BOULDER'S PLAN

Introduction Accomplishments

Transportation Vision and Goals

Boulder's Policies What's New Since 2014

How Boulder Travels

Essential Services

What We Heard

KEY INITIATIVES

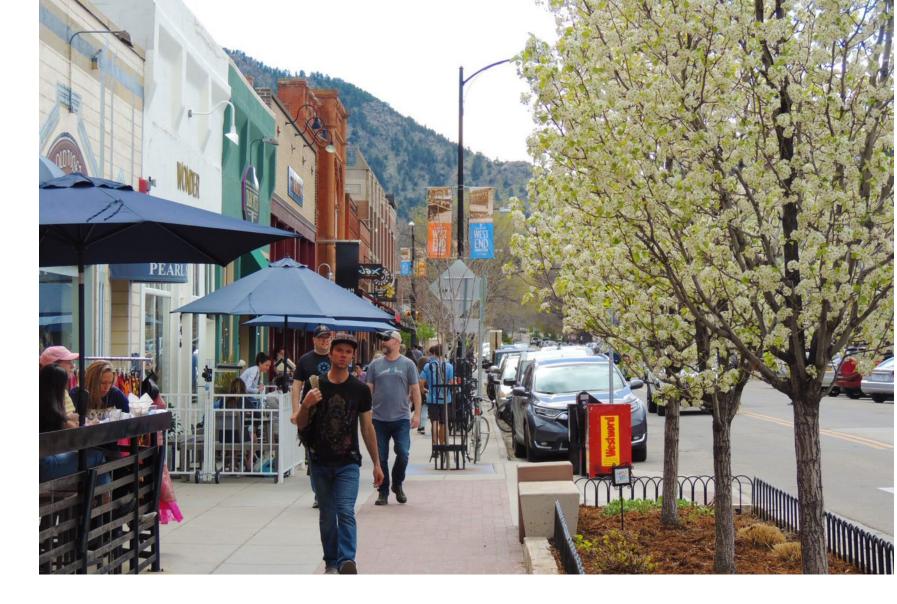
- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways
- 7. Connecting to the Region
- 8. Managing Demand on our System Together
- 9. Ensuring Equity
- 10. Funding the Transportation System

3 INVESTMENT PROGRAMS

Current Funding Program Strategic Investment Program Vision Investment Program 2019 TMP Objectives Boulder's Call to Action

Appendices can be found at <u>bouldertmp.net</u>













BOULDER'S PLAN

Introduction

Accomplishments

Transportation Vision and Goals

Boulder's Policies

What's New Since 2014

How Boulder Travels

Essential Services

What We Heard

KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways
- 7. Connecting to the Region
- 8. Managing Demand on our System Together
- 9. Ensuring Equity
- 10. Funding the Transportation System

INVESTMENT PROGRAMS

Current Funding Program Strategic Investment Program Vision Investment Program 2019 TMP Objectives Boulder's Call to Action

Appendices can be found at <u>bouldertmp.net</u>



ACKNOWLEDGMENTS

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- Josh Sperling
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CITY STAFF

- Jane S. Brautigam, City Manager
- Mary Ann Weideman, Interim Director of Public Works

Transportation

- Kathleen Bracke, Interim Co-Director of Public Works for Transportation
- Bill Cowern, Interim Co-Director of Public Works for Transportation
- Allison Crump, Employee Transportation Coordinator
- Kaaren Davis, Administrative Manager
- Michael Gardner-Sweeney, Transportation Engineer
- Jenny Godwin, Associate Planner for Transportation and Community Engagement
- Jessica Guitar, Administrative Specialist III
- Chris Hagelin, Senior Transportation Planner
- Ted Harberg, GO Boulder Intern
- Dave Kemp, Senior Transportation Planner
- Emily Kleinfelter, GO Boulder Intern
- Amy Lewin, Senior Transportation Planner
- Ryan Noles, Transportation Planner II
- Joe Paulson, Transportation Engineer
- Randall Rutsch, Senior Transportation Planner
- Jean Sanson, Senior Transportation Planner
- Meredith Schleske, Administrative Specialist II
- Reese Shaw, GO Boulder Intern
- Will Shepherd, GO Boulder Intern
- Mark Shisler, Acting Transportation Operations Engineer

- Gerrit Slatter, Principal Transportation Projects Engineer
- Natalie Stiffler, Senior Transportation Planner
- Noreen Walsh, Senior Transportation Planner

Other City Departments

Yvette Bowden, Director of Parks & Recreation, Acting Community Vitality Director

- Graham Clark, Budget/Financial Analyst
- Samantha Glavin, Communications Specialist II
- Kate Gregory, GIS Technician
- Sarah Huntley, Engagement Manager
- Cris Jones, Deputy Director of Community Vitality
- Kathleen King, Senior Planner
- Jim Robertson, Comprehensive Planning Manager
- Joe Simpson, GIS Analyst
- Meghan Wilson, Communication Manager for Public Works and Planning
- Melissa Yates, Parking Manager

Advanced Mobility Working Group

- Carl Castillo, Policy Advisor
- Matthew Lehrman, Energy Strategy Coordinator
- Janet Michels, Senior Assistant City Attorney
- Ryan Noles, Planner II
- Randall Rutsch, Senior Transportation Planner
- Bill Skerpan, Innovation and Analytics Manager
- Melissa Yates, Parking Manager

Adopted by Boulder City Council on September 17, 2019

Note: All images are provided by the City of Boulder unless otherwise noted

BOULDER'S PLAN

- Introduction
- Accomplishments
- Transportation Vision and Goals
- **Boulder's Policies**
- What's New Since 2014
- How Boulder Travels
- **Essential Services**
- What We Heard

KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways
- 7. Connecting to the Region
- 8. Managing Demand on our System Together
- 9. Ensuring Equity
- 10. Funding the Transportation System

K INVESTMENT PROGRAMS

Current Funding Program Strategic Investment Program Vision Investment Program 2019 TMP Objectives Boulder's Call to Action

Appendices can be found at <u>bouldertmp.net</u>



OUR PLAN, OUR FUTURE

Today, the Boulder community has several ways to get around: we can drive, walk some places, take the bus, hop on B-cycle, or bike on a few comfortable on-street bike lanes or multiuse paths. The Flatiron Flyer between Boulder and Denver is the only bus that connects to the region frequently. We have travel options, but we could do more to enhance our multimodal transportation system.

Now it's 2030 and we're standing in Boulder Junction Depot Square Station. We can choose from an array of convenient travel choices – with three high frequency regional Bus Rapid Transit lines connecting Boulder to Longmont, Lafayette, Erie, Broomfield, I-25, and the Denver International Airport. The local HOP and BOUND buses run every 10 minutes and the fleet is 100 percent electric. There's an autonomous shuttle to high-tech campuses, e-bikes rentable via smartphone apps, and an extensive network of comfortable onstreet bicycle lanes and pedestrian routes.

This plan represents the safe, sustainable and equitable vision of the Boulder community for our transportation future. This is our plan, our future; and everyone has a role in bringing it to life.



BOULDER'S PLAN

Introduction

Accomplishments Transportation Vision and Goals

Boulder's Policies

What's New Since 2014

How Boulder Travels

Essential Services

What We Heard

KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways

7. Connecting to the Region

- 8. Managing Demand on our System Together
- 9. Ensuring Equity
- 10. Funding the Transportation System

3 INVESTMENT PROGRAMS

Current Funding Program Strategic Investment Program Vision Investment Program 2019 TMP Objectives Boulder's Call to Action

Appendices can be found at <u>bouldertmp.net</u>





BOULDER'S PLAN

Boulder's Transportation Master Plan (TMP) identifies policies and investment priorities to provide safe, shared, sustainable, attractive, and comfortable travel choices for everyone.

BOULDER'S PLAN

Introduction

Accomplishments

Transportation Vision and Goals

Boulder's Policies

What's New Since 2014

How Boulder Travels

Essential Services

What We Heard

KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways
- 7. Connecting to the Region
- 8. Managing Demand on our System Together
- 9. Ensuring Equity
- 10. Funding the Transportation System

INVESTMENT PROGRAMS

Current Funding Program Strategic Investment Program Vision Investment Program 2019 TMP Objectives Boulder's Call to Action

Appendices can be found at <u>bouldertmp.net</u>





INTRODUCTION

First adopted in 1989, the Transportation Master Plan (TMP) recognizes the need to reconcile two seemingly conflicting goals: first, to provide mobility and access in the Boulder Valley in a way that is safe and convenient; and second, to preserve what makes Boulder a good place to live by designing for people and minimizing auto congestion, air pollution, and noise. Thirty years of consistent TMP policy direction and innovation reconciles these goals by increasing travel choices and decreasing the number of people driving alone.

This plan is an update to the 2014 TMP and provides the city and community a blueprint to meet transportation and mobility goals, achieve Vision Zero, and improve the safety of the transportation system overall. This update also promotes sustainability and a path to obtain the city's climate and air quality targets by 2030.

As with previous plans, this TMP is a summary of the City's policies and strategies in transportation and builds on and incorporates the policies and directions contained in the 1996, 2003, 2008 and 2014 versions of the TMP. As a living plan, each TMP responds to current needs and identifies the new policies, strategies and actions needed to meet the community's goals.

OUR PARTNERS

Other city, regional and state planning efforts are informed by and will modify the TMP. Continued collaboration, alignment, and partnerships with the Colorado Department of Transportation (CDOT), Denver Regional Council of Governments (DRCOG), Boulder County, and others will be key to meeting the TMP vision. The TMP is structured as a "living document," with an amendment process reflecting council actions and allowing the plan to remain relevant and consistent with other city, regional, and state efforts.

ACCOMPLISHMENTS

Since the first TMP 30 years ago, Boulder community members, civic partners, and policymakers have built a great foundation for an integrated, multimodal transportation system. Innovative transportation investments have resulted in accomplishments such as the:

- Construction of 80 underpasses and nearly 60 miles of multi-use paths
- Transformation of the US 36 corridor between Boulder and Denver with highfrequency Flatiron Flyer service, express lanes, and a commuter bikeway
- Provision of EcoPass access to 82,000 residents, employees, and university students
- Established the growing Boulder B-cycle bike share system with 47 stations and 300 bikes.
- Innovation of systems to improve pavement management and snow and ice control including a comprehensive pavement management program that proactively reduces life-cycle costs.
- Creation of GO Boulder, the city team that provides multimodal planning and programs connecting people and places throughout Boulder and beyond.

BOULDER'S PLAN

Introduction

Accomplishments

Transportation Vision and Goals

Boulder's Policies

What's New Since 2014

How Boulder Travels

Essential Services

What We Heard

KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways
- 7. Connecting to the Region
- 8. Managing Demand on our System Together
- 9. Ensuring Equity

10. Funding the Transportation System

INVESTMENT PROGRAMS

Current Funding Program Strategic Investment Program Vision Investment Program 2019 TMP Objectives Boulder's Call to Action

Appendices can be found at <u>bouldertmp.net</u>



TRANSPORTATION VISION AND GOALS

Boulder's Plan

A safe, accessible and sustainable multimodal transportation system connecting people with each other and where they want to go. Our transportation system will:

- Be **SAFE**
- Be **EQUITABLE**
- Be **RELIABLE**
- Provide travel CHOICES
- Support clean air and our
 <u>CLIMATE COMMITMENT</u>

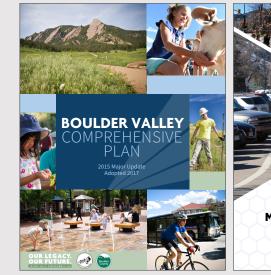


"Clean mobility will contribute a 16% reduction

in overall emissions by 2050."

- Boulder Climate Commitment (May 2017)

THE BOULDER TMP IS CLOSELY COORDINATED WITH OTHER CITY PLANS:







Area Plans

Boulder Valley Comprehensive Plan | 2017

Sustainability Framework | 2017

Climate Commitment | 2017

Access Management & Parking Strategy (AMPS) | 2017

Urban Forestry Strategic Plan | 2018

Open Space and Mountain Parks Master Plan | 2019

Local Plans

Boulder Junction Area Plan | 2007

Gunbarrel Community Center Plan | 2006

North Boulder Subcommunity Plan | 2014

Boulder Valley Regional Center Design Guidelines | 1998

BOULDER Transportation Master Plan

BOULDER VALLEY COMPREHENSIVE PLAN CORE VALUES

The TMP reflects long-standing community values contained in the <u>Boulder Valley</u> <u>comprehensive Plan (BVCP)</u> and is meant to implement those values in transportation. The transportation system is our largest public asset and should reflect community values and support citywide initiatives.

BVCP values that are particularly important to transportation are:

- **Sustainability** as a unifying framework to meet environmental, economic and social goals
- Strong city and county **cooperation**
- Great neighborhoods and public spaces
- Environmental stewardship and climate action
- A vibrant economy based on Boulder's quality of life and economic strengths
- An **all-mode transportation system** to make getting around without a car easy and accessible to everyone
- Physical health, safety and well-being

BOULDER'S PLAN

Introduction

Accomplishments

Transportation Vision and Goals

Boulder's Policies

What's New Since 2014

How Boulder Travels

Essential Services

What We Heard

KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways
- 7. Connecting to the Region
- 8. Managing Demand on our System Together
- 9. Ensuring Equity

10. Funding the Transportation System

INVESTMENT PROGRAMS

Current Funding Program Strategic Investment Program **Vision Investment Program** 2019 TMP Objectives **Boulder's Call to Action**

Appendices can be found at bouldertmp.net



BOULDER'S POLICIES

The TMP provides the policy framework to create and maintain a safe and efficient transportation system that meets city sustainability goals. Policies outlined below align with the Boulder Valley Comprehensive Plan.

COMPLETE TRANSPORTATION SYSTEM

All-Mode Transportation System & Complete Streets

The city's transportation system will be based on complete streets, including completed networks for each mode, making safe and convenient connections between modes, providing seamless connections between the city and county systems and promoting access and placemaking for adjacent land uses and activities.

Renewed Vision for Transit

The city will advance the Renewed Vision for Transit to provide high quality, reliable and time competitive transit, including an expanded local and regional transit network.

Reduction of Single Occupancy Auto Trips

The city will support and promote the greater use of alternatives to reduce vehicle miles traveled (VMT) and single-occupancy automobile travel.

Transportation System Optimization

The city will maintain the efficient and safe operation of the transportation system to benefit

all users. The city will monitor the performance of all modes as a basis for informed and systematic trade-offs supporting mobility, safety, greenhouse gas emissions reduction and other related goals.

Boulder's Plan

Integrated Transportation Demand Management (TDM) Programs

The city will develop TDM programs for residents and employees, which include incentives, promotion of shareduse mobility, and support for walking and biking. The city will employ strategies such as shared, unbundled, managed and paid parking (i.e., "Shared Unbundled, Managed, and Paid" - "SUMP" principles).

Accessibility and Mobility for All

The city will continue

development of a complete and equitable all-mode transportation system accommodating all users, including people with mobility impairments, youth, older adults, non-English speakers and lowincome persons. The city will implement the Low Stress Walk and Bike Network to create a safe and comfortable travel environment for all users.

Transportation Safety

In support of Vision Zero, the city will prioritize travel safety for all people using any mode within the transportation system (i.e., walking, bicycling, transit riding and driving).

REGIONAL TRAVEL Regional Travel Coordination

The city will work to develop regional consensus for multimodal improvements to regional

corridors through working with the Colorado Department of Transportation, the Regional Transportation District (RTD), US 36 Mayors and Commissioners Coalition, the State Highway 7 Coalition, the State Highway 119 Coalition, and other partners to develop high-quality regional multimodal travel options.

Regional Transit Facilities

The city will develop and enhance the regional transit anchors that serve the primary attractors of Downtown Boulder, the University of Colorado and Boulder Junction. Developing "Mobility Hubs," and first and last mile connections to these facilities, is a priority to support employees commuting into and throughout Boulder and to reduce single-occupancy auto travel and congestion on regional roads

FUNDING & INVESTMENT Investment Priorities

To protect previous investments and ensure efficient use of existing travel corridors, the city will prioritize investments for improvements to safety and maintenance for all modes of the existing transportation system.

INTEGRATION OF LAND USE & TRANSPORTATION WITH SUSTAINABILITY INITIATIVES Access Management & Parking

The city will expand and manage parking districts based on SUMP principles (shared, unbundled, managed and paid) to support transportation and GHG reduction goals as well as broader sustainability goals, including economic vitality and neighborhood livability.

Transportation Impacts Mitigated

The city will ensure transportation or traffic impacts from a proposed development that cause unacceptable transportation or environmental impacts, or parking impacts, to surrounding areas will be mitigated. All development will be designed and built to be multimodal, pedestrian-oriented and include TDM strategies to reduce the vehicle miles traveled generated by the development.

Concurrent Land Use & Transportation Planning

The city will continue to evaluated concurrently.

Centers & Corridors

Missing Links

BOULDER Transportation Master Plan

coordinate overall citywide transportation and land use planning. Future major changes to this plan and the BVCP Land Use Map and policies should, to the extent practicable, be coordinated, modeled and

Integrated Planning for Regional

In and along regional centers (i.e., Downtown Boulder, the University of Colorado and the Boulder Valley Regional Center, including at Boulder Junction) and regional multimodal corridors, the city will plan for a highly connected and continuous transportation system for all modes, identify locations for mixed use and higherdensity development integrated with transportation functions, emphasize high-quality urban design and pedestrian experience, develop parking maximums and encourage parking reductions.

The city will work to complete missing links in trails, paths and sidewalks, including connections

to all transit stops.

Transportation Facilities in Neighborhoods

The city will strive to protect and improve the quality of life within city neighborhoods while developing a balanced multimodal transportation system. The city will prioritize improvements to access by all modes and safety within neighborhoods by controlling vehicle speeds and providing multimodal connections over vehicle mobility.

Transportation Infrastructure to Support Walkable 15-Minute Neighborhoods

The city will continue to build improvements to transportation facilities in neighborhoods that create a variety of neighborhood supporting activities and infrastructure within approximately a one-quarter-mile walk radius where residents and employees can fulfill more of their daily needs through safe, healthy and convenient walking and biking.

Neighborhood Streets & Alleys Connectivity

The city recognizes neighborhood streets and alleys as part of the public realm and will plan a well-connected and finegrained pattern to facilitate public access, promote safe and convenient travel for all, disperse and distribute vehicle traffic and maintain character and community cohesion.

Mobility Hubs

The city will establish Mobility Hubs that provide seamless

integration between transit and pedestrian and bicycle facilities, car/ridesharing and a contextappropriate parking supply for people of all physical abilities.

OTHER TRANSPORTATION POLICIES

Improving Air Quality & Reducing Greenhouse Gas Emissions

The city will design the transportation system to minimize air pollution and reduce GHG emissions by promoting the use of active transportation (e.g., walking and bicycling) and low-emission transportation modes and infrastructure to support them, reducing auto traffic, encouraging the use of electric, fuel-efficient, and cleanfueled vehicles that demonstrate air pollution reductions and maintaining acceptable traffic flow.

Municipal Airport

The city will ensure the Boulder Municipal Airport continues to meet the needs of the community by providing a safe environment for aviation business and business-related travel, scientific and research flights, recreation and tourism, flight training and vocational education, aerial fire-fighting, emergency medical flights as well as flood and other disaster-related support.

Emergency Response Access

The city will continue to assess and develop solutions to coordinate transportation policies, infrastructure planning and response plans in the event of a disruption or emergency.

BOULDER Transportation Master Plan

Boulder's Plan

A lot has changed since we updated the plan in 2014. We looked at new transportation and demographic

CONTENTS

BOULDER'S PLAN

Introduction

Accomplishments

Transportation Vision and Goals

Boulder's Policies

What's New Since 2014

How Boulder Travels

Essential Services

What We Heard

KEY INITIATIVES

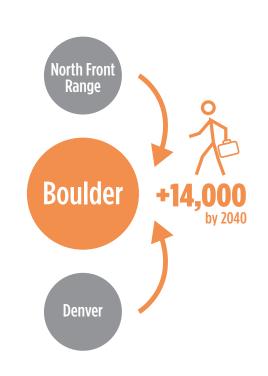
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- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways
- 7. Connecting to the Region
- 8. Managing Demand on our System Together
- 9. Ensuring Equity
- **10. Funding the Transportation System**

INVESTMENT PROGRAMS

Current Funding Program Strategic Investment Program **Vision Investment Program** 2019 TMP Objectives **Boulder's Call to Action**

Appendices can be found at <u>bouldertmp.net</u>





WHAT'S NEW SINCE 2014

changes and 2040 projections to inform the 2019 TMP Update.

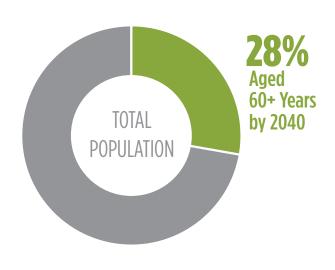
About one million additional people are expected in the Denver region and one million on the north Front Range by 2040. As an employment center drawing from both areas, Boulder is expecting an additional 14,000 employees, most likely traveling into the community.

Source: State Demographer's Office City of Boulder 2019 Boulder Community Profile



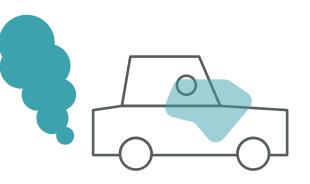
The most recent scientific studies indicate that climate crisis is apparent and an existential threat to our food, transportation, and social systems. Investments in transportation are needed to **reduce** total GHG emissions 50 percent by 2030.

Source: Boulder Climate Commitment (2017)



We are facing an **aging population.** The Colorado State Demographer's Office predicts that by 2040, Boulder County residents age 60 and older will nearly double to 28 percent of the county's population.

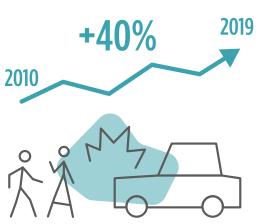
Source: State Demographer's Office



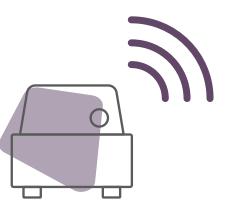
Air quality in the Denver region is currently out of compliance with federal air quality standards for ozone. The region's ozone is severe, with four violations in the first half of 2019. Reduction in GHG gas emissions is needed to improve health and enhance environmental stewardship.

Source: Colorado Department of Health and Environment





Boulder

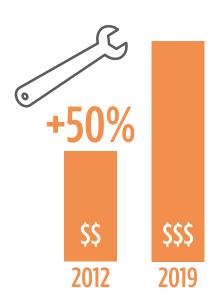


Changing technologies provided by smartphones, advanced communications, electrification, and automation are providing a variety of new travel options and services. Ride hailing services like Uber/ Lyft, micro-mobility options like electric bikes and scooters, and automated vehicles and delivery services are changing the way people travel and competing for space in the public right-of-way.

Following more than 20 years of reductions in roadway fatalities across the nation, traffic deaths have increased significantly. While Boulder fatalities have been relatively flat, in Colorado fatalities are up 40 percent since 2010 and distracted driving is a growing issue.

Source: Colorado Department of Transportation





Construction costs have gone up almost 50 percent since 2012 while revenue is basically flat. As a result, we have been deferring maintenance and have about \$23 million in annual essential services needs that are unfunded.

Source: City of Boulder, 2019

While in the past, vehicle counts have been declining or remaining flat, they have been increasing since 2013. The increase is driven by a 16 percent increase in vehicles traveling in and out of Boulder. As Boulder's employment and visitation continues to increase, this long-distance vehicle travel is a major challenge to our goals.

BOULDER Transportation Master Plan

Boulder's Plan

CONTENTS

BOULDER'S PLAN

- Introduction
- Accomplishments
- **Transportation Vision and Goals**
- **Boulder's Policies**
- What's New Since 2014

How Boulder Travels

Essential Services

What We Heard

KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways
- 7. Connecting to the Region
- 8. Managing Demand on our System Together
- 9. Ensuring Equity
- **10. Funding the Transportation System**

INVESTMENT PROGRAMS

Current Funding Program Strategic Investment Program Vision Investment Program 2019 TMP Objectives **Boulder's Call to Action**

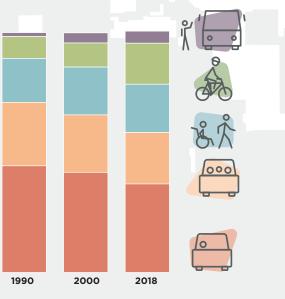
Appendices can be found at <u>bouldertmp.net</u>



HOW BOULDER TRAVELS

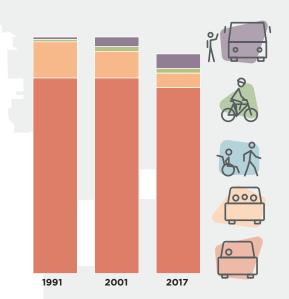
People in Boulder travel differently than the region and the nation. Boulder's established urban service area, robust multimodal transportation system, and vast areas of publicly owned open space have all contributed to Boulder's quality of life. For the past 30 years, we've focused on how to move more people, rather than how we can fit more cars on our roads. Reducing the need for individual auto use while providing a variety of travel choices is essential for achieving our community goals for mobility, quality of life, a vibrant economy, and clean air.

People who live in Boulder (all trips)



Source: Modal Shift in the Boulder Valley (1990-2018)

Non-residents who **work** in Boulder



(comm	ute	trips)
Fransit	trav	vel
<u>991</u>		
4% of	trip	S

Transit travel

2% of trips

5% of trips

44% of trips

37% of trips

Drive-alone travel

<u>1990</u>

2018

<u>1990</u>

<u>2018</u>

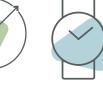
<u>2017</u> 6% of trips

Drive-alone travel <u>1991</u> 81% of trips 2017

77% of trips

Average Commute **Distance and Time**

Boulder Residents



Average commute time

1990 5.2 miles 15 minutes 2018 4.6 miles

All Employees in

Boulder Average

and Time

Average

commute

distance

10.3 miles

11.6 miles

<u>1991</u>

2017

Commute Distance

Average

commute

19.4 minutes

25.2 minutes

time

1991

<u>2017</u>

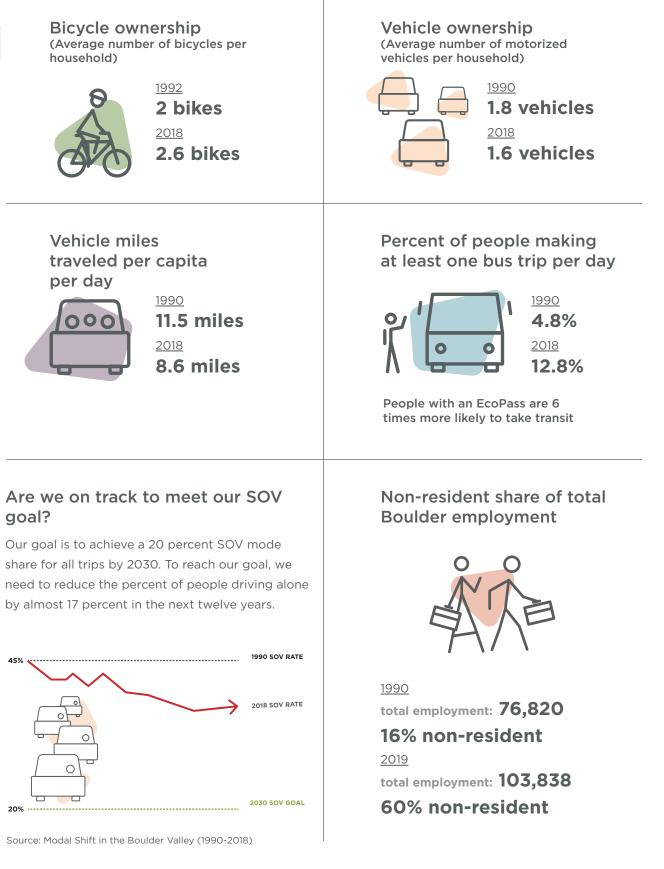
Average

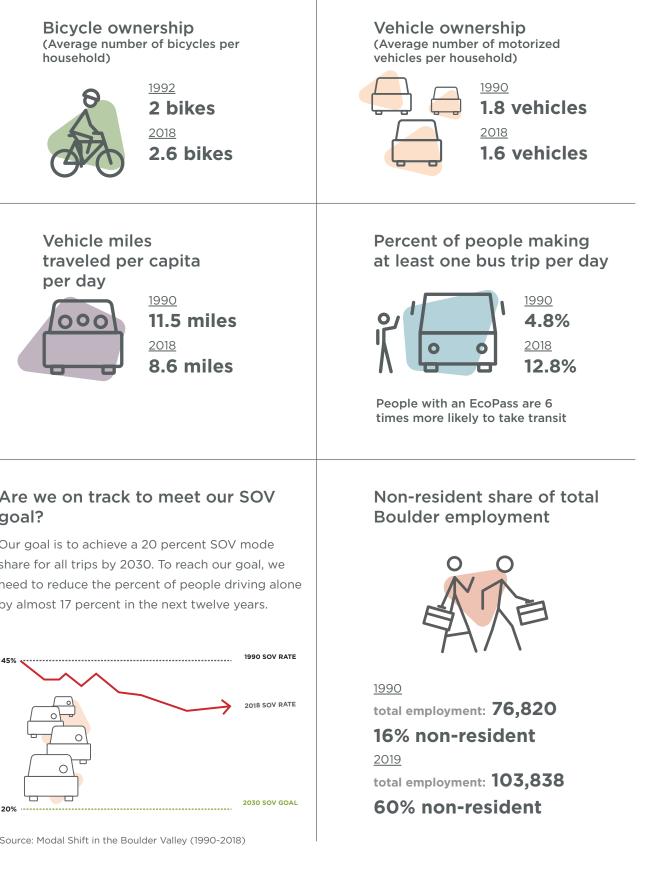
commute

distance

<u>1990</u>

2018





Source: 2017 Boulder Valley Employee Survey for Transportation

20 minutes

BOULDER'S PLAN

- Introduction
- Accomplishments
- **Transportation Vision and Goals**
- **Boulder's Policies**
- What's New Since 2014
- **How Boulder Travels**
- **Essential Services**
- What We Heard

KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways
- 7. Connecting to the Region
- 8. Managing Demand on our System Together
- 9. Ensuring Equity
- **10. Funding the Transportation System**

INVESTMENT PROGRAMS

Current Funding Program Strategic Investment Program Vision Investment Program 2019 TMP Objectives Boulder's Call to Action

Appendices can be found at <u>bouldertmp.net</u>



ESSENTIAL SERVICES

The city's Transportation division is responsible for planning, constructing, maintaining and operating the system. The division also provides the services and programs needed to increase safety, promote travel options, and reduce transportation-related emissions.

PLANNING

Boulder plans to reach the community's vision for a safe, well maintained, sustainable, and efficient multimodal system. In this plan, we focus on safety, air pollution, GHG reduction, and preparing for the travel opportunities of the future.

CONSTRUCTION

Boulder's Plan

The City of Boulder manages a wide variety of construction projects, ranging from major street and multi-use path reconstruction to sidewalk repairs.

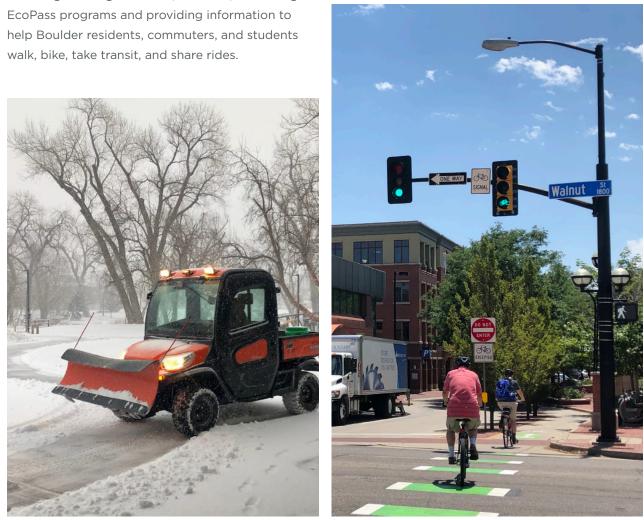
MAINTENANCE

Maintenance of transportation infrastructure improves safety, reduces costs, and benefits all travelers. Almost 80 percent of funding is used to operate and maintain the transportation system – up from about 59 percent since 2001.



OPERATIONS

PROGRAMS



BOULDER Transportation Master Plan

Boulder has invested in sophisticated signalization, but modernization is still needed. A complex system of signals and lighting improves safety for everyone. The city will need to modernize this system to prepare for future transportation options like shared electric and connected vehicles. The city also maintains all the signs, pavement markings and flashing beacons on the road and bike systems. The city operates parking and access districts and the HOP transit service and partners with RTD.

Educating the public about transportation options supports our investments in services and operations. Since 1989, the city's GO Boulder program has served the community by offering "Great Options" including the neighborhood, business, and college



BOULDER'S PLAN

Introduction

Accomplishments

Transportation Vision and Goals

Boulder's Policies

What's New Since 2014

How Boulder Travels

Essential Services

What We Heard

KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways
- 7. Connecting to the Region
- 8. Managing Demand on our System Together
- 9. Ensuring Equity
- 10. Funding the Transportation System

INVESTMENT PROGRAMS

Current Funding Program Strategic Investment Program Vision Investment Program 2019 TMP Objectives Boulder's Call to Action

Appendices can be found at <u>bouldertmp.net</u>



WHAT WE HEARD

Extensive community input shaped this TMP and guided each phase of the update process. The community provided input to:

Boulder's Plan

- Refine the plan's vision and goals
- Identify areas requiring new and innovative approaches
- Inform development of the investment programs and action plan

Engagement activities, including in-person and online approaches, were designed to ensure a broad cross-section of the community participated in the process. Hundreds of community members provided comments and ideas through outreach to community groups and neighborhoods, booths at community events, open houses, panel discussions, and online questionnaires via the Be Heard Boulder website. The project team also worked closely with a Pedestrian Advisory Committee, Transportation Funding Community Working Group, and our agency partners. We heard these themes from the community:



Travel safety is paramount.

The city should be both responsive and proactive to ensure everyone on our roads and pathways is safe and comfortable. Improving street maintenance, including snow removal, pothole and sidewalk repair, and landscape maintenance, is a critical foundation for a safe transportation system.



Boulder's land use policies and patterns influence how people choose to travel.

Enhanced coordination between land use and development, housing, and transportation services is needed to support the city goals of high quality and affordable living. The city should focus on the combined cost of housing and transportation and on equity throughout the community's transportation system.



Accelerated efforts are needed to reduce GHG emissions. Reducing vehicle miles traveled; increasing the number of people who walk, bike, and take transit; and reducing the number of fossil fuel powered vehicles on the road will help us meet our goals. The city should move quickly to implement programs such as electrifying vehicles and buses, enhancing regional transit, offering free and expanded local transit and expanding paid/managed parking.



Assertive work is needed to reverse the trend of RTD cutting bus service and charging higher fares. Higher frequency and reliable and affordable local and regional transit is important to making transit a more convenient option.



Safety and comfort influence a person's travel choice. Travel options should be easy, safe and accessible for every type of trip. It is important that a safe and comfortable transportation system be accessible to all, including people with mobility impairments, youth, older adults, non-English speakers, and low-income people in our community.



Congestion is a growing concern, particularly as more workers travel into Boulder.

To manage congestion, the city should work with regional partners and nearby communities to provide fast, convenient, and affordable travel options for commuters, modeled after the US 36 corridor with HOV lanes, tolls, Bus Rapid Transit (BRT), and commuter bikeways.



The city should prepare for new technology and innovation in how people travel. Emerging trends in transportation are influenced by demographic and social shifts such as an aging community and fewer younger people driving. Current and future technology changes include ride-sharing apps, increasing electric bicycles, car-sharing, and connected vehicles.



New funding sources are needed to maintain essential transportation needs. Filling potholes, snow and ice removal, sidewalk repair, and enhancements to the current transportation system are a priority. The city should consider new funding sources that are stable and fairly distribute the costs and benefits among those who use the system.

BOULDER'S PLAN

Introduction Accomplishments Transportation Vision and Goals Boulder's Policies What's New Since 2014 How Boulder Travels Essential Services What We Heard

KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways
- 7. Connecting to the Region
- 8. Managing Demand on our System Together
- 9. Ensuring Equity
- 10. Funding the Transportation System

INVESTMENT PROGRAMS

Current Funding Program Strategic Investment Program Vision Investment Program 2019 TMP Objectives Boulder's Call to Action

Appendices can be found at <u>bouldertmp.net</u>





Boulder's future transportation system.









BOULDER'S PLAN

Introduction

Accomplishments

Transportation Vision and Goals

Boulder's Policies

What's New Since 2014

How Boulder Travels

Essential Services

What We Heard

KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways

7. Connecting to the Region

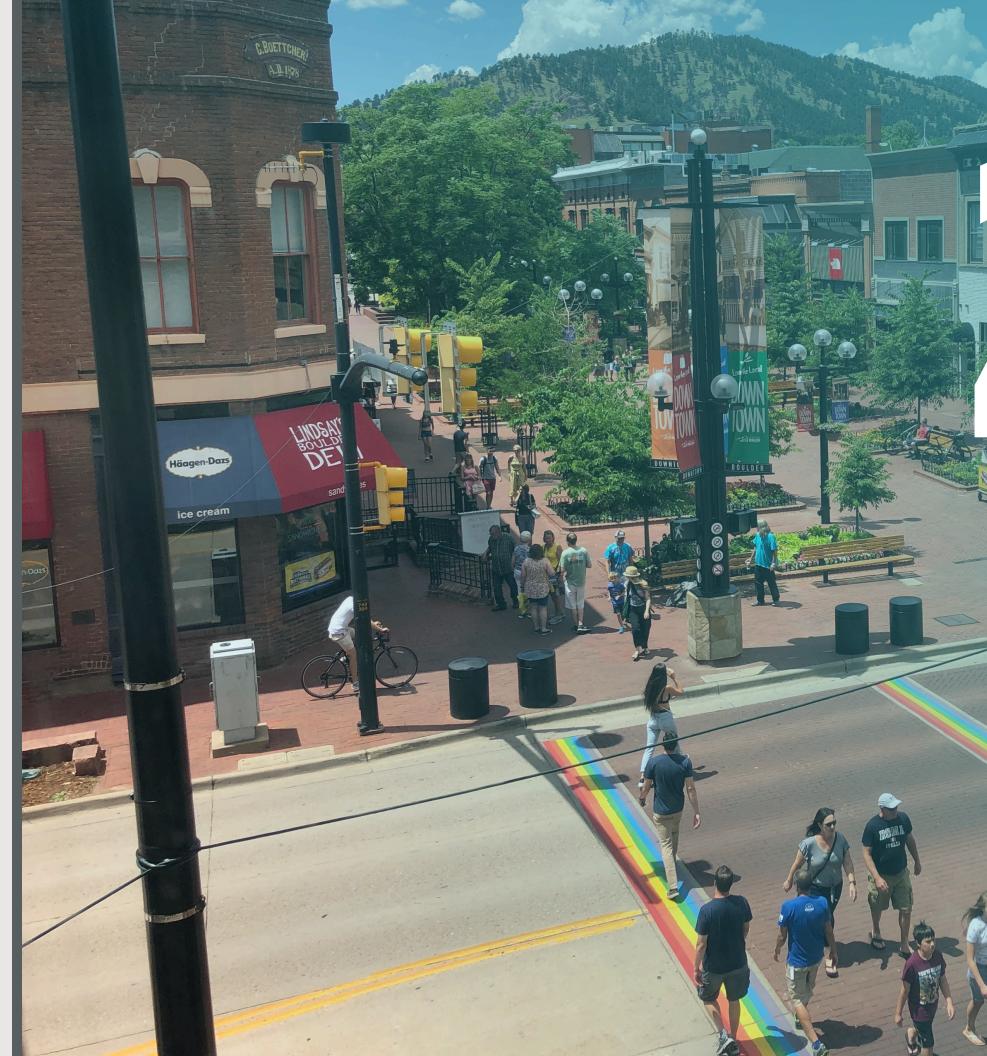
- 8. Managing Demand on our System Together
- 9. Ensuring Equity
- 10. Funding the Transportation System

3 INVESTMENT PROGRAMS

Current Funding Program Strategic Investment Program Vision Investment Program 2019 TMP Objectives Boulder's Call to Action

Appendices can be found at <u>bouldertmp.net</u>





KEY INITIATIVES

This TMP identifies 10 key initiatives to help focus our work in the coming years.

BOULDER'S PLAN

- Introduction
- Accomplishments
- **Transportation Vision and Goals**
- **Boulder's Policies**
- What's New Since 2014
- How Boulder Travels
- **Essential Services**
- What We Heard

KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways
- 7. Connecting to the Region
- 8. Managing Demand on our System Together
- 9. Ensuring Equity
- 10. Funding the Transportation System

INVESTMENT PROGRAMS

Current Funding Program Strategic Investment Program Vision Investment Program 2019 TMP Objectives Boulder's Call to Action

Appendices can be found at <u>bouldertmp.net</u>



INITIATIVE 1 MARING TRAVEL SAFE IN BOULDER



WHY IT'S

- Applying the four E's to eliminate crashes that result in serious injuries and fatalities and reducing other crash types
- Improving travel comfort and security
- Enhancing community engagement
- Improving data and transparency

KEY CHALLENGES

Although our severe crashes, including serious injuries and fatalities, are not increasing, they have not yet been eliminated. Severe crashes tend to involve people who are walking, biking, impaired, speeding, or making left turns, and people who are walking and biking are disproportionately affected.

THE FOUR E'S

Improving travel safety is based on a holistic combination of the four E's: Engineering, **Education, Enforcement, Evaluation** and relies upon our whole community to keep people safe. To achieve Vision Zero, the four E's approach helps ensure we are addressing travel safety from all angles. This means dangerous travel behaviors, such as distracted and impaired wtravel, can be countered through enforcement efforts and safety education outreach, while engineering treatments and innovative street design can help prevent intersection conflicts for example. Applying all four E's is the most comprehensive way to help prevent crashes.



KEY NEXT STEPS

Implement the Vision Zero Action Plan from the 2019 Safe Streets Report, which includes 50 specific actions. Highlights include:



ACTION 1.A

Implement specific countermeasures, such as the installation of green markings, at locations with crash trends.



ACTION 1.D

Develop and implement a Speed Management Plan to decrease travel speeds on city streets; and explore reducing the speed limit on residential (local) streets from 25 mph to 20 mph, and 15 mph in school zones.



ACTION 1.B

Proactively implement new signal timing practices, such as pedestrian head starts at identified intersections.



ACTION 1.E

Continue strategic enforcement measures city wide with Boulder Police, University of Colorado Police Department, and other partners.



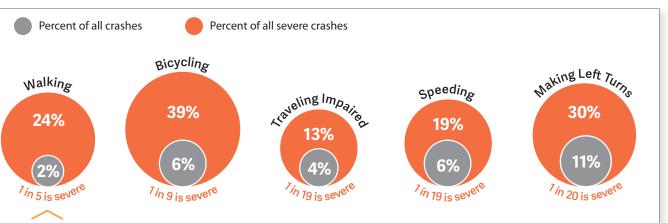
ACTION 1.C

Employ proven effective safe and innovative intersection and corridor treatments, such as protected intersections.



ACTION 1.F

In coordination with partner agencies, continue and enhance safety education programs and outreach, including Safe Routes to School and bicycle-friendly driver courses.



Between 2015 and 2017, people walking were involved in 2% of all crashes and 24% of all severe crashes. One out of every five pedestrian-related crashes is severe.

BOULDER'S PLAN

Introduction Accomplishments

Transportation Vision and Goals

Boulder's Policies

What's New Since 2014

How Boulder Travels

Essential Services

What We Heard

KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways
- 7. Connecting to the Region
- 8. Managing Demand on our System Together
- 9. Ensuring Equity
- 10. Funding the Transportation System

INVESTMENT PROGRAMS

Current Funding Program Strategic Investment Program Vision Investment Program 2019 TMP Objectives Boulder's Call to Action

Appendices can be found at <u>bouldertmp.net</u>



SAFE ROUTES TO SCHOOL

BOULDER VALLE

Safe Routes to School is an important partnership between the City and Boulder Valley School District supported by CDOT to make travel safe to and from schools. New initiatives being considered include enhanced bike and pedestrian safety education, a school crossing guard program, and a "Safety Town" with miniature roadway elements where people of all ages and abilities can practice the rules of the road.

INITIATIVE 2

MAKING TRAVEL COMFORTABLE THROUGH A LOW-STRESS WALK AND BIKE NETWORK

WHY IT'S IMPORTANT

The TMP prioritizes safe and complete streets to provide a comfortable transportation network for people of all ages and abilities. When streets are welcoming to people in wheelchairs or pushing strollers, they work well for everyone else, too.



KEY CHALLENGES

When people get in a car, they rarely give much thought to whether the road can get them to their destination or if they feel secure taking children with them. In contrast, getting on a bike or walking often entails crossing busy streets and mixing with vehicular traffic; these conditions create barriers for people who aren't familiar with the system or don't feel comfortable in a busy street environment. Our challenge is creating a connected walking and cycling network for people of all ages and abilities to travel along and across streets safely and comfortably.

BOULDER Transportation Master Plan

Key Initiatives

CONTENTS

BOULDER'S PLAN

- Introduction
- Accomplishments
- **Transportation Vision and Goals**
- **Boulder's Policies**
- What's New Since 2014
- How Boulder Travels
- **Essential Services**
- What We Heard

KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways
- 7. Connecting to the Region
- 8. Managing Demand on our System Together
- 9. Ensuring Equity
- **10. Funding the Transportation System**

ζ **INVESTMENT PROGRAMS**

Current Funding Program Strategic Investment Program Vision Investment Program 2019 TMP Objectives Boulder's Call to Action

Appendices can be found at bouldertmp.net



KEY NEXT STEPS

The 2019 TMP identified a Low Stress Walk and Bike Network to attract a broader population of people as confident and comfortable pedestrians and cyclists. Below are the priority actions to implement the full network:

ACTION 2.A

ACTION 2.B

pedestrians.

ACTION 2.C



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Implement the Neighborhood GreenStreets program- an ongoing program that transforms streets to prioritize pedestrians and bicyclists.

Incorporate multimodal design

into corridor projects to provide

between vehicles, cyclists and

Enhance the bike lane network

by including buffers or other

innovative techniques to

provide more separation

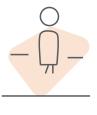
between bikes and cars.

the necessary physical separation



ACTION 2.D

street multi-use path system.



ACTION 2.E

Study and recommend improvements in Pedestrian Improvement Areas (see also Initiative #4: Prioritizing the Pedestrian).









BOULDER Transportation Master Plan

Key Initiatives

Designing a Low-Stress Walk and Bike Network









Note: Detailed bike actions are included in Initiative #2; detailed pedestrian actions are included in Initiative #4.

VERTICAL SEPARATION

This treatment places vertical elements in the buffer area of a bike lane to further separate bike lanes from motor vehicle traffic, providing comfort and safety to cyclists. Many different vertical separation types can be selected based on the presence of onstreet parking, overall street and buffer width, cost, durability, aesthetics, traffic speeds, emergency vehicle and service access, and maintenance.

BUFFERED BIKE LANE

A buffered bike lane is a bicycle lane separated from the general-purpose lane or parking lane by a pattern of standard longitudinal marks painted onto the roadway. These lanes appeal to a wide cross-section of bicyclists, reduce the possibility of a wide bicycle lane being misconstrued as a travel or parking lane and delineate a space between a parking lane and an adjacent bicycle lane. A buffer area provides a greater separation between the bicycle lane and adjacent lanes than is provided by a single normal or wide lane line.

NEIGHBORHOOD GREENSTREET

A GreenStreet is a street with low motor vehicle traffic configured to prioritize biking and walking. These streets combine wayfinding and safety signage with paint striping and roadway repair to increase the comfort and safety of pedestrians and bicyclists. These streets combine wayfinding and safety signage with paint striping, flatwork and roadway repair to increase the comfort and safety of pedestrians and bicyclists.

MULTI-USE PATH

Multi-use or shared-use paths provide low stress environments for bicycling and walking that are entirely separated from motor vehicle traffic. Systems of shared-use paths in urban and suburban communities serve as the arterials of the bicycle and pedestrian transportation system and an extension of on-street facilities.

BOULDER'S PLAN

- Introduction
- Accomplishments
- **Transportation Vision and Goals**

CONTENTS

- **Boulder's Policies**
- What's New Since 2014
- How Boulder Travels
- **Essential Services**
- What We Heard

KEY INITIATIVES

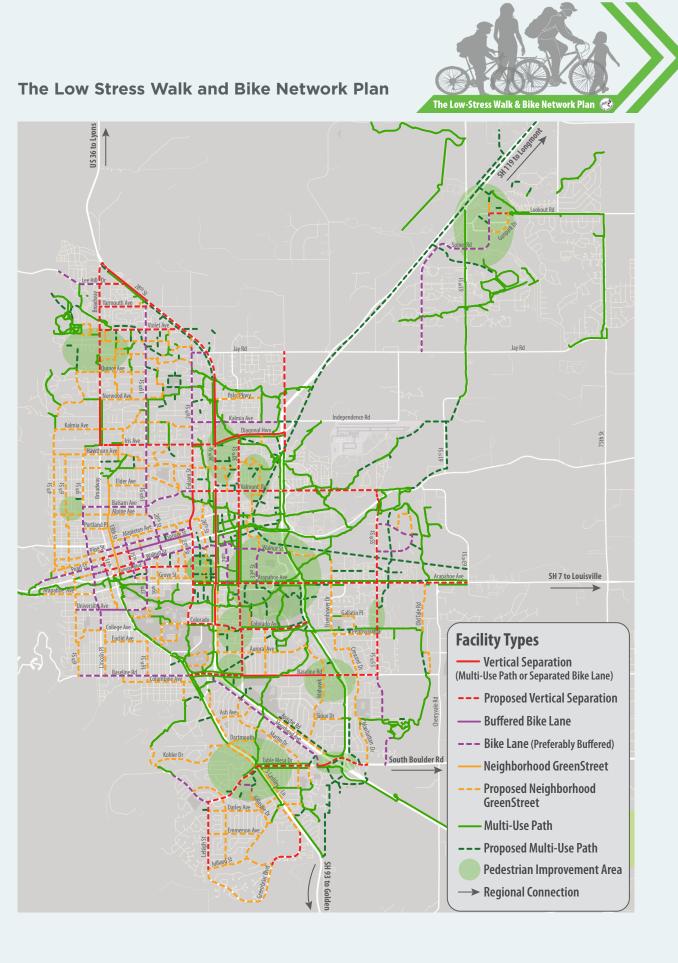
- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- **3. Providing Mobility Options**
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways
- 7. Connecting to the Region
- 8. Managing Demand on our System Together
- 9. Ensuring Equity
- **10. Funding the Transportation System**

INVESTMENT PROGRAMS

Current Funding Program Strategic Investment Program Vision Investment Program 2019 TMP Objectives Boulder's Call to Action

Appendices can be found at <u>bouldertmp.net</u>





WAY

BOULDER'S PLAN

Introduction

Accomplishments

Transportation Vision and Goals

Boulder's Policies

What's New Since 2014

How Boulder Travels

Essential Services

What We Heard

KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways
- 7. Connecting to the Region
- 8. Managing Demand on our System Together
- 9. Ensuring Equity
- 10. Funding the Transportation System

INVESTMENT PROGRAMS

Current Funding Program Strategic Investment Program Vision Investment Program 2019 TMP Objectives **Boulder's Call to Action**

Appendices can be found at bouldertmp.net



INITIATIVE 3 PROVIDING **MOBILITY OPTIONS**

WHY IT'S IMPORTANT

People in Boulder want choices for getting around. Without these options, continued growth in vehicle traffic will increase congestion and GHG emissions. Whether walking, biking, or taking transit, these choices need to be safe, reliable, convenient and affordable. The 2019 TMP has a renewed emphasis on moving people rather than vehicles with high quality, high-frequency, reliable transit being the backbone of an efficient transportation system. To create this system, the TMP includes over 1,200 multimodal projects which are illustrated on an interactive map. Since the 2014 TMP, the city has completed over thirty capital projects and refined the list to reflect recent corridor plans such as the 30th and Colorado Corridors Study, Canyon Boulevard Complete Street Study and East Arapahoe Transportation Plan, and the new Low-Stress Walk and Bike Network Plan.

KEY CHALLENGES

Boulder's compact size and the city's long-standing leadership in offering travel choices means a large share of people in Boulder already bike, walk, and take transit. However, to meet our mobility and climate commitment goals, we need to accelerate the pace of providing quality options and increase the share of people using these modes and emerging options such as shared electric vehicles and electric bikes.

Expanding local and regional transportation options to employment areas is particularly challenging. Many of the city's employment centers are east of downtown and have an auto-focused development pattern and abundant free parking. Redevelopment of these areas with parking reform and complete modal connections is one of the challenges and opportunities to reaching the city's transportation and greenhouse gas goals.



KEY NEXT STEPS





ACTION 3.A

Implement the Renewed Vision for Transit, with a new focus on barrierfree transit that provides equitable access to all and expanding transit service and funding beyond what RTD is able to provide.



ACTION 3.C

Expand options for the first and last mile portion of transit trips, including regulatory actions to allow forms of shared micromobility. Develop access to e-bike share programs across the region.



ACTION 3.B

Expand the high-frequency HOP service to areas within north Boulder and east Boulder.



ACTION 3.D

Promote use of e-bikes and explore incentives for residents to purchase them

ACTION 3.E

Identify locations, policies and regulations to support mixed land uses and the development of highly connected mobility hubs, particularly in Boulder's east side.

While mobility is transforming, it's important that we serve Boulder's transportation needs for today and prepare for the future, from providing essential services to supporting local and regional travel options.

BOULDER'S PLAN

Introduction

Accomplishments

Transportation Vision and Goals

Boulder's Policies

What's New Since 2014

How Boulder Travels

Essential Services

What We Heard

KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options

4. Prioritizing the Pedestrian

- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways
- 7. Connecting to the Region
- 8. Managing Demand on our System Together
- 9. Ensuring Equity
- **10. Funding the Transportation System**

INVESTMENT PROGRAMS

Current Funding Program Strategic Investment Program Vision Investment Program 2019 TMP Objectives Boulder's Call to Action

Appendices can be found at <u>bouldertmp.net</u>



INITIATIVE 4 BROOK BALL BROO



WHY IT'S IMPORTANT

Walking, including using mobility devices such as wheelchairs, is the primary way we get around. We know that walking is good for the environment and our physical and mental health. It also builds community. We aim to develop a transportation system in which walking is a fundamental way to connect people to each other and to the places they want to go. The 2019 TMP includes the first substantial update to the Pedestrian Plan in over 20 years.

The 2019 TMP includes the first substantial update to the Pedestrian

Plan in over 20 years.



KEY CHALLENGES

Challenges to our pedestrian system are multifaceted. Safety is paramount, and pedestrians are still being seriously injured—and in rare cases, killed—on our roadways. In addition, some community members don't walk as much as they'd like—particularly for daily needs—because they don't feel safe walking. Sometimes this lack of comfort is due to missing or narrow sidewalks, snow, or other obstructions due to poor maintenance, or the need to cross wide streets with high traffic speeds and volumes. Walking is also limited in areas of the city where there is a lack of destinations within walking distance or where facilities are not easily accessible for people in wheelchairs or other mobility devices.

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KEY NEXT STEPS

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ACTION 4.A

Implement the safety improvements identified in the 2019 Vision Zero Action Plan.



ACTION 4.D

Update Pedestrian Crossing Treatment Installation Guidelines



ACTION 4.B

Implement the Low-Stress Walk Network, Pedestrian Improvement Areas and Neighborhood GreenStreets.



ACTION 4.E

Complete and implement the Americans with Disabilities Act (ADA) Transition Plan.



ACTION 4.C

Evaluate and refine or enhance snow and ice removal practices on pedestrian facilities.







BENEFITS OF WALKING







BOULDER'S PLAN

- Introduction
- Accomplishments
- Transportation Vision and Goals
- **Boulder's Policies**
- What's New Since 2014
- How Boulder Travels
- **Essential Services**
- What We Heard

KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways
- 7. Connecting to the Region
- 8. Managing Demand on our System Together
- 9. Ensuring Equity
- 10. Funding the Transportation System

INVESTMENT PROGRAMS

Current Funding Program Strategic Investment Program Vision Investment Program 2019 TMP Objectives Boulder's Call to Action

Appendices can be found at <u>bouldertmp.net</u>



PEDESTRIAN PLAN GUIDING PRINCIPLES

The following will guide the implementation of the Pedestrian Plan:

INTERSECTIONS

Continue to assess the effectiveness of intersection/signal timing practices that facilitate pedestrian movement (e.g., pedestrian head starts, protected left-turns, No Right Turns on Red) and implement where appropriate

CROSSINGS

Construct for all ages and abilities at locations that facilitate access to key destinations; make enhancements for comfort and safety

SITE DESIGN

PEDESTRIAN-

comfortable

FOCUSED DESIGN

Provide buffers, lighting

in Boulder more safe and

Make developments, including parking lots/structures, more pedestrian-friendly by providing clear paths, creating visually active frontages, providing amenities (e.g., shade, shelter), and making pedestrian access prominent and

SIDEWALKS/MULTI-USE PATHS

Construct for all ages and abilities with separation from vehicles and bicycles, where possible; keep clear of obstructions

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DRIVEWAYS

Consolidate where possible and design to be more pedestrian-friendly (e.g., slower vehicle speeds, consistent level for sidewalk surface, reduce conflict points between cyclists and pedestrians)

OFF-STREET MULTI-USE PATHS

Build out the Greenways system for natural and transportation functions to seamlessly connect to the rest of the pedestrian network and to support pedestrians and other users co-existing well

BOULDER'S PLAN

Introduction

Accomplishments

Transportation Vision and Goals

Boulder's Policies

What's New Since 2014

How Boulder Travels

Essential Services

What We Heard

KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways
- 7. Connecting to the Region
- 8. Managing Demand on our System Together
- 9. Ensuring Equity
- **10. Funding the Transportation System**

INVESTMENT PROGRAMS

Current Funding Program Strategic Investment Program Vision Investment Program 2019 TMP Objectives **Boulder's Call to Action**

Appendices can be found at bouldertmp.net



INITIATIVE 5 SHAPING NNOVATION AND FORMS OF

WHY IT'S IMPORTANT

We are in a transportation revolution driven by advanced communications, electrification, and automation. Initial expressions of this revolution are ride-hailing services like Uber and Lyft and shared micro-mobility services such as electric bikes and scooters. Ultimately, autonomous vehicles (AVs) may provide ride-hailing and delivery services.

The city is aiming for a future that is shared and electric to meet our transportation and climate goals.

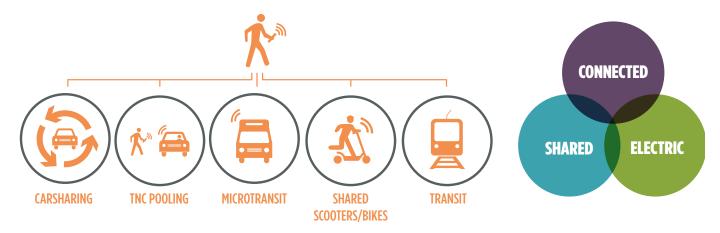
With technology shifts and innovations associated with smart phones, mobility-ondemand services will significantly shape how people travel in the future.

KEY CHALLENGES

As with past revolutions in transportation, this revolution will likely have unintended consequences as well as benefits. Early automobiles provided mobility but then took over the public right-of-way to the exclusion of other users; highways were often built through poor and minority neighborhoods.

The same is true today. Ride-hailing services have increased mobility for some while adding significant traffic to central cities. Privately owned, electric AVs could greatly increase vehicle miles of travel and congestion impacts on communities by reducing the cost and stress of long commutes. Dockless bikes and scooters may block sidewalks. Designing policies, rethinking the public right of way and ensuring equity will be critical as we balance the potential benefits of AVs with Boulder's broader community goals.







ACTION 5.A

Implement pick-up and drop-off zones in partnership with transportation network companies (Uber/Lyft) as a first step to a dynamic curbside management strategy that supports various curbside uses, including passenger loading and deliveries.

ACTION 5.B

Develop the concept of smart streets and implement the infrastructure and advanced communications needed to support connected vehicles and mobility on demand. Include smart street elements in all future city transportation projects.

ACTION 5.D

Explore dynamic pricing for curbside uses such as on-street parking and passenger loading and unloading

ACTION 5.E

Modify the city parking code to support policies in the BVCP that promote mixed-use development and higher densities where appropriate. Transition parking to other uses as needs change.

ACTION 5.C

Partner with transportation network companies to support shared and electric vehicle trips while reducing congestion impacts.



ACTION 5.F

Develop mobility hubs with the full complement of Advanced Mobility modes to address first and last mile connections for transit riders.

"It's time for Boulder to own innovation again."

- Mayor Suzanne Jones

More travel choices are the key to a sustainable future.

BOULDER'S PLAN

- Introduction
- Accomplishments
- **Transportation Vision and Goals**
- **Boulder's Policies**
- What's New Since 2014
- **How Boulder Travels**
- **Essential Services**
- What We Heard

KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways
- 7. Connecting to the Region
- 8. Managing Demand on our System Together
- 9. Ensuring Equity
- **10. Funding the Transportation System**

INVESTMENT PROGRAMS

Current Funding Program Strategic Investment Program Vision Investment Program 2019 TMP Objectives **Boulder's Call to Action**

Appendices can be found at <u>bouldertmp.net</u>



ADVANCED MOBILITY POLICIES

Advanced Mobility (AM) refers to using technological developments and innovations to support new modes of transportation. These range from ride hailing services like Uber/Lyft, micromobility shared services like bikeshare and scooters, micro-transit, and connected vehicles.

Advanced Mobility Policies

The city will:

- Protect the city's role in managing the public right-ofway in a manner consistent with local needs and communitywide goals.
- Support broader AM policies by monitoring and advocating for transportation legislation at the state and national level.
- Evaluate AM technologies and services and support them when they align with the community's environmental, economic and social sustainability and transportation goals to be safe for all users, shared, equitable, and limit the use of nonrenewable resources.
- Reallocate the right-of-way as appropriate to prioritize movement of people through transit, bicycle, and pedestrian improvements and public placemaking.

- Support shared, electric travel options and choices through incentive programs and other **Transportation Demand** Management strategies.
- Support high-quality transit service to move the most people in the fewest number of vehicles by encouraging AM applications that integrate with transit and address first and last mile connections.
- Prepare for the communication requirements of AM by including provisions for communication infrastructure in any projects in the public right-of-way.
- Require monitoring and reporting relative to the community's environmental, economic, social, climate and transportation goals.

Plug-in Electric Vehicle Policies

The city will:



Source: City of Boulder

BOULDER Transportation Master Plan

• Increase the number of plug-in electric vehicles in the private, shared mobility, transit, and city fleets to achieve the city's Climate Commitment goals.

• Lead the community in adoption of plug-in electric vehicles, with the city fleet demonstrating new technology when available.

• Contribute to charging infrastructure supporting plugin electric vehicles developed at both city parking facilities as well as with partner agencies and other interested parties.

- Promote pairing home and public plug-in electric vehicle charging with on-site or community-sited renewable generation.
- Advocate to advance statewide plug-in electric vehicle policy at the legislature and relevant regulatory bodies to enable electric transportation across the state, in support of Boulder residents as well as incommuters and visitors.

ILLUSTRATIVE SMART STREET



BOULDER'S PLAN

- Introduction
- Accomplishments
- **Transportation Vision and Goals**
- **Boulder's Policies**
- What's New Since 2014
- **How Boulder Travels**
- **Essential Services**
- What We Heard

KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways
- 7. Connecting to the Region
- 8. Managing Demand on our System Together
- 9. Ensuring Equity
- 10. Funding the Transportation System

INVESTMENT PROGRAMS

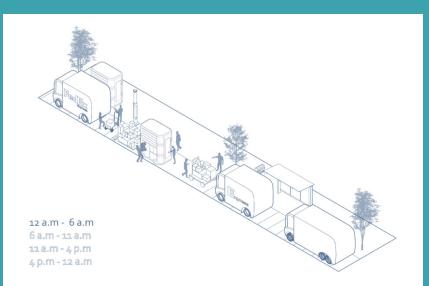
Current Funding Program Strategic Investment Program Vision Investment Program 2019 TMP Objectives **Boulder's Call to Action**

Appendices can be found at <u>bouldertmp.net</u>



ADVANCED MOBILITY AND MANAGING THE CURB

Where demand for using the public right-of-way changes throughout the day or seasons, Boulder can use flexible management strategies to address those changing needs.



a tan

12 a.m - 6 a.m

6 a.m - 11 a.m

11 a.m - 4 p.m

4 p.m - 12 a.m

Morning

Before the peak of the morning rush, freight deliveries arrive to stock stores with their goods for the day.

By 7:30, delivery vehicles give way to vehicles dropping off employees, many enjoying breakfast or coffee in a parklet on the way into work.

12 a.m - 6 a.m 6 a.m - 11 a.m 11 a.m - 4 p.m

Mid-Day

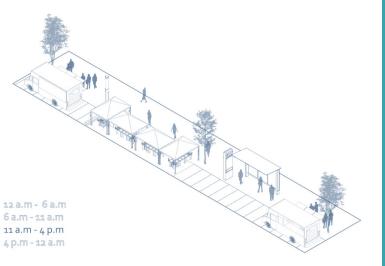
Late morning brings some deliveries of packages and mail to businesses and residents. At noon, the lunch rush begins bringing many people to street vendors to enjoy their midday meal.

By 2:00, most diners are back inside and light delivery activity continues until the evening rush.



12 a.m - 6 a.m 6 a.m - 11 a.m 11 a.m - 4 p.m 4 p.m - 12 a.m

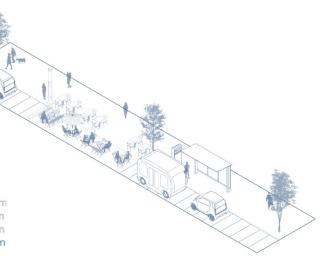
BOULDER Transportation Master Plan



Evening

The evening rush stops delivery activity as street and vehicle capacity is shifted to move people instead of goods. Passenger movement continues into the evening as people grab dinner or drinks, pick up children, or head to evening events.

Automated evening and late-night delivery activity allows for easy movement of large goods on underutilized streets.



Late-Night

Late at night the curb prioritizes freight vehicles. Passenger movement is at a minimum through the early hours of the morning, leaving more space for increased delivery services in cities. Delivery ease is increased through the use of nearby storage lockers.

In the morning, freight makes way for transit vehicles.

BOULDER'S PLAN

Introduction

Accomplishments

Transportation Vision and Goals

Boulder's Policies

What's New Since 2014

How Boulder Travels

Essential Services

What We Heard

KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility

6. Delivering Transit in New Ways

- 7. Connecting to the Region
- 8. Managing Demand on our System Together
- 9. Ensuring Equity
- 10. Funding the Transportation System

INVESTMENT PROGRAMS

Current Funding Program Strategic Investment Program Vision Investment Program 2019 TMP Objectives Boulder's Call to Action

Appendices can be found at <u>bouldertmp.net</u>





WHY IT'S IMPORTANT

A high-frequency, affordable, and reliable transit system is the backbone of our transportation network and will continue to be the travel option that efficiently moves the most people into and around Boulder. The <u>Renewed Vision for Transit</u>, developed by the community as part of the 2014 TMP Update, calls for expanding both the local Community Transit Network (CTN) and regional transit connections with fare-free service and a clean, electric bus fleet. The city and Via have started cleaning their fleet, with HOP bus service expected to be completely electric in the coming years.

303 447 8282 1

KEY CHALLENGES

With limited resources and competing priorities, RTD has been cutting bus service in Boulder—moving us in the wrong direction relative to the Renewed Vision for Transit. We recognize that we can't realize the vision for transit by continuing to rely on RTD to provide all of Boulder's local and regional service. The City of Boulder currently only provides two bus services: the HOP, and more recently, the seasonal Park-to-Park service to Chautauqua. The city must proactively pursue other transit service models to meet our goals, and must partner with other communities to do so.



KEY NEXT STEPS

New strategies are needed for transit funding and service delivery. New models for delivering transit will mean more local control for Boulder-based routes and a quicker conversion to an all electric fleet. Collaboration with northwest metro area communities will advance high quality regional transit connections.

ACTION 6.A

Expand the city's role as a local transit provider: The City of Boulder would provide local Community Transit Network routes by either directly operating or contracting with a transit service operator, similar to the local HOP service contracted to Via Mobility Services.

ACTION 6.B

Electrify and expand the

HOP service to North and

East Boulder with local, high-

frequency connections to CU

Boulder's main campus and

Flatirons Business Park.

ACTION 6.C

Explore forming a new Boulder County consortium with Boulder County and surrounding jurisdictions to create a county transit agency. The agency could assume responsibility for operating local and new regional routes, such as inter-city Bus Rapid Transit services. RTD would continue to operate existing long-distance, Denver-based routes such as the Flatiron Flyer and airport service.



ACTION 6.D

Seek additional funding sources and partnerships to add new forms of local and regional transit, including the reallocation of funds collected by RTD to support local transit operation.



While communities around the country are seeing a decline in transit ridership, Boulder has seen tremendous growth, with a

32% increase in regional transit ridership

between 2010 and 2017, with much of this attributed to the new Flatiron Flyer service.

BOULDER'S PLAN

- Introduction
- Accomplishments
- **Transportation Vision and Goals**
- **Boulder's Policies**
- What's New Since 2014
- How Boulder Travels
- **Essential Services**
- What We Heard

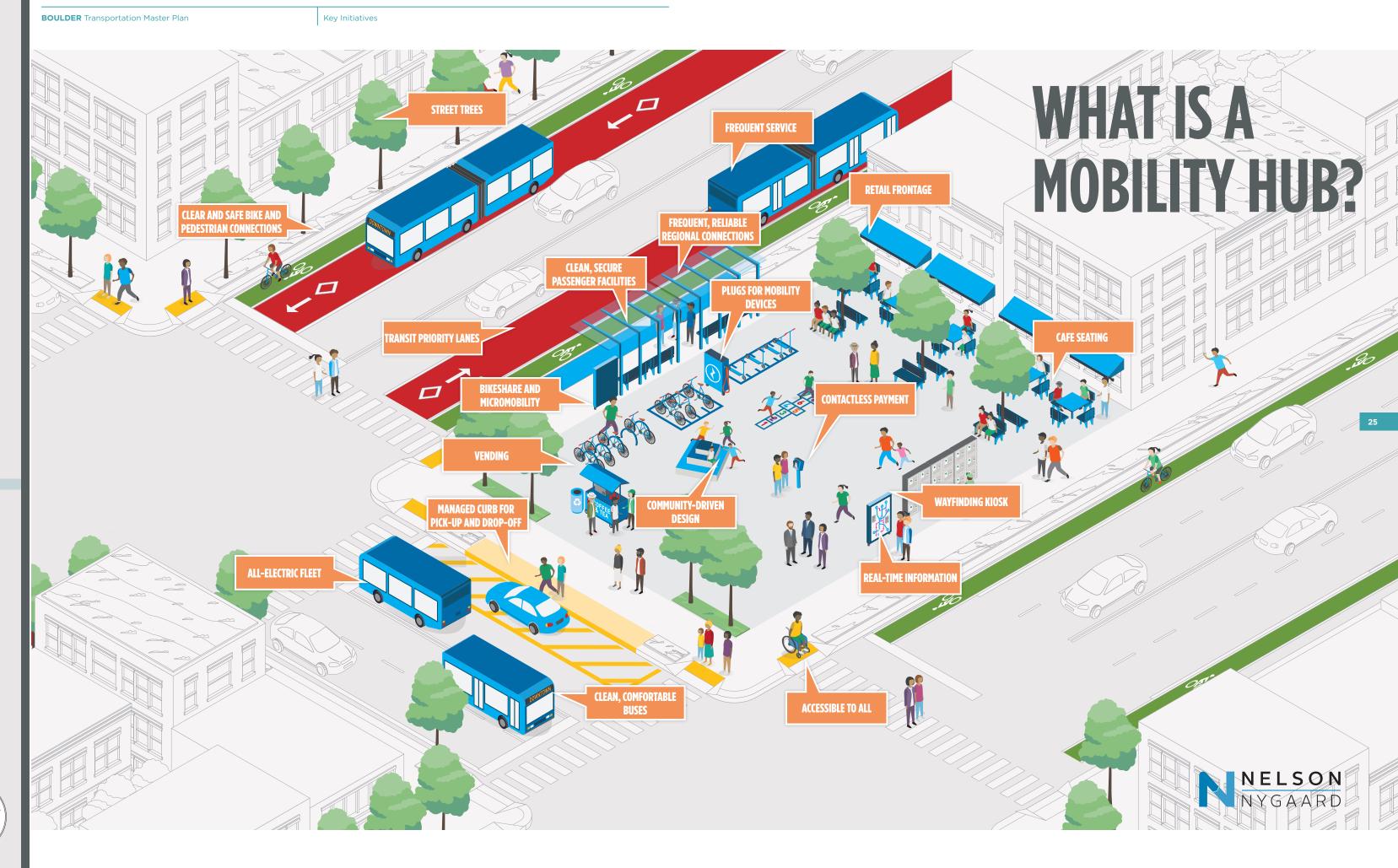
KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways
- 7. Connecting to the Region
- 8. Managing Demand on our System Together
- 9. Ensuring Equity
- 10. Funding the Transportation System

3 INVESTMENT PROGRAMS

Current Funding Program Strategic Investment Program Vision Investment Program 2019 TMP Objectives Boulder's Call to Action

Appendices can be found at bouldertmp.net



BOULDER'S PLAN

- Introduction
- Accomplishments
- **Transportation Vision and Goals**
- **Boulder's Policies**
- What's New Since 2014
- How Boulder Travels
- **Essential Services**
- What We Heard

KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways
- 7. Connecting to the Region
- 8. Managing Demand on our System Together
- 9. Ensuring Equity
- 10. Funding the Transportation System

INVESTMENT PROGRAMS

Current Funding Program Strategic Investment Program Vision Investment Program 2019 TMP Objectives Boulder's Call to Action

Appendices can be found at bouldertmp.net





WHY IT'S IMPORTANT

Over the next 20 years, the Front Range is expected to grow by two million people. Boulder's continued role as a regional job center, coupled with residential growth throughout the Front Range, is placing increased travel demands on the regional transportation system. Since 2017, the share of non-resident employees is estimated to have increased from 47 percent to 60 percent of all Boulder employees. For businesses to successfully attract and retain employees and customers, continue to exchange goods and services, and support affordable living, we must provide a broader range of travel options for inter-regional travel.

KEY CHALLENGES

Today, regional travel on the roadways connecting Boulder to neighboring communities is still highly dependent on single-occupant vehicles. If this continues and travel demand grows as expected, we will pay tremendous social, environmental, and economic costs associated with increased congestion and GHG emissions.

Our challenge is to make more efficient use of our limited road capacity and regional transportation networks by providing convenient, affordable and reliable travel choices. These choices should be balanced among automobiles, carpools, vanpools, transit including the FLEX and Bustang, bicycles, and strategies such as high occupancy toll and high occupancy vehicle lanes, rideshare, and first and last mile connections for transit riders. A diverse range of options are needed to meet the needs of a diverse workforce, including shift and service workers.

SH 119 Bus Rapid Transit Study



KEY NEXT STEPS

ACTION 7.A

Continue to advance designs and secure funding for all Northwest Area Mobility Study corridors; and prioritize the Diagonal/SH 119 and East Arapahoe/ SH7 multimodal corridor improvements, including regional BRT, express/managed lanes, and a commuter bikeway.

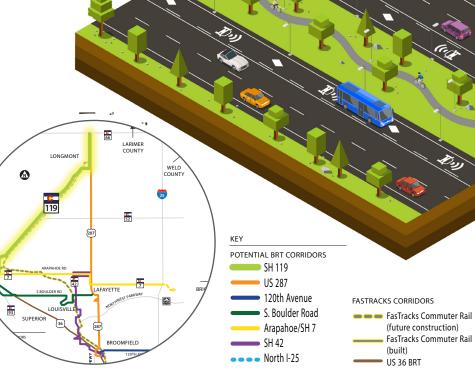
OVER 30%

LARIMER

BOULDE

of trips along the Diagonal between Longmont and Boulder are starting in Larimer and Weld County

Source: Streetlight Data, 2018



BOULDER'S PLAN

- Introduction
- Accomplishments
- **Transportation Vision and Goals**
- **Boulder's Policies**
- What's New Since 2014
- **How Boulder Travels**
- **Essential Services**
- What We Heard

KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways
- 7. Connecting to the Region
- 8. Managing Demand on our System Together
- 9. Ensuring Equity
- **10. Funding the Transportation System**

INVESTMENT PROGRAMS

Current Funding Program Strategic Investment Program Vision Investment Program 2019 TMP Objectives **Boulder's Call to Action**

Appendices can be found at bouldertmp.net



ACTION 7.B

BOULDER Transportation Master Plan

Advocate for improving RTD regional service on the US 36 corridor, including reinstating mid-day Flatiron Flyer express service between Boulder and Denver, increasing Flatiron Flyer service to Boulder Junction, and providing more service to Denver International Airport.



ACTION 7.C

Work with partners to provide, maintain, and expand enhanced, direct inter-regional FLEX transit service between Fort Collins and Boulder.

TO FORT

COLLINS

IBM 🔳

ACTION 7.D

Key Initiatives

Actively promote existing and new, innovative regional vanpool and ridesharing services, like app-based and casual carpooling that may particularly benefit shift and service workers who cannot utilize existing transit.

ACTION 7.E

ONGMONT

Continue to actively participate in regional partnerships and coalitions, such as the US 36 Mayors and Commissioners Coalition and State Highway 7 Coalition, to advocate for the funding and implementation of regional multimodal BRT corridors.

Long-Term Boulder Renewed Transit Vision: Schematic of Priority Transit Corridors

Transit Cente

(Existing or Funded)*

Includes Park & Ride

Transit Center (Euture)*

- Existing and Future Services US 36 BRT Other Rapid Transit High Frequency Service (CTN) Northwest Rail
- ••• Interregional Transit (FLEX) Mobility Hub Other Existing Services Hospital Local Circulator Service Area —> Regional Connection Inrth Rould State Highway 119 BRT Study TO ERIE & LAFAYETTE To Nede DE RD 7 East Arapahoe Transportation Plan BASELINE RD TO LOUISVILLE & Not-to-scale, schematic map illustrating priority transit vision investmer (Does not show all existing transit service or routing details.) To Golden TO DENVER

Note: This map does not directly illustrate all services or routing details currently in place. A map of the existing transit system

ACTION 7.F

Plan, design and implement physical and operational improvements to support highquality BRT, thereby increasing transit travel speed and reliability along regional corridors.

The Renewed Vision for Transit was included in the 2014 TMP update and identified key corridor investments for local and enhancements in Boulder. The Renewed Vision and refined as part of this TMP in the Transit service planning and costs for each route and







WHY IT'S IMPORTANT

As more people live and work in Boulder, it becomes even more important to take care of the infrastructure we have and promote the more efficient use of our limited transportation resources. Transportation Demand Management (TDM) is a set of strategies, policies, and programs designed to make the most efficient use of the transportation system by shifting trips to a different mode, time, or route instead of expanding capacity of our roads.

The most common TDM programs in Boulder include the business, neighborhood, and college EcoPass programs; carpooling and vanpooling; teleworking; and incentive programs like parking cash out.

KEY CHALLENGES

While city residents have made great strides in reducing vehicle trips and vehicle miles traveled, today more than half the people working in Boulder live outside the city. Non-resident employees are traveling farther and employees living in the rapidly growing areas east and north of Boulder County are outside the RTD district. Given the distance and lack of transit, about 80 percent of these employees drive alone to work, a percentage essentially unchanged since 1991. Parking is also free in most employment areas, making it easy for employees to make the choice to drive.

BOULDER Transportation Master Plan

Key Initiatives

CONTENTS

BOULDER'S PLAN

- Introduction
- Accomplishments
- **Transportation Vision and Goals**
- **Boulder's Policies**
- What's New Since 2014
- **How Boulder Travels**
- **Essential Services**
- What We Heard

KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways
- 7. Connecting to the Region
- 8. Managing Demand on our System Together
- 9. Ensuring Equity
- 10. Funding the Transportation System

INVESTMENT PROGRAMS

Current Funding Program Strategic Investment Program Vision Investment Program 2019 TMP Objectives **Boulder's Call to Action**

Appendices can be found at bouldertmp.net



ACTION 8.A Expand EcoPass Programs to work toward fare-free transit

KEY NEXT STEPS

ACTION 8.B

Expand the Access District Approach. The use of general improvement districts to provide parking and TDM programs, services, and ongoing funding is essential to meeting our TMP goals.

ACTION 8.D

Advance TDM and parking management strategies that make more efficient use of land, especially as ride-hailing and delivery service automation expands.



ACTION 8.E

Grow partnerships with the Boulder Chamber and the business community to address employee recruitment and retention concerns.

ACTION 8.C

Expand and pilot innovation and Advanced Mobility applications that are shared and clean.

For the first time, half of **Boulder's daytime** population has access to an **EcoPass.**

ACTION 8.F

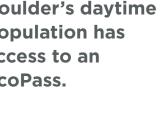
and Commuting Solutions to enhance commute options for all employees, and local and regional TDM programs.

> If you have an EcoPass, you're



more likely to ride the bus, and half of all your trips are done by walking, biking and transit.

Source: City of Boulder, 2018

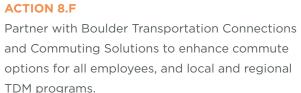


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EcoPass

Access

ENSURING EQUITY

WHY IT'S IMPORTANT

Boulder has historically sought to fairly distribute transportation investments and benefits among all parts of the community. The 2019 TMP focuses on ensuring that all people benefit from expanded mobility options. Providing more transportation options-like walking, biking, transit and shared options - in areas where people are more reliant on various modes will have a greater benefit to overall mobility. New transportation technologies and advanced mobility options provide Boulder with an opportunity to expand affordable transportation choices to those who need them the most, including those who cannot use existing fixed route transit such as service and shift workers.

KEY CHALLENGES

Access to quality, reliable, safe and affordable transport options remains a fundamental challenge for our community and the region. A lack of accessible transportation options can limit people's job and educational opportunities, affordable housing, healthcare, and social activities.

Certain transportation practices may have unintentially perpetuated inequities in Boulder. For instance, low-income community members most in need of affordable transit are oftentimes paying the most for transit service due to their reliance on cashbased fares. These populations may also lack the technology or banking relationships needed to access many of the new mobility options. Another fundamental challenge is that employees - particularly those with lower wage jobs - are living further from Boulder and paying more in transportation costs as a part of their total income. Affordable, reliable, and convenient travel choices are an essential need for equitable access to transportation in our community and throughout the region.

BOULDER Transportation Master Plan

Key Initiatives

BOULDER'S PLAN

- Introduction
- Accomplishments
- **Transportation Vision and Goals**

CONTENTS

- **Boulder's Policies**
- What's New Since 2014
- **How Boulder Travels**

Essential Services

What We Heard

KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways
- 7. Connecting to the Region
- 8. Managing Demand on our System Together

9. Ensuring Equity

10. Funding the Transportation System

INVESTMENT PROGRAMS

Current Funding Program Strategic Investment Program Vision Investment Program 2019 TMP Objectives **Boulder's Call to Action**

Appendices can be found at <u>bouldertmp.net</u>

KEY NEXT STEPS

ACTION 9.A

FREE

FARE

Incorporate a community-wide equity index and scoring process into the TMP investment program to prioritize multimodal investments in areas with higher concentrations of low-income, transitdependent, minority, and car-free households.

ACTION 9.B

Pursue implementation

of a fare-free local and

regional transit system.

Complete and implement the <u>Accessible Boulder:</u>

ACTION 9.C

ADA Self-Evaluation and Transition Plan to identify barriers and opportunities for better ensuring the accessibility of the city's transportation system for all mobility levels.

ACTION 9.D

Require mobility providers including transit, micro-mobility, and rideshare companies to offer low-income fare products and provide an array of payment options for those without credit cards or bank accounts.



EQUALITY

Equality is about providing individuals with equal access to goods, services, and opportunities, regardless of needs or socioeconomic status.



EQUITY

Equity acknowledges that some groups face problems created by deep-rooted or historical injustices that limit them from accessing what they need; thus, they require additional resources to help reduce these systemic barriers.

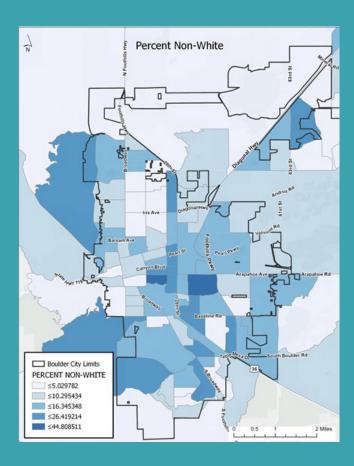




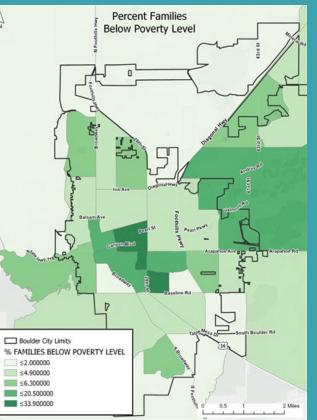
Source: ADVANCING EQUITY AND INCLUSION A Guide for Municipalities 2 Advancing Equity and Inclusion A Guide for Municipalities June 2015 © City for All Women Initiative (CAWI), Ottawa

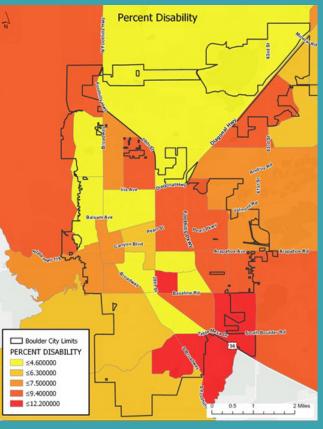
ACCESSIBLE BOULDER: ADA **SELF-EVALUATION AND TRANSITION PLAN FOR** TRANSPORTATION

In Boulder, we believe that mobility for people of all abilities is a fundamental right. We strive to provide a transportation system with a variety of safe, accessible and sustainable travel options that connect people with each other and with the places they want to go. This builds a stronger community in which everyone feels a sense of belonging.



EQUITY VARIABLES





BOULDER'S PLAN

- Introduction
- Accomplishments
- **Transportation Vision and Goals**
- **Boulder's Policies**
- What's New Since 2014
- How Boulder Travels
- **Essential Services**
- What We Heard

KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways
- 7. Connecting to the Region
- 8. Managing Demand on our System Together
- 9. Ensuring Equity
- 10. Funding the Transportation System

INVESTMENT PROGRAMS

Current Funding Program Strategic Investment Program Vision Investment Program 2019 TMP Objectives Boulder's Call to Action

Appendices can be found at <u>bouldertmp.net</u>



FUNDING THE TRANSPORTATION SYSTEM BASELINE ROAD



WHY IT'S IMPORTANT

Boulder envisions a transportation system that is well-maintained, safe, and sustainable. We prioritize multimodal options that are safe and support strategic investments in routine capital maintenance to meet community expectations. We invest to complete our bicycle and pedestrian networks, including a low-stress network that encourages people of all ages and abilities to safely navigate our city on foot or bicycle. These investments are made to change travel behavior, helping to reach our transportation and environmental goals and objectives.

Investment Policies

The city prioritizes transportation investments as follows, recognizing that investments which achieve multiple priorities maximize community benefit.

- **High Priority** Travel safety for people using all modes, such as Vision Zero improvements; system maintenance, such as street and bridge repair; system operations, such as signal enhancements.
- **Medium priority** System efficiency and optimization, such as enhancement of pedestrian, bicycle and transit systems; electrical vehicle charging infrastructure and electrification of fleets; neighborhood speed management, and person carrying capacity improvements (rather than adding capacity for vehicles).
- Lower Priority Quality of life improvements, such as sound walls.

Investment Principles

- Maintain and operate the existing, valuable multi-modal system, including investments in safety.
- As additions are made to the system, address ongoing operation and maintenance needs.
- Continue to advance innovations in the design, construction, operation, and maintenance of the system.
- Strategically enhance the Complete Street network, prioritizing projects that have maximum impact improving safety, mobility, and efficiency.
- Advance corridor studies integrating the city's Sustainability Framework and resiliency strategy.
- Leverage external funds extending the ability of local dollars to implement city goals.
- Continuously strive for efficiency and effectiveness in how work is
 accomplished
- Assure budget decisions are sustainable over time.
- Keep in mind the goal of identifying long-term, sustainable funding that is tied to vehicle use.

KEY CHALLENGES

Transportation funding is limited and highly dependent on sales tax. Sales tax revenue accounted for 80 percent of the \$32.8 million local transportation budget (not including federal funds) in 2018. Transportation's dedicated sales tax revenue is not keeping up with inflation, resulting in declining purchasing power. Even with 78 percent of our expenditures going to essential operations and maintenance, we are still deferring maintenance, which is more costly over time. Outside of local funding, the city is facing increased competition for regional, state and federal funding, and RTD is unable to provide the level of service needed to meet our goals.

A needs assessment evaluated all areas of transportation's essential services in the community, including routine and capital maintenance, traffic and transit operations, planning and programs, and the Capital Improvement Program (CIP). This assessment identified \$22.7 million in unmet annual needs and \$20.8 million in one-time capital expenditures. The majority of this need is in maintenance and transit service, with the transit service representing the amount needed to restore local transit service eliminated by RTD and implement HOP service expansions. The full cost of the Renewed Vision for Transit for local and regional BRT services is estimated to be over \$100 million, some of which will be provided by partners other than the city.



BOULDER Transportation Master Plan

Key Initiatives

CONTENTS

BOULDER'S PLAN

Introduction

- Accomplishments
- **Transportation Vision and Goals**
- **Boulder's Policies**
- What's New Since 2014
- **How Boulder Travels**
- **Essential Services**
- What We Heard

KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways
- 7. Connecting to the Region
- 8. Managing Demand on our System Together
- 9. Ensuring Equity

10. Funding the Transportation System

INVESTMENT PROGRAMS

Current Funding Program Strategic Investment Program Vision Investment Program 2019 TMP Objectives **Boulder's Call to Action**

Appendices can be found at bouldertmp.net



KEY NEXT STEPS

A new path forward is needed. New models to deliver transit will mean more local control for Boulder-based routes and collaboration with northwest metro area communities to advance high-quality regional transit connections. A strategy to creatively fund operations and maintenance projects is also needed.

ACTION 10.A

Identify funding mechanisms that decisionmakers support to invest in essential local services and regional corridor improvements and transit service.

ACTION 10.B

Select funding mechanisms that are tied to use and can provide predictable and reliable revenue that is scaled to inflation, such as user fees (congestion tolling) on regional corridors or a local transportation mobility fee.

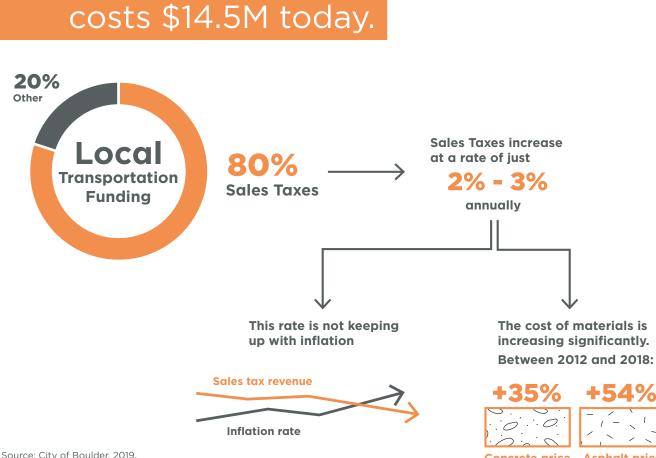
ACTION 10.C

Once mechanisms are identified, address social and economic equity issues and ensure lower-wage workers are not disproportionately impacted by fees and taxes.

ACTION 10.D

As regional travel choices are implemented, include mechanisms such as managed lanes and dynamic pricing that both manage performance and raise revenue.

A project in 2012 that cost \$10M



Concrete price Asphalt price



BOULDER'S PLAN

Introduction Accomplishments Transportation Vision and Goals Boulder's Policies What's New Since 2014 How Boulder Travels

Essential Services

What We Heard

KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility

6. Delivering Transit in New Ways

7. Connecting to the Region

- 8. Managing Demand on our System Together
- 9. Ensuring Equity

10. Funding the Transportation System

INVESTMENT PROGRAMS

Current Funding Program Strategic Investment Program Vision Investment Program 2019 TMP Objectives Boulder's Call to Action

Appendices can be found at <u>bouldertmp.net</u>





INVESTMENT PROGRAMS

Since 2003, the TMP has contained three investment programs reflecting what we expect will be done with anticipated funds, the next set of investments that would be pursued with additional funds, and all the projects included in the plan. In this plan, these programs focus on achieving our safety and GHG emission reduction targets by 2030. All the proposed capital project and transit services of the TMP can be found in the Maplt.

BOULDER'S PLAN

- Introduction
- Accomplishments
- **Transportation Vision and Goals**
- **Boulder's Policies**
- What's New Since 2014
- **How Boulder Travels**
- **Essential Services**
- What We Heard

KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways
- 7. Connecting to the Region
- 8. Managing Demand on our System Together
- 9. Ensuring Equity
- 10. Funding the Transportation System

INVESTMENT PROGRAMS

- **Current Funding Program**
- Strategic Investment Program
- **Vision Investment Program**
- 2019 TMP Objectives
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Appendices can be found at bouldertmp.net



CURRENT FUNDING PROGRAM

The Current Funding investment program reflects the investments from the funds expected from existing revenue sources through 2030-a total of \$421 million. Over 80 percent of these funds will be used for operations and maintenance of the existing transportation system. Examples of the Current Funding Investment program include:

- Prioritize safety on the transportation system and implement the actions from the 2019 Safe Streets Boulder Report / Vision Zero Action Plan.
- Maintain essential services at current levels and make selective enhancements for safety and efficiency.
- Provide funding for highest priority Pedestrian Improvement Areas to improve low-stress walking to daily destinations.
- Implement the neighborhood GreenStreets from the Low-Stress Walk and Bike Network.
- Enhance programmatic support for TDM efforts that increase transit ridership and decrease GHG emissions.
- Add funding for major reconstruction and bridge replacement, recognizing that as city facilities age there will be the need for increased reconstruction activity.
- Prioritize the limited capital improvement funds in high-demand city and regional arterial bus rapid transit (BRT) travel corridors.
- Include funds that can be leveraged as match amounts for various grant programs.

- Provide funding for some of the additional transit services identified in the Renewed Vision for Transit.
- Increase transit investment to electrify the city fleet and implement some of the high-priority programmatic items in the Renewed Vision for Transit.
- Preserve the existing EcoPass program.

STRATEGIC INVESTMENT PROGRAM

Investment Programs

The Strategic investment program is the next set of investments critical to reaching the community's transportation goals. Other emphasis areas are expanding regional and local transit service and supporting electrification of transit and other vehicles to reach GHG reduction goals.

The Strategic program would require a significant increase in funding at full implementation, although only a portion would be from local sources. In addition to the items in the Current Funding program, the Strategic investment program would:

- Fund the essential transportation services identified through the Needs Assessment of \$22.5 million in annual costs.
- Provide funding for the remaining Pedestrian Improvement Areas to improve the walking experience to daily destinations.
- Replace the EcoPass program with a fare-free zone covering Boulder residents and employees.
- More than double the investment in capital projects.

- services.

also would:

BOULDER Transportation Master Plan

• Add additional local transit service on corridors per the updated Renewed Vision for Transit.

 Support BRT transit service expansion on the high priority arterial BRT corridors of SH 119 and SH 7.

• Offer first and last mile enhancements including mobility hubs.

 Increase operations and maintenance funding proportional to the construction of new projects.

 Provide real-time roadway system, transit, and ride share information and

VISION INVESTMENT PROGRAM

The Vision investment program is fiscally unconstrained and will take longer than 2030 to support financially. This program includes Current Funding and Strategic investment programs and

 Continue to increase maintenance and operations funding to a full life-cycle replacement level for all facilities.

 Complete the modal enhancement investments in all the multimodal corridors, including all roadway improvements. Maintain city funding for high-frequency local transit service to reflect expected cost increases.

 Complete the Renewed Vision for Transit providing additional services including transit enhancements and BRT routes in Boulder.

• Complete the mobility hubs and transit center improvements from the Renewed Vision for Transit.

- Complete the regional BRT on South Boulder Road
- Complete remaining bicycle and pedestrian system enhancements in support of the Low-Stress Walk and Bike Network.
- Expand parking management to other areas of the community.
- Complete all roadway improvements.

CORRIDOR STUDIES IN BOULDER

Since 2014, the city has conducted major corridor studies to plan for improvements on sections of our major roadways. These studies develop an integrated vision of improvements for all modes for the corridor. Future corridor studies will include:

- Iris Avenue
- Broadway
- Table Mesa Drive/ S. Boulder Road
- Yarmouth Avenue
- Violet Avenue
- Folsom Street
- 30th Street (North of Pearl)
- 55th Street
- 63rd Street
- Broadway (S of Downtown)
- Valmont Road

BOULDER'S PLAN

- Introduction
- Accomplishments
- **Transportation Vision and Goals**
- **Boulder's Policies**
- What's New Since 2014
- **How Boulder Travels**
- **Essential Services**
- What We Heard

KEY INITIATIVES

- 1. Making Travel Safe in Boulder
- 2. Making Travel Comfortable through a Low- Stress Walk and Bike Network
- 3. Providing Mobility Options
- 4. Prioritizing the Pedestrian
- 5. Shaping Innovation and New Forms of Mobility
- 6. Delivering Transit in New Ways
- 7. Connecting to the Region
- 8. Managing Demand on our System Together
- 9. Ensuring Equity
- 10. Funding the Transportation System

INVESTMENT PROGRAMS

Current Funding Program

Strategic Investment Program

Vision Investment Program

2019 TMP Objectives

Boulder's Call to Action

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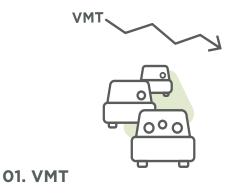


2019 TMP OBJECTIVES

The TMP includes measurable goals and objectives that are tracked every two years and shared with the community in the Transportation Report on Progress as well on the city's web-based community dashboard. These results help the city and the Boulder community gauge our progress and adjust our course as needed over time.

Investment Programs

The 2019 TMP has updated objectives reflecting the 2030 target year established by the State of Colorado and the city's Climate Commitment goals. Objectives have also been expanded to more fully measure the concept of putting people first in a transportation system that provides safe and comfortable opportunities for people traveling by all modes.



By creating high-quality travel choices, reduce vehicle miles of travel (VMT) in the Boulder Valley by 2030:

- Overall: by 20 percent
- Daily resident VMT: to 7.3 miles per capita
- Non-resident one-way commute VMT: to 11.4 miles per capita

MEASURES

- Total VMT
- Daily resident VMT
- Average one-way commute distance for nonresidents



02. MODE SHARE

Increase walking, biking, and transit to 80 percent of all trips for residents and to 40 percent of work trips for non-residents.

MEASURES

- Resident mode share
- Non-resident mode share



03. CLIMATE

By 2030, reduce transportation-sector GHG emissions by 50 percent and continuously reduce mobile source emissions of other air pollutants.

MEASURES

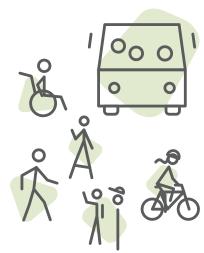
- Number of million metric tons of GHG produced
- Number (or share of) of electric vehicles in city, transit and private fleets.

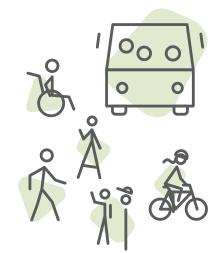
	Proposed 2030 Mode Share Targets	
	Resident Trips	Non-Resident Trips
Ped	25%	0%
Bike	30%	2%
Transit	10%	12%
SOV	20%	60%
MOV	15%	26%

Source: Boulder 2014 Transportation Master Plan

travel.

MEASURES









04. SAFETY

Eliminate fatal and serious injury crashes and continuously improve safety for all modes of

• Number of serious injury and fatal crashes

• Additional measures in Safe Streets Report

05. VULNERABLE POPULATIONS

Expand fiscally-viable transportation options for all Boulder residents and employees, including children, older adults and people with disabilities.

MEASURES

• City financial contributions to VIA mobility

• Number of residents eligible for Neighborhood EcoPass

• Percent of population with access to:

» Comfortable walkways & bikeways

» Local and regional transit

• Percent of students walking, biking and taking transit to school



06. TRANSPORTATION OPTIONS

Increase transportation options commensurate with the rate of employee growth.

MEASURES

Percentage change in:

- Total Employees
- Transit Service Hours
- Bike System Miles



07. TRAVEL TIME

Maintain 1994 levels of travel time on Boulder arterial streets, and improve travel time reliability and predictability

MEASURES

- Person travel time and throughput on arterials (autos and transit)
- LOS/intersection delay



08. WALKABLE NEIGHBORHOODS

Increase the share of residents living in walkable (15-minute) neighborhoods to 80 percent.

MEASURES

• Percent of residents living in a walkable neighborhood

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INVESTMENT PROGRAMS

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BOULDER'S CALL TO ACTION

nvestment Programs

Achieving the very ambitious mode shift, VMT and GHG reduction targets in the TMP will be challenging and requires a major shift from business as usual. Best practices and empirical experience across the country and world show that parking reform, curb management and the reallocation of public right-of-way are needed to support and accelerate mode shift to more sustainable travel choices. This will reduce GHG emissions and other transportation related air pollution.

Boulder has excellent examples of the power of shared, unbundled, managed and paid parking as the foundation of a comprehensive access management program in the Downtown and Boulder Junction areas. Curb management and dynamic pricing provide safe and predictable access to a limited resource increasingly in demand by new services. Our experience with US 36 confirms that making regional transit travel time competitive with driving and reliable will greatly increase ridership.

While these changes may be difficult to implement, they offer a host of co-benefits to the community and individuals. Increased walking and biking have significant health benefits and can be established as habits in children with life-long benefits. Reducing the full scope of vehicle emissions will reduce air pollution, increasing the health and comfort of everyone.

Creating more diverse, mixed use neighborhoods allow more trips to be short and attractive for walking or biking for people of all ages and abilities. Increased walking and biking builds community and supports local businesses. As households need to spend a smaller amount of their budget on transportation costs, they can direct these savings into other areas such as housing and local businesses. And as the major public space connecting the community, streets can increasingly be used for a balance of travel, placemaking, and community amenities. Boulder has a long history of intentionally planning for change and creatively approaching its challenges. The existential threat of climate crisis requires that we redouble our efforts to reduce GHG emissions by implementing this TMP.

The TMP includes action items for each Initiative. The <u>Action Plan</u> appendix contains the detailed recommended action items, along with the stakeholders and partnerships needed to move these forward. In the Action Plan, actions are identified for implementation as ongoing, and in the near-term (2019-2024) and long-term (2025-2030) of the plan timeframe. As this is a comprehensive list and exceeds existing resources available to the city and partner agencies, each action item is also classified by TMP Investment Program.

The TMP Action Plan is envisioned as a dynamic, working document and will be refined through the annual budget process and work programs.

Achieving a safe and sustainable transportation system requires the efforts of partner agencies and community members. Given the large negative consequences of increased vehicle traffic and climate crisis, everyone has a role in reaching our community goals.

BOULDER Transportation Master Plan



BOULDER'S PLAN

Introduction Accomplishments Transportation Vision and Goals Boulder's Policies What's New Since 2014 How Boulder Travels

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2 KEY INITIATIVES

Making Travel Safe in Boulder

Making Travel Comfortable through a Low- Stress Walk and Bike Network

Providing Mobility Options Prioritizing the Pedestrian Shaping Innovation and New Forms of Mobility Delivering Transit in New Ways Connecting to the Region Managing Demand on our System Together

Funding the Transportation System

3 INVESTMENT PROGRAMS

Ensuring Equity

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