Technical Memorandum No. 4

Project No. C SWOO-242

Data Collection and Evaluation of Railroad Project
May 18, 2005

CDOT DEPARTMENT OF TRANSPORTATION | DMJM HARRIS AN AECOM COMPANY | HDR

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All information and assessments contained herein are the sole responsibility of the Consultant. Although many other parties contributed substantially to the report, they shall not be held accountable for its accuracy.

4.1 Introduction

To accurately identify and understand the issues affecting the Proposed BNSF/UP Front Range Infrastructure Rationalization Project it is necessary to compile and review a large amount of data. This involved an extensive search through relevant completed studies and ongoing projects both in Colorado and elsewhere as well as associated websites and libraries of listings. This technical memorandum is a reference for all future technical memorandums associated with this study as well as any future related phases of this project.

As noted in the table of contents, Section 4.1.1 includes a listing of all sources and websites that were accessed and reviewed for this study. The next section, 4.1.2 includes a summary of any relevant completed studies. Section 4.1.3 lists the relevant ongoing studies, summarizing those that were found most beneficial. The remainder of this Technical Memorandum includes the results of data collected, displayed graphically where possible, along with a review of the cost estimates provided by the two Class 1 railroads. A glossary of words and phrases associated with this study are included in Section 4.1.6.

Most documents listed are available in hard copy form. Studies related to passenger rail are summarized in Technical Memorandum No. 7. URL's for relevant newspaper articles are referenced on our project website at http://www.dot.state.co.us/railroadstudy/.

4.1.1 Literature Review

This project required the input of several different professionals reviewing various topics. The sources sited below were relevant for the indicated topic. Detailed summaries of selected documents are included in Sections 4.1.2 and 4.1.3.

Railroad Operations

- Bridging the Valley Transportation Study, Ongoing.
- Colorado State Rail Plan – Rail Bypass Feasibility Study, State Department of Highways with FRA, URS-R L Banks, 1979
- Metro Vision 2025 Interim Regional Transportation Plan, DRCOG, 2002
- Eastern Colorado Mobility Study, Felsburg, Holt, and Ullevig with DMJM, Jacobs, Cambridge Systematics, and Infrastructure Management Group, 2002
- Orlando Freight Relocation Study (ongoing study), HDR, 2003
- DM&E Powder River Basin Expansion Project, Burns and McDonald, 2000
- Colorado Transportation Profile, U.S. Department of Transportation, Bureau of Transportation Statistics, 2002
- TransPort Market Overview, Ross Consulting Group, 2002
- Alameda Corridor Project, DMJM and Moffat & Nichols, 1995

Websites:

- BNSF System and Division Maps http://www.bnsf.com/about_bnsf/html/division_maps.html.
- FRA Office of Safety Analysis http://safetydata.fra.dot.gov/officeofsafety/.
- UPRR industrial development site http://www.up.com/re.shtml.

Environment

- Eastern Colorado Mobility Study, Felsburg, Holt, and Ullevig with DMJM, Jacobs, Cambridge Systematics, and Infrastructure Management Group, 2002
- Bridging the Valley Transportation Study, Ongoing.
- North Front Range 2025 Regional Transportation Plan, DRCOG

- DM&E Powder River Basin Expansion Project, Burns and McDonald, 2000
- Alameda Corridor Project, DMJM and Moffat & Nichols, 1995

Economic Impact/Property Value

- Indiana Rail Plan, Parsons
- Economic Impact of Railroad Abandonment: Carrington-to-Turtle Lake Rail Line, Upper Great Plains Transportation Institute and the Department of Agriculture Economics at North Dakota State University, by Honeyman et al., 1996
- Economic Effects of Transportation: The Freight Story, IFC Consulting and HLB Decision Economics Inc., 2002
- The Value of Rail Intermodal to the U.S. Economy, by T. Brown and A. Hatch, 2002
- Commercial Property Benefits of Transit, Federal Transit Administration, 2002
- Impacts of Rail Transit on Property Values, Booz-Allen & Hamilton Inc.
- Rail Transit's Value-Added: Effects of Proximity to Light and Commuter Rail Transit on Commercial Land Values in Santa Clara, California, Institute of Urban and Regional Development, University of California – Berkley, by R. Cervero and M. Duncan, 2001
- The Effect of Rail Transit on Property Values: A Summary of Studies, Parsons Brinkerhoff, 2001
- Meta-Analysis of Airport Noise and Hedonic Property Values: Problems and Prospects, Jon P. Nelson, Department of Economics, Pennsylvania State University, 2003
- Ignoring Whistle Bans and Residential Property Values: An Hedonic Housing Price Analysis, David E. Clark, Professor of Economics, Marquette University and Argonne National Laboratory
- Fresno Rail Consolidation Study, HDR, 2001
- Measuring Economic Benefits of Intermodal Transportation, Dr. Yuri V. Yedokimov
- "Rail Service Is Playing a Crucial Role in the Alliance Area's Development" Article in the Fort Worth Star-Telegram, 12-12-1999, by Hornaday
- Colorado Mining Association: Facts about Mining in the United States, 2002
- Alameda Corridor Project, DMJM and Moffat & Nichols, 1995

Safety/Security

- Railroad Safety Statistics, Federal Railroad Administration, 2002
- Federal Railroad Administration – Highway-Rail Incidents, 2002
- TranStats: The Intermodal Transportation Database
- DM&E Powder River Basin Expansion Project, Burns and McDonald, 2000
- Colorado Strategy for Homeland Security, 2003
- Alameda Corridor Project, DMJM and Moffat & Nichols, 1995
- Eastern Colorado Mobility Study, Felsburg, Holt, and Ullevig with DMJM, Jacobs, Cambridge Systematics, and Infrastructure Management Group, 2002
- Orlando Freight Relocation Study, HDR, Ongoing
- Colorado Transportation Profile, U.S. Department of Transportation, Bureau of Transportation Statistics, 2002

Other Rail Operations

- Colorado Passenger Rail Study, Kimley-Horn, 1997
- Eastern Colorado Mobility Study

Passenger Rail

- Colorado Passenger Rail Study, Kimley-Horn, 1997
- North Front Range Transportation Alternatives Feasibility Study, DRCOG

- South I-25 Corridor and U.S. 85 Corridor DEIS, PBS & J, 2000
- Rail Oriented Development: Strategies and Tools to Support Passenger Rail, CDOT, 2001
- East Corridor MIS Final Report, DRCOG and Kimley-Horn, 1997
- RTD FasTracks
- Metro Vision 2020 Plan, DRCOG, 2000
- Metro Vision 2025 Interim Regional Transportation Plan, DRCOG, 2002
- North Metro Transportation Study, BRW, 2001
- North Front Range 2025 Regional Transportation Plan, DRCOG
- Transportation Expansion (T-REX) Multi-Modal Transportation Project Fact Book, RTD, 2002

Archaeological and Historic Resources

Documents:

- A Profile of the Cultural Resources of Colorado 2003. This document includes the following data:
  1. Percent of the land surveyed for cultural resources in the State of Colorado.
  2. Listing of counties with Prehistoric Districts and general location of districts.
  3. Counties with no officially eligible prehistoric sites.
  4. List of officially eligible sites.

Websites

- Known historic, archeological, and cultural resources in Colorado = http://www.coloradohistory-oahp.org
- Known historic, archeological, and cultural resources in Colorado = http://www.nationalregisterofhistoricplaces.com
- Information about the Old Santa Fe Trail http://www.nps.gov/safe/
- Rixey School and historical marker http://www.coloradohistory.com/ghostsearchresults_lnk.asp?TypeOfSearch=County&SearchString=bent

Special Status Plant and Animal Resources

Documents:

- *Colorado Revised Statues 1994*
  1. Definition of a state endangered species
  2. Definition of a state threatened species

Web Sties:

- Definitions of a federally endangered species, a federally threatened species, a candidate species = http://midwest.fws.gov/endangered/glossary/index.html
- US Fish and Wildlife Service, list of federally endangered or threatened species = http://endangered.fws.gov/ and http://mountain-prairie.fws.gov
- For plants, each federal and state listed species was then compared to comprehensive species lists for each county prepared by the Colorado State University Herbarium, which is concerned with the documentation of Colorado's vascular flora, including the natural variation based on geographic and ecological distribution = http://herbarium.biology.colostate.edu/rare
- The Threatened and Endangered Species System (TESS) for federal species lists them in the following categories for Region 6 of the US Fish and Wildlife Service: Mammals, Amphibians, Fishes, Snails, Insects, and Flowering Plants = http://ecos.fws.gov/tess_public/TESSWebpage
- The federally listed species were then supplemented with Colorado listed species provided by the Bureau of Land Management = http://www.co.blm.gov/botany/listedtb
- Natural Areas Program of Colorado State Parks = http://www.parks.state.co.us/cnap/Natural_Areas/Countylist.htm#BOULDER
- Colorado Natural Heritage Program = http://www.cnhp.colostate.edu/index

- Center for Plants Conservation = http://www.mobot.org/CPC
- Natural Diversity Information Source, Colorado State University = http://ndis.nrel.colostate.edu/
- Natural Resource Conservation Service = http://plants.usda.gov/cgi_bin/topics.cgi?earl=threat
- Colorado Division of Wildlife = http://wildlife.state.co.us/swa/
- Bald Eagle = http://wildlife.state.co.us/species_profiles/baldeagle.asp
- Ferruginous Hawk = http://www.rmbo.org/pif/bcp/phy36/grasland/feha.htm
- Greater Sandhill Crane = http://ndis.nrel.colostate.edu/wildlifespx.asp?SpCode=040701
- Interior Least Tern = http://wildlife.state.co.us/species_profiles/leasttern.asp, and http://www.nwf.org/watersheds/platte/tern.html
- Lesser Prairie Chicken = http://www.rmbo.org/pif/bcp/phy36/grasland/feha.htm
- Long-billed Curlew = http://www.rmbo.org/pif/bcp/phy36/grasland/feha.htm
- Mexican Spotted Owl = http://www.rmbo.org/pif/bcp/phy62/ppine/meso.htm
- Mountain Plover = http://www.rmbo.org/pif/bcp/phy36/grasland/moup.htm
- Piping Plover = http://wildlife.state.co.us/species_profiles/pipingplover.asp
- Plains Sharp-tailed Grouse = http://www.rmbo.org/pif/bcp/phy36/grasland/feha.htm
- Southwestern Willow Flycatcher = http://www.usgs.nau.edu/swwf/wiflhab.html
- Western Burrowing Owl = http://wildlife.state.co.us/species_profiles/burrowingowl.asp
- Western Snowy Plover = http://www.azgfd.com/w_c/edits/documents/Charalni.d.pdf
- Whooping Crane = http://wildlife.state.co.us/species_profiles/whoopingcrane.asp
- Yellow-billed Cuckoo = http://ndis.nrel.colostate.edu/wildlifespx.asp?SpCode=040277
- Black-footed Ferret = http://ndis.nrel.colostate.edu/wildlifespx.asp?SpCode=050120
- Black-tailed Prairie Dog = http://ndis.nrel.colostate.edu/wildlifespx.asp?grp=Prairie
- Northern Pocket Gopher = http://ndis.nrel.colostate.edu/wildlifespx.asp?SpCode=050047
- Northern River Otter = http://ndis.nrel.colostate.edu/wildlifespx.asp?SpCode=050109
- Preble's Meadow Jumping Mouse = http://rockyweb.cr.usgs.gov/frontrange/virtour/ftcoll4.htm
- Swift Fox = http://ndis.nrel.colostate.edu/wildlifespx.asp?SpCode=051063
- Wolverine = Sources: http://mountain-prairie.fws.gov/pressrel/00-22.htm, "Gulo gulo" (On-line), Animal Diversity Web. Accessed January 30, 2004 at http://animaldiversity.ummz.umich.edu/site/accounts/information/Gulo_gulo.html, and http://www.enature.com/fieldguide/showRguide.asp?rguideID=714&speciesID=4029
- *Common Kingsnake = http://ndis.nrel.colostate.edu/wildlifespx.asp?grp=Snakes*
- Common Garter Snake = http://ndis.nrel.colostate.edu/wildlifespx.asp?grp=Snakes
- Massasauga = http://ndis.nrel.colostate.edu/wildlifespx.asp?grp=Vipers
- Midget Faded Rattlesnake = http://ntri.tamuk.edu/herpetarium/viperidae/c.v.concolor/cvconcolor.html
- Texas Blind Snake = http://ndis.nrel.colostate.edu/wildlifespx.asp?grp=Snakes
- Texas Horned Lizard = http://ndis.nrel.colostate.edu/wildlifespx.asp?SpCode=030173
- Tripliod Checkered Whiptail = http://ndis.nrel.colostate.edu/wildlifespx.asp?SpCode=030174
- Couches Spadefoot = http://ndis.nrel.colostate.edu/wildlifespx.asp?grp=Toads
- Northern Cricket Frog = http://ndis.nrel.colostate.edu/wildlifespx.asp?grp=Frogs
- Northern Leopard Frog = http://ndis.nrel.colostate.edu/wildlifespx.asp?grp=Frogs
- Plains Leopard Frog = http://ndis.nrel.colostate.edu/wildlifespx.asp?grp=Frogs
- Yellow Mud Turtle = http://ndis.nrel.colostate.edu/wildlifespx.asp?grp=Turtles
- Pallid Sturgeon = http://www.nwf.org/watersheds/platte/sturgeon.html
- Arkansas darter = http://wildlife.state.co.us/species_profiles/arkansasdarter.asp
- Colorado Butterfly Plant = http://mountain-prairie.fws.gov/pressrel/00-31.htm
- Ute Ladies'-tresses = http://www.natureserve.org/explorer/servlet/NatureServe?searchName=Spiranthes+diluvialis

- The Colorado Natural Heritage Program (CNHP) tracks and ranks Colorado's rare and imperiled species and habitats = http://www.cnhp.colostate.edu/index.html
- State Wildlife Areas in the vicinity of the study area = http://wildlife.state.co.us/swa/

Major Creeks and Rivers, Wetlands, and other Surface Water Resources

Documents:

- Water resources of the study area in this technical report were identified with minimal field reconnaissance using USFWS National Wetland Inventory maps, both electronic and paper. These maps used *Classification of Wetlands and Deep-Water of the United States* (an Operational Draft), Cowardin, et al, 1977, to define the types of streams.

Websites:

- Several major surface waters in the study area are under the jurisdiction of the Colorado Division of Wildlife (State Wildlife Areas) = http://wildlife.state.co.us/swa/

Hazardous and Contaminated Materials Resources

Websites:

- The Office of Solid Waste operates under authority of the Resource Conservation and Recovery Act (RCRA) regarding the national management of hazardous and non-hazardous waste = http://www.cqs.com/esuper.htm and http://www.epa.gov/superfund/programs/index.htm
- Comprehensive Environmental Response, Contamination and Liability Information System (CERCLIS) database, Superfund Program = http://www.cqs.com/esuper.htm
- GIS files of hazardous materials and wastes = Colorado Department of Public Health and Environment (CDPH) Hazardous Materials and Waste Management Division Geographical Information System Files
- Weld County solid waste sites = http://www.co.weld.co.us/departments/health/environmental/composting/health_composting_facilities.html
- List of active solid waste sites = http://www.cdphe.state.co.us/hm/lflist.pdf
- List of active waste transfer sites = http://www.cdphe.state.co.us/hm/transfer.pdf
- Disposition of the Fort Bent Veteran's Hospital = http://www.bentcounty.org/abc/cities/lasanimasfrm.htm and http://www.cha.com/Hospitals/hospitals.shtml

Demographics

Websites

- Racial Minorities, Low Income populations, and Group Housing data was collected to the census tract level from the U.S. Bureau of the Census, Census 2000 = HTTP://factfinder.census.gov
- Low Income Minorities Thresholds by county = http://www.hudser.org/datasets/il/fmr00/hud00co.txt
- Percent of minority populations for the State of Colorado = http://dola.colorado.gov/demog/QTables/

4.1.2 Previous Studies

A number of studies ongoing and completed in Colorado offer information that is valuable as they identify study methodology and compiled data that is relative to this effort. The completed studies that were found to be most valuable are summarized below.

DM&E Dakota, Minnesota, and Eastern Railroad Corporation Powder River Basin Project Draft EIS
Burns and McDonald in cooperation with the Surface Transportation Board, 2000

This study was conducted to determine the environmental impacts associated with the construction of new rail line totaling 300 miles and the rehabilitation of an additional 600 miles. This study analyzes all things important

to the environment including air quality, noise, energy usage, transportation impacts, environmental justice, and grade crossing safety related impacts.

Contained within the appendices of this study are all the methodologies associated with calculating the impacts of the various environmental factors. For the purposes associated with the Public Benefits and Costs Study of the Proposed BNSF/UP Front Range Railroad Infrastructure Rationalization Project (the Railroad Study) these methodologies were extracted and used as a reference for appropriate measurement techniques for environmental impacts.

Colorado State Rail Plan – Rail Bypass Feasibility Study

This study was prepared for the Colorado General Assembly by the State Department of Highways with the FRA and URS-R L Banks, 1979. The study is a predecessor of this project.

Four alternatives were defined:

- The Urban alternative would maintain present coal train routing but reduce auto-train conflicts with 40 grade separations from Sterling to Trinidad.
- The Loops alternative would bypass coal train traffic around Denver to Colorado Springs with new and existing tracks east of the urban area near Watkins, Elizabeth, and Elbert.
- The Sterling Rock alternative would construct new alignment between Brush and Limon and use existing track from Limon to Colorado Springs.
- The All New alternative would provide new tracks between Brush and Las Animas.

The benefit to cost ratio of all four alternatives was less than one. The All New alternative was the most attractive in spite of high capital cost because the 100-mile haul reduction provided significant railroad and utility benefits. The study recommends a multi-step process of incremental improvements that would monitor actual coal traffic development and respond appropriately. The study provided historical background and baseline benefit to cost ratio expectations.

East Corridor Major Investment Study Final Report

This Major Investment Study was prepared for DRCOG by Kimley-Horn and Associates, July 1997. The MIS recommended single-track commuter rail from Denver Union Terminal to Denver International Airport. It also recommended extending RTD's Central Corridor LRT one mile to connect with commuter rail. Intermediate stations would be located at Stapleton and Gateway. RTD feeder buses would connect to the stations. Diesel Multi Unit (DMU) vehicles would be an appropriate mode and I-70 would be widened. This study provided background on passenger rail service for the east side of the Denver metro area.

RTD FasTracks Executive Summary

FasTracks is RTD's twelve-year comprehensive plan for high quality transit service and facilities in the region. FasTracks responds to the growing transportation needs of the Denver metropolitan region by providing an enhanced region-wide, reliable and safe transit system. According to the Denver Regional Council of Governments (DRCOG), the Denver metropolitan region is expected to add more than 900,000 people and 600,000 jobs by 2025.

This growth will place a tremendous strain on the region's already congested transportation system. Weekday vehicle miles of travel are expected to increase from 58 million in the year 2001 to 95 million by the year 2025, a 64 percent increase. As part of its Fiscally Constrained 2025 Interim Regional Transportation Plan (RTP), DRCOG has noted that severe congestion will increase by 89 percent even with the transportation improvements

that are scheduled for implementation. Person hours of delay are predicted to increase by two times the current amount. By 2025, the region will have more traffic than the existing transportation system can handle. In its *2003 Annual Urban Mobility Report*, the Texas Transportation Institute (TTI) rated Denver as the third most congested city in the United States. The report indicates "Public transportation lines that do not intersect roads can be particularly reliable as they are not affected by weather, road work, and other unreliability producing events." FasTracks also responds to *Metro Vision*, the Denver region's plan for future growth and development. The second of the six core elements of Metro Vision states that the region must create "a balanced multimodal transportation system" which includes "an extensive fixed guide-way transit system and bus transit." Finally, FasTracks responds to current sentiment on transportation needs within the metropolitan area.

In a recent survey entitled *2003 Statewide Customer Survey – Results on Transportation Issues in Colorado,* conducted by the Colorado Department of Transportation (CDOT), the lack of public/mass transportation was identified as one of the top transportation issues. The CDOT survey also states that if transportation funds became available, in the metro are, the highest priority for spending that money should be on light rail. FasTracks provides the opportunity to implement rapid transit by funding a region-wide system of light rail, commuter rail and bus rapid transit in the next twelve years. This study was the basis for examining RTD corridors that would be impacted by the railroad project and provided cost elements for the No-Build Option.

Metro Vision 2020 Plan

The Metro Vision 2020 Plan is the Denver region's plan for addressing the future growth of the metropolitan area. It frames the overall regional planning background. It outlines strategies and implementation steps to preserve quality of life while positioning the region to benefit from growth.

There are six core elements of development patterns, transportation system, and water quality. The extent of urban development will occur within 747 square miles by 2020 to accommodate population growth. The plan seeks to protect another 100 to 500 square miles of open space by 2020 to meet regional objectives. The plan seeks to help designated communities to remain separate from the larger urbanized area. It seeks a balanced multimodal transportation system.

Metro Vision 2025 Interim Regional Transportation Plan – The Fiscally Constrained Element

This plan was adopted by DRCOG in April 2002. It presents regional transportation facilities that can be provided thru 2025 based on reasonably expected revenues. The plan presents data on freight movement by air, rail trucks, and combinations. The Western Transportation Trade Network (Western ASHTO), of which CDOT is a member, is described. Figures included within the plan include the Freight RR Network with trains per day and at-Grade railroad crossings on the Regional Highway Network showing 500 plus at-grade crossings in the metro region.

North Metro Transportation Study

This study was prepared for RTD by BRW, Oct 2001. It is the Final Report of the Major Investment Study for the North I-25/Northeast Corridor. The triangular study area is bounded by I-25 to I-76 and to the Weld County line on the north. This study presented information and data for potential passenger rail service north of Denver and its relationship to existing railroad traffic.

The locally preferred alternative is a combination of roadway widening, bus/HOV lanes, new interchanges, bus park-n-ride lots, LRT/DMU lines, and LRT or DMU stations. The LRT/DMU alignment is on the UPRR Boulder Branch from Denver Union Terminal to 124th Avenue.

4.1.3 Ongoing Studies

Bridging the Valley Transportation Study

This project is presently on going in Spokane for the Spokane Regional Transportation Council by HDR Engineering Inc. CH2M Hill w/ HDR and ITC, April 2000. The Spokane to Sandpoint, ID, corridor is strategic to system capacity for BNSF. UP's only Western US connection to Canada converges at Spokane. The project would eliminate 40 miles of UP corridor and consolidate to BNSF ROW.

Major study issues are:

- Local Communities – traffic congestion, delays, safety, noise, air quality, emergency vehicle delays, at-grade crossing safety, school children, train horn noise, safety vs. horn noise.
- Rail shippers – relocate, retain branch lines, discontinue rail service.
- Rail carriers – don't increase costs (cap and O&M) (reluctant to acknowledge benefits), no loss in operating capacity, don't reduce competitive position (maybe rotate branch line business on an annual basis). Maintain sense of autonomy, sense of control.

"Shuttle diplomacy" was conducted between RR upper management and study team. The decision support process should lead to agreement on solutions, clarity and agreement on the problem, preclude redo loops, provide exposure of the process, documentation, appropriate decision tools, avoidance of analysis paralysis, focus on solutions at the appropriate time, and present no surprises.

Costs and Benefits are projected for private railroads, private local RR users, general public for safety and environment, delay time, and economic development. Railroad data includes timetable and track profiles (BNSF Website), ROW maps, programmed maintenance schedules, forecast traffic, capital budget, AMTRAK capital improvement budget, train file data or Line Occupancy Index, unit costs, crew change locations, and air quality parameters.

Highway data includes delay estimates. The methodology uses "Traffic Flow Fundamentals" (Adolf D. May 1990) equations (inputs are frequency of train events, road capacity, traffic volume, and duration of each train event). This study confirmed categories of benefits and provided a methodology for estimating crossing delay.

Chicago Regional Environmental and Transportation Efficiency project (CREATE)

In Chicago Mayor Richard M. Daley engaged the National Surface Transportation Board to reassess the region's rail transportation system and help reduce the impact of freight traffic growth on the city and its surrounding communities. The State of Illinois and the City of Chicago has joined with passenger and freight railroads serving the region to identify critically needed improvements to the Chicago region's rail and highway transportation infrastructure.

The resulting Chicago Regional Environmental and Transportation Efficiency project (CREATE), a public/private partnership, aims to improve passenger rail service, reduce motorist delay, ease traffic congestion, increase safety and provide economic, environmental and energy benefits for the Chicago region. The CREATE project hopes to increase the efficiency and reliability of much of the nation's rail service as Chicago is the nation's transportation hub.

The project will maximize the use of five rail corridors for a faster and more efficient rail network, eliminate the wait for motorists at 25 grade crossings by creating grade separations that separate motorists from trains, and create six rail-to-rail "flyovers" - overpasses and underpasses that separate passenger trains from freight trains.

It is the intension of this project to have the railroads pay for the benefits they receive under the project, and the city, state and federal government pay for the public benefits generated by the plan, certainly a model for this Colorado project. The Public/private partnership established for CREATE is meant to help prepare for the increased demand on our nation's freight infrastructure, and at the same time take advantage of the many public benefits offered by rail.

For further information refer to the following website address: http://ncppp.org/cases/create.html.

Alameda Corridor Study (Concept Study of Railroad and Highway Improvements for the Development of the Alameda Corridor), Oct 1991

This study was prepared for the Alameda Corridor Transportation Authority by DMJM/M&N (joint venture). The project was driven by increasing volumes of cargo moving through San Pedro ports. It provides for two-track mainline railway, widening Alameda Street, and grade separations. The cost range of alternatives was 1.2 to 1.5 billion 1991 dollars. Alternatives were evaluated and ranked with criteria from Corridor goals. The next phase is the production of an Environmental Impact Report and receipt of public comment.

Project goals were to:

- Improve Alameda St. port-related trucking
- Consolidate main line freight operations of Southern Pacific, ATSF, and UP to "encourage the diversion of truck traffic to rail transport"
- Reduce delays and improve operations and safety

Train traffic was projected to grow to 100 TPD in 2020 from 30 today, longer trains. A 45% increase in vehicular traffic by 2020 was projected. There were 298 grade crossings on the existing 3 lines. Roadway and Railroad Design Standards were presented. Data Collection included; aerial mapping, geotechnical & hazardous waste, utilities, property lines, future development plans, trainway and traffic volume projections.

Alternatives discussed were

- One-way Alameda couplet design
- 4 or 6 lane w/ median
- 2-lane flyovers at major intersections
- Exclusive truck lanes
- Depressed Alameda
- Depressed trainway
- Elevated trainway.

The Screened Alternatives were

- At-grade trainway
- Depressed trainway
- Vernon Diversion
- Trainway at-grade at Rosecrans
- Trainway at-grade at Firestone
- Depressed trainway.

Alternatives were evaluated with respect to the goals (w/ weighting) as follows:

- Traffic (weighted 17%) - reduce delays, improve speeds, improve LOS at intersections, provide alternative truck route, improve emergency vehicle access, divert truck traffic to rail, coordinate w/ plans at corridor ends.

- Safety and Security 8% - reduce hazard index (TPD x ADT), improve pedestrian safety, improve operations personnel safety, and improve security.
- Railroad 20% - Improve RR operating flexibility and efficiency, improve RR speeds, provide fair and equal access for all carriers, maintain service to customers.
- Environmental 15% - improve quality of life, minimize air pollution, reduce energy consumption, compatible with adjacent land uses, resolve present poor situation, aesthetics, and minimize noise and vibration.

4.2 Additional Data Collection

To perform our benefits analysis it is necessary to gather all available data on the existing railroad operations in Colorado as well as the future operations for both the No-Build Option and the Build Option. To help tabulate this data, the two Class 1 railroads were asked to fill in tables relative to Master Train Counts, Track data and Train data. The information provided is shown in Tables 4.2.1 through 4.2.8. The combined train counts are shown graphically in Figures 4.2.1 and 4.2.2. The data is also extrapolated to fit within our GIS database and reproduced graphically showing each railroads information separately in Figures 4.2.3 through 4.2.10. Note that Figures 4.2.3 through 4.2.6 show the track *Segment ID's* as they have been labeled for this project while Figures 4.2.7 through 4.2.10 show the train counts for the UP and the BNSF railroads at the State level and through Denver.

Another important benefit to the relocation study is the potential movement of rail yards. Part of our data collection included locating the yards and mapping their characteristics in our GIS system. Information provided by the railroads relative to the yards is shown in Tables 4.2.9 and 4.2.10. The locations of the yards are shown graphically in Figures 4.2.11 and 4.2.12.

The grade crossing data was collected using the FRA database and refined through meetings the Public Utility Commission (PUC). Shown in Tables 4.2.11 through 4.2.17 are all the at-grade crossings that intersect with the rail lines of concern on this project. This data was gathered using the most up to date information provided by the FRA. Detailed discussion of the crossings is included in Technical Memorandum No. 5. The FRA database can be accessed at http://safetydata.fra.dot.gov/officeofsafety/.

Part of Technical Memorandum No. 5 includes the need to determine land use along the existing and proposed corridors. A method to calculate the acres that would be affected by the movement of through-freight out of the Front Range and into the eastern plains was devised using existing land-use information derived from 1:250,000-scale Landuse/Landcover Geographic Information Retrieval Analysis System (GIRAS) spatial data available from the USGS. This coverage is shown graphically in Figure 4.2.13. A calculation of the acres could be found by using a strip-corridor of a width selected as the impacted zone or buffer zone. This method is shown graphically in Figure 4.2.14. The areas calculated, broken down into acres based on land use, are shown in Table 4.2.18.

Table 4.2.1 BNSF Master Train Counts – No Build

Segment ID	Segment Description					Ownership				Train Type Data								Totals			
										Passenger		Coal		Mainfest		Locals					
	Between		And		Segment Length (mi.)	2003	Trackage Rights?	2030	Trackage Rights?	2003	2015	2003	2015	2003	2015	2003	2015	2003	2015	2030 assuming 1% increase from 2015	Change
B-1	Sidney	NE	Sterling	CO	40.14	BNSF	No	BNSF	No			16	20.8	4	5.1			20.0	25.8	30.0	10.0
B-2	Sterling	CO	Venango	NE	68.14	BNSF		BNSF				1	1.3	0.5	0.6			1.5	1.9	2.2	0.7
B-3	Union	CO	Brush Center	CO	10.77	BNSF	No	BNSF	No			16	20.8	4	5.1			20.0	25.9	30.0	10.0
B-4	Brush Center	CO	Sanborn	NE	88.58	BNSF		BNSF		2		0		8	10.2	2	2.5	12.0	12.7	14.7	2.7
B-5	Brush Center	CO	Wiggins	CO	30.23	BNSF	No	BNSF	No	2		16	20.8	8	10.2			26.0	31.0	35.9	9.9
B-6	Wiggins	CO	Hudson	CO	28.27	BNSF	No	BNSF	No	2		16	20.8	8	10.2			26.0	31.0	35.9	9.9
B-7	Hudson	CO	Sand Creek Jct	CO	24.96	BNSF	No	BNSF	No	2		16	20.8	8	10.2	6	7.6	32.0	38.6	44.8	12.8
B-8	Sand Creek Jct	CO	20th Street Jct	CO	4.48	BNSF	No	BNSF	No	2		16	20.8	8	10.2	6	7.6	32.0	38.6	44.8	12.8
B-9	20th Street Jct	CO	South Park Jct	CO	2.73	BNSF/UPRR		BNSF/UPRR				16	20.8	5	6.3			21.0	27.1	31.5	10.5
B-10	South Park Jct	CO	Palmer Lake	CO	48.77	BNSF/UPRR		BNSF/UPRR				16	20.8	5	6.3	3	3.8	24.0	30.9	35.8	11.8
B-11	Palmer Lake	CO	Crews	CO	31.38	BNSF/UPRR		BNSF/UPRR				16	20.8	5	6.3	3	3.8	24.0	30.9	35.8	11.8
B-12	Crews	CO	Pueblo Jct	CO	36.12	BNSF/UPRR		BNSF/UPRR				16	20.8	5	6.3	2	2.5	23.0	29.6	34.3	11.3
B-13	Pueblo Jct	CO	Walsenberg	CO	52.31	BNSF/UPRR		BNSF/UPRR				8	10.4	2	2.5			10.0	12.9	15.0	5.0
B-14	Walsenberg	CO	West Trinidad	CO	40.75	BNSF/UPRR		BNSF/UPRR				8	10.4	2	2.5			10.0	12.9	15.0	5.0
B-15	West Trinidad	CO	Raton	NM	22.66	BNSF	No	BNSF	No	2				1	1.3			3.0	1.3	1.5	-1.5
B-16	West Trinidad	CO	Branson	CO	50.43	BNSF	No	BNSF	No			8	10.4	2	2.5			10.0	12.9	15.0	5.0
B-17	West Trinidad	CO	La Junta	CO	81.24	BNSF	No	BNSF	No	2				3	3.8			5.0	3.8	4.4	-0.6
B-18	Pueblo Jct	CO	NA Jct	CO	26.07	BNSF/UPRR		BNSF/UPRR				8	10.4	2	2.5	2	2.5	12.0	15.4	17.9	5.9
B-19	NA Jct	CO	La Junta	CO	36.36	BNSF/UPRR	No	BNSF/UPRR	No			8	10.4	2	2.5	2	2.5	12.0	15.4	17.9	5.9
B-20	La Junta	CO	Las Animas Jct	CO	21.70	BNSF/UPRR	No	BNSF/UPRR	No	2		8	10.4	2	2.5	1	1.3	13.0	14.2	16.5	3.5
B-21	Las Animas Jct	CO	South Jct	CO	63.45	BNSF/UPRR	No	BNSF/UPRR	No			8	10.4	2	2.5			10.0	12.9	15.0	5.0
B-22	South Jct	CO	Boise City	OK	51.65	BNSF/UPRR	No	BNSF/UPRR	No			8	10.4	2	2.5			10.0	12.9	15.0	5.0
B-24	Las Animas Jct	CO	Coolidge	KS	64.74	BNSF/UPRR	No	BNSF/UPRR	No	2				2	2.5			4.0	2.5	2.9	-1.1
B-25	20th Street Jct	CO	Prospect Jct	CO	0.53	BNSF	No	BNSF	No			1	1.3	4	5.1	2	2.5	7.0	8.9	10.3	3.3
B-26	Prospect Jct	CO	Boulder	CO	26.64	BNSF	No	BNSF	No			1.0	1.3	2	2.5	1	1.3	4.0	5.1	5.9	1.9
B-27	Boulder	CO	Fort Collins	CO	44.11	BNSF	No	BNSF	No					2	2.5	1	1.3	3.0	3.8	4.4	1.4
B-28	Fort Collins	CO	Cheyenne	WY	45.37	BNSF	No	BNSF	No					2	2.5	1	1.3	3.0	3.8	4.4	1.4
B-30	C&S Jct	CO	Golden	CO	9.17	BNSF		BNSF						2	2.5	4	5.1	6.0	7.6	8.8	2.8
B-31	South Park Jct	CO	Arapahoe Power	CO	5.41	BNSF		BNSF				0.5	0.7	1	1.3			1.0	2.0	8.8	7.8
S-1	NA Jct	CO	Towner	CO	60.38	CKT	No	CKT	No												
S-2	Eaton	CO	Loveland	CO	25.27	GWR		GWR													
S-3	Officer Jct	CO	Longmont	CO	23.86	GWR		GWR													
S-4	Dent	CO	Welty	CO	11.09	GWR		GWR													
S-5	Walsenberg	CO	Alamosa Jct	CO	76.73	SLRG		SLRG													
S-6	Alamosa Jct	CO	Derrick	CO	69.98	SLRG		SLRG													
S-7	Alamosa Jct	CO	Antonito	CO	29.28	SLRG		SLRG													
S-8	Fort Collins	CO	Greeley	CO	23.70	GWRR		GWRR										0.0	0.0	0.0	0.0
S-9	South Jct	CO	Saunders	KS	32.50	CVR		CVR										0.0	0.0	0.0	0.0
S-10	Canon City	CO	Parkdale	CO	10.00	RGX		RGX													
N-1	Omar	CO	Peoria	CO	35.31	New	New	TBD	TBD												
N-2	Aroya	CO	Las Aminas Jct	CO	54.51	New	New	TBD	TBD												

Data provided by BNSF through 2015, consultant estimate to 2030.

Table 4.2.2 BNSF Master Train Counts – Build

Segment ID	Segment Description					Ownership				Train Type Data								Totals			
										Passenger		Coal		Mainfest		Locals					
	Between		And		Segment Length (mi.)	2003	Trackage Rights?	2030	Trackage Rights?	2003	2015	2003	2015	2003	2015	2003	2015	2003	2015	2030 assuming 1% increase from 2015	Change
B-1	Sidney	NE	Sterling	CO	40.14	BNSF	No	BNSF	No			16	20.8	4	5.1			20.0	25.8	30.0	10.0
B-2	Sterling	CO	Venango	NE	68.14	BNSF-NKCR		BNSF				1	1.3	0.5	0.6			1.5	1.9	2.2	0.7
B-3	Union	CO	Brush Center	CO	10.77	BNSF	No	BNSF	No			16	20.8	4	5.1			20.0	25.9	30.0	10.0
B-4	Brush Center	CO	Sanborn	NE	88.58	BNSF		BNSF		2		0		8	10.2	2	2.5	12.0	12.7	14.7	2.7
B-5	Brush Center	CO	Omar	CO	30.23	BNSF	No	BNSF	No	2		16	20.8	8	10.2			26.0	31.0	35.9	9.9
B-6	Omar	CO	Hudson	CO	28.27	BNSF	No	BNSF	No	2		16	0.0	8	8.2			26.0	8.2	9.5	-16.5
B-7	Hudson	CO	Sand Creek Jct	CO	24.96	BNSF	No	BNSF	No	2		16	0.0	8	8.2	6	7.6	32.0	15.8	18.3	-13.7
B-8	Sand Creek Jct	CO	20th Street Jct	CO	4.48	BNSF	No	BNSF	No	2		16	0.0	8	8.2	6	7.6	32.0	15.8	18.3	-13.7
B-9	20th Street Jct	CO	South Park Jct	CO	2.73	BNSF/UPRR		BNSF/UPRR				16	0.0	5	5.3			21.0	5.3	6.2	-14.8
B-10	South Park Jct	CO	Palmer Lake	CO	48.77	BNSF/UPRR		BNSF/UPRR				16	0.0	5	5.3	3	3.8	24.0	9.1	10.6	-13.4
B-11	Palmer Lake	CO	Crews	CO	31.38	BNSF/UPRR		BNSF/UPRR				16	0.0	5	5.3	3	3.8	24.0	9.1	10.6	-13.4
B-12	Crews	CO	Pueblo Jct	CO	36.12	BNSF/UPRR		BNSF/UPRR				16	0.0	5	5.3	2	2.5	23.0	7.8	9.1	-13.9
B-13	Pueblo Jct	CO	Walsenberg	CO	52.31	BNSF/UPRR		BNSF/UPRR				8	0.0	2	2.5			10.0	2.5	2.9	-7.1
B-14	Walsenberg	CO	West Trinidad	CO	40.75	BNSF/UPRR		BNSF/UPRR				8	0	2	2.5			10.0	2.5	2.9	-7.1
B-15	West Trinidad	CO	Raton	NM	22.66	BNSF	No	BNSF	No	2				1	1.3			3.0	1.3	1.5	-1.5
B-16	West Trinidad	CO	Branson	CO	50.43	BNSF	No	BNSF	No			8	0	2	2.5			10.0	2.5	2.9	-7.1
B-17	West Trinidad	CO	La Junta	CO	81.24	BNSF	No	BNSF	No	2			0	3	3.8			5.0	3.8	4.4	-0.6
B-18	Pueblo Jct	CO	NA Jct	CO	26.07	BNSF/UPRR		BNSF/UPRR				8	0	2	3	2	2.5	12.0	5.5	6.4	-5.6
B-19	NA Jct	CO	La Junta	CO	36.36	BNSF/UPRR	No	BNSF/UPRR	No			8	0	2	3	2	2.5	12.0	5.5	6.4	-5.6
B-20	La Junta	CO	Las Animas Jct	CO	21.70	BNSF/UPRR	No	BNSF/UPRR	No	2		8	0	2	3	1	1.3	13.0	4.3	5.0	-8.0
B-21	Las Animas Jct	CO	South Jct	CO	63.45	BNSF/UPRR	No	BNSF/UPRR	No			8	20.8	2	3			10.0	23.8	27.6	17.6
B-22	South Jct	CO	Boise City	OK	51.65	BNSF/UPRR	No	BNSF/UPRR	No			8	20.8	2	3			10.0	23.8	27.6	17.6
B-24	Las Animas Jct	CO	Coolidge	KS	64.74	BNSF/UPRR	No	BNSF/UPRR	No	2				2	2.5			4.0	2.5	2.9	-1.1
B-25	20th Street Jct	CO	Prospect Jct	CO	0.53	BNSF	No	BNSF	No			1	1.3	4	5.1	2	2.5	7.0	8.9	10.3	3.3
B-26	Prospect Jct	CO	Boulder	CO	26.64	BNSF	No	BNSF	No			1.0	1.3	2	2.5	1	1.3	4.0	5.1	5.9	1.9
B-27	Boulder	CO	Fort Collins	CO	44.11	BNSF	No	BNSF	No					2	2.5	1	1.3	3.0	3.8	4.4	1.4
B-28	Fort Collins	CO	Cheyenne	WY	45.37	BNSF	No	BNSF	No					2	2.5	1	1.3	3.0	3.8	4.4	1.4
B-30	C&S Jct	CO	Golden	CO	9.17	BNSF		BNSF						2	2.5	4	5.1	6.0	7.6	8.8	2.8
B-31	South Park Jct	CO	Arapahoe Power	CO	5.41	BNSF		BNSF				0.5	0.7	1	1.3			1.0	2.0	8.8	7.8
S-1	NA Jct	CO	Towner	CO	60.38	CKT	No	CKT	No												
S-2	Eaton	CO	Loveland	CO	25.27	GWR		GWR													
S-3	Officer Jct	CO	Longmont	CO	23.86	GWR		GWR													
S-4	Dent	CO	Welty	CO	11.09	GWR		GWR													
S-5	Walsenberg	CO	Alamosa Jct	CO	76.73	SLRG		SLRG													
S-6	Alamosa Jct	CO	Derrick	CO	69.98	SLRG		SLRG													
S-7	Alamosa Jct	CO	Antonito	CO	29.28	SLRG		SLRG													
S-8	Fort Collins	CO	Greeley	CO	23.70	GWRR		GWRR										0.0	0.0	0.0	0.0
S-9	South Jct	CO	Saunders	KS	32.50	CVR		CVR										0.0	0.0	0.0	0.0
S-10	Canon City	CO	Parkdale	CO	10.00	RGX		RGX													
N-1	Omar	CO	Peoria	CO	35.31	New	New	TBD	TBD				20.8		0.5			0	21.3	24.7	24.7
N-2	Aroya	CO	Las Aminas Jct	CO	54.51	New	New	TBD	TBD				20.8		0.5			0	21.3	24.7	24.7

Data provided by BNSF through 2015, consultant estimate to 2030.

Table 4.2.3 UPRR Master Train Counts – No-Build

		Year 1 2004	Year 2 2005	Year 3 2006	Year 4 2007	Year 5 2008	Year 6 2009	Year 7 2010	Year 8 2011	Year 9 2012	Year 10 2013	Year 11 2014	Year 12 2015	Year 27 2030
Annual Growth Rate	**Consultant Segment ID**		**1.0%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**See Note 1**
Moffat Sub	U-13	14.7	17.7	17.9	18.1	18.3	18.5	18.7	18.8	19.0	19.2	19.4	19.6	22.8
Utah Jct to Belt Jct	N-4, U22	20.5	23.5	23.7	24.0	24.2	24.5	24.7	25.0	25.2	25.5	25.7	26.0	30.2
North Yard to Prospect Jct	U-12	11.5	11.7	11.8	11.9	12.0	12.1	12.2	12.4	12.5	12.6	12.7	12.9	14.9
Prospect to Colorado Springs	U-11,U-32 to U-34	6.3	6.3	6.4	6.4	6.5	6.6	6.6	6.7	6.8	6.8	6.9	7.0	8.1
Sand Creek to Greeley	U-6	14.1	15.0	15.1	15.3	15.4	15.6	15.8	15.9	16.1	16.2	16.4	16.6	19.2
New Line (Omar to Peoria)	N-1						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
New Line (Aroya to Las Animas)	N-2						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MP4.0 to Pullman	U-9	17.0	19.3	19.5	19.7	19.9	20.1	20.3	20.5	20.7	20.9	21.1	21.3	24.7
Pullman to Sandown	U-41	6.4	8.6	8.7	8.8	8.9	9.0	9.1	9.2	9.2	9.3	9.4	9.5	11.1
South of Pullman	U-10	10.6	10.7	10.8	10.9	11.0	11.1	11.2	11.3	11.4	11.5	11.7	11.8	13.7
South of 36th St. Yard	U-10	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.9
Sandown to Belt Jct. (Old Rock Island Line)	N-3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sandown to Watkins	U-25	6.4	8.6	8.7	8.8	8.9	9.0	9.1	9.2	9.2	9.3	9.4	9.5	11.1
Pueblo to Stratford	U-40	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.7
Pueblo to Dalhart	U-37, U-38	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.7

NOTES:

1. Estimated by consultant using 1% increase per year from UP's estimate of year 2015.
2. Union Pacific volumes only; does not include Amtrak or BNSF volumes.
3. Train counts do not include "Local" trains.
4. "TBD" means To Be Determined.
5. Assumes a fully operational Utah Junction in 2005 (Segment N-4 presently under construction).

Table 4.2.4 UPRR Master Train Counts - Build

		Year 1 2004	Year 2 2005	Year 3 2006	Year 4 2007	Year 5 2008	Year 6 2009	Year 7 2010	Year 8 2011	Year 9 2012	Year 10 2013	Year 11 2014	Year 12 2015	Year 27 2030
Annual Growth Rate	**Consultant Segment ID**		**1.0%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**See Note 1**
Moffat Sub	U-13	14.7	17.7	17.9	18.1	18.3	18.5	18.7	18.8	19.0	19.2	19.4	19.6	22.8
Utah Jct to Belt Jct	N-4, U22	20.5	23.5	23.7	24.0	24.2	23.1	23.3	23.5	23.8	24.0	24.2	24.5	28.4
North Yard to Prospect Jct	U-12	11.5	11.7	11.8	11.9	12.0	4.0	4.1	4.1	4.2	4.2	4.2	4.3	5.0
Prospect to Colorado Springs	U-11,U32 to U-34	6.3	6.3	6.4	6.4	6.5	4.0	4.1	4.1	4.2	4.2	4.2	4.3	5.0
Sand Creek to Greeley	U-6	14.1	15.0	15.1	15.3	15.4	7.1	7.2	7.3	7.3	7.4	7.5	7.6	8.8
New Line (Omar to Peoria)	N-1						9.5	9.6	9.7	9.8	9.9	10.0	10.1	11.8
New Line (Aroya to Las Animas)	N-2						TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
MP4.0 to Pullman	U-9	17.0	19.3	19.5	19.7	19.9	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.7
Pullman to Sandown	U-41	6.4	8.6	8.7	8.8	8.9	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.5
South of Pullman	U-10	10.6	10.7	10.8	10.9	11.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.7
South of 36th St. Yard	U-10	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.7
Sandown to Belt Jct. (Old Rock Island Line)	N-3	0.0	0.0	0.0	0.0	0.0	21.4	21.7	21.9	22.1	22.3	22.5	22.8	26.4
Sandown to Watkins	U-25	6.4	8.6	8.7	8.8	8.9	21.4	21.7	21.9	22.1	22.3	22.5	22.8	26.4
Pueblo to Stratford	U-40	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.7
Pueblo to Dalhart	U-37, U-38	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.7

NOTES:

1. Estimated by consultant using 1% increase per year from UP's estimate of year 2015.
2. Union Pacific volumes only; does not include Amtrak or BNSF volumes.
3. Assumes a fully operational Utah Junction in 2005 (Segment N-4 presently under construction).
4. Assumes Front-Range plan is completed in 2008 and operations begin in 2009.
5. Train counts do not include "Local" trains.
6. "TBD" means "To Be Determined".

Table 4.2.5 Existing BNSF Track Data - 2004

Segment Description						Ownership				Track Data						
Segment ID	Between		And		Segment Length (mi.)	2003	Trackage Rights?	2030	Trackage Rights?	Track Description (SMT, DMT)	Class	Train Movement Control	Number of Grade Crossings	Number of Rail Shippers (Heavy, Light, None)	Number of Industry Tracks	Number of Sen. Noise Rec.
B-1	Sidney	NE	Sterling	CO	40.14	BNSF	No	BNSF	No	SMT	4					
B-2	Sterling	CO	Venango	NE	68.14	BNSF		BNSF		SMT	4					
B-3	Union	CO	Brush Center	CO	10.77	BNSF	No	BNSF	No	SMT	4					
B-4	Brush Center	CO	Sanborn	NE	88.58	BNSF		BNSF		SMT	4					
B-5	Brush Center	CO	Omar	CO	30.23	BNSF	No	BNSF	No	SMT	4					
B-6	Omar	CO	Hudson	CO	28.27	BNSF	No	BNSF	No	SMT	4					
B-7	Hudson	CO	Sand Creek Jct	CO	24.96	BNSF	No	BNSF	No	SMT	4					
B-8	Sand Creek Jct	CO	20th Street Jct	CO	4.48	BNSF	No	BNSF	No	SMT	3					
B-9	20th Street Jct	CO	South Park Jct	CO	2.73	BNSF/UPRR		BNSF/UPRR		DMT	4					
B-10	South Park Jct	CO	Palmer Lake	CO	48.77	BNSF/UPRR		BNSF/UPRR		DMT	4					
B-11	Palmer Lake	CO	Crews	CO	31.38	BNSF/UPRR		BNSF/UPRR		SMT	4					
B-12	Crews	CO	Pueblo Jct	CO	36.12	BNSF/UPRR		BNSF/UPRR		DMT	4					
B-13	Pueblo Jct	CO	Walsenberg	CO	52.31	BNSF/UPRR		BNSF/UPRR		DMT	4					
B-14	Walsenberg	CO	West Trinidad	CO	40.75	BNSF/UPRR		BNSF/UPRR		SMT	4					
B-15	West Trinidad	CO	Raton	NM	22.66	BNSF	No	BNSF	No	SMT	4					
B-16	West Trinidad	CO	Branson	CO	50.43	BNSF	No	BNSF	No	SMT	4					
B-17	West Trinidad	CO	La Junta	CO	81.24	BNSF	No	BNSF	No	SMT	4					
B-18	Pueblo Jct	CO	NA Jct	CO	26.07	BNSF/UPRR		BNSF/UPRR		SMT	4					
B-19	NA Jct	CO	La Junta	CO	36.36	BNSF/UPRR	No	BNSF/UPRR	No	SMT	4					
B-20	La Junta	CO	Las Animas Jct	CO	21.70	BNSF/UPRR	No	BNSF/UPRR	No	SMT	4					
B-21	Las Animas Jct	CO	South Jct	CO	63.45	BNSF/UPRR	No	BNSF/UPRR	No	SMT	4					
B-22	South Jct	CO	Boise City	OK	51.65	BNSF/UPRR	No	BNSF/UPRR	No	SMT	4					
B-23	South Jct	CO	Saunders	KS	32.50	CVR		CVR		SMT	4					
B-24	Las Animas Jct	CO	Coolidge	KS	64.74	BNSF/UPRR	No	BNSF/UPRR	No	SMT	4					
B-25	20th Street Jct	CO	Prospect Jct	CO	0.53	BNSF	No	BNSF	No	SMT	4					
B-26	Prospect Jct	CO	Boulder	CO	26.64	BNSF	No	BNSF	No	SMT	4					
B-27	Boulder	CO	Fort Collins	CO	44.11	BNSF	No	BNSF	No	SMT	4					
B-28	Fort Collins	CO	Cheyenne	WY	45.37	BNSF	No	BNSF	No	SMT	4					
B-29	Fort Collins	CO	Greeley	CO	23.70	GWRR		GWRR		SMT	1					
B-30	C&S Jct	CO	Golden	CO	9.17	BNSF		BNSF		SMT	2					
B-31	South Park Jct	CO	Arapahoe Power	CO	5.41	BNSF		BNSF		SMT	2					
N-1	Omar	CO	Peoria	CO	35.31	New	New	TBD	TBD	SMT	4					
N-2	Aroya	CO	Las Aminas Jct	CO	54.51	New	New	TBD	TBD	SMT	4					

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Table 4.2.6 Existing BNSF Train Data - 2004

Train Type	Route (Map Ref No.)	Origin	Destination	Segment ID	Cargo	Typical Number of Cars	Typical Train Length	Trains/day (TPD)	Annual Ton-miles	Typical Train Speeds	Typical Number of Locomotives per Train	Work on Line?	Annual Riders (passenger trains only)
Freight		Sterling	Denver		Coal load	125	6904	7.0	5,118,546,000	50	4		
Freight		Denver	Sterling		Coal empty	125	6898	7.0	1,019,971,000	50	4		
Freight		Denver	Pueblo		Coal load	125	68916	7.0	4,953,337,000	50	4		
Freight		Pueblo	Denver		Coal empty	125	6898	7.0	994,394,000	50	4		
Freight		Pueblo	Amarillo		Coal load	124	6836	6.0	11,621,202,000	45	4		
Freight		Amarillo	Pueblo		Coal empty	124	6827	6.0	2,237,530,000	45	4		
Freight		Mcook	Denver		Grain load	103	6355	6.0	357,352,000	50	3		
Freight		Denver	McCook		Grain empty	96	5831	0.5	83,409,000	50	2		
Freight		Denver	Pueblo		Grain load	92	5377	0.5	279,258,000	50	3		
Freight		Pueblo	Denver		Grain empty	97	5604	0.5	70,894,000	50	2		
Freight		Pueblo	Amarillo		Grain load	92	5416	0.5	714,537,000	45	3		
Freight		Amarillo	Pueblo		Grain empty	89	4882	0.5	104,792,000	45	2		
Manifest		McCook	Denver		manifest	76	4585	2.0	1,052,283,000	50	2		
Manifest		Denver	McCook		manifest	90	5546	1.5	840,614,000	50	2		
Manifest		Sterling	Denver		manifest	54	3064	0.5	74,710,000	50	2		
Manifest		Denver	Sterling		manifest	71	4656	0.5	69,475,000	50	3		
Manifest		Denver	Pueblo		manifest	61	3833	2.0	517,354,000	50	3		
Manifest		Pueblo	Denver		manifest	68	4292	2.0	309,204,000	50	3		
Manifest		Pueblo	Amarillo		manifest	72	4474	1.0	812,065,000	45	2		
Manifest		Amarillo	Pueblo		manifest	89	4882	1.0	404,479,000	45	2		
Manifest		Denver	Cheyenne		manifest	70	5069	1.0	149,440,000	45	3		
Manifest		Cheyenne	Denver		manifest	69	4672	1.0	285,582,000	45	3		
Intermodal		McCook	Denver		Containers	55	4763	2.0	651,801,000	50	2		
Intermodal		Denver	McCook		Containers	53	4595	1.5	546,725,000	50	2		
Intermodal		Denver	Pueblo		Containers	55	5061	0.5	51,633,000	50	2		
Intermodal		Pueblo	Denver		Containers	64	6026	0.1	4,861,000	50	2		
Intermodal		Pueblo	Amarillo		Containers	53	4900	0.5	118,770,000	45	2		
Intermodal		Amarillo	Pueblo		Containers	66	6233	0.1	8,821,000	45	2		
Passenger		McCook	Denver		passenger	no consist data							
Passenger		Denver	McCook		passenger	no consist data							
Commuter													

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Table 4.2.7 Existing UPRR Track Data - 2004

Segment ID	Between		And		Segment Length (mi.)	2003	Trackage Rights?	2030	Trackage Rights?	Track Description (SMT, DMT)	Class	Train Movement Control	Number of Grade Crossings	Number of Rail Shippers (Heavy, Light, None)	Number of Industry Tracks	Number of Sen. Noise Rec.
U-1	Julesberg	CO	Sterling	CO	57.01	UPRR	No	UPRR	No	SMT				Light		None
U-2	Sterling	CO	Union	CO	23.99	UPRR	BNSF	UPRR	BNSF	SMT		BNSF		None		None
U-3	Speer	WY	LaSalle	CO	51.38	UPRR	No	UPRR	No	SMT	4	CTC		Heavy	Heavy	None
	Union	CO	LaSalle	CO	69.65	UPRR				Out of Service	Out Of Service	Out of Service		None	Out of Service	None
U-4	LaSalle	CO	Dent	CO		UPRR	No	UPRR	No	SMT	2	YL		Light	Light	None
	Dent	CO	Fort Collins	CO		UPRR	No	UPRR	No	SMT	2	TWC		Light	Light	None
	Fort Collins	CO	Boettcher	CO		UPRR	No	UPRR	No	SMT	2	YL	168	Light	Light	None
U-6	LaSalle	CO	Sand Creek Jct	CO	42.09	UPRR	No	UPRR	No	SMT	4	CTC	**For Greeley**	Heavy	Heavy	None
U-7	Sand Creek Jct	CO	DRI Jct	CO	1.54	UPRR	No	UPRR	No	SMT	4	YL / 2MT	Subdivision	None	Heavy	None
U-8	DRI Jct	CO	DRGW Jct	CO	0.77	UPRR	No	UPRR	No	SMT	2	YL		None	None	None
U-9	DRGW Jct	CO	Pullman Jct	CO	1.3	UPRR	No	UPRR	No	SMT	2	YL		Light	Heavy	None
U-24	Belt Jct	CO	Sandown	CO	3.85	DRI	No	UPRR	No	SMT	2	YL	**For Limon**	Heavy	Heavy	None
U-25	Sandown	CO	Sable	CO		UPRR	No	UPRR	No	SMT	2	TWC	Subidivision	Heavy	Heavy	None
U-26	Sable	CO	Aroya	CO		UPRR	No	UPRR	BNSF	SMT	4	TWC	215	Heavy	Heavy	None
U-27	Aroya	CO	Sharon Springs	KS	77.55	UPRR	No	UPRR	No	SMT	4	TWC		Light	Light	None
U-32	Denver	CO	Burnham	CO		UPRR/BNSF	No	UPRR/BNSF	No	DMT	4	CTC		Light	Moderate	None
U-33	Burnham	CO	Littleton	CO		UPRR/BNSF	No	UPRR/BNSF	No	DMT	4	CTC		Light	Moderate	None
U-33	Littleton	CO	Blakeland	CO		UPRR/BNSF	No	UPRR/BNSF	No	2MT (Directional)	4	CTC		Light	Moderate	None
U-34	Blakeland	CO	Palmer Lake	CO		UPRR/BNSF	No	UPRR/BNSF	No	2MT (Directional)	4	CTC		Light	Light	None
U-34	Palmer Lake	CO	Colorado Springs	CO		UPRR/BNSF	No	UPRR/BNSF	No	SMT	4	CTC	168	Heavy	Heavy	None
U-35	Colorado Springs	CO	Bragdon	CO	32.95	UPRR/BNSF	No	UPRR/BNSF	No	2MT (Directional)	4	CTC	**For Co. Springs**	Heavy	Heavy	None
U-36	Bragdon	CO	Pueblo	CO	9.99	UPRR/BNSF	No	UPRR/BNSF	No	2MT (Directional)	4	CTC	Subdivision	Light	Light	None
U-37	Pueblo	CO	Walsenburg	CO	52.31	UPRR/BNSF	No	UPRR/BNSF	No	2MT (Directional)	3	YL / 2MT		None	Light	None
U-38	Walsenburg	CO	Trinidad	CO	40.75	UPRR/BNSF	No	UPRR/BNSF	No	SMT	BNSF	CTC	All of	None	BNSF	None
U-39	Pueblo	CO	NA Jct	CO	26.07	UPRR/BNSF	No	UPRR/BNSF	No	SMT	4	BNSF	149	Light	Light	None
U-40	NA Jct	CO	La Junta	CO	36.36	BNSF	UPRR	BNSF	UPRR	SMT	BNSF	BNSF	**Tennessee Pass**	None	BNSF	None
																None
S-1	NA Jct	CO	Towner	CO	60.38	CKP	No	CKP	No	SMT	1	CKP		Light		None
S-2	Eaton	CO	Loveland	CO	25.27	GWR	No			SMT	GWR	GWR		GWR		None
S-3	Officer Jct	CO	Longmont	CO	23.86	GWR	No			SMT	GWR	GWR		GWR		None
S-4	Dent	CO	Welty	CO	11.09		No			SMT	GWR			GWR		None
S-5	Walsenberg	CO	Alamosa Jct	CO	76.73	SLRG	No	SLRG	No	SMT	SLRG	SLRG		SLRG		None
S-6	Alamosa Jct	CO	Derrick	CO	69.98	SLRG	No	SLRG	No	SMT	SLRG	SLRG		SLRG		None
S-7	Alamosa Jct	CO	Antonito	CO	29.28	SLRG	No	SLRG	No	SMT	SLRG	SLRG		SLRG		None
																None
N-1	Omar	CO	Peoria	CO	35.31	New	New	TBD	TBD	SMT				New		None
N-2	Aroya	CO	Las Aminas Jct	CO	54.51	New	New	TBD	TBD	SMT				New		None

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Table 4.2.8 Existing UPRR Train Data - 2004

Train Type	Route (Map Ref No.)	Origin	Destination	Segment ID	Typical Number of Cars	Typical Train Length	Trains/day (TPD)	Annual Ton-miles	Typical Train Speeds	Typical Number of Locomotives per Train	Annual Fuel usage (gal)	Work on Line (Yes or No)	Annual Riders (passenger trains only)
Manifest		Denver	Cheyenne		80-90	7500' max							
Manifest		Denver	Pueblo		75	6900' (tonnage restriction							
Manifest		Denver	Salina		80	9000'							
Intermodal		Denver	Cheyenne		105	7500' max							
Automotive		Denver	Cheyenne		80	7500' max							
Local		Denver	Mesa		Various	6000'							
Local		Denver	Cheyenne		Various	7500' max							
Local		Denver	Sedalia		Various	6900' max							
Passenger		Denver	Grand Junction		AMTRAK SKI TRAIN								
Commuter					NONE								
Coal		Craig or Grand Jct.	Denver		105		225 per year						
Coal		Craig or Grand Jct.	Pueblo / South		105		352 per year						
Coal		Craig or Grand Jct.	Greeley / North		105		329 per year						
Coal		Craig or Grand Jct.	Limon / East		105		1,199 per year						
Coal		Denver	Craig or Grand Jct.		105		225 per year						
Coal		Pueblo / South	Craig or Grand Jct.		105		352 per year						
Coal		Greeley / North	Craig or Grand Jct.		105		329 per year						
Coal		Limon / East	Craig or Grand Jct.		105		1,199 per year						
Coal		Cheyenne, WY	Co. Springs		120		84 per year						
Coal		Co. Springs	Cheyenne, WY		120		84 per year						
Coal		Cheyenne, WY	Pueblo / South		120		24 per year in 2004						
Coal		Pueblo / South	Cheyenne, WY		120		24 per year in 2004						

NOTE: Does not include 466 empties and 56 loads to / from Colorado that moved via Salt Lake rather than Denver

NOTE: Does not include 13 "Test" or 169 "Grocery" coal trains from CO mines

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Figure 4.2.1 Existing Train Counts – Year 2004 – State

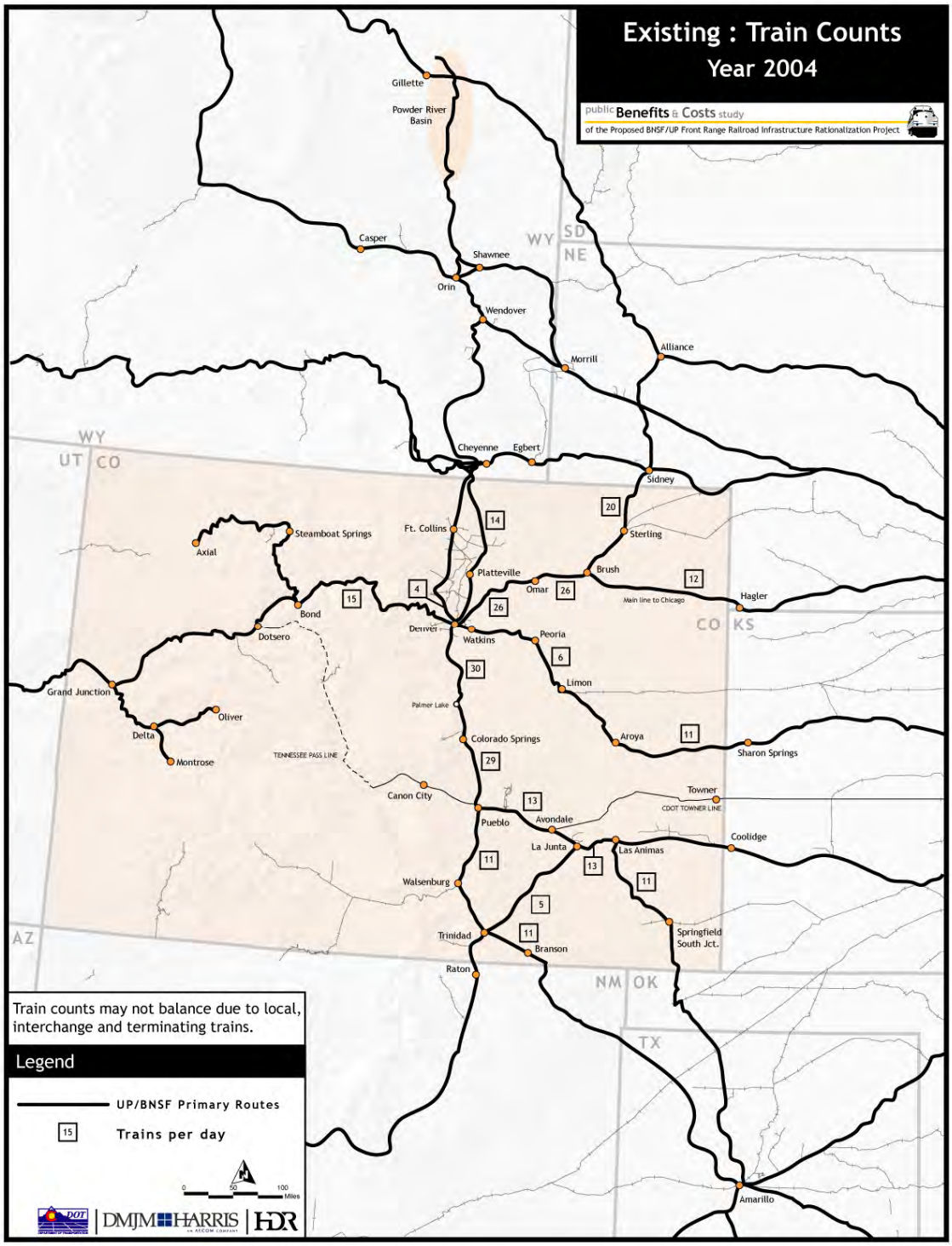

Figure 4.2.2 Existing Train Counts – Year 2004 – Denver

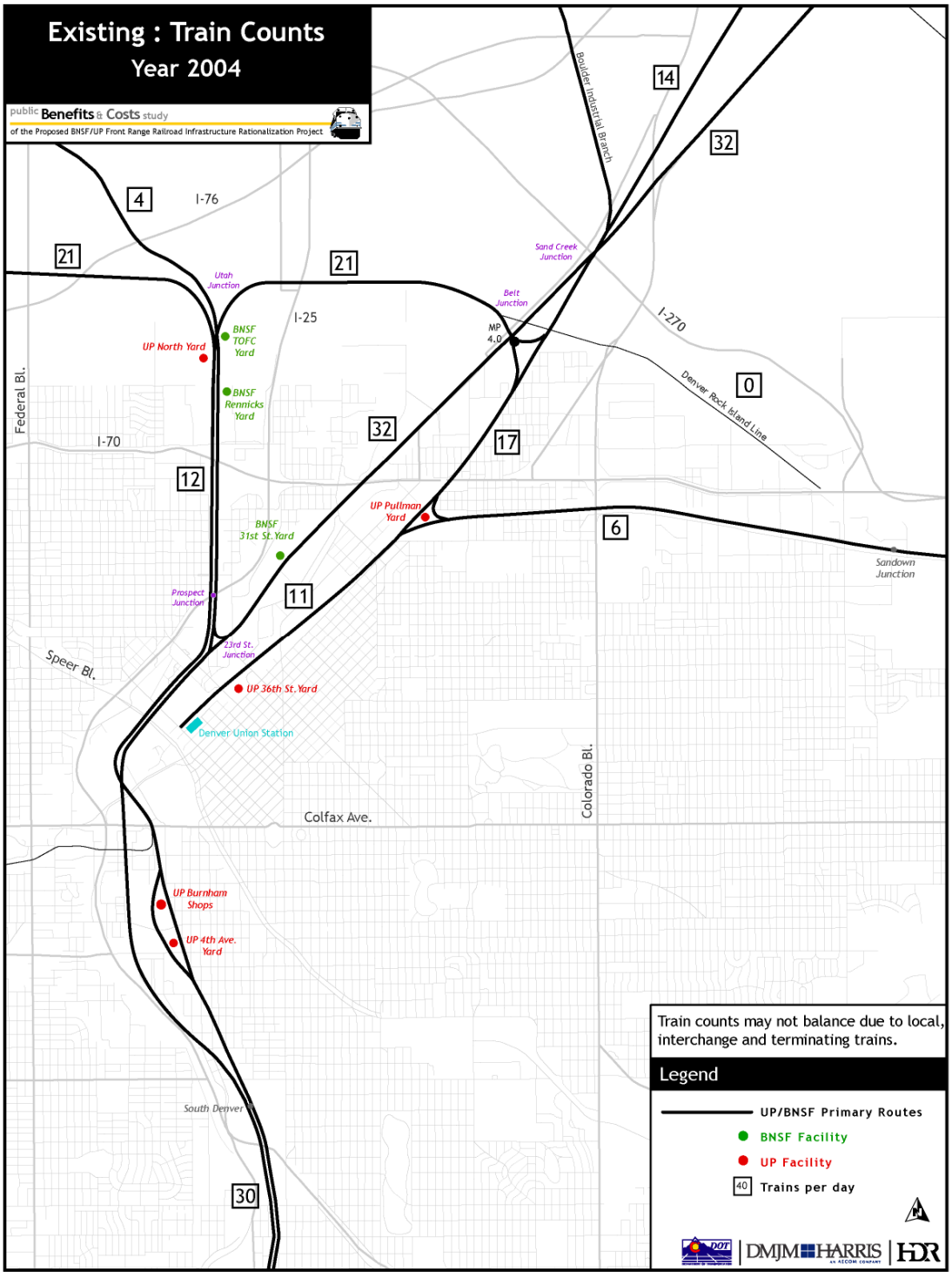

Figure 4.2.3 BNSF Segment Id's – State

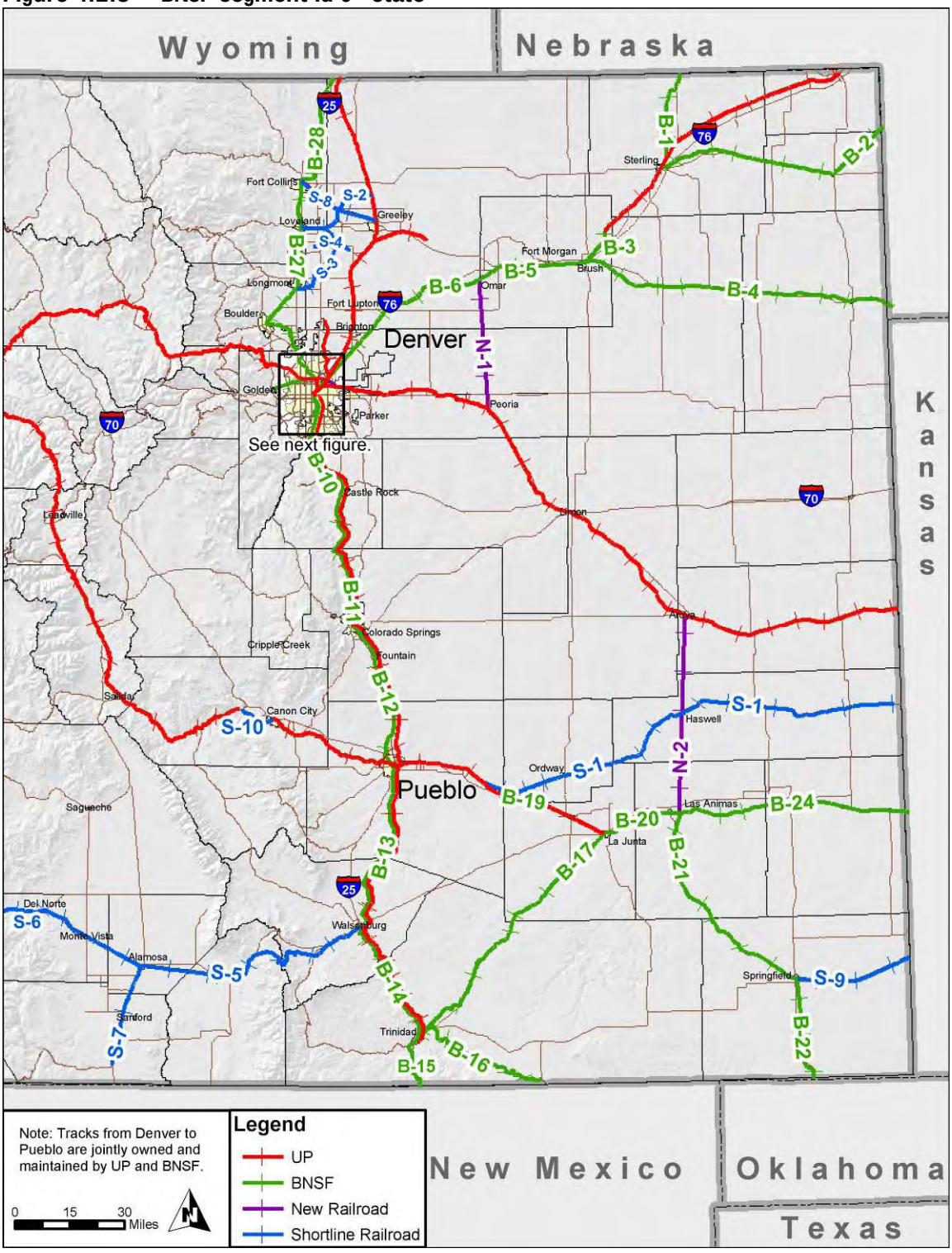

Figure 4.2.4 BNSF Segment Id's - Denver

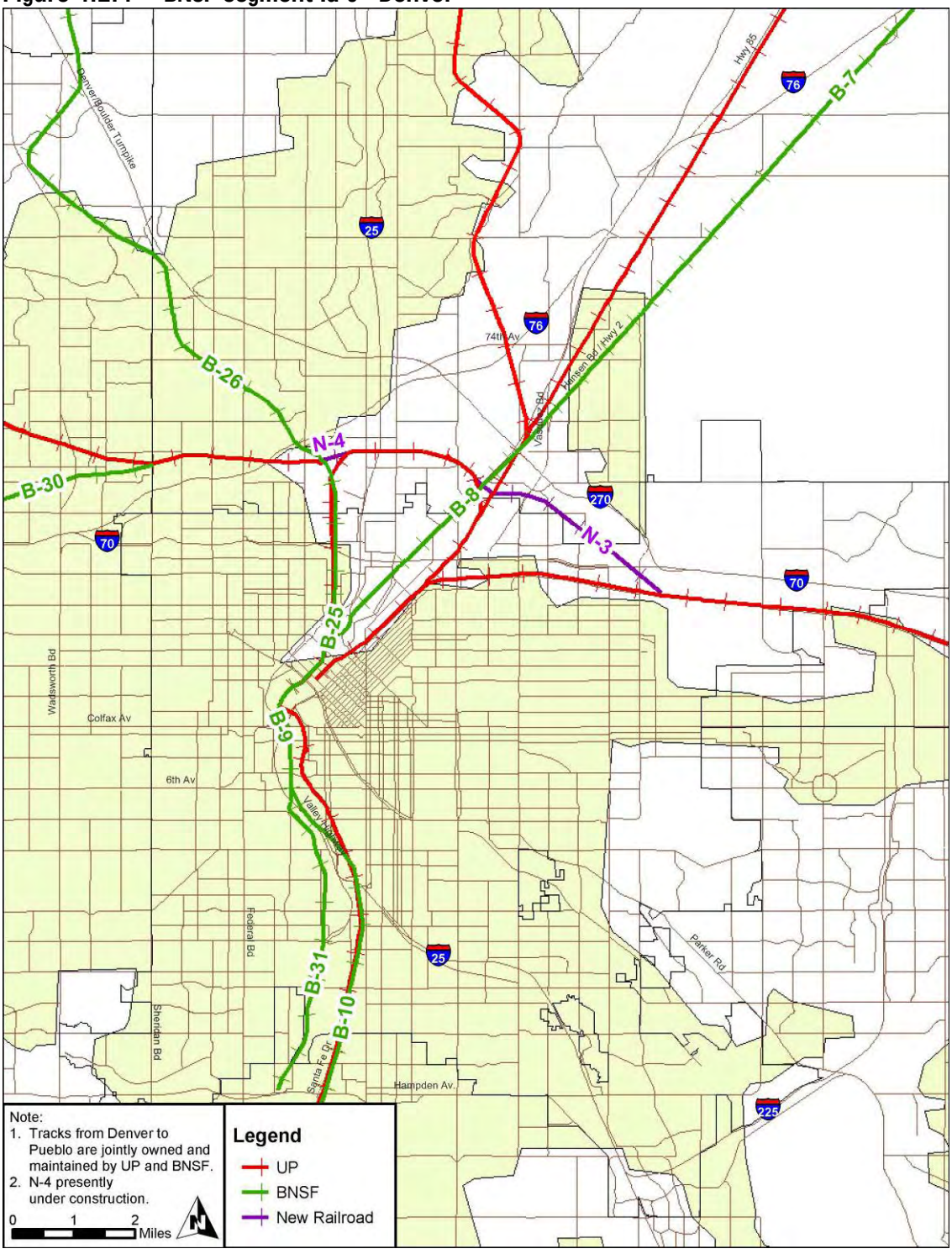

Figure 4.2.5 UP Segment Id's - State

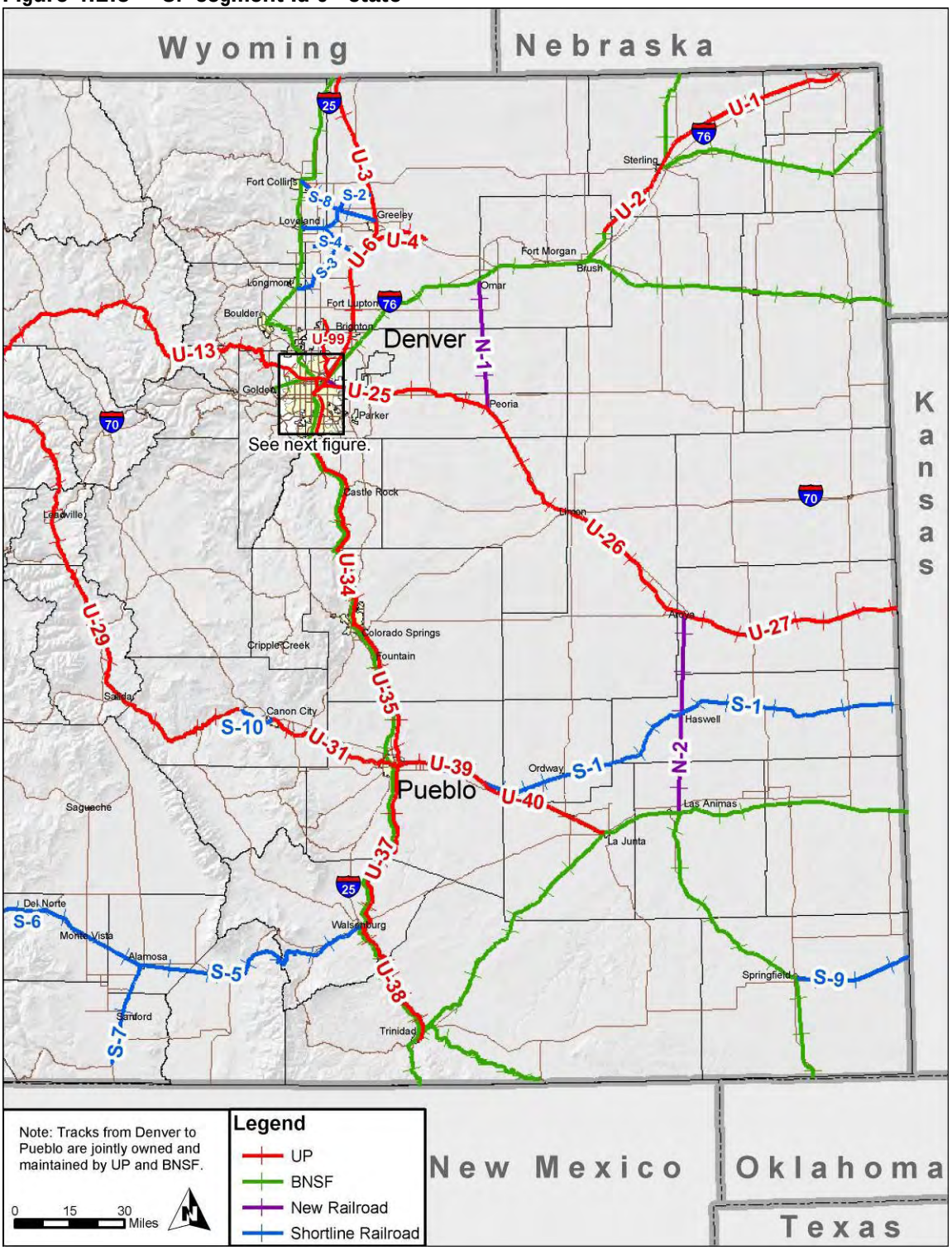

Figure 4.2.6 UP Segment Id's - Denver

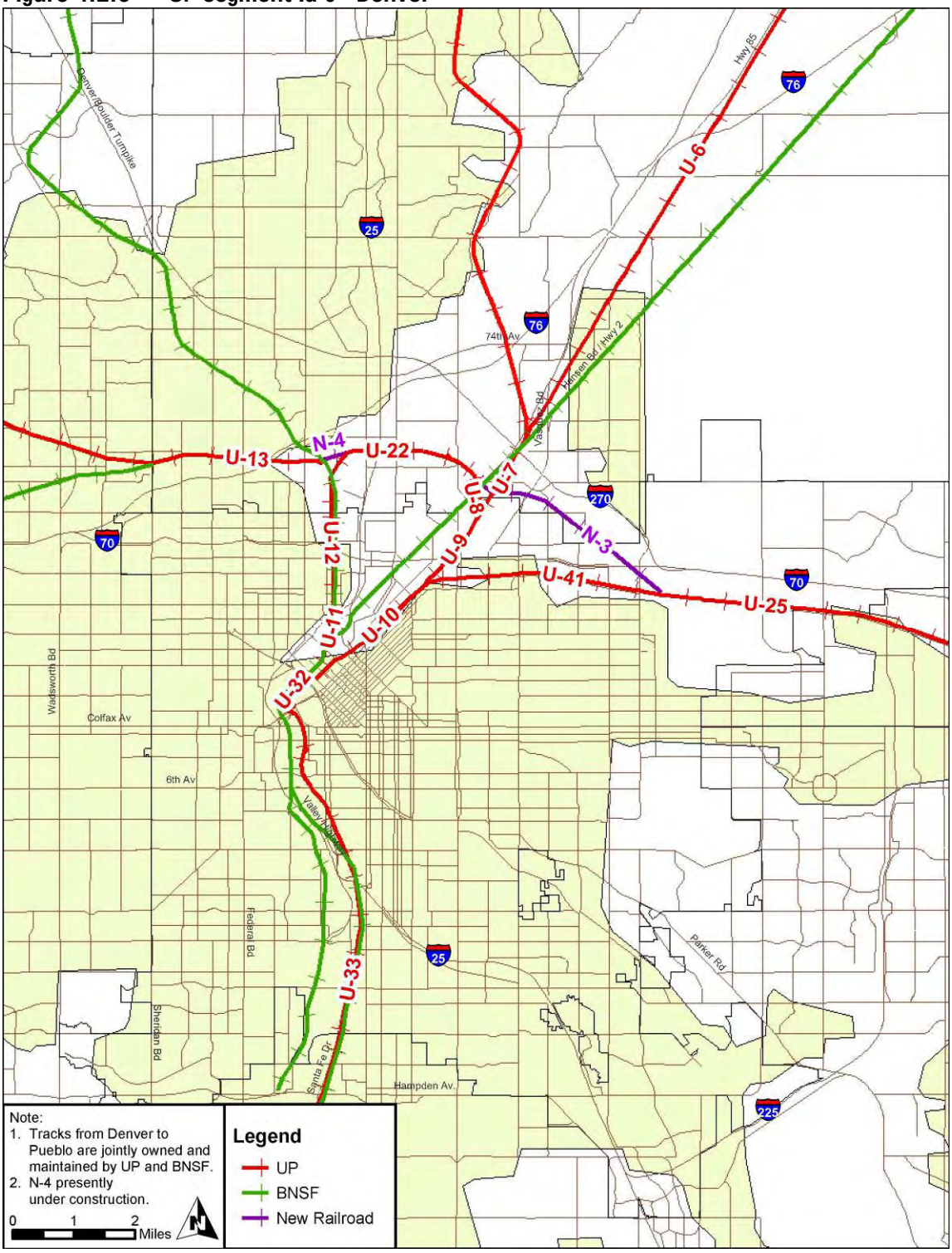

Figure 4.2.7 Existing Train Volumes – 2004 – BNSF – State

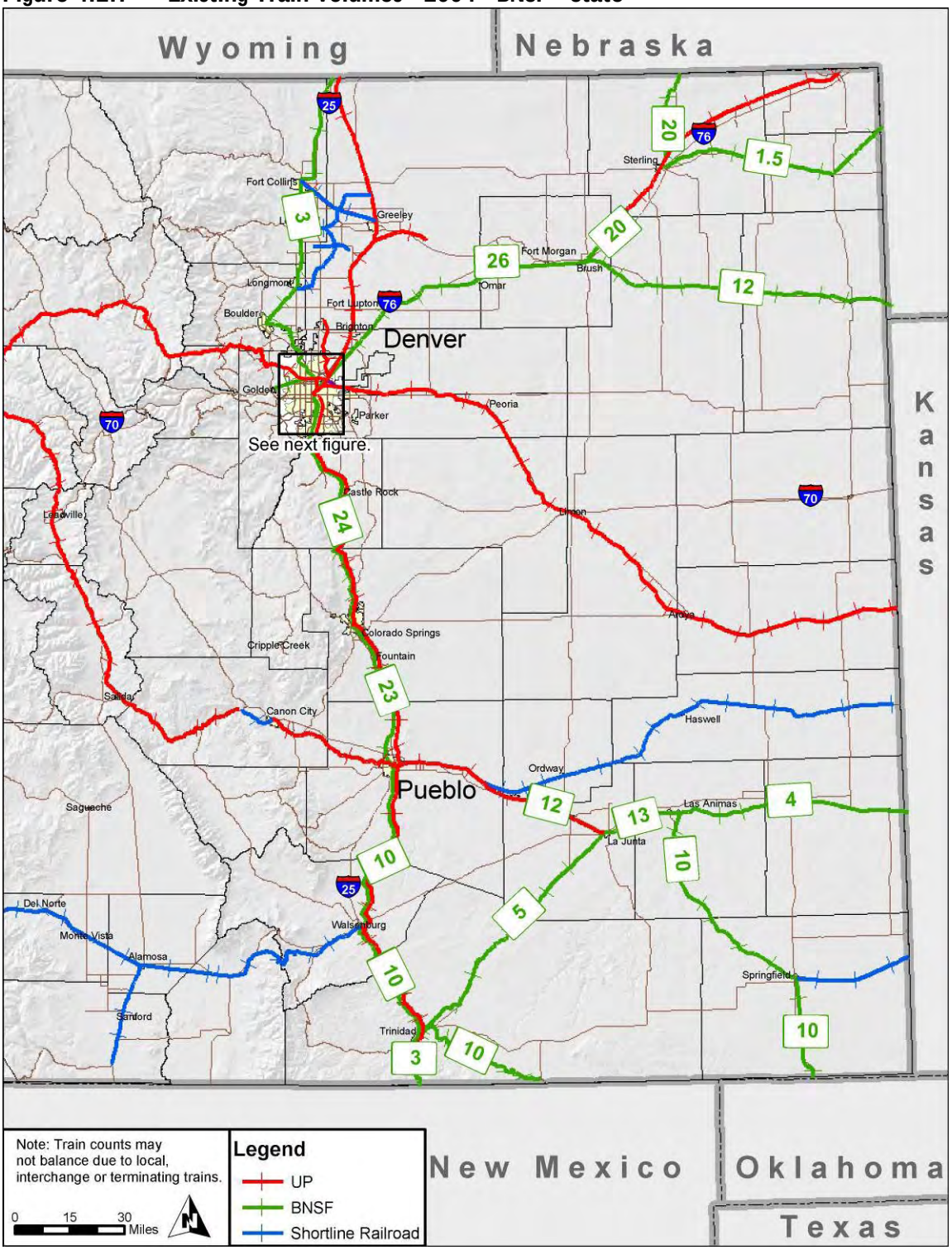

Figure 4.2.8 Existing Train Volumes – 2004 – BNSF – Denver

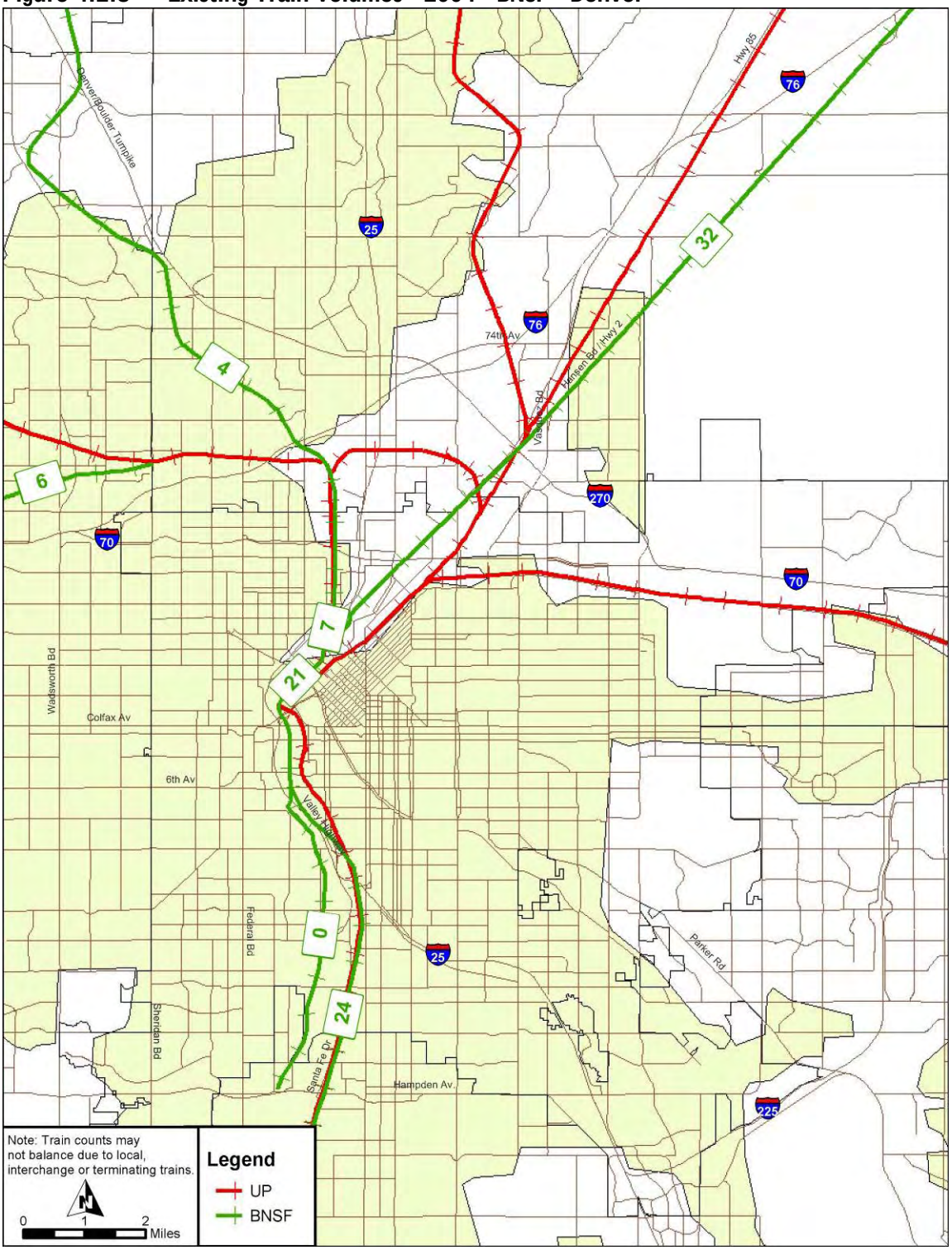

Figure 4.2.9 Existing Train Volumes – 2004 – UP – State

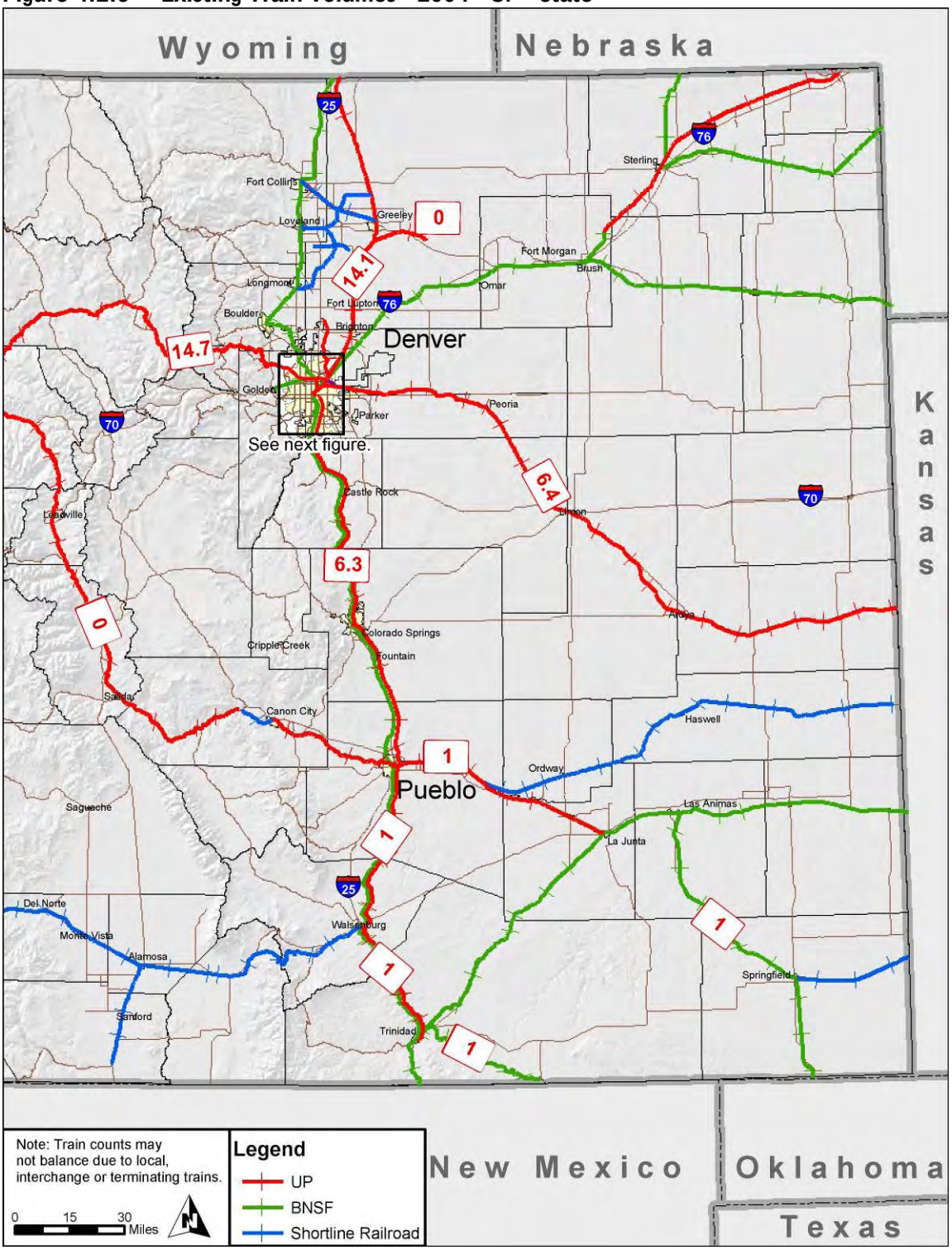

Figure 4.2.10 Existing Train Volumes – 2004 – UP – Denver

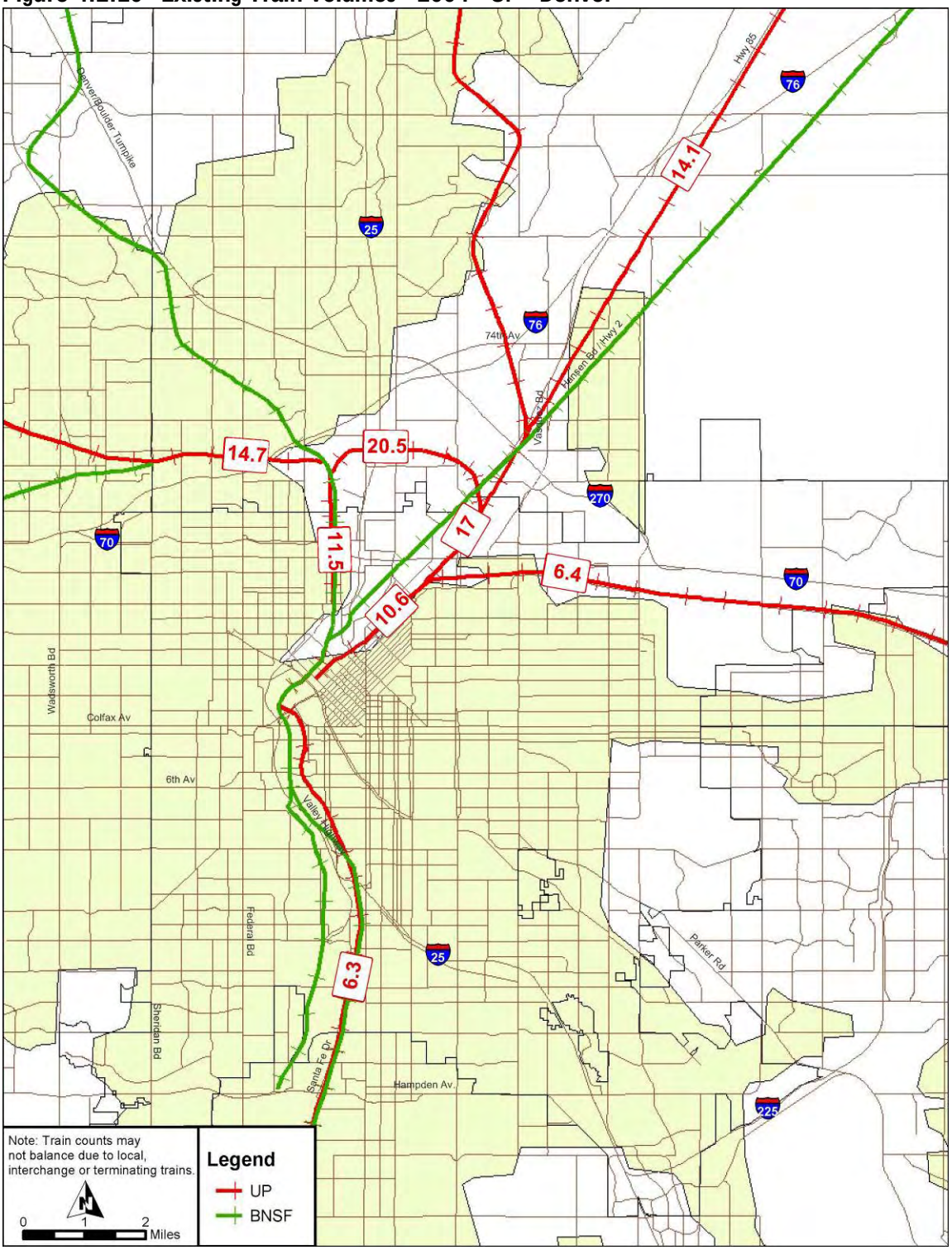

Table 4.2.9 Existing BNSF Yard Data - 2004

Yard Name	Yard Location	Yard Type	Size (Acre)	Trains/day	Redevelopment Potential	Lift Capacity	Annual Lifts	Container Capacity	Containers per day
Globeville			1000						
Rennick			117						
TOFC			55						

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Table 4.2.10 Existing UPRR Yard Data – 2004

Yard Name	Yard Location	Yard Type	Size (Acre)	Trains/day	Redevelopment Potential	Lift Capacity	Annual Lifts	Container Capacity	Containers per day
40th & 40th	40th Street & 40th	Intermodal	68	5	Yes	125,000	88,450	No Storage	246 (Based on 360 Days / Yr)
North Yard	901 W. 48th Avenue	Flat Switch		25	No				
36th	Wazee	Flat Switch	30	10	Yes				
Monaco	Smith Road & Monoco	Flat Switch		2 Locals	No				
Roydale	Smith Road & Peoria	Flat Switch		3 Locals	No				
Sandcreek	52nd Avenue	Flat Switch		1 Local	No				
Rolla	96th Avenue & Hwy 85	Ind Support	119.7	3 Locals / MainLine set	Yes				
La Salle	201 Union Street	Flat Switch		4 Locals / MainLine set	No				
Greeley	Greeley	Yard Tracks		1 Local	No				
Burnham	800 Seminole Rd	Flat Switch	60	1 Local/Switch	Yes				
Colorado Springs	Bijou	Flat Switch		2 Locals / MainLine set	Yes				
Pueblo	400 W. "B" Street	Flat Switch			No				

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Figure 4.2.11 Railroad Yard Map – 2004 – State

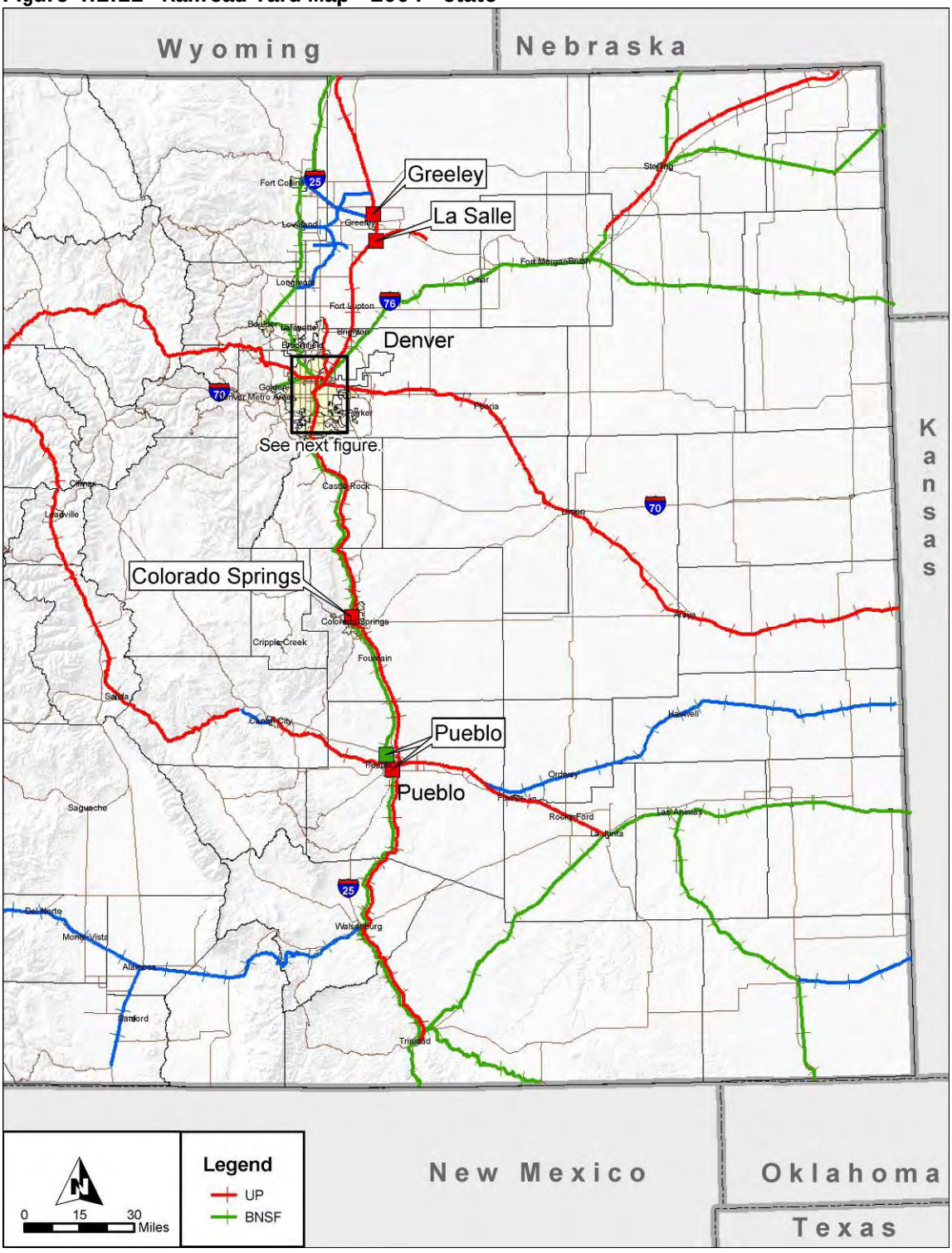


Figure 4.2.12 Railroad Yard Map – 2004 – Denver

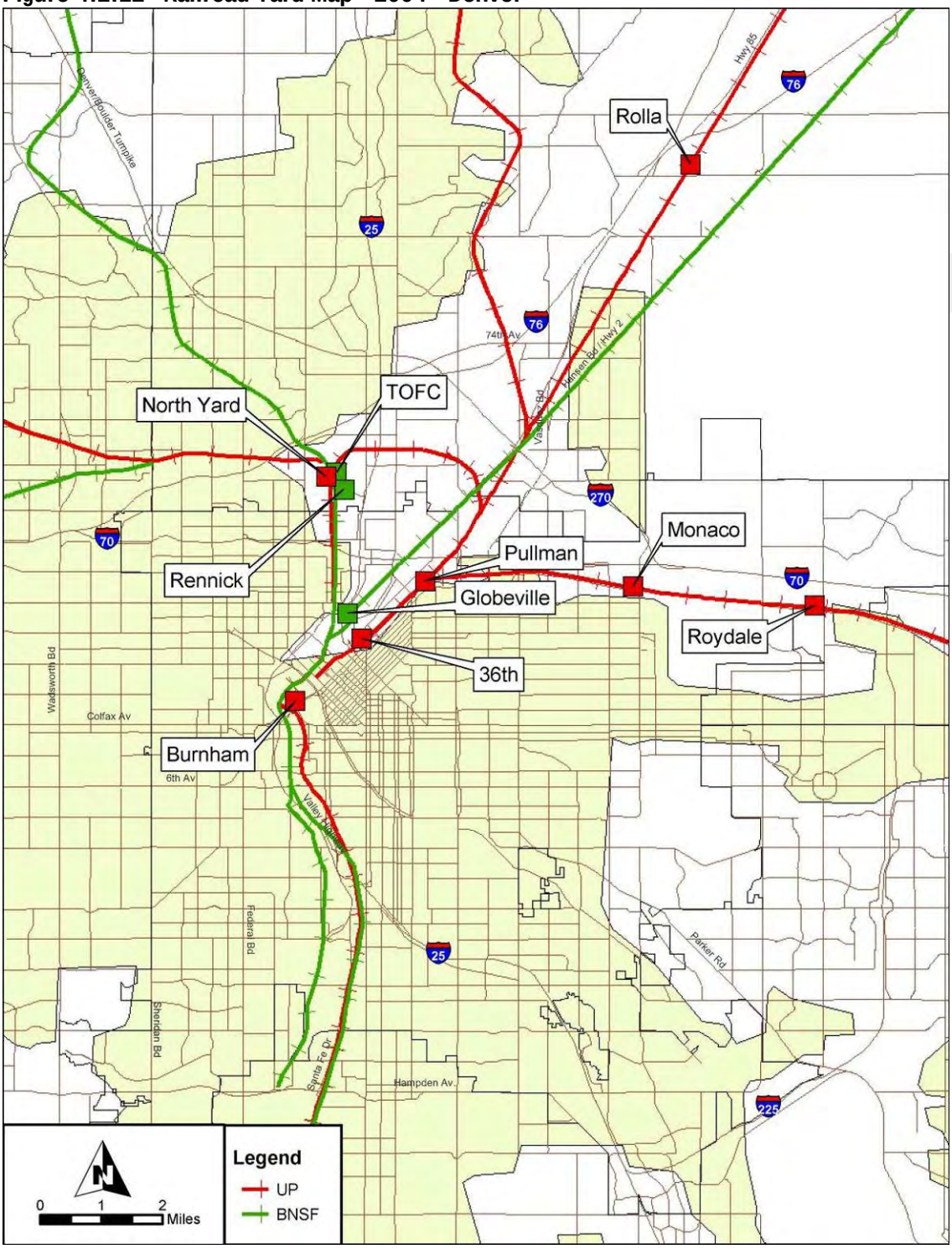


Table 4.2.11 Existing At-grade Crossings South of Denver along US 85 to Castle Rock and I-25 to New Mexico State Line (Branson)

Xing ID	RR	RR Division	RR Subdivision	Highway	Street	Branch	MP	TPD 2004	Max. TT Speed	Min. Speed	Max Speed	# of Lanes	AADT 2004	County	City
003621F	BNSF	POWDER RIVER	PIKES PEAK		TITAN RD	20TH ST-PUEBLO	001879	17	45	1	45	2	2240	DOUGLAS	LOUVIERS
003616J	BNSF	POWDER RIVER	PIKES PEAK	CR 16	CO RD 16	20TH ST-PUEBLO	002095	17	45	1	45	2	140	DOUGLAS	LOUVIERS
003615C	BNSF	POWDER RIVER	PIKES PEAK		AIRPORT RD	20TH ST-PUEBLO	002173	17	45	1	45	1	350	DOUGLAS	LOUVIERS
003612G	BNSF	POWDER RIVER	PIKES PEAK	FAS 67	MANHARDT ST	20TH ST-PUEBLO	002457	17	45	1	45	2	7089	DOUGLAS	SEDALIA
003598N	BNSF	POWDER RIVER	PIKES PEAK		TERRITORIAL RD	20TH ST-PUEBLO	003445	17	45	1	45	2	14	DOUGLAS	CASTLE ROCK
003593E	BNSF	POWDER RIVER	PIKES PEAK		TOMAH ROAD	20TH ST-PUEBLO	003794	17	45	1	45	2	14	DOUGLAS	LARKSPUR
003590J	BNSF	POWDER RIVER	PIKES PEAK		LARKSPUR RD	20TH ST-PUEBLO	004194	17	40	1	40	2	7	DOUGLAS	LARKSPUR
003586U	BNSF	POWDER RIVER	PIKES PEAK	CR 74	CO RD 74	20TH ST-PUEBLO	004629	17	35	1	35	2	28	DOUGLAS	PALMER LAKE
003528Y	BNSF	POWDER RIVER	PIKES PEAK	FAU2225	MAIN ST	20TH ST-PUEBLO	008278	34	55	1	55	4	14994	EL PASO	SECURITY
003527S	BNSF	POWDER RIVER	PIKES PEAK	FAU2910	FONTAINE BLVD	20TH ST-PUEBLO	008402	34	55	1	55	4	16091	EL PASO	FOUNTAIN
003525D	BNSF	POWDER RIVER	PIKES PEAK		MESA RD	20TH ST-PUEBLO	008575	17	45	1	45	2	11580	EL PASO	FOUNTAIN
003524W	BNSF	POWDER RIVER	PIKES PEAK	FAU2929	COMANCHE VILLAGE	20TH ST-PUEBLO	008714	17	55	1	55	4	10727	EL PASO	FOUNTAIN
003523P	BNSF	POWDER RIVER	PIKES PEAK	FAU2926	OHIO ST	20TH ST-PUEBLO	008808	17	55	1	55	2	14994	EL PASO	FOUNTAIN
003515X	BNSF	POWDER RIVER	PIKES PEAK		OLD PUEBLO RD	20TH ST-PUEBLO	009540	16	55	1	55	2	41	EL PASO	FOUNTAIN
003514R	BNSF	POWDER RIVER	PIKES PEAK	NFA 25	WIGWAM RD	20TH ST-PUEBLO	009782	17	55	1	55	1	7	EL PASO	FOUNTAIN
003513J	BNSF	POWDER RIVER	PIKES PEAK	CR 100	CO RD 100	20TH ST-PUEBLO	010016	17	55	1	55	1	14	PUEBLO	FOUNTAIN
003512C	BNSF	POWDER RIVER	PIKES PEAK	CR 102	TOTTON RD	20TH ST-PUEBLO	010122	17	55	1	55	1	28	PUEBLO	FOUNTAIN
003508M	BNSF	POWDER RIVER	PIKES PEAK	CR 104	CO RD 104	20TH ST-PUEBLO	010462	17	55	1	55	2	14	PUEBLO	PUEBLO
003507F	BNSF	POWDER RIVER	PIKES PEAK	CR 108	CO RD 108	20TH ST-PUEBLO	010538	17	55	1	55	1	14	PUEBLO	PUEBLO
003505S	BNSF	POWDER RIVER	PIKES PEAK	CR 110	CO RD 110	20TH ST-PUEBLO	010638	17	55	1	55	1	14	PUEBLO	PUEBLO
003476J	BNSF	POWDER RIVER	PIKES PEAK		CLARENCE ST	20TH ST-PUEBLO	012025	17	10	1	10	2	70	PUEBLO	PUEBLO
245077R	BNSF	POWDER RIVER	SPANISH PEAKS	CR 302	COUNTY RD	PUEBLO-TRINIDAD	012783	22	49	1	49	2	175	PUEBLO	PUEBLO
245088D	BNSF	POWDER RIVER	SPANISH PEAKS		RUSSELL ST	PUEBLO-TRINIDAD	017152	22	49	1	49	2	1211	HUERFANO	WALSENBURG
245089K	BNSF	POWDER RIVER	SPANISH PEAKS	FAP 925	MAIN ST	PUEBLO-TRINIDAD	017162	21	49	1	49	2	10369	HUERFANO	WALSENBURG
245091L	BNSF	AMARILLO	SPAISH PEAKS		5TH EO HENDREN	MAIN	017179	24	20	1	20	2	673	HUERFANO	WALSENBURG
245090E	BNSF	POWDER RIVER	SPANISH PEAKS		HENDREN ST	PUEBLO-TRINIDAD	017184	22	49	1	49	2	1346	HUERFANO	WALSENBURG
245092T	BNSF	POWDER RIVER	SPANISH PEAKS		6TH ST	PUEBLO-TRINIDAD	017191	22	49	1	49	2	269	HUERFANO	WALSENBURG
245093A	BNSF	POWDER RIVER	SPANISH PEAKS	FAP 160	7TH ST	PUEBLO-TRINIDAD	017204	22	49	1	49	4	8319	HUERFANO	WALSENBURG
244660L	BNSF	POWDER RIVER	SPANISH PEAKS	CR 310	ROUSE RD	PUEBLO-TRINIDAD	018262	22	35	1	35	2	121	HUERFANO	PRYOR
244657D	BNSF	POWDER RIVER	SPANISH PEAKS		AGUILAR RD	PUEBLO-TRINIDAD	018730	22	35	1	35	2	67	LAS ANIMAS	AGUILAR
244656W	BNSF	POWDER RIVER	SPANISH PEAKS	NFA 25	I-25 SPUR	PUEBLO-TRINIDAD	019056	22	45	1	45	2	1875	LAS ANIMAS	AGUILAR
245198N	BNSF	POWDER RIVER	SPANISH PEAKS		CO RD	PUEBLO-TRINIDAD	019753	22	45	1	45	2	94	LAS ANIMAS	AGUILAR
245188H	BNSF	POWDER RIVER	TWIN PEAKS	CO 239	SH CO 239	TEXLIN-TRINIDAD	021046	17	35	1	35	2	808	LAS ANIMAS	TRINIDAD
245187B	BNSF	POWDER RIVER	TWIN PEAKS		GODDARD EO I25	TEXLIN-TRINIDAD	021117	17	35	1	35	2	269	LAS ANIMAS	TRINIDAD
245153G	BNSF	POWDER RIVER	TWIN PEAKS		TRNDAD NEO CR	TEXLIN-TRINIDAD	021587	17	35	1	35	2	13	LAS ANIMAS	TRINIDAD
245155V	BNSF	POWDER RIVER	TWIN PEAKS			TEXLIN-TRINIDAD	021808	17	35	1	35	2	13	LAS ANIMAS	TRINIDAD
245158R	BNSF	POWDER RIVER	TWIN PEAKS		TRINIDAD EO CR	TEXLIN-TRINIDAD	022279	17	35	1	35	2	67	LAS ANIMAS	TRINIDAD
245160S	BNSF	POWDER RIVER	TWIN PEAKS		TRNDAD EO CR	TEXLIN-TRINIDAD	023070	17	35	1	35	2	27	LAS ANIMAS	TRINIDAD
245165B	BNSF	POWDER RIVER	TWIN PEAKS		TRINCRA NWO CR	TEXLIN-TRINIDAD	024518	17	35	1	35	2	13	LAS ANIMAS	TRINCHERA
245169D	BNSF	POWDER RIVER	TWIN PEAKS		TRINCRA EO CR	TEXLIN-TRINIDAD	025318	17	35	1	35	2	54	LAS ANIMAS	TRINCHERA
245172L	BNSF	POWDER RIVER	TWIN PEAKS		OLIVER SWO MAIN	TEXLIN-TRINIDAD	026209	17	35	1	35	2	13	LAS ANIMAS	BRANSON

Table 4.2.12 Existing At-grade Crossings
Wiggins to Denver along I-76

Xing ID	RR	RR Division	RR Subdivision	Highway	Street	Branch	MP	TPD 2004	Max. TT Speed	Min. Speed	Max Speed	# of Lanes	AADT 2004	County	City
057229S	BNSF	POWDER RIVER	BRUSH	CR 3	CO RD 3	E BRUSH-20TH ST	048019	33	79	1	79	2	269	MORGAN	WIGGINS
057228K	BNSF	POWDER RIVER	BRUSH	CR 2	CO RD 2	E BRUSH-20TH ST	048137	36	79	1	79	2	27	MORGAN	WIGGINS
057224H	BNSF	POWDER RIVER	BRUSH	CR 75	CO RD 75	E BRUSH-20TH ST	049445	36	79	1	79	2	67	WELD	ROGGEN
057218E	BNSF	POWDER RIVER	BRUSH	CR 63	CO RD 63	E BRUSH-20TH ST	050247	36	79	1	79	2	13	WELD	KEENESBURG
057215J	BNSF	POWDER RIVER	BRUSH		ELM ST	E BRUSH-20TH ST	050543	36	79	1	79	2	1211	WELD	KEENESBURG
057213V	BNSF	POWDER RIVER	BRUSH	CR 53	CO RD 53	E BRUSH-20TH ST	050806	36	79	1	79	2	135	WELD	KEENESBURG
057212N	BNSF	POWDER RIVER	BRUSH	CR 51	CO RD 51	E BRUSH-20TH ST	050908	36	79	1	79	2	27	WELD	HUDSON
089363S	BNSF	POWDER RIVER	BRUSH	CR 160	CO RD 160	E BRUSH-20TH ST	052043	36	79	1	79	2	135	ADAMS	BRIGHTON
057200U	BNSF	POWDER RIVER	BRUSH		BROMLEY	E BRUSH-20TH ST	052183	36	79	1	79	2	538	ADAMS	BRIGHTON
057195A	BNSF	COLORADO	BRUSH		E 120TH AVE	E BRUSH-20TH ST	052727	36	79	1	79	2	4632	ADAMS	BRIGHTON
057193L	BNSF	POWDER RIVER	BRUSH		POTOMAC ST	E BRUSH-20TH ST	052829	36	79	1	79	2	49	ADAMS	HENDERSON
057191X	BNSF	POWDER RIVER	BRUSH	FAS 44	104TH AVE	E BRUSH-20TH ST	052996	36	79	1	79	2	10018	ADAMS	ROCKY MT ARSENAL
057187H	BNSF	POWDER RIVER	BRUSH	FAU1734	88TH AVE	E BRUSH-20TH ST	053265	36	79	1	79	2	3047	ADAMS	COMMERCE CITY
057186B	BNSF	POWDER RIVER	BRUSH	FAU1718	80TH AVE	E BRUSH-20TH ST	053403	36	79	1	79	4	16091	ADAMS	COMMERCE CITY
057185U	BNSF	POWDER RIVER	BRUSH	FAU1698	72ND AVE	E BRUSH-20TH ST	053534	36	79	1	79	4	21454	ADAMS	COMMERCE CITY
057074C	BNSF	POWDER RIVER	BRUSH	FAU1642	56TH AVE	E BRUSH-20TH ST	053800	36	40	1	40	2	7680	ADAMS	COMMERCE CITY
057076R	BNSF	POWDER RIVER	BRUSH		RIVERSIDE CEM	E BRUSH-20TH ST	053896	36	40	1	40	2	269	DENVER	DENVER

Table 4.2.13 Existing At-grade Crossings Along US 50 from Las Animas to Pueblo

Xing ID	RR	RR Division	RR Subdivision	Highway	Street	Branch	MP	TPD 2004	Max. TT Speed	Min. Speed	Max Speed	# of Lanes	AADT 2004	County	City
003268H	BNSF	KANSAS	LA JUNTA	CR	CO RD	ELLINOR-LAJUNTA	053923	13	90	1	90	2	14	BENT	LAS ANIMAS
003269P	BNSF	KANSAS	LA JUNTA	CR	CO RD	ELLINOR-LAJUNTA	054020	13	90	1	90	1	14	BENT	LAS ANIMAS
003270J	BNSF	KANSAS	LA JUNTA	CR 6.25	CO RD 6.25	ELLINOR-LAJUNTA	054045	14	90	1	90	1	7	BENT	LAS ANIMAS
003260D	BNSF	KANSAS	LA JUNTA	CR 12-5	CO RD 12-5	ELLINOR-LAJUNTA	053427	13	90	1	90	1	14	BENT	LAS ANIMAS
003265M	BNSF	KANSAS	LA JUNTA	CR 8.75	CO RD 8.75	ELLINOR-LAJUNTA	053797	14	90	1	90	2	28	BENT	LAS ANIMAS
003267B	BNSF	KANSAS	LA JUNTA	CR	CO RD	ELLINOR-LAJUNTA	053848	13	90	1	90	1	14	BENT	LAS ANIMAS
003272X	BNSF	KANSAS	LA JUNTA	CR	CO RD	ELLINOR-LAJUNTA	054121	13	90	1	90	1	28	BENT	LAS ANIMAS
003278N	BNSF	KANSAS	LA JUNTA	CR 36	CO RD 36	ELLINOR-LAJUNTA	054714	14	90	1	90	2	14	OTERO	LA JUNTA
003281W	BNSF	KANSAS	LA JUNTA	CR 33	CO RD 33	ELLINOR-LAJUNTA	055061	13	90	1	90	2	140	OTERO	LA JUNTA
003366Y	BNSF	POWDER RIVER	PUEBLO		CO RD	LA JUNTA-PUEBLO	055965	11	55	1	55	2	70	OTERO	SWINK
003367F	BNSF	POWDER RIVER	PUEBLO		MAIN ST	LA JUNTA-PUEBLO	055997	11	55	1	55	2	840	OTERO	SWINK
003368M	BNSF	POWDER RIVER	PUEBLO	CR 173	CO RD 173	LA JUNTA-PUEBLO	056053	11	55	1	55	2	42	OTERO	SWINK
003370N	BNSF	POWDER RIVER	PUEBLO	CR 23	CO RD 23	LA JUNTA-PUEBLO	056165	11	55	1	55	2	137	OTERO	SWINK
003372C	BNSF	POWDER RIVER	PUEBLO		18TH RD SE	LA JUNTA-PUEBLO	056220	11	55	1	55	2	82	OTERO	SWINK
003373J	BNSF	POWDER RIVER	PUEBLO		15TH RD SE	LA JUNTA-PUEBLO	056276	11	55	1	55	2	82	OTERO	ROCKY FORD
003375X	BNSF	POWDER RIVER	PUEBLO	CR 79	10TH RD NE	LA JUNTA-PUEBLO	056388	11	55	1	55	2	137	OTERO	ROCKY FORD
003377L	BNSF	POWDER RIVER	PUEBLO	CR 81	3RD RD NE	LA JUNTA-PUEBLO	056444	11	55	1	55	2	137	OTERO	ROCKY FORD
003382H	BNSF	POWDER RIVER	PUEBLO	NFA 71	12TH ST	LA JUNTA-PUEBLO	056531	11	55	1	55	2	4394	OTERO	ROCKY FORD
003383P	BNSF	POWDER RIVER	PUEBLO		10TH ST	LA JUNTA-PUEBLO	056546	11	55	1	55	2	280	OTERO	ROCKY FORD
003384W	BNSF	POWDER RIVER	PUEBLO		MAIN ST	LA JUNTA-PUEBLO	056555	11	55	1	55	4	2800	OTERO	ROCKY FORD
003385D	BNSF	POWDER RIVER	PUEBLO		9TH ST	LA JUNTA-PUEBLO	056563	11	55	1	55	2	280	OTERO	ROCKY FORD
003386K	BNSF	POWDER RIVER	PUEBLO		7TH ST	LA JUNTA-PUEBLO	056577	11	55	1	55	2	1400	OTERO	ROCKY FORD
003387S	BNSF	POWDER RIVER	PUEBLO		5TH ST	LA JUNTA-PUEBLO	056591	11	55	1	55	2	700	OTERO	ROCKY FORD
003395J	BNSF	POWDER RIVER	PUEBLO	CR 93	CR93 10TH RD NW	LA JUNTA-PUEBLO	056725	11	55	1	55	2	700	OTERO	ROCKY FORD
003401K	BNSF	POWDER RIVER	PUEBLO	CR 183	CO RD 183	LA JUNTA-PUEBLO	056853	11	40	1	40	2	56	OTERO	ROCKY FORD
003404F	BNSF	POWDER RIVER	PUEBLO		20TH ST	LA JUNTA-PUEBLO	056950	11	40	1	40	2	28	OTERO	ROCKY FORD
003407B	BNSF	POWDER RIVER	PUEBLO	CR 155	CO RD 155	LA JUNTA-PUEBLO	057061	11	40	1	40	2	28	OTERO	MANZANOLA
003414L	BNSF	POWDER RIVER	PUEBLO		35TH ST	LA JUNTA-PUEBLO	057283	11	40	1	40	2	42	OTERO	MANZANOLA
003421W	BNSF	POWDER RIVER	PUEBLO	CR 199	CO RD 199	LA JUNTA-PUEBLO	057499	11	40	1	40	1	28	OTERO	MANZANOLA
003422D	BNSF	POWDER RIVER	PUEBLO		45 67RD NO SH50	LA JUNTA-PUEBLO	057578	11	40	1	40	1	14	OTERO	MANZANOLA
003426F	BNSF	POWDER RIVER	PUEBLO	CR 215	CO RD 215	LA JUNTA-PUEBLO	057653	11	40	1	40	2	28	OTERO	MANZANOLA
003427M	BNSF	POWDER RIVER	PUEBLO	CR 207	CO RD 207	LA JUNTA-PUEBLO	057703	11	40	1	40	1	7	OTERO	MANZANOLA
003433R	BNSF	POWDER RIVER	PUEBLO	CR 5.25	CO RD 5.25	LA JUNTA-PUEBLO	058084	11	40	1	40	1	14	OTERO	FOWLER
003435E	BNSF	POWDER RIVER	PUEBLO	CR 219	CO RD 219	LA JUNTA-PUEBLO	058161	11	40	1	40	1	14	OTERO	FOWLER
003456X	BNSF	POWDER RIVER	PUEBLO	NOSH50	PECOS ST	LA JUNTA-PUEBLO	059000	11	40	1	40	2	140	PUEBLO	FOWLER
003460M	BNSF	POWDER RIVER	PUEBLO		CHICO RD	LA JUNTA-PUEBLO	060666	11	55	1	55	2	28	PUEBLO	AVONDALE
003470T	BNSF	POWDER RIVER	PUEBLO		22ND LANE	LA JUNTA-PUEBLO	061524	11	55	1	55	2	619	PUEBLO	PUEBLO
003471A	BNSF	POWDER RIVER	PUEBLO		VISION LANE	LA JUNTA-PUEBLO	061562	11	55	1	55	2	137	PUEBLO	PUEBLO

Table 4.2.14 Existing At-grade Crossings
Southern Portion of Denver Metro Area along US 85 and between Utah and Belt Junction

Xing ID	RR	RR Division	RR Subdivision	Highway	Street	Branch	MP	TPD 2004	Max. TT Speed	Min. Speed	Max Speed	# of Lanes	AADT 2004	County	City
057090L	BNSF	DENVER	DENVER FREIGHT	FAU1441	19TH NWO CHESTNUT	MAIN	054203	51	20	3	20	2	269	DENVER	DENVER
003627W	BNSF	CENTRAL	DENVER	SH 470A	CTYLN RD EO US85	MAIN	072318	45	45	40	45	2	4566	DOUGLAS	LOUVIERS
003630E	BNSF	CENTRAL	DENVER	FAU1050	RIDGE EO SAN FE	MAIN	072577	45	45	20	25	4	8892	ARAPAHOE	LITTLETON
004059D	BNSF	CENTRAL	DENVER		TUFTS AVE	MAIN	072801	41	45	1	45	3	6341	ARAPAHOE	ENGLEWOOD
004060X	BNSF	CENTRAL	DENVER	FAU1102	QUINCY AVE	MAIN	072839	41	45	1	45	3	8878	ARAPAHOE	ENGLEWOOD
253266H	UP	DENVER	SUB DIVN 1-A	SH 53A	BROADWAY SO 60TH	BELT LINE	000086	9	20	10	20	2	15114	ADAMS	DENVER
253269D	UP	DENVER	SUB DIVN 1-A	FAU1471	WASHTNST SO62NDAV	BELT LINE	000136	9	20	5	20	2	14628	ADAMS	DENVER

Table 4.2.15 Existing At-grade Crossings North Denver Metro to Gilcrest along US 85

Xing ID	RR	RR Division	RR Subdivision	Highway	Street	Branch	MP	TPD 2004	Max. TT Speed	Min. Speed	Max Speed	# of Lanes	AADT 2004	County	City
804594Y	UP	CENTRAL REGION	WYOMING DIV.	FAU1734	88THAVEWOROSEMARY	D P M L	000894	18	79	60	79	2	12678	ADAMS	THORNTON
804592K	UP	CENTRAL REGION	WYOMING DIV.		E.96THAVE EO I76	D P M L	001010	18	79	60	79	2	8960	ADAMS	THORNTON
804433D	UP	CENTRAL REGION	WYOMING DIV.	SH 44A	104THAVE EO US 85	D P M L	001125	26	79	60	79	2	13240	ADAMS	THORNTON
804467X	UP	CENTRAL REGION	WYOMING DIV.		E132NDAVE EO US85	D P M L	001523	26	79	60	79	2	256	ADAMS	HENDERSON
804468E	UP	CENTRAL REGION	WYOMING DIV.		E136THAVE EO US85	D P M L	001580	27	79	60	79	2	378	ADAMS	BRIGHTON
804476W	UP	CENTRAL REGION	WYOMING DIV.		E144THAVE EO US85	D P M L	001690	25	79	60	79	2	1602	ADAMS	BRIGHTON
804487J	UP	CENTRAL REGION	WYOMING DIV.	FAU6202	BROMLEYLN EO MAIN	D P M L	001795	26	79	62	79	4	6701	ADAMS	BRIGHTON
804485V	UP	CENTRAL REGION	WYOMING DIV.	FAU6224	EGBERT WO 2ND AVE	D P M L	001877	27	40	25	40	2	4235	ADAMS	BRIGHTON
804484N	UP	CENTRAL REGION	WYOMING DIV.		BUSHST EO CABBAGE	D P M L	001885	26	40	25	40	2	5099	ADAMS	BRIGHTON
804481T	UP	CENTRAL REGION	WYOMING DIV.		CR4 EO CR27	D P M L	002098	29	79	60	79	2	73	WELD	BRIGHTON
804475P	UP	CENTRAL REGION	WYOMING DIV.		CR6 EO CR27	D P M L	002198	26	79	60	79	2	73	WELD	BRIGHTON
804472U	UP	CENTRAL REGION	WYOMING DIV.		CR8 EO CR27	D P M L	002300	25	79	60	79	2	140	WELD	FORT LUPTON
804488R	UP	CENTRAL REGION	WYOMING DIV.		CR10 EO CR27	D P M L	002400	26	79	60	79	2	73	WELD	FORT LUPTON
804461G	UP	CENTRAL REGION	WYOMING DIV.		CR12 EO DENVER	D P M L	002500	26	79	60	79	2	58	WELD	FORT LUPTON
804463V	UP	CENTRAL REGION	WYOMING DIV.	SH 52A	1ST ST EO MAINAVE	D P M L	002551	25	79	60	79	2	5038	WELD	FORT LUPTON
804374D	UP	CENTRAL REGION	WYOMING DIV.		14TH ST EO US 85	D P M L	002648	24	79	60	79	2	81	WELD	FORT LUPTON
804375K	UP	CENTRAL REGION	WYOMING DIV.		CR 16 EO US 85	D P M L	002698	25	79	60	79	2	70	WELD	FORT LUPTON
804377Y	UP	CENTRAL REGION	WYOMING DIV.		CR 18 EO US 85	D P M L	002797	26	79	60	79	2	73	WELD	FORT LUPTON
804378F	UP	CENTRAL REGION	WYOMING DIV.		CR 18.5 EO US 85	D P M L	002850	26	79	60	79	2	29	WELD	FORT LUPTON
804379M	UP	CENTRAL REGION	WYOMING DIV.		CR 20 EO US 85	D P M L	002900	26	79	60	79	2	29	WELD	FORT LUPTON
804329J	UP	CENTRAL REGION	WYOMING DIV.		CR 22 EO US 85	D P M L	003000	26	79	60	79	2	87	WELD	FORT LUPTON
804334F	UP	CENTRAL REGION	WYOMING DIV.		CR 26 EO US 85	D P M L	003200	25	79	60	79	2	28	WELD	PLATTEVILLE
804336U	UP	CENTRAL REGION	WYOMING DIV.		CR 28 EO US 85	D P M L	003301	25	79	60	79	2	28	WELD	PLATTEVILLE
804342X	UP	CENTRAL REGION	WYOMING DIV.		CR 34 EO US 85	D P M L	003602	26	79	60	79	2	29	WELD	PLATTEVILLE
804343E	UP	CENTRAL REGION	WYOMING DIV.		CR 36 EO US 85	D P M L	003705	26	79	60	79	2	29	WELD	PLATTEVILLE
804347G	UP	CENTRAL REGION	WYOMING DIV.		CR 38 EO US 85	D P M L	003842	25	79	60	79	1	14	WELD	GILCREST
804346A	UP	CENTRAL REGION	WYOMING DIV.		CR 29 SO US 85	D P M L	003902	25	79	60	79	2	56	WELD	GILCREST
804345T	UP	CENTRAL REGION	WYOMING DIV.		CR 40 EO US 85	D P M L	003972	25	79	60	79	2	84	WELD	GILCREST

Table 4.2.16 Existing At-grade Crossings Gilcrest to the Wyoming Border along US 85

Xing ID	RR	RR Division	RR Subdivision	Highway	Street	Branch	MP	TPD 2004	Max. TT Speed	Min. Speed	Max Speed	# of Lanes	AADT 2004	County	City
804348N	UP	CENTRAL REGION	WYOMING DIV.		CR 42 EO US 85	D P M L	004103	25	79	60	79	2	140	WELD	GILCREST
804351W	UP	CENTRAL REGION	WYOMING DIV.		CR 33 SO US 85	D P M L	004208	25	79	60	79	2	140	WELD	GILCREST
804354S	UP	CENTRAL REGION	WYOMING DIV.		CR 35 EO US 85	D P M L	004365	25	79	60	79	2	14	WELD	LA SALLE
804355Y	UP	CENTRAL REGION	WYOMING DIV.		CR 37 EO US 85	D P M L	004518	25	79	60	79	2	70	WELD	LA SALLE
804359B	UP	CENTRAL REGION	WYOMING DIV.		42ND EO STATE	D P M L	004790	8	70	50	70	2	140	WELD	EVANS
804361C	UP	CENTRAL REGION	WYOMING DIV.		39TH EO STATE	D P M L	004820	7	55	40	55	2	673	WELD	EVANS
804362J	UP	CENTRAL REGION	WYOMING DIV.	FAU5502	37TH-W OF CENTRAL	D P M L	004845	8	79	60	79	2	4901	WELD	EVANS
804363R	UP	CENTRAL REGION	WYOMING DIV.	FAU5510	31ST WO EMPIRE	D P M L	004899	8	79	60	79	4	1680	WELD	EVANS
804365E	UP	CENTRAL REGION	WYOMING DIV.	US 34D	18TH ST WO 3RDAVE	D P M L	005079	8	79	60	79	2	4312	WELD	GREELEY
804366L	UP	CENTRAL REGION	WYOMING DIV.	FAU5542	16TH ST EO 6THAVE	D P M L	005105	8	20	20	20	4	4831	WELD	GREELEY
804848L	UP	CENTRAL REGION	WYOMING DIV.		CR 70 EO US 85	D P M L	005678	9	79	60	79	2	219	WELD	EATON
804852B	UP	CENTRAL REGION	WYOMING DIV.		CR 72 EO US 85	D P M L	005780	9	79	60	79	2	73	WELD	EATON
804855W	UP	CENTRAL REGION	WYOMING DIV.		5TH EO US 85	D P M L	005933	9	79	60	79	2	73	WELD	EATON
804856D	UP	CENTRAL REGION	WYOMING DIV.		CR 76 EO US 85	D P M L	005988	8	79	60	79	2	140	WELD	EATON
804857K	UP	CENTRAL REGION	WYOMING DIV.		CR 37 EO US 85	D P M L	006019	8	79	60	79	2	280	WELD	EATON
804859Y	UP	CENTRAL REGION	WYOMING DIV.		CR 78 EO US 85	D P M L	006094	9	79	60	79	2	73	WELD	EATON
804860T	UP	CENTRAL REGION	WYOMING DIV.		CR 80 EO US 85	D P M L	006199	8	79	60	79	2	70	WELD	AULT
804878D	UP	CENTRAL REGION	WYOMING DIV.	COUNTY	CR 84 EO US 85	D P M L	006407	9	79	60	79	2	87	WELD	AULT
804881L	UP	CENTRAL REGION	WYOMING DIV.		CR 86 EO US 85	D P M L	006509	9	79	60	79	2	73	WELD	PIERCE
804868X	UP	CENTRAL REGION	WYOMING DIV.		CR 88 EO US 85	D P M L	006610	9	79	60	79	2	146	WELD	PIERCE
804874B	UP	CENTRAL REGION	WYOMING DIV.		CR 90 EO US 85	D P M L	006710	9	79	60	79	2	1020	WELD	PIERCE
804873U	UP	CENTRAL REGION	WYOMING DIV.		CR 92-E OF US 85	D P M L	006820	9	79	60	79	1	44	WELD	PIERCE
804872M	UP	CENTRAL REGION	WYOMING DIV.		CR 94 EO US 85	D P M L	006920	9	79	60	79	2	29	WELD	PIERCE
804870Y	UP	CENTRAL REGION	WYOMING DIV.		CR 98 EO US 85	D P M L	007120	9	79	60	79	2	44	WELD	NUNN
804865C	UP	CENTRAL REGION	WYOMING DIV.		CR 104 WO US 85	D P M L	007427	9	79	60	79	2	73	WELD	NUNN
804850M	UP	CENTRAL REGION	WYOMING DIV.		CR108 EO CR27	D P M L	007645	9	79	60	79	2	29	WELD	NUNN
804849T	UP	CENTRAL REGION	WYOMING DIV.		CR 110 EO CR 27	D P M L	007725	9	79	60	79	2	44	WELD	NUNN
804863N	UP	CENTRAL REGION	WYOMING DIV.		CR 118 AT CR 23	D P M L	008198	9	79	60	79	2	29	WELD	CARR

Table 4.2.17 Existing At-grade Crossings
South Denver to Pueblo along US 85 to Castle Rock then along I-25

Xing ID	RR	RR Division	RR Subdivision	Highway	Street	Branch	MP	TPD 2004	Max. TT Speed	Min. Speed	Max Speed	# of Lanes	AADT 2004	County	City
253053X	UP	DENVER	JOINT LINE		TITANRD(CR7)WO 85	MAIN	001847	29	45	25	35	2	2573	ARAPAHOE	HIGHLANDS RANCH
253057A	UP	DENVER	JOINT LINE		AIRPORTRD WO US85	MAIN	002143	19	45	35	45	2	1608	DOUGLAS	LOUVIERS
253065S	UP	DENVER	JOINT LINE	SH 86A	5TH EO PERRY	MAIN	003242	58	45	25	45	2	15583	DOUGLAS	CASTLE ROCK
253066Y	UP	DENVER	JOINT LINE		3RD AT FRONT	MAIN	003257	29	45	20	45	2	2413	DOUGLAS	CASTLE ROCK
253068M	UP	DENVER	JOINT LINE		CR 5J0 EO FAI25	MAIN	003505	29	45	40	45	2	16	DOUGLAS	CASTLE ROCK
253070N	UP	DENVER	JOINT LINE	SH 18A	NORM SMITH GULCH	MAIN	004206	58	45	20	45	2	586	DOUGLAS	LARKSPUR
253071V	UP	DENVER	JOINT LINE		PLUMCREEK&FRANKRD	MAIN	004311	29	45	20	45	2	32	DOUGLAS	LARKSPUR
253073J	UP	DENVER	JOINT LINE		NOE RD(CR74)-WFAI	MAIN	004689	29	45	15	45	2	32	DOUGLAS	PALMER LAKE
253076E	UP	DENVER	JOINT LINE		2ND-EO MITCHELL	MAIN	005582	48	45	25	45	2	609	EL PASO	MONUMENT
253077L	UP	DENVER	JOINT LINE		BPTSASSEMBRDWOI25	MAIN	005840	48	45	25	45	2	414	EL PASO	MONUMENT
253109P	UP	DENVER	JOINT LINE		ROYER NO LASVEGAS	MAIN	007664	44	55	30	45	2	437	EL PASO	COLORADO SPGS
253121W	UP	DENVER	JOINT LINE		MESA RD EO US 85	MAIN	008575	22	55	30	55	2	11580	EL PASO	FOUNTAIN
253122D	UP	DENVER	JOINT LINE		COMANCHEVIL(EO85)	MAIN	008706	18	55	30	45	4	10311	EL PASO	FOUNTAIN
253124S	UP	DENVER	JOINT LINE	FAU2926	OHIO WO MESA ROAD	MAIN	008819	21	55	30	45	4	7984	EL PASO	FOUNTAIN
253125Y	UP	DENVER	JOINT LINE		LINKRD(EOLDPUEBRD	MAIN	008962	32	55	45	55	2	7863	EL PASO	FOUNTAIN
253126F	UP	DENVER	JOINT LINE		BIRDSALL(CR60)E P	MAIN	009240	22	55	30	45	2	15	EL PASO	FOUNTAIN
253127M	UP	DENVER	JOINT LINE		OLDPUEBLO RDCR415	MAIN	009305	22	55	30	45	2	293	EL PASO	FOUNTAIN
253128U	UP	DENVER	JOINT LINE		OLDPUEBLORD EOI25	MAIN	009515	24	55	30	45	2	48	EL PASO	FOUNTAIN
253129B	UP	DENVER	JOINT LINE		WIGWAM(CR1250)EOF	MAIN	009910	22	55	30	45	1	44	EL PASO	FOUNTAIN
253130V	UP	DENVER	JOINT LINE		CO LN RD EO I25	MAIN	010022	22	55	30	45	1	15	EL PASO	FOUNTAIN
253131C	UP	DENVER	JOINT LINE		TOTTON RD (CR102)	MAIN	010128	26	55	30	45	1	29	PUEBLO	FOUNTAIN
253144D	UP	DENVER	JOINT LINE		CR 104 EO I25	MAIN	010460	26	55	30	45	2	15	PUEBLO	PUEBLO
253132J	UP	DENVER	JOINT LINE		PINON RD EO I25	MAIN	010542	26	55	30	45	1	15	PUEBLO	PUEBLO
253134X	UP	DENVER	JOINT LINE		CR110-E OF FAI25	MAIN	010638	26	55	45	30	1	15	PUEBLO	PUEBLO
253136L	UP	DENVER	JOINT LINE	NFA 25	EDEN EXIT 104 I25	MAIN	011261	58	50	30	50	2	161	PUEBLO	PUEBLO
253137T	UP	DENVER	JOINT LINE		40TH ST. EO I25	MAIN	011516	26	50	30	50	2	364	PUEBLO	PUEBLO
253141H	UP	DENVER	JOINT LINE		26TH ST EO I25	MAIN	011628	29	50	15	45	2	32	PUEBLO	PUEBLO

Figure 4.2.13 Existing Land Use – 2004

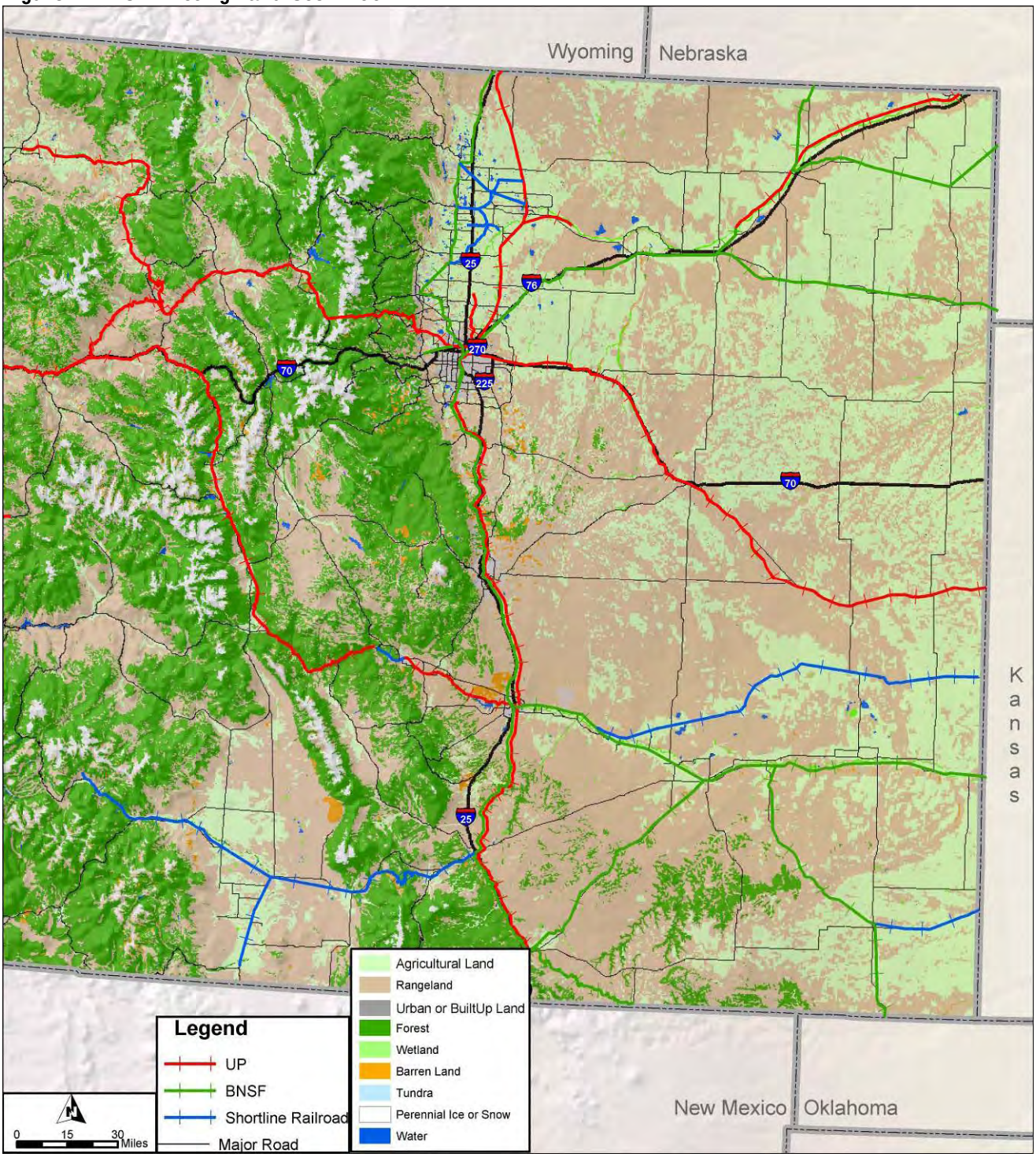


Figure 4.2.14 Sample Corridor - Existing Land Use Noise Receptors

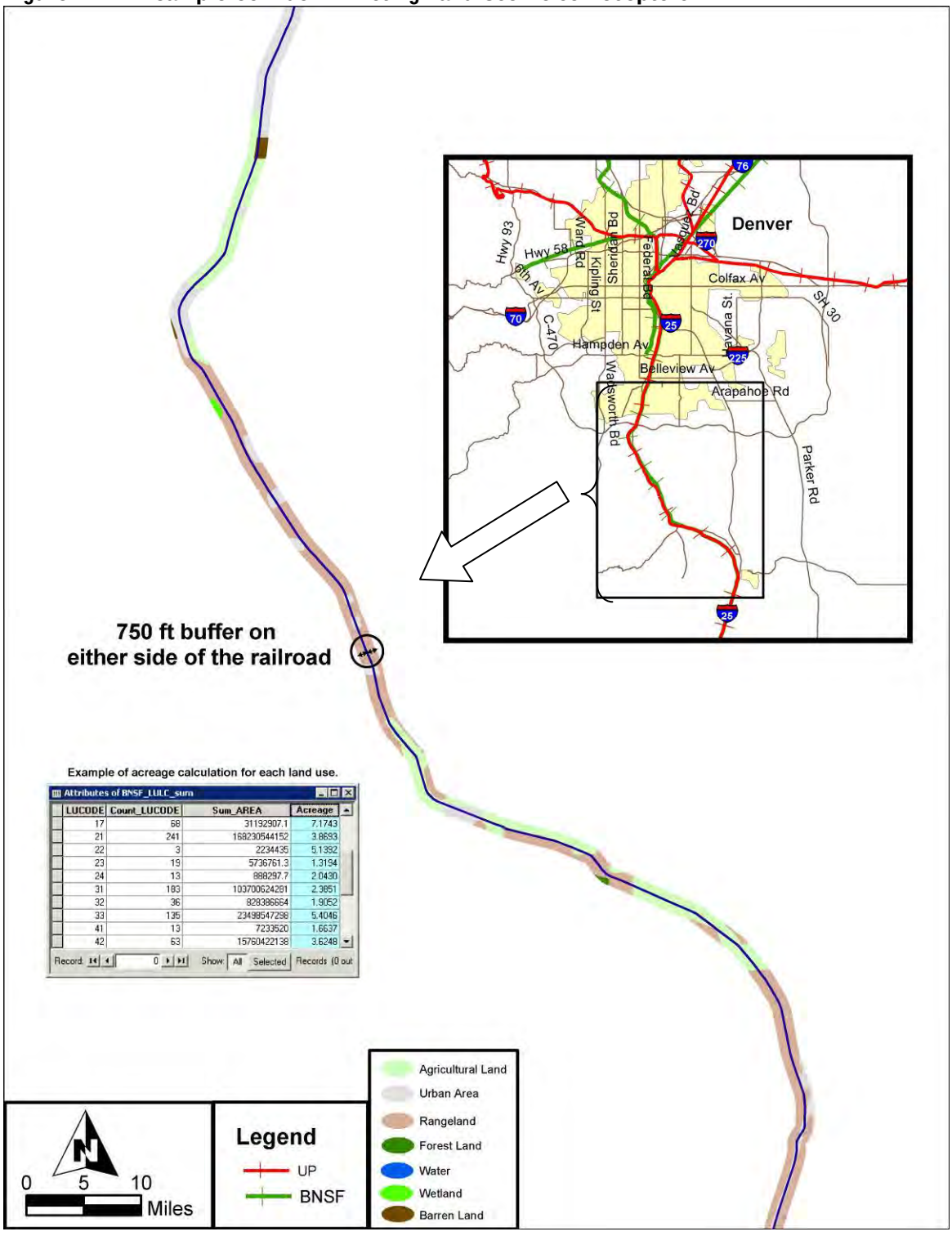


Table 4.2.18 Land Use Acres

750 ft Buffer along New segments		
LUCODE	Description of Land Use Code	Total ACRES of each LU
14	Transportation, communication, utilities	62.4430
21	Cropland and pasture	9562.9770
31	Herbaceous rangeland	2919.4710
33	Mixed rangeland	2806.5200
61	Forested wetland	344.7280
62	Nonforested wetland	684.3030
71	Dry salt flats	20.7310
73	Sandy areas, not beaches	6.9420

First Number of LUCODE	
1	Urban or Built Up Land
2	Agricultural Land
3	Rangeland
4	Forest Land
5	Water
6	Wetland
7	Barren Land
8	Tundra
9	Perennial snow or ice

750 ft Buffer along selected BN segments affected by study		
LUCODE	Description of Land Use Code	Total ACRES of each LU
11	Residential	1011.1310
12	Commercial and services	796.8050
13	Industrial	291.4090
14	Transportation, communication, utilities	1956.2320
16	Mixed urban or built-up land	619.6320
17	Other urban or built-up land	173.1920
21	Cropland and pasture	18532.9020
22	Orchards, groves, vineyards, nureseries and ornamental horticultural areas	16.6970
23	Confined feeding operations	205.0870
24	Other agricultural land	39.9250
31	Herbaceous rangeland	836.3190
32	Shrub and brush rangeland	74.8050
33	Mixed rangeland	9138.1860
53	Reservoirs	102.8950
61	Forested wetland	65.5960
62	Nonforested wetland	64.0590
76	Transitional areas	0.1090

750 ft Buffer along selected UP segments affected by study		
LUCODE	Description of Land Use Code	Total ACRES of each LU
0	No Data	4.9300
11	Residential	2777.0260
12	Commercial and services	4675.8600
13	Industrial	2039.6140
14	Transportation, communication, utilities	7854.8270
16	Mixed urban or built-up land	1387.0960
17	Other urban or built-up land	945.3390
21	Cropland and pasture	15949.4460
22	Orchards, groves, vineyards, nureseries and ornamental horticultural areas	87.2170
23	Confined feeding operations	18.0360
24	Other agricultural land	53.2820
31	Herbaceous rangeland	30238.2620
32	Shrub and brush rangeland	1536.2790
33	Mixed rangeland	4283.4940
41	Deciduous forest land	54.7190
42	Evergreen forest land	1647.6880
43	Mixed forest land	2.4460
53	Reservoirs	28.6490
61	Forested wetland	646.8670
62	Nonforested wetland	266.1690
75	Strip mines, quarries, gravel pits	83.7150
76	Transitional areas	775.3840

4.3 No-Build Data

The No-Build Option, as defined in Technical Memorandum No. 2, establishes a future point of reference or baseline to compare the Build Option. The two Class 1 railroads were asked to provide the data that answers the question, *What would the freight railroad situation be like in the year 2030 if the proposed railroad project were not built?* The combined train counts are shown graphically in Figures 4.3.1 and 4.3.2. Figures 4.3.3 through 4.3.6 show the exact train counts provided by each railroad.

This data is used in subsequent Technical Memorandums to identify important capital investments and on-going operating costs accruing to the railroads and to the public. Specific inclusions or exclusions in the No-Build Option may affect the outcome of the study. The benefits are discussed in detail in Technical Memorandum No. 5.

Figure 4.3.1 No-Build Train Counts – Year 2030 – State

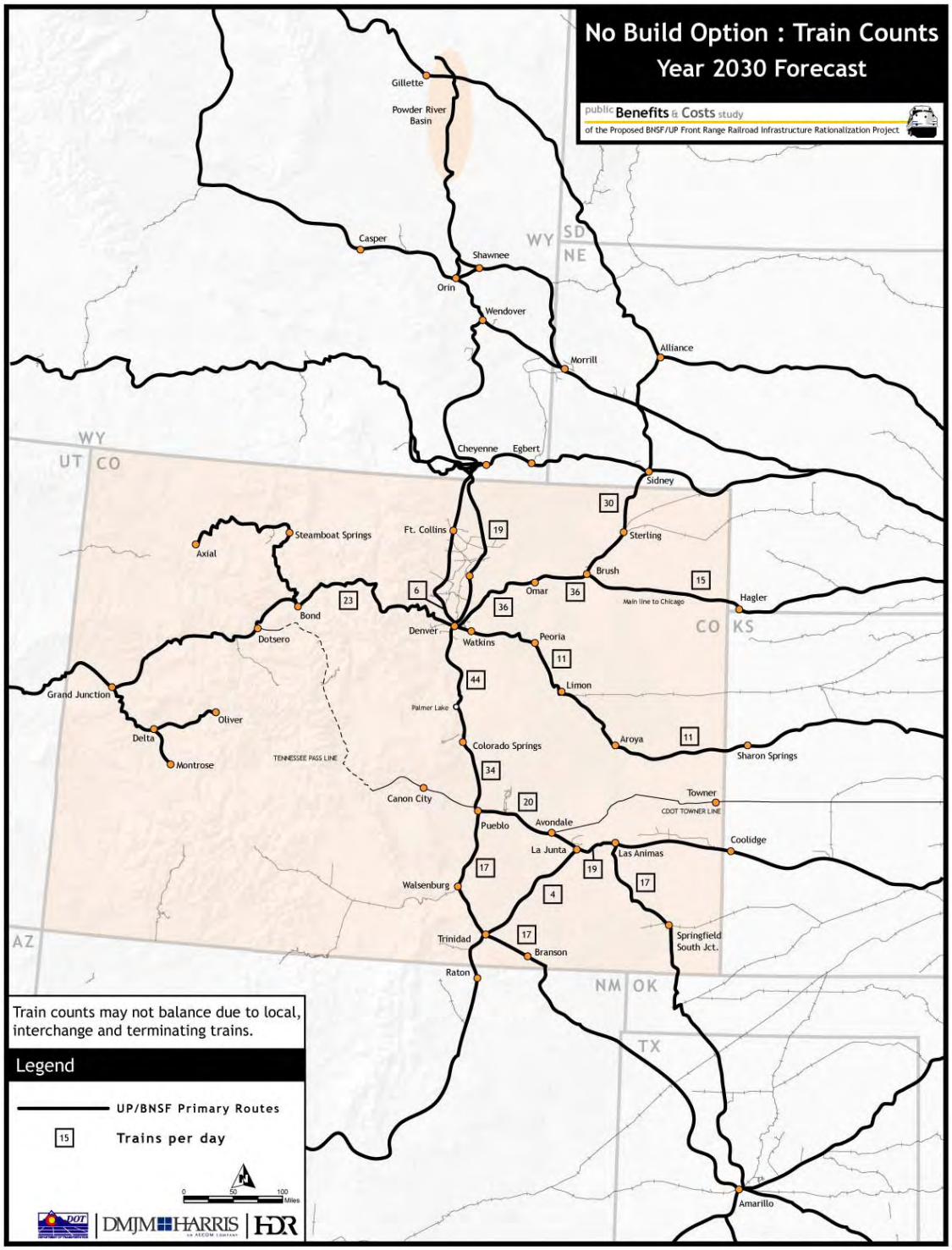


Figure 4.3.2 No-Build Train Counts – Year 2030 – Denver

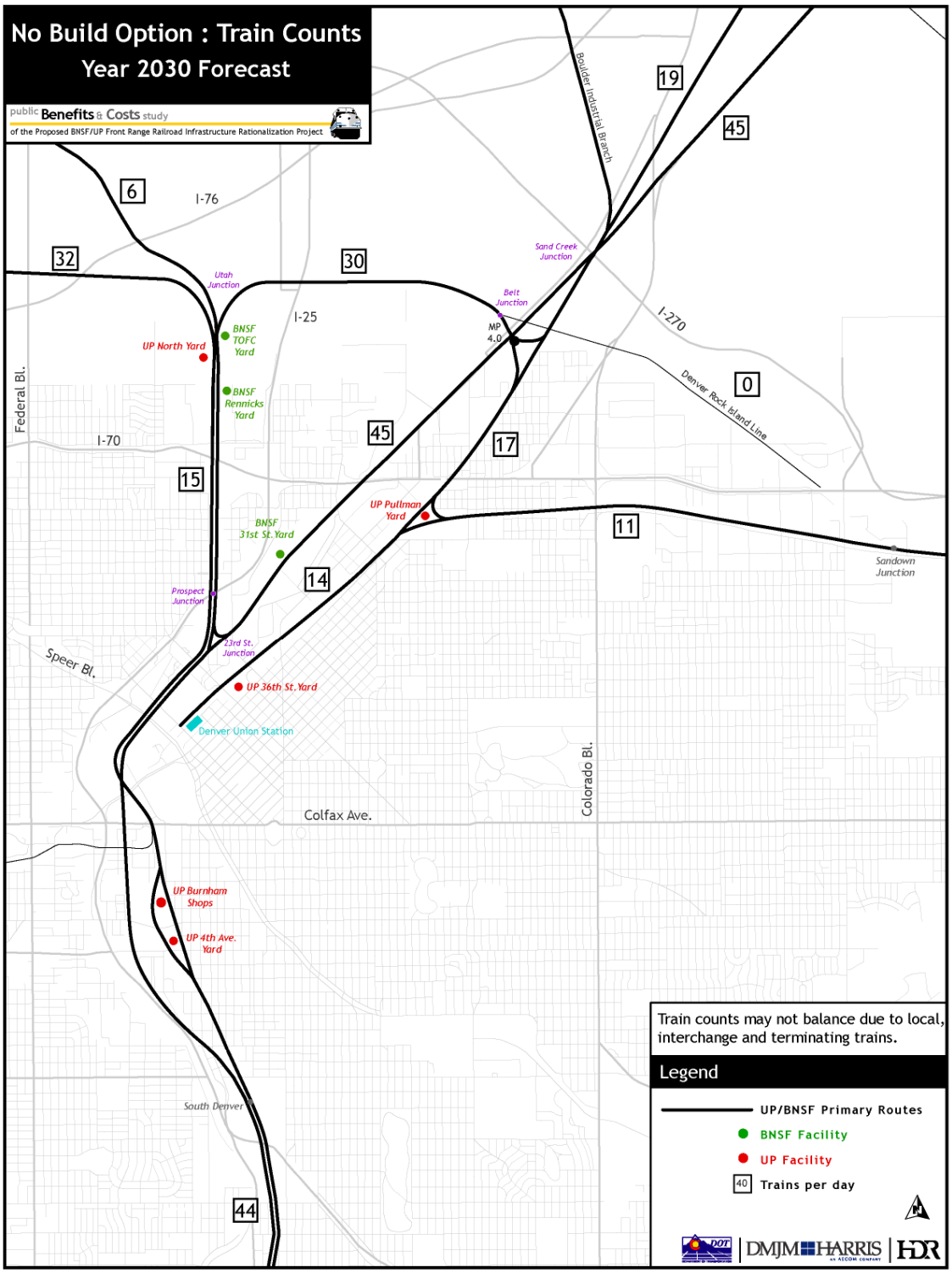


Figure 4.3.3 No-Build Train Volumes – 2030 - BNSF – State

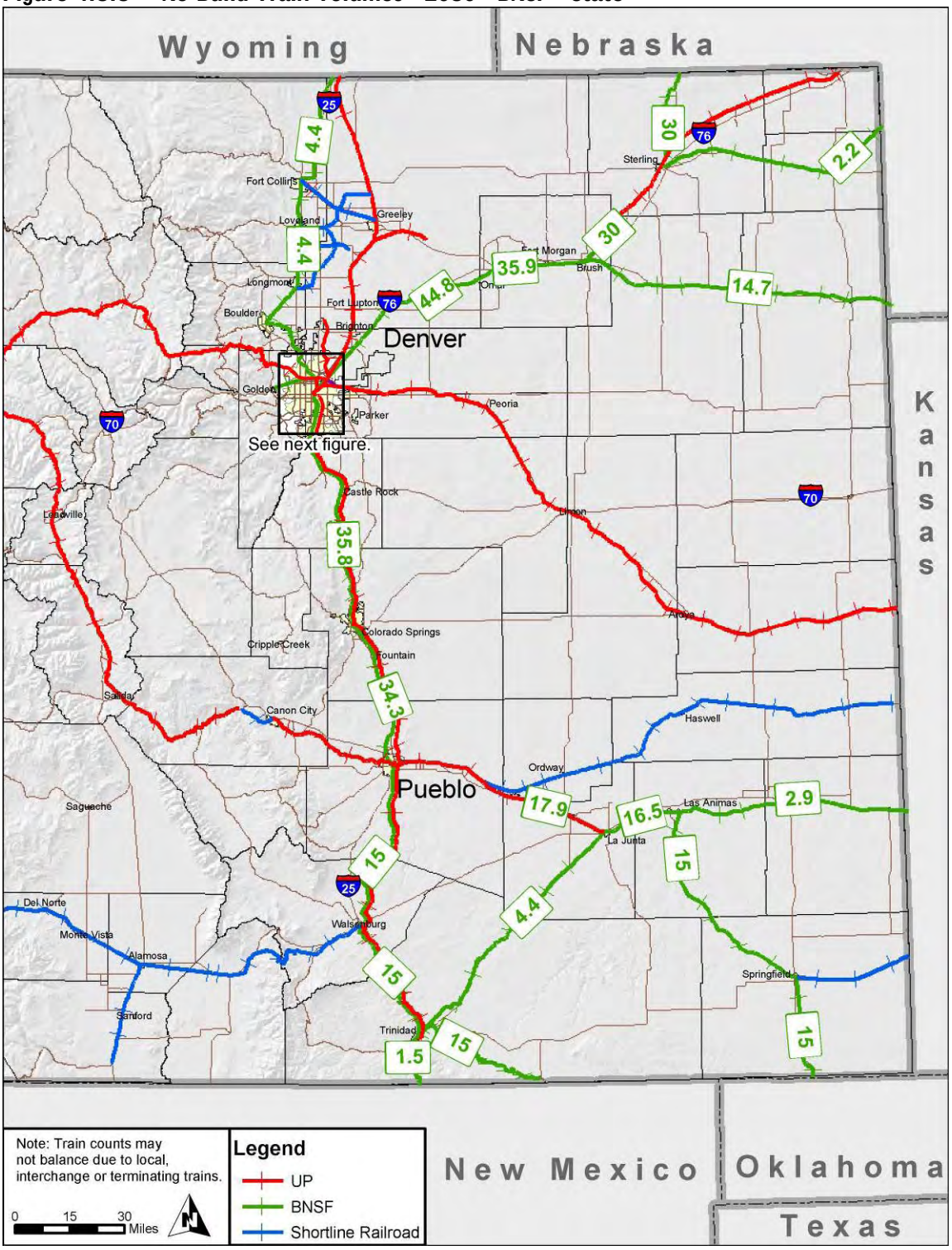


Figure 4.3.4 No-Build Train Volumes - 2030 - BNSF - Denver

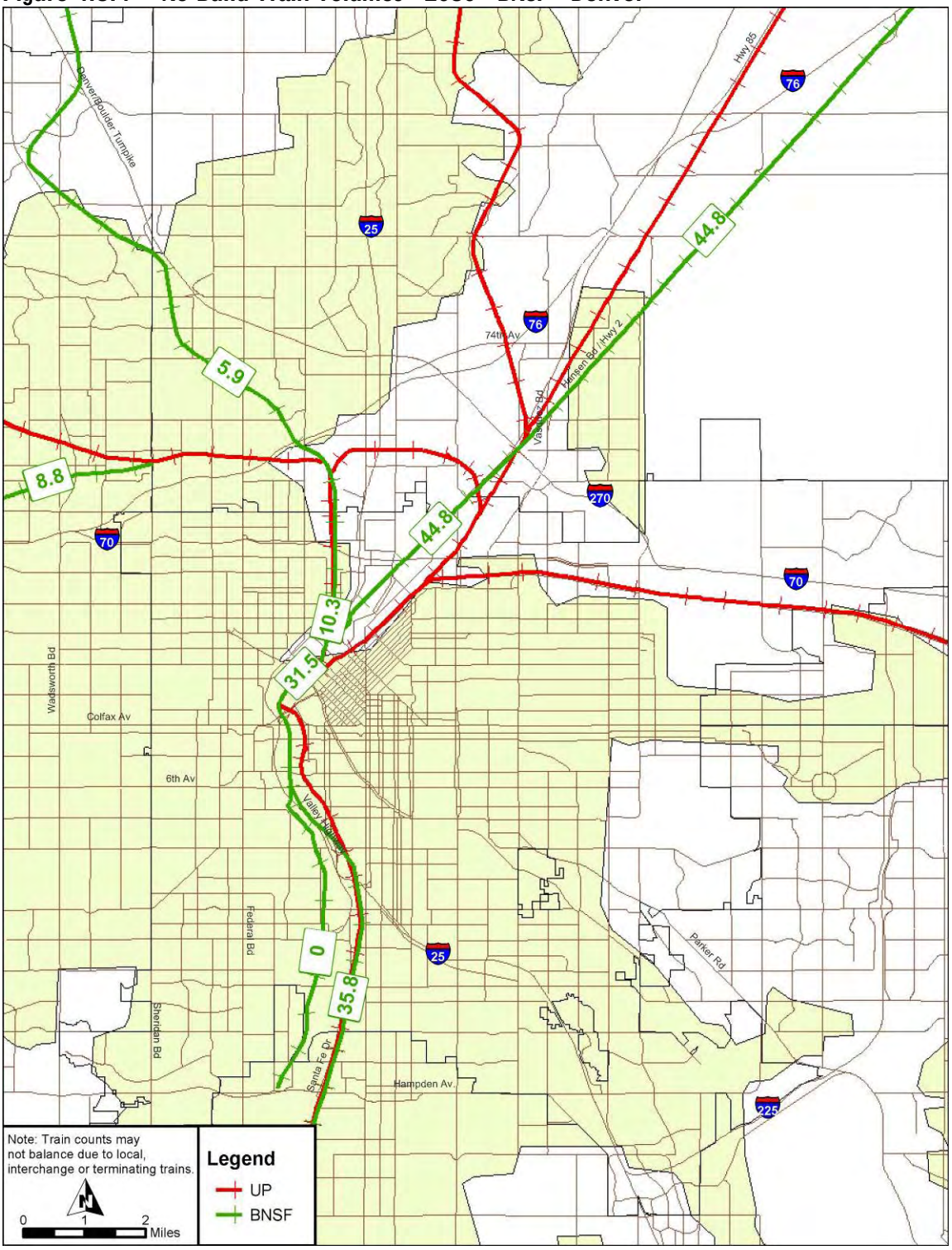


Figure 4.3.5 No-Build Train Volumes - 2030 - UP - State

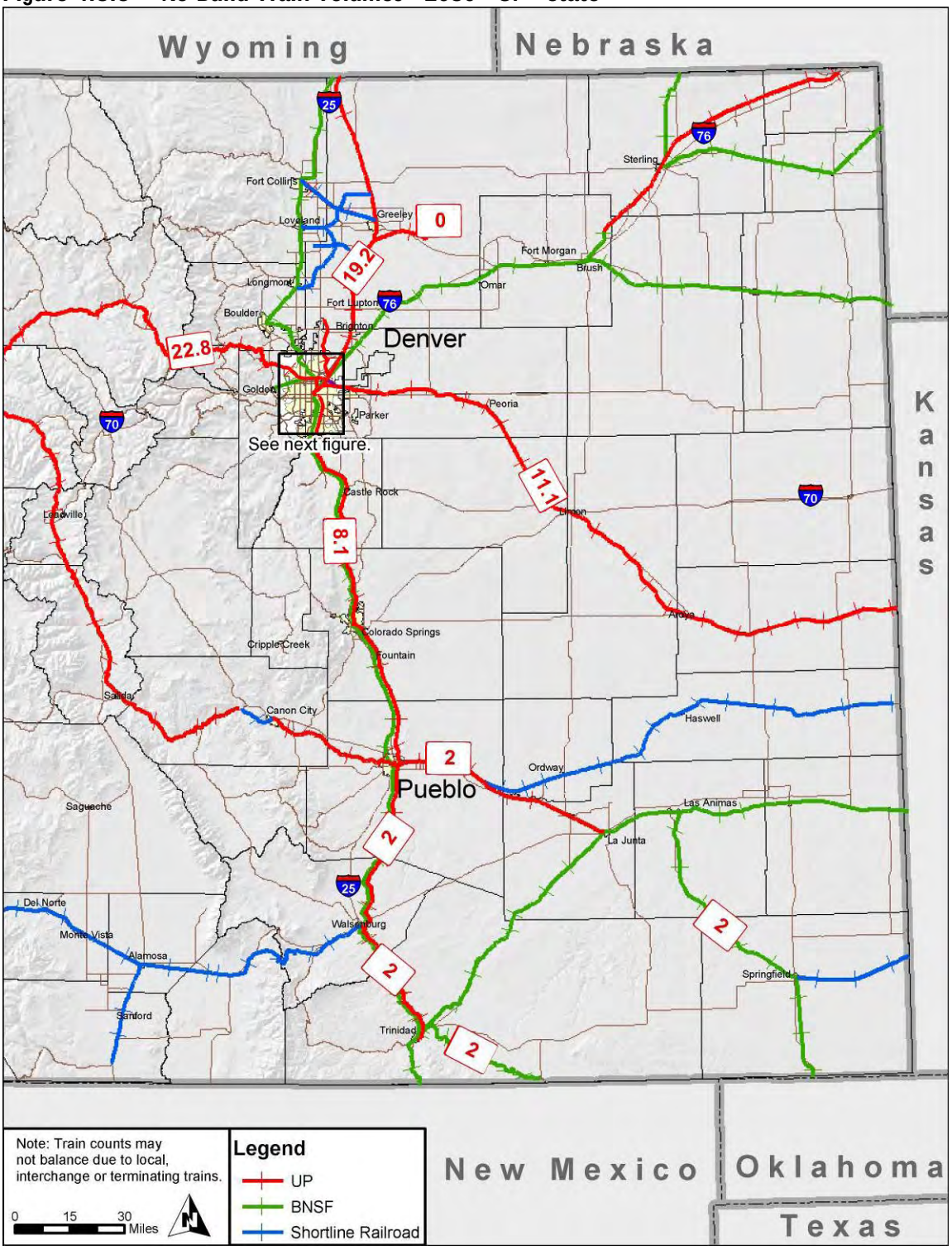
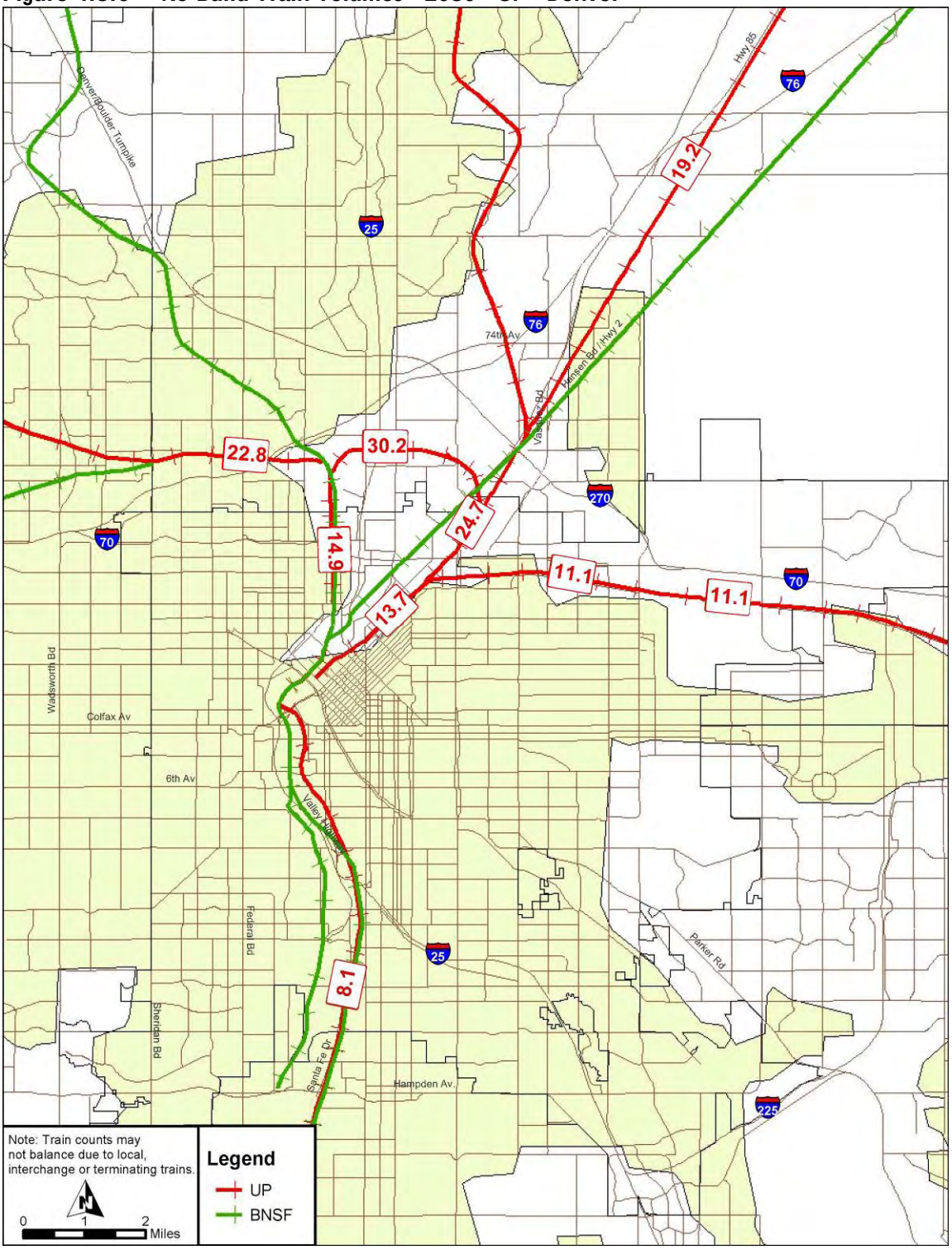


Figure 4.3.6 No-Build Train Volumes - 2030 - UP - Denver



4.4 Build Data

The Build Option is largely defined by the capital and operating improvements, as well as a corresponding freight service plan. This plan, proposed by the UP and BNSF Railroads, is described in Appendix A, included with Technical Memorandum No. 2. Specifically the increased opportunity for commuter/passenger service between Denver and Pueblo due to the removal of freight train traffic should be noted as discussed in Technical Memorandum No. 7.

The two Class 1 railroads were asked to provide specific data that would allow us to calculate qualitative and quantitative benefits of the Build Option. Clearly the most significant piece of information is the number of trains that would be dispatched along the given segments of track. These combined train counts are shown graphically in Figures 4.4.1 and 4.4.2. The exact breakdown of train counts provided by each railroad is shown in Figures 4.4.3 through 4.4.6.

Figure 4.4.1 Build Train Counts – Year 2030 – State

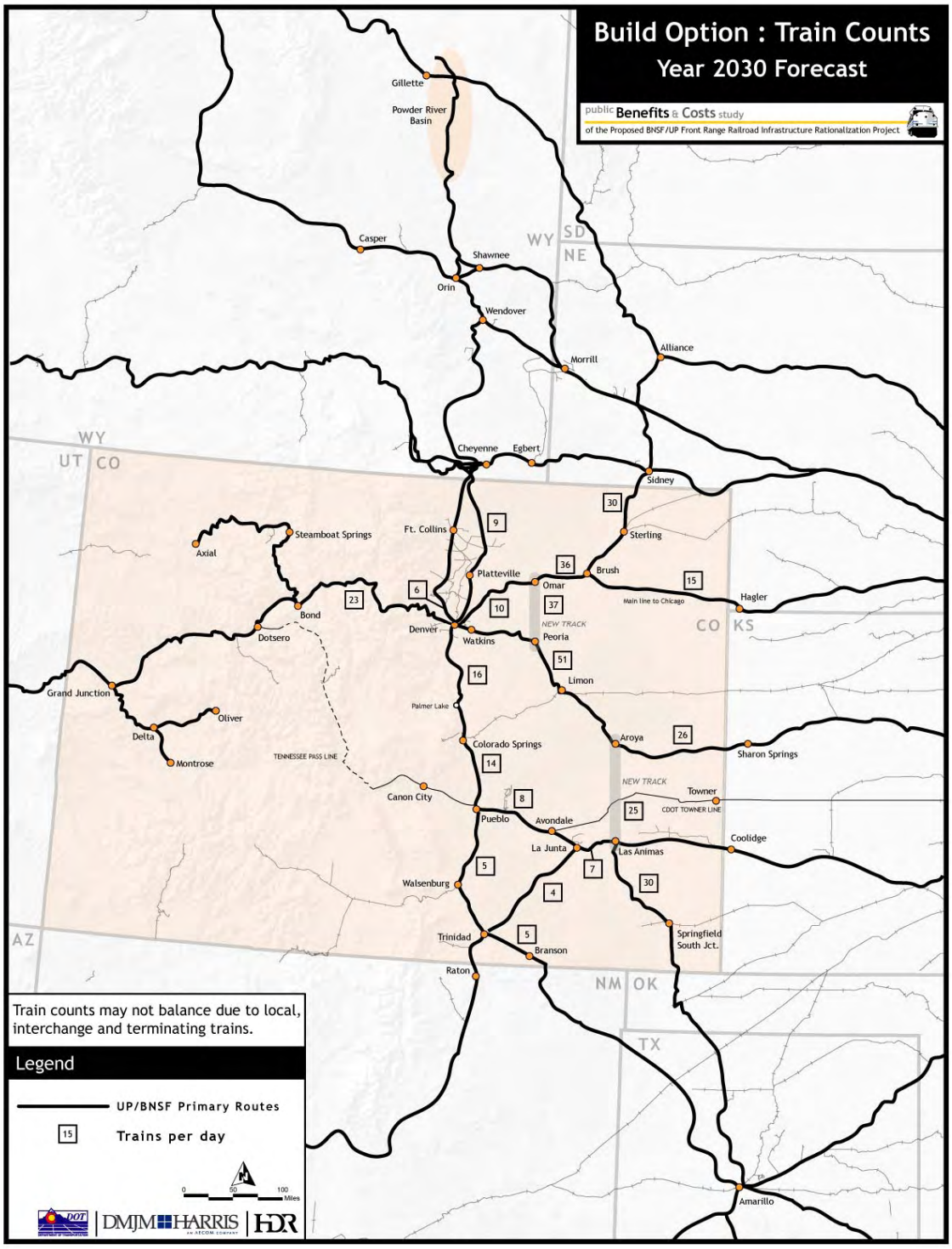


Figure 4.4.2 Build Train Counts – Year 2030 – Denver

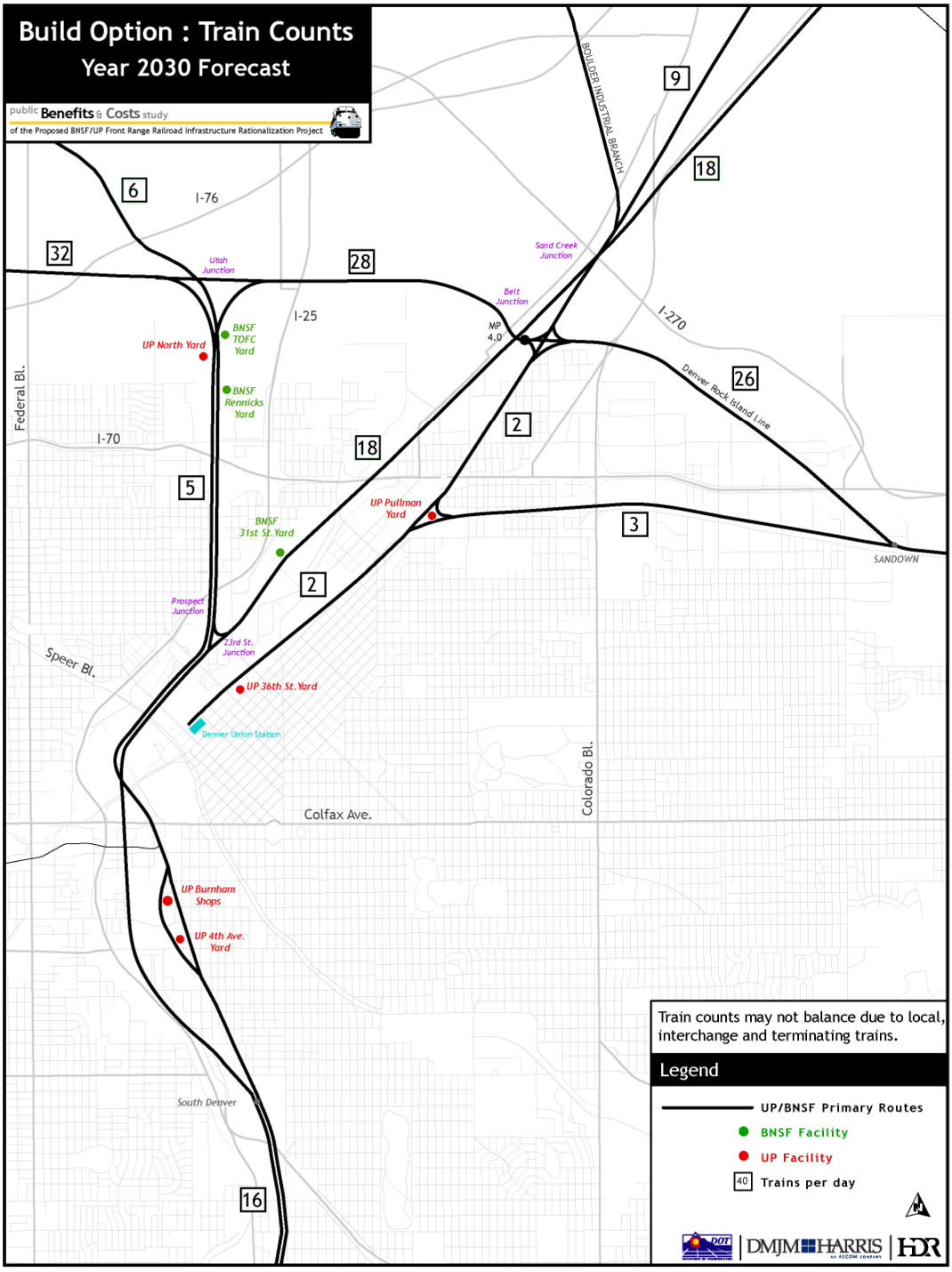


Figure 4.4.3 Build Train Volumes – 2030 - BNSF – State

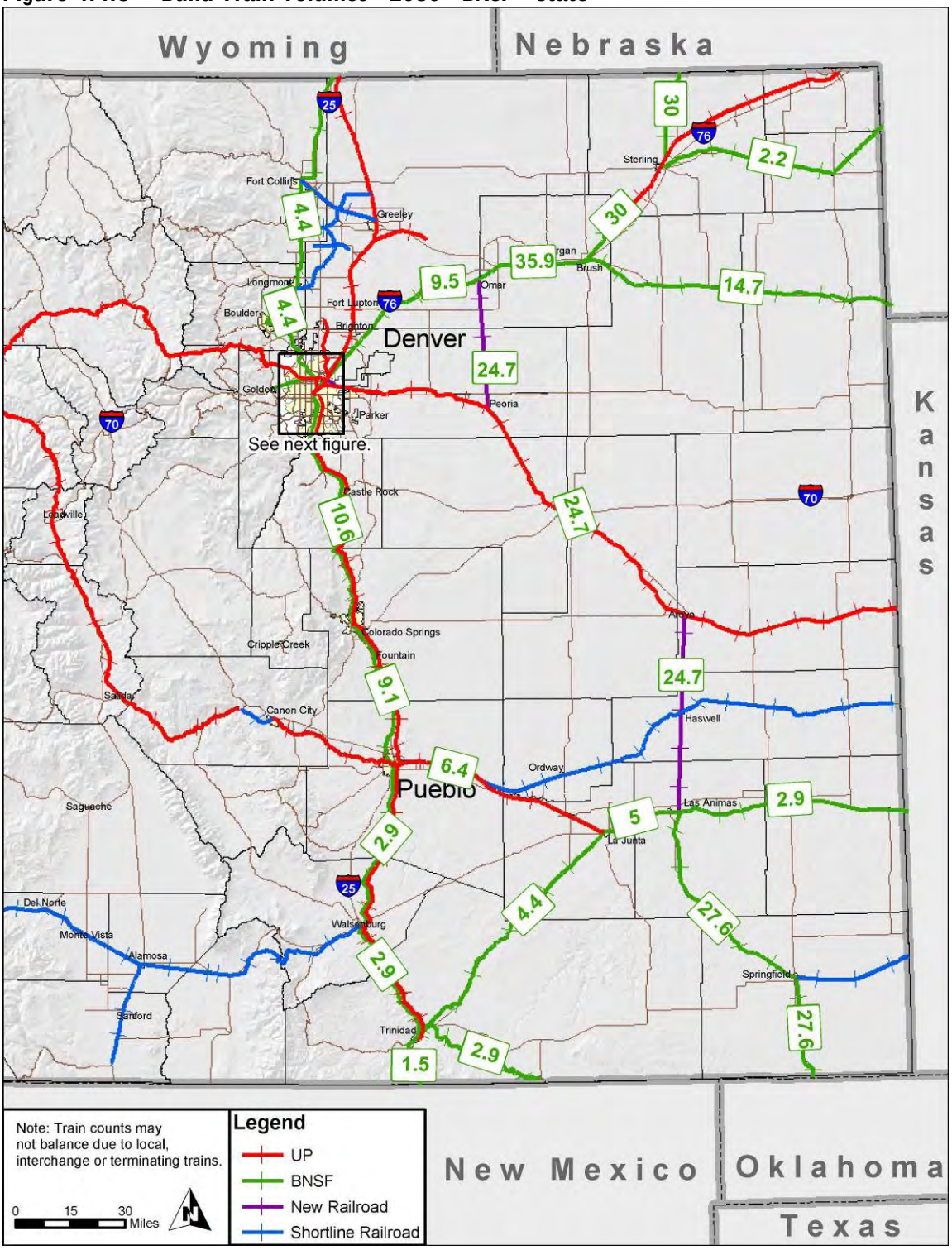


Figure 4.4.4 Build Train Volumes – 2030 - BNSF – Denver

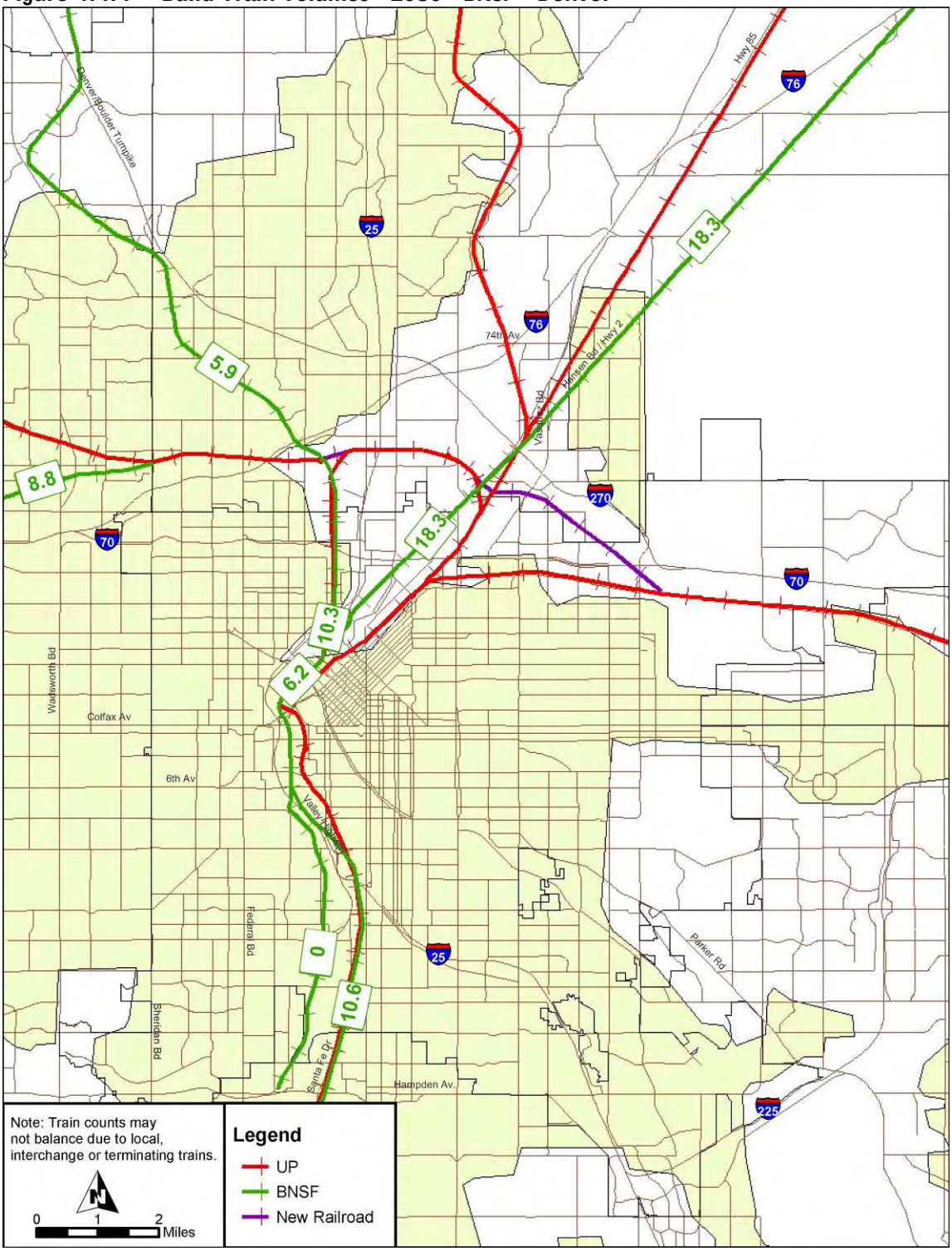


Figure 4.4.5 Build Train Volumes – 2030 - UP – State

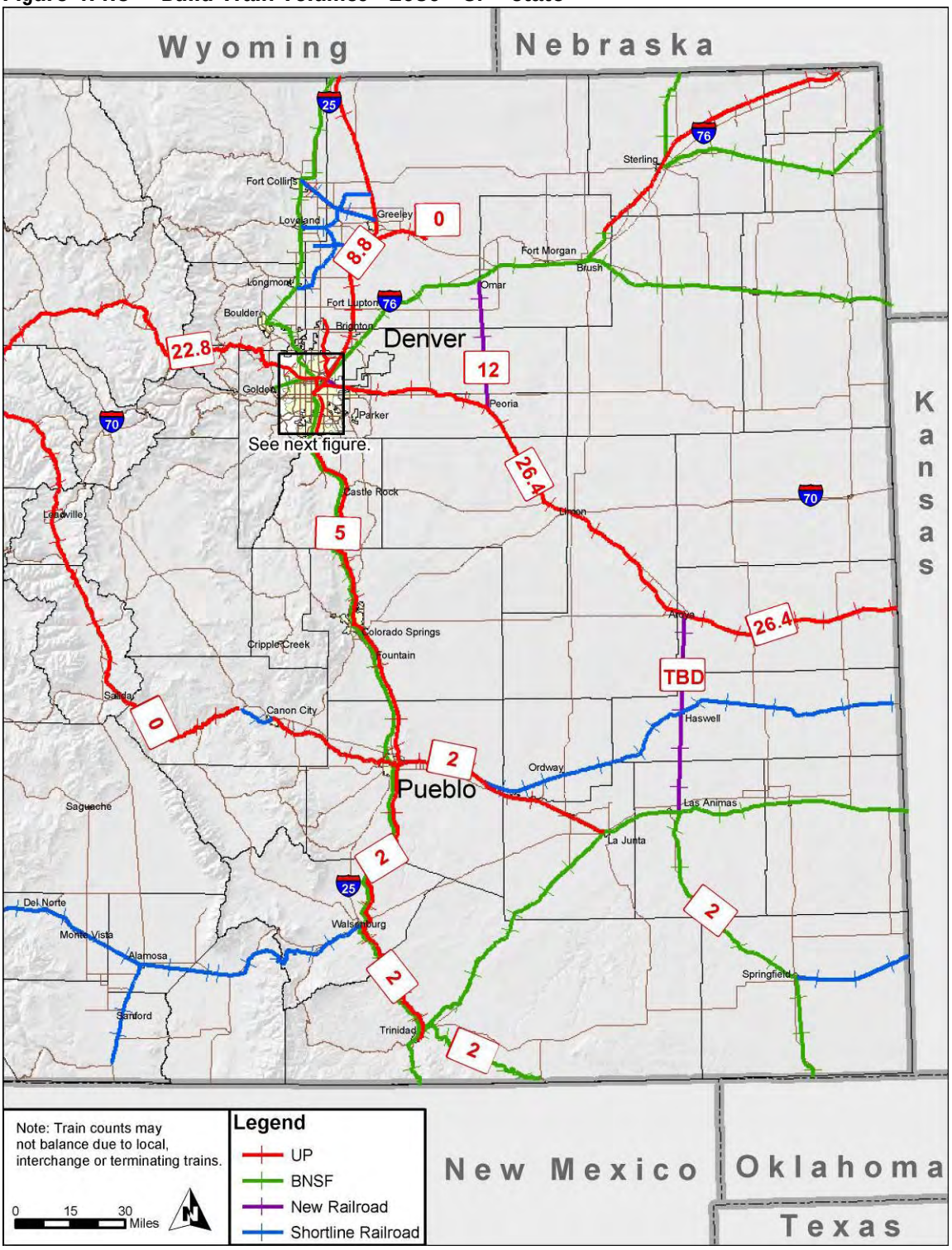
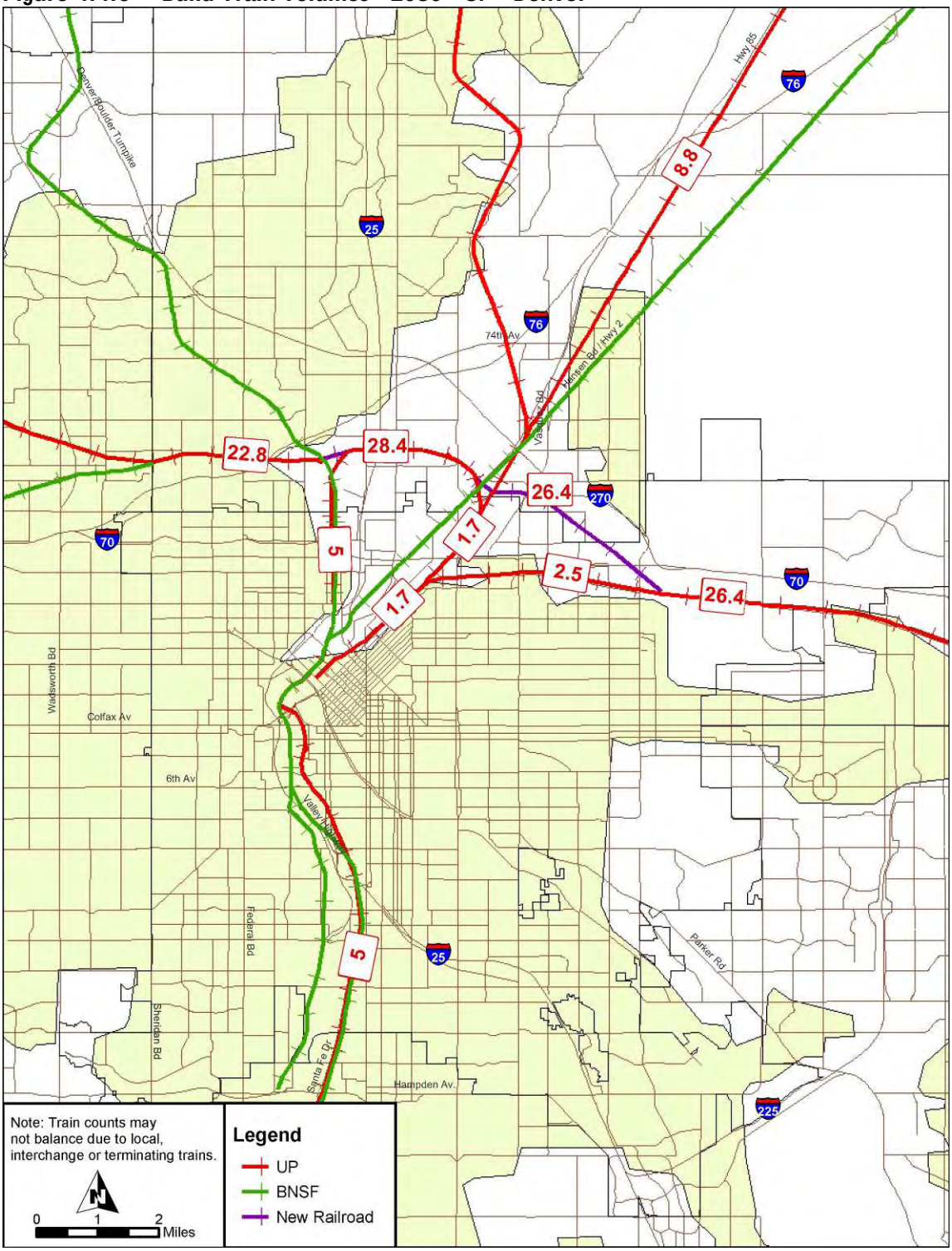


Figure 4.4.6 Build Train Volumes – 2030 - UP – Denver



4.5 Evaluation of the Railroads Costs

The two Class 1 Railroads have provided us with a cost estimate to construct all items listed in Appendix A - the Railroad Project. The Railroads costs as they were presented to us are shown in Table 5.1. This table does not include 3 of the items listed in Appendix A. The additional item costs were subsequently provided by the railroads and include:

Relocation of BNSF Facilities	$259,280,000
Add 9300' of sidings…Union to Omar	$5,293,000
Additional Capacity…Palmer Lake to Pueblo	$79,526,000

It should be noted that Table 5.1 provided by the railroads did not follow the same lettering convention as that shown in Appendix A.

In general all estimates seem accurate in terms of ballpark construction and material costs. The engineering design costs and the contingency used vary for most of the individual estimates. For consistency, it is recommended that 6% of the construction cost be used across the board for design engineering. It is also recommended that the contingency range increase from 15% to 30% based on the level of accuracy of each estimate.

The only other recommended change is to remove the costs for improvements along the line from South Denver to Palmer Lake and Palmer Lake to Pueblo. The improvements would only be done to help facilitate commuter rail along this corridor and not be part of the Railroad Project. Reducing traffic on these southern routes would be a great benefit to commuter rail from Denver to Pueblo as a new corridor would not need to be created. This benefit is discussed further in Technical Memorandum No. 7. It should be noted that this change was made with the permission of the railroads.

The results of making the above changes do not have a significant impact on the cost. The overall total decreases by less than 5%. The most significant impact is the removal of siding costs south of Denver. Other minor changes are noted in the comments column of Table 5.2. The total cost that we are recommending be used for this study is $1,167,369,667.

Table 4.5.1 The Railroad Project – Cost

Burlington Northern Santa Fe / Union Pacific
Front Range Railroad Infrastructure Rationalization
Proposal 1 (Modified Denver Bypass)

1. New Construction			
A.	Double Track Connection between UP Moffat Tunnel Subdivision and Belt Line Main Line at Utah Junction [1]	**$**	**43,832,000**
B.	Grade Separate BNSF Switching Lead from UP North Yard to Belt Junction Main Line [2]	*$*	*30,000,000*
C.	Double Track with CTC UP's Utah Junction to Belt Junction	**$**	**40,193,000**
	- Grade Separate or Close All Road Crossings		
D.	Rebuild and Double Track with CTC DRI/COE Line between Belt Junction and Sandown Junction	**$**	**78,204,000**
	- Grade Separate or Close All Road Crossings		
E.	Remove BNSF-UP Crossing at Sand Creek; Replace with Power-Operated Cross-Overs, Including Double Track on UP's Greeley Subdivision M.P. 4.0 to M.P. 7.0	**$**	**15,546,360**
F.	New Double Track Connection in the Northeast Quadrant between UP's Greeley Subdivision (M.P. 4.3) and the Current DRI Line	**$**	**7,983,000**
G.	Add Sidings or Sections of Double Track with CTC on UP's Limon Subdivision between Sandown Junction (M.P. 634.2) and Watkins (M.P. 612), Including Necessary Grade Separations of Road Crossings	**$**	**106,511,000**
H.	Add 9300' Sidings with CTC on UP's Limon Subdivision between M.P. 612 and Aroya	**$**	**37,712,000**
I.	New 60-Mile Line with CTC between Aroya and BNSF Boise City Subdivision at Las Animas	**$**	**182,967,000**
J.	Add a Second Track with CTC on UP Moffat Tunnel Subdivision between Utah Junction and Prospect Junction	**$**	**6,679,000**
K.	CTC and Additional Sidings as Necessary on the UP-BNSF Freight Line between South Denver and Palmer Lake [3]	*$*	*20,000,000*
L.	~~Additional Capacity (Sidings, Double Track, CTC) as Needed on UP-BNSF Joint Line between Palmer Lake and Pueblo~~		
	~~- Accommodate Both Freight and Commuter Passenger Operations on a Common Line~~		
M.	Freight Terminal Facilities at or near Irondale (BNSF) and Watkins (UP) to Replace Facilities in the Denver City Area (Estimate Does Not Include Facility at Irondale)	**$**	**208,024,000**
N.	Construct 35-Mile Connection Between BNSF (Omar, CO) and UPRR (Peoria, CO) [4]	*$*	*105,000,000*
		$	**882,651,360**

[1] Includes total cost ($11,000,000) of Pecos Street underpass. UPRR portion anticipated to be 50% of total cost
[2] Ballpark estimate based on connection similar to Utah Junction project
[3] Ballpark estimate based on construction of five new sidings @ $4MM per siding
[4] Ballpark estimate based on construction of 35-mile connection @ $3MM per mile

Italicized figures represent estimates without detailed backup information

Revised 01/16/04 th

Table 4.5.2 Capital Cost Summary Comparison

ID FROM TABLE 4.5.1	DESCRIPTION	RAILROADS ESTIMATE	CONSULTANTS RECOMMENDED ESTIMATE	COMMENTS
I + N	New Track (95 miles)	$287,967,000	$288,600,667	Use 6% engineering, contingency ok at 20%. $5M/Bridge for 3 Highway over RR - accepted although high given limited site restrictions.
M	New UP Freight Terminal	$208,024,000	$208,024,000	Design varies from 0.5% to 4.4%, not increased due to scale of project. Continguency at 15% ok.
N/A	New BNSF Freight Terminal	$259,280,000	$259,280,000	No data provided.
G + H	UP Limon Subdivision Track Improvements	$144,223,000	$150,568,000	Use 6% engineering, contingency ok at 15% and 20%. $15M/Bridge was used for Havana and Sable Blvd. - acceptable.
	Various Front Range Improvements			
A	Utah Junction	$43,832,000	$51,042,000	Use 6% engineering and 15% for contingency.
D	North Yard to Belt Junction	$30,000,000	$39,000,000	Use 6% engineering and 30% for contingency
C	Utah Junction to Belt Junction	$40,193,000	$41,836,000	Use 6% engineering, contingency ok at 20%. Add additional $1M for wetland mitigation
D	DRI Line	$78,204,000	$92,828,000	Use 6% engineering and 15% for contingency. $10M was used for 3 bridges - accepted given site conditions
E	Sand Creek	$15,546,360	$15,882,000	Use 6% engineering, contingency ok at 20%. Use $30/CY funished and installed for Subballast
F	Greeley Subdivision to DRI	$7,983,000	$8,036,000	Use 6% engineering, contingency ok at 20%. Use $30/CY funished and installed for Subballast
J	Utah Junction to Prospect Junction	$6,679,000	$6,980,000	Use 6% engineering, contingency ok at 20%.
N/A	Omar to Union	$5,293,000	$5,293,000	No data provided.
K	Sidings etc South Denver to Palmer Lake	$20,000,000	$0	Removed as these improvements are to facilitate commuter rail, not part of the Railroad Project.
N/A	Sidings etc Palmer Lake to Pueblo	$79,526,000	$0	Removed as these improvements are to facilitate commuter rail, not part of the Railroad Project.
	TOTAL	**$1,226,750,360**	**$1,167,369,667**	

4.6 Summary of the Public Involvement Results

Overview

The Public Involvement Plan of the Public Benefits and Costs Study was designed to:

- Provide information statewide and beyond about the study;
- Engage key stakeholders in working together to think through issues related to the study and making recommendations to decision makers at CDOT; and
- Solicit input from potentially affected citizens, businesses, and interest groups regarding possible positive and negative impacts to their communities and their perceptions of the value of those benefits and costs of those impacts.

To solicit this input, a database of approximately 375 individuals from the Front Range, Eastern Plains, and northwest Colorado was created. These individuals:

- Are involved in planning and development efforts that shape the physical characteristics and quality of life in their communities;
- Interact with, or represent, a broad cross-section of people in their community; and/or
- Represent the perspective of numerous organizations and interests.

A copy of the database is included at the end of this section.

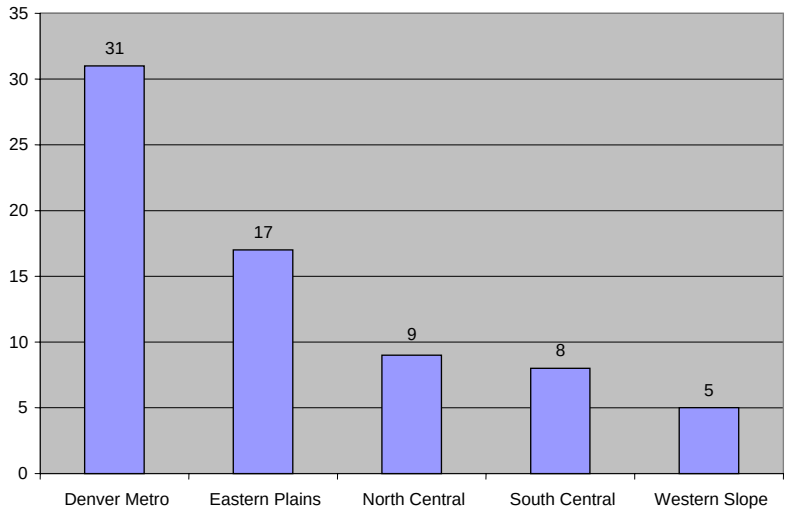
Each of the people on this database received background on the project and a survey soliciting their opinions on a variety of topics, including their perspectives on the potential environmental, economic, and safety issues associated with this proposed project. They were asked whether they thought the project was more positive or more negative for their community, and how their community might react to the proposal. A copy of the background and survey document is included at the end of this section.

Several of the organizations that received the survey also distributed the survey to their members. For example, Progressive 15, the organization representing the interests of 15 northeastern Colorado counties, distributed it to their membership. All were asked to respond via e-mail or mail. In addition, phone interviews were conducted with several key individuals whose opinion was particularly relevant to the study.

Approximately 600 surveys were distributed, and a total of 70 were completed and returned.[1] Each survey that was returned was numbered and categorized into one of five regions of the state: Denver Metro, Eastern Plains, North Central, South Central, and Western Slope. The regional breakdown of returned surveys is as follows: Denver Metro – 31, Eastern Plains – 17, North Central – 9, South Central – 8, Western Slope – 5 (see G*raph 1 – Survey Response Distribution by Region*).

[1] Of the 600 surveys that were distributed, 100 were sent to state legislators. Because the legislature was in session when this study was being conducted, we received minimal response from this group.

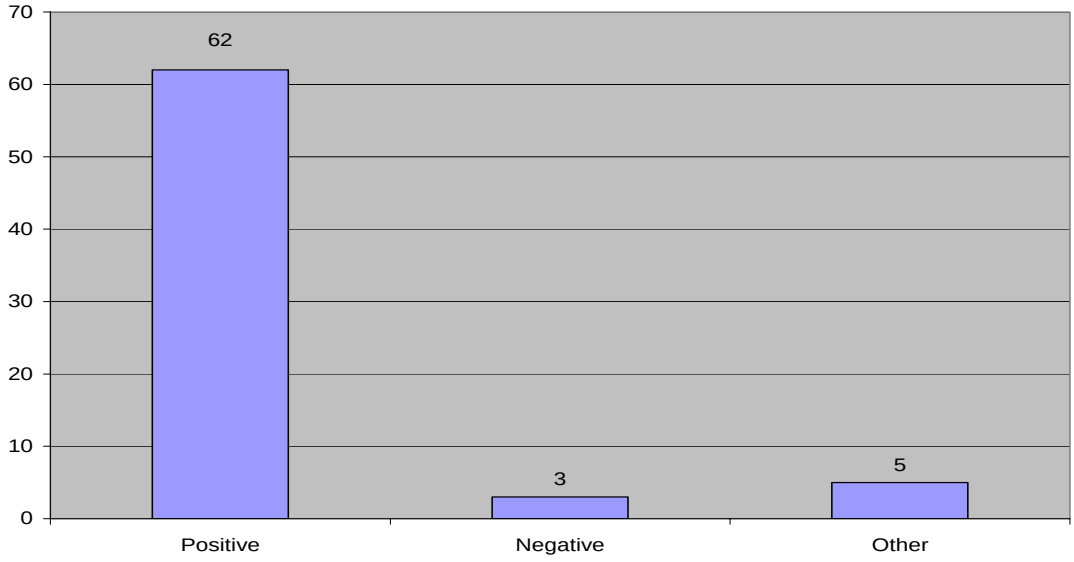
Graph 1 – Survey Response Distribution by Region



Survey Results

The overwhelming majority of respondents felt that the overall impact of this project would be more positive than negative for their community. After considering all the potential positive and negative impacts, 89% of the respondents responded that this project would be a net benefit to their community, with many stating enthusiastic support for the proposed project. Only 4% of respondents replied that the overall impact would be more negative, and 7% gave answers that fell into the "other" category [2] (see Graph 2 – Community Impact).

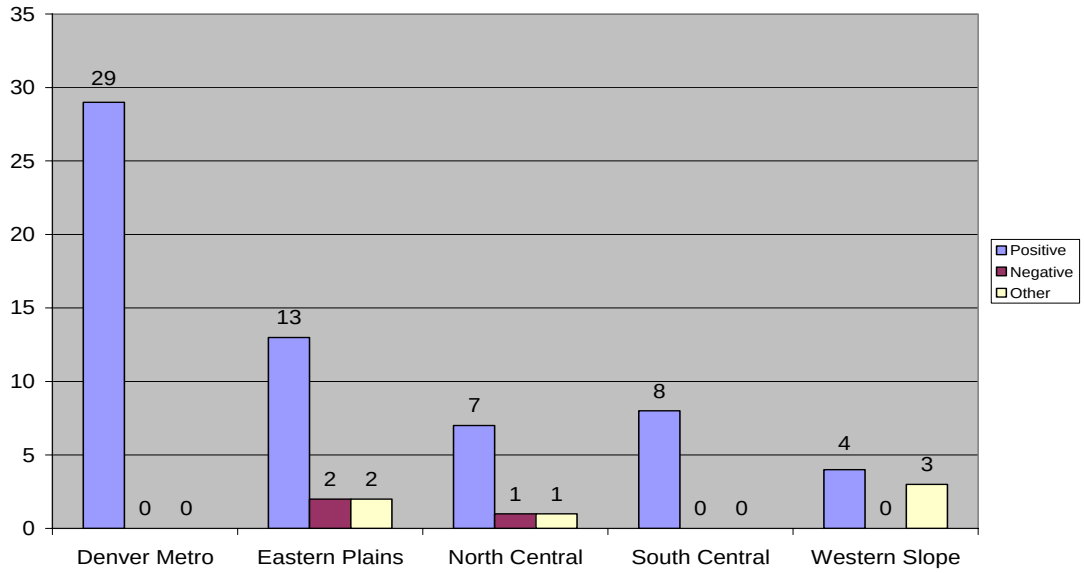
Graph 2 - Community Impact



[2] The "other" category is composed of answers that included: 'unknown', 'slight', 'not much impact', or failed to answer the question.

There was little to no significant regional variation in the response to this question. 100% of respondents living in the Denver Metro, South-Central and West Slope areas of the state felt that this project would be more positive for their communities, as did 85% of those living on the Eastern Plains and 86% of those living in North-Central Colorado. Two people living on the Eastern Plains felt this would be a net negative for their communities because of safety concerns as a result of increased railroad crossings, and one in the North-Central area felt it would be a net negative because of the funding it would consume that would otherwise go to highway improvements.

Graph 3 - Community Impact by Region



Several consistent themes were expressed in the surveys and interviews

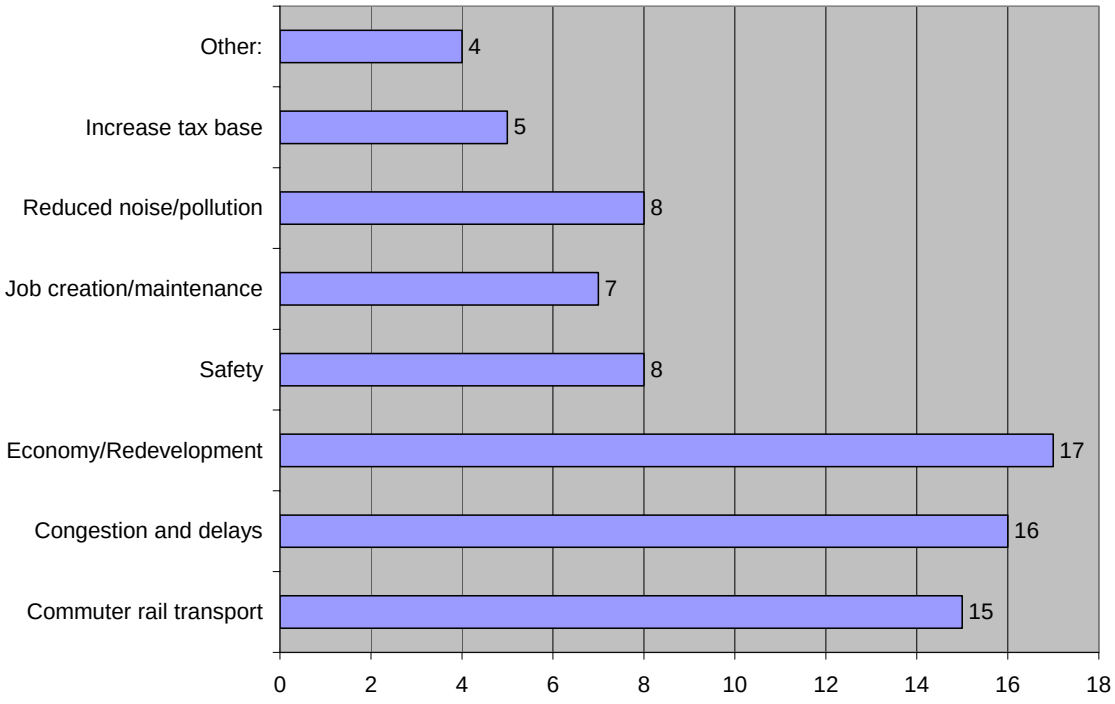
Survey Benefits[3]

- 24% of the respondents cited the potential for this project to spur economic development as the most significant benefit.
  - Eastern Plains respondents felt that this project could attract freight-related businesses to the new rail corridor, but pointed out that this potential would be minimal or non-existent if the new rail line did not include stops or transfer points. If the railroad simply went through their communities with no opportunities to stop and load and unload, it was questionable whether the Eastern Plains communities would see any significant economic development benefit in terms of job creation, although increased tax revenues might result.
  - In addition, Eastern Plains respondents cited the short-term job creation that would result from the construction activities associated with the proposed realignment.
  - Those living along the Front Range cited the potential redevelopment of the existing rail corridor, specifically mentioning areas like the Central Platte Valley that would benefit. Several also mentioned the increased tax revenue that would result from this redevelopment.

[3] Note that the percentages do not add up to 100% as several respondents cited more than one benefit as the most significant potential benefit of this project.

- 23% cited easing congestion and traffic delays as the biggest benefit, with another 21% citing the potential for commuter rail transportation in the Denver metro area and from Pueblo to Fort Collins. Those citing these benefits shared a common concern: the need to improve traffic along the Front Range, and particularly in the Denver metro area. This perspective was not limited to those living along the Front Range. Respondents from both the Western Slope and Eastern Plains noted this benefit as well. One respondent from the Eastern Plains noted that easing traffic congestion in Denver could result in more funds being available to other parts of the state to address their transportation concerns.
- 11% cited reduced noise, particularly for those living along the existing rail corridor, and reduced pollution from cars having to sit idling while trains pass as the greatest benefit.
- Another 11% cited the improved safety that would result from removing train crossings as the biggest benefit. Some cited the concern that trains currently carry hazardous materials through the heavily congested Front Range, and that moving rail lines to the Eastern Plains may improve safety for these residents.

Graph 4 - Greatest Benefits



Below is a geographic breakdown of what was cited as the greatest benefit of this proposed project.

Greatest Benefits	Denver Metro	Eastern Plains	North Central	South Central	Western Slope	TOTAL
Commuter rail transport	9		3	3		15
Congestion/delays	10	1	4	1		16
Economy/Redevelopment	7	6	2	2		17
Safety	4		2	1	1	8
Job creation/maintenance	1	5			1	7
Reduced noise/pollution	5		3			8
Increase tax base		3	1	1		5
Other (continued coal production, land use, access to Gulf Markets	1	1			2	4

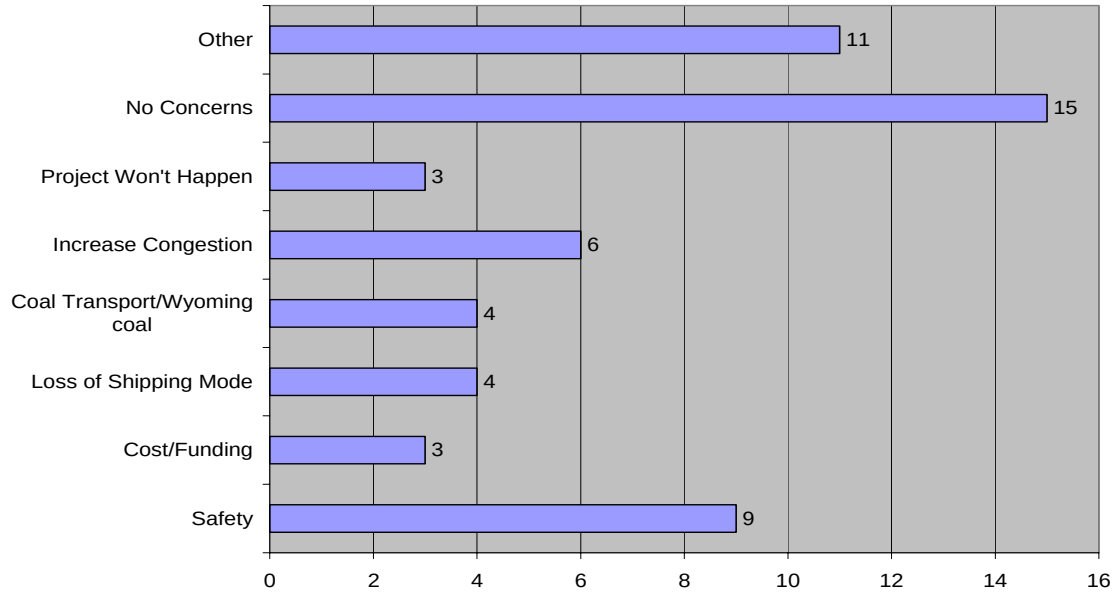
Survey Concerns[4]

There was less consistency in the concerns that were raised.

- The greatest number of respondents (21%) had no concerns about this project.
- The most significant concern raised by 13% of the respondents was the impact this proposed realignment would have on safety in Eastern Plains communities. An increase in the number of grade crossings could have a negative impact on safety, including more car/rail accidents and an increase in the delay emergency vehicles might encounter to get to an emergency.
- Similarly, 9% were concerned that this would increase congestion, primarily in Eastern Plains communities.
- 4 respondents were concerned that this potential realignment could negatively impact Colorado's coal industry. The coal industry, and the energy industry generally, are very competitive. There was concern that this realignment could benefit Wyoming coal and put Colorado coal at a competitive disadvantage. A question was raised whether any revenue to build this project might come from Wyoming since that state's coal industry would benefit from this project. It was also mentioned that this project could ease the train congestion in Denver, thus making it more efficient (and potentially less expensive) to get Colorado coal to market.
- A few respondents raised the issue about how this potential realignment might impact those businesses that currently ship by rail. This was less a concern and more of a question, with the respondents wanting to know more about this issue in order to formulate an opinion. Similarly, questions were raised about whether truck traffic might increase as a way to transport goods to the new rail location.
- A few of the respondents expressed concern about the cost of this project and how it would be paid, with one person stating that it would take money away from highway improvements.
- 3 respondents stated that their greatest concern was this project might not happen.
- Little concern was expressed that this proposed realignment could have negative environmental impacts.

[4] Again, the percentages will not add up to 100% because several people cited more than one reason as their concern.

Graph 5 - Greatest Concerns



Below is a geographic breakdown of what was cited as the greatest concern of this proposed project.

Greatest Concern	Denver Metro	Eastern Plains	North Central	South Central	Western Slope	TOTAL
Safety	2	7				9
Cost/Funding	1		1		1	3
Loss of Shipping Mode	3			1		4
Coal Transport/Wyoming coal				2	2	4
Increase Congestion	2	1	1	1	1	6
Project Won't Happen			1			3
No Concerns	2	4	2	2		15
Other (increased pollution, loss of farm land, detract from highway funds	5	2	2	2		11

Survey Community-Specific Issues

A few of the respondents raised community-specific benefits, concerns, or issues to be considered by this and future studies.

- Colorado Springs Utilities owns and operates the Nixon power plant in the central part of the City to which a significant amount of coal is transported. To the extent the coal trains are relocated to east of the City, an alternative way will be needed to get coal to the plant. One of the options that might be considered would be using the former east-west Rock Island rail line that goes through well-established neighborhoods. An official in the Colorado Springs area observed that this would be strongly opposed by those neighborhoods as a serious challenge to their community and quality of life.

- Two respondents from the Colorado Springs area also raised a concern over wanting to minimize any negative impact on rail freight traffic to Fort Carson and other military installations in the area. Military activities are a significant contributor to the economy of Colorado Springs, and these respondents want to avoid any impact that may harm this important segment of its economy.
- Xcel Energy recently announced plans to build a new coal-burning power plant in Pueblo. Respondents from Pueblo were very concerned that moving the rail line to a location significantly east of where the new plant is to be located could have a negative impact on the economics of this new plant. They were concerned that this study could negatively impact that new plant and whether it is built.
- One respondent from Pueblo noted that there is only one rail line manufacturer currently operating in the United States, and it is CF&I Steel located in Pueblo. To the extent new lines need to be manufactured because of the potential relocation, Pueblo could benefit from the new jobs that might be added to manufacture the rails.
- Another issue raised by residents in and near Pueblo is that the City has the second largest rail yard in the state, which presents both a concern in that jobs could be shifted east (although the individuals may continue to live in Pueblo) and a benefit in that the rail yard could be redeveloped.

Stakeholder Database

Organization	Name	Title	City
Adams County	Jeanne M. Shreve	Transportation Coordinator	Commerce City
Adams County Economic Development	Bill Becker	President/CEO	Westminster
Arvada Chamber of Commerce	Jenny Geyer		Arvada
Associated Governments of Northwest Colorado	Jim Evans		
Aurora Chamber of Commerce	George Peck	VP, Public Affairs	Aurora
Aurora Chamber of Commerce	Kevin Hougen		Aurora
BNSF	Cathy Norris		
BNSF	Jesus Chapa		
Boulder Area Realtor Assoc.	Ken Hotard	Sr. Vice-Pres Public Affairs	Boulder
Boulder Chamber of Commerce	Alice Swanson		Boulder
Boulder County	Dickey Lee Hullinghorst		Boulder
Boulder Economic Council	Susan Bond	Director	Boulder
Broomfield Chamber of Commerce	Rick Roberts		Broomfield
CASTA	Jeanne Erickson		
Castle Rock Chamber of Commerce	Pam Ridler		Castle Rock
CDOT	Jennifer Finch		
Center for Regional & Neighborhood Action	Rich McClintock		
Chief-of-Staff, Mayor of Denver	Michael Bennet		
Citiventure Assoc., LLC	Marilee Utter	President	Denver
City	Barbara Connors	Mayor	Erie
City	Beverly Bradshaw	Mayor	Englewood
City	Bill Shaneyfelt	Mayor	Castle Rock
City	Bonnie Thompson	Mayor	Delta
City	Charles Baroch	Mayor	Golden
City	Charles Sisk	Mayor	Louisville
City	Chris Berry	Mayor	Lafayette
City	Dale Sparks	Mayor	Federal Heights
City	Dan Jones	Mayor	Sterling
City	Doug Trevithick	Mayor	Fort Morgan
City	Ed Moss	Mayor	Westminster
City	Ed Tauer	Mayor	Aurora
City	Elwood Gillis	Mayor	Lamar
City	Gary Lasater	Mayor	Parker

Organization	Name	Title	City
City	Gretchen Cerveny	Mayor	Wheat Ridge
City	Jan Pawlowski	Mayor	Brighton
City	Jim Ferree	City Manager	Craig
City	Jim Spehar	Mayor	Grand Junction
City	John Hickenlooper	Mayor	Denver
City	John Huggins	Director	Denver
City	John Ostermiller	Mayor	Littleton
City	John R. O'Boyle	Mayor	Lone Tree
City	Julia Pirnack	Mayor	Longmont
City	Karen Stuart	Mayor	Broomfield
City	Kathie Novak	Mayor	Northglen
City	Kathy Dichter	Mayor	Morrison
City	Ken Fellman	Mayor	Arvada
City	Larry Walsh	Mayor	Loveland
City	Lee Evett	City Manager	Pueblo
City	Lionel Rivera	Mayor	Colorado Springs
City	Lorne Kramer	City Manager	Colorado Springs
City	Mark Smiley	Mayor	Glendale
City	Mary Carter	Mayor	Sheridan
City	Millie Bennett	Mayor	Castle Rock
City	Nancy Sharpe	Mayor	Greenwood Village
City	Noel Busck	Mayor	Thornton
City	Paul Strong	City Council President	Steamboat Springs
City	Phil Cortese	Assistant City Manager	Littleton
City	Randy Pye	Mayor	Centennial
City	Ray Martinez	Mayor	Fort Collilns
City	Rob Prewitt	Mayor	Edgewater
City	Robert Harper	Mayor	Yuma
City	Robert Johnson	Mayor	Paonia
City	Sean Ford	Mayor	Commerce City
City	Steve Burkholder	Mayor	Lakewood
City	Steve Sullivan	Mayor	Foxfield
City	Steve Treadway	Mayor	Brush
City	Stu Ferguson	Mayor	Gunnison
City	Susan Spence	Mayor	Superior
City	Ted Brandy	Mayor	Limon
City	Thomas Jacobucci	Mayor	Burlington
City	Tom Davidson	Mayor	Louisville
City	Tom Selders	Mayor	Greeley
City	Will Toor	Mayor	Boulder

Organization	Name	Title	City
City and County of Broomfield	Kirk Oglesby	Deputy City Manager	Broomfield
City and County of Denver	Jason Longsdorf	City Planner Specialist	Denver
City of Arvada	Bob Manwaring	Traffic Engineer	Arvada
City of Aurora	Mac Callison	Transp. Planner	Aurora
City of Boulder	Amy Mueller	Intergov'l Coordinator	Boulder
City of Boulder	Tracy Winfree	Transportation Chair	Boulder
City of Burlington	Darlene Scott	Community Development Director	Burlington
City of Colorado Springs	Craig Blewitt	Transportation Planner	Colorado Springs
City of Colorado Springs	Sherre Ritenour	Transit Services Manager	Colorado Springs
City of Englewood	Mike Flaherty	Asst. City Manager	Englewood
City of Lakewood	Dave Baskett	Traffic Engineer	Lakewood
City of Littleton	James Woods	City Manager	Littleton
City of Littleton	Pat Croneberger	Council Member	Littleton
City of Longmont	Phil Greenwald		Longmont
City of Louisville	Heather Balser	Assist. to the City Administrator	Louisville
City of Thornton	Gene Putman	Special Project Manger	
City of Westminster	Larry Schulz	Councilor	Wheat Ridge
City of Westminster	Steve Smithers	Ass't City Manager	Westminster
Club 20	Reeves Brown	President	
CO Railroad Passenger Assn.	Jon Esty	President	
Colorado Association of Commerce and Industry	Chuck Berry	President	
Colorado Association of Commerce and Industry	Dan Pilcher		Denver
Colorado Association of Commerce and Industry	Pam Saxton	Chair	Denver
Colorado Association of Wheat Growers	Darrell Hanavan		
Colorado Beef Industry Council	Fred Lombardi	Executive Director	
Colorado Cattlemen's Association	Terry Frankhauser	Executive VP	
Colorado Corn Growers Association	John Cevette	Executive Director	
Colorado Counties	Charles Montoya	Chairman of the Board	Huerfano Co.

Organization	Name	Title	City
Colorado Counties	Chuck Brown	Chairman of the Board	El Paso Co.
Colorado Counties	Dennis Everhart	President	
Colorado Counties	Doug Monger	Chairman of the Board	Routt Co.
Colorado Counties	Elaine Valente	Chairman of the Board	Adams Co.
Colorado Counties	Forrest Nelson	Chairman of the Board	Rio Blanco Co.
Colorado Counties	Fred Field	Chairman of the Board	Gunnison Co.
Colorado Counties	Gary Beedy	Chairman of the Board	Lincoln Co.
Colorado Counties	Greg Bledsoe	Legislative Liaison	
Colorado Counties	Jack McLavey	Chairman of the Board	Logan Co.
Colorado Counties	Jan McCracken	Chairman of the Board	Delta Co.
Colorado Counties	John Martin	Chairman of the Board	Garfield Co.
Colorado Counties	John Metli	Chairman of the Board	Elbert Co.
Colorado Counties	Kathay Rennels	Chairman of the Board	Larimer Co.
Colorado Counties	Larry Kallenberger	Executive Director	
Colorado Counties	Lawrence Sena	Chairman of the Board	Bent Co.
Colorado Counties	Loretta Kennedy	Chairman of the Board	Pueblo Co.
Colorado Counties	Marianna Raftopoulos	Chairman of the Board	Moffat Co.
Colorado Counties	Melanie Worley	Chairman of the Board	Douglas Co.
Colorado Counties	Mike Harms	Chairman of the Board	Morgan Co.
Colorado Counties	Rob Masden	Chairman of the Board	Weld Co.
Colorado Counties	Robert Bauserman	Chairman of the Board	Otero Co.
Colorado Counties	Robert Valdez	Chairman of the Board	Las Animas Co.
Colorado Counties	Susan Beckman	Chairman of the Board	Arapahoe Co.

Organization	Name	Title	City
Colorado Counties	Tobe Allumbaugh	Chairman of the Board	Crowley Co.
Colorado Environmental Coalition	Elise Jones	Executive Director	
Colorado Environmental Coalition	Sam Sager	Field Organizer	Denver
Colorado Farm Bureau	Alan Foutz	President	
Colorado Farm Bureau	Ray Christensen	Executive VP	
Colorado Livestock Association	Bill Hammerich	CEO	
Colorado Mobility Coalition	Joe Tempel		
Colorado Mobility Coalition	Margie Ness		
Colorado Motor Carriers Assoc.	Greg Fulton	President	
Colorado Municipal League	Ken Bueche	Executive Director	
Colorado Municipal League	Mike Braaten		
Colorado Municipal League	Patricia Vice	President	
Colorado Operation Lifesaver	Keith Dameron		
Colorado Organic Producers Association	Jim Dyer	Director	
Colorado Public Expenditure Council	Bud Hover		
Colorado Springs Chamber	Jeff Crank		
Colorado Springs Chamber	Will Temby		Colorado Springs
Colorado Springs Economic Development Corporation	Michael Kazmierski	COO	Colorado Springs
Colorado Springs Economic Development Corporation	Rocky Scott	President	
Commerce City	Brett Limbaugh	Director of Community Planning	Commerce City
Commuter Rail Supporters	Albert Bartlett		
Commuter Rail Supporters	Bill Roettker		
Commuter Rail Supporters	Dick McLean		
Commuter Rail Supporters	Doug Brown		
Commuter Rail Supporters	Elmer Zessin		
Commuter Rail Supporters	Jeff Henry		
Commuter Rail Supporters	Kelly Nordini		
Commuter Rail Supporters	Sue Anderson		
Consultant	Randy Grauberger		
Craig Chamber of Commerce	Cathy Vanatta	Director	Craig
Denver Metro Chamber	Joe Blake*		Denver
Denver Metro Chamber	Tamra Ward		Denver
Denver Metro Chamber of Commerce	Sara Thompson Cassidy	Deputy Director of Public Affairs	Denver
Denver Regional Council of Gov'ts	Melanie A. Worley	Chairman	Denver

Organization	Name	Title	City
Denver Regional Council of Gov'ts/Dist. 3	Bill Vidal	Director	Denver
Downtown Denver Partnership	Anne Warhover	President/CEO	Denver
Downtown Denver Partnership	Brendon Harrington	Transp. Prog. Man.	Denver
DRCOG	George Scheuernstuhl	Director Transportation Services	Denver
DRCOG	Lawrence Tilong		
East Central Council of Local Gov't/Dist. 5	Maryjo M. Downey	Director	Stratton
El Pomar Foundation	Dave Palenchar		
Environment Colorado	Elena Nunez	Transportation Advocate	
Executive Committee, Club 20	Les Mergelman		Cedaredge
Exempla Healthcare	Dave Wollard		
Forster Wheeler Envir. Corp.	Mary Gearhart		Lakewood
Fort Collins Area Chamber of Commerce	David May		Fort Collins
Front Range Railroad	John Peacock		Fort Collins
Ft. Collins Economic Dev. Corp.	Jacob Castillo		
Fuller & Company	Don Kortz		Denver
Glenwood Springs Area Chamber of Commerce	Ken Kranz		Glenwood Springs
Grand Junction Chamber of Commerce	Diane Schwenke		Grand Junction
Greater Englewood Chamber of Commerce	Cristin Ackerly		Englewood
Greater Golden Area Chamber of Commerce	Gary Wink	Executive Director	Golden
Greater Pueblo Chamber of Commerce	Rod Slyhoff		Pueblo
Greeley Weld Economic Development Partners	Ron Klaphake	President/CEO	Greeley
Greeley/Weld Chamber of Commerce	Gayle Duggar		Greeley
Groswold Ski Corp.	Jerry Groswold		Winter Park
Haight and Haight	Bill Haight		Steamboat
Highlands Ranch Metro Districts	Jeffrey Case	Director of Engineering	Highlands Ranch
Historic Arkansas Riverwalk of Pueblo	Mark Hess		Pueblo
Holme Roberts & Owen	Don Bain		Denver
Intermodal Studies program at DU	Andy Goetz	Professor	Denver

Organization	Name	Title	City
Jefferson County	Nanette Neelan	Special Projects Coordinator	Golden
Jefferson Economic Council	Debbie Woodward		Golden
Johns Manville Shipping	Gary Merrifield	Logistics Manager	
K.R. Swerdfeger Construction	Keith Swerdfeger		Pueblo
Kalos Strategy Group	Rollie Heath		Boulder
Kennecott Energy		Public Relations	
Kersey Area Chamber of Commerce	Steve Kramer		Kersey
Landside Services	Craig Calson		Brighton
LDC Properties	Louie D. Carleo		Pueblo
League of Women Voters	Carol Tone		Denver
Legislature – House	Alice Borodkin	Arapahoe, Denver	
Legislature – House	Alice Madden	Boulder	
Legislature – House	Andrew Romanoff	Arapahoe, Denver	
Legislature – House	Angela V. Paccione	Larimer	
Legislature – House	Ann F. Ragsdale	Adams	
Legislature – House	Anne L. McGihon	Arapahoe, Denver	
Legislature – House	Betty Boyd	Jefferson	
Legislature – House	Bill Cadman	El Paso	
Legislature – House	Bill Crane	Jefferson	
Legislature – House	Bob Briggs	Jefferson	
Legislature – House	Cheri Jahn	Jefferson	
Legislature – House	Dale Hall	Weld	
Legislature – House	David Schultheis	El Paso	
Legislature – House	Diane Hoppe	Logan, Phillips, Sedgwick, Weld	
Legislature – House	Don Lee	Jefferson	
Legislature – House	Fran Coleman	Arapahoe, Denver, Jefferson	
Legislature – House	Frank Weddig	Arapahoe	
Legislature – House	Gayle Berry	Mesa	
Legislature – House	Greg Brophy	Adams, Cheyenne, Crowley, Kiowa, Kit Carson, Lincoln, Morgan, Washington, Yuma	
Legislature – House	Gregg P. Rippy	Eagle, Garfield, Gunnison, Hinsdale, Pitkin	
Legislature – House	Jim Welker	Larimer	
Legislature – House	Joe Stengel	Arapahoe, Jefferson	

Organization	Name	Title	City
Legislature – House	Joel Judd	Denver	
Legislature – House	John T. Salazar	Alamosa, Conejos, Costilla, Huerfano, Mineral, Pueblo, Rio Grande, Saguache	
Legislature – House	John V. Pommer	Boulder	
Legislature – House	K. Jerry Frangas	Denver	
Legislature – House	Keith King	El Paso, Fremont	
Legislature – House	Kevin Lundberg	Larimer, Weld	
Legislature – House	Liane McFadyen	Fremont, Pueblo	
Legislature – House	Lois Tochtrop	Adams	
Legislature – House	Lola Spradley	Chaffee, Custer, Fremont, Park, Pueblo, Saguache	
Legislature – House	Mary Hodge	Adams	
Legislature – House	Matt Smith	Delta, Mesa	
Legislature – House	Michael Garcia	Arapahoe	
Legislature – House	Michael Merrifield	El Paso	
Legislature – House	Michael P Cerbo	Denver	
Legislature – House	Mike May	Douglas	
Legislature – House	Nancy Spence	Arapahoe	
Legislature – House	Pam Rhodes	Adams	
Legislature – House	Paul Weissmann	Boulder	
Legislature – House	Ramey Johnson	Jefferson	
Legislature – House	Richard D Decker	El Paso	
Legislature – House	Rob Fairbank	Jefferson	
Legislature – House	Rosemary Marshall	Denver	
Legislature – House	Shawn Mitchell	Adams, Boulder, Broomfield, Weld	
Legislature – House	Terrance Carroll	Denver	
Legislature – House	Tom Plant	Boulder, Clear Creek, Gilpin	
Legislature – House	Val J. Vigil	Adams	
Legislature – House	William D. "Bill" Sinclair	El Paso	
Legislature – Senate	Abel Tapia	Pueblo	
Legislature – Senate	Alice J. Nichol	Adams	
Legislature – Senate	Bob Hagedorn	Arapahoe	
Legislature – Senate	Bruce E. Cairns	Arapahoe, Denver	
Legislature – Senate	Dan Grossman	Denver, Jefferson	
Legislature – Senate	Deanna Hanna	Jefferson	
Legislature – Senate	Doug Lamborn	El Paso	
Legislature – Senate	Ed Jones	El Paso	
Legislature – Senate	F. Jim Dyer	Arapahoe,	

Organization	Name	Title	City
		Jefferson	
Legislature – Senate	Jennifer Veiga	Adams, Denver	
Legislature – Senate	Joan Fitz-Gerald	Boulder, Clear Creek, Gilpin, Grand, Jefferson, Summit	
Legislature – Senate	John Andrews	Arapahoe	
Legislature – Senate	Ken Arnold	Adams, Broomfield, Weld	
Legislature – Senate	Ken Chlouber	Douglas, El Paso, Lake, Park, Teller	
Legislature – Senate	Ken Gordon	Arapahoe, Denver	
Legislature – Senate	Ken Kester	Baca, Bent, Crowley, Custer, Fremont, Huerfano, Las Animas, Otero, Pueblo	
Legislature – Senate	Mark D. Hillman	Cheyenne, Elbert, Kiowa, Kit Carson, Lincoln, Logan, Morgan, Phillips, Prowers, Sedgwick, Washington, Yuma	
Legislature – Senate	Maryanne "Moe" Keller	Jefferson	
Legislature – Senate	Norma V. Anderson	Jefferson	
Legislature – Senate	Paula E. Sandoval	Denver	
Legislature – Senate	Peggy Reeves	Larimer	
Legislature – Senate	Peter C. Groff	Adams, Denver	
Legislature – Senate	Ron May	El Paso	
Legislature – Senate	Ron Tupa	Boulder	
Legislature – Senate	Ronald J. "Ron" Teck	Garfield, Mesa	
Legislature – Senate	Stephanie Takis	Adams	
Legislature – Senate	Steve Johnson	Larimer	
Legislature – Senate	Sue Windels	Jefferson	
Legislature – Senate	Terry Phillips	Boulder	
Longmont Area Chamber of Commerce	Alan Swanson		Longmont
Loveland Chamber of Commerce	Gaye Stockman		Loveland
mag chloride maker shipper	Todd Loose	Logistics Manager	
Mesa National Bank	Bill Sisson		
Metro Denver Network	Tom Clark	Executive Director	
Metro North Chamber of Commerce	Deborah Obermeyer	President and CEO	Thornton
Morton Consulting	Linda Morton		Lakewood

Organization	Name	Title	City
N.W. Colorado Council of Gov'ts/Dist. 12	Gary Severson	Executive Director	Silverthorne
Non-profit Trustee	Stephanie Foote		Denver
North Front Range MPO	Cliff Davidson	Director	Fort Collins
North Front Range MPO	John Daggett	Planner	
Northeastern Colorado Assn. of Local Gov't/Dist. 1	Larry Worth	Director	Fort Morgan
Past Chair, Action 22	Dennis Murphy		Del Norte
Pikes Peak Area Council of Gov'ts/Dist. 4	Fred Van Antwerp	Executive Director	Colo. Springs
Points of Passage Consulting	Gwen Anderson		Denver
Policy Development Associates	Andrew Wallach		Denver
Progressive 15	Jerry Allen	Chairman, Cheyenne County	
Progressive 15	Rick Dykstra	Executive Director	Siebert
Progressive 15	Stan Holmes	City Manager	Wray
Progressive 15	Terry Hall	Chair, Transportation Committee	
Prowers County Development	Diane Kolby		
Pueblo Area Council of Gov'ts/Dist. 7	Daniel Kogovsek	Co-Executive Director	Pueblo
Pueblo Bank & Trust	Dave Ferrill		Denver
Pueblo Bank & Trust	Mike Cafasso		Pueblo
Pueblo Chieftain	Jane Rawlings		
Pueblo Economic Development Corp.	Joan Acosta		
Qwest Communications	Pete Kirchhof		
Region 6 S.E. Colorado Enterprise Development Inc. and S.E. Council of Gov'ts/Dist. 6	Janet Goedert-Anderson	Executive Director	Lamar
Rocky Mountain Sierra Club	Bert Melcher		
Rocky Mountain Sierra Club	Greg Casini	Chair	
RR Consultant	Paul Smith		
RTD	Bill Van Meter	Senior Manager of Systems Planning	Denver
RTD	Bob Tonsing		
RTD	Liz Rao	Ass't GM, Planning and Development	Denver
RTD	Mary Blue		
Senn. Lewis, Cisciano & Strahle, PC	Joel Rosenstein		Denver
Shughart, Thomson & Kilroy	Howard Gelt		Denver
Sierra Club, RMC	Adriana Raudzens		Denver

Organization	Name	Title	City
South Central Council of Gov'ts/Dist. 14	Kerry Gabrielson	Director	Trinidad
South Metro Chamber	Brian Vogt	President	Centennial
Southeast Business Partnership	John Lay		Englewood
Southeast Business Partnership	Trish Layton	Vice President	Englewood
Southern Colorado Economic Development District	L. Tomkins	Executive Director	Pueblo
Special District Assn. of Colorado	Donna Alengi		
Special District Assn. of Colorado	J. Evan Goulding		Denver
STAC	Chuck Brown		
STAC	Dale Hoag		
STAC	Dan Ellison		
STAC	Daryl Shrum		
STAC	Frank Hempen		
STAC	Glenn Gibson		
STAC	Glenn Vaad		
STAC	Jan Anderson		
STAC	Jim Whitmore		
STAC	John Hurtado		
STAC	John Stulp		
STAC	John Stump		
STAC	Josh Joswick		
STAC	Karin MacGowan		
STAC	Kerry Gabrielson		
STAC	Leni Walker		
STAC	Leslie Jones		
STAC	Loretta Kennedy		
STAC	Lorraine Anderson		
STAC	Mary Frye		
STAC	Melanie Worley		
STAC	Mick Ireland		
STAC	Mike Geile		
STAC	Quentin Vance		
STAC	Rob Vance		
STAC	Steve Cook		
STAC	Vince Rogalski		
Stakeholders	Alice Birch		
Stakeholders	Carloe Lange		
Stakeholders	Charles Stelmokas		
Stakeholders	Chris Paulson		
Stakeholders	Gordon Riggle		
Stakeholders	Jack Quinn		
Stakeholders	Louie Carleo		

Organization	Name	Title	City
Stakeholders	Mel Takaki		
Stakeholders	Stan Broome		
Stakeholders	Will Shafroth		
Stakeholders - Action 22	Cathy Garcia	President/COO	
Tate Law Firm	Penfield Tate		Denver
Transit Alliance	Lauren Martens	Executive Director	
Transportation Solutions	Allison Billings	Executive Director	
Union Pacific	Dick Hartman		
University of Colorado at Colo. Sprgs	Karen Newell		
Upper Arkansas Area Council of Gov'ts/Dist. 13	Judy Lohnes	Director	Canyon City
UPS	Wayne Fish		
Urban Neighborhoods, Inc.	Dana Crawford		Denver
US 36 TMO	Debra Baskett	Director	Broomfield
Washington County Chamber of Commerce	Nancy Lightle		Akron
West Chamber Serving Jefferson County	Amy Sherman		Lakewood
Xcel Energy	Cynthia Evans		Denver
Xcel Energy	Wade Haerle		Grand Junction
City of Pueblo	Bill Moore	Urban Transport. Plan. Mgr.	

Survey and Background Document

Public Survey
February 2004

The Colorado Department of Transportation (CDOT) has commissioned a study to examine the potential benefits and costs associated with a proposed project that would relocate through-freight rail traffic from the Front Range to the Eastern Plains and make other rail improvements. Our purpose in contacting you is to provide some background on this proposed project and ask for your feedback on how it might impact your community.

The Front Range has seen increases in freight train traffic, much of it coal from Wyoming and western Colorado traveling to and through the Front Range. These increases, along with increasing urbanization and limitations related to topography, combine to result in longer delays at crossings and other operational inefficiencies in Colorado's transportation infrastructure. Consequently, for a number of years there have been suggestions that longer freight trains should be moved out from Front Range cities.

CDOT and the two Class I railroads operating in Colorado, the Burlington Northern Santa Fe Railway Company (BNSF) and the Union Pacific Railroad Company (UP), have been discussing possible rail infrastructure changes for several years. The two railroads have proposed a package of improvements (the "proposed project") designed to move most coal traffic from the Front Range to the Eastern Plains and improve and consolidate freight movement -- while still maintaining local freight traffic. The railroads recognize the benefits of this proposed project to their operations. They also believe the public will significantly benefit from the project, and therefore have expressed interest in exploring a public/private financial partnership to help defray the costs of the proposed project.

CDOT has commissioned a study, called the Public Benefits and Costs Study, to identify, quantify and qualify the public benefits associated with this proposed project. Costs refer to the full range of impacts, positive and negative, including social, economic and environmental costs and benefits. Examples include improvements in traffic movement and air quality, as well as the opportunity to redevelop certain railroad yards and the creation of construction jobs. The study will also consider the ability of western Colorado coal to be efficiently moved to market and remain competitive, as well as the possibility that passenger rail service could be added in the future within rail corridors once freight traffic is reduced. The ultimate goal of the study will be to determine whether the benefits to Coloradans are sufficient to warrant investing public dollars in a public/private partnership with the BNSF and UP to accomplish this proposed project.

Additional information on the Public Benefits and Costs Study is available on our website, http://www.dot.state.co.us/railroadstudy/, which might help to provide you with greater detail. In addition, a very informative article on this project was published by The Rocky Mountain News and can be found at the following Web address: http://www.rockymountainnews.com/drmn/business/article/0,1299,DRMN_4_2599024,00.html. The article included a map showing the current alignment and a map showing the realignment as proposed by the railroads; these Rocky Mountain News maps are available on our website, at http://www.dot.state.co.us/railroadstudy/maps/default.asp. It should be noted, however, that this study is not meant to establish or analyze any specific railroad alignments. Such work, as well as more detailed analyses, would be carried out in a more detailed implementation study phase, if such a next phase is deemed to be warranted.

Public input will play an important part in shaping this study. We would therefore like to ask you to complete the attached public information survey. The questions on the survey are designed to solicit your overall impression, at this early stage of the study, of the potential costs and benefits of the proposed project.

Subsequent phases of this project, if conducted, would likely include a more detailed analysis of the impacts on particular communities in greater detail.

We would greatly appreciate your response to the survey no later than February 20, 2004, if possible. To respond, simply hit REPLY TO ALL and respond to the questions below. (It is recommended that you temporarily save a copy on your computer in case there are problems sending/receiving your response.) You can also mail your response to Ron Thorstad, the project manager for this study, at DMJM/Harris, 717 17th Street, Suite 500, Denver, CO 80202. You may also provide additional feedback throughout the study until April 1, 2004, by clicking on the submit feedback tab or by mailing it to us at the address designated above. Any information submitted will be compiled in our database, reviewed and summarized by our public involvement team. To the extent you want more information, let us know and we will try to provide you what you need. We would also ask you to share this information with others in your community, such as members of organizations to which you belong, and ask them to respond to the survey and provide us their thoughts.

Thank you in advance for taking the time to provide us with your thoughts, and we look forward to hearing from you. For any questions regarding this survey, contact Tom Mauser, CDOT Modal Planning Manager, at (303) 757-9768 or tom.mauser@dot.state.co.us.

Thanks for your participation!

Sincerely,

Tom Norton
Executive Director
Colorado Department of Transportation

Public Survey

We would greatly appreciate your response to the survey no later than February 20, 2004, if possible. To respond, simply hit REPLY TO ALL and respond to the following questions.

1. Do you see this proposed project as having an impact on your community? To what extent (slight to significant)?
2. Who in your community do you think could potentially feel the greatest impact? How might they be affected?
3. What do you think the potential impact might be in terms of:
    a. Economic impacts
        i. Potential job creation or job loss?
        ii. Potential additions or loss to the tax base?
        iii. Attracting businesses to locate to, or move from, your community?
        iv. Other economic impacts?
    b. Environmental impacts
        i. Potential improvements or deterioration in air quality?
        ii. Potentially positive or negative impacts on land use?
        iii. Impacts on water quality, either positive or negative?
        iv. Other environmental impacts?
    c. Traffic movement, in terms of increased or decreased congestion, or increased or decreased safety risks?
4. What other potential impacts not mentioned do you see?
5. Of these potential impacts, which have the potential to be the greatest benefit to your community? Which cause you the greatest concern?
6. When considering all the potential positive and negative impacts, do you think the overall impact could be more positive or negative for your community?
7. How do you think your community in general will react to this proposed project?
8. Do you see this possible realignment as conflicting with any development, land use, or other plans for your community? As being consistent with redevelopment opportunities in your community?
9. Do you have any other comments or information you consider important for evaluating the impacts on your community that we have not mentioned?
10. In which part of the state you reside? (City or region)
11. You are responding as:
    a. An elected official _____
    b. A government official _____
    c. A chamber of commerce or economic development official _____
    d. A private sector business _____
    e. Other _____

Please feel free to provide any additional comments.

4.7 Study Glossary

AAR	Association of American Railroads (AAR)
At-grade roadway crossing	The location where a local street or highway crosses railroad tracks at the same level or elevation
Attainment area	An area that meets National Ambient Air Quality Standards (NAAQS) specified under the Clean Air Act.
A-weighted Sound Level (dBA)	The most commonly used measure of noise, expressed in "A-weighted" decibels (dBA), is a single-number measure of sound severity that accounts for the various frequency components in a way that corresponds to human hearing.
Ballast	Top surface of rail bed, usually composed of aggregate (i.e., small rocks and gravel).
Branch line	A secondary line of railroad usually handling light volumes of traffic.
Bulk Train	Also known as a unit train. A complete train consisting of a single non-breakable commodity (such as coal, grain, semi-finished steel, sulfur, potash, orange juice) with a single point of origin and destination.
CTC	Centralized Traffic Control (CTC)
Consist	The make-up of a train, usually referring to the number of cars.
Construction footprint	The area of a construction site subject to both permanent and temporary disturbances by equipment and personnel.
Class I Railroad	Railroads that exceed annual gross revenues of $250 million, in 1991 dollars. The amount is indexed annually to reflect inflation. For 1996, the annual gross revenue was $255 million.
Cultural resource	Any prehistoric or historic district, site, building, structure, or object that warrants consideration for inclusion in the National Register of Historic Places (NRHP). For the purposes of this document, the term applies to any resource more than 50 years of age for which SEA gathered information to evaluate its significance.
Day-Night Sound (L_{dn})	One of the most widely accepted measures of cumulative noise exposure in residential areas. The Day-Night Sound Level (L_{dn}) is the A-weighted sound level, average over a 24-hour period, but with levels observed during the nighttime hours between 10 p.m. and 7 a.m., increased by 10 dBA to account for increased sensitivity at night.
dBA	Adjusted decibel level. A sound measurement that adjusts noise by filtering out certain frequencies to make it analogous to that perceived by the human ear. It applies what is known as an "A-weighting" scale to acoustical measurements.

Decibel (dB)	A logarithmic scale that compresses the range of sound pressures audible to the human ear over a range from 1 to 140, which 0 decibels represents sound pressure corresponding to the threshold of human hearing, and 140 decibels corresponds to a sound pressure at which pain occurs. Sound pressure levels that people hear are measured in decibels, much like distances are measured in feet or yards.
Deciduous	Any plant whose leaves are shed or fall off during certain seasons; usually used in reference to tree types.
DMU	Diesel Multiple Unit - a new-generation version of the Rail Diesel Car.
Emergent species	An aquatic plant with vegetative growth mostly above the water.
Endangered species	A species of plant or animal that is in danger of extinction throughout all or a significant portion of its range and is protected by state and/or federal laws.
FRA	Federal Railroad Administration - the governing body whose mission is to provide support, analysis and recommendations on broad subjects relating to the railroad industry, such as: mergers and restructuring; economic regulation; rail economics; financial health; traffic patterns and network analysis; labor-management issues; freight data and operations; intermodalism; environmental issues; and international programs.
Flat yard	A system of relatively level tracks within defined limits for making up trains, storing cars, and other purposes, which requires a locomotive to move cars (switch cars) from one track to another.
Floodplain	The lowlands adjoining inland and coastal waters and relatively flat areas and flood prone areas of offshore islands, including, at a minimum, that area inundated by a one percent (also known as a 100-year or Zone A floodplain) or greater chance of flood in any given year.
Frog	A track structure used where two running rails intersect that permits wheels and wheel flanges on either rail to cross the other rail.
Grade crossing	An intersection between a railroad track and a roadway where they cross at the same grade or elevation.
Grade separation	An intersection between a railroad track and roadway where they are separated by height or elevation, the roadway crosses over the railroad on a structure or visa versa.
Habitat	The place(s) where plant or animal species generally occur(s) including specific vegetation types, geologic features, and hydrologic features. The continued survival of that species depends upon the intrinsic resources of the habitat. Wildlife habitats are often further defined as places where species derive sustenance (foraging habitat) and reproduce (breeding habitat).
Haulage right	The limited right of one railroad to operate trains over the designated lines of another railroad.
Hazardous materials	Any material that poses a threat to human health and/or the environment. Typical hazardous substances are toxic, corrosive, ignitable, explosive or chemically reactive.

Historic property	Any prehistoric or historic district, site, building structure, or object that warrants consideration for inclusion in the National Register of Historic Places (NRHP). The term "eligible for inclusion in the NRHP" includes both properties formally determined as such by Secretary of the Interior and all other properties that meet NRHP listing criteria.
Hump yard	A railroads classification yard in which the classification of cars is accomplished by pushing them over a summit, known as a "hump", beyond which they run by gravity.
Interlocking	An arrangement of switch, locks, and signal appliances interconnected so that their movements succeed each other in a predetermined order, enabling a moving train to switch onto adjacent rails. It may be operated manually or automatically.
Intermodal facility	A site or hub consisting of tracks, lifting equipment, paved areas, and a control point for the transfer (receiving, loading, unloading, and dispatching) of intermodal trailers and containers between rail and highway or rail and marine of transportation.
Intermodal train	A train consisting or partially consisting of highway trailers and containers or marine containers being transported for the rail portion of a multimodal movement on a time-sensitive schedule; also referred to as a piggyback, TOFC (Trailer on Flat Car), COFC (Container on Flat Car), and double stakes (for containers only).
Key routes	As defined by the Association of American Railroads (AAR), a key route is a track that carries an annual column of 10,000 car loads or intermodal tanks loads of any hazardous material. AAR has developed voluntary industry key route maintenance and equipment guidelines designed to address safety concerns in the rail transport of hazardous materials. For analysis purposes, SEA has used the term "major key route" to identify routes where the volume of hazardous materials carried a route would double and exceed a column of 20,000 carloads as a result of the proposed Conrail Acquisition.
Key train	The Association of American Railroads (AAR) defines a key train as any train handling five or more carloads of poison inhalation hazard (PIH) materials or a combination of 20 or more carloads containing hazardous materials. Under AAR voluntary industry guidelines, railroads impose operating restrictions on key trains to ensure safe rail transport of these materials. These restrictions include maximum speeds, and meeting and passing procedures.
LOS	Level of Service (LOS) (rating A through F). A measure of the functionality of a highway or intersection that factors in vehicle delay, intersection capacity and effects to the street/highway network.
Lift	A lift us defined as an intermodal trailer or container lifted onto or off of a rail car. For calculations, lifts are used to determine the number of trucks using intermodal facilities.
Locomotive, road	One or more locomotives (or engines) designed to move trains between yards or other designated points.
Locomotive, switching	A locomotive (or engine) used to switch cars in a yard, between industries, or in other areas where cars are sorted, spotted (placed at a shipper's facility), pulled (removed from a shipper's facility), and moved within a local area.
Mainline	The principle line or lines of a railway.
Merchandise train	A train consisting of single and /or multiple car shipments of various commodities.

Mitigation	Actions to prevent or lessen negative effects.
National Register	A listing of historic places maintained by the Secretary of the Interior.
National Wetlands Inventory	An inventory of wetland types in the United States compiles by the U.D.S.. Fish and Wildlife Service.
Noise	Any undesired sound or unwanted sound.
Palustrine wetland	Non-tidal wetland dominated by trees, shrubs or persistent emergent vegetation. Includes wetlands traditionally classified as marshes, swamps, or bogs.
Passby	The passing of a train past a specific reference point.
Pick up	To add one or more cars to a train from an intermediate (non-yard) track designated for the storage of cars.
Prime farmland	Land defined by the Natural Resource conservation Service (NRCS) as having the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops.
PUC	Public Utility Commission (PUC) - The body governing over and changes to rail crossings. This includes adding or removing at-grade vehicle crossings.
Rail spur	A track that diverges from a main line, also known as a spur track or rail siding, which typically serves one or more industries.
Rail yard	A location where rail cars are switched and stored.
Railbanking	A set-aside of abandoned rail corridor for recreational and/or transportation uses, including reuse for rail.
Receptor/receiver	A land use or facility where sensitivity to noise or vibration is considered.
ROW	Right-of-way. The strip of land for which an entity (e.g., a railroad) has a property right to build, operate, and maintain a linear structure, such as a road, railroad or pipeline.
Riparian	Relating to, living, or located on. Or having access to, the bank of a natural watercourse, sometimes also a lake or tidewater.
Riprap	A loose pile or layer of broken stones erected in water or on soft ground such as a guard against erosion.
Riverine wetland	All wetlands and deepwater habitats contained within a channel, either naturally or artificially created.
Route miles	Distance calculated along a railroad's main and branch lines.
Scrub-shrub	Areas dominated by woody vegetation less than 6 meters (20 feet) tall, which includes shrubs and young trees.
Set onto	To remove one or more cars from a train at an intermediate (non-yard) location such as a siding, interchange track, spur track, or other rack designated for the storage of cars.
TPD	Trains per day
Take or taking	Refers to a removal of property, an acquisition of right-of-way, or loss and/or degradation of species' habitat.
Threatened	A species that is likely to become an endangered species within the foreseeable future throughout all or part of its range, and is protected by state and/or federal law.

Trackage rights	The right or combination of rights of one railroad to operate over the designated trackage of another railroad including, in some cases, the right to operate trains over the designated trackage; the right to interchange with all carriers at all junctions; the right to build connections or additional tracks in order to access other shippers or carriers.
Turnout	A track arrangement consisting of a switch and frog with connecting and operating parts, extending from the point of the switch to the frog, which enables engines and cars to pass from one track to another.
Unit train	A train consisting of cars carrying a single commodity, e.g., a coal train (see also bulk train).
Water resources	An all inclusive term that refers to many types of permanent and seasonally wet/dry surfaces water features including springs, creeks, streams, rivers, ponds, lakes, wetlands, canals, harbors, bays, sloughs, mudflats, and sewage-treatment and industrial waste ponds.
Wetland	As defined by 40 CFR Part 230.3, wetlands are "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions". Wetlands generally include swamps, marches, bogs, and similar areas.
Wye track	A principal track and two connecting tracks arranged like the letter "Y".
Yard truck	Any truck that has delivery into a rail yard.