WHAT IS DENVER MOVES: TRANSIT?

Denver is experiencing a period of rapid growth that demands enhanced and expanded intracity transit services to improve travel options for residents, employees, and visitors. The Denver Moves: Transit plan will create a local vision by taking the following actions:

- Convening community conversations to understand the existing transit system and how, together, we can make RTD’s regional system even better for all Denver residents, employees, and visitors
- Working closely with the community and stakeholders to identify citywide needs, values, and a shared vision for transit
- Analyzing transit opportunities, costs, and potential trade-offs, using data and community input
- Defining transit priorities for new and enhanced transit services, areas that need better access to transit, and programs that make it easier to ride transit
- Reallocating street space to prioritize transit and support moving more people
- Identifying opportunities to use technology to improve transit reliability and legibility
- Exploring shared mobility options to serve lower density neighborhoods and employment areas
- Improving bicycle and pedestrian connections and other first/last mile options to key transit corridors
- Identifying parking and land use policies that support efficient and convenient transit service
- Establishing phased implementation strategies to prioritize local transit improvements
HOW DOES TRANSIT BENEFIT THE CITY OF DENVER?

1. **Supports a healthy environment.**
   Tailpipe emissions are the leading contributor to ozone and other air pollutants. Meeting new air quality standards will be difficult without a reduction in single occupancy vehicles, congestion, and a move to alternative fuels.

2. **Attracts talent and makes Denver more competitive.**
   Quality transit service helps to attract and retain a talented work force.

3. **Supports accessibility and affordability.**
   Transit reduces household transportation costs and provides access for residents who are not able or cannot afford to drive, allowing them to access work, shopping, medical appointments, and social activities.

4. **Supports sustainable growth.**
   Denver is growing at an unprecedented rate. Transit supports growth by moving more people within the same right-of-way footprint—accommodating new residents and employees efficiently.

5. **Contributes to active, healthy lifestyles.**
   Transit riders walk an average of 19 minutes per day, nearly reaching the Center for Disease Control’s recommendation of 22 minutes a day of moderate aerobic activity.

6. **Makes Denver a better place to visit.**
   Visitors expect quality public transportation to get around a world-class city.

7. **Boosts the region’s economy.**
   By 2035, Denver will add more than 190,000 jobs based on DRCOG projections. Transit can help people reach these jobs and expand economic mobility.
DENVERIGHT: FOUR PLANS, ONE CITY

*Denver Moves: Transit* is one of four plans being developed concurrently as part of Denveright by the City and County of Denver. Launched in May 2016, Denveright connects land use, mobility, parks, and recreational planning into one cohesive community-driven effort to guide Denver for the next 20 years. The other three Denveright plans are:

- **Blueprint Denver** will direct how our city evolves, shaping how certain areas of our city will change and how other areas can remain stable and vibrant. It will also help us decide how our city’s road, bus, rail, bicycle, and pedestrian systems should evolve to meet the needs of the Denver of tomorrow.

- **Game Plan** will update the 2003 plan for recreational spaces that was shaped by the concept of Denver as “a city in a park.” This update will establish the future of Denver parks and recreation, taking into account local population growth as well as climate change, resilience, and changing needs.

- **Denver Moves: Pedestrians and Trails** will build on guidance in the 2001 Bicycle Master Plan and 2004 Pedestrian Master Plan. *Pedestrians and Trails* will focus on making walking a truly viable option for people to use as their primary means of moving around Denver.
WHAT ARE DENVER’S MOBILITY CHALLENGES?

- Population in Denver is growing at an unprecedented rate: In 2014, Denver was the fifth fastest growing city in the country and is expected to add 145,000 more residents and 190,000 more jobs by 2035. Denver grew by 78,000 people between 2010 and 2015.

- Significant numbers of employees travel in and out of Denver during the peak: Each day, 300,000 people come into the city for work and 150,000 people leave the city for work by all modes of transportation.

- Congestion is expected to increase by 2035: Hours of delay are expected to increase by 122%, and the lane miles of roads congested for three or more hours per day are projected to increase by 39%.

- Frequent bus service does not reach everyone: Today, only 34% of residents live within convenient walking distance (1/4-mile of a bus stop) to frequent bus service (at least every 15 minutes all-day).

- Transit is not an appealing option for all: Like many U.S. cities, transit in Denver is not the first choice for many people. A combination of slow travel times and priority for autos has limited the attractiveness of transit for many riders.

Population Density | Employment Density | % Low Income
--- | --- | ---
4K people/sq. mile | 3K employees/sq. mile | 28%

<table>
<thead>
<tr>
<th>% No Vehicles</th>
<th>Walk Score</th>
<th>Transit Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>11%</td>
<td>47</td>
<td>46</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>% Living within 1/4-mile of Bus</th>
<th>% Living within 1/4-mile of Frequent Bus</th>
<th>% Living within 1/2-mile of Rail</th>
</tr>
</thead>
<tbody>
<tr>
<td>75%</td>
<td>34%</td>
<td>10%</td>
</tr>
</tbody>
</table>

Notes:
1DRCOG 2015 Annual Traffic Congestion report, Table 2, p.9.
WHAT ARE DENVER’S MOBILITY OPPORTUNITIES?

■ Transit can help accommodate growth: Transit service can significantly increase the carrying capacity of Denver’s existing street network, as transit can carry more people per hour than private autos. Improved transit service and use of that service will be needed to accommodate growth over the next 20 years and beyond.

■ Aging population: By 2035, the number of older adults (60 years or older) in Denver is expected to increase with one in five adults 60 years old or older. Changing expectations about aging in place will put the safety, accessibility, and convenience of Denver’s transportation system to the test. 4

■ Social and technological trends: Changing demographics and generational preferences—coupled with increased reliance on technology—are shifting mobility expectations and increasing the demand for frequent, efficient transit service.

■ Millennials drive less: The millennial generation (people who are between the ages of 18 and 34 in 2016) is the first in decades that drives less than their parents, and the number of young people with a driver’s license is declining. As of 2015, 31% of Denver’s population is in the millennial generation.3

Person Throughput by Mode, Persons per Hour*

<table>
<thead>
<tr>
<th>Mode</th>
<th>Throughput</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private motor vehicles</td>
<td>600–1,600/hr</td>
</tr>
<tr>
<td>Mixed traffic with frequent buses</td>
<td>1,000–2,800/hr</td>
</tr>
<tr>
<td>Dedicated transit lanes</td>
<td>4,000–8,000/hr</td>
</tr>
<tr>
<td>On-street transitway, bus or rail</td>
<td>10,000–25,000/hr</td>
</tr>
</tbody>
</table>

Notes: *Based on capacity of a single 10-foot lane (or equivalent width) by mode at peak conditions with normal operations. Source: NACTO Transit Street Design Guide, 2016

2According to the Federal Highway Administration, from 2000 to 2010, the share of 14 to 34 year olds without a driver’s license increased from 21 percent to 26 percent. Federal Highway Administration, Highway Statistics 2010 – Table DL-20, September 2011.
3Pew Research Center, 2016 and ACS 2015 1-Year ACS estimates.
4State of Colorado Department of Local Affairs, 2016.
WHERE IS TRANSIT SERVICE TODAY?

- **Service area:** The Regional Transportation District (RTD) operates transit in the Denver region, serving eight counties and 40 municipalities—an area of approximately 2,300 square miles, with more than 2.8 million people.

- **Types of services:** RTD’s service in Denver includes six light rail lines, two commuter rail lines, and 84 local and regional bus routes.

- **Ridership:** Today, more than 340,000 daily transit trips are taken in the region, with over 230,000 trips—approximately two-thirds—taken within Denver.

- **Recent investments:** FasTracks—a voter approved ballot initiative—has helped to fund new rail lines, the redevelopment of Denver’s Union Station, and the Free MetroRide service.

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**Transit Ridership and Service Hour Trends in the Denver Region**

Transit ridership data represents regional (systemwide) ridership.

Source: RTD Annual Performance Data
Overview of Transit in the Denver Region
RTD’S MULTIBILLION DOLLAR TRANSIT EXPANSION PLAN: FASTRACKS

2013
- West Rail (W) Line

2014
- Denver’s Union Station redevelopment includes a new bus concourse and a mix of uses that creates activity around the station
- Free MetroRide connects Union Station and Civic Center Station along 18th and 19th Streets

2016
- University of Colorado (A) Line to Denver International Airport
- Northwest Rail (B) Line to south Westminster
- Flatiron Flyer bus rapid transit on US 36 to Westminster, Broomfield, and Boulder

2017
- Gold (G) Line to Arvada and Wheat Ridge
- I-225 Rail (R) Line through Aurora

2018
- North Metro (N) Line to Thornton

2019
- Southeast extension (E, F, and R Lines) to Lone Tree

FUTURE
- Central (L) Line extension to 38th & Blake Station (A Line)
- Southwest extension (C and D Lines) to Highlands Ranch
- Northwest (B) Line extension to Boulder and Longmont
- North (N) Line extension

What’s Included in the State of the System Report?

The Denver Moves: Transit State of the System Report paints the picture of transit service, access, and programs in Denver today:

- **Chapter 1: What is Denver Moves: Transit?** provides an overview of the State of the System Report, the benefits of transit, the factors influencing transit in Denver, and the project process and schedule.

- **Chapter 2: Transit in Denver** describes transit service in Denver, including an assessment of system performance and bus stop amenities.

- **Chapter 3: Access and Programs** details the factors that influence people’s ability to access transit service, including street connectivity, pedestrian and bicycle access to transit, first and last mile options, programs that promote transit use, fares, and system information.

- **Chapter 4: Who Rides Transit** gives an overview of transit riders by neighborhood and rider characteristics.

- **Chapter 5: Market Analysis** documents the factors that influence the demand for transit, including current population and employment growth, travel patterns, demographic characteristics that increase transit reliance, and current land use.

- **Chapter 6: Governance** describes three peer cities and transit agencies that have demonstrated success in delivering local and regional transit service.

- **Chapter 7: Key Findings** summarizes the findings from this analysis and highlights the most prominent transit challenges and opportunities facing Denver today.

- **Appendix A: Plans and Policies Summary** provides an overview of related local and regional plans and policies.

- **Appendix B: Glossary** defines transit- and mobility-related terms used throughout this report.
WHAT ARE THE KEY FINDINGS?

Service & Ridership

RAIL INVESTMENTS

Rail service provides a fast and high-quality transit experience where available. Compared to other RTD services, rail has the highest on-time performance at 93%. The reliability of rail service combined with fast travel times makes it competitive with driving. Ridership on RTD rail lines has increased by about 5 million annual riders since 2010 (29%).

SYSTEM DESIGN

Inefficiencies in the bus system are counterproductive to a positive rider experience. The Denver bus system is designed with bus routes that jog between streets and have many turns. In some cases, this is due to the street network; in others it reflects how service has evolved to serve the most people. Removing deviations can make the system easier to understand, make transit routes more direct and legible, and reduce travel times. Denver Moves: Transit will include a detailed corridor analysis that will make recommendations for improving the design of the system.
FREQUENCY

Many bus lines run only every 30-60 minutes outside of peak hours. While all rail lines provide frequent service (every 15 minutes or better all day), there are relatively few bus lines that provide frequent service. Less than 40% of residents have convenient access (quarter-mile walk to a bus stop or a half-mile walk to a light rail station) to all-day frequent service.5

COMMUTE FLOW

53% of Denver workers commute to another county for work. Denver has a large number of people that travel into and out of the county for work, which presents challenges for the transit network to accommodate a significant daily change in population. Seventy percent of employees in Denver commute from outside of Denver. Every day, Denver’s population swells with over 300,000 employees that travel from outside of Denver County. To increase the number of people using transit, commute travel patterns should be an important consideration when changing existing service or implementing new service.

DECLINING USE OF TRANSIT

Denver’s share of commute trips on transit is lower than most peer cities. Driving alone is the most popular mode choice for commuting in Denver at 73% (2015). The percent of Denver residents using transit to get to work has declined from 8% in 2000 to 6% in 2015. This is lower than cities comparable to Denver.7 In order to make transit a more attractive choice, it must be competitive with driving, including convenient access and reduced travel times. Changes to service, new or improved infrastructure, and improved programs and information can help address these barriers.

The State of the System report includes comparisons to Atlanta, Austin, Charlotte, Minneapolis, Portland, Salt Lake City, Seattle, and Washington DC. Denver’s transit mode share is lower than all these cities except for Austin and Charlotte.
Access & Amenities

**DOWNTOWN FACILITIES**

The 16th Street Mall and Union Station contribute to a vital downtown core, but other amenities and facilities have room for improvement. Union Station and Civic Center Station serve as the central transit hubs in downtown Denver, connected by the 16th Street Mall and the Free MallRide and Free MetroRide services. Downtown bus stop amenities could be improved.

**WALKING AND BIKING**

Bicycle and pedestrian access to transit stops and stations is challenging in many areas. Bicycle and pedestrian infrastructure near transit stops and stations is essential to support convenient multimodal connections and to increase the number of people served by transit. For pedestrians in Denver, the experience of walking to transit stops and stations can vary widely. For cyclists, a combination of both on-street and off-street bicycle facilities will help support seamless first/last mile connections to transit. Many bicycle lanes do not directly connect to rail stations, and pedestrian facilities vary widely, from bustling streets with many amenities to streets with missing sidewalks adjacent to heavy traffic.

**STREET CONNECTIVITY**

Gaps in street connectivity influence access to transit and route design. Distance is one of the most important factors people consider when deciding whether to use transit. Well-connected streets provide shorter travel distances and make it easier and faster for pedestrians, cyclists, and drivers to access transit. While neighborhoods within and adjacent to downtown have a more fine-grained street network, some parts of the city, such as north Denver, have a disconnected street network that can more than triple the walk distance to transit.

The Free MetroRide service, launched in May 2014 with opening of the Union Station Transit Center, carries over 2,000 passengers per day during the morning and afternoon commute periods. It connects transit riders to major downtown transit facilities such as Union Station and Civic Center.

![Image: Nelson Nygaard]
**BUS SHELTERS**

Only 25% of the approximately 500 Denver bus stops with 40 or more daily boardings have shelters. Transit stop and station amenities can enhance comfort and improve the overall rider experience. Many RTD bus stops—even those that meet RTD’s minimum threshold of 40 or more daily boardings—do not have bus shelters. Some additional stops that have shelters funded and maintained through a City of Denver advertising contract, lack even basic amenities like transit information and system maps. While a shelter may not be needed at every bus stop, stops without shelters or other amenities can discourage people from using transit, especially during hot or inclement weather.

**Fares & Information**

**FARES**

Fares are relatively high compared to Denver’s peer cities; the zone fare structure can be cost-prohibitive for people with lower incomes. The cost of transit can significantly influence ridership and accessibility. People with lower incomes are more likely to rely on transit for everyday travel, but high fares can make it difficult for some people to use transit. Among its peer cities, Denver has some of the highest one-way fares, ranging from $2.60 for local trips to $4.50 for regional trips.

**TRANSIT INFORMATION**

Limited information is available to help riders understand the system. A lack of knowledge and understanding of the transit system are common barriers to transit access and use. Denver can help improve access and increase use of transit by providing simple and easy-to-understand maps and schedules, promoting the existing online and mobile resources available to transit riders, and implementing real-time transit arrival information at high-ridership stops and stations.

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*Note: Fares are for bus and rail services that use an agency’s standard fare zones, but do not include some commuter rail services with distance-based fares, e.g., Sounder commuter rail service in the Seattle area.*
NEXT STEPS FOR DENVER MOVES: TRANSIT

Denver Moves: Transit is an 18-month process that will build on the information in this State of the System Report and the key findings to engage Denverites in developing a vision for transit. The State of the System Report presents opportunities for Denver to work with RTD to improve the transit experience by improving frequency, providing better service between neighborhoods and to key destinations, and enhancing access to transit. To do this, the Denver Moves: Transit process will:

- **Establish goals and objectives** that set a vision for transit that is aligned with the community’s values and plans for growth.

- **Develop scenarios** in partnership with the Blueprint team to identify a preferred scenario that supports the land use and transportation connection and the goals and objectives for the plan.

- **Identify corridors** that are best suited for different types of transit—rail, bus rapid transit, and local bus—and the capital improvements that may be needed to ensure transit is a reliable and competitive option to driving alone.

- **Envision a complete transit system** that ensures bicycle and pedestrian access to transit is seamless, stops and stations are comfortable and safe, and information and programs improve the awareness and legibility of transit for all Denverites.

A detailed schedule is provided on the following page. Learn more and find ways to get involved at [https://www.denvergov.org/content/denvergov/en/denveright/transit.html](https://www.denvergov.org/content/denvergov/en/denveright/transit.html).

TRANSIT MASTER PLANS

Transit agencies and cities across the U.S.* are developing Transit Master Plans—like Denver Moves: Transit—to establish how they want their systems and services to grow and change in the next 20 to 25 years.

In 2016, the Nashville Metropolitan Transit Authority’s board adopted nMotion, a $6 billion service improvement and capital investment plan to help meet the needs of more than 1 million new residents expected by 2040. In addition to near-term service improvements, the plan calls for expanded rapid transit to new service areas and development of comprehensive regional transit coverage.

Seattle’s Transit Master Plan, adopted in 2012 and updated in 2015, resulted in an unprecedented level of consensus on Seattle’s mobility future, allowing the mayor to allocate $5 million towards its implementation in 2013-2014, promptly attracting $900,000 in federal support, setting the stage for $2 million in Sound Transit partnership funding, and leading to passage of the $930 Move Seattle Levy in 2015.

COMMUNITY ENGAGEMENT
Community engagement will occur throughout the project to guide the vision for transit in Denver and ensure the plan meets the community’s needs.
Ongoing

STATE OF THE SYSTEM & MARKET ASSESSMENT
The State of the System Report documents existing conditions of the transit system and provides statistics and trends that will help lay the groundwork to develop the vision for transit in Denver.
August – December 2016

VISION & GOALS
Our first task is to develop a vision and set of goals to guide project decisions and recommendations, with input from the Task Force, stakeholders, and the community.
August 2016 – February 2017

SCENARIO DEVELOPMENT
Working closely with the Blueprint Denver team, we’ll establish scenarios that match future land uses and potential transit services, demonstrating different outcomes and the trade-offs they would require. These scenarios will be evaluated using a framework grounded in the vision and goals.
January – May 2017

TRANSIT PLAN
Denver Moves: Transit will establish a short- and long-term vision for transit in Denver. The plan will document operating, capital, and programmatic priorities; funding and implementation strategies; and land use and other policies to support a transit system that works for Denver.
August – December 2017

COMPLETE TRANSIT SYSTEM
By identifying gaps in pedestrian and bicycle access to transit, we will create strategies that can be incorporated into the priority transit corridors and the final vision for transit. We will also develop recommendations for improving transit stops and stations, information and wayfinding, and creating a great passenger experience.
May – August 2017

CORRIDOR EVALUATION
Building on the preferred scenario, we will establish priority transit corridors and evaluate them for necessary investments. We’ll explore potential modes of transit—rail, bus, rapid transit, local bus—for each corridor along with capital projects that can make transit service work better.
May – August 2017

SCHEDULE FOR DENVER MOVES: TRANSIT