

2012 - 2014



City of Boulder

Transportation Master Plan Update

Draft
Summary of
**Community
Engagement**

Boulder's Transportation Master Plan

Imagine a city where taking the bus, riding a bike, or simply walking is just as easy and convenient as driving a car. This vision is at the heart of the City of Boulder's Transportation Master Plan (TMP).

THE 5 FOCUS AREAS OF THE TMP



WHAT IS THE TMP?

First adopted in 1990, the Transportation Master Plan is the City of Boulder's blueprint for creating safe, convenient and sustainable transportation options that meet the needs of the community and increase accessibility.

21% of Boulder's greenhouse gas emissions are from transportation.

Funding

Reliable transportation funding is paramount to maintain our current (and future) transportation systems. This is the simple reality for Boulder and other communities across the country.

Visions

- Establish a sustainable funding model with a local, reliable solution that covers system maintenance and operational needs.
- Continue prudent spending, focusing on the community's vision for transportation.

84% of the budget is used for BASIC MAINTENANCE and OPERATIONS EXPENSES.

20,500 BUS SERVICE HOURS HAVE BEEN CUT from BTD's local transit service over the last decade. That's the equivalent of losing the entire DASH route.

50,000+ in-commerce to Boulder every day!

Regional Travel

Work with regional partners to provide an assortment of multimodal connections and improvements on a very limited budget.

Complete Streets

Complete Streets accommodate all modes of transportation by keeping pedestrians, bikes, buses and cars in mind as facilities are planned, designed and constructed.

Visions

- Advance from "Platinum" to "Diamond" designated Bicycle Friendly Community.
- All residents walk, bike or bus for 75% of their trips because it is easy, convenient, and safe!

300% Increase in Bicycling on our local transit routes since 1990.

38% of Boulder employees walk, bike or bus to work.

70,000 students, residents and employees are eligible to receive Eco-Passes.

TDM

TDM or Transportation Demand Management provides convenient and easy-to-use travel options for Boulder residents, visitors and employees. Travel options become more & more important as resource limitations increase while the ability to build new capacity decreases.

Visions

- Increase use of transportation options by in-commuters & employees
- Possible creation of a community-wide Eco-Pass program

Sustainability

A major focus of the TMP update is considering how the transportation system can:

- Leverage transportation options to reduce greenhouse gas emissions and support city sustainability efforts
- Integrate with city planning projects to increase neighborhood livability
- Complement the city ecosystem as a whole by improving access to travel options

64% of all trips made by Boulder residents are completed by car, bus or bike.

The 2012 - 2014 Transportation Master Plan (TMP) update is a community planning effort to advance and innovate Boulder's transportation system to be more accessible and sustainable for future generations.

The Summary of Community Engagement outlines the city's approach to public outreach for the TMP update. This Summary describes the community outreach platforms and tools utilized throughout the update, and highlights the results and key findings from the community engagement.

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2012 - 2014

Transportation

Master Plan Update

What is the Transportation Master Plan?

First adopted in 1989, **the Transportation Master Plan (TMP) is the City of Boulder's blueprint for creating safe, convenient and sustainable transportation options** that meet the need of the community and increase accessibility.

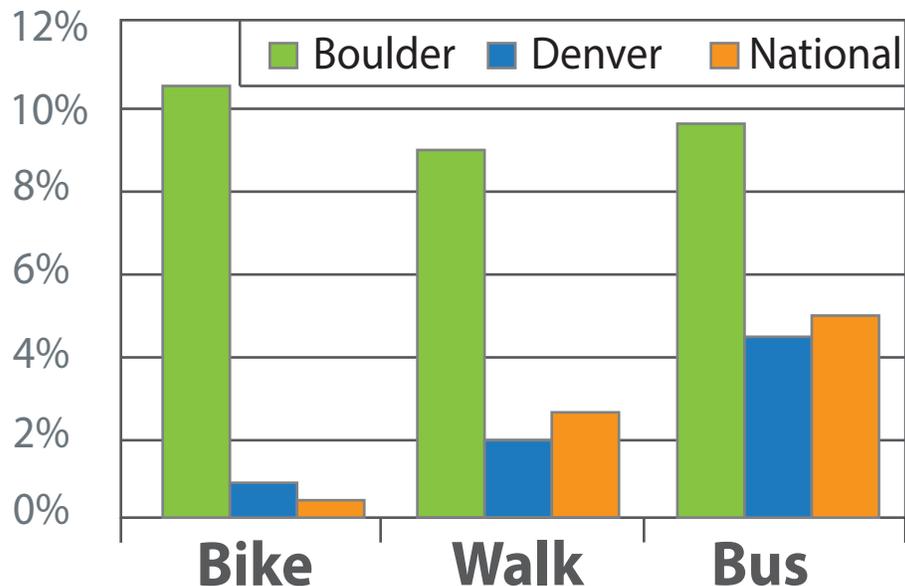


The TMP provides the policy basis for how transportation funding is spent, and what projects or programs the city focuses on to provide transportation services for its citizens through the year 2035.

Why do we need to update Transportation Master Plan?

The Transportation Master Plan is a mature plan reflecting more than 20 years of consistent policy direction. The goals established in the original TMP are the main reasons Boulderites are afforded such a robust system for walking and biking and a successful Community Transit Network for traveling by bus.

Work Mode Share Boulder Residents 2008-2010 (3 yr avg.)
American Community Survey

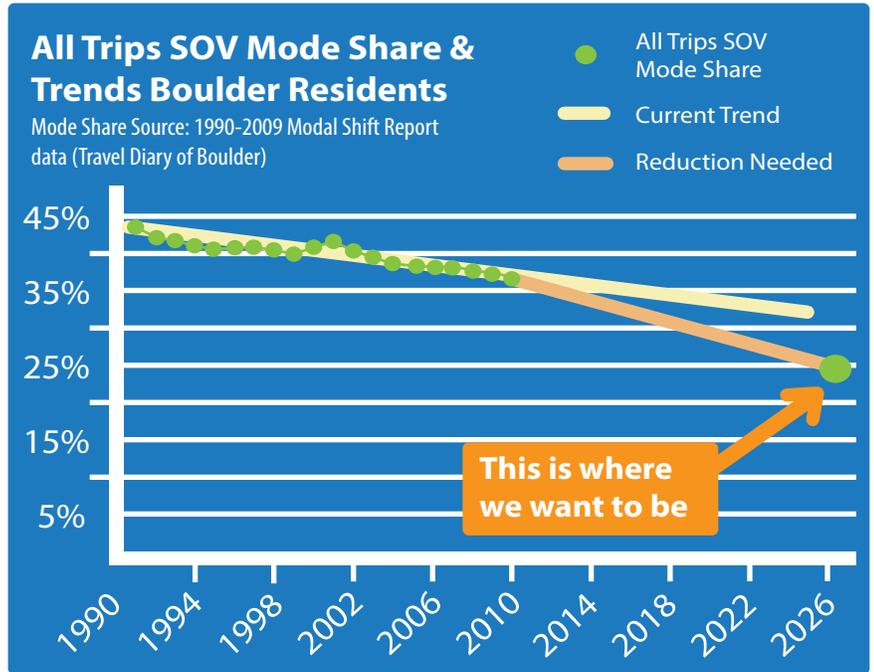


While Boulderite bike, walk and take the bus well beyond the national average, **the city is not on course to meet the current transportation goals and newly established Climate Commitment goals.**

Transportation Opportunities and Goals

The current TMP has a goal of reducing the number of trips made by one person driving alone in a car (called “Single Occupant Vehicle” mode share or SOV) to 25 percent of all trips by Boulder residents by 2025. While Boulder has made progress toward the goal, the city is not currently on track to reach it. Since 1990, SOV trips have been falling by about 0.4 percent per year. That rate needs to double to 0.8 percent per year to reach the goal.

To reduce the amount of Single Occupant Vehicle trips, **the city will need to see a significant increase in walking, biking, and taking transit for daily trips** and recognize the importance of building a balanced transportation system and embracing a Complete Streets approach.



In addition, a proposed new Climate Commitment greenhouse gas (GHG) reduction goal of 80% will require the city to take even more aggressive actions in all focus areas of the TMP. The transportation sector represents approximately 22 percent of the city’s GHG emissions, so accomplishing the goals of the TMP have taken on even greater urgency.

TMP Objectives

Existing		New
Reduce SOV to 25% of Trips	Max of 20% Roadways at LOS F	Safety
Expand Fiscally Viable Alternatives for Residents & Employees	Increase Alternatives with rate of Employee Growth	Neighborhood Accessibility
Reduce Mobile Source Emissions	No Growth in Long Term Vehicle Traffic	VMT Per Capita

- An integrated, multi-modal transportation system emphasizing the role of the pedestrian mode as the primary mode of travel;
- A transportation system supportive of community sustainability goals;
- Sufficient, timely and equitable financing mechanisms for transportation;
- Public participation and regional coordination in transportation planning;
- A transportation system supportive of desired land use patterns and functional, attractive Community design.

Focus Areas for the TMP Update

The TMP update process began with a Policy Review phase which was presented to City Council in the fall of 2012. Based on this assessment of progress and the issues identified, council provided direction areas of focus for the planning work of the update.



Funding

The transportation funding shortfall has been documented through the Transportation Maintenance Fee (TMF) analysis with the Transportation Advisory Board (TAB) and the community task force. Increased funding is essential to maintain the existing transportation system and for investments continuing progress toward community goals.

Complete Streets

Additional travel in Boulder needs to be accommodated in non single occupant vehicle (SOV) modes. Continue to build a transportation system for all modes with an emphasis on addressing the lack of progress in expanding the transit system and exploring bike and pedestrian innovations to increase use of these modes.

Regional Travel

About half of Boulder employees commute in at a much higher SOV mode share than Boulder residents. Providing enhanced transit, van pool and car pool opportunities as well as regional bike connections are critical to reduce regional SOV travel.

TDM

Parking management and the Eco Pass are the foundation for shifting travel behavior where travel options exist. Exploring a community-wide Eco-Pass and parking management strategies as well as developing TDM packages for development review are needed to support mode shift toward the community's goals.

Integrate Sustainable Initiatives

Successfully reaching the community's challenging goals across all areas of sustainability requires new, integrated planning approaches. Increasing the effectiveness and coordination of sustainability efforts across the city organization maximizes opportunities to achieve transportation, climate, land use, economic vitality, and other community goals.



Approach to Engaging the **Community**



The underlying question that guided the city's approach to community outreach was;

“How can we increase the number of people walking, biking and taking transit for daily trips?”

To answer this question city staff developed a comprehensive community outreach plan to organize and guide communications for the entire update process.

Community Outreach Goals



Understand what the community wants and needs to be able to walk, bike, and take transit more often



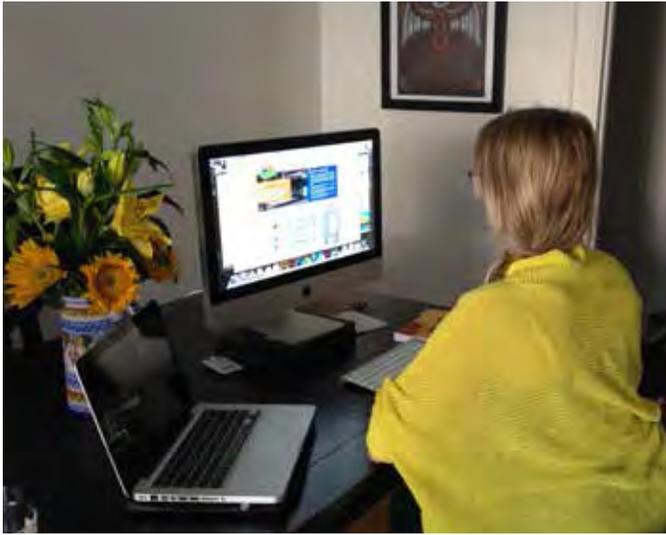
Work with the community to develop a Renewed Vision for Transit



Attract the “Interested But Concerned” Cyclists



Learn what contributes to a walk friendly community



City transportation staff utilized a wide range of new tools and technologies to involve a broad cross-section of the community in shaping a vision for transportation in Boulder.

The following strategies informed what platforms and tools the city used to get feedback on the TMP:

- **Integrating Social Media** into more traditional outreach efforts **to reach new audiences** in the community, **greater numbers**, and **allow a -broader more diverse population to participate**. Social media tools include Twitter, Facebook, Tumblr & email blasts. These social media tools are used to announce events and encourage participation on other TMP outreach efforts.
- Ensure geographic equity by creating a presence in all geographic areas of Boulder.
- Provide equal opportunity for participation by including both in-person as well as web-based engagement.



Platforms

- Open Houses/Public Meeting
- Community Feedback Panel
- InspireBoulder

Tools

Community Outreach tools were designed to get feedback on specific focus areas of the TMP. Descriptions of each tool can be found in the following chapters.

- Transit Advisory Committee
- Stakeholder Interviews
- Storefront Workshops
- BoulderTransitDesign.com
- Bike Walk Steering Committee
- Surveys
- Walk Audits
- Bike Audits
- Living Laboratory Demonstration Projects

Community Outreach Platforms

Community Outreach Platforms serve as a place or opportunity for public discussion.

Open Houses

The TMP Update employed Open Houses as a traditional public meeting platform to provide an educational opportunity for the community to come learn about the TMP update process and give feedback in person.

- 3.4.2013 TMP Kick-off Open House Boulderado
- 3.13.2013 CU East Open House
- 5.13.2013 Bike Living Laboratory Open House
- 10.30.2013 North Boulder Sub-Area Plan
- 12.9.2013 Pre TAB TMP Open House
- 2.6.2014 Walk Bike Summit Open House
- 3.10.2014 TMP Open House
- 3.30.2014 The Art of Street Design Open House
- 5.28.2014 TMP Open House



Community Feedback Panel

The TMP update **Community Feedback Panel is a new email-based platform, comprised of over 500 interested members of the public** who have volunteered to be queried via email on TMP related issues ranging from transit, bike, and pedestrian issues to funding and TDM. The Community Feedback panel is kept up to-date on the progress made in each focus area and is given the opportunity to provide immediate feedback on any of the information sent out. The panel also receives notifications on TMP events, new InspireBoulder posts, and other opportunities for input.

Inspire Boulder

- 1,441 Active Participants of whom 66% are between the ages of 25-56

- 3,064 Interactions in Transportation alone
Ages ranging from 14 - 65+



InspireBoulder.com is a web-base platform designed to solicit community ideas and spread information. **InspireBoulder fosters a community dialog** by providing a forum with which to discuss specific issues. Throughout the TMP Update a total of **26 topics have been posted ranging from general behavioral questions to specific location based inquires and scenario based preferences.** A list of all current and archived topics can be found at inspireboulder.com. Details on specific InspireBoulder posts can be found in the following chapters.

Integrating with Sustainability Initiatives

This new focus area emphasizes **city-wide integration of projects, planning, and outreach efforts under the city's Sustainability Framework of the BVCP**. Collaborative and interdepartmental project management is occurring across the city-wide planning initiatives. Interdepartmental teams, including staff from the TMP update team, have developed the scope for the AMPS effort and the multi-departmental Travel Wise series of workshops have refined the transportation portion of the Climate Commitment.

The City's Sustainability Framework provides a lens through which the TMP Update and other work efforts are being developed.



Accessible &
Connected
Community



Environmentally
Sustainable
Community



Economically
Vital Community



Livable
Community



Good
Governance



Healthy
and Socially
Thriving Community



Safe
Community

Climate Commitment

A priority of the Climate Commitment initiative is to establish an updated community Green House Gas (GHG) protocol and develop an new baseline and inventory. Transportation activities represent the second largest source of community GHG emissions. Expanding the complete streets system, enhancing the integration of land use and transportation planning, and increasing neighborhood accessibility so that more daily activity trips can occur locally will be critical to achieving Climate Commitment goals.



Envision East Arapahoe Walking Tour



Access Management and Parking Strategies (AMPS)

A comprehensive, phased, citywide initiative to develop overarching guiding principles for citywide assess and parking strategies. AMPS is exploring new strategies to enhance access and expand managed parking strategies throughout our community. Provisions for bicycle parking in collaboration with a connected system of bike ways are tools for integrated multi-modal access.

Envision East Arapahoe (Previously Sustainable Streets + Centers)

The ultimate goal of this effort is to develop prototypes of land use, transportation facility, site and building design and performance expectations that can be used to guide development across the community where more detailed plans do not exist. This project will serve as the first corridor study with the new Sustainable Streets + Centers approach and is scheduled to be completed by December 2014 so that it can inform the update to the BVCP starting at the end of the year. The approach for the Envision East Arapahoe corridor plan will be used as a model for subsequent corridor plans along 30th Street and Colorado.



North Boulder Sub-Community Plan Update

As North Boulder grows the city is working to ensure that they develop as part of an integrated and coordinated planning initiative.

North Boulder Walking Tour



Civic Area Plan

In addition to city-owned properties at the core, the Civic Area planning area is bounded by 9th to 17th streets and Canyon Boulevard to Arapahoe Avenue. The goal of the project is to transform this area into Boulder's social, civic, and environmental heart; one that prioritizes purpose per square foot over price per square foot. As a primary destination for a variety of special events that has limited opportunities for parking, multi-modal access is a primary interest of the plan.

Parks and Recreation Master Plan

To ensure that recreation opportunities are readily available and attractive to residents, the City of Boulder and its future will be guided by a new Master Plan. The opportunity to safely access parks by walking or biking is an important part of an active community and a focus area of the Plan.



Comprehensive Housing Strategies

While the scope of this project is still being defined, the numbers and type of housing units available in Boulder plays a significant role in the number of potential in-commuting employees. With an estimated 50 thousand in-commuters today, these employees are both vital to the city's economy and difficult to provide with alternatives to driving alone. The location and design of future housing within the city can support increased use of the non automotive modes and reduce the number of in-commuting employees.



Joint board Workshops

Multiple boards have participated in three joint Board workshops over the period of the TMP update discussing inter-related topics of transportation, parking, land use, urban design, and climate.

Hold Page for Outreach with other communities





Developing a
Renewed Vision
for Transit

Transit Use in Boulder



Our community has worked hard to build a successful Community Transit Network

Boulder has a reputation for having a great transit system. Since 1990, ridership on Boulder's local routes has grown 300 percent. **The unique and successful Community Transit Network, has resulted in Transit Ridership far exceeding the nation average.**

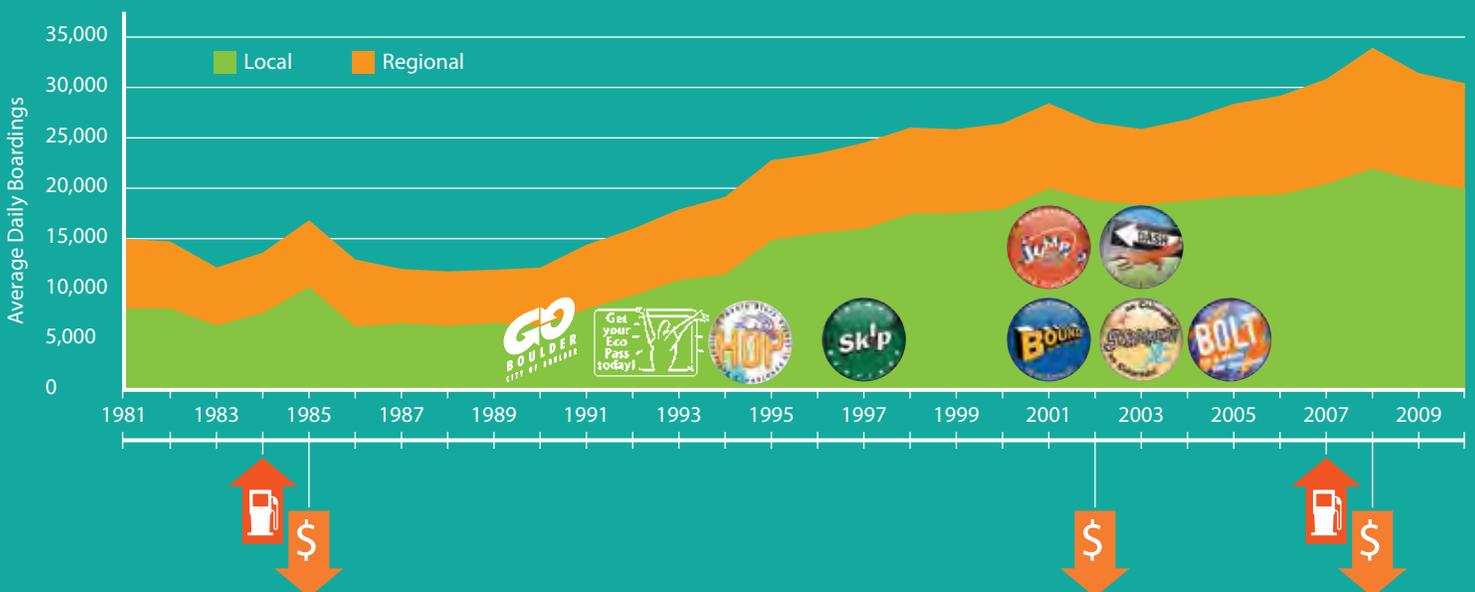
However, despite this success, ridership over the last several years is declining. In addition, under current trends operating cost for transit will increase and local bus service hours will decline.

Why is a Renewed Vision for Transit necessary?

- Due to these reasons, we have not implemented a new local transit route since 2003.
- Transportation revenue is stagnant, local transit service in Boulder is declining, and RTD Fast-Tracks improvements have been delayed.
- 80% of Boulder workers who commute from other communities drive alone to work. Capturing those regional trips continues to be a challenge.
- The funding strategy used for establishing new transit service is no longer viable.
- The eastern area of Boulder is developing quickly and we need to plan for the anticipated growth. (Boulder Community Hospital expansion; CU East Campus development; Boulder Junction opening)

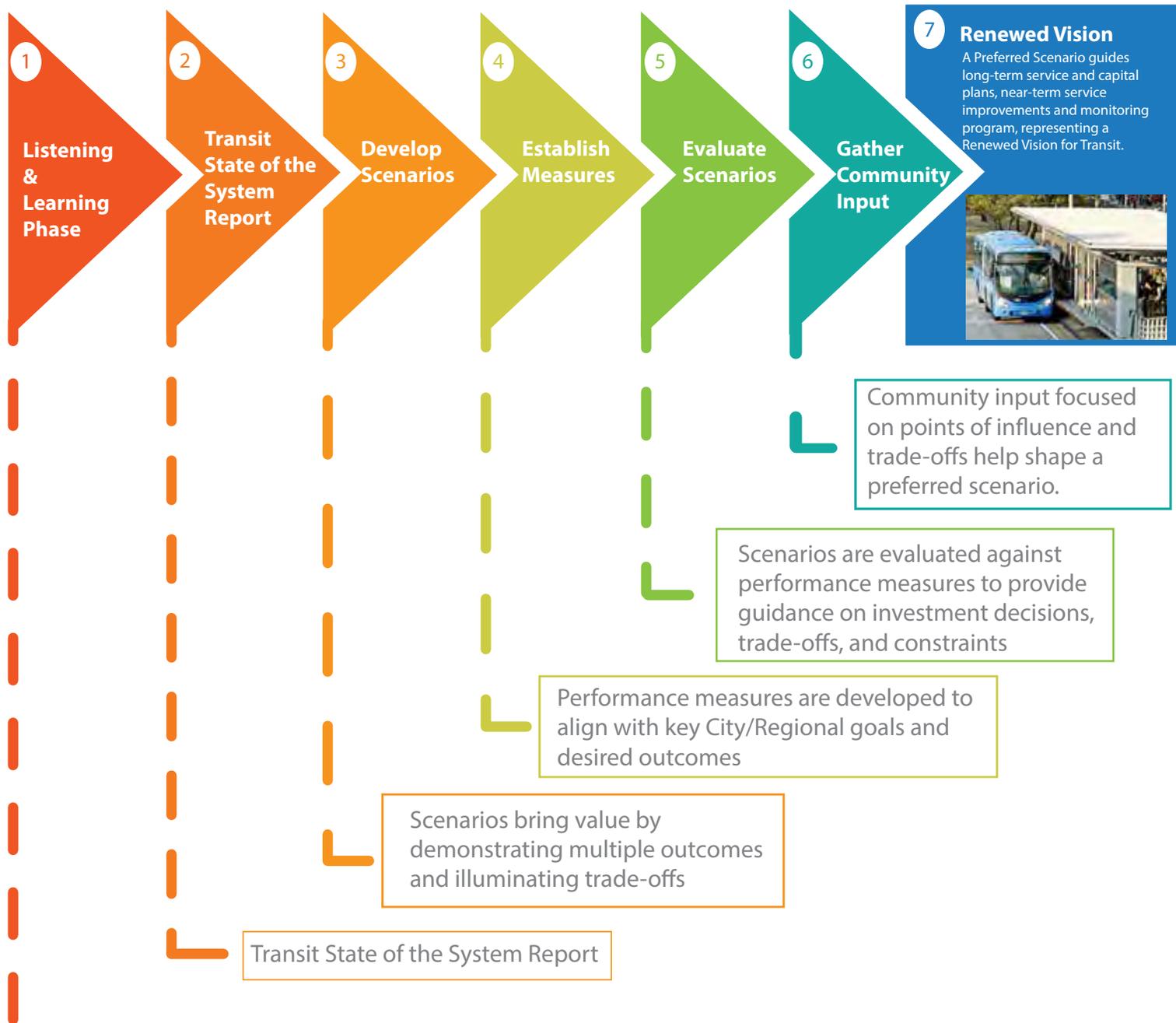
Boulder Transit Use

Logos represent developments in Boulder transit.



Source: RTD Annual Ridership Data.

Steps to Developing a Renewed Vision for Transit



During the Listening and Learning Phase, transportation staff conducted extensive outreach to **understand what the community's needs and values in a Transit System**. Tools utilized to get feedback on Boulder's Renewed Vision for Transit are described in the following pages.

Creating a presence the Community

Transportation Advisory Committee (TAC)

The TAC is comprised primarily, but not exclusively, of “technical staff” from local and regional policy, agency, and key community stakeholders such as transportation staff from Boulder County, RTD, the Director of the Chamber of Commerce, CU representatives, and local Transportation Management Organizations (TMOs). **The TAC meets on a monthly basis to advise and guide all technical work and public outreach related to the developing the Renewed vision for Transit** as part of the Transportation Master Plan. This includes assisting on all public outreach strategies, helping design the Design Your Transit System tool; advise and input on the technical work such as state of system report and the transit scenario evaluation and analysis and development of the draft Renewed Vision for Transit.



Stakeholder Interviews

A Stakeholder interview is a tool utilized to inform and get feedback from specific organization representatives. All interviews were conducted in a conversational style. The following stakeholders have been interviewed:

- Matthew Appelbaum, Mayor, Boulder City Council
- KC Becker, DRCOG Representative, Boulder City Council
- George Gerstle, Director of Transportation, Boulder County
- Elise Jones, Commissioner, Boulder County
- John Tayer, CEO, Boulder Chamber of Commerce
- Will Toor, Transportation Program Director, Southwest Energy Efficiency Project
- Tracy Winfree, Public Works Director, City of Boulder
- Frank Bruno, Vice President for Administration, Western Disposal
- Louise Vale, Vice Chancellor for Administration, University of Colorado



Storefront Workshops

Example of a map created at a storefront workshop:



14 Storefront workshops all in different geographic areas of Boulder

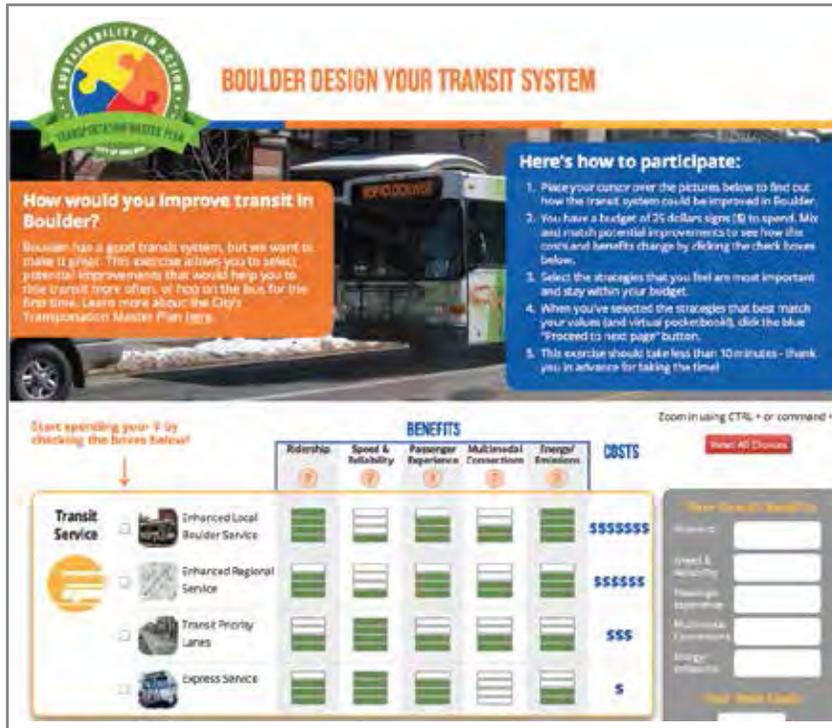
A Storefront Workshop is a new public outreach tool that aims to involve community members, who might not typically seek public participation, by setting up stations in common destinations around Boulder. At a storefront workshop community members that walk by are encouraged to locate on a map where they would add new transit service, improve frequency on exiting transit routes, improve the speed and reliability of the transit service, or improve bike and pedestrian connections.

This map-based activity allows community members to give “hands-on” input and helps transportation staff identify specific locations that need improvement.



Web-based Engagement for Transit

BoulderTransitDesign.com



The “Design Your Transit System” is an on-line tool that walks participants through a series of visually oriented exercises to better understand the public’s priorities for transit, such as, which elements of system design are most likely to attract new riders and improve the experience for existing users.

Over 1,000 participants, of whom 50% are in the 25- 44 age group

The on-line tool in conjunction with the short survey have helped the Transit team better understand participants’ travel patterns and barriers to taking transit as well what they need to be able to take transit more often. This tool has been effective in gathering feedback from a younger population.

InspireBoulder.com

Inspire Boulder has been a useful tool in getting information out to the community as well as getting general feedback on how to improve Boulder’s Transit System. Multiple topics posted under the transportation category have facilitated a discussion around how to improve Boulder’s Transit System.

Of all the transportation topics posted five have specifically pertained to Developing a Renewed Vision for Transit:



- What is your vision for Transit in Boulder? Share your ideas and GET INVOLVED
- What are YOUR barriers to riding the bus?
- Do it Yourself Transit
- Designing a Renewed Vision for Transit in Boulder
- What do you value most in a future Transit System for Boulder?

What we've learned from the community

Community feedback on how we can improve Boulder's Transit System has been consistent across the every community engagement platforms and tools, and in all areas of town. The top priorities and key themes identified from the 'Listening and Learning' phase are summarized below.

Top 5 Priorities

1 Real Time Arrival Information

2 Expand Eco Pass

3 Enhanced Regional Service

4 Expand Bike Capacity

5 Improve Passenger Information

Online trip planner/ pay for fares Online
Clearer stop announcements

Priorities not far behind

6 Free Wifi on Board

7 Improve local service

Bus only lanes along Arapahoe, Broadway, and Colorado Ave.
Provide benches and trash cans at popular transit stops
Coordinate timing of bus with middle & high School bells
Increase transit frequency on 28th street
Direct connection between South Boulder and 29th street
mall and Boulder Junction
Expanded service hours

Key Themes

- Regional Partnerships to Address In-Commute
- Reinforce the Land Use & Transportation
- Enhance Community Transit Network Services
- Find New and Sustainable Funding
- Parking Management is Key
- Plan for Changing Demographics

Transit State of the System Report

The State of the System report documents the existing conditions of the local and regional transit system and provides statistics and trends associated with the performance of the system and will help lay the groundwork to develop the renewed vision for Transit.

See www.bouldertmp.net ; click 'Complete Streets' then "Transit State of the System Report."



2 Expand Eco Pass

One of the top community priorities to improve Boulder’s Transit System was to expand the Eco Pass program. In response the Transportation Demand Management team conducted a Community Wide Eco Pass feasibility study. Results of that study are illustrated below:

Community-Wide Eco Pass Feasibility Study

The city and the county jointly conducted a study to examine the induced demand and program costs of increasing access to the Eco Pass, which is proven to be one of the most effective tools to encourage residents, employees and students to use transit. For the full Eco Pass Feasibility Study visit Boulder

Three scenarios and two geographic areas were included in the study:

- **Scenario 1:** All residents, employees, students;
- **Scenario 2:** Residents only;
- **Scenario 3:** Employees only
- **City of Boulder only**
- **All of Boulder County (including the City of Boulder)**

Key Findings

- Transit ridership would increase significantly with the implementation of a community-wide pass.

Increased Ridership

	BoCo	COB
Scenario 1 (All)	62%	38%
Scenario 2 (Residents only)	57%	27%
Scenario 3 (Employees only)	26%	21%

- A county- or city-wide Eco Pass program would assist in meeting transportation and sustainability goals of reducing single-occupant vehicle trips, increasing transit mode share and improving air quality.

- A community-wide Eco Pass program in Boulder County would increase the number of people eligible for an Eco Pass by between 130,000 and 270,000 depending on the scenario.

Program Cost

Boulder County	2011 RTD Revenue	Induced Demand Cost	Estimated Total Program Cost
Scenario 1 (All)	\$18,217,059	\$3,265,178	\$21,482,237
Scenario 2 (Residents only)	\$15,131,422	\$2,525,129	\$17,656,551
Scenario 3 (Employees only)	\$6,500,889	\$573,580	\$7,074,468

City of Boulder	2011 RTD Revenue	Induced Demand Cost	Estimated Total Program Cost
Scenario 1 (All)	\$14,185,543	\$956,246	\$15,141,789
Scenario 2 (Residents only)	\$8,447,519	\$727,536	\$9,175,055
Scenario 3 (Employees only)	\$5,388,194	\$476,758	\$5,864,952

Under the current business, college and neighborhood Eco Pass program, RTD receives approximately \$8.5 million per year from participants in the city and county.

For the feasibility study, scenario program costs were estimated by adding the cost of replacing existing revenue with the fully allocated cost of providing additional transit service in order to meet the induced demand.

What we've learned from the community

Hold for community input on transit scenarios and approaches

List Values that rose to the top that helped to inform the development of two approaches that took the best of the best

What we've learned from the community

**Hold for community input
on transit scenarios and
approaches**



Boulder's Walk Bike
Living Laboratory

Walking & Biking in Boulder Today

Since 2008, Boulder has been recognized by the League of American Bicyclists as a Platinum Bicycle Friendly Community. Boulder's Safe Routes to School program has constructed a total of 2,880 linear feet of new sidewalks, since 2009.

Today, Boulderites are afforded 159 miles of dedicated bike facilities in comparison to 305 centerline miles of roadway, with 68 of these miles comprising off-street multi-use paths supported by 79 grade separated underpasses.

- **Even though the system is substantially complete, there is still tremendous potential to increase the amount of trips completed by bike, especially by women, older adults and families with children.**

Boulder is one of the top places in the United States to walk and bike.



While people in Boulder bike to work at 20 times the national average, we are still seeing similar trends to the rest of the nation in regards to who is biking.

- According to the City of Boulder Travel Diaries **men are biking at a rate 2x that of women** and women are making more drive alone trips than men.
- **The majority of people in Boulder are biking and walking more for recreation than for transportation.**



Boulder's Living Laboratory

The City of Boulder needs to see more people walking and biking for daily trips like going to the grocery store, school, or work.



To understand how to make bicycling and walking more appealing the city launched a Living Laboratory. The Living Laboratory aims to:

What does the community need and want to be able to walk and bike more often?

- Engage neighborhoods, conduct walk audits and learn what makes a good pedestrian environment.
- Test innovative bike facilities and programs to see what's appropriate for Boulder
- Enhance the on-street bike system to that it attracts people who want to bike but don't feel comfortable or confident sharing the roadway with motor vehicle traffic

Boulder Walks

Creating a Walk Friendly Community

Walk Audits

A Walk Audit is a new tool used to assess the qualitative aspects of walking.



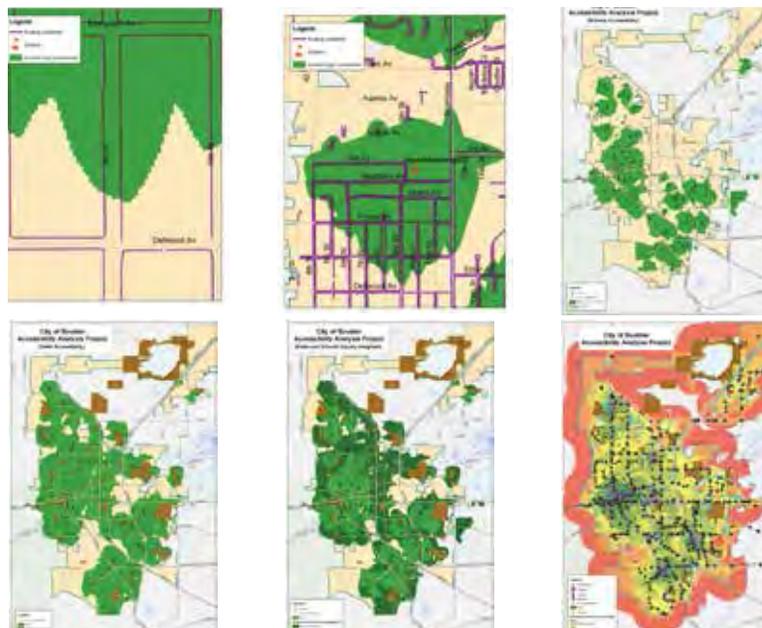
Walk Audits aim to address the walk friendliness of neighborhoods and corridors, the connectivity to destinations and the comfort of the surrounding environment from a pedestrian perspective.

This tool has been effective in working with the community to evaluate the present environment and envision potential ways to enhance the future walking experience for people of ages and abilities.

The city has conducted a series of walk audits in collaboration with other sustainability initiatives. Participants have reflected on the history of the site and discussed the relationship between land use and street scape design.

20-Minute Neighborhoods

In conjunction with Walk Audits, the city has developed a Neighborhood Access Tool to evaluate how accessible certain areas of town are from a pedestrian's perspective.



The **“twenty minute neighborhood”** is shorthand for **the concept that a person can fulfill many daily needs within their neighborhood by walking for less than twenty minutes.**

The Neighborhood Access tool calculate the twenty minute walk area for each activity or attractor using the existing pedestrian facilities, called the walk shed. Multiple walk sheds can then be overlaid to show how many attractors can be reached from a given area, creating an Access score for each part of the city. Areas with a high Access score are neighborhoods where many daily activities can safely and conveniently be carried out by walking.

Living Laboratory Bicycle Demonstration Projects

The most innovative components of Boulder's Living Laboratory are the bicycle demonstration projects. **The City of Boulder is using the demonstration projects as a tool to test and evaluate new bike facilities and programs.** Five bicycle demonstration projects were installed during the summer of 2013, with four more planned for summer 2014.

The Living Laboratory Demonstrations Projects offers a **real world environment** for community members to get out and ride these new facilities and report their results on InspireBoulder.com

InspireBoulder.com

To have a truly comprehensive evaluation of the demonstration projects, the city accounted for quantitative analysis and qualitative community feedback.

InspireBoulder.com has enabled the city to provide a forum that facilitates a community wide discussion and allows for the public to comment on the new bicycle facilities at a time that is convenient for them.

Over the course of TMP Update, the city has posted eight topics on InspireBoulder.com that directly relate to Biking and Walking in Boulder. **The Living Laboratory topic alone has received over 2,700 views and 281 interactions and comments.** Through the discussion in on InspireBoulder, the city has learned what works well on certain types corridors, what designs need improving, and where the community would like to more of these facilities.



Community members are encouraged to get out and ride the new bike facilities and share their feedback on InspireBoulder.com.

A map of all the treatments can be viewed at www.BoulderTMP.net.

Living Laboratory Bicycle Demonstration Projects

Back-in-angled Parking

University Ave (Broadway - 17th Street)



In an effort to reduce the potential for conflict and documented collisions between cyclists and vehicles backing out blindly into the bike lane, the city is testing back-in-angled parking.

Immediately after the installation, a handful of community members expressed concerns with back-in-angle parking.

To help raise awareness on the new parking policy, staff produced an instructional video and installed signs at the site. **Compliance has improved over time through education and enforcement efforts.**

Protected Cycle Track

Baseline Road (30th - 35th Street)



A cycle track is an on-street bicycle lane that is physically separated from pedestrian and vehicle traffic. **The city is testing this bike facility to see if it allows for more women, older adults and families with children to feel more comfortable and protected ride adjacent to traffic.**

Overall, **community members have shown support for the protected cycle track.**

The city has heard mixed feedback on the aesthetics and design of the protected bike lane. Drivers have stated that the concrete blocks and flexible poles are distracting and camouflaged and cyclists have expressed concerns with left turn movement.

Living Laboratory Bicycle Demonstration Projects

Variations of Buffered Bike Lanes

The City is testing a couple variations of buffered bike lanes to **understand how effective each design is in raising awareness and improving safety** between cyclist and drivers in travel lanes or existing parked cars.

The **buffered bike lane treatments have been well received by the community**. Cyclists have expressed support to continue the buffering in the “door zone”.

Buffered bike lanes provide a designated ‘buffer’ separating the bike lane from the adjacent auto travel lane and/or

Spruce Street (15th Street - Folsom)



Before



After



After

University Avenue (9th Street - Broadway)



Before



After



After

Living Laboratory Bicycle Demonstration Projects

Electric Assist Bike Pilot Project

An Electric Assist Bike (E-Bike) is a bike that has an optional electric motor to assist the cyclist during a time of need. E-bikes have the potential to help people, who may not be confident that they can make the trip by bike, feel more comfortable. In addition, **the use of E-bikes makes longer distance bike commutes more feasible for people of all ages and abilities.**

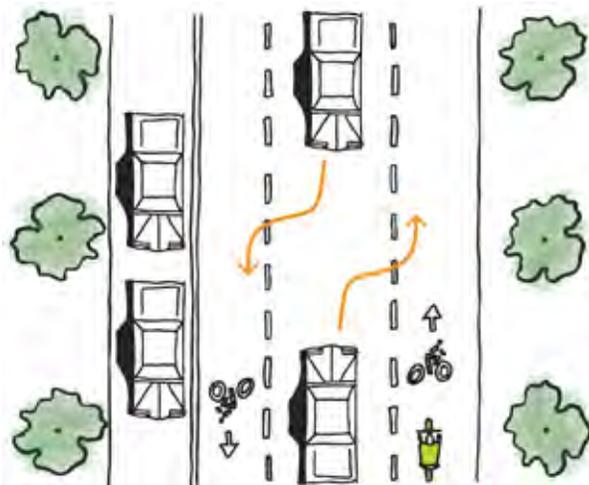
During the public process, the **city learned that community members have concerns about traffic congestion on the paths, speed, etiquette of bicyclists and safety.** In particular, the behavior of existing bicyclists and a lack of enforcement were cited as concerns that may be compounded by e-bike users.

For more information on the E-Bike pilot project please visit [Boulder > E-Bikes](#)

In February of 2014, [the City of Boulder launched an Electric Assist Bike Pilot project that allows the use of E-bikes on off multi-use paths for one year.](#)



Future Living Laboratory Projects



Example of Advisory Bike Lanes

The following projects are planned for installation during summer 2014:

- **A Bike Boulevard**
along 13th Street
- **A Shared Roadway**
along Junction Place
- **A Bike Box**
southbound Folsom St. at Canyon
- **An Advisory Bike Lane**
along Harvard Lane

Evaluating the Bike Network

Bike Audits

As part of the evaluation of the Living Laboratory Bicycle Demonstration projects, the city has conducted a series of three bike audits and focus groups.



During a Bike Audit, a group of community members and city staff ride along specific corridor and discuss the experience as bicyclists in that environment.

This new tool has been useful in collecting qualitative community feedback about Boulder's bike network.

Another series of bike audits is planned for summer 2014, to assess the corridors after the installation.

Low Stress Bike Network

Along with Bike Audits, the city is conducting a city wide Low Stress Bicycling Network Connectivity analysis to understand the functionality of the existing bike network and qualify the value of proposed projects.

An objective is to identify low-stress connectivity as well as barrier and opportunities to fine tune the network and increase the percentage of your system that offers a low stress riding opportunity. A before/after stress level analysis is being conducted to determine whether the Living Laboratory treatments reduce stress levels for bicyclists.

High-stress streets are measured as those with high speed limits, limited or non-existing bike lanes and signage, and large distances to cross at intersections.



The image above visually displays the different stress levels of a street, red being the highest stress and light green being the lowest.

2014 Walk Bike Summit

On Feb. 6, 2014, the City hosted the 2014 Walk Bike Summit in collaboration with the Transportation Advisory Board (TAB) and the Bike Walk Steering Committee. **The Summit brought together over 115 community members** from agencies, organizations, businesses, and retailers in the active transport industry, community groups as well as select community focus group participants **to envision and strategize how to increase walking and biking trips in the City of Boulder.**



The City of Boulder worked collaboratively with Growing Up Boulder to engage walk bike summit participants in co-design activities.



A day-long event, the Summit featured several interactive group activities:

- **Imagine Boulder in 10 years:** A co-design session in the morning that produced drawings detailing elements important to community members in a walk and bike friendly community.
- **Self-guided walks:** Participants ventured out for a walk during lunch to guide a group discussion and reflections of personal experiences on the perception of the walking environment.
- **Strategies to achieve our shared vision:** The afternoon session focused on identifying and prioritizing strategies to achieve the shared vision for a walk and bike friendly community.

2014 Walk Bike Summit

The following strategies were identified at the 2014 Walk Bike Summit as priorities:

Engineering

- Physical Separation between vehicles, bikes, and pedestrians
- More protected on-street bike lanes
- Road Diet - Reduce vehicle lanes to provide more space for pedestrians and bikers
- Signal timing that prioritize pedestrians and bikes
- Bike Signals

Education

- Way-finding signs and mobile maps
- Incorporate education about smart safe travel choices into K-12 curriculum
- Bike maintenance clinics in schools
- Incorporate bike and pedestrian safety into driver's Ed. classes
- Campaign to educate all users about the rules and responsibilities of the multi-use paths and crosswalks

Encouragement

- Community-wide Eco Pass
- Events in the community: Ciclovias, Car-Free Zones, Walk Bike Bus Days, family social rides
- Culture that includes all riders
- Expand Trip Tracker program
- Boltage/Trip Tracker program for businesses

Enforcement

- Police on bike and foot monitoring paths
- Enforce proper behavior at crosswalks
- Greater speed enforcement around schools

Evaluation

- Establish a mode-share goal for biking and walking
- More walking and biking tours as a tool for evaluation
- Utilize smart phone technology to evaluate travel patterns
- Evaluate the bike and pedestrian level of stress
- Map based technology to measure accessibility to daily needs - 20-Minute Neighborhoods

Policy

- Policy was identified as needing to be included as an "E"
- Replace minimum parking requirements with car parking maximums and minimum bike parking requirements
- Paid and unbundled parking
- Zoning changes in support of multi-use development to allow 20-min. neighborhoods and infill development

Creating a 2.0 Bike & Pedestrian Network

The City of Boulder proposes to develop a **programmatic approach to** identify and prioritize improved bicycle and pedestrian facilities in **support of a more complete low stress network.**

It is envisioned that the city would develop policies for Bicycle Facility Installation Guidelines and develop a “2.0 bicycle network” in support of a complete and connected low stress network.

The Guidelines would be informed by the evaluation of the installed treatments and be similar to our City of Boulder Pedestrian Crossing Treatment Installation Guidelines.

These will help develop the City’s 2.0 bicycle network of planned improvements to attract a broader population of people as confident and comfortable cyclists.



Bike Walk Action Plan

Community input collected through the **summit, walk audits and bike innovations** is being combined with the analysis from the **Neighborhood Access Tool** and the **Low Stress Bike Network** analysis to produce recommendations for the update and the **Bike Walk Action Plan.** The Action Plan also will identify new initiatives and programs for education, encouragement, enforcement and evaluation.



Hearing From Youth



Hearing From Youth



The City of Boulder Transportation department extends a big Thank You to the staff, volunteers, and students at the following schools and organizations for engaging the youth and for helping to make Boulder an exemplary child and youth-friendly city!

- Growing Up Boulder
- University of Colorado ENVD Program
- Boulder Valley School District
- Boulder High School's AVID Program
- Youth Services Initiative
- Casey Middle School
- Whittier Elementary
- and the Boulder Journey School

Special thank you to growing up Boulder staff and volunteers: Louise Chawla, Mara Mintzer, Tori Derr, Alessandro Rigolon, Flaminia Martufi, Nathalie Doyle, Mehdi Heris

This outreach aims to understand aspects of the physical and social environment that influence youth's independent mobility and active travel.

The City of Boulder's transportation department partnered with **Growing Up Boulder**, to **reach out to youth** and get their feedback on the transportation system and gain a better **understanding of what they need and walk to be able to walk, bike, scooter, skate, or take transit for daily travel.**



Mapping Activity

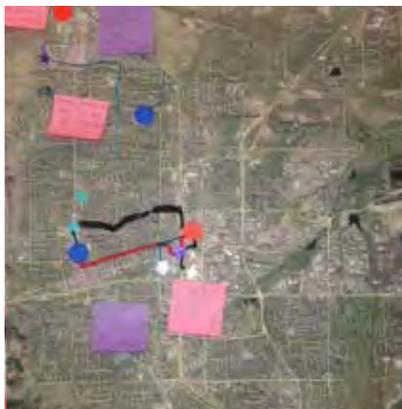
The students were asked to draw three different types of routes and specify the mode of transportation and who they travel with.

Common Destinations:

Pearl Street,
29th Street Mall,
Target,
29th Street movie theatre,
Sporting practices,
Chautauqua,
Valmont Bike Park
Families and friends houses,
& locations of clubs.

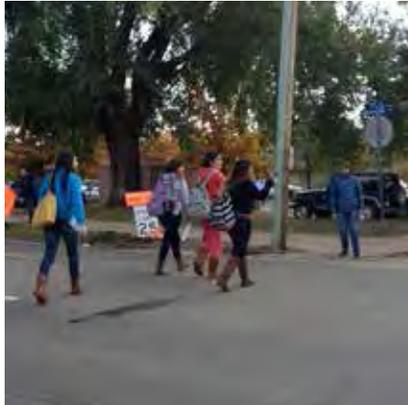
Key Findings:

- Many of the students walk, bike or take the bus when the distance is short or route is familiar.
- Young people tend to have quite complex patterns of mobility.
- The main limitation to youths ability to travel around is safety.
- Distance to destinations matters when choosing the transportation mode



Walk Audits

The students from each class were lead on a walk audit in the neighborhoods around their school. As they walked, they were asked to **take pictures of the aspects influencing**, positively and negatively, **their willingness to bike and walk.**



Whittier Elementary Great Neighborhoods

The GUB-Whittier Great Neighborhoods Curriculum is a collaboration between Whittier 3rd grade teachers Tamar Van Vliet, Cathy Hill and Lisa O'Brien; interns Flaminia Martufi, Nathalie Doyle and Maura Towey; parents, architects and city staff; and GUB coordinator Mara Mintzer.

The children's studies and designs include **reflections upon how they move around their neighborhoods and the larger city, and how they would like to get around** in a redeveloped neighborhood (CU's Athens Court).



The Role of Transportation in the GUB-Whittier Great Neighborhoods Curriculum

Mapping activity

Travel Patterns - Drawing activity

Walking Field Trip

- Several children requested more opportunities to bike and walk, and they also expressed concerns over speeding cars.
- Students observed that they felt less safe along busy roads like Folsom and much safer along side streets, such as Bluff
- Children want cars to have a minimal presence in the new site.
- Children request lots of bike racks throughout their imagined neighborhood.
- Children want the bike path and pedestrian paths separated near Boulder Creek.
- Well-connected walking paths within a neighborhood and to the creek.



Boulder Journey School

The Role of Transportation in the Boulder Journey School's Preschool Classes

The City of Boulder collaborated with the Boulder Journey school to reach out to pre-schoolers and their parent to better understand the barriers to taking the bus, riding bikes, and walking for daily trips with small children.

- Exploring Maps
- Bus Field Trips with preschooler's parents
- Bike days and Bike Rodeos
- In class play with toy buses and bikes



University of Colorado Students

In September 2013, CU students in a large lecture class offered by the Environmental Design Program —Human Behavior in Design and Planning— gathered the following information for the Transportation Master Plan:

Transportation Mode Survey

Each student in the class filled out an online survey designed by their professor in collaboration with Go Boulder, and asked 5 students in other classes or student housing to fill it out. As you read selected results, keep in mind that this is not a random survey, but because it includes many freshmen who were just beginning to find their way around Boulder and make transport choices, and students from a variety of majors, it provides useful information about students' transport experiences.

Number of survey respondents: **978**

Female 43%
Male **57%**

Freshmen 51%
Sophomores 22%
Juniors 16%
Seniors 11%



Top 5 ways to make **Transit** more attractive

- If I knew bus routes would go to where I want to go **51%**
- If I knew bus arrival in real time **41%**
- If the route to my destination were more direct **39%**
- If the bus went where I needed to go **35%**
- It if ran more often **31%**

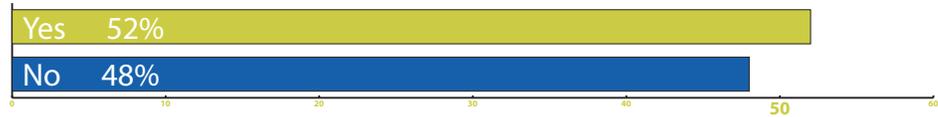


Top 5 ways to make **Biking** more attractive

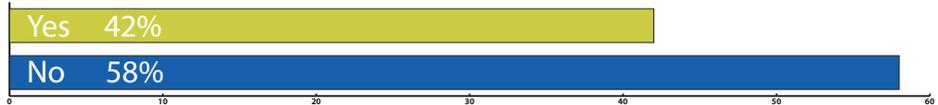
- Better separation between pedestrians and bicycles **54%**
- Better separation between cars and bicycles **50%**
- Improved bicycle parking **47%**
- Available space for bikes on buses **32%**
- Maintenance of bike paths and bike lanes **22%**

Walking is the **primary and most frequent** mode of transportation among the CU students who were surveyed.

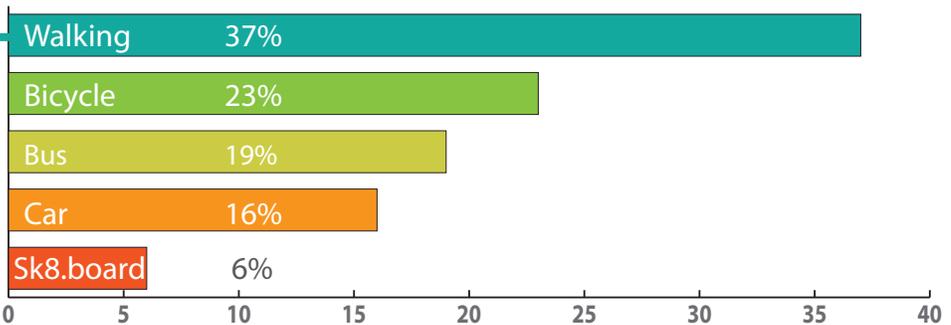
Do you have a bike in Boulder?



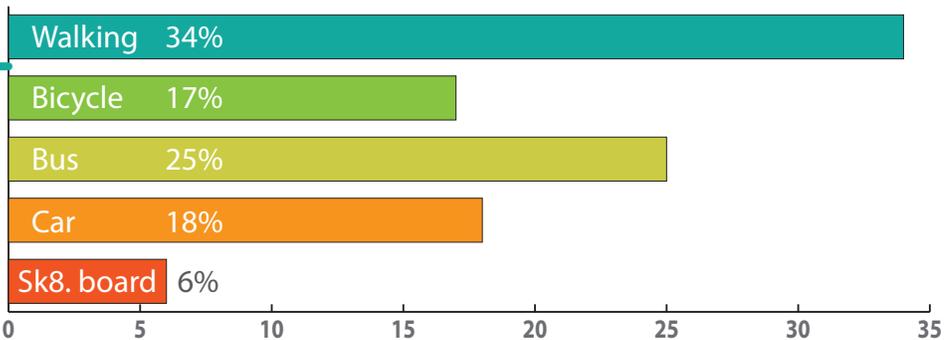
Do you have a car in Boulder?



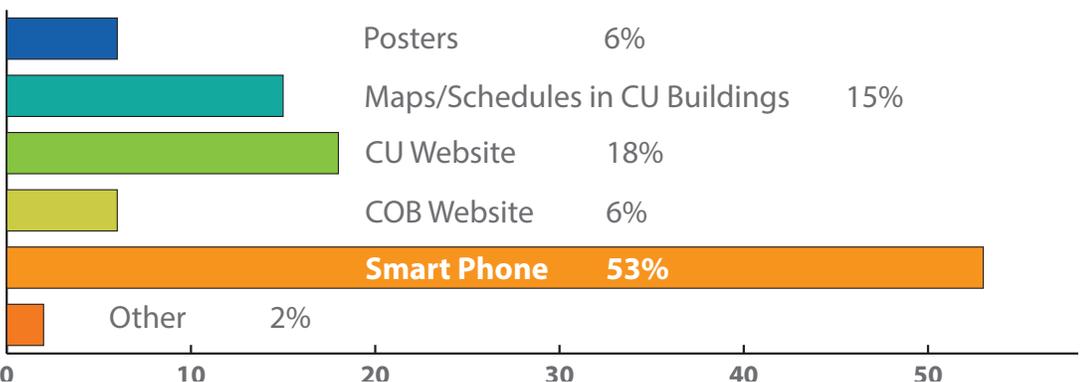
What is your major mode of Transportation in Boulder?



What is your second most frequent mode of transportation in Boulder?



How could you like to stay informed about transportation options in Boulder?



University of Colorado Students

In September 2013, CU students in a large lecture class offered by the Environmental Design Program —Human Behavior in Design and Planning— gathered the following information for the Transportation Master Plan:

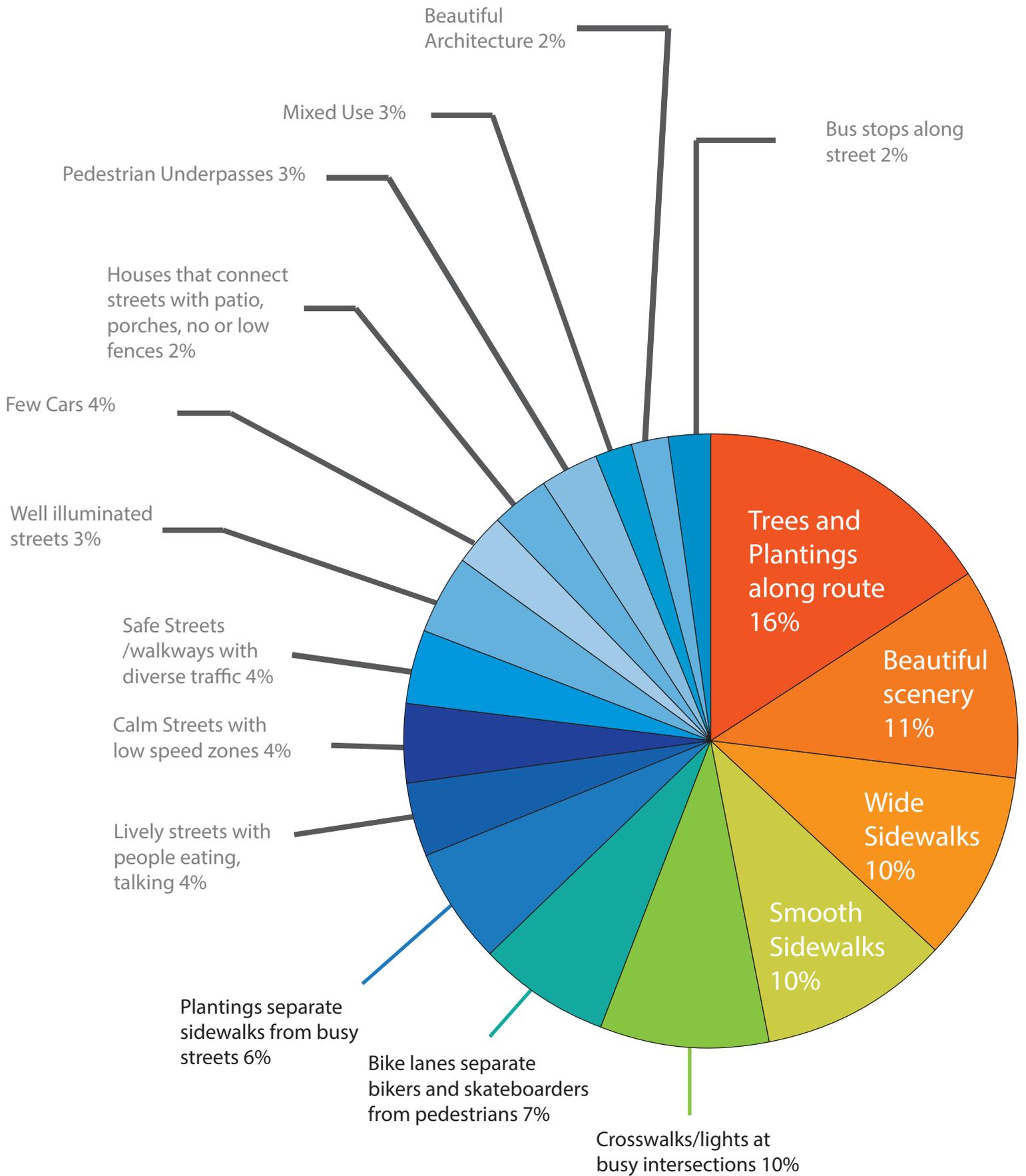
Walkability Audits

Each student in the class conducted a self-guided walk audit to reflect on what they were attracted to and what disliked in their everyday walking environment. The students we asked to consider the following:

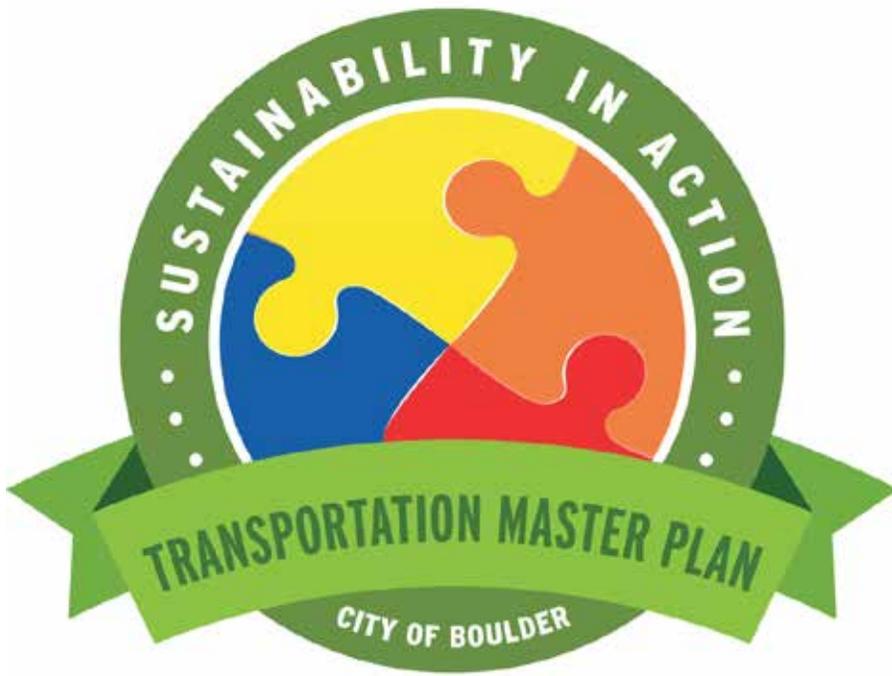
- Why they often walk this route
- Their overall impression of the route
- Features that made the route comfortable or enjoyable
- Any features that made them feel uncomfortable or unsafe
- Their ideas about how to make the route a better walking experience

CU Students top 5 ways to improve walkability

- Wide Sidewalks
- Smooth and level sidewalks for wheelchairs and walking
- More lighting at night
- Add greenery along sidewalks
- Mandate residents to trim hedges and trees along sidewalk



Boulder's TMP a Living Document



The City of Boulder's TMP was first adopted in 1989 and was later updated in 1996, 2003 and 2008. While the city tries to update its master plans about every five years, the **TMP and the TMP Website are intended to be a "living" plan and will be updated as needed.**

With the 2003 TMP Update, the city established the **TMP website as a more accessible, user friendly, cost-effective and informative presentation of the community's transportation direction.** This site contains all the material from the 2003 and 2008 TMP documents that were adopted by the City Council as well as extensive background material developed through each update process.

www.BoulderTMP.net

Thank You for
participating
in the
Transportation
Master Plan
Update!