WESTMINSTER TRANSPORTATION & MOBILITY PLAN

JUNE 2021 DRAFT

WESTMINSTER

ACKNOWLEDGEMENTS

Special thanks to the Westminster residents, businesses, commuters, visitors, and local and regional stakeholders who participated in the process, and for your continued involvement during implementation of the Transportation & Mobility Plan.

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Source: Visit Denver

Welcome to the Transportation & Mobility Plan: Westminster's Transportation Vision

Donald M. Tripp
City Manager

Transportation is important for our community – supporting a strong economy, connecting residents, commuters, and visitors to their destinations, and providing transportation options that support healthy living. We've heard from residents and businesses that Westminster needs more connected, reliable, and safe transportation facilities for all modes of transportation – more quality and frequent transit service, an expanded network of safe and connected bicycle facilities, safer and more accessible crossings and sidewalks for pedestrians, and less traffic congestion.

The City of Westminster wants to ensure that current and future users of the transportation system can have safe, accessible, and reliable transportation and mobility options to travel within Westminster and to connect to regional destinations. In order to achieve this, and reflect the needs of the community, now is the time for Westminster to develop and implement our first comprehensive multimodal transportation plan. We've already made progress in improving the transportation system in Westminster, but we need to do more, and the Transportation & Mobility Plan is a key first step.

Developed through analysis and informed by community input, the Transportation & Mobility Plan establishes Westminster's transportation vision and identifies a framework of key near-term and future projects and actions that the City, in coordination with partners, can implement. The plan's actions and projects will complement existing regional infrastructure and service investments including the US 36 Express Lanes and US 36 Bikeway, the RTD Flatiron Flyer bus rapid transit service, and the RTD B-Line commuter rail connecting Westminster to Downtown Denver. It will also build on the progress of many local investments including 40 miles of existing bicycle facilities and 150 miles of trails, major intersection and roadway improvements, and traffic signal system technological advancements. Ultimately, Westminster's transportation network of existing and future facilities and services, supported by new programs and integration of transportation technology, will create a safer and more connected, inclusive and equitable multimodal transportation system for all users.

Thank you to the residents, businesses, and partner agencies for your input to help shape the vision and goals of the plan. The City can implement many of the Transportation & Mobility Plan actions and projects, however, many other actions will still require continued input from the community as well as exploring and pursuing resources including grants and partnerships. We appreciate your continued support during the next steps in implementing the plan – together, we can keep Westminster moving forward.

Donald M. Tripp
City Manager

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EXECUTIVE SUMMARY

As Westminster and many cities in the Denver Metro region, as well as cities across the nation, continue to experience the impacts of population and employment growth, as well as economic and demographic changes, it has become increasingly important to evaluate the current and future transportation and mobility needs of communities and identify how to meet those needs. Additionally, the evolution of technology, advancements in community and environmental health, and many other factors that impact transportation operations and infrastructure have also prompted development and refinement of community plans, policies, and programs for a more proactive integration of these elements into the transportation system.

Historically in Westminster, and in many similar communities, land use patterns have resulted in car-dependent communities and streets designed to move vehicles. However, recent changes in the way people want to travel to their destination based on social, economic, and health influences, as well as the increased community initiatives to prevent fatalities and injuries along streets, has shifted the way streets are now planned and designed to move people more safely by more connected, accessible, and reliable transportation options.

The City of Westminster (the City) recognizes now is the time to evaluate the near- and long-term transportations needs of the community and develop Westminster's first comprehensive multimodal transportation plan - the Transportation & Mobility Plan - to establish the community's transportation vision and goals, achieved through a framework of key next steps and actions to improve the transportation system for current and future users.

WESTMINSTER'S TRANSPORTATION GUIDANCE PRIOR TO THE TRANSPORTATION & MOBILITY PLAN

The transportation needs of Westminster have been assessed and identified in transportation projects, portions of the Comprehensive Plan, and through three key transportation plans: Comprehensive Roadway Plan (2008), 2030 Westminster Bicycle Master Plan (2011), and implementation plans including the Westminster Mobility Action Plan (2017). These three existing transportation plans will be superseded by the TMP, with key components of the plans updated and integrated into the new and more comprehensive multimodal transportation plan.

What is the Transportation & Mobility Plan?

Westminster's Transportation & Mobility Plan is a 20-year comprehensive multimodal transportation plan that will address the near- and long-term transportation and mobility needs of Westminster residents, commuters, businesses and visitors, through strategic actions and investments in safer and more connected, accessible, reliable and equitable transportation options to connect to jobs, housing, recreation, services, schools, and other key destinations. Implementation of the plan's actions and projects will address the needs of all transportation network users and modes of transportation including vehicles, pedestrians, bicyclists, and transit. Development of the plan was informed by community and stakeholder engagement and input, analysis, City staff input, existing plans and projects, and application of industry best practices. The plan will be updated periodically to reflect changes in technology, industry guidance, resources, priorities, and community and demographic needs, and as projects are added or completed.

The Transportation & Mobility Plan establishes:

- Westminster's transportation vision and goals
- Near-, mid- and long-term strategic project, programmatic and policy actions
- Projects that will evaluate and improve the safety and reliability of travel along streets in Westminster
- Improvements that increase the quality of transit service along corridors and enhance transit stops and stations
- Bicycle and pedestrian safety and connectivity improvements along key corridors and at intersections in Westminster
- Guiding actions to prepare for the integration of evolving technology and advancements in community and environmental health

Transportation & Mobility Plan

VISION

Westminster is supported by an inclusive and equitable multimodal transportation network that provides safe and well-connected transportation and mobility choices to connect all people to local and regional destinations

GOALS

CONNECT

Develop a comprehensive multimodal transportation network that includes convenient, safe, and accessible transportation options for all and integrate land use.

THRIVE

Support the community's economic resilience, environment, public health, and quality of life for all community members.

PROTECT

Reduce traffic-related deaths and injuries by improving the safety and comfort for all modes of transportation.

MAINTAIN

Maintain the City's transportation assets and optimize the use of the transportation network.

COLLABORATE

Identify and utilize opportunities to coordinate projects and funding with local, regional, state, and private partners.

INNOVATIVE

Apply creative, sustainable, and cost-effective solutions to address transportation and mobility needs.

FUND

Pursue revenue resources to build, maintain, and operate new and existing transportation infrastructure and services.

Transportation & Mobility Plan Organzation

CHAPTER 1: INTRODUCTION

provides an overview about the Transportation & Mobility Plan, why the plan is needed, and a high-level presentation about the existing conditions of Westminster's transportation system. (Additional existing conditions details provided in Appendix B)

CHAPTER 2: COMMUNITY & STAKEHOLDER ENGAGEMENT

highlights how the community and stakeholders were engaged throughout the plan development process and summarizes the input received, with more details provided in Appendix C.

CHAPTER 3: TMP VISION & GOALS

presents the plan's vision and seven goals. The goals will be used to ensure the Transportation & Mobility Plan and implementation of the plan's actions and projects meet Westminster's transportation and mobility needs, as well as support other local and regional goals.

CHAPTER 4: MODAL PLAN DEVELOPMENT

provides an overview of how the four primary modes of transportation – vehicles (multimodal streets), transit, bicycles and pedestrians – were evaluated individually and collectively to identify the near-, mid- and long-term multimodal transportation improvements along corridors and intersections in Westminster.

CHAPTER 5: MULTIMODAL STREETS PLAN

provides an overview of the evaluation and identification of multimodal streets improvements along corridors and at intersections in Westminster. Improvement project details are presented in Appendix D.

CHAPTER 6: TRANSIT PLAN

discusses how the City, in coordination with partners including the Regional Transportation District, can implement capital, service and technology improvements to enhance transit service along corridors and improve transit rider experience at stops and stations. Transit project details are presented in Appendix D.

CHAPTER 7: BICYCLE PLAN

summarizes the evaluation and development of Westminster's future bicycle network that will provide a safer and low-stress network for bicyclists, including over 60 miles of new and 15 miles of upgraded bicycle facilities, as well as crossing improvements, building on the existing 150 miles of trails and 40 miles of on-street bicycle facilities in Westminster. The Bicycle Network map is shown in this chapter, with the bicycle improvement projects listed in Appendix D.

CHAPTER 8: PEDESTRIAN PLAN

provides an overview of the evaluation and identification of nearly 100 pedestrian network improvements (listed in Appendix D) including completing sidewalk and / sidepath gaps, creating safer pedestrian crossings, and improving pedestrian comfort by widening narrow sidewalks.

CHAPTER 9: TRANSPORTATION-SUPPORTIVE PROGRAMS AND TECHNOLOGY

introduces the key programs and technology - from scooter/bike rentals to traffic signal technology, to programs that provide transportation options information - that the City, in coordination with partners, should continue to explore and evaluate for the potential integration into Westminster's transportation network

CHAPTER 10: STRATEGIES & ACTIONS

identifies the 11 strategies and over 40 near-, mid- and long-term actions that the City, in coordination with partners, will implement to help achieve the plan goals and other local and regional goals, as well as support the implementation of the capital improvement projects identified in Appendix D.

CHAPTER 11: IMPLEMENTATION & NEXT STEPS

identifies the next steps for the City, in coordination with internal and external partners, to begin early initiation for a number of key plan actions, as resources and priorities are identified. This chapter also includes a high-level discussion of the plan costs and funding, as well as an introduction to the next steps to track and report on the progress of the Transportation & Mobility Plan implementation.

A APPENDIX A: GLOSSARY

defines the acronyms and terms used in the plan.

B APPENDIX B: CURRENT & FUTURE CONDITIONS REPORT

provides an overview of Westminster's demographics as well as the current and future conditions of Westminster's transportation system, including services and infrastructure. The report and associated findings were used to understand the current system's opportunities and deficiencies, an important first step to informing the development of the plan's transportation framework and recommendations

C APPENDIX C: COMMUNITY & STAKEHOLDER ENAGEMENT

provides a more detailed summary of the community engagement and input received throughout the plan development process.

D APPENDIX D: CORRIDOR PROFILES AND PROJECTS

identifies over 260 near-, mid- and long-term multimodal transportation capital projects and future studies along key corridors and at intersections throughout Westminster. These projects will be supported by actions identified in Chapters 10 and 11.

Strategies To Help Achieve Westminster's Transportation Vision And Goals

Achieving Westminster's transportation vision and goals (Chapter 3) as well as supporting existing and future multimodal transportation investments (Chapters 5-8 and Appendix D) are addressed through the 11 key focus area strategies shown below and achieved through over 40 near-term and future actions discussed in Chapter 10 and the early actions listed in Chapter 11.

Strategies for Street Planning, Design, Construction, Operations, and Maintenance

1. Plan, design, build, operate, and maintain Westminster's transportation system to improve and ensure the safety, connectivity, and accessibility for all users.
2. Evaluate and integrate emerging transportation technologies for their role in advancing Westminster's transportation system and maintenance of assets.

Strategies for Transit Capital and Service Improvements

3. Support high-quality and reliable transit service through investment of transit capital and operational improvements.
4. Design and enhance transit stops and stations to create a safe, comfortable, and accessible experience for transit riders.
5. Pursue and utilize partnerships to develop an integrated system of transit services to meet transportation and mobility needs of the community.

Strategy for Bicycle and Pedestrian Network Access, Connectivity, and Safety Improvements

6. Support and enhance a safe, connected, and accessible pedestrian, bicycle, and trail network that ensures seamless connections within the City and into adjacent jurisdictions.

Strategies for Parking and Curbside Management

7. Manage the curb use to ensure the highest and best use of the space to support multimodal transportation access and safety.
8. Encourage innovative management of off-street parking facilities that increase parking efficiencies and shared-parking opportunities.

Strategies for Project and Program Implementation

9. Ensure the outcomes of implementing the TMP actions, projects, and programs meet the current and future transportation and mobility needs of the community.
10. Leverage existing and pursue new partnerships and resources to maximize funding opportunities for transportation infrastructure, program, and service improvements.
11. Continue to promote and provide information about transportation options and encourage the use of transportation modes that provide health and environmental benefits.

Implementation and Next Steps

The City of Westminster, in coordination with partners, will initiate early actions identified in Chapter 11 over the next few years, depending on priorities and resources. A number of early actions may be already underway or will continue to build upon established projects and programs. Many actions will require evaluating the expansion of the City's resources to manage and implement the actions, projects, and programs. An implementation workplan will be developed after the plan is finalized, to prioritize the early and near-term actions and to be used to inform resource and funding needs.

Partnerships

While the City can complete many actions and projects identified in the Transportation & Mobility Plan, many actions and projects will still require coordination, investments, and participation of local, regional, and state partners and agencies, adjacent municipalities, as well as the essential support and participation of businesses, advocacy and non-profit organizations, schools, neighborhood organizations, and residents. Transportation improvements provided through new development will also help implement recommendations from the plan.

Costs and Funding

The planning-level cost estimate ranges provided for each improvement project (Appendix D) and action (Chapter 10) in the plan can be used as initial high-level guidance to identify implementation resource and funding needs, and do not include costs associated with on-going program management, operations, or maintenance. Additional project and program scoping, analysis, and/or design will be required to define more exact costs.

Source: Visit Denver

A number of near-term projects, with some already underway, identified in Chapters 10 and 11 and Appendix D, are funded through dedicated resources including the City's Capital Improvement Program and regional or state federally-funded grants. The remaining projects and actions are currently unfunded, therefore, resources including funding will need to be evaluated. As identified in early and near-term actions, the City, in coordination with internal and external partners, will continue to identify and pursue external funding resources including grants. Many projects will be funded on a project-by-project basis, whereas other projects and programmatic actions will require on-going sustainable funding not only for implementation, but also for on-going management, operations, and maintenance. Funding and resource decision-making will be informed by the plan, goals and policies, and the plan's implementation workplan.

Tracking Progress

To report on the progress of implementing the Transportation & Mobility Plan action and projects, how the plan goals and strategies are achieved, and the associated impacts implementation has on Westminster's transportation system, it is anticipated performance measures and metrics will be developed within the year after the plan is finalized and once data becomes more reflective of post-COVID-19 pandemic travel trends. Systemwide and mode-specific metrics and performance measures, outlined in Chapter 11, will be both quantitative and qualitative, with most being measured at a citywide level, to measure changes, benefits, and project delivery. Capital improvements that are implemented on a project-by-project basis will have detailed and/or additional metrics reported at the project level. Other metrics may be defined and measured by other internal and external partners and programs.

1 Introduction

CHAPTER 1

INTRODUCTION

The Need for a Transportation Vision and Plan for Westminster

As Westminster and many cities in the Denver Metro region, as well as cities across the nation, continue to experience the impacts of population and employment growth, as well as economic and demographic changes, it has become increasingly important to evaluate the current and future transportation and mobility needs of communities and identify how to meet those needs through near- and long-term investments in safer and more connected, accessible, reliable, and equitable transportation options to connect jobs, housing, recreation, services, schools, and other key destinations. The evolution of technology, advancements in community and environmental health, and many other factors that impact transportation operations and infrastructure have also prompted development and refinement of community plans, policies, and programs for a more proactive integration of these elements into the transportation system.

Historically in Westminster and in many communities throughout the Denver Metro region as well as across the United States, land use patterns have resulted in car-dependent communities and streets designed to move vehicles. However, recent changes in the way people want to travel to their destination based on social, economic, and health influences, as well as the increased community initiatives to prevent fatalities and injuries along streets, has shifted the way streets are now planned and designed to move people more safely by more connected, accessible, and reliable transportation options.

The City of Westminster (City) recognizes now is the time to evaluate the near- and long-term transportations needs of the community and develop Westminster's first comprehensive multimodal transportation plan to establish the community's transportation vision and goals, achieved through a framework of key next steps and actions to improve the transportation system for current and future residents, commuters, and visitors. The City can implement many of the projects and actions identified in the plan, but it will also require the investments and participation of many key local, regional, private, and public partners to help achieve Westminster's transportation vision and goals.

What is the Transportation & Mobility Plan?

Current and future Westminster residents, commuters, and visitors need safe, connected, reliable, and accessible transportation options that provide access to employment, neighborhoods, school, recreation, services, and resources. Westminster's Transportation & Mobility Plan (TMP) is a 20-year, community-driven plan that will address the near- and long-term transportation and mobility needs of the community. The TMP will be updated periodically to reflect changes in technology, industry guidance, resources, priorities and community and demographic needs, and as projects are added or completed.

The City's current Vision, Strategic Plan goals, and other citywide and regional goals can be achieved through the implementation of the TMP including various transportation improvements and investments, supported by programs and policies. Creating a comprehensive multimodal transportation system, as identified in the TMP, provides the freedom of personal mobility and the choice in how to travel – whether it's driving, walking, rolling (using a mobility device such as a wheelchair), biking, carpooling, or riding transit. The TMP establishes:

- Westminster's transportation vision and goals *(Chapter 3)*
- Near-, mid- and long-term strategic project, programmatic, and policy actions *(Chapters 10, 11, and Appendix D)*
- Guiding actions to prepare for the integration of evolving technology and advancements in community and environmental health *(Chapters 9, 10, 11 and Appendix D)*
- Projects that will evaluate and improve the safety and reliability of travel along streets in Westminster *(Chapters 5, 6, 7, 8, and Appendix D)*
- Improvements that increase the quality of transit service along corridors and enhance transit stops and stations *(Chapter 6 and Appendix D)*
- Bicycle and pedestrian safety and connectivity improvements along key corridors and at intersections in Westminster *(Chapters 6, 7, 8, 10, 11, and Appendix D)*

WESTMINSTER'S TRANSPORTATION GUIDANCE PRIOR TO THE TMP

The transportation needs of Westminster have been assessed and identified in transportation projects, portions of the Comprehensive Plan, and through three key transportation plans: Comprehensive Roadway Plan (2008), 2030 Westminster Bicycle Master Plan (2011), and implementation plans including the Westminster Mobility Action Plan (2017). These three existing transportation plans will be superseded by the TMP, with key components of the plans updated and integrated into the new and more comprehensive multimodal transportation plan.

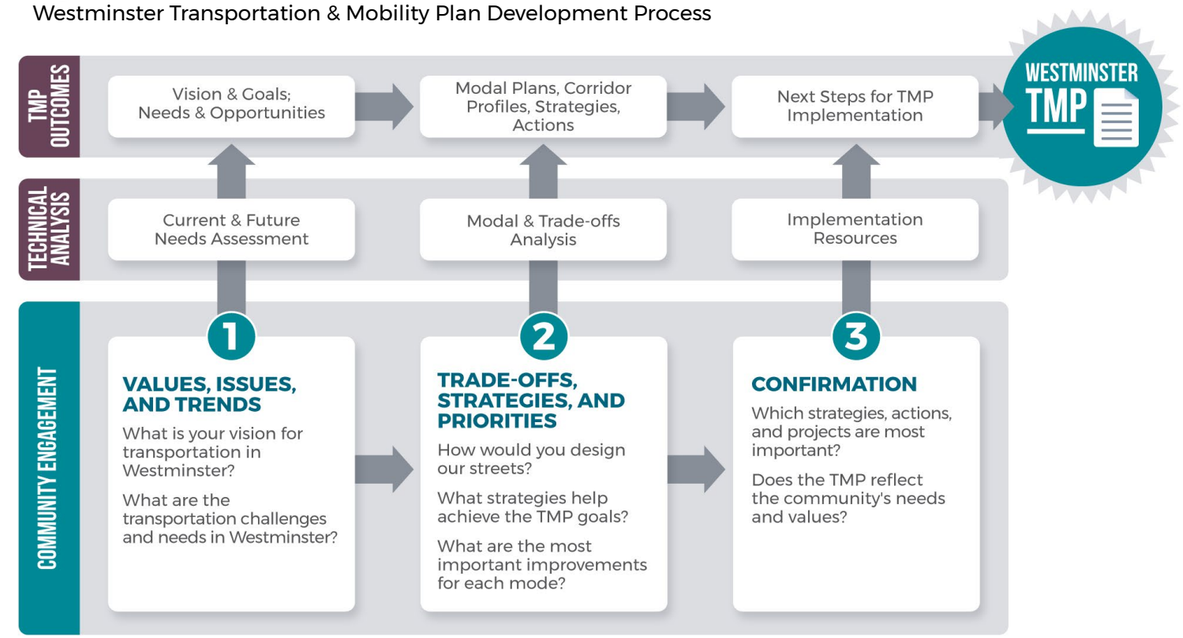
FUTURE OF TRANSPORTATION & CHANGES DUE TO COVID-19

The TMP was developed during a unique time for transportation. Not only has there been a rapid acceleration of transportation technology in recent years that is adding new mobility options and changing the way people travel, but the COVID-19 pandemic caused significant changes to people's everyday routines, including travel. At the time of the TMP development, it was unclear the degree to which COVID-19 pandemic travel pattern changes would be retained post-pandemic and it may take time for transportation data to become more reflective of the post-pandemic travel trends. The current conditions data used in the development of the TMP are based on available data from various resources and prior to events related to COVID-19 pandemic impacts. Future updates to the TMP and implementation of the TMP actions and projects will use the best and most recent data available.

How was the TMP Created?

The TMP was developed in three key phases, each one comprised of research, analysis, and community engagement, application of industry best practices, and informed by City staff input, as shown in Figure 1.1, with each phase building on the previous phase's outcomes. Community and stakeholder engagement and outreach was conducted during each phase, to gather input to help inform the development of the plan and to ensure the plan meets the needs of the community, as further discussed in Chapter 2. A consultant team provided technical expertise and community engagement support to assist City staff in the development of the plan, in coordination with other citywide and regional plans and projects.

Figure 1.1
Westminster Transportation & Mobility Plan Development Process



Westminster's Existing Transportation System

One of the first steps in informing the development of the TMP included the development of a Current and Future Conditions Report. Highlights from the report are summarized in the following pages, with more details, maps, and results of analysis shown in the report in Appendix B, including:

- An assessment of Westminster's population composition and transportation trends
- An overview of Westminster's current transportation network opportunities and deficiencies
- Highlights of the current and future conditions of the transportation network including services and infrastructure for streets, bicycle and pedestrian facilities, trails, transit service and facilities, truck freight, and evolving transportation technologies

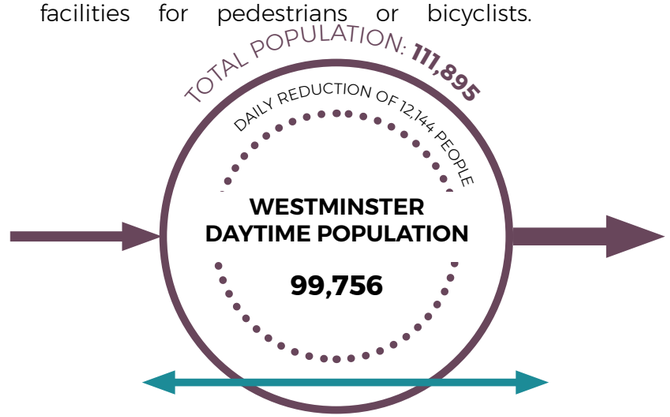
Who is Westminster?

Assessment of demographics is a key step in understanding the population composition of Westminster, use of the transportation system, and to anticipate where new or improved transportation facilities or services are needed to ensure they are accessible, equitable and provide connections to key community destinations. In identifying transportation opportunities and challenges, it is important to also understand vulnerable populations that may have unique transportation needs, including older adults, children, people with disabilities, zero-vehicle households, low-income populations, and minority populations. An assessment of the population demographics in Westminster is presented in Appendix B.

Not only does the number of people living and working in Westminster affect transportation needs, but where people choose to live and work greatly influences the demand for transportation infrastructure and services in Westminster as well as in the Denver Metro region. Population and employment growth trends are important to consider when planning for transportation investments and improvements, especially when the growth increases the demand for improved and additional transportation options and connections. Additionally, increase in the number of transportation system users also impacts transportation infrastructure conditions and maintenance.

How Westminster Travels

The quality and experience of how people travel within and in and out of the city is one of the most significant factors in planning for current and future growth and associated transportation needs. Streets can play multiple roles—as major thoroughfares that handle significant traffic through the city, as bicycle routes for commuters to employment or transit stations, or as recreation facilities for pedestrians or bicyclists.



Source: U.S. Census Bureau; American Community Survey, 2017 5-Year Estimates, Longitudinal-Employer Households Dynamics Program

As illustrated in the graphic above, the overall daily population in Westminster is reduced as more residents commute to work outside the city than employees who commute into Westminster. There are also many commuters who travel through Westminster everyday along many of Westminster's major corridors. As jurisdictions adjacent to Westminster continue to grow, Westminster will likely continue to experience an increase of commuters along these corridors.

According to the Census Bureau, the estimated population of Westminster was over 113,000 people in 2018. Westminster's average annual population growth has been less than one percent since 2010.

EMPLOYMENT GROWTH IN WESTMINSTER

2019 — 58,129

2040 — 87,859

Approximately **51% Increase**

TRAVEL TIME TO WORK

Increased from 25.4 minutes (2010) to 27.1 minutes (2017)

Overview of Westminster's Current Transportation System

For more details about Westminster's transportation system facilities and operations, including maps of the existing street, bicycle, pedestrian infrastructure and transit facilities and services, see the Current and Future Conditions Report (Appendix B).

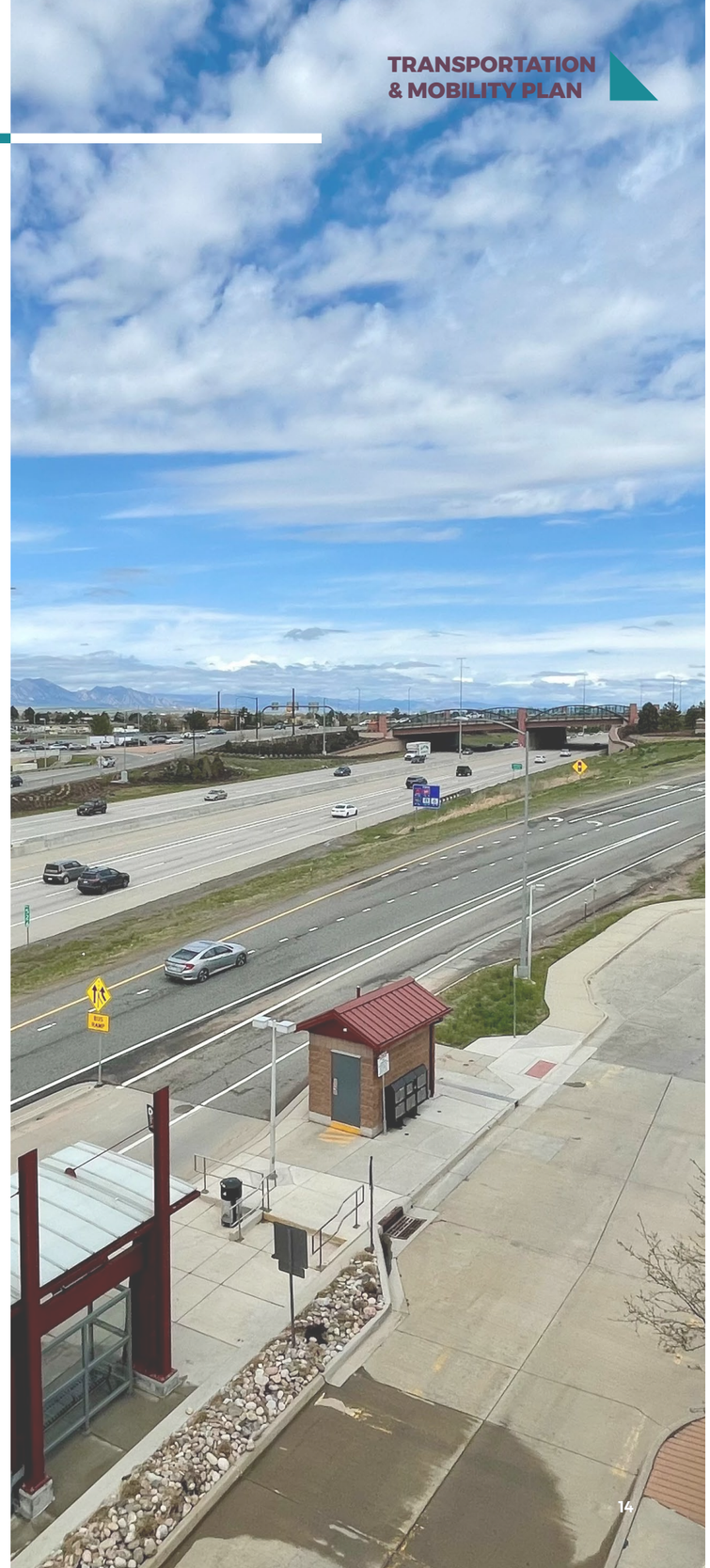
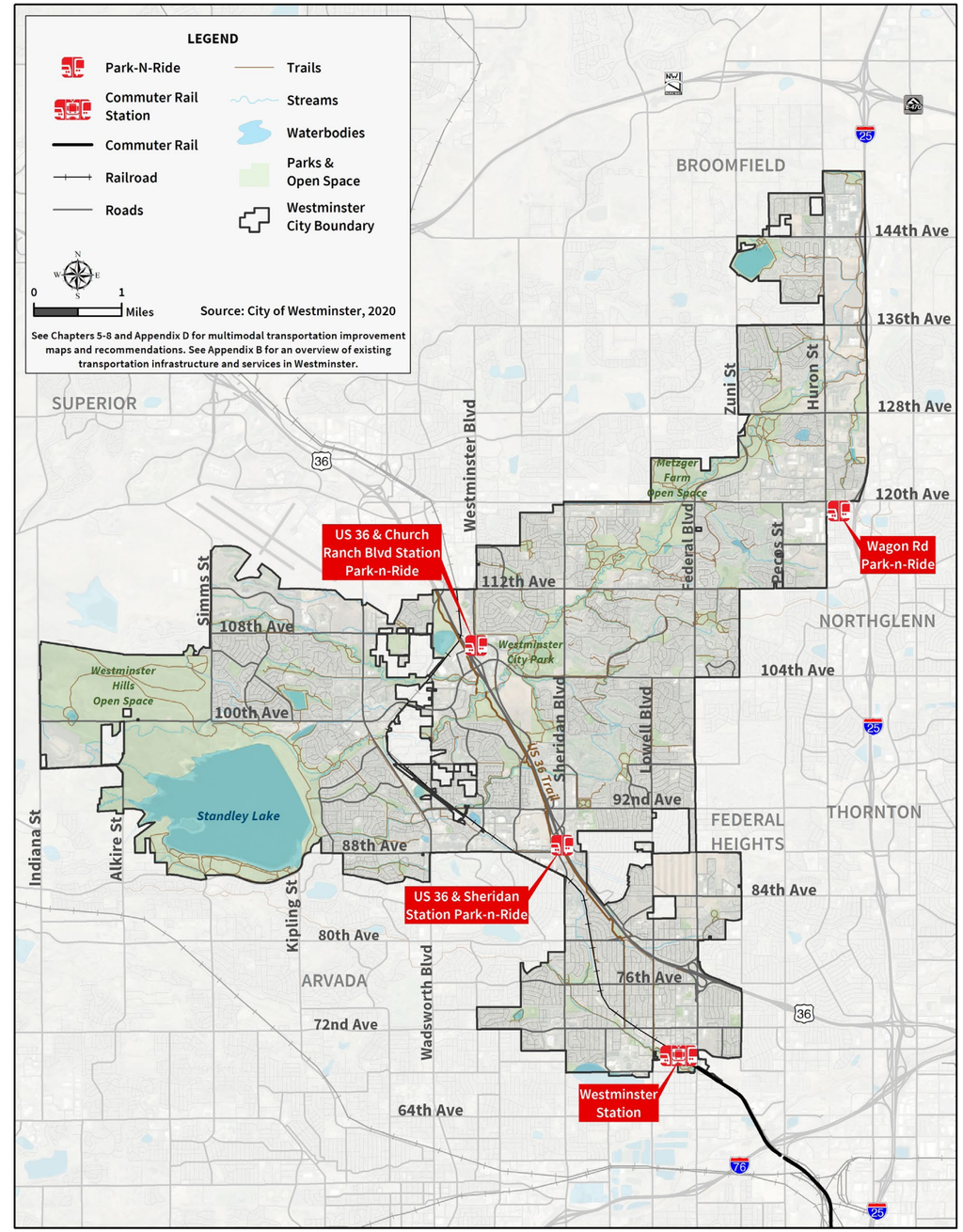


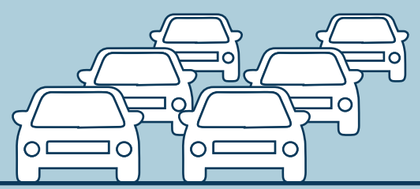
Figure 1.2
Map of Westminster



WESTMINSTER'S STREET NETWORK

is comprised of streets classified as local, collector, minor arterial, major arterial, or highway, as discussed and shown in the Current and Future Conditions Report and Chapter 5. Each street type is specifically designed to operate with certain characteristics based on adjacent land use, level of continuity, transportation modes served, and proximity and connections to other facilities.

Historically, Westminster's streets network has been designed to prioritize the efficient movement of vehicles, not the number of people.



HOW EASY IS IT TO GET AROUND WESTMINSTER?

Scored from 0 to 100, higher the score, the easier it is to get around the community by each of the modes of transportation.

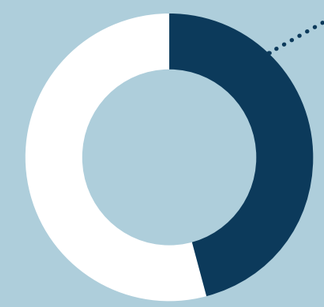
WALK SCORE: 37

BIKE SCORE: 51

TRANSIT SCORE: 37

1.8
Average number of cars per Westminster household

HOUSING AND TRANSPORTATION AFFORDABILITY



46%
of Westminster household income spent on housing & transportation

26%
of Westminster household income spent on housing

20%
of Westminster household income spent on transportation

$13,420
Annual average transportation cost for Westminster residents

SPEED LIMITS

Posted speed limits range from 20MPH to 55MPH on streets

Most streets in Westminster are 25 MPH

CRASHES

Between 2015 and 2017, approximately **7,900** reported traffic crashes, with **22** fatalities occurred on streets and highways within Westminster.

2015 — 2017

Bicyclists and pedestrians were involved in **2%** of these crashes

FREIGHT TRANSPORTATION

Westminster does not currently have established truck routes. The City references state codes for vehicle height and weight restrictions, along Westminster streets.

TRANSIT

In Westminster, Regional Transportation District (RTD) operates:

21 Transit Bus Routes

1 Commuter Rail Line

FlexRide Services

Serving over **300** bus stops, **3** stations, and **4** Park-n-Rides. Some stops have more than **1,000** daily boardings and alightings

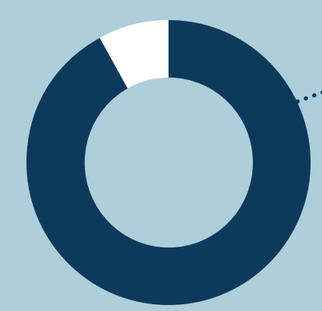
RTD Access-A-Ride services and Jefferson and Adams Counties' transportation services programs for older adults and people with disabilities.

BICYCLE FACILITIES

40 Miles of on-street bicycle facilities in Westminster (bike lanes, buffered bike lanes, shared lanes)

40% of Westminster's bicycle network are low-stress facilities for bicyclists

PEDESTRIANS



92%
of collector and arterial streets have sidewalks. Some do not meet current standards or may be in poor condition.

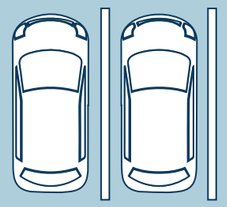
TRAILS

Westminster has:

Over 150 miles
of off-street trails

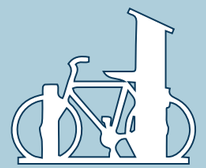
40
underpasses

PARKING



The City manages **600** on-street parking spaces, over **1,900** off-street spaces, and a Residential Parking Permit Program .

BIKE/SCOOTER SHARE (MICROMOBILITY)



is currently not available in Westminster. The City is evaluating the potential future integration into Westminster's transportation system.

ELECTRIC VEHICLE CHARGING STATIONS

are located at many City facilities, parking garages, and shopping centers throughout Westminster with plans for future expansion.

TECHNOLOGY

- Continual upgrades to traffic signal system infrastructure and technology to improve data collection capabilities, driver information, and safety and reliability along corridors.
- Integration of parking technology to improve driver information and parking enforcement.

Westminster's Future Transportation System

As Westminster and the region experience residential and employment growth over the next 20 years, traffic volumes are expected to increase. Forecasting models estimate that by 2040, not including improvements identified in the TMP, almost 50 miles (68%) of arterial streets in Westminster are anticipated to operate with some congestion and major arterials will experience some of the highest congestion along some segments along the corridors. See the Current and Future Conditions Report for a discussion and map about transportation forecasts for Westminster. Implementation of the TMP will provide access to more and improved transportation options and corridor and intersection improvements to increase the reliability and safety for all modes of transportation. The TMP will also build on the progress in transportation made over the past decade and beyond, as shown in the following page.

A Decade of Transportation and Mobility Investments in Westminster (2010- 2020)

Westminster has become home to some of the region's most notable transportation investments connecting residents, commuters, and visitors to their destinations.

RTD B-Line Commuter Rail

Westminster Station

RTD Flatiron Flyer Bus Rapid Transit Service with two transit stations in Westminster

Rocky Mountain Greenway Trail opened in 2016, part of Westminster's 150 miles of existing trails

40 miles of on-street bicycle facilities citywide; in 2015, the City began installing wayfinding signage throughout Westminster

Grants:

Since 2010

Over $17 million in grant funds, supported by over $9 million of City matching funds

for transportation improvement projects including the future Sheridan Boulevard multimodal transportation underpass, intersection improvements, traffic signal upgrades, electric vehicle charging stations, trail projects, multimodal safety improvements such as crosswalk improvements, and completion of sidewalk gaps.

Maintenance:

In 2010, there were over **1,000 lane miles** of paved roads in Westminster - **today there are over 1,135 miles of roads.** Between 2010 and 2020, street maintenance activities included:

- Placing over **300,059** tons of asphalt on City streets
- Resurfacing **882** lane miles
- Plowing **631,671** miles
- Restriping City streets using **75,627** gallons of paint
- Sweeping **35,668** miles of curb and gutter

Transportation Operations:

Since 2010: several major transportation and traffic signal system improvements were completed:

- Replaced **120** aging traffic signal poles
- Upgraded detection cameras at **35** intersections
- Upgraded over **4,000** street lights to more efficient light emitting diodes (LED)
- Upgraded all of the City's traffic signals to LED beginning in 2014
- Installed **16** flashing school zone signs
- Installed infrastructure for **10** new signalized intersections

2 Community and Stakeholder Engagement

CHAPTER 2

COMMUNITY AND STAKEHOLDER ENGAGEMENT

COMMUNITY AND STAKEHOLDER PARTICIPATION CONTINUES BEYOND THE TMP

The community and stakeholder input gathered during the development of the TMP helped inform the development of the various plan elements and will continue to be used to inform the implementation of the TMP. Additionally, after the TMP is finalized community and stakeholder engagement and participation will continue to be important during the implementation of the TMP actions, projects, and programs. Many actions and projects will also require partnerships for successful implementation.

Overview of Engagement and Outreach

To ensure the TMP meets the current and future transportation and mobility needs of the community, outreach and engagement was conducted to gather community and stakeholder input during three phases of the plan development process, as summarized below. The project team used a variety of in-person and online engagement tools to collect input. All online outreach activities asked for participants' optional demographic information to summarize from whom and where the project team received input. A more detailed summary of community engagement and input received is available in Appendix C and will be updated after community input on the draft TMP this summer. Key community input is also included throughout the TMP to highlight how input informed the development of various plan elements.

Phase 1 Online and In-Person Outreach and Engagement (Summer/Fall 2019): Transportation Needs and Values

The first phase of TMP community engagement was to understand the current experience of those traveling in Westminster and the community's values related to transportation. The project team received feedback through online surveys and activities and in-person activities at open houses and community events. The input gathered informed the development of the TMP vision, goals, and recommendations. Participants were asked to rank various transportation themes such as supporting economic vitality or environmental and community health, to themes about increasing connections and improvements for different modes of transportation. The results were used to inform the development of the TMP vision and goals (see Chapter 3 and Appendix C for a summary of results).

Participants were also asked to participate in an in-person and online mapping exercise to identify transportation challenges and opportunities in Westminster. Themes from the responses include the following, with detailed results shown in Appendix C:

- **Vehicle speeding and safety was a concern of many**
- **Traffic congestion and delays was one of highest identified challenges and many respondents want to see improved efficiencies such as better traffic signal timing along corridors**
- **Respondents envision Westminster with a great bicycle system with bike parking and on- and off-street trail facilities**
- **Many expressed the importance to feeling safe when walking and biking**
- **Access to transit service and transit service frequency poses a challenge to current and potential transit users**

Phase 2 Online Engagement (Summer/Fall 2020): Goals, Strategies, and Trade-offs

During the second phase of TMP community engagement, the project team gathered community input on the draft TMP goals (Chapter 3); draft strategies to achieve the goals (Chapter 10); transportation improvement trade-offs considering factors such as funding availability, street type, safety, and community goals; and initial community perception and input on micromobility (bicycle and scooter rentals - Chapter 9). An optional input opportunity was also available, "Design Your Street," where participants could learn more about street design and different transportation improvements considered for each street type. Over 330 participants provided input among the online activities and results are available in Appendix C. Highlights from the input received includes:

The most important goals identified by respondents were **Connect, Maintain, and Protect**, with the comment themes including:

- **The need for improved connections between modes, neighborhoods, and other key destinations as well as safer streets for all modes, especially bicyclists and pedestrians**
- **Desire for a better local transit system in Westminster**
- **The importance of street and sidewalk maintenance were also emphasized by many**
- **While many support transportation improvements, concerns were expressed about sustainable spending and funding resources for improvements**

Respondents indicated their preference for the TMP strategies to focus on:

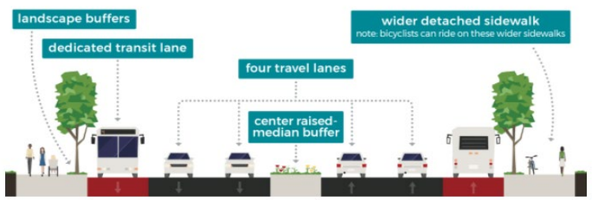
- **Safety**
- **Ensure developments include safe and accessible transportation facilities**
- **Provide transportation options that improve the quality of life and support human and environmental health**
- **Creative partnerships, innovative technology, and funding will be key to implement transportation improvements**
- **Maintenance of streets**

On average, most respondents indicated that streets should be designed for all modes of transportation and the city should be a leader in innovation.

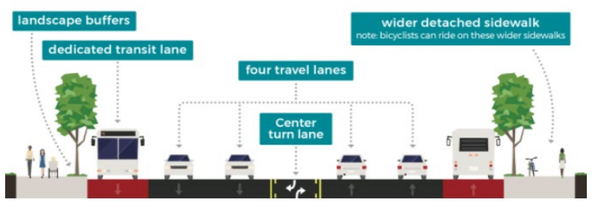
Respondents also prioritized frequent and reliable transit service, bicycle facilities with dedicated space to reduce the interaction between cars and bicycles, and completing sidewalk gaps.

Respondents indicated that micromobility would be most beneficial for shorter trips such as to transit, school, grocery store, or social events. The top perceived challenges of micromobility were safety and the location of the vehicles during operation and when parked.

Figure 2.1
"Design Your Street" Survey



Design Scenario F. Includes four travel lanes, dedicated transit lanes, center turn lane, landscaped buffers, and wide detached sidewalks for pedestrians and cyclists.



* 2. Considering the Transportation & Mobility Plan vision and goals as well as potential constraints such as funding availability and limited street width, please choose your preferred major arterial street design scenario from the examples above:

- ◯ Design Scenario A
- ◯ Design Scenario B
- ◯ Design Scenario C
- ◯ Design Scenario D
- ◯ Design Scenario E
- ◯ Design Scenario F

Phase 3 Online Engagement (Summer 2021): Draft and Final Plan

The third and final phase of community engagement is gathering community and stakeholder input on the TMP. The draft TMP will be posted online in summer 2021 with a companion online survey to gather input on the plan. Community feedback received on the draft plan will be used to inform refinements to the final plan. The final TMP will be presented to City Council in late summer. This section and Appendix C will be updated with additional details following the completion of Phase 3 community engagement.

Community Advisory Team

In addition to community input, the development of the plan was also informed by input from the TMP Community Advisory Team (CAT). The TMP CAT is comprised of 28 individuals representing various community interests including neighborhoods, City boards and commissions, businesses and employers, healthcare, housing and human services, mode-specific organizations, education, and state and regional agencies. A list of the TMP CAT members and their associated affiliation is shown in the Acknowledgments section in the front of the TMP.

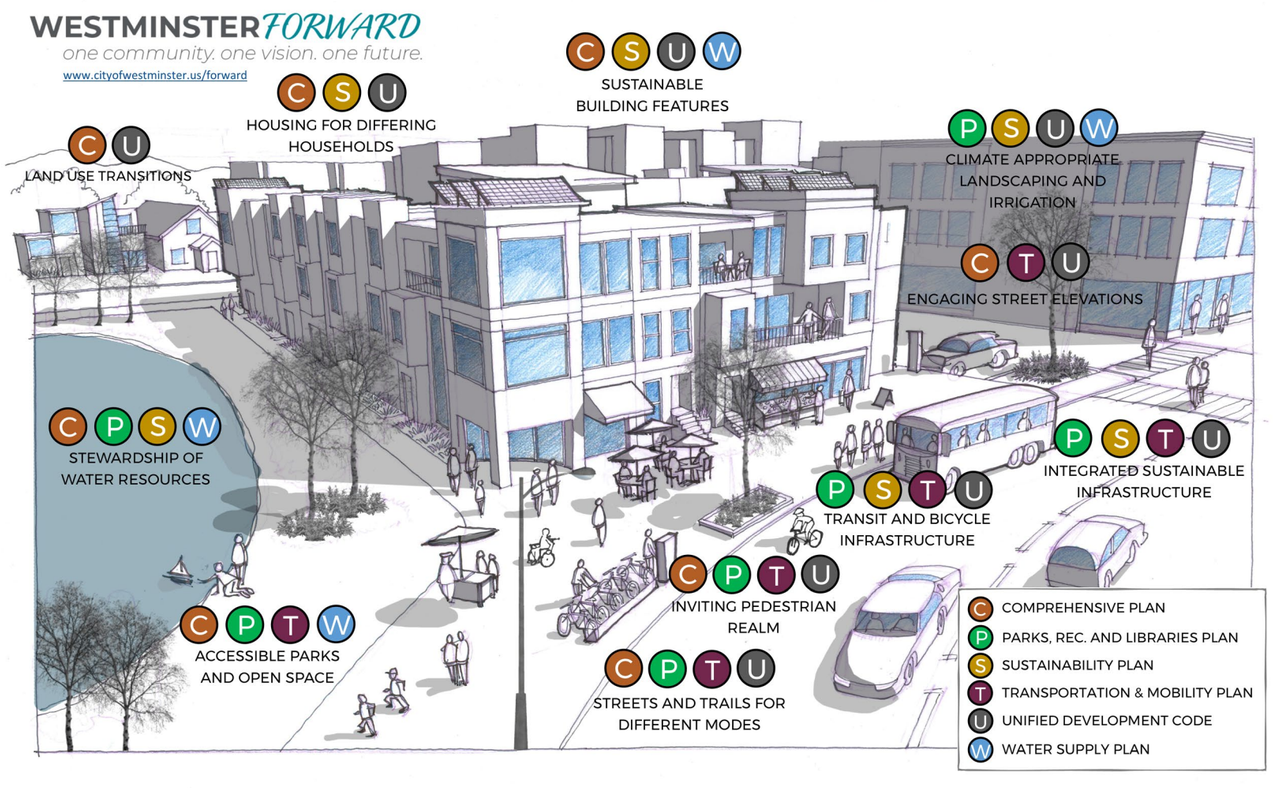
The TMP CAT convened virtually three times during the plan development process to provide input on plan content (vision, goals, strategies, actions), disseminate information about the plan and community outreach opportunities to their respective organization/community, and to be champions during the TMP development and implementation. Through activities and small group discussions, the TMP CAT emphasized the importance that the TMP include more emphasis on safety, education about modal options, the needs of youth in the community, and social equity through serving frequently underserved communities. More information about the TMP CAT meetings, activities, and input is provided in Appendix C.

Engagement with Local, Regional, and State Agencies

Many of the actions and projects identified in the TMP are located along regional or state-owned corridors, are served by local/regional transit service, as well as extend into adjacent jurisdictions. Implementation of actions and projects along these corridors will require partnerships and coordination with adjacent jurisdictions, Adams and Jefferson Counties, and regional, and state agencies including the RTD, Denver Regional Council of Governments (DRCOG), and the Colorado Department of Transportation (CDOT). Representatives from each of the counties, regional and state agencies participated on the TMP CAT. City staff will also continue to engage and coordinate with adjacent jurisdictions and Adams and Jefferson County staff during the development and implementation of the TMP to ensure cross-jurisdictional improvements are coordinated and to identify partnership opportunities.

WESTMINSTER FORWARD

Westminster Forward is a coordinated community engagement process created to support the Transportation & Mobility Plan and five other concurrent city planning efforts: 2040 Westminster Comprehensive Plan; Unified Development Code; Sustainability Plan; Parks, Recreation & Libraries Plan; and Water Supply Plan. Westminster Forward's key objective is to seek and maximize community and stakeholder engagement and to prevent community outreach fatigue by providing coordinated, innovative, and interactive opportunities for community input. Under a single umbrella, Westminster Forward facilitated outreach efforts as the development of the plans progressed. Westminster Forward is not one final plan or project, but an effort to integrate and coordinate community outreach as well as themes, projects, policies, and actions across the plans and disciplines. Each individual plan will provide specific guidance for policy and programming, and will be reliant upon vision alignment and resource availability and budget. The project teams coordinated regularly to ensure the plans are working together to address the City's Vision, Strategic Plan, and other citywide goals. As each plan is completed, any relevant revisions will be used to update the other Westminster Forward plans.



3 TMP Vision and Goals

Source: Visit Denver

CHAPTER 3

TMP VISION AND GOALS

The TMP vision and goals (Figure 3.1), the foundation of the TMP, ensure the TMP and implementation of the TMP's actions and projects meet Westminster's transportation and mobility needs, as well as support other local and regional goals. Development of the TMP vision and goals was informed by community input received during community outreach and engagement, including input from the TMP Community Advisory Team (Chapter 2). The vision and goals were also informed by Westminster's Strategic Plan, existing citywide plans and processes, City staff input, and industry best practices. The goals were used to help guide the development of the TMP strategies, actions, and projects and will continue to be used to guide prioritization and implementation of the TMP projects and actions, identify funding and resources, and tracking progress of the TMP implementation.

Figure 3.1
Westminster's Transportation & Mobility Plan Vision and Goals

VISION

Westminster is supported by an inclusive and equitable multimodal transportation network that provides safe and well-connected transportation and mobility choices to connect all people to local and regional destinations

GOALS

CONNECT
Develop a comprehensive multimodal transportation network that includes convenient, safe, and accessible transportation options for all and integrate land use.

THRIVE
Support the community's economic resilience, environment, public health, and quality of life for all community members.

PROTECT
Reduce traffic-related deaths and injuries by improving the safety and comfort for all modes of transportation.

MAINTAIN
Maintain the City's transportation assets and optimize the use of the transportation network.

COLLABORATE
Identify and utilize opportunities to coordinate projects and funding with local, regional, state, and private partners.

INNOVATIVE
Apply creative, sustainable, and cost-effective solutions to address transportation and mobility needs.

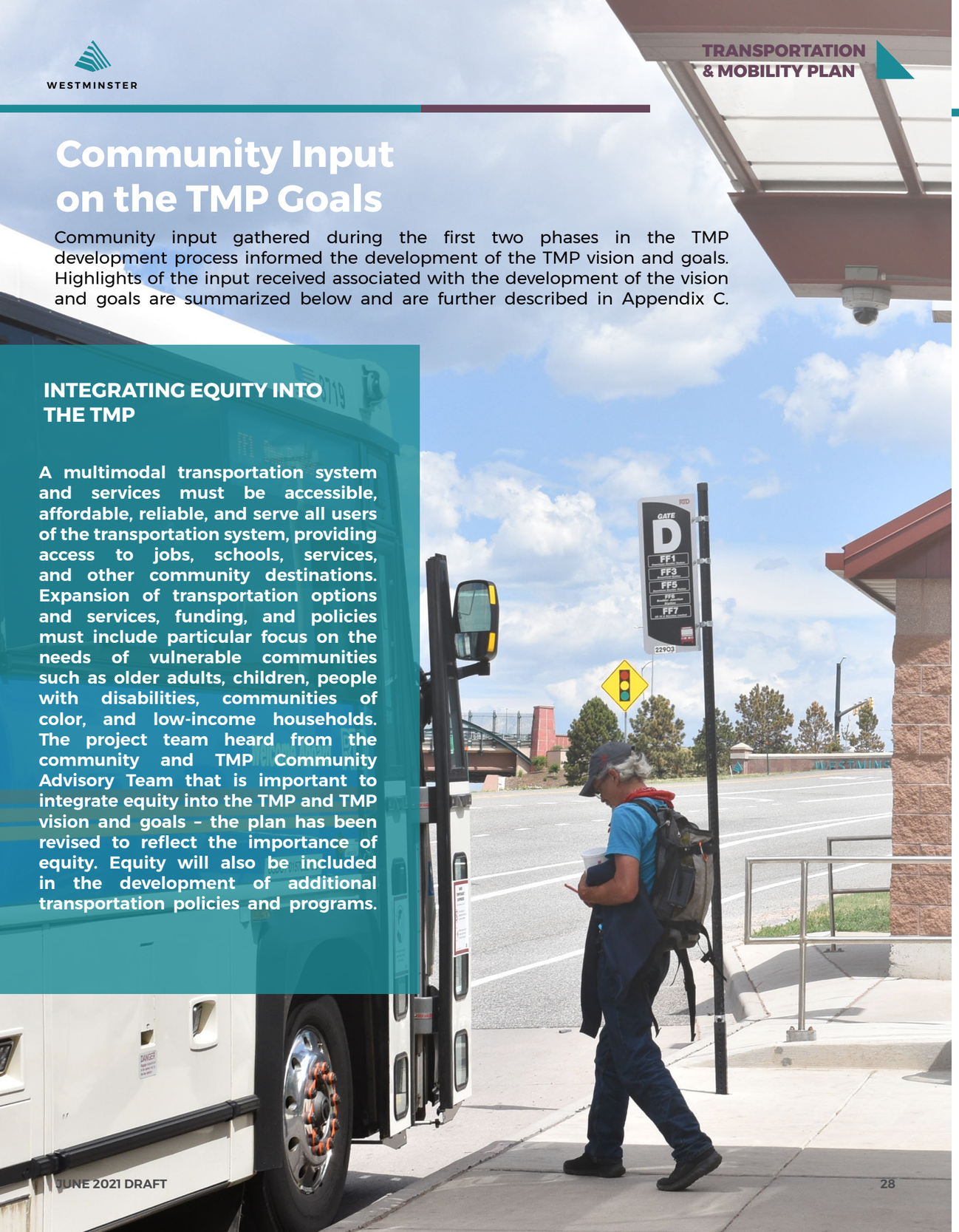
FUND
Pursue revenue resources to build, maintain, and operate new and existing transportation infrastructure and services.

Community Input on the TMP Goals

Community input gathered during the first two phases in the TMP development process informed the development of the TMP vision and goals. Highlights of the input received associated with the development of the vision and goals are summarized below and are further described in Appendix C.

INTEGRATING EQUITY INTO THE TMP

A multimodal transportation system and services must be accessible, affordable, reliable, and serve all users of the transportation system, providing access to jobs, schools, services, and other community destinations. Expansion of transportation options and services, funding, and policies must include particular focus on the needs of vulnerable communities such as older adults, children, people with disabilities, communities of color, and low-income households. The project team heard from the community and TMP Community Advisory Team that is important to integrate equity into the TMP and TMP vision and goals – the plan has been revised to reflect the importance of equity. Equity will also be included in the development of additional transportation policies and programs.



Phase 1 Community Outreach (Summer/Fall 2020):

Participants were asked to rank transportation themes to help inform the development of the TMP goals, with the highest priority themes identified as:

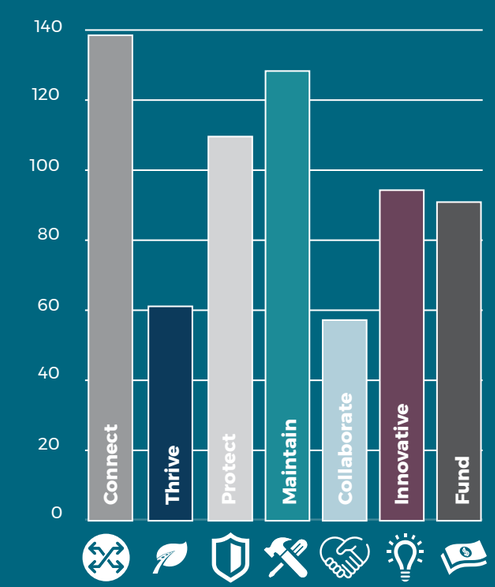
- Strengthen regional transportation connections
- Support transportation options that positively impact the environment and community health
- Improve and increase connections between transportation modes and community destinations
- Provide a more equitable and affordable transportation network for all
- Provide travel options (walking, biking, transit, etc.)
- Reduce delays caused by congestion

Phase 2 Community Outreach (Summer/Fall 2020):

Participants were asked to select up to 3 goals that were the most important for Westminster's transportation future and resonate with them the most. The results, based on 675 responses received, are shown in Figure 3.2. These results will help inform the prioritization of projects and actions. Participants were also asked to explain why they chose those goals based a personal story or connection. The input received helped to inform the development of the TMP strategies and actions (Chapter 10). The top themes included:

- Importance to provide safer streets for all modes of transportation, especially bicyclists and pedestrians
- More improved connections are needed between modes and between neighborhoods and other destinations
- Westminster needs an improved local transit service
- Maintenance of roads and sidewalks is important
- Implement transportation improvements that support a healthier environment
- Transportation improvements are needed to address traffic due to growth
- Funding is important to improve transportation, but there are concerns about funding resources
- Collaboration with partners will be important for successful implementation and funding of transportation improvement

FIGURE 3.2
Community Input on the TMP Goals



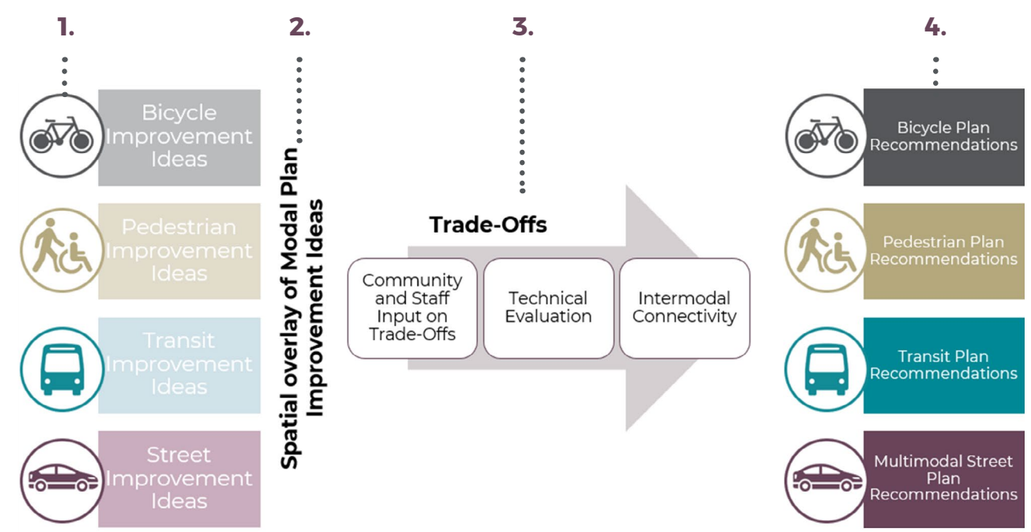
4 Modal Plan Development

CHAPTER 4

MODAL PLAN DEVELOPMENT

Addressing Westminster's transportation and mobility needs includes identifying near-, mid-, and long-term multimodal transportation capital and operational/service improvements along corridors and at intersections to improve the connectivity, safety, reliability, and accessibility of each mode of transportation. Transportation improvement recommendations for Westminster's TMP were identified and evaluated through an analysis (Figure 4.1) of the four primary modes of transportation: automobiles (multimodal streets), transit, bicycles, and pedestrians. The analysis resulted in the final recommended improvements discussed in the Modal Plans in Chapters 5 through 8, with more details for each recommendation presented in Appendix D. While the modes where initially individually assessed, further analysis and resulting recommended improvements collectively create a connected multimodal transportation network. The improvement recommendations will be also supported by project, programmatic, and policy actions documented in Chapters 10 and 11. Additional analysis details are available in the technical documentation available within a year after the TMP is finalized.

Figure 4.1
Mode Analysis & Transportation Improvement Process



1. Each transportation mode is focused on independently and an unconstrained list of improvement concepts is developed for each mode. Concepts were informed by existing plans and programs, technical analysis, and community and City staff input ideas.

2. A spatial overlay analysis of all the modal plan improvement concepts was then conducted to account for constraints such as right-of-way or costs. Feasible concepts were carried forward, modified or removed.

3. A trade-offs evaluation was conducted to identify conflicting modal needs and improvement concepts. The evaluation considered the community input on trade-offs, technical evaluation, and considerations for how the modal plans could work together ensure convenient access and connections between modes.

4. The resulting modal plan improvement recommendations are shown in Appendix D.

ANALYSIS CONSTRAINTS & CONSIDERATIONS

The TMP transportation improvement trade-offs evaluation considered the benefits of each improvement concept and how well it aligns with the TMP goals, as well as the implications of not implementing one or more of the modal improvement concepts along a corridor. The evaluation considered resulting impacts on each mode of transportation using metrics such as volume to capacity ratio (level of traffic congestion), comfort and safety for bicyclists, and travel time and reliability for vehicles and transit. The technical evaluation also considered the physical feasibility, construction and maintenance costs, and availability of alternative routing (particularly for the bicycle network). The analysis was conducted using 2019 data and forecasted land use from the 2040 Westminster Comprehensive Plan and associated travel demand forecasts.

Community Input On Trade-Offs And Priorities

During TMP Phase 2 community engagement (summer/fall 2020), participants provided feedback on which street elements (safety, street operations, transit service, bicycle facilities, sidewalks, and level of technology integration) is most important to them, while considering factors such as the City's vision and goals for transportation, safety, connections, accessibility, and potential limitations in funding, and street types and widths. The community input indicated a desire for a balanced approach to TMP recommendations to accommodate all modes of transportation and to design streets to balance the needs and safety of all users. Therefore, the modal plans and associated improvement recommendations and actions were created to address the community's desire. A more detailed overview of the community input received on trade-offs are included in Appendix C.

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5 Multimodal Streets Plan

CHAPTER 5

MULTIMODAL STREETS PLAN

VISION ZERO: ELIMINATING FATALITIES AND SERIOUS INJURIES IN THE TRANSPORTATION SYSTEM

Vision Zero is a safety approach with the core principle that it can never be acceptable that people are killed or seriously injured when moving within the transportation system, and that loss of life is not an acceptable price to pay for mobility. (Source: DRCOG, Vision Zero Network). Vision Zero is supported by the implementation of technical, education, and programmatic tools to proactively improve the transportation system to prevent and eliminate traffic deaths and severe injuries. Vision Zero recognizes that humans make mistakes and therefore the transportation system should be designed to minimize consequences of error.

DRCOG worked with jurisdictions and stakeholders, including Westminster, to develop the region's first Vision Zero Plan: Taking Action on Regional Vision Zero. This plan outlines the strategies and actions needed to move the region toward zero deaths and serious injuries. Westminster will use the regional plan and associated guidance to continue implementing Vision Zero measures into street design and planning. After the TMP is finalized, the City will begin to identify the next steps and resources to develop Westminster's own Vision Zero Plan, as identified as Chapter 10 and supported by early actions in Chapter 11 .

Historically, land use patterns in Westminster, and in other similar communities throughout the United States, have resulted in car-dependent communities with street networks designed to prioritize the efficient movement of vehicles, not people. Many of these communities have also used street widening as the primary means of mitigating traffic congestion. However, in recent years, there has been a considerable national shift in transportation planning and design to implement more comprehensive and safer multimodal streets that focus on the efficient and safe movement of all users – including bicyclists and pedestrians, the most vulnerable users in the transportation system. This shift has been influenced by an increase in community safety initiatives like Complete Streets (discussed in Chapter 10) and Vision Zero, integration of technology, as well as innovative utilization of limited funding to address congestion

The Multimodal Streets Plan and associated projects and actions identified in the TMP, represent a deviation to a more human-centric approach to planning Westminster's streets, with the philosophy to maximize the existing system's capacity, improving operational efficiency of moving people and freight, and addressing critical safety issues. These improvements also include dedicating space for transit, bicycle, and pedestrian transportation modes.

The Multimodal Streets Plan's near-, mid- and long-term project and improvement recommendations are identified along key corridors, as shown in Appendix D, and will be supported by strategies and actions in Chapters 10 and 11, including integration of technology (Chapter 9), new policies for Complete Streets and traffic calming/speed mitigation, and development of future plans including Vision Zero. Mode-specific (transit, bicycle, and pedestrian) improvements and projects are discussed the Chapters 6 through 8. Corridors not identified for specific improvements in the TMP will be evaluated (with guidance from the TMP, improvement toolkits, and industry best practices) for improvements as resources and priorities are identified.

Street Classification

Streets generally provide two important functions: access and mobility. Each street type is specifically designed to operate with certain characteristics based on the adjacent land uses, level of continuity, transportation modes served, and proximity and connections to other facilities. The functional classification of a street describes these characteristics and reflects its role in the street network and relationship with adjacent land use. A street's classification also guides access management (e.g., driveways), right-of-way preservation, inclusion of multimodal transportation facilities, and street design guidelines and standards. Refer to Appendix B for more detailed information about Westminster's existing street network.

Streets in Westminster are classified in five functional classifications:

LOCAL STREETS:

Serve the highest level of access, providing direct driveway access to adjacent properties and carrying traffic to collector streets. Local streets are usually the most comfortable streets for walking and biking.

COLLECTORS:

Gather traffic from local streets and connect travelers to the arterial network.

MINOR ARTERIALS:

Provide for trips of moderate length and offer connectivity to streets of higher functional classification.

MAJOR ARTERIALS:

Provide a high degree of mobility and serve corridor movements with longer trip lengths.

HIGHWAYS:

Have the highest level of mobility, providing unimpeded higher-speed regional and interstate connections and are managed by CDOT. Highways are typically used as primary freight routes.

Parking and Curbside Management

Different parking options are available throughout Westminster including on-street parking and private and public off-street parking (garages or parking lots). Actions identified in the TMP(Chapters 10 and 11) include developing parking management plans and strategies to enhance the existing parking program.

Off-Street Parking Facilities

Throughout Westminster, including privately-owned/managed parking lots and garages, and City-owned parking lots and garages, are designed for different uses and to provide convenient parking for residents, customers, or commuters. City-owned off-street parking is supported by real-time traveler information and other technologies for payment and enforcement. Through the TMP actions and the City's existing parking program, the City will continue to evaluate and address the efficient use of off-street parking, including development of a Parking Management Plan, encourage shared-use parking facilities, and to ensure new development meets the City's parking quantity requirements.

Curb Areas

Curb areas along streets in Westminster have varying competing needs including drop-off, deliveries/loading, parking, and transit. The City will continue to evaluate and define curb use and the areas adjacent to the curb in various land use contexts to ensure the highest and best use of the curb space and support safe and accessible multimodal access and connections.

Transportation Demand Management

Additionally, through the development of the City's Transportation Demand Management Program (discussed in Chapters 9 and 10), the City will integrate strategies and tools into on- and off-street parking management to encourage residents, commuters, and businesses to use lower-emission and alternative transportation options than driving alone.

Freight

With the quickly evolving and growing freight industry, most notably delivery services, Westminster will be proactive in street improvements that support this critical asset in the local and regional economy, while also addressing and managing the impacts of freight transport on other modes of transportation and impacts to street infrastructure. As identified in actions in Chapter 10, the City will evaluate freight transport in Westminster to gain an understanding of existing and future freight routing and impacts to infrastructure, to inform next steps in addressing and managing freight movements in the city. Resources including the state codes and guidance for vehicle height and weight restrictions and the DRCOG Regional Multimodal Freight Plan will be used to help identify freight routes and develop freight planning guidance for Westminster.


Source: Visit Denver

Development Of The Multimodal Streets Plan

Development of the Multimodal Streets Plan was informed through technical analysis, community input, and existing projects and plans (including Comprehensive Roadway Plan and the Westminster Mobility Action Plan). Key corridors throughout Westminster were evaluated for their existing conditions as well as the proposed improvements for other modes. A trade-offs evaluation was conducted for each street (Chapter 4) with considerations including how vehicles interact with others modes, right-of-way width, safety, technology, and street operations. The results of this evaluation identified the improvement recommendations shown in Appendix D and Master Street Network shown in Figure 5.1.

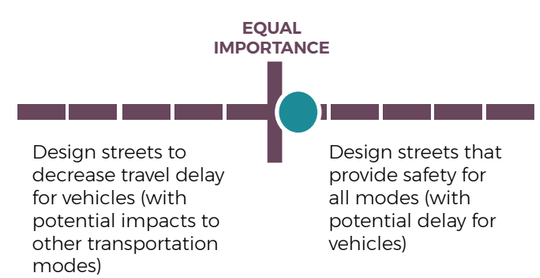
Community Input On Street Challenges And Opportunities

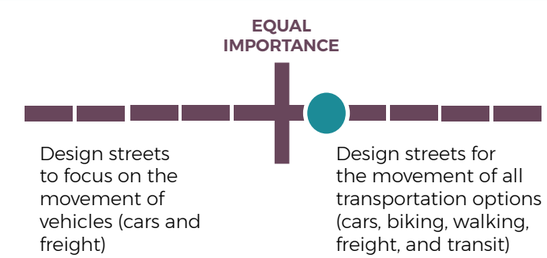
During the Phase 1 community engagement (summer/fall 2019), participants were asked to indicate the challenges and desired improvements for Westminster's transportation network. Detailed results are identified in Appendix C. Key input highlights include:

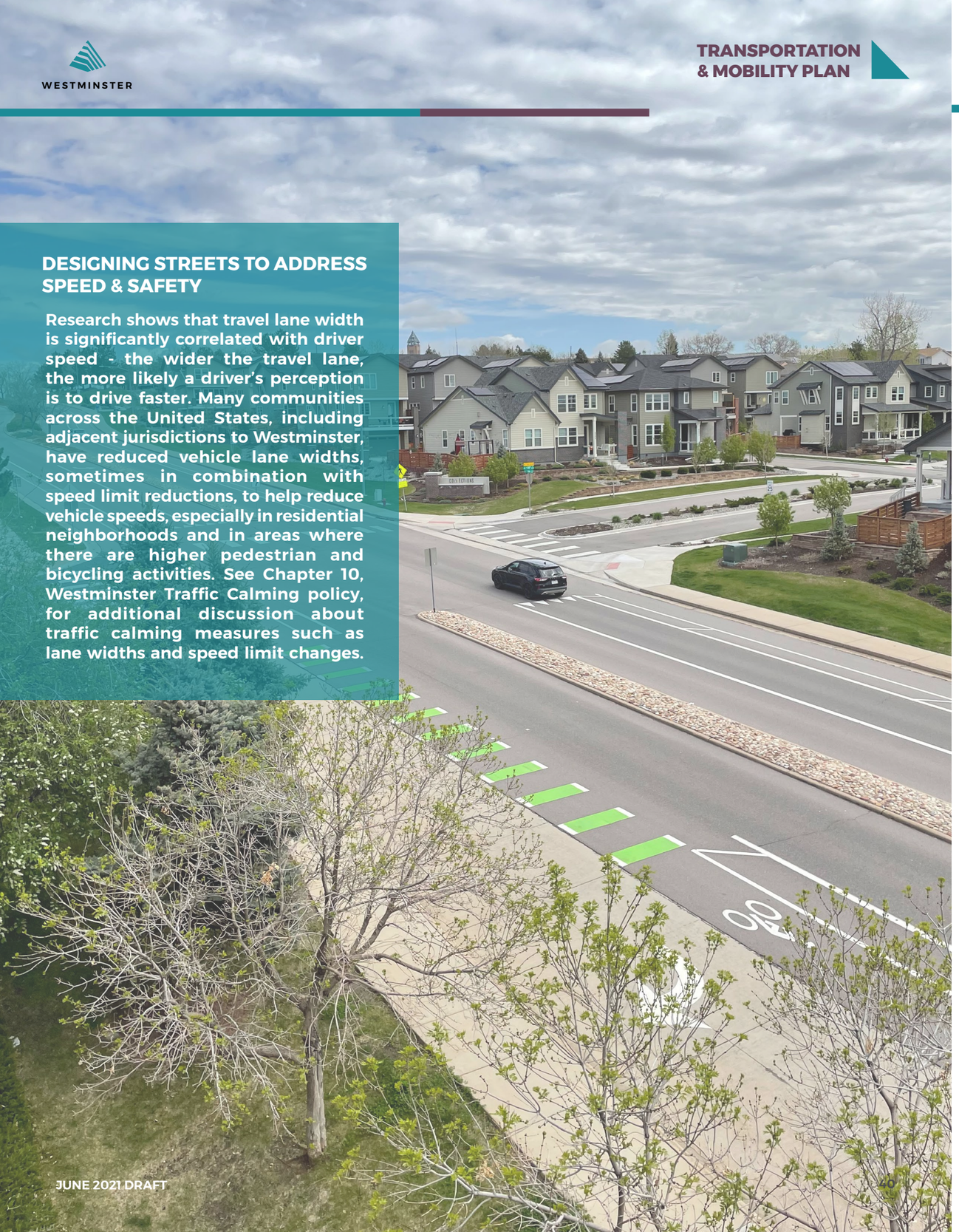
- Most community participants typically drive alone
- Many participants indicated that traffic congestion and delays is the biggest challenge along streets in Westminster
- Improved traffic signal timing along corridors (to improve traffic congestion/ delay) was one of the top desires from participants
- The most common concern from participants was vehicle speeding

During Phase 2 community outreach (summer 2020), participants were asked:

"What types of transportation improvements are most important while considering different trade-offs such as funding limitations, street type and width?" (The average of over 300 survey responses are indicated by the teal circle)







DESIGNING STREETS TO ADDRESS SPEED & SAFETY

Research shows that travel lane width is significantly correlated with driver speed - the wider the travel lane, the more likely a driver's perception is to drive faster. Many communities across the United States, including adjacent jurisdictions to Westminster, have reduced vehicle lane widths, sometimes in combination with speed limit reductions, to help reduce vehicle speeds, especially in residential neighborhoods and in areas where there are higher pedestrian and bicycling activities. See Chapter 10, Westminster Traffic Calming policy, for additional discussion about traffic calming measures such as lane widths and speed limit changes.

Multimodal Streets Projects

Multimodal street improvement recommendations, shown in Appendix D, were evaluated along key corridors in Westminster, based on the context of the existing street, proposed improvements for other modes, and current/upcoming projects and plans. The near-, mid- and long-term projects and improvement recommendations include:

- Acknowledgment of existing projects planned or underway
- Conduct corridor studies or traffic analysis to evaluate and identify multimodal transportation improvements (includes evaluation of lane repurposing and street widening)
- Conduct safety analyses to identify crash mitigation measures at high-incident intersections
- Complete street widening with Complete Streets (discussed in Chapter 10) and Vision Zero elements included in design
- Evaluate and implement intersection operations and safety improvements
- Implement traffic signal technology or other transportation technology to improve corridor safety and operations (also discussed in Chapter 9)
- Upgrade traffic signal infrastructure

The improvement projects will be closely coordinated with the implementation of projects identified for the other modes of transportation and will be supported by additional programmatic and policy actions identified in Chapters 10 and 11. The City will utilize opportunities to integrate improvements in existing projects and programs such as pavement resurfacing projects. Additional resources may be required to maintain the improvements - Chapter 10 and 11 identifies actions to evaluate the staff, equipment, and funding needs to maintain existing and future transportation improvements.

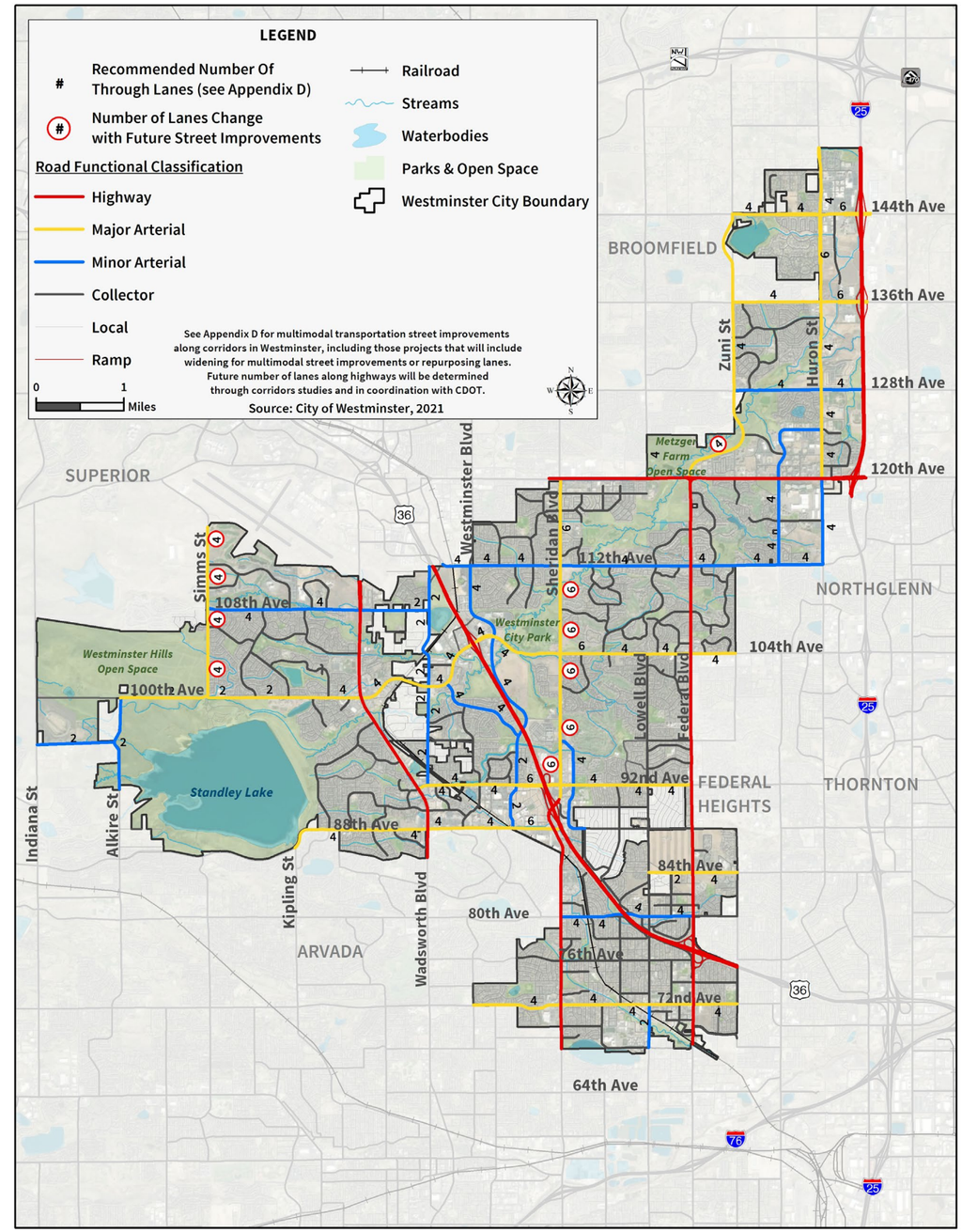
CREATING A SEAMLESS LOCAL & REGIONAL TRANSPORTATION NETWORK

The alignment and operations of adjacent communities was considered when developing Westminster's master street network and associated recommended improvements to ensure connectivity and seamless transition across City and county boundaries. Coordination with adjacent jurisdictions during the implementation of street improvements along cross-jurisdiction corridors will be important. Additionally, as development occurs in undeveloped areas in Westminster, street improvements will also be completed by developers.

Master Street Network

Based on analysis, existing and future projects, application of a more multimodal transportation focus, and informed by the former Comprehensive Roadway Plan (2008), Westminster's Master Street Network (Figure 5.1) was developed to identify the number of through lanes and street classifications required to meet the 2040 travel demand. This reflects improvements including street widening and lane repurposing as further described in Appendix D. The future conditions along State Highways, including number of lanes, will be determined in corridor studies and in coordination with CDOT. This network modifies and supersedes the network identified in the Comprehensive Roadway Plan, with some previously-recommended street widening projects not carried forward or carried forward and revised in the TMP. Additionally, portions of some streets, as identified in Appendix D, are recommended for reclassification to reflect the current/future use and adjacent land use of the street. The recommendations for the corridors will be further evaluated and defined during analysis and design and the TMP will be updated to reflect the changes. The Master Street Network, along with the standard street cross-sections in the City's Standards and Specifications, will be used to guide planning and design for street capital improvement projects.

Figure 5.1
Westminster's Master Street Network



6 Transit Plan

CHAPTER 6

TRANSIT PLAN

Providing a reliable, frequent, safe, affordable, and accessible transit system is important for both existing and future transit riders. Transit provides important connections for riders to access to work, schools, services, and other local and regional destinations, and also contributes to many community benefits including supporting the economy, human and environmental health, and access to opportunity.

RTD operates the regional transit system (bus, rail, transit facilities, and other transit services) serving Westminster and the surrounding region. RTD has made progress implementing a connected network of regional rail and bus services and facilities, such as the B-Line commuter rail serving Westminster Station and the Flatiron Flyer bus rapid transit service along US 36. However, RTD's local transit service does not provide frequent and reliable service to communities including Westminster. Additionally, some areas of Westminster, including many lower-density residential areas, remain unserved by infrequent transit service or no transit service. An overview of the existing transit service and facilities in Westminster are described in Appendix B.

While the City is not a transit service provider, the City, in coordination with RTD, adjacent jurisdictions, and other partners can implement capital, service, and technology improvements (discussed in this chapter, with further details provided in Appendix D). These improvements will also be supported by programmatic and policy actions (Chapters 10 and 11), to enhance transit service and improve rider experience, including exploring other types of transit service, for example, microtransit, or services that serves older adults or people with disabilities, as well as providing service in areas transit currently does not serve such as low-density areas of Westminster.

Quality Transit For Current And Future Transit Users

If a transit trip to a destination takes longer, is more expensive, and is more unreliable than an automobile trip, that transit trip is less desirable. However, when providing quality, affordable, and more reliable and frequent transit service, that is competitive with driving, through transit improvements like those identified in the TMP, transit can become a first choice of travel for more people. Improving transit service and facilities, and access connections to transit is especially important for transit-dependent riders who may use transit as their primary transportation mode.

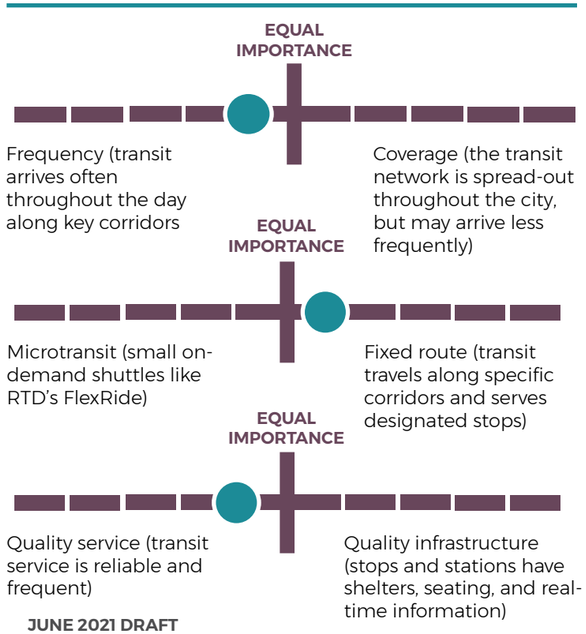
Community Input On Transit Challenges And Opportunities

During the Phase 1 community engagement (summer/fall 2019), activity participants were asked about their experience accessing and using transit in Westminster. A highlight of the responses included the following, with additional results discussed in Appendix C.

- 20 percent of community participants take transit at least once a week
- Most participants indicated they use transit to travel most often to Denver and Boulder
- Many participants indicated the top transit challenges in Westminster include: service does not come often enough and hours of service are not long enough
- Participants indicated a desire to have transit service that arrives more often and is easier access

During the Phase 2 community engagement (summer 2020), participants were asked to think about the trade-offs and importance of the different types transportation facilities and improvements:

"What types of transportation improvements are most important while considering different trade-offs such as funding limitations, street type and width?" (The average of over 300 survey responses are indicated by the teal circle)



Transit Priority Corridors & Projects

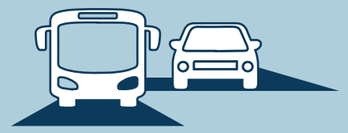
An evaluation was conducted (using data prior to 2020) to identify transit corridors best suited for speed and reliability improvements to improve transit travel times to provide Westminster residents, commuters, and visitors with more reliable and high-quality transit service. Corridors throughout Westminster were also evaluated and identified for those that would benefit most from stop and station enhancements to improve access and walkability to stops and stations as well as improve the safety and comfort for transit riders. In addition to improvements along the transit priority corridors, transit service in Westminster and the region will also be enhanced by the future expansion of the B-Line between Westminster Station and Downtown Westminster and Church Ranch Station and other regional transit services including the future Front Range Passenger Rail. Other corridors, not evaluated or identified as priority for transit improvements in this chapter and Appendix D, and are served by existing or future transit service, will be evaluated for speed and reliability and stop amenities improvements as resources and priorities are identified.

Speed & Reliability

Speed and reliability improvements help transit, move through a corridor safer, faster and more reliably, especially in areas of traffic congestion and at intersections where transit can experience the most delay. Corridor enhancements such as dedicated transit lanes, queue jumps, and transit signal priority can be applied along an entire corridor, at intersections or other areas where transit experiences delay. These corridor enhancements can minimize delay for the greatest number of transit users, reduce safety issues, and result in additional benefits such as increased ridership and overall transit service productivity.

Speed & Reliability Transit Improvements

DEDICATED TRANSIT LANES are "exclusive" transit lanes that can be reserved for transit use, separating transit vehicles from congested vehicle traffic, resulting in an increase in transit travel speed, reliability, safety, and reduce operating costs. A Business Access and Transit (BAT) lane is a lane for transit use, but general-purpose traffic is allowed to enter the lane to make right turns to access driveways or **intersections.**



Queue Jump Lanes are short sections of dedicated/exclusive transit lanes that give preference to transit along arterial streets to improve transit reliability, speed, and safety. Queue jumps, sometimes paired with transit signal priority, allows transit vehicles to bypass congested areas and move ahead of traffic at signalized intersections.

Transit Signal Priority (TSP) is a modification to the traffic signal technology and traffic signal timing (e.g., extend the green light time or shorten the red light time for transit) to expedite transit vehicles through signalized intersections. Delay at traffic signals can account for over one-quarter of a transit route's total trip time; therefore, TSP reduces delays and total transit travel time while improving transit reliability.

Designing Streets to Move People

PRIVATE MOTOR VEHICLES
600 - 1,600/HR

MIXED TRAFFIC WITH FREQUENT BUSES
1,000 - 2,800/HR

TWO-WAY PROTECTED BIKEWAY
7,500/HR

DEDICATED TRANSIT LANES
4,000 - 8,000/HR

SIDEWALK
9,000/HR

ON-STREET TRANSITWAY, BUS, OR RAIL
10,000 - 25,000/HR

While street performance is conventionally measured based on the number of vehicles and travel speed, measuring the number of people moved on a street presents a more complete picture of how a city's residents and visitors get around. Transportation modes such as transit have the highest capacity to move the most people in a constrained space. This graphic illustrates how many people are moved by each mode of transportation in a 10-foot travel lane along a street during the peak time of day. (Source: National Association of City Transportation Officials)

Evaluation and Identification of Speed and Reliability Corridors

The following factors were evaluated to identify the corridors that would benefit the most from speed and reliability improvements.

- Presence of existing transit
- Existing corridor traffic congestion (where buses can experience delay)
- Future corridor traffic congestion
- Existing lineloads (number of passengers on the bus)
- Vulnerable populations within a quarter mile of the corridor (including older adults, youth, people with disabilities, communities of color, people with low-income, and zero-vehicle households)

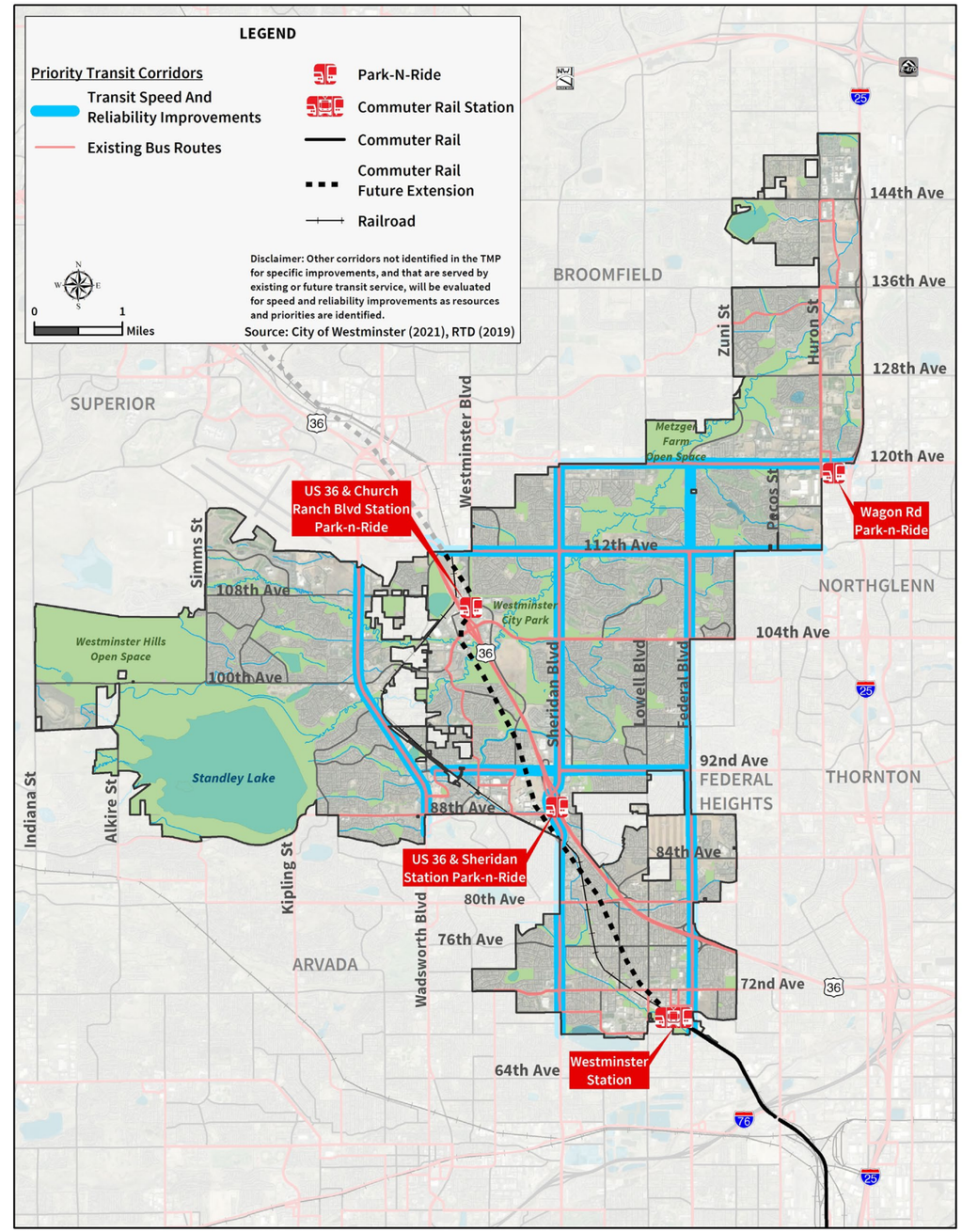
The corridors identified with the highest combination of above factors were carried forward in the evaluation and the final corridors are shown in Figure 6.1 and Appendix D.

Priority Transit Corridors Recommended for Speed & Reliability Improvements:

- **92nd Avenue**
- **112th Avenue**
- **120th Avenue**
- **Wadsworth Boulevard**
- **Sheridan Boulevard**
- **Federal Boulevard**

Other corridors not identified in the TMP for specific improvements, and that are served by existing or future transit service, will be evaluated for speed and reliability improvements as resources and priorities are identified.

Figure 6.1
Priority Transit Corridors for Speed and Reliability Improvements



Other corridors not identified in the TMP for specific improvements, and that are served by existing or future transit service, will be evaluated for speed and reliability improvements as resources and priorities are identified.

Stop & Station Improvements

Stop and station improvements support a safer and more comfortable and accessible passenger experience for transit users. Improvements include stop and station amenities such as shelters, benches, lighting, and rider information. Many of the bicycle and pedestrian infrastructure projects described in Chapters 7 and 8 and provided in Appendix D will complement the transit projects by improving first and last mile connections to transit stops (e.g., sidewalks, crosswalks, bicycle facilities) to ensure the stop and station can be easily and safely accessed. Stop and station improvements can also be integrated into adjacent land uses and community character.

Corridors best suited for stop and station improvements have existing transit service today and generally experience higher levels of transit boarding and alighting activity. The areas within a quarter mile of these corridors have more population and employment than other corridors in the City.

Evaluation and Identification of Speed & Reliability Corridors

The following factors were evaluated to identify corridors that would benefit most from stop and station improvements:

- Presence of existing transit service
- Existing boardings and alightings (number of passengers getting on and off buses)
- Existing population and employment density
- Future population and employment density
- Vulnerable populations within a quarter mile of the corridor (including older adults, youth, people with disabilities, communities of color, people with low-income, and zero-vehicle households)

Priority Transit Corridors Recommended for Stop & Station Enhancements are:

- **72nd Avenue**
- **80th Avenue**
- **88th Avenue**
- **92nd Avenue**
- **120th Avenue**
- **Sheridan Boulevard**
- **Federal Boulevard**

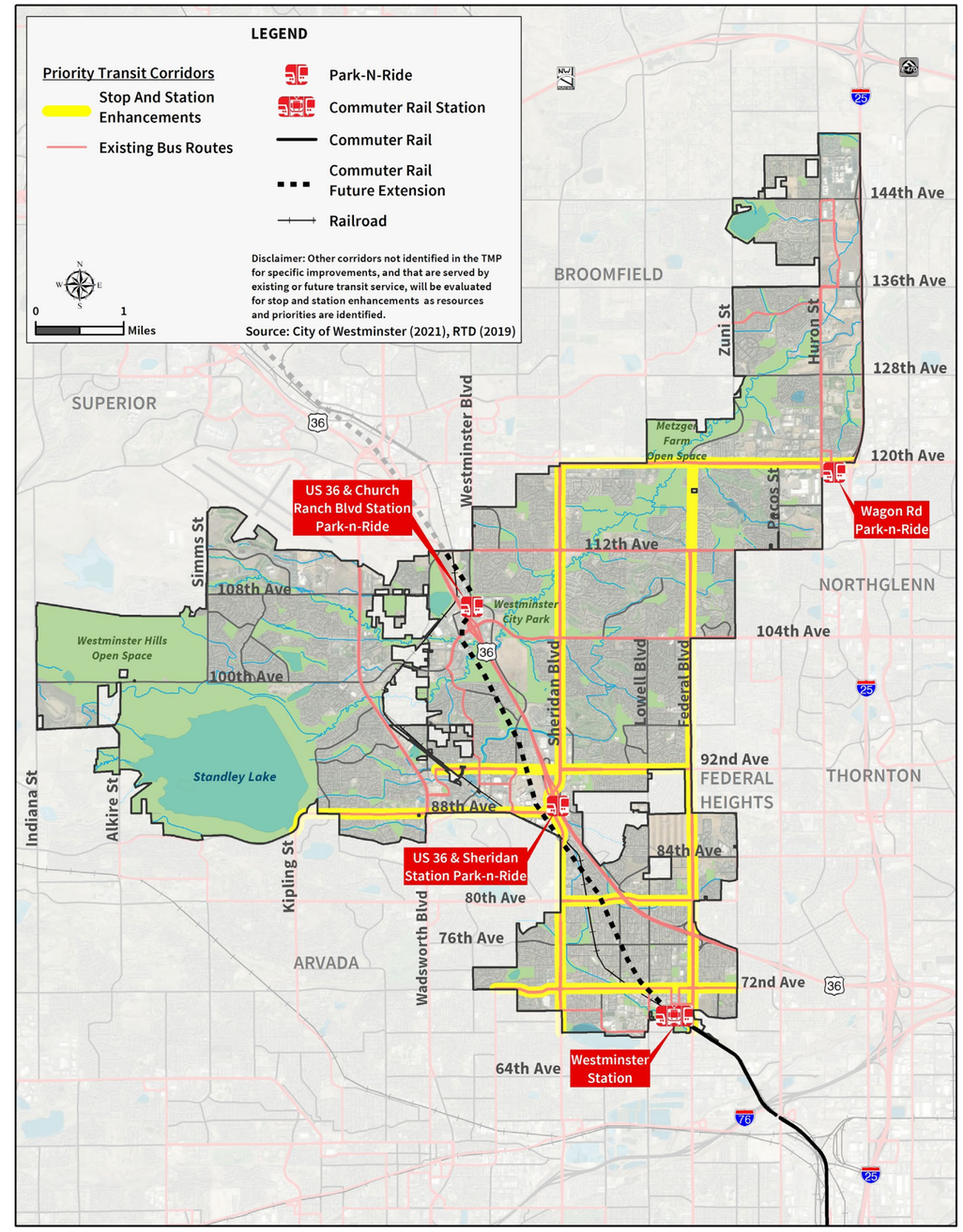
Other corridors not identified in the TMP for specific improvements, and that are served by existing or future transit service, will be evaluated for stop and station enhancements as resources and priorities are identified.

Similar to the speed and reliability corridor assessment, the evaluation of data was conducted to identify the corridors with the highest combination of the data. The top final priority corridors identified for stop and station improvements are shown in Figure 6.2 and Appendix D.

Transit Project Implementation

Implementation of the near-, mid- and long-term transit improvement projects identified in this chapter and Appendix D will require coordination with partners including RTD, adjacent jurisdictions, developers, and businesses. Implementation will also be supported by programmatic and policy actions discussed in Chapters 10 and 11. Maintenance of transit facilities may require additional resources - actions identified in Chapters 10 and 11 identify the need to evaluate the staff, equipment, and funding needs to maintain existing and future transportation improvements such as bus stop amenities.

Figure 6.2
Priority Transit Corridors for Stop and Station Enhancements



Other corridors not identified in the TMP for specific improvements, and that are served by existing or future transit service, will be evaluated for stop and station enhancements as resources and priorities are identified.

7 Bicycle Plan

CHAPTER 7
BICYCLE PLAN

To attract and support bicycle riders of all ages and abilities, a bicycle network needs to include safe, connected, low-stress, and high-comfort facilities that limit the interaction between bicyclists and motor vehicles. Both bicyclists and pedestrians are the most vulnerable users of the transportation system, due to higher risk for fatal or severe injury to occur from a collision with a motor vehicle, emphasizing the importance of providing safer bicycle facilities throughout Westminster.

The Bicycle Plan identifies Westminster's future on-street bike network, building on the existing 150 miles of existing trails, the US 36 Bikeway, and 40 miles of existing on-street bicycle facilities citywide, as well as supporting trail improvements identified in the Parks, Recreation & Libraries Plan. The bicycle network and associated improvements identified in the TMP supersedes the 2030 Westminster Bicycle Master Plan and Mobility Action Plan, with key components of the former plans updated and integrated into the TMP. The TMP bicycle network will provide safe and low-stress bicycle commuting and recreational opportunities and improved multimodal connections between neighborhoods and destinations. The bicycle network recommendations, identified in Appendix D, will be supported by education, encouragement, and enforcement strategies and actions, as documented in Chapters 10 and 11.

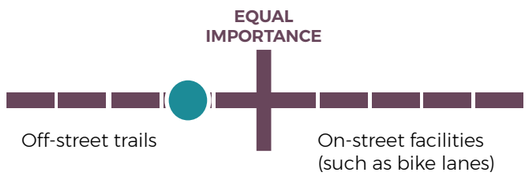
Community Input On Challenges And Opportunities For Bicycle Access And Connections

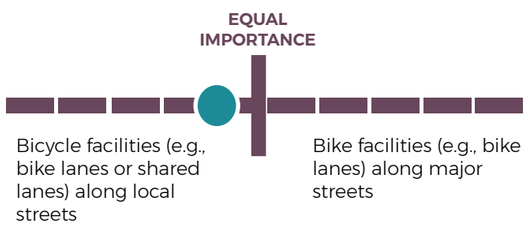
During the Phase 1 community engagement (summer/fall 2019), activity participants were asked about their experience with bicycling in Westminster. A highlight of the responses included the following, with additional results discussed in Appendix C.

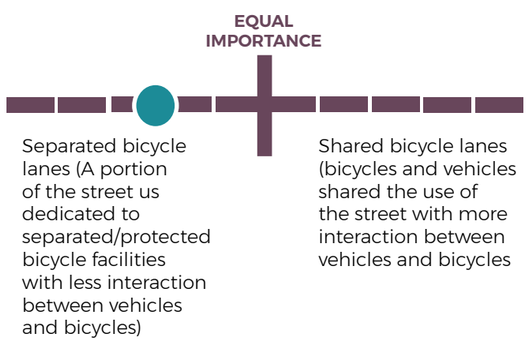
- 30 percent of community participants ride a bike at least once a week
- Most participants indicated that the biggest challenge is street crossings when bicycling
- Many participants highlighted the desire for a connected on-street and off-street network with bike parking

During the Phase 2 community engagement (summer 2020), participants were asked to think about the trade-offs and importance of different types of transportation facilities and improvements:

"What types of transportation improvements are most important while considering different trade-offs such as funding limitations, street type and width?" (The average of over 300 survey responses are indicated by the teal circle)







Development of the Bicycle Plan, Network, and Projects

A range of guiding factors, as discussed below, were considered in identifying bicycle facility recommendations that will enhance and transform the bicycle network into a more comprehensive network, providing community members throughout the city with access on-street bicycling options and connections to trails. The 2030 Westminster Bicycle Master Plan and Mobility Action Plan was also used to inform bicycle improvement recommendations.

A LOW-STRESS NETWORK:

The primary focus during the development of the future bicycle network was to ensure the lowest level of stress and most comfortable bicycle facility options. The Bicycle Level of Traffic Stress analysis (discussed in the Appendix B) indicates where there was the highest and lowest level of stress for bicyclists along corridors in Westminster. This data was used to help identify necessary upgrades to the bicycle network that would provide riders with a low level of stress.

COMMUNITY INPUT:

Another important factor in developing the bicycle network included community input. Location-specific comments from the first phase of the plan's community engagement were used to help identify areas throughout Westminster where safety or connectivity issues exist for bicyclists.

A CONNECTED NETWORK:

Connectivity, both between bicycle facilities and to destinations, is a critical component to the bicycle network. Disjointed and inconsistent bicycle facilities, requiring crossings at major streets, can create uncomfortable and stressful situations for bicyclists, reducing the likelihood that they will choose to bike. Due to the importance of continuity in a bicycle network, the network development considered where facilities dead-end or navigate bicyclists to high-stress streets. Providing low-stress connections to destinations commonly accessed by bicycle including schools, parks, transit stops and stations, and recreation centers, was emphasized in the network development. Enhancing connectivity between the on-street bike and trail network was also included.

SPACING

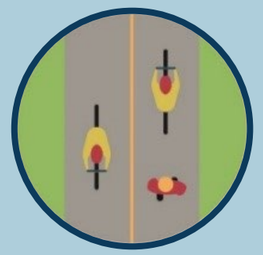
One of the challenges of developing a comfortable bicycle network is providing direct connections between locations, while also limiting interactions with high-stress streets. If the network is routed in that bicyclists travel significantly out of their way to stay on low stress facilities, they will be less inclined to choose bicycling as a mode of transportation. Spacing of approximately one-half mile between parallel low-stress facilities was used as a general guide when developing Westminster's bicycle network. This spacing provides a significantly larger portion of Westminster with bicycle facilities.

FEASIBILITY OF IMPLEMENTATION:

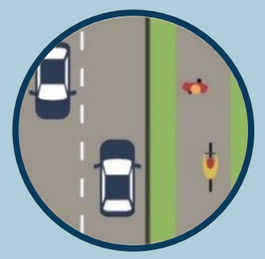
A final consideration that factored into the development of the network included implementation feasibility. For example, each bicycle network improvement was evaluated for factors including street (right-of-way) width to ensure the safety of bicyclists along the facility, in addition to other modes along the corridor. Additional factors to consider for implementation feasibility will be further identified during project analysis and design.

Bicycle Facility Types

Development of Westminster's bicycle network and associated transportation improvement and project recommendations integrated the seven facility types described below, in order from greatest separation of bicyclists from motor vehicle traffic, to least separation:



Multiuse Trails generally follow alignments independent from the street network. Multiuse trails are typically concrete and range from 8 to 16 feet in width. They provide a continuous route separated from streets with frequent directional signage provided at tail intersections and decision-making points. Multiuse trails are used for both commuters and recreation. Example of a multiuse trail in Westminster is the Big Dry Creek Trail.

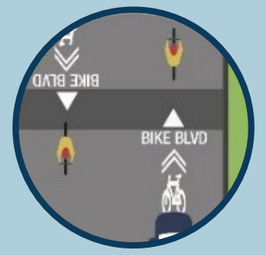


Multiuse Sidepaths is similar to multiuse trails but are parallel to a street. They are usually detached from a street's curb and gutter and completely separated from motor vehicles, except for at intersection crossings where no underpass is provided. A multiuse sidepath is usually designed for two-way travel and marked to indicate directionality. This concrete facility is typically wider than a sidewalk to accommodate a variety of uses, ranging from 8 to 16 feet. Multiuse sidepaths are used for both commuting and recreation. An example of a multiuse sidepath in Westminster is along Sheridan Boulevard.

Separated Bike Lanes (also sometimes referred to as protected bike lanes) provide exclusive space for bicyclists that is physically separated from both motor vehicle and pedestrian traffic. Separation is created using curbs, planter boxes, landscaping, and/or bollards. Separated bike lanes can also be vertically separated from motor vehicle traffic and at the same level as the sidewalk. Separated bike lanes can be one-way or two-way. No separated bike lanes currently exist in Westminster.

Buffered Bike Lanes are conventional bicycle lanes paired with a designated buffer space separating the bicycle lane from the adjacent motor vehicle travel lane and/or parking lane. Buffered bike lanes provide greater distance between motor vehicles and bicyclists, which appeals to a wider cross-section of bicycle users. Examples of buffered bike lanes in Westminster are along Yates Street near Westminster City Hall.

Bike Lanes designate an exclusive space for bicyclists using pavement markings and signage. The bike lane is located adjacent to motor vehicle travel lanes and flows in the same direction as motor vehicle traffic. Bike lanes facilitate predictable behavior and movements between bicyclists and motorists. Examples of bike lanes in Westminster are along Independence Drive, west of Wadsworth Parkway.



Neighborhood Bikeways are streets with low motorized traffic volumes and speeds, designed to give bicycle travel priority. Neighborhood Bikeways (also sometimes referred to as Bicycle Boulevards) use signs, pavement markings, and speed and volume management measures to discourage through trips by motor vehicles and create safe, convenient bicycle crossings of busy arterial streets. They not only benefit people on bicycles, but also help create and maintain "quiet" streets that benefit residents and improve safety for all road users. No neighborhood bikeways currently exist in Westminster.

Shared Lanes are used by both automobiles and bicyclists and are typically delineated by shared lane markings (sometimes called sharrows) to indicate a shared environment for bicycles and automobiles. Shared lane markings send the message to drivers that they should expect bicyclists to be sharing this road with them. They also help bicyclists position themselves in the roadway. Shared lane markings should be applied in situations where the difference in speed between bicyclist and motorist travel speeds is low, like on local and collector streets. Examples of shared lanes in Westminster are along Bradburn Boulevard south of 76th Avenue.

Bicycle Facility Improvement Projects

Building on the evaluation as previously discussed, and informed by existing plans (2030 Westminster Bicycle Master Plan and the Westminster Mobility Action Plan), key corridors throughout Westminster were evaluated for their existing conditions as well as the proposed improvements for other modes. A trade-offs evaluation was conducted for each street, resulting in the corridor improvement recommendations in Appendix D.

The evaluation resulted in the creation of Westminster's Bicycle Network (Figure 7.1), to accommodate bicyclists of all ages and abilities by providing a connected system of low-stress bike routes. As shown in Figure 7.2, the final near-, mid- and long-term bicycle facility improvement recommendations include, adding over 62 miles of new bicycle facilities and 18 miles of bicycle facility upgrades (e.g., upgrading a bike lane to a buffered bike lane). The bicycle network map shows the proposed ultimate bicycle facility types; in some cases, an interim facility type is recommended as detailed in Appendix D. Other corridors not shown in the TMP maps or Appendix D will benefit from future improvements through the application of improvement toolkits, industry best practice guidance, traffic calming/speed management tookits, and future studies, planning and design projects.

Unsignalized intersections, particularly across major streets, are often challenging for people to cross on bikes. The stress of having to cross multiple lanes of high-speed traffic without a protected signal phase can be enough to discourage some from bicycling, even where a strong network of low-stress facilities exists. Providing safe ways to cross major streets is important to the success of a bike network and improved street crossings will help to reduce or eliminate the barriers that major streets present to bicyclists. The 25 at-grade and 11 grade-separated (underpass) crossing projects, as well as the multiuse trail and multiuse sidepath projects, identified in the TMP, will benefit both bicyclists and pedestrians and are also a part of the pedestrian network discussed in Chapter 8 and shown in Appendix D.

Implementation of each type of bicycle facility will vary on use and application of pavement markings, signage, and other treatments for buffered and protected bike facilities. The City will utilize opportunities to integrate improvements in existing projects and programs such as pavement resurfacing projects. Maintenance of bicycle facilities may require special equipment, for example smaller snow removal equipment for protected bike lanes, and actions identified in Chapters 10 and 11 identify the need to evaluate the Staff, equipment and funding needs to maintain existing and future transportation improvements such as bike lanes.

CREATING A SEAMLESS LOCAL AND REGIONAL BICYCLE NETWORK

The bicycle network in adjacent communities was considered when developing Westminster's bicycle network to ensure connectivity and seamless transitions of bicycle facilities across citywide and within county boundaries. Coordination with adjacent jurisdictions during the implementation of bicycle infrastructure improvements along cross-jurisdiction corridors will be important. Additionally, as development occurs in undeveloped areas in Westminster, bicycle improvements will be completed by developers to complete bicycle network gaps, connections, or upgrades, to ensure new development is accessible by bicycle and connects to the existing network.

Figure 7.1
Westminster's Bicycle Network

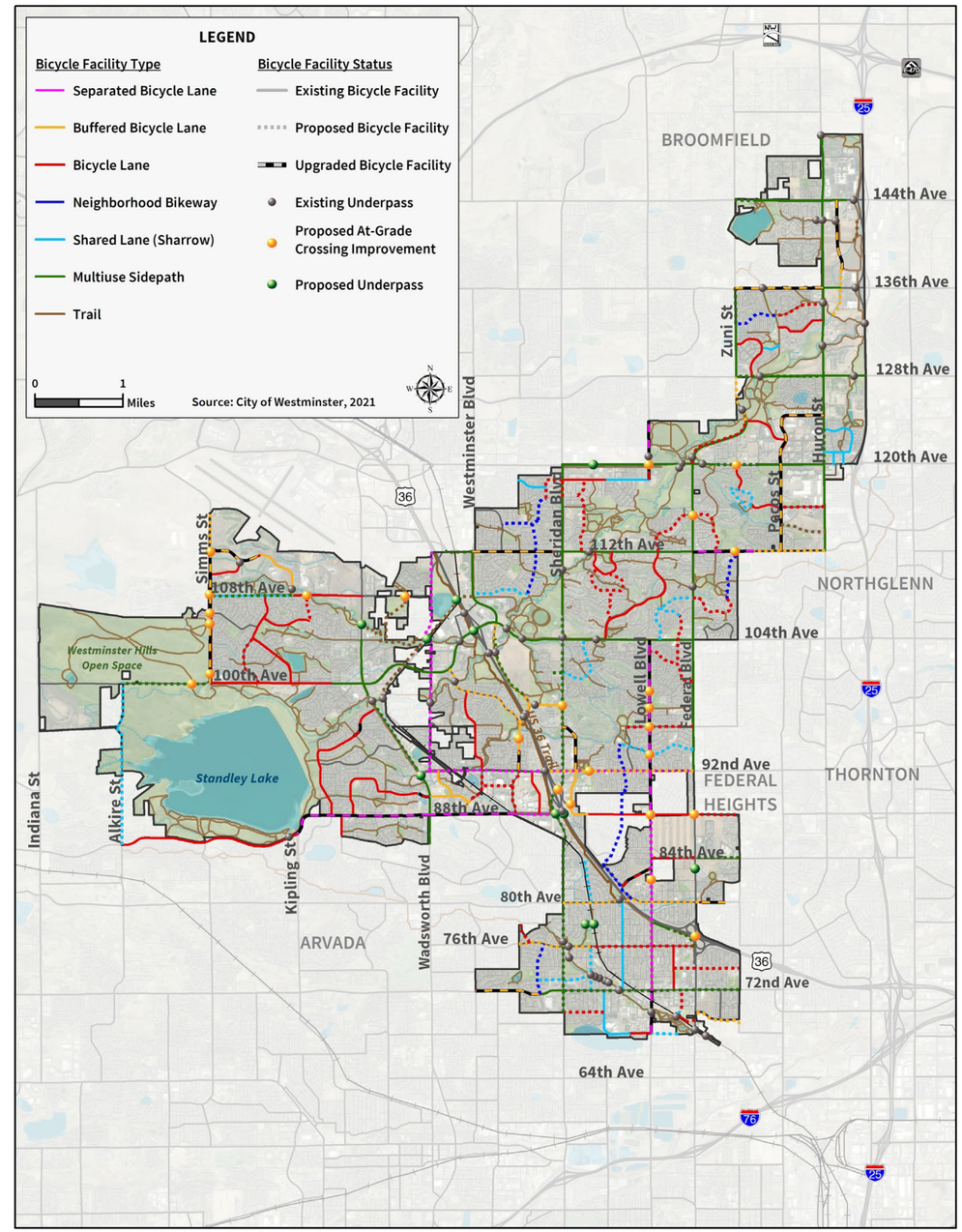
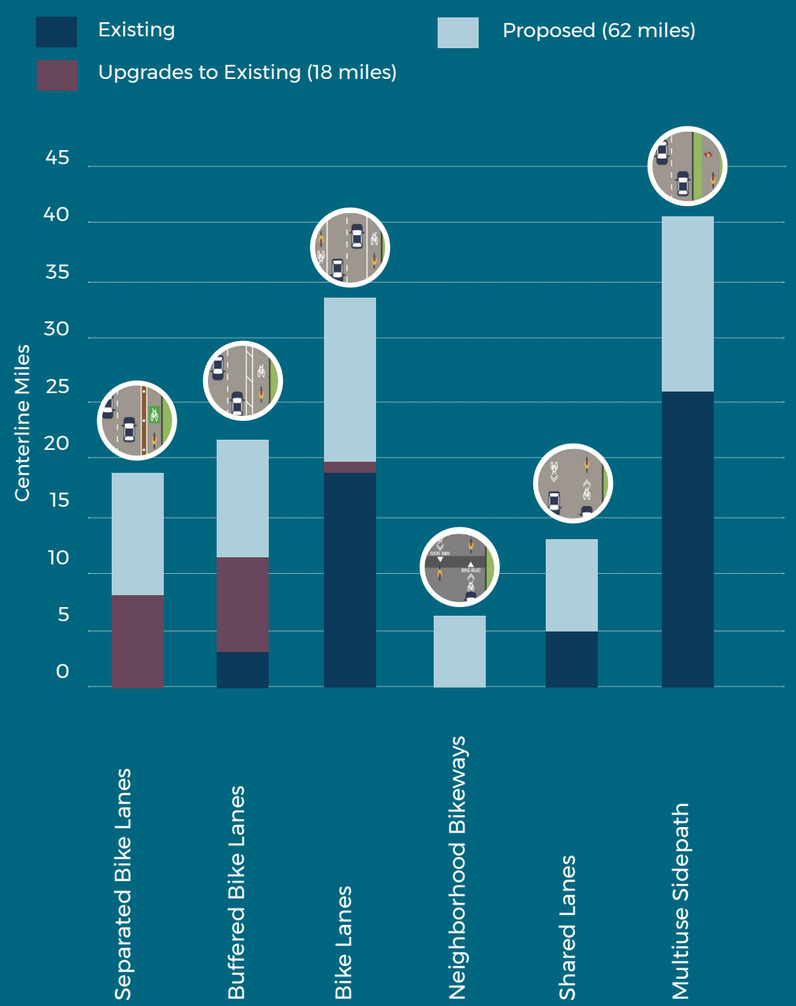


Figure 7.2
Existing and Proposed Bicycle Facilities by Type



8 Pedestrian Plan

CHAPTER 8

PEDESTRIAN PLAN

CONTEXT-SENSITIVE SOLUTIONS: "THINKING BEYOND THE PAVEMENT"

Context-sensitive solutions refer to the planning, design, construction, and operation of transportation facilities to enhance community livability. These solutions consider not only the goals of safety and mobility for a facility, but also the goals of the surrounding community in which the facility exists. This can include factors such as land use, aesthetics, historical considerations, and environmental quality. Context-sensitive solutions emphasizes a holistic process to transportation development, beginning with a multi-stakeholder community input process, and continuing throughout the lifecycle of the transportation facility to accommodate and enhance the desires of the community. (Source: Institute of Transportation Engineers). Westminster has various land uses from downtown and main streets to commercial areas and from residential neighborhoods to open space – each requiring different types of pedestrian facilities best suited for the area's pedestrian demand, access, and characteristics. Regardless of land use designation, every area in Westminster should prioritize the safety and access for pedestrians.

Pedestrians - whether walking or rolling (using a mobility device such as a wheelchair) - along with bicyclists, are the most vulnerable users of the transportation system. They rely on sidewalks, crosswalks, and other pedestrian facilities to safely travel through their neighborhood, commute to work or school, run errands, recreate, or access transit. Gaps in pedestrian infrastructure, poor conditions of sidewalks, and unsafe crossings are just some of the conditions that can create safety and accessibility issues for pedestrians. The improvement recommendations identified in Appendix D and introduced in this chapter will provide safe, accessible, connected, and context-sensitive pedestrian facilities throughout Westminster to address the mobility needs of pedestrians. A map of the existing pedestrian facilities in Westminster is available in Appendix B. Improvements will also be coordinated with the other citywide plans including the Parks, Recreation and Libraries Plan.

The Pedestrian Plan focuses on completing gaps in the pedestrian network, providing pedestrian access to key destinations like schools and transit stops, improving the safety for pedestrians crossing streets, and improving pedestrian comfort by widening narrow sidewalks. Creating a pedestrian-friendly community will not only include the implementation of pedestrian infrastructure recommendations shown in Appendix D, but are also supported by educational, encouragement, and enforcement strategies and actions discussed in Chapter 10. Improvements will also be coordinated with the other citywide plans including the Parks, Recreation and Libraries Plan.

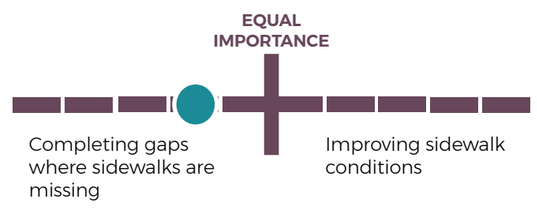
Community Input On Transit Challenges And Opportunities

During the Phase 1 community engagement (summer/fall 2019), activity participants were asked their experience with walking or rolling (e.g., using a wheelchair) in Westminster. A highlight of the responses included the following, with additional results discussed in Appendix C.

- 12 percent of the activity participants indicated they regularly walk or roll for transportation
- Most participants indicated that highest priority for pedestrians is safety
- Many participants highlighted the need for improved access to schools and direct connections to parks and open space

During the Phase 2 community engagement (summer 2020), participants were asked to think about the trade-offs and importance of different types of transportation facilities and improvements:

"What types of transportation improvements are most important while considering different trade-offs such as funding limitations, street type and width?" (The average of over 300 survey responses are indicated by the teal circle)



Development of the Pedestrian Plan & Projects

Developing the Pedestrian Plan was informed by technical analysis (pedestrian demand, land use typologies, and facility types) as well as through community input as summarized in the following sections.

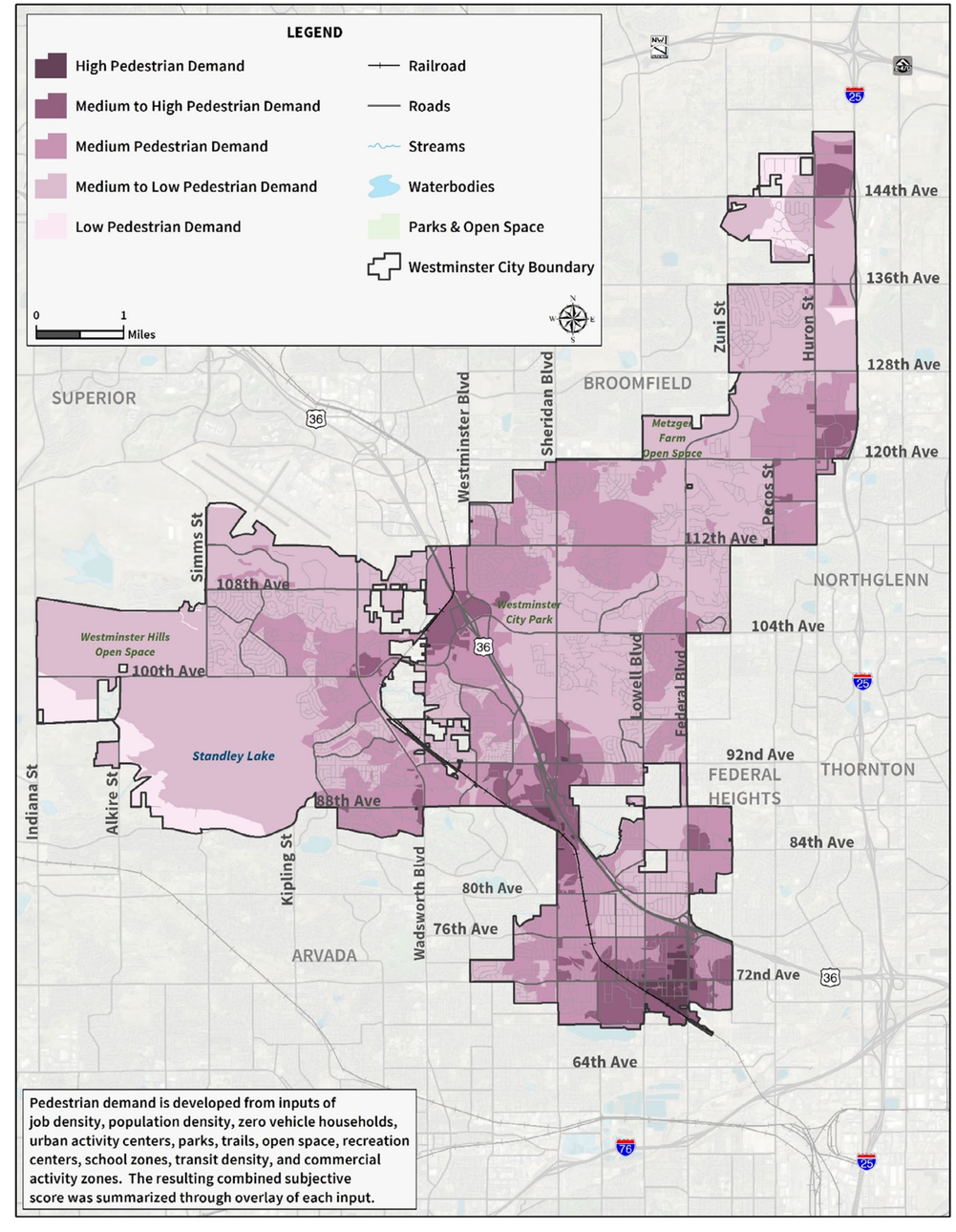
Pedestrian Demand

Analysis of pedestrian demand helps to identify areas that are likely to have high pedestrian activity such as employment, commercial areas, schools, and transit. A pedestrian demand "heat map" (Figure 8.1) was created by overlaying community factors that generate pedestrian activity and will be used to determine appropriate pedestrian facilities and amenities that provide connections and access to key destinations, as well as used to inform the prioritization in implementing the projects.

Land Use Typologies

Implementing context-sensitive pedestrian facilities is essential to supporting and encouraging pedestrian activity and access. Table 8.1 provides an overview of the different place types ("typologies") within Westminster and opportunities to transform streets to better accommodate the needs of pedestrians. The pedestrian opportunities by land use typology can provide guidance in development review, future area and corridor plans, implementing Pedestrian Plan projects, and evaluating pedestrian facility improvement requests from the public.

Figure 8.1
Pedestrian Demand Map



Pedestrian demand is developed from inputs of job density, population density, zero vehicle households, urban activity centers, parks, trails, open space, recreation centers, school zones, transit density, and commercial activity zones. The resulting combined subjective score was summarized through overlay of each input.

Table 8.1

Pedestrian Facility Challenges & Opportunities by Land Use Typology

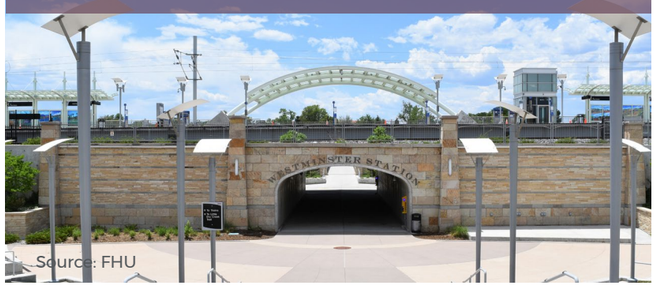
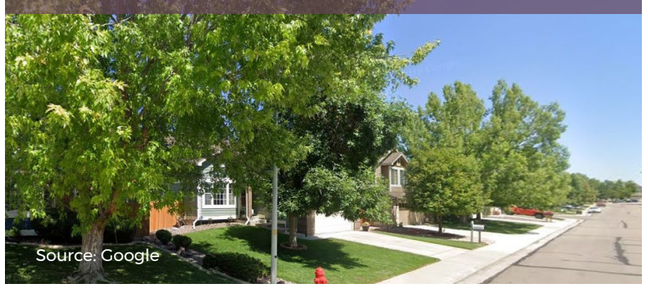
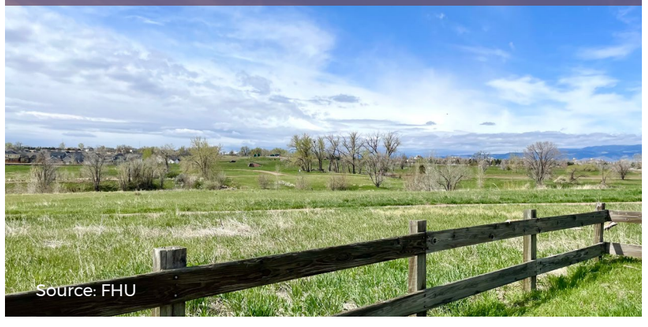
	Description	Uses/ Characteristics	Challenges	Opportunities	Partnerships
Main Streets, Downtown  Source: FHU	Mixed-use development areas along a gridded network Example locations: · 72nd Avenue · Downtown Westminster	· Office · Retail · Residential · Mixed-use development · Entertainment · Civic uses · · Major destinations · Multimodal transportation accessibility	· Pedestrian safety · Constrained right-of-way limit pedestrian amenity zones and/or widening of sidewalks	· Connections to transit · Improved pedestrian accommodation such as wider sidewalks, enhanced crosswalks, pedestrian refuge/crossing islands, flashing beacons, mid-block crossings, grade-separated crossings, curb extensions, curb ramps, pedestrian signals · Work with developers to proactively include pedestrian amenities · Green infrastructure	· City departments including Economic Development, Community Development, Public Works and Utilities · Developers · Businesses
Transit Station Areas  Source: FHU	Areas surrounding bus or rail transit stations, or areas adjacent to these stations configured with access to transit and encourage transit use Example locations: · Westminster Station · US 36 and Sheridan Station	· Office · Retail · Residential · Access to parks, open space and trails · Mixed-use development · Multimodal transportation accessibility · Transit connections	· Congested access points and crossings in peak commute periods · Transit station areas located in suburban contexts where bicycle and pedestrian access may be limited and prioritized for vehicle access	· First and last mile connections to make accessing transit easier · Improved pedestrian facilities such as wider sidewalks, enhanced crosswalks, pedestrian refuge/ crossing islands, flashing beacons, mid-block crossings, grade-separated crossings, curb extensions, curb ramps, pedestrian signals · Connector trails · Green infrastructure	· City departments including Economic Development, Community Development · Regional partners including RTD · Developers
School Zones  Source: Westminster Public Schools	Areas near elementary, middle, high schools and colleges where students, often times children, use sidewalks and crosswalks to access a school campus. Example locations: · Mesa Elementary School · Moore Middle School · Westminster High School · Front Range Community College	· Usually in or adjacent to residential neighborhoods · Civic uses · Access to parks, open space and trails · Minor, neighborhood destination · Typically accessed through residential areas, however, major street crossings may be required	· Safe crossing of major streets · Lack of pedestrian infrastructure · Limited intersection control · Vulnerable population · Lack of street connections, requiring longer walking distances	· Improved pedestrian accommodation such as wider sidewalks, crosswalks, pedestrian refuge/crossing islands, flashing beacons, mid-block crossings, grade-separated crossings, curb extensions, curb ramps, pedestrian signals · Traffic calming · Connector trails · Programs to encourage walking and biking to school	· City Departments including Community Development, Public Works and Utilities, Parks, Recreation and Libraries · Schools/School districts · Parent advisory boards · Neighborhood organizations

Table 8.1

Pedestrian Facility Challenges & Opportunities by Land Use Typology

	Description	Uses/ Characteristics	Challenges	Opportunities	Partnerships
Suburban Commercial  Source: FHU	Areas with high levels of retail land uses with surface parking lots. Typically located along arterial streets, emphasizing automobile access. Example locations: • Westminster Promenade • Shops at Walnut Creek • Towne Center at Brookhill • The Orchard Town Center	• Retail • Mixed-use • Residential • Entertainment • Civic uses • • Major destination • Limited access points • Prioritizes vehicular movements	• Often adjacent to higher-speed arterials • Buildings may be positioned to "turn their back" on the adjacent street, with large parking lots between the buildings and the street	• Traffic calming • Improved pedestrian accommodation such as wider sidewalks, crosswalks, pedestrian refuge/crossing islands, flashing beacons, mid-block crossings, grade-separated crossings, curb extensions, curb ramps, pedestrian signals • Connector trails	• City departments including Community Development, Economic Development • Developers • Retailers
Suburban Residential  Source: Google	Residential areas typically characterized by single-type land use, may include a mix of single-family and multi-family residential units. Neighborhood-focused retail and small-scale civic uses, including parks, may be present. Example locations: •Walnut Grove •Westcliff & Cambridge •Stratford Lakes	• Residential • Civic uses such as parks and schools • Small scale retail • Curvilinear streets and/or cul-de-sacs • Limited access points	• Lack of street connections due to curvilinear streets • Limited access points to developments resulting in longer walking distances • Lack of connectivity between neighborhoods and adjacent retail or commercial uses • Speeding and cut-through traffic • Often adjacent to higher-speed arterials	• Connector trails • Sidewalk improvements • Traffic calming • Connections between neighborhoods • Improved pedestrian accommodation such as wider sidewalks, crosswalks, pedestrian refuge/crossing islands, flashing beacons, mid-block crossings, grade-separated crossings, curb extensions, curb ramps, pedestrian signals • Green infrastructure	• City departments including Community Development and Public Works and Utilities • Neighborhood organizations/ Homeowners Associations (HOA'S)
Rural, Open Space  Source: FHU	Rural areas and open space outside of the urban and suburban areas in Westminster. Example locations: • Community College Open Space • Big Dry Creek Park and trails	• Rural/Agricultural • Low-density residential • Civic and recreational uses • Trails • Varies depending on use and proximity to developed activity centers	• Longer distances between land uses • Lack of sidewalks • Lack of crosswalks	• Regional trail connectivity • Underpasses • Detached paths adjacent to higher-speed streets	• City departments including Parks, Recreation and Libraries • Regional partners including counties and adjacent jurisdictions

Pedestrian Facility Types

Westminster's pedestrian network is comprised of the following four types of facilities. Completion of facility gaps, upgrading facilities, and improving facility conditions, will be completed through implementation of the TMP and key next steps identified in Chapters 10 and 11, Appendix D, and also identified in the future Parks, Recreation & Libraries Plan.

Sidewalks are the primary, accessible pathway that runs parallel to the street. The sidewalk ensures that pedestrians have a safe and adequate place to walk and should be 4-6 feet wide in residential settings and 8–12 feet wide in mixed-use/commercial areas. An attached sidewalk is connected to the street's curb and gutter. A detached sidewalk includes a landscape buffer or other treatment such as hardscape with street furniture and pedestrian scaled lighting.

Multiuse Paths are similar to multiuse trails but are parallel to a street. They are usually detached from a street's curb and gutter and completely separated from motor vehicles. A multiuse sidepath is usually designed for two-way travel. This paved facility is typically wider than a sidewalk to accommodate a variety of uses, ranging from 8 to 16 feet. Multiuse sidepaths are used for both commuting and recreation. Example in Westminster: Sheridan Boulevard.

Multiuse Trails generally follow alignments independent from the street network. Multiuse trails are typically concrete and range from 8 to 16 feet in width. They provide a continuous route separated from streets with frequent directional signage provided at tail intersections and decision-making points. Multiuse trails are used for both commuters and recreation. Trails may include underpasses that provide safer crossings at arterial streets. Example in Westminster: Big Dry Creek Trail.

Gravel Trails are designed for low to moderate speed trail use for walkers, hikers, runners, and off-road cyclists. They provide a continuous route separated from streets with frequent directional signage provided at trail intersections and decision-making points. The surface material is typically crusher fines. Example in Westminster: Big Dry Creek Trail.

Natural Trails are made of compacted organic material and are designed for low-speed use (walkers, hikers, trail runners). They provide a continuous route within an open space area with minimal conflicts with high-speed trail users. Natural trails typically have minimal directional signage, but may include educational or interpretive signage. Example in Westminster: Panorama Point Trails.

Pedestrian Facility Improvement Projects

Pedestrian facilities improvement recommendations were evaluated along key corridors in Westminster, based on the context of the existing street as well as the proposed improvements for other modes. The projects, shown in Appendix D, will add new sidewalks, multiuse sidepaths (new and widened sidewalks), new trail connections 25 at-grade crossing improvements, and 11 grade-separated crossing improvements (underpasses), benefiting both bicyclists and pedestrians. As development occurs, developers will include pedestrian facilities that will complete the pedestrian network gaps, connections and upgrades, to ensure the new development is accessible for pedestrians and connects to the existing pedestrian network.

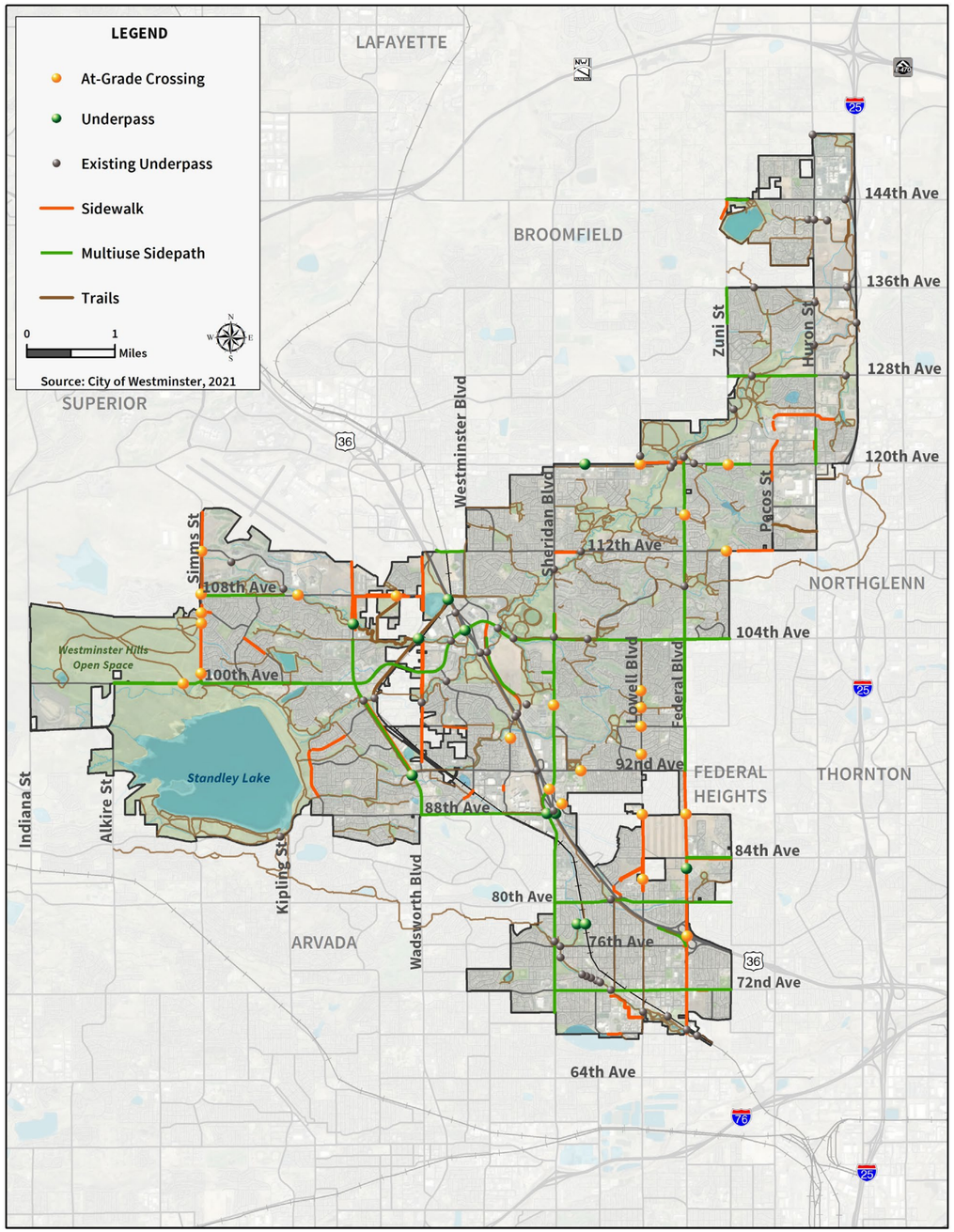
The City will utilize opportunities to integrate improvements in existing projects and programs such as pavement resurfacing projects. Additional resources may be required to maintain pedestrian facilities - Chapters 10 and 11 identify actions to evaluate the Staff, equipment, and funding needs to maintain existing and future transportation improvements including pedestrian facilities.

SAFETY & SPEED LIMITS

Typically, people drive 5 to 10 mph above the speed limit – the higher the speed, the risk increases for fatalities or severe injuries, especially if a pedestrian or bicyclist is involved in the crash. Designing streets for slower speeds and reducing the tolerance for speeding can be an effective way to increase safety for pedestrians and bicyclists. (See the Complete Streets, Vision Zero and Traffic Calming actions and policies in Chapter 10).

Source: Tefft, Brian C. Impact speed and a pedestrian's risk of severe injury or death. Accident Analysis & Prevention. 50. 2013

Figure 8.2
Pedestrian Improvement Projects Map



9 Transportation-Supportive Programs and Technology

CHAPTER 9

TRANSPORTATION-SUPPORTIVE PROGRAMS AND TECHNOLOGY

Successful implementation and the on-going operations and maintenance of the transportation improvements identified in the Modal Plans (Chapters 4 through 8) and in Appendix D will require building and leveraging partnerships; development and administration of transportation-supportive programs; and exploration and integration of technology to increase the efficiency and safety of the transportation network. Collectively, these projects, programs, and technology will create a more comprehensive multimodal transportation system for Westminster.

This chapter introduces some of the key programs and technology that the City, in coordination with partners, should explore and evaluate for the potential expansion and integration to support Westminster's transportation system including Transportation Demand Management, Intelligent Transportation Systems, and exploration and integration of transportation technology including micromobility and autonomous vehicles. Implementation of programs and technology will require investments from and coordination with local, regional, private, and public partners. Near-, mid- and long-term programmatic and policy actions for the associated programs, and technology discussed in this chapter are identified in Chapter 10, with early actions identified in Chapter 11, and technology-related corridor/intersections improvements shown in Appendix D. Additional next step actions will be defined during TMP implementation, as resources and priorities are identified, and as technology continues to evolve.

Transportation Demand Management (TDM)

A Transportation Demand Management (TDM) program and associated strategies provide information, encouragement, and incentives to residents, employees, and visitors, to help travelers know about different transportation options including those that are reliable and affordable, to commute to work or fulfill daily needs such as running errands or treveling to an appointment TDM also encourages the use of transportation options that are lower-emission, non-single occupancy modes, resulting in benefits including transportation system optimization such as traffic congestion reduction, decreased impacts to street infrastructure, reduced environmental impacts, and increased healthy living.

Examples of TDM strategies include:

- Posting information about transportation options on websites and in employee breakrooms
- Providing facilities that support biking to work such as showers and secured bicycle parking
- Providing discounted transit passes to employees
- Incentivizing carpool/vanpool with prioritized parking and subsidized carpool/vanpool memberships
- Telecommuting
- Flexible work schedules
- Parking pricing and demand management

Currently, the City does not have a TDM program - current TDM activities are completed in coordination with existing resources from DRCOG and Westminster-area Transportation Management Associations (TMA). After the TMP is finalized, as indicated in Chapters 10 and 11 actions, the City will continue to coordinate with the DRCOG/TMAs, but will begin to identify the next steps and initiate early actions to develop a TDM program framework and identify the resources needed to develop a TDM program for two key areas 1) Internal: City of Westminster employees and 2) External: residents, businesses, visitors, and development. A TDM program will also be important to help prepare the City for upcoming Colorado state Air Quality Control Commission greenhouse gas reduction/commute trip reduction rulemaking.

Technology and Innovation

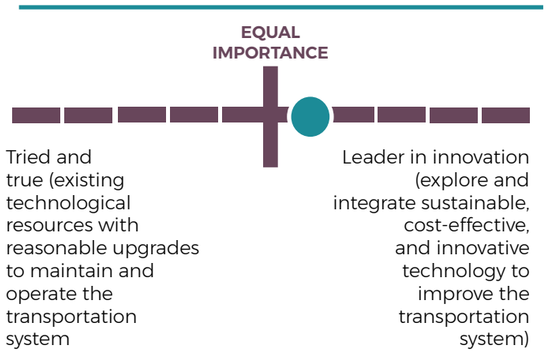
As technology and innovation continues to advance in the transportation industry, it will be important for Westminster to have strategies and resources in place to prepare for the exploration and evaluation of the potential integration of each technology into Westminster's transportation system. A few key areas of transportation-related technologies are discussed below – additional evolving and new technology will continue to be evaluated by the City.

Community Input on Technology & Innovation

During the Phase 1 community engagement (summer/fall 2019), when participants were asked the importance of transportation-related technology and innovation in Westminster, many participants indicated it is important for the City to stay informed about technology and innovation so the City is well-positioned for future changes.

During the Phase 2 community engagement (Summer 2020), participants were asked:

"Please indicate on the sliding scale to what extent the City should explore and integrate emerging transportation-supportive technologies." (The average of over 300 survey responses are indicated by the teal circle)



Intelligent Transportation Systems (ITS)

Intelligent Transportation Systems (ITS) improve transportation safety and mobility and enhances productivity through the integration of advanced communications technologies into transportation infrastructure and vehicles. ITS encompasses a broad range of wireless and wired communications-based information and electronics technology (Source: USDOT Intelligent Transportation Systems Joint Program Office). Example benefits of ITS include:

- Traffic signal improvements that improve the operational efficiency (travel time and safety of vehicles) along arterial streets, reducing the need to increase street capacity (adding travel lanes/street widening)
- Transit signal priority installed along transit routes that makes transit service faster and more reliable by allowing transit to bypass areas of congestion
- Providing travel information system technology to alert drivers of upcoming roadway conditions
- Traffic signal system equipment and infrastructure upgrades that provide real-time data and information about system issues and traffic delays to Traffic Operations staff and Police
- Implementation of a Traffic Operations Center to quickly deploy advanced information to travelers
- Providing emergency vehicle priority at signalized intersections

The City continues to build on previously implemented ITS components in the citywide traffic signal system. Over the next few years, the City will leverage over $1.2 million in regional and state federally-funded grants to implement ITS improvements citywide (Appendix D) including installation of traffic signal system technology components, detection and camera equipment improvements, and travel data collection technology along corridors, collectively improving the safety and efficiency of the traffic signal system and increasing the City's system monitoring, data-collection, and reporting capabilities.

Source: Streetsblog Denver

WESTMINSTER

COMMUNITY INPUT ON MICROMOBILITY

To help inform the City's initial evaluation of micromobility, participants were asked during the TMP Phase 2 community input (summer 2020) to provide their input on the anticipated benefits and challenges of micromobility, their experience using this type of mobility option, and the likelihood of them using this option in Westminster. Highlights of the input received are below, with more details provided in Appendix C. Westminster will continue to seek community input through the continued evaluation of micromobility for Westminster.

- **Most participants indicated that micromobility is most beneficial in Westminster for shorter trips such as to transit, school, stores, or social events.**
- **Participants indicated that the top potential challenges with micromobility in Westminster include interaction safety between modes of transportation, perception of litter/ abandoned vehicles, and speed of the vehicles on sidewalks/paths**

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TRANSPORTATION & MOBILITY PLAN

Micromobility

More cities throughout the United States, as well as in the Denver region, are allowing bicycle and scooter rentals, also known as micromobility or docked/dockless mobility, to operate within their communities to offer residents, commuters, and visitors with additional flexible and affordable ways to travel to their destinations. While micromobility vehicles can be personally-owned, fleets of electric-assisted vehicles are operated by a third party as part of a shared rental system and use either a docked or dockless parking system.

The City, through next-step actions identified in Chapters 10 and 11, will continue to evaluate how this new transportation option can be potentially effectively and safely integrated into Westminster's transportation system. City staff will continue to participate on DRCOG's Micromobility Workgroup and with other related training to learn more about industry best practices and lessons learned for micromobility program implementation and administration. Considerations for micromobility implementation include continued community engagement, conducting a program pilot, identify resources to establish a micromobility administration program. Developing a program will also include, but not limited to, procuring micromobility vendors, developing rider rules and operator regulations, identifying micromobility parking locations, and data management.

Freight Technology

The freight transport industry continues to advance with on- and off-vehicle technology, such as automated and connected freight technologies, to improve the safety and efficiency of movement of goods. Similar to AV/CV technologies, the City will continue to explore and evaluate the evolving technologies and identify how the City can support and integrate the technology into Westminster's transportations system.

In spring/summer 2020 during the COVID-19 pandemic, a autonomous vehicle pilot was used to move food between the MAC and a local food pantry, Growing Home.

Autonomous Vehicle Technology

The development of Autonomous Vehicle (AV) technology, also known as "driverless" vehicles, has made rapid strides in the past decade and is expected to become integrated more into the transportation system. Connected vehicle (CV) technology, which allows vehicles to "talk" to each other, is already being deployed throughout the region and nationally. AV and CV technology provide safety and efficiency benefits – both technologies have the potential to reduce crashes caused by human error and improve travel times by increasing real-time detection abilities which in turn allows real-time adjustments to traffic signal timing during times of heavy congestion. As identified in actions in Chapter 10, the City will continue to evaluate the integration of AV and CV technology into Westminster's transportation infrastructure and observe the implementation and lessons learned of AV and CV technology in other jurisdictions.. The City's role in AV and CV integration includes providing infrastructure and traffic signal system technology to support and communicate with AV and CV, while ensuring that integration of AV and CV is equitable, safe and sustainable.

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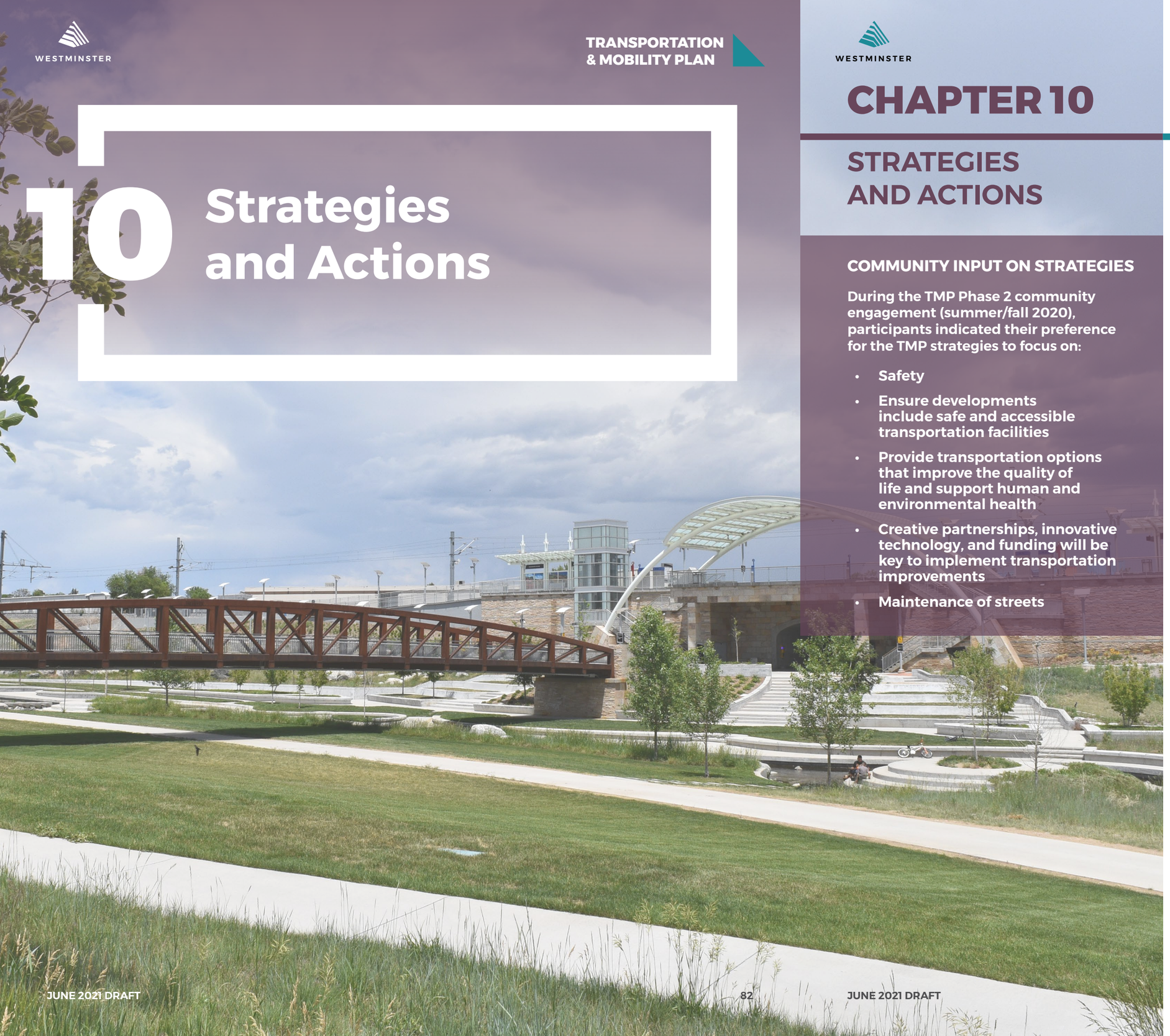
10 Strategies and Actions



CHAPTER 10

STRATEGIES AND ACTIONS

COMMUNITY INPUT ON STRATEGIES

During the TMP Phase 2 community engagement (summer/fall 2020), participants indicated their preference for the TMP strategies to focus on:

- **Safety**
- **Ensure developments include safe and accessible transportation facilities**
- **Provide transportation options that improve the quality of life and support human and environmental health**
- **Creative partnerships, innovative technology, and funding will be key to implement transportation improvements**
- **Maintenance of streets**

The Westminster TMP includes multimodal transportation capital improvement projects, as introduced in the Modal Plans (Chapters 5-8) and details provided in Corridor Profiles and Projects (Appendix D), that will provide a safer and more connected and accessible multimodal transportation system for all users. These investments will be supported by important implementation, programmatic and policy strategies and actions, as presented in this chapter.

Eleven TMP strategies, as shown on the following pages, identify the key focus areas to achieve Westminster's transportation vision and goals. Development of the strategies were informed by community, stakeholder, and City Staff input, industry best practices, existing plans, and other citywide goals. The strategies are supported by over 40 near-term and future actions including: ensuring transportation facilities are safe, connected, and accessible through comprehensive planning, design, operations, and maintenance; identifying and utilizing partnership opportunities for funding and project implementation; exploring and evaluating the integration of transportation technologies; ensuring multimodal transportation facilities are integrated into development and land use; and, establishing transportation-supportive plans, programs, and policies.

The actions are not shown in order of implementation or priority, instead guided by implementation initiation timeframes recommending when an action could begin: near-term (0-5 years), mid-term (6-10 years), and long-term (11 to 20 years). Each action's scope extent, cost estimates, and implementation initiation timeframes may be adjusted as priorities and resources are identified. Chapter 11 identifies key early actions and supporting tasks the City, in coordination with partners, can move forward within the next few years as resources are identified. Many of these early actions may be already underway or will continue to build upon established projects and programs.

THE IMPORTANCE OF PARTNERSHIPS DURING TMP IMPLEMENTATION

The City of Westminster will play a key role in advancing as many TMP actions as possible, utilizing existing and future resources, and implementing actions under the guidance of the TMP goals and other citywide goals and priorities. Successful implementation will also require the coordination, investments, and participation of internal City departments; local, regional, and state partners including adjacent municipalities, Adams and Jefferson Counties, CDOT, DRCOG and RTD; private partners including businesses and developments; and essential support and participation of advocacy and non-profit organizations and neighborhood community organizations.

TMP Strategies To Help Achieve Westminster's Transportation Vision And Goals

The actions that will help achieve each of the following eleven strategies and TMP goals are shown in Tables 10.1 through 10.5 on the following pages, and early actions are shown in Chapter 11.

Strategies for Street Planning, Design, Construction, Operations, and Maintenance

1. Plan, design, build, operate, and maintain Westminster's transportation system to improve and ensure the safety, connectivity, and accessibility for all users.
2. Evaluate and integrate emerging transportation technologies for their role in advancing Westminster's transportation system and maintenance of assets.

Strategies for Transit Capital and Service Improvements

3. Support high-quality and reliable transit service through investment of transit capital and operational improvements.
4. Design and enhance transit stops and stations to create a safe, comfortable, and accessible experience for transit riders.
5. Pursue and utilize partnerships to develop an integrated system of transit services to meet transportation and mobility needs of the community.

Strategy for Bicycle and Pedestrian Network Access, Connectivity, and Safety Improvements

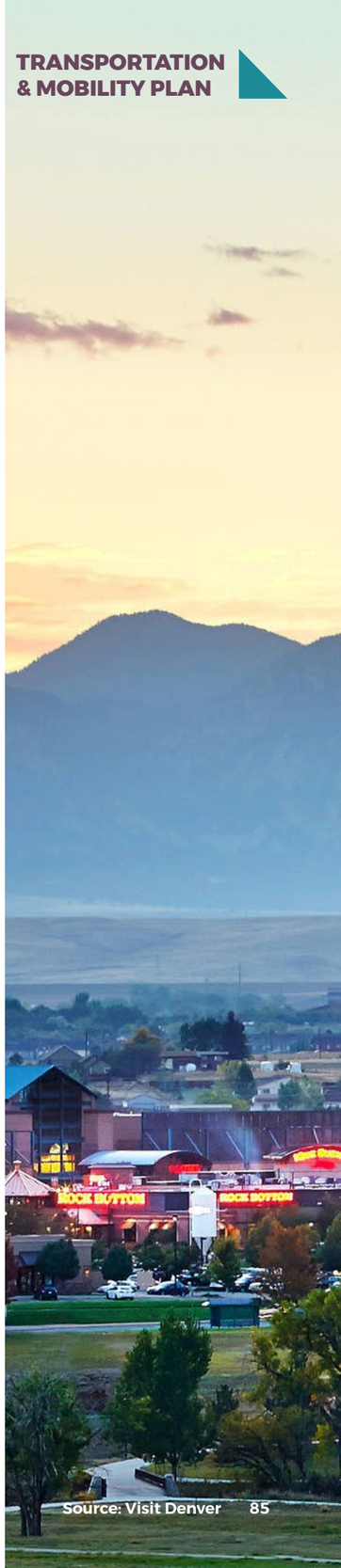
6. Support and enhance a safe, connected, and accessible pedestrian, bicycle, and trail network that ensures seamless connections within the City and into adjacent jurisdictions.

Strategies for Parking and Curbside Management

7. Manage the curb use to ensure the highest and best use of the space to support multimodal transportation access and safety.
8. Encourage innovative management of off-street parking facilities that increase parking efficiencies and shared-parking opportunities.

Strategies for Project and Program Implementation

9. Ensure the outcomes of implementing the TMP actions, projects, and programs meet the current and future transportation and mobility needs of the community.
10. Leverage existing and pursue new partnerships and resources to maximize funding opportunities for transportation infrastructure, program, and service improvements.
11. Continue to promote and provide information about transportation options and encourage the use of transportation modes that provide health and environmental benefits.



Source: Visit Denver

Table 10.1
Strategies and Actions for Street Planning. Design, Construction, Operations, & Maintenance

Strategies & Actions[a]	Implementation Initiation[b]	Example Key Implementation Partners[c] (Additional partners identified during implementation)	Cost Estimates[d]	TMP Goals the Actions Help Achieve[e]						
				Connect	Thrive	Protect	Maintain	Collaborate	Innovate	Fund
Strategy 1: Plan, design, build, operate, and maintain Westminster's transportation system to improve and ensure the safety, connectivity, and accessibility for all users.										
Why it's important: Providing a safe and connected transportation system reduces traffic fatalities and series injuries, especially for pedestrians and bicyclists, the most vulnerable users of the transportation system. It is also important to ensure the system provides connected and accessible infrastructure and services throughout Westminster, ensuring all users regardless of age or ability, can safely access their destination.										
Action 1.1: Develop a Vision Zero Plan and Vision Zero goal for Westminster.	Near-term	City departments including CD, PD, FD, PWU, PRL; Local and regional agencies including DRCOG, CDOT, RTD, adjacent municipalities, advocacy organizations, neighborhood organizations, schools/ school districts	$ to $$	✓	✓	✓	✓	✓		
Action 1.2: Create a Complete Street Policy and identify next-step actions to expand and implement the policy.	Completed: Policy included in the TMP Near-term: Policy expansion and implementation initiation	City departments including CD, PD, FD, PWU, PRL, ED. Local and regional agencies including DRCOG, CDOT, RTD, adjacent municipalities, advocacy organizations, neighborhood organizations, schools/ school districts	$	✓	✓	✓	✓	✓	✓	
Action 1.3: Create a Traffic Calming Policy and identify next-step actions to expand and implement the policy, including development of a neighborhood traffic calming/speed management toolkit.	Completed: Policy included in the TMP Near-term: Policy expansion and implementation initiation. Develop toolkit framework.	City departments including CD, PD, FD, PWU Local and regional agencies including CDOT and adjacent municipalities, advocacy organizations, neighborhood organizations, developers, schools/school districts	$ to $$$	✓	✓	✓	✓	✓	✓	
Action 1.4: Identify and implement safe and innovative multimodal improvements along corridors and at intersections, including those identified in the Vision Zero Plan (Action 1.1), Corridor Profiles and Projects (Appendix D), and Modal Plans (Chapters 5-8). Identify and utilize opportunities to integrate improvements development and existing projects and programs such as pavement resurfacing projects.	Near- to long-term (varies by project)	City departments including CD, PD, FD, PWU, PRL Local and regional agencies including DRCOG, CDOT, RTD, adjacent municipalities, advocacy organizations, schools/school districts, developers, businesses	$ to $$$$	✓	✓	✓	✓	✓	✓	✓

Refer to Appendix A for a list of acronyms and definitions

[a] The order in which the actions are listed does not indicated priority or implementation order. Implementation order will be further defined as priorities and resources are identified. Chapter 11 identifies early actions the City, in coordination with partners, can move forward during the next few years, depending on resources and priorities.

[b] Implementation initiation is when an action is proposed to begin in the near-term (0-5 years), mid-term (6-10 years), or long-term (11-20 years). On-going actions are those already underway and will continue. Implementation timelines may be adjusted based on priorities and resources. Early actions are discussed in Chapter 11.

[c] Implementation of most actions in the TMP will require coordination and/or investments from partners including local and regional agencies, adjacent jurisdictions, businesses, and organizations. Examples of key implementing partners are listed in the table and additional partners will be identified during planning and implementation. Projects will include City Council and community engagement.

[d] Estimated cost ranges shown for each action are for planning purposes only. Costs vary based on implementation year, project scope, and resources. Costs are defined during scoping, planning and/or design, depending on project type. Cost estimates do not include annual maintenance or operational costs. Cost estimates key: **$**: less than $100,000 **$$**: $100,000 - $500,000 **$$$**: $500,001 - $1,000,000 **$$$$**: more than $1,000,000

[e] Refer to Chapter 3 for a description of the TMP goals.

Table 10.1
Strategies and Actions for Street Planning. Design, Construction, Operations, & Maintenance

Strategies & Actions[a]	Implementation Initiation[b]	Example Key Implementation Partners[c] (Additional partners identified during implementation)	Cost Estimates[d]	TMP Goals the Actions Help Achieve[e]						
				Connect	Thrive	Protect	Maintain	Collaborate	Innovate	Fund
Strategy 1: Plan, design, build, operate and maintain Westminster's transportation system to improve and ensure the safety, connectivity, and accessibility for all users.										
Why it's important: Providing a safe and connected transportation system reduces traffic fatalities and series injuries, especially for pedestrians and bicyclists, the most vulnerable users of the transportation system. It is also important to ensure the system provides connected and accessible infrastructure and services throughout Westminster, ensuring all users regardless of age or ability, can safely access their destination.										
Action 1.5: Complete corridor studies/corridor traffic analysis as described in Corridor Profiles and Projects (Appendix D), building on existing projects and programs and improvements identified in Actions 1.1 through 1.4.	Near- to long-term (varies by project)	City departments including CD, PD, FD, PWU, PRL, ED; Local and regional agencies including DRCOG, CDOT, RTD, adjacent municipalities	$ to $$$	✓	✓	✓	✓	✓	✓	✓
Action 1.6: Evaluate and identify the staff, equipment, technology, asset management tools, and sustainable funding resources needed to maintain existing and future street, bicycle, pedestrian, and transit improvements. Ensure infrastructure maintenance requirements including lifecycle costs are included in project planning.	Near-term and as projects are scoped	City departments including CD, PWU, PRL, IT, ICD	$ to $$$$	✓	✓	✓	✓	✓	✓	✓
Action 1.7: Identify freight truck routes and evaluate City regulations needed to establish, monitor, and maintain truck routes. Evaluate the conditions of major streets with the highest traffic use, especially streets that experience high truck freight traffic. Identify and prioritize street repair along major streets that support the economy and access to services and businesses.	Near-term: maintenance evaluation Mid-term: regulations and inventory evaluation	City departments including CD, PWU, PD, ED Local businesses with freight truck deliveries Freight industry organizations	$ to $$		✓	✓	✓	✓		

Refer to Appendix A for a list of acronyms and definitions

[a] The order in which the actions are listed does not indicated priority or implementation order. Implementation order will be further defined as priorities and resources are identified. Chapter 11 identifies early actions the City, in coordination with partners, can move forward during the next few years, depending on resources and priorities.

[b] Implementation initiation is when an action is proposed to begin in the near-term (0-5 years), mid-term (6-10 years), or long-term (11-20 years). On-going actions are those already underway and will continue. Implementation timelines may be adjusted based on priorities and resources. Early actions are discussed in Chapter 11.

[c] Implementation of most actions in the TMP will require coordination and/or investments from partners including local and regional agencies, adjacent jurisdictions, businesses, and organizations. Examples of key implementing partners are listed in the table and additional partners will be identified during planning and implementation. Projects will include City Council and community engagement.

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Table 10.1
Strategies and Actions for Street Planning. Design, Construction, Operations, & Maintenance

Strategies & Actions[a]	Implementation Initiation[b]	Example Key Implementation Partners[c] (Additional partners identified during implementation)	Cost Estimates[d]	TMP Goals the Actions Help Achieve[e]						
				Connect	Thrive	Protect	Maintain	Collaborate	Innovate	Fund
Strategy 2: Evaluate and integrate emerging transportation technologies for their role in advancing Westminster's transportation system and maintenance of assets.										
Why it's important: Integration of technology improves the efficiency, safety, reliability and sustainability of the transportation system, especially for the traffic signal system. Technology also provides critical data outputs used to inform decision-making, contribute to regional traffic coordination, and inform traffic operations improvements along streets. Transportation technology is also used to provide travelers with transportation information. It is also important the City is proactive about how to integrate and regulate new transportation technologies.										
Action 2.1: Develop a Traffic Signal System Plan to assess system conditions and identify and prioritize system needs, including maintenance.	Near-term	City departments including CD, PWU, IT, FD; Regional agencies including DRCOG and CDOT and adjacent jurisdictions, traffic signal technology companies, Smart Cities organizations	$ to $$	✓	✓	✓	✓	✓	✓	✓
Action 2.2: Develop an Intelligent Transportation Systems (ITS) Plan to assess system conditions and identify and prioritize system needs.	Near-term: Inventory of the system Mid-term: Development of the plan	City departments including CD, IT, ICD, PWU, FD; Regional agencies including DRCOG and CDOT and adjacent jurisdictions, traffic signal technology companies, Smart Cities organizations	$ to $$	✓	✓	✓	✓	✓	✓	✓
Action 2.3: Evaluate the existing citywide street and trail light network to identify coverage and infrastructure conditions and types.	Near-term	City departments including CD, PWU, PRL, SO; Organizations including Xcel	$ to $$	✓	✓	✓	✓	✓	✓	✓
Action 2.4: Develop a City-owned street light plan, using the findings from the network evaluation (Action 2.2) to identify and prioritize needs including maintenance and energy efficient lighting	Near-term	City departments including CD, PWU, PRL, SO; Organizations including Xcel	$	✓	✓	✓	✓	✓	✓	✓
Action 2.5: Evaluate the potential for safe and efficient integration of transportation technology such as micromobility, autonomous vehicles, and automated/connected freight.	Underway: Micromobility evaluation On-going evaluation of other technologies with implementation varying from near- to long-term	City departments including CD, PWU, PRL, ED, ICD, IT; Regional agencies including DRCOG, CDOT, RTD Private partners including autonomous and micromobility companies, Smart Cities organizations, freight industry organizations	$ to $$	✓	✓	✓		✓	✓	

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New Transportation Policies for Westminster

To support Westminster's commitment to implement a safe, connected, and accessible multimodal transportation network for all users, two important policies, Complete Streets and Traffic Calming, have been identified as important first steps. Below is the high-level initial policy language to be included in the TMP. After the TMP is finalized, the policies will be further refined, expanded, and integrated into City projects and programs, and additional transportation-supportive policies will be developed.

Complete Streets

Complete Streets are enhanced streets that are designed and operated to focus on the safety and mobility of all users of all ages, abilities, and traveling modes. The concept of Complete Streets encompasses many approaches to planning, designing, and operating streets with all users in mind to make the transportation network safer and more efficient. Complete Streets is an important component of Vision Zero planning and implementation. While the City has already made progress in implementing some Complete Streets principals, a citywide Complete Streets policy is needed to expand and support this effort to address needs of all users of the system when planning new streets, improving existing streets, and implementing multimodal transportation infrastructure and technology.

A number of next step actions, informed by industry best practices and existing resources such as DRCOG's Complete Streets Toolkit, will be identified and implemented after the TMP is finalized, to expand the following Complete Streets Policy and ensure successful implementation of the policy in street planning, design, and operations as well as in new development. Additional Complete Streets-supportive actions also include development of performance measures/metrics to ensure implementation of the Complete Streets Policy and the TMP addresses community access, economic, health, environment, and safety needs.

WESTMINSTER'S COMPLETE STREET POLICY

Westminster's transportation system will be planned, designed, built, and maintained to provide safe, connected, and accessible transportation infrastructure for all users regardless of age, ability, or transportation mode. The Complete Streets Policy and associated Complete Streets principles will be applied to all transportation projects and programs to ensure all users and all modes of transportation are included in planning, analysis, design, construction, and maintenance.

- **Transportation planning, design, construction, and maintenance projects and programs will prioritize safety of all transportation system users, especially for the most vulnerable users: pedestrians and bicyclists.**
- **All transportation projects and programs will be planned and designed to support equity, access to opportunities and resources, and improve community and environmental health.**
- **All transportation projects and programs will consider existing and future land use and community character context to ensure transportation improvements are providing the appropriate connections and services for the community and associated land uses.**
- **Applicable City plans, regulations, design guidelines, procedures, and other documents and processes will be evaluated to identify where the Complete Streets policy and Complete Streets principles will be integrated, to ensure all transportation users are included in projects and decision-making.**

Traffic Calming/Speed Mitigation

Traffic calming (speed mitigation) measures are applied to streets to encourage motorists to drive safely, at or below the speed limit, and to use additional caution and reduce speeds when there are activities along a street such as near high areas of pedestrian or bicycling activities. Traffic calming measures are used to control the speed of the street or change how drivers perceive and respond to conditions along a street. According to the Institute of Transportation Engineers, "Traffic calming has helped to increase the quality of life in urban, suburban, and rural areas by reducing automobile speeds and traffic volumes on neighborhood streets. The implementation of traffic calming on residential streets is illustrative of the tools that traffic engineers and planners can use to meet broader societal needs to facilitate the safe and efficient movement of all street users. Traffic calming measures can help to transform streets and aid in creating a sense of place for communities."

Example of traffic calming measures and tools include, but not limited to, street speed limit reduction, medians, speed tables, roundabouts, curb bulb-outs, buffered/protected bike lanes, traffic signal timing to create slower speeds along a corridor, on-street parking, and landscaping. These tools are evaluated in traffic studies to determine feasibility before implementation. In addition to on-the-street physical traffic calming measures, non-physical measures such as education and enforcement efforts, and neighborhood traffic calming programs can also be effective in traffic calming efforts. Similar to Complete Streets, traffic calming is also an important component in supporting Vision Zero planning and implementation. The City current implements traffic calming measures throughout Westminster, however a citywide Traffic Calming policy is needed to expand this effort and guide the development of a Traffic Calming/Speed Mitigation Toolkit for residential streets and the implementation of associated tools, thresholds/standards, and community engagement. A number of next-step actions, informed by industry best practices, will be identified, after the TMP is finalized, to expand the Traffic Calming policy and toolkit, and ensure successful integration of the policy and toolkit in street planning, design, and operations as well as in new development.

WESTMINSTER'S TRAFFIC CALMING POLICY

To promote neighborhood safety for all transportation users, increase neighborhood involvement in transportation safety, and promote the livability of residential neighborhoods, the City will implement temporary or permanent traffic calming measures along streets, supported by education and enforcement strategies.

- **All transportation projects and new development will integrate traffic calming measures to improve the safety for all modes of transportation, especially along residential streets.**
- **Evaluate and update the City's current traffic calming tools, and identify opportunities to expand implementation of traffic calming measures citywide through the development of a Traffic Calming/ Speed Mitigation Toolkit.**
- **Applicable City plans, regulations, design guidelines, procedures, and other documents and processes will be evaluated to identify where the Traffic Calming policy and traffic calming/speed mitigation measures will be integrated, to ensure transportation safety is included in projects and decision-making.**

Table 10.2
Strategies and Actions for Transit Capital and Service Improvements

Strategies & Actions[a]	Implementation Initiation[b]	Example Key Implementation Partners[c] (Additional partners identified during implementation)	Cost Estimates[d]	TMP Goals the Actions Help Achieve[e]						
				Connect	Thrive	Protect	Maintain	Collaborate	Innovate	Fund
Strategy 3: Support high-quality and reliable transit service through investment of transit capital and operational improvements.										
Why it's important: Implementation of transit capital investments such as bus lanes, transit priority technology at intersections, and major stop enhancements, improves the quality and reliability of transit service, resulting in an increase in ridership, while supporting the environment, economy, and other citywide goals.										
Action 3.1: Pursue opportunities to increase funding resources to implement transit corridor and stop/station capital investments (as described in Appendix D and Chapter 6).	On-going	City departments including CD, PRL, ED, CMO, FIN; Regional agencies including RTD, CDOT, DRCOG	$	✓	✓	✓		✓	✓	✓
Action 3.2: Implement improvements that provide priority to transit on key transit corridors (identified in Chapter 6) to ensure reliable service.	Near-term to mid-term	City departments including CD, PWU, ED Regional agencies including RTD, CDOT	$ to $$$$	✓	✓	✓		✓	✓	
Strategy 4: Design and enhance transit stops and stations to create a safe, comfortable, and accessible experience for transit riders.										
Why it's important: Implementing transit stop and station improvements creates a safer and more comfortable experience for transit riders. Infrastructure improvements such as enhanced street crossings and sidewalks connecting to a stop/station ensures transit riders can safely access and connect to their destinations. Environmental, economic, and social benefits also result from improved transit stop/station areas.										
Action 4.1: Inventory transit stop amenities and conditions, and first and last mile connections to transit stops in Westminster to identify stop improvement needs. Complete inventory in coordination with Action 6.1.	Underway	City departments including CD, PWU Regional agencies including RTD	$ to $$$$	✓	✓			✓	✓	✓
Action 4.2: Implement transit stop amenity upgrades and stop condition and access improvements at transit stops in Westminster (based on results from Action 4.1), including integration of elements including green infrastructure and safety design from programs including Crime Prevention Through Environmental Design (CPTED).	On-going	City departments including CD, PWU, PRL, ED, PD; Regional agencies including RTD; Private partners including businesses, developers, and bus stop amenity companies	$ to $$$	✓	✓			✓	✓	✓
Action 4.3: Modify and implement parking, land use, and other requirements and strategies to incentivize and increase transit ridership. (Refer also to Strategy 11 and associated actions)	Near-term	City departments including CD, ED Regional agencies including RTD; Private partners including businesses and developers	$ to $$$	✓	✓			✓	✓	✓
Action 4.4: Incorporate transit stops into the design and function of adjacent land uses and through other placemaking opportunities including mobility hubs.	Near-term	City departments including CD, ED Regional agencies including RTD; Private partners including businesses and developers	$ to $$$	✓	✓			✓	✓	✓

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Table 10.2
Strategies and Actions for Transit Capital and Service Improvements

Strategies & Actions[a]	Implementation Initiation[b]	Example Key Implementation Partners[c] (Additional partners identified during implementation)	Cost Estimates[d]	TMP Goals the Actions Help Achieve[e]						
				Connect	Thrive	Protect	Maintain	Collaborate	Innovate	Fund
Strategy 5: Pursue and utilize partnerships to develop an integrated system of transit services to meet transportation and mobility needs of the community.										
Why it's important: Westminster is served by high-quality regional service including the Flatiron Flyer bus rapid transit and B-Line commuter rail. However, the local transit service does not meet the needs of the community. Improving the local transit service in Westminster will require public and private partnerships and coordination to ensure successful implementation of local transit service improvements.										
Action 5.1: Coordinate with regional partners for sub-regional transit service.	On-going	City departments including CD, ED; Regional agencies including RTD, adjacent jurisdictions	$ to $$$$	✓	✓			✓	✓	✓
Action 5.2: Evaluate the benefits of allocating City funds to supplementRTD transit service (e.g., buy-up service).	Mid-term to long-term	City departments including CD, FIN, CMO; Regional agencies including RTD	$ to $$$	✓	✓			✓	✓	✓
Action 5.3: Actively pursue partnerships with RTD and other transportation operators to enhance transit service throughout Westminster, including services for older adults, people with disabilities, and other types of mobility services.	Mid-term	City departments including CD Regional agencies including RTD, adjacent jurisdictions; Private shared-transportation operators	$ to $$$	✓	✓			✓	✓	✓
Action 5.4: Explore additional transit service (e.g., FlexRide or rideshare partnerships) to provide local and regional connections within Westminster where transit currently does not serve.	Near- to mid-term	City departments including CD; Regional agencies including RTD, adjacent jurisdictions; Private shared-transportation operators	$ to $$$	✓	✓			✓	✓	✓

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Table 10.3
Strategies and Actions for Bicycle and Pedestrian Network Access, Connectivity, and Safety Improvements

Strategies & Actions[a]	Implementation Initiation[b]	Example Key Implementation Partners[c] (Additional partners identified during implementation)	Cost Estimates[d]	TMP Goals the Actions Help Achieve[e]						
				Connect	Thrive	Protect	Maintain	Collaborate	Innovate	Fund
Strategy 6: Support and enhance a safe, connected, and accessible pedestrian, bicycle, and trail network that ensures seamless connections within the City and into adjacent jurisdictions.										
Why it's important: Pedestrians and bicyclists are the most vulnerable users of the transportation system, emphasizing the importance to provide pedestrian and bicycle facilities that are safe, visible, and comfortable with seamless and connected access to schools, work, transit, services, and other key destinations. Pedestrian and bicycling facilities also encourage healthy lifestyles, decease impacts on the environment, and increase the livability and vitality of the community.										
Action 6.1: Further evaluate the existing pedestrian and bicycle networks to identify infrastructure gaps and conditions. Build on the TMP pedestrian and bicycle network evaluation and recommendations identified in the Bicycle and Pedestrian Plans (Chapters 7 and 8) and Corridor Profiles and Projects (Appendix D). Complete in coordination with Action 4.1.	Near-term	City departments including CD, PWU, PRL; Advocacy organizations, neighborhood organizations, schools/school districts, and organizations such as the Farmers' High Line Canal and Reservoir Company	$	✓	✓	✓	✓			
Action 6.2: Implement a safe, connected, and accessible pedestrian network, incorporating the results from Action 6.1 and the recommendations from the Pedestrian Plan (Chapter 8) and the Corridor Profiles and Projects (Appendix D). Identify and utilize opportunities to integrate improvements development and in existing projects and programs such as pavement resurfacing projects.	On-going	City departments including CD, PWU, PRL, ED; Regional agencies including CDOT, BNSF; Advocacy organizations, developers, adjacent jurisdictions, Adams and Jefferson Counties, schools/school districts, and organizations such as the Farmers' High Line Canal and Reservoir Company	$ to $$$$	✓	✓	✓	✓	✓		
Action 6.3: Implement a safe, comprehensive, and connected on- and off-street bicycle network, incorporating the results from Action 6.1 and the recommendations from the Bicycle Plan (Chapter 7) and the Corridor Profiles and Projects (Appendix D). Identify and utilize opportunities to integrate improvements in development and in existing projects and programs such as pavement resurfacing projects.	On-going	City departments including CD, PWU, PRL, ED; Regional agencies including CDOT; Advocacy organizations, developers, adjacent jurisdictions, Adams and Jefferson Counties, schools/school districts	$ to $$$$	✓	✓	✓	✓	✓		
Action 6.4: Evaluate bicycle parking facilities at major local and regional transportation hubs in Westminster to identify where new or expanded bicycle parking facilities are needed.	Near-term to mid-term	City departments including CD, PWU, PRL, FIN/PB, ED; Regional agencies including RTD, TMOs/TMAs	$	✓	✓	✓	✓	✓		✓
Action 6.5: Require new development to provide safe and accessible sidewalks/sidepaths that connect to adjacent bus stops and community amenities as defined in City plans and standards and at the discretion of City engineering and planning staff.	On-going	City departments including CD, PRL, PWU, ED; Developers, businesses	$ to $$$$	✓	✓	✓		✓		
Action 6.6: Require development to provide appropriate bicycle parking and on-/off-street bicycle facility requirements as defined in City plans and standards and at the discretion of City engineering and planning staff.	On-going	City departments including CD, PWU, ED, Developers, businesses	$ to $$$	✓	✓	✓		✓		

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Table 10.4
Strategies and Actions for Parking and Curbside Management

Strategies & Actions[a]	Implementation Initiation[b]	Example Key Implementation Partners[c] (Additional partners identified during implementation)	Cost Estimates[d]	TMP Goals the Actions Help Achieve[e]						
				Connect	Thrive	Protect	Maintain	Collaborate	Innovate	Fund
Strategy 7: Manage the curbside use to ensure the highest and best use of the space to support multimodal transportation access and safety.										
Why it's important: The use of the curb area along a street may have varying competing needs including access, drop-off, deliveries/loading, parking, and transit. It is important to evaluate and define curb use and areas adjacent to the curb in various land use contexts to ensure the highest and best use of the curb space and support safe and accessible multimodal access and connections. Curbside management also manages parking demand and encourages the use of non-single occupancy modes.										
Action 7.1: Develop a Curbside Management Plan that provides guidance on hierarchies, values of curb uses, education, and enforcement. Build on the Complete Streets Policy and associated actions (Action 1.2). (Could be combined with Action 7.2)	Near-term	City departments including CD, ED, PD, PRL	$	✓	✓	✓	✓	✓	✓	✓
Action 7.2: Develop a Parking Management Plan to provide a framework, vision, and additional guidance for the existing parking program and program resource needs. (Could be combined with Action 7.1)	Near-term	City departments including CD, ED, PD	$	✓						
Action 7.3: Explore and implement parking technology, utilizing partnerships when feasible, that enhances the customer experience and supports parking efficiency, monitoring, enforcement, and wayfinding.	Near-term	City departments including CD, ED, PD, IT	$ to $$$	✓	✓	✓			✓	
Action 7.4: Evaluate the expansion of the Residential Permit Parking (RPP) program.	Near-term	City departments include CD, ED Businesses, residential rental communities and developers	$	✓	✓			✓		✓
Action 7.5: Evaluate the potential for repurposing on-street vehicle parking spaces in key locations to other uses such as bicycle parking, parklets, additional restaurant dining space, curbside pick-up/drop off, etc.	Mid-term	City departments including CD, PD Neighborhood organizations, schools/ school districts	$	✓	✓	✓		✓	✓	
Action 7.6 Evaluate and implement parking pricing strategies to effectively manage curbside parking demand and encourage the use of non-single occupancy modes.	Near-term	City departments including CD, ED Businesses, developers	$	✓	✓	✓				✓

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Table 10.4
Strategies and Actions for Parking and Curbside Management

Strategies & Actions[a]	Implementation Initiation[b]	Example Key Implementation Partners[c] (Additional partners identified during implementation)	Cost Estimates[d]	TMP Goals the Actions Help Achieve[e]						
				Connect	Thrive	Protect	Maintain	Collaborate	Innovate	Fund
Strategy 8: Encourage innovative management of off-street parking facilities that increase parking efficiencies and shared-parking opportunities.										
Why it's important: Instituting parking requirements in development and encouraging shared-use off-street parking facilities can encourage the use of lower-emission and alternative transportation options.										
Action 8.1: Develop and administer strategies and measures to support private businesses in establishing shared parking agreements.	Mid-term	City departments include CD, ED Businesses and developers	$ to $$	✓	✓			✓	✓	
Action 8.2: Continue to explore and initiate public-private shared parking partnerships for both small- and large-scale parking areas.	On-going	City departments include CD, ED Businesses and developers	$	✓	✓			✓	✓	
Action 8.3: Require adaptable parking structures to allow redevelopment of these structures to uses other than parking.	Mid-term	City departments include CD, ED Businesses and developers	$	✓	✓			✓	✓	
Action 8.4: Explore and develop a unbundled parking policy to guide development and residential rental communities to separate parking cost from rent.	Near-term	City departments include CD, ED Businesses, residential rental communities and developers	$	✓	✓			✓	✓	
Action 8.4: Establish a maximum parking requirement as a companion to the minimum parking requirement for development. Evaluate removing minimum parking requirements in high-density transit accessible locations.	Near-term	City departments include CD, ED Businesses and developments	$	✓	✓			✓	✓	

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Table 10.5
Strategies and Actions for Project and Program Implementation

Strategies & Actions[a]	Implementation Initiation[b]	Example Key Implementation Partners[c] (Additional partners identified during implementation)	Cost Estimates[d]	TMP Goals the Actions Help Achieve[e]						
				Connect	Thrive	Protect	Maintain	Collaborate	Innovate	Fund
Strategy 9: Ensure the outcomes of implementing the TMP actions, projects, and programs meet current and future transportation and mobility needs of the community										
Why it's important: Creating a TMP implementation work program and performance measures/metrics will help to identify and prioritize resources and funding needs to implement the TMP, prepare for the implementation of longer-term projects, and track and report implementation progress over time.										
Action 9.1: Develop a TMP implementation work plan to prioritize the near-term actions and identify the resource and funding needs.	Near-term (early action)	City departments including CD, PWU, PRL, ED	✓	✓	✓	✓	✓	✓	✓	✓
Action 9.2: Identify sustainable funding for the on-going implementation, management, operations, and maintenance of transportation improvements.	Near-term	City departments including CD, FIN/PB, ED, PRL, PWU; Regional agencies including DRCOG, RTD, CDOT	✓	✓	✓	✓	✓	✓	✓	✓
Action 9.3: Develop performance measures and targets to measure and guide the implementation of the TMP actions and projects over time.	Near-term	City departments including CD, PWU, PRL, SO	✓	✓	✓	✓	✓	✓	✓	✓
Action 9.4: Explore and pursue transportation recognition programs/designations (e.g., Bicycle-Friendly City, Age-Friendly Community).	Near-term	City departments including CD, PRL, SO	✓	✓	✓	✓		✓	✓	✓
Action 9.5: Periodically review existing City documents, regulations, standards, development review guidance, policies, and plans and identify revisions or additions needed to reflect, for example: revisions to the TMP, changes in industry best practices, and changes in demographics or travel patterns.	On-going	City departments including CD, PWU, PRL, ED, SO	✓	✓	✓	✓	✓	✓	✓	

Refer to Appendix A for a list of acronyms and definitions

[a] The order in which the actions are listed does not indicated priority or implementation order. Implementation order will be further defined as priorities and resources are identified. Chapter 11 identifies early actions the City, in coordination with partners, can move forward during the next few years, depending on resources and priorities.

[b] Implementation initiation is when an action is proposed to begin in the near-term (0-5 years), mid-term (6-10 years), or long-term (11-20 years). On-going actions are those already underway and will continue. Implementation timelines may be adjusted based on priorities and resources. Early actions are discussed in Chapter 11.

[c] Implementation of most actions in the TMP will require coordination and/or investments from partners including local and regional agencies, adjacent jurisdictions, businesses, and organizations. Examples of key implementing partners are listed in the table and additional partners will be identified during planning and implementation. Projects will include City Council and community engagement.

[d] Estimated cost ranges shown for each action are for planning purposes only. Costs vary based on implementation year, project scope, and resources. Costs are defined during scoping, planning and/or design, depending on project type. Cost estimates do not include annual maintenance or operational costs. Cost estimates key: **$**: less than $100,000 **$$**: $100,000 - $500,000 **$$$**: $500,001 - $1,000,000 **$$$$**: more than $1,000,000

[e] Refer to Chapter 3 for a description of the TMP goals.

Table 10.5
Strategies and Actions for Project and Program Implementation

Strategies & Actions[a]	Implementation Initiation[b]	Example Key Implementation Partners[c] (Additional partners identified during implementation)	Cost Estimates[d]	TMP Goals the Actions Help Achieve[e]						
				Connect	Thrive	Protect	Maintain	Collaborate	Innovate	Fund
Strategy 10: Leverage existing and pursue new partnerships and resources to maximize funding opportunities for transportation infrastructure, program, and service improvements.										
Why it's important: Successful implementation of the TMP will require coordination and resources from local, regional, state, private, and public partners including agencies, adjacent jurisdictions, organizations, and businesses. Identifying and pursuing external funding resources including grants will be critical in the delivery of corridor and intersection projects.										
Action 10.1: Identify and pursue private and public transportation improvement funding sources and partnerships at the federal, state, regional, and local level.	Underway and on-going	City departments including CD, PWU, PRL, ED, FIN/PB, SUS; Regional agencies including DRCOG, RTD, CDOT; Private partners and funding opportunities	$ to $$	✓	✓	✓	✓	✓	✓	✓
Action 10.2: Utilize the TMP to guide the scoping and budgeting for all phases of transportation improvement projects (planning, design, construction, operations, and maintenance).	Near-term	City departments including CD, FIN/PB, PWU, PRL, ED	$	✓	✓	✓	✓	✓	✓	✓
Action 10.3: Explore, identify, and strengthen partnerships to implement transportation improvements and programs.	On-going	City departments including CD, PWU, PRL, ED; Private and public partners including CDOT, RTD, DRCOG, adjacent jurisdictions, Adams and Jefferson Counties, businesses, developers, neighborhood organizations, schools/school districts	$ to $$	✓	✓	✓		✓	✓	✓
Strategy 11: Continue to promote and provide information about transportation options and encourage the use of transportation modes that provide health and environmental benefits.										
Why it's important: Providing information, encouragement, and incentives to residents, businesses, visitors, and City employees helps travelers know about transportation options and encourage use of low-emission/non-single occupancy modes of transportation. Implementing programs that provide transportation option information can result in benefits including transportation system optimization such as traffic congestion reduction, reduce environmental impacts, and increase healthy living.										
Action 11.1: Develop an internal (City Employee) and external (development, businesses, residents, visitors) Transportation Demand Management (TDM) Plan and Program.	Near-term	City departments including CD, PRL, ED, SO, HR, FIN/PB, TMOs/TMAs, DRCOG, businesses and development	$$ to $$$	✓	✓	✓		✓	✓	✓
Action 11.2: Increase coordination with DRCOG, Regional Air Quality Council and Transportation Management Organizations (TMOs/TMAs) to incentivize and encourage non-single-occupancy trips.		City departments including CD, SO TMOs/TMAs, DRCOG, RAQC	$ to $$	✓	✓	✓		✓	✓	✓
Action 11.3: Incorporate TDM programs and strategies as part of development plan review and implementation, capital improvements programming, and preparation of specific and area plans.	On-going Near- to mid-term integration of TDM Program guidelines	City departments including CD, ED Developers, businesses	$	✓	✓	✓		✓	✓	✓

Refer to Appendix A for a list of acronyms and definitions

[a] The order in which the actions are listed does not indicated priority or implementation order. Implementation order will be further defined as priorities and resources are identified. Chapter 11 identifies early actions the City, in coordination with partners, can move forward during the next few years, depending on resources and priorities.

[b] Implementation initiation is when an action is proposed to begin in the near-term (0-5 years), mid-term (6-10 years), or long-term (11-20 years). On-going actions are those already underway and will continue. Implementation timelines may be adjusted based on priorities and resources. Early actions are discussed in Chapter 11.

[c] Implementation of most actions in the TMP will require coordination and/or investments from partners including local and regional agencies, adjacent jurisdictions, businesses, and organizations. Examples of key implementing partners are listed in the table and additional partners will be identified during planning and implementation. Projects will include City Council and community engagement.

[d] Estimated cost ranges shown for each action are for planning purposes only. Costs vary based on implementation year, project scope, and resources. Costs are defined during scoping, planning and/or design, depending on project type. Cost estimates do not include annual maintenance or operational costs. Cost estimates key: **$**: less than $100,000 **$$**: $100,000 - $500,000 **$$$**: $500,001 - $1,000,000 **$$$$**: more than $1,000,000

[e] Refer to Chapter 3 for a description of the TMP goals.

11 Implementation and Next Steps

CHAPTER 11

IMPLEMENTATION AND NEXT STEPS

This chapter identifies the next steps for the City, in coordination with internal and external partners, to begin early initiation for a number of the key TMP actions (Chapter 10) and projects (Appendix D), as resources and priorities are identified. The chapter also includes a high-level discussion of the TMP costs and funding, as well as an introduction to the next steps to track and report on the progress of the TMP implementation. A TMP Implementation Workplan will be developed after the TMP is finalized, to prioritize the early and near-term actions and to be used to inform Staff and funding resource needs. The TMP will be updated periodically to reflect changes in technology, industry guidance, resources, priorities, and community and demographic needs, and as projects are added or completed. Changes to the TMP will be approved by the City Engineer.

Early Actions

Building on the actions identified in Chapter 10, Table 11.1 outlines, the early actions the City, in coordination with partners, will initiate over the next few years, depending on priorities and resources. A number of these early actions may be already underway or will continue to build upon established projects and programs. Many actions will require evaluating the expansion of the City's financial and Staff resources to manage and implement the actions, projects, and programs. Most actions can be supported by partnerships and external funding resources such as grants.

Table 11.1

TMP Implementation: Early Actions

Strategy/ Early Action	Action Reference (Chapter 10)
Strategy 1: Plan, design, build, operate, and maintain Westminster's transportation system to improve and ensure the safety, connectivity, and accessibility for all users.	
EA.1 Begin the next steps and identify resources needed to develop a Vision Zero Plan. Continue City staff participation in the DRCOG Regional Vision Zero working groups, as well as other Vision Zero training opportunities. Continue to integrate and implement Vision Zero elements into transportation projects and programs.	**1.1**, 1.2, 1.3, 1.4, 1.5
EA.2 Identify and begin the next steps to expand the Complete Streets policy and integrate the policy and Complete Streets principles into projects, programs, and development. Continue City staff participation in the DRCOG Regional Complete Streets Toolkit development and next steps, as well as other Complete Streets training opportunities.	1.1, **1.2,** 1.3, 1.4, 1.5, 4.4, 7.1
EA.3 Identify and begin the next steps to expand the Traffic Calming policy and integrate the policy and traffic calming measures into projects, programs, and development. Identify resources to develop a traffic calming/speed mitigation neighborhood toolkit.	1.1, 1.2, **1.3**, 1.4, 1.5
EA.4 Complete the Federal Boulevard Multimodal Transportation Study and identify next steps and resources to implement the study recommendations.	1.2, 1.3, 1.4, **1.5,** 1.6, 4.1, 4.2, 4.4, 5.3, 6.2, 6.3. 7.5, 10.1, 10.2, 10.3
EA.5 Identify the resources needed to begin the next corridor study.	**1.5**, 10.1, 10.2, 10.3
EA.6 Pilot and evaluate traffic signal cabinet art wrap materials to inform potential expansion citywide.	1.1, 1.2, 1.3, 1.4, 10.1, 10.2, 10.3
EA.7 Review existing City documents, regulations, standards, policies, and plans and identify revisions or additions that require integration of Complete Streets, Vision Zero, traffic calming measures, wayfinding, and other multimodal transportation elements identified in the TMP. Ensure elements from the TMP are integrated into development guidance and requirements.	1.1, 1.2, 1.3, 4.4, 6.5, 6.6, 7.1, 8.4, 9.5, 10.2, 11.3
EA.8 Evaluate the Adopt-a-Street (PWU Department) and Adopt-a-Stop (RTD) programs to identify opportunities for program enhancement, promotion, and partnerships.	1.6, 4.1, 4.2, 5.3
EA.9 Evaluate staffing, equipment, and technology resources and needs for the maintenance of existing and future street, bicycle, pedestrian, and transit infrastructure.	**1.6**

Strategy/ Early Action	Action Reference (Chapter 10)
Strategy 2: Evaluate and integrate emerging transportation technologies for their role in advancing Westminster's transportation system and maintenance of assets.	
EA.10 Inventory the traffic signal system and ITS system assets, including evaluating and documenting infrastructure/ equipment life span to account for maintenance resources. Develop a GIS dataset of the assets and integrate with asset management software. Develop a framework/outline for the Traffic Signal System Plan and Traffic Operations Center vision.	**2.1, 2.2**
EA.11 Continue to upgrade the traffic signal system infrastructure and technology funded by DRCOG Regional Transportation Operations & Technology and CDOT Highway Safety Improvement Program grants.	**1.4**, 2.1, 2.2
EA.12 Evaluate City-owned street and trail light implementation and maintenance processes and resources.	**2.3, 2.4**
EA.13 Evaluate the potential integration of micromobility into Westminster's transportation network, building on the initial community input gathered during the development of the TMP. Continue City staff participation in the DRCOG Micromobility working group.	1.2, **2.5**, 4.1, 7.1, 10.3
Strategy 3: Support high-quality and reliable transit service through investment of transit capital improvements.	
Strategy 5: Pursue and utilize partnerships to develop an integrated system of transit services to meet transportation and mobility needs of the community.	
EA.14 Continue Staff participation in the Reimagine RTD planning efforts, RTD bus route service changes, stop enhancements, and other regional and local transit planning and implementation projects.	**5.3,** 10.3
EA.15 Identify and utilize opportunities to integrate transit reliability, safety, and access improvements into street projects and development.	1.1, 1.4, 1.5, 4.1, **4.2, 4.4**
EA.16 Continue to support regional transit projects including the RTD B-Line commuter rail extension (Northwest Rail Line) to Downtown Westminster and Church Ranch Station.	5.1, **5.3,** 5.4
Strategy 4: Design and enhance transit stops and stations to create a safe, comfortable, and accessible experience for transit riders.	
EA.17 Complete an inventory of bus stop amenities and conditions, including first and last mile connections to transit. Evaluate the inventory to identify and prioritize bus stop improvements and improvement implementation resource needs. Evaluate the existing transit stop amenities contract. Develop transit improvements toolkit and stop and station standards.	5.1, **5.3**, 5.4

Refer to Chapter 10 and Appendix D for additional actions and details not reflected in this table. The order of the early actions does not indicate implementation order nor priority. Details including calculation of cost estimates, identification of partnerships, and definition of scope extent for each of the actions will be defined during next step actions, scoping, analysis, or design, and will be based on implementation resource availability and priorities. Actions bolded in the Action Reference column indicates the actions in Chapter 10 directly addressed by the associated early action – all other actions listed have some component supported by the early action.

Table 11.1

TMP Implementation: Early Actions

Strategy/ Early Action	Action Reference (Chapter 10)
Strategy 6: Support and enhance a safe, connected, and accessible pedestrian and bicycle network that ensures seamless connections within the City and into adjacent jurisdictions.	
EA.18 Inventory the bicycle and pedestrian system gaps and conditions, including wayfinding, signage and enforcement. Begin to prioritize the improvements (identified through the inventory and TMP projects) and identify resources needed for improvement implementation.	4.1, 4.2, **6.1**, 6.2, 6.3
EA.19 Identify and continue to utilize opportunities to integrate bicycle and pedestrian improvements into upcoming projects including street resurfacing projects and development.	1.4, 1.5, 1.6, **6.2, 6.3**
EA.20 Identify and pursue funding resources to expand bicycle parking facilities and amenities in Westminster along regional trails, such as the US 36 Bikeway, Big Dry Creek Trail, Little Dry Creek Trail/Rocky Mountain Greenway and the Farmers' High Line Canal Trail.	**6.4**, 10.1, 10.2, 10.3
EA.21 Review and update the bicycle and pedestrian GIS datasets.	6.1, 6.2, 6.3
EA.22 Evaluate the Safety Stop Law for the potential adoption in Westminster.	1.1, 6.1, 6.3
EA.23 Continue to build partnerships with schools and school districts in Westminster to encourage safe walking and biking to schools and identify partnership opportunities to improve transportation infrastructure that support Safe Routes to School (SRTS) initiatives.	1.1, 1.2, 1.3, 1.4, 6.1, 6.2, 6.3, **10.3**
Strategy 7: Manage the curbside use to ensure the highest and best use of the space to support multimodal transportation access and safety.	
EA.24 Develop a Curbside Management Plan and Parking Management Plan (potentially combined into one plan) guided by the TMP, Complete Streets policy, Traffic Calming policy, micromobility evaluation, and industry best practices.	1.1, 1.2, 1.3, **7.1, 7.2**

Strategy/ Early Action	Action Reference (Chapter 10)
Strategy 8: Encourage innovative management of off-street parking facilities that increase parking efficiencies and shared-parking opportunities.	
EA.25 Evaluate the minimum and maximum parking requirements for development. Modify City standards, specifications, and codes to reflect the outcome of the parking requirements evaluation.	**8.4**
Strategy 9: Manage and monitor the implementation of the TMP actions, projects, and programs to ensure the outcomes meet transportation and mobility needs of the community.	
EA.26 Develop the TMP Implementation Work Plan, including performance measurements/metrics and prioritization of project and early action implementation.	1.6, **9.1, 9.3**
EA.27 Evaluate the staffing resource needs to implement, manage, and maintain the near-term and early actions in the TMP.	**1.6, 9.1, 9.2**, 10.1, 10.2, 10.3
EA.28 Begin evaluation of sustainable transportation funding for on-going transportation improvement implementation and maintenance and transportation programs.	**1.6, 9.1, 9.2**, 10.1, 10.2, 10.3
EA.29 Integrate the TMP goals and other guidance from the TMP into the CIP budget development process and other decision-making processes.	9.1, **10.2**
EA.30 Pursue recognition/designations such as Bicycle Friendly City, Age-Friendly Community, and walkable community.	**9.4**
EA.31 Develop technical and guidance toolkits including a Transit Improvement Toolkit, Pedestrian Infrastructure/ Connections Improvement Toolkit, Crossing Treatment Guidelines, Transportation Demand Management Toolkit, and Traffic Calming Toolkit.	1.1, 1.2, 1.3, 9.1, 9.3
EA.32 Complete the Summary and Completion Status of Past Transportations Plans (2030 Bicycle Master Plan, 2008 Comprehensive Roadway Plan, and Mobility Action Plan).	9.1, **9.3**

Refer to Chapter 10 and Appendix D for additional actions and details not reflected in this table. The order of the early actions does not indicate implementation order nor priority. Details including calculation of cost estimates, identification of partnerships, and definition of scope extent for each of the actions will be defined during next step actions, scoping, analysis, or design, and will be based on implementation resource availability and priorities. Actions bolded in the Action Reference column indicates the actions in Chapter 10 directly addressed by the associated early action – all other actions listed have some component supported by the early action.

Table 11.1

TMP Implementation: Early Actions

Strategy/ Early Action	Action Reference (Chapter 10)
Strategy 10: Leverage existing and pursue new partnerships and resources to maximize funding opportunities for transportation infrastructure, program, and service improvements.	
EA.33 Complete an inventory of external transportation funding resources. Begin aligning the TMP actions and projects to the funding resources to identify implementation priorities, resources, and local grant match needs.	9.2, **10.1,** 10.2
EA.34 Provide DRCOG applicable transportation network revisions identified in the TMP to inform updates to regional models and plans.	1.4, 10.1, 10.3
Strategy 11: Continue to promote and provide information about transportation options and encourage the use of transportation modes that provide health and environmental benefits.	
EA.35 Develop a TDM plan framework and begin to identify funding and staffing resource needs to initiate an internal and external TDM program. Ensure the internal TDM program aligns with the upcoming Greenhouse Gas Transportation Rule requirements for reduction in employee commute trips.	4.3, 10.2, **11.1,** 11.2, 11.3
EA.36 Continue to provide support and coordinate with existing internal, local, regional and statewide TDM efforts (e.g., Westminster's SAGE program and DRCOG Way-to-Go commute challenges including Bike to Work Day).	11.1, **11.2**

Refer to Chapter 10 and Appendix D for additional actions and details not reflected in this table. The order of the early actions does not indicate implementation order nor priority. Details including calculation of cost estimates, identification of partnerships, and definition of scope extent for each of the actions will be defined during next step actions, scoping, analysis, or design, and will be based on implementation resource availability and priorities. Actions bolded in the Action Reference column indicates the actions in Chapter 10 directly addressed by the associated early action – all other actions listed have some component supported by the early action.

Costs

The planning-level cost estimate ranges provided for each improvement project (Appendix D) and action (Chapter 10) in the TMP can be used as initial high-level guidance to identify implementation resource and funding needs, however, additional project and program scoping will be required to define more exact costs including factoring in cost impacts such as inflation, scope extent, and Staff resource needs. Costs estimates do not include associated costs for on-going program management, operations, or maintenance. Cost estimates for the projects identified in the corridor profiles (Appendix D) will be determined on a project-by-project basis and completion of design and studies/analyses also determines next step construction, operations, and maintenance costs as well as resource needs. More defined cost estimates for many of the early actions will be evaluated during the development of the TMP Implementation Workplan.

Funding

A number of near-term projects, with some already underway, identified in Table 11.1, Chapter 10 and Appendix D, are funded through dedicated resources including the City's Capital Improvement Program and regional or state federally-funded grants. The remaining TMP projects and actions are currently unfunded, therefore, both Staff and funding resources will need to be evaluated. Many projects will be funded on a project-by-project basis, whereas other projects and programmatic actions will require on-going sustainable funding not only for implementation but also for on-going management, operations, and maintenance. Funding and resource decision-making will be informed by the TMP, goals and policies, and the TMP Implementation Workplan.

As identified in early and near-term actions, the City, in coordination with internal and external partners, will continue to identify and pursue external funding resources including grants. Development of an inventory of all external transportation funding opportunities is currently underway and will be used to help align projects with funding resources, and proactively identify City funding resources for local matching funds required for each grant.

Partnerships

While the City can complete many actions outlined in the TMP, many actions and projects will still require coordination, investments, and participation of local, regional, and state partners. These partners include adjacent municipalities, Adams and Jefferson Counties, CDOT, DRCOG, and RTD, as well as the essential support and participation of businesses, advocacy and non-profit organizations, schools, neighborhood organizations, and the residents of the community. Many of these partners participated in the development of the TMP. Transportation improvements provided through new development will also help implement recommendations from the TMP. Key implementing partners have been identified for each associated action and project in Chapter 10 and Appendix D, and additional partners will be identified as planning and implementation evolves.

Source: City of Westminster

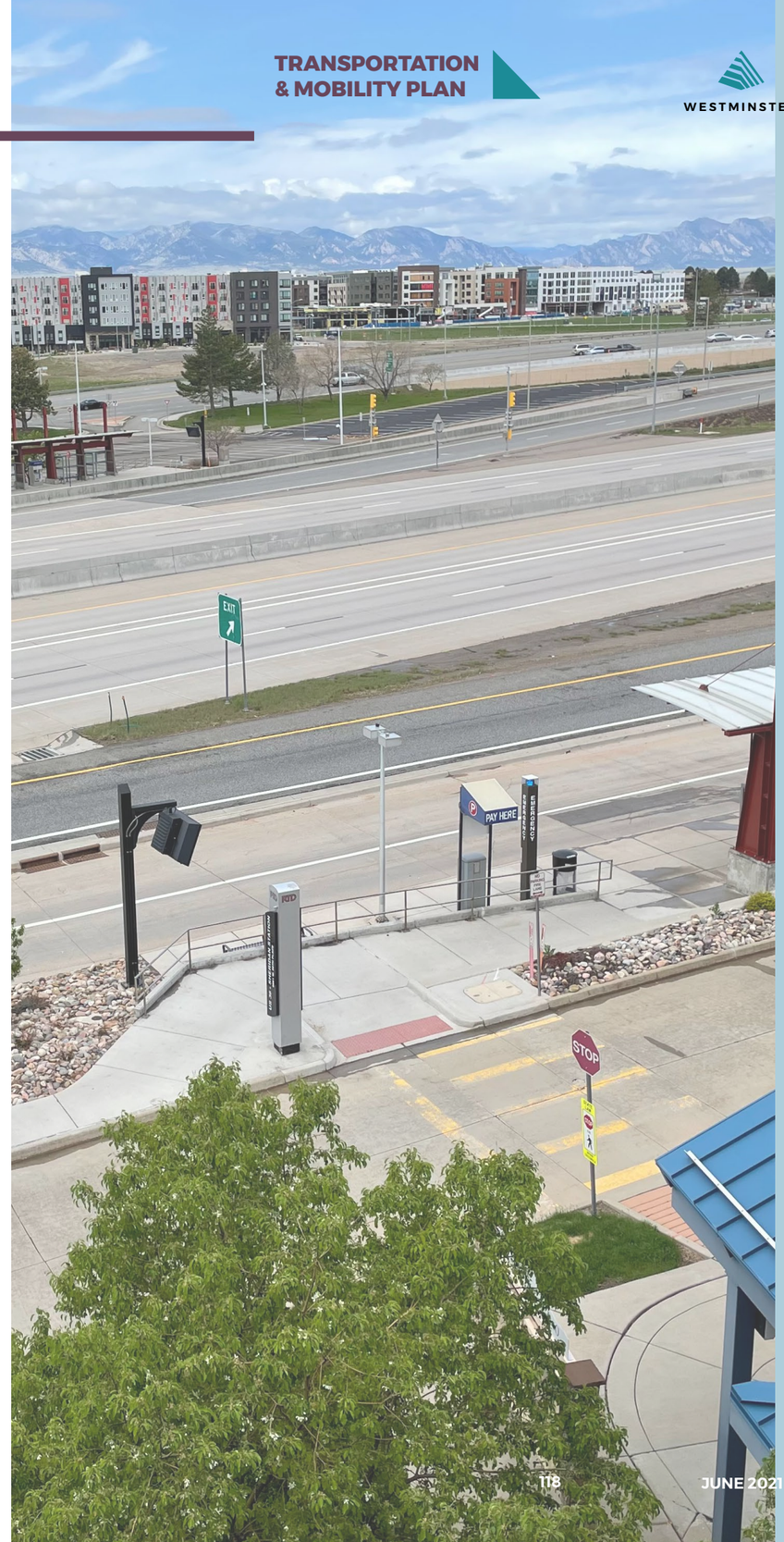
MAINTAINING TRANSPORTATION INVESTMENTS

Once transportation improvements are implemented, most will require additional Staff and resources to maintain the new infrastructure. Often referred to as Operations and Maintenance (O&M), these costs begin after implementation, and include the tasks and labor associated with daily operations, repairs, and other activities needed to preserve an asset. One example is the construction of new bicycle lane: once constructed, maintenance Staff and resources will be needed to maintain the new facility; the pavement markings will need to be refreshed; and seasonal snow plowing will be required to clear the bicycle lane. While bicycle lanes can often be plowed using existing vehicles, new multiuse paths and protected bicycle lanes may require narrower, specialized snow plow vehicles, which in turn requires additional Staff training and resources to operate. Another example is the implementation of transit stop amenities and the associated resources required to maintain the stop area and amenity. These are just a few examples of additional Staff and resources required after implementation. It will be important to budget and plan for the future Staff and resources required to maintain the existing and future infrastructure.

How Do We Track Progress?

To report on the progress of implementing the TMP action and projects, how the TMP goals and strategies are achieved, and the associated impacts implementation has on Westminster's transportation system, it is anticipated the TMP performance measures and metrics will be developed within approximately one year after the TMP is finalized, once data becomes more reflective of post-pandemic travel trends. The COVID-19 pandemic created significant changes to people's travel patterns at the time and it is unclear the degree those travel patterns will be retained post-pandemic – it may take some time for transportation data to become more reflective of the post-pandemic travel trends. The baseline and current conditions data used to develop the TMP was based on available data from various resources and prior to the COVID-19 impacts. Development of the TMP performance measures and metrics, future updates to the TMP, and implementation of the TMP actions and projects will use the best and most recent data available.

Below are example performance measures and metrics that will be defined within the next year or when data becomes more reflective of post-pandemic travel trends. Both quantitative and qualitative metrics, with most being measured at a citywide level, will measure changes, benefits, and project delivery. Capital improvements that are implemented on a project-by-project basis will have detailed and/or additional metrics reported at the project level. Other metrics may be defined and measured by other internal and external partners and programs. Data resources will include, but not limited to, DRCOG, RTD, CDOT, the Census, traffic data, corridor studies/traffic analyses, and other internal and external resources and partners.



Systemwide/Multimodal Transportation Measures

- Change in commute mode share
  (Goal: decrease single-occupancy vehicle %, increase other mode %)
- Change in all-trips mode share
  (Goal: decrease single-occupancy vehicle %, increase other mode %)
- Change in vehicle miles traveled
  (Goal: decrease VMT miles)
- Change in number of crashes per mode
  (Goal: decrease in number of crashes, fatalities, serious injuries – also related to goals defined in a Vision Zero Plan
- Implementation of projects as related to demographic data

Transit Measures

- Change in transit ridership
  (Goal: increase transit ridership)
- Number of transit stops or stations enhanced with amenities and improved connections
- Change in transit service performance
  (Goal: increase reliability, decrease delay)

Bicycle Measures

- Miles/number of bicycle facilities implemented
- Regional trails user counts (goal: increase number of users)

Pedestrian Measures

- Miles/number of pedestrian facilities implemented
- Number of facilities improved for accessibility
- Regional trails user counts (goal: increase number of users)

Project & Action Implementation Measures

- Completion status of TMP actions and projects
- Number of corridor studies/traffic analyses completed
- Total external transportation funding (e.g., grants) received
- Total ITS/traffic signal system infrastructure/equipment installed
- Status of program development/implementation (individual programs will develop additional metrics)
- Summary of safe routes to school improvements
- Ensure equity is incorporated into transportation projects and programs (metrics to be defined on citywide, program, and project-levels including affordability, accessibility, and connections/access to opportunity)

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JUNE 2021 DRAFT

WESTMINSTER

4800 W. 92nd Ave., Westminster, CO 80031