Pikes Peak Area Council of Governments
Communities Working Together

MEETING AGENDA
COMMUNITY ADVISORY COMMITTEE
Friday, December 20, 2024, 3:00 PM

In-Person
Pikes Peak Area Council of Governments Main Conference Room
14 S. Chestnut St., Colorado Springs, CO 80905

Virtual: Microsoft Teams (Video and Audio)
www.microsoft.com/en-us/microsoft-teams/join-a-meeting
M eeting ID: 276 869 477 820
Passcode: gB9bL6XF

Virtual: Phone (Audio Only)
Phone: (929) 242-8427
Conference ID: 919 251 386

1. **CALL TO ORDER / ESTABLISH A QUORUM / INTRODUCTIONS**

2. **AGENDA APPROVAL**

3. **CONSENT ITEMS**
(These items will be acted upon as a whole, unless they are called up for discussion by a Committee member or a citizen wishing to address the Committee.)
   A. Approval of the minutes from the Nov. 22, 2024, meeting

4. **PUBLIC COMMENTS / PRESENTATIONS**
   A. Public Comments. Public comments can be made before or during the meeting. Public comments during the meeting is limited to three minutes and can be done at the meeting location or remotely by using the posted Microsoft Teams link. Individuals are encouraged to notify the meeting organizer at before the start of the meeting with the agenda item they

would like to comment on. Public comments can be submitted before the meeting via email to ppacg@ppacg.org for distribution to the committee members.

5. **ACTION ITEMS**
   - **A.** Annual Safety Targets - Danelle Miller, PPACG Senior Transportation Planner; and David Swenka, CDOT
   - **B.** CDOT Infrastructure Condition and System Performance Target Setting - Danelle Miller, PPACG Senior Transportation Planner and Jacob Kershner, CDOT
   - **C.** LRTP Release for Public Comment - Danelle Miller, Senior Transportation Planner
6. **INFORMATION ITEMS**
7. **MEMBER ENTITY ANNOUNCEMENTS**
8. **MEETING SCHEDULE**
   - **A.** Upcoming PPACG Meeting Schedule
9. **ADJOURNMENT**

The Pikes Peak Area Council of Governments will not discriminate against qualified individuals with disabilities. Meetings are available to join remotely via Microsoft Teams, and meetings include live transcription for remote and in-person attendees using automated software. Should you require any additional auxiliary aids or services to participate, please contact ppacg@ppacg.org or (719) 471-7080 x139 as soon as possible so that we can do our best to accommodate your needs.

Si necesita ayuda con traducción, llame por favor al (719) 471-7080 x139 o ppacg@ppacg.org.

Pikes Peak Area Council of Governments
Communities Working Together

MEETING MINUTES
COMMUNITY ADVISORY COMMITTEE
November 22, 2024, 3 p.m.

Virtual – Microsoft Teams (Video and Audio)
www.microsoft.com/en-us/microsoft-teams/join-a-meeting
Meeting ID: 298 417 486 884
Passcode: FcYUNa
Virtual – Phone (Audio Only)
Phone Number: (929) 242-8427
Conference ID: 984 455 216

1. **CALL TO ORDER / ESTABLISH A QUORUM / INTRODUCTIONS**
   First Chair Ed Dills called the meeting to order at 3:01 pm.

2. **AGENDA APPROVAL**
   Teresa Cheek motioned to approve the agenda; Roland Rainey seconded. The motion was approved unanimously.

3. **CONSENT ITEMS**
   A. Approval of the minutes of the October 30, 2024, meeting
   Maile Foster motioned to approve the minutes, seconded by Tersea Cheek. The motion was approved unanimously.

4. **PUBLIC COMMENTS/PRESENTATIONS**
   None.

5. **ACTION ITEMS**
   A. 2025 CAC Officers
   Danelle Miller, Sr. Transportation Planner, provided an overview of the CAC Officers. Roland Rainey was nominated as Chair, Ed Dills as Vice Chair, and Tyler Peoples 2nd Vice Chair. All three nominations were approved unanimously.

6. **INFORMATION ITEMS**
   A. CDOT Regional Priority Program Funding
   Geoff Guthrie of CDOT gave a brief overview of the CDOT Regional Priority Program Funding and answered questions in regard to future funds.
   B. Long Range Transportation Plan Update and Review
   Danelle Miller, Sr. Transportation Planner, gave a brief overview of the Long Range Transportation Plan and answered questions about the stakeholders that are involved as well as gathering public comments and hosting open houses.

7. **MEMBER ENTITY ANNOUNCEMENTS**
   Welling Clark wrote a letter to Bill Boles expressing his gratitude for the work that he has done in his 6 years on the CAC.

8. **MEETING SCHEDULE**
   As the holiday season approaches there may be a couple of alternate dates for meetings; staff will keep members updated.

9. **ADJOURNMENT**
   The meeting was adjourned at 3:35pm.

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Attendees		
Present	**Name**	**Agency/Affiliation**
X	Andrea Perry	League of Women Voters
X	Bill Boles	Park County
	Brad Simmons	El Paso County
	Cali Standard	Colorado Springs
	Carey Storm	Manitou Springs
X	Chris Crockett	CONO
	Chuck Theobald	Colorado Springs
X	Ed Dills	Ramah
X	Gary Shugart	At-large
	Harold Larson	NEPCO
	Jon DeVaux	Woodland Park
X	Kathy Hisey	Calhan
X	Karen Lusby	Monument
X	Maile Foster	El Paso County
	Mattie Gullixson	Colorado Springs
	Paul Wiggins	At-large
X	Roland Rainey	At-large
X	Sheila Williams	At-large
X	Summer Earthsong	Fountain
X	Teresa Cheek	At-large
X	Tyler Peoples	At-large
	Welling Clark	El Paso County
X	Staff	CDOT
X	Staff and guests	PPACG

Pikes Peak Area Council of Governments
Communities Working Together

DATE: December 20, 2024

TO: PPACG Community Advisory Committee

FROM: PPACG Committee and Staff

SUBJECT: Annual Safety Targets - Danelle Miller, PPACG Senior Transportation Planner; and David Swenka, CDOT

ACTION REQUESTED: Review and Recommend

SUMMARY

Federal regulation requires Departments of Transportation (DOTs) and Metropolitan Planning Organizations (MPOs) to establish new safety targets every year based on updated data. As an MPO, we can either support targets set by the state DOT or set regional targets based on data only within our MPO boundary.

David Swenka, CDOT PE PTOE Safety Programs, Data and Analysis Traffic Safety and Engineering Services, has provided the attached targets for 2025 and presented to TAC in November. At this point, PPACG staff recommends supporting the state targets.

BACKGROUND

PROPOSED MOTION

Recommend that PPACG support the state-set safety targets.

STRATEGIC PLAN GOALS

Please select which strategic plan goals this applies to.

____ Advocacy: Serve as an effective advocacy voice for common ground issues.

_X_ Information Sharing: Serve as a significant resource for PPACG members to

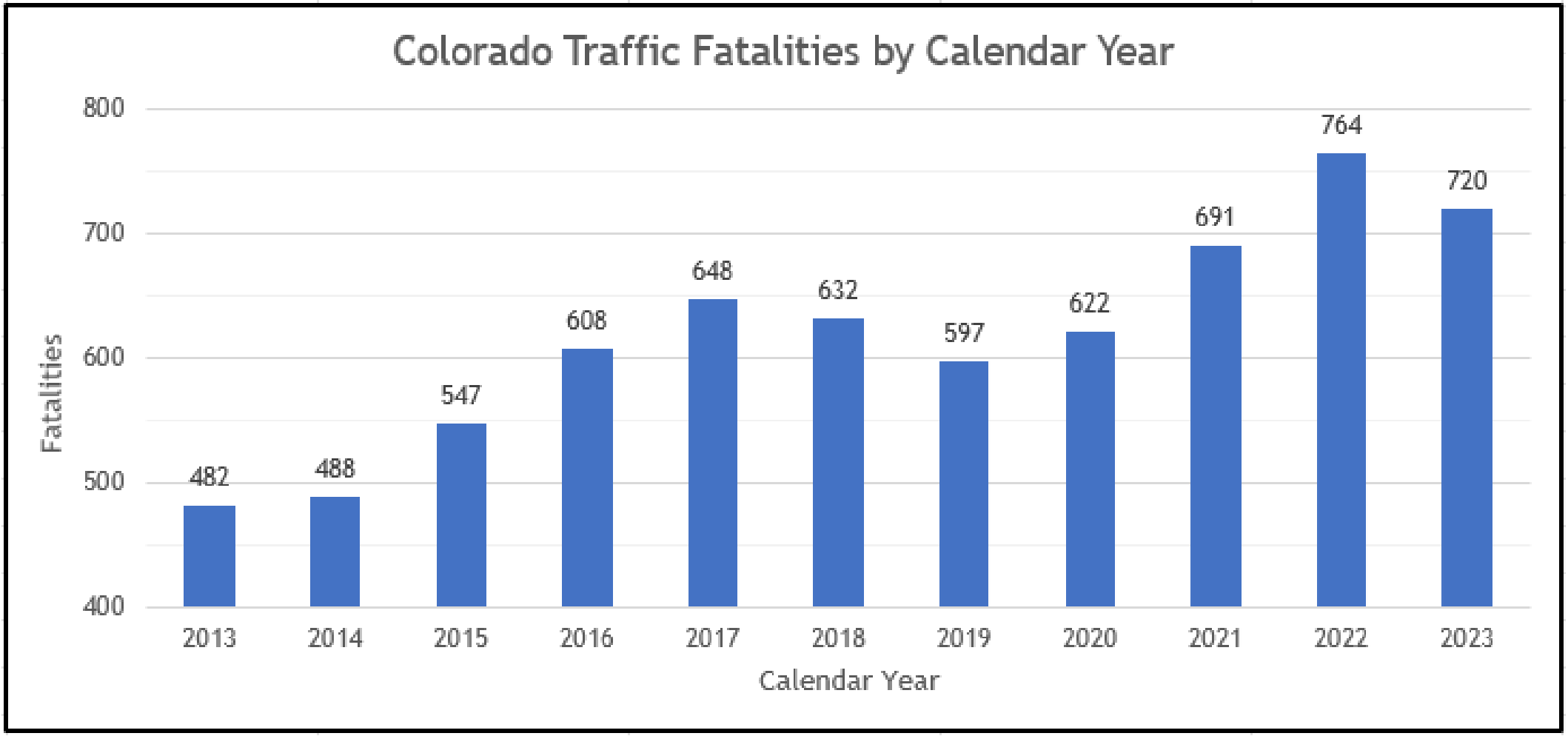
____	collect and share information with regional partners.
____	Aging: Expand and extend senior access, awareness, education, and connectivity to support age-friendly communities and empower individual seniors.
X ____	Transportation: Maintain and improve a coordinated, validated plan for transportation needs across the PPACG region.
X ____	Program Excellence: Continue to excel in the key fundamental areas of PPACG: Military support, Environmental programs, Transportation, Area Agency on Aging, and regional communication, and collaboration.

PREVIOUS ACTION

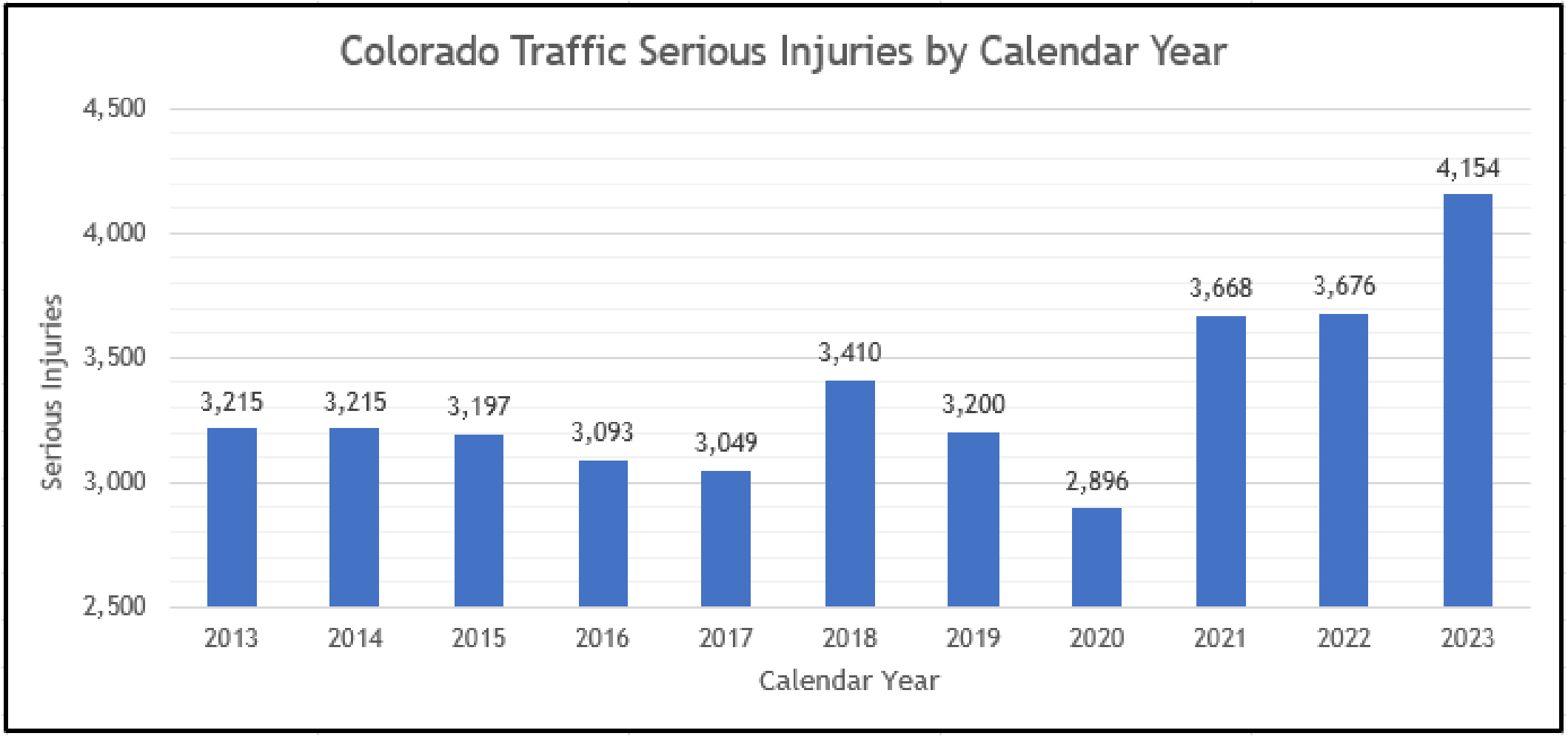
ATTACHMENTS

1. Colorado Calendar Year 2025 Safety Targets (Sep 2024)

Fatality Trends



Serious Injury Trends



Safety Performance Targets (PM 1) for CY 2025

Targets set for CY 2025

Trend Projections (5 year rolling average 2021-2025)

Fatalities: 740
Fatality Rate (per 100 MVMT): 1.363
Serious Injuries: 3,640
Serious Injury Rates: 6.701
Non-Motorized Fatalities and SI: 659

CY 2023
Fatalities: 720
Fatality Rate: 1.314
Serious Injuries: 4,154
SI Rate: 7.578
NM Fatal and SI: 833

Required Action for MPOs

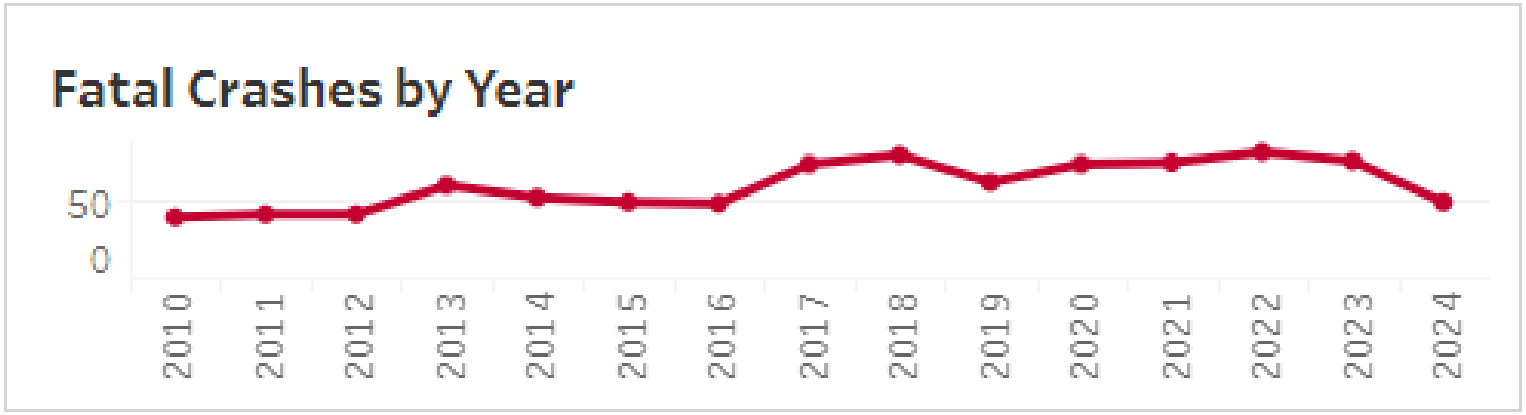
- Safety targets are reported by each State Department of Transportation (DOT) to FHWA in the State Highway Safety Improvement Program (HSIP) Annual Report (23 CFR 490.213(a)).

- The Metropolitan Planning Organizations (MPO) will establish performance targets for each of the measures (23 CFR 490.209(c)) no later than 180 days after the respective State DOT establishes and reports targets in the State HSIP annual report (23 CFR 490.209(c)(1)).

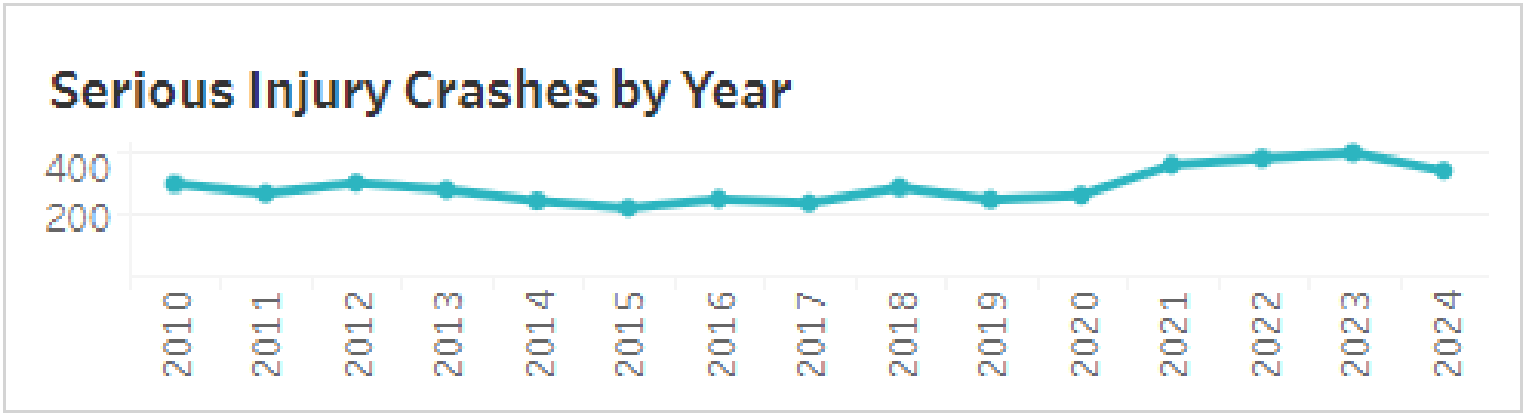
- The MPOs will annually report their established safety targets to their respective State DOT*, in a manner that is documented and mutually agreed upon by both parties (23 CFR 490.213(b)).

* Send Copy of Resolutions to David Swenka and Jacob Kershner

Pikes Peak Area Data



76 Fatal Crashes in 2023



396 Serious Injury Crashes in 2023

Source: Colorado Crash Data Dashboard

Note: The Colorado Crash Dashboard reports fatal and serious injury crashes, while the NHTSA data used for targets reports number of fatalities and serious injuries.

Pikes Peak Area Council of Governments
Communities Working Together

DATE: December 20, 2024

TO: PPACG Community Advisory Committee

FROM: PPACG Committee and Staff

SUBJECT: CDOT Infrastructure Condition and System Performance Target Setting - Danelle Miller, PPACG Senior Transportation Planner and Jacob Kershner, CDOT

ACTION REQUESTED: Review and Recommend

SUMMARY

Performance measures are used to track and maximize the benefits of the transportation planning decisions, meeting national and regional goals, and link infrastructure investments to the Long-Range Transportation Plan (LRTP), Transportation Improvement Program (TIP) and Congestion Management Process (CMP). As the Metropolitan Planning Organization (MPO) for the Colorado Springs Urbanized Area, PPACG will need to support the Colorado Department of Transportation (CDOT) targets or develop its own.

The attachments to this memo detail the Pavement Performance (PM2) and System Performance (PM3) targets recently established by CDOT and approved by the Transportation Commission. Jacob Kershner, CDOT Performance Data Manager, provided a presentation of the state's updated targets for 2025 in November. At this point, PPACG staff recommends supporting the state targets.

BACKGROUND

The previous PM2 and PM3 targets approved by PPACG committees in were those set by the state.

PROPOSED MOTION

Recommend that PPACG support the state-set infrastructure condition and system performance targets.

STRATEGIC PLAN GOALS

Please select which strategic plan goals this applies to.

X	Advocacy: Serve as an effective advocacy voice for common ground issues.
X	Information Sharing: Serve as a significant resource for PPACG members to collect and share information with regional partners.
X	Aging: Expand and extend senior access, awareness, education, and connectivity to support age-friendly communities and empower individual seniors.
X	Transportation: Maintain and improve a coordinated, validated plan for transportation needs across the PPACG region.
X	Program Excellence: Continue to excel in the key fundamental areas of PPACG: Military support, Environmental programs, Transportation, Area Agency on Aging, and regional communication, and collaboration.

PREVIOUS ACTION

ATTACHMENTS

1. CDOT Presentation



COLORADO
Department of Transportation

National Performance Measures
Mid-Performance Period Target Review

National Performance Measures Overview

Laws and Requirements:

- The 2021 Infrastructure Investment and Jobs (IIJA) Act, requires each state to establish targets for and report on the progress of performance measures related to the surface transportation system of the U.S.

Target Setting:

- State DOTs and MPOs are responsible for establishing 2- and 4-year data-informed targets.
  - Infrastructure Condition and System Performance
- Current performance period: 2022-2025
  - On October 1, 2022, CDOT established targets for 2023 and 2025.

Mid Performance Period

- The Mid Performance Period Report, occurring halfway through the 4-year performance period, allows DOTs to assess their progress and adjust targets if necessary.

Significant Progress Determination

- If FHWA determines that a State DOT has not made significant progress, they must write a report outlining the actions the State DOT will undertake to achieve the target in the future.
- Financial Restrictions:
  - If more than 5 percent of Interstate pavements are classified as Poor.
  - if more than 10 percent of NHS bridge-deck area is classified as Poor.

MPO Responsibilities

Target Setting:

- MPOs are required to either adopt state performance targets or establish their own targets for National Performance Measures.
- MPOs have 180 days from the date when the state DOT establishes its performance targets to either adopt those targets or establish their own.

Collaboration and Coordination:

- Work closely with CDOT and other regional stakeholders to ensure a collaborative approach to target setting and reporting.
- Engage in regular coordination with CDOT to ensure that both regional and state targets are consistent with each other.
- Ensure that regional targets align with state's National Performance Measure goals and are consistent with the region's long-range transportation plan (LRTP) and transportation improvement program (TIP).

Reporting Requirements:

- MPOs must document adopted targets in their RTP and share these with the state for submission to FHWA.

Mid-Performance Period Adjustments

- At this time, CDOT is only adjusting the 4-year target for bridges in good condition.
- CDOT staff recommends supporting this adjustment, while maintaining the targets for all other performance measures.
- Currently, PPACG supports CDOT's 4-year targets.

Pavement Performance Measures	4-year Target (2025)	Target Adjustment
Percentage of pavements of the Interstate System in Good condition	Above or at 47.0%	N/A
Percentage of pavements of the Interstate System in Poor condition	Below or at 3.5%	N/A
Percentage of pavements of the non-Interstate NHS in Good condition	Above or at 43.0%	N/A
Percentage of pavements of the non-Interstate NHS in Poor condition	Below or at 3.5%	N/A

Bridge Performance Measures	4-year Target (2025)	Target Adjustment
Percentage of National Highway System Bridges, by Deck Area, Classified in Good Condition	Above or at 36.0%	Adjust to 38.5%
Percentage of National Highway System Bridges, by Deck Area, Classified in Poor Condition	Below or at 4.0%	N/A

System Reliability Performance Measures	4-year Target (2025)	Target Adjustment
Percent of person-miles traveled on the Interstate that are reliable	Above or at 79%	N/A
Percent of person-miles traveled on the non-Interstate National Highway System (NHS) that are reliable	Above or at 94%	N/A
Truck Travel Time Reliability (TTTR) Index	Below or at 1.46	N/A

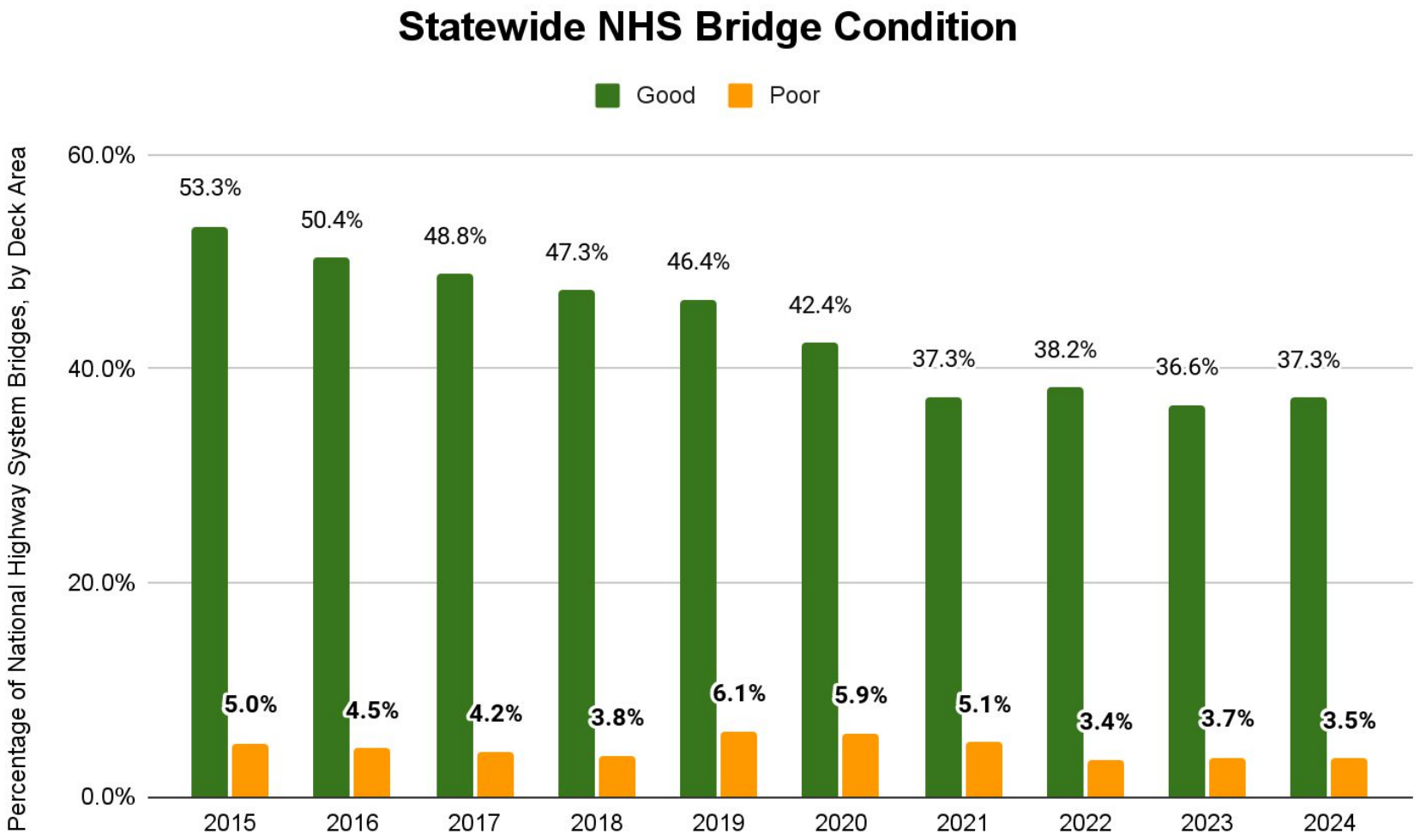
National Performance Measures Bridge Targets

- Federal performance period covers the years January 1, 2022 to December 31, 2025.
- **2-Year Target**
  - Mid Performance Period runs from January 2022 to December 2023.
  - Both targets achieved.
- **4-Year Target Recommendation**
  - Revise the 4-year Good target to reflect continued improvement.
  - Maintain current Poor target.

National Performance Measure	2-Year Target	Mid-Period 2-Year Condition	4-Year Target	Recommended 4-Year Target Adjustment
National Highway System Bridges, by Deck Area, Classified in Good Condition	**36.0%**	**37.3%** ✓	**36.0%**	**38.5%**
National Highway System Bridges, by Deck Area, Classified in Poor Condition	**4.0%**	**3.5%** ✓	**4.0%**	**Maintain 4.0%**

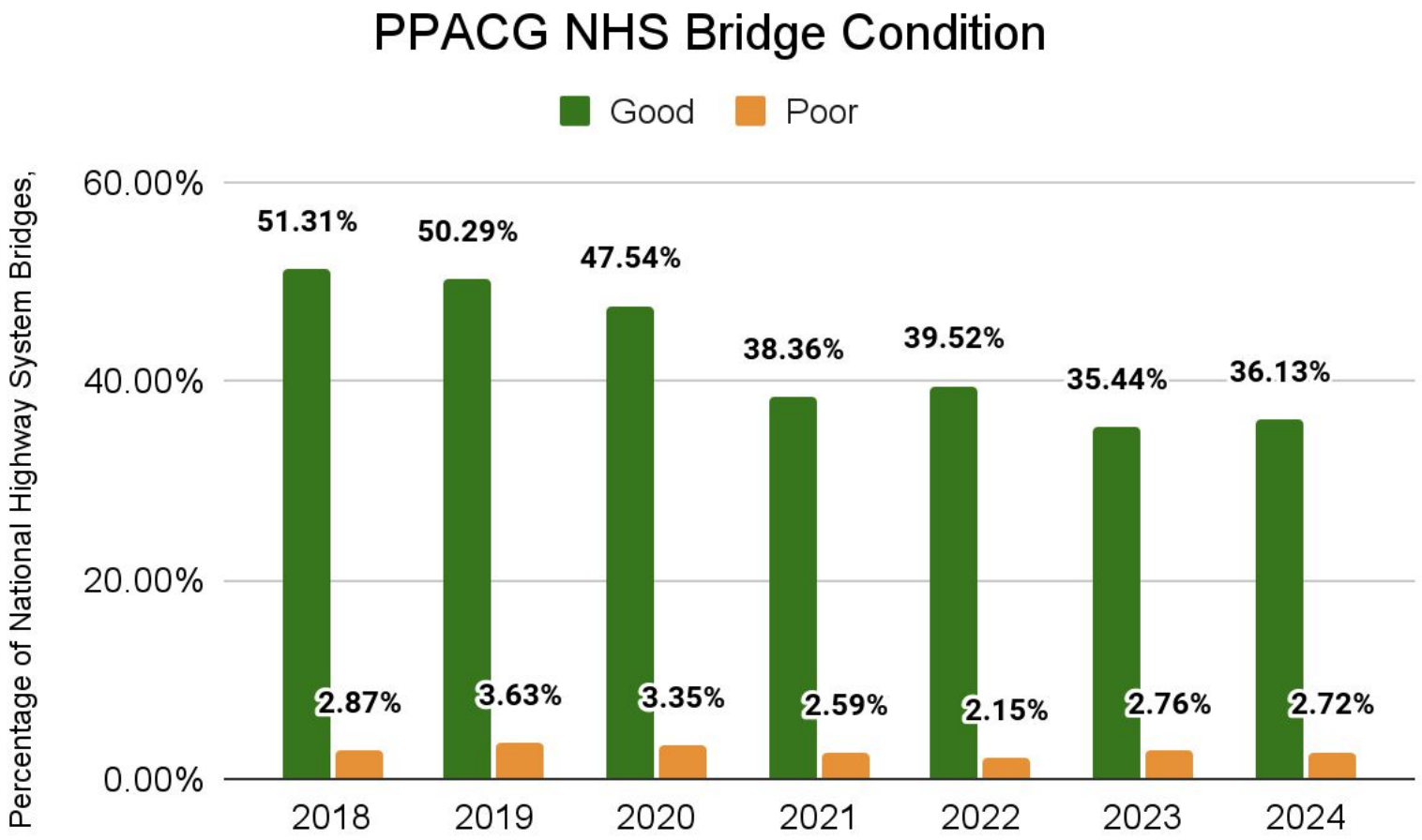
- 2-year target reflects bridge condition as of March 2024.
- 4-year target reflects bridge condition as of March 2026.

Statewide Bridge Performance



[CDOT Bridge Condition Dashboard]

PPACG Bridge Performance



CDOT Bridge Condition Dashboard

Questions?

For questions or comments on this presentation please contact:

- **William Johnson**
  Performance and Asset Management Branch Manager
  Colorado Department of Transportation
  Division of Transportation Development
  will.johnson@state.co.us

- **Jacob Kershner**
  Performance Program Manager
  Colorado Department of Transportation
  Division of Transportation Development
  jacob.kershner@state.co.us

- **Brittany Hanson**
  Performance Analyst
  Colorado Department of Transportation
  Division of Transportation Development
  brittany.hanson@state.co.us

Resources:

- FHWA Transportation Performance Management
- National Performance Measures Targets
- NPM Dashboard
- CDOT Performance Dashboards



Pikes Peak Area Council of Governments
Communities Working Together

DATE: December 20, 2024

TO: PPACG Community Advisory Committee

FROM: PPACG Committee and Staff

SUBJECT: LRTP Release for Public Comment - Danelle Miller, Senior Transportation Planner

ACTION REQUESTED: Release for Public Comment

SUMMARY

Pikes Peak Area Council of Governments (PPACG) staff have spent the past few years working toward the 2050 Pikes Peak Region Long Range Transportation Plan (LRTP). Pieces of the document have been developed with the Transportation Advisory Committee (TAC), including adoption of a financial plan in 2023, a Call for Projects in late 2023 and development of the fiscally constrained project list in early 2024.

A full draft of the document was provided to TAC in November, and at this time a revised draft has been developed with the intent to release for public comment. Per federal requirements, a 30-day public comment period will be held following approval by the Board of Directors. During that time, PPACG anticipates hosting in-person open houses as well as a virtual open house on the PPACG website.

Concurrently with this effort, PPACG has completed the state-required greenhouse gas (GHG) modeling, which shows that PPACG meets reduction targets for the LRTP. PPACG will present these results along with a GHG report to the Transportation Commission at a workshop on December 18. It is anticipated that the Transportation Commission will accept the results at its January meeting.

Because the current LRTP will expire at the end of January 2025, PPACG would like to minimize the amount of time that we are out of compliance and move forward with the public comment period with the intent to adopt the plan as quickly as

possible. As previously discussed, amendments to the Transportation Improvement Program cannot be made while PPACG is out of compliance. Attached is the full LRTP to include the Regional Transit Plan and Specialized Transportation Plan for your consideration.

In addition, PPACG would like to propose holding a special TAC meeting in February following the end of the public comment period to facilitate adoption by the Board to minimize the time PPACG does not have a conforming plan.

Upcoming LRTP Schedule (subject to change)

November

- PPACG submits GHG report information to CDPHE
- LRTP to be reviewed by PPACG committees

December

- PPACG presents to the Transportation Commission regarding GHG rule
- TAC and CAC recommend document for release for public comment

January

- Board releases document for public comment
- Public comment review and open houses
- TC approves PPACG's GHG report
- TAC/CAC approval of final document pending comments

February

- Special TAC/CAC meetings to hear comment summary
- Official public hearing
- Final document adoption by Board of Directors

Note: The transit and specialized human services plans are also federally required and will be adopted in line with the LRTP.

BACKGROUND

PROPOSED MOTION

Recommend the Board of Directors release the document for public comment.

STRATEGIC PLAN GOALS

Please select which strategic plan goals this applies to.

____	Advocacy: Serve as an effective advocacy voice for common ground issues.
____	Information Sharing: Serve as a significant resource for PPACG members to collect and share information with regional partners.
____	Aging: Expand and extend senior access, awareness, education, and connectivity to support age-friendly communities and empower individual seniors.
X ____	Transportation: Maintain and improve a coordinated, validated plan for transportation needs across the PPACG region.
X ____	Program Excellence: Continue to excel in the key fundamental areas of PPACG: Military support, Environmental programs, Transportation, Area Agency on Aging, and regional communication, and collaboration.

PREVIOUS ACTION

ATTACHMENTS

1. Presentation
2. Executive Summary
3. Draft 2050 Long Range Transportation Plan

2050 Long Range Transportation Plan

Pikes Peak Area Council of Governments
Communities Working Together

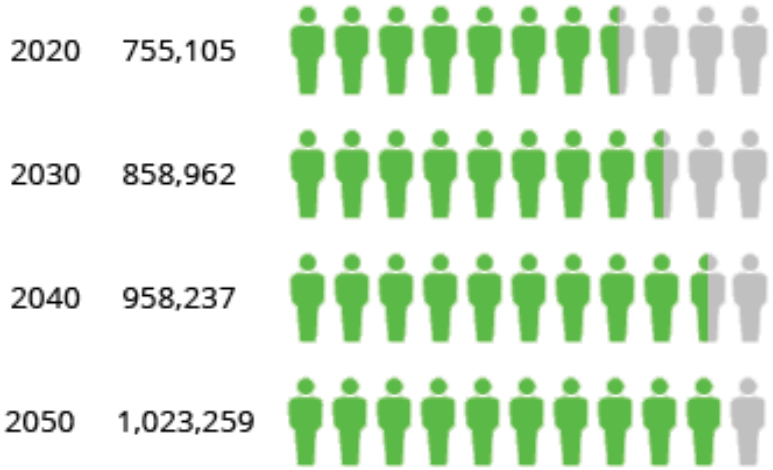
LRTP Contents

- Introduction
- Process and Engagement
- System Performance
- Transportation Network
- Planning Considerations
- Regional Forecast
- Financial Plan (already adopted by Board)
- Implementation Plan (includes project list)
- Appendices
  - Regional Transit Plan
  - Specialized Human Services Transportation Plan
  - Equity Report
  - Greenhouse Gas Report
  - Federal Lands Access

Regional Growth

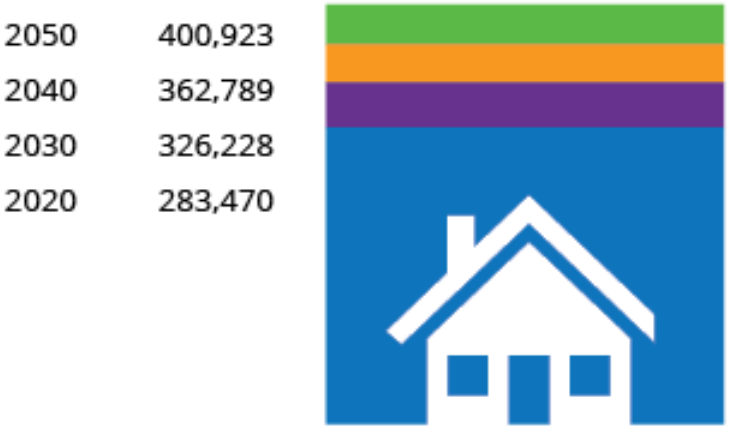
Population Growth

Population is expected to increase 36% by 2050



Housing Growth

Occupied housing units are is expected to increase 41% by 2050

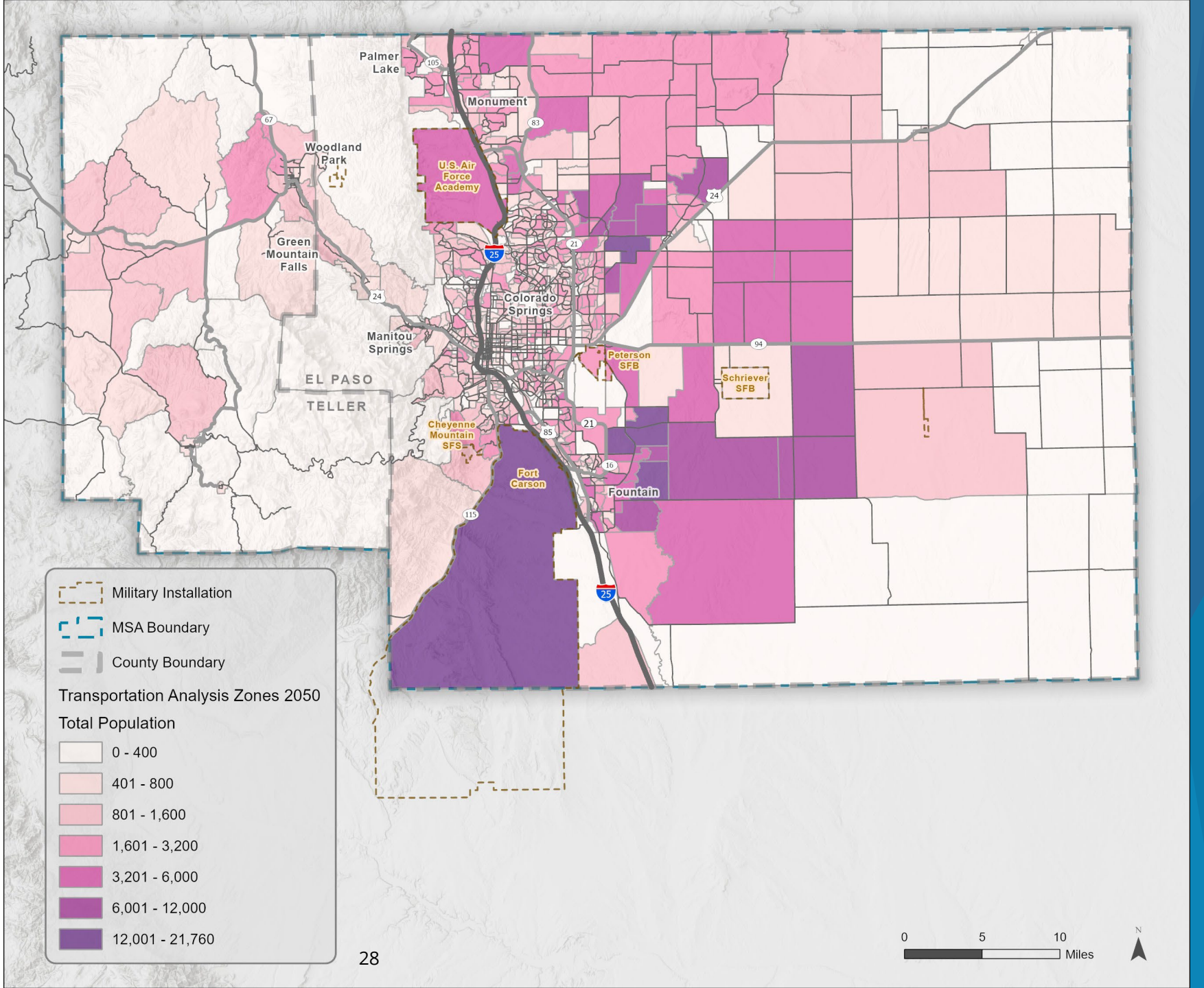


Employment Growth

Jobs are expected to increase 23% by 2050.

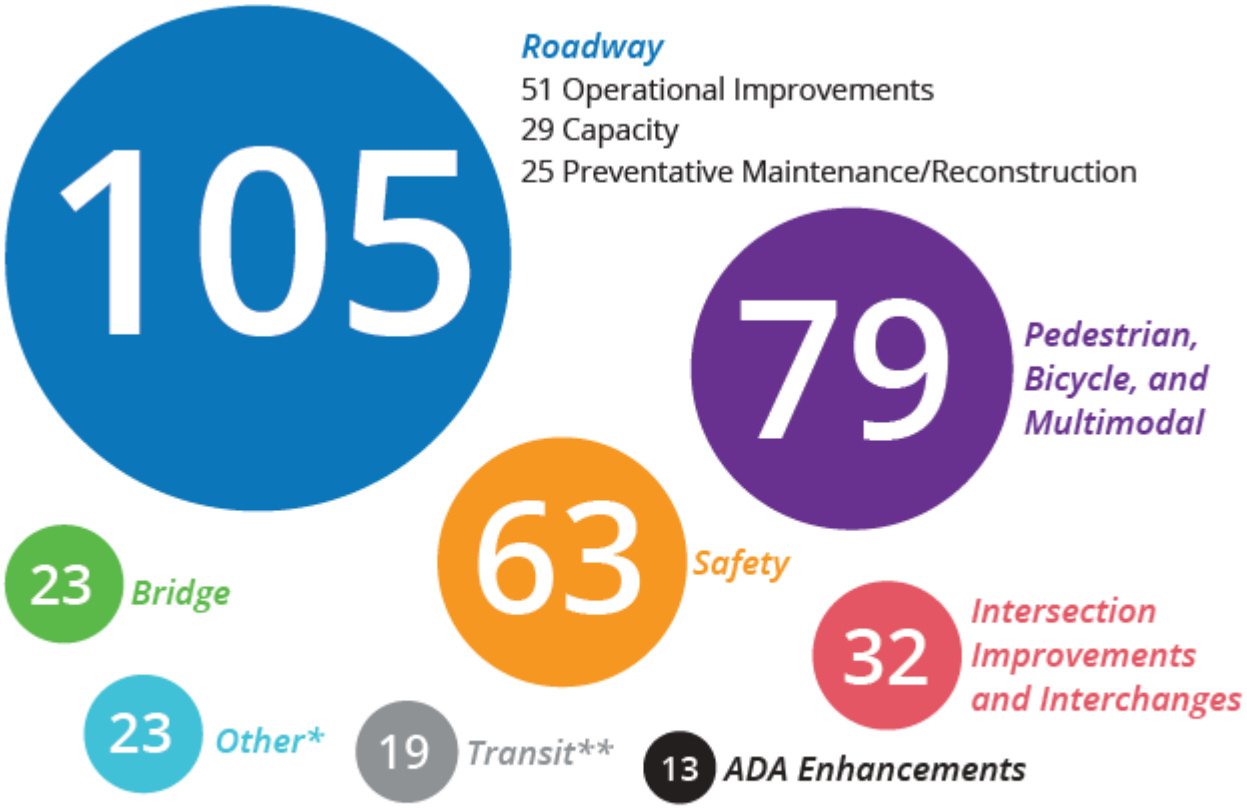


Forecasted 2050 Population



Investment Overview

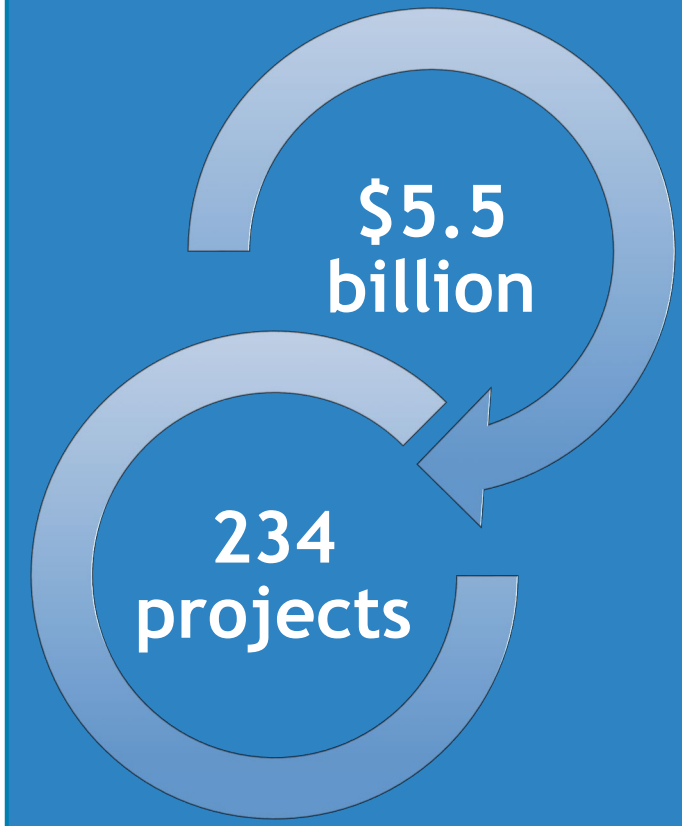
Although many projects have many different elements, projects were classified by their primary and secondary elements, which is represented here.



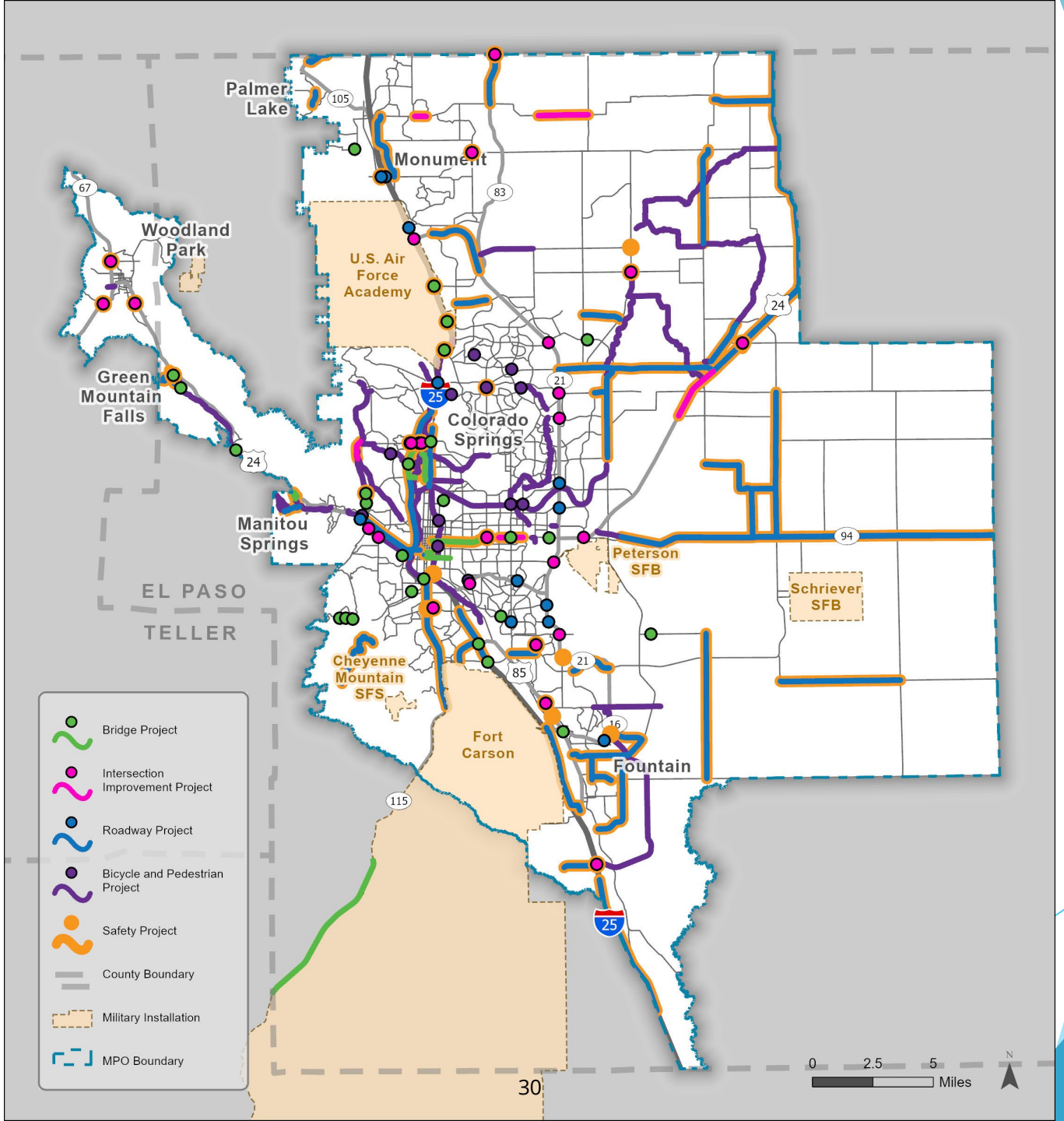
*Other includes plans and studies, technology upgrades, and funding pools for small projects.

** Transit projects are only those included in the fiscally constrained list, some of which are pools. The Regional Transit Plan details individual projects.

Implementation By the Numbers



Fiscally Constrained Projects



LRTP Process and Next Steps

Phase 1: Framework
Spring - Fall 2023

- Define Requirements
- Public Involvement Plan
- Vision, Goals, Objectives
- Inventory of Current Conditions
- Initial Identification of Needs and Public Survey

RTPAC # 1

Phase 2: Development
Summer 2023-Winter 2024

- Compile Performance Measures and Finalize Project Scoring Criteria
- Draft Fiscally Constrained Project List
- Baseline Demographics and Modeling

RTPAC # 2
Community Survey

Phase 3: Evaluation
Spring - Fall 2024

- Evaluate Projects
- Additional Input on Transportation Needs
- Integrate Remaining Component Plans
- Greenhouse Gas Modeling
- Draft Document Development

RTPAC # 3
RTPAC # 4

Phase 4: Review
Fall - Winter 2024

- Draft Plan Review
- Public Comment Period and Public Hearing
- Final Adoption by Committees

RTPAC # 5
Public Open House
Public Comment Period

We are here

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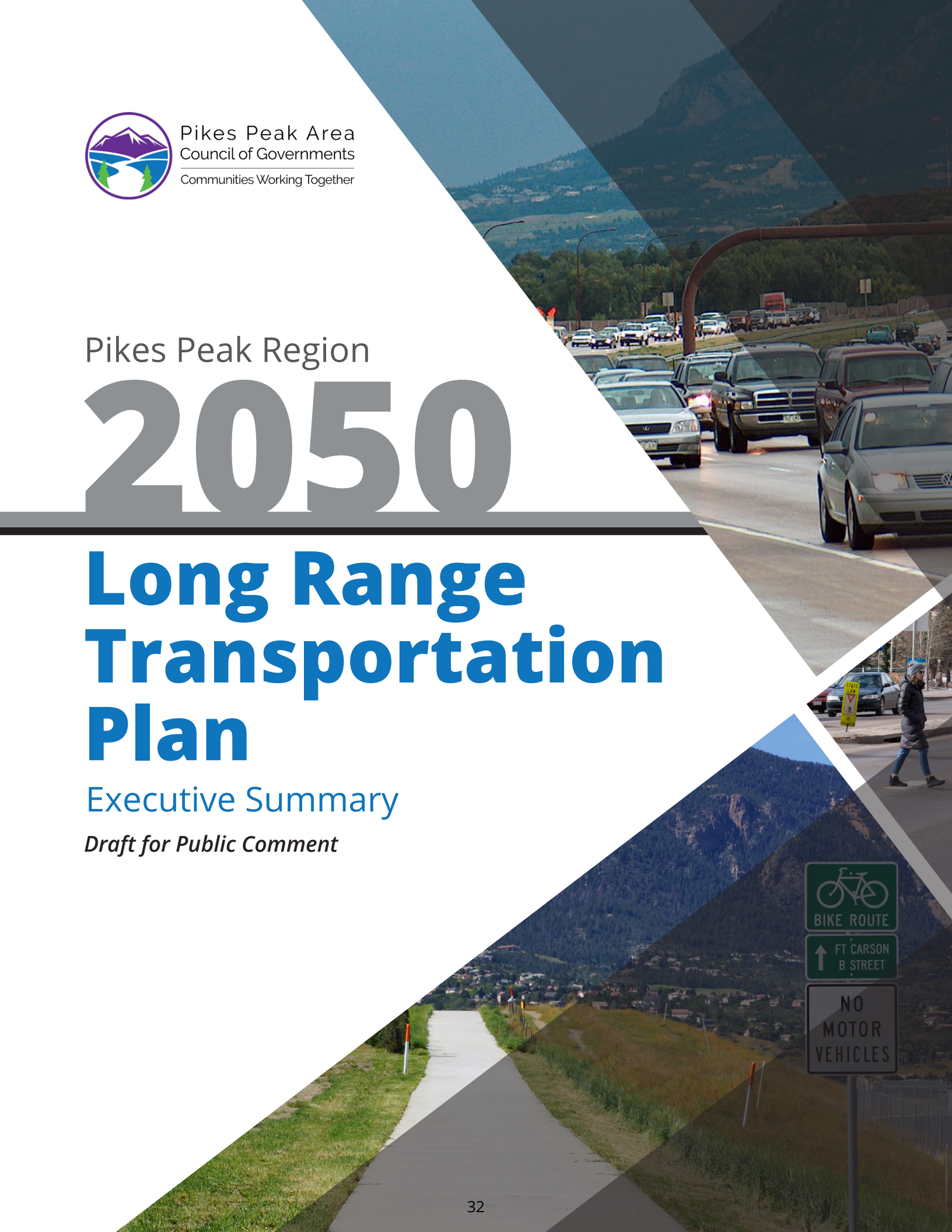
Pikes Peak Region

2050

Long Range Transportation Plan

Executive Summary

Draft for Public Comment



WHO WE ARE

WHAT IS PPACG?

Formed in 1967, The Pikes Peak Area Council of Governments (PPACG) is a voluntary organization composed of 16 member governments serving a regional community. PPACG's purpose is to identify regional problems and opportunities, develop solutions, and make recommendations on region-wide strategies. This regional approach serves to facilitate state and federal funding for local programs and projects.

Board of Directors

PPACG is governed by a Board of Directors composed of elected officials appointed by the member governments and non-voting members from each of the five military installations and key agencies.

Committees

Committees serve the community by providing technical or community input to the Board of Directors and are made up of member appointees and important partners from the region.



4,918
square miles



16
member governments



786,885
regional population



5
military installations

PPACG Member Governments and Military Partners

El Paso County	Fairplay	Victor
Park County	Fountain	Woodland Park
Teller County	Green Mountain Falls	U.S. Air Force Academy
Alma	Manitou Springs	Cheyenne Mountain SFS
Calhan	Monument	Fort Carson
Colorado Springs	Palmer Lake	Peterson SFB
Cripple Creek	Ramah	Schriever SFB

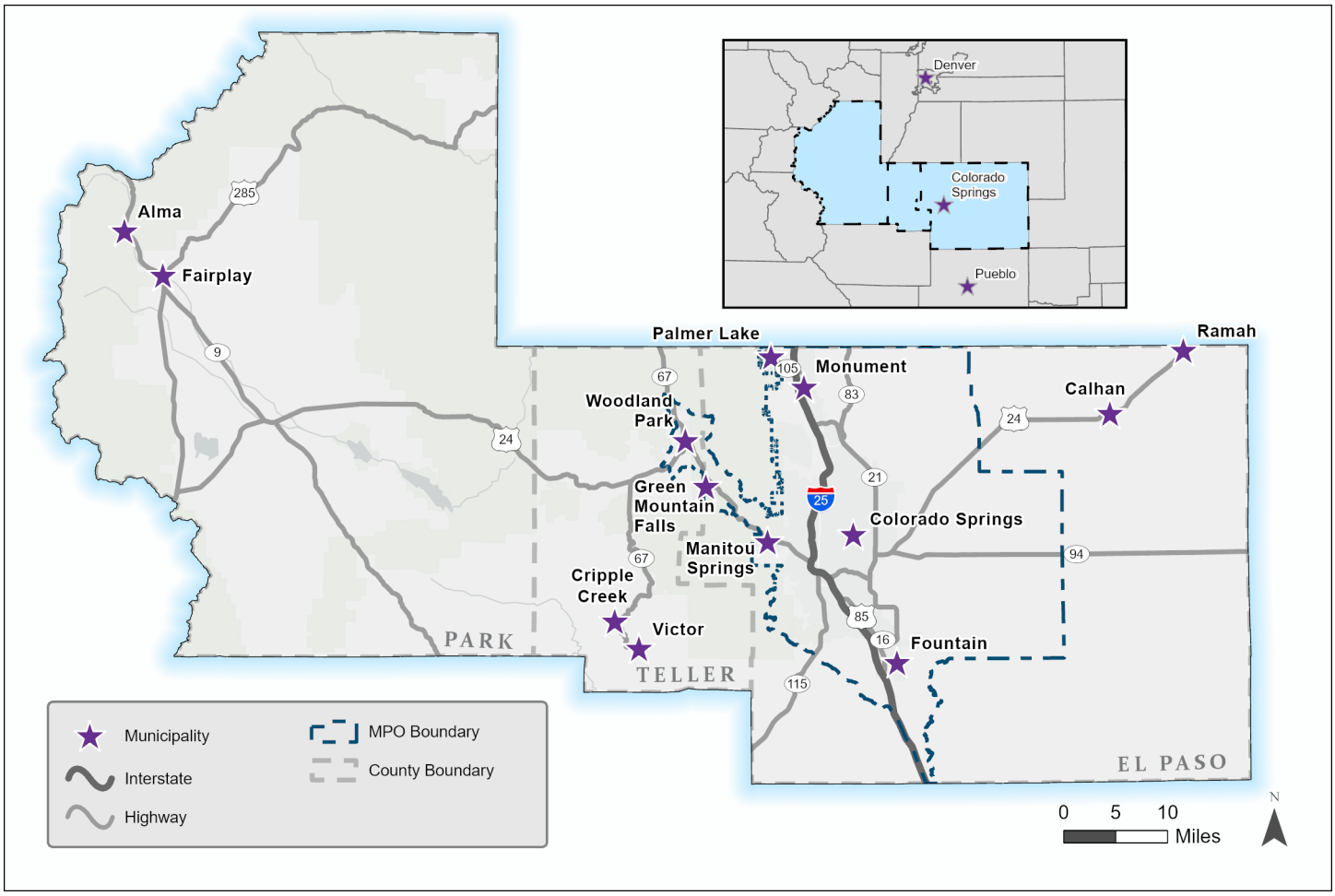
WHAT IS THE MPO?

PPACG's transportation planning efforts are focused within the designated Metropolitan Planning Organization (MPO) for the Colorado Springs Urbanized Area (UZA). MPOs are federally mandated and funded transportation planning organizations that are made up of representatives from local government and governmental transportation authorities. They are required for any UZA with a population greater than 50,000. The MPO boundary is designated by the U.S. Census and sets the geographic limits for certain types of federal funding eligibility.

Purposes of MPOs

- Identify planning needs and investment alternatives that reflect the region's shared vision for its future.
- Allocate scarce federal and other transportation funding resources.
- Provide transparency through public participation in the planning process.

COG and MPO Boundaries



ABOUT THE PLAN

PURPOSE

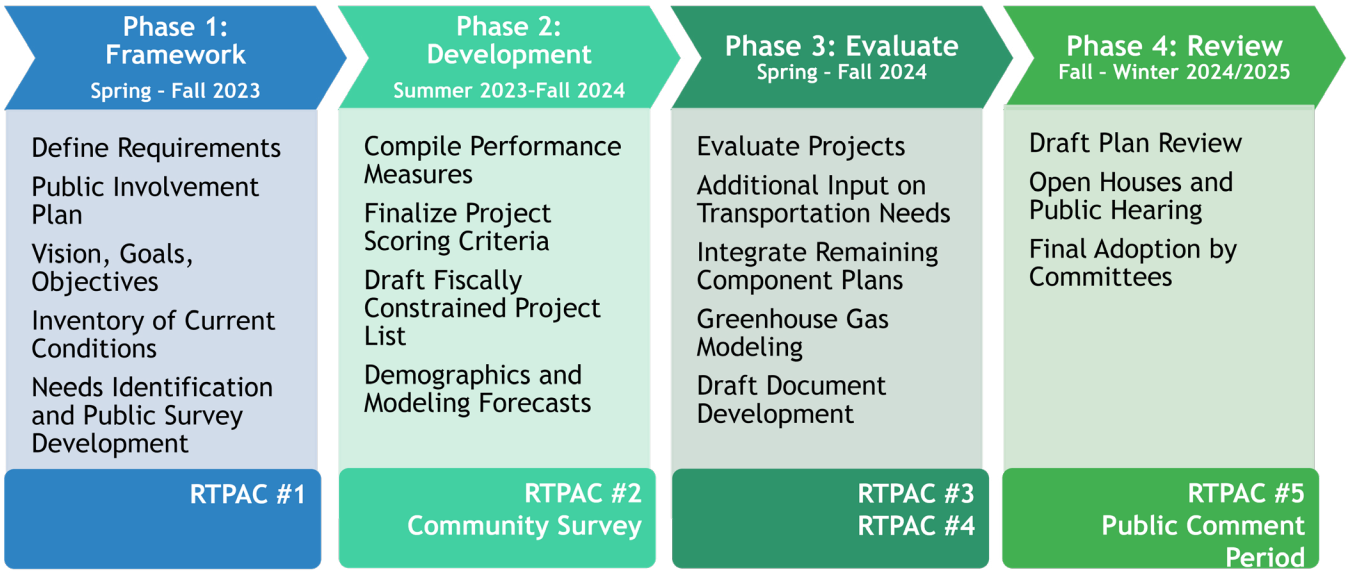
- Brings together existing local, regional, and state planning efforts to provide a strategic framework for the development, operation, and management of the transportation system.
- Present an opportunity for decision makers to understand the broader social, economic, and environmental impacts of transportation investments and land-use decisions.
- Develop a strategy for the best use of public funds in meeting community goals.

SCOPE

Long range transportation plans (LRTPs) are required to comply with federal and state laws for the region to be eligible for federal transportation funding. This plan:

- Includes a 20 or more year horizon;
- Describes the multimodal transportation system components designed to facilitate mobility of people and goods throughout the region;
- Is fiscally constrained, which means that projects can only be included in the plan if funding is expected to be reasonably available to pay for them;
- Identifies funding—federal, state, local, and private—that is reasonably anticipated to be available during the period 2025 to 2050;
- Demonstrates that transportation activities are consistent with air quality goals and meet the mobility needs of persons with disabilities; and
- Is updated every 5 years.

Plan Process and Schedule Summary



PUBLIC ENGAGEMENT

Engagement was built into each step of this LRTP development. The integration of existing planning efforts and the PPACG governing board, committee structure, and public outreach programs support cooperation. PPACG believes that a multifaceted approach to stakeholder and public engagement allows for greater exposure and opportunities.

Public Survey with more than 800 responses

Input from committees workshop, and agency consultations

30-day Public Comment Period

Open Houses around the region



Regional Transportation Plan Advisory Committee

In addition to our standing committees, PPACG convened an additional advisory committee focusing on the 2050 LRTP. The RTPAC guides the plan development process and provides insight into public participation.

More than 50 individuals and organizations around the region were invited to participate in the RTPAC, representing a variety of community needs and perspectives.

PLAN FRAMEWORK

Establishing a vision and goals with the guidance of our planning partners and RTPAC was a critical early component of the planning process. The vision and goals must align with federal and state guidance and planning factors, performance-based metrics, and regional needs.

All projects and recommendations included support one or more of these goals.

VISION

Develop a sustainable multimodal transportation system, facilities, and services that meet regional mobility and accessibility expectations, improve the quality of life in the Pikes Peak region, and plan for the future of transportation.

GOALS

1	***Preserve and enhance the function of and access to the existing regional transportation system.***
2	***Provide efficient, improved, and fully connected multimodal and intermodal transportation for people, goods, information, technology, and freight to employment hubs, military installations, and other key destinations throughout the region.***
3	***Increase the safety, security, redundancy, and resiliency of the multimodal transportation system.***
4	***Maintain a robust, equitable, and healthy regional transportation system that enhances economic vitality of the Pikes Peak region.***
5	***Implement responsible transportation solutions.***

MEASURING PERFORMANCE

An integral part of the plan is a review of the region's progress in achieving transportation goals. There are several federal performance measures that MPOs are required to evaluate with regard to safety, pavement condition, bridge condition, travel time reliability, freight movement, and transit.

In addition, the plan discusses other key issues impacting residents, visitors, businesses, and communities throughout the region, including information gathered through public survey, local jurisdiction plans and expertise, and consultations with other organizations.



What are we doing well?

- Interstate pavement condition and National Highway System (NHS) bridge conditions are better than the state average.
- System reliability for the interstate system and truck travel exceed targets.
- The region is in attainment for air quality standards as set by the EPA.
- Traffic-related fatalities are starting to decline.
- Multimodal options are increasing.
- Transit safety, accessibility, and options have increased.
- There are multiple dedicated services for specialized transportation.



What do we need to improve?

- Non-interstate road pavement condition and reliability are below statewide targets.
- Serious injury crashes are on the rise.
- Crash rates indicate a need to focus on safety for drivers, bicyclists, and pedestrians.
- There are opportunities to improve mode share and connectivity.
- Recurring congestion is problematic.
- There are opportunities to make transit a more competitive travel option.
- Specialized transportation is inadequate to meet current demand and can be confusing for users.

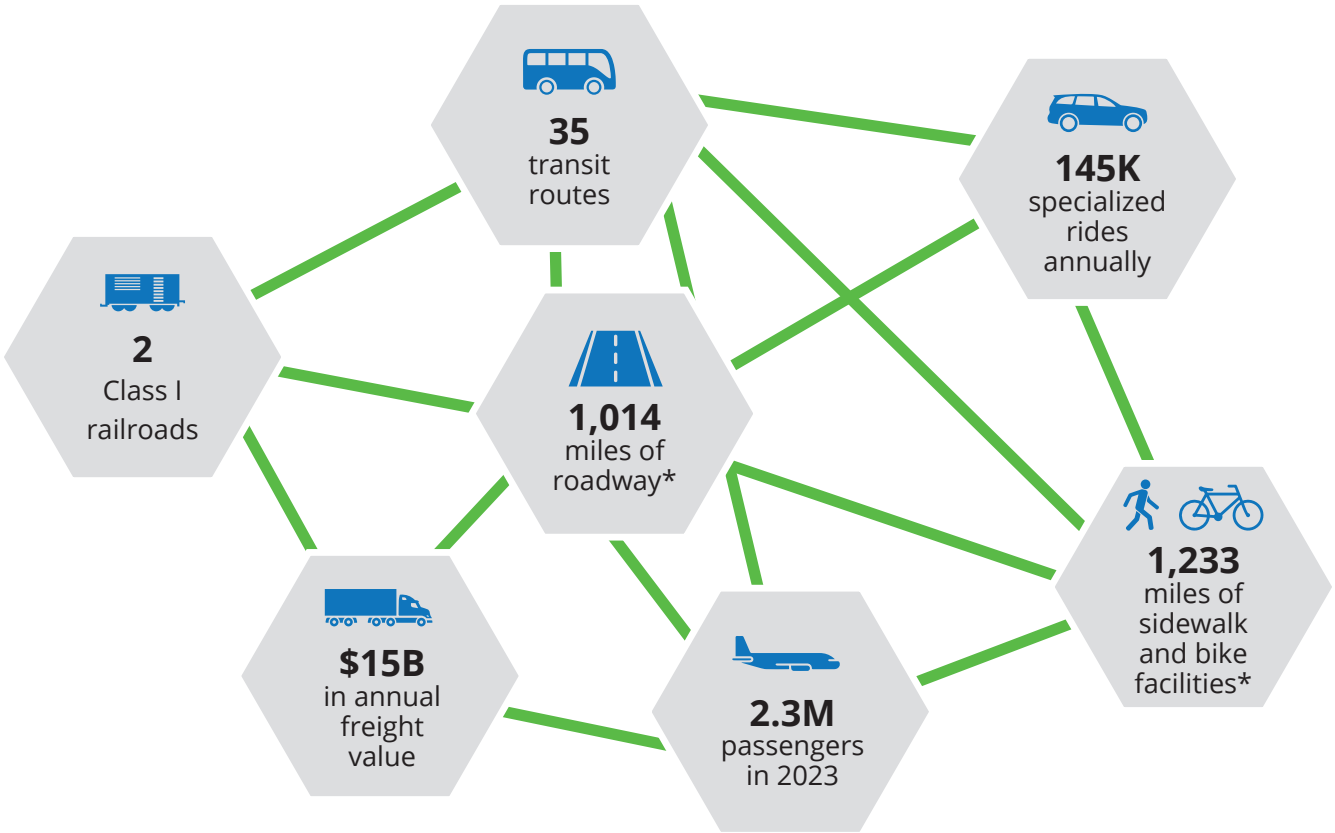
THE CURRENT SYSTEM

TRANSPORTATION NETWORK

The transportation network within the Pikes Peak Region is composed of roadways, transit systems, bicycle and pedestrian networks, railroads, and airports. These facilities are largely operated and maintained by local governments, CDOT, and private companies.

The LRTP provides a holistic view of the transportation system and supports those entities that operate and maintain the transportation networks. A successful transportation network allows the movement of people and goods safely and efficiently throughout the region and beyond, taking into account the transportation modes available to users.

It should be noted, however, that the PPACG network for this plan is primarily limited to roadways eligible for federal funding per classification. Similarly, sidewalks and bicycle facilities are only included in the PPACG network if they are associated with those roadways, although other trails and facilities may be eligible for certain funding sources.



** The PPACG network does not reflect all roads, sidewalks, and bicycle facilities in the region. See Chapter 4 for information.*

CONSIDERATIONS

Social

- Connectivity and mobility
- Safety and crash statistics
- Security of transportation system and planning for emergency events
- Public health and the influence of transportation
- Equity
- Cultural resources, tourism, and recreational opportunities
- Land use and development

Environmental

- Mitigation compliance
- Air quality conformance
- Carbon reduction strategies
- Greenhouse gas reduction

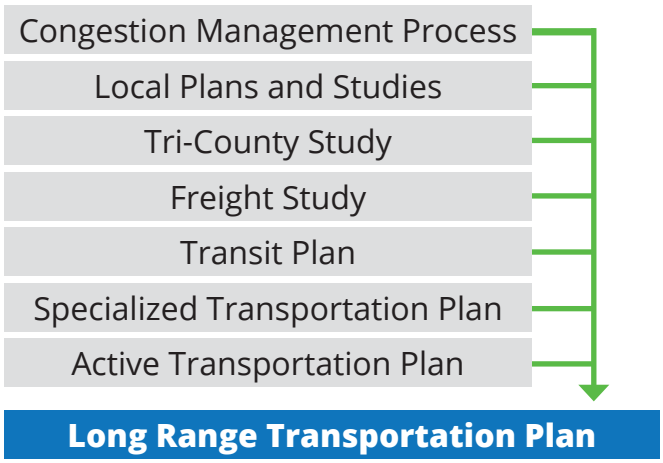
Economic

- Local economic development
- Freight activities and growth
- Military needs
- System productivity and cost

Technological

- Systems management and operations, including traffic signals, and ramp metering
- Electrification, including vehicles, freight, and escooters/ebikes
- Connected transportation systems and autonomous vehicles, including advancements in transit and rail

NEEDS AND PROJECT IDENTIFICATION



As a regional document, the LRTP aims to pull together existing planning efforts and component plans and relies heavily on the input of local jurisdictions for both content and project selection.

Projects are identified through local planning efforts and submitted for inclusion in the LRTP.

FUTURE OUTLOOK

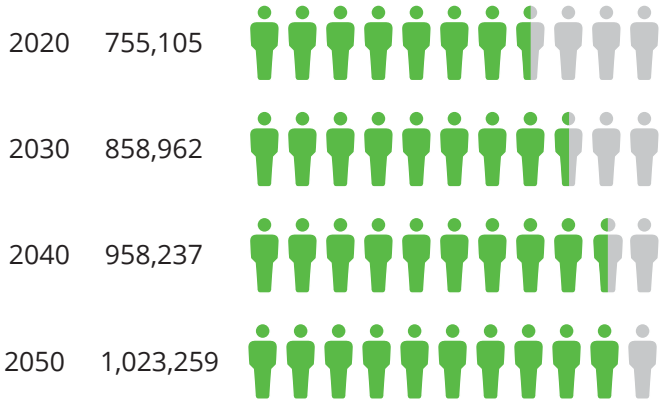
REGIONAL GROWTH

Demand for transportation services is directly related to the demographic, economic, and geographic characteristics of an area, with total demand rings in proportion to increases in population and employment.

Because each jurisdiction within the Pikes Peak Region has its own development plans, PPACG collaborated with these communities and leveraged their household and employment development and growth data to develop a "best-fit" scenario for the region that fits within population forecasts from the Colorado State Demography Office.

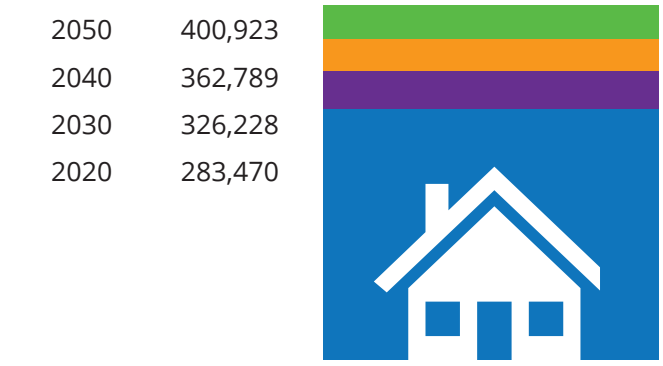
Population Growth

Population is expected to increase 36% by 2050



Housing Growth

Occupied housing units are is expected to increase 41% by 2050



Employment Growth

Jobs are expected to increase 23% by 2050.



FUNDING AND SOURCES

The financial plan estimates income from local, regional, state, and federal sources that can be reasonably expected over the life of the plan, taking into account conservative revenue growth and inflation. This funding totals approximately $5.5 billion for capital projects with additional funding identified for maintenance and operations. A significant portion of this funding specific to projects conducted by CDOT.

The estimated available funding is not adequate to fulfill the needs identified by the local communities, and achieving the full transportation vision identified in the plan would require new or enhanced revenues for maintenance, operating and capital projects.

Funding Overview

REGIONAL CAPITAL FUNDING FOR LOCAL JURISDICTION PROJECTS

- Federal $294M*
  - Surface Transportation Block Grant (STBG)
  - Transportation Alternatives Program (TAP)
  - Carbon Reduction Program (CRP)
- State $33M*
  - Multimodal Transportation and Mitigation Options Fund (MMOF)
- Local $2.1B
  - Pikes Peak Regional Transportation Authority (PPRTA)
  - Local jurisdiction match funds
- Discretionary Grants $200M

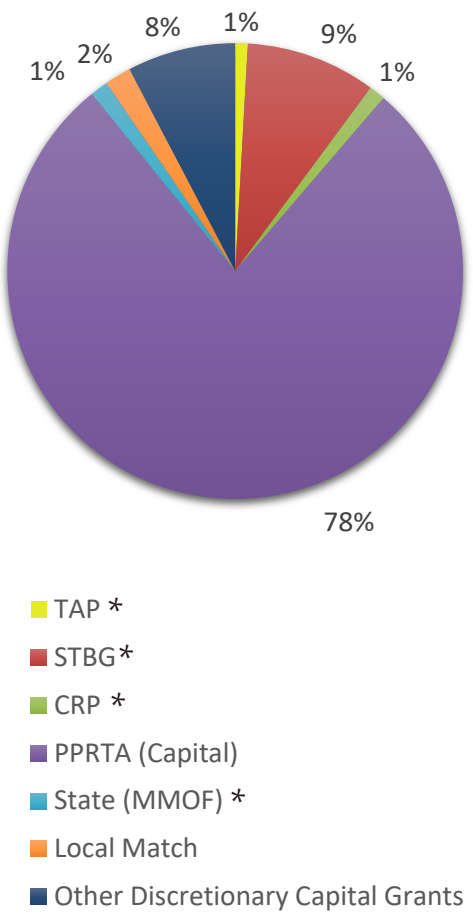
MAINTENANCE AND OPERATIONS

- Highway Users Tax Fund $872M

ADDITIONAL FUNDING IN THE LRTP

- Transit-specific Federal Funding
- CDOT-administered Funding
- Private Funding

Regional Capital Funding by Source



** Funding administered through PPACG.*

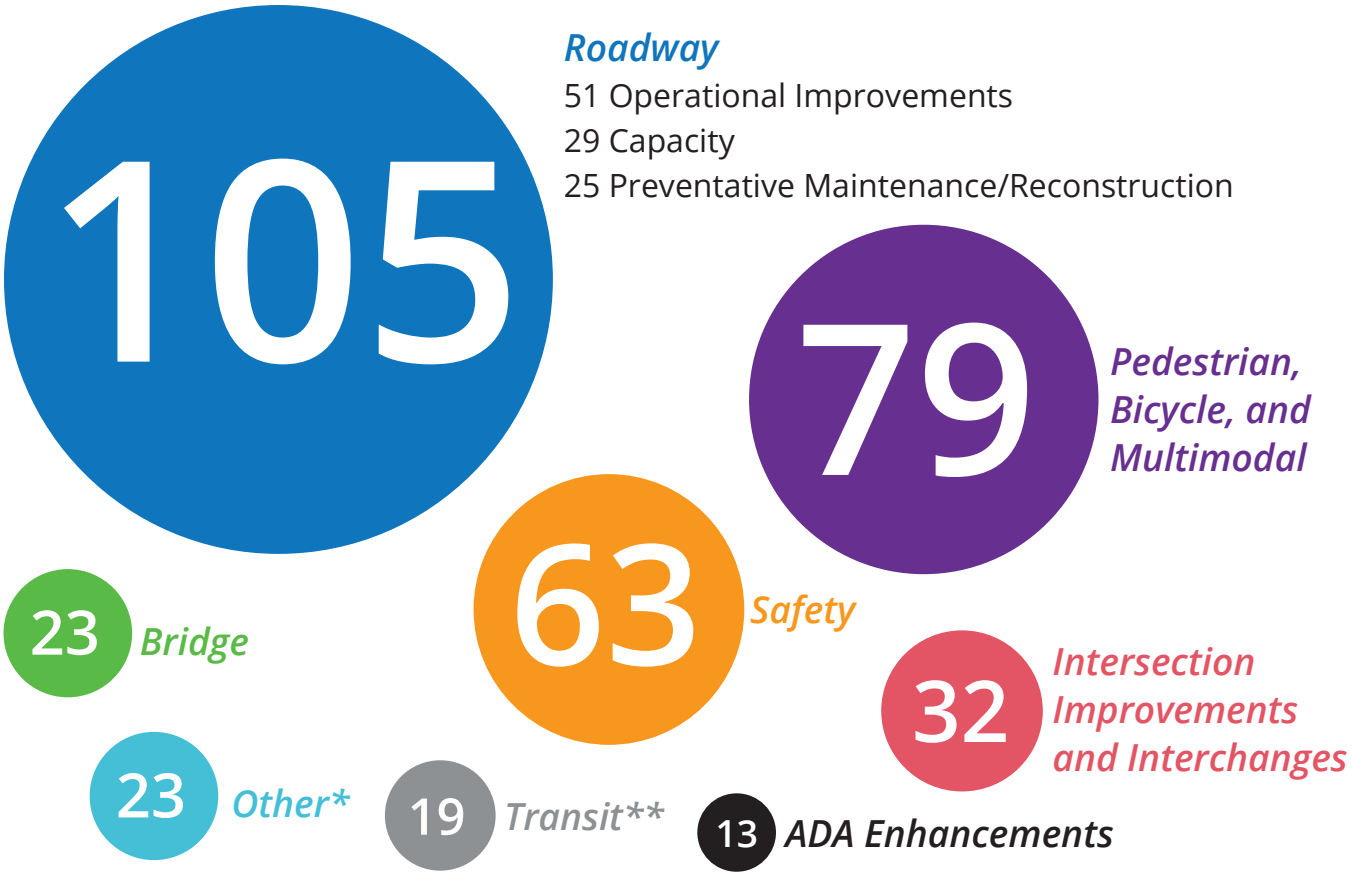
INVESTMENT OVERVIEW

PROJECT SELECTION

Developing a list of transportation projects that improve the way people and goods move is a critical element of the plan. This federally required project listing is intended to help the region identify and prioritize future transportation investments based on adopted regional goals, performance management strategies, and estimated financial resources. PPACG local governments submitted detailed project information that was evaluated and workshops were held to determine the 234 projects in the fiscally constrained list.

Projects by Type

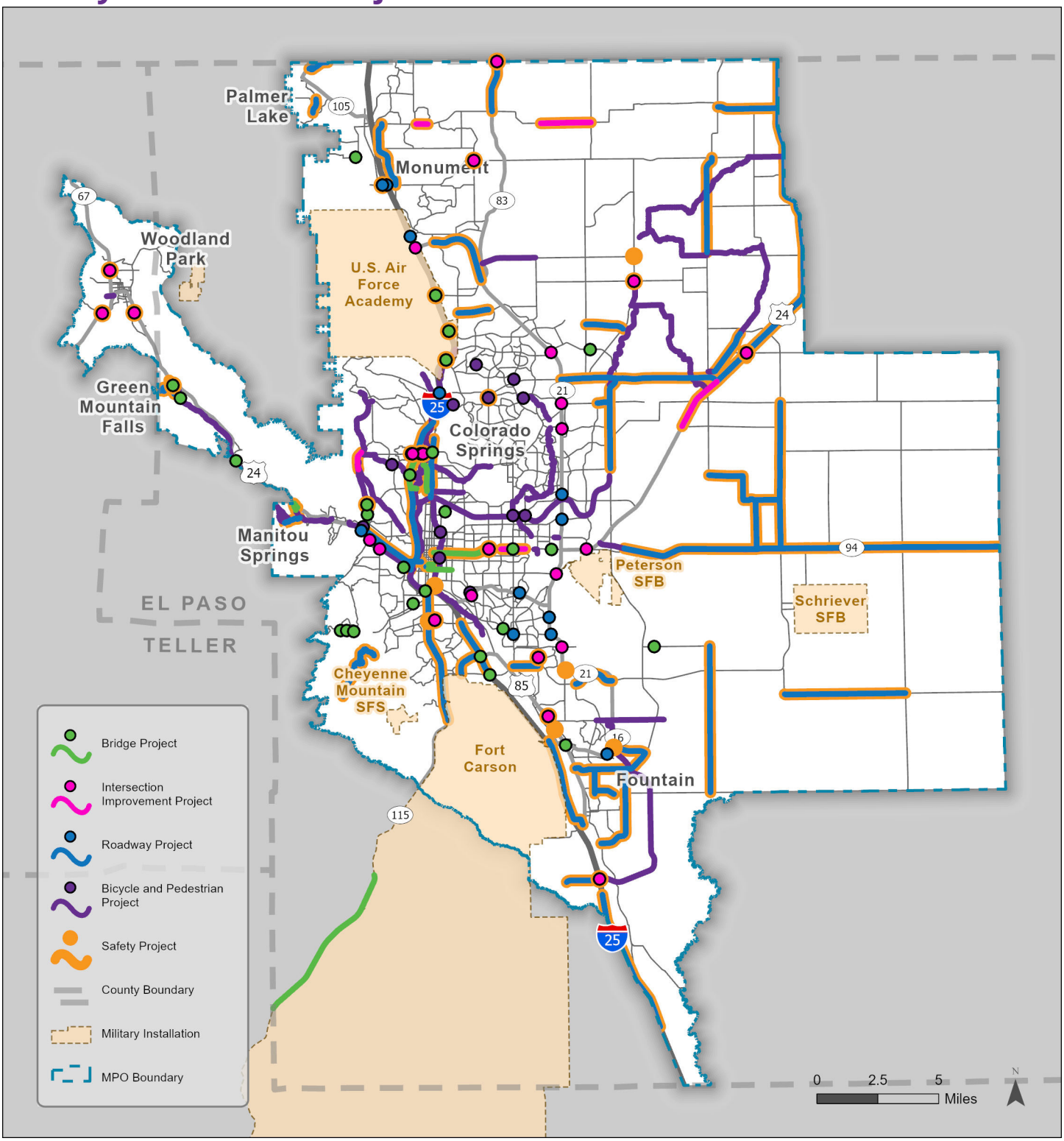
Although many projects have many different elements, projects were classified by their primary and secondary elements, which is represented below.



**Other includes plans and studies, technology upgrades, and funding pools for small projects.*

*** Transit projects are only those included in the fiscally constrained list, some of which are pools. The Regional Transit Plan details individual projects.*

Fiscally Constrained Projects



INVESTMENT OVERVIEW

TRANSIT

The Regional Transit Plan includes several planned improvements addressing the current and future transit needs of the region, building on previous planning work, responding to public priorities, and supporting continued growth with a more robust, usable, and effective transit system.

The Regional Transit Plan outlines $1.25 billion in capital costs and 58 projects divided into short-term (20), medium-term (21) , and long-term (17) projects.

Transit Investment Themes

- **Enhanced Transit Corridors**
- **New Fixed Routes**
- **Innovative Mobility Zones**
- **Extend Service Span**
- **Improve Capital Infrastructure**
- **Improve Existing Route Frequency**
- **New Crosstown Routes**

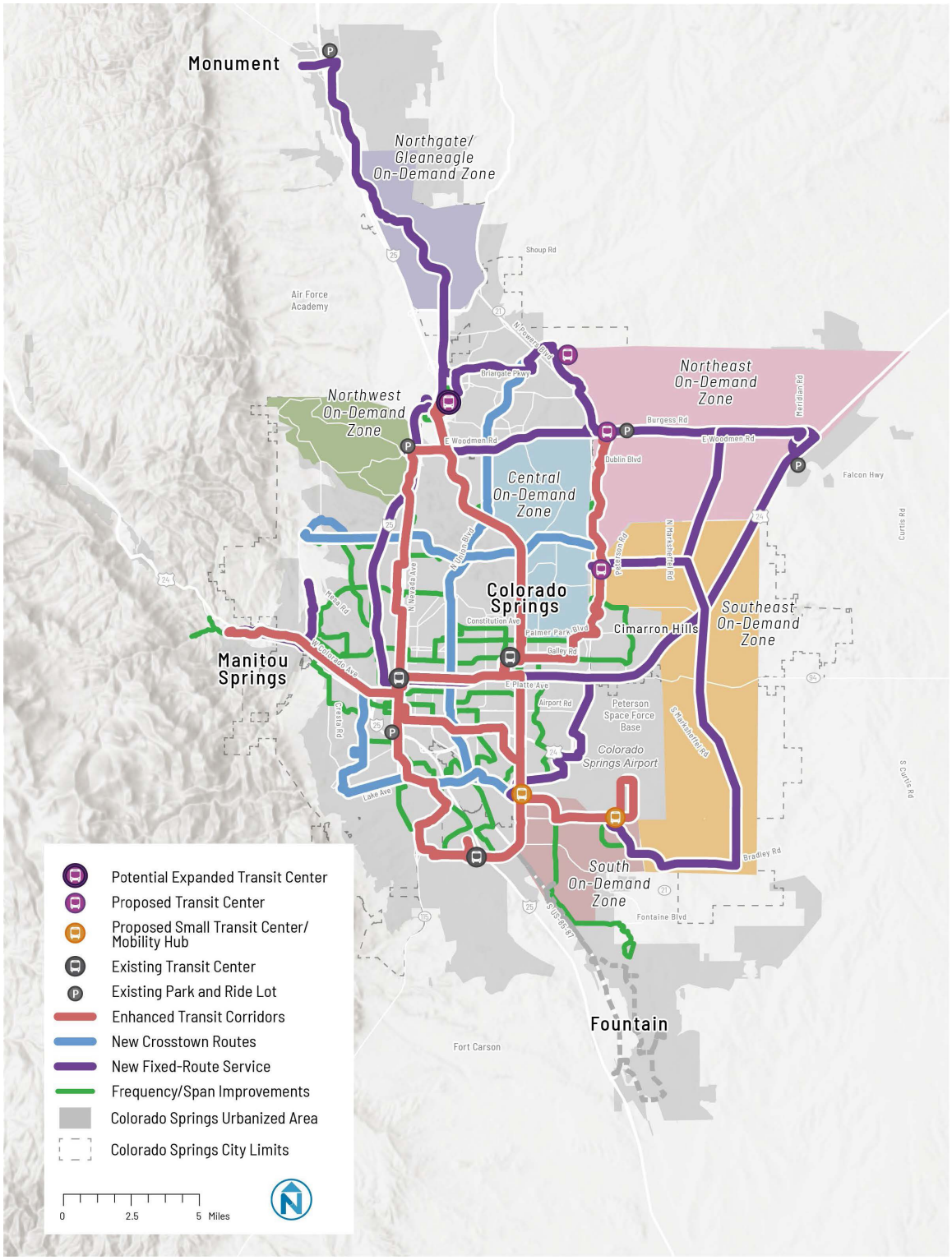
SPECIALIZED TRANSPORTATION

The following five recommended strategies were identified in the 2050 Specialized Transportation Plan. These strategies are not fiscally constrained, and implementation would require coordination among various groups within the Pikes Peak Region and, in some cases, additional funding.

HIGH PRIORITY
Incrementally develop a One-Call One-Click center.
Coordinate with providers to help secure funding for right-sized, shared, and well-maintained vehicles that meet ridership needs.
Commission mobility services under improved standards of service.

MEDIUM PRIORITY
Create a program to reimburse people for Uber, Lyft, and taxi rides in situations where there is a critical unmet transportation need based on the time and location of the trip.
Consolidate all resources and explore training options for drivers.

Transit Plan Projects









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Pikes Peak Area
Council of Governments
Communities Working Together

Pikes Peak Area
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Communities Working Together

Pikes Peak Region

2050

Long Range Transportation Plan

Draft for Public Comment



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A Acronyms and Abbreviations
B 2050 Regional Transit Plan
C 2050 Regional Specialized Human Services Transportation Plan
D Equity Analysis
E Greenhouse Gas Transportation Report
F Federal Lands Access
G 2050 LRTP Public Involvement Plan
H 2050 LRTP Survey Summary
I 2050 LRTP Public Comments
J References

ACKNOWLEDGMENTS

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INTRODUCTION
CHAPTER 1

INTRODUCTION

OVERVIEW

As the federally designated Metropolitan Planning Organization (MPO) for the Colorado Springs urbanized area, the Pikes Peak Area Council of Governments (PPACG) is responsible for developing and maintaining a long-range regional transportation plan and the supporting short-range implementation program.

Understanding that each county and municipality within the Pikes Peak Region has unique characteristics and needs, the 2050 Pikes Peak Region Long Range Transportation Plan seeks to collaboratively establish a foundation for transportation planning for the next 25 years.

This plan includes a vision and goals for regional transportation, evaluates the system as a whole, brings together local agency studies, identifies strategies for implementation, and provides information to assist decision makers in future development within the region.

The region's previous transportation plan, the Moving Forward 2045 Regional Transportation Plan, was adopted in January 2020. This plan updates that plan and addresses all of the performance-based planning requirements established with federal transportation legislation, Moving Ahead for Progress in the 21st Century Act (MAP-21), the Fixing America's Surface Transportation (FAST) Act, and the Infrastructure Investment and Jobs Act (IIJA). In its entirety, the plan meets the requirements for its composition and preparation process, and demonstrates conformity with applicable laws and regulations.

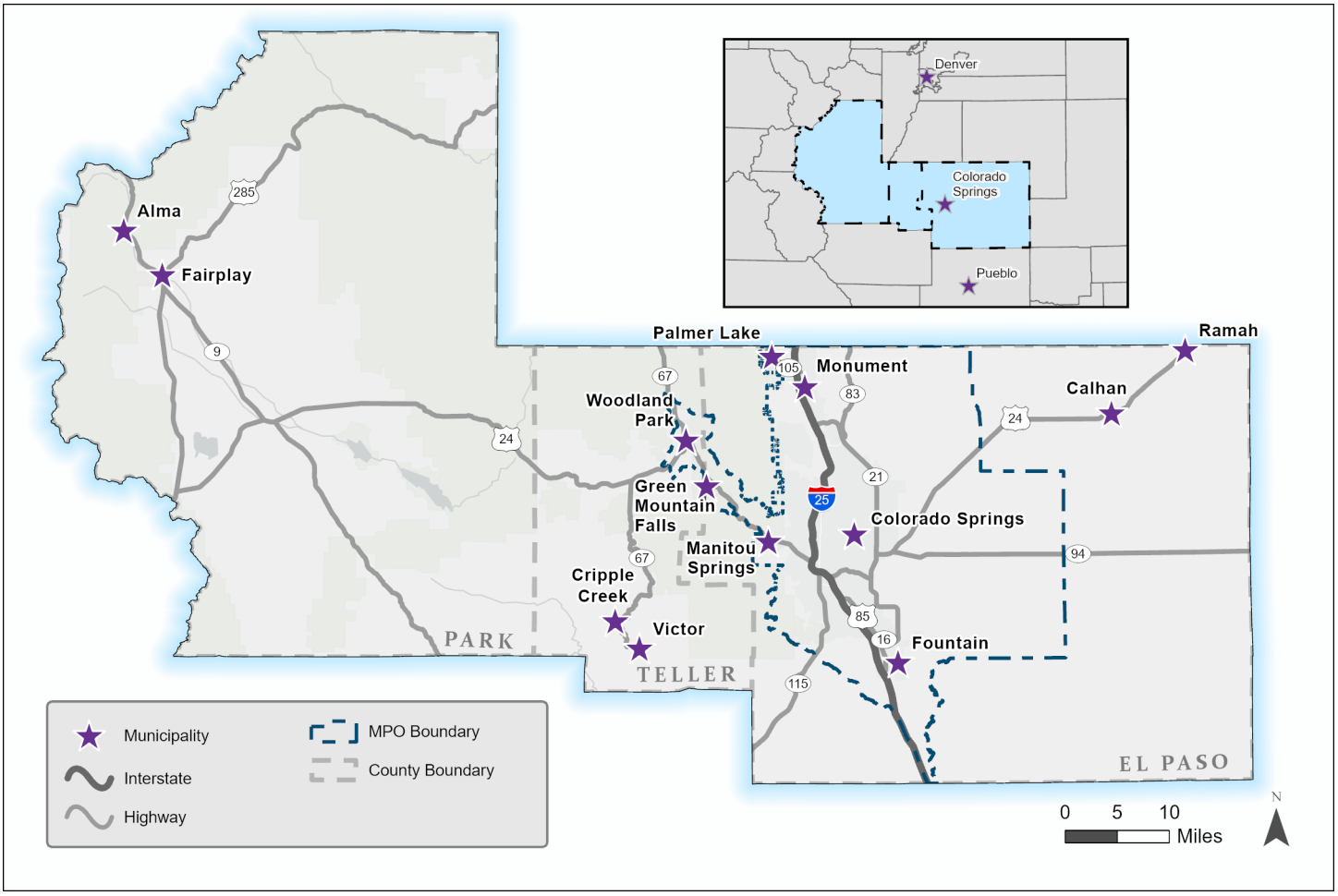
Pikes Peak Area Council of Governments

Formed in 1967 under Colorado laws regarding regional planning and intergovernmental contracting, PPACG is not a unit of local government, but an organization of local governments whose purpose is to identify regional problems and opportunities, develop solutions, and make recommendations on region-wide strategies. This regional approach serves to facilitate state and federal funding for local programs and projects.

PPACG is the designated Council of Governments (COG) for the region encompassing El Paso, Park, and Teller counties. It is also the state-designated MPO for the Colorado Springs Urbanized Area.

As the COG, PPACG is a voluntary organization composed of 16 member

Figure 1-1: COG and MPO Boundaries



governments: the counties of El Paso, Park, and Teller; the cities of Colorado Springs, Cripple Creek, Fountain, Manitou Springs, Victor, and Woodland Park; and the towns of Alma, Calhan, Fairplay, Green Mountain Falls, Monument, Palmer Lake, and Ramah. Elected officials appointed by these members compose the governing body of PPACG, the Board of Directors.

PPACG Metropolitan Planning Organization and Plan Area

While the COG is a voluntary organization, the MPO is instead a federally mandated and federally funded transportation organization made up of representatives from local government and governmental transportation authorities. The Federal Highway Act of 1962 requires the formation of an MPO for any urbanized area with a population of greater than 50,000.

Congress created MPOs to ensure that federal transportation funding is based on a continuing, cooperative, and comprehensive planning process. It is the job of the MPO to help allocate federal transportation funding to projects that reflect the region's shared vision for its future.

Figure 1-1 depicts the COG boundary and the Pikes Peak Metropolitan Planning Area boundary. This boundary must encompass

at least the existing urbanized area and the contiguous area expected to become urbanized within a 20-year forecast period for the transportation plan and may encompass the entire metropolitan statistical area or consolidated metropolitan statistical area (MSA), as defined by the Bureau of the Census.

Figure 1-2, on the following page, provides more detail regarding the MPO area with relation to the municipal, county, and military installation boundaries that fall within or cross the MPO area.

While this plan considers issues that extend into the COG area, this plan is limited to the MPO boundary. Areas within the COG that fall outside of the MPO undergo a separate planning process as part of the Central Front Range (CFR) Transportation Planning Region (TPR). The CFR TPR long range plan is developed by the Colorado Department of Transportation (CDOT).

Plan Purpose and Scope

The objective of regional long range transportation planning is to provide a strategic framework for the development, operation, and management of the transportation system within the larger context of the region's economic, social, mobility, and environmental goals. Planning must be flexible to adapt to changing economic and technological conditions and forward-thinking enough to maximize return on investment, all while minimizing negative impacts.

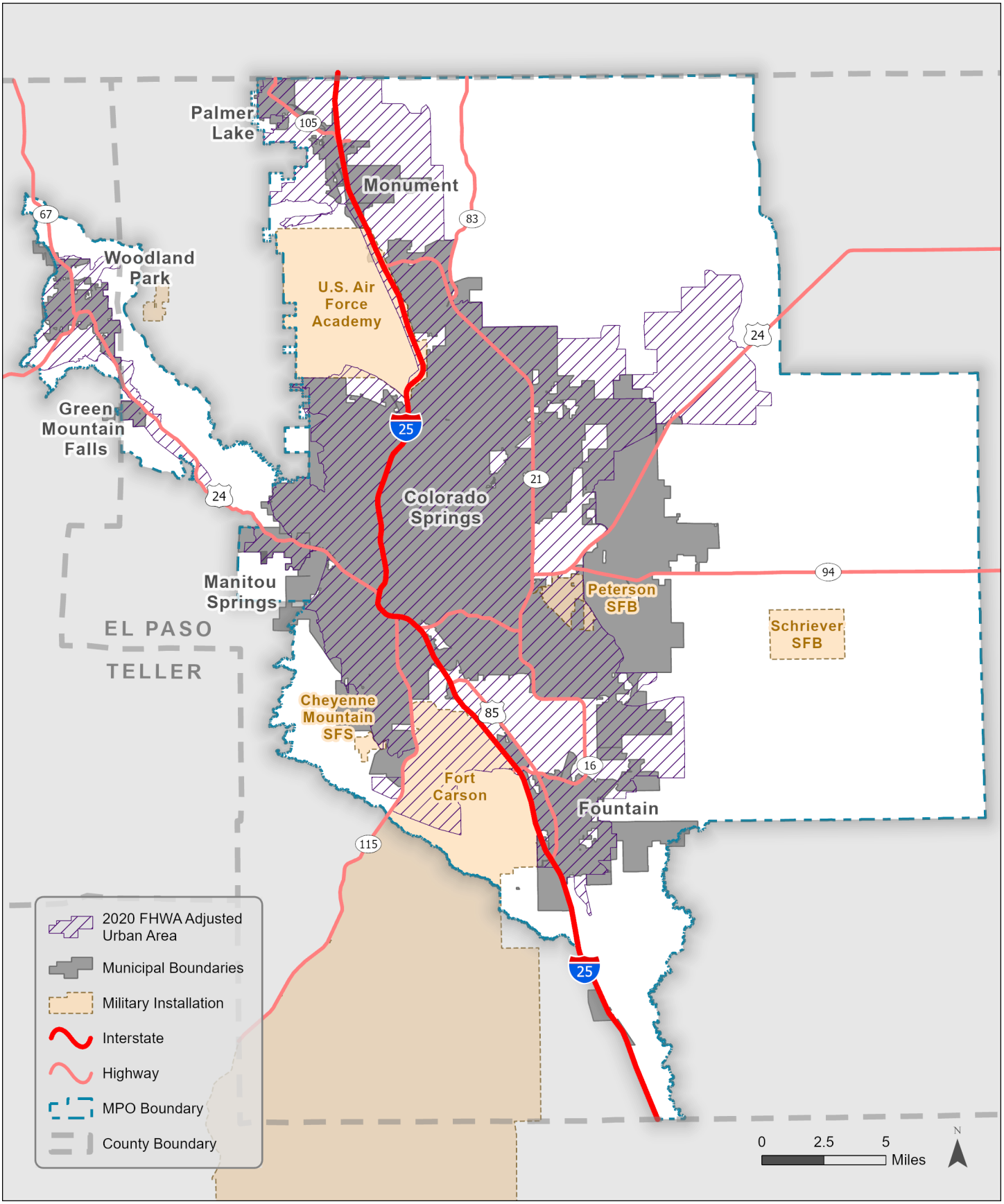
Long range transportation plans are required to comply with federal and state laws for regional and statewide planning, in order for the region to be eligible for federal transportation funding. Projects must be consistent with the LRTP to be eligible for federal funding.

Further, all transportation projects that are regionally significantly, or impact air quality within the metropolitan planning area, regardless of the source of funding, must be included in the plan. The primary purpose of the plan is to develop a strategy for the best use of public funds in meeting community goals.

This plan:

- Includes a 20 or more year horizon;
- Describes the multimodal transportation system components designed to facilitate mobility of people and goods throughout the region;
- Is fiscally constrained, which means that projects can only be included in the plan if funding is expected to be reasonably available to pay for them;
- Identifies funding—federal, state, local, and private—that is reasonably anticipated to be available during the period 2025 to 2050;
- Identifies how the transportation system, as recommended herein, assures maintenance of the National Ambient Air Quality Standards (NAAQS) and meets the mobility needs of persons with disabilities; and
- Is updated every 5 years (or 4 years for areas that are not in attainment with does not meet the national primary or secondary ambient air quality standard for a NAAQS).

Figure 1-2: MPO Boundary



FEDERAL AND STATE LEGISLATION

Title 23, United States Code (U.S.C.) 134 establishes the authority and responsibilities of the MPO. Further, this plan is guided by regulations set forth in 23 Code of Federal Regulation (CFR) § 450.324 and 23 CFR 49 CFR § 613.100., which are described in the previous section on scope.

Federal transportation legislation passed by Congress since 1991 emphasizes:

- Efficient use and preservation of existing transportation infrastructure;
- Synergistic relationships between transportation modes; and
- Inclusion of private citizens and stakeholders in planning.

In addition, transportation planning within metropolitan areas is defined by three major pieces of federal legislation:

- Infrastructure Investment and Jobs Act (IIJA, the current enactment of federal transportation legislation)
- The Clean Air Act Amendments of 1990
- The Civil Rights Act of 1964

Infrastructure Investment and Jobs Act

The FAST Act and MAP-21, the previous transportation legislation, incorporated performance goals, measures, and targets into the process of identifying necessary transportation improvements and selecting projects. The IIJA, signed into law in 2021, continued and expanded upon these provisions to promote an efficient and effective Federal surface transportation program. The long range plan must describe the performance measures and targets used in assessing system performance and progress in achieving the national and regional goals.

Clean Air Act Amendments

The IIJA is linked to the Clean Air Act Amendments, which recast transportation planning to ensure that it will help, not hinder, the region in meeting federal air-quality standards. They encourage reduced auto emissions and fewer trips by single-occupant vehicles, and they promotesthe use of alternative transportation modes, including transit, pedestrians and bicycles, as a viable part of the transportation system. Making federal funding dependent on a region's ability to meet air-quality standards reinforces the link between transportation planning and federal air-quality standards.

Civil Rights Act

Requirements within the IIJA are similarly linked to the 1964 Civil Rights Act, which states that "no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." The Act bars intentional discrimination, as well as disparate impact discrimination (i.e., a neutral policy or practice that has a disparate impact on protected groups).

Funding recipients must follow these fundamental environmental justice (EJ) principles:

- Avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority and low-income populations;
- Ensure the full and fair participation by all potentially-affected communities in the transportation decision-making process; and
- Prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

State of Colorado Requirements

Senate Bill (SB) 21-260, Sustainability of the Transportation System, identified requirements for greenhouse gas (GHG) reductions related to the transportation planning process for CDOT and MPOs.

In January 2021, the state published the Colorado Greenhouse Gas Pollution Reduction Roadmap, and in December 2021, the Transportation Commission voted to approve a the GHG Transportation Planning Standard. This Standard sets GHG reduction levels for PPACG at different time periods and requires PPACG to model the existing transportation networks and future regionally significant capacity projects in its transportation planning documents.

FEDERAL PLANNING FACTORS

The IIJA outlines 10 planning factors that must be addressed by the metropolitan transportation planning process. These are addressed throughout this LRTP and must be considered in future planning and programming of federal funds.

- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
- Increase the safety of the transportation system for all motorized and non-motorized users.
- Increase the security of the transportation system for motorized and non-motorized users.
- Increase the accessibility and mobility of people and freight.
- Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.
- Promote efficient system management and operation.
- Emphasize the preservation of the existing transportation system.
- Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation.
- Enhance travel and tourism.

PROCESS AND ENGAGEMENT

CHAPTER 2

PROCESS AND ENGAGEMENT

REGIONAL TRANSPORTATION PLANNING PROCESS

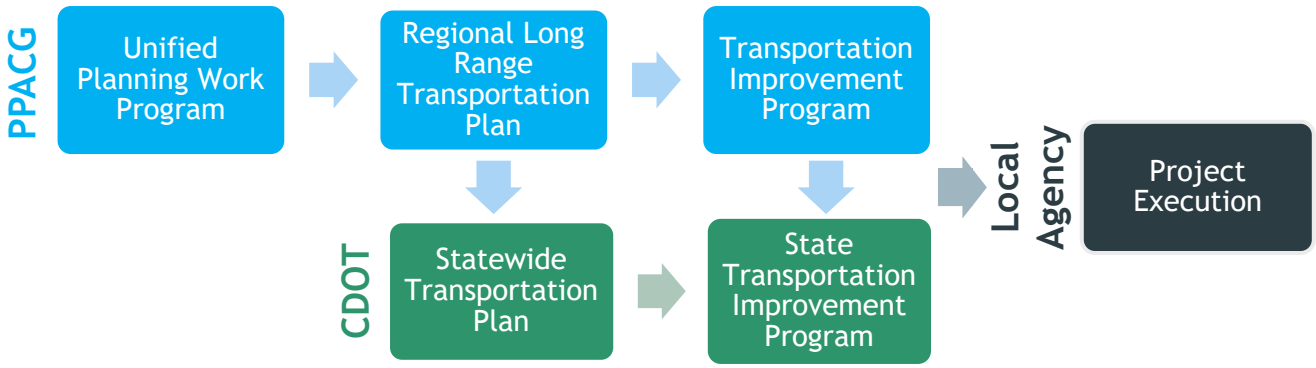
Transportation planning at the regional level is a process of balancing goals to improve the quality of life for the region's citizens. This process is coordinated among federal, state, and local governments and private transportation providers to continuously anticipate and respond to the comprehensive transportation needs of people and goods moving throughout the region, fostering economic activity, and enabling access to and from areas outside the region.

PPACG Planning Products

PPACG's transportation planning includes three major products. First, the Unified Planning Work Program (UPWP) defines the transportation planning efforts undertaken by the MPO and throughout the region. Second, this LRTP provides the long range vision and potential projects for the region's future. Finally the short range Transportation Improvement Program (TIP) is the mechanism by which funding is allocated to projects. Once funding is programmed, the projects are implemented by the local jurisdictions.

These processes work together and also feed into the larger state transportation plan and transportation improvement program, which are the responsibility of CDOT. This is illustrated in Figure 2-1.

Figure 2-1: PPACG Transportation Planning



LRTP PROCESS

The LRTP planning process is required to be continuing, cooperative and comprehensive. The 2050 LRTP provides consistency by building upon previous planning efforts. PPACG's iterative development process involved close coordination with local jurisdictions, CDOT, and various stakeholders as well as opportunities for engagement with the public at large. Figure 2-2 illustrates the process and schedule summary for this LRTP development.

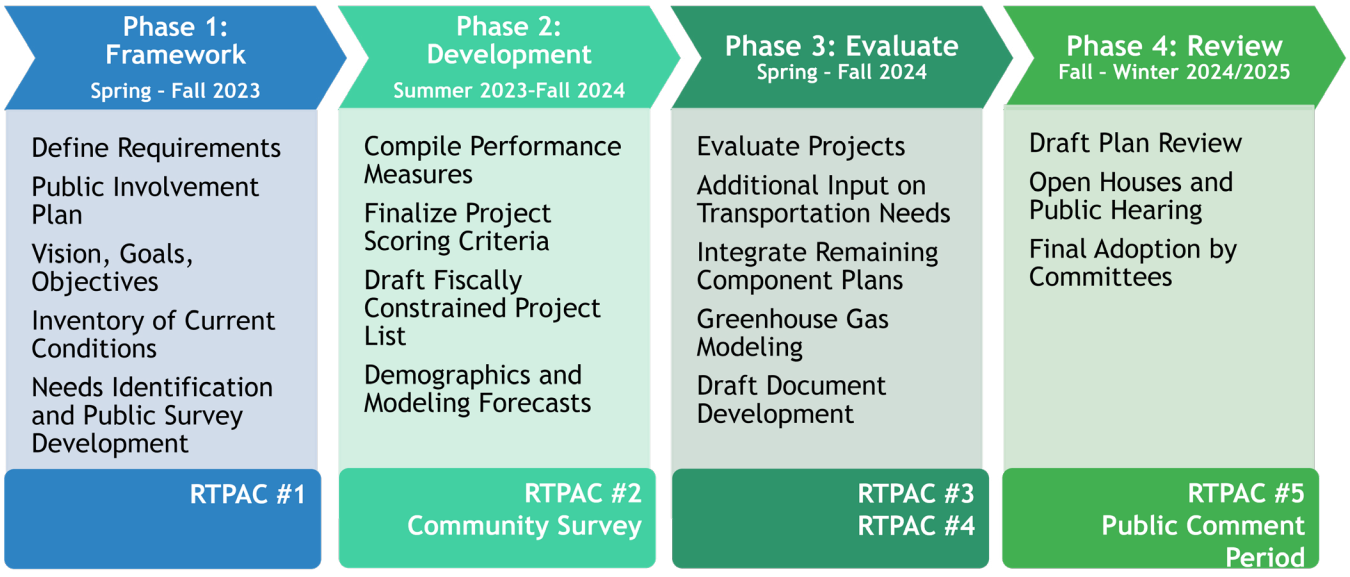
PPACG began by developing the framework for the plan, to include federal and state requirements and defining a new vision and goals for the future. Next, PPACG collected and compiled data to determine regional performance, existing network conditions, and public feedback regarding the transportation network.

Working with this data and local jurisdiction transportation planners, engineers, and subject-matter experts, PPACG defined the needs of the region. Local jurisdictions submitted projects for inclusion in the LRTP, which were then scored and culled into a fiscally constrained project list.

The project scoring criteria were based on the federal planning factors, the PPACG vision and goals, and system performance. The scoring methodology and criteria weighting were then verified and adjusted through engagement with the PPACG committees and Regional Transportation Plan Advisory Committee (RTPAC), which are defined in the following pages.

Once the draft list was assembled, projects and their impacts were evaluated and modeled. This analysis includes an equity analysis, which is included in Appendix D, and GHG analysis in accordance with state regulations and detailed in Appendix E.

Figure 2-2: LRTP Process and Schedule Summary



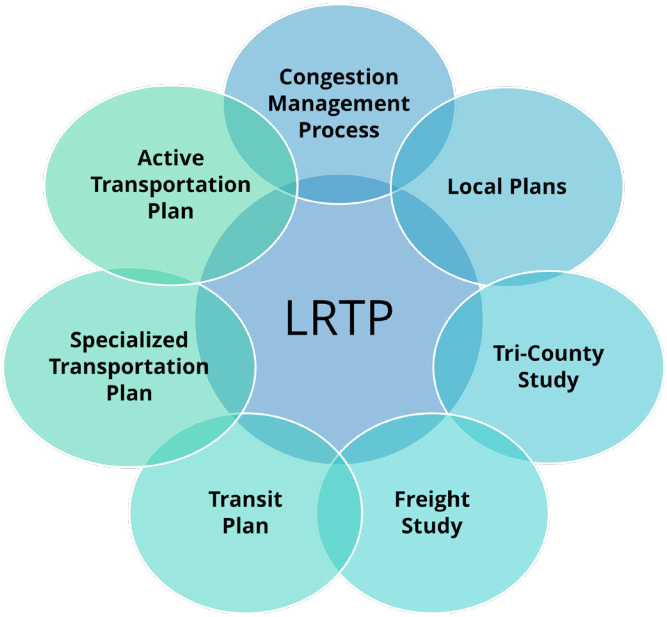
All of this information was then assembled into a draft document, which was reviewed by member jurisdictions, stakeholders and committees before being released for public comment. In addition, open houses were held to educate the public and gather feedback regarding the plan. Finally, adjustments to the document were made to address public comments and the plan was finalized. The LRTP must be approved by the PPACG Board of Directors before being approved by the Federal Highways Administration (FHWA) and Federal Transit Administration (FTA).

Component and Related Plans and Studies

Developing the LRTP is a multiyear process. As previously noted, this LRTP aims to pull together existing planning efforts and relies heavily on the input of local jurisdictions. Figure 2-3 depicts the component plan categories that support, overlap with, and feed into the LRTP. These include local plans and studies developed by jurisdictions in the region as well as additional efforts conducted by PPACG. For this LRTP, the following were referenced:

- PPACG Tri-County Transportation Study
- Regional Freight Mobility Study
- Pikes Peak Region Active Transportation Plan
- 2050 Regional Transit Plan
- 2050 Regional Specialized Transportation Plan (Coordinated Human Services Plan)
- PPACG Congestion Management Process (CMP)

Figure 2-3: Component Plans



- ConnectCOS
- El Paso County Major Transportation Corridors Master Plan, Master Plan, and Road Safety Plan
- Fort Carson Comprehensive Traffic Study
- City of Fountain Transportation Master Plan
- Manitou Springs Transportation and Mobility Master Plan and State of the System
- Town of Monument Comprehensive Plan
- Town of Palmer Lake Community Master Plan

PUBLIC ENGAGEMENT

Engagement was built into each step of this LRTP development. The integration of existing planning efforts and the PPACG governing board, committee structure, and public outreach programs support cooperation. PPACG believes that a

multifaceted approach to stakeholder and public engagement allows for greater exposure and opportunities. This approach is documented in the PPACG 2050 Long Range Transportation Plan Public Involvement Plan (PIP), which is included as Appendix G. Using multiple outreach techniques, PPACG empowered citizens to be involved at every stage of plan development.

Key Partners

THE BOARD OF DIRECTORS

The PPACG Board of Directors comprises elected officials of the local governments in the COG. Materials are presented to the Board to ensure there is an opportunity for clarification on project materials or messaging before disseminating information to the broader community. The Board ultimately is the adopting entity for the LRTP.

TRANSPORTATION ADVISORY COMMITTEE

The Transportation Advisory Committee (TAC) is closely involved in every step of the transportation planning process, providing technical expertise and input. Membership on the TAC includes planning, engineering, and public works staff of local governments, including Mountain Metropolitan Transit (MMT), CDOT, local military installations, FTA, and FHWA.

COMMUNITY ADVISORY COMMITTEE

The Community Advisory Committee (CAC) provides the means for citizens of the Pikes Peak Region to have an ongoing role in PPACG planning activities. In particular, the CAC is charged with providing ongoing input into public involvement methods to ensure that the public is heard in preparing transportation plans and programs. The CAC members also serve as liaisons to their communities, helping to distribute information and encourage engagement with PPACG planning processes. Membership includes citizens appointed by PPACG member jurisdictions, representatives of designated community organizations, and six citizens-at-large appointed by the PPACG Board of Directors.

REGIONAL TRANSPORTATION PLAN ADVISORY COMMITTEE

In addition to PPACG's standing committees, PPACG convened an additional advisory committee focusing on the 2050 LRTP. The RTPAC guides the plan development process and provides insight into public participation.

More than 50 individuals and organizations around the region were invited to participate in the RTPAC. These organizations represented a variety of categories, including education, housing, neighborhoods, bicycles/pedestrians, parks and recreation, public health, economic development, tourists, freight land development, aging issues, transit, military, community interests, and local governments.



The RTPAC met five times over the course of LRTP development to provide guidance and learn about the transportation planning process in the region.

PARTNERS AND CONSULTATIONS

PPACG recognizes there are more members of the community that should be coordinated with as part of a regional effort. Several entities were engaged and consulted, when possible, to provide additional context and information for this LRTP. These include military installations, environmental and health organizations, the Central Federal Lands Highway Division, and other groups.

Public Survey

One of the first engagement tactics to support the LRTP was a short public survey. This survey was developed, disseminated, and analyzed by a neutral third party and was intended to gather information regarding regional transportation preferences. The survey was disseminated in digital and hard copy versions and in English and Spanish. It appeared on the PPACG website and was shared with a wide range of community members.

However, this survey was self-selecting and is not statistically valid, meaning that it was completed by those who chose to participate and is not intended to be an accurate cross-representation of area residents. The survey results provide discussion points that can be explored through the LRTP development and with the local jurisdictions that develop transportation projects.

Results were shared with local jurisdictions and the PPACG committees.

SURVEY RESULTS

More than 800 respondents from more than 41 regional zip codes completed the survey, with high participation rates in the 80902 (Fort Carson area), in Colorado Springs 80903, 80904, 80906 (Broadmoor area), 80907 (Old North End area), 80918 (Northeast), and 80919 (Rockrimmon) areas. However, it should be noted that this represents a very small portion (less than 1%) of the population of the region.

Figure 2-4: Weekly Transportation Modes

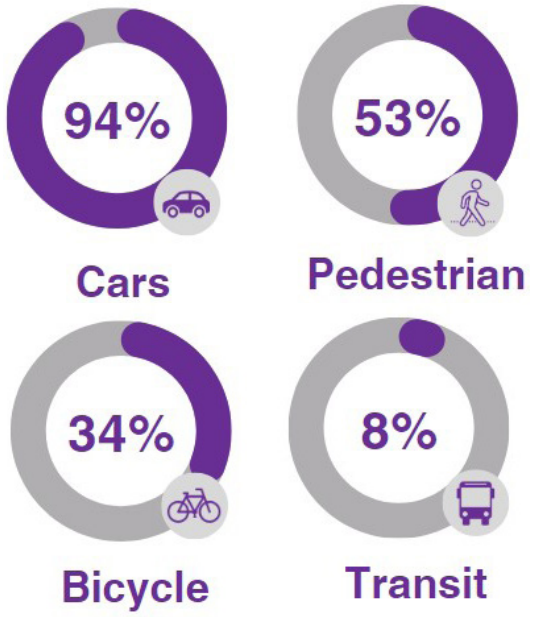
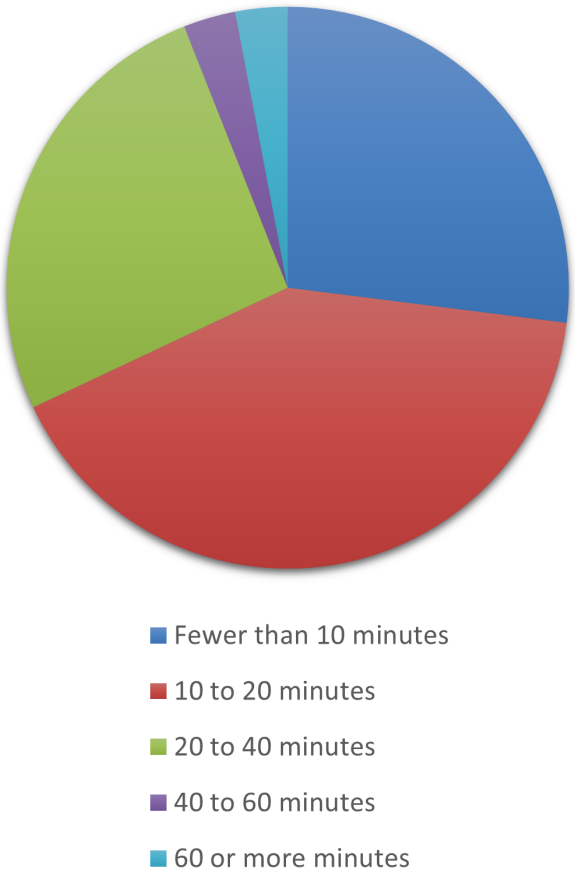


Figure 2-5: Commute Times



As seen in Figure 2-4, in a typical week, 94% of respondents used cars to travel throughout the region, 53% walked, 34% biked, and 8% used transit. Respondents were allowed to choose all the transportation modes they used.

When describing their commute between home and frequently traveled places like work, school, and others, 41% said they have an average commute of 10-20 minutes, while 26% have a commute less than 10 minutes and 26% have a 20–40-minute commute. This is illustrated in Figure 2-5.

Respondents indicated that transportation conditions have improved or worsened significantly (31%), or have somewhat improved (24%) over the last 5 years. Some respondents could not answer the question, indicating that they have not lived in the region long enough to comment. Many correlated the improved or worse transportation conditions with an increase in regional population and advocated for proactive, rather than responsive, transportation and infrastructure planning.

With regard to other modes of transportation, 27% would ride transit more frequently if there was expanded service or buses to more destinations and 38% saw the lack of transit frequency as a top transportation problem. Meanwhile, 39% of respondents were most concerned with the lack of bicycle/pedestrian options (bicycle lanes, trails, sidewalks, crosswalks, etc.

When comparing the survey results to those in the previous LRTP, there are

many similarities. The vast majority travel in single-occupancy vehicles. Drivers still desire improved road conditions and improved safety, and they would like to see increased bicycle connectivity and safe infrastructure.

Concerns about congestion have increased from 50% to 62%. Data also show, though, that over the past 5 years, people travel differently within the region. Walking on a weekly basis to destinations has increased from 27% to 53%, while taking transit has increased from 3% to 8%. Additionally, respondents to this survey advocated for additional transit options including increased service and frequency and incorporating rail into interregional and intraregional travel.

Additional information can be found in the Survey Summary in Appendix I.

Public Comments and Open Houses

In addition to the various committees, PPACG understands the importance of all voices in the regional planning process. As part of the LRTP review and adoption process, a public comment period allows the public to review, provide feedback, and comment on the draft plan. For this LRTP, the public comment period will be held in January-February of 2025.

During the comment period, PPACG holds a series of open houses to create a welcoming, collaborative environment and meet public involvement objectives. These meetings take place at a variety of locations and times to encourage maximum participation. Locations and times are chosen with consideration to Americans with Disabilities Act (ADA) and language accessibility.

LRTP information and the opportunity to comment is also hosted online via PPACG's website. After collecting comments, a summary is presented to the PPACG Board and relevant committees. Feedback collected during this period are included as an appendix in the LRTP and utilized for future planning efforts in the region.

LRTP VISION AND GOALS

Establishing a strategic direction through the formulation of a vision and goals with the guidance of our planning partners and RTPAC was the a critical early component of the LRTP planning process. The vision and goals must be in alignment with federal and state guidance and planning factors, performance-based metrics, and regional needs.

The following vision and goals were developed by the RTPAC and adjusted by the TAC, CAC, and Board of Directors to reflect the priorities of the region.

Goals were formulated with a focus on outcomes, rather than on activities or policies. The vision and goals are reflected throughout the LRTP, and all projects and recommendations included support one or more of these goals.

Vision

Develop a sustainable multimodal transportation system, facilities, and services that meet regional mobility and accessibility expectations, improve the quality of life in the Pikes Peak region, and plan for the future of transportation.

Goals

1	*Preserve and enhance the function of and access to the existing regional transportation system.*
2	*Provide efficient, improved, and fully connected multimodal and intermodal transportation for people, goods, information, technology, and freight to employment hubs, military installations, and other key destinations throughout the region.*
3	*Increase the safety, security, redundancy, and resiliency of the multimodal transportation system.*
4	*Maintain a robust, equitable, and healthy regional transportation system that enhances economic vitality of the Pikes Peak region.*
5	*Implement responsible transportation solutions.*

SYSTEM PERFORMANCE

CHAPTER 3

SYSTEM PERFORMANCE

PERFORMANCE-BASED APPROACH

Under the IIJA, the transportation planning process must provide for the establishment and use of a performance-based approach to decision making. Performance-based planning applies performance management principles to transportation system policy and investment decisions. It is a system-level, data-driven process that identifies strategies and investments. Using specific performance measures and agreeing upon desired targets provides an objective, quantified basis for policies and investments, and improves accountability in communicating with the public.

States and MPOs must set specific performance targets and develop plans designed to help reach those targets. The intent is to move toward an objectively accountable system that reflects the effectiveness of investment decisions, allowing federal funding recipients to improve decision-making.

SYSTEM PERFORMANCE

Performance measures are used to track and maximize the benefits of the transportation planning decisions, meeting national and regional goals, and link infrastructure investments to the LRTP, TIP, and CMP. Federal regulation requires states and MPOs to establish new targets based on updated data typically every four years or during a mid-cycle update. CDOT has recently updated some of their performance measures.

As the region's designated MPO, PPACG can either adopt targets set by the state DOT, or set regional targets based on data only within its MPO boundary. Recently the targets that have been approved by PPACG committees are those set by the state in the following categories: Pavement Condition, Bridge Condition, System Reliability, and Safety.

Two other target categories, congestion mitigation and traffic congestion, are not required of PPACG because the region is in attainment for air quality, which is discussed in more detail in Chapter 5.

Each performance measure has a corresponding baseline and target. Baselines are important to establish how much progress is being made on a performance target. Baselines are set when the performance measures and targets are first set. The status is the most recent data the PPACG has and is used to evaluate progress on target achievement. The federal performance measure targets

are to be achieved by the end of the corresponding performance period. It is important to note that targets are based on trends and data and are not aspirational in nature.

FHWA assesses targets to determine if states either met targets established or made significant progress. For example, a state is determined to have met or made significant progress toward meeting its safety performance targets when at least four out of the five targets are either met or the actual outcome for the target is better than the baseline performance, which is the 5-year rolling average. As provided by statute, states that did not meet the targets or make significant progress will be required to submit a Highway Safety Improvement Program (HSIP) Implementation Plan and use their funding only for those projects where targets have not been met.

Pavement Condition

Pavement condition is measured using data submitted to the Highway Performance Monitoring System (HPMS), specifically the International Roughness Index (IRI), cracking percent, faulting, and rutting. The IRI is a system used to evaluate and manage the road system, while cracking percent, faulting, and rutting address various aspects of pavement condition. FHWA set certain metric thresholds in the final rule, defining good, fair, and poor conditions for each of these measurements. Table 3-1 shows the metric categories for good, fair, and poor conditions used as part of this performance measure. The graphics on the following pages depict these goals.

The pavement conditions in the Pikes Peak Region are illustrated in Figure 3-1. Areas of poor and fair quality pavement conditions are scattered around the MPO with notable poor quality areas in high traffic areas such as I25 near Fountain, US24 through Woodland Park, and various roads in and around downtown Colorado Springs. Pavement condition is a consideration for CDOT and local agencies as they prioritize projects. It was also one of the elements of the scoring methodology used to select projects for this LRTP.

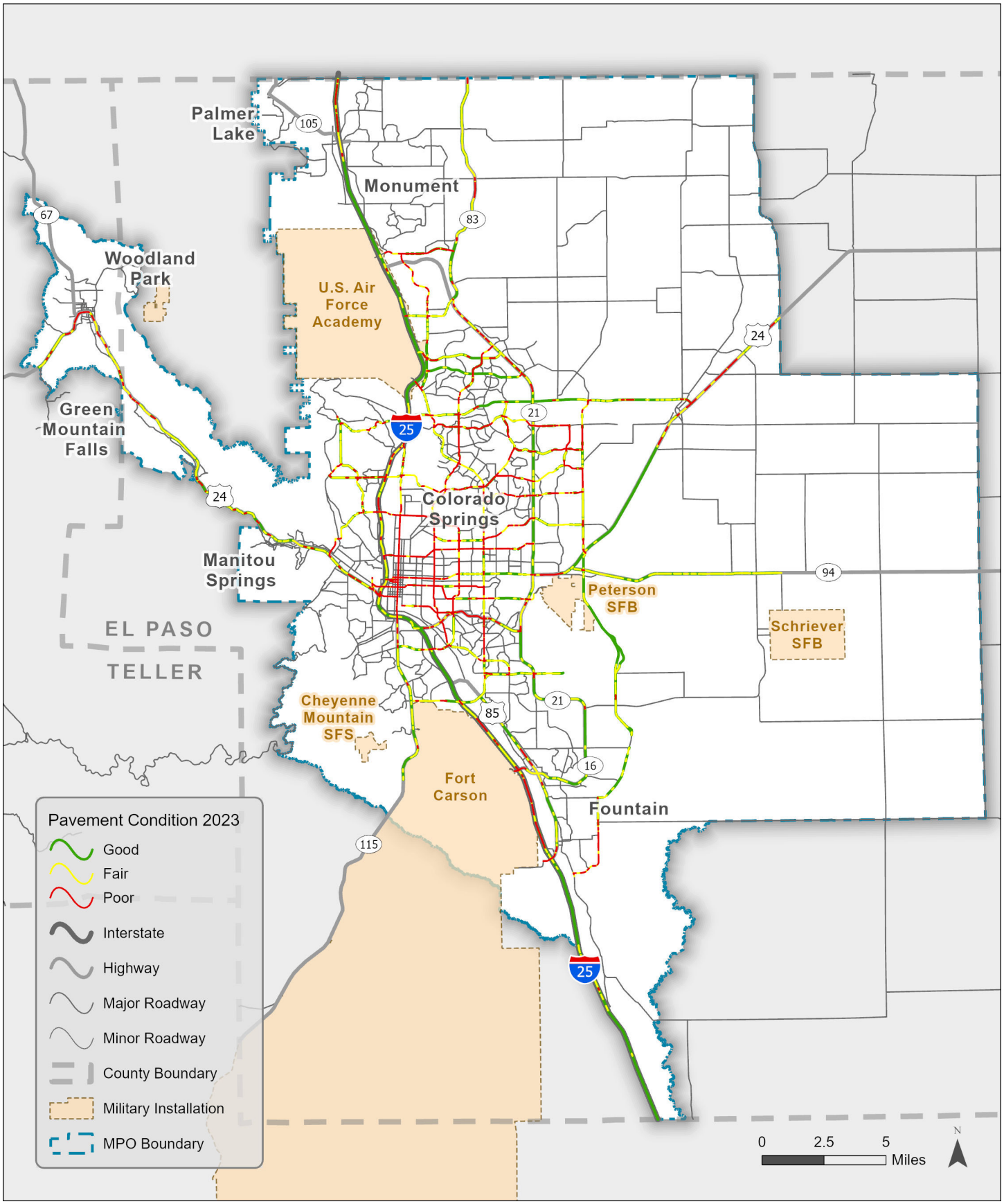
There are four targets related to pavement condition, which are described on the following pages. These targets were set

Table 3-1: Pavement Condition Metric Thresholds

	GOOD	FAIR	POOR
IRI (inches/mile)	<95	95-170	>170
Rutting (inches)	<0.20	0.20-0.40	>0.40
Faulting (inches)	<0.10	0.10-0.15	>0.15
Cracking (%)	<5	5-20 (asphalt) 5-15 (JCP) 5-10 (CRCP)	>20 (asphalt) 0.15 (JCP) >10 (CRCP)

CRCP: Continuous Reinforced Concrete Pavement
JCP: Jointed Concrete Pavement

Figure 3-1: Pavement Conditions



by CDOT for the state as a whole and are not specific to the Pikes Peak Region. The PPACG Board of Directors approved supporting these targets in 2023. These targets will be re-evaluated in early 2025.

The 2023 and 2025 state targets for the percentage of interstate system (National Highway System [NHS]) pavement in good condition are greater than or equal to 45% and 47%, respectively. In 2023, percentage of interstate system pavement in good condition was 45.10% statewide and 57.8% in the Pikes Peak Region. Per the FHWA, the NHS "consists of roadways important to the nation's economy, defense, and mobility." More information about these roadways is included in Chapter 4.

The 2023 and 2025 state targets for the percentage of interstate system pavement in poor condition are less than or equal to 4% and 3.5%, respectively. In 2023, percentage of interstate system pavement in poor condition was 3.3% statewide and 0.8% in the Pikes Peak Region.

Meanwhile, the 2023 and 2025 state targets for the percentage of non-interstate system pavement in good condition are 42% and 43%, respectively. In 2023, percentage of interstate system pavement in good condition was 41.2% statewide but only 29.6% in the Pikes Peak Region.

The 2023 and 2025 state targets for the percentage of non-interstate system pavement in poor condition are 3.5% for each target year. In 2023, percentage of interstate system pavement in poor condition was 3.4% statewide, but 5.8% in the Pikes Peak Region.

Figures 3-2 through 3-5 depict the statewide and Pikes Peak Region trends for 2017 through 2023 compared with these targets.

Figure 3-2: Percentage of Interstate System Pavement in Good Condition

2023 MPO Status	2023 Statewide Status	2023 Target
57.80%	45.10%	≥45.00%

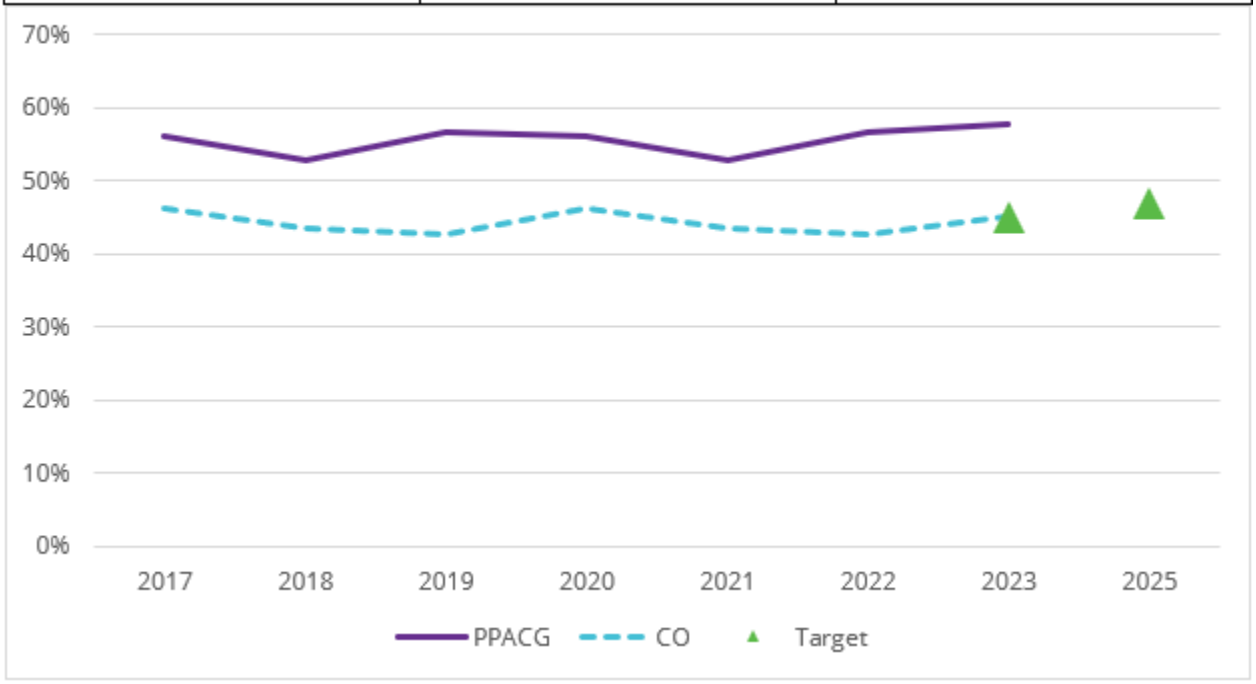


Figure 3-3: Percentage of Interstate System Pavement in Poor Condition

2023 PPACG Status	2023Statewide Status	2023 Target
0.80%	3.30%	≤4.00%

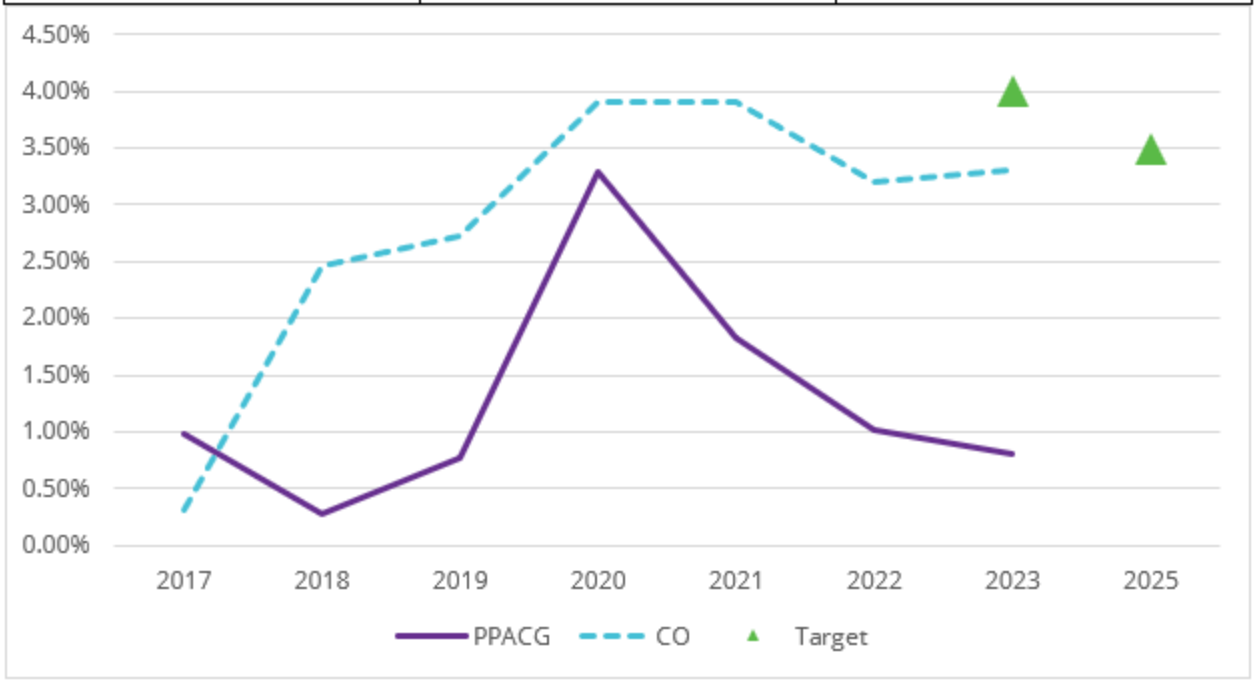


Figure 3-4: Percentage of Non-interstate System Pavement in Good Condition

2023 PPACG Status	2023 Statewide Status	2023 Target
29.60%	41.20%	≥42.00%

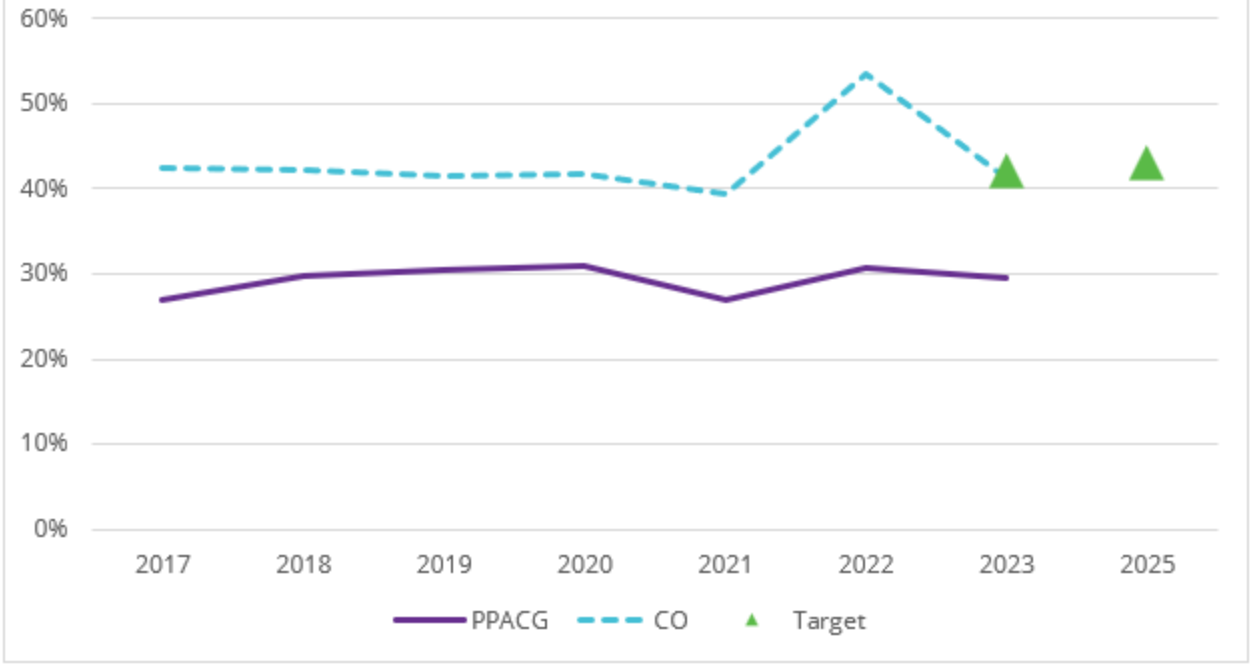
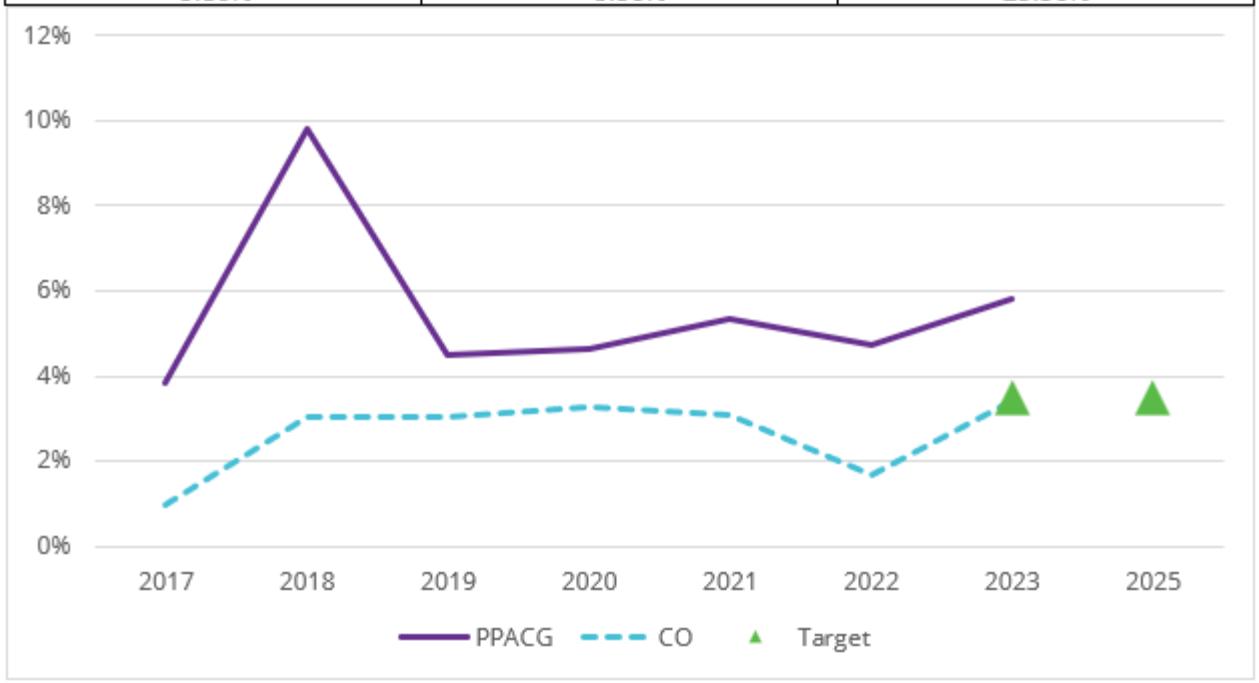


Figure 3-5: Percentage of Non-interstate System Pavement in Poor Condition

2023 PPACG Status	2023 Statewide Status	2023 Target
5.80%	3.50%	≤3.50%



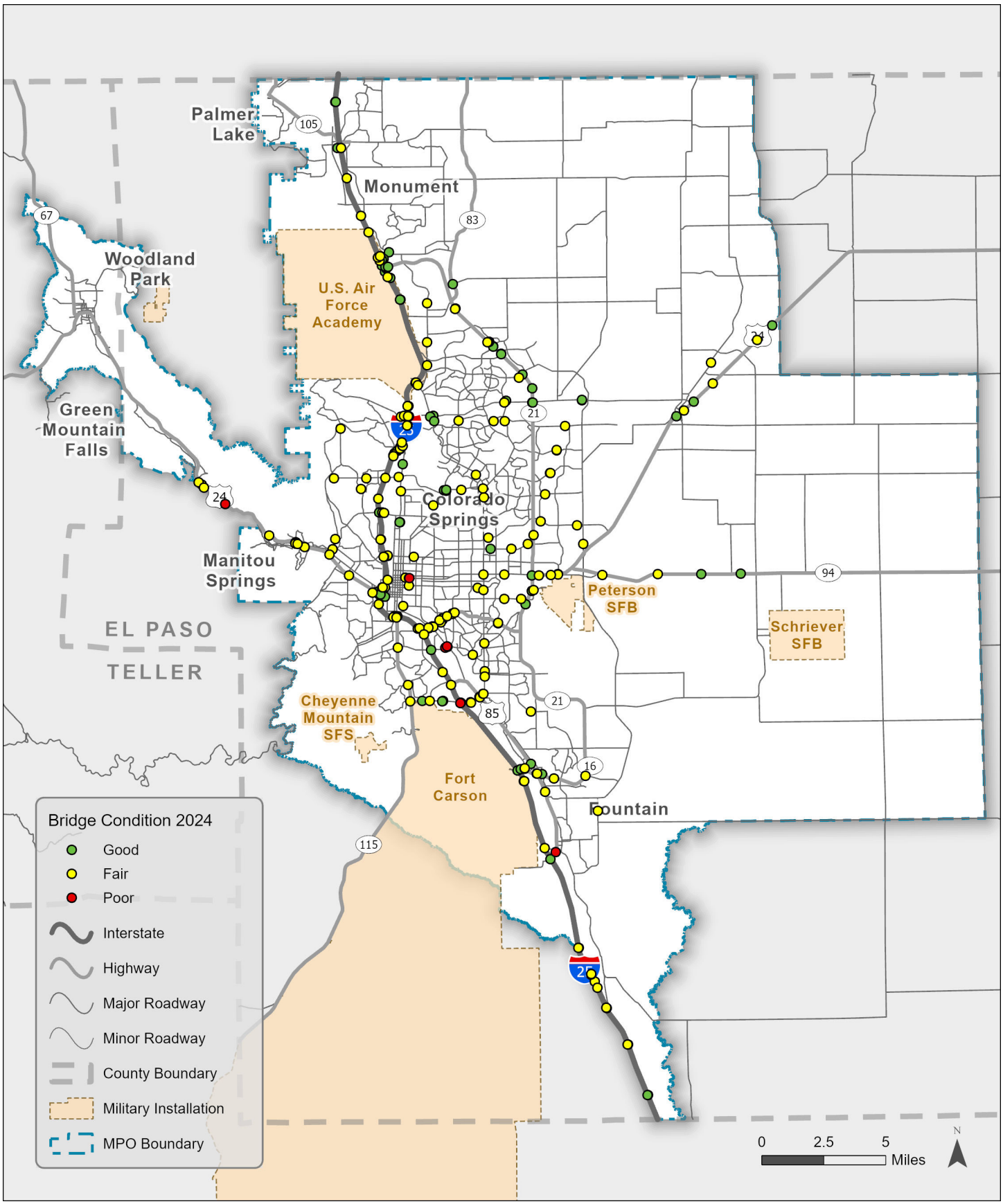
Bridge Condition

Bridge condition is measured using data reported to the National Bridge Inventory (NBI). The NBI is a rating scale from zero to nine, rated good, fair, and poor. Deck, superstructure, and culvert condition are graded and FHWA set the following thresholds.

The bridge conditions in the Pikes Peak Region are illustrated in a map on the following page, Figure 3-6. The vast majority of bridges are in fair to good condition, with only a handful of poor condition bridges in the region. As with pavement condition, bridge condition is used by CDOT and local agencies to prioritize projects and was a consideration during the LRTP project selection process.

There are two targets related to bridge condition. These targets were set by CDOT for the state as a whole and are not specific to the Pikes Peak Region. The PPACG Board of Directors approved supporting these targets in 2023. These targets will be re-evaluated in early 2025.

Figure 3-6: Bridge Conditions



The 2023 and 2025 statewide target for the percentage of NHS bridges in good condition are 36% for each target year. Meanwhile in 2023, the percentage of bridges in good condition was 37.3% statewide and 36.1% in the Pikes Peak Region. This percentage has been declining in the region recently.

The 2023 and 2025 targets for the percentage of NHS bridges in poor condition was 4% for each target year. In 2023, 4% of bridges were in poor condition statewide and 2.7% of bridges in the Pikes Peak Region were in poor condition.

Table 3-2 shows the thresholds for Bridge Condition Metrics. Figures 3-7 and 3-8 depict the statewide and Pikes Peak Region trends for 2017 through 2023 compared with these targets.

Table 3-2: Bridge Condition Metric Thresholds

	GOOD	FAIR	POOR
Deck	≥7	5 or 6	≤4
Superstructure	≥7	5 or 6	≤4
Substructure	≥7	5 or 6	≤4
Culvert	≥7	5 or 6	≤4

Figure 3-7: Percentage of NHS Bridges, by Deck Area, in Good Condition

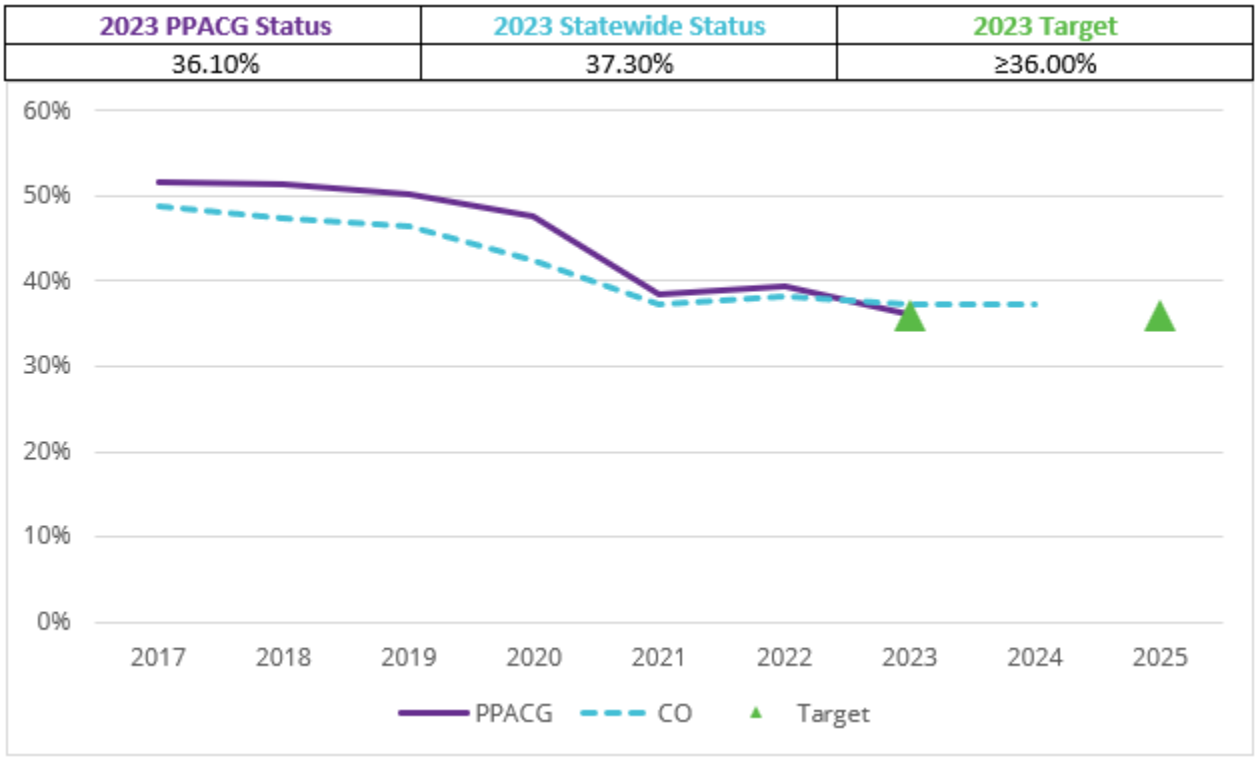
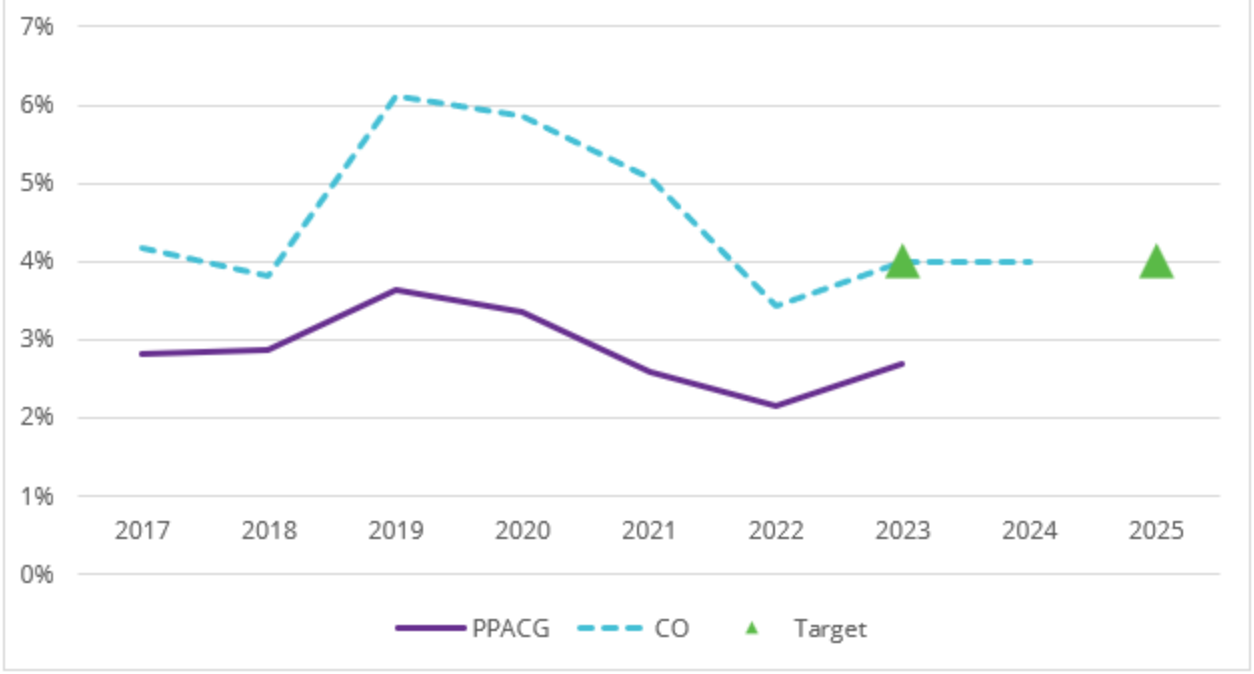


Figure 3-8: Percentage of NHS Bridges, by Deck Area, in Poor Condition

2023 PPACG Status	2023 Statewide Status	2023 Target
2.70%	4.00%	≤4.00%



System Reliability

Travel time reliability indexing (TTRI) is a multi-stepped process to determine the ratio of peak travel periods to normal travel periods. Travel time reliability is a measure of the consistency, timeliness, predictability, and dependability of a trip. Travel time reliability is a comparison, expressed as a ratio, of the 80th percentile travel time of a reporting segment to the "normal" (50th percentile) travel time of a reporting segment occurring throughout a full calendar year.

Travel time is reported using the National Performance Management Research Data Set (NPMRDS) and is collected in 15-minute segments during all time periods between 6:00 a.m. and 8:00 p.m. local time. The 80th Percentile Travel Time represents congested periods, while the 50th Percentile Travel Time represents the average travel time. "Reliable" is considering a TTRI below 1.5.

The system performance targets were set by CDOT for the state as a whole and are not specific to the Pikes Peak Region. The PPACG Board of Directors approved supporting these targets in 2023. These targets will be re-evaluated in early 2025.

The 2023 and 2025 state targets for the percent of person-miles traveled on the interstate system that are reliable are 81% and 79%, respectively. In 2023, percentage of interstate system pavement in good condition was 80.01% statewide and 90.6% in the Pikes Peak Region.

The 2023 and 2025 state targets for the percent of person-miles traveled on the non-interstate system that are reliable are 93% and 94%, respectively. In 2023, percentage of interstate system pavement in good condition was 92.5% statewide and 91% in the Pikes Peak Region.

Figures 3-9 and 3-10 depict the statewide and Pikes Peak Region trends for 2017-2023 as well as the targets.

TRUCK TRAVEL TIME RELIABILITY

Freight movement is assessed by the Truck Travel Time Reliability (TTTR) Index. The TTTR ratio is generated by dividing the 95th percentile time by the normal time (50th percentile) for each segment. The TTTR is calculated for each of the following five time periods for each segment of Interstate:

- Morning peak Monday through Friday (6-10 a.m.)
- Midday Monday through Friday (10 a.m.-4 p.m.)
- Afternoon peak Monday through Friday (4-8 p.m.)
- Weekends (6 a.m.-8 p.m.)
- Overnight for all days (8 p.m.- 6 a.m.)

The maximum TTTR for each segment of Interstate is multiplied by the length of the segment, then the sum of length-weighted segments is divided by the total length of Interstate will generate the TTTR Index.

The 2023 and 2025 state targets for TTTR Index are 1.46 for both target years. In 2023, the TTTR Index was 1.42 statewide and 1.48 in the Pikes Peak Region. Figure 3-11 depicts the statewide and Pikes Peak Region trends for 2017-2023 as well as the targets.

Figure 3-9: Percent of Person-miles Traveled on the Interstate System that are Reliable

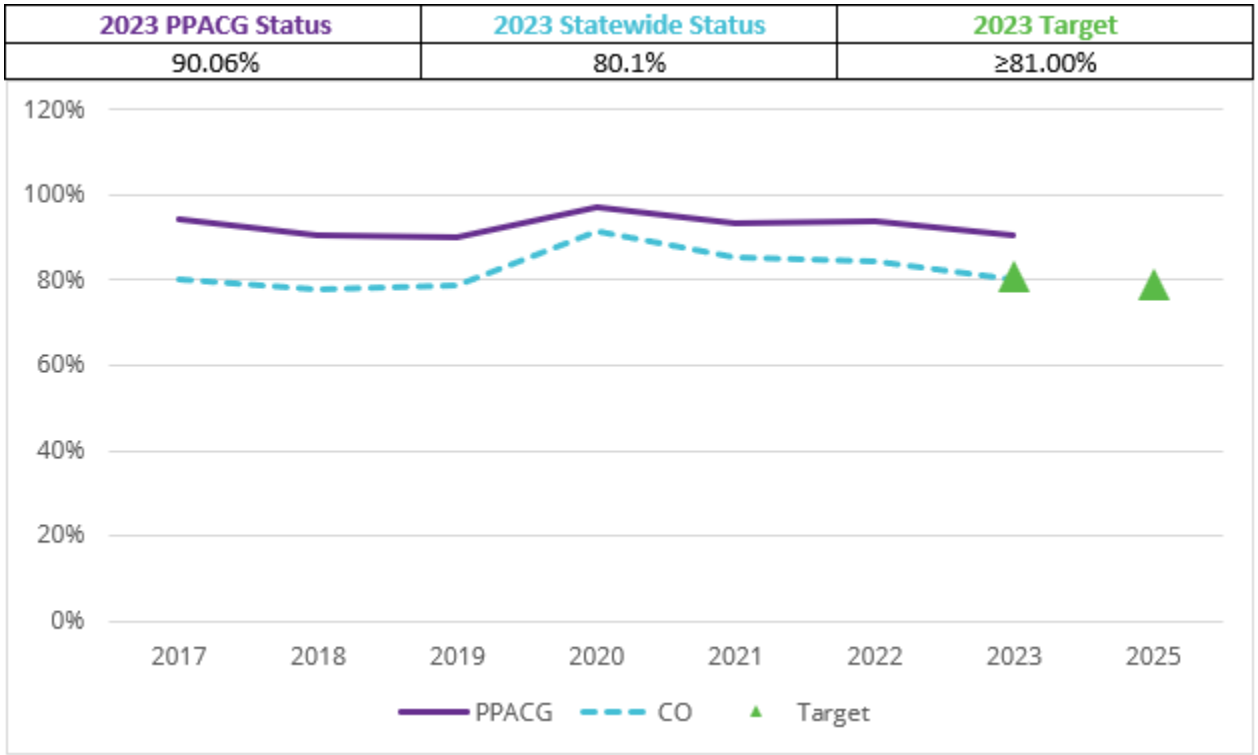


Figure 3-10: Percent of Person-miles Traveled on the Non-interstate System that are Reliable

2023 PPACG Status	2023 Statewide Status	2023 Target
91.00%	92.50%	≥93.00%

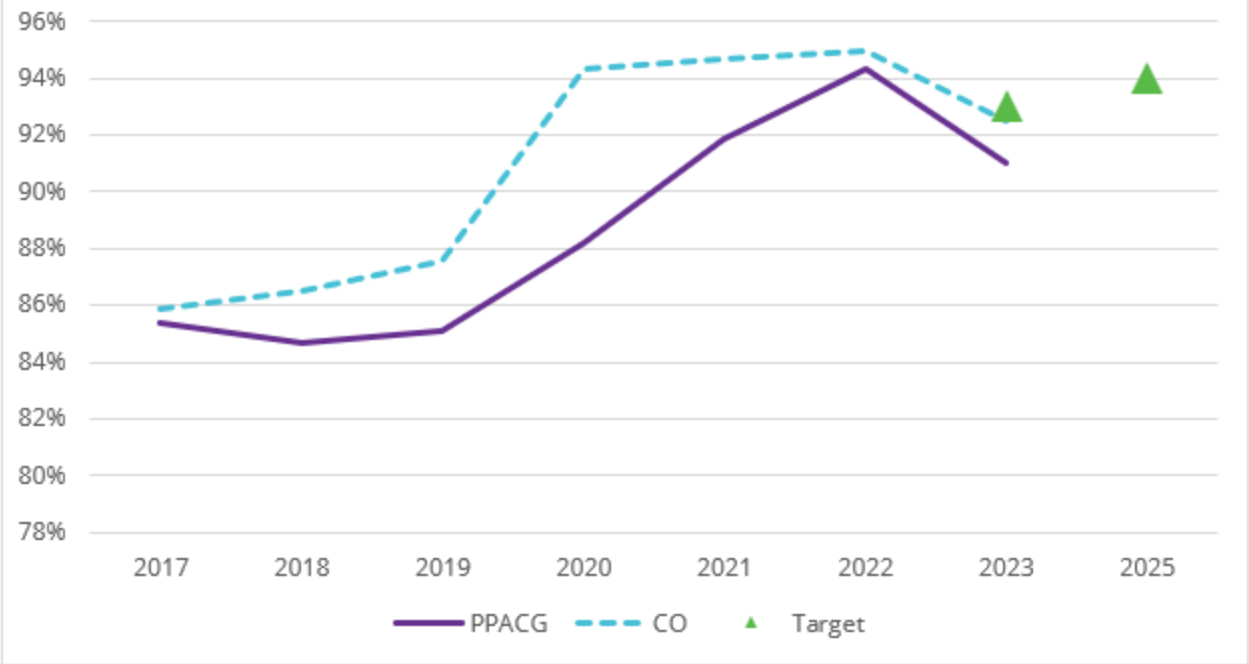
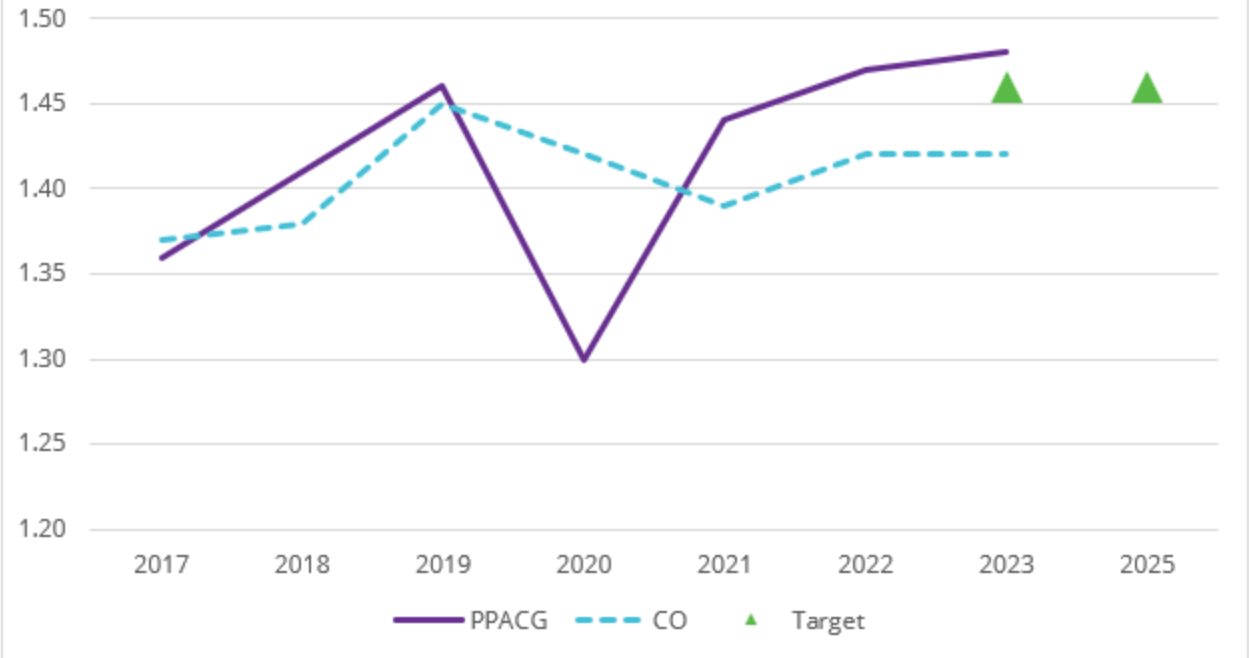


Figure 3-11: TTTR Index

2023 PPACG Status	2023 Statewide Status	2023 Target
1.48	1.42	≥1.46



Safety

There are five performance measures in the highway safety category related to the number of crashes, both resulting in fatal and/or serious injury, on the entire roadway network within the PPACG boundary. Data is collected from the Colorado Department of Revenue, refined by CDOT, and analyzed by PPACG staff.

The goal for PPACG and the State of Colorado regarding fatalities and injuries is to have none. Realistically that is not likely to happen, therefore targets are set to measure progress. Where targets are not met, funding received must be used toward those areas that need improvement.

Targets for the highway safety category are established annually. The safety targets in this document were set by CDOT in November 2023. The targets were supported by the Board in 2024 and will be re-evaluated in early 2025.

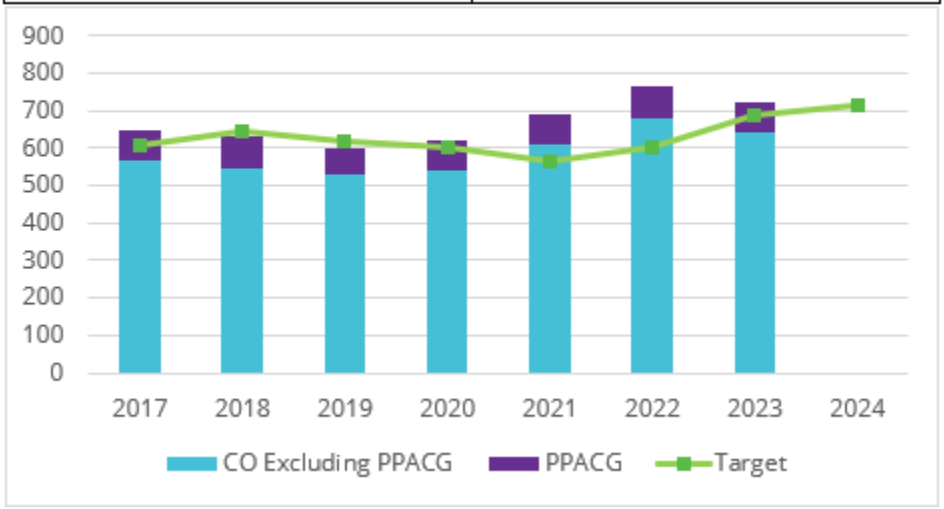
Chapter 5 provides additional detail regarding transportation safety and crashes in the Pikes Peak Region as well as steps being taken to address safety.

FATAL CRASHES

Figure 3-12 shows the number fatalities in Colorado and the Pikes Peak Region numbers from 2017-2023. There was an increase in fatalities in 2020 following decreases in 2018 and 2019. Between 2019 and 2022, the number of traffic fatalities in Colorado increased by 17% and declined again in 2023.

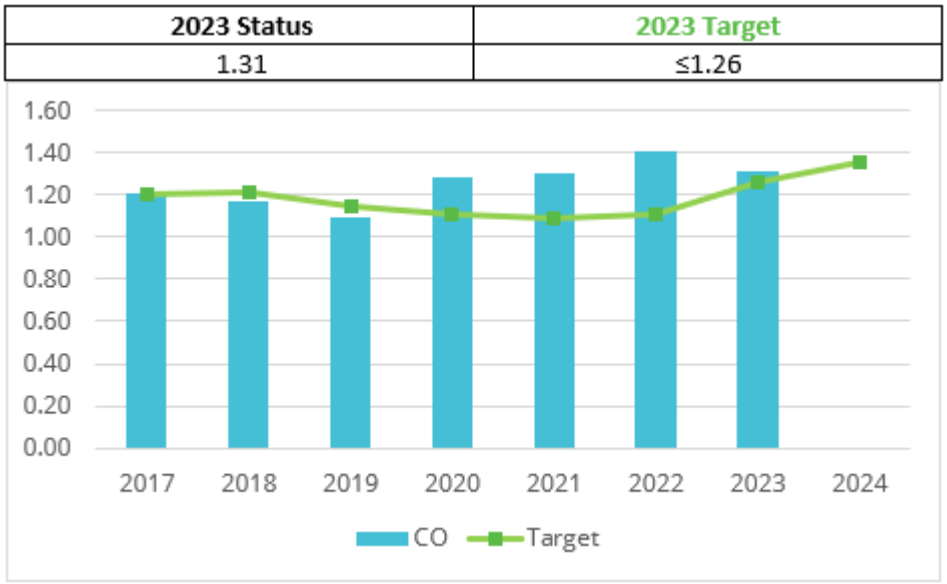
Figure 3-12: Number of Fatalities

2023 Status	2023 Target
720	≤688



Dividing the number of motor vehicle fatalities by the number of vehicle miles traveled (VMT) provides another perspective on the number of fatalities that may be more useful, particularly in areas with population changes or changes in driving habits. Fatalities per 100 million VMT can be compared over time and between different geographic areas. Figure 3-13 shows the rate of fatalities per 100 million VMT for Colorado. Colorado's fatality rate increased sharply (21%) in 2020 after a decrease in 2019. However, Colorado's fatality rate was slightly lower than the average fatality rate in the United States in 2020.

Figure 3-13: Fatalities per 100 million VMT



SERIOUS INJURIES

In this report, serious injury is defined as "evident incapacitating" on the crash report by the responding law enforcement officer. An incapacitating injury is a type of injury that prevents the person from walking, driving, or continuing the normal activities previously capable of performing prior to being injured. Figure 3-14 shows the number of serious injuries, while Figure 3-15 shows the rate if serious injuries per 100 million VMT.

NON-MOTORIZED FATALITIES AND SERIOUS INJURIES

Non-motorized refers to bicyclists, pedestrians, and other active transportation modes. This measure combines both fatalities and serious injuries. Figure 3-16 shows the number of non-motorized fatalities and serious injuries.

Figure 3-14: Number of Serious Injuries

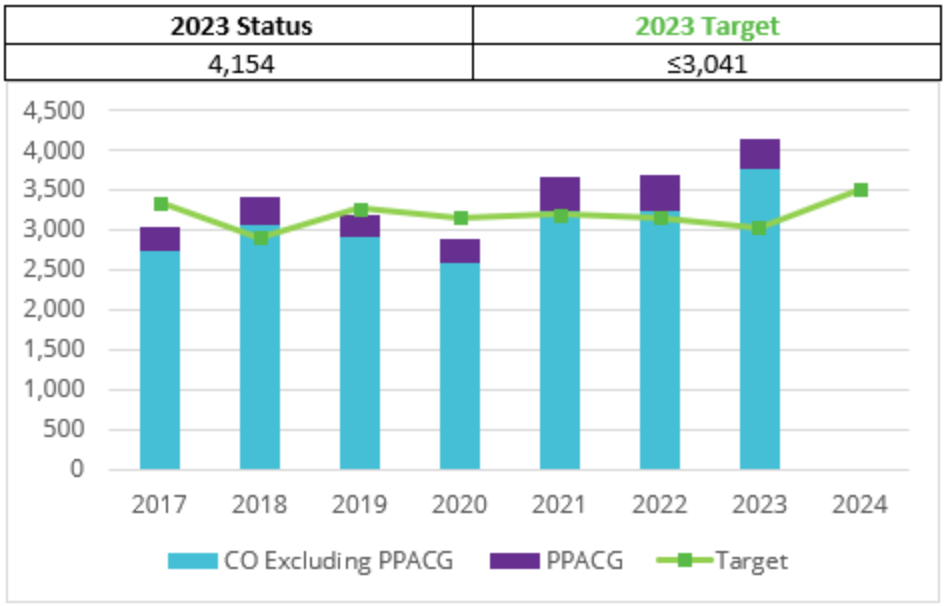


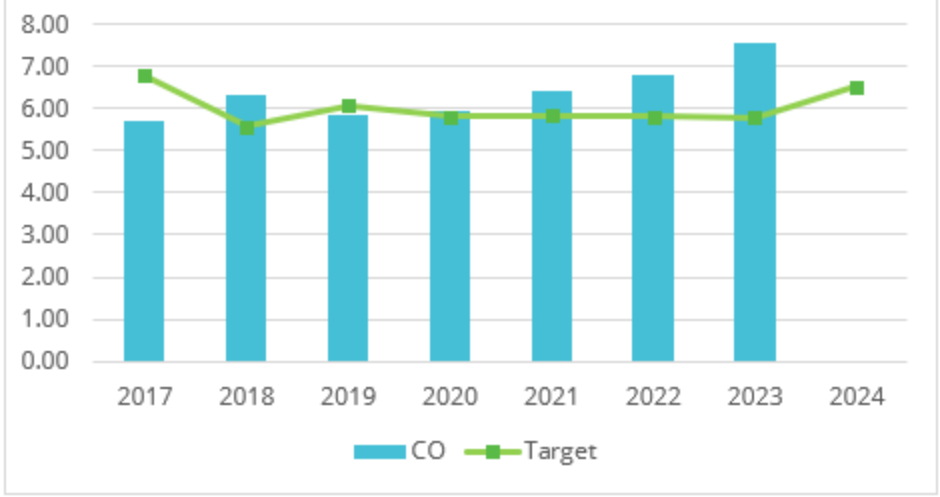
Figure 3-15: Serious Injuries per 100 million VMT

2023 Status	2023 Target
7.57	≤5.79



Figure 3-16: Non-motorized Fatalities and Serious Injuries

2023 Status	2023 Target
7.57	≤5.79



Transit Safety

Table 3-3 contains 2023 transit safety event data and 2024 targets by mode of service. Targeted rates represent at least a 10% decrease from 2023's data. Targets are updated annually using the previous year's data. This data is reported in the 2024 Public Transportation Agency Safety Plan done by MMT as the direct recipient of FTA Section 2307 funds for transit capital and operating assistance and transportation-related planning in urbanized areas .

Table 3-3: Transit Safety Performance

	MOTOR BUS OR FIXED ROUTE		DEMAND RESPONSE ADA COMPLEMENTARY PARATRANSIT		VANPOOL	
	2023 Actual	2024 Target	2023 Actual	2024 Target	2023 Actual	2024 Target
Total Accidents	258	232	26	23	1	1
Per 100k RM*	8.71	7.84	2.81	2.53	0.77	0.69
Total Incidents	41	37	2	2	0	0
Per 100k RM	1.38	1.25	0.22	0.19	0	0
Total Occurrences	17	15	8	7	0	0
Per 100k RM	0.57	0.52	0.86	0.78	0	0
Total Safety Events	316	284	36	3.50	1	1
Per 100k RM	10.67	9.60	3.89	2	0.77	0.69
Injuries	29	26	2	0.19	0	0
Per 100k RM	0.98	0.88	0.22	0	0	0
Fatalities	0	0	0	0	0	0
Per 100k RM	0	0	0	0	0	0
Minor NTD Reportable (S&S-50)	28	25	0	0	0	0
Per 100k RM	0.95	0.85	0	0	0	0
Major NTD Reportable (S&S-40)	14	13	4	4	0	0
Per 100k RM	0.47	0.43	0.43	0.39	0	0

NTD: National Transit Database

**Per 100,000 vehicle revenue miles. Revenue miles (RM) are those miles driven when the vehicle is providing public transportation and is available to carry passengers.*

SYSTEM PERFORMANCE REPORT

Performance targets are a way to review the region's progress in achieving its transportation goals. Table 3-4 shows the correlation between LRTP goals, federally required performance measures, and federal planning factors as listed in Chapter 1.

Table 3-4: 2050 LRTP Goals and Performance Measures

LRTP GOALS				
Preserve and enhance the function of and access to the existing regional transportation system.	Provide efficient, improved, and fully connected multimodal and intermodal transportation for people, goods, information, technology, and freight to employment hubs, military installations, and other key destinations throughout the region.	Increase the safety, security, redundancy, and resiliency of the multimodal transportation system.	Maintain a robust, equitable, and healthy regional transportation system that enhances economic vitality of the Pikes Peak region.	Implement responsible transportation solutions.
PERFORMANCE MEASURES				
• Infrastructure Condition • Transit Asset Management*	• System Reliability	• Safety • Transit Safety*	• System Reliability	• Infrastructure Condition • System Performance
FEDERAL PLANNING FACTORS				
• Efficient system management and operation • Existing system preservation	• Economic vitality • Accessibility and mobility of people and freight • Integration and connectivity of modes • Travel and tourism	• Motorized and non-motorized user safety • Motorized and non-motorized user security • Resiliency and reliability	• Economic vitality • Travel and tourism • Existing system preservation	• Efficient system management and operation • Environment protection, energy conservation, and quality of life • Stormwater impact mitigation

**See Appendices B and C, 2050 Regional Transit Plan and 2050 Specialized Transportation Plan for details.*

Measuring Performance

The following summary of the region's system performance was developed by comparing the targets, system performance metrics, and goals as well as considering information gathered through the public survey, a review of local plans, and discussions with local jurisdictions.

WHAT ARE WE DOING WELL?

- Interstate pavement condition and NHS bridge conditions meet targets and are better than the state average.
- System reliability for the interstate system and truck travel exceed targets.
- The region is in attainment for air quality standards as set by the EPA.
- Traffic-related fatalities are starting to decline in the region, although they remain high.
- Multimodal options are increasing.
- Transit safety, accessibility, and options have increased.
- There are multiple dedicated services and options for specialized transportation.

WHAT DO WE NEED TO IMPROVE?

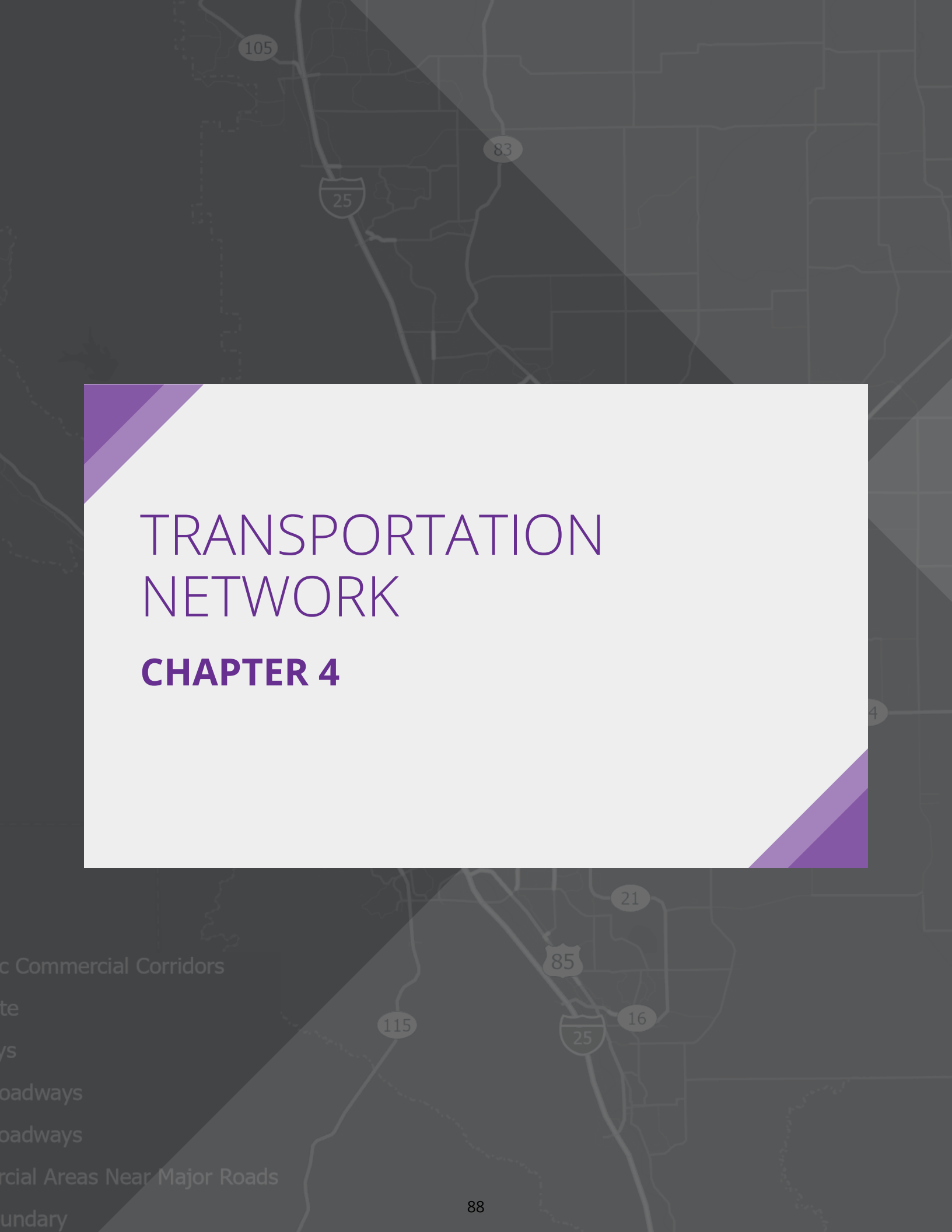
- Non-interstate road pavement condition and reliability are below statewide targets.
- Serious injury crashes are on the rise.
- Crash rates indicate a need to focus on safety for drivers, bicyclists, and pedestrians.
- There are opportunities to improve mode share and connectivity.
- Recurring congestion is problematic.
- There are opportunities to make transit a more competitive travel option.
- Specialized transportation is inadequate to meet current demand and can be confusing for users.

NEXT STEPS

While this chapter includes the performance targets as adopted most recently by the PPACG Board of Directors, targets are in the process of being updated. In addition, Chapters 4 and 5 document existing conditions and planning considerations related to these targets specific to the Pikes Peak Region.

Further, the scoring system used to determine the projects included in this LRTP integrated all of these performance measure concepts to support moving the region toward the targets in future years.

System performance will continue to be measured and adjustments made as needed to support regional goals and needs.



TRANSPORTATION NETWORK

CHAPTER 4

TRANSPORTATION NETWORK

The transportation network within the Pikes Peak Region is composed of roadways, transit systems, bicycle and pedestrian networks, railroads, and airports. These facilities are largely operated and maintained by local governments, CDOT, and private companies.

The LRTP provides a holistic view of the transportation system and supports those entities that operate and maintain the transportation networks. A successful network allows the movement of people and goods safely and efficiently throughout the region and beyond, taking into account the variety of modes available to users.

ROADWAY NETWORK

The NHS encompasses vital roadways crucial to the economy, defense, and overall mobility, connecting places and people across the country. Functional classification is pivotal in categorizing roads based on their role in transportation networks, influencing design standards, funding eligibility, and performance evaluations. Only public roads that are classified higher than minor collector are eligible for the federal funding included in this LRTP. It should be noted that these refer only to road classifications and not mulitmodal facilities. This classification system distinguishes between various road types, including the following as defined by the United States Department of Transportation (USDOT)

- Interstates: The highest classification of roadways in the United States. They are designed for high-speed, long-distance travel with limited access points, typically separated by medians or barriers. Interstates provide crucial links between major cities and regions while supporting passenger and freight transportation.
- Freeways and Expressways: Similar to Interstates in design but may vary regionally in terminology and specific design elements. They feature controlled access with ramps and limited points of entry and exit. These roadways are designed for efficient and rapid traffic, often connecting major urban areas and providing important links in regional transportation networks.
- Other Principal Arterials: Serve major centers of metropolitan areas and provide high mobility both within urban areas and through rural regions. Unlike freeways and expressways, they often allow direct access to adjacent land uses through intersections and driveways. They are critical for accommodating both local and through traffic movements.
- Minor Arterials: Facilitate shorter trips

within urban areas, connecting to higher-level arterials like Interstates and Other Principal Arterials. They support intracommunity continuity, providing access to neighborhoods, business districts, and local amenities. Minor arterials may also serve local bus routes and are designed to handle moderate traffic volumes efficiently.

- Major Collectors: Gather traffic from local roads and feed it into the arterial network. They typically have longer routes, lower densities of access points (such as driveways), and higher speed limits than minor collectors. Major collectors are extremely useful in facilitating regional travel patterns and supporting transportation between communities.
- Minor Collectors: Distribute local traffic within neighborhoods and communities, connecting residential areas to major and minor arterials. They have more frequent access points than major collectors, allowing easier local access to residences, businesses, and community facilities. Minor collectors generally have lower traffic volumes and shorter travel distances than major collectors.
- Local roads: Designed primarily to provide direct access to abutting properties, serving local traffic needs within neighborhoods and communities. Local roads typically discourage through traffic and are not intended for long-distance travel. They are a crucial part of supporting connectivity and providing access to local services and amenities.

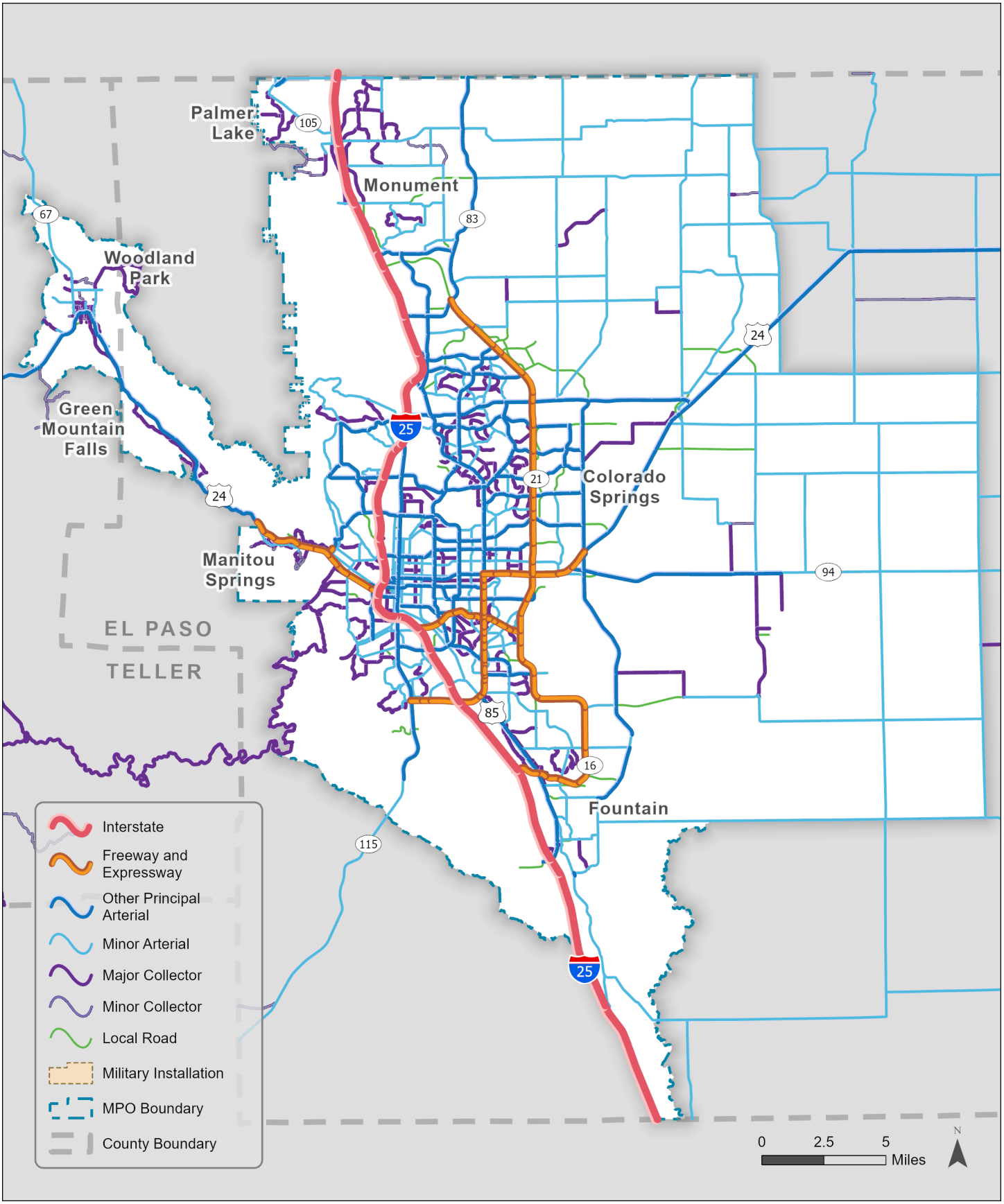
Functional classification plays a central role in transportation planning and management, underscored by federal legislation that ties funding eligibility to these classifications. State DOTs update and maintain these classifications, involving extensive collaboration with metropolitan and rural planning agencies, local officials, and federal oversight bodies like the FHWA Division Offices. Advances in geospatial technology and travel demand forecasting have facilitated more precise classification and planning, enhancing cost-effectiveness and analysis capabilities.

Figure 4-1 depicts the roadway network in the Pikes Peak Region by functional classification. More specific details can be found on the PPACG Roadway Network Map, which is available on the PPACG website. This dataset, compiled from various sources including the CDOT and the NHS data, provides essential planning and mapping attributes crucial for regional transportation planning. As of November 2024, the PPACG roadway network includes:

- Interstate: 46.9 miles
- Freeways and Expressways: 48.7 miles
- Other Principal Arterial: 225 miles
- Minor Arterial: 413.8 miles
- Major Collector: 199.3 miles
- Minor Collector: 14.8 miles
- Local Road: 65.9 miles*

** This number does not account for all local roads in the region. Local roads were only included in the PPACG roadway network if they were designed as a collector or above and serve to connect major roads in the network as their purpose in the network is too great to omit.*

Figure 4-1: Roadway Network



Regionally Significant Corridors

In 2022, PPACG developed a CMP, which defines a systematic approach to define the extent and duration of congestion, determine causes, identify a range of management strategies, and evaluate effectiveness of implemented strategies.

As part of the CMP, PPACG defined four facility classifications, which were based on data-driven criteria or which are similarly designated by adopted jurisdictional plans. Identifying these critical corridors allows jurisdictions to focus efforts on congestion management. Congestion was a component of the scoring used to select LRTP projects.

STRATEGIC COMMERCIAL AND EMPLOYMENT CORRIDOR

- Similar designation in an adopted jurisdictional plan, or meet the following conditions:
  - Average daily traffic (ADT) count above 10,000; and
  - Commercial area comprising at least 25% of the total area within a ¼ mi; and
  - Included in the PPACG travel demand model

FREIGHT CORRIDOR

- Similar designation in an adopted jurisdictional plan, or meet the following conditions:
  - Identified as a freight corridor in a federal or state adopted plan/map;
  - Connections to air or rail cargo facilities to include military; or
  - Construction standard specifically for freight traffic with an ADT above 10,000; and
  - Included in the Pikes Peak Regional transportation demand model
  - Or other NHS routes identified as secondary freight corridors by the owning jurisdiction

CRITICAL MULTIMODAL CORRIDOR

- Similar designation in an adopted jurisdictional plan, or meet the following conditions:
  - ADT count above 10,000;
  - Transit route; or
  - Provides bike lanes or provides a parallel bike boulevard or multi-use trail; and multi-use shoulder
  - Included in the PPACG travel demand model

MULTIMODAL HUB

- Similar designation in an adopted jurisdictional plan, or meet the following conditions:
  - Facilities for the changing of modes for people or goods:
    - Park and rides
    - Transit centers
    - Freight facilities – air and rail cargo
  - Included in the PPACG travel demand model

The following pages contain maps of these corridors and hubs. These maps are not intended to convey jurisdictional plans or planned improvements, nor are they intended to identify gaps.

Figure 4-2: Strategic Commercial and Employment Corridors

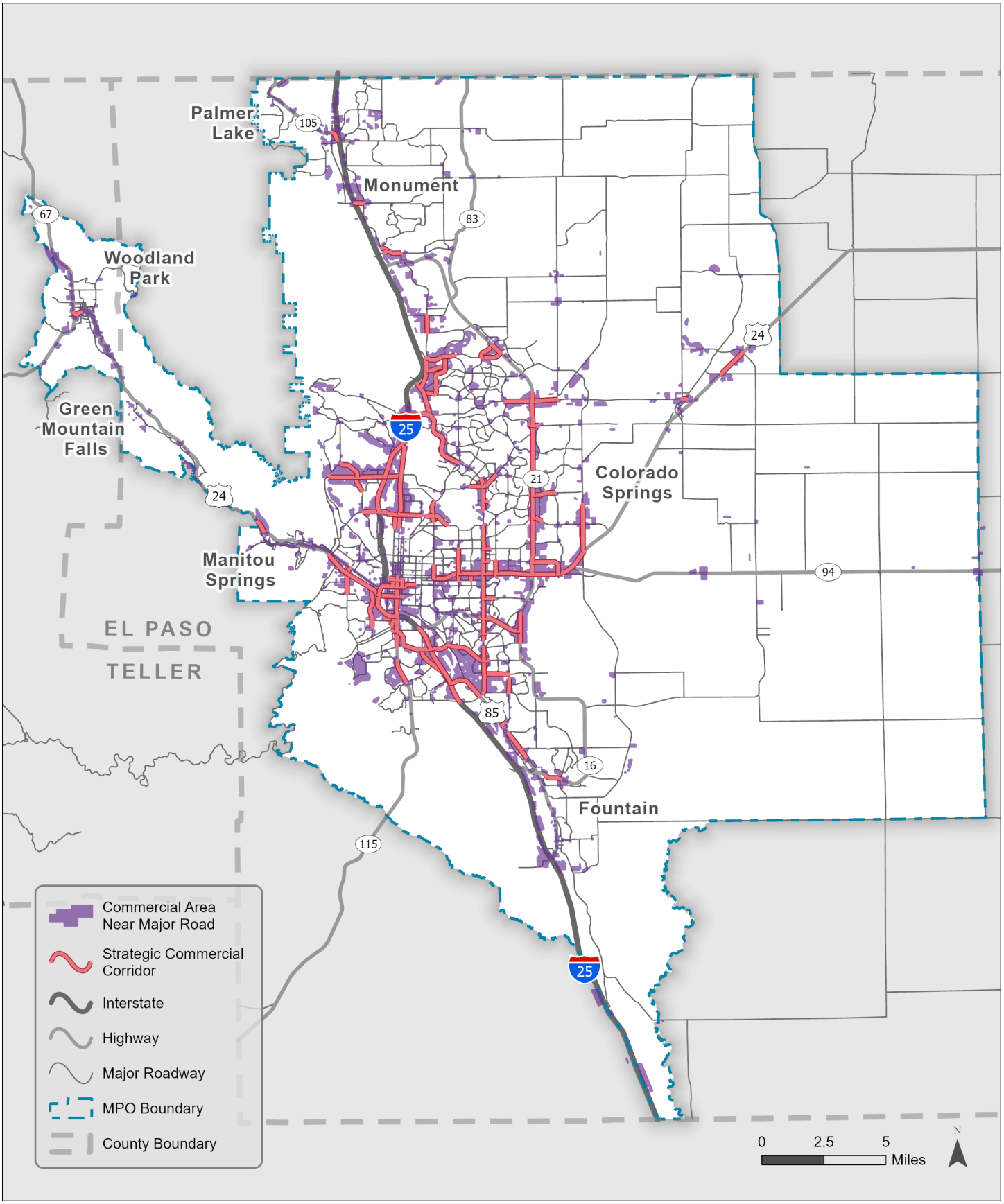


Figure 4-3: Critical Multimodal Corridors and Hubs

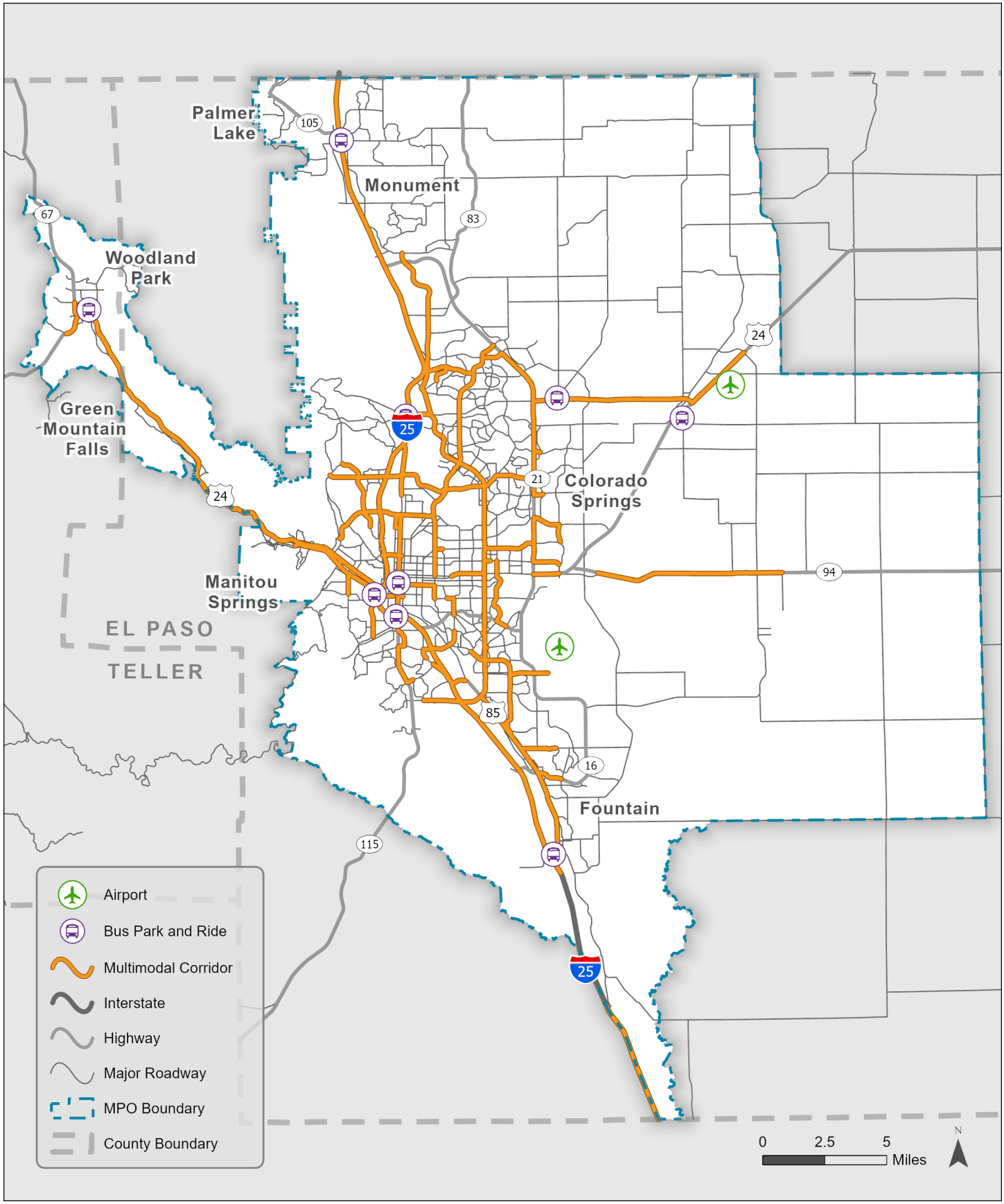
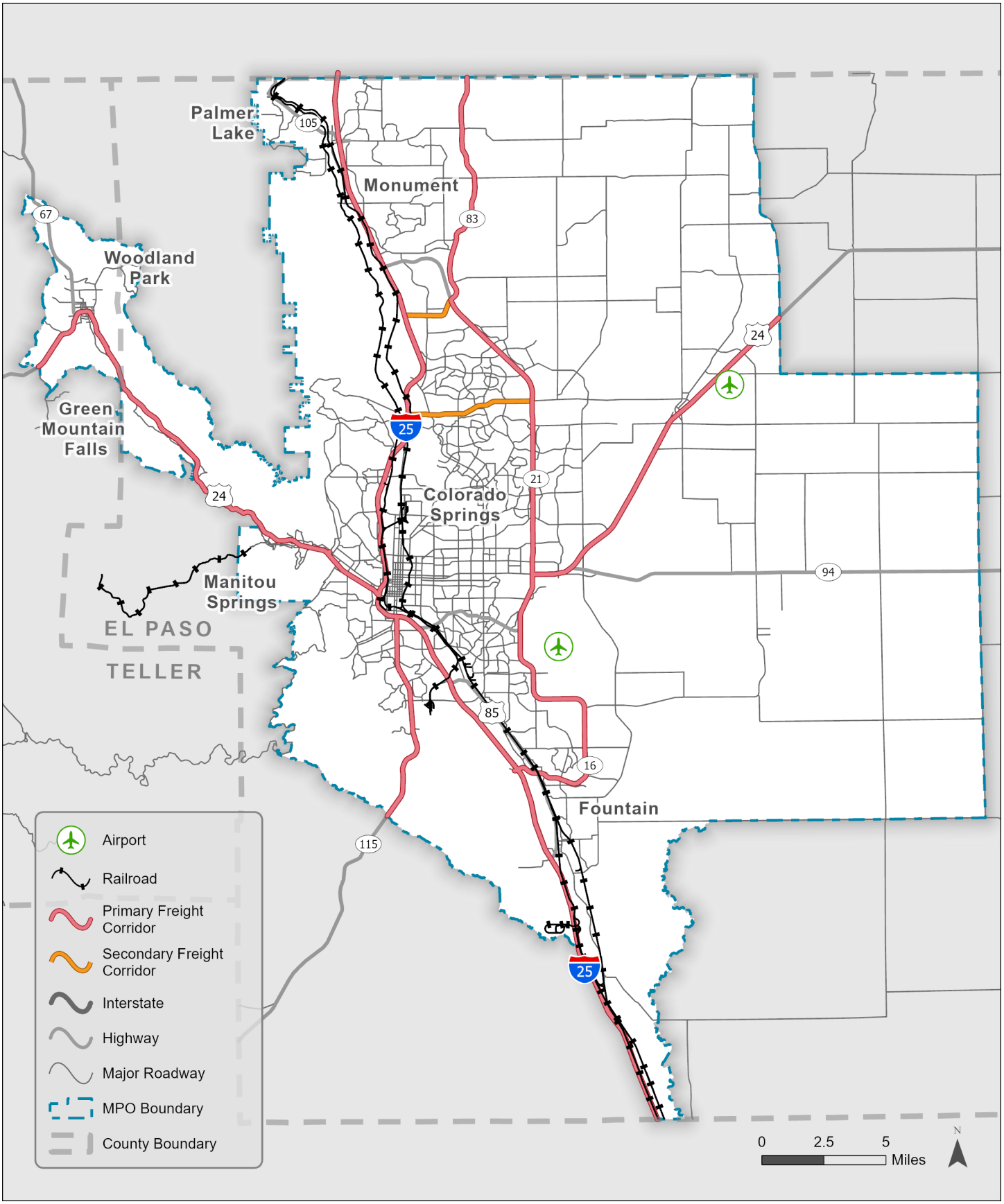


Figure 4-4: Freight Corridors



Additional information about elements of the transportation network are included in this chapter and their standalone plans and studies. The regionally significant corridors were used during the project selection process for this LRTP along with local plans and engineering and planning expertise. These corridors were based on data available at the time the CMP was developed and may be updated as needed.

Traffic and Congestion

The CMP defined types of congestion in the Pikes Peak Region and identifies areas of recurring congestion. However, since adoption of the CMP, access to improved data has allowed PPACG to better analyze congestion in the region.

RECURRING CONGESTION

For this LRTP, PPACG utilized StreetLight Data, Inc. for traffic analysis data. The recurring congestion map in Figure 4-5 shows the vehicle hours of delay (VHD) on the major roads within the region. Analyses were run for the evening hours of 5:00 to 6:00 pm on Tuesdays, Wednesdays, and Thursdays throughout the year. Roads analyzed were classified based on VHD for all the FHWA classified roads of types 1 – Interstate, 2 – Freeways and Expressways, and 3 – Other Principal Arterial. Results were exported with the VHD.

VHD is the amount of delay vehicles experienced in congestion where congestion is the speed of a vehicle not traveling at free flow speed. StreetLight exports tabular data for each road segment, which was joined to the geographic information system (GIS) data and utilized to create the recurring congestion map. High to low VHD is shown in the map using changing values from red to green with red signifying the highest VHD.

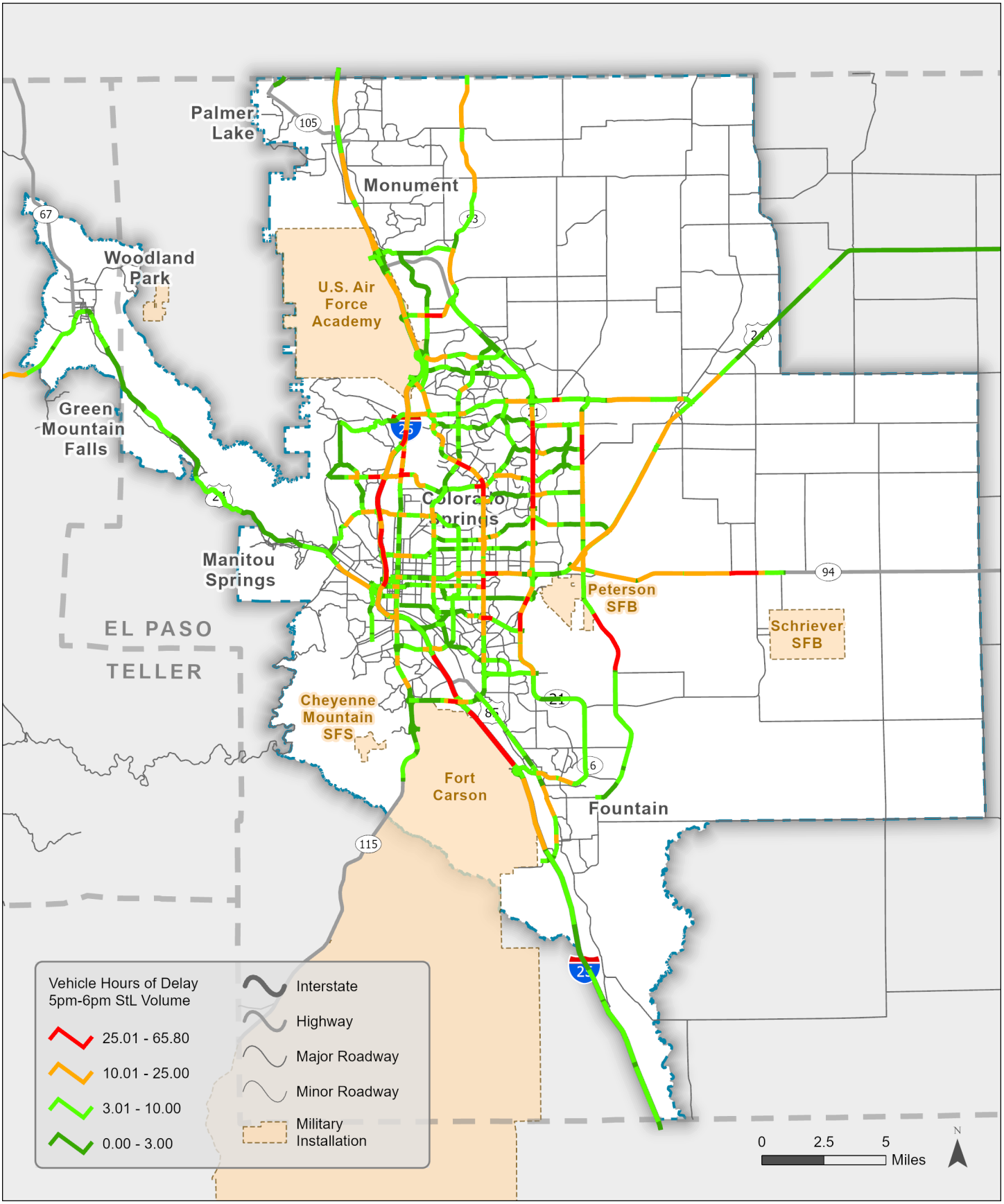
The areas of highest recurring congestion include I25 between Woodmen Road and Cimmarron Street; I25 between South Academy Boulevard and US85/57; portions of Powers Boulevard (CO21), particularly between Dublin Boulevard and North Carefree Circle; and portions of North Nevada Avenue, Academy Boulevard, Marksheffel Road, and US24.

NON-RECURRING CONGESTION

According to the FHWA, "About half of congestion is caused by temporary disruptions that take away part of the roadway from use – or "nonrecurring" congestion. The three main causes of nonrecurring congestion are: incidents ranging from a flat tire to an overturned hazardous material truck (25 percent of congestion), work zones (10 percent of congestion), and weather (15 percent of congestion)."

One of the most frequent causes of non-recurring congestion are traffic crashes. The locations and occurrences of crashes are discussed in more detail in the Safety discussion in Chapter 5.

Figure 4-5: Recurring Congestion



TRAFFIC GENERATORS

In addition to the recurring and non-recurring congestion, transportation planning should take into consideration the overall travel within the region. To do this, PPACG mapped the average annual daily traffic (AADT) for each transportation analysis zone (TAZ) in the region.

TAZs are areas used in transportation planning modeling. More information about TAZs within the Pikes Peak Region can be found in Chapter 6.

AADT is commonly used to provide a baseline understand of how busy a roadway or the transportation network is. The AADT includes all vehicular trips for an entire year, and is calculated by dividing the total traffic volume by the number of days in the year. Figure 4-6 shows the TAZs within the region by AADT in 2021, which was the most recent data available. This provides planners with a basic understanding of the areas with the most traffic volume. The areas with the largest traffic volume often correlate to large employment and commercial areas.

The AADT alone is not sufficient, however. Understanding locations of major traffic generators is also critical to transportation planning. The following paragraphs provide information related to some of those areas.

Military Installations

The Pikes Peak Region is home to five military installations: Fort Carson, the United States Air Force Academy (USAFA), and three Space Force installations that are part of Space Base Delta 1 (SBD 1): Peterson Space Force Base (SFB), Schriever SFB, and Cheyenne Mountain Space Force Station (SFS). These installations have an estimated associated population of 150,000, which includes military personnel, contract employees, and their families. Detailed information about these installations and their transportation needs is included in Chapter 5.

Higher Education

The University of Colorado, Colorado Springs (UCCS), Colorado College (CC), and Pikes Peak State College (PPSC) are generators of multimodal traffic.

PPSC is the largest college in the region, with 17,000 students across three campuses: the Centennial Campus on Interquest Parkway, the Rampart Range Campus on South Academy adjacent to Fort Carson, and a downtown campus on Pikes Peak Avenue.

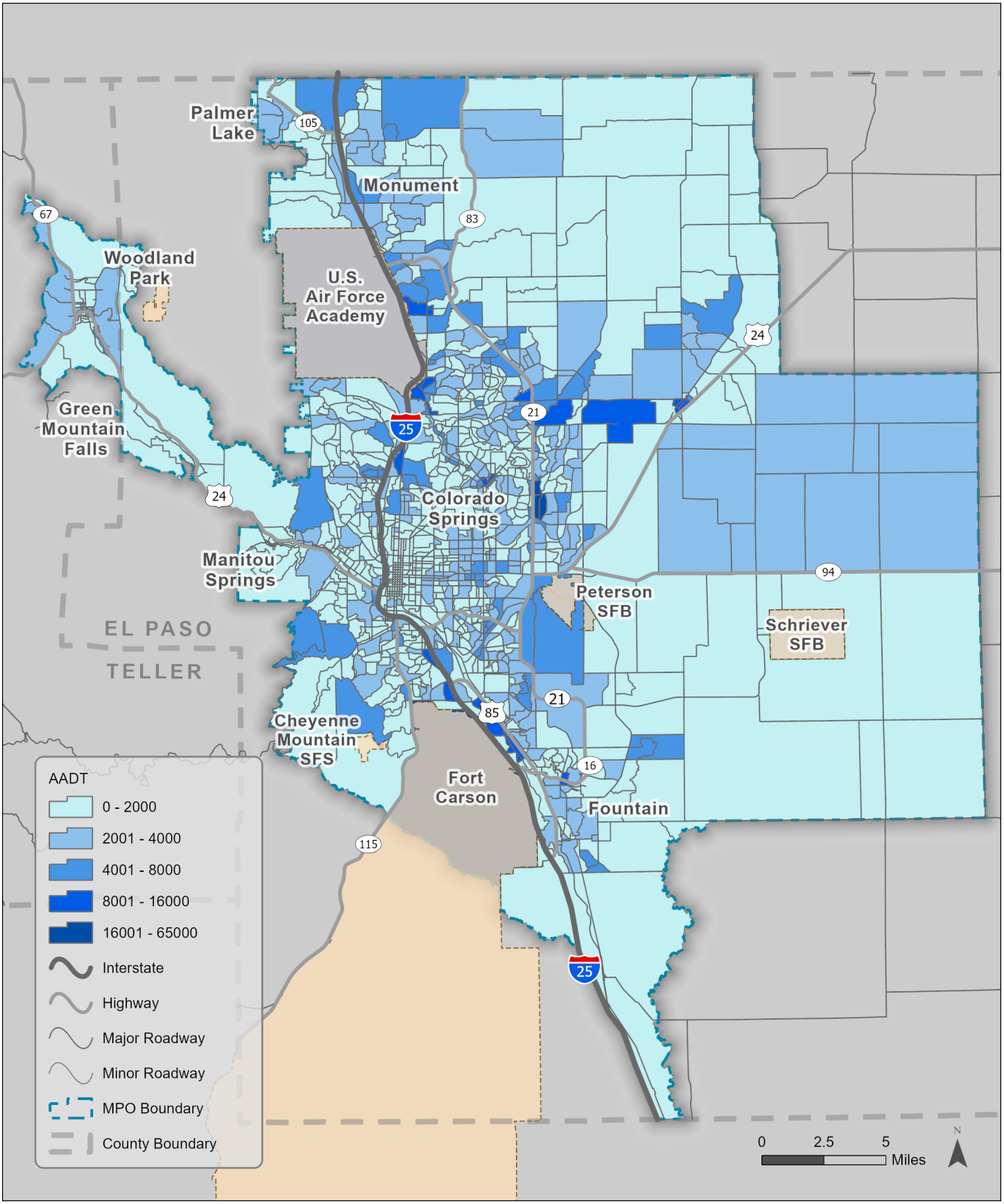
UCCS had more than 11,000 students in fall 2023, and its campus is located off Austin Bluffs Parkway, between North Nevada Avenue and Union Boulevard.

CC has more than 2,000 students and is located near downtown Colorado Springs, to the south side of Unitah Street between I25 and North Nevada Avenue.

While all of these generate vehicle traffic, it is also critical to consider active transportation and transit connections to these campuses.

A primary concern for these locations is pedestrian and bicycle connections to improve access and safety, particularly in areas that lack sidewalks or bike trails.

Figure 4-6: AADT



Recreational Access and Tourism

Recreational opportunities and outdoor activities are a critical quality of life factor for residents as well as tourists. According to Visit Colorado Springs, the region hosted 24 million visitors in 2022.Of those, 68% enjoyed outdoor activities during their trip. Further, the region is a year-round destination, illustrated by percentage of visits by season: January-March (21%), April-June (26%), July-September (29%), October-December (24%).

Among these traffic-generating destinations are USAFA; Garden of the Gods; The Broadmoor area, including Seven Falls and Cheyenne Mountain Zoo; downtown Colorado Springs, including the U.S. Olympic and Paralympic Museum and Weidner Field; Old Colorado City; and the Manitou Springs area, including the Pikes Peak Highway, Barr Trail, Manitou Incline, Manitou Penny Arcade, Cave of the Winds, and Manitou Cliff Dwellings.

In addition, many recreational destinations for tourists and residents lie outside the MPO boundary but are accessed via the PPACG transportation network, mostly notably US24. The impact of these desired locations on the network is detailed in the plans for individual municipalities and counties but should be considered in regional planning as well. This was a critical consideration for the development of a federal lands access report that is included as Appendix F, and local recreational trails were the focus of the PPACG Active Transportation Plan, adopted in 2024.

Well-maintained roads and bridges are critical for tourism and recreation across the region, as are clear wayfinding signage and consistent terminology, when possible for cohesive tourist communication.

TRANSIT SYSTEM

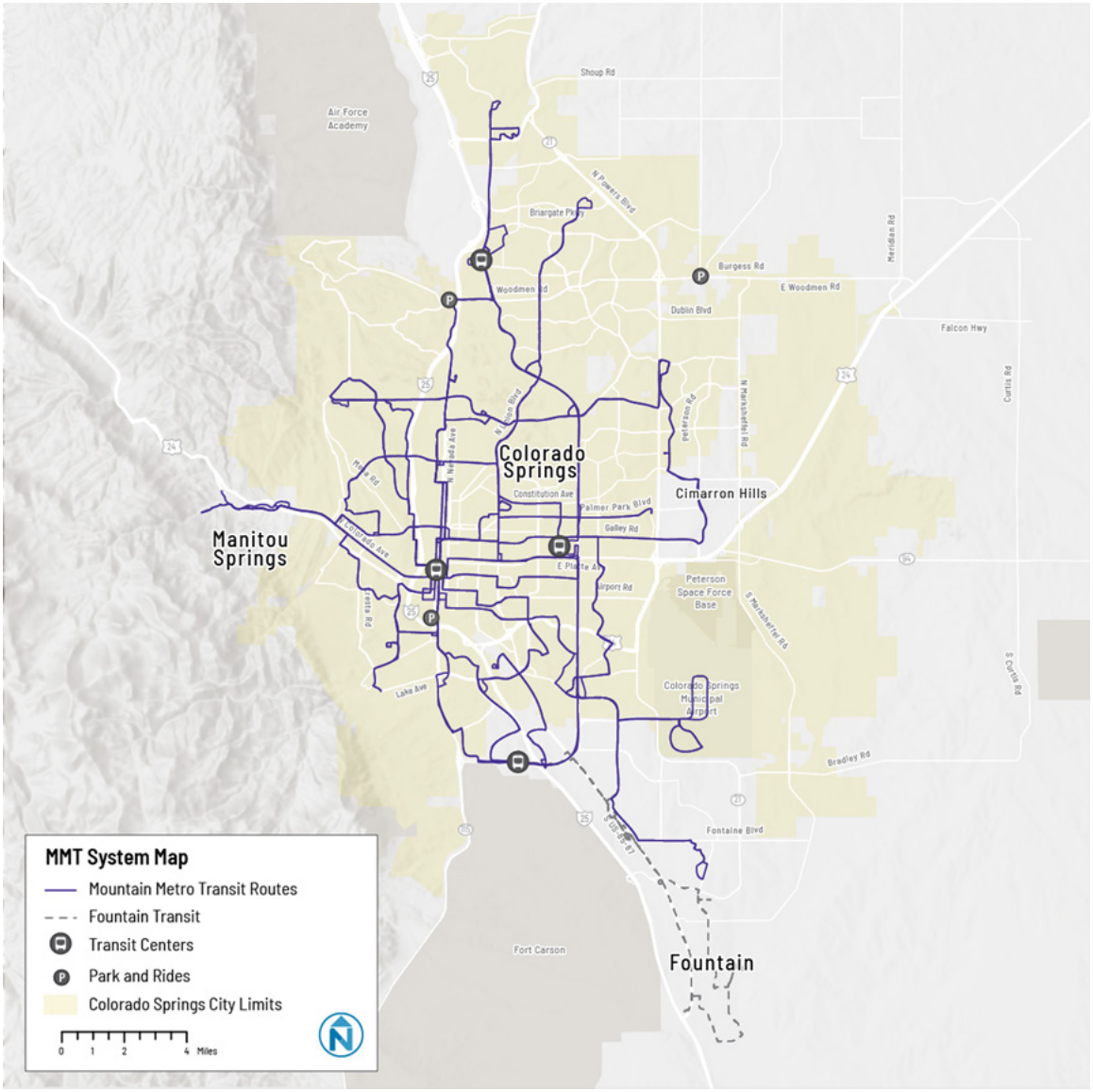
The transit system in the Pikes Peak Region is comprised of several providers.

MMT is the primary transit service provider in the Pikes Peak Region. MMT is operated by the City of Colorado Springs but also provides service to Manitou Springs and Security-Widefield. MMT operates 29 fixed-route transit lines, two deviated fixed-route lines, three free shuttles (one in downtown Colorado Springs and two in Manitou Springs), and complementary ADA paratransit service. The transit system map is depicted in Figure 4-7.

Fountain Municipal Transit is operated by the City of Fountain, which runs a single route that connects to MMT at the PPSC Transfer Center.

Envida is a nonprofit organization that predominantly provides transportation services to individuals with disabilities, older adults, and low-income individuals in the greater Colorado Springs area. Envida operates demand-responsive service, but also runs two fixed-route lines and deviations upon request. This service is open to the public and provides connections into Colorado Springs from rural communities in eastern El Paso County.

Figure 4-7: Transit System



Source: Colorado Springs 2050 Regional Transit Plan, 2024

Bustang is an intercity bus service provided by the Colorado Department of Transportation. There are three Bustang routes that serve Colorado Springs.

Ramblin Express is a private intercity bus service open to the general public. It operates two routes from Colorado Springs: to Cripple Creek via Woodland Park, and Pueblo.

Information about the specific services, routes, amenities, performance, and recommendations for the transit system can be found in Appendix B.

In addition, the CDOT Department of Transit and Rail (DTR) is developing a Transit Connections Study (TCS), which was anticipated to be completed in 2025. The TCS aims to provide a strategic vision for an

interconnected statewide transit network. This includes improving and expanding the Bustang Family of Services, adding passenger rail services, identifying transit gaps and needs, and fostering connections with intercity regional and local transit/mobility providers.

CDOT met with MMT and local jurisdictions in the Pikes Peak Region to determine projects for inclusion in the TCS, which is also included as an addendum to the Regional Transit Plan in Appendix B.

SPECIALIZED TRANSPORTATION

In addition to a regional transit plan, MMT and PPACG partnered to develop the Regional Specialized Transportation Plan, also called the coordinated human services plan. Specialized transportation is a service designed for individuals that offers door-to-door or curb-to-curb transportation (as well as door-through-door, in certain circumstances). The specialized plan, also known as a coordinated transit/human services transportation plan, is necessary for receiving federal dollars on transportation programs tailored to older adults, disabled people, and low-income communities.

Specialized transportation may require advanced reservations and is usually operated by a funded non-profit (e.g., Envida, Silver Key Services, Fountain Valley Senior Center).

In addition, paratransit is a transit agency service provided by transit agencies exclusively for individuals with disabilities who cannot independently use transit services some or all the time. MMT provides ADA complementary paratransit through its Mountain Metro Mobility program. Service operates the same days and hours as local fixed-route transit service covering areas within ¾-mile of existing routes.

Specialized transportation and ADA complementary paratransit seeks to meet these needs where fixed-route service cannot. Some, but not all, of these services exist to fulfill a legal mandate, such as the ADA. Additionally, some, but not all, of these services are funded through FTA Section 5310 funding.

PPACG currently receives and administers Pikes Peak Area Agency on Aging (PPAAA) funds for older adults and has been designated by the Governor of Colorado as the regional recipient of FTA Section 5310 funds for the Colorado Springs Urbanized Area. Section 5310 funds are currently the only dedicated federal source of transportation funding available to both transit agencies and human service providers (HSPs) in this region.

Section 5310 funds are used by PPACG to contract mobility services that provide rides for the populations of older adults and people with disabilities. Section 5310 funds received by PPACG for the past two contract years were allocated to two eligible subrecipients: Silver Key and Envida. However, there are several other providers

that are important HSPs in the region. While they do not receive Section 5310 funds, they may receive Older Americans Act funds through the PPAAA. HSPs receive assistance in the programming of funds used for these specialized transportation purposes through PPACG and PPAAA and may also receive funding from other sources (e.g., localities and donations).

Details of the service providers, their service regions, funding sources, and operations are included in Appendix C.

In fiscal year 2023, about 145,800 rides were provided by the five largest specialized transportation services in the region. However, the system does not currently meet demand in the region, andm ore than 7,000 rides are denied annually due to lack of adequate capacity. Funding is the biggest hurdle to improving service.

ACTIVE TRANSPORTATION

Active transportation focuses on human-powered modes such as biking and walking. The Pikes Peak Region has a robust active transportation network composed of paved and unpaved trails, on-street and off-street bicycle lanes, multiuse shoulders, and sidewalks.

This network serves a variety of purposes within the region. It supports children walking and biking to school, commuting, shopping and other consumer activities, and recreation.

PPACG's mapping data includes more than 922 miles of sidewalk and 311 miles of bicycle facilities. However, these miles were mapped based on imagery and reflect only those along federally classified roadways and corridors mapped for the travel demand model. It does not include all trails, local sidewalks, and other facilties. For this reason, the regional active transportation plan provides a more in-depth look at pedestrian and bicycle facilities than the LRTP.

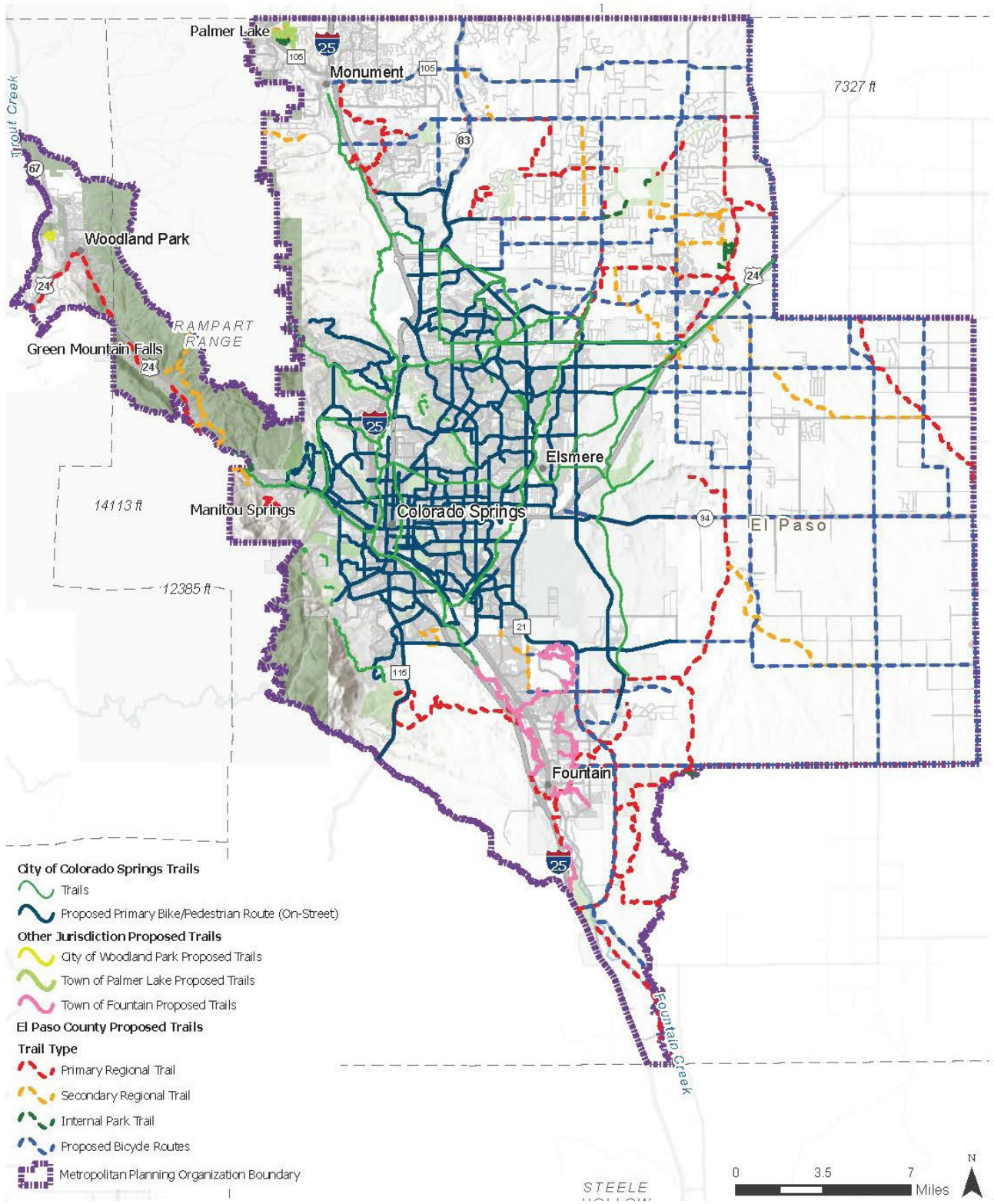
The regional active transportation plan, adopted by PPACG in 2024, focuses on connecting communities and helping each community to be a safer, healthier and more enjoyable place for residents, businesses, and visitors. Its purpose is to build upon previous regional bicycle and pedestrian initiatives alongside local plans in setting a path for the region to link its communities and regional destinations with a deserving transportation network.

Approximately 25 planning documents and studies developed by area governments were reviewed in the compilation of the active transportation network and the regional active transportation plan.

The Active Transportation Plan included a review of existing and planned facilities and developed a demand index to identify areas where people are likely to be and provide a framework to understand the environment for walking and bicycling. Demand was based on a set of factors that represent live, learn, work, and locations.

An analysis of the existing cycling and pedestrian facilities provides a general

Figure 4-8: Existing Trail Network



Source: PPACG Active Transportation Plan, 2024

understanding of the coverage and type of infrastructure. The facilities are given a buffer to show the reasonable access area for the existing infrastructure. Figure 4-8 depicts the existing trail facilities in the region. Sidewalks and sidewalk gaps were outside of the scope of the active transportation plan as the plan had a regional scope and sidewalk issues are generally handled on a jurisdictional level.

FREIGHT

In January 2024, PPACG adopted a Regional Freight Mobility Study. As the first such study conducted in the region, its goal was to gain a deeper understanding of the regional freight system and support future funding applications, at the regional, statewide, and federal level, as well as supporting planning initiatives.

The Pikes Peak Region lies snugly along the eastern side of the Southern Rocky Mountains which outlines the major freight corridors in the region. This corridor is home to the region's major freight carrying railroad corridor operated jointly by Burlington Northern Santa Fe (BNSF) and Union Pacific (UP) railroads as well as three airports and is a freight hub for Southern Colorado. BNSF and UP are considered Class I railroads by the Interstate Commerce Commission. Figure 4-9 outlines the region's freight network, and Figure 4-10 depicts the existing railroad facilities identified in the Regional Freight Mobility Study.

The I25 corridor is the main connection to larger trading hubs in the state and beyond as well as being the only location where certain modes such as air and rail can access the region. US24 runs east-west through the Pikes Peak Region.

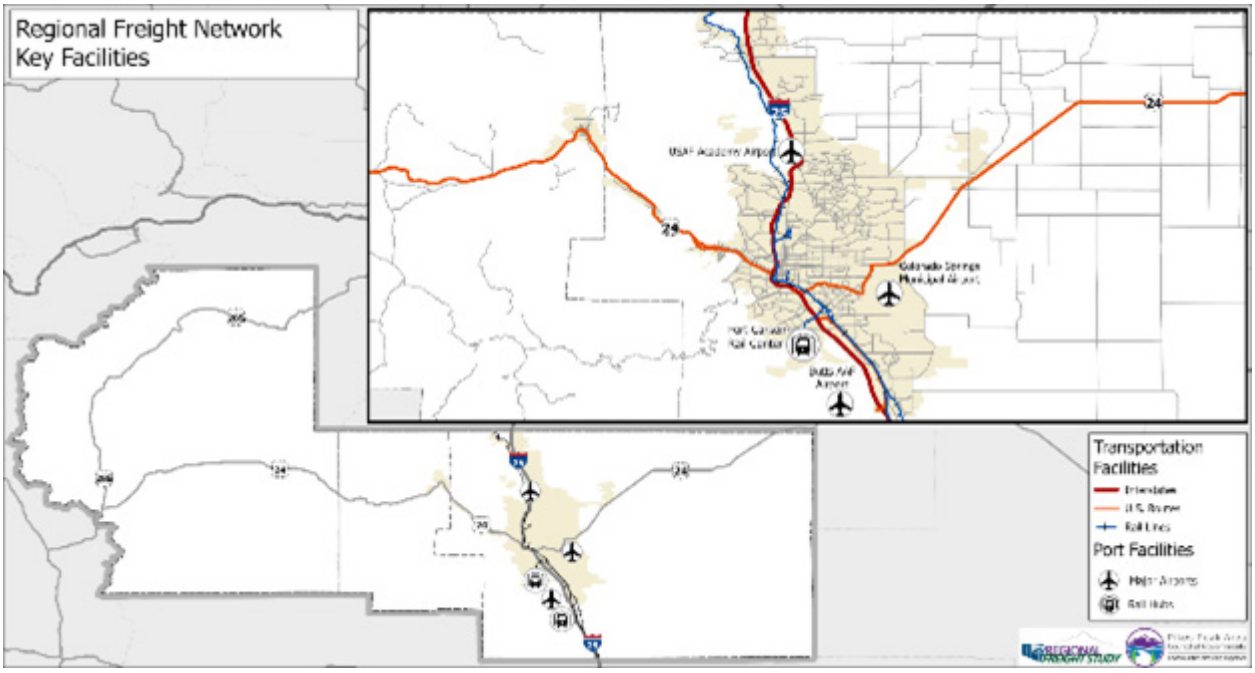
The Regional Freight Mobility Study provided an overview of the economic development trends and freight commodities in the region as well as summaries of freight by mode, safety and reliability, and emergency routes. The study included a list of potential future freight projects in the region and a vision freight network. It will also form the foundation for the forthcoming Freight Plan, which will add detail and create an implementation plan for strategic freight goals.

Truck, rail, and air are the three modes of freight transportation in the region. When considering the larger region of El Paso, Park, and Teller counties, truck is by far the most important mode to the region's economy, handling 99% of all tonnage and nearly 92% of all value in the region each year, according to cargo data compiled by Transearch.

Colorado Freight and Passenger Rail Plan

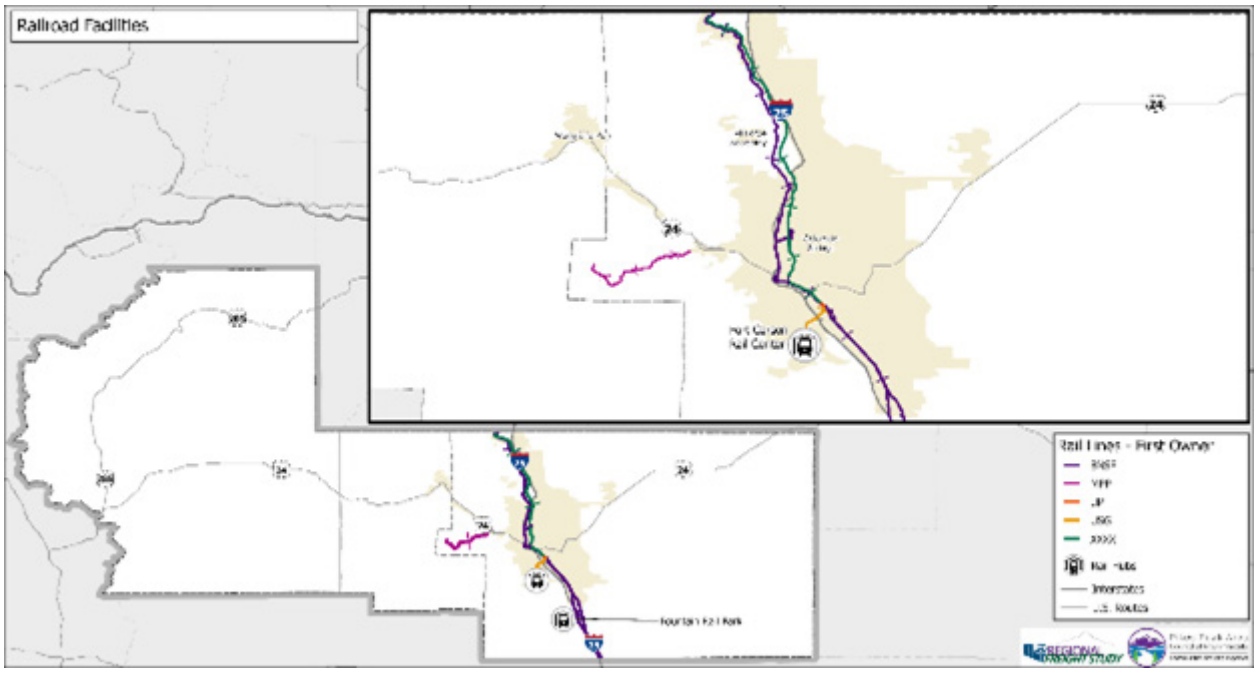
The Colorado Freight and Passenger Rail Plan was completed by CDOT in February 2024 and looks at the role of rail in the state, rail initiatives, and proposed rail improvements. This plan includes information from the regional study and discusses how the Pikes Peak Region network connects with existing and proposed rail throughout the state and

Figure 4-9: Freight Network



Source: Regional Freight Mobility Study, 2024

Figure 4-10: Railroad Facilities



Source: Regional Freight Mobility Study, 2024

beyond.

Southern Colorado Rail Park

The Southern Colorado Rail Park (SCRP) is a proposed industrial park and freight hub project that is currently progressing through the development review process. The SCRP industrial park site is located within El Paso County with potential future annexation into the City of Fountain. The site is bordered by Fort Carson to the north, south, and west, City of Fountain property to the east, and the Ray Nixon power plant to the southeast. The project received a U.S. Economic Development Administration grant to support technical planning in 2021, and in 2023, the City of Colorado Springs and Colorado Springs Utilities approved the rail trackage agreement.

The site is planned to be developed over four phases, with the first phase including only the existing rail line into Fort Carson. The planned land use mix for the site will be primarily light and heavy industrial, with some retail and storage/warehousing uses also expected. The build out of the site is expected to progress over a period of about 20 years.

PASSENGER RAIL

As described in the previous section, the major rail corridor in the region parallels I25. Both BNSF and UP use the facilities in this corridor for freight. In addition, there are about 7 miles of track in the region owned by the U.S. Government. This segment is operated by the Department of Defense (DoD) and connects to the Fort Carson Rail Center. There is also a portion of track that passes through USAFA.

The only other rail facilities in the region are The Broadmoor Manitou and Pikes Peak Cog Railway, a recreational and tourist railway that operates year-round from the Manitou Depot to the summit of Pikes Peak.

Front Range Passenger Rail

The Colorado Legislature established the Front Range Passenger Rail (FRPR) District in 2021. Per Senate Bill 21-238, the District's purpose is to "research, develop, construct, operate, and maintain an interconnected passenger rail system within the front range that is competitive in terms of travel time for comparable trips with other modes of surface transportation."

The established vision for FRPR is: Developing passenger rail that serves Front Range communities from Pueblo to Fort Collins is a critical component of Colorado's future. FRPR will provide a safe, efficient, and reliable transportation option for travel between major population centers and destinations along the Front Range and create a multi-modal backbone for connecting and expanding rail and transit options in the state and region.

The District contains portions of 13 counties along the Front Range and I-25, spanning the length of Colorado, and has the authority to levy taxes to fund rail programs.

A Service Development Plan (SDP) for FRPR is being conducted, which will evaluate routes, stations, service, infrastructure,

operations, costs, and financing. The final report is anticipated in fall of 2025.

Southwest Chief Thru-Car Service

Southwest Chief is a daily long-distance train that runs between Chicago and Los Angeles with stops in Lamar, La Junta, and Trinidad. In 2021, CDOT, Amtrak, and the Southwest Chief and FRPR Commission (predecessor to the FRPR District) received a federal grant to study the feasibility of adding passenger rail services between Colorado Springs, Pueblo, and the existing Amtrak Southwest Chief station in La Junta. Because this study overlaps with the FRPR SDP, analysis of the Colorado Springs to Pueblo segment has been paused pending the SDP.

However, a Passenger Rail Station Location Study, conducted by MMT and the City of Colorado Springs was adopted in December 2022. This study considered 11 potential station locations and determined a recommended location east of America the Beautiful Park and south of the Olympic and Paralympic museum

AIR TRANSPORTATION

The Pikes Peak Region contains two airports, although five additional small airports operate outside the MPO boundary.

The Colorado Springs Municipal Airport handles freight and passenger traffic . It includes a 275,000-square-foot facility with 12 gates, two parallel runways, and one crosswind runway. Colorado Springs Municipal Airport is located to the east of Powers Boulevard (CO21) off Milton Proby Parkway. The airfield is also a joint use civilian and military airport, with Peterson SFB located to the north.

The Meadow Lake Airport is located in Peyton off Judge Orr Road near the intersection with US24. It is a public use, one-runway airport owned by a 501.c4 nonprofit corporation, the Meadow Lake Airport Association.

According to monthly traffic reports, the number of passengers at Colorado Springs Airport has risen in recent years, from 1.8 million in 2021 to more than 2.3 million in 2023.

Colorado Springs Airport completed a 20-year master plan in 2022, which included an assessment of regional transportation assessment.

PLANNING CONSIDERATIONS

CHAPTER 5

PLANNING CONSIDERATIONS

When looking at the Pikes Peak Region, there are several items that should be considered for every transportation project. This section contains information on a broad range of issues that impact the future success of the network.

SAFETY

Safety is of the utmost importance in any transportation network. In the Pikes Peak Region, serious injury and fatal crashes have been increasing or holding steady over the past several years. Safety improvements not only reduce fatalities and injuries but can also reduce negative impacts to the regional economy. While regional safety is the focus of this plan, there are federal and state safety programs that can support efforts in the Pikes Peak Region. Those are described briefly below before the details of the regional safety conditions and efforts.

Federal Safety Programs

On a national level, the National Roadway Safety Strategy (NRSS) outlines the U.S. DOT's approach to reducing serious injuries and deaths on highways, roads, and streets. Adopted in 2022, this strategy is guided by the Safe Systems Approach, which was founded on the principles that humans make mistakes and that human bodies have limited ability to tolerate crash impacts. Applying the Safe Systems approach involves anticipating human mistakes by designing and managing road infrastructure to keep the risk of a mistake low; and when a mistake leads to a crash, the impact on the human body doesn't result in a fatality or serious injury. Road design and management should encourage safe speeds and manipulate appropriate crash angles to reduce injury severity.

The NRSS focuses on the objectives of safer people, safer roads, safer vehicles, safer speeds, and post-crash care.

To support the NRSS, the IIJA more than doubled funding for surface transportation programs that improve the safety of people and vehicles in our transportation system, including highways, trucks, rail, and pipeline and hazardous materials transport.

The IIJA established or continued formula-based and discretionary funding programs for safety projects. One of the core federal-aid programs is the Federal Highway Administration's HSIP. HSIP requires a data-driven, strategic approach to improving highway safety on all public roads with a focus on performance.

Major requirements of the HSIP include planning, implementation, evaluation, and reporting.

One significant new program established by the IIJA is the Safe Streets and Roads for All (SS4A) program, a discretionary grant program to support local safety planning and projects.

State Safety Planning and Programs

CDOT places high priority on increasing the safety for all travelers. Recent CDOT safety plans include the 2024 Triennial Highway Safety Plan (3HSP) and the 2020-2023 Strategic Transportation Safety Plan (STSP).

The 3HSP outlines priority highway safety projects and respective funding for a three-year period and reports on progress toward meeting the performance measures identified in the previous plan. It is developed by the Highway Safety Office (HSO), which sits within the Office of Transportation Safety (OTS) at CDOT and is responsible for developing and administering behavioral programs that improve the traffic safety environment in Colorado by reducing the number and severity of traffic crashes.

Meanwhile the STSP establishes a collaborative and shared vision for transportation safety across the state and sets specific visionary goals for reducing fatality and serious injury rates, as well as the total number of crashes overall as compared to previous years. The STSP was led collaboratively by CDOT, Colorado Department of Public Health and Environment (CDPHE), Colorado State Patrol (CSP) and Colorado Department of Revenue (CDOR).

The STSP put in place an Advancing Transportation Safety (ATS) initiative, a statewide collaborative effort led by a team of state and local agencies, advocacy groups, academic institutions and private entities. The ATS is intended to align all safety activities across the state, and it is based on the Safe Systems Approach.

CDOT develops and manages a number of initiatives to prevent crashes and injuries and also offers grants to agencies, organizations and tribal governments within Colorado that provide programs, projects, services and strategies intended to reduce the number of deaths and serious injuries from traffic crashes on roads.

One such program is administered by the HSO, which provides countermeasure strategies for programming funds in its 3HSP. These include strategies aimed at impaired driving, traffic enforcement services, community traffic safety, traffic records, occupant protection, motorcycle safety, media communications, pedestrians and bicyclists, and planning and administration.

Regional Safety

As the number of crashes and people in the region have grown, safety has become a critical concern for the region. In response, PPACG and local governments have collected data, developed plans and studies, created traffic safety education efforts, and implemented projects aimed at improving safety for all transportation network users.

CRASH ANALYSIS

In 2021, a state grant for processing crash data was successfully pursued, and the Diexsys crash analysis firm was hired to perform geolocation and correction of CDOT crash data. Upon completion of the project, PPACG's GIS team assumed responsibility for processing regional data on an annual basis.

PPACG processes and maps crash data, collected by state and local police and sheriff's departments and maintained by CDOR, into a more refined data set to be used in software and modeling programs. Crash records include the type of crash, location, weather conditions, and contributing factors such as alcohol. Different factors were used to rank the safety performance of roadways and intersections, including quantity, rate, and severity.

The PPACG data shows a total of 53,713 crashes occurred in the 5-year span on 2018-2022. These crashes were broken down into the following categories:

- 337 fatal crashes;
- 1,389 crashes that resulted in serious injuries;
- 16,022 crashes that resulted in minor injuries; and
- 35,965 crashes that resulted in property damage only

Although the number of crashes dipped significantly in 2020 due to the covid-19 pandemic and lower VMT in the region, that trend did not hold true for fatal and serious injury crashes. Of large significance is the increase in serious injury crashes during 2021 and 2022. Table 5-1 shows the trends of total crashes, fatal crashes, and serious injury crashes over the 5-year span.

Figures 5-1, 5-2, and 5-3 on the following pages depict the locations of all crashes, fatal crashes, and serious injury crashes, respectively. The largest number of crashes tends to occur on roads with the greatest VMT, such as I25 and Powers Boulevard (CO21). More detailed maps and information can be found online on the PPACG Traffic Crashes Dashboard. This data can be utilized by individual local governments to better identify trends and areas with more frequent crashes. This data was also during the scoring process used to guide selection of LRTP projects.

Table 5-1: Crashes by Year

	2018	2019	2020	2021	2022
Total Crashes	12,693	12,009	8,079	10,796	10,136
Fatal Crashes	73	56	77	63	68
Serious Injury Crashes	256	220	229	328	356

Figure 5-1: Heat Map of Crashes in the Pikes Peak Region 2018-2022

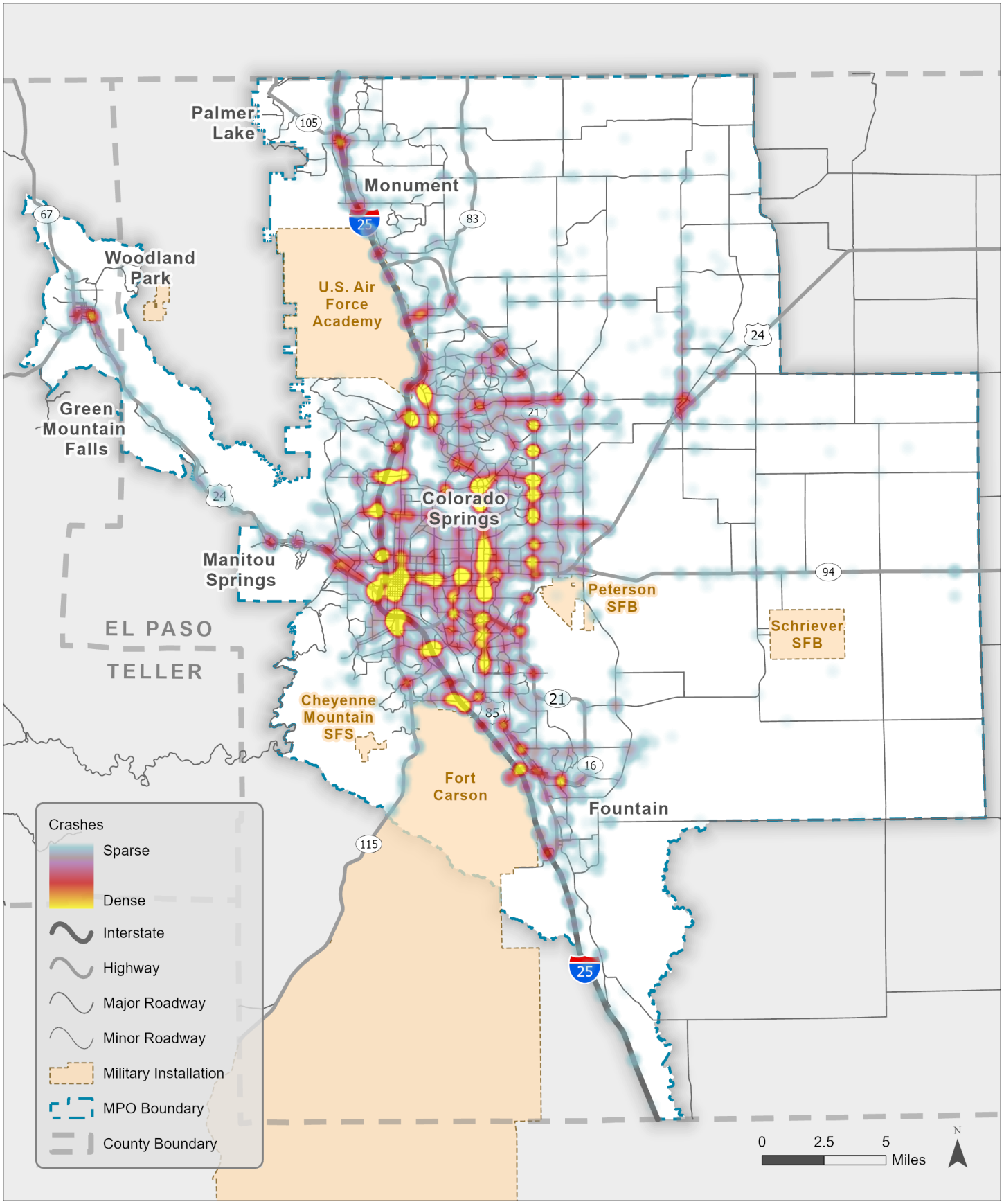


Figure 5-2: Fatal Crashes 2018-2022

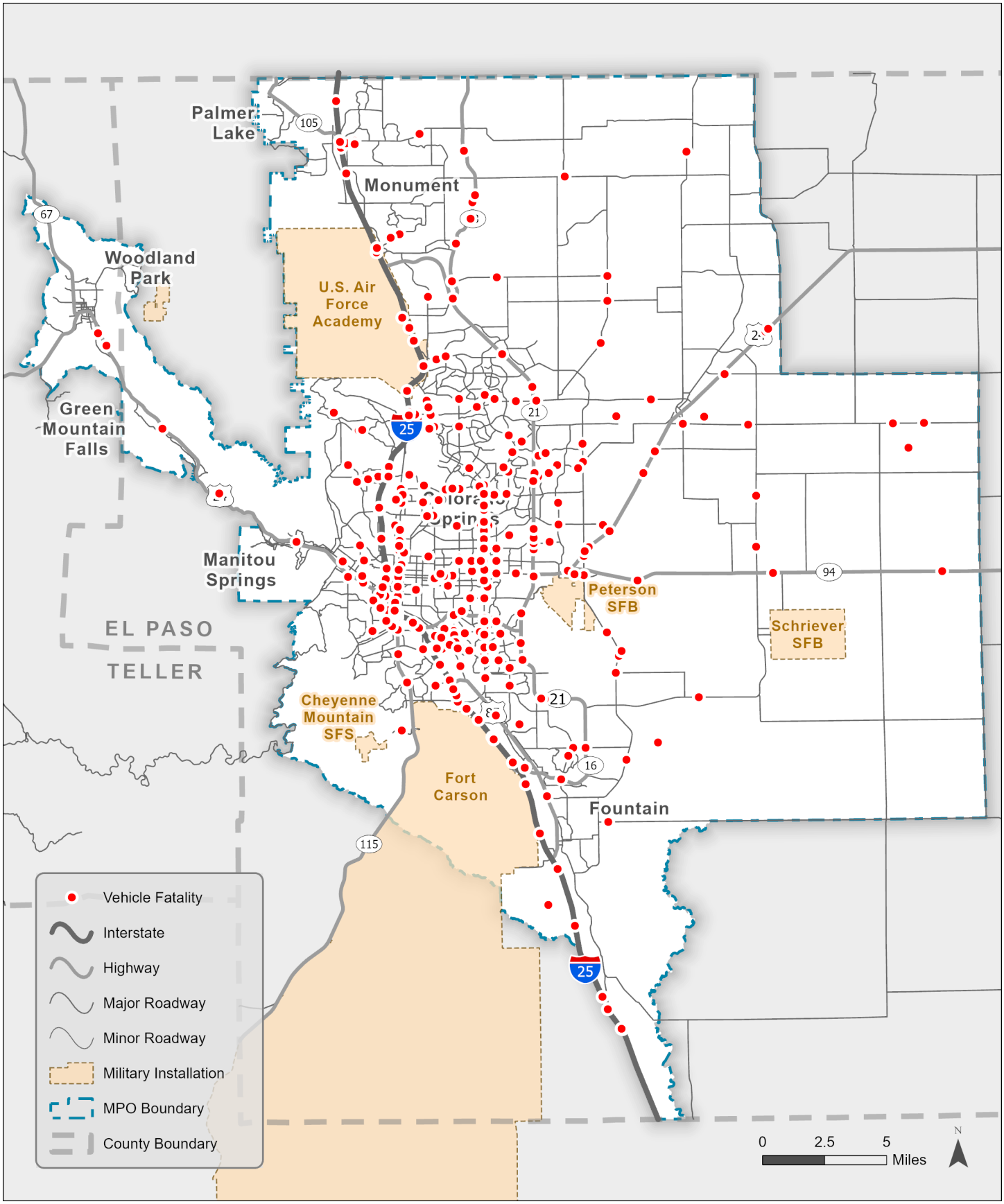
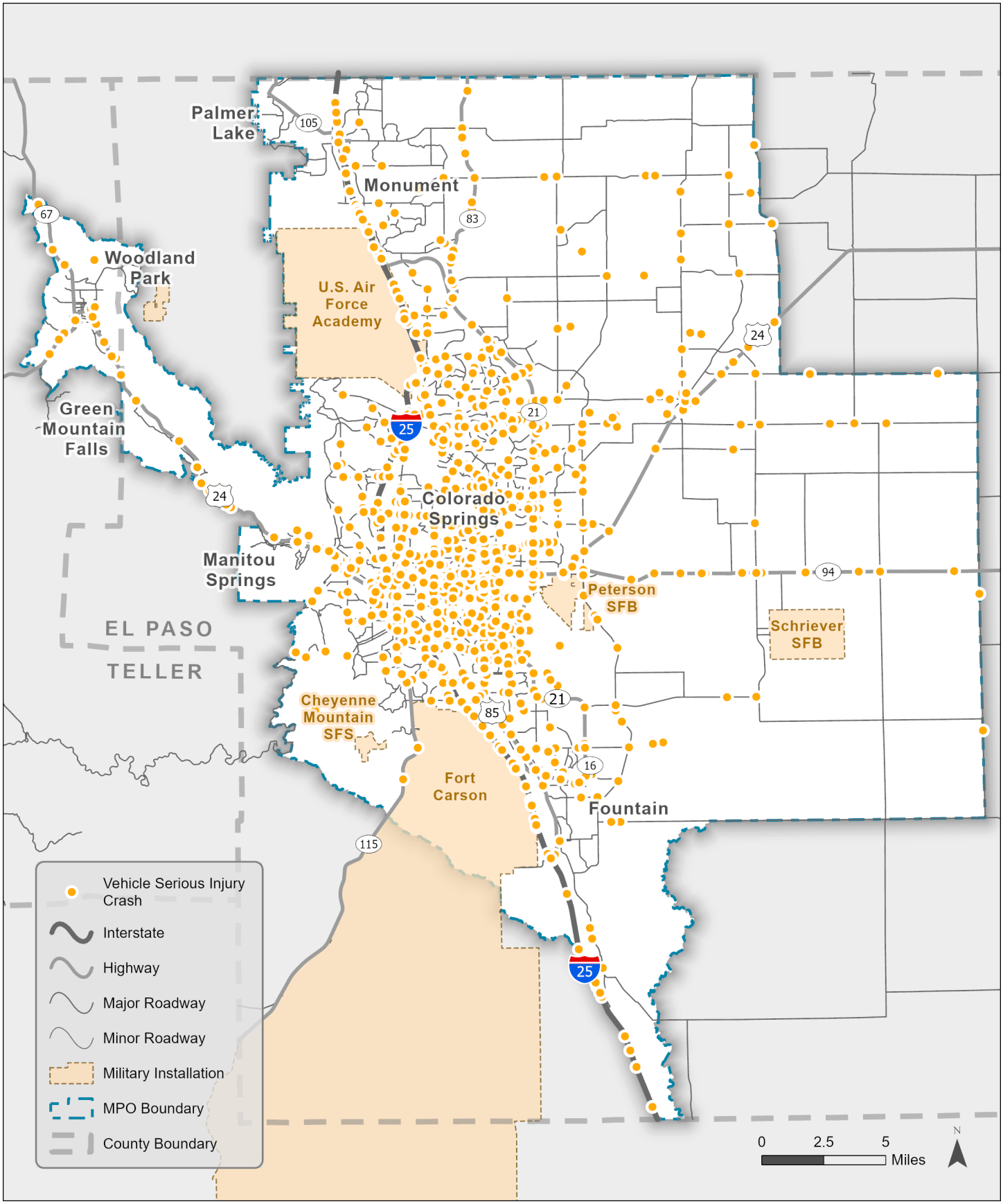


Figure 5-3: Serious Injury Crashes 2018-2022



PLANS AND STUDIES

As safety is a core consideration in transportation planning, nearly all of the component and related plans and studies listed in Section 2 contain discussion regarding safety in the region. Each local government within the MPO has its own approach to transportation safety and traffic engineering based on a variety of studies, data, and staff expertise.

A few recentdocuements are of specific interest when considering safety issues in the region. The first is the El Paso County Road Safety Plan. This plan will guide El Paso County and partner agencies in improving safety through implementation of recommended countermeasures based on the safety data analysis, road safety audits, and a prioritized list of projects, ensuring the county continues in line with the state in their history of utilizing state and federal roadway safety dollars effectively in fatal crash reduction. As part of this effort, the plan identified priority locations and conducted safety audits at 10 priority locations in 2022.

A unique study was conducted in 2024 by PPACG to tudy documented significant changes in driver behavior post-2020. The Major Crash Study was a small effort that looked at the change in driver behavior during and following the covid-19 pandemic. The intent of this study was to provide information for partner agencies and local governments as well as help guide PPACG's safety traffic education activities.

In addition, there are three concurrent planning projects in development in the region funded by grants from the SS4A program. The City of Colorado Springs and the City of Fountain were awarded grants to develop safety action plans for their jurisdictions. The City of Woodland Park, partnering with PPACG, is conducting a safety action plan for the larger COG region of El Paso, Teller, and Park counties, to include the municipalities therein. This study excludes the City of Colorado Springs, as it has unique needs in the region based on its more urban nature.

The goal of a safety action plan is to develop a holistic, well-defined strategy to prevent roadway fatalities and serious injuries in a locality, Tribal area, or region. A successful safety action plan includes the following eight key components:

- Leadership commitment and goal setting
- Planning structure
- Safety analysis
- Engagement and collaboration
- Equity
- Policy and process changes
- Strategy and project selections
- Progress and transparency

Having a certified safety action plan makes the jurisdiction or region eligible for implementation funding through the SS4A program to develop safety projects.

KEY ISSUES

According to Colorado DOT's statewide crash summary, the top three driver actions cited in crashes in the Pikes Peak Region and the state between 2019 and

2023 (excluding those categorized as "No Contributing Action") were "Careless Driving," "Failure to Yield," and "Following too Closely."

The top contributing factors in crashes in the Pikes Peak Region shifted starting in 2021.

In terms of contributing factors (excluding those categorized as "No Contributing Factor" or "Other Factor"), "Distracted," "DUI, DWAI, DUID," and "Driver Inexperience" were the top factors listed for both the region and the state in 2019 and 2020. Starting in 2021, however, "Aggressive Driving" and "Looked/Did Not See" replaced "DUI, DWAI, DUID" and "Distracted" as top contributing factors. This change in contributing factors suggests that aggressive driving is an increasing trend in the region.

The combination of plans, studies, and crash data reveal a number of significant issues in the region. The following are some of the top issues.

- Aggressive driving
- Distracted driving
- Impaired driving
- Speeding
- Transportation infrastructure
- Motorcycle driver behavior
- Nonmotorized and passenger safety
- Congestion
- Roadway departure
- Intersection crashes

It should be noted that transportation safety issues and crash factors differ in rural areas compared to urban ones. Understanding issues in the rural areas outside the MPO is important in the development of overarching or regional discussions and strategies. In addition to those above, the following are key issues in rural areas.

- Unrestrained occupants
- Lane departure

TRAFFIC SAFETY EDUCATION

Understanding that there are many facets to improving safety in the region, PPACG undertakes a number of efforts related to traffic safety education. In response to record breaking fatalities in 2018, PPACG performed research and conducted interviews of area planners, traffic engineers, law enforcement, and people in traffic safety education. This informal process revealed that the biggest gaps and opportunities for improving traffic safety were in public messaging and data collection.

In 2020, PPACG launched its first safety media campaign, conducted with consultation from Drive Smart Colorado. This effort included creations of original content that was boosted across online platforms. The 2021 campaign re-used 2020 content and used social media platforms with added radio buy. The 2023 media campaign consisted of new video content developed by Drive Smart Colorado and El Paso County. The 2024 media campaign is forthcoming, and PPACG intends to continue these campaigns as possible.

In 2023 the media campaign resulted in 336,735 impressions and 2,316 clicks

through Google and 630,946 impressions, 11,740 clicks through Facebook. Those who clicked were taken to a survey that helped inform future media campaigns as well as the Major Crash Study.

In 2022 and 2023, PPACG conducted a regional traffic safety education review to identify how many groups in the region were providing safety education materials and outreach and what type of education or activities they were conducting. The project goal was to identify any gaps as well as find new opportunities for cross-organizational collaboration. The project found a lack of cohesion and coordination throughout the region and made recommendations to improve traffic safety education in the communities.

Utilizing this analysis, PPACG successfully applied for a CDOT HSO grant related to traffic safety education. The bulk of this grant provides funding for a regional safety champion, tasked with providing a central point of contact for traffic safety education efforts throughout the region and fostering communication and collaboration.

The safety champion and this grant strengthen the alliance between PPACG and Drive Smart Colorado. Although Drive Smart Colorado was brought under the umbrella of PPACG in 2022, it continues to operate as a standalone nonprofit.

As the MPO, PPACG can perform some activities related to transportation and safety in the planning realm; however, there are many important activities that are outside of the scope of the MPO and PPACG's funding streams. As Drive Smart Colorado was losing momentum due to the pandemic and the loss of its executive director, PPACG saw an opportunity to partner with the organization. Drive Smart Colorado has made enormous contributions to traffic safety in the region over its history, and the region could ill afford its loss at a time when serious crash rates were at their worst.

Drive Smart Colorado is a nationally recognized community traffic safety program that focuses on improving communities through the reduction of traffic crashes and the unsafe behaviors that cause them.

Drive Smart was born of a public demand for improved traffic safety in 1989. Reaching 501(c)3 non-profit status in 1992, Drive Smart has been a key player in improving traffic safety across Colorado. Using advocacy, education, and policy, our goal is to make the roads safe for everyone, regardless of their means of transportation. Drive Smart Colorado is guided by a Board of Directors consisting of local law enforcement and emergency management personnel, elected officials, and traffic safety advocates. In addition, Drive Smart Colorado hosts a Traffic Safety Coalition that encompasses a wide variety of groups and interests from across the region. The coalition's goal is to share information and resources and improve collaboration in traffic safety activities.

LOCAL SAFETY STRATEGIES

Based on the environment, data, and plans previously mentioned, the following are strategies that may improve safety within the region. These actions are examples of strategies that may be undertaken by local jurisdictions or groups of jurisdictions, as the MPO does not have authority to dictate engineering, policy, law enforcement, or other types of local projects.

- Complete the regional and local safety action plans funded by recently awarded SS4A grants. Compete for discretionary funds to help implement the recommendations of those plans.
- Increase collaboration with available state and federal resources, and consider using grant funding for increased education or enforcement to offset lack of local funding sources.
- Build on successful law enforcement practices, and establish laws/policies that have bearing/are enforceable..
- Leverage traffic safety education programs such as Drive Smart Colorado, and coordinate efforts with the Drive Smart Traffic Safety Coalition.
- Continue conducting safety media campaigns targeted to the region and its issues to ensure effectiveness.
- Implement engineering and infrastructure improvements such as Minimizing speed deferential; making roads seem “narrower” with striping to encourage drivers to slow down; enlarging road signs; or installing adaptive signal systems or radar detection systems.
- Improve pedestrian engineering, safer cross walks, especially at intersections with high crashes. This may include adding pedestrian bump outs or adding advanced flashing beacons before the intersection to inform drivers that pedestrians are crossing.
- Identify areas where speeding or other types of dangerous driving is common.
- Implement effective access management techniques such as limiting the number of conflict points, adding turn lanes, and using connecting parking lots and access roads to minimize inefficient travel on primary roadways,

NONMOTORIZED SAFETY

Vulnerable road users are those that are not protected by an outside shield, such as a vehicle. As such, pedestrians, bicyclists, and others utilized nonmotorized transportation have a greater risk of injury in the event of a crash. Figures 5-4 and 5-5 illustrate crashes involving bicycles and pedestrians, respectively.

In the Pikes Peak Region, there were 1,199 reported crashes involving bicyclist or pedestrians in the 5 years between 2018 and 2022. However, the actual number is likely much higher. According to the FHWA, studies show that pedestrian and bicycle crashes are underreported. This may be because of several issues, including crashes that occur outside of the public right-of-way (such as at driveways or on shared use paths), a lack of injury or sufficient property damage to warrant a police report, or a lack of police involvement for fear of legal consequences.

Figure 5-4: Bicycle Crashes 2018-2022

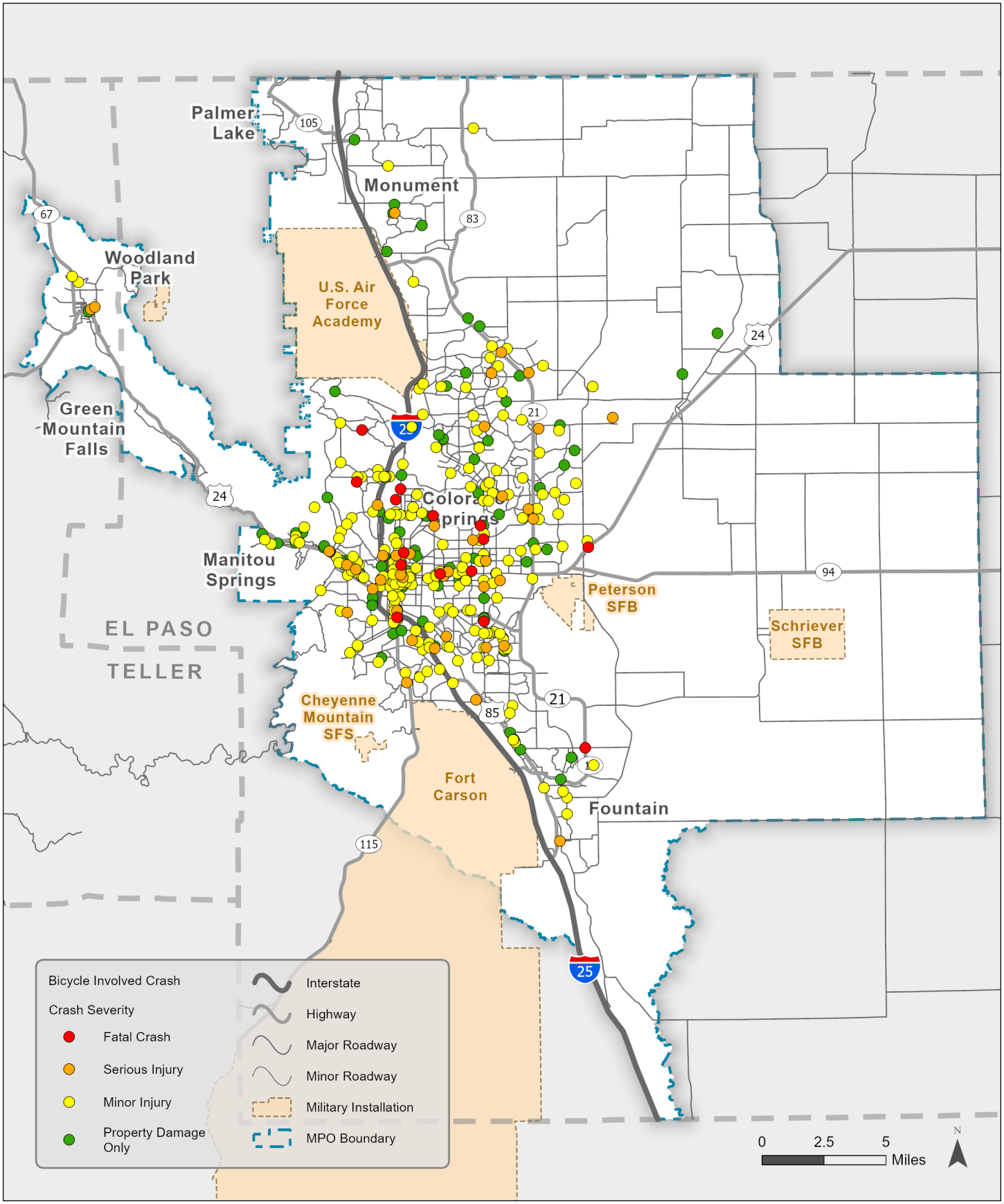
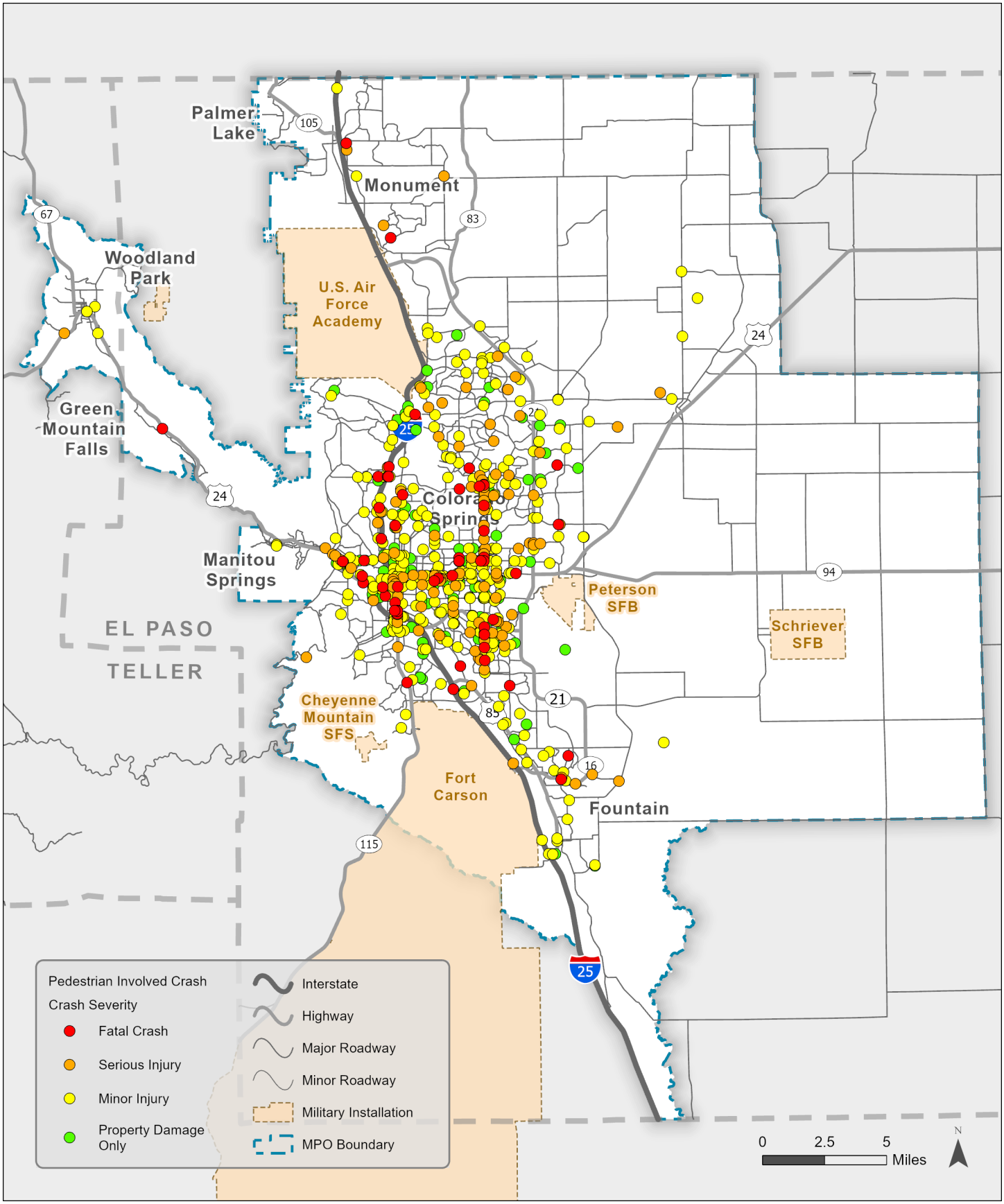


Figure 5-5: Pedestrian Crashes 2018-2022



The 71 reported fatal crashes between 2018 and 2022 resulted in 63 pedestrian deaths and 15 bicyclist deaths. Of these crashes, no impairment was suspected in 53 of them, while alcohol was suspected in 16 and drugs were suspected in 2. Weather did not seem to be a contributing factor in these crashes as dry conditions were reported in 65 crashes, followed by wet conditions (4), and snowy (1). Conditions were unknown for one crash.

The locations of crashes involving bicycles and/or pedestrians are included in the following figures. Few fatal crashes occurred in close proximity, meaning there were no noticeable trends by location.

As mentioned in the previous chapter, the Regional Active Transportation Plan was adopted in 2024 and details specific information regarding nonmotorized travel, including safety and crash information as well as active transportation network design guidelines.

TRANSIT SAFETY

The safety and security of public transit can also be an issue in comfort and ridership rates, and can make the difference between a system for everyone versus a system for captive riders only. The regional transit plan, included as Appendix B, discuses this and provides recommendations and guidance regarding safety and passenger perception.

SECURITY

During emergencies, the transportation system serves a crucial role in safeguarding regional security. The role of PPACG is limited to an informational level with regard to security and resilience within the region.

According to the Federal Emergency Management Agency (FEMA) National Risk Index, El Paso County has a “Relatively Moderate” risk index, where this rating is the middle ranking in a scale from “Very High” to “Very Low.” Teller County is rated “Relatively Low.” This risk index is based on a formula that calculates expected annual loss, social vulnerability, and community resilience.

The FEMA risk index lists El Paso County as having a very high risk of cold wave and lightning, as well as a relatively high risk of hail, ice storm, landslide, tornado, and wildfire. El Paso County also has relatively moderate risks of strong wind and riverine flooding. Meanwhile, Teller County has a relatively high risk of lightning with relatively moderate risk of hail and wildfire.

It should be noted that FEMA identifies El Paso County as having a relatively high ability to prepare for anticipated natural hazards, adapt to changing conditions, and withstand and recover rapidly from disruptions when compared to the rest of the U.S., while Teller County is listed as relatively moderate. Community resilience is measured at the county level using the Baseline Resilience Indicators for Communities published by the University of South Carolina’s Hazards and Vulnerability

Research Institute.

In addition to these natural events, human-cause events such as hazardous material incidents, power outages, acts of terrorism, and civil disobedience should be considered in planning for security.

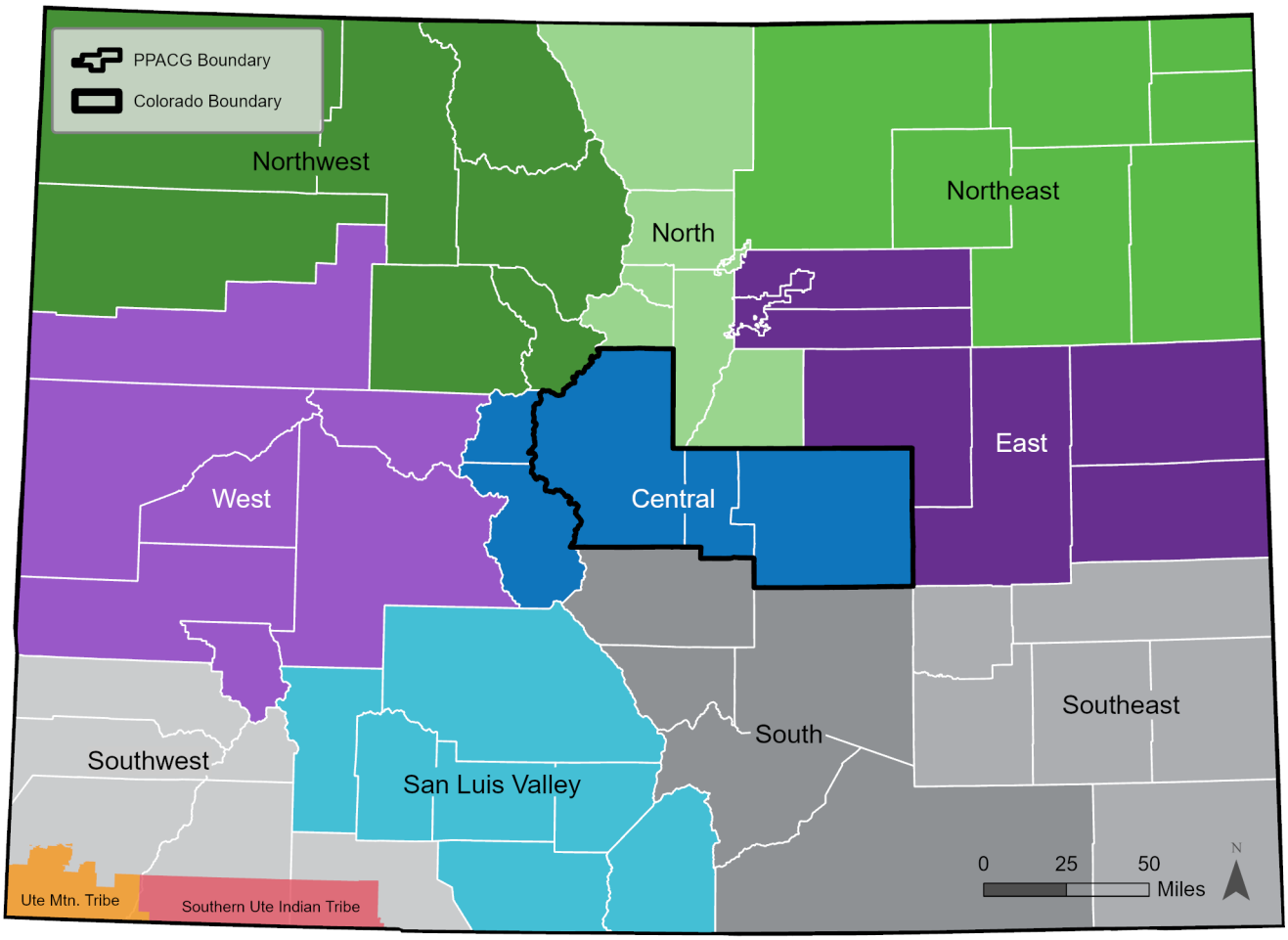
Manmade and natural disasters can have devastating long-term effects on the region. The Black Forest and Waldo Canyon fires are recent examples of this.

Within the state of Colorado, the Division of Homeland Security and Emergency Management (DHSEM) supports planning and response to hazards and disasters such as flooding, tornadoes, wildfire, and hazardous materials incidents.

DHSEM develops the State of Colorado Emergency Operations Plan, which identifies the roles, responsibilities, and actions of state government in disasters. When local government capabilities are taxed, state government has resources and expertise available to provide emergency or disaster assistance.

DHSEM Emergency Management Office has 10 field service areas, and the Pikes Peak Region is located in the Central field service area, as indicated in Figure 5-6.

Figure 5-6: DHSEM Field Service Areas



Communication and coordination between the field service manager and local emergency managers is important to the security of the regional transportation network. Field managers for these service areas can provide local emergency managers with response, planning, training, and exercise assistance as well as grant administration.

In addition the Pikes Peak Region is addressing transportation security through the following.

- Activation of an Emergency Operations Center (EOC) may be required during an incident. Effective January 22, 2019, Colorado Springs City Council and the El Paso County Board of Commissioners approved an Intergovernmental Agreement (IGA) to operate a joint office of emergency management. It is called the Pikes Peak Regional Office of Emergency Management.
- Locally-developed all-hazard plans provide for coordination, control, and allocation of transportation assets in support of the movement of emergency resources, including the evacuation of people and the redistribution of food and fuel supplies.
- CDOT's role in emergency management consists primarily of safeguarding and maintaining the state transportation system in the affected area and facilitating and coordinating evacuation routes that use the state transportation system. CDOT maintenance staff are the primary responders for damage to CDOT infrastructure and assistance to others, but staff from other areas may be used as needed.
- Chemical Response Teams in the Pikes Peak Region provide support for each other, and are housed within the Colorado Springs Fire Department, the El Paso County Sheriff, in Teller County, at Peterson Space Force Base, and at Fort Carson.

MILITARY

As previously mentioned, the local military installations and associated populations, including families, veterans, and defense contractors, are critical considerations when planning for regional transportation.

Fort Carson alone is the third-largest employer in the state. According to installation data provided to PPACG, Fort Carson serves more than 26,500 active duty military personnel, 39,000 family members, 1,400 Reserve component military, 900 contractors, and more than 6,600 civilian workers.

SBD 1 is headquartered at Peterson SFB and includes Schriever SFB and Cheyenne Mountain SFS in the Pikes Peak Region as well as several installations around the world. As of 2020 data, Peterson SFB employed 8,750 active duty military personnel and approximately 2,200 people. Schriever SFB employed 1,644 active duty military and more than 5,500 additional people. Per the Space Operations Command website, SBD 1 includes more than 4,000 military and civilian members who support 18,500 personnel and 173,000 local beneficiaries.

Peterson SFB and Schriever SFB are the global headquarters of the North American Aerospace Defense Command (NORAD) and the DoD operational center for the Global Positioning System (GPS), respectively. Together they employ 15,000 military and civilian personnel. SBD 1 has also been selected as the Headquarters for U.S. Space Command. The installations may see changes in personnel and employment due to the location of U.S. Space Command and the growth of the U.S. Space Force. This may increase travel demand on specific transportation networks that serve installation gates and are used by civilian drivers who travel within the vicinity of these installations.

USAFA is a public university and military service academy for cadets who will serve in the United States Air Force and United States Space Force. USAFA has an approximate population of 2,450 active duty military personnel, 4,000 cadets, and 1,900 civilians that live on the installation. However, that population is not representative of the total traffic to and from the installation.

In addition, these installations serve as medical, retail, and recreational destinations for the large contingent of veterans in the region. Congressional District 5 military veteran and retiree populations are the third highest in the United States at more than 109,000.

The military installations are major traffic generators within the region, but it is also important to consider security and compatible use when considering transportation projects that impact or are near the military installations. Protecting the mission of these installations may preclude some traditional solutions to traffic congestion or other issues. The traffic and security considerations make it critical to coordinate and continue good relationships between the military and surrounding communities to ensure there

is good understanding of the impacts of off and on-installation projects on the transportation network as a whole.

A relatively new discretionary funding source may be available for future transportation projects that mutually meet the needs of the military and communities. The Defense Community Infrastructure Program (DCIP), created in 2018, is a competitive program to fund infrastructure enhancements to support military value, the training of cadets, installation resiliency, and family quality of life that benefits installations. In 2024, the City of Colorado Springs was awarded $10,710,000 for a project to provide safety improvements and access to the North Gate of Peterson SFB. This project will address issues that impact operational readiness, the ability to accommodate future total force requirements, and operating costs.

In addition, Colorado Springs Utilities was awarded $5,348,798 for a project to remove several miles of existing overhead power lines between two substations on the USAFA grounds and replace them with underground 34.5 kilovolt lines. This project will enhance the reliability of the primary electric power feed to USAFA, providing essential support to all aspects of the training and education mission.

DCIP funding was not included in the development of the financial plan, chapter 7; however, it may be applicable for future projects that support military installations.

Strategic Highway Network and Power Projection Platform

The Strategic Highway Network (STRAHNET) is a system of select state and federal highways, including the entire Interstate System, designated by the DoD as the minimum public highway network necessary to support DoD deployment needs. Along with 1,800 miles of connector roadways, the entire STRAHNET system totals over 64,000 miles of roadway and links over 200 important military installations, seaports, and airports in the continental United States.

The DoD distinguishes a subset of the STRAHNET as Power Projection Platform (PPP) routes. PPP routes include about 5,000 miles of the STRAHNET system, and are considered the most critical routes to support the movement of DoD equipment from 18 inland military installations to their designated Seaports of Embarkation (SPOE) during a national emergency. These routes must therefore be capable of supporting the rapid movement of large, heavy military equipment through adequate highway and bridge design.

I25 serves as the major STRAHNET corridor within the region, with sections of South Academy Boulevard, East Fountain Boulevard, South Powers Boulevard (CO21), and US24 serving as STRAHNET connectors to link Fort Carson and Peterson SFB to the interstate. Further, the section of I-25 from the South Academy Boulevard interchange to the New Mexico state border is part of a PPP route linking Fort Carson to its SPOE in Beaumont/Port Arthur, Texas.

Recent Projects

In recent years, the military installations have had good relationships with surrounding jurisdictions and CDOT, and several key projects have been completed or are underway that have benefited the transportation network in relation to the installations.

The most substantial of these is the Military Access, Mobility and Safety Improvement Project (MAMSIP), an extensive project that contains four major components:

- Roadway, drainage and structural improvements on Charter Oak Ranch Road, completed in 2023, enhanced access to Fort Carson Gate 19. El Paso County estimated that improving Charter Oak Ranch Road would reduce the number of trips to Fort Carson Gate 20 by approximately 25%, improving safety along the I25 corridor and reducing gate times for those accessing the installation.
- Safety and efficiency improvements made to CO94 between Peterson SFB and Schriever SFB were completed in 2023 and included the addition of a westbound passing lane and a signalized jug handle intersection at Blaney Road. Prior to these improvements, eastbound daytime traffic suffered from recurrent congestion caused by steep grades, limited opportunities for passing, and a high volume of slow-moving heavy vehicles traveling to the Waste Management Landfill – Colorado Springs.
- I25, which supports military commuters and is a key travel corridor in the region will receive safety and efficiency improvements are part of MAMSIP to include two bridge replacements over South Academy Boulevard, maintenance on four additional bridges, widening of shoulders, surface treatment, median barriers, and lengthening of the deceleration lane at the interchange with CO16. This work will be completed in late 2024.
- South Academy Boulevard, a key corridor for commuters as well as a critical defense access and haul route, will receive efficiency and resiliency improvements to include widening and bridge work. This project will be completed in 2026.

In addition, several other projects have been completed or are in progress that will support local military installations.

Near Peterson SFB, a City of Colorado Springs project at the US24-Peterson Road interchange is ongoing to alleviate congestion near Peterson SFB's North Gate. Colorado Springs also worked with Peterson SFB to make improvements to Marksheffel Road at the base's East Gate.

CDOT is currently constructing a diverging diamond interchange at the intersection of Powers Boulevard (CO21) and Airport Road. Airport Road is a critical access point for the Peterson SFB West Gate.

Near Fort Carson, a CDOT project to improve CO115 from Nelson Boulevard to I25 will support Gate 1.

Military Interest Highlights

To ensure that military interests were included in this planning effort, TAC ex-officio military representatives participated in the LRTP update process. In addition, individual interviews were held with planners from each installation to determine needs, projects, and other input for this LRTP.

- In general, there is a need to ensure compatible land use and adequate transportation networks surrounding military installations. Representatives from military installations shall continue to be notified of planned future developments and improvements within the vicinity of the military installations. Colorado Revised Statutes § 29-20-105.6 and the Colorado Springs Regional Joint Land Use Study (JLUS), developed by PPACG, provide guidance regarding coordination of activities. PPACG continues to support JLUS implementation and compatible land use coordination as possible through an Office of Local Defense Community Cooperation grant.
- Peterson SFB may double in population by 2050, which will require significant transportation infrastructure investment as this occurs.
- I25 crosses USAFA on an easement held by CDOT. Due to underlying land ownership by USAFA, construction on this section requires additional processes due to USAFA ownership.
- Planning local/regional trail connections such as the Santa Fe Trail with military installation input is important, particularly Fort Carson, USAFA, and Cheyenne Mountain SFS.
- There is a desire by installations to support multimodal transportation, including transit and active transportation options, as well as car/van pools. However, these pose challenges related to maintaining appropriate security measures at installation boundaries and demand may not support these activities.
- The military commonly uses Inter-Governmental Support Agreements (IGSA), as well as the Compatible Use (formerly JLUS) program as tools to partner with surrounding cities to work on transportation projects.

Fort Carson

Approximately 57% of Fort Carson's personnel live off post, and about 34,000 travel to the post daily. This can be challenging, particularly in the morning hours as personnel report to the post. Recent and ongoing off-post projects will significantly benefit the post and will mitigate many of the issues that can be affected by civilian projects. Fort Carson staff would like to continue the supportive relationship with surrounding jurisdictions.

On post, Gate 20 is the busiest gate and is undersized, causing backups affecting Mesa Ridge Parkway, South Academy Boulevard, and I25. This is a challenge because Fort Carson has limited right-of-way in the area to make improvements. A long-term project has been identified to increase the number

of check lanes and provide additional security measures at Gate 20. However, recent and ongoing projects, including the improvements to Charter Oak Ranch Road, have significantly reduced traffic at Gate 20 by accommodating traffic at Gate 19 from personnel who commute from Fountain and Pueblo. A new barracks in the southern portion of the post will also reduces internal traffic congestion and shift traffic away from Gate 20.

A planned project to reconstruct Gate 3, the post's commercial gate, will mitigate congestion at Academy Road and Westmeadow Drive. In addition, Gate 4 is undersized. However, there is no timeline for these gate improvements by the DoD.

As previously mentioned, the SCRP is planned near the Ray Nixon power plant site. This has been previously recognized as an opportunity for Fort Carson to establish a secondary rail line for redundancy during deployments. This development could create a rail spur off the power plant rail loop that would extend to the eastern boundary of Fort Carson. Local governments, the developer, and Fort Carson representatives are coordinating on this project to meet community and military needs.

Fort Carson has an on-post shuttle that largely supports soldiers without vehicles and reduces on-post traffic. In the past Fort Carson has explored transit options to post, but security and low ridership were challenges. An existing bus hub at PPSC supports access to Fort Carson via Gate 4.

Fort Carson would additionally like to participate in discussions regarding local trail interests and projects. Bike/hike trail connections that link with Cheyenne Mountain State Park, the Chamberlin Trail, and Fountain Creek Trail will need coordination between the City of Colorado Springs and Fort Carson to ensure effective networks, master planning and wayfinding.

Space Base Delta 1

Recent, ongoing, and planned work near the three local SBD 1 installations will support greater access, safety, and efficiency. Installation staff has good working relationships with El Paso County, Colorado Springs, and CDOT and worked with El Paso County on the development of the Major Transportation Corridors Plan.

Of particular concern to all three installations is encroachment and added traffic volume due to nearby residential and other development. Staff would like to continue to be involved in any work on the major approaches and corridors to the installations that will change the traffic patterns for access, detours, delays and safety and welfare of personnel.

PETERSON SPACE FORCE BASE

Peterson SFB is accessed via three gates: East Gate (Marksheffel Road), North Gate (Peterson Road and US24), West Gate (only 24-hour gate) near Powers Boulevard (CO21) and Airport Road. Projects to improve the network near these gates have been high priorities for El Paso County, Colorado Springs, and CDOT, particularly

because anticipated growth at the base will add volume to adjacent roadways.

Another major transportation consideration for Peterson SFB staff is safety and efficiency along SH94 to Schriever SFB, where personnel commute between for work and home, which has also been addressed in part via a recent CDOT project.

Staff are interested in any project near the gates to the base, such as the Reagan Ranch residential development near East Gate and Banning Lewis Ranch development. They are also interested in better connectivity from Marksheffel Road to the Colorado Springs Airport via Drennan Road, or another route north of Bradley Road. This could alleviate cross traffic and volume on Powers Boulevard from people coming from the east to access the airport efficiently.

SCHRIEVER SPACE FORCE BASE

Around 7,000 people travel to Schriever SFB daily as the installation continues to grow in importance and missions. As a result, the criticality of transportation improvements is also increasing. Safety improvements to CO94 are the most critical concern for the installation. Assured and safe access to Schriever SFB is essential for sustaining National Security operations.

Continued considerations for safety and capacity improvements for area roadways connecting regional communities with Schriever SFB would include key access roads CO94, Curtis Road, Bradley Road, Enoch Road (North Gate), and Irwin Road (West Gate). Heavy vehicles and landfill traffic can cause sight line, safety, and efficiency issues. Specifically, Schriever SFB staff are supportive of the projects on Curtis Road to add shoulders to existing pavement from CO94 to Judge Orr Road.

The North Gate will be reconfigured for improved security, but no capacity changes are currently planned.

CHEYENNE MOUNTAIN SPACE FORCE STATION

Cheyenne Mountain SFS is accessed via NORAD Road near the Broadmoor Bluffs neighborhood, about 3 miles from CO115. There is an existing easement in place to allow residential traffic on NORAD Road to Broadmoor Bluffs.

The Station is pursuing an easement for emergency secondary egress, possibly south through Cheyenne Mountain State Park, which would be used only when the main gate is not viable as in the case of a wildfire.

Cheyenne Mountain SFS is concerned about encroachment on NORAD Road, new housing developments in the vicinity, and trail connections in the area, all of which can pose security issues. The Station would like to be involved in any discussions regarding nearby active transportation routes.

U.S. Air Force Academy

In addition to those housed on or working at USAFA, the installation allows visitors through either the North Gate or South Gate during certain hours with proper identification. The USAFA chapel, currently under renovation, has been a significant tourist destination, and a new visitor center is under construction that is likely to draw both tourists and area residents. In addition, Douglass Valley Elementary School and Air Academy High School, District 20 public schools, are located on USAFA, which adds to daily commute traffic.

USAFA is also the host to major events such as football, hockey, and basketball games; special sporting and concert events; and the annual cadet graduation ceremony. Falcon Stadium, which hosts football games and special events, can attract over 40,000 spectators, creating traffic backups in and around the installation during ingress and egress of the event. These major events and the daily commute are the main impacts of base traffic.

Due to its layout at the mountains on the west, USAFA is limited in how it connects to off-installation traffic. Incoming traffic at both North and South Gates occasionally backs up onto the I-25 off ramps, especially at the South Gate during the morning commute of the civilian installation employees and the two District 20 public schools that are located on the base.

USAFA is concerned with the increase traffic volume due to the rapid development around the I-25 corridor, which includes the new visitor center, hotel, and other facilities at North Gate as well as the Ford Amphitheater near Voyager Parkway and the Powers Boulevard-I-25 interchange. Coordinating with CDOT and local jurisdictions on construction projects and major improvements in the corridor is essential to help reduce the impacts of traffic on I-25 and maintain adequate access to USAFA.

Unlike other major transportation corridors in the state, I-25 is on federal property owned by the US Air Force and the state has an easement for I-25. It is important for CDOT to coordinate easement issues with USAFA on all work. In some instances, USAFA has to coordinate with central Air Force personnel and meet additional federal requirements, which can add time to the easement modification process. Early involvement could help reduce project delays and reduce public relations issues.

In addition, the proposed Front Range Passenger Rail project may run through USAFA via the existing rail line, which poses security, safety, noise, and right of way concerns. It is critical that USAFA be included in any rail planning efforts in the region.

USAFA is also interested in improvements to trail connections to Colorado Springs and Monument with non-motorized trails. This includes the Santa Fe Trail and bike lanes and sidewalks that run under I-25.

For connections to off-installation facilities, USAFA noted that any development or traffic changes that affect the Bullseye

Auxiliary Airfield, which is located in eastern El Paso County, should be brought to their leadership for review. The airfield is located near South Ellicott Highway and Sanborn Road, south of CO 94. Upgrades on roads that go to from Colorado Springs to Woodland Park area where USAFA has the Farish training/recreation facility would help facilitate access to this resource.

FEDERAL LANDS ACCESS

While most nearby federal lands fall outside of the MPO boundary, the Pikes Peak Region recognizes the importance of these lands and the role they play in the local environment and culture. In July 2024, the FHWA Central Federal Lands Team held a federal lands access workshop with stakeholders from the Pikes Peak Region and CFR TPR. The goal of the workshop was to identify and analyze unmet access needs to federal high-use recreation sites and economic generations. This type of coordinated and comprehensive planning on a regional scale supports greater integration among planning processes and identifies potential opportunities to maximize funding. The FHWA's Central Front Range 2050 Regional Transportation Plan outlines these needs and opportunities and is included as Appendix F.

ENVIRONMENT

The following are environmental considerations for any project included in the LRTP. In addition, the scoring criteria to guide project selection for this LRTP included an environment category. Projects were awarded points for incorporating environmentally friendly concepts, such as transit, active transportation element (bike lanes, sidewalks, etc.), erosion mitigation/reduction, reduction of dust pollution, solar canopies/lighting, resiliency, greenhouse gas-combating vegetation, and green stormwater infrastructure. Per the EPA, "stormwater runoff is a leading cause of water pollution in urban environments. 'Green' stormwater infrastructure is designed to mimic nature and capture rainwater where it falls. Green infrastructure reduces and treats stormwater at its source." Some jurisdictions have or are working on green stormwater infrastructure design criteria.

Mitigation and Monitoring

Transportation planning and decision making, including project selection, must be integrated and coordinated with land use, water quality, and natural resource concerns. Preserving the high quality of life in the Pikes Peak Region requires maintaining or enhancing communities and ecosystems while also accommodating growth and development. PPACG aspires to accomplish this by being as deliberate in developing coordinated and collaborative mitigation activities as we are in developing transportation projects.

PPACG collaborates with local governments, non-profit organizations, and state and federal resource and regulatory agencies to mitigate adverse impacts of

transportation projects. Collaboration among transportation planning, economic development, land development, and wildlife conservation efforts is critical because the impacts of policies will cut across all of these individual efforts. A desired outcome of the PPACG collaboration process is that transportation planning and decision making, including project selection, is integrated and coordinated with land use, water quality, and natural resource planning and management. The identification of a full range of environmental concerns will occur early in the transportation planning and project development process.

In the context of a regional transportation plan, environmental planning and collaboration means incorporating the broad strategies, policies, programs, and actions that serve to help avoid, minimize, mitigate, or remediate impacts to the human and natural environments associated with the implementation of the regional transportation plan. This planning process will identify issues and concerns that can be addressed proactively and can then be mitigated or incorporated into projects in a manner that both informs and reinforces other planning efforts in the region.

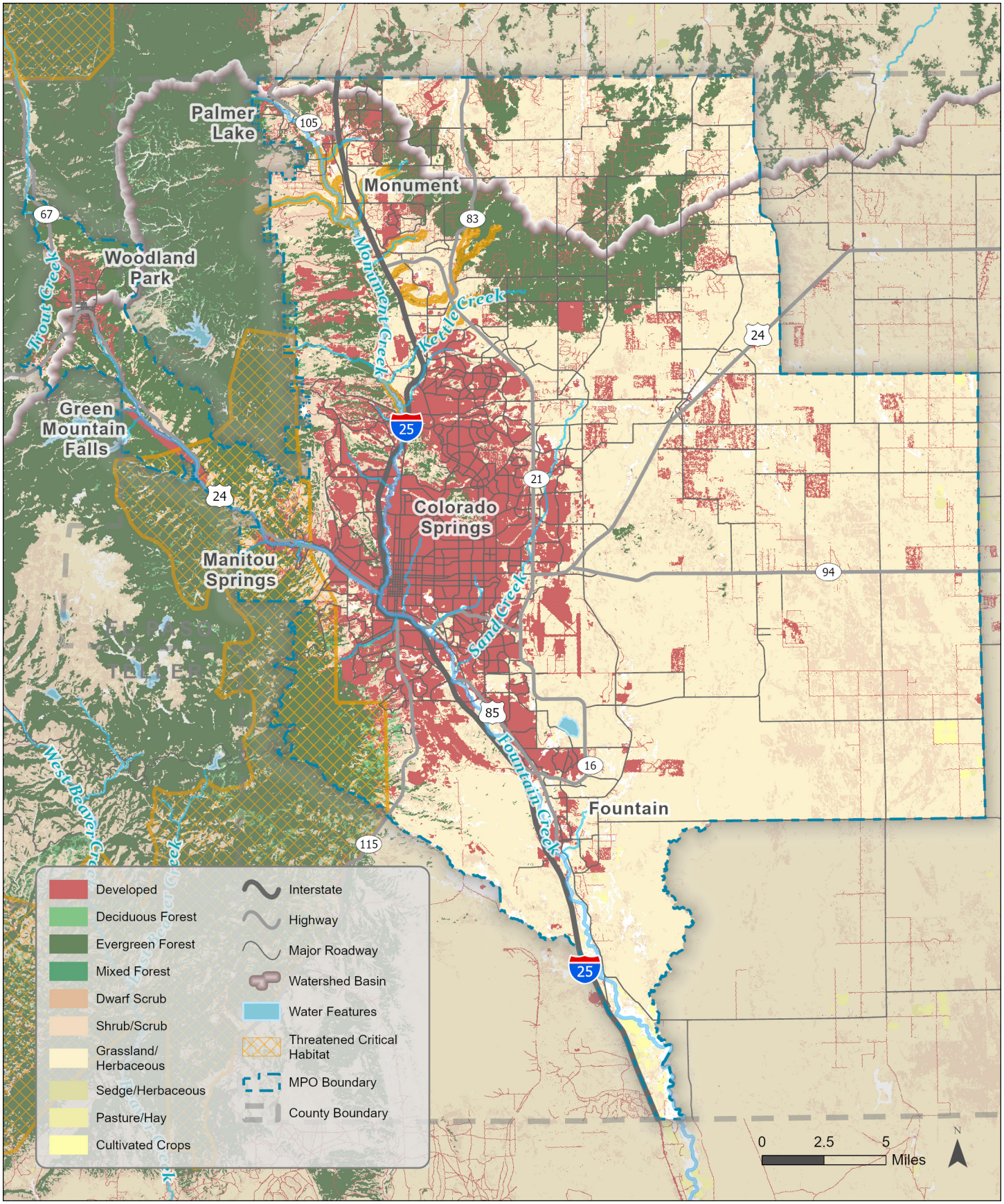
Figure 5-7 identifies the land cover for the Pikes Peak Region as defined by the National Land Cover Database (NLCD). While the core urban area is classified as developed, there are also areas of deciduous, evergreen, and mixed forest, particularly in the Woodland Park, Manitou Springs, and Black Forest areas. In addition, less populated areas, particularly in the eastern portion of the region are covered by dward scrub, shrub/scrub, grassland/ herbaceous, sedge/herbaceous, pasture/ hay, or cultivated crops. Land cover can influence the water quality and watershed, habitat and species, and micro-climate of the region.

Figure 5-7 also shows environmental considerations in the context of these land covers. These considerations include water features such as Fountain, Sand, Monument, and Kettle creeks as well as the boundary of the watershed basin, which runs through the northern portion of the region. Fuel, particle, and salt-laden runoff from streets, highways, and storage facilities results in damage to public water supplies, ponds, lakes and surface streams, roadside soil, vegetation and trees.

In addition, the Mexican Spotted Owl and the Preble's meadow jumping mouse are threatened species with critical habitat areas within the Pikes Peak Region. As noted on Figure 5-7, this habitat is largely in the wooded areas west of Colorado Springs and Fort Carson, but this habitat does not extend as far as Green Mountain Falls or Woodland Park. There are also small habitat areas along watersheds north of Colorado Springs in the Monument and Black Forest areas.

While this figure is not inclusive of all environmental considerations, it does provide context that can be used by local jurisdictions in planning. Specific environmental analysis and measures are

Figure 5-7: Environmental Considerations in the Pikes Peak Region



required at the project and implementation level beyond the scope of this regional look.

Individual projects in this plan could have a significant impact on the environment if they are not managed properly. The cumulative impacts to the region are significant and warrant a well-reasoned plan to remediate the social, economic, and ecological impacts.

Any federal project, or a state or locally funded project requiring a federal action, must meet requirements set forth by the National Environmental Policy Act of 1969 (NEPA).

As part of the NEPA process, alternatives to roadway construction must be thoroughly evaluated to identify any other possibilities that offer the least impact to people and the environment, including the alternative of no action. Impact prevention and mitigation strategies must be fully evaluated to prevent as much harm as possible during the construction and operation of new roads.

Mitigation of environmental impacts includes rectifying the impact by repairing, rehabilitating, or restoring the affected environment, reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action, and compensating for the impact by replacing or providing substitute resources or environments. Where possible, projects may also consider opportunities to avoid impacts altogether by not taking a certain action or parts of an action, or minimizing impacts by limiting the degree or magnitude of the action and its implementation. Together, these strategies can help reduce collective impacts to the environment.

Air Quality Conformance

Transportation conformity is required under Clean Air Act section 176(c) (42 U.S.C. 7506(c)) to ensure that federally funded or approved highway and transit activities are consistent with ("conform to") the purpose of the state air quality implementation plan (SIP). Conformity to the purpose of the SIP means that transportation activities will not cause or contribute to new air quality violations, worsen existing violations, or delay timely attainment of the relevant NAAQS or any interim milestones. The Environmental Protection Agency (EPA) transportation conformity rule (40 CFR Parts 51 and 93) establishes the criteria and procedures for determining whether metropolitan transportation plans, TIPs, and federally supported highway and transit projects conform to the purpose of the SIP.

In the 1980s, carbon monoxide levels in the Colorado Springs area exceeded the EPA standard and the area was designated non-attainment for carbon monoxide. The last violation of the 8-hour standard was in 1989. This allowed the area to be re-designated as a maintenance area. The EPA requires maintenance areas to develop two 10-year air quality maintenance plans that demonstrate attainment of the standard for a 20-year period.

The EPA reclassified the Colorado Springs

area as a maintenance area in October 1999. After 20 years as a maintenance area, the Pikes Peak Region successfully maintained conformity and was considered in attainment. Following is an excerpt from a letter from EPA dated December 9, 2019.

"In consideration of the Colorado Springs CO maintenance area, the EPA approved the first 10-year maintenance plan on August 25, 1999 (64 FR 46279) with an effective date of October 25, 1999. We approved the second 10-year Limited Maintenance Plan (LMP) on August 1, 2013 (78 FR 46521). As the Colorado Springs CO maintenance area has shown continuous maintenance of the CO NAAQS (see 40 CFR 50.8) from October 25, 1999 through October 25, 2019, the area has met its obligation to demonstrate maintenance of the CO NAAQS for 20-years. Therefore, as of October 26, 2019, the Pikes Peak Area Council of Governments (PPACG) Metropolitan Planning Organization (MPO) is no longer required to address the transportation conformity determination requirements of 40 CFR part 93, subpart A. As such, a conformity determination is no longer required for the PPACG's Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP)."

It should be noted that while PPACG is in "attainment" under the current federal guidelines, the region has significant ozone challenges ahead and is looking to voluntarily address those issues in advance of a potential "non-attainment" determination in the future. Such activities include participation in the EPA "Ozone Advance" program and developing voluntary control measures to reduce ozone precursors.

Carbon Reduction Strategies

The Carbon Reduction Program (CRP) was established by the IIJA and requires states, with the consultation of MPOs, to develop a Carbon Reduction Strategy.

Several policies/activities being developed within the Pikes Peak Region will reduce carbon emissions by facilitating the use of alternatives to single-occupant vehicle trips. These policies/activities include and are not limited to:

- Development of a Regional Complete Streets toolbox resource
- Enhanced regional Travel Demand Management strategies
- Recommendations from the PPACG Active Transportation Plan
- Reviewing the CMP and strengthening the process as necessary
- Updating the Regional Transit Plan
- Integration of carbon-reducing projects into the project selection process for the TIP and LRTP

Greenhouse Gas Reduction

Over the past few years the State of Colorado has taken legislative action to help reduce congestion and GHG emissions, with a desired outcome of reducing VMT.

As noted in Chapter 1, SB 21-260 initiated a the development of a GHG Pollution Reduction Roadmap and GHG

Transportation Planning Standard, which was adopted by the Transportation Commission. Under this Standard, MPOs such as PPACG are required to conform with GHG reduction levels for different planning time frames. For this LRTP, those time frames are 2030, 2040, and 2050.

Unlike the performance metrics discussed in Chapter 3, these reductions are not achieved via setting targets and measuring results. Instead these reductions are projected through travel demand modeling.

PPACG utilizes a sophisticated computer model to predict traffic volumes as part of the LRTP process. The model compares the capacity of the roadway network to the predicted traffic volumes at different times of day to generate travel times. The travel demand model takes into consideration data that reflects characteristics of the Pikes Peak travel shed such as population, household size, road network, transit routes, and land use. The model relies on several assumptions that can be adjusted to reflect the community such as work from home rate, passengers per vehicle, and transportation mode split between vehicles, transit, walking and bicycling/micromobility.

The fiscally constrained projects, along with the land use forecasts, were modeled for travel time to predict VMT and GHG performance at the given time frames. PPACG's GHG reduction was achieved primarily through a project mix that increases mode choice as supported by larger funding levels for active transportation and transit projects.

A discussion of a PPACG's efforts to conform to the State's GHG rules are discussed in Appendix E.

PUBLIC HEALTH

A holistic approach to planning includes serious consideration of the health impacts of transportation policies and decisions.

The effect of the built environment on the physical, social, and mental health of the community is substantial. Transportation affects physical activity, lifestyle, environmental quality, safety, quality of life, and access to healthy food, jobs, and social destinations. An understanding of the connections between transportation and health can help decision makers achieve desired public health outcomes.

This LRTP envisions a more accessible, effective transportation system that supports public health, and will enhance active transportation or environmental quality and reduce injury and mortality.

Safety

One of the most visible links between public health and transportation is transportation safety, which is discussed previously in this chapter. Lack of safety or perceived lack of safety is one of the key issues affecting transportation.

Access to Jobs, Goods, Services, and Social Activities

Transportation-related barriers such as mileage, lack of adequate pedestrian or bicycle facilities, or lack of transit service

can make it difficult for people to access important lifestyle destinations, while also reducing transportation choices. Community design and transportation systems impact the opportunity for all residents to make healthy choices. Access to these destinations by way of a variety of transportation choices is especially important for vulnerable populations as these populations generally have a lower vehicle ownership rate and/or depend on transit. Several aspects of the built environment can affect opportunities for a healthy lifestyle, such as mixed use zoning, pedestrian-friendly streets and intersections, handicap accessibility, and transit and bicycle infrastructure.

Identifying where people want and need to go and ensuring access to those locations is critical in planning for the transportation network. The commercial and employment centers identified in Figure 4-2 of Chapter 4 are among those locations as they contain both retail needs and areas where many people work. This link between transportation and public health is one of the reasons that connectivity was among the scoring criteria for project selection for this plan.

In particular, households without vehicles may have difficulty accessing basic services like healthy food outlets and medical care unless there are adequate nonmotorized and transit options in place. Figure 5-8 depicts the percent of the households that do not have a vehicle. Understanding the areas where no-vehicle households are prevalent can assist in planning the future transportation network, while also benefiting the greater community with increased transportation choices.

Figure 5-9 provides information regarding access to grocery stores within the Pikes Peak Region via walking and driving. In addition to the locations of grocery stores, the map identifies the areas within a 10-minute walk and a 5-, 10-, and 15-minute drive of each store. This information can help planners determine areas that lack nearby grocery stores or may benefit from increased transportation options to existing stores.

Active Transportation and Recreation

Active transportation includes any mode of human powered transportation, such as walking, biking, or scooters. In addition to being a mode of transportation, active transportation offers substantial physical and mental health benefits and has been shown to reduce heart disease, adult diabetes, obesity, hypertension, osteoporosis, depression, anxiety, and more.

Transportation systems can encourage active transportation through infrastructure such as separation from high-speed traffic or maintained and well-connected sidewalks and crosswalks.

In addition to physical infrastructure, laws, rules, and policies can support active transportation. Lower speed limits on certain roads, for example, can reduce the danger and discomfort of cycling, and

Figure 5-8: No-vehicle Households

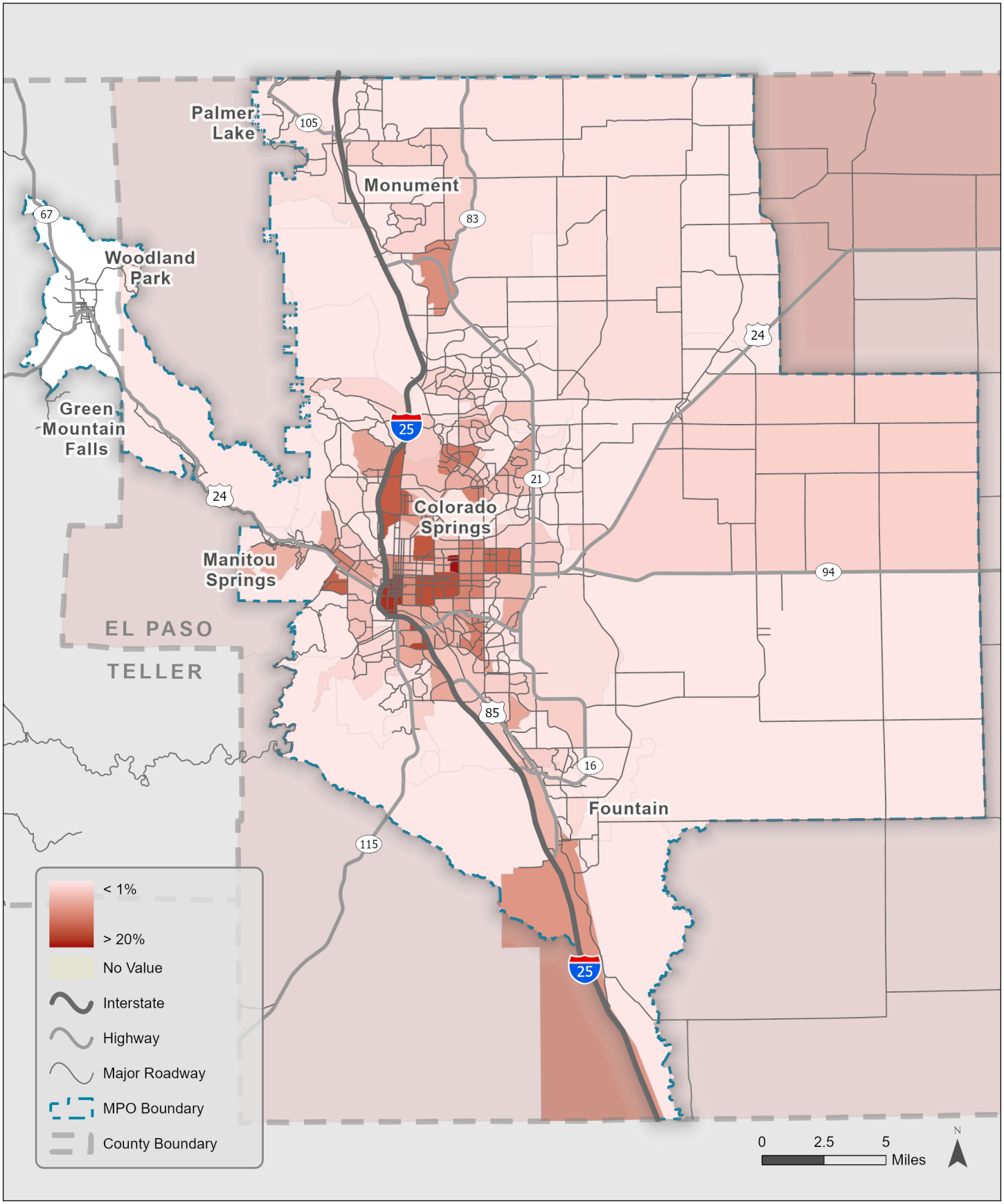
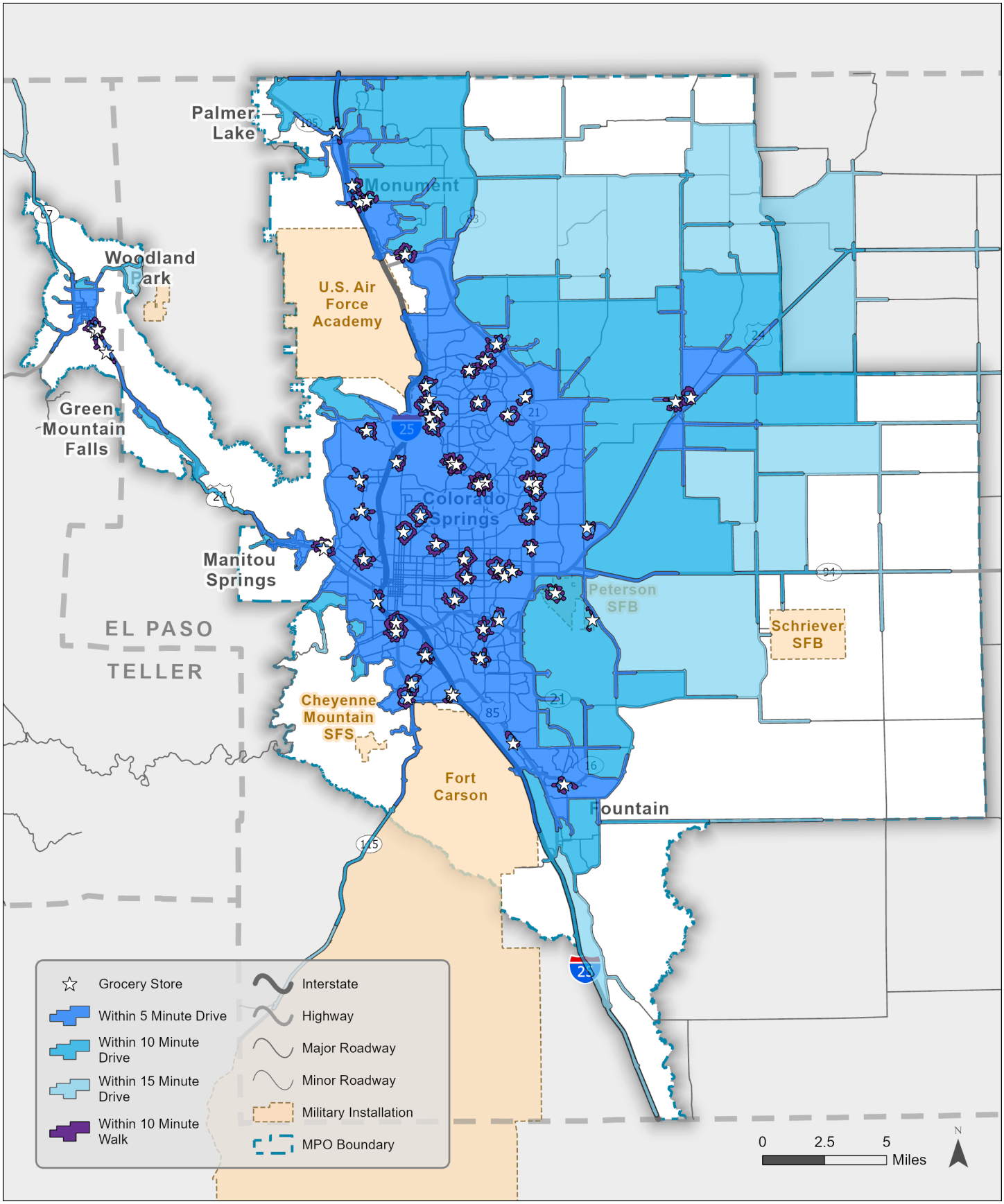


Figure 5-9: Access to Grocery Stores



requirements for new developments could include provisions for supplying active transportation infrastructure such as bicycle parking.

Two significant destinations not mentioned in the previous section are schools and parks, which are identified in Figure 5-10. Access to these by vehicle and transit are important but arguably access by active transportation network is even more important. For planning purposes, connectivity to these locations was considered in the project selection process. It should be noted that several funding streams, which will be defined in Chapter 7, that are dedicated to active transportation or other non-roadway projects.

This LRTP contains a number of active transportation projects that could be beneficial for public health. In addition, the Active Transportation Plan provides guidance for the region, particularly regarding recreational trails and priority trail corridors.

Aging Population

Colorado and the Pikes Peak Region are experiencing a dramatic increase in aging citizens. The over 65 population is expected to grow by more than 67,000 from 2020 to 2050. In 2050, people over the age of 65 are expected to constitute nearly 17 percent of the population. Chapter 6 provides more information about population growth in the region.

The implications of this growing population are yet to be seen, but will likely require well-coordinated long-term planning in health and transportation to adequately address the changing mobility and health needs of the population. This may include a greater need for transit, specialized transit, and walking/biking options.

Transportation Noise

Studies show that exposure to transportation noise such as an airport, railroad line, or downtown area can be detrimental to public health and the environment. Noise pollution levels have been linked to problems with communication, school performance, sleep, mental health, heart disease and hypertension, and hearing impairment as well as to negative impacts on wildlife.

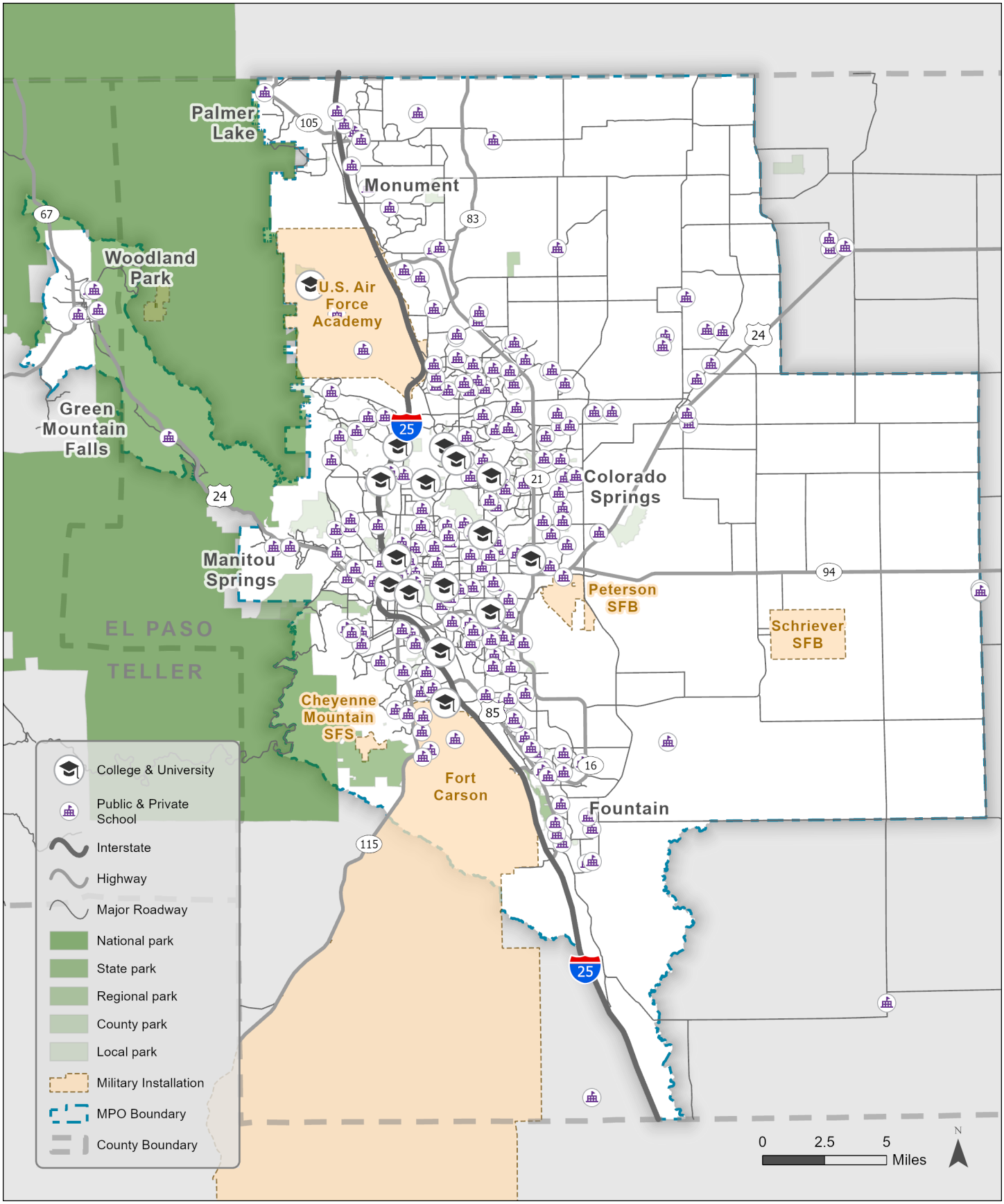
Low-noise road surfaces and rail tracks, sound walls, noise barriers, and traffic calming are all potential mitigation strategies.

EQUITY

As noted in Chapter1, PPACG is guided by federal Title VI and EJ mandates, and PPACG strives to not only meet these mandates, but to create an overall transparent, and inclusive planning process.

PPACG adopted the Title VI and EJ Plan in 2023 as well as the Limited English Proficiency (LEP) Plan. These were integrated into the planning and public participation processes for this LRTP to ensure that the LRTP considers the needs of minority populations so the benefits and burdens of transportation are

Figure 5-10: Schools and Parks



distributed fairly and to ensure that the public involvement process has no barriers that would prevent successfully engaging minority populations in regional decision-making.

The PPACG Title VI and EJ Plan uses the EPA's Environmental Justice Screening and Mapping Tool (EJScreen) (Version 2.11) website to identify environmental and demographic indicators within the region. Per federal requirement, an assessment of the projects included in this LRTP and their impacts with regard to equity is included in Appendix D.

EMERGING TECHNOLOGIES

Innovations and emerging technologies play an ever-increasing role in all aspects of transportation. Alternative energy, autonomy, big data, machine learning, and artificial intelligence (AI) can help to tackle traffic congestion, optimize planning, and reduce the environmental impacts caused by transportation. These advances will change the way we approach transportation and planning.

Many of the emerging technologies that were discussed in the PPACG 2045 LRTP still hold true for the 2050 LRTP. Targets such as electric vehicle (EV) adoption and driverless technology are ramping up slower than previously anticipated. Existing technology continues to be improved upon. Technology in transportation is leading to changes in demand, new opportunities, new infrastructure, and changes to urban form and the way streets are managed and operated. It is also bringing new challenges such as cost, infrastructure upgrades, and access to emerging technologies. PPACG prioritizes and funds regional transportation projects and does not propose or build them, so in this region the initiative will have to come from member cities and counties. Some of PPACG's member jurisdictions are already taking advantage of the opportunities presented by new technologies.

Emerging Technology Concepts

TRANSPORTATION ELECTRIFICATION

The State of Colorado has set ambitious goals to increase adoption of EVs, including increasing adoption of EVs in the light-duty sector to approximately 940,000 vehicles by 2030.

Although EVs are a small percentage of the overall automotive picture in Colorado, the numbers are growing steadily, according to the Colorado Energy Office. Colorado is among the top three states for EV and plug-in hybrid electric vehicle (PHEV) adoption. As EV technology becomes more reliable and EVs offer drivers more amenities and a longer driving range, it is anticipated that the market for them will grow. In 2022, PPACG published a Transportation Electrification Infrastructure Study to provide support and resources for local jurisdictions and other entities should they choose to pursue grants or other funding related to EVs and EV charging.

Significant infrastructure investments will be needed if EVs are to be adopted for widespread use. Electric grid readiness and charging station infrastructure and maintenance must be carefully considered. Cities, transportation agencies, and EV companies must work together to make sure that there is a smooth introduction to EV adoption. In addition, transportation projects must take into consideration EV-specific impacts such as safety, vehicle weight, and queuing demand due to long charge times.

ESCOOTERS AND EBIKES

Escooters and ebikes are also gaining popularity in Colorado and can be challenging to incorporate into the transportation network. Their speeds may cause incompatibilities with nonmotorized travel modes on trails and sidewalks, but they can pose safety challenges alongside vehicles. This should be studied further at the local level to determine impacts to individual areas.

CONNECTED AND AUTONOMOUS VEHICLES

Of all the technological changes on the horizon, connected vehicles and autonomous vehicles may have the largest impact on transportation. Although they have some features in common and are frequently confused, connected and autonomous vehicles are not the same.

Connected vehicles (CVs) change how drivers interact with each other and the transportation system. As transportation systems become more interconnected, vehicle-to-vehicle and vehicle-to-infrastructure communication will play an increasingly significant role. CVs focus on providing timely and accurate information to travelers and offer driver support capabilities, rather than self-driving capabilities. These networks will enable vehicles to share information about traffic conditions, road hazards, and other data in real-time, improving safety, efficiency, and overall traffic flow which can improve safety and mobility.

Autonomous vehicles (AVs), also known as self-driving cars, use a combination of sensors, cameras, light detection and ranging (LiDAR), radar, and AI algorithms to navigate the roads safely without human intervention. Though most autonomous vehicles will be connected, their immediate self-driving capabilities will not rely on being connected. Autonomous microtransit, small shuttles that specialize in circulating through high traffic areas and making first and last mile connections, and autonomous trucking are also potential future uses of autonomous vehicle technology. Although these are not in use currently in the Pikes Peak Region, they should be mentioned as a possibility through the lifespan of this LRTP. As technology develops, it is important to study and consider how CVs and AVs could impact safety, accessibility, congestion, and travel behavior.

MOBILITY AS A SERVICE

Mobility as a Service (MaaS) refers to the integration of transportation elements such as routing and payment to provide a streamlined user experience. MaaS services

arrange the most suitable transportation means to meet user's needs, which could include public transportation, taxi/ride hailing, car rental, ride shares, or bike shares.

THE INTERNET OF THINGS

The Internet of Things (IoT) is an idea that suggests that you can connect all objects and people to networks. In addition to self-driving technology, there are some other applications in which the IoT affect daily driving. Some of these impacts include efficient and secure transport in urban areas in ticketing, safety, and telematics systems. For example, radio-frequency identification and smart sensors can help manage tolls and aid traffic officers with ticketing. Vehicles equipped with collision prevention systems could also control the vehicle's settings to avoid an accident or monitor the physiological condition of a driver. Telematics can monitor vehicles and equipment by using GPS technology and on-board diagnostics to collect data about the vehicle's current location and can help plan routes.

BLOCKCHAIN TECHNOLOGY

Blockchain technology has the potential to streamline aspects of the transportation industry such as ticketing and payments to supply chain management. Blockchain creates a permanent record of all transactions, providing a tamper-proof record of every step in the logistics process. This technology allows for the authenticity of goods, tracking the origin of products, and ensuring compliance with regulations and standards so that transportation systems can become more secure, transparent, and efficient.

PASSENGER RAIL

Emerging technology could enable railroads to utilize the substantial amounts of data being collected to reduce the impact of human error and on railroad operations, improving safety and efficiency for passengers.

HYPERLOOP

The hyperloop is a hypothetical form of high-speed transit that proposes to use sealed, low-pressure tubes to minimize air resistance and reach speeds of up to seven hundred miles per hour. The technology and infrastructure are costly, and no operating hyperloops currently exist. However, there are plans in place to construct a hyperloop test track in Pueblo. The test track will be built at the decommissioned U.S. Army chemical depot about 20 miles east of Pueblo Colorado, called the PuebloPlex.

REGIONAL FORECAST

CHAPTER 6

REGIONAL FORECAST

SUMMARY

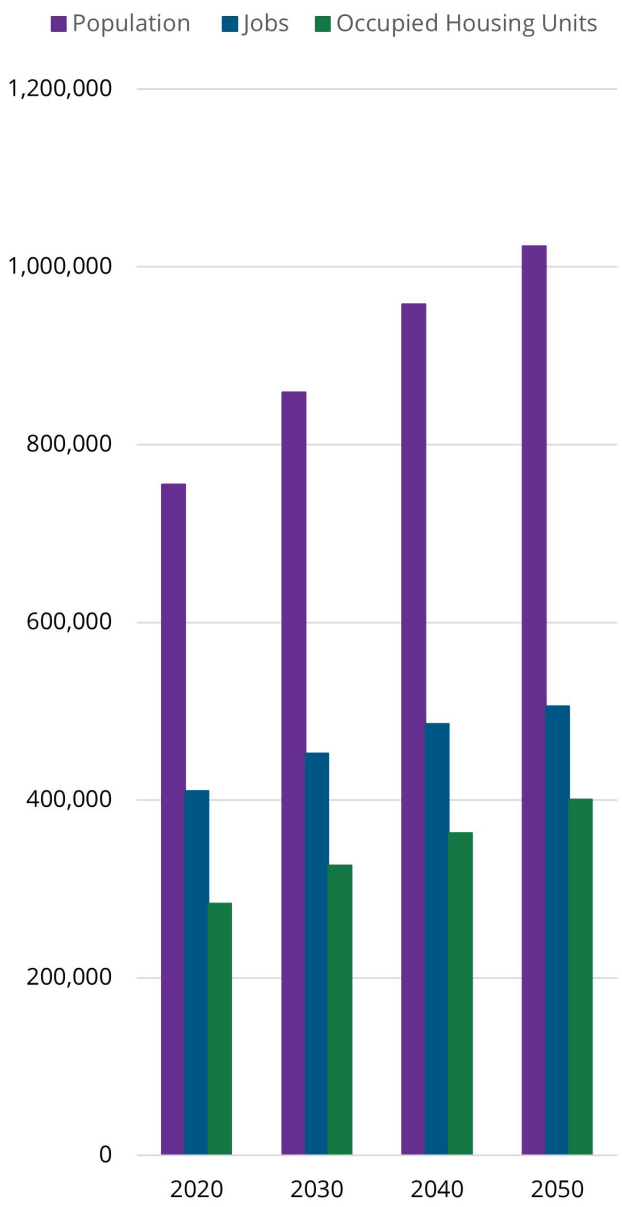
Population growth, economic expansion, and urbanization drive increasing demand for transportation facilities and services. This chapter explores the forecasted changes in land use and socioeconomic factors that are expected to impact the Pikes Peak Region's transportation system.

PPACG uses forecasts from the Colorado State Demography Office, which is housed within the Department of Local Affairs (DOLA), to help develop the area's socioeconomic trends. By 2050, the region is projected to be home to over 1,023,000 people, growing by about 268,000 from the 2020 Census population of 755,105. The State Demographer also forecasts regional employment to grow by more than 95,000 new jobs over that same time period, while the number of occupied housing units is expected to increase from 283,470 in 2020 to 400,923 in 2050. Figure 6-1 shows the population, job, and housing unit growth anticipated from 2020-2050.

More people and jobs mean more trips to and from work, school, shopping, appointments, and recreation, increasing demand on the transportation network.

Proactive planning can help mitigate these potential transportation challenges. PPACG

Figure 6-1: Population, Job, and Housing Unit Growth 2020-2050



collaborates with local government and military planners in the region to develop comprehensive assessments of residential and commercial growth, projecting where the forecasted population will live and work so that transportation investments can better accommodate and even help mitigate the impacts of these changes.

METHODOLOGY

Overview

PPACG worked with its local government members, particularly planners from Colorado Springs and El Paso County, to evaluate the strengths and weaknesses of the land use forecast developed for the previous 2045 LRTP, which was adopted in 2020. A primary concern was the forecast's overemphasis on population growth in two major planned developments, which understated the potential impact of urban infill initiatives and affordable housing projects in other areas of the MPO. In agreement with these concerns, PPACG committed to adopting a new approach for the land use forecast in the 2050 LRTP.

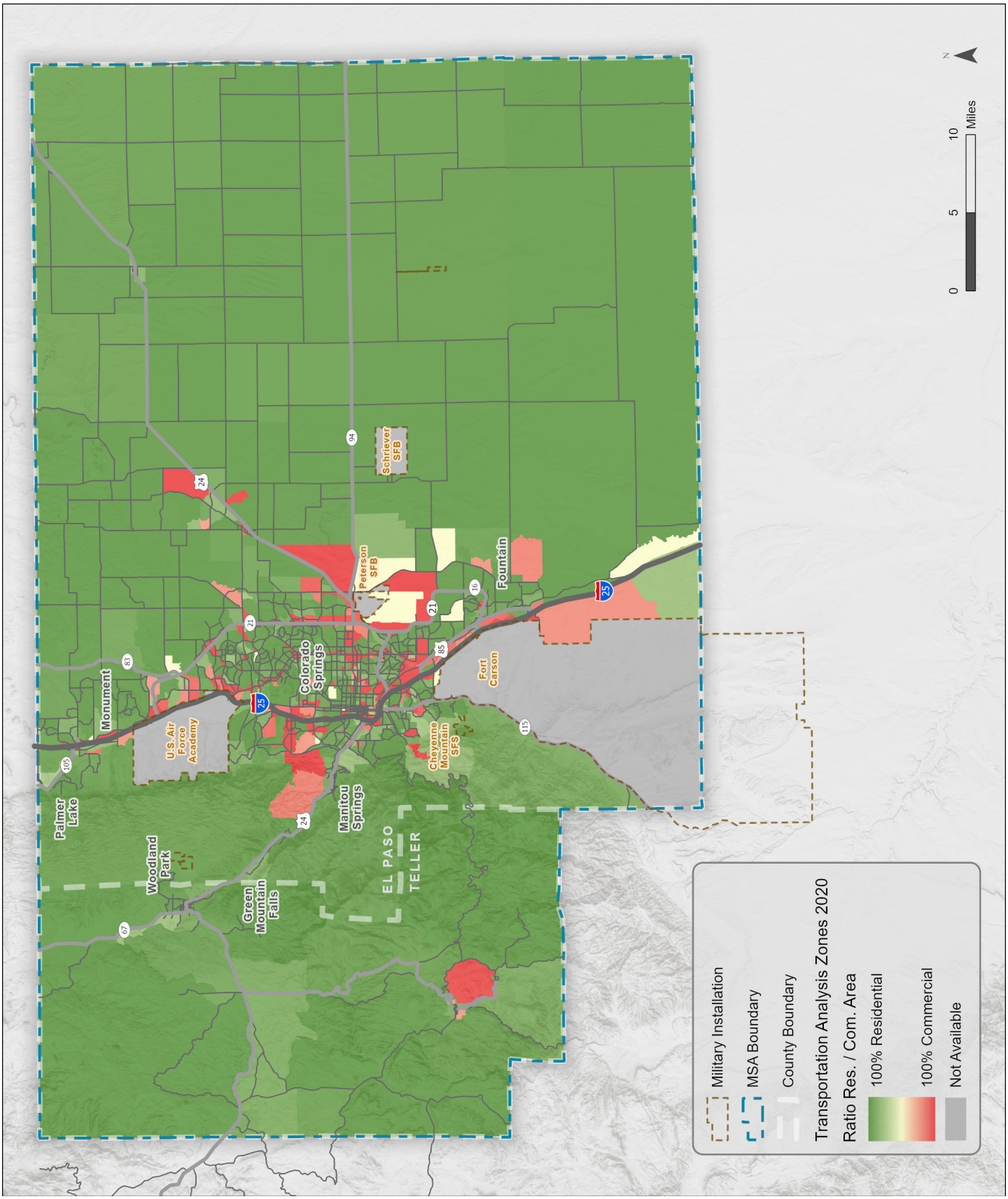
For the 2050 LRTP model, PPACG moved away from independent forecasting using tools and adopted a more collaborative approach, creating a regional "best-fit" model from all the development plans of its member governments. The process allowed known developments and entitlements to be accounted for in the regional land use forecast alongside the use of historical data like accessory dwelling unit (ADU) permits and residential build rates. When growth scenarios from multiple jurisdictions ended up exceeding the population control totals, roundtable discussions were held to evaluate where growth might be tempered based on historical trends, current and expected development incentives, and utilities requirements.

Transportation Analysis Zones

To project future needs and confirm that the 2050 LRTP transportation projects will be consistent with anticipated growth patterns, PPACG models population and employment in small areas that share similar land use and access to the transportation network, known as TAZs. There are 934 TAZs in the Colorado Springs MSA, which includes all of El Paso and Teller counties.

Each TAZ is typically derived from a Census Block Group, edited to be coincident with parcel boundaries, and then split or merged as needed to best represent shared network access and homogeneous residential, commercial, or military areas. This effort ensures that zones can effectively represent neighboring subdivisions that utilize different streets as points of entry and exit and also ensures that primarily residential areas can be accurately associated with Census data such as demographics and household income, while commercial zones can accurately represent the number and type of jobs in the area. Figure 6-2 shows the TAZs symbolized according to the relative percentage of residential and commercial area in each zone.

Figure 6-2: 2020 Ratio Residential/Commercial Areas by TAZ



TAZs are critical for travel demand modeling, as they are used to determine the origins and destinations of trips along the regional transportation network. PPACG used data from the 2020 Census, State Demography Office, Bureau of Labor and Statistics, County Assessor offices, private firms like DataAxle, and more to establish a base year model of population and employment data for each TAZ. This base year model serves to both help calibrate the travel demand model by verifying the trips to and from each zone align with the population and employment factors expected to produce such trips, and also establish the baseline upon which the land use and socioeconomic forecast is built.

Control Totals

A critical initial step for generating a land use and socioeconomic forecast is to determine the region's control totals, which serve as the limits for the total number of people and jobs throughout the planning region in each forecast year. Control totals are important for the planning process to ensure that no single local input or regional entity can influence the projected growth beyond what is expected by an independent measure. PPACG consulted with the Colorado State Demography Office to establish the 2050 LRTP control totals using their impartial and meticulously developed population and employment estimates for all of El Paso and Teller counties in each forecast year.

With the total population and employment limits set, the core component of the planning process begins – determining where the population and employment changes are going to occur, at what rate, and how those changes might impact expected socioeconomic factors such as age distribution, household size, incomes, and ultimately, travel patterns.

Growth and Development Plans

PPACG met with local government planners to review the base year model and collaborate on developing a comprehensive "best-fit" growth and development forecast that faithfully represented each jurisdiction's own plans while adhering to the state's control totals for the region as a whole.

Development plans, entitlements, and zoning information was compiled from each jurisdiction, and then evaluated against natural and regulatory constraints to determine an approximate developable area for each applicable TAZ. Areas within a TAZ that are not developable or relatively difficult to develop, due to natural hazards such as flood zones or steep slopes, were accounted for in addition to ownership constraints such as military influence areas and land owned by the State Land Board, National Park Service, U.S. Forest Service, and others. The result is an effective appraisal of actual developable space within each TAZ that coincides with a jurisdiction's development plans. Combined with zoning information and housing density estimates from the development plan, the number and type of housing or

commercial facilities can be forecasted for the TAZ.

Annual housing growth was limited to not exceed typical build rates in the area. Peak build rates are around 195 single family housing units per year, as seen in fast growing developments like the Wolf Ranch neighborhood in northeast Colorado Springs. Single family build rates are typically much lower in more rural TAZs. High density housing, such as townhome communities and commercial apartment developments, can result in an average build rate of several hundred units a year when multiple projects are planned in the same TAZ.

After development was allocated, the forecasted population was determined using an average persons per household estimate derived from Census data. For example, if a development in a TAZ is expected to have 300 homes when fully built out, and the Census estimates 2.5 persons per household for that area, then 750 people are expected to be added to the TAZ when the development project is complete. If that project is expected to take 5 years to complete, then the population growth rate is 150 people per year.

The socioeconomic data in the land use forecast, such as household income and age distribution, was developed using extrapolated patterns from Census and State Demographer data applied to the new population in each TAZ. School enrollment was modeled from existing admission rates and applied to the new schools constructed as part of residential development plans.

Employment was primarily forecasted using floor area ratios and space utilization rates from the U.S. Energy Information Administration. As an example of the process, consider a large commercial development that entails 250 acres in the plan. PPACG staff, working with the applicable jurisdiction, determines only 200 acres are actually developable based on restraints of slope and easements. If half the project is expected to be office space, and the other half retail, a typical floor area ratio for those commercial types is 0.28, and multiplied by 200 buildable acres, results in an estimated 1.2 million square feet of floor space expected for each business type. An average utilization rate for office buildings is 600 square feet per employee, and 920 square feet per employee for retail buildings. In this example, the commercial project would produce an estimated 2,000 office jobs and 1,300 retail jobs.

Construction jobs were tied to development, using estimates from the National Association of Homebuilders and the Bureau of Labor Statistics to forecast the labor employment required to support forecasted residential and commercial build rates.

Planning Intervals

PPACG held multiple meetings with local planners and organizations to review the development projects included in the forecast, and then reach consensus on growth distributions and build rates for each 10-year planning interval.

The population growth rates from development were evaluated in conjunction with a naturally declining population, as determined by the State Demographer's assessment of declining birth rates in the region, to establish a land use forecast that did not exceed control totals. If multiple projects were expected to produce population growth that exceeded the control total for a given forecast year, then build rates were adjusted as necessary. TCommercial development was likewise evaluated collaboratively by PPACG and local planners for each 10-year planning interval to produce employment distributions and job growth rates that aligned with expected development patterns out to 2050.

PPACG took current growth patterns and development plans into account and assigned growth based on these inputs. It is important to note that the growth that was assigned is a snapshot in time, based on plans and information that were available at the time of the land use modeling.

After development was allocated, PPACG met with local planners and organizations to ensure support for the growth distributions. As previously noted, PPACG's growth forecast expects 505,629 jobs and 1,023,259 people by 2050, while not exceeding the control totals. The population control totals are compared with the PPACG projected totals in Table 6-1.

The socioeconomic data is developed in 10-year intervals to align with banding of projects to be modeled. These 10-year bands are needed so that projects can be built when sufficient funding is available.

Table 6-1: Population Control Totals vs. PPACG Population Totals

YEAR	CONTROL POP.	PPACG POP.
2020	757,111	755,105
2030	859,427	858,962
2040	958,942	958,237
2050	1,023,342	1,023,259

Control Population Source: "State and Region," "Total Population Lookup" State Demography Office, Colorado Department of Local Affairs.

The proposed projects, along with the land use forecasts, are modeled for travel time and the State of Colorado required GHG performance.

While the LRTP is a 25-year plan beginning in 2025, PPACG uses 2020 as a base year for the 2050 LRTP. The 2020 Census data was the last collection of data by the U.S. Census Bureau. By using the 2020 data as a base year, it provides a more realistic look at the socioeconomic data to better forecast the future 10-year bands.

LAND USE FORECAST

Population

The forecasted population change by TAZ from 2020 through 2050 and the forecasted total 2050 population by TAZ were mapped and are depicted in Figures 6-3 and 6-4.

The areas of greatest growth occur mainly east of Powers Boulevard (CO21) in Colorado Springs and around the City of Fountain. Development in North and

Figure 6-3: 2020-2050 Population Changes by TAZ

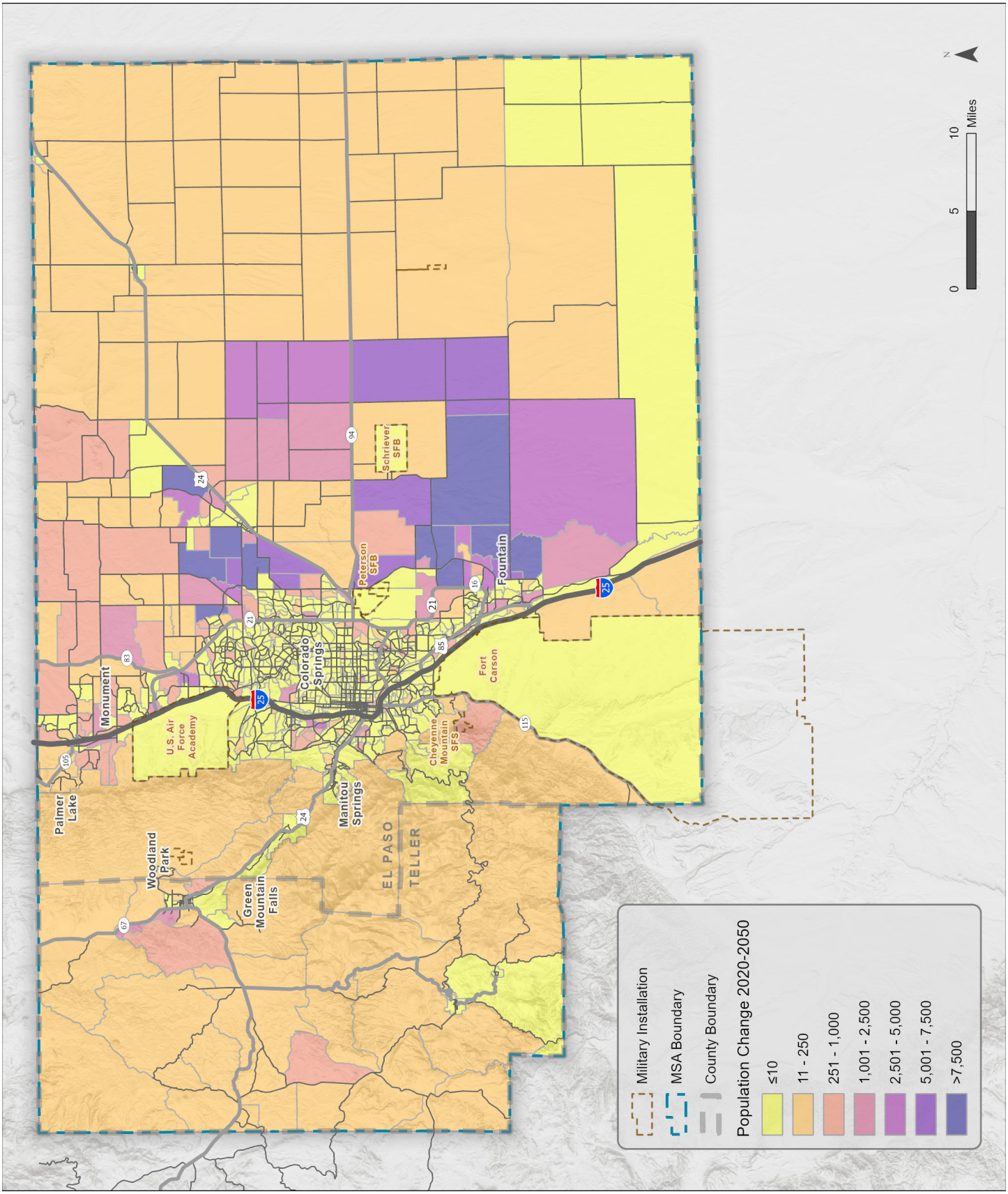
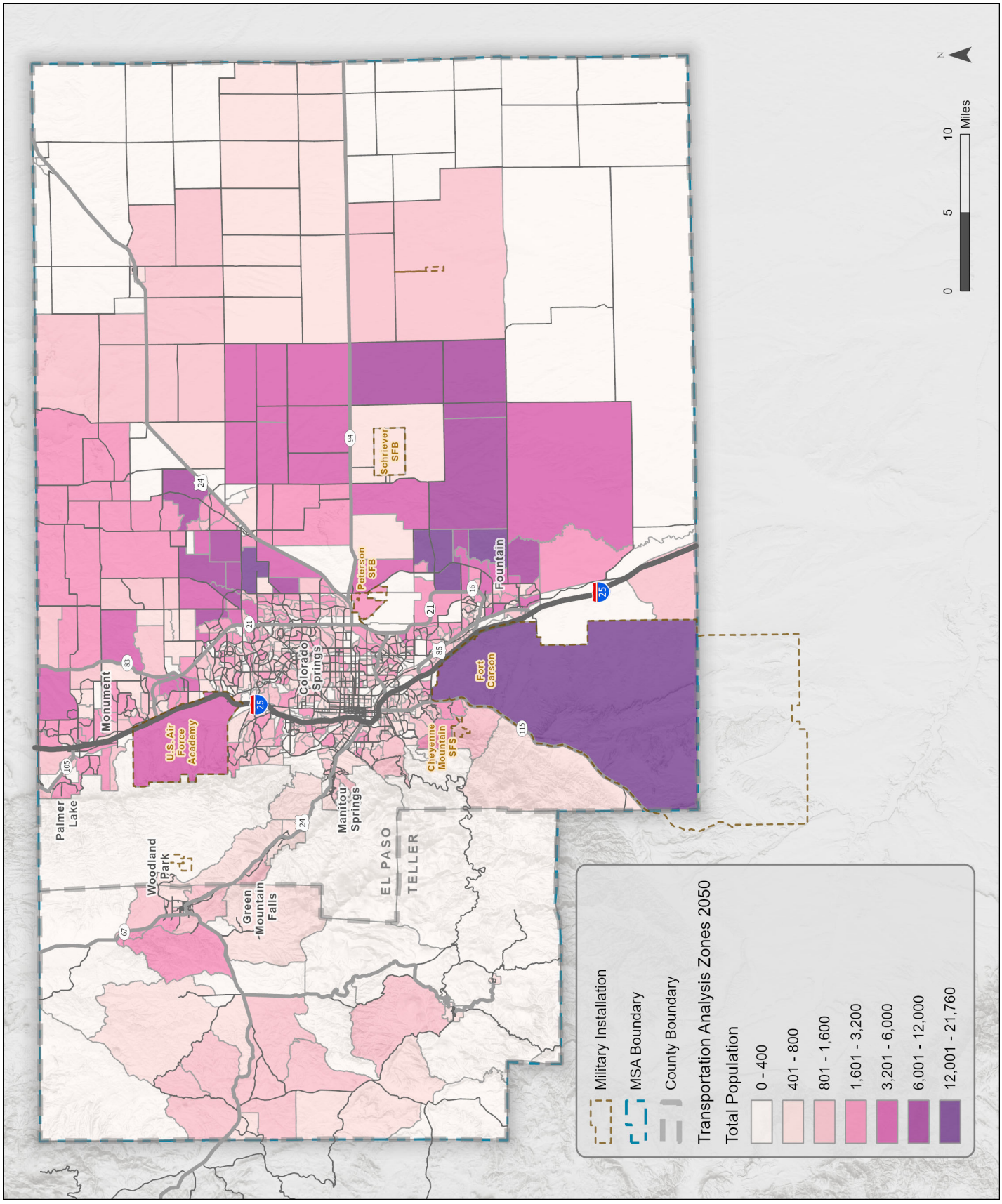


Figure 6-4: 2050 Total Population by TAZ



South Banning Lewis Ranch is expected to see rapid growth. This map also depicts an increase in development around Peterson SFB.

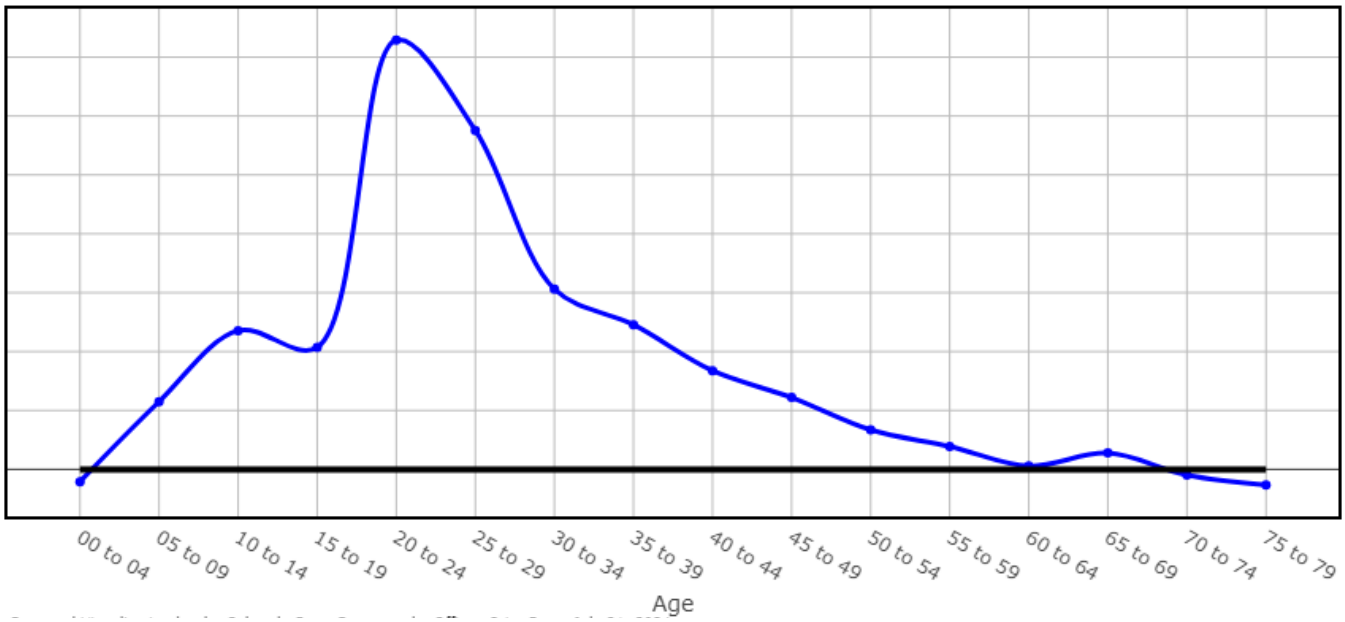
It should be noted that areas of high and low growth do not always correlate with overall high or low population. Rather, Figure 6-4 shows the forecasted total population for each zone in 2050. The TAZs representing Fort Carson, North Banning Lewis Ranch, and the area south of Peterson SFB and east of Fountain are among the most populated.

AGE BRACKETS

Figure 6-5 depicts the net migration by age to Colorado Springs from 2010 through 2020 as developed by the State Demography Office. Growth patterns slowed significantly during the covid-19 pandemic. Though the rates of population and job growth have been declining compared to those prior to 2020, there is still an influx of people and jobs coming into the area. The largest group of people in-migrating to the Pikes Peak Region are those in the 25-35 age bracket. The region attracts this age group likely because of the large military presence, universities, and early career opportunities in the region. It is also an attractive area for young families.

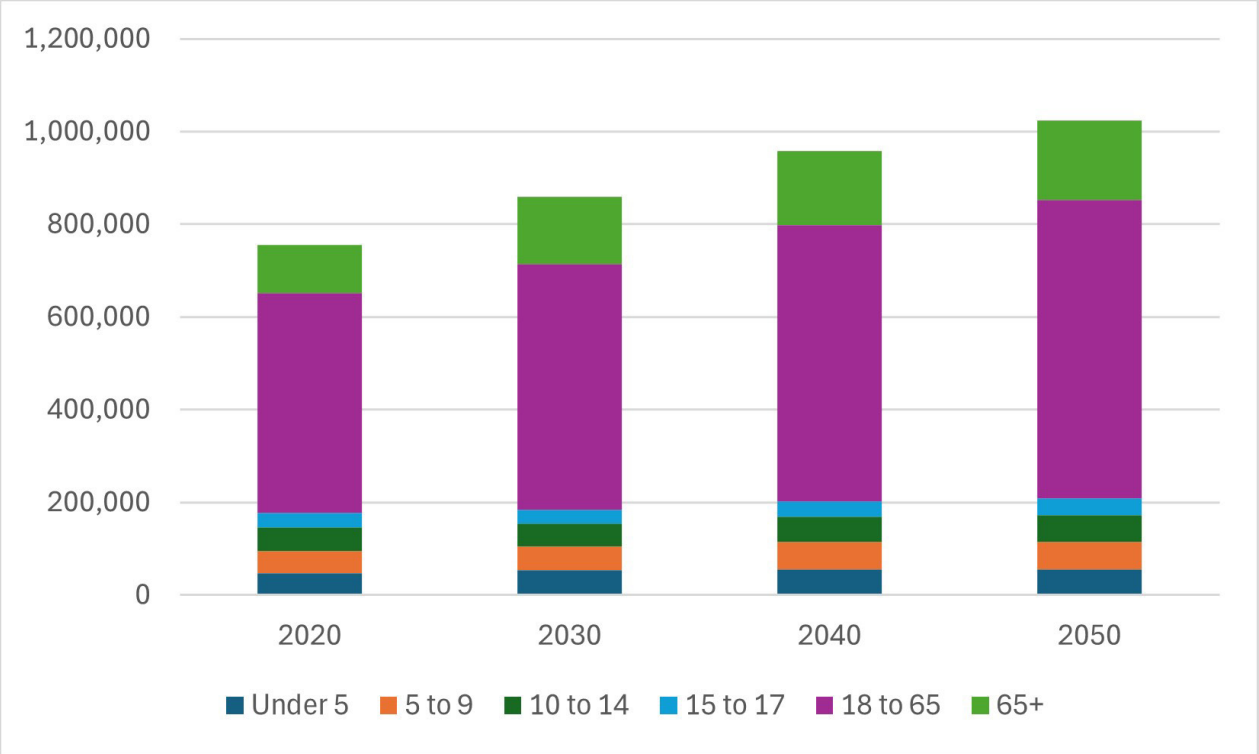
There was a large boom of in-migration in the early 1990s of people in the 25-35 age range. Much of that population is now aging in place. For this reason, the largest share of growth in the region presently is among those age 65 and above. Figure 6-6 depicts the population by age bracket for 2020, 2030, 2040, and 2050.

Figure 6-5: Net Migration by Age 2010-2020



Source: Colorado State Demography Office

Figure 6-6: Age Brackets 2020-2050



Residential Units/Housing

The majority of TAZs throughout the region have seen major residential housing growth in the past decade. Single-family housing will continue to make up the majority of housing units in the Pikes Peak Region. There were 200,632 single-family dwellings in 2020, and by 2050 there are expected to be 275,795 single-family homes.

Meanwhile there were 93,785 multi-family units in the MSA in 2021. By 2050 there are expected to be 139,371 multi-family units. In this case, multi-family refers to the number of units and includes condos, duplexes, apartments, senior living facilities, and ADUs. College dorms, jails, juvenile facilities, and barracks are not included in the multi-family numbers.

Table 6-1: Population Control Totals vs. PPACG Population Totals

YEAR	SINGLE FAMILY UNITS	MULTI-FAMILY UNITS
2020	200,632	93,785
2030	222,545	113,387
2040	247,990	126,852
2050	275,795	139,371

Figure 6-7 depicts new home construction between 2011 and 2023. The largest areas of recent growth in new residential units is anticipated in northeastern Colorado Springs, west of downtown Colorado Springs along US24, and northeast of

Figure 6-7: New Home Construction 2011-2023

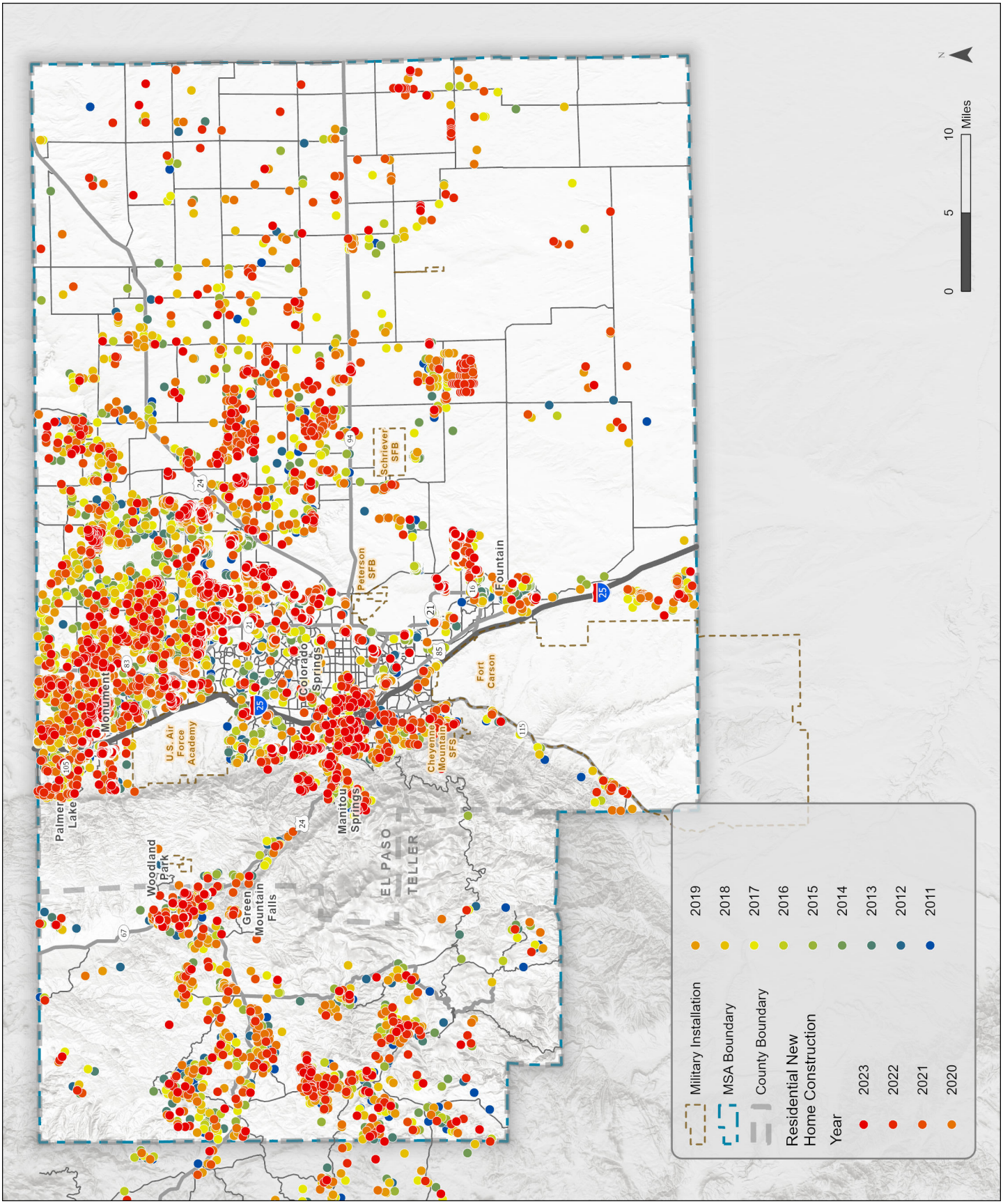
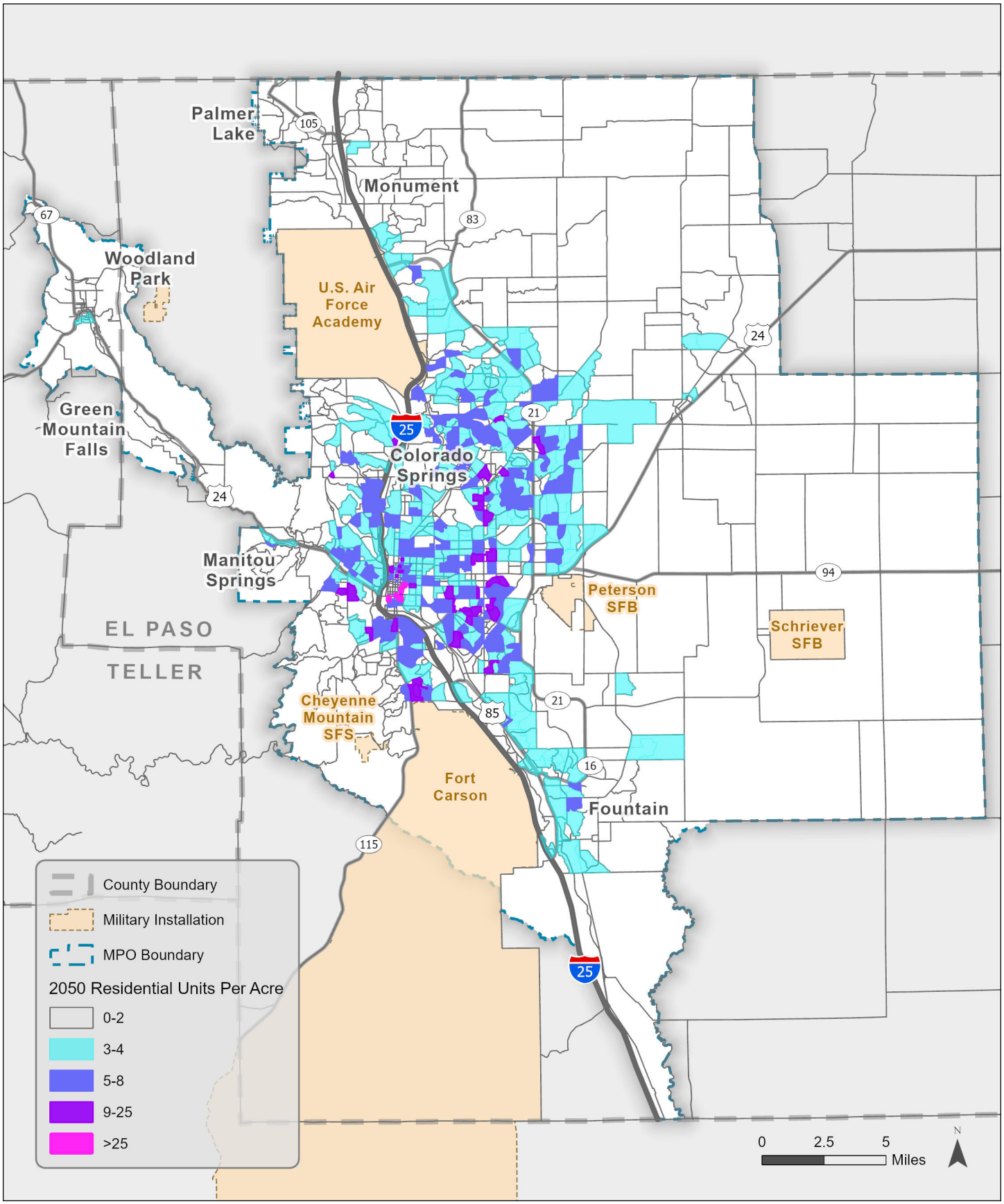


Figure 6-8: Residential Units per Acre 2050



Fountain. This map includes single-family and multi-family units such as duplexes or townhomes that are purchased by the resident. It does not include apartments, senior living centers, or other commercially managed rental units.

Figure 6-8 depicts the number of residential units per acre projected for 2050. Housing density varies across the Pikes Peak Region. For the 2050 estimates, housing density is highest in a few TAZs located in downtown Colorado Springs. Other high density areas are mostly located along the Academy Boulevard corridor in Colorado Springs, where there is a high percentage of multi-family units. Housing density decreases farther from urban centers. In 2050 it is estimated that the average density will be about 2.72 housing units per acre in the MSA, up from 2.23 in 2020.

Housing Affordability

Housing affordability in the Pikes Peak Region is low due to high housing prices, rising interest rates, and a housing deficit. As of February 2024, the average price of a home in Colorado Springs had increased 119% from 2015 to $449,123, while mortgage and interest rates have increased 82.6% over the same period. In the fourth quarter of 2023, the average apartment rent was $1,456 per month.

There are several initiatives in the region aimed at improving housing affordability, access, and production. The region should strive to support land use decisions and projects that provide a variety of housing types and sizes, serving a range of demographic sectors, and meet the needs of residents and families through various life stages and income levels. For example, working families may need larger apartments near schools, employment, and transit, or low income seniors may want housing with age-in-place features and outdoor access.

Jobs

It is anticipated that, like the population, jobs will grow in the region. Figure 6-9 depicts the anticipated job changes by TAZ from 2020 through 2050. The largest increase in jobs is anticipated along the Powers Boulevard (CO21) corridor, with a significant amount of the employment along this corridor being labor to support new development taking place.

Figure 6-11 depicts the number of jobs by TAZ anticipated in 2050. The TAZs with the largest number of jobs are projected to be the military installations along with a new employment center called Peak Innovation Park. This is located near the Amazon distribution center just south of the Colorado Springs Municipal Airport. This employment center could encompass over 30,000 jobs at full build-out.

The SCRP, as discussed in Chapter 4, is also projected to be a catalyst for commercial development and job creation. It is expected to create around 5,000 jobs.

Areas with high residential growth are also projected to foster large commercial centers. An example of this is Polaris Pointe

Figure 6-9: 2020-2050 Total Job Changes by TAZ

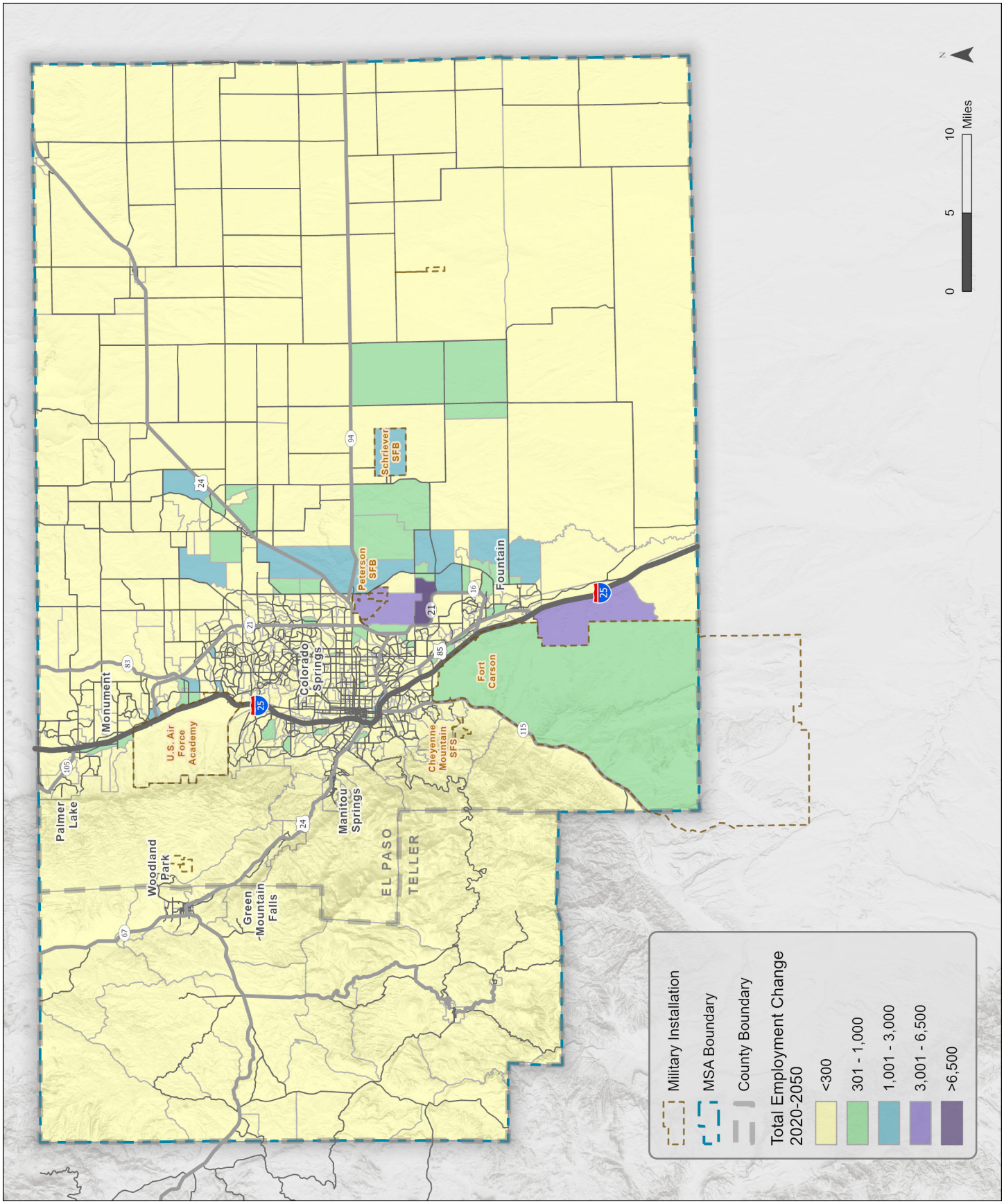


Figure 6-10: 2050 Total Jobs by TAZ

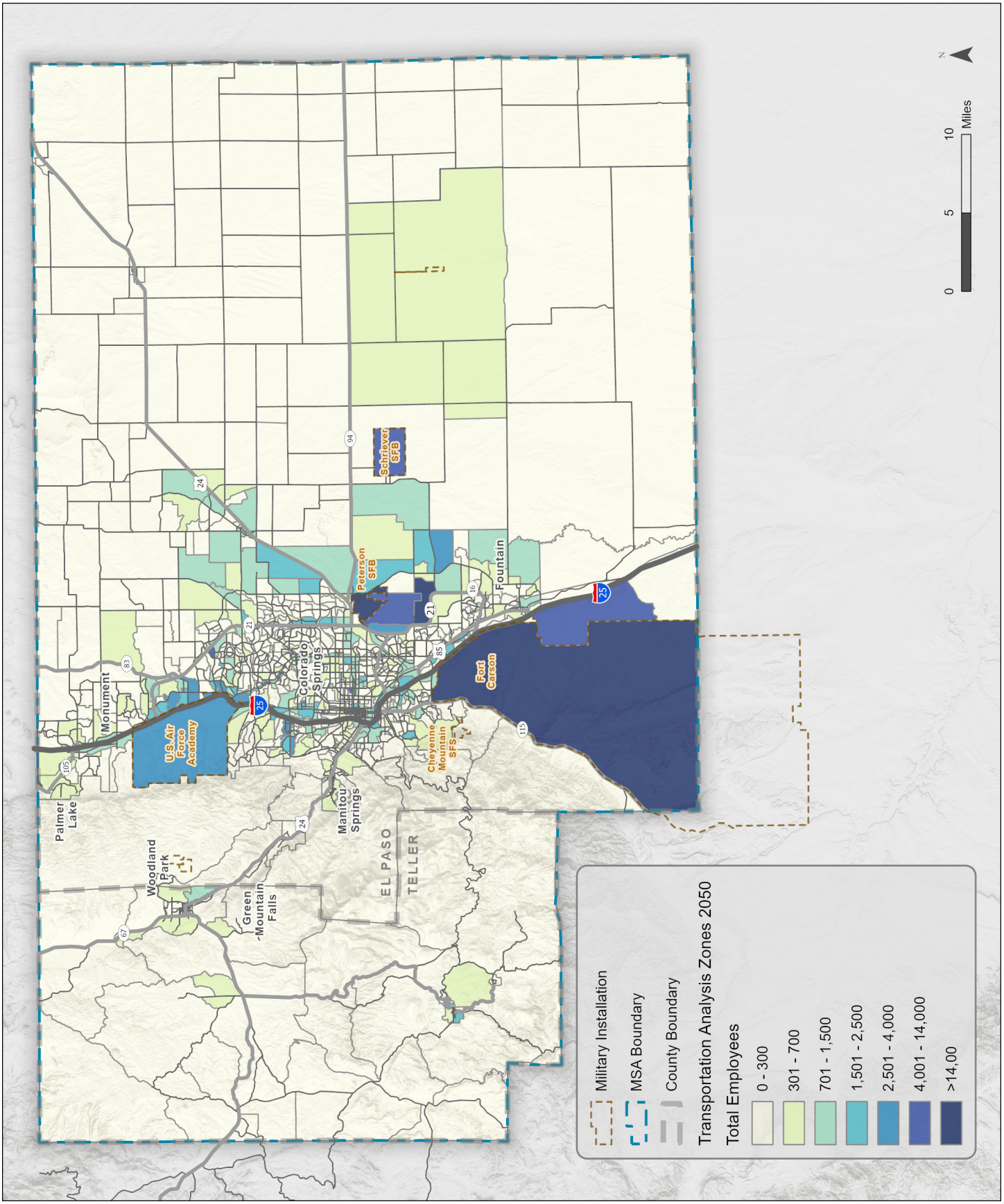


Figure 6-11: Employment by Sector



in northern Colorado Springs, near I25 and North Gate Boulevard, where a new music venue, restaurants, and shopping are expected to create a hub of commercial activity in the area.

Figure 6-11 shows employment by sector for 2020, 2030, 2040, and 2050. The overall number of jobs is anticipated to increase 23%, from around 412,000 in 2020 to more than 507,000 in 2050. In 2020, service employees accounted for about 37% of jobs, followed by office (29%), labor (13%), retail (11%), and active duty military (9%).

Transportation and Land Use

Land use and transportation planning are deeply interconnected. Low density development often limits the feasibility of walking, bicycling, transit, and rideshare options. For instance, residential developments located far from activity centers and designed with curvilinear street patterns make it challenging, both physically and financially, to provide effective transit services.

By contrast, developments that integrate transit considerations during planning and construction encourage transit use and improve operational efficiency. Higher density compatible land use supports efficient transit systems and reduces automobile dependency. Similarly, well-connected, high density developments make walking and bicycling more practical and appealing.

Compact, higher density development also shortens trip distances, reducing vehicle miles traveled. This benefits the community by easing traffic congestion, lowering air pollution, and optimizing infrastructure use.

Although land use policies are determined by individual jurisdictions and fall outside

PPACG's authority, collaborative planning can align regional growth with long term transportation goals. This approach promotes sustainable, equitable access to transportation while supporting the region's overall development vision.

The land use forecast in the 2050 plan reflects many of the recent zoning and development changes that are being adopted throughout the region, but especially important for GHG reduction are the advancements made within the region's central urban area:

- The City of Colorado Springs recently approved a Unified Development Code (UDC) that encourages, and in some cases even requires, higher density and mixed use development.
- The adopted UDC reduces parking requirements for a number of development types and has several provisions to encourage walkability in new projects.
- A downtown "Form-Based Zone" specifically targets high density development with full parking exemption throughout, and a half a square mile of downtown now has no maximum building height.
- These land use changes are supported by a new downtown circulator, improved bike lanes and roadway lane diets, a robust e-scooter and bike share program, and multiple pedestrian safety improvement projects.
- The Norwood Development Group's portion of the Banning Lewis Ranch property encompasses over 18,000 acres. Norwood spent 2.5 years to work through a framework plan for the property from 2019 through 2022. These strategies compliment the region's goal of responsible land use and transportation planning.
    - The framework plan anticipates over 77,000 dwelling units and over 22 million square feet of non-residential development creating 69,000 jobs at build out. Three higher density core areas for mixed use development will be linked by Banning Lewis Parkway with a parallel multimodal trail/future transit corridor to create transportation alternatives for future residents.
    - Immediate development is being planned and under construction for locations adjacent to existing city areas. This allows the use of existing infrastructure and limits remote housing areas. Each new community will have multiple housing types of varying density to diversify housing offerings and prices.
    - A trail and open space plan seeks to place homes within a 5 minute walk to a trailhead/access point. This improves the quality of life of residents and allows trail options to schools, jobs and community hubs.

Figure 6-12: Infill Redevelopment at Chapel Hills Mall



Source: https://milehighcre.com/sears-building-to-become-luxury-apartment-complex/

Figure 6-13: Printers Hill Mixed Use Urban Development Near Downtown



Source: https://www.sasaki.com/projects/printers-hill-master-plan/

The Pikes Peak region has made significant progress in adopting land use and development strategies that enhance transportation options for all. The 2050 LRTP shows a marked increase in infill and urban development in its land use forecast compared to the 2045 plan, complementing the transportation changes being implemented by member governments. In addition, the 2050 LRTP includes a diverse mix of multimodal and transit projects which could reduce vehicle dependency. Figures 12, 13, and 14 provide renderings of planned or under construction projects in the Pikes Peak Region.

Figure 6-14: New 27 Story Mixed Use Project Submitted for Downtown



Source: https://one-vela.com/

FINANCIAL PLAN

CHAPTER 7

FINANCIAL PLAN

OVERVIEW

CFR 450.324 (11) outlines the elements required to develop a transportation financial plan. The IIJA requires a financial plan that includes revenues and costs necessary to operate and maintain the roads and associated systems (signals, signage, snow removal, etc.) These costs enable an MPO like PPACG to estimate future transportation conditions and resources to make the fullest use of existing infrastructure. The FAST Act also requires the financial plan to include recommendations on the development of new financing strategies.

Federal regulations require that when the MPO develops an LRTP for a region, it does so demonstrating fiscal constraint. Fiscal constraint means that the plan doesn't promise to the public more projects than could be built with the funding that could be reasonably expected to be available to the region within the time period of the plan. In other words, an MPO can only put projects in the plan that the MPO has a reasonable expectation that it could afford during the life of the plan.

This financial plan estimates the income from existing local, regional, state, and federal sources that can be reasonably expected over the life of the plan. These estimates should be adjusted to account for growth on the revenue side, as well as inflation on the expenditure side.

The financial plan was developed in 10-year bands so that the region can have better information on developing when projects could be built for the purposes of travel demand modeling. Realistically, projects can only be built when sufficient funding is available to build them.

This banding of projects by years into the future provides the region with valuable information on how the projects programmed within the band will perform when modeled for travel time and the State of Colorado required GHG performance.

Since the adoption of the Pikes Peak Region's 2045 LRTP in January 2020, there has been new state and federal legislation that impacts the reasonably expected transportation funds that will be available to the Pikes Peak Region during the life of the 2050 LRTP. Most notable is the reauthorization of the FAST Act in 2021 as the IIJA, the impact of which is noted below. Also in 2021, the Colorado State Legislature passed SB 21-260.

- IIJA: This legislation increased the available federal funding to the Pikes

Peak Region for roadways, transit, and bicycle and pedestrian projects. Additionally, the IIJA added a new CRP fund that the Pikes Peak Region can use to fund projects that reduce the region's carbon footprint.

- SB21-260: Sustainability of the Transportation System. This legislation created new dedicated funding sources (fees) and new state enterprises intended to preserve, improve, and expand existing transportation infrastructure; develop the modernized infrastructure needed to support the widespread adoption of EVs; and improve accessibility to, and use of, alternate modes of transportation.
  - Per-gallon fee on gasoline sales, which started at 2 cents in 2022 and will rise to 8 cents by 2028.
  - A 30-cent fee on rideshare trips in gas-powered vehicles, or a 15-cent fee on trips in EVs.
  - 27-cent fee on online retail deliveries.
  - Increase in EV registration fees, which is indexed to inflation.

This financial plan was developed in 2023 in coordination with the local jurisdictions and CDOT and with the assistance of a local economist. It was also submitted to the PPACG TAC, CAC, and Board of Directors for their review and approval at that time in order to facilitate the project submission and selection process.

It should be noted that while these projections were as complete as possible at the time, several factors impact how much funding is available to the region. These include changes to legislation, actual revenues collected, and actual inflation rates.

FEDERAL FUNDING ELIGIBILITY

As previously noted, not all roadways are eligible for federal funding. FHWA eligible roadways are:

- The NHS
- The Interstate System
- Non-NHS routes which include all other functionally classified routes (except rural minor collector and local access).

The NHS provides an interconnected system of principal arterials and other highways serving major population centers, international border crossings, ports, airports, public and intermodal transportation facilities, and other major travel destinations. The system meets national defense needs and serves interstate and interregional travel. Routes that must be included on the NHS are principal arterials, interstate highways, highways on the Strategic Highway Network, major Strategic Highway Network connectors, and congressional high-priority routes.

The IIJA of 2021 continued to allow up to 15% of Surface Transportation Block Group Program, previously known as Surface Transportation Program (STP), rural dollars to be used on rural minor collectors. All of the National Highway Performance Program funds are for use on all of the

NHS, including those under jurisdiction of local governments. These funds make up over half of the federal funds available to the CDOT.

REVENUE SOURCES

Transportation has traditionally been funded by user fees. Today, the major tax sources to fund transportation are state and federal fuel excise taxes, vehicle license fees, sales taxes, and transit fare box revenues. Although dedicated for use within the Pikes Peak Region, state and federal funding is programmed by CDOT with the exception of Surface Transportation Block Grant (STBG, sometimes called STP Metro), Transportation Alternatives Program (TAP), Carbon Reduction Program (CRP), Multimodal Transportation and Mitigation Options Fund (MMOF), and some FTA funding.

Federal Funding Sources

Federal funding is derived primarily from the federal gas tax, which is currently 18.4¢ per gallon for gas and 24.4¢ for diesel. FHWA funds may be used to reimburse project costs for general transportation planning, preliminary engineering, right-of-way acquisition, construction, and audit. FHWA funds may only be spent after authorization by CDOT through FHWA.

The following sections define federal funding programs.

FHWA FUNDING PROGRAMS

- National Highway Performance Program (NHPP)
- Highway Safety Improvement Program (HSIP)
- Surface Transportation Block Grant (STBG, formerly STP)
- Transportation Alternatives Program (TAP) (STBG set aside)
- Carbon Reduction Program (CRP)

Of these FHWA programs, PPACG administers the process for regional funding for the bottom three bullets.

FTA FUNDING PROGRAMS

- 5310: Enhanced Mobility of Seniors and Individuals with Disabilities
- 5307: Urbanized Area Formula Program
- 5309: Capital Investment Program
- 5339: Grants for Buses and Bus Facilities
- 5314: Technical Assistance and Workforce Development Program

Of these FTA programs, PPACG is the direct recipient of regional Section 5310 funding and disperses it through a submission process. MMT is the direct recipient for Section 5307 funding in the region.

DISCRETIONARY GRANT PROGRAMS

Discretionary grants are those that are awarded through a competitive process. The IIJA and IRA continue existing programs and create new programs used to fund transportation projects. According to the Government Accountability Office, the IIJA alone includes $110 billion in U.S. DOT discretionary grant programs. Some of these programs include the Bridge Investment Program; Promoting Resilient

Operations for Transformative, Efficient, and Cost-saving Transportation (PROTECT); Rebuilding American Infrastructure with Sustainability and Equity (RAISE); and Multimodal Project Discretionary Grant (MPDG). Eligible entities, largely local governments, apply for these funds depending on the project type.

State of Colorado Funding Sources

COLORADO HIGHWAY USERS TAX FUND

The primary source of revenue in Colorado is the Highway Users Tax Fund (HUTF): 22¢ per gallon for gasoline and 20.5¢ per gallon for diesel. This dedicated revenue source is supplemented by car registration fees and other miscellaneous revenue. There are two levels of funding to the HUTF: a basic and an additional funding level. All fuel taxes up to 7¢ per gallon are considered basic funding. A portion of the basic funding is allocated off the top to the Department of Public Safety for the State Patrol and Department of Revenue for the Ports of Entry. The State Treasury distributes the remaining basic funding in the following manner:

- 65% to CDOT
- 26% to Colorado counties
- 9% to Colorado cities

The amount over 7¢ per gallon is considered additional funding. Additional funding is distributed:

- 60% to CDOT
- 22% to Colorado counties
- 18% to Colorado cities

SUSTAINABILITY OF THE TRANSPORTATION SYSTEM (SB21-260)

Passed in 2021, SB21-260: Sustainability of the Transportation System, created new dedicated funding sources (fees) and new state enterprises intended to preserve, improve, and expand existing transportation infrastructure, develop the modernized infrastructure needed to support the widespread adoption of EVs, and improve accessibility to, and use of, alternate modes of transportation.

- Per-gallon fee on gasoline sales, which started at 2¢ in 2022 and will rise to 8¢ by 2028. The fee will remain at 8¢ until 2031, when the fee is indexed to National Highway Construction Cost Index (NHCCI) inflation.
- A 30¢ fee on rideshare trips in gas-powered vehicles, or 15¢ on trips in EVs. This fee will fluctuate based on inflation.
- 27¢ fee on online retail deliveries. The retail delivery fee may fluctuate annually, as it is indexed to inflation rates.
- $50 increase in EV registration fees, which is indexed to inflation.
- A phased-in fee for electric and hybrid vehicles to offset the loss of fuel taxes. This fee starts at $9 and grows to $90 by 2031 for EVs. The fee is $3 for hybrids and grows to $27.
- $2 per day fee on car-sharing services as well as adjusting an existing fee on car rentals to be indexed for inflation.
- Temporarily lowers vehicle registration fees in 2022 and 2023.

FUNDING ADVANCEMENTS FOR SURFACE TRANSPORTATION AND ECONOMIC RECOVERY (SB09-108)

In 2009, the enactment of SB09-108 created the Funding Advancements for Surface Transportation and Economic Recovery (FASTER) program. FASTER provides CDOT and local governments with a new funding source separate from the General Fund that is stable and predictable. The funds derive from modest increases to vehicle registration fees and other funding mechanisms and are dedicated to specific programs.

These funds are split into several categories for distribution:

- Statewide Bridge Enterprise
- High-Performance Transportation Enterprise to encourage innovative financing strategies
- A safety program
- Dedicated funds for transit

The FASTER Bridge Fund is used to repair or replace a specific list of poor-rated bridges on the state highway system. FASTER funds 80% of each project, with the local entity supplying the remaining 20%. FASTER transit funds are granted to local governments and transit agencies for projects such as new bus stops, maintenance facilities, or multimodal transportation centers. These funds cannot be used for operations.

Local Funding Sources

Local revenue comes from a variety of sources such as property and sales taxes for highway and transit projects. Other revenues include money from street-use permits, utility permits, and impact fees. There is also an allocation of state HUTF directly to each entity. Local jurisdictions may fund projects in a variety of ways, including through local funding only.

When utilizing federal and state grants for projects, local jurisdictions are generally requires to pay a certain percentage of the project, often called a local match. The loacal match percentage depends on the type of funding and other factors.

PIKES PEAK REGIONAL TRANSPORTATION AUTHORITY

In 2004, citizens of El Paso County, Colorado Springs, Manitou Springs, Ramah, and Green Mountain Falls voted to approve the Pikes Peak Rural Transportation Authority (now called Regional) (PPRTA) sales tax on goods sold within their respective jurisdictions. In 2012 and 2022, the capital portion of this tax was renewed for 10 years with 80% approval. In 2020, the citizens of Calhan joined PPRTA.

The PPRTA is a collaborative effort among six regional governments to improve and maintain roads and support public transit. The funds collected by the PPRTA are divided between capital projects (55%), maintenance projects (35%) and transit (10%). The capital portion has a 10-year sunset provision, while maintenance and transit portions are not subject to a sunset.

Capital projects are specified on the ballot for voter approval. Maintenance funds are distributed to each of the six member

governments based on the most recent decennial census. Transit funds shall only be used to implement Colorado Springs-sponsored transit activities.

PPRTA is governed by a Board of Directors and a Citizens Advisory Committee. The day-to-day work of PPRTA is performed by two full-time staff members and portions of time from several other staff members of PPACG, under an administrative services agreement between PPACG and PPRTA.

TRANSIT FUNDING FARE AND ADVERTISING REVENUES

Fare and advertising revenues are important funding sources for transit operations. In 2015, these revenues provided approximately 20% of MMT's operating funds.

Fare and advertising revenues are projected to grow at 3% per year. This revenue growth is based on historical information and with a moderate growth in ridership on the transit system. No fare increase is included in this assumption.

PPACG'S ROLE IN FUNDING

As the MPO, PPACG has a limited role within the regional transportation funding environment. On an annual basis, a portion of the federal STBG, TAP, and CRP funding as previously described is apportioned to the State of Colorado, which then allocates a portion to the PPACG region. In addition, the State of Colorado allocates a portion of the funding generated through SB21-260 as part of the Multimodal Transportation and Mitigation Options Fund (MMOF) program. These funds are allocated to the PPACG region via fundind distribution formulas that are adopted by the state Transportation Commission (TC).

PPACG then administers the process by which those funds are programmed to projects throughout the region. That is, PPACG holds a call for projects, projects are submitted by local governments and eligible entities, projects are scored and prioritized in coordination with the TAC, projects are vetted through the PPACG committees and public engagement, and finally the programming of funds is adopted by the Board of Directors prior to being finalized in the TIP.

The amount of funding in each program fluctuates based on revenue. However, as of fiscal year (FY) 2025, the Pikes Peak Region receives approximately $9 million in STBG, $900,000 in TAP, $1.2 million in CRP, and $1.4 million in MMOF on an annual basis.

It should be noted that each of these programs has specific eligibilities and all funds cannot be used for all project types. Per 23 U.S.C. 133, STBG is the most flexible funding type and is a general-purpose program that can fund planning studies, enhancement activities, road projects, maintenance, and non-operational transit projects. It is the the only funding distributed by PPACG that can be used for the majority of roadway projects, including bridge projects, roadway reconfiguration, widening, or construction of new roads. As

previously noted, only routes functionally classified as a urban collector, rural arterial, or higher are eligible for STBG funding.

Per 23 U.S.C. 213, TAP includes all projects and activities encompassing a variety of smaller-scale transportation projects such as pedestrian and bicycle facilities, recreational trails, routes to school, community improvements such as historic preservation and vegetation management, and environmental mitigation related to stormwater and habitat connectivity.

Per 23 U.S.C. 175, CRP includes projects designed to reduce transportation emissions, specifically carbon dioxide. Examples include traffic monitoring management, public transportation, nonmotorized transprotation, intelligent transportation systems, and transprotation electricitation.

The state MMOF program program seeks to fund multimodal transportation projects throughout the state. Eligible projects include capital and operating costs for fixed route and on-demand transit, transportation demand management programs, multimodal mobility projects enabled by new technology, multimodal transportation studies, bicycle or pedestrian projects, modeling tools, and GHG mitigation projects that reduce VMT or increase multimodal travel.

ASSUMPTIONS AND APPROACH TO FISCAL CONSTRAINT

Inflation and Year of Expenditure

The financial plan is developed by looking at fund sources over time and developing estimates of funding that can be "reasonably expected" for those fund estimates during the life of the plan. As stated above, it is appropriate to make certain assumptions for the revenue growth of certain funding types while also making considering adjustments to account for increased construction costs due to inflation (e.g., a million dollar project built today is going to more expensive when that same project is built 10 years from now, due to inflation).

The development of the 2050 LRTP involves several jurisdictions providing cost estimates for their proposed projects, and not all of them may approach inflation adjustments the same way. To provide consistency, this financial plan

NOTE: This financial plan's revenue calculations do not include the sale of gasoline. Federal gas sales are important to HUTF, but over the past several years it has been supplemented by other sources. Additionally, in the State of Colorado gas tax does not go to any of the MPOs, including PPACG, to program as a regional funding source. State gas tax goes to CDOT and the cities/towns and counties. Cities/towns and counties will see an impact to their transportation revenues over time, as the fleet becomes more fuel efficient and/or if it converts to EVs. It is also assumed that the State Legislature will continue to adjust registration fees to EVs over time, just as it did with SB21-260, to account for this lost transportation revenue.

will adjust revenue growth upward based on reasonably expected growth over the life of the plan. Additionally, funding will be adjusted to account for anticipated increased construction costs caused by inflation. This addresses the expected reduction in buying power of the revenues over time. Approaching the financial plan in this manner allows the jurisdictions to provide current-year estimates without the need to adjust each project for inflation and provides consistency among projects.

To develop this financial plan, PPACG staff conferred with CDOT in May 2023, and Dr. Tatiana Bailey, Executive Director of Data-Driven Economic Strategies (DDES) in July 2023.

Revenue Growth

To determine revenue growth, it was determined that it was best to take two approaches: one for federal funding that is determined by legislative action and another for local (PPRTA) and state (MMOF) funding as those distributions are based on sales tax and fees.

FEDERAL REVENUE

To calculate federal revenue, PPACG looked at the national apportionment for STBG Program funding, to include TAP and CRP, for the last four authorizations of the Federal Surface Transportation Act.

Table 7-1 shows the 2005 apportionment was $6.860 billion compared with the 2024 apportionment, the third year of IIJA, of $14.394 billion. Over that 20-year span, the federal apportionment will more than double. It is unlikely we will see a doubling of federal transportation funds by the year 2050, but these numbers justify a conservative growth assumption of 10% for every 5 years.

Given the Pikes Peak Region's base year amount of $59 million over years 2025-2029, Table 7-2 denotes the expected revenue growth of the federal funding available to the region.

It should be noted that the FY 2025-2029 funding represents only the funding specific to those years and does not include funding already allocated in the TIP that has rolled

Table 7-1: Federal Transportation Funding

NAME OF LEGISLATION	ACRONYM	FIRST YEAR	NATIONAL APPORTIONMENT (IN BILLIONS)
Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users	SAFETEA-LU	2005	$6.860
Making Action Possible in the 21st Century Act	MAP-21	2012	$7.105
Fixing America's Surface Transportation Act	FAST	2015	$10.302
Infrastructure Investment and Jobs Act	IIJA	2022	$13.385

Table 7-2: Transportation Revenue Growth for the Pikes Peak Region (in millions, rounded to the nearest thousand)

FUND TYPE	BASE AMOUNT (FIRST 5 YEARS) 2025-2029*	2030-2039	2040-2049	TOTAL
Federal**	$59.433	$137.290	$166.121	$632.844
State	$7.5	$16.051	$17.562	$41.112
Local (PPRTA - Capital)	$462	$988.734	$1,081.789	$2,532.523

** The FY25-29 funding does not include funding in the TIP that has been rolled over from previous years.*

*** This number does not include FTA transit dollars received by the region through MMT as the region's designated recipient. Federal fund amounts also do not include local match, only the federal funding available.*

over from previous years. When funding is allocated to a project but there is not contractual obligation to the funds, they rolls into the next fiscal year. This happens annually at the end of the fiscal year. When funding is committed to a contract, it is removed from the TIP.

In addition, these projections do not include FTA transit dollars received by the region through MMT as the region's designated recipient.

STATE AND LOCAL REVENUE

On the state and local side of the equation, funds are generated by fees per transaction, in the case of the state MMOF, or an excise tax generated by the amount of the sales, for the PPRTA revenue. The growth of these revenue sources is closely tied to the overall growth of the economy.

In close consultation with DDES, PPACG looked at Conference Board's Economic Forecast of the U.S. Economy as well as the Wells Fargo Economic Outlook focusing on 2017-2020 as a model for the annual average because that was a stable economic period between the Great Recession and covid-19. That period was about a 4.6% increase over 5 years and serves as an appropriate growth adjustment for each of the 10-year bands to project revenue.

Table 7-2 applies 4.6% adjustment to PPRTA and state funding within each 10-year band to get the projected revenue.

Inflation

The assumptions above adjusted the Pikes Peak Region's revenue growth, as a raw dollar amount, over the life of the plan; however, the buying power of those funds will diminish over time due to inflation. There is a federal requirement for PPACG to adjust the LRTP to account for the "year of expenditure" whereby revenues are adjusted downward, with the bigger adjustment happening further out in the future, to account for the buying power of

the funding relative to the project estimates that are held constant in today's dollars. As previously noted, if the project cost estimates are held constant in today's dollars, the future revenues need to be adjusted to account for inflation so that the region does not over-program, and in turn over-promise, the projects that can be funding with the "reasonably expected" revenues available to the region.

Looking at the official Federal Reserve Economic Data (FRED) yields the following annual inflation rates:

- 3.76% from 1960 to 2022
- 2.67% from 1983 to 2019, and
- 2.477% for the past 20 years, 2003-2022.
- 2.170% for the past 20 years prior to the pandemic, 2000 to 2019

The Federal Reserve has a target of limiting 2.0% inflation on a yearly basis. Even though the Fed has many tools at its disposal, inflation can, and has, risen faster than those tools can keep inflation in check. Note the 2.67% rate over the long term.

To be conservative PPACG has chosen to use a 2.5% inflation rate per year; this allows for unforeseen "shocks" to the economy such as a sudden and somewhat sustained spike in oil prices, for example.

Because this inflation gets compounded on a year over year basis, PPACG felt it appropriate to reduce the buying power annually by 2.5% as denoted in Table 7-3.

Local Funding Estimates

It is appropriate to look at the State HUTF for the jurisdictions within the MPO to ensure there is capacity to pay the required match for the state and federal funds outlined previously. Additionally, there is an expectation that the jurisdictions within the region will make the appropriate investments to keep the system in good repair.

The Colorado Treasurer's web site contains the HUTF allocations for each jurisdiction over the past five years, which are used to develop a baseline 5-year average. This is

Table 7-3: Pikes Peak Region Transportation Funding Adjusted for Inflation (in millions, rounded to the nearest thousand)

FUND TYPE	BASE AMOUNT (FIRST 5 YEARS) 2025-2029*	2030-2039	2040-2049	TOTAL
Federal**	$59.433	$120.706	$113.916	$294.055
State	$7.5	$13.741	$11.694	$32.936
Local (PPRTA - Capital)	$462	$846.469	$720.381	$2,028.849

** The FY25-29 funding does not include funding in the TIP that has been rolled over from previous years.*

*** This number does not include FTA transit dollars received by the region through MMT as the region's designated recipient. Federal fund amounts also do not include local match, only the federal funding available.*

shown in Table 7-4.

In addition to the HUTF received by the jurisdictions, several of those within the MPO are members of the PPRTA and have additional PPRTA dollars that are set aside for maintenance. These funds, adjusted for 4.6% growth and 10% compounded inflation, are shown in Table 7-5.

These local funds are used for matching the state and federal projects over the life of the LRTP, as well as providing maintenance and operations funding for the existing and future transportation system. In coordination with the TAC, PPACG estimated that more than $49 million would be anticipated to be utilized as local match in determining the fiscally constrained project list in Chapter 8.

Table 7-4: Local Jurisdictions HUTF Allocations (rounded to the nearest dollar)

INCOME	2022	2021	2020	2019	2018	5-YEAR AVERAGE
El Paso County	$13,860,860	$13,269,322	$12,320,915	$15,782,257	$12,697,648	$13,586,201
Teller County	$2,513,486	$2,208,027	$2,231,468	$2,890,356	$2,397,722	$2,448,212
Colorado Springs	$20,664,645	$19,148,238	$17,644,362	$22,771,360	$18,257,792	$19,697,279
Fountain	$817,594	$760,591	$708,033	$877,086	$709,136	$774,488
Green Mountain Falls	$28,975	$27,626	$26,150	$55,398	$14,409	$30,511
Manitou Springs	$158,077	$149,706	$140,467	$179,801	$149,660	$155,542
Monument	$309,542	$279,371	$247,991	$296,676	$230,679	$272,852
Palmer Lake	$103,546	$96,811	$89,853	$113,993	$95,163	$99,873
Woodland Park	$312,043	$229,695	$197,201	$342,585	$284,729	$273,251
					TOTAL	$37,338,209

Table 7-5: Adjusted HUTF and PPRTA Operations and Maintenance Funds

INCOME	BASE AMOUNT (FIRST 5 YEARS) 2025-2029	2030-2039	2040-2049	TOTAL
HUTF	$37	$63.978	$34.734	$98.712
PPRTA – O&M	$290	$501.457	$272.251	$773.708
Total O&M	$327	$565.435	$306.985	$872.42

O&M: operations and maintenance

Transit Funding

MMT receives direct funding from the FTA in addition to other sources. It also has revenue from its services. For this effort, MMT provided funding estimates for both capital and operations and maintenance. The following are funding sources identified by MMT:

- FTA 5339(a)
- FTA 5307
- FASTER
- City General Fund
- PPRTA
- PPRTA Capital
- Fare and Advertising Revenue
- Discretionary grants

In developing its funding estimates, MMT took into consideration discretionary grants as derived from those received by MMT between 2017 and 2023, with the exception of the CARES grant, which was due to the covid-19 pandemic.

MMT is eligible for federal and state funding through the TIP process and may apply for the capital funding previously listed in Table 7-3. In addition, MMT is eligible for PPRTA capital funding as identified.

The Regional Transit Plan in Appendix B includes financial projections specific to transit that includes additional sources and more information.

State of Colorado Funding

CDOT

CDOT provided a list of anticipated funding to be dispersed to projects on state facilities in the PPACG MPO, as detailed in Table 7-6. CDOT funding does not impact the funding available to jurisdictions.

PASSENGER RAIL

In addition, the FRPR District is pursuing a variety of funding sources. The SDP will determine infrastructure and operating requirements for the service. Preliminary analyses show that capital costs for implementing a six daily round-trip service is anticipated to cost between $3 and $3.5 billion. However, only a portion of the District falls within the Pikes Peak Region. Per the FRPR District website, “The District intends to leverage federal funding from the Bipartisan Infrastructure Law to advance planning, engineering, and construction activities. In addition, a new locally driven funding source will be needed

to make the service happen. Over the next few years, the District anticipates putting a measure on the ballot asking voters within the district to approve a new tax to fund the construction, operation, and maintenance of the system."

In October 2024, CDOT was awarded $66.4 million in grant funding from the Consolidated Rail Infrastructure and Safety Improvements (CRISI) Program with the state matching almost $28 million from the State's IIJA match fund to improve safety on the BNSF line north of Denver and helping to proactively prepare the state for fast, convenient, and safe passenger rail service. While this funding will not impact the Pikes Peak Region in the near future, additional discretionary grant funding may be sought by CDOT for additional FRPR projects.

Discretionary Grant Funding for Capital Projects

In addition to the funding already discussed, this plan takes into account additional federal and state discretionary grant awards. The IIJA and Inflation Reduction Act (IRA) have increased the amount of funding available through competitive processes hosted by U.S. DOT, the state, and other entities to support transportation infrastructure. The region

Table 7-6: CDOT Funding (in millions, rounded to the nearest thousand)

FUND TYPE	2025-2029*	2030-2039	2040-2049	TOTAL
Asset**	$79,000	$171,500	$188,000	$438,500
Maintenance	$71,800	$155,000	$172,000	$398,800
RPP	$20,200	$40,000	$40,000	$100,200
Bridge Enterprise	$50,050	$55,000	$60,000	$165,050
HSIP	$7,100	$14,000	$15,000	$36,100
FASTER Safety	$40,000	$80,000	$75,000	$195,000
Water Quality	$5,000	$10,000	$10,000	$25,000
Technology	$5,000	$10,000	$10,000	$25,000
Strategic Transit and Multimodal	$18,500	$37,000	$37,000	$92,500
Strategic***	$92,500	$185,500	$185,500	$463,500
Discrectionary Grants	$25,000	$50,000	$50,000	$125,000
Total	$414,150	$808,000	$842,500	$2,064,650

** The FY25-29 funding does not include funding in the TIP that has been rolled over from previous years.*
*** Asset funding may include surface treatment, wall, culvert, bridge, signal, and ADA funding.*
**** Strategic funding may inclyde SB 1, SB 267 or similar funds.*

RPP: Regional Priority Progam

has a robust history of obtaining funding through these competitive processes and is well-positioned to successfully pursue this funding in coming years. In late 2023, a workshop was held with PPACG and local jurisdictions to discuss potential discretionary grant funding anticipated throughout the region.

Within the state of Colorado, $301 million has been awarded in Transportation Investments Generating Economic Recovery (TIGER), Better Utilizing Investments to Leverage Development (BUILD), and RAISE grants between 2010 and 2023, including several major projects in the Pikes Peak Region. Other discretionary grants currently or recently received by the region include Safe Routes to School, FTA Low/No Emission Funding, Revitalizing Main Streets, CRISI) the Office of Local Defense Community Cooperation, Strengthening Mobility and Revolutionizing Transportation (SMART), HSIP, Community Development Block Grant (CDBG), Bridge On System and Bridge Off System grants.

In addition, several jurisdictions have ongoing or completed planning studies, Planning and Environment Linkages (PEL) studies, and other preconstruction work that prepares them for future grants. One example of this is an ongoing PEL for a potential extention of Powers Boulevard (CO21) to connect with I25 to the south of Colorado Springs. Although the alignmnet and preconstruction work for this project is in development, the potential exists for its development within the life of this LRTP. A more short-term example is a potential influx of safety funding as follow-on funding to an existing grant. Both the City of Colorado Springs and the larger PPACG region are developing Comprehensive Safety Action Plans through SS4A grants, which will create the opportunity for implementation grants to conduct projects identified in the plans.

Given this history and funding horizon, the region is estimating an additional $250 million over the 25-year lifespan of the LRTP. This includes $50 million for transit-specific projects. In addition, CDOT anticipates applying for discretionary grant funding to be utilized in the region.

Private Funding

PPACG anticipates that some projects in the region will be funded or partially funded by private entities. Although there is no projection or tracking of private funds by the MPO, some privately funded projects are included in the Implementation Plan, Chapter 8, because of their importance in the regional transportation network.

Operations and Maintenance

Federal regulations require that this financial plan contain system level estimates to make sure that the existing and future system are in a state of good repair per the guidance below.

(i) For purposes of transportation system operations and maintenance, the financial plan shall contain system-level estimates of costs and revenue sources that are reasonably expected to be available to

adequately operate and maintain the Federal-aid highways (as defined by 23 U.S.C. 101(a)(5)) and public transportation (as defined by title 49 U.S.C. Chapter 53).

FEDERAL-AID HIGHWAY.—The term "Federal-aid highway" means a public highway eligible for assistance under this chapter other than a highway functionally classified as a local road or rural minor collector.

The PPACG jurisdictions have indicated that their local HUTF funds as well as those PPRTA maintenance dollars will continue toward the upkeep and operation of the network as a priority. Tables 7-7 and 7-8 show additional information provided by the City of Colorado Springs.

Table 7-7: City of Colorado Springs Operations and Maintenance Funds

O&M BUDGET FOR COLORADO SPRINGS	BASE YEAR	BUDGET	2025	2026
HUTF	2023	$ 31,458,573	$ 33,374,400	$ 34,375,632
PPRTA Maintenance (estimate)	2023	$ 36,569,951	$ 38,797,061	$ 39,960,973
2C (Repaving tax initiative, sunsets in 2025)	2022	$ 65,435,820	$ 71,503,487	0
			$ 143,676,973	$ 74,338,631

Table 7-8: City of Colorado Springs-MMT Operations and Maintenance Funds

LTRP O&M BUDGET FOR COLORADO SPRINGS - MMT	BASE YEAR	BUDGET	2025	2026
Fixed Route	2023	$ 24,101,950	$ 25,569,759	$ 26,336,852
ADA Paratransit	2023	$ 5,930,460	$ 6,291,625	$ 6,480,374
Specialized Transportation	2023	$ 220,000	$ 233,398	$ 240,400
Metro Rides	2023	$ 225,500	$ 239,233	$ 246,410
Administrative	2023	$ 3,774,537	$ 4,004,406	$ 4,124,538
		$ 34,252,447	$ 36,338,421	$ 37,428,574

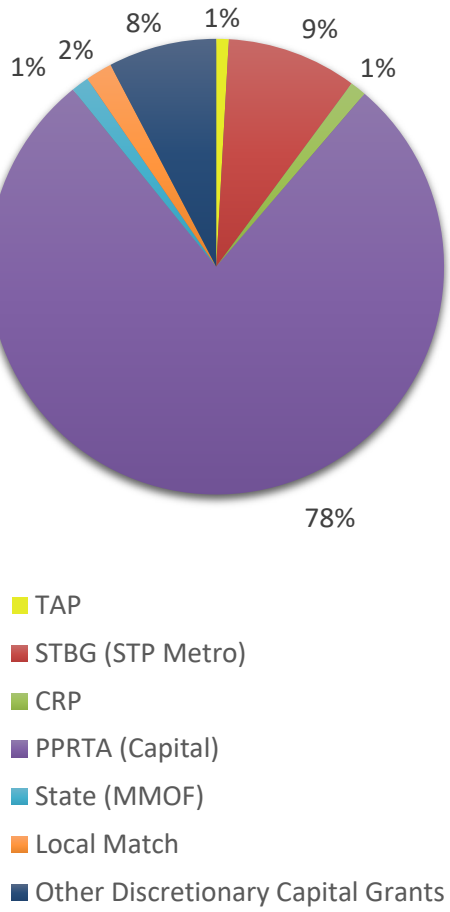
CONCLUSION

In total this financial plan projects approximately $2.6 billion in funding for capital projects between 2025 and 2050. This includes $240.8 million in STBG funding, $23 million in TAP, and $30.2 million in CRP, for a total of $294 million in federal funds appropriated to the region. In addition, the region is projected to received $32.9 million in MMOF from the state. The use of these federal and state funds is contingent upon local match, which was determined to be approximately $49 million. By comparison, PPACG projected approximately $200 million in other discretionary capital grants and $2 billion in PPRTA funding. Figure 7-1 shows the breakdown of this funding by percent. PPRTA funding accounts for approximately 78% of transportation funding.

These numbers do not include additional transit funding specific to MMT, including Section 5307 and other funds, which are detailed separately in the Regional Transit Study.

These numbers also do not include projected CDOT funding in the region, which totals $2 billion.

Figure 7-1: Regional Capital Funding by Source



IMPLEMENTATION PLAN

CHAPTER 8

IMPLEMENTATION PLAN

The Pikes Peak Region will invest in outcome-driven activities that specifically meet the goals and priorities established in the LRTP. The LRTP utilized qualitative and quantitative data gathered through citizen input, partner agency participation, technical analysis, project scoring, and local engineering expertise to identify the highest priority needs in which to direct funding.

IMPLEMENTATION STRATEGIES

To ensure the transportation system meets existing and future travel needs of the PPACG region, the LRTP includes implementation guidance for maintenance, operations, safety, motorized, nonmotorized, transit, and specialized transportation systems. It should be noted that PPACG does not have the authority to construct projects, maintain infrastructure, or develop policy for the jurisdictions and other transportation organizations in the region.

Roadway

Roadway and highway transportation projects tend to be the focus of investments and improvements for most MPOs nationwide. The projects in this LRTP funded by federal and state dollars are primarily maintenance, operations improvements, congestion management and safety, not construction of new roads or road widening. The construction of new roads within the region is primarily paid for through private funding as part of development agreements. In addition, the PPRTA provides local funds that may be utilized for any type of roadway or other transportation project, including road widening or development. These projects are proposed by the member governments of the PPRTA and are approved by taxpayers; thus, they are not subject to the approval of PPACG or the TC.

The roadway projects recommended for implementation are shown in the fiscally constrained project list, Table 8-1. This table includes all funding streams in order to provide transparency to the public and a more holistic approach to the regional transportation system.

However, the projected funding for the region is not anticipated to fulfill regional needs. Because of this, an unfunded project list is also included in this chapter to identify additional projects that may be considered in the future.

MAINTENANCE

Funding preventive maintenance is crucial to maintaining a transportation system, including maintaining or rehabilitating road surface, and replacing or repairing bridges, as well as maintaining bicycle and pedestrian facilities and public transportation. This is particularly important considering the projected needs resulting from projected regional population increases and economic growth over the life of the plan.

The following strategies are recommended.

- Continue resurfacing and reconstruction programs, with priority assigned to higher volume routes.
- When possible, standardize design and use of pavements that better absorb noise and drain water, such as the application of rubberized pavements.

MANAGEMENT AND OPERATIONS

System management refers to programs and infrastructure that are used to operate roadways. The goal is to make the transportation system as effective and efficient as possible. Some of the most common features include signal synchronization, traffic monitoring, variable message signs, incident management, public information programs, and marked detours.

Transportation System Management and Operations strategies will be considered and analyzed in connection with all investments in the plan either as stand-alone projects or as part of another transportation project.

- Implement intelligent transportation system (ITS) architecture to enhance incident management program effectiveness.
- Support real-time traveler-information systems, incident management, and information/communication/monitoring systems, including live video feed or internet access to traffic cameras.
- Install "pedestrian timing signals" that count down time remaining for pedestrians to cross at major pedestrian intersections. Install audible pedestrian signal equipment at key locations as warranted. Use alternative pedestrian detection and pre-emption systems as appropriate.
- Expand travel demand management programs to help reduce the number of peak-period single-occupant automobile trips.
- Better link transportation planning and operations, which may include data or resource sharing, cooperative planning, or operations activities.

Transit

While the fiscally constrained project list in this LRTP includes major transit projects and funding pools, the 2050 Regional Transit Plan (Appendix B) includes a detailed implementation plan and project list that provides detail beyond this LRTP. Implementing the full vision of the Regional Transit Plan would achieve many of the goals of MMT and its stakeholders through the following:

- Make transit a more competitive travel

option, especially along the seven identified enhanced transit corridors.
- Tailor new service options to demand by introducing innovative mobility zones that can build up transit demand in unproven or growing markets.
- Improve the transit service for existing riders by increasing frequency and extending service span on all local routes.
- Increase access to jobs and services by combining some existing routes into new crosstown routes.
- Serve areas of high existing and expected growth with new local and express transit routes.
- Sustainably support service expansion with capital investments in new buses, transit centers, a new maintenance facility, and establishing programs within MMT to partner with municipalities to improve the accessibility, comfort, and competitiveness of riding transit in the Pikes Peak Region.

Specialized Transportation

The following five recommended strategies were identified in the 2050 Specialized Transportation Plan, which is included in this plan at Appendix C. These strategies are not fiscally constrained.

- High-Priority Strategies
  - Incrementally develop a One-Call One-Click center.
  - Coordinate with providers to help secure funding for right-sized, shared, and well-maintained vehicles that meet ridership needs.
  - Commission mobility services under improved standards of service.
- Medium-Priority Strategies
  - Create a program to reimburse people for Uber, Lyft, and taxi rides in situations where there is a critical unmet transportation need based on the time and location of the trip.
  - Consolidate all resources and explore training options for drivers.

Implementation of these strategies would require coordination among various groups within the Pikes Peak Region and, in some cases, additional funding.

Active Transportation

As noted in Chapter 7, there are multiple funding sources specifically designated for active transportation (bicycle and pedestrian) projects. Specific projects are contained in the fiscally constrained project list, Table 8-1, as well as several additional projects that have active transportation elements. The Active Transportation Plan, adopted in 2024, contains a variety of additional recommendations for the future. Below is a summary list of recommendations from that plan:

- Adopt a Regional Corridors Network
- Identify and Pursue Big Lift Projects
- Reserve Right-of-Way (ROW) in Future Roadway Corridors
- ADA Transition Plans
- Complementary Programmatic Projects
- Develop Regional Design Guidelines
- Local Programmatic Gaps Identification
- Update Local Development Review

Processes
- Install Amenities at Strategic Locations in Regional Corridor Network
- Develop Amenities Brochure for External Investments
- Explore Operations and Maintenance Agreements
- Create a Terminology and Consistency Committee
- Adopt Common Language
- Adjust Local Ordinances And Policies
- Create Wayfinding Committee
- Create Shared Micromobility Committee
- Consolidate Regional Active Transportation Data

Freight

The Regional Freight Mobility Study's findings culminated with the identification of projects and corridors designed to improve freight mobility and the position of the region for future population growth and the demand for freight infrastructure.

The study includes the following implementation actions:

- Continue coordination with regional, state, and federal stakeholders around freight planning implementation activities, such as engagement with the Colorado Freight Advisory Committee and CDOT Freight Mobility and Safety Branch.
- Build on the region study through development of a freight plan and other specific studies as needed.
- Consider establishment of a PPACG freight working group.
- Explore funding programs available through the IIJA relevant to specific freight needs within the region, such as the National Highway Freight Program (NHFL), CRIS), and the Grade Crossing Elimination Program.

Passenger Rail

As previously noted, the FRPR District has been established to plan, design, finance, construct, operate, and maintain a new passenger rail system along the Front Range. Following the development of the SDP to guide implementation, recommendations may be included in future LRTPs as applicable.

Safety

Safety improvements are vital to the regional transportation system in order to reduce the number of crashes, serious injuries, and fatalities in the region. Many of the project in the fiscally constrained list are safety projects or have safety components. In addition, the following strategies are recommended.

- Continue effective programs to monitor and evaluate the highway system to make it possible to identify locations where improvements are needed. Conduct necessary studies and improve deficient locations.
- Support CDOT's efforts to implement the goals, strategies and project needs set forth in the SHSP.
- Continue to participate in Colorado's SHSP and provide direct input to its working groups.
- Conduct and support Safety Action

Plans within the region as well as their implementation.
- Work cooperatively with CDOT and local governments to obtain grant funding such as Safe Routes to Schools, SS4A, and other sources as possible.

FISCALLY CONSTRAINED PROJECT LIST

As described in Chapter 2, this LRTP includes a fiscally constrained project list developed to support the LRTP goals in coordination with the local jurisdictions and planning partners. Projects included in Table 8-1 are recommended for implementation from 2025 through 2050. In total, the fiscally constrained project list includes $5.5 billion in projects to be funded over the next 25 years.

These projects are planned to be funded through various sources, including private, local, PPRTA, state, and federal funds. Projects were submitted by the local jurisdictions. They were then evaluated, scored, and prioritized by members of our TAC. The projects represent the regional priorities that can be funded with sources that are reasonably expected to be available throughout the life of the plan. Chapter 7 discusses the expected revenues and costs in detail. Projects in the region must be consistent with this LRTP in order to be eligible for federal funds. However, inclusion in this plan does not guarantee funding or completion.

Projects that have funding programmed in the FY 2025-2029 TIP are considered as part of the fiscally constrained long-range plan revenues and estimates and are included in Table 8-1. However, the TIP is amended as needed. The listing in this document is as of November 6, 2024; the electronic TIP (eTIP) on the PPACG website should be consulted for the most up-to-date TIP information. It should be noted that for transparency the fiscally constrained list contains TIP projects that have funding that was programmed in previous years but has not yet been encumbered in a contract. In line with federal regulations, that funding rolls over on an annual basis. When the funding is committed to a contract, it will be taken out of the TIP. This occurs on an annual basis in line with the end of the state fiscal year.

The fiscally constrained project list (Table 8-1) contains 234 projects throughout the Pikes Peak Region. Although specific funding sources were not identified for each project, the funding sources for these projects are identified in the Financial Plan, Chapter 7. The fiscally constrained project list contains only those transit projects that would fall into those regional funding sources. Additional funding specific to transit or specialized transportation, such as FTA Section 5307 and 5310 funding, are identified in the Regional Transit Plan and Regional Specialized Transportation Plan, respectively, as are projects utilizing that funding.

Table 8-1: Fiscally Constrained Project List

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
CDOT	BUILD Grant/MAMSIP: I-25 and CO94 Safety Improvements	Military Access, Mobility and Safety Improvement Project (MAMSIP)/BUILD Grant - HSIP, Bridge Asset, water quality, and SB267 funds for years 2020, 2021 and 2022 for Charter Oak, South Academy, I25 Safety Improvements, and CO94 Improvements included in BUILD grant project. State match is in the project from multiple state funding pools.	$436,227
CDOT	CDOT 10 Year Plan Transit Projects 1068, 2556, 2763	New Regional Fixed-Route Transit Service in Teller County, Mountain Metropolitan Transit Fixed-Route Service Expansion – Stage 1, Academy Boulevard/Hancock Expressway Transfer Center.	$8,400,000
CDOT	CO105A Palmer Lake Rehabilitation	Pre-construction activities for long-term rehabilitation of CO105A near Palmer Park to address issues with pavement deterioration and groundwater	$100,000
CDOT	CO16 Safety & Operational Improvements	Scope to be determined.	$60,000,000
CDOT	CO21 & Grinnell Blvd Drainage Repairs	Programs funds for urgent/emergency safety repairs on a failing culvert on CO21.	$400,000
CDOT	CO21 (South Powers) Median Barrier	Median barrier on CO21/South Powers Blvd.	$197,000
CDOT	CO21 and Airport Rd Diverging Diamond Interchange	CO21 (Powers Blvd.) and Airport Road Interchange Design.	$6,520,140
CDOT	CO21 EA Corridor Management	Scope to be determined per the environmental assessment.	$2,250,000
CDOT	CO21 Grade Separated Interchange at Milton E. Proby Parkway	New interchange.	$92,900,000
CDOT	CO21A & B Safety & Operational Improvements	Scope to be determined.	$4,000,000
CDOT	CO21B/Dublin Interchange	New Interchange.	$68,000,000
CDOT	CO21B/Stetson Hills Interchange	New Interchange.	$71,000,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
CDOT	CO83 Passing Lane between CO105 and Palmer Divide Rd	CO83 passing lanes safety project MP 28 - MP 30.	$8,588,000
CDOT	CO83 Roundabout at Palmer Divide Rd	Scope to be determined	$10,100,000
CDOT	CO83A & County Line Rd Intersection Improvements	Replace existing temporary span wire signal and with full mast arm signal and upgrade existing signal equipment at the intersection of CO83A and County Line Rd. Work may potentially include minor intersection improvements to add acceleration and/or deceleration lanes.	$1,100,892
CDOT	CO94 Widening & Safety Improvements	Widening highway and shoulders for safety. 2+1 will maintain two through lanes with +1 providing improved auxiliary and turn lanes. Budget is insufficient for the entire project area.	$25,000,000
CDOT	I25 Filmore to Garden of the Gods	I25 Fillmore to Garden of the Gods bridge repairs and surface treatment.	$4,202,864
CDOT	I25 Cimarron-N Nevada Widening	Interstate widening and capacity improvement to accomodate an additional lane expected to be an HOV (possible TEL operation as well).	$137,500,000
CDOT	I25 EA Corridor Management	Scope to be determined.	$1,250,000
CDOT	I25 Exit 125 (Ray Nixon) Interchange Operations & Safety Improvements (S Powers connection, RR, industrial)	Non-capacity safety and operational imrpovements, including potenital auxiliary lanes, shoulder widening, and bridge replacement.	$30,900,000
CDOT	I25 Midway North	CDOT Region 2 rehabilitating I25 from MP 119 to MP 125.	$4,745,493
CDOT	I25 Safety & Operational Improvements	Scope to be determined.	$32,000,000
CDOT	I25 Safety and Operational Improvements Exit 135 South Academy to Exit 138 Circle/Lake	CDOT Project ID 2759; Safety and Operational Improvements on I25, Exit 135 South Academy to Exit 138 Circle/Lake.	$21,908,020

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
CDOT	I25: S Academy-Circle Safety and Operational Improvements	Non-capacity safety and operational improvements, including potenital auxiliary lanes, shoulder widening, water quality and drainage improvements, and bridge replacement.	$48,700,000
CDOT	MLOS Activities	Asset management (maintenance levels of service).	$398,800,000
CDOT	Mobility/Safety Improvements SH 21, MM 132-154	Design funding for mobility or safety improvements along the corridor within the limits of MM 132-154.	$400,000
CDOT	PP Area BTE Bridge Replacements	Pikes Peak area Statewide Bridge and Tunnel Enterprise (BTE or Enterprise).	$83,600,000
CDOT	PP Area Culverts, Walls, Other Assets	Scope to be determined.	$16,820,513
CDOT	PP Area Resurfacing & Bridge Rehab	Scope to be determined.	$565,269,231
CDOT	PP Area Safety Improvements	Scope to be determined.	$100,000,000
CDOT	PP Area Signal Replacement	Scope to be determined.	$18,137,830
CDOT	PP Area Transit, Multi-modal and Technology Improvements	Scope to be determined.	$124,100,000
CDOT	SH115 - Nelson Blvd to I25 Improvements Project	The project will consist of resurfacing of the existing roadway. The project limits are along CO115 from approximate MP 41.7 to MP 47.5. In addition to pavement resurfacing on the roadway, key elements of the work on this project include guardrail replacement and modification, ADA curb ramp rehabilitation and replacement, re-striping, safety improvements, and temporary erosion control.	$15,665,000
CDOT	US24G Falcon Hwy to West of Elbert Rd.	US24G Falcon Hwy to West of Elbert Rd. surface treatment.	$5,739,106
CDOT	US24 FalconJudge Orr Intersection Improvements	Improvements to the Intersection of US24 and Judge Orr Road in Falcon.	$8,759,000
CDOT	US24 East Widening Garret to Woodmen	Design funding for the widening from 2 lanes to 4 lanes of US 24 East from Garret to Woodmen Rd.	$2,000,000
CDOT	US24 West over Ridge Road	Non-capacity grade separation and access modification of US24A and Ridge Rd.	$35,900,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
CDOT	US24A BTE Bridge Replacements (incl. I-17-GD/E)	Scope to be determined.	$8,250,000
CDOT	US24A EA Corridor Management	Scope to be determined.	$1,200,000
CDOT	US24A Safety & Operational Improvements	Scope to be determined.	$15,500,000
CDOT	US24A/21st Interchange Phase 1	This project is for preconstruction work only to investigate a new interchange per the EA. Budget is insufficient for the entire project area, so this will constitute phase 1 including planning, design and ROW acquisition.	$77,000,000
CDOT	US24A/26th Intersection Improvements	Non-capacity intersection improvements.	$3,000,000
CDOT	US24A/31st Intersection Improvements	Non-capacity intersection improvements in accordance with the EA.	$22,500,000
CDOT	US24G Safety & Operational Imrpovements	Scope to be determined.	$6,800,000
CDOT	US24G Widening Garrett-Woodmen	Widening the highway from 2 to 4 lanes total, or additional auxiliary and other lanes to achieve lane balance and decreased delay. Includes intersection and access improvements, including a likely frontage or backage road parallel to US24A from Garrett to Falcon Hwy.	$95,565,844
CDOT	US24G Widening Woodmen-Stapleton	Widening the highway from 2 to 4-lanes total, or additional auxiliary and other lanes to achieve lane balance and decreased delay.	$71,000,000
CDOT	US24H Rehab & Reconstruction	Non-capacity safety, operations, shoudler improvements, and resurfacing of the highway.	$27,600,000
CDOT	US85 BTE Bridge Replacements (incl. J-18-M)	Scope to be determined.	$19,800,000
CDOT	US85 Safety & Operational Improvements	Scope to be determined.	$24,000,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
CDOT	Woodland Park Reliever Route Study	Study to investigate the possibility of a reliever route and potential alignments.	$500,000
Colorado Springs	30th St Corridor Improvements - Mesa Rd to Garden of the Gods Rd	Construct paved shoulders, drainage, and intersection improvements along 30th St from Mesa Rd to Garden of the Gods Rd.	$21,300,000
Colorado Springs	31st St/Camp Creek Roadway and Trail Improvements - Kiowa St to Fontanero St	Reconstruct roadway and bridges along the corridor to accommodate conversion of the concrete channel to a naturalistic rock lined channel. Includes new off-street trail and wayfinding signage for the corridor.	$30,000,000
Colorado Springs	31st Street and Fontanero Bridge Reconstruction	Study to investigate the possibility of a reliever route and potential alignments.	$5,749,525
Colorado Springs	8th Street Improvements - US24 to Fountain Creek	Construct roadway, pedestrian, and bicycle improvements and a bridge replacement at Fountain Creek.	$16,579,260
Colorado Springs	Academy Bridge over Platte	Replace Academy bridge over Platte Ave in configuration that better accomodates pedestrian movements along Academy and acces to transit, and conversion to quadrant road interchange.	$17,580,000
Colorado Springs	Austin Bluffs Pkwy/ Garden of the Gods Rd./Nevada Ave. Intersection Improvements and Bridge Replacement	This project will improve traffic operations, multimodal access and safety for the intersection of Austin Bluffs Parkway/Garden of the Gods Road and Nevada Avenue. The intersection will be designed based on the PPRTA3 Intersection Study. The project will also require a new bridge on Garden of the Gods Road over Monument Creek due to condition issues and to accommodate new configuration. The project includes extension of the multi-use trail along Austin Bluffs Parkway to the Pikes Peak Greenway and considers future enhnaced transit connections along Nevada Ave.	$15,000,000
Colorado Springs	Campus to Campus Corridor	Enhanced Transit Corridor including Mobility Hubs connecting Pikes Peak State College Transfer Centers (at South Academy Blvd and Interquest Pkwy) to USAFA Gateway Visitor Center. Routing generally following Academy Blvd, Voyager Pkwy, and Northgate Blvd as determined by further analysis.	$8,000,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
Colorado Springs	Cascade Ave - Mark Dabling Connection (construction)	Extend Cascade Ave to the north to connect to Mark Dabling Blvd with two new bridges.	$52,581,350
Colorado Springs	Cascade Ave - Mark Dabling Blvd Connection (design)	Extend Cascade Ave to the north to connect to Mark Dabling Blvd with two new bridges.	$3,500,000
Colorado Springs	Circle/Platte Intersection Enhancements	Design and construct intersection enhancements at the Platte Ave/Circle Dr intersection to address intersection delay and safety.	$12,300,000
Colorado Springs	City of Colorado Springs Safety Signal Rebuilds	Rebuild of 6 existing span wire signals to mast arm signals. There rebuilds will include upgrades to improve safety at the intersections. Upgrades would vary per location but would generally include backplates, protected left turn signal phasing, pedestrian crossings, upgrade ramps to PROWAG standards, directional push buttons, countdown heads, and intersection lighting.	$2,100,000
Colorado Springs	Colorado Ave. Roadway Improvements	Reconstruct Colorado Ave to improve safety including arterial street traffic calming and enhanced pedestrian crossings Increase on-street parking, widen sidewalks, and enhance bike/ped wayfinding throughout the corridor.	$16,600,000
Colorado Springs	Colorado Avenue Improvements - Limit St to I25	From 8th St to Walnut St, reconstruct the area between the property line and the curb for parking and sidewalk modifications. Add pedestrian mid-block crossings, median landscaping, and bike/ped wayfinding throughout the corridor.	$6,000,000
Colorado Springs	Colorado Springs Bridge Fund	To provide program funds for bridge replacement, reconstruction or rehabilitation based on needs identifed through the City's Bridge Management Program or emergency condition.	$250,000,000
Colorado Springs	Colorado Springs Citywide Congestion and Incident Management Signal Improvement	Implement citywide/regionwide ITS to improve traffic operations, coordinate systems and improve safety. Improvements may include monitoring systems, hardware and software, message systems, metering, communication infrastructure, specialized equipment and staff.	$10,000,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
Colorado Springs	Colorado Springs Citywide Intersection Improvements	Construct improvements at intersections that will reduce delay, improve air quality, and enhance safety for both motorized and non-motorized traffic.	$20,000,000
Colorado Springs	Colorado Springs Citywide On-Street Bikeway Improvements	Proposed bikeway improvements will include: improve and construct bike lanes in accordance with the ITP and the City's Bicycle Plan; install on-street bicycle lanes and connections to off-street facilities to close gaps on the existing bike network; improve connections from on-street bike lanes to the Colorado Springs trail system and residential/commercial centers; and, develop/implement improved signage to provide better wayfinding for cyclists.	$10,000,000
Colorado Springs	Colorado Springs Citywide Roadway Safety and Traffic Operations	This capital program includes analysis, study, engineering and construction of intersection and corridor "spot" improvements to mitigate existing safety and traffic flow deficiencies. Proposed projects of this type will include the construction of traffic signals, roundabouts, auxiliary traffic lanes, traffic calming features, incorporation of multimodal enhancements, and other lower-cost geometric improvements. These projects may also install guard rail, construct/reconstruct medians, and install traffic control devices where warranted to improve traffic operations and safety.	$25,000,000
Colorado Springs	Colorado Springs Citywide Sidewalk Infill Improvements	Proposed pedestrian improvements will continue to construct missing pedestrian connections along transportation facilities, schools, and neighborhoods and will follow the Operations and Maintenance Division quadrant approach to improve safety and develop/ implement improved pedestrian connectivity.	$20,000,000
Colorado Springs	Colorado Springs Citywide Traffic Signal System Upgrade	Design and reconstruct traffic signal systems across the City to modern signal standards.	$25,000,000
Colorado Springs	Colorado Springs Railroad Bridges Program	Repair/Rehabilitation/Replacement of railroad bridges due to condition issues (such as Uintah, Tejon, Nevada, Shooks Run) or for City required changes to accommodate other improvements.	$100,000,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
Colorado Springs	Companion Drainage Improvements for Roadway Projects	This program constructs drainage improvements needed in advance of roadway rehabilitation or reconstruction efforts.	$10,000,000
Colorado Springs	Costilla and Cucharras St. Improvements over Shooks Run	Improve Costilla St. and Cucharras St, including replacing the bridge over Shooks Run and improvements at Nevada Ave, Weber St, Corona St, Prospect St, Institute St, and Cedar St intersections.	$10,000,000
Colorado Springs	Cottonwood Creek Trail Corridor Improvements - Union crossing	Design and construct a grade-separated crossing of Cottonwood Creek Trail at Union Blvd.	$4,000,000
Colorado Springs	Drennan Rd Bridge over Jimmy Camp Creek	Replace bridge due to condition issue.	$11,700,000
Colorado Springs	Dublin Blvd Improvements - Peterson Rd to Marksheffel Rd	Reconstruct/construct roadway to widen for appropriate lane configuration and consistent cross section. Project includes bike and pedestrian accommodations.	$16,600,000
Colorado Springs	Fillmore Pedestrian Safety Improvements	Conduct a pedestrian safety study along Fillmore St and implement recommednations. Consider access management, access to transit, and safe crossings.	$15,000,000
Colorado Springs	Fillmore St. Roadway Improvements	The bridges over Monument Creek/Pikes Peak Greenway and bridges over the Union Pacific Railroad will be replaced due to condition. The project also includes a trail connection down to the Pikes Peak Greenway. The project will improve the existing sidewalks and pedestrian facilities and widen Fillmore St. from 4 to 6 lanes from Cascade to I25.	$117,189,000
Colorado Springs	Foothills Trail Improvements	Trail program to extend, realign, widen, reconstruct, and construct trails, access to trails, connections to attractions or other portions of the trail network, crossings, wayfinding, ADA improvements and other functional enhancements. May entail engineering, land procurement and construction activities.	$500,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
Colorado Springs	Garden of the Gods Rd Intersection Improvements (4 Locations)	Safety project to improve intersections on Garden of the Gods Rd at Hilton Pkwy, Northpark, and Mark Dabling. Hilton Pkwy will be reconstructed to restrict the access on the north leg to right-in/right-out, while the south leg will allow 3/4 movement with no outbound left-turns. The westbound left-turn will be protected with a signal that controls westbound left/eastbound through movements. The access east of Hilton Parkway will be reconstructed as right-in/right-out only on both the north and south legs. The median will be reconstructed to extend the I25 eastbound left-turn storage. The Northpark signal will be rebuilt with mast arms, additional through heads, backplates, and fully protected eastbound and westbound left-turns. The Mark Dabling signal will be rebuilt with mast arms, additional through heads, backplates, and flashing yellow arrow eastbound and westbound protected/permissive left-turns.	$1,685,933
Colorado Springs	Hancock Corridor Study and Implementation	Conduct a study to determine the desired function/role of Hancock Expwy between the airport and Downtown Colorado Springs considering vehicles use, enhanced transit corridor, bike and pedestrain connections, and desired land use	$15,000,000
Colorado Springs	Hancock over Sand Creek	Replace bridge over Sand Creek due to poor condition.	$20,000,000
Colorado Springs	Homestead Trail Improvements	Trail program to extend, realign, widen, reconstruct, and construct trails, access to trails, connections to attractions or other portions of the trail network, crossings, wayfinding, ADA improvements and other functional enhancements. May entail engineering, land procurement and construction activities.	$1,000,000
Colorado Springs	Lake Ave Safety Improvements: CO115 and Southgate Rd	The project will modify the existing intersection to include fully protected left turns from all 4 approaches including restripe of eastbound left turn lanes for double left movements and widening of the north leg of the intersection to include 2 receiving lanes.	$3,974,334
Colorado Springs	Las Vegas St Bridge over Shooks Run	Replace bridge over Shooks Run and provide roadway, intersection and bicycle and pedestrian improvements to address safety, drainage, and access improvements	$15,000,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
Colorado Springs	Lorraine St Bridge over Cheyenne Run	Replace bridge due to condition issue.	$5,000,000
Colorado Springs	Marksheffel Rd Bridge at Cottonwood Creek	Construct bridge crossing of Cottonwood Creek to carry Marksheffel Rd.	$27,850,000
Colorado Springs	Midland Trail Completion (21st St to 25th St)	Complete the Midland Trail as an off-street facility from 21st St to 25th St.	$1,025,000
Colorado Springs	Nevada Ave Reconstruction - Rock Island Railroad to Eagle Rock Rd, Commerce St to Templeton Gap Floodway, Templeton Gap Floodway to Lee St, & Lee St to University Village	Reconstruct Nevada Ave to improve vehicular operations at signalized intersections and provide improved transit, bicycle and pedestrian infrastructure to support the N Nevada Redevelopment vision.	$103,667,000
Colorado Springs	Nevada Ave/Garden of the Gods Rd/Austin Bluffs Pkwy Intersection Study	Conduct an intersection improvement and selection study to identify improvements to the Nevada Ave/Garden of the Gods Rd/Austin Bluffs Pkwy Intersection.	$1,000,000
Colorado Springs	Northeast Sub-Area Study - Bounded by Union Blvd, Austin Bluffs Pkwy and Briargate Pkwy	Conduct a multimodal area study to examine the existing functionality of Union Blvd and Austin Bluffs Pkwy from their intersection north to Briargate Pkwy including how this network may better serve traffic demands, local bus, enhanced transit, bikes, and pedestrians Examine traffic hot spots including major intersections for recommendations on reducing delay and enhancing safety Identify specific improvements for roadway, transit, and completion of bike and pedestrian network connections.	$1,100,000
Colorado Springs	Old Ranch Rd: Voyager Pkwy to Kettle Creek	Construct roadway and drainage improvements to bring Old Ranch Rd to a 5-lane City standard roadway including bike and pedestrian facilities.	$19,400,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
Colorado Springs	Palmer-Mesa Trail Improvements	Trail program to extend, realign, widen, reconstruct, and construct trails, access to trails, connections to attractions or other portions of the trail network, crossings, wayfinding, ADA improvements and other functional enhancements. May entail engineering, land procurement and construction activities.	$500,000
Colorado Springs	Pikes Peak Greenway Improvements	Trail program to extend, realign, widen, reconstruct, and construct trails, access to trails, connections to attractions or other portions of the trail network, crossings, wayfinding, ADA improvements and other functional enhancements. May entail engineering, land procurement and construction activities.	$2,000,000
Colorado Springs	Pine Creek Trail Connection - Pikes Peak Greenway to Research Pkwy	Construct a shared use path along Pine Creek between Pikes Peak Greenway and Research Pkwy.	$3,000,000
Colorado Springs	Plains to Peak Corridor	Enhanced Transit Corridor including Mobility Hubs connecting Manitou Springs to Falcon. Routing generally following Colorado Ave, Pikes Peak Ave, Platte Ave, and US24 as determined by futher analysis.	$4,800,000
Colorado Springs	Platte Ave Improvements - Wahsatch Ave to Circle Dr	Operational and condition improvements including the Union intersection, bridges and retaining walls.	$36,000,000
Colorado Springs	Platte Ave/Academy Blvd Interchange Conversion	Reconstruct Academy Blvd/Platte Ave interchange to be a quadrant road interchange to facilitate pedestrian movements along Platte Ave by removing ramps and across Academy by eliminating left turns on the bridge.	$10,000,000
Colorado Springs	Platte Ave Corridor Improvements - Chelton to Powers	Construct six lane roadway and include a shared use trail, adjacent to Platte Ave between Chelton Rd and Powers Blvd, including connections to existing Sand Creek Trail.	$28,300,000
Colorado Springs	Replace and Upgrade Transit IT Equipment and software	Maintain and upgrade existing transit hardware and software allowing for smart-cards, real-time bus information, traffic signal prioritization, etc. to improve efficiency and customer service.	$2,590,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
Colorado Springs	Rock Island Trail Corridor Improvements - Academy Grade Separation	Design and construct grade-separated crossing of Rock Island Trail at Academy Blvd.	$10,000,000
Colorado Springs	Safe Streets 4 All (SS4A) Action Plan	Develop a city-wide safety action plan by engaging stakeholders and by evaluating a wide range of strategies and collaboration to reduce fatal and serious crashes.	$350,000
Colorado Springs	Safe Streets 4 All (SS4A) Demostration Projects	Five types of demonstration projects will be temporarily installed and before and after data will be evaluated to determine effectiveness. Demonstration projects include rubberized pinned down raised crosswalks, dynamic speed feedback signs, neighborhood pop-up traffic circles, speed activated flashing school zone signs, and projected bike lanes.	$1,310,600
Colorado Springs	Shooks Run Trail Improvements	Trail program to extend, realign, widen, reconstruct, and construct trails, access to trails, connections to attractions or other portions of the trail network, crossings, wayfinding, ADA improvements and other functional enhancements. May entail engineering, land procurement and construction activities.	$4,000,000
Colorado Springs	Sinton Trail Improvements	Trail program to extend, realign, widen, reconstruct, and construct trails, access to trails, connections to attractions or other portions of the trail network, crossings, wayfinding, ADA improvements and other functional enhancements. May entail engineering, land procurement and construction activities.	$500,000
Colorado Springs	Strengthening Mobility and Revolutionizing Transportation (SMART)	Development and implementation of a multi-dimensional Perception-Based Adaptive Traffic Management and Data Sharing system to address critical real-world challenges in traffic management, including improving safety, reducing congestion, and enhancing the efficiency of transportation systems across urban, suburban, and rural contexts.	$14,788,590

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
Colorado Springs	Templeton Gap Trail Improvements	Trail program to extend, realign, widen, reconstruct, and construct trails, access to trails, connections to attractions or other portions of the trail network, crossings, wayfinding, ADA improvements and other functional enhancements. May entail engineering, land procurement and construction activities.	$500,000
Colorado Springs	Terminal Southgate Enhanced Transit Corridor Study and Implementation	Evaluate options for implementing enhanced transit, options should include routing and operations, and alternate routing.	$2,000,000
Colorado Springs	Transit Fleet Supplement	Fund replacement and expansion transit service vehicle purchases: diesel, gasoline, and any low or zero emission vehicles including supporting infrastructure technologies to fuel and charge.	$31,420,000
Colorado Springs	Transit Service Enhancements	Studies (including Comprehensive Operation Analysis, Alternate Transportation Implementation Study and other studies) and implementation to improve operations and/or to provide service extension/expansion enhancements to Military Bases, Major Employers, and Tourism Hubs and underserved areas. This program aims to bring public transit in the Colorado Springs area to a higher level by providing direct, frequent, efficient, and reliable transit solutions that continue to focus on improving the existing service area, advancing high-frequency core transit corridors to create improved mobility options for the entire community, improving service hours and frequencies, and implementing new and advanced technologies to improve reliability and advance fleet upgrades.	$8,000,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
Colorado Springs	Transit Stop and Station Improvements	New or existing transit stops and stations; stop improvements could include, but not limited to, safety improvements, customer access, sidewalk connections, ADA-compliance, pre-board fare payment infrastructure, wayfinding, service kiosk, message boards, benches, trash receptacles, and shelters. Station examples include new/relocated stations or transfer centers at Chapel Hills Mall, Citadel Mall, Hancock/Academy, PPSC and other Multimodal Hubs to support ConnectCOS Transit Vision Network including but not limited to Garden of the Gods Rd, PPSC, military bases, downtown and park and rides, and active transportation connections.	$10,000,000
Colorado Springs	Uncontrolled Trail Crossing Enhancements	Trail crossing improvements at 8 locations to reduce risk for vulnerable users. Improvements include RRFBs, pedestrian refuge islands, raised crosswalks, signs and markings.	$715,000
Colorado Springs	Union Blvd Urban Trail: MLK Bypass to Fountain Blvd	Construct an 8 foot multiuse urban trail from the MLK Bypass eastbound ramp terminus north to Fountain Blvd. The proposed project will extend to the Fountain Blvd sidewalks and planned on-street bike lanes, all withing the existing ROW.	$1,490,640
Colorado Springs	US24 Functionality and Routing Study - I25 to Falcon	Conduct a major transportation corridor study to determine safety, traffic operations, transit operations, and functionality of US24 from Falcon to I25 Analyze the function of US24 in the region's transportation network and consider alternatives for US24 such as Woodmen Rd to meet long-term needs	$2,500,000
Colorado Springs	Vermijo Streetscape Improvements - Tejon St to Shooks Run	Reconstruct roadway to enhance streetscape similar to recent improvements west of Tejon St.	$22,500,000
Colorado Springs	Water Street and 31st Street Bridge Replacement	Bridge replacement with two concrete box culvert bridges including 460 feet of roadway and channel reconstruction. The project includes a 12-foot trail section as part of an overall plan to improve bicycle and pedestrian safety.	$5,000,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
Colorado Springs	Weber St. Transportation Improvements	Improve Weber St to meet city standards from Lilac St to Jackson St. The project will also construct a trail and transit only connection across the old Rock Island Railroad to Fillmore St. The trail and transit connection includes a bridge and trail connections to the Rock Island Trail.	$10,000,000
Colorado Springs	Woodmen/I25 Interchange Congestion Management	Conduct interchange study for Woodmen Rd at I25 to reduce delay and improve safety.	$1,000,000
Colorado Springs - MMT	Downtown Shuttle Operations (Service Expansion)	Three years of operational support (funding) for the Downtown Shuttle. This transit expansion will serve the downtown core of Colorado Springs, connecting customers to numerous destinations and attractions, while easing traffic congestion.	$9,683,318
Colorado Springs - MMT	MMT Metro Rides	Travel demand management programs and operations to support congestion relief and mobility choice.	$2,327,848
Colorado Springs - MMT	MMT Operating	MMT (Operating, Maintenance, Transit Improvements, Safety & Security).	$26,585,945
Colorado Springs - MMT	MMT Planning	MMT planning projects.	$1,623,011
Colorado Springs - MMT	MMT Transit Planning Studies	Transit planning studies.	$1,345,097
Colorado Springs - MMT	MMT Vehicle Purchase	Purchase up to nine hybrid transit vehicles, with MMT committing local match funds.	$19,906,966
Colorado Springs - MMT	Two Battery Electric Buses for Service Expansion	Acquire two BEBs and charging infrastructure for service expansion.	$3,224,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
El Paso County Public Works	Academy Blvd Widening	Design and construct a road widening from 4 to 6 lanes from I25 ramps to CO115 to include shoulders, improved sight distance with horizontal and vertical improvements, and address turn lanes and intersection improvements where needed. To accommodate the new lanes and multiuse shoulders for enhanced multimodal safety and improve drainage, replace or repair the seven bridges and underpasses to PPSC, and evaluate an interchange at Venetucci Blvd. Evaluate and construct improvements needed to meet current ADA standards.	$110,000,000
El Paso County Public Works	ADA Compliance Program	Work will occur on a variety of roads in the unincorporated area within the MPO boundary to carry out an ADA Compliance Program. Design and construct ADA improvements, missing sidewalk/trail connections, and intersection, signal and signing improvements.	$5,000,000
El Paso County Public Works	B Street Improvements	This was a project identified in our Local Road Safety Plan as a high crash are that needed safety improvements. Design and reconstruct/construct roadway for appropriate lane configuration which may include pavement overlay, intersection and drainage improvements, transit accommodations, ADA improvements and consistent cross section including multimodal accommodations and access control.	$10,000,000
El Paso County Public Works	Baptist/Hodgen/Roller Coaster Intersection	Construct improvements at the intersection that will reduce delay and enhance safety for both motorized and non-motorized traffic.	$8,200,000
El Paso County Public Works	Black Forest Rd: Paving from Walker to County Line	Design and construct surface improvements to Black Forest Rd by converting the gravel road to pavement, fixing alignments, improving drainage, and improving intersections. Evaluate and construct improvements needed to meet current ADA standards.	$13,500,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
El Paso County Public Works	Blaney/Davis/Hoofbeat Gravel Road Conversion	Design and construction of a gravel road conversion for freight service. This project supports the regional use of the landfill on Blaney Rd. These connector roads are gravel and have too many truck trips to safely function for freight. The gravel roads need to be paved and brought up to current standards including multiuse shoulders, safety improvements, turn lanes and auxiliary lanes, intersection, drainage and water quality improvements.	$24,000,000
El Paso County Public Works	Bradley Rd from Goldfield to Powers Blvd	Construct new roadway connection, drainage, upgrade traffic signal, and multimodal features.	$23,000,000
El Paso County Public Works	Bradley Rd Widening	Design and construct upgrades on approximately 1 mile of Bradley Rd from Academy to Hancock from two to four lanes and improve sight distance and intersections where needed. From Academy Rd to Hancock Exp. design and construct two additional lanes to improve the road to a four-lane principle arterial with multimodal access and turn lanes where needed. Resurface the current two-lane section and ensure proper drainage. Evaluate and construct improvements needed to meet current ADA standards.	$19,200,000
El Paso County Public Works	Bradley Rd: Grinnell to Wageman Dr	Design and construct 2 additional lanes and add multimodal features.	$24,000,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
El Paso County Public Works	Burgess and Vollmer Intersection Improvements	Burgess and Vollmer Road Intersection is currently a non-signalized intersection in the Black Forest area, with stop controls on Burgess Road. The intersection is currently two-lane rural roadway without turn bays or acceleration lanes. Roadside ditches were graded to convey surface runoff on both side of the road. There is a need for a safe trail crossing to convey non-motorized traffic between the Black Forest Section 16 Open Space trail, Sand Creek Trail and the proposed Bike Route on Burgess. This project will improve this intersection to a safer operating intersection (options being studied during design are standard signalized intersection or roundabout) and provide a safer ADA compliant trail connection. Also included surface and drainage improvements, signage, striping and road resurfacing if needed.	$10,000,000
El Paso County Public Works	Curtis Rd Improvements	Design and reconstruct the road segments between Falcon Hwy and CO94. Design and construct features that address the higher accident rate including shoulders and improving sight distance with horizontal and vertical improvements, include drainage features, and add turn lanes and intersection improvements where needed. Add multimodal improvements. Maintain bridges and culverts on this segment. Evaluate and construct improvements needed to meet current ADA standards.	$35,000,000
El Paso County Public Works	Eastonville Rd from McLaughlin Rd to Bandanero	Reconstruct/construct roadway for appropriate lane configuration, intersection and drainage improvements and consistent cross section including multimodal accommodations.	$15,000,000
El Paso County Public Works	Eastonville Rd: McLaughlin Rd to Evans	Design and construct surface improvements to Eastonville Rd by bringing arterial roadway to current standards, sight distance, horizontal and vertical improvements, surface paving (existing gravel areas), shoulders, drainage and intersection improvements, auxiliary lane improvements, multimodal improvements. Evaluate and construct improvements needed to meet current ADA standards.	$47,000,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
El Paso County Public Works	El Paso County ADA Inventory and ADA Improvements	El Paso County ADA inventory and ADA improvements. EPC is completing an inventory of ROW infrastructure for ADA compliance. This application is for funding to measure ADA attributes to determine if they are compliant and to prioritize and plan for improvements. With this funding request, we will be working on a variety of roads in the unincorporated area within the MPO boundary to carry out an ADA Compliance Program. Projects will include, repair/install sidewalk, repair/install curb cuts, pedestrian crossing improvements/signals, barrier removal, etc. While we realize that minor design, ROW or clearances may be needed at limited locations, our goal is to focus on construction in existing ROW. Project received toll credits and additional federal funding to cover some of the local match requirements.	$2,125,632
El Paso County Public Works	El Paso County Wetland Bank: Akers Dr	Design and construction of approximately 20 acres of mitigation for inclusion in the El Paso County Wetland Umbrella Mitigation Bank.	$1,760,893
El Paso County Public Works	Evans Rd Gravel Road Conversion - Meridian Rd to Elbert Rd	This gravel road segment has too many trips to safely function. The gravel road needs to be paved and brought up to current standards. The project will design and construct a gravel road conversion to paved roads with multiuse shoulders, safety improvements, turn lanes and auxiliary lanes, intersection and drainage and water quality improvements.	$5,000,000
El Paso County Public Works	Fountain Mesa Rd: Caballero Ave to Fontaine Blvd Improvements	Resurface and maintain the road segments, shoulders improvements, pedestrian improvements, improve sight distance, drainage, turn lanes and intersections where needed.	$9,000,000
El Paso County Public Works	Galley Rd Sidewalks	Design and construct missing multimodal segments, upgrade to current ADA standards, and improve intersection safety. Fix the drainage problems.	$5,600,294

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
El Paso County Public Works	Garrett Rd Upgrade: US24 to Curtis Rd	Upgrade Garrett Rd from US24 to Curtis Rd from a collector to a minor arterial. Resurface and maintain the road segments. Design and construct shoulders, improve sight distance with horizontal and vertical improvements, address drainage, add turn lanes and intersection improvements where needed.	$28,000,000
El Paso County Public Works	Hancock Expwy at Clearview Dr/Yucatan Dr	Traffic signal replacement and intersection reconstruction/safety improvement. Replace signal equipment, auxiliary lane improvements, drainage improvements and pedestrian improvements.	$750,000
El Paso County Public Works	CO105 - Furrow Rd to CO83	Construct paved multiuse shoulders, improve driving surface, drainage, turn lanes, accel. and decel. lanes, and intersection improvements.	$50,000,000
El Paso County Public Works	Hodgen Rd Improvements - Black Forest to Meridian	Design and construct surface treatments and features that address the higher accident rate including multiuse shoulders and improving sight distance with horizontal and vertical improvements, include drainage features, and add turn lanes and intersection improvements where needed. At Roller Coaster and Hodgen Rd, design and construct a signal/roundabout and intersection improvements. Evaluate and construct improvements needed to meet current ADA standards.	$29,000,000
El Paso County Public Works	ITS program	Design and construct an ITS, which would allow for an integrated and centrally controlled traffic management system, sensors for traffic counts, incident management, etc. This may require installing fiber optic cable, radar, cameras, signal control upgrades and accessory equipment and equipment at DWP to monitor and control the system to better manage traffic efficiency and capacity.	$5,000,000
El Paso County Public Works	Judge Orr/Blue Gill Dr Intersection Realignment Project	Realign the US24 East/Blue Gill Dr intersection to Judge Orr Rd. Project includes design, clearances, and construction.	$6,369,002

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
El Paso County Public Works	Lake Woodmoor Dr	From Woodmoor Dr to CO105, design and construct improvements to sight distances and intersections, resurface pavement, maintain drainage, and add multimodal facilities. Evaluate and construct improvements needed to meet current ADA standards.	$10,000,000
El Paso County Public Works	Major Road and Bridge Reconstruction - Phase 1	This capital program includes road and bridge projects that improve road surfaces, update to current engineering standards and are beyond normal road maintenance. These projects may also install shoulders, regravel and grade gravel roads, convert gravel to paved roads, provide safety edges, enhanced striping, measures to prevent roadway departers, or reconstruct a roadway surface.	$18,800,000
El Paso County Public Works	Meridian Rd - Latigo Blvd to Hodgen Rd	Design and construct a project to bring the roadway to current 2-lane arterial standards, including sight distance, horizontal and vertical improvements, surface paving (existing gravel areas), add shoulders, drainage and intersection improvements, add auxiliary lanes and multimodal improvements.	$28,200,000
El Paso County Public Works	Meridian Rd S Gravel Road Conversion - Bradley Rd to Drennan Rd	This gravel road segment has too many trips to safely function. The gravel road needs to be paved and brought up to current standards. The project will design and construct a gravel road conversion to paved roads with multiuse shoulders, safety improvements, turn lanes and auxiliary lanes, intersection and drainage and water quality improvements.	$5,000,000
El Paso County Public Works	Mesa Ridge Pkwy Improvements: Powers Blvd to Marksheffel Rd	Complete the connection between Powers Blvd (CO21) and Marksheffel Rd by designing and constructing a 2-lane urban principle arterial including intersection and auxiliary lane improvements, multimodal improvements, drainage and water quality improvements, and installation of bridge/s if needed.	$15,000,000
El Paso County Public Works	North Calhan Hwy from US24 to Paint Mine Rd	Construct paved shoulders, improve driving surface, drainage, intersection improvements and provide multimodal features.	$7,100,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
El Paso County Public Works	Old Stage Rd from MP 0.75 to MP 4.157	Re-gravel, grade, and drainage improvements.	$7,300,000
El Paso County Public Works	Pedestrian Crossings Improvements	Upgrade 24 pedestrian crossings with MUTCD compliant signals and audible countdown pedestrian signals, ADA improvements and other safety features at high priority pedestrian crossing locations.	$10,982,284
El Paso County Public Works	Peyton Area Roads - Railroad, Front & Main Streets	Reconstruct roadway for appropriate lane configuration, intersection and drainage improvements and consistent cross section including multimodal accommodations.	$4,000,000
El Paso County Public Works	Preconstruction Funding - Phase 1	This capital program Includes activities to get projects shovel ready, often for grant funding or developer constructed improvements. These projects may include design, corridor studies, safety analysis, ROW and/or required federal clearances.	$18,800,000
El Paso County Public Works	Road Rumble Strips and Epoxy Striping	This is a maintenance project with various locations for rural road centerline rumble strips and epoxy striping.	$500,000
El Paso County Public Works	Safety and Multimodal Program - Phase 1	This capital program includes analysis, study, engineering and construction of intersection, multimodal, and corridor “spot” improvements to mitigate safety and traffic flow deficiencies. Proposed projects of this type will include the construction of traffic signals, roundabouts, auxiliary traffic lanes, traffic calming features, trails, multiuse shoulders, sidewalks and other geometric improvements. These projects may also install guard rail, construct/reconstruct medians, and install traffic control devices where warranted to improve bike and pedestrian crossings, emergency repairs, traffic operations and safety.	$18,800,000
El Paso County Public Works	Safety program - epoxy marking, multiuse shoulders, safety edges on rural roads, etc.	Program project to improve safety for all users with FHWA safety countermeasures and other safety, operational and ADA improvements.	$500,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
El Paso County Public Works	Security Blvd at Willis Dr	Traffic signal replacement and intersection reconstruction/safety improvement. Replace signal equipment, auxiliary lane improvements, drainage improvements and pedestrian improvements.	$1,500,000
El Paso County Public Works	Stapleton Dr/Briargate Pkwy Improvements - Black Forest Rd to Vollmer Rd	Construct new roadway connection, drainage, upgrade traffic signal, and multimodal features.	$38,000,000
El Paso County Public Works	Vollmer Rd Improvements: Marksheffel Rd to Shoup Rd	Bring roadway to current 2-lane arterial standards, sight distance, horizontal and vertical improvements, surface paving (existing gravel areas), shoulders, drainage and intersection improvements, auxiliary lane improvements, multimodal improvements.	$48,000,000
El Paso County Public Works Parks & Community Services Department	Arroya Ln/Woodmen Hills/Rock Island Regional Trails	Starting Vollmer Rd and Arroya Ln at its intersection with the Sand Creek Regional Trail, this 5.3-mile Secondary Regional Trail follows Arroya Ln east past the Retreat at Timber Ridge and Sterling Ranch developments before turning south through Sterling Ranch, then eastward through the proposed The Ranch development, before turning southward through Bent Grass, past Woodmen Rd, before turning northeast along East US24 to Old Meridian Rd. This project will connect the City of Colorado Springs and Falcon with a contiguous non-motorized trail. It will connect to 5 sidewalks, 3 trails, commercial developments, and several neighborhoods.	$2,820,000
El Paso County Public Works Parks & Community Services Department	Black Forest Regional Trail	At 6.25 miles in length, this primary regional trail begins at CO83 and continues along Shoup Rd where it terminates at its connection to the Pineries Open Space and Black Forest Section 16 at the intersection of Shoup Rd and Vollmer Rd. Project includes design, clearances and construction.	$8,500,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
El Paso County Public Works Parks & Community Services Department	Crews Gulch Regional Trail	This 2.85-mile section of the primary regional trail begins where the existing Crews Gulch Regional Trail ends, at the intersection of Fountain Mesa Rd and Fontaine Blvd. The trail continues east along Fontaine Blvd to Marksheffel Rd at Lorson Ranch, where it connects with the proposed Jimmy Camp Creek Regional Trail. Project includes design, clearances and construction.	$4,500,000
El Paso County Public Works Parks & Community Services Department	Eastonville/Latigo Regional Trails	A mixed land use trail in nature, the Eastonville Regional Trail starts in an urbanized environment at Woodmen Rd and runs north along Eastonville Rd, connecting to Falcon High School and Falcon Regional Park. Entering a more rural area, the trail then continues to northward the existing Latigo Trails Open Space, where the trail turns westward and connects to Pineries Open Space, utilizing road rights-of-way and proposed property easements. Project includes design, clearances and construction.	$8,250,000
El Paso County Public Works Parks & Community Services Department	Fountain Creek Regional Trail	An 8-foot-wide multi-use trail, the Fountain Creek Primary Regional Trail begins at the El Pomar Youth Sports Complex in Colorado Springs and travels southward 24.90 miles through the City of Fountain to the El Paso/ Pueblo County line. Approximately 14.55 miles of the trail is complete and finished with crusher fines surfacing. This project will complete the southernmost 10.40 miles of trail and will constitute the last segment of the Colorado Front Range Trail through El Paso County Public Works. Primarily surfaced in crusher fines, the trail will connect to 2 transit stops, one Park and Ride location, and 3 parks/ open spaces. Project would be conducted in partnership with the City of Fountain and possibly the Fountain Creek Watershed District.	$5,200,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
El Paso County Public Works Parks & Community Services Department	Fox Run Regional Trail (Cherry Creek)	The 12.65-mile-long Fox Run Regional Trail begins at the intersection of Old Denver Rd and Baptist Rd, continuing east 1.7 miles as the completed 8-foot-wide sidewalk along Baptist Rd, before turning north through Promontory Pointe, where it shares a trail corridor with the proposed Jackson Creek Regional Trail. The trail then turns east through Sanctuary Point, connecting to Fox Run Regional Park, utilizing a 1-mile long completed section of crusher fine-surfaced trail. The trail leaves the park, continuing east along Hodgen Rd before crossing Hodgen Rd and turning south through the proposed Flying Horse North development where it connects to the existing Black Forest Regional Park trail system.	$4,884,000
El Paso County Public Works Parks & Community Services Department	CO94 Regional Trail	Approximately 16.6 miles in length, the CO94 Regional Trail connects the City of Colorado Springs to the Town of Ellicott, including possible connections to Schriever Air Force Base and the Mayberry development. The trail starts at the intersection of CO94 & East US24 and runs east along CO94 before ending at the Town of Ellicott. Project includes design, clearances and construction.	$13,000,000
El Paso County Public Works Parks & Community Services Department	Jackson Creek Regional Trail	This proposed contiguous non-motorized regional trail will connect the City of Colorado Springs and the Town of Monument. Approximately 9.38 miles long, excluding alternate routes, this 8-foot-wide Tier I trail begins at its intersection with the New Santa Fe Regional Trail, travels east on CO105 before turning south along Jackson Creek Pkwy. At Higby Rd, the trail turns east before turning south into the Home Place Ranch development along Gleneagle Dr. The trail then continues south through an existing trail easement, crosses Baptist Rd before turning southwest near Jessie Dr following open spaces to Struthers Rd. The trail then splits into two sections, one heading west under I25 to the New Santa Fe Trail, the other heading south along Struthers Road to North Gate Blvd and the City of Colorado Springs trail system.	$4,418,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
El Paso County Public Works Parks & Community Services Department	Palmer Divide Regional Trail	Beginning at the Pineries Open Space Trailhead, this 10.5-mile primary regional trail connects the Pineries Open Space to Homestead Ranch Regional Park. Its Pineries location allows it to make further connections southward to Black Forest Section 16 and the Sand Creek Regional Trail. Utilizing the existing singletrack trail loop in Pineries Open Space, the trail continues northeast through Black Forest Reserve, crossing Meridian Rd at a proposed underpass, where it continues northeast where it connects to the existing Woodlake portion of the trail. From the Woodlake Trailhead, the trail turns east along Hodgen Rd and continues to through subdivisions to eventually connect to the Homestead Ranch Regional Park. Project includes design, clearances and construction.	$7,500,000
El Paso County Public Works Parks & Community Services Department	Sand Creek Regional Trail	Approximately 5.55 miles long, this 8-foot wide primary regional trail commences along Sand Creek north of Woodmen Rd at the City of Colorado Springs/El Paso County Public Works line, follows Sand Creek north to Arroyo Ln, where it continues along Vollmer Rd to Burgess Rd and connects to the Black Forest Section 16. Ultimately, the trail will allow contiguous non-motorized connections to Pineries Open Space and the Palmer Divide Regional Trail, which is proposed to connect to Homestead Ranch Regional Park. It will connect to the City trail system at Woodmen Rd, 2 bike lanes, 1 school, 2 parks/open spaces, 3 trails, commercial developments, and several neighborhoods along Sand Creek. Project includes design, clearances and construction.	$6,500,000
El Paso County Public Works Parks & Community Services Department	South Powers Trail	Commencing at Clear Spring Ranch, this 9.8-mile primary regional trail travels northward along the planned South Powers Blvd right-of-way corridor, ending at Powers Blvd and Fontaine Blvd where it connects to a proposed extension of the Crews Gulch Regional Trail. This trail would thus allowing for future connections to other primary and secondary regional trails in the area. Project includes design, clearances and construction.	$14,250,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
El Paso County Public Works Parks & Community Services Department	Ute Pass Regional Trail	A important urbanized portion of the Ring the Peak Trail System, this particular project would focus on the last remaining unfinshed 2-mile section of the Ute Pass Regional Trail. Commencing at the intersection of West US24 and Fountain Ave in Cascade, the trail continues southeastward along the West US24 corridor, where it then turns southward along French Creek where it makes a connection to Longs Ranch Road and then the existing terminus of the Ute Pass/Ute Indian Trail. Project includes design, clearances and construction.	$10,000,000
El Paso County Public Works/ Private	Black Forest Rd Widening: Old Ranch Road to Shoup	Expand two-lane minor arterial to a 4-lane major arterial.	$55,000,000
El Paso County Public Works/ Private	Drennan Rd Gravel Road Conversion	Desing and construct improvements to Drennan Rd including converting the gravel road to pavement and bringing the road to current standards, adding multiuse shoulders, safety improvements, turn lanes and auxiliary lanes where needed, intersection, drainage and water quality improvements. This important east/west connection is one of few roads in the southern part of county that connect residents, agricultural products and military employees/contractors access to four bases.	$43,000,000
El Paso County Public Works/ Private	Elbert Rd – US24 to County Line Rd N Improvements	Elbert Rd makes an important connection from US24 East going to Douglas County and connects to CO86. Design and construct a project to bring the roadway to current 2-lane arterial standards, improve sight distance, horizontal and vertical improvements, add multiuse shoulders, drainage, water quality, intersection improvements, and auxiliary and turn lanes.	$70,000,000
El Paso County Public Works/ Private	Grinnell Blvd: Goldfield to Powers Blvd (CO21)	Design and construct two additional lanes with multimodal features and improve the intersection at Powers Blvd (CO21).	$10,900,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
El Paso County Public Works/ Private	Meridian Rd - Bradley Rd to Squirrel Creek Rd	New road connection needed. Design and construct the new 2-lane road segment to include intersection and auxiliary lane improvements, pedestrian improvements, drainage and water quality improvements.	$42,000,000
El Paso County Public Works/ Private	Shoup Rd. Improvements CO83 to Meridian Rd	Resurface and maintain the road segments. Design and construct features that address the higher accident rate including shoulders and improving sight distance with horizontal and vertical improvements, include drainage features, and add turn lanes and intersection improvements where needed. Design and construct new segment to Meridian Rd. Add multimodal improvements. Evaluate and construct improvements needed to meet current ADA standards.	$97,517,887
El Paso County Public Works/ Private	Stapleton Dr/Briargate Pkwy: Towner Ave to Meridian Rd	Where needed, design and construct new road segments and where needed design and construct additional through lanes to increase capacity from 2 to 4 lane expressway standard to reduce existing congestion, drainage and intersection improvements, auxiliary lane improvements, multimodal improvements.	$48,000,000
El Paso County Public Works/ Private	Walker Rd from Steppler Rd to Black Forest Rd	Construct paved multiuse shoulders, improve driving surface, drainage, turn lanes, accel and decel lanes, and intersection improvements.	$40,000,000
Envida	Coordinated Mobility On-Demand in the Pikes Peak Region	Operating funds for fiscal years 2025, 2026, and 2027 to deliver additional rides for older adults and individuals with disabilities and to meet the financial match requirements of AAA and 5310 transportation programs.	$624,492
Fountain	Fountain ADA Improvements	Sidewalk and Pedestrian Ramp Construction and Reconstruction to enhance connectivety and meet ADA requirements within the following 2045 LRTP Corridors: Fortman Ave — Fountain Mesa Rd to Medicine Bow Ave. Fountain Mesa Rd — Mesa Ridge Pkwy to Fortman Ave. Medicine Bow Ave — Fountain Mesa Rd to Woodstock St. Old Pueblo Rd — Link Rd to Illinois Ave. Southmoor Dr. — US85/87 to US85/87.	$159,700

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
Fountain	Link Rd Reconstruction	Link Rd from Old Pueblo Rd to Kane Rd Reconstruction - Roadway reconstruction, roadway widening (2 lanes to 3 lanes), safety improvements, drainage improvements, signalization improvements, bike lanes and sidewalk. Three phases.	$5,618,726
Fountain	Old Pueblo Rd Reconstruction from Link Rd to Illinois Ave	6,900 foot long; 2 travel lanes; 2 bike lanes; 25 to 30 mph; minor arterial; 6 inch vertical curb; 6 foot attached/detached sidewalk. Full reconstruction to address significant slippage cracking, longitudinal cracking, alligator cracking, block cracking, potholes, distortions and rutting. This is a critical roadway that serves numerous residents in the following adjacent subdivisions Ventana, Tera, Fountain Farms and Fountain Industrial Park. Turn lanes will be necessary at the intersections to ensure the through lanes will not experience interrupted flow as they do today.	$13,000,000
Fountain	Southmoor Dr Reconstruction from US85/87 to US85/87	12,100 foot long; 2 lanes; 25 to 30 mph; major collector; vertical/mountable curb; 6 foot attached/detached sidewalk. Full reconstruction to address significant transverse cracking, longitudinal cracking, alligator cracking and edge cracking. This is a critical roadway that serves numerous residents and several businesses including Fountain Valley Senior Center, Anderson Brothers Subdivision, Beckett Development, Fountain Plaza North, Fountain Commons, Pedro Subdivision and the Southmoor Subdivision.	$19,000,000
Green Mountain Falls	Belvidere Avenue Right-of-Way Improvements	Planning/design and construction.	$275,000
Green Mountain Falls	El Paso Ave Bridge Replacement	Planning/design and construction.	$875,000
Green Mountain Falls	El Paso Trail and Iona Ave Roads Improvement	El Paso Trail Road Drainage Improvements (paving, graveling, ditch, easements) (Iona Ave culvert replacement).	$173,580

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
Green Mountain Falls	Green Mountain Falls Transportation Safety Improvement Project	The Town of Green Mountain Falls seeks to create improvements to pedestrian, bicycle and vehicular traffic through the impelmentation of reallignment and improvement of trails, widening of Ute Pass Avenue to include ADA pedestrian walkways and public transit infrastructure (bus shelters, etc.).	$950,000
Green Mountain Falls	Ute Pass Ave (Downtown) Improvements	From Olathe St to Hotel St, improvements include curb, sidewalk, gutter/drainage, and parking.	$365,000
Green Mountain Falls	Ute Pass Ave Pedestrian Bridge Safety Improvements	This project will widen the road and widen/replace the bridge on Green Mountain Falls Rd to allow for pedestrian traffic on both sides.	$225,000
Manitou Springs	Creekwalk Trail Phase 6	Creekwalk Trail Phase 6 - Lovers Lane/Wichita Parking Lot to intersection of Park Ave and Manitou Ave and intersection of Manitou Ave and Serpentive Ave to City Boundary at Serpentine Ave. The Creek Walk trail, which has the first 5 phases funded, is looking to continue performing topographical survey, ROW delineation, and trail design to contine the City's efforts to connect the Creek Walk Trail through the City. The goal is to provide a 10' wide concrete pavement path that aligns with Fountain Creek and provides for non-motorized connectivity through town.	$230,000
Manitou Springs	Crystal Park Rd Improvements	The first phase of the proposed Crystal Park Rd improvement plan is to install sidewalk, curb, gutter, and lighting that is missing on the North and East side from Old Crystal Park Rd to Sutherland Pl, and install a sidewalk, curb, gutter, and lighting from Sutherland Pl to Crystal Hills Blvd. A section of the 1.5 miles of Crystal Park Rd, a 2-lane road with a speed limit of 25 mph throughout, with a primarily residential and commercial function. Labeled as phase two, and part of phase one, of the Manitou Springs Crystal Park Rd Traffic Study.	$698,610

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
Manitou Springs	East Manitou Ave Pedestrian and Drainage Improvements	East Manitou Ave pedestrian and drainage improvements from intersection with El Paso Blvd (west) to on/off ramps on the east side of US24 Bypass. This section of Manitou Ave has proper lane widths and newer pavement, the primary focus of this project is for utility undergrounding, sidewalk widening, back-in angle parking opportunities, and operational improvements at the US24 off/on ramps.	$2,620,000
Manitou Springs	East Manitou Ave Pedestrian and Drainage Improvements Ph 2	Sidewalk, curb/gutter, crosswalk, storm drainage, street lighting, and landscaping improvements, and undergrounding of electricity, telephone and cable lines on Manitou Ave from intersection with El Paso Blvd to overpass of US24 Bypass. Project costs also include traffic circle at Manitou Ave/El Paso Blvd intersection, plans/specs and bid document creation and construction administration services. Project area approximately 5,005 LF total.	$1,326,700
Manitou Springs	El Paso Blvd Pedestrian and Drainage Improvements	Design and construct, transportation-related improvements to 7900 LF of El Paso Blvd from Manitou Ave to the City boundary. Roadway improvements including curb/gutter, sidewalk, crosswalks, storm drainage, street lighting, landscaping improvements, and undergrounding of electricity, telephone, and cable lines.	$1,900,000
Manitou Springs	Lovers Lane and Creek Walk Trail Pedestrian and Mobility Improvements	Design transportation-related improvements to 1500 LF of Lovers Lane from Canon Ave to El Paso Blvd. Project includes survey, ROW acquisition, design, and construction. Roadway improvements including multimodal trail (Creek Walk Trail), curb/gutter, crosswalks, storm drainage, street lighting, landscaping improvements, and undergrounding of electricity, telephone, and cable lines.	$1,300,000
Manitou Springs	Manitou Ave Safety and Mobility Improvements Phase 1	Safety and mobility improvements.	$1,500,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
Manitou Springs	Ruxton Ave Reconstruction	The Ruxton Ave Pedestrian and Drainage Improvements is a project to upgrade Ruxton Ave from Manitou Ave to the Cog Railway. The project involves the reconstruction of Ruxton Ave with upgraded sidewalks, utilities, approach roadways and parking opportunities. It is the intent of the project to implement thea findings of the mobility study presently underway. This may include transit and traffic management alternatives.	$4,303,268
Manitou Springs	Serpentine E Dr Roadway Improvements	Preliminary design, conceptual plans, public engagement and survey of the Creek Walk/Serpentine area for improvements to connectivity to the City's western boundary. Provide connection to the existing Creek Walk Trail project, roundabout, Rainbow Falls and Higgenbotham Park. The existing Creek Walk Trail begins at the City's eastern boundary, where it connects with the Colorado Springs Midland Trail, and then extends west to Manitou Springs' Pool and Recreation Center at Schryver Park, adjacent to Garden of the Gods Pl/ Manitou Ave. In November 2018, the Manitou Springs City Planning Commission adopted the Manitou Springs Creek Walk Master Plan (CWMP), which identified a preferred alignment to construct the remaining Creek Walk Trail segments from Schryver Park/Recreation Center to the City’s western boundary at Serpentine Dr, near the Rainbow Falls Cultural Site in El Paso County.	$2,034,250
Monument	Jackson Creek Pkwy Expansion	Jackson Creek Pkwy is a major north south road from Baptist Rd to CO105. The project is intended to increase the 2 lane segment to 4 lanes to ensure safety and capacity. The portion of Jackson Creek Pkwy south of Higby Rd is in the jurisdiction of Triview Metropolitan District. North of Higby Rd is the jurisdiction of the Town of Monument. The scope of work for this portion of the project consists of preconstruction and mitigation phases only. Additionally, the preconstruction and construction phases of a bicycle/pedestrian facility will be completed.	$7,141,064
Multiple Agencies	Powers Blvd Extension - CO83 to Voyager Pkwy	Construct Powers Blvd from CO83 (Interquest Pkwy) to Voyager Pkwy to connect with I25.	$140,000,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
Multiple Agencies/ Private	Powers Blvd (CO21) - South Extension to Rail Park (west of I25)	Design, ROW acquisition and construction of a 2-lane arterial interim section of S Powers (CO21) per the PEL, including multimodal, water quality, and other features to reduce traffic on other area roads and provide a redundant link to I25. This road will serve freight from Powers north, Colorado Springs Airport and the freight distribution centers around the airport.	$38,600,000
Multiple Agencies	Rail Station Design/ Construction Project	The project limits are to be determined in conjunction with the Southwest Chief Through Car Study and service development planning for FRPR. Project includes planning, design, and construction of a rail station in the Pikes Peak Metropolitan Planning Area. Final approval to spend funding would be via addition to the TIP.	$5,000,000
Multiple Agencies	US24/Peterson Rd Interchange	Conduct environmental clearance, design services and construction from the US24 ramps intersecting with Peterson Road to the Peterson SFB North Gate. The project will accommodate pedestrian and bicycle infrastructure and include improvements for transit service up to the gate entrance.	$16,500,000
Palmer Lake	Palmer Lake Elementary School Roadway & Safety Improvements	Improvements to two roads, Upper Glenway and Pie Corner which are connected to CO105 and provide the main route to Palmer Lake elementary school. The length of the road is 1,350 feet of which 220 feet is the student pickup and drop off area. Residential location where the speed limit is 25 mph, except approximately 600 feet of which is in a school zone and is 2 0mph during school hours. Both roads involved are 2-lane roads except in the school drop off location where the road widens slightly. Includes new asphalt, upgrades to existing sidewalks and improving storm water runoff. Will specifically include improved signage about school zone speed and crosswalk signs to where the children are being dropped off. Possibly solar powered flashing lights for school zone speed and crosswalk. Current sidewalks will be replaced for new ADA compliance sidewalks which will have a ramp at the entrance to the school.	$10,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
Palmer Lake	Spruce Mountain Rd Improvements	Spruce Mountain Rd from W Perry Park Rd to Douglas County Line. Intersects with County Line Rd - Spruce Mountain Rd is a principal arterial that connects Palmer Lake with Larkspur; it is also heavily used when I25 backs up. Currently it is configured as a 2-lane road and has no shoulder on either side of the road. Improvements will include a new driving surface as well as a bike lane. Safety improvements will be turn lanes onto County Line Rd, which will improve traffic flow when there is a train. The rest of the 2,100 feet will still be 2 lanes but shoulders be widen and a bike added on one side. The roadway itself is very old and still has concrete under the pavement that used to be the Old Denver Hwy. which is creating heaves in the roadway. These improvements will help ease the congestion when the Interstate is backed up.	$1,499,996
Palmer Lake	Palmer Lake County Line Rd Widening and Safety Project	The County Line Rd widening and safety design and construction project is approximately 2/3 of a mile, from Spruce Mountain Rd to the top of the hill just past the Greenland Open Space where El Paso County Public Works begins maintenance, a minor arterial roadway.	$2,391,000
Palmer Lake	Palmer Lake Forest View Roadway Improvement Project	The Forest View roadway improvement design and construction project is approximately .5 mile, from Red Rocks Ranch Rd to Douglas Ave, a major collector roadway.	$1,460,000
Pike Ride	Enhancing Micromobility Accessibility; Strengthening Transportation Demand Management	The Enhancing Micromobility Accessibility; Strengthening Transportation Demand Management project, with a focus on PikeRide's existing public ebike share is an initiative aimed at improving transportation options within Colorado Springs and Manitou Springs. This project combines principles of micromobility, accessibility, and TDM to create a more efficient, sustainable, and inclusive urban transportation system.	$267,375
PPACG	Mobility Management - 5310	Mobility management for specialized transit services using FTA Seciton 5310 funding.	$1,966,745

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
Private	21st St Roadway Improvements: US24 South to Lower Gold Camp Rd	Widen 21st St to a 4-lane roadway from US24 south to Lower Gold Camp Rd. Construct new sidewalk, curb, gutter and bike lanes as none exist. Project will also address drainage deficiencies as water currently sheet-flows off the roadway into curbside ditch or unimproved property.	$6,600,000
Private	Bandley Rd Reconstruction - Santa Fe Dr to Mesa Ridge Pkwy	20,500 foot long; full reconstruction and widening of Bandley Rd from Santa Fe Dr to Mesa Ridge Pkwy to address rutting, significant longitudinal cracking, edge cracking, transverse cracking, and alligator cracking and to upgrade the frontage road to a minor arterial from a collector, consistent with the Fountain Transportation Master Plan. Widening will add a center turn lane and upgrade to the minor arterial section to include 2 lanes in each direction with a 5 foot shared use shoulders. The project will enhance an I25 redundant route, improving incident managment, safety, and emergency response times, and will provide direct transit hub (south end of the corridor) connectivity.	$30,000,000
Private	C&S Rd Reconstruction - US85/87 to Mesa Ridge Pkwy	17,000 foot long; full reconstruction and widening of C&S Rd between US85/87 and Mesa Ridge Pkwy to address rutting, significant longitudinal cracking, edge cracking, transverse cracking, and alligator cracking and to upgrade to collector to a mnor arterial, consistent with the Fountain Transportation Master Plan. Widening will take a 2-lane section to a 5-lane section with 2 lanes in each direction, a center turn lane, and a 5 foot shared use shoulders. The project will complete an important existing east-west connector route to support incident management, to reduce congestion, and improve safety, resiliency, travel time reliability and emergency response times.	$35,001,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
Private	Fountain Mesa Rd Reconstruction - Lake Ave to C&S Rd	5,280 foot long; full reconstruction to address rutting, significant longitudinal cracking, edge cracking, transverse cracking and alligator cracking. Maintenance efforts and disruptions to the traveling public will be minimized if reconstruction is performed. This is a critical roadway that serves military personnel in the area as well as residents in the following adjacent subdivisions Markets at Mesa Ridge Pkwy (business district) and Country Club Heights East subdivision. This will complete maintenance improvements to the minor arterial section, including 5 foot shared use shoulders, between Mesa Ridge Pkwy and Ohio Ave and improve safety along the segment.	$12,000,000
Private	Hancock Expwy Realignment: Clarendon Dr to Chelton Rd	Construct street and drainage improvements by extending Chelton Rd south to Drennan Rd and realigning Hancock Exwy east from Monica Dr/Claredon Dr to new Chelton Rd.	$6,600,000
Private	Squirrel Creek Rd Extension - Fountain Mesa Rd to Jimmy Camp Rd	6,000 foot long; extend Squirrel Creek Rd from Fountain Mesa Rd to Jimmy Camp Rd as an arterial roadway with a 5-lane section including 2-lanes in each direction, a center turn lane, and a 5 foot wide shared use shoulder to include construction of a new bridge over Jimmy Camp Creek Rd. The project will complete an important east-west connection consistent with the Fountain Transportation Master Plan, and will provide a complete redundant route, reduce congestion, and improve incident management, travel time reliability, and emergency response times.	$21,000,000
Regional	Alternate Modes - Pooled Funds	Alternate modes projects and/or products within the MPO region.	$7,000,000
Regional	Marksheffel Rd Improvements - Woodmen Rd to N Carefree Cir	Widen Marksheffel Rd from Woodmen Rd to N Carefree Cir Include enhanced bike and pedestrian accommodations for the length of the corridor and provide safe crossing opportunities at intersections.	$47,000,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
Regional	Midland Trail Improvements	Multi-jurisdictional trail program to extend, realign, widen, reconstruct, and construct trails, access to trails, connections to attractions or other portions of the trail network, crossings, wayfinding, ADA improvements and other functional enhancements. May entail engineering, land procurement, construction and ancillary trail activities.	$1,000,000
Regional	Planning - Pooled Funds	Planning projects and/or products within the MPO region.	$2,000,000
Regional	Safety and Congestion Management - Pooled Funds	Safety and congestion management projects and/or products within the MPO region.	$20,000,000
Regional	State and Federal Discretionary Grant Match Fund - Phase 1	This program could be available for all member governments and could be used for local matching funds for projects. The State or Federal Discretionary Grant Match Fund Program could be used to fulfill local match requirements for discretionary grants awarded by the State of Colorado (programs pending development) or the Federal government (e.g., INFRA, RAISE, CRISI grants) or future grant opportunities resulting from a federally declared disaster. The program is not intended to provide local match for revenue allocations administered by PPACG.	$1,000,000
Regional	Woodmen Rd Improvements - Powers Blvd to US24	Safety and multimodal improvements on Woodmen Rd from Powers Blvd to US24. Widening from Golden Sage Rd to US24.	$52,948,426
Regional/ Private	Ray Nixon Powerplant Road/Extension west of the Future I25/CO21 (Powers)	Ray Nixon Powerplant Road/Extension west of the future I25/CO21 (Powers).	$25,000,000
Woodland Park	American Discovery Trail Connection	Construct a 550 foot long, 8 feet wide asphalt trail from US24 (existing sidewalk) to the Fountain Creek Open Space and connect to the American Discovery trail.	$85,900
Woodland Park	Pedestrian Infrastructure - Sidewalks: Browning Ave	The project scope includes the provision of all labor, tools, equipment, materials, and supervision required to install sections of sidewalk that do not currently exist along Browning Ave.	$330,756

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
Woodland Park	CO67 Corridor Improvements - Phase II	The CO67 Phase II project is to widen the highway from 2-lanes to 4-lanes including dedicated left turn lanes, bi-directional center turn lane; accel/decel lanes; and an underground stormwater system. This multi-modal project includes sidewalks on the west side connecting pedestrian facilities with Evergreen Heights Drive and Stone Ridge Village.	$3,000,000

Notes: Acronyms and abbreviations are available in Appendix A. Project names were adjusted for clarity and consistency within this document only.

Projects by Type

For mapping and categorization purposes, projects were classified by their primary project type and a secondary project type based on the major elements of the project. Note that because many projects were assigned two project types, when added the following percentages will be more than 100%. In addition, although the projects were only designated to a maximum of two project types, many projects have multiple elements and could have been classified as several project types. For example, a project to improve roadway operations may also be a critical safety project but also may contain sidewalk or other bicycle/pedestrian features. See the project descriptions in Table 8-1 for details on particular projects.

Figure 8-1 depicts the number of projects by project type per the following text.

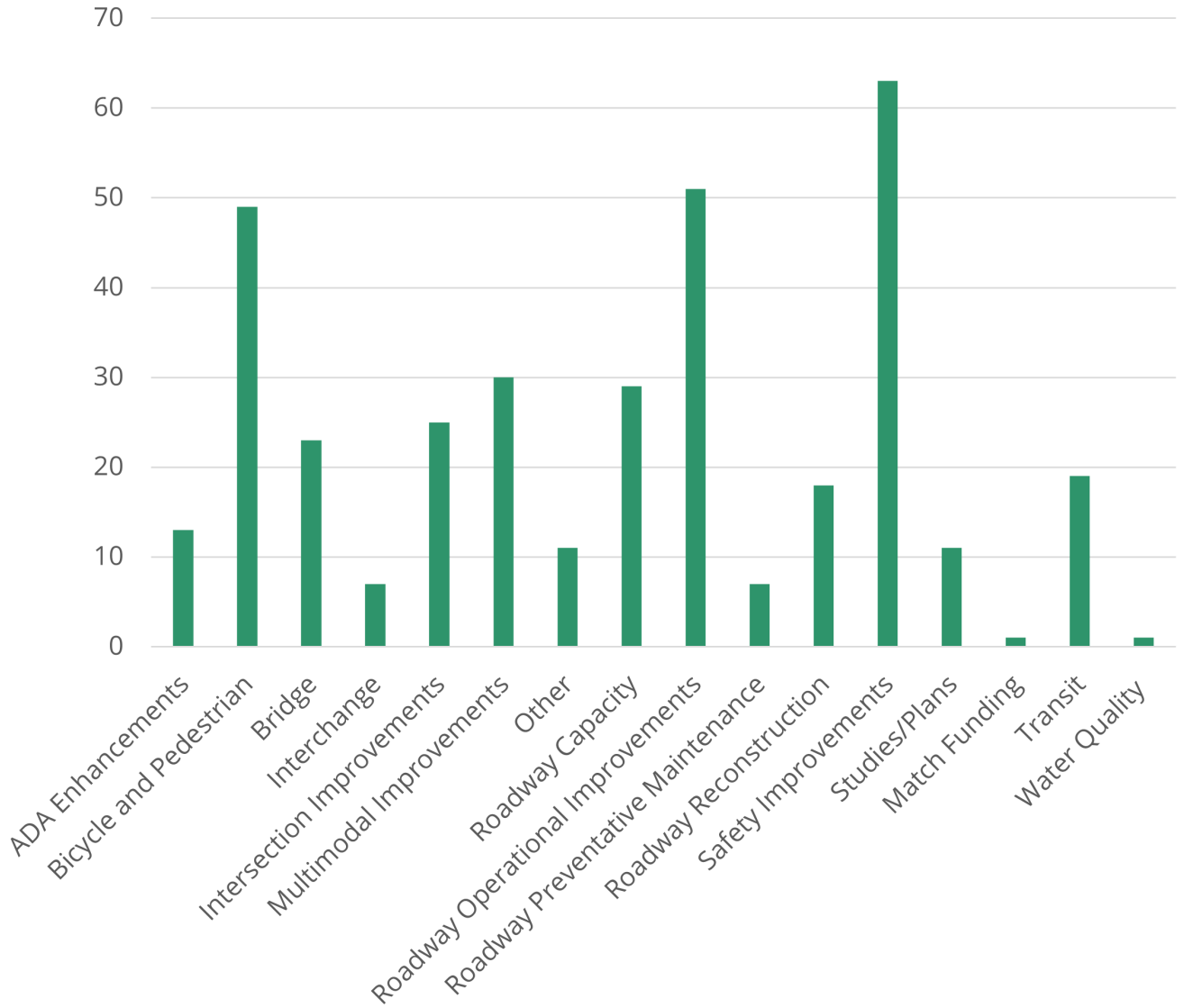
The first and second goals of the LRTP discuss the preservation and enhancement of the regional transportation system and providing efficient and fully connected to transportation. To fulfill those goals, nearly 45% of the fiscally constrained list is roadway projects (105 projects). Nearly 22% (51 projects) of projects are classified as roadway operational improvements, 12% (29) are capacity and 11% (25) are preventative maintenance or reconstruction projects. Many of these projects also increase resiliency and redundancy.

Of the capacity projects, defined as projects that create new roads or road lanes, eight are anticipated to be fully or partially paid for with private funding. Six are CDOT projects, two of which are funded or partially funded in the current TIP and one of which is the construction phase of that TIP project. Of the remaining projects identified to be sponsored by local jurisdictions or multiple agencies, two are partially or fully funded in the TIP and one is a Phase 2 of an existing TIP project. Nine have already been approved by local voters to receive PPRTA funding and one is the construction phase of a current PPRTA project. PPACG anticipates the remainder to be identified for future PPRTA funding as they provide critical for critical connectivity, support safety by correcting outdated lane configuration, etc.

In addition to those roadway projects, nearly 14% (32) are interchange or intersection improvements projects; 10% (23) are bridge projects,

However, the LRTP goals also speak to providing multimodal transportation and maintaining a robust, equitable, and healthy system. The project selection process recognized that non-motorized, transit, and other transportation modes and the growth of those modes are critical to the overall system. In addition, there are several funding sources, including state MMOF and federal TAP funding that is designated specifically for alternate mode projects. Approximately 16% of projects (49) are classified as bicycle and pedestrian projects with an additional 13% (30) classified as multimodal improvement projects. Just over 8% of projects (19) are transit projects, although this does not include additional transit projects funded through FTA and transit-specific funding

Figure 8-1: Projects by Type



and identified in the Regional Transit Plan. Specific specialized transportation projects are also not included in this fiscally constrained list.

Understanding that safety is a critical issue for the Pikes Peak Region, 27% of projects were classified as safety improvement projects and nearly 6% were classified as ADA Enhancements.

Finally, about 10% of projects (23) included transportation studies and plans or water quality, technology, or other transportation-related enhancements and one project could not be classified as it is a PPRTA funding pool that provides local match money for projects that receive state or federal discretionary grants.

Figures 8-2 through 8-6 illustrate the roadway, intersection improvement, bridge, active transportation, and safety projects in the region.

Because most projects have multiple characteristics, it is difficult to identify how much funding is designated to specific projects types funding amount designated to different project types. It should be noted that several funding types may be used for a single project. For example, a project may use TAP funding to add sidewalks but STBG funding for roadway operational improvements.

TRANSIT PROJECT LIST

As previously noted, the Regional Transit Plan outlines 58 projects divided into short-term (20), medium-term (21) , and long-term (17) projects. The projects are categorized by the following investment themes:

- Enhanced Transit Corridors
- New Fixed Routes
- Innovative Mobility Zones
- Extend Service Span
- Improve Capital Infrastructure
- Improve Existing Route Frequency
- New Crosstown Routes

These projects total $1.25 billion in captial costs between 2025 and 2050. The full project list and more detail can be found in Appendix B. Figure 8-7 depicts these projects.

In addition, MMT, local jurisdictions, and CDOT have developed a project list for inclusion in the TCS. This list contains projects in the Pikes Peak Region that can help support CDOT transit goals and represents more aggressive implementation of the vision in the Regional Transit Plan positioned to take advantage of increasing funding streams. This list includes several service enhancement projects, including express bus service and localized circulators to create last mile connections. In addition, this list includes express and flex service as part of the Plains to Peak Corridor as well as several stop and station improvements such as mobility hubs and upgrades to existing connection points. The list is included as an addendum to the Regional Transit Plan, Appendix B.

Figure 8-2: Roadway Projects

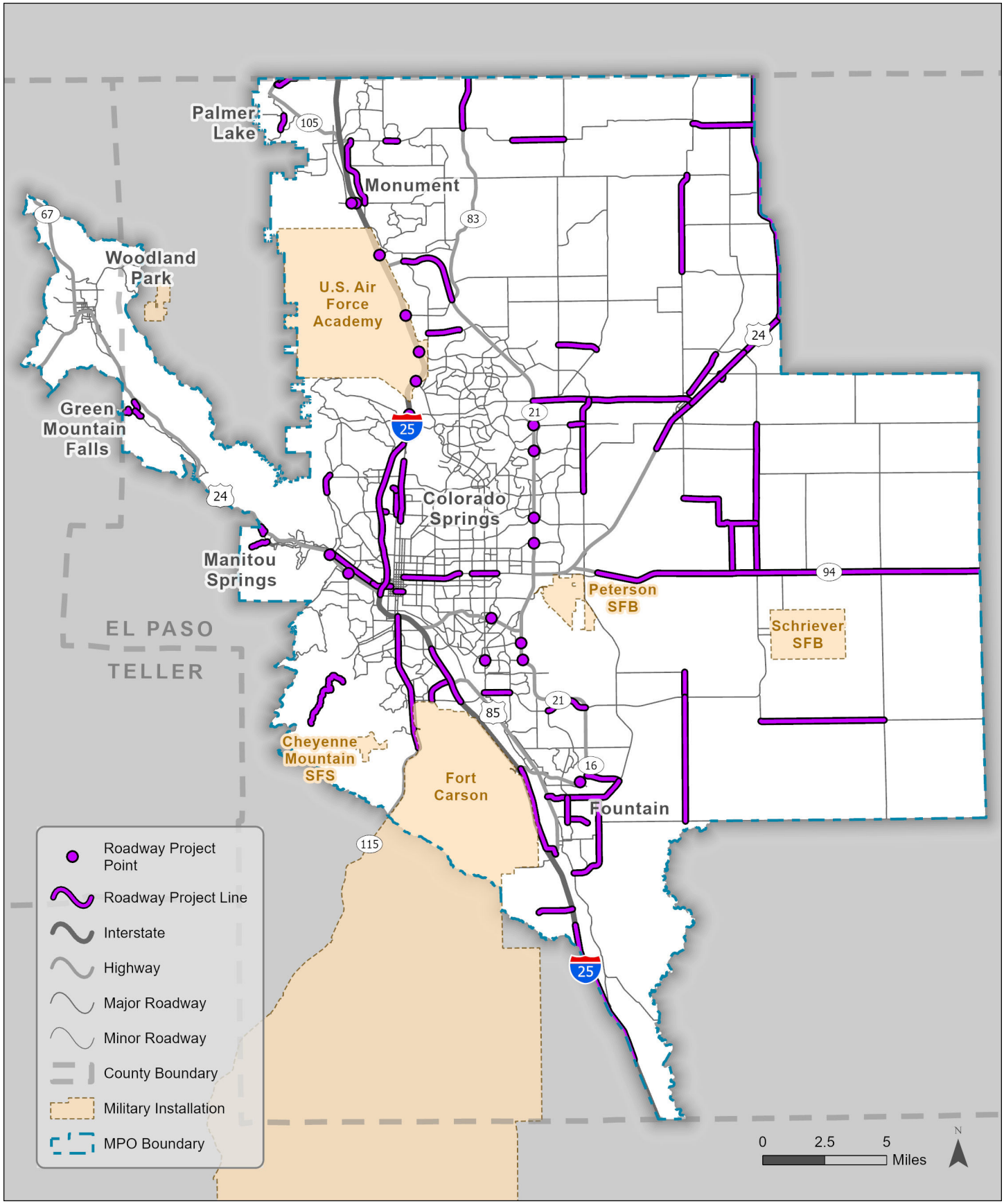


Figure 8-3: Intersection Improvement Projects

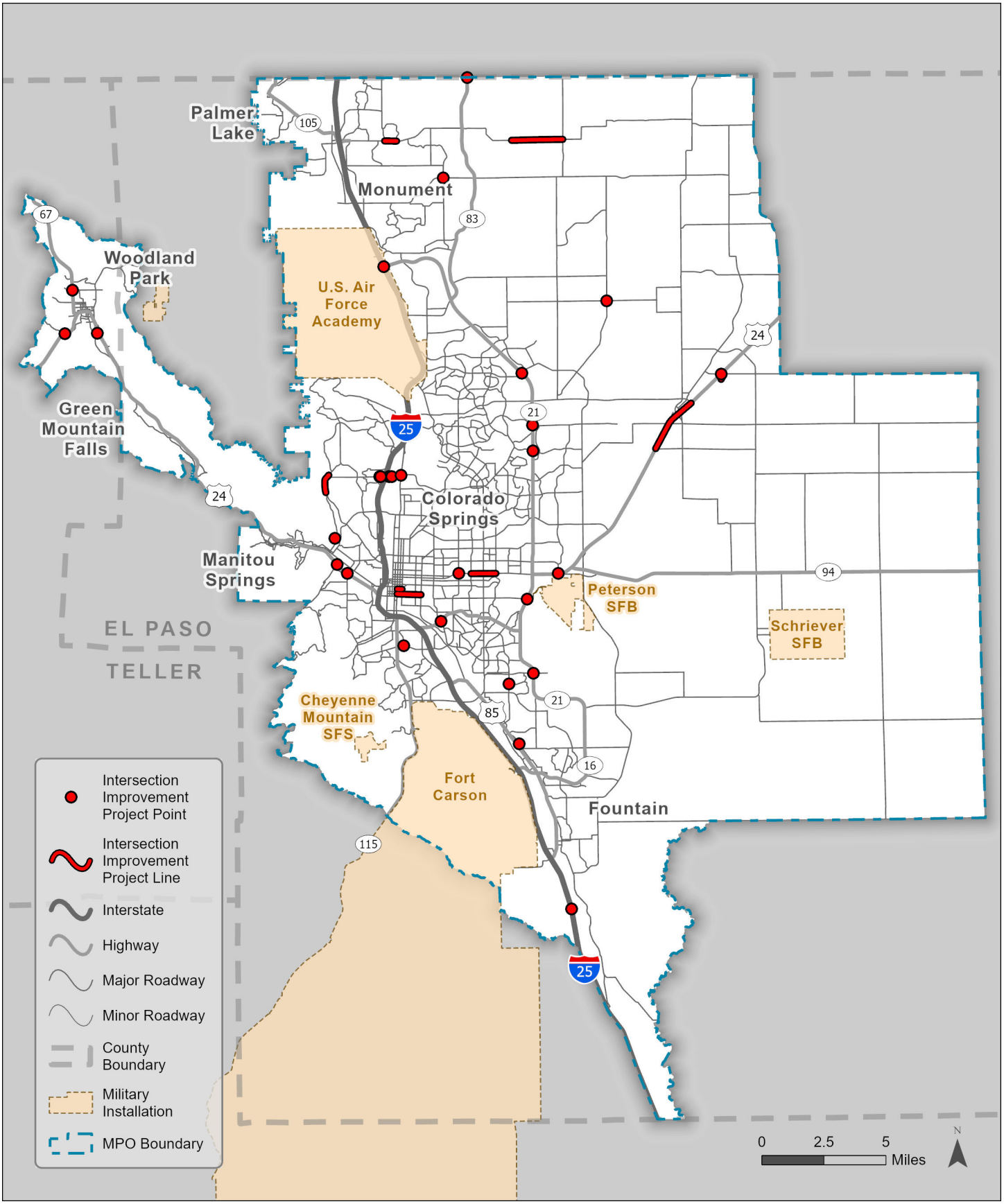


Figure 8-4: Bridge Projects

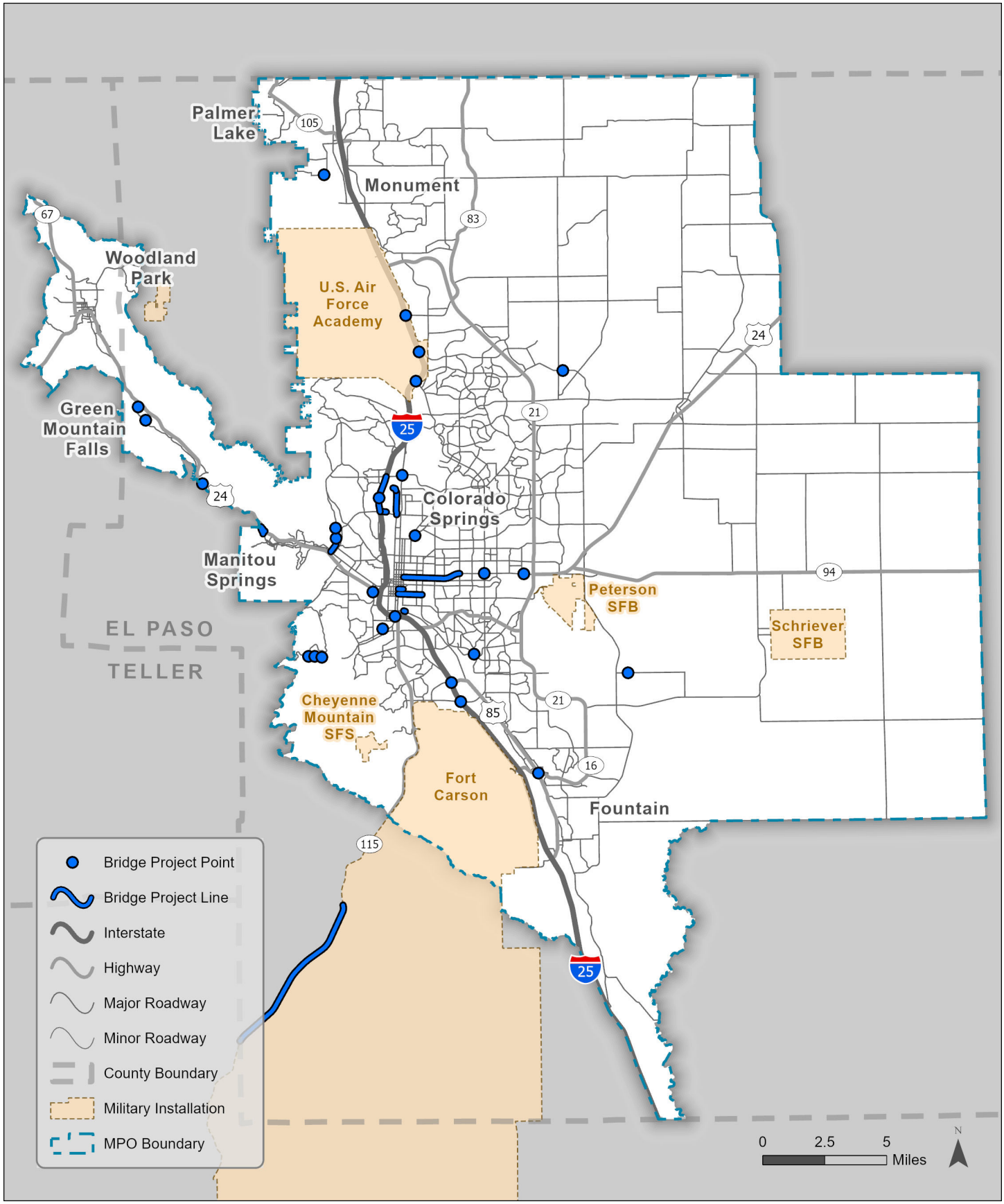


Figure 8-5: Active Transportation Projects

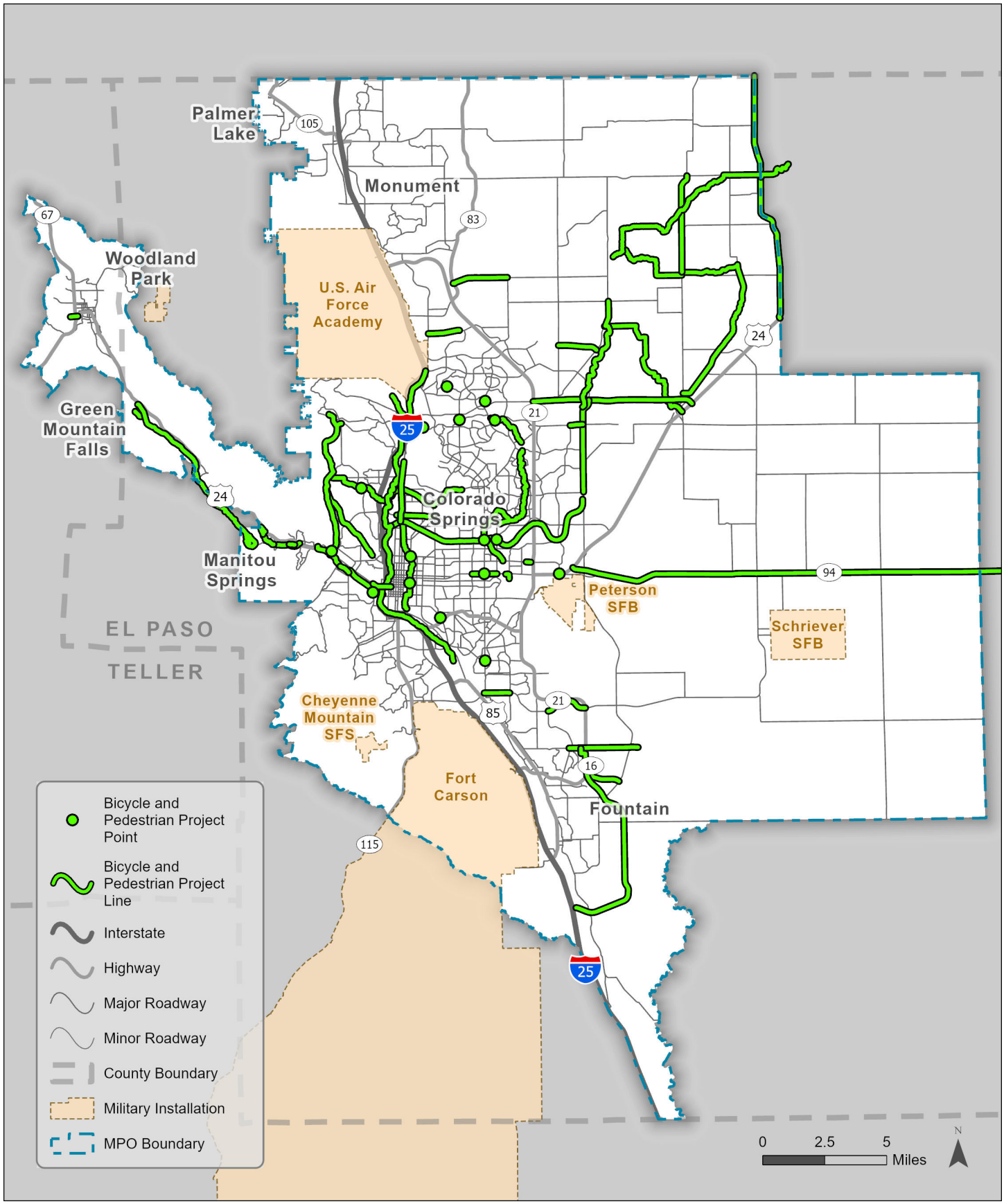


Figure 8-6: Safety Projects

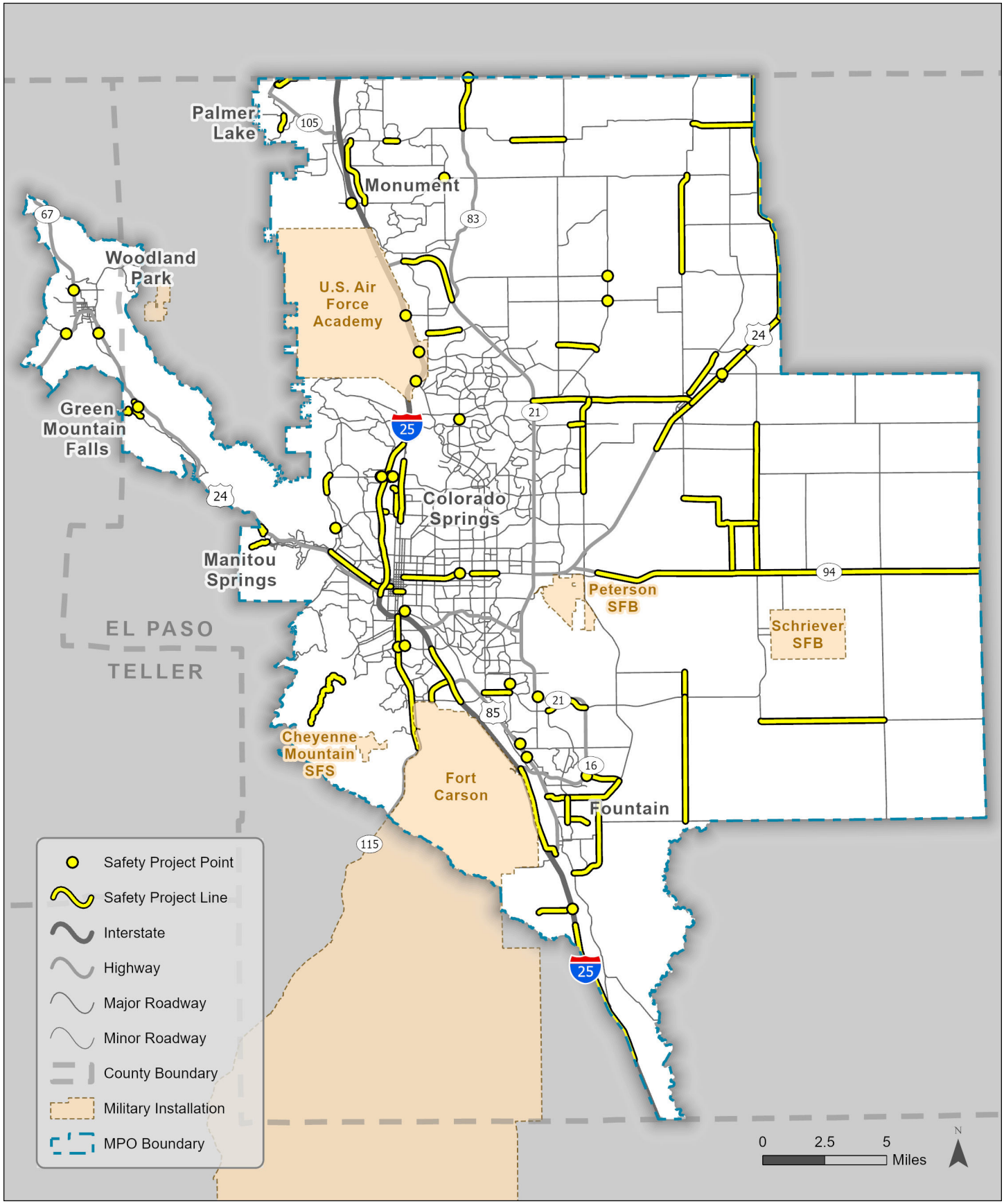
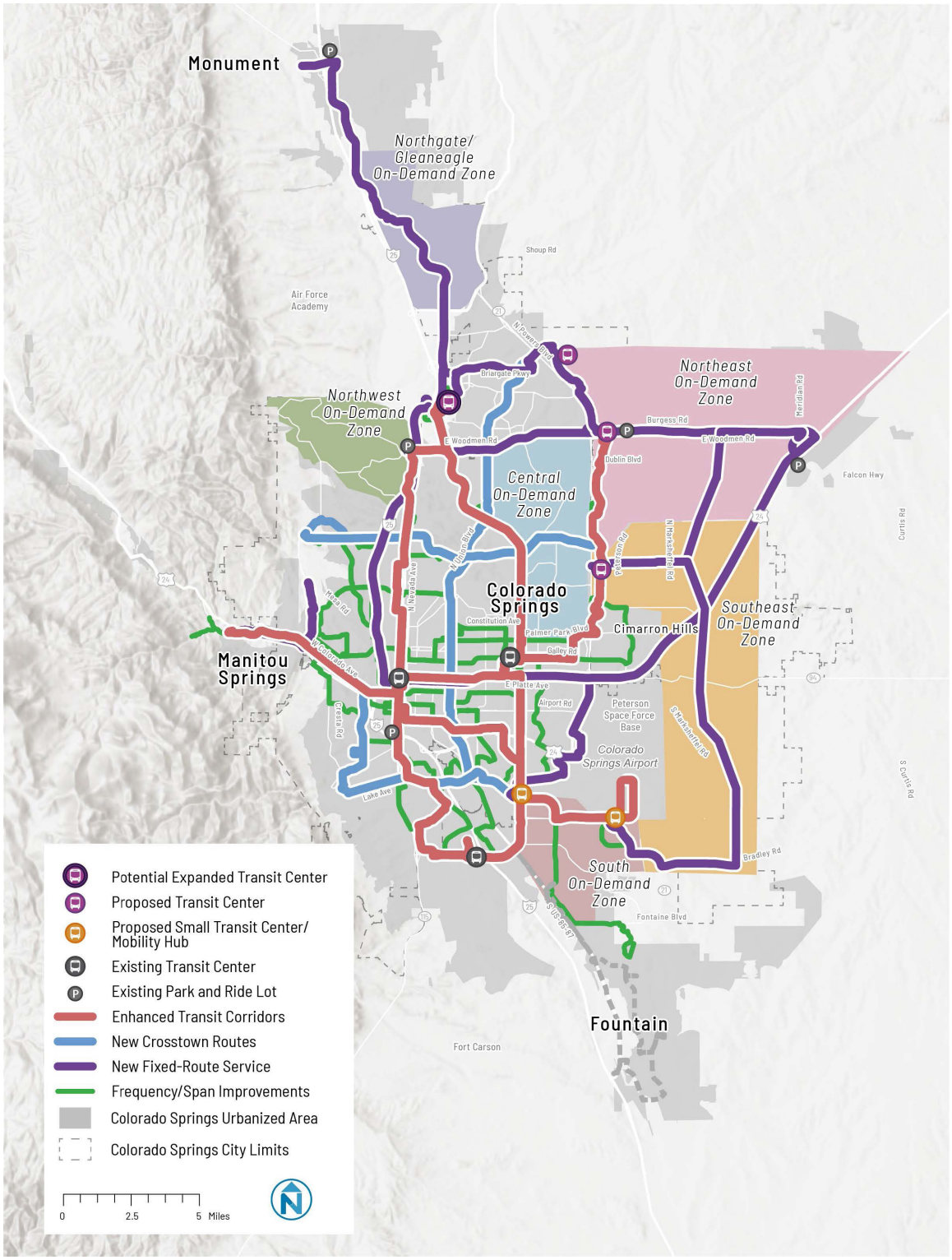


Figure 8-7: Transit Projects



Source: Colorado Springs 2050 Regional Transit Plan, 2024

UNFUNDED PROJECT LIST

As noted, the projected funding for the region is not anticipated to sufficiently meet transportation needs. Projects included in Table 8-2, are those that have an identified need but no identified funding source. While these projects would be beneficial to the regional transportation system, funding is not available to implement them within this plan. The unfunded project list is not all-encompassing. There are known needs beyond the scope of the fiscally constrained and unfunded project lists; however, they may not be developed enough to include in the LRTP at the time of publication. As the LRTP is updated in future years, the fiscally constrained and unfunded projects lists will change as needed.

Funding estimates were included in Table 8-2 when available.

Table 8-2: Unfunded Project List

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
CDOT	PPACG Freight Study Recommendations	Scope to be determined.	TBD
Colorado Springs	21st St Bridge over Bear Creek	Replacement or major rehabilitation of bridge due to condition issue.	TBD
Colorado Springs	2nd St Bridge over Spring Run	Replacement or major rehabilitation of bridge due to condition issue.	TBD
Colorado Springs	31st St Bridge Reconstruction over Spring Run	Replacement or major rehabilitation of bridge due to condition issue.	TBD
Colorado Springs	31st St/Camp Creek Roadway and Trail Improvements - Kiowa St to Fontanero St Phase 2	Reconstruct roadway and bridges along the corridor to accommodate conversion of the concrete channel to a naturalistic rock lined channel. Includes new off-street trail and wayfinding signage for the corridor.	$10,000,000
Colorado Springs	8th St/Cheyenne Blvd Intersection Improvements	Construct a roundabout at 8th St/Cheyenne Blvd intersection including appropriate pedestrian and bicycle crossings.	TBD
Colorado Springs	8th Street Improvements - US24 to Fountain Creek Phase 2	Construct roadway, pedestrian, and bicycle improvements and a bridge replacement at Fountain Creek.	$3,420,740
Colorado Springs	Academy Blvd and Palmer Park Pedestrian Connections	Improve pedestrian facilities and crossings along Academy Blvd to improve access to Palmer Park.	TBD

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
Colorado Springs	Academy Bridge over Platte Phase 2	Replace Academy bridge over Platte Ave in configuration that better accomodates pedestrian movements along Academy and acces to transit, and conversion to quadrant road interchange.	$64,320,000
Colorado Springs	Austin Bluffs Pkwy/ Garden of the Gods Rd/ Nevada Ave Intersection Improvements and Bridge Replacement Phase 2	This project will improve traffic operations, multimodal access and safety for the intersection of Austin Bluffs Pkwy/Garden of the Gods Rd and Nevada Ave. The intersection will be designed based on the PPRTA3 Intersection Study. The project will also require a new bridge on Garden of the Gods Rd over Monument Creek due to condition issues and to accommodate new configuration. The project includes extension of the multi-use trail along Austin Bluffs Pkwy to the Pikes Peak Greenway and considers future enhnaced transit connections along Nevada Ave.	$25,000,000
Colorado Springs	Bijou St Bridge over Shooks Run	Replacement or major rehabilitation of bridge due to condition issue.	TBD
Colorado Springs	Cache La Poudre St Bridge Reconstruction over Monument Creek	Replacement or major rehabilitation of bridge due to condition issue.	TBD
Colorado Springs	Cache La Poudre St Bridge Reconstruction over Shooks Run	Replacement or major rehabilitation of bridge due to condition issue.	TBD
Colorado Springs	Campus to Campus Corridor Phase 2	Enhanced Transit Corridor including Mobility Hubs connecting PPSC Transfer Centers (at South Academy Blvd and Interquest Pkwy) to USAFA Gateway Visitor Center. Routing generally following Academy Blvd, Voyager Pkwy, and Northgate Blvd as determined by further analysis.	$32,000,000
Colorado Springs	Cascade - Mark Dabling Connection (construction) Phase 2	Extend Cascade Ave to the north to connect to Mark Dabling Blvd with two new bridges.	$418,650
Colorado Springs	Cheyenne Rd Bridge over Cheyenne Creek	Replacement or major rehabilitation of bridge due to condition issue.	TBD

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
Colorado Springs	Colorado Ave Roadway Improvements Phase 2	Reconstruct Colorado Ave to improve safety including arterial street traffic calming and enhanced pedestrian crossings Increase on-street parking, widen sidewalks, and enhance bike/ped wayfinding throughout the corridor.	$3,400,000
Colorado Springs	Colorado Springs Railroad Bridges Program Phase 2	Repair/Rehabilitation/Replacement of railroad bridges due to condition issues (such as Uintah, Tejon, Nevada, Shooks Run) or for City required changes to accommodate other improvements.	$50,000,000
Colorado Springs	Congestion and Incident Management - Phase 2	This capital program includes analysis, study, engineering and construction to implement Citywide/ Region-wide Transportation System Management to include ITS and other technical solutions to improve traffic operations, coordinate systems and improve safety. Improvements may include monitoring systems, hardware and software, message systems, metering, fiber optic cable, communication infrastructure, and specialized equipment and staff.	TBD
Colorado Springs	Costilla and Cucharras St Improvements over Shooks Run Phase 2	Improve Costilla St and Cucharras St, including replacing the bridge over Shooks Run and improvements at Nevada Ave, Weber St, Corona St, Prospect St, Institute St, and Cedar St intersections.	$9,627,000
Colorado Springs	Cottonwood Creek Trail Corridor Improvements - Union crossing Phase 2	Design and construct a grade-separated crossing of Cottonwood Creek Trail at Union Blvd.	$12,400,000
Colorado Springs	Cresta Rd Bridge over Cheyenne Creek	Replacement or major rehabilitation of bridge due to condition issue.	TBD
Colorado Springs	Cucharras St Improvements - Nevada Ave to Hancock Ave	Improve Cucharras St, including a new bridge over Shooks Run and intersection improvements.	TBD
Colorado Springs	Dawson Dr Bridge over Dry Creek	Replacement or major rehabilitation of bridge due to condition issue.	TBD

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
Colorado Springs	Emergency Bridge Fund - Phase 2	The Emergency Bridge Fund addresses unfunded bridge needs and provide the City the ability to repair, replace, or rehabilitate a bridge that has a serious deterioration issue or safety concerns to the travelling public. Historically, Emergency Bridge Funds have been invested in replacement design and construction efforts. The funds have enabled the City to leverage other funding sources, advance design efforts on B-List projects, and address serious bridge needs.	TBD
Colorado Springs	Fillmore Pedestrian Safety Improvements Phase 2	Implement recommendations of a safety study. Consider access management, access to transit, and safe crossings	$10,000,000
Colorado Springs	Fillmore St Roadway Improvements Phase 2	The bridges over Monument Creek/Pikes Peak Greenway and bridges over the Union Pacific Railroad will be replaced due to condition. The project also includes a trail connection down to the Pikes Peak Greenway. The project will improve the existing sidewalks and pedestrian facilities and widen Fillmore St. from 4 to 6 lanes from Cascade to I25.	$151,000
Colorado Springs	Fontaine Blvd Improvements - Rolling View Dr to Sleepy Meadow Dr	Upgrade to arterial roadway standards.	TBD
Colorado Springs	Garden Ln Bridge over Fountain Creek Tributary	Replacement or major rehabilitation of bridge due to condition issue.	TBD
Colorado Springs	Garden of Gods Rd Bridge over Monument Creek	Replace bridge due to condition issue and widen to support intersection improvements at Nevada Ave.	TBD
Colorado Springs	Gold Camp Rd Bridge over Bear Creek	Replacement or major rehabilitation of bridge due to condition issue.	TBD
Colorado Springs	Hancock Corridor Study and Implementation Phase 2	Conduct a study to determine the desired function/role of Hancock Expwy between the airport and Downtown Colorado Springs considering vehicles use, enhanced transit corridor, bike and pedestrain connections, and desired land use.	$10,000,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
Colorado Springs	Hancock Expwy/Delta Dr/Circle Dr Intersection Safety Improvements	Construct intersection improvements to improve safety for vehicles and bicyclists.	TBD
Colorado Springs	Holly Street New Bridge over Columbia Drainage	Replacement or major rehabilitation of bridge due to condition issue.	TBD
Colorado Springs	Interquest Pkwy Multimodal Improvements - I-25 to E Federal Dr	Conduct an analysis to assess the traffic impacts to this area as a result of the northern extension of Powers Blvd to I25 and provide a concept to improve multimodal access to and between businesses and employers and improve safety and intersection operations.	TBD
Colorado Springs	Intersection Improvements - Phase 2	Construct improvements at intersections that will reduce delay, improve air quality, and enhance safety for both motorized and non-motorized traffic.	TBD
Colorado Springs	Las Vegas St Bridge over Shooks Run	Replacement or major rehabilitation of bridge due to condition issue.	TBD
Colorado Springs	Las Vegas St Corridor Improvements - Ft Carson Spur to 1,200' south of Janitell Rd	Provide roadway, intersection and bicycle and pedestrian improvements to Las Vegas St to address safety, drainage, and access.	TBD
Colorado Springs	Las Vegas St Corridor Improvements - SH85/87 to Ft Carson Spur	Provide roadway, intersection, and bicycle and pedestrian improvements to Las Vegas St to address safety, drainage, and access.	TBD
Colorado Springs	Mayhurst Ave Bridge over Cheyenne Creek	Replacement or major rehabilitation of bridge due to condition issue.	TBD
Colorado Springs	Mesa Rd Improvements - Fillmore St to Uintah St	Improve Mesa Rd with curb, gutter, sidewalk, bike lanes, and a shared use path.	TBD
Colorado Springs	Murray Blvd and Bijou St Intersection Improvements	Design and implement a roundabout intersection at this location.	TBD
Colorado Springs	Nevada Roadway Safety Study - Uintah St to Fillmore St	Analyze alternatives and identify a concept for improving safety and mitigating traffic speeds on Nevada Ave between Uintah St and Fillmore St.	TBD
Colorado Springs	Old Ranch Rd - Kettle Creek to Lexington Dr Shoulders and Sidewalk Improvements	Completes improvements to Old Ranch Rd between Kettle Creek and Lexington Dr by adding shoulders and sidewalks.	TBD

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
Colorado Springs	Old Ranch Rd Improvements - Cordera Crest Ave to Union Blvd/Milam Rd	Improve Old Ranch Road operations and safety.	TBD
Colorado Springs	On-Street Bikeway Improvements - Phase 2	The City's Comprehensive Plan, ITP, Bike Master Plan and the Complete Streets ordinance strongly recommend streets be designed to accommodate safe and efficient bicycle travel/access. There are many locations in the city where safe and adequate bicycle travel and access are not provided or need enhancement. Proposed bikeway improvements will continue to include: improve and construct bike lanes in accordance with the ITP and the City's Bicycle Plan; install on-street bicycle lanes and connections to off-street facilities to close gaps on the existing bike network; improve connections from on-street bike lanes to the Colorado Springs trail system and residential/commercial centers; and, develop/ implement improved signage to provide better wayfinding for cyclists.	TBD
Colorado Springs	Patty Jewett Trail - Cache La Poudre St to Patty Jewett Golf Course	Construct a 12 foot shared use trail along Shooks Run between Cache La Poudre St and Patty Jewett Golf Course.	TBD
Colorado Springs	Pedestrian Bridge Reconstruction over Cache La Poudre St	Replacement or major rehabilitation of bridge due to condition issue.	TBD
Colorado Springs	Peterson Rd Multimodal Improvements - Dublin Blvd to Stetson Hills Rd	Reconstruct sidewalk on one side of the road to provide a two-way shared-use path.	TBD
Colorado Springs	Pine Creek Trail Connection - Pikes Peak Greenway to Research Pkwy Phase 2	Construct a shared use path along Pine Creek between Pikes Peak Greenway and Research Pkwy.	$9,000,000
Colorado Springs	Plains to Peak Corridor Phase 2	Enhanced Transit Corridor including Mobility Hubs connecting Manitou Springs to Falcon. Routing generally following Colorado Ave, Pikes Peak Ave, Platte Ave, and US24 as determined by futher analysis.	$19,200,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
Colorado Springs	Platte Ave Reconstruction - Wahsatch Ave to Cascade Ave	Reconstruct Platte Ave between Wahsatch Ave and Cascade Ave to one travel lane in each direction to increase pedestrian safety and improve intersection operations at Nevada Ave.	TBD
Colorado Springs	Platte Ave/Academy Blvd Interchange Conversion Phase 2	Reconstruct Academy Blvd/Platte Ave interchange to be a quadrant road interchange to facilitate pedestrian movements along Platte Ave by removing ramps and across Academy by eliminating left turns on the bridge.	$36,400,000
Colorado Springs	Rangewood Dr Bridge over Cottonwood Creek Tributary	Replacement or major rehabilitation of bridge due to condition issue.	TBD
Colorado Springs	Replace and Upgrade Transit IT Equipment and Software Phase 2	Maintain and upgrade existing transit hardware and software allowing for smart-cards, real-time bus information, traffic signal prioritization, etc. to improve efficiency and customer service.	$23,310,000
Colorado Springs	Roadway Safety and Traffic Operations - Phase 2	This capital program includes analysis, study, engineering and construction of intersection and corridor “spot” improvements to mitigate existing safety and traffic flow deficiencies. Proposed projects of this type will include the construction of traffic signals, roundabouts, auxiliary traffic lanes, traffic calming features, incorporation of multimodal enhancements, and other lower-cost geometric improvements. These projects may also install guard rail, construct/ reconstruct medians, and install traffic control devices where warranted to improve traffic operations and safety.	TBD
Colorado Springs	Saint Elmo Ave Bridge over Cheyenne Creek	Replacement or major rehabilitation of bridge due to condition issue.	TBD
Colorado Springs	Saint Vrain St Bridge over Shooks Run	Replacement or major rehabilitation of bridge due to condition issue.	TBD
Colorado Springs	Sand Creek Trail Corridor Improvements - Palmer Park Blvd to Airport Rd	Construct a new 12 foot trail to include pedestrian underpasses and pedestrian bridges.	TBD

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
Colorado Springs	Sidewalk Infill Improvements - Phase 2	The City's Comprehensive Plan, ITP) and the Complete Streets Policy strongly recommend streets be designed to accommodate safe and efficient pedestrian access. There are many locations in the city where safe and adequate pedestrian travel and access are not provided. Proposed pedestrian improvements will continue to construct missing pedestrian connections along transportation facilities, schools, and neighborhoods and will follow the Operations and Maintenance Division quadrant approach to improve safety and develop/implement improved pedestrian connectivity.	TBD
Colorado Springs	Sinton Trail Underpass at Centennial Blvd	Improve Sinton Trail underpass under Centennial Blvd.	TBD
Colorado Springs	Stetson Hills Blvd - Marksheffel Rd to Luther Rd	Extend Stetson Hills Blvd from Marksheffel Dr east to Luther St as a complete street with bike and pedestrian facilities.	TBD
Colorado Springs	Stratton Ave Bridge over Cheyenne Creek	Replacement or major rehabilitation of bridge due to condition issue.	TBD
Colorado Springs	Tech Center Dr/ Rusina Rd/Pro Rodeo Dr Shared Use Path - Garden of the Gods Rd to Rockrimmon Blvd	Construct a shared use trail between Rockrimmon Blvd and Garden of the Gods Rd, generally along the alignment of Tech Center Dr.	TBD
Colorado Springs	Templeton Gap Trail Connection - Templeton Gap Rd to Templeton Gap Trail	Construct a shared use path or upgrade and connect existing sidewalk along the west side of Union Blvd between Templeton Gap Rd and the Templeton Gap Trail.	TBD
Colorado Springs	Terminal Southgate Enhanced Transit Corridor Study and Implementation Phase 2	Evaluate options for implementing enhanced transit, options should include routing and operations, and alternate routing.	$8,000,000
Colorado Springs	Transit Fleet Supplement Phase 2	Fund replacement and expansion transit service vehicle purchases: diesel, gasoline, and any low or zero emission vehicles including supporting infrastructure technologies to fuel and charge.	$125,680,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
Colorado Springs	Transit Service Enhancements - Phase 2	Studies and service extension/expansion enhancements (including Comprehensive Operation Analysis, Alternate Transportation Implementation Study and other studies) and implementation to improve operations and/or to provide service extension/expansion enhancements to Military Installations, Major Employers, and Tourism Hubs and underserved areas as well as Nevada Ave, Academy Blvd, Platte Ave, or other corridors identified for consideration in ConnectCOS. This program aims to bring public transit in the Colorado Springs area to a higher level by providing direct, frequent, efficient, and reliable transit solutions that continue to focus on improving the existing service area, advancing high-frequency core transit corridors to create improved mobility options for the entire community, improving service hours and frequencies, and implementing new and advanced technologies to improve reliability and advance fleet upgrades.	$50,000,000
Colorado Springs	Transit Stop and Station Improvements - Phase 2	New or existing transit stops and stations; stop improvements could include, but not limited to, safety improvements, customer access, sidewalk connections, ADA-compliance, pre-board fare payment infrastructure, wayfinding, service kiosk, message boards, benches, trash receptacles, and shelters. Station examples include new/relocated stations or transfer centers at Chapel Hills Mall, Citadel Mall, Hancock/Academy, Pikes Peak SC and other Multimodal Hubs to support ConnectCOS Transit Vision Network including but not limited to Garden of the Gods Rd, PPSC, military bases, downtown and park and rides, and active transportation connections.	$50,000,000
Colorado Springs	Uintah St Multimodal Improvements - El Paso St to Institute St	The project includes the reconstruction of the Uintah St bridge over Shooks Run to include a trail underpass and ramps from the trail to street level.	TBD
Colorado Springs	Union Blvd Bridge over Cottonwood Creek Tributary	Replacement or major rehabilitation of bridge due to condition issue.	TBD

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
Colorado Springs	Union Blvd/Circle Dr Bike Improvements - Monterey Rd to Fountain Blvd	Address gaps in bicycling infrastructure along south Union Blvd and Circle Dr, including a 2-way cycle track between Hancock Expy and Monterey Rd.	TBD
Colorado Springs	UPRR Bridge over Nevada Ave	Replace bridge due to condition issue.	TBD
Colorado Springs	UPRR Bridge over Shooks Run	Replacement or major rehabilitation of bridge due to condition issue.	TBD
Colorado Springs	UPRR Bridge over Tejon St	Replace bridge due to condition issue.	TBD
Colorado Springs	UPRR Bridge over Uintah St	Replacement or major rehabilitation of bridge due to condition issue.	TBD
Colorado Springs	Vincent Dr Bridge over Cottonwood Creek	Replacement or removal of bridge due to condition issue.	TBD
Colorado Springs	Water St Bridge Replacement over Camp Creek	Replacement or major rehabilitation of bridge due to condition issue.	TBD
Colorado Springs	Westwood Blvd Bridge over Templeton Gap Basin	Replacement or major rehabilitation of bridge due to condition issue.	TBD
Colorado Springs	Woodmen Rd Multimodal Improvements - Orchard Valley Rd to Rockrimmon Blvd	Construct multimodal improvements including on-street bike lanes and sidewalks along Woodmen Rd between Orchard Valley Rd and Rockrimmon Blvd.	TBD
El Paso County	Non-motorized Projects Pool Program	A program to implement non-motorized projects to improve safety and connectivity.	$20,000,000
El Paso County	Baptist Rd from Desiree Dr to Roller Coaster Rd	Construct paved multiuse shoulders, improve driving surface, drainage, and intersection improvements.	$28,500,000
El Paso County	Bradley Rd from Academy to Goldfield	Reconstruct/construct roadway for appropriate lane configuration, intersection and drainage improvements and consistent cross section including multimodal accommodations.	$70,000,000
El Paso County	Bridge Maintenance and Replacement Pool Program	A program to design, preconstruction activities, and construct bridge maintenance and bridge replacements.	$150,000,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
El Paso County	Burgess Rd from Milam Rd to Meridian Rd (via Goodson/Rex)	Construct paved shoulders, improve driving surface, drainage, intersection improvements and provide multimodal features.	$71,000,000
El Paso County	Curtis Rd from Judge Orr Rd to Falcon Hwy and Garrett Rd to Highway 94	Construct paved multiuse shoulders, improve driving surface, drainage, and intersection improvements.	$38,000,000
El Paso County	Data Collection Pool Program	Program to purchase equipment, contracts or software for data collections including but not limited to traffic counts, speed monitors, cameras, compliance with traffic rules, crash data or identification of crash hot spots, etc. to allow data driving decision making.	$12,000,000
El Paso County	Fountain Mesa Rd from Caballero Ave to Fontaine Blvd	Urban drainage improvements, multimodal features & upgrade traffic signal.	$9,000,000
El Paso County	CO105 from Arrowwood Dr to CO83	Construct paved multiuse shoulders, improve driving surface, drainage, and intersection improvements.	$31,000,000
El Paso County	Interchange at Academy Blvd and PPSC Design	Plan and design for a future grade separation.	$4,500,000
El Paso County	Major Road and Bridge Reconstruction - Phase 2	This capital program Includes road and bridge projects that improve road surfaces, update to current engineering standards and are beyond normal road maintenance. These projects may also install shoulders, regravel and grade gravel roads, convert gravel to paved roads, provide safety edges, enhanced striping, measures to prevent roadway departers, or reconstruct a roadway surface.	$18,800,000
El Paso County	Meridian Rd from Hodgen Rd to Rex Rd	Reconstruct/construct roadway for appropriate lane configuration, intersection and drainage improvements and consistent cross section including multimodal accommodations.	$67,000,000
El Paso County	Meridian Rd from Woodmen Rd to Woodmen Hills Dr Improvements	Reconstruct/construct roadway for appropriate lane configuration, intersection and drainage improvements and consistent cross section including multimodal accommodations.	$19,000,000
El Paso County	Milam Rd from Shoup Rd to Old Ranch Rd	Construct paved multiuse shoulders, improve driving surface, drainage, and intersection improvements.	$22,700,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
El Paso County	Old Pueblo Rd from Link to I25 Improvements	Construct paved multiuse shoulders, improve driving surface, drainage, and intersection improvements.	$57,000,000
El Paso County	Pavement Maintenance Pool Program	A program to identify road segments needing pavement overlays, safety edges, striping, crack or chip sealing with the goal to extend the useful live a pavement.	$120,000,000
El Paso County	Preconstruction Funding - Phase 2	This capital program Includes activities to get projects shovel ready, often for grant funding or developer constructed improvements. These projects may include design, corridor studies, safety analysis, Right of Way and/or required federal clearances.	$18,800,000
El Paso County	Rampart Range Road from MP 18.8 to MP 21.1 and Loy Creek	Upgrade the road from gravel to pavement, safety and drainage improvements.	$4,700,000
El Paso County	Safety and Multimodal Program - Phase 2	This capital program includes analysis, study, engineering and construction of intersection, multimodal, and corridor "spot" improvements to mitigate safety and traffic flow deficiencies. Proposed projects of this type will include the construction of traffic signals, roundabouts, auxiliary traffic lanes, traffic calming features, trails, multiuse shoulders, sidewalks and other lower-cost geometric improvements. These projects may also install guard rail, construct/reconstruct medians, and install traffic control devices where warranted to improve bike and pedestrian crossings, emergency repairs, traffic operations and safety.	$18,800,000
El Paso County	Safety Implementation Pool Program	A program to implement various safety improvements with a focus on high crash areas, intersections, and the use of FHWA Proven Safety Countermeasures.	$50,000,000
El Paso County	Stormwater Master Plan	Develop a Stormwater Master Plan that includes hydrologic and hydraulic modeling, risk assessments, development of a CIP and cost estimates.	$3,000,000
El Paso County	Stormwater Project Design and Construction Pool Program	Ongoing conditions assessments are determining improvements needed to address stormwater related to road runoff or regional pond needs. Design and construct project to address identified needs.	$500,000,000

PROJECT SPONSOR	PROJECT NAME	PROJECT DESCRIPTION	EST. COST
El Paso County Public	Interchange at Academy Blvd and PPSC Construction	Preconstuction ROW and othe permits and construction of the Interchange.	$10,000,000
El Paso County Public Works	ADA Compliance Program Phase 2	Work will occur on a variety of roads in the unincorporated area within the MPO boundary to carry out an ADA Compliance Program. Design and construct ADA improvements, missing sidewalk/trail connections, and intersection, signal and signing improvements.	$150,000,000
El Paso County/ Colorado Springs	Black Forest Rd Improvements - Research Pkwy to Shoup Rd	Scope to be determined.	$55,000,000
Green Mountain Falls	Bridge Improvements	Safety improvements study for 8 bridges.	$50,000
Green Mountain Falls	Intersection Improvements (Green Mountain Falls)	Traffic engineering study.	$75,000
Green Mountain Falls	Roadway Safety and Traffic Operations (Green Mountain Falls)	Traffic engineering study.	$125,000
Regional	State and Federal Discretionary Grant Match Fund-Phase 2	This program could be available for all member governments and could be used for local matching funds for projects. The State or Federal Discretionary Grant Match Fund Program could be used to fulfill local match requirements for discretionary grants awarded by the State of Colorado (programs pending development) or the Federal government (e.g., INFRA, RAISE, CRISI grants) or future grant opportunities resulting from a federally declared disaster. The program is not intended to provide local match for revenue allocations administered by PPACG.	TBD
Regional	Woodmen Rd Improvements - Powers Blvd to US24 Phase 2	Safety and multimodal improvements on Woodmen Rd from Powers Blvd to US24. Widening from Golden Sage Rd to US24.	$47,051,574

Notes: Acronyms and abbreviations are available in Appendix A. Project names were adjusted for clarity and consistency within this document only.

APPENDICES

APPENDICES

The following pages contain the appendices for the 2050 Long Range Transportation Plan:

- A. Acronyms and Abbreviations
- B. 2050 Regional Transit Plan
- C. 2050 Regional Specialized Human Services Transportation Plan
- D. Equity Analysis
- E. Greenhouse Gas Transportation Report
- F. Federal Lands Access
- G. 2050 LRTP Public Involvement Plan
- H. 2050 LRTP Survey Summary
- I. 2050 LRTP Public Comments
- J. Financial Plan References

APPENDIX A: ACRONYMS AND ABBREVIATIONS

5307	FTA Urbanized Area Formula Program
5309	FTA Capital Investment Program
5310	FTA Enhanced Mobility of Seniors and Individuals with Disabilities
5314	FTA Technical Assistance and Workforce Development Program
5339	FTA Grants for Buses and Bus Facilities
3HSP	Triennial Highway Safety Plan
AADT	average annual daily traffic
ACT	average daily traffic
ADA	Americans with Disabilities Act
ADU	accessory dwelling unit
AI	artificial intelligence
ATS	Advancing Transportation Safety
BEB	battery electric
BIL	Bipartisan Infrastructure Law
BLM	Bureau of Land Management
BNSF	Burlington Northern Santa Fe
BTE	Bridge and Tunnel Enterprise
BUILD	Better Utilizing Investments to Leverage Development
CAC	Community Advisory Committee
CC	Colorado College
CDBG	Community Development Block Grant
CDOR	Colorado Department of Revenue
CDOT	Colorado Department of Transportation
CDPHE	Colorado Department of Public Health and Environment
CFR	Central Front Range
CFR	Code of Federal Regulation
CMP	Congestion Management Process
CO	Colorado (state highway)
COG	Council of Governments
CRCP	Continuous Reinforced Concrete Pavement
CRISI	Consolidated Rail Infrastructure and Safety Improvements
CRP	Carbon Reduction Program
CSP	Colorado State Patrol
CV	connected vehicle
CWMP	Creek Walk Master Plan
DCIP	Defense Community Infrastructure Program
DDES	Data-Driven Economic Strategies

DHSEM	Division of Homeland Security and Emergency Management
DoD	Department of Defense
DOLA	Colorado Department of Local Affairs
DOT	Department of Transportation
DTR	Department of Transit and Rail
EA	environmental assessment
EJ	Environmental Justice
EOC	Emergency Operations Center
EPA	Environmental Protection Agency
ETC	Enhanced Transit Corridor
eTIP	electronic TIP
EUL	Enhanced Use Lease
EV	electric vehicle
FAST	Fixing America's Surface Transportation
FASTER	Funding Advancements for Surface Transportation and Economic Recovery
FEMA	Federal Emergency Management Agency
FHWA	Federal Highways Administration
FLAP	Federal Lands Access Program
FLH	Federal Lands Highways
FLMA	Federal Lan Management Agency
FLTP	Federal Lands Transportation Plan
FRED	Federal Reserve Economic Data
FRPR	Front Range Passenger Rail
FTA	Federal Transit Administration
FY	fiscal year
GHG	greenhouse gas
GIS	geographic information system
GPS	Global Positioning System
HOV	high-occupany vehicle
HPMS	Highway Performance Monitoring System
HSIP	Highway Safety Improvement Program
HSIP	Highway Safety Improvement Program
HSO	Highway Safety Office
HSP	human service provider
HUTF	Highway Users Tax Fund
I	Interstate
IGA	Intergovernmental Agreement
IGSA	Inter-Governmental Support Agreements
IIJA	Infrastructure Investment and Jobs Act

INFRA	Infrastructure for Rebuilding America
IoT	Internet of Things
IRA	Inflation Reduction Act
IRI	International Roughness Index
ITP	Colorado Springs Intermodal Transportation Plan
ITS	intelligent transportation system
JCP	Jointed Concrete Pavement
JLUS	Joint Land Use Study
LF	linear feet
LiDAR	light detection and ranging
MaaS	Mobility as a Service
MAMSIP	Military Access, Mobility and Safety Improvement Project
MAP-21	Moving Ahead for Progress in the 21st Century Act
MM	mile marker
MMOF	Multimodal Transportation and Mitigation Options Fund
MMT	Mountain Metropolitan Transit
mph	miles per hour
MLOS	maintenance levels of service
MPDG	Multimodal Project Discretionary Grant
MP	mile point
MPO	Metropolitan Planning Organization
MSA	metropolitan statistical area
MUTCD	Manual on Uniform Traffic Control Devices
NAAQS	National Ambient Air Quality Standards
NBI	National Bridge Inventory
NEPA	National Environmental Policy Act of 1969
NHCCI	National Highway Construction Cost Index
NHFL	National Highway Freight Program
NHPP	National Highway Performance Program
NHS	National Highway System
NLCD	National Land Cover Database
NORAD	North American Aerospace Defense Command
NPMRDS	National Performance Management Research Data Set
NPS	National Park Service
NRSS	National Roadway Safety Strategy
NTD	National Transit Database
O&M	operations and maintenance
OTS	Office of Transportation Safety
PEL	Planning and Environment Linkages

PHEV	plug-in hybrid electric vehicle
PIP	Public Involvement Plan
PP	Pikes Peak (in project names)
PPAAA	Pikes Peak Area Agency on Aging
PPACG	Pikes Peak Area Council of Governments
PPP	Power Projection Platform
PPRTA	Pikes Peak Regional Transportation Authority
PPSC	Pikes Peak State College
PROTECT	Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation
PROWAG	Public Right-of-Way Accessibility Guidelines
RAISE	Rebuilding American Infrastructure with Sustainability and Equity
RM	revenue miles
ROW	right of way
RPP	Regional Priority Progam
RR	railroad
RRFB	Rectangular Rapid Flashing Beacon
RTPAC	Regional Transportation Plan Advisory Committee
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SB	Senate Bill
SBD 1	Space Base Delta 1
SCRP	Southern Colorado Rail Park
SDP	Service Development Plan
SFB	Space Force Base
SFS	Space Force Station
SH	state highway (used only in legacy project names)
SIP	state air quality implementation plan
SMART	Strengthening Mobility and Revolutionizing Transportation
SPOE	Seaports of Embarkation
SS4A	Safe Streets and Roads for All
STBG	Surface Transportation Block Grant
STBGP	Surface Transportation Block Group Program
STRAHNET	Strategic Highway Network
STSP	Strategic Transportation Safety Plan
SV	autonomous vehicle
TAC	Transportation Advisory Committee
TAP	Transportation Alternatives Program
TAZ	ransportation analysis zone

TBD	to be determined
TC	Transportation Commission
TCS	Transit Connections Study
TEL	toll express lane
TIGER	Transportation Investments Generating Economic Recovery
TIP	Transportation Improvement Program
TPR	Transportation Planning Region
TTRI	travel time reliability index
TTTR	Truck Travel Time Reliability
U.S.	United States
U.S.C.	United States Code
UCCS	University of Colorado, Colorado Springs
UDC	Unified Development Code
UPWP	Unified Planning Work Program
UPWP	Union Pacific
USAFA	United States Air Force Academy
USFS	United States Forest Service

APPENDIX B: 2050 REGIONAL TRANSIT PLAN

The 2050 Regional Transit Plan was led by Mountain Metropolitan Transit (MMT) as the designated direct recipient of FTA Section 5307 funding in the region.

Colorado Springs 2050 Regional Transit Plan

Final Report

August 2024



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1 INTRODUCTION

PROJECT BACKGROUND

The 2050 Regional Transit Plan (RTP) serves as a framework for operations, improvements, and ongoing development of fixed route transit services in the Pikes Peak region. The RTP is an appendix to Pikes Peak Area Council of Governments' (PPACG's) 2050 Long Range Transportation Plan (LRTP) and is integrated with future roadway, pedestrian, bicycle, specialized, and new mobility plans to form a complete vision for multimodal transportation in the region. Completing and regularly updating the LRTP maintains the region's compliance with federal and state laws, as well as maintains the region's eligibility for federal transportation funding. The 2050 LRTP ultimately forms the strategy for the appropriate use of funds to meet the community's mobility goals.

The RTP was developed through a partnership between Mountain Metropolitan Transit (MMT) and PPACG. Because of their inherent connections, the RTP was completed in conjunction with the 2050 Specialized Transportation Plan or Coordinated Human Services Transportation Plan (CHSTP) as well as MMT's first Zero Emission Vehicle Transition Plan (ZEV Plan). The focus of the CHSTP is to optimize coordination for specialized transportation (i.e., services for seniors, persons with disabilities, etc.). The ZEV Plan charts a path forward for MMT to transition its vehicle fleet from mostly relying on gasoline- and diesel-powered vehicles to alternative fuel vehicles and is a requirement to be eligible to receive Federal Transit Administration (FTA) grants that fund low- and no-emission vehicles. The RTP was developed with the CHSTP and ZEV Plan to capitalize on opportunities to best support users of all services. The teams jointly developed the goals/objectives, engaged the Advisory Committee, and conducted engagement activities for maximum integration.

The 2050 RTP builds off previous planning efforts, such as the 2045 RTP and ConnectCOS to develop a vision for the future of transit in Colorado Springs and adjacent communities. Since the 2045 RTP was adopted in early 2020, transit in the region has been acutely affected by the COVID-19 pandemic. Like most transit agencies across the country, MMT saw a significant decline in the number of daily boardings beginning in March 2020 and scaled back services across the system. Thanks in part to federal COVID-19 relief funds as well as a quick recovery in tax revenue, MMT has been steadily restoring service and seeing ridership bounce back in response, reaching 89% of 2019 annual ridership in 2023. Ongoing industrywide challenges with hiring and retaining bus operators as well as adapting to new travel patterns with the increased adoption of remote work have continued to present barriers to implementing many of the recommendations from the 2045 RTP.

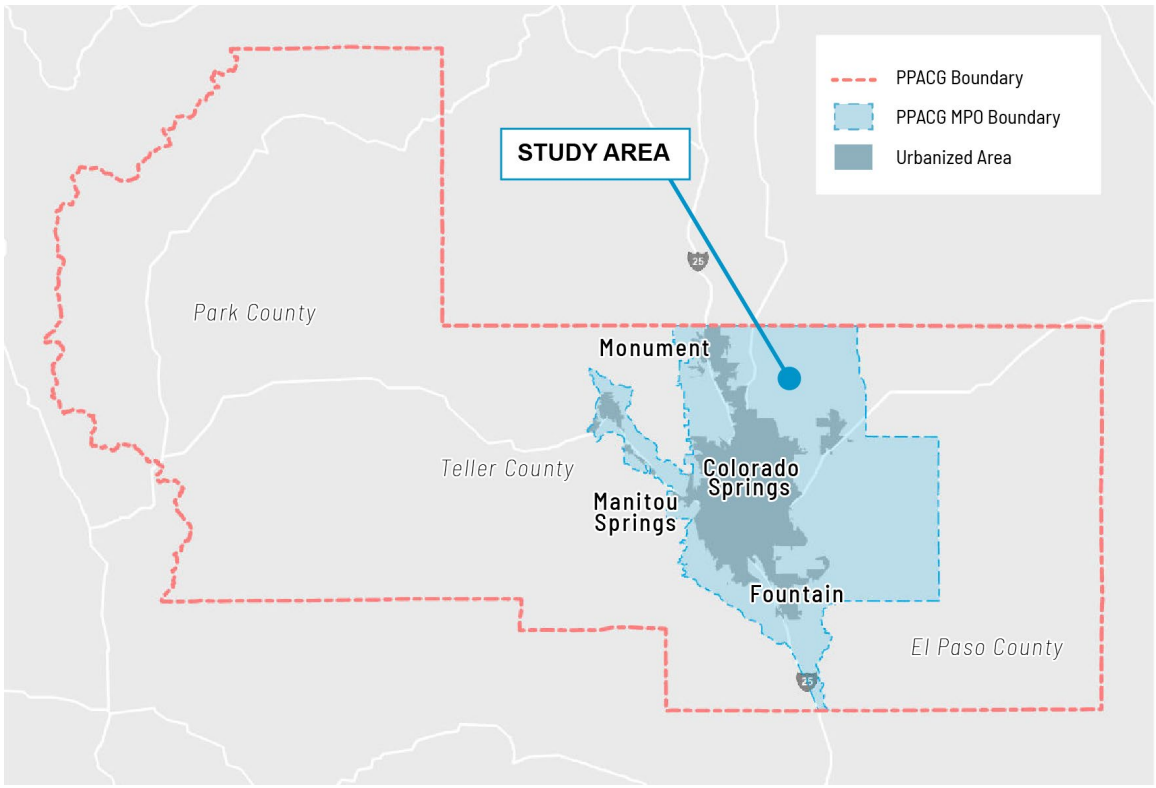
Given this new paradigm for transportation needs in the region, the 2050 RTP represents a unique opportunity to take a fresh approach to charting a vision for transit in the Pikes Peak region over the next 25 years.

STUDY AREA

The RTP addresses transit needs at two overlapping scales within the region. At its largest extent, the study area comprises the urbanized area (UZA) and the Pikes Peak region, for which PPACG is the federally designated metropolitan planning organization (MPO). The MPO boundary, shown in Figure 1, includes the cities of Colorado Springs, Fountain, Monument, and Manitou Springs, as well as portions of El Paso and Teller counties. PPACG also serves a larger geography for planning purposes, which encompasses 16 local governments, representing a total population of 772,504 residents across 4,878 square miles.

The second layer of the study area focuses on MMT's current service area which is smaller than the MPO boundaries and primarily within the UZA in and around the City of Colorado Springs and the City of Manitou Springs, with a land area of roughly 200 square miles.

Figure 1. Study Area



PLANNING PROCESS

MMT, in partnership with PPACG and consultant team staff, worked cooperatively to develop and implement a process to create the plan while engaging stakeholders and the public throughout the process. MMT convened a Project Management Team (PMT) to help guide development of the project, which was responsible for day-to-day project activities, schedule, and budget management. The members of the PMT are shown in Table 1.

Table 1. Project Management Team Membership

Organization	Project Management Team Members
Mountain Metropolitan Transit	Jacob Matsen, Transit Planning Supervisor (Regional Transit Plan Project Manager)
Mountain Metropolitan Transit	Lan Rao, Transit Division Manager
Mountain Metropolitan Transit	Kevin Teagarden, Senior Transit Planner
Pikes Peak Area Council of Governments	Laura Crews, Mobility Coordinator (Specialized Transportation Plan Project Manager)
Pikes Peak Area Council of Governments	John Liosatos, Transportation Planning Manager
Consultant Team	Thomas Wittmann, Nelson\Nygaard (Project Manager)
Consultant Team	Jonathan Mosteiro, Nelson\Nygaard (Deputy Project Manager)
Consultant Team	Ezra Pincus-Roth, Nelson\Nygaard (Specialized Transportation Plan Project Manager)
Consultant Team	Angela Woolcott, Kearns & West (Public Engagement Lead)
Consultant Team	Shawn Strate, Olsson (Zero Emission Vehicle Transition Plan Project Manager)

The PMT extended invitations to a range of organizations involved in planning and delivering transportation services in the region to serve on the project's Advisory Committee. This committee was designed to include stakeholder organizations with interest in the transit planning process and to provide critical input and guidance to the team. Advisory Committee members represented multiple constituencies such as seniors, veterans, county-level interests, city-level interests, advocacy groups, military installations, persons with disabilities, etc.

Advisory Committee participants committed to engagement throughout the RTP's development and to act as a liaison with the constituents they represent. The Advisory Committee met as a team at two major project milestones to review the latest plan developments. Members were given time to review the information and convey what they had learned to their constituents. Advisory Committee members provided input to the project team

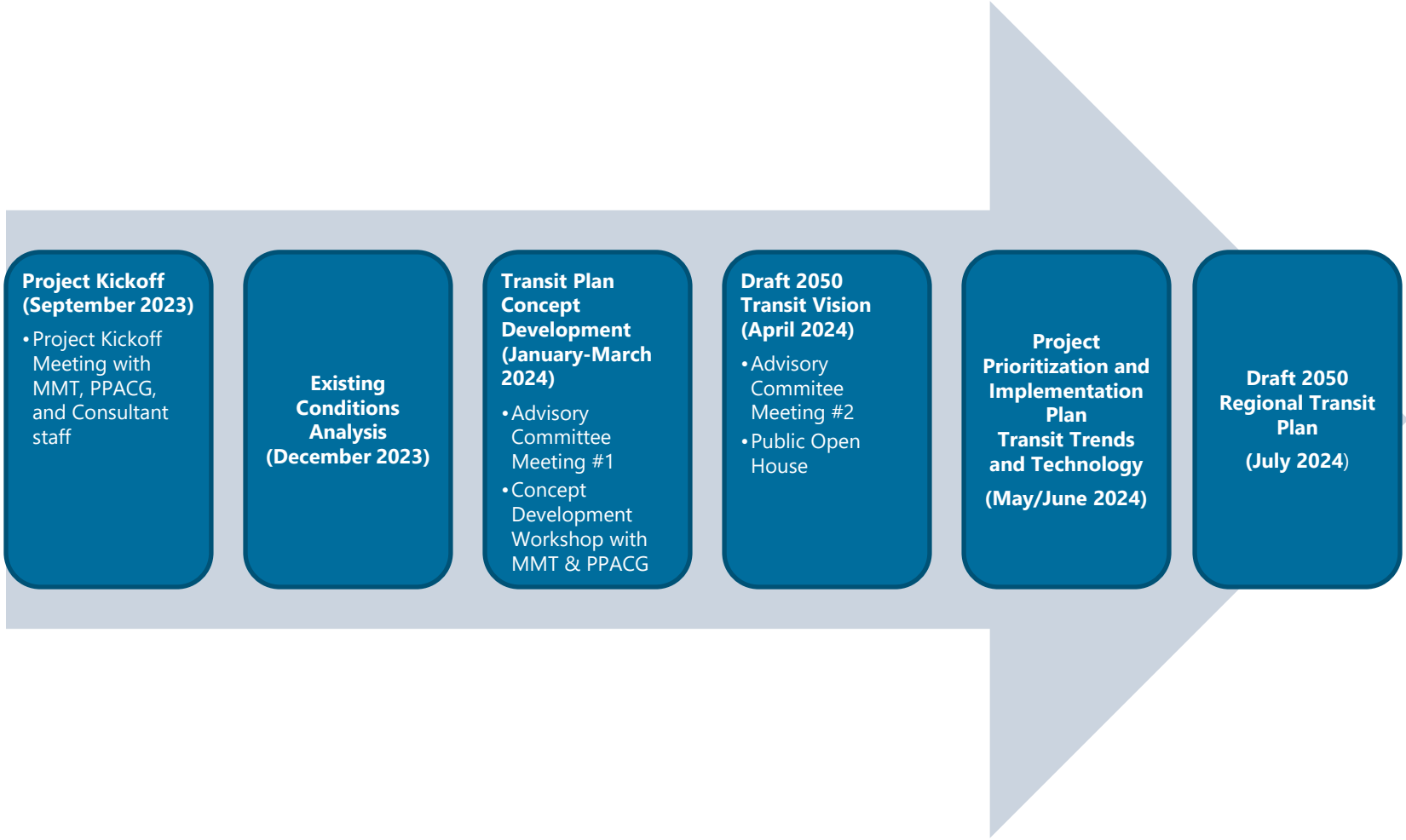
(from their perspective). This information helped guide the plan's focus. The activities of the Advisory Committee are discussed further in **Chapter 2**.

The PMT and Advisory Committee steered the plan through several steps in the planning process as outlined in Figure 2. The steps in this process are explained in more detail in the following chapters of this report:

- The PMT conducted a Project Kickoff Meeting in September 2023 that outlined the purpose of the planning process, confirmed major milestones and data availability, and generated ideas for key outcomes that MMT and PPACG staff desired from the 2050 RTP.
- Based on available data, the consultant team conducted a deep dive into existing and future conditions for transit in the region including ridership trends, financial performance, and expected growth. This analysis is summarized in Chapter 3 of this report.
  - The PMT presented the findings of the Existing Conditions analysis to the Advisory Committee as well as gathered input on goals and objectives for strategies to address these conditions at a meeting in February 2024.
- The PMT used the findings of the Existing Conditions Analysis as well as Advisory Committee feedback to generate draft transit improvement concepts between January and March of 2024, including a concept development workshop in March to refine the initial transit investment strategies with additional MMT and PPACG stakeholders.
- The PMT then developed the 2050 RTP that represents an unconstrained vision for where transit improvements are most needed to address existing gaps and expected growth (detailed in Chapter 4 of this report).
  - The PMT presented the RTP to the Advisory Committee in early April 2024 to verify that the recommendations addressed the needs expressed in the first Advisory Committee meeting, as well as to gauge committee members' direction on how to prioritize the investments.
  - MMT and PPACG conducted a joint Public Open House and corresponding Virtual Open House in late April/early May 2024 to gather feedback from the community on the 2050 RTP as well as priorities for implementation.
  - A complete account of stakeholder and community engagement efforts is included in **Chapter 2** and **Appendix A** of this report.
- The consultant team took the community feedback and conducted a project prioritization process as well as a financial analysis of expected costs and revenues available to implement the RTP, as outlined in the Financial Plan (**Chapter 5**).

- The consultant team also conducted a scan of transit trends and technology to inform strategies for implementing the RTP **(Chapter 6).**
- The final phased implementation recommendations for the 2050 RTP are outlined in **Chapter 7** of this report.

Figure 2. 2050 Regional Transit Plan Development Process



GUIDING PRINCIPLES OF THE PLAN

Identification of goals is a fundamental step in preparation of any transit plan. It is critical to establish the framework within which the agency would pursue its vision. The PMT, with feedback from the Advisory Committee, crafted a set of goals to guide the preparation of the 2050 RTP. These goals align with the vision of MMT and recent planning efforts such as ConnectCOS and are envisioned to facilitate the performance evaluation of the transit system, improve accountability in implementation of the transit plan, and enhance decision making.

The four identified goals are:

- **Choice**
- **Accessibility**
- **Equity**
- **Technology**

Each goal is supplemented by a set of metrics to be used by MMT for evaluation and improvement of the existing public transportation services as well as the proposed changes per the plan. Table 2 presents the identified goals and performance metrics associated with each goal.

Table 2. Goals and Performance Metrics

Goals	Description	Performance Metrics
Choice	Make transit a competitive travel mode.	a. Number of people within ¼ mile of routes with 15-minute weekday frequencies, or better. b. Number of jobs within ¼ mile of routes with 15-minute weekday frequencies, or better.
Accessibility	Provide access to jobs, schools, medical facilities, social events, and community activities.	a. Number of people within ¼ mile of MMT network. b. Number of jobs within ¼ mile of MMT network. c. Percentage of the UZA population within ¼ mile of MMT network. d. Percentage of existing public health facilities (with employee count greater than or equal to 20) within ¼ mile of MMT network. e. Percentage of existing educational facilities (with employee count greater than or equal to 10) within ¼ mile of MMT network.
Equity	Maintain or improve service to the people who need it the most.	a. Number of people in equity focus areas within ¼ mile of MMT network. b. Number of low-income jobs within ¼ mile of MMT network.
Technology	Deploy technology to both improve agency operations and the customer experience.	a. N/A

2 PUBLIC AND STAKEHOLDER ENGAGEMENT

Public and stakeholder engagement throughout the planning process was targeted to engage community members who live within the MMT operating area and larger Metropolitan Planning area of the Pikes Peak region. The key audiences included current transit riders, specialized and human services transportation providers, and community based and social services organizations. In addition to key audiences, the project team also engaged the broader public, jurisdictions, businesses, military installations, and community organizations within the planning area. Public involvement and engagement were built upon previous MMT planning efforts as well as leveraging relationships from recent transportation planning efforts. Multiple strategies (Figure 3) were employed to share information about the project, and receive feedback from key audiences, stakeholders, and the public. Table 3 presents the specifics and outcomes of each public involvement strategy adopted by the project team.

Figure 3. Public Involvement Strategies



Table 3. Summary of Involvement Strategies

Involvement Strategy	Specifics	Outcome
Stakeholder Interviews	Six stakeholder interviews were conducted. Participating organizations include City of Colorado Springs City Council, City of Colorado Springs Economic Development, City of Fountain, Innovations in Aging, Pikes Peak Housing Network Front Range Passenger Rail District Board Member, and Pikes Peak Rural Transit Authority Community Advisory Committee.	The feedback shared during these interviews informed the technical process including the existing conditions and gap analysis.
Focus Groups	Four focus groups were conducted: on-demand focus group, education focus group, health and human services focus group, and business, development and residential focus group.	Feedback themes collected during each focus group informed the technical analysis including existing conditions and identifying gaps in the current system.
Stakeholder Advisory Committee	Stakeholder advisory committees for both the 2050 RTP and 2050 CHSTP were engaged.	Developed a common understanding of project goals and objectives, roles and expectations of the stakeholder advisory committee members, findings from stakeholder engagement, existing conditions, project schedule and major technical milestones.
Public Meeting	One in-person open house was hosted by the project team which featured a series of informational stations to encourage active public participation. In addition to the in-person open house, two additional events – a virtual "office hours" meeting, and an in-person meeting at the Independence Center – were held that encouraged the community to view, interact, and provide feedback on the materials in-person and digitally.	Approximately, 114 community members provided feedback or attended a virtual or in-person event. The open house had 45 in-person attendees over a two-hour period, and 66 unique digital comment card responses were collected.

Involvement Strategy	Specifics	Outcome
Digital Engagement	The project team maintained an updated website to educate stakeholders and the community and promote upcoming engagement opportunities.	Throughout the study, the website had 3,177 visits from 2,532 unique users. Peaks in website views corresponded with the plan's public open house.

Public involvement throughout the planning process primarily engaged community members who live within the MMT operating area and larger Metropolitan Planning area of the Pikes Peak region. Engagement spanned both the 2050 RTP and CHSTP, while also targeting specific audiences of stakeholders, including current transit riders, human services transportation providers, and community and social services organizations.

Current Transit Riders

Existing ridership helped inform current uses of transit and the specialized system, and how riders' experiences can be improved. The information gathered from conversations and engagements with this population helped to inform recommendations that would address current and future community mobility needs.

Specialized and Human Services Transportation Providers

Specialized and human services transportation providers are an important audience due to their role in providing local transportation options. Providers were engaged as an operational group to understand their experiences and challenges with providing services to the necessary transit-dependent populations. In addition, a feedback loop was created to provide feedback and conversations between riders and providers.

Community Based and Social Services Organizations

Community based and social services organizations were engaged to provide their feedback and to partner with MMT. Community leaders helped to share information with their constituents and promote upcoming engagement and feedback opportunities.

In addition to key audiences, the project team engaged the broader public, jurisdictions, businesses, military installations, and community organizations within the planning area.

PUBLIC INVOLVEMENT APPROACH

Public involvement and engagement were built upon previous MMT planning efforts as well as leveraging relationships from recent transportation planning efforts.

Multiple strategies were employed to share information about the project, and receive feedback from key audiences, stakeholders, and the public.

Stakeholder Interviews

To begin the public involvement process, stakeholders were interviewed in December 2023 and January 2024 to understand their familiarity with the current transit system and what they believe is going well or needs improvement. The feedback shared during these interviews

informed the technical process including the existing conditions and gap analysis. Table 4 summarizes the stakeholder interviewees and their affiliated organizations.

Table 4. Stakeholder Interviews

Name	Organization
Yolanda Avila	City of Colorado Springs City Council
Jessie Kimber	City of Colorado Springs Economic Development
Sharon Thompson	City of Fountain Mayor
Erin Maruzzella	Innovations in Aging
Jill Gaebler	Pikes Peak Housing Network Front Range Passenger Rail District Board Member
Jim Godfrey	Pikes Peak Rural Transit Authority Community Advisory Committee

Additionally, a memo summarizing the stakeholder interviews is included in **Appendix A.**

Focus Groups

To engage various community leaders and organizations in the planning area, the project team hosted the following four focus groups:

- January 17, 2024 - On-Demand Travel Focus Group
- February 7, 2024 - Education Focus Group
- February 7, 2024 - Health and Human Services Focus Group
- February 7, 2024 - Business, Development, and Residential Focus Group

The On-Demand Travel Focus Group was an in-person event hosted at The Independence Center. The three focus groups on February 7, 2024, were virtual meetings. Table 5 summarizes the focus group participants, their organization, and which focus group they attended.

The goal of each focus group was to create a common understanding of the plans, to learn more about how the community utilizes transit, and to identify potential successes or improvements to inform plan recommendations and strategies. Feedback themes collected during each focus group informed the technical analysis including existing conditions and identifying gaps in the current system.

Additionally, a memo summarizing the stakeholder focus groups is included as **Appendix A**.

Table 5. Focus Group Participants

Name	Organization	Focus Group
Cathy Buckley	Colorado College	Education
Catherine Duarte	Colorado Springs Housing and Urban Development	Business, Development, and Residential
CJ McCampbell	District 11	Education
Isabel Robben	District 11	On-Demand Travel
Marla Luckey	El Paso County Public Health	Health and Human Services
Marsha Unruh	Homefront Military Network	Business, Development, and Residential
Buddy Castor	N/A	Paratransit and Specialized Transportation Rider
Jeannette Fortin	N/A	Paratransit and Specialized Transportation Rider
Loretta Houseman	N/A	Paratransit and Specialized Transportation Rider
Mary Kim McCarthy	N/A	Paratransit and Specialized Transportation Rider
Toby Cotter	N/A	Paratransit and Specialized Transportation Rider
Skyler Rorabaugh	Pikes Peak	Business, Development, and Residential
Kevin Coleman	Pikes Peak School District	Education
Aaron Simeraro	Silver Key	Health and Human Services
Edgar Morales	The Independence Center	Paratransit and Specialized Transportation Rider
Mary Rose Evans	The Independence Center	Paratransit and Specialized Transportation Rider
Paul Spotts	The Independence Center	Paratransit and Specialized Transportation Rider
Scott Land	The Independence Center	Paratransit and Specialized Transportation Rider
Jim Spice	University of Colorado – Colorado Springs	Education

Stakeholder Advisory Committee

Each plan had a dedicated Stakeholder Advisory Committee, which included a diverse representation of the broader community. The project team engaged the Stakeholder Advisory Committees at key milestones throughout the project.

2050 RTP Stakeholder Advisory Committee

The 2050 RTP Stakeholder Advisory Committee met twice throughout the development of the plan. Stakeholders were identified and invited to the committee based on the plan's boundaries and with the goal of representing a cross-section of jurisdictions, community organizations, state and county representatives, military installations, businesses, and educational institutions. Table 6 provides a list of committee members and their affiliated organizations. Additional stakeholders were invited to participate on the committee; however, the roster reflects active participants only.

The first committee meeting took place on Wednesday, February 21, 2024. The goal of the meeting was to create a common understanding of:

- Project goals and objectives
- Planning landscape and intersections
- Roles and expectations of the Stakeholder Advisory Committee members
- Stakeholder engagement conducted to date and what we've heard
- Existing conditions
- Project Schedule and major technical milestones

The second committee meeting took place on Thursday, April 9, 2024. The goal of the second meeting was to:

- Share a brief project update
- Explain the technical scenario development process
- Preview potential recommendations, investment options, and open house materials
- Understand the Stakeholder Advisory Committee members' priorities related to the potential recommendations
- Discuss the open house format and materials

Full summaries of each 2050 RTP Stakeholder Advisory Committee meeting can be found in **Appendix A.**

Table 6. 2050 Regional Transit Plan Stakeholder Advisory Committee Roster

Name	Organization
Carlos Perez	Citizens Transportation Advisory Board

Name	Organization
Jessie Kimber	City of Colorado Springs Economic Development Division
Catherine Duarte	City of Colorado Springs Housing and Community Vitality
Katie Sunderlin	City of Colorado Springs Housing and Community Vitality
Morgan Hester	City of Colorado Springs Long Range Planning Division
Gayle Sturdivant	City of Colorado Springs Public Works
Todd Frisbie	City of Colorado Springs Public Works
Sharon Thompson	City of Fountain
Juan Alvarez	City of Manitou Springs
Roy Chaney	City of Manitou Springs
Pete Zeitz	Colorado College
Emily Barden	Colorado Department of Transportation
George Gromke	Colorado Department of Transportation
Scott Skinner	Colorado Department of Transportation
Chris Padilla	Colorado Springs Airport
Chelsea Gondeck	Downtown Partnership
Tara McCarthy	PikeRide
Jim Godfrey	Pikes Peak Rural Transit Authority
Traci Marques	Pikes Peak Workforce Center
Darren Horstmeier	Schriever Space Force Base
Laura Zapien	TransDev
Salvador Pozos	TransDev
Hannah Parsons	Transportation Commission of Colorado
Amy Kelley	United States Air Force Academy
Matthew Fitzsimmons	United States Air Force Academy
Jim Spice	University of Colorado - Colorado Springs

Public Meeting

The project team hosted an in-person open house on Tuesday, April 30, 2024, at the City of Colorado Springs' City Administration Building. The in-person open house featured a series of informational stations arranged around the room to encourage active public participation. In addition to the in-person open house, two additional events were held that encouraged the community to view, interact, and provide feedback on the materials in person and digitally.

Approximately 114 community members provided feedback or attended a virtual or in-person event. The open house had 45 in-person attendees over a two-hour period, and 66 unique digital comment card responses were collected.

The public open house and subsequent events required an extensive promotional campaign, which included community leaders assisting in disseminating information, sending public e-blasts, creating media toolkits, coordinating and distributing flyers to MMT buses and community gathering locations, and utilizing social and conventional media channels.

A brief description of each event is included here, and a full summary can be found in **Appendix A.**

Public Open House – Tuesday, April 30, 2024

The open house featured a series of informational stations that encouraged participants to interact with the material and project team staff. The stations summarized the plan process, existing conditions, the proposed 2050 RTP, the proposed 2050 Specialized Transportation strategies, and feedback shared with the project team. Project staff were available at each station to answer participant questions or discuss specific topics. Before leaving the open house, participants were encouraged to fill out either a print or digital comment card.

A self-guided virtual open house was launched on the project website on Tuesday, April 30, 2024, for members of the public to view materials. The self-guided open house featured the same materials as the in-person event and participants could provide their feedback through the digital comment card, programmed through SurveyMonkey.

2050 Specialized Transportation Plan Pop-Up Open House – Tuesday, May 14, 2024

PPACG hosted an additional in-person open house at The Independence Center on May 14, 2024. The event ensured members of the specialized transportation community could provide their feedback and ask questions of the project team.

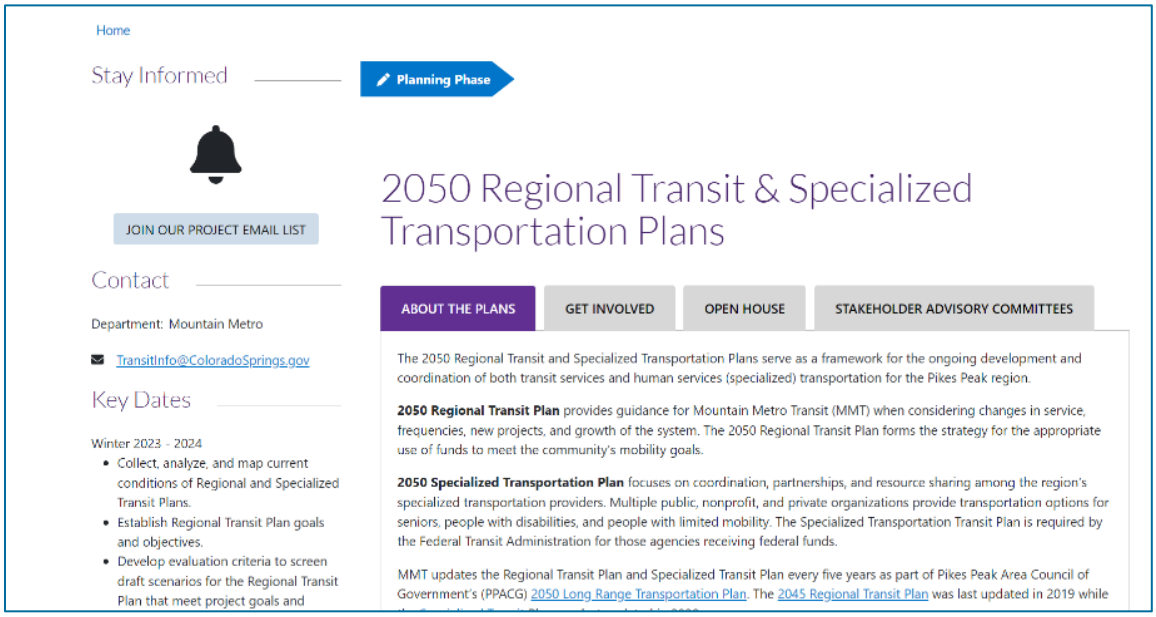
Virtual Office Hour Session – Friday, May 17, 2024

A virtual office hour was hosted on Friday, May 17, 2024, which included a brief presentation and an opportunity for the community to ask questions of the project team.

Digital Engagement

MMT provided the community with up-to-date digital materials throughout the planning process. The project team maintained an updated website (Figure 4) to educate stakeholders and the community and promote upcoming engagement opportunities. Throughout the study, the website had 3,177 visits from 2,532 unique users. Peaks in website views corresponded with the plan's public open house.

Figure 4. Website for Digital Engagement



In addition to the plan's website, the project team utilized public e-blasts and MMT's social media channels to inform and educate the community on study updates and upcoming events. The MMT email database utilized those who had previously subscribed to ConnectCOS and PlanCOS updates with an option to update their email subscription settings.

KEY FEEDBACK THEMES

Throughout the 2050 RTP and CHSTP process, the following themes emerged as consistent priorities of community members, current riders, stakeholders, and specialized transportation providers.

2050 RTP Priorities

Through various means of engagement, community members reacted to the seven proposed elements of the 2050 RTP. The vision objectives are unconstrained by cost and composed of multiple recommendations and strategies to expand service and introduce innovative technologies.

The public prioritized the following three proposed 2050 RTP recommendations in order of importance:

1. Earlier/later service on all routes, which would expand service on all routes to begin at 6:00 a.m. on weekdays, 6:00 a.m. on Saturdays, and 7:00 a.m. on Sundays. Service would also be extended until midnight Monday through Saturday, and until 9:00 p.m. on Sundays.
2. Investment in transit facilities, bus stops, and bus speed/reliability, which would include additional infrastructure to better connect bus stops, increase speed and reliability, and ensure on-time bus operations.
3. Improved frequency on existing routes, which would include improvements to all existing routes to run at least every 30 minutes all day throughout the week.

This feedback was gathered through a digital polling questionnaire as well as an interactive in-person activity at the open house on Tuesday, April 30, 2024.

2050 RTP Feedback Themes

Stakeholders, community members, transit riders, and the public provided feedback on their current experiences and desires for a future transit system. The priorities align with feedback heard throughout the process, which focused on developing an aspirational, actionable, responsive, and funded plan to increase transit connectivity and operations. Throughout the process, the public expressed a desire to ride transit on the condition it was more convenient with improved infrastructure, such as bus stops, connected sidewalks, and bicycle-friendly amenities.

Additional key themes and feedback are summarized below.

Process

- Create a plan that is aspirational, actionable, and responsive to the region's population growth and development.
- Identify community partnership opportunities to enhance transit services and operations.
- Explore funding streams to address transit and mobility gaps.

- Consider future transit planning with land use planning to improve the effectiveness of housing, access to essential services, and transit.
- Investigate ways to incentivize transit use.

Connectivity

- Connect transit to City and regional destinations, like the airport, higher education institutions, nearby jurisdictions, and military installations.
- Explore the option to connect to City and regional systems through light rail and passenger rail.
- Improve connectivity to Downtown Colorado Springs for pedestrians, cyclists, and transit riders, which allows them to seamlessly use all three modes.
- Ensure residents have access to transit when commuting to and from jobs to help grow the region's workforce.

Operations

- Improve the accessibility and safety of bus stops and transfer locations.
- Expand service hours and frequency of service to attract additional ridership.
- Consider adding enhanced transit services on popular corridors, such as North Nevada and Colorado Avenue.
- Explore low-cost or free-fare travel on certain routes to increase ridership.
- Increase the salaries and benefits for bus drivers to attract more drivers to the industry.

3 EXISTING CONDITIONS

OVERVIEW OF TRANSIT SERVICE

This chapter provides an overview of transit services in the greater Colorado Springs region, including those provided by MMT and other regional operators that connect to MMT services.

Current Services

MMT is the primary transit service provider in the Colorado Springs area. The system is operated by the City of Colorado Springs, but also provides service to the neighboring communities of Manitou Springs, Cimarron Hills, and Security-Widefield.

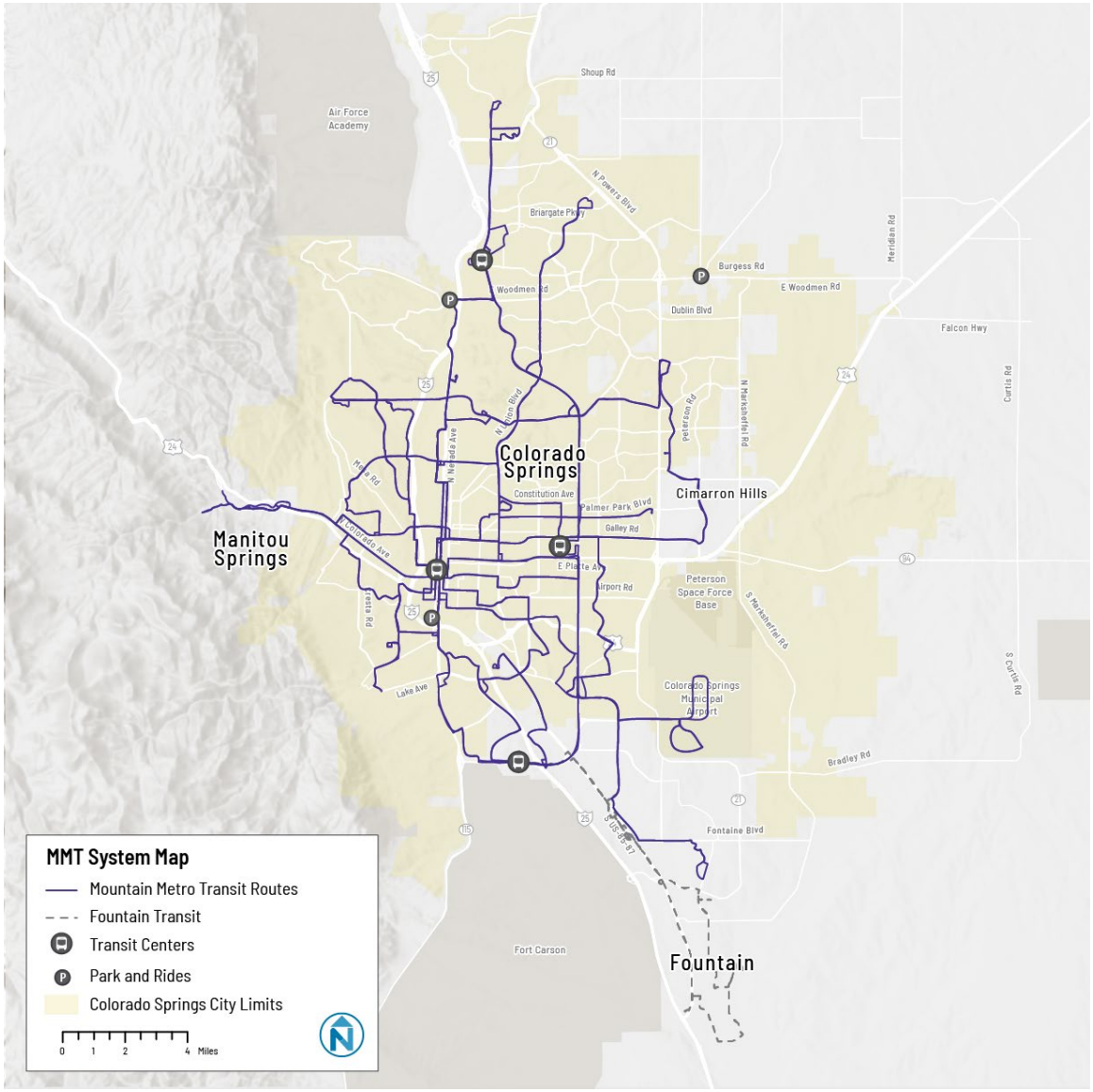
MMT Services

MMT currently operates four different services as a part of their comprehensive regional transit network. A description of each service type is provided on subsequent pages.

Fixed-Route

MMT operates 29 traditional fixed-route transit lines throughout greater Colorado Springs (see Figure 5), not including its deviated fixed-route and shuttle offerings. Fixed-route rides cost $1.75 for adults, or $0.85 for youth, seniors, individuals with disabilities, and those who are on Medicare. A day pass is also available for $4.00, which expires at midnight on the day of activation. Up to three transfers between routes are free within a two-hour period. Transfer tickets must be requested from the driver upon boarding. Fares can be paid on board in cash or coin, with pre-purchased multi-ride or period passes, or through MMT's mobile ticketing application. Service runs 7 days per week on 28 routes, excluding shuttles. Route 20 Downtown–Southgate operates on weekends only. Route 35 Las Vegas–PPSC does not operate on Sundays.

Figure 5. MMT System Map



Deviated Fixed-Route

MMT operates two deviated fixed-route lines, Routes 38 and 40. MMT's deviated fixed-route service generally operates along a fixed alignment but can pick-up and/or drop-off passengers within ¾ of a mile from the published routes. Riders must call MMT in advance to request a deviation and are subject to a $1 surcharge per trip, in addition to the base fare, which is the same as for a fixed route. Both routes operate Monday through Friday only. Route 40 is primarily designed to serve Pikes Peak State College (PPSC) Rampart and Center for Healthcare Education & Simulation (CHES) campuses. This route does not operate in the summer months, and only runs during the PPSC Fall and Spring academic calendar.

Shuttles

MMT operates three free shuttles: one in downtown Colorado Springs (the Zeb), and two in Manitou Springs.

The Zeb operates from 7 a.m. to 10 p.m. Monday through Thursday, 7 a.m. to Midnight on Fridays, 8 a.m. to midnight on Saturdays, and 10 a.m. to 8 p.m. on Sundays. Shuttles run every seven minutes on weekdays until 6:00 p.m., and every 10 minutes in the evenings and on weekends. The Zeb serves major downtown Colorado Springs destinations, such as Colorado College, Ed Robson Arena, Weidner Field, and the US Olympic and Paralympic Museum (Figure 6).

Routes 33 and 36 are fare-free shuttle routes that operate in Manitou Springs (see Figure 7 for route alignments). The Manitou Springs shuttles are funded by revenue from Manitou Springs' managed parking system, and with funding from the City of Colorado Springs. Both routes connect to Route 3 to provide service into the City of Colorado Springs.

Route 36 provides service in downtown Manitou Springs. It operates seasonally from late April to late September, with service every 20 minutes, seven days a week from 10 a.m. to 9 p.m.

Route 33 provides service to downtown Manitou Springs, the Pikes Peak Cog railway, and the Incline. Service operates year-round. "Off-season" service runs from late September to late April, operating seven days per week from 6 a.m. to 6 p.m. For the rest of the year, the service runs every 20 minutes from 6 a.m. to 8 p.m. Monday through Friday, every 10 minutes on weekends from 6 a.m. and 3:30 p.m., and every 20 minutes on weekends from 3:40 p.m. to 8 p.m.

Figure 6. The Zeb Route Map



Figure 7. Manitou Springs Shuttles Map



Americans with Disabilities Act (ADA) Complementary Paratransit

Mountain Metro Mobility is MMT's ADA complementary paratransit service that is available for people with disabilities who cannot otherwise use MMT fixed-route service. Paratransit service is available within ¾ of a mile from existing MMT fixed-route transit service during the same operating hours as fixed-route service, which are generally from 5:00 a.m. to 10:15 p.m. on weekdays, 6:00 a.m. to 12:15 a.m. on Saturdays, and 6:00 a.m. to 8:15 p.m. on Sundays.

Riders must apply for eligibility to use the service by completing a written application and being interviewed. Certified riders must qualify under one of three conditions:

1. *"Any individual with a disability who is unable, as a result of a physical or mental impairment (including vision impairment), to independently navigate the fixed-route Mountain Metropolitan Transit System.*
2. *"Individuals who use a wheelchair, or other boarding assistance device, that need the assistance of a wheelchair lift and are unable to board, ride, or disembark at a fixed-route bus location. This category is not applicable once a transit route is 100% accessible. Please note: all Mountain Metropolitan Transit vehicles offer lift equipment accessibility.*
3. *"Any individual with a disability who has a specific impairment-related condition which prevents such individual from traveling to a boarding location or from a disembarking location. Environmental conditions and architectural barriers not under the control of the public entity do not, when considered alone, confer eligibility[1]"*

In certain circumstances, the applicant for certification may be asked to complete an additional confidential assessment to verify their cognitive and/or mobility limitations.

Paratransit rides may be scheduled one to three days in advance and can be scheduled online, over the phone, or via email. Riders are given a 30-minute pickup window that is 15 minutes before and 15 minutes after their pickup time.

Fares for Mountain Metro Mobility are $3.50 per one-way trip. Riders may pay the driver in cash, check, or money order, pre-purchase a book of 10- or 40-ride tickets from the driver or at the Transit Administration Office, or through a pre-paid online electronic account using a credit card. Trips that begin and end in the ¾ mile zones surrounding the Zeb and Manitou shuttle service areas are fare-free.

Riders may also elect to use the premium Taxi Choice Option for trips under seven miles. The fare for the Taxi Choice Option is the same as standard ADA complementary paratransit but can only be paid using an electronic prepaid account. Taxi Choice is different from Taxi Overflow, which is a program that is only used when there is not sufficient capacity to complete

[1] https://coloradosprings.gov/mountain-metro/page/eligibility-requirements-and-application

a confirmed trip with dedicated paratransit vehicles. In this case, the paratransit operator may send a taxi to complete the trip.

Other Regional Operators

MMT's network provides connections to other transit operators and intercity transportation providers. These other operators and the services they provide are described further in this section.

Fountain Municipal Transit

Fountain Municipal Transit is operated by the City of Fountain, which runs a single route that connects to MMT at the PPSC Transfer Center. Fountain Transit operates on weekdays with 45-minute headways from 5:00 a.m. to 8:30 p.m. and on Saturdays with 90-minute headways from 9:00 a.m. to 5:00 p.m. An adult one-way fare is $1.50; there is a discounted fare for youth, seniors, and people with disabilities which is $0.85. A deviated service is available upon request and subject to an additional fee. The route alignment is shown in Figure 8.

Envida

Envida is a nonprofit organization that predominantly provides transportation services to individuals with disabilities, older adults, and low-income individuals in the greater Colorado Springs area. Envida operates demand-responsive service, but also runs two deviated fixed-route lines that are open to the public which provide connections into Colorado Springs from rural communities in eastern El Paso County and offer deviations upon request (see Figure 8). The Eastern El Paso County Bus Route 1 runs four days a week and serves Peyton, Falcon, and Calhan. The Eastern El Paso County Bus Route 2 operates four days a week and runs from Ramah to the Voyager Transit Center (via Falcon) where it connects with MMT service.

Bustang

Bustang is an intercity bus service provided by the Colorado Department of Transportation (CDOT). There are three Bustang routes that serve Colorado Springs, as shown in Figure 8.

- The Bustang South Line provides daily service between Colorado Springs and Denver via Monument and Lone Tree, with three stops in Colorado Springs and four stops in Denver, terminating at Denver Union Station. The Bustang South Line connects to MMT fixed-route service at the Woodmen Park and Ride, the Downtown Terminal, and the Tejon Park and Ride. There are eight trips in each direction on weekdays, with the first departure from the Tejon Park and Ride at 4:50 a.m. and the final arrival at 9:25 p.m. There are two trips in each direction on weekends and holidays, one in the morning and one in the afternoon. An adult ride between Colorado Springs and

Denver costs $12.00 for a one-way trip. Multi-ride passes are available at a lower per-trip rate.

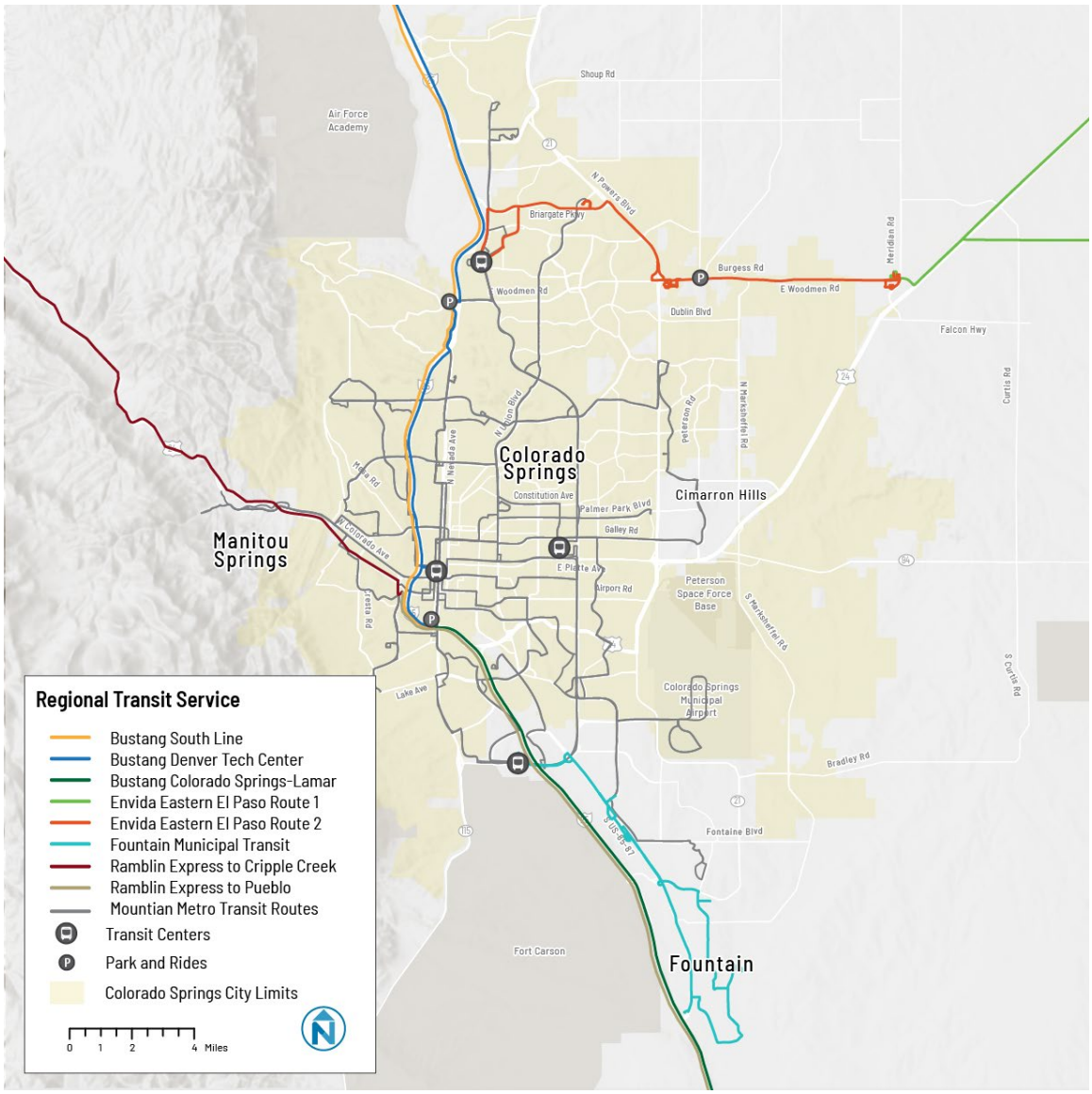
- The Bustang Denver Tech Center route provides daily service between Colorado Springs and Denver via Monument, with two stops in Colorado Springs and multiple stops along the Tech Center corridor in southeast Denver, terminating at the Regional Transportation District (RTD) Belleview station. The Bustang Denver Tech Center route connects to MMT fixed-route service at the Woodmen Park and Ride and the Tejon Park and Ride. As of March 2024, the Bustang Denver Tech Center route has been discontinued.
- The Bustang Colorado Springs to Lamar route originates at the Tejon Park and Ride, where it connects to MMT fixed-route services, and terminates in Lamar, traveling via Pueblo, and is designed to serve rural communities. Service is available seven days a week, with one trip in each direction per day. Standard adult fares are distance-based; a one-way trip along the full route between Colorado Springs and Lamar costs $29.

Ramblin Express

Ramblin Express is a private intercity bus service open to the general public providing transportation across the state. In the Pikes Peak Region, Ramblin Express operates two routes from Colorado Springs: to Cripple Creek via Woodland Park, and Pueblo. Relevant information regarding service hours and days of operation for the routes is as follows:

- **Colorado Springs to Cripple Creek via Woodland Park** – Operates Wednesday through Sundays only, plus select holidays. There are 12 trips per day in each direction. Service from Colorado Springs operates from 8:00 a.m. (first departure) to 12:15 a.m. (last departure). Service from Cripple Creek operates from 9:45 a.m. (first departure) to 2:15 a.m. (last departure). Roundtrip fares are $35 between Cripple Creek and Colorado Springs, and $25 between Woodland Park and Colorado Springs.
- **Colorado Springs to Pueblo** – Operates Wednesday through Sundays only, plus select holidays. There are four trips per day in each direction. Service from Colorado Springs operates from 12:00 p.m. (first departure) to 1:15 a.m. (last departure). Service from Pueblo operates from 8:25 a.m. (first departure) to 11:25 p.m. (last departure). Roundtrip fares are $25, one-way fares are $17.

Figure 8. Regional Transit Service Connections

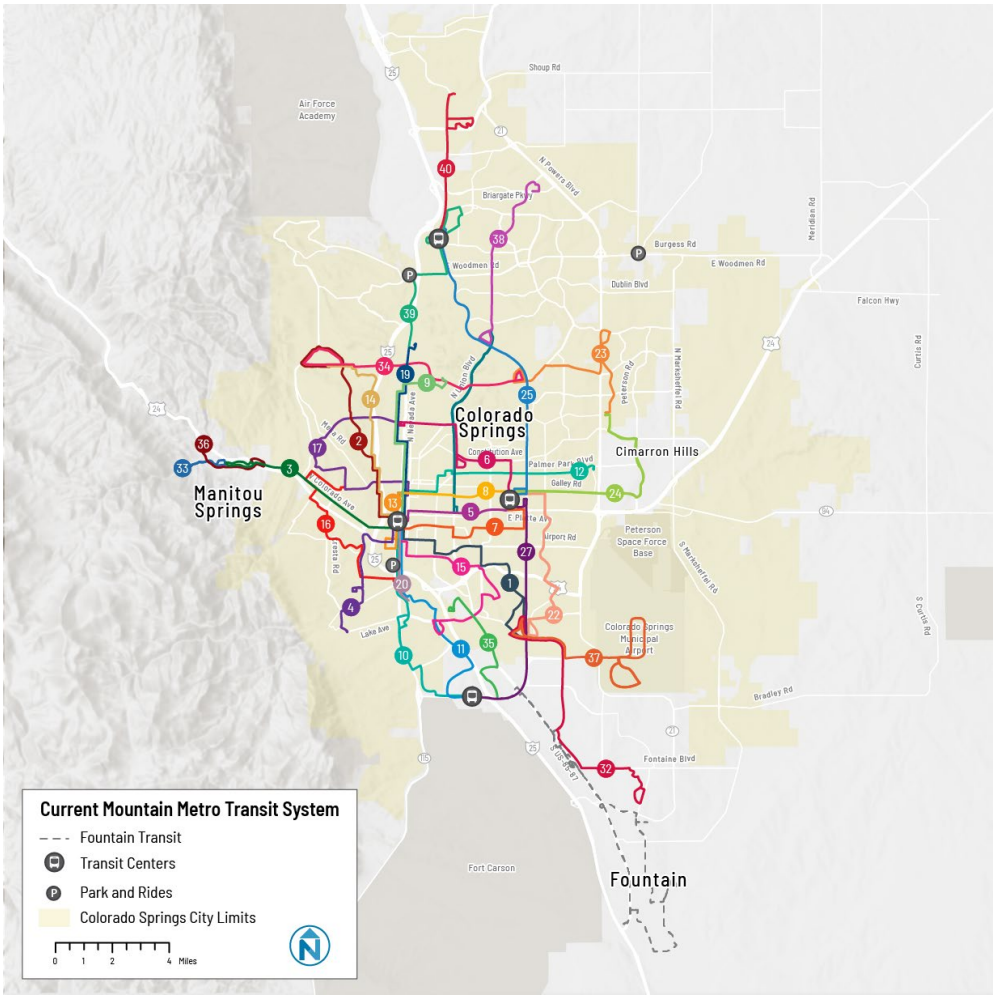


MMT Fixed-Route Service

MMT currently operates 34 fixed-routes[2] in its network (including two deviated fixed-routes and three shuttles), as shown in Figure 9.

This section describes MMT's fixed-route service in greater detail, including historical trends and route-level analysis of service span and frequency, ridership, productivity, and on-time performance. It also includes an overview of existing transit facilities, bus stops and amenities, and geographic coverage. The purpose of this analysis is to understand the baseline level of service upon which to build for future recommendations.

Figure 9. MMT Fixed-Route Network

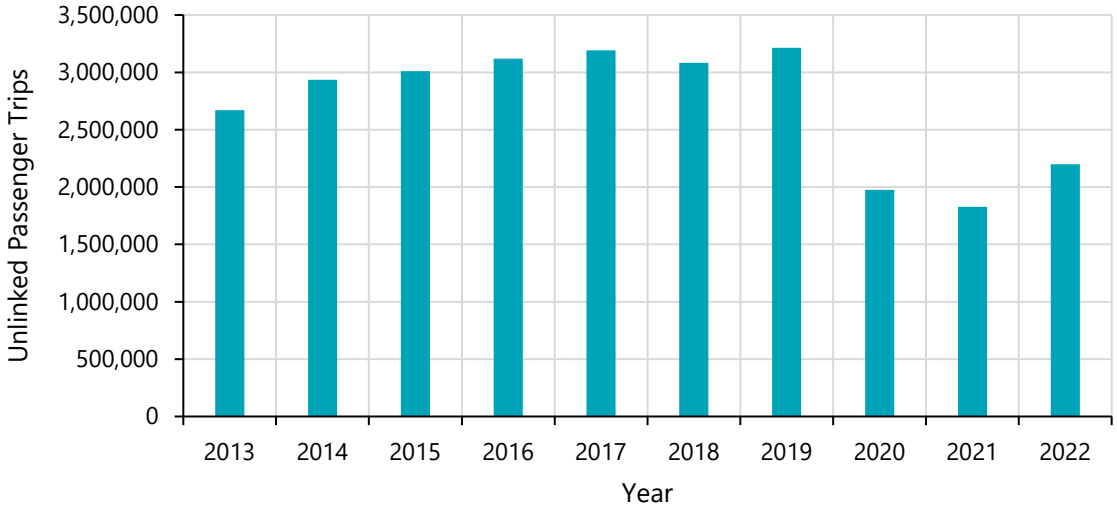


[2] Unless otherwise noted, for the rest of the report, the term "fixed-route" includes the deviated fixed-route and shuttle services operated by MMT.

Historical Trends

Providing a historical context of MMT's fixed-route service is important to set the stage for where the agency is today. Ridership on MMT's fixed-route service (Figure 10) was on an upward growth trend from 2013 to 2019. Between 2013 and 2019, ridership increased by an average of 3% a year. Like many agencies, MMT experienced a drop in ridership due to the COVID-19 pandemic. MMT's 2023 annual ridership was 2.87 million boardings, which is roughly 89% of 2019 ridership.

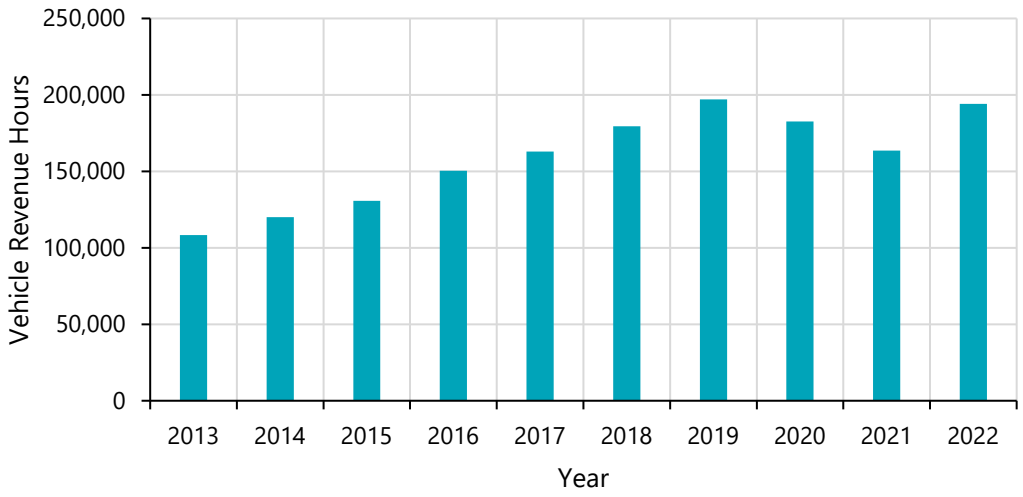
Figure 10. Historical Fixed-Route Ridership



Source: MMT

Revenue hours is the amount of time buses operate in service, including recovery time and operator breaks at the end of each trip. As seen in Figure 11, revenue hours had been increasing until 2020 when MMT cut service in response to the COVID-19 pandemic. Between 2013 and 2019, revenue hours increased by an average of 10% a year.

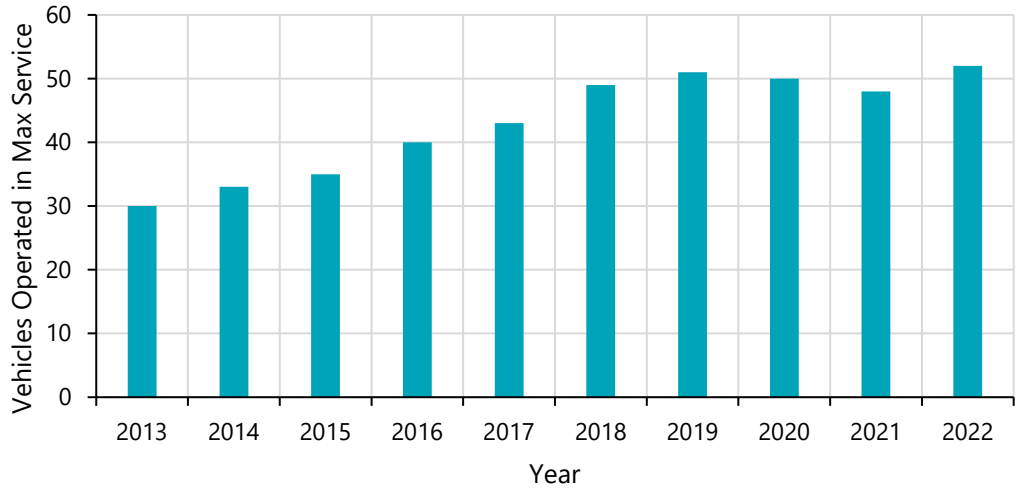
Figure 11. Historical Fixed-Route Revenue Hours



Source: MMT

Vehicles operated in max service (VOMS) is the maximum number of vehicles needed at a single time to provide peak service. As seen in Figure 12, VOMS had been increasing between 2013 and 2019 before plateauing.

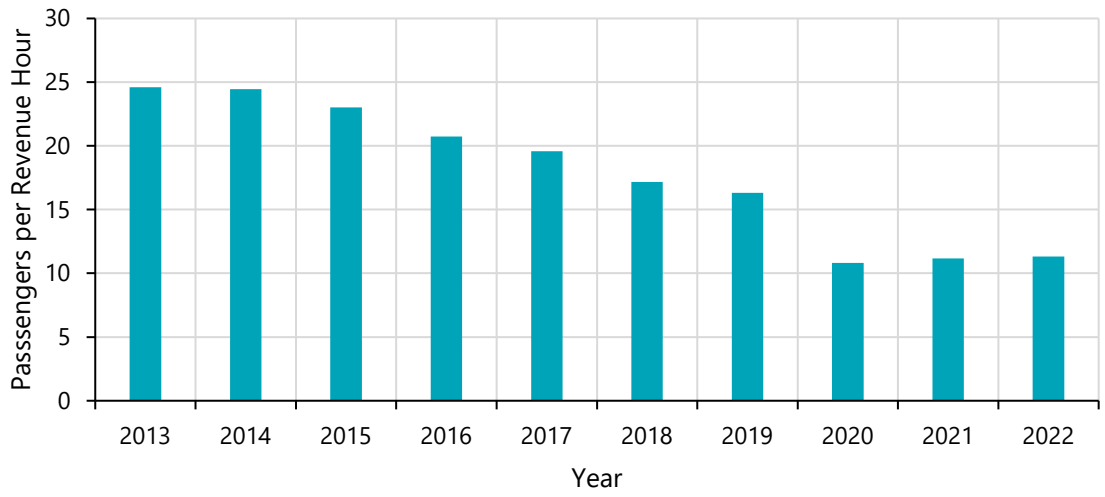
Figure 12. Historical Fixed-Route Vehicles Operated in Max Service



Source: MMT

The productivity of the service is typically measured in terms of passengers per revenue hour. Service productivity (Figure 13) has been declining over the last decade and is roughly half of what it was in 2013. It is important to highlight that service levels in 2013 were heavily reduced due to the Great Recession, and as such, productivity was higher than in subsequent years.

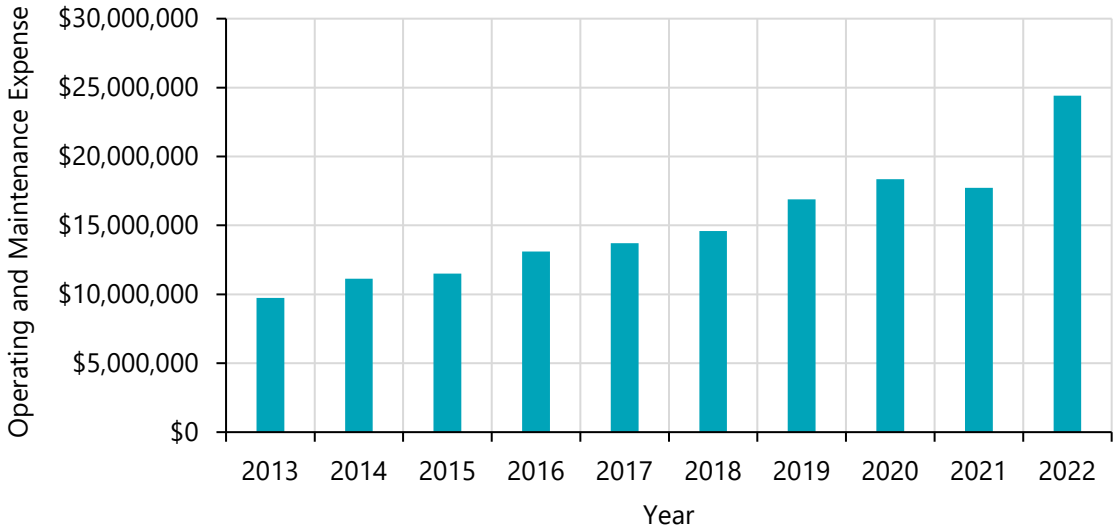
Figure 13. Historical Fixed-Route Productivity



Source: MMT

Figure 14 shows the annual operating and maintenance (O&M) costs for the fixed-route system, not adjusted for inflation. Prior to the pandemic, costs rose an average of 10% per year. Between 2021 and 2022, costs increased by 38%.

Figure 14. Historical Fixed-Route Operating and Maintenance Expense

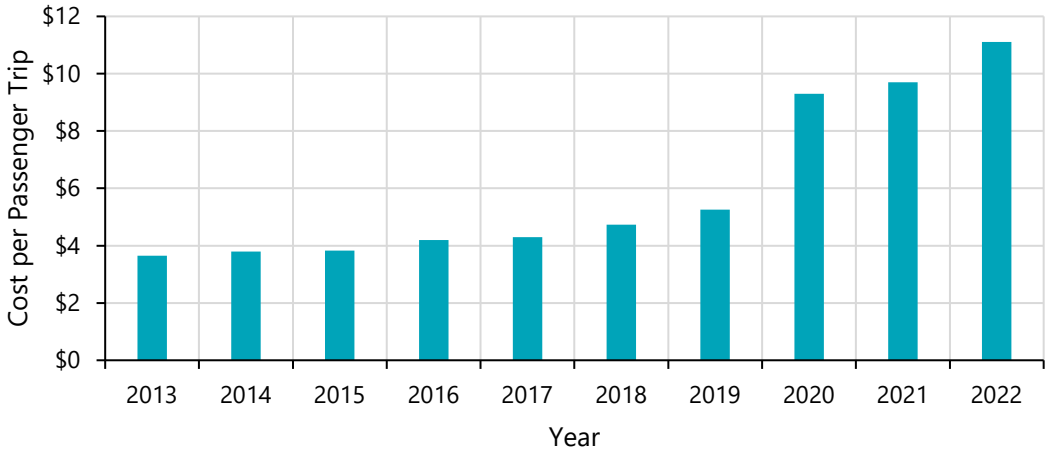


Source: National Transit Database (NTD)

Figure 15 normalizes O&M costs by number of passengers, or trips. It shows that the cost per trip in 2022 is almost double what it was in 2019. Between 2013 and 2019, cost per trip

increased by an average of 6% per year. Cost per trip since 2020 have increased by an average of 9% per year.

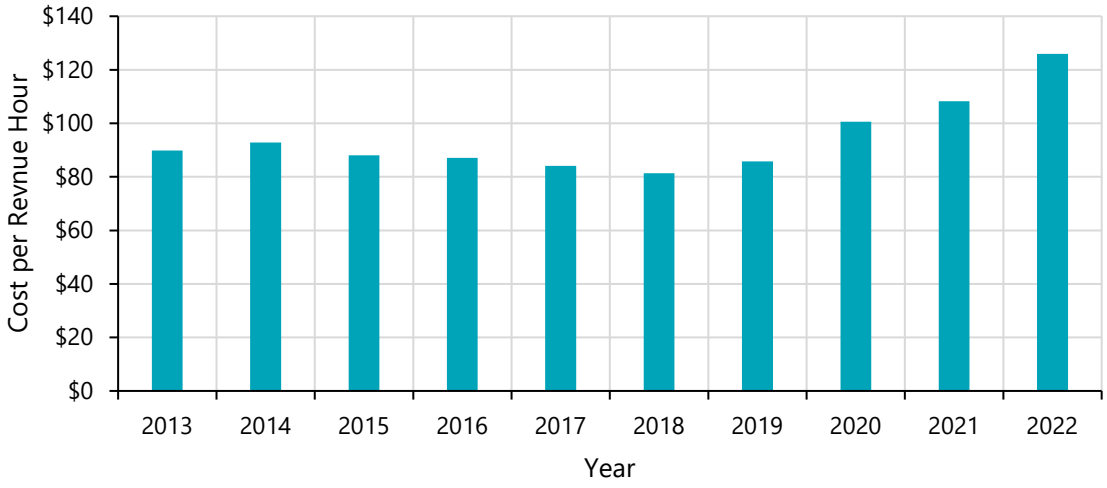
Figure 15. Historical Fixed-Route Cost per Trip



Source: NTD and MMT

Figure 16 normalizes O&M costs by revenue hours. Between 2013 and 2019, cost per revenue hour declined by an average of 1% per year. Cost per revenue hour since 2020 have increased by an average of 12% per year.

Figure 16. Historical Cost per Revenue Hour



Source: NTD and MMT

Span of Service and Frequency

All but four of MMT's routes operate seven days per week. On weekdays, routes generally operate between 5:30 a.m. and 10:00 p.m. On weekends, service generally runs from 6:00 a.m. to 10:00 p.m. on Saturdays, and from 7 a.m. to 6 p.m. on Sundays. Route 20, which only operates during weekends, was added as part of the Fall 2023 service change to reduce crowding on Routes 10 and 11 and increase frequency along the Nevada Avenue Corridor between the Terminal and Southgate Road.

Aside from the three shuttle routes (Route 13, 33, and 36), most routes operate with headways of between 30 and 60 minutes on weekdays. Four routes (Route 1, 5, 25, and 27) operate 15-minute weekday service from 6 a.m. to 6 p.m. On weekends, all non-shuttle routes operate with headways of 30 minutes or more.

Table 7 shows headways and service span for each route, and the subsequent maps show the spatial distribution of routes by service frequency for weekday daytime (Figure 17), weekday evening (Figure 18), Saturdays (Figure 19), and Sundays (Figure 20).

Table 7. MMT Fixed-Route Headways and Span of Service

Route	Name	Weekday Daytime Headways	Weekday Evening Headways	Saturday Headways	Sunday Headways	Weekday Service Span	Saturday Service Span	Sunday Service Span
1	Hillside - Hancock Plaza	15	30	30	30	5:37 - 22:07	6:37 - 21:37	7:37 - 17:37
2	Centennial Blvd - Garden of the Gods Rd	60	60	60	60	7:45 - 22:10	7:15 - 18:10	8:45 - 17:32
3	Colorado Ave - Manitou Ave	30	30	30	30	5:33 - 22:07	6:33 - 21:37	7:42 - 17:37
4	8th St - Broadmoor	60	60	60	60	6:15 - 21:35	6:41 - 21:35	7:41 - 17:35
5	Boulder St - Citadel Transfer Center	15	30	30	30	5:52 - 22:01	6:50 - 21:31	7:51 - 17:31
6	Fillmore St. - Citadel Transfer Center	60	60	60	60	5:49 - 21:42	6:27 - 18:14	7:27 - 17:14
7	Pikes Peak Ave - Citadel Transfer Center	30	30	30	60	5:45 - 22:08	6:45 - 21:38	7:45 - 17:38
8	Cache La Poudre St - Citadel Transfer Center	60	60	60	60	6:14 - 22:07	6:51 - 18:44	7:32 - 17:44
9	Nevada Ave - UCCS	30	60	60	60	5:43 - 21:37	6:43 - 21:37	7:43 - 17:37
10	Hwy 115 - PPSC Centennial Campus	30	60	60	60	5:52 - 21:54	7:12 - 18:08	8:12 - 17:37
11	World Arena - PPSC Centennial Campus	30	30	60	60	5:37 - 22:09	6:40 - 21:39	7:40 - 17:39
12	Palmer Park Blvd	60	60	60	60	5:53 - 21:49	6:28 - 18:23	7:28 - 17:23
13	Zeb Free Downtown Shuttle	7	10	10	10	7:00 - 22:00 (24:00 on Fri)	8:00 - 24:00	10:00 - 20:00

14	Chestnut St - Garden of the Gods Rd	60	60	60	60	5:42 - 21:39	6:42 - 18:39	7:40 - 17:39
15	East Fountain Blvd / Cheyenne Mountain Center	60	60	60	60	5:51 - 21:46	6:51 - 18:46	7:50 - 17:45
16	Brookside St - Uintah Gardens	60	60	60	60	6:39 - 22:03	6:39 - 18:36	8:24 - 17:49
17	19th St - Fillmore St	60	60	60	60	6:20 - 20:06	6:16 - 18:43	7:57 - 17:43
18	Union Blvd - Montebello Dr	45	45	45	45	6:00 - 18:40	6:39 - 18:37	7:39 - 17:22
19	Nevada Ave - Eagle Rock	30	30	60	60	5:59 - 20:50	7:14 - 20:35	8:14 - 17:35
20	Downtown - Southgate	No Service	No Service	30	30	No Service	7:13 - 16:10	8:13 - 16:10
22	Southborough via Murray Blvd	30	60	60	60	6:20 - 22:13	7:18 - 22:03	8:18 - 18:40
23	Barnes Rd - Tutt Blvd	30	45	60	60	5:49 - 21:29	7:49 - 22:10	8:49 - 18:30
24	Galley Rd - Tutt Blvd	60	60	60	60	5:43 - 22:11	7:50 - 21:32	8:50 - 17:32
25	N Academy Blvd - Voyager Pkwy	15	30	30	30	5:12 - 22:04	6:13 - 22:07	7:14 - 18:10
27	S Academy Blvd - PPSC Centennial Campus	15	30	30	30	5:42 - 22:05	6:14 - 22:05	7:14 - 18:01
32	Security - Widefield	60	60	60	60	6:07 - 22:07	6:07 - 19:07	8:07 - 18:07
33	Manitou Springs Free Shuttle	20	20	10 (May-Sept) 20 (Oct-Apr)	10 (May-Sept) 20 (Oct-Apr)	6:00 - 18:00	6:00 - 18:00	6:00 - 18:00
34	Garden of the Gods Rd - Austin Bluffs Pkwy	60	60	60	60	5:17 - 22:08	6:15 - 19:06	7:13 - 18:06
35	Las Vegas St - PPSC Centennial Campus	40	40	40	No Service	6:11 - 21:31	7:15 - 19:05	No Service

36	Manitou Springs Free Shuttles	20	20	20	20	10:00 - 21:00	10:00 - 21:00	10:00 - 21:00
37	Hancock Plaza - Colorado Springs Airport	40	40	40	40	6:15 - 22:18	6:15 - 18:14	6:15 - 18:14
38	Deviated Fixed Service - The Care Connection	45	45	No Service	No Service	7:30 - 19:20	No Service	No Service
39	Corporate Dr - Voyager Parkway	60	60	60	60	5:26 - 20:20	6:40 -20:05	7:40 - 17:30
40	Voyager Parkway - PPSC North Campuses	40	40	No Service	No Service	7:34 - 17:28	No Service	No Service

Source: MMT October 2023 Schedules

Figure 17. Weekday Daytime Fixed-Route Frequency (6 a.m. to 6 p.m.)

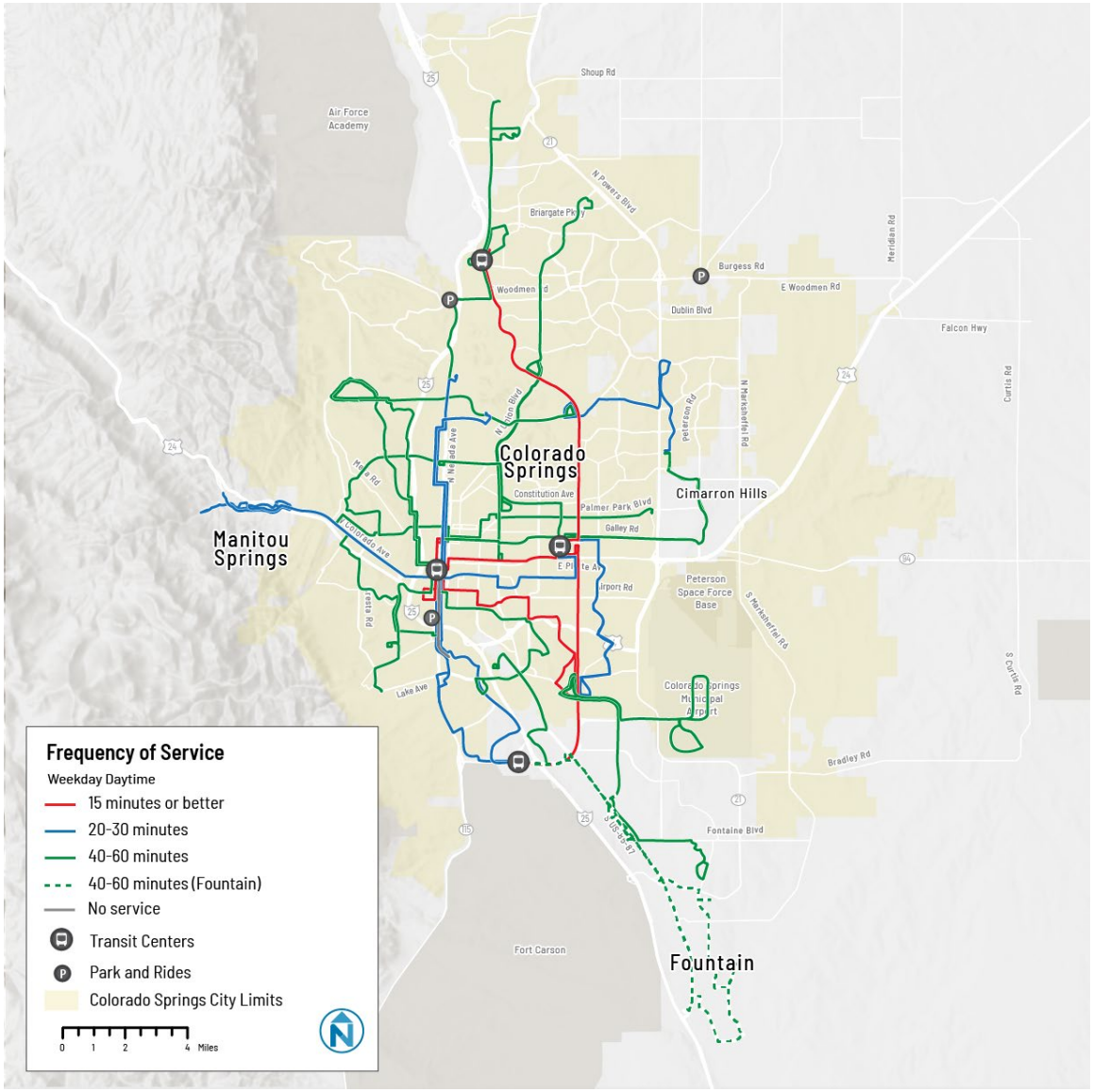


Figure 18. Weekday Evening Fixed-Route Frequency (after 6 p.m.)

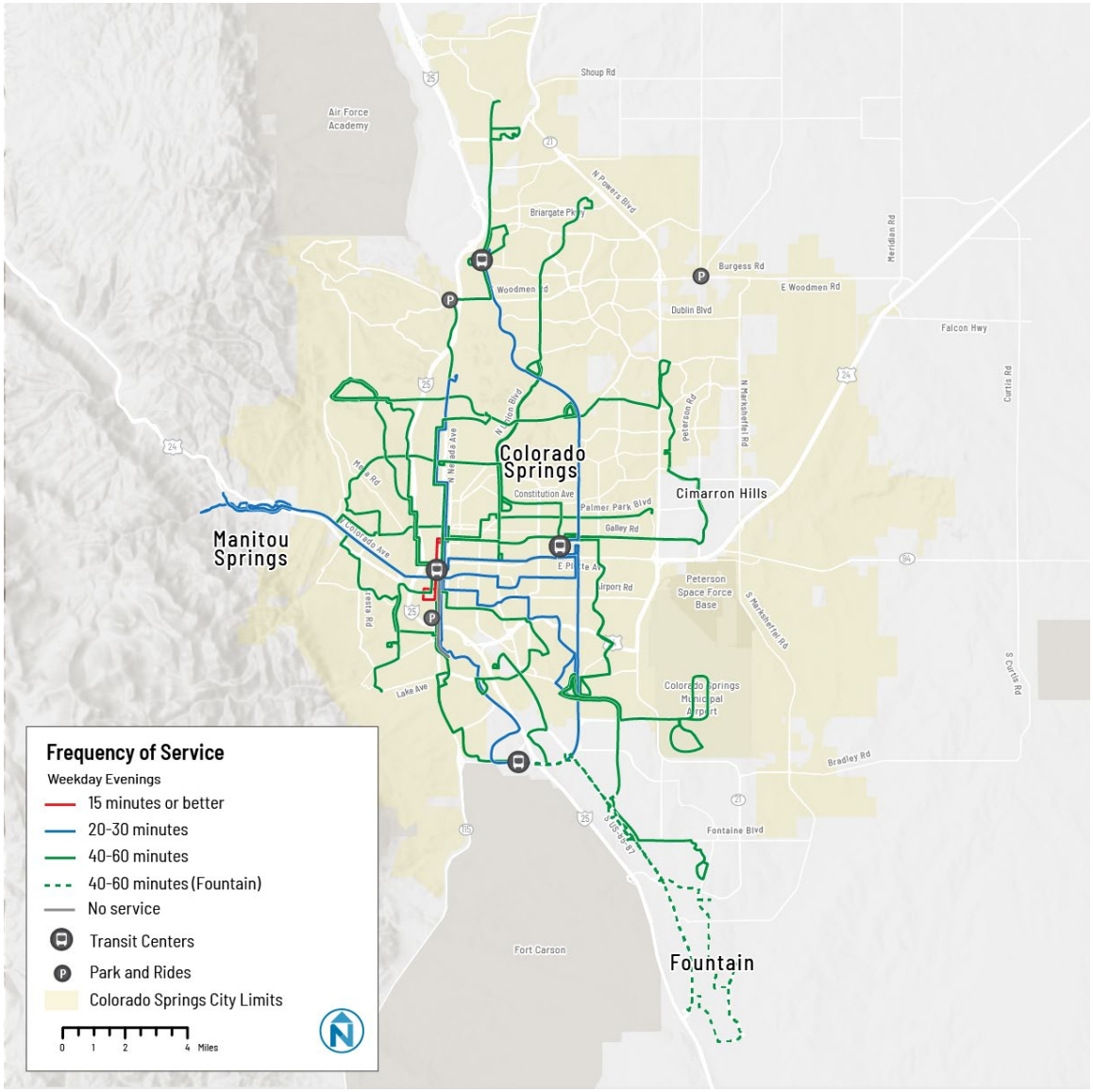


Figure 19. Saturday All-Day Fixed-Route Frequency

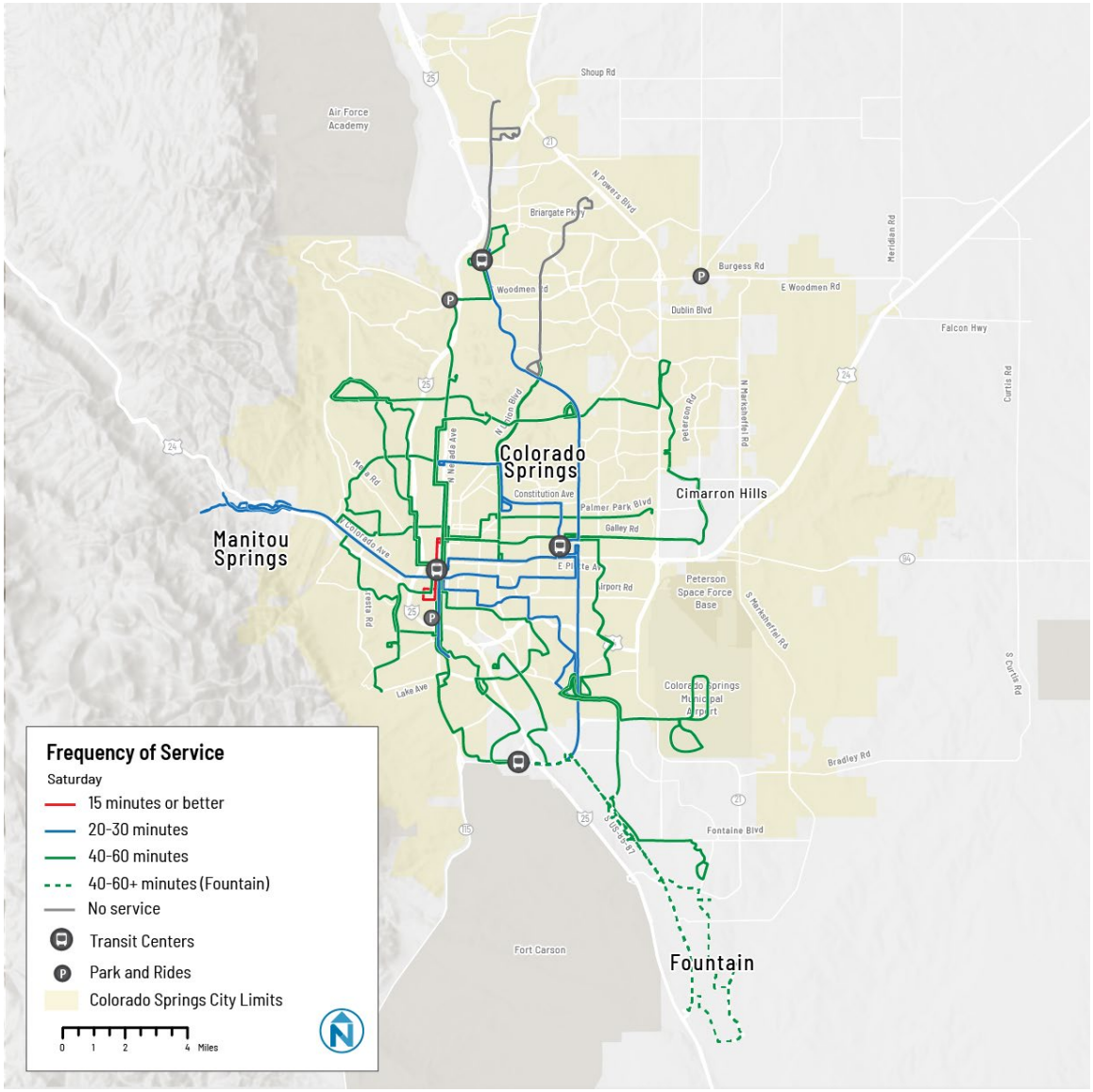
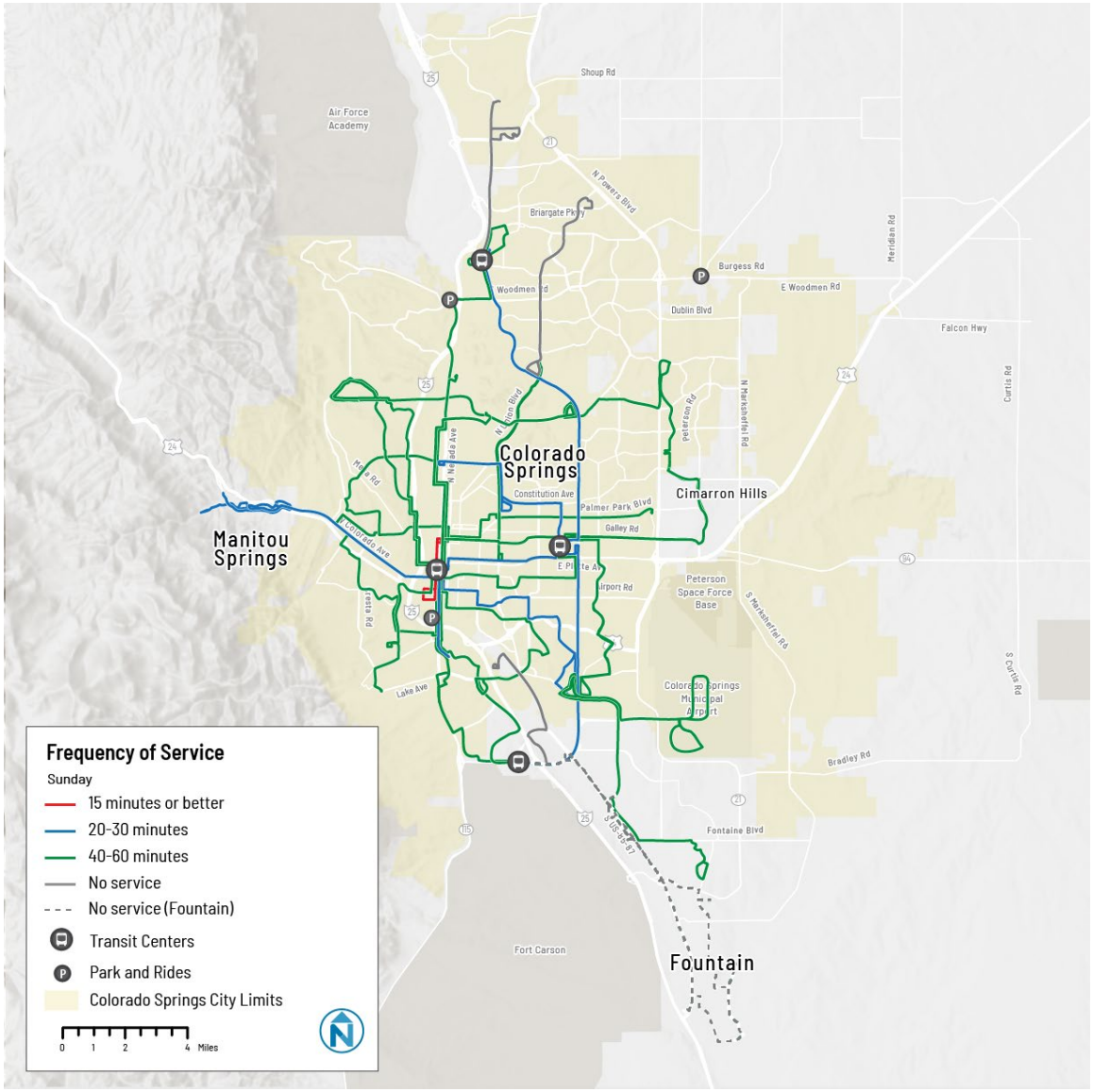


Figure 20. Sunday All-Day Fixed Route Frequency



System Ridership

In September 2023, MMT's fixed-route network had over 242,000 boardings. Figure 21 shows the average weekday ridership throughout the system at the stop level. Some of the high ridership corridors in the system include W Colorado Avenue, Academy Boulevard, E Boulder Street, E Platte Avenue, and S Nevada Avenue.

Figure 21. Average Weekday Ridership

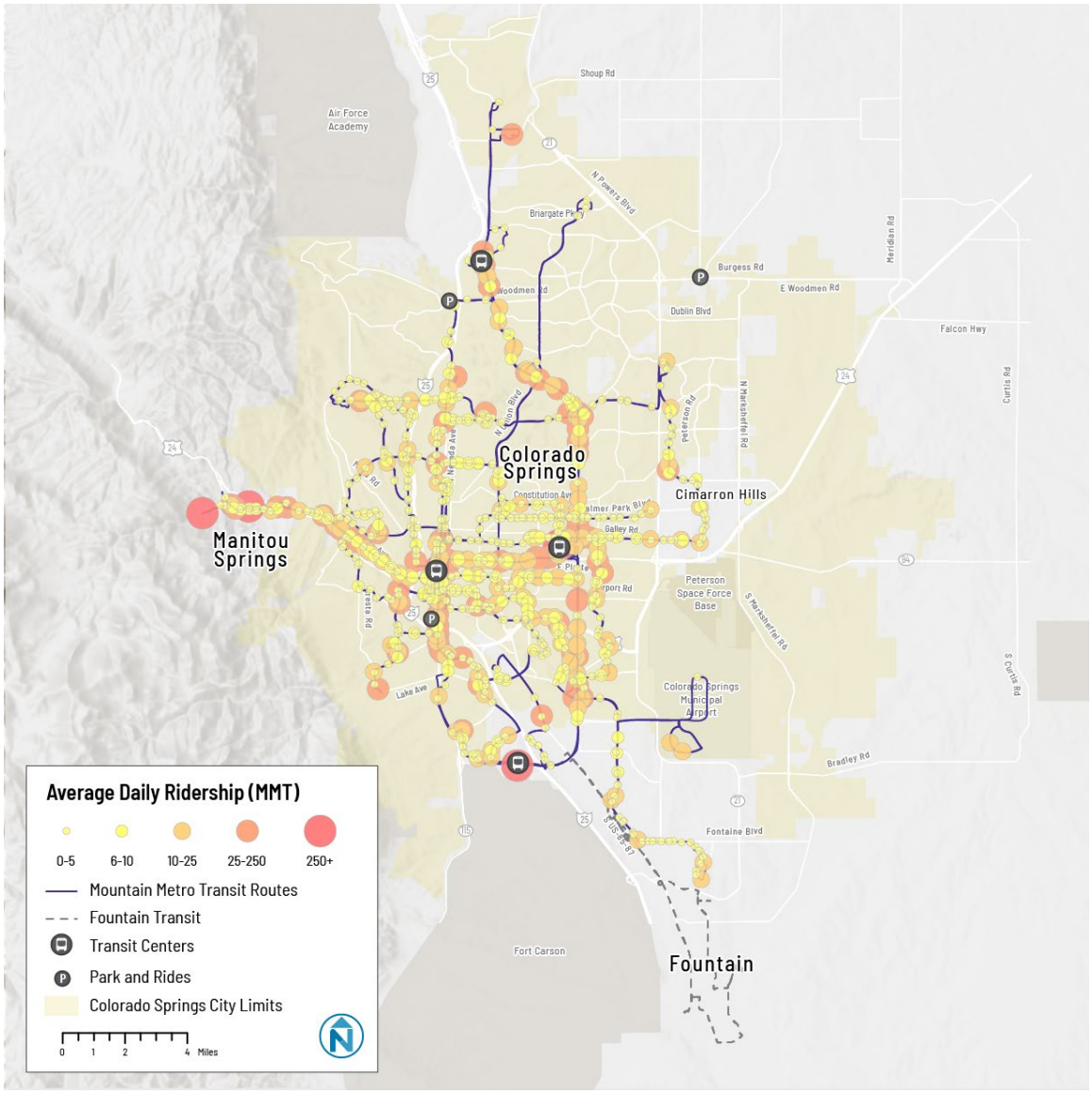
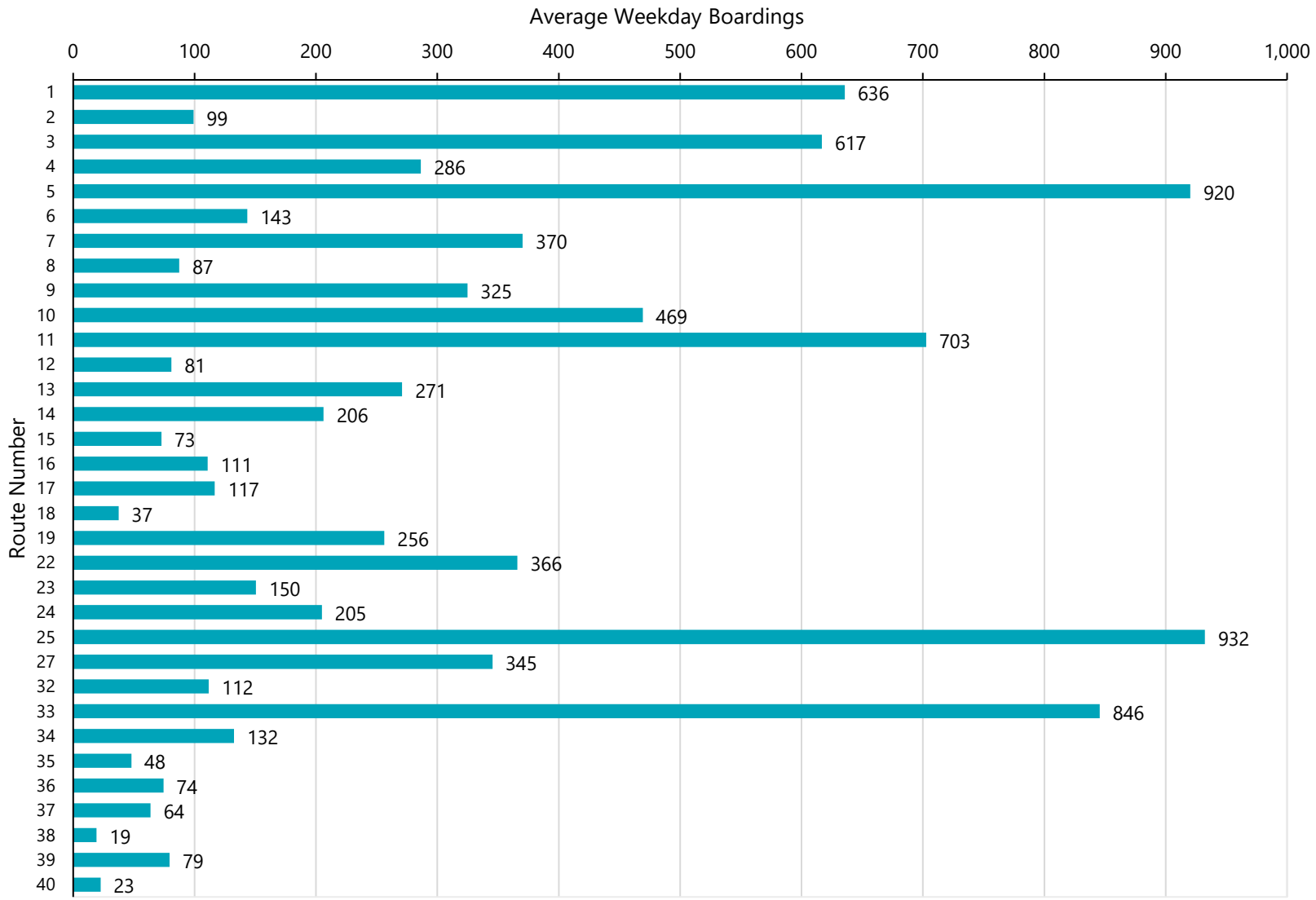


Figure 22 shows the ridership at the route level. The top three routes in MMT's system based on September 2023 average weekday ridership are: Route 25 (N Academy Blvd - Voyager Pkwy), Route 5 (Boulder- Citadel), and Route 33 (Manitou Springs Free Shuttle).

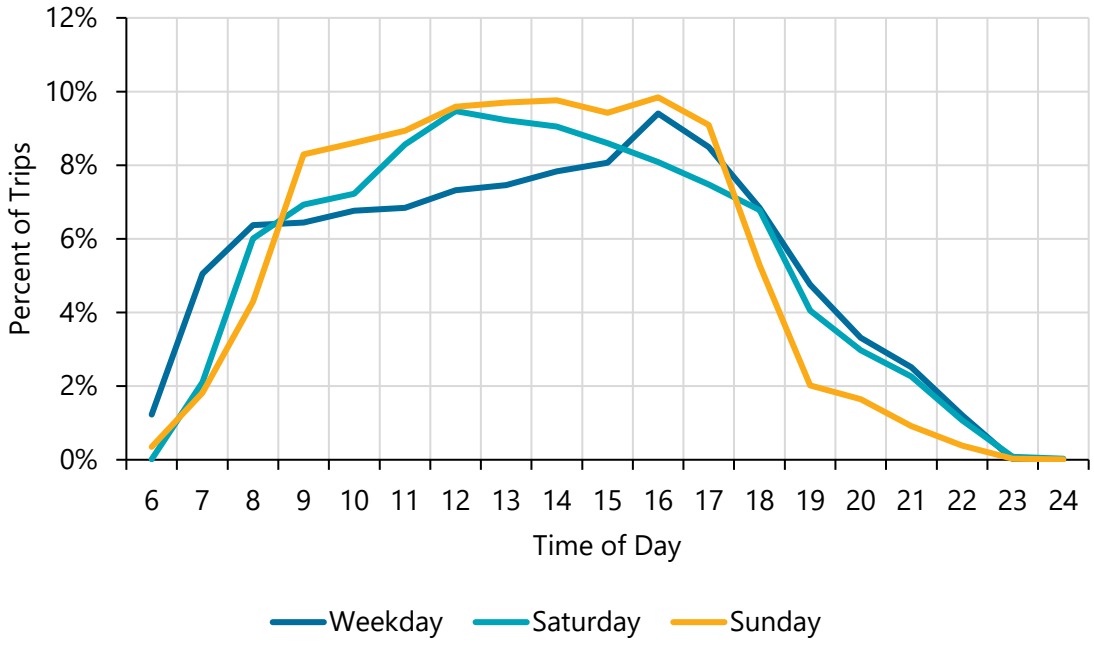
Figure 22. Average Weekday Ridership by Route



Source: MMT, September 2023 data

A temporal analysis of ridership was also performed. The results (Figure 23), show weekday ridership gradually increases from 8 a.m. before peaking between 4 p.m. and 5 p.m. This ridership pattern supports the daytime service schedule MMT currently operates. Saturday ridership peaks around midday, while Sunday ridership is generally consistent between 9 a.m. and 5 p.m. Ridership after 6 p.m. drops off substantially regardless of day of the week, likely because services are less frequent in the evenings.

Figure 23. Systemwide Temporal Distribution of Ridership



Source: MMT, September 2023 data

Transit Facilities

Figure 24 depicts the transit facilities in MMT's network. MMT has four major transit hubs, typically referred to as transfer centers, where riders can transfer between MMT lines and neighboring systems: the Downtown Terminal, the Citadel Transfer Center, the PPSC Centennial Transfer Center, and the Voyager Transfer Center. The routes serving each of these facilities are shown in to .

MMT also has two park-n-rides in their network: the Woodmen and Tejon Park-n-Rides. These facilities serve some MMT routes, but predominantly serve regional intercity bus routes (see Figure 8). There is also a park-n-ride at the intersection of E Woodmen Road and Black Forest Road, called the Black Forest Park-n-Ride, which is served by Envida.

Figure 24. Transit Facilities

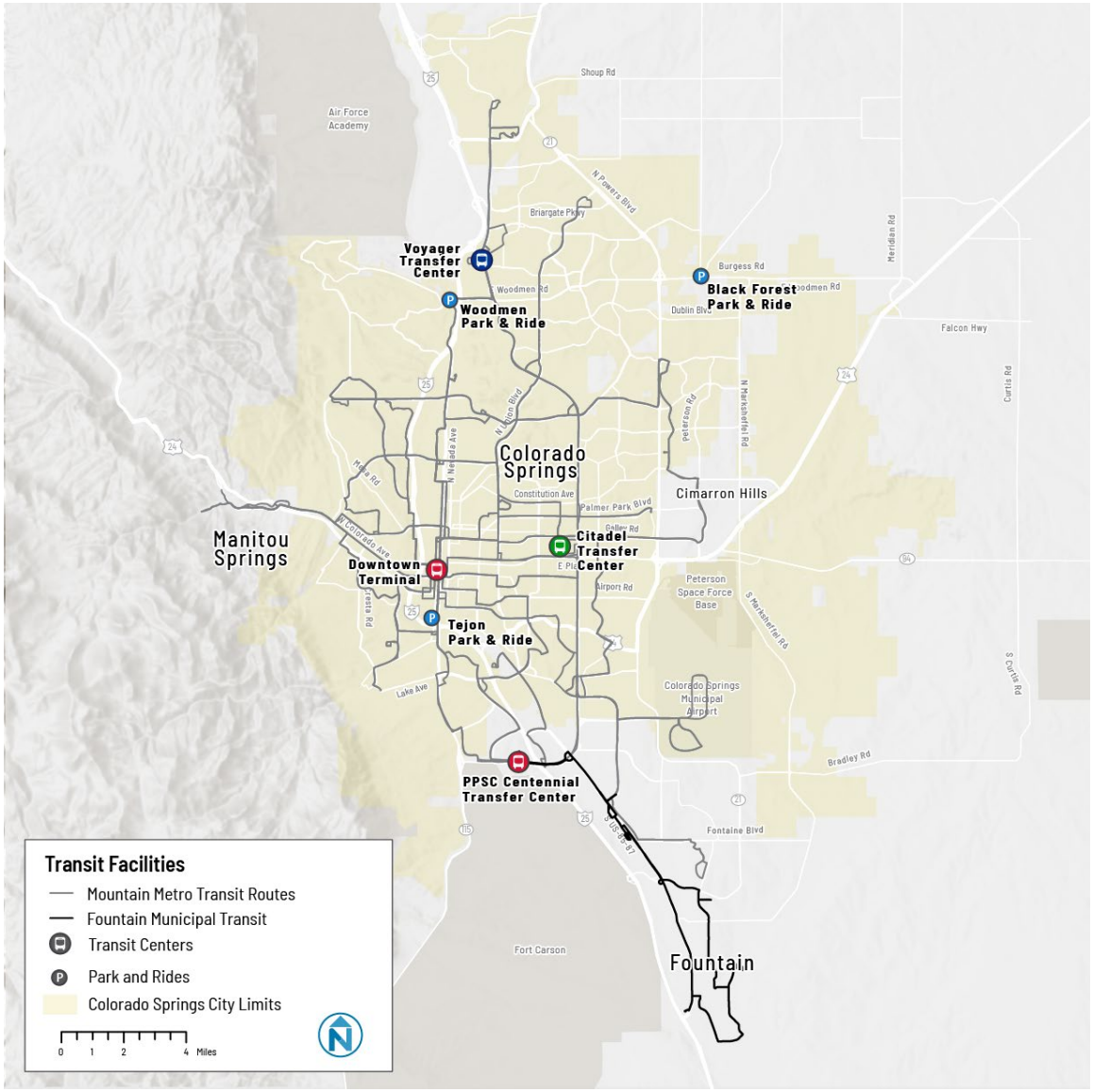
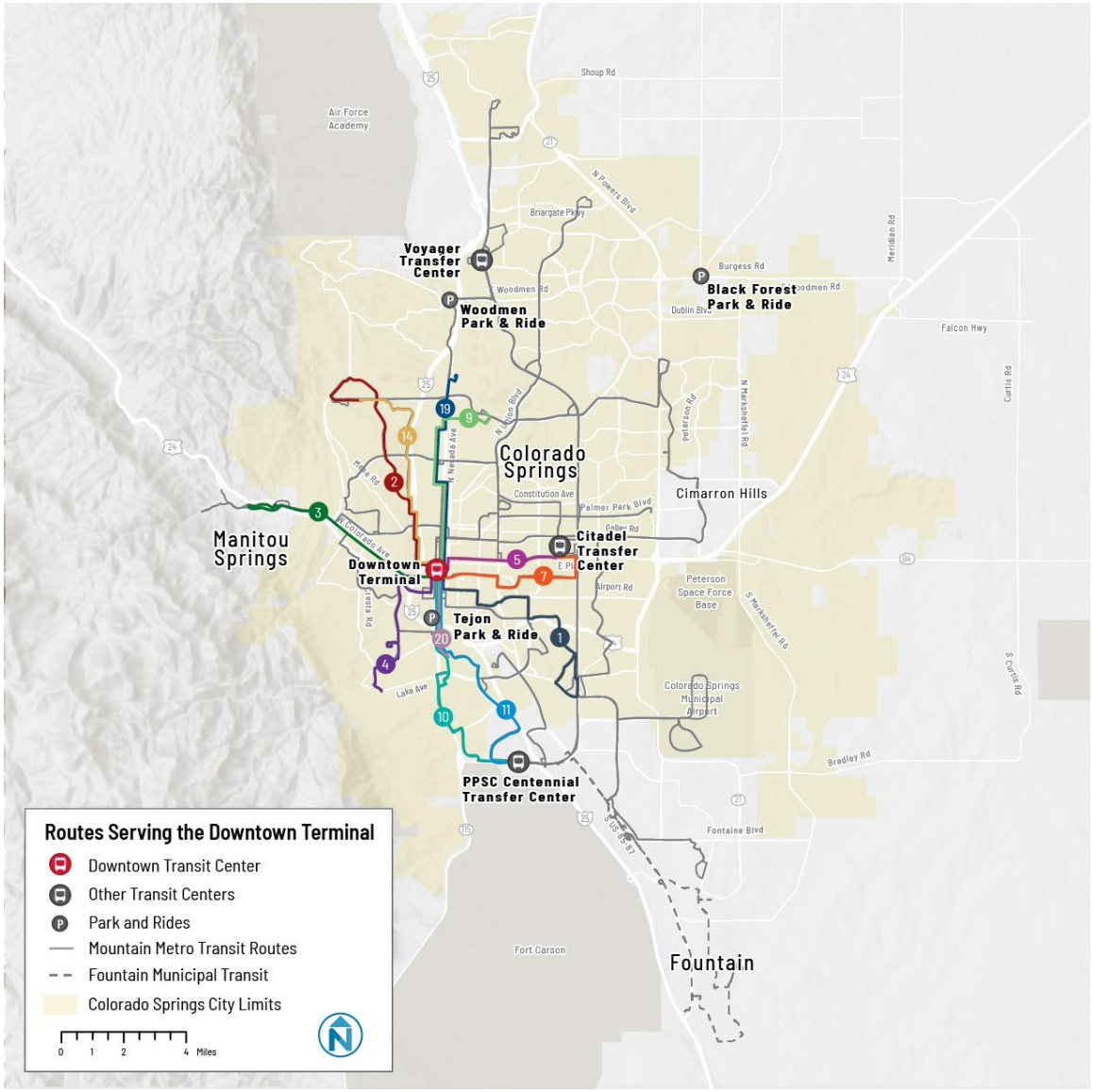
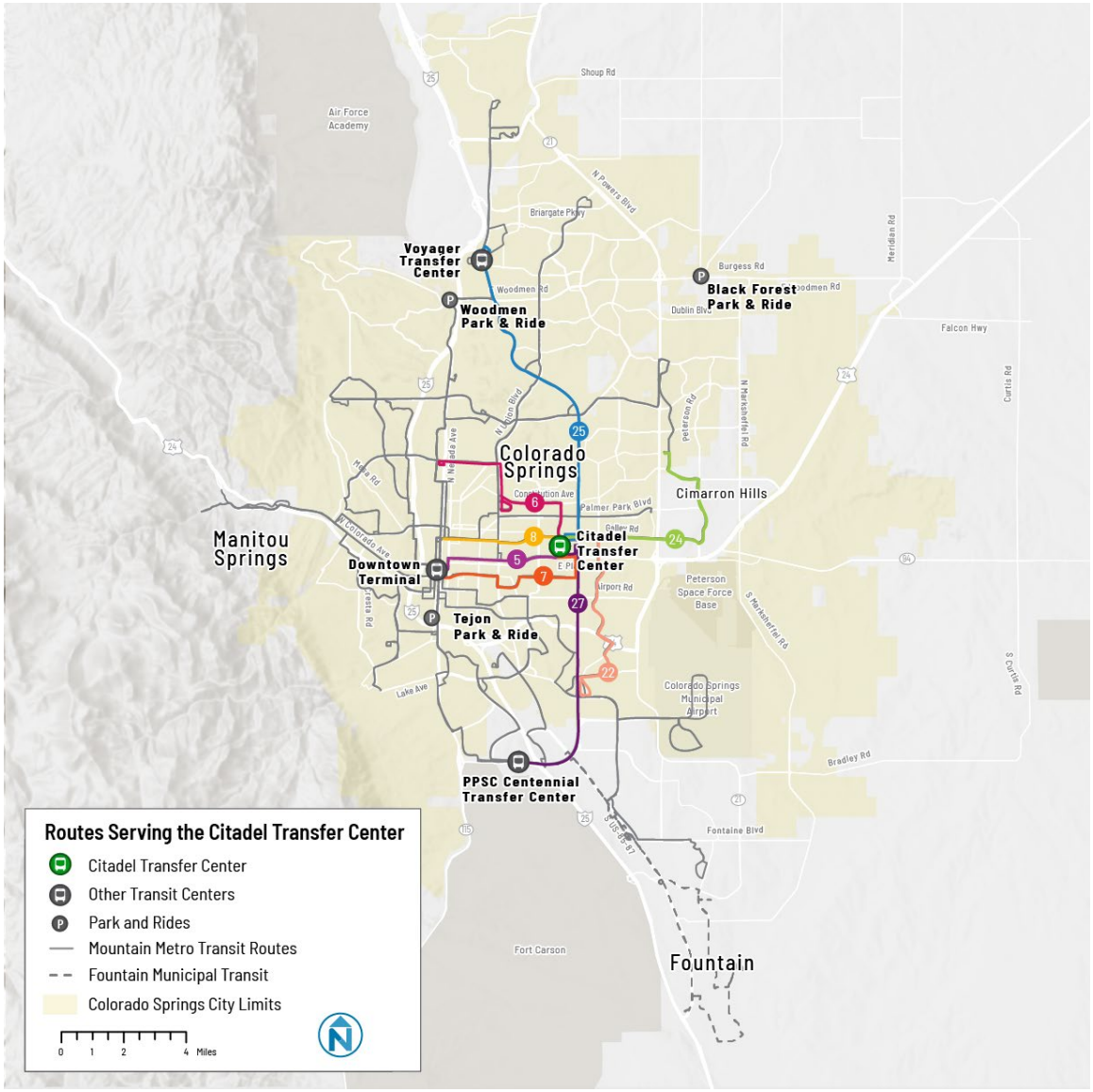


Figure 25. Downtown Terminal Routes



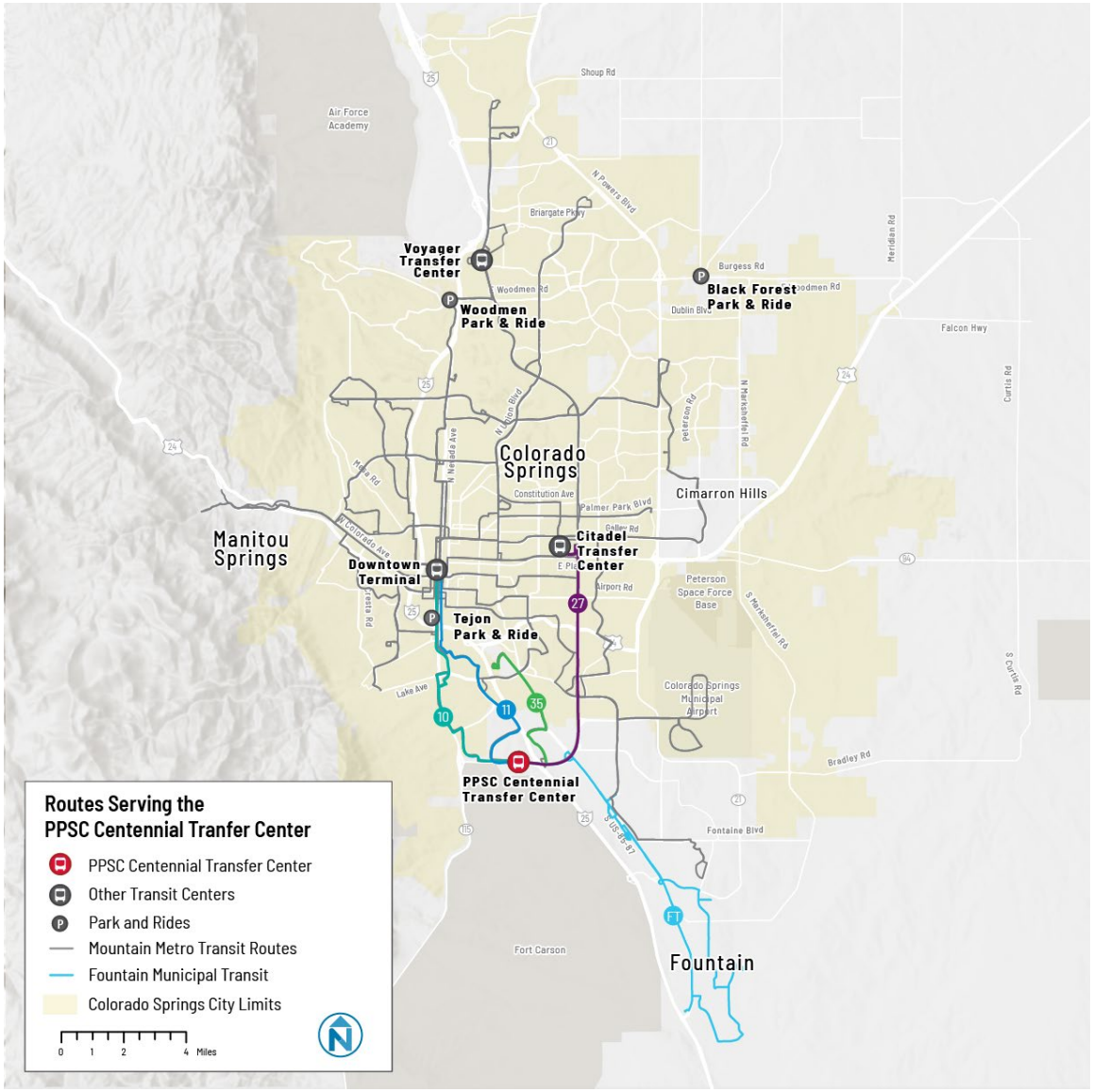
The Downtown Terminal is the central hub for MMT service, providing riders access to 12 MMT routes and the Bustang South Line to Denver. Routes originating at the Downtown Terminal also connect to the Citadel Transfer Center and PPSC Centennial Transfer Center.

Figure 26. Citadel Transfer Center Routes



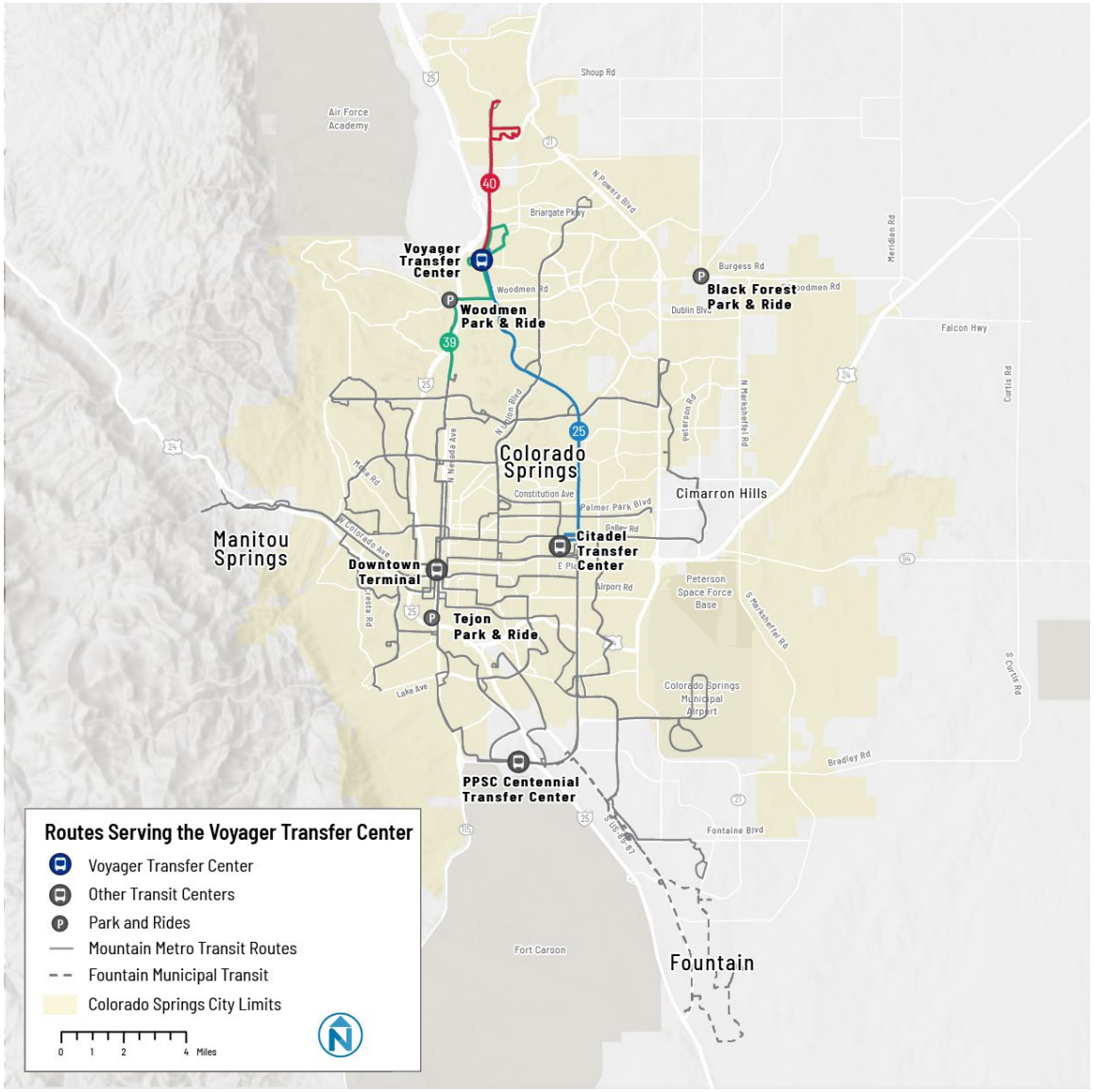
The Citadel Transfer Center is located adjacent to the Citadel Mall and connects to eight MMT routes. Routes serving the Citadel Transfer Center also connect to all three other MMT transfer centers: The Downtown Terminal, the Voyager Transfer Center, and the PPSC Centennial Transfer Center.

Figure 27. Pikes Peak State College Centennial Transfer Center Routes



The PPSC Centennial Transfer Center is located on the PPSC campus and connects to four MMT routes and Fountain Municipal Transit. Routes serving the PPSC Centennial Transfer Center also connect to the Downtown Terminal and the Citadel Transfer Center.

Figure 28. Voyager Transfer Center Routes



The Voyager Transfer Center is located just off I-25 in north Colorado Springs in a commercial development near the Chapel Hills Mall. It connects to three MMT routes. Routes serving the Voyager Transfer Center also connect to the Citadel Transfer Center and the Woodmen Park and Ride. Envida Transportation's Eastern El Paso County Bus Route 2 also serves the Voyager Transfer Center.

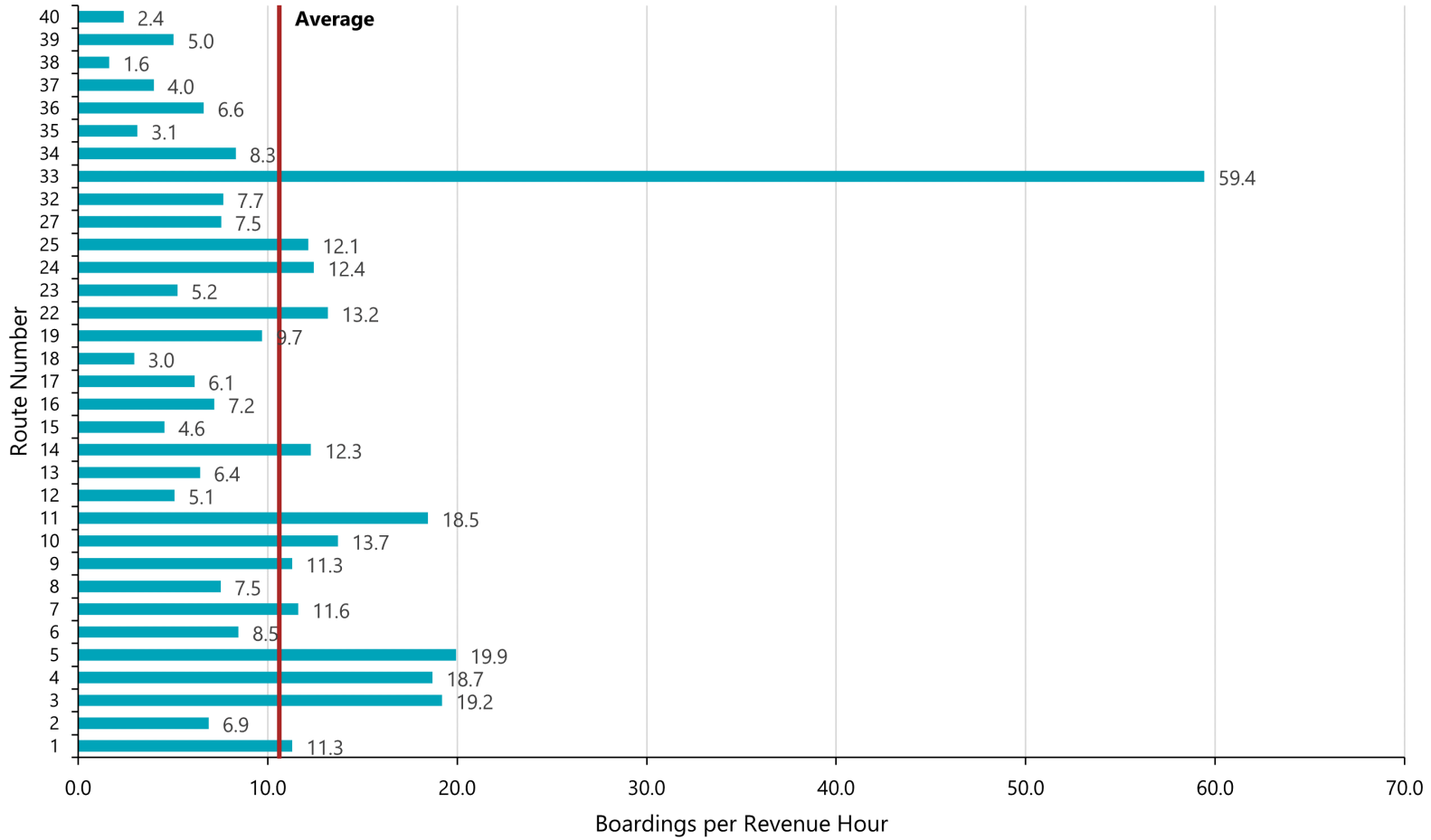
Productivity

Productivity is measured in boardings per vehicle revenue hour. Revenue hours is the amount of time buses operate in service, including recovery time and operator breaks at the end of each trip.

Figure 29 shows the weekday boardings per revenue hour for MMT fixed-route service. The five most productive routes in the MMT system are Route 33, Route 5, Route 3, Route 4, and Route 11. The five least productive routes are Route 38, Route 40, Route 35, Route 18, and Route 37, all of which have less than five boardings per revenue hour.

Table 8 shows the productivity by route and day of the week, with the headways included for reference. The green shading denotes weekend service that is more productive than weekday service, which could indicate opportunities for investment (there are 14 routes that fall into this category). There are also several hourly routes (Routes 4, 10, and 11) with productivity over 15 boardings per revenue hour that could be candidates for improved service.

Figure 29. Weekday Boardings per Revenue Hour



Source: MMT, September 2023

Table 8. MMT Fixed-Route Productivity

Route	Name	Weekday Daytime Headways	Weekday Evening Headways	Saturday Headways	Sunday Headways	Weekday Boardings per Revenue Hour	Saturday Boardings per Revenue Hour	Sunday Boardings per Revenue Hour
1	Hillside - Hancock Plaza	15	30	30	30	11.3	15.4	9.7
2	Centennial Blvd - Garden of the Gods Rd	60	60	60	60	6.9	3.6	2.2
3	Colorado Ave - Manitou Ave	30	30	30	30	19.2	18.2	20.6
4	8th St - Broadmoor	60	60	60	60	18.7	19.2	19.0
5	Boulder St - Citadel Transfer Center	15	30	30	30	19.9	24.2	21.9
6	Fillmore St. - Citadel Transfer Center	60	60	60	60	8.5	4.5	Missing
7	Pikes Peak Ave - Citadel Transfer Center	30	30	30	60	11.6	9.0	6.8
8	Cache La Poudre St - Citadel Transfer Center	60	60	60	60	7.5	5.9	Missing
9	Nevada Ave - UCCS	30	60	60	60	11.3	11.6	9.0
10	Hwy 115 - PPSC Centennial Campus	30	60	60	60	13.7	25.5	18.3
11	World Arena - PPSC Centennial Campus	30	30	60	60	18.5	22.9	23.7
12	Palmer Park Blvd	60	60	60	60	5.1	3.7	2.3
13	Zeb Free Downtown Shuttle	7	10	10	10	6.4	5.2	5.2
14	Chestnut St - Garden of the Gods Rd	60	60	60	60	12.3	9.0	6.1
15	East Fountain Blvd / Cheyenne Mountain Center	60	60	60	60	4.6	3.5	3.0
16	Brookside St - Uintah Gardens	60	60	60	60	7.2	7.4	4.5
17	19th St - Fillmore St	60	60	60	60	6.1	4.4	Missing
18	Union Blvd - Montebello Dr	45	45	45	45	3.0	1.5	0.9

Route	Name	Weekday Daytime Headways	Weekday Evening Headways	Saturday Headways	Sunday Headways	Weekday Boardings per Revenue Hour	Saturday Boardings per Revenue Hour	Sunday Boardings per Revenue Hour
19	Nevada Ave - Eagle Rock	30	30	60	60	9.7	13.0	10.8
20	Downtown - Southgate	No Service	No Service	30	30	No Service	No Data	No Data
22	Southborough via Murray Blvd	30	60	60	60	13.2	13.2	10.7
23	Barnes Rd - Tutt Blvd	30	45	60	60	5.2	6.8	4.5
24	Galley Rd - Tutt Blvd	60	60	60	60	12.4	8.3	7.7
25	N Academy Blvd - Voyager Pkwy	15	30	30	30	12.1	19.0	15.3
27	S Academy Blvd - PPSC Centennial Campus	15	30	30	30	7.5	9.3	6.9
32	Security - Widefield	60	60	60	60	7.7	7.5	4.8
33	Manitou Springs Free Shuttle	20	20	20	20	59.4	42.6	66.6
34	Garden of the Gods Rd - Austin Bluffs Pkwy	60	60	60	60	8.3	4.3	2.7
35	Las Vegas St - PPSC Centennial Campus	40	40	40	No Service	3.1	2.0	No Service
36	Manitou Springs Free Shuttles	20	20	20	20	6.6	14.2	5.1
37	Hancock Plaza - Colorado Springs Airport	40	40	40	40	4.0	4.7	2.8
38	Deviated Fixed Service - The Care Connection	45	45	No Service	No Service	1.6	No Service	No Service
39	Corporate Dr - Voyager Parkway	60	60	60	60	5.0	5.9	4.4
40	Voyager Parkway - PPSC North Campuses	40	40	No Service	No Service	2.4	No Service	No Service

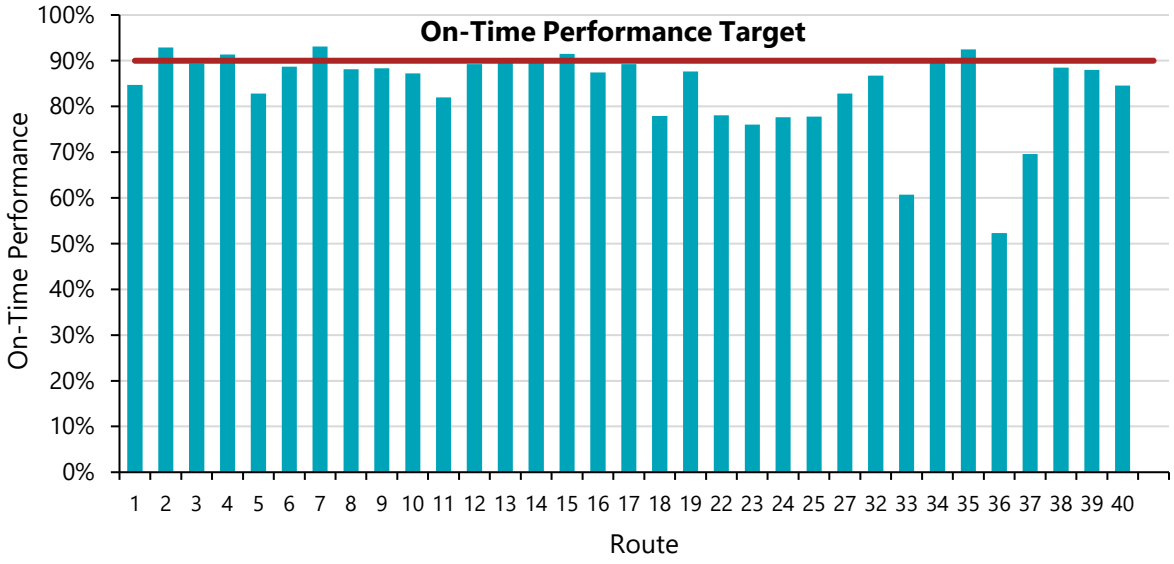
Source: MMT, September 2023 data

Note: Green shading denotes weekend service productivity that is better than on weekdays

On-Time Performance

MMT measures on-time performance by comparing the timepoint on the schedule with the actual time the bus arrives. A bus is considered on time if it arrives up to five minutes after the scheduled time. Buses that depart earlier or later than that window are not considered on time. MMT has an on-time performance goal of 90% for service. In September 2023 (Figure 30), five routes met the 90% on-time performance goal. There is an opportunity to explore speed and reliability treatments along with running time adjustments to improve service reliability.

Figure 30. On-Time Performance by Route



Source: MMT, September 2023 data

Bus Stops and Amenities

MMT has 972 stops in its system as of September 2023. The number and percentage of stops with various amenities are shown in Table 9. Figure 31 shows an example of a stop that features all three amenity types.

Table 9. Bus Stops and Amenities

Amenities	Number of Stops	Percent
Benches	553	57%
Shelters	135	14%
Lighting	796	82%
Total Stops	972	--

Source: MMT

Figure 31. Bus Shelter with Bench and Lighting on Academy Boulevard, 2022



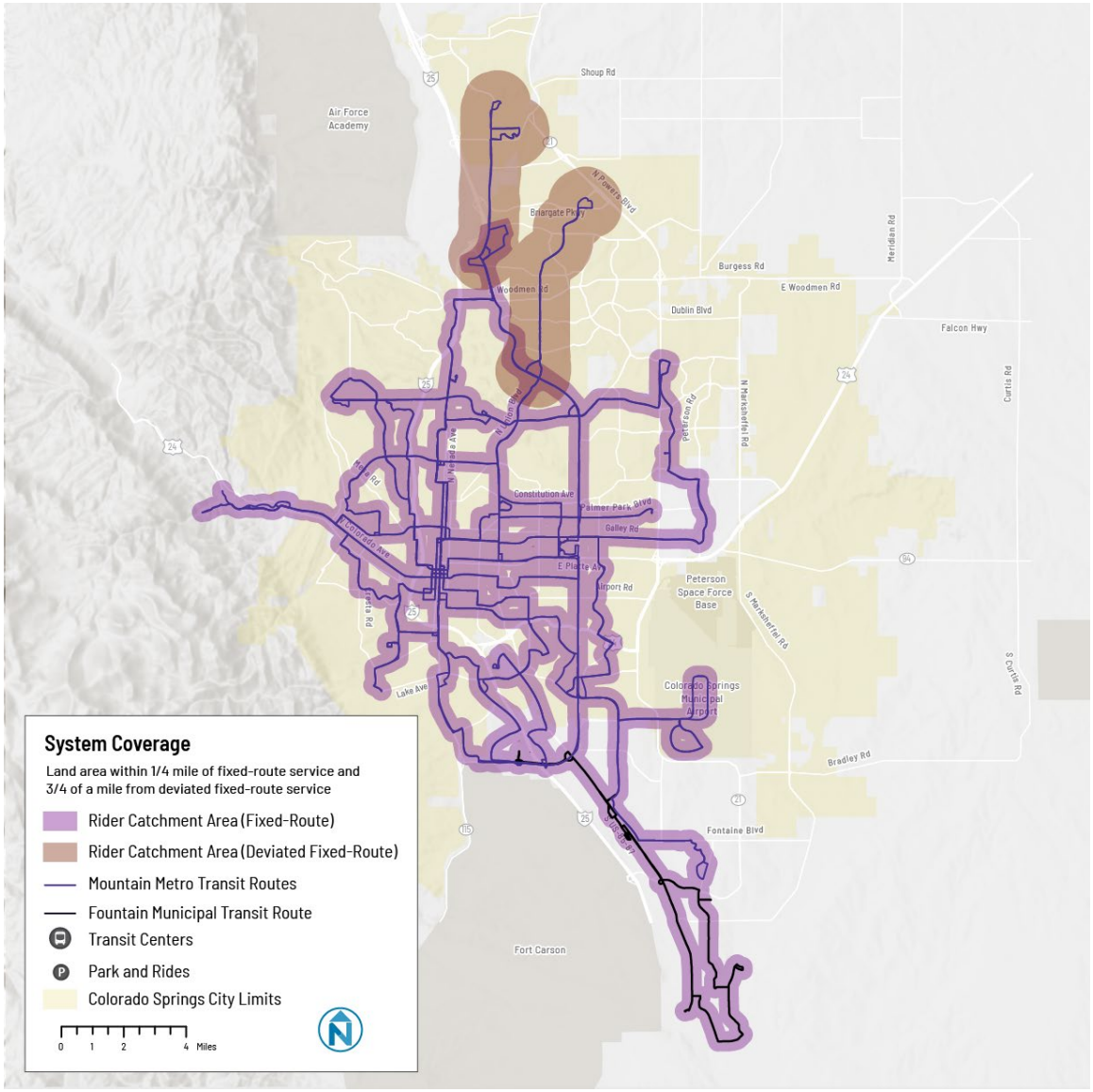
System Coverage

As documented in the 2023 Title VI Plan, MMT has a long-term goal for fixed-route service to be available to 90% of the UZA. Note, this is different than the coverage area for ADA complementary paratransit, which is federally mandated and is defined as a ¾-mile buffer around all fixed routes (the ADA complementary paratransit service area is presented in the paratransit section of this chapter).

Based on the guidance in the 2023 Title VI plan, a coverage analysis was performed on the existing transit network. The analysis utilized a ¼-mile buffer around regular fixed-routes and a ¾-mile buffer around deviated fixed-routes. Fountain Municipal Transit's fixed-route was also included in this calculation. Populations residing in census blocks with their centroids located within the buffer were considered to be 'served'. The coverage area generated by this methodology is shown in Figure 32.

The results of this analysis showed 44% of the total UZA population (per the 2020 Census) of Colorado Springs is served by MMT, indicating more coverage is needed in the network in the long-term.

Figure 32. Fixed-Route System Coverage



MMT ADA Complementary Paratransit Service

Mountain Metro Mobility is the division of MMT that delivers ADA complementary paratransit service. Paratransit service is available within ¾ of a mile of existing MMT fixed-route service, excluding deviated fixed-routes. Riders may also elect to use the premium Taxi Choice Option for trips under seven miles, which costs the same as ADA complementary paratransit service.

Historical Trends

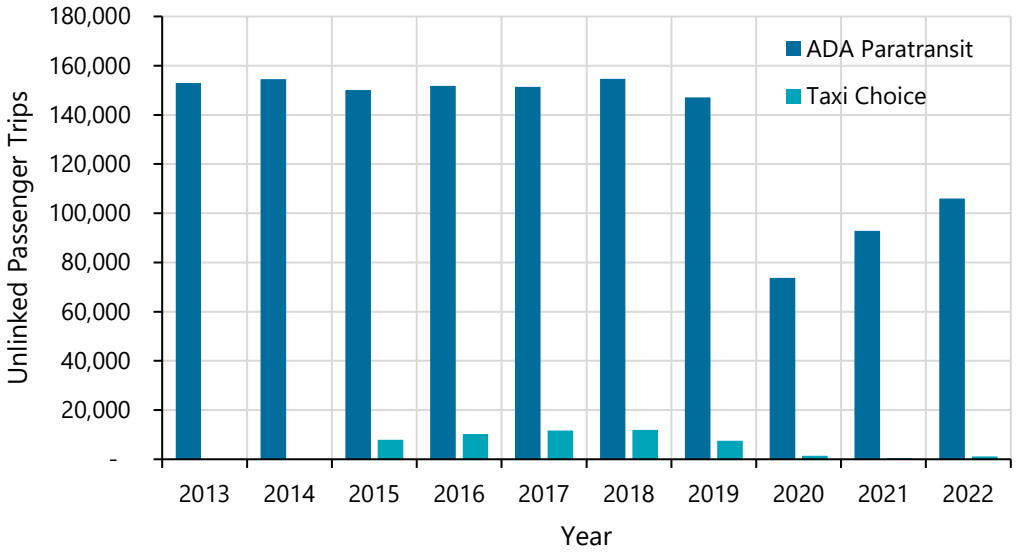
Assessing the historical performance of MMT's paratransit system lays a strong foundation upon which to develop recommendations for improvement. This section shares historical trends for the paratransit service, which includes both traditional paratransit and the premium taxi service.

Ridership on MMT's ADA complementary paratransit service (Figure 33) was affected by the pandemic, as ridership in 2020 was nearly half of what it was in 2019. ADA complementary paratransit has been slowly recovering since the pandemic started, with ridership increasing each year since 2020. Vehicle revenue hours on ADA complementary paratransit have increased since 2020 (Figure 34). These increases in these two measures equates to an increase in productivity for ADA complementary paratransit service since 2020 (Figure 36).

From 2013 to 2019, total O&M expenses for ADA complementary paratransit were steadily rising; the previous peak from 2019 was surpassed in 2022 (Figure 37). Cost per trip for ADA complementary paratransit increased dramatically in 2020 despite low ridership, at least partially due to the contracted cost increasing, but likely also due to complications caused by the COVID-19 pandemic such as social distancing requirements resulting in fewer shared trips (Figure 38). Cost per revenue hour has steadily increased each year over the last decade, reaching a peak of $115 in 2022 (Figure 39). In 2021 and 2022, VOMS for ADA complementary paratransit totaled 32 (Figure 35).

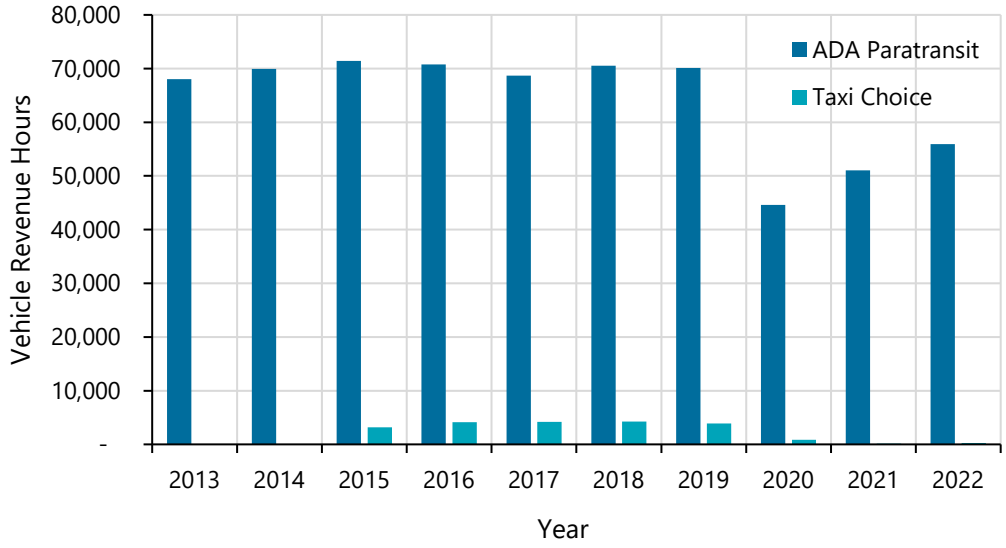
Prior to 2019, MMT also tracked the performance specialized transportation services. PPACG has since taken over this responsibility, while MMT focuses on future ADA complementary paratransit performance.

Figure 33. Historical Paratransit Ridership



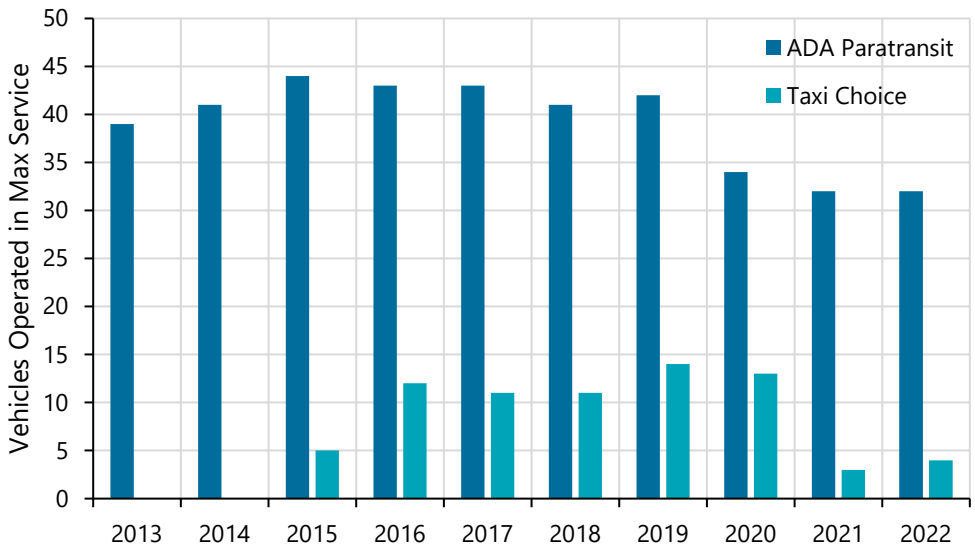
Source: MMT

Figure 34. Historical Paratransit Vehicle Revenue Hours



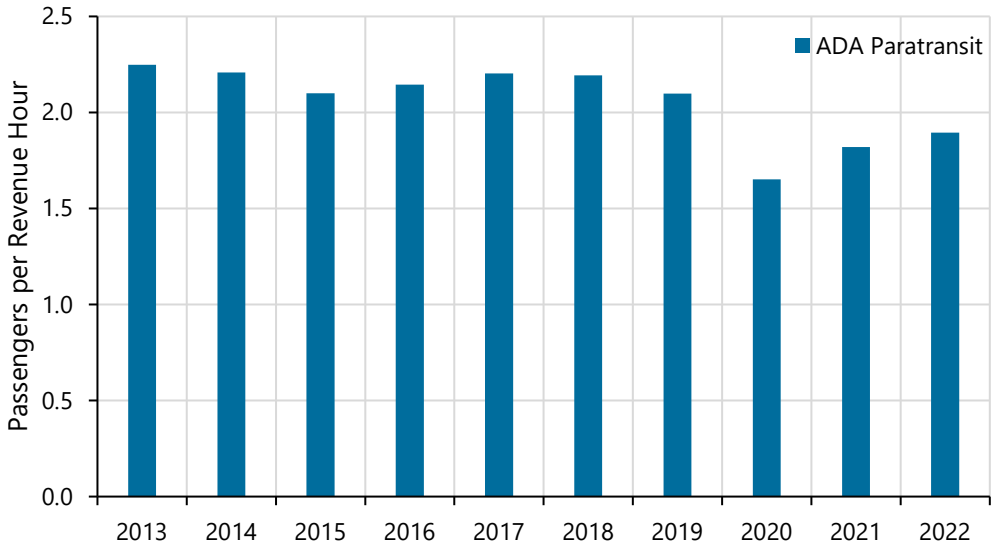
Source: MMT

Figure 35. Historical Paratransit Vehicles Operated in Max Service



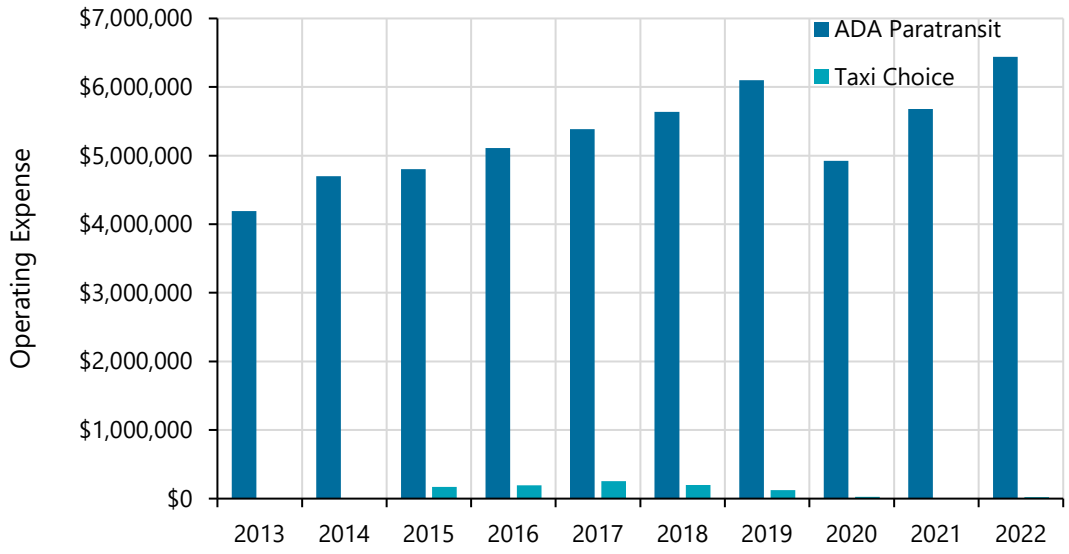
Source: MMT

Figure 36. Historical Paratransit Productivity



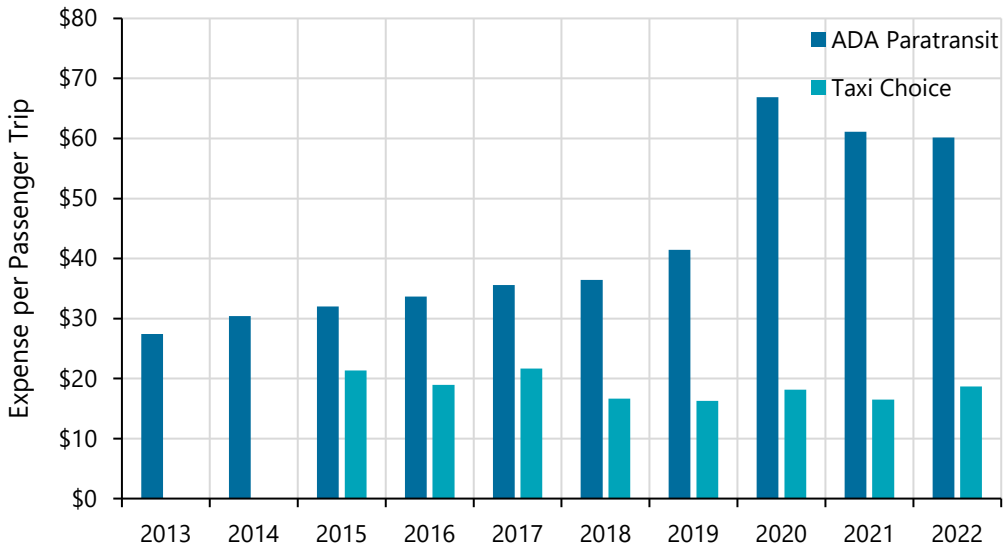
Source: MMT

Figure 37. Historical Paratransit Operating and Maintenance Expenses



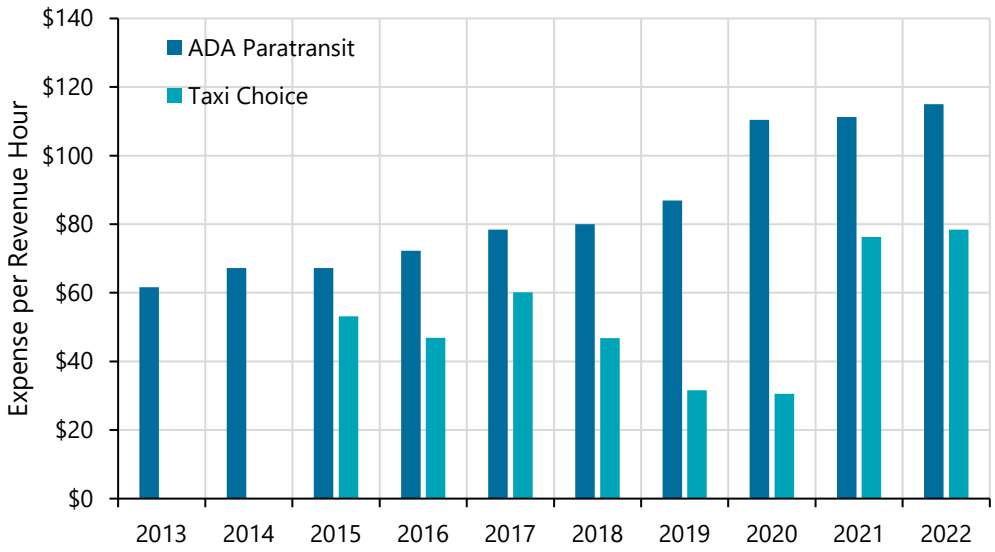
Source: NTD

Figure 38. Historical Paratransit Cost per Trip



Source: NTD and MMT

Figure 39. Historical Paratransit Cost per Revenue Hour

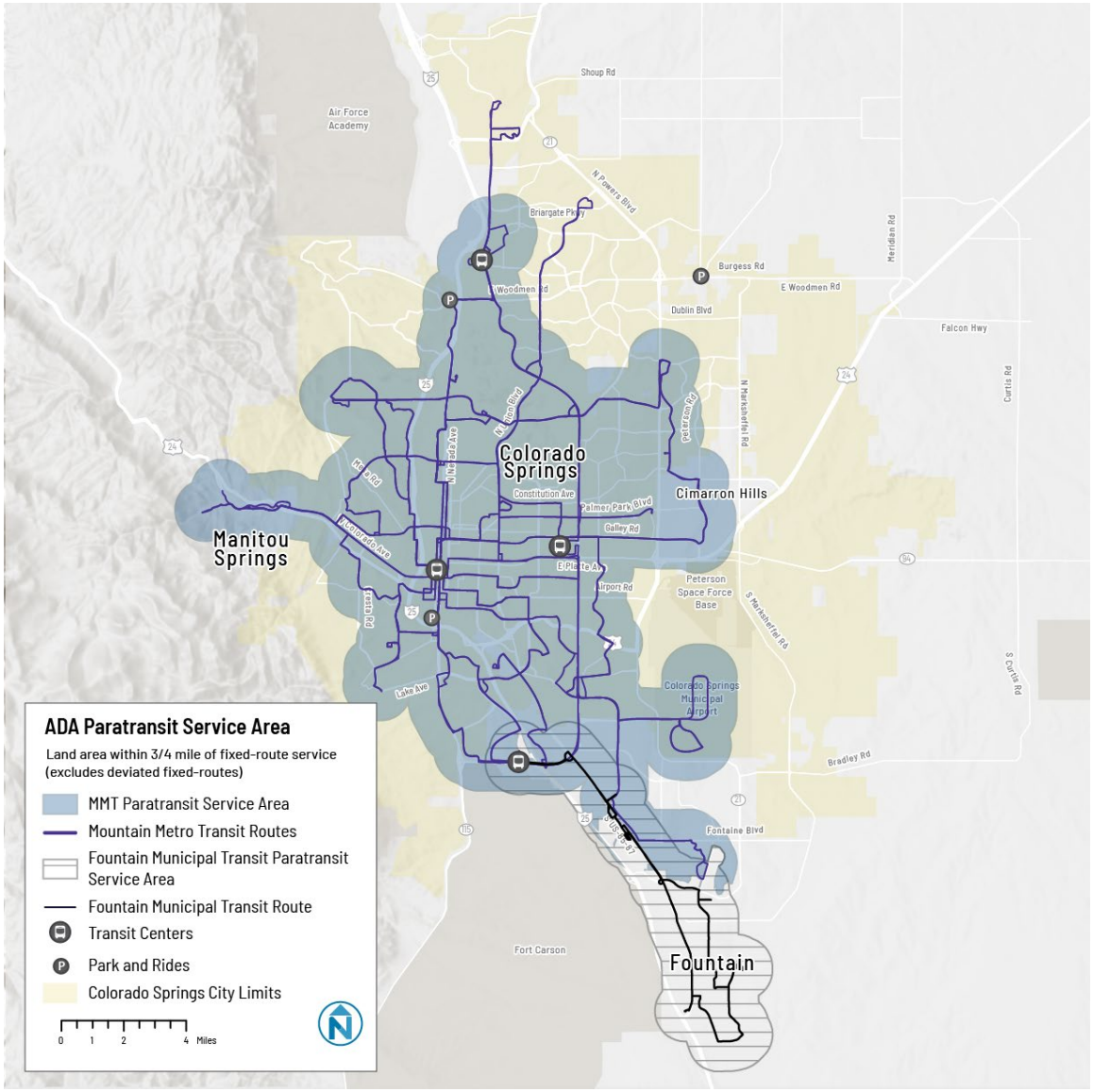


Source: NTD and MMT

Service Area

Figure 40 shows the ADA complementary paratransit service area for MMT, which is defined as a ¾-mile buffer around fixed-route service. This does not include Routes 38 and 40, which offer deviated fixed-route service in northern Colorado Springs. Fountain Municipal Transit's ADA complementary paratransit service boundary is also shown in Figure 40.

Figure 40. ADA Complementary Paratransit Service Area



Key Findings

- Historical trend data helps to paint where MMT has been and the direction they are heading.
  - Fixed-Route
    - Ridership on the fixed-route network was growing at about 3% per year before the COVID-19 pandemic but is slowly recovering back to pre-pandemic levels. MMT's 2023 ridership was 2.87 million boardings, which is approximately 89% of MMT's 2019 annual ridership.
    - Productivity has been declining and is now at 11 passengers per revenue hour, roughly half of what it was in 2013. It is worth noting that MMT operates roughly double the number of revenue hours as it did in 2013, so some decline in productivity is to be expected.
    - Total O&M costs have been increasing over the last decade, with the highest increases being during the last three years.
  - Paratransit
    - Ridership on MMT's paratransit service had generally been declining before the pandemic. There was a small uptick in ridership from 2015 to 2018, but ridership decreased dramatically in the intervening years, and in 2022 was 70% of 2013 levels.
    - Productivity is relatively stable, with numbers holding steady around two passengers per hour for the last decade, aside from a dip during the COVID-19 pandemic.
    - Without adjusting for inflation, O&M expenses have not declined with ridership; expenses are as high in 2022 as they were with double the ridership in 2017 and 2018.
- The top three ridership routes in MMT's fixed-route system in 2023 were: Route 25 (N Academy Blvd - Voyager Pkwy), Route 5 (Boulder - Citadel), and Route 33 (Manitou Springs Free Shuttle).
- The weekday systemwide temporal distribution of ridership shows a single peak in the afternoon between 4 and 5 p.m. This ridership pattern supports the daytime service schedule MMT currently operates.
- The five most productive routes in the MMT system based on average weekday boardings per revenue hour are Route 33, Route 5, Route 3, Route 4, and Route 11.
- Demand for weekend service is strong; 14 of the 29 routes that operate seven days per week see higher productivities on one or both weekend days than during the week, which could be an opportunity for improved service.

- Three routes (Routes 4, 10, and 11) with hourly service have productivity of more than 15 boardings per revenue hour that could be candidates for improved service.
- Ridership on the two deviated fixed-route services (Routes 38 and 40) in northern Colorado Springs is low but are important coverage services, especially if MMT has a long-term goal of serving 90% of the UZA population.
- Five routes currently meet the 90% on-time performance target. There is an opportunity to explore speed and reliability treatments along with running time adjustments to improve service reliability.
- Out of the 972 stops in the system, 14% have shelters, 57% have benches, and 82% have lighting. There is an investment opportunity to increase the number of stops with shelters.
- MMT has a 90% long-term coverage goal for fixed-route service in the UZA. Currently, that number is at 43.8%, indicating additional coverage service is needed.

FLEET AND FACILITIES

Fleet

MMT has 70 vehicles in its fixed-route fleet. The complete fleet roster, along with average condition, are shown in Table 10. Four out of MMT's 70 fixed-route vehicles are electric buses. The fixed-route fleet is supplemented by the contingency fleet (described on the next page) where necessary. Fountain Municipal Transit's fixed-route service fleet is not included in the table; their service requires at least two vehicles for peak service.

Table 10. Fixed-Route Fleet and Condition

Number of Vehicles	Year	Manufacturer	Average Condition (1=poor, 5=excellent)
4	2006	Gillig	1.25
3	2007	Gillig	2.0
6	2008	Gillig	2.5
6	2015	Gillig	3.6
8	2016	Gillig	4.0
10	2017	Gillig	4.0
9	2018	Gillig	4.0
10	2019	Gillig	4.0

Number of Vehicles	Year	Manufacturer	Average Condition (1=poor, 5=excellent)
4	2021	Proterra	4.0
10	2022	Gillig	3.8

Source: MMT

MMT has 49 vehicles in its paratransit fleet, with a mixture of cutaways and minivans. The complete fleet roster, along with average condition, are shown in Table 11. The paratransit fleet is supplemented by the contingency fleet (Table 12) where necessary.

Table 11. Paratransit Fleet and Condition

Number of Vehicles	Year	Manufacturer	Model	Average Condition (1=poor, 5=excellent)
5	2014	Toyota	Sienna	3.0
3	2017	Ford	Transit 350	3.7
14	2018	Ford	Transit 350	4.0
3	2018	Chrysler	Pacifica	3.7
1	2019	Diamond	VIP2200	4.0
4	2019	Chrysler	Pacifica	4.0
8	2020	Diamond	VIP2200	4.0
1	2023	Diamond	VIP2200	4.0
10	2023	Ford	E450	4.5

Source: MMT

Due to maintenance issues resulting in the dedicated fixed-route and paratransit fleets being occasionally out of service, MMT maintains a contingency fleet consisting of 20 vehicles. This fleet is available to use for both fixed-route and paratransit operations when necessary.

Table 12. Contingency Fleet and Condition

Number of Vehicles	Year	Manufacturer	Model	Average Condition (1=poor, 5=excellent)
9	2013	Ford	E450	2.0
11	2018	Ford	Transit 350	3.8

Facilities

Aside from the park-n-rides and transfer centers mentioned in Chapter 2, MMT has seven other facilities used for system operations. Those facilities, their location, and condition are shown below in Table 13.

Table 13. MMT Transit Facilities and Condition

Building	Location	Condition (1=poor, 5=excellent)
Transit Admin	1015 Transit Dr.	3
Transit Customer Service/Certification	1070 Transit Dr.	3
Bus Parking Canopy	1075 Transit Dr.	3
Fleet Maintenance Facility	1145 Transit Dr.	3
Paratransit Admin	1161 Transit Dr.	3
Paratransit Bus Storage	1165 Transit Dr.	3
Transit Operations Facility	1190 Transit Dr.	5

Source: MMT

RECENT PLANNING EFFORTS

The following pages summarize reviewed documents that help provide context from previous planning efforts that are of consequence to transit and specialized transportation in the Colorado Springs region. The data, strategies, and identified needs from these plans can provide insight into possible persistent gaps and needs. Plans produced prior to 2020 may lack the context and consideration of impacts of the COVID-19 pandemic.

Plan Descriptions

2045 Regional Transportation Plan – Specialized Transportation Coordination (PPACG – 2019)

The previous edition of the Specialized Transportation Plan emphasized strategies around improving customer service, maximizing shared resources, and streamlining services to deliver maximum benefits to users. Unmet needs identified at the time of the planning process include limitations with wheelchair accessible vehicles, lacking access for same-day medical trips, and coverage gaps for medical and military destinations.

2045 Regional Transportation Plan – Transit (MMT – 2020)

The 2045 Regional Transportation Plan (Transit) presents a framework for operating, enhancing, and expanding fixed route transit services in the Pikes Peak region. Additionally, the report identified various themes that are relevant to public transit and human services transportation planning efforts (with recommendations for each theme), including maintaining a focus on the existing service area, improving the user experience and access, planning for innovation, and improving service hours, frequencies, and reliability.

PPACG Tri-County Study (PPACG – 2022)

The PPACG Tri-County Study aimed to perform a multimodal transportation study of Park, Teller, and El Paso counties. Critical needs identified in the report included the need for expanded/new transit services (including for older adults, individuals with disabilities, and those with medical needs), improvements to current public transportation services, and initiatives focused on improving human service and public transportation options.

Specialized Transportation Needs Assessment: Gap Analysis (PPACG – 2023)

This document analyzed the transportation preferences and needs of older adults and those with disabilities in Park, El Paso, and Teller counties. In El Paso County, the report highlighted that Mountain Metro Mobility does not cover the whole county and specialized transportation providers must fill service area gaps. Additionally, various hospitals and medical facilities are located outside Mountain Metro Mobility's area of service. Similarly, in Teller and Park counties, the vast majority of (and in the case of Park County, all) medical facilities are located outside of a quarter-mile buffer around bus stops. In all counties, service hour gaps persist amongst

specialized transportation – no provider features 24-hour service, and weekend services are extremely limited. Additionally, no specialized transportation provider allows rides to be booked with less than two days' notice (as opposed to Mountain Metro Mobility which allows rides to be booked one to three days in advance).

Pikes Peak Area Agency on Aging (AAA) Four Year Plan for State Fiscal Years 2024-2027 (PPACG – 2023)

The AAA Four Year Plan is a state-mandated document that identifies various challenges that are expected to occur from 2024 to 2027, including a growing strain on services brought about by an aging population. Transportation is mentioned as one of the primary needs in the region, and it is of the utmost importance in more isolated areas. Individuals residing in rural areas mentioned that it is key that services come to them instead of them having to go somewhere to obtain them. Older adults also desire flexibility to access a variety of locations at various times.

Community Assessment Survey for Older Adults (AAA – 2023)

The Community Assessment Survey for Older Adults (CASOA) reported key findings regarding transportation in the region. The survey found 38% of respondents indicated that the overall quality of the transportation system in their communities was good or excellent. However, ease of travel differed by mode: ease of travel by car was rated as good/excellent by 75% of respondents, while only 56% responded the same for walking and 48% for bicycling, and only 18% for ease of travel by public transportation. Additionally, around ¼ of older residents in the area reported mobility needs. When compared to national benchmarks, the region had lower ratings in the overall quality of the transportation system and on the ease of public transportation.

North Nevada Transit Connectivity Study (City of Colorado Springs – 2020)

The North Nevada Transit Connectivity Study aimed to identify an alignment, technology, and level of service for potentially upgraded transit along the prominent north-south Nevada Avenue corridor of Colorado Springs. The study recommended "Bus Rapid Transit (BRT) Light" service due to costs, scalability, and phased approach to implementation. Regarding alignment, Weber Street and Nevada Avenue were identified as locally preferred alternatives. While spatially nearby, each street presented different challenges and opportunities. General areas for the location of potential stations were also identified, although the document indicates that actual station design and location details will be determined in a future phase of

the project. Additionally, the report covered the necessary steps for implementing the suggested transit service in the event that the City opts for its adoption.

MMT Five-Year Strategic Business Plan (MMT – 2019)

MMT's Five-Year Strategic Business Plan offers overall direction and guidance for the agency over the next five years following adoption. A lack of financial resources, buy-in, and a misperception of not being a key city service were identified as challenges for the agency. However, areas such as improved specialized transportation coordination, technological advances, public-private partnerships, and transit-supportive taxes and funding initiatives were identified as opportunities. The document also identifies various objectives relevant to specialized services, such as improving service reliability, utilizing the one-ride call center as a regional mobility hub, and leveraging technological improvements through coordination and collaboration. It also includes an appendix covering best management practices recommendations for paratransit eligibility certification and ADA complementary paratransit service delivery models.

Passenger Rail Station Location Study (MMT/City of Colorado Springs – 2022)

The Passenger Rail Station Location Study aimed to identify the ideal location for a new station for passenger rail service in Colorado Springs, following renewed exploratory efforts on the expansion of intercity passenger rail service in Colorado (stretching from Fort Collins to Pueblo, with future connections to neighboring New Mexico and Wyoming). Although various sites for potential Colorado Springs stations were evaluated (most of them in and near Downtown), the study identified the America the Beautiful Park Area – East Side (Olympic Museum) as the final recommended location for the potential station.

Central Front Range 2045 Regional Transportation Plan (CDOT – 2020)

The Central Front Range 2045 Regional Transportation Plan serves as a guide for the ongoing development of a multi-modal transportation system for the Central Front Range Transportation Planning Region. Transit services were specifically mentioned as warranting monitoring due to their potential to accommodate access for tourists in the region. Mobility was identified as a regional priority, and pedestrian connections to local transit were highlighted as mobility options. Regarding emergency response, it was highlighted that a key goal of the Transportation Planning Region is ensuring that the transportation system functions as a complete system that provides alternate routes to accommodate emergency evacuations and the increased traffic demands.

Statewide Transportation Plan (CDOT – 2020)

The 2020 Statewide Transportation Plan is a document which is updated every four years by CDOT. The three main goals of the plan are mobility, safety, and asset management. CDOT highlighted its development of mobility hubs in the plan, identifying those as shared spaces for all modes of transportation, and ensuring first/last mile connections. Transit connections were identified as elements of mobility hubs, which the plan envisions every ten miles along I-25 and every 30 miles along I-70. Improving rural access across the state was also a key priority in the document, as veterans and older adults in particular need more options to reach basic services and medical care.

Statewide Transit Plan (CDOT – 2020)

The 2020 Statewide Transit Plan is a document which is updated every four years by CDOT in coordination with rural and urban regional planning partners. The established statewide transit goals identified in the plan are mobility, safety, and asset management. Key mobility implementation strategies highlighted included coordination & partnerships (including supporting transit and human services agencies in rural areas to expand local and regional coordinating council activity) and technology (including investing in technological improvements to support demand response services). Regarding connectivity, strategies identified included integrating bicycle and pedestrian/ADA improvements in all projects to improve access to transit and implementing planned mobility hub improvements, some of which are identified along I-25 in and around the Colorado Springs area. Regarding service enhancements and expansion, Bustang services are identified as aiming to increase frequency along the I-25 corridor, benefiting Colorado Springs. Maximizing current and seeking new sources of funding to expand interregional services, supporting veterans' transportation needs, and supporting appropriate allocation of funds for rural transit services are also established mobility implementation strategies in the plan.

CDOT 10-Year Vision for Colorado's Transportation System (CDOT – 2020)

CDOT's 10-Year Vision was developed through extensive public input. Safety was key in all communities across the state, and the document highlights that the state's transportation vision is for a future with zero deaths and serious injuries. The document highlights various efforts in the areas of improvements to the roadway system, relieving traffic, and improving rural access statewide (including acknowledging that the need for mobility services [such as local, regional, and statewide transit] will increase due to a growing senior population across Colorado). The plan also highlights upcoming transit projects in El Paso County and nearby areas, including Bijou Street Storage and Maintenance Facility and the Colorado Springs Transit

Center (both of which are located in Colorado Springs) and a new Regional Fixed-Route Transit Service in Teller County, amongst others.

ConnectCOS (City of Colorado Springs – 2023)

ConnectCOS is a comprehensive evaluation of the current status of the transportation system in Colorado Springs and a roadmap for improvements over the next 20 years. Regarding public transit, ConnectCOS mentioned that stakeholders discussed the limited amount of transit connections for southeast Colorado Springs. Other priorities mentioned include equitable connectivity between the western and eastern parts of the City, and a need for public transportation connectivity in the north. When it comes to accessibility, it was mentioned that improvements to any element of the transportation network/infrastructure must consider and accommodate all residents, and that many sidewalk curbs are not compliant with the ADA. Additionally, the document highlighted that coordination and availability of service amongst specialized transportation providers does not meet everyone's needs and that riders must navigate a confusing system. More service hours (frequency, span, and days) and faster, more direct service were also identified as desired improvements by riders. Amongst other recommendations, the final plan outlined a "Transit Vision Network" for Colorado Springs that includes corridor-based enhanced transit, expansion of service to high-growth areas, and new transit facilities like mobility hubs and expanded park-and-rides to facilitate connectivity with the rest of the transportation system.

Plan Review Summary

There has been, and will continue to be, a great need for specialized and public transit services in the Colorado Springs region and greater Pikes Peak area. Regional studies highlight the importance of closing the gap in not just service coverage (like the spatial and temporal gaps from ConnectCOS), but also the way in which the current system can be flexible enough to adapt to the needs of the population (which is highlighted in multiple versions of the 2045 plan). If people today cannot get services in-home, and booking rides to appointments must continue to be required for days or weeks in advance, then the system is not meeting the needs identified from these plans. The anticipated aging of the region cited in some of these plans also cautions that unfilled gaps and needs across the entire transit system could accelerate if left unaddressed. Finally, the Statewide plans also call attention to the importance of both expanded transit service and physically improving the access routes to transit. With rural communities also aging, the conversation around reducing vehicular deaths must be complemented by how to expand safe alternative multimodal options.

EXISTING AND FUTURE MARKET CONDITIONS

Existing and future market conditions are based on a combination of U.S. Census data, Colorado State Demographer data, and PPACG travel demand model data. The analysis relies on the outputs from the version of the travel demand model created for the 2045 LRTP because the 2050 model was still in development at the time of this study.

Population and Employment

Population

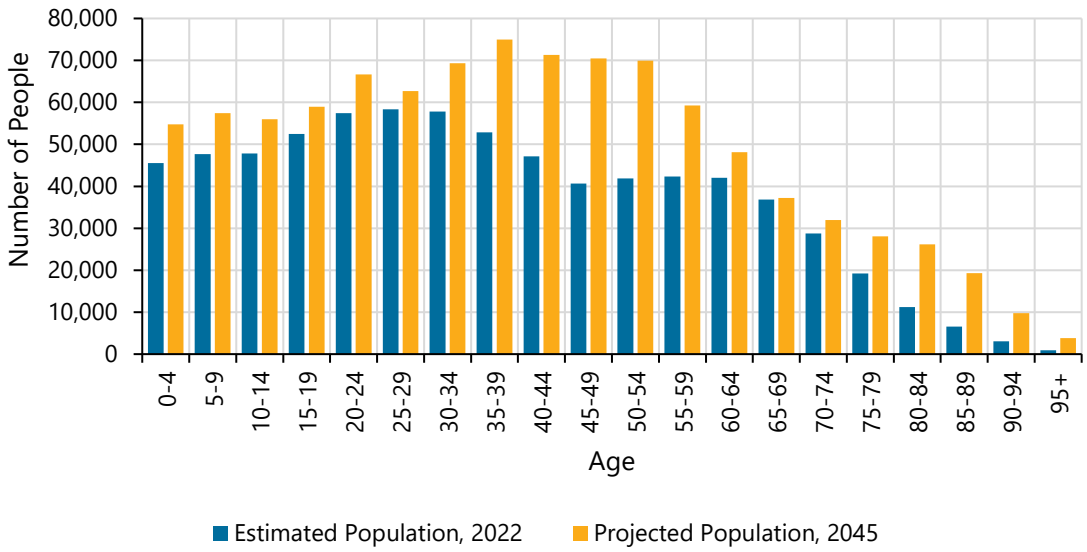
The population in El Paso County and Colorado Springs is expected to grow by 40 to 45% over the next 30 years (see Table 14). The population as a whole is expected to gradually get older over the next two decades (Figure 41). These shifts in population may impact transit ridership, particularly older adults (over age 65) who often rely on transit to live independently as they age.

Table 14. Population Statistics, 2015 to 2045

Geography	Population (2015)	Population (2045)	Growth Rate
El Paso County	679,492	988,599	45%
City of Colorado Springs	446,960	628,192	40%

Source: PPACG 2045 Travel Demand Model

Figure 41. Population Distribution by Age, 2022 and 2045



Source: Colorado State Demography Office for the Colorado Springs Metropolitan Statistical Area

Most of Colorado Springs' dense residential areas are located near existing transit service, although there are some pockets in northern and eastern parts of the City that are not served by the current system (Figure 42). Over the next 30 years, the population is expected to grow exponentially in northeastern Colorado Springs as large tracts of land develop into new neighborhoods and communities (Figure 43). As these areas grow and develop, MMT will likely need to expand its service to serve a growing market.

Figure 42. Population Density, 2015

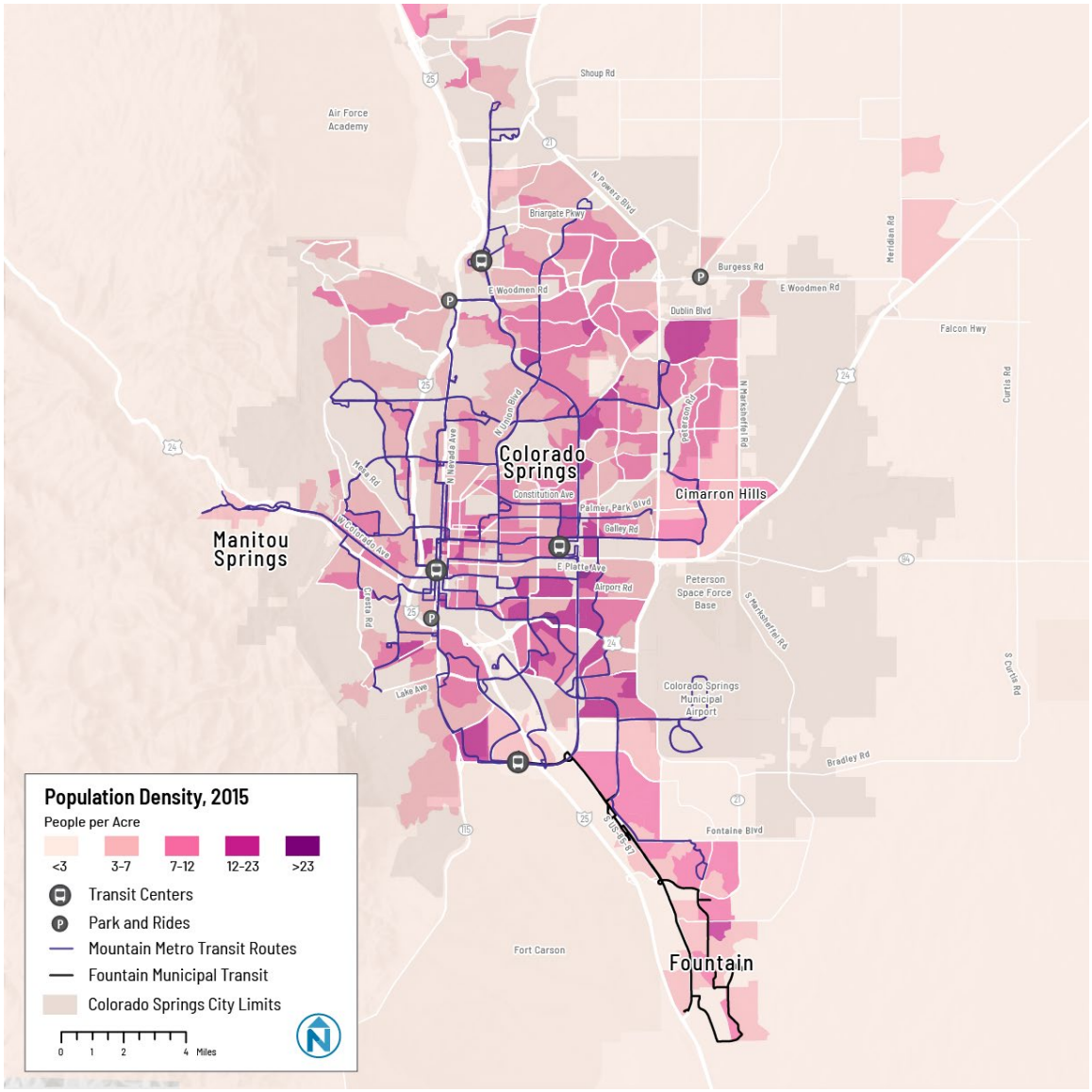
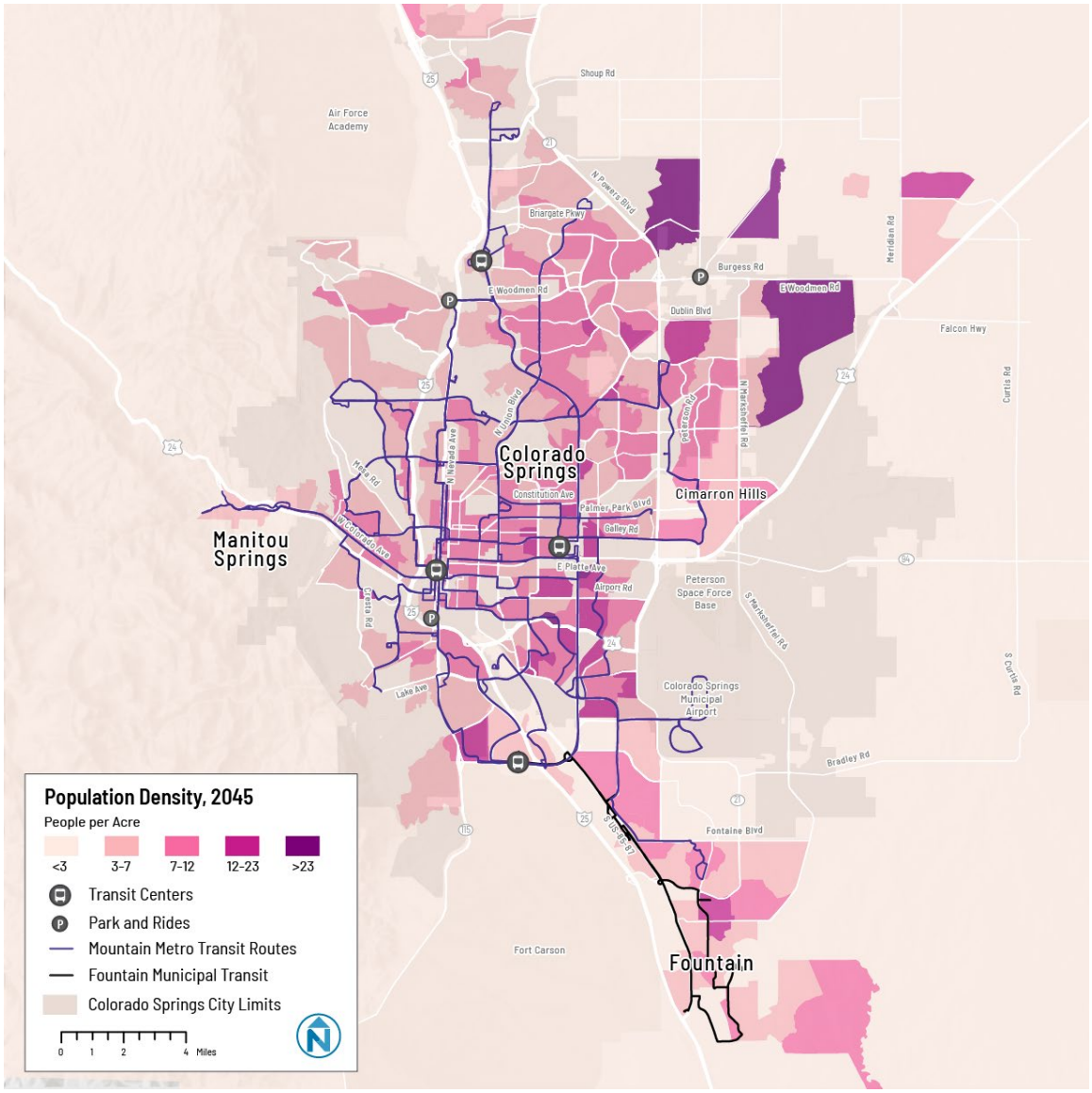


Figure 43. Population Density, 2045



Employment

Colorado Springs is anticipating considerable employment growth, with projections showing an increase of more than 150,000 jobs over the next 30 years in the City alone (Table 15).

Table 15. Regional Employment Statistics, 2015 to 2045

Geography	Employment (2015)	Employment (2045)	Growth Rate
El Paso County	319,719	541,993	70%
City of Colorado Springs	254,042	422,335	66%

Source: PPACG Travel Demand Model

Currently, the bulk of jobs in the Pikes Peak region are concentrated in downtown Colorado Springs, with some pockets of less dense employment along the I-25 corridor (Figure 44). The existing MMT fixed-route network provides good connectivity to the densest employment areas.

While future job growth is predicted to remain concentrated in downtown Colorado Springs, job growth is anticipated in the northern portion of the City between Briargate Parkway and East Woodmen Road, where there is limited MMT service (Figure 45). There is an opportunity for MMT to expand service into these areas to serve the new employment that is expected in the coming decades.

Figure 44. Job Density, 2015

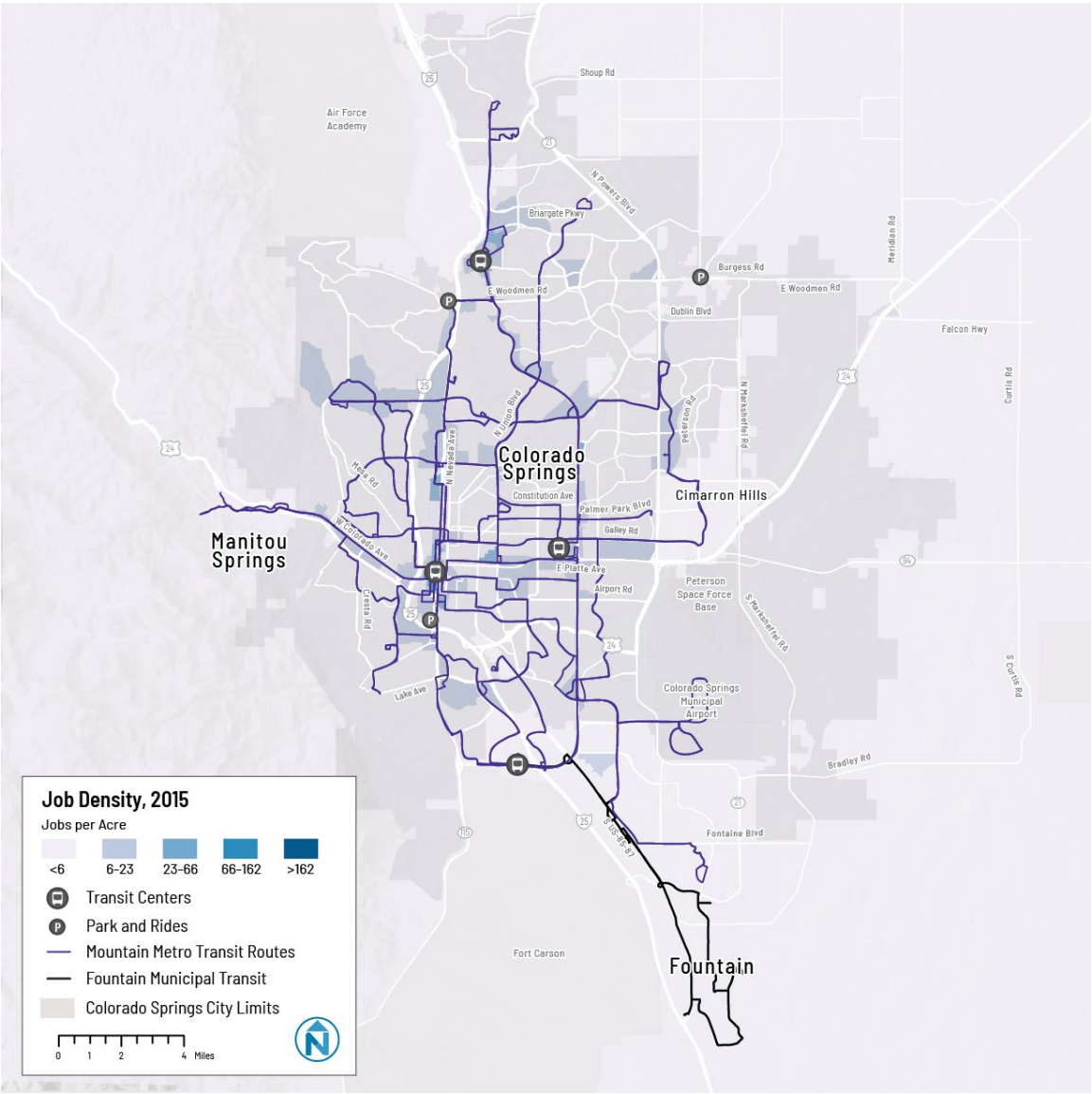
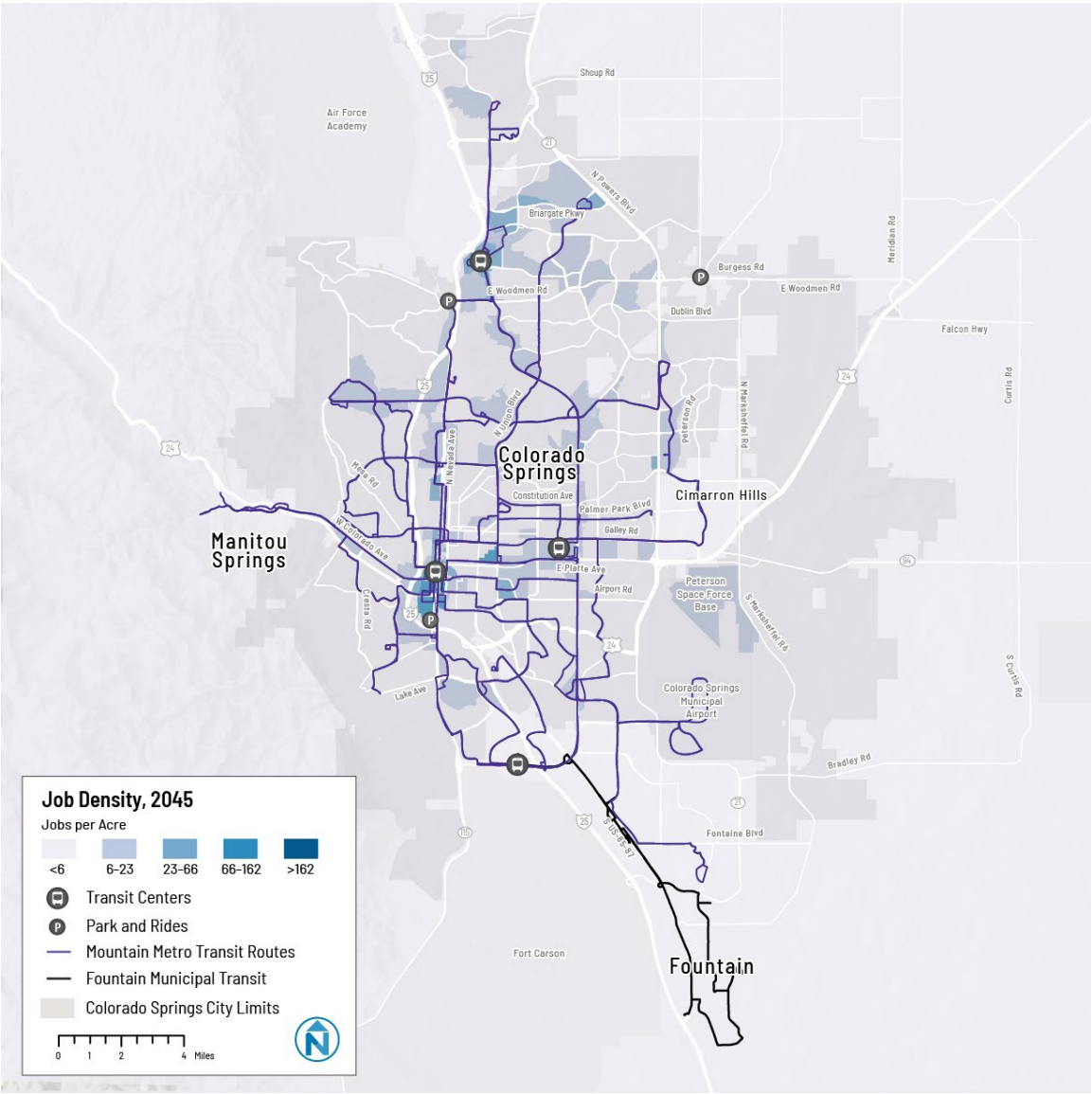


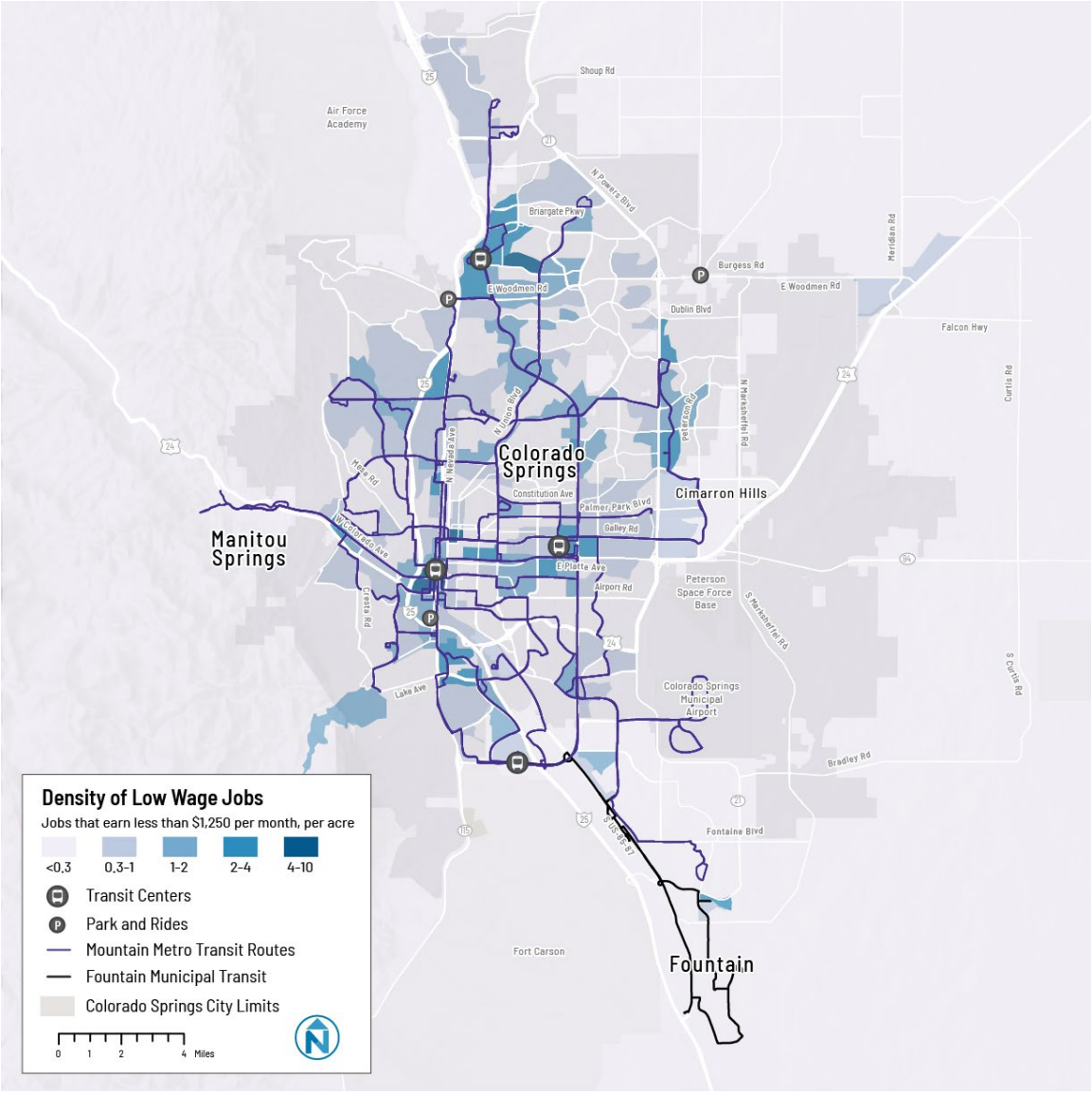
Figure 45. Job Density, 2045



Low-Wage Jobs

To understand where employees might be more dependent on transit service for their commute, low-wage jobs throughout the region were analyzed (Figure 46). Low-wage jobs are defined as those that generate a monthly income of less than $1,250 per month, or $15,000 per year. The majority of Colorado Springs' low-wage jobs are concentrated along major transportation corridors where MMT already provides fixed-route transit service. Employees who work low-wage jobs are more likely to use transit because it is a lower cost option than private vehicle ownership and reduces their transportation cost burden.

Figure 46. Density of Low-Wage Jobs

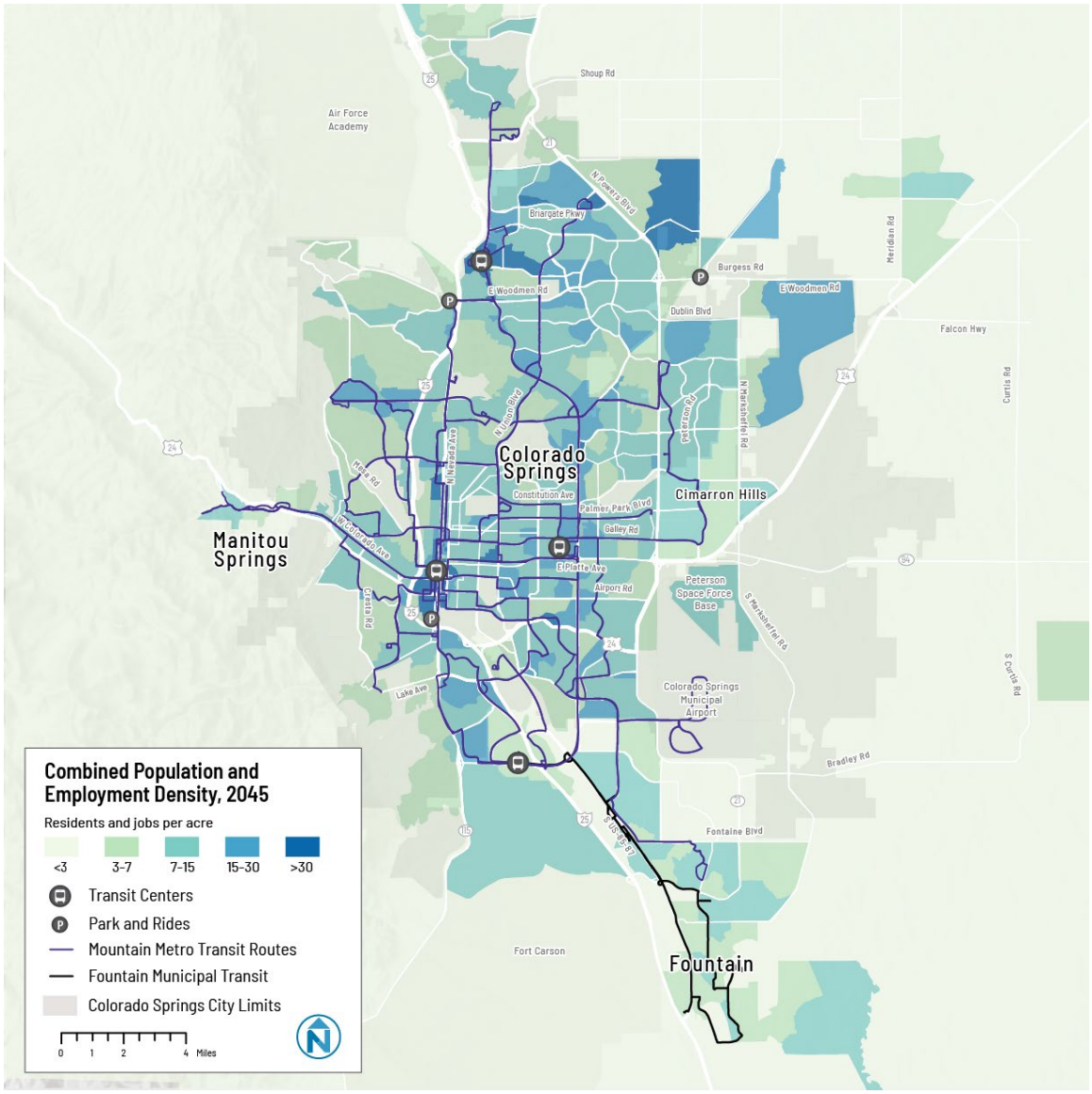


Population and Employment

Combining future population and employment data can better highlight areas that are anticipated to be more supportive of transit service. In locations where population and employment densities are higher, transit service can be supported.

The existing transit network serves most areas anticipated to have higher population and employment, with several notable exceptions. Areas along Powers Boulevard and in northeastern Colorado Springs are anticipated to have densities that could support better transit service (Figure 47).

Figure 47. Combined Population and Employment Density, 2045



Socioeconomic Characteristics

The demographic factors illustrated in the following maps provide an indication of potential transit demand. Table 16 describes these factors and how they contribute to transit demand.

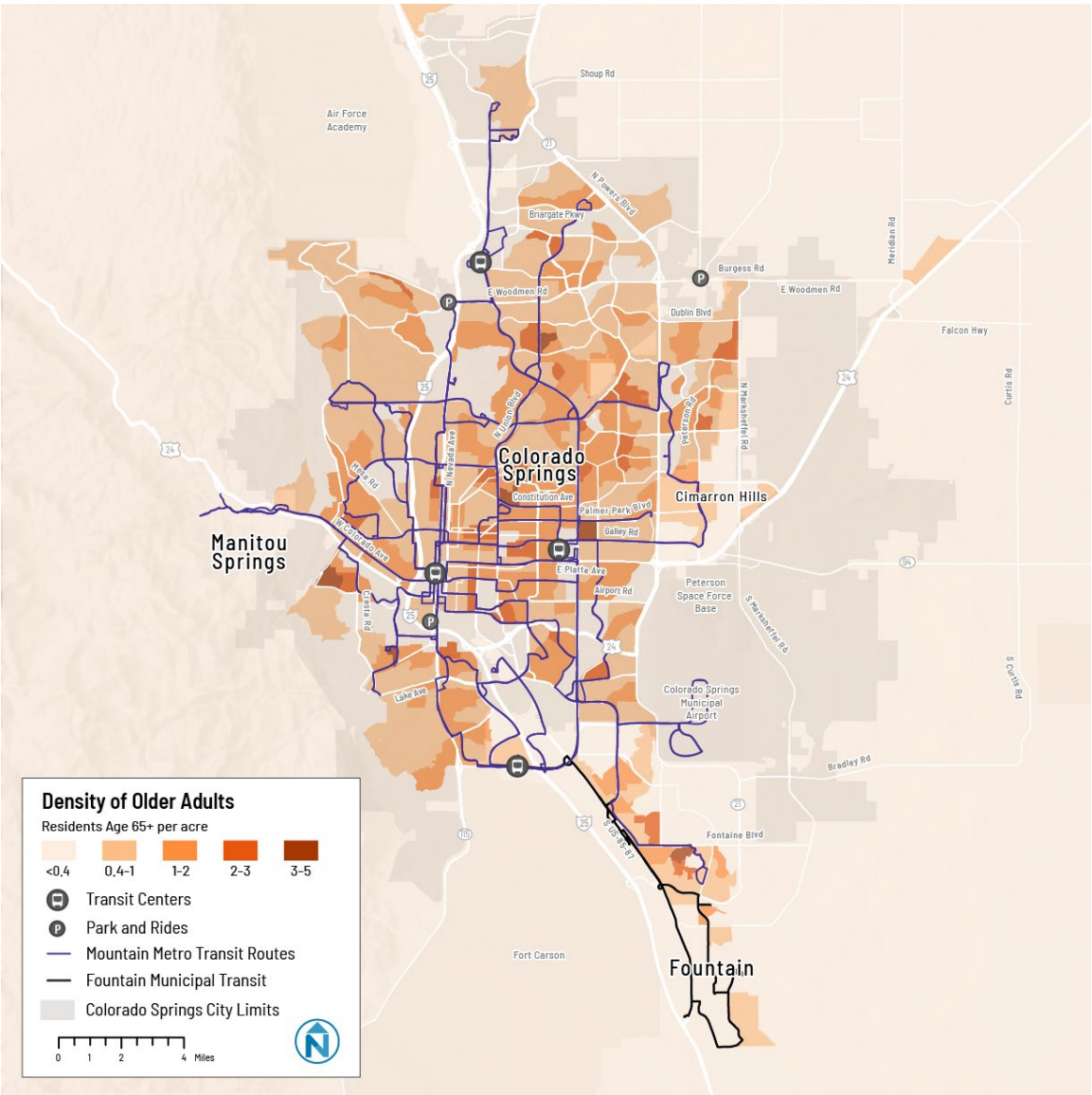
Table 16. Socioeconomic Characteristics and Transit Demand

Map	Figure Number	Description
Older Adults	Figure 48	Older adults (age 65 and older) may no longer be comfortable driving or are no longer able to drive. Transit allows them to live independently, access healthcare, and meet essential needs.
Young Adults	Figure 49	Younger adults (ages 18-24) are often enrolled in college or just entering the workforce and may not be able to afford to own a personal vehicle.
Zero Vehicle Households	Figure 50	Because these households do not have access to a personal vehicle, they are more likely to depend on transit for daily commutes and other travel needs.
Low-income Households	Figure 51	Income is tied to the likelihood of an individual owning a vehicle. Low-income households may rely more heavily on public transportation to meet their transportation needs.
People with Disabilities	Figure 52	People with disabilities may be more likely to rely on transit and paratransit services to meet their transportation needs and maintain an independent lifestyle.
People of Color	Figure 53	People of color are more likely to use transit than their white peers. People of color often fall into other demographic groups such as low-income and zero vehicle households.

Older Adults

Most areas with high concentrations of older adults (age 65 and up) are located near existing transit service (Figure 48). There are some areas with higher concentrations of older adults living in neighborhoods on the outskirts of the City that lack MMT fixed-route service. Typically, older adults are not a primary fixed-route service ridership market.

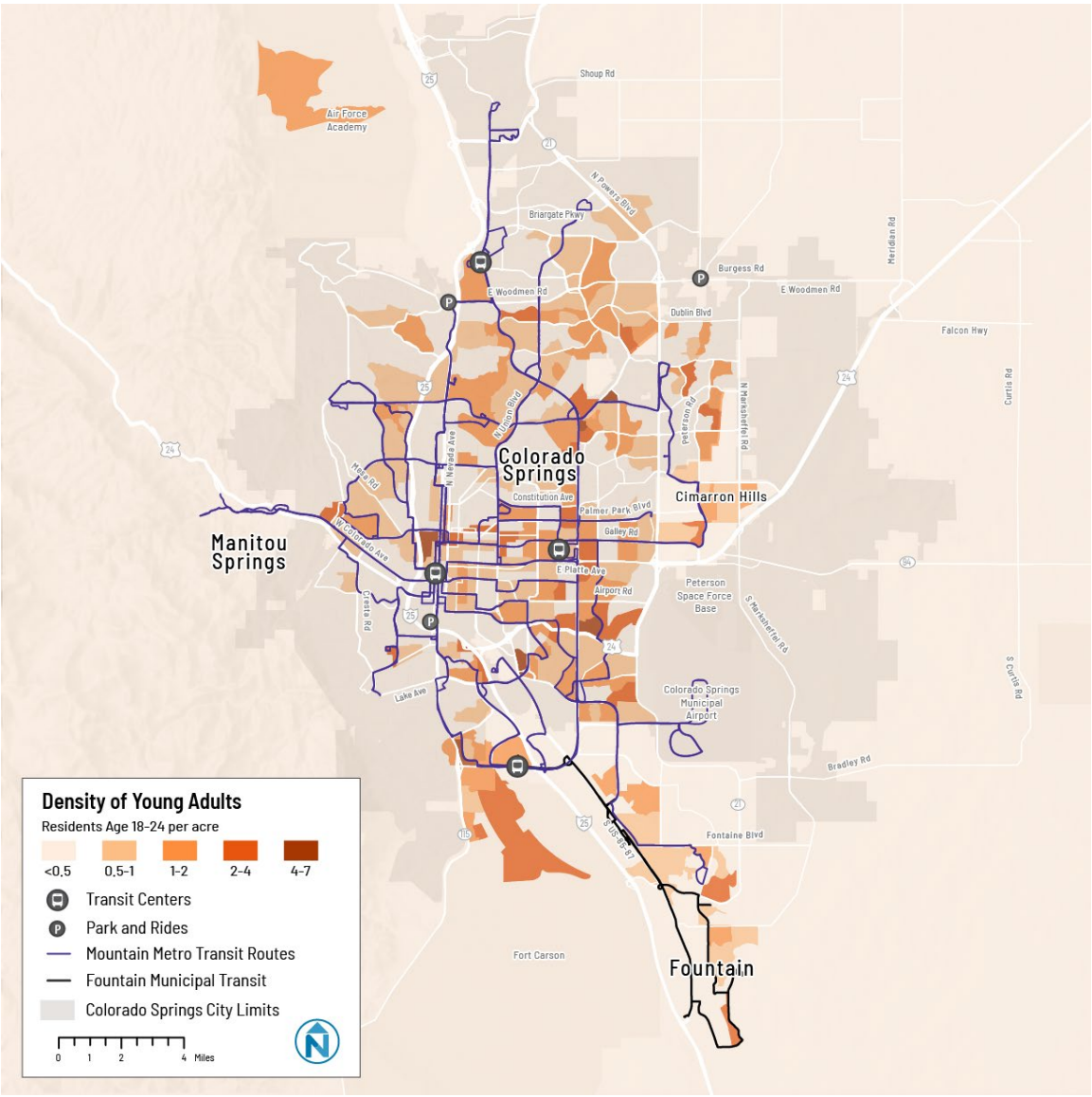
Figure 48. Density of Older Adults



Young Adults

Much of Colorado Springs' young adult population, defined as those between the ages of 18 and 24, is located near transit routes and transfer stations near major educational and employment centers like downtown, military installations, and PPSC (Figure 49). However, there are populations in the northeast and northwest parts of the City with limited transit access. There is limited connectivity into Colorado Springs for young adults living on military bases like the Air Force Academy and Fort Carson.

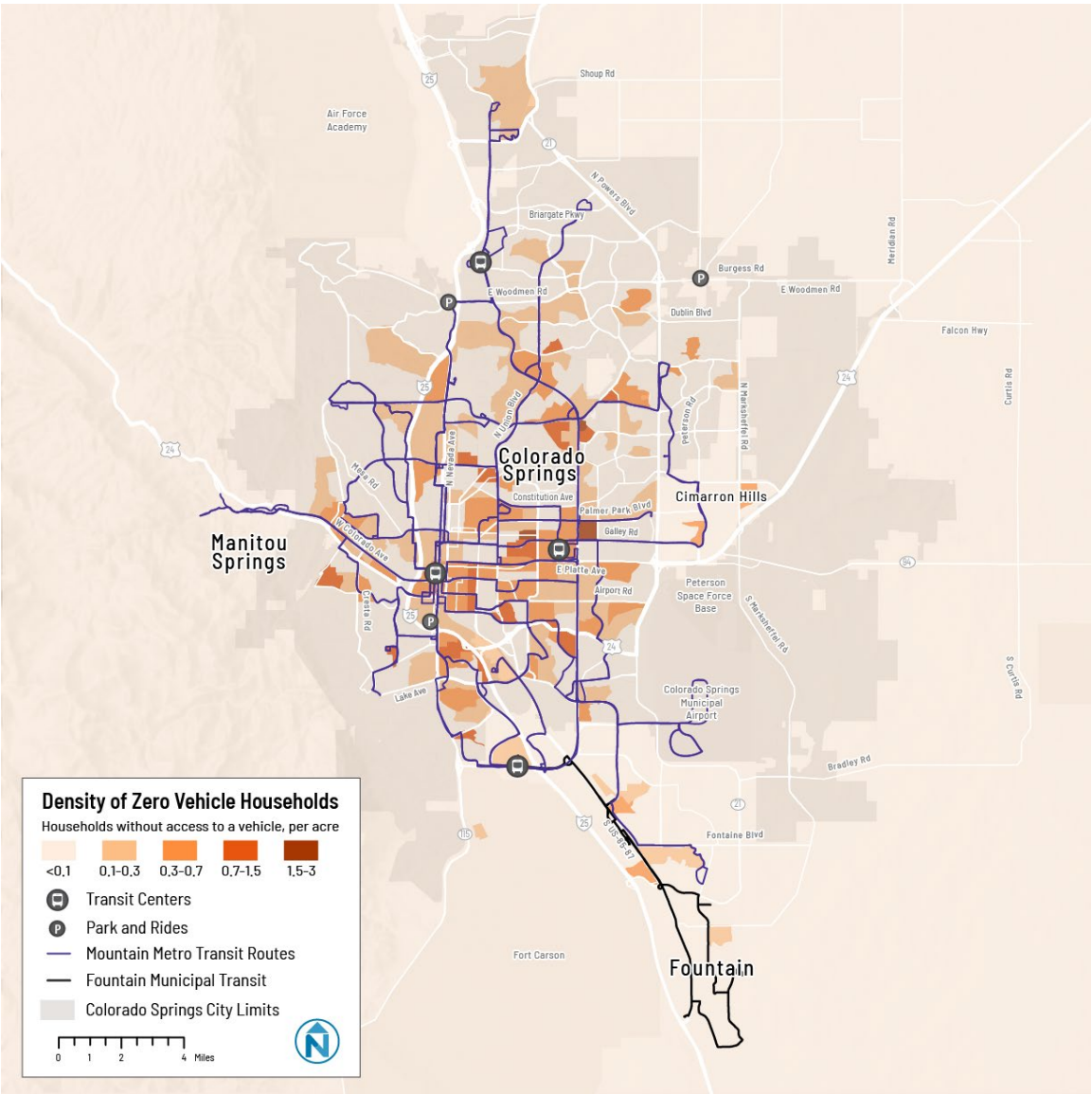
Figure 49. Density of Young Adults



Zero Vehicle Households

There is a relatively low density of zero vehicle households in Colorado Springs, and the areas with the highest concentrations are well served by existing MMT service (Figure 50).

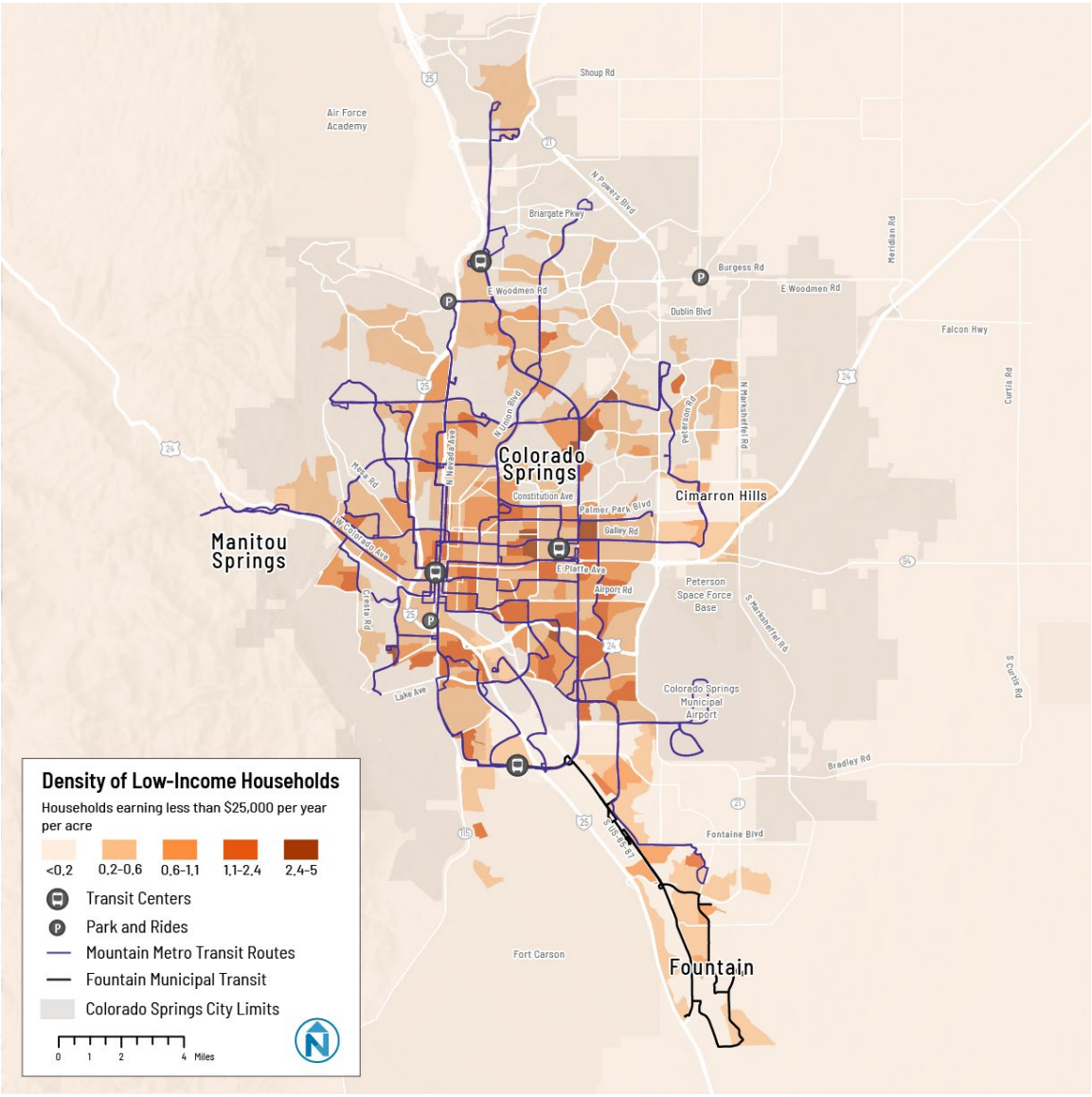
Figure 50. Density of Households without Access to a Vehicle



Low-Income Households

Low-income households throughout Colorado Springs are well served by existing transit service, except for some neighborhoods outside of the MMT service area in the northeast, northwest, and southwest outskirts of the City (Figure 51).

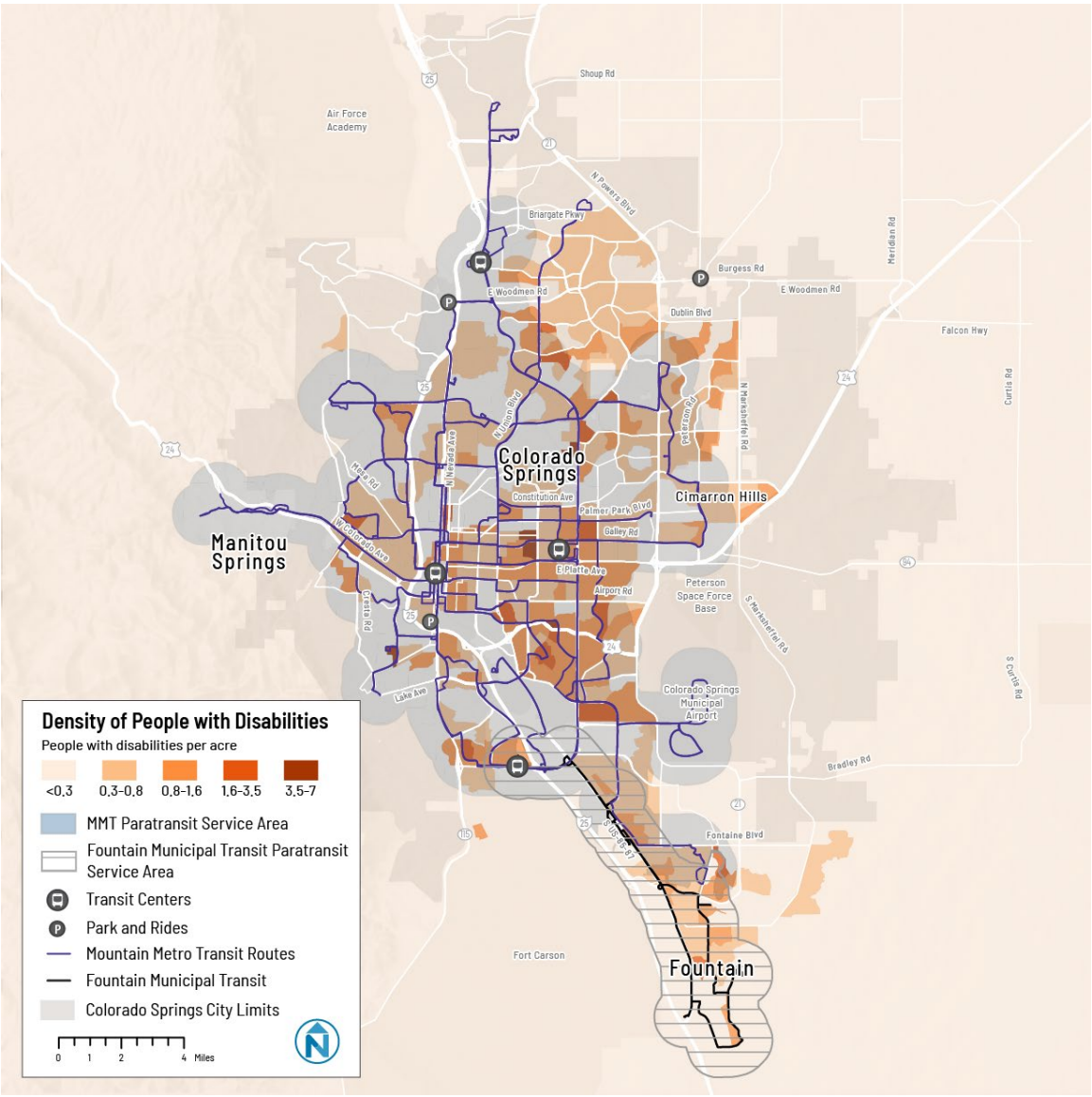
Figure 51. Density of Low-Income Households



People with Disabilities

Figure 52 shows the density of people with disabilities overlaid with the ADA complementary paratransit service area. People with disabilities live across the region, with some more dense clusters in central and south Colorado Springs. While most people with disabilities have access to MMT fixed-route and/or ADA service, there is a portion of northeastern Colorado Springs that is outside the Mountain Metro Mobility service area and lacks ADA complementary paratransit service.

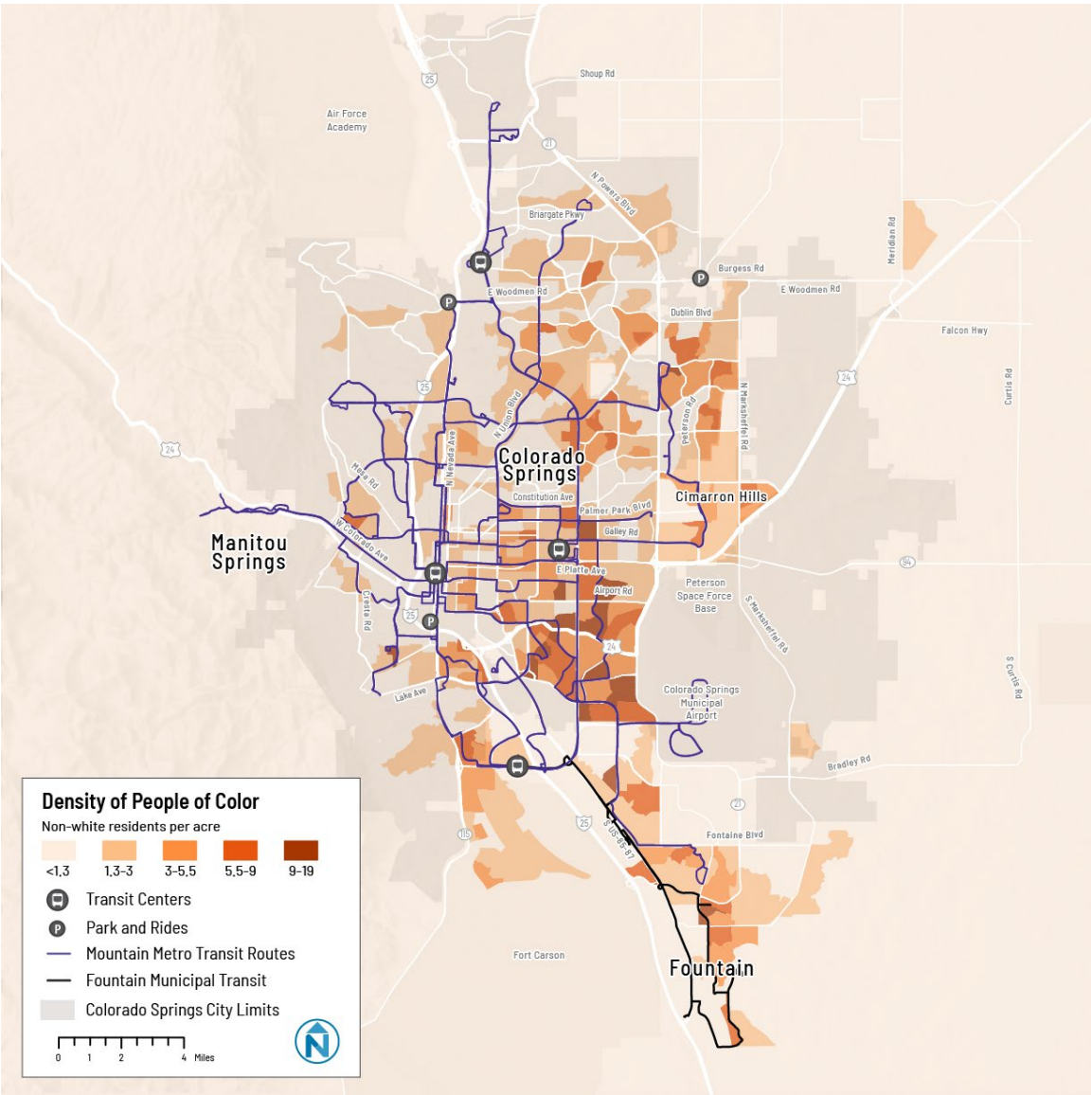
Figure 52. Density of People with Disabilities



People of Color

Colorado Springs' non-white residents are generally concentrated in the central and southeast areas of the City and are located near existing MMT fixed-route service (Figure 53). There are some clusters in the north and northeast perimeter of the City that are not served by existing transit routes.

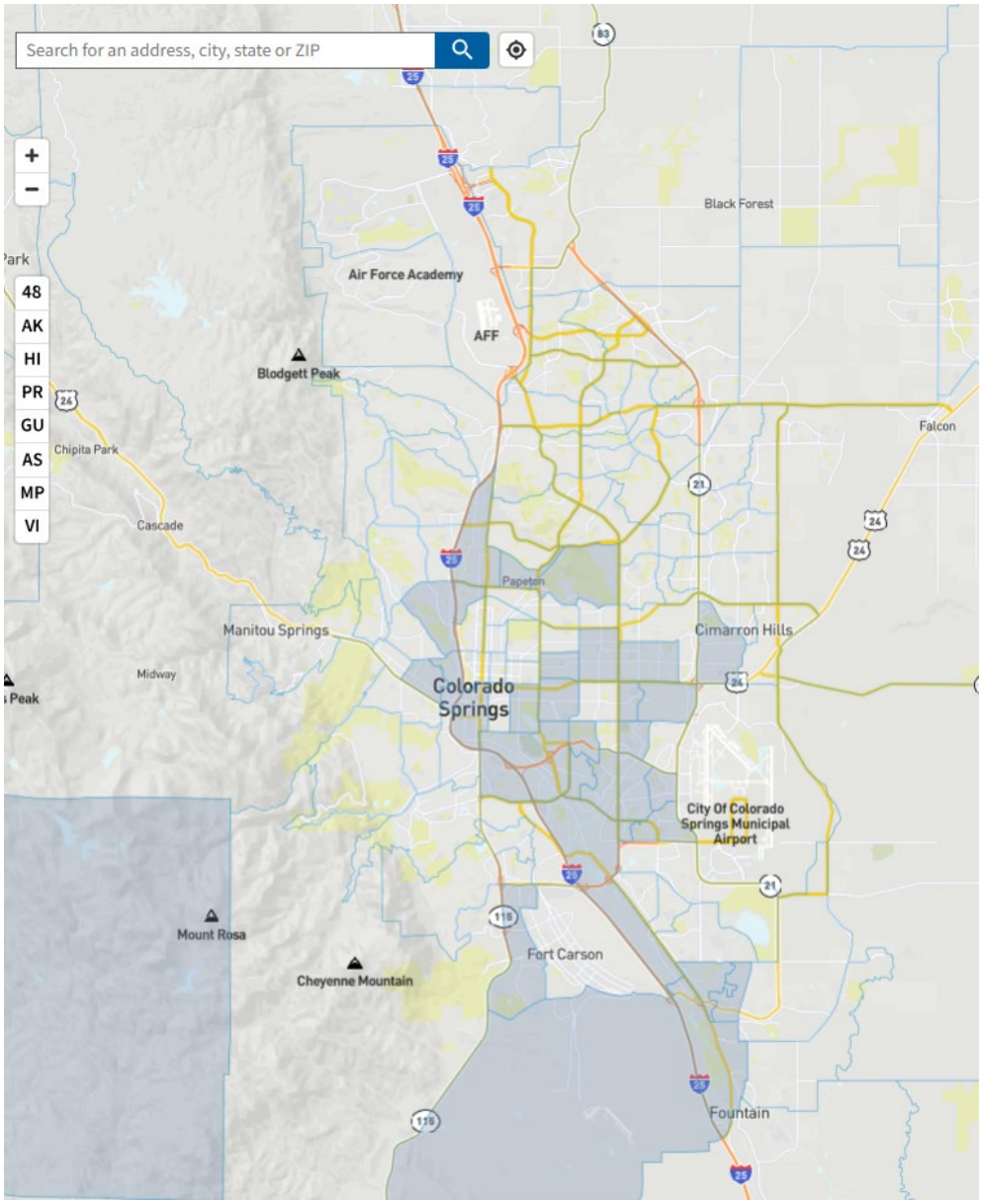
Figure 53. Density of People of Color



Equity Areas

In recent years, the topic of transportation equity has been discussed more frequently and with increasing levels of importance. At its core, transportation equity seeks to prioritize resources to those that need it most. The Council on Environmental Quality (CEQ), under direction from President Biden in January 2021, began development of an online tool called the Climate and Economic Justice Screening Tool (CEJST). This tool includes eight indicators of burden, one of which includes transportation. The equity areas identified from CEJST using the eight indicators are depicted in Figure 54. The highest scoring equity areas are in downtown Colorado Springs and the surrounding areas, which are served by MMT.

Figure 54. Equity Areas



Source: Climate and Economic Justice Screening Tool (CEJST)

Activity Generators

Many of Colorado Springs' major employers are located along or near existing transit routes (see Figure 55). There are some notable exceptions, such as the region's multiple military installations, as well as Penrose-St. Francis Hospital. Table 17 includes a list of employers referenced on the map in Figure 55, listed in order from north to south (not ranked according to employer size).

Figure 55. Major Employers

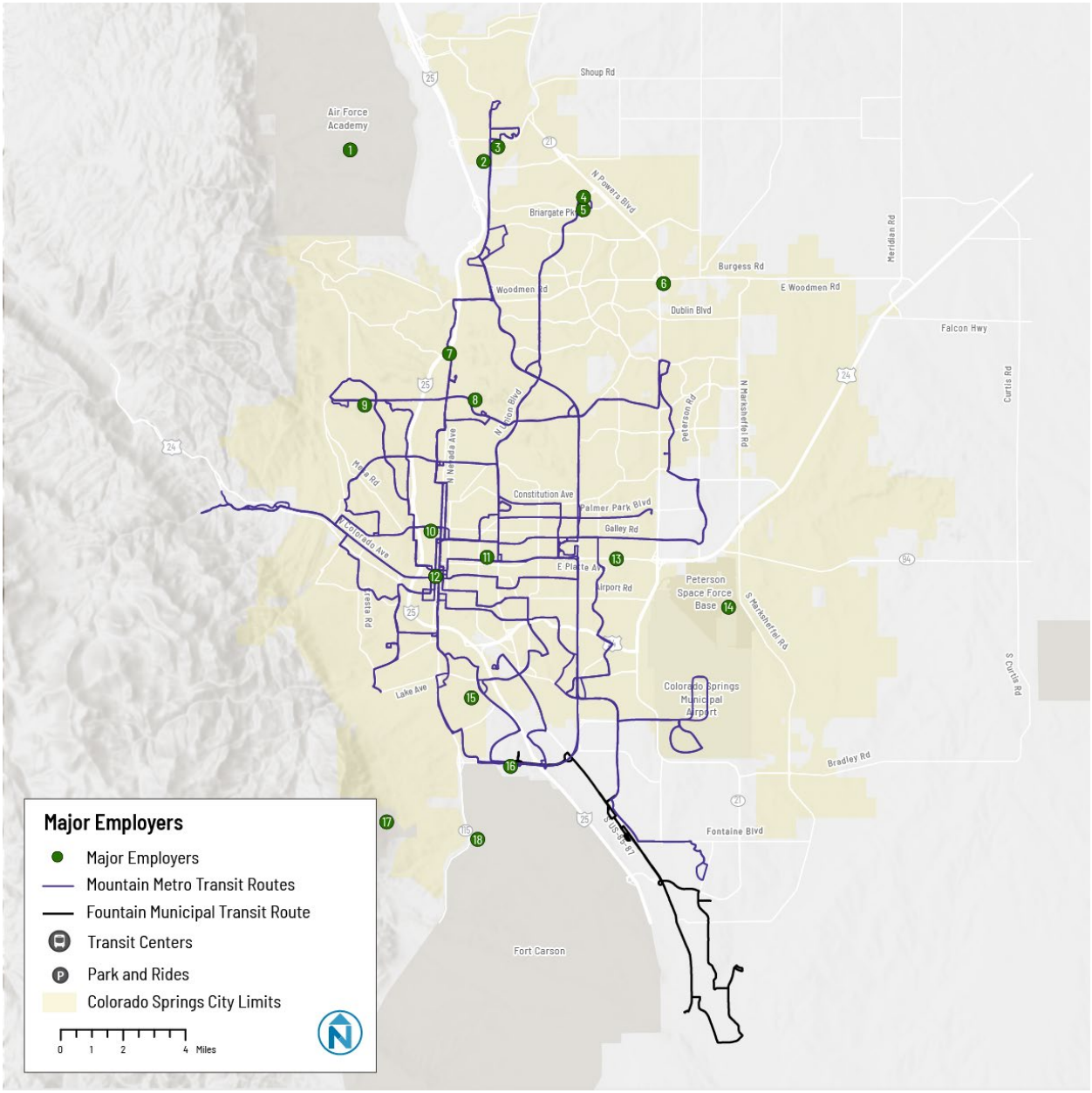


Table 17. Major Employers

Number	Employer Name
1	Air Force Academy
2	Lockheed Martin
3	Progressive Insurance
4	Children's Hospital Colorado
5	UC Health Memorial Hospital North
6	Penrose-St. Francis Hospital
7	UC Health Grandview Medical Center
8	University of Colorado – Colorado Springs
9	Colorado Technical University
10	Colorado College
11	UC Health Memorial Hospital Center
12	US Olympic and Paralympic Committee
13	Lockheed Martin
14	Peterson Space Force Base
15	Microchip
16	Pikes Peak State College
17	Cheyenne Mountain Space Force Station
18	Fort Carson

Transit Propensity

Using select socioeconomic data can help determine the overall transit demand for a given area. Areas of higher demand are more likely to generate ridership and support transit service that is provided. Note that this analysis relies on demographic data maintained by the Census Bureau.

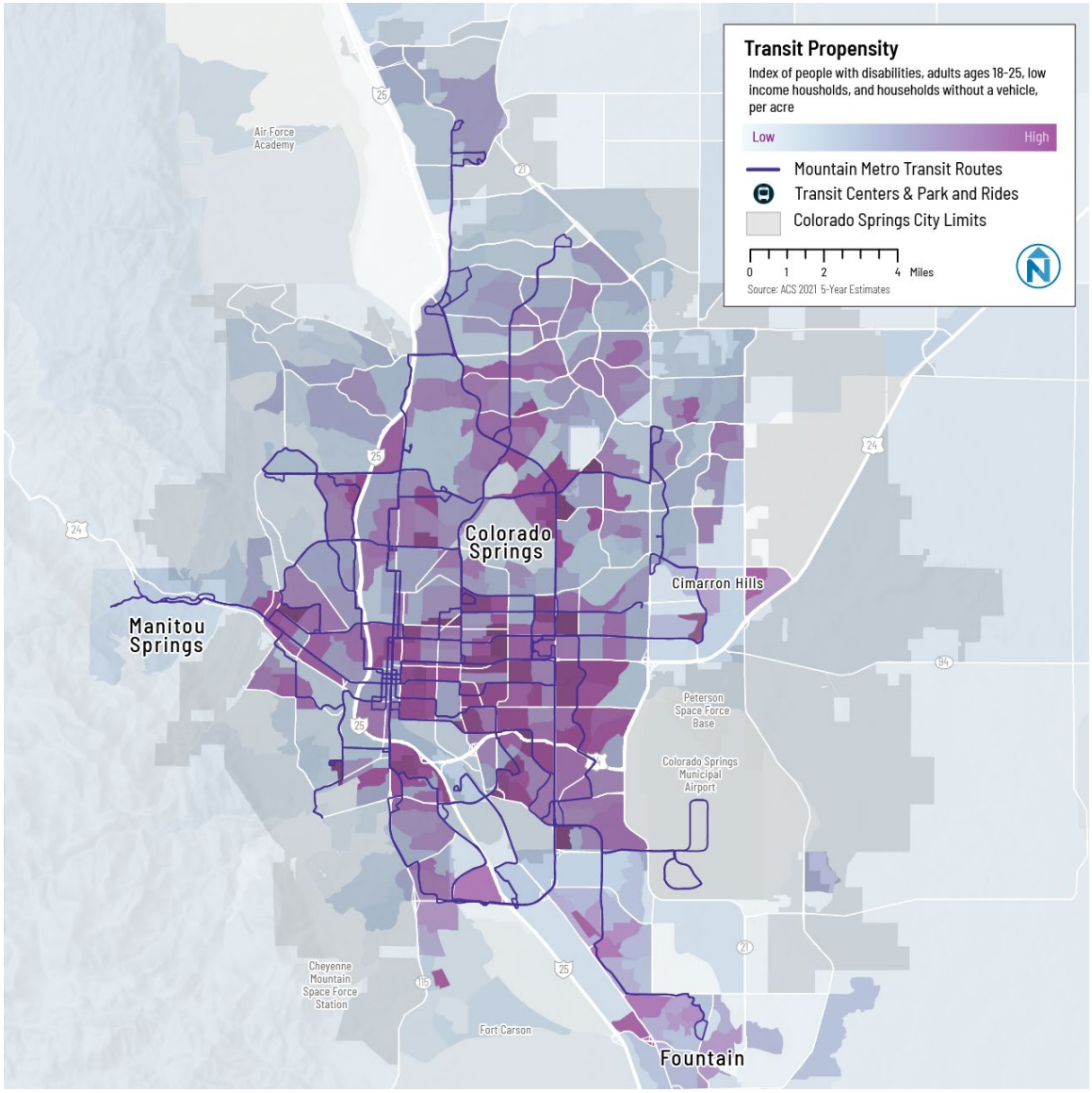
This analysis utilized a composite index of demographic groups that exhibit higher-than-average demand for transit service, also known as transit propensity. The groups included in the index include:

- People with disabilities
- Young adults (18-24)
- Low-income households
- Zero vehicle households

To calculate transit propensity, the density of each variable is sorted into quintiles and assigned a score between one and five. The quintile score of each variable is then summed up to determine a total transit propensity score for each census tract.

The index shows that most areas with a high anticipated demand for transit are currently served by existing fixed-route service (Figure 56). However, there is elevated demand in the developing areas in the northeast of the City that may merit expanded service if propensity indicators continue to grow.

Figure 56. Transit Propensity Index



Key Takeaways

- The population in El Paso County and Colorado Springs is expected to grow by 40 to 45% over the next 30 years. The population in the region skews younger but is expected to gradually get older over the next two decades.
- Most of Colorado Springs' dense residential areas are located near existing transit service, although there are some pockets in northern and eastern parts of the City that are not served by the current system.
- Colorado Springs is anticipating considerable employment growth, with projections showing an increase of more than 150,000 jobs over the next 30 years in the City alone.
- The bulk of jobs in the Pikes Peak region are concentrated in downtown Colorado Springs, with some pockets of less dense employment along the I-25 corridor, both of which are served by MMT. Future job growth is expected in the northern portion of the City between Briargate Parkway and East Woodmen Road, where there is limited MMT service.
- An equity analysis using the CEQ's CEJST shows that most areas of the City that have the highest need are served by existing local bus routes, although service frequency and span could be expanded in these areas.
- Most major activity generators are served by MMT's fixed-route network, except for the region's multiple military installations, as well as Penrose-St. Francis Hospital.
- A transit demand analysis showed areas with the highest transit propensity are already served by the existing fixed-route service. However, there is elevated demand in the developing areas in the northeast of the City that may merit expanded service if propensity indicators continue to grow.

4 2050 REGIONAL TRANSIT PLAN

The 2050 RTP includes seven elements (Figure 58) that build upon the four goals (guiding principles) identified in Chapter 1. The 2050 RTP expands coverage, identifies future improvement corridors, addresses regional connectivity, and supports future economic growth. It is cost-unconstrained and outlines how MMT and the region can address future mobility needs. Additional funding will be necessary to implement the vision. The routing suggestions in this chapter are conceptual and will require further feasibility analysis to determine specific streets where new routes could travel as well as locations of any new bus stops.

The key considerations in designing the vision include:

- **Expanding upon previous plans**
- **Identifying a high-quality transit network that will attract more riders**
- **Supporting changes to land use and shifting employment patterns**
- **Improving geographic and temporal coverage throughout the region**
- **Incorporating new technology and capital to improve the customer experience**

The complete 2050 RTP is shown in Figure 57. The seven vision elements are presented in Figure 58 and discussed in more detail in this chapter.

Serving the Region's Military Installations

While the region's military installations are an important destination for a wide variety of trips, the RTP does not include specific recommendations to expand transit service to these locations. The logistical challenges of passing through the security gates at these locations make regular fixed-route transit or microtransit infeasible. However, many of the projects in this plan provide the foundation for expanding transit access to military bases by:

- Providing fixed-route transit services closer to primary access points outside the security perimeter, where servicemembers and other employees can transfer to transit circulators operated within each installation by the relevant federal agency;
- Exploring the possibility of launching vanpool service that could more easily navigate each installation's secure access points;
- Increasing transit frequency and reliability on the network as a whole to increase the utilization of transit and create a constituency for expanding transit access to and within the installations themselves.

Figure 57. 2050 Regional Transit Plan

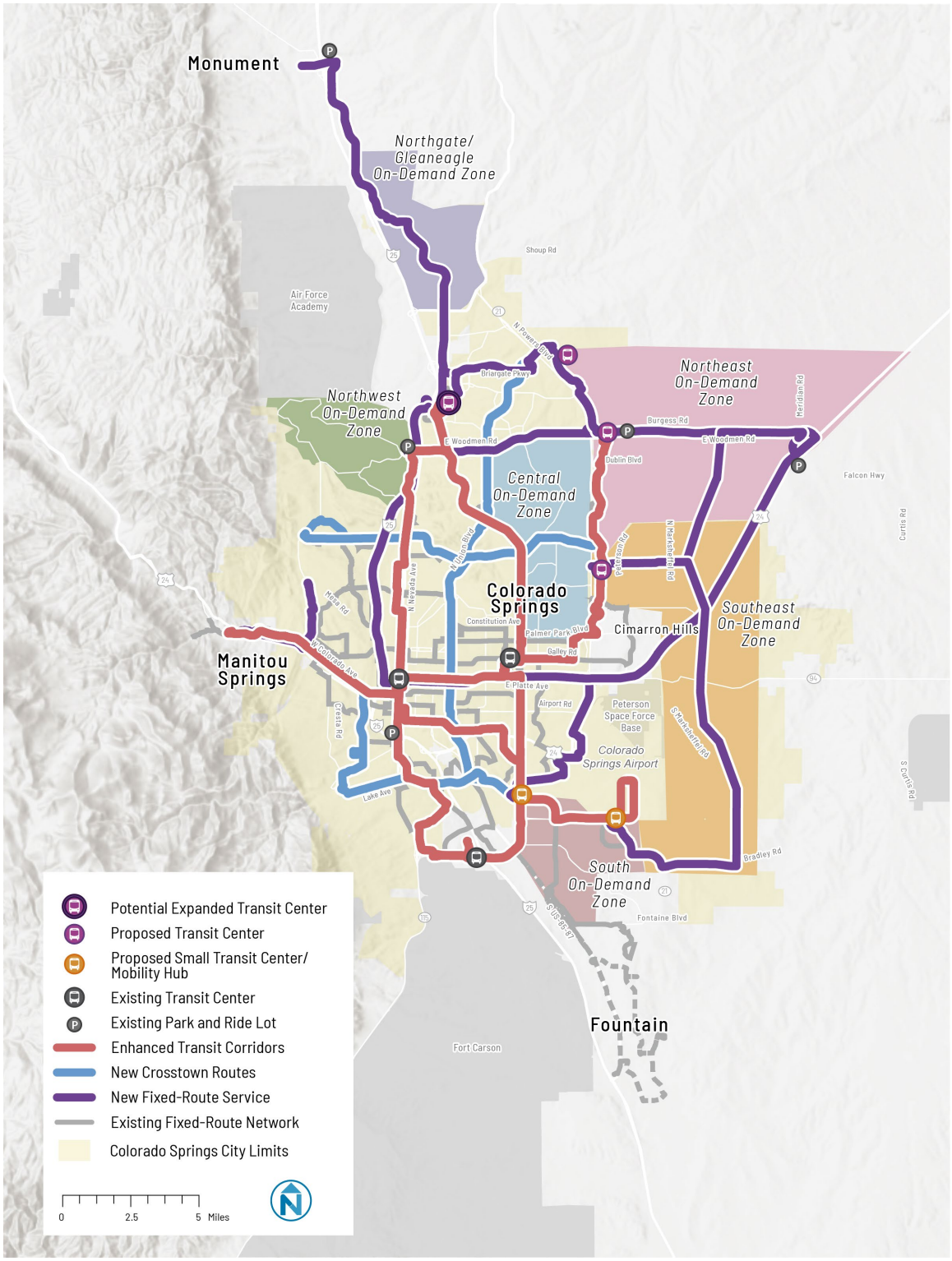
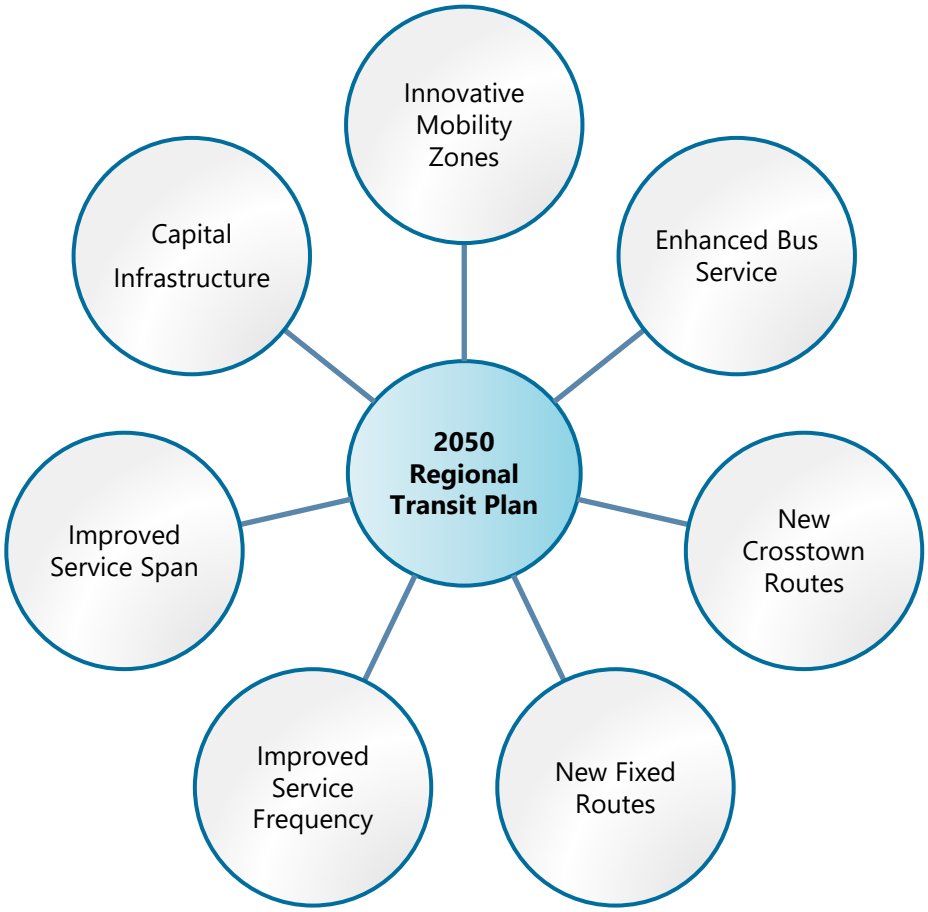


Figure 58. 2050 Regional Transit Plan Elements



INNOVATIVE MOBILITY ZONES

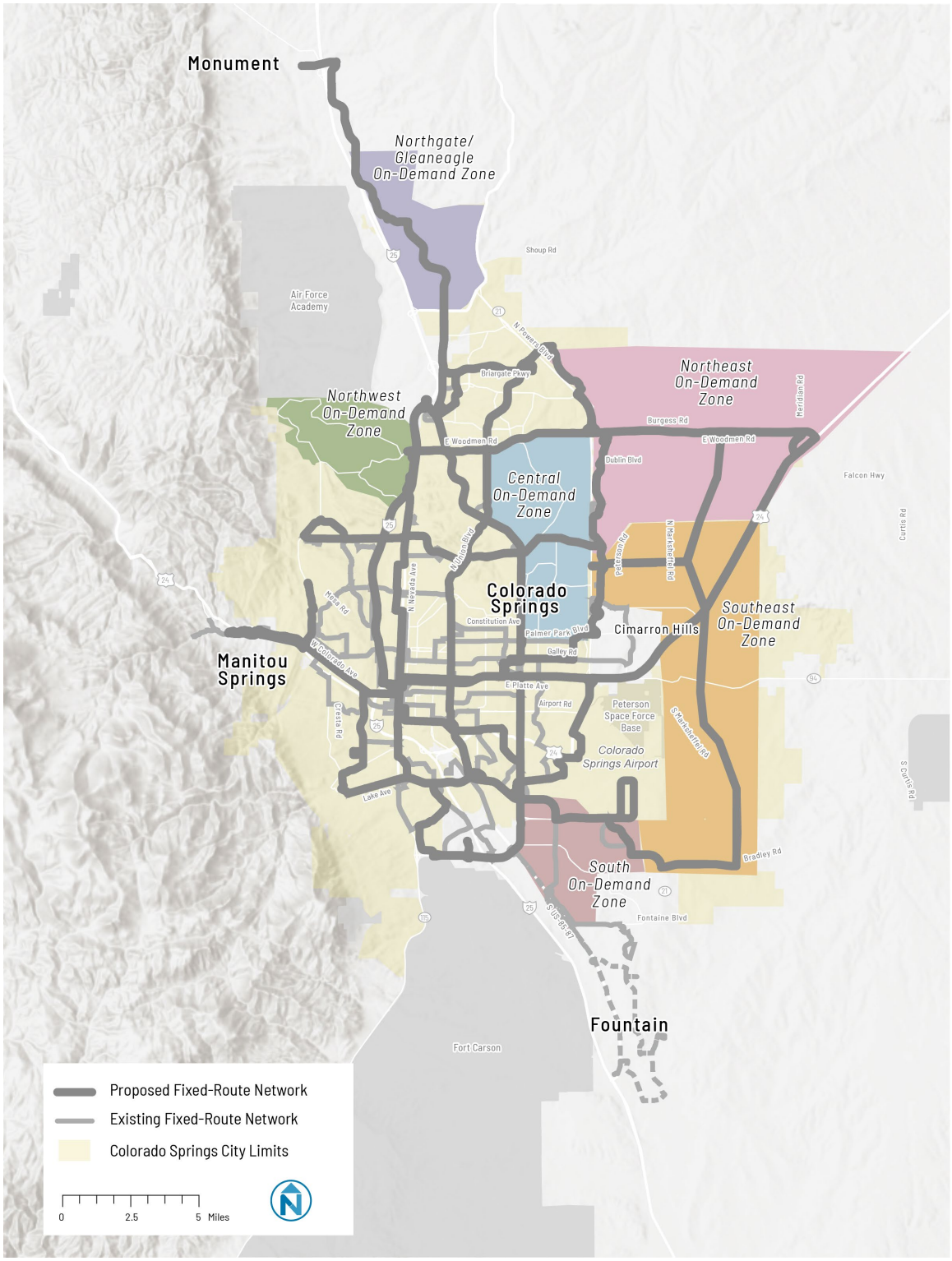
Not all growth recently seen (or expected) in the region includes sufficient density to sustain fixed-route transit routes. Until areas can support fixed-route transit, other types of transit services may be able to meet the needs of residents and travelers in these areas to improve access to jobs and essential services. These types of services are referred to in the 2050 RTP as "Innovative Mobility Zones," and their locations are shown in Figure 59.

Service in these six zones will serve passengers on an on-demand basis where riders can request rides via a call-in number or mobile application. Such an arrangement can be more cost-effective and complement the existing transit network. The service vehicles that can be used for these zones can range from vans or minibuses to shuttles. The service may be directly operated (by the agency) or MMT can contract/operate the services in partnership with transportation network companies like Uber or Lyft. Table 18 presents the service area and recommended annual revenue hours for the six innovative mobility zones.

Table 18. Innovative Mobility Zones

Innovative Mobility Zone	Size (Sq. miles)	Proposed Annual Revenue Hours
Northeast	35.2	16,000
Central	13.4	20,000
Northwest	8.5	11,000
Southeast	32.8	15,000
South	8.8	11,000
Northgate/Gleneagle	9.6	11,000
Total		**84,000**
Cost (2024 $)		**$7,585,000**

Figure 59. Innovative Mobility Zones



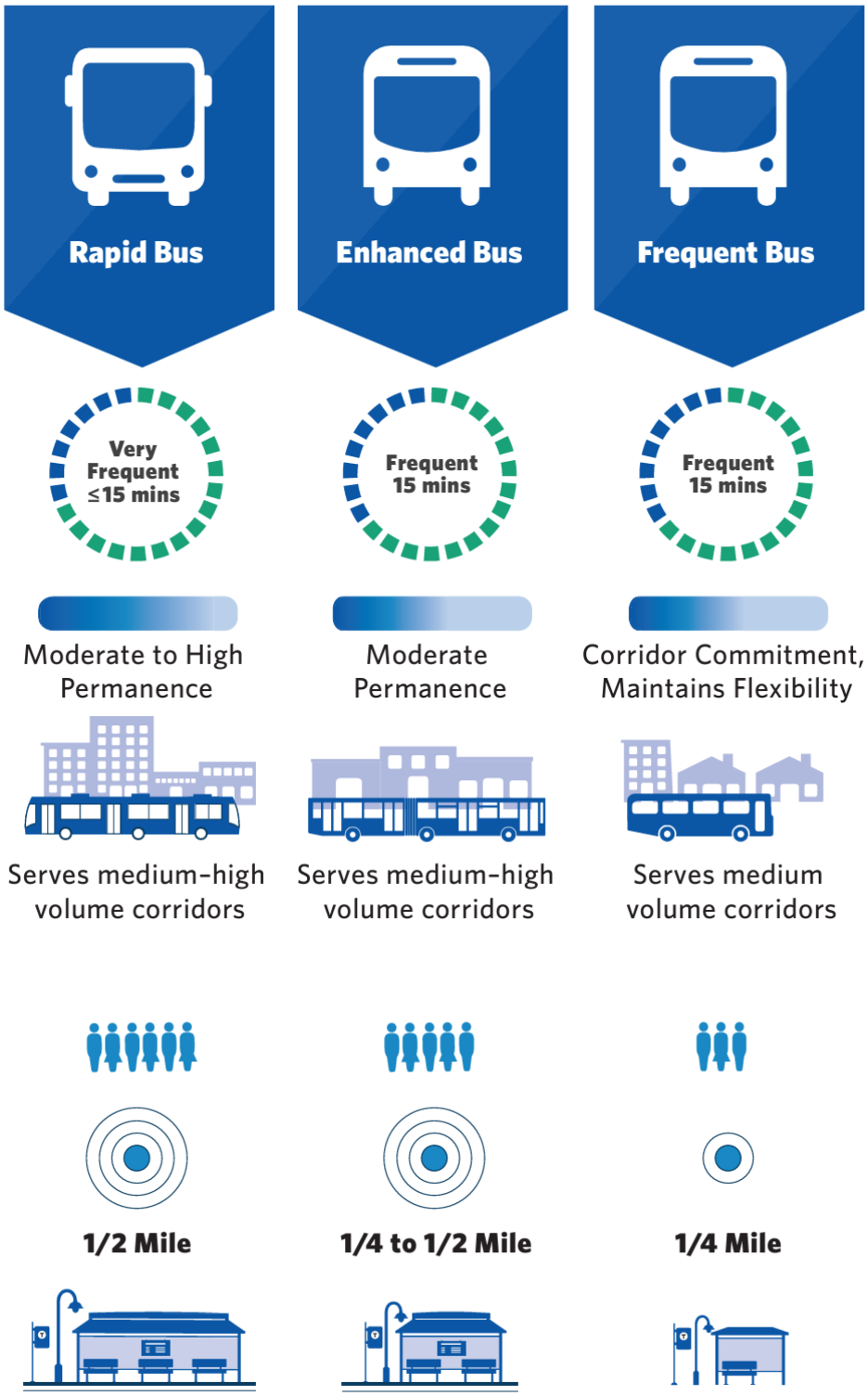
ENHANCED TRANSIT CORRIDORS

Several corridors in the region are proven "workhorses" of the existing transit system, carrying the majority of MMT's existing riders and connecting many of the key destinations throughout the region. These corridors are the obvious candidates for investing in both additional transit service as well as capital investments to improve bus speed and reliability, benefiting existing riders while also making transit a more competitive travel option to driving. These corridors comprise the Enhanced Transit Corridor (ETC) element of the 2050 RTP, as outlined in Figure 60.

What is an Enhanced Transit Corridor?

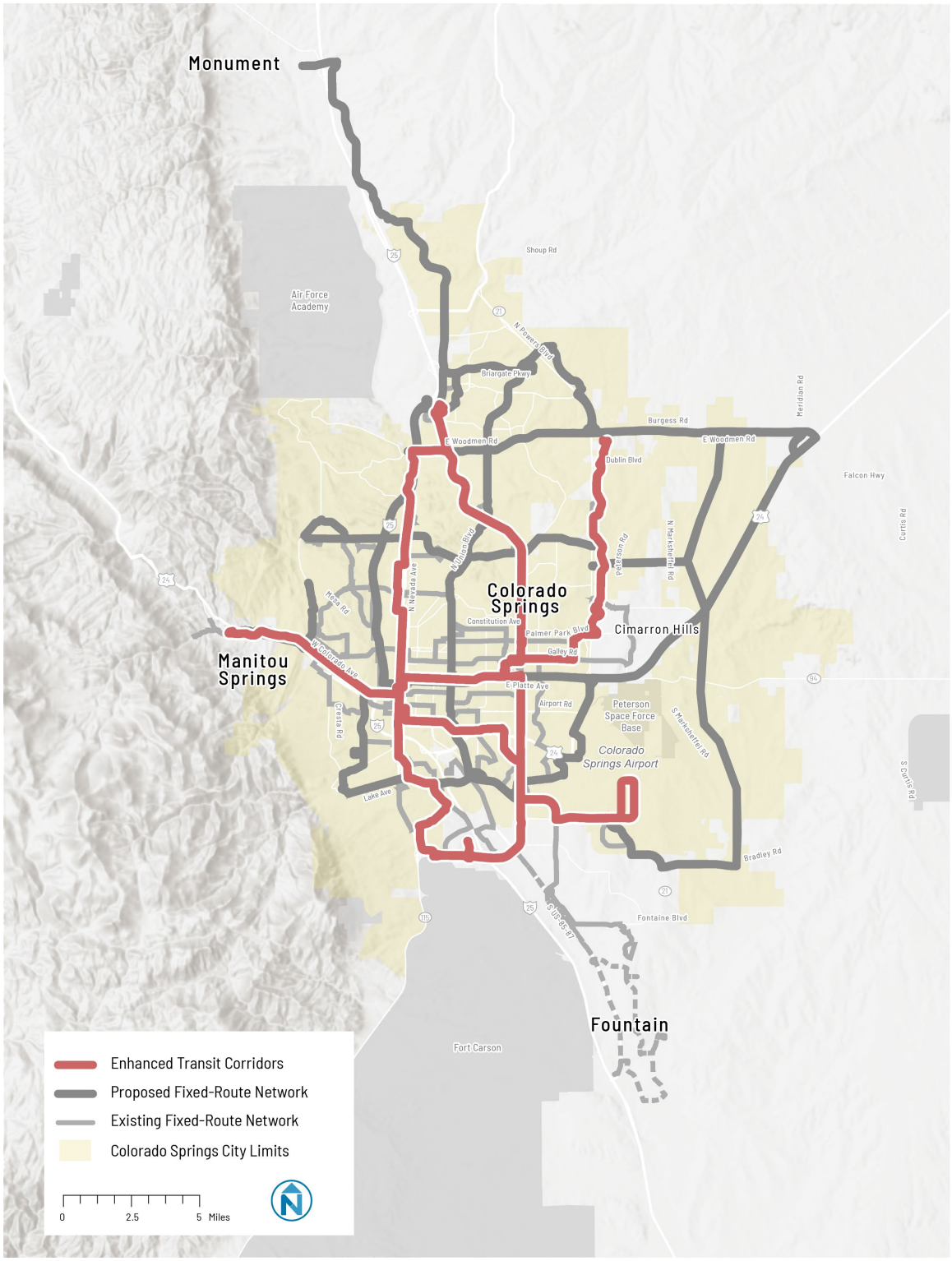
An ETC refers to a transit corridor that provides both a higher level of service as well as improved amenities compared to a regular local fixed-route bus. These projects are implemented on corridors with high existing transit ridership, existing or planned transit-supportive land use, and where modifications to the roadway can be made to give buses the ability to compete with the travel times of private cars. The exact infrastructure of an ETC will vary from corridor to corridor depending on the local context and the need, and a more detailed study (called an "alternatives analysis") is typically conducted for each project to define the project in partnership with the community. These types of projects are the most capital-intensive of the proposed solutions, but are also eligible for a variety of outside grant funding opportunities at both the federal and state levels.

Figure 60. Examples of Enhanced Transit Corridor Types



Source: Utah Transportation Authority

Figure 61. Proposed 2050 Enhanced Transit Corridors



The 2050 RTP includes upgrading six corridors to provide fast, frequent, and reliable service to the parts of the region with the highest concentration of existing and future residents and jobs. Enhanced bus service would replace some of the existing routes to serve existing transit riders more efficiently while attracting new riders. Improvements would include higher frequency, longer service spans, and short-term bus stop amenities and improvements. For instance, the routes would operate every 15 minutes or better during the day on weekdays and weekends and 30 minutes at all other times, and the service spans would be enhanced to serve from morning until midnight on weekdays and Saturdays and from morning to 9:00 p.m. on Sundays. Table 19 presents the existing and proposed annual revenue hours for the six enhanced bus corridors. Note that in some cases – like Tutt Boulevard – the ETC represents an expansion of fixed-route service beyond the reach of the most relevant current transit service, so the change in revenue hours reflects both the increased level of service as well as the expanded geographic coverage of the route.

Table 19. Enhanced Transit Corridors

ETC	Replaces Existing Route(s)	Existing Annual Revenue Hours	Proposed Annual Revenue Hours	Difference
Academy Boulevard	25, 27	31,000	68,000	37,000
North Nevada	9, 19, 39	22,000	38,000	16,000
South Nevada	10, 11, 20	10,000	26,000	16,000
Platte Avenue	5	12,000	14,000	2,000
Colorado Avenue	3	11,000	24,000	13,000
Airport	37	10,000	48,000	38,000
Tutt Boulevard	24	6,000	37,000	31,000
Total				**153,000**
Cost (2024 $)				**$16,000,000**

NEW CROSSTOWN ROUTES

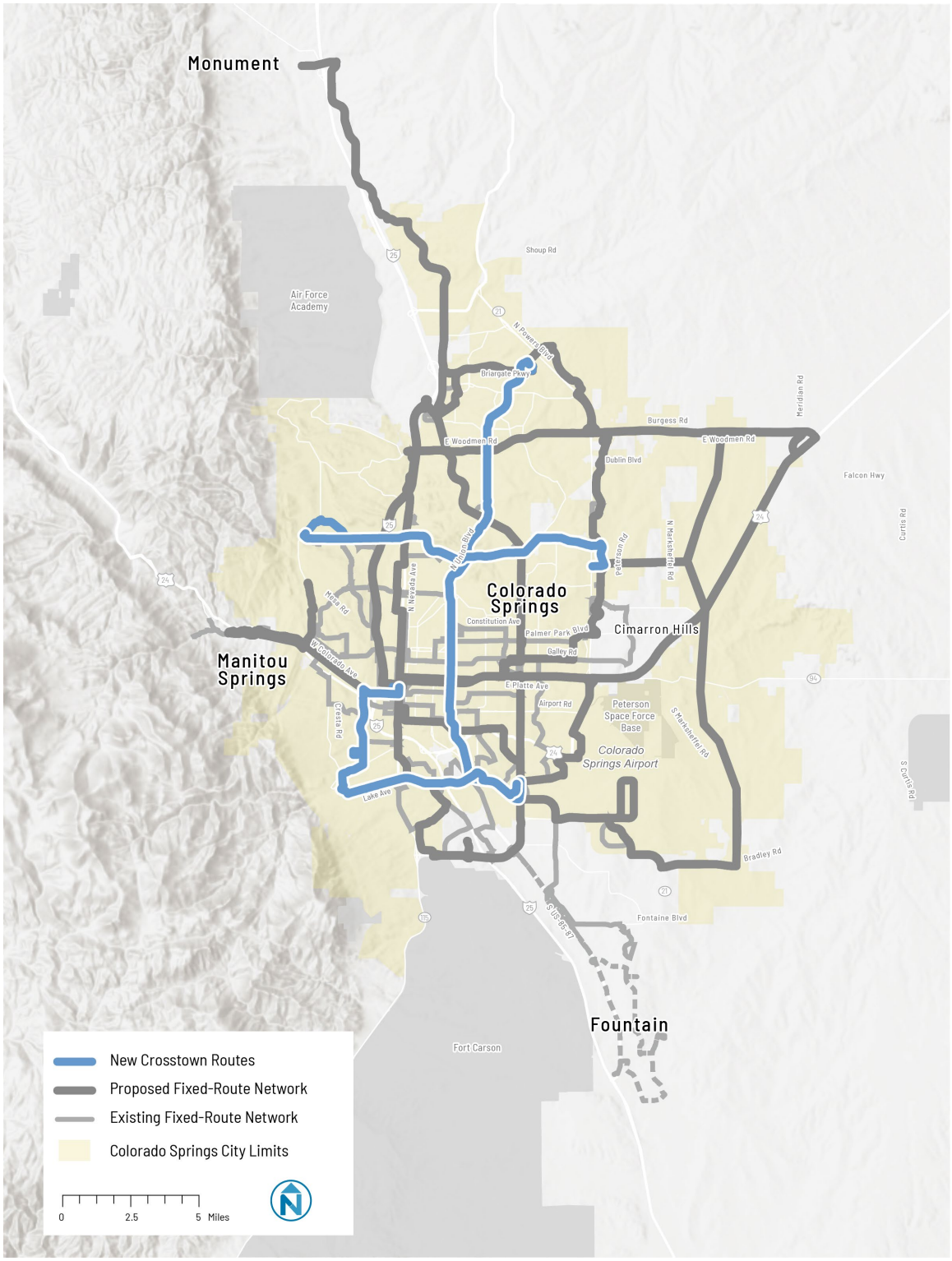
New crosstown routes will improve north-south and east-west crosstown travel and connect many of the ETCs to unlock new travel patterns with fewer transfers than on today's MMT system. New crosstown routes are shown in Figure 61.

The routes would extend the reach of the regular, fixed-route transit network to regional destinations like UC Health Memorial Hospital North, University of Colorado – Colorado Springs, and the Broadmoor Hotel. The new crosstown routes would replace some of the existing routes and would be implemented in two phases. In the first phase, frequency improvements would be made, and these routes would operate every 30 minutes all day, seven days a week. In the second phase, service spans would be enhanced to serve from morning until midnight on weekdays and Saturdays and from morning to 9:00 p.m. on Sundays. Table 20 presents the existing and proposed annual revenue hours for the three new crosstown routes.

Table 20. New Crosstown Routes

New Crosstown Routes	Replaces Existing Route(s)	Existing Annual Revenue Hours	Proposed Annual Revenue Hours	Difference
Union Blvd	18, 38	9,000	32,000	23,000
Garden of the Gods/Austin Bluffs	23, 34	13,000	22,000	9,000
Lake	4	5,000	22,000	17,000
Total				**49,000**
Cost (2024 $)				**$5,125,000**

Figure 62. Proposed Crosstown Routes



NEW FIXED-ROUTES

A constant theme heard during stakeholder and community feedback was the need to connect fast-growing parts of the region with reliable transit service. Wide swaths of the region to the north and east have seen tremendous growth in both housing and jobs and lack access to transit today, while additional growth in both directions will only exacerbate the number of people who lack access to reliable transit service. To address this gap, the 2050 RTP includes expansion of new local fixed-route transit to serve areas that have seen the most growth and that are most likely to meet the thresholds of people and jobs needed to sustain regular transit service. These routes are shown in Figure 62.

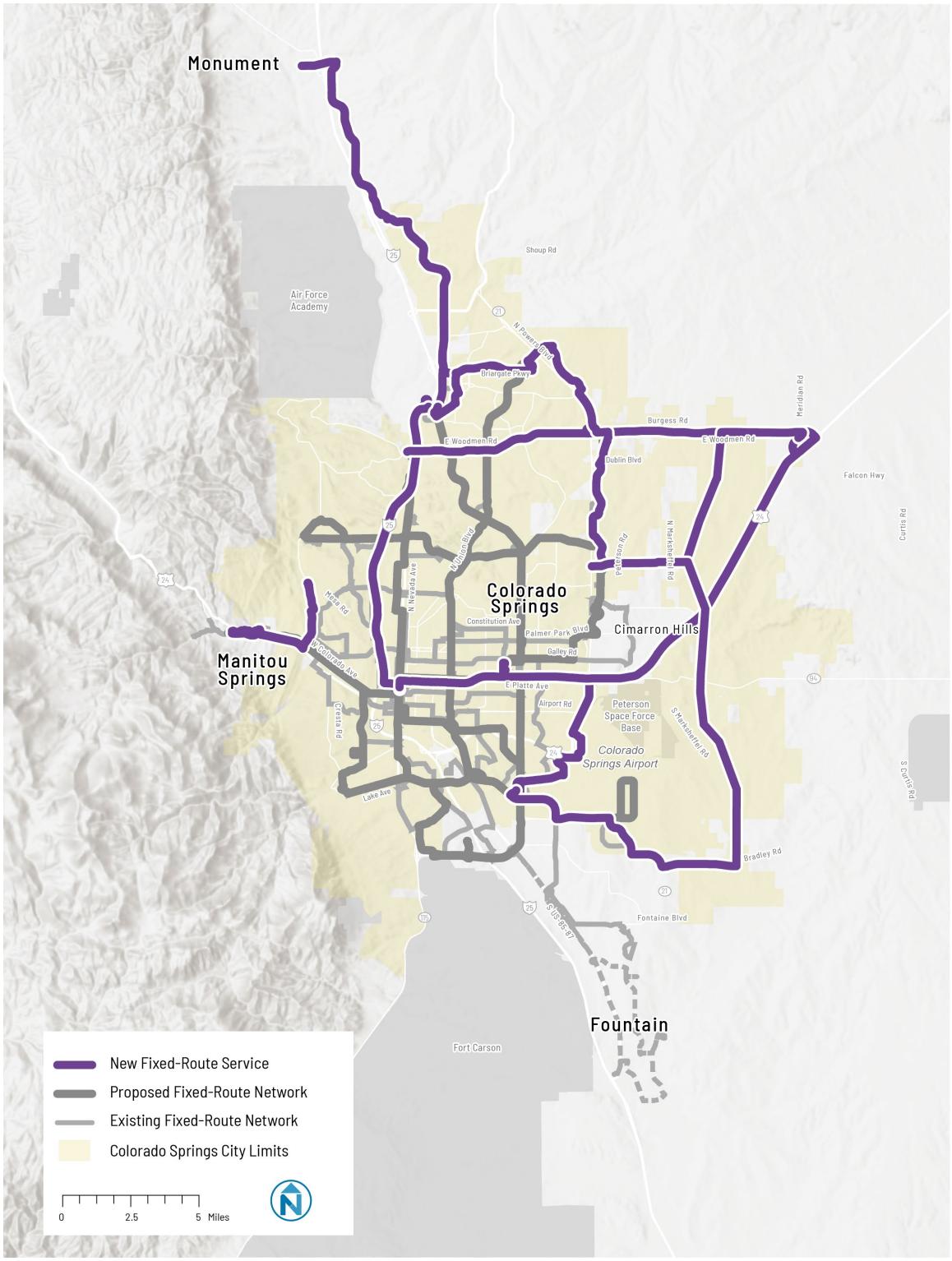
Table 21 presents nine new fixed-routes with recommended annual revenue hours. Out of the nine, two routes; I-25/Voyager Express Service and U.S. 24/Falcon Express Service are new commuter/express routes that would reduce travel time from outlying areas in the Pikes Peak region. For both the Banning Lewis Ranch (North) and Banning Lewis Ranch (South) routes, further analysis is needed to determine if Banning Lewis Parkway or Marksheffel Road is the preferred alignment to serve this part of the region. All routes are proposed to operate from morning until midnight on the weekdays and Saturdays and morning to 9:00 p.m. on Sundays with the exception of Manitou/Garden of the Gods Shuttle that will operate only on Saturdays and Sundays from the morning until 7:00 p.m. All new fixed-routes are proposed to operate every 30 minutes on all operational days.

Table 21. New Fixed-Routes

New Fixed-Routes	Proposed Annual Revenue Hours
Tutt North/Briargate	28,000
Woodmen	26,000
Citadel to Astrozon	18,000
Banning Lewis Ranch (North)*	22,000
Banning Lewis Ranch (South)*	44,000
Manitou/Garden of the Gods Shuttle	2,000
Voyager to Monument	50,000
I-25/Voyager Express Service	29,000
U.S. 24/Falcon Express Service	36,000
Total	**255,000**
Cost (2024 $)	**$26,665,000**

*Route could use Banning Lewis Pkwy and/or Marksheffel Rd

Figure 63. New Fixed-Route Transit Service



IMPROVED SERVICE FREQUENCY

Improved frequency and later and earlier service were two of the most desired improvements for existing MMT riders. Improved service directly addresses these top needs. All existing routes (that are not included in the enhanced bus or crosstown routes) would be provided with bus service that runs every 30 minutes on weekdays, Saturdays, and Sundays. This will reduce waiting times, improve connections, and lead to greater system utilization in the City of Colorado Springs. Table 22 shows all the existing routes whose frequency would be enhanced to 30 minutes and the change in the annual revenue hours as a result of the frequency enhancement.

Table 22. Frequency Improvements of Existing Routes

Route ID	Name	Existing Annual Revenue Hours	Proposed Annual Revenue Hours	Difference
2	Centennial Blvd - Garden of the Gods Rd	4,000	8,000	4,000
6	Fillmore St - Citadel Transfer Center	6,000	12,000	6,000
7	Pikes Peak Ave - Citadel Transfer Center	10,000	11,000	1,000
8	Cache La Poudre St - Citadel Transfer Center	4,000	8,000	4,000
11	World Arena - PPSC Centennial Campus	10,000	12,000	2,000
12	Palmer Park Blvd	6,000	10,000	4,000
14	Chestnut St - Garden of the Gods Rd	5,000	10,000	5,000
15	East Fountain Blvd / Cheyenne Mountain Center	5,000	10,000	5,000
16	Brookside St - Uintah Gardens	6,000	11,000	5,000
17	19th St - Fillmore St	6,000	11,000	5,000
22	Southborough via Murray Blvd	9,000	11,000	2,000
32	Security - Widefield	6,000	12,000	6,000
35	Las Vegas St - PPSC Centennial Campus	5,000	7,000	2,000
	Total			**51,000**
	Cost (2024 $)			**$5,335,000**

IMPROVED SERVICE SPAN

Improved frequency and later and earlier service were two of the most desired improvements for existing MMT riders. Improved service directly addresses these top needs.

Earlier and later service would be provided on all the existing routes that are not described in the enhanced bus service or crosstown route sections. Service on all routes would begin at 6:00 a.m. on weekdays, 6:30 a.m. on Saturdays, and 7:00 a.m. on Sundays. Service would be extended until midnight on weekdays and Saturdays and until 9:00 p.m. on Sundays. Table 23 presents all the existing routes whose service span would be improved and the resultant change in the annual revenue hours.

Table 23. Span Improvements of Existing Routes

Route ID	Name	Existing Annual Revenue Hours	Proposed Annual Revenue Hours	Difference
1	Hillside - Hancock Plaza	20,000	22,000	2,000
2	Centennial Blvd - Garden of the Gods Rd	4,000	10,000	6,000
6	Fillmore St - Citadel Transfer Center	6,000	15,000	9,000
7	Pikes Peak Ave - Citadel Transfer Center	10,000	12,000	2,000
8	Cache La Poudre St - Citadel Transfer Center	4,000	9,000	5,000
11	World Arena - PPSC Centennial Campus	10,000	13,000	3,000
12	Palmer Park Blvd	6,000	12,000	6,000
14	Chestnut St - Garden of the Gods Rd	5,000	13,000	8,000
15	East Fountain Blvd / Cheyenne Mountain Center	5,000	12,000	7,000
16	Brookside St - Uintah Gardens	6,000	14,000	8,000
17	19th St - Fillmore St	6,000	14,000	8,000
22	Southborough via Murray Blvd	9,000	13,000	4,000
32	Security - Widefield	6,000	14,000	8,000
35	Las Vegas St - PPSC Centennial Campus	5,000	8,000	3,000
	Total			**79,000**
	Cost (2024 $)			**$8,260,000**

CAPITAL INFRASTRUCTURE

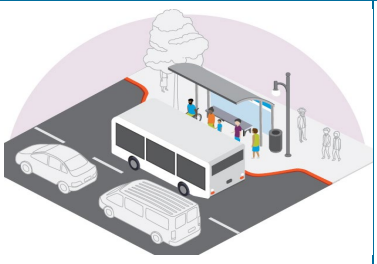
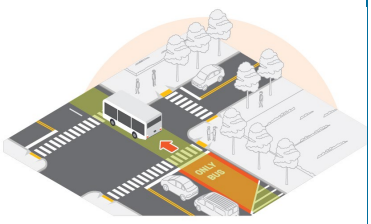
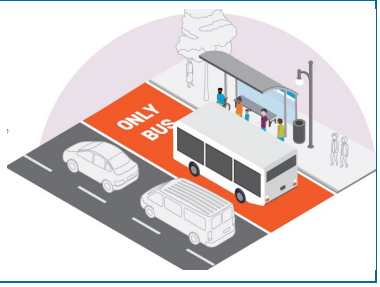
Investment in infrastructure is needed to improve access to transit and attract more riders. New or expanded transit centers would provide more space for buses to connect/transfer passengers and facilitate expansion of the fixed-route transit network as envisioned in the 2050 RTP. Locations for these new transit centers are shown in Figure 63.

The vision includes an additional set of programmatic investments in supportive transit infrastructure to improve passenger experience. New mobility hubs would provide first/last mile connections to access the bus, such as bicycle and scooter parking/rentals. Bus stops would be improved to meet ADA standards and include new amenities like benches and shelters.

Speed and reliability improvements would speed up bus service and ensure buses operate on time. Because these types of investments often occur on right-of-way that MMT doesn't directly control, these programs would be established as partnerships with local governments, and further coordination is needed to define roles, responsibilities, and funding sources.

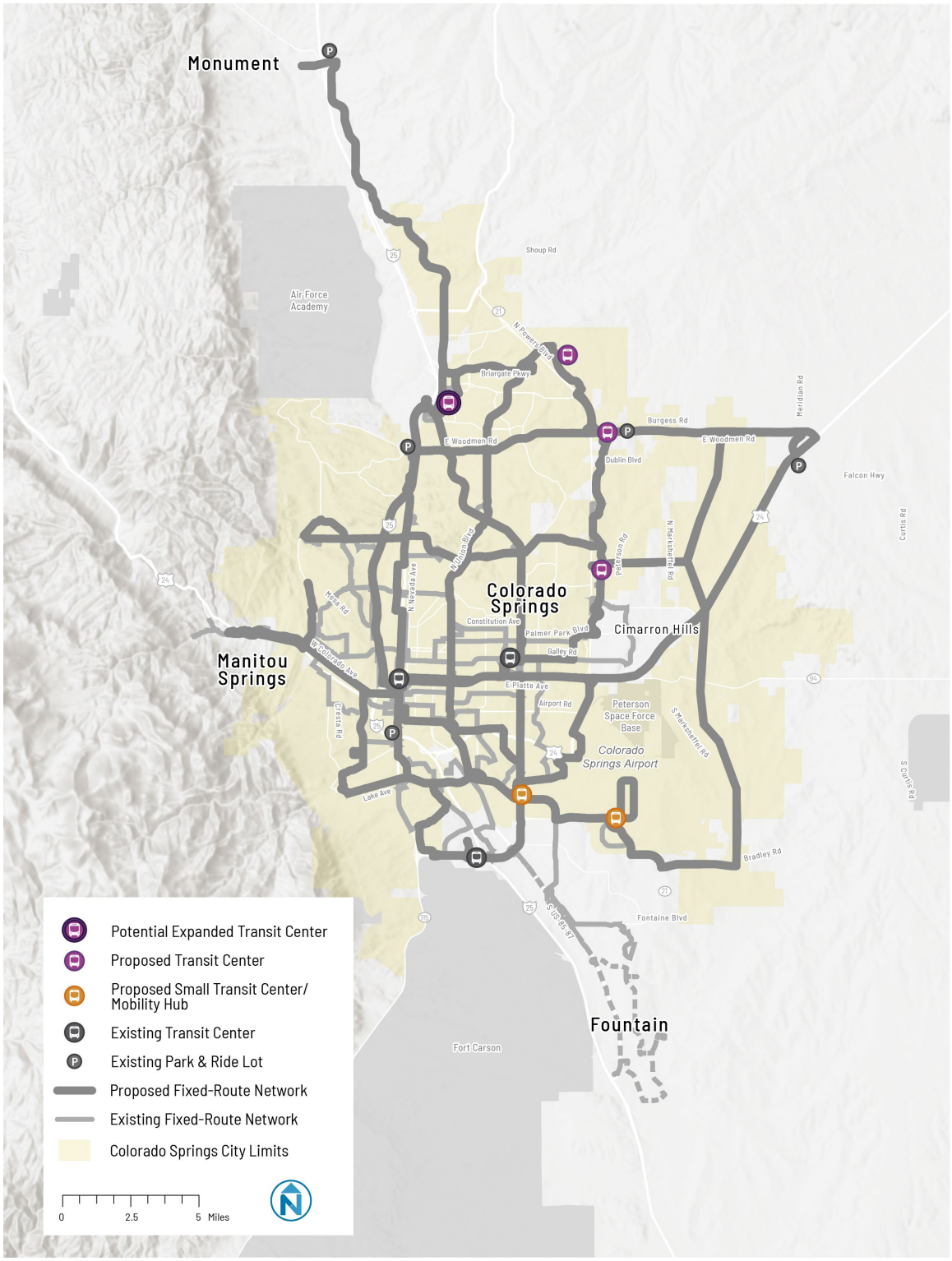
Types of Bus Infrastructure

In order to make transit a more competitive travel mode, MMT can partner with local governments to make strategic investments in infrastructure that speed up the boarding process, allow buses to avoid congestion at traffic signals, and (where feasible) give buses their own space within existing roadways. Examples of bus speed and reliability infrastructure include:

Curb Extensions, *which speed up the time it takes for buses to load and unload passengers;*	***Queue Jumps,*** *which can give buses a head start getting through congested intersections;*	*And* ***Bus Lanes,*** *which provide dedicated space for buses where it is most needed.*
		

Finally, expanding bus service through both new/improved routes and additional service frequency and span will require a large investment in additional buses, necessitating the construction of a new maintenance facility. The location and size of such a facility would be determined through a site selection process when the facility is needed.

Figure 64. New Transit Facilities



What is a Mobility Hub?

A key component to a successful high frequency transit system is offering an inviting place for riders to begin and end their journey. Mobility Hubs play a vital role in the network by facilitating safe and easy connections between travel modes. They create welcoming and enticing environments for travelers that include amenities, information resources and both public and private transit services. They provide site-specific services and amenities to create a user experience that is above and beyond what most basic transit stations or Park & Rides typically provide.

The 2050 RTP includes enhancements that will refresh existing Park and Rides and Transit Centers to more closely meet the definition of true, modern Mobility Hubs. Mountain Metro's Mobility Hubs will be high quality transit and multimodal sites that serve as the origin, destination and/or transfer point for a significant portion of trips within the regional transit network.

Transit Transfer Points

Mobility Hubs make transferring between different transportation modes and services easy, safe and efficient.

Comfortable Walking Destination for All

A great pedestrian environment makes Mobility Hubs accessible to everyone — not just the very dedicated.

Context-Sensitive Designs Well-adapted to Sites

Mobility Hubs are more than just functional. They are also welcoming, enjoyable, safe, intuitive and enticing.

Popular Place for Private Mobility Services

Successful Mobility Hubs need to be in places that make sense for transportation users and providers alike. This could include Transportation Network Companies (TNCs) like Uber and Lyft, or shared bicycle or scooter providers.

2050 RTP PERFORMANCE

After confirming the 2050 RTP with stakeholders and the public, the project team conducted an evaluation of how the RTP performs according to the established goals of the transit plan. The evaluation quantifies the benefits of the future transit network compared to the existing transit network.

The goals and metrics used for system evaluation of the existing and proposed transit network are presented in Table 24. The proposed transit network presents significant benefits over the existing network:

- Nearly **doubling the number of people** and more than **quadrupling the number of jobs** within a 5-minute walk of high-frequency (15-minutes or better) transit by 2040.
- Expanding the overall reach of the transit network to serve **~75% more people and ~25% more jobs** than the current network would serve by 2040.
- Serving **nearly three-quarters of the UZA's population** by transit by 2040 (an increase of more than 26%).
- Reaching **12% more existing public health facilities** and **19% more existing educational facilities** through the regular fixed-route transit network.
- Expanding the reach of the transit network to **thousands of individuals living within equity focus areas**.
- Increasing access to **low- to moderate-wage jobs** through the transit system by **nearly 25%.**

A complete description of the methodology for calculating systemwide performance measures is included in **Appendix B.**

Table 24. System Evaluation

Goal	Metric	Existing Network	2050 RTP Network	Change
Choice	Population within ¼-mile buffer of routes with 15-minute weekday frequencies (or better)*	63,078	123,118	**+95%**
Choice	Jobs within ¼ mile of routes with 15-minute weekday frequencies (or better)*	35,185	149,914	**+326%**
Accessibility	Population within ¼-mile buffer of the transit system*	337,973	596,525	**+77%**
Accessibility	Jobs within ¼-mile buffer of the transit system*	267,015	326,039	**+22%**
Accessibility	Percentage of UZA population within ¼ mile of the transit network	44%ǂ	70%‡	**+26%**
Accessibility	Percentage of existing public health facilities (with employee count greater than or equal to 20) within ¼ mile of the transit system	82%	93%	**+12%**
Accessibility	Percentage of existing education facilities (with employee count greater than or equal to 10) within ¼ mile of the transit system	63%	82%	**+19%**
Equity	Population within equity focus areas within ¼-mile buffer of the transit system*	130,551	134,997	**+3%**
Equity	Low-income jobs within ¼ mile of the transit system♦	27,583	33,938	**+23%**

* Based on 2040 transportation analysis zone (TAZ) population/employment estimates (PPACG)

ǂ Based on 2020 TAZ population and 2020 UZA definition

‡ Based on 2040 TAZ population and approximation of 2040 UZA boundary (TAZs where housing unit density is greater than 200 units per square mile)

♦ Based on 2021 LEHD jobs data

PROJECT PRIORITIZATION

The 2050 RTP outlined in this chapter represents the full realization of transit improvements in the Colorado Springs region over the next 25 years but is not constrained by funding or project implementation sequencing. After confirmation of the RTP, the project team conducted a project prioritization process to assign relative importance to each project within each investment theme. By systematically evaluating and prioritizing projects, MMT will position itself to strategically meet the current and future needs of the community, as well as to advance near-term priorities through the implementation process – including through regional funding processes such as the 2050 LRTP.

The project team used six prioritization metrics to answer the question of how well each project met the project's goals. Those metrics are:

- **Existing population density:** Number of people per square mile served by the innovative mobility zone or within ¼-mile buffer of the proposed route.
- **Existing employment density:** Number of jobs (employment opportunities) per square mile served by the innovative mobility zone or within ¼-mile buffer of the proposed route.
- **Population growth:** Percentage increase in the number of people served by the innovative mobility zone or within ¼-mile buffer of the proposed route.
- **Employment growth:** Percentage increase in the number of jobs (employment opportunities) served by the innovative mobility zone or within ¼-mile buffer of the proposed route.
- **Population growth within equity zone:** Percentage increase in the population living within equity focus areas (as identified in Chapter 3) served by an innovative mobility zone or within ¼-mile buffer of the proposed route.
- **Implementation readiness:** Qualitative assessment of readiness for implementation of transit service improvements.

The assessment of the metrics for each proposed project is based on data received from PPACG which forecast population and employment distribution for the years 2020, 2030, and 2040. Thus, existing population and existing job density metrics correspond to 2020 data, while growth metrics correspond to the 'change' between 2020 and 2040. The prioritization analysis was only conducted for discrete projects; programmatic investments such as frequency/span improvements and capital infrastructure investments are expected to be phased and implemented in coordination with route changes and upgrades. Prioritization scores for each metric are reflected on a scale of 1 to 5, with 5 referring to "high" performance and 1 referring to "low" performance.

Table 25. Project Prioritization

Investment Theme	Project	Population Density Score	Job Density Score	Population Growth Score	Job Growth Score	Serves Riders Equitably Score	Ease of Implementation Score	Overall Score	Category Rank
Enhanced Bus Service	Academy Blvd	3	3	1	1	4	5	**17**	**3**
Enhanced Bus Service	North Nevada	2	5	2	2	3	5	**19**	**2**
Enhanced Bus Service	South Nevada	3	5	3	2	3	1	**17**	**3**
Enhanced Bus Service	Platte Ave	3	5	1	1	5	5	**20**	**1**
Enhanced Bus Service	Colorado Ave	2	5	2	2	3	3	**17**	**3**
Enhanced Bus Service	Airport	3	3	3	2	5	1	**17**	**3**
Enhanced Bus Service	Tutt Blvd	3	3	2	1	3	1	**13**	**7**
New Crosstown Routes	Union Blvd	3	3	1	1	4	3	**15**	**1**
New Crosstown Routes	Garden of the Gods/Austin Bluffs	2	3	2	1	1	5	**14**	**3**
New Crosstown Routes	Lake	2	4	2	2	4	1	**15**	**1**
New Fixed-Routes	Tutt North/Briargate	2	3	3	1	1	1	**11**	**6**
New Fixed-Routes	Woodmen	2	2	4	1	1	3	**13**	**4**
New Fixed-Routes	Citadel to Astrozon	2	2	2	2	5	5	**18**	**1**
New Fixed-Routes	Banning Lewis Ranch (North)	1	2	5	1	1	1	**11**	**6**
New Fixed-Routes	Banning Lewis Ranch (South)	1	1	3	5	2	1	**13**	**4**
New Fixed-Routes	Manitou/Garden of the Gods Shuttle	1	2	1	1	1	5	**11**	**6**
New Fixed-Routes	Voyager to Monument	1	2	4	2	1	1	**11**	**6**
New Fixed-Routes	I-25/Voyager Express Service	1	3	3	2	2	5	**16**	**2**
New Fixed-Routes	US 24/Falcon Express Service	1	3	3	2	3	3	**15**	**3**
Innovative Mobility Zones	Northeast	1	1	4	2	1	5	**14**	**5**
Innovative Mobility Zones	Central	5	2	1	2	1	5	**16**	**1**

Investment Theme	Project	Population Density Score	Job Density Score	Population Growth Score	Job Growth Score	Serves Riders Equitably Score	Ease of Implementation Score	Overall Score	Category Rank
Innovative Mobility Zones	Northwest	2	2	1	1	1	5	**12**	**6**
Innovative Mobility Zones	Southeast	1	1	4	5	1	3	**15**	**3**
Innovative Mobility Zones	South	3	1	1	5	1	5	**16**	**1**
Innovative Mobility Zones	Northgate/Gleneagle	2	2	3	2	1	5	**15**	**3**

A complete listing of prioritization metrics is included in **Appendix B.**

5 FINANCIAL PLAN

EXISTING FUNDING SOURCES

Various federal, state, and local programs are available to assist transportation programs in the Pikes Peak Region. A summary of the most common sources of funding are included below.

Federal Funding

- **Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grants:** RAISE is a competitive grant program administered by the U.S. Department of Transportation (USDOT) that provides funding for transportation infrastructure projects. This project supports road, rail, and transit projects that have significant local or regional impact. The funds available through this grant vary based on the appropriations from Congress. Eligible candidates include state, local, and tribal governments, including transit agencies.
- **Multimodal Projects Discretionary Grant Program (MPDG):** This USDOT grant aims to fund transportation projects such as highway and bridge, intercity passenger rail, public transportation, etc. that are of national or regional significance and expand surface transportation infrastructure. Eligible candidates include state, local, and tribal governments, including transit agencies.
- **Capital Improvement Grant (CIG)**: This FTA discretionary program funds many types of transit capital investments. Federal transit law requires every transit agency to complete a series of steps for funding eligibility. For New Starts and Core Capacity projects, completion of two phases in advance of the receipt of the grant is needed. For Small Starts projects, completion of one phase is needed.
- **Buses and Bus Facilities Program (Section 5339):** This FTA program supports state and local governments by providing financial assistance to buy or modernize buses, enhance bus-related facilities, and support workforce development. The funding is provided through formula allocations and competitive grants. Eligible applicants include designated recipients such as state or local government entities that support operations of fixed-route buses.
- **Strengthening Mobility and Revolutionizing Transportation (SMART)**: The Bipartisan Infrastructure Law (BIL) established the SMART discretionary grant program administered by the USDOT, that provides $100 million annually from FY 2022 to FY 2026 to support public sector agencies in the implementation of advanced technologies to enhance transportation efficiency and safety.

- **Congestion, Mitigation and Air Quality (CMAQ) Funds**: The CMAQ program administered by the Federal Highway Administration (FHWA) continues to provide a flexible funding source to State and local governments for transportation projects and programs to help meet the requirements of the Clean Air Act (CAA). Transit investments such as transit vehicle acquisitions and construction of new facilities or improvements to the existing facilities that increase transit capacity are eligible for CMAQ funds.
- **Surface Transportation Block Grant Program (STBG):** The FHWA's STBG program (reauthorized under the BIL through 2026) provides flexible funding that can be utilized by State or local governments for improvement of any surface transportation infrastructure like public roads, pedestrian and bicycle infrastructure, and transit capital projects.
- **Enhanced Mobility of Seniors and Individuals with Disabilities Program (Section 5310)**: FTA's Section 5310 program allocates funds for both capital and operating expenses to states and other designated recipients. These funds are intended to improve transportation options and meet the needs of individuals with disabilities and seniors. Although services funded by 5310 funds can be used by the public on an occasional basis, projects receiving these funds are required to cater to the needs of seniors and people with disabilities. In Colorado, CDOT administers 5310 funds for small urbanized and rural areas. PPACG administers 5310 funds for the Colorado Springs urban area, while CDOT provides supplemental 5310 rural transit funding to smaller providers in the region. Projects receiving 5310 funding must be included in a coordinated plan. Additionally, regulations require that at least 55% of those funds must be available for traditional projects (such as mobility management and capital purchases), while the remainder can be utilized for other operating and capital projects. At this time, the following organizations are subrecipients of Section 5310 through PPACG: Envida and Silver Key Senior Services.
- **Rural Area Formula Program (Section 5311)**: The Section 5311 program offers planning, capital, operating, and administrative assistance to states to aid transit in rural areas with populations under 50,000. Recipients of these FTA funds can be recognized Indian tribes, local governments, public transit operators, and nonprofits. CDOT provides supplemental 5311 funding to smaller providers in the Colorado Springs region (for example, Envida uses 5311 funding to operate deviated fixed routes in eastern El Paso County).
- **Urbanized Area Formula Grants (Section 5307)**: Section 5307 funds are available from the FTA to assist with operating and capital assistance for transit and for planning related to transportation in urban areas with more than 50,000 people. In the Colorado Springs metropolitan region, MMT is the designated recipient of 5307 funds.

- **Older Americans Act (OAA)**: Funds through the OAA are distributed to the PPACG and AAA, which supplement grants for human service providers. These funds are administered to PPACG by the Administration for Community Living (ACL), which is part of the U.S. Department of Health and Human Services (HHS).
- **Mobility on Demand (MOD) Sandbox Demonstration Program**: Supports projects promoting inventive business models to provide equitable, high quality transportation choices for everyone. MOD funds are administered by the FTA.
- **Innovative Coordinated Access and Mobility Grants (ICAM)**: These funds are administered by the FTA to support innovative projects improving coordination of services.
- **Integrated Mobility Innovation (IMI)**: Supporting USDOT's Smart Cities program, FTA's IMI program provides funds for projects demonstrating effective and innovative practices, technologies and partnerships enhancing the effectiveness of transit, and projects that improve efficiency, improve quality, foster safety, and upgrade the experiences of travelers.
- **Enhancing Mobility Innovation (EMI)**: New for 2024, FTA's EMI program aims to promote projects that focus on the passenger experience and encourage individuals to use transportation services. While the program requires proposals by August 30, 2024, funding within this project may be available in another round of federal appropriations.
- **Other Discretionary Grant Funds:** There are a variety of other discretionary grants that could be used to fund transportation programs in the Pikes Peak region, including several that were established under the BIL. As these competitive possibilities are constantly evolving, they are not described in the same detail as the other programs above. Opportunities include the Advanced Transportation Technologies and Innovative Mobility Deployment (ATTIMD) program through USDOT and FHWA, FTA's Innovative Coordinated Access and Mobility (ICAM) pilot program, the USDOT's Safe Streets and Roads for All (SS4A) program, and the FTA's Transit-Oriented Development Planning Program.

State/Local Programs

- **Pikes Peak Regional Transportation Authority (PPRTA):** PPRTA was approved by voters in 2004, authorizing a 1% sales tax supporting PPRTA goals. Funds are assigned to capital and maintenance projects, in addition to transit (which receives 10% of funds). Subsequently renewed in 2012 and in 2022, PPRTA-2 and PPRTA-3 included capital and program funds for transit, which were not included in the original PPRTA transit funds.

- **Funding Advancements for Surface Transportation and Economic Recovery Act of 2009 (FASTER) Transit Grants:** Provide $15 million every year to support transit projects in Colorado. A third of these funds are awarded competitively as local transit grants, with the rest of the funding being dedicated for statewide projects. Local recipients must provide at least 20% as local match.
- **Colorado SB17-267 Funding:** Provides $500 million every year to transportation projects, with 10% of those funds being dedicated to transit. However, this transit funding must be utilized on capital investment projects (therefore, it does not support operating needs of providers).
- **SB24-032 Funding:** Passed in May 2024, this bill creates a consolidated zero fare transit grant program through the Colorado Energy Office. $7 million is allocated annually for fare-free transit during the ozone season and another $7 million is allocated specifically for youth fare-free transit all year long. Eligible transit agencies outside of the Denver RTD would apply for and receive grants via the Colorado Association of Transit Agencies (CASTA). Agencies will be required to report information back to CASTA. A committee is also established to develop a statewide transit pass, with a report due in 2026.
- **Multimodal Transportation and Mitigation Options Fund (MMOF):** The Colorado State Legislature created MMOF in 2018, initially providing a one-time provision of funding. In 2021, Colorado SB21-260 designated a significant share of Colorado's COVID Fiscal Recovery Funds to MMOF in addition to generating yearly state revenues for the program for the next decade. MMOF funding is allocated by formula across the 15 different Transportation Planning Regions (TPR) in the state, and qualifying projects include operating or capital costs for on-demand and fixed-route transit, programs dealing with transportation demand management, multimodal mobility projects enabled by new technologies and studies dealing with multimodal transportation.
- **Colorado SB24-230 Oil & Gas Production Fees Funding:** The Colorado State Legislature recently created new oil and gas production fees to be paid quarterly beginning late 2025 with a portion dedicated for transit operations, competitive transit grants, and statewide passenger rail. Specifically for transit, fees will be collected by CDOT and administered by the Department of Revenue (DOR). PPACG will receive 8.9% of total funds for transit operations while MMT will receive roughly 81% of PPACG's share of those funds. MMT will also be eligible to receive competitive transit grants, which comprise approximately 10% of the total funds raised through the new fees.

FINANCIAL ANALYSIS

As a part of the 2050 RTP, a financial model was developed to help MMT assess future costs and revenue. This model will help the agency in determining the affordability and need for additional funds to sustain current services and infrastructure and accommodate proposed vision elements.

The model uses current budget and plans from the agency to detail revenue and expense streams for both operations and capital needs. The future revenue and expense streams were anticipated based on the following:

- Historical data
- Inputs from MMT officials
- Recommendations per the 2050 RTP

"Constrained" and "unconstrained" scenarios were developed by the project team. The constrained scenario builds on the business-as-usual approach assuming the agency continues to operate with existing services at current levels with no recommendations adopted per the 2050 RTP. The unconstrained scenario builds on the consideration that all the recommendations per the 2050 RTP are adopted by the agency.

Both the constrained (baseline) and unconstrained scenarios rely on a series of assumptions that allow forecasts based on current revenues and expenses. Changing one or more of the assumptions can impact future financial forecasts.

Assumptions

Revenue and expense assumptions were made and affect both scenarios. Revenue assumptions include those related to the operating, non-operating, and capital revenue streams and annual reserves held by MMT. Expense assumptions include those related to operating, non-operating, and capital costs. For the unconstrained scenario, proposals from the 2050 RTP are included as subsections within expenses.

Revenues

- Operating, non-operating, and capital revenues were provided by MMT for a base year of 2023.
- An inflation rate of 2% is assumed for all revenues.
- Operating revenues

  - Fare and advertisement revenue: MMT provided a base year assumption of $2.8 million. Based on historical data, revenues from fares are assumed at 79% of the total and advertising and other streams are 21% of the total.
  - Ozone Season Transit Grant program (OSTG) better known as Zero Fare for Better Air program: based on SB24-032. Base year has been assumed at $1 million and $1.5 million in 2025.
  - Oil and gas funds are based on the recent Colorado SB24-230 legislation that will provide MMT roughly $6.3 million in ongoing operating and capital funds starting in FY26 (due to the timing of the start of legislation, FY25 will provide around $2.9 million) of which 70% is assumed for operations.
- Non-operating revenue: These streams include discretionary and formula-based grants such as 5339 (a), 5307, FASTER, City general fund, PPRTA annual transit sales tax, and STBG & Surface Transportation Program (STP).
  - Oil and gas funds are based on the recent Colorado SB24-230 legislation that will provide MMT roughly $6.3 million in ongoing operating and capital funds starting in FY26 (due to the timing of the start of this legislation, FY25 will provide around $2.9 million) of which 30% is assumed for non-operating revenues.
  - The FASTER grant is assumed to be a constant $700,000 through 2050.
- Operating and Grant Match Reserves:
  - The operating reserve is based on 17% of the sum of MMT's annual operating budget and the City operating budget, which is then reduced by the amount of 7% of the PPRTA transit sales tax (10% minus 3% for the Taxpayer's Bill of Rights). In FY24-25 this was around $3.8 million.
  - Grant match reserve is matching funds budgeted for formula and other awarded grants. This is generally the amount of two lagging years of FTA Section 5307 funds primarily due to the timing of application and award of those funds. In FY24, MMT held roughly $40 million in grant match reserves, $8 million of which was for a downtown transit center, and another nearly $20 million was the total of FY22 and FY23 funds.

Expenses

- Expenses include those for operations, capital/fleet replacement, and other capital (projects) expenses. Planned operating expenses for 2024 were provided by MMT.
- An inflation rate of 3% is assumed for all the operating expenses that include fixed-route, ADA paratransit, specialized transportation, Metro Rides, and administrative.
- The fleet replacement expenses are based on vehicle replacement costs and the useful life of the fleet per MMT's input. These costs have been summarized by four

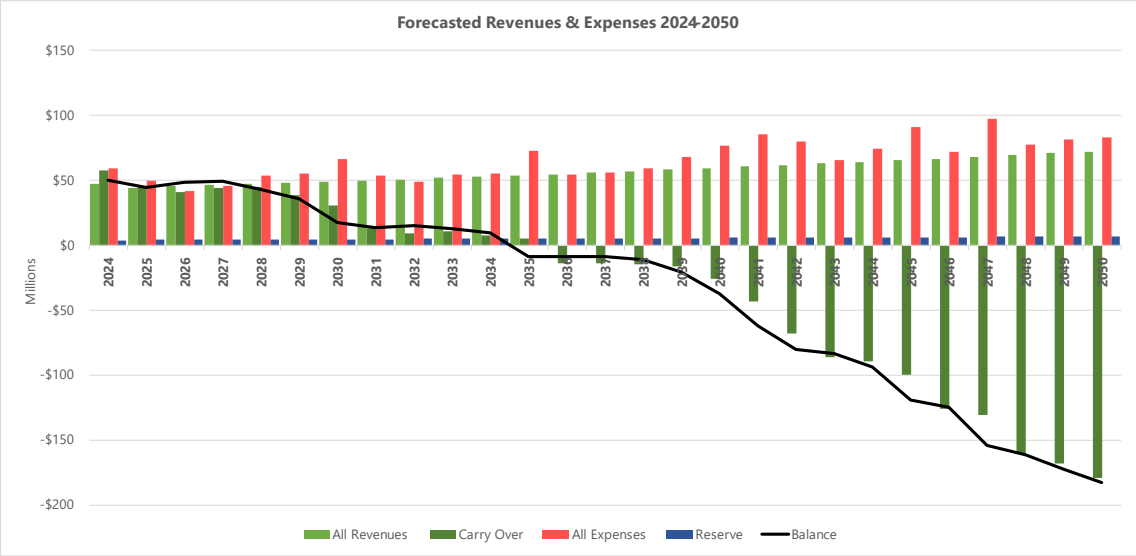
vehicle categories: fixed-route transit, paratransit, Metro Rides (vanpool), and non-revenue vehicles (which for now is unused since these vehicle types tend to be recycled fleet vehicles and/or marginal costs to MMT). Costs were also parsed by vehicle length. For 40' and 35' fixed route buses, the useful life is assumed to be 12 years and regular replacement is assumed through 2050. The same is assumed to be 10 years and 8 years for 29' fixed route buses and paratransit and Metro Rides (vanpool), respectively.

- Capital expenses account for nine different types of project-based outlays that are funded in the operating budget. These expenses have been provided by MMT for 2025-2029 and are totaled by year. No 'other capital' expenses are accounted for after 2029 per MMT's indication. 2050 RTP capital expenses that are currently not accounted for by MMT were added to understand fiscal implications of full implementation.

Baseline Scenario

A preliminary comparison of the forecasted revenues and expenses for the baseline scenario is presented in Figure 64. MMT's typical annual operating expenses and revenues are closely aligned in most years of the forecast. Due to the presence of substantial carryover from MMT's PPRTA allocation and the previously mentioned unspent 5307 grant funds, MMT experiences a surplus of available funding at the beginning of the financial forecast period that could accommodate piloting several short-term RTP expansion projects during the early years of the plan. However, that budget surplus is forecast to significantly decrease with expected maintenance and fleet replacement costs out to the 2050 horizon year. The baseline financial model does not account for one-time, discretionary grants that are available to fund these types of capital investments (like FTA 5339(b) competitive bus and bus facility grants), so the likely financial impact of these expenses may not result in the substantial funding deficits presented in this graph. However, this baseline scenario makes clear that to fully implement the 2050 vision, MMT would require additional financial assistance.

Figure 65. Forecasted Revenues and Expenses for Baseline Scenario (2024-2050)



Limitations of Financial Scenarios

The financial model's output and summaries are only as accurate as the data and assumption inputs into the model. The model and associated outputs are the project team's best attempt at capturing the agency's revenues and expenses and were part of an iterative process vetted by MMT. The model's reliability to predict cashflow into the future with a reasonable degree of certainty assumes a stable regional economy and funding streams consistent with model assumptions.

6 TRANSIT TRENDS AND TECHNOLOGY

OVERVIEW

With advancements in technology, public transportation is at the brink of a transformative era. We have more data than ever to help our customers. Cutting-edge technologies have made it easier to serve both urban and low-density rural areas. These advancements hold the potential to increase transit ridership. This tech memo presents an overview of different transit technologies, their benefits, and associated challenges that can potentially impact the long-term future of MMT and human service providers. Transit technologies that are briefly discussed include:

- On-Demand Transit
- Micromobility
- Zero-Emission Buses (ZEBs)
- Real-Time Transit Information
- Contactless Fare Payment
- Autonomous/Driverless Vehicles

On-Demand Transit

On-demand transit (also referred to as 'microtransit') is an approach to provide public transportation service that is more flexible, and responsive to the travel needs of the riders in comparison to traditional fixed-route services. On-demand transit can aid agencies in enhancing public transit service without significant infrastructure investments. On-demand transit uses technology to match the real-time travel needs of riders with vehicles that operate on routes that are flexible. This type of service is usually provided via smaller vehicles such as shuttles or vans.

Usually, users make their service request via mobile application or by calling customer service. The most common service design includes a defined zone where customers can be taken from any origin to any destination within the zone. Curb-to-curb service is common, although more systems are defining stops where pickups and drop-offs are possible.

On-demand service can supplement existing human service transportation options. It is often popular with those with less mobility because the response times are faster, and one does not need to reserve a ride more than 24 hours in advance. However, on-demand service does not

include door-to-door service, so potential passengers must meet the vehicles. Therefore, it is not a replacement for all trips operated by human service transportation providers.

There are different operational models of on-demand transit:

- **Software as a Service:** In this model, a vendor provides the software used by the agency to operate the on-demand service. The remaining facets of operations are taken care of by the local agency.
- **Transportation as a Service:** In this model, the vendor procures vehicles and drivers in addition to the technology.
- **User-side subsidy:** User-side subsidy aids users in making a trip through private transportation service providers like Uber or Lyft by providing a subsidy from the local agency that has partnered with the private transportation service providers. The subsidy covers the trip cost partly or completely based on the decided terms of the partnership agreement.

Some of the benefits of on-demand service include:

- **Dynamic:** On-demand service is responsive to the users' needs in real-time.
- **Mobility in low-density areas or during times when demand is low**: On-demand service is particularly helpful in expanding the coverage of transit in low-density areas where a fixed-route service is not feasible or during times when demand is low.
- **Mobility in areas where big buses cannot go**: On-demand service uses smaller vehicles which can access neighborhoods and destinations that may not be suitable for big buses.

Some of the drawbacks of on-demand transit include:

- **On-demand service is usually less cost-effective than fixed-route service.** The cost per passenger is almost always higher.
- **On-demand service does not scale well.** If demand increases, costs typically scale up in direct proportion to the additional demand.
- **Not all users can easily access on-demand services.** Access to on-demand service is facilitated by smartphones and on-line payment mechanisms. Those without access to smartphones or those who are unbanked must be offered a workaround.

The drawbacks must be balanced against the ability to access areas where bigger buses cannot go. On-demand service can be a way for agencies to improve temporal and geographic coverage.

Micromobility

FHWA defines micromobility[3] as "any small, low-speed, human- or electric-powered transportation device, including bicycles, scooters, electric-assist bicycles, electric scooters (e-scooters), and other small, lightweight, wheeled conveyances". Micromobility serves as an alternative travel mode for short-distance trips. There is an increasing trend in the usage of micromobility devices in the United States with 136 million trips being taken on shared bikes and scooters in 2019,[4] a 60% increase from 2018. With the increasing consumption of micromobility, U.S. cities continue to formalize shared micromobility systems for the best outcomes. As of December 2019, 21 of the 50 biggest cities in the U.S. issued requests for proposals or other similar application methods to determine the number of micromobility vendors that could operate within the city limits[4].

Micromobility may be useful for making first-mile/last-mile connections to transit that improve transit accessibility. In particular, micromobility can provide access to hard-to-reach neighborhoods where bigger buses may not be able to enter or provide a faster way to access a bus stop.

However, few cities have effectively integrated micromobility with their transit systems, particularly from a fare perspective. In addition, several cities such as Atlanta and Indianapolis have found that micromobility competes with and reduces transit ridership. In downtown Colorado Springs and in Manitou Springs, additional micromobility options would likely compete with MMT for short trips. In addition, access to micromobility is facilitated by smartphones and on-line payment mechanisms. Those without access to smartphones or those who are unbanked must be offered a workaround. Micromobility typically does not improve access to those with mobility challenges.

Zero-Emission Buses (ZEBs)

The ZEB market, which includes battery electric buses and hydrogen fuel buses, has seen significant growth recently in the United States. Transit agencies have procured over 1,000 ZEBs nationwide[5]. ZEBs implementation has been driven by the desire to have less polluting, more efficient buses. Some anticipated benefits include:

- **Reduction in greenhouse gas emissions:** ZEBs are a cleaner alternative to traditional diesel buses producing no harmful emissions while operating. Each ZEB is

[3] https://highways.dot.gov/public-roads/spring-2021/02

[4] https://nacto.org/shared-micromobility-2019/

[5] Horadam, N., & Posner, A. (2021). A zero-emission transition for the US transit fleet.

estimated to reduce carbon emissions by 270,000 pounds per year as compared to diesel and compressed natural gas (CNG) buses[6].

- **Lower fuel cost:** Electricity and hydrogen are more economical substitutes to diesel, as a result ZEBs cost hundreds of thousands of dollars per year less to fuel as compared to diesel/CNG buses[6].
- **Reduced maintenance cost**: Engines, transmissions, and exhaust systems need lesser maintenance than diesel buses.
- **Noise reductions:** ZEBs operate more quietly than diesel buses and contribute to a better experience for other users sharing the road space.

However, ZEBs also have multiple drawbacks.

- **Higher up front capital costs**: ZEBs cost significantly more than diesel buses.
- **Maintenance facility costs**: ZEBs require modifications to maintenance facilities, some of which may require wholesale changes to the maintenance space due to charging or ventilation requirements.
- **Training costs for mechanics:** Mechanics must be retrained to work on an entirely new propulsion system.
- **Charging stations and infrastructure for Battery Electric Buses (BEBs):** Most BEBs do not have the same range as diesel buses, requiring on-street charging at select locations. In addition, electric utility companies may not have sufficient infrastructure to charge large fleets of BEBs, which requires expensive upgrades.

As of 2024, the transit agency implementation costs have so far outweighed any savings from adopting ZEBs. The first generation ZEBs have not met their advertised range, are unreliable, and require higher operating and operator costs.

MMT and human service providers should carefully evaluate the experiences of their peer agencies before adopting a preferred ZEB technology due to the potential for unanticipated costs.

Real-Time Information

The integration of real-time information with public transit operations is a pivotal advancement in the transit sector. Global Positioning Systems (GPS), mobile applications, and data analytics are the technological foundations of real-time transit information. GPS enabled devices provide the real-time location of the transit vehicle, mobile applications serve as the interface

[6] https://www.transportation.gov/sites/dot.gov/files/images/Zero%20Emission%20Buses.pdf

for delivering real-time information to the users and data analytics help generate insights from the real-time data.

There are two components of real-time information: Automatic Vehicle Location (AVL) and real-time passenger information. From an agency perspective, AVL features are important for incident management and dispatching. Real-time information is useful to both transit agencies and riders in several ways:

- Transit agencies and human service transportation providers can optimize operations by monitoring vehicle locations and traffic conditions and subsequently modify schedules and resource allocation.
- Fixed-route, paratransit, and human service transportation riders can obtain accurate data about the location of transit vehicles enabling them to make informed travel decisions. This convenience reduces travel time and enhances the overall travel experience, which in turn increases ridership and revenue.
- Trips involving multimodal options can be planned more effectively well in advance.
- Service updates during emergencies and unexpected events like crashes and detours can help ensure passengers' safety and security.

MMT currently uses the My Next Bus app/website to provide real-time information to passengers. Human service transportation providers do not currently have this feature.

Contactless Fare Payment

Contactless fare payment refers to paying for a transit service with the help of a contactless technology that uses Radio Frequency Identification (RFID) or Near-field Communication (NFC) technology. With the help of RFID or NFC, payment information is transferred from a card to the payment terminal. With the innovations in smartphones and debit/credit card technologies, more and more transit agencies are switching to open-loop contactless payment systems. For instance, Metropolitan Transit Authority (New York City) accepts RFID-enabled debit/credit cards to pay for all transit services.

There are several benefits associated with the usage of contactless fare payments:

- **Convenience**: Elimination of cash transactions reduces the time passengers spend purchasing tickets and boarding transit vehicles.
- **Cost efficiency**: Transit operators don't have to manually sell tickets and handle cash.
- **Safety**: Minimizes physical contact which is particularly helpful in the context of public health considerations, as demonstrated with the recent COVID-19 pandemic.
- **Security**: The robust security features of smart cards minimize the risk of fraud.

- **Data generation**: Data on riders' travel patterns can aid agencies in planning and delivering services more efficiently.

There are several drawbacks, primarily related to costs.

- **Costs**: For agency-provided contactless fare cards, there is an upfront cost for the cards, vending machines, and ongoing agreements with the ticket machine vendors. For contactless smartphones and debit/credit cards, there may be a fee from banks for each transaction, which reduces fare revenue. Overall, the benefits of faster boarding and less confusion about fares typically offset any decreases in revenues.
- **Not all users have smartphones, RFID cards, or banks**. Contactless fare payment is facilitated by smartphones and online payment mechanisms. Those without access to smartphones or those who are unbanked must be offered a workaround. Moreover, very low-income riders are unlikely to have the ability to pre-load cards with funding.

Autonomous/Driverless Vehicles

Transit agencies have begun testing autonomous/driverless technology. Autonomous Vehicles (AVs) navigate with the help of advanced sensors and artificial intelligence with no human intervention. There are a handful of initiatives and pilot programs running in different U.S. cities. For instance, an on-demand transit service was launched by May Mobility in Sun City, Arizona. The service was intended to serve the aging population to enhance their mobility and accessibility[7]. Cobb County, Georgia is another example that launched a driverless shuttle called "Cumberland Hopper" to serve a three-mile path around the core of the Cumberland District[8] and connect people to jobs and Cumberland's major assets The integration of autonomous technology with public transportation could deliver the following benefits:

- **Enhanced safety:** Human error is a major cause of crashes, and is a factor reduced by autonomous vehicles equipped with advanced sensors and artificial intelligence technology.
- **Cost savings:** In the longer term, autonomous fleets can help reduce the cost of operation by eliminating the need for human drivers and improved fuel efficiency.
- **Improved mobility and accessibility:** On-demand autonomous services can help expand the coverage of the public transportation network by serving the diverse needs of the local community.

[7] https://roboticsandautomationnews.com/2024/01/16/may-mobility-launches-first-driverless-transit-service-in-arizona/76627/

[8] https://cumberlandsweep.org/

- **Data-driven solution:** Vast amounts of data can be generated through the technology incorporated in autonomous vehicles which can be used for continuous improvements in transit service operation.

Autonomous bus technology is not advanced enough for full-scale adoption at this time. There are a number of elements needed to facilitate widespread adoption that are not quite fully developed, including a regulatory framework, infrastructure requirements, safety concerns, and public acceptance. As technology advances, autonomous vehicles may be an option for improved transit.

CHALLENGES

Emerging transit technologies present opportunities to re-shape utilization of public transportation to serve the day-to-day travel needs of the users. Despite significant benefits, adoption of these technologies may not be an easy task because of the following associated challenges:

- **Infrastructure requirements:** Significant capital investment is needed to establish the supporting infrastructure.
- **Regulatory and legal issues:** The regulatory landscape regarding emerging transit technologies is still in its infancy. Further, the lack of a regulatory framework that is universally applicable adds to the barriers for the seamless implementation of these technologies.
- **Public acceptance:** Gaining public acceptance is critical for implementation of any new technology, especially when there are concerns about cost, safety, security, privacy, and job displacement. Public skepticism, including privacy concerns, can limit the penetration of transit technologies.
- **Equity issues:** Emerging transit technology relies heavily on digital platforms for booking, navigation, and payment. Low-income communities with limited access to (or trust in) smartphones, reliable internet service, and banking may face challenges in using the services.
- **Accountability of contractors:** Before contracting any services, agencies need to ensure the accountability of the contractors in regard to safety standards, licensing and insurance and make sure that they comply with local, state or federal regulations.

PRIORITIES

It is important to note that some of the emerging transit technologies have greater applicability to improve mobility in the Colorado Springs area than others. While all have applications, several are more relevant from an implementation and planning perspective. Table 26 presents

transit technologies and their priority (relevance) in context of the 2050 RTP for the City of Colorado Springs.

Table 26.Transit Technology and Priorities

Emerging Technology	Priority	Rationale
On-Demand	Short-Term	On-demand can help the region expand geographic coverage to build a market for fixed-route transit. On-demand service can also be operated later at night instead of extending span of service on fixed-route transit. Both are cost-effective ways to improve geographic and temporal coverage.
Micromobility	Long-Term	Bicycles and scooters are effective mobility tools for short trips, particularly in denser areas. These short trips could also be taken on transit, however. The market opportunity for MMT is to utilize bicycles and scooters to address first/last mile issues and to extend the reach of existing transit investments. To maximize this opportunity, infrastructure is necessary at stops (mobility hubs, secure parking space) and fare payments between transit and micromobility must be coordinated.
ZEBs	Mid-Term	Due to federal guidelines, transitioning to ZEBs is a priority. Given the upfront capital expenses of potential alternatives, the region should let experiences at other agencies regarding the chosen propulsion technology drive the choice.
Real-Time Information	Short-Term	Better information on the location of transit vehicles helps transit providers, human service transportation providers, and all customers.
Contactless Fare Payment	Short-Term	Adding the option of using RFID enabled credit/debit cards and smartphones to pay fares makes it easier for existing and potential customers to use transit.

Emerging Technology	Priority	Rationale
AVs	Long-Term	AVs have the ability to enhance mobility. However, current state of the art is not sufficiently developed for implementation. As technology develops further, AVs should be considered.

7 IMPLEMENTATION PLAN

The 2050 RTP outlined in Chapter 4 includes several planned improvements addressing the current and future transit needs of the Colorado Springs region. It builds on previous planning work, responds to public priorities, and supports continued growth with a more robust, usable, and effective transit system.

Implementing the full vision would achieve many of the goals of MMT and its stakeholders:

- **Make transit a more competitive travel option**, especially along the seven identified enhanced transit corridors
- **Tailor new service options to demand** by introducing innovative mobility zones that can build up transit demand in unproven or growing markets
- Improve the transit service for existing riders by **increasing frequency and extending service span on all local routes**
- **Increase access to jobs and services** by combining some existing routes into new crosstown routes
- **Serve areas of high existing and expected growth** with new local and express transit routes
- **Sustainably support service expansion with capital investments** in new buses, transit centers, a new maintenance facility, and establishing programs within MMT to partner with municipalities to improve the accessibility, comfort, and competitiveness of riding transit in the Pikes Peak region

Example: Transit Making a Difference

Oklahoma City is a growing, economically diverse metro of over 600 square miles. Over the past 15 years, Oklahoma City has had multiple planning processes that helped develop a vision for a robust regional transit system. When discussions about improving transit began, the system was almost exclusively for those who had limited mobility choices. It has since grown to include service seven days a week, with improved frequency. Oklahoma City implemented a streetcar downtown circulator as well as its first Bus Rapid Transit route. Both investments are crucial to attracting transit users in a region where transit has not historically been strong. The BRT project, which was implemented in late 2023, has attracted 1,200 new daily riders, most of whom did not use transit before. Two additional corridors are being planned, as well as regional service, and improved local service. **Colorado Springs has the opportunity to follow Oklahoma City's path, where a vision for improved service is incrementally funded and implemented.**

Implementing this ambitious vision won't happen all at once. This chapter outlines a potential phasing approach to implementing the short-, mid- and long-term implementation schedule of those planned improvements. The horizon years for the short-, mid- and long-term implementation schedule are 2030, 2040, and 2050, respectively.

This implementation schedule is primarily based on the project prioritization outcomes discussed in Chapter 4. The team also considered other factors such as availability of financial resources and interrelation of projects (such as implementing a transit center before implementing the routes serving it) and ongoing projects that are proposed for implementation in the short-, mid- and long-term, respectively.

Almost all investments in the Implementation Plan beyond the short-term recommendations require additional financial resources to implement. Leveraging local, state, and federal funding sources will be necessary to implement these investments. Costs shown in this section are all represented in 2024 dollars. Assumptions for costs are included in Appendix B.

SHORT-TERM (2024-2030)

Even without an infusion of new funding beyond the additional support from new statewide transit funding, there are several projects that MMT and its partners can advance to achieve many of the goals of the transit plan over the next 5-6 years. Table 27 outlines the list of projects while Figure 65 shows those projects mapped with the existing system. The following text beginning on page 7-138 describes these projects in more detail.

Table 27. Short-Term (2024-2030) Projects

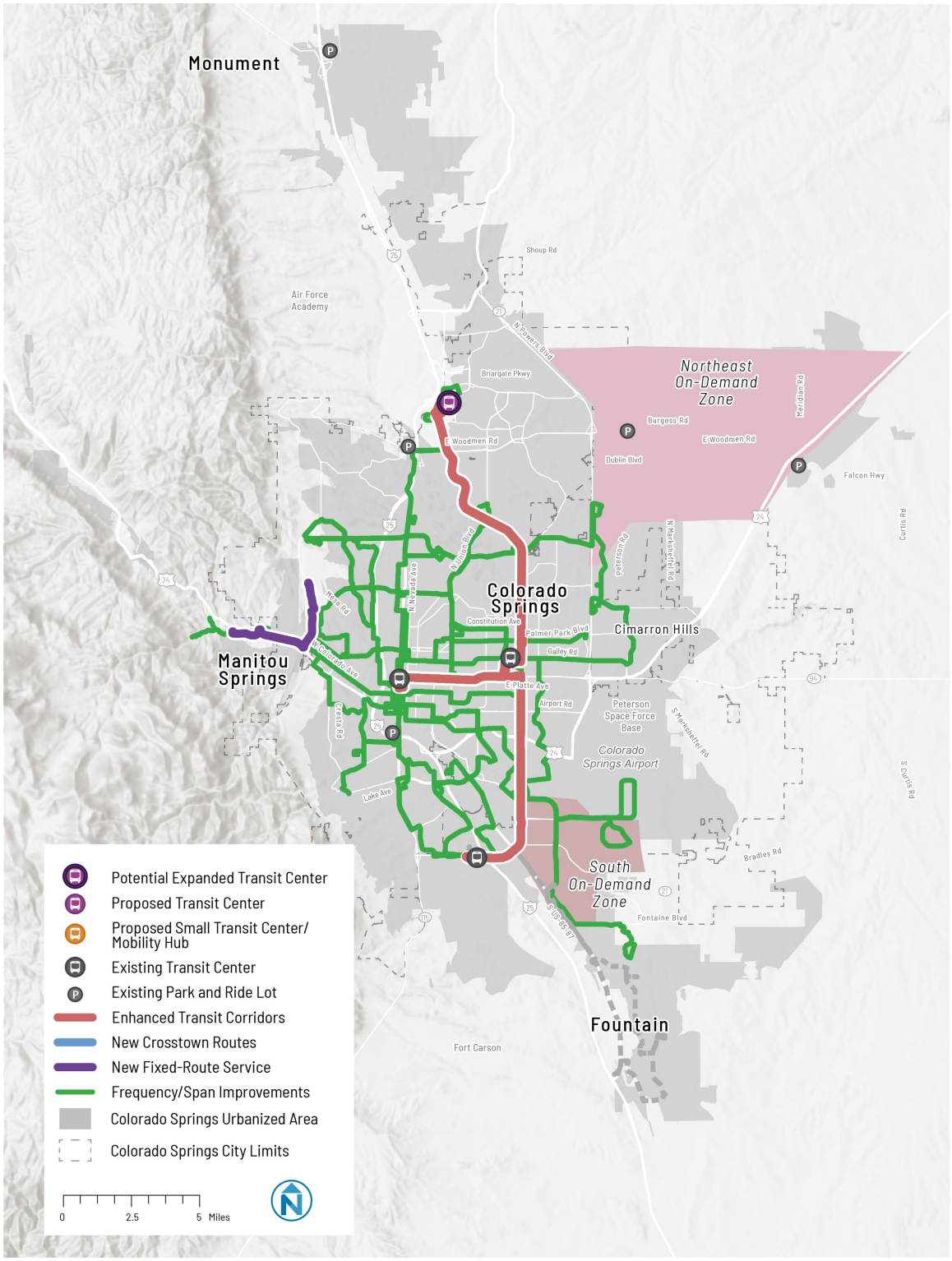
Investment Theme	Projects	Capital Cost ($M)	Annual Operating Cost ($M)
Enhanced Transit Corridors	Academy Blvd	$255.0	$3.8
Enhanced Transit Corridors	Platte Ave	$57.0	$0.2
New Fixed-Routes	Manitou/Garden of the Gods Shuttle	$4.6	$0.2
Innovative Mobility Zones	Northeast	$0.4	$1.5
Innovative Mobility Zones	South	$0.2	$1.0
Extend Service Span	Span Improvements (Short-Term)	-	$1.0
Improve Capital Infrastructure	Voyager Transit Center (Expansion)	$2.0	-
Improve Capital Infrastructure	Bus Stop Amenities & Accessibility Upgrades (Short-Term)	$5.0	-
Improve Capital Infrastructure	Bus Speed & Reliability Improvements (Short-Term)	$5.0	-
N/A	Additional Complementary ADA Paratransit	-	$0.2
TOTAL	**All Projects**	**$330**	**$7.9**

Increasing Sunday Service – A Case Study

In 2022, Spokane Transit (an agency similar in size and scope to MMT) increased the span of service by 3-4 hours on Sunday evenings on their highest ridership routes. Later evening service responded to calls from the community to be able to return home from job opportunities. On the three improved routes, the agency increased operating hours by 12-28%, and saw a ridership increase of 39-52% as a result. In Spokane, the additional evening service increased ridership throughout the day as well as during the time of increased service.

The early ending time of MMT's Sunday service suggests that a similar improvement in Colorado Springs will also significantly increase Sunday ridership.

Figure 66. Short-Term Projects (2024-2030)



ETCs

Two ETCs are prime candidates to advance in the short-term given both the need and the level of advanced planning work either completed or underway. MMT has begun the process for defining an Enhanced Transit project along Academy Boulevard, and this is likely to be the first ETC to advance from the long-term vision. As the highest ridership corridor in the MMT network, this project has the potential to set the tone for future ETC implementation and establish a replicable process for advancing projects to implementation (regardless of the eventual funding source).

The City of Colorado Springs has recently completed the Platte Avenue Corridor Study which identified several possible improvements to Route 5 in the Platte Avenue corridor but stops short of recommending a specific transit project scope. This plan can serve as a baseline for MMT and its partners to better define the Platte ETC project during the short-term horizon, even if implementation of the project lags into the mid-term horizon.

Innovative Mobility Zones

Although MMT should conduct a more detailed prioritization effort before launching its first Innovative Mobility Zone, the project team considers two zones to be promising candidates for an initial launch. The Northeast Mobility Zone would capture a large swath of Colorado Springs that has recently experienced – and continues to experience – rapid growth but lacks access to fixed-route transit. This zone would provide important data to MMT about the depth of the transit market in this part of the community before implementing new fixed-routes in the future. The South Mobility Zone would serve an area experiencing rapid growth in industrial jobs and provide another test case for exploring how to serve jobs that are harder to serve with traditional fixed-route transit.

Improved Span/Frequency

One of the most promising short-term projects is the expansion of the span of service on existing routes, particularly on Sunday evening. MMT could extend service with minimal impact on revenue vehicle requirements or number of operators.

Improved Capital Infrastructure

Finally, the project team recommends advancing upgrades to the existing Voyager Transit Center in the short term. These upgrades could be included in the Academy Blvd ETC project pending the outcome of that study and would better support implementation of the I-25/Voyager Express service. In addition to this facility project, the short-term implementation period includes a recommendation to launch both a bus stop accessibility/amenity program

as well as a bus speed and reliability program. While the initial investments in this period may be limited, establishing a process by which MMT and its partners can systematically improve the passenger experience will provide an important foundation to build on at-scale in future phases of the plan.

MEDIUM-TERM (2031-2040)

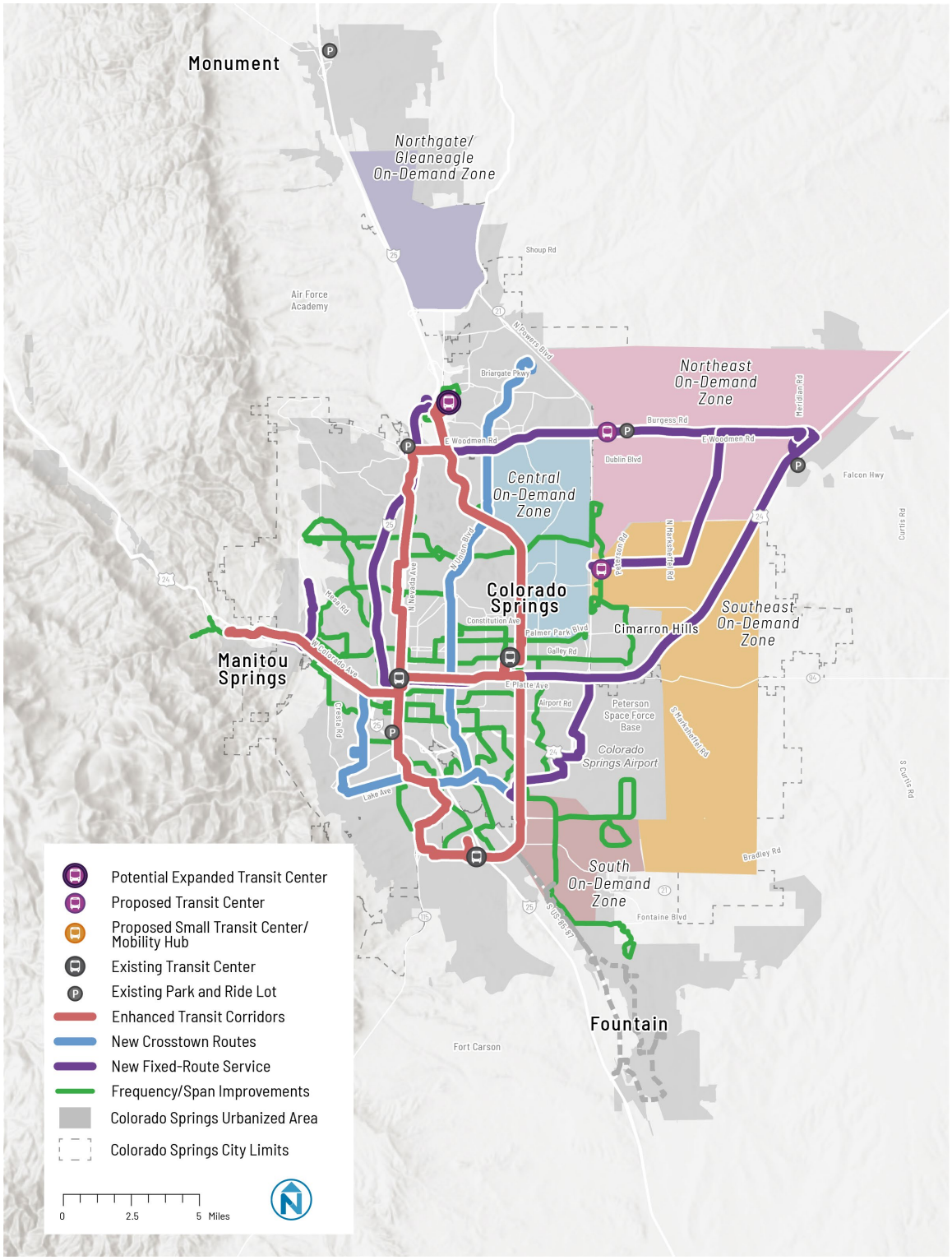
The 2030-2040 horizon year includes the majority of the projects identified in the 2050 RTP given expected growth and existing gaps. Implementing projects in this phase and the long-term phase would likely require additional funding sources to be identified as these represent substantial costs in terms of both ongoing operating dollars and one-time capital investments. Table 28 and Figure 66 display the list of medium-term projects and map the projects (along with the short-term recommendations), respectively.

Table 28. Medium-Term (2031-2040) Projects

Investment Theme	Projects	Capital Cost ($M)	Annual Operating Cost ($M)
Enhanced Transit Corridors	North Nevada	$150.0	$1.7
Enhanced Transit Corridors	South Nevada	$123.0	$1.7
Enhanced Transit Corridors	Colorado Ave	$89.0	$1.4
New Crosstown Routes	Union Blvd	$11.5	$2.4
New Crosstown Routes	Lake	$9.5	$1.8
New Fixed-Routes	Citadel to Astrozon	$5.4	$1.9
New Fixed-Routes	Woodmen	$8.7	$2.7
New Fixed-Routes	Banning Lewis Ranch (North)	$6.9	$2.3
New Fixed-Routes	I-25/Voyager Express Service	$6.0	$3.0
New Fixed-Routes	U.S. 24/Falcon Express Service	$7.2	$3.8
Innovative Mobility Zones	Central	$0.5	$1.8
Innovative Mobility Zones	Southeast	$0.4	$1.4
Innovative Mobility Zones	Northgate/Gleneagle	$0.2	$1.0
Improve Existing Route Frequency	Route Frequency Improvements (Short-Term)	$8.4	$2.6
Extend Service Span	Span Improvements (Medium-Term)	-	$2.7
Improve Capital Infrastructure	Woodmen/Powers Transit Center (New)	$7.5	-
Improve Capital Infrastructure	Carefree Transit Center (New)	$7.5	-
Improve Capital Infrastructure	Bus Stop Amenities & Accessibility Upgrades (Medium-Term)	$10.0	-
Improve Capital Infrastructure	Bus Speed & Reliability Improvements (Medium-Term)	$10.0	-
Improve Capital Infrastructure	New Maintenance Facility	$45.0	-
N/A	Additional Complementary ADA Paratransit	-	$3.1
TOTAL	**All Projects**	**$507**	**$40.0***

**Including ongoing short-term operating costs*

Figure 67. Short- and Medium-Term Projects (2024-2040)



ETCs

The project team recommends advancing three additional ETC projects after the Academy Blvd and Platte Ave corridors: North and South Nevada, and Colorado Avenue. Although the City of Colorado Springs has already studied the North Nevada corridor, the recommendations from that effort should be revisited closer to implementation to update corridor conditions and engage stakeholders in a planning process that results in a viable project. Pairing the North Nevada corridor with the South Nevada corridor could unlock additional opportunities for outside grant funding by generating higher ridership and serving parts of the community that are more transit-dependent. The Colorado Avenue corridor is already served by one of MMT's busiest routes – Route 3 – and would complete the east-west ETC spine (along with the Platte ETC) through central Colorado Springs.

Crosstown Routes

This phase includes the introduction of two new crosstown routes. The Lake Corridor, which largely replaces the existing Route 4, provides new connections between important job centers near the Broadmoor and south/southeast Colorado Springs. The Union Blvd Crosstown Corridor combines existing routes 18 and 38 and introduces regular fixed-route service to a part of the region that is currently only served by deviated fixed-route service. This new north-south crosstown route would be anchored by the UC Health Memorial medical center in the north and the Astrozon/Hancock/Academy area to the south.

New Routes

The medium-term implementation phase includes the majority of new fixed-route service recommended in the 2050 RTP, although it is important to note that implementing such a large expansion in MMT's services would require identification of additional, reliable funding sources beyond the existing system's expected revenue. Most of the new routes in this phase would serve high-growth communities in North and Northeast Colorado Springs, including two new Express routes connecting Downtown Colorado Springs to the community of Falcon along US-24 and connecting Downtown Colorado Springs with Voyager Transit Center along I-25.

Innovative Mobility Zones

This phase recommends exploring implementation of innovative mobility zones in areas that are expected to continue to experience rapid growth but that may not be ready for regular fixed-route service, namely the Southeast Zone and the Northgate/Gleneagle Zone. While additional improvements to fixed-route service frequency and span are being phased in, this phase could also see implementation of an innovative mobility zone in Central Colorado

Springs to further enhance transit service availability. Depending on the performance of the Northeast Zone, implementation of new fixed-route service could justify shrinking the boundary of the zone to better align with gaps in fixed-route transit coverage – or elimination of the zone altogether.

Improved Span/Frequency

MMT should continue to expand service span as vehicle and operator availability allow during the medium term. If a new, reliable funding source is identified, this phase would also include an initial expansion in service frequency along routes beyond those identified as ETCs or Crosstown routes.

Improved Capital Infrastructure

Due to the large expansion of fixed-route service in this phase, the project team has identified several capital projects that would be needed to support the new service. New capital projects include:

- A new transit center at Woodmen/Powers (near St. Francis Hospital) to serve new local routes along Tutt Blvd and Woodmen Rd.
- A new transit center at Carefree Circle North to connect existing services to new local service along Tutt Blvd.
- Expansion of the Bus Stop Accessibility/Amenity and Bus Speed & Reliability programs launched during the short-term period
- A new Maintenance Facility to support the expanded bus fleet needed to serve routes launched during this phase and in accordance with expected ZEV needs as identified in the ZEV Plan

LONG-TERM (2041-2050)

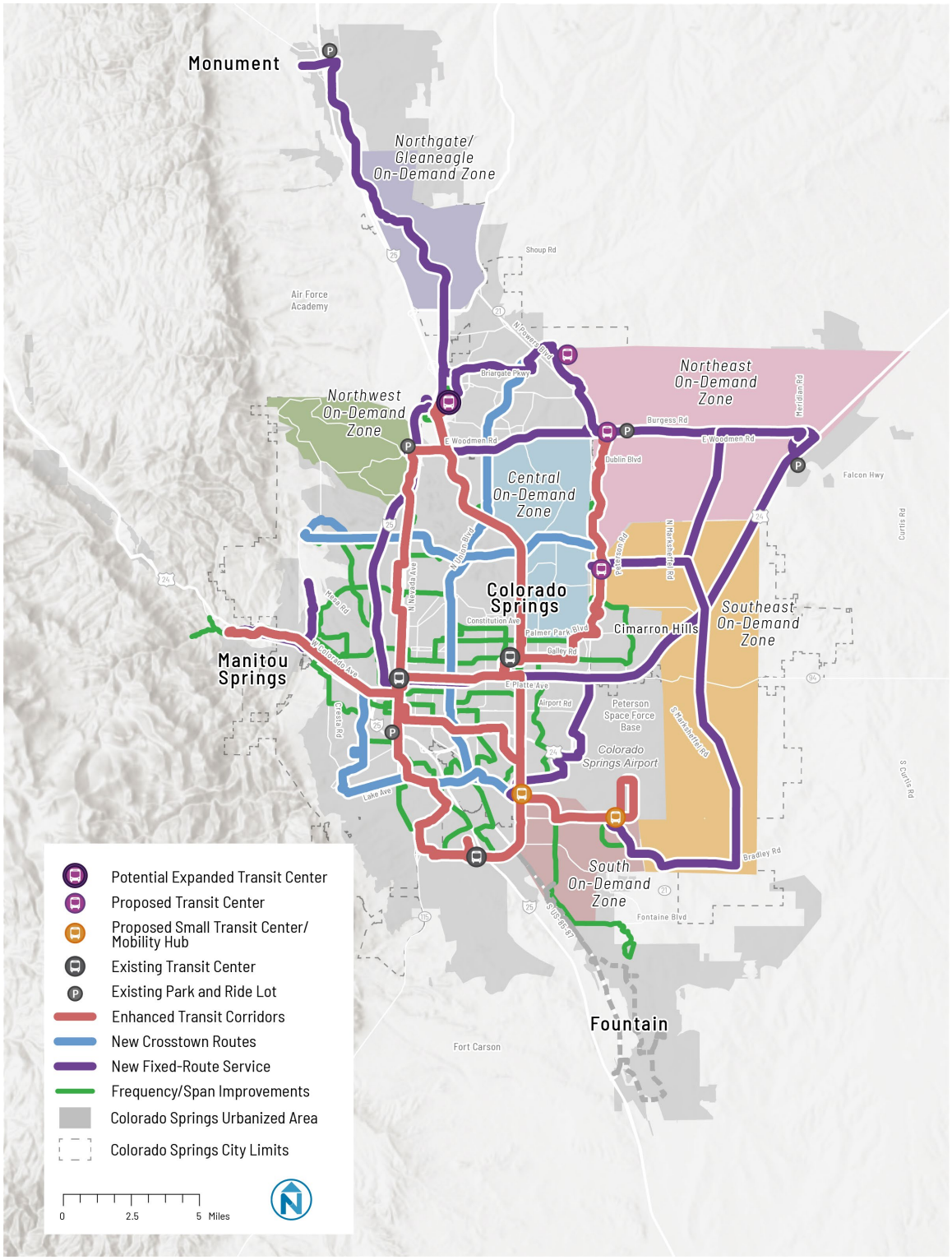
The long-term phase includes the remaining projects needed to fully implement the 2050 RTP. These projects largely serve areas where major growth is not expected to occur until much later in the planning horizon or not expected to occur at all but where existing transit gaps may remain. Table 29 and Figure 67 display the list of long-term projects and map the complete RTP at full implementation in 2050, respectively.

Table 29. Long-Term (2041-2050) Projects

Investment Theme	Projects	Capital Cost ($M)	Annual Operating Cost ($M)
Enhanced Transit Corridors	Airport	$180.0	$4.0
Enhanced Transit Corridors	Tutt Blvd	$147.0	$3.3
New Crosstown Routes	Garden of the Gods/Austin Bluffs	$8.1	$0.9
New Fixed-Routes	Tutt North/Briargate	$8.9	$2.9
New Fixed-Routes	Banning Lewis Ranch (South)	$12.6	$4.6
New Fixed-Routes	Voyager to Monument	$12.5	$5.2
Innovative Mobility Zones	Northwest	$0.2	$1.0
Improve Existing Route Frequency	Route Frequency Improvements (Medium-Term)	$9.6	$2.7
Improve Existing Service Span	Route Span Improvements (Long-Term)	-	$3.1
Improve Capital Infrastructure	Briargate Transit Center (New)	$7.5	-
Improve Capital Infrastructure	Innovation Parkway Mobility Hub (New)	$3.8	-
Improve Capital Infrastructure	Astrozon Mobility Hub (New)	$3.8	-
Improve Capital Infrastructure	Bus Stop Amenities & Accessibility Upgrades (Long-Term)	$10	-
Improve Capital Infrastructure	Bus Speed & Reliability Improvements (Long-Term)	$10	-
N/A	Additional Complementary ADA Paratransit	-	$1.1
TOTAL	**All Projects**	**$413**	**$67.7***

**Including ongoing short- and medium-term operating costs*

Figure 68. Short-, Medium-, and Long-Term Projects (2024-2050)



ETCs

The project team recommends implementing the remaining two ETC projects during this phase. The Airport ETC project would connect Downtown Colorado Springs with the Colorado Springs Airport. Improvements to existing Route 37 frequency and span and implementation of the South innovative mobility zone will likely address improved transit service in this part of the community until the ETC project is implemented. The Tutt Blvd ETC represents an upgrade of some existing routes and part of the new Briargate/Tutt local route identified in this implementation phase, and so implementation itself could be phased to introduce the new local service before upgrading part of the route to a new ETC. This corridor is experiencing rapid growth today but could benefit from additional time to build ridership and make other connectivity and land use improvements that would support a competitive ETC project.

Crosstown Corridors

The final crosstown project is the Garden of the Gods/Austin Bluffs Pkwy corridor. This project would largely replace two existing local routes that would receive frequency/span improvements in the short- and medium-term phases of the plan and depending on a detailed analysis of impacts to vehicle and operator needs could be accelerated through the first phase of systemwide frequency upgrades.

New Routes

The project team recommends implementing the Banning Lewis Ranch South new route during the long-term given the expected longer buildout horizon of Banning Lewis Ranch toward US-24 and further south (the Southeast Zone would serve this area in the interim). Also given long term growth trends, the team recommends introducing local service between Monument and Voyager Transit Center during the long-term planning horizon. The team also recommends implementing a Garden of the Gods to Manitou Springs circulator in the long-term after a more thorough study of the benefits and infrastructure that would be needed to operate such a service. Given the focus on serving tourists visiting Manitou Springs and Garden of the Gods Park, this project may also be eligible to advance on a different timeline with unique funding sources that may not be available for other routes in the proposal.

Innovative Mobility Zones

The final Innovative Mobility Zone – the Northwest Zone – would be implemented in the long-term horizon. Depending on performance of the other zones in conjunction with implementation of new fixed-route service, the remaining zones may be phased out during

the long-term horizon or have their boundaries adjusted to tailor resources to areas with the highest need.

Improved Span/Frequency

With implementation of the full RTP, all routes would be upgraded to at least 30-minute weekday frequency and would operate earlier in the morning and later in the evening than routes that are currently scheduled on both weekdays and weekends.

Improved Capital Infrastructure

While less pronounced than the medium-term phase, additional capital projects are likely needed to support the remaining projects identified in the long-term horizon. Those include:

- A new transit center near Briargate and Powers Blvd to better support network functionality in north/northeast Colorado Springs.
- A new Mobility Hub at Astrozon (near Academy Blvd & Hancock Expwy) to connect existing services.
- A new Mobility Hub at Innovation Parkway to connect the new Airport ETC to the new Banning Lewis Ranch South route.
- Continuation of the Bus Stop Accessibility/Amenity and Bus Speed & Reliability programs, with the goal to have 100% of bus stops be ADA compliant and to address remaining delay points on local routes that do not receive investment as part of an ETC project.

CITY OF COLORADO SPRINGS AND MOUNTAIN METRO TRANSIT

2050 REGIONAL TRANSIT PLAN, SPECIALIZED PLAN, AND ZEV TRANSITION PLAN

PUBLIC INVOLVEMENT REPORT



Prepared by:

KEARNS WEST

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Project Purpose & Overview

The 2050 Regional Transit Plan, led by Mountain Metropolitan Transit (MMT), identifies potential improvements to the transit system that respond to the current needs and expected growth between now and 2050. The goals of the plan include:

- Make transit competitive with other ways to travel throughout the region.
- Provide access to jobs, schools, medical facilities, social events, and community activities.
- Maintain or improve services for the people who need them most.
- Deploy technology to improve both agency operations and the customer experience.
- Promote environmental stewardship.

The 2050 Specialized Transportation Plan, led in partnership between MMT and Pikes Peak Area Council of Governments (PPACG), is necessary to receive federal funding for transportation programs tailored to older adults, people with disabilities, and people with lower incomes. The plan assesses the conditions and potential improvements for transit and paratransit, along with specialized transit and human services providers.

The project's goals and objectives informed the following public involvement goals:

- Inform, educate, and raise awareness about the 2050 Regional Transit Plan and Specialized Transportation Plan, and how these plans support the larger regional planning efforts, including the 2050 LRTP.
- Provide accurate and timely information to stakeholders on the planning process and solicit their feedback at appropriate technical milestones.
- Consult with stakeholders prior to decisions to create buy-in for a well-planned regional transit system.
- Collaborate with stakeholders to understand their needs and perceptions around transit and address any barriers or challenges to using the current transit system.
- Facilitate inclusive engagement events, considering accessibility, mobility needs, and digital engagement (508 accessibility).
- Identify opportunities for partnership and alliances with regional organizations, community partners, and transit service providers.

The 2050 Regional Transit Plan and Specialized Transportation Plan are components within the larger regional Long Range Transportation Plan (LRTP). Each plan will be incorporated as a chapter within the final document. PPACG leads this effort in close coordination with MMT.

Key Audiences

Public involvement throughout the planning process engaged community members who live within the MMT operating area and larger Metropolitan Planning area of the Pikes Peak region. Engagement spanned both the 2050 Regional Transit and Specialized Transportation plans, while also targeting specific audiences of stakeholders, including current transit riders, human services transportation providers, and community and social services organizations.

Current Transit Riders

Existing ridership helped inform current uses of transit and the specialized system, and how riders' experiences can be improved. The information gathered from conversations and engagements with this population helped to inform recommendations that would address current and future community mobility needs.

Specialized and Human Services Transportation Providers

Specialized and human services transportation providers are an important audience due to their role in providing local transportation options. Providers were engaged as an operational group to understand their experiences and challenges with providing services to the necessary transit dependent populations. In addition, a feedback loop was created to provide feedback and conversations between riders and providers.

Community Based and Social Services Organizations

Community based and social services organizations were engaged to provide their feedback and to partner with MMT. Community leaders helped to share information with their constituents and promote upcoming engagement and feedback opportunities.

In addition to key audiences, the project team engaged the broader public, jurisdictions, businesses, military installations, and community organizations within the planning area.

Stakeholder Advisory Committees





Figure 1. Pictures from the in-person Stakeholder Advisory Committee meetings on Thursday, April 9, 2024.

Public Involvement Approach

Public involvement and engagement were built upon previous MMT planning efforts, as well as leveraging relationships from recent transportation planning efforts, such as ConnectCOS.

Multiple strategies were employed to share information about the project, and receive feedback from key audiences, stakeholders, and the public.

Stakeholder Interviews

To begin the public involvement process, stakeholders were interviewed in December 2023 and January 2024 to understand their familiarity with the current transit system and what they believe is going well or needs improvement. The feedback shared during these interviews informed the technical process including the existing conditions and gap analysis. **Table 1** summarizes the stakeholder interviewees and their affiliated organizations.

Table 1. Stakeholder Interviews

Name	Organization
Yolanda Avila	City of Colorado Springs City Council
Jessie Kimber	City of Colorado Springs Economic Development
Sharon Thompson	City of Fountain
Erin Maruzzella	Innovations in Aging
Jill Gaebler	Pikes Peak Housing Network Front Range Passenger Rail District Board Member
Jim Godfrey	Pikes Peak Rural Transit Authority Community Advisory Committee

Additionally, a memo summarizing the stakeholder interviews is included as **Appendix A.**

Focus Groups

To engage various community leaders and organizations in the planning area, the project team hosted the following four focus groups:

- January 17, 2024, - On-Demand Travel Focus Group
- February 7, 2024, - Education Focus Group
- February 7, 2024, - Health and Human Services Focus Group
- February 7, 2024, - Business, Development, and Residential Focus Group

The On-Demand Travel Focus Group was an in-person event hosted at The Independence Center. The three focus groups on February 7, 2024, were virtual meetings. **Table 2** summarizes the focus group participants, their organization, and which focus group they attended.

The goal of each focus group was to create a common understanding of the plans, to learn more about how the community utilizes transit, and to identify potential successes or improvements to inform plan recommendations and strategies. Feedback themes collected during each focus group informed the technical analysis including existing conditions and identifying gaps in the current system.

Additionally, a memo summarizing the stakeholder focus groups is included as **Appendix B**.

Table 2. Focus Group Participants

Name	Organization	Focus Group
Cathly Buckley	Colorado College	Education
Catherine Duarte	Colorado Springs Housing and Urban Development	Business, Development, and Residential
CJ McCampbell	District 11	Education
Isabel Robben	District 11	On-Demand Travel
Marla Luckey	El Paso County Public Health	Health and Human Services
Marsha Unruh	Homefront Military Network	Business, Development, and Residential
Buddy Castor	N/A	Paratransit and Specialized Transportation Rider
Jeannette Fortin	N/A	Paratransit and Specialized Transportation Rider
Loretta Houseman	N/A	Paratransit and Specialized Transportation Rider
Mary Kim McCarthy	N/A	Paratransit and Specialized Transportation Rider
Toby Cotter	N/A	Paratransit and Specialized Transportation Rider
Skyler Rorabaugh	Pikes Peak	Business, Development, and Residential
Kevin Coleman	Pikes Peak School District	Education
Aaron Simeraro	Silver Key	Health and Human Services
Edgar Morales	The Independence Center	Paratransit and Specialized Transportation Rider
Mary Rose Evans	The Independence Center	Paratransit and Specialized Transportation Rider
Paul Spotts	The Independence Center	Paratransit and Specialized Transportation Rider
Scott Land	The Independence Center	Paratransit and Specialized Transportation Rider
Jim Spice	University of Colorado – Colorado Springs	Education

Stakeholder Advisory Committee

Each plan had a dedicated Stakeholder Advisory Committee, which included a diverse representation of the boarder community. The project team engaged both stakeholder committees at key milestones throughout the project.

2050 Specialized Transportation Plan Stakeholder Advisory Committee

The 2050 Specialized Transportation Plan Stakeholder Advisory Committee also met twice throughout the plan development process. Stakeholders were identified and invited based on the plan's boundaries and goals to represent a cross-section of specialized transportation providers, riders, and social services providers. **Table 3** reflects the commitee roster. Additional stakeholders were invited to participate on the committee; however, the roster reflects active participants only.

The first committee meeting took place on Wednesday, February 21, 2024. The goal of the meeting was to create a common understanding of:

- Project goals and objectives
- Planning landscape and intersections
- Roles and expectations of the Stakeholder Advisory Committee members
- Stakeholder engagement conducted to date and what we've heard
- Existing conditions
- Project Schedule and major technical milestones

The second committee meeting took place on Thursday, April 9, 2024. The goal of the second meeting was to:

- Share a recap of the first meeting
- Discuss current specialized transportation issues, potential near term strategies, and long-term solutions
- Understand stakeholders' priorities related to the draft strategies.
- Preview open house materials and discuss what else should be included.

Full summaries of each 2050 Specialized Transportation Plan Stakeholder Advisory Committee meetings can be found in **Appendix C.**

Table 3. 2050 Specialized Transportation Plan Stakeholder Advisory Committee Roster

Name	Organization
Jenn Nimmo	CCHACares
Sharon Thompson	City of Fountain
Eric Esch	Envida

Name	Organization
Gail Nehls	Envida
Sean Martin	Goodwheels
Sharon King	On-Demand Transportation Group
DeAnna Rumsey	PPACG Mobility Coordinating Committee
Raquel Dominguez	Resource Exchange Center Board
Aaron Simerone	Silver Key
Jason DeaBueno	Silver Key
Valerie Anders	Silver Key
Kathy Lowry	Teller Senior Coalition
Roni Gordon	Teller Senior Coalition
Phil Young	The Independence Center
Scott Land	The Independence Center
Matt Heafner	Transdev
Tom Lathrop	YMCA Colorado Springs Senior Center

2050 Regional Transit Plan Stakeholder Advisory Committee

The 2050 Regional Transit Plan Stakeholder Advisory Committee met twice throughout the development of the plan. Stakeholders were identified and invited to the committee based on the plan's boundaries and with the goal of representing a cross-section of jurisdictions, community organizations, state and county representatives, military installations, businesses, and educational institutions. **Table 4** provides a list of committee members and their affiliated organizations. Additional stakeholders were invited to participate on the committee; however, the roster reflects active participants only.

The first committee meeting took place on Wednesday, February 21, 2024. The goal of the meeting was to create a common understanding of:

- Project goals and objectives
- Planning landscape and intersections
- Roles and expectations of the Stakeholder Advisory Committee members
- Stakeholder engagement conducted to date and what we've heard
- Existing conditions
- Project Schedule and major technical milestones

The second committee meeting took place on Thursday, April 9, 2024. The goal of the second meeting was to:

- Share a brief project update
- Explain the technical scenario development process
- Preview potential recommendations, investment options, and open house materials
- Understand the Stakeholder Advisory Committee members' priorities related to the potential recommendations.
- Discuss the open house format and materials

Full summaries of each 2050 Regional Transit Plan Stakeholder Advisory Committee meetings can be found in **Appendix D.**

Table 4. 2050 Regional Transit Plan Stakeholder Advisory Committee Roster

Name	Organization
Carlos Perez	Citizens Transportation Advisory Board
Jessie Kimber	City of Colorado Springs Economic Development Division
Catherine Duarte	City of Colorado Springs Housing and Community Vitality

Name	Organization
Katie Sunderlin	City of Colorado Springs Housing and Community Vitality
Morgan Hester	City of Colorado Springs Long Range Planning
Gayle Sturdivant	City of Colorado Springs Public Works
Todd Frisbie	City of Colorado Springs Public Works
Sharon Thompson	City of Fountain
Juan Alvarez	City of Manitou Springs
Roy Chaney	City of Manitou Springs
Pete Zeitz	Colorado College
Emily Barden	Colorado Department of Transportation
George Gromke	Colorado Department of Transportation
Scott Skinner	Colorado Department of Transportation
Chris Padilla	Colorado Springs Airport
Chelsea Gondeck	Downtown Partnership
Tara McCarthy	PikeRide
Jim Godfrey	Pikes Peak Rural Transit Authority
Traci Marques	Pikes Peak Workforce Center
Darren Horstmeier	Schriever Space Force Base
Laura Zapien	TransDev
Salvador Pozos	TransDev
Hannah Parsons	Transportation Commission of Colorado
Amy Kelley	United States Air Force Academy
Matthew Fitzsimmons	United States Air Force Academy
Jim Spice	University of Colorado - Colorado Springs

Public Meeting

The project team hosted an in-person open house on Tuesday, April 30, 2024, at the City of Colorado Springs' City Administration Building. The in-person open house featured a series of informational stations arranged around the room to encourage active public participation. In addition to the in-person open house, MMT in partnership with PPACG hosted two additional events that encouraged the community to view, interact, and provide feedback on the materials in-person and digitally.

Approximately, 114 community members provided feedback or attended a virtual or in-person event. The open house had 45 in-person attendees over a two-hour period, and 66 unique digital comment card responses were collected.

The public open house and subsequent events required an extensive promotional campaign, which included community leaders assisting in disseminating information, sending public e-blasts, creating media toolkits, coordinating and distributing flyers to MMT buses and community gathering locations, and utilizing social and conventional media channels.

A brief description of each event is included here, and a full summary can be found in **Appendix E.**

Public Open House – Tuesday, April 30, 2024

The open house featured a series of informational stations that encouraged participants to interact with the material and project team staff. The stations summarized the plan process, existing conditions, the proposed 2050 Transit Vision, the proposed 2050 Specialized Transportation strategies, and feedback shared with the project team. Project staff were available at each station to answer participant questions or discuss specific topics. Before leaving the open house, participants were encouraged to fill out either a print or digital comment card.

In partnership with the public open house, a self-guided virtual open house was launched on the project website on Tuesday, April 30, 2024, for members of the public to view materials. The self-guided open house featured the same materials as the in-person event and could provide their feedback through the digital comment card, programmed through SurveyMonkey.

2050 Specialized Transportation Plan Pop-Up Open House – Tuesday, May 14, 2024

PPACG hosted an additional in-person open house at The Independence Center on May 14, 2024. The event ensured members of the specialized transportation could provide their feedback and ask questions of the project team.

Virtual Office Hour Session – Friday, May 17, 2024

A virtual office hour was hosted on Friday, May 17, 2024, which included a brief presentation and an opportunity for the community to ask questions of the project team.

Digital Engagement

MMT provided the community with up-to-date digital materials throughout the planning process. The project team maintained an updated website to educate stakeholders and the community and promote upcoming engagement opportunities. Throughout the study, the website had about 3,177 visits from 2,532 unique users. Peaks in website views corresponded with the plan's public open house.

In addition to the plan's website, the project team utilized public e-blasts and MMT's social media channels to inform and educate the community on study updates and upcoming events. The MMT e-mail database utilized those who had previously subscribed to ConnectCOS and PlanCOS updates with an option to update their email subscription settings.

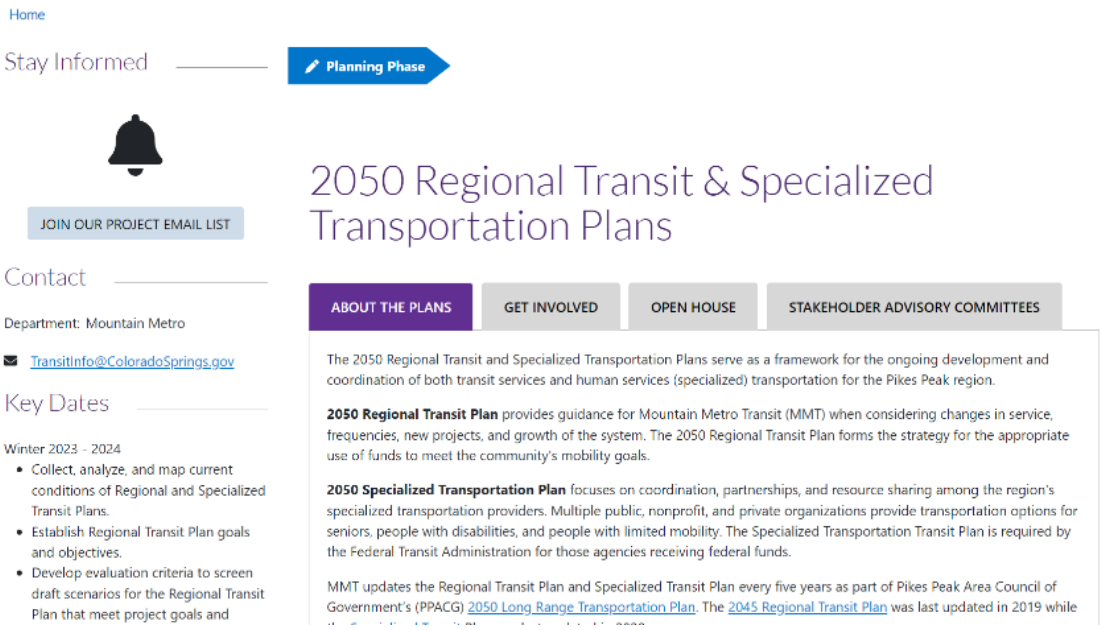


Figure 3. Pictures from the in-person open house on Tuesday, April 30, 2024.

Key Feedback Themes

Throughout the 2050 Regional Transit Plan and Specialized Transportation Plan process, MMT heard the following themes, which emerged as consistent priorities of community members, current riders, stakeholders, and specialized transportation providers.

2050 Specialized Transportation Plan Priorities

Through various engagement opportunities, the specialized transportation community of riders and providers were encouraged to share their top priorities based on proposed and recommended strategies. This feedback was collected through in-person meetings through an interactive polling activity, as well as a digital survey question.

In response to the proposed strategies, the community shared the following as top specialized transportation strategies:

1. Improvements to help people access bus stops more safely, including sidewalks, safer crosswalks, shelters, and lighting. - Since many specialized transportation users are dependent on paratransit and specialized transportation providers, improvements to help people access bus stops safely, including sidewalks, safer crosswalks, shelters, and lighting will increase mobility options for all riders.
2. Prioritize vehicle purchases so they are appropriately sized for the rider's needs, shared between agencies, and regularly maintained. – Smaller vehicles, increased coordination among providers, and increased consideration for the rider's on-board experience can help those requiring specialized transportation to feel more comfortable.
3. 24/7 phone hotline and website to help direct people to the most appropriate transportation options. – Reserving rides presents complications for riders, whereas a centralized hotline can help riders understand the services they qualify for, and how to easily reserve or book upcoming rides.
4. Set new standards of service for all specialized transit providers receiving funding from PPACG & MMT received the same number of responses. – Creating and implementing service standards will provide trip consistency and reliability, while streamlining provider coordination. This will provide riders with a more seamless experience when riding specialized transportation.

2050 Specialized Transportation Plan Feedback Themes

The top specialized transportation strategies are similar to what was heard through discussions with current riders and social services organizations. In discussions with providers, providers would like to have a more centralized or streamlined ride reservation system, which is not as important to specialized transportation clients and riders. Additional feedback themes are summarized below.

Accessibility

- Create an inclusive transportation system that focuses on the experience of the rider.

- Improve accessibility to existing fixed-route and express-route service that is not currently designed for riders with disabilities.
- Incorporate sensory-sensitivity considerations as fixed-route buses are loud.
- Equip drivers with training to be sensitive and courteous to all disabilities.

Operations

- Make booking, canceling, or reserving single and/or reoccurring rides easier and adaptable to changes in everyday life.
- Increase the coordination and collaboration between organizations to maximize the impact of limited resources for riders.
- Consider centralizing services into one entity to increase efficiencies rather than sharing information between several providers.
- Eliminate “no-ride scenarios” to those needing to ride transit, paratransit, or specialized transportation.
- Create a voucher system for on-demand service should be explored to increase flexibility in the services disabled riders can take.

Partnerships

- Cultivate partnerships between organizations to support a network of services.
- Provide educational opportunities for riders to learn more about the different services and eligibility requirements.

2050 Regional Transit Plan Priorities

Through various means of engagement, community members reacted to the seven proposed elements of the 2050 Regional Transit Vision. The vision is composed of multiple recommendations and strategies to expand service and introduce innovative technologies.

The public prioritized the following top three proposed 2050 Transit Vision recommendations in order of importance:

1. Earlier/later service on all routes, which would expand service on all routes to begin at 6:00 a.m. on weekdays, 6:00 a.m. on Saturdays, and 7:00 a.m. on Sundays. Service would also be extended until midnight Monday through Saturday, and until 9:00 p.m. on Sundays.

2. Investment in transit facilities, bus stops, and bus speed/reliability, which would include additional infrastructure to better connect bus stops, increase speed and reliability, and ensure on-time bus operations.
3. Improved frequency on existing routes, which would include improvements to all existing routes to run at least every 30 minutes all day throughout the week.

This feedback was shared through a digital polling questionnaire as well as an interactive in-person activity at the open house on Tuesday, April 30, 2024.

2050 Regional Transit Plan Feedback Themes

Stakeholders, community members, transit riders, and the public provided feedback on their current experiences and desires for a future transit system. The priorities align with feedback heard throughout the process, which focused on developing an aspirational, actionable, responsive, and funded plan to increase transit connectivity and operations. Throughout the process, the public expressed a desire to ride transit on the condition it was more convenient with improved infrastructure, such as bus stops, connected sidewalks, and bicycle-friendly amenities.

Additional key themes and feedback are summarized below.

Process

- Create a plan that is aspirational, actionable, and responsive to the region's population growth and development.
- Identify community partnership opportunities to enhance transit services and operations.
- Explore funding streams to address transit and mobility gaps.
- Consider future transit planning with land use planning to improve the effectiveness of housing, access to essential services, and transit.
- Investigate ways to incentivize transit use.

Open House Photos



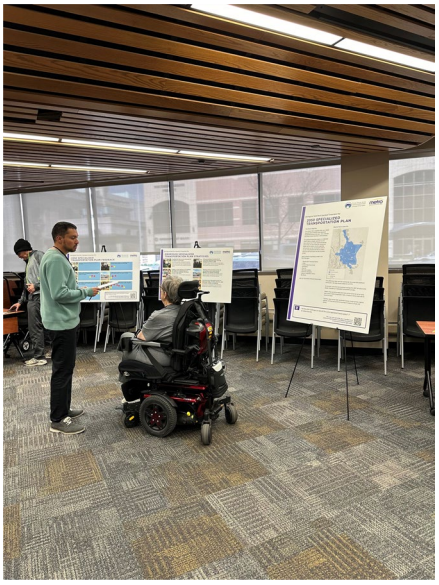


Figure 2. Pictures from the in-person open house on Tuesday, April 30, 2024.

Connectivity

- Connect transit to City and regional destinations, like the airport, higher education institutions, nearby jurisdictions, and military installations.
- Explore the option to connect to City and regional systems through light rail and passenger rail.
- Improve connectivity to Downtown Colorado Springs for pedestrians, cyclists, and transit riders, which allows them to seamlessly use all three modes.
- Ensure residents have access to transit when commuting to and from jobs to help grow the region's workforce.

Operations

- Improve the accessibility and safety of bus stops and transfer locations.
- Expand service hours and frequency of service to attract additional ridership.
- Consider adding enhanced transit services on popular corridors, such as North Nevada and Colorado Avenue.
- Explore low-cost or free-fare travel on certain routes to increase ridership.
- Increase the salaries and benefits for bus drivers to attract more drivers to the industry.

Appendix A: Stakeholder Interview Summary Memo

2050 Regional Transit and Specialized Transportation Plans

Stakeholder Interview Summary
February 2024
-Internal-

Introduction

Mountain Metro Transit (MMT) is leading the 2050 Regional Transit planning process. MMT in partnership with the Pikes Peak Area Council of Governments (PPACG) is also conducting the Specialized Transportation Plan (also known as the Specialized Human Services Plan). The 2050 Regional Transit Plan guides MMT when considering changes in service, frequencies, new projects, and the system's growth. Additionally, the regional transit plan informs the strategy for the appropriate use of funds to meet the community's mobility needs. Both plans, while unique, seek to engage the community to find the best solutions for the transit system and specialized transportation network. Each plan will be a chapter within the 2050 Long Range Transportation Plan (LRTP).

Throughout the process, MMT and PPACG will engage with stakeholders, current and future transit riders, specialized transportation providers, the public, jurisdictions, and community stakeholders. In the Winter of 2023 – 2024, Kearns & West conducted interviews with stakeholders to understand their awareness of regional transit and specialized transit, their interests, and to discuss engagement considerations. This document summarizes input shared in the interviews.

Approach

Kearns & West conducted six interviews with stakeholders throughout the region. These individuals represented jurisdictions, transportation organizations, community organizations, and specialized transportation interests.

The themes are summarized in no order of importance and do not represent consensus recommendations, but if they are included in this document, it is implied that more than two individuals or groups reflected their importance. The themes will continue to inform the project's engagement and messaging.

Participants

The project team identified stakeholders based on community leadership and their connection to the current and specialized transit systems. Stakeholders varied from decision-makers to members of community organizations. **Appendix A-1** of this summary includes interview participants and their organizations.

Themes

Specialized Transportation Plan

- Create an inclusive transportation system from the start.

Ride Reservations

- Improve the experience of the current system.
- Improve the ride reservation system to make it easier to book, cancel, or reserve single and/or reoccurring rides
- Increase the number of volunteers to provide transportation.

Partnership Opportunities

- Host educational workshops for those with disabilities on how they can use transit or specialized transportation.
- Coordinate with partners, such as doctor's offices or service providers, to coordinate appointments with available rides or times.

Regional Transit Plan

Financial

- Increase the salaries of bus drivers to attract more drivers to the industry.
- Focus on funding opportunities to address mobility and transit gaps.

Operational

- Incorporate the region in transit planning, as the current system only exists in the City of Colorado Springs.
- Create pilot programs or areas of the City to demonstrate where and how transit can work well.
- Increase bus routes, stops, and frequency.
- Plan for future system users referring to population and job growth trends.
- Connect popular tourist destinations, the east and west portions of the City, and the airport through the transit system.
- Create routes to popular tourist destinations and the airport.
- Consider future improvements of a light rail or autonomous system that could move people around the city.
- Connect the region to other cities along the Front Range and to the mountains by passenger rail.

Process

- Consider the nexus between affordable housing and transit.
- Explore ways to decrease the need for a car to travel within Colorado Springs.

- Understand the workforce's needs to offer services that take people to and from work.
- Continue raising awareness for the current planning process and transit system.

Appendix A-1: List of Community Stakeholders

#	Name	Organization	Interview Date
1	Jim Godfrey	Pikes Peak Rural Transit Authority (PPRTA) – Citizens Advisory Committee (CAC)	December 19, 2023
2	Erin Maruzzella	Innovations in Aging Collaborative	January 3, 2024
3	Jill Gaebler	Front Range Passenger Rail (FRPR)District Board of Directors, Pikes Peak Housing Network	January 3, 2024
4	Mayor Sharon Thompson	City of Fountain	January 10, 2024
5	Jessie Kimber	City of Colorado Springs Economic Development Division	January 30, 2024
6	Councilmember Yolanda Avila	City of Colorado Springs City Council	January 31, 2024

Appendix B: Focus Groups Summary Memo

2050 Regional Transit and Specialized Transportation Plans

Focus Group Summary
February 2024
-Internal-

Introduction

Mountain Metro Transit (MMT) is leading the 2050 Regional Transit planning process. MMT in partnership with the Pikes Peak Area Council of Governments (PPACG) is also conducting the Specialized Transportation Plan (also known as the Specialized Human Services Plan). The 2050 Regional Transit Plan guides MMT when considering changes in service, frequencies, new projects, and the system's growth. Additionally, the regional transit plan informs the strategy for the appropriate use of funds to meet the community's mobility needs. Both plans, while unique, seek to engage the community to find the best solutions for the transit system and specialized transportation network. Each plan will be a chapter within the 2050 Long Range Transportation Plan (LRTP).

Throughout the process, MMT and PPACG will engage with stakeholders, current and future transit riders, specialized transportation providers, the public, jurisdictions, and community stakeholders. In the Winter of 2024, Kearns & West conducted virtual focus groups with stakeholders to understand what the current systems are doing well, opportunities for improvement, and potential challenges or barriers to implementing improvements. This document summarizes input shared from the focus groups.

Approach

Kearns & West conducted four focus groups with stakeholders throughout the region. These focus groups included interests from specialized transportation users, education, health and human services providers, and business, development, housing, and residential sectors.

The themes are summarized in no order of importance and do not represent consensus recommendations, but if they are included in this document, it is implied that one or more focus groups reflected their importance. The themes will continue to inform the project's engagement and messaging.

Participants

The project team identified stakeholders based on community leadership, their role within their organization, and their connection to the current and specialized transit systems. Stakeholders varied from decision-makers to members of community organizations. **Appendix B-1** of this summary includes focus group participants and their organizations.

Themes

Specialized Transportation Plan

- Create an inclusive transportation system from the start.

- Emphasize empathy and understanding for all staff involved.

Ride Reservations

- Improve the users' experience of the current system.
    - Improve the ride reservation system to make it easier to book, cancel, or reserve single and/or reoccurring rides.
    - Increase transparency and communication of limitations for return pick-up in areas outside of a service area.
    - Improve the convenience and turnaround time for ride requests.
- Include optional fields or questions related to the preference of the rider to ride with other users.

Operational

- Increase the diversity of fleet vehicles to include smaller more comfortable vehicles with paratransit capabilities.
- Align the vehicle used with the trip planned.
- Increase service ranges to include:
    - Northern Colorado Springs medical hub
    - Doherty High School
    - Monument
    - Interquest Parkway
    - Veteran Affairs
- Improve safe access to fixed-route transit stops.
- Increase service capacity to provide more rides.
- Extend the hours of services into the evenings for social activities.

Partnership Opportunities

- Host educational workshops for those with disabilities on how they can use transit or specialized transportation and the different providers and how to book rides.
- Coordinate with partners, such as doctor’s offices or service providers, to coordinate appointments with available rides or times.
- Coordinate marketing among providers to better educate users of all services available.
- Coordinate services to be more efficient with providers resources.

Financial

- Increase or identify funding for traditional (non-electric) vehicles.

Regional Transit Plan

Operational

- Incorporate the region in transit planning, as the current system only exists in the City of Colorado Springs.
- Create pilot programs or areas of the City to demonstrate where and how transit can work well.
- Increase bus routes, stops, and frequency. Areas mentioned:
    - Academy Boulevard
    - Union
    - Interquest Parkway and Powers Boulevard
    - Northern part of the City
- Improve safety features at bus stops.
- Increase safety at transfer points. Specifically:
    - Tejon parking lot for bus to Denver.
    - Citadel Mall bus stop.
- Plan for future system users referring to population, job growth, and affordable housing trends.
- Improve amenities on buses:
    - Wifi
    - Recreational equipment storage/transport
- Connect popular tourist destinations, the east and west portions of the City, and the airport through the transit system.
- Increase routes that connect to the outskirts of Colorado Springs and military installations.
- Increase services and incentives for underserved populations.
    - Additional ride free periods
    - Additional free-passes for community-based or similar organizations
- Consider future improvements of a light rail or autonomous system that could move people around the city.

- Connect the region to other cities along the Front Range and to the mountains by passenger rail.

Partnership Opportunities

- Coordinate with educational institutions to improve connectivity for students on campus.
- Host educational workshops or programs with educational institutions to inform students or staff how to use public transit.
- Coordinate CDL training programs with other institutions that use bus drivers.

Appendix B-1: List of Focus Group Attendees

#	Name	Organization	Focus Group
1	Skyler Rorabaugh	Pikes Peak	Business, Development, and Residential
2	Marsha Unruh	Homefront Military Network	Business, Development, and Residential
3	Catherine Duarte	Colorado Springs Housing and Urban Development	Business, Development, and Residential
4	Aaron Simeraro	Silver Key	Health and Human Services
5	Marla Luckey	El Paso County Public Health	Health and Human Services
6	Jim Spice	University of Colorado – Colorado Springs	Education
7	Kevin Coleman	Pikes Peak School District	Education
8	CJ McCampbell	District 11	Education
9	Cathly Buckley	Colorado College	Education
10	Toby Cotter	N/A	Paratransit or Specialized Transportation Rider
11	Paul Spotts	The Independence Center	Paratransit or Specialized Transportation Rider
12	Edgar Morales	The Independence Center	Paratransit or Specialized Transportation Rider
13	Mary Rose Evans	The Independence Center	Paratransit or Specialized Transportation Rider
14	Isabel Robben	District 11	Paratransit or Specialized Transportation Rider
15	Scott Land	The Independence Center	Paratransit or Specialized Transportation Rider
16	Jeannette Fortin	N/A	Paratransit or Specialized Transportation Rider
17	Mary Kim McCarthy	N/A	Paratransit or Specialized Transportation Rider
18	Loretta Houseman	N/A	Paratransit or Specialized Transportation Rider
19	Buddy Castor	N/A	Paratransit or Specialized Transportation Rider

Appendix C: 2050 Specialized Transportation Plan Stakeholder Advisory Committee Meeting Summaries

2050 Specialized Transportation Plan

Stakeholder Advisory Committee – Meeting #1
Wednesday, February 21, 2024, 11 a.m. – 12:30 p.m. MT

Overview

Mountain Metro Transit (MMT), in partnership with the Pikes Peak Area Council of Governments (PPACG), held its first 2050 Specialized Transportation Plan Stakeholder Advisory Committee meeting on Wednesday, February 21, 2024. Stakeholders were identified and invited based on the plan's boundaries to represent a cross-section of specialized transportation providers, riders, and social services.

The meeting objectives were to create a common understanding of:

- Project goals and objectives
- Planning landscape and intersections
- Roles and expectations of Stakeholder Advisory Committee members
- Stakeholder engagement conducted to date and what we've heard
- Existing conditions
- Project schedule and major technical milestones

This document summarizes the presentation delivered and the themes shared by meeting participants. The accompanying PowerPoint presentation is available for review upon request and includes enlarged maps.

Welcome & Introductions

Jacob Matsen (MMT), Lan Rao (MMT), and Laura Crews (PPACG) welcomed stakeholders, thanking them for their participation in a very important process to guide the next 25 years of paratransit, fixed route, and specialized transportation service. They encouraged stakeholders to help the project team identify needs and gaps in the current system and create a common understanding of opportunities to create a visionary service that meets the needs of the current and future community.

Angela Jo Woolcott (Kearns & West), meeting facilitator, introduced project team members, reviewed the agenda, and invited participants to introduce themselves and one goal for the Specialized Transportation Plan. Stakeholder Advisory Committee members shared the following goals:

- Build capacity to meet the rising demand.
- Coordinate across agencies and providers to enhance the client's experience.

- Utilize other agencies to create a robust transportation system with ways to anticipate and prevent gaps.
- Include transit as a solution to affordable housing.
- Remember how important socialization is for all who ride specialized transportation.
- Incorporate emergency preparedness.
- Educate potential riders on the multiple transit options, including fixed route, paratransit, and specialized transportation.
- Explore additional funding opportunities.

Multiple committee members mentioned coordination among agencies and providers to build a more robust transportation system to meet the riders' needs. Participants who joined virtually introduced themselves through the Zoom chat function. A table of participants is included in **Appendix C-1**.

Angela Jo Woolcott (Kearns & West) reviewed the stakeholder committee roles and clarified the stakeholder commitment for this planning process. Given the shorter planning window, stakeholders can expect two meetings over the six to nine months. The stakeholder committee accepted their role and agreed to have the committee roster posted to the website.

Project Overview

Ezra Pincus-Roth (Nelson\Nygaard) introduced the Specialized Transportation Plan, often called the Coordinated Human Services Plan, a plan required for receiving federal transit dollars to serve older adults, people with disabilities, and people with lower incomes. Ezra Pincus-Roth (Nelson\Nygaard) emphasized that contributions to this plan should come from community members, local governments, and specialized transportation providers.

Ezra Pincus-Roth (Nelson\Nygaard) described the various activities that inform the planning process, including engagement and outreach, analysis of existing conditions, and incorporation of previous and current planning efforts. Angela Jo Woolcott (Kearns & West) built upon the summary of what has been done to describe the various engagement activities, including a website launch, a digital engagement survey, presentations to the Long Range Transportation Plan (LRTP)

Paratransit & Specialized Transportation Services

The **Specialized Transportation Plan,** often called the **Coordinated Transit Human Services Plan**, is required to receive federal transit dollars to serve older adults, people with disabilities, and people with lower incomes.

Paratransit services operate within a three quarters of a mile radius of Mountain Metro Transit's fixed route providing door to door services. Paratransit services are provided through MMT.

Specialized transportation provides services for individuals with disabilities or seniors that need added assistance outside of what paratransit can offer. Specialized transportation providers serve a larger geographic area with door through door services. Door to door services allows individuals with mobility issues to have assistance getting from the vehicle to their destination.

These services can sometimes be differentiated by their Americans with Disability Act (ADA) requirements. Paratransit services are a mandated service, whereas specialized providers can go above and beyond ADA standards.

Regional Transportation Planning Advisory Committee (RTPAC), stakeholder interviews, and focus groups.

Angela Jo Woolcott (Kearns & West) then summarized what the project team has heard from stakeholders in the process thus far. Community members have shared the following:

Overall Planning Effort

- Create an inclusive transportation system from the start.
- Increase or identify funding for traditional and non-electric vehicles.

Ride Reservations

- Improve the experience of the current system.
- Make booking, canceling, or reserving single and/or reoccurring rides easier.
- Increase the number of volunteers to provide transportation.
- Include socialization preferences.

Operations

- Increase diversity of vehicle fleets.
- Align vehicles with requested trips.
- Increase service ranges.
- Improve safe access to fixed-route transit stops.
- Increase service capacity.
- Extend operational hours into evenings for social activities.

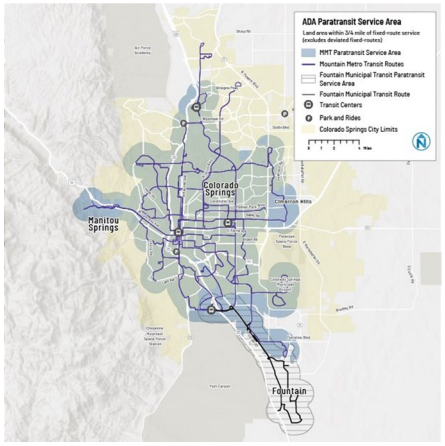
Partnerships

- Provide educational workshops for people with disabilities on how to use the system.
- Coordinate with health providers for medical visits.
- Coordinate marketing and resources among all providers.

While sharing commonly heard themes, stakeholders shared that they would prefer the transportation system was flexible

Existing Conditions

Existing Service Areas



Major Employers

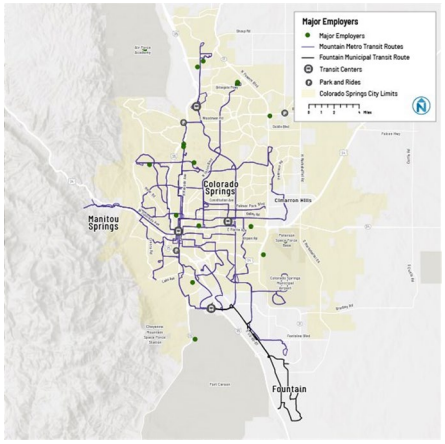


Figure C-1: Maps show the existing service area (Map 1) and major employers (Map 2).

and consider the rider's needs, rather than expecting the rider to accommodate the transit schedule.

Stakeholders also asked for clarification on what was previously heard about the diversification of vehicle fleets. While conducting focus groups, riders expressed how the size of the vehicle matters. When riding in too large of a vehicle can create an awkward riding experience and draw attention to their transportation needs. A diversification in vehicle fleets could lend itself to a better rider experience. The Stakeholder Advisory Committee considered the challenges of providing a diverse fleet of vehicles, including funding needs and ongoing driver shortages. Stakeholders proposed potential solutions to these issues to include a shared fleet of vehicles, additional benefits for drivers including increased pay or community benefits, and increased coordination among providers to help share the demand for requested rides.

Ezra Pincus-Roth (Nelson\Nygaard) emphasized that the team looks forward to hearing from the community, which will inform improvement opportunities and recommendations. In addition to those in the room, stakeholders recommended additional organizations and communities that should be engaged throughout the plan. He then explained that the plan would propose solutions to meet accessibility, connectivity, service, user experience, and inter-service coordination needs.

The Stakeholder Advisory Committee shared additional feedback, particularly on the ride reservation system. Stakeholders recommended the following considerations:

- Streamline how clients reserve rides, including the questions asked on intake calls.
- Create a shared database of client information.
- Educate clients about how to reserve rides within the system and what questions might be asked as part of the process.
- Improve getting rides when you are further than fifteen minutes from the provider.
- Eliminate the "no ride scenarios" for those needing to ride transit, paratransit, or specialized transportation.

When considering connectivity, stakeholders recommended exploring how transit operates within the larger transportation system, as there are only so many corridors to transport people. Additionally, stakeholders recommended that the team consider first- and last-mile connections and the creation of mobility hubs to assist riders in starting or ending their trips.

Existing Conditions

Ezra Pincus-Roth (Nelson\Nygaard) explained the technical team has been reviewing the existing service area to understand where specialized transportation and paratransit operate and where geographic gaps still exist. Within the existing service area (Figure 1) the current system requires riders or clients to navigate many different services or options. When looking to travel, riders must make a series of choices to meet their trip needs.

Ezra Pincus-Roth (Nelson\Nygaard) also shared that while this plan looks at current needs and gaps, it must anticipate future growth in the region. It is predicted that the Pikes Peak region will see a sharp increase in older adults by 2045, which could require additional funding, capacity, and resources for the transit system. The 2050 Specialized Transportation Plan looks to incorporate predicted demographic changes in its planning and coordinate with the 2050 Regional Transit Plan effort.

Within the plan, the project team will look at a series of possible improvements as potential strategies or recommendations, including:

- Create shared wheelchair-accessible vehicle fleets for all specialized providers to access and utilize.
- Develop creative opportunities to train and retain drivers.
- Implement a discounted taxi program for riders in areas where there are unmet geographic needs.
- Design infrastructure to include accessible travel paths to fixed route transit stops.

The coordination continuum (Figure 2) provides a possible framework for aspirational recommendations across all strategies and recommendations within the region's transportation and transit system. Ezra Pincus-Roth (Nelson Nygaard) prompted stakeholders to consider what they would like this planning effort to be and where collaboration can create efficiency for future service.

Coordination and partnership opportunities were themes discussed throughout the meeting. Stakeholders emphasized wanting to explore more opportunities to partner either with each other or through private-public partnerships. Stakeholders recommended creating more standardization across providers regarding regulations, data sharing, driver training programs, and vehicle maintenance.

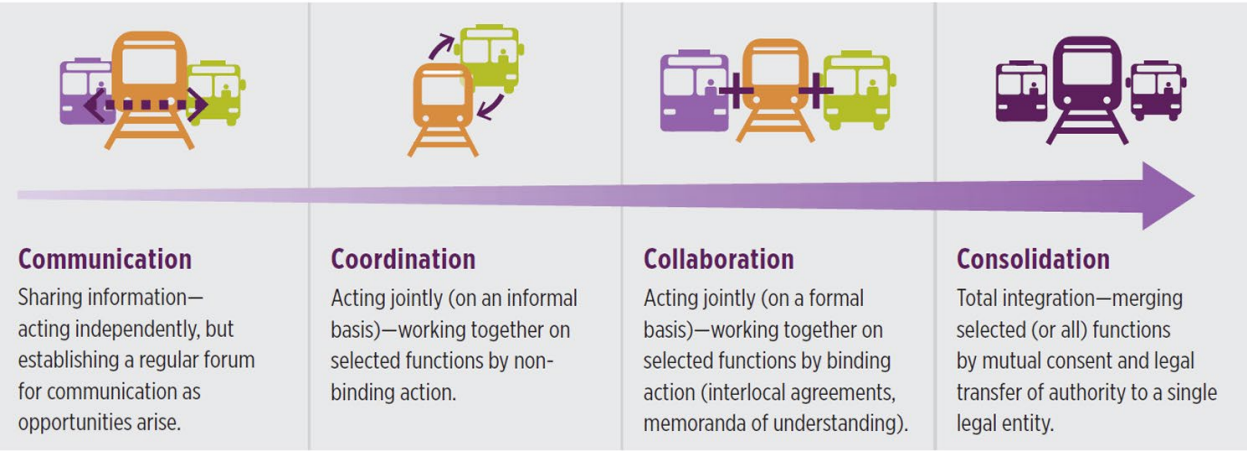


Figure C-2: A diagram shows the coordination continuum from communication to consolidation.

Next Steps

Angela Jo Woolcott (Kearns & West) closed the meeting by thanking those who could join the first stakeholder committee meeting. Stakeholder Committee members can expect a second committee meeting before the Public Open House in late Spring. The technical team will refine the needs and strategies between meetings based on incoming survey responses and further analysis.

Appendix C-1: Meeting Participants

Stakeholder Committee Members – In Attendance

Name	Organization
Sharon Thompson	City of Fountain
Eric Esch	Envida
Gail Nehls	Envida
Lee Palke	Greccio Housing
Sharon King	On-Demand Transportation Group
DeAnna Rumsey	PPACG Mobility Coordinating Committee
Aaron Simeraro	Silver Key
Valerie Anders	Silver Key
Diana van Auken	Teller Senior Coalition
Kathy Lowry	Teller Senior Coalition
Roni Gordon	Teller Senior Coalition
Tom Lathrop	YMCA Colorado Springs Senior Center

Stakeholder Advisory Committee Members – Not in Attendance

Name	Organization
Jenn Nimmo	CCHACares
Darrel Holtzlander	Goodwheels
Jason DeaBueno	Silver Key
Edgar Morales	The Independence Center

Project Team

Name	Organization
Laura Crews	PPACG
John Liosatos	PPACG
Danelle Miller	PPACG
Jacob Matsen	MMT
Lan Rao	MMT
Jackson Simmons	MMT
Ezra Pincus-Roth	Nelson\Nygaard
Jonathan Mosteiro	Nelson\Nygaard
Zach Barr	Kearns & West
Angela Jo Woolcott	Kearns & West
Caitlin Sheridan	Kearns & West

Specialized Transportation Plan Update

Stakeholder Advisory Committee – Meeting #2
Tuesday, April 9, 2024, 10 a.m. – 12 p.m. MT

Overview

Mountain Metro Transit (MMT), in partnership with the Pikes Peak Area Council of Governments (PPACG), held its second Specialized Transportation Plan Stakeholder Advisory Committee meeting on Tuesday, April 9, 2024. Stakeholders were identified and invited based on the plan's boundaries to represent a cross-section of specialized transportation providers, riders, and social services.

The meeting objectives were to:

- Share a brief recap of the first meeting.
- Discuss current Specialized Transportation issues, potential near-term strategies, and long-term solutions.
- Understand stakeholders' priorities related to the draft strategies.
- Preview Open House materials and discuss what else should be included.

This document summarizes the presentation delivered and the themes shared by meeting participants. The accompanying PowerPoint presentation is available for review upon request and includes enlarged maps. Please see page 37 for a summary of the strategies shared with the committee.

Welcome & Introductions

Angela Jo Woolcott (Kearns & West), meeting facilitator, introduced project team members, reviewed the agenda, meeting guidelines, and invited participants to introduce themselves. A table of participants is included in **Appendix C-2**.

While reviewing the stakeholder committee roles, Angela Jo Woolcott (Kearns & West) encouraged participants to help promote the upcoming 2050 Regional Transit and Specialized Transportation Plans Open House by encouraging others within their networks to attend the event.

Before discussing the draft strategies, Angela Jo Woolcott (Kearns & West) shared a short recap of the first meeting.

- The Specialized Transportation Plan is a chapter of the 2050 Long Range Transportation Plan (LRTP).
- The existing conditions show several gaps in the system and where growth is expected over the next 15 years in Colorado Springs.

- The Advisory Committee discussed what is currently working well, what could be improved, and examples of improvement projects.

Draft Strategies to Meet Needs

Ezra Pincus-Roth (Nelson\Nygaard) introduced the 2050 vision for regional transit in Colorado Springs (Figure 1). Under this vision, the ADA Paratransit service area would increase 67%. The draft 2050 Transit Vision includes the following:

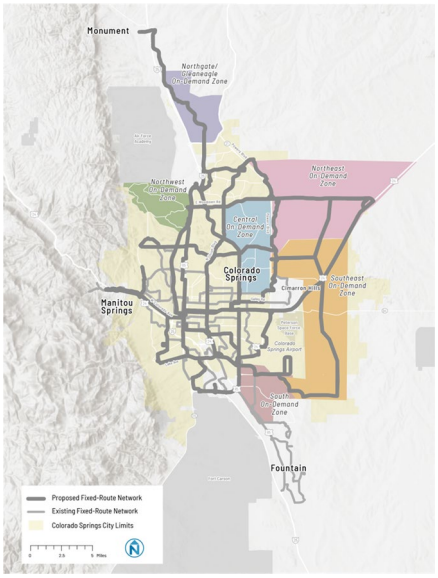
- Increase the frequency of services in proven Transit Corridors
- Expand routes in growing areas
- Enhance speed and reliability improvements
- Designate on-demand Transportation zones

In response to the vision and increased fixed-route transit service, stakeholders shared that expanded fixed-route services would improve their quality of life by providing them freedom to travel to areas currently not accessible. At the same time, stakeholders expressed concerns that this expanded service would not improve door-through-door services or address the resource challenges on Specialized Transportation providers.

Ezra Pincus-Roth (Nelson\Nygaard) described the current challenges for service providers in the context of projected growth in population (including older adults) throughout the region. The 2045 LRTP made progress to increase equitable access to services and the ease of accessing those services, but barriers still exist, and growth will bring more demand for these services. Providers must do so much, from client intake to policy setting. Stakeholders were prompted to think through how to create efficiencies as providers, while prioritizing current riders, future riders, and the overall riding experience.

Providers' shared operations are being streamlined through updating of dispatch software and the launch of a shared service to improve ride reservations. Additional training of drivers to build capacity is underway or planned. Sharing training resources was also discussed between stakeholders. Fleets are being diversified with smaller more comfortable vehicles to complete single-user rides. While providers shared the additional trainings staff are receiving, stakeholders discussed

Proposed Transit Vision



Proposed Paratransit Service

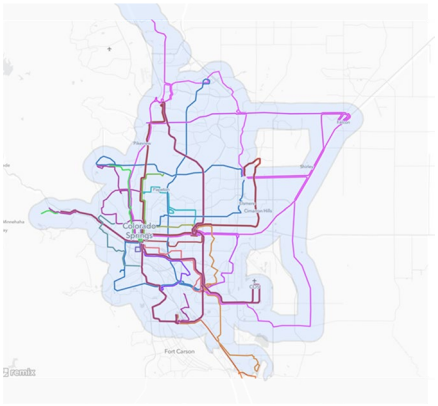


Figure C-3: Maps show a DRAFT proposed 2050 Transit Vision concept (Map 1) and the increased ADA paratransit service area that would be necessary if the draft vision were fully implemented (Map 2).

the value of coordinating training across providers and involving users or the Independence Center to participate.

The ZEB service was cited by the audience as an example of a successful local program that accommodates shoppers, seniors, and riders with disabilities in Colorado Springs.

When considering ways to improve service or create efficiencies, stakeholders shared one of the largest barriers is that of grant funding compliance. For example, a certain grant may have geographic or service-specific requirements that each provider must track and report. To overcome this challenge, stakeholders recommended a centralized system to distribute resources could address funding and compliance barriers but implementation brings its own challenges. Other innovative programs, like car trade-ins for aging populations, are successful in areas with mature transit systems.

During the discussion on how providers are addressing challenges, a stakeholder asked how Medicaid is factored into providers operations. Providers shared challenges in referring Medicaid patients to the appropriate service. Medicaid riders are required to use the lowest cost of transportation and may end up returning to service to meet that requirement.

Ezra Pincus-Roth (Nelson\Nygaard) reviewed the draft issues, near-term strategies (for consideration over the next five years), and long-term solutions (for consideration to help realize a vision for 2050).

Issue: A lack of understanding of the available specialized transit and paratransit networks, how they are different, and how each can potentially help riders.

- Short-term Strategy: Go through a process for developing specific standards for a more consistent and easily navigated network.
- Long-term Solution: Maintain a single regionwide brand and delivery design for all specialized and demand-response services as a condition of using public funds.

A stakeholder shared that understanding additional benefits, like the opportunity to socialize, is important when selecting a service.

Issue: Riders are expected to navigate a system that is unnecessarily complicated and unsatisfactory in meeting everyday travel needs.

- Short-term Strategy: Develop an easy-to-use website or similar tool for riders with a centralized information from providers.
- Long-term Solution: Establish a mobility management program dedicated to trip coordination among providers.

A stakeholder asked if this solution would develop a single portal to book a ride. Ezra Pincus-Roth (Nelson\Nygaard) clarified that the mechanism could be a portal or a single database for providers to access. By centralizing passenger information, providers may increase efficiency of matching riders needs and requests with the appropriate service. A centralized database of information would still help others, like senior center employees, schedule rides, reduce ‘deadhead’ rides, and increase efficiencies.

The stakeholders discussed the challenges for older-aged consumers to use new technology. A stakeholder shared that riders have such a variety of needs that must be addressed and that using generative Artificial intelligence (AI) may also help increase efficiencies in providing information to both riders and providers.

Issue: The only immediate service (or even a service reserved within a couple days) is via the private market.

- Short-term Strategy: Provide riders with a fixed maximum study for short notice rides and study other solutions.
- Long-term Solution: Coordinate service needed through a mobility management program dedicated to trip coordination among providers.

Issue: Riders must go through multiple processes and inquiries before finding a ride due to data being siloed by organization and different eligibility requirements between organizations.

- Short-term Strategy: Develop a common eligibility form and consolidated database of riders shared across providers.
- Long-term Solution: Utilize a third-party entity which is responsible for multiple services including database management, eligibility, information, and brokering.

Issue: Bus driver shortages.

- Short-term Strategy: Invest in centralized year-round driver training center accessible to all transit, specialized, volunteers, and school providers (including drug/alcohol, disability sensitivity, small vehicle, et. al.).
- Long-term Solution: Develop a bus operator apprenticeship and mentorship program, discuss opportunities to improve the job with drivers regularly, and ensure pay keeps up with the cost of living.

Issue: Traditional specialized transportation vehicles can be stigmatizing and uncomfortable for riders, and expensive to purchase and maintain.

- Short-term Strategy: Require grant applications for vehicle purchases demonstrate good faith efforts in coordinating with other entities to share existing underutilized vehicle fleets.
- Long-term Solution: Begin real-time monitoring of specialized transit riders per vehicle to strategically right-size vehicle fleets.

Issue: Riders may be uncomfortable or unable to access fixed-route bus stops which drives them to use paratransit or specialized services.

- Short-term Strategy: Prioritize the paving and lighting of current and future bus stops and coordinate paratransit eligibility with Colorado Springs Public Works once improvements are made.

- Long-term Solution: Build a foundation of regular transit riders through the convenience of frequent fixed-route service.

Jacob Matsen (MMT) added during the discussion of accessibility to bus stops, as ridership for MMT fixed-route service went up, the ridership for ADA paratransit went down. As more investment was put into bus stops and additional operational freedom for riders there was a greater degree of ability for paratransit users to use fixed-route which won't eliminate paratransit but would help reduce the reliance/resources on the system. The project team also shared that access to the existing system has been a feedback theme from the ConnectCOS planning process.

Ezra Pincus-Roth (Nelson\Nygaard) reminded Stakeholder Advisory Committee members that in the long run, the plan should build support for diversification of potential new local funding sources, help deliver mobility as a service for people who need it, and continue putting the rider first.

Angela Jo Woolcott (Kearns & West) then facilitated a round robin to hear stakeholders' priorities as it related to short-term strategies or long-term solutions. Stakeholders were also asked to share if there were other priorities they agreed with (represented by the number in parenthesis following with strategy, Figure 2).

- Create a centralized call center for all ride reservations (1).
- Integrate Specialized Transportation into the healthcare system (1).
- Increase on-demand travel capacity and capabilities.
- Create a portal for riders to easily book and change ride reservations.
- Reduce or eliminate fares.
- Increase training for customer intake and service.
- Expand or increase funding available to providers and identify areas to share resources to increase efficiency.
- Develop a regional approach to planning that considers Specialized Transportation needs.
- Integrate Specialized Transportation needs into community planning and development.

2050 Regional Transit and Specialized Transportation Plans Open House Preview

Angela Jo Woolcott (Kearns & West) previewed the 2050 Regional Transit and Specialized Transportation Plans Open House, scheduled for Tuesday April 30th 4:30 – 6:30 p.m. at the City Administration Building. The Open House looks to achieve the following:

- Inform and educate the community about the planning process, existing services and route conditions, and how feedback will be incorporated into the final plan.

- Collect input that can be incorporated into screening criteria and ultimately inform outcomes and recommendations.
- Consult with attendees to help prioritize proposed transit improvements.

Angela Jo Woolcott (Kearns & West) reviewed the Open House format and stations. The Open House will be a 'choose your own adventure' meeting format with several topical stations with boards for participants to browse at their leisure. If someone is only interested in a specific topic, they may only visit that station. In addition to providing information, the Open House will also seek feedback from the public through various interactive activities and questions and answers to the project team. The planned Open House stations are:

- **Welcome and Sign-in**: Orient participants to the meeting.
- **Process and Plans Overview:** Contextualize how the Specialized Transportation and Regional Transit Plans are a component of the LRTP.
- **Existing Conditions:** Provide an overview of the current transit system.
    - **Participant Exercise:** Share where you live and where you like to travel on a map of Colorado Springs.
- **Regional Transit Plan:** Present the draft 2050 Transit Vision and different vision elements.
    - **Participant Exercise:** Prioritize the transit vision elements – which three draft transit vision elements would you prioritize?
- **Specialized Transportation Plan:** Present the draft strategies and how they address the specialized transportation needs.
    - **Participant Exercise:** Prioritize the draft strategies – which three draft strategies would you prioritize?
- **What We've Heard:** Summarize key feedback themes and outreach activities conducted thus far.
- **Next Steps and Comment:** Review next steps in the process and share your feedback via a comment card.

Angela Jo Woolcott (Kearns & West) concluded by asking members to share if they would be able to attend the Open House. A majority of stakeholders raised their hand to show that they plan to attend. In addition to attending, Angela Jo Woolcott (Kearns & West) encouraged stakeholders to promote the upcoming open house. A digital promotional toolkit, which includes the flyer and drafted promotional language, will be shared with Stakeholder Advisory Committee members.

Stakeholders were curious to understand if this would be the only open house. Angela Jo Woolcott (Kearns & West) clarified that there would be additional open houses as part of the LRTP process, but the Open House on April 30th is solely focused on the 2050 Regional Transit and Specialized Transportation Plans, a component plan of the LRTP.

Next Steps

Angela Jo Woolcott (Kearns & West) closed the meeting by thanking those who could join the final stakeholder meeting. Stakeholder Committee members can expect more information on the Open House in the coming weeks.

Appendix C-2: Meeting Participants

Stakeholder Committee Members – In Attendance

Name	Organization
Sharon Thompson	City of Fountain
Sean Martin	Goodwheels
Sharon King	On-Demand Transportation Group
Raquel Dominguez	Resource Exchange Center Board
Jason DeaBueno	Silver Key
Valerie Anders	Silver Key
Kathy Lowry	Teller Senior Coalition
Roni Gordon	Teller Senior Coalition
Scott Land	The Independence Center
Phil Young	The Independence Center
Tom Lathrop	YMCA Colorado Springs Senior Center

Stakeholder Advisory Committee Members – Not in Attendance

Name	Organization
Eric Esch	Envida
Gail Nehls	Envida
Aaron Simerone	Silver Key
Edgar Morales	The Independence Center

Project Team

Name	Organization
Laura Crews	PPACG
John Liosatos	PPACG
Danelle Miller	PPACG
Jared Verner	PPACG
Jacob Matsen	MMT
Lan Rao	MMT
Allison Burns	MMT
Tara Evans	MMT
Ezra Pincus-Roth	Nelson\Nygaard
Jonathan Mosteiro	Nelson\Nygaard
Thomas Wittmann	Nelson\Nygaard
Zach Barr	Kearns & West
Angela Jo Woolcott	Kearns & West
Caitlin Sheridan	Kearns & West

Appendix D: 2050 Regional Transit Plan Stakeholder Advisory Committee Meeting Summaries

2050 Regional Transit Plan

Stakeholder Advisory Committee – Meeting #1
Wednesday, February 21, 2024, 1:30 – 3 p.m. MT

Overview

Mountain Metro Transit (MMT) held the first 2050 Regional Transit Plan Stakeholder Advisory Committee meeting on Wednesday, February 21, 2024. Stakeholders were identified and invited based on the plan's boundaries to represent a cross-section of jurisdictions, community organizations, state and county representatives, military installations, businesses, and educational institutions.

The meeting objectives were to create a common understanding of:

- Project goals and objectives
- Planning landscape and intersections
- Roles and expectations of Stakeholder Advisory Committee members
- Stakeholder engagement conducted to date and what we've heard
- Existing conditions
- Project schedule and major technical milestones

This document summarizes the presentation delivered and the themes shared by meeting participants. The accompanying PowerPoint presentation is available for review upon request and features enlarged maps.

Welcome & Introductions

Jacob Matsen (MMT) and Lan Rao (MMT) welcomed stakeholders and thanked them for their involvement in the regional transit planning process. The 2050 Regional Transit Plan is the planning process that explores how to allocate current resources and create a visionary plan. They both emphasized that this plan looks to find the right service model to serve as much of the community as possible by meeting their needs and preventing future gaps.

Angela Jo Woolcott (Kearns & West), meeting facilitator, introduced project team members, reviewed the agenda, and invited participants to introduce themselves and one goal for the Regional Transit Plan. Stakeholder Advisory Committee members shared the following goals:

- Explore how transit can act as a catalyst for housing and affordable housing opportunities.
- Create a transit plan that is aspirational, actionable, and responsive to the region's population growth and development.
- Increase the use of transit to and from military installations.
- Understand the planning process to educate and inform others.

- Explore opportunities to ensure integration with higher education institutions.
- Connect transit to regional destinations, like the airport.
- Create a network that works with other modes of transportation.
- Explore the challenges and opportunities for transit within the larger system.
- Improve connectivity to Downtown Colorado Springs for other modes beyond single-occupancy vehicles.
- Include partnership opportunities.
- Ensure residents have access to transit when commuting to and from quality jobs to help grow the region's workforce.
- Listen to local voices throughout the planning process.

Multiple stakeholders emphasized creating a plan that is both actionable and responsive to the region's population growth and development, particularly focusing on funding. Participants who joined virtually introduced themselves through the Zoom chat function. A table of participants is included in **Appendix D-1**.

Angela Jo Woolcott (Kearns & West) reviewed stakeholder committee roles and clarified the stakeholder commitment for this planning process. Given the shorter planning window, stakeholders can expect two meetings over six to nine months. The stakeholder committee accepted their role and agreed to have the committee roster posted to the website.

Before discussing the project in more detail, the committee asked to clarify the larger transportation plan's goals. Nelson\Nygaard explained that the goal of these planning efforts is to use the near-term information and data to identify 2050 strategies that are both visionary and practical to identify incremental steps toward a long-term goal. Since these plans are updated every five years, this allows the inclusion of actionable items now, and the ability to be responsive as things change between now and 2050.

Project Overview

Jonathan Mosteiro (Nelson\Nygaard) introduced the transit plan as part of the larger Long Range Transportation Plan (LRTP). Both plans are visionary documents with a great opportunity to chart out short- and long-term policies and programs. The previous iteration of the plan was last completed before the pandemic, where a lot has changed in how people travel throughout the region.

Jonathan Mosteiro (Nelson\Nygaard) explained that the project team is looking to understand existing conditions, including ridership and on-time performance, and is analyzing existing gaps and opportunities for improvement and funding. While the technical side is a plan component, the team seeks to engage the community for feedback to inform the plan's projects, programs, and strategies.

Additionally, this planning effort looks to build upon the previous planning effort, which had the following four themes:

- Maintain focus on existing service area.
- Improve service hour frequency and reliability.
- Improve user experience and access.
- Plan for innovation.

The committee was interested in discussing what innovation could mean for MMT and transit in the region. Stakeholders encouraged MMT to be innovative and consider applying emerging technologies to its vehicles, routes, operations, and accessible transportation options. Stakeholders suggested improvements to bus tracking, including more accurate real-time updates. MMT currently offers this service to its riders. It was also recommended that transit services be expanded beyond fixed route service, especially in geographic areas with lower population density.

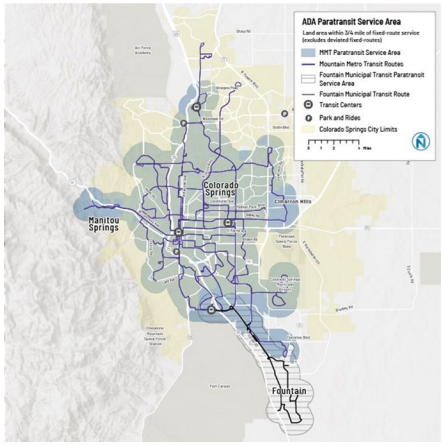
Innovation was also expanded to consider future transit partnerships and how housing and multimodal options could be part of a larger transportation system. When discussing the nexus of housing and transit, stakeholders shared how future state policy could create more of a partnership and relationship between housing, population density, and public transportation.

Before delving into what is known from the technical analysis, Angela Jo Woolcott (Kearns & West) reviewed the outreach and engagement done to date, which has included a website launch, the LRTP Digital Engagement Survey, presentations to the LRTP Regional Transportation Planning Advisory Committee (RTPAC), stakeholder interviews, and focus groups. Through these engagements, the team has learned the following:

LRTP Digital Survey – Transit Results

- 8% of respondents ride transit in a typical week to move around the region.
- 27% would ride transit more frequently if services or buses were expanded to more destinations.
- 51% are concerned with the lack of public transit coverage (bus/streetcar/light rail).

Existing Service Area Map



Current Transit System

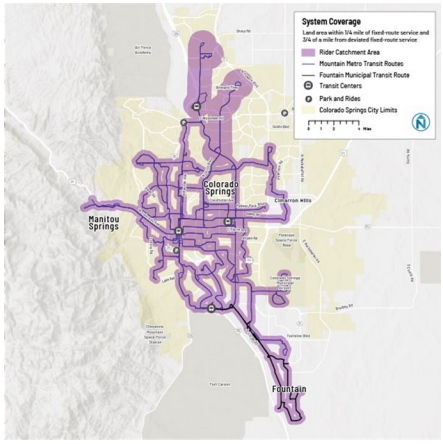


Figure D-1: Maps show the existing service area (Map 1) and system coverage (Map 2).

- 38% see the lack of transit frequency as a top transportation problem.

The Stakeholder Advisory Committee paused when considering the survey results emphasizing that these results show a desire for public transit. Stakeholders shared that MMT should consider ways to be proactive and innovative when looking at current and future scenarios or recommendations to increase transit. They also emphasized that this might involve creative thinking or incentivizing people to ride public transportation over single-occupant vehicles. Jonathan Mosteiro (Nelson\Nygaard) clarified that transit can look many different ways, and strategies and solutions could be proposed to meet the various community or geographic needs.

For more information about the survey responses, the results are posted on the PPACG 2050 Long Range Transportation website.

Process

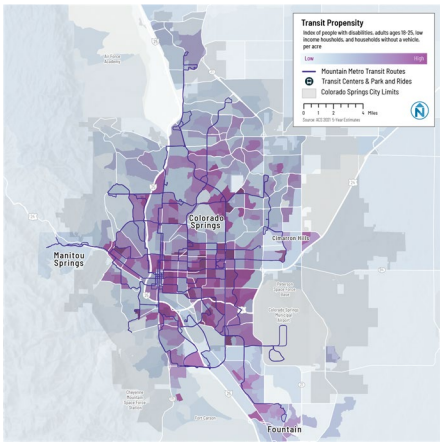
- Continue to engage with impacted communities.
- Explore additional opportunities for collaboration.
- Incorporate the region into the planning process.
- Plan for future population and job growth in the region.
- Consider regional rail improvements.
- Explore how to decrease car-dependent travel within the City.

Operations

- Continue to provide metro-to-metro services, access to outdoor recreation, and routes that include educational institutions.
- Increase salaries of bus drivers.
- Focus on funding opportunities to address gaps.
- Create pilot program demonstrations.
- Increase routes, stops, and frequency.
- Connect tourist destinations, job centers, the east-west side, and the Colorado Springs Airport.
- Improve safety features and bus amenities.

Target Locations

Transit Propensity Index



Major Employment Markets

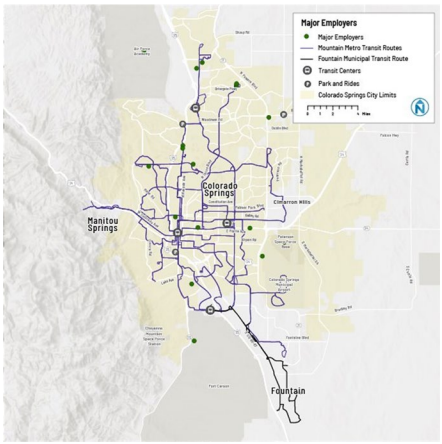


Figure D-2: Maps show the transit propensity index (Map 1) and major employment markets (Map 2).

Partnerships

- Continue to offer housing and community vitality bus passes.
- Support for the no-fare months.
- Provide non-profit grant programs.
- Continue to offer the free downtown shuttle (ZEB).
- Offer bus passes as part of student ID programs.
- Coordinate with educational institutions to inform staff and students how to use the public transit system.
- Provide a larger CDL training program to find drivers for all buses.

Stakeholders expanded on comments previously heard to encourage MMT to consider creative funding streams. Transit can be seen as a community service, and stakeholders discussed how to create a sustainable and affordable transportation system. Stakeholders discussed creative funding opportunities, like farebox recovery ratios, which examine how much operating expenses are covered by passenger fares. Additionally, stakeholders were curious to learn about federal grant opportunities.

Existing Conditions

Jonathan Mosteiro (Nelson\Nygaard) presented the existing conditions for fixed routes transit. The existing area shows service frequency on a typical weekday and the system coverage (Figure 1). Within the current system, most routes are more in the 40 to 60-minute frequency, requiring riders to plan their trip around routes, which causes disruptions if a rider cannot make a bus.

In addition to looking at the current service route, the project team has also analyzed demographic data to understand where the region will see near-term and future growth, especially in areas that might not currently have access to transit. When considering future growth and current service, it is important to consider how paratransit and specialized transit work in partnership with the fixed route service. The 2050 Regional Transit Plan is working closely with the Specialized Transportation Plan to develop strategies to increase regional transit access.

The Stakeholder Advisory Committee emphasized the importance of considering and planning for future population growth when examining existing conditions. Stakeholders also shared anticipated employment growth and development within the City. The growing semiconductor manufacturing industry was one example of future employment opportunities that should be incorporated into the transit plan.

To understand more about where transit opportunities might be more prominent, the project team has analyzed socioeconomic data to determine what characteristics transit riders are more likely to have through the transit propensity index. This includes areas where there might be

more concentrations of reliable ridership (Figure 2). The transit propensity index is focused more on where people start their trips, whereas the major employment markets demonstrate popular destinations where people might utilize transit to get to and from. Stakeholders confirmed that the St. Francis Hospital is a major employment center not currently served by transit. Additionally, stakeholders shared the growing population east of Powers Boulevard should be served with future transit service.

Next Steps

Angela Jo Wolcott (Kearns & West) closed the meeting by thanking participants for their participation and reminding them that the next committee meeting will be in late Spring. Jacob Matsen (MMT) also thanked stakeholders for their participation and emphasized that a plan with community input will allow MMT to create the best possible plan.

Appendix D-1: Meeting Participants

Stakeholder Advisory Committee Members - In Attendance

Name	Organization
Carlos Perez	Citizens Transportation Advisory Board
Steve Posey	City of Colorado Springs
Sharon Thompson	City of Fountain
Juan Alvarez	City of Manitou Springs
Pete Zeitz	Colorado College
Emily Barden	Colorado Department of Transportation
Scott Skinner	Colorado Department of Transportation
Chris Padilla	Colorado Springs Airport
Chelsea Gondeck	Downtown Partnership
Tara McCarthy	PikeRide
Jim Godfrey	Pikes Peak Rural Transit Authority
Traci Marques	Pikes Peak Workforce Center
Darren Horstmeier	Schriever Space Force Base
Beth Dukes	United States Space Force
Amy Kelley	United States Air Force Academy
Matthew Fitzsimmons	United States Air Force Academy
Matt Beckwith	University of Colorado - Colorado Springs

Stakeholder Advisory Committee Members – Not in Attendance

Name	Organization
Gayle Sturdivant	City of Colorado Springs
Jessie Kimber	City of Colorado Springs
Morgan Hester	City of Colorado Springs
Cathy Buckley	Colorado College
Ben Gellman	Colorado Department of Transportation
Geoff Guthrie	Colorado Department of Transportation
George Gromke	Colorado Department of Transportation
Erin Maruzzella	Innovations in Aging
Cindy Aubrey	Pikes Peak United Way
Hannah Parsons	Transportation Commission of Colorado
Doug Price	VisitCOS

Project Team

Name	Organization
Laura Crews	PPACG
John Liosatos	PPACG
Danelle Miller	PPACG
Jacob Matsen	MMT
Lan Rao	MMT
Jackson Simmons	MMT
Ezra Pincus-Roth	Nelson\Nygaard
Jonathan Mosteiro	Nelson\Nygaard

Name	Organization
Zach Barr	Kearns & West
Angela Jo Woolcott	Kearns & West
Caitlin Sheridan	Kearns & West

2050 Regional Transit Plan

Stakeholder Advisory Committee – Meeting #2
Tuesday, April 9, 2024, 1:00 – 3 p.m. MT

Overview

Mountain Metro Transit (MMT) held the second 2050 Regional Transit Plan Stakeholder Advisory Committee meeting on Tuesday, April 9, 2024. Stakeholders were identified and invited based on the plan's boundaries to represent a cross-section of jurisdictions, community organizations, state and county representatives, military installations, businesses, and educational institutions.

The meeting objectives were to:

- Share a brief project update.
- Explain the technical scenarios development process.
- Preview potential recommendations, investment options, and open house materials.
- Understand Stakeholder Advisory Committee members' priorities related to the potential recommendations.
- Discuss the Open House format and materials.

This document summarizes the presentation delivered and the themes shared by meeting participants. The accompanying PowerPoint presentation is available for review upon request and features enlarged maps.

Welcome & Introductions

Angela Jo Woolcott (Kearns & West), meeting facilitator, introduced project team members, reviewed the agenda, meeting guidelines, and invited participants to introduce themselves. A table of participants is included in **Appendix D-2**.

While reviewing the stakeholder committee roles, Angela Jo Woolcott (Kearns & West) encouraged participants to help promote the upcoming 2050 Regional Transit and Specialized Transportation Plans Open House by encouraging others within their networks to attend the event.

Angela Jo Woolcott (Kearns & West) summarized that since the first committee meeting, the project team has been analyzing the existing conditions, developing, and reviewing different scenarios, options, and engagement materials.

Draft Technical Scenario

Overview

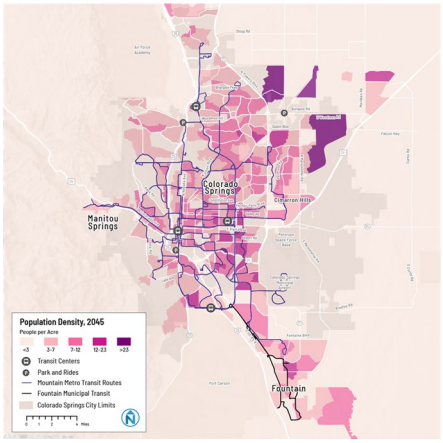
Jonathan Mosteiro (Nelson\Nygaard) introduced the transit plan as part of the larger Long Range Transportation Plan (LRTP). The 2050 Regional Transit Plan, a chapter within the LRTP, looks to chart out short- and long-term policies and programs. The previous iteration of the plan was last completed before the pandemic, and a lot has changed in how people travel throughout the region.

Jonathan Mosteiro (Nelson\Nygaard) provided a framing of the draft technical scenarios by sharing the current strengths and challenges of the transit system. The current transit system serves the strongest transit corridors and maintains frequent service (a trip every 15 minutes) along four main transit corridors. Large parts of Colorado Springs do not have fixed-route service and where growth is expected in the next 20 years (Figure 1), there is no existing fixed-route service. The existing service is typically not frequent and does not run late. There is a lack of pedestrian accessibility to many bus stops and several transfer locations do not have suitable operations, rider, and operator amenities.

Jonathan Mosteiro (Nelson\Nygaard) reviewed the progress made from the last planning process, the City-wide Transportation Plan ConnectCOS, and stakeholder feedback provided thus far. Based on the feedback heard and past planning, the proposed vision responds to community desire for a plan that is aspirational, actionable, and responsive to regional population growth. Feedback has also expressed the importance of connectivity to regional destinations, access to downtown Colorado Springs, and access to jobs.

Thomas Wittmann (Nelson\Nygaard) reviewed the guiding principles for developing the draft technical scenarios. These draft scenarios holistically address transit needs through a mixture of expanding service and introducing innovative technology. The goals are to utilize new investments to attract citizens who do not currently use the system with high-quality service in growing areas while increasing service for current riders. The technical concepts collectively create the draft 2050 Transit Vision (Figure 2), a cost-unconstrained compilation of different transit elements.

Population Density Map



Employment Density Map

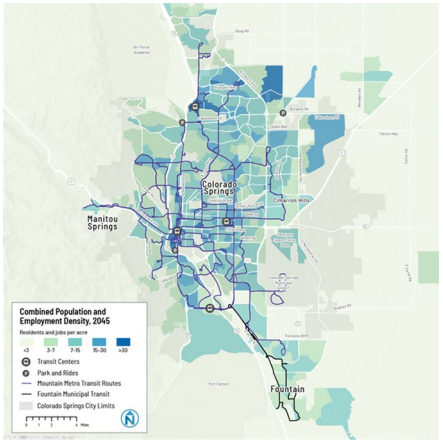


Figure D-3: Maps show the expected population density, 2045 (Map 1) and combined population and employment density (Map 2).

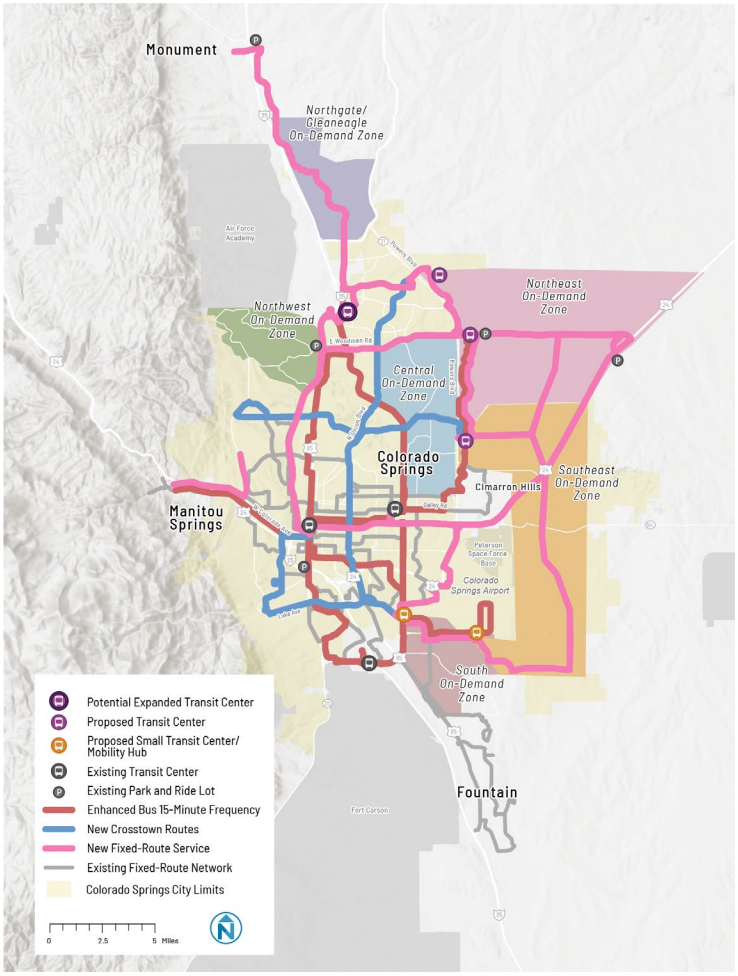


Figure D-4: Draft 2050 Transit Vision

Thomas Wittman (Nelson\Nygaard) reviewed the draft elements of the 2050 Transit Vision, which include the following:

Innovative Mobility Zones

- Designating separate geographic zones to provide on-demand and/or non-traditional transit services for trips that occur entirely within each zone's boundary. The primary goal is to connect growing areas to existing fixed-route buses and build ridership until demand is sufficient to support new routes. Effective implementation of the zones is supported by app-based technology.

Enhanced Bus Service

- Create six frequent and fast services that serve the highest concentrations of existing and projected growth along Academy Boulevard, Nevada, Colorado, Powers Boulevard, downtown Colorado Springs, and the Colorado Springs Airport. The service would run every 15 minutes or less during the weekday, 30 minutes or less during the weekend, and have wider stop or station spacing.

Cross-Town Services

- Develop or improve existing north-south and east-west services on Union, Garden of the Gods/Austin Bluffs, and Lake to promote regional connections and access to jobs.

New Fixed-Route Service

- Expand existing fixed-route service to areas with expected growth, focusing on residential areas east of Powers Boulevard, northwest of InterQuest Parkway, and Banning Lewis Ranch. This includes the introduction of two new express bus routes – one to Falcon, and one to Monument.

Improve Existing Route Frequency

- Increase existing route frequency from 60 minutes to 30 minutes on all routes to attract more riders, create efficiency, and build upon the current transit investments.

Operate Earlier and Later Services

- Expand operations to 9pm on Sunday and midnight on other days of the week on all routes to support service industry workers and recreational opportunities.

Capital Improvements

- Invest in additional facilities like new or expanded transit centers, mobility hubs, speed and reliability improvements, and bus stop improvements to attract more riders.

Thomas Wittmann (Nelson\Nygaard) reviewed the total cost of the draft 2050 Transit Vision. The proposed elements more than triple the current transit investment of about 253,000 annual revenue hours (Table 1). Stakeholders were curious to understand the total revenue hours needed to implement the vision, which Thomas Wittmann (Nelson\Nygaard) clarified that if all elements were implemented, there would be the need for an additional 603,000 annual revenue hours. A total dollar amount was not allocated as some draft transit vision elements may incur additional operational costs.

Table D-1. Summary of Investment Needs for the Draft 2050 Transit Vision

Vision Element	Annual Revenue Hours	Weekday Fleet Needs
New Routes	220k	+36
Enhanced Bus	158k	+27
Crosstown Routes	49k	+6
Frequency Improvements	53k	+11
Span of Service Improvements	32k	0
Innovative Mobility Zones	93k	+16
TOTAL	**603k**	**+96**

Stakeholders were curious to understand how this vision creates a cultural shift and encourages more people to ride transit, particularly how best to do this with limited resources. Thomas Wittmann (Nelson\Nygaard) shared that in Oklahoma City, faster and more reliable service increased ridership to a point where Bus Rapid Transit (BRT) is now a backbone of future planning efforts. Transit services need to support land uses and job growth to provide another option for people to ride for work, everyday trips, recreation, and leisure.

When discussing the innovative mobility zone, stakeholders wanted to understand more about implementation and potential amenities. Thomas Wittmann (Nelson\Nygaard) clarified the mobility zones would provide a complimentary service to the fixed-route improvements and focus on providing on-demand travel services within each geographic zone, not between them. These zones would address immediate needs of growing areas before fixed-route service is established. The geographic bounds of the zones can be refined as well as the services (ride share, bike sharing, scooter sharing, etc.) provided. Implementation would start with a single geographic zone to provide lessons learned for additional zones to be established. Additional needs to implement a mobility zone would depend on the specific facilities for that zone. Updates to zoning would not be required as the mobility zone would support existing land uses. Vehicles within the mobility zones will be size-specific for the zone.

During the innovative mobility zone discussion, the stakeholders explored ways to better support school drop-off. A program that provides neighborhood to school choice van service would help promote trust in the transit system and reduce traffic. The program could also help vulnerable families by not disrupting school attendance that are currently being helped by the school districts. Jacob Matsen (MMT) clarified that MMT has an existing voluntary school pool program to support students' transportation to school beyond the buses operated by the school districts. Thomas Wittmann (Nelson\Nygaard) noted that funding for an additional program may depend on if this program is considered 'new'. Stakeholders agreed an additional program should be included in the 2050 Regional Transit Plan and funding would be identified later.

While discussing connectivity in relation to the new fixed-route services and enhanced bus services, stakeholders asked questions about incremental changes and connection to military installations. Thomas Wittman (Nelson\Nygaard) clarified the destinations in the draft 2050 Transit Vision are conceptual. The basis for the conceptual locations was to build on some of the top ranked interests for future service in ConnectCOS. The incremental approach would be providing service farther north where population is expected to grow and connect to other destinations like Manitou Springs. Connecting to military installations is difficult because the approvals required for vehicles to leave and return to base cause operational challenges if a driver with clearance is unavailable.

Angela Jo Woolcott (Kearns & West) facilitated a polling exercise to understand Advisory Committee members top three priority draft 2050 Transit Vision Elements (Figure 3).

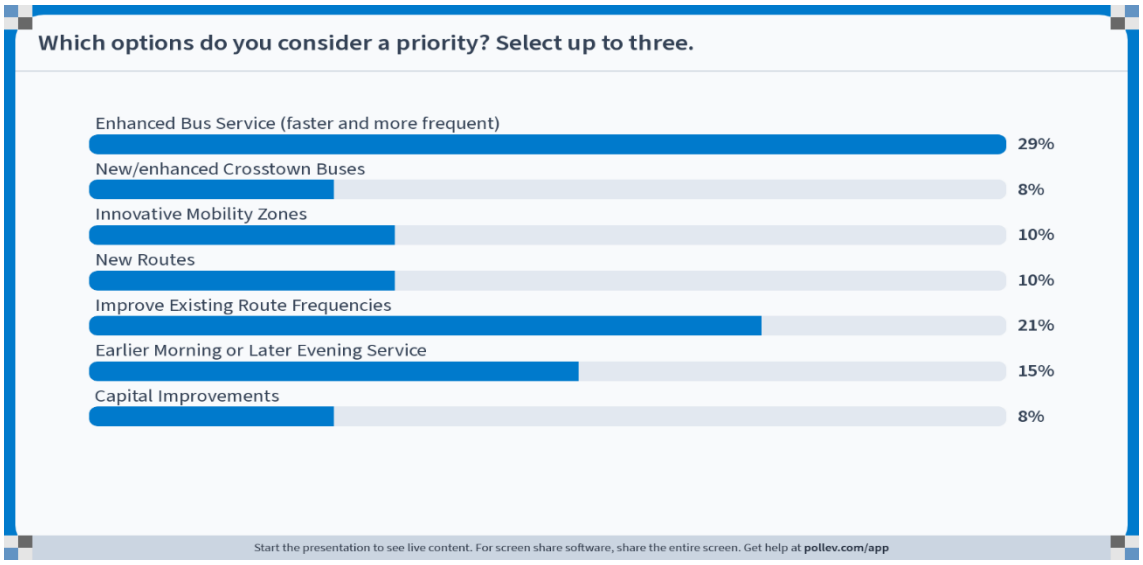


Figure D-5: Draft 2050 Transit Vision Elements Polling Results

While answering the poll, participants asked to understand the difference between the 'Enhanced Bus Service' and 'Improve Existing Route Frequencies' elements. Thomas Wittmann (Nelson\Nygaard) clarified the 'Enhanced Bus Service' is focused on six corridors while the 'Improve Existing Route Frequencies' is for all services.

While discussing the responses to the poll, stakeholders provided additional considerations on how to present this material to the public, while also receiving their feedback including:

- Provide visual examples of where elements have worked elsewhere to instill more confidence that these elements can be implemented.
- Update maps to include more landmarks like military installations.
- Reduce the use of transportation or transit jargon. If acronyms must be used, create a cheat-sheet of the acronyms.
- Provide the opportunity for other stakeholders who could not attend to provide input virtually.

2050 Regional Transit and Specialized Transportation Plans Open House Preview

Angela Jo Woolcott (Kearns & West) previewed the 2050 Regional Transit and Specialized Transportation Plans Open House, scheduled for Tuesday April 30th 4:30 – 6:30 p.m. at the City Administration Building. The Open House looks to achieve the following:

- Inform and educate the community about the planning process, existing services and route conditions, and how feedback will be incorporated into the final plan.
- Collect input that can be incorporated into screening criteria and ultimately inform outcomes and recommendations.

- Consult with attendees to help prioritize proposed transit improvements.

Angela Jo Woolcott (Kearns & West) reviewed the Open House format and stations. The Open House will be a 'choose your own adventure' meeting format with several topical stations with boards for participants to browse at their leisure. If someone is only interested in a specific topic, they may only visit that station. In addition to providing information, the Open House will also seek feedback from the public through various interactive activities and questions and answers to the project team. The planned Open House stations are:

- **Welcome and Sign-in**: Orient participants to the meeting.
- **Process and Plans Overview:** Contextualize how the Specialized Transportation and Regional Transit Plans are a component of the LRTP.
- **Existing Conditions:** Provide an overview of the current transit system.
    - **Participant Exercise:** Share where you live and where you like to travel on a map of Colorado Springs.
- **Regional Transit Plan:** Present the draft 2050 Transit Vision and different vision elements.
    - **Participant Exercise:** Prioritize the transit vision elements – which three draft transit vision elements would you prioritize?
- **Specialized Transportation Plan:** Present the draft strategies and how they address the specialized transportation needs.
    - **Participant Exercise:** Prioritize the draft strategies – which three draft strategies would you prioritize?
- **What We've Heard:** Summarize key feedback themes and outreach activities conducted thus far.
- **Next Steps and Comment:** Review next steps in the process and share your feedback via a comment card.

Angela Jo Woolcott (Kearns & West) concluded by asking members to share if they would be able to attend the Open House. A majority of stakeholders raised their hand to show that they plan to attend. In addition to attending, Angela Jo Woolcott (Kearns & West) encouraged stakeholders to promote the upcoming open house. A digital promotional toolkit, which includes the flyer and drafted promotional language, will be shared with Stakeholder Advisory Committee members.

Stakeholders were curious to understand if this would be the only open house. Angela Jo Woolcott (Kearns & West) clarified that there would be additional open houses as part of the LRTP process, but the Open House on April 30th is solely focused on the 2050 Regional Transit and Specialized Transportation Plans, a component plan of the LRTP.

Next Steps

Angela Jo Wolcott (Kearns & West) closed the meeting by thanking those who could join the final stakeholder meeting. Jacob Matsen and Lan Rao (MMT) also thanked stakeholders for their participation, input, and support.

Appendix D-2: Meeting Participants

Stakeholder Advisory Committee Members - In Attendance

Name	Organization
Carlos Perez	Citizens Transportation Advisory Board
Morgan Hester	City of Colorado Springs Long Range Planning
Katie Sunderlin	City of Colorado Springs Housing and Community Vitality
Catherine Duarte	City of Colorado Springs Housing and Community Vitality
Gayle Sturdivant	City of Colorado Springs Public Works
Todd Frisbie	City of Colorado Springs Public Works
Sharon Thompson	City of Fountain
Juan Alvarez	City of Manitou Springs
Roy Chaney	City of Manitou Springs
Scott Skinner	Colorado Department of Transportation
Chris Padilla	Colorado Springs Airport
Chelsea Gondeck	Downtown Partnership
Tara McCarthy	PikeRide
Jim Godfrey	Pikes Peak Rural Transit Authority
Clarke Becker	Pikes Peak Workforce Center
Laura Zapien	TransDev
Salvador Pozos	TransDev
Amy Kelley	United States Air Force Academy
Matthew Fitzsimmons	United States Air Force Academy
Jim Spice	University of Colorado - Colorado Springs

Stakeholder Advisory Committee Members – Not in Attendance

Name	Organization
Jessie Kimber	City of Colorado Springs Economic Development Division
Cathy Buckley	Colorado College
Emily Barden	Colorado Department of Transportation
Ben Gellman	Colorado Department of Transportation
Geoff Guthrie	Colorado Department of Transportation
George Gromke	Colorado Department of Transportation
Erin Maruzzella	Innovations in Aging
Cindy Aubrey	Pikes Peak United Way
Traci Marques	Pikes Peak Workforce Center
Darren Horstmeier	Schriever Space Force Base
Hannah Parsons	Transportation Commission of Colorado
Doug Price	VisitCOS

Project Team

Name	Organization
Laura Crews	PPACG
John Liosatos	PPACG
Danelle Miller	PPACG
Jared Verner	PPACG

Name	Organization
Jacob Matsen	MMT
Lan Rao	MMT
Tara Evans	MMT
Allison Burns	MMT
Ezra Pincus-Roth	Nelson\Nygaard
Thomas Wittmann	Nelson\Nygaard
Jonathan Mosteiro	Nelson\Nygaard
Zach Barr	Kearns & West
Angela Jo Woolcott	Kearns & West
Caitlin Sheridan	Kearns & West

Appendix E: 2050 Regional Transit Plan & Specialized Transportation Plan Open House

2050 Regional Transit Plan & Specialized Transportation Plan

Spring 2024 Public Feedback Summary (April 30 – May 17, 2024)

Introduction

Mountain Metropolitan Transit (MMT) held an in-person open house on Tuesday, April 30, 2024, at the City Administration Building in Colorado Springs for the 2050 Regional Transit Plan and Specialized Transportation Plan. The open house was an opportunity for the public to help shape the future of transit in the growing Pikes Peak Region.

The purpose of the open house was to:

- Inform and educate the community about the planning process, existing services, and route conditions, and how feedback will be incorporated into the final plan.
- Collect input that can be incorporated into screening criteria and ultimately inform outcomes/recommendations.
- Consult with attendees to help prioritize proposed transit improvements.

The public open house was promoted through various channels resulting in about 45 in-person attendees over a two-hour window. Advertising included posting information on the plan's website, social media channels, city-wide e-blasts, and through the plan's stakeholder committees. In addition, 300 flyers were distributed to community gathering locations throughout the City, as well as distributed on all MMT buses. A complete summary of the promotional materials can be found in **Appendix E-1**.

Background

Pikes Peak Area Council of Governments (PPACG) is leading the Long Range Transportation Plan (LRTP), of which both the 2050 Regional Transit Plan and Specialized Transportation Plan are component plans. The LRTP informs the long-term transportation strategy for Pikes Peak. PPACG works with local jurisdictions and concurrent planning efforts to inform the LRTP.

The 2050 Regional Transit Plan identifies potential improvements to the transit system that respond to the current needs and expected growth between now and 2050. The 2050 Regional Transit Plan goals are to:

- Make transit competitive with other ways to travel throughout the region.
- Provide access to jobs, schools, medical facilities, social events, and community activities.
- Maintain or improve services to the people who need it the most.
- Deploy technology to both improve agency operations and the customer experience.
- Promote environmental stewardship.

The 2050 Specialized Transportation Plan is necessary for receiving federal funding on transportation programs tailored to older adults, people with disabilities, and people with low incomes. The plan assesses the conditions and potential improvements for transit and paratransit, along with specialized transit options and human services for the target populations.

The recommendations in the 2050 Regional Transit and Specialized Transportation Plans will be incorporated into the LRTP. The draft LRTP will be available for public comment in Fall of 2024.

Format

The open house featured a series of informational stations arranged around the room to encourage participant interaction. Each station included a feedback exercise allowing participants to participate in the room or through a QR code.

Participants were asked to sign in with their name, organization, and email address before receiving a room legend, project factsheet, and comment card. A set of participation guidelines and key terms and definitions were included with the room legend. Participants were asked to collaborate and respect the ideas of others.

The six informational stations summarized the plan process and overview, existing conditions, the proposed 2050 Transit Vision, the proposed 2050 Specialized Transportation strategies, what we've heard, and next steps. Project staff were available at each station to answer participant questions or discuss specific topics. Before leaving the open house, participants were directed to a comment station where they could provide specific project feedback either handwritten or digitally.

A virtual open house was launched on the project website on Tuesday, April 30, 2024, for members of the public who could not attend the open house. The self-guided open house featured the same materials as the in-person event. The physical comment card was recreated as a digital comment card in SurveyMonkey to collect priority information on the proposed transit and specialized transportation improvements.

In addition to the in-person and virtual open house, two additional pop-up events were hosted. A Specialized Plan open house pop-up was hosted at The Independence Center on

Open House Photos



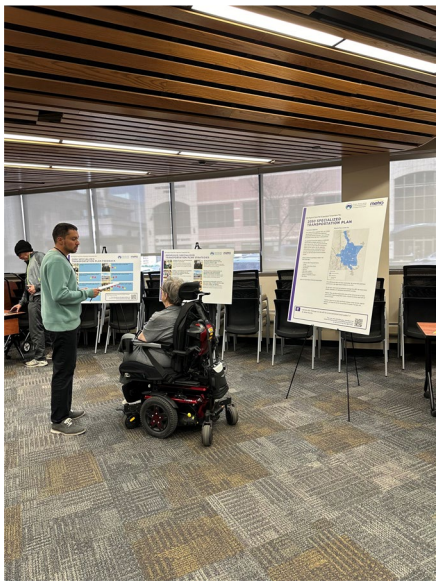


Figure E-1: Pictures from the in-person open house on Tuesday, April 30, 2024.

Tuesday, May 14, 2024 from 12:30 – 3 p.m. to ensure members of the specialized transportation community could provide feedback. A virtual office hour was hosted on Friday, May 17,2024, from 12 – 1 p.m., which included a brief presentation and an opportunity for Q&A with the project team.

Public Feedback Overview

Public input at the open house was collected via comment cards (digital and print) and conversations with project staff. The digital comment card remained accessible on the website until Friday, May 17, 2024.

Approximately 114 community members provided feedback or attended an open house event. Seven physical comment cards with unique zip codes were submitted at the open house. 66 unique responses from 31 of the 48 Colorado Springs zip codes were provided through the digital comment card, with most responses (7) coming from just north of downtown.

Community members shared feedback on various topics with project staff including services and operations, connectivity, accessibility, building partnerships, future planning considerations, and funding. Below is a high-level summary of what was heard:

- The City of Colorado Springs is a car-centric City. Increased or improved transit services will create a more competitive travel option and could increase ridership. Improved services and operations are key to shifting the culture and mindset around transit in the City.
- The northern and eastern regions of the city and military installations do not have adequate services. In addition, transit connections to downtown, attractions, and other regional centers should be established.
- Transit information and services should be accessible to all. This includes physical access to infrastructure as well as navigating the transit system.
- With a growing population, educating future users about the transit system will ensure all can navigate it effectively. Transit education and awareness can be increased through community partnerships.
- The needs of older adults in the future will be different than the current generation. Consider future technologies and the need to educate older adults about transit.
- Consider transit-supportive land use and development code changes to accommodate service expansion and reduce communities being cut off from grocery stores, medical facilities, and education.
- Funding for implementation will be important to consider for both plans.

The following sections describe additional feedback gathered by station (both in-person and digitally).

Accessing Transportation Information

Participants were asked how they like to find information about their transportation options **(Figure E-2):**

a. Look up information online and navigate myself
b. Have a friend or caretaker handle the issue
c. Phone call with a professional coordinator/broker who handles the issue
d. Text messaging with a professional coordinator/broker who handles the issue
e. Online chat with a professional coordinator/broker who handles the issue

Over 80% of respondents selected “Look up information online and navigate it myself.”.

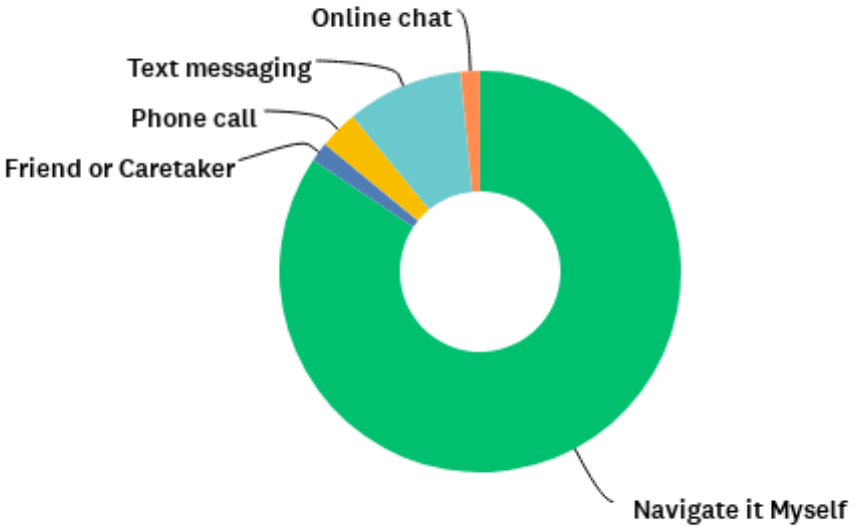


Figure E-2. Responses on How Participants Would Like to Receive Information About Their Transportation Options.

Draft 2050 Transit Vision

Based on stakeholder feedback and work conducted in previous planning processes like ConnectCOS, the project team developed a draft 2050 Transit Vision. The vision is made up of seven proposed elements **(Figure E-3)** that holistically address transit needs through a mixture of expanding service and introducing innovative technology.

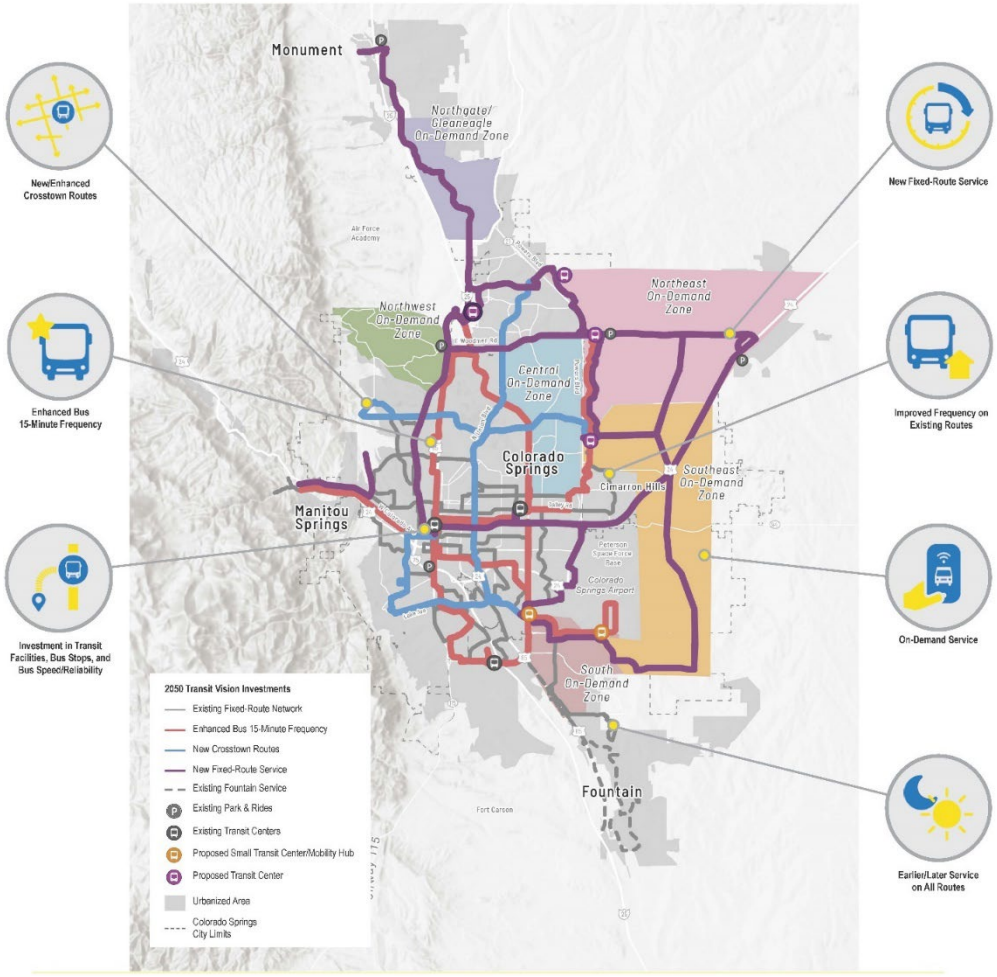


Figure E-3. Draft 2050 Transit Vision

The proposed 2050 Transit Vision elements are:

- **Enhanced Bus 15-Minute Frequency:** Six enhanced bus routes to provide fast, frequent and reliable service to corridors with the highest concentration of existing and future jobs and residents. These routes would operate every 15 minutes or better during the day on weekdays and weekends and 30 minutes at all other times.
- **New/Enhanced Crosstown Routes:** New crosstown routes improve north-south and east-west crosstown travel and serve several key corridors. These routes would operate every 30 minutes all day, seven days a week.

- **On-Demand Service:** Six different on-demand zones throughout the region. Riders can request rides via a call-in number or mobile application. Vehicles can pick up and drop off riders anywhere within the boundaries of the given zone.
- **Improved Frequency on Existing Routes:** All existing routes would be improved to run at least every 30 minutes all day on weekdays, Saturdays, and Sundays.
- **New Fixed-Route Service:** Two new express routes connecting downtown Colorado Springs with Monument and Falcon. Six new local bus routes to improve connectivity to the eastern and northern parts of Colorado Springs, including Bannis Lewis Ranch and Garden of the Gods. All new routes would operate every 30 minutes all day.
- **Earlier/Later Service on All Routes:** Service on all routes would begin at 6:00 AM on weekdays, 6:30 AM on Saturdays, and 7:00 AM on Sundays. Service would be extended until midnight on weekdays and Saturdays and until 9:00 PM on Sundays.
- **Investment in Transit Facilities, Bus Stops, and Bus Speed/Reliability:** Investment in additional infrastructure to improve access and attract more riders. This would support new or expanded transit centers, new mobility hubs for first/last mile connections, bus stops with additional sidewalk connections or new benches/shelters, and speed/reliability improvements to speed up bus service and ensure on-time operations.

Public Priorities

Participants responded with their top three transit priorities. Participants shared their feedback by placing a colored dot on a station board **(Figure E-4)** or by sharing feedback on the digital or print comment card, which is summarized in Table 1.

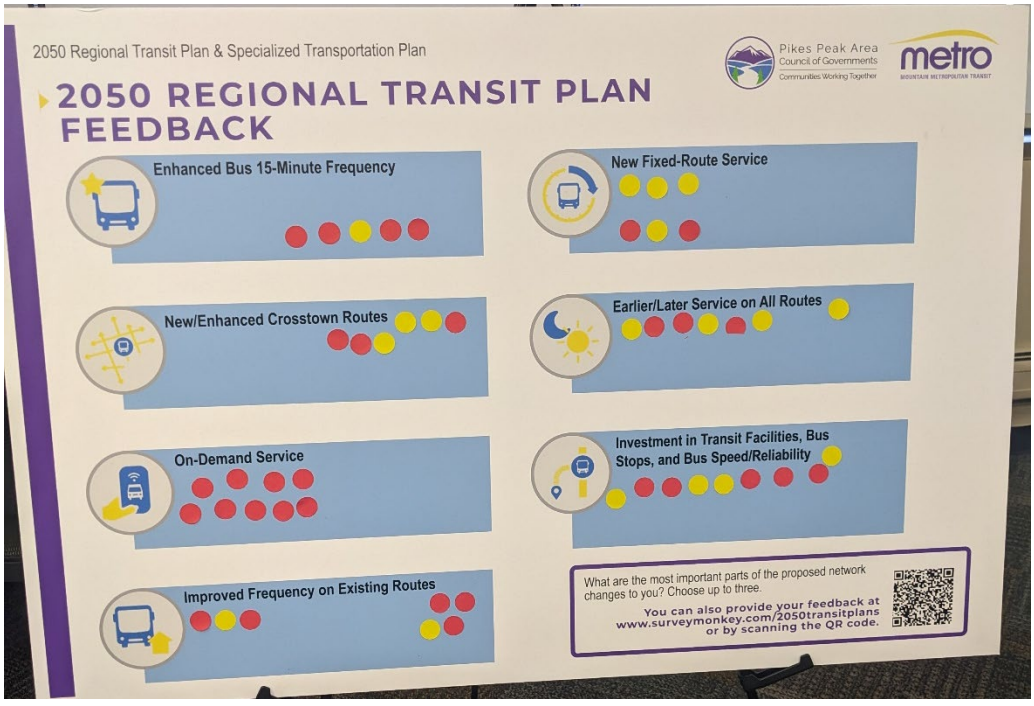


Figure E-4. Public feedback collected during the in-person public open house 2050 Regional Vision prioritization exercise.

From the feedback collected, the top Transit Vision Priorities are the following:

1. Earlier/later service on all routes
2. Investment in transit facilities, bus stops, and bus speed/reliability
3. Improved frequency on existing routes.

Table E-1. Summary of Transit Vision Element Priorities

Transit Vision Element	Open House Responses*	Virtual Open House Responses	Total
Enhanced bus 15-minute frequency	8	12	20
New/enhanced crosstown routes	6	23	29
New fixed-route service	9	18	27
On-demand service	9	13	22
Improved frequency on existing routes	**9**	**28**	**37**
Earlier/later service on all routes	**12**	**35**	**47**
Investment in transit facilities, bus stops, and bus speed/reliability	**12**	**27**	**39**

**Includes responses from board exercises and physical comment cards.*

The top three priorities align with the discussions between project staff and participants at the open house regarding increasing the competitiveness of transit compared to single-occupancy vehicles and the overall appeal of using transit in Colorado Springs.

Additional Feedback

In addition to their priorities, the public had the opportunity to provide feedback on additional considerations for the Regional Transit Plan through the physical and digital comment card. A summary of the key themes is provided below.

- **Connectivity:** The plan should focus on connecting destinations within the City of Colorado Springs. The public advocated for improved connectivity between major destinations, including the airport, new housing developments, and tourist destinations or attractions. Regional connections shared include destinations like Monument, Falcon, Woodland Park, and Manitou.
- **Rail:** A light rail or trolley system connecting areas to downtown was suggested to help increase City connectivity. Participants also shared a need for regional connectivity through Front Range Passenger Rail.
- **Expanded Weekday Services:** The service hours and frequency of service should be improved to attract riders and support jobs. The public recommended increasing service hours to include weekday service beginning at 5 a.m. and weekend service to begin at 6 a.m. Additionally, the public advocated for buses to run until midnight. In addition, the

public recommended increasing the frequency of buses to reduce wait times for shift workers.

- **Enhanced Service:** The public advocated for additional enhanced transit services on North Nevada, Colorado Avenue, and connecting University of Colorado – Colorado Springs. Additional fixed-route services should be implemented to connect northern and eastern parts of Colorado Springs.
- **Infrastructure:** Infrastructure improvements should increase fixed-route service reliability, support multi-modal travel, and bus stop amenities. The public recommended dedicated bus lanes on major transit routes. In addition, improvements to the infrastructure at bus stops were recommended to protect riders from inclement weather.
- **Bicycles:** The public shared they would like to see more ways to connect bicycle riders with public transit, such as connecting bus lanes to transit service or including bicycle racks at bus stops or bus racks on bikes.
- **Safety:** Increase safety at bus stops from vehicle traffic.
- **Operations:** Improve operations to enhance riders' experience and increase ridership. This includes increased pay for transit employees, improved reliability, and increased regular maintenance of buses and bus stops. Provide real-time bus information at kiosks at bus stops.
- **Fares:** Consider low-cost or fee-free travel on certain routes to increase ridership.
- **Accessibility:** Improve accessibility to bus stops for all modes of travel and all riders. Improve the accessibility of the vehicle fleet for fixed-route services, including reducing noise for sensory-sensitive riders.
- **Planning:** Coordinate future transit planning with improved land-use codes to improve the effectiveness of housing, access to essential services, and transit. Explore creative policies to incentivize transit use.

2050 Specialized Transportation Plan

Specialized Transportation Issues, Needs, and Solutions

The 2050 Specialized Transportation strategies focus on increasing coordination between human services, regional planners, and organizations who provide transportation for people of all ages and abilities.

The Specialized Transportation proposed solutions are the following:

- Coordinate all resources and instruction for bus drivers in one location.
- Establish a single database of all registered and eligible riders shared between all the specialized, paratransit, and transit providers in the region.
- Create programs to reimburse people for Uber, Lyft, and taxi rides in situations where no transit is available or there is a personal emergency.
- 24/7 phone hotline and website to help direct people to the most appropriate transportation options.
- Set new standards of service for all specialized transit providers receiving funding from PPACG & MMT.
- Prioritize vehicle purchases so they are appropriately sized, shared between agencies, and regularly maintained.
- Improvements to help people access bus stops more safety, including sidewalks, safer crosswalks, shelters, and lighting.

Paratransit & Specialized Transportation Services

Specialized transportation is service designed for individuals which offers door-to-door or curb-to-curb transportation (as well as door-through-door, in certain circumstances). Specialized transportation may require advanced reservations and is usually operated by funded non-profit (e.g., Envida, Silver Key Services, Fountain Valley Senior Center).

Paratransit services is a transit agency service provided by transit agencies for individuals with disabilities who cannot independently use transit services some or all of the time. Paratransit operates the same days and hours as local fixed-route transit service covering areas within 3/4 mile of existing routes. It is often called “ADA complementary paratransit”, as it exists to ensure transit complies with the Americans with Disabilities Act (ADA).

Public Priorities

The project team asked participants to choose their the three most important specialized transportation strategies through an in-room exercise **(Figure E-5)** and physical and virtual comment cards.



Figure E-5. Public feedback collected during the in-person public open house and pop-up specialized open house to inform the 2050 Specialized Transportation plan.

The top priorities shared are:

1. Improvements to help people access bus stops more safety, including sidewalks, safer crosswalks, shelters, and lighting.
2. Prioritize vehicle purchases so they are appropriately sized, shared between agencies, and regularly maintained.
3. 24/7 phone hotline and website to help direct people to the most appropriate transportation options.
4. Set new standards of service for all specialized transit providers receiving funding from PPACG & MMT received the same number of responses.

Table E-2. Summary of Priority Specialized Transportation Strategies.

Specialized Transportation Plan Strategy	Open House Responses*	Virtual Open House Responses	Specialized Open House Pop-Up	Total
Coordinate all resources and instruction for bus drivers in one location	3	17	2	22
Establish a single database of all registered and eligible riders shared between all the specialized, paratransit, and transit providers in the region	6	14	8	28
Create programs to reimburse people for Uber, Lyft and taxi rides in situations where no transit is available or there is a personal emergency.	5	14	4	23
24/7 phone hotline and website to help direct people to the most appropriate transportation options:	**10**	**13**	**11**	**34**
Set new standards of service for all specialized transit providers receiving funding from PPACG & MMT.	**7**	**16**	**6**	**29**
Prioritize vehicle purchases so they are appropriately sized, shared between agencies, and regularly maintained.	**5**	**23**	**6**	**34**
Improvements to help people access bus stops more safety, including sidewalks, safer crosswalks, shelters, and lighting.	**14**	**44**	**12**	**70**

**Includes responses from board exercises and physical comment cards.*

The overwhelming support for improvements focused on accessibility and safety aligns with feedback provided throughout the planning process.

Specialized Transportation Experience

The project team asked participants to rank the following priorities when receiving specialized transportation (listed in order of rank with one being their top priority):

1. Better on-time performance and reliable pick-up and drop-off service
2. Thoughtful customer service, including sensitivity to disabilities

3. Service available 24 hours a day (particularly during the evenings, late nights, and early mornings)
4. Service available seven days a week
5. Less diversions and stops picking up / dropping off other passengers during your trip
6. Less time between when I need to reserve a ride and when I get the ride
7. A centralized simple method for booking a ride
8. More comfortable vehicles
9. Personal assistance getting into the vehicle and getting through the front door of my destination

The top three priorities most commonly shared on all comment cards included better on-time performance and reliable pick-up and drop off, thoughtful customer service, and service hours particularly service in the evenings, late night, or early mornings. This ranking reiterates feedback heard prior about the importance of creating an inclusive transportation system focused on riders' experiences.

Provider Preference

The project team also asked participants if they had a preference on who is responsible for their specialized transportation rides. The responses were evenly split between a preference for a government or public sector provider (41%) and no preference (57%). Previous feedback showed a similar split, with some specialized transportation riders preferring a specific service and others using several services to meet their needs.

Additional Feedback

In addition to sharing their plan priorities, the public had the opportunity to provide additional thoughts for the Specialized Transportation Plan. A summary of the key themes is provided below.

- **Accessibility:** Accessibility to existing fixed-route and express-route services is not adequate for riders with disabilities. Create a complete sidewalk system so fixed-route bus stops can be reached by all riders. Ensure all express routes allow for paratransit services. The fixed-route buses are loud and not friendly to riders with sensory issues, which creates accessibility issues and reduces user experience.
- **User Experience:** The current system (fixed-route, specialized and paratransit services) is difficult to navigate, is not welcoming, and can be cumbersome. Consider centralizing services into one public or private entity to increase efficiencies rather than sharing information between several providers. Equip drivers with training to be sensitive and courteous to all disabilities. Introduce an option to set up a long-term schedule with paratransit providers to reduce the need for calling and scheduling routine rides.
- **Flexibility:** The current specialized and paratransit system is not flexible when a rider books multiple rides for a day, but one cancels. Riders recommend the creation of a more flexible system, that can be adapted to riders' needs.

- **Vouchers:** A voucher system for on-demand service should be explored to increase flexibility in the services disabled riders can take.
- **Operations:** Introduce more routes for specialized and paratransit services to provide more freedom for riders. Expand paratransit service beyond the federally required ¾ mile radius from fixed-route stations.

Next Steps

The project team will review technical analyses and public feedback provided throughout the planning process and prioritize the proposed regional transit and specialized transportation improvements. This step will include the development of an implementation plan. The draft 2050 Regional Transit Plan and Specialized Transportation Plan will be published in the summer of 2024. Both plans will then be incorporated into the LRTP planning process in Fall 2024 and transition into the adoption process, which will include additional public engagement opportunities.

Appendix E-1: Open House Promotional Materials

Flyer



COLORADO SPRINGS OLYMPIC CITY USA
metro MOUNTAIN METROPOLITAN TRANSIT
Pikes Peak Area Council of Governments Communities Working Together

ESTÁ INVITADO A LA

JORNADA DE PUERTAS ABIERTAS DEL PLAN DE TRÁNSITO REGIONAL Y EL PLAN DE TRANSPORTE ESPECIALIZADO 2050



Acompañe a la Cuidad de Colorado Springs, Mountain Metropolitan Transit (MMT) y el Consejo de Gobiernos del Área de Pikes Peak (PPACG) en nuestra próxima jornada de puertas abiertas.



- Escuche sobre las posibles formas en que el transporte público puede satisfacer las crecientes necesidades regionales.
- Conozca los criterios utilizados para seleccionar soluciones prometedoras.
- Ayude a priorizar futuras soluciones de tránsito.

Acompáñenos entre las 4:30 p.m. y las 6:30 p.m. el martes 30 de abril de 2024.

Edificio de la Administración Municipal
30 S Nevada Ave
Colorado Springs, CO 80903

El estacionamiento será validado para el estacionamiento del Edificio de Administración de la Ciudad por hasta 2 horas.

APRENDA MÁS

De acuerdo con la Ley de Estadounidenses con Discapacidades (ADA, por sus siglas en inglés) de 1990, la Ciudad de Colorado Springs no discriminará a las personas calificadas con discapacidades. Además, la Ciudad ofrece servicios de traducción para materiales y reuniones. Los ciudadanos pueden presentar solicitudes de traducción y acomodación enviando un correo electrónico a max.donofrio@coloradosprings.gov o contactando a la Oficina de Comunicaciones al 719-385-5248. Marque 711 o 800-659-3656 para Relay Colorado antes del 25 de abril de 2024.

transitinfo@coloradosprings.gov
http://bit.ly/2050transitplans

Advisory Committee Promotional Toolkit

Mountain Metropolitan Transit
2050 Regional Transit Plan & Specialized Transportation Plan
Help us promote the upcoming open house! – April 2024

Share in an e-blast or community newsletter.

English:

Attention transit enthusiasts! 🚍 We need your input to help shape the future of transit in Colorado Springs! Join us at the 2050 Regional Transit and Specialized Transportation Plans Open House.
Stop by anytime on Tuesday, April 30, 2024, between 4:30 – 6:30 p.m. at the City Administration Building (30 S Nevada Ave) to hear about the potential ways transit can meet growing regional needs, learn the criteria used to select promising solutions for the Regional Transit Plan and Specialized Transportation Plan, and help prioritize future solutions.
Together, we can create a more connected and efficient transit system that works for everyone. See you there! 🤝👏

Spanish:

¡Atención entusiastas del tránsito! 🚍¡Necesitamos su opinión para ayudar a dar forma al futuro del tránsito en Colorado Springs! Acompáñenos en la Jornada de Puertas Abiertas del Plan de Tránsito Regional y el Plan de Transporte Especializado 2050.
Acompáñenos el martes 30 de abril de 2024, entre las 4:30 – 6:30 p.m. en el Edificio de la Administración de la Ciudad (30 S Neveda Ave) para escuchar acerca de las maneras potenciales en que el tránsito puede satisfacer las crecientes necesidades regionales, aprenda los criterios utilizados para seleccionar soluciones prometedoras para el Plan Regional de Tránsito y el Plan Especializado de Transporte, y ayudar a priorizar soluciones futuras.
Juntos, podemos crear un sistema de tránsito más conectado y eficiente que funcione para todos. ¡Nos vemos allí! 🤝👏

Share on social media channels:

English:

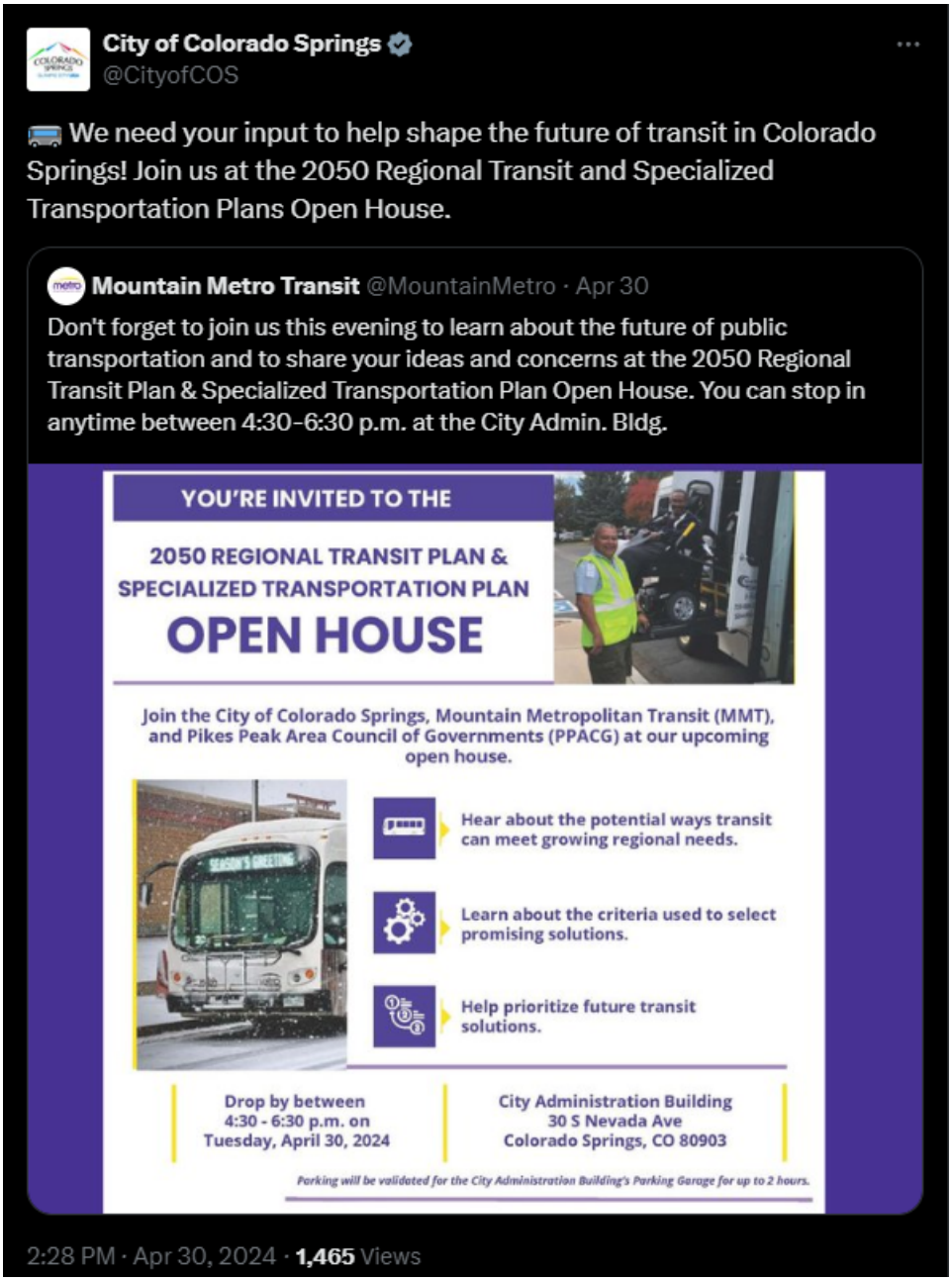
Attention transit enthusiasts! 🚍
We need your input to help shape the future of transit in Colorado Springs! Join us at the 2050 Regional Transit Plan and Specialized Transportation Plan Open House.
Stop by anytime on Tuesday, April 30, 2024, between 4:30 – 6:30 p.m. at the City Administration Building (30 S Nevada Ave) to review current conditions, learn about draft recommendations, and help us prioritize transit improvements.

Spanish:

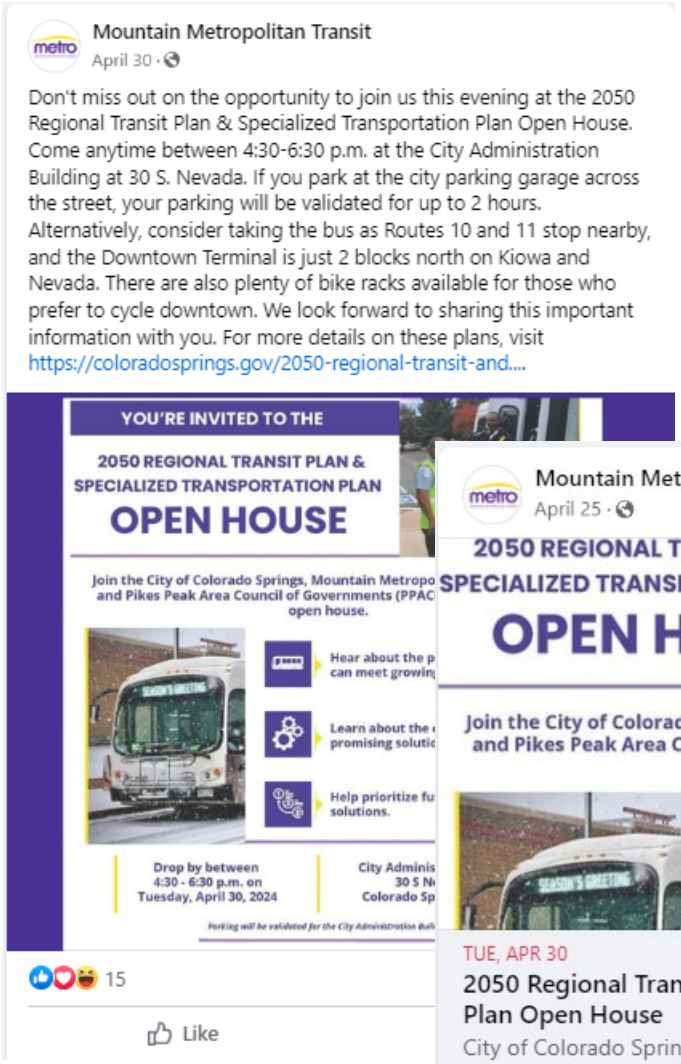
¡Atención entusiastas del tránsito! 🚍¡Necesitamos su opinión para ayudar a dar forma al futuro del tránsito en Colorado Springs! Acompáñenos en la Jornada de Puertas Abiertas del Plan de Tránsito Regional y el Plan de Transporte Especializado 2050.
Pase en cualquier momento el martes 30 de abril de 2024, entre las 4:30 pm y las 6:30 p.m. en el edificio de la Administración Municipal (30 S Nevada Ave) para revisar las condiciones actuales, aprender sobre los borradores de recomendaciones y ayudarnos a priorizar las mejoras en el tránsito.

Spread the word by sharing the attached flyer or include the flyer .jpeg in your digital communications!

X Social Media Post



Facebook Social Media Posts







Public E-Blasts

Dear [x]

Join the City of Colorado Springs, Mountain Metropolitan Transit (MMT), and Pikes Peak Area Council of Governments (PPACG) at an upcoming public open house!

Come by to hear about the potential ways transit can meet growing regional needs, learn the criteria used to select promising solutions for the Regional Transit Plan and Specialized Transportation Plan, and help prioritize future solutions.

When: Stop by anytime on Tuesday, April 30, 2024, from 4:30 – 6:30 p.m.

Where: City Administration Building, 30 S Nevada Ave, Colorado Springs, CO 80903

For those using the City Administration Building's parking lot, parking will be validated for up to 2 hours.

For more information about the plans, visit https://coloradosprings.gov/2050-regional-transit-and-specialized-transit-plans.

Spread the Word:
Invite your friends, coworkers, and neighbors. Together, we can create a more connected and efficient transit system that works for everyone. See you there!
-
Acompañe a la Cuidad de Colorado Springs, Mountain Metropolitan Transit (MMT) y el Consejo de Gobiernos del Área de Pikes Peak (PPACG) en nuestra próxima jornada de puertas abiertas.

Venga a escuchar las posibles formas en que el tránsito puede satisfacer las crecientes necesidades regionales, conozca los criterios utilizados para seleccionar soluciones prometedoras para el Plan de Tránsito Regional y el Plan de Transporte Especializado, y ayude a priorizar soluciones futuras.

Cuándo: Acompáñenos entre las 4:30 p.m. y las 6:30 p.m. el martes 30 de abril de 2024.

Dónde: Edificio de la Administración Municipal, 30 S Nevada Ave, Colorado Springs, CO 80903

El estacionamiento será validado para el estacionamiento del Edificio de Administración de la Ciudad por hasta 2 horas.

Corre la voz: Invite a sus amigos, compañeros de trabajo y vecinos. Juntos, podemos crear un sistema de transporte más conectado y eficiente que funcione para todos. ¡Nos vemos allí!

Public E-Blast Reminder

Join the City of Colorado Springs, Mountain Metropolitan Transit (MMT), and Pikes Peak Area Council of Governments (PPACG) at an upcoming public open house!

Come by to hear about the potential ways transit can meet growing regional needs, learn the criteria used to select promising solutions for the Regional Transit Plan and Specialized Transportation Plan, and help prioritize future solutions.

When: Stop by anytime on Tuesday, April 30, 2024, from 4:30 – 6:30 p.m.

Where: City Administration Building, 30 S Nevada Ave, Colorado Springs, CO 80903

For those using the City Administration Building's parking lot, parking will be validated for up to 2 hours.

Additionally, PikeRide is offering two free 30-minute trips on a PikeRide to help get to and from the upcoming open house. Use PPACGTRANSIT on the PikeRide app, and it is only valid for Tuesday, April 30, 2024. The closest hubs for parking are the CAB, Plaza of the Rockies, South Tejon Strip, and Pikes Peak Ave Downtown.

For more information about the plans, visit https://coloradosprings.gov/2050-regional-transit-and-specialized-transit-plans.

Spread the Word:
Invite your friends, coworkers, and neighbors. Together, we can create a more connected and efficient transit system that works for everyone. See you there!

-

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Venga a escuchar las posibles formas en que el tránsito puede satisfacer las crecientes necesidades regionales, conozca los criterios utilizados para seleccionar soluciones prometedoras para el Plan de Tránsito Regional y el Plan de Transporte Especializado, y ayude a priorizar soluciones futuras.

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Además, PikeRide ofrece dos viajes gratuitos de 30 minutos en PikeRide para ayudar a llegar y regresar de la próxima jornada de puertas abiertas. Utilice PPACGTRANSIT en la aplicación PikeRide y solo es válido para el martes 30 de abril de 2024. Los centros de estacionamiento más cercanos son CAB, Plaza of the Rockies, South Tejon Strip y Pikes Peak Ave Downtown. Corre la voz: Invite a sus amigos, compañeros de trabajo y vecinos. Juntos, podemos crear un sistema de transporte más conectado y eficiente que funcione para todos. ¡Nos vemos allí!

Advisory Committee E-Blasts

Dear Stakeholder Advisory Committee Members,

Thank you to those who attended the committee's second meeting. As mentioned, please find an official invitation and promotional toolkit for the upcoming open house.

Join the City of Colorado Springs, Mountain Metropolitan Transit (MMT), and Pikes Peak Area Council of Governments (PPACG) at an upcoming open house.

Come by to hear about the potential ways transit can meet growing regional needs, learn the criteria used to select promising solutions for the Regional Transit Plan and Specialized Transportation Plan, and help prioritize future strategies.

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Where: City Administration Building, 30 S Nevada Ave, Colorado Springs, CO 80903

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Help spread the Word:
Please share the meeting information through your communication channels and networks. For your convenience, attached is recommended language for website and social media announcements, newsletter content, or e-blasts – all helpful ways to encourage participation in this event.

Thank you for your continued engagement!
Sincerely,
The MMT 2050 Regional Transit & Specialized Transportation Plans

Stakeholder Committee Reminder

Dear Stakeholder Advisory Committee Members,

As a reminder, join the City of Colorado Springs, Mountain Metropolitan Transit (MMT), and Pikes Peak Area Council of Governments (PPACG) at an upcoming open house.

Come by to hear about the potential ways transit can meet growing regional needs, learn the criteria used to select promising solutions for the Regional Transit Plan and Specialized Transportation Plan, and help prioritize future strategies.

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Help spread the Word:
Please share the open house through your communication channels and networks. For your convenience, we have reattached the stakeholder media toolkit with recommended language for websites, social media, and newsletters.

See you soon!
Sincerely,
The MMT 2050 Regional Transit & Specialized Transportation Plans

Regional Transportation Plan Advisory Committee E-Blasts

Dear Regional Transportation Plan Advisory Committee Members,

As members of the Regional Transportation Plan Advisory Committee (RTPAC), we would like to invite you to join the City of Colorado Springs, Mountain Metropolitan Transit (MMT), and Pikes Peak Area Council of Governments (PPACG) at an upcoming open house.

The open house will focus on the Long Range Transportation Plan's (LRTP) 2050 Regional Transit and Specialized Transportation component plans.

When: Tuesday, April 30, 2024, drop by between 4:30 – 6:30 p.m.

Where: City Administration Building, 30 S Nevada Ave, Colorado Springs, CO 80903

For those using the City Administration Building's parking lot, parking will be validated for up to 2 hours.

Help spread the Word:
Please share the meeting information through your communication channels and networks. For your convenience, attached is recommended language for website and social media announcements, newsletter content, or e-blasts – all helpful ways to encourage participation in this event.

Thank you for your continued engagement!
Sincerely,

Reminder

Dear Regional Transportation Plan Advisory Committee Members,

As members of the Regional Transportation Plan Advisory Committee (RTPAC), we would like to remind you about the upcoming 2050 Regional Transit and Specialized Transportation. Both plans are components within the larger Long Range Transportation Plan (LRTP).

When: Tuesday, April 30, 2024, drop by between 4:30 – 6:30 p.m.

Where: City Administration Building, 30 S Nevada Ave, Colorado Springs, CO 80903

For those using the City Administration Building's parking lot, parking will be validated for up to 2 hours.

Additionally, PikeRide is offering two free 30-minute trips on a PikeRide to help get to and from the upcoming open house. Use PPACGTRANSIT on the PikeRide app, and it is only valid for Tuesday, April 30, 2024. The closest hubs for parking are the CAB, Plaza of the Rockies, South Tejon Strip, and Pikes Peak Ave Downtown.

Help spread the Word:
Please share the open house through your communication channels and networks. For your convenience, we have reattached the stakeholder media toolkit with recommended language for websites, social media, and newsletters.

See you soon!
Sincerely,

Specialized Plan Pop-up Open House Flyer

COLORADO SPRINGS OLYMPIC CITY USA
metro MOUNTAIN METROPOLITAN TRANSIT
Pikes Peak Area Council of Governments Communities Working Together

YOU'RE INVITED TO THE

SPECIALIZED TRANSPORTATION PLAN

POP-UP OPEN HOUSE

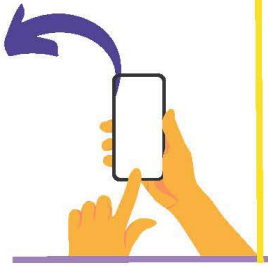


Join the City of Colorado Springs, Mountain Metropolitan Transit (MMT), and Pikes Peak Area Council of Governments (PPACG) at the upcoming pop-up event focused on the Specialized Transportation Plan.



- Hear about the potential ways specialized transportation can meet growing regional needs.
- Learn about the criteria used to select promising solutions.
- Help prioritize future specialized transportation solutions.

LEARN MORE



Drop by between 12:30 - 3 p.m. on Tuesday, May 14, 2024

The Independence Center
729 S. Tejon St
Colorado Springs, CO 80903

If you have any questions, please contact Laura Crews, at lcrews@ppacg.org or by calling 719-471-7080, ext. 121.

transitinfo@coloradosprings.gov http://bit.ly/2050transitplans

Virtual Open House Notice on the City of Colorado Springs Website

Virtual Open House for 2050 Regional Transit Plan and Specialized Transportation Plan

Home > News

Published on May 13, 2024

Log on and join the City of Colorado Springs, Mountain Metropolitan Transit (MMT), and Pikes Peak Area Council of Governments (PPACG) on Friday, May 17, 2024 at noon for a virtual open house to learn about the 2050 Regional Transit Plan and Specialized Transportation Plan. Your input is crucial in shaping the future of transit in Colorado Springs! This is your opportunity to ask questions and provide valuable input.

2050 Regional Transit Plan provides guidance for Mountain Metro Transit (MMT) when considering changes in service, frequencies, new projects, and growth of the system. The 2050 Regional Transit Plan forms the strategy for the appropriate use of funds to meet the community's mobility goals.

2050 Specialized Transportation Plan focuses on coordination, partnerships, and resource sharing among the region's specialized transportation providers. Multiple public, nonprofit, and private organizations provide transportation options for seniors, people with disabilities, and people with limited mobility. The Specialized Transportation Transit Plan is required by the Federal Transit Administration for those agencies receiving federal funds.

MMT updates the Regional Transit Plan and Specialized Transit Plan every five years as part of Pikes Peak Area Council of Government's (PPACG) 2050 Long Range Transportation Plan. The 2045 Regional Transit Plan was last updated in 2019 while the Specialized Transit Plan was last updated in 2020.

Join us on Microsoft Teams for the virtual open house by clicking the link at noon on Friday, May 17, 2024. Join the meeting now

Fill out a short comment form to ask questions, share your ideas, and prioritize future solutions.

Learn more: 2050 Regional Transit and Specialized Transportation Plans

Contact Mountain Metropolitan Transit (MMT) for more information: transitinfo@coloradosprings.gov.

APPENDIX B

SYSTEM EVALUATION

The existing transit network and 2050 system vision network were evaluated based on a set of various metrics associated with three of the goals: Choice, Accessibility, and Equity. The methodology employed for the evaluation of different metrics associated with each of the goals is discussed next.

The evaluation of the **'Choice'** goal is based on two metrics: population and the number of jobs within ¼ mile buffer of routes with 15-minute weekday frequencies (or better) in the existing and proposed network. For assessing the number of people and jobs, a circular buffer with a ¼ mile radius was drawn around the routes in GIS. The population and jobs data at the TAZ level (obtained from PPACG) for the year 2020 and 2040 was then reduced to the circular buffers of the routes using the 'summarize within' analytical tool of GIS. It is useful to note that the 'summarize within' tool of GIS was used for assessing other metrics as well that are discussed next.

The evaluation of the **'Accessibility'** goal is based on five metrics. The metric 'population within ¼ mile buffer of the transit system' is assessed by capturing the 2020 and 2040 population at TAZ level within the ¼ mile circular buffer of the existing and proposed network respectively. Similarly, the metric 'jobs within ¼ mile buffer of the transit system' is evaluated by summarizing the numbers of jobs at the TAZ level. The metric 'percentage of UZA population within ¼ mile of the transit system' is assessed by summarizing 2020 and 2040 TAZ population within the existing and future UZA boundaries respectively. The future UZA boundary includes all the TAZs where the housing density is predicted to be greater than or equal to 200 units per square mile per the 2040 TAZ data obtained from PPACG. The metric 'percentage of existing public health facilities within ¼ mile buffer of the transit system' is assessed using 'select by location' tool within GIS. All the existing public health facilities in the region (with employee count greater than or equal to 20) are determined using ESRI's Business Analyst dataset and then 'select by location' tool is used to count all the entities fulfilling the selection criterion. A similar approach is adopted for assessing the number of education facilities within the ¼ mile buffer of the transit system.

The evaluation of **'Equity'** goal is based on two metrics. The metric 'population within equity focus areas within ¼ mile buffer of the transit system' is assessed by summarizing the equity population (2040 population living in an equity area) within the ¼ mile buffer of the existing and proposed transit system. The equity areas identified from CEJST using the eight indicators are depicted in Figure 54 for the region. The metric 'low-income jobs within ¼ mile buffer of the transit system' is evaluated by summarizing the low-income jobs (per the LEHD

2021 count of jobs with wages less than $3,333/month) within the quarter mile buffer of the existing and proposed transit system.

PROJECT PRIORITIZATION

The six metrics that were used for project prioritization include: existing population density, existing employment density, population growth, employment growth, population growth within equity zone and implementation readiness. Prioritization scores for each metric are reflected on a scale of 1 to 5, with 5 referring to “high” performance and 1 referring to “low” performance. The overall score is calculated by summing up the scores of all the individual metrics. Based on the overall scores, each project was allotted with a category rank indicative of the priority of the project’s implementation. The prioritization metrics included a qualitative metric describing the project’s readiness for implementation that represents the project team’s best judgement of how ready a project was for implementation based on the surrounding land use, existence of the street network, cost-effectiveness, and whether or not previous planning had identified the project in the short- or medium-term.

PROJECT PRIORITIZATION METRICS

Investment Theme	Project	Area/ Buffer Area (Sq. Miles)	2020 Population	Existing Population Density	2020 Jobs	Existing Job Density	2040 Population	Population Growth Percentage	2040 Jobs	Job Growth Percentage	2020 Equity Population	Equity Population %	People Score	Job Score	Pop Growth Score	Job Growth Score	Equity Score	Readiness	Overall Score	Overall Rank	Category Rank	Year
Enhanced Bus/Core Transit Corridors	Academy Blvd ETC	8.6	31,191	3,640	36,951	4,312	33,738	8%	39,757	8%	12,912	41%	3	3	1	1	4	5	17	4	3	2030
Enhanced Bus/Core Transit Corridors	North Nevada ETC	5.1	12,962	2,546	44,155	8,675	15,062	16%	48,886	11%	3,709	29%	2	5	2	2	3	5	19	2	2	2040
Enhanced Bus/Core Transit Corridors	South Nevada ETC	4.2	15,020	3,603	34,964	8,387	19,026	27%	38,530	10%	5,632	37%	3	5	3	2	3	1	17	4	3	2040
Enhanced Bus/Core Transit Corridors	Platte Ave ETC	2.0	6,980	3,490	27,752	13,876	7,294	5%	30,355	9%	4,429	63%	3	5	1	1	5	5	20	1	1	2030
Enhanced Bus/Core Transit Corridors	Colorado Ave ETC	3.1	7,613	2,492	27,416	8,972	9,000	18%	30,224	10%	2,900	38%	2	5	2	2	3	3	17	4	3	2040
Enhanced Bus/Core Transit Corridors	Airport ETC	6.1	22,154	3,651	29,180	4,809	28,104	27%	35,155	20%	13,707	62%	3	3	3	2	5	1	17	4	3	2050
Enhanced Bus/Core Transit Corridors	Tutt Blvd ETC	5.0	16,031	3,206	16,338	3,268	19,696	23%	17,652	8%	5,353	33%	3	3	2	1	3	1	13	18	7	2050
Enhanced Crosstown Routes	Union Blvd	7.9	30,446	3,839	26,601	3,355	33,033	8%	28,605	8%	12,714	42%	3	3	1	1	4	3	15	11	1	2040
Enhanced Crosstown Routes	Garden of the Gods/Austin Bluffs	5.8	14,692	2,533	22,457	3,872	16,790	14%	24,429	9%	1,817	12%	2	3	2	1	1	5	14	16	3	2050
Enhanced Crosstown Routes	Lake	6.0	16,253	2,709	36,453	6,076	18,353	13%	40,123	10%	7,898	49%	2	4	2	2	4	1	15	11	1	2030
New Fixed-Route Bus Service	Tutt North/Briargate	7.2	21,524	2,990	30,617	4,253	27,529	28%	32,321	6%	0	0%	2	3	3	1	1	1	11	22	6	2040
New Fixed-Route Bus Service	Woodmen	6.7	14,407	2,146	12,267	1,828	23,385	62%	13,110	7%	0	0%	2	2	4	1	1	3	13	18	4	2040
New Fixed-Route Bus Service	Citadel to Astrozon	4.5	12,799	2,819	11,483	2,529	14,672	15%	12,788	11%	8,453	66%	2	2	2	2	5	5	18	3	1	2030
New Fixed-Route Bus Service	Banning Lewis Ranch (North)	5.3	9,238	1,727	5,391	1,008	18,227	97%	5,741	6%	0	0%	1	2	5	1	1	1	11	22	6	2040
New Fixed-Route Bus Service	Banning Lewis Ranch (South)	10.4	14,683	1,417	4,926	475	21,559	47%	11,093	125%	1,955	13%	1	1	3	5	2	1	13	18	4	2050
New Fixed-Route Bus Service	Manitou/Garden of the Gods Shuttle	2.4	4,624	1,945	2,390	1,005	4,715	2%	2,538	6%	0	0%	1	2	1	1	1	5	11	22	6	2030
New Fixed-Route Bus Service	Voyager to Monument	7.1	11,374	1,599	19,175	2,695	17,524	54%	21,968	15%	0	0%	1	2	4	2	1	1	11	22	6	2040
New Fixed-Route Bus Service	I-25/Voyager Express Service	12.0	21,324	1,773	52,892	4,399	29,739	39%	58,918	11%	3,772	18%	1	3	3	2	2	5	16	8	2	2030
New Fixed-Route Bus Service	US 24/Falcon Express Service	8.7	14,398	1,663	33,288	3,846	18,287	27%	36,795	11%	4,332	30%	1	3	3	2	3	3	15	11	3	2040
Innovative Mobility Zones	Northeast	35.2	69,832	1,986	20,016	569	120,900	73%	22,145	11%	0	0%	1	1	4	2	1	5	14	16	5	2030
Innovative Mobility Zones	Central	13.4	66,934	5,010	13,444	1,006	68,046	2%	15,358	14%	0	0%	5	2	1	2	1	5	16	8	1	2040
Innovative Mobility Zones	Northwest	8.5	17,384	2,050	10,316	1,216	18,060	4%	11,338	10%	0	0%	2	2	1	1	1	5	12	21	6	2050
Innovative Mobility Zones	Southeast	32.8	27,625	841	9,553	291	45,929	66%	19,913	108%	0	0%	1	1	4	5	1	3	15	11	3	2040
Innovative Mobility Zones	South	8.8	29,186	3,324	3,544	404	31,340	7%	10,635	200%	0	0%	3	1	1	5	1	5	16	8	1	2030
Innovative Mobility Zones	Northgate_gleanagle	9.6	21,949	2,289	12,783	1,333	28,098	28%	14,417	13%	0	0%	2	2	3	2	1	5	15	11	3	2040

ADDENDUM

TRANSIT CONNECTIONS STUDY

The CDOT Department of Transit and Rail (DTR) is developing a Transit Connections Study (TCS), which was anticipated to be completed in 2025. The TCS aims to provide a strategic vision for an interconnected statewide transit network. This includes improving and expanding the Bustang Family of Services, adding passenger rail services, identifying transit gaps and needs, and fostering connections with intercity regional and local transit/mobility providers.

CDOT met with MMT and local jurisdictions in the Pikes Peak Region to determine projects for inclusion in the TCS, included here as an addendum to the Regional Transit Plan.

The TC reflects major investments to expand bus and rail options across Colorado as included in Senate Bills 24-184, 24-230, and 24-032.

The TCS was identified as an opportunity to potentially accelerate implementation of Regional Transit Plan and LRTP identified transit projects, considers alternative strategies of LRTP and Transit Plan project implementation, and does not change LRTP or Transit Plan recommendations.

This accelerated strategy includes features to meet CDOT goals and support the Regional Transit Plan's long-term objectives while attracting new users through express bus type services to connect local transit with CDOT inter-city services, station improvements at key nodes to create mobility hubs, improvements on key corridors that facilitate travel-time competitive transit service and support existing local service, and last mile service (circulator) at key nodes.

The following pages provide information about the Pikes Peak Region projects submitted for inclusion in the TCS.

COLORADO
Department of Transportation
Region 2

Region Transportation Director
5615 Wills Blvd., Suite A
Pueblo, CO 81008

John Liosatos
Pikes Peak Area Council of Governments
15 South 7th Street
Colorado Springs, CO 80905

December 4, 2024

Dear Mr. Liosatos,

As requested by me, Mountain Metro Transit (MMT) has provided the attached list of Long-Range Transportation Plan (LRTP) Projects in anticipation of the expected transit-focused revenue streams coming online in CY26 and FY26. I have reviewed the list as it stands today and for PPACG purposes, CDOT Region 2 supports the current list of transit projects for inclusion into the 2050 PPACG Long Range Transportation Plan.

Thank you,

Shane A. Ferguson

Shane Ferguson, P.E.
Region 2 Transportation Director

cc: File
Paul Desrocher, Director Division of Transit and Rail
Rob Frei, Region 2 Planning and Environmental Manager
Geoff Guthrie, Region 2 Transportation Planning Supervisor
Scott Skinner, Region 2 Transit Liaison

CDOT Transit Connection Study

Mountain Metro Transit Project Considerations to Meet CDOT Goals

The TCS envisions a future where Colorado's transit system is:

Comprehensive	Providing a connected network of services across the state, focusing on key corridors.
Accessible and Equitable	Addressing the needs of rural, underserved, and transit-dependent communities by ensuring equitable transit access and breaking down barriers to mobility opportunities
Reliable	Enhancing transit services through infrastructure improvements and maintaining consistent, predictable travel times for transit users.
Integrated	Collaborating with local transit agencies and communities to ensure seamless connections between transit systems, mobility hubs, and First Mile/Last Mile (FLM) solutions.
Sustainable	Considering operational costs alongside capital needs to ensure long-term financial viability and strategic investments.
Fostering Strategic Growth	Encouraging denser development near transit hubs, reducing car dependence and emissions but also maximizing infrastructure use for a sustainable future.

					Qualitative Assessment				
Project ID	**DRAFT LRTP Project**	**Project Name**	**Project Type**	**Project Scope**	**Ease of Implementation**	**Relative Cost**	**Alignment with CDOT Goals**	**Alignment with Local Vision**	**Key Points**
2045-Transit-SP16	Service Enhancements	Woodmen Rd Express Bus Service	Service	Express Bus service from Falcon PnR to Woodmen PnR Bustang, includes improving existing PnR at Falcon, Black Forest Rd, and Woodmen/I-25 to all weather facilities. Also includes corridor operations enhancements including transit prioritization.	**High**	$	High	Medium	- Provides direct access from the eastern reaches of the region to a Bustang stop at the Woodmen Rd PnR - Provides opportunity for passenger boarding at existing Black Forest PnR and high density housing.
2045-Transit-SP16	Service Enhancements	Airport / Downtown Express Bus Service	Corridor Service	Express Bus service from COS airport to Downtown Transit Center (Bustang), includes development of Academy/Hancock Mobility Hub on the Campus to Campus Corridor. Also includes corridor operations enhancements including transit prioritization.	**High**	$	High	High	- Connects to Air Transportation hub to facilitate job access and tourist car-free travel. - Also connects to major employers at Airport business park including Amazon distribution center.
2045-Transit-SP16	Service Enhancements	Airport Academy Circulator	Last Mile Service	Establish a localized circulator to create last mile connections to the Mobility hub from nearby neighborhoods and employers. The circulator could connect the Hancock/Academy and Airport Mobility Hubs.	**Medium**	$	Medium	High	Providing last mile connections to employers, services, and neighborhoods
2050-057	Plains to Peak Corridor	Downtown / Manitou Springs Express Bus Service	Corridor Service	Express Bus service from Downtown Transit Center (Bustang) to Manitou Springs Mobility Hub, includes development of Garden of the Gods Mobility Hub that would faciliate car-free travel to major attractions. Also includes corrior operations enhancements including transit prioritization.	**High**	$$	High	High	- Capitalize on existing, strong ridership to key destinations and provide better integration for visitors to arrive on Bustang - Provides community and environmental benefits by reducing vehicle dependence to Garden of the Gods and other scenic destinations and potential to eliminate cars from within GoG Park. - Leverage locally funded near-term investments in the corridor designed to improve pedestrian environment and reduce lanes
2050-057		US24 Express Flex Services	Service	Express bus service from the Falcon PnR along US 24, operates similar to the Flatiron Flyer (operated by RTD along US 36 between Boulder and Denver) and connects to key destinations in Colorado Springs. Routes/destinations will be served based on time of day and direction of travel, and will include key transit/mobility hubs (including Bustang connection points), the COS Airport, Downtown Colorado Springs, and potentially other stops such as the proposed Peterson SFB Mobility Hub based on ridership demand.	**High**	$	High	High	- MMT is already taking over ownership of the Falcon PnR - Establishes transit connections to growth areas of the region and could reduce SOV travel on US 24. - Provides flexible routes/destinations based on time of day and direction of travel as to capture and serve highest ridership demand

CDOT Transit Connection Study

Mountain Metro Transit Project Considerations to Meet CDOT Goals

The TCS envisions a future where Colorado's transit system is:

Comprehensive	Providing a connected network of services across the state, focusing on key corridors.
Accessible and Equitable	Addressing the needs of rural, underserved, and transit-dependent communities by ensuring equitable transit access and breaking down barriers to mobility opportunities
Reliable	Enhancing transit services through infrastructure improvements and maintaining consistent, predictable travel times for transit users.
Integrated	Collaborating with local transit agencies and communities to ensure seamless connections between transit systems, mobility hubs, and First Mile/Last Mile (FLM) solutions.
Sustainable	Considering operational costs alongside capital needs to ensure long-term financial viability and strategic investments.
Fostering Strategic Growth	Encouraging denser development near transit hubs, reducing car dependence and emissions but also maximizing infrastructure use for a sustainable future.

					Qualitative Assessment				
Project ID	**DRAFT LRTP Project**	**Project Name**	**Project Type**	**Project Scope**	**Ease of Implementation**	**Relative Cost**	**Alignment with CDOT Goals**	**Alignment with Local Vision**	**Key Points**
2045-Transit-SP20	Stop and Station Improvements	USAFA North Gate Mobility Hub	Connection	Establish a new transit connection point to serve the USAFA, higher density housing and entertainment district including the USAFA Hosmer Visitor Center and Ford Amphitheater. Provide enhanced amenities and mobility options, including opportunities to establish a branded Bustang terminal, a hub for the local transit system and improved services for this growing part of the City and USAFA.	**Medium**	$$	High	High	- USAFA has consistently requested transit access for their cadets and visting familes. - Could mitigate I-25 congestion during USAFA or Ford Amphitheater events - Mobility Hub location could be at Hosmer Visitor Center, nearby business, or in I-25 Median similar to other CDOT installations.

CDOT Transit Connection Study

Mountain Metro Transit Project Considerations to Meet CDOT Goals

The TCS envisions a future where Colorado's transit system is:

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Fostering Strategic Growth	Encouraging denser development near transit hubs, reducing car dependence and emissions but also maximizing infrastructure use for a sustainable future.

					Qualitative Assessment				
Project ID	**DRAFT LRTP Project**	**Project Name**	**Project Type**	**Project Scope**	**Ease of Implementation**	**Relative Cost**	**Alignment with CDOT Goals**	**Alignment with Local Vision**	**Key Points**
2045-Transit-SP16	Service Enhancements	USAFA North Gate Circulator	Last Mile Service	Establish a localized circulator to create last mile connections to the Mobility hub from nearby neighborhoods and attractions. The circulator could connect the North Gate and PPSC North Mobility Hubs	**High**	$	Medium	High	- Providing last mile connections to employers, services, and neighborhoods - Also serving entertainment venues such as Ford Amphitheater, healthcare including St. Francis Hospital, and PPSC multiple campuses
2045-Transit-SP16	Service Enhancements	I-25 Monument to COS Express	Corridor Service	Express bus service overlapping and augmenting Bustang stops along I-25 from Monument PnR to Downtown Transit Center, including at New North Gate Mobility Hub and Woodmen Rd PnR.	**High**	$	High	High	- Could be adapated to additional or different endpoints - Provides more frequent regional service while facililitating interregional Bustang trips
2050-064	Terminal Southgate Enhanced Transit Corridor	Downtown COS PPSC South Express	Corridor Service	Express bus service overlapping and augmenting Bustang stops along I-25 from Downtown Transit Center to future stop at PPSC South.	**High**	$	High	High	- Could be adapated to additional or different endpoints - Provides more frequent regional service while facililitating interregional Bustang trips
2045-Transit-SP20	Stop and Station Improvements	PPSC South Mobility Hub Improvements	Improved Connection	Upgrade existing connection point to provide enhanced amenities and mobility options, including opportunities to establish a branded Bustang terminal, a hub for the local transit system, and improved services for PPSC and Ft Carson	**High**	$$	High	High	- Already has momentum to become a Bustang stop - Serves major DOD installation and higher education institution to provide connectivity and accessibility - Lots of existing interest in this facility from CDOT, PPSC, Ft Carson, the City of Fountain and the City of Colorado Springs/MMT to provide greater local and regional connectivity
2045-Transit-SP20	Stop and Station Improvements	Monument PnR Improvements	Improved Connection	Upgrade existing connection point to provide enhanced amenities and mobility options, including opportunities to establish a branded Bustang terminal, a hub for the local transit system	**High**	$	High	Medium	- Upgrade to all weather facility - Included branded stops for Bustang and MMT or destinations
2045-Transit-SP20	Stop and Station Improvements	Woodmen Rd PnR Improvements	Improved Connection	Upgrade existing connection point to provide enhanced amenities and mobility options, including opportunities to establish a branded Bustang terminal, a hub for the local transit system	**High**	$	High	High	- Upgrade to all weather facility - Included branded stops for Bustang and MMT or destinations
2045-Transit-SP20	Stop and Station Improvements	Falcon PnR Improvements	Improved Connection	Upgrade existing connection point to provide enhanced amenities and mobility options, including opportunities to establish a branded Bustang terminal, a hub for the local transit system	**High**	$	High	Medium	- Upgrade to all weather facility - Included branded stops for Bustang and MMT or destinations

CDOT Transit Connection Study

Mountain Metro Transit Project Considerations to Meet CDOT Goals

The TCS envisions a future where Colorado's transit system is:

Comprehensive	Providing a connected network of services across the state, focusing on key corridors.
Accessible and Equitable	Addressing the needs of rural, underserved, and transit-dependent communities by ensuring equitable transit access and breaking down barriers to mobility opportunities
Reliable	Enhancing transit services through infrastructure improvements and maintaining consistent, predictable travel times for transit users.
Integrated	Collaborating with local transit agencies and communities to ensure seamless connections between transit systems, mobility hubs, and First Mile/Last Mile (FLM) solutions.
Sustainable	Considering operational costs alongside capital needs to ensure long-term financial viability and strategic investments.
Fostering Strategic Growth	Encouraging denser development near transit hubs, reducing car dependence and emissions but also maximizing infrastructure use for a sustainable future.

					Qualitative Assessment				
Project ID	**DRAFT LRTP Project**	**Project Name**	**Project Type**	**Project Scope**	**Ease of Implementation**	**Relative Cost**	**Alignment with CDOT Goals**	**Alignment with Local Vision**	**Key Points**
2050-033	Campus to Campus Corridor	Campus to Campus Express Bus Service	Corridor Service	Interim BRT implementation by express bus service including Mobility Hubs connecting Pikes Peak State College Transfer Centers (at South Academy Blvd and Interquest Pkwy) to USAFA Gateway Visitor Center. Routing generally following Academy Blvd, Voyager Pkwy, and Northgate Blvd. Will include corridor operations improvements for transit prioritization such as signal prioritization or queue jumps.	**High**	$$	High -	High	- MMT has long term plans for a BRT implementation on this corridor to improve service for underserved areas of the city. - Interim express service will allow many of the corridor operations improvement such as transit signal prioritization or queue jumps while supporting better access to employment, education, and services - Public investment at the associated mobility hubs will also attract desired private investment in the corridor
2045-Transit-SP20	Stop and Station Improvements	Peterson SFB Mobility Hub	New Connection	Construct a Mobility Hub/PnR near the North Gate of Peterson SFB. This connection would serve as a stop or destination on the US24 Express Flex. Working with Peterson, this hub also provides an opportunity to extend base security and facilitate a shuttle service to reduce on-base parking needs.	**Medium**	$$	Medium	Medium	- Serves major DOD installation to provide connectivity and accessibility - Would provide greater regional connectivity as an intermediate stop for US24 Falcon Express or future Marksheffel Rd transit
2045-Transit-SP16	Service Enhancements	Peterson/Schriever Shuttle	Corridor Service	Express bus service connecting important DOD employers.	**High**	$	Medium	Medium	- Provide direct connection from Peterson SFP Mobility hub to Schriever SFB - Mitigate growing traffic on US94 highway
2045-Transit-SP20	Stop and Station Improvements	Citadel Mobility Hub	Improved Connection	Construct mobility hub at/near existing transfer center at the intersection of highly productive transit routes in the heart of the City. Improve transit routing into transfer station to improve efficiency and reliability, increase passenger amenities to improve perception of transit, and add better connections to other mobility choices to communities that want or need mobility options.	**Medium**	$$$	High	High	- Investing in key transfer point for the highest ridership routes in the City to improve reliability and service efficiency - serve transit-dependent populations to provide greater mobility choices and reduce SOV dependence - Capitalize on economic development opportunities to improve redevelopment potential around transit for currently underproductive land uses
2045-Transit-SP20	Stop and Station Improvements	PPSC North Mobility Hub	New Connection	Construct Mobility hub at/near the Pikes Peak State College North Campus. Improve transit access to larger employers in this area (Ent Headquarters), a hospital, and higher density housing .	**Medium**	$$	High	High	- Investment in hub that connects the rest of the transit network to healthcare, employment, and education - Serves higher density housing and encourages denser development.

APPENDIX C: 2050 REGIONAL SPECIALIZED HUMAN SERVICES TRANSPORTATION PLAN

The 2050 Specialized Human Services Transportation was led by PPACG in coordination with MMT.



Pikes Peak Region Specialized Transportation Plan – 2024 Update

Final Report

Pikes Peak Area Council of Governments

Communities Working Together

COLORADO SPRINGS
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1 INTRODUCTION AND EXECUTIVE SUMMARY

Transportation is a critical factor in ensuring that people have access to essential services and daily needs, such as healthcare appointments, employment, grocery shopping, and social activities. However, not everyone can easily access a private vehicle or public bus.

The Pikes Peak region's specialized transportation system is an additional layer of coverage for people who may otherwise face limitations when accessing transit services.

The **Specialized Transportation Plan, also known as a Coordinated Human Services Transportation Plan (CHSTP),** is necessary for receiving federal dollars (Section 5310) to help fund accessible transportation programs and services tailored to older adults and people with disabilities. The plan assesses the conditions and potential improvements for Americans with Disabilities Act (ADA) Complementary Paratransit service and specialized transportation service options for the target populations.

PLAN SUMMARY

The Specialized Transportation Plan is the outcome of a collaboration between entities including:

- Mountain Metropolitan Transit (MMT), the primary public transit provider located within the Colorado Springs Urbanized Area (UZA).
- Pikes Peak Area Council of Governments (PPACG), the Metropolitan Planning Organization (MPO) which is designated by the Governor of Colorado as the recipient of Section 5310 funding for the Colorado Springs UZA.
- Human service providers (HSPs) throughout the region, including, but not limited to, Silver Key Senior Services, Envida, and Goodwill.

Section 5310 dollars that are distributed to PPACG by the United States Department of Transportation (USDOT) and the Federal Transportation Administration (FTA) are specifically intended for programs and services tailored to older adults and people with disabilities. PPACG

collaborates with eligible subrecipients of Section 5310 funds that provide specialized transportation services for these population groups that cannot access the existing fixed-route and demand-response transit networks through MMT.

A variety of key needs are identified by this plan, including, but not limited to:

- There is currently not enough specialized transportation service to meet community demand.
- Future demand will only increase the burden on specialized transportation.
- People have difficulty navigating the existing specialized transportation system, but past attempts to improve user knowledge and navigation of those options have had limited success.
- Although consolidating systems is challenging due to different standards set by grants and compliance, there is still a need for coordination. Recent efforts led by specialized transportation providers demonstrate the interest and commitment towards finding ways to improve efficiency.
- The existing fixed-route transit system (MMT) is perceived by some potential riders as inaccessible due to inadequate and unsafe walking experiences to stops.

The Specialized Transportation Plan lists the following strategies to help meet the identified needs for the Pikes Peak region:

High-Priority

- Incrementally develop a one-call one-click center.
  - Part A: Develop a shared intake form and back-end database that can be accessed by all providers.
  - Part B: Establish a phone hotline and website to help direct people to the most appropriate transportation options.
- Coordinate with providers to help secure funding for right-sized, shared, and well-maintained vehicles that meet ridership needs.
- Commission mobility services under improved standards of service.

Medium-Priority

- Create a program to reimburse people for Uber, Lyft, and taxi rides in situations where there is a critical unmet transportation need based on the time and location of the trip.
- Consolidate all resources and explore training options for drivers.

Low-Priority

- None

These strategies were developed and prioritized as the result of multiple discussions involving PPACG, MMT, key stakeholder organizations, including representatives of HSPs, people who ride specialized transportation services, and other interested community members.

The full implementation of all the recommended strategies in this plan is conditioned on additional funding, because the current allocation of Section 5310 funds to the region is insufficient. However, there are important immediate steps that PPACG can lead to help ensure continued progress is meeting demands for specialized transportation.

Potential steps to assist in implementation of the specialized transportation plan include:

- Hiring additional mobility managers with clear regional coordination responsibilities – separate from any direct transportation operation.
- Repurposing and reinvigorating the Regional Coordinating Council and/or continuing to convene the Specialized Transportation Plan stakeholder meetings on a quarterly basis.
- Finding additional funding.
- Utilizing funding for short-term implementation and/or pilot programming.

IMPORTANT TERMS AND DEFINITIONS

The remainder of this chapter will lay out important terminology used in this plan (Figure 1), the context of this plan alongside of the planning efforts, and summaries of other key components of the planning process including goals and outreach.

Figure 1. Specialized Transportation Plan Glossary

Term	Definition	Local Example
Specialized Transportation	Service designed for individuals which offers door-to-door or curb-to-curb transportation (as well as door-through-door, in certain circumstances). Specialized transportation is usually operated by a funded non-profit and requires advanced reservations.	Envida, Silver Key Services, Fountain Valley Senior Center are specialized transportation programs operating in the Pikes Peak region.
ADA Complementary Paratransit	A transit agency service exclusively for individuals with disabilities who cannot independently use fixed-route transit some or all the time. It is often called "ADA complementary paratransit", as it exists to ensure transit complies with the ADA. Service operates the same days and hours as local fixed-route transit service covering areas within ¾-mile of existing routes.	MMT provides ADA complementary paratransit through their Mountain Metro Mobility program.

Term	Definition	Local Example
Non-Emergency Medical Transportation (NEMT)	A program to ensure members of Medicaid receive transportation to and from their covered medical appointments. This program is governed and regulated at the State level. Providers need to be certified in advance to provide such services, and patients are advised to reserve and report their rides in compliance with current Medicaid policy to ensure the transportation is covered. Although NEMT services provide an affordable connection for people to healthcare, it is available to Medicaid patients only.	In El Paso County alone, over 100 providers are currently enrolled as NEMT service providers, including GoodWheels, Envida, and a variety of taxi companies.
Section 5310	A program through the FTA that provides formula funding to states and designated recipients to meet the transportation needs of older adults and people with disabilities when the transportation service provided is unavailable, insufficient, or inappropriate to meeting these needs.	Envida and Silver Key Senior Services are current subrecipients of Section 5310 funding through PPACG to provide their specialized transportation services.
Door-through-Door	A type of transportation service where drivers escort riders from inside their homes to the vehicle and from the vehicle to inside their destination.	Envida, Fountain Valley Senior Center, GoodWheels, Rocky Mountain PACE, Silver Key, and Beo Mobility provide door-through-door service.
Door-to-Door	A type of transportation service where the vehicle picks up riders from their home and delivers them to the building entrance of their destination.	ADA Complementary Paratransit, Envida, Teller Senior Coalition, Asteri EMS / The Way, Axel Medical Transportation, Blue Skies, Friends Transportation, Medride, Second Home Care, and Transit to Care provide door-to-door service.
Curb-to-Curb	A type of transportation service where the vehicle comes directly to the desired curb pickup location, rather than the user needing to get to a bus stop or common pickup location and delivers riders to the curb at their destination.	Ridehailing services like Uber and Lyft provide curb-to-curb service.
On-Demand	Transportation services that enable passengers to book their journey at a convenient time (during service operating hours), and to be picked up from an agreed location.	Envida partnered with PPACG to pilot an on-demand transportation service.
Ridehailing	Platforms that connect fare-motivated drivers with riders for on-demand services, similar to taxi services.	Uber and Lyft are two of the most popular ridehailing platforms available in Colorado Springs.

Term	Definition	Local Example
One-Call One-Click (OC/OC)	A platform that allows riders to discover and book shared mobility services through a single phone call or web portal.	The One Ride call center launched in July 2018 is an iteration of a OC/OC system. It subsequently closed in December 2020.
Human Service Providers (HSPs)	Organizations who assist individuals or communities with specialized needs.	Fountain Valley Community Center provides specialized transportation to senior adults in Colorado Springs.
Transportation Providers	Local transit agencies and HSPs who provide specialized transportation services.	MMT, HSPs such as Envida and NEMT services are among the many transportation providers in the Colorado Springs region.
Deviated Fixed-Route Service	Transit service that operates along a fixed route but can pick up or drop off passengers within a set distance of the route.	MMT's routes 38 and 40 operate along a fixed alignment but can pick-up and/or drop off passengers within ¾-mile from the published routes.
Wheelchair-Accessible Vehicle (WAV)	A vehicle designed or modified to transport passengers in wheelchairs.	Several NEMT providers have WAVs in their fleet, by promising fully equipped and tested wheelchair lifts and/or ramps and securement devices on board.
Colorado Association of Transit Agencies (CASTA)	A nonprofit dedicated to representing transit interests and providing membership services to transit agencies in the state.	MMT received the 2023 Large Transit Agency of the Year award from CASTA.

CONTEXT OF THE SPECIALIZED TRANSPORTATION PLAN ALONGSIDE THE REGIONAL TRANSIT PLAN

The Specialized Transportation Plan process occurred simultaneously with the development of Colorado Springs 2050 Regional Transit Plan (RTP)[1]. They shared the following components:

- Project ownership by MMT.
- Consultant project managers and resources.
- Public outreach and engagement efforts.

[1] It should be noted that the previous Specialized Transportation Plan update was also developed alongside the Regional Transit Plan update. Unlike the current version of the Specialized Transportation Plan, PPACG was the sole listed owner and leader of the plan's development.

- Development of project goals.
- Long-term visioning and goals for transportation in the Pikes Peak region.

At the same time, the Specialized Transportation Plan is a distinct product because of:

- Project co-ownership by PPACG, the designated recipient of Section 5310 funds.
- An added focus on specialized transportation services, and not just public transit.
- Additional dedication to understanding the needs of older adults, people with disabilities, and low-income households as required by Section 5310.
- A set five-year timeframe prior to the next plan update.

Collectively, the plans provide comprehensive documentation of the necessary elements to ensure the Specialized Transportation Plan is an acceptable community-driven plan.

SUMMARY OF PUBLIC INVOLVEMENT

For more details, please visit the Public Involvement Report for the 2050 RTP and Specialized Transportation Plan.

As with any transportation plan, the contributions and feedback from the public and stakeholders (or project partners) are critical steps for the Specialized Transportation Plan's development. Highlights of the public and stakeholder involvement process include:

- Four focus group meetings with a total of 19 participants, focusing on a series of themes including education, economic development, on-demand travel for riders with special needs, and healthcare.
- Two stakeholder committee meetings with participants representing more than 10 organizations dedicated to human services, including Envida, Silver Key, The Independence Center, Teller Senior Coalition, YMCA Colorado Springs Senior Center, On-Demand Transportation Group, and the Resource Exchange Center Board.
- Three open houses (in-person and online), including components like recorded videos and printed boards, which can be replicated for future conversations as necessary.

A breakdown of individual participants and their respective organizations is in Appendix C.

SUMMARY OF GOALS IDENTIFIED BY PLAN

The following goals were developed by the project team in tandem with the RTP:

- Choice - To make transit a competitive travel mode.

- Accessibility - Provide access to jobs, schools, medical facilities, social events, and community activities.
- Equity - Maintains or improves service to the people that need it the most.
- Technology - Deploy technology to both improve agency operations and the customer experience.

In addition to the overarching goals established by the RTP, the Specialized Transportation Plan stakeholders proposed additional goals tailored to address specific needs and challenges in specialized transportation. These were the goals, suggested verbatim, from those discussions:

- Build capacity to meet rising demand.
- Coordinate across agencies and providers to enhance the client's experience.
- Utilize other agencies to create a robust transportation system with ways to anticipate and prevent gaps.
- Include transit as a solution to affordable housing.
- Remember how important socialization is for all who ride specialized transportation.
- Incorporate emergency preparedness.
- Educate potential riders on the multiple transit options, including fixed-route, paratransit, and specialized transportation.
- Explore additional funding opportunities.

According to the PPACG's Section 5310 Management Plan, subrecipient applicants must align their proposals with goals outlined from the Specialized Transportation Plan[2]. The goals listed can serve as potential justification for eligible subrecipient applicants seeking to provide services and programs to meet identified needs and gaps in the Pikes Peak region.

[2] The specific quote is "the most recent coordinated plan," but as already noted, this is simply an alternative name for the Specialized Transportation Plan.

2 EXISTING CONDITIONS

OVERVIEW OF PROVIDERS IN PIKES PEAK REGION

Fixed-Route Transit

In the region, there are several public fixed-route transit services, along with public and private intercity services. These are available to the general public and are detailed in the RTP. The extent to which these serve the needs of the focus population groups of the Specialized Transportation Plan (older adults, people with disabilities, and low-income households) depends on their relative accessibility and awareness of these services by those populations.

ADA Complementary Paratransit

ADA Complementary Paratransit exist to fulfill a legal mandate set by the ADA. It is a demand-response public transit service.

Specialized Transportation

Specialized transportation assists older adults and people with disabilities throughout the region who cannot have their needs met by any of the above forms of public transit. For example, people with disabilities in need of transportation but who live outside of the ADA complementary paratransit service area may depend on specialized transportation services. Some, but not all, of these services, are funded through Section 5310. Specialized transportation typically includes demand-response services with operators on behalf of HSPs carrying the responsibilities of coordination and meeting human service needs.

Appendix A contains a detailed inventory of the current specialized transportation resources in the region. This inventory should help enhance knowledge about the transportation resources available in the Pikes Peak region.

The Commercial Transportation Market

There are many visible transportation services that appear similar to specialized transportation by using similar-looking cutaway vehicles and catering to older adults, but they are ancillary services restricted to tenants or dues-paying members of a specific facility.

With such hurdles and protections in place, these services are limited in scope and are perceived as restricted to the populations facing needs in the Specialized Transportation Plan.

Taxis, Uber, and Lyft are technically options open to the general public, but they are not usable by all people. For example, these services do not need to comply with the ADA. Also, the services are priced at a rate that may not be sustainable for regular use by seniors or people

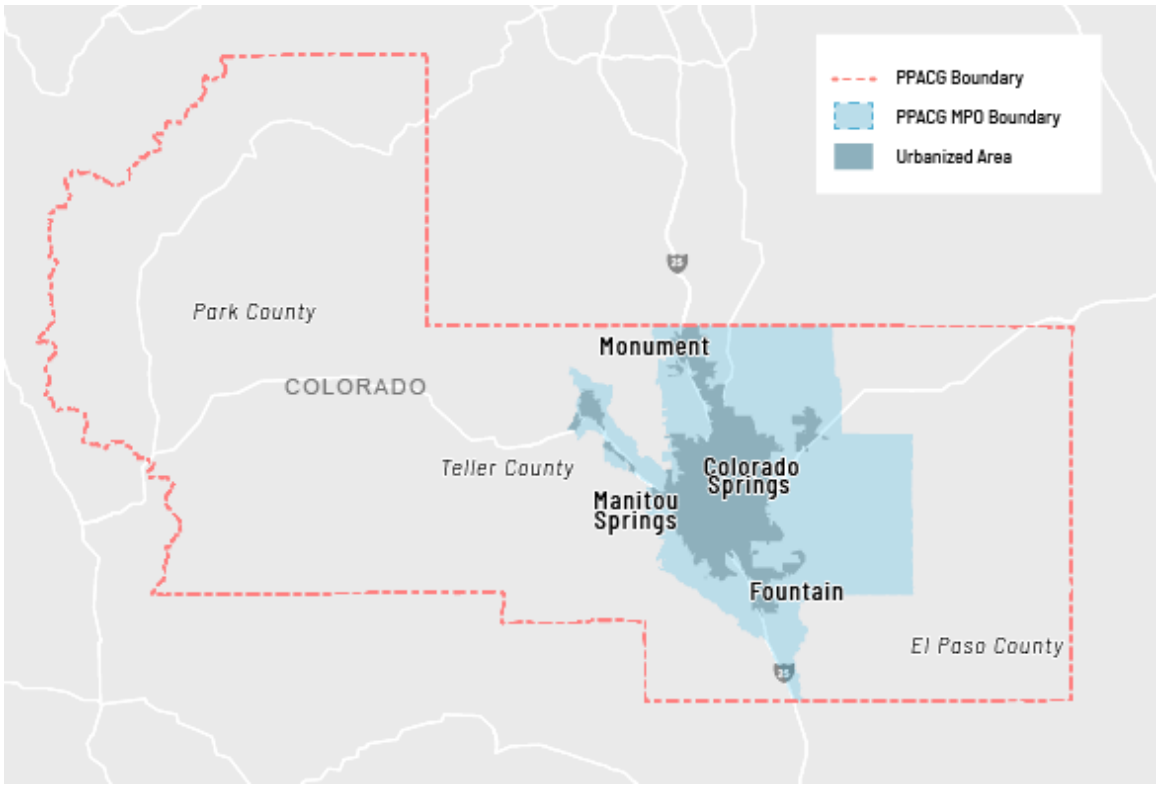
with low incomes. These door-to-door services may be among the choices in situations where other options are limited or nonexistent.

Some private commercial providers are certified to provide NEMT to customers, but that option is restricted to those who are eligible and enrolled members of the Medicaid practice (known as Health First Colorado). Such a service is not usable for older adults who are unenrolled and live outside of the MMT transit network.

SECTION 5310 FUNDS FOR THE COLORADO SPRINGS URBANIZED AREA

The PPACG currently receives and administers Pikes Peak Area Agency on Aging (PPAAA) funds for older adults and has been designated by the Governor of Colorado as the regional recipient of Section 5310 funds for the Colorado Springs UZA (see Figure 2 for map of boundaries).

Figure 2. Map of Colorado Springs and Pikes Peak MPO Boundaries



Section 5310 funds are currently the only dedicated federal source of transportation funding available to both transit agencies and HSPs in this region. Eligible subrecipients for Section 5310 funds include private nonprofit organizations, states or local government authorities, and operators of public transportation.

Section 5310 funds are currently used by PPACG to contract mobility services that provide rides for the populations of older adults and people with disabilities. Section 5310 funds received by PPACG for the past two contract years were allocated to two eligible subrecipients: Silver Key and Envida (Figure 3). However, there are several other providers that are important HSPs in the region. While they do not receive Section 5310 funds, they may receive Older Americans Act funds through the PPAAA. HSPs receive assistance in the programming of funds used for these specialized transportation purposes through PPACG and PPAAA and may also receive funding from other sources (e.g., localities and donations).

Figure 3. Recent Section 5310 Fund Allocations by Subrecipient

Contract Year	Silver Key	Envida
2023-2024	$398,472	$417,528
2024-2025	$395,000	$421,000

NEEDS AND GOALS IDENTIFIED BY STAKEHOLDERS

Estimated Needs Based on Reported Data

All specialized transportation providers receiving funds through the PPAAA reported additional information relevant to their respective transportation operations and services for this planning process. *These findings are detailed in Appendix A.* The information on those figures has been compiled from reports that providers voluntarily shared with PPACG in 2024, based on each provider's unique definitions and perspectives. The data could be subject to discrepancies and changes.

Using their submitted information, one can make a high-level estimate of certain specialized transportation needs in the region, particularly around vehicle replacement and unmet travel demand (Figure 4). This figure includes all specialized transportation providers regardless of funding source.

For service, the current demand going unfulfilled by providers totals 7,272 rejected rides a year. Assuming an average cost of $50.86 per demand-response ride[3], that means a backlog of denied rides that would cost approximately $370,000 per year. For vehicles, there are currently 18 nearing the end of their life. If a vehicle costs in the range of $80,000 and $95,000 to replace, that means a backlog of approximately $1,440,000 to $1,710,000.

Figure 4. Summary of Estimated Needs for HSP Transportation

Provider	Rides denied annually	Estimated cost to fund denied rides (based on average cost per demand-response ride of $50.86)	Vehicles past useful life	Cost ranges to replace vehicles past useful life (based on $80,000 - $95,000 per unit range)
Fountain Valley Senior Center	400	$20,344.00	3	$240,000 - $285,000
Silver Key	4,229	$215,086.94	6	$480,000 - $570,000
Teller Senior Coalition	270	$13,732.20	2	$160,000 - $190,000
Community Intersections	--	--	4	$320,000 - $380,000
Envida	2,373	$120,690.78	3	$240,000 - $285,000
Total	**7,272**	**$369,853.92**	**18**	**$1,440,000 - $1,710,000**

The current allocation of Section 5310 dollars to the region does not meet the combined value of meeting just these two quantitative needs, even on the lower end of the estimated range for replacement vehicles. Additionally, these estimates do not incorporate any other current service gaps, such as gaps created by newly occupied developments located outside of the MMT transit service area.

Stakeholder-Identified Needs

Specialized transportation providers were also asked to provide an account of their needs and interests. Overall, the providers' responses indicate that public sources of funding are pivotal to their transportation operations (whether they originate from federal, state, or local agencies). Most respondents expressed a goal to grow their dispatch and driver staff, and almost all reported using volunteer drivers to provide transportation services. Aging fleets are of concern, since all respondents mentioned having vehicles currently that are beyond their useful life. Based on responses received, service hours for transportation services are not

[3]$40.69 (80% reimbursement as reported by PPACG) + $10.17 (calculated 20% match) = $50.86

comprehensive (for example, evening and night transportation are not provided, and weekend transportation options are extremely limited) and the service areas of many respondents are limited to specific parts of the region. Other obstacles to coordination among transportation providers mentioned include geographical barriers, payment method disparities, scheduling coordination challenges, and the types of systems and software for effective reservation and dispatch management.

Stakeholder-Identified Goals

In stakeholder group meetings during the development of this plan, project stakeholders proposed goals tailored to address specific needs and challenges in specialized transportation. These were the goals, suggested verbatim, from those discussions:

- Build capacity to meet rising demand.
- Coordinate across agencies and providers to enhance the client's experience.
- Utilize other agencies to create a robust transportation system with ways to anticipate and prevent gaps.
- Include transit as a solution to affordable housing.
- Remember how important socialization is for all who ride specialized transportation.
- Incorporate emergency preparedness.
- Educate potential riders on the multiple transit options, including fixed-route, paratransit, and specialized transportation.
- Explore additional funding opportunities.

DEVELOPMENTS IN SPECIALIZED TRANSPORTATION 2019-2024

Since the previous Specialized Transportation Plan was approved, some improvements have been implemented in the Pikes Peak region. The success of these improvements may vary, and for ongoing initiatives, their effectiveness is inconclusive. Some highlights are included below to provide further context for this plan.

Unsuccessful Implementation of One-Call One-Click Center

"ONE-RIDE (663-7433) is a transportation call center operated by the City of Colorado Springs to provide transportation coordination services for seniors age 60+ and people with disability.

One Ride contracts with four human service organizations to provide this specialized transportation." - January 2018

As a recommendation from previous Specialized Transportation Plan updates, a OC/OC center for specialized transportation was initially pursued using shared technology. The aim was for this center to incorporate all services, including scheduling and booking rides, regardless of the end provider. However, the implementation of this strategy, faced major challenges, including:

- **Lack of security around adjusting existing operations.** HSPs did not want to give up autonomy or feel forced to conform to a new scheduling system that was different to what was being used at the time. Thus, the region continued to have different incompatible software used for scheduling.
- **Limited financial resources.** Non-profit HSPs noted limitations in their ability to be directly leading or heavily involved in the operation of a call center.
- **Limited conversations or coordination between MMT and HSPs**, despite MMT assuming responsibilities of the most recent iteration of OC/OC.

Ultimately, One Ride fell short of objectives. Today, there remains limited coordination between MMT's ADA complementary paratransit service and eligible subrecipients and other providers. These fractures and inconsistencies amongst all providers make for a very challenging client experience. The difficulty experienced by riders navigating the specialized transportation system remains, and the desire for a new OC/OC program still surfaces in public meetings and stakeholder meetings for this Specialized Transportation Plan update.

Scheduling Software and On-Demand Pilot

In 2024, a partnership of Envida, Silver Key, and Fountain Valley Senior Center collaborated on using the same ride scheduling software with the aim of increasing convenience and access for riders. The platform includes an on-demand app in which riders can request trips, track rides, and receive notification.

Vouchers for Regional Healthcare Travel

In 2024, PPACG will start a four-year program to help provide vouchers to people travelling to the Denver region or elsewhere for a specialized medical appointment. These vouchers will help cover transportation costs for accessing in-person medical visits. In doing so, the program can aim to support those without Medicaid coverage, because they lack access to the NEMT program.

REGIONAL DEMOGRAPHIC LOCATIONS AND OBSERVATIONS

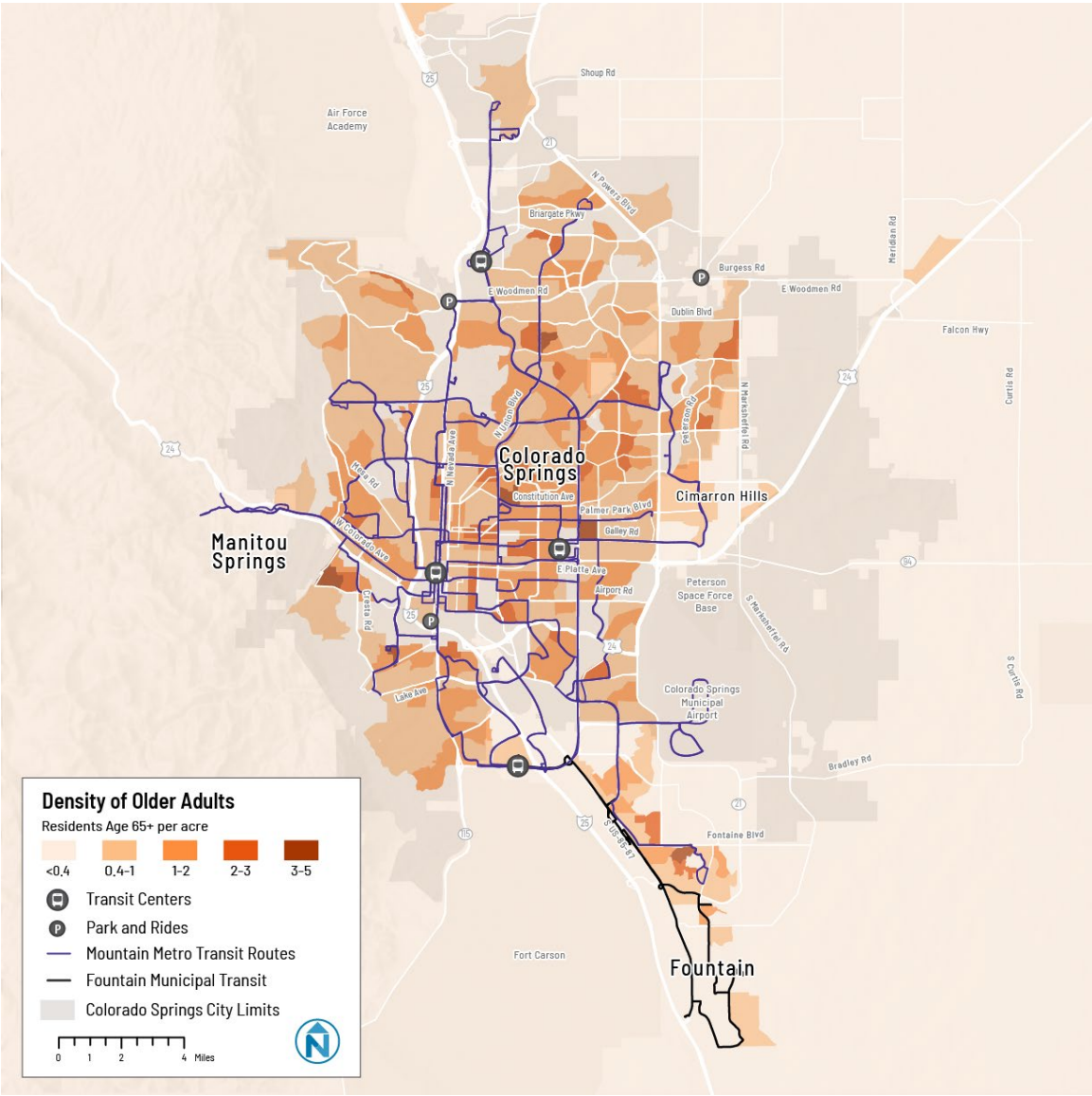
As required by Section 5310, this plan identifies the needs of older adults and people with disabilities in the region. Additionally, this plan identifies the needs of low-income households. Using maps that show home locations for each population group, there are additional observations about how the current transportation system serves each group. These additional observations, when paired with objective demographic data, are collectively crucial for a more complete understanding of existing conditions.

These population groups, among others, are also highlighted in the context of MMT service in the 2050 RTP.

Older Adults

Most areas with high concentrations of older adults (age 65 and up) are located near existing transit service (Figure 5). There are some areas with higher concentrations of older adults living in neighborhoods on the outskirts of the City of Colorado Springs that lack MMT fixed-route service.

Figure 5. Density of Older Adults



Additional Observations

- Typically, older adults are not a primary fixed-route service ridership market. However, as also noted in the RTP, older adults may no longer be comfortable driving or are no longer able to drive. Transit and specialized transportation can help older adults continue to live independently, access healthcare, and meet essential needs.
- There is an anticipated growth in older adults for the next few decades, implying there could be an uptick in future demand for specialized transportation (or ADA

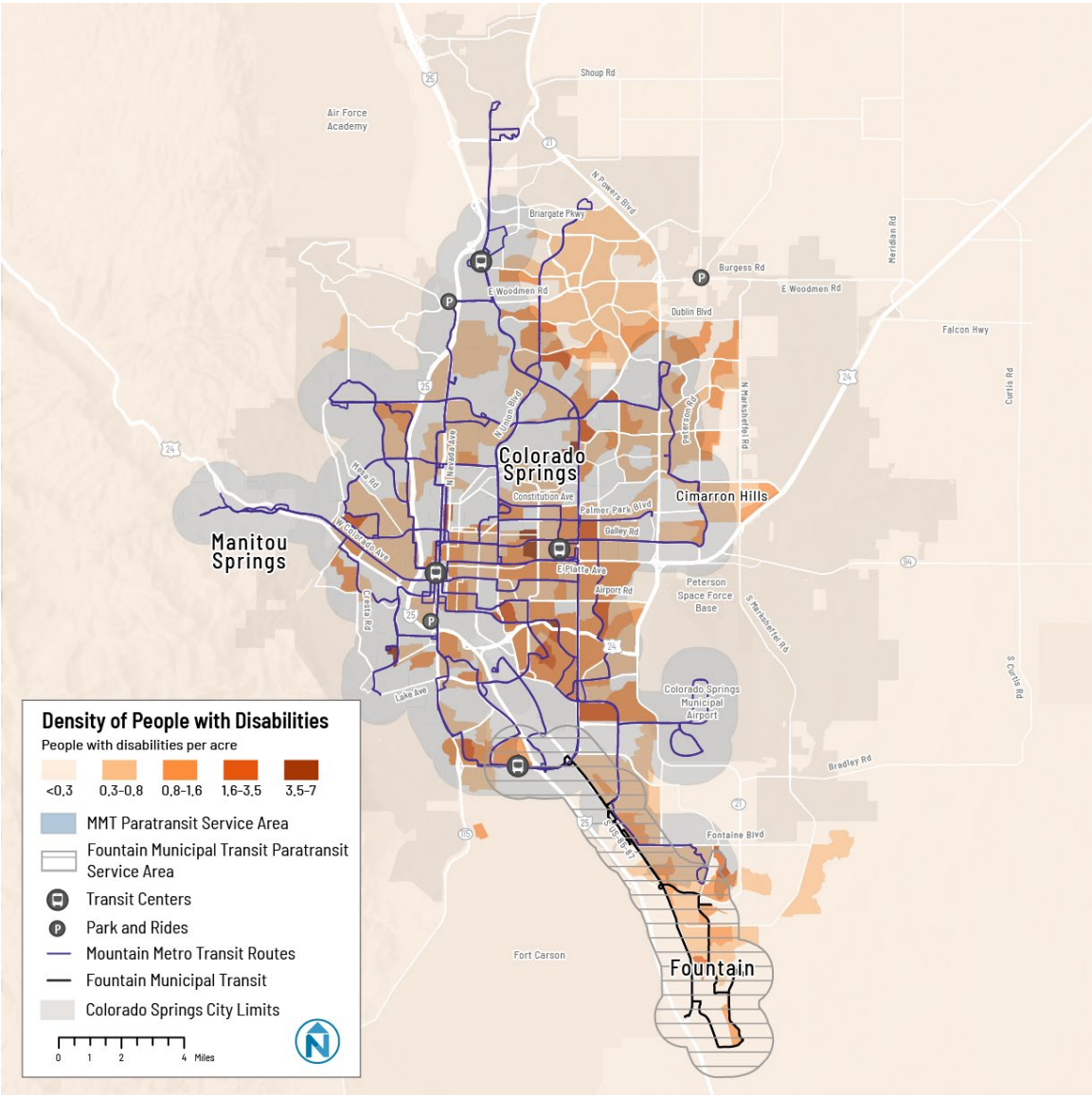
complementary paratransit in the case of older adults with disabilities who live within the service area).

- As the population ages, transportation needs become intertwined with housing choices. Often, the choice for individuals is to either relocate to areas with better accessibility or opt to age in place in current residences. This choice can significantly impact transportation options for older adults, especially in areas lacking fixed-route services.
- In the absence of fixed-route services, isolated individuals without access to a vehicle must navigate and secure transportation through other options, including their social networks and community groups.

People with Disabilities

Figure 6 shows the density of people with disabilities overlaid with the ADA complementary paratransit service area. People with disabilities live across the region, with some more dense clusters in central and south Colorado Springs. While most people with disabilities have access to MMT fixed-route and/or ADA service, there is a portion of northeastern Colorado Springs that is outside the Mountain Metro Mobility service area and lacks ADA complementary paratransit service.

Figure 6. Density of People with Disabilities



Additional Observations

- As noted in the RTP, people with disabilities may be more likely to rely on transit and ADA complementary paratransit services to meet their transportation needs and maintain an independent lifestyle.
- Beyond medical and educational transportation, a significant portion of specialized transportation trips for people with disabilities cater to varied purposes, including adult

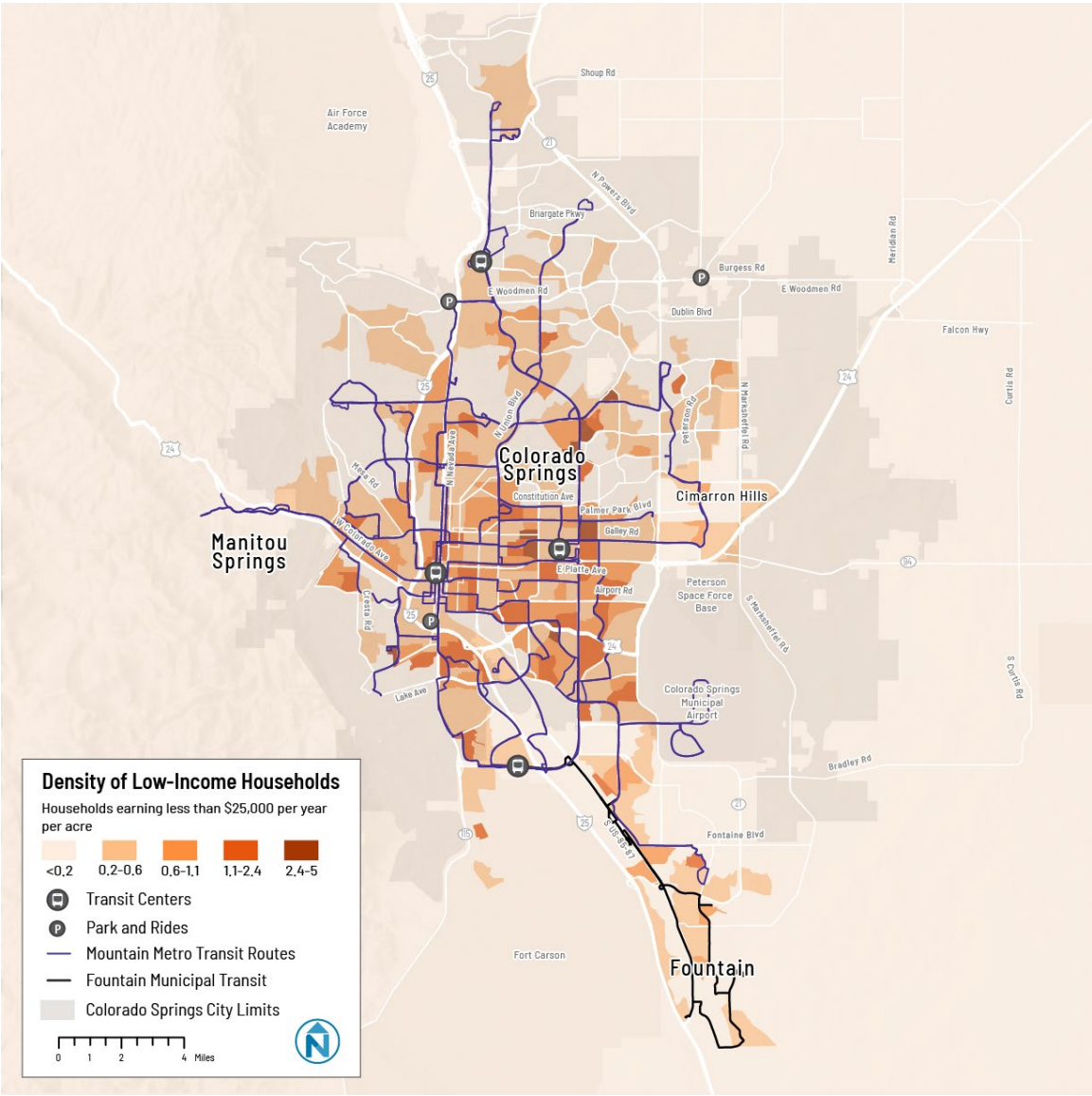
day programs. Ensuring accessibility to these diverse needs remains a challenge for people with disabilities.

- Through assessments and education, the Independence Center provides reduced fixed-route fare ID cards (on behalf of MMT) specifically for people with disabilities.

Low-Income Households

Low-income households throughout Colorado Springs are well served by existing transit service, except for some neighborhoods outside of the MMT service area in the northeast, northwest, and southwest outskirts of the City of Colorado Springs (Figure 7).

Figure 7. Density of Low-Income Households



Additional Observations

- While Medicaid NEMT transportation offers versatility in service providers, its applicability is limited to specific situations and trip types for low-income communities.
- The absence of a specific source of specialized transportation information following the OC/OC center's closure can lead to disparities in accessibility and service awareness.
- Transportation for people with low incomes is available for other sustainable modes, such as bicycle leasing programs sponsored by the Colorado Energy Office.

SUMMARY OF KEY NEEDS IN THE PIKES PEAK REGION

There is currently not enough specialized transportation service to meet community demand. Specialized transportation providers have limited resources and a great amount of current demand. Thus, people must make reservations far in advance and availability is limited on these services. If somebody who lives outside the transit service area needs to get to the grocery store or an important appointment but has not made a reservation, they may need to find a willing and able friend or family member, pay extra delivery fees, or take expensive rides via taxi, Uber, or Lyft.

Future demand will only increase the burden on specialized transportation. Anticipated growth in the region's aging population equates to increased transportation demand. Some of these high-growth areas are in locations currently unserved by the MMT transit service, which, if not covered by a fixed-route expansion, will increases the burden placed on specialized transportation, volunteer drivers, and expensive ridehailing services.

People have difficulty navigating the existing specialized transportation system. With multiple providers, eligibility requirements, and funding sources tied to each ride and geography served, there is a complicated and bureaucratic system to navigate. Without the resources of a centralized information center or platform, the burden is forced on the rider to contact each specialized provider and figure out their service.

Past attempts to provide unified information and booking services in the Pikes Peak region have been unsuccessful. In addition to the call center ceasing, providers lack resources to deal with certain situations and challenges shared amongst all providers, such as Medicaid reimbursements and rejections.

Although consolidating systems is challenging due to different standards set by grants and compliance, there is still a need for coordination. Recent efforts led by specialized transportation providers demonstrate the interest and commitment towards finding ways to improve efficiency. In 2024, Envida, Silver Key, and Fountain Valley Senior Center collaborated on using the EcoLane software with the goal of increasing efficiencies and riders.

The existing transit system (MMT) is perceived by some potential riders as inaccessible due to inadequate and unsafe walking experiences. Public feedback for this planning process was supportive of riding transit, but on the condition that it is safer for them to access by sidewalks and other multimodal amenities. With El Paso County leading the State in traffic

fatalities[4] and third place[5] for pedestrian fatalities in 2023, the region has much work to do to improve conditions for people travelling outside of vehicles. When fixed-route transit stops and the routes leading to them are made safer and universally accessible, the need and burden on ADA complementary paratransit and the specialized transportation system may decrease or shift to other underserved locations.

[4] B. Finley, "Colorado saw 6% dip in overall traffic deaths in 2023 — but a record-high 131 pedestrian fatalities," *The Denver Post*, 27 January 2024

[5] O. Prentzel, "Colorado is getting deadlier for pedestrians and cyclists, despite overall drop in traffic deaths," *The Colorado Sun*, 2 February 2024

3 STRATEGIES AND IMPLEMENTATION

INTRODUCTION

Method for Developing and Prioritizing Strategies

The development, refinement, and prioritization of the Specialized Transportation Plan followed a process aligned with all steps of community and stakeholder engagement and was achieved in conjunction with the RTP. The steps in this process included:

- **Existing Conditions Analysis:** Existing conditions were analyzed and shared with PPACG, MMT, and project partners as part of the first stakeholder meeting. Feedback was provided on those findings.
- **Draft Strategies to Meet Needs and Stakeholder Conversations:** The key challenges or needs for specialized transportation in the region, along with draft strategies to meet those needs, were drafted by the consultant team and then presented to PPACG, MMT, and project partners as part of an interactive discussion and presentation during the second stakeholder meeting. Stakeholders voiced their greatest support for systems and databases around the development of a OC/OC center.
- **Public Engagement:** The strategies were revised and presented to the public at the virtual and in-person open houses. Attendees were asked to vote on which strategies were the highest priority. The most votes prioritized capital projects like bus stop improvements and vehicle purchases, along with the components of a OC/OC center.
- **Final Revisions:** Strategies were revised to reflect input from the general public, stakeholders, PPACG, and MMT.

The outcome is a set of five recommendations described in this chapter.

List of Strategies

The five recommended strategies listed below (Figure 8) include high-level subject-to-change cost estimates which help contextualize the intensity of resources behind each strategy. It should be noted that this is not a fiscally constrained list.

The legend for cost estimates is as follows:

- $ = Fewer than $750,000 (or less than the FY2024 apportionment of Section 5310 funds).
- $$ = Between $750,000 and $1,500,000.
- $$$ = Greater than $1,500,000.

Figure 8. List of Specialized Plan Strategies

Strategy Number	Strategy Name	Start-Up and Capital Cost Estimates	Annual Operations and Maintenance Cost Estimates
	High-Priority Strategies		
1	Incrementally develop a One-Call One-Click center.	$$$	$
2	Coordinate with providers to help secure funding for right-sized, shared, and well-maintained vehicles that meet ridership needs.	$$$[6]	$
3	Commission mobility services under improved standards of service.	$	$
	Medium-Priority Strategies		
4	Create a program to reimburse people for Uber, Lyft, and taxi rides in situations where there is a critical unmet transportation need based on the time and location of the trip.	$	$
5	Consolidate all resources and explore training options for drivers.	$	$

[6] Assumes new vehicle purchases to full backfill existing combined number of vehicles that specialized transportation providers reported to be at the end of their life.

How to Navigate Strategies in this Plan

The header of each strategy contains the following designations:

- Whether it is **High-Priority** or **Medium-Priority** as determined by inputs from the public and stakeholders.
- Whether it is relatively **Low-Cost** or if **Additional Funding is Needed** beyond the Section 5310 apportionment.

Each strategy also includes the following components:

- A narrative description and rationale for each strategy.
- List of short-term actions to be taken over the next five years for implementation, including a designated leader for implementation.
- List of considerations to make for actions and plans over the longer term beyond the next five years.
- Descriptions of case studies where this strategy has been implemented elsewhere, and an explanation of how this could be applied in the Pikes Peak region.
- List of start-up and capital resources necessary to consider for implementation.
- List of ongoing operations and maintenance resources necessary to consider for implementation.

RECOMMENDED PLAN STRATEGIES

STRATEGY 1 | High-Priority | Additional Funding Needed

Incrementally develop a One-Call One-Click center.

A key problem for current and future specialized transportation riders in the Pikes Peak region is the difficulty in navigating the providers' network. There are 17 specialized, paratransit, or transit providers across El Paso County. Each provider has its own operating structure, policies, and funding sources. Eligibility requirements also differ. Variations are also tied to each ride and geography served. Navigating the system today requires riders to contact each provider to learn more, costing much time and effort.

A OC/OC center could help reduce the difficulty experienced by riders. It could reduce the amount of time spent by riders in finding the most appropriate ride for their specific trip and location. The development and maintenance of such a call center is a coordinated effort and

can help transportation providers in their efforts to share information, identify gaps, and reduce costs.

Implementing a fully integrated one-stop ride booking system, accessible 24/7 for all riders and organizations in the region, is a complex task that will take time. There are also other appropriate stages of OC/OC programs which are relatively intermediate and considerate of the inherent coordination challenges and autonomy of partnering organizations in the context of the Pikes Peak region.

To that end, this strategy is divided into two key parts:

- **Part A:** Developing a shared intake form and back-end database of riders that can be shared amongst all providers to the greatest extent possible.
- **Part B:** Establishing the OC/OC center as a front-end customer-friendly website and hotline for information and referrals.

Each part includes detailed short-term and long-term actions to guide implementation and is summarized with an overall case study example and cost estimates.

Part A: Develop a shared intake form and back-end database that can be accessed by all providers.

This database would include a profile for each rider registered with a specialized transportation provider and/or ADA complementary paratransit. Each profile would be created or updated upon rider intake. The rider profile would contain essential information such as eligibility certification, recurring destinations, and any assistance needs (e.g., using a mobility device or having a caretaker). Providers could use these profiles to simplify scheduling and efficiently communicate with riders. For example, if a rider calls a service to schedule a ride, the scheduler can view their profile and confirm eligibility or make a recommendation of another service if they do not qualify. The future OC/OC center could also make updates to the database and expedite rider referrals to other services. This streamlined process eliminates the need for riders to make multiple calls or submit additional applications, thus reducing confusion and improving the customer experience. It also helps ensure that eligible subrecipients are referring riders living within the MMT service area to confirm their ability to access the transit network or eligibility to ride ADA complementary paratransit.

The organization responsible for the database must establish and enforce data privacy standards. Providers and schedulers should be notified on how to responsibly handle personal data.

Regularly sharing the database access with providers and reminding riders to update their profile information is also essential. A functioning shared database allows riders to make one call to a provider and have their ride scheduled, whether with that provider or a different one.

Short-Term (Five-Year) Actions

Lead: PPACG, with support from Envida, MMT, Silver Key, and Fountain Valley Senior Center.

- Envida, MMT, Silver Key, Fountain Valley Senior Center, and any other providers, should share all current eligibility forms, criteria, and systems for entry with one another.
- Work with transportation providers to streamline and coordinate intake and eligibility policies, establishing memoranda of understanding as necessary.
- Develop a common eligibility and intake form that covers multiple providers to the greatest extent possible.
- If an existing database or software is not being considered, a new agreement with a software provider for a database may need to be developed.
- Contact each registrant using pre-populated self-addressed stamped postcards to request a signature for consent in incorporating and updating their listing into a consolidated database. The benefits of convenience -- and affirmations of privacy -- should be conveyed in this communication.
- Share database access among all providers and provide necessary training to designated personnel from specialized transportation providers and other agencies.
- Set a recurring deadline for updating the rider database and training newly participating agencies.
- Continue promoting database use and raising awareness among providers and riders.

Long-Term Considerations

Lead: PPACG, or the organization ultimately responsible hosting the OC/OC program as determined in the short-term timeline.

- Integrate database with scheduling platforms to streamline updates.
- Coordinate with all agencies on unified policies, including reservations, late cancellations, no-shows, and suspensions.
- Continue with marketing efforts and regularly monitor and report on system performance.
- Develop computer logic or utilize assisting software to determine the most appropriate funding source for each rider and ride based on eligibility and need criteria.

Part B: Phone hotline and website to help direct people to the most appropriate transportation options.

The responsibilities of a new regional phone hotline (or call center) should be right-sized to meet expectations and work within the constraints of the existing system. If the only acceptable outcome is a fully integrated single point of contact to achieve all bookings and dispatching for a rider regardless of their provider or circumstance, that vision will take a very long time to realize. The more reasonable starting point and expectation for a OC/OC center is a one-stop source for information and referrals. Offering both a low-tech option like a call center, complemented by a website or automated option, will ensure that people with differing needs and resources can receive similar outcomes.

Setting up a hotline and website, even for information and referral purposes, can help save time in different ways:

- Current MMT and HSP customer service representatives and dispatchers may not have the time to answer individual questions or look up answers for the specialized transportation customer base, but a call center and website could be dedicated toward meeting those needs.
- Fewer phone calls on the user end for people without reliable internet services or do not feel comfortable finding information on a website or app. Depending on the circumstances, this service may be expedited for people who agree to be listed and pre-verified in the shared database, which is Part A of this strategy.

Short-Term (Five-Year) Actions

Lead: PPACG, but could switch to another organization responsible for regional transportation demand management.

- Conduct peer interviews with fellow Colorado agencies implementing OC/OCs to gain further insight and best practices.
- Identify representatives of each transit and specialized transportation service to be the reference point and contact for the mobility managers tasked with directing and referring callers and riders to the most appropriate service.
- Take a full inventory of the software, scheduling, and dispatch capabilities of every operating transportation provider in the region for planning purposes.
- Set standards for desired outcomes and the regular updating of resources.
- Integrate the database. Develop a platform to allow for all providers to regularly provide information.

- Set timelines and conditions for regular updates of information (for example, submitted information from the providers could be conditioned on a confirmed update or check-in every six months).
- Provide ongoing training to and recruitment for call center staff.
- Pilot test all systems with a focus group of riders with the assistance of community stakeholders.
- Coordinate marketing of the platforms when available to the greater community.

Long-Term Considerations

Lead: PPACG, or the organization ultimately responsible hosting the one-call one-click program as determined in the short-term timeline.

- The core of the program should first be a well-functioning call center, website, form for taking in new riders, and series of protocols for referring callers to the most appropriate service. Only then should further improvements be implemented, including incorporating scheduling services and dispatch services. Using the program to reduce redundancy and overhead is a good benefit to continue conferring with partnering organizations and other eligible subrecipients. For example, a fully integrated and coordinated scheduling system would provide cost savings to specialized transportation because it does not require each organization to have a team of schedulers, which reduces the average overhead.
- Invest in the procurement of a technology platform that will integrate all specialized transit providers booking systems and be part of an accessible and user-friendly web platform that allows for updated information. Ensure solicitations for software focus on cross-compatibility between providers.
- As the Colorado Springs region grows, overnight needs will continue to persist – particularly emergency situations. Therefore, a 24/7 system will be important to provide and maintain in the long-term.
- Possible future programs and services in the long-term, such as travel training, may also be good candidates for what riders and callers can be referred towards.

Case Study and Resourcing Examples

Case Study Example	Applicability to the Pikes Peak Region
North Front Range MPO (NFRMPO) of Fort Collins, CO: After identifying an information and awareness need for older adults' transportation, it was decided that NFRMPO was best equipped entity to set up the program (now known as RideNoCo), as it was seen as a neutral third-party, unlike entities that directly provided the transportation. The NFRMPO Planning Council set aside funds to match startup costs received through a successful application of State MMOF funds. Initial startup costs included $1.2 million. Section 5310 funds were used to cover initial program operations. Setting up the center and website were relatively easy steps. However, concerns emerged about the extent to which all systems would be fully integrated. Providers did not want to relinquish the relationships and trust they had built with existing clients. Providers were also already well acquainted with their scheduling and dispatch software, some of which was not consistent across the region. Therefore, the steering committee decided that enabling the center to perform ride scheduling was going to be too difficult. Instead, a more incremental step was taken. RideNoCo pivoted towards making referrals and providing accurate information to callers, so they wouldn't need to go to multiple entities to figure out which service would cover them depending on the location, trip purpose, and funding source. Once questions were answered by the call center and referral was made, the next interaction would be scheduling directly with the provider itself. Energy was put towards supporting transactional data supply (TDS) data specifications. Demonstrating value back to project partners and funders went beyond simply reporting back the number of engaged callers and customers. NFRMPO pointed to new services that were brought into the regional program, their ability to use data to identify gaps, and overall telling a compelling story about where the program had been and where it was headed. Following these demonstrations, the City Council approved another $600,000 to fund program operations from 2025 to 2027.	Fort Collins demonstrates success with a OC/OC as a smaller city with many specialized transportation providers for riders to navigate. The Pikes Peak region may be larger, but it should consider a similar tact that recognizes the solid foundation and relationships of local transportation providers and human services by first making it easier for people to navigate the specialized transportation system. Collaborative efforts like these can help expand the reach and effectiveness of any program. Then, after a successful demonstration, there is a foundation to consider other one-stop services in the long-run, like scheduling. Ultimately, this case study is a lesson in being gradual and open to how to demonstrate value. Steps for the Pikes Peak region need to consider taking, include: ▪ Securing funding from sources beyond Section 5310, including the State's Multimodal Transportation and Mitigation Options Fund (MMOF). ▪ Focusing on getting the easy components complete first, like setting up the hotline. ▪ Adopting a TDS data specification for all providers to use.

START-UP AND CAPITAL RESOURCES

- Estimated costs for program startup (including software and hardware acquisition) and an initial pilot period may be $1,848,000.[7]
- For the initial roll-out and program preparation, at least 0.5 full-time equivalent (FTE) of staff resources will be needed to coordinate providers on identifying a common standardized intake form and communications protocol, along with working with marketing teams to increase awareness.
- At least one FTE of staff resources will be needed to assist in contacting riders, developing software agreements, and updating a consolidated database.
- Additional consultation may be needed for some steps around planning and assessment.

ANNUAL OPERATIONS AND MAINTENANCE RESOURCES

- Estimated annual costs for call center and website operation is approximately $462,000.[8]
- One FTE should be available to answer the phone hotline during business hours, make referrals, update rider databases based on intake over the hotline, and make website updates.
- Staff resources dedicated to program start-up would pivot to maintaining quality control, improve database entry, and update practices.
- There may be an agreement with a software provider for continued training, technical assistance, and data privacy protections.

STRATEGY 2 | High-Priority | Additional Funding Needed

Coordinate with providers to help secure funding for right-sized, shared, and well-maintained vehicles that meet ridership needs.

Purchasing and maintaining vehicles is a significant expense for specialized transportation and ADA complementary paratransit. When purchasing new or used vehicles, it is important to consider community needs, procurement constraints (such as being limited to a purchasing

[7] Adjusting the $1,200,000 in initial start up costs for the Fort Collins region, multiplied by a 1.4 factor to account for population differences, followed by a 1.1 factor to account for cost of living differences.

[8] Adjusting the $300,000 in recently approved annual costs for the Fort Collins region, multiplied by a 1.4 factor to account for population differences, followed by a 1.1 factor to account for cost of living differences.

catalog when using traditional Colorado Department of Transportation (CDOT) funds), and the service context of the acquired vehicles.

Plan feedback from riders and project partners highlighted the following aims:

- Diversify fleets to include smaller, comfortable vehicles with capabilities like ADA complementary paratransit service. This particular aim could be a best practice for Metro Mobility's operations and future fleet planning.
- Match vehicle size to the trip planned and the number of riders.
- Reduce noise for sensory-sensitive riders.
- Reduce costs associated with maintenance and the ability to find parts.

Vehicle size should be based on factors like ridership numbers, route distance, and accessibility.

Vehicles can also be shared between transportation providers through various types of agreements and partnerships, enhancing efficiency and service coverage.

Short-Term (Five-Year) Actions

Lead: PPACG, with technical expertise from MMT and other operators.

- PPACG should confer with eligible subrecipients to understand current opportunities and limitations around coordinating the operation and maintenance of vehicles.
- PPACG, in consultation with MMT and CASTA, could identify vehicles in other regions that could be refurbished for HSPs at a lower cost than a new purchase.
- Organizations applying for new vehicles should demonstrate they have actively taken reasonable steps to coordinate with other transportation providers in the area, such as planning to share vehicles, other resources, or reduce duplication of service coverage.

Long-Term Considerations

Lead: PPACG, with technical expertise from MMT and other operators.

- Adopt right-sized fleets that are suitable for the specific services being provided.
- Use real-time monitoring of specialized transit ridership statistics to inform more right-sized decisions in the future. For example, if a cutaway vehicle regularly averages one rider at any given time, a minivan should be used.
- Work with technical experts to continue understanding opportunities and constraints of the existing specialized fleet based on the volume of needs.

Case Study and Cost Examples

Case Study Example	Applicability to the Pikes Peak Region
Illinois Department of Transportation (IDOT): Section 5310 project selection criteria include point values assigned to "the amount of demonstrated use vehicles receive, based on vehicle miles traveled (VMT) or one-way vehicle trips per day," the "ability to preserve and maintain vehicles throughout their useful life," and the "willingness and ability to coordinate with other service providers at a local and/or regional level."	With increasing costs of vehicles, labor, and other goods and services, the Pikes Peak region should seek the greatest possible utilization out of their next purchases. After discussing and receiving feedback from eligible subrecipients, PPACG could adopt similar criteria to encourage more coordination around the utilization of fleets.

START-UP AND CAPITAL RESOURCES

- Staff resources would help propose and set these standards as part of updates to the Section 5310 management plan.
- All-wheel drive minivans (e.g., Toyota Sienna) converted to be wheelchair-accessible assumed in the cost range of $80,000 - $95,000 per unit.
- Wheelchair-accessible cutaway buses (e.g., Ford E-450) should be in the cost range of $120,000 - $230,000 per unit, depending on the age of the vehicle[9].

ANNUAL OPERATIONS AND MAINTENANCE RESOURCES

- Staff resources would maintain and oversee the application of these standards.
- Staff responsible for procurement or asset management at all transportation providers throughout the region could also be a resource to one another by sharing their research for vehicles if compliance with CDOT or Buy America standards is necessary. This may be a shared resource that is collected along with other training materials or information systems as laid out in Strategies 1 and 5.
- Existing specialized staff resources may be responsible for vehicle maintenance, but knowledge sharing and coordination around contracting maintenance services in the community should be encouraged.

[9] Range of base prices for Cutaway/Body purchases on chassis buses and vans as reported to CDOT, March 2024.

STRATEGY 3 | High-Priority | Low-Cost

Commission mobility services with improved standards of service.

There are several characteristics of a high-quality specialized transit service, including:

- Reliable on-time service with minimal cancellations or delays.
- Universally accessible and regularly maintained vehicles and information systems that meet the needs of all ages and abilities.
- Safety as the primary focus of all driver and staff training.
- Professionalism from all staff when interacting with riders.
- Flexibility in the form of allowing people to book rides closer to the date of their appointment, which may also reduce last-minute cancellations by clients.

Specialized transportation services must aim to meet such standards if they are to effectively serve older adults and people with disabilities in the region. If these standards are not being met, the riders' experience may be negatively impacted and the use of limited resources may be inefficient. Measurable outcomes and objectives for providing mobility services will help providers in meeting standards. The following metrics, among others, could be used in assessing that quality of specialized transportation service:

- On-time performance.
- Customer wait times.
- Vehicle dwell times.
- Number of riders making connections to other transportation services.
- Number of customer/rider comments by category.
- Number of customer/rider complaints by category.
- Number of riders reporting that the specialized transportation service provided is their only mobility option for the trip purpose and/or location.

This strategy ultimately aims to ensure that riders of specialized transportation services feel confident, satisfied, and safe on their full journey to access vital healthcare, employment, education, and community resources. Encouraging providers to meet and maintain this level of quality service is also important. Establishing clear expectations and guidelines for service delivery can elevate the quality of specialized transit services, enhance the customer experience, and improve transportation access for various communities throughout the region.

Short-Term (Five-Year) Actions

Lead: PPACG.

- As current direct recipient of such funds, PPACG will contract providers to provide services.
- HSPs should disclose all their program requirements to PPACG to help support more efficient management, monitoring, and reporting out to funders.
- PPACG and HSPs will collaborate to develop more outcome-driven and remedy-focused standards for future project solicitations.
- PPACG will confirm regional service standards or performance measures for specialized transportation are consistent with funding-related measurements set by Federal guidelines (e.g., "Gaps in Service Filled" and "Ridership" for Traditional Section 5310 Projects).
- PPACG will confirm definitions of specialized transportation service terms and parameters, such as vehicle accessibility, timing of service (e.g., same day or pre-scheduled), applicable limits on trips or use, days and hours of operation, eligibility requirements, service area, and whether a service is fixed-route, door-to-door, or door-through-door.
- PPACG may consider offering technical expertise or assistance to HSPs around the procurement and deployment software needed to coordinate and book rides.
- Following the implementation of new service standards, providers can expect to continue meeting riders' needs and complying with laws and regulations such as the ADA.

Long-Term Considerations

Lead: PPACG.

- PPACG will continue to monitor eligible subrecipients' performance of contracted mobility services and, if necessary, update definitions of specialized transportation service parameters.

Case Study and Cost Examples

Case Study Example	Applicability to the Pikes Peak Region
Durham - Chapel Hill - Carrboro (North Carolina) Metropolitan Planning Organization: When assessing applications for Section 5310 projects, the MPO requires a defined service operations plan, procurement plan, specific implementation steps, key personnel responsible for implementation, and demonstrated institutional capability to carry out service delivery. Partnerships with other non-profit or private entities receive higher points. In addition to listing out "clear, measurable outcome-based performance measures", applicants are also expected to provide a plan for monitoring, evaluation, and remedies if performance standards are not achieved.	HSPs around Colorado Springs face multiple streams of funding and requirements and adding more performance measures may be perceived as burdensome and ineffective. Allowing eligible subrecipients to propose some of their own outcome-based measurements, along with a plan for monitoring and reporting, may be an opportunity to augment the compliance work already being carried out. Section 5310 applicants could also be asked to justify how their proposed measures meet RTP goals.
Montana Department of Transportation (MDT): Compliance and good practice reviews are conducted on Section 5310 recipients as "part of a technical assistance effort" in which "technical assistance is provided to improve deficient areas and to document exemplary performance to share with other transit systems." The three main categories reviewed include 1) administration and management, 2) operations and service provision, and 3) service planning and marketing.	Quality service is the aim for improved standards and reporting, but skepticism and trust among the Pikes Peak transportation providers could persist. Offering technical assistance instead of punitive measures for deficient performance would help foster trust and support improvements. PPACG may have limited resources to directly provide the technical assistance needed to remedy certain deficiencies in specialized transportation performance, but providers could utilize the CASTA network for potential support, expertise, and even possible coordination with other service providers.
Michiana Area Council of Governments (MACOG) in South Bend, IN: MACOG uses Section 5310 scoring criteria to evaluate whether an applicant has shown evidence of "coordination with other non-profit, for-profit and public transportation providers" along with the documented coordination anticipated with each vehicle. Examples include "service agreements, resource sharing, referral arrangements, coordinated vehicle dispatch, memorandum of understanding, coordination action plans, joint training."	After discussing and receiving feedback from eligible subrecipients, PPACG could incorporate scoring criteria providing additional points to applications identifying clear performance measures (to track service effectiveness) and including well-defined project planning and implementation steps. Applicant organizations can also be scored on their technical capacity and organizational preparedness to provide services.

START-UP AND CAPITAL RESOURCES

- PPACG mobility staff time would be focused on the development and communication of these standards with eligible subrecipients.
- Temporary additional staff time may be necessary to assist in change management and/or communications with eligible subrecipients.

ANNUAL OPERATIONS AND MAINTENANCE RESOURCES

- PPACG mobility staff time would be focused on the refinement and continued communication of these standards.
- Costs may be affected by future annual Section 5310 apportionments and matching amounts.

STRATEGY 4 | Medium-Priority | Low-Cost

Create a program to reimburse people for Uber, Lyft, and taxi rides in situations where there is a critical unmet transportation need based on the time and location of the trip.

A common barrier to people using public transportation is what to do in an emergency if you need to travel somewhere fast and do not have a personal vehicle nearby. Therefore, one of the main reasons people choose to drive to work, school, errands, etc., is the convenience of having quick access to a car. A guaranteed ride home program can mitigate these concerns by providing the assurance that, in case of a personal emergency, they will be reimbursed for the faster direct ride through a ridehailing service or taxi. Guaranteed ride home programs incentivize and encourage people to walk or ride transit, specialized transportation, or vanpools because riders know they have a free ride home in case of an emergency. A guaranteed ride home can also provide equity to riders who solely rely on transit or specialized transportation for their mobility needs and may be relatively lower-income or part of a marginalized community.

A guaranteed or emergency ride home program can have several components chosen for the agency's needs. There are different methods for registration, procedures, and usage limits that can be customized based on what would work best for the overall rider base. For example, the reimbursement method could be in the form of rideshare credits or a cash subsidy. The program could also be specifically for low-income households or older adults.

A partnership with ridehailing services or taxis could also serve riders who may use ADA complementary paratransit or specialized services, but could also use an Uber, Lyft, or taxi if it is a convenient, reliable, and accessible option.

For riders who solely rely on specialized transportation services or ADA complementary paratransit, sending some of their on-demand trips to be serviced by transportation network companies (TNCs) or taxis could help save costs and reserve resources.

Ultimately, the program must ensure the users' barriers to entry are reduced to the fullest extent possible and people must be reminded that they have access to this program. To ensure it is not abused, there should be set limits on the maximum number of rides, distance covered, or amount reimbursed. Documentation of a personal emergency could be required depending on the trip purpose, circumstance, and user.

There are multiple ways to customize a program, depending on the intended audience:

- A **broad audience with a focus on regional transportation demand**, in which customers submit information for reimbursement after a ride.
- A **specialized focus for qualifying individuals**, in which people with disabilities are given a stipend or limited number of trip vouchers in advance of using such rides.

A well-organized, utilized, and marketed guaranteed ride home program can provide peace of mind, cover service gaps when needed, and encourage riders to keep choosing transit and specialized transportation for their trips.

Short-Term (Five-Year) Actions

Lead: PPACG, with support from MMT, TNCs, and local taxi companies.

- Engage with TNCs and/or local taxi companies to offer a pilot program, with the agency subsidizing trips for customers.
- Ensure participating providers can offer wheelchair-accessible services on request and that they pass insurance and training standards.
- Determine and place ride/distance-covered caps and other policies for the program.
- MMT could support program marketing by placing promotions in vehicles, transit centers, and bus shelters.
- TNCs and taxis would support program implementation by ensuring that receipts and documentation for program users and all riders are regular practice.
- MMT and specialized transportation providers would support program implementation by preparing a standard and easily produced documentation of a qualifying event (e.g., a vehicle breakdown, a denied ride due to capacity, etc.) that a rider can use to justify reimbursement for the ride.

Long-Term Considerations

Lead: PPACG or another organization responsible for regional transportation demand management.

- Explore unique transportation demand management (TDM) program funds to sustain the project, such as transportation management organization (TMO) funds via CDOT Office of Innovation.
- Measure awareness of travel options, including the Emergency Ride Home program, using internet traffic analytics, media engagement, or a regional survey.
- The management of the permanent program goes to a new locally financed organization dedicated to mobility management, trip coordination, and TDM.
- Consider scaling in customer service for this program into the staffing roles and responsibilities alongside the OC/OC center operation.

Case Study and Cost Examples

Case Study Example	Applicability to the Pikes Peak Region
South Florida Commute Services (Florida Department of Transportation) defines an emergency as one of the following: ▪ Regular transit service is unavailable or inaccessible ▪ Illness of the rider or an immediate family member ▪ Unscheduled overtime or extended work hours ▪ A carpool driver's inability to make the scheduled trip home due to an unexpected work schedule or illness **ACHD Commuteride (Idaho)** caps annual emergency ride home reimbursements per registered user as six times or $300 in value, whichever comes first. Additionally, commuters need to be registered in the system and have logged their commuting days to qualify for a free ride home. **ABQ Ride (New Mexico)** provides a guaranteed ride home to commuters who use transit, bike, walk, etc. to work or school at least three times a week. Commuters are limited to five rides per calendar year. Commuters can register online or via mail-in paper form and get a Guaranteed Ride Home ID card to use for scheduling a ride.	Colorado Springs and its surroundings are susceptible to a variety of natural disasters. A guaranteed ride home program does not have the funding, capacity, or scope to meet natural disasters which affect most every person. Specific criteria for a guaranteed ride home program in terms of what constitutes an emergency will ensure that funds are limited to being used for personal emergencies, ensuring that resources aren't exhausted on this program alone and that limited budgets can be efficiently utilized. In its own program policy, the Pikes Peak region could simply write and draft definitions and guidelines – similar to what is used by South Florida and other programs.

START-UP AND CAPITAL RESOURCES

- Staff time would be focused on the development and communication of program guidelines.
- There may be initial set-up fees for a TDM platform (e.g. a third-party transportation technology platform and/or a contractor to administer the program.

ANNUAL OPERATIONS AND MAINTENANCE RESOURCES

- Anticipated workload and effort for the management of the program, including customer service, program administration, reimbursement processing and annual monitoring, is approximately 0.5 FTE.

- Annual costs, including platform and database hosting, in coordination with other TDM platforms, budget for reimbursements, annual reporting, and marketing and is approximately $55,000 a year[10].

STRATEGY 5 | Medium-Priority | Low-Cost

Consolidate all resources and explore training options for drivers.

Centralizing all relevant information and training materials for bus drivers can enhance the efficiency and effectiveness of transportation agencies, solidify more consistent standards in training, and foster a culture of continuous learning and improvement among bus drivers. This approach also enhances communication and customer satisfaction. As all providers in the Pike's Peak region will be pulling from the same resources, riders can be assured that their drivers will have been trained consistently each time on the same key topics.

There are multiple transportation providers in the Pikes Peak region, each with its own set of drivers and operators and potentially overlapping credentials and requirements. This need manifested itself during a Specialized Transportation Plan stakeholder meeting, in which one attending provider connected with another over training materials.

This strategy is a continuation of current opportunities to consolidate training with the specialized transportation service providers so that customers in the region experience consistency with drivers.

Short-Term (Five-Year) Actions

Lead: PPACG, supported by specialized transportation providers, MMT, and any other transportation providers interested in partnering and sharing resources in the public interest.

- PPACG should coordinate with HSPs immediately identify other training needs which may be applicable to all drivers, including drug/alcohol, defensive driving, sensitivity to people with disabilities, small vehicles, first aid administration, safe technology use, conflict management and de-escalation tactics.

[10] Adjusting the reported $220,000 in annual costs for a program in Baltimore, MD, multiplied by a 0.25 factor to account for population differences.

- Identify a training site with classroom space along with the necessary capacity for vehicle parking and demonstrations.

Long-Term Considerations

Lead: A third-party organization responsible for standardizing and consolidating driver and staff training for specialized transportation operations.

- Coordination with CASTA on identifying resources may be beneficial, especially if such efforts have already begun in other parts of the State.
- MMT may maintain separate contractors for training drivers for fixed-route and ADA complementary paratransit.
- Continue diversifying training curriculum based on operational needs and rider feedback.
- Continue marketing, monitoring, and reporting.
- Consider partnering with agencies in helping to pool resources to develop a single year-round site that would train drivers regardless of which provider they serve.

Case Study and Cost Examples

Case Study Example	Applicability to the Pikes Peak Region
The Miami Valley Greater Regional Mobility Council's biggest priority is a standardized training curriculum for drivers, covering first aid, defensive driving, fundamentals of transporting older and disabled passengers, safe technology use, and conflict management.	Like many regions, Colorado Springs has a driver shortage and ensuring that new drivers can be sufficiently and effectively trained will be an important priority for all forms of transportation, including specialized transportation. A standardized training approach is worth considering as an effective program that can provide an affordable (or free) opportunity for people, potentially alleviating labor shortages and improving service quality. Miami Valley's focus on sensitivity and dignity to riders who are older or disabled is relevant, as Pikes Peak focus group feedback observed a need for improved customer service among specialized transportation drivers compared to ADA complementary paratransit drivers.

START-UP AND CAPITAL RESOURCES

- Staff resources from all partners to find sites, pool resources, contact transportation providers, apply for grants, and market training opportunities as needed.

ANNUAL OPERATIONS AND MAINTENANCE RESOURCES

- Scaling beyond the consolidation of resources may require additional costs, including the acquisition and maintenance of a training facility, FTEs for dedicated training, and incentives and events for trainers and students.

IMPLEMENTATION AND SUPPORTIVE POLICY FOR STRATEGIES

Short-Term (Five-Year) Implementation Steps

The following actions should be seriously considered in the implementation and management of the recommended strategies for the Pikes Peak region.

Hire mobility managers with a clearly defined role.

"Mobility Management is about bringing people together. Bringing together the people who need transportation, with the people who provide transportation and the people who can pay for transportation to address community transportation needs. It's making the most of existing resources, creating new services when needed and looking at the issues through the lens of the rider."[11]

The previous update to the Specialized Transportation Plan called special attention to the role of mobility manager as the catalyst for action and coordination to improve transportation conditions for target populations. The essential role and responsibility of a mobility manager continue to be crucial for the implementation of this plan. As public entities, PPACG, MMT, and CDOT would be the primary organizations hiring mobility managers. Key responsibilities of a mobility manager responsibilities include:

- Convening, leading, and attending all future stakeholder meetings, including the Regional Coordinating Council, and ensuring regular representation and attendance of those meetings.
- Becoming familiar with all available transportation services, providers, funders, human services, and unmet need throughout the region.
- Continue identifying and analyzing trends, gaps, and opportunities in specialized transportation services throughout the region.
- Monitoring progress, budgets, contract compliance with federal guidelines, and timelines.
- Securing strong partnerships for the benefit of being competitive for grants and enhancing coordination.
- Researching and applying for transportation grants.

[11] A. Simmons, "New Mobility Managers: An Introduction", National Center for Mobility Management, 2020, https://nationalcenterformobilitymanagement.org/blog/new-mobility-managers-an-introduction-part-1/ accessed 2024.

- Ensuring compliance with local, state, regional, and federal regulations and policies as applicable.
- Answering inquiries from organizations on specialized transportation options.
- Corresponding with peers in the CASTA network and beyond to exchange lessons learned and build a knowledge base of third-party vendors, operators, and technologies.
- When speaking on behalf of a provider, serving as a good faith representative of organizational efforts to improve access to transportation for the most vulnerable communities and populations in the region.
- Travelling throughout the region and state to meet partners, stakeholders, and community members at their respective locations to better understand needs and build trust, empathy, and collaboration.
- Being the primary point of contact and owner of all future updates to the Specialized Transportation Plan, committing to facilitating transparent and regular communications between stakeholders, government agencies, and consultants for the full process.

Qualifications should include multiple years of experience in program management, project management, and/or transportation planning with a background knowledge in transportation policies, regulations, and finance.

Responsibilities that should ***not*** fall under a mobility manager include:

- Direct operation and maintenance of any transportation service, including dispatch and driving responsibilities, or the training of people in those roles.
- Leading marketing campaigns related to transportation services and programs.
- Executing emergency response protocols.
- Physically assisting passengers with their access needs.

Given the current size and future projected growth of the Pikes Peak region, a single FTE mobility manager is insufficient. A minimum of three FTE staff is the combined need identified in this plan. If should be noted, for example, the NFRMPO, which serves a region with a significantly smaller population, has a mobility-centered staff of three people. Mobility managers may be assigned responsibilities specific to their strengths (e.g., one may be more focused on grants while another may be more focused on coordination activities).

Revamp the Mobility Coordinating Committee by splitting it into more specialized areas of expertise.

The regional mobility coordinator or mobility manager has historically been responsible for facilitating the convening of the Mobility Coordinating Committee as overseen by PPACG. It remains a good opportunity to exchange perspectives across multiple institutional silos.

However, conflating the perspectives and experiences of all participants in the universe of coordinated transit may not make for a useful or productive conversation. Thus, the Pikes Peak region should consider holding more specialized meetings and discussions. Two proposed focuses are described below.

Planning and administration focus

Meaningful progress and attendance during the stakeholder meetings and open houses during the Specialized Transportation Plan process are a positive sign that people want to have conversations about improvements to the current system and putting riders first. The group of stakeholders that convened twice over the period of this plan's development is the logical choice for the next team of people responsible for sharing information and assisting program implementation. This group should ideally meet on a quarterly basis and no fewer than two times a year. Some benefits from such convenings would include:

- Learning about new funding opportunities with representatives at the state, federal, and non-profit levels.
- Committing to standards of quality transportation service.
- Tracking and reporting progress.

Operations focus

There is another group – specifically the schedulers, operations managers, customer-facing individuals, and technical experts who make the real-time decisions as to when, for example, a taxi completes somebody's requested ride when real-time resources and demands are tight. These individuals should also be getting to know one another across the institutional silos. Benefits from such convenings would include:

- Sharing experiences working with the specialized transportation customer base.
- Identifying coordination opportunities for utilizing shared fleets.
- Discussing the development and implementation of new technologies to enhance service delivery for riders.
- Discussing best practices for improving driver satisfaction and retainment.

This group should ideally meet on a quarterly basis and no fewer than two times a year. The operational demands may be more challenging for scheduling, but the importance of holding such meetings is crucial. Experts with this focus need to provide first-hand information to build trust between organizations and support more realistic service enhancements in the region.

Find funding.

The full implementation of all the recommended Specialized Transportation Plan strategies is conditioned on sufficient, sustainable funding streams *beyond* the Section 5310 allocation. As previously noted, the mobility manager's role should include pursuing grants. It will also be critical for mobility managers and specialized transportation providers to demonstrate to funders that there are strong partnerships and flexible expectations for a program or service.

Do some quick deployment of programs.

With an infusion of funds, pilot programs may be developed. These should be nimble and responsive to performance measures, such as ridership, engagement, and cost-savings. The lack of a long-term funding source will be an inevitability in many pilot programs, but it should not be seen as a hindrance. Instead, pilot program managers should regularly remind users of the limited timeframe to help encourage feedback, future support, and program modifications.

Additional Long-Term Policy Considerations

As implementation of the 2050 RTP continues, critical partnerships are built, the Pikes Peak region continues to grow, and new funding sources are sought over the long-term timeline beyond the next five years, specialized transportation will need to continue to be a part of the conversation. Burdens on the existing specialized transportation network and ADA complementary paratransit service increasing the physical accessibility of transit will continue to grow, and a vision for how to leave no person behind will continue to be realized.

Help people access bus stops more safely, including sidewalks, safer crosswalks, shelters, and lighting.

As noted in the RTP, the infrastructure for making MMT bus stops more easily and safely accessible for passengers will continue to be an important focus of improvements over the long run. If the fixed-route network is more accessible to riders currently reliant on ADA complementary paratransit and specialized transportation services, the cost burdens on those demand-response services may be reduced. Lifting this barrier to cost-effective fixed-route transit can, in turn, promote greater mobility, independence, and quality of life for riders of all ages and abilities. This may be especially important in areas of high transit need where there is a high proportion of people with disabilities.

Consider organizational structures in the context of a growing region and long-term funding commitments.

Although efforts exist to coordinate among various transit providers, each agency has unique specialties, responsibilities, and limited resources. Expanding long-term transportation options for a diverse group of riders requires the continued partnership between PPACG, MMT, and HSPs, as no single entity can lead alone.

There is an added imperative to be flexible and creative in the long-term as growth and development continues into the fringes of the Pikes Peak region, and trips to and from other regions in Colorado increase as well. The implementation and development of Specialized Transportation Plan recommendations like an emergency ride home program and a OC/OC center, for example, may need to scale up to meet these growing demands after building a successful foundation for a more basic operation.

PPACG, MMT, and the HSPs should be coordinating with CASTA and other trade organizations to be open to future organizational structures and relationships. Some examples to consider:

- Setting up the Mobility Coordinating Committee (or future subcommittees) for the Pikes Peak region to become a future El Paso County representative in the Denver Regional Mobility and Access Council (DRMAC)'s network of coordinators. This would be a means to facilitate services and programs to meet inter-regional and inter-county specialized transportation needs.
- Creating independent organizations with a mission centered around mobility management, trip coordination, and transportation demand management for the Colorado Springs UZA. Responsibilities could include relieving entities from the burden of managing certain programs that no longer fit within their original organizational framework, revamping dormant programs, or sharing administrative responsibilities among specialized transportation providers such as procurement, scheduling, training, compliance, and accounting.
- Continuing to actively participate in the CASTA network to help advocate on behalf of the region for reforms to policies occurring at the state and/or federal levels, like NEMT.

4 CONCLUSION

Successfully improving the specialized transportation system in the Pikes Peak region hinges on strong and effective partnerships. Government guidelines and foundation directives underscore this need for collaboration. No single entity can achieve a better system in isolation.

Therefore, it is imperative that agencies and organizations organize open communication and transparency with one another. Investing in continuous and open dialogue will help strengthen partnerships and facilitate understanding when tough decisions arise.

The Specialized Transportation Plan is not simply a mechanism to secure a stream of federal dollars. It shines a light on important community needs, informing the people of the Pikes Peak region about their transportation options and advocating for increased access to opportunities. As the City of Colorado Springs plans to scale up its transit system to meet the needs of as many riders as possible, the specialized transportation system plays the critical role of connecting those who may remain underserved – rural areas, places lacking transit access, and the numerous individuals who do not or cannot drive for a variety of reasons and constraints. Without specialized transportation, there would be fewer lives being lived independently in the Pikes Peak region, less dollars being spent locally, and more missed medical appointments.

In five years, another plan will succeed this one. In the meantime, the call to action is clear. There are at least five recommendations in this document that people should be acting upon:

1. Incrementally develop an OC/OC center.
2. Coordinate with providers to help secure funding for right-sized, shared, and well-maintained vehicles that meet ridership needs.
3. Commission mobility services under improved standards of service.
4. Create a program to reimburse people for Uber, Lyft, and taxi rides in situations where there is a critical unmet transportation need based on the time and location of the trip.
5. Consolidate all resources and explore training options for drivers.

If steps are not taken to address these recommendations, the next plan will lament the lack of progress. The responsibility to further the enduring objective of serving the full region now rests on the organizations dedicated to that mission, paired with the partnerships that are forged and nurtured along the way.

5 APPENDICES

APPENDIX A – LIST AND DESCRIPTIONS OF TRANSPORTATION PROVIDERS AND SERVICES

Specialized Transportation and ADA Complementary Paratransit

Figure 9 summarizes all the specialized transportation and ADA complementary paratransit providers that have been identified at the time of plan development to be providing service to the Colorado Springs UZA – a designated area entirely within El Paso County for which PPACG distributes Section 5310 funds. Each specialized provider specifically targets to meet the needs of the focus population groups of the Specialized Transportation Plan. Each of these services is described in greater detail on subsequent pages.

Figure 9. Overview of Specialized Transportation Services in Pikes Peak Region

Provider	Service Area	Services Provided	Focus Population
Asteri EMS / The Way	Colorado Springs and Manitou Springs	Door-to-door service for NEMT	Qualified Colorado Medicaid Recipients
Axel Medical Transportation	Colorado Springs, Manitou Springs, Security-Widefield, Fountain, Monument	Door-to-door service for NEMT	Qualified Colorado Medicaid Recipients
Beo Mobility	Colorado Springs metropolitan area	Door-through-door service for medical appointments	Older adults and people with disabilities, but open to general public
Blue Skies	Must start in El Paso County, but will go to Denver, Castle Rock, Pueblo, Canon City	Door-to-door service for NEMT	Qualified Colorado Medicaid Recipients
Community Intersections	Colorado Springs metropolitan area	Transportation to access in-house programs, transportation to employment	Adults with developmental disabilities

Provider	Service Area	Services Provided	Focus Population
Envida	El Paso and Teller Counties (varies by program)	Door-to-door and door-through-door transportation, deviated fixed-route service, NEMT rides	Varies by program (older adults, individuals with disabilities, general public, Medicaid recipients, etc.)
Fountain Valley Senior Center	Fountain and southeastern El Paso County, special outings to destinations across Colorado	Door-through-door transportation for a variety of purposes including medical appointments, shopping, employment/education	Individuals 60+ (with some programs available for those 55+) and individuals with disabilities
Friends Transportation	Colorado Springs	Door-to-door service for NEMT	Qualified Colorado Medicaid Recipients
GoodWheels (Goodwill)	Colorado Springs and Pueblo, Medicaid destinations, anywhere in Colorado for private paying clients	Door-through-door service for different needs: medical appointments (including NEMT), shopping, errands, airport transportation, etc.	General public, specialized in transportation for individuals utilizing wheelchairs
Medride	El Paso County	Door-to-door service for NEMT	Qualified Colorado Medicaid Recipients
Mountain Metro Mobility (MMT)	¾-mile of existing MMT routes (excluding deviated fixed-routes)	Door-to-door ADA complementary paratransit	Individuals with disabilities
Rocky Mountain PACE	Colorado Springs, Fountain, Manitou Springs	Door-through-door service for medical appointments	Only for PACE participants (also must be 55+)
Second Home Care	El Paso County, Teller County, Park County	Door-to-door service for NEMT	Qualified Colorado Medicaid Recipients
Silver Key	Qualifying ZIP codes across Colorado Springs, Manitou Springs, and some surrounding communities, some services available on Monument, Palmer Lake, and Glen Eagle areas	ADA accessible door-through-door transportation	Older adults 60+
Teller Senior Coalition	Available for Teller Conty residents and residents of selected portions of Eastern Park and Western El Paso counties. Transportation is provided to all areas of Teller County and Colorado Springs area. Shuttle services are available in Teller County	Door-to-door transportation, shuttle service, NEMT	Older adults, but open to the general public

Provider	Service Area	Services Provided	Focus Population
Transit to Care	El Paso County, Teller County, Pueblo	Door-to-door service for NEMT	Qualified Colorado Medicaid Recipients
Veterans Transportation Service	Colorado Springs VA Clinic and Aurora VA Medical Center	Shuttle transportation for medical appointments	Veterans receiving healthcare through United States Department of Veterans Affairs (VA)

Mountain Metro Mobility

Individuals who are unable to use fixed-route MMT services because of a disability, and are deemed eligible after completing an evaluation process, are allowed to use Mountain Metro Mobility, MMT's ADA complementary paratransit service. Mountain Metro Mobility service is provided during the same days and times as local MMT bus service and is generally available within ¾-mile of existing fixed-routes (excluding Routes 38 and 40, the two deviated fixed-routes). General service hours for Mountain Metro Mobility range from 5:00 a.m. to 10:15 p.m. on weekdays, from 6:00 a.m. to 10:15 p.m. on Saturday, and from 7:00 a.m. to 6:30 p.m. on Sunday. Longer hours of service are available on Friday/Saturday evenings for those traveling in the downtown area served by the Downtown Colorado Springs (ZEB) shuttle. Reservations can be made via phone or via email, as early as three calendar days in advance of a trip. Reservations are available Monday through Sunday from 8:00 a.m. to 5:00 p.m.

Taxi Choice (a premium passenger service) is available to Mountain Metro Mobility passengers whose ride is seven miles or less. Reservations for this service can be made up to three days in advance and no same-day rides nor changes are allowed. The fare for the Taxi Choice is the same as standard ADA complementary paratransit but can only be paid using an electronic prepaid account.

Envida

Envida provides a variety of transportation services, including door-to-door, door-through-door transportation, deviated fixed-route service, and NEMT rides. Specialized transportation is provided for Colorado Springs and nearby areas (including Monument) for individuals with disabilities, older adults, people with low incomes and others with specific qualifying circumstances. Envida also provides deviated fixed-route services in Eastern El Paso County open to the general public, operating Monday through Thursday, with service starting at 6:40 a.m. through 4:10 p.m. Additionally, Envida coordinates with various agencies in Park and Teller Counties to assist individuals in accessing medical services in Colorado Springs through Medicaid's NEMT program, as well as handling mileage reimbursement for family and friends through NEMT (however, Envida does not directly provide transportation services in Park

County). Transportation can be scheduled on weekdays from 5:00 a.m. to 6:00 p.m., and from 7:00 a.m. to 4:00 p.m. on Saturday.

Envida partnered with PPACG to pilot an on-demand transportation service. Service has been operational for over a year. However, this pilot is open only to a few individuals in the Colorado Springs area and it is not open to the public, as it aims to identify the resources that are needed to provide and expand on-demand service.

Fountain Valley Senior Center

Fountain Valley Senior Center provides transportation for individuals 60 years of age or older and those with disabilities (with some services available to individuals 55 years of age or older) who live in southern and eastern El Paso County. Transportation is available for a variety of purposes, including medical appointments, employment, and recreation, for destinations including Fountain Valley, Colorado Springs, and other parts of El Paso County. Special outings are provided to destinations across Colorado.

The City of Fountain contracts with the Fountain Valley Senior Center to provide ADA complementary paratransit service for individuals unable to use Fountain Municipal Transit's deviated fixed-route service due to a disability. Transportation service is provided Monday through Friday from 9:00 a.m. to 3:30 p.m. Reservations can be made via phone only, Monday through Friday between 8:00 a.m. and 5:00 p.m.

Goodwill of Colorado's GoodWheels

GoodWheels provides door-through-door service for different needs, including medical appointments, shopping, errands, and airport transportation. Transportation is open to the general public, although the program specializes in transportation for individuals utilizing wheelchairs. The service area is Colorado Springs and Pueblo, although GoodWheels will take individuals to Medicaid destinations and anywhere in Colorado for private pay clients. The phone line to request rides is available Monday through Saturday from 7:00 a.m. to 7:00 p.m.

Rocky Mountain PACE

Rocky Mountain PACE provides door-through-door service for medical appointments for PACE participants (who must be 55 years of age or older). The service area is Colorado Springs, Fountain, and Manitou Springs. Transportation is provided Monday through Friday from 6:30 a.m. to 5:00 p.m., although service is available outside of those hours/days depending on specific individual needs.

Silver Key

Silver Key offers ADA accessible door-through-door transportation for a variety of purposes, including medical appointments, VA medical facility trips, shopping trips, group meals, and social/recreation trips. Individuals utilizing services must be 60+ and reside in qualifying ZIP codes in Colorado Springs, Manitou Springs, and some surrounding communities. Reservations can be made up to two weeks in advance, Monday through Friday from 8:00 a.m. to 5:00 p.m., and transportation is available weekdays from 8:30 a.m. to 4:00 p.m.

Beginning in summer 2023, Silver Key took over transportation services for Mountain Community Senior Services. Silver Key now also provides medical rides to seniors in the Monument, Palmer Lake, and Glen Eagle areas Monday through Friday. Limited connections to the Tri-Lakes Senior Center are also provided Monday and Wednesday for lunch, picking customers up from their home and driving them back.

Teller Senior Coalition

The Teller Senior Coalition provides door-to-door transportation for Teller County residents and for residents of selected portions of eastern Park County and western El Paso County. Transportation is provided to all areas of Teller County and the Colorado Springs area. Medical appointments for seniors are prioritized, although the service is open for everyone for certain situations. Additionally, the Teller Senior Coalition offers shuttle services in Teller County for the general public, with different runs each day serving different geographies of the county (individuals have the ability to request a stop). NEMT is also provided. Transportation services operate Monday through Friday from 7:30 a.m. to 5:30 p.m. Scheduling is available on weekdays from 8:00 a.m. to 4:00 p.m.

Community Intersections

Community Intersections provides transportation for adults with developmental disabilities to access programs provided by the agency itself as well as access to employment in the Colorado Springs metropolitan area. Transportation services are provided Monday through Friday from 9 a.m. to 2 p.m.

Veterans Transportation Services

A service for veterans receiving healthcare services through the VA, the Veterans Transportation Service (VTS), provides a shuttle connecting PFC Floyd K. Lindstrom VA Clinic in Colorado Springs with the Rocky Mountain Regional VA Medical Center in Aurora. This helps extend access to a greater quantity of specialized services from the VA which may not necessarily be locally available. The VTS service, however, may have limited reach because of a reliance on volunteer drivers with little capacity.

Additional Providers Listed

There are several additional specialized transit providers serving the Colorado Springs UA which are listed in the PPACG Mobility Guide. These additional providers (Asteri EMS / The Way, Axel Medical Transportation, Blue Skies, Friends Transportation, Medride, Second Home Care, and Transit to Care) offer NEMT services for eligible Colorado Medicaid recipients only. As noted later in this chapter, there are nearly 100 eligible NEMT providers offering service to El Paso County alone.

Detailed Operations and Performance Indicators from Selected Specialized Providers

For the purposes of this report, specialized transportation providers receiving funds through the PPAAA reported additional information relevant to their respective transportation operations and services. These findings are detailed in Figure 10 and Figure 11. However, it is important to reiterate that the information on those figures has been compiled from reports that providers voluntarily shared with PPACG, based on each provider's unique definitions and perspectives. Therefore, the data could be subject to discrepancies in accuracy.

Figure 10. Operations Details Reported by Specialized Transportation Services

Provider	Transportation Hours of Operation	Fleet Summary	Main Sources of Funding
Fountain Valley Senior Center	9:00 a.m. - 3:30 p.m. (Mon-Fri)	Number of Vehicles: 11 ▪ 3 Ford Mini-Bus ▪ 2 Transit 350 Wagon ▪ 3 Dodge Mini-Van ▪ 2 Ford Mini SUV ▪ 1 Toyota Sienna ADA Accessible Vehicles: 6 Vehicles Past Useful Life: 3	▪ Area Agency on Aging (AAA) Regular (60%) ▪ AAA Assisted (40%)
Silver Key	8:30 a.m. - 4:00 p.m. (Mon-Fri)	Number of Vehicles: 34 ▪ Buses: 12 ▪ Mini-Vans: 22 ADA Accessible Vehicles: 22 Vehicles Past Useful Life: 6	▪ PPACG Assisted (24%) ▪ PPACG Regular (12%) ▪ 5310 FTA (36%) ▪ MMOF (27%)
Teller Senior Coalition	7:30 a.m. - 5:30 p.m. (Mon-Fri)	Number of Vehicles: 12 (2 more expected in 2024) ▪ 2 Cutaway Bus ▪ 2 Transit Van ▪ 3 Forester Car ▪ 2 Braun Van ▪ 1 Chrysler Pacifica ▪ 1 Toyota Sienna ▪ 1 Terrain Car ADA Accessible Vehicles: 6 Vehicles Past Useful Life: 2	▪ PPACG ▪ CDOT/FTA ▪ Medicaid

Provider	Transportation Hours of Operation	Fleet Summary	Main Sources of Funding
Community Intersections	6:00 a.m. - 5:00 p.m. (Mon-Fri)	Number of Vehicles: 8 ▪ 2 mini vans ▪ 1 standard van ▪ 1 transit van ▪ 4 cutaway buses ADA Accessible Vehicles: 7 Vehicles Past Useful Life: 4	▪ Medicaid funding through HCBS waiver services.
Envida	8:00 a.m. - 5:00 p.m. (Mon-Fri) 10:00 a.m. - 5:00 p.m. (Sat) (with exceptions for dialysis appointments and behavioral health programs)	Number of Vehicles: 34 ▪ 9 SUVs ▪ 9 Vans ▪ 9 BOCs ▪ 5 BOC - V (Ford Transit Passenger ADA) ▪ 2 Cars ADA Accessible Vehicles: 15 Vehicles Past Useful Life: 3	▪ AAA Assisted (12.1%) ▪ 5310 (20.6%) ▪ Medicaid (46.5%) ▪ 5311 (6.6%) ▪ CDBG (1.2%) ▪ Private pay contracts (1.5%) ▪ Other grants (10.2%) ▪ Contributions (1.3%) *(information based on 2024 budget)*

Figure 11. Performance Details Reported by Specialized Transportation Services

Provider	Trips Provided Oct '22-Sep '23	% of Trips Provided to Ages Under 60 and Disabled Individuals*	% of Trips Provided to Ages 60+ Individuals*	Rides Denied Annually	Top Ride Request Reasons
Fountain Valley Senior Center	14,441	9.17%	90.83%	400	▪ Medical appointments ▪ Socialization ▪ Essential trips (e.g. grocery store, bank, etc.)
Silver Key	32,061	0.50%	94%	4,229	▪ Medical appointments ▪ Essential trips (e.g. grocery store, bank, etc.) ▪ Transportation to a meal site
Teller Senior Coalition	10,398	8.8%	91.2%	270[12]	▪ Medical appointments ▪ Socialization ▪ Essential trips (e.g. grocery store, bank, etc.)
Community Intersections	10,624	75%	25%	0	▪ Work ▪ Day programs
Envida	78,276 Annual Unlinked Trips[13]	6%	59%	2,373	▪ Medical appointments ▪ Work ▪ Day programs

*Percentage of trips were originally reported as percentages and may be approximations. They may also not add up to 100% due to a variety of other groups that may be riding (e.g., caretakers) depending on the interpretation of the respondent.

[12] Was originally reported as 2.6% of trips each month.

[13] Data obtained through 2022 NTD Annual Agency profile and not through the survey instrument.

Additional Transit Programs and Partnerships

There are additional programs and partnerships which serve as a broad safety net for vulnerable communities and the target populations of the Specialized Transportation Plan. Some of these may come in the form of standard policy practices, like NEMT, while others may be uniquely tailored to the region, like supports for veterans from the Independence Center or shuttles to training sites for Paralympic athletes.

Free/Subsidized/Discounted Fares

- As part of the **"**Zero Fare for Better Air" statewide initiative, free rides were available for all riders on MMT in August of 2022, June through August of 2023, and July through August 2024, including for Mountain Metro Mobility riders.
- Service on the ZEB is regularly free for all riders.
- Discounts of at least 50% from MMT single ride cash fares, 31-day tickets, and 20-ride tickets are available for people over the age of 60, between the ages of 6 and 18, or with a Medicare Card or Disabled Reduced Fare Authorization (issued by the Independence Center).
- Fountain Municipal Transit is using Ozone Season Transit Grant program funds to provide zero-fare service in July and August, which has increased ridership for those months in the past when service was fare-free.

Non-Emergency Medical Transportation (NEMT)

- For people under the Health First Colorado (Medicaid) plan who have no other means of transportation (including free transportation), NEMT provides connections to medically necessary appointments and services.
- Enrollees request reimbursement for eligible rides through the Colorado Department of Health Care Policy and Financing.
- In El Paso County alone, over 100 providers are currently enlisted as NEMT service providers, including GoodWheels, Envida, and a variety of taxi companies. However, per State law, TNCs (e.g., Uber) are not covered or reimbursed by NEMT.

Veterans

- For Veterans of the United States Armed Forces, free weekday shuttles are available connecting PFC Floyd K. Lindstrom VA Clinic in Colorado Springs to the Rocky Mountain Regional (RMR) VA Medical Center in Aurora. These shuttle rides, which are part of the

VTS, are free and for VA medical appointments. Rides must be scheduled in advance with a VA transportation coordinator.

- Veterans who meet beneficiary travel eligibility requirements and are either unable to independently transfer into a private vehicle or necessitate medical care during transport beyond what an attendant can provide, may receive an extra free transportation service. These rides, which are free and only for VA medical trips within the Colorado Springs region, are scheduled in advance with a VA transportation coordinator.
- Veterans may receive a discount on some, but not all, private transportation/taxi services.
- Through the Veteran in Charge program in collaboration with the Independence Center, veterans may also receive support for in-home personal care services (which reduces the need for travel in certain situations).

Equitable Access Programs for Other Transportation Modes

The following programs are specifically for bicycle rentals, in the form of discounts offered to people with low incomes in the Pikes Peak region:

- The PikeRide program, available to the general public, has a discounted program for people residing in a "Disproportionately Impacted Communities for Colorado Energy Office Transportation Program" and making 80% or less of the area median income (AMI). Eligible participants will receive an electronic-assist bike and charger to lease at $25 a month. The program is supported by the Colorado Energy Office.
- WeRide is a program allowing people with proof of financial hardship to receive a $20 annual membership to a bike share program in Colorado Springs.
- Lime Access provides discounted fares to eligible riders who participate in local, state, or federal public benefits programs. Lime Access also provides access to scooters for riders without smartphones or credit cards.
- Veo Access provides discounted fares to eligible riders who participate in local, state, or federal public benefits programs, as well as Colorado Springs area residents who are active and former armed services members. Veo also provides a call-based system to allow users without smartphones or bank accounts to access the devices.

APPENDIX B - FUNDING

Various federal, state, and local programs are available to assist transportation programs in the Pikes Peak region. A summary of the most common sources of funding are included below.

Federal Funding

5310 Enhanced Mobility of Seniors and Individuals with Disabilities Program

The FTA Section 5310 program allocates funds for both capital and operating expenses to states and other designated recipients. These funds are intended to improve transportation options and meet the needs of individuals with disabilities and seniors. Although services funded by 5310 funds can be used by the public on an occasional basis, projects receiving these funds are required to cater to the needs of seniors and people with disabilities. In Colorado, CDOT administers 5310 funds for small urbanized and rural areas. PPACG administers 5310 funds for the Colorado Springs UZA, while CDOT provides supplemental 5310 rural transit funding to smaller providers in the region.

Projects receiving 5310 funding must be included in a coordinated plan. Additionally, regulations require that at least 55% of those funds must be available for traditional projects (such as mobility management and capital purchases), while the remainder can be utilized for other operating and capital projects. At present, the following organizations are subrecipients of Section 5310 funds through PPACG:

- Envida
- Silver Key Senior Services

5311 Rural Area Formula Program

The 5311 program offers planning, capital, operating and administrative assistance to states to aid transit in rural areas with populations under 50,000. Recipients of 5311 funds can be recognized Indian tribes, local governments, public transit operators, and nonprofits. CDOT provides supplemental 5311 funding to smaller providers in the Colorado Springs region (for example, Envida uses 5311 funding to operate deviated fixed-routes in eastern El Paso County).

5307 Urbanized Area Formula Grants

5307 funds are available to assist with operating and capital assistance for transit and for planning related to transportation in urban areas with more than 50,000 people. In the Colorado Springs metropolitan region, MMT is the designated recipient of 5307 funds.

Competitive FTA Grants

The FTA offers various competitive grants that could support mobility for Specialized Transportation Plan focus populations in the Pikes Peak region. Those include (but are not limited to) the following:

- **Mobility on Demand (MOD) Sandbox Demonstration Program**: Supports projects promoting inventive business models to provide equitable, high quality transportation choices for everyone.
- **Innovative Coordinated Access and Mobility (ICAM) Grants**: Funding supporting innovative projects improving coordination of services.
- **Integrated Mobility Innovation**: Funding for projects demonstrating effective and innovative practices, technologies, and partnerships that enhance the effectiveness of transit, improve efficiency, improve quality, foster safety, and upgrade the experiences of travelers.
- **Enhancing Mobility Innovation**: Aims to promote projects that focus on the passenger experience and encourage individuals to use transportation services.
- **Better Utilizing Investments to Leverage Development (BUILD) Transportation Discretionary Grants**: Funding for transportation infrastructure (including public transportation).

Older Americans Act (OAA)

Funds through the OAA are distributed to PPACG and PPAAA, which supplement grants for human service providers.

State/Local Programs

- **PPRTA**: The Pikes Peak Regional Transportation Authority (PPRTA) was approved by voters in 2004, authorizing a 1% sales tax supporting PPRTA goals. Funds are assigned to capital and maintenance projects, in addition to transit (which receives 10% of funds). Subsequently renewed in 2012 and in 2022, PPRTA-2 and PPRTA-3 included capital and program funds for transit, which were not included in the original PPRTA transit funds.
- **Funding Advancements for Surface Transportation and Economic Recovery Act of 2009 (FASTER) Transit Grants**: Provide $15 million every year to support transit projects in Colorado. A third of these funds are awarded competitively as local transit grants, with the rest of the funding being dedicated for statewide projects. Local recipients must provide at least 20% as local match.
- **SB-267 Funding**: Provides $500 million every year to transportation projects, with 10% of those funds being dedicated to transit. However, this transit funding must be utilized on

capital investment projects (therefore, it does not support future/current operating needs of providers).

- **SB24-032 Funding**: Passed in May 2024, this bill creates a consolidated zero fare transit grant program through the Colorado Energy Office. $7 million is allocated annually for fare-free transit during the ozone season and another $7 million is allocated specifically for youth fare-free transit all year long. Eligible transit agencies outside of the Denver Regional Transportation District (RTD) would apply for and receive grants via CASTA. Agencies will be required to report information back to CASTA. A committee is also established to develop a statewide transit pass, with a report due in 2026.
- **MMOF:** The Colorado State Legislature created MMOF in 2018, initially providing a one-time provision of funding. In 2021, SB 2021-260 designated a significant share of Colorado's COVID Fiscal Recovery Funds to MMOF in addition to generating yearly state revenues for the program for the next decade. MMOF funding is allocated by formula across the 15 different Transportation Planning Regions (TPR) in the state, and qualifying projects include operating or capital costs for on-demand and fixed-route transit, programs dealing with TDM, mobility projects enabled by new technologies, and studies dealing with multimodal transportation.

APPENDIX C – PUBLIC INVOLVEMENT APPROACH

Public involvement and engagement were built upon previous MMT planning efforts, as well as leveraging relationships from recent transportation planning efforts, such as ConnectCOS.

Multiple strategies were employed to share information about the project, and receive feedback from key audiences, stakeholders, and the public.

Focus Groups

To engage various community leaders and organizations in the planning area, the project team hosted the following four focus groups:

- January 17, 2024 - On-Demand Travel Focus Group
- February 7, 2024 - Education Focus Group
- February 7, 2024 - Health and Human Services Focus Group
- February 7, 2024 - Business, Development, and Residential Focus Group

The On-Demand Travel Focus Group was an in-person event hosted at The Independence Center. The three focus groups on February 7, 2024, were virtual meetings. Figure 12 summarizes the focus group participants, their organization, and which focus group they attended.

The goal of each focus group was to create a common understanding of the plans, to learn more about how the community utilizes transit, and to identify potential successes or improvements to inform plan recommendations and strategies. Feedback themes collected during each focus group informed the technical analysis including existing conditions and identifying gaps in the current system.

Figure 12. Focus Group Participants

Name	Organization	Focus Group
Cathy Buckley	Colorado College	Education
Catherine Duarte	Colorado Springs Housing and Urban Development	Business, Development, and Residential
CJ McCampbell	District 11	Education
Isabel Robben	District 11	On-Demand Travel
Marla Luckey	El Paso County Public Health	Health and Human Services
Marsha Unruh	Homefront Military Network	Business, Development, and Residential

Name	Organization	Focus Group
Buddy Castor	N/A	Paratransit and Specialized Transportation Rider
Jeannette Fortin	N/A	Paratransit and Specialized Transportation Rider
Loretta Houseman	N/A	Paratransit and Specialized Transportation Rider
Mary Kim McCarthy	N/A	Paratransit and Specialized Transportation Rider
Toby Cotter	N/A	Paratransit and Specialized Transportation Rider
Skyler Rorabaugh	Pikes Peak	Business, Development, and Residential
Kevin Coleman	Pikes Peak State College	Education
Aaron Simeraro	Silver Key	Health and Human Services
Edgar Morales	The Independence Center	Paratransit and Specialized Transportation Rider
Mary Rose Evans	The Independence Center	Paratransit and Specialized Transportation Rider
Paul Spotts	The Independence Center	Paratransit and Specialized Transportation Rider
Scott Land	The Independence Center	Paratransit and Specialized Transportation Rider
Jim Spice	University of Colorado – Colorado Springs	Education

Stakeholder Advisory Committee

Each plan had a dedicated Stakeholder Advisory Committee, which included a diverse representation of the boarder community. The project team engaged both stakeholder committees at key milestones throughout the project.

The first committee meeting took place on Wednesday, February 21, 2024. The goal of the meeting was to create a common understanding of:

- Project goals and objectives
- Planning landscape and intersections
- Roles and expectations of the Stakeholder Advisory Committee members
- Stakeholder engagement conducted to date and what we've heard

- Existing conditions
- Project Schedule and major technical milestones

The second committee meeting took place on Thursday, April 9, 2024. The goal of the second meeting was to:

- Share a brief project update
- Discuss key project needs and visioning
- Preview and refine potential recommendations, investment options, and open house materials
- Understand the Stakeholder Advisory Committee members' priorities related to the potential recommendations.
- Discuss the open house format and materials

Figure 13. Specialized Transportation Plan Stakeholder Advisory Committee Roster

Name	Organization
CHACares	Jenn Nimmo
City of Fountain and Pikes Peak Area Council of Governments Board of Directors Chair	Mayor Sharon Thompson
Colorado Springs Senior Center	Tom Lathrop
Envida	Gail Nehls Alternate: Eric Esch
GoodWheels	Sean Martin
On-Demand Transportation Group	Sharon King
Pikes Peak Area Council of Governments Mobility Coordinating Committee Chair	DeAnna Rumsey
Resource Exchange Center Board	Raquel Dominguez
Silver Key	Jason DeaBueno Alternate: Valerie Anders, Aaron Simeraro

Name	Organization
Teller Senior Coalition	Kathy Lowry Alternate: Roni Gordon
The Independence Center	Edgar Morales Alternate: Scott Land, Phil Young
Transdev	Matt Heafner

Public Meeting

The project team hosted an in-person open house on Tuesday, April 30, 2024, at the City of Colorado Springs' City Administration Building. The in-person open house featured a series of informational stations arranged around the room to encourage active public participation. In addition to the in-person open house, MMT in partnership with PPACG hosted two additional events that encouraged the community to view, interact, and provide feedback on the materials in-person and digitally.

Approximately, 114 community members provided feedback or attended a virtual or in-person event. The open house had 45 in-person attendees over a two-hour period, and 66 unique digital comment card responses were collected.

The public open house and subsequent events required an extensive promotional campaign, which included community leaders assisting in disseminating information, sending public e-blasts, creating media toolkits, coordinating and distributing flyers to MMT buses and community gathering locations, and utilizing social and conventional media channels.

Public Open House – Tuesday, April 30, 2024

The open house featured a series of informational stations that encouraged participants to interact with the material and project team staff. The stations summarized the plan process, existing conditions, the proposed 2050 RTP, the proposed 2050 Specialized Transportation strategies, and feedback shared with the project team. Project staff were available at each station to answer participant questions or discuss specific topics. Before leaving the open house, participants were encouraged to fill out either a print or digital comment card.

In partnership with the public open house, a self-guided virtual open house was launched on the project website on Tuesday, April 30, 2024, for members of the public to view materials. The self-guided open house featured the same materials as the in-person event and could provide their feedback through the digital comment card, programmed through SurveyMonkey.

2050 Specialized Transportation Plan Pop-Up Open House – Tuesday, May 14, 2024

PPACG hosted an additional in-person open house at The Independence Center on Tuesday, May 14, 2024. The event ensured members of the specialized transportation could provide their feedback and ask questions of the project team.

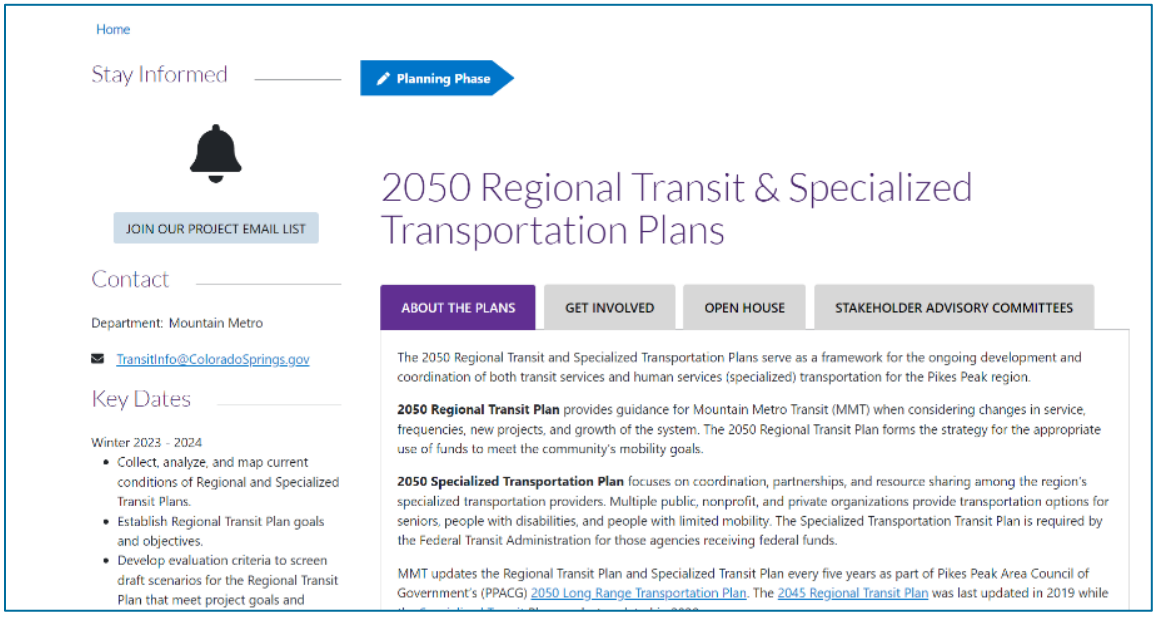
Virtual Office Hour Session – Friday, May 17, 2024

A virtual office hour was hosted on Friday, May 17, 2024, which included a brief presentation and an opportunity for the community to ask questions of the project team.

Digital Engagement

MMT provided the community with up-to-date digital materials throughout the planning process. The project team maintained an updated website (Figure 14) to educate stakeholders and the community and promote upcoming engagement opportunities. Throughout the study, the website had about 3,177 visits from 2,532 unique users. Peaks in website views corresponded with the plan's public open house.

Figure 14. Website for Digital Engagement



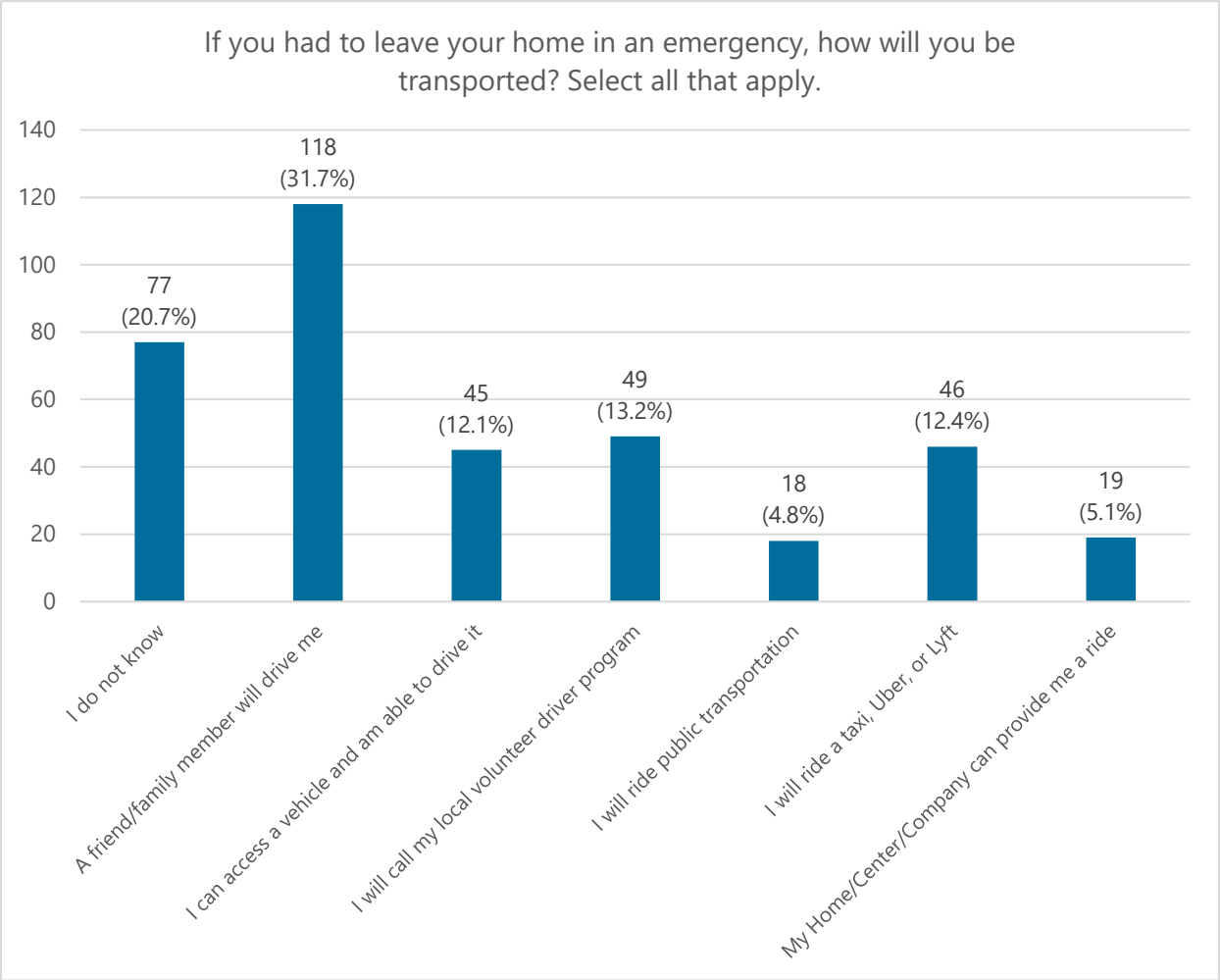
In addition to the plan's website, the project team utilized public e-blasts and MMT's social media channels to inform and educate the community on study updates and upcoming events. The MMT email database utilized those who had previously subscribed to ConnectCOS and PlanCOS updates with an option to update their email subscription settings.

APPENDIX D - EMERGENCY TRANSPORTATION

Events of the past five years demonstrate that that the Pikes Peak region is susceptible to emergencies caused by heat, wildfires, flooding, landslides, lightning strikes, tornadoes, winter storms, power outages, and pandemics. As natural disasters become more frequent, the need to ensure the safety of people of all ages and abilities is of utmost importance.

In early 2023, PPAAA distributed a survey to older adults about a variety of needs, including transportation safety. Out of 244 respondents, 77 (or 31.6%) selected "I don't know" when asked how they would travel from home in the event of an emergency. Some of these responses were coupled with others as part of a "select all that apply question," but the results reveal there is a sizable number of people living in the Pikes Peak region who are feeling insecure about their transportation options in an emergency. This underscores the need for more improved information systems, such as the database, hotline, and website as recommended in the Specialized Transportation Plan's Strategy 1.

Figure 15. Summary of PPAAA Survey Responses Regarding Emergency Transportation



Some responses are expecting that Uber, Lyft or taxis will have the supply of drivers to provide such support. Others are expecting a local volunteer driver program, which may include existing specialized transportation services. All these services – and the dedicated individuals who drive and maintain the vehicles – are important assets for supporting emergency resilience.

Project types for consider for future funding include:

- Evacuation training programs for all local transportation providers.
- Development of a comprehensive emergency guide specifically tailored for individuals with disabilities and seniors, as well as their caregivers and families.
- Creation and deployment of a checklist to help individuals with disabilities and seniors prepare for emergencies.

- Incorporation of resiliency and emergency preparedness into the planning and operations of local transportation providers.

These programs should be tailored to prepare for and respond to the variety of emergency hazards and scenarios that are likely to occur in the Pikes Peak region. A seamless network of communication that overcomes institutional silos is critical to a successful emergency response. Finding ways to overcome these barriers begins in the planning process and should rely on supportive funding from the public and private sectors. There are examples of emergency planning already occurring at other levels of government, including El Paso County.

APPENDIX D: ENVIRONMENTAL JUSTICE EVALUATION AND LRTP PROJECT ANALYSIS

PPACG is guided by federal Title VI and environmental justice mandates, and PPACG strives to not only meet these mandates, but to create an overall transparent, and inclusive planning process

Title VI requires that no person in the United States of America shall, on the grounds of race, color, or national origin, be excluded from the participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which PPACG receives federal financial assistance.

Environmental justice (EJ) is a specific application of Title VI. Presidential Executive Order 12898 (1994) directs each federal agency to make environmental justice part of its mission. It dictates that, "each federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." Executive Order 12898 requires federal agencies and recipients of federal aid to specifically consider the impacts of its programs on minority and low-income populations and other disproportionately impacted communities (DIC).

PPACG adopted its most recent Title VI and Environmental Justice Plan in June 2023. This plan outlines how PPACG meets Title VI and EJ requirements. It also identifies the concentrations of EJ populations within the Pikes Peak region, utilizing the Environmental Protection Agency's (EPA) Environmental Justice Screening and Mapping Tool (EJScreen); provides demographic information per the U.S. Census; and provides information regarding those with limited English proficiency (LEP) in the region.

Methodology for this Analysis

Some EJ analyses examine only the adverse effects of transportation plans and projects. The Executive Order 12898 also requires a demonstration of equal benefits from transportation investments. For a metropolitan transportation system, analyses should examine how the Long Range Transportation Plan (LRTP), and the Transportation Improvement Program (TIP) promote the safety, mobility, economic productivity, human environment, natural environment, and other goals identified in state and local plans for all populations served by the transportation agency. A complete EJ analysis examines both the benefits to and adverse effects (or "burdens") of transportation plans or projects on EJ populations.

The demographic data shown in the following maps comes from EJScreen, which utilizes standard and nationally consistent data to highlight places that may

have higher environmental burdens and vulnerable populations. The tool offers EJ indexes by combining environmental and demographic indicators in basic geographic units of Census block groups. It records the percentile of each Census block group for the following indicators, and not the actual percentage. Percentiles express all the observations of a given occurrence, below a certain percentage of that occurrence. For example, if an area is at the 57th Percentile in the nation, this means that for the average person the block group score is greater than (or equal to) 57% of the national population. The percentiles in the following maps represent the Census block group compared with the state of Colorado. Using percentiles allows the maps to illustrate higher concentrations of EJ populations relative to the average across the state. Percentiles were used rather than percentages because percentages alone do not provide a good representation of what percent might be considered high for an area.

The geographic framework for EJScreen was built from 2020 Census TIGER/Line data. This data is analyzed against the mappable transportation projects in the 2050 LRTP.

The maps reveal some distinctive EJ areas that will be helpful in focusing PPACG's efforts to involve EJ populations in the planning process, to avoid disproportionate ill effects, and to ensure EJ populations receive an equal benefit from its plans and projects.

When selecting projects for the LRTP, the scoring system and recommendation process allowed for flexibility and considered quality of life and jurisdictional equity concerns based on the expertise of local engineers and planners. It is important to consider both potential adverse effects and benefits. As an example, a transit project might have both benefits and adverse effects for an EJ community: while decreasing travel times and expanding employment opportunities, the same project could also increase air pollution and noise. A road project might improve travel times to certain destinations but also create a barrier separating an EJ population from the broader community. A good analysis accounts for both types of effects at examines the balance of a project's impact on an EJ community.

Of special concern when reviewing projects and their potential impact is whether an adverse effect is "disproportionately" high. An adverse effect becomes "disproportionate" when that effect 1) is predominantly borne by an EJ population, or 2) will be suffered by the EJ population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-EJ population. For example, a major widening or roadway project in an area that currently houses disproportionately impacted communities could create more traffic and faster speeds that could have disparate adverse effects on these populations in a region-wide pattern. More traffic could also bring safety and health hazards to already disadvantaged populations. It is not certain that these affects will occur, however, and any final assessment should

consider the net effect of mitigating factors and techniques as well as transportation benefits that will come from the projects.

Project Analysis

PEOPLE OF COLOR

People of Color (POC) is defined as the percent of individuals in a block group who list their racial status as a race other than white alone and/or list their ethnicity as Hispanic or Latino. That is, all people other than non-Hispanic, white-alone individuals. The word "alone" in this case indicates that the person is of a single race, not multiracial. Figure E-1 depicts the fiscally constrained projects from the LRTP overlaid onto the mapped percentile of population that is POC.

The neighborhood southwest of Platte Avenue and Powers Boulevard is above the 90th percentile POC. This means that the percentage of POC within the Census block group score is greater than (or equal to) 90% of the state population.

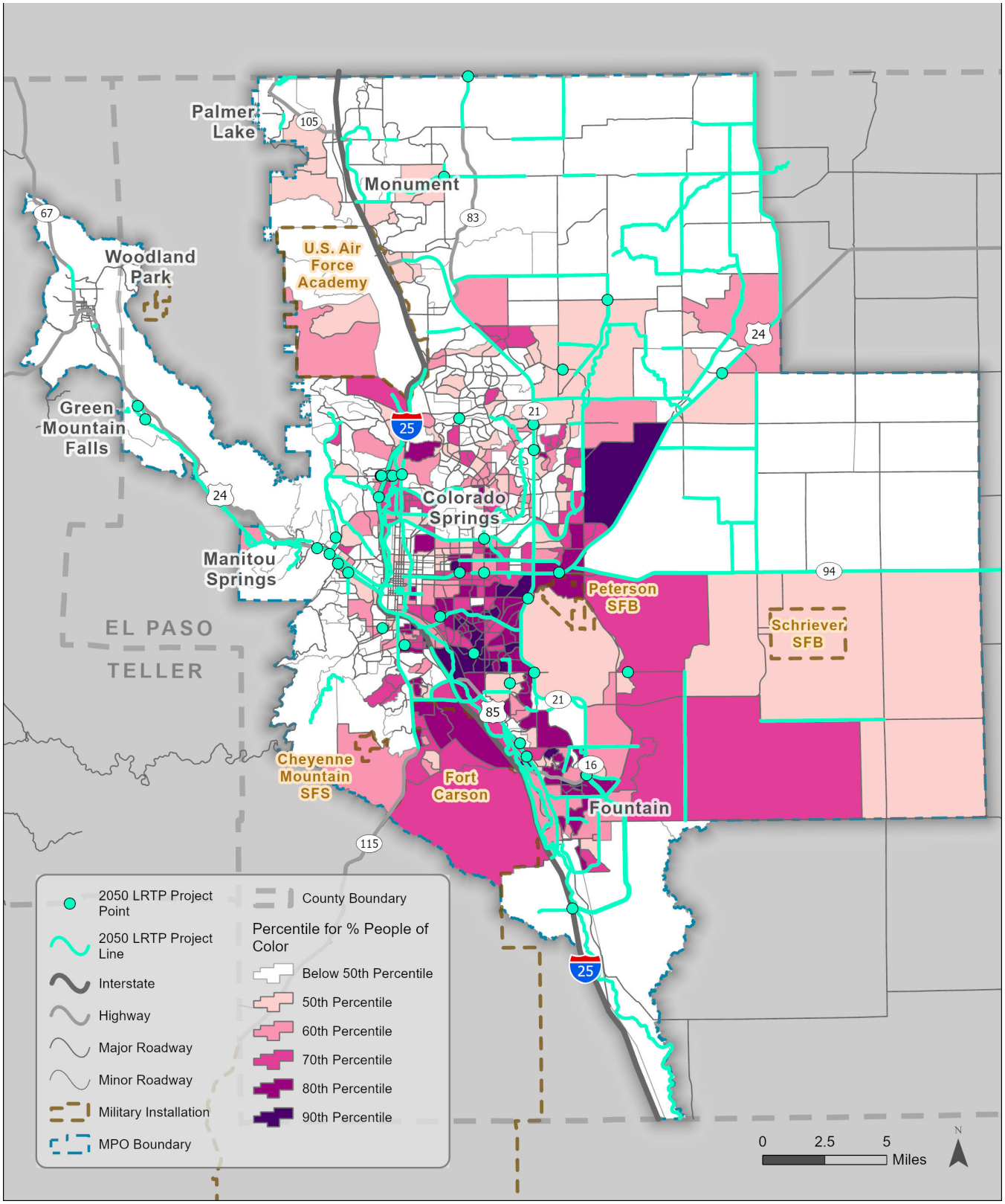
There are a couple of LRTP projects that could have potential impacts on this EJ area. The Platte Avenue Corridor Improvements project, between Chelton Road and Powers Boulevard, incorporates construction of a six-lane roadway that will include a shared use trail and connections to the existing Sand Creek Trail. This project will provide increased access to jobs, retail, and services as well as improved options for active transportation and alternative modes. However, the development of this project should include adequate evaluation to ensure there are no disproportionately adverse effects on nearby neighborhoods.

The Mobility/Safety Improvements SH 21, MM 132-154 project includes design funding for mobility or safety improvements along the corridor within the limits of mile markers (MM) 132-154. Impacts of this project include access to active transportation, trail connectivity, and increased safety.

There are several Census block groups off Platte Avenue with high percentile POC. The US24 Functionality and Routing Study - I-25 to Falcon project will conduct a major transportation corridor study to determine safety, traffic operations, transit operations, and functionality of US24. This project aims to increase safety and transit options for the EJ groups in this area.

The Fountain Creek Regional Trail in envisioned as a multi-use trail, that will begin at the El Pomar Youth Sports Complex in Colorado Springs and travel southward 24.9 miles through the City of Fountain to the El Paso/Pueblo County line. The LRTP Fountain Creek Regional Trail project will complete the southernmost 10.4 miles of trail and will constitute the last segment of the Colorado Front Range Trail through El Paso County Public Works. The trail will connect to two transit stops, one Park and Ride location, and three parks/ open spaces. This project will increase access to transit and active transportation for many EJ areas that have a larger percentile POC in the area.

Figure E-1: LRTP Projects compared with the Percentile of Population that is People of Color



LOW-INCOME

In EJScreen, low income is defined as the percent of a block group's population in households where the household income is less than or equal to twice the federal "poverty level." Figure E-2 depicts the fiscally constrained projects from the LRTP overlaid onto the mapped percentile of population that is low income.

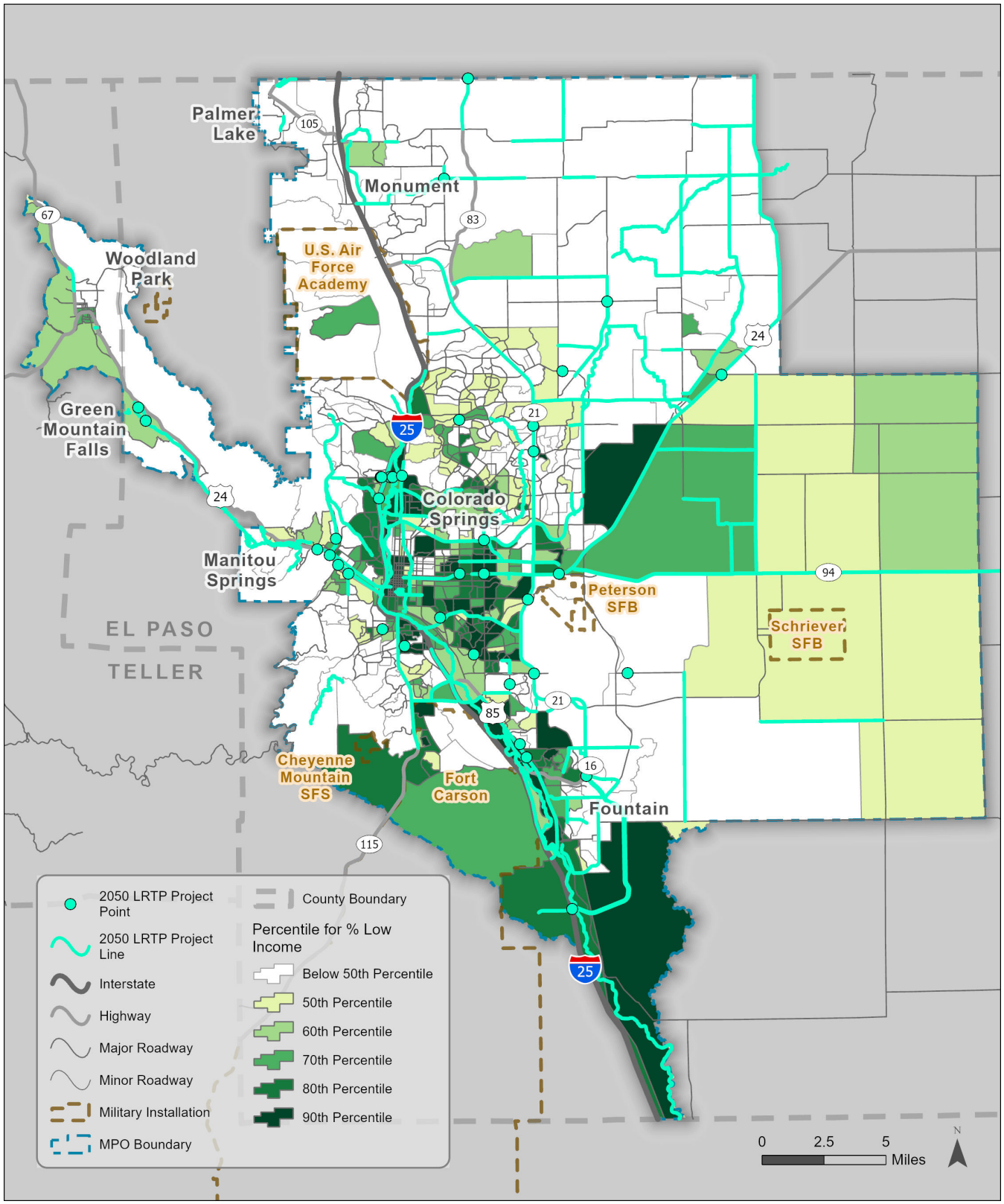
The Pikes Peak Greenway Improvements Trail program will extend, realign, widen, and reconstruct/construct trails. It will also provide access to trails, connections to attractions or other portions of the trail network, crossings, wayfinding, ADA improvements and other functional enhancements. The project will run through many low-income areas above the 90th percentile, especially along the Nevada Avenue corridor.

The Templeton Gap Trail Improvements, Shooks Run Trail Improvements, and Fillmore Pedestrian Safety Improvements projects will provide active transportation access and increased safety to many EJ low-income areas.

The area southeast of Fountain is a large block group in the 90th percentile for low income with two projects that could have potential impacts. The Powers Boulevard (SH21), South Extension to Rail Park project is for design, right-of-way acquisition, and construction of a two-lane arterial interim section of South Powers Boulevard (CO21) per an existing Planning and Environmental Linkages (PEL) study. This project is intended provide a critical redundant link to I-25 and reduce traffic on other area roads. It will also include multimodal, water quality, and safety elements. This road will serve freight traffic from Powers Boulevard, Colorado Springs Airport, and the freight distribution centers around the airport. This project will provide increased network security for the region as well as decreased congestion. It provides improved access for the EJ population in this area but may also bring adverse affects of increased traffic such as health and safety concerns.

The other project in this area is the South Powers Trail. Commencing at Clear Spring Ranch, this 9.8-mile primary regional trail would travel northward along the planned South Powers Boulevard right-of-way corridor, ending at Powers Boulevard and Fontaine Boulevard where it would connect to a proposed extension of the Crews Gulch Regional Trail. This trail would thus allow for future connections to other primary and secondary regional trails in the area. This project increases opportunity for active transportation and recreation within the area.

Figure E-2: LRTP Projects compared with the Percentile of Population with Low Income



OVER AGE 64

Figure E-3 depicts the fiscally constrained projects from the LRTP overlaid onto the mapped percentile of population that is over the age of 64. The LRTP projects that are planned to run through or near the EJ areas for people over the age of 64 are almost exclusively trail or transit projects. These will increase access to employment, services, goods, and recreation through a variety of transportation modes.

The Powers Boulevard Extension project, which runs from CO83 to Voyager Parkway, runs through the Flying Horse neighborhood, which has a high percentile of people over age 64. This will bring critical regional connectivity and redundancy to increase network security. However, it will also bring increased traffic that could also impact health and safety in the area. This project will be funded through the PPRTA and was approved by voters in the region.

DEMOGRAPHIC INDEX

The Demographic Index in EJScreen is a combination of percent low-income and percent people of color. These are the two demographic factors explicitly named impacts in Executive Order 12898 on Environmental Justice. For each Census block group, these two numbers are simply averaged together. The formula is as follows: Demographic Index equals the sum of the % Low Income and the % People of Color) divided by 2.

For example, if a Census block group has a low-income indicator value of 25% and a people of color indicator value of 75%, the Demographic Index value would be 50%.

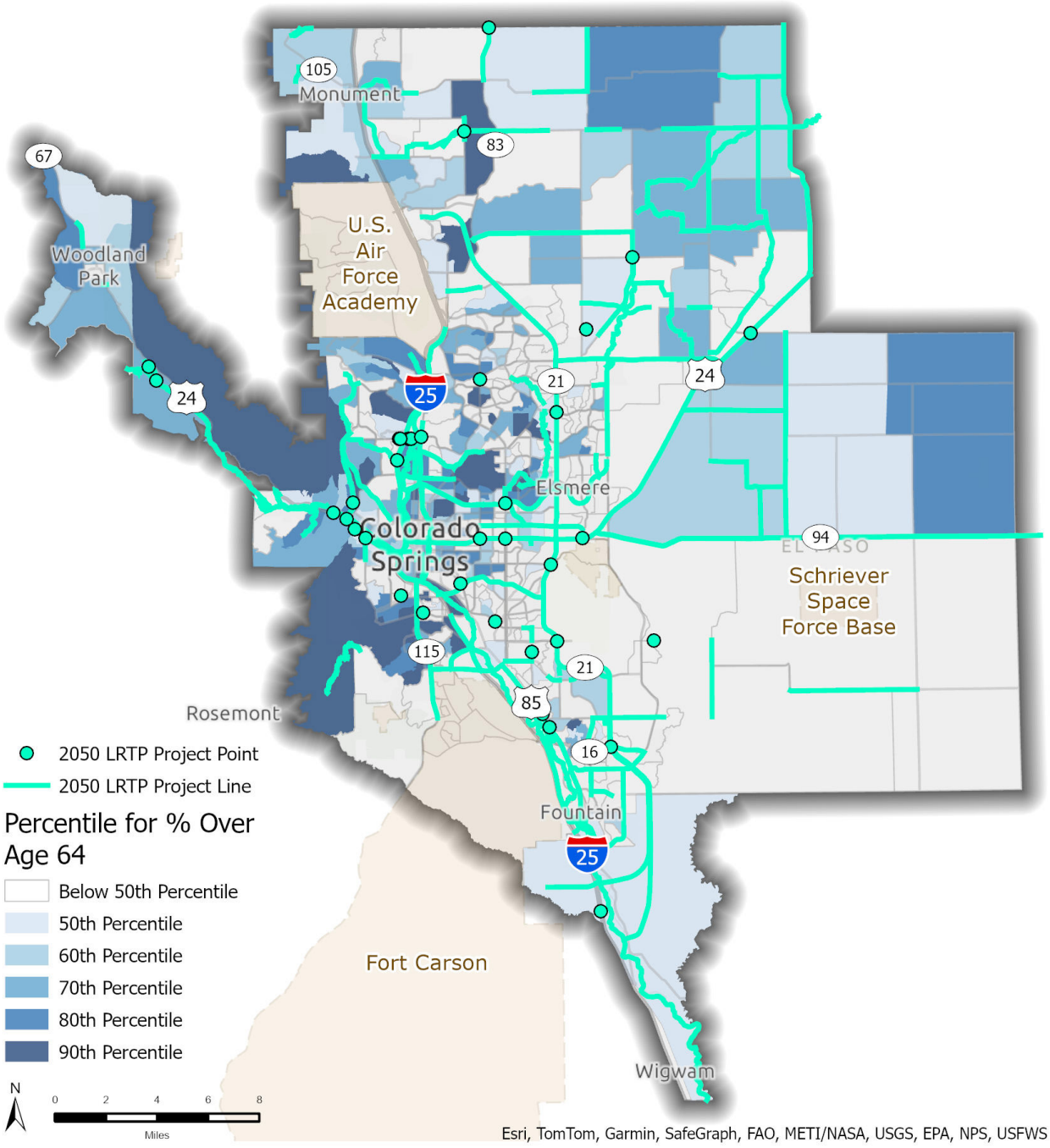
Table E-1 presents the percentages for race, ethnicity, and poverty status utilized to determine the Demographic

Table E-1: Race, Ethnicity, and Poverty Status in the Pikes Peak Region and State

DEMOGRAPHIC	EL PASO COUNTY	TELLER COUNTY	COLORADO
White	65.78%	85.69%	65.13%
Hispanic or Latino (of all races)	17.80%	7.10%	21.88%
Black or African American	5.58%	0.51%	3.83%
American Indian and Alaska Native	0.52%	0.68%	0.58%
Asian/Pacific Islander	3.34%	0.62%	3.54%
Some other race	0.63%	0.54%	0.51%
Two or more races	6.35%	4.85%	4.24%
Total Minority Population	34.22%	14.31%	34.59%
Total Population	730,395	17,390	5,773,714
Poverty Rate	9.60%	9.20%	9.70%

Source: U.S. Census Bureau

Figure E-3: LRTP Projects compared with the Percentile of Population over age 64



Index. The data for race and ethnicity in the table below comes from the 2020 DEC Redistricting Data (PL 94-171) table from the U.S. Census Bureau. Figure E-4 depicts the fiscally constrained projects from the LRTP overlaid onto the mapped Demographic Index.

The Shirley neighborhood, located between US-24 and Marksheffel Road, is in the 94th percentile for People of Color and 99th percentile for Low Income. One LRTP project could have potential impacts on this block group. The project would widen Marksheffel Road from Woodmen Road to North Carefree Circle. This would include enhanced bike and pedestrian accommodations for the length of the corridor and provide safe crossing opportunities at intersections. While this project provides increased access and improved safety, there are the potential health hazards that come with widening roads such as the potential for more traffic and higher speeds.

Per the demographic index, there is a concentrated area of EJ populations located southeast of downtown Colorado Springs, between I-25 and Powers Boulevard. Two LRTP projects that could impact these populations that have already been discussed in this section: the Pikes Peak Greenway Improvements project and the Platte Avenue Corridor Improvements - Chelton to Powers project, and the US24 Functionality and Routing Study - I-25 to Falcon.

OVERALL IMPACTS

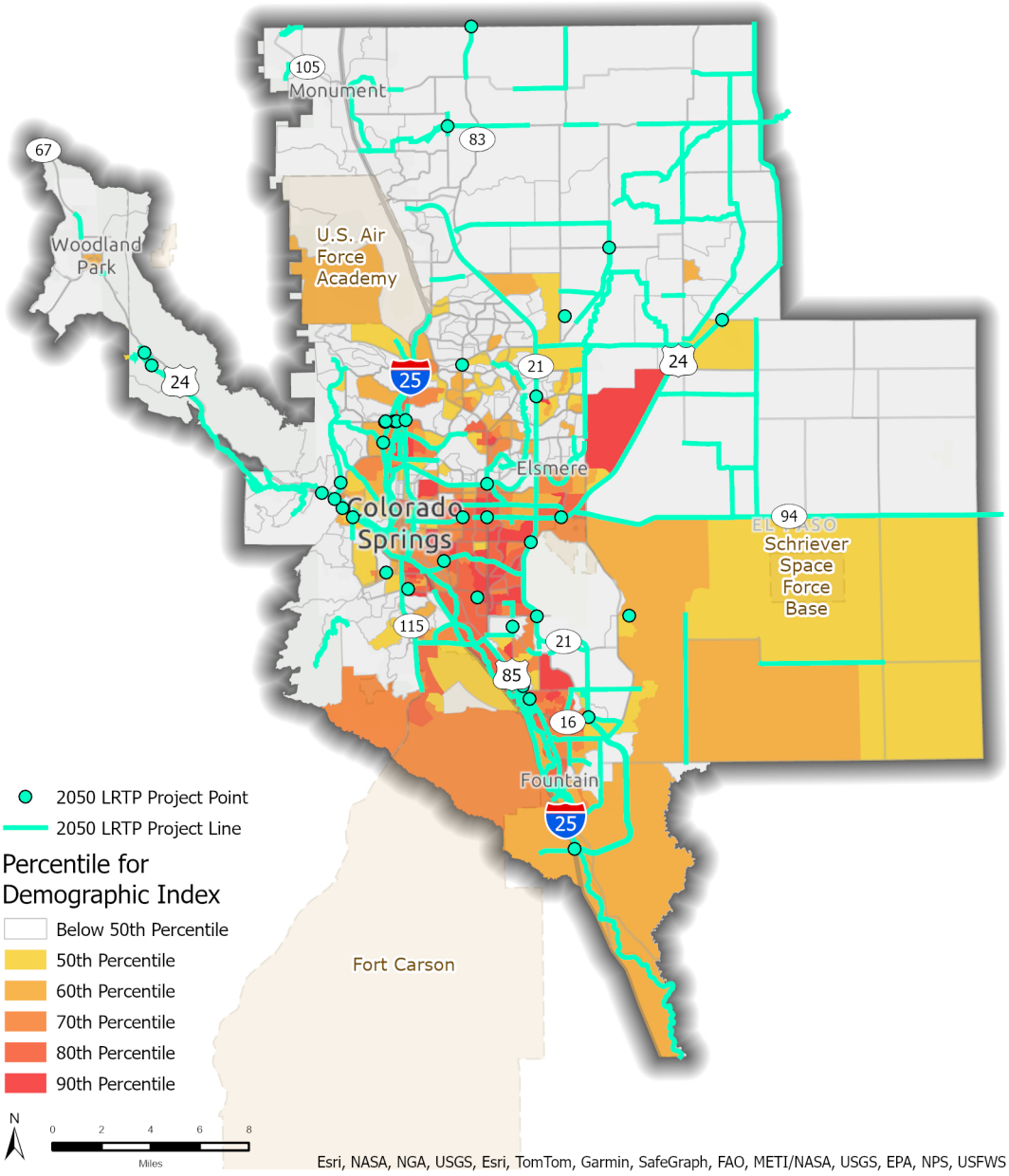
As a group, the 2050 projects have the potential to both help and hurt EJ populations in the region. Much of the real effect will depend on how the projects are developed and whether any mitigation techniques are used. EJ populations will benefit from the many planned trail improvements and connections, transit projects, and safety improvements. Since rates of vehicle ownership and the costs of maintaining a vehicle in running order can be difficult for many people, transit improvements should be especially beneficial.

There are no any evident disproportionate impacts associated with the fiscally constrained projects in this LRTP. However, there are issues to consider regarding transportation planning, design, and construction. As discussed in Chapter 5, pollution; traffic volumes and speeds; access to work, schools, medical care, and stores; and access to safe physical activity are just some examples of these considerations.

One way to better understand impacts to disproportionately impacted communities and transportation equity should be evaluated for each individual project through the planning, design, and construction process, including targeted outreach and engagement.

At the regional level, the PPACG Title VI & Environmental Justice and Limited English Proficiency Plans include several

Figure E-4: LRTP Projects compared with the Demographic Index



provisions and recommendations for this type of proactive outreach and can act as guides moving forward. As LRTP and TIP documents are developed, public outreach techniques, community representative involvement, and tracking and reporting on improvements will provide crucial input regarding adverse affects and benefits of transportation projects.

In addition to this regional analysis, National Environmental Policy Act (NEPA) studies will need to be conducted for individual transportation projects that use federal funds. These studies need to incorporate environmental justice analyses specific to those projects.

APPENDIX E: GREENHOUSE GAS TRANSPORTATION REPORT

The following pages contain the Greenhouse Gas Transportation Report as developed by PPACG and submitted to the Transportation Commission in December 2024.



Pikes Peak Area
Council of Governments
Communities Working Together

GHG Transportation Report

For the Pikes Peak Area MPO

Pikes Peak Area
Council of Governments
Communities Working Together

GHG Transportation Report

For the Pikes Peak Area MPO

Submitted to the State Transportation Commission
Pursuant to Code of Colorado Regulations 2 CCR 601-22
December 2024

for the
2050 Long Range Transportation Plan

by the
Pikes Peak Area Council of Governments
15 S. 7th Street, Colorado Springs, CO 80905

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1 Executive Summary

This *Greenhouse Gas Report* by the Pikes Peak Area Council of Governments (PPACG) presents the planning strategies employed by staff to produce a 2050 Long Range Transportation Plan (LRTP) that successfully supports a modelled reduction in greenhouse gas (GHG) emissions within the Pikes Peak Area Metropolitan Planning Organization (MPO), including the plan's land use forecast, transportation project mix, and modeling methods. This report demonstrates compliance with the requirements of the state's greenhouse gas rule (2 CCR 601-22) by meeting or exceeding the GHG reduction requirements recorded in Table 1 of the rule.

1.1 Key Highlights

Planning and Modeling Innovations

A collaborative land use forecasting approach replaces isolated methodologies, better aligning regional and local development initiatives into a comprehensive plan. The improved land use forecast is combined with an enhanced Travel Demand Model (TDM) that now includes reasonable remote work considerations, pedestrian and bicycle mode choices, and simulation-based traffic assignment.

Notable Regional Initiatives

A new Regional Transit Plan aligns with multimodal goals, detailing 58 projects including Enhanced Transit Corridors and innovative mobility zones. Investments in multimodal projects doubled compared to the previous plan, while several miles of major roadway projects were not advanced from the previous plan into the 2050 LRTP and removed from the model, emphasizing sustainability and equitable transportation access.

GHG Reduction Strategies

The 2050 LRTP incorporates a diverse mix of projects prioritizing multimodal transportation, including transit enhancements, pedestrian and bicycle infrastructure, and innovative mobility solutions that all promote environmentally positive changes in travel behavior.

1.2 Results

The 2050 LRTP exemplifies balanced, collaborative, and effective planning, seamlessly integrating environmental considerations into the region's long-term transportation strategies. The plan demonstrates full compliance with the state's greenhouse gas rule by exceeding the required reduction targets for all horizon years. For further details, please refer to the full report and Section 4.2 for specific emissions figures.

2 Introduction

2.1 Purpose

This report documents the actions taken by the Pikes Peak Area Council of Governments (PPACG) to incorporate regional Greenhouse Gas (GHG) reduction strategies into the planning and modeling processes of the 2050 Long Range Transportation Plan (LRTP) and satisfy the requirements of Colorado's transportation greenhouse gas rule specified in the Code of Colorado Regulations (2 CCR 601-22).

The planning measures, modeling methods, and emissions analysis results documented in this report demonstrate that the 2050 Long Range Transportation Plan complies with these regulations, and that no additional GHG Mitigation Measures, and by extension an annual Mitigation Action Plan, are necessary for PPACG to satisfy the rule's transportation GHG reduction requirements.

The approval of this GHG Transportation Report by the Transportation Commission is a prerequisite for the 2050 Long Range Transportation Plan to be considered fully compliant with all state and federal rules and regulations when adopted by the PPACG Board of Directors in 2025.

2.2 Background

In June 2021, the Colorado legislature passed Senate Bill (SB) 21-260, titled "Sustainability of the Transportation System." This legislation established new funding sources for transportation and mandated that the state Transportation Commission (TC) create guidelines and procedures to address greenhouse gas (GHG) emissions in transportation planning. It also directed the Colorado Department of Transportation (CDOT) to update statewide transportation planning rules to incorporate GHG reduction goals into specific planning documents adopted by CDOT and the state's Metropolitan Planning Organizations (MPOs).

The result of this effort was the adoption of the "Rules Governing Statewide Transportation Planning Process and Transportation Planning Regions" (2 CCR 601-22) by the Transportation Commission (TC) in December 2021. These rules address the GHG reduction requirements outlined in SB21-260 by setting GHG reduction targets for CDOT and each Metropolitan Planning Organization (MPO) across multiple forecast years. The initial GHG emissions projected from the forecasted land use and transportation network in each MPO's adopted plan were developed by CDOT in collaboration with Cambridge Systematics using the Energy Emissions Reduction and Policy Analysis Tool (EERPAT).

	2030	**2040**	**2050**
Initial GHG Emissions Estimated by CDOT for the Pikes Peak Area MPO	2.2	2.0	2.3

Figure 1: Table of the GHG emissions in Million Metric Tons (MMT) of CO2e (Carbon Dioxide equivalent) estimated by CDOT for the Pikes Peak MPO in 2030, 2040, and 2050

CDOT used the initial GHG emissions estimates, along with each MPO's share of statewide Vehicle Miles Travelled (VMT), to determine the required GHG reduction amounts in Million Metric Tons (MMT) of CO2e (Carbon Dioxide equivalent) for three forecast years: 2030, 2040, and 2050. These reduction amounts are reported for each MPO in Table 1 of the rule.

Table 1: GHG Transportation Planning Reduction Levels in MMT of CO2e

Regional Areas	2025 Reduction Level (MMT)	2030 Reduction Level (MMT)	2040 Reduction Level (MMT)	2050 Reduction Level (MMT)
DRCOG	0.27	0.82	0.63	0.37
NFRMPO	0.04	0.12	0.11	0.07
PPACG	N/A	0.15	0.12	0.07
GVMPO	N/A	0.02	0.02	0.01
PACOG	N/A	0.03	0.02	0.01
CDOT/Non-MPO	0.12	0.36	0.30	0.17
TOTAL	0.43	1.5	1.2	0.7

Figure 2: Table 1 in 2 CCR 601-22 identifies the GHG reduction amounts for PPACG in Million Metric Tons (MMT) of CO2e (Carbon Dioxide equivalent) emissions in 2030, 2040, and 2050

Currently, the Long Range Transportation Plan is the only applicable planning document for which PPACG is required to model GHG emission reductions; other PPACG planning products like the Transportation Improvement Program (TIP) do not require GHG modeling to comply with the rule.

2.3 Planning Area

The Pikes Peak Area Council of Governments (PPACG) boundary encompasses El Paso, Park, and Teller Counties, and serves as a regional forum for cities, towns, tribal governments, counties, transit agencies, and state agencies operating within the region to address common issues. While PPACG administers a variety of programs and services across the entire region, the Long Range Transportation Plan focuses on the Metropolitan Planning Organization (MPO) area.

Federally mandated and funded, MPOs are required to facilitate transportation planning for Census Urbanized Areas (UZA) with populations exceeding 50,000 people. The Pikes Peak Area MPO conducts long-range transportation planning through the LRTP and uses it to guide short-range programming of select federal and state transportation funds. The MPO area includes the cities of Colorado Springs, Fountain, Manitou Springs, and Woodland Park; the towns of Monument, Palmer Lake, and Green Mountain Falls; and urban portions of unincorporated El Paso and Teller Counties.

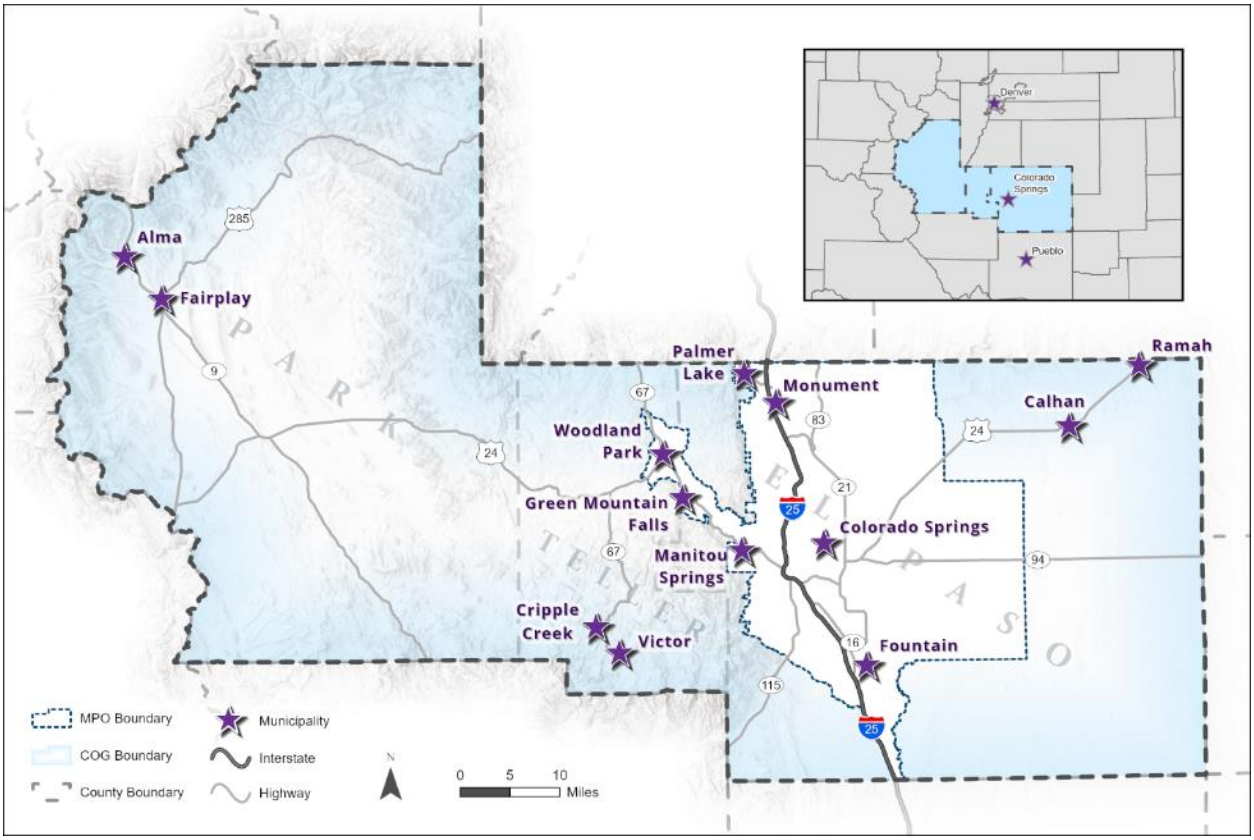


Figure 3: Map of the PPACG region and the MPO area

The Long-Range Transportation Plan (LRTP) is updated every five years and includes planning horizons of at least 20 years. Its primary purpose is to establish the region's transportation vision and goals, evaluate the system as a whole, and identify strategies to optimize the use of public funds in achieving these goals. The LRTP also provides a framework for decision-makers to consider the broader social, economic, and environmental impacts of transportation and land-use choices. Consequently, all transportation projects with the potential to significantly affect transportation or air quality within the metropolitan planning area must be included in the plan.

A critical component of the LRTP is the regional Travel Demand Model (TDM), a tool used to estimate future traffic volumes, average speeds, and travel patterns by analyzing factors such as population changes, land use, employment, and the transportation network. Updating planning assumptions and model inputs like residential locations, job distribution, housing density, transportation projects, and mode choice in the planning forecast can significantly influence predicted traffic volumes and roadway speeds. Projects included in the LRTP are integrated into the TDM to evaluate their impacts on the forecasted travel network and determine their alignment with the plan's goals, including GHG emission reductions.

Transportation projects outside the MPO are evaluated separately by CDOT and incorporated into their modeling process to meet the GHG reduction targets established for non-MPO areas of the state.

2.4 GHG Modeling Procedure

The GHG rule requires new transportation plans to incorporate projects and funding choices designed to model a reduction in GHG emissions relative to a baseline GHG amount in each of the prescribed forecast years. The baseline GHG amount is determined from the adopted plan in place when the rule became effective on January 30, 2022.

The baseline plan for the Pikes Peak Area MPO is the 2045 Long-Range Transportation Plan (LRTP), adopted by PPACG in January 2020. This plan was in effect as of January 30, 2022, and its forecasted population estimates, land use assumptions, and transportation network were used to establish the GHG reduction targets outlined for the MPO in Table 1 of the rule.

The new transportation plan, the 2050 LRTP, must demonstrate GHG emission reductions that meet or exceed the targets recorded in Table 1 of the rule for the compliance years 2030, 2040, and 2050, compared to the adopted 2045 plan.

Greenhouse gas emissions are estimated from these plans using the MOtor Vehicle Emission Simulator (MOVES), an emissions modeling program developed by the Environmental Protection Agency (EPA). MOVES utilizes many factors to estimate surface transportation GHG emissions, including:

- Traffic volumes and average speeds by time of day
- The type and age of vehicles in the region
- The vehicle fleet mix by roadway type
- Meteorological conditions
- Fuel types and fuel economy of the vehicle fleet mix
- The adoption rate of electric vehicles into the fleet mix over time

PPACG's only input for emissions modeling is the traffic volume and average speed along each roadway for each hour of a typical workday, generated by the regional Travel Demand Model. All other factors used in the MOVES emissions analysis are developed and maintained by the Air Pollution Control Division (APCD) within the Colorado Department of Public Health and Environment (CDPHE).

The GHG rule requires an Intergovernmental Agreement (IGA) between the APCD, CDOT, and PPACG to define the roles and responsibilities of each agency in conducting the emissions modeling. This includes establishing modeling standards and assumptions for PPACG's Travel Demand Model and specifying the methods and assumptions used by APCD to estimate the millions of metric tons (MMT) of carbon dioxide equivalent (CO2e) emissions generated by the model for each compliance year.

3 Plan Development

3.1 The 2045 LRTP and Model

The 2045 Long-Range Transportation Plan (LRTP) was adopted by the PPACG Board of Directors in January 2020. As the plan in effect on January 30, 2022, it serves as the baseline against which future GHG reductions are measured. Like most regional transportation plans, it contains a forecast of land use and population changes, along with a variety of fiscally constrained projects designed to address the region's transportation needs.

The 2045 LRTP's land use forecast was developed from population and workforce estimates provided by the state demographer's office, which served as regional control totals.

REGIONAL	2015	2020	2025	2030	2035	2040	2045
Population	701,483	758,232	819,138	880,361	940,711	1,001,120	1,055,656
Employment	364,561	401,735	434,104	468,176	495,948	518,862	541,984
El Paso County							
Population	677,022	732,993	791,904	851,955	911,290	970,825	1,024,521
Employment	354,681	390,309	421,464	454,501	481,509	503,824	526,450
Teller County							
Population	24,461	25,239	27,234	28,406	29,421	30,295	31,135
Employment	9,880	11,426	12,640	13,675	14,439	15,038	15,534

Figure 4: Population and employment forecasts from the 2045 LRTP

The distribution of population and employment, along with related household socioeconomic factors such as income and size, was modeled using UrbanSim planning software. The results were aggregated into distinct areas called Transportation Analysis Zones (TAZs), which serve as origins or destinations for trips modeled across the transportation network, such as home-to-work or home-to-school trips. TAZs with larger populations or higher concentrations of employees generate more trips to and from their zones. The 2045 plan forecasted significant population growth in a few concentrated areas within the MPO, while projecting a decline in population throughout much of the existing urban area.

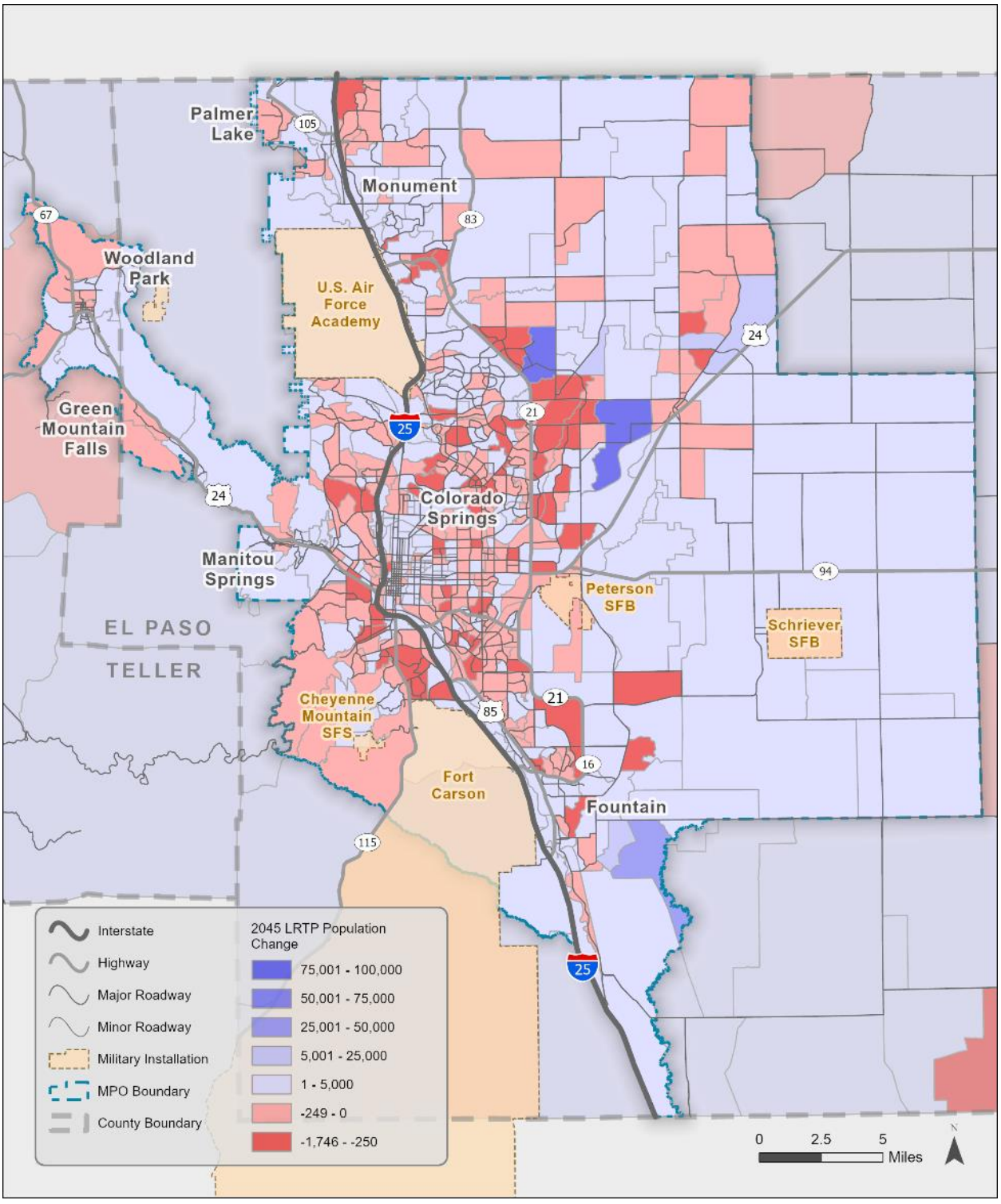


Figure 5: Map of forecasted 2045 LRTP population change

The forecasted population and employment changes were added to the regional Travel Demand Model (TDM) along with the plan's new roadway projects to estimate their combined effect on future travel patterns, and evaluate the alignment of future projects with the plan's goals of improving access, reducing pollution, and minimizing congestion. The TDM also incorporated several illustrative capital projects as part of a funding gap analysis, which identified unmet transportation needs that could be addressed in future plans if additional funding becomes available. Altogether, the 2045 LRTP travel demand model included 202 new centerline miles of major roadways added to the network over the 20 year forecast period. Since PPACG is not subject to air quality conformity analysis—which requires projects to align with staged implementation timeframes—the majority of the new roadway mileage was added between the 2030 and 2040 planning years rather than distributed across a staged timeline.

	2020		2030		2040	2045
Centerline Miles of Roadway in the MPO	**1,166 mi**	20 miles major new roads	**1,186 mi**	182 miles major new roads	**1,368 mi**	**1,368 mi**

Figure 6: Increases in the modeled centerline miles of roadway within the MPO from the 2045 LRTP

The 2045 LRTP also included a mix of transit funding and numerous bicycle and pedestrian projects, such as new multi-use urban trails, however, the travel demand model did not include any new transit lines and did not model pedestrian or bicycle trips as mode choice options.

Vehicle miles traveled (VMT) and population are closely related, as population growth typically drives increases in VMT. A larger population means more people traveling for various purposes, such as commuting to work, attending school, shopping, or accessing services. As the population grows, the number of vehicles on the road often increases, leading to more trips and longer travel distances. However, the relationship between VMT and population is also influenced by factors such as land use patterns, urban density, and transportation options. For example, in car-dependent, sprawling regions, population growth is likely to result in proportionally higher increases in VMT than similar growth in dense urban centers that better accommodate walking or transit mode choices. Understanding this relationship is critical for transportation planning, as it helps predict future travel demand and assess environmental impacts like greenhouse gas emissions.

	2020	2030	2040	2045
VMT in the MPO Area	12,659,333	16,800,165	18,120,837	18,319,508
Total Traffic Volume in the MPO Area	60,621,529	78,640,926	78,983,836	79,485,959

Figure 7: Vehicle Miles Traveled (VMT) and traffic volume in the MPO from the 2045 LRTP

3.2 The 2050 LRTP Land Use Forecast

PPACG collaborated with its local government members, particularly planners from Colorado Springs and El Paso County, to evaluate the strengths and weaknesses of the land use forecast developed for the 2045 LRTP. A primary concern was the forecast's overemphasis on population growth in two major planned developments, which understated the potential impact of urban infill initiatives and affordable housing projects in other areas of the MPO. In agreement with these concerns, PPACG committed to adopting a new approach for the land use forecast in the 2050 LRTP.

For the 2050 LRTP model, PPACG moved away from independent forecasting using tools like UrbanSim and adopted a more collaborative approach, creating a regional "best-fit" model from all the development plans of its member governments. The process allowed known developments and entitlements to be accounted for in the regional land use forecast alongside the use of historical data like accessory dwelling unit (ADU) permits and residential build rates. When concurrent growth scenarios from multiple jurisdictions ended up exceeding the population control totals, round-table discussions were held to evaluate where growth might be tempered based on historical trends, current and expected development incentives, and utilities requirements.

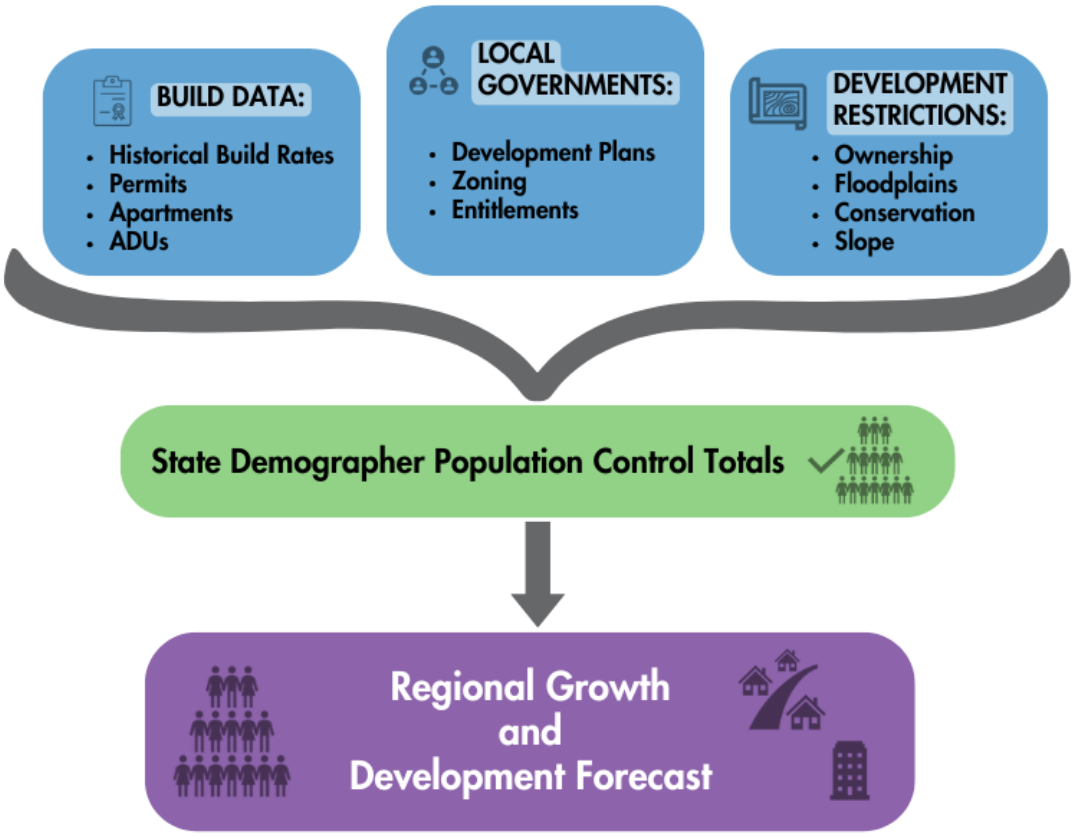


Figure 8: 2050 LRTP Land Use Forecast Process

This effort resulted in a new regional growth dataset that offers a unified development outlook for the entire MPO area, transcending jurisdictional boundaries while still effectively capturing their planned development patterns. The dataset enables quick evaluation of plans across jurisdictions, facilitating coordination of regional, state, and federal funding initiatives, such as programs for transit-oriented communities or mixed-use developments. Widely embraced by local government and utility planners, the dataset is now a fully maintained resource, supported by ongoing collaborative meetings where updates and changes are reviewed collectively. This process ensures the "best-fit" regional picture is continuously refined as annexations, entitlements, and other development plans are updated.

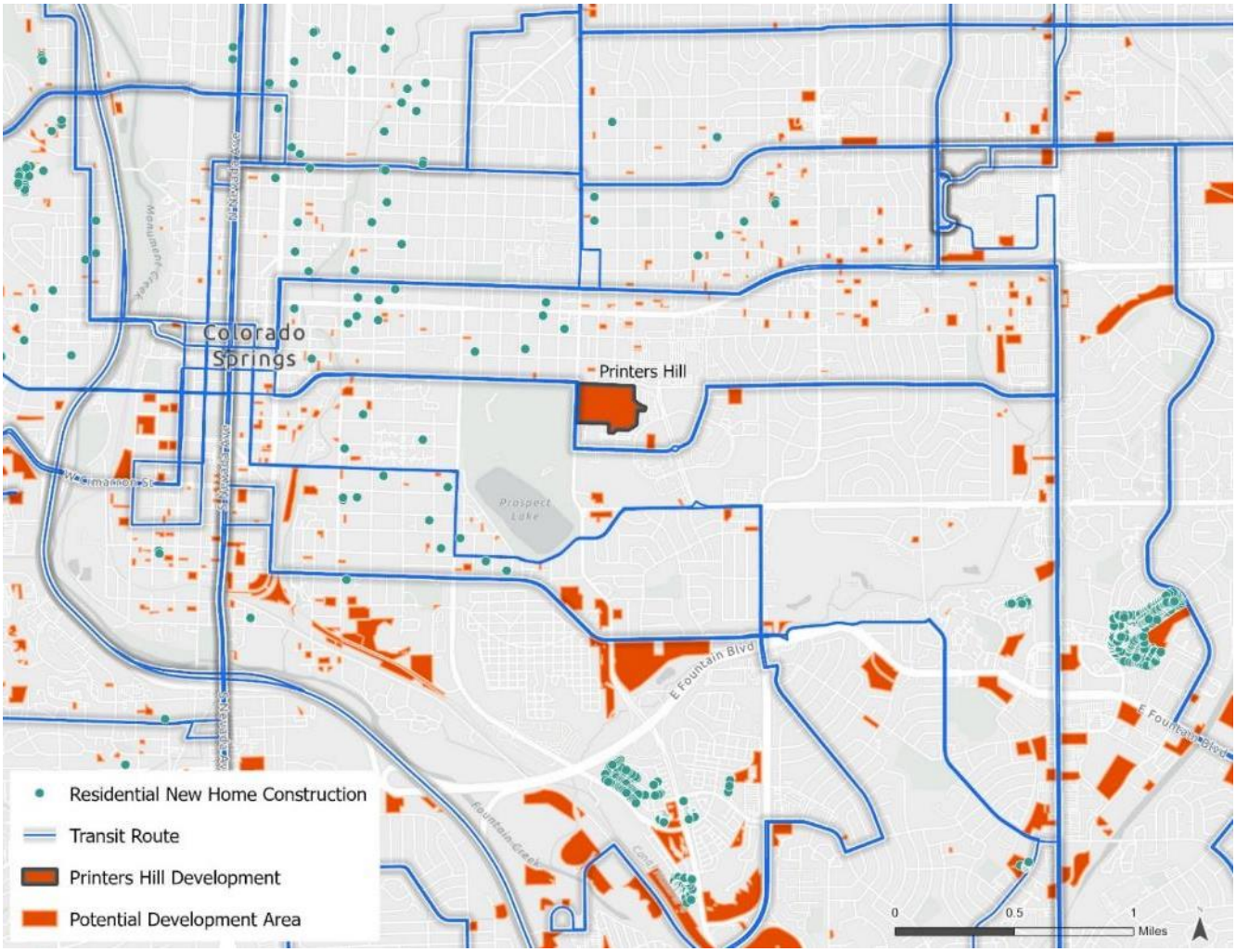


Figure 9: Overview map of the Regional Growth and Development dataset and new home construction in central Colorado Springs, both used to help identify and estimate future land use changes

The new land use model also introduces a transparent approach to employment forecasting. Instead of relying on a "black box" method, it uses development plans, zoning, and entitlements to estimate both the type and number of jobs expected from future commercial and industrial ventures.



Figure 10: A detailed map of the Printers Hill development plan showing housing unit densities, commercial area, and neighboring parks, transit, and other development areas that are all used to forecast changes in population, employment, and trip generation in this area

The 2050 LRTP land use forecast outlines the anticipated growth and distribution of population and jobs in a cohesive framework that adheres to regional control totals while more accurately reflecting the planning and development goals of the region's local governments.

	2030	**2040**	**2050**
2050 LRTP Population Forecast	858,962	958,237	1,023,259
State Demographer's Population Forecast (Control Total)	859,427	958,942	1,023,342

Figure 11: Forecasted population from the 2050 LRTP compared to the state demographer's forecast

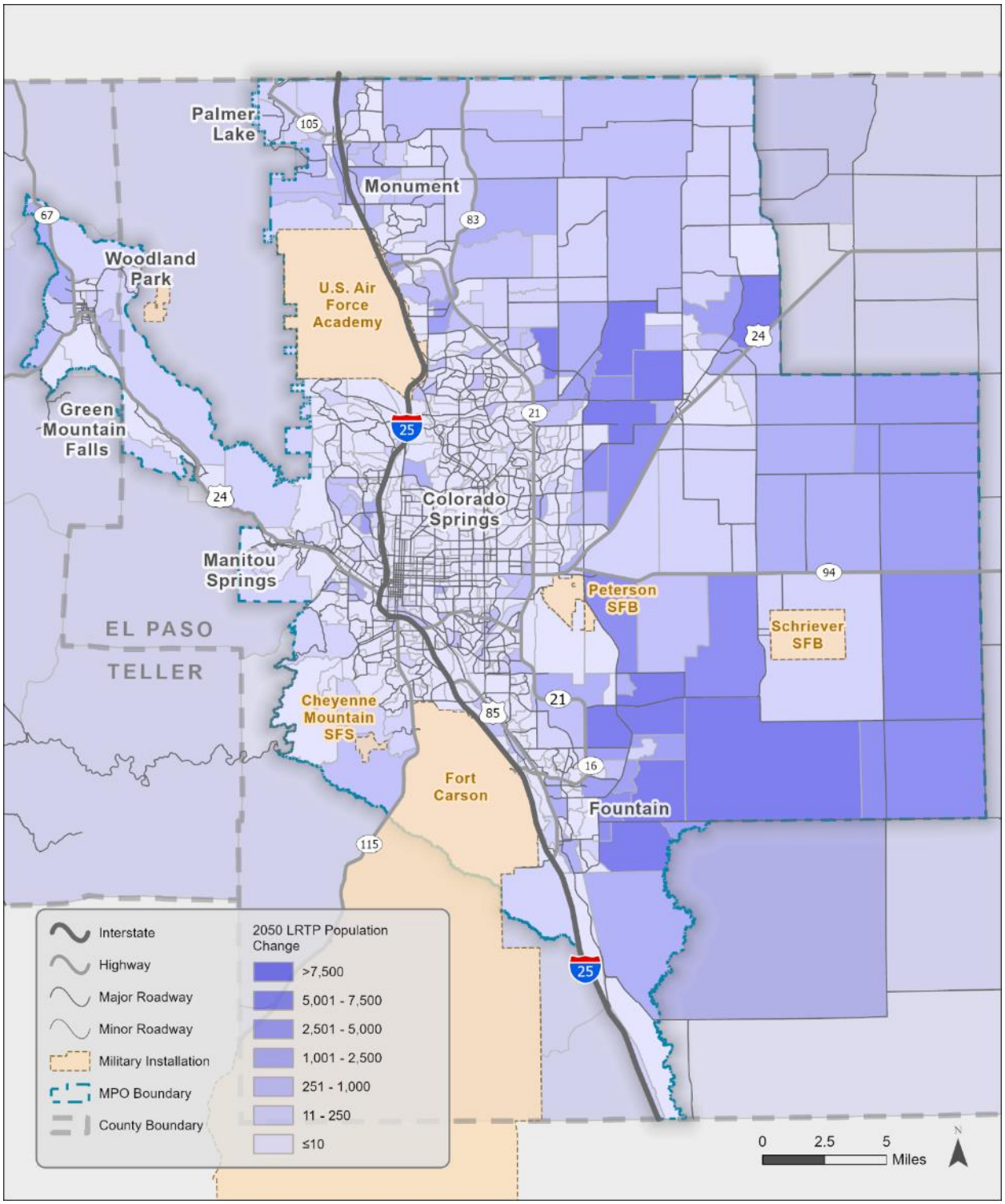


Figure 12: Map of forecasted 2050 LRTP population change

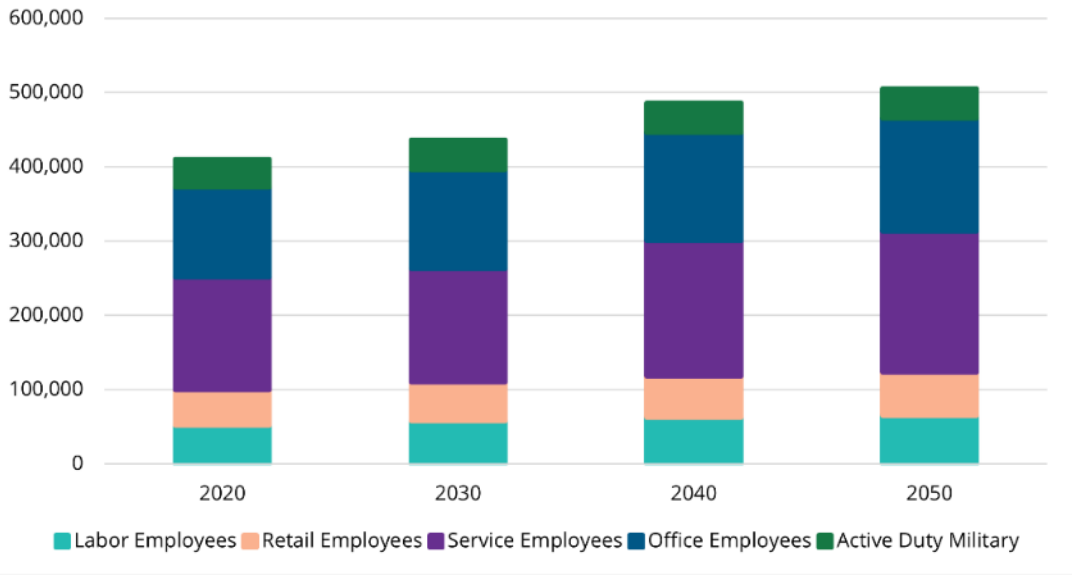


Figure 13: Table of the five employment categories used in the 2050 LRTP and their forecasted change 2020 to 2050

3.3 The 2050 LRTP Travel Demand Model

Senate Bill (SB) 21-260 not only established guidelines to address greenhouse gas (GHG) emissions in transportation planning but also expanded the goals of the Multimodal Transportation and Mitigation Options Fund (MMOF) to support improvements to travel demand models. In 2022, the Transportation Commission (TC) awarded PPACG a grant from the state's MMOF to enhance its Travel Demand Model (TDM) with specific improvements designed to enhance sensitivity to GHG emissions modeling:

- **Pedestrian and Bicycle Mode Choice**
- **Remote Work Considerations**
- **Simulation Based Assignment**
- **Induced Demand Sensitivity**

PPACG collaborated with the PTV Group to implement those and several other updates for the 2050 model, enhancing the model's overall accuracy, efficiency, and ability to forecast different scenarios. The resulting 2050 TDM is a tour-based model that integrates detailed roadway facilities, transit lines, synthetic population at the household and person levels, as well as land use variables such as employment, student enrollment, and shopping activity. With a base year of 2020 to align with Census data and the land use model population, the TDM was calibrated to reflect average daily traffic using counts from both 2019 and 2021. Further, hourly traffic counts were utilized to fine-tune hourly travel demand, supporting dynamic traffic assignment.

The model's key improvements are summarized below, with the full calibration and validation report, including detailed methodologies, available as an appendix item for further review.

3.3.1 New Transportation Analysis Zones (TAZs)

The original TAZ system in the PPACG model was updated to align with the 2020 Census block boundaries and further refined to separate commercial, residential, and military areas into more homogenous zones. These revisions increased the number of zones from 802 to 945, enhancing land use fidelity while maintaining alignment with Census boundaries, simplifying the incorporation of Census data. Additionally, zone connectors—used as access points for traffic and transit trips entering or exiting the network—were improved by adding "stub links" to the network. This change eliminated illogical loading directly into intersections and ensured consistency across both static and dynamic network assignments.



Figure 14: A detailed map of a 100% commercial TAZ surrounded by zones that are almost 100% residential, ensuring that all trips to and from the businesses in this zone are captured in the model

3.3.2 New Population Synthesizer

The PPACG travel model relies on a disaggregate synthetic population to represent individual households and people. This approach enhances the model's ability to analyze travel behavior across various demographic groups and incorporates factors like work-from-home scenarios more effectively. For the updated model, PPACG partnered with PTV to implement PopulationSim, a more advanced population synthesizer than the PopGen system used in the 2045 model.

PopulationSim uses an entropy-maximization method to balance data and generate consistent population weights. This ensures that variables not directly controlled—such as household size or income—remain accurately distributed while avoiding unrealistic weight expansions. The model also allows for "importance factors," which adjust the emphasis on different data inputs based on their reliability.

Another key advantage of PopulationSim is its ability to process all geographic areas simultaneously. This prevents errors common in sequential models like PopGen, which can misrepresent smaller population segments such as university students or low-income households. By using simultaneous list balancing, PopulationSim produces a more accurate synthetic population for these groups.

The result is a refined synthetic population that better represents individual and household travel characteristics. This includes detailed socioeconomic variables like income, job type, household composition, and more—creating a model that more accurately reflects real-world transportation choices across diverse populations in the region.

3.3.3 Added Pedestrian and Bicycle Mode Choice

As previously mentioned, the 2045 model lacked the capability to account for pedestrian or bicycle mode choices. To address this, PPACG staff first conducted an extensive GIS analysis to identify all roadways with bike lanes, multi-use shoulders, adjacent trails, and sidewalks. This data was then incorporated into the updated travel demand model network to identify where bicycle and pedestrian mode choices could potentially be utilized when assigning trips between TAZs.

The mode choice probabilities for taking a walk or bike trip are calculated at the individual level based on a variety of person and household attributes derived from the enhanced population synthesizer. For example, reflecting differences in surveyed travel behavior, university students are more likely to choose walking or biking compared to individuals over the age of 65.

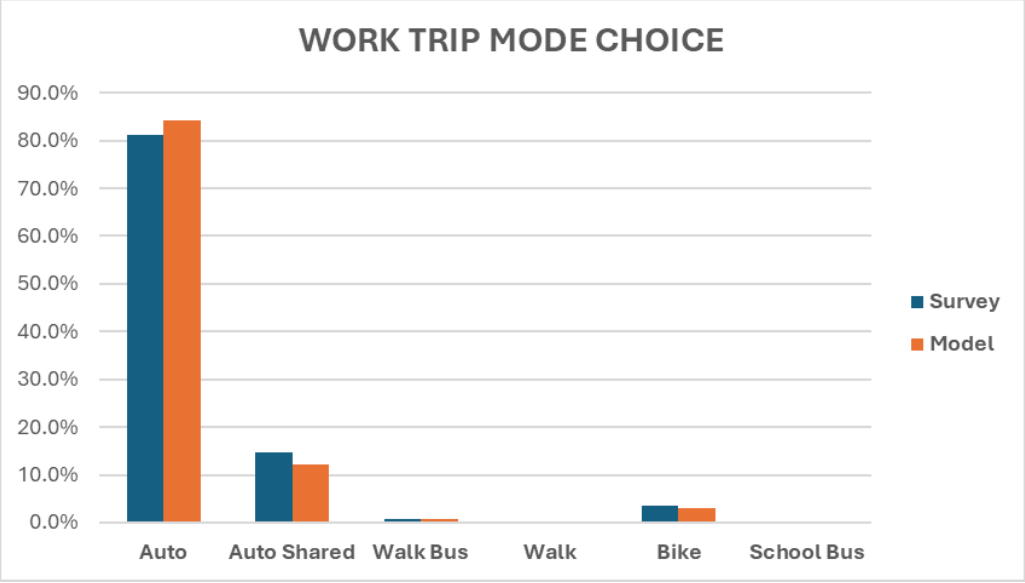


Figure 15: Table showing the distribution of work trip mode choice in the 2050 LRTP model

These mode choice options are fully integrated into each individual's activity chain, enabling the model to represent multi-modal tours for individuals with applicable mode-choice options. This ability is especially useful when modeling non-work trips. For instance, a worker who drives to the office still has a probability of choosing to walk to and from lunch as part of their tour, whereas a person who walks to work won't have a probability of driving to lunch but may choose to share an auto trip or use a rental e-bike if they choose not to walk. A range of possibilities such as these are now accurately represented in the model, allowing a more realistic depiction of pedestrian and bicycle trips throughout the network.

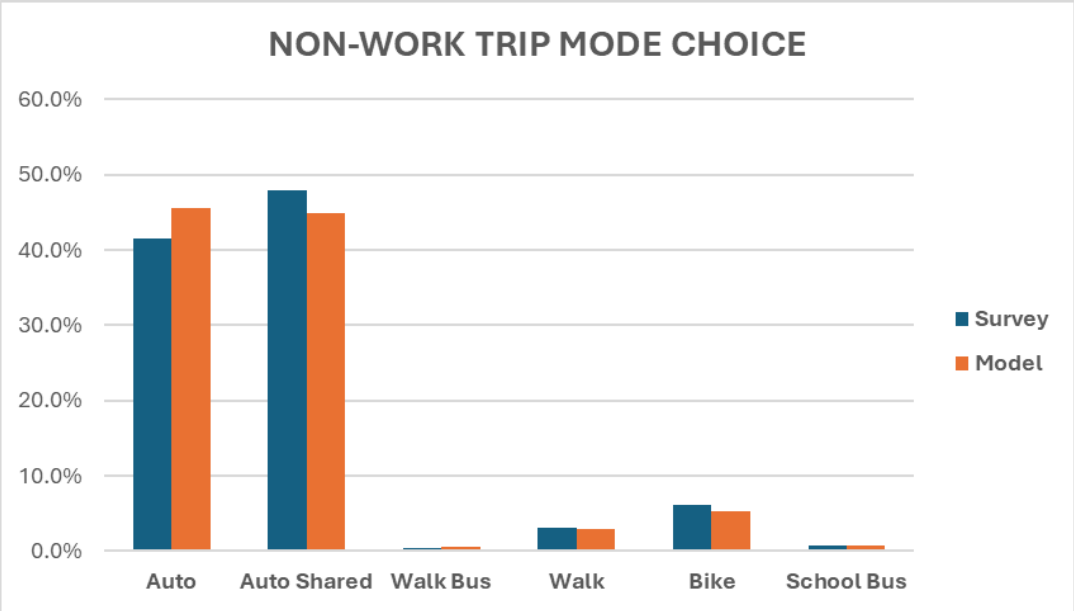


Figure 16: Table showing the distribution of non-work trip mode choice in the 2050 LRTP model

3.3.4 Account for Remote Work

A work-from-home component was integrated into the model using socioeconomic data to estimate the likelihood of remote work based on household attributes such as income and job type. To establish initial remote work frequency coefficients, PTV adopted data from the San Diego Association of Governments (SANDAG) travel demand model, which shares similarities with the PPACG region, including a significant military population and the use of PopulationSim. These coefficients account for multiple remote work options, such as hybrid environments where an individual works remotely only two days a week, and were then calibrated for the PPACG region using available remote-work survey data.

PTV ensured the framework for setting remote work probabilities remains adaptable to evolving employer policies. This flexibility is crucial given the ongoing changes in remote work practices post-pandemic. Additionally, the tour generation model accounts for workers whose roles inherently prevent remote work, such as those in the military, manufacturing, or delivery industries.

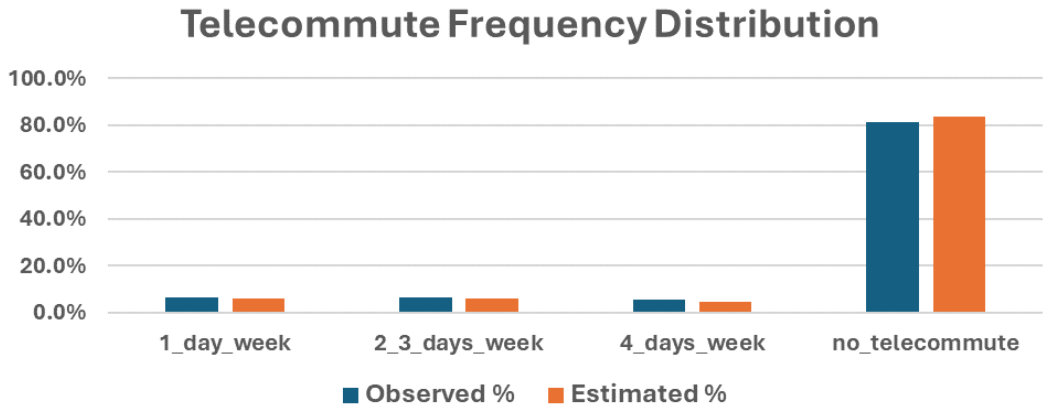


Figure 17: Table showing the distribution of remote work frequency in the 2050 LRTP model

3.3.5 Simulation Based Assignment

One of the most significant upgrades to the travel demand model is the implementation of a full Simulation-Based Assignment (SBA) procedure. SBA dynamically assigns traffic by simulating individual vehicles and persons traveling within the network. This allows the model to realistically represent intersection delays, including the forming and dissolving of queues over time, enabling signal timing efficiencies and operational improvements to influence mode choice and routing.

This upgrade required the model network to be carefully reviewed for the correct number of roadway lanes, posted speeds, and intersection control types. Aerial imagery was used with GIS to code detailed intersection geometry with appropriate turn bays and lane grouping for over 1,500 intersections in the model network.

There are approximately 700 signalized intersections in the network. To simulate traffic queues forming at these intersections, signal phasing plans were developed based on the lane grouping at each approach leg. Green times and splits were calculated using the turn flows obtained from the static traffic assignment, providing a consistent representation of delay across the network. This methodology also ensures compatibility across forecasted network scenarios.

Simulation-Based Assignment (SBA) provides a more accurate reflection of congestion-related impedance compared to static assignment methods. For instance, vehicles waiting through multiple light cycles at a congested intersection have their "stop-and-go" queue times factored into the average vehicle speeds recorded for that link. This level of detail enables SBA to better represent dynamic traffic conditions and travel times during specific timeframes, enhancing the model's precision.

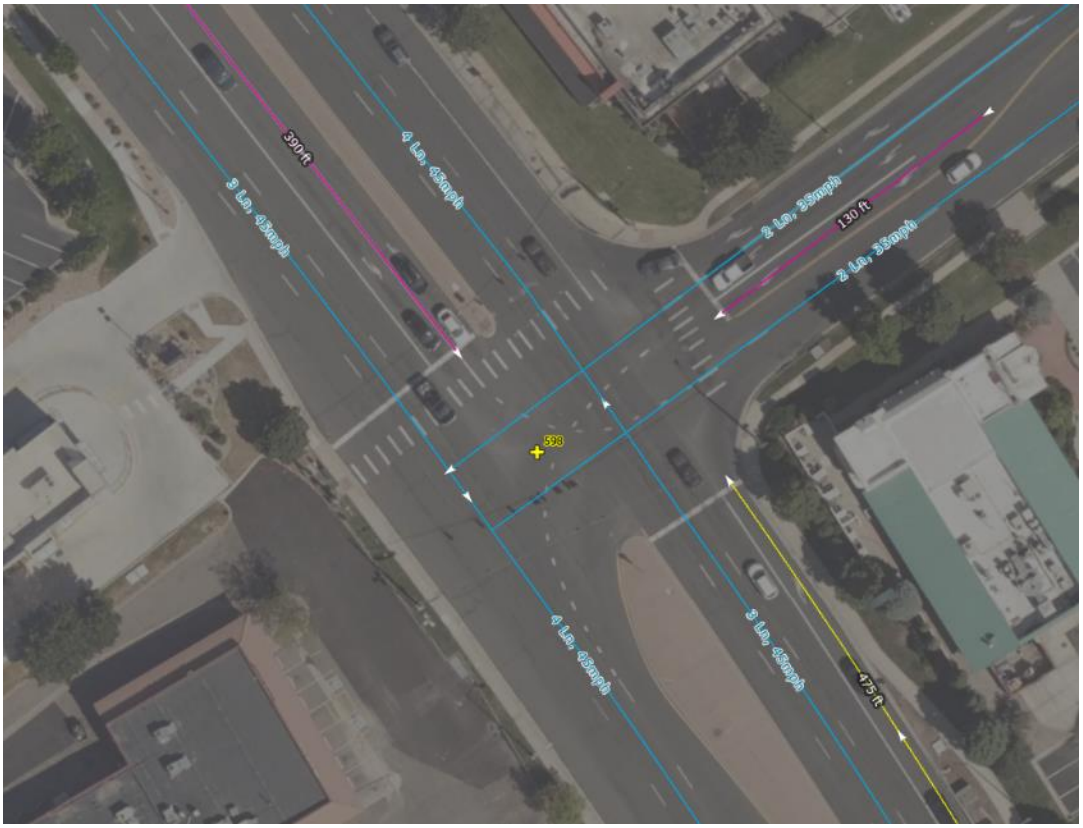


Figure 18: Map of an intersection modeled in GIS with lane count, speed, and geometry, including pocket turn lanes, accurately recorded

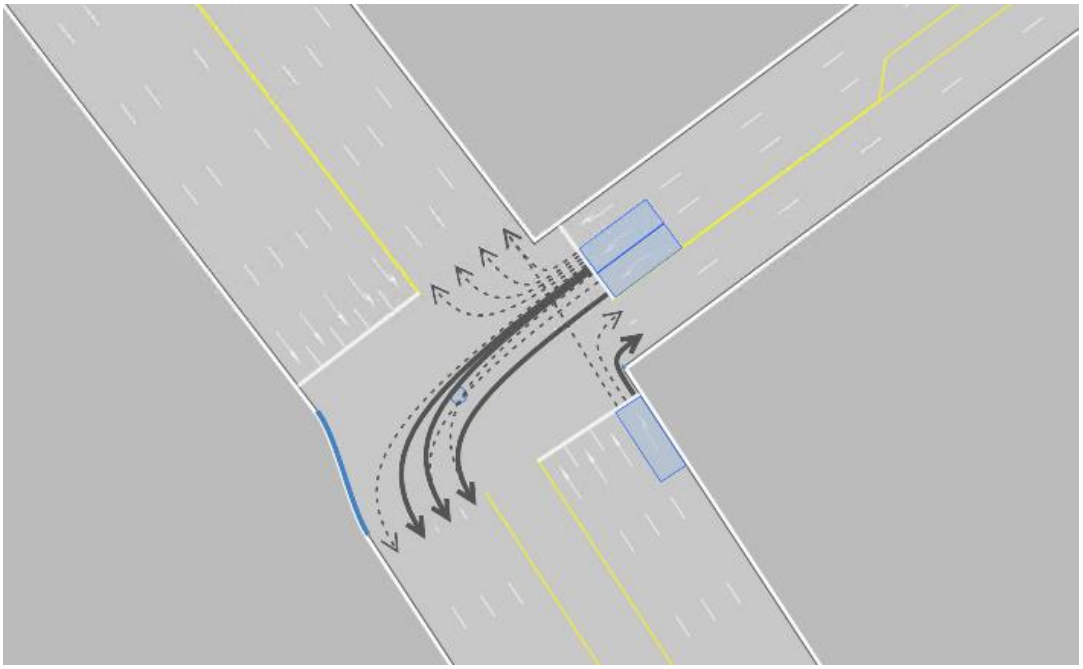


Figure 19: The same intersection as shown in Figure 18 is displayed in the travel model, with all lanes accounted for and allowable turning movements seen for selected lanes

SBA is a powerful tool for transportation planning, enabling more precise simulations of traffic flow and allowing PPACG to work collaboratively with local planners to assess network impacts dynamically. For instance, SBA can evaluate the effects of adjusting signal timings to reduce congestion, analyze the improvement in average vehicle speeds from replacing a congested intersection with an interchange, or model induced demand resulting from such improvements through the reallocation of trips to more attractive routes.

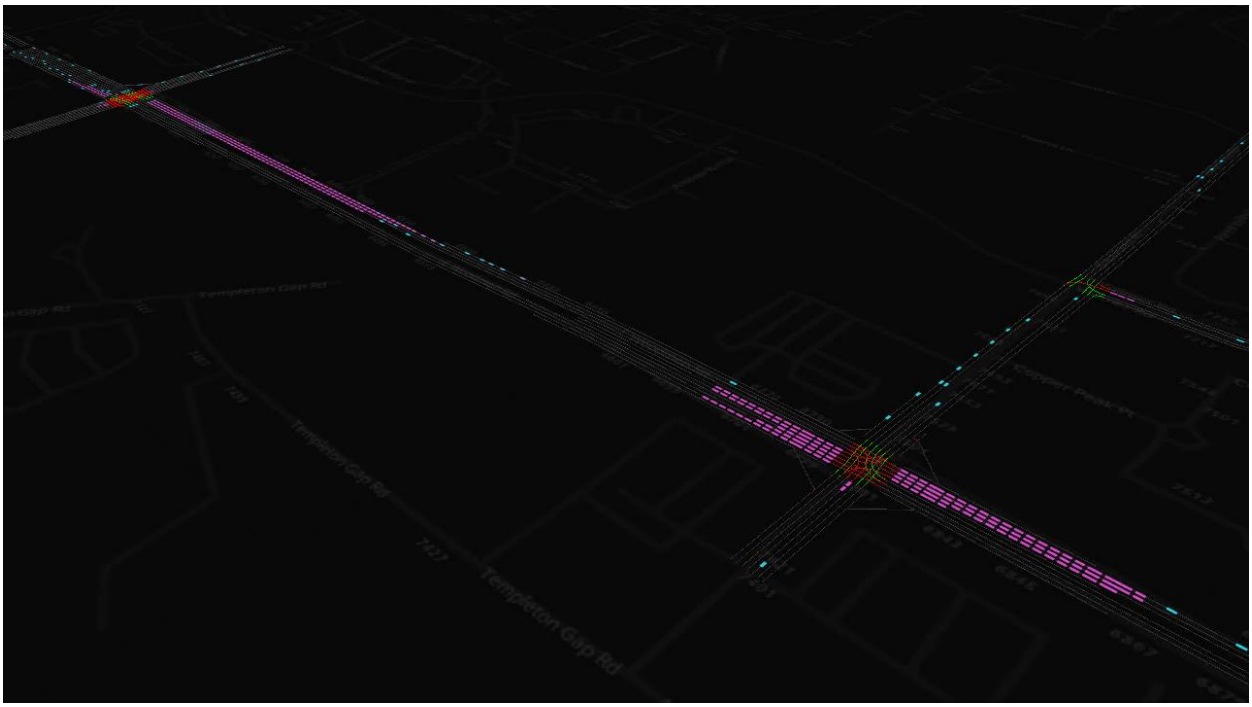


Figure 20: A screen capture of SBA traffic animation along Woodmen Rd in Colorado Springs, with pink vehicles queuing at signalized intersections during the morning commute while the light blue vehicles are in motion along the network

The new 2050 LRTP travel model enables transportation engineers and planners to evaluate the impacts of various scenarios, such as changes in population, employment centers, travel behavior, or infrastructure improvements. By projecting future traffic volumes, the model helps avoid the costs of constructing unnecessary roadways or waiting for severe congestion to develop.

3.4 2050 LRTP Project Mix

The primary purpose of the Long-Range Transportation Plan (LRTP) is to define the region's transportation vision and goals, assess the overall performance of the system, and develop strategies to maximize the effectiveness of public investments in achieving these objectives. To support this mission, the 2050 LRTP incorporates a diverse array of projects submitted by local governments through a collaborative scoring process. These projects are prioritized with input from the Transportation Advisory Committee (TAC), reviewed by other PPACG committees, and refined through public engagement before being adopted by

the PPACG Board of Directors. Once adopted, the projects become eligible for funding from various state and federal programs based on their alignment with each funding program's purpose and eligibility requirements.

3.4.1 Project Funding

The funding available through each program varies annually based on revenue. As of fiscal year 2025, the Pikes Peak region receives approximately $9 million in Surface Transportation Block Grant (STBG) funds, $900,000 in Transportation Alternatives Program (TAP) funds, $1.2 million in Carbon Reduction Program (CRP) funds, and $1.4 million from the Multimodal Transportation and Mitigation Options Fund (MMOF) each year. The specific eligibility requirements of each program means not all funds can be used to support all project types. For example, TAP and MMOF are generally restricted to multi-modal projects like bicycle and transit initiatives. STBG is the most versatile funding source, supporting a wide range of projects and the only funding stream managed by PPACG that can be applied to most roadway projects, including bridge repairs, operational improvements, roadway construction, and can also be flexed to transit.

Extended out from 2020 to 2050, the LRTP financial plan estimates approximately $240.8 million in STBG funding, along with $23 million from TAP, $30.2 million from CRP, and $32.9 million from MMOF, all contingent on securing local matching funds. PPACG also calculates additional funds of approximately $200 million from other discretionary capital grants, and $2 billion generated from the local Pikes Peak Regional Transportation Authority (PPRTA) over the same period. These projections do not include transit-specific funding allocated to Mountain Metropolitan Transit, such as FTA 5307 and other federal funds, which are detailed separately in the Regional Transit Study.

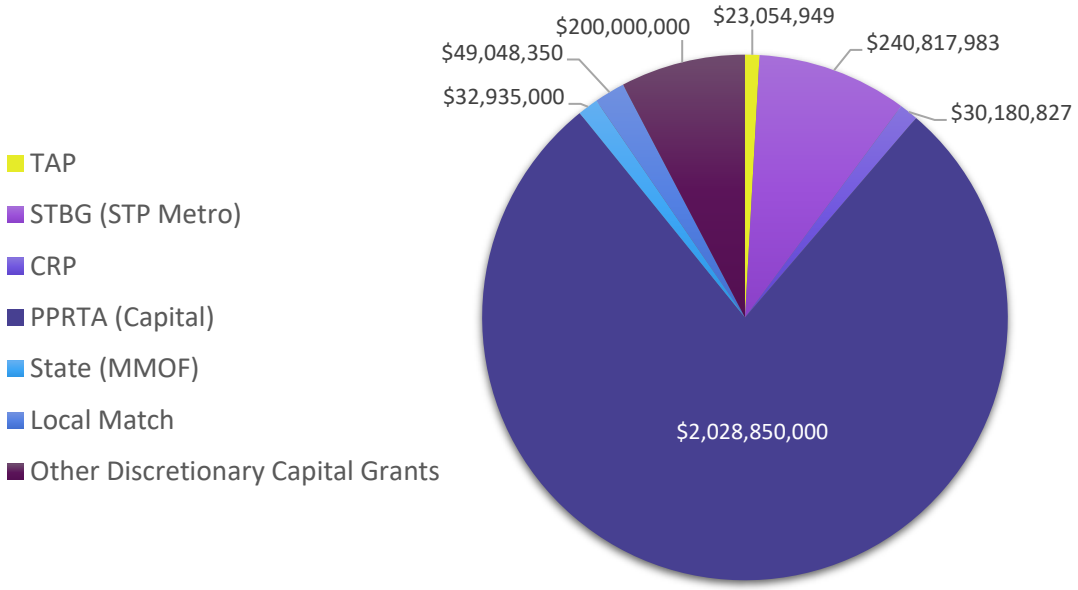


Figure 21: Chart of projected transportation funds by program type from 2020-2050

3.4.2 Project Types

Classifying the entire LRTP project list by type presents challenges because many projects encompass multiple elements that could influence their classification. For instance, the CDOT project to widen the section of US24 stretching from CO21 to Stapleton Road is categorized as a capacity project due to the addition of lanes, yet a significant portion of its funding also addresses corridor safety and operational improvements. For this report, projects are classified according to a primary project type and a secondary type based on their most significant components, and therefore the same project may be counted in two separate categories.

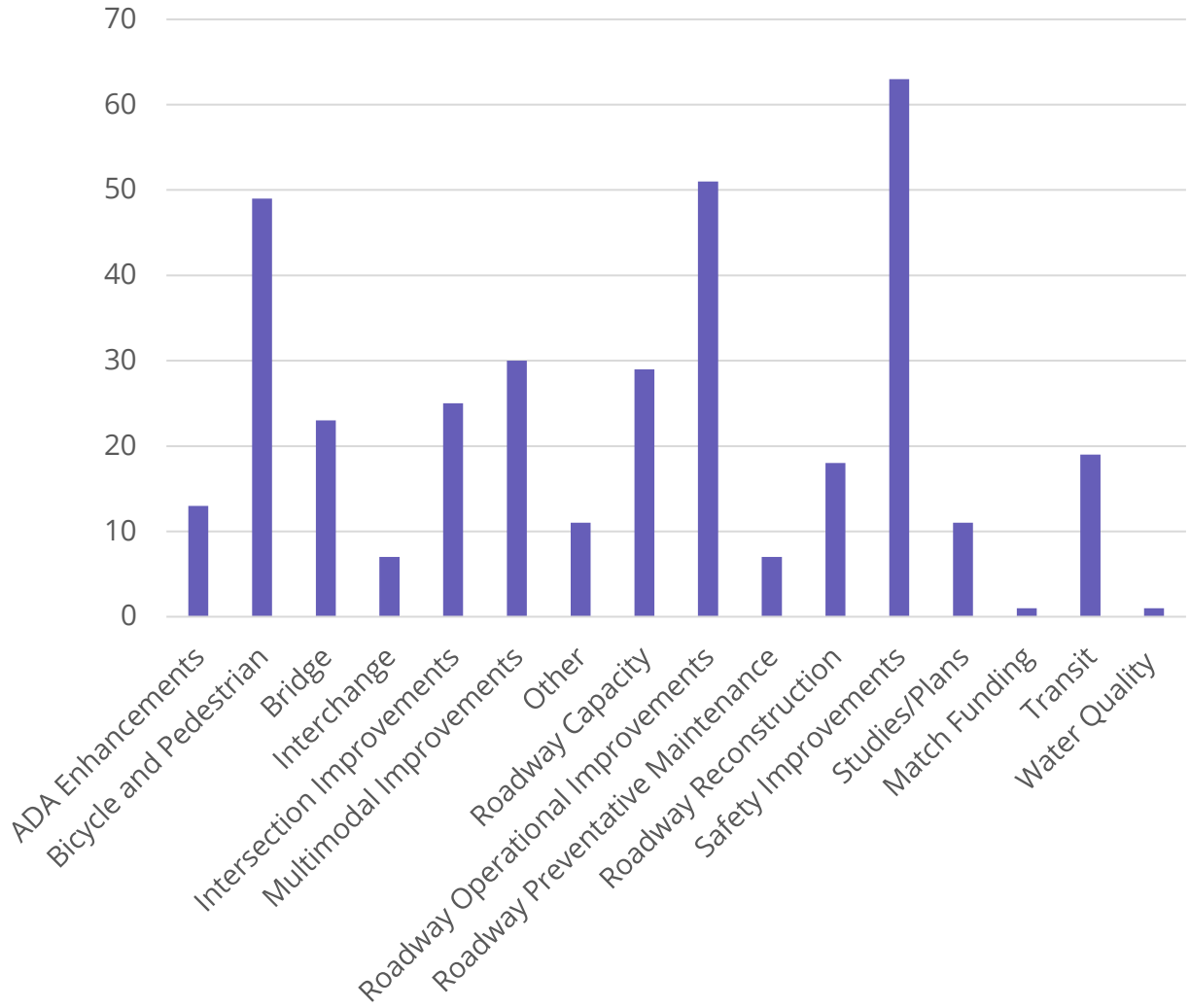


Figure 22: Chart of the number of 2050 LRTP transportation projects by type

The first two goals of the LRTP focus on preserving and enhancing the regional transportation system and ensuring it is efficient and fully connected. To support these goals, nearly 45% of the fiscally constrained project list consists of roadway projects, totaling 105 initiatives. Within this category, 22% (51 projects)

are classified as roadway operational improvements, 12% (29 projects) address capacity by adding new roads or lanes, and 11% (25 projects) focus on preventative maintenance or reconstruction. Many of these projects also contribute to the system's resiliency and redundancy.

Among the capacity projects, eight are anticipated to be fully or partially funded by private sources. Six are CDOT-led projects, two of which are currently funded or partially funded through the Transportation Improvement Program (TIP), while one represents the construction phase of an existing TIP project. Of the capacity projects sponsored by local jurisdictions or multiple agencies, three are already partially or fully funded in the TIP, one is part of Phase 2 of an ongoing TIP project, and nine have secured PPRTA voter-approved funding. PPACG expects the remaining capacity projects to be prioritized for future PPRTA funding, as they address critical connectivity needs, enhance safety by updating lane configurations, and fulfill other regional priorities.

In addition to roadway initiatives, nearly 14% (32 projects) are classified as interchange or intersection improvements, and 10% (23 projects) focus on bridges.

The LRTP also prioritizes multimodal transportation and creating a robust, equitable, and healthy system. Recognizing the importance of alternate transportation modes, the project selection process included specific funding sources like the state MMOF and federal TAP programs, which target alternate mode projects. Approximately 16% (49 projects) are bicycle and pedestrian initiatives, with another 13% (30 projects) classified as multimodal improvements. Additionally, over 8% (19 projects) are transit projects, though these do not account for separate transit-specific projects funded by FTA or detailed in the Regional Transit Plan. Specialized transportation initiatives are also excluded from this fiscally constrained list.

Safety remains a critical priority, with 27% of all projects categorized as safety improvements, and nearly 6% classified as ADA enhancements.

Around 10% of the project mix (23 projects) cover transportation studies, plans, water quality improvements, technological advancements, or other transportation-related enhancements. One project, which serves as a PPRTA funding pool for local match contributions to state or federal discretionary grants, was not classified into a specific category.

Because most projects have multiple characteristics, classifying and reporting the project types by their allocated funding is also challenging because many projects can draw from multiple funding sources to address their various elements. For instance, a project might use TAP funding for sidewalks while utilizing STBG funding for roadway operational improvements.

Of note for this report, when considering only the primary project type, the 2050 LRTP designates $182 million for bicycle and pedestrian projects and $76 million for multimodal projects. In comparison, the 2045 LRTP allocated $125 million to active transportation projects, which included both bicycle/pedestrian and multimodal initiatives. When accounting for both primary and secondary project types, the funding totals increase significantly, with $414 million allocated to bicycle and pedestrian projects and $708 million to multimodal projects. Additionally, local transit projects included in the fiscally constrained list and the Regional Transit Plan total approximately $1.5 billion, while 69 fewer centerline miles of new roadway construction are in the 2050 LRTP model network compared to 2045.

The 2050 LRTP project mix highlights the dedication of PPACG and its local governments to addressing the diverse needs of the regional transportation system while promoting sustainable travel solutions. When assessed through the 2050 travel model, these projects demonstrate their collective impact in advancing mobility and significantly reducing greenhouse gas emissions, paving the way for a cleaner, more connected future.

4 GHG Results

4.1 Considerations for Reducing GHG

PPACG has been a proactive partner in evaluating and advancing the implementation of the "Rules Governing Statewide Transportation Planning Process and Transportation Planning Regions" (2 CCR 601-22) since its first draft in 2021. Through ongoing collaboration with CDOT, other MPOs, statewide modeling coordination meetings, and the Inter-Agency Consultation Team (IACT), PPACG has worked to help address unforeseen challenges with practical, data-driven solutions.

Along the way, PPACG technical staff have focused on responsibly using taxpayer MMOF dollars to significantly update the travel demand model, while planners have actively engaged with local government stakeholders to prioritize projects that help meet rule requirements and uphold equitable transportation solutions. These collective efforts have led to several key considerations for PPACG meeting the GHG reduction goal.

4.1.1 Regional Transit Plan

A new Regional Transit Plan was developed by Mountain Metro Transit (MMT) in coordination with PPACG planners and concurrently with the 2050 LRTP to address implementation goals for projects funded through both the LRTP and new state transit programs. The Regional Transit Plan outlines 58 projects divided into short-term (20), medium-term (21), and long-term (17) projects. The projects are categorized by the following investment themes:

- Enhanced Transit Corridors (ETC)
- New Fixed Routes
- Innovative Mobility Zones
- Extend Service Span
- Improve Capital Infrastructure
- Improve Existing Route Frequency
- New Crosstown Routes

4.1.1.1 Enhanced Transit Corridors

Two Enhanced Transit Corridor (ETC) projects stand out as prime candidates for near-term advancement, based on both demand and the level of planning already completed or underway. MMT has initiated the process of defining an Enhanced Transit project along Academy Boulevard, which is likely to be the first ETC to move forward from the long-term vision. As the highest ridership corridor in the MMT network,

this project has the potential to set a precedent for future ETCs and establish a replicable process for advancing projects to implementation, regardless of the eventual funding source.

The City of Colorado Springs recently completed the Platte Avenue Corridor Study, which identified several potential improvements to Route 5 in the Platte Avenue corridor. While the study did not recommend a specific transit project scope, it can serve as a foundation for MMT and its partners to further define the Platte ETC project in the short term, even if the project's implementation is delayed until the mid-term horizon.

The project team recommends advancing three additional ETC projects after the Academy Boulevard and Platte Avenue corridors: North and South Nevada Avenue and Colorado Avenue. Although the City of Colorado Springs has already studied the North Nevada Avenue corridor, the recommendations from that study should be revisited closer to implementation, with updated corridor conditions and stakeholder engagement to ensure a viable project. Pairing the North Nevada corridor with South Nevada could attract additional outside grant funding by boosting ridership and serving more transit-dependent areas. The Colorado Avenue corridor, already served by MMT's busy Route 3, would complete the east-west ETC spine (along with the Platte Avenue ETC) through central Colorado Springs.

The project team also recommends implementing two additional ETC projects in the long-term phase. The Airport ETC project would connect Downtown Colorado Springs with the Colorado Springs Airport. Until this project is implemented, improvements to Route 37's frequency and span, as well as the South Innovative Mobility Zone, are expected to address transit needs in this area. The Tutt Boulevard ETC would upgrade existing routes and introduce a new Briargate Parkway/Tutt Boulevard local route identified in the implementation phase. Implementation could be phased, with the new local service introduced before upgrading part of the route to an ETC. This corridor is experiencing rapid growth and would benefit from additional time to build ridership and make the necessary connectivity and land use improvements to support a competitive ETC project.

4.1.1.2 Innovative Mobility Zones

Although MMT should conduct a more detailed prioritization before launching its first Innovative Mobility Zone, the project team identifies two promising candidates for an initial launch. The Northeast Mobility Zone would serve a rapidly growing area of Colorado Springs that lacks access to fixed-route transit. This zone would provide valuable data on the transit demand in this part of the community, helping to inform future decisions on new fixed routes. The South Mobility Zone would address an area with expanding industrial jobs, offering another opportunity to test innovative mobility solutions for job centers that are harder to serve with traditional transit.

In the mid-term phase, the plan recommends exploring additional innovative mobility zones in areas experiencing continued growth but not yet ready for fixed-route service, such as the Southeast Zone and the Northgate/Gleneagle Zone. While improvements to fixed-route service frequency and span are being phased in, this phase could also see the implementation of an innovative mobility zone in Central Colorado Springs to further enhance service availability. Depending on the performance of the Northeast Zone, the fixed-route service expansion may prompt adjustments to the zone boundaries to better align with gaps in coverage, or even eliminate the zone entirely.

The final Innovative Mobility Zone, the Northwest Zone, would be implemented in the long term. As other zones are tested and fixed-route services are expanded, some zones may be phased out, or their boundaries may be adjusted to focus resources on areas with the greatest need.

4.1.1.3 Improved Span/Frequency

One of the most promising short-term projects is the expansion of service span on existing routes, particularly on Sunday evenings. This expansion could be achieved with minimal impact on vehicle requirements or the number of operators.

MMT should continue to expand service span during the medium term as vehicle and operator availability allow. If a reliable new funding source is identified, this phase could also include an initial increase in service frequency along routes beyond those identified as ETCs or Crosstown routes.

With the full implementation of the RTP, all routes would be upgraded to at least a 30-minute weekday frequency, with earlier morning and later evening service compared to current schedules, on both weekdays and weekends.

4.1.1.4 Improved Capital Infrastructure

The project team recommends advancing upgrades to the existing Voyager Transit Center in the short term. These upgrades could be incorporated into the Academy Boulevard ETC project, pending the outcome of that study, and would better support the implementation of the I-25/Voyager Express service. In addition to this facility improvement, the short-term implementation period includes a recommendation to launch both a bus stop accessibility/amenity program and a bus speed and reliability program. While initial investments may be limited, establishing a process by which MMT and its partners can systematically improve the passenger experience will provide an important foundation to scale these improvements in future phases of the plan.

Due to the large expansion of fixed-route service in the mid-term phase, the project team has identified several capital projects that would be needed to support the new service. New capital projects include:

- A new transit center at Woodmen Road/Powers Boulevard (near St. Francis Hospital) to serve new local routes along Tutt Blvd and Woodmen Rd.
- A new transit center at Carefree Circle North to connect existing services to new local service along Tutt Boulevard.
- Expansion of the Bus Stop Accessibility/Amenity and Bus Speed and Reliability programs launched during the short-term period
- A new Maintenance Facility to support the expanded bus fleet needed to serve routes launched during this phase and in accordance with expected zero emission vehicle (ZEV) needs as identified in the ZEV Plan

While less pronounced than the medium-term phase, additional capital projects are likely needed to support the remaining projects identified in the long-term horizon. Those include:

- A new transit center near Briargate Parkway and Powers Boulevard to better support network functionality in north/northeast Colorado Springs.

- A new Mobility Hub at Astrozon (near Academy Boulevard and Hancock Expressway) to connect existing services.
- A new Mobility Hub at Innovation Parkway to connect the new Airport ETC to the new Banning Lewis Ranch South route.
- Continuation of the Bus Stop Accessibility/Amenity and Bus Speed and Reliability programs, with the goal to have 100% of bus stops be compliant with the Americans with Disabilities Act (ADA) and to address remaining delay points on local routes that do not receive investment as part of an ETC project.

4.1.1.5 Crosstown Routes

The medium-term implementation phase includes the introduction of two new crosstown routes. The Lake Corridor, which largely replaces the existing Route 4, provides new connections between important job centers near the Broadmoor and south/southeast Colorado Springs. The Union Boulevard Crosstown Corridor combines existing routes 18 and 38 and introduces regular fixed-route service to a part of the region that is currently only served by deviated fixed-route service. This new north-south crosstown route would be anchored by the UC Health Memorial medical center in the north and the Astrozon Boulevard/Hancock Expressway/Academy Boulevard area to the south.

The final crosstown project is the Garden of the Gods Road/Austin Bluffs Parkway corridor. This project would largely replace two existing local routes that would receive frequency/span improvements in the short- and medium-term phases of the plan and depending on a detailed analysis of impacts to vehicle and operator needs could be accelerated through the first phase of systemwide frequency upgrades.

4.1.1.6 New Routes

The medium-term implementation phase includes the majority of the new fixed-route services recommended in the 2050 RTP. However, it is important to note that implementing such a large expansion of MMT's services will require the identification of additional, reliable funding sources beyond the existing system's expected revenue. Most of the new routes in this phase would serve high-growth communities in North and Northeast Colorado Springs, including two new Express routes: one connecting Downtown Colorado Springs to Falcon along US-24, and another linking Downtown Colorado Springs with the Voyager Transit Center along I-25.

The project team recommends implementing the Banning Lewis Ranch South route during the long-term phase, given the expected longer buildout horizon of Banning Lewis Ranch toward US-24 and further south (with the Southeast Zone serving this area in the interim). Additionally, based on long-term growth trends, the team recommends introducing local service between Monument and Voyager Transit Center in the long term. The team also recommends implementing a Garden of the Gods to Manitou Springs circulator in the long-term, following a more thorough study of the benefits and infrastructure needed to operate such a service. Given its focus on serving tourists visiting Manitou Springs and Garden of the Gods Park, this project may be eligible for advancement on a different timeline with unique funding sources that may not be available for other routes in the proposal.

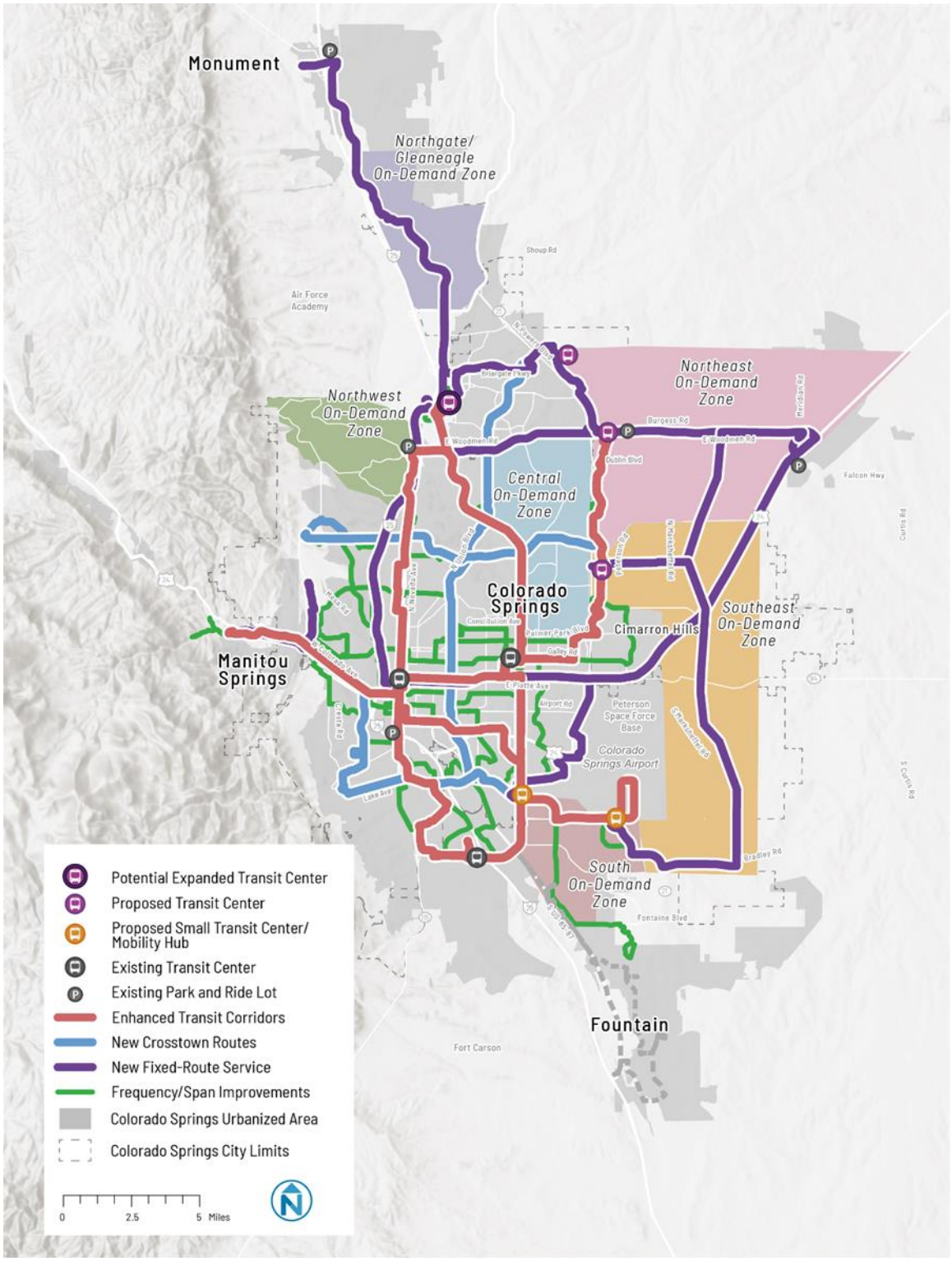


Figure 23: Map of regional transit projects from the transit plan

4.1.2 Transit Connections Study

In 2024, CDOT's Division of Transit and Rail (DTR) launched the Transit Connections Study (TCS) as part of its effort to build a statewide transit network. The study aims to provide a strategic vision for an interconnected statewide transit system, focusing on expanding and improving the Bustang Family of Services, adding passenger rail services, identifying transit gaps and needs, and fostering connections with intercity, regional, and local transit/mobility providers.

Mountain Metro Transit (MMT), local jurisdictions, and CDOT have developed a project list for inclusion in the TCS. This list identifies projects in the Pikes Peak region that align with CDOT's transit goals and represents a more aggressive implementation of the vision laid out in the Regional Transit Plan, designed to leverage increasing funding streams. It includes several service enhancement projects, such as express bus service and localized circulators to address last-mile connections. Additionally, the list features express and flex service as part of the Plains to Peak Corridor, along with several stop and station improvements, including mobility hubs and upgrades to existing connection points. This list is included as an addendum to the Regional Transit Plan.

4.1.3 State Multimodal and Transit Initiatives

Many of the projects and mode choice assumptions incorporated in the Regional Transit Plan and the Transit Connections Study are supported by a host of new state legislation, including:

- SB24-032 Methods to Increase the Use of Transit, provides additional funding for transit in the form of an annual allocation of $7 million to the ozone season transit grant program fund.
- HB24-1152 Accessory Dwelling Units, promotes the development of ADUs, which by extension promotes urban infill and correlates with higher probability of walk, bike, and transit mode choices.
- HB24-1304 Minimum Parking Requirements, prohibits a county or municipality, on or after June 30, 2025, from enforcing minimum parking requirements for real property within a MPO to encourage higher residential density and walk, bike, and transit mode choices.
- HB24-1313 Housing in Transit-Oriented Communities, is intended to provide greater access to transit.
- SB24-184 Support Surface Transportation Infrastructure Development, imposes a $3 a day congestion impact fee on car rentals intended to support the development of Front Range Passenger Rail (FRPR) service.
- SB24-230 Oil & Gas Production Fees, requires the clean transit enterprise to impose a production fee on oil and gas to be used for clean transit.

4.1.4 Modeling the Mode Choice Changes

The 2050 LRTP has more than doubled the funding for transit and multimodal projects compared to the 2045 plan, supported by coordinated planning and programming with local transit providers like MMT and state transit programs run by CDOT, using a host of new funding resources provided by legislation with the explicit goal of promoting multimodal options and transit use. Supporting these initiatives is

PPACG's new travel demand model (TDM), which provides robust capabilities to evaluate the impacts of proposed projects on both transportation efficiency and environmental sustainability.

The following changes were made compared to the 2020 base year model to account for the impacts these initiatives might have on the transportation network. These models constitute what is considered the GHG reduction or action scenarios for each forecast year.

- The transit mode choice probability was increased for general office workers, college students, and individuals over 65 years, for most trip types. This increase in forecasted transit attractiveness as a mode choice also models expected rebound of very low transit boardings in the base year, which likely influenced model calibration.
- In 2030, four new transit routes/lines were added: University of Colorado, Colorado Springs /Colorado College service to downtown, Monument line, Falcon line, and Woodmen line. The North Academy and Voyager lines were coded with shorter 10 minute headway times to reflect planned service improvements.
- In 2040, one new transit line was added: the Union South line. Shorter headways were coded to reflect improved service on the South Academy, Citadel, Union North, and Security Widefield lines.
- In 2050, the FRPR station was added in downtown Colorado Springs with a 30 minute headway service to Denver, and one a new transit line was added to Banning Lewis Ranch. The existing Amazon and Las Vegas transit lines were noticed to not be coded properly to all their stops and were repaired (there was no time to fix this problem in the 2030 and 2040 years before submission), and shorter 15 minute headway service was coded to all routes not already improved in 2030 and 2040.
- Walk mode choice probability for all adults was increased for non-work trips within 2 miles to be more attractive.
- Remote work probability was increased slightly by 4% for office workers and 2% for service workers, for a total remote work probability of around 14%.

	2020		2030		2040		2050	
Auto	1,845,542	*68.87%*	2,028,453	*68.00%*	2,300,422	*68.81%*	2,418,511	*68.05%*
Auto Shared	694,974	*25.93%*	740,937	*24.84%*	825,435	*24.69%*	868,281	*24.43%*
Transit	12,691	*0.47%*	81,389	*2.73%*	83,731	*2.50%*	127,559	*3.59%*
Walk	109,029	*4.07%*	114,512	*3.84%*	113,822	*3.40%*	118,262	*3.33%*
Bike	17,524	*0.65%*	17,757	*0.60%*	19,971	*0.60%*	21,390	*0.60%*
Total Trips	**2,679,761**		**2,983,047**		**3,343,380**		**3,554,003**	

Figure 24: Table of total trips by mode choice in the 2050 LRTP model across all model years

2020		2030		2040		2050	
Static VMT	SBA VMT	Static VMT	SBA VMT	Static VMT	SBA VMT	Static VMT	SBA VMT
14,571,122	**14,672,365**	**15,289,668**	**15,393,629**	**17,415,561**	**17,810,938**	**18,742,536**	**19,472,327**

Figure 25: Table of total vehicle miles traveled (VMT) in the 2050 LRTP model across all model years calculated using both the traditional static assignment and the newer simulation based assignment

4.1.5 New Baseline Model

The GHG rule, "Rules Governing Statewide Transportation Planning Process and Transportation Planning Regions" (2 CCR 601-22), requires that baseline GHG emissions be determined from modeling the regional plan adopted by the MPO when the rule became effective in January 2022. PPACG understood this to mean that the 2045 LRTP travel demand model – being the adopted plan when the rule became effective – would be used to establish the GHG baseline emissions, as its land use and transportation network were utilized to calculate the GHG reduction requirements in Table 1 of the rule. However, in September 2024, CDOT shared their interpretation and instructed PPACG to develop a new baseline model using the 2050 LRTP travel demand model.

PPACG staff and CDOT engaged in several discussions to determine how best to accomplish this, as the 2050 LRTP model represents a substantial improvement over the previous model and includes numerous changes that are incompatible with its predecessor. Some of these challenges include:

- The 2050 model has over 100 new TAZs, with different boundaries and household/employment composition
- Different population and household data, such as income and age brackets, between the models
- The 2045 model uses three worker classes, with no certainty to correctly parse them into the five worker types used in the 2050 model
- The 2045 model network does not have the geometric detail or attributes required for simulation based assignment for 69 centerline miles of major roadway projects removed from the 2050 LRTP

Working closely with CDOT, PPACG used the new 2050 LRTP model to generate a GHG baseline model with the following considerations to the 2045 LRTP:

- The baseline uses the 2045 LRTP land use and population distribution, but scaled to the 2050 LRTP population control total
- The baseline uses the 2050 LRTP workforce and employment distribution
- The baseline reflects the 2045 LRTP model's remote work and mode choice trip distributions
- The baseline contains the 2045 LRTP model's transportation network, using generic intersection geometry adopted where necessary to facilitate simulation based assignment (SBA) and PPACG staff's best estimate for project timelines

While the vehicle miles traveled (VMT) in the new GHG baseline models closely align with the VMT from the adopted 2045 LRTP, the lower average speeds in the baseline models reveal significant congestion in 2040 and 2050, to the point that not all trips in the baseline could be modeled to completion in those years. This is primarily attributed to the conflicting land use forecasts and the transportation project mix adopted in the 2045 LRTP. In retrospect, the nonsynchronous nature of the 2045 plan is apparent; however, it's important to note that as the Pikes Peak Area MPO is in attainment, previous plans did not have emissions budgets. Consequently, previous plans often employed a broader and less constricted approach conducive to their ability to be easily revised in four years' time. The lack of project implementation timelines in previous plans can be considered an example of this approach.

	2030	2040	2045
VMT in the 2045 LRTP for the MPO	16,800,165	18,120,837	18,319,508

	2030	2040	2050
VMT in the new GHG Baseline for the MPO	16,470,841	18,170,984	18,841,427

GHG Baseline Model Avg Speeds

PM rush hour (4pm - 7pm):

	2030	2040	2050	2040	2050
Interstate	69.5 mph	56.5 mph	55.2 mph	38.1 mph	37.1 mph
Highways	48.0 mph	36.7 mph	36.5 mph	22.0 mph	23.5 mph
Principal Arterials	38.6 mph	30.2 mph	29.6 mph	18.5 mph	18.4 mph
Minor Arterials	34.9 mph	28.7 mph	27.5 mph	19.8 mph	17.8 mph
Major Collectors	29.3 mph	25.0 mph	24.0 mph	18.7 mph	17.1 mph
Minor Collectors	24.7 mph	23.6 mph	23.6 mph	22.7 mph	22.9 mph

GHG Reduction Scenario Model Avg Speeds

PM rush hour (4pm - 7pm):

	2030	2040	2050	2040	2050
Interstate	69.2 mph	68.8 mph	68.5 mph	67.7 mph	66.3 mph
Highways	48.5 mph	48.3 mph	47.5 mph	47.3 mph	45.0 mph
Principal Arterials	38.6 mph	38.3 mph	38.3 mph	37.7 mph	37.4 mph
Minor Arterials	34.9 mph	34.9 mph	34.8 mph	34.7 mph	34.4 mph
Major Collectors	29.3 mph	29.2 mph	29.2 mph	29.0 mph	28.9 mph
Minor Collectors	24.2 mph	24.2 mph	24.2 mph	24.1 mph	24.1 mph

Figure 26: Tables of VMT in the original 2045 LRTP model and the new GHG baseline model, and comparisons of average vehicle speeds in the GHG baseline model and the 2050 LRTP model

The baseline models underscore the substantial benefits achievable through a harmonious land use and transportation planning strategy, such as the approach implemented in the 2050 Long Range Transportation Plan. This recent planning effort has yielded more than just a transportation project list and land use forecast; it has been the impetus to establish two new regional forums that enhance collaboration among local government planners. These forums represent a significant step forward, fostering the collective vision and coordination needed to drive meaningful, positive change across the region, and will help ensure the progress made on the 2050 LRTP continues into the next plan.

4.2 GHG Target Reporting

For each compliance year required under the rule, PPACG provided two sets of Excel file outputs from its travel demand model to the Air Pollution Control Division (APCD) of the Colorado Department of Public Health and Environment (CDPHE) for greenhouse gas (GHG) emissions evaluation using the MOtor Vehicle Emission Simulator (MOVES). These files were also supplied to CDOT, and included hourly traffic volumes, hourly average speeds, and details such as functional class, urban classification, number of lanes, and speed limits for each traffic link within the MPO network. The first file output was from the GHG baseline model derived from the adopted 2045 plan's land use and network, while the second file output was from the GHG action/reduction model from the new 2050 plan.

The result of the emissions analysis done by the APCD using the MOVES tool in rates mode to evaluate PPACG's 2050 LRTP through its travel demand model outputs in the following compliance years for Carbon Dioxide equivalent (CO2e) GHG emissions are as follows:

MPO	Year	pollutantID	HPMSid	Total(tons)
ppacog2030GHGbase	2030	98	11	11.69
ppacog2030GHGbase	2030	98	21	2,127.58
ppacog2030GHGbase	2030	98	30	3,049.30
ppacog2030GHGbase	2030	98	40	25.49
ppacog2030GHGbase	2030	98	50	65.56
ppacog2030GHGbase	2030	98	60	336.82
				5,616.44

MPO	Year	pollutantID	HPMSid	Total(tons)
ppacog2030GHGaction	2030	98	11	10.63
ppacog2030GHGaction	2030	98	21	1,679.36
ppacog2030GHGaction	2030	98	30	2,467.42
ppacog2030GHGaction	2030	98	40	20.92
ppacog2030GHGaction	2030	98	50	51.02
ppacog2030GHGaction	2030	98	60	266.38
				4,495.73

MPO	Year	pollutantID	HPMSid	Total(tons)
PPACOG_2040base	2040	98	11	19.49
PPACOG_2040base	2040	98	21	1,470.33
PPACOG_2040base	2040	98	30	4,743.79
PPACOG_2040base	2040	98	40	35.63
PPACOG_2040base	2040	98	50	95.48
PPACOG_2040base	2040	98	60	438.14
				6,802.86

MPO	Year	pollutantID	HPMSid	Total(tons)
PPACOG_2040action	2040	98	11	12.48
PPACOG_2040action	2040	98	21	620.73
PPACOG_2040action	2040	98	30	2,089.30
PPACOG_2040action	2040	98	40	22.35
PPACOG_2040action	2040	98	50	56.23
PPACOG_2040action	2040	98	60	275.80
				3,076.89

MPO	Year	pollutantID	HPMSid	Total(tons)
PPACOG_2050base	2050	98	11	21.76
PPACOG_2050base	2050	98	21	233.90
PPACOG_2050base	2050	98	30	2,970.43
PPACOG_2050base	2050	98	40	38.80
PPACOG_2050base	2050	98	50	105.67
PPACOG_2050base	2050	98	60	483.41
				3,853.97

MPO	Year	pollutantID	HPMSid	Total(tons)
PPACOG_2050action	2050	98	11	14.26
PPACOG_2050action	2050	98	21	98.60
PPACOG_2050action	2050	98	30	1,306.47
PPACOG_2050action	2050	98	40	24.55
PPACOG_2050action	2050	98	50	61.02
PPACOG_2050action	2050	98	60	295.38
				1,800.28

	2030	**2040**	**2050**
GHG Baseline Model	1.72	2.09	1.18
2050 Plan Action/Reduction Model	1.38	0.94	.55
Reduction Amount	.34	1.15	.63
Required Reduction in the Rule	.15	.12	.07
Pass/Fail	Pass	Pass	Pass

These values reported in Million Metric Tons (MMT) of CO2e emissions

Figure 27: Tables comparing GHG baseline emissions and action/reduction scenario emissions

5 Appendices

5.1 Acronyms and Abbreviations

ADA	Americans with Disabilities Act of 1990
ADU	Accessory Dwelling Unit
APCD	Air Pollution Control Division
CAC	community advisory committee
CCR	Code of Colorado Regulations
CDOT	Colorado Department of Transportation
CDPHE	Colorado Department of Public Health and Environment
CRP	Carbon Reduction Program
CO2e	carbon dioxide equivalent
COG	Council of Governments
BRT	Bus Rapid Transit
EV	electric vehicle
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FY	fiscal year
GHG	greenhouse gas
GIS	geographic information systems
IACT	Inter-Agency Consultation Team
IGA	Intergovernmental Agreement
LRTP	long range transportation plan
mi	miles
MMOF	multimodal transportation and mitigation options fund
MMT	Mountain Metropolitan Transit
MMT	millions of metric tons
MOVES	MOtor Vehicle Emission Simulator
MPO	metropolitan planning organization
mph	miles per hour
PPACG	Pikes Peak Area Council of Governments
SB	Senate Bill
SBA	simulation based assignment
STBG	surface transportation block grant
TAC	transportation advisory committee
TAP	Transportation Alternatives Program
TAZ	transportation analysis zone
TC	Transportation Commission
TDM	travel demand model
TIP	transportation improvement program

UZA	Census designated urbanized area
VMT	vehicle miles traveled
ZEV	zero emission vehicle

5.2 TDM Calibration and Validation Report

The travel model calibration and validation report developed by the PTV Group as part of its 2050 LRTP travel model improvements is attached.

5.3 MOVES Modeling Methodology Memo

The methodology used by the APCD to calculate greenhouse gas emissions for the PPACG 2050 LRTP travel demand model using the MOVES emissions model is attached.

Pikes Peak Travel Demand Model Update

PTV Group in cooperation with the Pikes Peak Area Council of Governments updated the multimodal tour-based travel demand model that represents travel activity in the region. This model update also enhanced the model with the addition of a work from home variable in the tour generation step and a 24hr dynamic traffic assignment model. The dynamic assignment model is a regional scale mesoscopic traffic simulation with more than 700 signalized intersections. The base year for the model is set to 2020.

This transportation planning model is a tour-based model and is a representation of the Colorado Springs area transportation facilities and multimodal travel patterns using these facilities. The model contains inventories of the existing roadway facilities, transit lines, synthetically generation population at the household and person level, as well as land use data such as workers, student enrollment, shopping, employment etc. in the area. The travel demand model was calibrated to reflect average daily traffic on roadway facilities. Further, hourly traffic counts were used to calibrate hourly travel demand for the purpose of dynamic traffic assignment.

The model can be used to measure the impact and evaluate scenarios such as changes in population, employment centers, travel behavior patterns, or roadway improvements. The transportation engineer or planner, using the transportation planning model, can project future traffic volumes without the cost of building inappropriate roadways or waiting for traffic congestion to severely impact travelers.

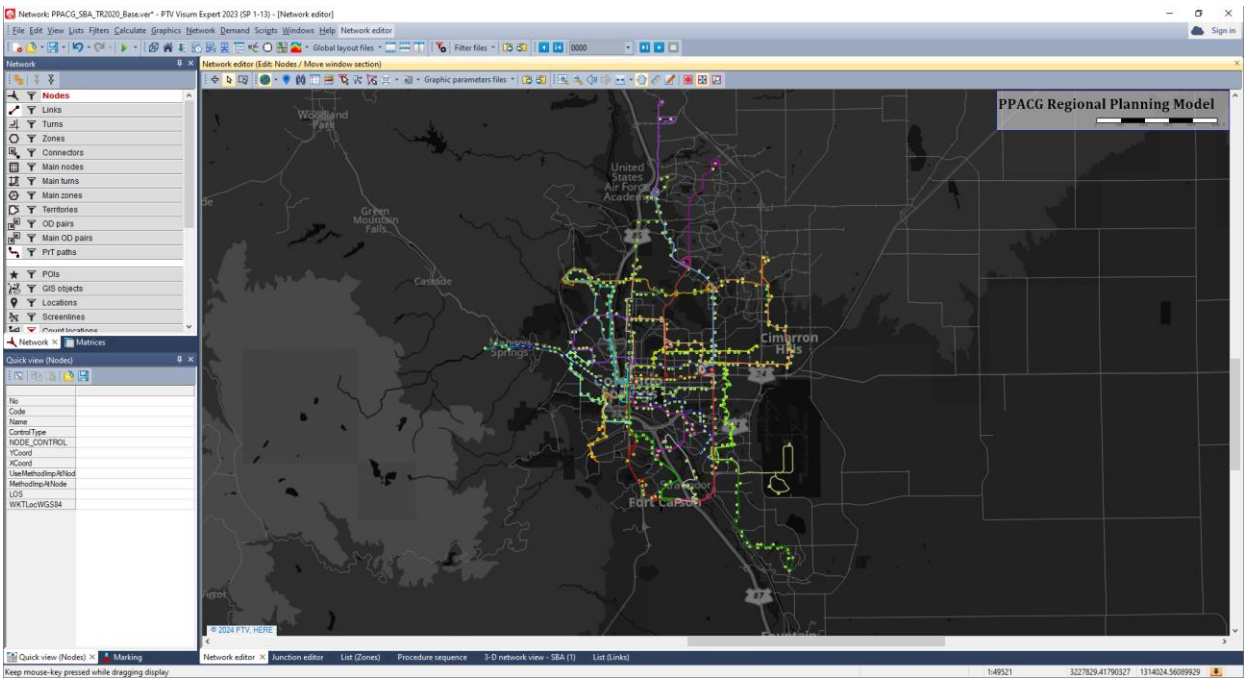
The model was developed using VISUM 2024. VISUM is a Windows based multimodal transportation modeling software and has an array of features implemented in an easy-to-use graphical user interface, thereby making it a very powerful analysis tool for transportation modeling and planning.

This document details the methodology that was used to develop the model. Because modeling is a complex process, much of the theory, terminology, and concepts are also discussed.

1. Model Area Identification

The model area contains El Paso County, Colorado Springs, Manitou Springs, Woodland Park, Green Mountain Falls, Fountain, Palmer Lake and Monument. The major through route in the area is I-25. The route runs in a north-south direction, with Denver in the north and Pueblo in the south. A snapshot of the model area is shown in Figure 1

Figure 1: Travel Demand Model Area – Pikes Peak Area Model



2. Network Development

The updated model network is multi-resolution in structure. Here, the level of detail used in the network assignments can be increased or decreased based on the network assignment method. The static assignment uses a typical link-node structure and applies turn prohibitions and macroscopic volume delay functions to model volume-based network delay. The simulation-based assignment (SBA) uses intersection geometry details and intersection control including signal timings and stop/yield control.

Network development for the model involved the following items:

1) Street network development – lanes, speeds, intersection geometries, signal timings etc.
2) Transit network development – transit lines with related timetable and headway data.
3) Transportation analysis zone refinement and updated centroid connectors.

2.1 Street Network Development

The street network for the model was developed by refinement of the existing travel demand model network using GIS layers and aerial imagery. The roadway classes, speeds, capacities and number of lanes were checked and updated in the entire network. In addition, intersection control, geometry and signal timings were added to the network to represent intersection level delay more accurately for the purpose of dynamic traffic assignment.

The following roadway functional classifications were used for modeling link delays in the model:

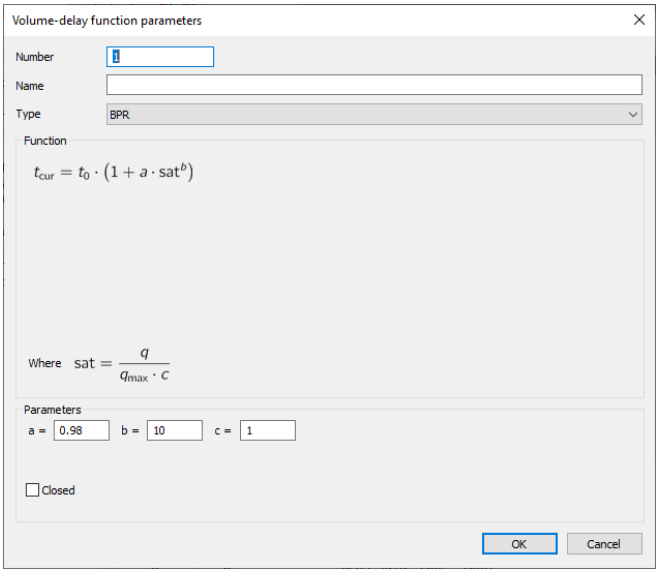
Table 1: Model Link Classification

Type No	Class No	Class Name	Capacity (/hr/ln)	Speed	Delay Function
10	1	Interstate HOV Connection	1500	65	1
11	1	Interstate	2400	80	1
12	1	Interstate	2400	75	1
13	1	Interstate	2400	70	1
14	1	Interstate	2350	65	1
15	1	Interstate	2300	60	1
16	1	Interstate	2250	55	2
17	1	Interstate HOV	1500	75	1
18	1	Interstate HOV	1500	70	1
19	1	Interstate HOV	1500	65	2
20	2	Expressway	2000	65	3
21	2	Expressway	2000	60	3
22	2	Expressway	1850	55	4
23	2	Expressway	1700	50	4
24	2	Expressway	1550	45	4
25	2	Expressway	1500	40	5
26	2	Expressway	1450	35	8
27	2	Expressway	1400	30	9
28	2	Expressway	1350	25	10
29	2	Expressway	1850	70	1
30	3	Principal Arterial	1800	65	4
31	3	Principal Arterial	1800	60	4
32	3	Principal Arterial	1800	55	5
33	3	Principal Arterial	1200	50	5
34	3	Principal Arterial	1000	45	6
35	3	Principal Arterial	900	40	7
36	3	Principal Arterial	850	35	8
37	3	Principal Arterial	800	30	9
38	3	Principal Arterial	800	25	10
40	4	Minor Arterial	1000	55	4
41	4	Minor Arterial	1000	50	5
42	4	Minor Arterial	850	45	6
43	4	Minor Arterial	850	40	7
44	4	Minor Arterial	750	35	8
45	4	Minor Arterial	700	30	9
46	4	Minor Arterial	700	25	10
47	4	Minor Arterial	650	20	10
48	4	Minor Arterial	650	15	10

Type No	Class No	Class Name	Capacity (/hr/ln)	Speed	Delay Function
49	4	Minor Arterial	1000	65	1
50	5	Collector	850	55	5
51	5	Collector	850	50	5
52	5	Collector	650	45	6
53	5	Collector	650	40	7
54	5	Collector	650	35	8
55	5	Collector	650	30	9
56	5	Collector	650	25	10
57	5	Collector	600	20	11
58	5	Collector	600	15	11
59	5	Collector	600	10	11
60	6	Residential	600	35	8
61	6	Residential	600	30	9
62	6	Residential	550	25	10
63	6	Residential	550	20	11
70	7	Ramp	1250	60	3
71	7	Ramp	1200	55	4
72	7	Ramp	1200	50	5
73	7	Ramp	1200	45	6
74	7	Ramp	1200	40	7
75	7	Ramp	1200	35	8
76	7	Ramp	1000	30	9
77	7	Ramp	1000	25	10
78	7	Ramp	1000	20	11
79	7	Ramp	1000	15	12

The above link capacities were applied in the network in combination with BPR volume delay functions to capture volume to capacity-based delay. The functional form is shown in the Figure 2 below.

Figure 2: Link Volume Delay Function for the PPACG Model



Six parameter sets were used in the model. These are shown in the table below:

Table 2: BPR Volume Delay Function Parameters

Delay Function No	BPR_a	BPR_b
1	0.98	10.0
2	0.93	8.0
3	1.00	5.4
4	0.83	2.7
5	0.71	2.1
6	0.15	7.0
7	0.15	7.0
8	0.15	7.0
9	0.15	7.0
10	0.15	7.0
11	0.15	7.0
12	0.15	7.0
13	0.15	7.0

2.2 Transit Network Development

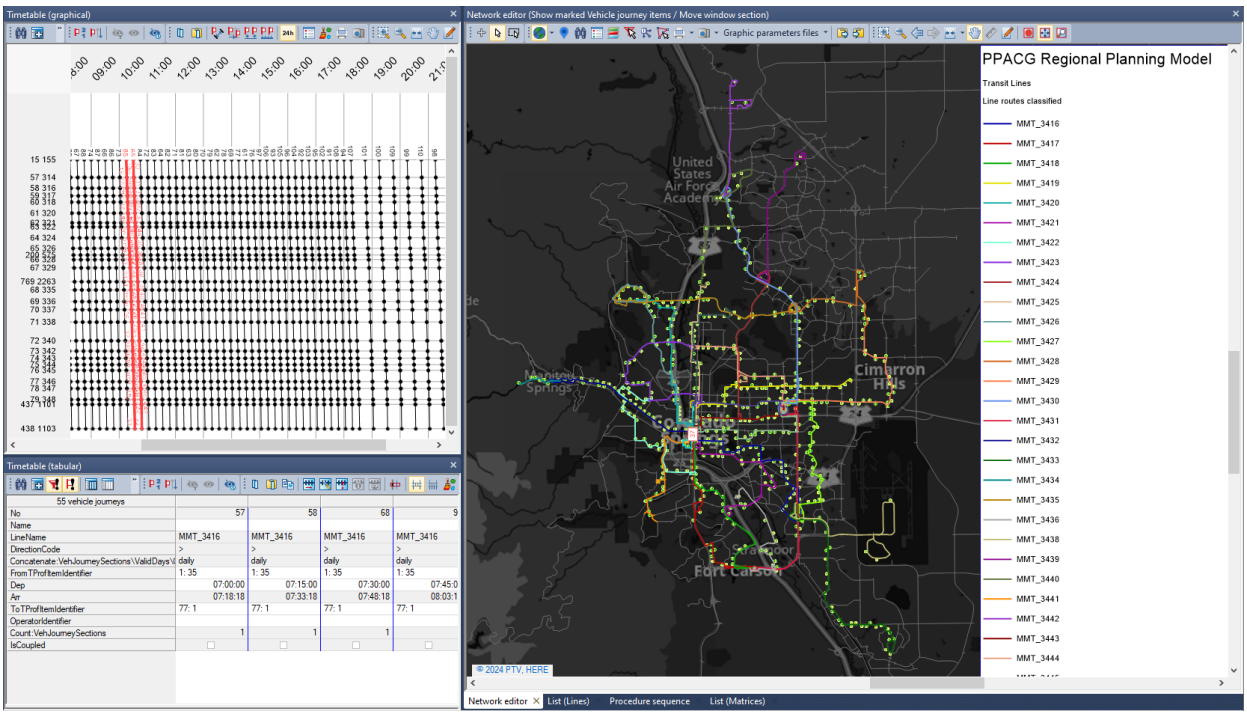
The PPACG tour-based model is designed as a 24-hour model with user defined time of day outputs. As a result, the network from the previous version of the model was completely replaced with a high-resolution transit network based on General Transit Feed Specification (GTFS). This network contains detailed timetable information suitable for timetable-based assignment and other operational analyses related to transit. While the existing model does not use timetable-based transit assignment, storing a timetable allows calculation of transit isochrones by time of day. This is useful in obtaining more realistic measures of transit accessibility and timed transfer connections at a disaggregated level.

A summary of transit lines included in the base model is presented in the table below.

Table 3: Base Model Transit Lines

LINE NAME	ROUTE_ID	ROUTE_NAME	TSYSNAME
MMT_3416	1	Hillside - Hancock Plaza	Bus
MMT_3417	10	Hwy 115 - PPSC	Bus
MMT_3418	11	World Arena - PPSC	Bus
MMT_3419	12	Palmer Park Blvd	Bus
MMT_3420	14	Chestnut St - G.O.G. Rd	Bus
MMT_3421	15	FOUNTAIN BLVD -E CHEYENNE MTN BLVD	Bus
MMT_3422	16	Brookside - Uintah Gardens	Bus
MMT_3423	17	19TH STREET/FILLMORE	Bus
MMT_3424	18	Union Blvd	Bus
MMT_3425	19	WEBER - EAGLE ROCK	Bus
MMT_3426	2	CENTENNIAL BLVD - G.O.G. Rd	Bus
MMT_3427	22	SOUTHBOROUGH VIA MURRAY BLVD	Bus
MMT_3428	23	Barnes Rd. - Tutt Blvd	Bus
MMT_3429	24	Galley Rd - Tutt Blvd	Bus
MMT_3430	25	N. ACADEMY BLVD - VOYAGER	Bus
MMT_3431	27	S. ACADEMY BLVD - PPSC	Bus
MMT_3432	3	COLORADO AVE - MANITOU	Bus
MMT_3433	32	SECURITY/WIDEFIELD	Bus
MMT_3434	33	INCLINE/COG SHUTTLE	Bus
MMT_3435	34	GOG/AUSTIN BLUFFS PKWY	Bus
MMT_3436	35	LAS VEGAS ST/ PPSC	Bus
MMT_3438	37	Amazon/ Airport	Bus
MMT_3439	38	UNION/ CHILDRENS HOSPITAL	Bus
MMT_3440	39	CORPORATE DR - VOYAGER PKWY	Bus
MMT_3441	4	S. 8th STREET - BROADMOOR	Bus
MMT_3442	40	VOYAGER - RAMPART PPSC	Bus
MMT_3443	5	Boulder - Citadel	Bus
MMT_3444	6	FILLMORE - Citadel	Bus
MMT_3445	7	Pikes Peak Ave. - Citadel	Bus
MMT_3446	8	Cache La Poudre - Citadel	Bus
MMT_3447	9	NEVADA - UCCS	Bus
MMT_3448	ZEB	ZEB Downtown Shuttle	Bus

Figure 3: GTFS Based Transit Network for the PPACG Model



2.3 Transportation Analysis Zone Refinement

The original TAZ system for the PPACG model was reviewed and revised to better align with census boundaries and roadway infrastructure. The updated TAZ system consists of 945 zones out of which 11 zones are external stations. The traffic and transit loading points or connectors were also redefined and placed as appropriate. The same loading scheme is used in both static and dynamic network assignments. The updated TAZ system for the PPACG Tour Based Model is illustrated below.

Figure 4: Updated TAZ System for the PPACG Model

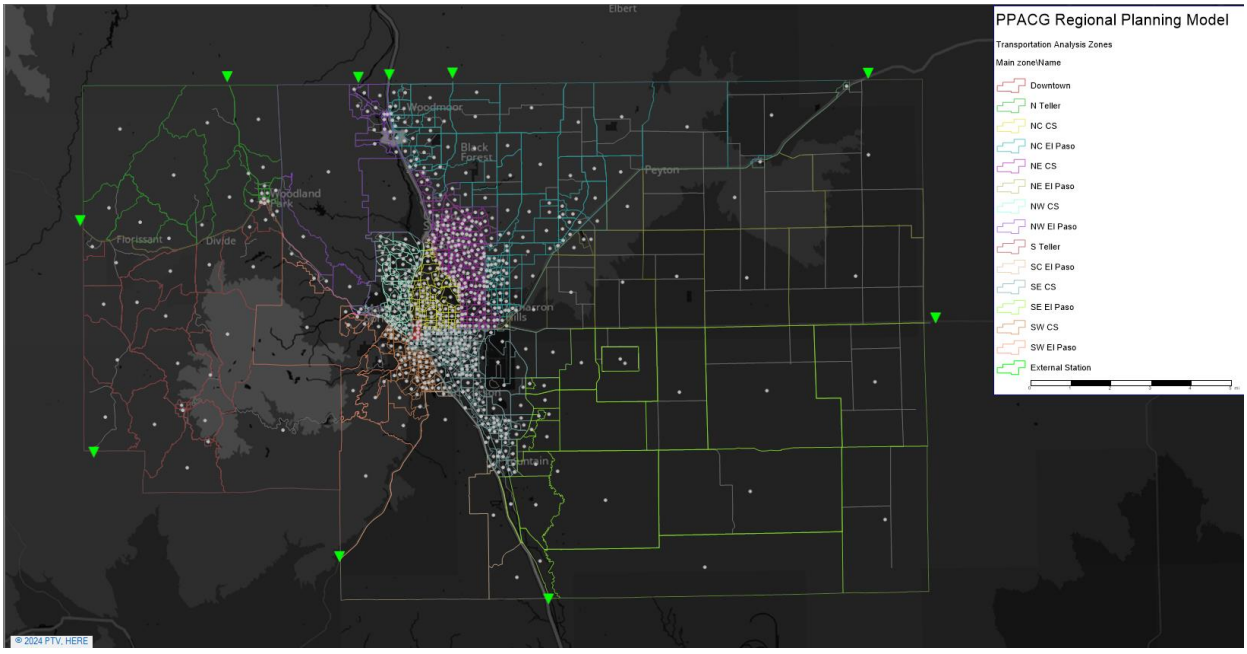


Table 4: PPACG TAZ System Summary

District	Number of Zones
Downtown	72
N Teller	19
NC CS	100
NC El Paso	129
NE CS	182
NE El Paso	14
NW CS	79
NW El Paso	22
S Teller	26
SC El Paso	8
SE CS	183
SE El Paso	23
SW CS	62
SW El Paso	15
External Station	11
TOTAL	**945**

2.4 Land Use Data

The land use and demographic data for the tour-based model was developed from multiple sources. The MPO provided the population and employment cross-sections. Additionally, the land use data related to zone level employment, shopping, recreation and student enrollment was derived from GIS data maintained by the MPO.

2.5 Demographic Data – Population Synthesis

The PPACG model uses a disaggregate synthetic population. The population synthesis process generates household weights for the seed sample that satisfies the marginal distributions. The final weights are then used to expand the seed sample into a disaggregate synthetic population. The use of a synthetic population allows greater flexibility in modeling tour and trip making characteristics by various demographic cross-sections and incorporation of variables to model work-from-home situations in a more robust and flexible manner.

With the advancement of travel demand models in recent years, synthetic population generation has also received research attention. Traditional population synthesizers used Iterative Proportional Fitting (IPF) or Iterative Proportional Updating (IPU) methods while advanced population synthesizers use optimization-based techniques such as entropy maximization and linear programming. PopulationSim[1] is a state-of-the-art population synthesizer software originally developed for the Oregon Department of Transportation (ODOT) and its partner agencies. PopulationSim is an open software developed in the ActivitySim[2] framework and is currently managed by the ActivitySim consortium. PopulationSim offers many technical and usability enhancements over other population synthesizers.

[1] PopulationSim: https://activitysim.github.io/populationsim/
[2] ActivitySim: https://activitysim.github.io/

PopulationSim makes several advancements over traditional population synthesizers such as PopSyn3 and PopGen. These include enhancements resulting from the use of advanced optimization methods, unique features for travel demand model applications, efficient software design, and better interfacing with PTV Visum. The following sub-sections describe these benefits in more detail.

Algorithmic advantages

PopulationSim uses an entropy maximization-based list-balancing approach for generating weights[3]. The entropy-maximization formulation results in uniform weights that are not expanded beyond a user-defined threshold. The uniformity in weights ensures that the distribution of uncontrolled variables is not significantly changed in the process. This unique formulation also allows for the specification of importance factors on each marginal control. The user can set these factors in accordance with their confidence in the quality of the data.

Another important advantage of the PopulationSim algorithm is that it operates simultaneously on all geographic units. This eliminates the errors resulting from the sequential processing of geographies. This is a known problem in the PopSyn3 population synthesizer which results in poor control match for minority population segments such as university students or low-income households. The simultaneous list balancing method used in PopulationSim eliminates this type of error and results in better control match for minority population segments.

Generally, the list balancing or IPF-based process generates floating-point weights. However, for expanding the seed sample, integer weights are required. Many traditional population synthesizers resort to simple or bucket rounding of floating-point weights. This method results in poor control matches and the errors can accumulate over geographic units. Some IPF-based population synthesizers such as PopGen rely on Monte-Carlo draws from a joint distribution of floating-point weights. Again, the Monte-Carlo errors can accumulate and result in poor marginal control matches. PopulationSim uses a linear programming (LP) formulation to convert floating-point weights to integers. As a result, PopulationSim avoids rounding or drawing errors in contrast to other population synthesizers.

Advanced usability features

PopulationSim also offers several unique features that make it a practical choice for many travel demand model applications. These features are described below:

- Person controls

PopulationSim allows the specification of both household and person-level controls. While most population synthesizers offer this feature, some of the traditional ones operate only at the household level.

- Multiple geographies

As stated earlier, the main inputs to the population synthesis process are a seed sample and marginal controls. Typically, most population synthesizers operate at a single geographic level. However, data for marginal controls are generally not available at the same geographic level. For example, the household income distributions may be available at the Traffic Analysis Zone (TAZ) level and the person age distribution might be available at the County level. The available data needs to be transformed to the

[3] See TRB Paper for more details:
https://github.com/ActivitySim/populationsim/blob/master/papers/TRB_Paper_PopulationSim_v6.pdf

same geographic level which can be a time-consuming task and can introduce approximation errors. In contrast, PopulationSim can use data available at multiple geographic levels without any transformation.

- Importance factors for controls

As stated earlier, PopulationSim also allows users to specify importance factors on each control. The PopulationSim algorithm gives higher priority to marginal controls with a higher importance factor. This feature can be very useful in a situation where the user places a higher level of confidence in a certain data source.

- Re-populate feature

Typical model applications for a regional model include corridor studies and traffic impact studies, which require carefully controlled baseline versus build analysis. PopulationSim software offers functionality that supports this type of analysis; a 're-populate' mode in the software adds to or replaces the existing synthetic population in a subset of zones using whatever controls the user is able to provide (for example, households by type).

Software benefits

As mentioned earlier, PopulationSim has a robust open-source software implementation in the ActivitySim framework. Software development adheres to software engineering best practices. The system is under continuous integration (CI), which means the software and documentation are automatically built and tested against sample datasets to ensure that new features do not break the code base for any users. PopulationSim benefits arising from its robust software design are described below:

- Runtime

The Python-based ActivitySim framework makes heavy use of the Numpy and Pandas Python libraries, which allow for the vectorization of operations to reduce overall runtime. This in conjunction with an optimization-based algorithm achieves faster convergence for PopulationSim. Runtime comparison between PopGen and PopulationSim for DVRPC and NFTPO showed significant runtime improvements.

- ActivitySim framework

The software depends on the ActivitySim core and therefore offers the same user experience as the ActivitySim activity-based model, namely the same user interface, customizable expressions, approach to tracing calculations, and data management.

- Documentation and support

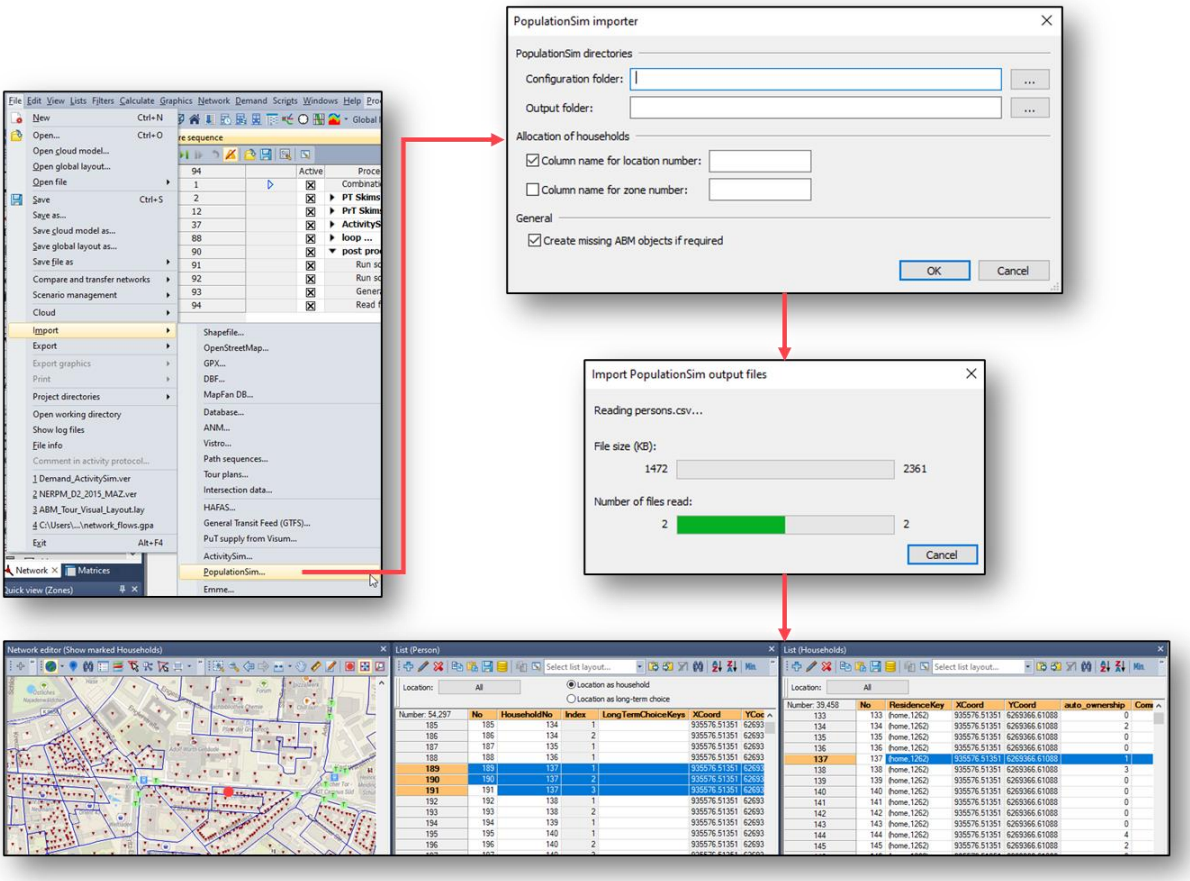
The PopulationSim source code and technical documentation are available at the following public GitHub repository: https://github.com/ActivitySim/populationsim. The technical documentation includes runnable examples and training resources. PopulationSim enjoys a large user community in the US and worldwide. The users can report bugs and issues on the GitHub repository and contribute to the software development.

Integration with PTV Visum

Visum now includes person and household Network Objects to house synthetic populations. Visum's Python API or the GUI-based menu option can be used to import PopulationSim-generated synthetic

population. The user points Visum to an existing PopulationSim setup. The import procedure reads the outputs into Visum and creates network objects as needed.

Figure 5: PTV Visum PopulationSim Import Procedure



The list of land use and demographic variables used in the model is given in the Appendix.

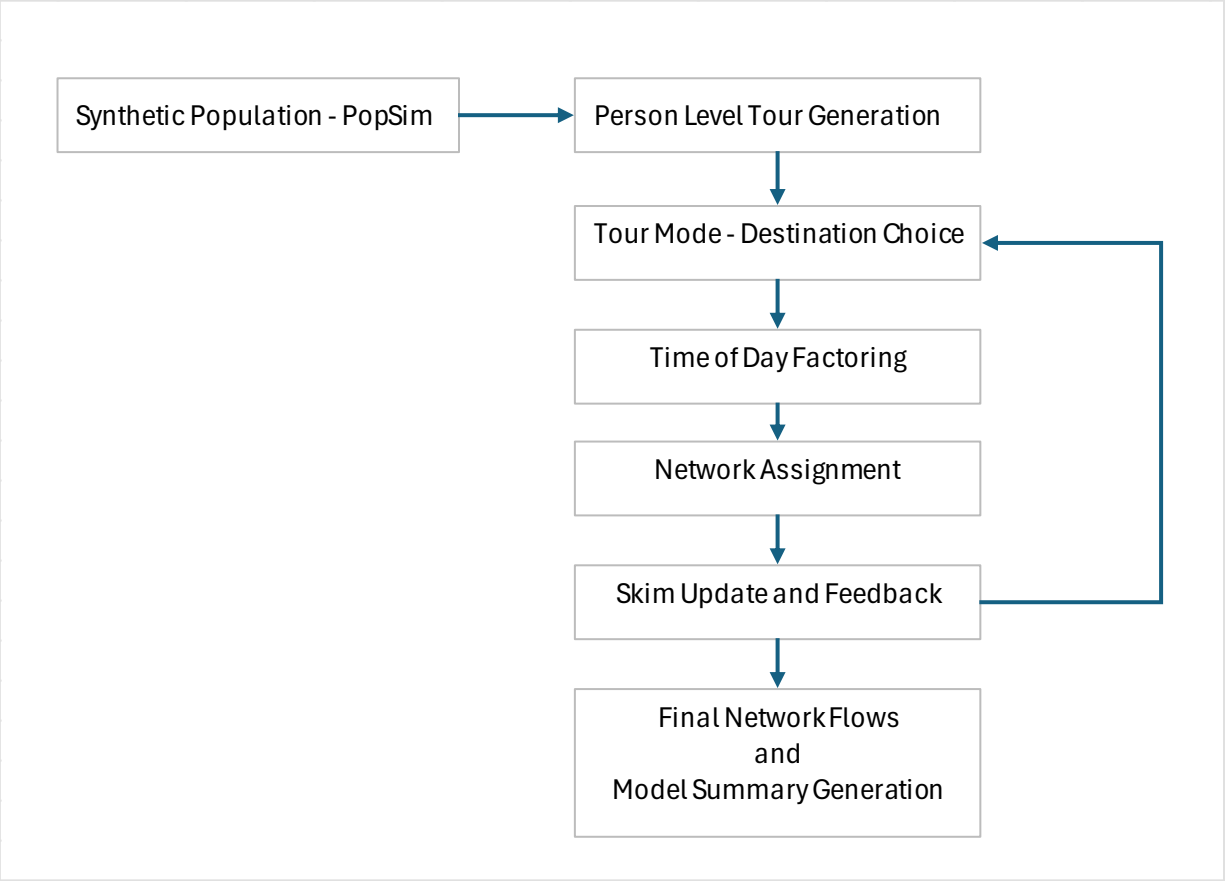
3. Model Approach

The tour-based model structure adopted in Visum is based on a hybrid modeling methodology which explicitly models person tour generation at the individual level and combined mode-destination and time of day choice of homogeneously divided person types at an aggregated zonal level. It involves execution of the following procedures:

1) Tour generation
2) Tour destination choice – with and without rubber banding
3) Tour mode choice – with primary mode choice or leg-by-leg mode choice
4) Time of day calculation – based on trip level time of day factors derived from survey data

The three logical units (mode-destination-time of day choice) are processed simultaneously during the model calculation.

Figure 6: PPACG Tour Based Model Calculation Flow



3.1 Tour Generation

Tour generation (calculating and applying skeletal tour/activity patterns by person type): In the hybrid modeling approach, tour generation is calculated at the person level using a range of person and household attributes. Subsequently, the person level results are aggregated into a set of broader person groups which are used to summarize model results and application of mode-destination and time of day models.

Table 5: PPACG Model Person Groups

CODE	NAME
Worker_GCP	General, Clerical and Professional Workers
Worker_MCT	Manufacturing, Construction and Trades Workers
Worker_MIL	Military Workers

NonWorker	Non-Workers under 65
Senior	Non-Workers 65 and above
Student_Elem	Student Elementary School
Student_High	Student High School
Student_Univ	Student College University

The updated tour generation model incorporates a work-from-home model to accommodate the impact of new work-from-home trends seen after the COVID19 pandemic. The approach used in the PPACG tour generation model to account for work-from-home policies is applied as a post-processing step in tour generation that scales the base tour generation to produce updated tour frequencies for each worker in the synthetic population.

In the first step, a mobility rate is calculated for each person and tour type combination. To calculate mobility rates, daily activity chains derived from a travel survey are broken down into individual home-based tours. Distinct tour types are identified among the complete set of tours and their corresponding probability is calculated. As a result, the sum of the probabilities of a person group can be greater than 1.0 (or 100 %), because a person can execute multiple tours one after the other in a day (for example: first HWH, then HOH).

Consider for example the daily activity chains 5 persons below:

HWH, HWH, HWOH, HWHOH, HOHWH

In the above case, mobility rates for home-based tours (HWH, HWOH, HOH) tours are calculated by counting their occurrence in each of the daily activity chains and dividing it by the total number of daily activity chains.

This produces a mobility rate of 0.8 [4/5] for HWH, a mobility rate of 0.4 [2/5] for HOH and a mobility rate of 0.2 [1/5] for HWOH tours.

Mobility rate extraction from the travel diary coarsely involves the steps below,

1) Extraction of raw chains or daily patterns for each person type

2) Determining unique home-based tours within the chains

3) Counting the occurrence of each tour type in the list of all chains and dividing by the number of activity chains.

The base mobility rates for each person group and tour type derived from the PPACG travel survey are tabulated below. Activities in the tour chain are represented as: H-Home, W-Work, D-Stop on work/school, O-Non-work.

Table 6: Tour Mobility Rates by Person Type

NO	TOUR	WORKER GCP	WORKER MCT	WORKER MIL	NON-WORKER	SENIOR	STUDENT ELEM	STUDENT HIGH	STUDENT UNIV
1	HDDDWDDDH	0	0	0	0	0	0	0	0
2	HDDDWDDH	0	0	0	0	0	0	0	0
3	HDDDWDH	0	0	0	0	0	0	0	0
4	HDDDWH	0.01	0.01	0	0	0	0	0	0
5	HDDSDDH	0	0	0	0	0	0	0.01	0.01
6	HDDSDH	0	0	0	0	0	0	0	0
7	HDDSH	0	0	0	0	0	0	0	0
8	HDDWDDDH	0	0.01	0	0	0	0	0	0
9	HDDWDDH	0	0	0	0	0	0	0	0
10	HDDWDH	0.01	0.01	0	0	0	0	0	0
11	HDDWH	0.01	0	0.01	0	0	0	0	0
12	HDSDDH	0	0	0	0	0	0.01	0	0.01
13	HDSDH	0	0	0	0	0	0.05	0.05	0.01
14	HDSH	0	0	0	0	0	0.03	0.06	0.01
15	HDWDDDH	0.02	0.02	0.02	0	0	0	0	0
16	HDWDDH	0.02	0.01	0.02	0	0	0	0	0
17	HDWDH	0.03	0.01	0.06	0	0	0	0	0
18	HDWH	0.05	0.03	0.04	0	0	0	0	0
19	HOH	0.44	0.41	0.25	0.67	0.55	0.38	0.26	0.44

NO	TOUR	WORKER GCP	WORKER MCT	WORKER MIL	NON-WORKER	SENIOR	STUDENT ELEM	STUDENT HIGH	STUDENT UNIV
20	HOOH	0.16	0.12	0.09	0.26	0.22	0.12	0.05	0.15
21	HOOOH	0.07	0.04	0.03	0.1	0.06	0.04	0.05	0.06
22	HOOOOH	0.09	0.06	0.01	0.11	0.11	0.04	0.03	0.07
23	HSDDH	0	0	0	0	0	0.04	0.1	0.04
24	HSDH	0	0	0	0	0	0.08	0.12	0.03
25	HSH	0	0	0	0	0	0.42	0.5	0.22
26	HWDDDH	0.06	0.05	0.02	0	0	0	0	0
27	HWDDH	0.05	0.05	0.06	0	0	0	0	0
28	HWDH	0.08	0.07	0.07	0	0	0	0	0
29	HWH	0.4	0.5	0.5	0	0	0	0	0

In the second step, a person level work from home multinomial choice model is used to estimate the probability of a person working from home for a given number of days. This provides a scaling factor that is then applied to the 'base' work tour mobility rate for each person. The model coefficients for the telecommute frequency choice model were initially adopted from the SANDAG travel demand model and calibrated to the available remote-work data available in the travel survey. The coefficients adopted in the model are tabulated below.

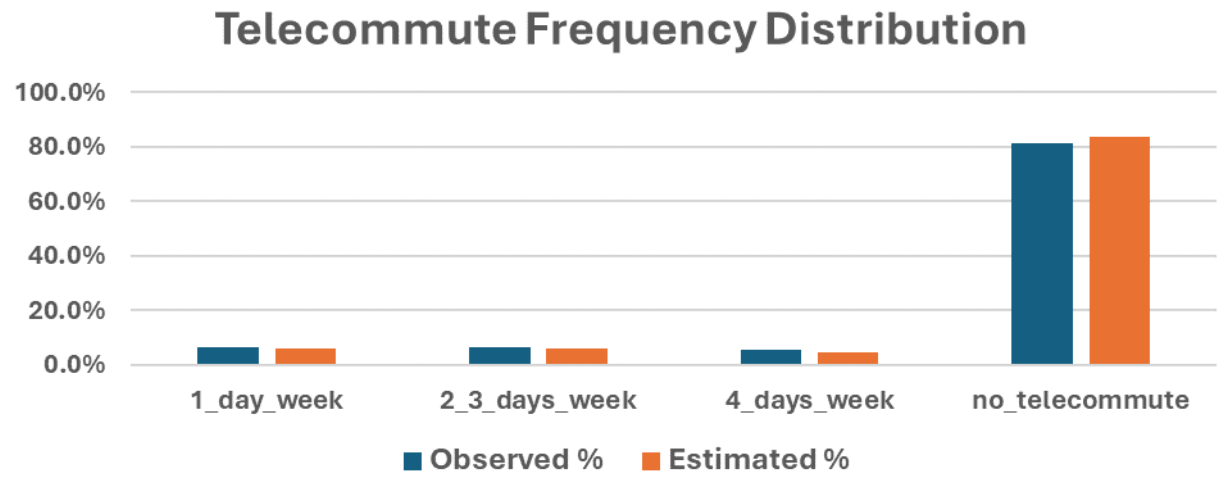
Table 7: Remote Work Choice Model Parameters

		Telecommute Alternative Coefficients			
No	**Variable**	**no_telecommute**	**1_day_week**	**2_3_days_week**	**4_days_week**
1	occp_Services	0	-1.62	-0.65	0
2	occp_SalesOffice	0	-0.62	-0.74	-0.89
3	occp_ResourceConstruct	0	-1.57	0	0
4	occp_TransportMat	0	-14.75	0	0
5	presenceOfChildren0_5	0	0	0	-0.86

		Telecommute Alternative Coefficients			
No	**Variable**	**no_telecommute**	**1_day_week**	**2_3_days_week**	**4_days_week**
6	presenceOfChildren6_12	0	0	0.52	-0.81
7	adultInHousehold_1	0	0.18	0	-0.04
8	adultInHousehold_ge2	0	0	0	0
9	female	0	0	0	0
10	partTimeWorker	0	0	0.42	1.11
11	univStudent	0	0	0.6	0
12	paysToPark	0	0.46	0	0
13	income_60_100k	0	0.56	0.39	0
14	income_100_150k	0	0.64	0.19	0
15	income_150k_pl	0	0.92	0.77	0
16	autos_0	0	0	0.41	0
17	autos_1	0	0	0	0
18	autos_ge3	0	0	-0.73	0
19	avgDistToWork	0	0.02	0	0
20	ASC	0	-3.62	-3.55	-4.57
21	CALIB_CONST	0	0.57	0.77	1.65

The framework above allows a flexible way to account for the impact of remote work policies on work related travel. This flexibility in the model is necessary because the remote work policies of employers are still evolving post-pandemic (COVID19). The tour generation mode considers that certain types of workers may not be able to work remotely due to the nature of their job (military, manufacturing, service). The models are thus applied based on workers classified by occupation types rather than income. The summaries for the base model are shown below.

Figure 7: Telecommute Model Validation



Observed		Estimated		Estimated Scaled		Observed %		Estimated %	
TelecommuteFreq	Workers	TelecommuteFreq	Workers	TelecommuteFreq	Workers	TelecommuteFreq	Percent	TelecommuteFreq	Percent
1_day_week	16,052	1_day_week	18,899	1_day_week	18,899	1_day_week	6.3%	1_day_week	5.9%
2_3_days_week	16,903	2_3_days_week	19,344	2_3_days_week	19,344	2_3_days_week	6.7%	2_3_days_week	6.1%
4_days_week	14,198	4_days_week	14,270	4_days_week	14,270	4_days_week	5.6%	4_days_week	4.5%
no_telecommute	206,952	no_telecommute	266,628	no_telecommute	266,628	no_telecommute	81.4%	no_telecommute	83.5%
Total	254,104	Total	319,141	Total	319,141	Total	100%	Total	100%

Table 8: Summary of Base Year Person Tours

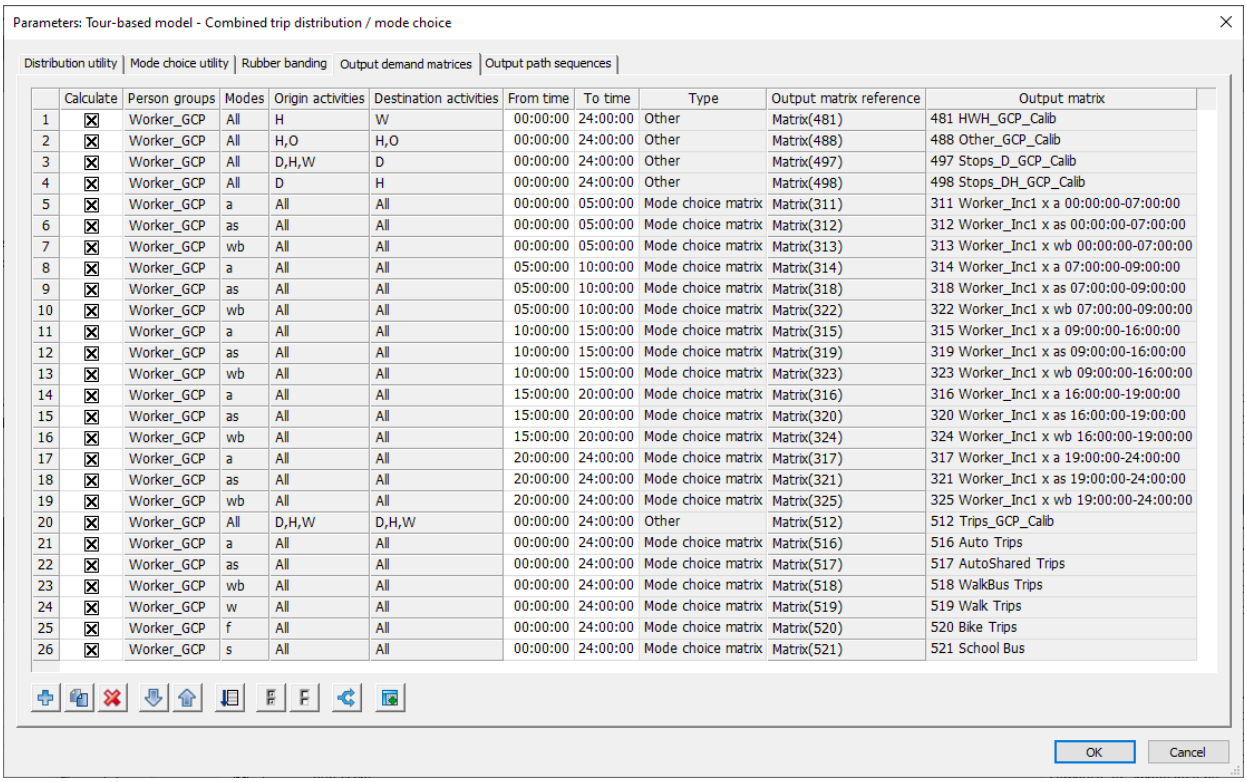
Person Group	Persons	Work/School Tours	Other Tours	Total Tours
Worker_GCP	257,151	179,257	204,696	**383,952**
Worker_MCT	59,428	42,727	39,103	**81,829**
Worker_MIL	22,093	16,766	8,825	**25,591**
NonWorker	112,822	-	129,559	**129,559**
Senior	92,989	-	88,154	**88,154**
Student_Elem	143,255	91,617	84,293	**175,910**
Student_High	47,740	40,155	18,552	**58,706**
Student_Univ	47,864	15,679	34,857	**50,536**

3.2 Tour Based Destination and Mode Choice

Destination choice/trip distribution (determining the trip destination): The hybrid approach used in the PPACG model implements the tour-based destination choice at a zonal aggregate level. Modeling of

tours considers non-home-based trips as part of a trip chain. This makes the non-home-based trips spatially consistent with the overall trip making in the system. Aggregate tour or trip chain calculations are implemented with matrix operations in a multi-threaded optimized framework. This removes the burden of complicated matrix management from the modeler. Instead, outputs can be specified by time of day and with a flexible combination of activities and modes.

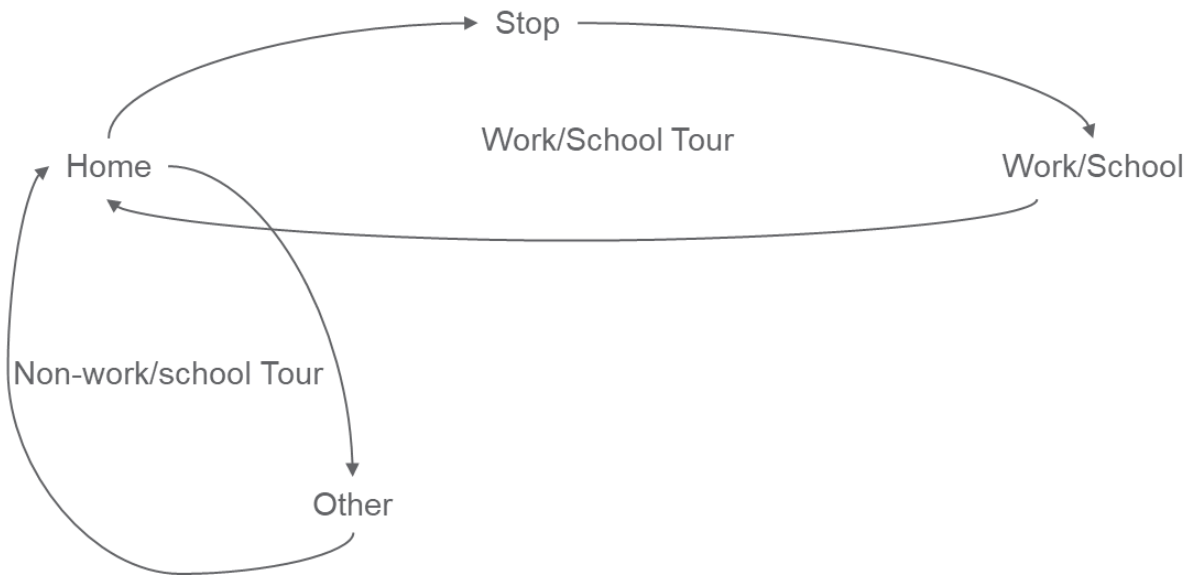
Figure 8: Tour-based Destination-Mode Choice Output Specification



	Calculate	Person groups	Modes	Origin activities	Destination activities	From time	To time	Type	Output matrix reference	Output matrix
1	☒	Worker_GCP	All	H	W	00:00:00	24:00:00	Other	Matrix(481)	481 HWH_GCP_Calib
2	☒	Worker_GCP	All	H,O	H,O	00:00:00	24:00:00	Other	Matrix(488)	488 Other_GCP_Calib
3	☒	Worker_GCP	All	D,H,W	D	00:00:00	24:00:00	Other	Matrix(497)	497 Stops_D_GCP_Calib
4	☒	Worker_GCP	All	D	H	00:00:00	24:00:00	Other	Matrix(498)	498 Stops_DH_GCP_Calib
5	☒	Worker_GCP	a	All	All	00:00:00	05:00:00	Mode choice matrix	Matrix(311)	311 Worker_Inc1 x a 00:00:00-07:00:00
6	☒	Worker_GCP	as	All	All	00:00:00	05:00:00	Mode choice matrix	Matrix(312)	312 Worker_Inc1 x as 00:00:00-07:00:00
7	☒	Worker_GCP	wb	All	All	00:00:00	05:00:00	Mode choice matrix	Matrix(313)	313 Worker_Inc1 x wb 00:00:00-07:00:00
8	☒	Worker_GCP	a	All	All	05:00:00	10:00:00	Mode choice matrix	Matrix(314)	314 Worker_Inc1 x a 07:00:00-09:00:00
9	☒	Worker_GCP	as	All	All	05:00:00	10:00:00	Mode choice matrix	Matrix(318)	318 Worker_Inc1 x as 07:00:00-09:00:00
10	☒	Worker_GCP	wb	All	All	05:00:00	10:00:00	Mode choice matrix	Matrix(322)	322 Worker_Inc1 x wb 07:00:00-09:00:00
11	☒	Worker_GCP	a	All	All	10:00:00	15:00:00	Mode choice matrix	Matrix(315)	315 Worker_Inc1 x a 09:00:00-16:00:00
12	☒	Worker_GCP	as	All	All	10:00:00	15:00:00	Mode choice matrix	Matrix(319)	319 Worker_Inc1 x as 09:00:00-16:00:00
13	☒	Worker_GCP	wb	All	All	10:00:00	15:00:00	Mode choice matrix	Matrix(323)	323 Worker_Inc1 x wb 09:00:00-16:00:00
14	☒	Worker_GCP	a	All	All	15:00:00	20:00:00	Mode choice matrix	Matrix(316)	316 Worker_Inc1 x a 16:00:00-19:00:00
15	☒	Worker_GCP	as	All	All	15:00:00	20:00:00	Mode choice matrix	Matrix(320)	320 Worker_Inc1 x as 16:00:00-19:00:00
16	☒	Worker_GCP	wb	All	All	15:00:00	20:00:00	Mode choice matrix	Matrix(324)	324 Worker_Inc1 x wb 16:00:00-19:00:00
17	☒	Worker_GCP	a	All	All	20:00:00	24:00:00	Mode choice matrix	Matrix(317)	317 Worker_Inc1 x a 19:00:00-24:00:00
18	☒	Worker_GCP	as	All	All	20:00:00	24:00:00	Mode choice matrix	Matrix(321)	321 Worker_Inc1 x as 19:00:00-24:00:00
19	☒	Worker_GCP	wb	All	All	20:00:00	24:00:00	Mode choice matrix	Matrix(325)	325 Worker_Inc1 x wb 19:00:00-24:00:00
20	☒	Worker_GCP	All	D,H,W	D,H,W	00:00:00	24:00:00	Other	Matrix(512)	512 Trips_GCP_Calib
21	☒	Worker_GCP	a	All	All	00:00:00	24:00:00	Mode choice matrix	Matrix(516)	516 Auto Trips
22	☒	Worker_GCP	as	All	All	00:00:00	24:00:00	Mode choice matrix	Matrix(517)	517 AutoShared Trips
23	☒	Worker_GCP	wb	All	All	00:00:00	24:00:00	Mode choice matrix	Matrix(518)	518 WalkBus Trips
24	☒	Worker_GCP	w	All	All	00:00:00	24:00:00	Mode choice matrix	Matrix(519)	519 Walk Trips
25	☒	Worker_GCP	f	All	All	00:00:00	24:00:00	Mode choice matrix	Matrix(520)	520 Bike Trips
26	☒	Worker_GCP	s	All	All	00:00:00	24:00:00	Mode choice matrix	Matrix(521)	521 School Bus

The trip chaining within the tours is calculated in two modes – without rubber-banding (full-tours) and with rubber-banding (half-tours). The methodology for trip chain calculation is described in the next subsections.

Figure 9: Example Tour Types



Tours without Primary Activities

The tour-based destination choice is performed using the gravity/destination choice formulation shown below:

$$P_{ij}^{g} = \frac{Z_j . f(U_{ij}^{g})}{\sum_{k=1}^{N} Z_k . f(U_k^{g})}$$

Where,

P_{ij}^{g} *= Probability of destination/location choice.*

f(U_{ij}) = friction term with specified functional transformation on utility.

Zj = size term related to the destination activity.

If *f(U_{ij})* is used with a logit function, the above equation becomes equivalent to:

$$P_{ij}^{g} = \frac{e^{U_{ij}^{g} + \ln(Z_j)}}{\sum_{k=1}^{N} e^{U_{ik}^{g} + \ln(Z_k)}}$$

Multiplying out the total number of tours with the above probabilities yields the number of trips along the tour leg. Each trip leg of the home-based tour is evaluated by successively applying the above formulation with each destination leg serving as the origin control for the next leg. As an example, a tour with the skeletal structure HOOH, will be calculated as a chain of matrix operations applied to each leg: HO-> OO->OH. The tour generation provides the initial control trip total for the first trip leg.

Tours with Primary Work/School Activities

Work and school tours are modeled using the concept of rubber-banding. Here, a primary destination governs the choice of mode as well as intermediate stop locations on work and school tours. Consider a tour with skeletal structure HSWH (Home-Stop-Work-Home). Since the primary activity in this tour is

Work (W), the chain is split into two half-tours: (1) HSW and (2) WH. The first half-tour HSW is calculated using the attraction size of the work activity as HW. The trips between H and W are then routed through potential stop locations by using the composite utility of the stop attraction size and friction factor of stop locations with respect to the two anchor locations (Home and Work).

Figure 10: Half Tour with Primary Work Destination and Intermediate Stop Location



A general consideration for the insertion of stop locations on primary tours is to minimize out of way travel between the primary activity locations (Home and Work/School). The stop location choice is thus based on the composite utility of the trip legs between the primary anchor locations and stop locations. The formulation for intermediate stop location choice is illustrated below:

$$P_{ik} = \frac{Z_k \times f(U_{ik}^{H \to S} + wU_{kj}^{S \to W})}{\sum_{m=1}^{n} Z_m \times f(U_{im}^{H \to S} + wU_{mj}^{S \to W})}$$

Where,

i=index of origin (home anchor)

j=index of primary destination (work/school)

k=index of intermediate stop location

Zk= size variable for stop location k

f = functional transformation | exp

U(HS), (SW) – utilities of traveling to destination thorough a given stop location

w = weight factor

Destination Choice Model Parameters

The activities considered in the PPACG model are tabulated below:

Activity Name	Activity Code	Anchor Activity
Stop on primary	D	No
Home	H	Yes

Other (Shop/Recreation/Non-work)	O	No
School	S	No
Work	W	No

The size variables used in the model are applied to each person group as a weighted sum of land use variables. The initial set of these weights were based on the SANDAG activity-based model. The weights were then systematically calibrated for the PPACG model to reflect local conditions.

		Land Use Variable												
Person Type	**Activity**	**EMP OFFICE**	**EMP RETAIL**	**EMP SRVC**	**EMP LABOR**	**EMP MIL**	**HH**	**EM EN ROL L**	**HS ENRO LL**	**COLL ENROL L**	**EMP SRVC**	**EMP RETAIL**	**EMP OFFICE**	**EMP SRVC**
Senior/Non-Worker	Other	0	0.95	0.3	0	0	0.07	0	0	0	-0.25	-0.8	0	-0.25
Students	Other	0	0.95	0.3	0	0	0.07	0	0	0	-0.25	-0.85	0	-0.25
Workers	Other	0	0.95	0.3	0	0	0.05	0	0	0	-0.25	-0.8	0	-0.25
Elementary	School	0	0	0	0	0	0	1	0	0	0	0	0	0
High	School	0	0	0	0	0	0	0	1	0	0	0	0	0
Post Secondary	School	0	0	0	0	0	0	0	0	1	0	0	0	0
Workers (GCP/MCT)	Stop	0	0.95	0.3	0	0	0.05	0.1	0	0	-0.25	-0.8	0	-0.25
Workers (MIL)	Stop	0	0.95	0.3	0	0	0.05	0.1	0	0	0	0	0	-0.25
Students	Stop	0	0.95	0.25	0.1	0	0.03	0.05	0	0	-0.2	-0.85	0	-0.23
Workers (GCP)	Work	0.94	0.83	0.93	0.11	0	0	0	0	0	0	0	0	0

		Land Use Variable												
Person Type	Activity	EMP OFFICE	EMP RETAIL	EMP SRVC	EMP LABOR	EMP MIL	HH	EM EN ROL L	HS ENRO LL	COLL ENROL L	EMP SRVC	EMP RETAIL	EMP OFFICE	EMP SRVC
Workers (MCT)	Work	0.06	0.17	0.07	0.89	0	0	0	0	0	0	0	0	0
Workers (MIL)	Work	0	0	0	0	1	0	0	0	0	0	0	0	0

The impedance term in the destination choice model was adopted from the SANDAG model and uses the time, distance and various transformations over destination distance. The coefficients in the model were then systematically calibrated to fit trip length distribution observed from the available travel survey. The impedance related utility coefficients in the model are tabulated below:

Table 9: Impedance Related Utility Coefficients in Destination Choice

Person Type	Activity	Time	Dist	Dist^2	Dist^3	ln(Dist +1)
Worker_GCP	Work	-0.04	0.05	0	0	-0.85
Worker_GCP	Other	-0.21	0.04	0	0	-0.75
Worker_GCP	Stop	-1.4	0	0	0	0
Worker_MCT	Work	-0.04	0.05	0	0	-0.85
Worker_MCT	Other	-0.21	0.04	0	0	-0.75
Worker_MCT	Stop	-1.4	0	0	0	0
Worker_MIL	Work	-0.04	0.05	0	0	-0.85
Worker_MIL	Other	-0.21	0.04	0	0	-0.75
Worker_MIL	Stop	-1.4	0	0	0	0
Student_Elem	School	-0.22	-0.07	0	0	-0.9
Student_Elem	Other	-0.21	0.04	0	0	-0.75
Student_Elem	Stop	-1.5	-0.5	-0.03	0	-0.25

Person Type	Activity	Time	Dist	Dist^2	Dist^3	ln(Dist +1)
Student_High	School	-0.4	-0.15	0	0	0
Student_High	Other	-0.21	0.04	0	0	-0.75
Student_High	Stop	-1.5	-0.5	-0.03	0	-0.25
Student_Univ	School	-0.1	-0.05	0	0	-1.1
Student_Univ	Other	-0.21	0.04	0	0	-0.75
Student_Univ	Stop	-1.5	-0.5	-0.03	0	-0.25
NonWorker	Other	-0.21	0.04	0	0	-0.75
Senior	Other	-0.21	0.04	0	0	-0.75

Destination Choice Model Validation

The destination choice models were calibrated for the trip lengths observed in the available household travel survey. A summary of the trip length validation for the modeled primary and secondary trip purposes is given below.

Table 10: Average Trip Length Validation

	Trip Length (miles)	
Purpose	**HH Survey**	**Model**
Work	8.35	8.85
School (K8)	3.31	3.58
High School	4.26	4.47
Post-Secondary	8.61	8.93
Other/non-work	4.74	5.19
Stops on Work Tour	5.15	5.49
Stops on School Tour	4.17	4.47

Figure 11: Work/School Trip Length Validation

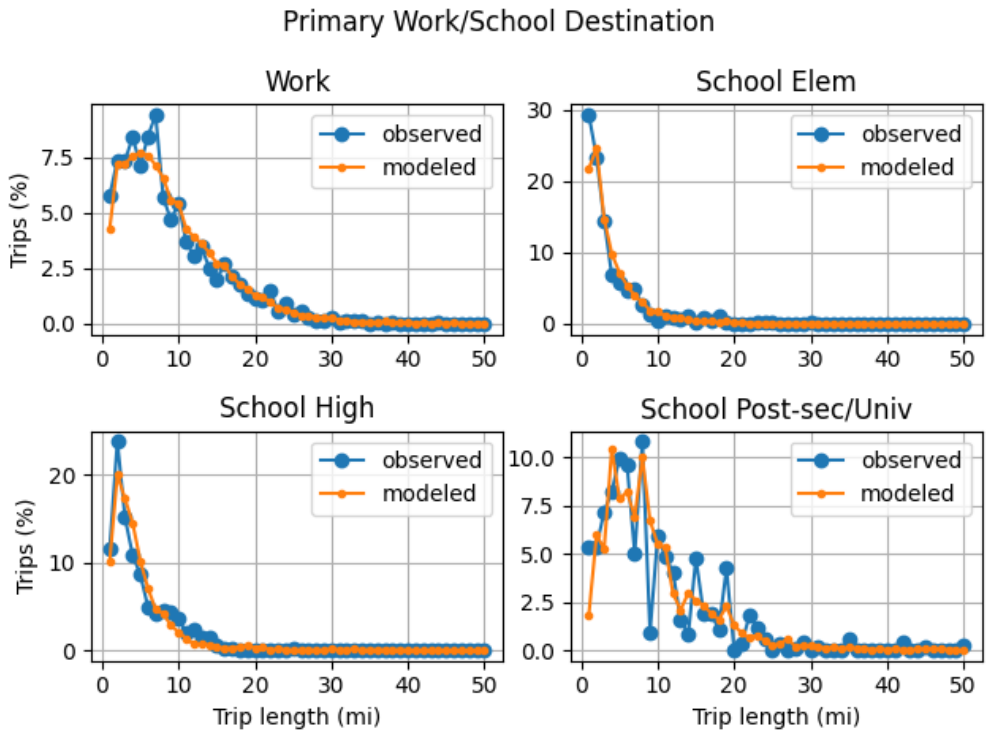
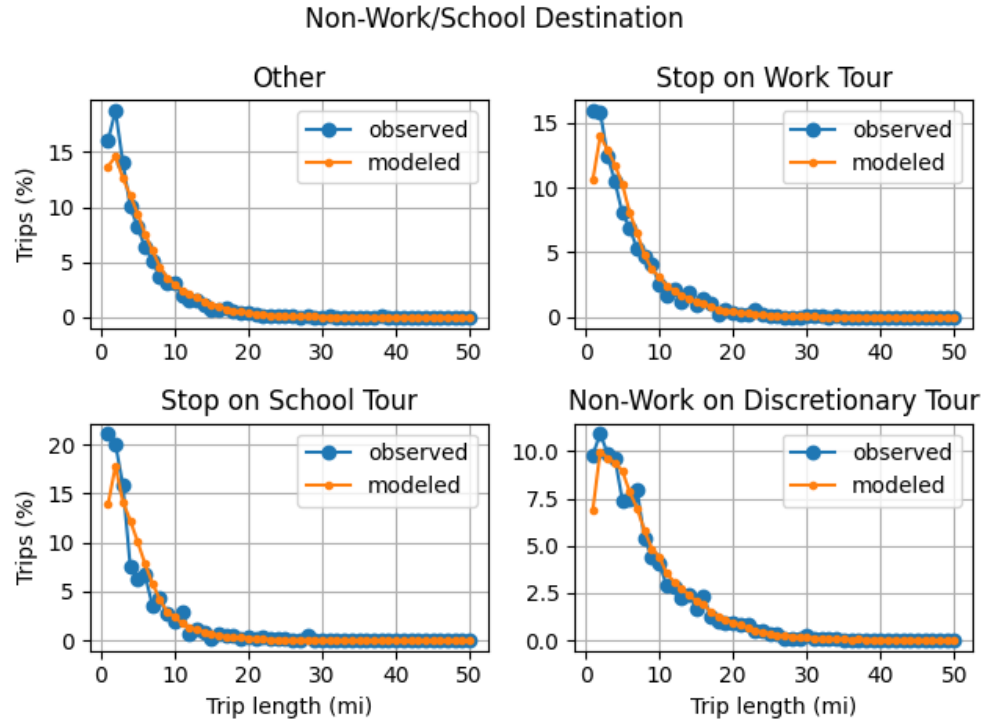


Figure 12: Discretionary and Other Trip Length Validation



Tour Based Mode Choice

Mode choice: The mode choice functional form is the commonly used logit model. Mode choice can be specified at the person type level as well as the destination activity level. In the PPACG model, it is specified at the person type and destination activity level. The freedom of choice restrictions within trip chains where a traveler may switch between travel modes from one leg of the tour to another is accounted for by defining modes as exchangeable or non-exchangeable. Thereafter, the tour-based model calculates a logit choice model. In the tour-based framework, mode choice is computed either based on primary activity when using rubber-banding or applied to each trip leg along the tour when rubber-banding is turned off. Trip chains or tours with work or school were calculated using rubber-banding and other trip chains were calculated using the sequential mode choice model. The coefficients for the mode choice model were adopted from the FHWA-TMIP[4] guidelines. The constants were then adjusted to align the mode choice results with the available travel survey data.

Six travel modes were considered in the PPACG model. The coefficients and calibrated constants for these are summarized in the tables below.

Table 11: Mode Choice Coefficients

Purpose	Time (Min)	Cost ($)
Work	-0.018	-0.184
Non-work	-0.024	-0.25

Table 12: Calibrated Alternative Specific Constants

Person Type	Purpose	Auto (sov)	Auto (hov)	Transit	Bike	Walk	SchBus
Worker_GCP	Work	0	-3.59	-4.03	-4.04	-3.03	N/A
	Other	0	-1.9	-2.93	-4.04	-2.58	N/A
Worker_MCT	Work	0	-3.59	-5.93	-4.04	-3.03	N/A
	Other	0	-1.9	-4.93	-4.04	-2.58	N/A
Worker_MIL	Work	0	-3.59	-5.93	-4.04	-3.03	N/A
	Other	0	-1.9	-4.93	-4.04	-2.58	N/A
Student_Elem	School	N/A	0	-999	-4.16	-1.76	-0.932
	Other	N/A	0	-999	-4.16	-1.76	N/A

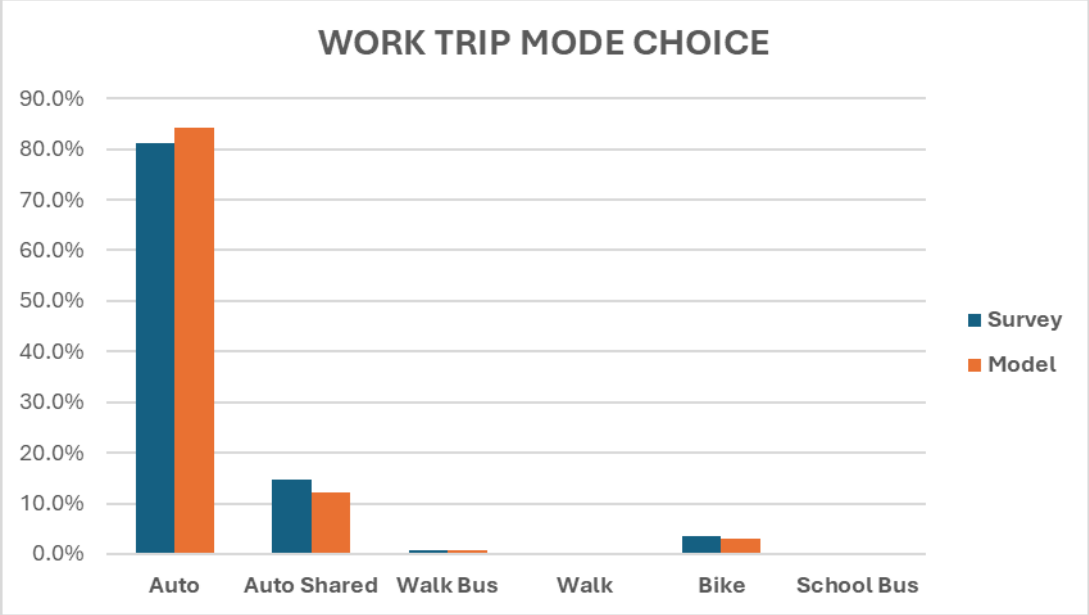
[4] https://www.fhwa.dot.gov/planning/tmip/publications/other_reports/validation_and_reasonableness_2010/fhwahep10042.pdf

Student_High	School	-0.402	0	-4.42	-3.09	-1.46	-0.622
	Other	-0.402	0	-4.42	-3.09	-1.46	-0.622
Student_Univ	School	1.67	0	-1.11	-1.72	-1.45	N/A
	Other	1.67	0	-1.11	-1.72	-1.45	N/A
Non_worker	Other	0	-1.9	-3.43	-999	-3.58	N/A
Senior	Other	0	-1.3	-3.91	-999	-2.73	N/A

Mode Choice Model Validation

The mode choice model was validated against the available expanded survey data. These summaries are presented below.

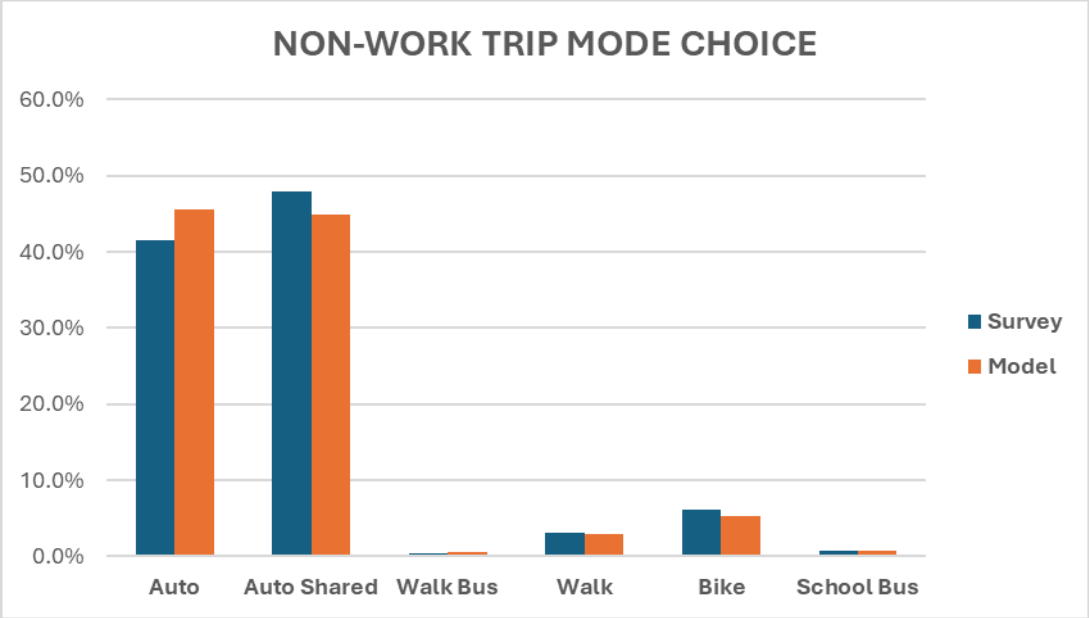
Figure 13: Work Mode Choice Validation



WORK

Observed		Estimated		Estimated Scaled		Observed %		Estimated %	
Mode	Trips	Mode	Trips	Mode	Trips	Mode	Percent	Mode	Percent
Auto	181,419	Auto	200,962	Auto	200,962	Auto	81.2%	Auto	84.2%
Auto Shared	32,606	Auto Shared	28,857	Auto Shared	28,857	Auto Shared	14.6%	Auto Shared	12.1%
Walk Bus	1,574	Walk Bus	1,499	Walk Bus	1,499	Walk Bus	0.7%	Walk Bus	0.6%
Walk	140	Walk	217	Walk	217	Walk	0.1%	Walk	0.1%
Bike	7,684	Bike	7,213	Bike	7,213	Bike	3.4%	Bike	3.0%
School Bus	-	School Bus	-	School Bus	-	School Bus	0.0%	School Bus	0.0%
Total	223,424	Total	238,748	Total	238,748	Total	100%	Total	100%

Figure 14: Non-work Mode Choice Validation



NON WORK

Observed		Estimated		Estimated Scaled		Observed %		Estimated %	
Mode	Trips	Mode	Trips	Mode	Trips	Mode	Percent	Mode	Percent
Auto	786,045	Auto	1,128,195	Auto	1,128,195	Auto	41.5%	Auto	45.6%
Auto Shared	908,111	Auto Shared	1,109,467	Auto Shared	1,109,467	Auto Shared	47.9%	Auto Shared	44.9%
Walk Bus	9,121	Walk Bus	12,699	Walk Bus	12,699	Walk Bus	0.5%	Walk Bus	0.5%
Walk	59,630	Walk	73,503	Walk	73,503	Walk	3.1%	Walk	3.0%
Bike	115,794	Bike	131,939	Bike	131,939	Bike	6.1%	Bike	5.3%
School Bus	15,377	School Bus	16,677	School Bus	16,677	School Bus	0.8%	School Bus	0.7%
Total	1,894,078	Total	2,472,480	Total	2,472,480	Total	100%	Total	100%

3.3 Time of Day Calculation

Time of day calculation: The time-of-day distribution of trips in the aggregate tour-based structure is based on direct application of empirical departure time profiles of each activity pair by person type. These departure time profiles were extracted from the existing travel survey. Since the travel survey was from 2010, it did not account for the post-covid changes seen in the time-of-day distribution of travel. An updated travel survey or other alternative information would allow a more accurate modeling of time-of-day travel patterns. A more detailed discussion around this issue presented in the later section on simulation-based dynamic assignment (SBA).

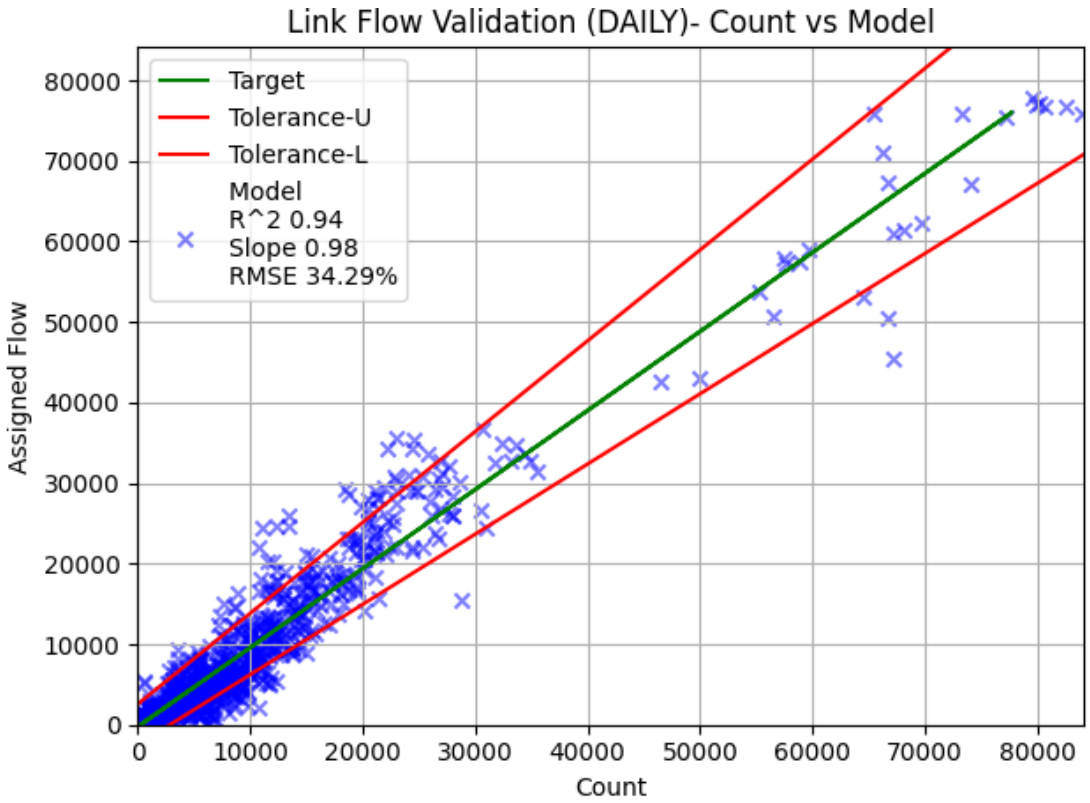
3.4 Network Assignment

Network assignment: Only motorized modes are assigned to obtained network flows in the PPACG model. Traffic assignment is performed for five macro time periods: Early, AM, MD, PM and Evening. Network flows from each of the time periods are aggregated into daily traffic flows. Headway based assignment is used for transit assignment. Demand is calculated at the same resolution as the traffic

assignment and assigned at once with AM, PM periods using an average peak headway and the Early, MD and Evening periods using an average off-peak headway.

Traffic Assignment Validation

The traffic assignment was validated using the AADT model flows and average traffic counts available. An RMSE of 35%, R^2 of 0.94 and slope of 0.98 was achieved for the overall network. The statistics for each major link classification are presented in the table below.



FACTYPE	FACNAME	NUMOBS	SLOPE	%RMSE
1	Interstates	32	0.939	8.10%
2	Expressway	49	1.016	14.80%
3	Principal Arterials	375	1.24	23.80%
4	Minor Arterials	285	0.815	37.10%
5	Collector	312	0.772	59.90%
6	Residential	0	0	N/A
7	Ramp	93	1.007	28.30%

Transit Assignment Validation

The transit assignment was validated against overall line boardings. The mode choice coefficients were adjusted to produce overall line boardings that reflected the overall observed line boardings. The transit system has seen a steady decline in ridership from 2019 to 2021. As a result, an average of total line boardings over this period was used to validate the transit line boardings produced by the model. The transit route choice was not specifically calibrated due to the overall sparsity of ridership and relatively older travel survey. The boardings by route are summarized in the table below.

ROUTE_ID	ROUTE_CODE	ROUTE_NAME	MODEL_BOARDINGS	OBS_BOARDINGS
1	MMT_3416	Hillside - Hancock Plaza	555	564
10	MMT_3417	Hwy 115 - PPSC	218	425
11	MMT_3418	World Arena - PPSC	459	670
12	MMT_3419	Palmer Park Blvd	139	73
14	MMT_3420	Chestnut St - G.O.G. Rd	99	179
15	MMT_3421	FOUNTAIN BLVD -E CHEYENNE MTN BLVD	44	52
16	MMT_3422	Brookside - Uintah Gardens	112	85
17	MMT_3423	19TH STREET/FILLMORE	79	68
18	MMT_3424	Union Blvd	105	20
19	MMT_3425	WEBER - EAGLE ROCK	131	263
2	MMT_3426	CENTENNIAL BLVD - G.O.G. Rd	76	119
22	MMT_3427	SOUTHBOROUGH VIA MURRAY BLVD	322	218
23	MMT_3428	Barnes Rd. - Tutt Blvd	421	258
25	MMT_3430	N. ACADEMY BLVD - VOYAGER	1,556	802
27	MMT_3431	S. ACADEMY BLVD - PPSC	477	458
3	MMT_3432	COLORADO AVE - MANITOU	341	534
32	MMT_3433	SECURITY/WIDEFIELD	189	88
33	MMT_3434	INCLINE/COG SHUTTLE	32	400
34	MMT_3435	GOG/AUSTIN BLUFFS PKWY	158	123
35	MMT_3436	LAS VEGAS ST/ PPSC	28	47
38	MMT_3439	UNION/ CHILDRENS HOSPITAL	64	7
39	MMT_3440	CORPORATE DR - VOYAGER PKWY	123	54
4	MMT_3441	S. 8th STREET - BROADMOOR	155	202

ROUTE_ID	ROUTE_CODE	ROUTE_NAME	MODEL_BOARDINGS	OBS_BOARDINGS
40	MMT_3442	VOYAGER - RAMPART PPSC	51	32
5	MMT_3443	Boulder - Citadel	744	923
6	MMT_3444	FILLMORE - Citadel	137	131
7	MMT_3445	Pikes Peak Ave. - Citadel	235	355
8	MMT_3446	Cache La Poudre - Citadel	32	67
9	MMT_3447	NEVADA - UCCS	237	344
ZEB	MMT_3448	ZEB Downtown Shuttle	438	65
TOTAL			**7,757**	**7,626**

3.5 Simulation Based Dynamic Traffic Assignment (SBA)

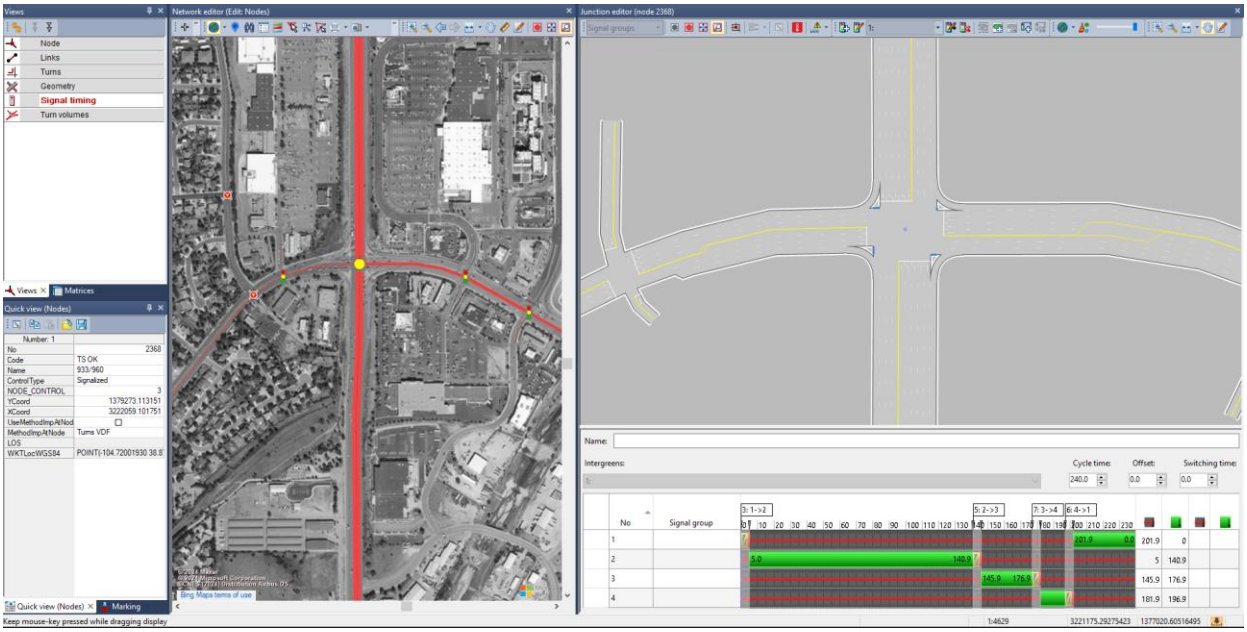
One of the key uses of the PPACG model is evaluation of air quality conformity and GHG analysis. While the actual GHG analysis is performed using US EPA's MOVES software, the link speed and volume inputs required in the analysis are generated using the PPACG model. The link speed and volume inputs are required at hourly intervals. As a result, simulation based dynamic traffic assignment (SBA) integrated into Visum was used as a post-process to obtain network link speeds at hourly intervals with relevant accounting of intersection level delays. SBA involves two components. Network preparation and hourly demand generation. These two items are discussed next.

Network Preparation for SBA

The Visum modeling platform used to implement the PPACG model natively stores multi-resolution network data. Here, the detailed lane geometry and intersection control (signal timings) can be specified in addition to the typical link-node data used in static traffic assignments. The appropriate level of network detail is used or ignored based on the type of traffic assignment selected by the user. The multi-resolution network storage concept is illustrated in the figure below.

The entire PPACG model network was carefully reviewed for the correct number of roadway lanes, posted speeds and intersection control type. Aerial imagery was used to code detailed intersection geometry with appropriate turn bays and lane grouping at all intersections in the model network. The network base year for the model is 2020. There are ~1500 controlled intersections in the model network. Out of these, ~700 intersections are signalized. Signal phasing plans for all these intersections were developed based on the lane grouping at approach legs. The green time and splits were calculated based on turn flows obtained from the static traffic assignment. Coding signal timings in this manner allows an overall consistent delay representation in the network. It also allows the methodology to be extended to all forecast networks.

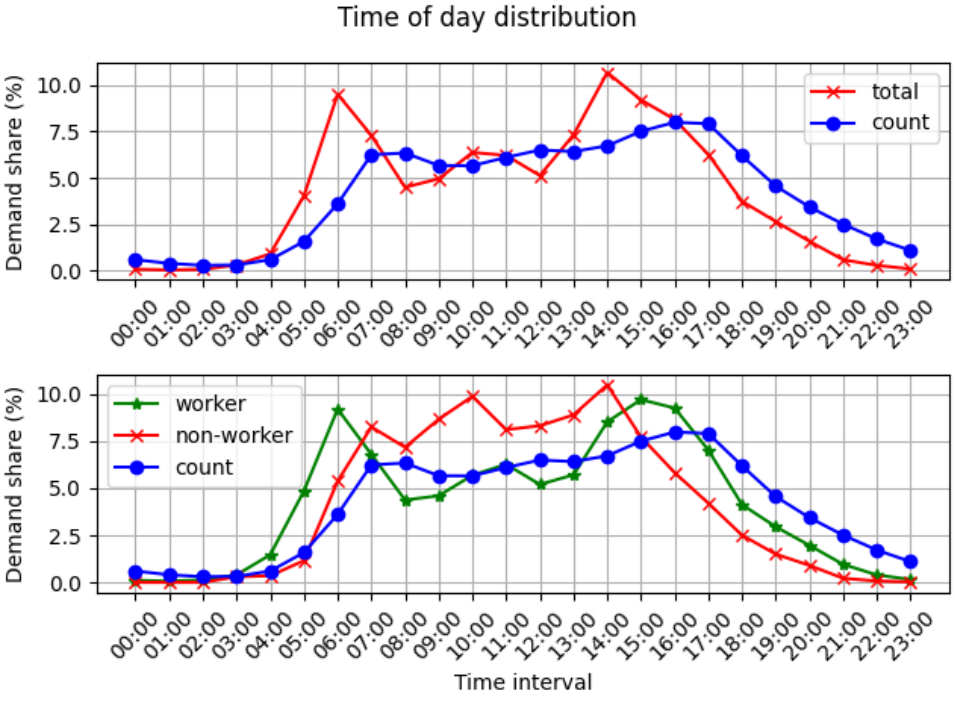
Figure 15: Integrated Multi-resolution Network Representation in Visum



Demand Preparation for SBA

The tour-based model allows flexibility in specifying outputs for any time of day. Ordinarily, the hourly demand for the SBA would be derived by specifying an hourly demand output setting in the tour-based model calculation setup.

Figure 16: Pre-COVID19 Demand Profile vs Post-COVID19 Count Profile



However, the changes in time use patterns seen after COVID19 and time of day factors derived from relatively older travel survey data (2010) made the direct use of time-of-day factors applied to activity pairs unviable. This was clearly seen by plotting the 24-hour demand profiles from the travel survey against the more updated 24-hour count data. The post-COVID19 time-of-day count profiles exhibit a much greater spreading of the traffic flows as opposed to the shaper AM and PM peak flows exhibited by the demand profiles extracted from the pre-COVID19 2010 travel survey. This change in travel pattern presented a major challenge in the development of 24-hour demand profiles and model calibration in general. Since count data was the most updated source of time-of-day distribution of traffic patterns, dynamic matrix estimation was used to re-profile the demand calculated for macro time periods (EA, AM, MD, EV) into hourly trip tables for use in SBA. The link flow validation for hourly flows is tabulated and plotted below. The early morning and late evening time periods have a greater %RMSE due to the overall lower volumes but are within the NCHRP allowable tolerance for hourly flows.

Table 13: SBA Hourly Link Flow Validation

Time Interval	R2	Slope	%RMSE
00:00	0.93	0.86	63.64%
01:00	0.89	0.85	75.01%
02:00	0.87	0.82	74.52%
03:00	0.8	0.82	81.80%
04:00	0.66	0.59	99.22%
05:00	0.76	0.78	72.51%
06:00	0.89	0.91	42.61%
07:00	0.93	0.98	32.52%
08:00	0.95	0.98	31.37%
09:00	0.96	0.98	30.18%
10:00	0.96	0.99	28.19%
11:00	0.96	1.01	28.21%
12:00	0.96	1.01	28.15%
13:00	0.96	1.01	27.65%
14:00	0.96	1.01	27.75%
15:00	0.95	1.02	29.80%
16:00	0.95	1.02	29.45%
17:00	0.95	1.01	29.61%
18:00	0.95	0.99	32.55%
19:00	0.94	0.98	42.88%
20:00	0.93	0.99	47.45%
21:00	0.94	0.96	47.56%
22:00	0.94	0.93	51.48%
23:00	0.93	0.90	58.48%
DAILY	**0.96**	**1.00**	**27.78%**

Figure 17: AM Period Hourly Link Flow Validation

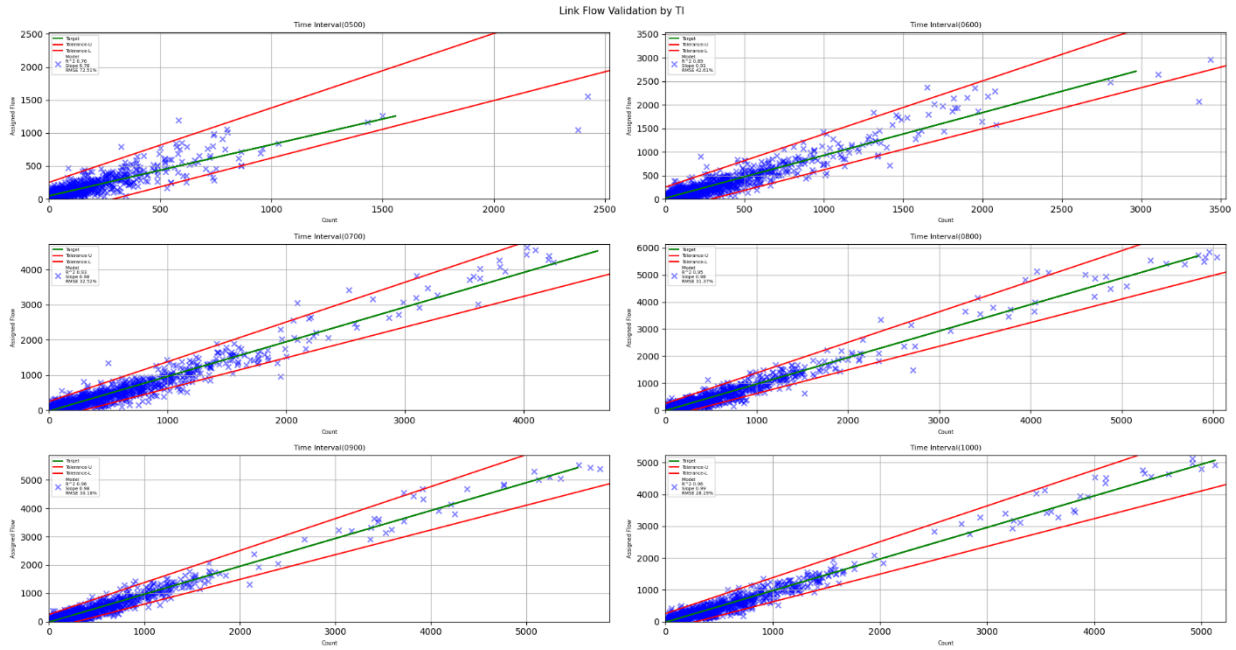


Figure 18: PM Period Link Flow Validation

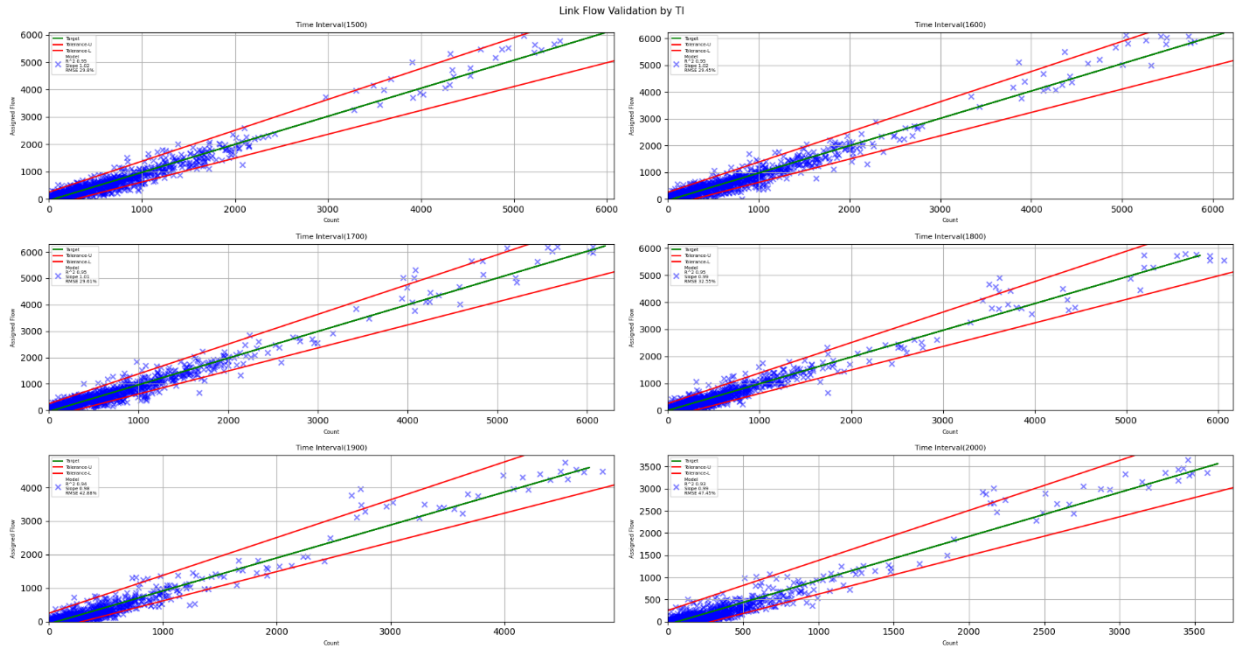
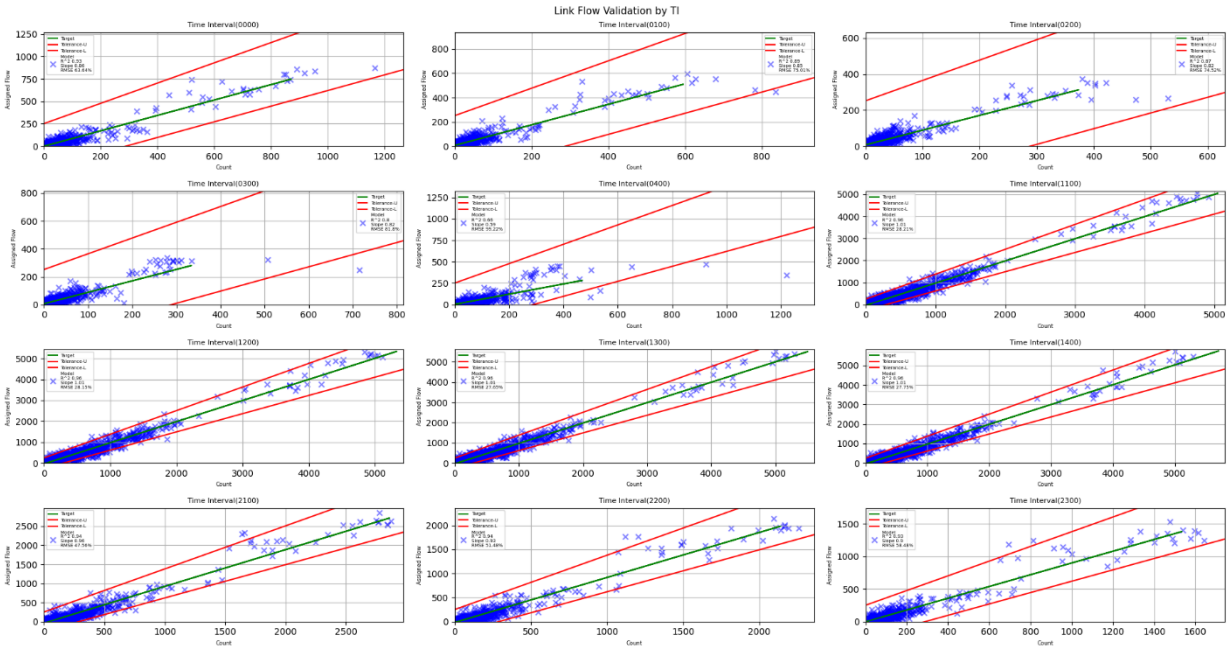


Figure 19: OP Link Flow Validation

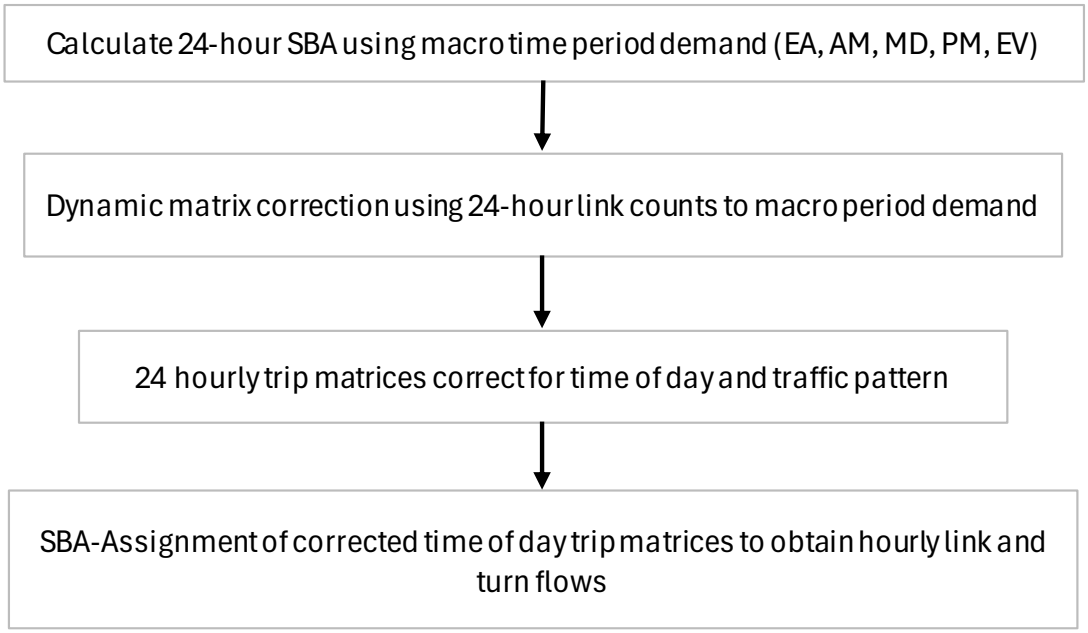


The dynamic matrix estimation method implemented in Visum is based on a least squares minimization formulation. Here, the sum of squared error between network counts and network flows arising from traffic assignment is minimized using a gradient method.

Conceptually, the dynamic matrix estimation method is like the static variant but adds a time dimension to the problem formulation. In the dynamic variant, the rows of the flow matrix no longer correspond to the count locations, but to the cross product of count locations and analysis time intervals; the columns of the flow matrix no longer correspond to the quantity of the OD pairs, but to the entire demand time series. An entry in the flow matrix corresponds to the proportion of the demand of an OD pair during a demand time interval that passes a count location during an analysis time interval.

Since the original seed trip matrices and total number of trips are used in the overall solution formulation, the method also minimizes the distortion of the original matrix structure and preserves the number of trips in the seed matrices. This property also allows the use of adjusted base year hourly trip matrices to generate hourly link flows when assigned using SBA and as a reasonable basis for generating hourly trip matrices for the forecast years. As noted earlier, re-calibration of the tour-based model based on more steady traffic patterns and an updated travel survey would eliminate the necessity of using the dynamic matrix estimation post-process to obtain hourly trip matrices aligned with the observed time of day traffic patterns.

Figure 20: Steps to Obtain Hourly Link Flows - Base Condition



The methodology used in developing hourly trip assignment matrices for the forecast conditions is illustrated in the flowchart below.

4. Remarks

One of the challenges in the model calibration process was that the available travel survey was from 2010, and the latest data used in the model validation was over multiple years starting 2019 and ending 2022 with the COVID19 pandemic and its effects occurring during this period. As a general strategy, the model was thus not overfit to observations. It would be of benefit to take up a more thorough calibration and validation exercise when new travel survey data with a more stable set of observations from new travel trends is available.

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MEMORANDUM

TO: Ms. Marissa Gaughan, CDOT Multimodal Planning Branch Manager

FROM: Dale Tischmak and Jake Fritz

DATE: January 21, 2022

SUBJECT: DRAFT MOVES3 Greenhouse Gas Modeling Methodology (117429-32)

Introduction

This document summarizes the methodology used to calculate greenhouse gas (GHG) emissions for the CDOT Statewide Travel Demand Model (TDM). Previous GHG modeling to support CDOT was conducted by APCD. This methodology replicates APCD's modeling process as best as possible.

For more information about GHG modeling using MOVES, see the *Using MOVES for Estimating State and Local Inventories of On-road Greenhouse Gas Emissions and Energy Consumption* guidance document linked to in the references (i.e., EPA 2016).

The process begins with generating emission rates using the EPA's Motor Vehicle Emission Simulator version 3.0.1 (MOVES3). The emission rates are multiplied by the vehicle miles traveled from the TDM. The result is an emissions inventory. A series of data engineering steps are required to prepare the rates and VMT into desirable and compatible formats.

MOVES3 Run Specifications

The run specification (RunSpec) parameters outlined below were used to calculate GHG emission rates with MOVES. They are consistent with APCD's process to calculate GHG emissions.

The four modeled years 2025, 2030, 2040, and 2050 used the same run specifications except for where specified (e.g., the year being modeled). Each of the four modeled years has six related run specifications to separate the emission rates by vehicle type, as described in the On-road Vehicles section.

Scale

The "Scale" parameters define the model type (on-road or non-road), domain/scale, and calculation type.

Model Type

On-road was the model type selected. This estimates emissions from motorcycles, cars, buses, and trucks that operate on roads.

Non-road/off-network emissions were not included. These emissions are from equipment used in applications such as recreation, construction, lawn and garden, agriculture, mining, etc. and are outside of the scope of this analysis.

Domain/Scale

MOVES allows users to analyze mobile emissions at various scales: National, County, and Project. While the County scale is necessary to meet statutory and regulatory requirements for SIPs and transportation conformity, either the County or National scale can be used for GHG inventories. EPA recommends using the

County scale for GHG analysis. The County scale allows the user to enter county-specific data through the County Data Manager. Providing local data significantly improves the precision of the modeling results (EPA 2016).

The County scale was used.

Calculation Type

MOVES has two calculation types - Inventory (total emissions in units of mass) or Emissions Rates (emissions per unit of distance for running emissions or per vehicle for starts and hotelling emissions) in a look-up table format must be post-processed to produce an inventory. Either may be used to develop emissions estimates for GHGs (EPA 2016).

The Emission Rates calculation type was used.

Time Span

The "Time Span" parameters define the years, months, days, and hours that emissions are calculated.

When Emission Rates is chosen, users may choose to approach the selection of options in the Time Spans Panel differently than when running MOVES in Inventory mode. For example, when modeling running emission rates, instead of entering a diurnal temperature profile for 24 hours, users can enter a range of 24 temperatures in increments that represent the temperatures over a period of time. By selecting more than one month and using a different set of incremental temperatures for each month, users could create a table of running emission rates by all the possible temperatures over an entire season or year (EPA 2016).

When using Emission Rates instead of Inventory, the time aggregation level is automatically set to Hour and no other selections are available. Pre-aggregating time does not make sense when using Emission Rates and would produce emission rates that are not meaningful (EPA 2016). However, the year, month, and day must still be specified and will affect the emission rates calculated.

The time span parameters specified below were also used because the TDM outputs represent an annual average weekday.

Years

The County scale in MOVES allows only a single calendar year in a RunSpec. Users who want to model multiple calendar years using the County scale will need to create multiple RunSpecs, with local data specific to each calendar year, and run MOVES multiple times (EPA 2016).

The years used were 2025, 2030, 2040, and 2050. Emission rates for each of these years were calculated separately. This accounts for information such as a changing age distribution of vehicles and their corresponding fuel efficiency.

Months

MOVES allows users to calculate emissions for any or all months of the year. If the user has selected the Emission Rates option, the Month can be used to input groups of temperatures as a shortcut for generating rate tables for use in creating inventories for large geographic areas (EPA 2016).

The months used were January and July to match the process described by APCD. These represent winter and summer months and generally the extremes in annual weather conditions. This accounts for changes in fuel efficiency between warm and cold temperatures throughout the year. The arithmetic averages of emission rates from January and July were used for the final emissions inventory.

Days

Weekdays and weekend days can be modeled separately in MOVES. MOVES provides the option of supplying different speed and VMT information for weekdays and weekend days to allow the calculation of separate emissions estimates by type of day (EPA 2016).

The days used were weekdays to match the TDM output data. These represented the emission rates for an average weekday. The results were escalated later to approximate a full year.

Hours

The hours used were all 24 hours of the day (i.e., clock hours of 1 AM, 2 AM, 3 AM, etc.). These represent the emission rates for individual hours of a day. This accounts for changes in fuel efficiency between warm and cold temperatures throughout the day.

Geographic Bounds

The "Geographic Bounds" parameter defines the county(s) used. For a county-scale run, only one county can be selected per RunSpec. The county used was Adams County, Colorado. The county defines input parameters such as the meteorology data used to estimate emission rates.

On-road Vehicles

MOVES describes vehicles by a combination of vehicle characteristics (e.g., passenger car, passenger truck, light commercial truck, etc.) and the fuel that the vehicle is capable of using (gasoline, diesel, etc.). The [Panel] is used to specify the vehicle types included in the MOVES run (EPA 2016).

The "On-road Vehicles" parameter defines the source types (i.e., vehicle types) and their fuels (gasoline, diesel, electricity, etc.). All combinations of vehicle types and fuels available in MOVES3 were used to calculate the emission rates. APCD's process, which was being followed, assigns TDM mileage based on a modified HPMS category. To calculate aggregate emission rates for each HPMS category (i.e., merging all of the relevant source types and fuel types), each of the six HPMS categories used a separate RunSpec. It is important to note that APCD's modified HPMS category does not match the MOVES HPMS types for source types 21, 31, and 32. When this methodology document refers to HPMS categories, it is generally referring to APCD's HPMS categories. The figure below illustrates the HPMS categories.

	A	B	C	D	E
1	sourceTyp	sourceTypeName	HPMSVtypeID	HPMSVtypeName	**HPMS from APCD**
2	11	Motorcycle	10	Motorcycles	**10**
3	21	Passenger Car	25	Light Duty Vehicles	**20**
4	31	Passenger Truck	25	Light Duty Vehicles	**30**
5	32	Light Commercial Truck	25	Light Duty Vehicles	**30**
6	41	Other Buses	40	Buses	**40**
7	42	Transit Bus	40	Buses	**40**
8	43	School Bus	40	Buses	**40**
9	51	Refuse Truck	50	Single Unit Trucks	**50**
10	52	Single Unit Short-haul Truck	50	Single Unit Trucks	**50**
11	53	Single Unit Long-haul Truck	50	Single Unit Trucks	**50**
12	54	Motor Home	50	Single Unit Trucks	**50**
13	61	Combination Short-haul Truck	60	Combination Trucks	**60**
14	62	Combination Long-haul Truck	60	Combination Trucks	**60**

Road Type

The Road Type Panel is used to define the types of roads that are included in the run. MOVES defines five different road types as shown in Table 3-1. Generally, all road types should be selected including Off-Network. Selection of road types in the Road Type Panel determines the road types that will be included in the MOVES run results (EPA 2016).

Table 3-1: MOVES Road Types

Roadtypeid	Road type	Description
1	Off-Network	Locations where the predominant activity is vehicle starts, parking and idling (parking lots, truck stops, rest areas, freight or bus terminals)
2	Rural Restricted Access	Rural highways that can be accessed only by an on-ramp
3	Rural Unrestricted Access	All other rural roads (arterials, connectors, and local streets)
4	Urban Restricted Access	Urban highways that can be accessed only by an on-ramp
5	Urban Unrestricted Access	All other urban roads (arterials, connectors, and local streets)

All road types available in MOVES3 were used.

Pollutants and Processes

The Pollutants and Processes Panel allows users to select from various pollutants, types of energy consumption, and associated processes of interest. In MOVES, a pollutant refers to particular types of pollutants or precursors of a pollutant but also includes energy consumption choices. Processes refer to the mechanism by which emissions are released, such as running exhaust or start exhaust. Users should select all relevant processes associated with a particular pollutant to account for all emissions of that pollutant. Generally, for this project, that includes running emissions.

The CO2 Equivalent pollutant is the sum of the global warming potential of other greenhouse gases expressed as a unit of CO2 (EPA 2016) and CO2 Equivalents (CO2e) is the pollutant of interest for these GHG calculations. MOVES requires several other prerequisite pollutants for CO2e; however, only the emission rates for CO2e were needed for this project.

General Output

The "General Output" parameters define the output database, units, and activity.

Output Database

Results from the six related HPMS RunSpecs for a single emissions year can be stored in a single output database for convenience. The RunSpecs must have the same units and aggregation (EPA 2016). A different output database is needed for each year of emission rate calculations. A consistent and informative naming convention for all output databases is very valuable.

One output database was used for each year modeled (i.e., 2025, 2030, 2040, and 2050). Each output database contained results for six RunSpecs, where each RunSpec represented a different APCD HPMS type. The naming convention FHU used was as follows:

[firm]_[pollutant]_[year][region]_[description]_[database type]

[firm] = The company or agency performing the analysis.

[pollutant] = The pollutant(s) of interest.

[year] = The year that emission rates were generated for.

[region] = The geographic area that emission rates were generated for.

[description] = An abbreviated description of relevant notes for the RunSpec.

[database type] = Whether the database was an input or output database.

For example, the database "fhu_ghg_2025sw_wev_in" represented an input database for greenhouse gases, the year 2025, the Statewide Transportation Plan, with electric vehicles, and was performed by FHU.

Units

Users are free to choose any of the mass unit selection options but should generally choose a unit whose magnitude is appropriate for the parameters of the RunSpec (EPA 2016).

The units used for models were grams for mass, joules for energy, and miles for distance.

Activity

MOVES allows the user to select multiple activity output options (e.g., distance traveled, population, etc.). For Emission Rate calculations, distance and population are reported automatically, but the values in the output are intermediate steps in the rate calculation and do not represent the true activity (EPA 2016).

When calculating emission rates (as opposed to emission inventories), MOVES selects the activities hoteling hours, population, and starts without the option of changing them.

Output Emissions Detail

This panel allows the user to select the amount of detail provided in the output database. Certain selections on this panel are made by the MOVES software and cannot be changed, based on selections made on earlier panels. The more boxes checked on this panel, the more detail and segregation provided in the MOVES output database. More detail generally is not helpful for this process so no optional selections should be checked on this panel. For example, if Source Use Type were selected on this panel, emission rates for each of the MOVES vehicle Source Use Type categories would be reported in the output database, which would defeat the purpose of performing MOVES calculations based on consolidated HPMS category.

No optional aggregation selections were made on this panel. Source type detail was captured via the six HPMS RunSpecs for each year modeled, as described in the On-road Vehicles section. Since multiple source types were used for HPMS 30, 40, 50, and 60, emission rates were aggregated for into HPMS categories. That is, emission rates for MOVES source types 31 and 32 were aggregated into the HPMS 30 RunSpec, etc.

Input Database/County Data Manager

After completing the RunSpec, the next step is to supply MOVES with data to create an input database that is the basis for the emission rate calculations. When using the County scale, the County Data Manager (CDM) is used to create an input database and populate it with local data. Modelers can either rely on MOVES default information or local data that the user inputs, as is appropriate for the goals of the MOVES modeling. The data contained in the MOVES default database are typically not the most current or best available for any specific county. Therefore, with the exception of fuels, EPA recommends using local data for MOVES for GHG analyses when available to improve the accuracy of GHG emissions estimates. However, the MOVES default data (county level) may be the only or best source of that data readily available. Also consider that data consistency may be more important than data perfection for some GHG analyses. At a minimum, EPA strongly

encourages the use of local VMT and vehicle population data. EPA believes these inputs have the greatest impact on the quality of results. However, if local data are not available, MOVES default data may be useful for some inputs without affecting the quality of the results (EPA 2016).

In Emissions Rates mode, a full gamut of input data must be provided, described below, for MOVES to run. Some of these inputs actually do not affect the ultimate emission rates (they would affect inventory mode output) but reasonable inputs in the CDM should be used for general data integrity. As a general rule, users should input accurate activity for the scenario being modeled regardless of whether MOVES is being used in Inventory or Emissions Rates mode (EPA 2016).

The "Create Input Database" parameters define the region-specific inputs such as distributions of road types, vehicle age distributions, and meteorology data. The parameters specified in RunSpecs pre-populate the input database with default data for some of the parameters. However, region-specific data should be used when available and not all parameters have default data.

One comprehensive input database was created for each year modeled. Each of the six HPMS RunSpecs for that year used that single input database and were saved to a single output database. The input data were entered with the MOVES County Data Manager window, as specified below.

Age Distribution

A typical vehicle fleet includes a mix of vehicles of different ages, referred to as Age Distribution in MOVES. MOVES covers a 31 year range of vehicle ages, with vehicles 30 years and older grouped together. MOVES allows the user to specify the fraction of vehicles in each of 30 vehicle ages for each of the 13 source types in the model. For estimating on-road GHG emissions, EPA recommends and encourages states to develop age distributions that are applicable to the area being analyzed (EPA 2016).

APCD has developed a vehicle age distribution, and it was used for each year modeled.

Average Speed Distribution

This input is more important for Inventory than Emission Rates. Vehicle power, speed, and acceleration have a significant effect on vehicle emissions, including GHG emissions. MOVES models those emission effects by assigning activity to specific drive cycles. The Average Speed Distribution Importer in MOVES calls for a speed distribution in VHT in 16 speed bins, by each road type, source type, and hour of the day included in the analysis. EPA urges users to develop the most detailed local speed information that is reasonable to obtain. However, EPA acknowledges that average speed distribution information may not be available at the level of detail that MOVES needs (EPA 2016).

The Emission Rates option in MOVES will produce a table of emission rates by road type for each speed bin. Total running emissions are then quantified outside of MOVES by multiplying the emission rates by the VMT for each source type in each vehicle speed category. Users should supply an appropriate speed distribution to produce the necessary emission rates (EPA 2016).

APCD uses MOVES default data for all years in emission rate mode for their GHG models. This was used for each year modeled. Since emission rates were calculated (as opposed to emission inventories), the average speed distribution used in MOVES will not change the emission rates calculated. The speeds are accounted for in the TDM data.

Fuel

Entering this input data into MOVES involves four tables – called FuelFormulation, FuelSupply, FuelUsageFraction, and AVFT (alternative vehicle fuels and technology) – that interact to define the fuels used in the area being modeled.

- The FuelSupply Table identifies the fuel formulations used in a region (the regionCounty Table defines which specific counties are included in these regions) and each formulation's respective market share;
- The FuelFormulation Table defines the properties (such as RVP, sulfur level, ethanol volume, etc.) of each fuel;
- The FuelUsageFraction Table defines the frequency at which E-85 capable (flex fuel) vehicles use E-85 vs. conventional gasoline; and
- The AVFT Table is used to specify the fraction (other than the default included in the sampleVehiclePopulation Table) of fuel types capable of being used (such as flex fuel vehicles) by model year and source type.

In general, users should review/use the default fuel formulation and fuel supply data provided in MOVES, with important exceptions noted below. EPA strongly recommends using the default fuel properties for a region unless a full local fuel property study exists.

The GHG effects of changes in the fuel mix used by vehicles can be modeled in MOVES. AVFT can be used to change the fraction of future vehicles using gasoline, diesel, CNG and electricity. These changes will be reflected in MOVES GHG emission rates.

The FuelUsageFraction Table allows the user to change the frequency at which E-85 capable vehicles use E-85 fuel vs. conventional fuel, when appropriate. MOVES contains default estimates of E-85 fuel usage for each county in the U.S. In most cases, users should rely on the default information.

The AVFT Table allows users to modify the fraction of vehicles using different fuels and technologies in each model year. In other words, the Fuel Tab allows users to define the split between diesel, gasoline, ethanol, CNG, and electricity, for each vehicle type and model year. For transit buses, the default table assumes that gasoline, diesel, and CNG buses are present in the fleet for most model years. If the user has information about the fuel used by the transit bus fleet in the county modeled, the user should be sure it is reflected in the AVFT Table (EPA 2016). ***NOTE: This tab can be critically important in CDOT's GHG calculations. This is where electric vehicle percentages, etc. are defined. This tab may vary among CDOT's scenarios and should not be overlooked.***

APCD uses MOVES default data for fuel supply, fuel formulation, and fuel usage fraction for all years in their GHG models. For AVFT, APCD uses custom inputs that includes electric vehicles for all years. These were used for each year modeled.

Meteorology

Ambient temperature and relative humidity data are important inputs for estimating on-road GHG emissions with MOVES. Ambient temperature and relative humidity are important for estimating GHG emissions from motor vehicles as these affect air conditioner use. MOVES requires a temperature (in degrees Fahrenheit) and relative humidity (in terms of a percentage, on a scale from 0 to 100) for each hour selected in the RunSpec. EPA recommends that users input the average daily temperature profile for each month if they are modeling all 12 months. Temperature assumptions used for estimating on-road GHG emissions should be based on the latest available information. The MOVES database includes default monthly temperature and humidity data for every county in the country. These default data are based on average monthly temperatures for each county from the National Climatic Data Center for the period from 2001 to 2011. These national defaults can be used for a GHG inventory, or more recent data can be used (EPA 2016).

If the Emission Rate calculation type is chosen in the RunSpec, users can enter a different temperature and humidity for each hour of the day to create an emission rate table that varies by temperature for running emissions processes. Emission rates for all running processes that vary by temperature can be post-processed outside of MOVES to calculate emissions for any mix of temperatures that can occur during a day. This creates

the potential to create a lookup table of emission rates by temperature for the range of temperatures that can occur over a longer period of time such as a month or year from a single MOVES run (EPA 2016).

MOVES default meteorology data was used for all years. The county used was Adams County, Colorado for the months of January and July. Emission rates were post-processed to average winter and summer emission rates.

Road Type Distribution

MOVES does not have default data for this input, so it must be developed. The fraction of VMT by road type varies from area to area and can have a significant effect on GHG emissions from on-road mobile sources. EPA expects states to develop and use their own specific estimates of VMT by road type (EPA 2016).

If the Emission Rates option is used, MOVES will automatically produce a table of running emission rates by road type. Running emissions would then be quantified outside of MOVES by multiplying the emission rates by the VMT on each road type for each source type in each speed bin. In that case, data entered using the Road Type Distribution Importer is still required, but is not used by MOVES to calculate the rate. However, road type distribution inputs are important for Emission Rates runs involving non-running processes, because they are used by MOVES to calculate the relative amounts of running and non-running activity, which in turn affects the rates for the non-running processes (EPA 2016).

APCD uses a custom road type distribution for all years in their GHG models. This was used for each year modeled. Since emission rates were calculated (as opposed to emission inventories), the road type distribution used in MOVES will not change the emission rates calculated. The road types are accounted for in the TDM.

Source Type Population

MOVES does not have default data for this input, so it must be developed. APCD uses a custom source type distribution for all years in their GHG models. These data were used for each year modeled. The source type populations used in MOVES will not change the emission rates calculated. However, source population data are still needed as inputs for an emission rates MOVES run.

Vehicle Type VMT

MOVES does not have default data for this input, so it must be developed. EPA believes VMT inputs have the greatest impact on the results of a state or local GHG or energy consumption analysis. Regardless of calculation type, MOVES requires VMT as an input. MOVES can accommodate whatever VMT data is available: annual or average daily VMT, by HPMS class or MOVES source type. Therefore, there are four possible ways to enter VMT, allowing users the flexibility to enter VMT data in whatever form they have. EPA recommends that the same approach be used in any analysis that compares two or more cases (e.g., the base year and a future year) in a GHG analysis (EPA 2016).

The Output Emission Detail panel determines the detail with which MOVES will produce emission rates for running emissions, such as by source type and/or road type in terms of grams per mile. Total emissions are quantified outside of MOVES by multiplying the emission rates by the VMT for each source type and road type. However, users will still need to enter data using the Vehicle Type VMT Importer that reflects the VMT in the total area where the lookup table results will be applied. This is necessary because MOVES uses the relationship between source type population and VMT to determine the relative amount of time vehicles spend parked vs. running (EPA 2016).

APCD uses HPMS as the source type and annual as the time span for their GHG models. This was used for each year modeled. Since emission rates were calculated (as opposed to emission inventories), the VMT used in MOVES will not change the emission rates calculated. The VMT values are in the TDM data. However, VMT data are still needed as inputs for an emissions rate MOVES run.

Inspection/Maintenance Program

If a model is examining any nonattainment/maintenance areas, an inspection and maintenance (I/M) program may apply. I/M program inputs should be those used for SIP and conformity analyses and are generally available as defaults within MOVES. However, if a user is modeling CO2, N2O, and/or elemental carbon emissions only, or modeling area where no I/M program applies, the user should check the box on this tab (EPA 2016).

APCD uses the check box for "No I/M Program" for the Statewide Transportation Plan, since there is not a statewide emissions program that applies in these areas. This was used for each year modeled.

Others

APCD assumes MOVES default values for the starts, hoteling, idle, retrofit data, and generic tabs. This was left as is for each modeled year.

Output Database

When a RunSpec is executed in MOVES, the results are stored in the output database specified in the "General Output" parameters. HeidiSQL (or equivalent software) can be used to view and export the calculated emission rates.

MOVES Rate per Distance Table

The critical table in the output database with the calculated emission rates was the "rateperdistance" table. It contained emission rates for each combination of month, hour, pollutant, road type, speed bin, and vehicle type as specified in the RunSpec. The MOVESScenarioID field was the mechanism used by FHU to identify the HPMS source type.

The table was filtered to include only CO2e (i.e., pollutant ID 98) emission rates and exported to a comma-separated value (CSV) file. Because the table included emission rates for both January and July, and MOVES speed bins are not discrete speeds in miles per hour, post-processing of the emission rates was required to calculate emission inventories.

Processed Emission Rates

APCD provided several Access databases with calculation tools for processing the MOVES and TDM data. These Access databases are the basis for the post-MOVES data processing. The instructions contained below provide a narrative of what occurs, but these actions are already built into the Access databases.

The MOVES rate per distance output table needed to be manipulated to produce emission rates that could be related to the calculated vehicle speeds for road links in the TDM data. The emission rates for January and July needed to be averaged to create composite emission rates. The emission rates for the 16 speed bins (which cover 5 MPH ranges) in MOVES were linearly interpolated to provide emission rates for every mile per hour speed from 1 to 75, which is how speed data are presented in the TDM data.

The resulting table includes a total of 43,776 unique emission rates. That is, an emission rate for each combination of:

- MOVES Road Types 2-5
- HPMS Types 10/20/30/40/50/60
- Hours 1-24
- Speeds 1-75

Processing Annual Average Emission Rates

For each year/rate per distance table (i.e., this process must be repeated for 2025, 2030, 2040, and 2050):

- Filter to include only CO2e (pollutant ID 98) emission rates
- There were unique emission rates for each combination of:
  - Road type
  - HPMS type
  - Speed Bin
  - Hour
  - Month
- To get the average emission rates per year, each combination of road type, HPMS type, average speed bin, and hour were summed and divided by two (to average the corresponding emission rates for January and July)
- Seasonally averaged emission rate = (Winter Rate + Summer Rate)/2

Interpolating Emission Rates from Speed Bin to Integer Speeds

After seasonally averaging the emission rates, these rates were used to interpolate (linearly) between speed bins to get an emission of rate for every mile per hour for the speeds of 1 to 75 miles per hour. In general, the process used was:

- For adjacent speed bins, subtract the lower bin number emission rate from the higher bin number emission rate and divide by five to calculate a per mile per hour change in the emission rate (NOTE: emission rates generally decrease with increased speed)
- Add the appropriate emission rate change to the lower bin avgBinSpeed value to interpolate each mile per hour emission rate between the avgBinSpeed values
- For reference, the table below illustrates the MOVES speed bins
- Example for interpolating emission rate of 11 mph:
  - Speed per mph = 11 mph
  - Speed of Lower Speed Bin = 10 mph
  - Number of Speeds per Speed Bin = 5 (= 2.5 for speed bin 1; = 5 for all other speed bins)
  - ER of Lower Speed Bin = 4055 g/m (dummy data)
  - ER of Upper Speed Bin = 3421 g/m (dummy data)
  - 4055 + (3421 – 4055) * (11 – 10)/5 = 3928

avgSpeedBinID	avgBinSpeed	avgSpeedBinDesc
1	2.5	speed < 2.5mph
2	5	2.5mph <= speed < 7.5mph
3	10	7.5mph <= speed < 12.5mph
4	15	12.5mph <= speed < 17.5mph
5	20	17.5mph <= speed <22.5mph
6	25	22.5mph <= speed < 27.5mph
7	30	27.5mph <= speed < 32.5mph
8	35	32.5mph <= speed < 37.5mph
9	40	37.5mph <= speed < 42.5mph
10	45	42.5mph <= speed < 47.5mph
11	50	47.5mph <= speed < 52.5mph
12	55	52.5mph <= speed < 57.5mph
13	60	57.5mph <= speed < 62.5mph
14	65	62.5mph <= speed < 67.5mph
15	70	67.5mph <= speed < 72.5mph
16	75	72.5mph <= speed

Processed TDM

The TDM data are usually presented as an ESRI polyline shapefile format with each traffic link represented as one record (feature) and attributed with distances, total volumes, volumes per time period, and speeds per time period. A series of post-processing steps were performed to relate the relevant TDM data with the appropriate MOVES emission rates, as described below. The first step described below was done using ArcGIS. The other steps were done using the tools in the Access databases.

The resulting table includes aggregated VMT for each combination of:

- MOVES Road Types 2-5
- HPMS Types 10/20/30/40/50/60
- Hours 1-24
- Speeds 2.5-75

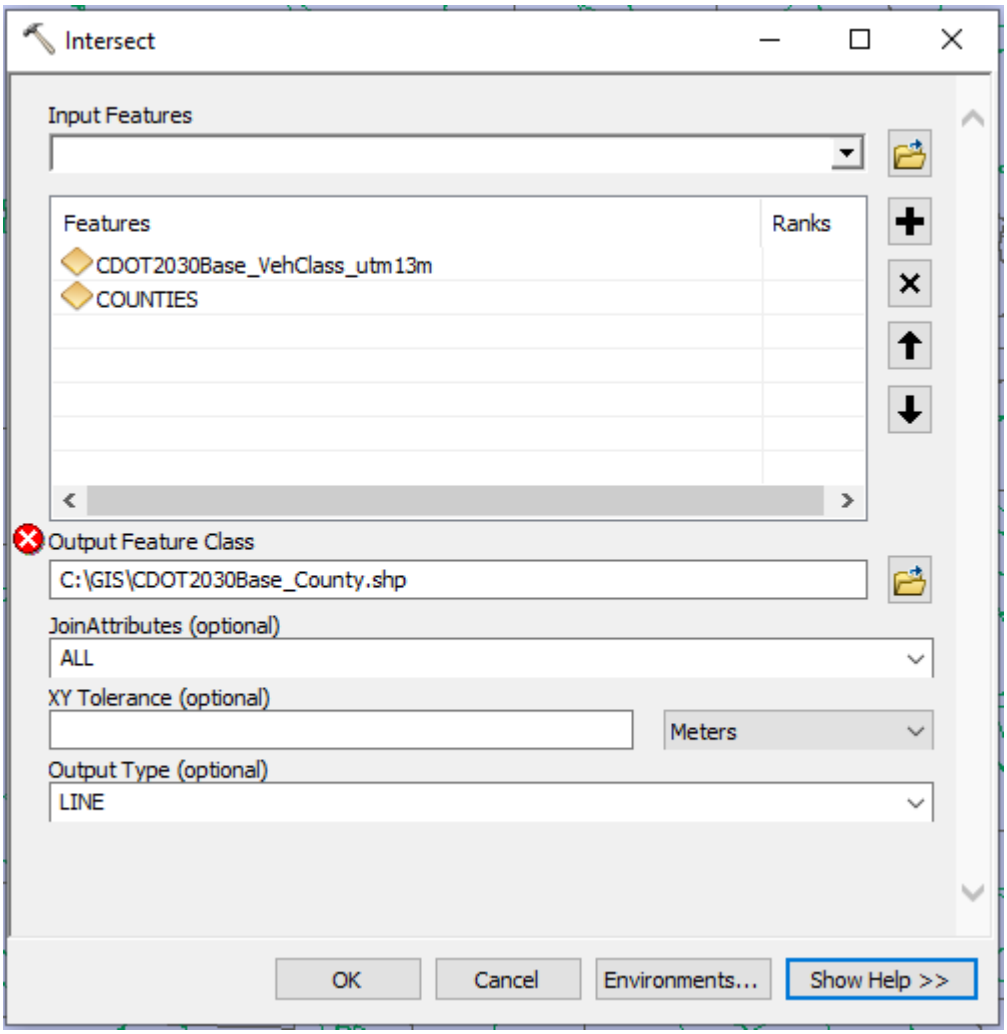
This process provides respective county names for each link to aggregate VMT by geography/region.

Attribute TDM with County Name

The first step was to attribute each link with the county name. The county information was necessary because it was used later in the process to filter VMT (and thus, on-road emissions inventory) by geography/region (e.g., MPO or non-MPO traffic). Performing this step later in the process would require significant modifications to the process.

The ArcGIS geoprocessing tool "Intersect" was used to attribute the TDM shapefile with county names for each roadway link (feature). The Input Features were the TDM shapefile and CDOT's "COUNTIES" shapefile that can be downloaded from OTIS. Unnecessary fields in the counties shapefile were deleted, so that the fields remaining were FID, Shape*, COUNTY, and CO_FIPS. The Output Feature Class name and file path could change, depending on the user's preference. The Join Attributes parameter was set to "ALL" which kept attributes from both input features. The Output Type parameter was set to "LINE" which set the output feature class to be the geometry of the TDM shapefile. The Environment was defaults except for the Output

Coordinate System. That was set to the projected coordinate system, "GRS_1980_UTM_Zone_13N" which matched the TDM shapefile's coordinate system.



The resulting output feature class had the same geometry and attributes as the TDM shapefile except for the following changes:

- Each link was attributed with the county name and FIPS number.
- Links within multiple counties were split (divided) into separate features at the county line(s). In these cases:
  - Both features still had the same attributes except for the county name and FIPS.
  - The distance attribute in the "DIST" field was now invalid since the feature was split.

To account for changes in distances for links that were in multiple counties, a new field "cntyMiles" was added to the output feature class. The geoprocessing tool "Calculate Geometry" was used on the "cntyMiles" field to calculate the distance of each link in miles. The "cntyMiles" field, rather than the "DIST" field, was used later in Access to calculate VMT.

The resulting attribute table was saved as a CSV file and used in the following steps.

Access Database

The TDM CSV file from the step above was imported into an Access database. The remaining post-processing steps were performed in this Access database, as described below.

Speeds

The TDM speeds were in floating decimal format and rounded to the nearest integer. Speeds less than 2.75 mph were rounded to 2.5 mph. This was because emission rates for speeds of 2.5 mph or less were the same, as described in the Processed Emission Rates section.

Time Periods

The TDM model provides aggregated data for 10 blocks of time for a day, not hour by hour—see the "name" column below. The data for these TDM periods were recategorized/interpolated into data for discrete clock hours 1-24 based on methodology from APCD.

The PeriodHour24 table below was used to split the TDM data for different time periods (AM1, PM2, OP1, etc.) into 24 clock hour time periods. VMT was calculated for each combination of integer speed (2.5 – 75mph), interstate (yes or no), road functional class (1-8), rural (yes or no), periodCog (1-10), and county.

The periodCog 1-10 were related to hours 1-24 as shown in the "hour" column. That provided a VMT per clock hour for each combination of speed and functional class. This was used to relate the VMT to fractions of VMT by HPMS per functional class and hour.

The cVMT was divided by the number of "periods" corresponding with each clock hour to calculate the VMT.

PeriodHour24

Interval	periodCog	name	hour	hrsT	periods
11:00 PM - 6:30AM	7	Op1.bin	1	7.5	7
11:00 PM - 6:30AM	7	Op1.bin	2	7.5	7
11:00 PM - 6:30AM	7	Op1.bin	3	7.5	7
11:00 PM - 6:30AM	7	Op1.bin	4	7.5	7
11:00 PM - 6:30AM	7	Op1.bin	5	7.5	7
11:00 PM - 6:30AM	7	Op1.bin	6	15	7
6:30-7:00 AM	1	Am1.bin	7	1	1
7:00-8:00 AM	2	Am2.bin	8	1	1
8:00-9:00 AM	3	Am3.bin	9	1	1
9:00 AM - 11:30 AM	8	Op2.bin	10	2.5	2.5
9:00 AM - 11:30 AM	8	Op2.bin	11	2.5	2.5
	9	Op3.bin	12	3.5	7
	8	Op2.bin	12	2.5	5
11:30 AM - 3:00 PM	9	Op3.bin	13	3.5	3.5
	9	Op3.bin	14	3.5	3.5
	9	Op3.bin	15	3.5	3.5
3:00-5:00 PM	4	Pm1.bin	16	2	2
3:00-5:00 PM	4	Pm1.bin	17	2	2
5:00-6:00 PM	5	Pm2.bin	18	1	1
6:00-7:00 PM	6	Pm3.bin	19	1	1
7:00-11:00 PM	10	Op4.bin	20	4	4
7:00-11:00 PM	10	Op4.bin	21	4	4
7:00-11:00 PM	10	Op4.bin	22	4	4
7:00-11:00 PM	10	Op4.bin	23	4	4
11:00 PM - 6:30AM	7	Op1.bin	24	7.5	7

Fraction of VMT by HPMS

Once VMT was calculated for each road functional class and clock hour, the fractions of VMT by HPMS for each corresponding functional class and clock hour were applied. This calculated the VMT for HPMS 10-60. The fractions used were from APCD and were consistent with their methodology.

FractionsByHourHPMSnaaT

NAA?	Weld?	Rural?	FC	Hr	10f	20f	30f	40f	50f	60f
-1	W	R	1	1	1.12494375281236E-03	0.442984079764564	0.408981870287873	8.24958752062397E-04	3.60606876834793E-03	0.14247807867434
-1	W	R	1	2	6.50325162581291E-04	0.418107821883677	0.388118179039889	1.40070035017509E-03	5.57032759041272E-03	0.186152645973265
-1	W	R	1	3	1.1907462009526E-03	0.402448608970853	0.376594285267901	1.92787480154423E-03	8.86488378110699E-03	0.208973600977645
-1	W	R	1	4	1.88772529102432E-03	0.400795540811441	0.375296865809669	3.5956672209987E-03	8.74568726325532E-03	0.209678513603612
-1	W	R	1	5	1.27600843728028E-03	0.438002933384539	0.406922735865401	8.59352621025494E-04	5.91653137282429E-03	0.14702243831893
-1	W	R	1	6	9.86892049192773E-04	0.462978652961131	0.429325812630245	1.88521686320158E-03	5.20852159466524E-03	9.96149039015637E-02
-1	W	R	1	7	8.56477631797771E-04	0.47063947538398	0.437825973989187	1.19740562115417E-03	7.50554404406707E-03	8.19751233298142E-02

Road Types

The TDM used roadway functional classes that were recategorized to MOVES road types. That allowed the road types from the TDM to be related to the emission rates.

RTt

DRCOG Facil	FHWA facility type	rural?	FHWA	Urban	MOVESrt	fhwaRT	fcCode	Intestate
1	Principal Arterial - Interstate	-1	R	R	2	1	1	1
1	Principal Arterial - Interstate	-1	R	R	2	1	1	0
1	Principal Arterial - Interstate	0	N	U	4	11	1	0
1	Principal Arterial - Interstate	0	N	U	4	11	1	1
2	Principal Arterial - Other	-1	N	R	3	2	2	0
2	Principal Arterial - Other Freeways or Expressway	0	N	U	4	12	2	0
3	Principal Arterial - Other	-1	N	R	3	2	3	0
3	Principal Arterial - Other	0	N	U	5	14	3	0
4	Minor Arterial	-1	N	R	3	6	4	0
4	Minor Arterial	0	N	U	5	16	4	0
5	Major Collector	-1	N	R	3	7	5	0
5	Collector	0	N	U	5	17	5	0
6	Principal Arterial	-1	R	R	2	1	1	0
6	Principal Arterial	0	N	U	4	11	1	0
8	Local System	-1	N	R	3	9	7	0
8	Local System	0	N	U	5	19	7	0

Filter by Geography/Region

The statewide GHG inventory was filtered to contain VMT for all counties in Colorado except for the nine-county region in the ozone non-attainment area. The nine counties excluded were Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson, Larimer, and Weld. The statewide results were subdivided further into Pikes Peak area and the rest of the state.

Emissions Inventory

The processed emission rates table and the processed VMT table were related by road type, HPMS type, hour, and speed. This relate was used to multiply the emission rate (g/mi) by the VMT (mi) to get a total in grams of CO2e for an average weekday. The formula used was:

- CO2e (g/day) = SUM(Emission Rate (g/mi) * VMT (mi))
- CO2e (MMt/day) = CO2e (g/day) * 1 (MMt) / 1e+12 (g)
- CO2e (MMt/year) = CO2e (MMt/day) * 338 (TDM weekdays/calendar year)

The calculated emissions inventory was for on-road emissions. Non-road emissions were not included in this calculation.

References

EPA. 2016. *Using MOVES for Estimating State and Local Inventories of On-road Greenhouse Gas Emissions and Energy Consumption*. June. https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100OW0B.pdf

APPENDIX F: FEDERAL LANDS ACCESS

The following information was developed by the FHWA Central Federal Lands team.

The Federal Highway Administration & Federal Lands Highways

The FHWA recognizes the vital role transportation plays in the lives of the traveling public, influencing economic growth, public safety, and many other aspects of daily life.

Federal Lands Highways, a division of the FHWA, provides financial resources, planning, transportation engineering, and project delivery for mobility networks that service the transportation needs of U.S. federal and tribal lands partners. These include the National Park Service, the U.S. Forest Service, the U.S. Fish and Wildlife Service, the Bureau of Indian Affairs and Tribal Governments, the Bureau of Land Management, the Department of Defense, the U.S. Army Corps of Engineers, and the Bureau of Reclamation.

Its mission is to deliver effective, efficient, and reliable transportation systems while protecting and enhancing natural resources and providing recreational access for the traveling public. These essential services are delivered in all 50 states, the District of Columbia, Puerto Rico, and U.S. Territories through the Headquarters, Eastern, Central, and Western Federal Lands Highway Division offices.

Federal Lands Highways (FLH) prioritizes projects, infrastructure, and services that seamlessly integrate with the landscape, fostering a deeper connection with the natural world and enriching the outdoor recreational experience. This ensures that all Americans can continue to explore and appreciate the splendor of our shared natural heritage.

Enhanced FLMA Coordination: Legislative Basis & Approach

State DOTs, MPOs, and local transportation agencies are responsible for considering Federal Land Management Agency (FLMA) transportation access needs in their planning and capital improvement processes per 23 U.S.C. Sections 134 and 135.

However, recreational and FLMA access needs are qualitatively different from transportation needs on the urban, suburban, and inter-urban networks. Whereas the latter systems are built on high-volume, paved facilities, recreational travel tends to occur on low-volume, typically unpaved systems in rural or remote contexts. Furthermore, recreational travel patterns are less predictable than typical “rush hour” pulses of activity and can be dependent on external factors such as weather and special events.

As such, determining the relative priority of projects on discretionary (or recreational) systems versus non-discretionary systems (commute, school, and other daily transportation needs) can be challenging.

The Federal Lands Access Program (FLAP) was created to plan, design, and fund projects in this unique discretionary travel niche, however lack of consistent coordination between federal, state, and local agencies can hinder the development of a broad, multi-agency consensus for enhanced recreational travel. This limits chances for partnerships and funds-leveraging and can lead to missed opportunities where shared needs could be addressed in the planning or design processes.

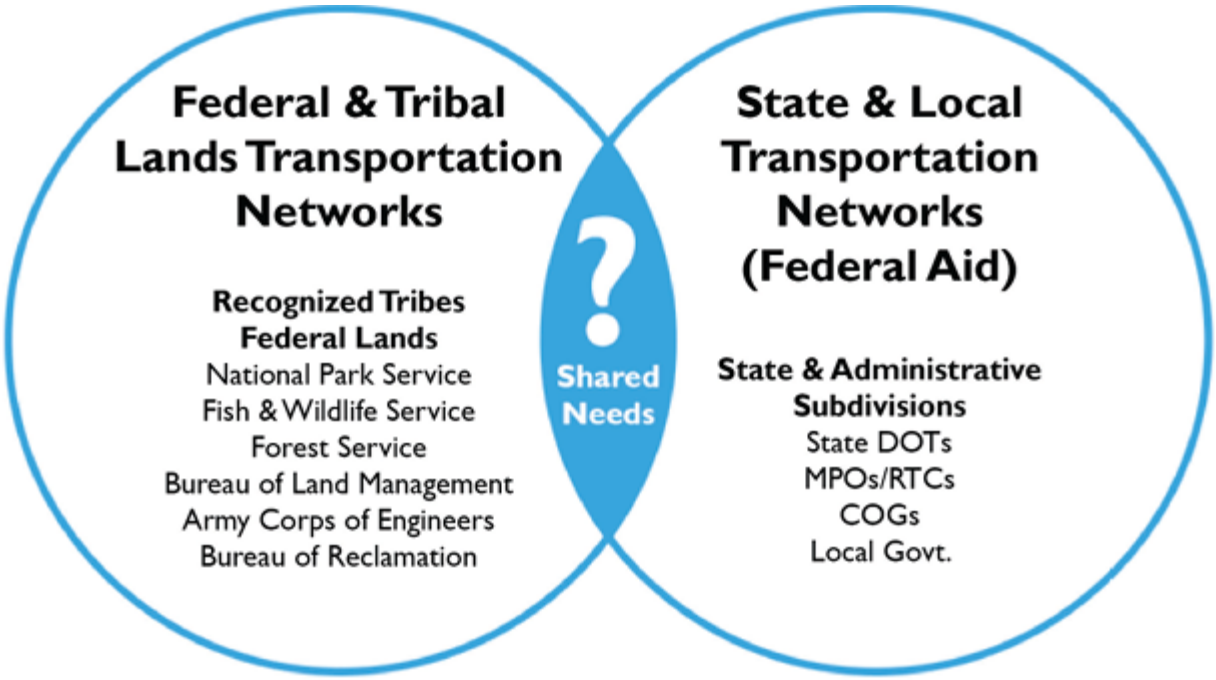
Led by FLH, enhanced FLMA coordination attempts to solve this challenge through the identification of shared needs through cross-sector, multi-agency workshops (see Figure F-1). Multi-agency workshops can reveal and elevate projects and opportunities that are:

- Beneficial to multiple agencies and supported by the general public
- Most likely to receive (or have received) state or local investment
- Projects of mutual interest where planning and design can be aligned before final programming and funding decisions are made
- Eligible and competitive for a broad set of state and federal grant funding opportunities (like FLAP, or other discretionary sources at the state or federal levels)

Enhanced coordination can help FLMAs, along with state and local agencies, better align improvement programs, seek partnerships, leverage resources, and advance shared goals.

Needs identification through the enhanced FLMA coordination process is mostly an

Figure F-1



exercise with a long-range (10-20 year) time horizon where agencies have flexibility in determining priorities and identifying projects (the top tier of Figure F-2 below). Sometimes referred to as "blue sky" strategy, the IP process is a financially unconstrained assessment of current and future need such that capital investments can be identified before safety, congestion, state of good repair, or other concerns become acute. Most needs identified in this study are within this top "Long Range" tier.

Some projects require additional planning, studies, scope refinement, or risk mitigation (e.g., through a public engagement process) before capital investments or programming decisions can be made. Concept planning, in the forms of corridor plans, site plans, modal plans, and other planning projects/studies can ready projects for implementation by reducing risk, refining scope, and/or determining relative priority. A small number of needs identified in this study are in this "Mid-Range" tier. Step-down planning efforts, initiated based on the needs identified in the process, can transition a project from conceptual phases to shovel readiness, as depicted in the implementation, or "Programming," bottom tier of the pyramid. This study is intended to help guide the best projects toward implementation, by highlighting the projects of greatest need and broadest benefit while aligning prioritization and funding streams.

Figure F-2



Physical and Economic Geography

LAND MANAGEMENT

With 24 million acres, constituting 36.3% of the state's total landmass, federal lands play a significant role in the Colorado's environmental, recreational, and economic landscape.

The CFR TPR encompasses Park, Fremont, and Custer counties as well as portions of Teller and El Paso counties, while the urbanized area within is served by the PPACG MPO. This region features diverse federally managed lands and natural resources. These resources play a vital role in supporting recreation, conservation, and local economies.

- U.S. Forest Service (USFS): This region is home to portions of the Pike-San Isabel National Forest, offering extensive opportunities for outdoor recreation, including hiking, camping, and off-highway vehicle use. Iconic destinations such as Pikes Peak and Eleven Mile Canyon Reservoir are located here, drawing thousands of visitors annually.
- Bureau of Land Management (BLM): While BLM lands are more concentrated in western Colorado, small tracts in Fremont County support activities such as hiking, rock climbing (notably in areas like Shelf Road), and wildlife observation. These lands also contribute to grazing and mineral resource management.
- National Park Service (NPS): The Florissant Fossil Beds National Monument, located in Teller County, is a key NPS site. It preserves fossilized redwood stumps and thousands of plant and insect fossils, offering both recreational and educational opportunities.
- Bureau of Reclamation (BOR): The BOR oversees infrastructure related to water management in the Arkansas River Basin, which impacts Fremont County. This includes the Pueblo Reservoir and upstream water storage projects crucial for municipal and agricultural use.
- Department of Defense (DoD): The U.S. Air Force Academy, located in northern Colorado Springs, is not only a military installation but also a site of significant natural beauty and recreational opportunities. While public access to the academy is restricted due to its operational role, it does allow for limited public entry to certain areas, particularly for outdoor recreation. Academy grounds are integrated into the local trail system, including the popular New Santa Fe Regional Trail, which traverses part of the base grounds. This multiuse trail is accessible to the public and provides a scenic route for hiking, biking, and running, connecting to other regional trails.

The region's mix of mountainous terrain, river valleys, and plains supports activities ranging from backcountry exploration to conservation research, making it an integral part of Colorado's public lands system.

COLORADO'S OUTDOOR RECREATION ECONOMY

Driven in large part by the vast amounts

of federal public lands, the state's outdoor recreation industry is a major contributor to Colorado's economy. Colorado ranks 12th in the nation for outdoor recreational economic activity with $5.77 billion in value-add contribution to the state's gross domestic product (GDP) while also supporting 129,800 direct employment jobs (2022, see Figure F-3).

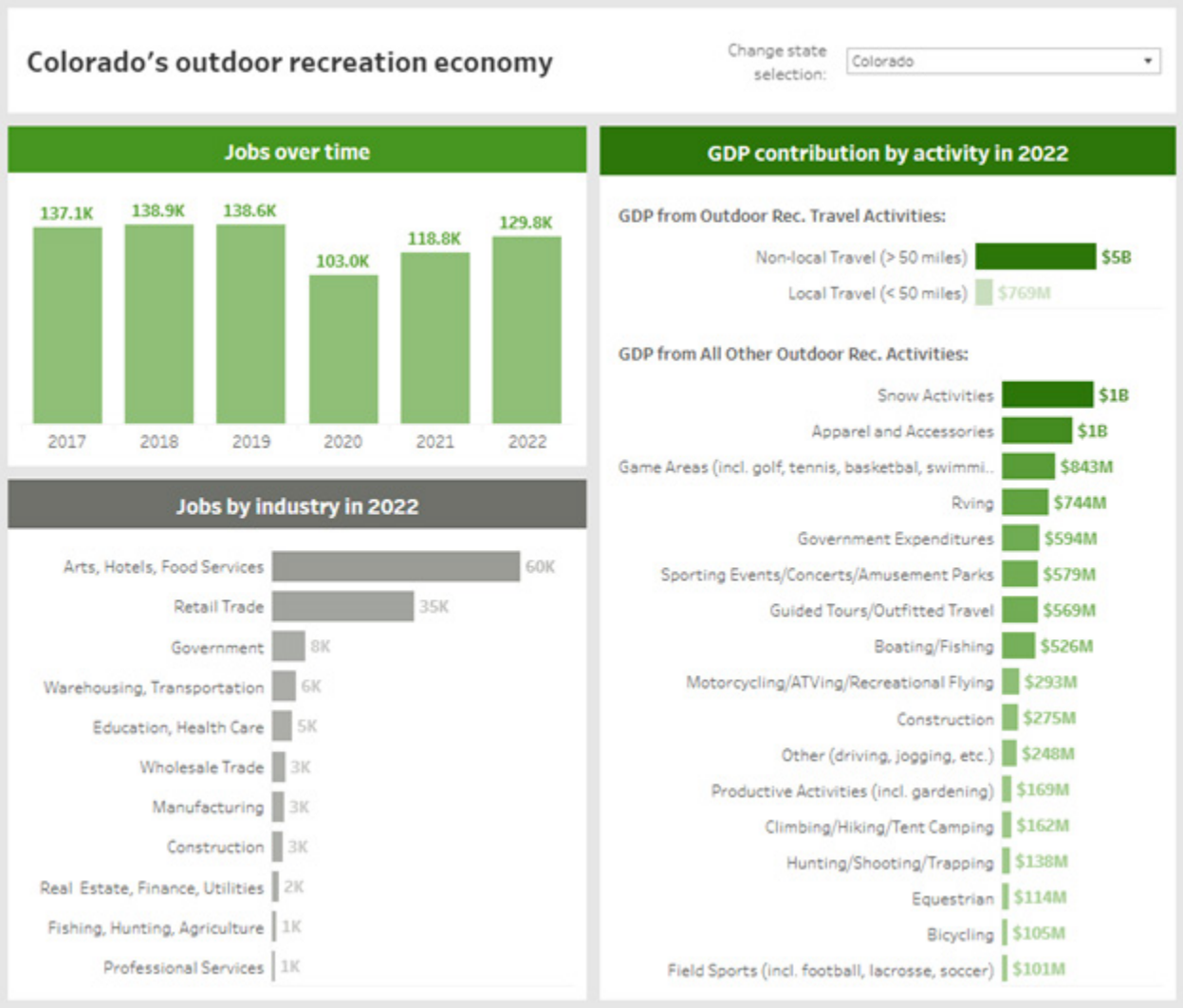
Non-local travel, defined as greater than 50 miles, alone contributes $5 billion to this figure and is driven largely by the internationally renowned ski destinations on USFS lands throughout the state.

Transportation Systems and Funding

COLORADO'S RECREATIONAL TRANSPORTATION NETWORK

Access to the outdoor recreational opportunities on federal lands is dependent on safe and reliable mobility on local, state, and federally owned roadway and trail systems. From major highways to rural

Figure F-3



Source: https://headwaterseconomics.org

roads, from developed campsites to backcountry trails, the traveling public expects to be able to move seamlessly between systems and modes, regardless of ownership, to reach their destination.

Each system, and its underlying ownership structure, dictates which programs and funding sources can be used for planning and improvements.

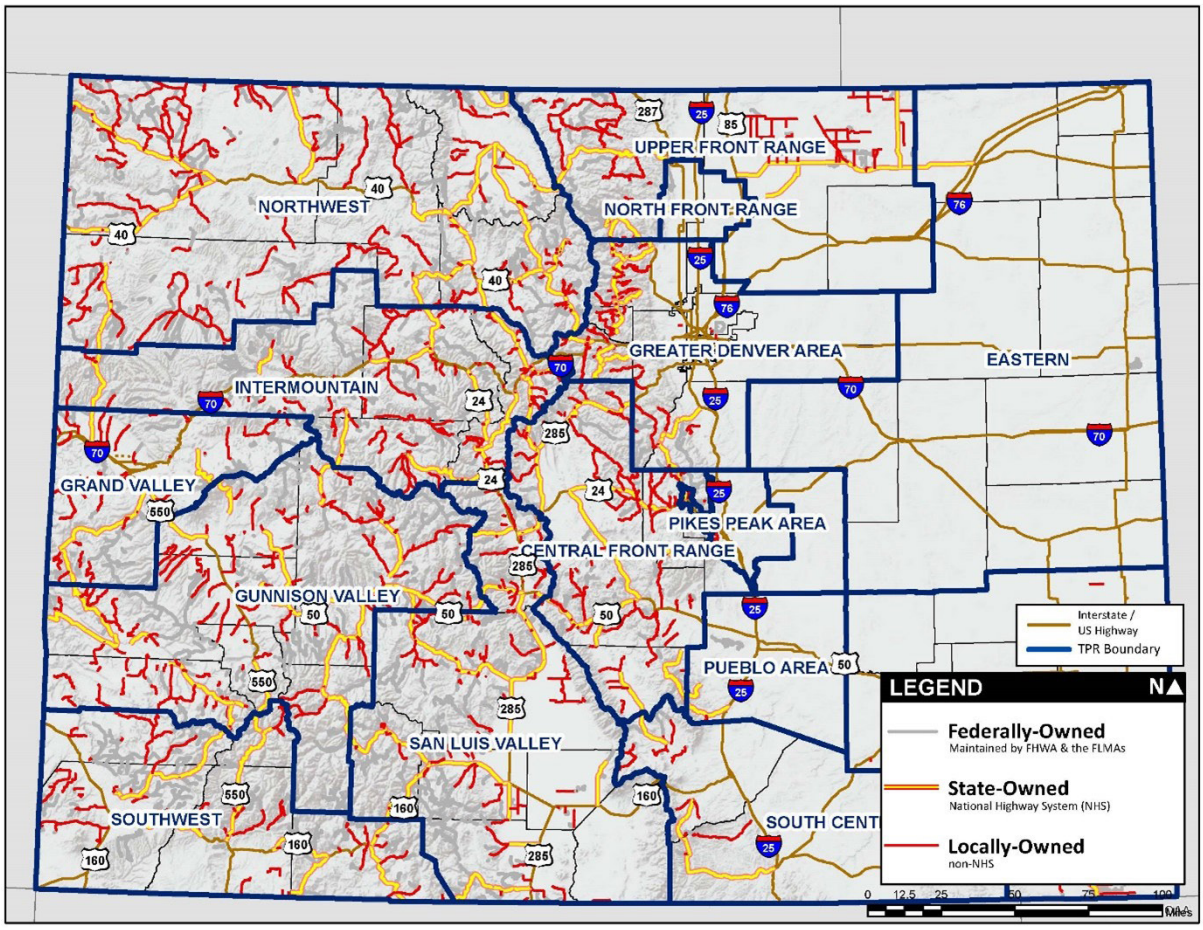
Colorado's Recreational Transportation Systems

Federally Owned Roadway Miles (all FLMAs, paved & unpaved)	7,672 Miles
State Owned FLMA Access Routes	3,897 Miles
Locally Owned FLMA Access Routes	7,154 Miles
Trails & Multiuse Paths, all Ownership	Between 40,000 and 45,000 Miles

Central Front Range TPR and PPACG Recreational Roadway Systems

Federally Owned Roadway Miles (all FLMAs, paved & unpaved)	536 Miles
State Owned FLMA Access Routes	306 Miles
Locally Owned FLMA Access Routes	710 Miles

Figure F-4



FEDERALLY OWNED SYSTEM

The federally owned high-use transportation system (and associated facilities, like bridges, trails, trailheads, etc.) is funded by U.S. Congress under the current surface transportation act (the Bipartisan Infrastructure Law, or BIL, 2022-2026). Federal Lands Highways is responsible for improvements to this system under the Federal Lands Transportation Program (FLTP).

The National Park Service, the U.S. Fish & Wildlife Service, and the USFS all receive a fixed yearly amount (set-aside) to program as agency needs dictate. The Bureau of Land Management, U.S. Army Corps of Engineers, and the Bureau of Reclamation compete for the remainder of the yearly funding (see Figure F-5).

All other federally owned transportation facilities (such as administrative or low volume public roads) are managed by the various FLMAs with departmental or agency specific funds.

In Colorado, 7,672 miles of federally owned roadways are eligible for FLTP investment. Within the CFR TPR and PPACG planning area, 536 miles of roadway qualify (gray routes in Figure F-4). This total excludes trails, trailheads, bridges, and other federally owned transportation systems also eligible for FLTP funding. Note that federally owned transportation assets are eligible for funding under the Access Program (FLAP, see next section) with an agreement whereby a state or local agency agrees to assume operations and maintenance costs of the facility.

STATE OWNED ACCESS SYSTEM

The state owned access system, which includes U.S. routes, interstate routes, and some local roads that are crucial to freight transport and airport access, falls under the jurisdiction of state DOTs to maintain and improve as needs dictate. State DOTs receive formulaic funding under the Federal Aid system, and are eligible for a variety of discretionary (competitive grant) programs under BIL.

Figure F-5

	2022	2023	2024	2025	2026
FLTP Total Funding	**$422 M**	**$430 M**	**$439 M**	**$448 M**	**$456 M**
Set-aside for National Park Service	$332 M	$339 M	$346 M	$354 M	$360 M
Set-aside for Fish and Wildlife Service	$36 M	$36 M	$36 M	$36 M	$36 M
Set-aside for Forest Service	$24 M	$25 M	$26 M	$27 M	$28 M
Remaining Amount for Bureau of Land Management, US Army Corps of Engineers, Bureau of Reclamation	$30 M	$30 M	$31 M	$31 M	$32 M

Given the prevalence of federal lands in Colorado, many state routes are also eligible for funding from the Federal Lands Access Program or FLAP. FLAP is a formulaic program administered by FLH to improve and expand access to public federal lands that support high-use recreation or economic generation.

By legislative formula, every U.S. state receives a yearly allocation under FLAP. Due to the abundance of federal lands and federal public roadway in Colorado, the state receives one of the largest yearly allocations in the country (see Figure F-6).

In Colorado, there are 3,897 miles of CDOT roadway that provide primary access to various FLMA units (gold routes in Figure F-4). In the Central Front Range TPR, there are 306 miles of CDOT roadway that provide FLMA access.

LOCALLY OWNED ACCESS SYSTEM

The locally owned system is comprised of various county and municipal facilities (such as roads, streets, bridges, sidewalks, and public transit systems) that provide urban, inter-urban, and rural mobility. Counties and municipalities play a crucial role in the planning, development, and maintenance of these transportation systems. Local governments are responsible for tailoring transportation solutions to meet the unique needs and demands of their communities. They must address issues such as traffic congestion, road safety, public transit accessibility, and infrastructure resilience.

To fund projects, local governments often rely on a combination of revenue sources, including property taxes, sales taxes, vehicle registration fees, and grants from state and federal agencies. While MPOs do not own transportation assets, they play a crucial role in planning and funding transportation systems in urbanized regions. MPOs can bring multiple jurisdictions together, develop funding strategies for projects of regional significance, and provide an excellent forum to discuss shared needs across federal, state, and local systems. In Colorado, there are 7,154 miles of roadway that provide primary access to federal lands and are owned and maintained by counties and incorporated municipalities (red routes in Figure F-4). These routes are also eligible for funding under FLAP.

TRAILS AND MULTIUSE PATHS

The vast array of natural surface trails, paved trails, and multiuse paths are integral components of Colorado's transportation and recreation infrastructure. Trails and

Figure F-6

	2022	2023	2024	2025	2026
FLAP Total Funding	$286 M	$292 M	$297 M	$304 M	$309 M
Colorado FLAP Funding	$15M	$15.5M	$16M	$16.5M	$16.99M

multiuse paths can connect neighborhoods, schools, parks, and commercial areas, fostering a sense of community and reducing dependency on vehicles. More than merely providing non-motorized access to recreational and other destinations, very often these systems are the destination in and of themselves.

The expansive systems of trails and paths throughout the United States are owned and maintained by a wide variety of local, state, and federal agencies, and can also include some non-governmental agencies as well. Trails are also eligible for a wide variety of formulaic and discretionary funding sources from local, state, and federal agencies. State and locally owned trails are eligible for funding under FLAP. The National Park Service manages the Scenic, Historic, and Recreational trail systems, with many state and local trail systems feeding into these world-class routes.

In Colorado, there is between 40,000 and 45,000 miles of trails and multiuse paths, both on and off federal lands (not pictured in Figure F-4). While official, designated trails make up the majority of this system, the state's abundant remote lands have engendered the development of informal and undesignated trail networks, posing a challenge for land managers.

Identified Needs

Colorado Springs is at the heart of a region grappling with surging travel demand, particularly for recreational access to federal lands like Pike National Forest and the Arkansas River Corridor. This growth has created significant challenges for transportation infrastructure, including congestion, increasing demands for recreational access, and the need for coordinated federal, state, and local solutions. High recreational demand, particularly along corridors like US285, Old Stage Road, and Rampart Range Road, has strained rural and semi-urban roads. Park County residents, for instance, report significant detours and increased traffic from visitors bypassing congested highways.

Workshops and one-on-one public agency meetings in the CFR TPR and PPACG led to identification of 18 transportation needs in the planning area. These workshops emphasized the importance of strategic planning, funding alignment, and innovative approaches to address transportation infrastructure challenges. Participants included representatives from USFS, BLM, USAFA, CDOT, and PPACG, among others. The discussions focused on enhancing connectivity to public lands, supporting recreational travel, and balancing growth with sustainability and security concerns. At USAFA, recreational access must be carefully managed to balance public use with operational security. This includes projects like the Santa Fe Trail and Enhanced Use Lease (EUL) Visitor Center.

Where appropriate, project needs should be integrated into state and local planning processes to ensure their consideration for inclusion in improvement programs or implementation through

discretionary funding sources, such as grants. Simultaneously, FLAP planners and programmers will explore opportunities for joint funding and partnerships with state and local entities to advance projects that align with shared priorities.

PROJECT NEEDS: COLORADO SPRINGS AND PPACG PLANNING AREA

- MPO: Yes (PPACG)
- Total Number of Projects: 7
- Total Estimated Planning Need: $100,000 - $500,000
- Total Estimated Capital Need: $12,100,000 - $27,700,000

OVERVIEW OF KEY PROJECTS

Old Stage Road Rehabilitation (Project No. 158)

The rehabilitation of Old Stage Road addresses critical safety and accessibility needs for a high-use recreational corridor linking Colorado Springs with USFS lands. This county-owned and federally accessed gravel road faces increasing demand from urban growth and recreational use. Improvements will enhance the road's surface and geometry, reduce maintenance costs, and support safer travel for both residents and visitors.

Rampart Range Road Rehabilitation (Project No. 159)

Rampart Range Road (different segments owned and managed separately by Teller County, El Paso County and the USFS), connects high-use outdoor recreation areas and serves as an essential link for tourism and local economic activity. The planned rehabilitation will address erosion, wear, and connectivity challenges, aligning with the area's growing role as a gateway to public lands.

USAFA Trails Management Plan (Project No. 181)

USAFA plays a unique dual role as a federal military installation and a regional recreational hub. This project will develop a comprehensive Trails Management Plan, balancing public access with security needs. The plan will address signage, maintenance, and access restrictions while ensuring sustainable recreational opportunities for activities like hiking and biking. This initiative aligns with USAFA's evolving development priorities, including the new EUL Visitor Center at the North Gate, slated for completion in 2025.

Santa Fe Trail Improvements (Project No. 182)

Running through the USAFA grounds, the Santa Fe Regional Trail provides critical multimodal connectivity from Colorado Springs to Monument and Palmer Lake. Planned upgrades include interpretive signage highlighting cultural and natural resources, improved security, and enhanced trail management to address issues like homelessness and unauthorized access. These improvements reflect a collaborative effort between USAFA, El Paso County, and regional stakeholders.

La-Foret Trail Improvements (Project No. 183)

Similar to the Santa Fe Trail, the La-Foret Trail improvements focus on signage, fencing, and access control. As the trail lies on the eastern side of USAFA, upgrades will enhance public safety while maintaining operational security for the base. Collaboration with local jurisdictions will ensure effective trail management and accessibility.

Ice Lake Parking Lot Enhancements (Project No. 184)

USAFA's Ice Lake parking lot is a heavily used facility supporting both recreational users and nearby trails. Upgrades will address flooding, drainage, and safety concerns, particularly around the train crossing. Improved signage and stormwater management are priorities to ensure safe and efficient access.

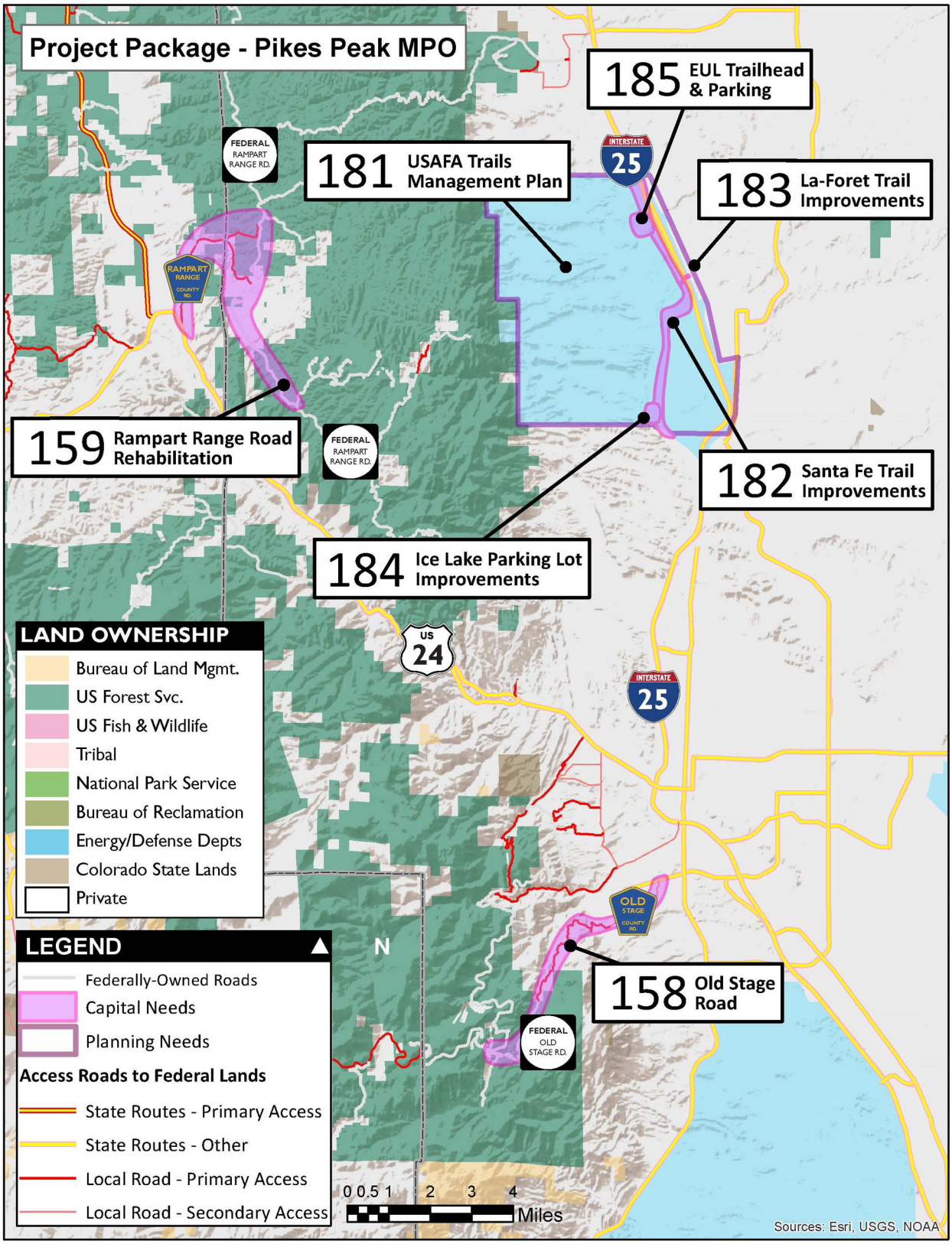
EUL Trailhead and Parking (Project No. 185)

The planned trailhead near USAFA's North Gate is part of the Enhanced Use Lease development. This public-private partnership aims to support the new Visitor Center and provide better access to trails and recreational facilities. Improved wayfinding signage will make the trailhead more user-friendly and integrated with regional recreation networks.

Figure F-7

Project Number	Project Name	Project Type	Ownership	FLMA Access	Estimated Project Cost	Fund Source	Next Investment Needed	FLMA Goal Area	CDOT Goal Areas Mobility/Safety/Asset Mgmt.
158	Old Stage Road	Roadway	Federal, County	USFS	$5,000,000 - $10,000,000	FLAP & Fed Aid/Local	Design Engineering	Asset Management	
159	Rampart Range Road Rehabilitation	Roadway	Federal	USFS	$5,000,000 - $10,000,000	FLTP	Design Engineering	Asset Management	
181	USAFA Trails Management Plan	Planning, Trail, Multi-Use Path	Federal, Municipal	DoD	$100,000 - $500,000	FLAP & Fed Aid/Local	Planning Study	Outdoor Recreation	
182	Santa Fe Trail Improvements	Multi-Use Path	Federal	DoD	$500,000 - $1,000,000	FLAP & Fed Aid/Local	Design Engineering	Outdoor Recreation	
183	La-Foret Trail Improvements	Trail	Federal	DoD	$500,000 - $1,000,000	FLAP & Fed Aid/Local	Design Engineering	Outdoor Recreation	
184	Ice Lake parking lot	Parking/Trailhead	Federal	DoD	$1,000,000 - $5,000,000	FLAP & Fed Aid/Local	Design Engineering	Outdoor Recreation	
185	EUL Trailhead & Parking	Parking/Trailhead	Federal	DoD	$100,000 - $500,000	FLAP & Fed Aid/Local	Design Engineering	Outdoor Recreation	

Figure F-8


Project Package - Pikes Peak MPO
185 EUL Trailhead & Parking
181 USAFA Trails Management Plan
183 La-Foret Trail Improvements
159 Rampart Range Road Rehabilitation
182 Santa Fe Trail Improvements
184 Ice Lake Parking Lot Improvements
158 Old Stage Road
FEDERAL RAMPART RANGE RD.
RAMPART RANGE COUNTY RD.
INTERSTATE 25
US 24
OLD STAGE COUNTY RD.
FEDERAL OLD STAGE RD.
LAND OWNERSHIP
Bureau of Land Mgmt.
US Forest Svc.
US Fish & Wildlife
Tribal
National Park Service
Bureau of Reclamation
Energy/Defense Depts
Colorado State Lands
Private
LEGEND
Federally-Owned Roads
Capital Needs
Planning Needs
Access Roads to Federal Lands
State Routes - Primary Access
State Routes - Other
Local Road - Primary Access
Local Road - Secondary Access
N
0 0.5 1 2 3 4
Miles
Sources: Esri, USGS, NOAA

APPENDIX G: 2050 LRTP PUBLIC PARTICIPATION PLAN

The following pages contain the public participation plan that was developed to guide public engagement and outreach efforts specifically for the LRTP.

APPENDIX H: 2050 LRTP SURVEY SUMMARY

The following pages contain a summary of the results of the 2050 LRTP Survey conducted by Kearns and West for PPACG.

APPENDIX I: 2050 LRTP PUBLIC COMMENTS

The public comment period for the 2050 LRTP is anticipated to be held January 10, 2025 through February 10, 2025. The following pages contain the comments received during the public comment period and a summary of verbal comments received during the four open houses held by PPACG throughout the region. This section is in development.

APPENDIX J: FINANCIAL PLAN REFERENCES

23 CFR 450.104 "Financial plan": https://www.ecfr.gov/current/title-23/chapter-I/subchapter-E/part-450#p-450.104(Financial%20plan)

> *Financial plan means documentation required to be included with a metropolitan transportation plan and TIP (and optional for the long-range statewide transportation plan and STIP) that demonstrates the consistency between reasonably available and projected sources of Federal, State, local, and private revenues and the costs of implementing proposed transportation system improvements.*

23 CFR 450.104 "Financially constrained or Fiscal constraint": https://www.ecfr.gov/current/title-23/chapter-I/subchapter-E/part-450#p-450.104(Financially%20constrained%20or%20Fiscal%20constraint)

> *Financially constrained or Fiscal constraint means that the metropolitan transportation plan, TIP, and STIP includes sufficient financial information for demonstrating that projects in the metropolitan transportation plan, TIP, and STIP can be implemented using committed, available, or reasonably available revenue sources, with reasonable assurance that the federally supported transportation system is being adequately operated and maintained. For the TIP and the STIP, financial constraint/fiscal constraint applies to each program year. Additionally, projects in air quality nonattainment and maintenance areas can be included in the first 2 years of the TIP and STIP only if funds are "available" or "committed."*

§ 450.306 Scope of the metropolitan transportation planning process: https://www.ecfr.gov/current/title-23/chapter-I/subchapter-E/part-450#p-450.306(a)

> *(a) To accomplish the objectives in § 450.300 and § 450.306(b), metropolitan planning organizations designated under § 450.310, in cooperation with the State and public transportation operators, shall develop long-range transportation plans and TIPs through a performance-driven, outcome-based approach to planning for metropolitan areas of the State.*

§ 450.324 Development and content of the metropolitan transportation plan: https://www.ecfr.gov/current/title-23/chapter-I/subchapter-E/part-450#p-450.324(f)(11)

> *23 CFR 450.324(f)(11)*
>
> *(11) A financial plan that demonstrates how the adopted transportation plan can be implemented.*
>
> *(i) For purposes of transportation system operations and maintenance, the financial plan shall contain system-level estimates of costs and revenue sources that are reasonably expected to be available to adequately operate and maintain the Federal-aid highways (as defined by 23 U.S.C. 101(a)(5)) and public transportation (as defined by title 49 U.S.C. Chapter 53).*

(ii) For the purpose of developing the metropolitan transportation plan, the MPO(s), public transportation operator(s), and State shall cooperatively develop estimates of funds that will be available to support metropolitan transportation plan implementation, as required under § 450.314(a). All necessary financial resources from public and private sources that are reasonably expected to be made available to carry out the transportation plan shall be identified.

(iii) The financial plan shall include recommendations on any additional financing strategies to fund projects and programs included in the metropolitan transportation plan. In the case of new funding sources, strategies for ensuring their availability shall be identified. The financial plan may include an assessment of the appropriateness of innovative finance techniques (for example, tolling, pricing, bonding, public private partnerships, or other strategies) as revenue sources for projects in the plan.

(iv) In developing the financial plan, the MPO shall take into account all projects and strategies proposed for funding under title 23 U.S.C., title 49 U.S.C. Chapter 53 or with other Federal funds; State assistance; local sources; and private participation. Revenue and cost estimates that support the metropolitan transportation plan must use an inflation rate(s) to reflect "year of expenditure dollars," based on reasonable financial principles and information, developed cooperatively by the MPO, State(s), and public transportation operator(s).

(v) For the outer years of the metropolitan transportation plan (i.e., beyond the first 10 years), the financial plan may reflect aggregate cost ranges/cost bands, as long as the future funding source(s) is reasonably expected to be available to support the projected cost ranges/cost bands.

(vi) For nonattainment and maintenance areas, the financial plan shall address the specific financial strategies required to ensure the implementation of TCMs in the applicable SIP.

(vii) For illustrative purposes, the financial plan may include additional projects that would be included in the adopted transportation plan if additional resources beyond those identified in the financial plan were to become available.

(viii) In cases that the FHWA and the FTA find a metropolitan transportation plan to be fiscally constrained and a revenue source is subsequently removed or substantially reduced (i.e., by legislative or administrative actions), the FHWA and the FTA will not withdraw the original determination of fiscal constraint; however, in such cases, the FHWA and the FTA will not act on an updated or amended metropolitan transportation plan that does not reflect the changed revenue situation.

Colorado Department of the Treasury HUTF Distributions: https://treasury.colorado.gov/hutf-distributions

The Conference Board Economic Forecast for the US Economy: https://www.

conference-board.org/research/us-forecast

FHWA Bipartisan Infrastructure Law: https://www.fhwa.dot.gov/bipartisan-infrastructure-law/

FHWA Bipartisan Infrastructure Law Fact Sheets: https://www.fhwa.dot.gov/bipartisan-infrastructure-law/fact_sheets.cfm

FRED Economic Data: https://fred.stlouisfed.org/series/FPCPITOTLZGUSA

Previous PPACG MTP – 2045 LRTP Chapter six: https://www.ppacg.org/wp-content/uploads/2020/03/2045-Moving-Forward_FINAL_spreads_chp6.pdf

U.S. Bureau of Labor Statistics, Consumer Price Index: https://www.bls.gov/regions/mountain-plains/news-release/consumerpriceindex_denver.htm

Wells Fargo Economic Outlook: https://wellsfargo.bluematrix.com/links2/html/1844f48b-fe1e-48a7-b841-9018cd2ff747),

https://ops.fhwa.dot.gov/program_areas/reduce-non-cong.htm#:~:text=Non%2Drecurring%20congestion%20includes%20the,events%2C%20and%20planned%20special%20events.







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Pikes Peak Area
Council of Governments
Communities Working Together

Pikes Peak Area Council of Governments
Communities Working Together

Upcoming Meeting Schedule

Date	Time	Meeting
Dec. 20	3 p.m.	Community Advisory Committee
Jan. 2	8 a.m.	Commission on Aging – Executive Committee
Jan. 2	11 a.m.	Regional Advisory Council – Executive Committee
Jan. 3	9 a.m.	Board of Directors Workshop
Jan. 8	9 a.m.	Board of Directors
Jan. 13	8:30 a.m.	Legislative Committee
Jan. 15	3 p.m.	Commission on Aging
Jan. 16	8:30 a.m.	Mobility Coordinating Committee – Executive Committee
Jan. 16	1:30 p.m.	Transportation Advisory Committee
Jan. 22	9 a.m.	Water Quality Management Committee
Jan. 22	1 p.m.	Air Quality Technical committee
Jan. 23	10 a.m.	Regional Advisory Council
Jan. 27	8:30 a.m.	Legislative Committee
Jan. 28	9:30 a.m.	Mobility Coordinating Committee
Jan. 29	3 p.m.	Community Advisory Committee
Feb. 3	8:30 a.m.	Legislative Committee
Feb. 5	8 a.m.	Commission on Aging – Executive Committee
Feb. 5	11 a.m.	Regional Advisory Council – Executive Committee
Feb. 7	9 a.m.	Board of Directors Workshop
Feb. 10	8:30 a.m.	Legislative Committee
Feb. 12	9 a.m.	Board of Directors
Feb. 19	3 p.m.	Commission on Aging
Feb. 20	8:30 a.m.	Mobility Coordinating Committee – Executive Committee
Feb. 20	1:30 p.m.	Transportation Advisory Committee
Feb. 24	8:30 a.m.	Legislative Committee
Feb. 25	9:30 a.m.	Mobility Coordinating Committee
Feb. 26	9 a.m.	Water Quality Management Committee
Feb. 26	1 p.m.	Air Quality Technical Committee
Feb. 26	3 p.m.	Community Advisory Committee
Feb. 27	10 a.m.	Regional Advisory Council

Schedule as of Dec. 13, 2024
Meetings may be added, changed or cancelled as needed. Current meeting schedule is available at ppacg.org.