

Executive Summary Colorado State Freight & Passenger Rail Plan

March, 2012



Acknowledgements

The Colorado Department of Transportation would like to thank the following individuals and their organizations for their contributions to the development of the Colorado State Freight and Passenger Rail Plan.

State Rail Plan Steering Committee

<u>Name</u>	<u>Representing</u>
Jonathan Hutchison	Amtrak
Sarod Dhuru	BNSF Railway
Ann Rajewski	Colorado Association of Transit Operators (CASTA)
Gary Beedy	Colorado Counties Inc. (CCI)
Tim Larsen	Colorado Department of Agriculture
Mehdi Baziar	Colorado Department of Transportation
Sandi Kohrs	Colorado Department of Transportation
Wendy Wallach	Colorado Department of Transportation
Mark Radtke	Colorado Municipal League (CML)
Matt Cheroutes	Colorado Office of Economic Development
Craig Casper	Metropolitan Planning Organizations
Mike Ogborn	OmniTRAX
Cathy Shull	Progressive 15, Action 22, Club 20
Henry Stoppelcamp	Regional Transportation District (RTD)
Steve Gregory	San Luis and Rio Grande Railroad
Vince Rogalski	State Transportation Advisory Committee (STAC)
Alice Destigter	Union Pacific Railroad

COLORADO STATE FREIGHT AND PASSENGER RAIL PLAN



Executive Summary

Introduction

The creation of the Division of Transit and Rail (DTR) within the Colorado Department of Transportation (CDOT) in 2009 (Senate Bill 94) was a critical milestone for the future of rail planning and further implementation of the freight and passenger rail system within the state. Recognizing the importance of rail to the future of the Colorado transportation system and to the economic health of the state, the Division initiated the Colorado State Freight and Passenger Rail Plan (Plan) to provide a framework for future freight and passenger rail planning in Colorado. This Plan will inform both the railroad element of the state's next long-range multi-modal transportation plan (2040 horizon) and a statewide transit plan.

The rail system that was very important in the development of early Colorado has evolved in recent decades as a primary economic driver in the movement of freight to, from, and through the state. This Plan will move freight rail transportation forward with a focus on economic development, as well as set the stage for the state to take advantage of the momentum around the country in regard to the re-birth of passenger rail service. The Plan has been developed to ensure that the benefits of both freight and passenger rail are fully realized as Colorado prepares for the future.

The purpose of the Plan is to improve the overall effectiveness of Colorado's freight and passenger rail system. In addition, the Plan has created and adopted a vision for rail improvements that can greatly enhance the effectiveness and efficiency of the state's overall transportation system.

Adopted Colorado Rail Vision

The Colorado rail system will improve the movement of freight and passengers in a safe, efficient, coordinated and reliable manner. In addition, the system will contribute to a balanced transportation network, cooperative land use planning, economic growth, a better environment and energy efficiency. Rail infrastructure and service will expand to provide increased transportation capacity, cost effectiveness, accessibility and intermodal connectivity to meet freight and passenger market demands through investments which include public-private partnerships.

COLORADO STATE FREIGHT AND PASSENGER RAIL PLAN



The following Plan Goals linked to the state rail vision were also adopted:

- Create a balanced transportation system utilizing cooperative land use planning to create intermodal connectivity and accessibility without compromising existing service and infrastructure
- Provide for the safety of people, infrastructure, and goods
- Expand rail infrastructure and freight and passenger rail services to meet future demand through strategic investments which include public-private partnerships with privately owned service providers
- Promote through education the energy efficiency, environmental and economic benefits of freight and passenger rail transportation throughout the state
- Use the efficiencies of freight and passenger rail to develop livable communities which enhance economic growth throughout the state

Rail System Needs and Plan Policy Recommendations

This Plan has been prepared to provide a framework for future freight and passenger rail planning in Colorado. It also has been prepared to be in compliance with the requirements of the federal Passenger Rail Improvement and Investment Act of 2008 (PRIIA). Through the development of this Plan, considerable work has been completed to form a comprehensive understanding of the current characteristics of the state rail system and to establish a thorough list of improvement needs as recognized by the Colorado Department of Transportation, the railroads, industry groups, local governmental entities and other interested stakeholders throughout Colorado. The process also produced a series of non-project specific policy recommendations to guide and enhance future rail planning in Colorado.

Although complete, this Plan is not meant to be the culmination of rail planning; it is meant to be the beginning. The Plan will be incorporated into the Statewide Long Range Transportation Plan and will be updated regularly to reflect current information and policies.

Short-range Investment Program

As outlined in Chapter 6 of the Plan, a substantial list of system improvement needs has been identified. Those projects that are either programmed through public or private sector sources or that could be implemented within five years, depending on funding availability, have been included in the Short-Range

COLORADO STATE FREIGHT AND PASSENGER RAIL PLAN



Investment Program. Furthermore, a relative priority rating has been established for many of these projects. The short-range program generally includes the following element:

Freight Rail

- Numerous railroad/public safety projects aimed at safety improvements at railroad/highway at-grade crossings,
- Many railroad overpass/underpass projects at locations where a new grade separation is needed or where an existing grade separation needs rehabilitation or reconstruction,
- A number of short line railroad improvement projects necessary to allow smaller railroads to effectively work with Class I railroads and to better support local and state economic development. These projects mostly improve tracks and structures to support standard 286,000-pound rail cars or to allow higher operating speeds, and
- A wide range of Class I railroad capital projects, which will be implemented by the railroads.

Passenger Rail

- Several projects directed at enhancing existing Amtrak services and stations in the state, and
- Support for completion of the Commuter Rail portions of the Regional Transportation District's FasTracks program, and
- Interregional Connectivity Study (ICS) and Advanced Guideway System (AGS) Feasibility Study to plan for future high-speed intercity passenger rail, and
- Development of commuter rail service from the Denver metropolitan area to Fort Collins.

Long-range Investment Program

The Long-Range Investment Program includes those major freight rail and passenger rail projects that have not been studied beyond the level of feasibility or are not anticipated to be initiated within the next five years. These include the following:

COLORADO STATE FREIGHT AND PASSENGER RAIL PLAN



Freight Rail

- Relocation of the BNSF Railway and Union Pacific Railroad intermodal facilities, and
- Added freight rail capacity to accommodate future demand and Front Range passenger rail.

Passenger Rail

Extension of intercity commuter rail service from Denver to Colorado Springs and Pueblo,

- A number of projects extending intercity rail service throughout the state and as far as Cheyenne, Wyoming and El Paso, Texas,
- High-speed rail projects extending north, south, east and west of Denver, with the highest priority on the line from the Denver metropolitan area to the Eagle County Airport, pending the outcomes of the ICS and AGS studies, and
- A series of rail station-related projects that will be dependent on the development of new passenger rail service lines.

Rail Plan Policy Recommendations

The following is a list of policy recommendations suggested to enhance rail planning and to improve the rail system in Colorado. These recommendations are discussed in more detail in the Plan.

Position Colorado for future federal funding for freight and passenger-related infrastructure improvements

One of the requirements of PRIIA is that states applying for future passenger rail funding from the federal government must have a state rail plan approved by the Federal Railroad Administration (FRA). The intent of this Plan is to provide a framework for future direction for improving and expanding freight and passenger rail services in Colorado.

Explore new state and local funding sources for rail-related programs, infrastructure and services

This Plan contains recommendations for many new programs, such as the Short Line Railroad Assistance Program and the numerous passenger services and other projects that have been identified in the Short and Long Range Investment Programs. Many of these programs and projects are currently unfunded, so it will be important to actively pursue alternative strategies for securing additional funding.

COLORADO STATE FREIGHT AND PASSENGER RAIL PLAN



Facilitate improved communication between communities and railroads

Considerable discussion occurred at the six workshops and open houses held around the state about issues relating to a lack of adequate and effective communications between communities/shippers and the railroads. It was suggested that CDOT facilitate a forum where organizations such as the Colorado Municipal League and the Class I and short line railroads could discuss ways to further improve communications related to a broad variety of issues.

Coordinate to ensure integration and connectivity with other existing and planned transportation system improvements

An efficient transportation system that integrates all modes and provides connectivity for passengers, goods and services plays an important role in ensuring Colorado's economic success. A multimodal system requires that connections between modes of transportation be fully integrated to increase system efficiency and operations, ultimately saving time and costs.

Develop and explore implementation options for a Front Range regional commuter rail system

The Front Range of Colorado is continuing to grow into a linear economic region from Fort Collins to Pueblo with increasing traffic congestion throughout. At the workshops and open houses a high level of support was expressed by many communities throughout Colorado to implement a passenger rail system. CDOT has completed environmental documents in the form of the North I-25 Environmental Impact Statement (EIS) between the Denver metropolitan area and Fort Collins with commuter rail improvements addressed. The next phase of the passenger rail planning effort is the Interregional Connectivity Study. CDOT should work with the Metropolitan Planning Organizations (MPOs) along I-25 to identify reasonable funding strategies and financing mechanisms for the furtherance of Front Range passenger rail.

Maximize use of existing infrastructure and monitor significant rail corridor infrastructure to ensure future corridor preservation and expansion

With limited funding, state departments of transportation are looking for ways to use existing transportation systems in more efficient and economical ways. A need exists not only to make the best use of what they have, but to preserve the system for future use. The Colorado Transportation Commission passed Policy Directive #1607.0 in July 2000 which describes a framework for identifying and preserving rail corridors for future use and to supplement the highway system, among other things.

While the Tennessee Pass and Towner Lines appear to have the most potential for future preservation, other light density lines in the state also should be monitored as part of the Division of Transit and Rail's future rail planning activities and efforts.

COLORADO STATE FREIGHT AND PASSENGER RAIL PLAN



Facilitate meetings among the Colorado Office of Economic Development, the Class I and short line railroads, regional economic development agencies and representatives of various economic sectors, such as agriculture, defense and energy, to explore win/win opportunities to grow the Colorado and local/regional economies

Access to rail transportation is crucial for many businesses and industries looking to locate or relocate in Colorado's cities and communities. These meetings could initiate discussions and develop relationships that would improve business for the railroads, enhance economic development in Colorado's communities and address issues pertaining to railroad abandonment. CDOT and its partners should seek to maximize the participation of the private sector in rail improvement projects and establish responsibilities and performance standards for the railroads in return for public participation.

Develop and implement a Short Line Railroad Assistance Program

Colorado does not currently have a program to provide assistance to short line railroads for improving their infrastructure. Several states (e.g., Kansas, Iowa, North Carolina and Pennsylvania) have short line assistance programs (low interest revolving loans and grants) that Colorado should explore as to their adequacy for the conditions and requirements of the short lines that are key economic drivers in many regions of the state. CDOT should also support efforts to modernize the rail system to accommodate 286,000-pound railcars and increase allowable speeds on short line railroads. The Short Line Railroad Assistance Program would be expected to benefit agricultural and other industries, promote economic development in rural Colorado and make strategic investments to best move freight by both rail and truck throughout the state.

Support linking of Colorado's passenger rail systems to the developing national intercity and high-speed rail networks

CDOT has completed an environmental document for the I-70 mountain corridor in the form of the I-70 Mountain PEIS study. The next phase of that effort will be the Advanced Guideway System (AGS) Feasibility study. The goal of the AGS study is to define the technology and alignment of future AGS along the I-70 corridor. CDOT should work with the mountain Transportation Planning Regions along I-70 to identify reasonable funding strategies and financing mechanisms for the I-70 PEIS commitments.

Also, the state should consider supporting the retention of all Amtrak services in Colorado. Numerous discussions have occurred regarding the potential re-routing of Amtrak's Southwest Chief service off the Raton Pass line and onto the BNSF's transcontinental line. The potential re-route would benefit Amtrak by adding service to two major population centers, Wichita and

COLORADO STATE FREIGHT AND PASSENGER RAIL PLAN



Amarillo, while reducing the cost for service by eliminating operations over Raton Pass. However, the rerouting would terminate service to La Junta and Trinidad. CDOT should work with the New Mexico and Kansas Departments of Transportation to determine if a strategy can be developed and presented to Amtrak and BNSF to maintain the existing route.

Use the Stakeholder Group convened for this Plan as a resource for the upcoming Interregional Connectivity and Advanced Guideway Systems studies and to advise on future updates to the Plan

CDOT should consider using appropriate rail stakeholders for public involvement activities as it moves forward with the Interregional Connectivity and Advanced Guideway System studies. In addition, when CDOT initiates its first update of this Plan, which is expected to occur no later than five years following its completion, the importance of including the strong base of rail transportation supporters should be used to the fullest.

Rail History in Colorado

Railroads played a significant role in the development of the state of Colorado. Following the discovery of gold in the state in the late 1850s, the railroad network began to develop in earnest. The demand for additional transportation in the state was met by both passenger and freight rail for approximately 100 years. A majority of today's highways and roadways in the state are adjacent to existing or now abandoned railroad corridors.

The advent of the Interstate Highway System in the mid-1950s changed the way Americans traveled. The automobile began to replace passenger rail as the preferred mode of long-distance travel for a majority of Americans. Commercial air travel also led to the demise of long-distance passenger rail service. As passenger rail began to decline in popularity, the private railroad companies began to focus on the movement of freight.

The creation of the National Railroad Passenger Corporation (Amtrak) in 1971 signaled the end of most passenger rail service in Colorado. While the Denver and Rio Grande Railroad continued its passenger service between Denver and Salt Lake City, other passenger rail services were eliminated except the two routes that Amtrak currently operates: the California Zephyr from Chicago to San Francisco and the Southwest Chief from Chicago to Los Angeles.

The railroads continued to take a larger share of the movement of freight into, out of and through Colorado. This reduced the burden of much of the movement of bulk freight commodities off of Colorado's highway network. The demand for Colorado and Wyoming coal to fuel electrical-generating facilities in Colorado and other states also led to an increase in railroad traffic in the late 1970s and early 1980s.

COLORADO STATE FREIGHT AND PASSENGER RAIL PLAN



The last several years have seen a re-birth in the interest for passenger rail services around the country. There is interest by several Colorado communities to re-establish passenger rail service as an option for providing mobility to Colorado's citizens and tourists alike.

A brief history of railroading in Colorado is detailed in the Plan. This history is the basis and background for many of the developments that occurred later in the 20th century and which made the railroad of great importance to Colorado, particularly in the handling of coal, iron, and steel; agricultural and food products; and intermodal traffic.

Colorado Rail System

The Colorado transportation system infrastructure includes a broad array of multimodal elements that are privately and publicly owned and operated. The transportation system consists of highways, local roadways, freight and passenger railroads, private and public transit systems, airports pedestrian and bicycle facilities.

The Colorado rail system currently includes both a freight rail network and a limited passenger rail network. The role of the railroads and rail transportation in the state is to provide efficient transportation choices for the movement of goods and people while connecting effectively to the other transportation modes. The rail system in the state is an inter-connected component of much larger regional, national and global multi-modal transportation systems and economies.

The freight rail system has been in place for many years and has been a key contributor to the growth and development of the state throughout its history. It is expected that, as the state population and economy continues to grow, freight rail service also will expand to meet the needs of commerce.

Alternatively, passenger rail service is currently limited, with Amtrak providing the only long-distance passenger service in Colorado and the Regional Transportation District (RTD) providing rail service in the Denver area. However, there is a growing sentiment to support the development of an improved inter-city and commuter rail passenger rail system in Colorado to link to RTD's FasTracks program.

Freight Rail System

Freight railroads represent a significant industry that is critical to the economic health and competitiveness of the state. Currently 14 freight railroads operate in Colorado; these railroads own more than 2,800 miles of track in the state and currently operate on 2,684

COLORADO STATE FREIGHT AND PASSENGER RAIL PLAN



miles of those tracks (see Figure ES-1). This represents about 1.9 percent of the nation's 140,000 miles of network trackage. The extent of this network is also reflected in the fact that 48 of Colorado's 64 counties are directly served by the freight rail network.

Class I Railroads

The two Class I railroads in Colorado, the BNSF Railway (BNSF) and the Union Pacific Railroad (UP), operate over 80 percent of the miles of track and carry the majority of freight in the state. They both provide service that runs north-south and east-west in Colorado, although only the UP owns trackage across the Continental Divide. The rail line that carries the greatest amount of freight is the Consolidated Main Line, which runs along the Front Range between Denver and Pueblo. Portions of this line are owned by BNSF and UP, but they both operate on it over the length of the line.

Short Line Railroads

There are 12 short line railroads operating in Colorado. These railroads, comprising about 20 percent of the track miles in the state, primarily provide localized service with connections to the Class I railroads. In most cases, they principally serve the agricultural industry. Hence, these short line railroads are very valuable assets to both local and statewide economies.

Detailed statistical bios for the Two Class I and 12 short line railroads are included in Chapter 3. These bios provide a summary description of the railroad, a map of their lines and other key facilities and track, and economic and commodity data.

COLORADO STATE FREIGHT AND PASSENGER RAIL PLAN

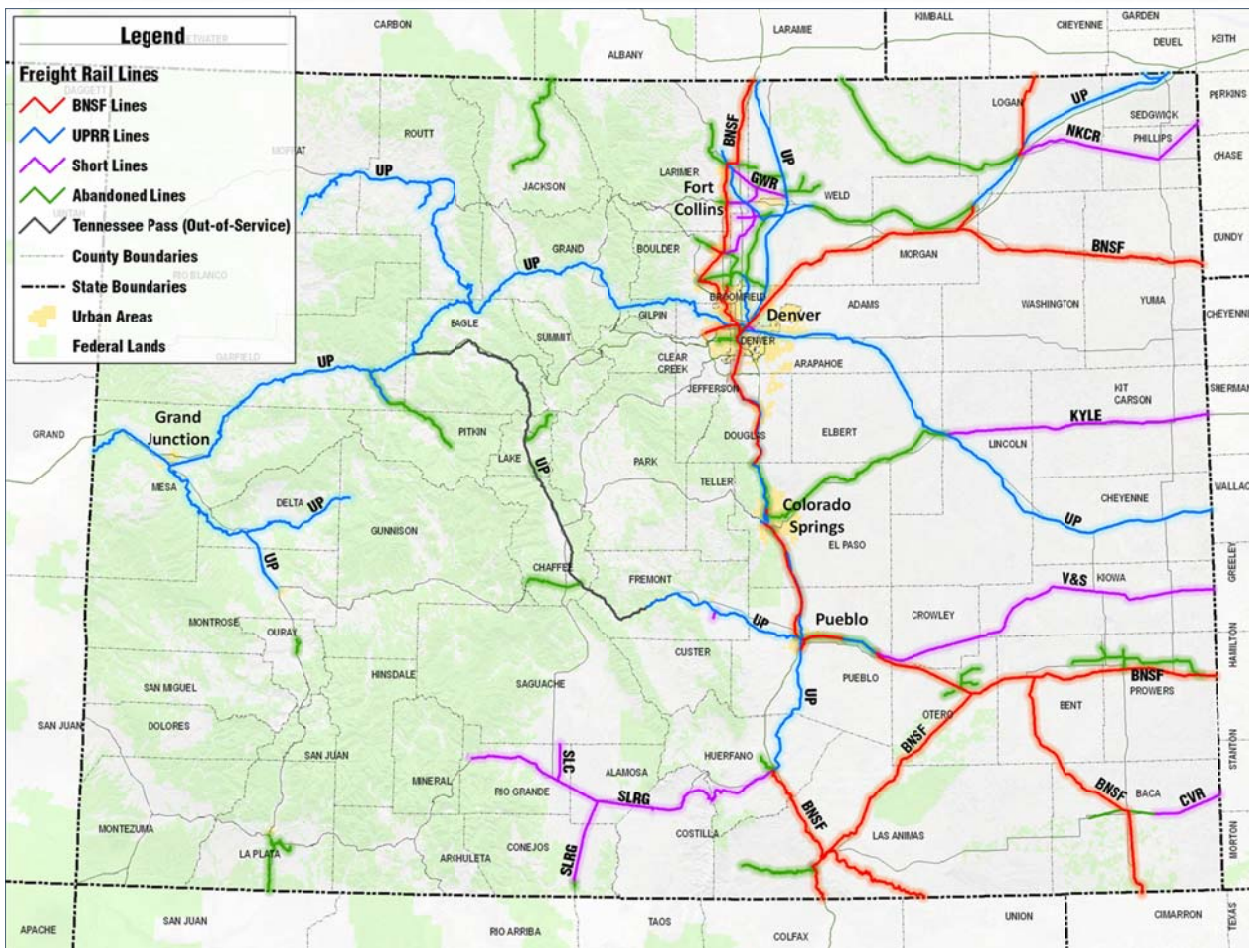


Figure ES-1 Colorado’s Freight Railroad Network

Commodity Flow Characteristics

Nearly one-fourth of all freight handled in Colorado is moved via rail. The 2009 Surface Transportation Board (STB) Carload Waybill Sample served as the primary data source for the freight rail commodity flow analysis. The Carload Waybill Sample is a stratified sampling of carload waybills for all U.S. rail traffic, obtained from rail carriers that deliver 4,500 or more revenue carloads annually.

Nationally, more than 1.7 billion tons of freight was originated by U.S. railroads in 2009. Table ES-1 summarizes the tonnage, carloads and value of all commodities traveling by rail from, to, and through Colorado.

The commodities carried totaled nearly 2.4 million carloads, with a combined value of \$107 billion. Of the commodities carried in Colorado in 2009, by weight, 72 percent were goods

COLORADO STATE FREIGHT AND PASSENGER RAIL PLAN



neither originating nor terminating in Colorado but only traveling through the state. This through-traffic equates to \$90 billion worth of goods and materials. The vast majority of this through-traffic was coal from Wyoming destined for Texas and states east of Colorado¹. Railroads in Colorado carried a total of 164 million tons of goods and materials in the state in 2009.

Table ES-1. Colorado Tonnage, Carloads, and Value of Commodities Moved by Rail (2009)

Flow Direction	Tons (million)	Percent of Tonnage	Carloads	Percent of Carloads	Value (\$ billions)	Percent of Value
Interstate outbound	19.8	12.1%	250,821	10.7%	5.2	4.9%
Interstate inbound	18.4	11.2%	265,250	11.3%	11.8	11.0%
Through freight (overhead)	116.3	71.0%	1,750,686	74.4%	89.1	83.4%
Total	163.8	100%	2,351,570	100%	106.8	100%

Source: 2009 STB Carload Waybill

Passenger Rail System

The passenger rail system in Colorado is presently very limited. Amtrak, with its two routes in the state, is the only provider of long-distance passenger rail service. The RTD in the Denver metro area has an existing light rail network and will be adding commuter rail service as part of its FasTracks program. In addition, given Colorado's railroad history and the state's natural beauty, a number of scenic railroads provide tourist-oriented service.

Amtrak

The National Railroad Passenger Corporation, also known as Amtrak, was created by Congress in 1971 and is the sole provider of intercity passenger rail service in the United States. Amtrak operates on more than 21,000 miles of rail and serves more than 500 stations in 46 states. In federal fiscal year 2011 Amtrak provided service to nearly 30.2 million passengers throughout the U.S. Amtrak's long-distance routes, which provide critical intercity service to many rural communities, had their highest ridership in 16 years. Colorado is served by two long-distance Amtrak routes as shown on Figure ES-2.

The California Zephyr runs daily between Chicago and San Francisco with major stops in Omaha, Nebraska; Denver, Colorado; Salt Lake City, Utah; Reno, Nevada; and Emeryville, California. In Colorado, the California Zephyr provides service to stations in Fort Morgan, Denver, Fraser/Winter Park, Granby, Glenwood Springs and Grand Junction.

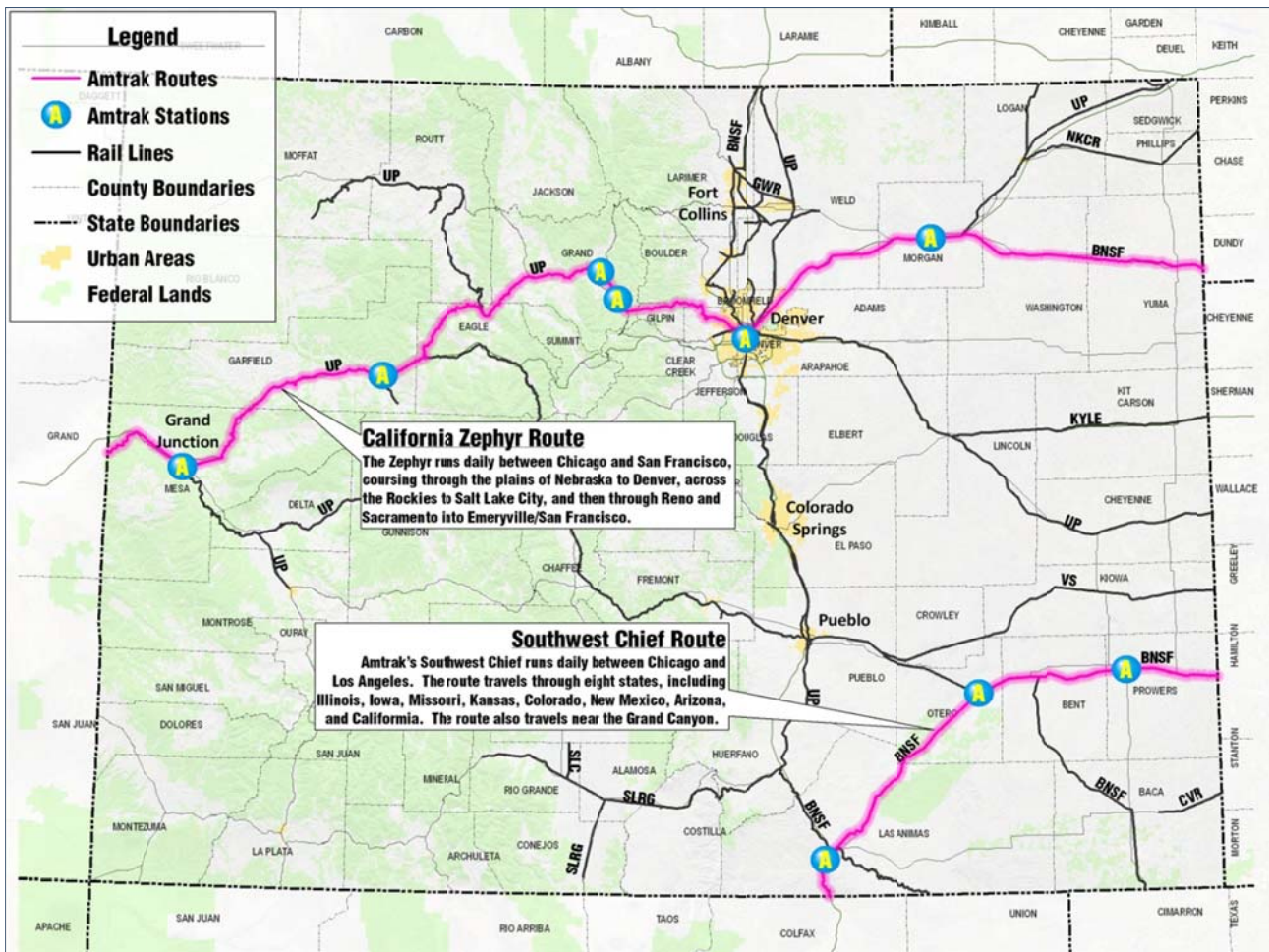
The Southwest Chief is operated through the Midwestern and Southwestern United States from Chicago to Los Angeles. The route travels through eight states: Illinois, Iowa, Missouri, Kansas,

¹ 2009 STB Carload Waybill Sample

COLORADO STATE FREIGHT AND PASSENGER RAIL PLAN



Colorado, New Mexico, Arizona, and California. In Colorado, the Southwest Chief has stations in Lamar, La Junta and Trinidad.



Source: Amtrak

Figure ES-2. Colorado Amtrak Routes and Stations

The Regional Transportation District FasTracks Program

The Regional Transportation District (RTD) rail network includes an existing 35-mile light rail network and a multi-billion dollar transit expansion plan designed to integrate new transit modes into a comprehensive region-wide system. The FasTracks program is designed to increase transit mode share during peak travel times, provide improved transportation choices and options and balance transit needs with future regional growth. The FasTracks program will expand the Denver Region's rail network to 157 corridor miles of passenger rail. When completed the total network

COLORADO STATE FREIGHT AND PASSENGER RAIL PLAN



will include 63 miles of light rail and 94 miles of commuter rail. Compared to light rail, commuter rail has higher maximum and average speeds due to longer distances between stops.

The Plan contains a map depicting RTD's FasTracks rail network, with proposed commuter rail lines, light rail and expansion of existing lines. The four proposed commuter rail lines are the Gold Line, East Corridor, Northwest Rail, and North Metro.

Scenic Railroads

Colorado is also home to eight scenic railroads that operate on either narrow or standard gauge track. These are outlined in more detail in Chapter 3. These railroads are very important to the economic development of the communities and regions in which they operate.

Rail Plan Outreach

To ensure everyone had opportunities to voice thoughts, ideas and opinions related to the Plan, the Project Team implemented a flexible approach to communication, which included numerous meetings and six workshops/open houses. In addition to face-to-face communication, e-mails, media communications and a project website were used to disseminate and receive information and feedback throughout the development of the Plan. By utilizing some of the core principles of Context Sensitive Solutions, including continuous communication with a full range of stakeholders, the team was able to incorporate comments from both freight and passenger rail interests in a balanced and meaningful way.

In addition to working with the public, the Project Team worked with the Project Management Team, the Steering Committee and the Stakeholder Group throughout the entire process to gather input and feedback.

Key Themes from the stakeholder outreach efforts include the following:

- Retain all existing rail lines and services
- Address access issues for rail shippers
- Provide expanded intercity passenger service
 - Commuter rail
 - High speed rail
- Improve communications between railroads and all interested parties
- Increase opportunities for rail-related economic development
- Improve highway/rail crossing safety
- Develop support program for Short Line railroads

COLORADO STATE FREIGHT AND PASSENGER RAIL PLAN



- Ensure CDOT's long-range transportation plan incorporates all aspects of rail

Rail Issues and Opportunities

Freight and passenger rail have a significant impact on the economy, environmental resources, land use, communities, and of course, transportation. The freight and passenger rail systems in Colorado have the opportunity to move people and goods, create jobs, increase access and connections, manage highway congestion and help reduce greenhouse gas (GHG) emissions.

Economic

Class I railroads regularly invest in infrastructure replacement and improvement. These capital investments include strengthening track infrastructure, replacing locomotives, adding new tracks or facilities and other improvements. The two Class I railroads in Colorado have recently made the following investments:

- In 2010, UP invested \$36.8 million in Colorado. This is less than, but comparable to, previous years, with nearly \$43 million invested in 2008.²
- BNSF invested more than \$104 million in Colorado in 2008 - 2010 for capacity expansion and maintenance and expects to make similar investments in the years ahead.³

In 2009, there were 2,734 active employees of freight railroads in Colorado, which resulted in \$276 million in wages. Additionally, there were 7,403 retired beneficiaries of the freight railroad industry in the state, resulting in \$132 million in retirement benefits.⁴

Environmental

Railroads are the most environmentally sound way to move freight. In 2010, railroads moved a ton of freight with an average of 484 miles per gallon of fuel consumed. According to the Association of American Railroads (AAR), railroad fuel efficiency has increased 106 percent since 1980. Currently, rail transportation is up to four times more fuel efficient than using trucks. Greater use of freight rail offers a simple, inexpensive, and immediate way to meaningfully reduce greenhouse gas (GHG) and other emissions. This is significant in Colorado because truck traffic is a significant contributor to ground-level ozone and GHG emissions. Ground-level ozone is an issue in Denver and the North Front Range. Shipping or traveling by rail instead of by truck or car could help reduce both of these emissions by reducing overall fuel consumption, and in some cases, by

² Union Pacific in Colorado, www.up.com, access December 2011.

³ 2011 BNSF's Fact Sheet "Colorado – Delivering the World to the Mile High State"

⁴ Research and Innovative Technology Administration, *State Transportation Statistics 2010*.

COLORADO STATE FREIGHT AND PASSENGER RAIL PLAN



using cleaner fuel or power sources. According to the AAR, moving the same amount of freight on rail instead of by truck would reduce average GHG emissions by 75 percent.

Community Impacts

Among the challenges faced by both railroads and the communities through which they traverse are the safety concerns of railroads, cities and towns at highway-rail grade crossings and the noise impacts on adjacent neighborhoods caused by the need for locomotives to sound their horns as they approach the crossings. One process for addressing this challenge that has been gaining interest among Colorado communities is the implementation of safety measures for the establishment of a “Quiet Zone.” The Plan contains a discussion of the requirements for and the costs of Quiet Zone implementation.

Additional decisions affecting communities relate to the specific location of future passenger rail services. Two basic concepts are frequently evaluated. One is to use an existing rail corridor with added infrastructure to accommodate new passenger train services. The second concept is to develop an entirely new corridor in undeveloped or “greenfield” property, with corridor facilities designed exclusively for the new passenger services. Each scenario has opportunities and issues that are discussed in detail in the Plan.

Safety/Security

One of the Plan goals is “**Provide for the safety of people, infrastructure and goods.**” A safe and secure railroad system is vital to rail transportation efficiency and success. Laws at both the federal and state levels regulate railroad operations while also promoting transportation safety.

The Plan includes a detailed discussion of highway/railroad grade crossing safety in Colorado including new crash avoidance technology. Other rail safety issues such as railroad property trespassing, rail transportation of hazardous materials and positive train control (PTC) technology are discussed. PTC has been designed to prevent train collisions as well as derailments caused by excessive speed and other circumstances. The state and federal funding programs utilized for rail safety improvement are also highlighted.

There are many challenges in providing security for passenger and freight rail services. Some challenges are common to both passenger and freight modes, while others are unique to specific rail operations. Discussions of Amtrak as well as freight rail specific security issues are contained in the Plan.

The roles of state and federal government in regard to rail security are described and the state’s portion of the Strategic Rail Corridor Network (STRACNET) is shown in the Plan. This program

COLORADO STATE FREIGHT AND PASSENGER RAIL PLAN



integrates defense rail needs into civil sector planning; critical in Colorado due to the number of defense related installations in the state.

Funding Sources

Investments in Colorado's rail system, expansion and maintenance are beneficial to the economy at the local, regional, state and national levels. To date, rail funding in Colorado has predominantly come from the private railroad companies that own and operate the rail infrastructure in the state.

State and local governments provide matching funds for the Section 130 at-grade rail/highway crossing programs and the rail/highway grade-separation projects built in the state. The only significantly funded passenger rail transportation at the state level has been the rail network program of the RTD in the Denver metropolitan area.

The challenge in Colorado, as well as the rest of the United States, is to find adequate and predictable funding for the projects identified in this Plan. The growing prevalence of public-private partnerships nationwide should be helpful in advancing projects that have mutual public and private benefits.

The tools used to pay for infrastructure development continue to evolve and become more complex as limited funds must be allocated to critical new projects and maintenance of existing assets. Terms like "innovative finance" have been used for years to describe the world of project funding and financing outside of traditional gasoline tax-based federal funding and pay-as-you-go project delivery. Most of what was considered innovative just a few years ago is now commonplace and much more diverse than can be accommodated under a single title.

The Plan describes various existing federal and state funding and financing sources that are currently available and could be used to improve the freight and passenger rail infrastructure and services of Colorado. Also included is a discussion of funding and financing programs utilized by other states that should be explored by Colorado.

COLORADO STATE FREIGHT AND PASSENGER RAIL PLAN



Summary

This Plan is not the culmination of rail planning in Colorado; it is the beginning! With input from an extensive stakeholder outreach program, the Plan establishes a framework for effective freight and passenger rail planning within the state.

CDOT and its broad array of rail stakeholders are committed to increasing the focus on improving freight and passenger rail transportation in the State and integrating rail planning efforts with those of other transportation modes. CDOT will also coordinate with other states to identify regional freight and passenger corridor needs and will work with the FRA and neighboring states to develop a Final National Rail Plan that it is consistent with this Plan.

The ultimate objective will be to improve the mobility of passengers and freight within Colorado while enhancing the state's economy.