Grand Valley 2040 Regional Transportation Plan Update

LSC #144180

Final Report

2040 Regional Transportation Plan
Connecting Our Communities
walk fly bus bike drive rail freight

December 15, 2014

Grand Valley 2040
Regional Transportation Plan Update
LSC #144180

Final Report

prepared for

Mesa County Regional Transportation Planning Office
525 S. 6th Street, 2nd Floor
Department 5093
P.O. Box 20,000
Grand Junction, CO 81501

prepared by:

Cambridge Systematics, Inc.
999 18th Street, Suite 3000
Denver, CO 80202

with

Turnkey Consulting, LLC
Catalyst Consulting, Inc.
LSC Transportation Consultants, Inc.
Urban Interactive Studio

December 15, 2014

Table of Contents

Table of Contents

Table of Contents

LIST OF TABULATIONS

Table of Contents

Table of Contents

LIST OF ILLUSTRATIONS

Table of Contents

Table of Contents

Chapter 1:

2040 RTP Summary

Chapter 1: 2040 RTP Summary

CHAPTER OVERVIEW

The Grand Valley is a vibrant, destination region and major hub on Colorado's Western Slope. Mesa County is the fourth largest and eleventh most populous of Colorado's counties. The region is situated at the confluence of two major rivers and sits at the crossroads of major travel routes. The Grand Valley's communities each offer unique character, downtown centers, global travel destinations, and significant agriculutral and natural resources. While still recovering from the recent recession, the region's economy is diversifying and population is growing. The regional transportation system connects businesses to markets, improves quality of life for residents, and provides visitors access to local communities, businesses, and destinations.

2040 Regional Transportation Plan

To maintain the region's transportation system, ensure the efficient movement of people and goods, and support future growth and development, transportation services and infrastructure are planned and coordinated through a regional transportation planning process carried out by the Grand Valley Metropolitan Planning Organization (GVMPO).

The GVMPO is the federally-designated transportation planning organization for the Grand Junction urbanized area and all of Mesa County. The GVMPO is led by the Grand Valley Regional Transportation Committee (GVRTC) and supported by a Technical Advisory Committee and Regional Transportation Plan Steering Committee. The long-term guidance developed in the regional Long Range Regional Transportation Plan (RTP) informs a short-term capital improvement plan, or the Transportation Improvement Program (TIP). The GVMPO produces the TIP to coordinate projects selected by local governments and the Colorado Department of Transportation and to then prioritize projects to make the best use of limited funding.

The regional transportation plan is required under federal regulations and is critical for the region to assess, prioritize, and fund future transportation improvements. This planning process examines current transportation issues and needs for travelers, workers, visitors, and residents of the region. The regional plan covers all of the Grand Valley, including the communities of Clifton, Collbran, DeBeque, Fruita, Gateway, Glade Park, Grand Junction, Loma, Mesa, Mack, Palisade, Whitewater, and the rest of Mesa County.

The Grand Valley 2040 Regional Transportation Plan (RTP) is the most recent update to the region's overall vision for future transportation infrastructure and investment. The 2040 RTP looks out 20 years into the future and identifies the types of investments and strategies needed to address transportation mobility needs in the region. The RTP includes a list of critical regional priority projects anticipated to be implemented between now and 2040. Important but unfunded transportation needs are also described and may be implemented should additional funding become available.

This plan will guide future investments in the region's transportation system to reduce congestion; ease commutes; improve roadway safety; enhance sidewalks, bike, and multi-use trails; and, maintain an efficient and effective transportation system that supports the regional economy. The 2040 RTP is also the region's first performance-based plan. Regional investments are tied to newly established national and state goals for performance, condition, safety, and mobility of the transportation system. The GVMPO will continue to measure the success of regional investments in delivering results and will communicate progress to the public and elected officials.

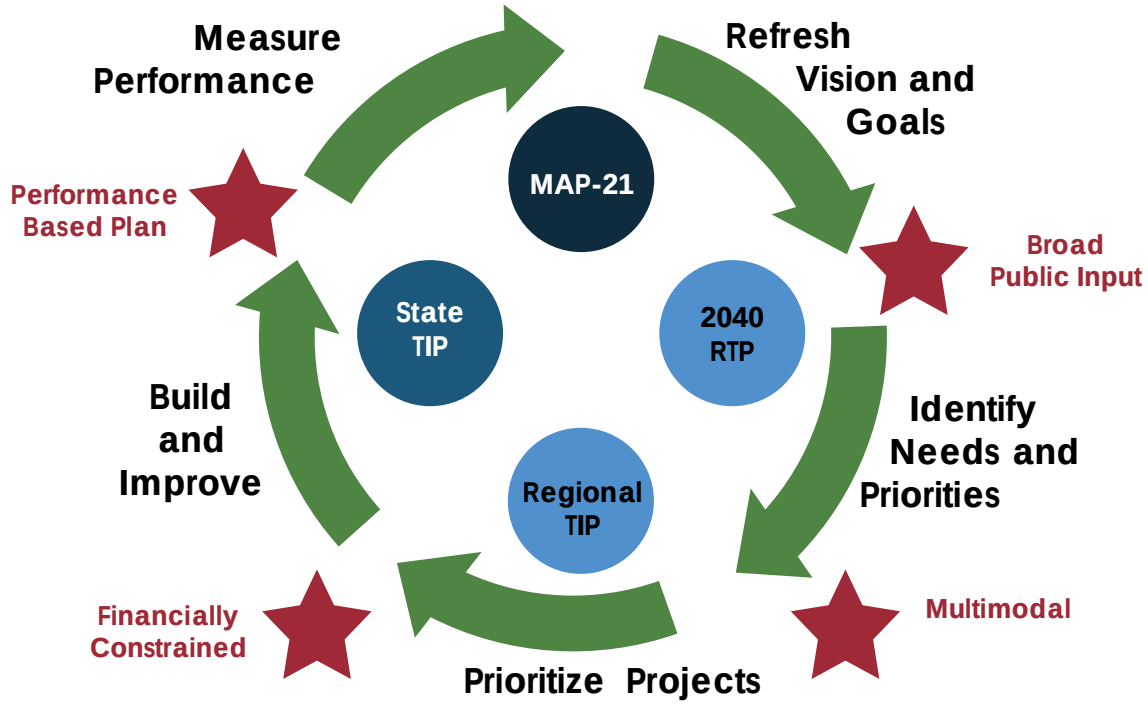
Regional Planning Process

The 2040 RTP was updated in accordance with federal regulations and emphasized public involvement. An extensive public outreach process took place over the summer of 2014. Through surveys, websites, kiosks, event booths, focus groups, and interviews a significant number of Mesa County residents had the opportunity to share their ideas and insights on transportation in the region. It is estimated that:

- 16,510 words were received through online surveys;
- 800 views of project website pages were recorded;
- 600 dots were placed on maps and display boards;
- 350 people stopped by a community event booth; and,
- 20 flip chart pages were filled with ideas, suggestions, and comments.

The GVMPO and 2040 RTP Steering Committee would like to thank all those who took the time to comment and to become involved in planning the region's transportation future.

The 2040 RTP planning process sought to refresh and update the regional goals and project priorities established in the previous 2035 regional plan. The 2040 process was a streamlined update and relied substantially on the significant public involvement, analysis, and call for projects completed under the prior plan. The 2040 plan reexamined regional goals, looked at a broader set of regional trends and conditions, identified additional needs through public input, and prioritized investments through a performance approach to decision-making. From here, the 2040 RTP will move into implementing projects and continually monitoring regional transportation system condition and performance impacts.



Key Regional Issues

Public comment received through the 2040 process indicates that the regional transportation system is critical to supporting the region's quality of life, future growth, diversifying economy, and emergence as a global recreation destination. The following key messages emerged from the 2040 planning process.

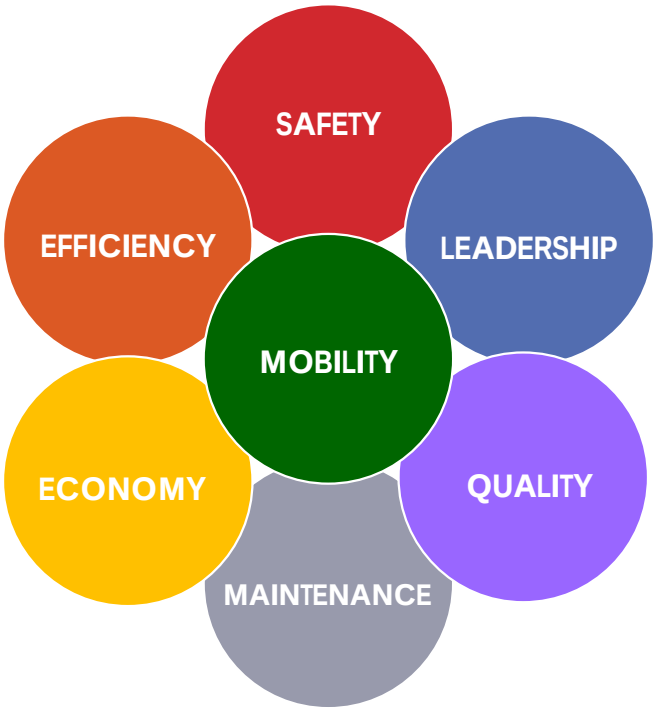
Build multimodal systems that enable people to easily travel from work to home or to readily transfer from bike to bus. The region's extensive trail networks, pedestrian amenities, transit routes, local streets, interstate highways, and truck routes are an interconnected multimodal network that could be more complete. Residents suggested that more connections could be made, more corridors could be established, and more transportation choices could be offered.

Maintain what we have before adding new capacity. Residents did not broadly support significant new investments without first preserving existing roads, signs, bridges, trails, and sidewalks. Adequate funding is not available to fulfill all regional needs and the first priority for investment should be maintenance. Additional transportation dollars can then be directed toward improving multimodal infrastructure, including making roads safer for all users, adding shoulders to county roads and urban streets, creating additional bike and pedestrian routes, and upgrading interchanges and truck routes.

Support quality community growth. There is widespread agreement that transportation substantially improves the livability of communities and the economic development prospects of the region. There is less agreement on how and what transportation improvements have the greatest impact on our communities. Many residents view investments in bike and pedestrian facilities as a future trend and critical path to supporting quality communities and economic diversification. Other residents view basic improvements to roads and reducing congestion as key to advancing quality development in the region. What is clear is that balanced transportation improvements that enable people and goods to move safely and efficiently throughout the region will support future growth.

In support of this vision, regional goals for 2040 were established based on public input. The following goal statements provided guidance for evaluating projects and were considered in the decision-making process as the region makes progress towards its transportation vision for the future.

- Improving roadway **SAFETY** for all travelers;
- **MAINTAINING** the existing transportation system;
- Linking communities through an **EFFICIENT** multimodal transportation network;
- Increasing bike and pedestrian **MOBILITY** and expanding transit options;
- Promoting **ECONOMIC** competitiveness;
- Creating **QUALITY** communities, providing access to recreation, and encouraging healthy lifestyle choices; and,
- Encouraging regional **LEADERSHIP** and cooperation.



Challenges and Opportunities

> *Transportation affects every one of us, every day, and in many ways. Our transportation system has a large impact on our regional economy. To make fair and efficient choices with limited resources, we need people throughout the region to let us know what works well and what needs improvement."* – Mesa County Commissioner Steve Aquafresca

The 2040 RTP identifies the challenges and opportunities the Grand Valley is facing now and in the future. The following chapters of this regional plan provide a detailed look at trends and conditions, summary of public input, and guidance and strategies to help the region invest in the future.

- **Chapter 1 – Executive Summary:** Overview of the 2040 planning process, key public issues, regional goals, plan content and significant updates to this 2040 Regional Transportation Plan.
- **Chapter 2 – Public Engagement:** Top issues, key considerations, tradeoffs, and investment preferences from extensive public input are summarized. This chapter synthesizes what was heard and how residents were reached for comment.
- **Chapter 3 – Growth in the Region:** Future growth in the region is examined through demographic and economic trends. This chapter details future projections for population and economic growth and travel trends through 2040.
- **Chapter 4 –Transportation Financing and Funding:** The complexities of funding important regional transportation investments are described. This chapter estimates future surface transportation and public transit revenues available to help improve and maintain the regional transportation system.
- **Chapter 5 – Regional Non-Motorized Transportation:** Key public concerns, use, safety, and growing impact of regional bike and pedestrian trail networks and investments are considered. This chapter presents prioritized regional non-motorized investments and detailed cost estimates for future consideration.
- **Chapter 6 – Regional Public Transportation:** Public opinions, ridership growth, and regional demand for connected transit services are summarized. This chapter highlights key data describing the importance of Grand Valley Transit to the region.
- **Chapter 7 – Regional Roadways and Transportation:** Trends in congestion, system performance, and roadway safety are detailed. This chapter presents fiscally constrained regional priority projects for 2040 and additional unfunded needs.
- **Chapter 8 – Regional Corridor Visions:** Long-term visions for over thirty key regional corridors are updated. This chapter summarizes visions for regional travel corridors and the goals, objectives, strategies and investments needed to achieve each vision.
- **Chapter 9 – Regional Freight and Intermodal Transportation:** The role of freight transportation in economic development and industry diversification is discussed. This chapter compiles data on regional freight movements, international exports, and trade imbalances.
- **Chapter 10 – Regional Performance and Results:** Performance of the region's transportation system and status of regional progress toward national goals and state targets is examined. This chapter reports performance results on key measures.

2040 Regional Transportation Plan Updates

The 2040 regional planning process builds on the previous regional transportation plan but includes significant regional accomplishments and notable changes from prior plans.

Regional progress. Major trail, road construction, and transit capital projects have been completed since the last plan update. Notable projects included completion of the Monument View section of the Riverfront Trail to make the final link and trail connection between Fruita and Grand Junction. The first diverging diamond interchange in the state of Colorado, was opened to traffic at I-70 Exit 26. The interchange represents a new concept in design that increases capacity of the interchange, improves safety, requires less land area, and reduces cost by a third over traditional interchanges. Grand Valley Transit completed maintenance buildings in Grand Junction and Whitewater to repair and maintain the region's growing bus fleet, including vehicles powered by compressed natural gas. These example regional projects all further progress toward the region's vision and transportation blueprint for the future.

Updated information. Past regional transportation plans delved deeply into public engagement and modelling the impacts of road capacity projects. The 2040 RTP was informed by updated regional travel models, future growth estimates, and data on safety and freight conditions. As a result, this plan provides an updated and balanced look at the future of the region following the impacts of the recent economic recession. Revised population and economy forecasts indicate that the existing regional transportation network will move people and goods efficiently well into the future, without the need for significant new investments in capacity. This means more attention to safety improvements at intersections, more funding available to improve business loops of major highways, and more investments in maintaining the system in a state of good repair. Newly available roadway safety data provides a closer look at regional crash issues and an expanded view of freight movement and economic vitality more closely links transportation and the economy.

Non-motorized priorities. The Grand Valley's recreational opportunities are increasingly attracting businesses, residents, and visitors. Through public comment in the 2040 regional planning process, residents from all walks of life indicated a high-level of support for bike and pedestrian investments. Non-motorized trail investments are viewed as a key opportunity for future industry growth and a competitive economic advantage for the region. The region's expanding trail network and outdoor access attracts visitors from around the globe. Trails also provide valued recreational, healthy living, and quality of life benefits to residents in the Grand Valley. The 2040 RTP goes beyond previous plans by prioritizing regional trail improvements and producing detailed cost estimates for use in future planning and implementation activities. Future funding for non-motorized transportation investments still falls well short of identified regional needs, but this plan will advance critical investments and help integrate bike and pedestrian projects with future regional investments.

Performance management. New federal legislation requires a performance-based approach to transportation planning. This 2040 RTP transitions the regional planning process toward performance management. Regional projects were prioritized based on expected performance impacts and linked to key national goals and statewide targets. In the future, regional investments in the Transportation Improvement Program will be tied to state and regional performance targets in key areas of safety, condition, mobility, congestion, freight, and asset management. Performance-management is the future of transportation planning, but the process is evolving as performance data becomes available and guidance on federal regulations is issued. This 2040 RTP will likely have to be updated subsequently to accommodate changes in federal and state performance measures and targets. In the long-run, performance-based management and planning will lead to more transparent decision-making, more efficient and impactful investments, and will help move toward the region's vision for the future.

Chapter 2:
Public Engagement

Chapter 2: Public Engagement

CHAPTER OVERVIEW

The Grand Valley 2040 Regional Transportation Plan will advance transportation investments that improve commute, business, recreation, safety, health, and lifestyle opportunities for residents, businesses, and visitors in the region. To that end, the public and stakeholders were engaged at every opportunity throughout this planning effort. Online surveys, social media, websites, interviews, iPad kiosks, and community event booths helped capture public comment and ideas. This chapter provides a summary of key messages, a synthesis of comments on major themes, and and an overview of the public engagement process.

Key Messages and Cross Cutting Themes

The 2040 Regional Transportation Plan (RTP) public outreach process took place over the summer of 2014. Through surveys, websites, event booths, focus groups, and meetings a large number of Mesa County residents had the opportunity to share their ideas and insights on transportation in the region. It is estimated that:

- 16,510 words were received through online surveys;
- 800 views of project website pages were recorded;
- 600 dots were placed on maps and display boards;
- 350 people stopped by a community event booth; and,
- Numerous flip charts pages were filled with ideas, suggestions, and comments.

The Grand Valley Metropolitan Planning Organization (GVMPO) and 2040 RTP project team would like to thank all those who took the time to comment and to become involved in planning the region's transportation future.

The GVMPO also recognizes that public comment received though this planning process is not necessarily representative of Mesa County public opinion as a whole. The 2040 RTP process provided many opportunities for people from all communities and all perspectives to comment online and at regional events. Those people that did engage and comment tended to be those who are also most interested, knowledgeable, or passionate about transportation issues. Public comment has been integrated within this plan and will be considered, on balance, as one source of information in future decision making processes.

Public comment received through this 2040 process indicated that residents place the highest value on moving people and goods around the region, regardless of whether by car, bus, bike, feet, or other modes - roller skates were even mentioned. The following key messages emerged from the 2040 planning process.

- **Build multimodal systems.** Residents support multimodal transportation projects that allow people to easily travel from work to home or to readily transfer from bike to bus. The region's extensive trail network, bike lanes, pedestrian amenities, transit routes, and local streets form the backbone of an interconnected multimodal network. People also recognized the importance of moving goods to support businesses and the regional economy and to reduce the impacts of truck traffic on roadways. However, public comment suggested that more connections could be made, more corridors could be established, and more choices could be offered.
- **Maintain what we have.** Few residents were interested in adding new capacity without first maintaining and preserving existing roads, signs, bridges, trails, and sidewalks. Residents understand that adequate funding is not available to fulfill all regional needs and the first priority for investment should be maintenance. Any additional transportation dollars should then be directed toward improving existing infrastructure. Desired improvements included making roads and intersections safer for all users, widening or adding shoulders to county roads and busy urban streets, creating additional bike routes or pedestrian crossings, and upgrading interchanges and truck routes.
- **Support quality community growth.** There is widespread agreement that efficient, safe, and functioning transportation systems substantially improve quality of life for residents, the livability of communities, and the business and economic development prospects of the region. There is less agreement on how and what transportation improvements have the greatest impact on our communities. Many residents view investments in bike and pedestrian facilities as the future trend and critical path to supporting quality communities, while other residents view basic improvements to roads and reducing congestion as key to advancing quality development in the region.

Figure 2.1 represents a word cloud of all comments received online throughout this planning effort. Words that appear larger were heard more frequently and represent key themes and high levels of public interest.

Figure 2.1: Common Themes from the 2040 RTP

Regional Goals

Goals establish the region's vision for future transportation investments and are directly linked with project prioritization and performance reporting. The 2035 RTP process emphasized four critical goals: (1) to enhance mobility, (2) promote economic vitality, (3) increase safety, and (4) provide transportation system enhancements.

The early stages of the 2040 planning process focused on public confirmation that these 2035 goals still represented the region and resonated with residents. Tremendous feedback was received through web surveys and display boards at community events. The public voted on a broad set of priority regional goals, which helped refine the 2040 goal statements. Some themes remained consistent, including: safety, mobility, and economy, while other themes emerged as important, including: quality communities, maintaining the system, efficient connections, and leadership.

The 2040 RTP regional goals are interconnected and interrelated. The region cannot work toward these goals without considering how future transportation investments support each goal. The following 2040 goal statements provide guidance for evaluating projects and will be considered in the decision-making process as the region makes progress towards its transportation vision for the future.

- Improving roadway **SAFETY** for all travelers;
- **MAINTAINING** the existing transportation system;
- Linking communities through an **EFFICIENT** multimodal transportation network;
- Increasing bike and pedestrian **MOBILITY** and expanding transit options;
- Promoting **ECONOMIC** competitiveness;
- Creating **QUALITY** communities, providing access to recreation, and encouraging healthy lifestyle choices; and,
- Encouraging regional **LEADERSHIP** and cooperation.

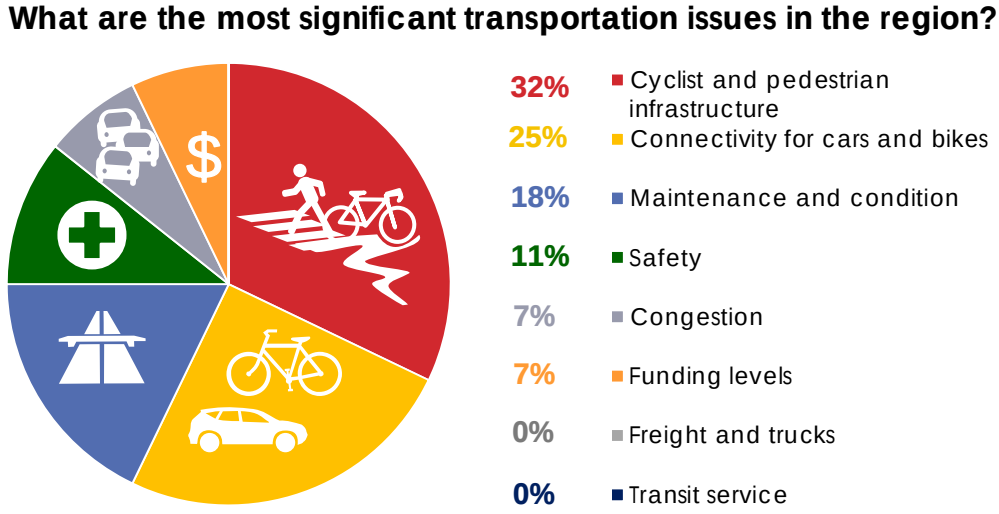
Thematic Results

Public input received throughout this planning process is synthesized and included within each modal chapter of the 2040 RTP. The following section presents comment on broad issues such as the benefits of quality regional transportation systems, regional investment priorities, and transportation finance options.

What Challenges Do We Face?

When asked about the region's most significant transportation issue, most respondents indicated that connectivity and mobility issues for cars, bikes, and people were the greatest needs in the region. Maintenance and safety were also commonly identified challenges. Congestion, funding levels, transit, and freight movement were also mentioned in public comments, but as shown in the survey results in Figure 2.2, were not identified as pressing future issues. Each modal chapter of the 2040 RTP includes detailed summaries of public comment received on each of these issues.

Figure 2.2: 2040 Transportation Investment Priorities



Where Should We Invest?

In online polls, residents were asked to prioritize where they would invest transportation dollars. Figure 2.3 highlights the top ranked choices from more than 300 survey respondents. Consistent with comments received throughout the planning process, maintaining the existing transportation infrastructure was considered the highest priority. This was followed by demand for expanding cycling and walking facilities and improved transit service and other transportation options for those unable or preferring not to drive.

Figure 2.3: 2040 Transportation Investment Priorities

These priorites represent a change from the 2035 RTP direction and public perception of five years earlier. The 2035 plan emphasized reconstructing facilities, adding new roadways, and improving transportation operations and management to address the possibility of rising congestion. However, the region's economy has changed dramatically in the past five years and congestion is not anticipated to be as significant an issue in the near future.

The emphasis on maintenance and preserving infrastructure in the region today reflects regional fiscal constraint and consumer confidence. Opportunities in the regional economy include manufacturing and a rise in activity related to a trails-based economy – including bike component manufacturing, outdoor gear retail sales, and recreational tourism and visitation. This is reflected in the region's reprioritization of needed transportation investments into cycling and trail infrastructure, access to recreation, and improved freight movement.

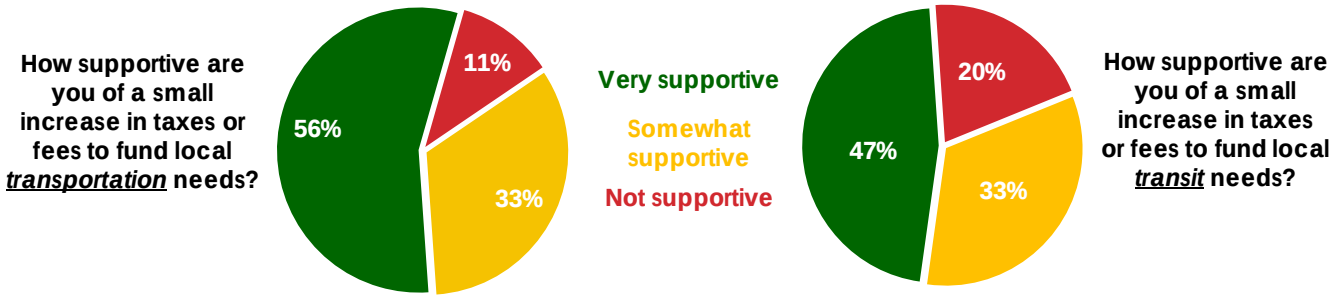
How Do We Pay for Transportation?

Grand Valley residents recognize that transportation funding is limited and that available dollars must be invested wisely. Many people foresee a reduced role for the federal government in funding transportation and increased roles for state and local governments. There are also some common misperceptions surrounding transportation finance, particularly regarding fuel taxes and paying for improvements to cycling and walking infrastructure. These topics are covered in more detail in Chapter 4 of this planning document.

The total cost of roadway and active transportation projects considered in the 2040 RTP equals some $330 million, while total federal and local funding expected to be available for regional projects through 2040 could total just $236 million. Regional transportation needs far exceed current transportation funding levels. This challenge is not unique to Mesa County and regions across the country are examining alternative funding options.

Informal opinion surveys were conducted online to gauge public support for alternative transportation funding. Figure 2.4 shows that overall, Mesa County residents are split on increasing future funding for transportation. While more than half of those polled are very supportive of an increase in taxes or fees, another third are less supportive and 1 in 10 would not support an increase at all. Public support for additional revenue for transit improvements is even less certain.

Figure 2.4: Public Support for Increased Transportation Funding



Among Mesa County residents, more than half supported the idea of raising the gas tax (52%), while fewer supported increases in local sales and property taxes (40%), and relatively few favor reducing spending altogether (8%). Online surveys conducted by CDOT in 2013 and by Club 20 in 2014 found similar results. The Club 20 poll was an unscientific survey of over 400 Western Slope residents that found that 64 percent of respondents would be willing to pay more money to improve the transportation system. Two-thirds of those residents favored an increase in the gas tax as the most preferable way to raise revenues. These regional results mirror regional public opinion from the 2035 planning effort, but are more supportive of public financing than recent national and state polling results on transportation finance.

In the fall of 2013, a coalition of Colorado transportation interests considered placing a statewide measure on the ballot that would increase sales taxes to fund local transportation needs. The measure was not ultimately pursued, in large part because public opinion showed relatively little support. Key findings from statewide polling conducted at the time are instructive to Mesa County. In 2013, just 1 in 5 Colorado voters viewed transportation as a high priority issue in the state, while more than half believed K-12 education was the highest priority. When asked to consider a 5 to 15 cent increase in gas taxes, nearly two-thirds of respondents said they would vote no on a tax increase. When asked about other revenue mechanisms, three-quarters of Colorado voters disapproved of vehicle mile traveled fees and a majority disapproved of including gas and fuel in sales tax collections. More agreeable options included indexing the gas tax to inflation and increasing sales taxes to pay for transportation and transit. These statewide results are consistent with recent national polling by Gallup and the Reason Institute which has found that more than two-thirds of voters oppose increasing gas taxes.

Outreach and Engagement Process

The goals of the 2040 RTP outreach and engagement process were to readily share information, to make providing input simple, and to reach as many people as possible through events and technology. Overall, an estimated 900 people shared their ideas and comments on transportation in the Grand Valley. The following section provides a brief summary of the methods and techniques utilized in the planning process.

The previous 2035 RTP was a comprehensive plan update. That outreach effort that offered many opportunities to engage and provided for many meetings and events with stakeholders. The 2040 RTP process was intended to be more streamlined and more focused on using technology to reach people, while providing opportunities for direct input at regional events and interviews. Figure 2.5 provides an overview of the outreach process beginning with each phase and including the activities and techniques employed, the issues and input sought, and how public comments were reflected in key outcomes.

Figure 2.5: 2040 Planning Process Overview

In the first phase of outreach, public opinion was gathered through surveys, social media, the project website, and community event booths. Input was sought on prioritization of regional goals, current transportation issues and challenges, and the benefits and significance of transportation to the region. The second phase built on initial activities and included additional community event booths, an interactive online mapping tool, stakeholder interviews, meetings, and iPad kiosks. This phase gathered more detailed information on specific issues, opportunities, regional projects and investment priorities and helped refine regional goals. In the final phase of outreach, meetings, and kiosks were deployed to provide the opportunity for the public to provide comment on the draft 2040 plan and to help determine regional strategies and investment choices moving forward. The following outreach techniques and technologies were used throughout this effort.

Online Surveys

Web-based surveys were used to gather broad public input on why transportation matters in the region, what transportation issues were most important, and to gauge public opinion on specific issues. Surveys were shared online, distributed to email lists, and embedded within the project website. Overall, some 395 responses to a series of 2040 RTP surveys were recorded. Included within that total were nearly 90 responses from individuals who regularly participate in the City of Grand Junction's standing survey panel. This group is representative of the City's overall demographics. Survey results are understood to represent certain viewpoints more than others and to reflect only the ideas and opinions of survey takers. However, within the more than 34 pages of comments submitted through this series of surveys many different and balanced perspectives about the future of transportation in the Grand Valley can be found.

Community Events

Over the summer and fall of 2014, GVMPO staff and RTP Steering Committee volunteers were present at major regional and community events. These events included the Fruita Fall Festival, Palisade Peach festival, weekly Grand Junction and Palisade Farmer's Markets, Mesa County Fair, Powderhorn Outdoor Fest, and others. A 2040 RTP booth with printed maps and informative displays was set up at these events to engage residents. Interactive voting and comment activities provided people the opportunity to vote with stickers, to write comments, to circle hot spots on a map, and to have their questions answered by staff. An estimated 350 persons visited a community event booth and had an opportunity to share their ideas and concerns.

Project Website and Hot Spots e-Mapping Tool

A project website (www.gv2040rtp.org) and dedicated email address were created to provide an online presence. The website was used to share surveys, links of interest, to distribute information, and encourage people to learn more about the transportation planning effort. Over the summer and fall of 2014, the project website received 238 visits from unique users who viewed over 800 page views. Nearly three-quarters of site visitors were new and had not visited the site before. The site was also used to provide for public comment on the draft 2040 Plan documents and resources.

A key component of the project website was the inclusion of an interactive hot spots e-mapping tool (www.gv2040rtp.org/places). This site encouraged visitors to post pictures, submit comments, and vote up or down on specific hot spots or potential projects in the region. More than a dozen projects and regional hot spots were identified through this site and will be integrated into lists of potential future projects.

Facebook

A Facebook page was created for the 2040 RTP process and utilized to share information, post questions and surveys, and to connect with other regional organizations. This use of social media was successfully in expanding the RTP audience and surveys. Each post was shared by other regional organizations or individuals and was then likely seen by countless more people online. An estimated 1 in 5 visitors to the project website and a significant number of survey takers were referred through social media.

iPad Kiosks

This planning process experimented with technology to engage audiences that may not otherwise have been reached or may not typically become involved in transportation issues. This was accomplished through the deployment of interactive iPad kiosks in the common areas of busy public spaces, including the Mesa County Central Services building, Community Services and Workforce Center, and Department of Human Services. These iPad kiosks enabled users to navigate the project website through a touch screen tablet and respond to a series of mini-polls on a variety of transportation topics. In total, more than 65 survey responses were recorded through these kiosks.

Interviews and Meetings

Throughout the 2040 process, representatives from key stakeholder groups were offered the opportunity to discuss transportation issues in Mesa County in-depth and in-person. These groups included public health, law enforcement, natural resources, community development, transit, assisted transportation, K-12 and higher education, business, economic development, freight, air quality, and active transportation organizations Approximately a dozen interviews and focus groups were held with key contacts from local Chambers of Commerce, downtown development and county economic development groups, safety, and air quality organizations, advocacy groups, and resource agencies. These conversations covered a variety of topics and revealed helpful insights into the importance of multi-modal transportation investments to the Grand Valley economy.

GVMPO and consultant staff also met with officials from local municipalities, other County departments, and public-private groups such as the Urban Trails Committee. Presentations and updates on the 2040 RTP were made to city councils, the GVRTC, and to a gathering of more than 40 elected representatives and local officials at the quarterly Municipalities Dinner. Interactive cell phone polling was used during the presentation to local officials to gather input and preferences from this group. Steering Committee members also periodically briefed their respective departments and local governments on the plan process and progress.

Chapter 3:
Growth in the Region

Chapter 3: Growth in the Region

Trends and Conditions

CHAPTER OVERVIEW

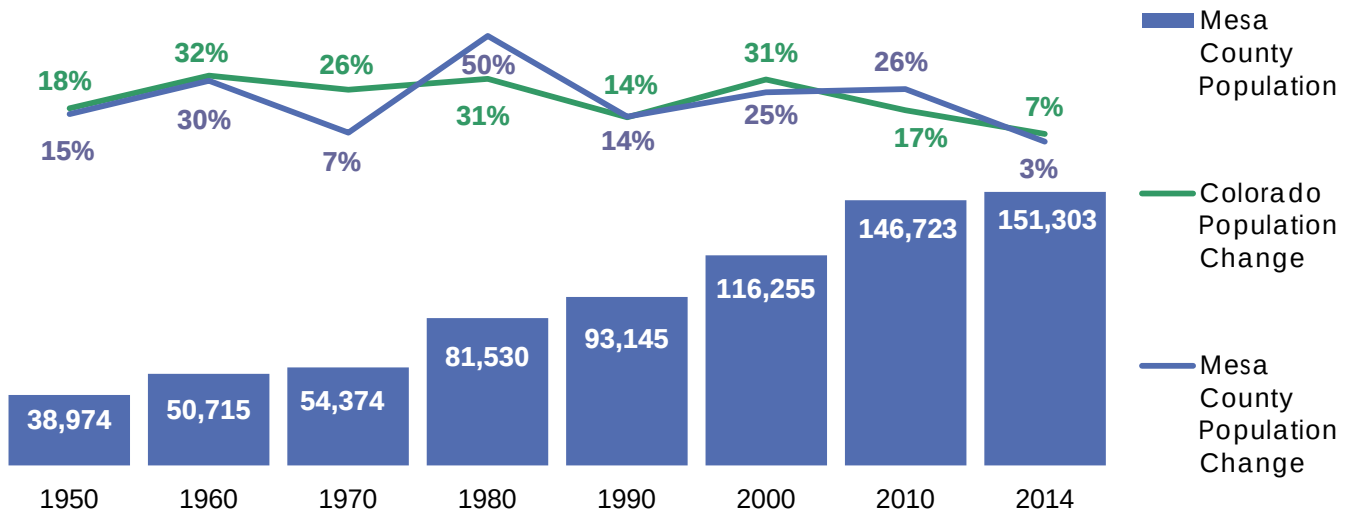
Changes in population, economic conditions, land uses, and demographics are among the major drivers of transportation needs. More people and more jobs in the region may mean a greater need for commute routes and transit options. Growth in the number of younger and older residents may mean a greater need for active transportation and transit choices. Faster growth in one area of the region may bring the need for upgrades to that community's transportation network.

Mesa County has seen steady overall growth in population and employment for decades and these trends are expected to continue in the mid-term.

Population Trends

Mesa County is Colorado's 11th most populous county, with a 2014 population estimated at 151,303. The region is characterized by boom and bust cycles with periods of very fast population growth (1970-1980) followed by periods of slower growth. Compared to the Colorado average, Mesa County grew much faster than the state between 2000 and 2010, but population growth has slowed since 2010. From 2000, the region has welcomed over 35,000 new residents.

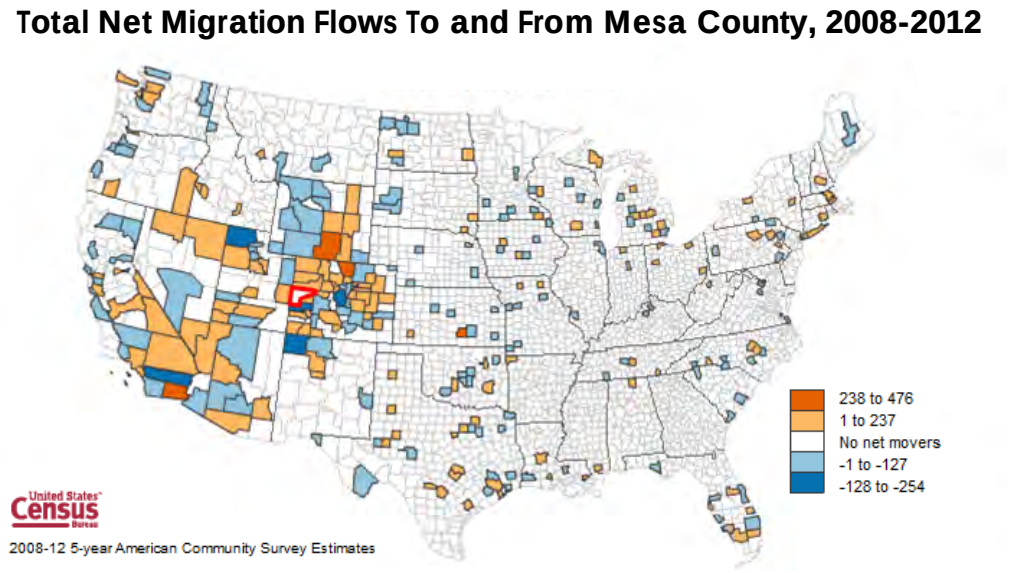
Figure 3.1: Mesa County and Colorado Population Change, 1950-2014



Colorado Department of Local Affairs, 2014.

The majority of that growth has been a result of net new migration from residents moving into the region. Between 2000 and 2010, Mesa County attracted over 2,000 more new residents per year moving in than it lost from residents moving out. New residents predominately relocated from counties in the Southwest and Mountain West U.S. and other parts of Colorado. Mesa County attracts new residents from all over the nation reflecting the region's quality of life, economic competitiveness, and recreational opportunities.

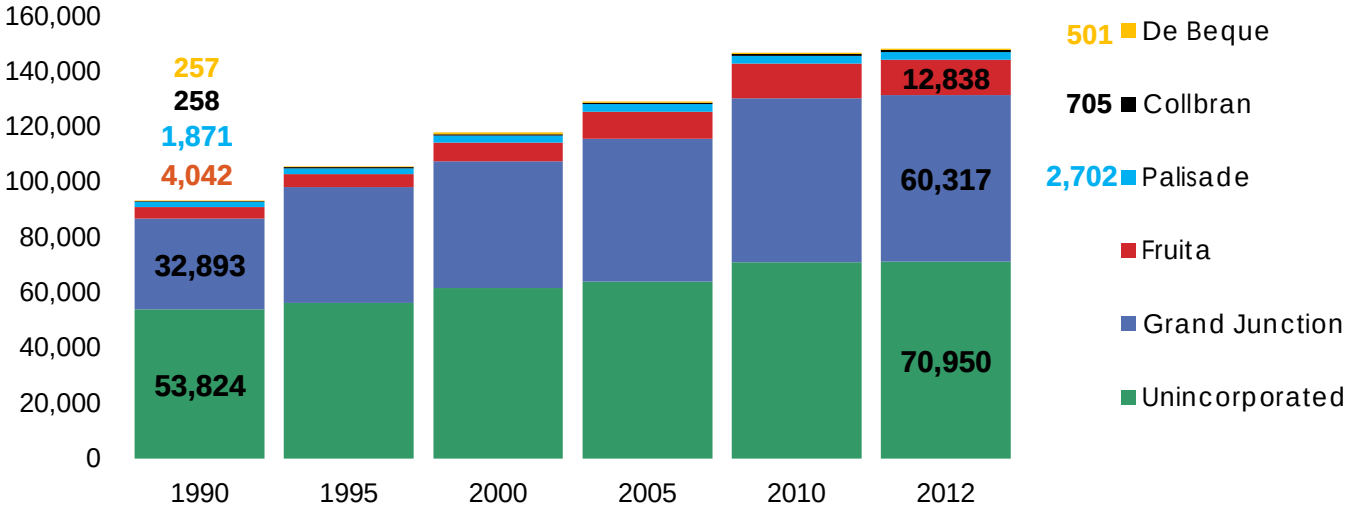
Figure 3.2: County to County Population Flows, 2008-2012



U.S. Census Bureau, 2014.

New residents to the region were likely to settle in established cities and towns. Over the past decade, the cities of Fruita and Grand Junction have grown most rapidly with growth rates of 91 percent and 32 percent, respectively. Mesa County's unincorporated population remained the largest in the county with 71,100 residents as of 2012. With over 60,000 residents in 2012, Grand Junction represents over 40 percent of the region's population. Figure 3.3 highlights population trends from 1990 to 2012 within Mesa County's major municipalities.

Figure 3.3: Population Change by Municipality, 1990-2012



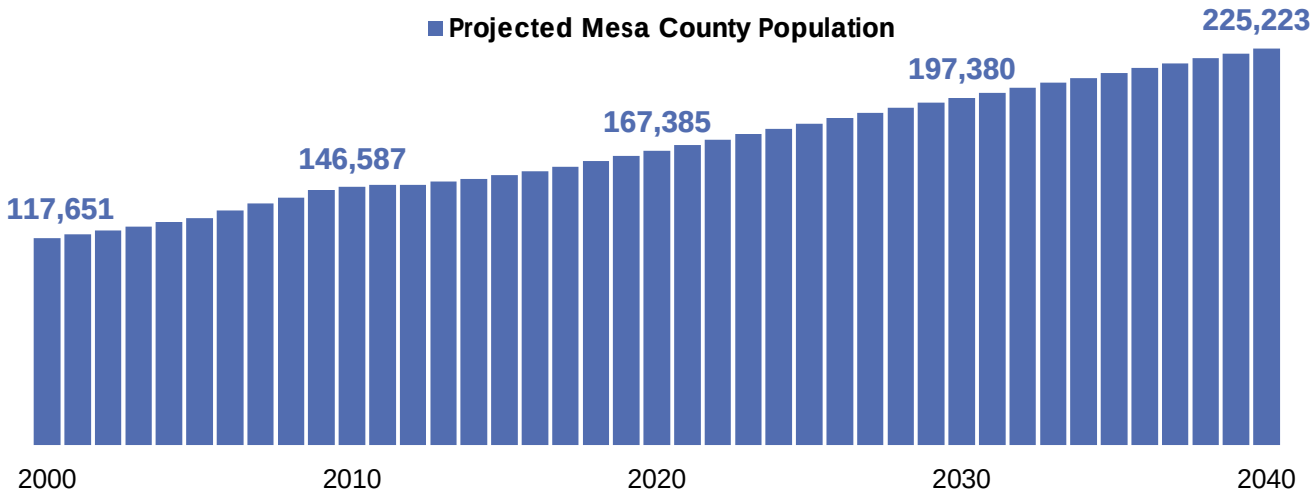
Colorado Department of Local Affairs, 2014.

Population Forecasts

The region's population will climb from an estimated 151,303 in 2014 to 225,223 by 2040. This equates to 73,390 net new residents – or more than 2,800 new residents each year. Future growth is challenging to predict, particularly in the Grand Valley which is characterized by cycles of rapid growth followed by periods of slower

growth. Mesa County's population grew much faster than the state average between 2000 and 2010. However, beginning in 2010, the pace of regional population growth slowed substantially for several years. Growth is anticipated to resume after 2015 and the region is expected to again grow more quickly than the state average, but more slowly than the 2000-2010 period. Figure 3.4 displays projected population in Mesa County according to the Colorado State Demographer's Office.

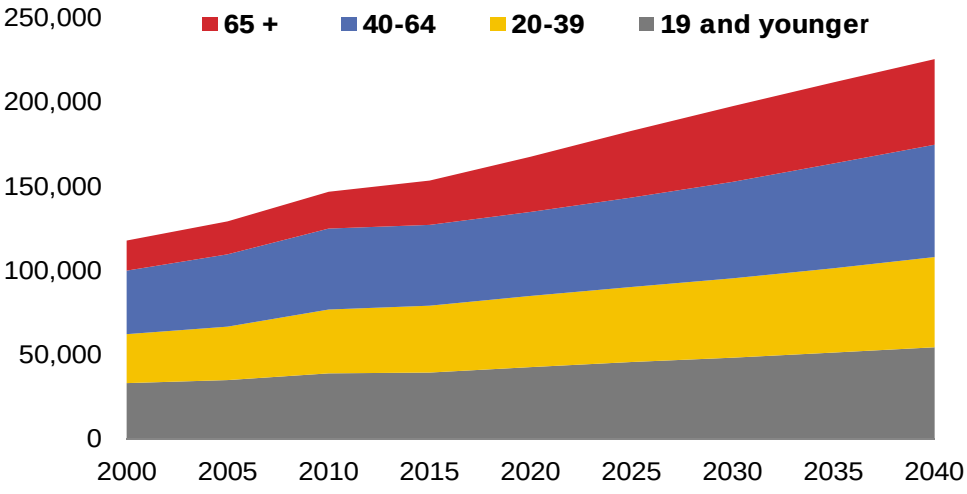
Figure 3.4: Forecast Population Growth, 2000-2040



Colorado Department of Local Affairs, 2014.

Population growth will impact future transportation needs. More residents will mean more daily commuters on the region's roadways, buses, and trails. More consumers will mean more truck traffic delivering goods and services. More traffic will increase the need for safety improvements at busy intersections and upgrades to major interchanges, as well as for shoulders, bike lanes and sidewalks along roadways and routes to school. More vehicle travel will also accelerate maintenance needs for the region's roads and bridges, drainages, and sidewalks. Another key determinant of future travel needs is also the age of residents.

Figure 3.5: Forecast Population Growth by Age Group, 2000-2040



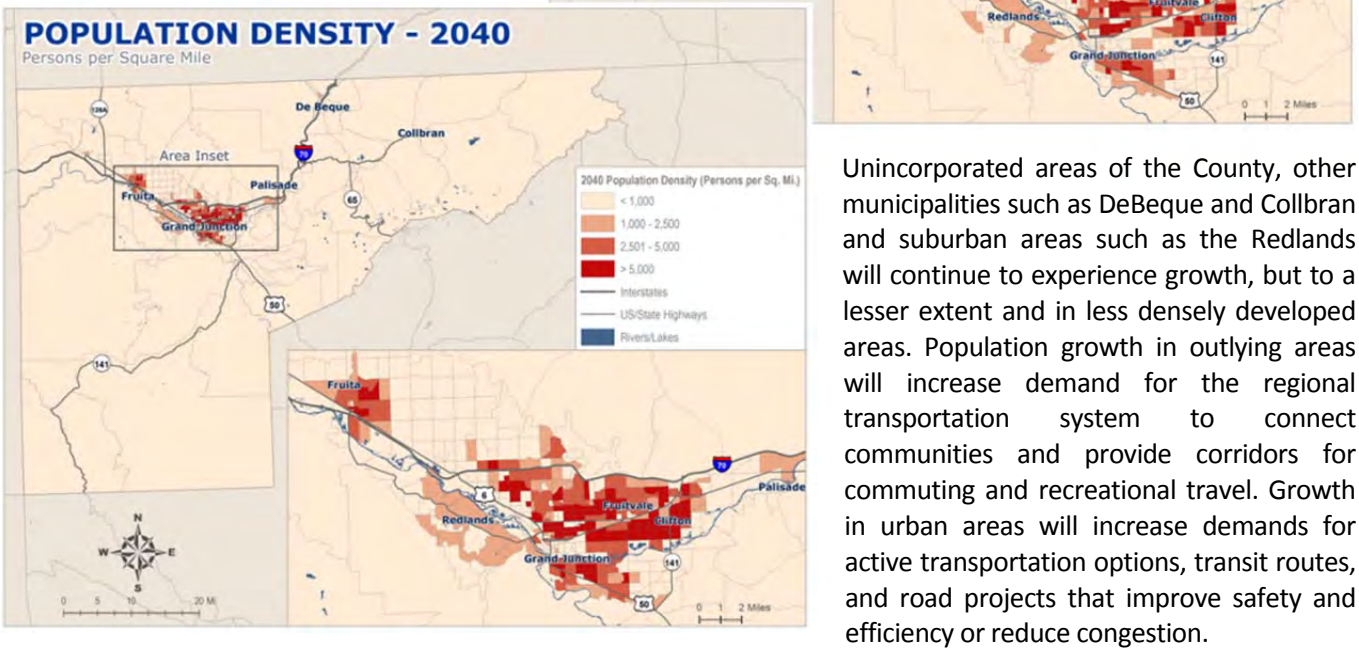
Colorado Department of Local Affairs, 2014.

Across the country, a wave of baby boomer retirees will create new demands on the nation's transportation system – from larger signage, to more safety improvements, to additional transportation choices. Mesa County will experience a similar trend. Figure 3.5 shows projected population growth in the region by age. The percentage of the total population aged 65 and over will grow from 15 percent in 2015 to 23 percent in 2040. This is more rapid growth

than any other age group. Nearly 40 percent of total population change between now and 2040 is a result of residents 65 and older. The region's older adult residents currently do not report significant transportation challenges – according to the 2014 Colorado Department of Transportation Survey of Older Adults. However, in Mesa County, roughly 1 in 3 older adults do not currently drive and approximately 1 in 5 report having trouble sometimes or often when finding transportation to make needed trips (e.g. pharmacy or medical appointments, shopping, or recreation). As the region's population continues to age, older adults will face increasing transportation challenges.

Figure 3.6: Regional Population Density, 2010-2040

Population growth within the region may also be viewed in terms of the distribution of residents – or persons per square mile. Figure 3.6 compares population density in 2010 to estimated density in 2040. All communities in Mesa County are expected to experience additional growth, development, and build out to accommodate the anticipated 74,000 new residents by 2040. The majority of that growth is projected to occur in existing urban areas – particularly within Grand Junction, Fruita, Clifton, and Palisade.



Unincorporated areas of the County, other municipalities such as DeBeque and Collbran and suburban areas such as the Redlands will continue to experience growth, but to a lesser extent and in less densely developed areas. Population growth in outlying areas will increase demand for the regional transportation system to connect communities and provide corridors for commuting and recreational travel. Growth in urban areas will increase demands for active transportation options, transit routes, and road projects that improve safety and efficiency or reduce congestion.

Economic Trends

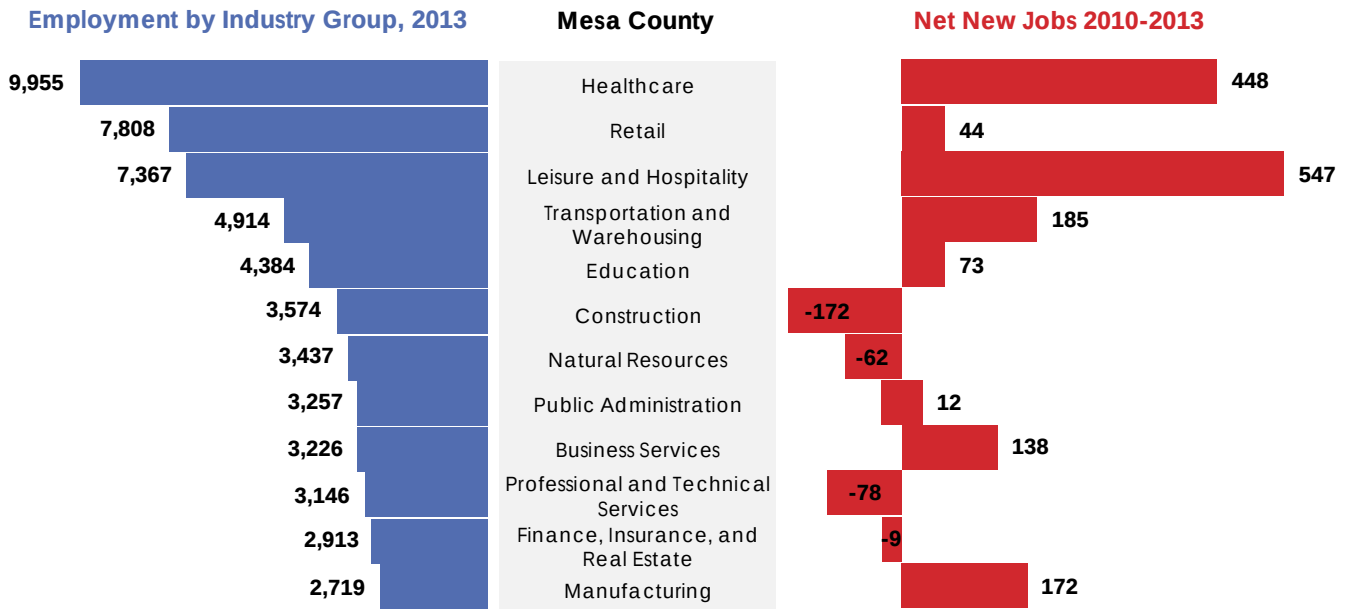
Mesa County's economy is predominately based in service industries. Employment is concentrated in health care, retail, accommodation, education, and public administration industries. This reflects the region's status as the major health and educational center for Western Colorado and surrounding states, as a hub of shopping and

services for the Western Slope, and as Colorado's western gateway and destination for tourists and visitors. Natural resources, manufacturing, transportation and logistics, and professional services are also important economic sectors in the region.

The Great Recession impacted the region particularly hard in 2009 and 2010. In 2010, the unemployment rate peaked at 10.2 percent and retail activity, home sales, construction permits and other indicators of regional economic activity all fell. The economic downturn significantly impacted county and local governments' ability to finance public services and invest in transportation and other public works projects. In 2014, property taxes and sales and use taxes, which are the major revenue sources for governments in the region, are now holding steady and will grow again in the coming years.

Other key economic indicators have also picked up and the economy is showing signs of recovery. New construction permits, home sales, retail sales, and jobs have all increased between 2013 and the first several quarters of 2014. However, job growth remains slow and Mesa County is still more than 5,000 jobs short of the previous employment peak in 2008. Those industries leading the job recovery include healthcare, leisure and hospitality services, manufacturing, and business services, as shown in Figure 3.7. Growth in accommodation, leisure, and hospitality industry is driven by tourists and business visitors to the region and increased consumer spending. Manufacturing growth is strong on international sales and exports and the emergence of a outdoor products and services industry cluster in the region.

Figure 3.7: Mesa County Employment, 2013



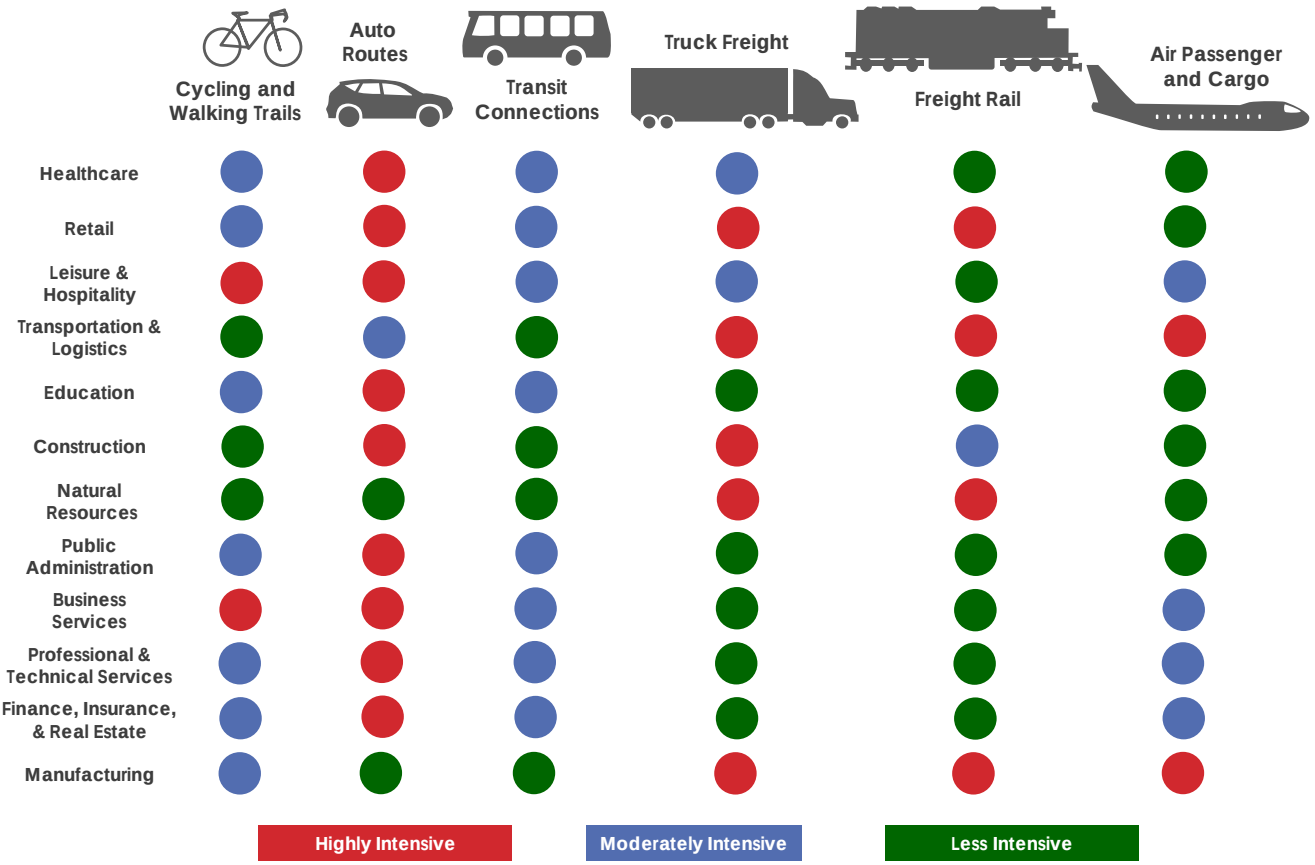
U.S. Bureau of Labor Statistics, QCEW, 2014.

The transportation demands of the region's key industries vary. Industries with greater employment bases, such as healthcare, education, and retail may demand more intensive commuting options. For example, Mesa County is home to a major university, hospitals, and shopping centers that depend heavily on automobiles, transit, and trails to get people to and from these employment centers. Industries that produce or move goods, such as logistics, natural resources, or manufacturing may have more intensive freight demands. Figure 3.8 highlights the estimated relative transportation needs by mode of the region's major industries.

Mesa County is home to several major manufacturers and energy producers and fruit growers that depend on air, rail, and truck movements to ship components and final goods in and out. As a major employer, the tourism

and hospitality industry is particularly dependent on an efficient regional transportation network. Tourism businesses depend on regional roadways and commute options to get workers to employment locations; rely on on-time truck and air cargo deliveries to stock consumer goods; count on passenger rail and air service to get visitors to the region; and, are increasingly dependent on regional recreational opportunities, cycling trails, and cultural events to attract visitors. The regional economy is intertwined and interdependent with the regional transportation network and all modes of travel.

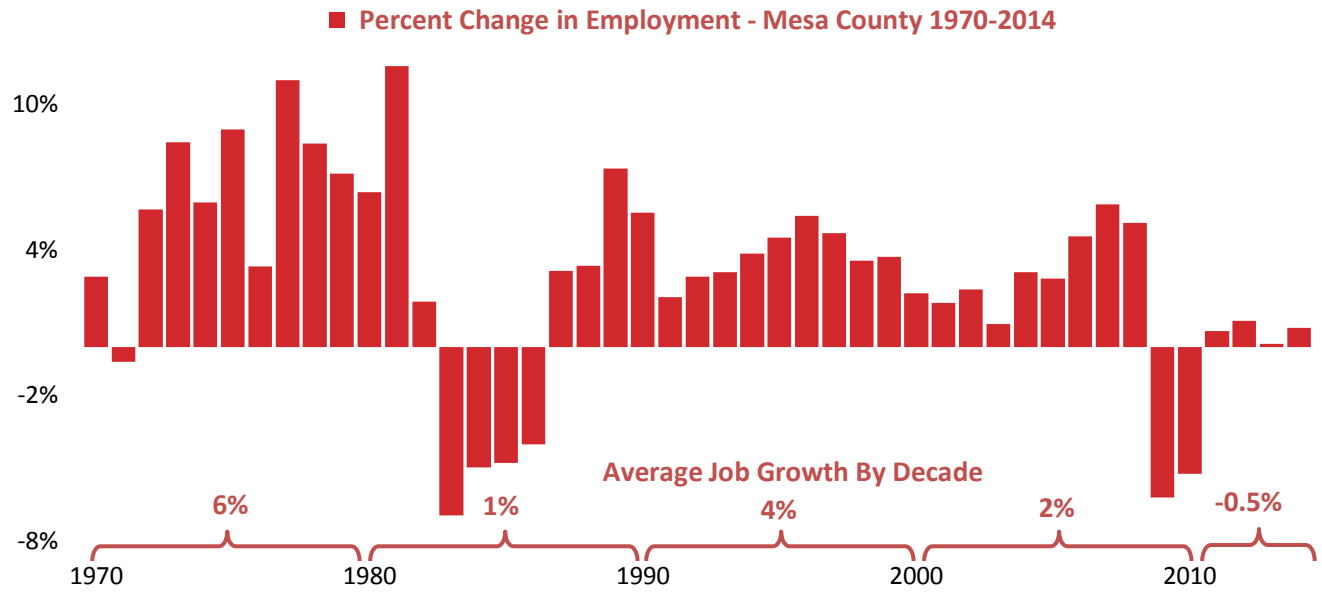
Figure 3.8: Transportation Demands of Major Industries in Mesa County



Economic Forecasts

The recent recession impacted the regional economy, yet historically the region has recovered from prior downturns and the boom and bust cycles of industry. Figure 3.9 displays year over year percent change in the total number of jobs in the region. Average growth rates by decade reveal the pattern of fast growth followed periods of slower growth that tend to characterize the region. The economy in the Grand Valley is sensitive to national and state trends, natural resource prices, consumer spending, and tourism and travel activity. If historical trends continue to hold true and the economy continues to rebound, the region could see improved rates of job creation and economic growth in the future.

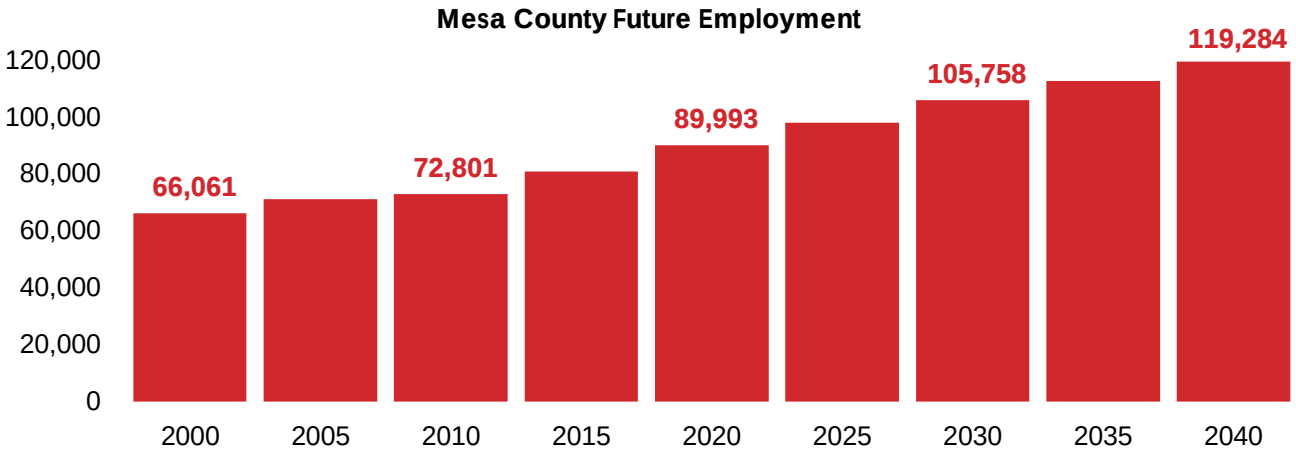
Figure 3.9: Mesa County Percent Change in Employment, 1970-2014



Bureau of Economic Analysis, 2014.

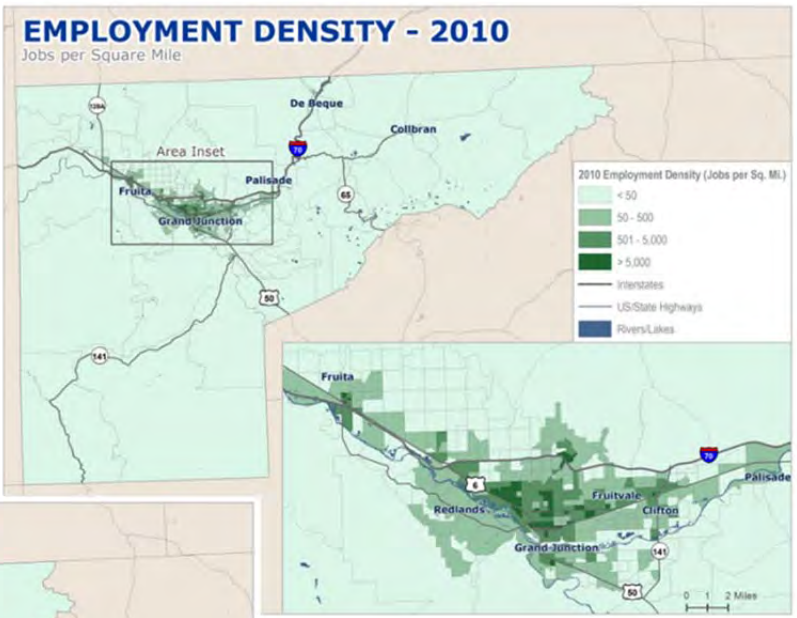
Employment forecasts prepared by the Colorado State Demographer's Office indicate that future job growth in Mesa County will largely be driven by expansion of the region's current service industries, including healthcare, hospitality, education, and retail. Growth in industrial and goods-producing jobs is also expected to remain strong and could rise significantly should manufacturing expand in the region. Jobs generated by older adults and retirees are also anticipated to see strong growth – almost doubling by 2040. These jobs are primarily related to increased demand for healthcare and professional services. Overall, the region could expect to see an additional 46,000 net new jobs in the region over the next 25 years.

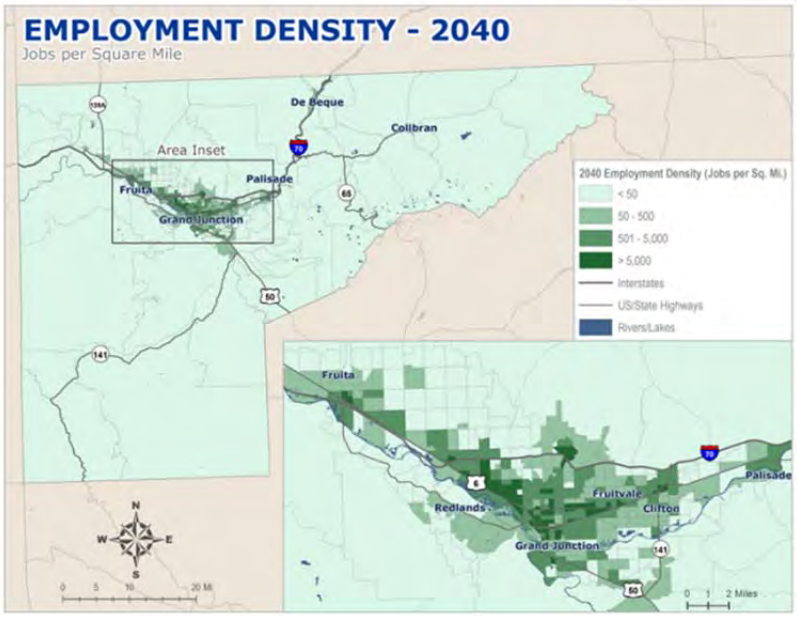
Figure 3.10: Mesa County Forecasted Employment, 2000-2040



Colorado Department of Local Affairs, 2014.

Figure 3.11: Mesa County Forecasted Employment Density, 2010-2040





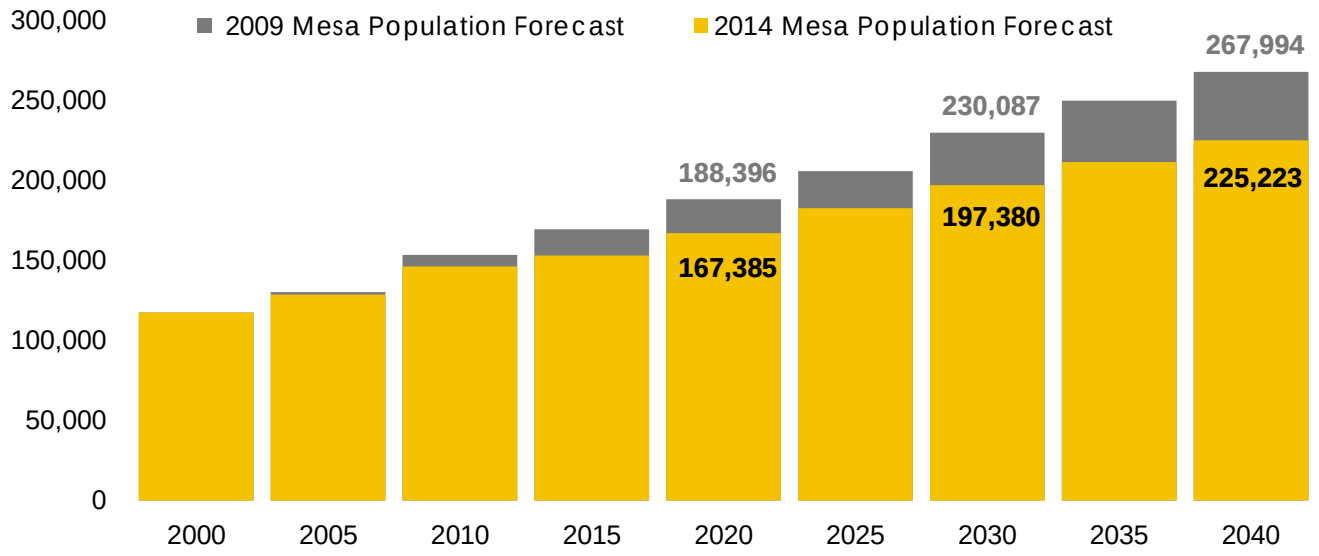
Where those future jobs will be located in the region is a key determent of future transportation needs. If the majority of future business and job growth occurs in existing downtown areas and around major regional employment centers, as current future land use plans for Mesa County's communities show – then future transportation demands may be lessened. For example, the Grand Junction Comprehensive Plan identifies the need to channel growth inward, thereby preserving as much agricultural land as possible near the edge of the community and increasing density and intensity in core areas, such as the city's central business district. These areas are well served by major roadways and freight connections, and to a lesser extent, transit routes, and cycling and walking trails. These systems will have to be upgraded to maintain service levels, but the need for new infrastructure will be less than in undeveloped areas. Additional transit routes and improved non-motorized connections will still be needed. If new land is developed for industrial parks or commercial centers that are not currently well served by transportation connections then new infrastructure will be required. Areas with the most economic development potential in the region are already well-served with passenger and freight connections and employment centers are well-defined. Future job growth in the region is forecast to occur along existing commercial corridors.

Changes in Regional Forecasts

Any planning document that looks out 20 years is visionary and uses the best available information and trends to predict future paths and trajectories for the region. The regional transportation plan is updated every five years in order to continuously present the most realistic vision of the future and to select the most viable and cost effective transportation projects for completion. Determining priority projects is in part dependent on future growth projections and estimates of future demands on the transportation system – including congestion, safety, and development patterns.

The 2035 Regional Transportation Plan was completed in 2011 at a time of great uncertainty. The full impacts of the Great Recession were not fully visible in the region and not reflected in best available data on population and economic growth rates. The population, economic, and travel demand forecasts used at the time suggested that the region would continue to experience robust growth rates – leading to greater levels of future congestion, delay, and travel volumes. However, the economic downturn significantly dampened current and future growth rates. Figure 3.12 highlights the difference between population forecasts prepared by the Colorado State Demographer's Office in 2009 compared to the most recent available forecasts from 2014.

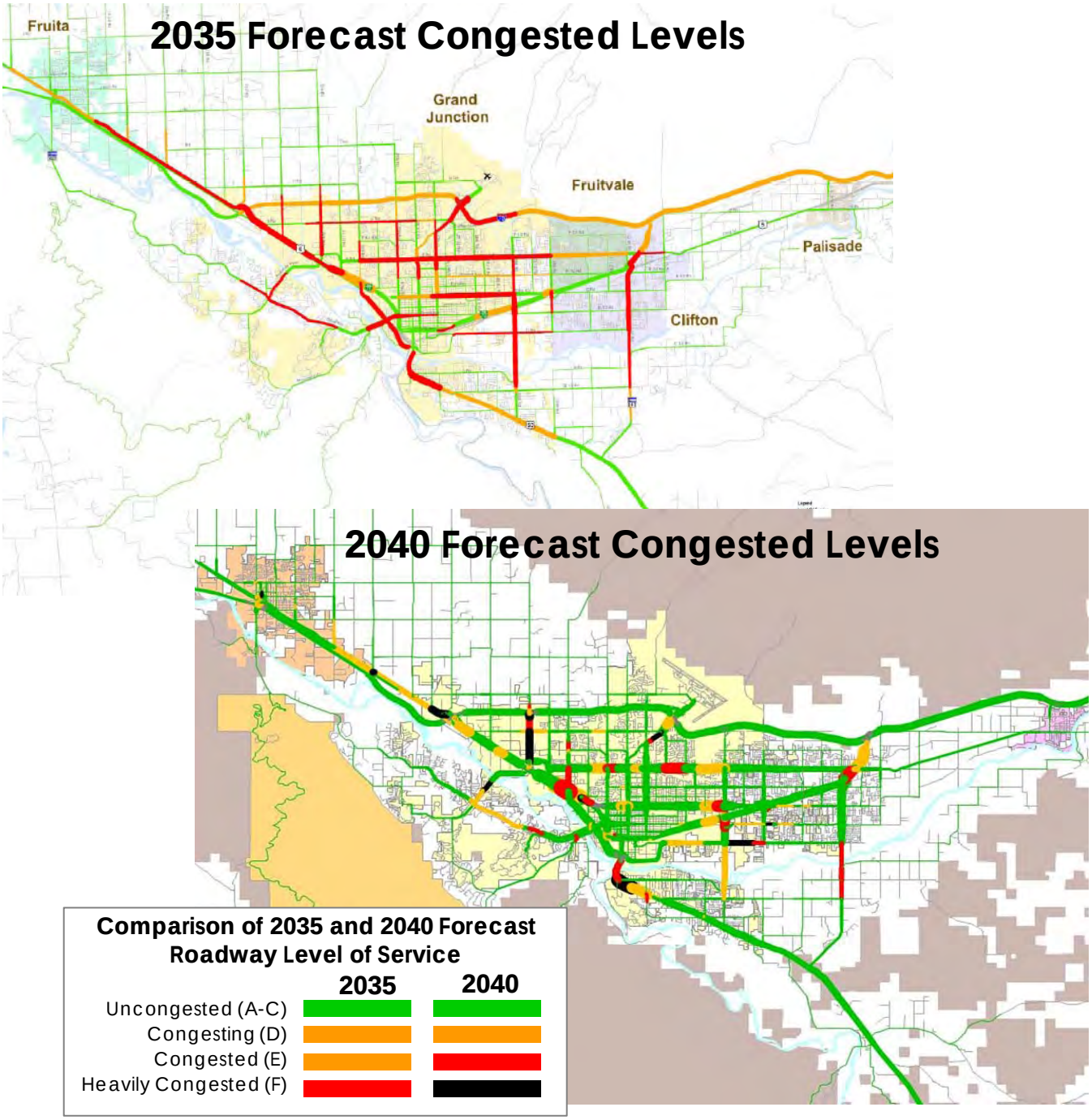
Figure 3.12: Comparison of Mesa County Population Forecasts



Colorado Department of Local Affairs, 2009 and 2014.

Population estimates made in 2009 suggested an additional 43,000 residents by 2040. Newer forecasts revised growth rates downward in the near and mid-term, so that region is expected to grow more slowly. The result is that fewer vehicles and travelers are to be expected on the region's roadways. The Mesa County Regional Transportation Planning Office estimates future transportation demand through complex computer models. These models take into account future population and economic forecasts and other variables, including land use patterns and estimates of future activity from local governments. Earlier and more robust projections significantly increased congestion levels on the regional roadway network, as seen in Figure 3.13. Red lines indicate the highest level of congestion on road segments while orange, yellow, and green indicate roads with less delay. As seen in the 2040 model output, fewer roads and areas in the region are anticipated to experience worsening congestion. Under current growth forecasts, the region does not face significant capacity constraints and many of the roadways that are problematic are already planned for reconstruction or improvement.

Figure 3.13: Comparison of 2035 and 2040 Mesa County Congestion Levels



Chapter 4:
Transportation Finance and Funding

Chapter 4: Transportation Finance and Funding

CHAPTER OVERVIEW

Financing transportation in the region is a complex partnership between local, state, and federal agencies. A range of different transportation funding programs exist and each is funded from a variety of sources and is dedicated to specific purposes, such as safety, maintenance, bridges, or transit. The amount of revenues available to fund future regional investments is uncertain and many important sources of funding are declining in real value over time. Without alternative revenues, responsible choices must be made. This plan documents anticipated revenues and fiscal constraint in the region over the next twenty years.

Financing Transportation in Colorado

The average vehicle owner in Mesa County drives 12,000 miles, uses 600 gallons of fuel, and spends $2,100 on fuel each year. Just over 10 percent of that fuel cost is paid in federal and state taxes. Drivers also pay annual vehicle registration fees to the State of Colorado and Mesa County that depend on the type and value of vehicle owned. They may also pay other fees or fines related to vehicle ownership. A percentage of local sales and property taxes are also used to support transportation projects at the local level. On average, each resident of the Grand Valley pays federal, state, and local vehicle fuel and registration taxes of at least $250 annually or around $20 dollars a month.

That amount is significantly less than most people directly spend on insuring, maintaining, and fueling personal vehicles. In mid-size urban areas such as Mesa County, households spend an estimated $3,800 per vehicle each year according to the Bureau of Labor Statistics. A well functioning regional transportation system can help reduce those costs. Safety improvements can reduce crashes and insurance rates. Roadway maintenance can reduce the need to replace tires and shocks. Reduced congestion can lessen wear and tear on brakes and other components and improve gas mileage for commuters. Active transportation options such as biking and walking, as well as the regional transit system, provide low-cost alternatives to get to work. In 2013, the American Automobile Association estimated that commuting by car cost an average of $60 for every 100 miles driven.

Transportation is costly for both consumers and public agencies. The cost of designing and building infrastructure continue to rise and long-term expenses of maintenance, snow-removal, upgrades, and replacement add up. The City of Grand Junction estimates that construction costs for major roadway projects are increasing at an average annual rate of nearly 12 percent. The cost of bids received for various aggregate, concrete, asphalt, and utility projects received by the City has doubled since 2004.

However, the revenues to fund transportation improvements have not kept pace with these cost escalations and with overall maintenance and replacement needs. Federal and state fuel taxes provide the majority of transportation funds. The federal fuel tax has remained constant since 1993 – the longest period since 1956 without an increase. Colorado's fuel tax was last increased in 1991 and remains at 22 cents per gallon. Colorado's total fuel and other excise tax rates are roughly 8 cents lower than the national average.

Revenue collections from fuel taxes remain flat, even when prices at the pump increase. Improvements in average fleet fuel economy means that drivers are consuming less fuel even while driving more. Together these trends severely impact the revenues available for transportation now and could result in declining revenues in

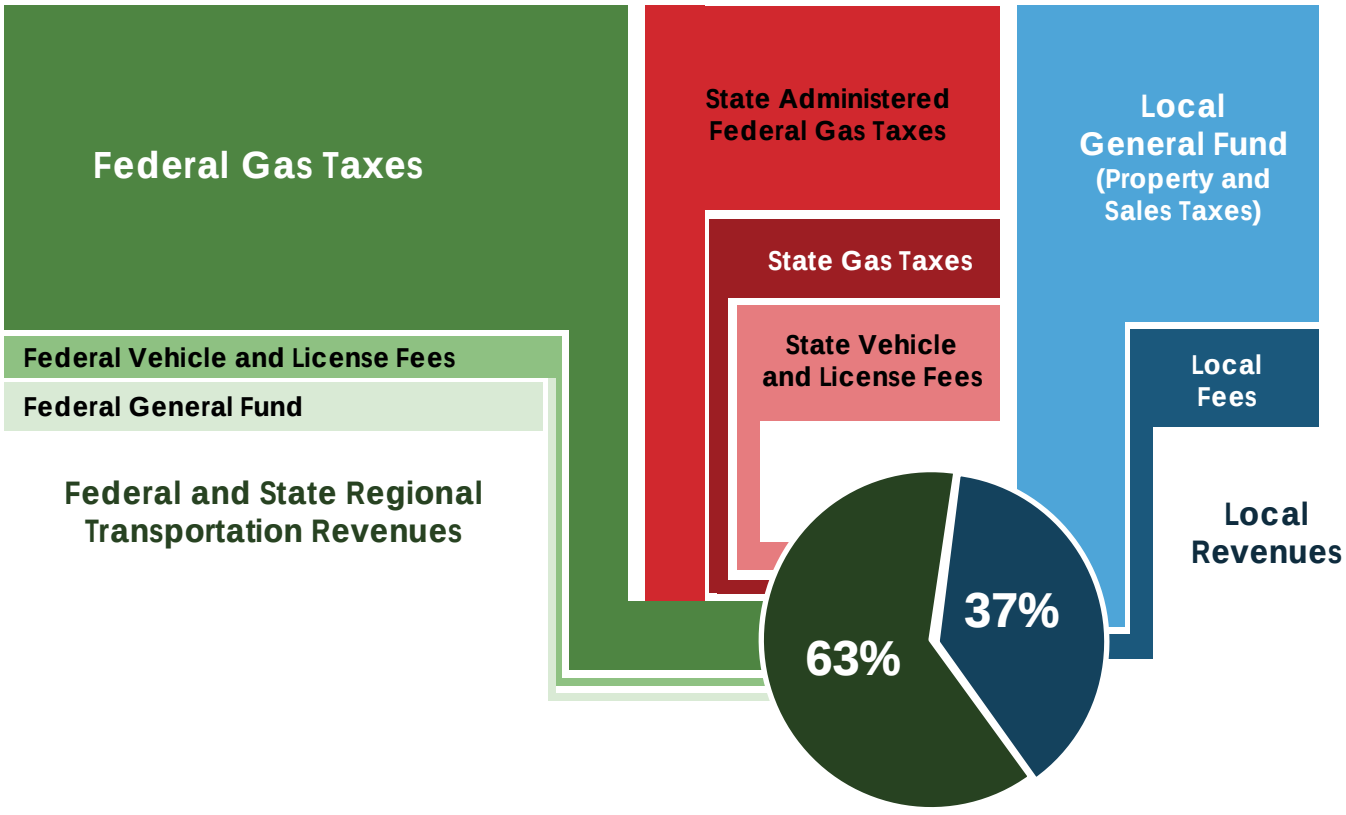
the future. The Colorado Department of Transportation forecasts that statewide transportation revenues will grow four percent from now through 2040, even while the state's population is expected to grow by 50 percent.

Regional Transportation Investments

Transportation funding flows are complex. The simplified chart shown in Figure 4.1 shows the flow of taxes and fees that are used to support regional projects. Federal and state sources provide more than 60 percent of funding for regional projects, while local matching funds and other contributions account for less than 40 percent of regional projects.

Federal funds derived from gas taxes are distributed to the state and directly to the Grand Valley Metropolitan Planning Organization (GVMPO) and Grand Valley Transit (GVT). State funds are derived primarily from gas taxes which are distributed to local governments. State vehicle registration and miscellaneous ownership fees fund Colorado's Funding Advancement for Surface Transportation & Economic Recovery (FASTER) program which supports regional safety, bridge, and capacity investments. Local governments collect vehicle registration fees and fund local capital construction funds through property taxes and sales and use taxes. These revenues are used to meet local match funding requirements for federal investments in regional projects, as well as directly financing local transportation projects.

Figure 4.1: Representative Regional Transportation Funding Flows



GVMPO 2008-2013 Transportation Improvement Program. Not all local investments are included in the TIP.

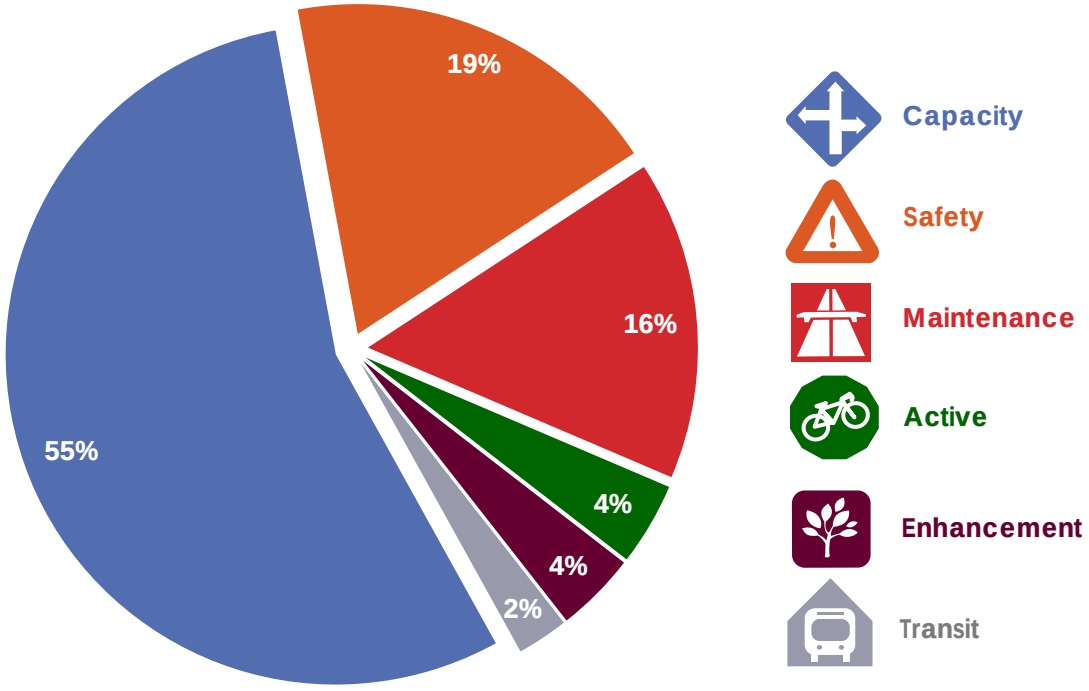
Transportation Finance and Funding

Through the 2008-2013 Transportation Improvement Program (TIP), more than $58 million dollars have been invested in the regional road, bridge, rail, trail, and transit system. The investments made over the past several years have contributed to advancing the regional goals of the 2035 Regional Transportation Plan (RTP). That plan emphasized new capacity projects to improve mobility.

Figure 4.2 shows the proportion of regional transportation investments by project category. This chart reflects only those investments made in partnership with the GVMPO and does not capture all investments by local governments or the Colorado Department of Transportation (CDOT). In addition, projects often have multiple components and may contribute to several goal areas (e.g. safety and capacity). For example, a road maintenance resurfacing project may also increase road shoulder width or stripe bike lanes that benefit active transportation users even if the project is not considered an active transportation project.

Finally, past patterns of investments in the region do not indicate future allocation as regional priorities do change. Based on the revised goals of the 2040 RTP, transportation investment in the region over the next twenty years will emphasize different projects and investments levels.

Figure 4.2: Regional Transportation Investments, 2008-2013



GVMPO 2008-2013 Transportation Improvement Program. Not all investments are included in the TIP.

2040 Transportation Revenue Forecasts

The Grand Valley 2040 RTP is required to identify what revenues can be reasonably expected over the next 25 years and what project alternatives may be accomplished with those resources. For these purposes, the 2040 RTP projects available federal, state, and local match revenues by major program area.

However, forecasting future transportation and transit revenues is highly variable and subject to uncertainty. The most recent federal transportation legislation has been authorized only through May of 2015. Until long-term transportation legislation is in place, any programs and funding levels beyond 2015 are subject to change. State fuel tax revenues are dependent on economic conditions and vary as residents increase or reduce driving levels or switch to more fuel-efficient vehicles. CDOT's total budget decreased from $1.6 billion in 2007 to $1.2 billion in 2013, even as costs increased. Over the long-term, CDOT's budget may continue to shrink in real terms and lose purchasing power due to inflation and cost escalations.

Local transportation revenues are primarily derived from sales and property taxes and miscellaneous fees, including vehicle registration and ownership taxes. The value of these tax collections vary with regional economic conditions. Over the long-term, sales tax collections will grow more slowly, even while the value of retail sales increases. As the region's population ages, consumer spending will shift to non-taxable services such as healthcare. The Denver Regional Transportation District forecasts that statewide growth rates in sales tax revenues for transportation will slow by 2040.

Future Road and Trail Funding

The 2040 Fiscally Constrained Plan for major roadway and transit systems in the Grand Valley includes only those projects that can be implemented with available funds from federal and state sources in addition to required local matching funds, as available.

For planning purposes "available funds" include allocations to the GVMPO from major federal and state funding sources as identified by the Colorado Department of Transportation (CDOT). This plan relies on estimates of state program distributions of funding levels from FY2016 to FY2040 produced by CDOT in September 2014. These projections do not constitute a guarantee of funding from the state and may change over time. Forecast totals incorporate the GVMPO's share of funds that flow through CDOT Region 3 and also include estimates of required local matching funds.

Table 4.1 shows a breakdown of major funding programs and total revenues available between 2016 and 2040. Values are shown both in present value of 2016 dollars and future inflated values in 2040 dollars.

Table 4.1: Estimate of 2040 Revenues by Major Program Area

Funding Program		Total Revenues, 2016-2040	
		FY 2016 Dollars (Deflated)	*FY 2040 Dollars (Inflated)*
Non-Flexible – CDOT Directed and Competitive Funds	**Maintenance**	$64.27 m	$90.92 m
	Preservation	$47.27 m	$66.46 m
	Bridge and Structure Maintenance	$20.20 m	$26.92 m
	State Safety (FASTER)	$53.85 m	$78.63 m
	Federal Safety (HSIP)	$13.32 m	$18.38 m
Flexible – GVMPO and CDOT Programmed and Competitive Funds	**Metropolitan Planning**	$5.92 m	$8.25 m
	Transportation Alternatives (MPO share of CDOT Region)	$4.63 m	$6.39 m
	Regional Priority Program (MPO share of CDOT Region)	$31.98 m	$44.58 m
	TOTAL	**$241.44 m**	**$340.53 m**

Transportation funding programs are restricted to specific uses (e.g. safety or bridge improvements), are dedicated to certain roadways (e.g. on-system national or state highways), and are allocated through various processes (e.g. state Transportation Commission, CDOT Region, or local governments.) There are a number of programs available to fund transportation improvements in the region and the GVMPO may sponsor projects with local partners to secure additional funding. Listed below are several of the major sources of funds detailed in the 2040 revenue projections.

- **Asset Management Funding:** CDOT dedicates the majority of funding for asset management and maintenance activities on state highways and National Highway System roads. Maintenance and preservation of off-system roads is the responsibility of local governments. Of total funding in 2016, more than 55 percent is dedicated to maintaining existing roads, bridges, and infrastructure in a state of good repair. These funds are allocated by formula set by the Colorado Transportation Commission. Local and regional projects are prioritized through CDOT Region 3 and the GVMPO RTP process.
- **Safety - State FASTER Safety Program:** This category includes safety-related projects, such as: asset management, transportation operations, intersection and interchange improvements, and shoulder and safety-related widening, and pedestrian and bicycle facilities. Projects are advanced by local governments and selected based on priority and data within CDOT Region 3.
- **Safety – Federal Highway Safety Improvement Program (HSIP):** Eligible projects in this category include improvements or corrections to safety issues on any local or regional public roads and trails or paths. Funded activities must be consistent with Colorado's Strategic Highway Safety Plan. Projects are selected competitively through CDOT.

- **Metropolitan Planning:** Federal funds are allocated to the GVMPO to provide for a continuing, comprehensive, and cooperative transportation planning process in the region. The region receives approximately $300,000 annually to fund planning studies and to carry out MPO responsibilities.
- **Transportation Alternatives Program (TAP):** Under MAP-21 this new federal program consolidates several previous programs and provides reduced funding from historic levels. Eligible activities include planning or construction projects for on and off-road pedestrian and bicycle facilities, community enhancement activities, and safe routes to schools. The GVMPO may sponsor projects with local partners, but does not directly receive or compete for TAP funding. Projects are screened and selected by CDOT Region 3 and funds are awarded through a competitive process to local entities.
- **Regional Priority Program:** This program covers priority projects that are not addressed in other federal and state programs and usually utilized for major new construction or reconstruction projects. These projects are identified cooperatively with CDOT and local partners.

Future Transit Funding

Estimating future transit revenues is particularly challenging as a variety of federal, state, and local funding sources are utilized to support transit services in the region. Grand Valley Transit (GVT) relies on financial support from federal agencies, Colorado's FASTER program, and local governments to support transit capital construction projects. Capital expenses vary from year to year with vehicle replacement needs and major construction, such as new transfer or maintenance facilities. Annual operating and administration costs are primarily supported by local governments, Federal Transit Administration (FTA) grants, and from agency-generated revenues such as service fares. Operating expenses are more stable but vary with changes in the prices of fuel, labor rates, and contracted transportation services.

GVT receives funding directly from the FTA primarily through formula grants that support service in urbanized and non-urbanized areas of Mesa County. GVT may also apply for additional FTA grants that are competitively awarded to support vehicle repair and replacement, transit programs for elderly, low-income, or disabled residents, and programs that support transit ridership as a commute alternative. CDOT allocates a portion of FASTER revenues to support statewide and local transit capital projects. The projects are competitively awarded to local transit agencies. Local funding is provided to support ongoing operating and maintenance needs. Mesa County and local governments collectively contribute over $1.3 million annually to support essential transit services in the region. These funds are primarily derived from sales and property tax revenues from local governments. A legislative change in 2013 under Colorado Senate Bill 13-140 enabled local governments to flex Highway User Tax Fund (HUTF) dollars to transit-related projects. However, no more than 15 percent of HUTF allocations may be expended for operating and administrative purposes.

The CDOT Division of Transit and Rail estimates that future FTA revenues will grow slowly through 2030 and then decrease through 2040 along with declining federal gas tax revenues. According to state forecasts prepared in 2013, FTA revenues will decline at an average annual rate of 0.5 percent between FY 2016 and FY 2040. State transit revenues from the FASTER program are expected to grow at an average annual rate of two percent through 2040. FASTER funds are currently dedicated to supporting capital construction projects only and not ongoing operating expenses. Table 4.2 presents estimates of future funding available to GVT through 2040. These estimates are based on CDOT future revenue forecasts and historical trends in local support and fare revenues, but are subject to risk.

Table 4.2: Estimate of 2040 Transit Revenues by Source and Purpose

	2002-2012 Average Annual Funding	2040 Estimated Annual Funding	Total Revenues, 2016-2040 *FY 2016 Dollars (Deflated)*	Total Revenues, 2016-2040 *FY 2040 Dollars (Inflated)*
Operating –Federal FTA	$1.16 m	$1.04 m	$20.05 m	$28.27 m
Operating - Local	$1.11 m	$2.32 m	$27.84 m	$39.25 m
Operating - Fares and Other	$0.24 m	$0.82 m	$8.07 m	$11.37 m
Capital – Federal and State	$1.01 m	$1.69 m	$24.18 m	$34.10 m
Total Transit Revenues	$3.52 m	$5.87 m	$80.14 m	$113.00 m

Federal transit funding from FTA is uncertain and may decrease or remain stable in future years. Regionally, fare revenues have grown an average of 10 percent per year over the last decade and local support has increased six percent annually. If these trends continue, local and agency revenue sources will become more important and will be relied on to make up for declining federal transit support. If local support is reduced or transit service is cutback resulting in lowered fare collections, revenues will be significantly less than predicted.

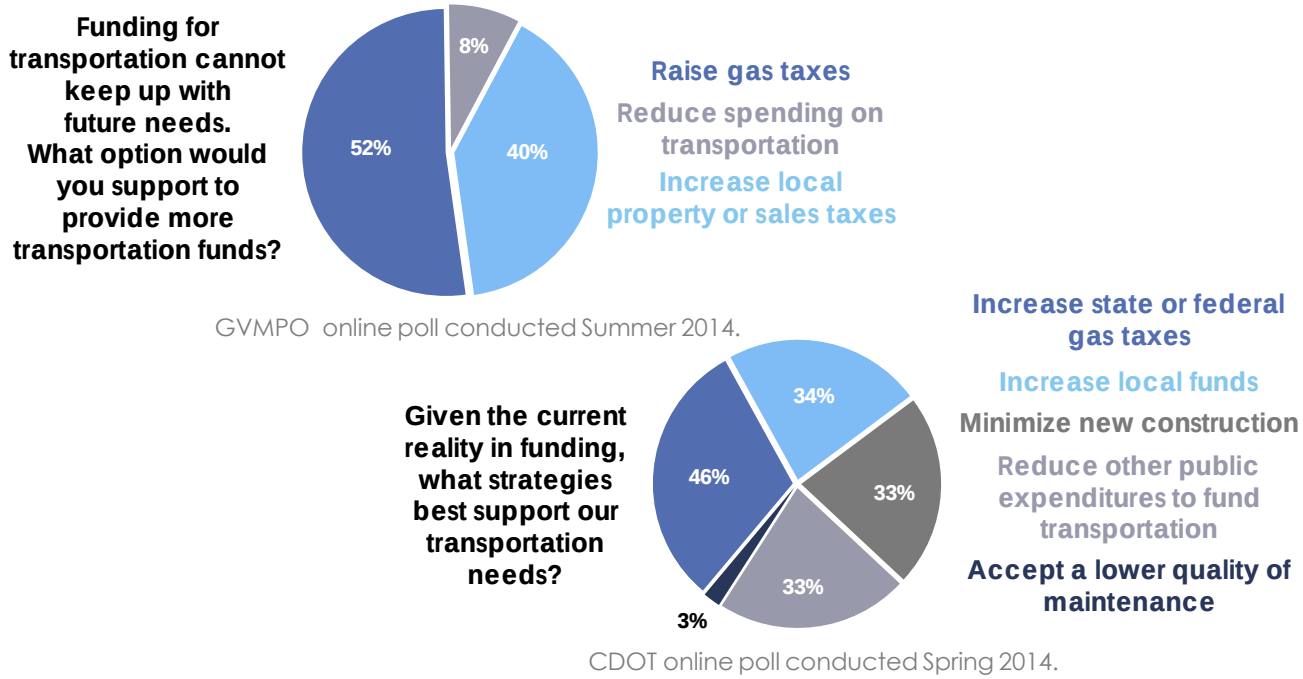
Alternative Future Regional Transportation Funding

The total value of available transportation revenues between now and 2040 represent a significant investment in the future of the region – potentially $400 million dollars. However, the ongoing expenses of maintaining and operating the regional transportation system as well as the costs of making important safety, capacity, and quality improvements is also substantial and increasing faster than revenues.

Over the last ten years, Mesa County has accommodated an average of 1,400 additional vehicles per year. Since GVT's inception in 2000, there have been over 100,000 additional transit riders every year. By 2040, the region's population is expected to increase over 40 percent and vehicle miles travelled on regional roadways is expected to increase 70 percent. In contrast, the real value of future federal and state transportation gas tax revenues is expected to decline as inflation and project cost escalation erodes the purchasing power of those funds.

Many Grand Valley residents recognize that available funding is not sufficient to address all future regional transportation needs; however, there is less agreement on strategies to address funding shortfalls. Figure 4.3 reports the results from online polls of Mesa County residents conducted by the GVMPO and the Colorado DOT in 2014. Among Mesa County respondents there is a relatively high level of support for raising fuel taxes at the state or federal level or increasing local transportation revenues. A similar poll was conducted by Club 20 in 2014. This unscientific survey of over 400 Western Slope residents found that 64 percent of respondents would be willing to pay more money to improve the transportation system. Two-thirds of those respondents favored an increase in the gas tax as the most preferable way to raise revenues.

Figure 4.3: Surveyed Support for Increasing Transportation Revenues



However, these recent results from regional surveys do differ from other statistically representative surveys of statewide and national voters. A 2013 survey in Colorado found that more than two-thirds of voters would vote no on a 5 to 15 cent gas tax increase. Recent national polls by Gallup and the Reason Institute have found that 75 to 85 percent of U.S. voters oppose increasing gas taxes.

Recognizing that fuel taxes are unpopular, states and local governments across the country are seeking other sources to fund transportation needs. Vehicle registration and title fees are among the most common sources and have recently been increased in Colorado. Other mechanisms include development impact fees, tax-increment financing, household utility fees, document stamp taxes, employment-based fees, and property, sales and use taxes. With a growing list of unfunded transportation needs and increasingly constrained revenues, the Grand Valley could benefit from additional sources of transportation revenues.

Estimates of additional funds that could be generated in Mesa County are provided for several common revenue mechanisms in Table 4.3. These estimates are included for informational purposes only and do not constitute an endorsement by GVMPO, local governments, or the citizens of Mesa County.

- Increasing sales and use tax rates by one half of one percent, or a half-cent per every dollar spent in the region, would result in more than $11 million each year. In Colorado, several cities and counties use dedicated sales taxes to fund transportation. Outside of the Denver metro area, there are five Rural Transportation Authorities active in Colorado (Roaring Fork, Gunnison Valley, Pikes Peak, Baptist Road, and South Platte Valley). These authorities are enabled under state legislation to allow local governments to create to construct and maintain roadways, develop and operate transit systems, and petition the citizens within the authority to tax themselves for the purpose of funding services provided.
- Tourists in the region spend nearly $270 million annually and generate over $8 million in local tax receipts. If a lodging tax, surcharge, or fee equivalent to one percent of total visitor spending were enacted over $2.7 million could become available each year. Other resort and tourism areas in states such as Florida and cities such as Aspen, Colorado utilize lodging fees to offset visitor impacts to

infrastructure and fund improvements. Colorado's FASTER program increased rental-car fees in 2009 and a portion of those fees are distributed to cities and counties.

- Assessed property values have declined in the region in recent years but total assessed values still total nearly $1.8 billion. If a 1.0 mill levy was approved by voters, approximately $1.8 million annually could become available for transportation. Local governments and Mesa County currently rely on property taxes to fund capital projects and infrastructure needs. The 2006 T-REX project along the Front Range funded interstate widening and light-rail improvements through property tax increases.
- The number of registered vehicles in Mesa County continues to grow with population and jobs. Over 1,400 additional vehicles were registered between 2012 and 2013. If annual license and ownership fees were increased by $10 dollars, or an equivalent percentage, nearly $1.4 million could become available. Mesa County collects over $32 million in vehicle fees a year. Currently, school districts receive approximately 55 percent of ownership tax revenues with the remainder going to the County, special districts, and cities and towns.
- Household utility fees are monthly or annual surcharges for transportation similar to annual assessments for local sewer or waste services. If a $15 annual fee were assessed on every housing unit in Mesa County, nearly $950,000 could become available. A flat fee of anywhere from $10 a month to $25 a year is imposed in cities such as Loveland and Fort Collins, Colorado and in many areas of Oregon. In Provo Utah, a utility charge of $3.50 per month was recently enacted and is collected as a charge on residential electric bills. Funds are used for street maintenance and curb and sideway replacement.

Table 4.3: Potential Future Alternative Transportation Revenues

Revenue Mechanism	Revenue Source	2013 Revenue (Mesa County)	Potential Transportation Funds	Percent of Regional Funding Gap Addressed
0.5% Tax Increase	Net Taxable Sales	$2,332,770,000	$11,663,850	125%
1% Fee Equivalent	Local Tourism Receipts	$269,100,000	$2,691,000	29%
1.0 Mill Levy Increase	Assessed Property Value	$1,827,031,060	$1,827,031	20%
$10 Fee Increase	Registered Vehicles	138,393	$1,383,930	15%
$15 Annual Fee	Total Housing Units	63,202	$948,030	10%

Chapter 5:

Non-Motorized Transportation

Chapter 5: Non-Motorized Transportation

CHAPTER OVERVIEW

The Grand Valley's non-motorized transportation system is anchored by the Colorado Riverfront Trail System and supported by a growing network of over 1,700 miles of on-street bike lanes; biking, walking, hiking, equestrian, and off-road vehicle trails; as well as the considerable assets of the Colorado National Monument and other public lands. Increased cycling and walking choices, connections, and corridors were strongly supported through public comment. The regional transportation system provides healthy alternatives for getting around and promotes quality community development. It enhances the region's economy and competitive strengths while attracting visitors, residents, and businesses to the region.

What Did We Hear?

Non-motorized (or active transportation) refers to cycling and walking and reflects the health, social, and recreational benefits of traveling under one's own power.

Throughout the 2040 Regional Transportation Plan (RTP) update process, public comments were invited on regional active transportation issues, challenges, and opportunities. Interviews and focus groups were conducted with representatives from regional advocacy and community organizations. The bulk of public comments received through this process related to bicycle and pedestrian issues and supported a strong regional commitment and actions to improving biking and walking infrastructure in the region.

The emphasis on active transportation issues is likely due to the relatively high level of interest and participation from bike advocacy organizations in the region as well as increasingly widespread recognition that bicycling infrastructure contributes to regional economic growth, tourism, community development, as well as national and global recognition of the Grand Valley as a destination.

> A synthesis of comments and ideas received is documented below. Not all ideas are within the scope of this Regional Transportation Plan and some may require federal or state legislation or cooperation to implement. The regional plan is intended to document the region's vision for transportation and incorporate guidance received into decision-making.

- Mesa County's climate, topography, and large percentage of public lands, all make the region ideal for the development of a very complete non-motorized transportation system. This would have significant economic, health, recreation and transportation benefits.
- The private vehicle remains the number one choice of transportation in the region, yet the recreational, commute, and economic impact benefits of bicycling on the region are undeniable.
- A well planned transportation system moves traffic efficiently but also encourages people to park and walk around downtown areas, shopping and business areas, provides for safe crossings, and encourages people to get out of their cars to walk and ride bicycles to and from locations.
- Mesa County has world-class recreational opportunities and can really build a 'trails-based' economy. Specific improvements could be made to major trails to attract more destination visitors. Major cycling events bring a lot of people into the region, fill hotel rooms, and boost local economies.

- Walkable, livable, bicycle friendly communities improve citizen's health, well being, and quality of life, improve traffic safety and reduce air pollution and congestion.
- The same active infrastructure that is valued by outdoor recreation enthusiasts is also valued by the community at large (youth, families, elderly, etc.) as well as businesses, workers, and economic developers. Active transportation systems have been shown to raise home values and access to recreation is often a selling point. This is increasingly the basis for competition in many cities and towns around the state and country.
- Bicycling may be a more feasible and more enjoyable form of transportation for many older residents whose mobility may otherwise be limited when they can no longer drive, or who simply enjoy the health benefits of bicycling.
- The Riverfront Trail can't be the region's only biking and walking highway. Regional trail networks need to be completed, signed, and mapped. Connectivity between and within communities should be a priority. New corridors should be established or gaps in existing corridors completed.
- Connections between destinations (schools, downtowns, shopping, recreation, etc.) need to be made safer, more practical, and more accessible. This includes bike paths and sidewalks and crossings on well-traveled streets and boulevards, rather than bike lanes where they just happen to be easy to install.
- Pedestrian overpasses over I-70 and major roadways could be created. Safe pedestrian infrastructure (crosswalks, lighted signs, pedestrian priority signals, sidewalks, etc.) are lacking more in the communities of Clifton, Palisade, and Fruita than in Grand Junction. Pedestrian overpasses also have the benefit of increasing traffic flow on busy roads.
- The region has a large and growing percentage of older drivers for whom driving may not be practical for long, as well as a large percentage of other non-drivers. These demographic groups benefit greatly from improved bike and pedestrian facilities, as well as good transit linkages. Some estimates suggest that 1/3rd of Mesa County residents can't or won't drive and rely on community-based transportation.
- Specific bike infrastructure should be considered. For example, bike only stoplights, separated bike lanes and bike turn lanes, temporary closures to dedicate sections of roads to bikes (e.g. Sundays and holidays, and bike and pedestrian overpasses. Other public input received indicated that bike lanes are not safer and should not be striped.
- All new or reconstructed roads should incorporate wider shoulders, bike lanes, or take advantage of right of way to include sidewalks or separated bike paths.
- Lanes could be reduced on major East-West streets in Grand Junction and on busy roads in all communities to make walking and biking more enjoyable and safer. Road diets, or lane reductions, have also been shown to make traffic flow more smoothly with less congestion and fewer accidents.
- Youth and school children should be encouraged to ride or walk to school, but safety improvements are needed throughout the region. Many routes to school do not have sidewalks or crosswalks, pedestrian crossings across major roadways or train tracks do not exist, and bike lanes or shoulders are not present.
- District 51 increased the walk to school distance approximately two years ago to 2 miles, up from 1 mile, resulting in a large increase in the number of students walking, biking, or otherwise not on a bus (being driven to school). To facilitate students biking to school, buses could be made to accommodate bikes on board.

- Bicycles could be licensed and registered in the region. This would increase safety, provide counts of all riders, encourage cyclists to obey traffic laws, and potentially provide a way to raise revenue through bike fees.
- Explore the possibility of raising funds through a bike license fee or other means to fund public relations, education, safety, and marketing campaigns for cyclists and all road users.
- Mesa County Health Department is engaged in a long-term effort to improve health outcomes in the region. As part of this effort, a Built Environment Action Team (BEAT) is working on identifying community needs and strategies related to transportation and land use. BEAT completed a walkability study in cooperation with CMU to prioritize accessibility needs in the area.

What Does the Data Tell Us?

Data on cyclist and pedestrian volumes and patterns is incomplete and does not capture the full extent and use of active transportation networks in the Grand Valley. MPOs and state DOTs across the country are beginning to implement bicycle count programs and pedestrian monitors to better understand the complete picture of people movement in a region. The data that does exist in the region is largely drawn from surveys and modeled estimates.

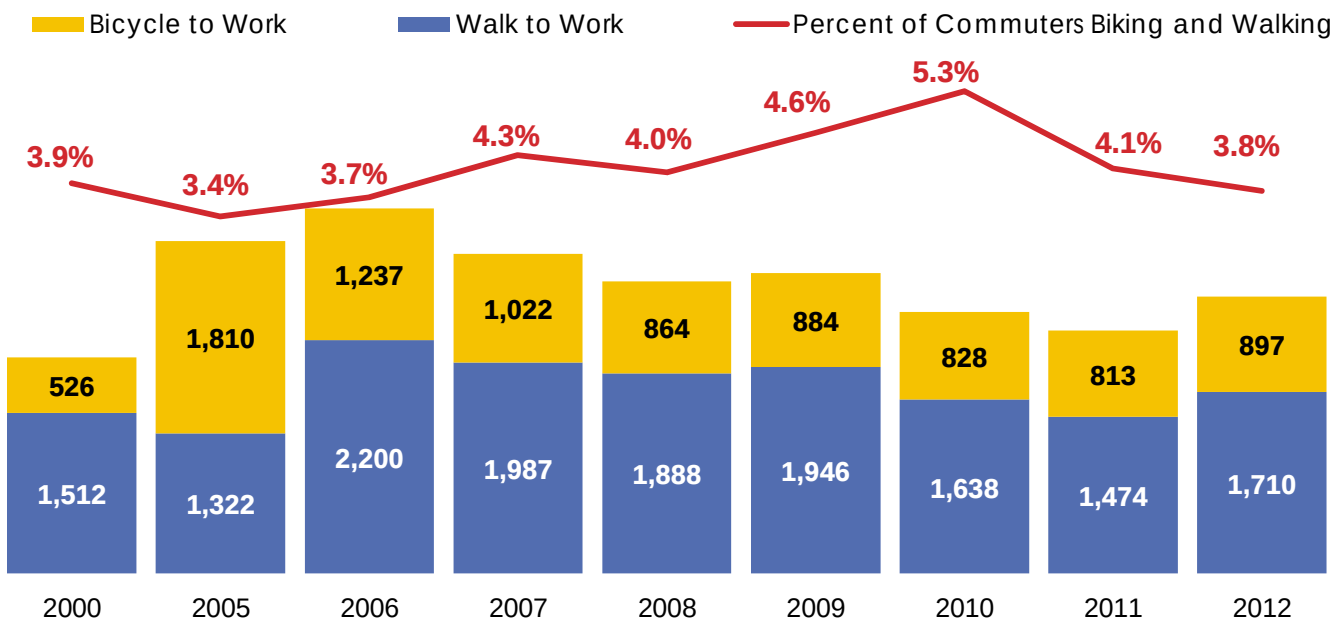
Commute Trends

The U.S. Census Bureau annually estimates how workers commute to their workplaces. In Mesa County, the average commute time in 2012 was 19.5 minutes and 60 percent of workers travelled less than 10 miles from home to work. The typical commute to work by bicycle is a range of 3 to 5 miles, while walking to work is commonly considered feasible from one half mile to 2 miles. In Mesa County, employment centers and residential areas are spread out and commuting to work by cycling or walking may not be practical for many without improved infrastructure and routes.

On average, an estimated four percent of the region's workforce, or 2,600 workers, commute to work by bicycling or walking. Figure 5.1 highlights the number of workers and percent of workforce overall either biking or walking to work. This number has fluctuated over the last decade with changes in gas prices, economic conditions and access to amenities, such as trails, sidewalks, bike lockers, crosswalks, overpasses, and other safety features. In addition, Census data is estimated and survey methodologies change from year to year, so trend data may not be directly comparable.

Top recognized bicycle-friendly regions such as Boulder, Colorado or Portland, Oregon have commute by bike rates of four to five percent. The estimated 1.3 percent of all commuters that bike to work in Mesa County may appear low. However, in 2012, out of 3,143 counties in the U.S., Mesa County ranked as the 147th highest for the percentage of commuters cycling to work. This places the region in the top five percent of all counties in the country in terms of popularity of cycling to work. The region ranked 1,523rd in terms of the percentage of commuters walking to work.

Figure 5.1: Commute to Work Trends, 2000-2012



U.S. Census Bureau, American Community Survey 2000-2013.

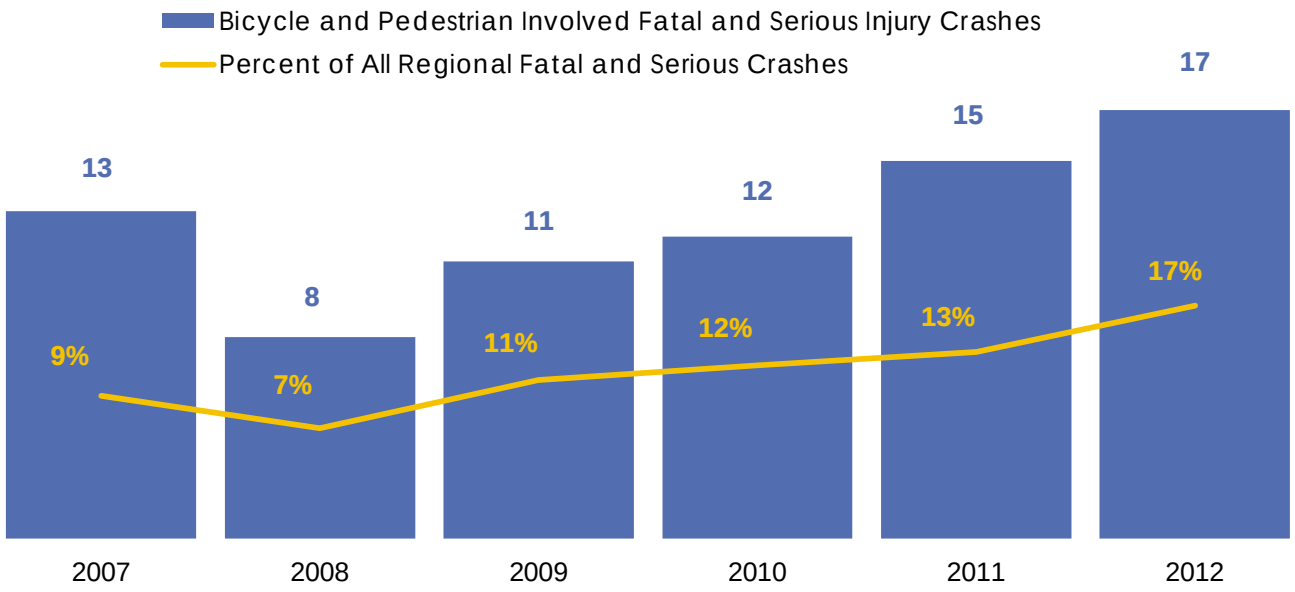
Safety Trends

In the past five years, ten pedestrians and one cyclist have lost their lives on Mesa County's roadways. Safety for all travelers continues to be a priority for state, regional, and local agencies. Funding for safety improvements through the federal government and through the state's Funding Advancements for Surface Transportation and Economic Recovery Act of 2009 (FASTER) program have resulted in significant safety improvements in recent years. However, as shown in Figure 5.2 fatal and serious injury crashes involving bicyclists and pedestrians are on the rise.

Pedestrians are more likely to be killed or injured on the region's roadways than cyclists. Intersections and mid-block crossings tend to the most dangerous areas for pedestrians. According to the City of Grand Junction's annual crash reports, most crashes involving pedestrians occur at intersection crossings during daylight hours and both drivers and pedestrians are generally equally at fault.

Right-hand turning movements of vehicles are often the most dangerous for bicyclists and can be addressed through protected lanes and other safety improvements at intersections. According to the City of Grand Junction, most bicycle crashes occurred while crossing intersections and fault was often shared by both drivers and cyclists. Cyclists involved in crashes tend to be less 20 years old or over the age of 55. Infrastructure projects and educational programs, such as Safe Routes to School, can be targeted toward addressing dangerous intersections and behaviors.

Figure 5.2: Bicyclist and Pedestrian Crash Trends, 2007-2012



Colorado Department of Transportation, 2013.

In 2012 there were 17 fatal or serious crashes involving bicycles or pedestrians out of an estimated 60,000 person trips by biking or walking – a rate of 0.27 crashes per 1,000 person trips. In comparison, there were 103 total fatal and serious injury crashes in the region involving vehicles in 2010 – a rate of 0.17 crashes per 1,000 person trips. Mesa County ranked 9th highest in the state in 2012 in terms of the total number of serious or fatal crashes involving pedestrians or cyclists. When taking total vehicle miles travelled into account, Mesa County ranks as the 11th most travelled county in the state.

Serious or fatal crashes involving pedestrians or cyclists in the region have risen recently, while overall crashes in the region have fallen. This reflects national trends where roads are becoming safer for vehicles but not necessarily for people. By most indicators, Mesa County's road safety for bicyclists and pedestrians represents an increasing challenge to address.

Activity Trends

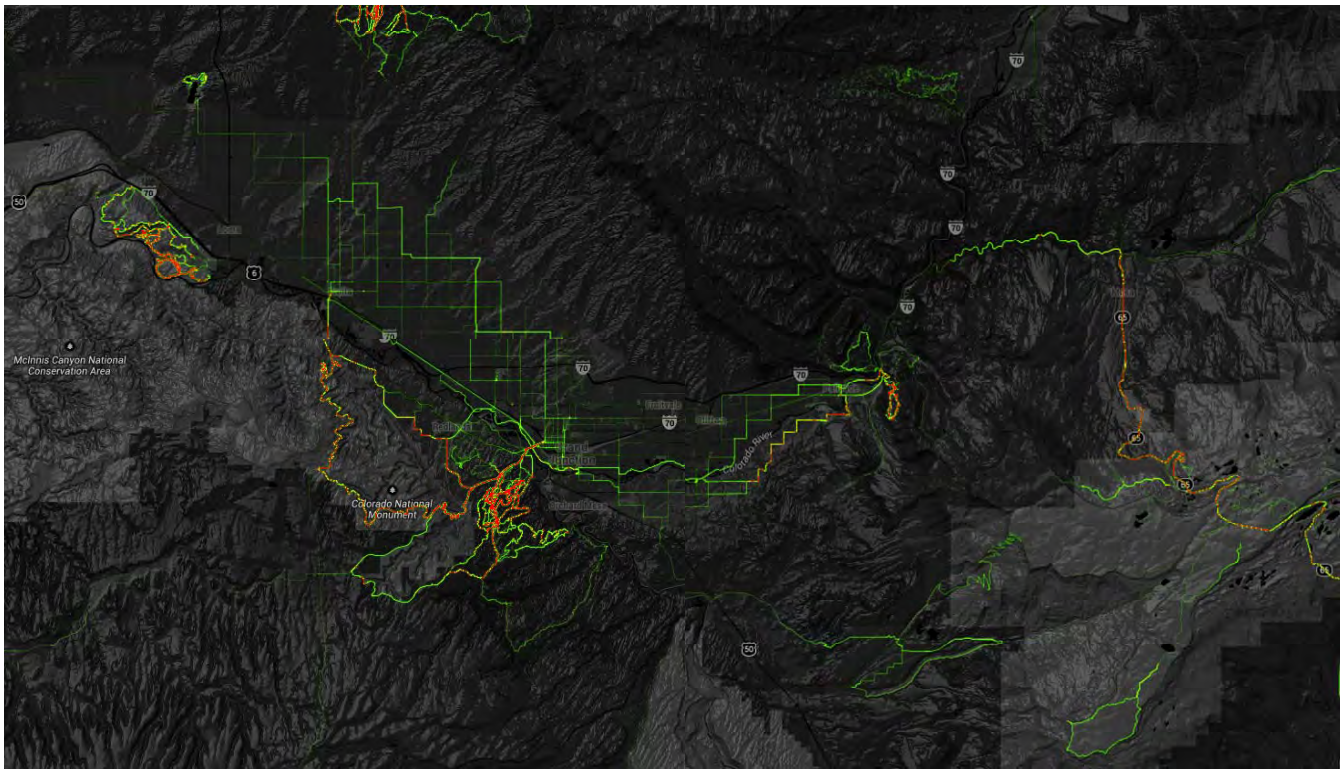
The Grand Valley Metropolitan Planning Organization (GVMPO) continually updates a regional travel demand model for transportation planning purposes. The current model estimates similar commute and trip patterns as Census and other data indicate. For example, in 2012, an estimated 60,000 person trips in the region were made by bicycling or walking, though this represents less than 10 percent of total trips. By 2040, bike and walking person trips are expected to increase to over 100,000 – a 65 percent increase. However, the biking and walking share of total trips is expected to remain stable.

In June of 2013, the Colorado DOT and City of Grand Junction partnered to install an automatic counter for cyclists and pedestrians along a stretch of the off-street Colorado Riverfront Trail near the Broadway Bridge. Similar to programs that collect traffic data for vehicles, this counter will help increase understanding of how and when the trail is being utilized and can better support data-based decision making. In August of 2014, 1,089 pedestrian and 2,650 bicyclist trips were counted along the westbound segment of this trail, or about 120 one-way trips per day. From January through September of 2014, nearly 28,800 trips were made along the trail. The trail is used frequently throughout the week for both recreation and commute purposes. Travel volumes spike along the trail segment during the weekday between 6 am – 8 am and again from 4 pm – 6 pm as people travel to and from work.

Additional data on cycling patterns and volumes in the region can be discerned from available private data. An increasing number of recreation enthusiasts use technology to track exercise routes and that information can be made available in aggregate and used in transportation planning. Strava is a leading company of run and ride tracking software and has made available global maps of cycling and running activity. The map pictured in Figure 5.3 highlights popular biking and running routes through the region. This data is based on a small sample size and is representative only of those using Strava software. However, within those limitations, the map serves to better illustrate well-traveled routes, both on and off street throughout the region.

Datasets such as the Strava activity heat map and the relatively recent CDOT bicycle traffic counter are important sources for data on non-auto traffic patterns and volumes. As data collection improves, the region can better understand all movements and better gauge total person travel in and around the region. Improved data will also help the region assess potential projects, gauge demand, and measure performance of projects.

Figure 5-3. Strava Activity Map, 2013



http://labs.strava.com/heatmap/#10/-108.84525/39.02935/blue/bike.

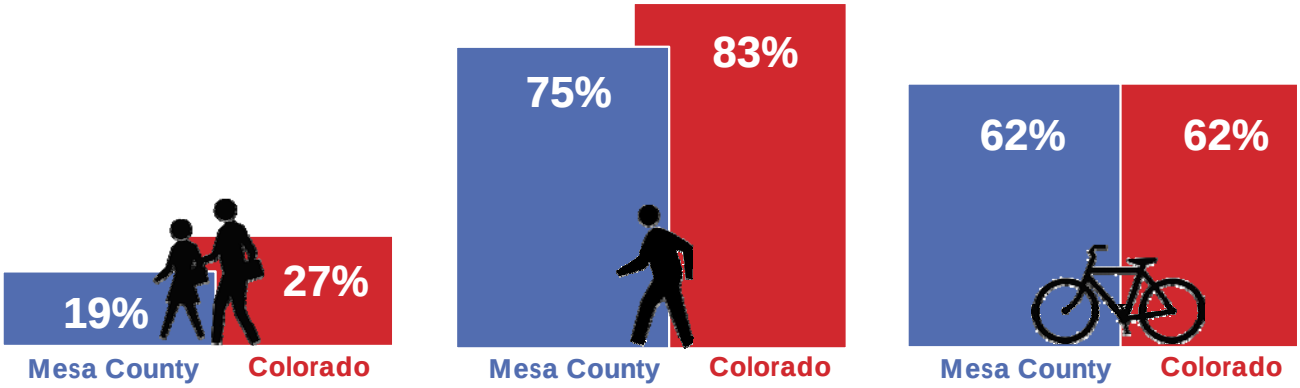
Health and Wellness

Across the country, awareness and attention to health issues and the connection between health and active transportation is increasing. In the Grand Valley, the Healthy Mesa County initiative is an innovative partnership to improve the health and wellbeing of residents. Sponsored by the Mesa County Health Department this effort involves a number of public agencies, schools, universities, healthcare providers, and other partners. The 2012 Community Health Improvement Plan identified the region's built environment, including land use, transportation, and recreation access as a key determinate of public and environmental health outcomes in the county.

According to the Colorado Health Foundation, people who live in neighborhoods that include safe, sturdy, well-designated walking paths are twice as likely to get sufficient physical activity as those who don't live in similar areas. Transportation infrastructure improvements can directly impact safety outcomes, improve access to

recreation, and offer active transportation choices, which in turn can lower rates of obesity and chronic diseases that cost society and taxpayers substantial resources over the long-run. A 2005 national study recently cited by the Colorado Legislature found that every dollar invested in building walking and biking trails, could achieve nearly three dollars in lifetime medical cost savings.

Figure 5.4: Key Regional Health and Transportation Indicators, 2010-2012



Colorado Department of Public Health and Environment.

Figure 5.4 shows several key health indicators where Mesa County could make progress to catch up to and surpass the state. Today, just 1 in 5 school children in the region get to school by biking or walking. Additional safe routes to school, improved crossings and intersections, and biking options are a priority in the region. More than 3 in 4 of the region's residents who live in neighborhoods with sidewalks or shoulders report that those sidewalks are safe for exercise. Yet, just 2 out of 3 adults may take advantage of those amenities or options to bike or walk to work in order to meet basic guidelines of two hours of exercise per week. The region will track health and wellness indicators and other measures over time to assess the impact of expanded and improved active transportation infrastructure in the region.

Community Bike Sharing

The Grand Valley MPO is interested in the potential for communities within the Grand Valley to launch a bike-share program. These programs make bicycles available for point-to-point short distance trips. They differ from bike rentals as they often serve spontaneous trips and users may drop off a bike at locations other than where originally picked-up. Bike share programs have grown exponentially in recent years and there are now over 80 programs across the country. These include programs limited to universities as well as private or non-profit programs in large and small cities. Most bike-share programs require initial sponsorship from private or local government sources. Large systems in major cities are financially profitable and have generated returns for public investors.

Denver B-Cycle. Courtesy: Denver Post.

Throughout the 2040 planning effort, civic leaders and the public were informally surveyed to assess whether a bike share program in the Grand Valley could be successful or not. By a narrow margin, those surveyed did believe that a small-scale or pilot test program in the City of Grand Junction could be successful. This level of interest suggests that further study is warranted. Next steps for the region could include a detailed feasibility study, surveying interest from public and private funding partners, identifying community leaders or sponsor organizations, or expanding the existing bike library program at Colorado Mesa University.

There are many resources and examples available of detailed feasibility studies. At a high-level, a bike share program must consider the following factors in order to be successful.

- **Sufficient Demand:** Bike share programs depend on high densities of residents and workers in a small area. Many bike users combine longer auto or transit commute trips into a central business area with shorter bike trips for errands, meetings, or events. Other bike share users are residents who find it more convenient to not worry about owning a bike and instead use a program for all home, work, and other trips. Grand Junction does have sufficient worker density to consider a bike share program. Within a 2.5 mile radius centered on Colorado Mesa University, over 24,900 workers commute in on a daily basis. Another 9,000 workers both live and work within that area. These workers, other residents, and visitors are the potential market for a bike share program. Most programs base financial plans on three to nine percent of residents using systems. In Grand Junction 6.3 percent of residents already bike or walk to work.
- **Business Model:** Capital and operating costs must be estimated and a business model proposed. Most programs involve some public-private partnership. For example, bikes and capital equipment in the Hubway program are owned by the City of Boston who contracts with a private business to maintain and operate the system. Revenues from advertising are returned to the City, which is generating a profit from its investment in the program. Others such as NYC's Citibike are entirely private, but supported by significant corporate investment.
- **Partnerships:** Leadership from public officials and partnerships with financial investors and corporate sponsors must be in place. Many programs have a single large investor while others rely on advertising and sponsorships from a variety of local businesses, hospitals or health insurers, and local governments. We-Cycle in Aspen, CO is a non-profit organization supported entirely by local businesses, foundations, and public agencies.

Bike share programs have been shown to increase rates of active commuting, to replace vehicle trips, and to improve physical activity for users. The long-term health benefits and cost-savings of physical exercise are well documented. Programs are also often popular with visitors and increase tourism and local visits. However, bike programs represent significant investments. The City of Fort Collins proposed small-scale system is estimated to require over $1 million in initial investment and more than $500,000 in annual operating funds. Revenues are expected to cover approximately half of operating costs in the initial phase. Bike share programs also require that bike friendly infrastructure, bike safety programs, and a bike culture among drivers and riders are all in place. Weather, accessibility of jobs, shopping, school, and the system technology are also important factors that must be considered.

A bike share program is consistent with regional and local goals to increase active transportation, provide commute options, encourage healthy choices, and increase accessibility of the built environment. The region can consider pursuing a concept or feasibility study of a pilot program within the City of Grand Junction.

Changes from the 2035 RTP

Significant updates, changes, and accomplishments have occurred since the 2035 Plan was adopted, including:

The Mesa County Board of Commissioners sunsetted the Urban Trails Master Plan, effectively leaving the unincorporated portion of the region without a non-motorized plan. The Grand Valley Trails Master Plan developed in 2013 has not been adopted by any local agency. The 2040 RTP represents a functional base trail network that does not include alignments along canals or drainages outside of municipalities.

With the passage of MAP-21, dedicated funding for the national Safe Routes to School (SRTS) program was discontinued and replaced with the Transportation Alternatives Program (TAP). School safety projects are still eligible for federal funds through TAP. In 2014, the Colorado Legislature provided state funding to continue the state SRTS program for at least another year. Grand Valley Bikes, local governments, and regional partners will continue to sponsor safety programs and secure educational and other grants for training and access to schools throughout the region.

In 2012, the Colorado DOT incorporated a bicycle facility design chapter within the state Roadway Design Guide for the first time. In 2014, Colorado became the 7th state to adopt the National Association of City Transportation Officials Urban Street Design Guide, which provides guidance on new bike infrastructure, including green lanes, cycle tracks and bike boxes. These design guidelines will be reflected in regional projects sponsored by CDOT and will be considered wherever feasible in local projects.

In 2009, the Colorado DOT embraced Complete Streets concepts by adopting Procedural Directive 1602 that "promotes transportation mode choice by enhancing safety and mobility for bicyclists and pedestrians on or along the state highway system." In 2010, the Legislature codified this directive into state law. In the Grand Valley, most governments have adopted either formal or informal guidance that incorporates Complete Streets principles into transportation projects. However, there is not always enough funding to enable local governments to apply these principles consistently and uniformly.

Progress on developing a regional trail network continues and several significant projects have been accomplished since the 2035 plan was adopted. Notable projects include the Monument View section of the Riverfront Trail which completes the trail connection between Fruita and Grand Junction. A recent project along I-70B near Mesa Mall upgraded this roadway to be compliant with the Americans with Disabilities Act and better accommodate pedestrian and bicycle travel.

The Grand Valley's recreational opportunities are increasingly attracting businesses, residents, and visitors. The number of bicycle component manufacturers is growing and several global outdoor firms are headquartered in the region. The Outdoor Industry Association estimates that 3.4 million visitors enjoy a range of activities in Mesa County each year. Recognizing the potential for future growth, the Grand Junction Economic Partnership identified outdoor products and services as a regional target industry. In 2012, the employment concentration in Mesa County in sporting goods, recreational vehicles, and fitness retail industries was more than three times the national average.

2040 Project Prioritization and Priorities

This component of the 2040 Regional Transportation Plan (RTP) is consistent with and builds upon the local bicycle and pedestrian planning efforts of the Urban Trails Committee and other regional organizations as well as the bike and pedestrian plans of local municipalities. The 2040 plan furthers regional goals of developing a comprehensive network of active transportation facilities that serves as many residents, visitors, and activity centers as possible, regardless of jurisdictional boundaries or funding sources.

The Grand Valley MPO is responsible for competing for and allocating federal and state funding to advance regional projects. CDOT Region 3 and local governments are key partners in this process and must provide matching funds (and in many cases, additional funding) in order to secure federal awards.

The primary source of funding for regional bike and pedestrian projects has traditionally been the federal government and Colorado DOT. Local funding also provides a significant share of regional projects and commonly covers all costs for local projects.

Under MAP-21, dedicated funding for Transportation Enhancements, Safe Routes to School, and Recreational Trails was consolidated into a new Transportation Alternatives Program (TAP). TAP will provide the greatest opportunity to fund future regional bike and pedestrian enhancements. Other funds that are commonly used to fund active transportation projects include:

- Surface Transportation Program (STP);
- Highway Safety Improvement Program (HSIP);
- National Highway Performance Program (NHPP);
- Federal Lands Transportation Program (FLTP);
- Urbanized Area Formula Program (UZA);
- Federal Lands Access Program (FLAP);
- Other federal agency programs (e.g. Community Block Grants, Community Transformation Grants);
- State of Colorado FASTER safety and transit programs;
- Other state sources (e.g. Great Outdoors Colorado grants, Colorado Dept. of Health and the Environment.);
- Civic organization grants (e.g. People For Bikes Community Grant Program, Colorado Health Foundation, etc.); and,
- Private businesses and individual contributions.

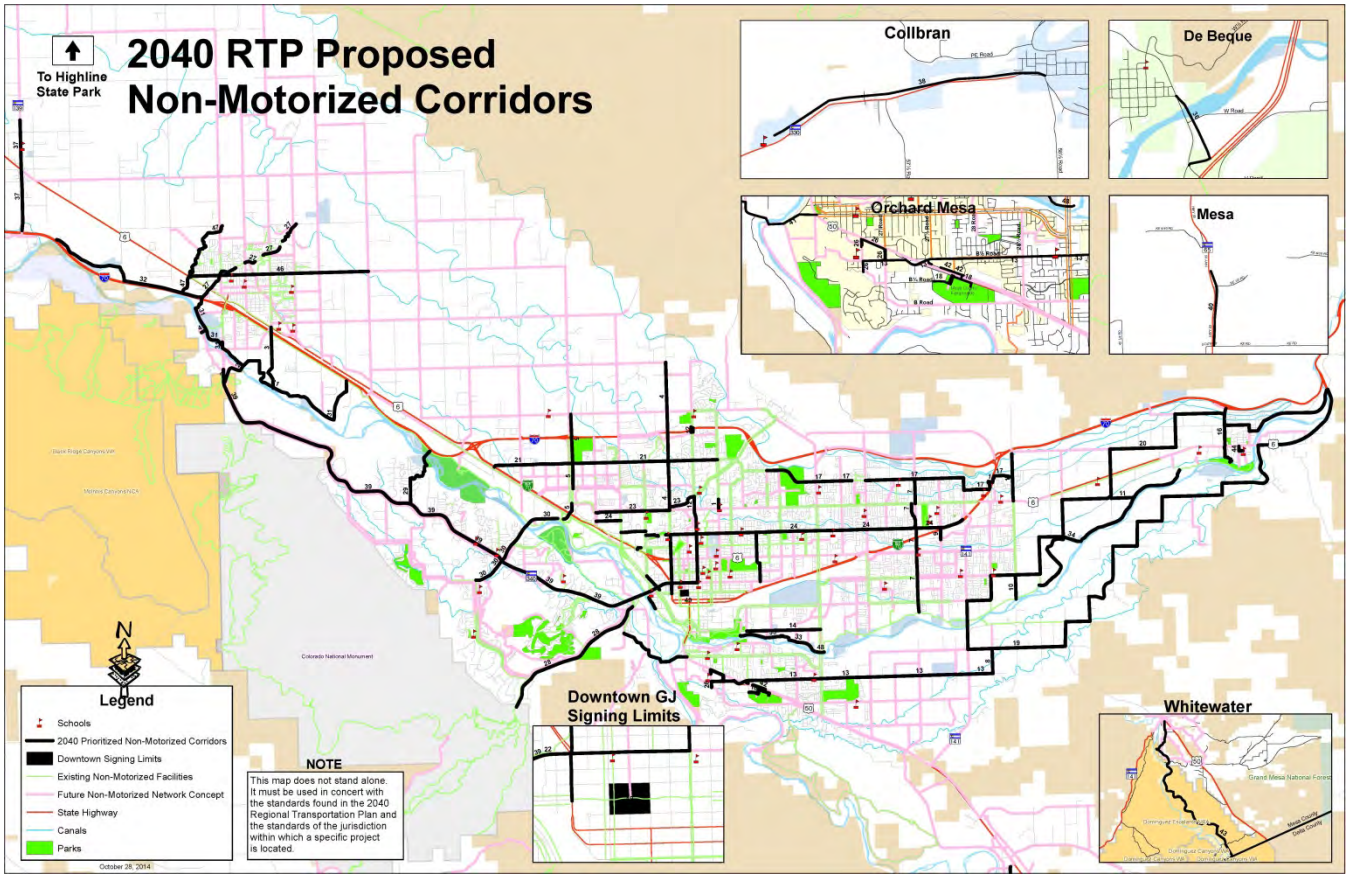
The Colorado DOT estimates that the GVMPO will have access to approximately $200,000 annually in Transportation Alternatives Program (TAP) and local matching funds over the next ten years. Through 2040, available funding under this program is anticipated to total over $4 million. However, the total cost of top priority future projects identified in this plan is more than $20 million. The region cannot afford to complete every potential project no matter how beneficial or how well supported by the public. Limited funding must be dedicated to regionally significant and regional priority projects.

Evaluating 2040 Active Transportation Project Alternatives

The map in Figure 5.5 displays the existing regional active transportation network (including trails, bike lanes, paths, and other facilities) and each of the proposed alternatives considered in the 2040 RTP. Nearly 50 project and corridor alternatives were considered. These proposed alternatives incorporate those projects covered within the 2035 RTP, those submitted by local governments and included in local plans, those prioritized by the

Urban Trails Committee, and those recommended by public supporters. A wide range of improvements ranging from shared lanes, dedicated bike lanes, bike paths and connectors, off-system trails, pedestrian bridges, and other alternatives are addressed. Each proposed alternative supports regional goals for greater cycling and walking connectivity within and between communities, expanded commute options, and access to recreational opportunities.

Figure 5.5: 2040 Proposed Active Transportation Alternatives plus Existing Network



A larger version of this map and accompanying detailed project information and cost estimates for non-motorized projects are included in an appendix to this 2040 RTP.

A subcommittee of the 2040 Steering Committee was convened to consider all proposed active transportation project alternatives. This group included representatives from County and local governments as well as staff of the Grand Valley MPO. A scoring process was undertaken that weighed overall merits of each project and ranked priority projects by total expected benefits. The criteria used to assess projects is described in the framework in Figure 5.6 and provides clear links to regional, state, and national goals. For example, each project alternative was scored based upon: potential for safety improvements; coordination with ongoing maintenance programs; level of connectivity; mobility gains for recreational and commute travelers; access to recreational opportunities; implementation timeframe; and, level of local support and consistency with regional and local visions.

In the absence of regional data at the project level, assessments by Committee members provide the best available information for decision-making. This framework supports the region's transition toward a performance-based planning process by advancing projects that are linked to national goals and state performance targets. The region will continue to measure and assess the performance of active transportation investments by tracking key indicators of safety, commute choices, and recreational access.

Figure 5.6: 2040 Performance-Based Planning Framework for Active Transportation

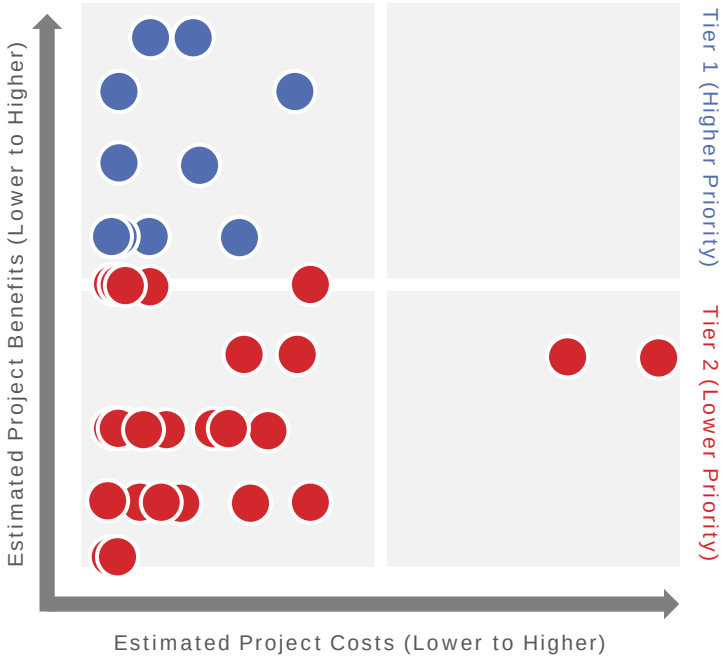
U.S. DOT and CDOT GOALS	SAFETY	INFRASTRUCTURE CONDITION	CONGESTION REDUCTION	SYSTEM RELIABILITY	FREIGHT MOVEMENT AND ECONOMIC VITALITY	ENVIRONMENTAL SUSTAINABILITY	REDUCED PROJECT DELIVERY DELAYS	
GVMPO GOALS	SAFETY	MAINTENANCE	EFFICIENT, MULTIMODAL NETWORK	MOBILITY AND TRANSIT	ECONOMIC COMPETITIVENESS	LIFESTYLE AND RECREATION	LEADERSHIP AND COOPERATION	
GVMPO Roadway Project Criteria	*Reasonably expected to improve safety for roadways users ?*	*Improves pavement, bridge, or facility condition?*	*Connects corridors, centers, and/or communities?*	*Improves Mobility for all travelers?*	*Realistically enhances economic potential of project area?*	*Increases access to recreational or active transportation opportunities?*	*Implementation timeframe?*	*Local partner commitment and plan consistency?*
	Low Medium High (e.g. high crash volume/rate intersection, locally identified hotspot, adds or improves safety features)	Low Medium High (e.g. improves facility in fair or poor condition, extends expected lifecycle, minimizes need for replacement)	Low Medium High (e.g. reduces current congestion or future delay, completes corridors or connections within and between communities, provides for multi-modal facilities.)	Low Medium High (e.g. improves reliability and mobility, primarily through operational improvements and secondarily through capacity. Supports opportunities for mode choice.)	Low Medium High (e.g. contribution to regional economy, facilitates freight movement, or aligns with local/regional economic development strategies.)	Low Medium High (e.g. improves or enables active transportation through sidewalks, shoulders, or safety features or enhances access to tourist/recreational destinations.)	More than 10 years 5-10 years Less than 5 years (e.g. consider implementation timeframe, challenge, obstacles, and other contributing factors to project delays)	Low Medium High (e.g. high level of local support and or funding and aligned or supported by local plans or in priorities.)
GVMPO Performance Measures	Fatality and serious injury rate per 100 million vehicle miles travelled Five year average annual reduction in fatalities and serious injuries	Drivability life rating for on-system roadways Percent of regional bridges that are not structurally deficient	Minutes of delay per traveler, per day	Planning Time Index rating for on-system roadways	Annual Average Daily Truck volumes on regional on-system roadways	Percent of schoolchildren commuting actively at least one day a week. Percent of workers commuting work by biking or walking	Percent of regional priority projects with action taken in each LRTP cycle.	

2040 Priority Active Transportation Projects

Based on this prioritization process a set of proposed corridor alternatives were identified as regional priorities. Individual corridors were grouped into three tiers. Tier 1 includes alternatives with the greatest perceived benefits – as assessed and scored by subcommittee members using the criteria described in the framework above. Tier 2 alternatives did not score as highly in terms of potential benefits. Tier 3 includes project alternatives scoring the lowest relative to all projects. Tier 2 and 3 alternatives do represent important projects that can be considered in the future.

Figure 5.7 shows tiered projects in a benefit-cost matrix. As depicted, alternatives in the upper left corner represent those with the greatest perceived benefits and with relatively low total estimated costs. These projects will the first to be considered for funding commitments in the regional Transportation Improvement Program. Tier 2 alternatives are also shown and represent additional opportunities should funding become available.

Figure 5.7: Benefit-Cost Matrix of Tier 1 and 2 Active Transportation Alternatives



Tier 1 Priority 2040 Active Transportation Corridors

Tier 1 alternatives represent a menu of potential project options that will be considered by the Grand Valley Regional Transportation Committee and local government partners as funding becomes available. Complete descriptions of all tiered alternatives, facility definitions, and cost estimation methodology are included below.

In total, it could cost approximately $26 million to complete these important active transportation corridors and linkages. However, the GVMPO is anticipated to receive just $14 million, or $200,000 annually, in funds that can be readily allocated to active transportation projects. Funding for these critical corridors will have to be raised from local governments, CDOT and other federal grant programs, or private and civic organizations. Some corridors, or portions of corridors, may be completed in conjunction with other ongoing roadway or maintenance efforts.

1st Street – Main Street to I Road - $2.4 million

This corridor is located in the center of Grand Junction and provides a critical north-south linkage between residential areas to the north and downtown or the Riverfront Trail to the south. This corridor provides dual benefits of an access to recreational facilities and a route for commuter transportation. It will cost approximately $2.4 million to upgrade this nearly 4-mile long corridor, with the majority of length and cost located in segments north of I-70. There are five distinct sections of this corridor that will each require different types of improvements, with a focus on bike lanes in both directions.

Orchard Avenue Corridor – Mesa Mall to 32 Road - $1.6 million

This corridor is located in the center of Grand Junction and it provides a critical east-west linkage between commercial areas to the west (Mesa Mall) and commercial areas to the east (Clifton shopping centers), while traveling directly through high-density residential areas. This corridor provides benefits of access to commercial facilities and a route for active commuter transportation. It will cost approximately $1.6 million to upgrade this more than 6-mile long corridor. There are eleven distinct sections of this corridor that each require different types of improvements, with a focus on bike lanes and shared lanes in both directions. The corridor also includes connected facilities on four different east-west roads through the City.

Little Salt Wash – Riverfront Trail to 18½ Road - $1.0 million

This corridor is located along the western edge of Fruita and provides recreational linkage between the Riverfront Trail and other biking destinations to the north. It will cost approximately $1.0 million to upgrade this nearly 2-mile long corridor with a shared use path.

SH 340 – Kings View Road to Rice Street - $5.0 million

This corridor runs through the Redlands area below the Colorado National Monument and provides an east-west linkage between Fruita and Grand Junction. This corridor provide benefits of increased access to recreational facilities (connects both Monument entrances) and a route for active commuter transportation. It will cost approximately $5.0 million to upgrade this over 10-mile long corridor to provide bike lanes in both directions.

24 Road – Redlands Parkway to H Road - $1.0 million

This corridor is located on the west side of Grand Junction and provides a critical north-south linkage between residential areas to the north and Mesa Mall or the Riverfront Trail to the south. This corridor provides additional access to recreational facilities and a route for active commuter transportation. It will cost approximately $1.0 million to upgrade this nearly 2-mile long corridor. There are two distinct sections of this corridor with a focus on a shared use paths.

Riverfront Trail – Loma Interchange to Little Salt Wash - $2.6 million

This corridor is located along the north side of the Colorado River and provides recreational linkages between the current Riverfront Trail and other biking destinations in the Loma area and beyond. It will cost approximately $2.6 million to improve this 4-mile long corridor with a shared use path. This does not include the cost of property necessary to construct the trail.

31 Road – Riverfront Trail to H Road – $1.5 million

This corridor is located on the eastern side of Grand Junction and provides a north-south linkage between residential areas to the north and the Riverfront Trail to the south. This corridor provide additional access to recreational facilities and routes for active commuter transportation. It will cost approximately $1.5 million to upgrade this 3-mile long corridor. There are six distinct sections of this corridor that will each require different types of improvements, with a focus on bike lanes or shared lanes in both directions.

7th Street – Struthers Ave to H Road - $1.2 million

This corridor is located in central Grand Junction and provides a critical north-south linkage between residential areas to the north and downtown or to the Riverfront Trail to the south. This corridor provides increased access to recreational facilities and routes for active commuter transportation. It will cost approximately $1.2 million to upgrade this over 2-mile long corridor, with the majority of length and cost located in the segment between Grand Avenue and Center Avenue. There are four distinct sections of this corridor that each require different types of improvements, with a focus on shared lanes in both directions.

B½ Road Corridor – Linden Avenue to C Road - $3.6 million

This corridor is located in the center of East Orchard mesa and provides an important east-west linkage between commercial areas to the west and residential areas to the east. This corridor improves access to commercial facilities and provides routes for active commuter transportation. It will cost approximately $3.6 million to upgrade this more than 6-mile long corridor. There are seven distinct sections of this corridor that each require different types of improvements, with a focus on sidewalks and shared lanes in both directions.

Riverfront Trail – 27½ Road to 29 Road - $1.1 million

This corridor is located along the north side of the Colorado River and creates a recreational linkage between existing sections of the Riverfront Trail. It will cost approximately $1.1 million to improve this 1.75-mile long corridor with a shared use path. This does not include the cost of property necessary to construct the trail.

Riverfront Trail & Downtown Destination Signing – 7th Street & Main Street Routes - $5,000

This effort includes two corridors to connect Downtown Grand Junction and the Riverfront Trail. In the current configuration, it is challenging for visitors and others trail users to know how to get to downtown and for those downtown to find the trail. This project will install destination guide signs in both directions along the two routes. It will cost approximately $5,000 to install signage. While not included in the cost estimate, this project could be enhanced by installing Riverfront Trail information kiosks at both ends of downtown.

North Avenue (US-6) – 1st Street to 30 Road - $4.8 million

This corridor is located near the center of Grand Junction and serves as an east-west arterial street and State Highway. The corridor can be revitalized by improving the mobility between the community assets it connects. It is vitally important to, and heavily used by, all modes of travel because of its commercial facilities and proximity to community assets including Colorado Mesa University, Stocker Stadium, the Veterans Hospital, and multiple Mesa County human services and workforce facilities. The existing street will be upgraded to enhance mobility for transit, bicycle, and pedestrian users while maintaining capacity and level of service for motor vehicles. It will cost approximately $4.8 million to improve this 4-mile long corridor. Improvements on both sides of the road would include 8' wide detached sidewalks, bus stops with pullout lanes at ¼ mile spacing, a widened outside travel lane accommodating shared use, and mid-block pedestrian crosswalks.

2040 Active Transportation Project Alternatives and Cost Estimates

Costs for Tier 1 and 2 alternatives are estimated in detail to provide local and regional partners greater certainty when moving projects forward and to better allocate regional funding. However, costs are for planning purposes only and may change as a project advances. Cost estimates include only construction costs only and do not include expenses related to acquisition of right-of-way, design, construction management, materials testing, and other non-construction items.

Costs for Tier 1 projects are based on a preliminary, but detailed, assessment of the type of facility to be constructed along each major segment of the alternative corridor. Descriptions of common facility types are included at close of this chapter. The assumed type of facility construction was based on a comparison of existing conditions to desirable future design standards. For example, many county roads are constructed at 22-feet wide, but to conform with current bicycle and pedestrian design standards the desired width with the addition of bike lanes in each direction would be 34-feet (two 12-foot wide vehicle lanes and two 5-foot wide bike lanes). This would require widening of 6-feet on both sides of the road. This level of improvement would also require an asphalt overlay of the entire new road surface and restriping. In some cases, the desired type of active transportation facility would not fit within existing right-of-way, and a lesser type of facility was assumed for future implementation.

Costs for Tier 2 projects are based on preliminary assessments of the type of facility and construction required. For example, the specific type of construction, over every segment of the corridor, was not determined for these projects and instead a general unit cost assumption was made. The unit cost per foot for different types of facility construction is based on historic cost information from the following sources: :Mesa County "Engineers Opinion of Possible Construction Costs" for the SH-340 Sidewalk Project (designed but not constructed); Mesa County "Riverfront Trail East Route Alternatives – Planning Level Cost Estimates"; and, CDOT 2013 Historical Construction Cost Data Summary.

Table 5.1 lists corridor alternatives considered within this effort by priority and with available cost estimates.

Table 5.1: 2040 Grand Valley Active Transportation Corridors and Cost Estimates

ID	Tier	Facility Type (May vary along corridor)	Location Short Description	Estimated Cost ($2014)
Tier 1 Projects				
4	1	Bike Lanes	1st Street – Main Street to I Road	$2,359,000
24	1	Shared and Bike Lanes	Orchard Avenue Corridor – Mesa Mall to 32 Road	$1,621,000
27	1	Shared Use Path	Little Salt Wash – Riverfront Trail to 18½ Road	$1,080,000
39	1	Bike Lanes	S.H. 340 – Kings View Rd (Fruita) to Rice St (GJ)	$4,950,000
5	1	Shared Use Path	24 Road – Redlands Pkwy Ramp to H Road	$1,092,000
32	1	Shared Use Path	Riverfront Trail Kokopelli Connection	$2,556,000
7	1	Bike Lanes and Shared Use Path	31 Road – Riverfront Trail to F½ Road	$1,461,000
12	1	Shared Lanes	7th Street – Struthers Ave to H Road	$1,189,000
13	1	Sidewalk & Shared Lanes	B½ Road – Linden Ave to C Road	$3,565,000
33	1	Shared Use Path	Riverfront Trail – 27½ Road to 29 Road	$1,104,000
49	1	Destination Route Signing	Downtown - 7th St Corridor and Main St Corridor	$9,000
50	1	Sidewalk and Shared Lanes	North Avenue – 1st Street to 30 Road	$4,770,000
Tier 2 Projects				
3	2	Bike Lanes and Bridge	18 Road – Riverfront Trail to J Road	$5,085,000
18	2	Sidewalk	Fairgrounds Entrance Area	$360,000
22	2	Shared Lanes	Grand Avenue – Spruce Street to 7th Street	$611,000
23	2	Shared Use Path	Horizon Dr/Patterson Rd – 24½ Road to I-70	$1,560,000
26	2	Sidewalk and Shared Use Path	Linden/US-50/27 Rd Area	$522,000
19	2	Bike Lanes	Fruit and Wine Byway (East OM) – 32 Rd to US-6	$12,474,000
20	2	Bike Lanes	Fruit and Wine Byway (Palisade) – 32 Rd to US-6	$10,980,000
21	2	Bike Lanes and Shared Use Path	G Road – I-70B to Horizon Drive	$4,880,000
34	2	Shared Use Path	Riverfront Trail – 33½ Rd to 36¼ Road	$3,072,000
1	2	Shared Lanes	12th Street – Patterson Rd to Bonita Ave	$180,000

ID	Tier	Facility Type (May vary along corridor)	Location Short Description	Estimated Cost ($2014)
Tier 2 Projects (cont.)				
2	2	Shared Use Path	17¼ Road – SH-340 to CO River historic bridge	$444,000
6	2	Shared Lanes	23rd Street/24th Street – Grand Ave to Orchard Ave	$6,000
15	2	Shared Use Path	Crosby Avenue – CO River Ped Bridge to Base Rock St	$144,000
17	2	Bike Lanes	F½ Road Corridor – 28 Rd to 33 Rd	$3,731,000
28	2	Shared Use Path	Monument Road – CO Nat'l Monument to D Rd	$2,148,000
37	2	Shared Use Path	S.H. 139 – Hawkeye Rd (I-70) to N ¼ Rd	$1,632,000
38	2	Shared Use Path	S.H. 330 – Plateau Valley School to Collbran	$1,200,000
45	2	Bike and Ped Bridge	CO River at JM Robb State Park	$2,700,000
9	2	Shared Use Path and Bridge	31½ Road over I70B/RR – Perkins Drive to E½ Road	$4,950,000
14	2	Shared Lanes	C½ Road – 27½ Road to 29 Road	$729,000
31	2	Shared Use Path	Riverfront Trail – Little Salt Wash to 20 Road Overpass	$3,360,000
36	2	Shared Use Path	Roan Creek Road – DeBeque I70 to 4th Street	$336,000
46	2	Bike Lanes	K Road – US6/Little Salt Wash to 20 Rd	$1,755,000
48	2	Bike and Ped Underpass	Riverfront Trail, 29 Road @ CO River	$1,500,000
10	2	Shared Use Path and Bike Lanes	33 Road – Riverfront Trail to G Road	$351,000
25	2	Bik eand Ped Intersection.	Independent Avenue at Rimrock Ave	$250,000
Tier 3 Projects				
8	3	Shared Lanes	32½ Road – B ½ Road to C Road	Not estimated
16	3	Bike Lanes	Elberta Avenue – Riverfront Trail to Grande River Dr.	Not estimated
29	3	Shared Use Path, Bike Lanes, Bridge	20½ Road – SH-340 to Riverfront Trail	Not estimated
42	3	Sidewalk	US 50 North Frontage Rd – Lynwood St to B½ Rd	Not estimated
44	3	Shared Use Path	Taylor Elementary (Palisade) – US-6 to School	Not estimated
35	3	Road Removal and Shared Use Path	Riverside Park Dr – Hale Ave to W. Colorado Ave	Not estimated
40	3	Shared Use Path	S.H. 65 – KE Road to RV Park (Mesa)	Not estimated
41	3	Shared Use Path and Bridge	South Redlands Road/C Rd – Mira Monte to US-50 @ Unaweep, including "Black Bridge" crossing of the Gunnison River	Not estimated
43	3	Shared Use Path	SH-141 @ US-50 to Delta County Line (Whitewater)	Not estimated
11	3	Shared Use Path	F Road – 35 Road to Riverfront Trail	Not estimated
47	3	Shared Use Path	Big Salt Wash (Fruita) – Riverfront Trail to L Road	Not estimated
30	3	Second Shared Use Path	Redlands Parkway – S. Camp Rd to Riverside Pkwy Ramps	Not estimated

Active Transportation Facility Names, Definitions, and Standards

The following information is provided to help readers understand the complexities and details of active transportation planning and design. For additional references and information, please consult Chapter 14 of the CDOT Design Guide, the AASHTO Guide for the Development of Bicycle Facilities, and the National Association of City Transportation Officials Urban Street Design Guide.

- *Complete Streets* are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders. By adopting a Complete Streets policy, communities and transportation agencies direct planners and engineers to routinely design and operate the entire right of way to enable safe access for all users, regardless of age, ability, or mode of transportation. A complete street may include: sidewalks, bike lanes (or wide paved shoulders), special bus lanes, comfortable and accessible public transportation stops, frequent and safe crossing opportunities, median islands, accessible pedestrian signals, curb extensions, narrower travel lanes, roundabouts, and more. This concept does represent a fundamental change in the way many of the region's and nation's roadways are commonly designed and built.

Descriptions of Active Transportation Facilities:

- *Sidewalks*: That portion of a street between the curb line, or edge of pavement, and the adjacent property line (Uniform Vehicle Code). Generally hard surface and accessible to all users within a high-density urban area. Minimum width is 4-feet. If width is less than 5-feet, then additional sections of 10-foot width must be provided at reasonable intervals for wheelchairs to pass. The desirable width is 6-8 feet when a planting strip is provided between walk and curb. The desirable width is 8-10 feet when a planting strip is not provided between walk and curb. Desirable width in downtown areas is 10-feet.
- *Shared Lanes*. A roadway with wide outside or curb lanes, minimum 14-feet wide (without share the road signage) and maximum 16-feet wide.
- *Marked shared lanes* (sharrow) are used in locations where it is desirable to provide a higher level of guidance to bicyclists and motorists. If there is not any on-street parking, then a sharrow can be placed on the outside portion of the lane but the lane width must be at least 14-feet. If the width is less than 14-feet then the sharrow must be placed in the center of the lane to indicate that bicyclists should occupy the lane like a motor vehicle.
- *Bicycle Boulevards or Shared Streets*: A low-volume, low-speed street that allows shared use of the street for walking and driving.
- *Bicycle Lanes*: A portion of the roadway designated for preferential use by bicycles, by using a solid white line and bicycle symbols. They are one-way lanes in the same direction as adjacent motor vehicle traffic (unless multi-lane, one-way roadway). Motorist are prohibited from using bike lanes except for transitions and intersections. Minimum bike lane width is 5-feet with wider lanes provided for on-street parking, higher bicycle volumes, or high-speed roadways. Depending on conditions, motor vehicle lane widths could be reduced to 10-feet to retrofit bike lanes.
- *Paved Shoulders:* Roadway shoulders are generally not considered pedestrian facilities, but can accommodate occasional pedestrian usage if designed to be accessible. Paved shoulders are not considered a travel lane like bike lanes, but greatly improve bicyclist accommodations on roadways. Minimum width is 4-feet and wider sections are recommended for various site specific conditions.
- *Bicycle Guide Signs:* Bike route signage provides clear user information and navigational instructions for preferred routes as determined by each community. They can be used as standalone signs, but it is

preferred that they be used in conjunction with other formal bicycle facilities. Crosswalks, signals and other treatments of facilities for crossing streets.

- *Off-road Path*: A travel way within road right of way that is generally set back from the road and separated by a green area, ditch, swale, or trees. They are generally used in rural or low density urban areas. They can be paved or unpaved and do not need to follow road alignment.
- *Sidepath:* Off-road path that generally follows the road alignment.
- *Shared use path:* Off-road path that is used by both pedestrian and bicycle traffic.
- *Pedways:* Indoor urban walking networks that connect buildings and transportation terminals.
- *Recreational paths and trails:* Rugged rural travel way located outside of road right of way.

Chapter 6:
Regional Transit

Chapter 6: Regional Transit

CHAPTER OVERVIEW

Public transportation in the region serves a critical need for transportation choice and provides mobility for lower-income families, older residents, veterans, commuters and many others. Grand Valley Transit and other service providers operate a network of fixed route and on-demand service throughout Mesa County's urbanized area. Transit ridership is increasing as more residents choose to live closer to work. Many residents without other options also rely on transit services to travel to and from workforce centers, medical appointments, schools, shops, and workplaces. Yet, the revenues available to cover rising costs and meet increasing demand are stretched and likely to remain stagnant or even decrease in the future, based on current policy.

What Did We Hear?

> A synthesis of comments and ideas received is documented below. Not all ideas are within the scope of this Regional Transportation Plan and some may require federal or state legislation or cooperation to implement. The regional plan is intended to document the region's vision for transportation and incorporate guidance received into decision-making.

- Multi-modal transportation, including walking, biking, and mass transit should be the primary focus of development for the next 50 years.
- This is a part of the country known for biking and outdoor activity, but you wouldn't know it by our roadways. It is important to maintain and improve what is already here while better incorporating public transit options.
- Mass transit will be more important in the future if the region's air quality deteriorates and becomes an non-attainment area.
- As traffic becomes more and more congested, transit systems helps alleviate congestion, as well as provide transportation to those who wouldn't normally have any.
- We need to invest in more bus routes and in buses that run on something beside gasoline, for example CNG or electric buses.
- The region's aging population will need to rely on public transit more and more to get around and get to essential health services and appointments.
- As a senior that will soon need public transportation I am interested in how far I will have to walk to get to a bus.
- Visitors to the area would benefit if the bus system was connected to recreational destinations.
- Eliminating the stigma of public transit use could increase ridership. Transit provides mobility for the disabled and nondrivers.
- Mass transit needs to be made affordable and convenient. Currently, it is definitely not convenient and bordering on not being affordable.
- Many more bus routes are needed as it is really not convenient for people to use the bus.

- There is a greater need for multi-modal interconnections as there are very few "park and ride" opportunities available. Too little emphasis is placed on commuter point to point transit and traditional routes are not commuter friendly.
- Transit connections to CMU campus and from the university to downtown are needed. Airport could be better served by bus also.
- A transit system could be developed that would connect systems across the Western Slope. For example, express bus routes connecting Montrose and Glenwood Springs and high-speed rail to the Front Range or other connections to Denver, Colorado Springs, and Fort Collins.
- Regional Bus Express services serving Mesa County and surrounding counties and statewide connectivity for travel across the state are needed.
- GVT could make small improvements, such as multiple languages for signage and multi-lingual drivers, restrooms at transit hubs, increased trans-county travel services, and credit purchases for rides.
- Bus service in the area around 25 Road and G Road could be improved.
- Bus routes and service schedules could be expanded to offer evening services, more frequent services (every 30 minutes) and service on Sundays.
- We need to maintain variable route planning, express services, and paratransit systems.
- A “Shoppers Shuttle” would be important for people on a fixed income to spend their money more efficiently while still remaining independent. With a Shopper’s Shuttle they could spend less money on gas and drivers and save money by being able to comparison shop. Such a shuttle could serve stores such as WalMart and K-Mart, among others. This could be sold as an All Day Shoppers Transit Pass and drop passengers at store fronts – rather than street side bus stops.

Input on Proposed GVT Route Changes

In addition, to public comment on transit service in the region that was received through the website, online surveys, and comments at community events – input into proposed route changes was sought.

An open house was held on Wednesday May 28, 2014. This was a joint public meeting for the Grand Valley Transit 2040 Regional Transportation Plan (RTP), the Grand Valley Metropolitan Planning Organization (GVMPO), and the Colorado Department of Transportation’s (CDOT) Statewide Transit Plan effort. Grand Valley Transit (GVT) posted a display board and asked people what they thought of specific proposed changes to existing GVT routes. The proposed changes displayed on the board are summarized below. Meeting attendees were then asked to place dots on the display board indicating whether they were supportive or not supportive of the proposed changes. A total of 10 responses were received and are reported in Table 6.1 below.

Table 6.1: Public Comment on Proposed GVT Route and Budget Changes

Proposed GVT Route and Policy Changes	Public Support
• Route 1 (Horizon Drive)— Limit service times for the Social Security office on North Crest Drive to 8:00 a.m. to 12:00 p.m. daily.	Two people *were not supportive* of the change to limit service times for the Social Security office.
• Route 8 (Fruita)—Revise the Fruita route to add a stop to serve the new Community Hospital facilities on G Road.	Two people *were supportive* of the proposed change on Route 8 to serve new healthcare facilities.
• Route 9B (North Avenue) —Change this route to serve North Avenue exclusively from Rimrock Shopping Center to the new Workforce Center on 29½ Road. This change would allow for approximately 20 minute time between buses.	Two people *were supportive* of the proposed change to Route 9B to offer more efficient service.
• Redlands Dial-A-Ride—Continue operation of the service but increase the fare from $1.50 to $3.00 cash only (no passes allowed) to help cover costs.	One person *was supportive* and another *was not supportive* of a fare increase for Dial-A-Ride.
• Eliminate Transfers—This change would only affect those paying cash fares or using the 11 ride punch pass. The elimination of bus transfers will allow a more efficient operation of the system by reducing the amount of time a driver spends at each bus stop.	One person *was supportive* and another *was not supportive* of the elimination of bus transfers.

Grand Valley Transit will continue to engage customers and community members on these and future route, fare, or policy changes. GVT continually surveys riders to gauge customer satisfaction, learn of opportunities for improvement, and to evaluate potential service changes to offer more convent and efficient bus service throughout the Grand Valley.

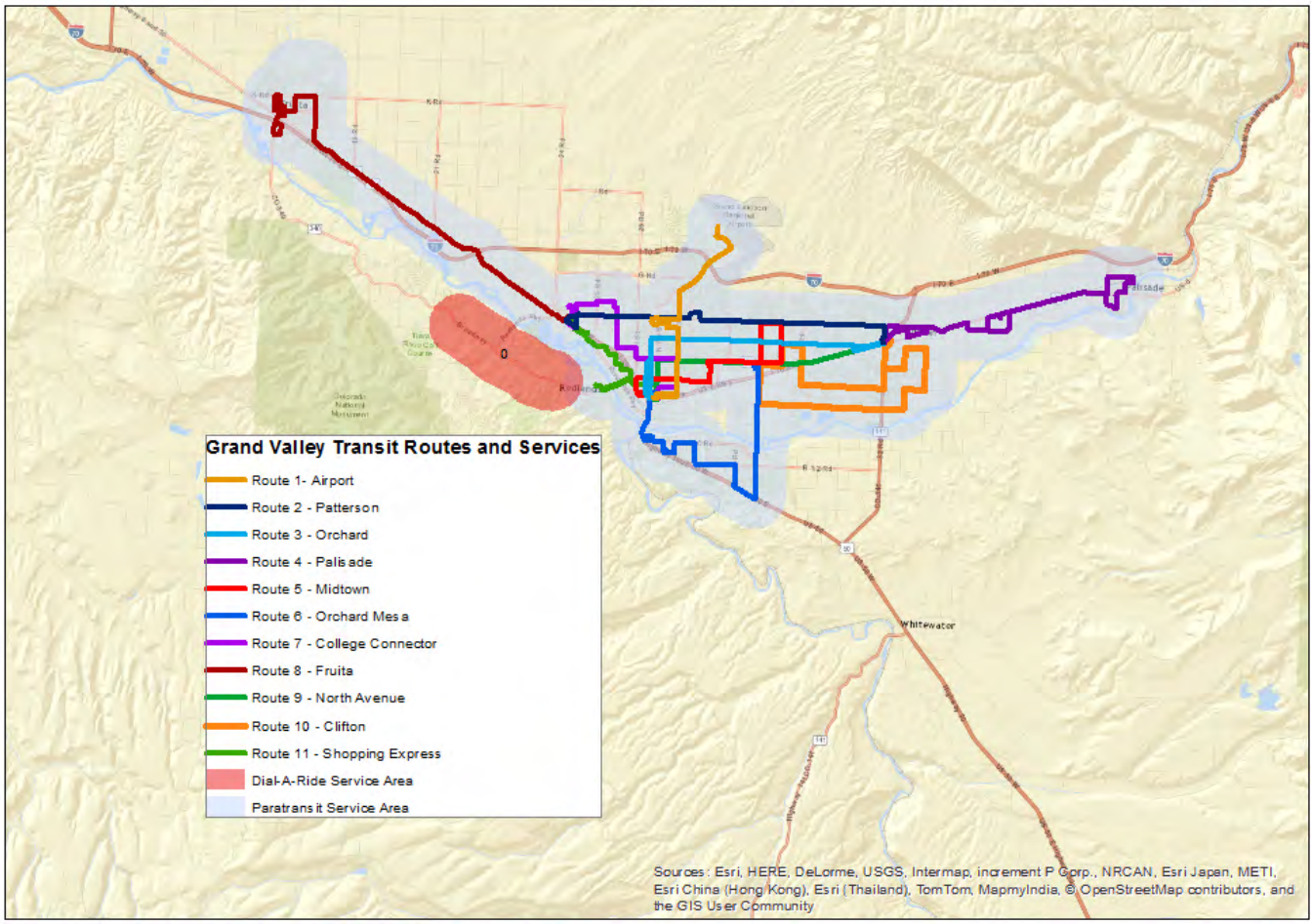
What Does the Data Tell Us?

Existing System

Two primary types of public transit services are offered in Mesa County– a local fixed-route bus system and on-demand paratransit service. Current routes and service extents are shown in Figure 6.1.

Grand Valley Transit (GVT) operates 11 fixed local bus routes connecting Grand Junction, Palisade, Clifton, Orchard Mesa, and Fruita. GVT operates both fixed-route and paratransit service Monday through Saturday from approximately 4:45 a.m. until 8:35 p.m. The region is also served by curb-to-curb Dial-A-Ride service in the Redlands area and paratransit service is offered in accordance with the Americans with Disabilities Act (ADA) of 1990. The ADA paratransit service is for persons with physical, cognitive, emotional, visual, or other disabilities which functionally prevent them from using the public fixed-route bus system either permanently or at certain times of the year. All of GVT's buses are fully ADA accessible, inclusive to persons who use mobility aids such as wheelchairs and walkers and persons with visual impairment.

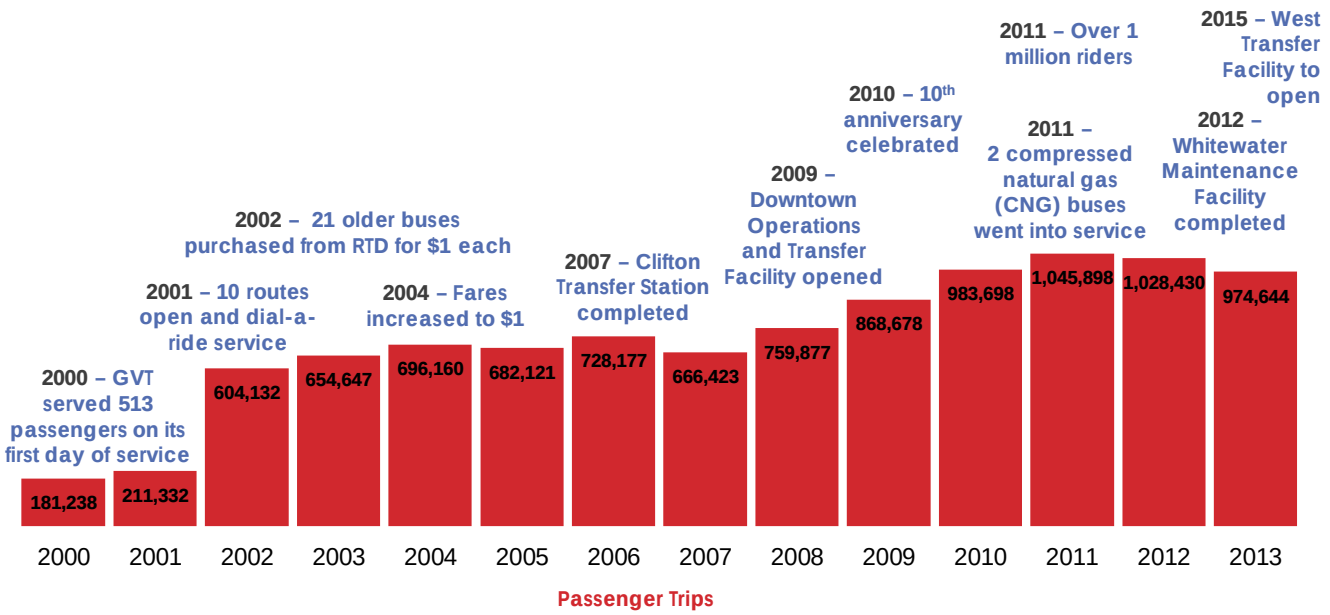
Figure 6.1: Grand Valley Transit Routes and Services



Timeline of Grand Valley Transit Services

The history of transit in Mesa County stretches back to the rail era of the early 1900s. Electric streetcars ran through the City of Grand Junction and to Fruita through 1926. Local and regional bus service began in the 1920s and was privately operated through 1949. Grand Valley Transit began service in February of 2000 with two circulator and four shuttle routes. Today, the system serves nearly 975,000 riders annually with a fleet of 27 buses. Over 15,000 passengers are served through the region's demand-responsive and paratransit services. Figure 6.2 highlights trends in ridership and major developments over GVT's short history serving the Grand Valley.

Figure 6.2: Grand Valley Transit Passenger Trip Trends and Major Developments



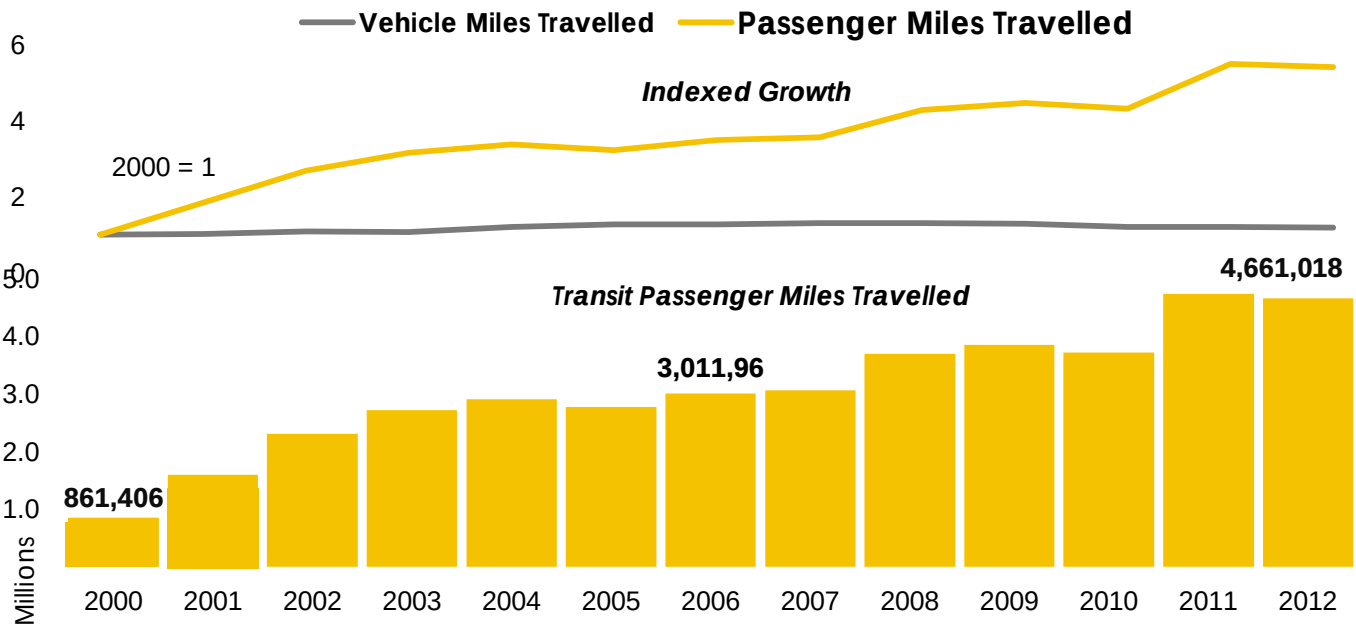
Ridership Trends

As shown in Figure 6.2, ridership of the GVT's fixed route bus system has grown significantly over time. Total unlinked passenger trips (one person, one trip) reached over 1 million in 2011. With the economic downturn and increased unemployment, ridership dipped down in 2012 and 2013. A similar downward trend has occurred with vehicle miles travelled and licensed drivers in Mesa County in recent years.

Over the past decade, total transit passenger miles travelled have grown more quickly than vehicle miles travelled. In 2013, transit passengers travelled over 4 million miles (cumulative miles travelled by passengers). Growth in transit passenger travel is shown in Figure 6.3 compared to state highway vehicle travel. The indexed growth rate indicates that transit travel has grown nearly 5 times since 2000, while vehicle travel has remained relatively stable.

The region's roadways still carry the majority of people and goods as less than one percent of all daily person trips are made by transit. However transit ridership is likely to continue to see overall long-term growth. By 2040, transit trips are forecast to increase 40 percent, which could result in over 1.3 million riders annually on GVT's system. If route expansions and service extensions are undertaken growth could be expected to exceed this. If financial constraints result in service reductions, growth could be expected to be less than is currently forecast.

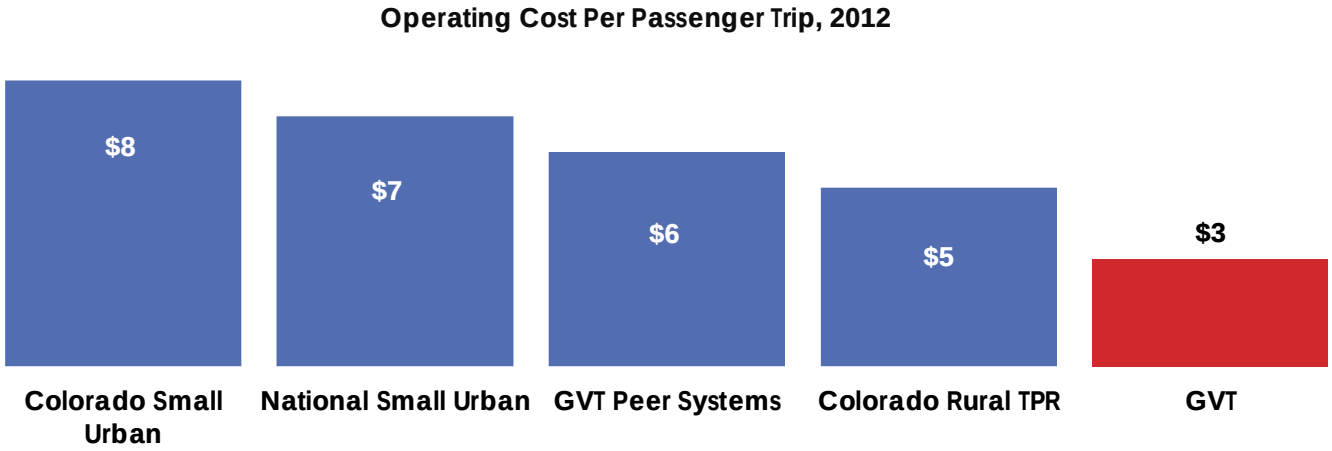
Figure 6.3: Transit and Vehicle Passenger Miles Travelled, 2000-2012



Operating Efficiency Comparison

Transit performance is assessed on many metrics, including customer satisfaction, on-time performance, ridership growth, and operating cost per passenger or revenue mile. Figure 6.4 reports total operating expenses (including vehicle operations and maintenance, facilities maintenance, and personnel costs) per passenger trip for GVT and select comparison areas. In 2012, operations and maintenance of the entire GVT regional system was provided for an average cost of approximately $3.40 per single passenger trip.

Figure 6.4: GVT Operating Cost Efficiency Comparison, 2012



National Transit Database | Colorado Department of Transportation.

Compared to other urban systems in Colorado, GVT's cost efficiency is less than half the state average of $8 per passenger trip. The national average cost for small urban systems (passenger trips between 500,000 – 1,500,000 annually) is approximately $7 per passenger trip. GVT's peer systems include other Western metropolitan areas with ridership of around 1 million annual trips including: Missoula, Santa Fe, Scottsdale, Corvallis, and other

similarly sized urban transit providers. The Colorado State Transit Plan reports that the average cost per passenger trip of rural transit systems operating in rural transportation planning regions across Colorado is $5. GVT's cost per trip is the lowest and most efficient among these comparison areas. This could be due to GVT's investment in maintenance facilities, compact service area, and route management.

Transit Demand

Public transportation is a lifeline for many residents of the Grand Valley. Transit services connect people to jobs, schools, grocery stores, medical care, recreational areas, and family. There is a diverse and widespread range of transit-dependent populations, including veterans, older residents, recently arrived immigrants, English-as-a-second-language populations, and those without ready access to other transportation options. Many commuters, residents, and students also choose to take transit to and from work, home, or school.

With over 973,000 riders in 2013, many people choose GVT's services. Despite misconceptions of public transit users, the average bus rider is a young, white, lower-income, employed male. An on-board survey conducted in 2014 of over 500 GVT riders collected demographic information. According to that survey:

- 35 is the average age of GVT bus riders;
- 94 percent speak English as a primary language;
- 53 percent are male and 70 percent are white;
- 63 percent earn less than $15,000 annually;
- 33 percent work in service or labor occupations;
- 54 percent reside in Grand Junction;
- 36 percent of riders take the bus more than 5 days a week; and,
- 58 percent use transit to travel to home or work.

The top reasons for surveyed passengers choosing to take transit are because they do not drive (35 percent) or their families do not have cars (30 percent). More detailed information on passenger demographics and trip origins and destinations can be found in the full GVT 2014 Onboard Survey accessible online at: *www.rtpo.mesacounty.us.*

The onboard survey provides a sample of current ridership. Data from the U.S. Census, Colorado Department of Local Affairs, and other sources provides another way of looking at potential transit users in the region. The following data points provide common measures of transit-dependent populations in Mesa County in 2013. Not all of these individuals may choose or be able to take transit, however these metrics provide a rough measure of potential demand. GVT and many community and veterans organizations provide demand-responsive services (e.g. Dial-a-Ride) to assist individuals getting to and from medical appointments, grocery stores, errands, and workplace.

- 305 workers regularly commute to jobs using transit every day. 90 percent of commuters have a car available, but choose to ride transit.
- 19,230 persons live in households with incomes below poverty level. 33 percent of those are considered working poor – living below poverty level and working full or part-time.
- 3,285 persons live in households with no vehicle available. 10 percent of householders over the age of 65 do not have a car available.
- 26,340 residents are over the age of 65. 3,814 are over 85 years of age. By 2040, older residents will more than double to 50,733.

- 9,173 residents have an ambulatory difficulty that restricts work or mobility. 50 percent of those persons are over the age of 65.
- 14,541 armed services veterans live in Mesa County. By 2040, that number will drop to 11,132.

The 2014 Local Coordinated Human Service Plan for Mesa County is included as an appendix to this 2040 RTP and provides detailed estimates of ridership demand and unmet service and mobility gaps for the Grand Junction urbanized area.

Safety and Security

For GVT and other service providers, the safety of the travelling public and operators has always been a top priority. MAP-21, the most recent federal transportation legislation, strengthens this commitment and introduces additional safety and security requirements for transit operators. Not all of the recent federal changes will apply to GVT and further guidance from the Federal Transit Administration (FTA) is still pending to clarify key aspects of these regulations. The most significant requirements are embedded within a National Public Transportation Safety Plan and include:

- Safety performance criteria for all modes of public transportation;
- Definitions of state of good repair developed through the implementation of a national transit asset management system;
- Programs for public transportation safety certification; and,
- Minimum safety performance standards for transit vehicles used in revenue service.

The FTA released an advanced notice of proposed rulemaking on these topics in September of 2013 and final rulemaking is expected in 2015, or later. It is likely that FTA will designate some of these responsibilities to State Safety Oversight agencies. In Colorado, this would be the Colorado Department of Transportation (CDOT), Division of Transit and Rail. For some small or rural transportation providers, CDOT will prepare agency safety plans and oversee performance standards.

Public transportation providers and FTA grant recipients will be required to adopt agency safety plans, integrate those safety plans into the MPO planning process, and provide certified training for staff. Until final rulemaking is established, existing agency safety plans will remain in effect.

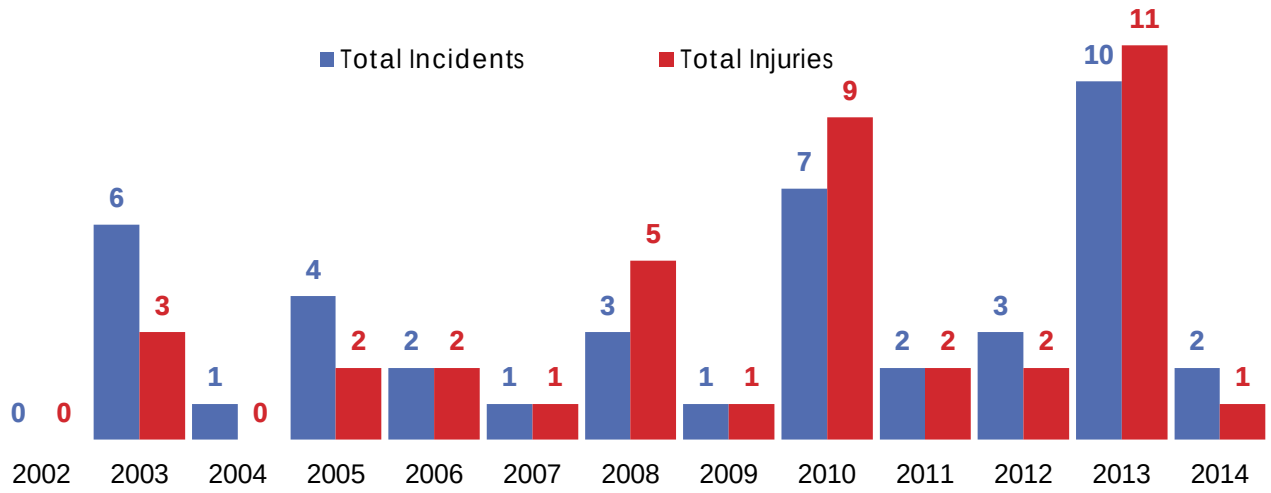
GVT currently maintains an Agency Safety Plan. This plan is developed in accordance with the FTA's System Security and Emergency Preparedness Training and Technical Assistance Program. The safety plan describes policies, procedures and requirements of. maintenance and operating personnel to mitigate safety incidents and improve security and emergency response. This plan is a requirement of all FTA grantees. GVT's service contractor, MV Transportation, Inc. also maintains a detailed System Security and Emergency Preparedness Plan that is regularly updated.

For smaller urban operators such as GVT, the cost of implementing performance monitoring, preparing an agency safety plan, providing operator training, and mitigating safety risks (e.g. through fleet replacement) may be significant. FTA is being encouraged by the American Public Transportation Association and other organizations to adopt a flexible, scalable and cost-effective approach for smaller operators.

GVT has a strong safety record. Figure 6.5 reports trends in safety incidents and total injuries to passengers and operators over the past decade. Most safety incidents do not involve serious collisions, but "slips, trips, falls, electric shocks, vehicles leaving the roadway, and other minor events." Similarly, most injuries to passengers or employees are classified as minor, not serious injuries or fatalities. GVT has had one fatality in over ten years of service. Historically, GVT's total injury rates per 1 million miles travelled has averaged 0.9. This is nearly 30

percent higher than the region's vehicle serious injury rate of 6.5 per 100 million miles travelled. Other fixed route bus systems in Colorado have injury rates between 0.1 and 2.0 per 1 million miles travelled.

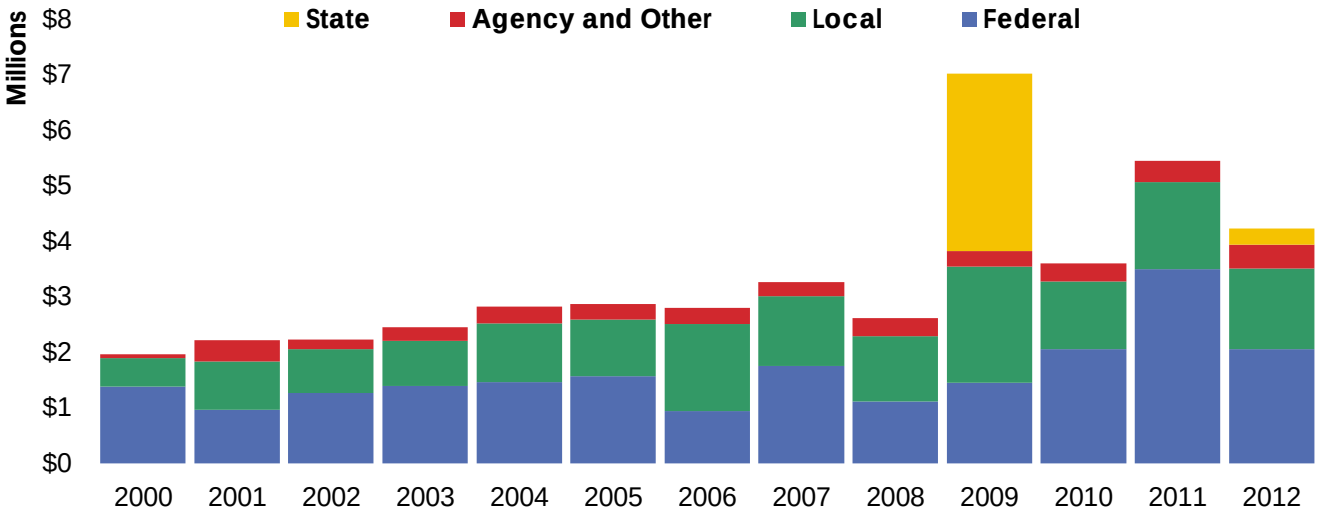
Figure 6.5: Transit Safety and Security Incidents and Injuries, 2002-2014



Transit Finance

A variety of federal, state, and local funding sources support transit services in the region. GVT relies on financial support from the Federal Transit Administration, the State of Colorado's FASTER program, and local governments to support transit operating and capital expenses. Operating costs are primarily supported by federal grants, local governments, and from agency-generated revenues such as service fares. As shown in Figure 6.6, federal grants are the primary source of financial support for transit in the region, providing more than half of all transit revenues.

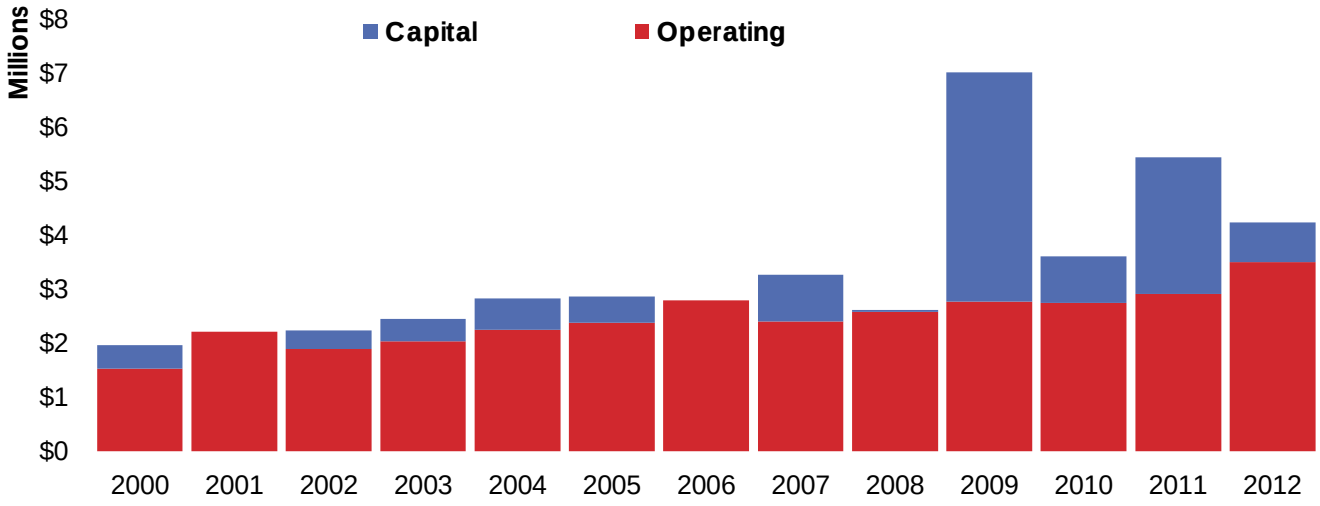
Figure 6.6: GVT Total Revenues by Source, 2000-2012



GVT receives funding directly from the FTA primarily through formula grants that support service in urbanized and non-urbanized areas of Mesa County. GVT may also apply for additional FTA grants that are competitively awarded for vehicle repair and replacement, transit programs for elderly, low-income, or disabled residents, and programs that support transit ridership as a commute alternative. CDOT allocates a portion of FASTER revenues to support statewide and local transit capital projects. In 2009, a FASTER grant provided $3.2 million to fund completion of the GVT's central transfer and operations center. Local funding supports ongoing operating and maintenance needs. Mesa County and local governments collectively contribute over $1.3 million annually to support essential transit services in the region.

Capital expenses vary from year to year with vehicle replacement needs and major construction, such as new transfer or maintenance facilities. Operating expenses are more stable but vary with changes in the prices of fuel, labor rates, and contracted transportation services. Figure 6.7 shows trends in the two primary expenditures of the GVT system – operating and administration and capital construction and vehicle purchases. Capital expenditures in 2009 and 2011 reflect investment in new maintenance and transfer facilities in the region. Over 80 percent of operating expenses are attributable to ongoing vehicle repair and maintenance. GVT expended an estimated $2.8 million in 2012 to keep its fleet of buses in safe order and good condition.

Figure 6.7: GVT Total Expenses by Expenditure, 2000-2012



2040 Transit Financial Needs

With significant recent investments in transfer and maintenance facilities in Whitewater and Grand Junction and the anticipated completion of the West Transfer Facility, the region's long-term capital needs are restricted to replacement of aging vehicles. The 2040 RTP does not include any major capital construction projects for GVT facilities. Future needs are focused almost exclusively on maintaining existing services, replacing vehicles, and expanding service as needed. The region's 2040 Local Coordinated Human Services Transportation Plan was updated as part of the 2040 RTP effort. This detailed plan includes estimates of future short and long-term transit investment needs.

Total costs through 2040 for GVT and other local providers to maintain existing services and implement regional service priorities are estimated to total over $209 million ($2014). As reported in Chapter 4, the region is forecast to receive some $80.1 million ($2014) in federal, local, and state revenues. This means that GVT could potentially face a gap of $129.4 million between future transit needs and resources. Some of this gap may be covered through additional capital funding from federal or state grants which are not accounted for in forecast revenues.

To simply maintain current service levels, GVT's total operating expenses are estimated at $86.7 million through 2040 – just higher than expected future revenues. The 2040 fiscally constrained transit plan is limited only to maintaining existing services. This means that the region may not be able to pursue high priority service expansions or additions and alternative revenue sources will have to be explored. For detailed future cost estimates, review the Local Coordinated Human Services Plan included in the appendix of the 2040 regional plan.

Chapter 7:
Regional Roadways

Chapter 7: Regional Roadways

CHAPTER OVERVIEW

The Grand Valley's road network provides for the safe and efficient movement of people and goods within the region and connecting to other regions. Over 600,000 daily trips are made from home to work or to school or to other destinations. The transportation network must accommodate those trips safely and efficiently. Ensuring that the thousands of miles of roads and hundreds of bridges and other facilities are in good condition and are uncongested requires signficant resources and cooperation among many levels of government. The regional transportation system connects businesses to markets, improves quality of life for residents, and provides visitors access to local communities, businesses, and destinations.

What Did We Hear?

Throughout the 2040 Regional Transportation Plan (RTP) update process, public comments were invited on regional road transportation issues, challenges, and opportunities. The bulk of public comments received through this process related to maintenance and safety issues and supported continued regional commitment and action to improve the condition and safety of infrastructure in the region.

> A synthesis of comments and ideas received is documented below. Not all ideas are within the scope of this Regional Transportation Plan and some may require federal or state legislation or cooperation to implement. The regional plan is intended to document the region's vision for transportation and incorporate guidance received into decision-making.

Maintain Current Infrastructure

- In the recession we need to focus on maintaining the roads we have first and then expanding lane capacity and roadways.
- More resources will be needed in the future to invest in maintaining the existing network.
- We need to improve and maintain our transportation, but to do it as fiscally responsibly as possible. It costs much more to reconstruct a street than it does to properly maintain it.

Connect Communities

- We need to link communities with better options for travel. For example, making Palisade more accessible to and from Grand Junction.
- Focus on inter- and intra-community movement and efficient ways of getting trucks and industry in and out of Grand Junction so outlying communities can continue to maintain their "small-town" feel.
- Consider "gateway" projects that will benefit visitors and provide access to major destinations and communities. Our community is judged by the upkeep of our road system and by how easy it is to get around, if we want to grow the community must appear inviting to our victors and potential businesses. If it is easy to get around, visitors will keep coming back.

Support Economic Development

- Inefficient transportation and lack of transportation options create a drag on the economy in terms of time and inefficiency and productivity.
- Without safe and efficient transportation, businesses will be unlikely to relocate to the Grand Valley and won't be able to grow.
- Investments should focus on improving regional economic development; ease of access for tourism, business, and manufacturing.
- If people can efficiently move around town, they will be more likely to spend money locally. If roads are clogged and there is no way to get somewhere, residents and visitors won't shop and new business won't come into the area.
- Make roads multi-modal, safe, aesthetic, and efficient - that will spark and enhance private investment along those streets and corridors. Recognize that roadway projects spin money into the community and are a form of economic development.

Increase Safety

- Living in a rural area, transportation is vital for getting to work, events, and stores. Make the system as safe as possible and try to eliminate challenging intersections.
- Too much congestion and too many inefficient signals and intersections between 1st Street out to I-70 between Grand Junction and Fruita. We could get more use out of I-70 and existing roads by reversing lanes during peak hour and other demand management strategies.
- Unsafe intersections and roads need to be corrected. Safe routes for people walking and biking are needed. Reduce accidents and the congestion caused by traffic incidents.
- Roads and schools are congested with traffic created by parents because there is no safe alternatives for children to get to school.

Improve Efficiency and Mobility

- Quality of life is a big driver in the economic viability of community. Unsafe commuting conditions and traffic jams decrease quality life and community growth.
- Focus investment dollars where travel demands are greatest and where safety improvements are most needed.
- Select a few roads for fast, high-volume traffic for good regional flow. Slow down and diversify transportation options on the rest.
- Specific intersection and signage improvements could serve to improve intercity mobility
- We have very little traffic compared to many other cities and some of the recent improvements seem to far exceed current or near future demands.
- Reduce the number of commercial trucks traveling rural and suburban streets that are not designed or intended for large vehicles. Make more truck routes to move products through town without need of impeding other traffic.

- We live in the wide open west and we are spread out. We are dependent of our transportation system. Transportation development must be aligned with land use, community, economic and other comprehensive plans.
- Fewer cars on the road means fewer expensive and eyesore parking lots.

Advance Multi-Modal Transportation

- Make surface street improvements that create safe opportunities for vehicle and pedestrian and bicycle transportation within urban and suburban areas a priority.
- Improve the connectivity of people to recreation, parks, and new and existing trails (e.g. Matchett Park could have a major impact on the Patterson corridor).
- Stop spending so much on trails and alternate transportation. We already have rights-of-way for roads and sidewalks, let's use them.
- Well planned transportation systems move traffic efficiently but also encourage people to park and walk around downtown areas to access local shopping and business areas and encourage people to get out of their cars to walk and ride bicycles.

Consider Future Trends

- Aging population will rely on other people for transportation, may need public transportation more, or need dedicated or alternate routes to get around. Seniors living in rural areas should not be isolated. We will need transportation systems and choices that are designed for the aging population, e.g. corridors for 'golf carts' or other modes of travel.
- Any new construction or improvements to existing roads should be done with an eye to the future. Take into account future growth, future right of way needs, future rail or mass transit corridors, and future industrial development then build accordingly.
- There are strong trends toward the public wanting to live in safe, vibrant, livable urban communities.
- Air quality may determine where funds can be invested in the future if we do not plan wisely and avoid non-attainment status. Avoiding non-attainment status for air quality must to be included in this plan.
- There is a need to invest in sustainable fuels and technologies. Electric or CNG vehicles could be owned by the County and rented by residents like other car-sharing programs around the country.

What Does the Data Tell Us?

Travel Trends

The region's roads may appear similar but an important distinction is whether a roadway is considered on-system or off-system. The on-system network includes any road that is a numbered state highway or federal interstate. This would include regional routes such as I-70, U.S. 6, U.S. 50, Hwy 141. S.H. 340, and other major roads. Maintenance and oversight of construction for on-system roads and many bridges is the responsibility of the Colorado Department of Transportation (CDOT). Projects on these roads must conform to state and federal standards. On-system roads accommodate the majority of traffic in the region.

Nearly all other roads and streets in the region are considered off-system and owned by local governments or the county. The off-system network includes any paved or unpaved road without a U.S. or state highway designation, including alphanumeric roads such as K or 24 ½ Road and other routes such as Patterson/F Road, Elberta Avenue, and many frontage roads. Maintenance and minor construction projects on these roads are the

responsibility of local governments. CDOT and the Grand Valley Metropolitan Planning Organization (GVMPO) may partner with local governments to complete projects on local roads and many local routes are included in this 2040 RTP. Other roads, streets, and bridges in the region may be privately owned by property owners or associations and are not covered in this plan. The U.S. Park Service, U.S. Forest Service, and Bureau of Land Management also have jurisdiction over some roads in the region.

The distinction between on and off system is important in terms of funding decisions and jurisdiction; however, the entire transportation network must work together to keep the region moving. Collectively, the region's roadway transportation network includes:

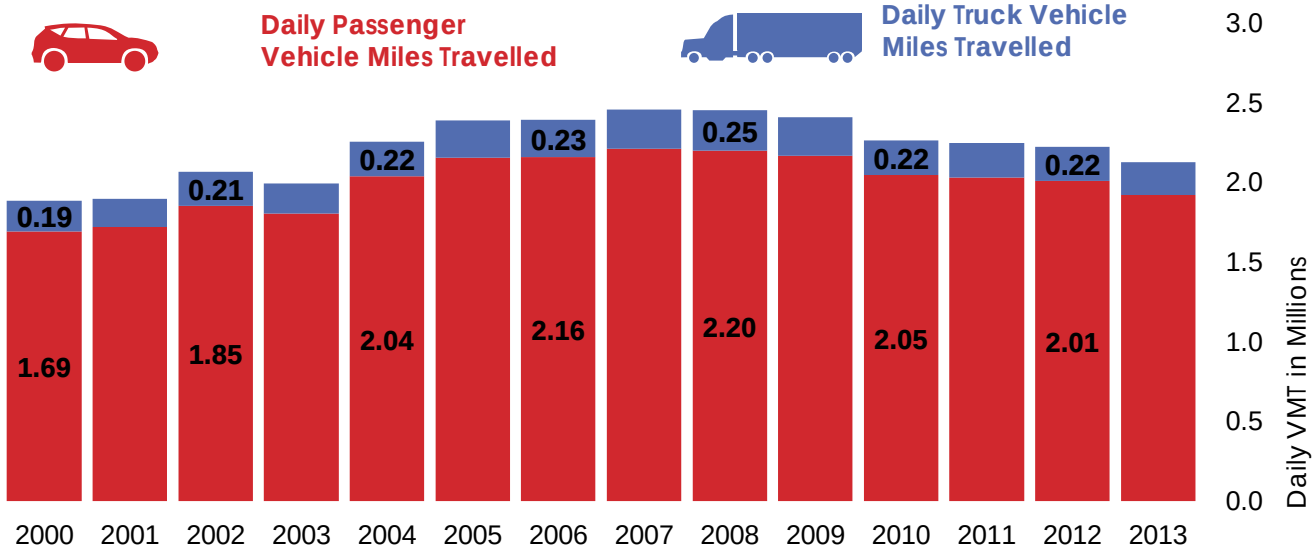
- 265 centerline miles of state highways and U.S. interstates. Approximately 73 percent of regional highways have a drivability life rating of high or moderate. This means that pavement conditions will be drivable for another three to 10 years or more.
- 342 major bridge structures. Half of the region's bridges were built before 1970 but are still in good condition. Overall, 98 percent of on and off-system bridges are structurally sound.
- 1,407 centerline miles of county-owned roads and 456 centerline miles of city-owned roads. More than 60 percent of those roads are paved.
- 1,900 miles of trails throughout the region, including 4WD/ORV trails, hiking and biking trails, neighborhood paths, and bike paths. This includes an estimated 134 miles of signed and striped bike lanes along regional roadways.

The regional network of roads, bridges, and trails carry people and goods throughout the region and connect the Grand Valley to other regions. These roads must be safe, reliable, and efficient to accommodate commuters, commercial truck traffic, visitors, cyclists and pedestrians, and countless daily trips. According to the region's traffic forecasting model over 4.4 million vehicle miles are travelled every day and 620,00 daily driving trips are made using the region's transportation system.

Mesa County's on-system state highways carry more than half of all regional traffic, or approximately 2 million daily vehicle miles traveled (DVMT) in 2013. DVMT represents all vehicles traveling on every highway segment, over an average day. Figure 7.1 shows trends in vehicle miles travelled over the past decade. Travel in the region declined with the onset of the economic recession and higher fuel prices. As the region's economy recovers, travel volumes are expected to grow again.

On all local and state roads, approximately 54 percent of miles travelled are on urban or suburban roads and 46 percent on rural roads. Interstate-70 carries more than 40 percent of all traffic in the region while another 20 percent of traffic is on local streets and connectors. The remainder of regional travel is largely accommodated by arterial roads and state highways. On average, 10 percent of vehicle miles traveled on all state highways consists of commercial truck traffic. Some routes carry a greater percentage of trucks than other roads.

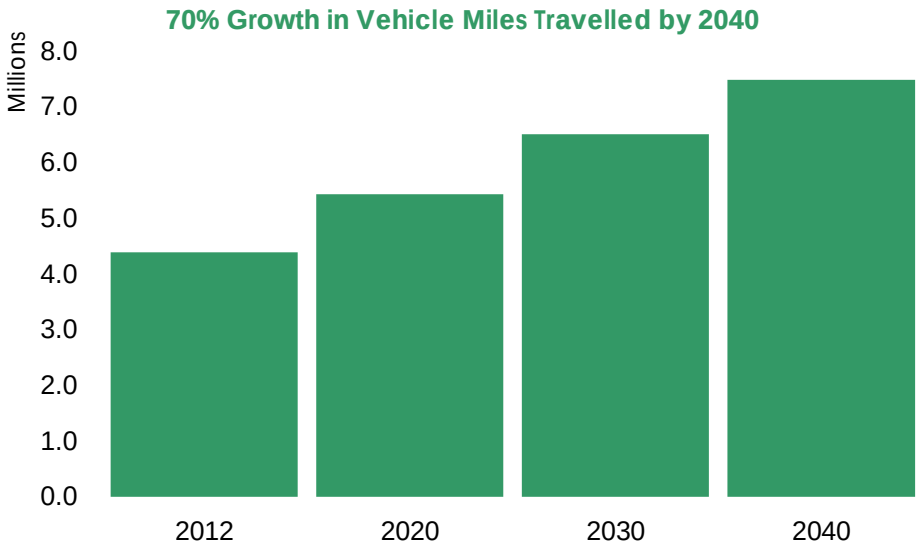
Figure 7.1: Mesa County Daily Vehicle Miles Traveled on State Highways and Interstate, 2000-2013



Colorado Department of Transportation, 2014.

With the economic slowdown and decline in vehicle miles traveled across the region, long-term travel and congestion growth trends have also slowed. The 2035 RTP forecast more substantial traffic growth than is now expected. The Mesa County regional travel model was updated in 2013 and incorporates revised future growth estimates. As shown in Figure 7.2 daily vehicle miles traveled are expected to reach over 7 million by 2040 – a 70 percent increase from today. The most substantial volume growth is anticipated on the interstate, state highways, and other on-system roads. By 2040, traffic is expected to increase slightly more on roads in rural areas compared to roadways in suburban or urban areas. Increased traffic on rural roads may be attributed to the location of future residential land uses in currently rural areas of Mesa County. Current urban areas in the region are mostly built out and have less potential for future traffic growth.

Figure 7.2: Future Vehicle Miles Travelled On All Regional Roads, 2012-2040

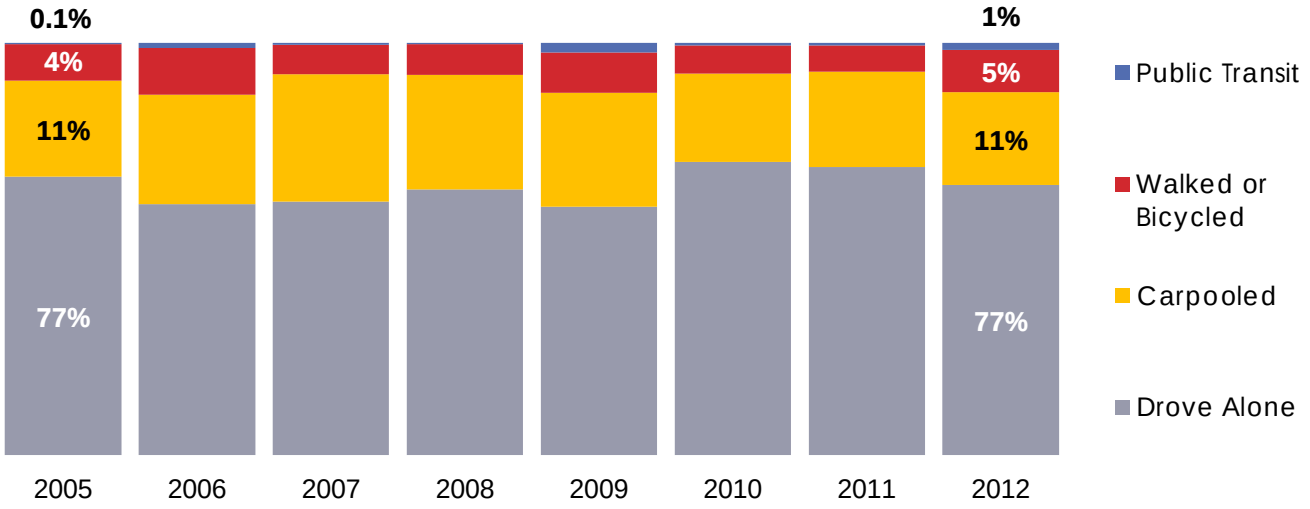


Mesa County Regional Travel Model, 2013.

Commute Trends

In 2014, over 60,000 workers commuted to jobs in Mesa County. Over three-quarters of those workers traveled to work in their own vehicle. Figure 7.3 shows how commuters in the region get to work. Carpooling or walking and bicycling are options for some workers, but driving remains the most common way of getting to work in the region and across the country. More than three-quarters of workers in the Grand Valley drive to work in their own vehicle by themselves.

Figure 7.3: Percent of Mesa County Commuters by Mode of Travel to Work, 2005-2012



U.S. Census Bureau, 2014.

According to U.S. Census estimates, two-thirds of workers in the region travel less than 20 minutes and less than 15 miles to work. But 1 in 5 residents commutes 25 miles or more to work. More than 10,000 residents travel more than 50 miles each-way. The majority of workers who live in Mesa County commute less than 10 miles to work. The majority of those commuting long distance travel east (upvalley) to jobs in the Front Range, Garfield County, and other mountain resort towns. The time workers leave home in the mornings does impact overall commute times. Those leaving home between 7 am and 8 am have average commute times of 30 minutes, though they may be travelling longer distances than workers leaving later in the morning.

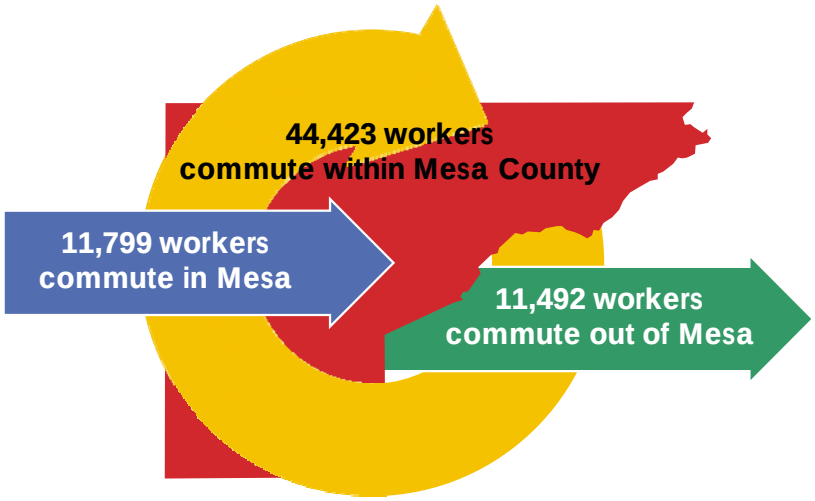
An estimated 60,000 commuters travel in and out of the region every day on their way to jobs. According to 2011 U.S. Census data, nearly 80 percent of workers in Mesa County also live in the county. Another 20 percent, or nearly 12,000 workers, live outside the county but commute into the county to work. The remaining 20 percent of workers live in the county but travel to jobs outside the county.

Figure 7.4 illustrates this daily inflow and outflow of workers for Mesa County as a whole, for major cities, and census-designated places within the region. Work-based trips generate 1 in every 5 person trips made in the region and account for a significant portion of daily congestion. While the majority of commutes are made by driving in a personal vehicle - transit, cycling, and walking may also be available options particularly for workers who live in close proximity to work.

In Grand Junction, Clifton, and Fruita, around a third of workers both live and work within the same city limits. Developing transit services and providing cycling and walking infrastructure for these workers may help relieve congestion and improve the efficiency of the transportation network. Community development plans that call for mixed-use zoning and encourage higher density residential and commercial districts in downtown cores may lead to more live-work opportunities. Similarly, economic development that encourages local business creation, revitalizes downtown cores, or redevelops existing business and industrial areas may also create more jobs

within cities. The majority of workers in other communities in the region commute to jobs in other cities or places within unincorporated Mesa County. Developing longer-distance transit service and alleviating congestion along major commute routes is important to these commuters.

Figure 7.4: Commute Patterns in Mesa County, 2011



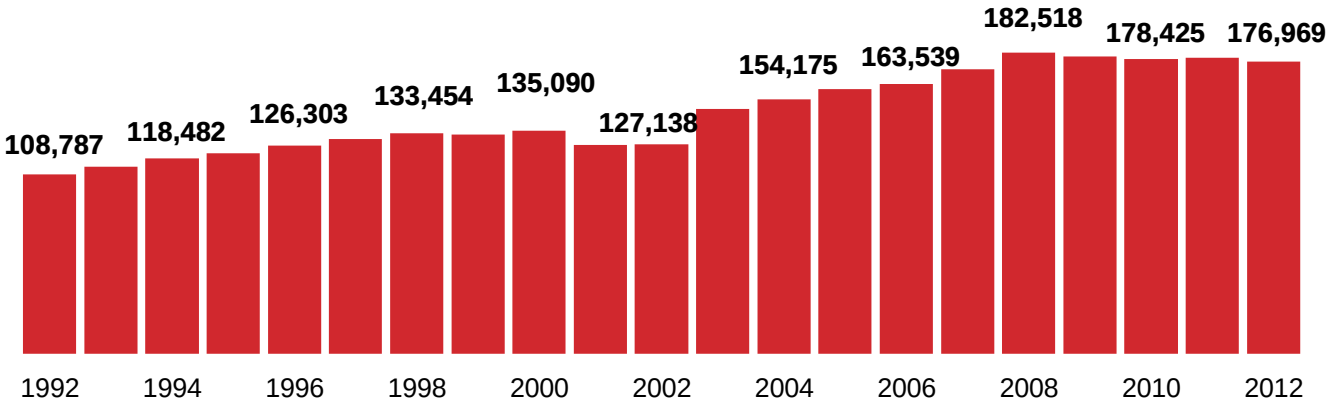
	Commute In		Commute Out		Commute Within	
City or Place	Commuting In	*Percent of Workers*	Commuting Out	*Percent of Residents*	Commuting Within	*Percent of Workers*
Grand Junction	**27,212**	***65%***	**8,666**	***38%***	**14,451**	**35%**
Clifton	1,836	*80%*	6,732	*94%*	458	20%
Fruita	**1,316**	***67%***	**4,151**	***86%***	**651**	**33%**
Fruitvale	779	*93%*	3,150	*98%*	62	7%
Orchard Mesa	**490**	***87%***	**2,443**	***97%***	**76**	**15%**
Redlands	478	*85%*	2,913	*97%*	85	13%
Palisade	**319**	***93%***	**657**	***96%***	**25**	**7%**
DeBeque	135	*99%*	281	*99%*	2	2%
Collbran	**63**	***91%***	**358**	***98%***	**6**	**9%**
Loma	131	*96%*	415	*99%*	6	4%
Mesa County	***11,799***	***21%***	***11,492***	***21%***	***44,423***	80%

U.S. Census Bureau, Longitudinal Employer Household Dynamics, 2011.

Driver Trends

Between 1992 and 2012, the Grand Valley gained over 50,000 additional residents and 68,000 more vehicles. Currently, there are 176,969 vehicles registered in the county including passenger, recreational, commercial, agricultural, and other types of vehicles. Figure 7.5 shows the twenty year trend of increasing vehicles in the region. More than 75 percent of those are passenger vehicles including: cars, light trucks and SUVs, trucks, and motorcycles. The majority of households in Mesa County have 2 or more vehicles. An estimated 900 households did not have a vehicle available in 2013. The percentage of households without a vehicle has remained stable at approximately 2 percent since 2000.

Figure 7.5: Registered Vehicles in Mesa County, 1992-2012



Colorado Department of Revenue, 2014.

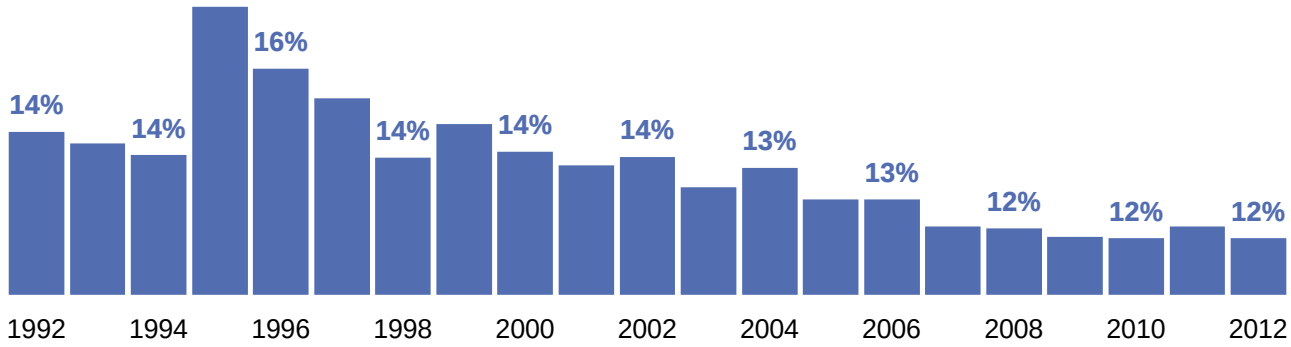
The greater number of vehicles registered in the county, the more licensing and ownership revenues that are collected. These revenues are an important source of funds for local governments to repair and maintain roadways. More vehicles does not necessarily mean more drivers and more traffic however.

On a per-capita basis, vehicle miles travelled have fallen continuously across the U.S. since 2004. Overall, people are making shorter trips, driving less, and using alternative modes of transportation more. According to the Federal Highway Administration even in rural areas where residents often must drive, vehicle miles travelled have fallen since 2001 and are now at similar levels as they were in 1996. Decline in driving activity reflects sensitivity to fuel prices, but also corresponds with transportation choices and overall population trends.

With the coming retirement of the Baby Boomer generation, fewer people will be in the labor force full time and commuting to work. However, it is younger generations that are making a large difference in national driving patterns. According to the Millennials in Motion study, between 2001 and 2009, the average number of miles driven by 16 to 34 year-olds in the U.S. decreased 23 percent. More than any other age group, young adults are driving less and choosing to live in downtown areas and to ride transit or bicycles more.

While data for Mesa County is not available, Figure 7.6 shows the proportion of licensed drivers under age 24 in the state of Colorado. While the total number of drivers has increased since 1992, the percentage of younger drivers has decreased from 14.5 percent to 11.6 percent in 2012. This trend has been consistent over time and mirrors national patterns. A two percent drop over twenty years is the equivalent of 100,000 fewer drivers in the state.

Figure 7.6: Colorado Licensed Drivers Under Age 24 as Percent of All Licensed Drivers, 1992, 2012



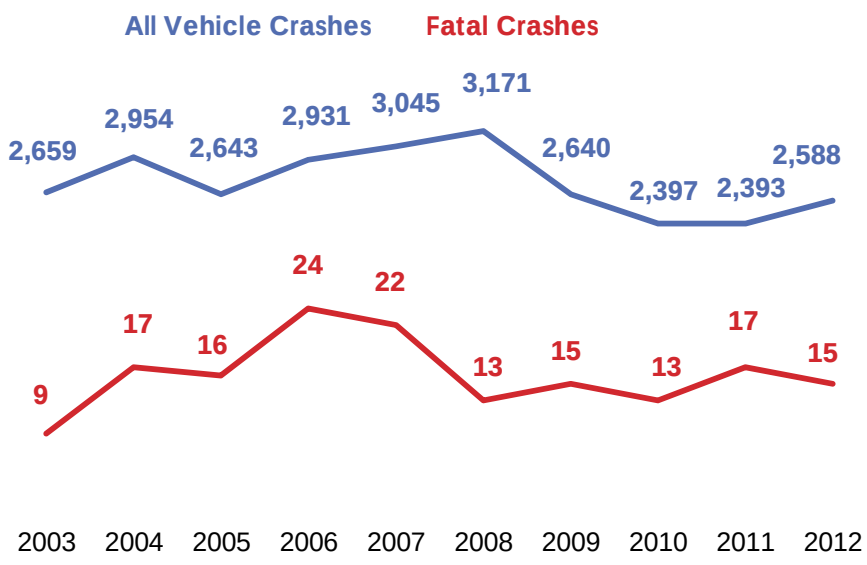
Federal Highway Administration, 2014.

Mesa County may not reflect national and state driving patterns, or changes over time may not be as evident in the region. However, the future will bring demographic shifts with significant implications for transportation in the region. Younger generations are driving less and travelling more by biking or walking. And as the Baby Boomer generation retires and ages, that large segment of the population will drive less and use more transportation and transit alternatives. These demographics shifts will impact transportation and development patterns in the region over the next 20 years.

Safety Trends

Mesa County's roads have become safer over the last decade. Following long-term state and national trends, overall motor vehicle crashes are declining and crashes resulting in deaths or serious injuries are dropping. Figure 7.7 shows a snapshot of regional crash data since 2003. Crash numbers have fluctuated and some years have been better and worse than others. However, total miles driven have increased over the same time period, so while the region is driving more there are fewer crashes per vehicle miles travelled.

Figure 7.7: Mesa County Crash Trends, 2007-2012



Colorado Department of Transportation, 2014.

Safety issues continue to be a primary concern of many residents and too many people are killed or injured in the region every year. Between 2007 and 2012, crashes resulted in 105 deaths and nearly 700 serious injuries (injuries requiring hospitalization or resulting in incapacitation.)

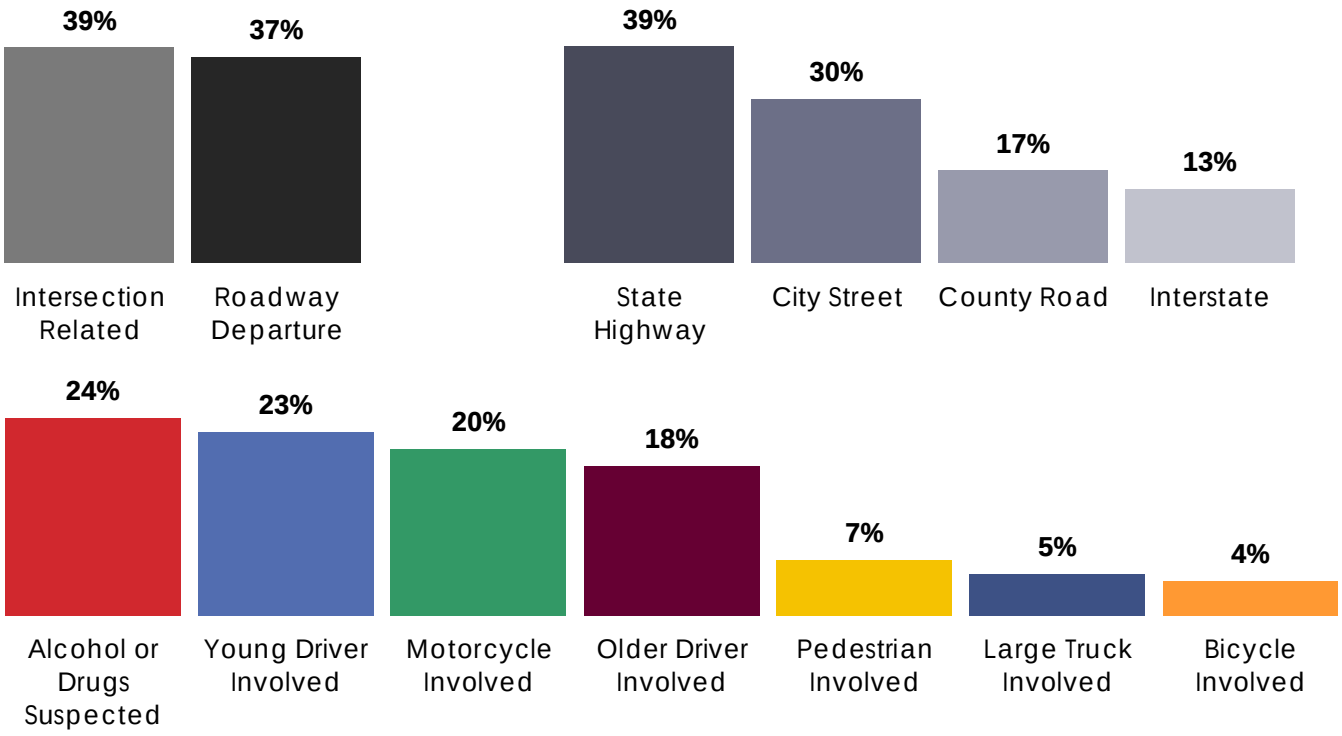
CDOT, the City of Grand Junction, and other local governments analyze crash data on an annual basis to monitor high-frequency crash locations and to better understand contributing factors. The City of Grand Junction produces an annual crash report detailing accident history within the city. Figure 7.8 highlights CDOT crash data in Mesa County over the past five years by major contributing factor. These factors highlight the issues and challenges that can be addressed in the region through enforcement, education, and engineering efforts to correct roadway problems and address driver behaviors.

There were 683 serious injury and fatal crashes in Mesa County between 2007 and 2012. Of those, 39 percent occurred at or near an intersection and 37 percent involved a driver running off the road. Serious accidents were most common on state highways and city streets – accounting for two-thirds of all crashes in the past five years. Fatal crashes can be random occurrences brought on by any combination of circumstances, but over time patterns do develop and are identified by CDOT and local governments. These hot spots are prioritized when allocating state and federal safety improvement funding.

Driver behavior crash factors are harder to isolate because a crash may have multiple contributing factors and a single primary accident cause can be hard to identify. The most common factor to all serious injury and fatal crashes in the region is the presence of alcohol and drugs – either in the driver, passenger, or pedestrian involved. Other high risk groups include younger and older drivers, motorcyclists, and pedestrians and cyclists. Driver education and safety campaigns are conducted by the Colorado State Patrol, Colorado Office of

Transportation Safety, CDOT, local law enforcement agencies, and civic groups. For example, CDOT's Share the Road bicycle safety campaign was rolled out in the region in 2012 and 2013.

Figure 7.8: Mesa County Contributing Crash Factors in Fatal and Serious Injury Crashes, 2007-2012



Note: Crashes may have multiple contributing factors. Categories are not mutually exclusive.

Colorado Department of Transportation, 2014.

2040 Priorities and Projects

The GVMPO is responsible for competing for and allocating federal and state funding to advance regional projects. CDOT Region 3 and local governments are key partners in this process and must provide matching funds (and in many cases, additional funding) in order to secure federal awards. The USDOT and the State of Colorado provide the majority of funding for on-system projects. Projects that are likely to be entirely funded and managed by local governments are included but are not financially constrained.

The CDOT estimates that the GVMPO could expect to receive a total of approximately $240 million dollars in transportation funding between now and 2040. That funding is limited to certain roadways or to certain purposes. Within the total funding amount, $86 million dollars must be addressed by the RTP and programmed in the regional capital program – or Transportation Improvement Program. The total cost of potential future projects identified in the RTP is more than $330 million. The remaining $154 million is administered by CDOT for maintenance and other programmatic needs. The region cannot afford to complete every potential project no matter how beneficial or how well supported by the public. Limited funding must be dedicated to regionally significant projects. This RTP identifies regional priority projects within the constraints of available future funding.

Evaluating 2040 Active Transportation Project Alternatives

This 2040 planning effort considers over 70 project and corridor alternatives for on and off-system roadways. These proposed alternatives incorporate roadway projects covered within the 2035 RTP, projects submitted by local governments or included in local plans, projects under consideration by CDOT Region 3, and others recommended by the public through the outreach process. The majority of project alternatives considered within the 2040 update were rigorously evaluated and modelled in the 2035 planning effort.

Together, these alternatives represent a wide range of improvements including new road connections or interchanges, widening of congested routes, safety improvements to road alignments and at intersections, operational improvements at intersections and along busy roadways. Each proposed alternative was evaluated against regional goals for greater connectivity within and between communities, increased maintenance and improvements to road conditions, safer and more efficient commute options and routes, and access to recreational opportunities and regional destinations.

To prioritize future alternatives, a subcommittee of the 2040 Steering Committee was convened and considered the implementation timeframe, benefits, and performance impacts of proposed transportation projects. This group included representatives from all local governments in the region, CDOT, and staff of the GVMPO. This group evaluated congestion, condition, safety, and performance data for each project and then reached consensus on a qualitative assessment of each project's potential benefits. Scoring criteria was established to estimate the benefits or impacts of projects on national and regional goals for safety, infrastructure condition, congestion reduction, system reliability and mobility, freight and economic development, environmental sustainability and active transportation, and reduced project delays.

The criteria used to assess project alternatives is described in the framework in Figure 7.9 and provides clear links to regional, state, and national goals. In the absence of complete data at the project level, assessments by Steering Committee members provide the best available information for decision-making. This framework supports the region's transition toward a performance-based planning process by advancing projects that are linked to national goals and state performance targets. The region will continue to measure and assess the performance of active transportation investments by tracking key indicators of safety, commute choices, and recreational access.

Figure 7.9: 2040 Performance-Based Planning Framework for Roadway Projects

U.S. DOT and CDOT GOALS	**SAFETY**	**INFRASTRUCTURE CONDITION**	**CONGESTION REDUCTION**	**SYSTEM RELIABILITY**	**FREIGHT MOVEMENT AND ECONOMIC VITALITY**	**ENVIRONMENTAL SUSTAINABILITY**	**REDUCED PROJECT DELIVERY DELAYS**	
GVMPO GOALS	**SAFETY**	**MAINTENANCE**	**EFFICIENT, MULTIMODAL NETWORK**	**MOBILITY AND TRANSIT**	**ECONOMIC COMPETITIVENESS**	**LIFESTYLE AND RECREATION**	**LEADERSHIP AND COOPERATION**	
GVMPO Roadway Project Criteria	*Reasonably expected to improve safety for roadways users ?*	*Improves pavement, bridge, or facility condition?*	*Connects corridors, centers, and/or communities?*	*Improves Mobility for all travelers?*	*Realistically enhances economic potential of project area?*	*Increases access to recreational or active transportation opportunities?*	*Implementation timeframe?*	*Local partner commitment and plan consistency?*
	Low **Medium** **High** (e.g. high crash volume/rate intersection, locally identified hotspot, adds or improves safety features)	**Low** **Medium** **High** (e.g. improves facility in fair or poor condition, extends expected lifecycle, minimizes need for replacement)	**Low** **Medium** **High** (e.g. reduces current congestion or future delay, completes corridors or connections within and between communities, provides for multi-modal facilities.)	**Low** **Medium** **High** (e.g. improves reliability and mobility, primarily through operational improvements and secondarily through capacity. Supports opportunities for mode choice.)	**Low** **Medium** **High** (e.g. contribution to regional economy, facilitates freight movement, or aligns with local/regional economic development strategies.)	**Low** **Medium** **High** (e.g. improves or enables active transportation through sidewalks, shoulders, or safety features or enhances access to tourist/recreational destinations.)	**More than 10 years** **5-10 years** **Less than 5 years** (e.g. consider implementation timeframe, challenge, obstacles, and other contributing factors to project delays)	**Low** **Medium** **High** (e.g. high level of local support and or funding and aligned or supported by local plans or in priorities.)
GVMPO Performance Measures	Fatality and serious injury rate per 100 million vehicle miles travelled Five year average annual reduction in fatalities and serious injuries	Drivability life rating for on-system roadways Percent of regional bridges that are not structurally deficient	Minutes of delay per traveler, per day	Planning Time Index rating for on-system roadways	Annual Average Daily Truck volumes on regional on-system roadways	Percent of schoolchildren commuting actively at least one day a week. Percent of workers commuting work by biking or walking	Percent of regional priority projects with action taken in each LRTP cycle.	

Project alternatives were sorted by expected implementation timeframe. Those projects that can reasonably be expected to be completed, or be acted upon, within the next 10 years were selected for further evaluation. This approach aligns with CDOT's statewide long range planning effort which is focused on mid-term milestones and is consistent with the planning and programming process of CDOT Region 3. Of the 70 alternatives under consideration, 21 are anticipated to be completed within the next 10 years as part of the fiscally constrained portion of the plan.

Mid-term projects were then scored by Steering Committee members in a consensus-based process that weighed overall merits of each project and ranked projects by total expected benefits on each of the criteria listed in Figure 7.9. For example, each project alternative was scored based upon: potential for increasing safety; improving; infrastructure conditions; reducing delay; advancing reliability and system efficiency; benefiting local and regional economies and goods movement; enabling mode choices and active transportation; and

consistency with local plans and priorities. This links national, state, and regional performance goals to project selection and helps ensure that those projects with the greatest impact on regional performance are advanced. This process resulted in a prioritized list of regional projects, show in table 7.1. This list represents all regional priorities. Individual projects were then prioritized for each local jurisdiction and CDOT and a fiscally constrained plan developed for state projects based on reasonably expected state and federal revenues.

Table 7.1: Summary of 2040 Regional Priority Projects (project costs are in 2040$)

ID	Project Description	Jurisdiction	Cost (2040$)	Type
45	I-70 B (Phase III) from Independent to w/o Grand Ave, including Rimrock	CDOT	$27.2m	Capacity
5	24 Rd from H Rd to Patterson Rd	GJ	$32.6m	Capacity
65	SH-340 from Redlands Parkway to Grand Ave	CDOT	$39.0m	Safety
78	US-6 at 20 Rd (intersection)	CDOT	$6.0m	Operations
53	Orchard Ave (E 1/2 Rd) from 1st St to I-70B	GJ/MC	$26.5m	Safety
1	12th St and Patterson (intersection)	GJ	$6.0m	Operations
79	U.S. 50 MP 32-36 Orchard Mesa	CDOT	$2.1m	Safety
82	330 E Rd Buzzard Creek bridge replacement, realign curve	MC	$1.9m	Safety
46	I-70 B (Phase IV) from Grand Ave to 6th St	CDOT	$23.8m	Capacity
32	G Rd and 1st Street (Intersection)	GJ	$6.0m	Operations
81	58.5 Road from Buckskin Hill to Bonham Rd	MC	$1.7m	Capacity
24	D Rd from 29 Rd to 32 Rd (SH-141)	GJ/MC	$30.5m	Capacity
73	US 6 from 15 Rd to I-70 (Exit 26/22 Rd)	CDOT	$29.1m	Capacity
10	29 Rd from Patterson Rd to I-70 (including interchange)	MC/GJ	$97.0m	Capacity
17	31 Rd with overpass of I-70B	MC	$28.9m	Operations
21	Collbran Truck Bypass from High St (SH 330) to PE Rd	Collbran	$1.3m	Capacity
22	F 1/2 Road link from Cortland Ave at 28 Rd to F 1/2 Rd at 29 Rd	GJ	$6.9m	Capacity
29	F1/2 Rd Pkwy from I-70 B to 25 Rd	GJ	$27.2m	Capacity
30	F1/2 Rd Pkwy (curve) from Patterson Rd to F1/2 Rd	GJ	$8.2m	Capacity
74	US 6 from I-70 B to 33 Rd	CDOT	$11.6m	Capacity
23	D Rd and 32 Road (SH-141) (intersection)	CDOT	$6.0m	Operations
78	I-70 Palisade Curves E. of Exit 44	CDOT	$29.1m	Safety
	Total 2040 Regional Priority Projects		**$448.6**	

2040 Fiscally Constrained Plan

The critical regional priority projects listed in the table above are constrained by available future funding. Regional maintenance and operating needs are growing quickly. Project construction costs are escalating with increases in material and input prices. Yet future federal and local funding levels are uncertain and state revenues limited. In total, the Grand Valley's regional priority project costs are estimated to total $448.6 million in 2040 dollars. State and federally funded priorities are expected to total $167.9. However, the region is anticipated to receive $131.5 million ($2040) in programmable state and federal funds through 2040.

Table 7.2 displays the region's prioritized fiscally constrained project plan through 2040. This listing identifies those state and federally funded projects that can be reasonably expected to be completed with available state and federal funding. Projects are included based upon total prioritization score up to the identified 2040 fiscal

constraint threshold. Future funding constraint is based only on expected state and federal revenues. Local revenues are not accounted for within this 2040 long-range transportation plan update.

Table 7.2: Summary of 2040 State and Federally Funded Fiscally-Constrained Corridor Projects

ID #	Corridor	Priority Project Description (State and Federally Funded Projects)	Year of Expenditure Cost ($2040)	Type
45	I-70 B	I-70 B (Phase III) from Independent to west of Grand Ave including Rimrock connection	$27.2	Capacity
65	SH-340	SH-340 from Redlands Parkway to Grand Ave	$39.0	Safety
74	US 6	US 6 from I-70 B to 33 Rd	$11.6	Capacity
73	US 6	US 6 from 15 Rd to I-70	$29.1	Capacity
46	I-70 B	I-70 B (Phase IV) from west of Grand Ave to 6th St	$23.8	Capacity
		$ 2040 Fiscally Constrained Total	**$130.7**	
		$ 2040 Fiscal Constraint (RPP, FASTER, and MPP)	**$131.5**	
78	I-70	I-70 Palisade Curves E. of Exit 44	$29.1	Safety
79	US 50	US 50 MP 32-36 Orchard Mesa	$2.1	Safety
23	SH-141	D Rd and 32 Road (SH-141) (intersection)	$6.0	Operations
		$ 2040 Unfunded Total	**$37.2**	
		$ 2040 Total all State Funded Projects	**$167.9**	

Fiscal constraint for 2040 is based on current dollar estimates made by CDOT. Funding sources include the Regional Priority Program (RPP), FASTER safety funding, and Metropolitan Planning funds. RPP and FASTER funds are based on CDOT estimates of the GVMPO's share of funds distributed through CDOT Region 3. This estimate does not include Transportation Alternatives Program funds which are assumed to be largely allocated to nonmotorized transportation projects.

The 2040 constrained list and list of CDOT and local jurisdiction projects represent a menu of options to be selected from in future programming cycles depending on the status of projects and availability of funding. Local governments may advance projects from any list should funding become available.

2040 Roadway Corridor Projects by Jurisdiction

For most corridors listed here more information is included in the "Corridor Visions" in Chapter 8.

Colorado Department of Transportation

Table 7.3: Summary of CDOT 2040 Priority Corridors

ID #	Corridor	Corridor Project Description	Estimated Cost (2014 $, millions)	CDOT 10-Year Capital Program		Type
				RPP Funds	FASTER Funds	
45	I-70 B	I-70 B (Phase III) from Independent to west of Grand Ave, including Rimrock connection	$14.0	$8.0	$6.0	Capacity
79	US 50	US 50 MP 32-36 Orchard Mesa[1]	$1.1	NI	$1.1	Safety
74	US 6	US 6 from I-70 B to 33 Rd	$6.0	$1.5	$3.4	Capacity
73	US 6	US 6 from 15 Rd to I-70 (Exit 26/22 Rd)(Intersection Improvements)[2]	$15.0	$2.0	$2.0	Capacity
46	I-70 B	I-70 B (Phase IV) from west of Grand Ave to 6th St	$12.2	$6.0	$4.0	Capacity
78	I-70	I-70 Palisade Curves east of Exit 44	$15.0	NI	$1.0	Safety
		Subtotal of 10-Year CDOT Projects	**$63.3**	**$17.5**	**$17.5**	
65	SH-340	SH-340 from Redlands Parkway to Grand Ave[3]	$20.1	NI	NI	Safety
23	SH-141	D Rd and 32 Road (SH-141) (intersection)	$3.1	NI	NI	Operations
67	SH-141	32 Rd (SH-141) at C 1/2 Rd (intersection)	$3.1	NI	NI	Operations
64	SH-340	SH-340 from Fawn Lane to Greenwood Dr.	$8.1	NI	NI	Safety
61	SH-340	SH-340 from Greenwood Dr to Redlands Pkwy	$10.5	NI	NI	Capacity
63	SH-340	SH-340 from I-70 (Fruita) to Fawn Lane	$11.2	NI	NI	Safety
41	I-70	23 Rd bridge over I-70	$14.9	NI	NI	Operations
44	I-70	26 1/2 Rd bridge over I-70	$14.9	NI	NI	Operations
48	I-70B	I-70B at 32 Rd (SH-141) (intersection)	$14.9	NI	NI	Operations
72	US 6	US 6 from N Coulson St to 10 1/2 Rd	$17.7	NI	NI	Safety
47	I-70B	I-70B from 32 Rd (SH 141) to I-70	$22.7	NI	NI	Capacity
69	SH-330	SH-330 from SH-65 to Collbran	$28.3	NI	NI	Safety
3	I-70	20 Rd and I-70	$31.0	NI	NI	Operations
80	US-6	US-6 from 33 Rd to Palisade (intersections)	$33.4	NI	NI	Capacity
66	SH-141	32 Rd (SH-141) from D Rd to US-50	$33.6	NI	NI	Capacity
		Subtotal of all other out year projects	**$267.5**			
		Total all projects	**$330.8**			

RPP (Regional Priority Program) | FASTER (State Safety Funds) | NI (Not yet identified)

1) $1.1m FASTER funds + $5.6m Surface Treatment = $6.7m project total
2) Improvements are assumed to include five intersections at $3 million each (2014 $)
3) Corridor includes SH 340 and Redlands Pkwy intersection funded from other sources

To generate this listing, discussions were held with CDOT Region 3 staff to establish planning assumptions for this near-term (10 year) constrained corridor list. Regional Priority Program and FASTER safety funds are estimated to total $35 million ($2014) over the next ten years. CDOT Region 3 has established the following guidelines for planning purposes: 60 percent of available revenues are estimated to fund construction activities, 30 percent to fund design work, and the remaining 10 percent will be used at the discretion of CDOT for surface treatment, shoulder, and median work. This project listing will be used as a menu of projects or segments to choose from as funding becomes available and upon further review by CDOT Region 3 and the Grand Valley Regional Transportation Committee.

Description of CDOT 2040 Priority Corridors

I-70B from I-70 Exit 26 to 5th Street

This corridor begins at Interstate 70 on the west side of Grand Junction at Interstate 70, Exit 26 and terminates at its intersection with 5th Street in Grand Junction. Future travel modes include passenger vehicles, bus service, rail freight, truck freight. Pedestrian/bicycle facilities are also needed along this corridor. Major improvements to the corridor are recommended in the I-70B Environmental Assessment completed in 2008. Two phases of the project have been completed through 2014. Two additional phases remain to be constructed based on the 2008 Environmental Assessment.

U.S. 50 MP 32-36 on Orchard Mesa

This corridor, between the Colorado River and 29 Road, serves as a multi-modal National Highway System facility, connecting to places outside the region, and makes east-west connections within west central Colorado. The corridor serves as a primary route for through traffic and commuter traffic. Future travel modes include passenger vehicle, bus service, active transportation and truck freight. In the 2014 Orchard Mesa Plan, this corridor is identified as lacking pedestrian and bicycle facilities.

SH-340 from Mile Post 1 to Mile Post 13

The vision for this corridor is primarily to increase mobility, as well as improve safety and maintain system quality. This corridor serves as a multi-modal local facility, acts as a Main Street, and makes north-south connections along its length. Future travel modes include passenger vehicle, bus service, bicycle and pedestrian facilities. The corridor primarily serves local destinations with some travel by tourists accessing the Colorado National Monument. Three projects proposed for this corridor include safety improvements at the Kings View Road Intersection, a roundabout at Redlands Parkway and sidewalk on one side in certain sections.

US 6 from 15 Rd to I-70 (Exit 26/22 Rd)

This corridor serves as a multi-modal local facility, provides commuter access, and makes east-west connections within the City of Fruita and to the Grand Junction area. Future travel within the corridor will continue to be passenger vehicles as well as increased bicycle/pedestrian opportunities. Intersection improvements along the corridor are deemed the most important projects to identify.

City of Grand Junction

Table 7.4: Summary of City of Grand Junction 2040 Priority Projects

ID #	Priority Project Description	Estimated Cost (2014 $, millions)	Type
5	24 Rd from H Rd to Patterson Rd	$16.8	Capacity
24	D Rd from 29 Rd to 32 Rd (SH-141)*	$15.7	Capacity
53	Orchard Ave (E 1/2 Rd) from 1st St to I-70B	$13.6	Safety
10	29 Rd from Patterson Rd to I-70 (including interchange)*	$50.0	Capacity
1	12th St and Patterson (intersection)	$3.1	Operations
22	F 1/2 Road link from Cortland Ave at 28 Rd to 29 Rd	$3.5	Capacity
29	F1/2 Rd Pkwy from I-70 B to 25 Rd	$14.0	Capacity
30	F1/2 Rd Pkwy (curve) from Patterson Rd to F1/2 Rd	$4.2	Capacity
32	G Rd and 1st Street (intersection)	$3.1	Operations
	Subtotal of mid-term projects (5-10 years)	**$124.0**	
27	F 1/2 Rd from 29 1/2 Rd to 30 Rd	$0.5	Capacity
25	D Rd from 9th St to Riverside Pkwy	$1.2	Safety
6	25 Rd from I-70 B to Patterson Rd	$1.5	Safety
56	Redlands Pkwy from Colorado River to I-70 B	$2.5	Safety
4	23 Rd from I-70 to H Rd	$2.6	Capacity
9	28¼ Rd from I-70 B to Orchard Ave	$2.7	Safety
28	Patterson Rd and 7th Street (intersection)	$3.1	Operations
33	Grand Ave and 7th St	$3.1	Operations
36	H Rd from 25 Rd to 26 Rd	$3.5	Capacity
52	N 12th St from Horizon Dr to H Rd	$4.2	Safety
7	26 1/2 Rd from Horizon Dr to H Rd	$4.3	Safety
13	29 Rd and D Rd (intersection)	$5.0	Operations
15	29 Rd/H Rd connection from Horizon Dr to I-70 (Exit 37)*	$5.0	Capacity
35	H Rd from 23 Rd to 24 Rd	$5.2	Capacity
58	Riverside Pkwy from 24 Rd to 25 Rd	$5.2	Capacity
11	29 Rd from North Ave to Patterson Rd	$6.8	Capacity
59	Riverside Pkwy from 15th St to 29 Rd	$8.4	Capacity
57	Redlands Pkwy from Colorado River to SH 340	$8.4	Capacity
19	B 1/2 Rd from US-50 to 31 Rd	$9.9	Safety
39	Horizon Dr from 7th St to G Rd	$10.5	Capacity
12	29 Rd from D Rd to B 1/2 Rd*	$12.6	Capacity
31	G Rd from 24 Rd to Horizon Dr	$17.8	Capacity
8	7th St from Patterson Rd to Pitkin Ave	$23.9	Capacity
55	Patterson Rd from I-70 B (west side) to 30 Rd	$81.9	Capacity
	Subtotal of all out year (10-20 year) projects	**$229.8**	
	Total all projects	**$353.8**	

* Project currently Includes Mesa County and Grand Junction jurisdictions.

Description of City of Grand Junction 2040 Priority Projects

24 Rd from Patterson Road to H Rd

This corridor, in part, is identified by the City of Grand Junction as part of the Grand Junction Beltway. The segment from Patterson Road to I-70 was designed as a 5-lane arterial with 3 lanes already constructed. The next project is anticipated to be the addition of two lanes to the segment.

Orchard Ave (E 1/2 Rd) from 1st St to I-70B

This corridor is a major collector that runs through the center of the Grand Junction/Mesa County urbanized area. It is becoming more attractive to motorized and non-motorized travelers as an alternative to more heavily traveled east/west corridors. This project will likely include several phases as needed improvements vary depending on traffic demand and the area type.

12th St and Patterson Intersection Improvement

This intersection is one of the most heavily traveled nodes in the City of Grand Junction. As traffic volumes continue to increase, improvements such as additional auxiliary lanes will be needed to maintain the efficiency of the intersection.

29 Road Interchange and Corridor

The project would include a new interchange on I-70 at approximately milepost (MP) 33 as well as improvements to 29 Road from Patterson Road north to the new interchange. The interchange would provide a link needed for the safety, capacity, and economic development of the Grand Valley. The City of Grand Junction and Mesa County have partnered to complete other elements of the 29 Road Corridor, including the Colorado River Bridge on 29 Road and the 29 Road/I-70B interchange with a grade separation of 29 Road over the UPRR railyard. A new interchange connecting 29 Road with I-70 would complete this corridor.

D Road from 29 Road to 32 Road

This section of D Road is an extension of the Riverside Parkway on the west and ties into State Highway 141 on the east. The vision is to primarily increase mobility for bikes and pedestrians as well as improve safety for all users for the three mile segment. In accordance with the City's Pear Park Neighborhood Plan, the multi-modal facility is proposed to be constructed as a three lane collector with access control medians, bike lanes and detached shared use paths similar to the Riverside Parkway. The corridor still has lots of potential for residential growth with pockets of commercial at 30 Road and industrial near 32 Road. Future travel modes include passenger vehicles, bus service, truck freight, as well as bicycles and pedestrians.

F½ Road from Cortland Avenue at 28 Road to F½ Road at 29 Road

F 1/2 Road through this segment will increase mobility and provide a north and east entrance into the proposed Matchett Park connecting to the 29 Road. It may serve as a local interconnect between 27 1/2 Road and 29 Road, however with slower speeds proposed through the proposed Park it is not anticipated to become a regional facility. The multi-modal connection is envisioned as a three lane collector road with bike lanes, detached paths and medians through Matchett Park and the access to 29 Road complete with street lights. The corridor will serve primarily residential areas, the park and the new Independence Academy Charter School. Future travel modes include passenger vehicles, bus service, truck freight, as well as bicycles and pedestrians.

F½ Road Parkway

The F 1/2 Road Parkway vision is to primarily increase mobility as well as improve safety between I-70B on the west and 25 Road on the east as an alternative to Patterson Road. The multi-modal F 1/2 Road Parkway corridor is to be constructed with a distinctive “parkway” character along the roadway that can serve as a bypass around

the Mesa Mall area as well as serve the anticipated additional growth in residential, commercial and industrial property along the corridor. F 1/2 Road at buildout is proposed to have four lanes with a 30 foot landscaped median with 10 foot detached share use paths on both sides complete with street and pedestrian level lighting. Future travel modes include passenger vehicles, possibly bus service, as well as bicycles and pedestrians.

G Road/1st Street Intersection Improvement

G Road currently serves as an east-west facility between I-70B on the west and 27 1/2 Road on the east spanning a distance of almost five miles. It primarily serves residential areas east of 24 1/2 Road and commercial and industrial areas west of 24 1/2 Road including the City of Grand Junction's flagship regional park, Canyon View Park. The vision is to primarily increase mobility and safety along the corridor by constructing roundabouts at major intersections as well as add multi-modal features to better accommodate bike and pedestrians through the corridor. As part of this vision, this particular project is to construct a new roundabout at the intersection of G Road and 1st Street (26 Road) adding to existing roundabouts on the corridor at 23 Road, 24 1/2 Road, and 25 Road. Eventually roundabouts will also be added at 7th Street (26.5 Road), 12th Street (27 Road) and Horizon Drive. Future travel modes include passenger vehicles, bus service, bicycles and pedestrians and truck freight between 24 1/2 Road and I-70B.

Mesa County

Table 7.5: Summary of Mesa County 2040 Priority Projects

ID #	Priority Project Description	Estimated Cost (2014 $, millions)	Type
10	29 Rd from Patterson Rd to I-70 (including interchange)	$50.0	Capacity
53	Orchard Ave (E 1/2 Rd) from 1st St to I-70B*	$13.6	Safety
17	31 Rd with overpass of I-70B	$14.9	Operations
82	330 E Rd Buzzard Creek bridge replacement, realign curve	$1.0	Safety
81	58.5 Road from Buckskin Hill to Bonham Rd	$0.9	Capacity
Subtotal of mid-term projects (5-10 years)		**$80.4**	
12	29 Rd from D Rd to B 1/2 Rd*	$12.6	Capacity
15	29 Rd/H Rd connection from Horizon Dr to I-70 (Exit 37)*	$5.0	Capacity
34	H Rd from Horizon Dr to 26 Rd*	$5.7	Safety
51	Little Park Rd at C 1/2 Rd to 5 miles south	$12.4	Safety
12	29 Rd from D Rd to B 1/2 Rd*	$12.6	Capacity
Subtotal of all out year (10-20 year) projects		**$48.3**	
Total all projects		**$128.7**	

* Project currently Includes Mesa County and Grand Junction jurisdictions.

Description of Mesa County 2040 Priority Corridor Projects

29 Road Interchange and Corridor

The project would include a new interchange on I-70 at approximately milepost (MP) 33 as well as improvements to 29 Road from Patterson Road north to the new interchange. The interchange would provide a link needed for the safety, capacity, and economic development of the Grand Valley. The City of Grand Junction and Mesa County have partnered to complete other elements of the 29 Road Corridor, including the Colorado River Bridge on 29 Road and the 29 Road/I-70B interchange with a grade separation of 29 Road over the UPRR rail yard. A new interchange connecting 29 Road with I-70 would complete this corridor.

Orchard Ave (E 1/2 Rd) from 1st St to I-70B

This corridor is a major collector that runs through the center of the Grand Junction/Mesa County urbanized area. It is becoming more attractive to motorized and non-motorized travelers as an alternative to more heavily traveled east/west corridors. This project will likely include several phases as needed improvements vary depending on traffic demand and the area type.

31 Road with I-70B Overpass – E Road to F Road

The 31 Road overpass includes construction of a bridge over I-70B with connections to E Road on the South and E½ Road on the north. Access to/from I-70B would be evaluated. The 31 Road corridor would further extend north to F Road from E½ Road along the east side of Lewis Wash.

County Road 330E

This corridor serves eastern Mesa County including Vega State Park, numerous ranches, access for energy development and as an alternative access, via the "Silt Cutoff," for the Town of Collbran. Ongoing maintenance and safety improvements are the most important needs for the corridor. Improvements, including a bridge replacement and geometric improvements are currently included in Mesa County's Capital Improvement Program.

58.5 Road from NE Road to 59½ Road

This corridor is an important element of the road network in eastern Mesa County that primarily serves the numerous farms and ranches in the area. Ongoing maintenance and safety improvements are the most important needs for the corridor. Improvements to this corridor are currently included in Mesa County's Capital Improvement Program.

Other Local Governments (Fruita, Palisade, and DeBeque)

Table 7.6: Summary of Other Local Government 2040 Priority Projects

ID #	Priority Project Description	Estimated Cost (2014 $, millions)	Type
	None identified within 2040 RTP		
	Subtotal of mid-term projects (5-10 years)	**$0.0**	
Palisade			
18	Elberta Ave from I-70 to G Rd (US-6)	$2.5	Safety
DeBeque			
26	De Beque Truck Bypass from V.2 Rd to Roan Creek Rd	$4.9	Capacity
42	New I-70 interchange at De Beque (west of existing interchange)	$31.0	Operations
Fruita			
2	19 Rd from L Rd to US-6 & 50	$14.7	Capacity
50	L Rd from US-6 to 19 Rd	$21.6	Capacity
Collbran			
21	Collbran Truck Bypass from High St (SH 330) to PE Rd	$13.1	Safety/Capacity
	Subtotal of all out year (10-20 year) projects	**$87.8**	

Chapter 8:
Corridor Visions

Chapter 8: Corridor Visions

CHAPTER OVERVIEW

This chapter defines long-term visions for key transportation corridors throughout the Grand Valley. For each corridor, a vision for future use and multi-modal improvements is described. In addition, associated goals, objectives, and strategies are identified to advance these visions. Visions were originally identified in the 2035 Regional Transportation Plan and have been continuously updated. The information presented in this chapter is based on public and Steering Committee input received through the 2040 Plan process as well as from local transportation and comprehensive plans.

Introduction

A corridor is defined by key elements, including: 1) unique roadway, trail, or transit features serving passenger and goods movement, 2) surrounding land area and development patterns, and 3) multi-modal facilities and services and travel patterns. In the context of the 2040 Regional Transportation Plan, multi-modal corridors serve regional travel activities, so collector and local roads are typically not included.

Corridors have defined beginning and endpoints based on the character of the roadway and the surrounding land uses. The endpoints of each corridor are typically defined by cross-streets. In the case of on-system corridors, the endpoints are defined using cross-streets and highway mile post numbers. In the 2035 Plan and continuing in this 2040 update, corridor definitions have been expanded to include regional off-system arterial streets.

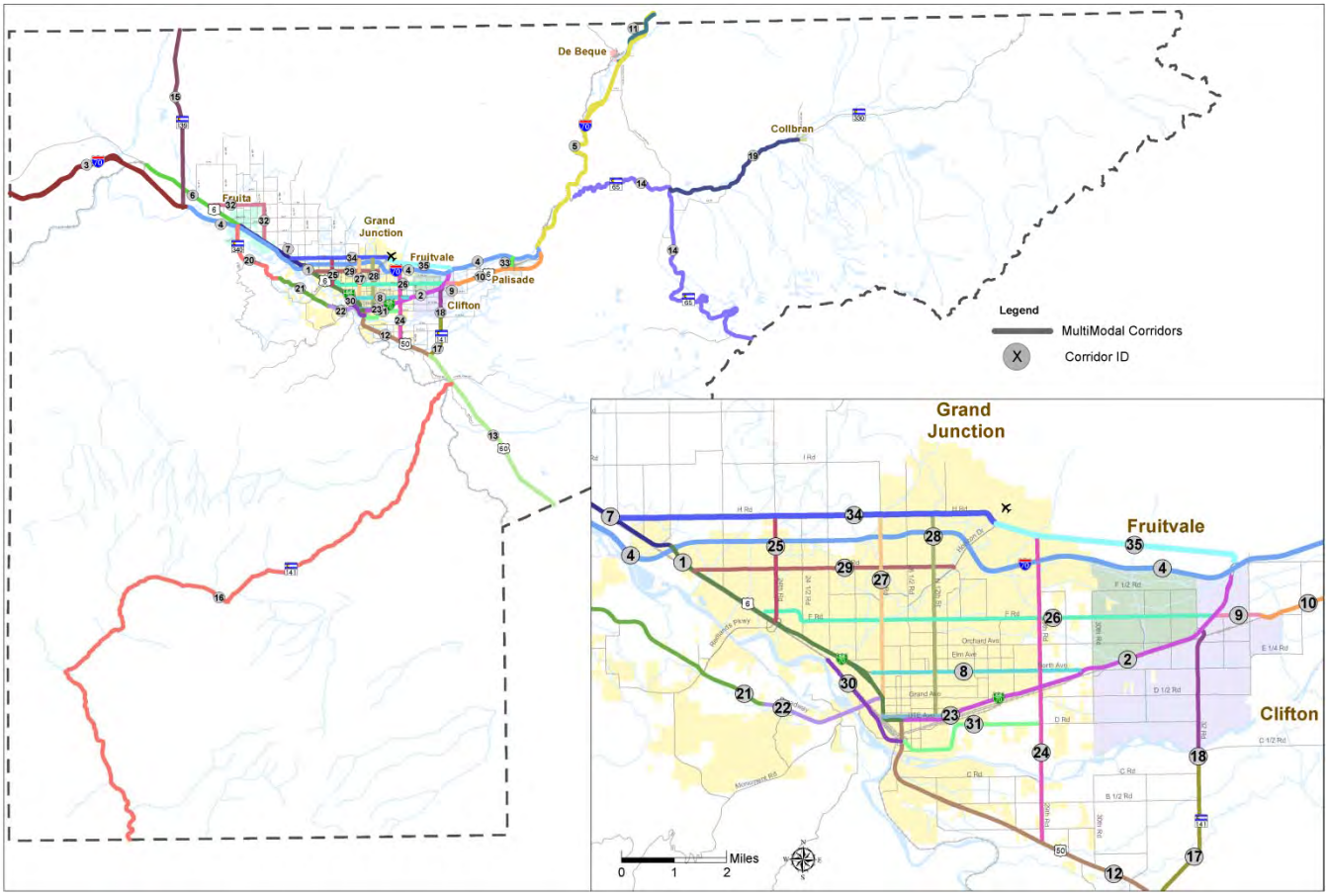
Many, but not all regional non-motorized (or active transportation) facilities are co-located along or near these key regional corridors. Transit service is also provided along many corridors. Non-motorized and transit system amenities are included on the following corridor maps where they occur in proximity to defined corridors. Not all corridors necessarily include full multi-modal features and not all multi-modal features are represented here. Recently completed, under construction, or committed projects are also identified on the corridor maps. Figure 8-1 and Table 8-1 summarizes all key regional multi-modal corridors in the region.

Each corridor is presented in Figures 8-2 to 8-39 and Tables 8-2 and 8-39. Many of the descriptions of the corridor visions and future improvements are from the Corridor Vision Process undertaken for the previous *2035 Regional Transportation Plan* adopted in January 2011.

Table 8-1: Multi-Modal Corridors in the Mesa County Region

Map #	Corridor (Segment #)	From	To	Mileposts (Start and End)	
1	I-70B (1)	I-70 (exit 26)	(15th Street)	0.000	5.751
2	I-70B (2)	US-50 (5th Street)	I-70 (exit 37 near Clifton)	5.751	13.360
3	I-70 A (1)	Utah State Line	SH-139 (exit 15 Loma)	0.000	15.080
4	I-70 A (2)	SH-139 (exit 15 Loma)	US-6 (exit 44 Palisade)	15.080	43.909
5	I-70 A (3)	US-6 (exit 44 Palisade)	(Mesa / Garfield County Line)	43.909	74.000
6	US-6 A (1)	Jct. I-70 Access Road (Mack)	Fruita	11.212	20.244
7	US-6 A (2)	Fruita	Jct. I-70 ramp Grand Junction	20.244	25.998
8	US-6 (North Avenue)	I-70B (near 1st Street)	I-70B (near 30 Road)	30.269	34.375
9	US-6 C (4.1)	I-70B	east of 33 Road	37.161	38.272
10	US-6 C (4.2)	33 Road	I-70	38.272	46.058
11	US-6 M (5) / Old US-6	De Beque	Parachute	65.411	66.258
12	US-50 A (1)	5th Street (Grand Junction)	SH-141	32.001	38.744
13	US-50 A (2)	SH-141	Delta County Line	38.744	70.500
14	SH-65 A	Delta County Line	I-70	0.000	61.387
15	SH-139 A	I-70 / US-6 (in Loma)	Rangely	0.000	72.060
16	SH-141 A	Uravan	US-50 (near Whitewater)	75.420	153.999
17	SH-141 B (1)	US-50 (near Whitewater)	Colorado River	156.746	159.436
18	SH-141 B (2)	Colorado River	I-70B (in Clifton)	159.436	161.999
19	Horizon Drive	1st Street	H Road		
20	22 Road	U.S. 6	K Road		
21	K Road	18 Road	24 Road		
22	SH-330 A	SH-65 (near Mesa)	Orchard Ave. (in Collbran)	0.000	11.395
23	SH-340 (Broadway)	US-6 (in Fruita)	(Rimrock Drive	0.000	2.800
24	SH-340 (Broadway)	Rimrock Drive	Mesa Grande Drive	2.800	10.750
25	SH-340	Mesa Grande Drive	1st Street@I-70B	10.750	13.341
26	I-70 Z (Ute Ave)	15th Street	2nd Street	0.000	1.269
27	29 Road	H Road	US-6 / US-50	n/a	n/a
28	24 Road	H Road	US-6 / US-50	n/a	n/a
29	F Road (Patterson Rd.)	US-6 / US-50 (Mesa Mall)	I-70B (near Clifton)	n/a	n/a
30	1st Street (26 Road)	H Road	Grand Avenue	n/a	n/a
31	12th Street (27 Road)	H Road	I-70B (Ute/Pitkin)	n/a	n/a
32	G Road	US-6 / US-50	Horizon Drive / 27 ½ Road	n/a	n/a
33	Riverside Parkway	25 Road	US-50	n/a	n/a
34	Riverside Parkway	US-50	29 Road	n/a	n/a
35	L Road / 19 Road	15 Road (US-50 Fruita)	US-50 (east of Fruita)	n/a	n/a
36	Elberta Avenue	I-70 (exit 42)	W. 8th Street (G Road)	n/a	n/a
36	H Road	21 Road (near I-70B)	Horizon Drive	n/a	n/a
37	H Road	Horizon Drive	I-70B	n/a	n/a

Figure 8-1: Key Regional Multi-Modal Corridors in the Mesa County Region



The following legend applies to all figures within this Chapter.

Corridor 1: I-70B (1)

Figure 8-2: I-70B (1) Corridor

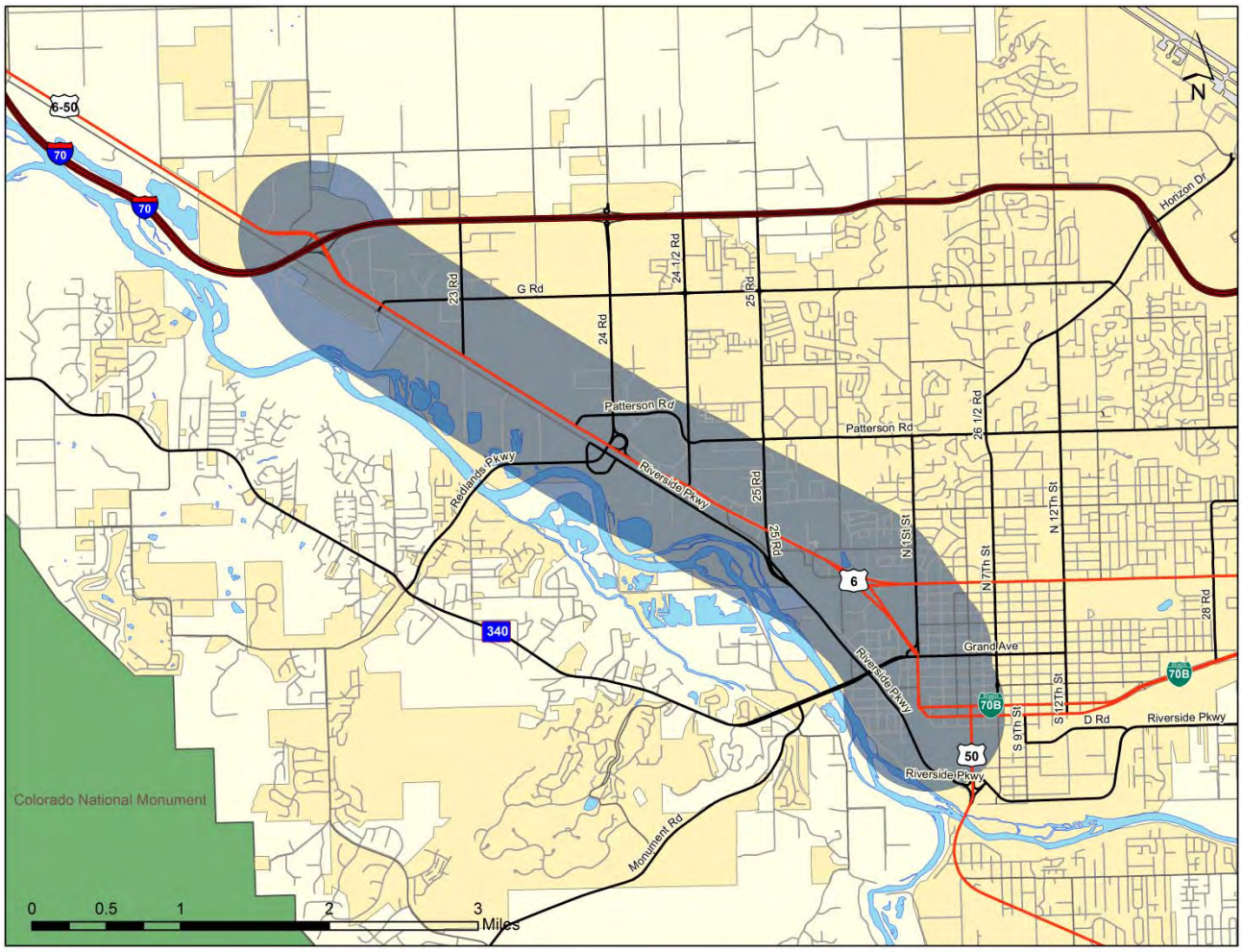


Table 8-2: I-70B (1) Corridor Characteristics

I-70B (1)	
Investment Category	**Mobility**
Vision	The Vision for the I-70B corridor is primarily to increase mobility as well as to improve safety. This segment of I-70B begins at Interstate 70 on the west side of Grand Junction and terminates at its intersection with 5th Street in Grand Junction. It is listed separately from the remainder of I-70B east of 5th due to its dual designation as US-50 and I-70B. The corridor serves as a multi-modal National Highway System facility and connects to places outside the region as well as a gateway to the city of Grand Junction. In its role as US-50, it serves Central Colorado from Utah to Kansas. Future travel modes include passenger vehicles, bus service, rail freight, truck freight, and possibly bus rapid transit. Pedestrian/Bicycle facilities are needed along this corridor. The transportation system in the area provides access to the urban area including downtown Grand Junction, and also provides linkages to interregional corridors. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to increase. The communities along the corridor value high levels of mobility and connections to other areas. They depend on tourism and commercial activity for economic activity in the area. Users of this corridor want to preserve the urban character of the area while supporting the movement of tourists, commuters, and freight.
2040 RTP Improvements	All segments of I-70B are expected to be heavily impacted by energy development activity, including heavy truck traffic. This segment has experienced some relief with the completion of the Riverside Parkway; however, overall traffic volumes will continue to grow. Without improvements to this corridor, traffic would experience level of service (LOS) E/F conditions in the peak hours and possibly other hours in 2040. With the committed and planned improvements, peak hour LOS is in the "D", or congesting, range by 2040. Phases I, II and III (24 Road to Rimrock Avenue have been widened from 4 to 6 lanes with intersection and signal improvements. Phase IV (Grand Ave. to 6th Street) is a committed priority in the 2040 Regional Transportation Plan to widen to a 6-lane principal arterial. This phase will also include improvements to the I-70B/North Avenue (U.S. 6) interchange.
Goals / Objectives	• Reduce traffic congestion and improve traffic flow by enhancing capacity. • Reduce fatalities, injuries and property damage. • Preserve the existing transportation system. • Provide transit, carpooling, vanpooling and bicycle and pedestrian facilities. • Manage access while maintaining economic viability. • Improve economic opportunities in Downtown Grand Junction. • Development and/or redevelopment along this corridor shall accommodate transit.
Strategies	• Reconstruct roadways. • Consolidate and limit access and develop access management plans. • Synchronize/interconnect traffic signals. • Add signage. • Construct intersection/interchange improvements. • Add medians. • Provide public transportation improvements. • Provide bicycle/pedestrian facilities. • Preserve right-of-way. • Improve landscaping. • Relocate the Ute avenue/Pitkin Avenue one-way pair to Pitkin Avenue/South Avenue.

Corridor 2: I-70B (2)

Figure 8-3: I-70B (2) Corridor

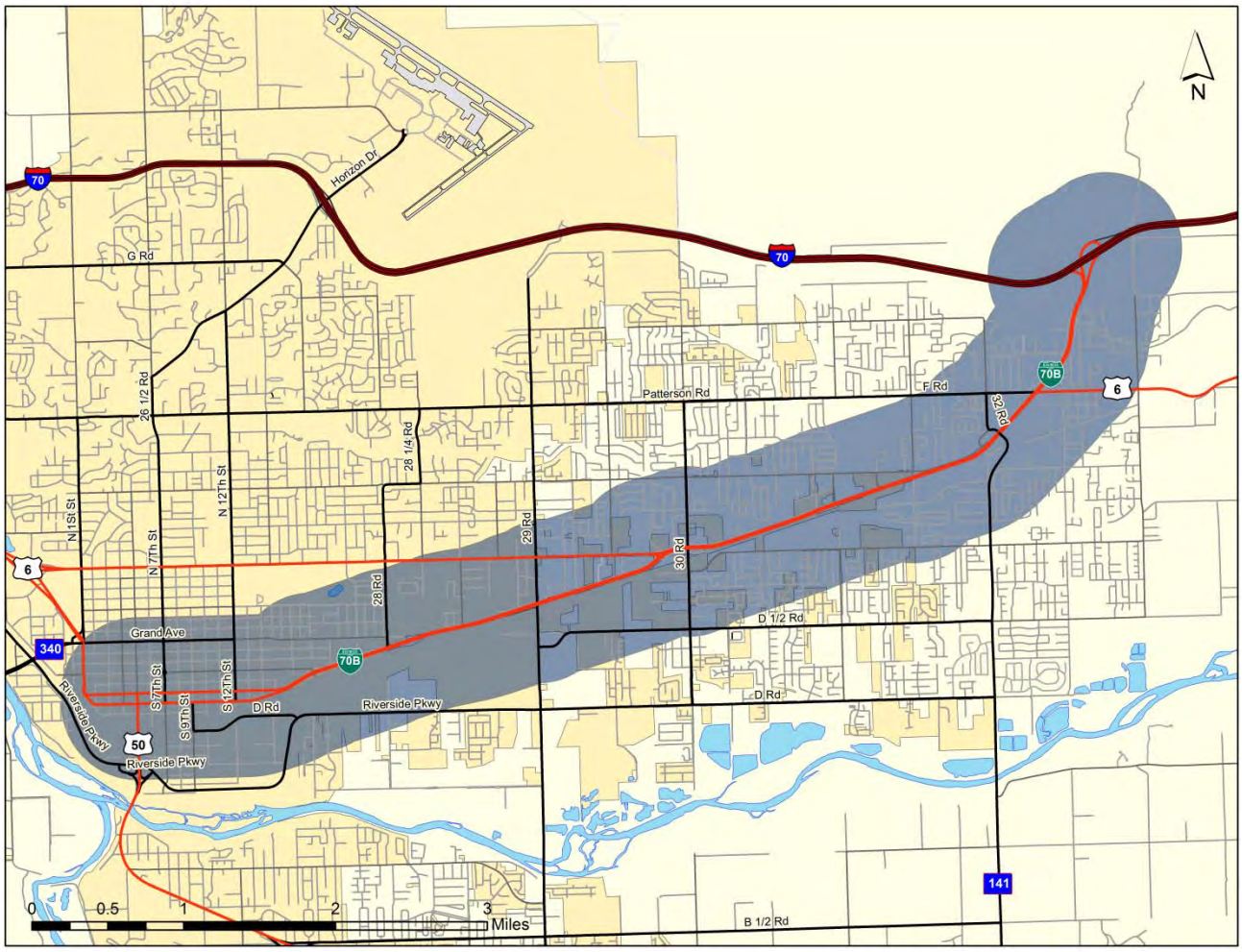


Table 8-3: I-70B (2) Corridor Characteristics

I-70B (2)	
Investment Category	**Mobility**
Vision	The Vision for the I-70B corridor on the east side of Grand Junction is primarily to increase mobility as well as to improve safety and to maintain system quality. This corridor serves as a multi-modal local facility, provides commuter access, and makes east-west connections within the Central Grand Junction to the east edge of the Clifton area, as well as serving as a Gateway to the City. The corridor serves as a multi-modal National Highway System facility and connects to Interstate 70. Future travel modes include passenger vehicles, bus service, rail freight, truck freight, and possibly bus rapid transit and commuter rail service. The transportation system in the area provides access to the urban area, but also provides linkages to interregional corridors. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to increase. Users of the corridor value high levels of mobility and connections to other areas. They depend on tourism and commercial activity for economic activity in the area. Users of this corridor want to preserve the urban character of the area while supporting the movement of tourists, commuters, and freight.
2040 RTP Improvements	All segments of US50 / I-70B should continue to be heavily impacted by energy development activity, including heavy truck traffic. No major improvements for this corridor are included in the 2040 Regional Transportation Plan.
Goals / Objectives	• Reduce traffic congestion and improve traffic flow. • Increase travel reliability and improve mobility. • Maintain statewide transportation connections. • Address the issue of access management. • Reduce fatalities, injuries and property damage crash rate. • Preserve the existing transportation system. • Increase bus ridership. • Accommodate and/or mitigate increased energy resource development traffic. • Development and/or redevelopment along this corridor shall accommodate transit.
Strategies	• Reconstruct roadways. • Consolidate and limit access and develop access management plans. • Synchronize/interconnect traffic signals. • Add signage. • Construct intersection/interchange improvements. • Add medians. • Provide public transportation improvements. • Provide bicycle/pedestrian facilities. • Preserve right-of-way. • Improve landscaping. • Develop an access management plan for the corridor. • Relocate the Ute avenue/Pitkin Avenue one-way pair to Pitkin Avenue/South Avenue.

Corridor 3: I-70 A (1)

Figure 8-4: I-70 A (1) Corridor

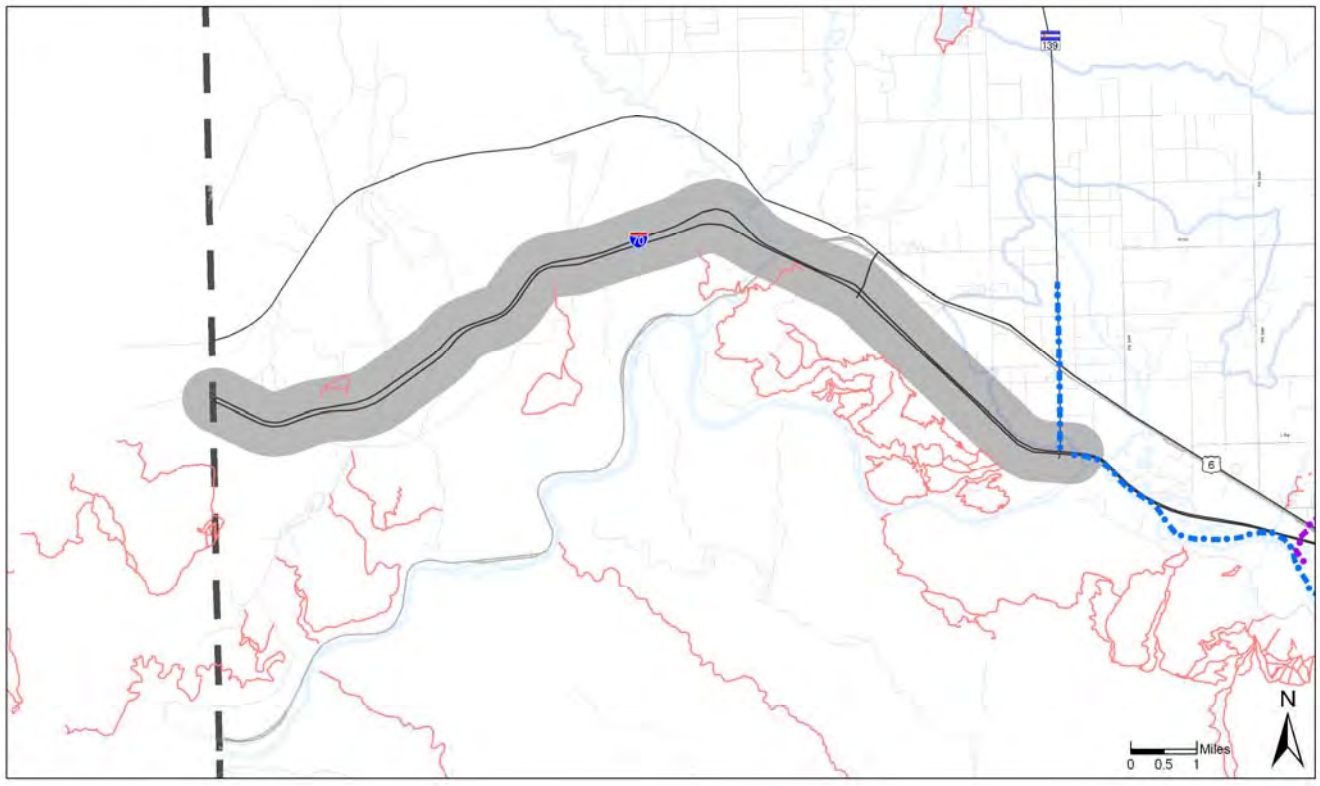


Table 8-4: I-70 A (1) Corridor Characteristics

I-70 A (1)	
Investment Category	**System Quality**
Vision	The Vision for the I-70 corridor through the region is primarily to maintain system quality as well as to improve safety. This corridor is a multi-modal Interstate facility and makes east-west connections within the west central region of the United States. It is a principal gateway between major recreation areas in Utah and Colorado. Future travel modes include passenger vehicle, bus service, truck freight, passenger rail and freight rail. The transportation system in the area primarily serves destinations outside of the corridor. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to increase. The communities along the corridor value high levels of mobility, connections to other areas, safety, and system preservation. They depend on tourism, agriculture, and commercial activity for economic activity in the area. Users of this corridor want to preserve the rural character of the area while supporting the movement of interstate travelers and freight.
2040 RTP Improvements	No major improvements for this corridor are included in the 2040 Regional Transportation Plan.
Goals / Objectives	• Increase travel reliability and improve mobility. • Support freight movements. • Develop intermodal connections. • Provide for safe movement of bicycles and pedestrians. • Preserve the existing transportation system. • Accommodate and/or mitigate increased energy resource development traffic. • Conduct study to determine need for additional Park ‘n Rides and Truck Parking facilities.
Strategies	• Improve ITS Traveler Information, Traffic Management and Incident Management.

Corridor 4: I-70 A (2)

Figure 8-5: I-70 A (2) Corridor

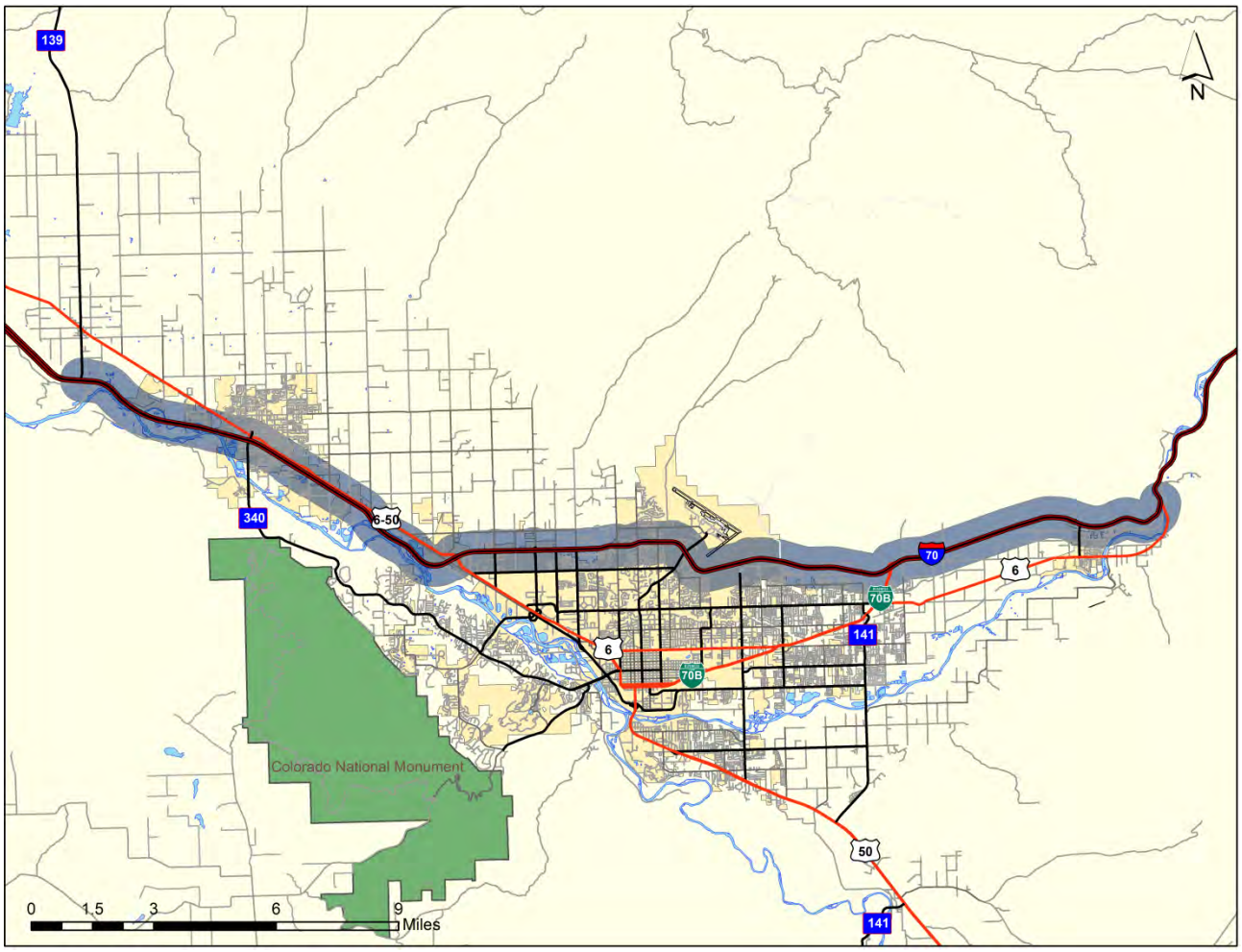


Table 8-5: I-70 A (2) Corridor Characteristics

I-70 A (2)	
Investment Category	**Mobility**
Corridor Vision	The Vision for the I-70 corridor within the urbanized area is primarily to increase mobility as well as to maintain system quality. This heavily used urban corridor serves as a multi-modal Interstate facility, connects to places outside the region, and makes east-west connections within the Grand Valley urban area. Future travel modes include passenger vehicle, bus service, truck freight, passenger rail, rail freight, bicycle and pedestrian facilities, aviation, and Transportation Demand Management (telecommuting and carpooling). The transportation system in the area serves towns, cities, and destinations within the corridor as well as destinations outside of the corridor. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to increase. The communities along the corridor value high levels of mobility. They depend on commercial activity for economic activity in the area. Users of this corridor want to preserve the urban character of the area while supporting the movement of commuters and freight in and through the corridor while recognizing the environmental, economic, and social needs of the surrounding area.
2040 RTP Improvements	No major improvements for this corridor are included in the 2040 Regional Transportation Plan.
Goals / Objectives	• Increase travel reliability and improve mobility. • Support commuter travel. • Accommodate growth in freight transport. • Maintain statewide transportation connections. • Support recreation travel. • Provide for bicycle and pedestrian travel. • Accommodate and/or mitigate increased energy resource development traffic. • Conduct study to determine need for additional Park 'n Rides and Truck Parking facilities.
Strategies	• Add/improve interchanges. • Construct and maintain Park-n-Ride facilities. • Provide inter-modal connections. • Improve ITS Traveler Information, Traffic Management and Incident Management. • Review design and safety of the corridor in the vicinity of Exit 31.

Corridor 5: I-70 A (3)

Figure 8-6: I-70 A (3) Corridor

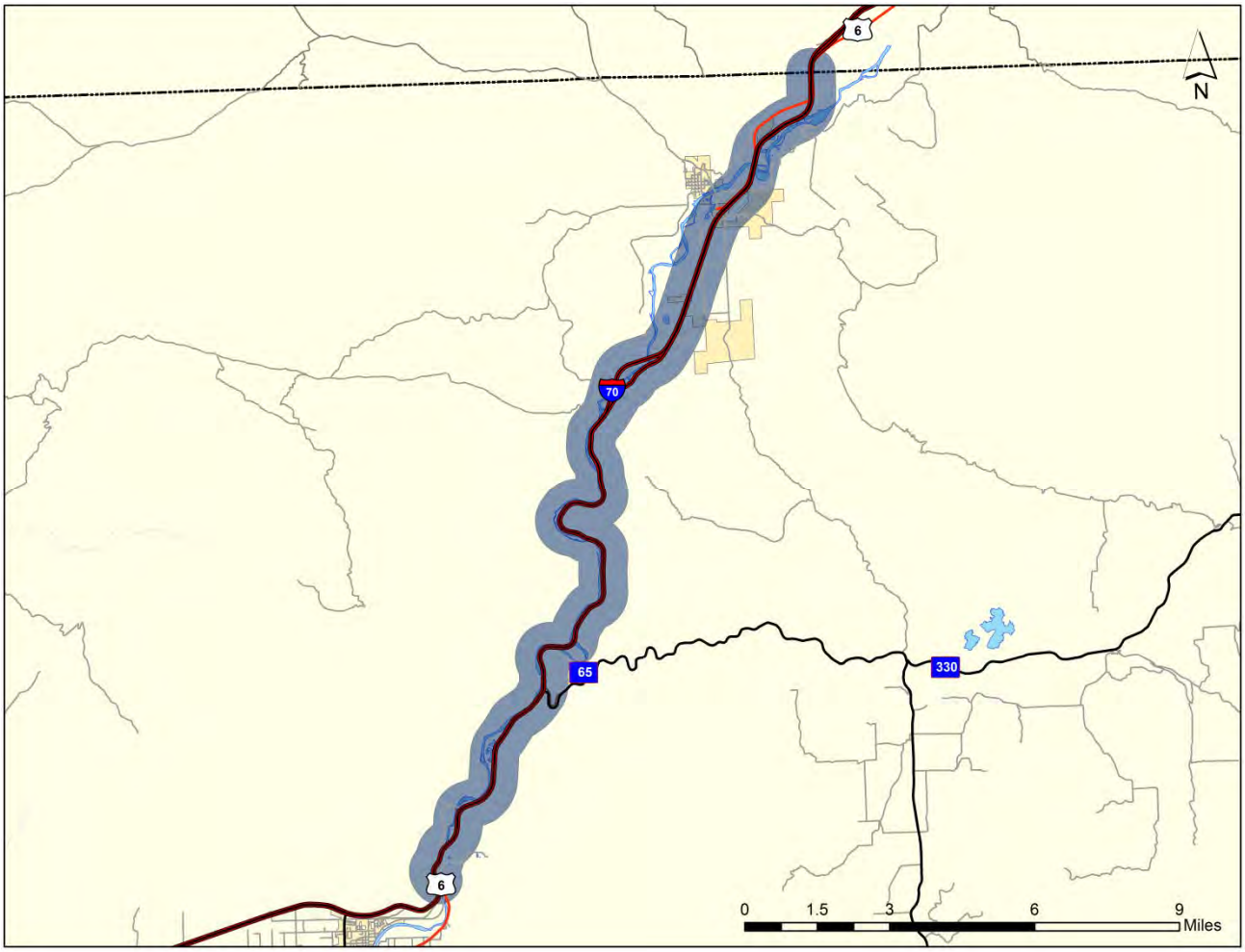


Table 8-6: I-70 A (3) Corridor Characteristics

I-70 A (3)	
Investment Category	**Mobility**
Vision	The Vision for the I-70 corridor east of the urbanized area is primarily to enhance mobility, improve safety as well as to maintain system quality. This corridor serves as a multi-modal Interstate facility, connects to places outside the region, and makes east-west connections within the De Beque Canyon area. Future travel modes include passenger vehicle, bus service, passenger rail, truck freight, rail freight, bicycle and pedestrian facilities. The transportation system in the area primarily serves destinations outside of the corridor. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to increase. The communities along the corridor value safety. They depend on tourism and agriculture for economic activity in the area. Users of this corridor want to preserve the rural character of the area while supporting the movement of tourists, commuters, and freight in and through the corridor.
2040 RTP Improvements	No major improvements for this corridor are included in the 2040 Regional Transportation Plan.
Goals / Objectives	• Support commuter travel. • Accommodate growth in freight transport. • Reduce fatalities, injuries and property damage. • Provide for safe movement of bicycles and pedestrians. • Maintain statewide transportation connections. • Conduct study to determine need for additional Park-n-Rides and Truck Parking facilities.
Strategies	• Reconstruction of sub-standard segments (geometrics). • Construct interchange improvements • Improve ITS Traveler Information, Traffic Management and Incident Management. • Provide bicycle/pedestrian facilities. • Mitigate potential rock fall areas. • Review design and safety of the corridor in the vicinity of Exit 44. • Construct and maintain Park-n-Ride facilities.

Corridor 6: US-6 A (1)

Figure 8-7: US-6 A (1) Corridor

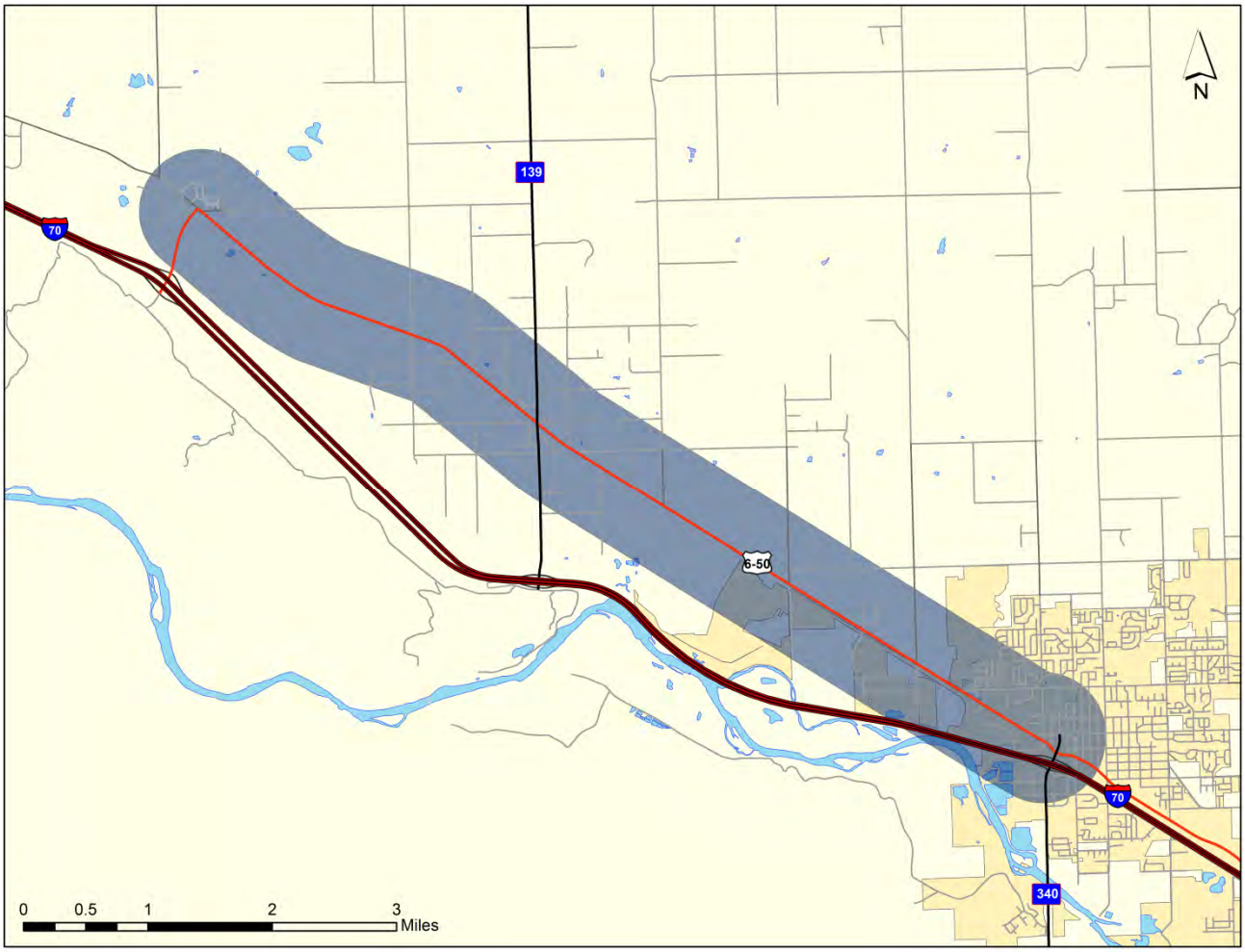


Table 8-7: US-6 A (1) Corridor Characteristics

US-6 A (1)	
Investment Category	**Safety**
Vision	The Vision for the US 6 corridor west of Fruita is primarily to improve safety as well as to improve system quality. This corridor serves as a local facility, provides commuter access, and makes east-west connections within the northern Fruita area. Future travel needs include passenger vehicles and truck freight. Multi-modal connections are currently lacking in this corridor. Future improvements might include bicycle and pedestrian facilities. The highway primarily serves communities within the corridor. Based on historic and projected population and employment levels, passenger traffic volumes are expected to increase along with freight volumes. The City of Fruita and Mesa County have jointly adopted a long-range master plan, the *Fruita/Mesa County Greenway Business Park Plan* (adopted 2001), for 1750 acres south of US-6 A in this corridor. The Plan envisions the redevelopment of the underutilized vacant industrial land and abandoned heavy industrial corridor south of the highway into a business park and a riverfront park and greenway along the Colorado River. Highway landscaping and attractive business park entry signage with interconnecting bicycle pedestrian trails is part of the vision for the corridor. The communities along the corridor depend on agriculture and rural density development for economic activity in the area. Users of this corridor want to preserve the rural character of the area while supporting the movement of commuters and farm-to-market products of the area. Mesa County has experienced heavy growth due in part to the energy exploration and extraction industry. In addition. The Loma/Mack Area Plan was completed in 2004 and will help guide the area's anticipated long-term growth. The transportation impacts of the energy-related growth in western Mesa County and eastern Utah must be accounted for in the development of the Goals, Objectives and Strategies for this corridor.
2040 RTP Improvements	No major improvements for this corridor are included in the 2040 Regional Transportation Plan.
Goals / Objectives	• Preserve and improve the existing transportation system. • Eliminate shoulder deficiencies. • Accommodate local rail and highway freight transport. • Support commuter travel. • Eliminate private rail road crossings. • Accommodate increased traffic from the Greenway Business Park. • Accommodate and/or mitigate increased energy resource development traffic. • Add enhancements that will improve the appearance of the corridor. • Provide bicycle and pedestrian facilities.
Strategies	• Geometric improvements/widen travel lanes. • Construct intersection/interchange improvements. • Reconstruct roadways. • Add/improve shoulders. • Provide bicycle/pedestrian facilities including Colorado River Greenway from Fruita to Loma. • Add gateway signing. • Implement U.S. 6 West access control plan. • Adopt highway landscape design standards. • Provide lights and gate at public rail crossings.

Corridor 7: US-6 A (2)

Figure 8-8: US-6 A (2) Corridor

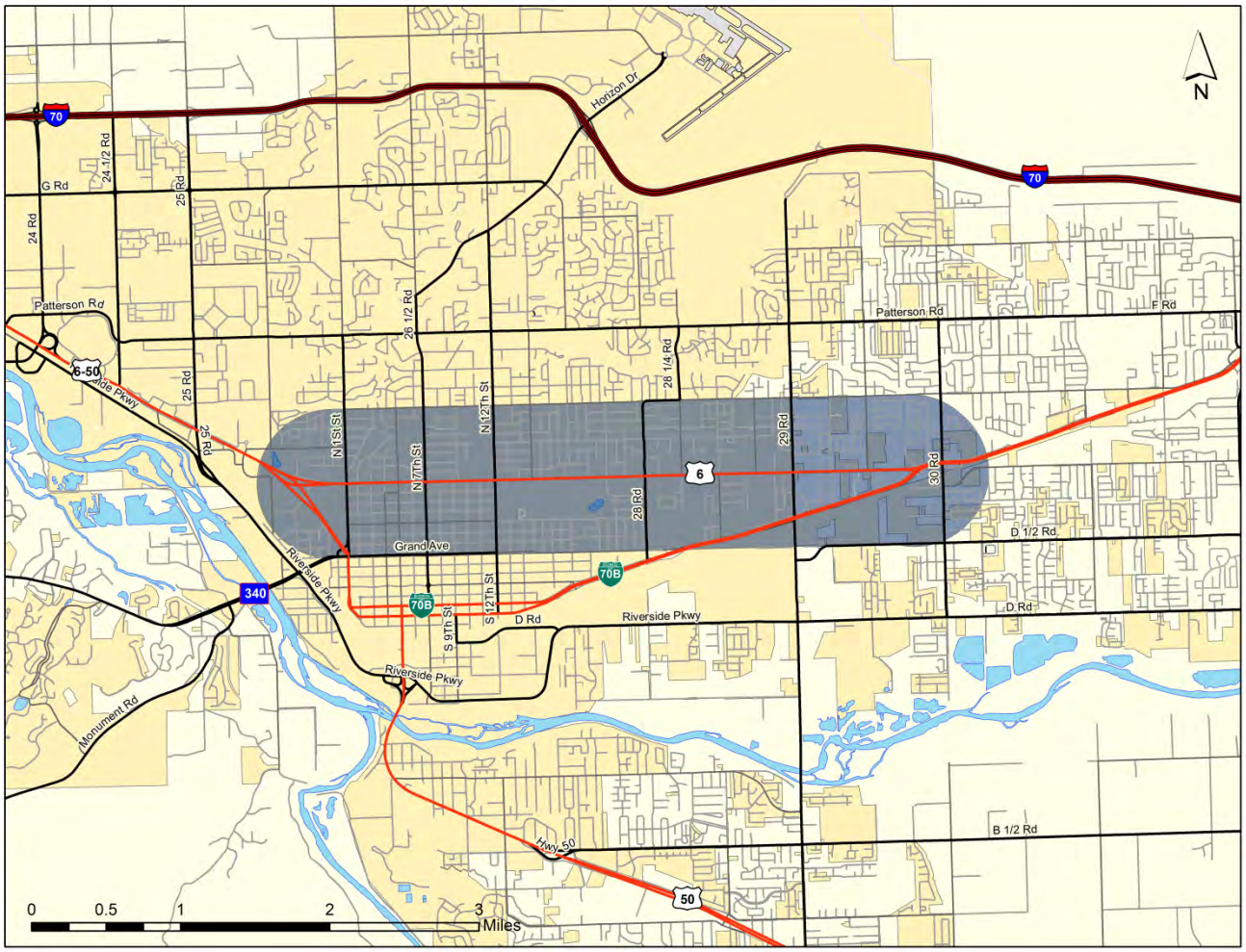


Table 8-8: US-6 A (2) Corridor Characteristics

US-6 A (2)	
Investment Category	**System Quality**
Vision	The Vision for the US-6 / US-50 corridor from Fruita to Grand Junction at I-70 is primarily to maintain system quality, increase mobility and improve safety. This corridor serves as a multi-modal local facility, provides commuter access, and makes east-west connections within the Fruita to Grand Junction area. It crosses the community buffer zone between Fruita and Grand Junction. Future travel within the corridor will continue to be passenger vehicles as well as increased bicycle/pedestrian opportunities. The highway primarily serves towns and other destinations within the corridor. Based on historic and projected population and employment levels, passenger traffic volumes are expected to increase along with freight volumes. The communities along the corridor value high levels of mobility and safety. They depend on agriculture and commercial activity for economic activity in the area. Users of this corridor want to preserve the small town, rural character of the area while supporting the movement of commuters and farm-to-market products in and through the corridor.
2040 RTP Improvements	The City of Fruita has recently experienced high rates of growth although the current economic climate has moderated development more recently. This growth is fueled in part by energy resource development. In addition, the Grand Junction urban area continues to expand westerly along this corridor. A segment of land in the northwest area of Grand Junction is currently proposed for a growth plan amendment to allow industrial uses such as large storage yards needed by the oil and gas industry. As this occurs, there will be a significant increase in the percentage of heavy trucks on this segment of U.S. 6. This corridor has a programmed improvement to widen this section from 2 to 4 lanes and incorporate an expressway design standard in the 2040 Regional Transportation Plan. This is being reviewed by CDOT's Resident Engineer.
Goals / Objectives	• Support commuter travel. • Accommodate freight transport and increased traffic from the Greenway Business Park. • Preserve the existing transportation system. • Expand public transportation. • Add enhancements that will improve the appearance of the highway corridor. • Provide for bicycle and pedestrian travel. • Accommodate and/or mitigate increased energy resource development traffic. • Increase travel reliability and improve mobility.
Strategies	• Consolidate and manage access and develop access management plans. • Expand Transit Service and provide carpooling and vanpooling. • Improve landscaping. • Construct, improve and maintain a system of local roads that supports access management on this corridor. • Provide bicycle and pedestrian facilities including the Colorado River Greenway for Fruita to Loma. • Maintain and upgrade traffic signs as necessary. • Implement U.S. 6 West Access Control Plan.

Corridor 8: US-6 (North Avenue Commercial Street)

Figure 8-9: US-6 (North Avenue) Corridor

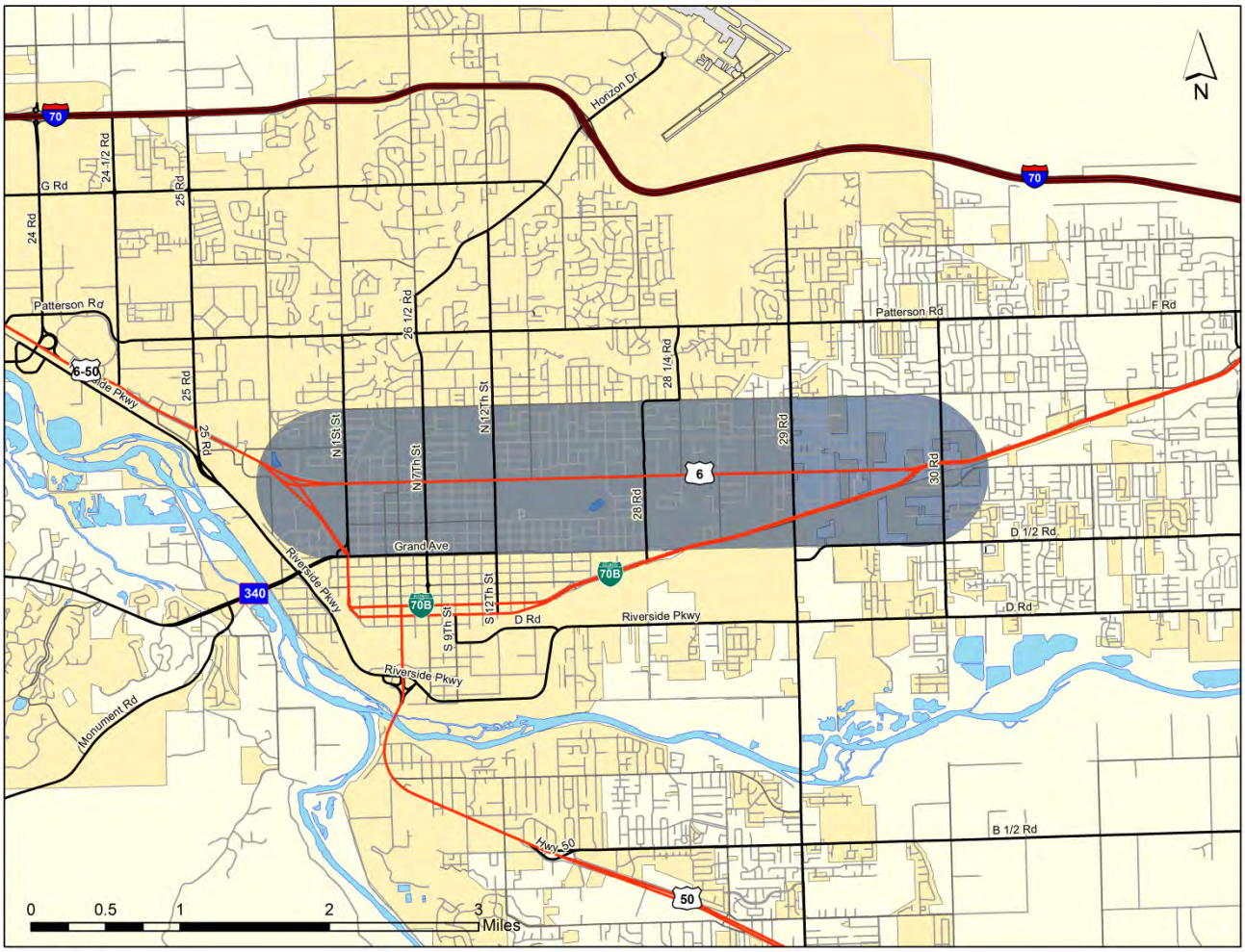


Table 8-9: US-6 (North Avenue) Corridor Characteristics

US-6 (North Avenue)	
Investment Category	**System Quality**
Vision	The Vision for the US-6 / North Avenue Corridor is to establish a "Complete Street" vision for North Avenue. This includes improving system quality and safety as well as increasing mobility. This corridor serves as a multi-modal local facility that acts as an urban arterial and provides access to the Grand Junction urban area. The North Avenue "Complete Street" concept includes: • A multi-modal corridor designed for not only the vehicle, but also for the pedestrian, bicyclist and the transit user. • Wide sidewalks detached from the roadway. • Buildings located close to the street with pedestrian access to the building at the streetscape. • Safe access to businesses from the street and sidewalks and parcel interconnectivity to minimize multiple access points to North Avenue. • Safe and efficient transit stops. • Adequate lighting creating a safer vehicle and pedestrian experience. • Landscaping, street furniture and other hardscape features and amenities that enhance the pedestrian and motoring public's experience, but still allow buildings to be near the street. Future travel modes include passenger vehicle, bus service, truck freight, bicycle and pedestrian users. Based on historic and projected population and employment levels, all modes are expected to increase. The community values high levels of mobility, transportation choices, and safety. It depends on commercial activity for economic vitality. Users of this corridor want to support the movement of all modes of traffic. 2010 GJ Comp Plan envisions the west end (to 12th) as a Neighborhood Center Mixed Use Corridor and the east end (12th east) as a Village Center Mixed Use Corridor.
2040 RTP Improvements	No major roadway improvements for this corridor are included in the 2040 Regional Transportation Plan. Multi-modal improvements are planned and include improvements for pedestrians and bicyclists.
Goals / Objectives	• Preserve the existing transportation system. • Reduce traffic congestion and improve traffic flow. • Accommodate growth in freight transport. • Reduce fatalities, injuries and property damage crash rate. • Provide for safe movement of bicycles and pedestrians.
Strategies	• Construct/improve intersections. • Market transit services and provide incentives. • Consolidate and limit access and develop access management plans. • Provide bicycle/pedestrian facilities. • Add signage. • Construct, improve and maintain the system of local roads. • Interconnect traffic signals with fiber optic cable. • Development and/or redevelopment along this corridor shall accommodate transit.

Corridor 9: US-6 C (4.1)

Figure 8-10: US-6 C (4.1) Corridor

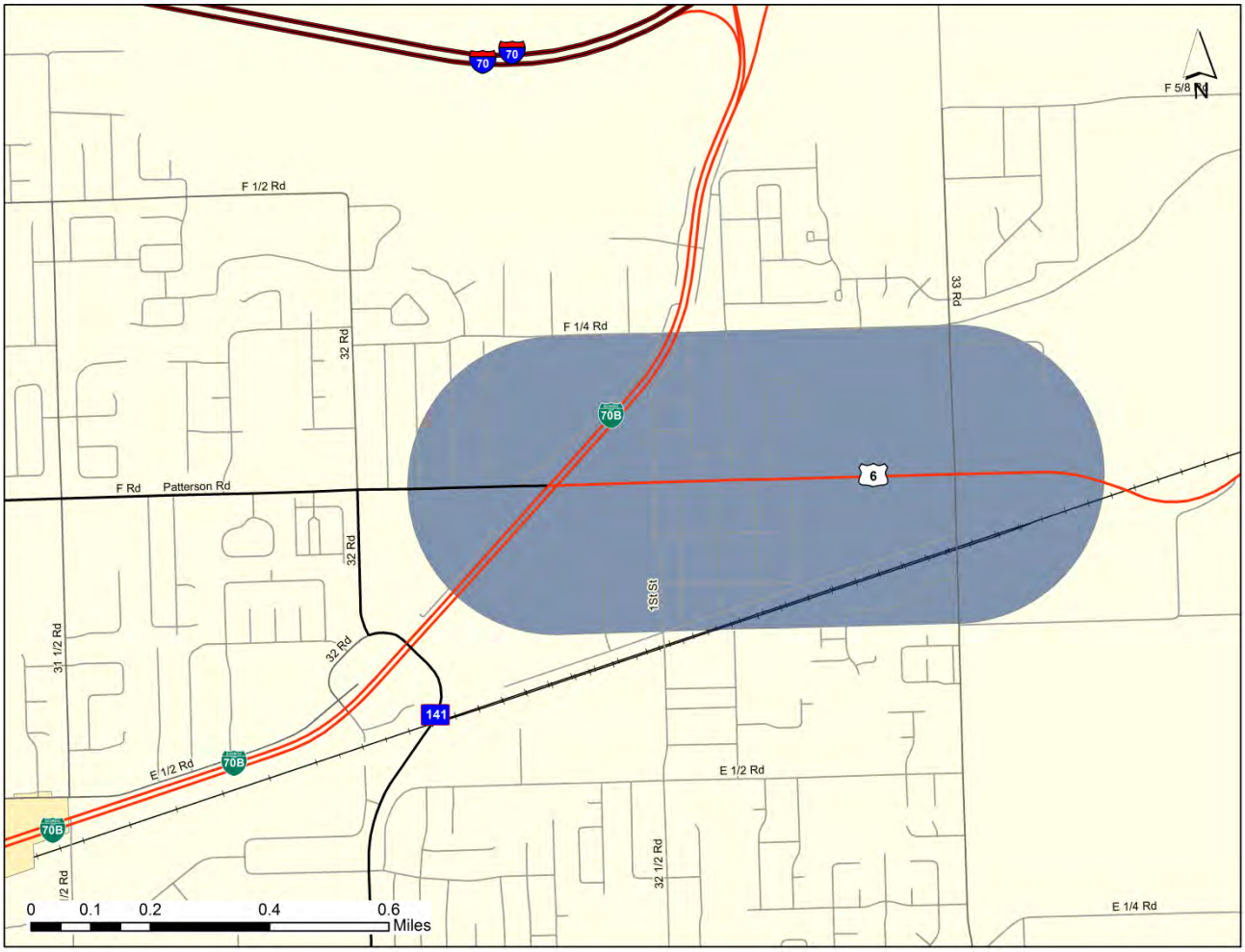


Table 8-10: US-6 C (4.1) Corridor Characteristics

US-6 C (4.1)	
Investment Category	**Mobility**
Vision	The vision for the US-6 C corridor from I-70B to east of the 33 Rd. is primarily to increase mobility as well as to improve safety and maintain system quality. This corridor serves as a multi-modal facility, provides commuter access, and access to an elementary school, the U.S. post office and other local business. This section of US-6 C is a congested urban corridor through the unincorporated neighborhood of Clifton and serves as their main street. Based on historic and projected population and employment levels, passenger traffic volumes are expected to increase significantly while freight volume will remain constant. In 2007, Mesa County developed a redevelopment plan for the Clifton area including the conceptual designs for improvements to this corridor.
2040 RTP Improvements	This corridor is programmed for a PEL corridor study to determine the improvements needed to improve safety and capacity.
Goals / Objectives	• Improve mobility and reduce congestion. • Provide multimodal facilities. • Provide safe routes to schools. • Capacity improvements. • Support commuter travel. • Reduce fatalities, injuries and property damage crash rate. • Eliminate shoulder deficiencies. • Preserve the existing transportation system.
Strategies	• Improve hotspots. • Construct/improve intersections. • Add turn lanes. • Preserve right-of-way. • Expand transit services. • Consolidate and manage access and develop access management plans. • Provide bicycle/pedestrian facilities, including the U.S. 6 Bridge across the Colorado River • Add surface treatment/overlays. • Construct improvements recommended in PEL study. • Add/improve shoulder.

Corridor 10: US-6 C (4.2)

Figure 8-11: US-6 C (4.2) Corridor

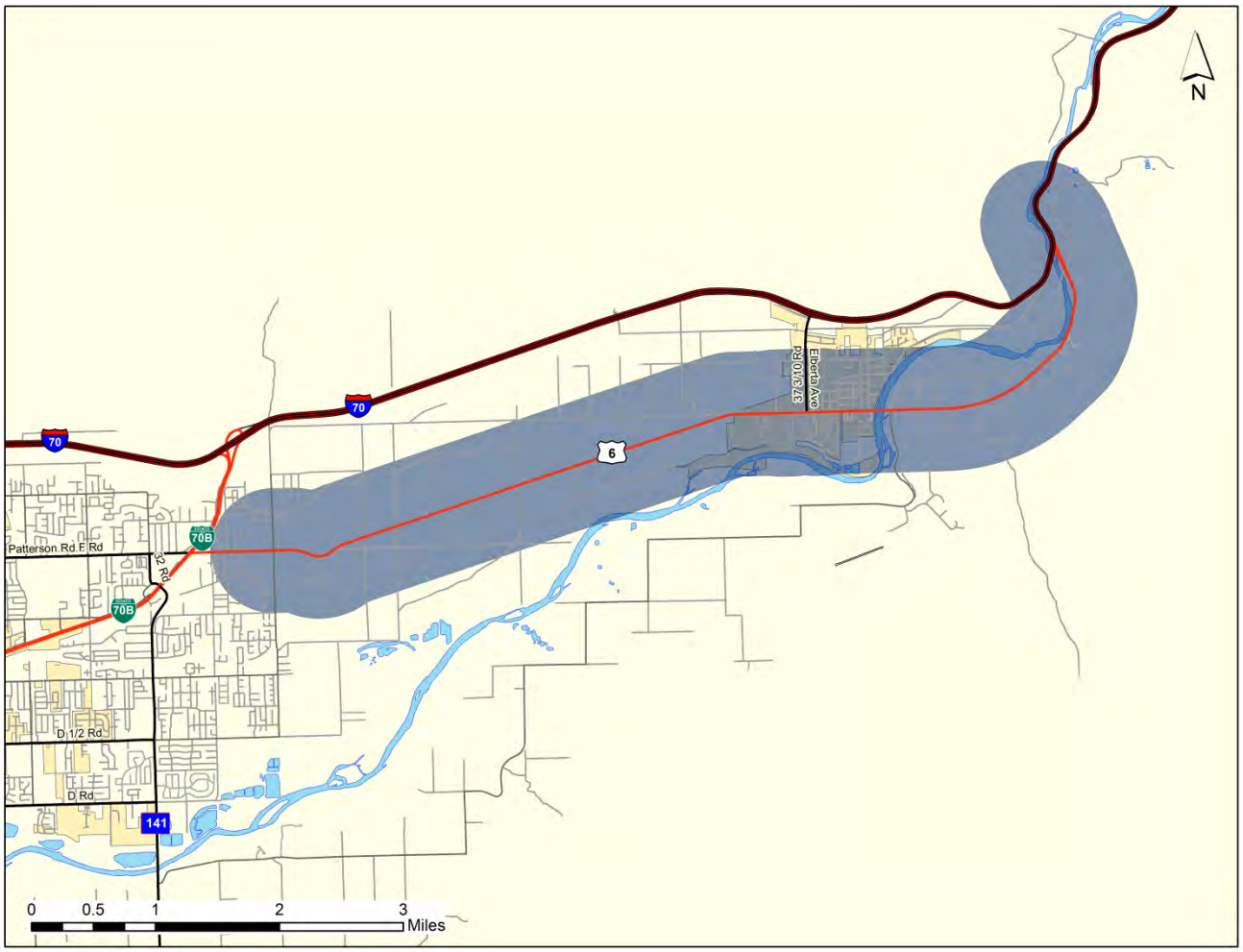


Table 8-11: US-6 C (4.2) Corridor Characteristics

US-6 C (4.2)	
Investment Category	**Mobility**
Vision	The Vision for the US-6 C corridor from 33 Rd. to I-70 is primarily to increase mobility as well as to improve safety and to maintain system quality. This corridor serves as a multi-modal local facility, provides commuter access, access to several schools, makes east-west connections within the eastern part of Mesa County, and serves as a relief route if I-70 is closed. The corridor is rural in nature with the exception of the commercial area in Palisade. Primary future travel modes include passenger vehicles and bus service. The transportation system serves communities within the corridor. Based on historic and projected population and employment levels, traffic and freight volumes are expected to modestly grow on this segment. The communities along the corridor value high levels of mobility and safety. They depend on agriculture and suburban density development for economic activity. Users of this corridor want to preserve the semi-rural and agricultural character of the area while supporting the movement of commuters and farm-to-market products. In the Palisade area, the US 6 Plan will be implemented.
2040 RTP Improvements	No major improvements for this corridor are included in the 2040 Regional Transportation Plan. Implement recommended improvements found in the recently completed US 6 Study within the Palisade town limits.
Goals / Objectives	• Improve mobility and reduce congestion. • Capacity improvements. • Multi-modal improvements. • Provide safe student routes to Palisade High School and Taylor Elementary. • Support commuter travel. • Reduce fatalities, injuries and property damage crash rate. • Eliminate shoulder deficiencies. • Preserve the exiting transportation system.
Strategies	• Improve hotspots. • Construct/improve intersections. • Add turn lanes. • Preserve right-of-way. • Expand transit services. • Consolidate and manage access and develop access management plans. • Provide bicycle/pedestrian facilities including the Colorado River Bridge in Palisade. • Add surface treatment/overlays. • Add/improve shoulder.

Corridor 11: US-6 M (5) / Old US-6

Figure 8-12: US-6 M (5) / Old US-6 Corridor

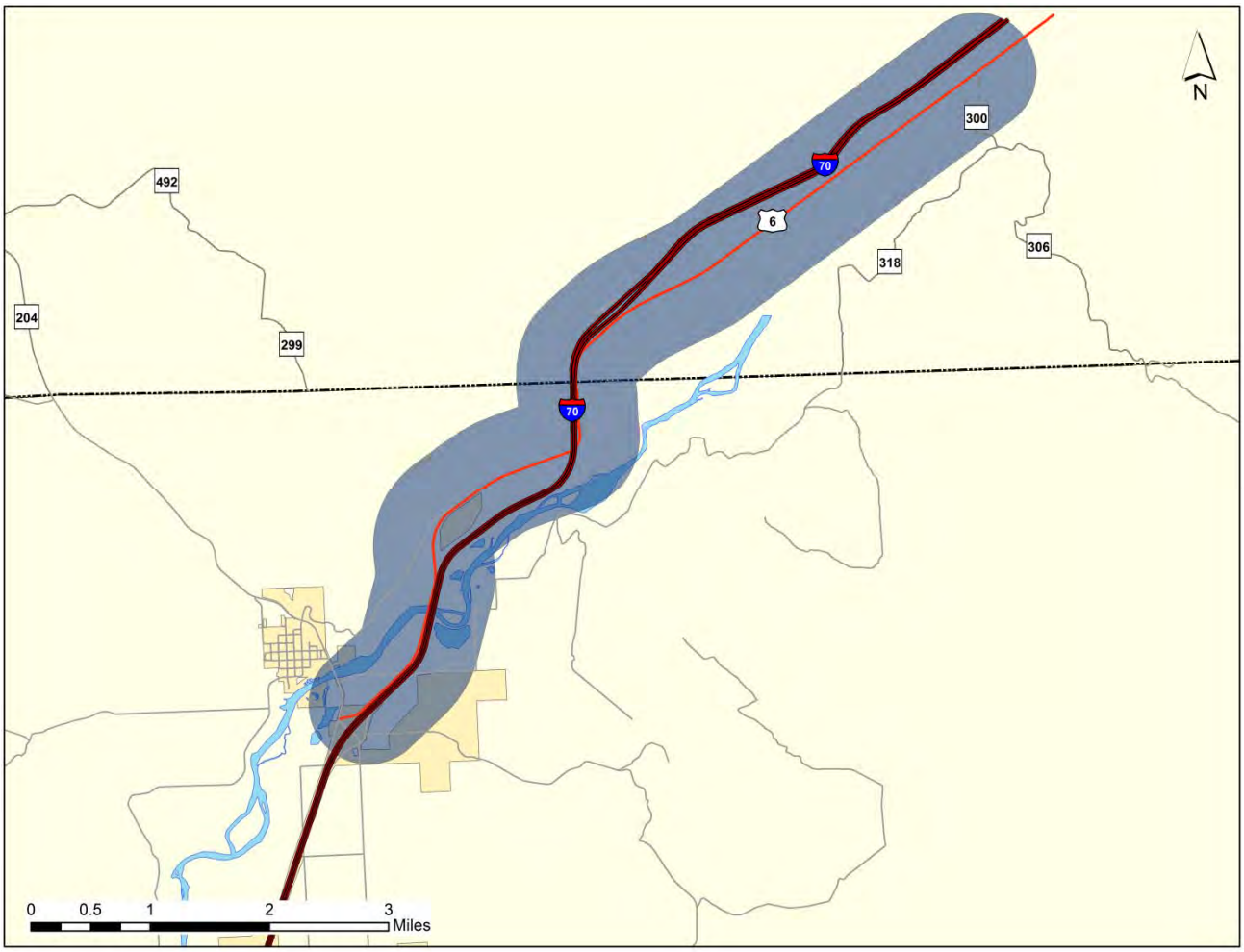


Table 8-12: US-6 M (5) / Old US-6 Corridor Characteristics

US-6 M (5) / Old US-6	
Investment Category	**System Quality**
Vision	The Vision for this corridor is primarily to maintain system quality. This corridor provides local access and makes east-west connections within the De Beque Canyon (Colorado River) area. The primary travel mode is passenger vehicle. The highway serves towns and rural residential areas within the corridor. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to stay the same. The communities along the corridor value system preservation and depend on agriculture for economic activity. Users of this corridor want to preserve the rural and residential character of the area and support local access.
2040 RTP Improvements	This corridor is expected to experience heavy traffic impacts driven by energy-related development. No major improvements for this corridor are included in the 2040 Regional Transportation Plan.
Goals / Objectives	• Preserve the existing transportation system. • Maintain or improve pavement to optimal condition. • Provide for safe movement of bicycles and pedestrians. • Improve signing/striping. • Accommodate and/or mitigate increased energy resource development traffic.
Strategies	• Improve geometrics. • Add surface treatment/overlays. • Improve shoulders. • Add signage. • Provide bicycle and pedestrian facilities.

Corridor 12: US-50 A (1)

Figure 8-13: US-50 A (1) Corridor

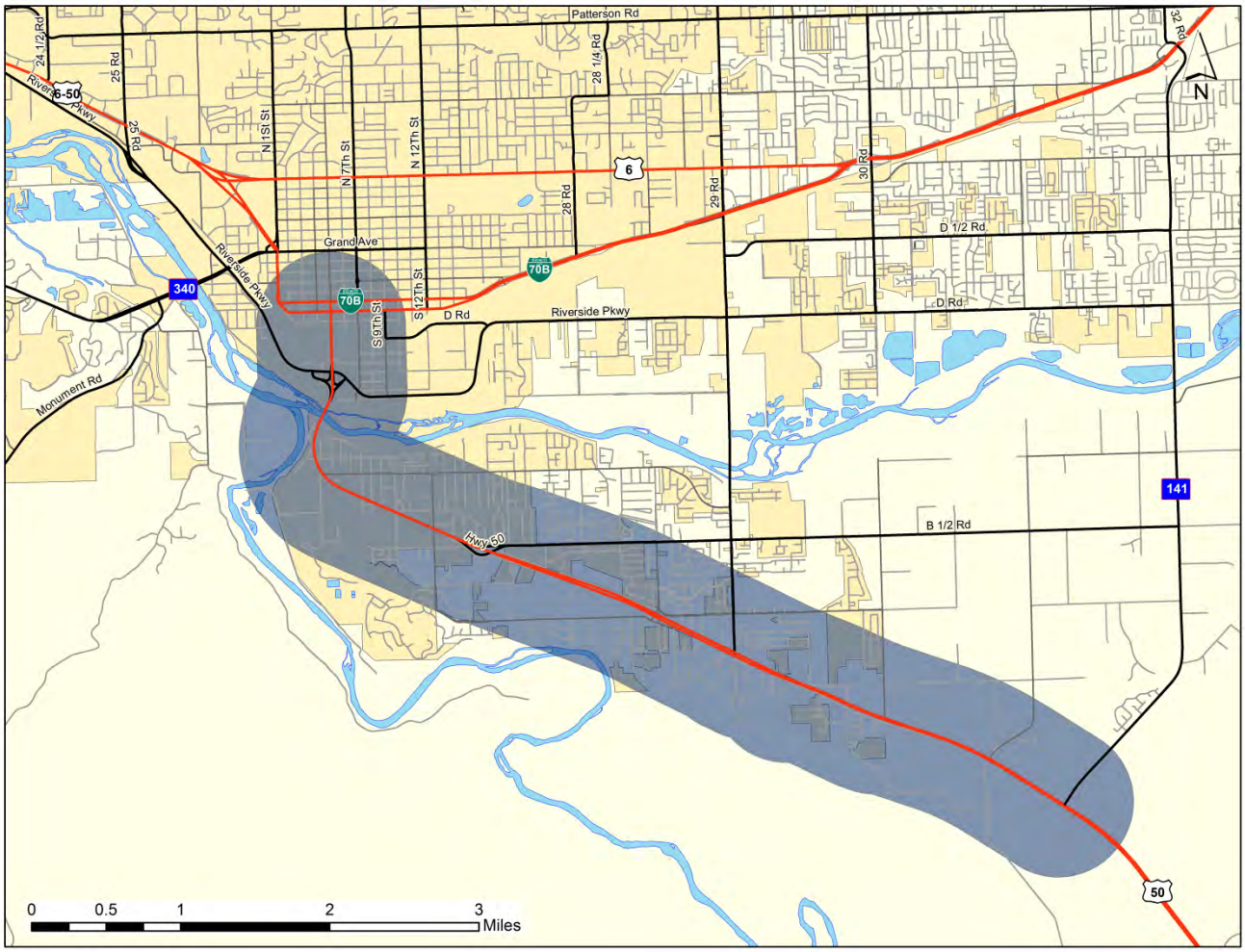


Table 8-13: US-50 A (1) Corridor Characteristics

US-50 A (1)	
Investment Category	**Mobility**
Vision	The Vision for this corridor is primarily to increase mobility, improve safety and maintain system quality. This 4-lane corridor serves as a multi-modal National Highway System facility, connecting to places outside the region, and makes east-west connections within west central Colorado. This segment serves as a primary route for through traffic and commuter traffic. Future travel modes include passenger vehicle, bus service, rail freight, and truck freight. The transportation system in the area primarily serves local access needs within the corridor, but also provides a critical link in the US 50 corridor connecting Utah, Eastern Colorado, and Kansas. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to increase. This corridor will have facilities for non-motorized users. As the gateway to the Grand Junction area, businesses and residents along the corridor value high levels of mobility, connections to other areas, safety, and system preservation. Businesses depend on commercial activity, tourism, and agriculture for economic activity. Users of this corridor support the movement of shoppers, tourists, commuters, freight, and farm products in and through the corridor.
2040 RTP Improvements	This corridor will be heavily impacted by the development of Whitewater based on the Whitewater Community Plan adopted by Mesa County in 2007. In addition, the resurgence of uranium mining in the Gateway area will have an impact on the corridor from commuter and service vehicle traffic traveling on SH-141 between Gateway and Grand Junction. It is anticipated that other energy development, such as oil and natural gas, will be developed in the Whitewater area. No major improvements for this corridor are included in the 2040 Regional Transportation Plan; however, the 2040 RTP includes project ID #79, US 50 MP 32-36 on Orchard Mesa, to include median and shoulder work, as well as improvements for pedestrians and bicyclist. New or upgraded intersections may be required with land development activity. Traffic modeling indicates the segment from Unaweep Avenue to the Riverside Parkway will be the most congested area along the corridor.
Goals / Objectives	• Reduce traffic congestion and improve traffic flow. • Accommodate growth in freight transport. • Reduce fatalities, injuries and property damage crash rate. • Preserve the existing transportation system. • Enhance visual appearance and aesthetics. • Accommodate and/or mitigate increased energy resource development traffic. • Accommodate transit with development and/or redevelopment. • Accommodate effects of traffic due to the anticipated Whitewater Community Plan. • Provide redundant corridors to relieve anticipated congestion.
Strategies	• Construct intersection/interchange improvements. Add capacity. • Add turn lanes. • Post informational signs. • Consolidate and limit access and develop access management plans. • Add signage. • Improve landscaping. • Interconnect traffic signals. • Provide functional medians. • Add street lighting. • Add additional river crossings for congestion relief and redundancy. • Enhance Pedestrian crossing facilities for Mesa View Elementary and Dos Rios Elementary School students and between the Fairgrounds and the City Market commercial/retail center.

Corridor 13: US-50 A (2)

Figure 8-14: US-50 A (2) Corridor

Table 8-14: US-50 A (2) Corridor Characteristics

US-50 A (2)	
Investment Category	**System Quality**
Vision	The Vision for this corridor is primarily to maintain system quality and improve safety as well as to maintain system quality. This corridor serves as a multi-modal National Highway System facility, connects to places outside the region, and makes east-west connections within the Lower Gunnison River area. It is a primary access corridor to Grand Junction from much of southwestern Colorado. Future travel modes include passenger vehicle, bus service connections, including life line service, truck freight, and rail freight. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to increase. The communities along the corridor value connections to other areas and safety. They depend on agriculture and tourism for economic activity in the area. Users of this corridor want to preserve the rural character of the area while supporting the movement of freight and interregional access in and through the corridor.
2040 RTP Improvements	This corridor will be heavily impacted by the growth of Whitewater based on the Whitewater Community Plan adopted by Mesa County in 2007. In addition, a resurgence of Uranium mining will impact the corridor from commuter and service vehicle traffic traveling between the SH 141/Gateway area and Grand Junction. No major improvements for this corridor are included in the 2040 Regional Transportation Plan.
Goals / Objectives	• Maintain statewide transportation connections. • Support commuter travel. • Accommodate growth in freight transport. • Reduce fatalities, injuries and property damage crash rate. • Preserve the existing transportation system. • Accommodate and/or mitigate increased energy resource development traffic.
Strategies	• Construct/improve intersections. • Provide transit bus service.

Corridor 14: SH-65 A

Figure 8-15: SH-65 A Corridor

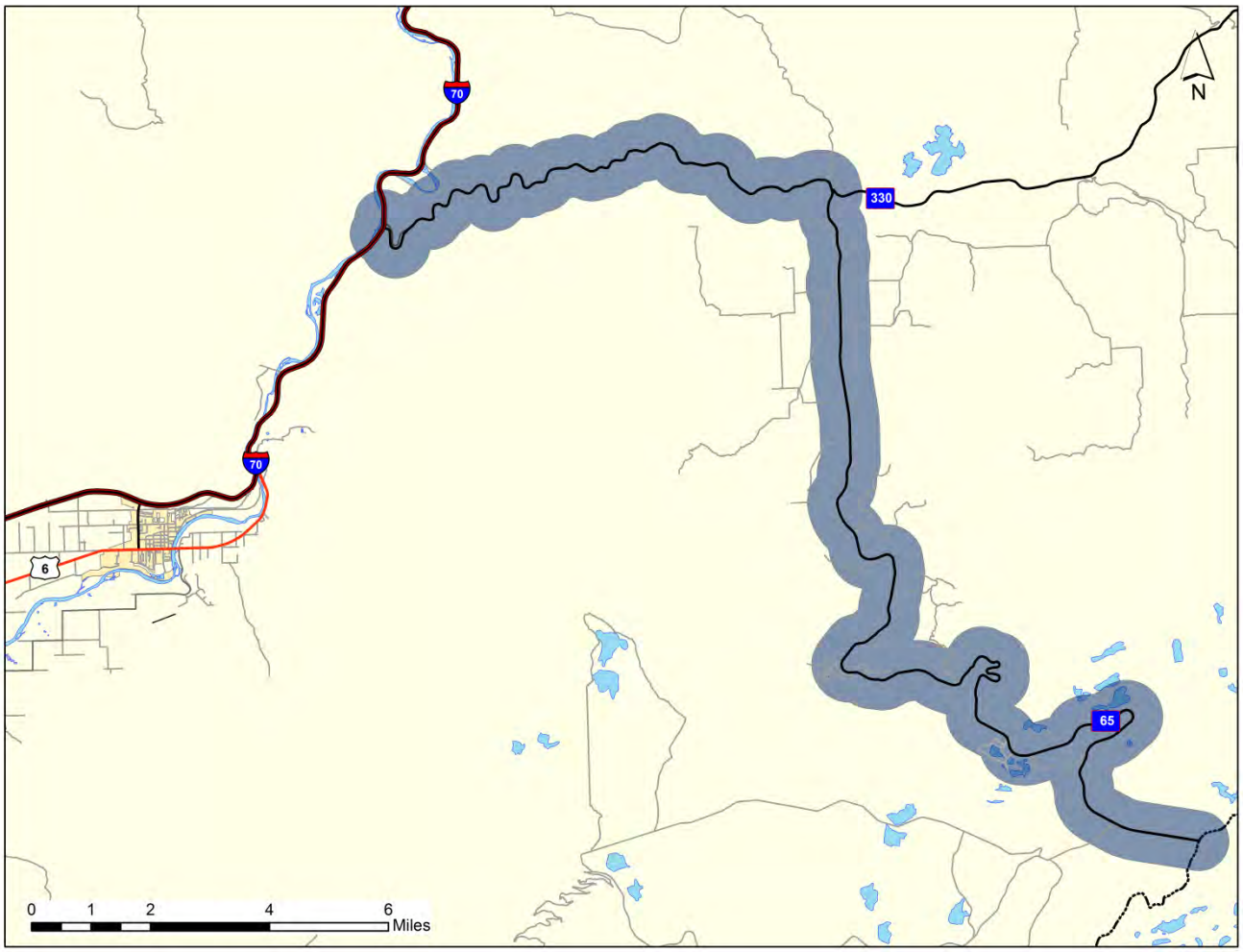


Table 8-15: SH-65 A Corridor Characteristics

SH-65 A	
Investment Category	**Safety**
Vision	The Vision for this corridor is primarily to improve safety as well as to maintain system quality. This heavily used recreation corridor provides commuter access and makes north-south connections within the Grand Mesa National Forest, Plateau Valley, and Surface Creek Valley areas as well as serving as main street in the Town of Mesa. Future travel needs include passenger vehicle improvements and bicycle and pedestrian facilities. The corridor primarily serves local destinations, but also connects through the Grand Mesa area to US 50 and points south. It is designated as the Grand Mesa Scenic Byway, accessing the Powderhorn Ski Area, the Grand Mesa Visitor Center and other public recreation sites. Based on historic and projected population and employment levels, passenger traffic volumes are expected to increase while freight volume will remain constant. The communities along the corridor value connections to other areas, safety, system preservation, and recreational access. They depend on tourism, agriculture, logging, and recreational lodging for economic activity in the area. Users of this corridor want to preserve the rural, mountain, agricultural, and recreational environment while supporting the movement of tourists, commuters, and farm-to-market products.
2040 RTP Improvements	The energy development industry has started using this corridor heavily as they continue to develop mineral rights on properties most readily accessed from this corridor. No major improvements for this corridor are included in the 2040 Regional Transportation Plan.
Goals / Objectives	• Support recreation travel. • Provide information to traveling public. • Reduce fatalities, injuries and property damage crash rate. • Provide for safe movement of bicycles and pedestrians. • Eliminate shoulder deficiencies. • Enhance Scenic Byway interpretive opportunities. • Accommodate and/or mitigate increased energy resource development traffic.
Strategies	• Improve geometrics. • Add passing lanes. • Add/improve shoulders. • Add guardrails. • Add turn lanes. • Add roadway pullouts for breakdowns and slow vehicles. • Improve winter maintenance. • Provide pullouts and signing for interpretive sites.

Corridor 15: SH-139 A

Figure 8-16: SH-139 A Corridor

Table 8-16: SH-139 A Corridor Characteristics

SH-139 A	
Investment Category	**Safety**
Vision	The Vision for this corridor is primarily to improve safety as well as to maintain system quality. This corridor connects to places outside the region, and makes north-south connections within the west-central Colorado area. It is designated as a portion of the Dinosaur Diamond Scenic Byway and serves as main street in Loma. Future travel modes include passenger vehicle and truck freight and bicycle and pedestrian facilities in and around Loma. The transportation system in the area primarily serves destinations outside of the corridor. Based on historic and projected population and employment levels, passenger volumes are expected to increase as Loma grows. Mineral and natural gas resource recovery activities are expected to result in an increase in truck traffic. The communities along the corridor value safety. They depend on tourism and agriculture for economic activity in the area. Users of this corridor want to preserve the rural character of the area, enhance the community of Loma as it grows, while supporting the movement of tourists, freight, and farm-to-market products.
2040 RTP Improvements	This corridor is experiencing increased traffic, particularly heavy trucks due to ever increasing energy development activity. No major improvements for this corridor are included in the 2040 Regional Transportation Plan.
Goals / Objectives	• Reduce fatalities, injuries and property damage crash rate. • Accommodate growth in freight transport. • Provide improvements/facilities to accommodate pedestrian & bicycle travel. • Eliminate shoulder deficiencies. • Provide for tourist-friendly travel. • Preserve the existing transportation system. • Enhance Scenic Byway interpretive sites. • Accommodate and/or mitigate increased energy resource development traffic.
Strategies	• Improve geometrics. • Add passing lanes. • Add/improve shoulders. • Add guardrails. • Add turn lanes. • Add surface treatment/overlays. • Consolidate and limit access and develop access management plans. • Construct pullouts and provide signing for interpretive sites. • Improve bike/pedestrian facilities on Exit 15 interchange. • Provide bike trail connections to Highline Recreation Area.

Corridor 16: SH-141 A

Figure 8-17: SH-141 A Corridor

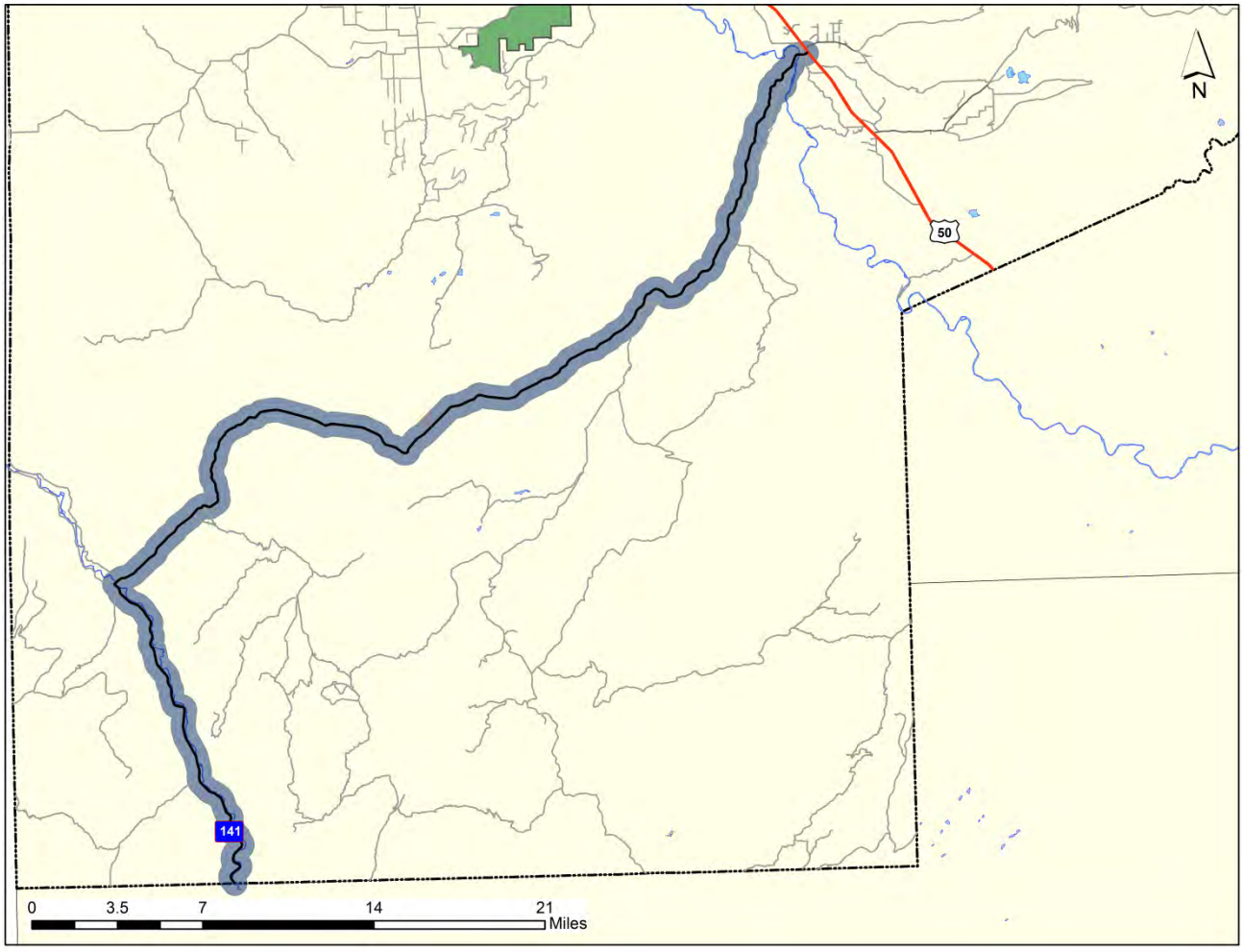


Table 8-17: SH-141 A Corridor Characteristics

SH-141 A	
Investment Category	**Safety**
Vision	The Vision for this corridor is primarily to maintain system quality as well as to improve safety and to maintain mobility. This corridor provides local access, access to public lands and makes north-south connections within the southwest Mesa County connecting the Unaweep Canyon and Dolores River Valley. It is designated as the Unaweep Tabeguache Scenic & Historic Byway. Future travel modes include passenger vehicle, bus service, truck freight, and bicycle and pedestrian facilities. The transportation system in the area serves towns, cities, and destinations within the corridor as well as destinations outside of the corridor. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to moderately increase. The communities along the corridor value connections to other areas, safety, and system preservation. They depend on tourism, agriculture, ranching, and access to public lands recreation for economic activity. Users of this corridor want to preserve the rural, mountain, and agricultural character of the area while supporting the movement of tourists, commuters, freight, and farm-to-market products.
2040 RTP Improvements	This corridor will experience increased traffic, particularly heavy trucks when energy development activity such as the resurgence of the Uranium industry in the Gateway area resumes. In addition, the development of the Gateway Canyons resort and the creation of a sanitation district have created the potential for considerably more population growth that will generate more traffic traveling the corridor. No major improvements for this corridor are included in the 2040 Regional Transportation Plan.
Goals / Objectives	• Reduce fatalities, injuries and property damage crash rate. • Provide for safe movement of bicycles and pedestrians. • Preserve the existing transportation system. • Promote transportation improvements that are environmentally responsible. • Support commuter travel. • Enhance Scenic Byway interpretive opportunities. • Accommodate and/or mitigate increased energy resource development traffic. • Accommodate increased traffic from tourist oriented development and attendant population growth.
Strategies	• Add Pullouts and informational signs at appropriate locations. • Improve geometrics. • Add/improve shoulders. • Add guardrails. • Add surface treatment/overlays. • Replace/repair Structurally Deficient (SD) /Functionally Obsolete (FO) bridges. • Provide scenic byway interpretive sites/signage.

Corridor 17: SH-141 B (1)

Figure 8-18: SH-141 B (1) Corridor

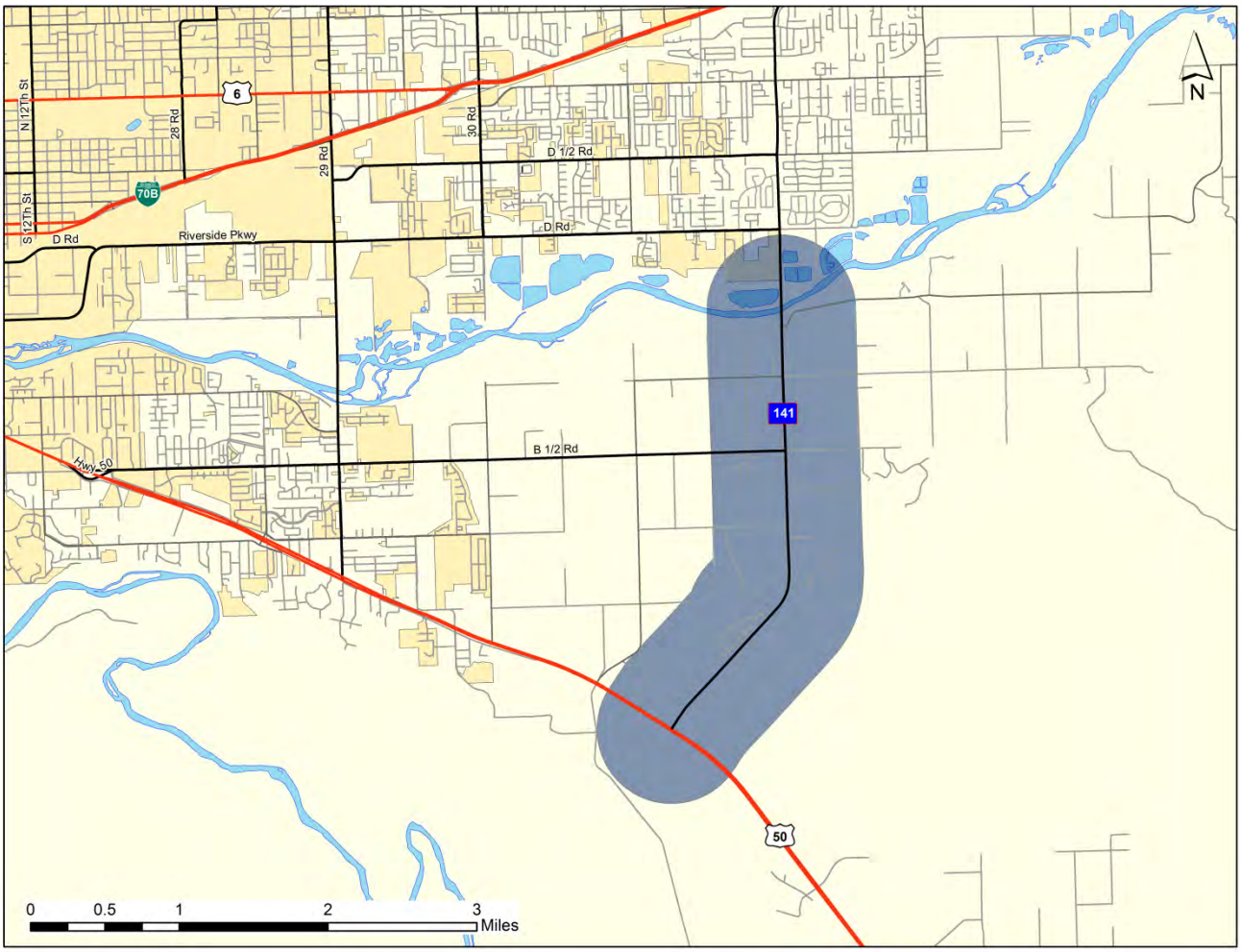


Table 8-18: SH-141 B (1) Corridor Characteristics

SH-141 B (1)	
Investment Category	**Safety**
Corridor Vision	The Vision for this corridor is primarily to improve safety as well as to increase mobility and maintain system quality. This corridor connects to places outside the region and makes north-south connections within the eastern Grand Junction urban area as well as a Gateway to the city. It is also identified locally as 32 Road and serves as an arterial for Clifton connecting US 50 to I-70. Future travel modes include passenger vehicle, transit service, truck freight, and bicycle and pedestrian facilities. The transportation system primarily serves destinations within the corridor. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to increase. The communities along the corridor value high levels of safety, mobility, transportation choices, and connections to other major corridors. The community depends on commercial activity for economic vitality in the area.
2040 RTP Improvements	This corridor will experience increased traffic volumes generated by overall community growth related to energy development. No major improvements for this corridor are included in the 2040 Regional Transportation Plan.
Goals / Objectives	• Reduce traffic congestion and improve traffic flow. • Support commuter travel. • Reduce fatalities, injuries, and property damage. • Provide for safe movement of bicycles and pedestrians. • Preserve the existing transportation system. • Develop the corridor with future transit service in mind. • Add enhancements that will improve the appearance of the corridor. • Accommodate and/or mitigate increased energy resource development traffic.
Strategies	• Add general purpose lanes. • Construct intersection improvements. • Construct, improve and maintain the system of local roads. • Post information/interpretive signs. • Provide bicycles/pedestrian facilities. • Provide for landscaping/hardscaping and entry features.

Corridor 18: SH-141 B (2)

Figure 8-19: SH-141 B (2) Corridor

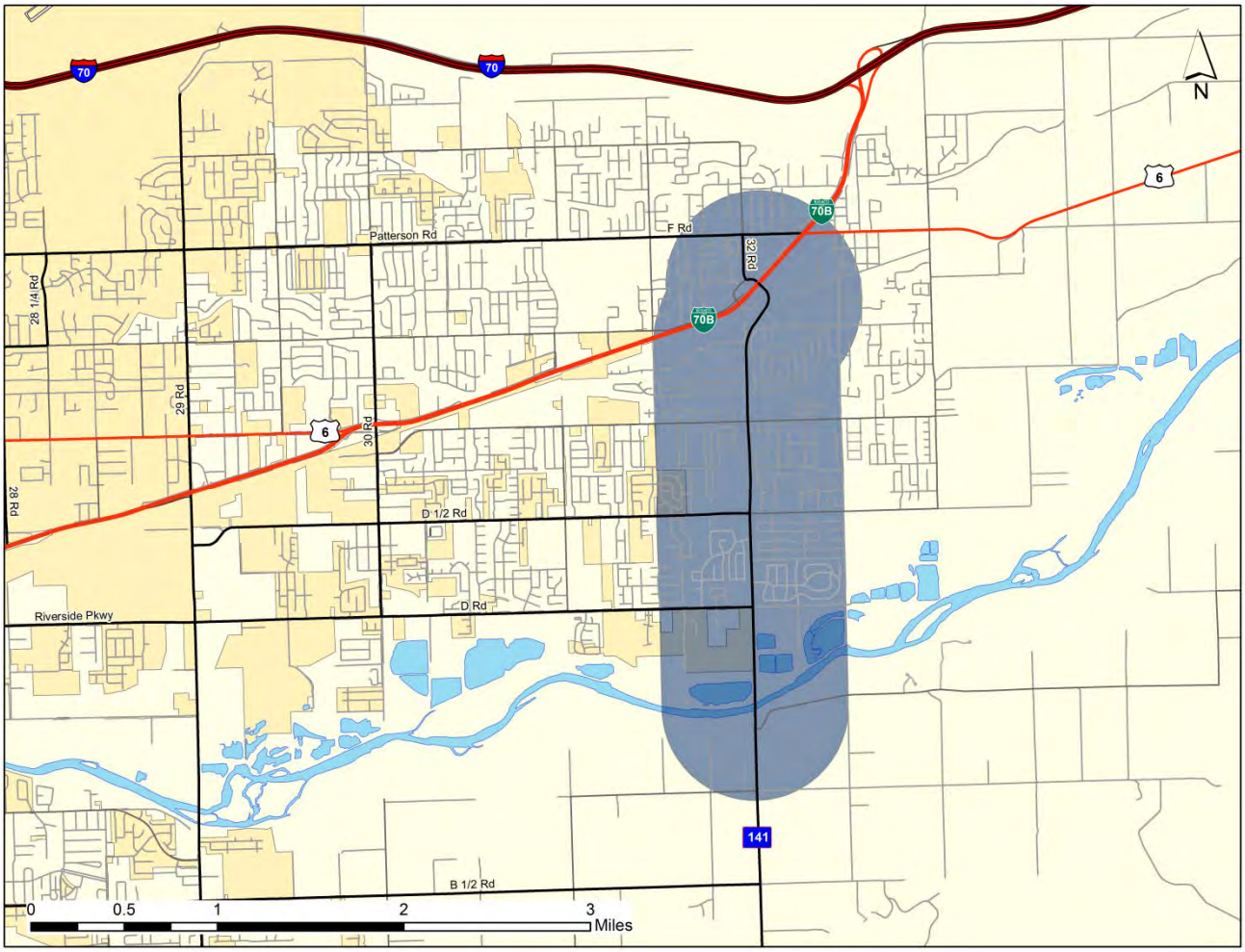


Table 8-19: SH-141 B (2) Corridor Characteristics

SH-141 (B) 2	
Investment Category	**System Quality**
Vision	The Vision for this corridor is primarily to improve safety as well as to maintain system quality. This corridor serves as a multi-modal local facility, provides local access, and makes north-south connections within the Clifton suburban area east of Grand Junction. Future travel modes include passenger vehicle, bus service, truck freight, bicycles and pedestrians. The transportation system in the area primarily serves towns, cities, and destinations within the corridor as well as through traffic between I-70 and US 50. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to increase. Users of the corridor value high levels of mobility. They depend on commercial activity for economic activity in the area. Users of this corridor want to support the movement of commuters, freight, and commercial access in the corridor. 2010 GJ Comp Plan envisions as a Multi-Use Opportunity Corridor.
2040 RTP Improvements	Due in part to the location of numerous businesses that support the energy development industry, this corridor is experiencing a dramatic increase of use by heavy trucks. No major improvements for this corridor are included in the 2040 Regional Transportation Plan.
Goals / Objectives	• Preserve the existing transportation system. • Reduce traffic congestion and improve traffic flow. • Support commuter travel. • Accommodate growth in freight transport. • Expand transit usage. • Assess the need for an access management plan. • Accommodate and/or mitigate increased energy resource development traffic. • Development and/or redevelopment along this corridor shall accommodate transit.
Strategies	• Synchronize/interconnect traffic signals. • Construct intersection/interchange improvements. • Add/Improve landscaping at appropriate locations. Provide and expand transit bus services. • Promote carpooling and vanpooling. • Consolidate and limit access and develop access management plans. • Add surface treatment/overlays. • Develop an access management plan.

Corridor 19: Horizon Drive

Figure 8-20: Horizon Drive Corridor

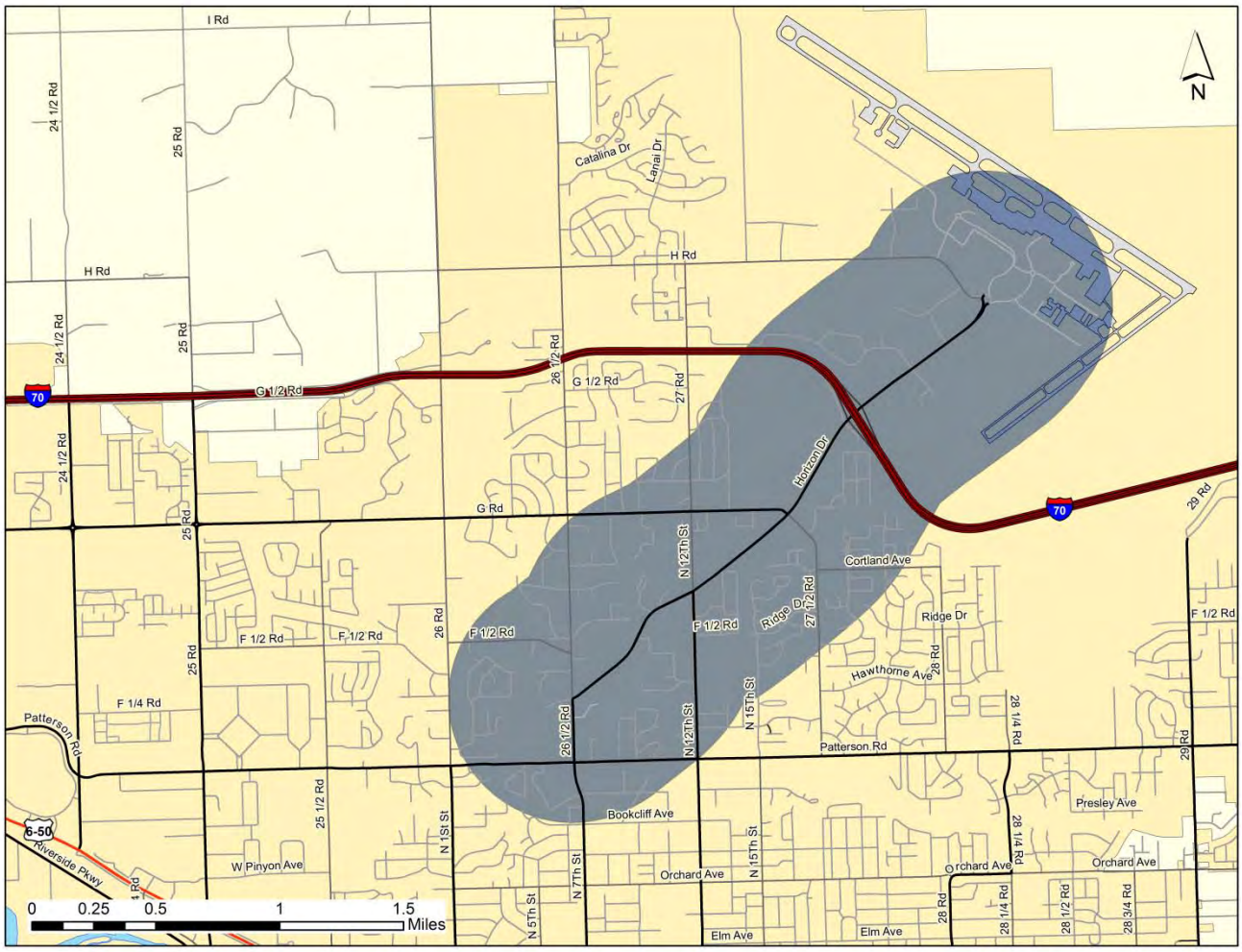


Table 8-20: Horizon Drive Corridor Characteristics

Horizon Drive	
Investment Category	**Safety**
Vision	The Vision for this corridor is primarily to improve safety, as well as to maintain system quality. Future travel modes include passenger vehicle, truck freight, and bicycle and pedestrian facilities. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to increase. Residents and businesses along the corridor value safety and system preservation. As warranted, the corridor will add travel lanes between 1st Street and G Road.
2040 RTP Improvements	Improvements will include upgrades to Exit 31 Interchange, including roundabouts.
Goals / Objectives	• Reduce fatalities, injuries and property damage crash. • Support commuter travel. • Provide for bicycle and pedestrian movement. • Accommodate and/or mitigate increased traffic.
Strategies	• Add travel lanes. • Develop bicycle and pedestrian facilities.

Corridor 20: 22 Road

Figure 8-21: 22 Road Corridor

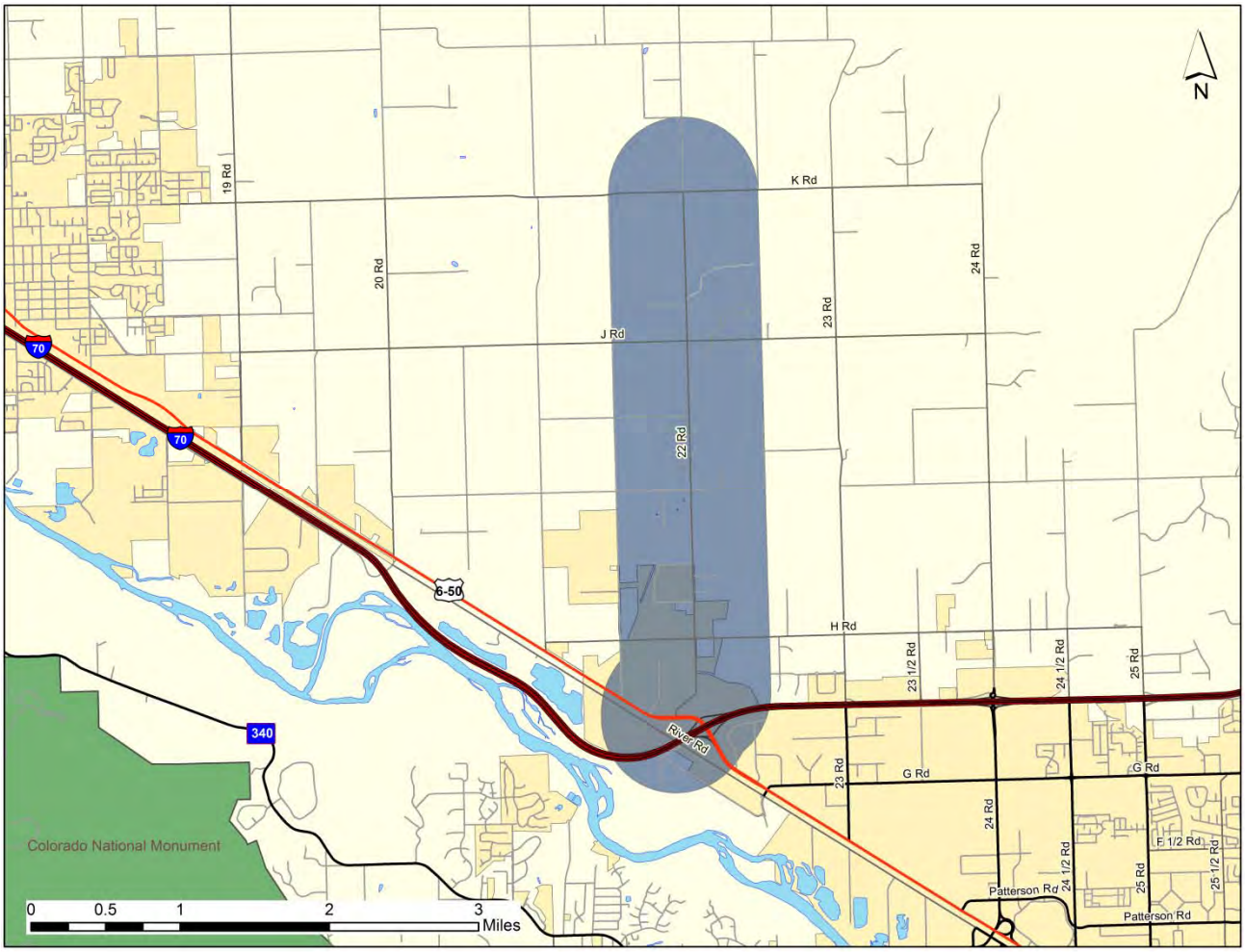


Table 8-21: 22 Road Corridor Characteristics

22 Road	
Investment Category	**Safety**
Vision	The Vision for this corridor is primarily to improve safety, as well as to maintain system quality. This corridor provides commuter access, industrial/freight access on the south end as well as farm to market access. Future travel modes include passenger vehicle, truck freight, and bicycle and pedestrian facilities. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to slowly. Residents and businesses along the corridor value safety and system preservation.
2040 RTP Improvements	Improvements to the south end of this corridor will be completed in December, 2013. A corridor study is underway from the north end of the above project and extending to K Road. Results of the study will be included in this vision.
Goals / Objectives	• Reduce fatalities, injuries and property damage crash. • Support commuter travel. • Provide for bicycle and pedestrian movement. • Eliminate shoulder deficiencies. • Accommodate and/or mitigate increased industrial/commercial traffic.
Strategies	• Improve geometrics. • Add/improve shoulders. • Develop bicycle and pedestrian facilities.

Corridor 21: K Road

Figure 8-22: K Road Corridor

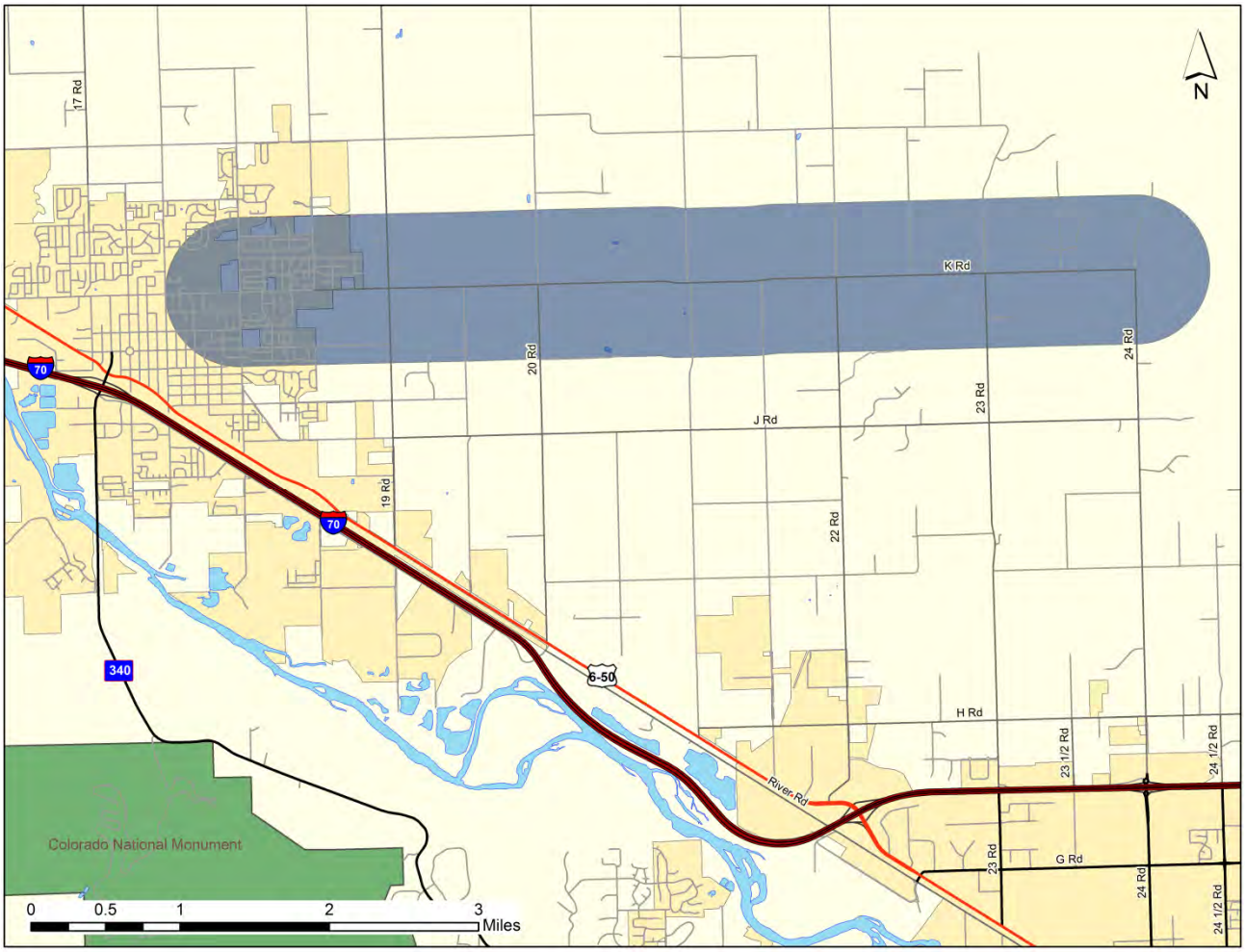


Table 8-22: K Road Corridor Characteristics

K Road	
Investment Category	**Safety**
Vision	The Vision for this corridor is primarily to improve safety, as well as to maintain system quality. This corridor provides commuter access, agricultural access and recreational opportunities for cyclists. Future travel modes include passenger vehicle, agricultural freight, and bicycle and pedestrian facilities. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to rise slowly. Residents along the corridor value safety and system preservation.
2040 RTP Improvements	Mesa County and the City of Fruita have been systematically improving the segments within their respective jurisdictions.
Goals / Objectives	• Reduce fatalities, injuries and property damage crash. • Provide for bicycle and pedestrian movement. • Eliminate shoulder deficiencies. • Accommodate and/or mitigate agricultural/commuter traffic.
Strategies	• Improve geometrics. • Add/improve shoulders. • Develop bicycle and pedestrian facilities.

Corridor 22: SH-330 A

Figure 8-23: SH-330 A Corridor

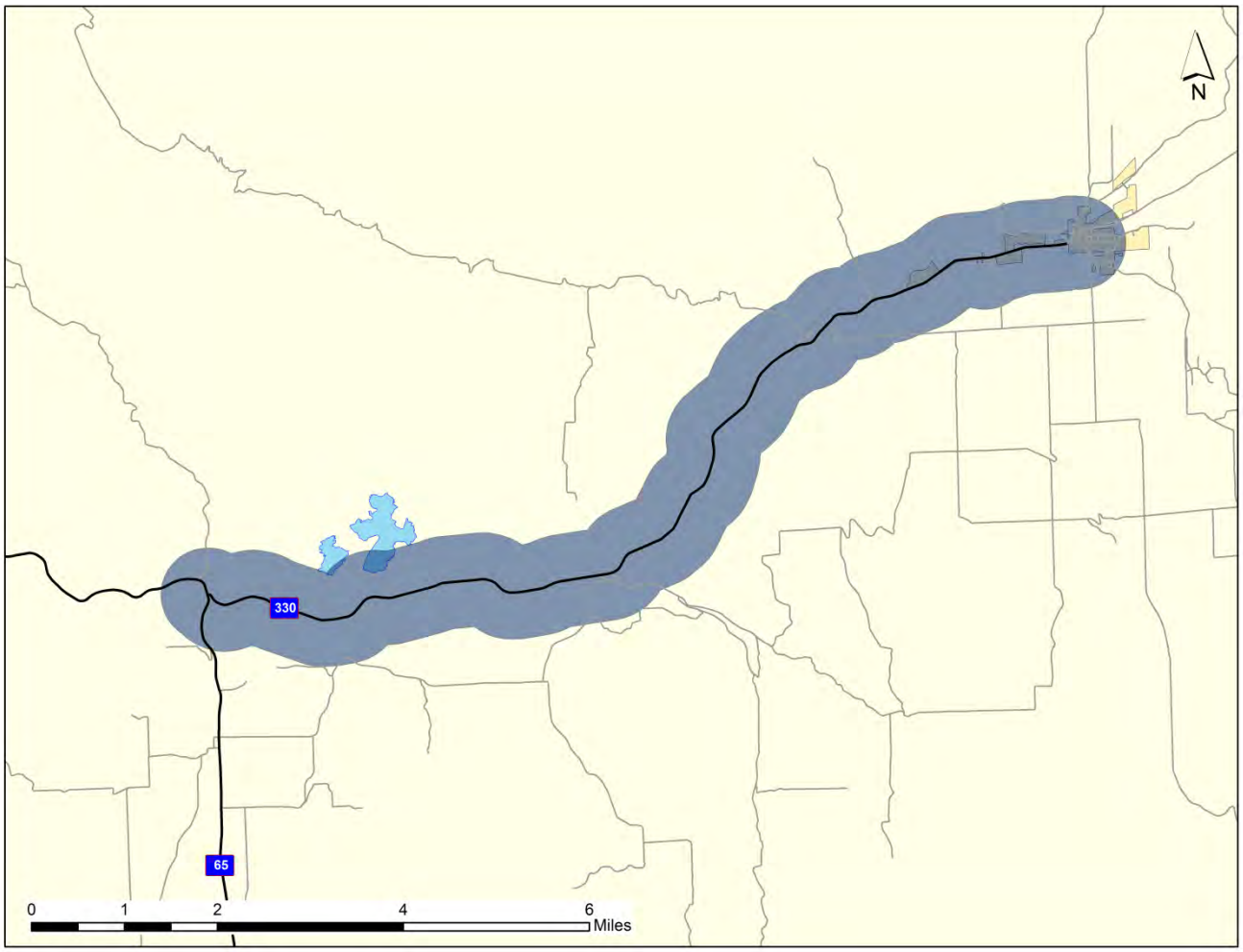


Table 8-23: SH-330 A Corridor Characteristics

SH-330 A	
Investment Category	**Safety**
Vision	The Vision for this corridor is primarily to improve safety, as well as to maintain system quality. This corridor provides commuter access and makes east-west connections within the Plateau Valley area. Future travel modes include passenger vehicle, truck freight, and bicycle and pedestrian facilities. The highway primarily serves as Main Street in Collbran, as well as commuter and commercial access through Plateau Valley to Interstate 70 and the Grand Junction urban area. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to stay the same. Communities on the corridor value safety and system preservation. They depend on tourism, agriculture, Vega Reservoir State Park, and other public recreation sites for economic activity. Users of this corridor want to preserve the rural and mountain character of the area while supporting the movement of tourists, commuters, and farm-to-market products.
2040 RTP Improvements	This corridor is experiencing increased traffic, particularly heavy trucks due to ever increasing energy development activity in the area. Project ID# 69. SH-330 from SH-65 to Collbran is included in the 2040 Regional Transportation Plan, however, specific improvements and funding have not yet been identified.
Goals / Objectives	• Reduce fatalities, injuries and property damage crash. • Support recreation travel. • Support commuter travel. • Provide for bicycle and pedestrian movement. • Provide public transportation. • Eliminate shoulder deficiencies. • Accommodate and/or mitigate increased energy resource development traffic.
Strategies	• Improve geometrics. • Add passing lanes. • Add/improve shoulders. • Provide and expand transit bus service. • Promote carpooling and vanpooling. • Develop bicycle and pedestrian facilities.

Corridor 23: SH-340 A (1)

Figure 8-24: SH-340 A (1) Corridor

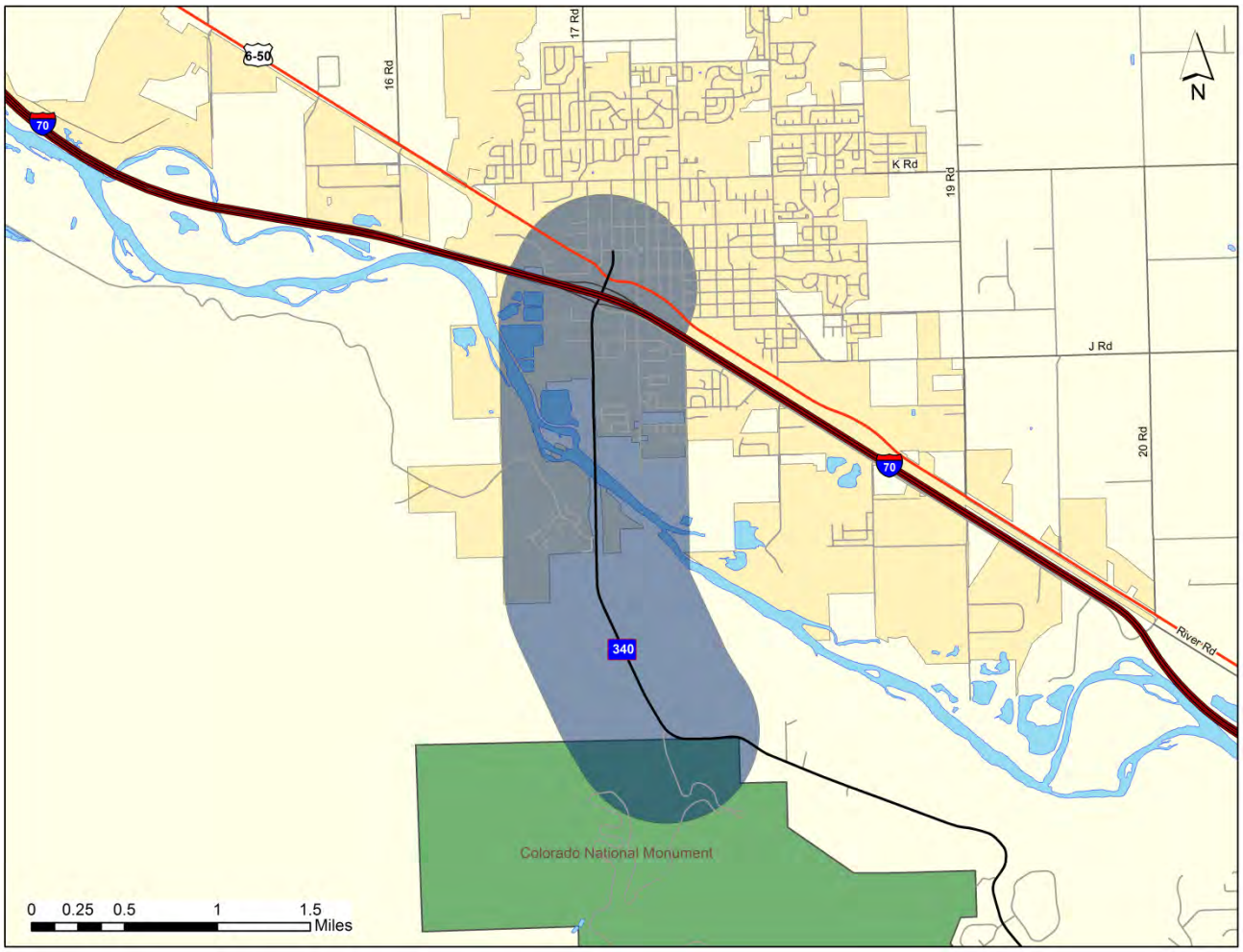


Table 8-24: SH-340 A (1) Corridor Characteristics

SH-340 A (1)	
Investment Category	**Mobility**
Vision	The Vision for this corridor is primarily to increase mobility, as well as to improve safety and to maintain system quality. This corridor serves as a multi-modal local facility, acts as Main Street, and makes north-south connections within the Fruita area. Future travel modes include passenger vehicle, bus service, bicycle and pedestrian facilities, and Transportation Demand Management (telecommuting and carpooling). The corridor primarily serves local destinations. Based on historic and projected population and employment levels, passenger traffic volumes are expected to increase along with freight volumes. The community served by this corridor (Fruita) values transportation choices, safety, and system preservation. They depend on commercial activity for economic activity in the area. Users of this corridor want to preserve the small town character of the area while supporting the movement of commuters and commercial access. Several adopted plans give direction for future improvements in the corridor. They are the Redlands Transportation Plan (2002) and the City of Fruita 340 Corridor Plan (1994). A corridor optimization study for this corridor was completed in 2006.
2040 RTP Improvements	The SH-340 / I-70 interchange and the 20 Road/I-70/Railroad overpass are three miles apart and the only two accesses between the I-70 Frontage Road and US 6. With an expanding population on the south side of I-70 primarily dependent on the SH-340 / I-70 interchange for access into Fruita proper, there is a growing realization that there is a need to provide another access into Fruita somewhere between the two existing accesses.
Goals / Objectives	• Increase travel reliability and improve mobility. • Support commuter travel. • Expand transit usage, provide for bicycle/pedestrian travel. • Preserve the existing transportation system. • Reduce fatalities, injuries and property damage. • Provide for tourist friendly travel. • Improve Gateway to Colorado National Monument and the Colorado Canyons National Conservation Area. • Accommodate and/or mitigate increased energy resource development traffic. • Development and/or redevelopment along this corridor shall accommodate transit. • Provide another access across I-70 between the South Frontage Road & U.S. 6.
Strategies	• Consolidate and limit access and develop access control plans. • Provide and expand transit bus service. • Develop bicycle/pedestrian facilities. • Promote carpooling and vanpooling. • Construct intersection improvements. • Add traffic signals and street lighting. • Provide destination signing (Colorado National Monument, Paleo-sites, etc.). • Development and/or redevelopment along this corridor shall accommodate transit.

Corridor 24: SH-340 A (2)

Figure 8-25: SH-340 A (2) Corridor

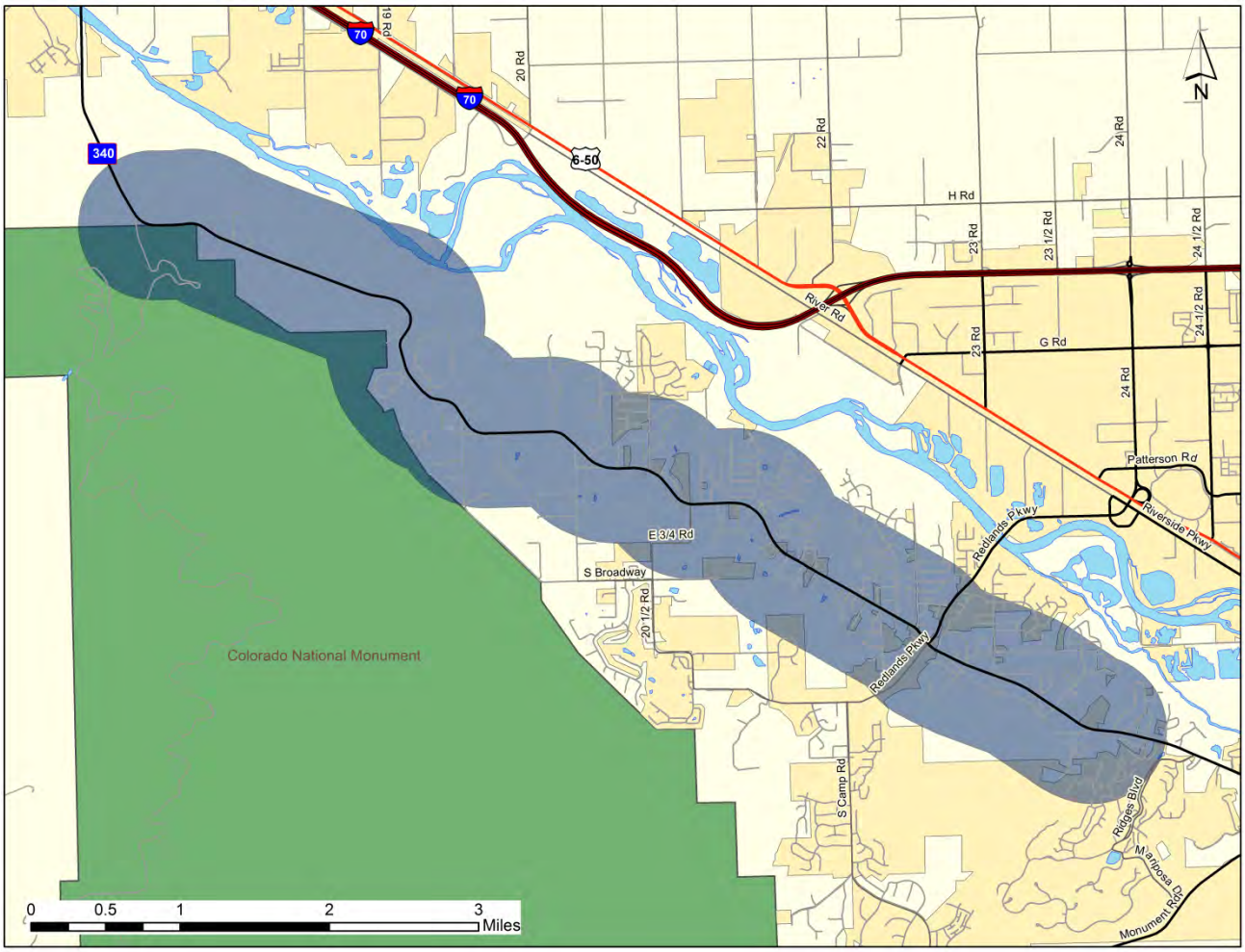


Table 8-25: SH-340 A (2) Corridor Characteristics

SH-340 A (2)	
Investment Category	**Mobility**
Vision	The Vision for this corridor is primarily to improve safety and maintain system quality. This corridor serves as a multi-modal local facility, acts as Main Street for the Redlands area. Future travel modes include passenger vehicle, bus service, bicycle and pedestrian facilities, and Transportation Demand Management (telecommuting and carpooling). It crosses the community buffer zone between Fruita and Grand Junction. The corridor primarily serves local destinations. Based on historic and projected population and employment levels, passenger traffic volumes are expected to moderately increase. Freight volumes will not substantially increase as the area served by this corridor is primarily residential in nature. The residents along the corridor value transportation choices, safety, and system preservation. Users of this corridor want to preserve the character of the area while supporting the movement of commuters and to and from employment and commercial centers. The Redlands Transportation Plan (2002) provides direction for future improvements in the corridor.
2040 RTP Improvements	An upgraded intersection at Redlands Parkway/S.H. 340 is included in the 2040 Regional Transportation Plan.
Goals / Objectives	• Increase travel reliability and improve mobility. • Support commuter travel. • Expand transit usage, provide for bicycle/pedestrian travel. • Preserve the existing transportation system. • Reduce fatalities, injuries and property damage. • Improve Gateway to Colorado National Monument and the Colorado Canyons National Conservation Area through the Federal Lands Access Program (FLAP). • Development and/or redevelopment along this corridor shall accommodate transit. • Devolve this corridor from the state highway system to gain local oversight.
Strategies	• Consolidate and limit access and develop access management plans. • Provide and expand transit bus service. • Develop bicycle/pedestrian facilities. • Construct and maintain Park'n Ride facilities. • Promote carpooling and vanpooling. • Construct intersection improvements. • Add traffic signals and street lighting. • Provide destination signing (Colorado National Monument, Paleo-sites, etc.). • Development and/or redevelopment along this corridor shall accommodate transit. • Work with CDOT to develop an agreement on devolution.

Corridor 25: SH-340 A (3)

Figure 8-26: SH-340 A (3) Corridor

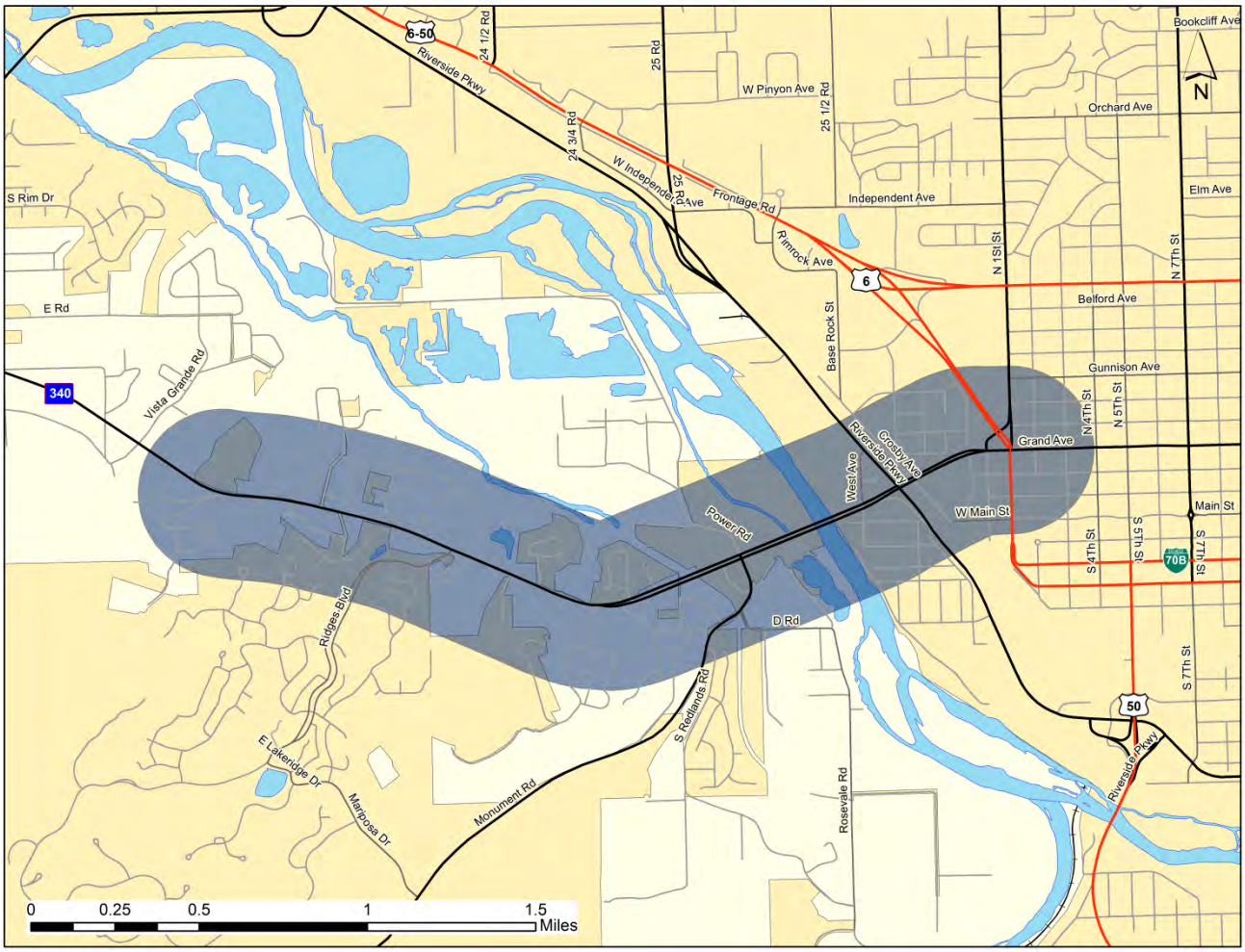


Table 8-26: SH-340 A (3)Corridor Characteristics

SH-340 A (3)	
Investment Category	**Safety**
Vision	The Vision for this corridor is primarily to improve safety and maintain system quality. This corridor serves as a multi-modal local facility. Future travel modes include passenger vehicle, bus service, bicycle and pedestrian facilities, and Transportation Demand Management (telecommuting and carpooling). The corridor primarily serves local destinations and the Colorado National Monument. Based on historic and projected population and employment levels, passenger traffic volumes are expected to moderately increase. Freight volumes will not substantially increase as the area served by this corridor is primarily residential in nature. The residents along the corridor value transportation choices, safety, and system preservation. Users of this corridor want to preserve the character of the area while supporting the movement of commuters and to and from employment and commercial centers.
2040 RTP Improvements	No major improvements for this corridor are included in the 2040 Regional Transportation Plan, as funding has not yet been identified.
Goals / Objectives	• Increase travel reliability and improve safety and system quality. • Support commuter travel. • Expand transit usage, provide for bicycle/pedestrian travel. • Preserve the existing transportation system. • Reduce fatalities, injuries and property damage. • Development and/or redevelopment along this corridor shall accommodate transit. • Devolve this corridor from the state highway system to gain local oversight.
Strategies	• Consolidate and limit access and develop access management plans. • Provide and expand transit bus service. • Develop bicycle/pedestrian facilities. • Construct intersection improvements. • Development and/or redevelopment along this corridor shall accommodate transit. • Work with CDOT to develop an agreement on devolution.

Corridor 26: I-70 Z (Ute Avenue in Grand Junction)

Figure 8-27: I-70 Z Corridor

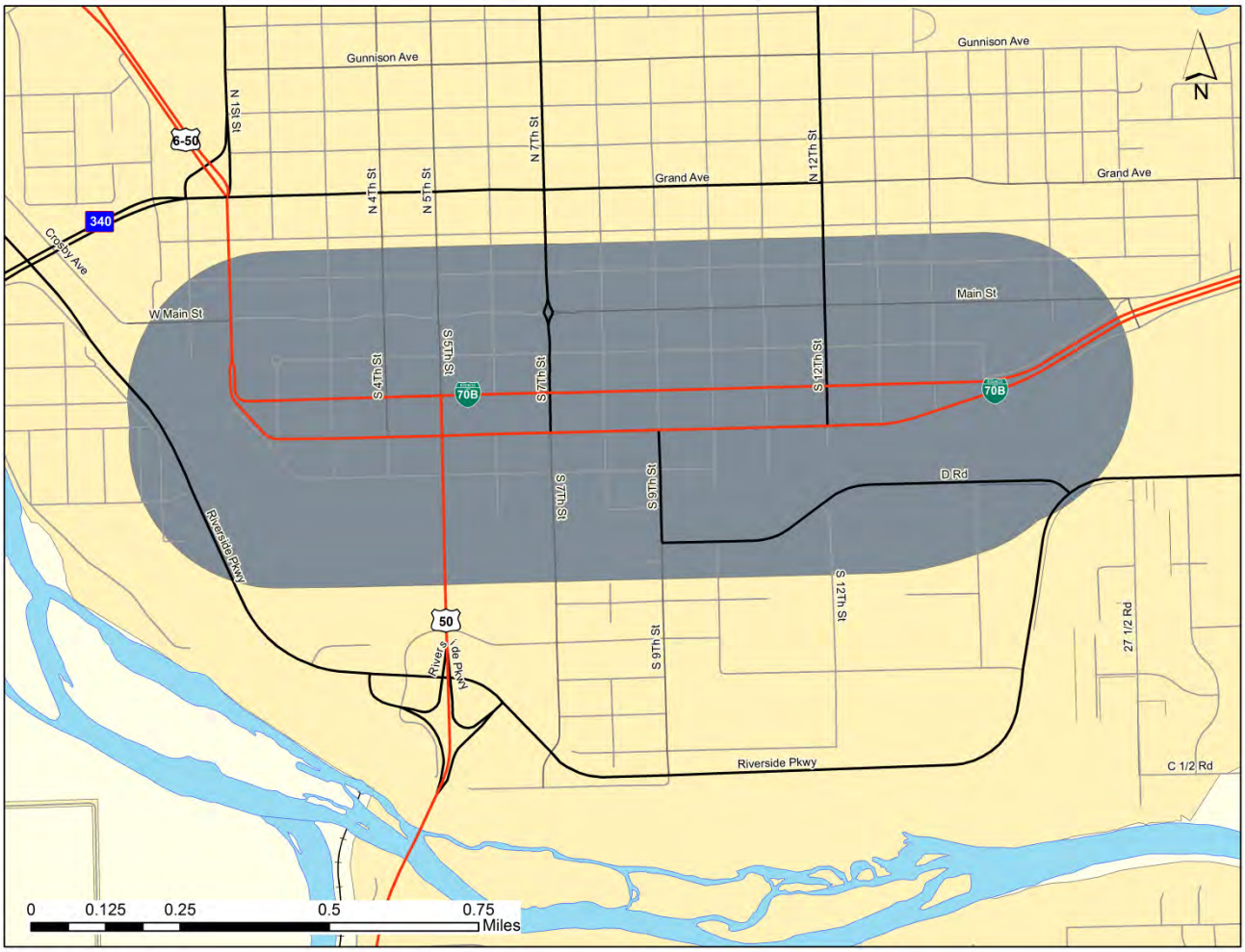


Table 8-27: I-70 Z Corridor Characteristics

I-70 Z	
Investment Category	**Mobility**
Vision	The Vision for this corridor is primarily to increase mobility, as well as to maintain system quality and improve safety. This corridor serves as a multi-modal local facility and makes east-west connections within the Downtown Grand Junction area. It is the eastbound segment of a two-way pair with I-70B from Ute from 15th to 2nd Street. The corridor serves as a multi-modal National Highway System facility and connects to places outside the region. Future travel modes include passenger vehicle, bus service, rail freight, and truck freight. The transportation system in the area provides access to the urban area, but also provides linkages to interregional corridors. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to increase. The city values high levels of mobility and connections to other areas. They depend on tourism and commercial activity for economic activity in the area. Users of this corridor want to preserve the urban character of the area while supporting the movement of tourists, commuters, and freight.
2040 RTP Improvements	All segments of US 50/I-70 Z are expected to be heavily impacted by energy development activity, including heavy truck traffic. No major improvements for this corridor are included in the 2040 Regional Transportation Plan.
Goals / Objectives	• Provide for urban renewal by reclaiming Ute Avenue for local traffic and moving both directions of I-70B one block to Pitkin Avenue and South Avenue. • Reduce traffic congestion and improve traffic flow. • Reduce fatalities, injuries and property damage crash rate. • Preserve the existing transportation. • Increase bus ridership. • Increase Transportation Demand Management (carpool, vanpool, telecommute, etc.). • Accommodate and/or mitigate increased energy resource development traffic. • Development and/or redevelopment along this corridor shall accommodate transit.
Strategies	• Relocate I-70B to South Avenue and Pitkin Avenue (Southkin Project). • Reconstruct roadways. • Consolidate and limit access and develop access management plans. • Synchronize/interconnect traffic signals. • Construct intersection/interchange improvements. • Provide bicycle/pedestrian facilities. • Preserve right-of-way. • Improve landscaping.

Corridor 27: 29 Road

Figure 8-28: 29 Road Corridor

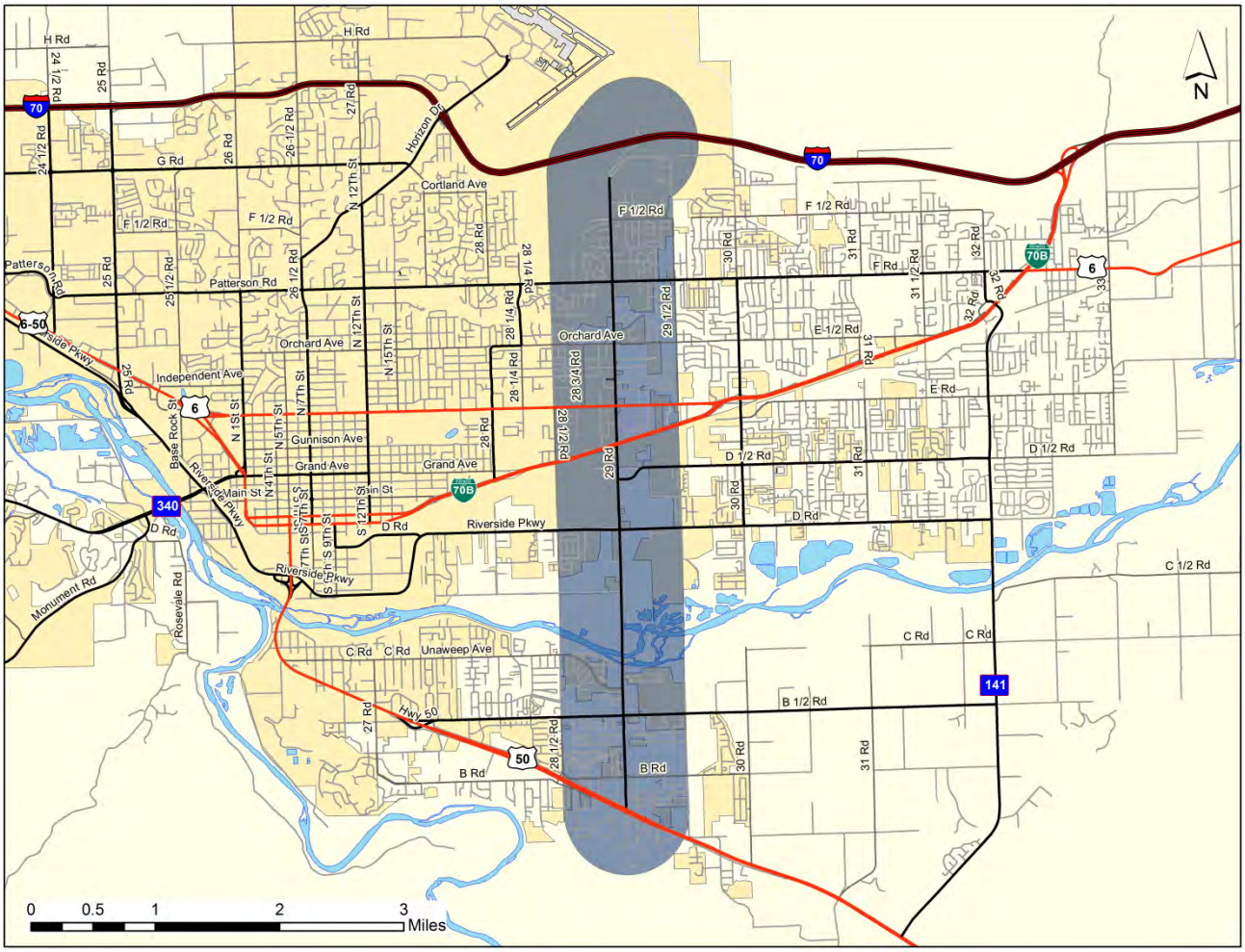


Table 8-28: 29 Road Corridor Characteristics

29 Road	
Investment Category	**Mobility**
Vision	The 2010 Grand Junction Comprehensive Plan envisions this as a Multi-use Opportunity Corridor and as part of the Grand Junction Beltway/North- South Corridor connecting I-70 to Riverside Parkway and US 50. Several recent and planned projects will transform this into a complete north/south corridor sometime after 2025. The planned projects are multi-modal, including pedestrian and bicycle facilities.
2040 RTP Improvements	In the 2040 roadway plan, two additional projects are planned for 29 Road. The first project will widen 29 Road from 2 to 4 lanes between F Road North to I-70 and construct an interchange on I-70. The second project will involve widening 29 Road from 3 lanes to 5 lanes between North Avenue and Patterson Road.

Corridor 28: 24 Road

Figure 8-29: 24 Road Corridor

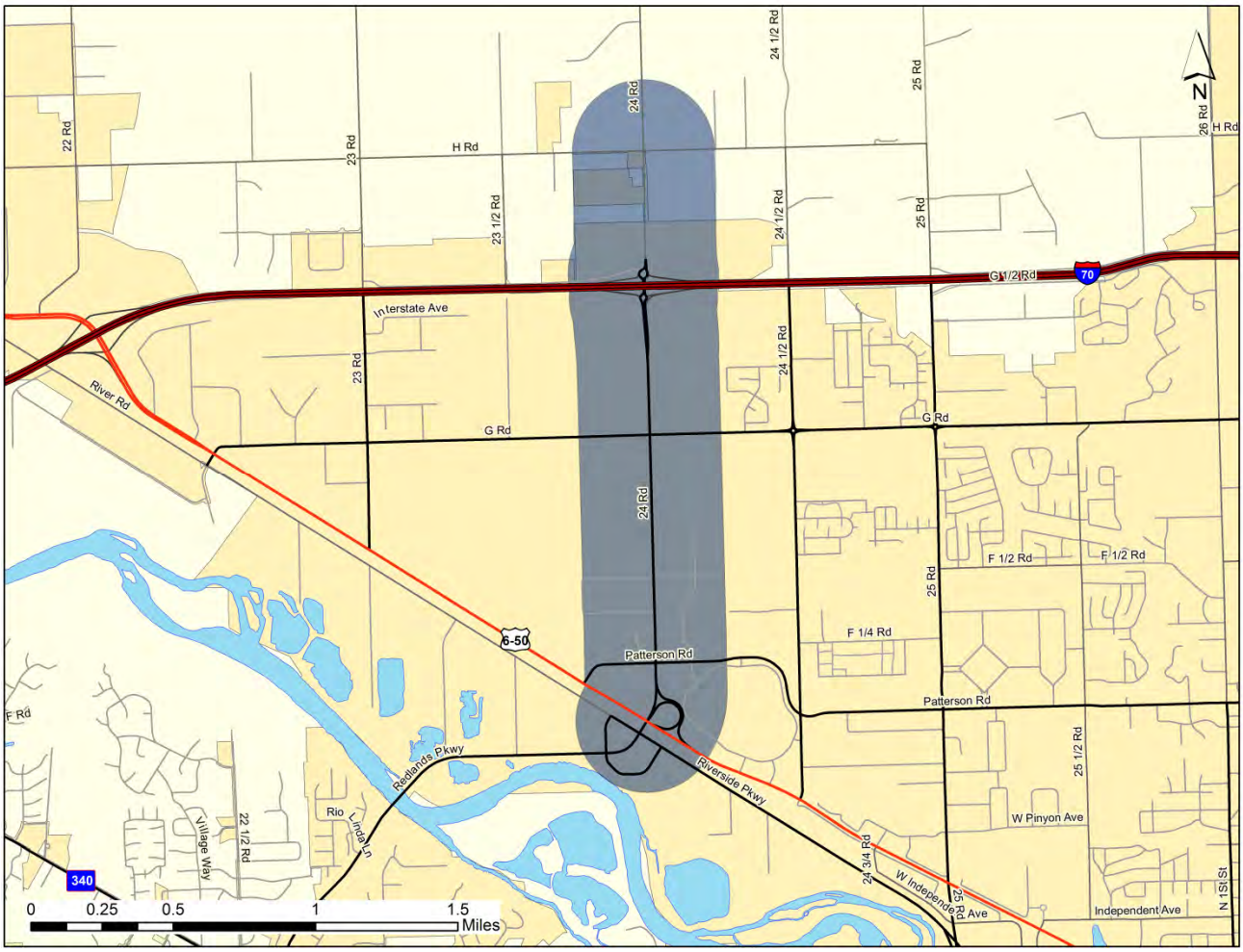


Table 8-29: 24 Road Corridor Characteristics

24 Road	
Vision	2010 GJ Comp Plan envisions as part of the Grand Junction Beltway/North-South Corridor connecting I-70 and I-70B with the Riverside Parkway. The 24 Road Corridor Plan establishes 24 Road with a distinctive "parkway" character along the roadway that can serve as a gateway to the Grand Junction community. Expansion of 24 Road as a five-lane landscape parkway with a median is a key feature that should occur as soon as possible. Reconstruction of the Interchange at I-70 has already occurred, creating a desired gateway feature through coordination with and project construction by CDOT. The ultimate 5-lane section of this street shall be completed with a landscaped median, landscaped right-of-way on the west and east (including transitions to the Leach Creek natural corridor), street lighting, bike lanes, and a detached sidewalk on the west side. No sidewalk is planned for the east side because a multi-use trail is planned for the Leach Creek natural corridor. This section will be planned for future transit system expansion.
2040 RTP Improvements	No major improvements for this corridor are included in the 2040 Regional Transportation Plan.

Corridor 29: F Road (Patterson Rd.)

Figure 8-30: F Road (Patterson Rd.) Corridor

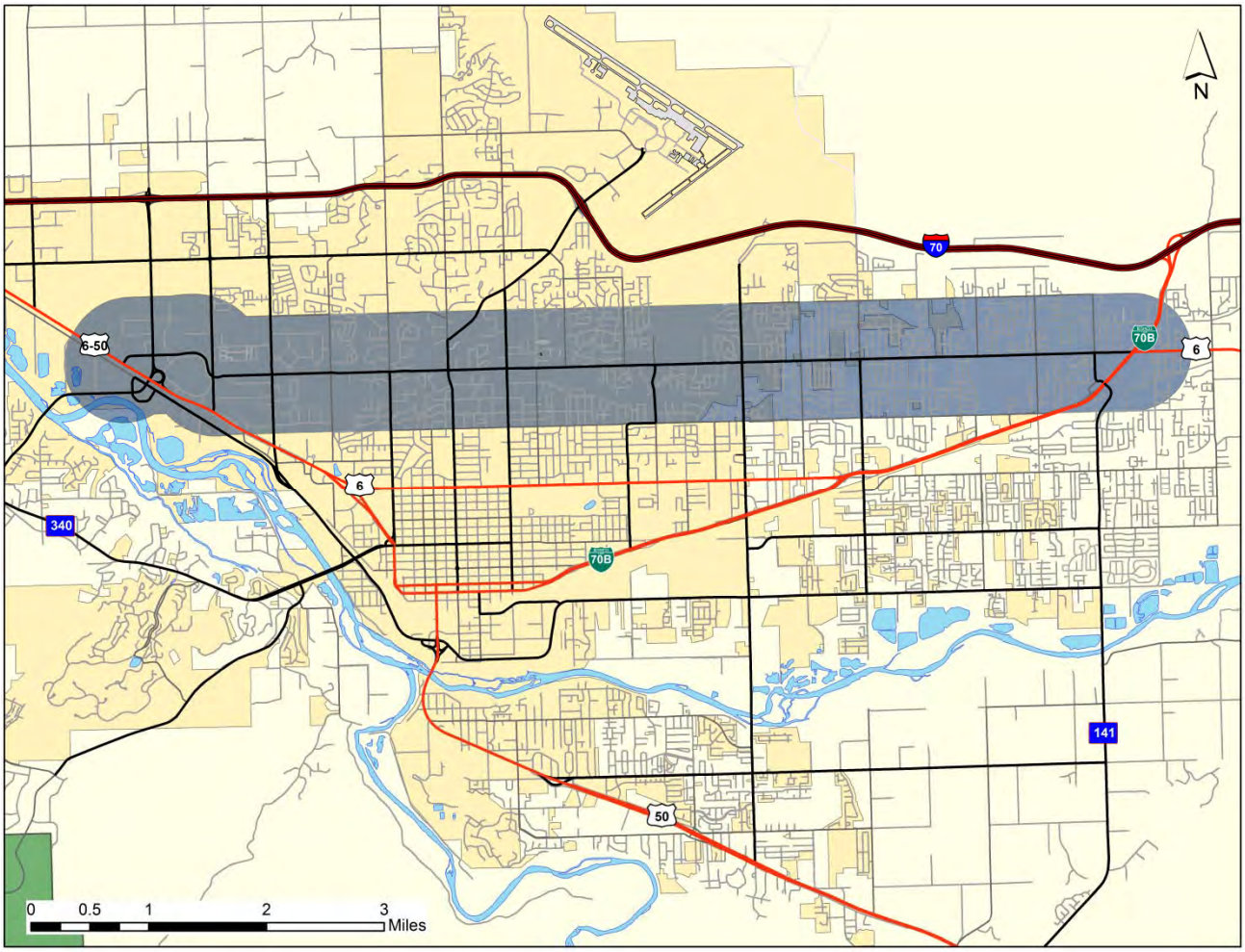


Table 8-30: F Road (Patterson Rd.) Corridor Characteristics

F Road (Patterson Rd.)	
Vision	The Vision for the F Road (Patterson Rd.) corridor from U.S. 6/U.S. 50 (near Mesa Mall) to I-70B (near Clifton) is primarily to maintain mobility, improve safety and maintain system quality. The corridor currently serves as a multi-modal local facility, providing commuter access between the commercial and residential areas east of Grand Junction to the established commercial and employment centers in the core Grand Junction area. Primary travel modes include passenger vehicles and transit service. Based on historic and projected population and employment levels, traffic volumes are expected to moderately grow along this corridor. The residents along the corridor value high levels of mobility and safety. Due to the already built environment along most of its length, there is limited opportunity for capacity upgrades such as adding additional travel lanes. As traffic increases, the addition of medians will be needed to help control access and maintain capacity.
2040 RTP Improvements	No major improvements for this corridor are included in the 2040 Regional Transportation Plan.

Corridor 30: 1st Street (26 Road)

Figure 8-31: 1st Street (26 Road) Segment Corridor

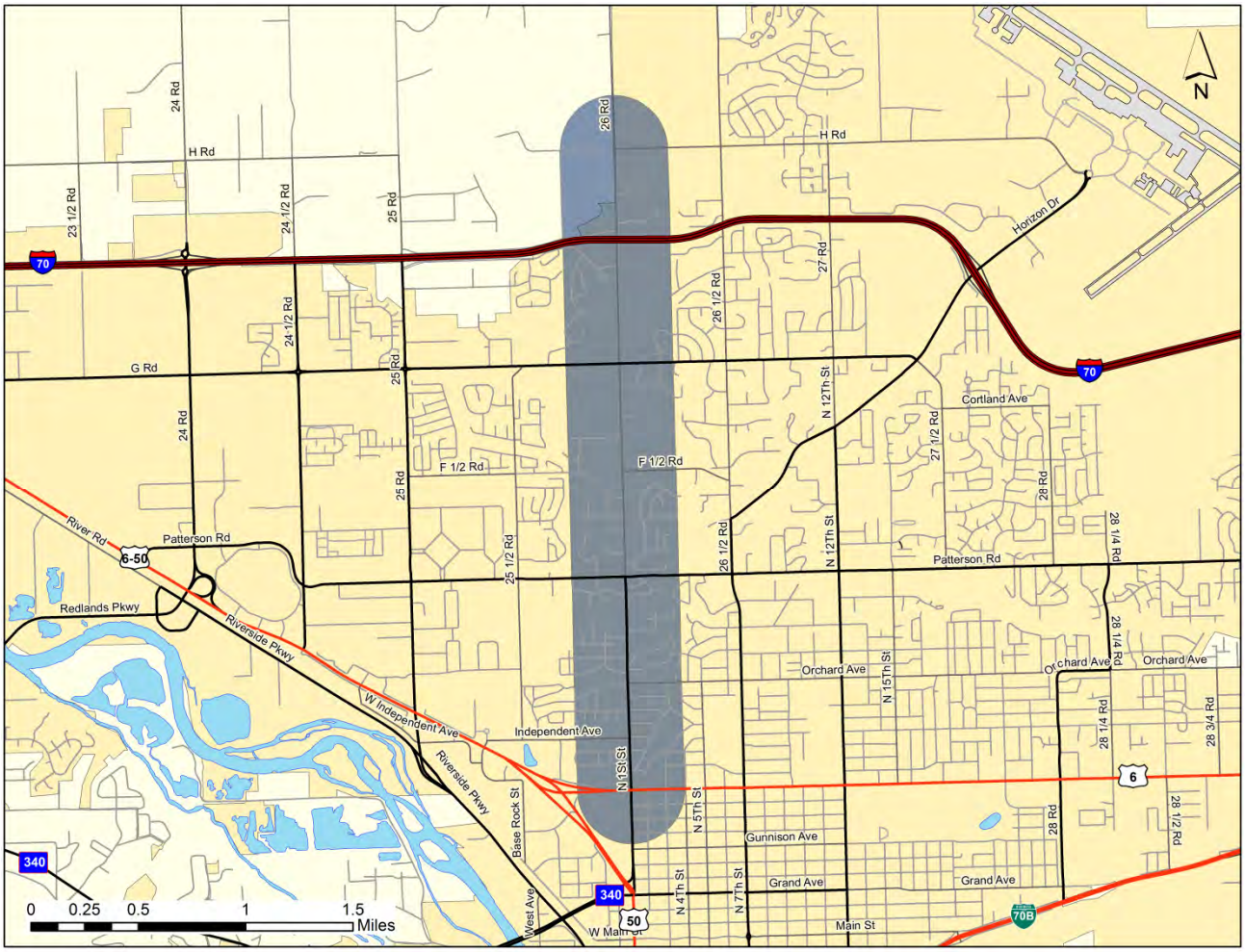


Table 8-31: 1st Street (26 Road) Corridor Characteristics

1st Street (26 Road)	
Vision	The Vision for the 1st Street/26 Road corridor from H Road to Grand Avenue is primarily to increase mobility as well as to improve safety and to maintain system quality. This corridor currently serves as a multi-modal local facility, provides commuter access between the developing commercial and residential areas north of Interstate 70 to the established commercial and employment centers in the core Grand Junction area. The north part of the corridor is transitioning from a rural area to a suburban one. Primary future travel modes include passenger vehicles and transit service. Based on historic and projected population and employment levels, traffic and freight volumes are expected to moderately grow along this corridor. The residents along the corridor value high levels of mobility and safety. Future improvements along this corridor may include upgrading the current rural road sections to urban standards and adding travel lanes to increase capacity.
2040 RTP Improvements	See Non-Motorized Project ID 4 – Bike Lanes on 1st Street (26 Road) – Main Street to I Road.

Corridor 31: 12th Street (27 Road)

Figure 8-32: 12th Street (27 Road) Corridor

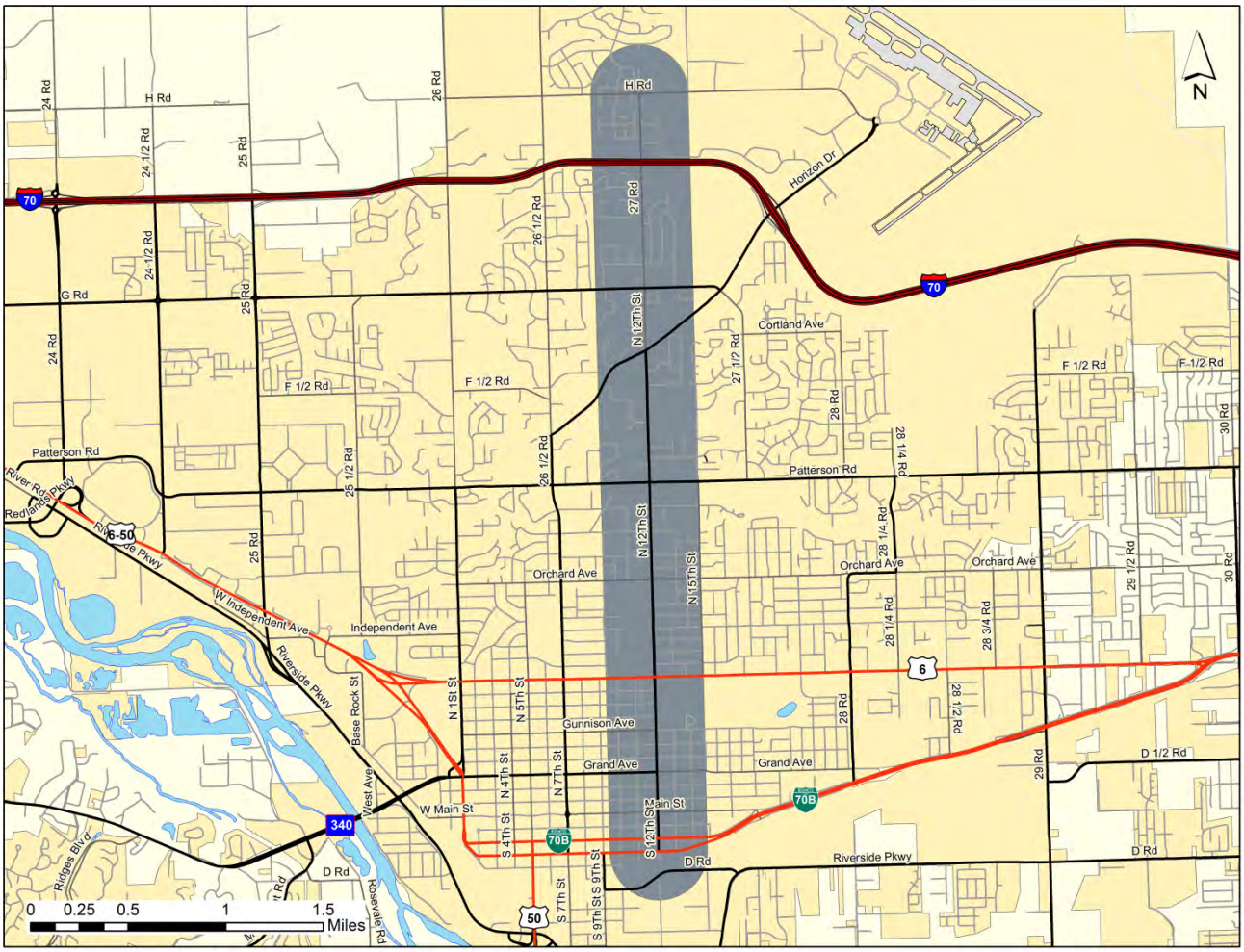


Table 8-32: 12th Street (27 Road) Corridor Characteristics

12th Street (27 Road)	
Vision	The Vision for the 12th Street/27 Road corridor from H Road to I-70B (Ute/Pitkin) is primarily to increase mobility as well as to improve safety and to maintain system quality. This corridor currently serves as a multi-modal local facility, provides commuter access between the developing commercial and residential areas north of Patterson Road to the established commercial and employment centers in the core Grand Junction area. The north part of the corridor is transitioning from a rural area to a suburban one. Primary future travel modes include passenger vehicles and transit service. Based on historic and projected population and employment levels, traffic and freight volumes are expected to moderately grow along this corridor. The residents along the corridor value high levels of mobility and safety. Future improvements along this corridor may include upgrading the current rural road sections to urban standards and adding travel lanes to increase capacity.
2040 RTP Improvements	No major improvements for this corridor are included in the 2040 Regional Transportation Plan.

Corridor 32: G Road

Figure 8-33: G Road Corridor

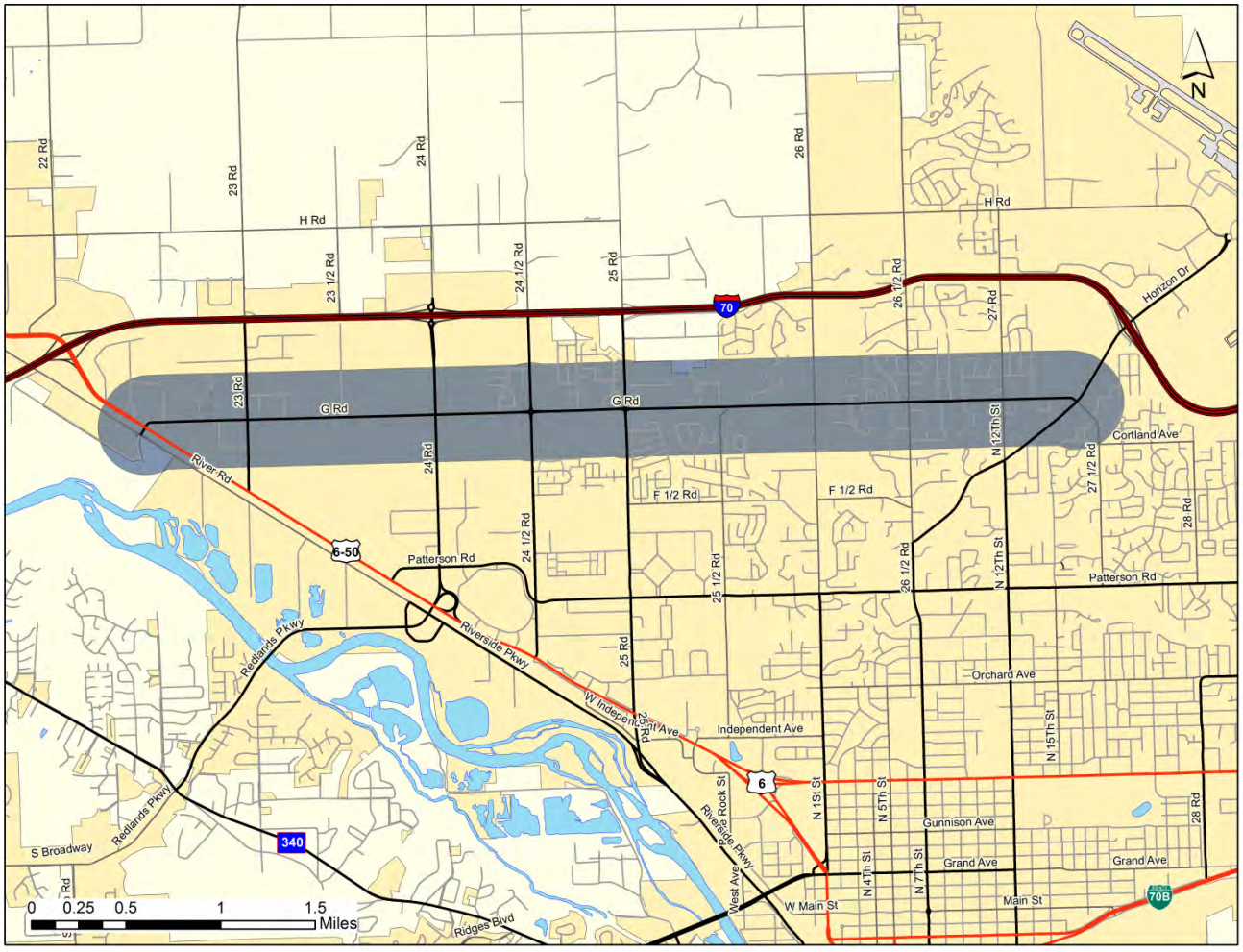


Table 8-33: G Road Corridor Characteristics

G Road	
Vision	The Vision for the G Road corridor from US 50 to Horizon Drive is primarily to increase mobility as well as to improve safety and to maintain system quality. This corridor currently serves as a multi-modal local facility, providing commuter access between the developing commercial area along the 24 Road corridor and residential areas to the east and north of Grand Junction. It is also considered an alternative east/west corridor that will help mitigate congestion on Patterson Road. Primary future travel modes will include passenger vehicles and transit service. Based on historic and projected population and employment levels, traffic and freight volumes are expected to moderately grow along this corridor. The residents along the corridor value high levels of mobility and safety. Future improvements along this corridor may include upgrading the current rural road sections to urban standards and adding travel lanes to increase capacity.
2040 RTP Improvements	See G Road/1st Street Intersection Improvement in the Regional Roadways chapter; and see Non-Motorized Project ID 21 – Bike Lanes and Shared Use Path G Road – I-70B to Horizon Drive.

Corridor 33: Riverside Parkway West Segment

Figure 8-34: Riverside Parkway West Segment Corridor

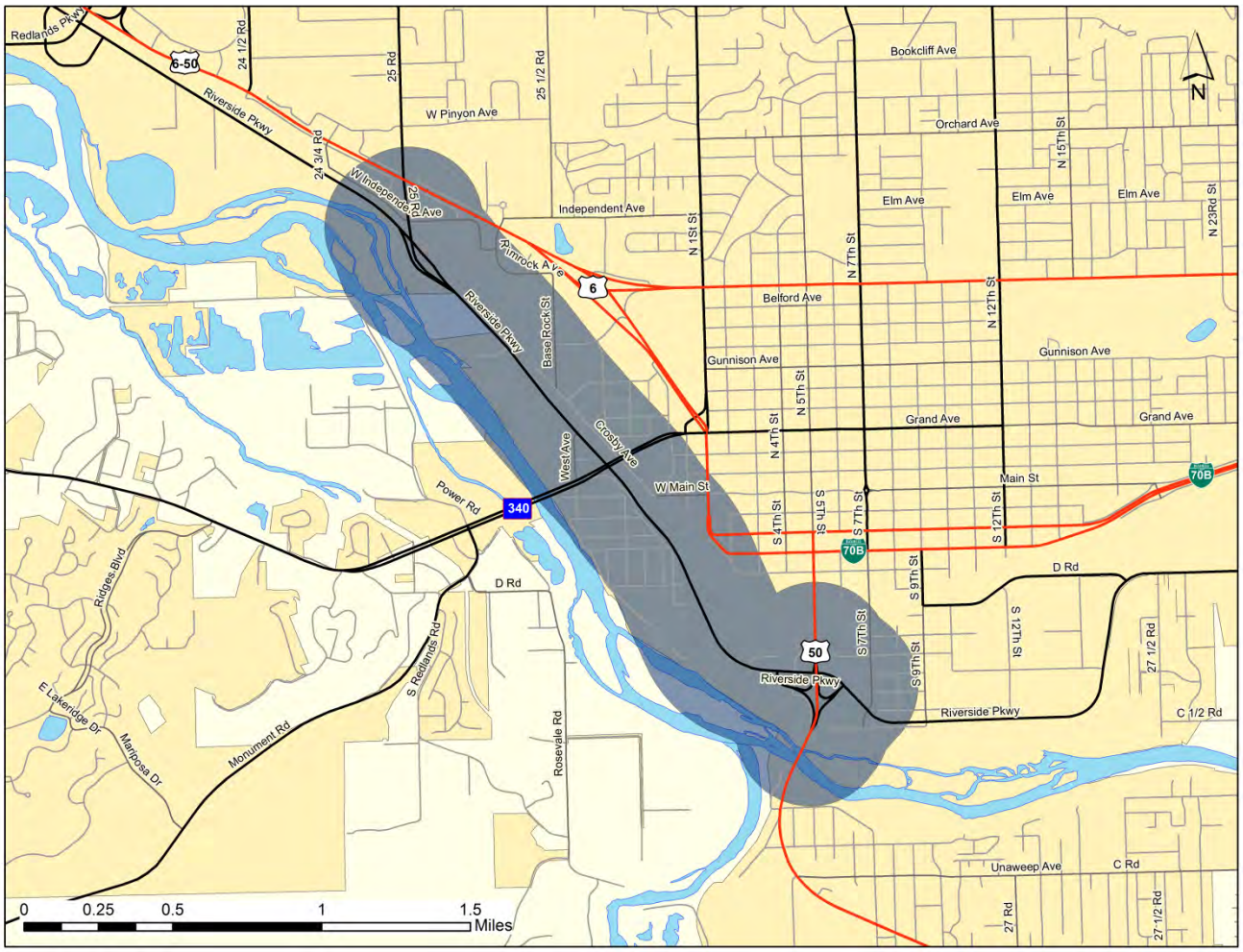


Table 8-34: Riverside Parkway West Segment Corridor Characteristics

Riverside Parkway West Segment	
Vision	2010 GJ Comp Plan envisions this segment as part of the Grand Junction Beltway/North-South Corridor connecting I-70B to US 50. As part of the identified Purpose and Need, bicycle lanes, a wide sidewalk, connections to the River Front Trail System and bus pullouts were constructed with the project as well as a pedestrian overpass bridge.
2040 RTP Improvements	No major improvements for this corridor are included in the 2040 Regional Transportation Plan.

Corridor 34: Riverside Parkway East Segment

Figure 8-35: Riverside Parkway East Segment Corridor

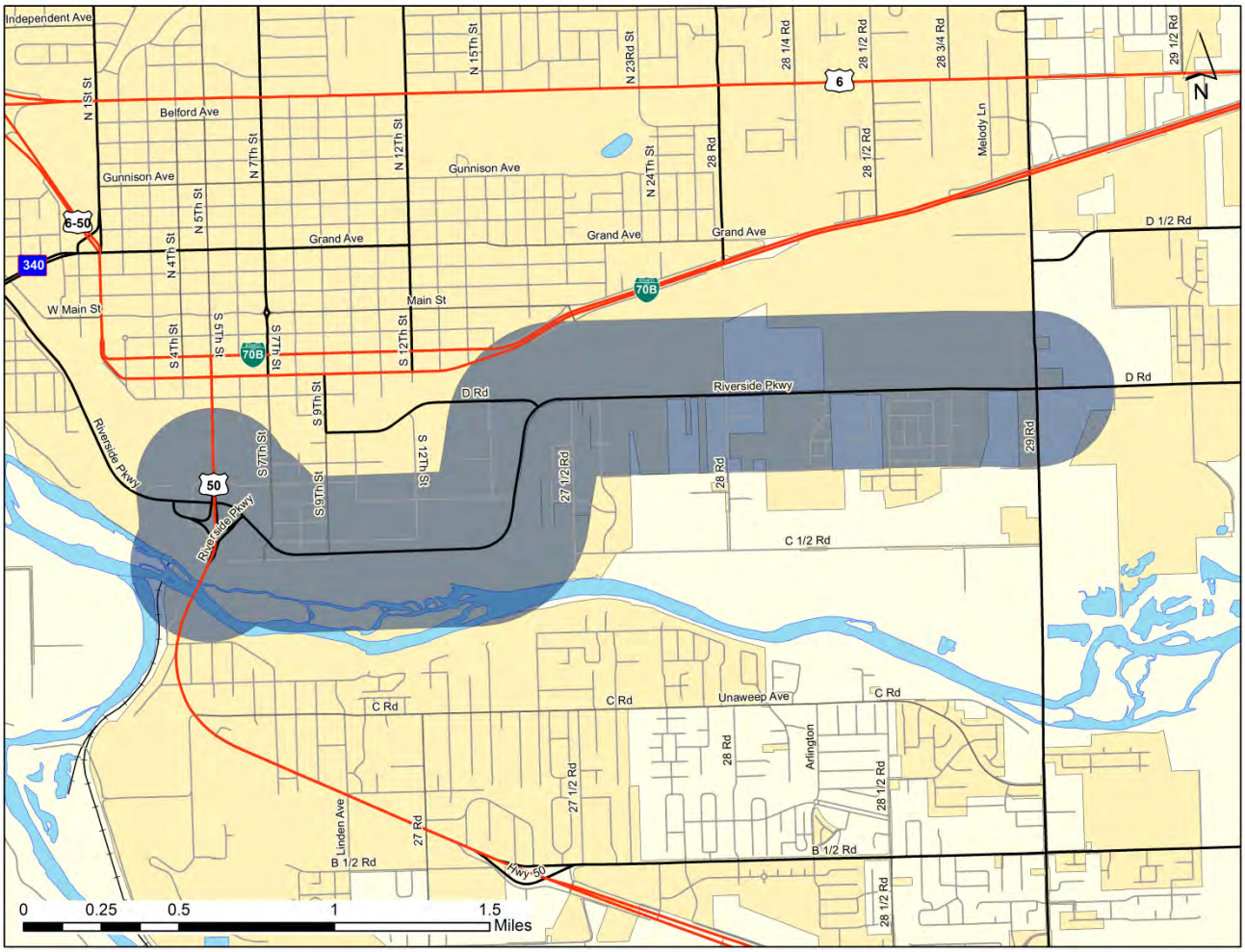


Table 8-35: Riverside Parkway East Segment Corridor Characteristics

Riverside Parkway East Segment	
Vision	2010 GJ Comp Plan envisions this segment as part of the Grand Junction Beltway/North-South Corridor connecting US-50 to 29 Road. As part of the identified Purpose and Need, bicycle lanes, a wide sidewalk, connections to the River Front Trail System and bus pullouts were constructed with the project as well as a pedestrian overpass bridge.
2040 RTP Improvements	No major improvements for this corridor are included in the 2040 Regional Transportation Plan.

Corridor 35: L Road / 19 Road Corridor

Figure 8-36: L Road / 19 Road Corridor

Table 8-36: L Road / 19 Road Corridor Characteristics

L Road / 19 Road Corridor	
Vision	The Vision for 19 Road and L Road is identified in Fruita's Community Plan 2008 (a major portion of the City's Master Plan). This document identifies these roadways as 'enhanced travel corridors' which are to be arterial roads with enhanced amenities such as detached sidewalks, landscape medians, transit stops and gateway features. These enhanced travel corridors are intended to increase capacity of these planned future major through-streets to serve as travel corridors connecting important community nodes. Improvements to these roads will be phased in over time as new development occurs.
2040 RTP Improvements	Fruita has experienced heavy growth due to increased demand for outdoor recreation in the area, and in part to energy exploration. Along with expectations for more energy exploration in eastern Utah and the proposed coal mine rail spur extending from the rural community of Mack, this growth has the potential to create major industrial activity in the Fruita Greenway Business Park industrial area and related residential and commercial growth in other areas of the City of Fruita. This growth is expected to create a need for arterial roads around the edges of the current City limits to provide an alternative to Highway 6 & 50 and connect important community nodes. The Fruita Community Plan (a major component of the City's Master Plan) will help guide the City's long-term growth and transportation impacts are accounted for in this long range plan. No major improvements for this corridor are included in the 2040 Regional Transportation Plan.

Corridor 36: Elberta Avenue (Palisade)

Figure 8-37: Elberta Avenue (Palisade) Corridor

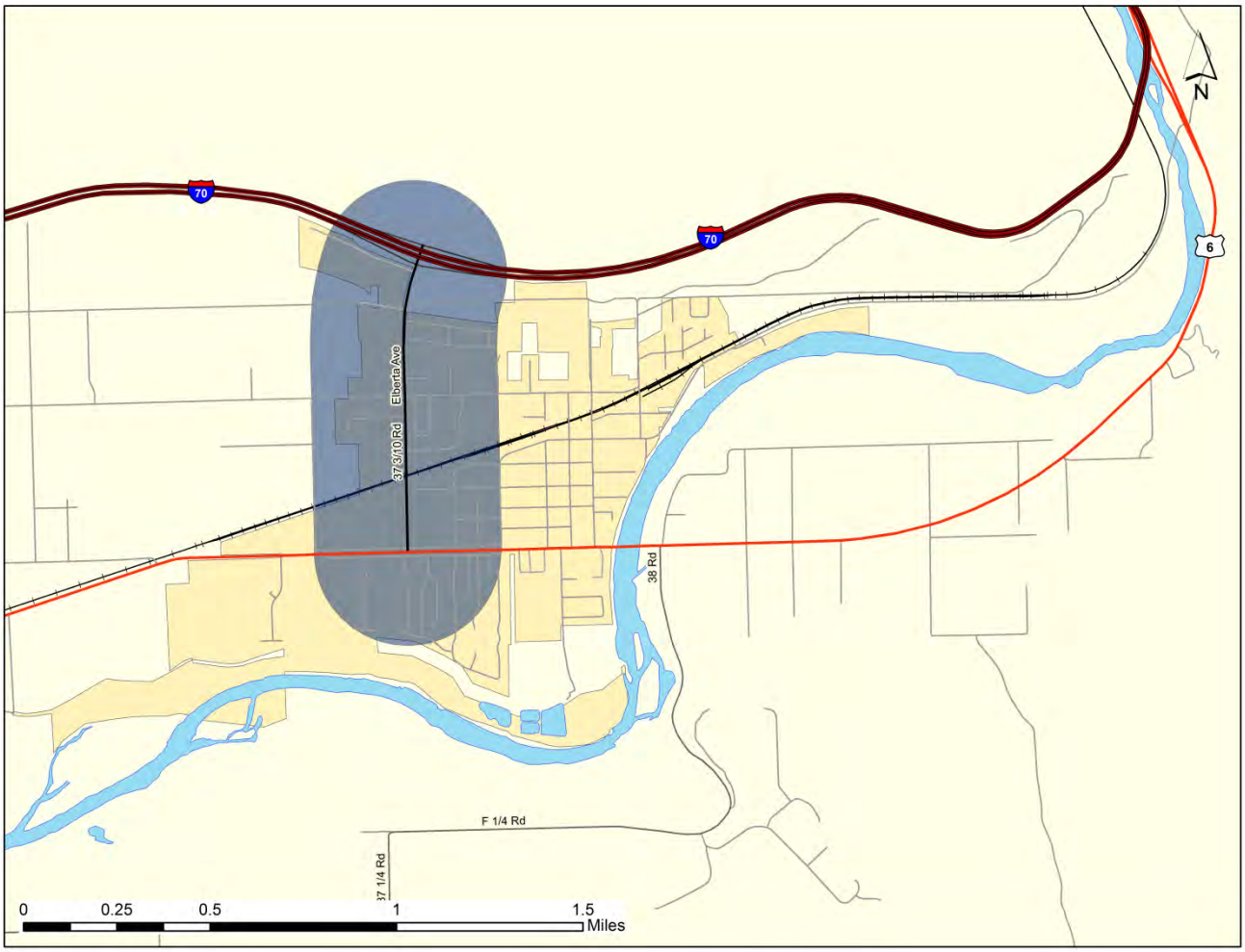


Table 8-37: Elberta Avenue (Palisade) Corridor Characteristics

Elberta Avenue (Palisade)	
Vision	No Vision has been established for this corridor as a part of the 2040 RTP. See Palisade Community Plan.
2040 RTP Improvements	See Non-Motorized Project ID 16 – Bike Lanes, Elberta Avenue, Riverfront Trail to Grande River Drive, and see Regional Roadways Project ID 18 – Elberta Ave from I-70 to G Road.

Corridor 37: H Road

Figure 8-38: H Road Corridor

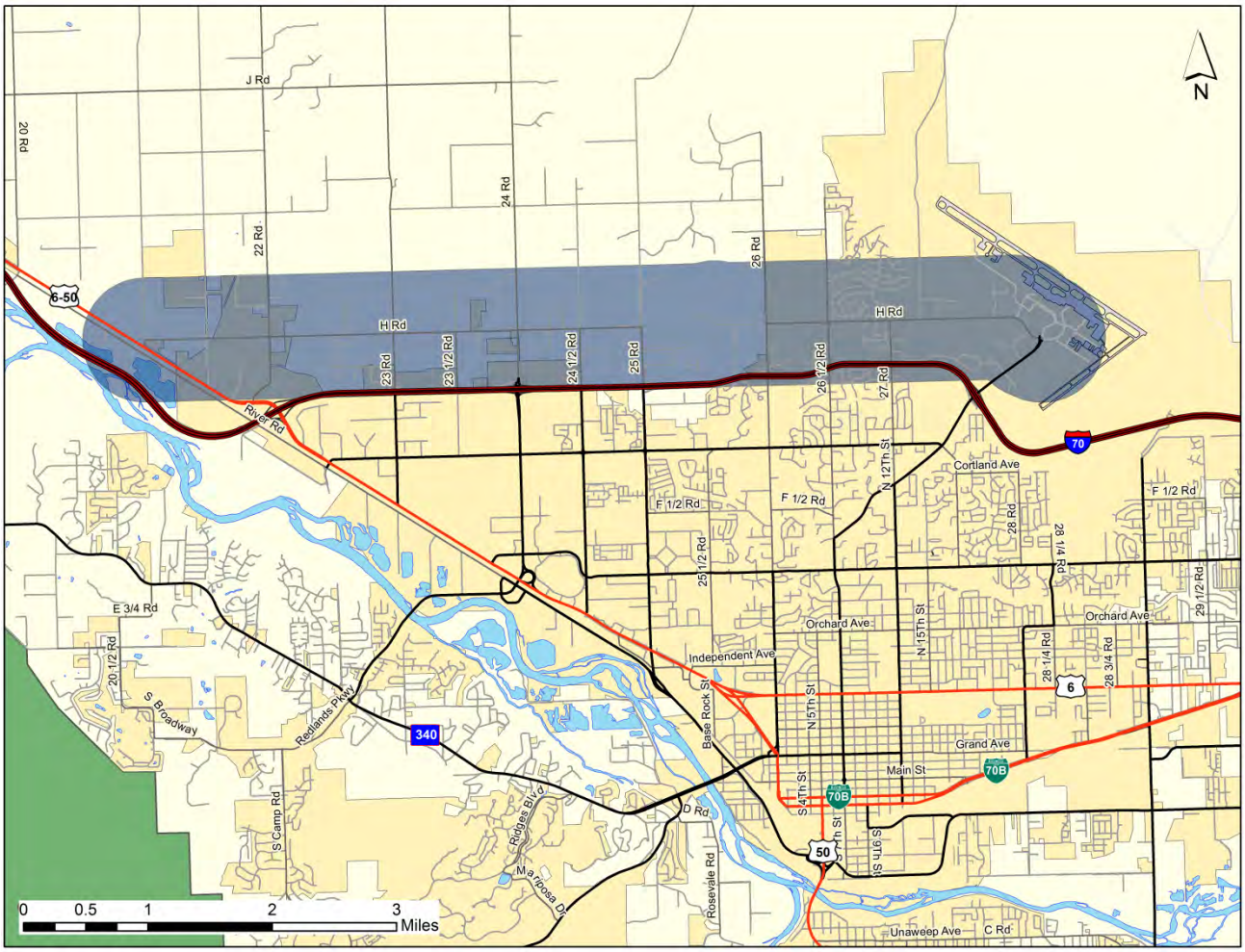


Table 8-38: H Road Corridor Characteristics

H Road	
Vision	The Vision for the H Road Corridor from 21 Road to Horizon Drive is primarily to provide an arterial corridor to serve the adjacent rural lands as it redevelops in conformance with City of Grand Junction/Mesa County Comprehensive Plan. The corridor will serve as a multi-modal local facility. Primary future travel modes will include passenger vehicles, trucks and transit service. Based on historic and/or projected population and employment levels, traffic and freight volumes are expected to moderately grow along this corridor. Future improvements along this corridor may include upgrading the current rural road sections to urban standards, adding travel lanes to increase capacity and construction of new road segments.
2040 RTP Improvements	No major improvements for this corridor are included in the 2040 Regional Transportation Plan.

Corridor 38: H Road

Figure 8-39: H Road Corridor

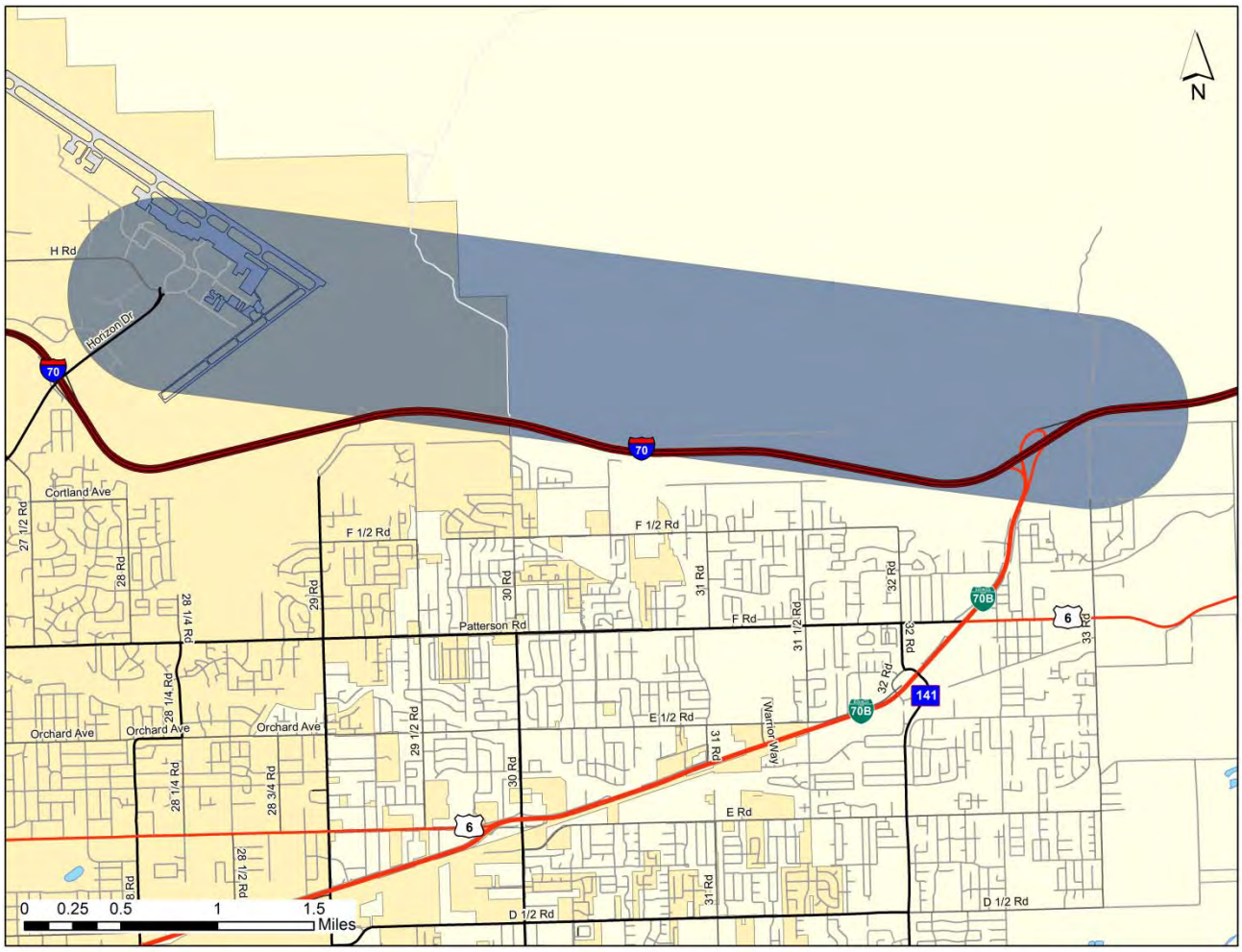


Table 8-39: H Road Corridor Characteristics

H Road	
Vision	The Vision for the H Road Corridor from Horizon Drive to I-70 Exit 37 is primarily to provide an arterial corridor to serve the adjacent undeveloped lands as it develops in conformance with City of Grand Junction/Mesa County Comprehensive Plan. The corridor will serve as a multi-modal local facility. Primary future travel modes will include passenger vehicles, trucks and transit service. Based on projected population and employment levels, traffic and freight volumes are expected to modestly grow, if at all, along this corridor for the next 25 years. Future improvements along this corridor may include construction of new road segments.
2040 RTP Improvements	No major improvements for this corridor are included in the 2040 Regional Transportation Plan.

Chapter 9:
Freight and Intermodal

Chapter 9: Freight and Intermodal

CHAPTER OVERVIEW

In today's increasingly interconnected global economy, the economic competitiveness of a region depends on its connections to other regions of the U.S. and the rest of the world. Freight and intermodal transportation systems facilitate the movement of goods and people and enable regional businesses to compete in global markets. Mesa County offers extensive freight rail, pasenger rail, air passenger and cargo, interstate trucking, and distribution capabilities.

What Did We Hear?

Throughout the 2040 Regional Transportation Plan update process, public comments were invited on regional freight and intermodal opportunities. Interviews and surveys were also conducted, or requested, with major freight stakeholders and economic development partners.

The general public consistently ranked freight infrastructure improvements as a lower priority when compared to other modal and maintenance investments. Similarly, freight and economic competitiveness goals were rated as a relatively less important than safety, maintenance, or active transportation goals by the general public. However, many key stakeholders, including elected officials, placed a higher priority on the importance of making investments in freight infrastructure to support regional businesses and economic development.

> A synthesis of comments and ideas received is documented below. Not all ideas are within the scope of this Regional Transportation Plan and some may require federal or state legislation or cooperation to implement. The regional plan is intended to document the region's vision for transportation and incorporate guidance received into decision-making.

- *The regional economy depends on the safe and efficient movement of people and goods.*
- *Moving goods should be a priority along with moving people.*
- *A freight consolidation or load-matching intermodal logistics center could be considered. This would enable regional producers to pool shipments in order to fill trucks or rail cars completely and reduce costs.*
- *Expanded regional mobility options could reduce the number of cars on the road and improve truck travel and safety conditions along the I-70 corridor.*
- *Truck traffic could be diverted through additional truck routes and away from heavily used streets and county roads. Options for using smaller trucks for delivery service within cities and towns should be considered.*
- *Truck load limits could be increased to increase efficiency and reduce truck movements.*
- *Encourage state and regional cooperation to create an efficient rail system throughout the state.*
- *High-speed, electric, commuter rail, or light rail were all mentioned as options to increase connectivity between the Grand Valley and other regions.*
- *Further consolidation of airlines could reduce service and increase cost to travel to the region by air.*
- *Businesses depend on reliable air service. The final legs of flights into the Grand Junction Regional Airport are not always dependable and shipments or meetings may be missed.*

- *Transit connections to and from the airport could be made.*
- *Airport expansion could lead to additional service which would make air travel into and out of the area easier for visitors and residents and be provided at more reasonable rates.*

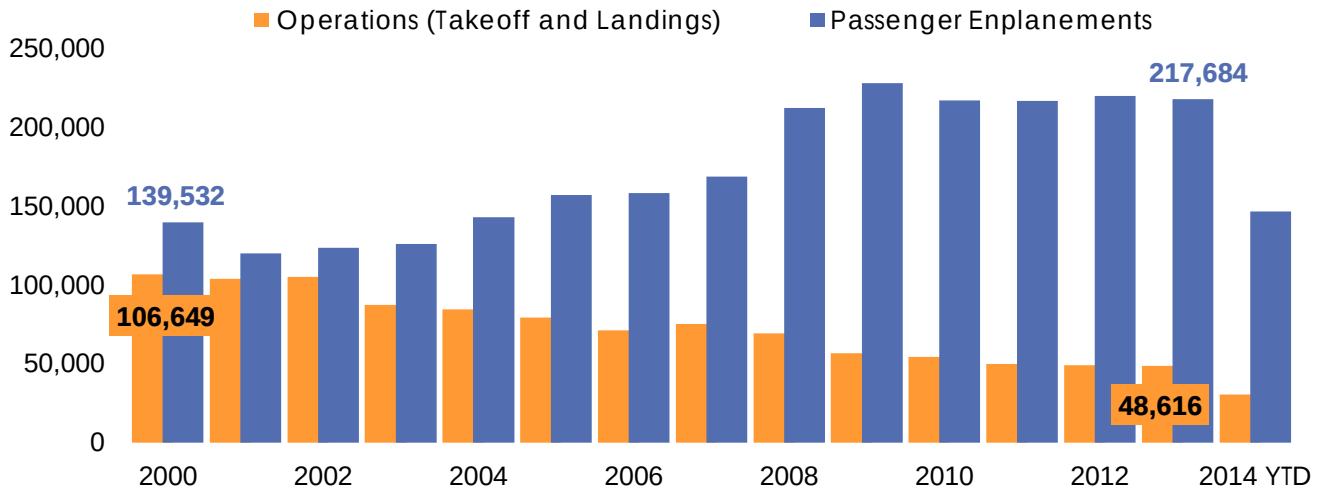
What Does the Data Tell Us?

Air Passenger and Freight Movements

Scheduled commercial air service, general aviation services, and military operations are supported by the Grand Junction Regional Airport. In operation since 1930, the airport is the third busiest in the state – with over 217,000 passenger boardings, or enplanements, in 2013. Passenger service is primarily provided by five major airlines with additional regional and charter services. Destination routes include Los Angeles, Las Vegas, Dallas-Ft. Worth, Houston, Salt Lake City, Denver, and Phoenix. The airport also provides air cargo support services – primarily through FedEx with additional belly cargo carried in passenger planes.

Figure 9.1 shows trends in total aircraft operations and passenger boardings at the regional airport since 2000. While total operations have declined as large commercial carriers have scaled back service or gone out of business, total passenger boardings have continued to increase along with the capacity of planes and efficiency of service. The Colorado Department of Transportation's 2013 Aviation Economic Impact Study reports that the Grand Junction Regional airport creates over 2,800 jobs and generates a direct economic impact in the region of over $380 million dollars.

Figure 9.1: Aircraft Operations and Passenger Boardings, 2000-2014



Grand Junction Regional Airport Authority, 2014.

Cargo flown in and out of the region in 2013 totaled 7.8 million pounds – almost 90 percent of which was handled by FedEx cargo services. Freight movements have grown in recent years even after a slowdown during the economic recession. The airport moved nearly 3 million pounds more of cargo in 2012 than five years earlier.

The Grand Junction Regional Airport is a critical asset to maintain and grow Mesa County's presence as a transportation hub in the Western U.S. and to facilitate international commerce and regional business growth. Scheduled commercial service that is predictable and on-time is important to regional businesses. Many of the region's businesses rely on the airport to bring in clients or shipments of important components and in turn, rely on air connections for staff travel and outbound product deliveries.

According to the airport's most current master plan, prepared in 2011, forecasts of aviation activity through 2027 indicated continued growth in passenger traffic. Commercial air service operations are expected to increase 37 percent contributing to a continued growth in passenger enplanements of 47 percent. Should these forecasts hold true, over 370,000 total passengers could be accommodated at the airport by 2030.

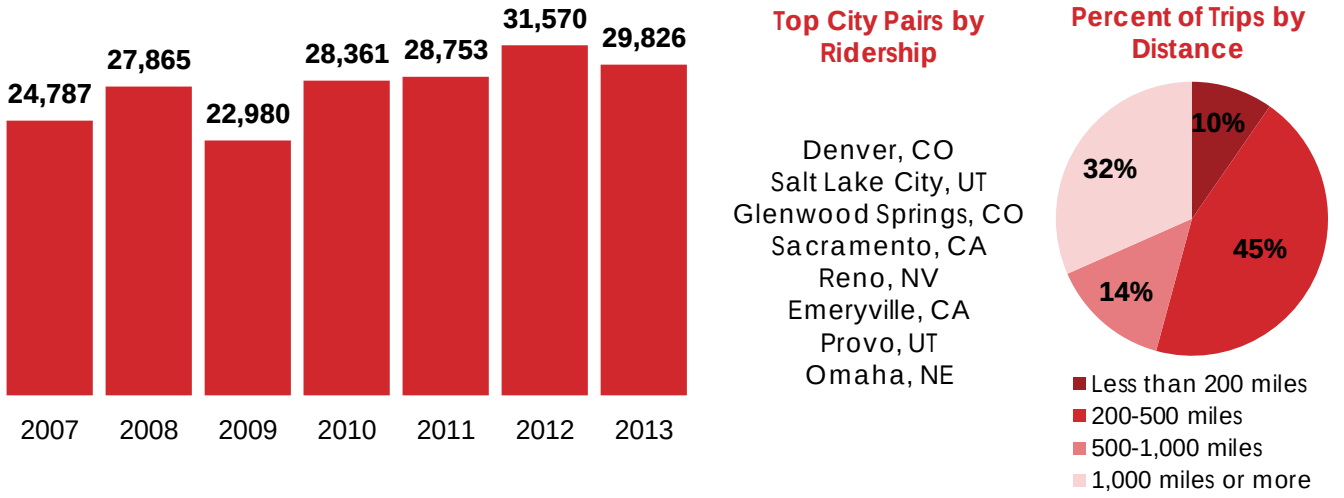
In recent years the airport has gone through an extensive master planning process that will help guide future expansion plans. More information about that plan can be found by visiting the website: http://www.gjairport.com/airport-authority.

Rail Passenger and Freight Movements

The Grand Valley region has historically been a transportation crossroads– from river to rail. Currently, two Class I freight railroads operate within the region - the Union Pacific and the Burlington Northern Santa Fe. Amtrak operates the California Zephyr between Denver and San Francisco through Grand Junction daily.

In 2013, the Grand Junction Amtrak station was the third busiest in the state with 29,800 boardings and alightings. Figure 9.2 shows that ridership on the Zephyr route to and from the Grand Junction station has grown in recent years, particularly following the 2010 downturn as travelers turned to other transportation choices besides personal vehicles. The majority of Amtrak passengers in 2013 used passenger rail service as an inter-regional transportation option. More than half (55%) of trips made on Amtrak that year were less than 500 miles. This distance includes popular destinations and origins such as Glenwood Springs, Denver, Provo, and Salt Lake City. Only a third of Amtrak trips through Grand Junction are cross-country or long-distance, the majority of trips are likely made by residents, visitors, and businesses to nearby regions and hubs.

Figure 9.2: Amtrak Total On/Off Passengers in Grand Junction, 2007-2013



Amtrak | National Association of Railroad Passengers, 2014.

Freight rail in Colorado is largely concentrated on moving lower value, higher bulk goods, such as coal, cement, and agricultural products to and from the state. Colorado is not situated on a major east-west trunk rail line as the Continental Divide passage in Colorado is a barrier to train speed, length, and tonnage. Regional data is not available on freight rail movements in Mesa County. However in Colorado, the Union Pacific and the Burlington Northern Santa Fe railways together operate 2,236 miles of track, including a rail yard in Grand Junction. In 2010, the two railroads moved over 600,000 carloads to and from Colorado carrying goods measured in the millions of tons. Top commodities for carloads originating or terminating in Colorado included: intermodal wholesale products and shipping containers, coal, aggregates, agricultural grains and products, scrap metal, and food products. Figure 9.3 maps the volume of rail movements originating, terminating, and / or traveling through Colorado by rail. The

majority of freight flows, by weight, are shipped along North-South corridors along the Front Range and along the I-80 East-West corridor. A small share of the state's total rail freight movements travel through the I-70 corridor and Mesa County. Among other things, Figure 9.3 shows that few or no Colorado products or commodities are shipped directly via rail to the Atlantic Seaboard or the Southeast U.S. Instead, inbound and outbound rail cars are likely consolidated in major hubs in the Midwest, Texas, and Pacific Coast.

Figure 9.3: Freight Rail Tonnage Originating, Terminating, and / or Traveling through Colorado, 2009

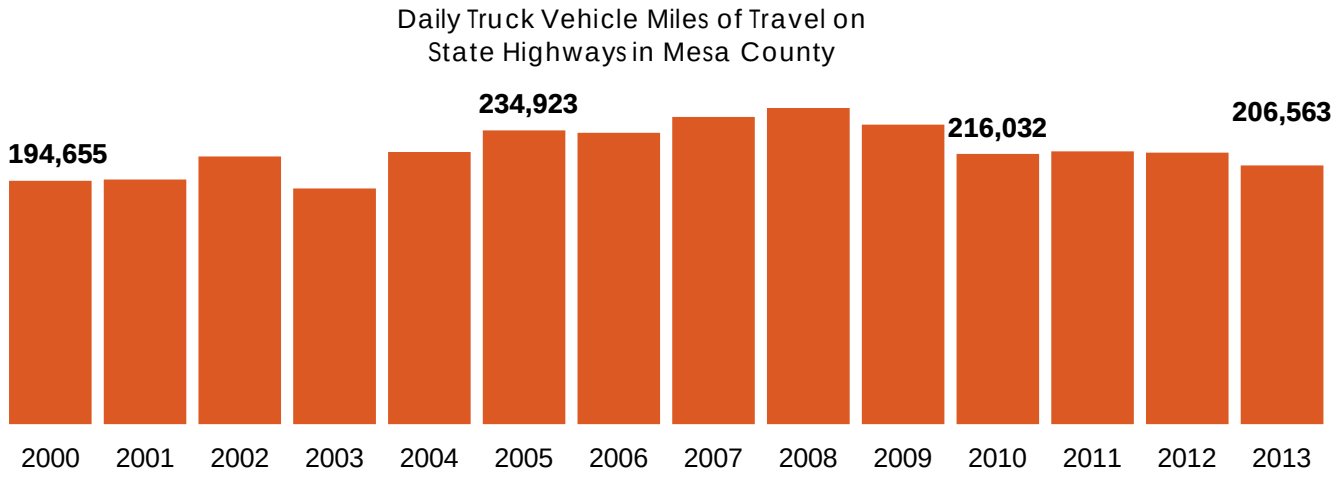
Rail still plays a significant role in the region's transportation system and that role could be expanded as the nation's freight rail volumes increase and other major cross-continental routes reach capacity. Mesa County lacks an intermodal logistics center to efficiently transfer shipping containers from rail to truck or to transload goods from one mode to another. Rail safety is also an important consideration in the region as there are a number of at-grade rail crossings and facilities that could be made safer for vehicles, cyclists, and pedestrians as well as ensuring safe and efficient rail movements.

Truck Freight Movements

Mesa County experiences significant interstate and regional truck travel. The region's proximity to Interstate 70; status as a major consumer market and distribution hub in Western Colorado; and, as a producer of agricultural products, manufactured goods, and energy ensure that truck freight movements are critical to the regional economy.

In 2013, trucks traveled an average of 206,563 miles on state highways in the region – every day. Figure 9.4 shows trends in truck movements in the region since 2000. Truck travel is sensitive to consumer demand and economic activity and has declined with the economic downturn beginning in 2009.

Figure 9.4: Truck Daily Vehicle Miles Traveled on State Highways, 2000-2013

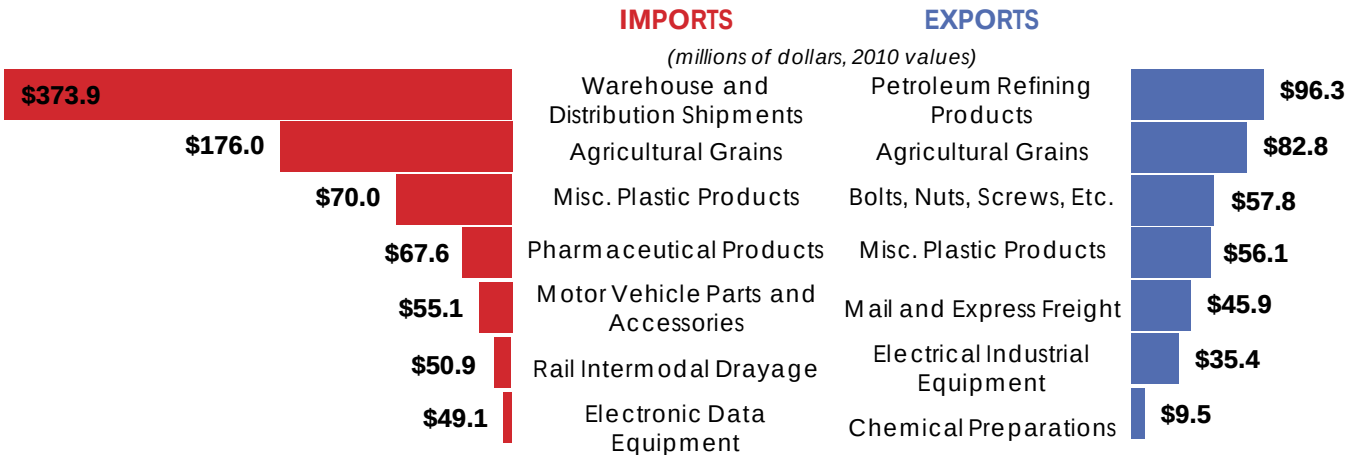


Colorado Department of Transportation, 2014.

On average, trucks represent roughly ten percent of regional daily vehicle miles traveled on state highways. In 2012, two percent of serious injury and roadway accidents in the region involved large commercial trucks. This was the lowest rate since 2007 when nearly seven percent of injury and fatality accidents involved trucks.

Trucks move the majority of freight in and out of the region – as much as 70 percent of all freight by weight and value according to the Colorado state average. The top commodities imported and exported into Mesa County by truck in 2010 are shown in Figure 9.5 and include: consumer products and other shipments to distribution centers, products exported by the energy industry, agricultural grain trade, and other machinery, equipment, and components either produced or consumed in the region.

Figure 9.5: Value of Truck Freight in Mesa County, 2010



TRANSEARCH | Colorado Department of Transportation, 2014.

By 2040, commodity imports are forecast to grow 89 percent and exports are forecast to grow 129 percent. As Mesa County's consumer base, manufacturing activity, and agricultural and energy production continue to grow so will the need to transport goods by truck over the region's roadways. Even goods that are flown into the regional airport or that arrive in bulk by rail are transported to their final destination by truck.

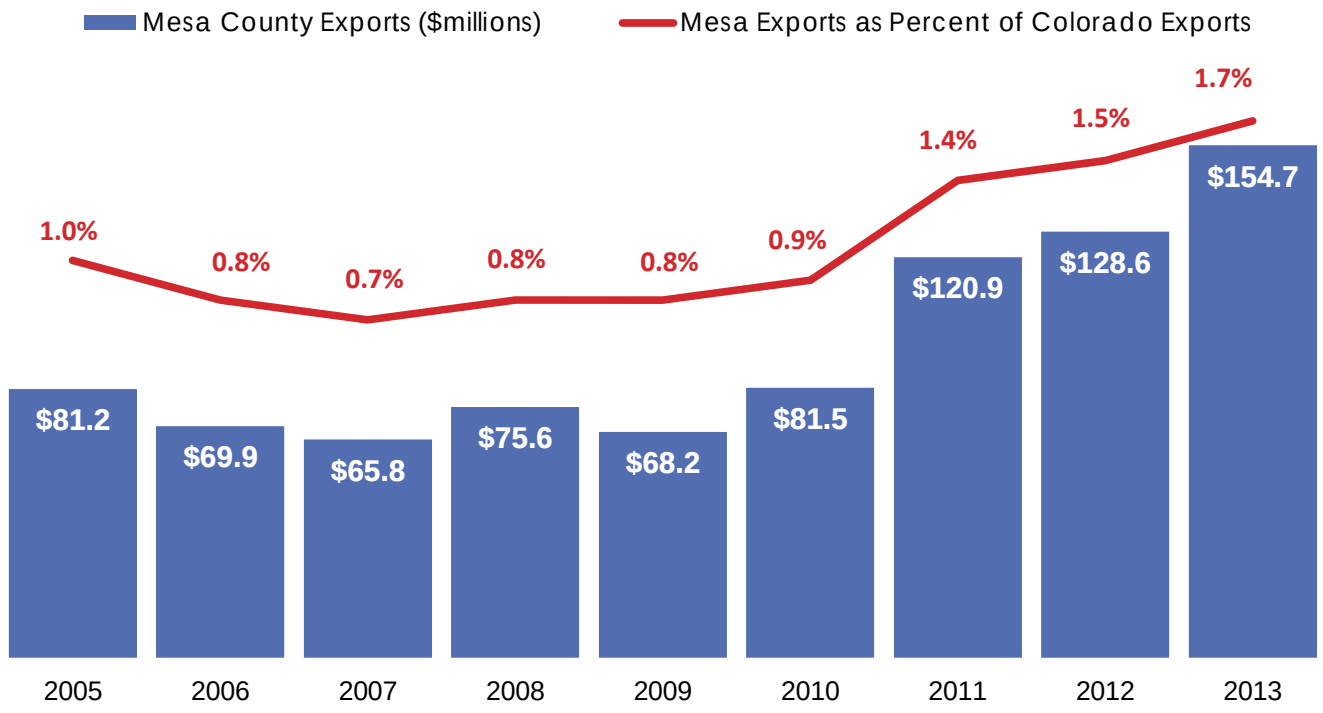
Trucking is critical to the region's businesses and consumers as nearly all goods made or consumed in Mesa County are moved by truck. Upgrading interchanges and intersections, maintaining bridges, enhancing truck routes, improving safety, and providing access to commercial centers, industrial parks, and major manufacturers is critical to keeping goods moving freely and efficiently in the region.

International Exports

Global trade in goods and services is increasingly important to regional economies. While domestic business declined during the recent economic downturn, companies that exported saw international sales hold steady and even grow significantly. According to the U.S. International Trade Administration, U.S. companies that export grow 15 percent faster, pay 15 percent higher wages, and are 12 percent more profitable, and yet nationally, only 3 percent of small businesses export.

Mesa County is home to a number of international exporters of manufactured goods and agricultural products. Exports add significantly to the regional economy, accounting for the equivalent of three percent of gross regional product or $154.7 million dollars in 2013. Figure 9.6 reports the substantial increase in international exports from the region and the region's growing share of the state's total. Importantly, regional exports grew following the economic downturn and at a time when many other businesses were struggling. This mirrors trends across the U.S. as businesses turned to overseas markets to make up for slowing domestic sales. Top regional exports by value include transportation equipment and components ($45.9m), computers and electronics ($32.9m), machinery and components ($22.8m), and other mineral products ($12.7m). Most regional products are exported to markets in Asia, Canada, Mexico, and Europe.

Figure 9.6: Value of Exports Produced in Mesa County, 2005-2013



Exports are a key indicator of freight movement and economic vitality in the region. The region's increasing export value and share of total Colorado exports indicates the recent success of regional manufacturing and underscores the importance of a seamless air, rail, road, and intermodal system to keep the region competitive.

Spotlight on Exporters in Mesa County

GPD Global, based in Grand Junction since 1974, is a manufacturer of fluid dispensing systems and other equipment for advanced industries. GPD Global has exported products since 1985 all over the world and growing Asian markets. Over 65 percent of sales are international exports.

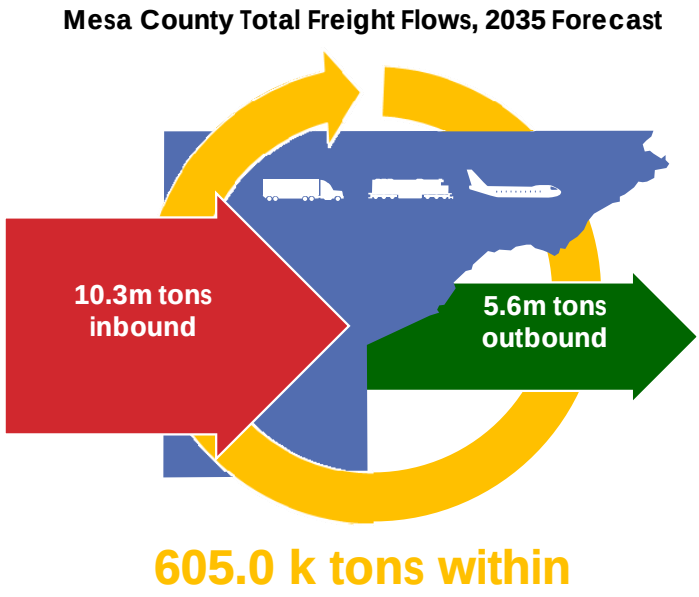
Reynolds Polymer relocated to Grand Junction in 1993, and now manufactures components for aquariums and marine projects for exports around the world. Reynolds Polymer now exports to over 50 countries with international exports accounting for 60 percent or more of sales. Massive acrylic panels are cast in Grand Junction and trucked to various ports for overseas projects, most often Houston.

Freight, Intermodal, and Economic Development Opportunities

Mesa County consumes more goods than it produces. As a result, the region has an imbalance of trade, with more freight moving in than out of the region. For example, inbound air cargo is almost twice the weight, or 2.2 million pounds, more than departing air cargo. Total tonnage traveling by truck destined for the region is more than 2.5 times, or 1.9 million tons, greater than truck tonnage that originates in the region. Figure 9.7 shows estimates of future freight volumes in Mesa County in 2035. Freight inbound to the region remains more than twice the tonnage of outbound freight, across all modes.

This represents a substantial opportunity to make more goods for export overseas and to other areas of the country. Manufacturers and producers can take advantage of cost savings and fill empty tractor trailers, rail containers, or cargo planes that are departing the region. Consumer goods could become more cost-efficient if the cost of empty backhauls is reduced.

Figure 9.7: Total Freight Volumes in Mesa County, 2035



Colorado Department of Transportation, Statewide Freight Roadmap, 2009.

To do so the region's business and municipal partners could continue to advance economic development strategies to promote established industries and support emerging industries, such as manufacturing centered on cycling components and outdoor gear. The region should also pursue transportation improvements that support manufacturers and agricultural producers such as improved access to transportation infrastructure or new access to new developments, industrial parks, and business centers. The concept of a regional co-op or shared transloading or loadmatching intermodal logistics center could also be explored by regional partners.

Chapter 10:
Performance and Results

Chapter 10: Performance and Results

CHAPTER OVERVIEW

Transportation planning is continuously evolving and innovating. Recent federal transportation legislation emphasizes performance-based planning within federally-required planning and programming processes. Performance management is simply the practice of setting goals; selecting measures; setting targets; applying data and measures in decision-making; and, reporting results. The Grand Valley MPO has a long history of data-driven decision-making but less experience tracking performance. This 2040 plan update begins the transition toward a performance-based planning process.

Performance-Based Planning

Moving Ahead for Progress in the 21st Century Act (MAP-21) was signed in 2012 and is the first major transportation authorization legislation enacted since 2005. MAP-21 revised the national policy and programmatic framework for over $100 billion in transportation investment through FY 2013 and 2014. MAP-21 is currently extended through 2015. The most significant features of MAP-21 is the integration of performance-based planning into transportation planning and programming decisions.

MAP-21 creates a performance-based federal program with the intent of increasing accountability and improving transportation investment decision-making. Within the next several years, the Colorado Department of Transportation (CDOT), the Grand Valley MPO (GVMPO), and Grand Valley Transit (GVT) will be required to act on the performance management requirements embedded within MAP-21.

Performance-based planning considers trends in past and anticipated future performance outcomes to inform investment decisions and then measure progress toward meeting performance goals. The objective is to direct state and regional investment in projects that make progress toward achieving national goals. Federal legislation establishes a core set of national goals with associated performance measures (many of which are yet to be determined by the USDOT (Federal Highway Administration [FHWA] and Federal Transit Administration [FTA]) along with a variety of planning and programming requirements. Instituting a performance-based program carries significant implications for metropolitan planning organizations.

Key elements of this legislation include:

- Regulations that require regional long range plans to incorporate a performance-based approach to decision-making that supports national goals;
- Guidance for states and MPOs to establish targets for national performance measures;
- Requirements for regular (within LRTP/RTP update) metropolitan system performance report that evaluates condition and performance, demonstrates progress toward national goals, compares actual performance to target values, and assesses how local policies and investments have impacted costs necessary to achieve performance targets;
- Consideration of measures and targets when developing policies, programs and investment priorities and linkages between national goal areas and Transportation Improvement Program (TIP) projects; and,
- Coordination with the state DOT and transit agencies on measures and targets.

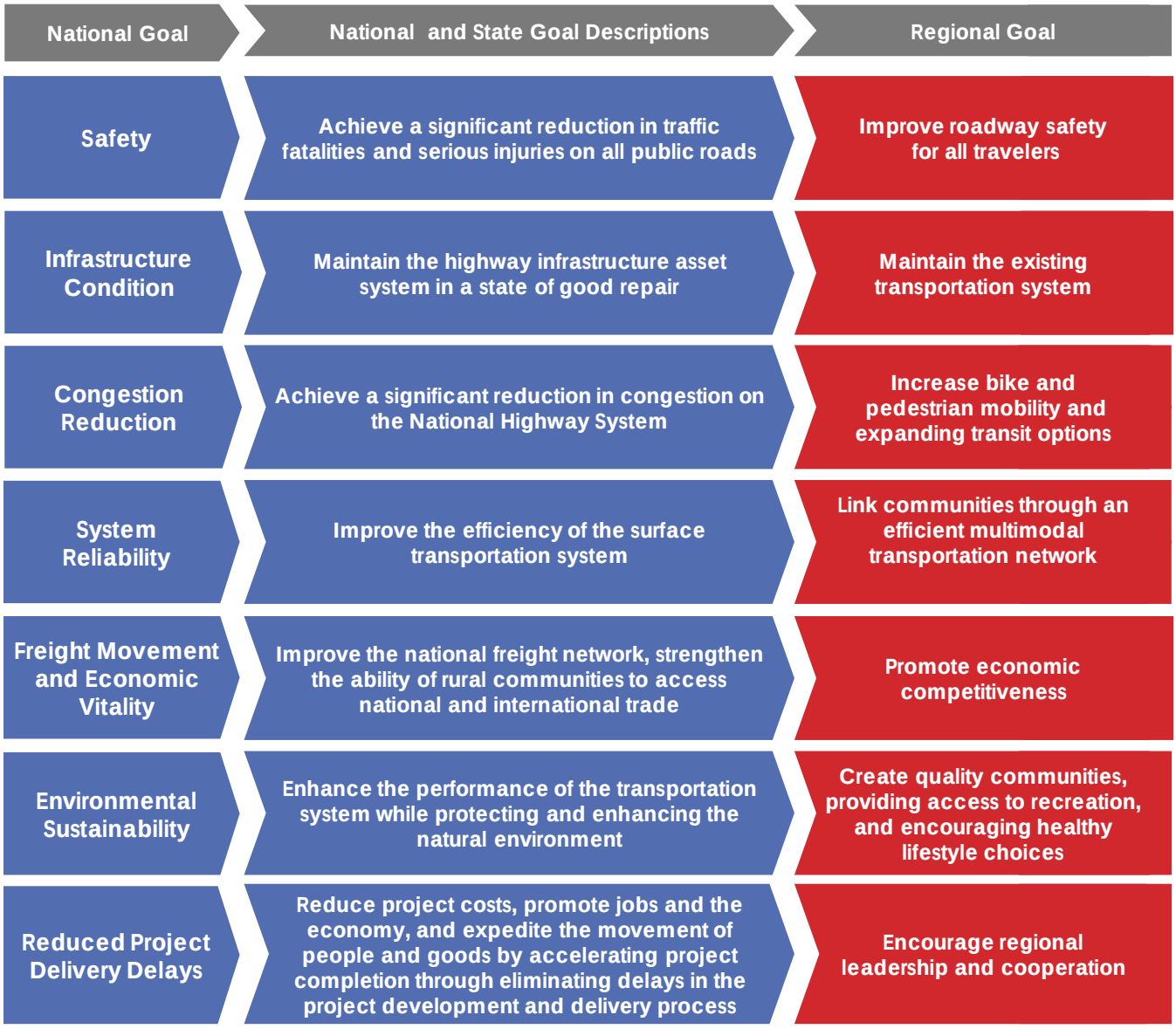
MAP-21 establishes seven key national goals:

- *Safety* - To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
- *Infrastructure Condition* - To maintain the highway infrastructure asset system in a state of good repair.
- *Congestion Reduction* - To achieve a significant reduction in congestion on the National Highway System.
- *System Reliability* - To improve the efficiency of the surface transportation system.
- *Freight Movement and Economic Vitality* - To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
- *Environmental Sustainability* - To enhance the performance of the transportation system while protecting and enhancing the natural environment.
- *Reduced Project Delivery Delays* - To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

These areas are the foundation of the national highway performance program and the USDOT (FHWA and FTA) will establish consistent performance measures and data elements that align with these goals. Performance measures are focused on the National Highway System (NHS) and Interstate System networks within the region and do not necessarily apply to all public roads. Minimum data and performance reporting requirements will extend primarily to NHS networks.

The Colorado Department of Transportation has adopted the national goals established by MAP-21. The Grand Valley Metropolitan Planning Organization's 2040 long-range goals also align with these important state and national goal areas. Figure 10.1 links national and state goals with the region's 2040 vision and goals.

Figure 10.1: National, State, and Regional Performance Goals



Federal Rulemaking Process

Performance measures and targets will be established for each of these national goals in the near future. The USDOT anticipates issuing final rules on performance measures in late 2015. However, that target date may continue to be extended beyond then. As federal guidance continues to be issued and the rulemaking process advances, it may become necessary for the GVMPO to update portions of this plan to account for new data, new performance measures, or new guidance. The 2040 RTP will be updated as necessary to comply with federal and state guidance.

Within one year of a final ruling, CDOT must set performance targets in support of national measures. Different performance targets may be set for urbanized and rural areas of the state. Within 6 months following CDOT's adoption of performance targets, the GVMPO and GVT must also set performance targets that relate to state and national targets. CDOT, GVMPO and GVT must coordinate when establishing those targets.

Even before MAP-21 was signed into law, the Colorado Department of Transportation committed to measuring and reporting performance. Transportation Commission Policy Directive 14 (PD-14) was revised in 2008 to articulate CDOT goals, objectives, measures, and targets in key areas that align with national goals. This directive is currently being revised through the state's own 2040 Long Range Transportation Plan process. For the purposes of the 2040 Grand Valley Regional Transportation Plan the current PD-14 measures will be used. Any revisions to state measures or targets will be incorporated into the next iteration of this regional plan. CDOT's 2013 Annual Performance Plan also describes strategic policy initiatives and performance targets within the national goal areas established in MAP-21.

Reporting Regional Performance

Table 10.1 highlights current state objectives, performance measures, and targets by national goal area. Only those measures and targets that the Grand Valley MPO and local partners can reasonably affect are included.

Table 10.1: National and State Performance Goals, Measures, and Targets

MAP-21 Goals	CDOT Objectives	CDOT Primary Performance Measures	CDOT Primary Performance Targets
SAFETY	*Reduce traffic fatalities and serious injuries and work toward zero deaths for all users*	Number of fatalities and fatalities per 100M VMT, five year average Number of serious injuries and serious injuries per 100M VMT, five year average	Achieve a 5-year annual average reduction of 12 in number of fatalities. Achieve a five-year annual average fatality rate of 0.97 per 100 million vehicle miles traveled. Achieve a five-year annual average reduction of 100 in the number of serious injuries. Achieve a five-year annual average serious-injury rate of 6.5 per 100 million vehicle miles traveled.
INFRASTRUCTURE CONDITION	*Preserve the transportation infrastructure condition to ensure safety and mobility at a least life-cycle cost.*	Percent of pavement on state highways, NHS, and Interstates with high and moderate Drivability Life. Percent of NHS and state bridge total deck area that is not structurally deficient	Achieve 80% high/moderate Drivability Life for NHS, Interstate, and state highway system pavement. Maintain percent of NHS, Interstate, and state bridge total deck area that is not structurally deficient at or above 90 percent.
CONGESTION REDUCTION	*Reduce congestion, primarily through operational improvements and secondarily through the addition of capacity.*	Minutes of travel delay in congested highway segments, per traveler, per day.	Maintain minutes of travel delay in congested highway segments at less than 22 minutes per traveler, per day.
SYSTEM RELIABILITY	*Improve the efficiency of the surface transportation system.*	Statewide Planning Time Index for congested segments on Interstates and NHS roadways	Maintain statewide Planning Time Index (PTI) value of 1.25 or less for congested segments of NHS, Interstate, and state highway system.
FREIGHT MOVEMENT AND ECONOMIC VITALITY	*Improve the freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.*		In development

MAP-21 Goals	CDOT Objectives	CDOT Primary Performance Measures	CDOT Primary Performance Targets
ENVIRONMENTAL SUSTAINABILITY	*Enhance the performance of the transportation system while minimizing the impact to and encouraging the preservation of the environment.*		State output measures. No regional influence.
REDUCED PROJECT DELIVERY DELAYS	*Reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process.*		State output measures. No regional influence.

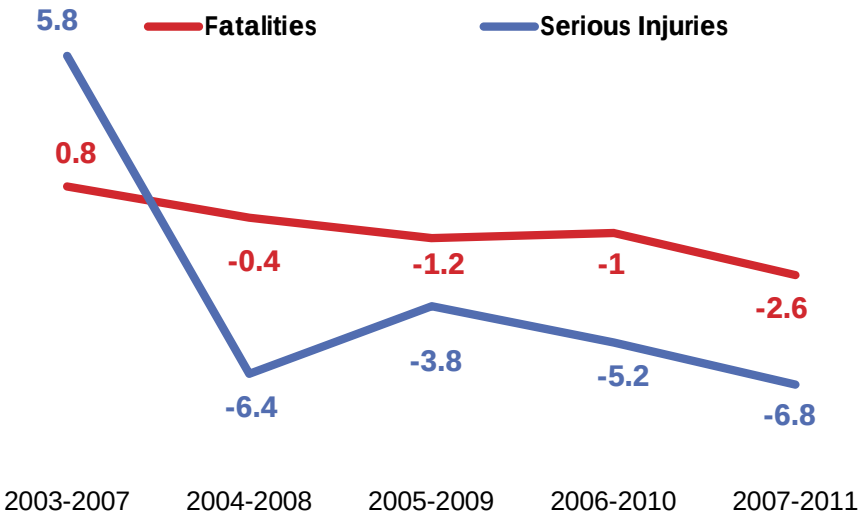
Safety

CDOT and the Colorado Transportation Commission have established a vision of moving toward zero deaths for all travelers in Colorado. This is a long-term but attainable goal and is consistent with visions set by the USDOT and American Association of State Highway and Transportation Officials to reach zero deaths by 2030.

On average, between 2007 and 2012, there were 15 fatalities on Mesa County roadways or about three percent of the state's total deaths due to traffic crashes. The region's fatality rate per 100 million vehicle miles travelled in 2012 was 0.94. This rate is below the state's target of 0.97 for the 2013-2017 period. The five-year average annual reduction in total fatalities in the region is 2.6, however it has historically averaged closer to 1.0. To reach the goal of zero deaths by 2030, the region must continue to reduce fatal accidents by at least one per year.

Between 2007 and 2012, the number of serious injuries in the region averaged 112. Serious injuries are typically defined as injuries resulting in hospitalization or incapacitation. The region's serious injury rate per 100 million vehicle miles travelled in 2012 was 6.5. This rate is equal to the state target for the 2013-2017 period. The five year average annual reduction in serious injuries in the region is 6.8. If this trend continues, the region will contribute significantly to the state target of reducing serious injuries by 100 annually. Figure 10.2 highlights historical five-year average annual reductions in fatalities and serious injuries. This measure will be tracked into the future.

Figure 10.2: Five Year Average Annual Reductions in Fatalities and Serious Injuries in Mesa County



Colorado Department of Transportation, 2013.

In order to continue contributing to state and national goals of moving toward zero deaths, the region will address high-frequency crash locations, improve dangerous intersections and roadways, and make systemic safety improvements. Crash information and potential for safety improvements was directly considered in the selection of future regional projects. The region will continue to monitor crash trends and report performance measures for fatal and serious injury totals and rates. In addition, the region will also track reductions in fatal and serious injury crashes involving pedestrians and cyclists to better understand active transportation challenges and track impacts of non-motorized projects.

Infrastructure Condition

Overall, Colorado's road and bridge infrastructure is in good condition. In 2012, 82 percent of state highways were graded with high or moderate drivability life remaining and 94 percent of bridges were structurally sufficient.

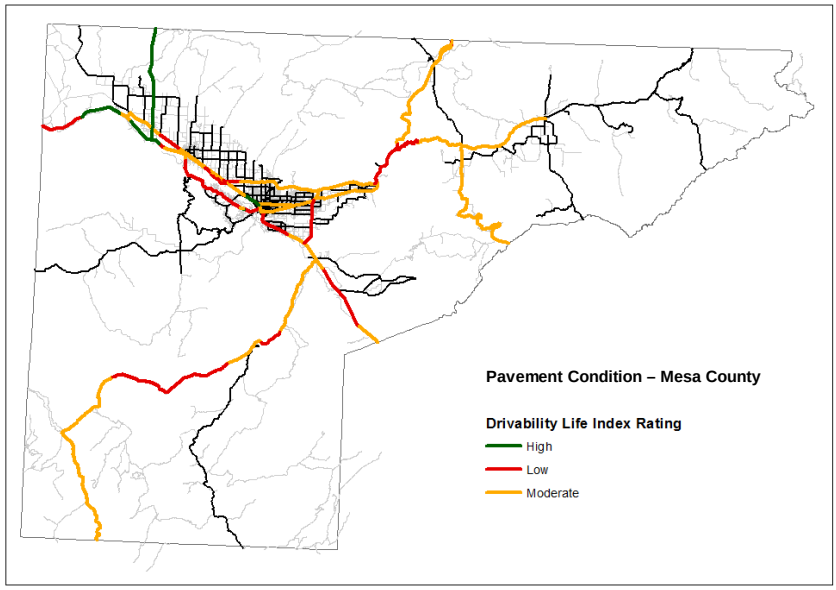
In Mesa County, four of the region's 364 bridge structures are considered structurally deficient. This rating does not imply that a bridge is unsafe but that there are elements of the structure that must be monitored or repaired. One of these bridges is on an interstate and the other three are on local or county roads with very low traffic volume. All were built between 1930 and 1960. Overall, 99 percent of the region's bridges have a deck rating that is not structurally deficient – well above the state performance target of 90 percent. The Colorado Bridge Enterprise and CDOT are responsible for maintaining state highway bridges. The GVMPO will continue to monitor and report bridge condition ratings.

Pavement condition is assessed on the basis of smoothness, pavement distress, and safety. This is important because road conditions impact vehicle maintenance costs, traffic safety, and visitors and residents expect regional roadways to offer comfortable rides for both vehicles and bicycles. Maintaining pavement in good condition also extends the service life of a road and reduces the need to replace roads entirely.

CDOT measures condition based on a drivability life indicator that measures how many years a roadway is expected to have acceptable driving conditions. A low drivability life measure indicates that the road surface may not last more than 2 years. Moderate or high drivability life measures indicate roads that will be acceptable for 3 to 10 years or 10 years or more. The statewide target for pavement condition is to maintain a high or moderate rating for at least 80 percent of state highways and interstates. Regional pavement condition ratings can be seen in the map in Figure 10.3.

CDOT estimates that in 2014, 74 percent of all state highways were rated with high or moderate drivability life. However with continued funding constraints and increasing maintenance needs, that rating is estimated to fall to 60 percent by 2016. In Mesa County, 73 percent of on-system state roadways were rated with high or moderate drivability life remaining. This is below the state target of 80 percent. Pavement condition and maintenance needs were considered in the selection of projects and condition data was compiled for all major highways in the region. The regional projects expected to be completed in the next 20 years will result in low rated pavement being replaced or rehabilitated.

Figure 10.3: Pavement Condition Drivability Life Rating in Mesa County



Colorado Department of Transportation, 2013.

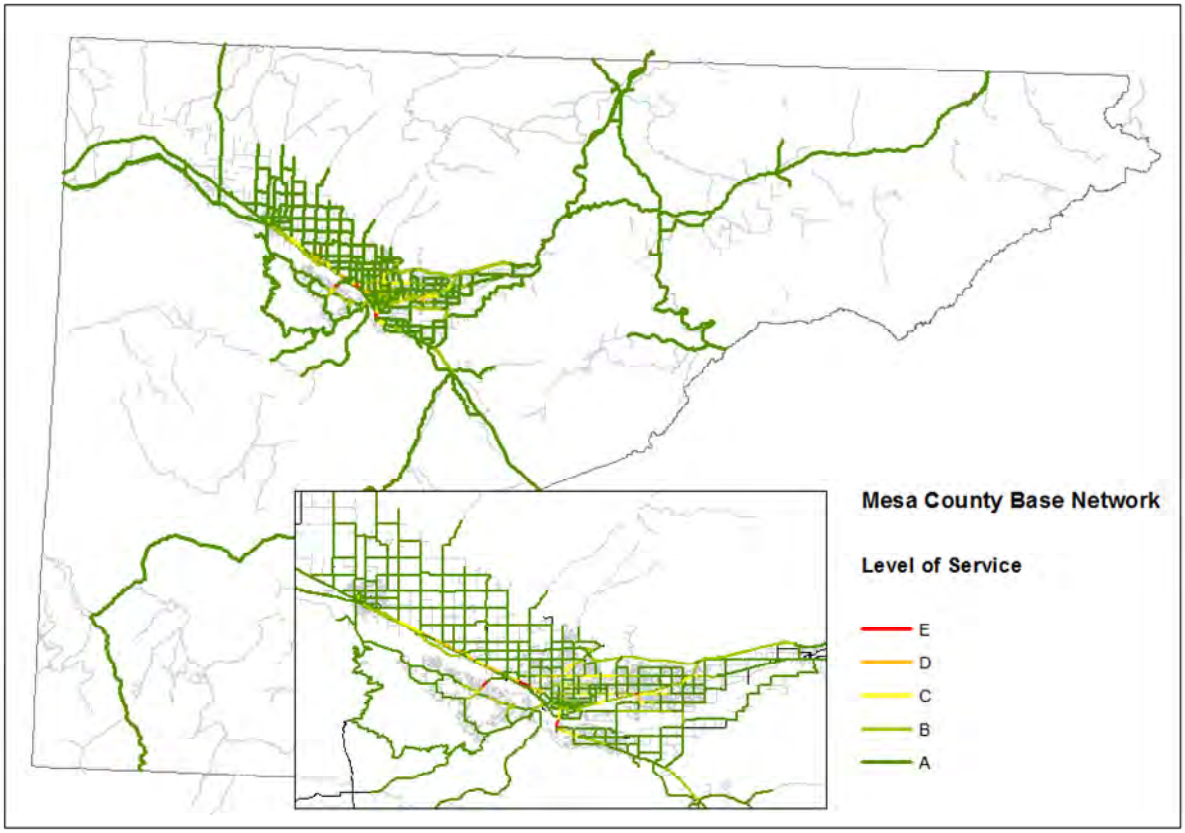
Congestion Reduction

Commuters, businesses, and residents are impacted by congestion on the region's roadways. Congestion results in lost opportunity time, impacts economic productivity, and increases vehicle emissions. Recurring delays can be caused by roadways carrying a greater volume of traffic than intended or designed for. Non-recurring delays are often caused by one-time accidents, weather, incidents, or special events. Congestion is most often measured by delay which is the difference between travel time on roadways at free-flow speed and travel time in congested traffic conditions.

CDOT's statewide target is to maintain minutes of travel delay on congested highway segments at less than 22 minutes per traveler, per day. In Mesa County, just 1 percent, or 2.75 center-line miles, of a total of 265.5 miles of state highways were considered congested by CDOT in 2013. Using state measures, the average delay in the region is approximately 5.4 minutes per traveler, per day. This is substantially below the statewide target, but does not reflect all delay and congested roadways in the region. Level of Service (LOS) grades are relatively high across all regional roadways. LOS grades roads on traffic and travel conditions. An LOS grade of A indicates free flowing traffic, while a grade of F represents stopped traffic due to congestion. As can be seen in the map in Figure 10.4, the majority of the region's roads are free of delay most of the time. Only 6 miles of roads are graded at LOS D and just 2 miles are graded LOS E. These roads are congested at peak period times – such as morning commutes or afternoon school or shopping trips.

The region will continue to monitor congestion levels and report delay measures. The majority of the project alternatives included within this 2040 fiscally constrained plan, along with other benefits, are intended to add capacity, relieve bottlenecks, and reduce delay on roads likely to be congested in the near future.

Figure 10.4: Level of Service Grades for Major Roadways in Mesa County



Colorado Department of Transportation, 2013.

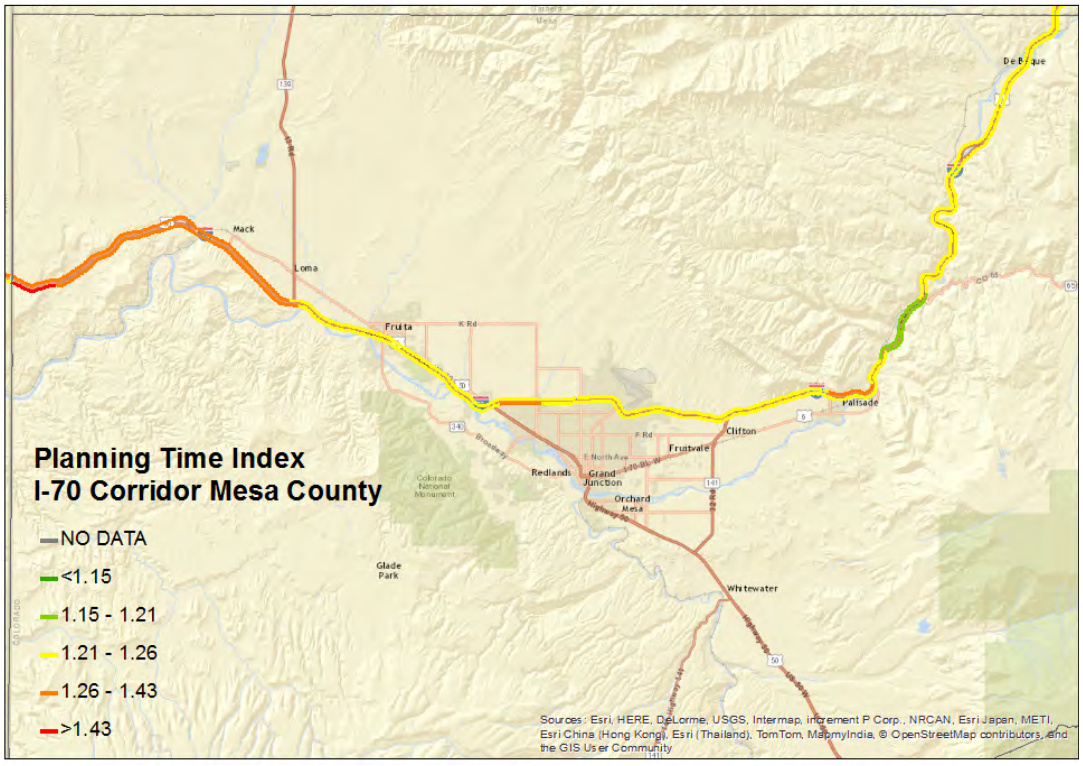
System Reliability

Improving the efficiency of the existing transportation system reduces congestion, increases reliability, and improves safety with minimal new investment. Transportation system management and operations (TSM&O) strategies include systems, services, and projects that improve the efficiency, operation, and reliability of the transportation system. These improvements include installing roundabout intersections, traffic signal operations, special event and incident traffic management, traveler information, construction work zone management, and other efforts.

CDOT, the City of Grand Junction, Grand Valley Transit, and other regional partners are investing in operations technology in the region. Grand Valley Transit offers real-time bus tracking online and for mobile devices to help travelers plan ahead and avoid waits. The City of Grand Junction posts live stream traffic cams to help travelers avoid congested times and routes. CDOT and the City of Grand Junction partnered to build Colorado's first diverging diamond interchange. This innovative design improves efficiency by reducing wait time and eliminating dangerous left-hand turns that cross opposing traffic. CDOT measures the reliability of the state highway system using the Planning Time Index (PTI) as an indicator. This index describes the time that must be added to travel time to ensure on time arrivals for 95 percent of trips.

CDOT has set a target of maintaining a PTI value of 1.25 or less for state highways. PTI data is not available at the regional level for all state highways and on-system roads. The National Performance Measure Research Data Set dataset provides PTI estimates for the I-70 corridor through Mesa County. The majority of the corridor maintains PTI values of 1.21 to 1.26. As shown in Figure 10.5, there are segments in the region (Loma to state line and Palisade area) with PTI values of 1.26 to 1.43. These higher values indicate that on congested or incident prone portions of I-70, a traveler on a 20 minute trip would have to plan for an additional 12 or more minutes to arrive on time.

Figure 10.5: Planning Time Index for I-70 Corridor in Mesa County



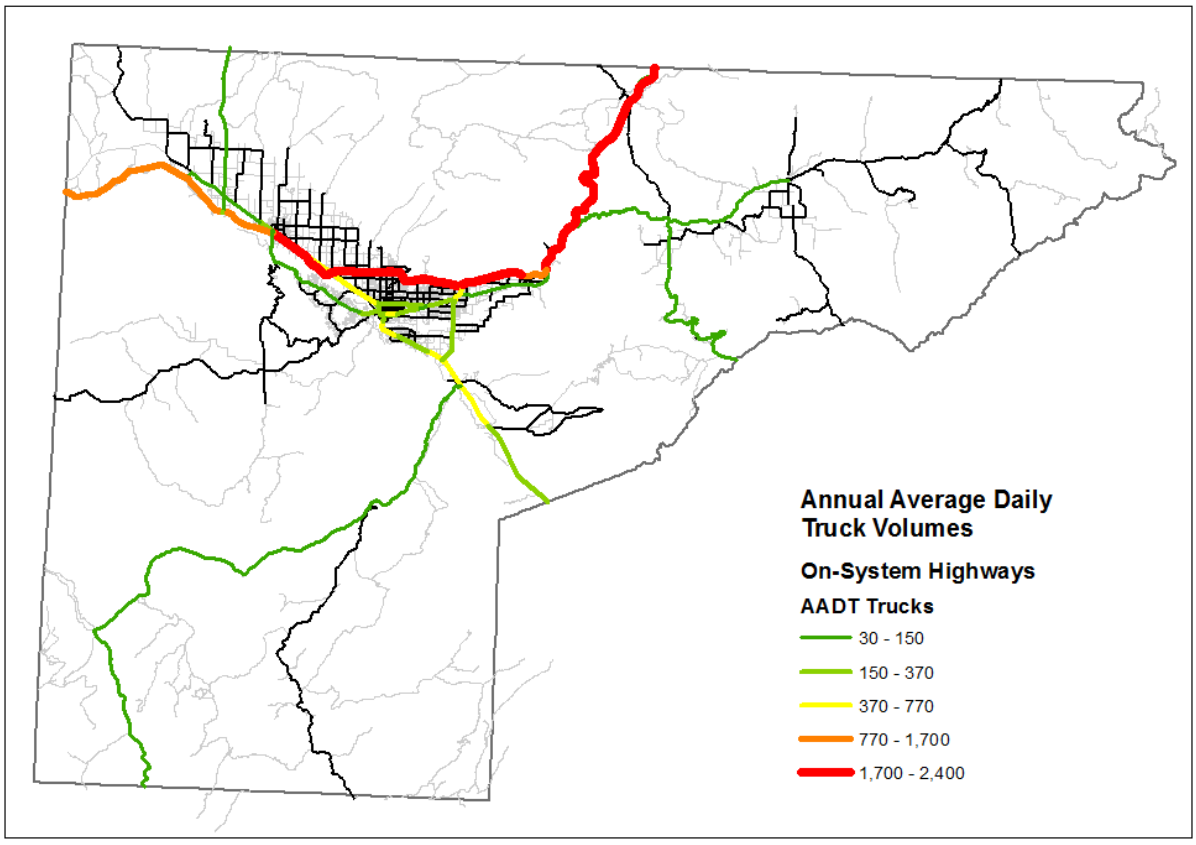
Wisconsin Traffic Operations and Safety Lab , 2014.

Freight Movement and Economic Vitality

Facilitating goods movement and improving freight transportation networks strengthens the region's ability to access national and international markets, increases business competitiveness, and supports regional economic development. Freight depends on an integrated air, rail, and truck network – though most freight in the Grand Valley region moves by truck across on-system state highways and interstates.

Data on regional freight movements is not readily available. The data that is available measures only inputs or outputs (e.g. miles of truck routes, truck traffic on state highways, or value of international trade.) In 2013, trucks travelled a total of 206,000 miles per day on Mesa County's state highways. On some of the region's busiest highways, freight volumes can exceed 1,700 commercial trucks every day. Figure 10.6 maps annual average daily truck volumes for on-system highways. It is more challenging to measure the performance or reliability of the freight transportation system. Statewide freight performance measures and targets remain under development. CDOT is developing a Freight Reliability Index (FRI) to measure the dependability of Colorado's highway system for freight traffic. GVMPO will report this measure once the FRI has been developed and as regional data becomes available.

Figure 10.6: Annual Average Daily Truck Volumes on State Highways in Mesa County



Colorado Department of Transportation, 2013.

Maintaining these critical highways in good condition, reducing delay, managing incidents and weather events, addressing dangerous curves and interchanges, and creating additional truck routes will improve the flow of freight to and through the region. The 2040 plan considered freight movements and the economic impact of transportation investments in project selection. Future projects are intended to improve roadway and safety conditions for commercial vehicles, provide connections to the airport and rail facilities, and expand the economic potential of future business and industrial developments.

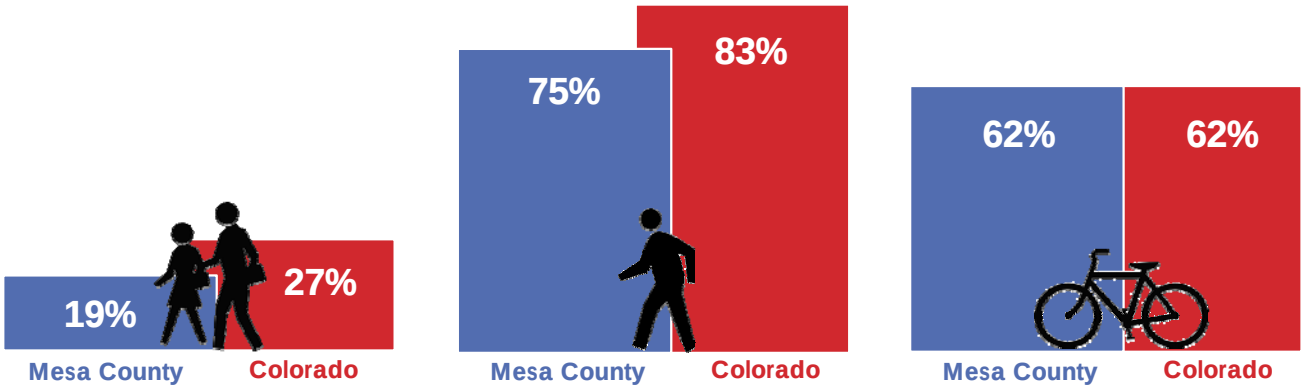
Environmental Sustainability

The Grand Valley's natural environment attracts visitors, supports local businesses, and provides residents with healthy lifestyle and recreation options. Over 73 percent of Mesa County's land area is held in conservation by the U.S. government for habitat, recreational, agricultural, and other uses. Additional areas are conserved by the state and local governments. The region is in attainment status for national air quality standards and meets or exceeds federal performance measures.

National and state goals have been established to enhance the performance of the transportation system while minimizing the impact to and encouraging preservation of the environment. CDOT's statewide performance measures focus on internal processes and programs that avoid or mitigate potential adverse impacts of transportation on the environment. The GVMPO does not have a direct role in these processes or programs. The region's goal is focused on improving access to recreation and healthy lifestyle choices for residents and visitors.

The region will track and report measure of access and mobility to assess how well the regional transportation system is providing healthy and active transportation options. Figure 10.7 compares Mesa County and Colorado's performance on key indicators of health and wellness related to the physical environment and transportation system. Access to recreation factors were considered when prioritizing roadway and active transportation project alternatives for the 2040 plan. Projects that provided additional or enhanced access to recreation or that provided safe alternatives to commute to work or school by bicycle were weighted more favorably. The Grand Valley will track the impact of investments in active transportation infrastructure on these key indicators and other measures over time.

Figure 10.7: Key Indicators of Regional Recreation Access and Commute Choices



Colorado Department of Public Health and Environment.

Reduced Project Delivery Delays

Major transportation infrastructure projects can take decades to complete from a project first being identified through planning, design, engineering, and construction phases to finally being opened for public use. National and state goals have been established to reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process. CDOT measures performance in this area based on internal project development processes such as timing of design and scheduled versus actual project completion. The GVMPO does not play a major role in the project development and delivery process and can influence the timing of projects only by engaging CDOT and other partners and by advancing funding commitments from the jurisdictions within the region.

Corresponding to this national goal area, the GVMPO has established a goal of encouraging regional leadership and cooperation. The implementation timeframe of projects was a key factor in assessing and prioritizing potential project alternatives for this 2040 planning effort. The 2040 RTP focuses on those roadway, active, and transit projects that are expected to be reasonably completed within the next 10 years. Doing so will help the region move projects forward that improve the performance and reliability of the region's multi-modal transportation system. Project alternatives were also prioritized based on their level of regional partner commitment and support. Projects with identified and committed funding sources from local governments or CDOT Region 3 were scored more favorably. Projects that were included in or consistent with local land use, economic development, or transportation plans were also rated more highly. This helps the region develop projects that support local and regional visions and to advance projects to design and construction phases more readily.

The GVMPO is committed to advancing regional conversations and decision-making that include representatives from all local governments in the region and from Grand Valley Transit. However, regional leadership and cooperation cannot be adequately measured with any single metric. The region will assess performance in this area by tracking the percentage of regional projects identified within the Regional Transportation Plan with action taken (completed, underway, or under study) before the next update to the regional plan. Project action is dependent on funding availability and federal and state decisions. Some beneficial regional projects may have long implementation timeframes.

Regional Performance Summary

Until such time as guidance from the USDOT and CDOT is finalized, the GVMPO will support current CDOT performance goals and adopt applicable measures and targets into the 2040 Regional Transportation Plan. Table 10.2 summarizes regional performance measures and the status of statewide targets.

Table 10.2: Summary of National and Regional Goals and Performance Measures

National Goal	Regional Goal	Regional Performance Measure(s)	Grand Valley	Statewide Target
Safety	Safety	Fatality and serious injury rate per 100 million vehicle miles travelled	0.94 regional fatality rate per 100 million vehicle miles travelled 6.5 regional serious injuries per 100 million vehicle miles travelled	Statewide target met
		Five year average annual reduction in fatalities and serious injuries	2.6 five year average annual reduction in fatalities in the region 6.8 five year average annual reduction in serious injuries in the region	Statewide target met
		Five-year average annual reduction in fatalities and serious injuries of pedestrians and cyclists.	0.8 five year average annual increase in pedestrian and cyclist fatalities and serious injury crashes in the region	No regional target set
Infrastructure Condition	Maintenance	Drivability life rating for on-system roadways	73 percent of regional on-system road surfaces are rated with high or moderate drivability life remaining	Statewide target met
		Percent of regional bridges that are not structurally deficient	99 percent of regional bridges have a deck rating that is not structurally deficient	Statewide target met
Congestion Reduction	Efficient, Multimodal Network	Minutes of delay per traveler, per day	5.4 minutes of delay per traveler, per day	Statewide target met
System Reliability	Mobility and Transit	Planning Time Index (PTI) rating for on-system roadways	> 1.25 average PTI for regional interstate system	Statewide target not met
Freight Movement and Economic Vitality	Economic Competitiveness	Freight Reliability Index under development	Annual average daily truck travel on regional roadways	Statewide measures and target under development
Environmental Sustainability	Health and Recreation	Percent of schoolchildren commuting actively at least one day a week. Percent of workers commuting work by biking or walking Percent of residents reporting sidewalks in neighborhood are safe to walk, run, or bike.	19% schoolchildren walk, run, or bike to school at least one day a week. 4.8% of workers commute to work by biking or walking. 75% of residents that report sidewalks in neighborhood are safe to walk, run, or bike.	No regional or statewide targets set
Reduced Project Delivery Delays	Leadership and Cooperation	Percent of regional priority projects with action taken in each LRTP cycle.	40% of projects identified in 2035 RTP have been acted on.	No regional target set

Transit Performance Measures

MAP-21 included changes to Federal Transit Administration (FTA) grant programs and introduced new requirements of providers. For example, MAP-21 consolidated several programs and streamlined the "New Starts" major capital investment grant program. Many of these changes will not apply to the Grand Valley MPO or Grand Valley Transit (GVT). For example, legislation requires that a public transportation provider be a member of the MPO Board, but only in MPOs serving as designated "transportation management areas." Significant new requirements that do apply to GVT include FTA requirements that the agency establish a safety and security plan and report performance measures in that area.

Safety and Security

FTA must develop safety performance criteria for all modes of public transportation and establish minimum safety performance standards for vehicles not regulated by other federal agencies. FTA must also develop a public transportation safety certification training program for individuals involved in transit safety.

All recipients of FTA funding, including GVT, will be required to develop safety and security plans that include performance targets, strategies, and staff training. For small urban systems, FTA will issue a rule designating which systems may have their safety plans drafted by the state. Once established, transit safety measures and targets must be incorporated into metropolitan transportation plans and transportation improvement programs. Guidance from FTA on the content, intent, and performance measures associated with safety and security is anticipated in 2015, but may be delayed as late as 2016.

CDOT's Division of Transit and Rail will have implementing authority over these safety and security plans and may draft plans for some small systems within the state. Final FTA rulemaking on safety and security measures and planning standards is not available at this time. Until further guidance is available, GVT will update the agency's existing safety and security plan and report performance measures established by the state.

Asset Management

MAP-21 requires FTA to define the term "state of good repair" and create objective standards for measuring the condition of capital assets, including equipment, rolling stock, infrastructure, and facilities. Based on that definition, FTA must then develop performance measures under which all FTA grantees will be required to set targets. All FTA grantees are required to develop transit asset management plans. These plans must include, at a minimum, capital asset inventories, condition assessments, and investment prioritization. Agencies will be required to report on the condition of systems, performance measures and targets, and progress towards meeting those targets. These measures must be incorporated into metropolitan transportation plans and transportation improvement programs. FTA will support this effort through technical assistance, including the development of an analytical process or decision support tool that allows recipients to estimate their capital investment needs over time and assists with asset investment prioritization.

CDOT's Division of Transit and Rail will have implementing authority over asset management plans and will document asset information for agencies in the state. A comprehensive state asset inventory effort is currently underway. CDOT is also in the process of providing technical guidance for asset management plans and asset inventory tracking. Final FTA rulemaking on asset management measures and planning standards is anticipated in late 2015. Until further guidance is available, GVT has prepared a baseline asset management plan in accordance with prior FTA guidelines and will report performance measures as currently established by the state.

Regional Transit Performance Summary

CDOT's Policy Directive 14 (PD-14) establishes preliminary performance measures and targets for state transit agencies – primarily providers in rural areas. GVT will begin reporting performance in these areas until further FTA and state measures are finalized.

Table 10.3 shows current state transit related performance measures and targets and current GVT performance relative to those targets.

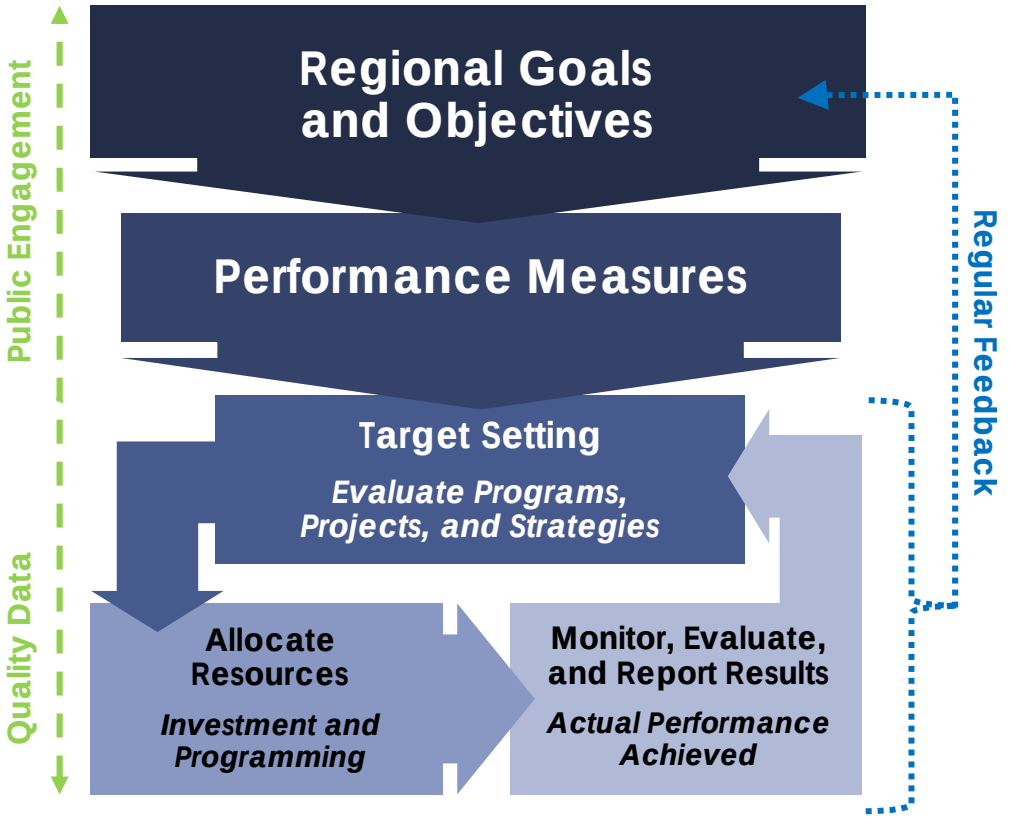
Table 10.3: Summary of Regional Transit Performance Measures

CDOT Performance Measure	CDOT Performance Target	GVT Performance
Percent of vehicles in the rural Colorado transit fleet operating in fair, good, or excellent condition, per Federal Transit Administration definitions.	Maintain percentage of vehicles in the rural Colorado transit fleet to no less than 65 percent operating in fair, good, or excellent condition.	55% of vehicles in the GVT fleet are currently in fair, good, or excellent condition.
Percent of agencies with transit asset management plans and programs updated.	100 percent of transit agencies receiving federal funds will have transit asset management programs for fleet, buildings, and equipment by 2017.	Draft asset management plan in place.
Ridership of small urban and rural transit grantees.	Increase ridership an average of 1.5 percent annually over a 5-year period moving average, as compared to a 2012 base.	8% five-year average annual increase in annual fixed route ridership.

Transitioning to a Performance-Based Plan for the Grand Valley

Performance management is a strategic approach that links data and decision-making to performance goals. *Performance-based planning* applies this approach to transportation by attempting to tie long-range policy and investment decisions to measurable indicators of performance and report progress toward achieving performance outcomes. This system-level, data-driven process helps identify optimal regional strategies and investments based on their ability to meet established regional and national goals. *Performance measurement* is the application of data and information on past conditions and future trends to inform decisions, to report impact, and to communicate progress to stakeholders and the public. A conceptual performance-based planning and programming process is shown in the Figure 10.8.

Figure 10.8: Conceptual Performance Based Planning Process



NCHRP 20-24(37G) Technical Guidance for Deploying National Level Performance Measurements.

The performance-based planning process begins with established regional goals and objectives. The Grand Valley's regional goals are linked to the seven established national goal areas and other goals set by the State of Colorado. Performance measures flow from regional goals and must include identified national measures as well as a subset of regionally specific measures. For this update, the GVMPO has adopted those national and state measures that are currently available.

Targets for performance measures are established to quantify desired outcomes and demonstrate progress toward goals. Targets will be set to support state and national goals as well as additional regional objectives. These targets then provide a basis for evaluating regional investment programs, individual projects or packages of projects, or strategies. Analysis of trend information and estimates of expected future impact of investments help allocate resources and program investment packages. At this time, targets have not been set by the USDOT. This 2040 plan adopts those targets that have been adopted by CDOT. As MAP-21 final guidance on national and state target becomes available, the GVMPO will establish regionally appropriate targets or continue to support state targets.

Allocating investments and prioritizing projects provides a link between goals and targets. For the 2040 RTP, national and regional goal areas were linked to project prioritization decisions that explicitly considered goal performance areas and potential future regional performance measures. This qualitative and quantitative process follows best practices for integrating performance-decisions into current regional processes.

Over time, monitoring and evaluation of actual performance results in comparison to expected results will guide future decisions and provide continuous feedback when setting future goals and targets. Reporting results and communicating to broad audiences is a critical component of the performance process and may be incorporated

within broader regional indicator efforts. Quality data management and analysis and engaging stakeholders and the public underpin the entire process. In the future, and as further federal guidance is issued, the GVMPO will monitor, evaluate, report, and integrate past results into future planning efforts and project decisions.

This framework provides a link between Grand Valley's regional goals and national and state performance goals, establishes objectives and targets, and carries performance targets through to resource allocation and investment programming. The 2040 RTP sets the stage for the GVMPO to begin a transition to a performance-based plan under this framework. The process of this long-range plan update has incorporated data-driven decision-making, linkages between regional and national goals, and integrated those goals with project selection and investment allocation decisions.

Next Steps

Fully implementing and integrating performance-based planning is a long-term and iterative process. In addition, federal regulations and state guidance are still forthcoming and final rules and measures may not be established for years to come. This 2040 RTP is just the beginning of a full transition to a performance-based approach. The Grand Valley has a long history of regional cooperation, capable foundation in data management and reporting, commitment from staff and partners, and can learn from the lessons of other regional organizations.

Lessons and experiences from early adopters of performance-management approaches should be considered early on and may influence the future methodology and path of regional efforts. Some of those key lessons can be summarized as follows:

- Leverage existing planning efforts and tools such as state data management systems, transit asset management plans, complementary regional planning processes, GIS databases, or local initiatives.
- Start with national measures and other statewide base measures and incrementally add regional measures that further communicate goals.
- Emphasize internal cross-function coordination and increase external collaboration with new partners and stakeholders.
- Dedicate resources to managing data, processes, and people. A performance-based approach may take additional organizational resources or at least a redistribution of existing resources within the MPO.
- Provide clear visuals and communication of performance decisions and impacts for to help stakeholders and decision-makers better understand the tradeoffs and impacts of decisions.
- A performance-based process alone, without sufficient resources or regional cooperation, will not drive better performance results. However, this approach can help communicate financial needs and illustrate performance impacts.
- Prepare for an iterative and evolutionary period of adjustment as a performance approach is implemented and prior planning processes, projects, procedures, and protocols are continually revaluated.