

2018 Billings Urban Area Long Range Transportation **TECHNICAL APPENDIX**



January 11, 2019



prepared by

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Appendix A

Steering Committee Meeting #1



Kickoff Meeting Agenda

2018 Billings Urban Area Long Range Transportation Plan

December 8, 2017 @ 8:30 AM – 10:30 AM

1. Introductions and Roles
2. Schedule
3. Coordination with Other Projects
4. Areas of Emphasis / Success Factors
 - a. What would you like to see in the LRTP?
 - b. What would you define as a success for the LRTP?
5. Emphasis Areas by Chapter
 - a. Policy Requirements
 - b. Land Use
 - c. Streets & Highways
 - d. Public Transit and Transportation
 - e. Truck Services and Facilities
 - f. Rail Facilities
 - g. Pedestrian and Bicycle Facilities
 - h. Safety
 - i. Security
6. Data Collection
7. Plan Documentation
8. Public Outreach for LRTP
9. Public Participation Plan (PPP) Overview
10. Next Steps

DATE 12/8/2017



2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN

KICK OFF MEETING



Today's Agenda

- Introduction and Roles
- Schedule
- Coordination with Other Projects
- Areas of Emphasis / Success Factors
- Emphasis Areas by Chapter
- Data Collection
- Plan Documentation
- Public Outreach for LRTP
- Public Participation Plan (PPP) Overview
- Next Steps



Schedule

- 15 months timeframe
 - Notice to proceed → November 13th, 2017
 - Draft plan → November 2018
- Steering Committee (SC)
 - Anticipate eight meetings
 - Provide biweekly updates to Scott Walker



Coordination with Other Projects

- 2017 Billings Travel Demand Model (MPO)
- Billings Downtown Traffic Flow Study (City)
- 27th Street Railroad Crossing Study (MDT)
- Billings Bypass Final Design (MDT)
- 1st Avenue North (MDT)
- 1st Avenue North & Exposition Drive (MDT)

- Other projects?



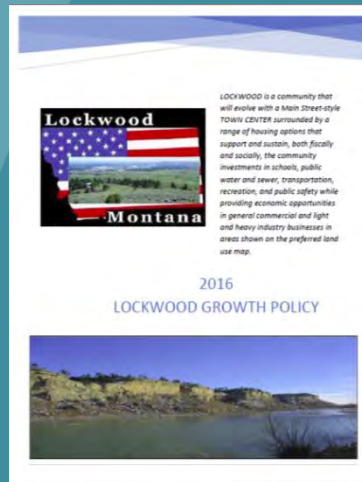
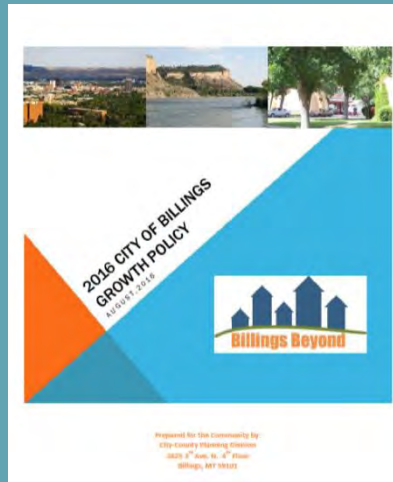
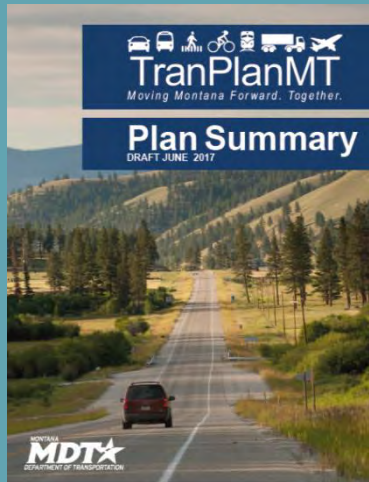
Areas of Emphasis / Success Factors

- What would you like to see in the LRTP?
- What would you define as a success for the LRTP?



Policy Requirements

- Meet local, state, and federal requirements
 - Fixing America's Surface Transportation (FAST) Act
 - TranPlanMT
 - 2016 City of Billings Growth Policy
 - 2016 Lockwood Growth Policy



Emphasis Areas by Chapter

- Land Use

- Update data and maps
 - 2016 Billings Growth Policy
 - 2016 Lockwood Growth Policy
 - Household Travel Survey
- Develop year 2040 employment and population projections

- Streets and Highways

- Update data and maps
 - West End Study
 - Highway 3 Study
 - Old Highway 312 Corridor Study
- Model and develop future year 2040 traffic forecasts
- Perform intersection analysis
- Perform analysis on key corridors
- Update Functional Classification Map



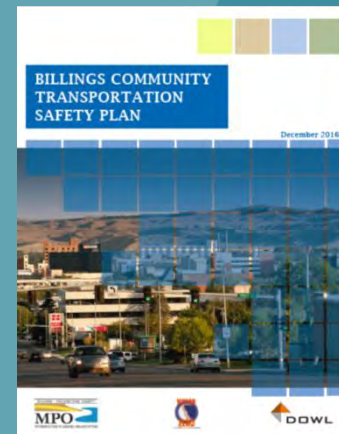
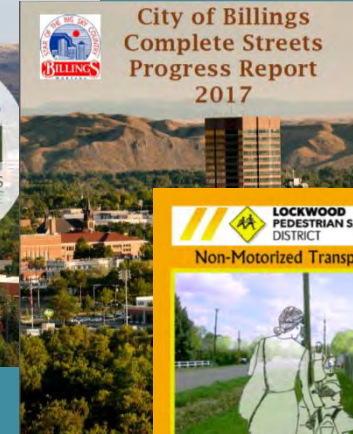
Emphasis Areas by Chapter

- Public Transit and Transportation
 - Update data and maps
- Truck Services and Facilities
 - Update data and maps
- Rail Facilities
 - Update data and maps
 - 2016 Montana Rail Grade Separation Study
 - 27th Street Railroad Study



Emphasis Areas by Chapter

- Pedestrian and Bicycle Facilities
 - Update data and maps
 - Billings Bikeway and Trails Master Plan Update
 - Complete Street Progress Report
 - Lockwood Non-Motorized Transportation Plan
 - Safe Routes to School Maps
- Safety
 - Update data and maps
 - Billings Community Transportation Safety Plan
- Security
 - Update data and maps
 - Pre-Disaster Mitigation Plan Update



Data Collection

- Projects completed since 2014 Update
- Other studies and plans
- GIS data
- Traffic, truck, rail, bike, trail, and pedestrian counts
- Crash data
- Transit data
- Funding



Plan Documentation

2014 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN

FINAL
August 2014



CHAPTER

5

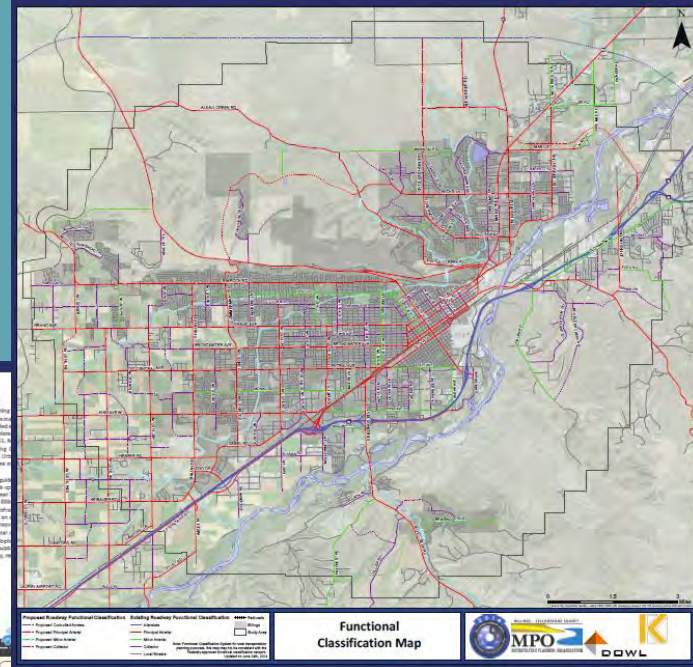
Public Transit and Transportation

Like most public transportation systems, MET has been effective in developing a transit system with the limited funding resources available. Marginal revenue growth and rising operational costs have prevented any noticeable service expansion for the last 25 years. For public transit service to be expanded in the region, an increase in the operations funding would need to occur through an increase in the mill levy, other local funding sources, and additional federal funds. Through this LRTP process, the community continued to identify projects and support for the public transportation system.

Did you know? MET Transit started in 1973 with five fixed routes in the Billings Urban Area. MET currently operates 17 routes with flag service and bus stops, transfer centers, and other amenities.

Looking ahead, it might be time to bring the funding element to the region and determine a future plan to fund the expansion of public transit in the Billings Urban Area. Public transportation continues to be a priority of the community. As such, the 2014 LRTP outlines several goals related to public transportation:

- Goal 1: Safe, Efficient, Effective** – To develop a transportation system that is safe, efficient, and effective
- Goal 2: Functional Integrity** – To optimize, preserve, and enhance the existing transportation system
- Goal 3: Multimodal** – To create a transportation system that supports the practical and efficient use of all modes of transportation
- Goal 4: Economic Vitality** – To develop a transportation system that supports the existing local economy and connects Billings to local, regional, and national commerce



Introduction

The Long Range Transportation Plan (LRTP) is a framework to guide the City of Billings and the MPO. The LRTP is a long-term plan for the future through year 2035 and provides a comprehensive vision for the future of the region's transportation infrastructure, including roads, transit, and other modes of transportation. The LRTP is a living document that will be updated as needed to reflect changes in the region's transportation needs and priorities.

LONG RANGE TRANSPORTATION PLAN RESULTS

- 1. Improved Transportation System
- 2. Increased Safety
- 3. Enhanced Economic Vitality
- 4. Reduced Environmental Impact
- 5. Increased Quality of Life

Functional Classification

The Functional Classification System defines a road's role in the overall context of the highway transportation system. It is used to define which standards are generally desirable for roadway width, right of way needs, access, spacing, and other factors and other specifications. The Functional Classification System hierarchy is defined by the following hierarchy:

- Principal Arterial - 4 Lane**
- Minor Arterial - 4 Lane**
- Principal Arterial - 3 Lane**
- Minor Arterial - 3 Lane**
- Principal Arterial - 2 Lane**
- Minor Arterial - 2 Lane**
- Principal Arterial - 1 Lane**
- Minor Arterial - 1 Lane**

Local Roads and Streets are the lowest classification. Their primary purpose is to carry local generated traffic at relatively low speeds. Local roads provide connectivity through neighborhoods, but generally should be designed to discourage through traffic.

Intermediate roads are the next classification. Their primary purpose is to carry local generated traffic at relatively low speeds. Intermediate roads provide connectivity through neighborhoods, but generally should be designed to discourage through traffic.

Collector roads are the next classification. Their primary purpose is to carry local generated traffic at relatively low speeds. Collector roads provide connectivity through neighborhoods, but generally should be designed to discourage through traffic.

Principal Arterial roads are the next classification. Their primary purpose is to carry regional generated traffic at relatively low speeds. Principal arterial roads provide connectivity through neighborhoods, but generally should be designed to discourage through traffic.

Minor Arterial roads are the next classification. Their primary purpose is to carry regional generated traffic at relatively low speeds. Minor arterial roads provide connectivity through neighborhoods, but generally should be designed to discourage through traffic.

Functional Classification Map and Cross Sections

The LRTP planning process led to the development of the Functional Classification Map, shown on the front page. The City of Billings, Yellowstone County and Blaine County's Department of Transportation will update the map regularly as part of the planning efforts in the urban area. To support the Functional Classification Map, typical roadway cross sections are provided in the right of the City of Billings and Yellowstone County. More details and guidance on these cross sections can be found in the City of Billings and Yellowstone County's Subdivision Regulations.



Public Outreach for LRTP

Develop Public Participation Plan

- Goals and objectives for outreach
- Strategies for engagement
 - Promote
 - Community Meetings
 - Online Engagement – MetroQuest Surveys
 - billingslrtp.com
- Branding, logo, templates
- Schedule – Align with key project dates and deliverables



Public Outreach for LRTP

Online Engagement Tools – Goals and Priorities

The screenshot shows a web interface for 'Improvement Strategies'. The left sidebar contains a navigation menu with 'WELCOME', 'STANDARD SURVEY', 'PRIORITIES', 'MAP MARKERS', and 'WRAP UP'. The main content area is titled '3 Improvement Strategies' and includes a 'What to do' button and a 'Next Task' button. Below the title, there is a section for ordering items, with a list of categories: Education, Signage, Activities and Events, Improved Facilities, New Recreational Trails, Land Use Management, Safety Initiatives, and Facility Maintenance. A 'Suggest another item' button is at the bottom. A text box asks: 'How can we best improve bicycling and walking in the region? Select your top 3 preferred strategies and provide additional feedback with the "Comment" option.' Below this is a drag-and-drop interface with a line and a note: 'Please drag 5 of the items above the line in your preferred order.'

The screenshot shows a web interface for 'Budget Allocation'. The left sidebar contains a navigation menu with 'WELCOME', 'GOALS AND OBJECTIVES', 'PRIORITY RANKING', 'BUDGET ALLOCATION', and 'WRAP UP'. The main content area is titled '4 Budget Allocation' and includes a 'Progress' indicator, a 'What to do' button, and a 'Next Task' button. Below the title, there is a question: 'How would you allocate funding among the following categories?' and a sub-question: 'Drag coins to invest in the categories you prefer.' Below this is a grid of categories with 'Details' buttons and a coin counter. The categories are: Bicycle Safety, Pedestrian Safety, Bicycle System Expansion, Pedestrian System Expansion, Motor Vehicle Roadway Safety, Motor Vehicle Roadway Expansion, and Transit Expansion. The coin counter shows 100 coins, with a '1' coin and a '10' coin icon. The grid shows 0 coins allocated to each category.

Category	Details	Coins
Bicycle Safety	Details	0
Pedestrian Safety	Details	0
Bicycle System Expansion	Details	0
Pedestrian System Expansion	Details	0
Motor Vehicle Roadway Safety	Details	0
Motor Vehicle Roadway Expansion	Details	0
Transit Expansion	Details	0



Public Outreach for LRTP

Online Engagement Tools – Mapping

Phase 1

Chester County Comprehensive Plan Public Survey

Progress

1 WELCOME 2 IDENTIFY TOPICS 3 YOUR PREFERENCES 4 **MAP PREFERENCES (optional)** 5 STAY INVOLVED

What to do Next Task

Please drag and drop at least 1 marker on the map.

Thumbs Up Thumbs Down Comment... Home

Google

Help Privacy About MetroQuest

Phase 2

Satellite Topography Map

LAYERS

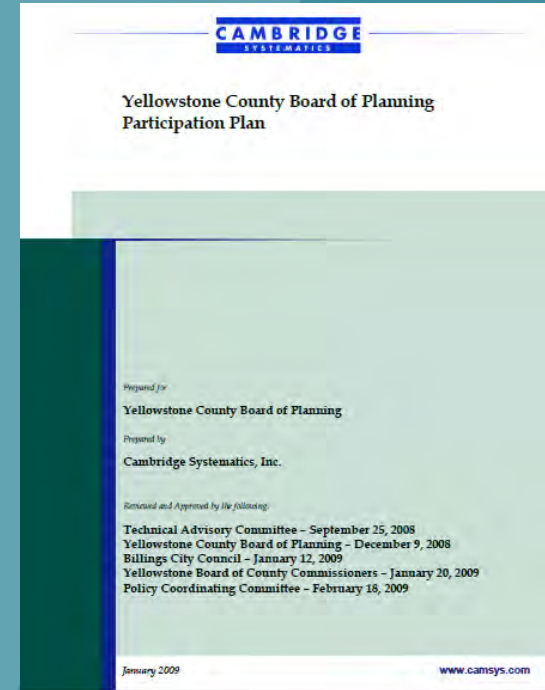
- Study Area
- Bike Projects
- Trail Projects
- Pedestrian Projects- SRTS/Crossings
- Pedestrian Projects- Segment
- Freight Projects- Intersections
- Freight Projects- New Roadways
- Freight Projects- ITS/Advanced Warning
- Transit Projects- Routes
- Transit Projects- New Service Area
- Intersection Projects
- Roadway Projects

Map data ©2017 Google Terms of Use Report a map error



Public Participation Plan Overview

- Review current plan
- Identify goals for update
- Identify performance measures for public participation
- Draft plan to SC
- Updated draft to MDT and FHWA
- Final plan to SC
- Public comment period - 45 days
- Final adoption with LRTP adoption



Next Steps

- Next 2-3 months
 - Develop work plan and detailed schedule
 - Obtain data
 - Develop goals, objectives, & performance measures
 - Kick-off public participation plan
 - Schedule Steering Committee meetings



12/08/2017 - Kick off Meeting

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Scott Walker	MPO Transportation Planner PLSD	walkers@ci.billings.mt.us
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Aaron Lebsack	City of Billings - Engineering	lebsacka@ci.billings.mt.us
ERIN CLANNEY	CITY ENGINEERING	clannee@ci.billings.mt.us
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Katie Potts	MDT Planning	
Carol Strizich	MDT Planning	
Robyn Austin	Kittelson & Associates, Inc.	

Kickoff Meeting Agenda

2018 Billings Urban Area Long Range Transportation Plan

December 8, 2017 @ 8:30 AM - 10:30 AM

1. Introductions and Roles \rightarrow POC
2. Schedule \rightarrow updates \rightarrow adopted by 2018
3. Coordination with Other Projects

LRTD
 POP \rightarrow summer...
 \rightarrow contaminated data \rightarrow Nov 20, 2018
 \rightarrow schedule into 3 out (months)

4. Areas of Emphasis / Success Factors
 - a. What would you like to see in the L RTP?
 - b. What would you define as a success for the L RTP?

5. Emphasis Areas by Chapter
 - a. Policy Requirements
 - b. Land Use
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 - e. Truck Services and Facilities
 - f. Rail Facilities
 - g. Pedestrian and Bicycle Facilities
 - h. Safety
 - i. Security

Lockwood Pedestrian Traffic
 \rightarrow Peak 2 Peak
 Bypass \rightarrow TRD
 Pedestrian
 • possible funding source for
 Turner Belt Loop Road (SS)
 • connect to next road
 to Hwy 3
 need to include

City Projects (Anders)

MET

\rightarrow some re-eval of route
 \rightarrow Transit Asset Management Plan
 \rightarrow Oct 2018
 \uparrow Add performance
 measures

MOT
Helen

\rightarrow Adair Street Corridor
 \rightarrow Main Street \rightarrow
 \rightarrow 2nd Ave

Airport

\rightarrow updates
 \rightarrow Kevin Plan \rightarrow Director

• 2) residents survey (work)

• 2) residents survey (work)

• 6) residents survey (work)

• 5) Yellowstone Ave \rightarrow interchange changes at 27th & Lockwood

6. Data Collection
7. Plan Documentation \rightarrow add exec summary
8. Public Outreach for L RTP
9. Public Participation Plan (PPP) Overview

Next Steps
North projects (safety)
 Hwy / 50th - MOT (decision complete)
 Central / 50th - Center (under review)



Appendix B

Steering Committee Meeting #2



1. Introductions (Sign-in sheet)
2. Schedule / Work Plan
3. Study Area
 - a. Confirm study area for LRTP
4. Data Collection
 - a. Review data request
5. Plan Documentation for LRTP
 - a. Review proposed template for LRTP report (Attachment A)
6. Travel Demand Model
 - a. Status update
7. Public Outreach for LRTP
 - a. Review Draft Public Involvement Plan (Attachment B)
8. Public Participation Plan (PPP) Update
 - a. Discuss key topics / requirements for a PPP (Attachment C)
 - b. Review proposed outline (Attachment D)
 - c. Review proposed template for PPP report (Attachment E)
9. Next Meeting (March 8, 10 AM – 12 PM)
 - a. Goals, objectives, and performance measures for LRTP
 - b. Confirm intersections for collecting traffic counts / additional analysis
 - c. Review of what's been completed since 2014 LRTP
 - d. Continued discussion on public outreach for LRTP and PPP

YELLOWSTONE COUNTY

BOARD OF PLANNING



public participation plan

prepared by



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APPENDICES

A: TEMPLATES

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B: FEDERAL AND STATE REGULATIONS

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C: GLOSSERY OF FREQUENTLY USED PLANNING TERMS

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Participants in Process

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Public Participation Plan Update – Outline and Discussion Topics

Discussion Questions

Goals for the Public Participation Plan (PPP) Update

- Comply with all current federal requirements
- Serve as a guide for MPO staff on what is required and what are best practices for public participation in the planning process
- Serve as a guide for the public on how and when to participate in the planning process
- Others?

Discussion Topics

- What about the previous plan (Yellowstone County Board of Planning Participation Plan, January 2009) worked well?
- What didn't work well?
- Current outreach strategies
- Performance evaluation strategy

Current Public Participation Plan Outline

1. Introduction

- a. Federal and State Requirements
- b. PPP Purpose and Objectives
- c. PPP Update

2. Public Participation Procedures

- a. Ongoing PPP Procedures
- b. Project Specific Public Participation

3. Program and Plan Specific Procedures

- a. Transportation Improvements Plan
- b. Regional Transportation Plan

4. Appendix

- a. PCC and TAC Members
- b. Task Force Members and Contacts
- c. Local Media Contacts
- d. Project Specific Public Participation Guidance
- e. Potential Planning Agencies and Stakeholders
- f. Public Meeting Locations

Proposed Public Participation Plan Update Outline

1. Introduction

- a. How to Use the PPP?
- b. What is an MPO?
- c. The Transportation Planning Process

2. Participants in the Process

- a. Standing Committees
 - i. Who/How/When
 1. Technical Advisory Committee/Policy Coordinating Committee/Neighborhood Task Forces
- b. The Public

3. Products

- a. Transportation Improvements Plan
- b. Long Range Transportation Plan
- c. Public Participation Plan
- d. Unified Planning Work Plan
- e. Special Projects

4. Strategies

- a. Strategies and Tools Utilized for Public Participation
- b. Evaluation Strategy

References

Appendix:

- Templates – Media releases, Public Notices (anything else useful)?
- Federal and State Regulations
- Glossary of frequently used planning terms

21 points to check for the Public Participation Plan

1. Does the PPP provide summary language which defines a process for providing interested parties* with reasonable opportunities to be involved in the metropolitan transportation planning process [450.316(a)]
 - a. **Section 2-2: Directs interested parties to City/County Planning annual report, The City Link, and MDT District Design Coordination Report**
 - i. **Identifies how to find out about ongoing planning activities but not clearly states how to become involved.**
 - ii. **“Notifications of upcoming projects and opportunities for public involvement will be made to all interested parties.” (Section 2-3)**
 1. **How does the MPO accomplish this? How do you define “interested party”**
 2. **How to get on the “interested party” mailing list**
2. Does the plan provide summary information about what the MPO is and what the MPO's role is in the metropolitan planning process [450.316 (a)]?
 - a. **Introduction: Covers the role of the MPO but does not define what an MPO is. Assumes the reader already know this information.**
3. Does the plan indicate how to get involved in the planning process, including how to serve on MPO committees [450.316 (a)]?
 - a. **No.**
4. Does the plan provide contact information for MPO staff and/or the person responsible for public involvement at the MPO [450.316 (a)]?
 - a. **No.**
5. Does the plan provide a description of general planning documents (TIP, STIP, LRTP, CMP, PPP) and/or a glossary of frequently used planning terms [450.316 (a)] ?
 - a. **Describes general planning documents – Yes**
6. Does the plan include a glossary of frequently used planning terms, acronyms and/or terms of art, commonly used in the planning process such as ADA, Title VI, EJ and LEP [450.316(a)(1)(iii)]?
 - a. **No**
7. Does the plan provide a description of the "current" public outreach strategies used to engage the public in the transportation planning process [450.316 (a)]?
 - a. **Yes, but could be updated and clarified**
8. Does plan provide detail on how it engages in public education efforts designed to make the transportation planning process and decisions it produces easier to understand in a laypersons’ terms [450.316 (a)]?
 - a. **Needs improvement**
9. Was the participation plan developed by the MPO in consultation with all interested parties* [450.316 (a) (1)]?

a. ???

10. Is there a discussion about how the public participation plan was developed or when it was last updated [450.316 (a) (1)]?

a. No

11. Is there language in the public participation plan which references how the process addresses the principles of the Title VI of the Civil Rights Act of 1964 [450.316 (a)(1)]?

a. **Mentioned in section 2-5: Public Informational Meetings but could be better highlighted.**

12. Does the plan describe the availability of public information (technical information and meeting notices) available in electronically accessible formats and means, such as the World Wide Web [450.316 (a)(1)(iv)]?

a. **City and County websites are listed but not clear what information and notices are provided through these sites.**

13. Does the plan describe techniques for employing visualization** techniques to describe metropolitan transportation plans and TIPs [450.316 (a) (1) (iii)]?

a. **2-5 Informational Public Meetings: "Graphics and other visual aids will be used as necessary"**

14. Is the format of the plan user friendly and does it include visual images to help with the "readability" of the plan [450.316 (a) (1) (iii)]?

a. **Layout is clear but lacks visuals**

15. Does the plan provide detail relating to plan document review (LRTP, TIP, PPP etc.) including information about the timeframe for public review and comment, at key decision points [450.316(a)(1) and 450.316 (a)(1)(i)]?

a. **Sections 3.1 and 3.2 address the TIP and RTP but do not provide clear direction on how and when to participate.**

16. Is there discussion in the plan about the plan (LRTP, TIP, STIP) amendment process, including how a member of the public can comment and/or review amendments to a planning document before and after the amendment is executed [450.316(a) (1) (i) and 450.316(a) (1) (ii)]?

a. No

17. Does the plan detail how consideration and response to public input received during the development of the metropolitan transportation plan and the TIP will be handled [450.316(a) (1) (VI) and 450.316(a) (1) (viii)]?

a. Yes

18. Does the plan indicate how many days and/or by what method responses submitted for public input will be responded to [450.316 (a) (1) (viii)]?

a. No

19. Does the plan specify a minimum public comment period of 45 calendar days shall be provided before the initial or revised participation plan is adopted by the MPO [450.316(a)(3)]?

a. No

20. Does the plan reference coordinating with the statewide transportation planning public involvement and consultation processes [450.316(a) (1) (ix)]?

a. No

21. Does the plan discuss a strategy for periodically reviewing the effectiveness of the procedures and strategies contained in the participation plan to ensure a full and open participation process [450.316(a)(1)(x)]?

a. Plan states it will be reviewed but not a specific strategy for doing so.



Public Involvement Plan - DRAFT

January 2018

Prepared by



2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN - PUBLIC INVOLVEMENT PLAN

INTRODUCTION

This document presents the public involvement plan (PIP) for the 2018 Billings Urban Area Long Range Transportation Plan (LRTP). Public involvement and agency coordination during this plan is critical for plan development, acceptance, and adoption by the Policy Coordinating Committee (PCC), Yellowstone County Planning Board (YCPB), Federal Highway Administration (FHWA), Montana Department of Transportation (MDT), and City of Billings. The PIP was developed based on past public involvement efforts for the 2014 LRTP and to be consistent with the public involvement elements of the YCBP Participation Plan (2009) and MDT's Public Involvement Plan (2018). The following topics are covered:

- **Approach and Goals**
- **Agency Involvement**
- **Tools and Resources**
- **Public Involvement Action Plan**

The LRTP will include four key items: 1) changes to the Billings transportation network, land uses, and socioeconomic characteristics that have occurred since the 2014 plan; 2) integration of completed pedestrian, bicycle, transit, freight, roadway and security plans; 3) evaluation and prioritization of future infrastructure investments, and 4) incorporation of the Fixing America's Surface Transportation Act (FAST Act), MDT's statewide planning requirements, and local requirements.

Designated Public Information Contact

- **Billings Yellowstone County MPO:**
Scott Walker, 406.657.8246, walkers@ci.billings.mt.us
- **Consultant Team:**
Andy Daleiden, Project Manager, 208.338.2683, adaleiden@kittelson.com
Robyn Austin, Public Involvement Specialist, 208.338.2683, raustin@kittelson.com

APPROACH AND GOALS

A collaborative and context-sensitive public engagement process is proposed with this plan. The project team is committed to a public involvement approach that strives to achieve the goals listed below.

- Facilitate an open, honest, and transparent decision-making process conducted through constructive two-way communication between the project team, agencies, and the public.
- Provide early and continuous opportunities for the public to share values, understand the opportunities and constraints within the study area, develop potential solutions, and raise issues and concerns to be considered.
- Inform and encourage community participation.
- Improve the public involvement process by measuring the effectiveness and modifying methods based on evaluation.

This PIP outlines how and when interested parties and stakeholders can provide and receive information throughout the life of the LRTP.

AGENCY INVOLVEMENT

Steering Committee (SC): Includes the MPO staff, City of Billings staff, Yellowstone County staff, MDT staff, MET Transit staff, Lockwood Steering Committee, and elected officials from the City of Billings City Council, County Commission, and YCPB;

- Role: Attend monthly meetings with the consultant team. Review and provide comments on the project deliverables. Provide guidance and decision making to the plan development.

Technical Advisory Committee (TAC): Includes staff and representatives from the MPO, City of Billings, Yellowstone County, MET Transit, and MDT.

- Role: Provide a technical resource and sounding board to the plan development.

Elected Officials: Billings City Council, City/County Planning Board, Yellowstone County Board of Planning, and Yellowstone County Commission.

- Role: Provide insights to the project and support for plan adoption.

Policy Coordinating Committee (PCC): Includes the Board of Yellowstone County Commissioners, City of Billings Council, Yellowstone County Board of Planning, MDT, and FHWA.

- Role: Provide insights to the plan development and adopt the plan.

Resource Agencies (RA): Resource agencies provide experience and knowledge that is vital to developing a successful, community-driven, multimodal plan. These agencies will be notified of all public involvement opportunities and given the option for interviews/in-person meetings.

- Role: Provide insights to the plan development.

TOOLS AND RESOURCES

Branding and Logo

Consultant will develop a logo, color scheme and reporting templates in order to develop brand awareness and cohesiveness with plan materials.



- Evaluation: Branding implemented in all plan materials

Webpage

The primary purposes of the website are to provide a public, 24-hour source for project information and to act as a location for the public to provide comments. The website will be used to post draft and final deliverables, host links to online surveys and mapping, invite and record public comments, and information on upcoming meetings. This will be an update to the existing website:

www.BillingsLRTP.com

- Evaluation: Number of website visits

Media Coordination

Outreach will be conducted to appropriate media outlets, to disseminate information regarding information on the plan and advising the community of public involvement opportunities.

- Evaluation: Number of news articles and media events

Print Materials

The consultant team will prepare two (2) meeting mailers for each public informational meeting (PIM). The meeting mailers will introduce the project, overall schedule, and identify the date and location for the meetings. The two meeting mailers will be postmarked and distributed by the MPO. With input from the consultant team, the MPO will develop four (4) news releases for notifications about the plan development.

Youth Engagement

Involving elementary, middle, and high school teachers is a good way to inform and involve not only students, but also their parents. Social studies and government classes provide a good connection to this planning effort. Youth involvement is also a recommendation of Environmental Justice/Title VI best practices. The consultant team plans to provide outreach to two schools during the plan development.

- Evaluation: Number of students participating.

Online Engagement

A combination of online surveys and an interactive web map will be developed using the tool MetroQuest to solicit input from the public and stakeholders on the existing transportation deficiencies and successes and proposed projects included in the plan. This online survey will be linked to the website and available leading up and during the two PIMs. The survey questions will be the same ones used at the PIMs.

Two interactive maps/surveys will be developed. The first will occur during the goal setting & needs identification phase and the second map will be used during the project identification phase to present proposed projects for comment and prioritization.

- *Evaluation: Number of unique comments received*

Stakeholder Interviews

Consultant will set up, attend, and summarize one-on-one meetings with individuals and groups who have a key interest or stake in the plan. The purpose of these meetings will be to:

- Introduce the plan
- Identify existing transportation deficiencies and/or concerns that should be addressed with the plan
- Gather input on the proposed projects included in the plan

Meetings will be scheduled with several organizations. Consultant will coordinate with the MPO to identify organizations and attend these stakeholder interviews.

- *Evaluation: Feedback collected from stakeholders; stakeholders continued involvement.*

Public Informational Meetings

Two (2) public informational meetings (PIMs) are planned during the development of this plan. **These meetings are tentatively scheduled for Spring and Summer 2018.**

The Spring PIM will provide the public an opportunity to review and provide input on the following three items:

1. What transportation projects have been completed since the 2014 LRTP?
2. What transportation deficiencies exist today?
3. What would you like to see for the future transportation system?

The Summer PIM will provide the public an opportunity to review and provide input on the following items: project list, evaluation, prioritization, and funding.

The PIMs are planned to be held in the study area. Summary documents of each PIM and the public comments received will be prepared for each PIM. The consultant team will work with the MPO to ensure the PIMs are appropriately and effectively advertised to the public through a project mailer, news releases, and project website.

- *Evaluation: How many attendees; How they heard about the meeting; Demographics of participants (age, gender, race); Number of comments received*

Social Media (Plan and online survey engagement)

Social media content and graphics will be developed and provided to MPO to publish on their existing social media networks to provide updates on the plan and to promote meetings and opportunities for online engagement.

- *Evaluation: Number of social media engagements*

PUBLIC INVOLVEMENT ACTION PLAN

Activity	Major Task	Responsibility
SC Meetings	Member Recruitment	MPO
	Schedule meeting locations, date & time	MPO with KAI support
	Prepare meeting materials and meeting summaries	KAI
	Facilitate and lead meetings	KAI with MPO support
TAC/City Council/P&Z/PCC Meetings	Schedule meeting locations, date & time	MPO with KAI support
	Prepare meeting materials, facilitate and lead meetings and prepare meeting summaries	KAI
Branding and Logo	Prepare plan logo, color scheme, and document templates	KAI
Webpage	Update and maintain	KAI
Youth Engagement	Identify school and classroom opportunities	MPO with KAI support
	Develop materials and meeting summary	KAI
Media Coordination	Develop and distribute media releases	KAI with MPO support
Print Materials	Develop project flyer and meeting announcements	KAI with MPO support
Online Engagement (including MetroQuest)	Develop two online survey, mapping tools and comment summaries	KAI
Stakeholder Interviews	Develop stakeholder list	MPO with KAI support
	Schedule, conduct and summarize interviews	KAI
Public Information Meetings	Schedule meeting location, date & time	MPO with KAI support
	Notifications and media releases	KAI with MPO support
	Technical and written materials and displays, sign in and comment sheets, facilitate and lead meeting, and prepare meeting summaries	KAI
	Prepare social media content and graphics	KAI
Social Media	Post and public content and provide analytics	MPO with KAI support

TIMELINE FOR PUBLIC INVOLVEMENT

The proposed timeline for public involvement was developed to meet the LRTP plan adoption deadline of Fall 2018.



2018 Billings Urban Area Long Range Transportation Plan



August 2018

prepared by





Chapter 1

STUDY AREA



INTRODUCTION

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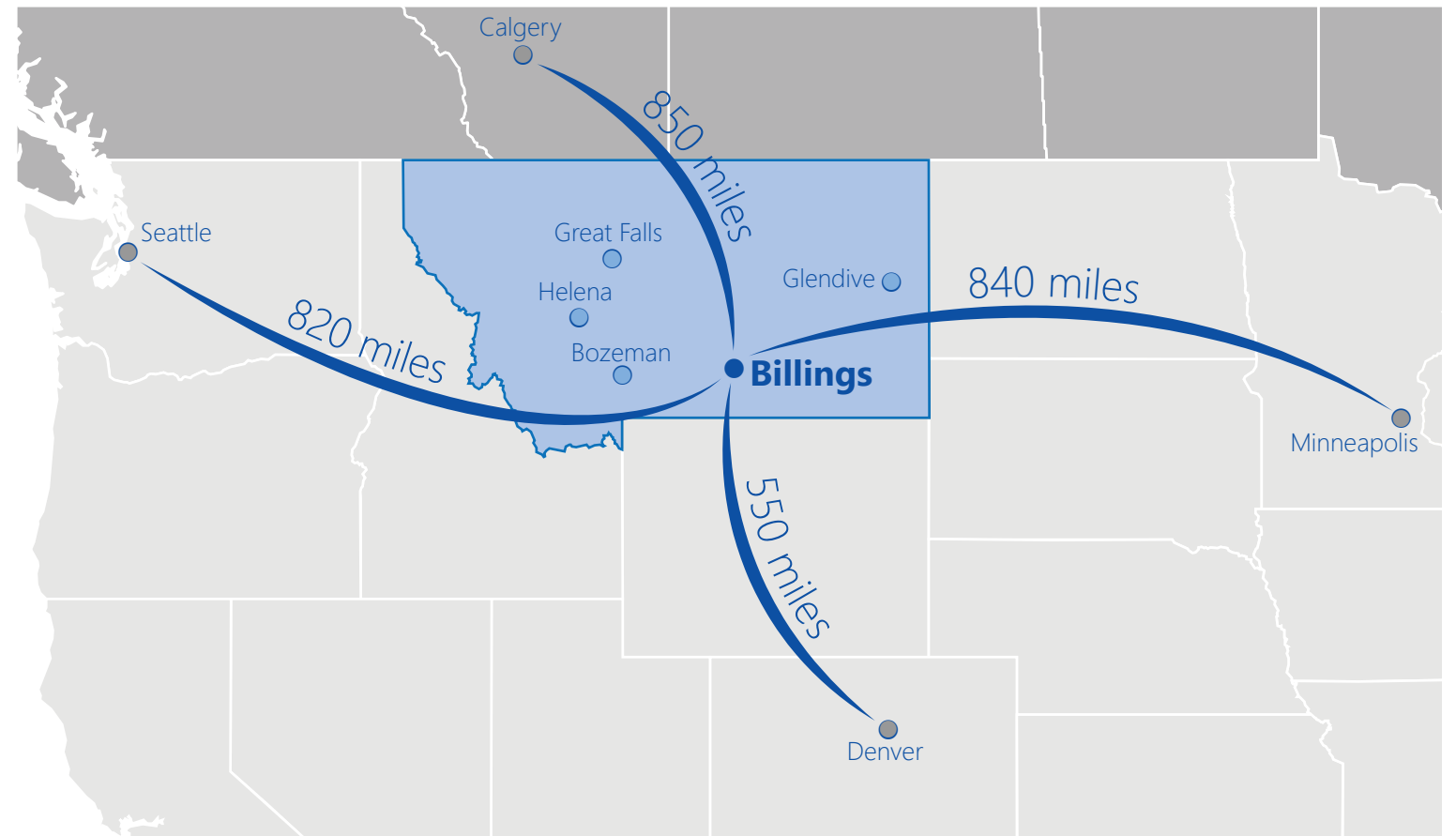
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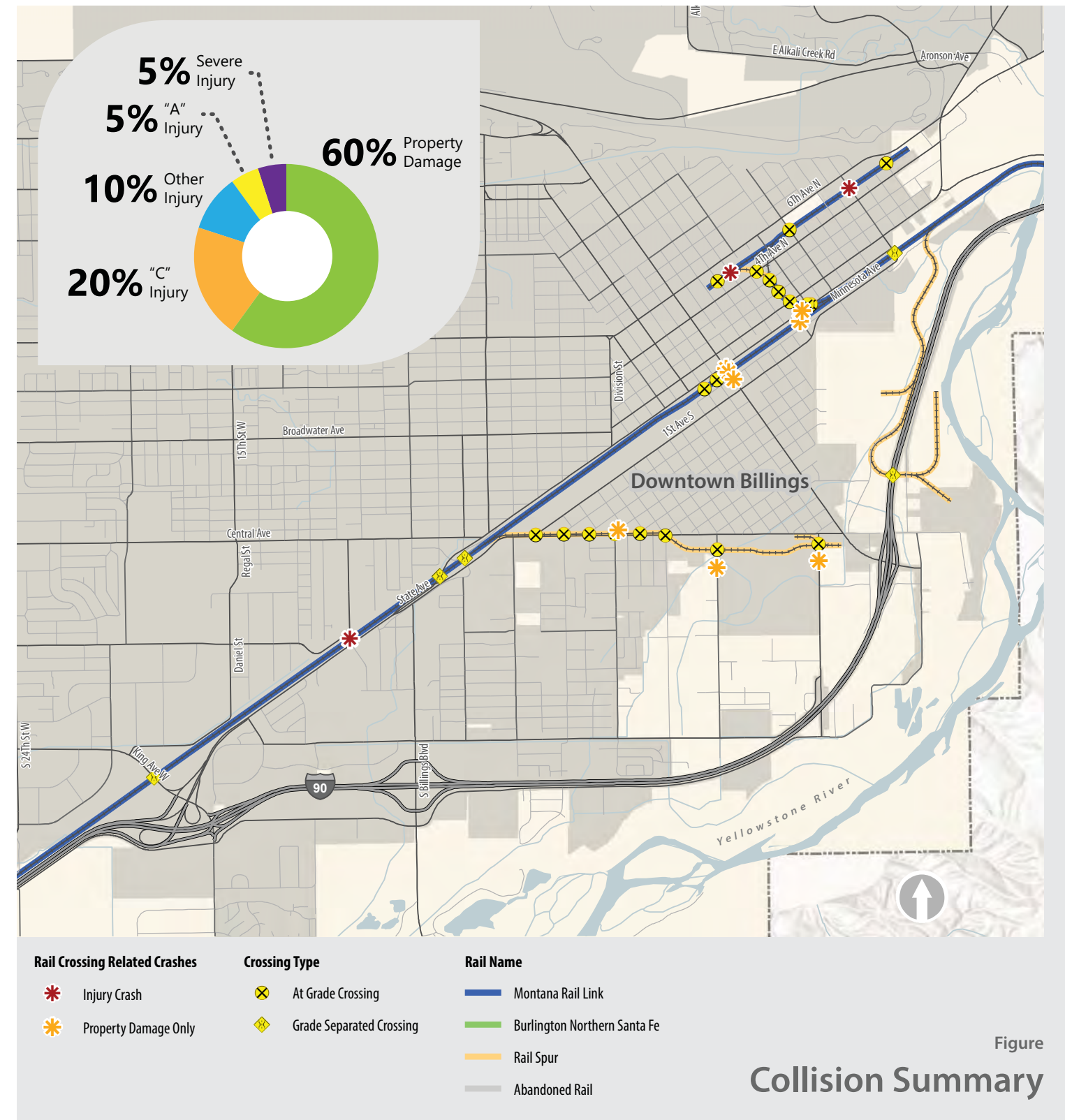
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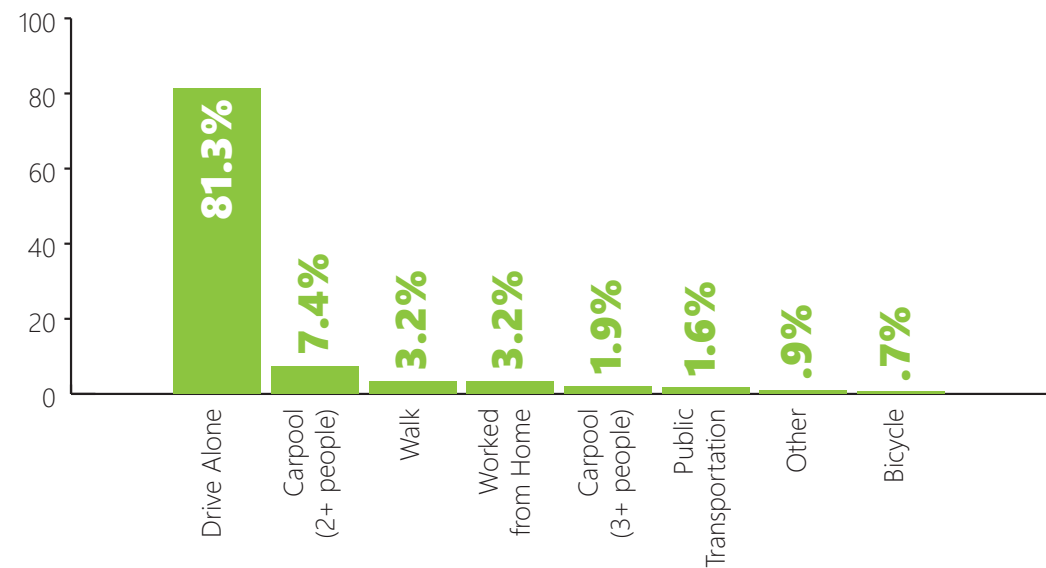
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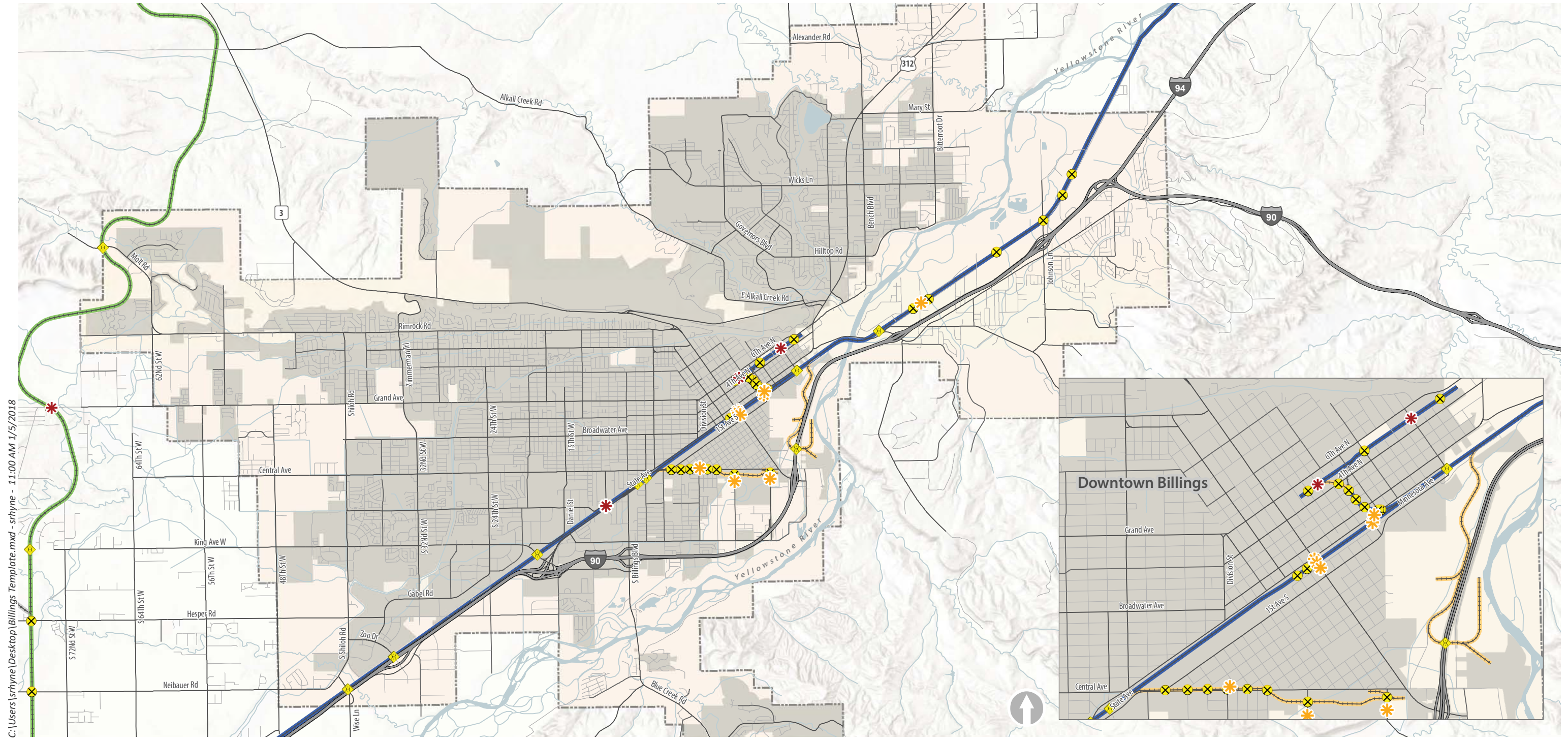
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HEADING

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Rail Crossing Related Crashes		Crossing Type		Rail Name	
	Injury Crash		At Grade Crossing		Montana Rail Link
	Property Damage Only		Grade Separated Crossing		Burlington Northern Santa Fe
					Rail Spur
					Abandoned Rail

Figure
Study Area

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Table X.X - Table Title

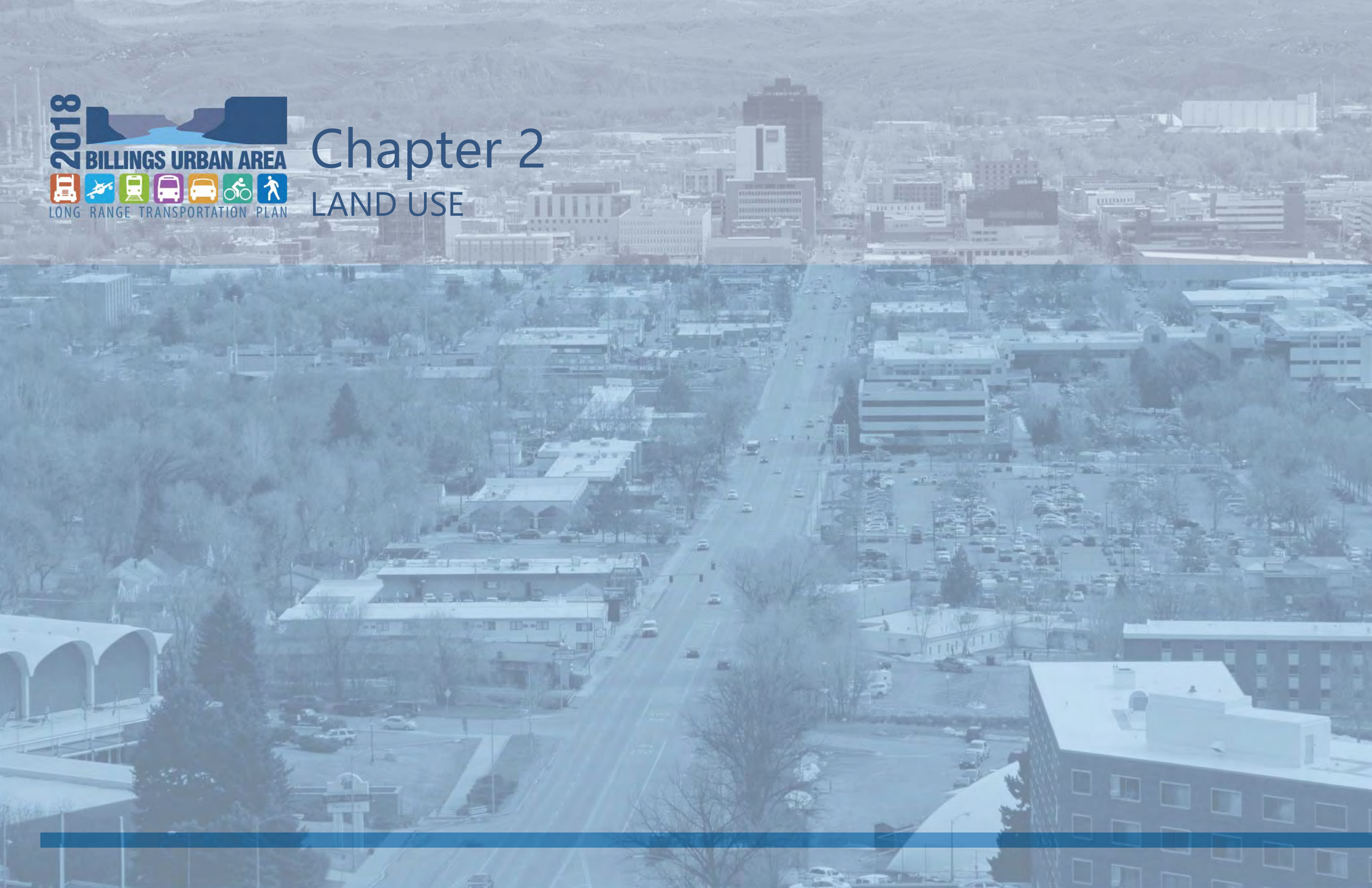
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Git quia sument odit officiam	600	800	900
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Ad conum achuist	25,000	25,300	28,000
Mae conduce acesser	13,000	12,500	10,000
Cuperem oenihil habust	500	700	750
TOTAL	82,100	73,300	79,150

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Chapter 2

LAND USE



INTRODUCTION

2ND LINE INTRODUCTION

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Sub Heading

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2018 Billings Urban Area LRTP, TDM, & PPP

Steering Committee Meeting #2 (10 AM - 12 PM)

February 8, 2018

What We'll Cover Today

- ▶ Introductions
- ▶ Schedule / Work Plan
- ▶ Confirm Study Area
- ▶ Data Collection
- ▶ Plan Documentation for LRTP
- ▶ Travel Demand Model
- ▶ Public Outreach for LRTP
- ▶ Public Participation Plan (PPP) Update
- ▶ Next Meeting

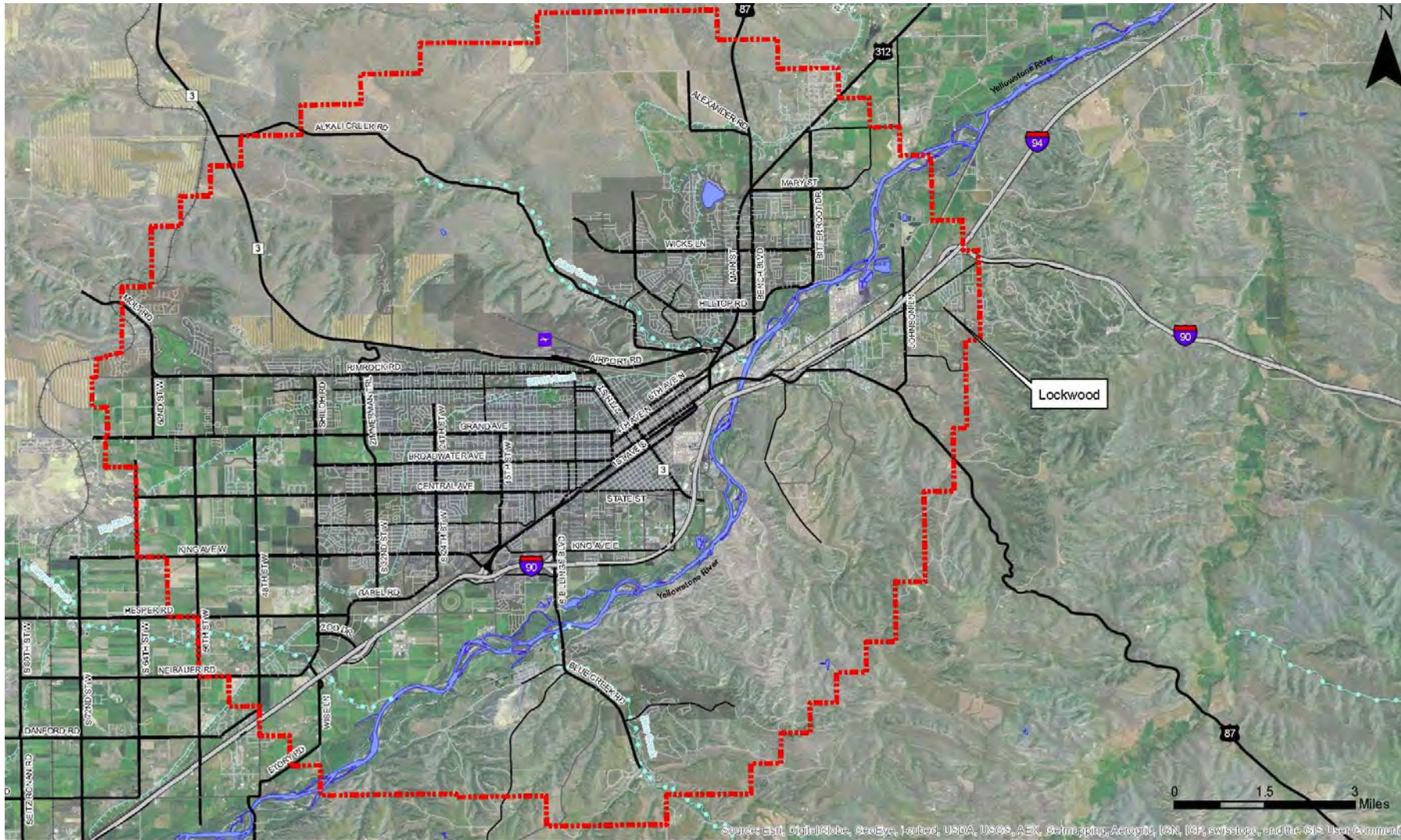
Proposed Schedule / Work Plan for LRTP

- ▶ SC #1 (Dec)
 - ▶ Kickoff meeting
 - ▶ Emphasis areas
- ▶ SC #2 (Feb)
 - ▶ Data collection
 - ▶ Public involvement
 - ▶ PPP
- ▶ SC #3 (Mar)
 - ▶ Data collection
 - ▶ Goals, objectives, perf. measures
 - ▶ PPP
- ▶ SC #4 (Apr)
 - ▶ Land use
 - ▶ Draft PPP
- ▶ SC #5 (May)
 - ▶ Current conditions
 - ▶ Final PPP (comment)
 - ▶ Open house #1
- ▶ SC #6 (Jun)
 - ▶ Needs and deficiencies
 - ▶ Final PPP (adopt)
- ▶ SC #7 (Jul)
 - ▶ Future conditions
 - ▶ Initial project list
- ▶ SC #8 (Aug)
 - ▶ Future conditions
 - ▶ Open house #2
 - ▶ Final project list
 - ▶ Financial/Funding
 - ▶ Conformity Analysis
- ▶ SC #9 (Sept)
 - ▶ Draft Plan
- ▶ SC #10 (Oct)
 - ▶ Final Plan

Value Added Items

- ▶ Intersection Traffic Count Database
 - ▶ Using ArcGIS Online / Story map
 - ▶ Benefits current and future LRTPs, other projects, and TDM
 - ▶ <http://www.arcgis.com/home/webmap/viewer.html?webmap=8a0308abed8846b6b533781e7a96eedd>

Study Area

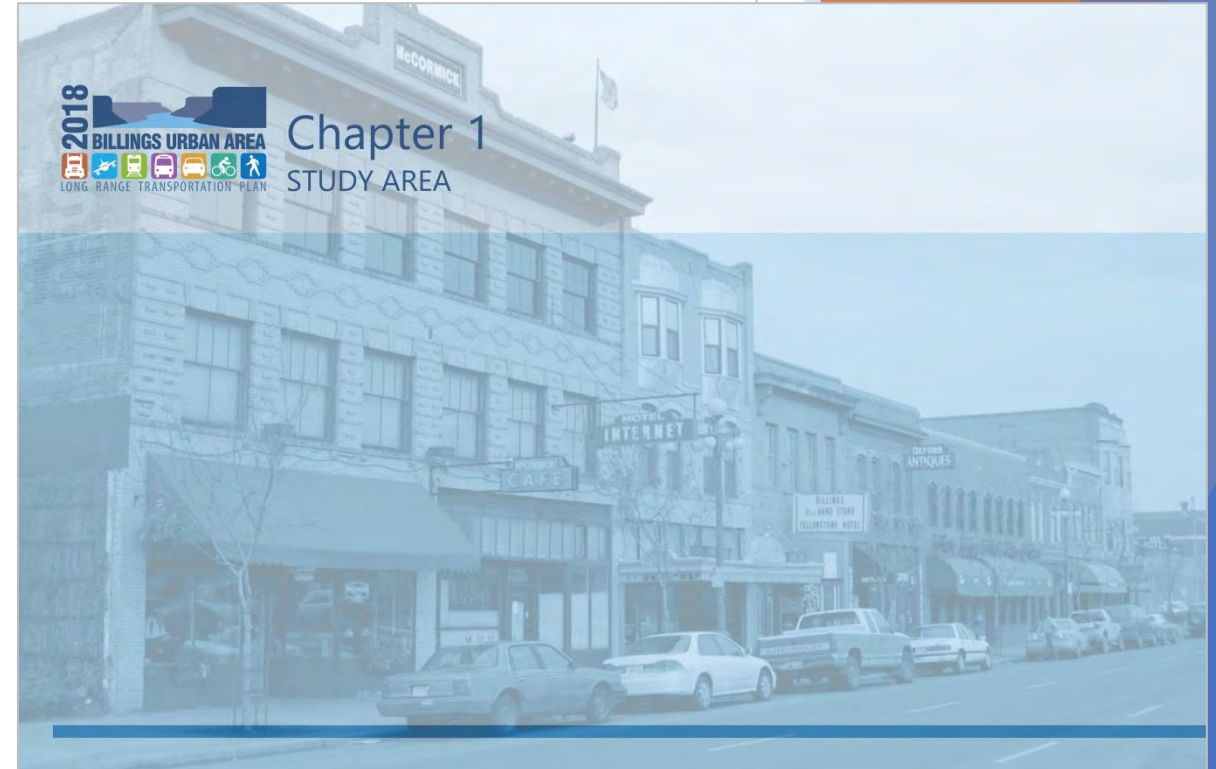


Data Collection Update

- ▶ Recent plans and studies
- ▶ GIS data
- ▶ Land use demographics
- ▶ Travel demand model files
- ▶ Surveys
- ▶ Count data
- ▶ Crash data
- ▶ Agency logos
- ▶ Contact list for various committees
- ▶ Financial data

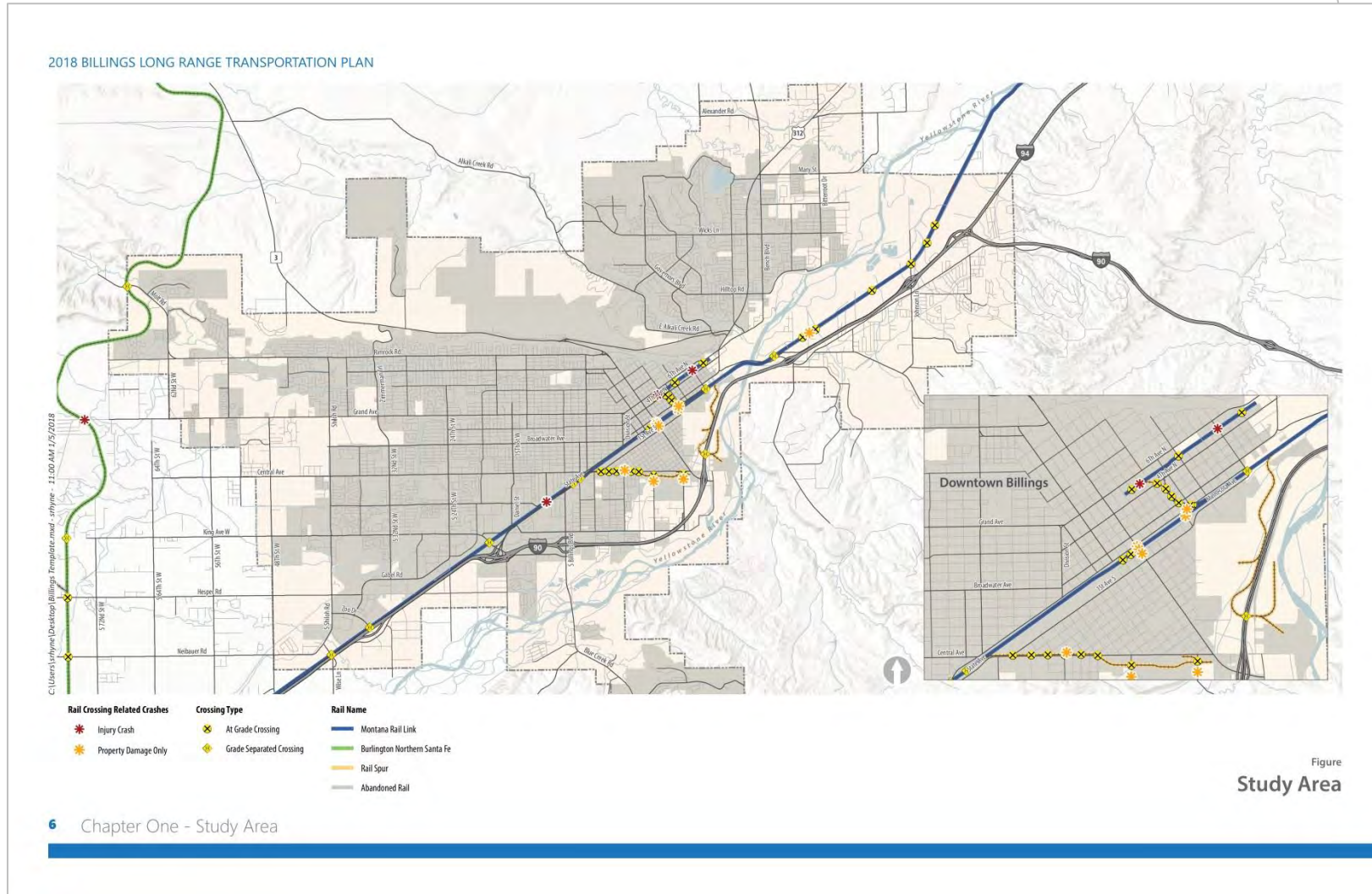
Plan Documentation for LRTP

Cover and Section Dividers



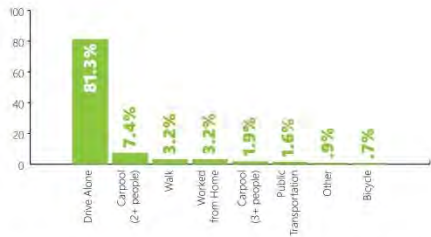
Plan Documentation for LRTP

Mapping



Plan Documentation for LRTP

Content and Infographics



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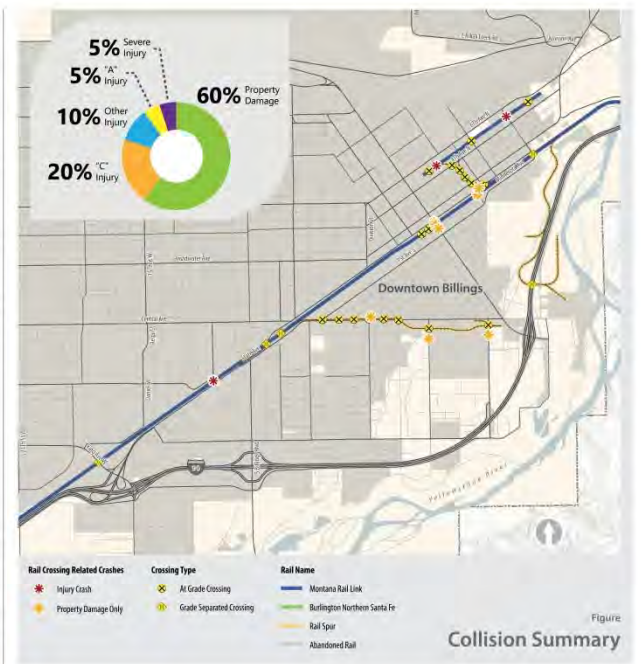
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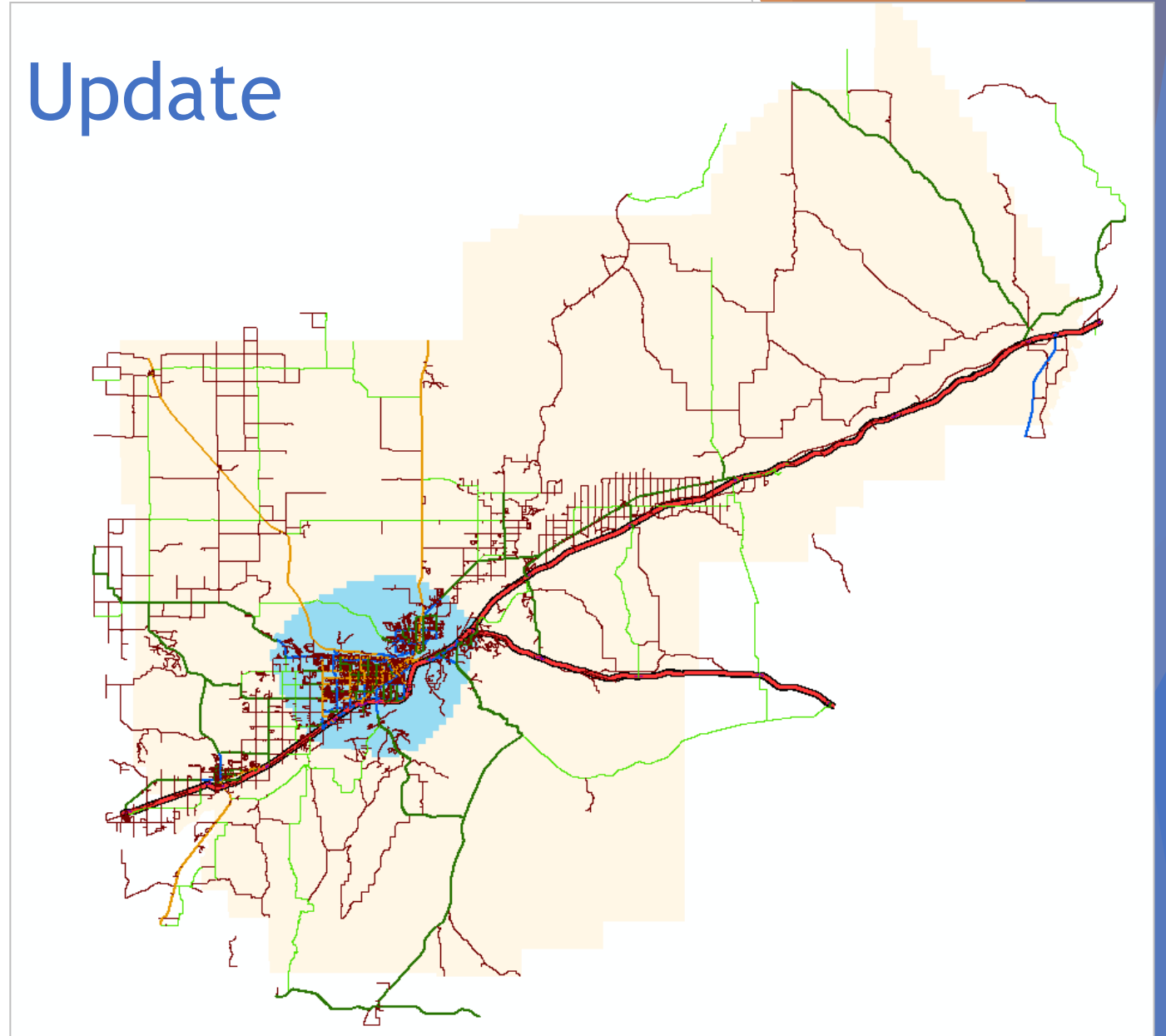
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Travel Demand Model Update

- ▶ **Model Area**
 - ▶ Current MDT model covers entire Yellowstone County
 - ▶ New model will cover Billings MPO



Current Travel Demand Model Activity

- ▶ Compiling data from MPO, City, Yellowstone County, MDT
- ▶ Road network
 - ▶ Will contain all streets
 - ▶ Will be built from GIS data provided by MDT
- ▶ Transportation Analysis Zones
 - ▶ Based on Census blocks (as in MDT model), but some may be combined or split as needed
- ▶ Household survey analysis starting

L RTP Public Involvement Plan

Draft for Review

- ▶ Approach and Goals
- ▶ Agency Involvement
- ▶ Tools and Resources
- ▶ Public Involvement Action Plan

TIMELINE FOR PUBLIC INVOLVEMENT

The proposed timeline for public involvement was developed to meet the L RTP plan adoption deadline of Fall 2018.



L RTP Public Involvement Plan

Approach and Goals

- ▶ Facilitate an open, honest, and transparent decision-making process conducted through constructive two-way communication between the project team, agencies, and the public.
- ▶ Provide early and continuous opportunities for the public to share values, understand the opportunities and constraints within the study area, develop potential solutions, and raise issues and concerns to be considered.
- ▶ Inform and encourage community participation.
- ▶ Improve the public involvement process by measuring the effectiveness and modifying methods based on evaluation

L RTP Public Involvement Plan

Agency Involvement

- ▶ **Steering Committee (SC):** Includes the MPO staff, City of Billings staff, Yellowstone County staff, MDT staff, MET Transit staff, Lockwood Steering Committee, and elected officials from the City of Billings City Council, County Commission, and YCPB.
- ▶ **Technical Advisory Committee (TAC):** Includes staff and representatives from the MPO, City of Billings, Yellowstone County, MET Transit, and MDT.
- ▶ **Elected Officials:** Billings City Council, City/County Planning Board, Yellowstone County Board of Planning, and Yellowstone County Commission.
- ▶ **Policy Coordinating Committee (PCC):** Includes the Board of Yellowstone County Commissioners, City of Billings Council, Yellowstone County Board of Planning, MDT, and FHWA.
- ▶ **Resource Agencies (RA):** Resource agencies provide experience and knowledge that is vital to developing a successful, community-driven, multimodal plan. These agencies will be notified of all public involvement opportunities and given the option for interviews/in-person meetings.

L RTP Public Involvement Plan

Tools and Resources

- ▶ **Branding and Logo - Completed**
- ▶ **Webpage - Updating existing site**
 - ▶ BillingsLRTP.com
- ▶ **Media Coordination**
 - ▶ Media releases and outreach to local media advertising plan and outreach opportunities
- ▶ **Print Materials**
 - ▶ Mailers and flyers to promote events
- ▶ **Youth Engagement**
 - ▶ Middle or High School classroom event
- ▶ **Online Engagement**
 - ▶ MetroQuest Surveys and Online Mapping Tool
- ▶ **Stakeholder Interviews**
- ▶ **Public Informational Meetings**
 - ▶ Spring and Summer
- ▶ **Social Media (Plan and online survey engagement)**
 - ▶ Content and graphics to promote the plan and opportunities to engage

Public Participation Plan Update

Goals

- ▶ **Goals for the Public Participation Plan (PPP) Update**
 - ▶ Comply with all current federal requirements
 - ▶ Serve as a guide for MPO staff on what is required and what are best practices for public participation in the planning process
 - ▶ Serve as a guide for the public on how and when to participate in the planning process
 - ▶ Others?

Public Participation Plan (PPP) Update

Discussion Topics

▶ Discussion Topics

- ▶ How does MPO staff use the current PPP?
- ▶ What about the previous plan (Yellowstone County Board of Planning Participation Plan, January 2009) worked well?
- ▶ What did not work well? Areas for improvement?
- ▶ What current outreach strategies are being used successfully? Any new ones to include?
- ▶ Performance evaluation strategy

Public Participation Plan (PPP) Update

Layout

YELLOWSTONE COUNTY
BOARD OF PLANNING



public participation plan

prepared by
KITTELSON & ASSOCIATES

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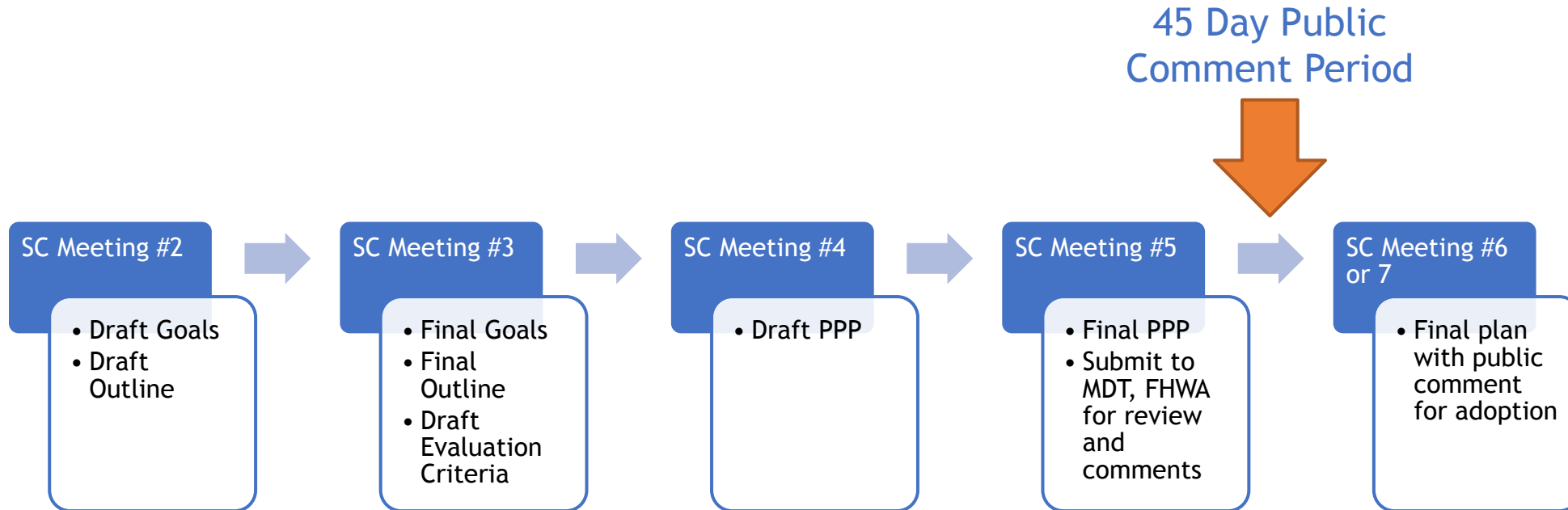
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6 Yellowstone County Board of Planning
PUBLIC PARTICIPATION PLAN

Public Participation Plan (PPP) Update Process



Next Meeting & Topics

- ▶ **Steering Committee Meeting #2**
 - ▶ March 8 (10 AM - 12 PM)
- ▶ Goals, objectives, and performance measures for LRTP
- ▶ Confirm intersections for collecting traffic counts / additional analysis
- ▶ Review of what's been completed since 2014 LRTP
- ▶ Continue discussion on public outreach for LRTP and PPP

Questions and Answers

Steering Committee
 Meeting #2 Sign-In Sheet

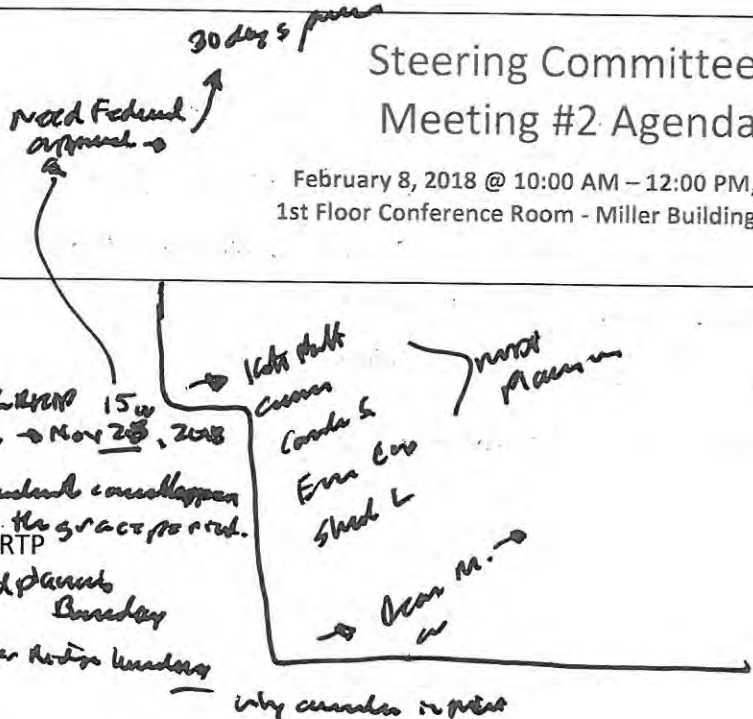
February 8, 2018 @ 10:00 AM – 12:00 PM,
 1st Floor Conference Room - Miller Building

Name	Organization	Email address
ANDY DALEIDEN	KITTELSON & ASSOCIATES, INC.	adaleiden@kittelson.com
ROBYN AUSTIN (BY PHONE)	"	raustin@kittelson.com
MIKE ARONSON (BY PHONE)	"	maronson@kittelson.com
DOUG ENDERSON	DOWL	dendersen@dowl.com
Bob Riehl	Lockwood Steering Com	bsriehl@gmail.com
Debra Hagel	MET Transit	hageld@ci.billings.mt.us
SCOTT WALKER	c/c plug.	
Joni Matthews	c/c m plug.	
Darell Turnciff	City County Planning	dturnciff@ci.billings.mt.us
Aaron Lebsack	City of Billings-Engineering	lebsack@ci.billings.mt.us
Jain Miller	Yellowstone County	tmiller@co.yellowstone.mt.gov
ERIN CLANCHY	CITY ENG.	clanchy@ci.billings.mt.us
Monica Flecker	city/county Planning	fleckerm@ci.billings.mt.us

Steering Committee Meeting #2 Agenda

February 8, 2018 @ 10:00 AM – 12:00 PM,
 1st Floor Conference Room - Miller Building

1. Introductions (Sign-in sheet)
2. Schedule / Work Plan
3. Study Area
 - a. Confirm study area for LRTP
4. Data Collection
 - a. Review data request
5. Plan Documentation for LRTP
 - a. Review proposed template for LRTP report (Attachment A)



6. Travel Demand Model
 - a. Status update

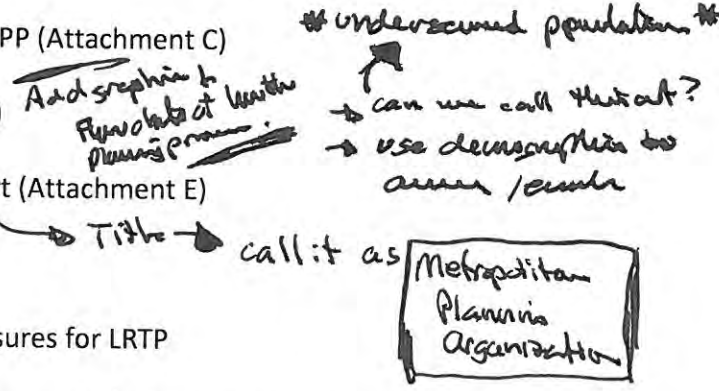
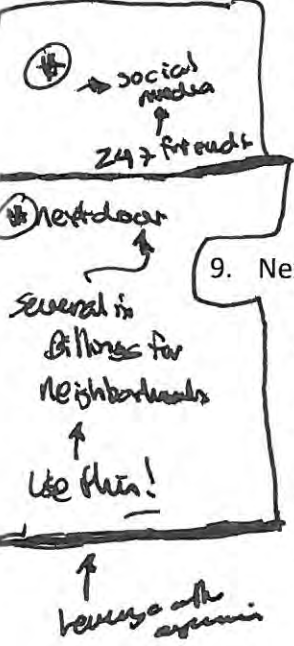
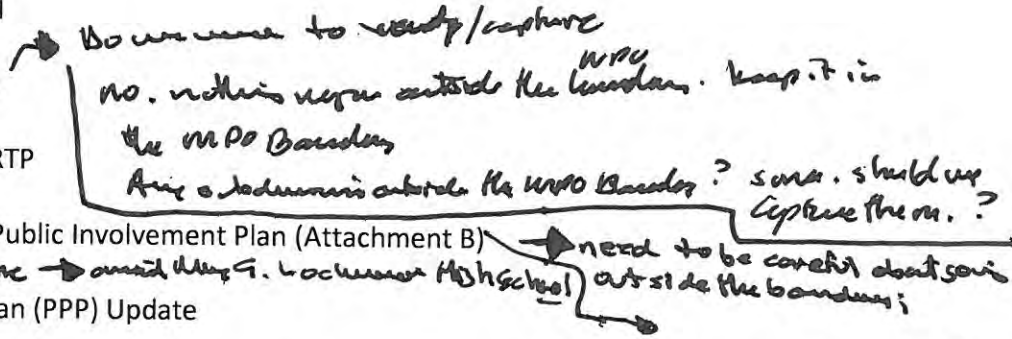
7. Public Outreach for LRTP
 - a. Review Draft Public Involvement Plan (Attachment B)

8. Public Participation Plan (PPP) Update
 - a. Discuss key topics / requirements for a PPP (Attachment C)
 - b. Review proposed outline (Attachment D)
 - c. Review proposed template for PPP report (Attachment E)

9. Next Meeting (March 8, 10 AM – 12 PM)

- a. Goals, objectives, and performance measures for LRTP
- b. Confirm intersections for collecting traffic counts / additional analysis
- c. Review of what's been completed since 2014 LRTP
- d. Continued discussion on public outreach for LRTP and PPP

Handwritten note: *Handwritten meeting*



PPP Update

- NPO
- the 2009 PPP was the first one! Need for requirements
 - not as well used by NPO → inherent to NPO staff
 - need to highlight structure, add structure to evaluation and checklist
 - add new information
 - help with implementation
 - define the evaluation process → report and / benchmarks

Keep it as a living document

Steering Committee Meeting #2 Notes

February 8, 2018 @ 10:00 AM – 12:00 PM, 1st Floor Conference Room - Miller Building

- Introductions (Sign-in sheet)
- Roll call

2. Schedule / Work Plan

- Carol and Katie: Conformity dates sometime November (November 15th or 28th need to confirm)
 - Needs to be wrapped up for a final adopted plan in November to avoid lapse.
 - The would lose the ability to make changes to TIP projects in PE phase and could not start new projects.
 - November date is federal approval by that date so local plan adopted 30 days prior (mid October)
 - Due to the tight timeline SC members will
 - GIS Story Map – Where information is hosted/added to and updated
 - Does see a value added including this in the project
 - Provide more framework at next SC meeting
 -

3. Study Area

a. Confirm study area for LRTP

- MPO boundary has been updated
 - Updated in 2014 and missed some of the East side near I-94 so went back to PCC to extend the boundary to include that area.
 - Very west end of Rim Rock has large development. Copper Ridge area? Will need to look at that area and see if it needs to be adjusted in the future.
 - Keep in mind that if we include Laurel Urban area then we need to be sure to include them in the decision making process
 - Currently not including so will move forward with current boundary

4. Data Collection

a. Review data request

- Laura Katie – TDM files are in the process of getting them ready just not ready right now. Will have financial data soon.

5. Plan Documentation for LRTP

a. Review proposed template for LRTP report (Attachment A)

- Prefers the 11x17 for ease of viewing materials – Not easy to carry about but the last plan layout worked well so decided to stay with the large format
- Infographic and visualizations will be key to share with individuals with less technical knowledge

6. Travel Demand Model

a. Status update

Mike and Dean

- Currently in data collection mode
- Subdivisions that impact traffic are within the boundary. Developments outside the boundary don't seem to be a concern at this point
- MDT Carol: Be careful about what components outside that boundary were looked at s expanding the boundary to include those areas.
- Model boundary does not have to match the MPO boundary
- Can include Laurel as long as we have a growth prediction.
- No anticipated major land use changes outside the current boundary – Current MPO boundary is fine
- **No questions or updates to the current activity**

7. Public Outreach for LRTP

a. Review Draft Public Involvement Plan (Attachment B)

- Timeline – Lockwood Mid-May school vote on May 9th
- Before summer vacation June 1st
- School district 2 – Great working relationship can work with them
- Math and engineering classes – will share contacts for enriched math classes – Can point where this will work well
- STEM program – Principal in Lockland
- Provide what we heard from the kids at the public meetings
- Goes well with long term planning
- College of technology – contacts
- Carol – Focus on underserved population

8. Public Participation Plan (PPP) Update

a. Discuss key topics / requirements for a PPP (Attachment C)

b. Review proposed outline (Attachment D)

c. Review proposed template for PPP report (Attachment E)

- Goals hit the main points
- Make the public aware that it exists, and it is a tool to utilize – Marketing efforts for the plan
- Meet with groups to present the Plan in coordination with LRTP outreach including youth engagement
- Planning practices are getting scrutinized by the public so need to help inform people
- No standard public participation practice or process outside of required
- Media point person? Individual planners – Organizational that would be beneficial

What didn't work

- 2009 was the first plan – A lot of content that was not needed (materials to bring to meetings etc.)
- After a year or so it was not well used because it became inherent
- Want a plan that can be carried forward
- How information gets out and how we continue to get information out.

- Title – MPO Public Participation Plan – Title TBD
 - Preference seems to be MPO
- Can collect public feedback on the PPP at first round of engagement for the LRTP

9. Next Meeting (March 8, 10 AM – 12 PM)

- a. Goals, objectives, and performance measures for LRTP
 - b. Confirm intersections for collecting traffic counts / additional analysis
 - c. Review of what's been completed since 2014 LRTP
 - d. Continued discussion on public outreach for LRTP and PPP
-



Appendix C

Steering Committee Meeting #3

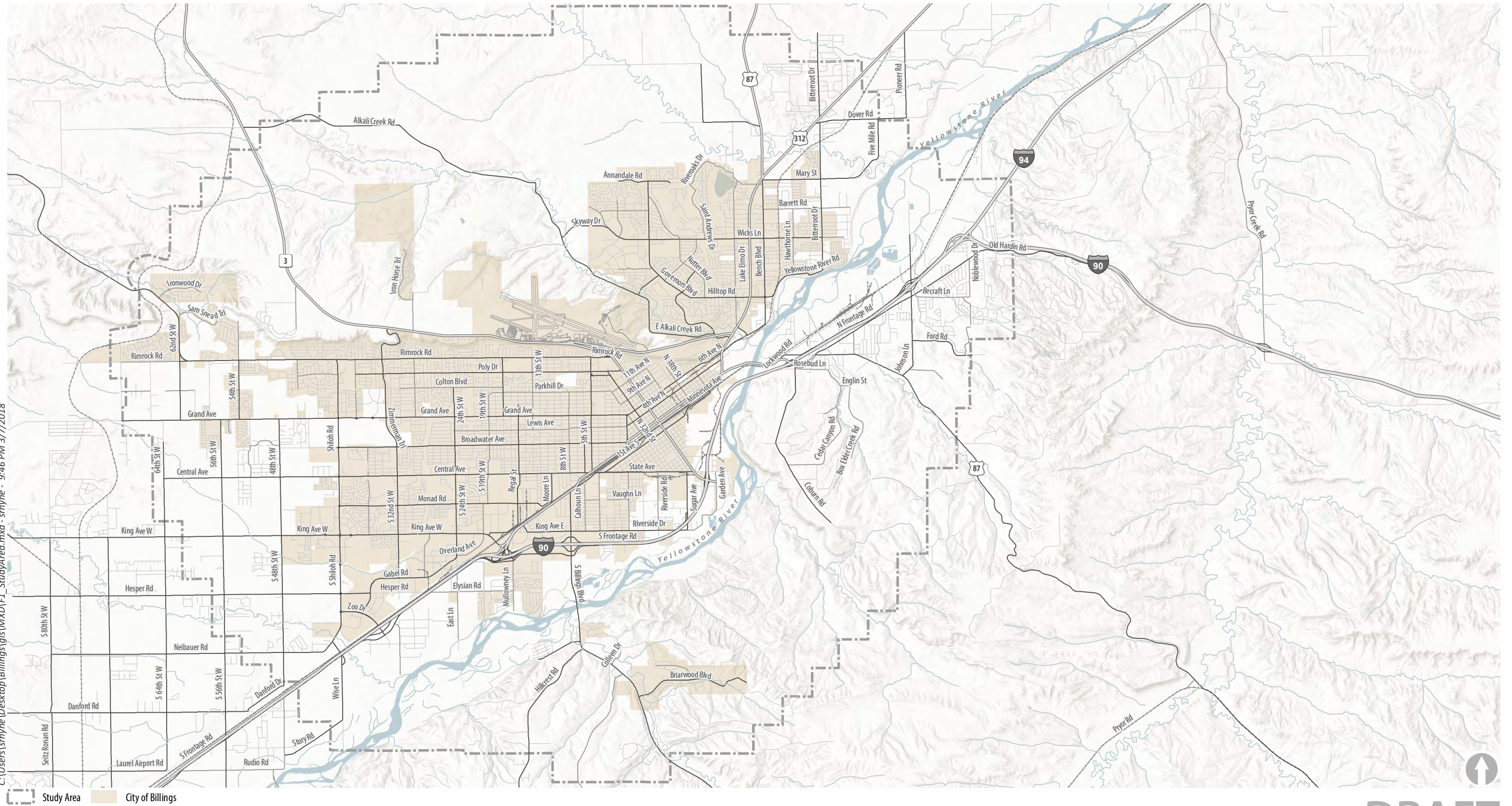


Steering Committee Meeting #3 Agenda

March 8, 2018 @ 10:00 AM – 12:00 PM,
1st Floor Conference Room - Miller Building

1. Introductions (Sign-in sheet)
2. Update from Aviation/Transit Director
3. What's been completed since the 2014 LRTP?
 - a. List of studies and projects
4. Existing Conditions
 - a. Review maps (Attachment A)
 - b. Traffic counts and intersections
 - i. What data do we have? (Refer to *.kmz file)
 - ii. Intersection locations to study further
 - iii. Format for online database (Refer to link -- <http://kai.maps.arcgis.com/apps/webappviewer/index.html?id=15729063b03f401987046ea8ecb56e4b>)
 - c. Data collection
5. Public Outreach Activities and Dates for LRTP (Attachment B)
6. DRAFT Goals, Objectives, and Performance Measures for LRTP (Attachment C)
7. Next Meeting (April 12, 10 AM – 12 PM)
 - a. Final goals, objectives, and performance measures for LRTP
 - b. Existing conditions (continued)
 - c. Land use (forecasts)
 - d. Public outreach for LRTP and PPP
 - e. Summary details for the travel demand model

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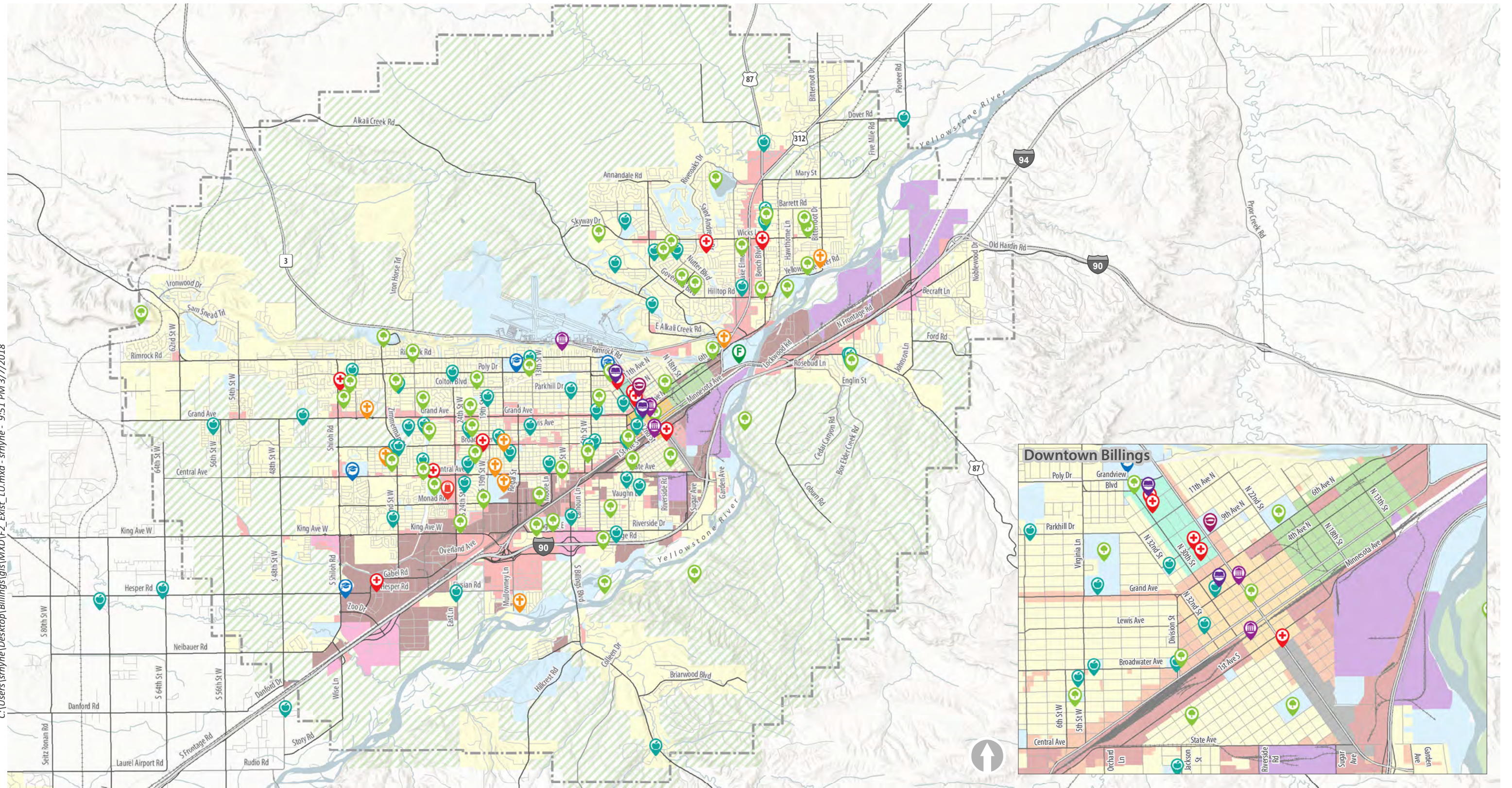
Study Area City of Billings



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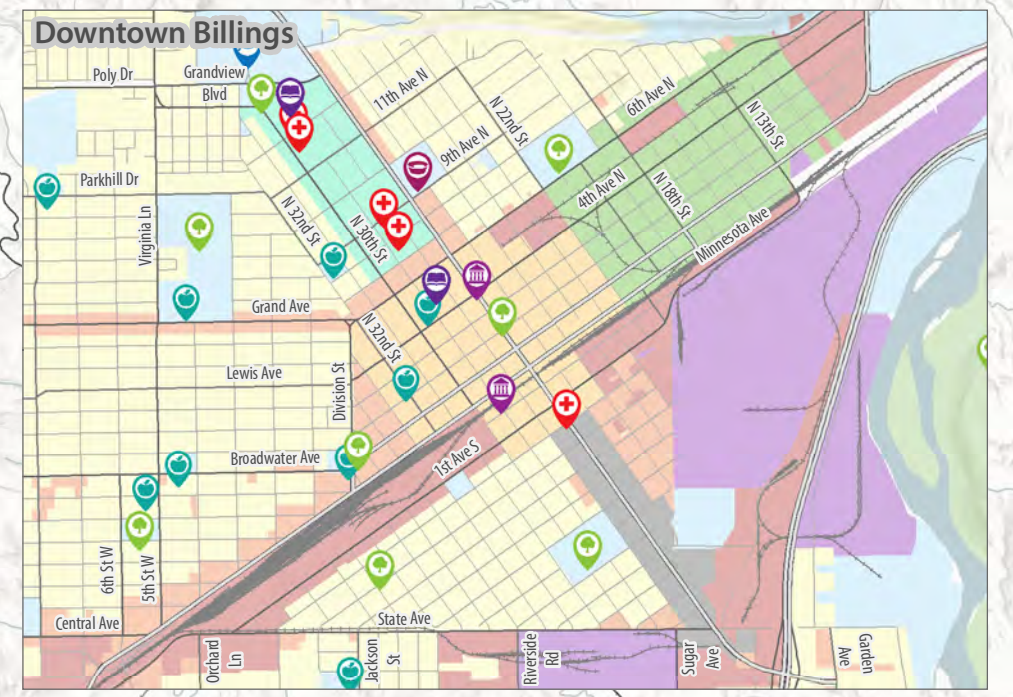
Figure 1
Study Area

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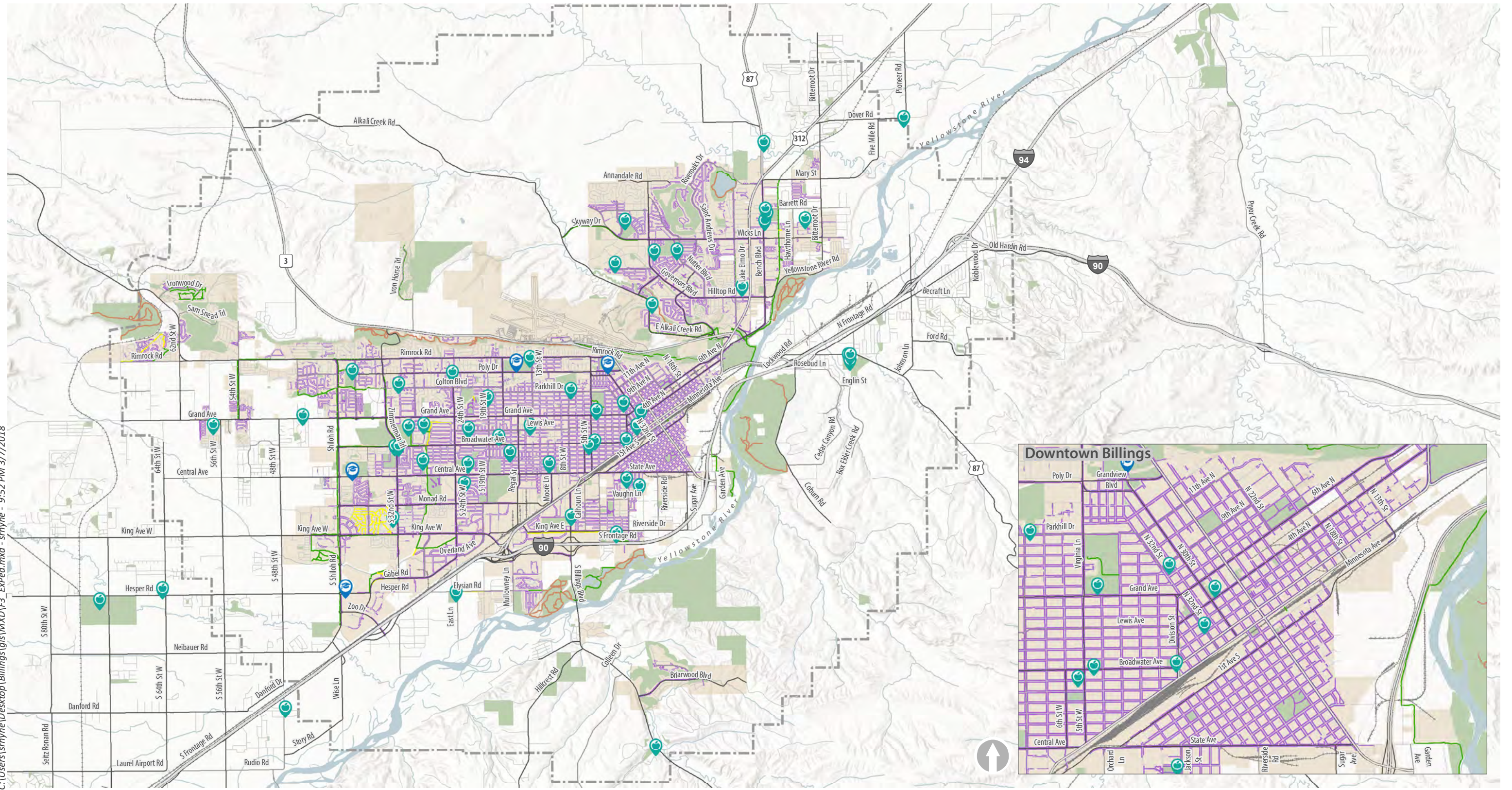
Study Area



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Figure 2
Existing Land Use

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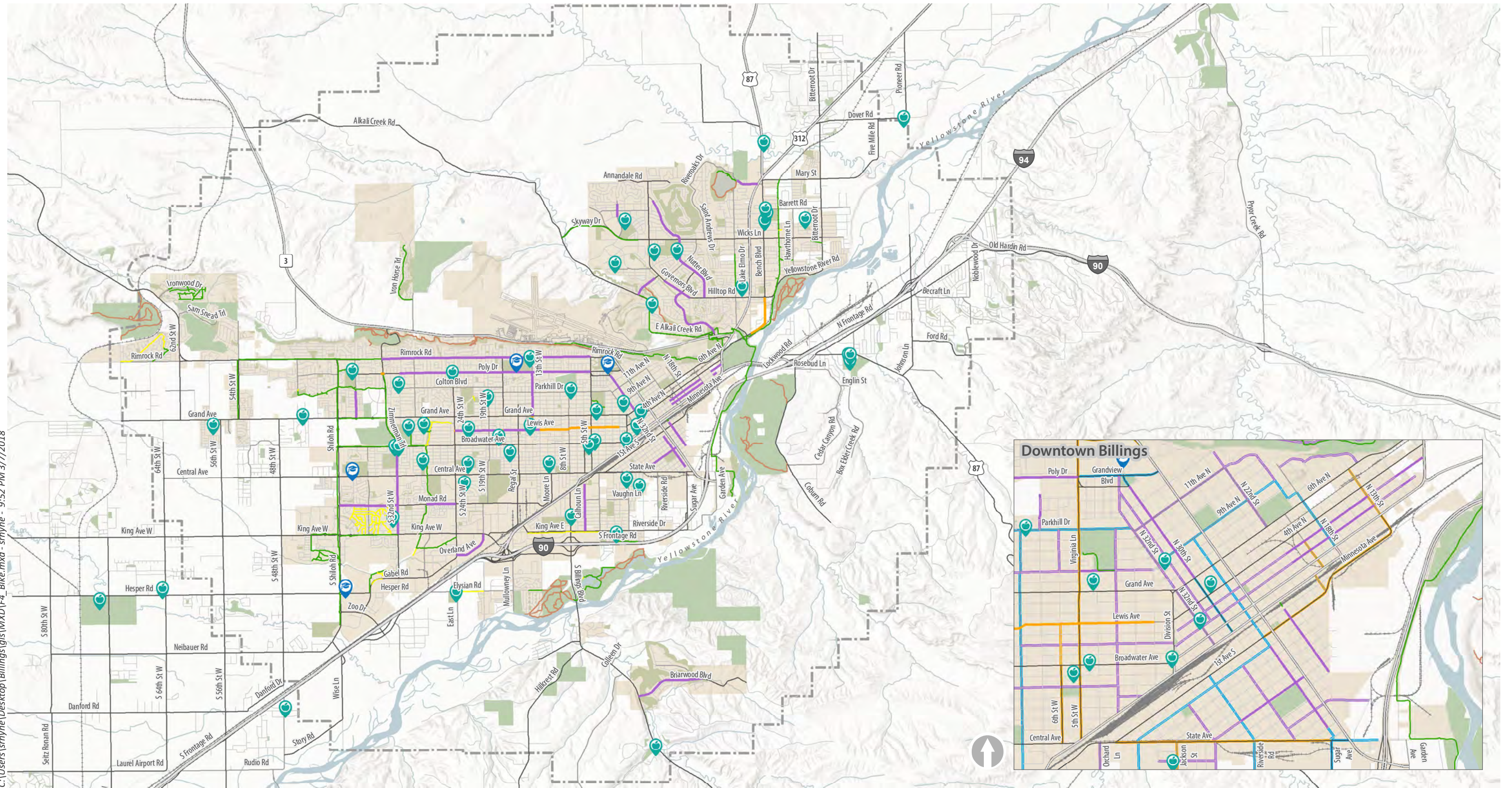


- Shared Use Path
- Neighborhood Trail
- Unpaved Trail
- Sidewalks
- College
- Schools
- Study Area
- Park
- City of Billings

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Figure 3
Existing Pedestrian and Trail Facilities

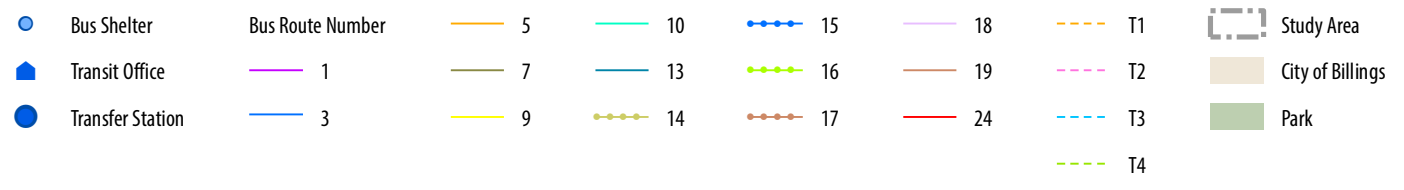
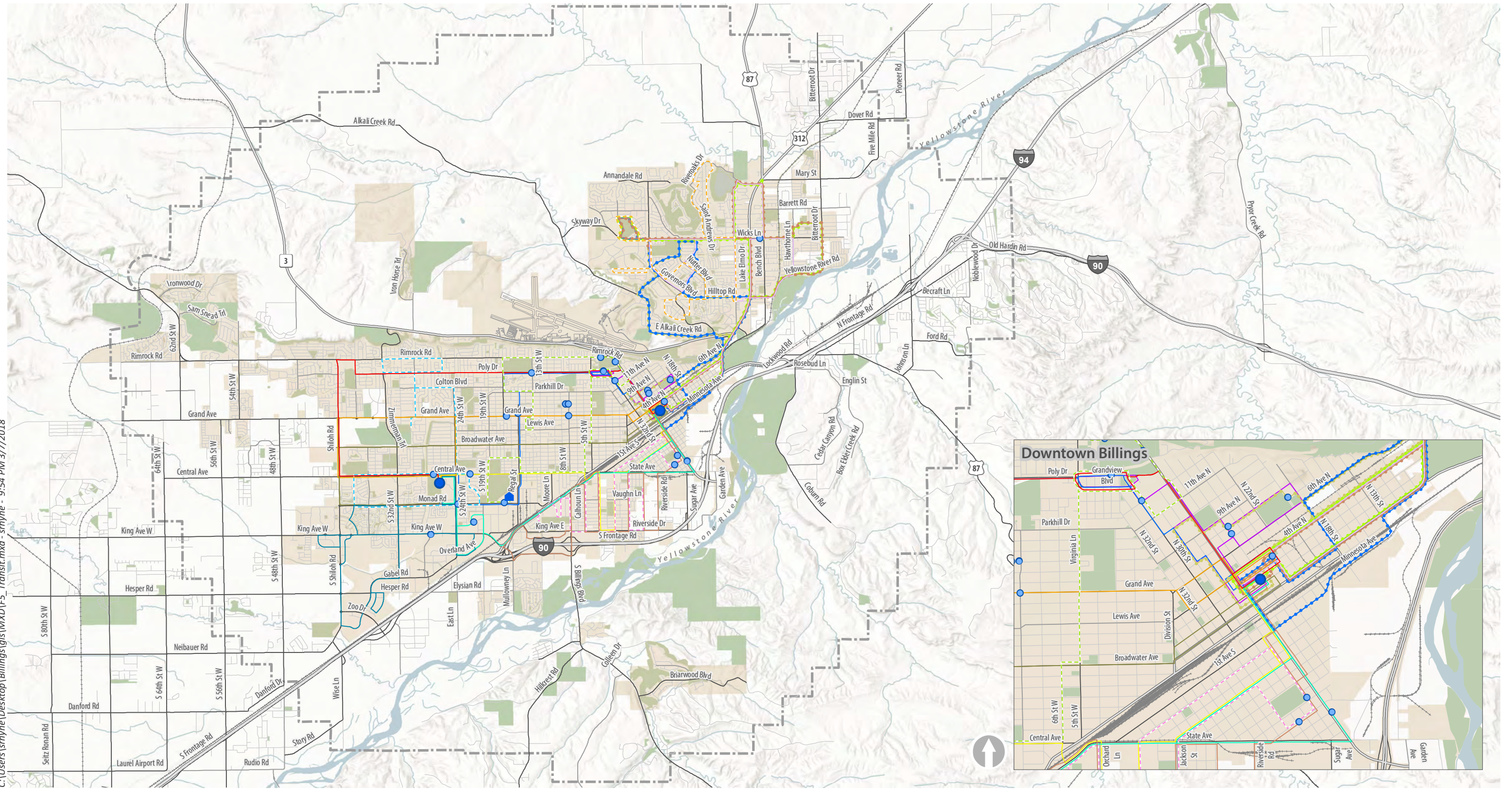
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Figure 4
Existing Bikeways and Trail Facilities

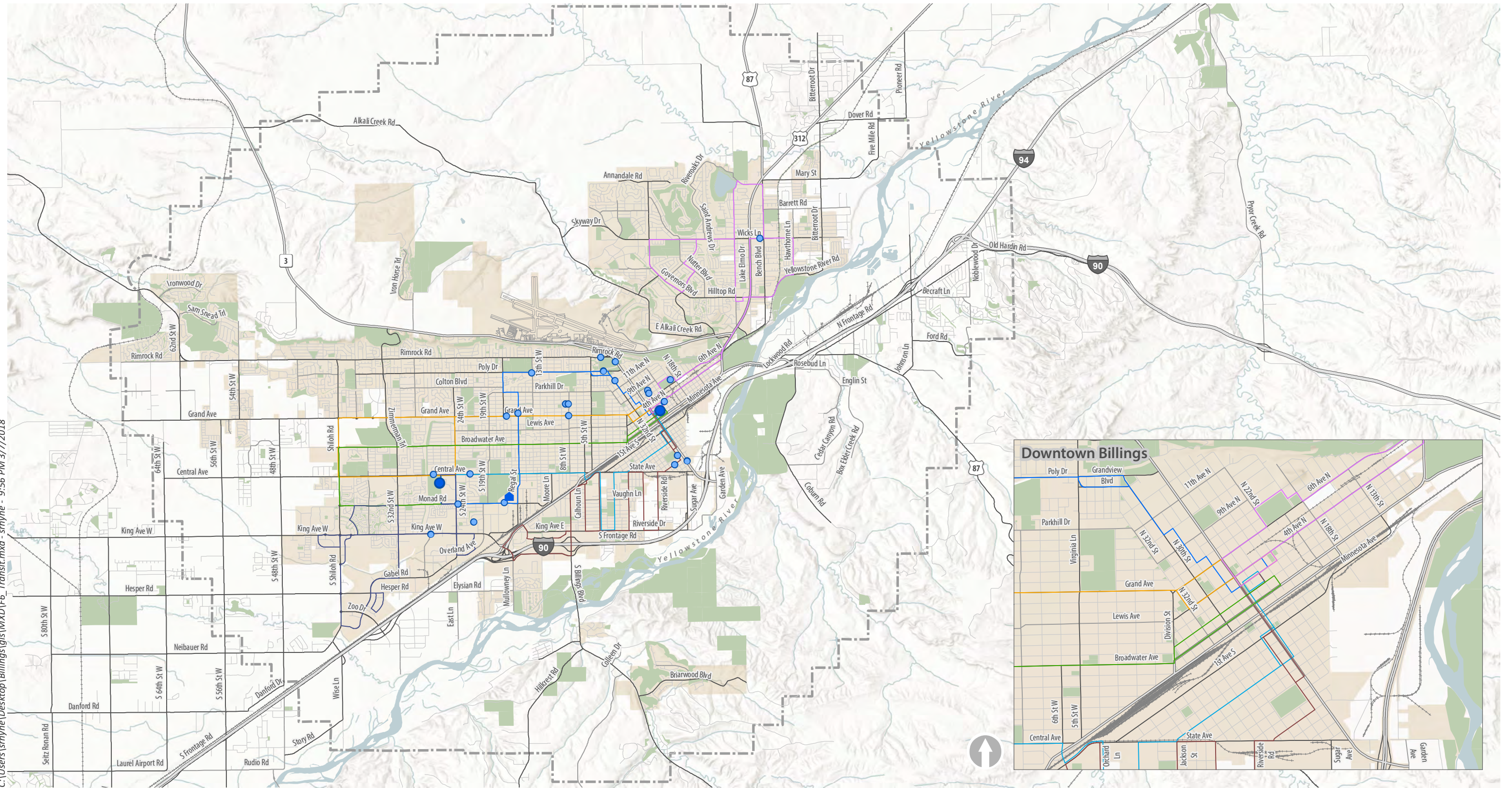
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Figure 5
Existing Weekday Bus Routes

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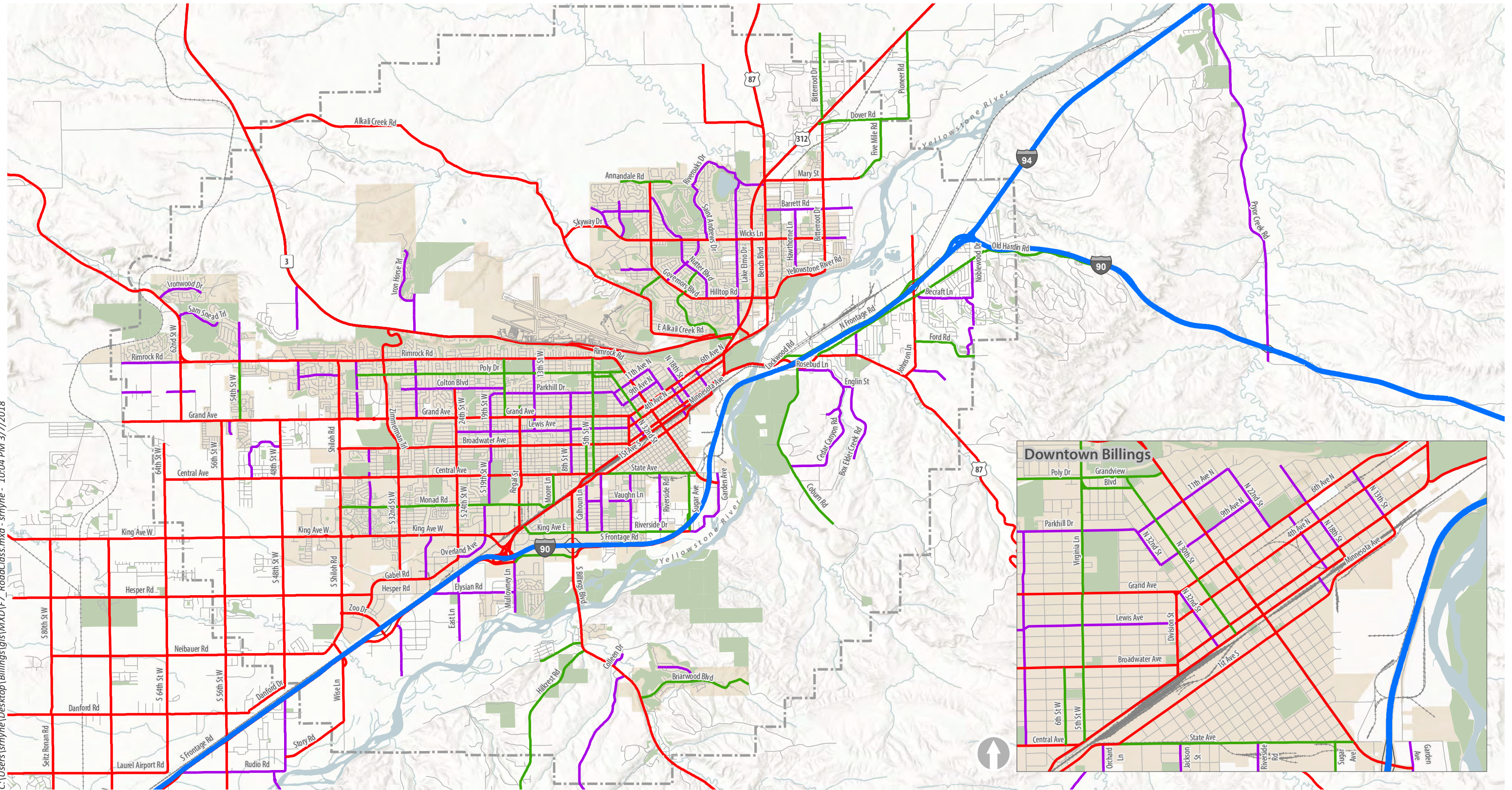


- Bus Shelter
 - Transit Office
 - Transfer Station
- | | | | | |
|--|--|---|---|---|
| Route Number | — S5 | — S9 | — S18 | Study Area |
| — S3 | — S7 | — S13 | — S19 | Park |
| | | | | City of Billings |

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Figure 6
Existing Weekend Bus Routes

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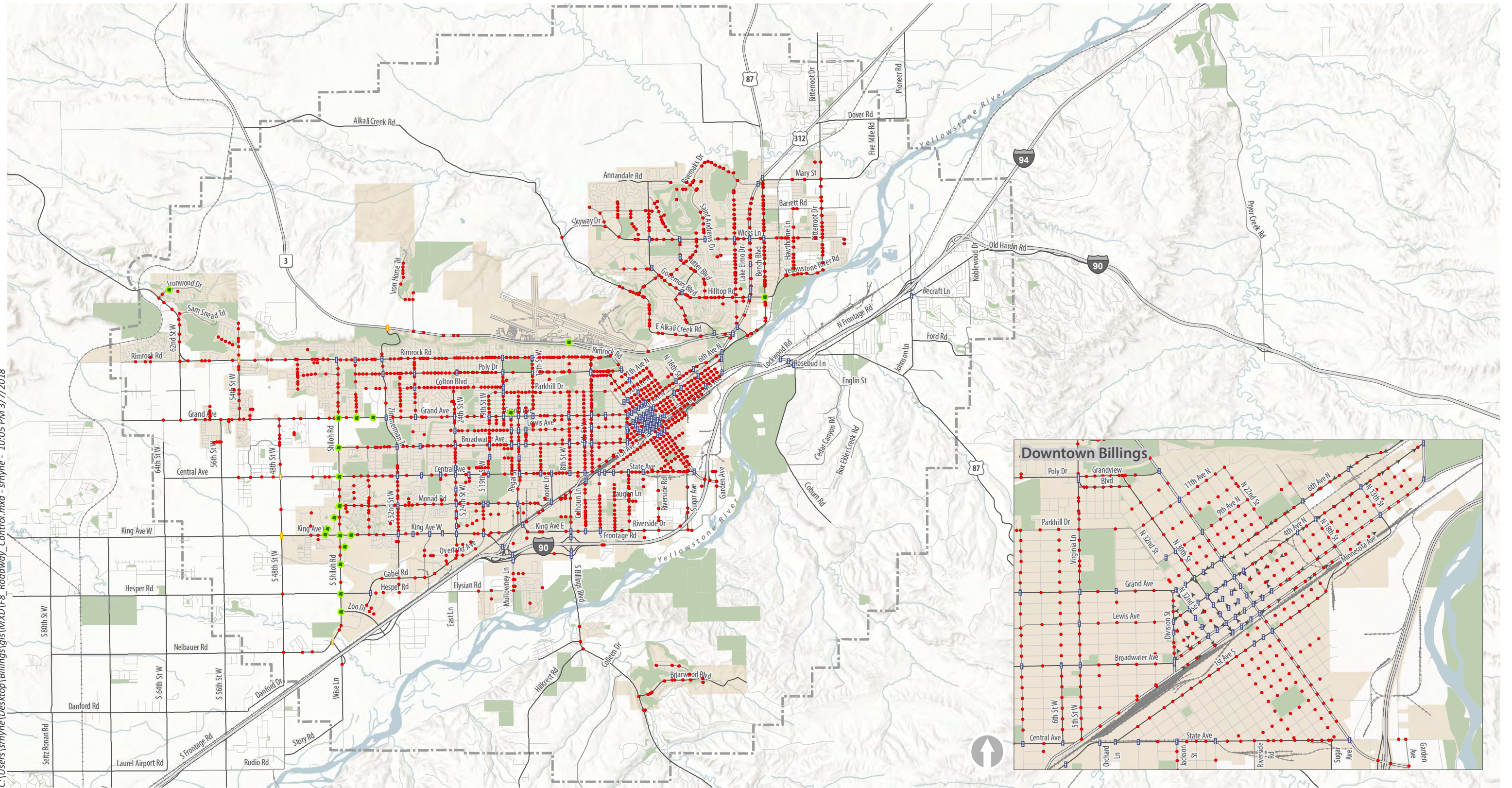


Roadway Classification	Minor Arterial	Study Area
Interstate	Collector	Park
Principal Arterial	Local Streets	City of Billings

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Figure 7
Existing Roadway Functional Classification

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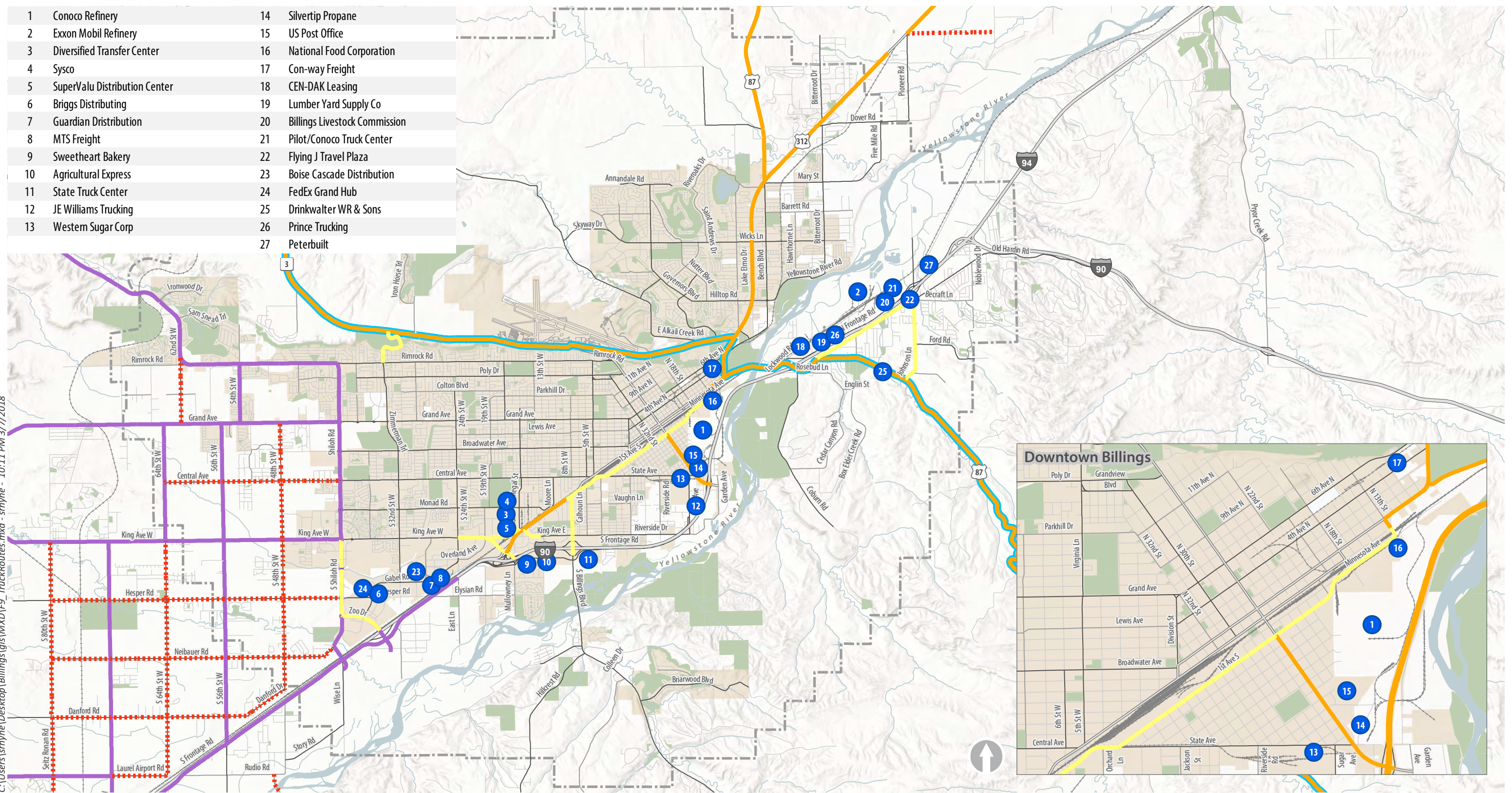
- Roundabout
- Signal
- Stop with Flashing Beacon
- Stop
- Interstate/Highway
- Arterial
- Collector
- Local
- Study Area
- Park
- City of Billings

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Figure 8
Existing Roadways and Traffic Control Devices

- | | | | |
|----|-------------------------------|----|-------------------------------|
| 1 | Conoco Refinery | 14 | Silvertip Propane |
| 2 | Exxon Mobil Refinery | 15 | US Post Office |
| 3 | Diversified Transfer Center | 16 | National Food Corporation |
| 4 | Sysco | 17 | Con-way Freight |
| 5 | SuperValu Distribution Center | 18 | CEN-DAK Leasing |
| 6 | Briggs Distributing | 19 | Lumber Yard Supply Co |
| 7 | Guardian Distribution | 20 | Billings Livestock Commission |
| 8 | MTS Freight | 21 | Pilot/Conoco Truck Center |
| 9 | Sweetheart Bakery | 22 | Flying J Travel Plaza |
| 10 | Agricultural Express | 23 | Boise Cascade Distribution |
| 11 | State Truck Center | 24 | FedEx Grand Hub |
| 12 | JE Williams Trucking | 25 | Drinkwalter WR & Sons |
| 13 | Western Sugar Corp | 26 | Prince Trucking |
| | | 27 | Peterbilt |

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|--|----------------------|--|---------------------------|--|-------------------------|--|------------------|
| | Major Truck Activity | | Highway Truck Route | | Restricted Truck Routes | | Study Area |
| | Arterial Truck Route | | Unrestricted Truck Routes | | Park | | City of Billings |
| | CaminoReal | | | | | | |

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Figure 9
Existing Truck Routes and Local Generators

L RTP PUBLIC OUTREACH TIME LINE

PHASE 1

BRANDING AND LOGO

- Done

WEBPAGE

- Website is currently being updated: Will be done 3/9
- Will maintain periodically throughout the project

PUBLIC MEETING

- Time line: May 14-16
- Next Steps: Identify and confirm meeting location
 - Due: April 13th
 - Request sent to Billings Library for May 15th

METROQUEST SITE

- Start developing content and collecting images
- Draft screens and questions to Steering Committee
 - Due: April 23rd
 - Draft site for testing: April 30th
 - Time to launch site: May 7th-11th
 - Site Live: May 14th

YOUTH ENGAGEMENT

- **School: Riverside Middle School**
- Contact: Kevin Kirkman, Principal - kirkmank@billingssschools.org
- Time line: May 14-16
- Next Steps: Confirm dates with School
- Due: April 13th

- **School: Lockwood Middle School**
- Contact: Gordon Klasna, Principal - 406 867-6211
- Time line: May 14-16
- Next Steps: Confirm dates with Mr. Klasna
 - Due: April 13th

MEDIA COORDINATION

- Press release developed for public meeting, online engagement, and Youth engagement
 - Due: Send to media May 1

PRINT MATERIALS

- Meeting mailers developed for public meeting and provided to MPO for distribution
 - Due: Draft April 15 (once meeting location is confirmed)

STAKEHOLDER INTERVIEWS

- Reach out to key stakeholders to schedule interviews
 - Due: KAI to send draft list of stakeholders
 - Interviews schedule for week of May 14th and June 11th

SOCIAL MEDIA

- Prove MPO with social media content to promote online engagement and public meeting
 - Due: May 7th

RESOURCE AGENCIES

- Send list of resource agencies for approval
- Send letter to identified resource agencies
 - Due: Send letters May 1st
 - Interviews schedule for week of May 14th and June 11th

PHASE 2 HIGH LEVEL SCHEDULE

PUBLIC MEETING

- Time line: Week of September 5th or September 10th

METROQUEST SITE

- Time line: Draft site and content end August

YOUTH ENGAGEMENT

- Time line: Week of September 5th or September 10th

Tentative Outreach Schedule

Monday 5/14	Tuesday 5/15	Wednesday 5/16	Thursday 5/17	Friday 5/18
Possible School Outreach City Council Meeting	Public Meeting	Possible School Outreach Steering Committee Meeting Stakeholder Interviews	Stakeholder Interviews	Stakeholder Interviews

DRAFT - 2018 LRTP Goals, Objectives, and Performance Measures

National Goals	Source of these goals and objectives is the 2014 Billings Urban Area LRTP		FAST ACT Requirements	MT Requirements	Proposed Objectives Additions/Changes	Notes
	Proposed 2018 LRTP Goals	Proposed 2018 LRTP Objective				
A. Safety B. Infrastructure Condition C. Congestion Reduction D. System Reliability E. Freight Movement and Economic Vitality F. Environmental Sustainability G. Reduced Project Delivery Delays	Goal 1: Safe, Efficient, Effective – Develop a transportation system that is safe, efficient, and effective	1.1 Reduce the frequency and severity of crashes by X% by year YYYY		<ul style="list-style-type: none"> Number of Fatalities Number of Serious Injuries Rate of Fatalities per 100 million VMT Rate of Serious Injuries per 100 million VMT Number of non-motorized fatalities and non-motorized serious injuries 	1.1 Reduce the frequency and severity of crashes by X% by year YYYY.	
		1.2 Reduce the number of non-motorized fatalities and non-motorized serious injuries by X% by year YYYY			1.2 Reduce the number of non-motorized fatalities and non-motorized serious injuries by X% by year YYYY	Bikeways + Trails Master Plan Update
		1.3 Reduce the number of major intersections operating at LOS D or worse during the peak hour by X% by year YYYY			None	
		1.4 Reduce weekday peak hour vehicular travel time on principal arterial corridors by X% by year YYYY			None	
		1.5 Reduce vehicle delay at railroad crossings by X% by year YYYY			None	
	Goal 2 : Functional Integrity – Optimize, preserve, and enhance the existing transportation system	2.1 Reduce the number of gaps in the transportation system by X% by year YYYY	Improving transportation system resiliency and reliability		2.1 Reduce the number of gaps in the transportation system by X% by year YYYY	
		2.2 Develop and maintain an inventory of critical infrastructure and regularly update the regional emergency response plan			2.2 Develop and maintain an inventory of critical infrastructure and regularly update the regional emergency response plan	
		2.2 Maintain access management standards for streets consistent with City, County and State requirements			None	
	Goal 3: Prioritized Improvements – Identify and prioritize projects that mitigate deficiencies, maximize the use of existing facilities, and balance anticipated needs with available funding	2.3 Incorporate bicycle and pedestrian facilities on X% of projects by year YYYY			None	
		3.1 Identify funded projects that address specific needs of all modes			None	
	Goal 4: Environment – Develop a transportation system that protects the natural environment and promotes a healthy sustainable community	4.1 Mitigate negative transportation corridor impacts to cultural resources			None	
		4.2 Increase bicycle and pedestrian activity by X% by year YYYY			None	
		4.3	Reducing (or mitigating) the stormwater impacts of surface transportation		To be determined	What policies exist on this topic? Other?
	Goal 5: Multimodal – Create a transportation system that supports the practical and efficient use of all modes of transportation	5.1 Increase annual ridership by year YYYY	Enhance travel and tourism		None	
		5.2 Maintain current level of transit service for the next Y years			None	
		5.3 Maintain current replacement of buses for the next Y years			None	
		5.4 Increase bicycle lane miles by X% by year YYYY			None	
		5.5 Increase shared use trail miles by X% by year YYYY			None	
	Goal 6: Economic Vitality – Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce	6.1 Identify transportation projects that support new developments	Enhance travel and tourism		None	
		6.2 Reduce travel time on freight corridors by X% by year YYYY			None	
6.3 Increase bicycle and pedestrian activity by X% by the year YYYY				None		
6.4 Increase the percentage of the transportation system that is equipped with two or more modes by X% in Y years and three or more modes by Y% in Z years				6.4 Increase the percentage of the transportation system that is equipped with two or more modes by X% in Y years and three or more modes by Y% in Z years		

2018 Billings Urban Area LRTP, TDM, & PPP

Steering Committee Meeting #3 (10 AM - 12 PM)

March 8, 2018

What We'll Cover Today

- ▶ Introductions
- ▶ Update from Aviation/Transit Director
- ▶ What's Been Completed Since the 2014 LRTP?
- ▶ Existing Conditions
- ▶ Public Outreach for LRTP
- ▶ Draft Goals, Objectives, and Performance Measures
- ▶ Next Meeting

What's Been Completed Since the 2014 LRTP?

▶ 2014 Studies / Projects

- ▶ ?

▶ 2015 Studies / Projects

- ▶ Highway 3 Corridor Study
- ▶ Lockwood Pedestrian Safety District, Non-Motorized Transportation Plan
- ▶ **Inner Belt Loop Phase 1**
- ▶ **Poly Drive (32nd Street W to 38th Street W)**

▶ 2016 Studies / Projects

- ▶ City of Billings Growth Policy
- ▶ Lockwood Growth Policy
- ▶ West End Multimodal Planning Study
- ▶ Montana Rail Grade Separation Study
- ▶ Billings Community Transportation Safety Plan
- ▶ Old Highway 312 Corridor Study
- ▶ **Grand Avenue Widening (Zimmerman Trail to Shiloh Road)**

Red text indicates projects

What's Been Completed Since the 2014 LRTP?

▶ 2017 Studies / Projects

- ▶ Billings-Yellowstone Household Travel Survey
- ▶ TranPlanMT
- ▶ Billings Area Bikeways + Trails Master Plan Update
- ▶ City of Billings Complete Streets Progress Report
- ▶ City of Billings Comprehensive Parks and Recreation Master Plan
- ▶ **Grand Avenue (52nd Street W to 58th Street W)**

▶ 2018 Studies / Projects (Ongoing / Active)

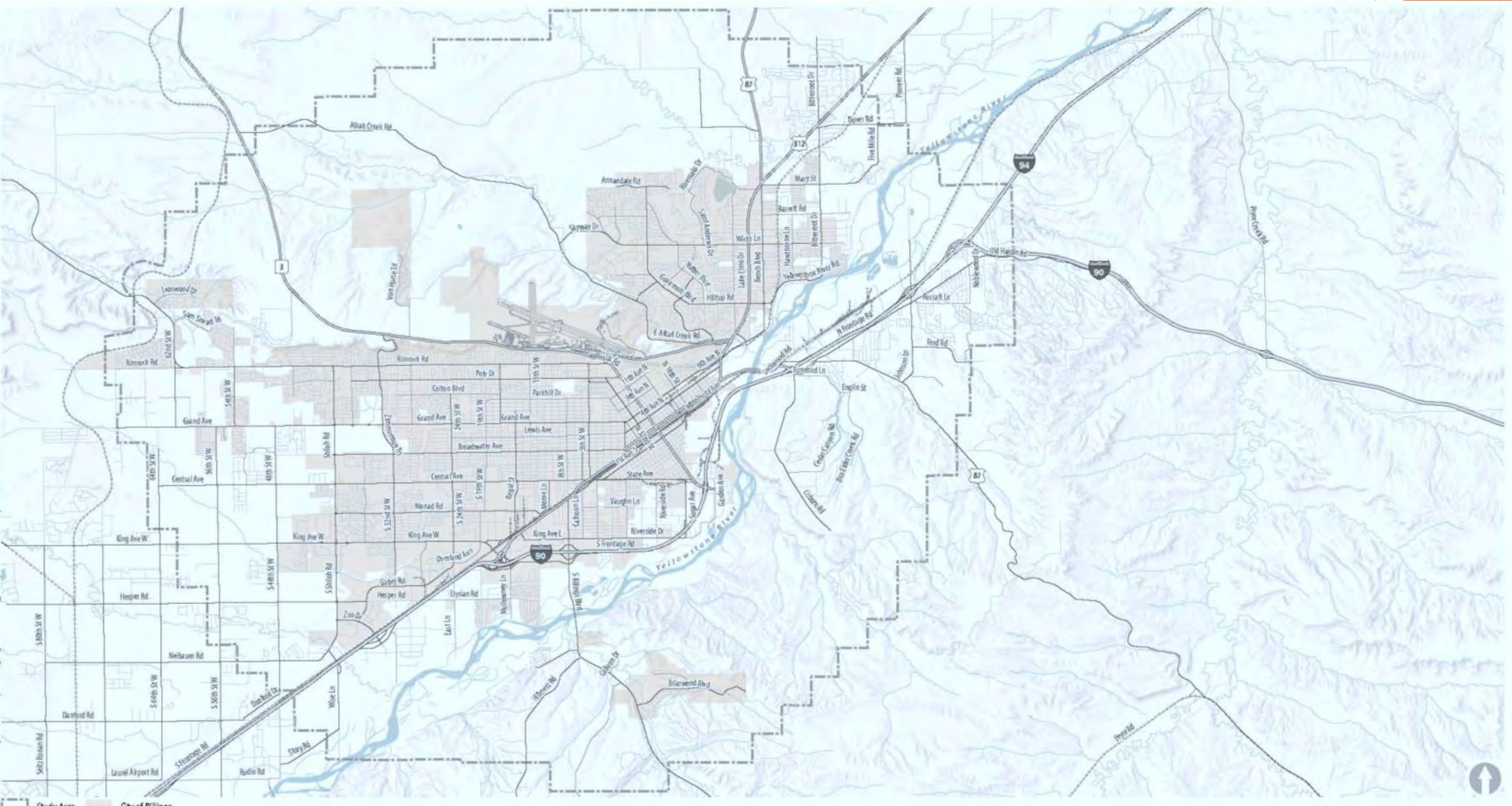
- ▶ **1st Avenue North Billings**
- ▶ **Billings Bypass**
- ▶ **Underpass Avenue Improvements**
- ▶ 27th Street Railroad Crossing Study
- ▶ **1st Avenue North & Exposition Drive**
- ▶ Billings Downtown Traffic Study
- ▶ **Main Street Signal Timing**
- ▶ **Airport & Main Intersection**

Red text indicates projects

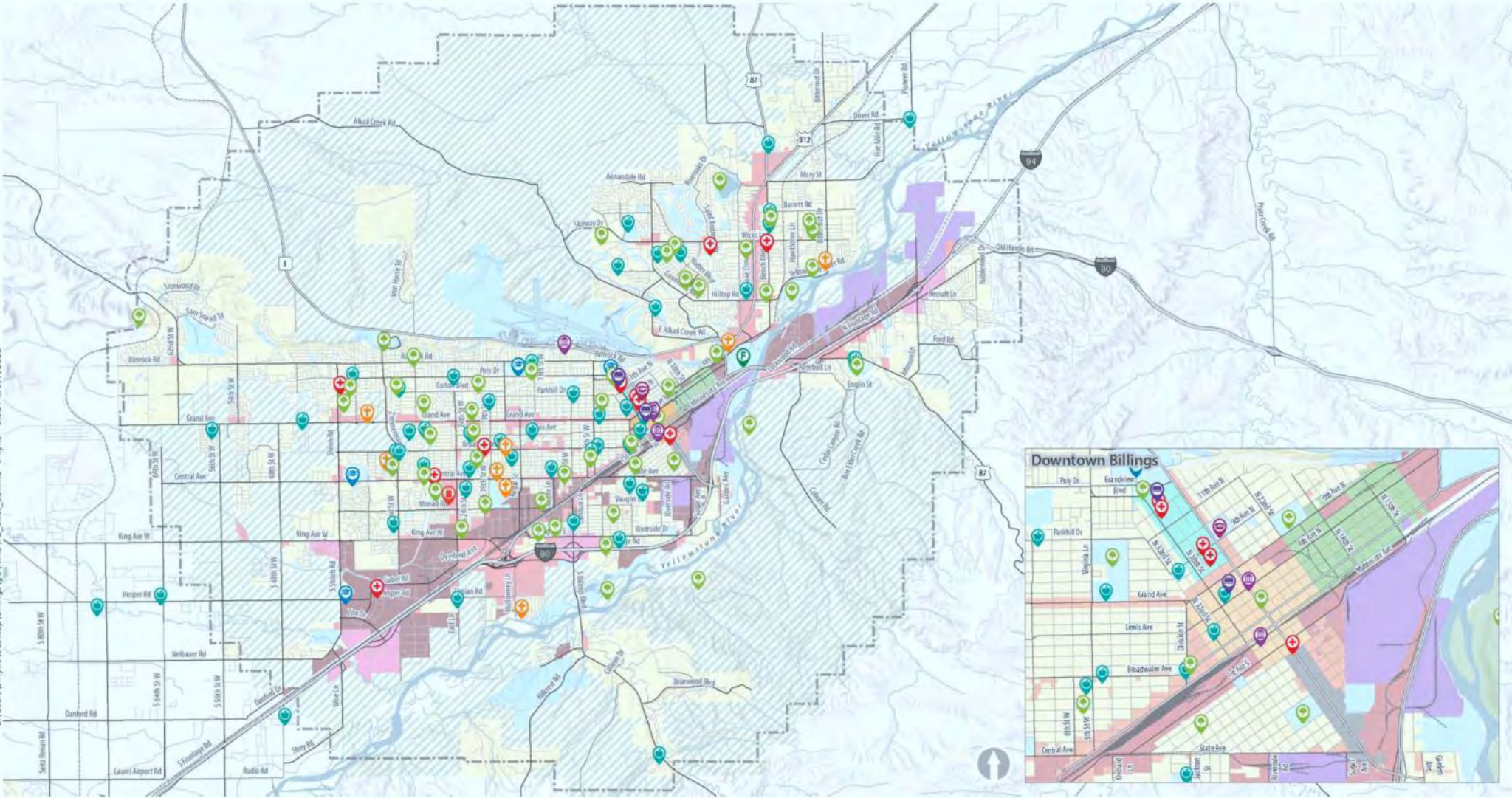
Other Types of Completed Projects?

- ▶ Sidewalks
- ▶ ADA improvements
- ▶ Pedestrian crossings (e.g. HAWK)
- ▶ Bike facilities
- ▶ Shared use trails
- ▶ Bridges
- ▶ Roadway
- ▶ Intersections
 - ▶ Roundabouts
 - ▶ Traffic signals
- ▶ Signal timing
- ▶ Freight
- ▶ Rail

Study Area



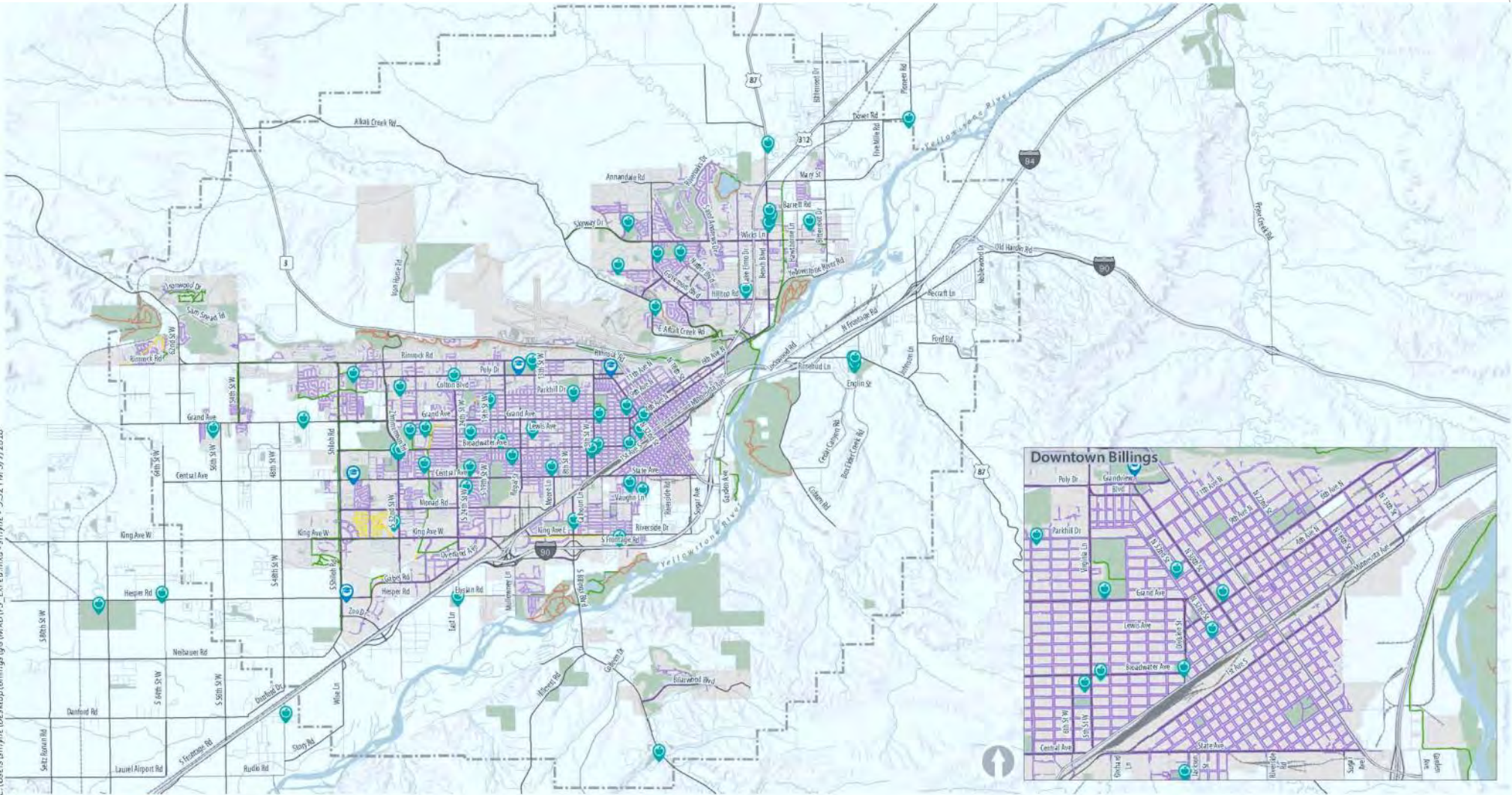
Land Use



- College
- Shopping Mall
- Stadium
- Fairgrounds
- Cemetary
- Residential
- Central Business District
- Light Industrial
- Entryway
- Study Area
- Schools
- Museum
- Library
- Park
- Hospital
- Commercial/Industrial
- Public
- Agricultural
- East Billing Urban Renewal District
- Commercial
- Medical Corridor Permit
- Heavy Industrial
- South 27th Street Corridor

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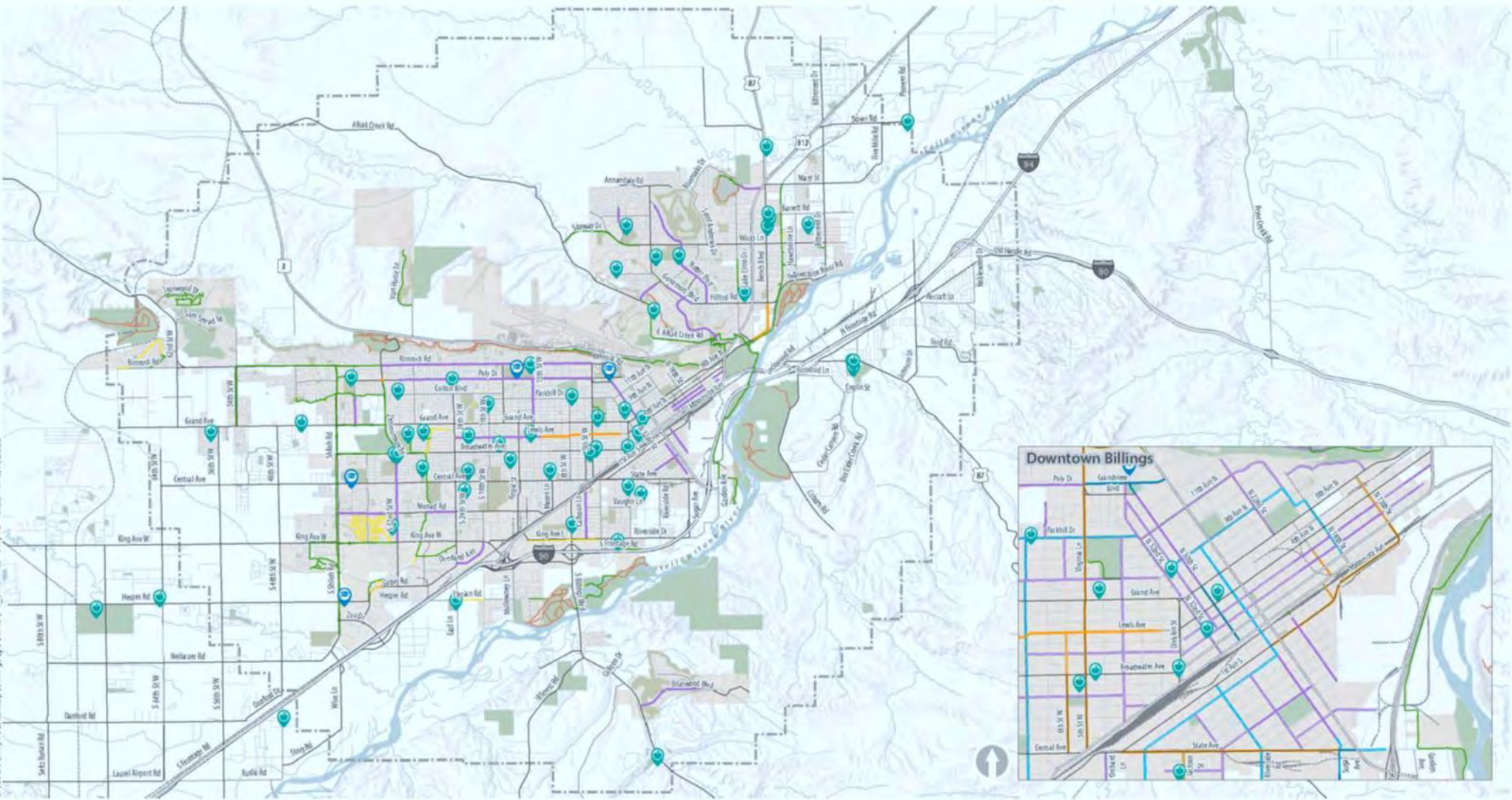
Pedestrian and Trail Facilities



DRAFT

Figure 3

Bikeways and Trail Facilities



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Weekday Bus Routes

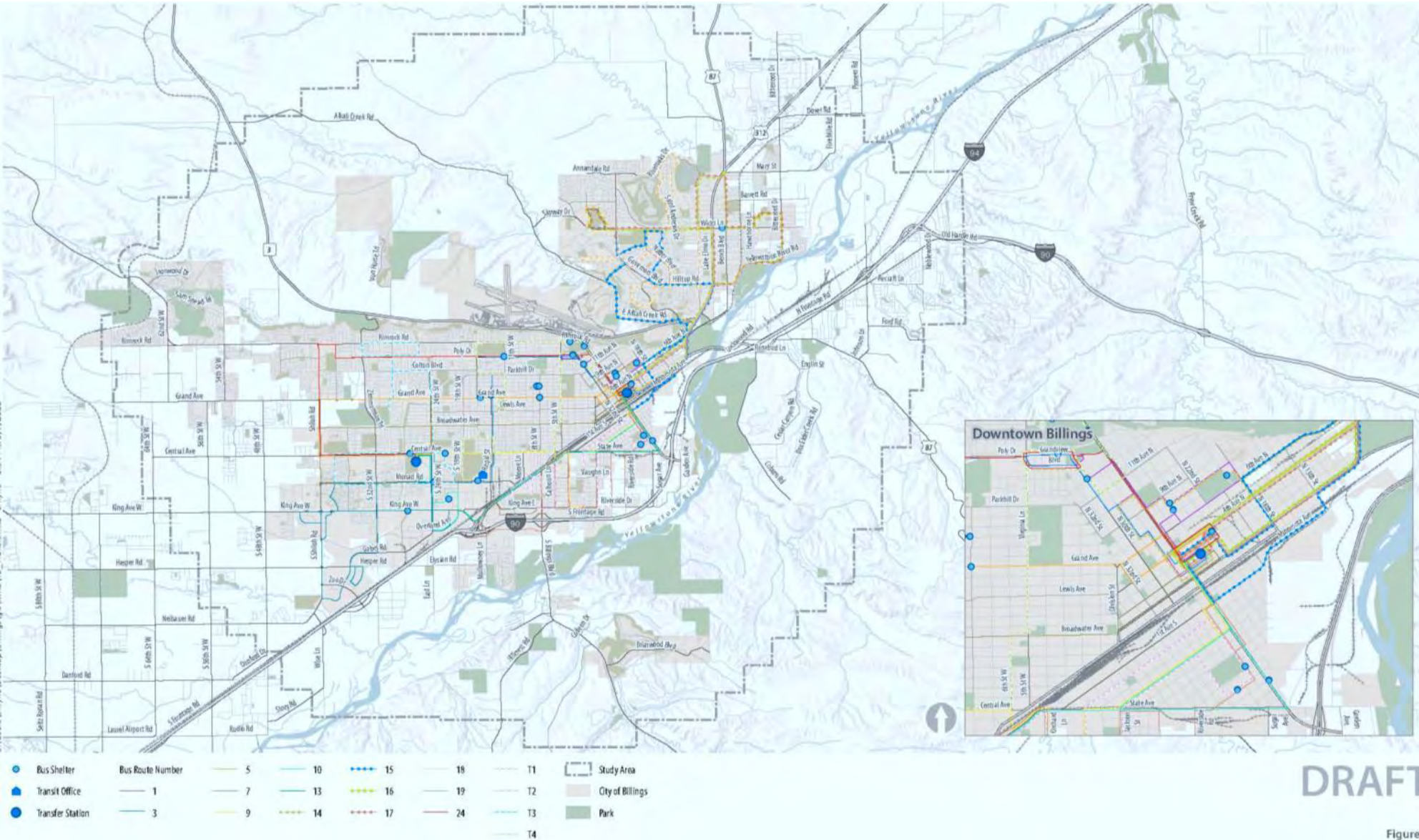
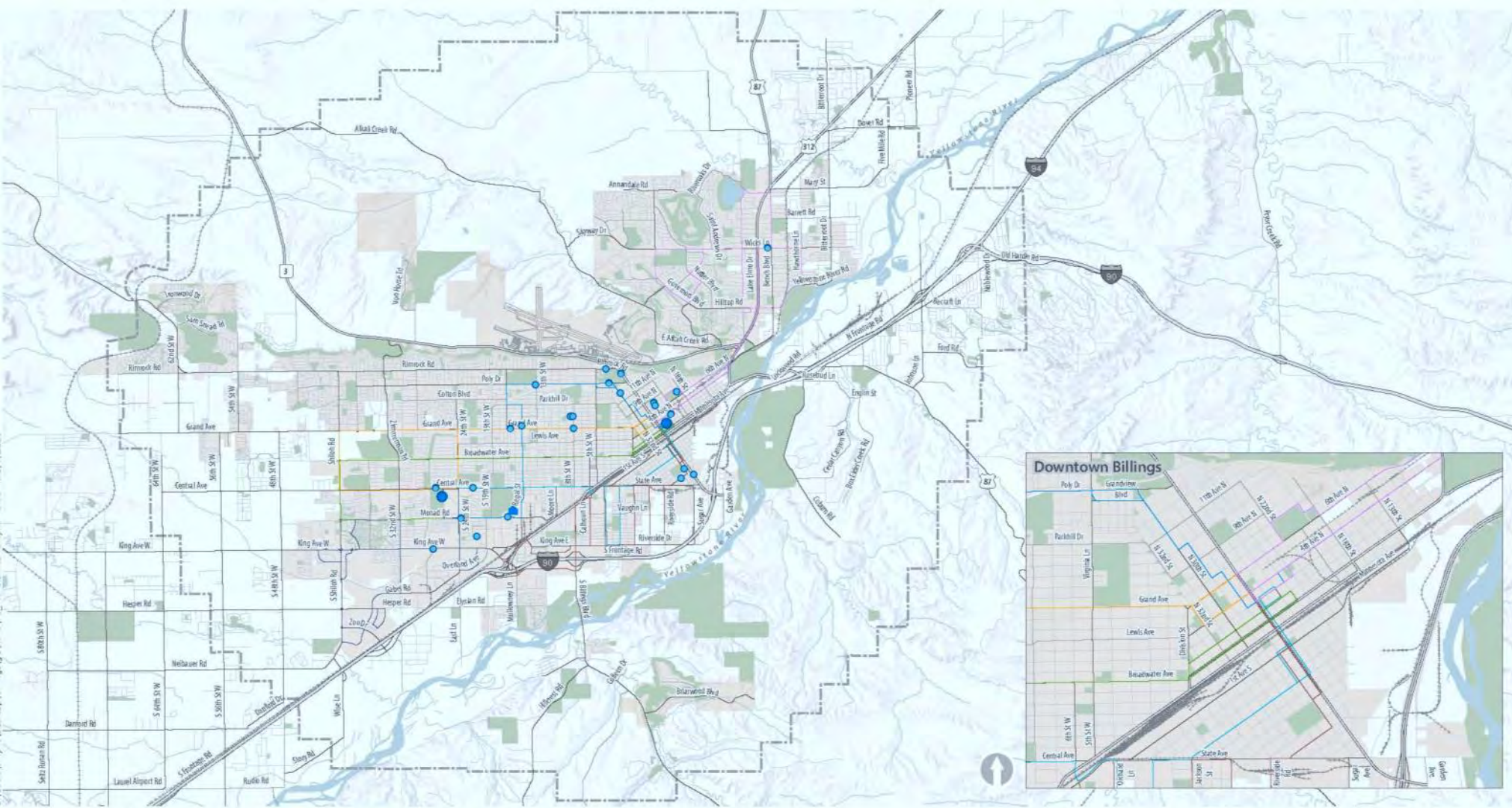


Figure 5

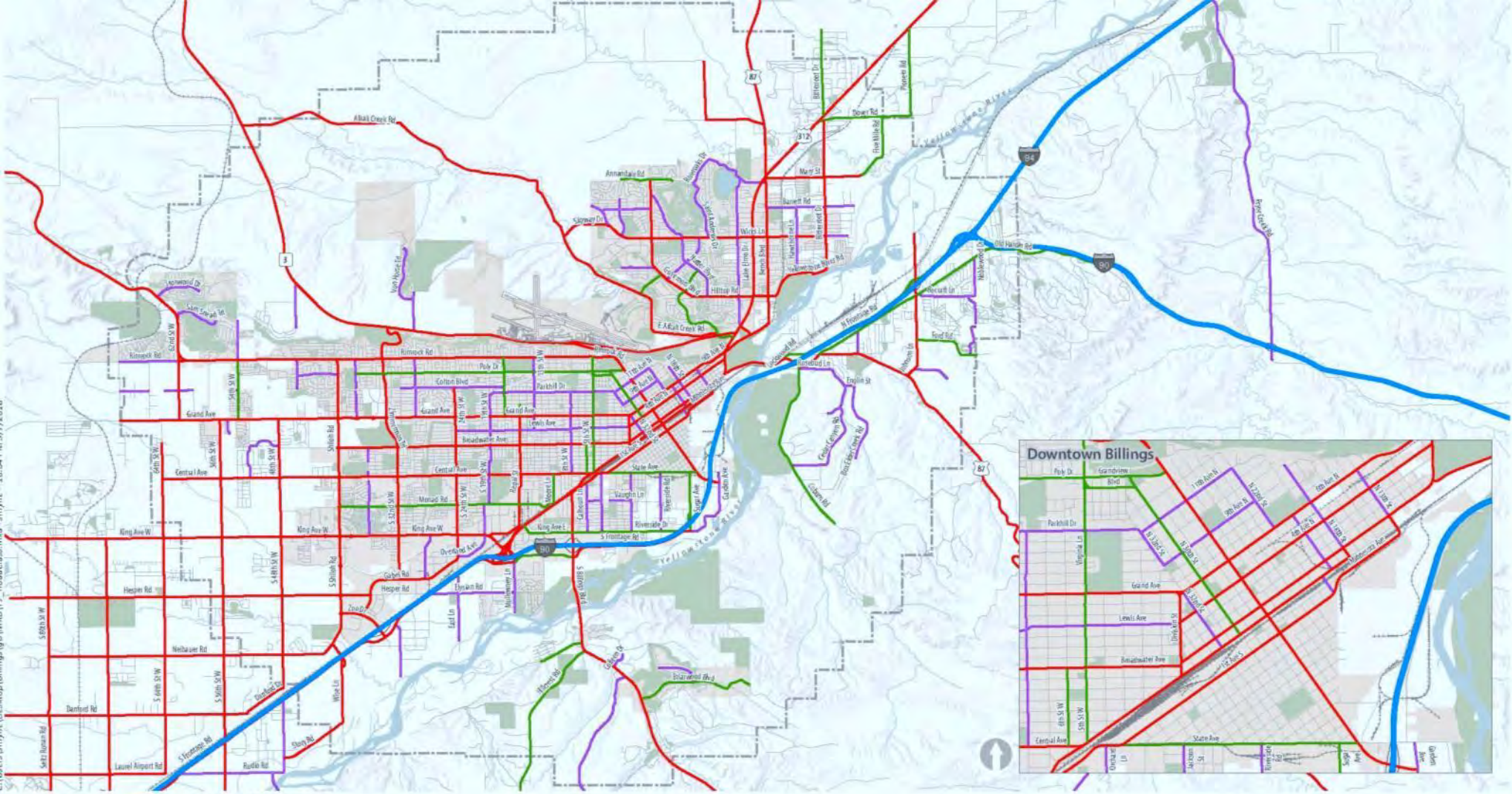
Weekend Bus Routes



- Bus Shelter
 - Transfer Station
 - Transit Office
- | | | | | |
|--|--|---|--|---|
| Route Number | — S5 | — S9 | — S18 | Study Area |
| — S3 | — S7 | — S13 | — S19 | Park |
| | | | | City of Billings |

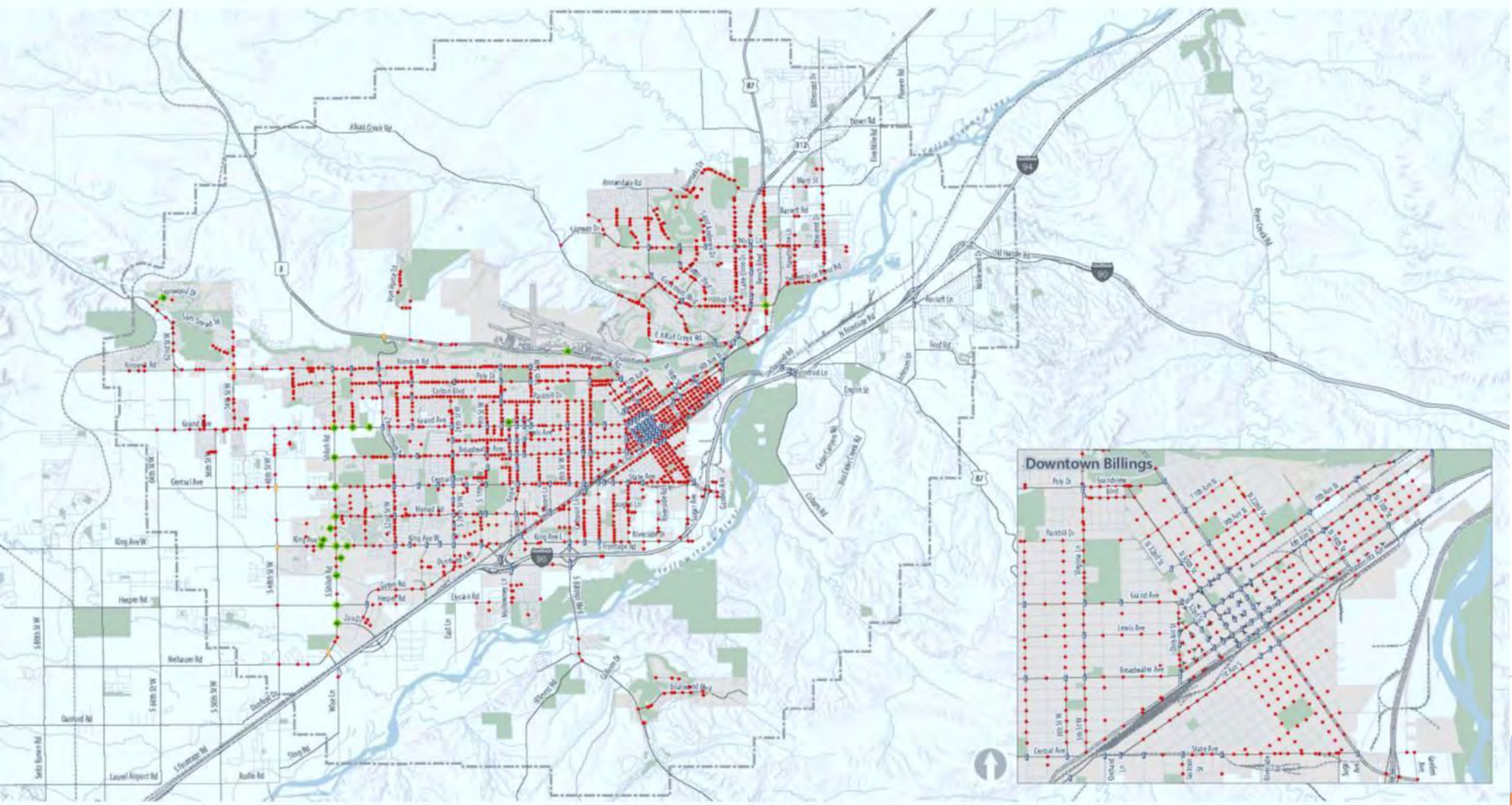
DRAFT

Roadways Functional Classification



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Intersection Traffic Control

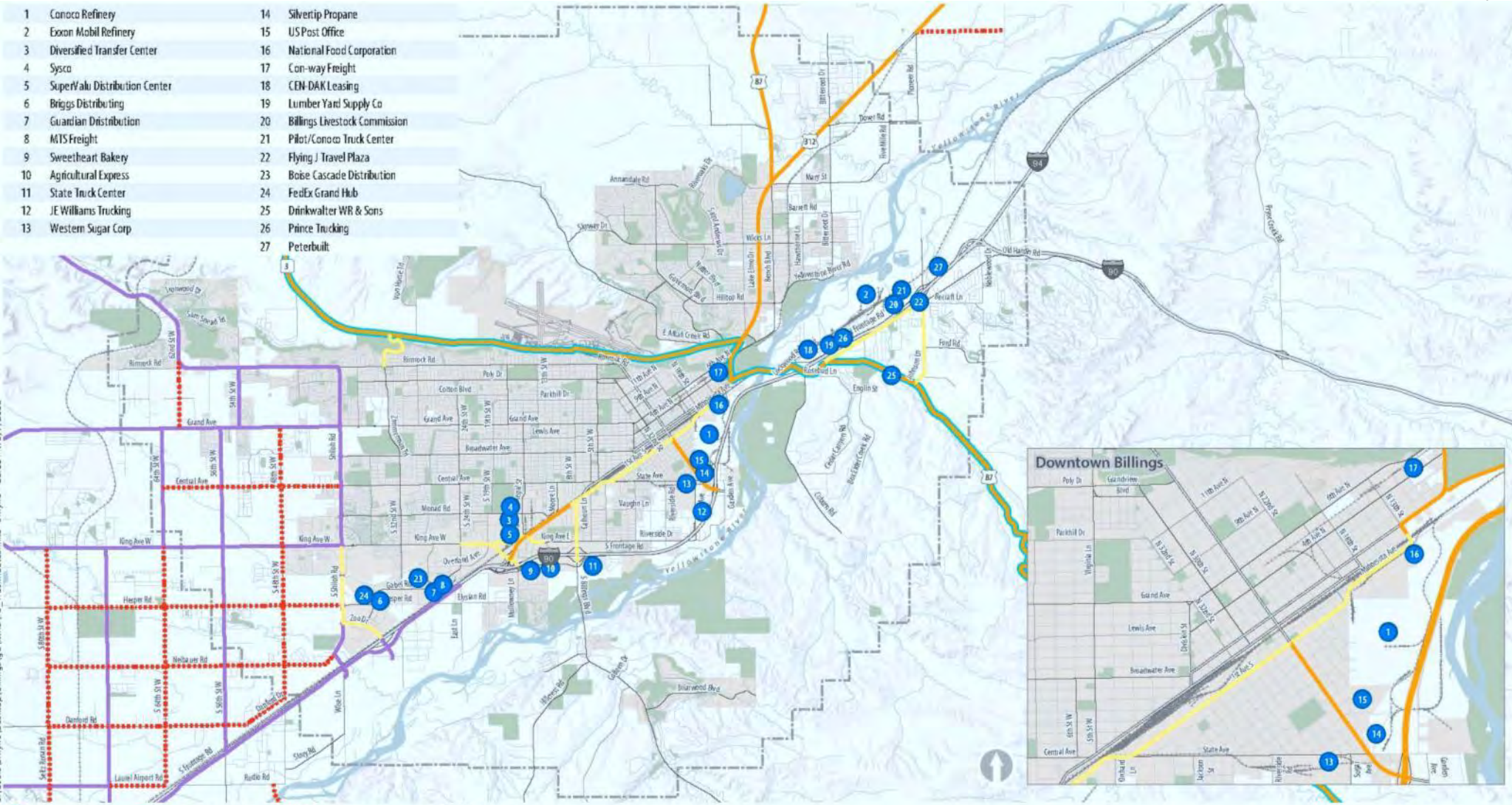


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Figure 8

Truck Routes and Local Generators

- | | | | |
|----|-------------------------------|----|-------------------------------|
| 1 | Conoco Refinery | 14 | Silvertip Propane |
| 2 | Exxon Mobil Refinery | 15 | US Post Office |
| 3 | Diversified Transfer Center | 16 | National Food Corporation |
| 4 | Sysco | 17 | Con-way Freight |
| 5 | SuperValu Distribution Center | 18 | CEN-DAK Leasing |
| 6 | Briggs Distributing | 19 | Lumber Yard Supply Co |
| 7 | Guardian Distribution | 20 | Billings Livestock Commission |
| 8 | MIS Freight | 21 | Pilot/Conoco Truck Center |
| 9 | Sweetheart Bakery | 22 | Flying J Travel Plaza |
| 10 | Agricultural Express | 23 | Boise Cascade Distribution |
| 11 | State Truck Center | 24 | FedEx Grand Hub |
| 12 | JE Williams Trucking | 25 | Drinkwater WR & Sons |
| 13 | Western Sugar Corp | 26 | Prince Trucking |
| | | 27 | Peterbilt |

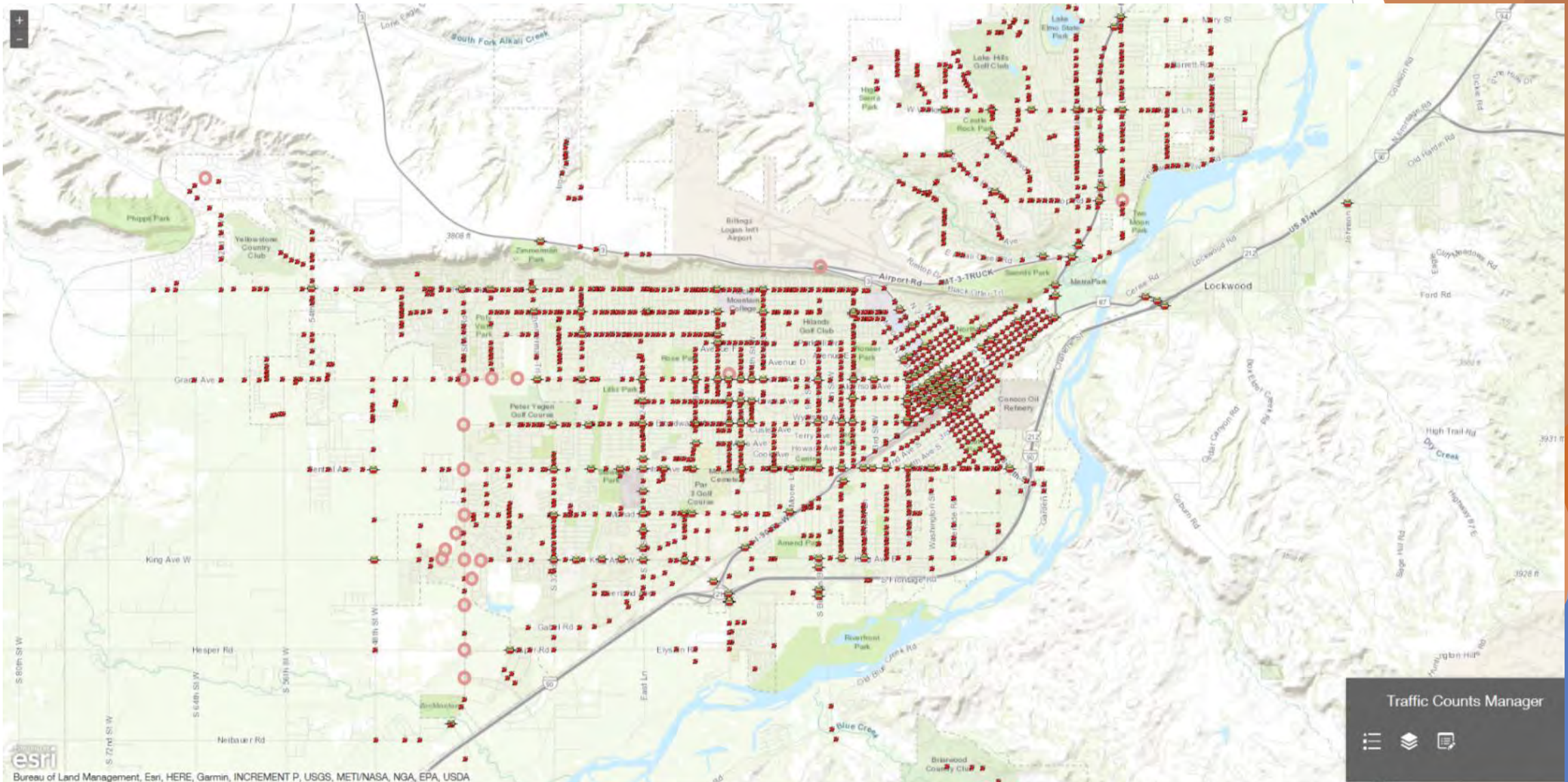


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Intersection Traffic Counts

- ▶ What data do we have?
 - ▶ 75 intersections with counts during PM peak hour
 - ▶ 125 intersections with counts during AM and PM peak hour
- ▶ What data will we be getting through other sources?
 - ▶ Request sent to a few other consultants (data pending)
 - ▶ ~100 intersections planned to be collected through other studies

Online Database for Traffic Counts



Data Collection

- ▶ Crash data
 - ▶ Plan to send a request to MDT
- ▶ Traffic counts
 - ▶ Continue to assess traffic data for intersections

Proposed Goals for LRTP

- ▶ **Goal 1: Safe, Efficient, Effective**
 - ▶ Develop a transportation system that is safe, efficient, and effective
- ▶ **Goal 2: Functional Integrity**
 - ▶ Optimize, preserve, and enhance the existing transportation system
- ▶ **Goal 3: Prioritized Improvements**
 - ▶ Identify and prioritize projects that mitigate deficiencies, maximize the use of existing facilities, and balance anticipated needs with available funding

Proposed Goals for LRTP

▶ Goal 4: Environment

- ▶ Develop a transportation system that protects the natural environment and promotes a healthy sustainable community

▶ Goal 5: Multimodal

- ▶ Create a transportation system that supports the practical and efficient use of all modes of transportation

▶ Goal 6: Economic Vitality

- ▶ Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce

FAST ACT and MDT Requirements

- ▶ Fixing America's Surface Transportation ACT
 - ▶ Improving transportation system resiliency and reliability
 - ▶ Reducing (or mitigating) the stormwater impacts of surface transportation
 - ▶ Enhance travel and tourism
- ▶ MDT Requirements
 - ▶ Performance measures for safety...
 - ▶ Number of Fatalities
 - ▶ Number of Serious Injuries
 - ▶ Rate of Fatalities per 100 million VMT
 - ▶ Rate of Serious Injuries per 100 million VMT
 - ▶ Number of non-motorized fatalities and non- motorized serious injuries

New/Revised Objectives based on FAST ACT, MDT Requirements, & Local Plans

- ▶ 1.1 Reduce the frequency and severity of crashes by X% by year YYYY (*MDT*)
- ▶ 1.2 Reduce the number of non-motorized fatalities and non-motorized serious injuries by X% by year YYYY (*MDT & Bike Master Plan*)
- ▶ 2.1 Reduce the number of gaps in the transportation system by X% by year YYYY (*FAST ACT*)
- ▶ 2.2 Develop and maintain an inventory of critical infrastructure and regularly update the regional emergency response plan (*FAST ACT*)
- ▶ 4.3 Need to develop one to address...
 - ▶ Reducing (or mitigating) the stormwater impacts of surface transportation (*FAST ACT*)

Upcoming Public Outreach Activities & Dates for LRTP

- ▶ **Webpage (Complete by March 9)**
 - ▶ BillingsLRTP.com
- ▶ **Public Meeting (May 14-16)**
 - ▶ Print Materials - April 15
 - ▶ Media Coordination - May 1
 - ▶ Social Media - May 7
 - ▶ MetroQuest Site - May 14
- ▶ **Youth Engagement (May 14-16)**
 - ▶ Riverside Middle School
 - ▶ Lockwood Middle School
- ▶ **Stakeholder and Resource Agencies Interviews (week of May 14 and June 11)**
 - ▶ Send letters by May 1

Next Meeting & Topics

- ▶ Steering Committee Meeting #4
 - ▶ April 12 (10 AM - 12 PM)
- ▶ Finalize goals, objectives, and performance measures
- ▶ Finalize existing conditions
- ▶ Public outreach materials for review
- ▶ Initiate land use (forecasts)
- ▶ Summary details on travel demand model

Questions and Answers

2018



BILLINGS URBAN AREA



LONG RANGE TRANSPORTATION PLAN

Steering Committee Meeting #3 Sign-In Sheet

March 8, 2018 @ 10:00 AM – 12:00 PM,
1st Floor Conference Room - Miller Building

Name	Organization	Email address
SCOTT WALKER	c/c PLNG.	walker@ci.billings.mt.us
Aaron Letsack	City of Billings - Engineering	letsacka@ci.billings.mt.us
ERIN CLAUNCH	CITY ENGINEERING	claunche@ci.billings.mt.us
Doug ENDERSON	DOWL	denderson@dowl.com
Rad Nelson	MDT-Billings	radnelson@mt.gov
Debra Hagel	MET Transit	hageld@ci.billings.mt.us
Jana Mattox	c/c Plng.	mattoxj@ci.billings.mt.us
Bob Riehl	Lockwood	bsriehl@gmail.com
Monica Plecker	c/c Planning	pleckerma@ci.billings.mt.us
WYATT FRIDAY	PCSD	fridayw@ci.billings.mt.us
Mike Black	Yellowstone County Public Works	mblack@co.yellowstone.mt.gov

1. Introductions (Sign-in sheet)

2. Update from Aviation/Transit Director → setup conf call w/ Debra +

3. What's been completed since the 2014 LRTP?

a. List of studies and projects

→ Ruris to Valley Study (2015/16)
 → City List (Euro-C.)

4. Existing Conditions

→ TFD Economic Development Master Plan
 → Trade/Trade

a. Review maps (Attachment A)

→ 2017 20

b. Traffic counts and intersections

→ 2018

→ Downtown Master Plan (Find) (2014)
 → commercial districts
 → ped/bike

i. What data do we have? (Refer to *.kmz file)

ii. Intersection locations to study further

iii. Format for online database (Refer to link --
<http://kai.maps.arcgis.com/apps/webappviewer/index.html?id=15729063b03f401987046ea8ecb56e4b>)

c. Data collection

Col has same number → to get count (⊕) → list it w/ crash data -

→ B. Tolson (b. to counts by lane)

→ Can this be added to the map?

5. Public Outreach Activities and Dates for LRTP (Attachment B)

6. DRAFT Goals, Objectives, and Performance Measures for LRTP (Attachment C)

7. Next Meeting (April 12, 10 AM – 12 PM)

a. Final goals, objectives, and performance measures for LRTP

b. Existing conditions (continued)

c. Land use (forecasts)

d. Public outreach for LRTP and PPP

e. Summary details for the travel demand model

MMO
 Study Area
 → western boundary
 → exposed if on the west
 → break at to the west

MMO

Created success to stone w/ public

City has counts

Counts at

→ Grand Ave 3rd to 24th

→ Heights Area

Yellowstone Counts

→ no into auto

→ tube counts



Appendix D

Steering Committee Meeting #4

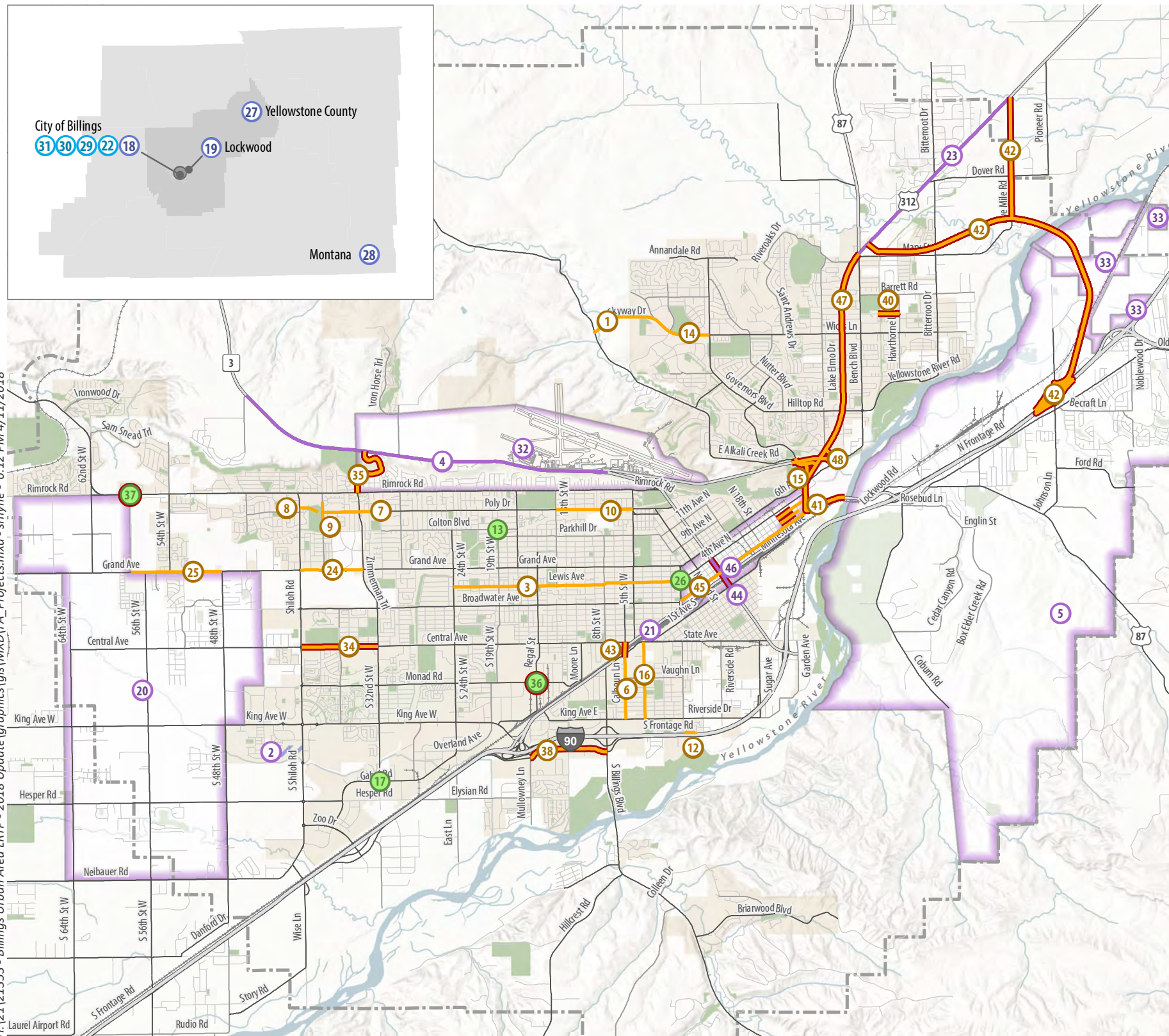


Steering Committee Meeting #4 Agenda

April 12, 2018 @ 10:00 AM – 12:00 PM,
1st Floor Conference Room - Miller Building

1. Introductions (Sign-in sheet)
2. Existing Conditions
 - a. What's been completed since 2014 LRTP? (Attachment A)
 - b. Review updated maps (Attachment B)
 - c. Other activities
 - i. Traffic counts, crash data, & level of service analysis
3. Public Outreach Activities for LRTP
 - a. Public Outreach Schedule for May 14th-18th, 2018
 - b. Public Informational Meeting #1 (May 15, 2018: 4-7 PM @ Billings Library)
 - i. Outline of Boards (Attachment C)
4. Travel Demand Model Update
 - a. Road Network
 - b. Transportation Analysis Zones
 - c. Land Use Inventory
 - d. Household Travel Survey
 - e. Next Steps
5. Next Meetings
 - a. SC Meeting #5 - May 17, 10 AM – 12 PM
 - b. TDM Work Session – May 17, 1:30 – 3:30 PM

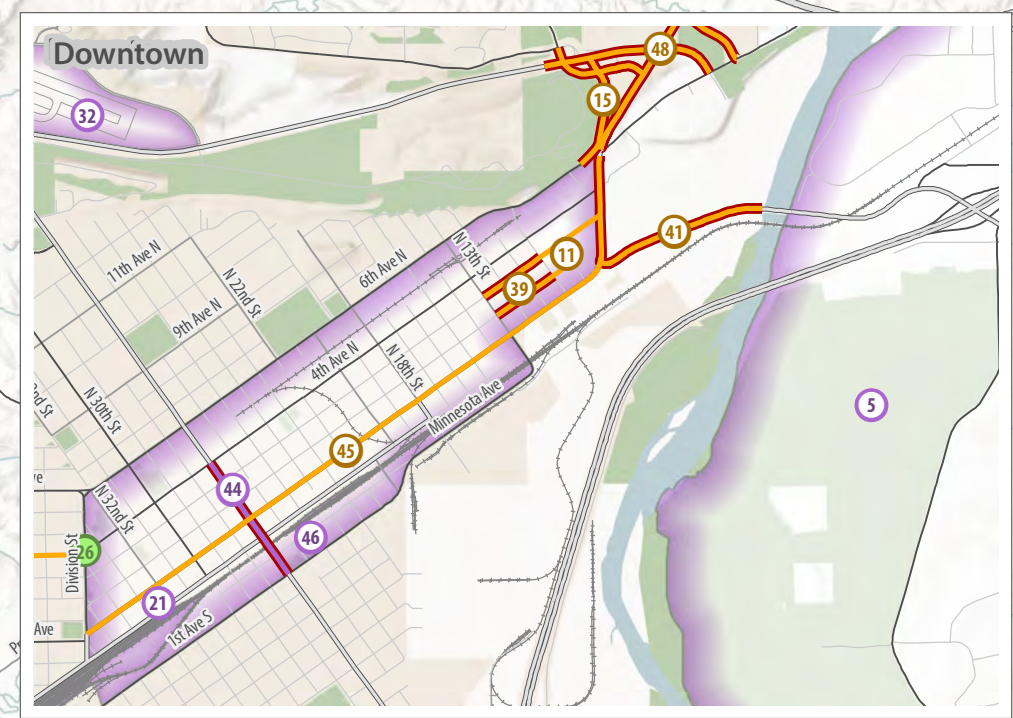
H:\121121353 - Billings Urban Area L RTP - 2018 Update\graphics\GIS\MXD\FA_Projects.mxd - srhnye - 6:12 PM 4/11/2018



- Intersection Project
- Ongoing Intersection Project
- Project
- On-Going Project
- Study/Plan
- Ongoing Study/Plan
- Study Area
- Park
- City of Billings

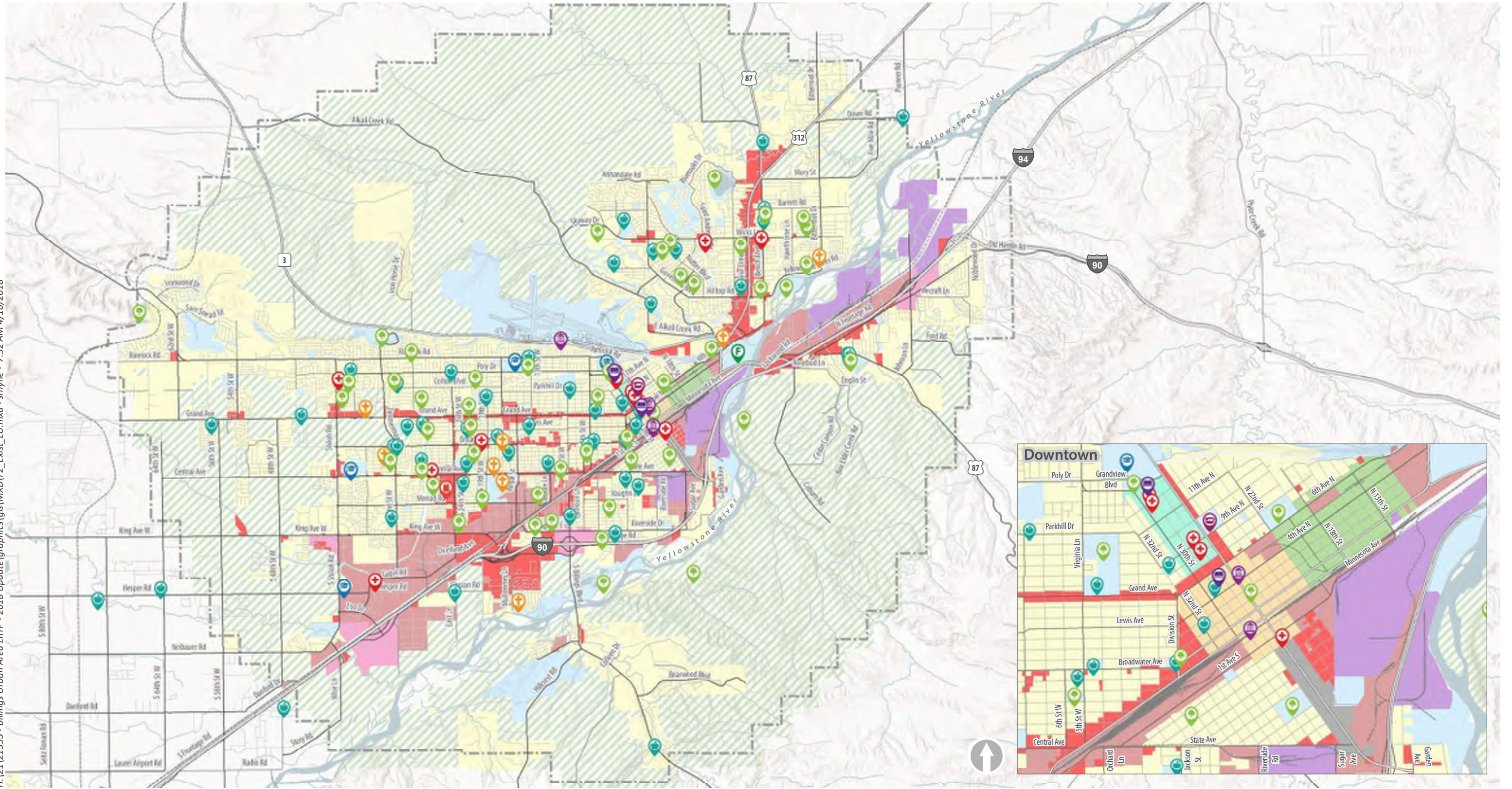
ID	Name
1	Inner Belt Loop Phase 1
2	Shiloh Conservation Area (Trail)
3	Lewis Avenue Bike Lanes (24th Street W to Division Street)
4	Highway 3 Corridor Study
5	Non-Motorized Transportation Plan
6	Calhoun Lane (King East to Underpass Avenue)
7	Poly Drive (32nd Street W to 38th Street W)
8	Arrowhead Trail (Arrowhead Elementary School to Shiloh Road)
9	Poly Drive School Sidewalks
10	Poly Drive/Virginia Lane Traffic Signal Reconstruction & Bike Lanes (Poly from Virginia to 13th St W)
11	Exposition Gateway (2nd & 3rd Ave N from Main Street to N. 10th)
12	Ponderosa Trail
13	19th St W & Colton School Crossing
14	Wicks Lane Trail (Siesta to Governors)
15	Swords Park Outlet Trail (Aronson to 6th Ave N)
16	Orchard Lane (King East to State Ave)
17	Gabel Road & 32nd Street West Traffic Signal
18	City of Billings Growth Policy
19	Lockwood Growth Policy
20	West End Multimodal Planning Study
21	Montana Rail Grade Separation Study
22	Billings Community Transportation Safety Plan
23	Old Highway 312 Corridor Study
24	Grand Avenue Widening (32nd Street West to Shiloh Road)

ID	Name
25	Grand Avenue (48th to 58th Streets West)
26	4th Ave N & Division Street Signal Reconstruction
27	Billings-Yellowstone Household Travel Survey
28	TranPlanMT
29	Billings Area Bikeways + Trails Master Plan Update
30	City of Billings Complete Streets Progress Report
31	City of Billings Comprehensive Parks and Recreation Master Plan
32	Rims to Valley Bike-Pedestrian Feasibility Study
33	Targeted Economic Development District (TEDD)
34	Central Avenue (32nd St W to Shiloh Road)
35	Zimmerman Trail (Rimrock Road to Hwy 3)
36	Monad & Daniel Traffic Signal
37	Rimrock & 54th St W Traffic Signal
38	Midland Road (S. Billings Blvd. to Mullowney Ln)
39	EBURD Reconstruct (2nd & 3rd Ave N from N. 13th to N. 10th)
40	Kyhl Lane (BBWA to Hawthorne)
41	1st Avenue North & Exposition Drive
42	Billings Bypass Arterial
43	Underpass Avenue Improvements
44	27th Street Railroad Crossing Study
45	1st Avenue North Billings
46	Billings Downtown Traffic Study
47	Main Street Signal Timing
48	Airport & Main Intersection



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Figure A
Projects/Plans/Studies/Policies
Completed Since 2014 LRTP

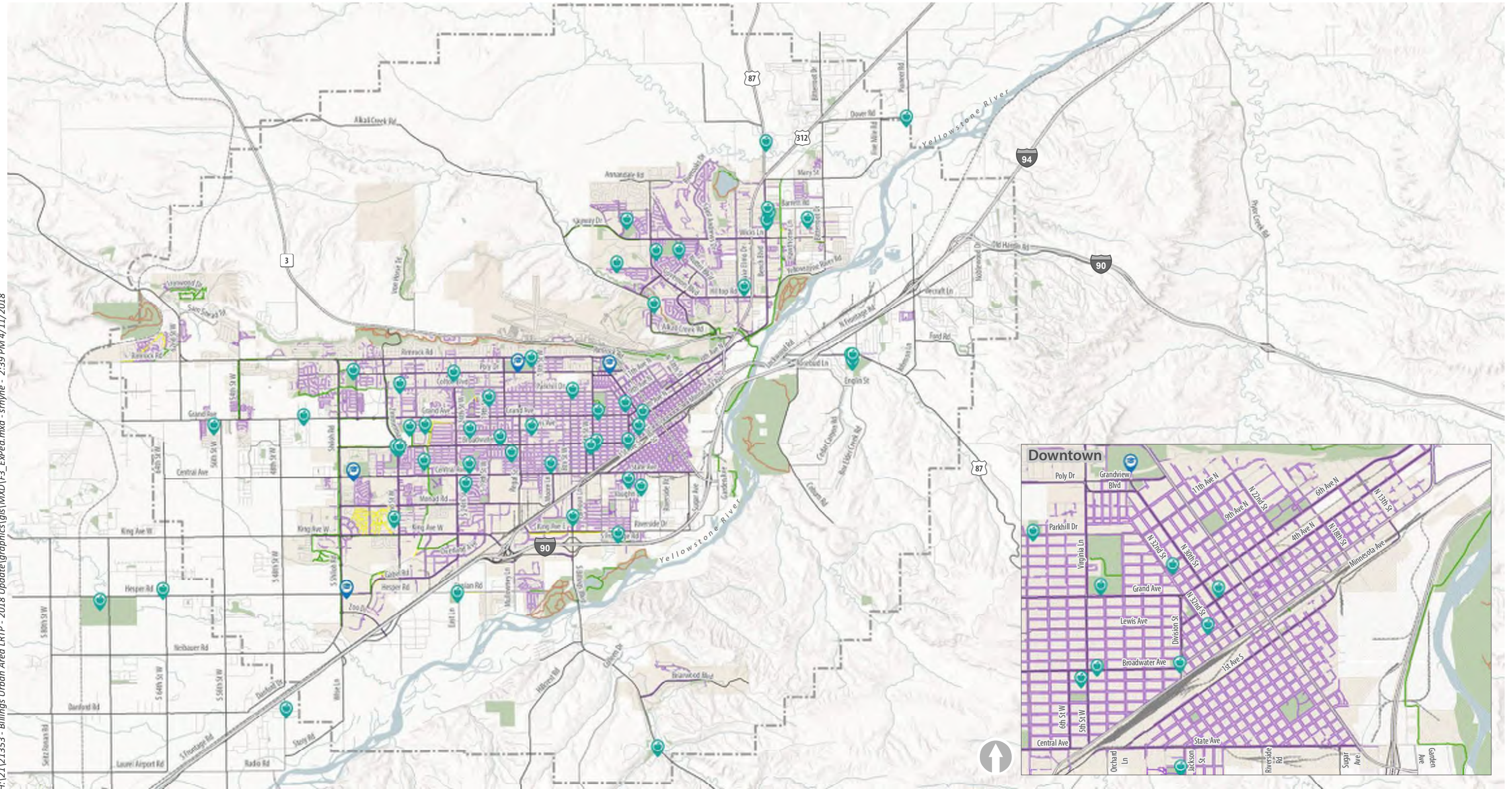


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| | | | | | | | | | |

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Figure 2
Existing Land Use

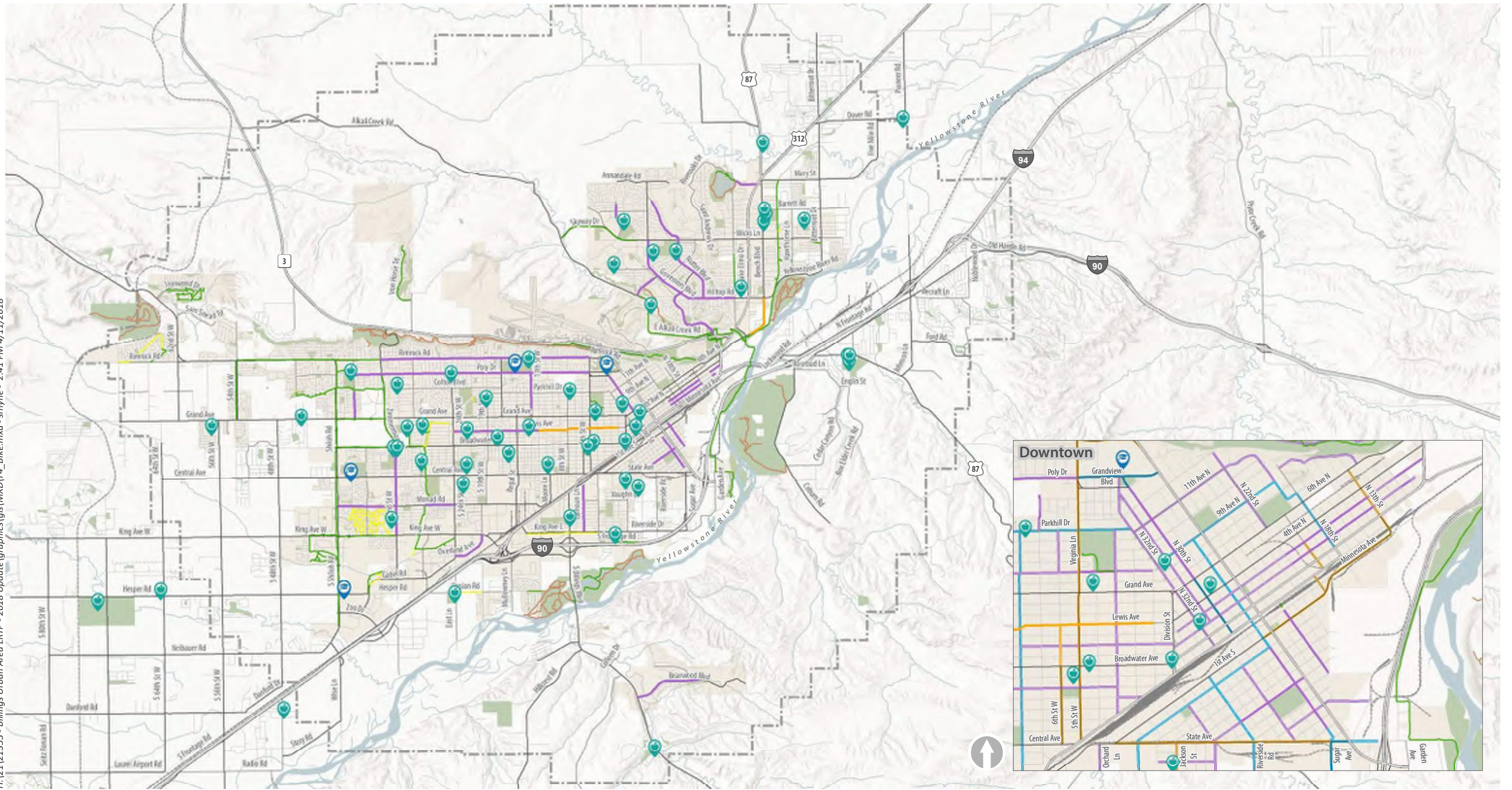
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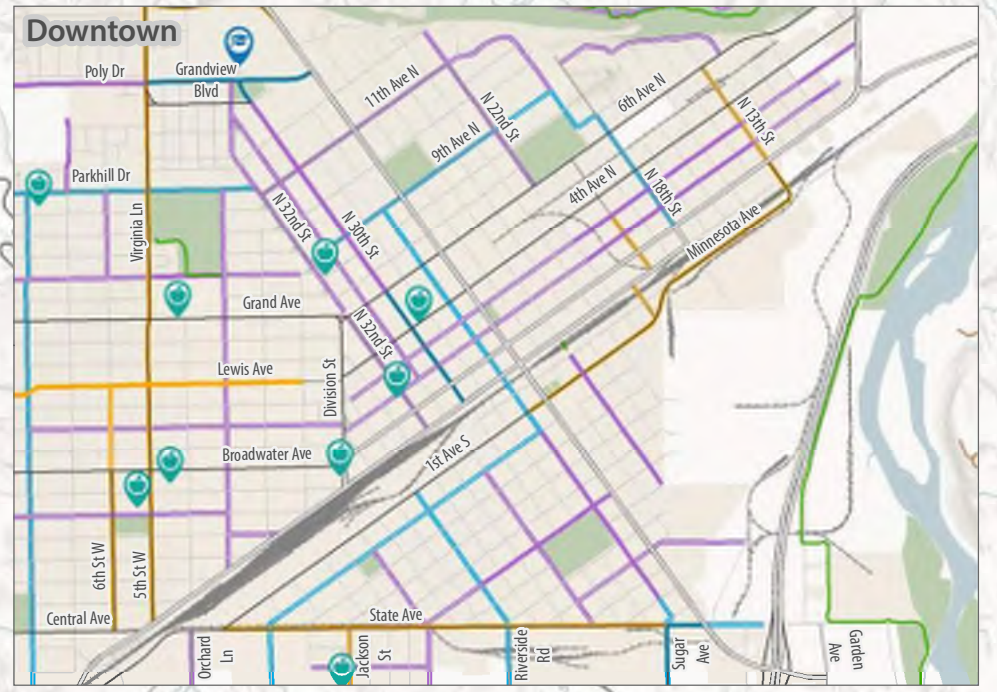
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Figure 3
Existing Pedestrian and Trail Facilities

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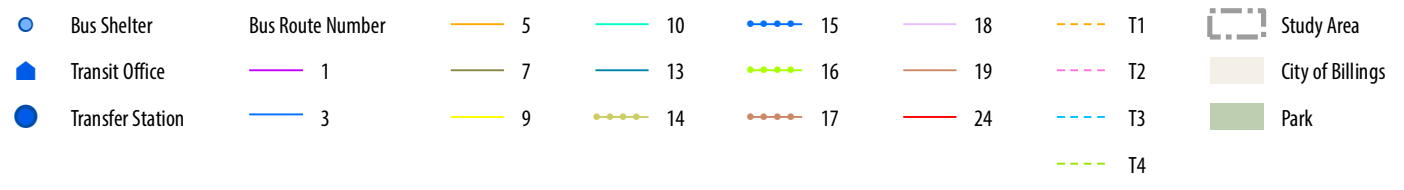
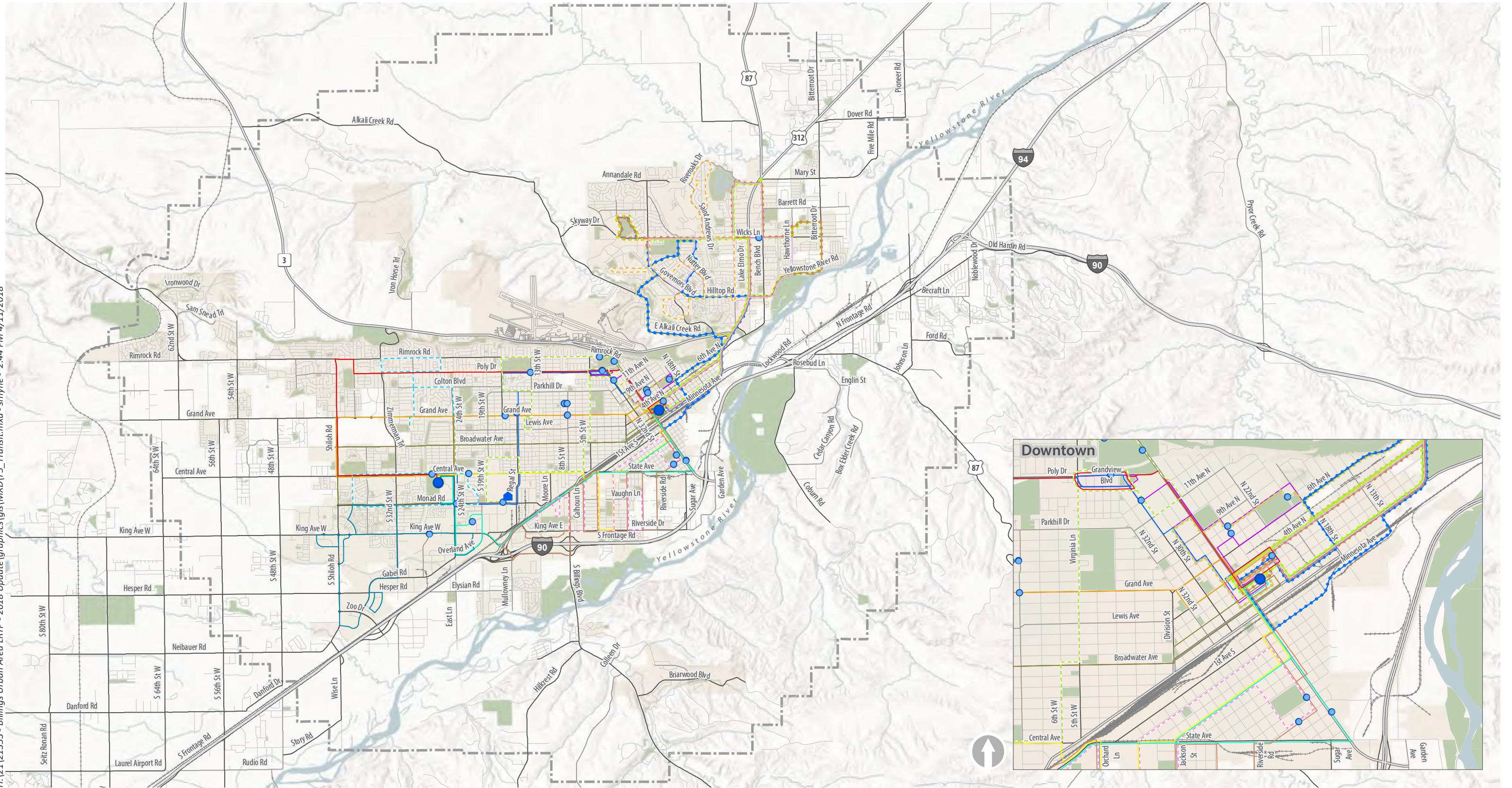
- Bike Lane
- Shared Use Path
- Unpaved Trail
- College
- Study Area
- Shared Lane Marking
- Neighborhood Trail
- Schools
- City of Billings
- Park



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Figure 4
Existing Bikeways and Trail Facilities

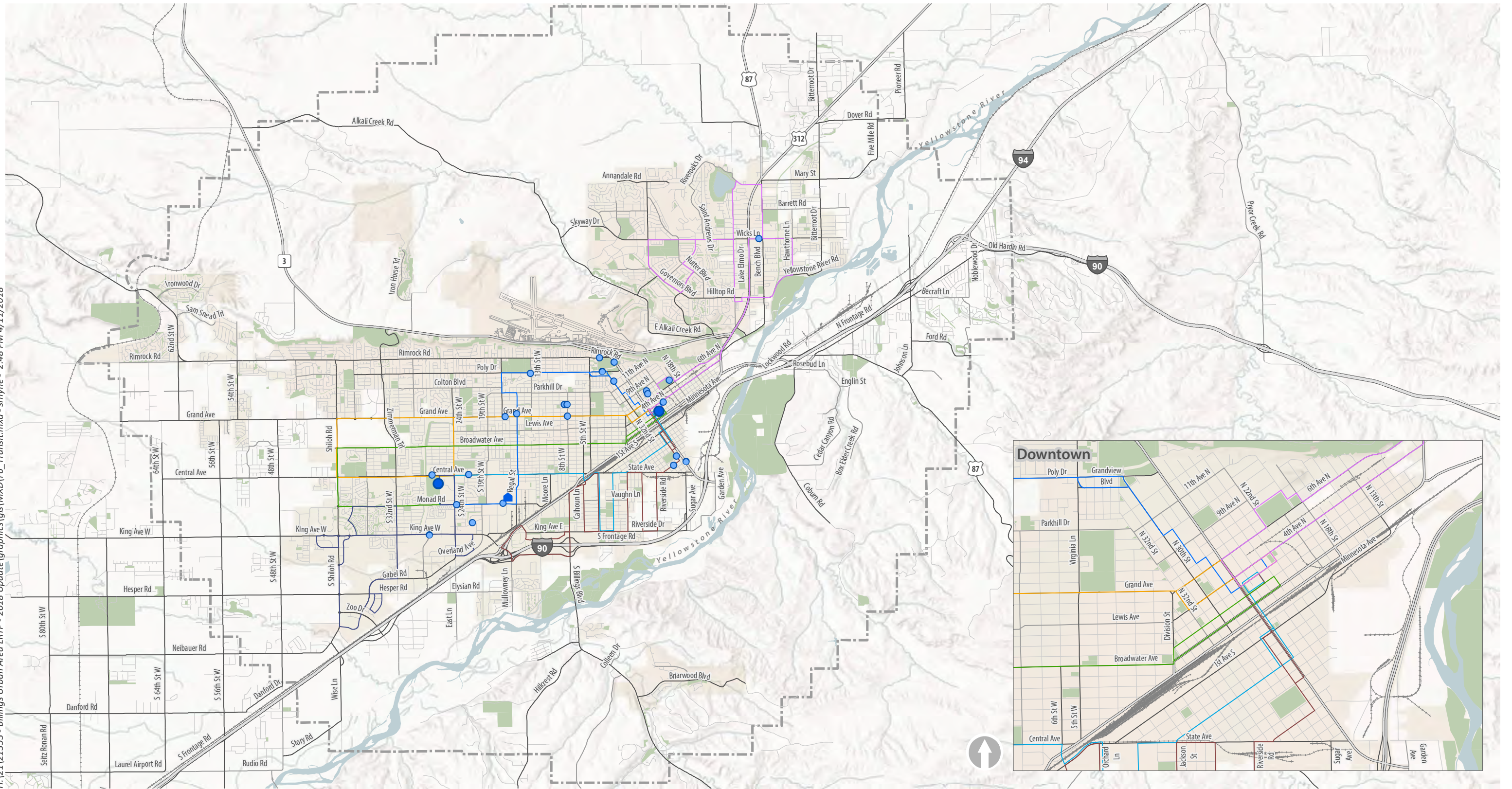
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Figure 5
Existing Weekday Bus Routes

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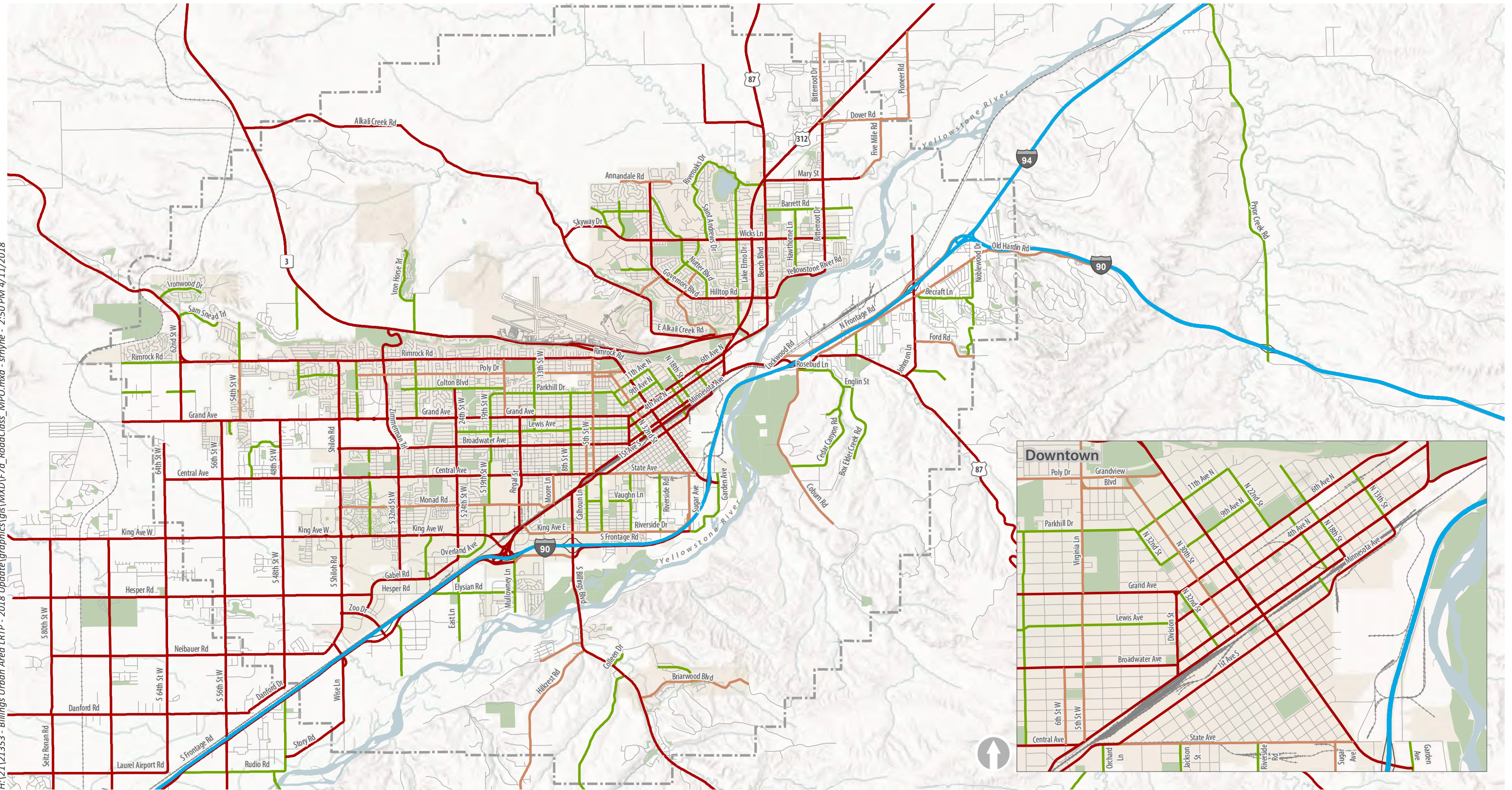


- Bus Shelter
 - Transit Office
 - Transfer Station
- | | | | | |
|--|--|---|--|---|
| Route Number | — S5 | — S9 | — S18 | Study Area |
| — S3 | — S7 | — S13 | — S19 | Park |
| | | | | City of Billings |

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Figure 6
Existing Weekend Bus Routes

H:\121121353 - Billings Urban Area LRTP - 2018 Update\graphics\GIS\MXD\F7a_RoadClass_MPO.mxd - srhnye - 2:50 PM 4/11/2018



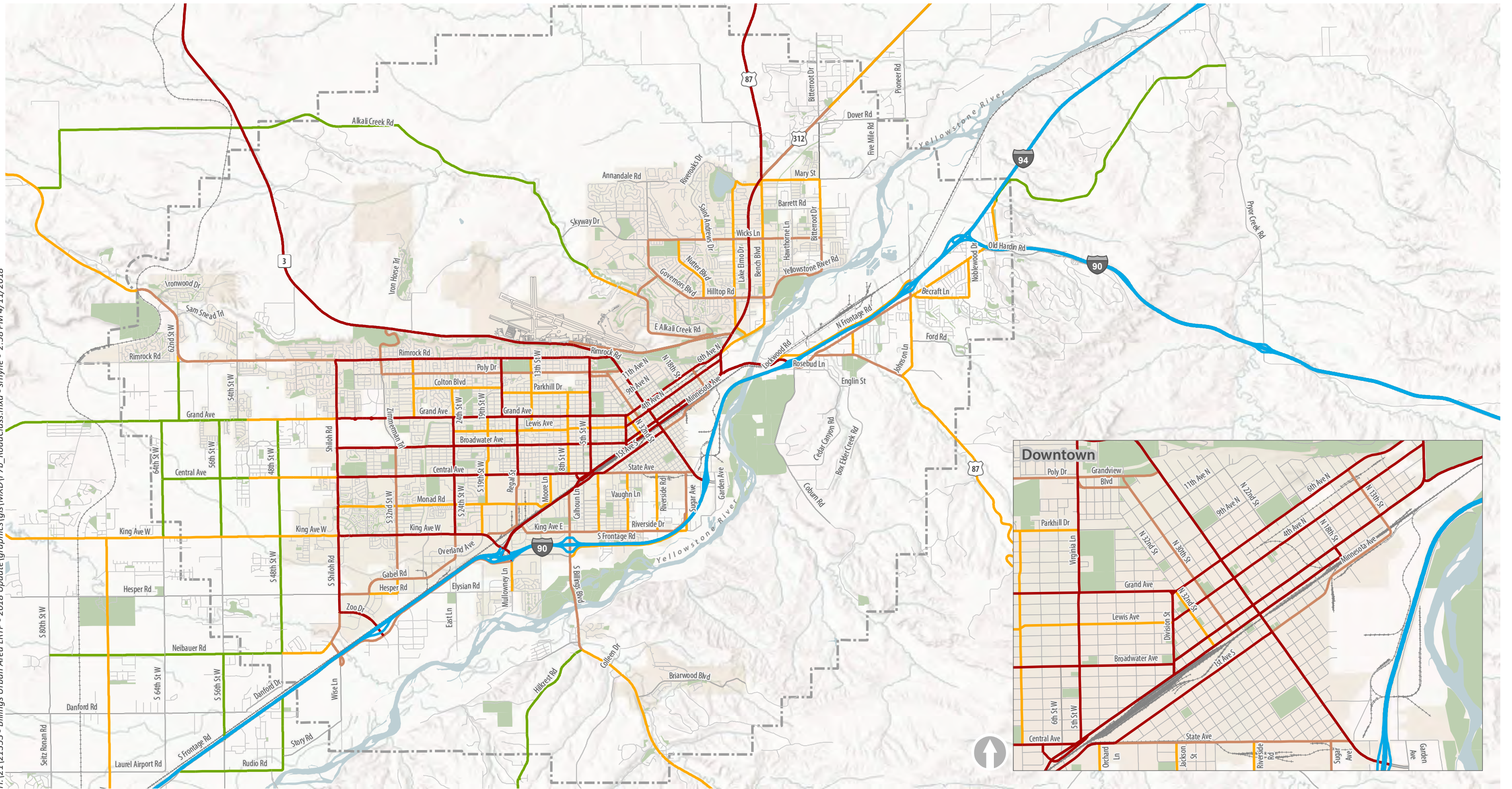
Roadway Classification	Minor Arterial	Study Area
Interstate	Collector	Park
Principal Arterial	Local Streets	City of Billings

DRAFT

Figure 7a

Existing Roadway Functional Classification - MPO Classification

H:\121121353 - Billings Urban Area L RTP - 2018 Update\graphics\gis\MXD\F7b_RoadClass.mxd - srhnye - 2:58 PM 4/11/2018

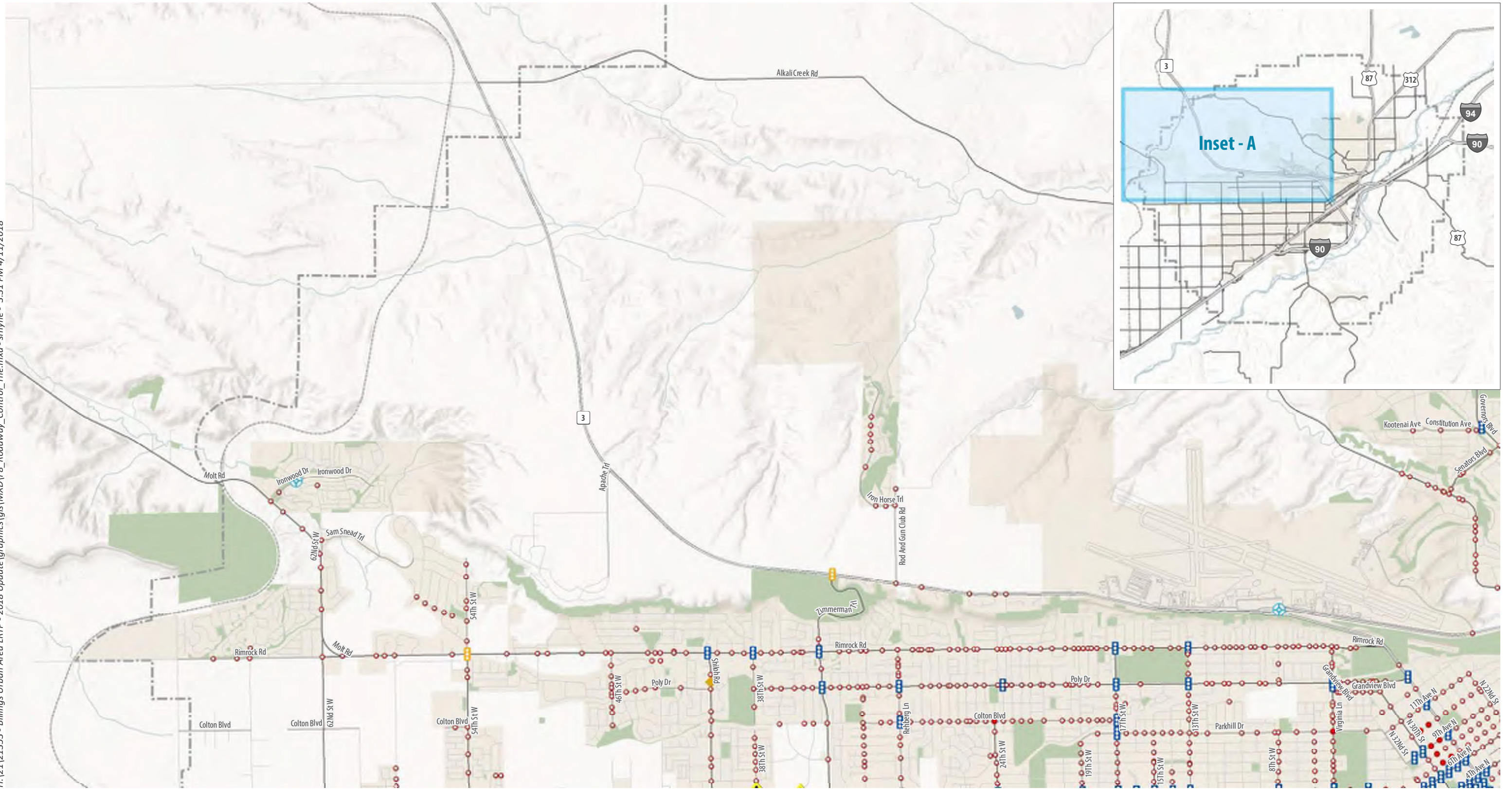


- | | | |
|-------------------------------|-----------------|------------------|
| Roadway Classification | Major Collector | Study Area |
| Interstate | Minor Collector | Park |
| Other Principal Arterial | Local Streets | City of Billings |
| Minor Arterial | | |

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Figure 7b

Existing Roadway Functional Classification - MDT Classification

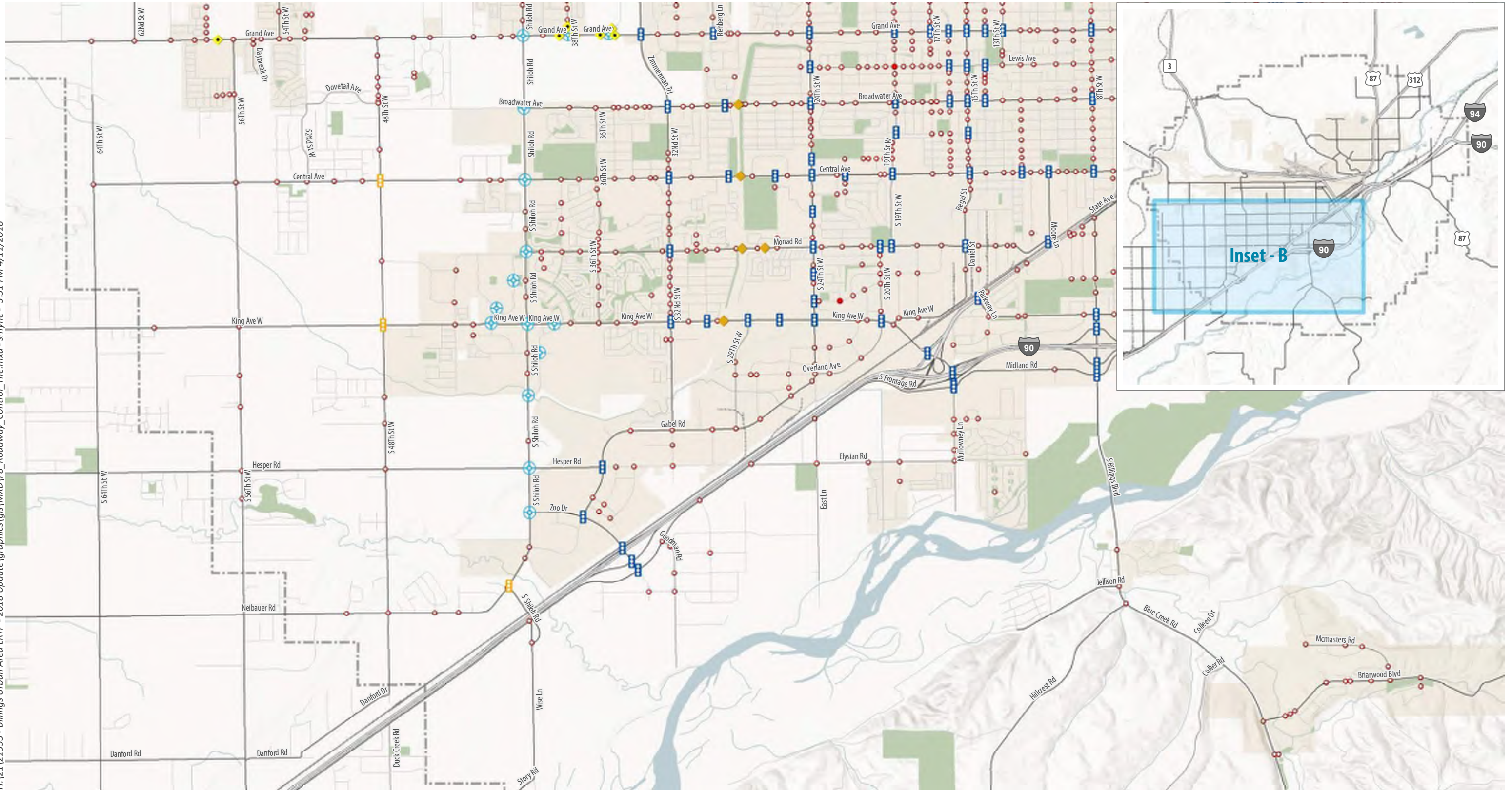


- | | | | | | | | | | |
|--|--------------|--|---------------------------|--|------------|--|--------------------|--|------------------|
| | Signal | | Stop with Flashing Beacon | | Roundabout | | Interstate/Highway | | Study Area |
| | All-Way Stop | | Hawk Signal | | Park | | Arterial | | City of Billings |
| | Stop | | RRFB | | Local | | | | |



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Figure 8a
Existing Roadways and Traffic Control Devices

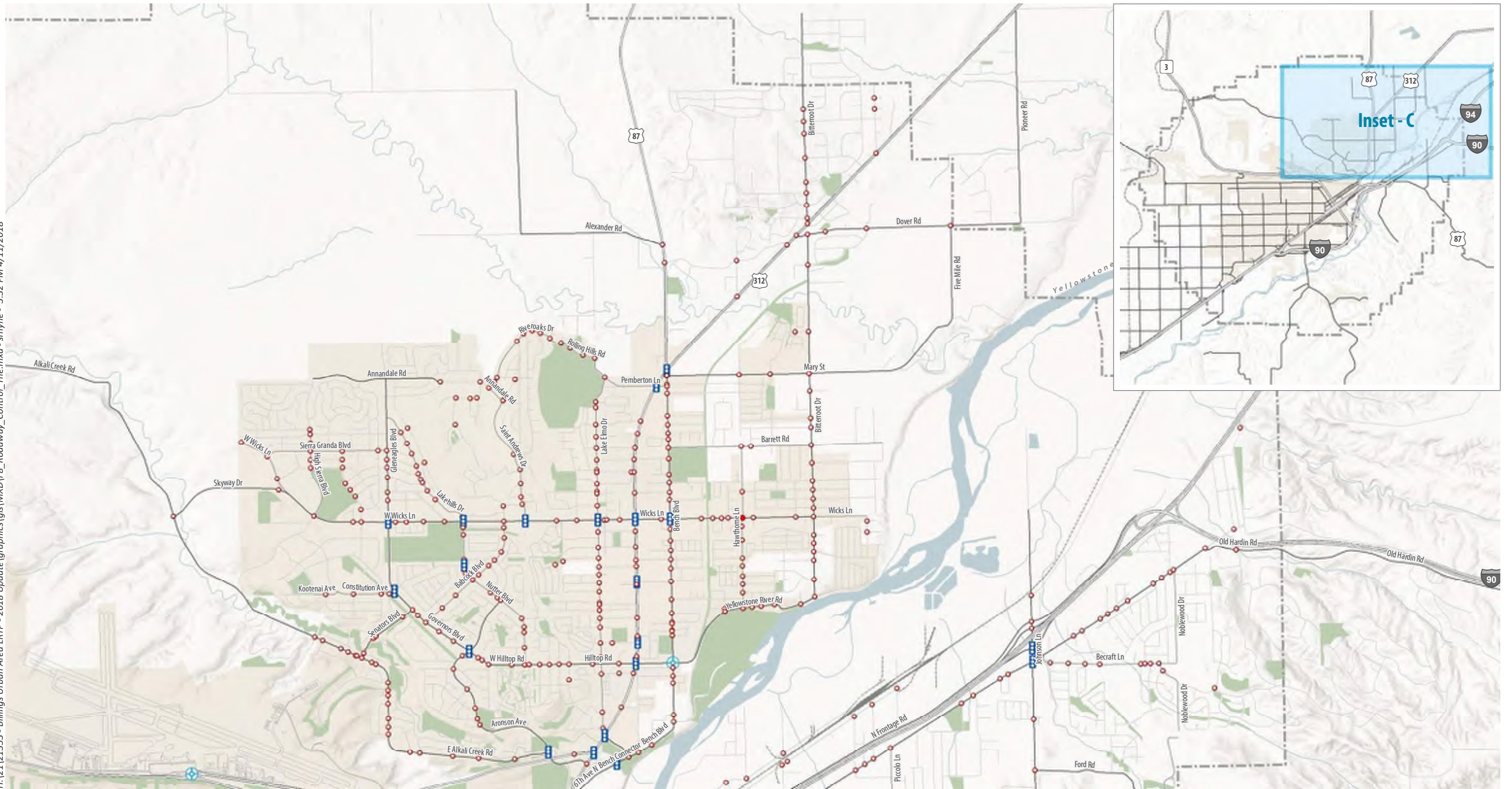


- | | | | | | | | | | | |
|--|--------------|--|---------------------------|--|------------|--|--------------------|--|------------------|--|
| | Signal | | Stop with Flashing Beacon | | Roundabout | | Interstate/Highway | | Study Area | |
| | All-Way Stop | | Hawk Signal | | Park | | Arterial | | City of Billings | |
| | Stop | | RRFB | | Collector | | Local | | | |

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Figure 8b
Existing Roadways and Traffic Control Devices

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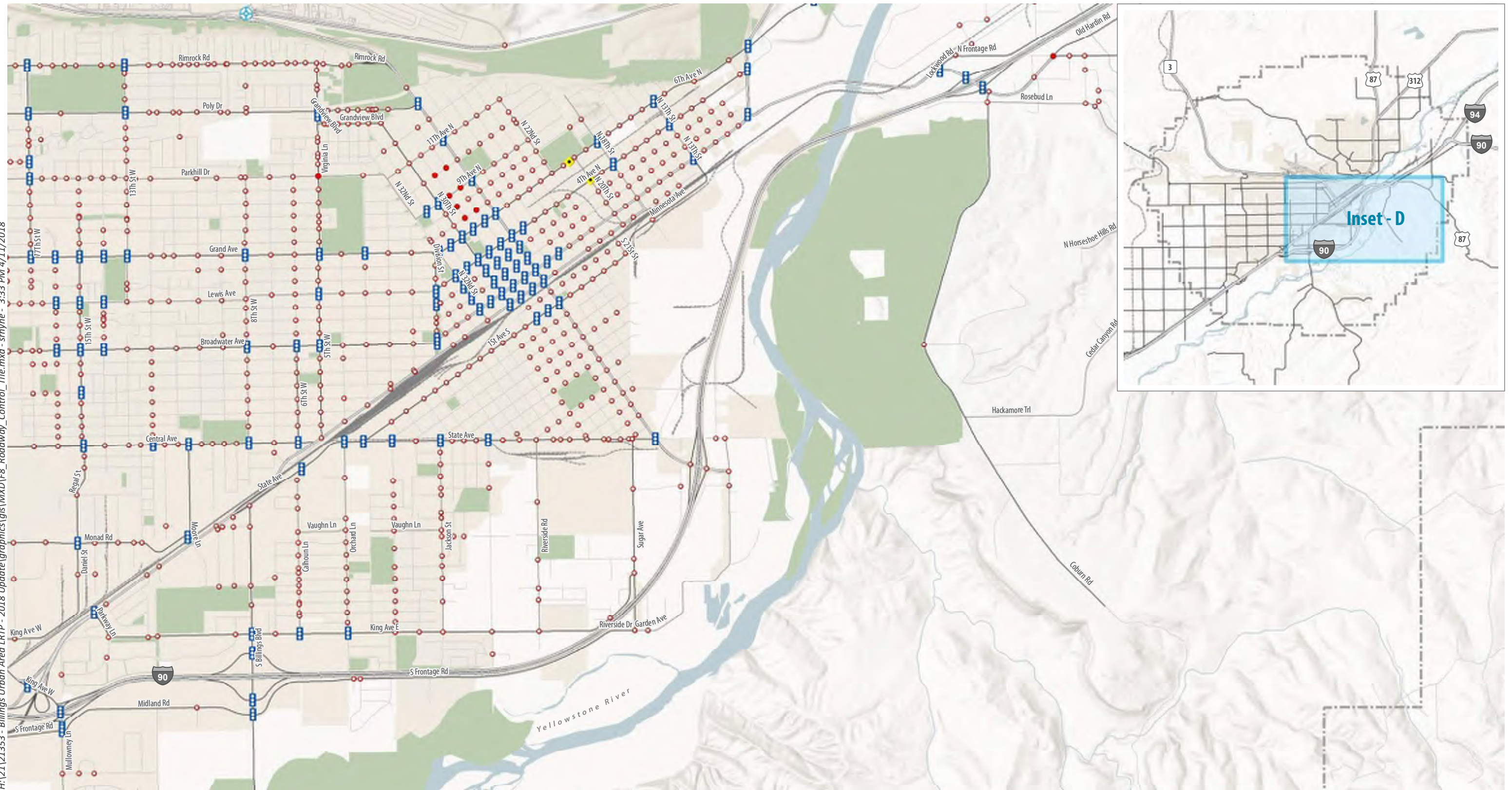
- | | | | | |
|--------------|---------------------------|------------|--------------------|------------------|
| Signal | Stop with Flashing Beacon | Roundabout | Interstate/Highway | Study Area |
| All-Way Stop | Hawk Signal | | Arterial | Park |
| Stop | RRFB | | Collector | City of Billings |
| | | | Local | |



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Figure 8c
Existing Roadways and Traffic Control Devices

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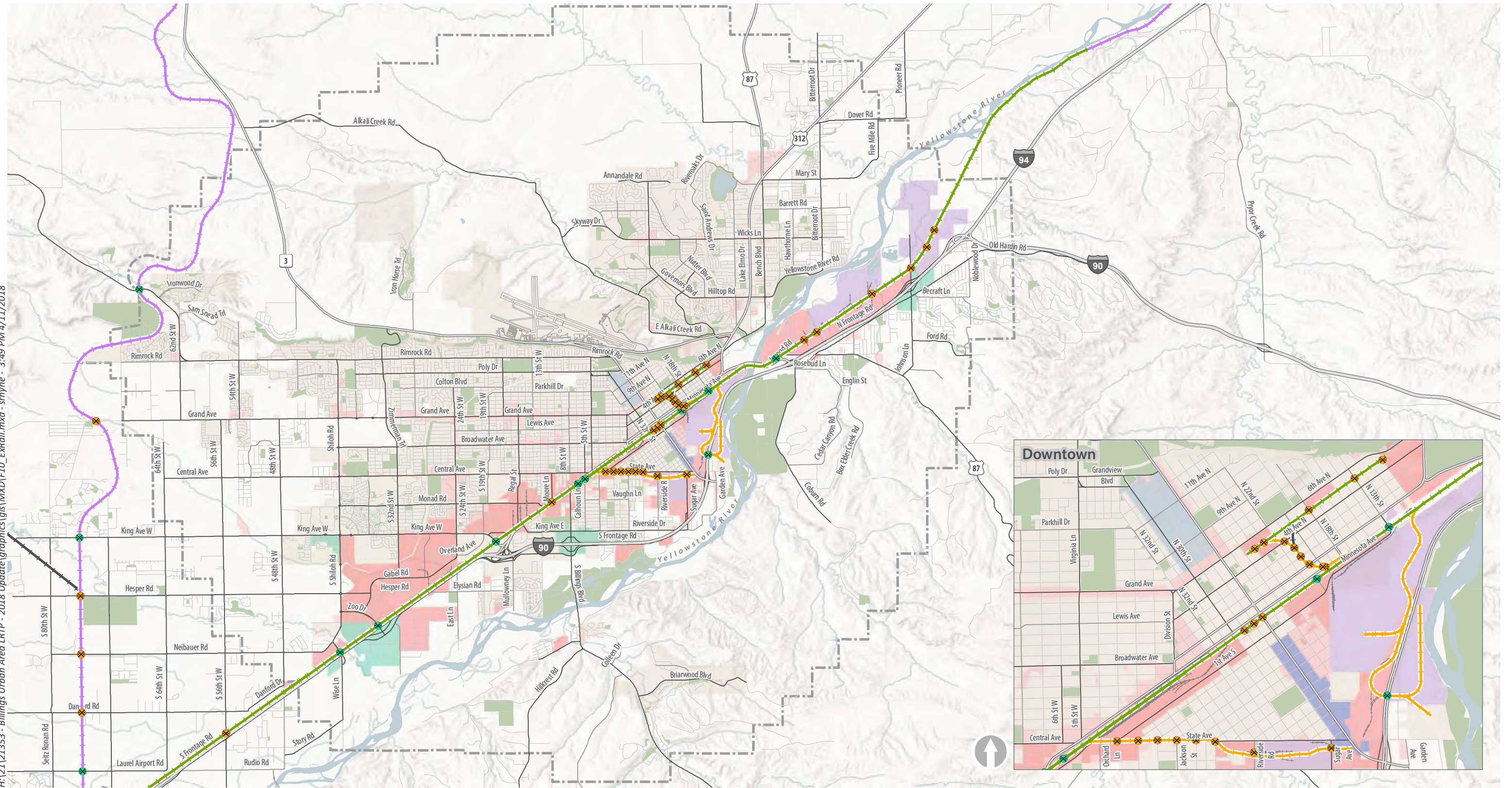
- | | | | | |
|--------------|---------------------------|------------|--------------------|------------------|
| Signal | Stop with Flashing Beacon | Roundabout | Interstate/Highway | Study Area |
| All-Way Stop | Hawk Signal | Park | Arterial | City of Billings |
| Stop | RRFB | Local | Collector | |



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Figure 8d
Existing Roadways and Traffic Control Devices

H:\121121353 - Billings Urban Area L RTP - 2018 Update\graphics\GIS\MXD\F10_ExtRail.mxd - srhyn - 3:49 PM 4/11/2018



- ✘ At Grade Crossing
- ✘ Grade Separated Crossing
- Burlington Northern Santa Fe
- Montana Rail Link
- Spur
- Abandoned
- Study Area
- Park
- Commercial
- Commercial/Industrial
- Heavy Industrial
- Light Industrial
- Medical Corridor Permit
- South 27th Street Corridor
- Entryway
- City of Billings

DRAFT

Figure 10
Existing Railroad Facilities

Public Informational Meeting #1 – May 15, 2018

Welcome

Thank you for attending tonight's open for the Billings Urban Area Long Range Transportation Plan. The purpose of this open house is to give you an opportunity to learn about the plan, review technical information, and provide comment on the following three items:

- What goals are most important to you for the plan?
- What transportation deficiencies exist today?
- What would you like to see for the future transportation system?

Your Views Are Important! Please remember to fill out a comment sheet.

Who Is Involved?

Add logos of agency representatives from project website:

<http://www.billingslrtp.com/websites/14/pages/91>

The primary sounding board is the Project Oversight Committee (POC), which includes representatives from the above agencies. Public involvement is a major contributor to the plan development.

The consultant team for the project includes Kittelson & Associates, Inc. and DOWL.

What is a Long Range Transportation Plan (LRTP)?

The Billings-Yellowstone County Metropolitan Planning Organization (MPO) is preparing a long range transportation plan (LRTP) to address travel by people and goods and meet the local, state, and federal requirements. The plan is a blueprint to guide the development and implementation of needed transportation system projects for the Billings Urban Area.

MPOs are required to update their transportation plan every four years. The last plan for Billings was completed in 2014. The LRTP includes:

- Planning for the next 20 years
- Engaging the public for input and comment
- Assessing facilities and operations of the different transportation modes
- Identifying transportation needs and a set of short and long-range transportation projects
- Constraining the recommendations financially

Add planning process graphic

Schedule

INSERT SCHEDULE

Study Area

The Yellowstone County Planning Board is the designated Metropolitan Planning Organization (MPO) and oversees transportation planning for the Billings Urban Area. The area encompasses the City of Billings, Lockwood, and a planning area extending approximately 4.5 miles outside the City limits.

INSERT STUDY AREA MAP

Draft Goals for 2018 LRTP

Goal 1: Safe, Efficient, Effective - Develop a transportation system that is safe, efficient, and effective

Goal 2: Functional Integrity - Optimize, preserve, and enhance the existing transportation system

Goal 3: Prioritized Improvements - Identify and prioritize projects that mitigate deficiencies, maximize the use of existing facilities, and balance anticipated needs with available funding

Goal 4: Environment - Develop a transportation system that protects the natural environment and promotes a healthy, sustainable community

Goal 5: Multimodal - Create a transportation system that supports the practical and efficient use of all modes of transportation

Goal 6: Economic Vitality – Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce

What Transportation Projects Have Been Completed Since the 2014 LRTP?

Since the 2014 LRTP was completed, several projects have been completed by the local agencies and are identified on this map.

INSERT MAP

Existing Land Use

INSERT MAP

Existing Pedestrian and Trail Facilities

INSERT MAP

Existing Bikeways and Trail Facilities

INSERT MAP

Existing Weekday Bus Routes

INSERT MAP

Existing Weekend Bus Routes

INSERT MAP

Existing Roadway Functional Classification

INSERT MAP

Existing Roadways and Traffic Control Devices

INSERT MAP

Existing Truck Routes and Local Generators

INSERT MAP

Existing Railroad Facilities

INSERT MAP

Help Us Identify the Transportation Deficiencies That Exist Today

Based on your understanding of the transportation system, please use the numbered stickers to identify the location of an existing deficiency on the aerial map and use the table to describe the deficiency.

- Map and Sticker Exercise – Plot an aerial (may need to break up the map into sub areas)

Additionally, we have an interactive web map survey tool set-up on the laptop that you can use to identify existing deficiencies.

- Interactive Map Survey Tool (Screen shots)

Help Us Identify the Future Transportation Vision for the Billings-Urban Area

In the next phase of the LRTP, a short- and long-range project list will be identified to address current and future transportation needs. This project list will be financially constrained. To assist the project team in identifying the vision and project priorities, please place three stickers in the three areas that are most important to you.

- Roadways
- Intersections
- Railroad
- Trucks
- Bus Transit
- Airport
- Safety
- Security
- Pedestrians
- Bicycles

How to Stay Involved?

Add three PI graphics to the left

Sign up on the “Notify Me” list on the City’s website: <http://ci.billings.mt.us/>

Attend future public meetings

Check back frequently for updates on our project website at www.billingslrtp.com

Provide comments via our interactive web map survey: <http://maps.kittelson.com/billingslrtp>

Contact Scott Walker (MPO) at 406.657.8246 or via email at walkers@ci.billings.mt.us

What is Next?

- Summarize comments from Public Informational Meeting #1
- Develop and analyze year 2040 conditions
- Identify draft short and long range projects
- Prepare draft plan for review and comment
- Present materials at Public Informational Meeting #2 (September 2018)

All displays and handouts from tonight will be posted on the project website at www.billingslrtp.com for review and comment.

Comments on tonight’s open house are due by May 29th, 2018. Please turn in your comment sheets:
Via Mail - Scott Walker, 2825 3rd Avenue North, 4th Floor, Billings, MT 59101 or Via Email - Scott Walker at walkers@ci.billings.mt.us.

Thank you for participating!

2018 Billings Urban Area LRTP, TDM, & PPP

Steering Committee Meeting #4 (10 AM - 12 PM)

April 12, 2018

What We'll Cover Today

- ▶ Introductions
- ▶ Existing Conditions
- ▶ Public Outreach Activities for LRTP
- ▶ Travel Demand Model Update
- ▶ Next Meeting

What's Been Completed Since the 2014 LRTP?



DRAFT

Figure A
Projects/Plans/Studies/Policies
Completed Since 2014 LRTP

Study Area



DRAFT

Figure 1
Study Area

Land Use

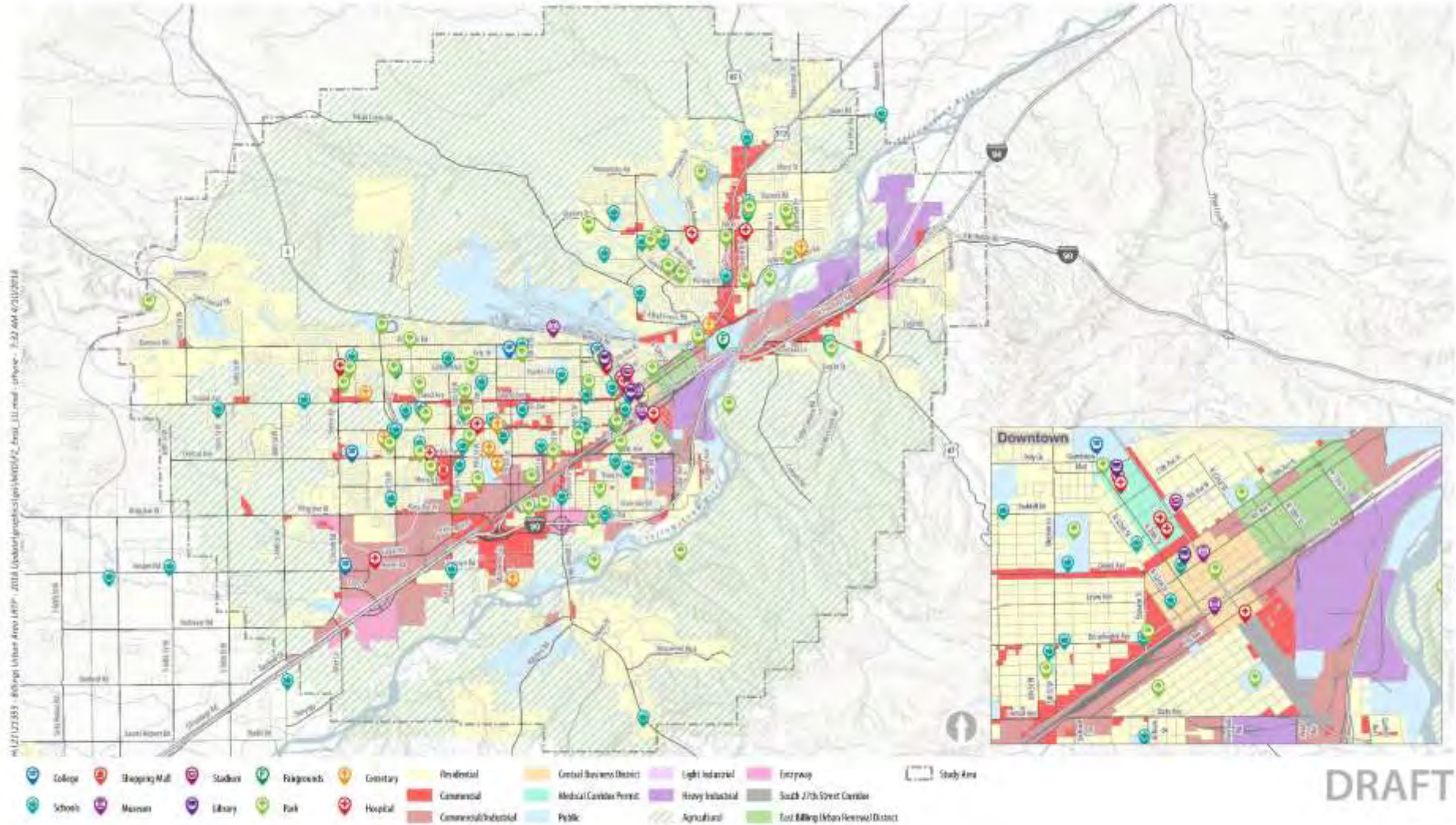


Figure 2
Existing Land Use

Pedestrian and Trail Facilities

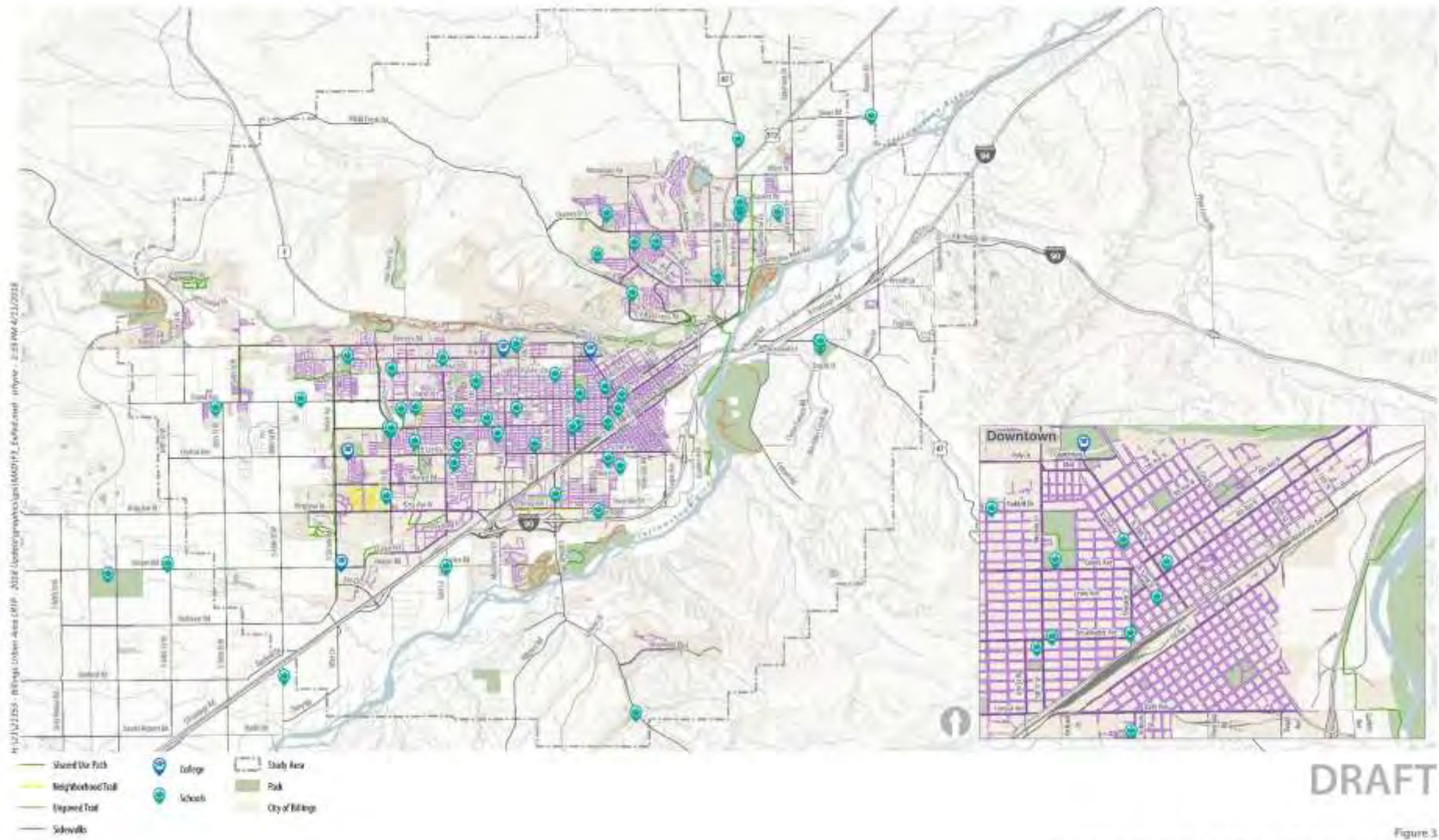


Figure 3
Existing Pedestrian and Trail Facilities

Bikeways and Trail Facilities

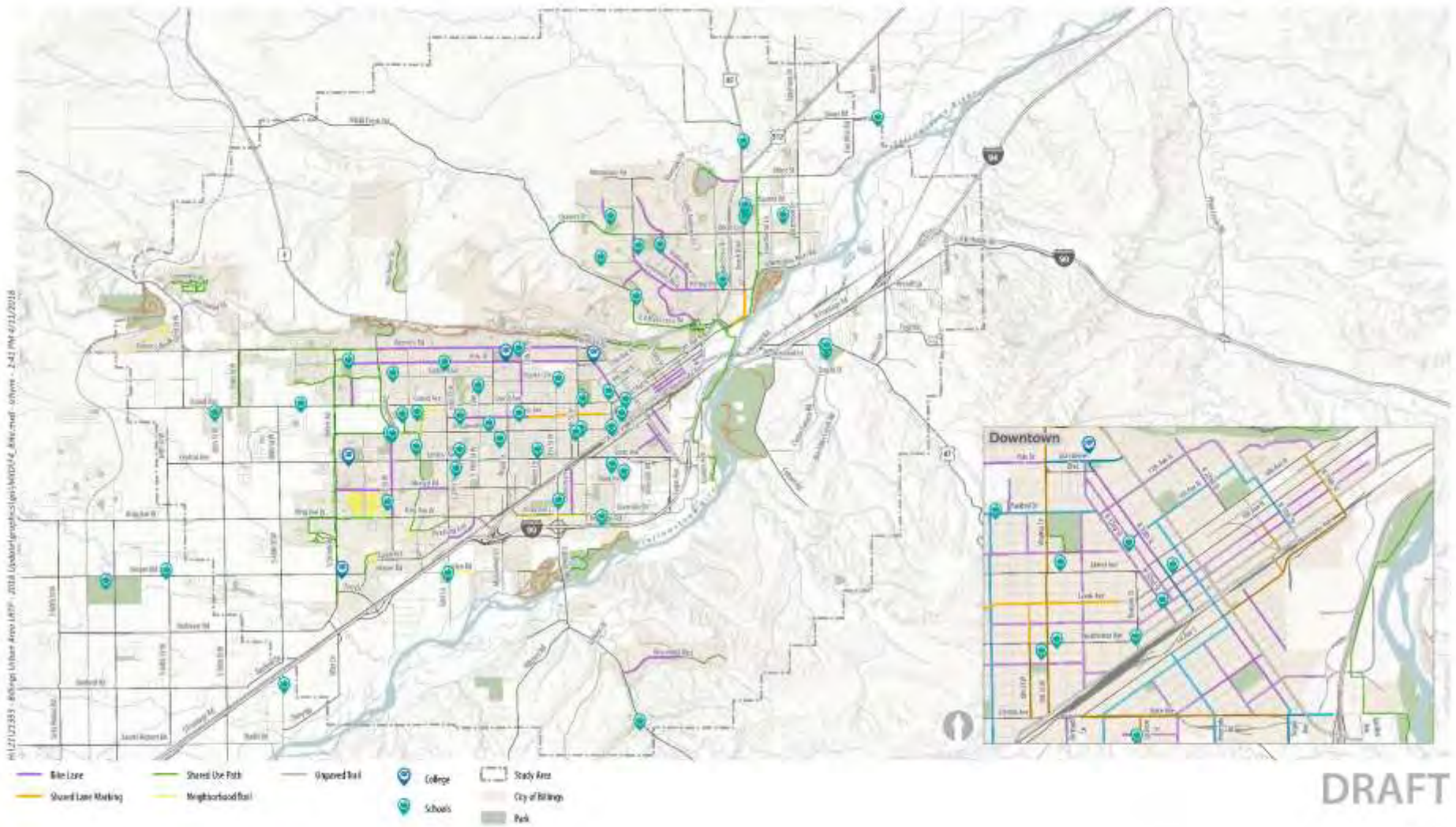
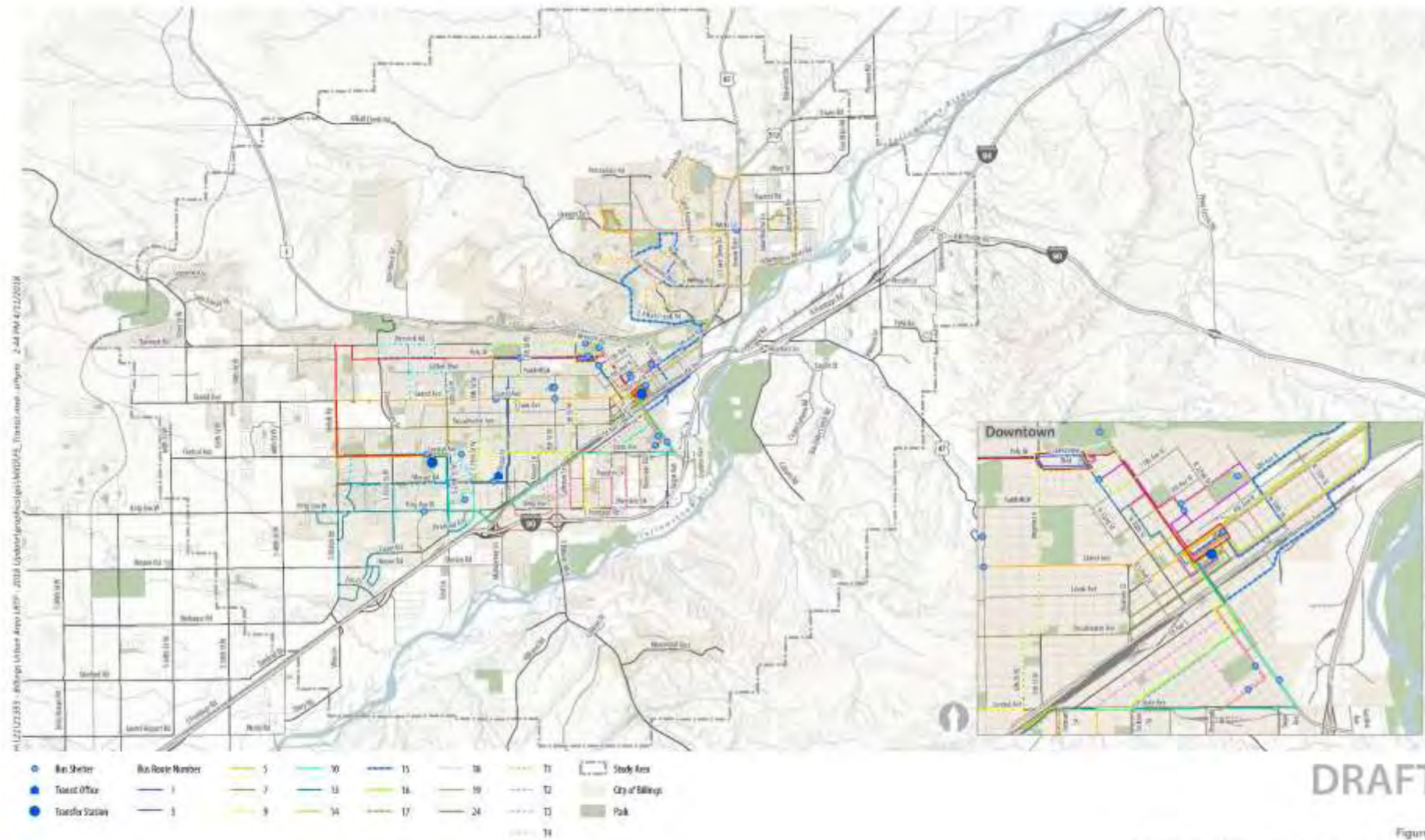


Figure 4
Existing Bikeways and Trail Facilities

Weekday Bus Routes



DRAFT

Figure 5
Existing Weekday Bus Routes

Weekend Bus Routes



DRAFT

Figure 6
Existing Weekend Bus Routes

Roadways Functional Classification (MPO)



Existing Roadway Functional Classification - MPO Classification

Roadways Functional Classification (MDT)



Intersection Traffic Control (NW)



Figure 8a
Existing Roadways and Traffic Control Devices

Intersection Traffic Control (SW)



Figure 4b
Existing Roadways and Traffic Control Devices

Intersection Traffic Control (NE)



Figure 8c
Existing Roadways and Traffic Control Devices

Intersection Traffic Control (SE)



Rail Facilities

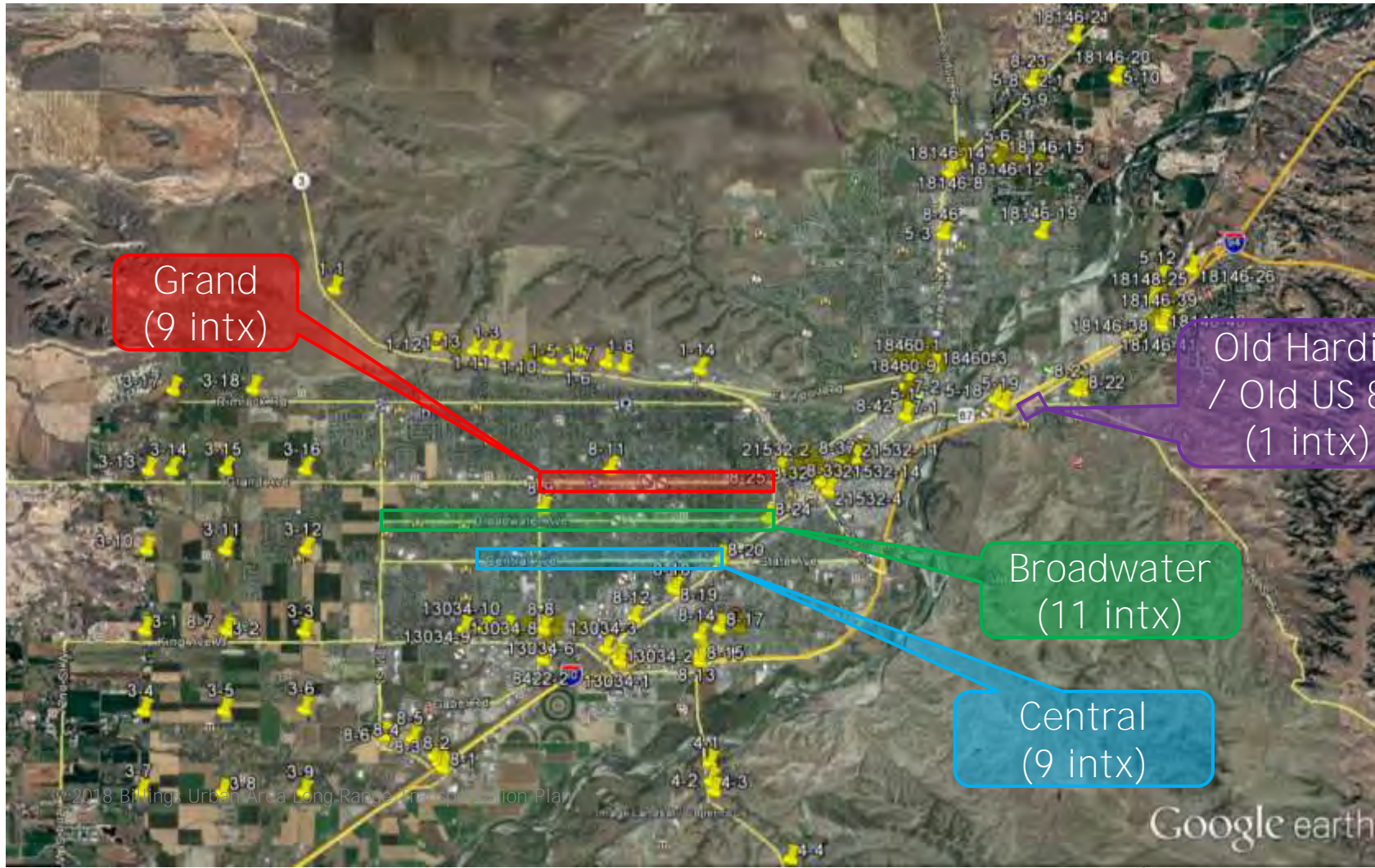


Figure 10
Existing Railroad Facilities

Intersection Traffic Counts

- ▶ What data do we have?
 - ▶ 75 intersections with counts during PM peak hour
 - ▶ 125 intersections with counts during AM and PM peak hour
 - ▶ ~100 intersections planned to be collected through other studies

Intersection Traffic Counts - Proposed Locations (30 intersections)



Other Existing Conditions Activities

▶ Crash Data

- ▶ 5 years of data (2013-2017) requested from MDT → completed
- ▶ Identify types, severity, crash rates, pedestrian/bicycle-related crashes

▶ Existing Traffic Operations by Intersection

- ▶ Summarize locations with level of service (LOS) → completed
- ▶ Collect new traffic counts
- ▶ Perform traffic analysis and develop level of service (LOS) map

Public / Stakeholder Outreach Activities

Monday 5/14	Tuesday 5/15	Wednesday 5/16	Thursday 5/17	Friday 5/18
School Outreach (TBD)	Public Meeting (4:00PM-7:00PM)	School Outreach (TBD)	Steering Committee Meeting #5 (10:00AM-12:00PM)	
			Travel Demand Model Worksession (Afternoon)	
Stakeholder Interviews	Stakeholder Interviews	Stakeholder Interviews	Stakeholder Interviews	Stakeholder Interviews

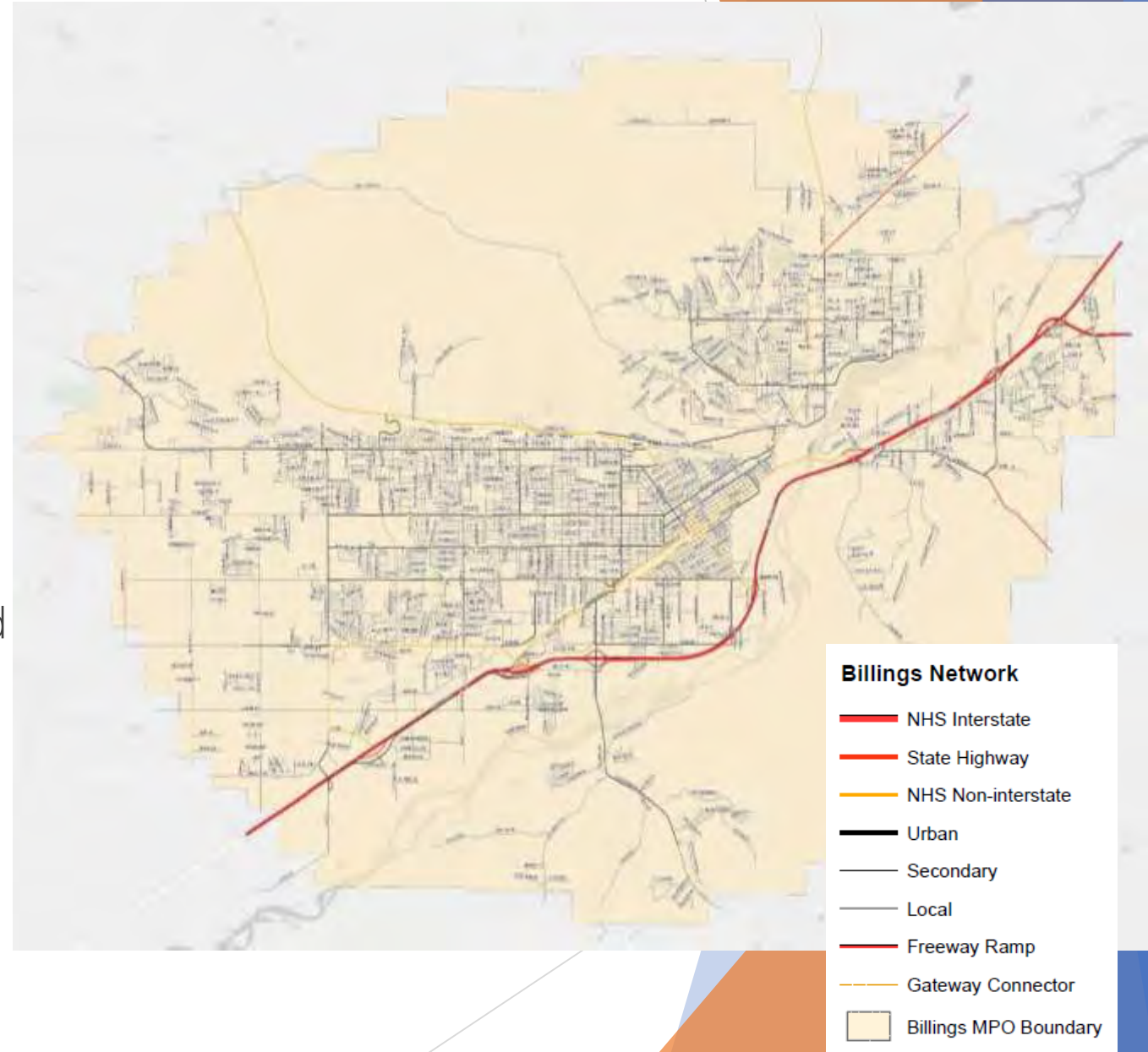
- ▶ Public Informational Meeting #1
 - ▶ May 15, 2018: 4-7 PM @ Billings Public Library (510 N Broadway)
 - ▶ Outline of display boards

Travel Demand Model Update

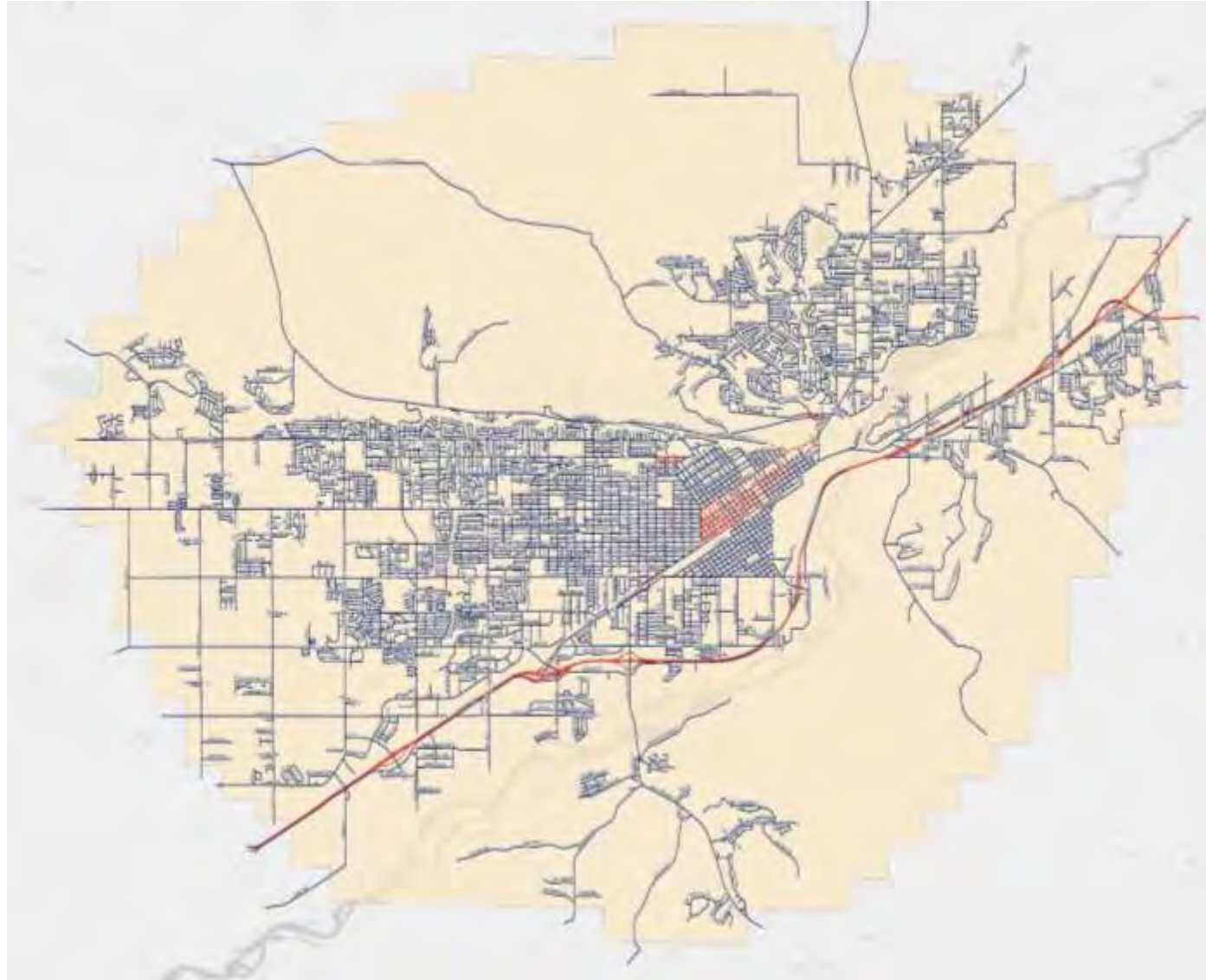
- ▶ Road Network
- ▶ Transportation Analysis Zones
- ▶ Land Use Inventory
- ▶ Household Travel Survey
- ▶ Next Steps

Road Network

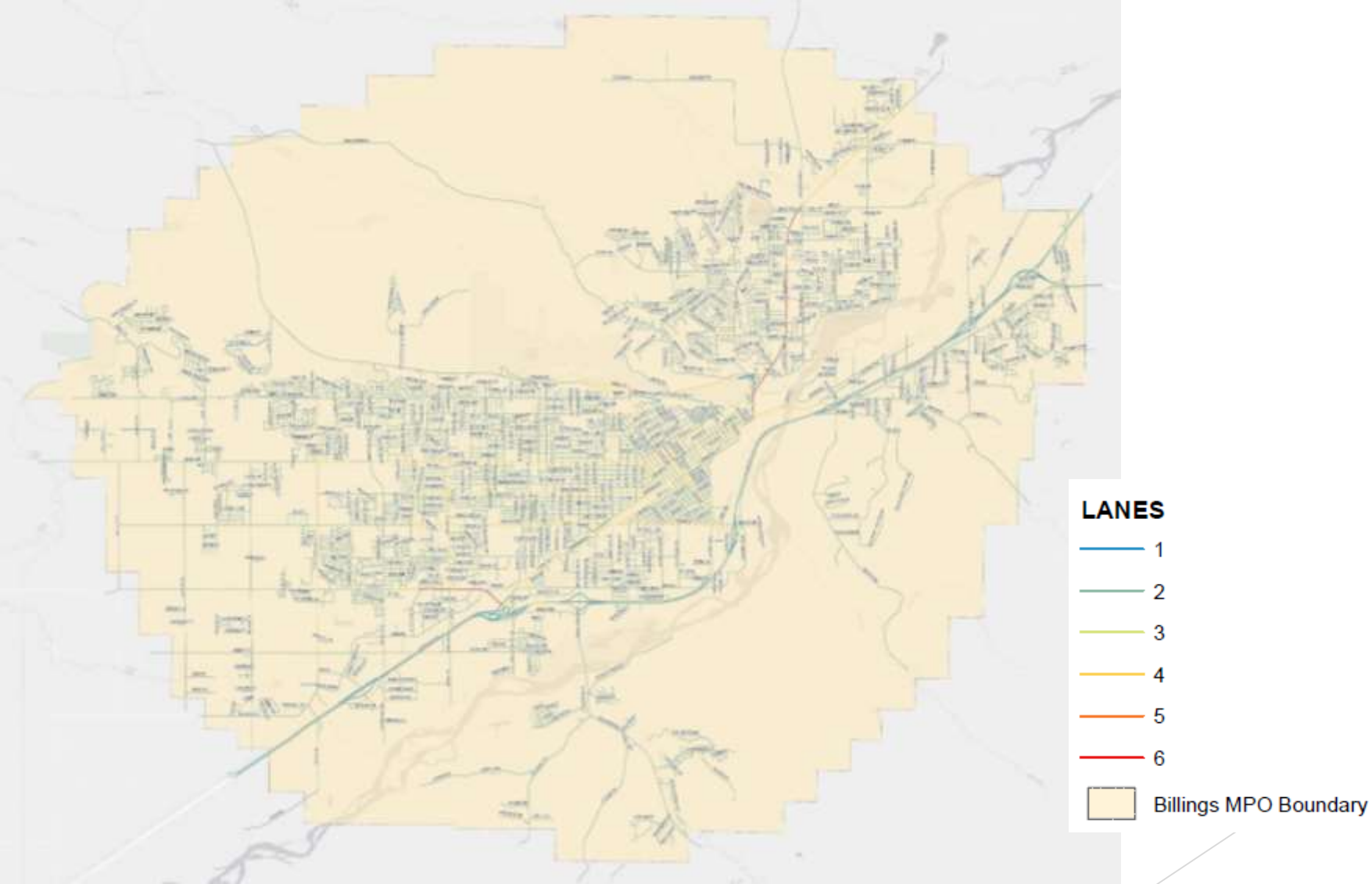
- ▶ Convert GIS to TransCAD
 - ▶ GIS street data from MDT
- ▶ Crop to MPO Boundary
 - ▶ Extend beyond boundary as needed
- ▶ Add data from other sources
 - ▶ Directionality
 - ▶ Speeds



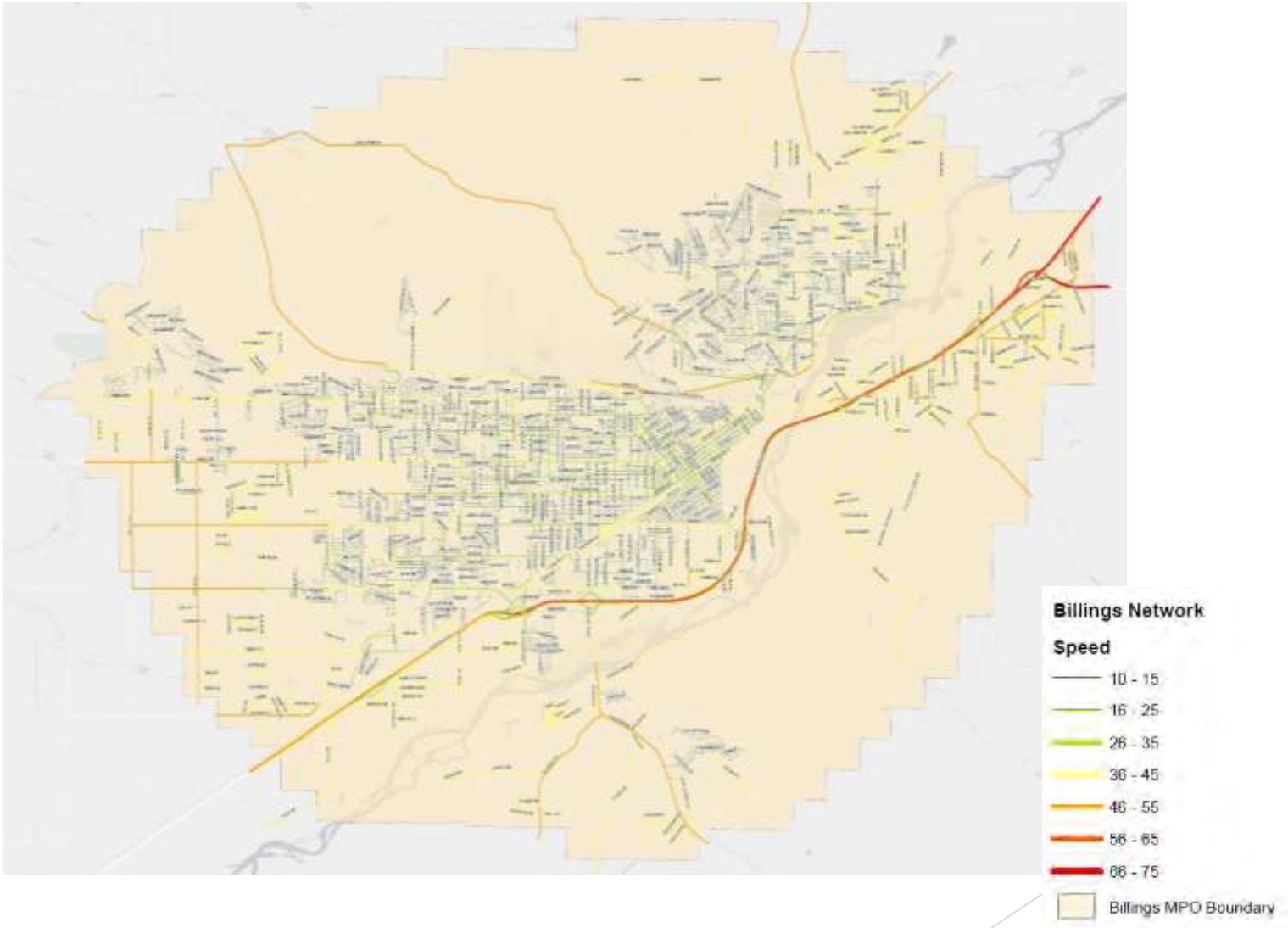
Road Network - One Way Roads



Road Network - Lanes

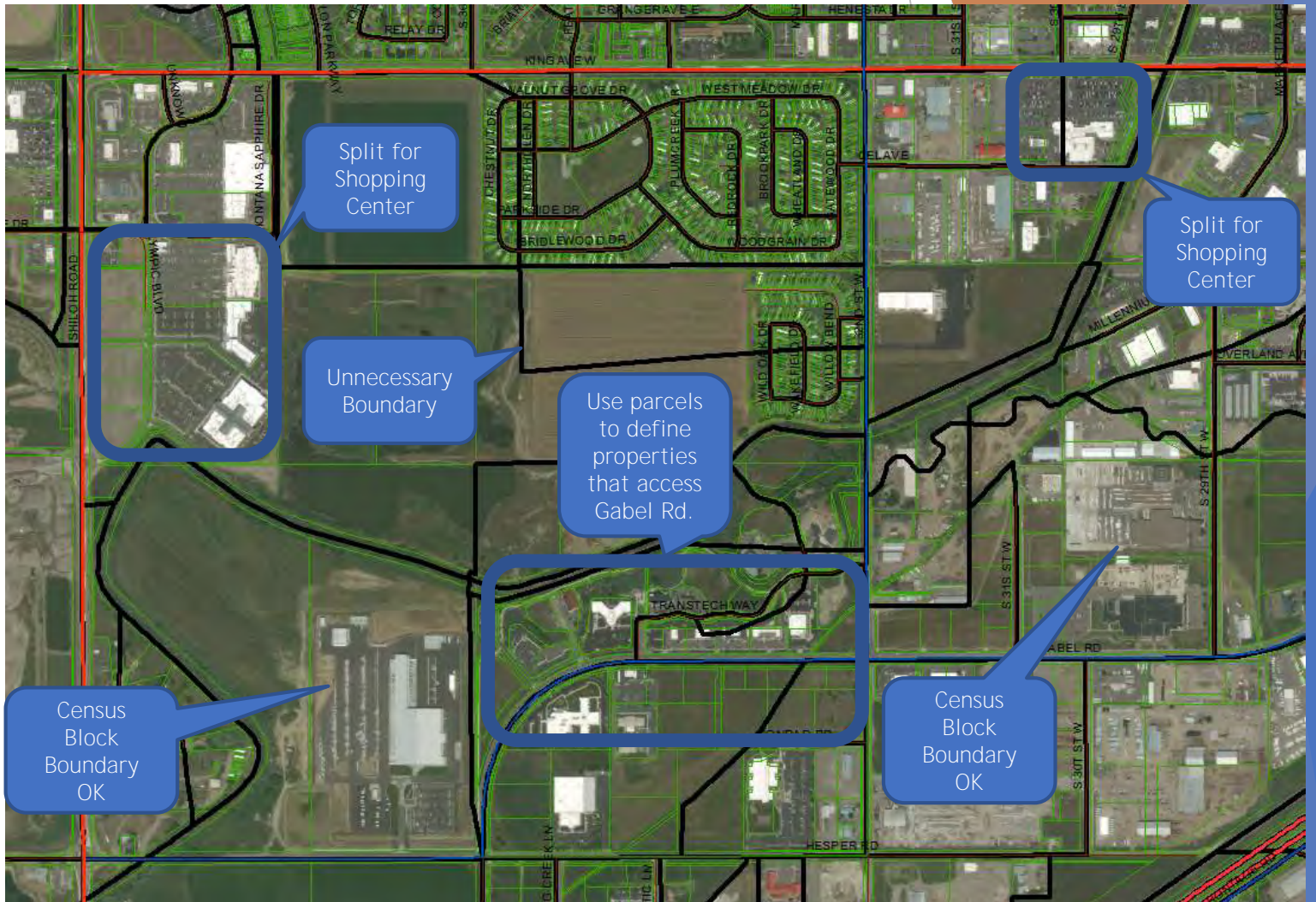


Road Network - Speeds



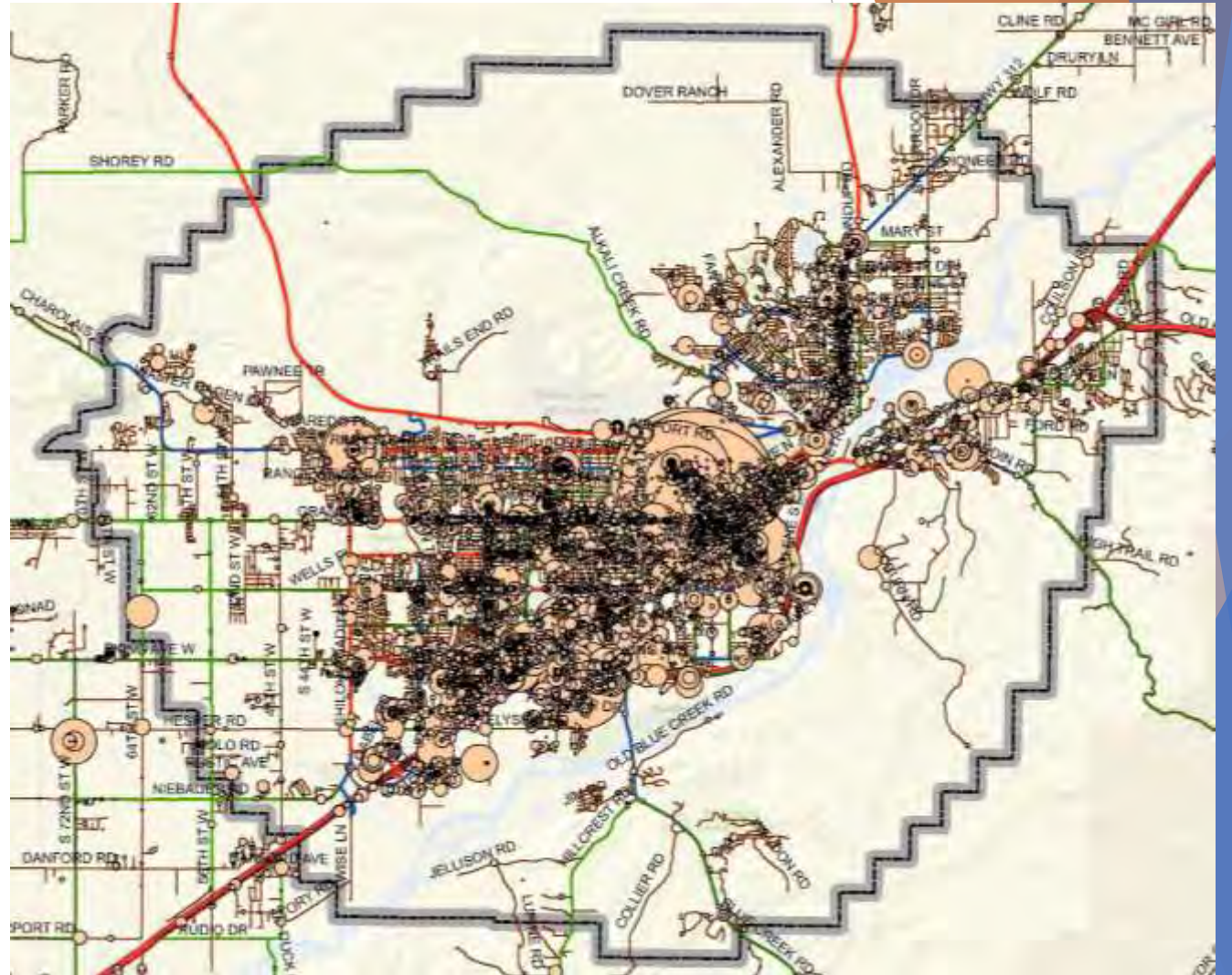
Transportation Analysis Zones

- ▶ Start with Census Blocks
 - ▶ Similar to MDT model
- ▶ Split as needed
- ▶ Aggregate where helpful
- ▶ Goal is to group properties with similar access

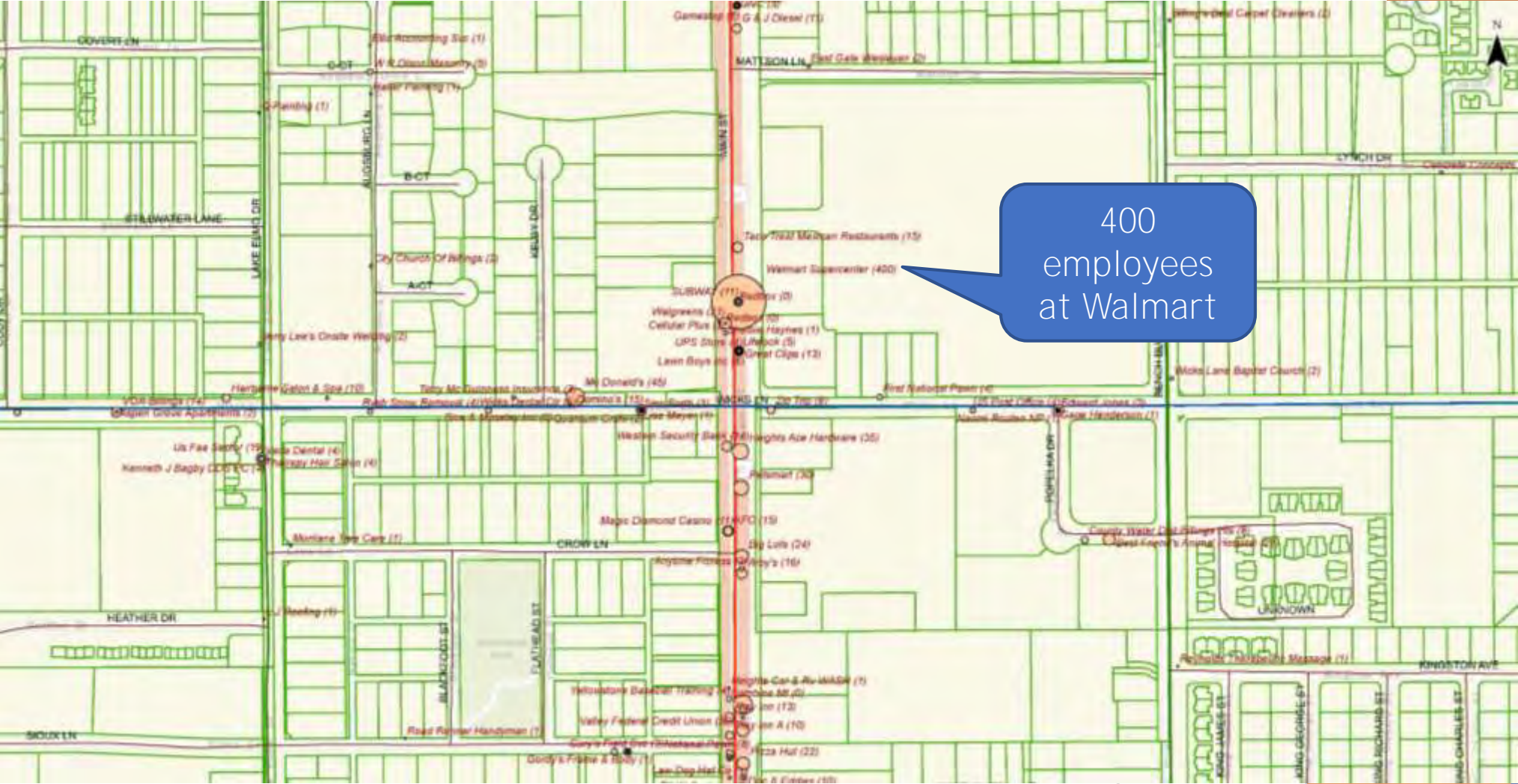


Land Use Inventory

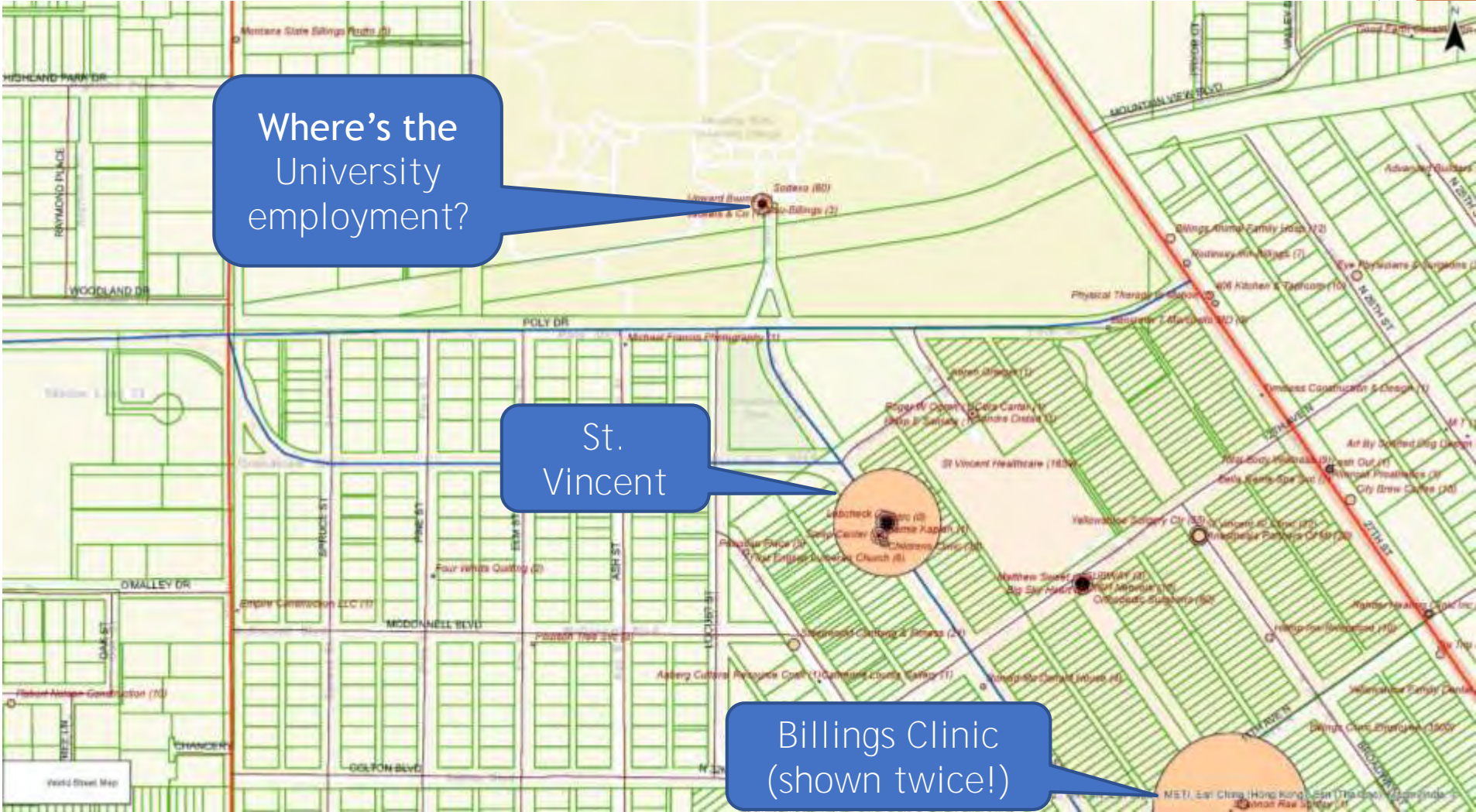
- ▶ Purchased InfoUSA data
- ▶ Geocode to addresses
- ▶ Visual checks
- ▶ Phone calls and e-mails



Land Use Inventory - InfoUSA Example



Land Use Inventory - InfoUSA Example 2



Household Travel Survey

Number of Survey Households by Category

Household Size	Low Income	Med-Low Income	Med-High Income	High Income	Total
1	55	130	97		282
2	156		183	104	443
3	31		48	27	106
4+	36		73	44	153
Total					984

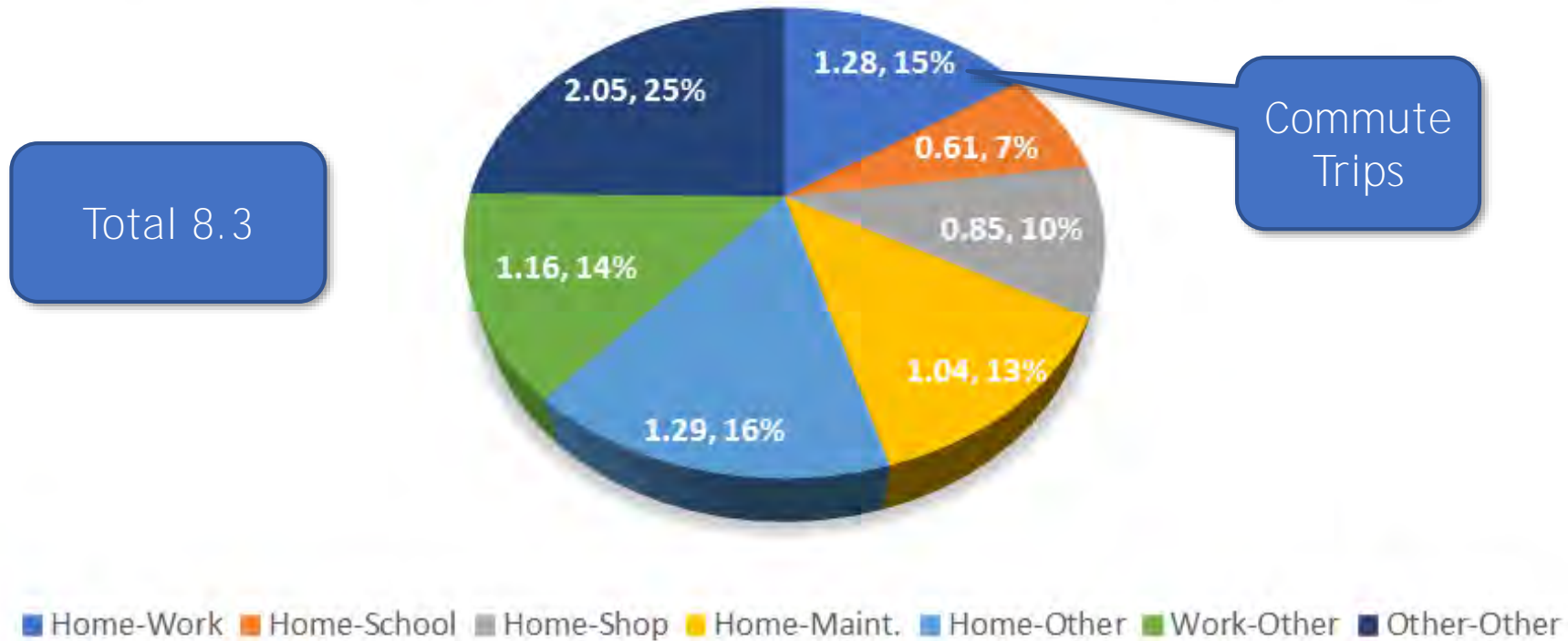
Income Ranges:

Low = \$0-\$19,999
Med-Low = \$20,000-\$49,999
Med-High = \$50,000-\$99,999
High = \$100,000+

Household Travel Survey

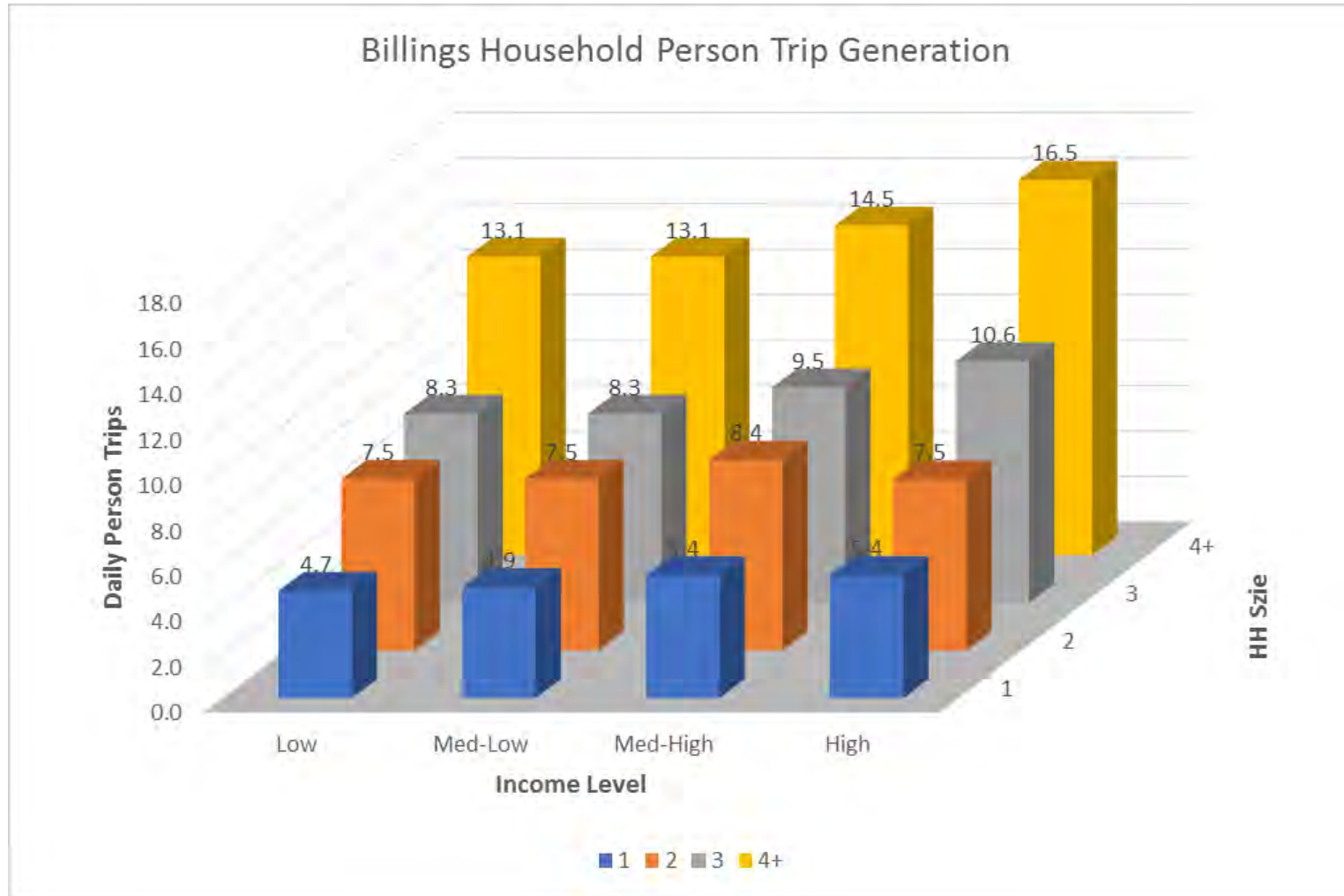
Average Household Trips by Purpose

Billings Average Household Trips by Purpose



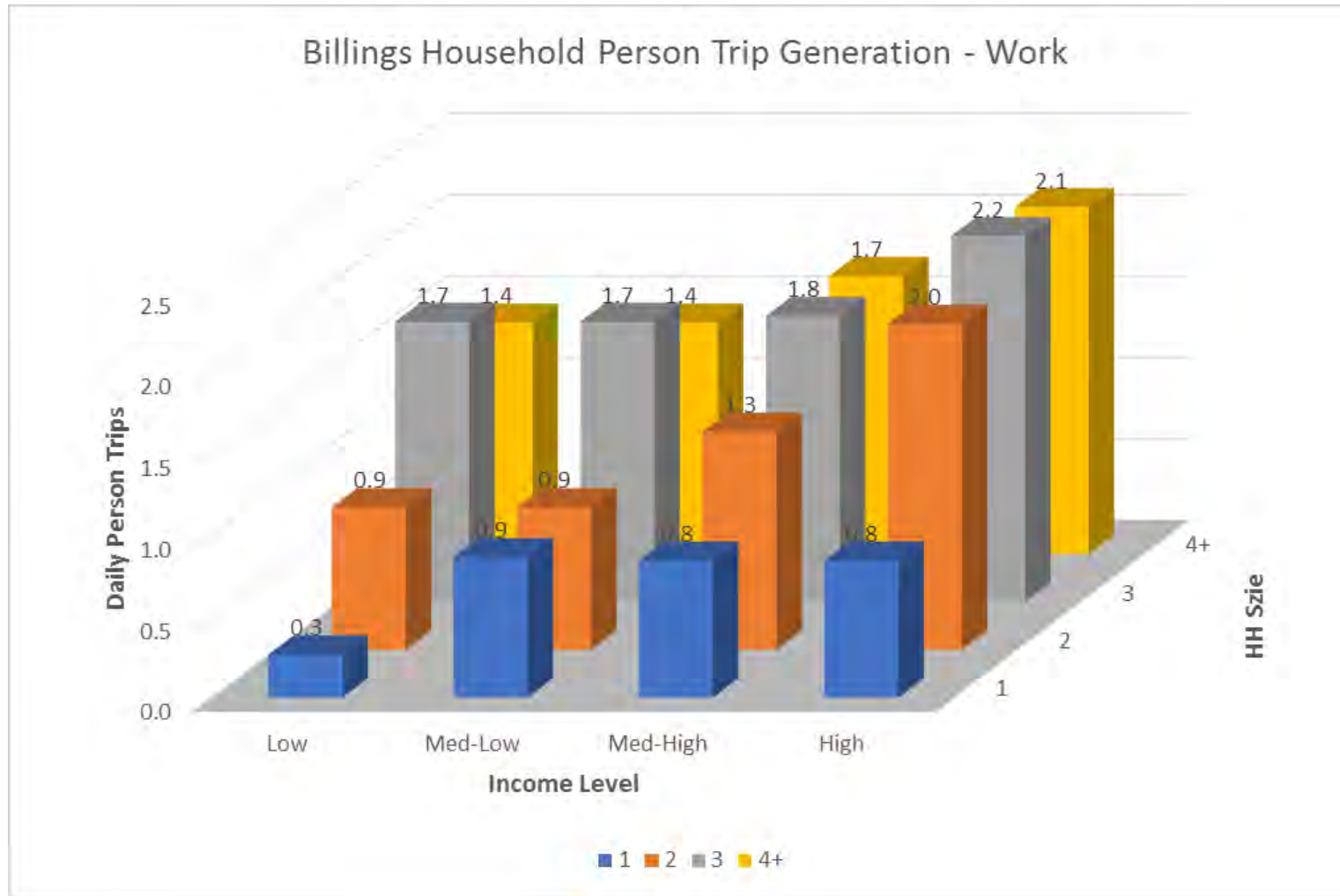
Household Travel Survey

Total Daily Person Trips by Household



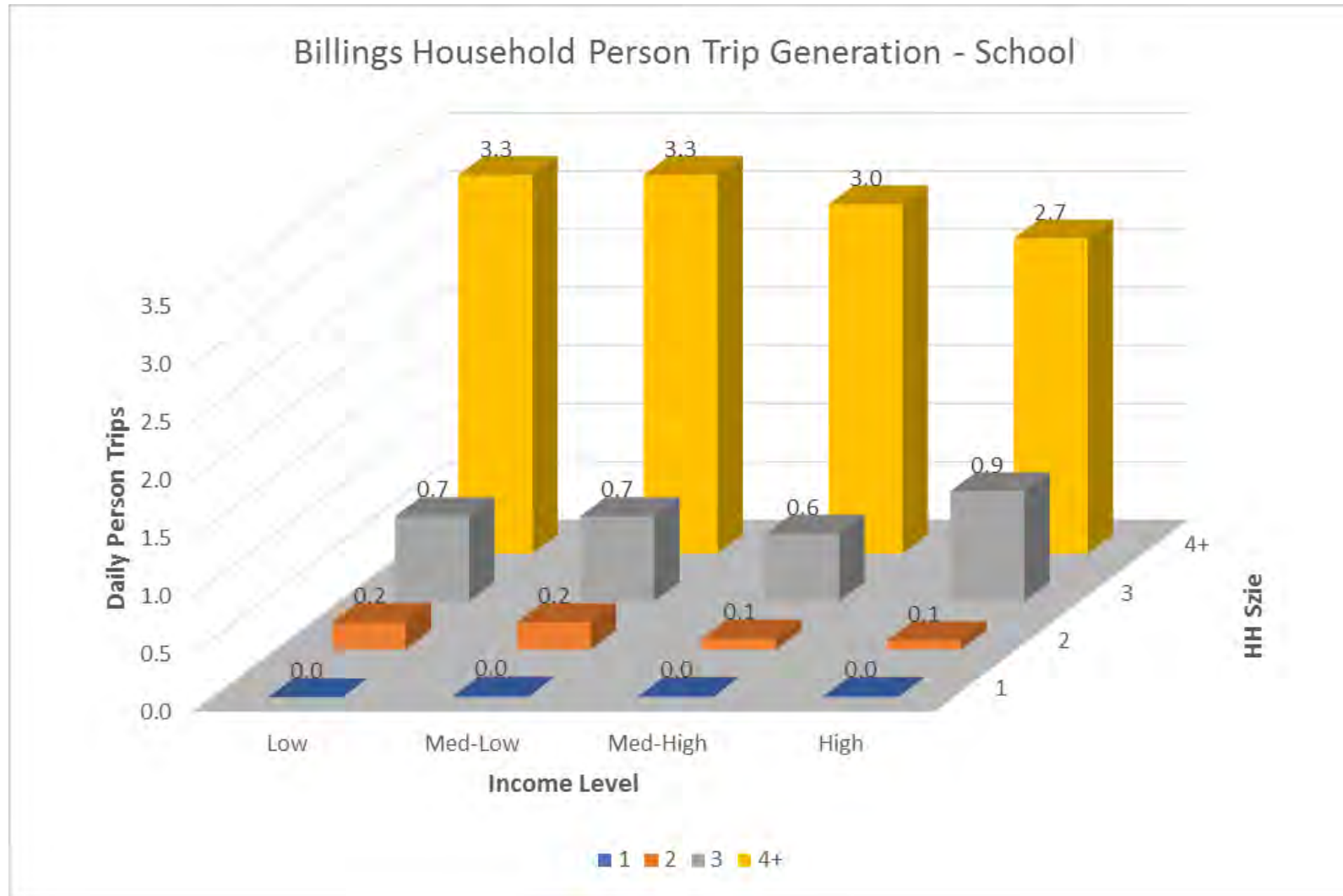
Household Travel Survey

Daily Work Person Trips by Household



Household Travel Survey

Daily School Person Trips by Household



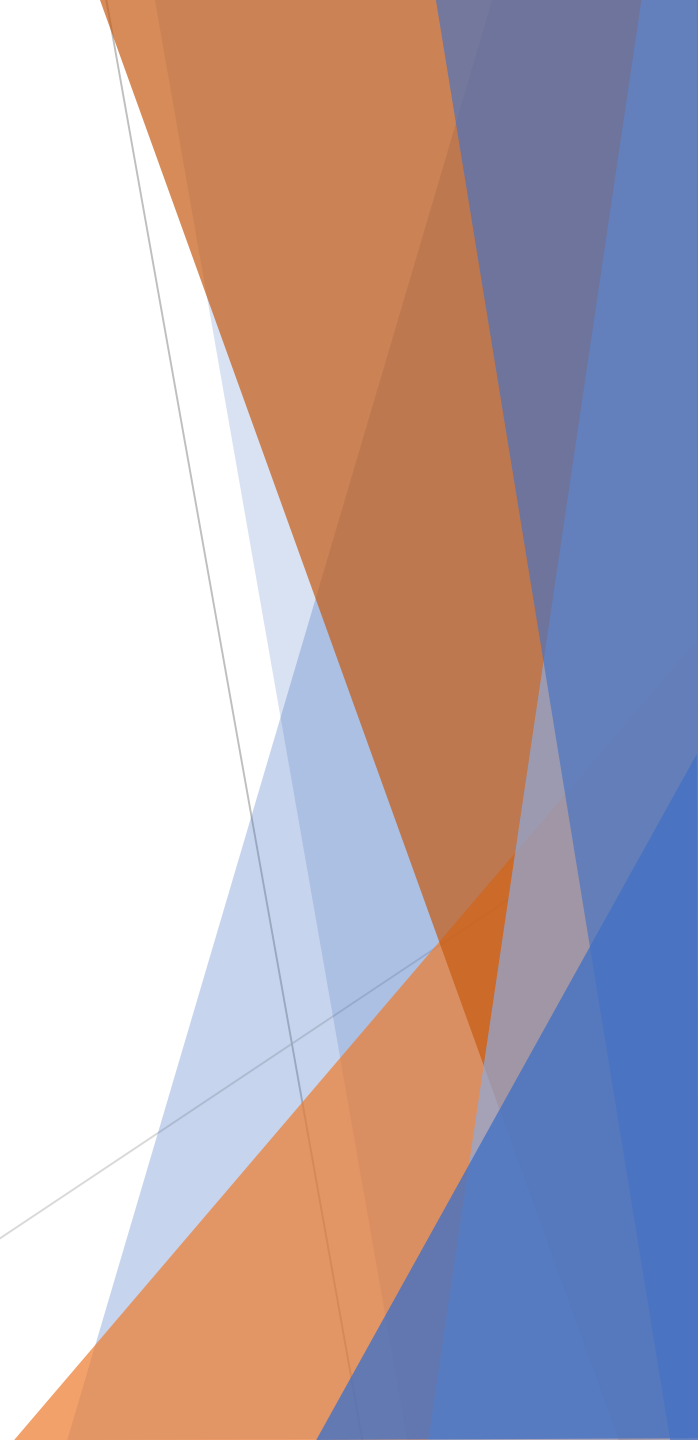
Travel Model Next Steps

- ▶ Complete TAZ Boundaries
- ▶ Corrections to InfoUSA data
- ▶ Compile Census housing
- ▶ Add TAZ connectors to network (represent driveways)
- ▶ Transit routes
- ▶ Survey memo

Next Meetings & Topics

- ▶ Steering Committee Meeting #5
 - ▶ May 17 (10 AM - 12 PM)
 - ▶ Finalize goals, objectives, and performance measures
 - ▶ Land use (forecasts)
 - ▶ Draft Public Participation Plan
 - ▶ Travel demand model
- ▶ TDM Work Session
 - ▶ May 17 (1:30 - 3:30 PM)
 - ▶ TDM output and findings
 - ▶ Troubleshooting

Questions and Answers





Steering Committee Meeting #4 Sign-In Sheet

April 12, 2018 @ 10:00 AM - 12:00 PM,
1st Floor Conference Room - Miller Building

Name	Organization	Email address
Monica Plecker	city/county planning	pleckerm@ci.billings.mt.us
Aaron Lebsack	City Engineering	lebsacka@ci.billings.mt.us
Debra Hagel	MET Transit	hagel@dci.billings.mt.us
Doug ENDRERSON	DOWL	denderson@dowl.com
Bob Riehl	Lockwood	bsriehl@gmail.com
Mike Black	Yellowstone County Public Works	mblack@co.yellowstone.mt.gov
Darrell Tunncliffe	Planner Extra	dtunncliffe@l.wks.net
Rod Nelson	MDT-Billings	rodnelson@mt.gov
Jora Matthe	clc Planning	
Dennis Pitman	Board of County Commissioners	

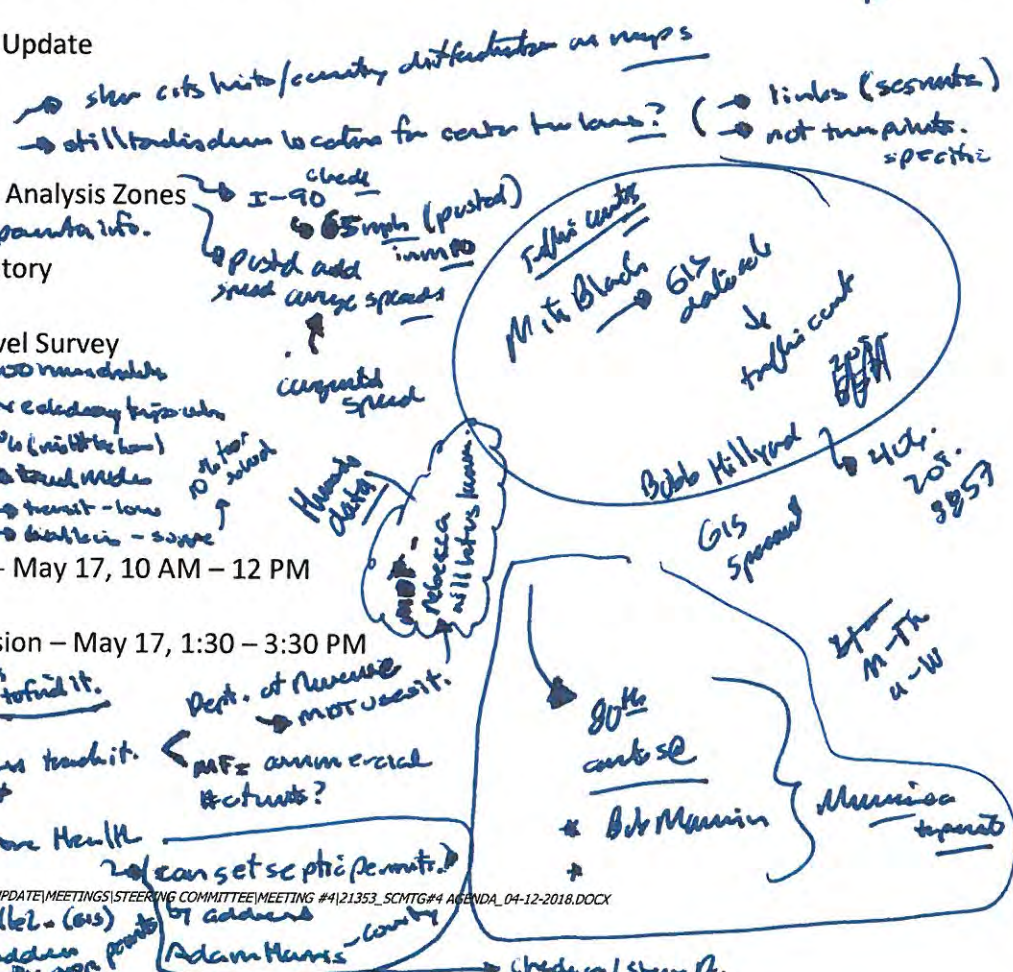
Phone: MDT- Corina, Erik, Rebecca, Sheila
Mike A.
Dean M.

1. Introductions (Sign-in sheet)
2. Existing Conditions
 - a. What's been completed since 2014 LRTP? (Attachment A)
 - b. Review updated maps (Attachment B)
 - c. Other activities
 - i. Traffic counts, crash data, & level of service analysis
3. Public Outreach Activities for LRTP
 - a. Public Outreach Schedule for May 14th-18th, 2018
 - b. Public Informational Meeting #1 (May 15, 2018: 4-7 PM @ Billings Library)
 - i. Outline of Boards (Attachment C)

Handwritten notes:
 → Monica P.
 → Debra M.
 → Bob P.
 → Ned P.
 → Anne T.
 → Mary E.
 → Larry M.
 → Anne L.
 → Dennis P.
 → Lorraine
 → Eric
 → Rebecca
 → Ann M.

4. Travel Demand Model Update

- a. Road Network
 - b. Transportation Analysis Zones
 - c. Land Use Inventory
 - d. Household Travel Survey
 - e. Next Steps
5. Next Meetings
- a. SC Meeting #5 - May 17, 10 AM – 12 PM
 - b. TDM Work Session – May 17, 1:30 – 3:30 PM



Handwritten notes:
 University trips
 this is pretty unique.
 non-traditional students
 need to be careful on this one.

Handwritten notes:
 census block data → 2010
 MOT Eric V.
 how do you split for comm. & residential areas?
 Do we need to?
 - Trips not too far residential areas

Handwritten notes:
 County Building Permits?
 How do we get this data?
 200-2017 - counts

Handwritten notes:
 MOT Cadastrol site



Appendix E

Steering Committee Meeting #5



Steering Committee Meeting #5 Agenda

May 17, 2018 @ 10:00 AM – 12:00 PM,
1st Floor Conference Room - Miller Building

1. Introductions (Sign-in sheet)
2. Public Outreach Activities
 - a. Update from Public Informational Meeting #1 (May 15, 2018)
 - b. MetroQuest Survey (Comment period until May 29, 2018)
 - c. Interviews with Resource Agencies
3. Goals, Objectives, and Performance Measures
 - a. Draft Excel Table (Attachment A)
 - b. LRTP Report Card – Example Layouts (Attachment B)
4. Public Participation Plan
 - a. Draft Plan for Review (Attachment C)
 - b. Schedule for Plan Adoption
5. Plan Updates
 - a. Existing Conditions
 - b. Land Use
 - c. Public Transportation Chapter
 - d. Pedestrian / Bicycle Chapter
 - e. Travel Demand Model
6. Next Meetings
 - a. TDM Work Session – May 17, 1:30 – 3:30 PM
 - b. SC Meeting #6 – June 11, 10 AM – 12 PM
 - c. SC Meeting #7 – July 12, 10 AM – 12 PM

2018 LRTP GOALS, OBJECTIVES, AND PERFORMANCE MEASURES



GOAL 1

SAFE, EFFICIENT, EFFECTIVE

Develop a transportation system that is safe, efficient, and effective

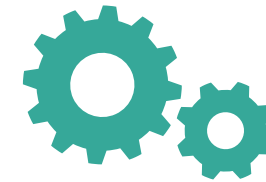
OBJECTIVES

<p>1.1 Reduce the number of fatal and serious injury crashes by</p> <p>20% 2022</p>	<p>1.2 Reduce the rate of fatal and serious injury crashes per miles driven by</p> <p>20% 2022</p>	<p>1.3 Reduce the number of fatal and serious injury crashes involving non-motorized modes by</p> <p>X% 2022</p>
---	--	--

RESULTS

X%	X%	X%
-----------	-----------	-----------

RELATED PLAN: Billings Community Transportation Safety Plan



GOAL 2

FUNCTIONAL INTEGRITY

Optimize, preserve, and enhance the existing transportation system

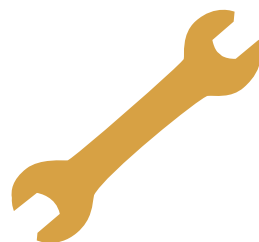
OBJECTIVES

<p>2.1 Reduce the number of gaps in the transportation system by</p> <p>X% 2022</p>	<p>2.2 Develop an inventory of critical infrastructure. Update the regional emergency response plan.</p> <p>2022</p>	<p>2.3 Reduce the number of intersections operating at LOS E or worse by</p> <p>X% 2022</p>	<p>2.4 Reduce weekday peak hour vehicular and freight travel time on selected arterial corridors by</p> <p>X% 2022</p>
---	---	---	--

RESULTS

X%	Y/N	X%	X%
-----------	------------	-----------	-----------

RELATED PLAN: City of Billings Emergency Operations Plan



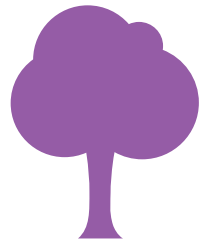
GOAL 3

PRIORITIZED IMPROVEMENTS

Identify and prioritize projects that mitigate deficiencies, maximize the use of existing facilities, and balance anticipated needs with available funding

OBJECTIVES

<p>3.1 Create an annual prioritized list of fiscally constrained projects</p> <p>2022</p>	Y/N
--	------------



GOAL 4

ENVIRONMENT

Develop a transportation system that protects the natural environment and promotes a healthy sustainable community

OBJECTIVES

<p>4.1 Increase the number of parks within Billings city limits by</p> <p>X% 2022</p>	<p>4.2 Develop and codify a stormwater management ordinance</p> <p>2022</p>
---	--

RESULTS

X%	Y/N
-----------	------------

RELATED OBJECTIVES: 5.1-5.8

RELATED PLAN: 2017 Comprehensive Plan and 2016 Billings Growth Policy Statement and Guidelines



GOAL 6

ECONOMIC VITALITY

Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce

RELATED OBJECTIVES: 2.1-2.4 and 3.1



GOAL 5

MULTIMODAL

Create a transportation system that supports the practical and efficient use of all modes of transportation

OBJECTIVES

<p>5.1 Maintain annual transit ridership each year</p> <p>2022</p>	<p>5.2 Maintain number of routes, hours of service, and headways</p> <p>2022</p>	<p>5.3 Maintain 2018 rate of replacement of buses</p> <p>2022</p>	<p>5.4 Increase number of bicycle lane miles by</p> <p>X% 2022</p>	<p>5.5 Increase number of shared use trail miles by</p> <p>X% 2022</p>
---	---	--	--	--

RESULTS

Y/N	Y/N	Y/N	X%	X%
------------	------------	------------	-----------	-----------

OBJECTIVES

<p>5.6 Incorporate bicycle or pedestrian facilities on projects</p> <p>X% 2022</p>	<p>5.7a Increase percentage of system equipped for two or more modes by</p> <p>X% 2022</p>	<p>5.7b Increase percentage of system equipped for three or more modes by</p> <p>X% 2022</p>	<p>5.8 Increase bicycle and pedestrian traffic counts at selected trails and intersections</p> <p>X% 2022</p>
--	--	--	---

RESULTS

X%	X%	X%	X%
-----------	-----------	-----------	-----------

RELATED OBJECTIVES: 1.3 and 2.1

RELATED PLAN: City of Billings Complete Streets Policy and Billings Area Bikeway and Trail Master Plan

2018 LRTP GOALS, OBJECTIVES, AND PERFORMANCE MEASURES



GOAL 1

SAFE, EFFICIENT, EFFECTIVE

Develop a transportation system that is safe, efficient, and effective

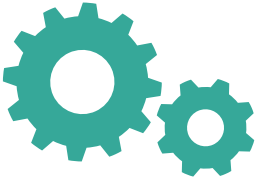
OBJECTIVES

<p>1.1 Reduce the number of fatal and serious injury crashes by</p> <p>20% 2022</p>	<p>1.2 Reduce the rate of fatal and serious injury crashes per miles driven by</p> <p>20% 2022</p>	<p>1.3 Reduce the number of fatal and serious injury crashes involving non-motorized modes by</p> <p>X% 2022</p>
---	--	--

RESULTS

<p>X%</p>	<p>X%</p>	<p>X%</p>
------------------	------------------	------------------

RELATED PLAN: Billings Community Transportation Safety Plan



GOAL 2

FUNCTIONAL INTEGRITY

Optimize, preserve, and enhance the existing transportation system

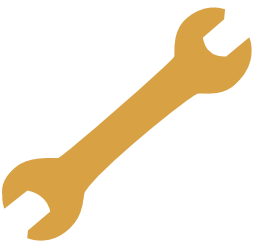
OBJECTIVES

<p>2.1 Reduce the number of gaps in the transportation system by</p> <p>X% 2022</p>	<p>2.2 Develop an inventory of critical infrastructure. Update the regional emergency response plan.</p> <p>2022</p>	<p>2.3 Reduce the number of intersections operating at LOS E or worse by</p> <p>X% 2022</p>	<p>2.4 Reduce weekday peak hour vehicular and freight travel time on selected arterial corridors by</p> <p>X% 2022</p>
---	---	---	--

RESULTS

X%	Y/N	X%	X%
-----------	------------	-----------	-----------

RELATED PLAN: City of Billings Emergency Operations Plan



GOAL 3

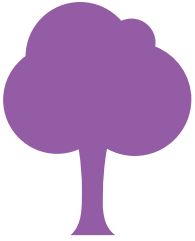
PRIORITIZED IMPROVEMENTS

Identify and prioritize projects that mitigate deficiencies, maximize the use of existing facilities, and balance anticipated needs with available funding

OBJECTIVES

RESULTS

<p>3.1 Create an annual prioritized list of fiscally constrained projects</p> <p>2022</p>	<p>Y/N</p>
--	-------------------



GOAL 4

ENVIRONMENT

Develop a transportation system that protects the natural environment and promotes a healthy sustainable community

OBJECTIVES

<p>4.1 Increase the number of parks within Billings city limits by</p> <p>X% 2022</p>	<p>4.2 Develop and codify a stormwater management ordinance</p> <p>2022</p>
---	--

RESULTS

X%	Y/N
-----------	------------

RELATED OBJECTIVES: 5.1-5.8

RELATED PLAN: 2017 Comprehensive Plan and 2016 Billings Growth Policy Statement and Guidelines



GOAL 6

ECONOMIC VITALITY

Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce

RELATED OBJECTIVES: 2.1-2.4 and 3.1



GOAL 5

MULTIMODAL

Create a transportation system that supports the practical and efficient use of all modes of transportation

OBJECTIVES

<p>5.1 Maintain annual transit ridership each year</p> <p>2022</p>	<p>5.2 Maintain number of routes, hours of service, and headways</p> <p>2022</p>	<p>5.3 Maintain 2018 rate of replacement of buses</p> <p>2022</p>	<p>5.4 Increase number of bicycle lane miles by</p> <p>X% 2022</p>	<p>5.5 Increase number of shared use trail miles by</p> <p>X% 2022</p>
---	---	--	--	--

RESULTS

Y/N	Y/N	Y/N	X%	X%
------------	------------	------------	-----------	-----------

OBJECTIVES

<p>5.6 Incorporate bicycle or pedestrian facilities on projects</p> <p>X% 2022</p>	<p>5.7a Increase percentage of system equipped for two or more modes by</p> <p>X% 2022</p>	<p>5.7b Increase percentage of system equipped for three or more modes by</p> <p>X% 2022</p>	<p>5.8 Increase bicycle and pedestrian traffic counts at selected trails and intersections</p> <p>X% 2022</p>
--	--	--	---

RESULTS

X%	X%	X%	X%
-----------	-----------	-----------	-----------

RELATED OBJECTIVES: 1.3 and 2.1

RELATED PLAN: City of Billings Complete Streets Policy and Billings Area Bikeway and Trail Master Plan

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Appendix A: Notices and Media Templates

Appendix B: Federal and State Laws and Requirements

Appendix C: Glossary of Frequently Used Planning Terms

Introduction

How to Use the PPP?

If possible add quotes from elected officials regarding public participation

The Yellowstone County Board of Planning (YCBP) is committed to the concept that planning is a community-based effort. In support of this, the YCBP Public Participation Plan (PPP), defines a process that ensures reasonable opportunity for all interested parties to participate in the planning process.

This PPP serves two main purposes. The first is to provide the public with a guidebook for how and when they can participate in local and regional transportation planning and decision-making. Secondly, it outlines the policies and procedures for public engagement committed to by the YCBP. The YCBP's public participation process also satisfies the Transit's grantee's public participation process or the Program of Projects.

It is the intent of the YCBP to consistently inform and engage the public throughout the regional planning process from the development of planning policies to the conceptual stages of planning projects through the adoption of formal planning documents. The methods and guidelines in the PPP have been designed to achieve the following objectives:

- Encourage and facilitate the participation of all interested parties in regional planning efforts;
- Integrate public participation into the regional planning process in a timely, constructive, and meaningful manner;
- Use techniques to increase awareness, accessibility, and understanding of planning issues;
- Seek out and consider the needs of a cross-section of the community, including the traditionally underserved, in regional planning efforts;
- Provide increased education and awareness of planning issues in order to create a higher degree of understanding, thereby enhancing the public input received; and
- Continue to build upon citizen participation so that strengthened support for planning and its products will be achieved.

These objectives also provide a valuable reference for use in evaluating and planning for public engagement efforts in the future.

YCBP will periodically review the PPP to ensure that the methods and guidelines effectively support the objectives defined above. Barring changes in Federal regulations, the PPP will be reviewed and updated at least every four years to ensure a full and open participation process. Other situations that may warrant review and update will be considered on a case-by-case basis. The review process will include discussion and assessment of the stated objectives of the program, as well as an evaluation of the efficacy and implementation of its methodology. The level of citizen participation will be analyzed to determine if modifications to the program are warranted. In addition, MPO staff will monitor current laws and regulations to determine if program changes are required.

What is an MPO?

Metropolitan Planning Organizations (MPOs) are government organizations mandated by the Federal Highway Act of 1973 to provide a cooperative, comprehensive, and continuing transportation planning and decision-making process. The YCBP is the designated Metropolitan Planning Organization (MPO) for the Billings Urban Area. The MPO acts as a liaison between local governments, communities, residents, and the State and Federal Departments of Transportation (DOTs). The MPO currently operates under the U.S. DOT's FAST Act (Fixing America's Surface Transportation Act).

Participants in the Process

Insert Participants graphic – currently in development

Planning Board

As established by Interlocal Agreement 20-201, the role of the Planning Board (Board) is to recommend planning policy to the County, Billings and Broadview. The Board consists of twelve members. Seven members are to be appointed by the Yellowstone County Commissioners, one member to be from the governing board of a soil conservation district or a state cooperative grazing district and two ex-officio non-voting representatives of School District No. 2 and the County Superintendent of Schools. Five members are to be appointed by the Mayor of Billings from within the City limits, one from each of the 5 City Wards. The Planning Board shall consist of citizen members and shall not include any elected official.

Governing Board Meetings: Meetings are scheduled for the 2nd and 4th Tuesday of every month beginning at 6:00 PM. Check the website (<https://ci.billings.mt.us/95/Yellowstone-County-Planning-Board>) for the current meeting schedule and locations. Agendas and backup information are posted one week in advance of each meeting.

Standing Committees

The YCBP has two standing committees to provide focused input to the YCBP Board. These committees meet regularly throughout the year to advise the YCBP based on their expertise, knowledge and perspective.

Policy Coordinating Committee (PCC)

The PCC is provided for in the Memorandum of Agreement for Continuing Transportation Planning in the Billings Urbanized Area which has been cooperatively agreed to by the MDT, YCBP, City of Billings and Yellowstone County. Committee members and their contact information can be found on PCC website, ci.billings.mt.us/89/Policy-Coordinating-Committee.

PCC Meetings: Meetings are scheduled on the 3rd Tuesday of every month at 12:00 PM. Check the website (ci.billings.mt.us/89/Policy-Coordinating-Committee) for the current meeting schedule and locations. Agendas and backup information are posted one week in advance of each meeting.

Commented [RA1]: Please confirm all meeting schedules and webpages

Technical Advisory Committee (TAC)

Functions, duties and responsibilities of the TAC of the Billings Urban Transportation Planning Process are as follows:

- The TAC is provided for in the Memorandum of Agreement for Continuing Transportation Planning in the Billings Urbanized Area, which has been cooperatively agreed to by the Montana Department of Transportation (MDT), Yellowstone County Board of Planning, City of Billings, and Yellowstone County.
- The purpose of the TAC is to provide technical advice to the Policy Coordinating Committee on transportation matters and technical direction to the staff of the Yellowstone County Board of Planning on transportation matters.
- Committee members and their contact information can be found on TAC website, ci.billings.mt.us/93/Technical-Advisory-Committee.

TAC Meetings: Meetings are scheduled as needed, usually five to six times a year. Check the website (ci.billings.mt.us/93/Technical-Advisory-Committee) for the current meeting schedule and locations. Agendas and backup information are posted one week in advance of each meeting.

Neighborhood Task Forces

Neighborhood task forces are community groups designed to give residents of each neighborhood a chance to make a difference where they live. Members of the YCBP are encouraged to attend neighborhood task force meetings. The purpose is to inform a larger portion of the population, and to provide the YCBP members with an increased awareness of issues or concerns within their particular area of the region. Task force leaders will receive quarterly reports and draft planning documents for review and comment. The leaders will meet with their Planning Board representatives and the City/County Planning Department or other appropriate department or agency staff, as necessary.

The Public

All members of the public are encouraged and welcome to participate in any public meetings or events hosted by the YCBP. Federal regulations related to planning, environmental justice and civil rights cite specific “interested parties” that are to be consulted and engaged in the metropolitan transportation planning process.

These groups and/or advocates may include but are not limited to:

- Persons with limited English proficiency
- Representatives of the disabled
- Representatives of public transportation users
- Representatives of pedestrian facility users
- Representatives of bicycle facility users
- Representatives of low-income communities
- Representatives of minority communities
- Freight shippers and haulers

- Private providers of transportation
- Representatives of affected public agencies

All meetings and official activities of the YCBP are held in buildings and locations that comply with accessibility standards according to the Americans with Disabilities Act (ADA). A TTY number for the hearing impaired, 406-657-3079, is available upon request.

Special arrangements for participation in the public hearings by individuals with hearing, speech, or vision impairment may be made upon request at least three days prior to the hearing. Please notify Tammy Deines, Planning Clerk, at 406-247-8610.

Products

Insert Planning Process Graphic – currently in development

Transportation Improvement Program (TIP)

The TIP is a short-range program of highway and transit projects in the Billings metropolitan planning area and is prepared by YCBP staff in cooperation with state and local agencies. The basic purpose of the TIP is to provide the mechanism for scheduling federal funds for surface transportation projects, indicating regional priorities, and demonstrating a short range transportation vision for the area. A secondary purpose of the TIP is to provide information about other transportation projects in the planning area that are exempt from the TIP approval process such as projects that do not utilize federal funds.

The development of the TIP document is the responsibility of the Billings MPO and provides an opportunity for local officials to determine priorities and spending for federal highway and transit funds. Any transportation project located in the Billings metropolitan planning area must be included in the TIP prior to receiving federal funds. TIP projects must be included in the area's 20 year Transportation Plan, and are proposed for the TIP by local elected officials, transit operating officials, or state highway agencies. The TIP is reviewed and endorsed annually by the Billings MPO's PCC and may be modified through the TIP amendment process. The PCC includes a Billings City Council representative, the Chair of the Yellowstone County Commission, the President of the Yellowstone County Board of Planning and the District Administrator of the Montana Department of Transportation. After PCC endorsement, the TIP is submitted to the Montana Department of Transportation (MDT) and to the Federal Highway Administration and Federal Transit Administration for federal review of the document and approval of conformity and fiscal constraint determination.

Public notifications of a TIP update will be made available on the City/County web sites. Additionally, notification of public participation activities including opportunities of public comment and review will be made to interested parties using the methods documented above, including but not limited to City/County web sites and local media contacts, two-weeks prior to the start date. The TIP will be published and made readily available for public review on the City/County web sites.

When significant written and oral comments are received on a draft TIP as a result of participation process, a summary, analysis, and report on the disposition of comments shall be as part of final TIP.

Transportation Improvement Program Details	
Purpose:	Provides the mechanism for scheduling federal funds for surface transportation projects, indicating regional priorities and demonstrating a short-range transportation vision for the area
Updated:	Every four years
Outlook:	Five years
Public Review and Comment Period:	xx days

Commented [RA2]: Please provide what the MPOs standard review/comment period

Long Range Transportation Plan

The Billings Urban Area Long Range Transportation Plan (LRTP) is the long range regional transportation plan (RTP) for the region, spanning a 20-year planning horizon. The LRTP will be updated at least every four years and should utilize visualization techniques to clearly convey items in the plan.

The LRTP is developed in coordination with planning processes of other planning agencies and due consideration of the planning activities of all transportation providers in the region. Public notifications of an LRTP update will be made available on the City/County web sites. Additionally, notification of public participation activities including opportunities of public comment and review will be made to interested parties using the methods documented above, including but not limited to City/County web sites and local media contacts, two-weeks prior to the start date. The LRTP will be published and made readily available for public review on the City/County web sites.

When significant written and oral comments are received on draft LRTP as a result of participation process, a summary, analysis, and report on the disposition of comments shall be as part of final LRTP.

Long Rang Transportation Plan Details	
Purpose:	Provides a list of transportation projects to meet the future transportation needs.
Updated:	Four years
Outlook:	Minimum of 20 years
Public Review and Comment Period:	xx days

Public Participation Plan

Providing opportunities for public participation in transportation planning is a federal requirement established through various transportation bills passed by the US Congress and signed into law by the president. MPOs are required to develop a Public Participation Plan (PPP). This PPP outlines strategies anticipated to be used by the YCBP to enhance public participation in its transportation planning. This document assists the YCBP in carrying out its mission in an open process that provides complete information, timely public notice, full public access and input to key decisions, and support for early and continued public participation.

Public Participation Plan Details

Purpose:	Outlines and provides guidance for public participation opportunities.
Updated:	As needed
Outlook:	No Expiration Date
Public Review and Comment Period:	45 days

Unified Planning Work Plan (UPWP)

The Unified Planning Work Program (UPWP) is a federal requirement that serves as the budget and business plan for the YCBP, and sets forth planned activities and programs to accomplish the YCBP's goals. The UPWP is developed each year, and once adopted and approved by FHWA and FTA, is in effect from October 1 to September 30. The UPWP contains a task by task discussion of projects, which are to be undertaken during the program year. It also contains appropriate funding information, staffing information, and a schedule for each project. The UPWP undergoes a comprehensive review at the local, state, and federal levels each year.

The UPWP is a detailed description of projects, which occur on a routine basis. Once adopted, the document is only amended if there is a change in the planning process. The UPWP also contains information pertaining to the organization of the planning process, agencies involved, and agreements between agencies involved in the process.

Unified Planning Work Program Details

Purpose:	Serves as the budget and business plan for the YCBP.
Updated:	Every year
Outlook:	One year
Public Review and Comment Period:	xx days

Special Plans/Studies

From time to time, the YCBP will lead a special plan or study to develop a greater understanding of transportation needs and public desires for a specific area or corridor, and to propose improvements. Each plan or study provides a unique opportunity for public participation in discussing the issues, conceiving potential improvements, and commenting on any final recommendations that may result.

Public Participation Strategies and Evaluation

Strategies and Tools Utilized for Public Participation

This section provides a description of the various techniques that will be used to carry-out the YCBP's public participation process. Opportunities for public input are not limited to those contained in this section. Other public participation techniques deemed necessary may be employed to increase awareness of and to provide ample opportunities for public participation in the development of YCBP products. Techniques that are not longer applicable or useful will not be used.

Media

Press Releases and Public Service Announcements: The YCBP will use media press releases and public service announcements to announce opportunities for the public to participate in the development of up-coming plans and products. Registered news media and organizations expressing interest may be mailed press releases.

Newspapers: Notices of all meetings, public hearings, and public comment periods are published in a local newspaper and when public comments are needed for a major YCBP.

Information Distribution

Direct Mailings: Project specific mailings may be used to announce upcoming meetings, activities or to provide information to a targeted area or group of people. Direct mailings can be letters, postcards, or flyers and depends on the project type.

Email Announcements: The YCBP employs a direct emailing list in order to announce upcoming activities or to provide information to a targeted area or group of people. Direct emailing are usually electronic letters or documents. This list will continue to grow with each outreach activity as noted within the database of contact information category.

Posters and Flyers: Posters and flyers can be used to announce YCBP meetings and events. Posters and flyers can be distributed to public places such as City Hall, libraries, and community centers for display. The announcement may contain a brief description of the purpose of the meeting, the time(s) and location(s), and contact information.

Fact Sheets: A condensed format of bullet point information related to a certain project and providing the public with the key project highlights and information.

Commented [RA3]: Does the MPO have a distribution list?

Online Resources

Website: ci.billings.mt.us/514/Transportation-Planning: The main mode of communication employed by the YCBP to distribute information regarding regional transportation planning is the YCBP website. There interested persons can find information on the transportation planning process, as well as up-to-date information on current projects and events.

Social Media: The YCBP utilizes the City of Billings established a Facebook page (facebook.com/Billings-MT-City-Government-74352842013/) as a means to provide the public with information via social media.

Surveys: The YCBP may conduct, mail, in-person, or web-based surveys to obtain public input or to gauge public opinion regarding regional planning issues.

Comment Cards: Comment cards are used to solicit public comment on specific issues being presented at YCBP public meetings. Comment forms are also used to solicit input regarding general input regarding YCBP plans and projects.

Commented [RA4]: Is this the correct social media that the MPO uses?

Meetings

Formal meetings will be held in ADA accessible locations at times that offer the greatest opportunity for those interested to participate. The YCBP will select the location, size, and setup of meeting facilities based on the specific characteristics of the audience and the type of information to be presented.

Public Meetings / Workshops: Public meetings and workshops will be held in ADA accessible facilities at times and locations that offer the greatest opportunity for those interested to participate. As much as possible, the YCBP will hold meetings and workshops in public places (e.g., a neighborhood community center, library, town center, or shopping mall) that are conducive to attracting the mix of people and businesses most representative of the community. For all public meetings, the YCBP will seek to increase participation by creating a welcoming and inviting environment.

Tag-on Meetings: At various times, YCBP staff may request to appear on the agendas of local planning commission, or other public meetings to communicate the purpose and need for the YCBP and its planning process. This method can be effective way to encourage discussion about the interrelationship between local land use zoning and sub-division decisions and regional planning efforts. School Board meetings would also be an appropriate place for general messages about the functions and products of the YCBP.

Exhibits at Events: While formal meetings provide a good forum for public education and input, YCBP plans and processes may receive wider exposure at various community events. Events, recreational and social gatherings attract many people who would not typically attend a formal meeting. As appropriate, YCBP staff will attend special events in person or with stand-alone booths and kiosks to provide information. The YCBP will use this type of technique to improve public participation, especially prior to LRTP updates and TIP adoption. When appropriate, the YCBP will pursue opportunities to establish booths and/or tables where staff can solicit names and addresses

of people who would like to receive advance notification of the future opportunities to participate in the YCBP process.

Steering Committees/Focus Groups/Stakeholder Groups: Specific projects, plans, or studies may benefit from establishing a group of experts, individuals, or stakeholders to be representative of all interested parties and provide guidance on the direction of the project, plan, or study.

Methods

Visualization Techniques: The YCBP will use visualization, interactive, and other graphic techniques to enhance understanding of transportation issues and decisions. Techniques include but not limited to the use of PowerPoint presentations, aerial photography, Geographic Information Systems (GIS) software, charts, graphs, artist renderings, brochures and mapping.

Display Booths at Community Events: Existing community events provide an opportunity for the YCBP to engage the public in an outreach effort. Informational booths can be set up at events with relative mapping providing the opportunity for public comments and to obtain public's contact information.

Guided Tours: During various stages of a project, the YCBP may provide guided tours through a chosen environment that acquaints stakeholders with existing conditions and potential enhancements of an area. The purpose of a guided tour is to bring together a diverse group of people to increase their awareness of a project area. Route maps and photographs of points of interest are frequently used to support tours.

Meeting-in-a-Box: The YCBP will provide all the necessary information for neighborhood partners to reach their members with information about YCBP plans, studies and projects. Information will be customized to the intended audience to ensure general understanding.

Pop-up Meetings: Pop-Up events allow community members to participate in the planning process without a large time commitment. These engaging, neighborhood-focused events are held in specific geographic areas. The YCBP would set up a table or booth and passers-by would be able to take the survey electronically or on paper.

Assessment of Effectiveness

The YCBP must assess the effectiveness of public participation techniques to ensure that funds and time invested in public participation activities area achieving their goals. To aid in the assessment on a continuing basis, information will be collected from sign-in sheets, and/or surveys or meetings/conversations with stakeholders.

The YCBP will track the following:

- Total number of attendees at an event or meeting
- Total number of comments received
- Geographic distribution of comments

- Comments from low-income and minority areas

Commented [RA5]: This will be turned into a “report card” document for MPO staff to use.

Closing Summary

The YCPB recognizes that an effective participation process is a vital element in the development and implementation of transportation plans and programs. The procedures and tools out-lined in this plan are to be used with the recognition and acknowledgment that the community’s interests are best served by planning efforts that are sensitive to public goals and values.

Appendix A Notices and Media
Templates

Appendix B Federal and State
Regulations

Appendix C Glossary of Frequently Used
Planning Terms

2018 Billings Urban Area LRTP, TDM, & PPP

Steering Committee Meeting #5 (10 AM - 12 PM)

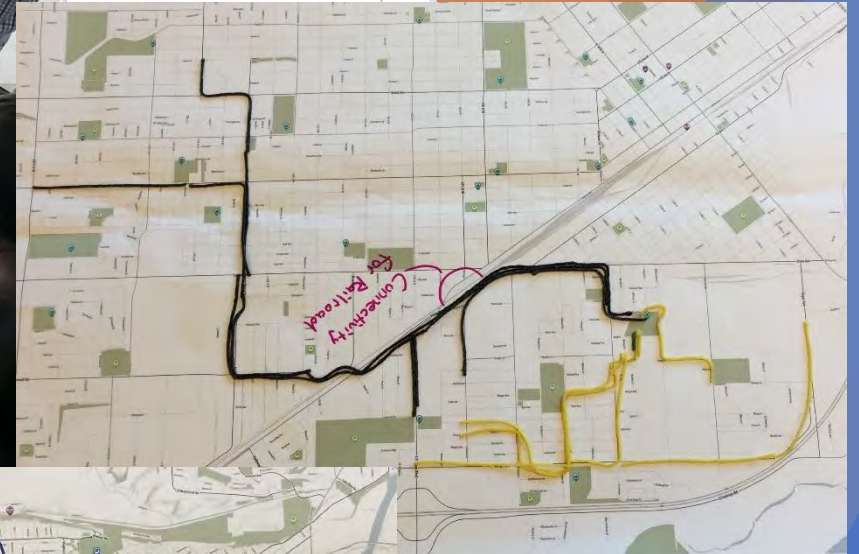
May 17, 2018

What We'll Cover Today

- ▶ Introductions
- ▶ Public outreach activities for LRTP
- ▶ Goals, objectives, and performance measures
- ▶ Public Participation Plan
- ▶ Updates
 - ▶ Existing conditions
 - ▶ Land use
 - ▶ Public transportation chapter
 - ▶ Pedestrian / bicycle chapter
 - ▶ Travel demand model
- ▶ Next meeting

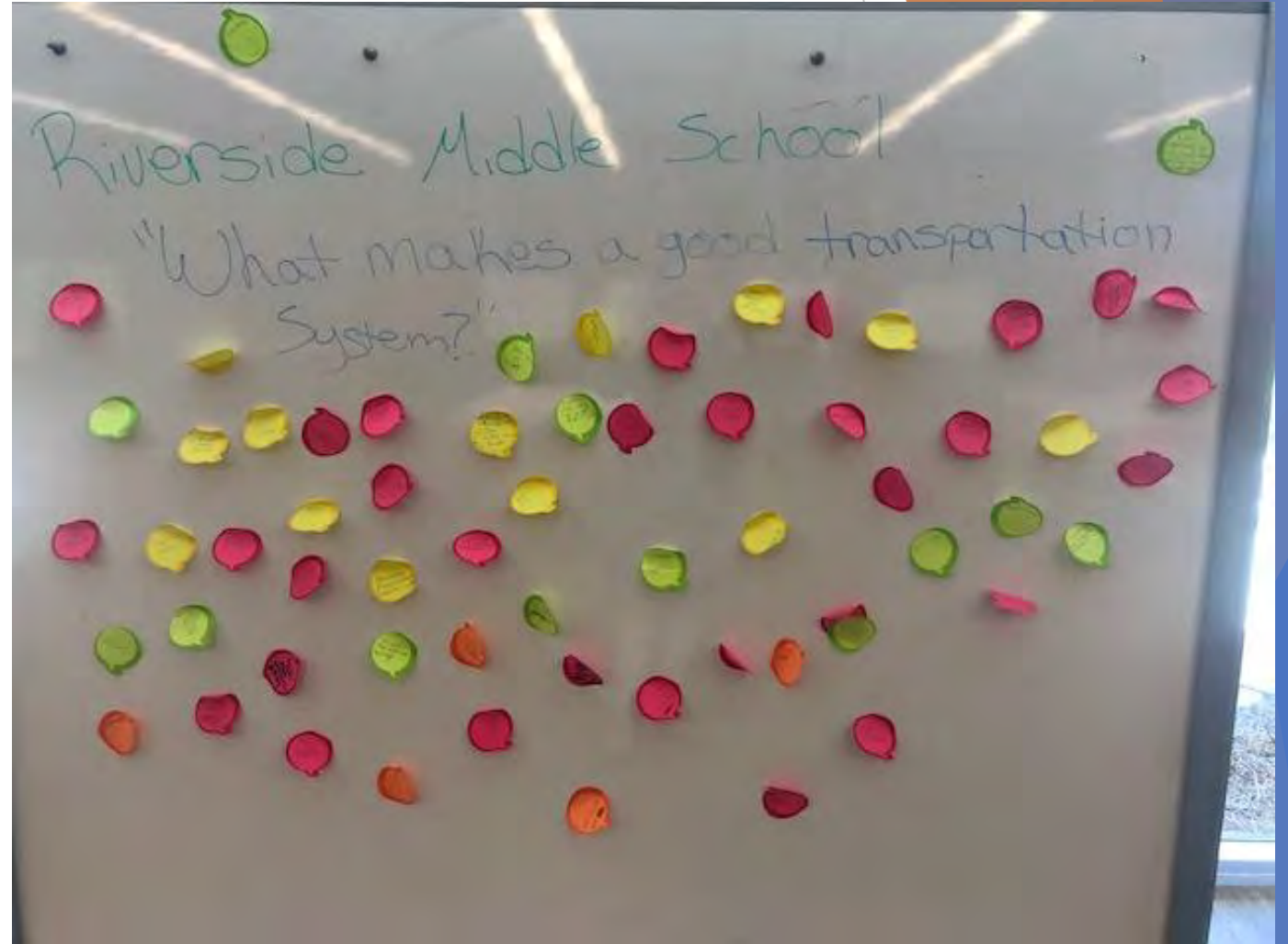
Outreach Activities

- ▶ Riverside Middle School
 - ▶ 7th grade geography (2 classes)
 - ▶ 8th grade social studies (1 class)
 - ▶ ~50 students total
 - ▶ Activities
 - ▶ Map route to school
 - ▶ Map route to favorite destination in town
 - ▶ Discuss issues with these routes
 - ▶ Provide ideas on what makes a good transportation system



Outreach Activities

- ▶ Provide ideas on what makes a good transportation system
 - ▶ More sidewalks
 - ▶ Improve sidewalks
 - ▶ Test drivers every 20 years
 - ▶ Hoverboard
 - ▶ Fix potholes
 - ▶ More buses
 - ▶ Better signal timing
- ▶ Feedback presented at open house



Outreach Activities

- ▶ Open House
 - ▶ 4-7 PM - Billings Library
 - ▶ 18 signed in
 - ▶ 3 comment sheets collected
 - ▶ 25+ comments on map



Outreach Activities

- ▶ MetroQuest Survey
 - ▶ 36 responses
 - ▶ 2 filled out the survey at the open house
- ▶ Go to Billingslrtp.com
 - ▶ Running until May 29th

2018 Billings Urban Area Long Range Transportation Plan Progress

WELCOME

We need your input!

The Billings-Yellowstone County Metropolitan Planning Organization is preparing a long range transportation plan (LRTP) to improve transportation for our region. This update will plan for growth and lay out a long-range vision for our transportation system through the year 2040.

Study Area [Begin](#)

WELCOME

2 GOALS

3 FOCUS AREAS

4 NEEDS/OPPORTUNITIES

5 WRAP UP

The [Yellowstone County Planning Board](#) is the designated Metropolitan Planning Organization (MPO) and oversees transportation planning for the Billings Urban Area.

2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN

Outreach Activities

- ▶ Resource Agencies
 - ▶ Sent invitation letter for interviews, open house, and MetroQuest survey
 - ▶ Held interviews with:
 - ▶ Billings Chamber of Commerce (05/14)
 - ▶ Yellowstone County Fire and Emergency Services (05/16)
 - ▶ Rimrock Neighborhood Task Force (05/17)
- ▶ Other Stakeholders
 - ▶ MET Transit (05/16)
 - ▶ One Big Sky Center (05/14)

Draft Goals - Proposed Changes

- ▶ Create a stand-alone safety goal
 - ▶ Develop a safe transportation system
- ▶ Create a stand-alone transit goal
 - ▶ Create a transportation system that supports the practical and efficient use transit
- ▶ Create a stand-alone active transportation (walking and bicycling) goal
 - ▶ Create a transportation system that supports the practical and efficient use of active transportation such as walking and bicycling

Draft Objectives - Outstanding Questions

- ▶ Are these objectives required in the LRTP?
 - ▶ % of NHS Bridges in Good Condition and Poor Condition
 - ▶ % of Reliable Travel Times on Interstate and Non-Interstate NHS
 - ▶ % of Reliable Truck Travel Times on Interstate System
 - ▶ % of Interstate System Mileage Uncongested
 - ▶ % of Good/Poor Pavement Condition on Interstate and Non-Interstate NHS System
 - ▶ % change in tailpipe CO2 emissions on the NHS compared to the calendar year 2017 level (GHG measure)
 - ▶ Total Emission reductions
- ▶ **If so...**
 - ▶ What targets have been discussed?
 - ▶ What data is available for measuring?
 - ▶ Have other MPOs in MT established objectives, targets, and tools for measuring?

L RTP Report Card - Example (8.5x11 or 11x17)






2018 LRTP GOALS, OBJECTIVES, AND PERFORMANCE MEASURES




GOAL 1
SAFE, EFFICIENT, EFFECTIVE
Develop a transportation system that is safe, efficient, and effective

OBJECTIVES		
1.1 Reduce the number of fatal and serious injury crashes by	1.2 Reduce the rate of fatal and serious injury crashes per miles driven by	1.3 Reduce the number of fatal and serious injury crashes involving non-motorized modes by
20% 2022	20% 2022	X% 2022
RESULTS		
X%	X%	X%

RELATED PLAN: Billings Community Transportation Safety Plan


2018 LRTP GOALS, OBJECTIVES, AND PERFORMANCE MEASURES



GOAL 1
SAFE, EFFICIENT, EFFECTIVE
Develop a transportation system that is safe, efficient, and effective

OBJECTIVES		
1.1 Reduce the number of fatal and serious injury crashes by	1.2 Reduce the rate of fatal and serious injury crashes per miles driven by	1.3 Reduce the number of fatal and serious injury crashes involving non-motorized modes by
20% 2022	20% 2022	X% 2022
RESULTS		
X%	X%	X%


RELATED PLAN: Billings Community Transportation Safety Plan



GOAL 2
FUNCTIONAL INTEGRITY
Optimize, preserve, and enhance the existing transportation system

OBJECTIVES			
2.1 Reduce the number of gaps in the transportation system by	2.2 Develop an inventory of critical infrastructure. Update the regional emergency response plan.	2.3 Reduce the number of intersections operating at LOS E or worse by	2.4 Reduce weekday peak hour vehicular and freight travel time on selected arterial corridors by
X% 2022	2022	X% 2022	X% 2022
RESULTS			
X%	Y/N	X%	X%

RELATED PLAN: City of Billings Emergency Operations Plan



GOAL 3
PRIORITIZED IMPROVEMENTS
Identify and prioritize projects that mitigate deficiencies, maximize the use of existing facilities, and balance anticipated needs with available funding

OBJECTIVES	RESULTS
3.1 Create an annual prioritized list of fiscally constrained projects	2022 Y/N

Goals and Objectives - Next Steps

- ▶ Confirm goals and objectives
- ▶ Confirm report card format
- ▶ Identify initial performance targets for review

Public Participation Plan

- ▶ Draft content sent to SC for review
- ▶ This review is content only
 - ▶ Graphics and layout will be developed once text is final.

Public Participation Plan

Providing opportunities for public participation in transportation planning is a federal requirement established through various transportation bills passed by the US Congress and signed into law by the president. MPOs are required to develop a Public Participation Plan (PPP). This PPP outlines strategies anticipated to be used by the YCBP to enhance public participation in its transportation planning. This document assists the YCBP in carrying out its mission in an open process that provides complete information, timely public notice, full public access and input to key decisions, and support for early and continued public participation.

Public Participation Plan Details	
Purpose:	Outlines and provides guidance for public participation opportunities.
Updated:	As needed
Outlook:	No Expiration Date
Public Review and Comment Period:	45 days

Introduction

How to Use the PPP?

If possible add quotes from elected officials regarding public participation

The Yellowstone County Board of Planning (YCBP) is committed to the concept that planning is a community-based effort. In support of this, the YCBP Public Participation Plan (PPP), defines a process that ensures reasonable opportunity for all interested parties to participate in the planning process.

This PPP serves two main purposes. The first is to provide the public with a guidebook for how and when they can participate in local and regional transportation planning and decision-making. Secondly, it outlines the policies and procedures for public engagement committed to by the YCBP. The YCBP's public participation process also satisfies the Transit's grantee's public participation process or the Program of Projects.

It is the intent of the YCBP to consistently inform and engage the public throughout the regional planning process from the development of planning policies to the conceptual stages of planning projects through the adoption of formal planning documents. The methods and guidelines in the PPP have been designed to achieve the following objectives:

- Encourage and facilitate the participation of all interested parties in regional planning efforts;
- Integrate public participation into the regional planning process in a timely, constructive, and meaningful manner;
- Use techniques to increase awareness, accessibility, and understanding of planning issues;
- Seek out and consider the needs of a cross-section of the community, including the traditionally underserved, in regional planning efforts;
- Provide increased education and awareness of planning issues in order to create a higher degree of understanding, thereby enhancing the public input received; and
- Continue to build upon citizen participation so that strengthened support for planning and its products will be achieved.

These objectives also provide a valuable reference for use in evaluating and planning for public engagement efforts in the future.

YCBP will periodically review the PPP to ensure that the methods and guidelines effectively support the objectives defined above. Barring changes in Federal regulations, the PPP will be reviewed and updated at least every four years to ensure a full and open participation process. Other situations that may warrant review and update will be considered on a case-by-case basis. The review process will include discussion and assessment of the stated objectives of the program, as well as an evaluation of the efficacy and implementation of its methodology. The level of citizen participation will be analyzed to determine if modifications to the program are warranted. In addition, MPO staff will monitor current laws and regulations to determine if program changes are required.

Adoption Schedule for Public Participation Plan

- ▶ Send Draft Plan in PDF to SC (June 2018)
- ▶ Send Final Plan in PDF to SC, FHWA, and MDT (July 2018)
 - ▶ Public comment period - 45 days (end of August 2018)
- ▶ Final plan adoption in September 2018

Existing Conditions

- ▶ Traffic counts
 - ▶ Completed TMCs at 31 intersections
 - ▶ Working on TMC online database
- ▶ Level of service analysis at study intersections
 - ▶ Initiated HCM Planning Analysis
- ▶ Crash data review and analysis
 - ▶ Ongoing

Land Use

- ▶ Coordinating with the travel demand model project on the land use effort
- ▶ Reviewing growth scenario data from the Billings Growth Policy
- ▶ Identifying potential adjustments for future land uses
 - ▶ Lockwood High School
 - ▶ One Big Sky Center

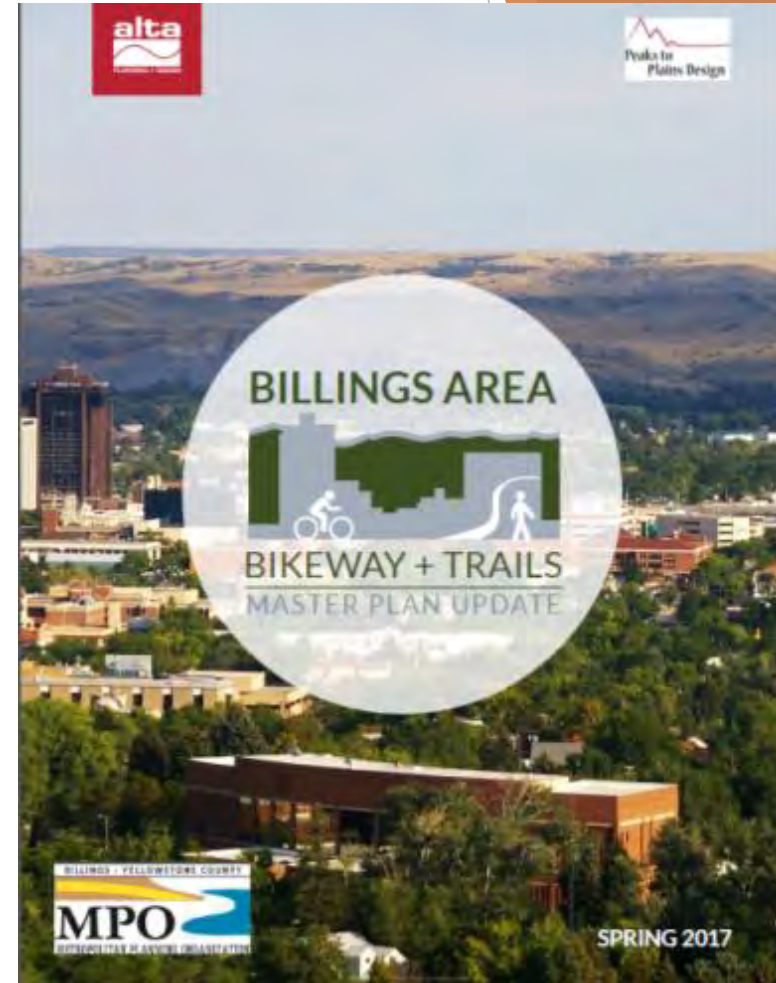


Public Transit and Transportation Chapter

- ▶ Meeting with MET Transit
 - ▶ Initial vision
 - ▶ Long term vision
 - ▶ Input for Airport section
- ▶ Updated text, data, and graphics for Draft Chapter
- ▶ Waiting for transit changes in July 1, 2018 and 2018 ridership data for Draft Chapter

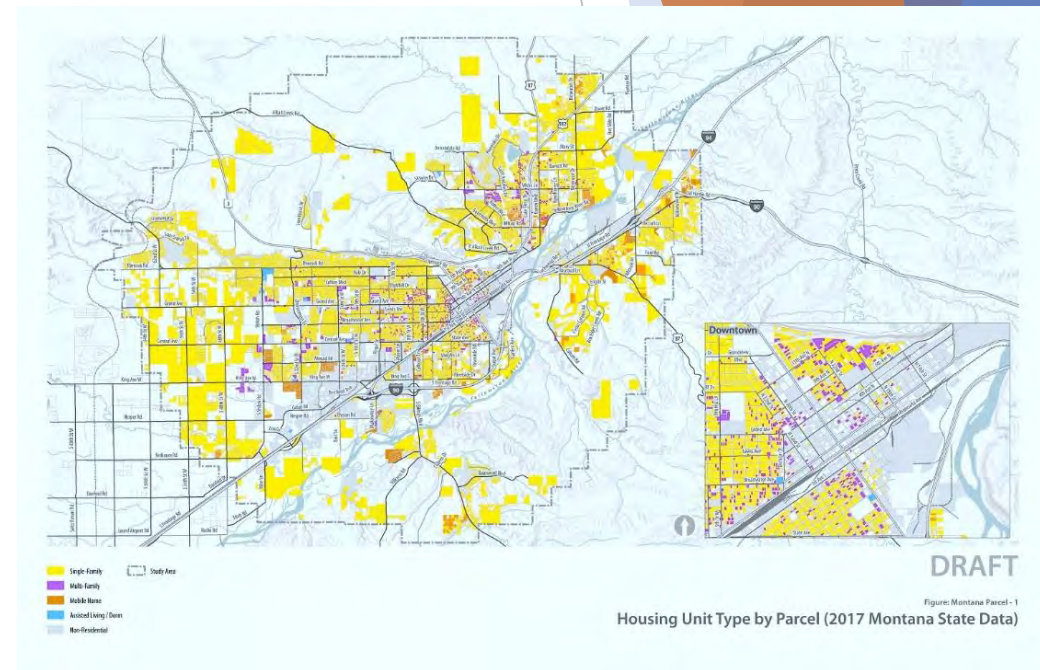
Pedestrian / Bicycle Chapter

- ▶ Completed existing conditions maps and data review
- ▶ Requested GIS data from Bikeway + Trails Master Plan Update
 - ▶ Use to develop future project maps
- ▶ Initiated text updates of Draft Chapter



Travel Demand Model Update

- ▶ Road Network
 - ▶ Added information for center turn lanes, bike facilities
- ▶ Transportation Analysis Zones
 - ▶ Adjustments from Census blocks nearly complete
- ▶ Land Use Inventory
 - ▶ Compiled detailed housing data from 2010 census
 - ▶ Added State parcel data to fill in 2010-2017
- ▶ Household Travel Survey
 - ▶ Extracting data on modes, trip lengths by purpose



Travel Demand Model Next Steps

- ▶ Finalize Transportation Analysis Zones (TAZs)
- ▶ Allocate land uses to TAZs
- ▶ Set up initial model process
- ▶ Join available traffic counts to model
- ▶ Initial 2017 base year validation results to report at June Steering Committee

Next Meetings & Topics

- ▶ Steering Committee Meeting #6
 - ▶ June 14 (10 AM - 12 PM)
- ▶ PIM #1 Summary
- ▶ Land use (initial forecasts)
- ▶ LOS analysis
- ▶ Draft Chapters (updates)
- ▶ Draft PPP



Steering Committee Meeting #5 Sign-In Sheet

May 17, 2018 @ 10:00 AM – 12:00 PM,
1st Floor Conference Room - Miller Building

Name	Organization	Email address
Andy Daleiden	Kittelson & Assoc.	adaleiden@kittelson.com
Bryan Gravelme	Kittelson	bgravelme@kittelson.com
Bob Riehl	Lockwood	bsriehl@gmail.com
Lara Mattox	CIC Planning	mattoxl@ci.billings-mt.us
SCOTT WALKER	CIC PLNG	WALKERS@ci.Billings.MT.US
Mike Black	Yellowstone County	mblack@co.yellowstone.mt.gov
KURTIS SCHNIEBER	MDT	Kschnieber@mt.gov
Rod Nelson	MDT-Billings	rodnelson@mt.gov
Debra Hugel	MET	hugeld@ci.billings.mt.us
WYETH FRIDAY	PCSD	fridayw@ci.billings.mt.us
ERIN CLAUNCH	PW-ENG	claunche@ci.billings.mt.us
Monica Plecker	CIC Planning	pleckerm@ci.billings.mt.us

Steering Committee Meeting #5

May 17, 2018, 10:00 AM – 12:00 PM
Miller Building 1st Floor Conference Room
In-Person Meeting

Action Items:

- Katie will send language Great Falls used to describe compliance with MDT targets to Andy
- Kittelson will move forward with Goals & Objectives graphic in 11x17 form
- MDT will review and submit comments on public participation plan by next Friday
- Scott will send Kittelson work flow graphic
- Kittelson to reach out to KLG if they wish for more details on Lockwood Targeted Economic Development
- Kittelson will review meeting notes below as aid in development of 2018 LRTP update.

Attendees: see sign-in sheet

Meeting Notes:

- Andy the meeting off by describing several items Kittelson sent out earlier and will discuss today. These include outreach efforts, the goals & objectives section, the public participation plan, and individual chapter updates.
- Andy described outreach efforts conducted in person and virtually:
 - The steering committee liked the junior high outreach Kittelson did early in the week. They thought the engagement piece was important to get kids thinking about these topics. The educational aspect is likely more important than the feedback.
 - Andy also described the open house and the MetroQuest survey. Bob noted that he had trouble making more than one comment on the map. Additional feedback from a surveytaker is that the Kittelson link is easier to use than the City/County planning link.
 - Andy lastly noted the stakeholder interviews and other meetings with key staff.
- Andy described the updates to the Goals & Objectives section:
 - Goals were revised slightly to streamline the focus on safety, transit, and active transportation. No comments from steering committee on this.
 - Andy asked what MDT objectives were required in the LRTP. Steering committee would like them to be removed as objectives, but to include language in the plan that the MPO will support them. Andy asked about baseline data for objectives, and MDT responded that different stakeholder groups are tackling each objective. Katie hopes to get more details on data sources as the process moves along. Katie will send language Great Falls used to describe compliance with MDT targets to Andy.
 - Andy passed around the Goals & Objectives graphic and asked about preference between 8.5x11 and 11x17 version. Steering Committee preferred 11x17 version, noting that it's easy to print this version as an 8.5x11 document with smaller print. Steering

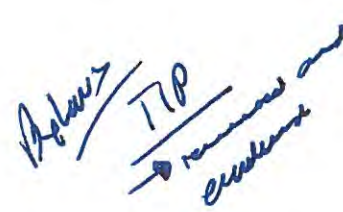
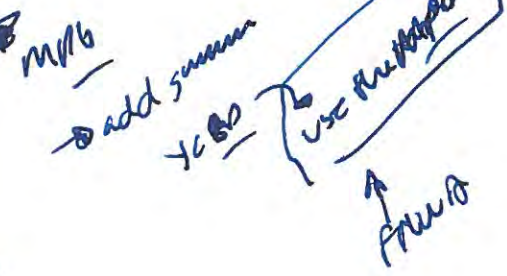
-
- Committee also noted that objectives could be updated every two years or every four years.
- Next steps include to identify performance targets. This will happen later in the process.
 - Andy described the public participation plan:
 - Katie noted that the introduction could benefit from a generalized description of who designates the MPO, and that the rest of the document could change from YCBP to MPO throughout the document. Katie will leave a comment addressing this.
 - The second paragraph TIP section states that it's reviewed and endorsed annually. However, this isn't looked at unless there's a need amend. Katie will leave a comment addressing.
 - Scott will send Kittelson work flow graphic.
 - Andy gave an update on existing conditions analysis, including turning movement count collection, level of service analysis, and crash data. There were no Steering Committee comments.
 - Andy gave an update on land use and the travel demand model, noting that we would get into this in more detail in the afternoon. Two potential sources of change include the Lockwood High School and the One Big Sky development. For more details related to the targeted economic development district in Lockwood, Kittelson should reach out to KLG.
 - Andy described updates on the public transit chapter and pedestrian/bicycle chapter of the LRTP update document. There were no Steering Committee comments.
 - Andy described emergency services meeting with Brad Shoemaker and noted that we'll discuss the pre-disaster plan.
 - Steering Committee asked if dams by 84th and Hessburn need to be mentioned, but it was determined that this is outside the study area.
 - Mike Aronson described the travel demand model update. There were no Steering Committee comments.
 - The next Steering Committee meeting will be on June 14th.

1. Introductions (Sign-in sheet)
2. Public Outreach Activities
 - a. Update from Public Informational Meeting #1 (May 15, 2018)
 - b. MetroQuest Survey (Comment period until May 29, 2018)
 - c. Interviews with Resource Agencies
3. Goals, Objectives, and Performance Measures
 - a. Draft Excel Table (Attachment A)
 - b. LRTP Report Card – Example Layouts (Attachment B)
4. Public Participation Plan
 - a. Draft Plan for Review (Attachment C)
 - b. Schedule for Plan Adoption
5. Plan Updates
 - a. Existing Conditions
 - b. Land Use
 - c. Public Transportation Chapter
 - d. Pedestrian / Bicycle Chapter
 - e. Travel Demand Model
6. Next Meetings
 - a. TDM Work Session – May 17, 1:30 – 3:30 PM
 - b. SC Meeting #6 – June 11, 10 AM – 12 PM
 - c. SC Meeting #7 – July 12, 10 AM – 12 PM

*MPO
 not required
 2y performance measures
 & targets
 5-year goals
 & objectives*

*MPO is a vehicle
 sub-targets*

are deliver the data?





Appendix F

Steering Committee Meeting #6



Steering Committee Meeting #6 Agenda

June 14, 2018 @ 10:00 AM – 12:00 PM,
1st Floor Conference Room - Miller Building

1. Introductions (Sign-in sheet)
2. Public Comment Summary (Attachment A)
3. Meeting Notes with Resource Agencies/Stakeholders (Attachment B)
4. Public Participation Plan
 - a. Update
 - b. Schedule for Plan Adoption
5. Plan Updates
 - a. Planning Level HCM Analysis at Study Intersections
 - b. Safety Analysis (Attachment C)
 - c. Chapter development
 - i. Goals, Objectives, Performance Measures, & Targets
 - ii. Public Transportation
 - iii. Pedestrian / Bicycle
 - iv. Safety
 - v. Security
 - d. Travel Demand Model
6. Next Meetings
 - a. SC Meeting #7 – July 12, 10 AM – 12 PM
 - b. SC Meeting #8 – August 9, 10 AM – 12 PM
 - c. SC Meeting #9 – September 13, 10 AM – 12 PM

MEMORANDUM

Date: June 12, 2018

Project #: 21353

To: Steering Committee

From: Andy Daleiden, PE

Project: 2018 Billings Urban Area Long Range Transportation Plan

Subject: Public Comment Summary #1

This memorandum summarizes public feedback received to date for the 2018 Billings Urban Area Long Range Transportation Plan (LRTP). Public comments were collected through middle school outreach, an online survey and a public open house in May 2018.

INTRODUCTION

The Yellowstone County Metropolitan Planning Organization (MPO) conducted a public outreach effort in order to introduce the LRTP and collect feedback on goals, objectives and needs. Outreach efforts included:

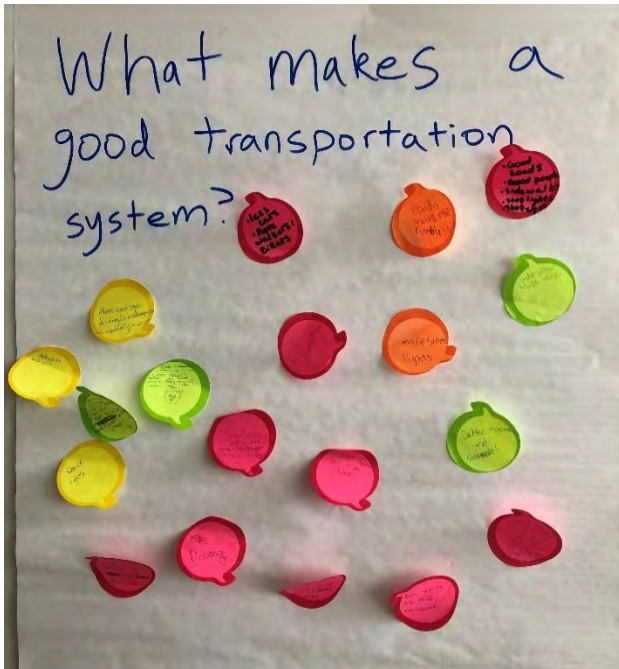
- Riverside Middle School classroom outreach
- Public open house
- Online survey

MIDDLE SCHOOL OUTREACH

Kittelson & Associates, Inc. (Kittelson) presented to three classes (two geography classes and one social studies class) at the Riverside Middle on Tuesday May 15th, 2018. These three classes included approximately 50 students. Kittelson presented information on transportation planning and then asked the students to map how they traveled to school and to after school or weekend activities. The students mapped the routes they took, and color coded them by what mode of transportation they used (see images on next page). The students then discussed issues about these routes. Next the students were asked “What makes a good transportation system?”. They wrote these ideas down on sticky notes



and placed them on a board for group discussion (see comment example below). These notes were also presented at the public open house.



Their ideas for a good transportation system included (for detailed comments from this outreach refer to Appendix A), but not limited to:

- More sidewalks
- Improve sidewalks
- Test drivers every 20 years
- Hoverboard
- Fix potholes
- More buses
- Better signal timing

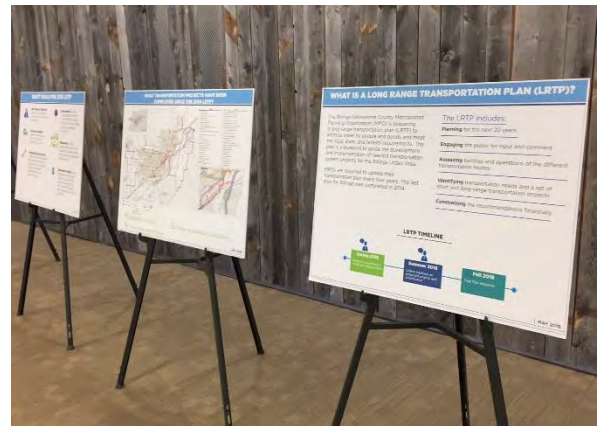


PUBLIC OPEN HOUSE

The public open house was held at the Billings Library from 4 pm to 7 pm. The purpose of the open house was to give the public an opportunity to learn about the plan, review technical information about the LRTP, and provide comment on the following three items:

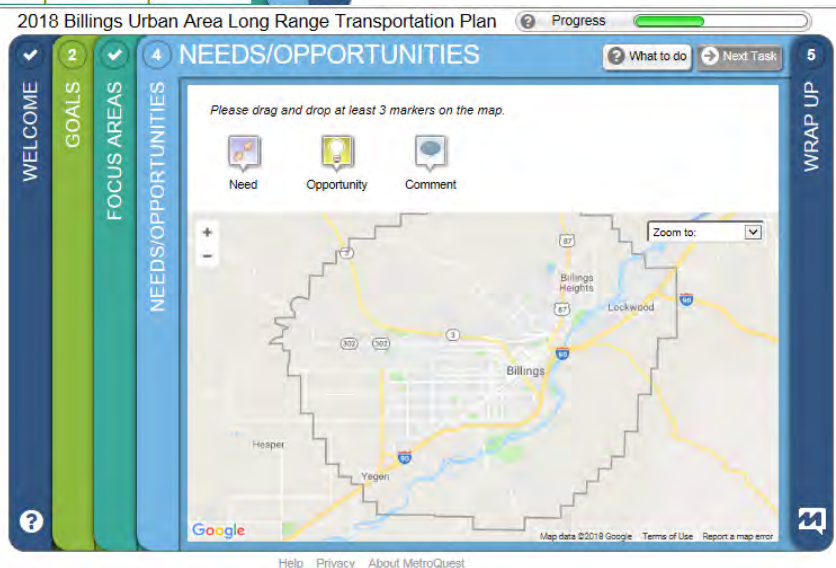
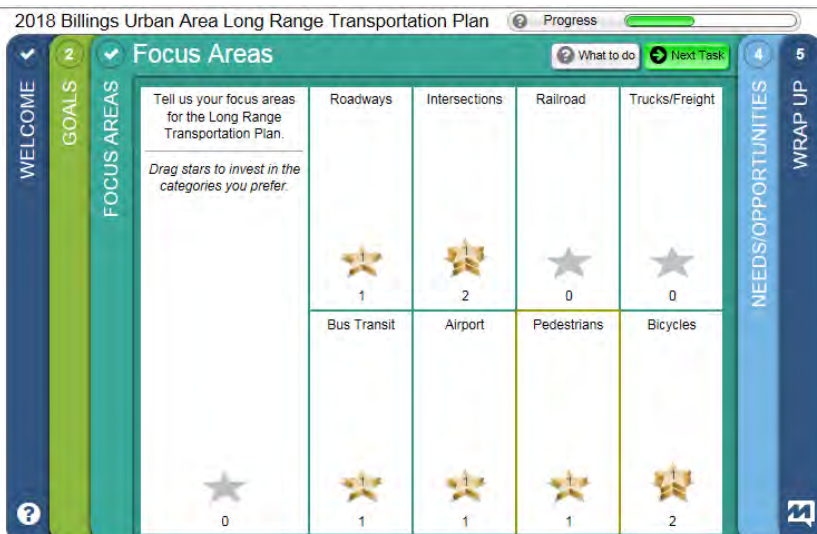
- What goals are most important to you for the plan?
- What transportation needs and opportunities exist today?
- What you like to see for the future transportation system?

Attendees were able to review materials on the LRTP, provide mapped comments regarding needs and opportunities, and provide feedback on goals and focus areas. 25 people signed into the meeting, 32 map comments were received and three comment sheets. Appendix B includes the open house display boards. Appendix C includes the completed comment sheets from the open house. Appendix D includes the sign-in sheet from the open house.



ONLINE SURVEY

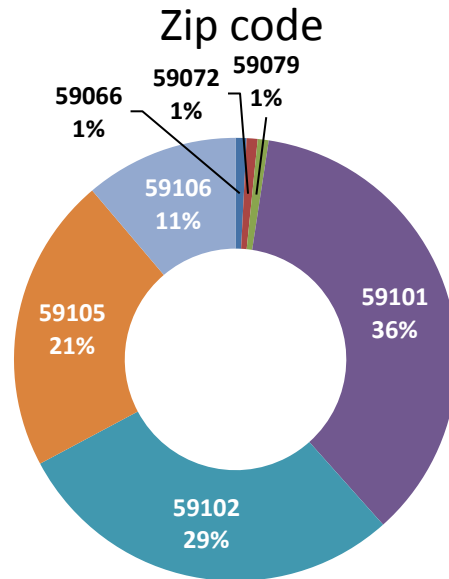
An online survey was developed to provide information on the LRTP, collect feedback on goals, priorities and allow users to map their comments regarding needs and deficiencies. The same questions were asked on the survey as at the public open house. The online survey ran from May 14th to May 29th and had 139 participants. The site is no longer active, but the demo site can be viewed at: <https://2018BillingsLRTP-demo.metroquest.com>



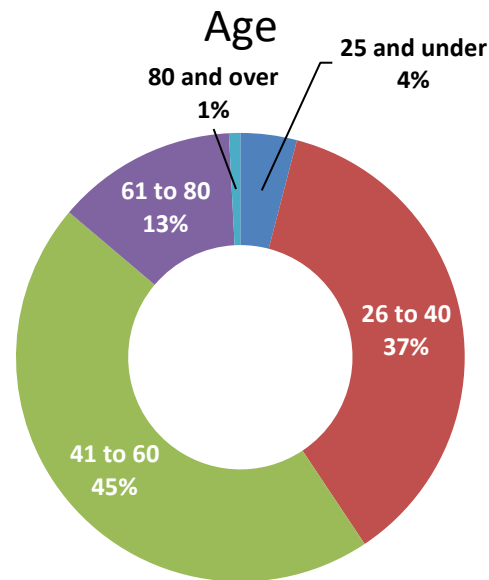
COMMENT SUMMARY

DEMOGRAPHICS

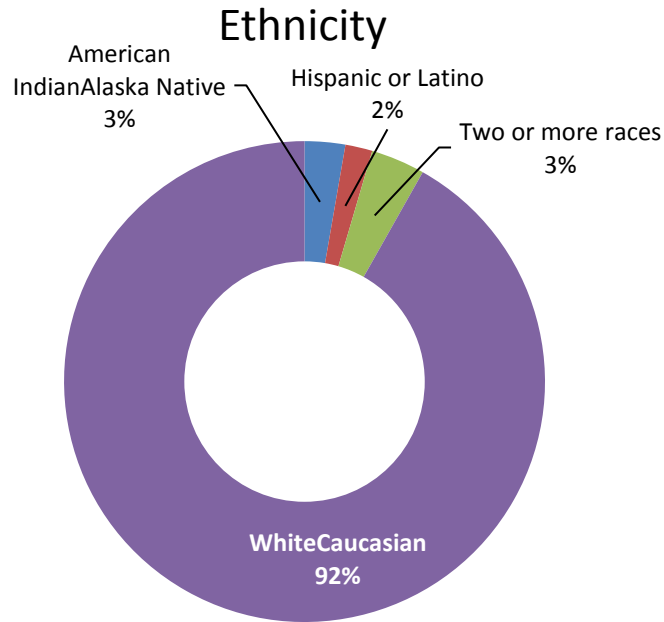
1) What zip code do you live in?



2) What is your age?



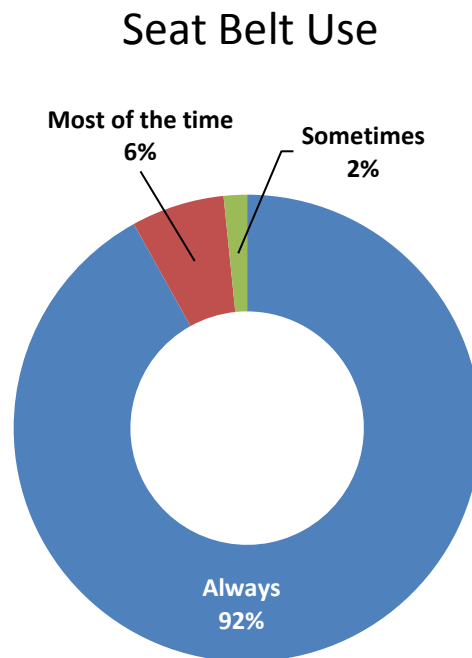
3) What is your ethnicity?



US Census Data Demographics for Yellowstone County

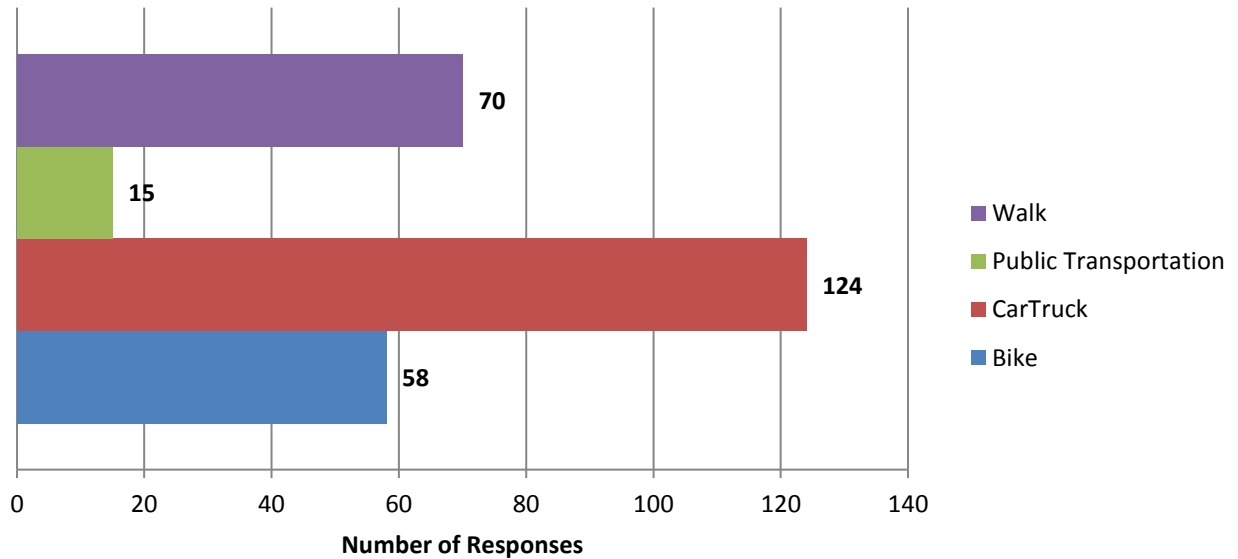
White/Caucasian:91% | American Indian/Alaska Native:4.6% | Hispanic or Latino:5.5% | Two or more races:2.9%

4) How often do you wear a seat belt?



5) What mode of transportation do you use (check all)?

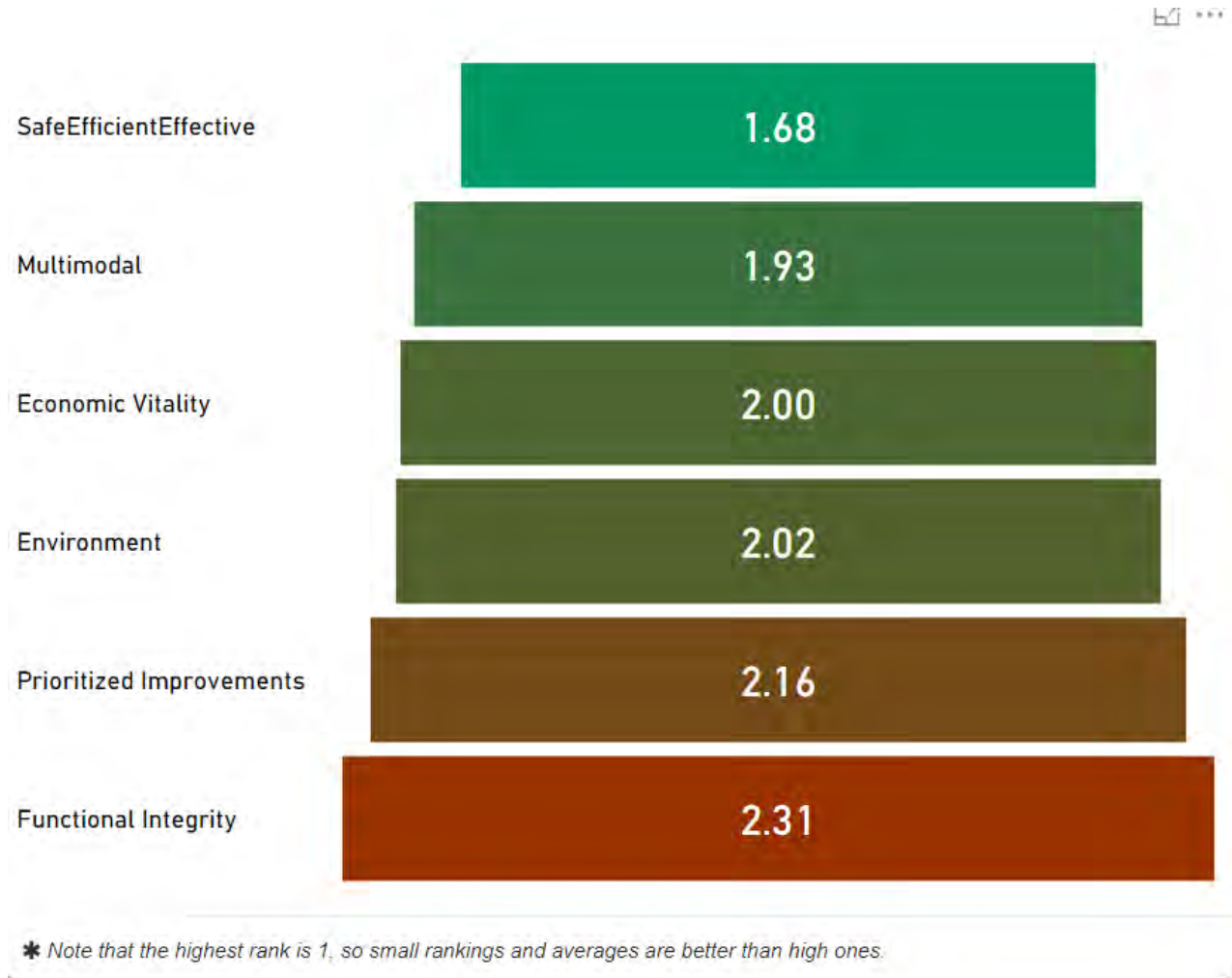
Mode of Transportation



GOALS

Prioritizing goals helps the MPO guide future project prioritization. Survey respondents were asked to rank their top 3 transportation goals.

- **Safe, Efficient, Effective:** Develop a transportation system that is safe, efficient, and effective
- **Functional Integrity:** Optimize, preserve, and enhance the existing transportation system
- **Prioritized Improvements:** Identify and prioritize projects that mitigate deficiencies, maximize the use of existing facilities, and balance anticipated needs with available funding
- **Environment:** Develop a transportation system that protects the natural environment and promotes a healthy, sustainable
- **Multimodal:** Create a transportation system that supports the practical and efficient use of all modes of transportation
- **Economic Vitality:** Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce

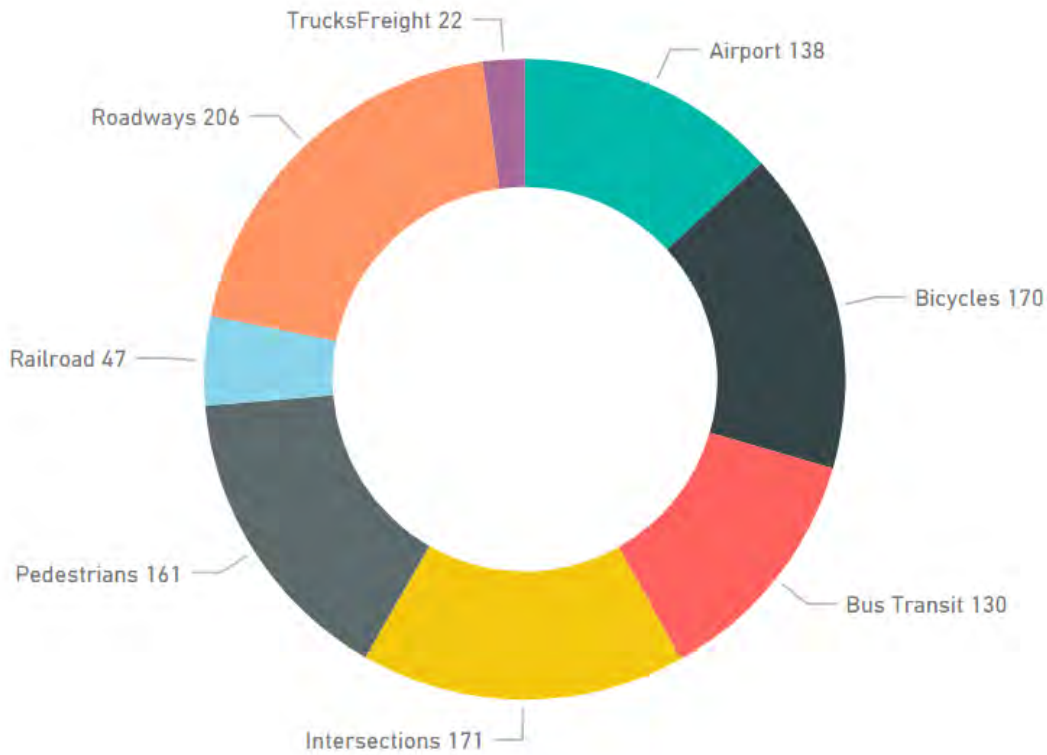


FOCUS AREAS

Survey respondents were asked to identify their focus areas for the Billings Urban Area Long Range Transportation Plan.

- Roadways
- Intersections
- Railroad
- Truck/Freight
- Bus/Transit
- Airport
- Pedestrians
- Bicycles

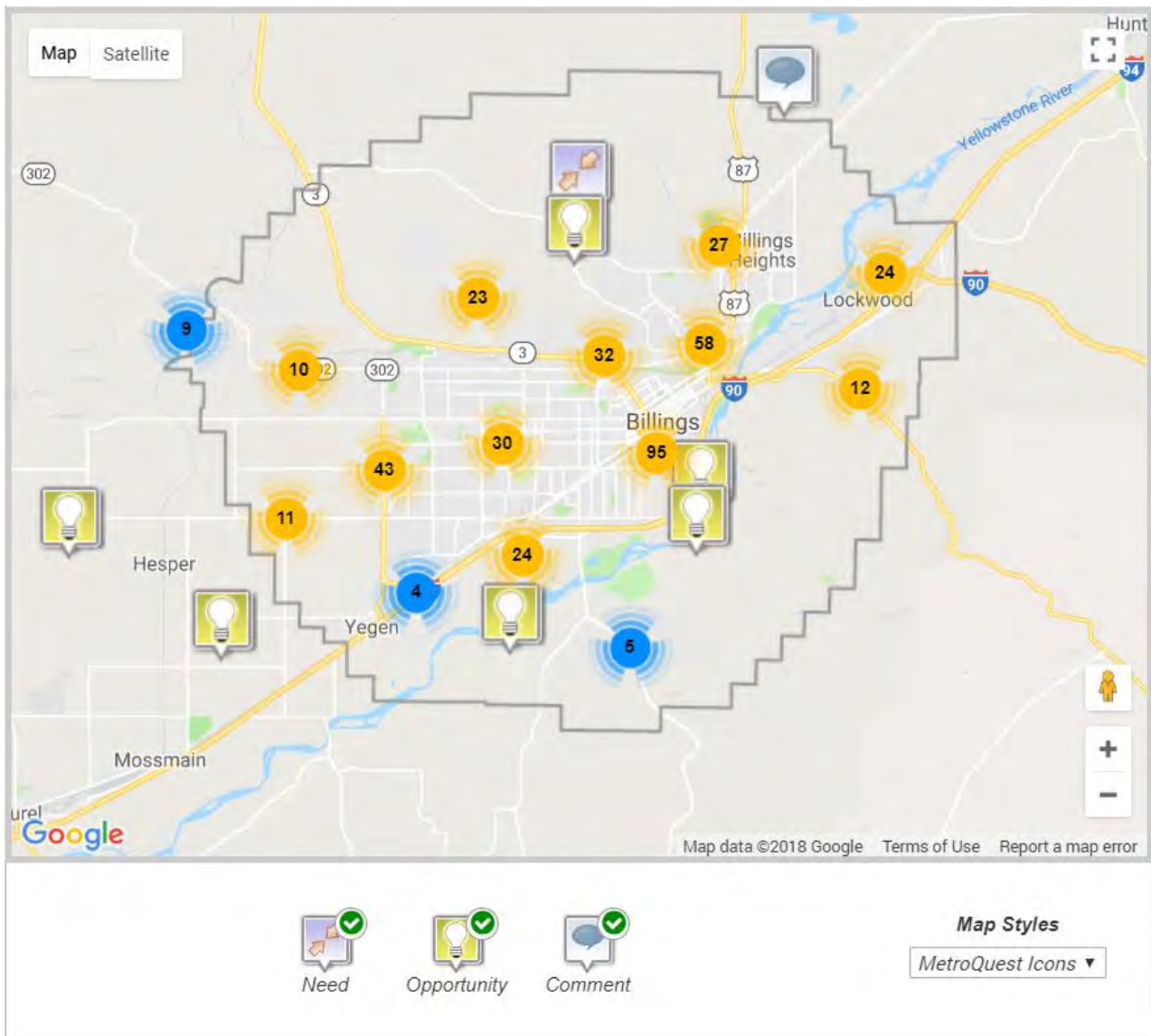
The chart on the next page summarizes the number of chips/coins dropped into a focus area. The focus areas with the most chips/coins were roadways, intersections, and bicycles followed by pedestrians, airport, and bus transit followed by railroad and truck/freight.



NEEDS AND OPPORTUNITIES

Survey respondents were asked to use the map to tell us about needs and opportunities with the existing transportation system in the Billings Urban Area. A spreadsheet of these comments is included in Appendix E. In total, 418 map comments were provided by respondents, which fell into the following categories: 89 general comments, 103 comments on opportunities, and 226 comments on needs. The map on the next page provides a snapshot of where comments were provided within the study area.

Kittelton is evaluating the comments in more detail for further use in the development of the project list for the LRTP. In short, the comments, needs and opportunities included a range of issues and project types, including but not limited to pedestrian crossings, bicycle facilities, more bus frequency, at-grade railroad crossings enhancements, roadway extensions, new roadway connections from Highway 3 to the Interstate, and intersection enhancements.



Appendix A Middle School Outreach
Comments - What Makes a
Good Transportation System?

Middle School Comments – What Makes a Good Transportation System?

1. More bridges over train track
2. More sidewalks
3. More sidewalks
4. Hoverboards
5. Good Roads
6. Good Drivers
7. More plows
8. More and better drains
9. Better sidewalks
10. More sidewalks
11. Less traffic
12. Using less non-renewable sources
13. Less red light running
14. Better safety at intersections
15. Bike paths
16. Better passage ways
17. More alternate routes
18. Flying cars
19. More available ride services
20. More available ride services
21. Better sidewalks
22. Not having to worry about getting hit
23. Underground walk ways
24. Feeling safer
25. Sidewalks in more places
26. A driving test every 20 years
27. Less Cars
28. More walkers, bikers
29. Safer neighborhoods
30. More street lights
31. Transit
32. Less potholes
33. More drains
34. Stop Signs
35. Safety/Personal Safety
36. Less drunks
37. More than one way to get somewhere
38. Subway trains
39. Road maintenance
40. Transportation out of town
41. Sidewalks
42. Pedestrian Crossings
43. Train Crossings
44. Crosswalks and more bike roads
45. Busses coming more
46. Less cars
47. More cautious driving (less dangerous especially in the winter)
48. Drivers that aren't from Billings
49. Less expensive
50. Guardrails and rumble strips
51. Better draining system
52. Slow down signs near neighborhoods
53. More sidewalks
54. Stop Signs
55. Quick lights
56. No major traffic
57. More routes to places
58. accessible
59. Safe (lots of stop signs)
60. Sidewalks
61. Better crosswalks and sidewalks

62. Signs that say "yield to pedestrians"
63. Less drunks
64. Better roads
65. Good Roads
66. Good people
67. Sidewalks
68. Stop lights
69. Stop Signs
70. Less crammed streets
71. bike lanes
72. Good roads
73. No pot holds
74. Stop signs
75. Stop lights
76. Safe driving
77. Good sidewalks
78. Less rocks
79. More stop signs
80. Fixed roads
81. More sidewalks
82. Better sidewalks
83. Less cars
84. Some people can ride bikes
85. Helicopters and jets
86. Safer old drivers
87. Less pot holes so my head doesn't hit
the car roof
88. Heated roads
89. Moving sidewalks
90. Teleportation
91. More careful drivers
92. No drunk drivers
93. Stop lights that don't change when no
one is there
94. Better stop lights
95. Calm streets
96. Safe sidewalks
97. More crosswalks
98. I want to see more bike lanes

Appendix B Public Open House #1
Display Boards

WELCOME!

Thank you for attending tonight's open house for the Billings Urban Area Long Range Transportation Plan. The purpose of this open house is to give you an opportunity to learn about the plan, review technical information, and provide comment on the following three items:

- What goals are most important to you for the plan?
- What transportation needs and opportunities exist today?
- What would you like to see for the future transportation system?

Who Is Involved?



The primary sounding board is the Steering Committee (SC), which includes representatives from the above agencies. Public involvement is a major contributor to the plan development.

The consultant team for the project includes Kittelson & Associates, Inc. and DOWL.



WHAT IS A LONG RANGE TRANSPORTATION PLAN (LRTP)?

The Billings-Yellowstone County Metropolitan Planning Organization (MPO) is preparing a long range transportation plan (LRTP) to address travel by people and goods and meet the local, state, and federal requirements. The plan is a blueprint to guide the development and implementation of needed transportation system projects for the Billings Urban Area.

MPOs are required to update their transportation plan every four years. The last plan for Billings was completed in 2014.

The LRTP includes:

Planning for the next 20 years

Engaging the public for input and comment

Assessing facilities and operations of the different transportation modes

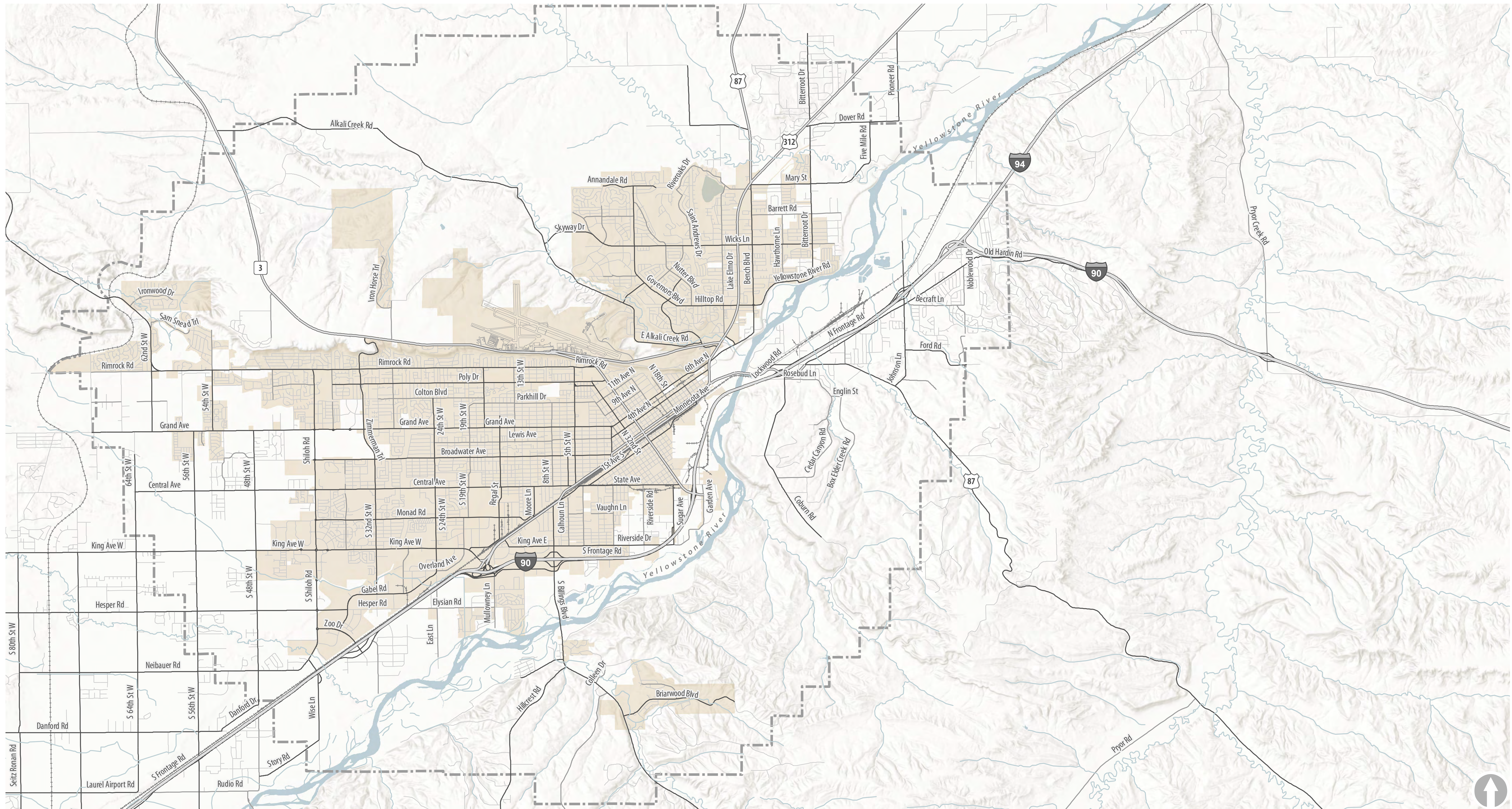
Identifying transportation needs and a set of short and long-range transportation projects

Constraining the recommendations financially

LRTP TIMELINE



STUDY AREA



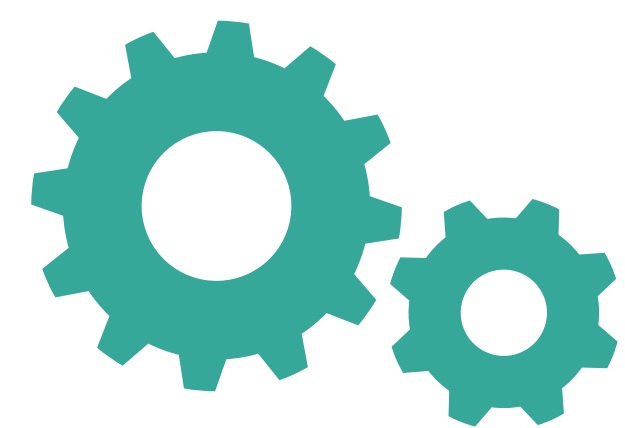
Study Area City of Billings

DRAFT GOALS FOR 2018 LRTP



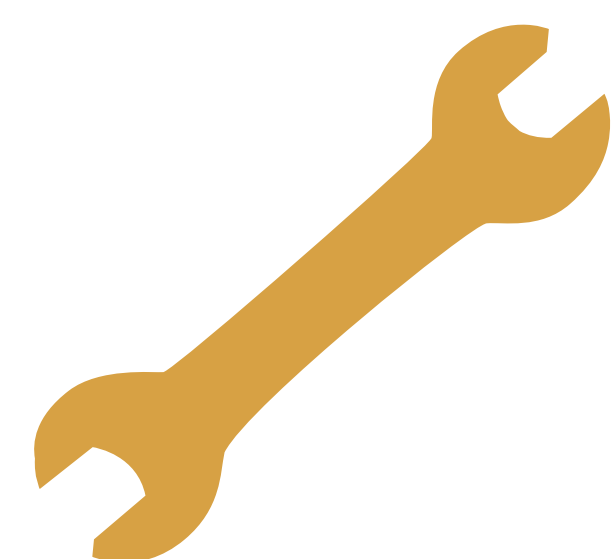
Safe, Efficient, Effective

Develop a transportation system that is safe, efficient, and effective



Functional Integrity

Optimize, preserve, and enhance the existing transportation system



Prioritized Improvements

Identify and prioritize projects that mitigate deficiencies, maximize the use of existing facilities, and balance anticipated needs with available funding



Environment Develop a transportation system that protects the natural environment and promotes a healthy, sustainable community

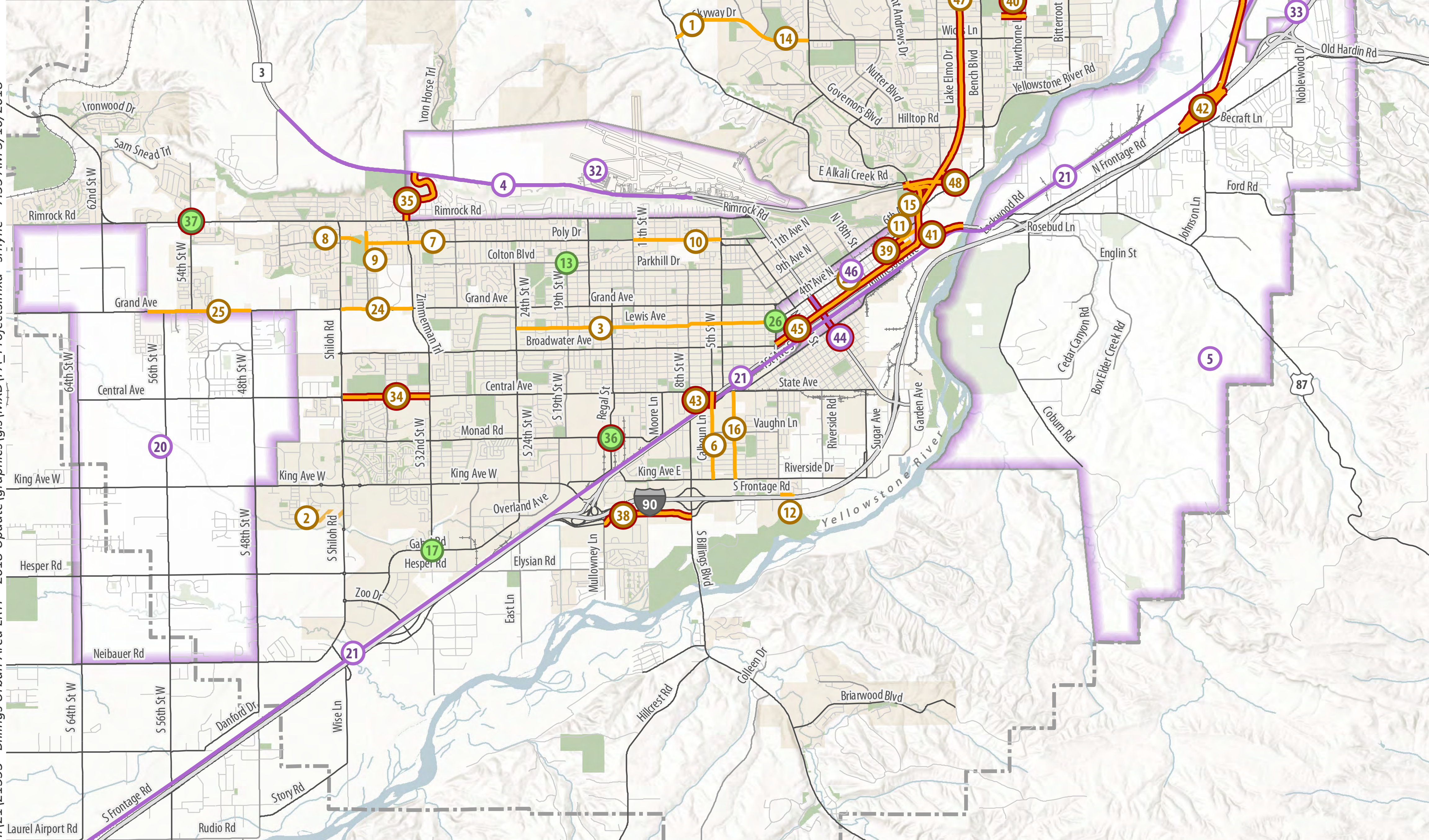
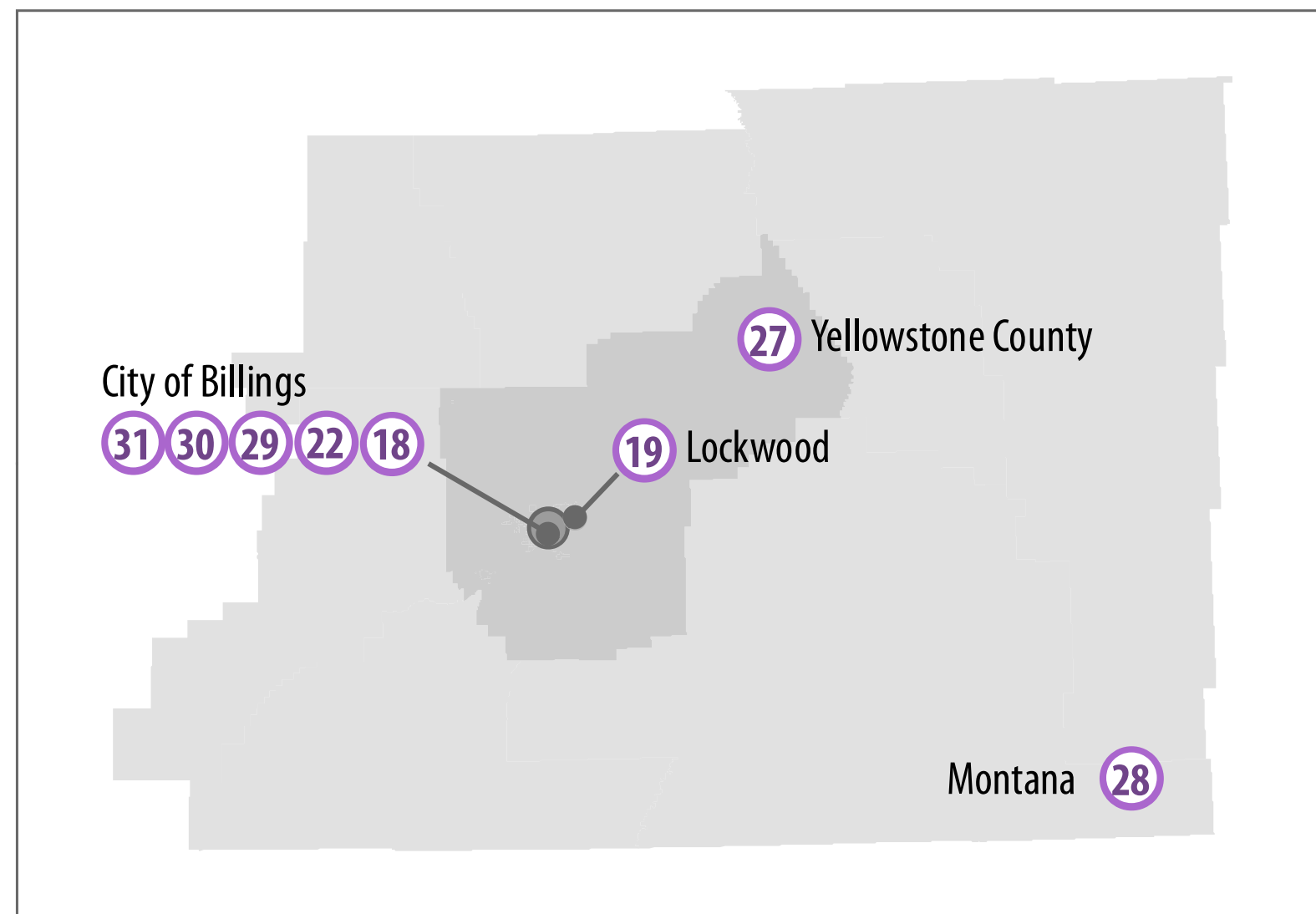


Multimodal Create a transportation system that supports the practical and efficient use of all modes of transportation



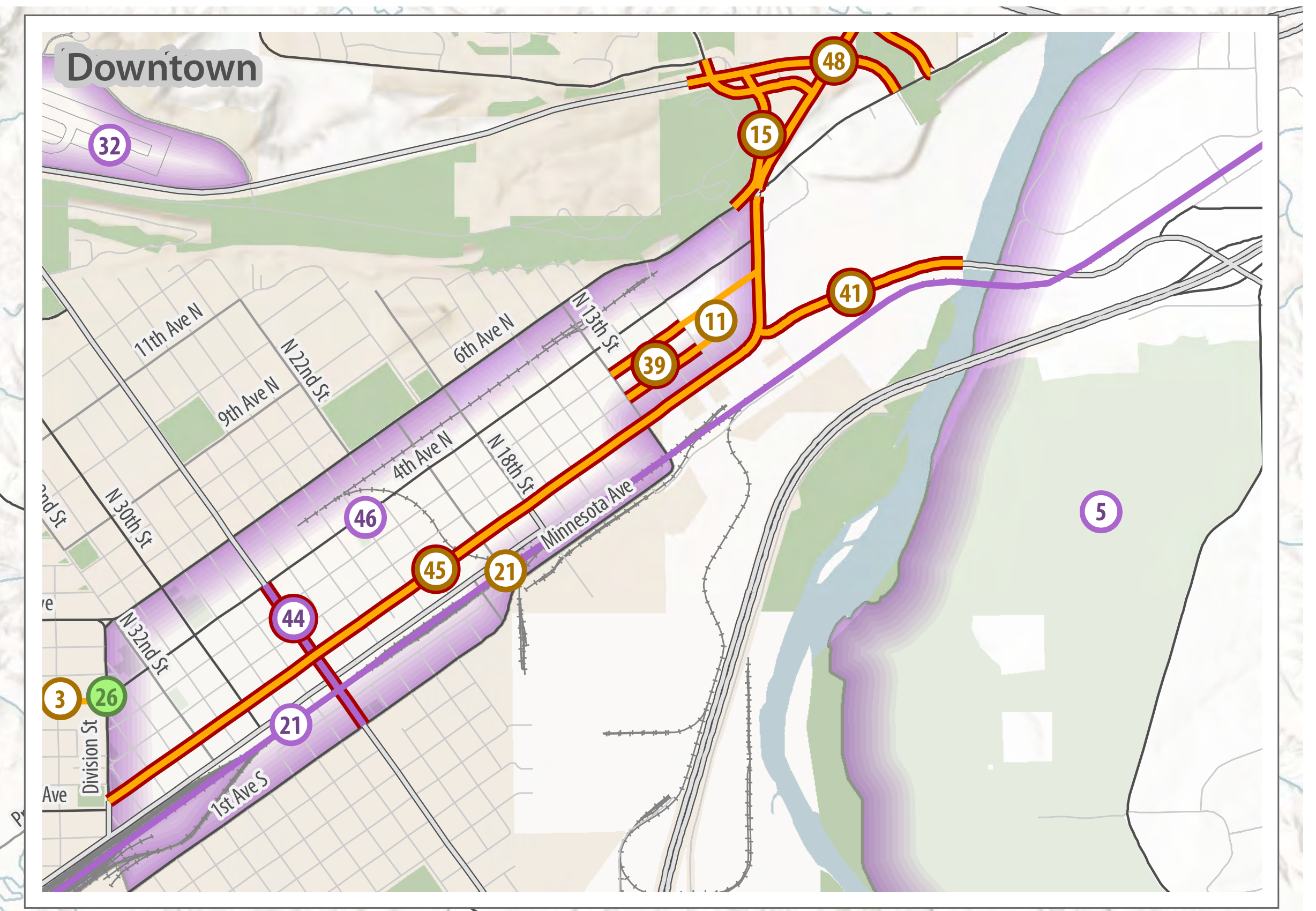
Economic Vitality Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce

WHAT TRANSPORTATION PROJECTS HAVE BEEN COMPLETED SINCE THE 2014 LRTP?



ID	Name
1	Inner Belt Loop Phase 1
2	Shiloh Conservation Area (Trail)
3	Lewis Avenue Bike Lanes (24th Street W to Division Street)
4	Highway 3 Corridor Study
5	Non-Motorized Transportation Plan
6	Calhoun Lane (King East to Underpass Avenue)
7	Poly Drive (32nd Street W to 38th Street W)
8	Arrowhead Trail (Arrowhead Elementary School to Shiloh Road)
9	Poly Drive School Sidewalks
10	Poly Drive/Virginia Lane Traffic Signal Reconstruction & Bike Lanes (Poly from Virginia to 13th St W)
11	Exposition Gateway (2nd & 3rd Ave N from Main Street to N. 10th)
12	Ponderosa Trail
13	19th St W & Colton School Crossing
14	Wicks Lane Trail (Siesta to Governors)
15	Swords Park Outlet Trail (Aranson to 6th Ave N)
16	Orchard Lane (King East to State Ave)
17	Gabel Road & 32nd Street West Traffic Signal
18	City of Billings Growth Policy
19	Lockwood Growth Policy
20	West End Multimodal Planning Study
21	Montana Rail Grade Separation Study
22	Billings Community Transportation Safety Plan
23	Old Highway 312 Corridor Study
24	Grand Avenue Widening (32nd Street West to Shiloh Road)

ID	Name
25	Grand Avenue (48th to 58th Streets West)
26	4th Ave N & Division Street Signal Reconstruction
27	Billings-Yellowstone Household Travel Survey
28	TranPlanMT
29	Billings Area Bikeways + Trails Master Plan Update
30	City of Billings Complete Streets Progress Report
31	City of Billings Comprehensive Parks and Recreation Master Plan
32	Rims to Valley Bike-Pedestrian Feasibility Study
33	Targeted Economic Development District (TEDD)
34	Central Avenue (32nd St W to Shiloh Road)
35	Zimmerman Trail (Rimrock Road to Hwy 3)
36	Monad & Daniel Traffic Signal
37	Rimrock & 54th St W Traffic Signal
38	Midland Road (S. Billings Blvd. to Mullooney Ln)
39	EBURD Reconstruct (2nd & 3rd Ave N from N. 13th to N. 10th)
40	Kyhl Lane (BBWA to Hawthorne)
41	1st Avenue North & Exposition Drive
42	Billings Bypass Arterial
43	Underpass Avenue Improvements
44	27th Street Railroad Crossing Study
45	1st Avenue North Billings
46	Billings Downtown Traffic Study
47	Main Street Signal Timing
48	Airport & Main Intersection



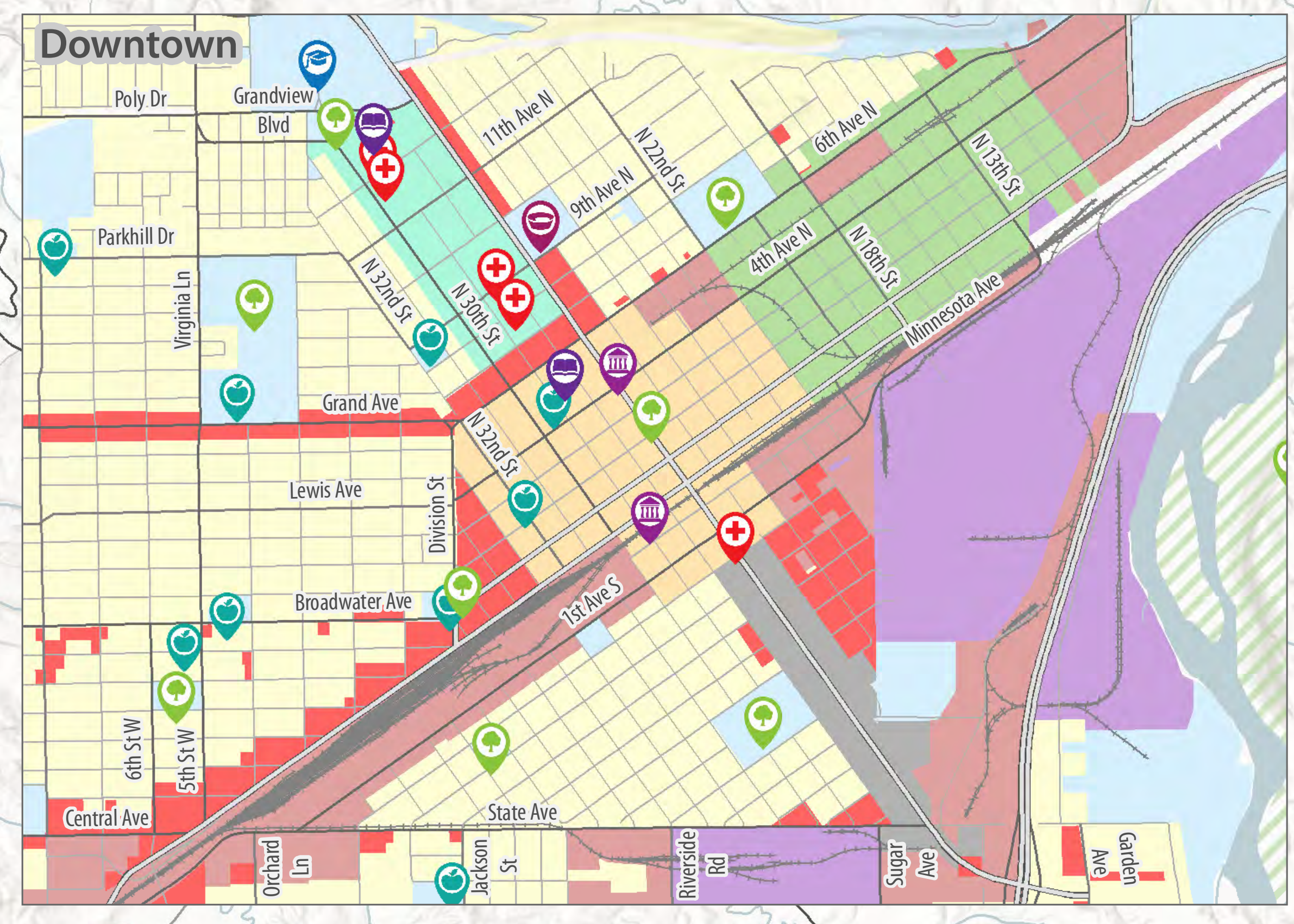
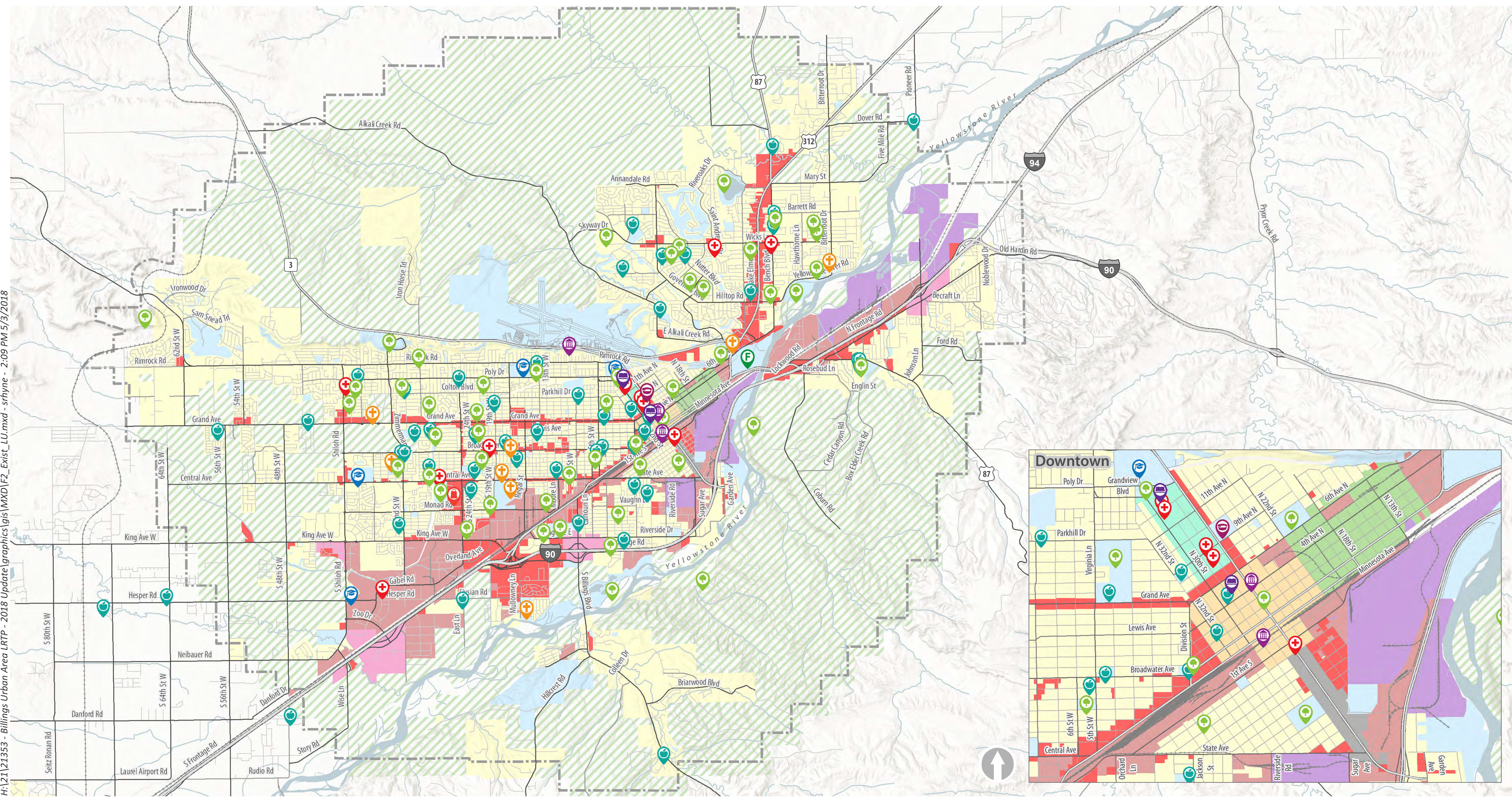
- Intersection Project
- Project
- Study/Plan/Policy
- Study/Plan/Policy
- Ongoing Study/Plan/Policy
- Ongoing Intersection Project
- On-Going Project
- Study/Plan/Policy
- Ongoing Study/Plan/Policy
- Study Area
- Park
- City of Billings
- ↑

18 completed projects
15 completed studies/plans

15 Ongoing projects/studies/plans

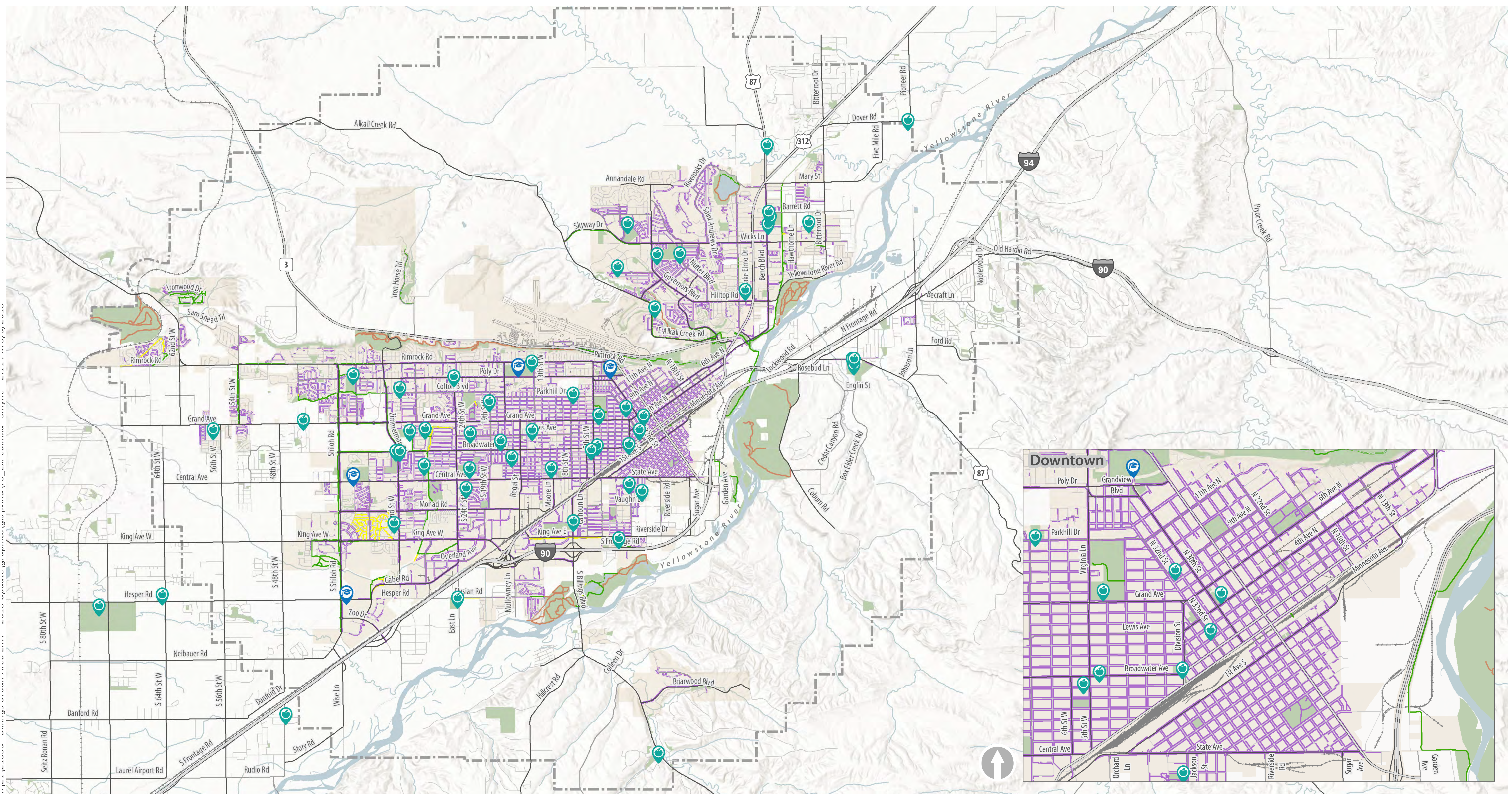
EXISTING LAND USE

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- | | | | | | | | | | |
|---------|---------------|---------|-------------|----------|-----------------------|---------------------------|------------------|-------------------------------------|------------|
| College | Shopping Mall | Stadium | Fairgrounds | Cemetery | Residential | Central Business District | Light Industrial | Entryway | Study Area |
| Schools | Museum | Library | Park | Hospital | Commercial | Medical Corridor Permit | Heavy Industrial | South 27th Street Corridor | |
| | | | | | Commercial/Industrial | Public | Agricultural | East Billing Urban Renewal District | |

EXISTING PEDESTRIAN AND TRAIL FACILITIES

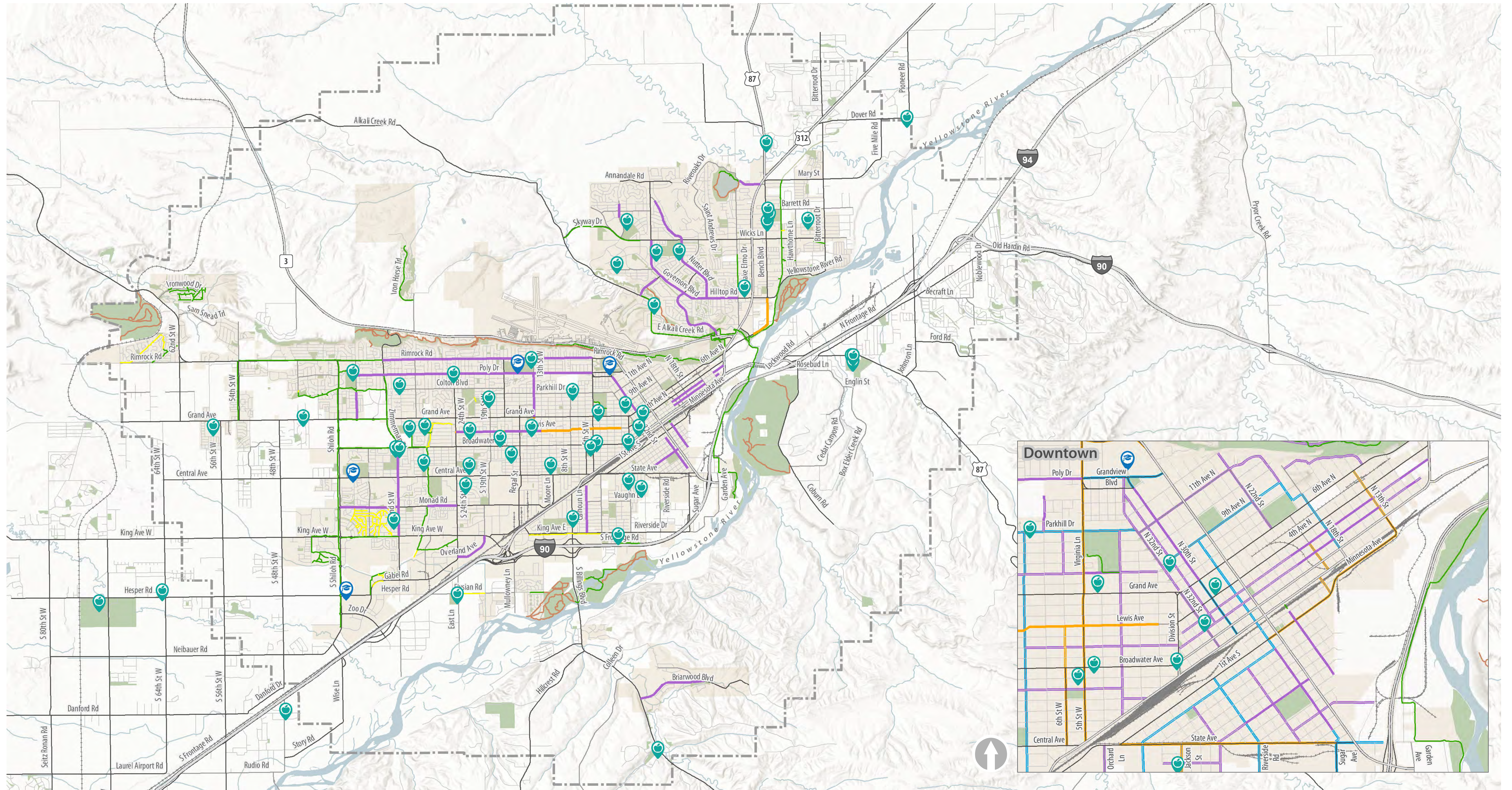


- Shared Use Path
- Neighborhood Trail
- Unpaved Trail
- Sidewalks
- College
- Schools
- Park
- City of Billings
- Study Area

660 Miles of sidewalks
11 Miles of neighborhood trails

45 Miles of shared use paths
3.3% Billings residents commute by walking*

EXISTING BIKEWAYS AND TRAIL FACILITIES



26 Miles of bike lanes

2.6 Miles of shared lanes

11 Miles of neighborhood trails

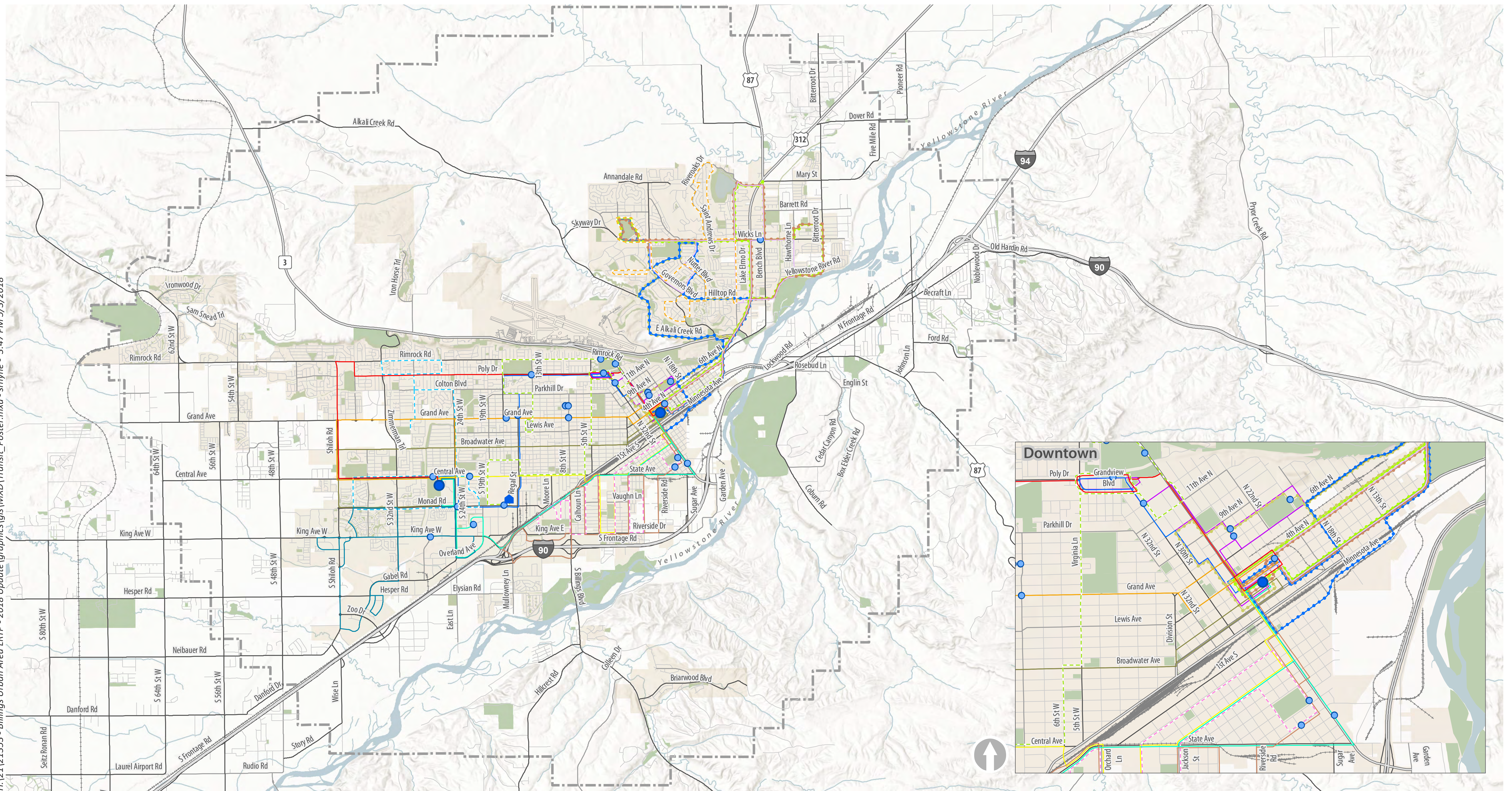
45 Miles of shared use paths

1% Billings Residents Commute by bike*

*2010-14 ACS Data

EXISTING BUS ROUTES

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- | | | | | | | | |
|--------------------------------------|------------------|----|-----|----|-----|----|------------------|
| Bus Shelter | Bus Route Number | 5* | 10 | 15 | 18* | T1 | Study Area |
| Transit Office | 1 | 7* | 13* | 16 | 19* | T2 | City of Billings |
| Transfer Station | 3* | 9* | 14 | 17 | 24 | T3 | Park |
| * Bus services operating on Saturday | | | | | | | T4 |

18 Routes

1% Billings Residents Commute by bus*

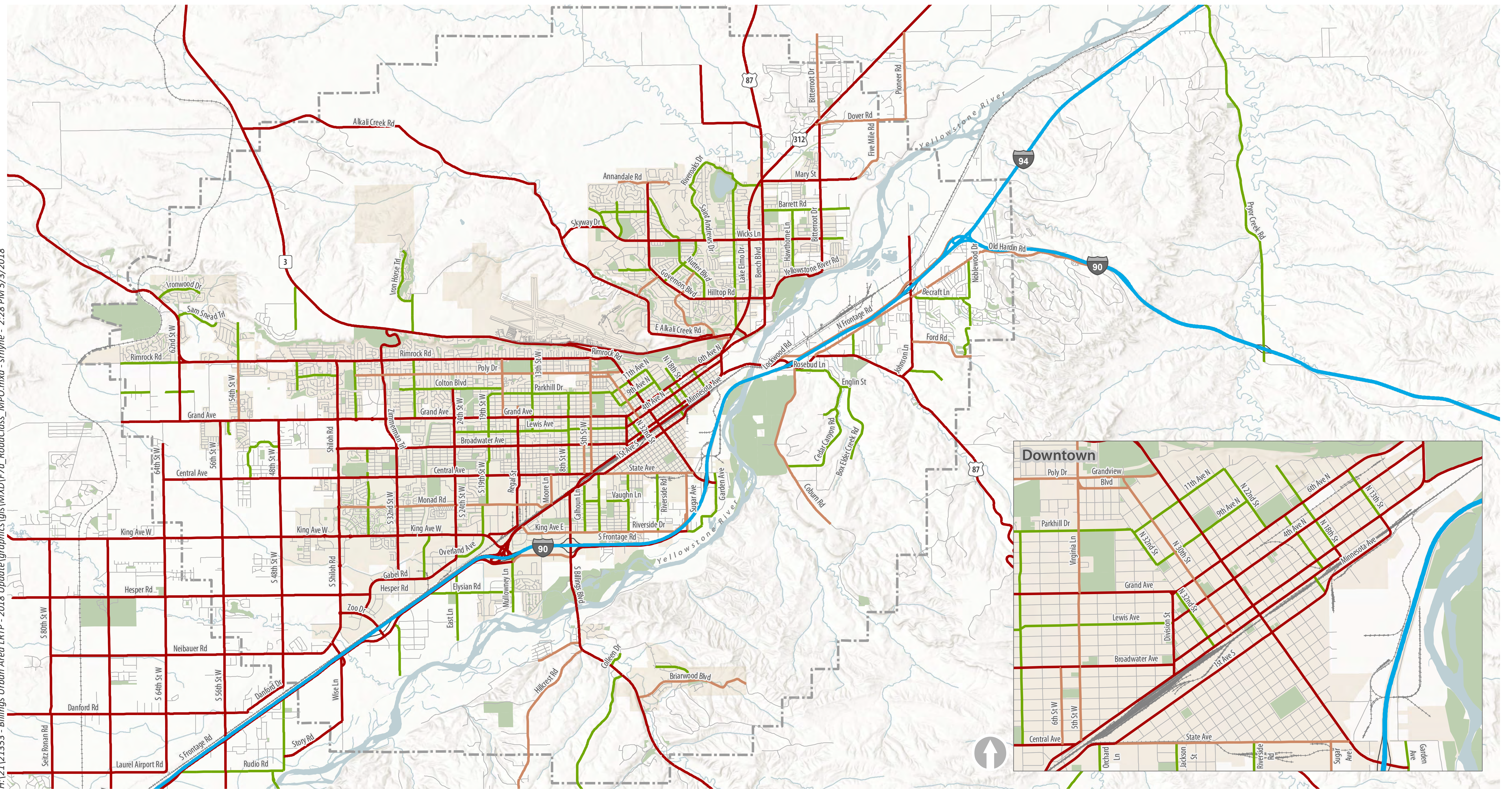
5:50a-6:50p Weekday hours

8:10a-5:45p Saturday hours

*2010-14 ACS Data

EXISTING ROADWAY FUNCTIONAL CLASSIFICATION

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- | | | |
|-------------------------------|----------------|------------------|
| Roadway Classification | Minor Arterial | Study Area |
| Interstate | Collector | Park |
| Principal Arterial | Local Streets | City of Billings |

970 Miles of roads

18 Roundabouts

173 of signalized intersections

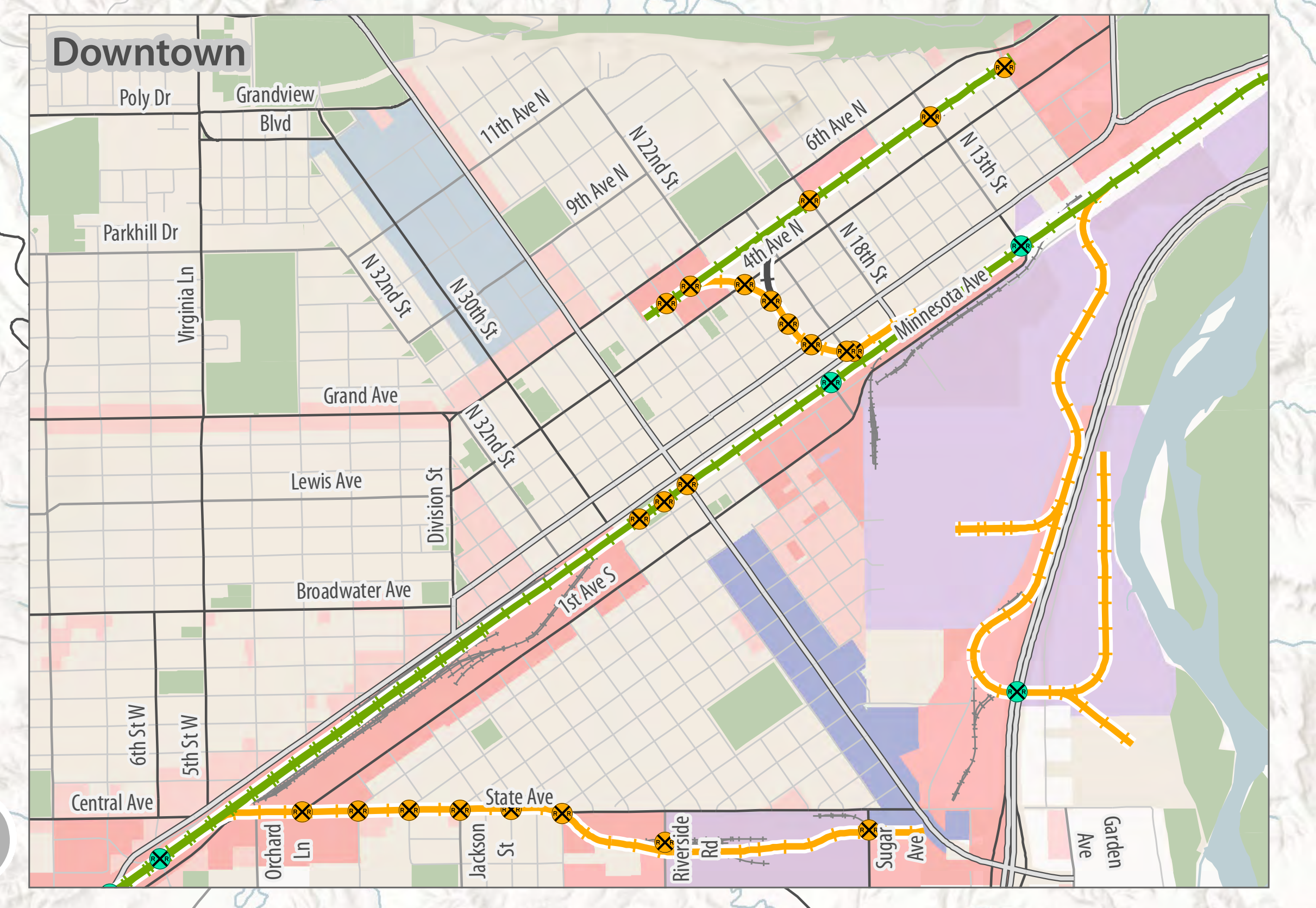
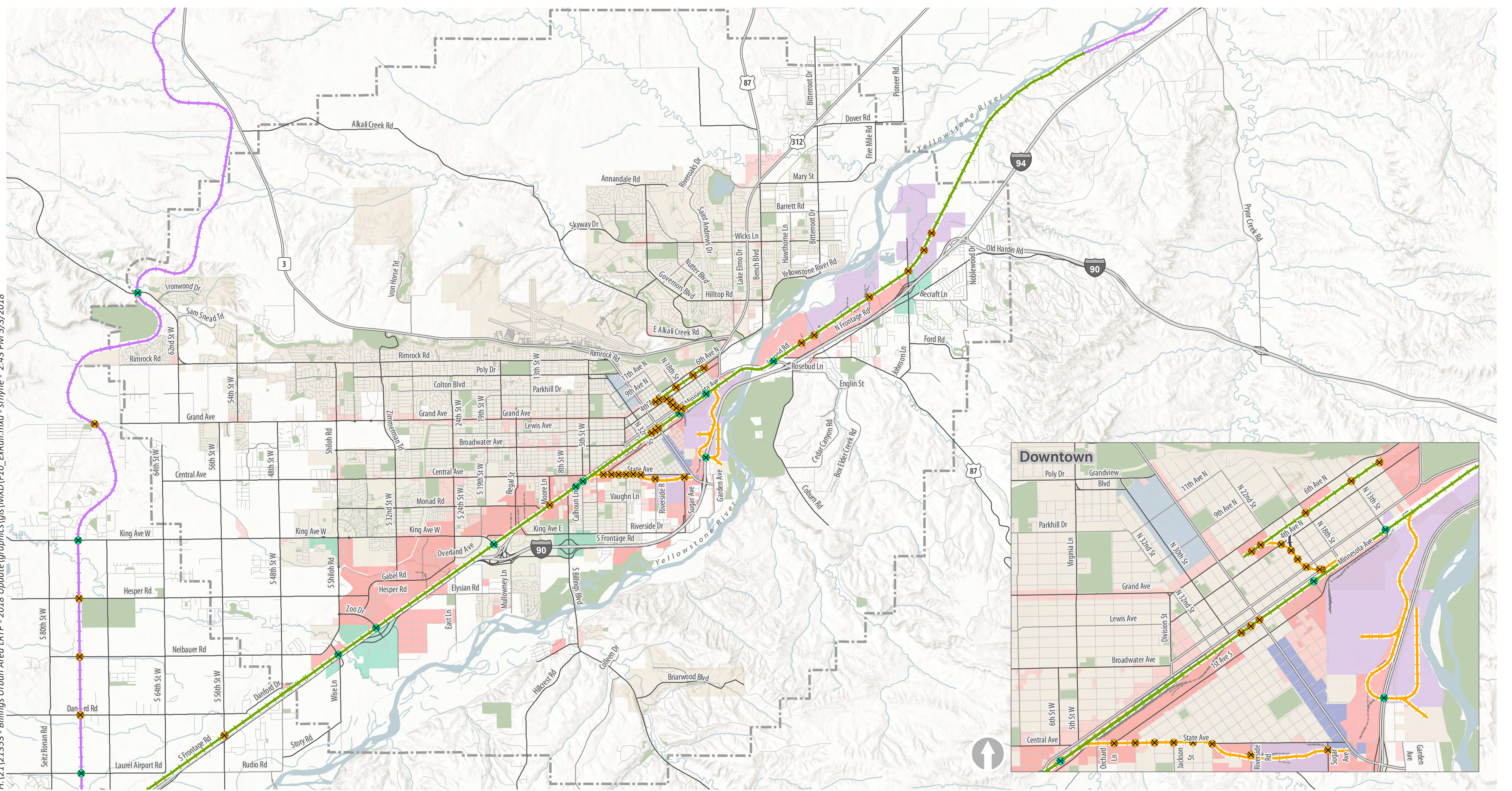
Freeways serve high speed, long distance travel movements and provide limited access to adjacent lands.

Arterials serve higher volumes of traffic, particularly through-traffic, at higher speeds.

Collectors carry locally generated traffic at lower speeds.

EXISTING RAILROAD FACILITIES

H:\21121353 - Billings Urban Area LRTP - 2018 Update\graphics\GIS\MMD\F10_Extra\mxd - srhnye - 2:43 PM 5/3/2018



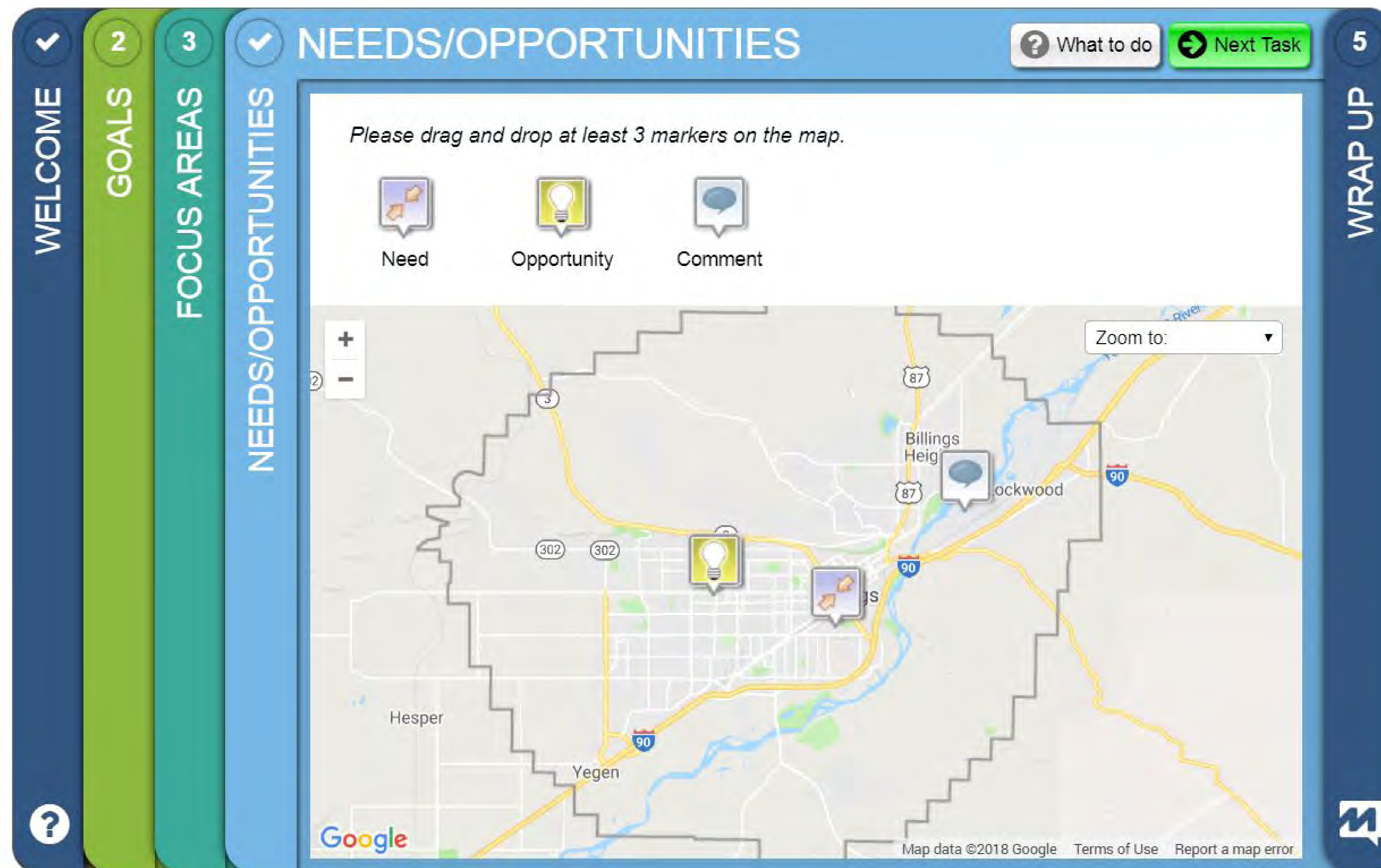
- | | | | | |
|--------------------------|------------------------------|------------|-----------------------|----------------------------|
| At Grade Crossing | Burlington Northern Santa Fe | Study Area | Commercial | Medical Corridor Permit |
| Grade Separated Crossing | Montana Rail Link | Park | Commercial/Industrial | South 27th Street Corridor |
| Spur | | | Heavy Industrial | Entryway |
| | | | Light Industrial | City of Billings |

36 at-grade railroad crossings 12 grade-separated railroad crossings

HELP US IDENTIFY THE TRANSPORTATION NEEDS AND OPPORTUNITIES

Based on your understanding of the transportation system, please use the numbered stickers and map to identify the location of needs and opportunities.

Additionally, we have an interactive survey tool (screen shot below) set-up on the iPad that you can use to identify needs and opportunities.



HELP US IDENTIFY THE FUTURE TRANSPORTATION VISION FOR THE BILLINGS-URBAN AREA

In the next phase of the LRTP, a short- and long-range project list will be identified to address current and future transportation needs. This project list will be financially constrained. To assist the project team in identifying the vision and project priorities, please use your comment sheet to identify the three areas that are most important to you.



Roadways



Trucks/Freight



Pedestrians



Intersections



Bus Transit



Bicycles



Railroad



Airport

NEXT STEPS

Stay Involved

- Sign up on the “Notify Me” list on the City’s website: <http://ci.billings.mt.us/>
- Attend future public meetings
- Check back frequently for updates on our project website at www.billingslrtp.com
- Provide comments via our interactive web map survey: <http://maps.kittelson.com/billingslrtp>
- Contact **Scott Walker** (MPO) at 406.657.8246 or via email at walkers@ci.billings.mt.us

What is Next?

- Summarize comments from Public Informational Meeting #1
- Develop and analyze year 2040 conditions
- Prepare a draft list of short and long range projects
- Present materials at Public Informational Meeting #2 (September 2018)
- Prepare draft plan for review and comment

All displays and handouts from tonight will be posted on the project website at www.billingslrtp.com for review and comment.

Thank you for participating!

Appendix C Public Open House #1
Comment Sheets

What zip code do you live in? 59101

What modes of transportation do you use? (check all that apply)

- Car/Truck/Motorcycle
- Bike
- Walk
- Public Transportation
- Other: _____



Goals

Prioritizing goals helps the MPO guide future project prioritization.

Please rank your top 3 transportation goals.

Rank Top 3 (1, 2, 3)	Goal
	Safe, Efficient, Effective: Develop a transportation system that is safe, efficient, and effective
	Functional Integrity: Optimize, preserve, and enhance the existing transportation system
	Prioritized Improvements: Identify and prioritize projects that mitigate deficiencies, maximize the use of existing facilities, and balance anticipated needs with available funding
	Environment: Develop a transportation system that protects the natural environment and promotes a healthy, sustainable
	Multimodal: Create a transportation system that supports the practical and efficient use of all modes of transportation
	Economic Vitality: Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce

Comments: WHEN BUILDING THE LOCKWOOD/HEIGHTS BYPASS
PLEASE START THE CONSTRUCTION ON THE ROADS IN LOCKWOOD
BEFORE WORKING ON THE BRIDGE. HAVING THE ROADS IN
LOCKWOOD BUILT WOULD ENCOURAGE BUSINESS DEVELOPMENT
IN THE AREA THAT PROBABLY WON'T MOVE IN UNTIL
THE MAIN ROADS ARE BUILT. THIS WOULD HELP BUILD
THE TAX BASE FOR THE SCHOOLS.

Focus Areas

Tell us your focus areas for the Long Range Transportation Plan. Check your top four (4) areas.

Check 4	Focus Area
	Roadways
	Intersections
	Railroad
	Trucks/Freight
	Bus Transit
	Airport
	Pedestrians
	Bicycles

Other Comments: _____

If you would like to receive project updates, please fill out the information below.

Name: PETER FREIVALDS
Email: PJAR42@GMAIL.COM

Please leave your completed comment sheet at the sign-in table. If you would like to complete it at a later date, please send it to the YCPB, 2825 3rd Avenue North, 4th Floor, Billings, MT 59101 or take the online survey at BillingsLRTP.com
While your comments are always welcome, they can be best utilized if received by May 29, 2018.
Thank you!

✈ Send to Todd @Dowl

Focus Areas BILLINGS HEIGHTS

Tell us your focus areas for the Long Range Transportation Plan. Check your top four (4) areas.

Check 4	Focus Area
	Roadways
✓	Intersections
	Railroad
	Trucks/Freight
✓	Bus Transit
	Airport
✓	Pedestrians
✓	Bicycles

Other Comments: WALKABLE ACCESS TO GROCERY, HEALTH ENTERTAINMENT & HARDWARE/BLDG ETC. RAISED WALKWAYS & TOP & BOTTOM OF MAIN STREET FOR PEDESTRIAN & BIKE & STROLLER ETC. (MULTI FAMILY DWELLINGS NEED FOOT ACCESS!

If you would like to receive project updates, please fill out the information below.

Name: TANK FULLEN
Email: hanwilful@yahoo.com

Please leave your completed comment sheet at the sign-in table. If you would like to complete it at a later date, please send it to the YCPB, 2825 3rd Avenue North, 4th Floor, Billings, MT 59101 or take the online survey at BillingsLRTP.com
While your comments are always welcome, they can be best utilized if received by May 29, 2018.

Thank you!



What zip code do you live in? 59105
 What modes of transportation do you use? (check all that apply)
 Car/Truck/Motorcycle
 Bike
 Walk
 Public Transportation
 Other: _____

Goals

Prioritizing goals helps the MPO guide future project prioritization.
 Please rank your top 3 transportation goals.

Rank Top 3 (1, 2, 3)	Goal
	Safe, Efficient, Effective: Develop a transportation system that is safe, efficient, and effective
	Functional Integrity: Optimize, preserve, and enhance the existing transportation system
3	Prioritized Improvements: Identify and prioritize projects that mitigate deficiencies, maximize the use of existing facilities, and balance anticipated needs with available funding
2	Environment: Develop a transportation system that protects the natural environment and promotes a healthy, sustainable
1	Multimodal: Create a transportation system that supports the practical and efficient use of all modes of transportation
	Economic Vitality: Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce

LAND TO ENCOURAGE NEW

Comments: FAMILY ACCESS TO BUSINESS BY
BICYCLES AND WALKABLE SAFE & CONTROLLED
& LIGHTED. (SIDEWALKS ARE TOO CLOSE TO
BUSY FAST STREETS -

What zip code do you live in? 59101

What modes of transportation do you use? (check all that apply)

- Car/Truck/Motorcycle
- Bike
- Walk
- Public Transportation
- Other: _____



Goals

Prioritizing goals helps the MPO guide future project prioritization.

Please rank your top 3 transportation goals.

Rank Top 3 (1, 2, 3)	Goal
3	Safe, Efficient, Effective: Develop a transportation system that is safe, efficient, and effective
	Functional Integrity: Optimize, preserve, and enhance the existing transportation system
	Prioritized Improvements: Identify and prioritize projects that mitigate deficiencies, maximize the use of existing facilities, and balance anticipated needs with available funding
	Environment: Develop a transportation system that protects the natural environment and promotes a healthy, sustainable
2	Multimodal: Create a transportation system that supports the practical and efficient use of all modes of transportation
1	Economic Vitality: Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce

Comments: Google Maps or App to help w/ MET

Make safer access to YDEF (Tumbleweed)

Focus Areas

Tell us your focus areas for the Long Range Transportation Plan. Check your top four (4) areas.

Check 4	Focus Area
✓	Roadways
	Intersections
	Railroad
	Trucks/Freight
✓	Bus Transit
	Airport
✓	Pedestrians
✓	Bicycles

Other Comments: _____

Love the Roundabouts

If you would like to receive project updates, please fill out the information below.

Name: *Drew Johnson*

Email: _____

Please leave your completed comment sheet at the sign-in table. If you would like to complete it at a later date, please send it to the YCPB, 2825 3rd Avenue North, 4th Floor, Billings, MT 59101 or take the online survey at BillingsLRTP.com

While your comments are always welcome, they can be best utilized if received by May 29, 2018.

Thank you!

Appendix D Public Open House #1
Sign-In Sheet

Please Sign In

Public Open House
May 14, 2018

Requested Information

Voluntary Information

Name

Mailing Address

E-Mail Address

CONRAD STROEBE 213 Johnson Ln
Billings MT 59101 stroebefam@aol.com

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

THOM MCKEAN 523 YELLOWSTONE AVE
BILLINGS, MT 59101 thommckean@gmail.com

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

LYLE GABRIAN 3142 Zimmerman Pl.
Billings, MT 59106 lgabrian@bresnan.net

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

Cheryl Lenhardt 3209 Rimrock 59102 cherlenhardt@gmail.com
(Zimrod neighbor)

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

ED GULICK 3015 10th Ave N.
Billings, MT 59101 edgulick47@alum.pomona.edu

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

Please Sign In

Public Open House
May 14, 2018

Requested Information

Voluntary Information

Name Mailing Address E-Mail Address

-Lora Matto c/o Planning

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

Teresz Hook. 213 Johnson Ln.

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

MING CABRERA 1734 POLY DR 59102

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

Deanne Lehman 3725 Hawthorn Dr. lehnd@bigskyeda.org

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

Simon Harper bar 30635 59107

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

PETER FREIVALDS 1022 NOBLEWOOD DR PJAR42@GMAIL.COM
59101

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

Please Sign In

Public Open House
May 14, 2018

Requested Information

Voluntary Information

Name Mailing Address E-Mail Address

Mike Black 4411 Toyon Dr Billings MT mblack@co.yellowstone.mt.gov

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

Leo Barsanti 3314 Pipestone Drive Leos47@MSN.com

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

- Bob Riehl 126 Rolling Meadow Drive bsriehl@gmail.com

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

- Debra Hagel 705 Monard Rd Billings, MT

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

Denise Joy joyd@ci.billings.mt.us

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

HANK FOWER hankfower@ychoo →

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

Kelli Workman ARA 1505 Ave. D.

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

Please Sign In

Public Open House
May 14, 2018

Requested Information

Voluntary Information

Name	Mailing Address	E-Mail Address		
Danny Choriki	20 Marshall Dr	danny.choriki@gmail	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> American Indian/Alaskan Native
			<input type="checkbox"/> Disabled	<input type="checkbox"/> Asian/Pacific Inlander
				<input type="checkbox"/> Black <input type="checkbox"/> Hispanic
				<input type="checkbox"/> White <input checked="" type="checkbox"/> Other
Jack Nichols	942 N. 14 th	jacknickel555@gmail.com	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> American Indian/Alaskan Native
			<input type="checkbox"/> Disabled	<input type="checkbox"/> Asian/Pacific Inlander
				<input type="checkbox"/> Black <input type="checkbox"/> Hispanic
				<input type="checkbox"/> White <input type="checkbox"/> Other
Drew Johnson	1139 Annella Dr.	ADJ1223@gmail.com	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> American Indian/Alaskan Native
			<input type="checkbox"/> Disabled	<input type="checkbox"/> Asian/Pacific Inlander
				<input type="checkbox"/> Black <input type="checkbox"/> Hispanic
				<input type="checkbox"/> White <input type="checkbox"/> Other
Jan Rehberg	4401 Hwy 3	jan@rehberg ranch.com	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> American Indian/Alaskan Native
			<input type="checkbox"/> Disabled	<input type="checkbox"/> Asian/Pacific Inlander
				<input type="checkbox"/> Black <input type="checkbox"/> Hispanic
				<input type="checkbox"/> White <input type="checkbox"/> Other
✓ Scott Walker		c/c PLNtz.	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> American Indian/Alaskan Native
			<input type="checkbox"/> Disabled	<input type="checkbox"/> Asian/Pacific Inlander
				<input type="checkbox"/> Black <input type="checkbox"/> Hispanic
				<input type="checkbox"/> White <input type="checkbox"/> Other
✓ Monica Becker		c/c Planning	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> American Indian/Alaskan Native
			<input type="checkbox"/> Disabled	<input type="checkbox"/> Asian/Pacific Inlander
				<input type="checkbox"/> Black <input type="checkbox"/> Hispanic
				<input type="checkbox"/> White <input type="checkbox"/> Other
✓ WYETH FRIDAY		PCSD	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> American Indian/Alaskan Native
			<input type="checkbox"/> Disabled	<input type="checkbox"/> Asian/Pacific Inlander
				<input type="checkbox"/> Black <input type="checkbox"/> Hispanic
				<input checked="" type="checkbox"/> White <input type="checkbox"/> Other

Appendix E Detailed Map Comments from
Online Survey

File contains all data collected as of May-29-2018 17:10:26-UTC. Click the Refresh button in Data Center to download the latest dataset.

Latitude	Longitude	VisitId	MarkerType	Comment
45.7742453	-108.5032665	3078676	Comment	Need more development south of tracks. Bike trails, maybe a protected pedestrian space with no car access.
45.7812271	-108.5033481	3079084	Comment	we need bus routes that run longer than the current route times (earlier morning, later evening). If we want to continue engaging an active workforce on lower paying wage, we will need to help provide transportation-especially with our extreme weather conditions
45.7829851	-108.5016929	3079094	Comment	train tracks over/under pass
45.7997505	-108.4672256	3079133	Comment	Utilize the river and make it part of our town
45.7813163	-108.5152913	3079631	Comment	I appreciate that this is now a two-lane right turn (for those driving north and turning onto 4th)
45.7700265	-108.522845	3079631	Comment	I find this intersection is particularly well-done (traffic flows well from all directions)
45.8059652	-108.4836113	3079656	Comment	Bike trails in Alkali Creek are great.
45.7990773	-108.5433499	3080043	Comment	-----
45.7698603	-108.6387349	3080161	Comment	Many west end intersections in the County are dangerous. Maybe controlled intersections are warranted.
45.7851573	-108.5037861	3080574	Comment	As it is now, if you take the bus from the west-end to the heights, chances are you'll have spend a half hour waiting around at the Downtown Transfer Center. It would be more convenient if the schedules were altered so the buses that go to the Downtown Transfer Center would arrive and depart at the same times.
45.8074014	-108.4634624	3081031	Comment	-----
45.8267754	-108.4078021	3082342	Comment	Ensure that new development in the Lockwood TEDD installs boulevard sidewalks.
45.7773069	-108.5164518	3082447	Comment	It's very difficult for cyclists to move east-west because Division forces all traffic onto Broadwater, which is a poor street for cycling.
45.7769954	-108.567917	3082452	Comment	we have very bad traffic lights system (Flow, Timing and duration)
45.8108957	-108.4964825	3082460	Comment	I can't think of anything else
45.8195729	-108.57788	3082463	Comment	find a way to make the proposed inner belt loop path shorter. Perhaps a straight shot from Highway 3 to Skyway drive. The proposed route west of rehberg ranch seems like it would take too long.
45.7659832	-108.5968667	3082461	Comment	It is not necessary to widen the 32nd Street Corridor. People need to utilize the Shiloh Road corridor or other north-south corridors of they think 32nd Street West is too "congested" Millions was spent on Shiloh, and past improvements to 32nd Street West, let's not throw it away to address a few complaints.
45.7611034	-108.5458817	3082496	Comment	-----
45.7835838	-108.6005559	3082496	Comment	-----
45.7691566	-108.6170139	3082496	Comment	too many accidents at the circles, need to add signage on how to use them, or remove and replace with signals.

45.8222371	-108.580085	3082504	Comment	I have lived in many parts of the country as well as in Europe. In most I was able to organize my life so that I could bus, bike or walk to work and travel regionally by train. Unfortunately, none of those things are practical for me here so I am almost completely reliant on my car. And, it is disappointing to me that it turns out that, in my opinion, Billings has the worst drivers I've ever encountered. I have never seen more people that are completely indifferent to how their actions affect others and never even knew some of the ways in which Billings drivers suck even existed. We need focused police action on dangerous and even stupid and annoying driving habits and a focused public education on getting people to respect others and act like they live in a community. I don't know if world peace would follow but it would be a nice change of pace from the current situation.
45.8265753	-108.537142	3082939	Comment	Finish connecting to Airport rd.
45.7650571	-108.5764525	3082939	Comment	We live in the heights and totally avoid the westend on the weekends because of too much traffic.
45.7764304	-108.5008847	3082945	Comment	LOVE the bike lanes down to South Park!
45.7828354	-108.526076	3082945	Comment	LOVE the bike lanes on Lewis!
45.8026145	-108.5251533	3082967	Comment	My interests lie in at least one pedestrian/bike trail designated at either Airport Road or Zimmerman trail. Pedestrians and cyclists need a safe way connect to the trail system.
45.769679	-108.6383879	3082975	Comment	The new 4-way stop planned here shortly is an indicator of the need to plan for additional road and pedestrian/bike improvements in this area--particularly with Ben Steel Middle School.
45.7800843	-108.507378	3082975	Comment	Traffic light here gives unnecessary time in the morning to southbound traffic on N 30th.
45.7856323	-108.4983658	3082975	Comment	On street parking on 1st Ave N (and other high traffic streets in this general area) near intersections blocks vision of drivers trying to turn onto such streets...very unsafe.
45.7649402	-108.5592591	3083041	Comment	Improve the view on the interstate as you drive by Billings, the oil refineries look horrible and I've heard people who drive by Billings on how horrible it looks. Include the river into our city somehow
45.800221	-108.4702217	3083089	Comment	Use Revenue from Enforcing Red Light offenders and Cell phone use while driving tickets to go towards funding some of your projects.
45.7975355	-108.4556499	3083213	Comment	Lots of dangerous situations occur near the exit/entrance ramps.
45.7681088	-108.6142241	3083259	Comment	I get frustrated that we spend millions of dollars improving west end arterials to make it more convenient for people who live outside the city and do not pay arterial fees and city taxes to commute into town.
45.7769691	-108.6254731	3083373	Comment	More connected bike trails and keep them off the roads...most of our bike lanes on the roads are very unsafe.
45.7844515	-108.6252156	3083373	Comment	Road condition is terrible in town, so much repair and maintenance needs to be done, especially from winter. There are potholes so large around town you could lose your entire vehicle.
45.7896436	-108.6247221	3083373	Comment	Access at dead-end of 43rd Street west just North of Waterford Drive to bike/walking path across the ditch.
45.782153	-108.5057587	3083689	Comment	change most one way streets to two way
45.7579131	-108.5887797	3083768	Comment	I think the winter plowing on "side streets" was fine this year. I drive an SUV so I would be fine without it.
45.7443044	-108.5595714	3084771	Comment	Need basic service businesses to serve residential areas like this one so transportation needs are reduced. This may be an opportunity also, especially in certain areas.
45.7558036	-108.5842048	3084771	Comment	Automobiles travel far too fast on the big thoroughfares like King, Laurel Frontage Road, even Shiloh sometimes. The roundabouts on Shiloh have been very effective at allowing a thoroughfare without lights and periodic speed checking.

45.7852196	-108.503578	3086153	Comment	I don't understand why we rely on typical busses in Billings instead of passenger vans. I generally see buses carrying very few passengers and I often wonder if we couldn't get more bus service for our funding if we switched to smaller vehicles like vans. I know this leaves open the question of servicing wheelchairs. I'm not sure that I know the exact answer to that concern, but I would raise the idea that we might be able to improve our overall bus service by looking at smaller vehicles making more frequent trips rather than large buses getting limited use.
45.7759216	-108.5399162	3088735	Comment	-----
45.8719803	-108.4496223	3088930	Comment	Need a funding structure that shares responsibility for safe roads to schools
45.7427171	-108.555752	3088735	Comment	Improved pedestrian infrastructure (no sidewalks on arterials)
45.7479581	-108.556224	3088735	Comment	Interchange improvements
45.7625703	-108.5970151	3088735	Comment	EBR at Monad & 32nd
45.7553844	-108.5967576	3088735	Comment	Adaptive signal timing
45.7932777	-108.4182484	3088735	Comment	Right turn lane or roundabout for traffic calming
45.7842157	-108.6177833	3088735	Comment	Pedestrian Crossing @ roundabout needs signal - badly needed! (love the roundabouts :))
45.7986389	-108.6018617	3088735	Comment	Right turn lane at bottom of Zimmerman Trail
45.8101269	-108.5983855	3088735	Comment	Inner Belt Loop from Skywalk to Zimmerman
45.7841259	-108.638683	3088735	Comment	Grand Ave between Shiloh & 56th - 3 schools - need wider road for/with turning lanes - bike/walking path
45.7769521	-108.5969626	3088735	Comment	Add lanes to 32nd St. W
45.7700414	-108.5282066	3089848	Comment	There seems to be a lot of backup of people turning left here. So much so that the cars on the overpass get stopped. Since people don't slow down to 35mph on the overpass as they should, this can be kind of scary when the traffic stops all of the sudden.
45.7667245	-108.4884642	3089899	Comment	The entries to the city are dismal. If I were driving by, there is nothing that would entice me to stay in Billings and explore the area. Would like more attractive gateways to our community.
45.7693441	-108.6595127	3090050	Comment	put in a stop light. No more roundabouts
45.7839872	-108.4983668	3090089	Comment	pedestrians on MT ave are an issue. Cars have a hard time seeing people wanting to cross, etc. also have seen lots of speeding vehicles in this area.
45.8347926	-108.4773804	Open House	Comment	Phoebe Lane - no pavement
45.8306064	-108.4710719	Open House	Comment	Main St - Slow traffic cleanup, main st - improve business climate
45.8246991	-108.4770749	Open House	Comment	Lake Elmo water sewer development
45.8267028	-108.4736202	Open House	Comment	Sioux Lane paving weeds large housing development, west lake elmo
45.7881123	-108.515055	Open House	Comment	Trolley from downtown to MSUB - rezone NC 32nd

45.7444639	-108.5967658	Open House	Comment	Upgrade to road on 32nd @ King to Gabel and 32nd
45.74081	-108.606808	Open House	Comment	Congestion backs up traffic coming off interstate @ rush "minute"
45.8000351	-108.4541152	Open House	Comment	trail/walkway for pedestrian safety along Metra Park and beautification connection to I90
45.7901609	-108.5279296	Open House	Comment	Needs improved sidewalks
45.7938163	-108.4164245	Open House	Comment	Roundabout @ So Johnson and Hwy 87 (slow down north to sb on 87)
45.7996808	-108.4349854	Open House	Comment	Picoco - remove congestion via?
45.7985139	-108.4321959	Open House	Comment	Hillner - remove triangle
45.7989328	-108.4375817	Open House	Comment	remove left turns into school
45.7869936	-108.4548552	Open House	Comment	Plan Basline Rd to I90 (Grand Ave of Lockwood)
45.7963297	-108.4611637	Open House	Comment	Trail over yellowstone (off roadway)
45.805784	-108.475712	Open House	Comment	Elevated foot and bike crossing for walkable improved access to grocery/health/entertainment from housing developments
45.8227138	-108.4709484	Open House	Comment	Elevated foot and bike crossing for walkable improved access to grocery/health/entertainment from housing developments
45.8130232	-108.4070904	Open House	Comment	Move Becraft to Johnson off old Hardin Rd. Remove all angle intersections (safety)
45.7623889	-108.4944231	Open House	Comment	Safe walkway/path for pedestrians to access the YCDF
45.82096	-108.3943721	Open House	Comment	Old Hardin pedestrian pathway
45.7522194	-108.617446	Open House	Comment	Underpass under Shiloh between Shiloh crossing and mt sapphire
45.7925403	-108.4977551	Open House	Comment	Peds dont use crosswalk
45.7906851	-108.4904166	Open House	Comment	Improved ped experience through traffic calming
45.7466793	-108.5356494	Open House	Comment	S Billings Blvd bike/pedestrian to the river park
45.8049271	-108.616459	Open House	Comment	Traffic connect from Rims/Hwy 3 to Shiloh
45.785897	-108.4761258	Open House	Comment	Pedestrian bridge connecting four dances and Coulson Park
45.8024141	-108.4867688	Open House	Comment	Connect Heights and Downtown with a tunnel and name it after Willard Frazer
45.7635673	-108.5422583	Open House	Comment	Intersection needs to be improved - Moore/Monad/Laurel/RR Bottleneck

45.7335577	-108.6038891	Open House	Comment	One overpass - needs more lanes, at least 2 lanes each direction with separate right turn lanes
45.7551437	-108.658692	Open House	Comment	Needs to keep King Ave traffic flowing 60 mph. for long commuters
45.7553234	-108.6905352	Open House	Comment	Overpasses across King, not roundabouts to keep traffic speed going on King to Keep long work travelers from having to slow and waste gas. They want to keep traveling 60 mph from out west into Billings on King.
45.7552643	-108.6347087	Open House	Comment	Traffic concerns on King Aves W too slow. Keep it flowing 60 mph.
45.7820273	-108.5082447	3078676	Need	More pedestrian only places, less cars. More walkability and channels to bike into downtown. More plant life, roof top gardens, and store fronts facing walkways so people can see inside. Maybe even more sky walkways for when it gets cold to keep pedestrians safe and motivated to show downtown and be downtown all year long.
45.8027342	-108.5106479	3078787	Need	Need to connect the Heights to downtown, probably with a tunnel.
45.8079325	-108.6269688	3078787	Need	We need another way to get down off the Rim connecting to the West End without seriously impacting residential neighborhoods.
45.7817849	-108.5036518	3078787	Need	A major urban center does not have a train track dividing its core downtown area in half.
45.799385	-108.4756006	3078787	Need	A fly over connecting Bench and 6th Ave would alleviate a lot of downtown/ Heights traffic.
45.8396742	-108.4016564	3078787	Need	Connect Lockwood to Johnson Lane at the northern end.
45.7951346	-108.4570037	3079084	Need	an additional stop for the city bus transportation across the johnson lane bridge
45.7914242	-108.6112415	3079085	Need	make 38th St go all the way through
45.7988448	-108.6527192	3079085	Need	a light and a turn lane for those turning left onto 54th from Rimrock Rd
45.7992038	-108.6713659	3079085	Need	This whole area is a cluster. Traffic coming from so many directions and everyone going 55 MPH and only one lane going each way. Also, the curve is terrible in bad weather
45.7893672	-108.5121029	3079084	Need	the sidewalks seem to be the first to be neglected when it comes to maintenance. In order to promote other modes of transportation, we need to be able to provide accessible walkways
45.8126545	-108.4140763	3079119	Need	better planned lights/flow during busy times
45.8139645	-108.4139905	3079119	Need	better planned lights for less sitting
45.7942968	-108.494569	3079094	Need	more traffic calming measures and more greenscapre
45.8361122	-108.4623253	3079128	Need	City bus to run on the St. Andrews/Lake Hills side of wicks. Schools are to far for kids to walk, yet not far enough for school buses.
45.7910651	-108.4956848	3079094	Need	more traffic calming measures and greenscape
45.8011866	-108.5270857	3079133	Need	Bike route to and from the Rims
45.8078798	-108.5495292	3079128	Need	We need to figure out why it is so expensive to fly out of Billings, yet Cody, Wyoming is much cheaper.
45.7986711	-108.5203897	3079139	Need	Very difficult to turn left on 27th to go to the heights. Back-up is bad at prime times (8am, noon, 5pm)

45.7710125	-108.6209404	3079140	Need	-----
45.7413564	-108.5351068	3079076	Need	Turn lanes
45.7166475	-108.5013051	3079076	Need	Streetlights in Briarwood neighborhood to increase safety!
45.8038139	-108.5378583	3079178	Need	More affordable flights to compete with Bozeman
45.7831283	-108.5070548	3079278	Need	Public transit downtown to other parts of town. Current bus transit is a joke.
45.783702	-108.5605036	3079588	Need	Turn lanes
45.7858902	-108.5073492	3079588	Need	Downtown area needs better pedestrian management
45.768237	-108.5300733	3079631	Need	Difficult for pedestrian traffic to pass through this intersection and/or the underpass
45.7693909	-108.5305212	3079631	Need	Traffic commonly backs up here during peak traffic hours (usually packed with vehicles traveling north to south)
45.8126513	-108.4139869	3079649	Need	The functionality of this area(Johnson Lane-Old Hardin Rod intersection and the ramps on and off of I-90) needs a lot of work. The light before the interstate backs up into the Old Hardin Rd -Johnson Lane interchange and often has traffic backed up well beyond Saddle Lane. Hundreds of cars are stopped for a minute at a time everytime a single car wants to turn north off of the east bound I-90 exit ramp. The light at the east bound exit ramp has really exacerbated an already problematic and congested intersection. I know there is work planned here in conjunction with the bypass, but in mean time something needs to be done with light timing and adding a longer RH turn lane from Old Hardin east of Johnson Lane for those turning north onto Johnson Lane.
45.7840585	-108.5279318	3079649	Need	-----
45.7985551	-108.4588225	3079649	Need	-----
45.7964532	-108.4699536	3079649	Need	This bridge is especially problematic in the winter given both a transverse and longitudinal slope. MUCH more attention needs to be paid to keeping this bridge de-iced and sanded. It is very hazardous and prone to accidents.
45.811948	-108.598796	3079656	Need	Bypass for the height. Connect into new Zimmerman Trail Roundabout.
45.9264554	-108.8557731	3079693	Need	-----
45.7974684	-108.6584055	3079693	Need	lower speed limit west of 54th street. The current limit hasn't been lowered to reflect all the new construction going on. There is no shoulder on the road and bikers and runners are at great risk.
45.7798126	-108.5109817	3079725	Need	Bike friendly roadways
45.7962716	-108.556472	3079725	Need	More bus routes from MSUB and Rocky to downtown Billings
45.8184088	-108.5756218	3079878	Need	Finish Inner Belt Loop from Skyway Drive to Zimmerman Trail. Connect the Heights to the West End.
45.7843019	-108.6290085	3079878	Need	Grand West of Shilo needs improvements given all the schools on this stretch. Bike and walking paths. Left and Right Turn lanes into schools.
45.7935188	-108.600856	3079878	Need	Expand Zimmerman Trail to better handle volume.

45.834756	-108.4535959	3079878	Need	Bike and Walking bath needed along Barrett Rd for Student safety.
45.8238437	-108.6467962	3079941	Need	There is a need to define a preferred alignment fro a connection from Hwy 3 to Molt Road. There was a great one, but the developer of Ironwood killed it. This needs to be a community project to provide an alternate route to N 27th and Zimmerman.
45.7809201	-108.53581	3079941	Need	The intersection of Lewis & 8th St W needs some help. The current two-way stop is not ideal, plus the site distances are limited to the north. And the odd angle makes for a potentially dangerous situation. A roundabout might work (or not with the grade) but something to slow down traffic and improve sight distance.
45.7831426	-108.5008125	3079941	Need	Slow down traffic on Montana east of 27th Street. If you are a pedestrian and try to use the crosswalks... good luck. Most vehicles do not stop for you. Do a road diet and reduce to two thru lanes.
45.7949446	-108.5279228	3080132	Need	Improve this intersection...possibly a roundabout.
45.8025182	-108.5952709	3080132	Need	Separate Bike/Ped Facility alongside Zimmerman Trail.
45.7729283	-108.5969936	3080151	Need	Improve 32nd Street Corridor to 5-lanes
45.8068028	-108.6001693	3080151	Need	Complete "inner belt loop" from Wicks to Zimmerman.
45.8034917	-108.4344878	3080159	Need	-----
45.795407	-108.4916736	3080161	Need	Billings' own Daytona Speedway. You can see Dale Earnhardt Jr. driving most days of the week.
45.7936715	-108.4856225	3080161	Need	Area in general needs more pedestrian facilities.
45.7833717	-108.5072391	3080201	Need	Two way streets in downtown that explicitly accommodate bikes. Downtown has the highest concentration of jobs and services and needs to be accessible to all.
45.8004639	-108.5286362	3080201	Need	For both commuting and tourism, a trail along 27th for bikes and peds is really needed.
45.7936777	-108.5243281	3080201	Need	Bike lane connecting Poly to N 30th.
45.7859853	-108.5266599	3080201	Need	Pave trail here as a part of bike boulevard system.
45.7685531	-108.5289945	3080201	Need	Underpass and intersections need to safely accommodate bicyclists.
45.7894392	-108.4984568	3080574	Need	-----
45.804922	-108.5970555	3080574	Need	-----
45.744455	-108.5564187	3080682	Need	Side walks and/or bike lane
45.8193659	-108.3916008	3080764	Need	bus and safe bike and walk ways
45.7698598	-108.5805354	3080907	Need	Central is an absolutely disaster, as are many of our roads right now. The amount of pot holes is completely unacceptable.
45.793999	-108.4813661	3081031	Need	traffic backs up to Yellowstone bridge at certain times events and 5pm
45.8000916	-108.4794283	3081031	Need	speed limit should be 25mph crest of the street makes it hard to see on coming from left at stop sign and right comes down hill fast

45.7840573	-108.5779542	3081049	Need	This route is very difficult - Several stop light intersections with no designated turn lanes. Did not get plowed during heavy snow fall.
45.8057631	-108.4757404	3081154	Need	Safer intersection
45.7841823	-108.600444	3081154	Need	Roundabouts throughout 32nd St at Grand, Central, Broadwater, King, etc.
45.7826504	-108.5044993	3081154	Need	This intersection desperately needs a left turn arrow for westbound traffic heading north on 27th st.
45.7498279	-108.5564489	3082342	Need	Convert to a red or green left turn arrow from the existing turn arrow and green light. Many accidents occur here.
45.7499476	-108.5761041	3082342	Need	Evaluate this intersection for a controlled intersection.
45.7451448	-108.5457079	3082342	Need	Extend Songbird to Midland Road
45.8043514	-108.433799	3082342	Need	Build sidewalk along Old Hardin Road
45.8006416	-108.4344427	3082342	Need	Improve Piccolo Ln
45.7623906	-108.5076439	3082451	Need	-----
45.7833549	-108.5059278	3082446	Need	Need to get rid of the angle parking west of Park Two parking garage -- it's super hard to see cars coming down 2nd Avenue when trying to pull out of the garage. Put the angle parking across the street and put the curblin parking on the north side of the street to make it easier to see down the street when pulling out of the
45.8442444	-108.5357963	3082451	Need	-----
45.770165	-108.5216454	3082451	Need	-----
45.7635051	-108.4784337	3082443	Need	Continue Bike Path
45.7554443	-108.5970794	3082456	Need	Better flow on 32nd from Zimmerman to Gable.
45.8346942	-108.4618217	3082443	Need	Improvements needed to improve safety of people walking in the area. Side walks should be continued the full length of Barrett RD.
45.7771152	-108.6062833	3082452	Need	we need 2 line street.
45.8351554	-108.4595787	3082460	Need	more bus routes/more frequent trips to the Heights
45.8011186	-108.5974675	3082461	Need	Pedestrian/Bicycle access from Highway 3 to Rimrock Road is needed along Zimmerman Trail.
45.8309992	-108.5294019	3082462	Need	Trail
45.7698165	-108.6025963	3082452	Need	2 line street.
45.8451917	-108.4275412	3082443	Need	Do not ruin this park by running a road through it!
45.7841616	-108.6325207	3082456	Need	Work with County to Build Grand and Central to at least 56th. Condemn property if necessary.

45.7856911	-108.5041043	3082460	Need	need last bus to leave later to the Heights in the evenings from downtown, or additional runs from downtown around quitting time
45.8023801	-108.5465991	3082462	Need	Trail off the Rims to town
45.8042899	-108.5661804	3082463	Need	Bike Trail from Airport to Zimmerman
45.8026145	-108.4788906	3082472	Need	heights to downtown rail, would cut down on metra area congestion
45.7946911	-108.4850619	3082472	Need	Major road reconstruction
45.8231164	-108.4400718	3082472	Need	This subdivision is a bane on the community, there needs to be something done about this mistake. It has tarnished the schools and the general well being of a previously wonderful area.
46.0218199	-108.5035061	3082474	Need	-----
45.7896886	-108.4862935	3082487	Need	need a better way to handle the problems with trains and traffic around this intersection. Major problems with traffic back up during peak hours.
45.7810696	-108.5303032	3082504	Need	24th - Trees along road to cool environment and calm people down. More right turn lanes to speed traffic through intersections. Cameras at intersections to stop people from running red lights. Education to get people to drive better. Driving 50 on 24th is not ok. Driving 10 on 24th is not ok. Failing to use turn signals is not ok. Getting engrossed in your phone and failing to notice that the light has changed is not ok. Some of us have places we have to go and we are unfortunately stuck with getting from place to place by motor vehicle so we need to make it possible for that to happen.
45.7855182	-108.5083489	3082880	Need	-----
45.8036515	-108.5381077	3082880	Need	-----
45.7669711	-108.5968362	3082939	Need	Should of made it wider from the start. Needs to be widened.
45.7872946	-108.5013782	3082945	Need	light-controlled cross walks on these main thoroughfares through Billings. Montana Avenue, 4th Avenue North, 6th Avenue North are all nightmares for pedestrians and/or bicycle riders to navigate.
45.7740377	-108.576195	3082939	Need	Needs to be widened.
45.7846311	-108.6047827	3082945	Need	Maybe this has been completed already - I haven't been out this far on bike/foot lately, but there was not a connecting pedestrian walkway between Zimmerman & Shiloh on Grand. Stressful when you're trying to walk/run/bike with the drag racers
45.7767596	-108.5538208	3082967	Need	Traffic traveling north south are stopped at nearly every intersection. Sometimes for long periods of time and no traffic what so ever in site. Are there more ways to trip the lighting to change the light? Early/late hours especially. Perhaps making most of these streets change to flashing red light to stop and go instead of wasting gas.
45.7984857	-108.6528265	3083052	Need	Stoplight, roundabout
45.7985156	-108.6736833	3083052	Need	Stoplight, round a bout
45.7841522	-108.6344587	3083052	Need	Widen Grand from Shiloh to 56th
45.7769093	-108.6113488	3083052	Need	widen Broadwater from Shiloh to 30th. Increase speed limit to 45.
45.7698151	-108.6066925	3083052	Need	Widen Central from Shiloh to 32nd. Round a bout at City College.

45.7671314	-108.6514762	3083079	Need	-----
45.7752696	-108.5013071	3083041	Need	Improve the south side due to crime, poverty, etc.
45.7892098	-108.4994041	3083089	Need	Better turning lanes, turn signals
45.774844	-108.5230934	3083089	Need	Better traffic flow in Monad road area for morning and evening commute
45.8240315	-108.3864938	3083094	Need	The intersection of Becraft and Old Hardin Rd and Johnson Lane is congested with Morning traffic and Semi's. There is limited ways to get on to I-90 if you live East of Johnson Lane. Suggest an entrance ramp be built somewhere near Dickie Rd. This would allow another option to get out of Lockwood. With the new road to the Heights and the New High School being built Lockwood should expect to see growth. Looking at the new building going on that growth is going to happen East of Johnson Lane adding to the problem.
45.8117664	-108.4139252	3083094	Need	This intersection needs a round about that would join Becraft.
45.8130527	-108.412509	3083094	Need	Congested area. Vehicles go through local business to avoid this area.
45.797648	-108.4860145	3083156	Need	Need for a safe and environmentally and user friendly path of connectivity between the heights and downtown for bicyclists and pedestrians.
45.751969	-108.6140398	3083156	Need	Need for public transportation that allows for residents of the heights to see movies on the west end with show times after 1:00 pm or 3:00 pm.
45.7748178	-108.506842	3083156	Need	Need for residents that may not own a car to have public transportation available past 8:00 pm and on Sundays.
45.8251081	-108.4568321	3083178	Need	commercial, retail planning and development
45.8121718	-108.4140063	3083199	Need	Intersection and traffic is a nightmare. The lot behind Casey's Corner is for sale. Please purchase this and create a cut across road for those needing to travel between Becraft and Johnson Ln. This cut across would alleviate people cutting thru the parking lot.
45.7959855	-108.4560262	3083199	Need	This light needs to be better timed. There are days when only 3 or 4 cars coming out of Lockwood can get through the light while it remains green for a long time for cars coming off I90 when no one is actually there. Morning rush hour traffic gets backed up all the way to the intersection at Old Hardin/Hwy 87E when the roads are bad. Please put in better traffic light sensors.
45.7956943	-108.4138771	3083199	Need	Johnson Lane has GOT to be widened. It is scary driving that close to the edge when the roads are icy. Plus adding in future high school traffic, it needs to have a shoulder on both sides with a middle turn lane near Ford Road and better reconfiguration at Hwy 87E.
45.812397	-108.4078441	3083199	Need	Had a broken pipe sink hole here a couple years ago. There are spots where the road feels like it is dipping again. Please re-level low areas.
45.8281984	-108.4191223	3083213	Need	Connecting Lockwood and the Heights would allow decreased traffic jams in and out of the heights.
45.7455622	-108.576008	3083056	Need	Overpass over I-90 on 24th street south of Jake's would alleviate a lot of traffic on both the King Ave exit and the Zoo Drive exit.
45.7706329	-108.5967147	3083056	Need	Better north and south flow of traffic on 32nd street west from Gable Rd all the way to Zimmerman. It should be 2 lanes each direction like 24th and better timing of lights. Morning and evening commuter traffic on this road gets congested. I suggest widening the road to accommodate more traffic.
45.8289155	-108.573197	3083056	Need	Connector road from Rehberg Ranch or Zimmerman to Skyway Drive in the heights. Getting to Skyline High from Billings West End is difficult.
45.7847807	-108.5052621	3083259	Need	Convert one-ways downtown back to two-ways

45.7988202	-108.5904447	3083275	Need	Traffic Light
45.7988884	-108.6018671	3083275	Need	Need a traffic light turn arrow for a left hand turn onto Rimrock from Zimmerman .
45.7871449	-108.4907138	3083259	Need	We need a real bike ped connection between downtown and the river. The bike lane on South 26th is a joke.
45.7820273	-108.697158	3083361	Need	Planning to address the extensive growth and additional traffic on westend roads which are generally build to County standards.
45.7960023	-108.602213	3083373	Need	Better intersection/round about
45.7815185	-108.6009255	3083373	Need	Better intersection/round about
45.7738562	-108.5984364	3083373	Need	Better intersection/round about
45.766552	-108.5969773	3083373	Need	Better intersection/round about
45.7829707	-108.5030159	3083474	Need	Move railroad tracks downtown or dig them down so 27th can have a bridge over them.
45.7681243	-108.5596676	3083474	Need	-----
45.7491094	-108.5505567	3083522	Need	This entry is important and we need to invest in it.
45.8448423	-108.4255039	3083539	Need	Eastern access into/out of Billings Heights
45.8193659	-108.4708225	3083539	Need	Access over main street for pedestrian crossings Safety concerns
45.8002167	-108.5962017	3083567	Need	-----
45.7975638	-108.6728674	3083567	Need	improve intersection of Rimrock and 62nd
45.7773333	-108.5682587	3083587	Need	More frequent buses and longer run times
45.8355625	-108.4432892	3083587	Need	More buses in the heights
45.7431758	-108.6723821	3083587	Need	Need to include Laurel
45.7933452	-108.6253637	3083689	Need	an interconnected network of streets should be required for all new developments on the edges of town (west end, heights, south of river etc,
45.7797826	-108.5153042	3083710	Need	make crossing Division St. safe for pedestrians and bicycles.
45.7994336	-108.4817809	3083710	Need	Need to create a safe route for pedestrians and bicycles from the Heights to downtown.
45.8008248	-108.5298588	3083710	Need	Need to create a safe route for pedestrians and bicycles up N. 27th St. to the Rims.
45.923112	-108.8001548	3083768	Need	-----

45.7554432	-108.5066206	3083768	Need	Roads need repair. Awful pothole almost swallowed my car.
45.7557426	-108.5435064	3083768	Need	Better parking situation
45.8012084	-108.4799976	3084183	Need	more than 1 main roadway into the Heights. Rush hour can be chaotic and time consuming due to a bottle neck at Main St and Airport Rd
45.7772834	-108.5153277	3084183	Need	better markings for roadway
45.7977029	-108.4814605	3084421	Need	Safe bike rransitio. To 3rd ave
45.8043288	-108.482098	3084421	Need	Connect heratige trial to rims trail
45.7670737	-108.5474908	3084479	Need	very confusing, dilapidated and wasteful road.
45.7414869	-108.5351204	3084479	Need	You need a southbound left turn lane here very badly.
45.717806	-108.5147356	3084479	Need	This entire road from Midland to Briarwood would greatly benefit by being two lanes north and south.
45.7404708	-108.5493576	3084771	Need	Need a way for safe, non-motorized travel to the other side of the interstate.
45.8119959	-108.5619575	3084964	Need	-----
45.8103451	-108.4106377	3085384	Need	Sidewalks, bike accessibility, street lights
45.8010588	-108.5987102	3085457	Need	Need a wider road on Zimmerman Trail.- 4-lane preferred.
45.7956133	-108.481326	3085457	Need	Widen Exposition Drive to accommodate one more lane of traffic on each side.
45.7628767	-108.5770549	3085697	Need	Congested
45.753435	-108.596709	3085697	Need	Congested
45.9274107	-108.73973	3085839	Need	-----
45.7830103	-108.5304166	3085839	Need	Increased bus transportation connecting different business centers around town.
45.7871125	-108.5087709	3086153	Need	It is not strictly a transportation need, but this intersection is a mess. It is dangerous for pedestrians and was one of the most dangerous intersections in town last year. The combination of the Albertsons on the north east corner, the gas station on the southeast corner, both selling alcohol and the homeless services slightly farther south on 27th lead to a large number of homeless individuals to be in the area and often intoxicated. The intersection is not super safe to cross anyway. It seems to me that what we have at present is a space that is unsafe for pedestrians crossing the street, offering easy access to alcohol to in a way that isn't making anyone's life better. I'd love to see this intersection redeveloped to be a less gritty, hopeless feeling place.
45.7840002	-108.505917	3086153	Need	It would be nice to have a median on 27th. Pedestrians cross mid-block in this area and a median would help avoid car-pedestrian collisions. I know they should be crossing at the corners, but I would prefer to have them safely make it across, even if crossing mid-block, and a median would facilitate that.
45.7710125	-108.5680687	3086177	Need	Short half hourly bus from West Park Promonade to down town and also one from there to Shilo.

45.7813585	-108.5030687	3086660	Need	Something needs to be done about the trains and traffic/traffic lights!
45.770134	-108.5536015	3086660	Need	needs a turn signal badly
45.7552634	-108.6175337	3086660	Need	better signage and clearer directions at ALL roundabouts!
45.8308496	-108.4595787	3086779	Need	-----
45.8392217	-108.4649002	3087520	Need	The heights needs another way in and out of the area. Build the Mary Street bridge! over 30,000 people live in the area and the heights is a go-thru for many neighboring communities (Roundup, Shepherd, Huntley, etc.) which lends to the congestion.
45.8271603	-108.459821	3087520	Need	Better curbs, gutters and sidewalks are needed throughout heights residential areas. Many of the streets are still gravel and difficult to drive because of constant potholes. Many of these lye in the County, but a lot of them don't. It would be a plus to have the unpaved streets brought to an acceptable standard.
45.7734073	-108.5553623	3087580	Need	Need north south bike trails midtown
45.7808525	-108.5172096	3087618	Need	Lewis is a terrible bikeway- it has too much traffic going too fast. Why not Yellowstone instead?
45.7812106	-108.5124406	3087618	Need	Downtown should have bike lanes! Please!
45.7820928	-108.515315	3087648	Need	-----
45.777319	-108.5152721	3087648	Need	-----
45.7870194	-108.5086906	3087648	Need	-----
45.7886346	-108.4920878	3087648	Need	-----
45.7467602	-108.5563098	3087729	Need	Bike/Pedestrian facilities along this busy collector. With the housing development along Elysian Road, high volume of vehicle trips. The roadway promotes high speeds with nowhere for pedestrians or bicyclists to be. MET Transit is expanding the bus route to Riverfront Point and Josephine Crossing, additional bike/ped facilities needed to enhance the usability of that new bus route.
45.7552946	-108.5244452	3087729	Need	Minor arterial that has a shared use path on the south side of King Ave E from S Billings to Orchard. Need to finish the SUP along King Ave E to Yellowstone County Detention Facility.
45.767049	-108.5203296	3087729	Need	Hallowell needs reconstructed to accommodate a complete street design. Hallowell meets up with 2nd Avenue South (across State) which is striped with a bike lane. This would continue a bike route from the Southside to downtown.
45.7806531	-108.5760889	3087812	Need	Intersection is poorly designed and functions even worst - needs to be restructured
45.7766956	-108.597284	3087812	Need	Zimmerman from Broadwater to Rimrock needs to be widen
45.8447227	-108.501464	3088333	Need	-----
45.7996188	-108.4799036	3088389	Need	Options to reduce congestion around the metra would be nice
45.7830249	-108.5061636	3088389	Need	Public transportation to get to and from downtown
45.8327634	-108.4183799	3088930	Need	Barrett road will kill children

45.7724493	-108.5268699	3089165	Need	Safe pedestrian crosswalks
45.7944763	-108.5697852	3089165	Need	Pavement improvements
45.7844216	-108.6810218	3089165	Need	Safe intersections
45.7496892	-108.5967582	3089848	Need	This roadway is falling apart, it has very limited pedestrian facilities and the hill is dangerous.
45.7920825	-108.5982811	3089864	Need	Zimmerman Trail cannot be expected to accommodate the impending vehicle traffic that will result from the Inner Belt Loop. It is crazy to promote a situation where high traffic volumes are dumped onto a very limited capacity roadway.
45.7550555	-108.5666617	3089848	Need	This intersection timing doesn't work at rush hour. If you are travelling north from Overland to 20th, it only allows about 3 cars through. If there is someone turning left from King onto 20th on a red, it's even less. If someone turns into the Holiday, it's the same problem. The result is that traffic gets backed up all the way to EBMS some days.
45.7625168	-108.5762619	3089848	Need	Turn arrows are needed for Monad! If you are turning from Monad onto 24th it can be very difficult to see and the traffic means you end up running a yellow or red. Scary!
45.7920825	-108.6700355	3089864	Need	Eliminate the triangle intersection past the YCC and Molt Road before someone gets killed!
45.8141017	-108.4060203	3089879	Need	Bus pick up and drop off sites
45.920246	-108.7946617	3089871	Need	-----
45.7838924	-108.505654	3089871	Need	resurface and make safer for pedestrians
45.7987297	-108.6734997	3089883	Need	-----
45.7909888	-108.4873	3089883	Need	-----
45.7942729	-108.4813628	3089883	Need	-----
45.7995269	-108.6733829	3089899	Need	Round-about and soon! This is a very dangerous curve!
45.7543743	-108.6378833	3090050	Need	King ave needs to be widened
45.7926057	-108.4812007	3090089	Need	needs to be redesigned, traffic backs up often and most vehicles are just sitting not moving.
45.750107	-108.5969107	3090182	Need	Improve 32nd - widen, plus bike/ped facilities from King to Gabel
45.8345763	-108.4660628	3090228	Need	Congestion and traffic flow in this area need improvement.
45.8056261	-108.4757959	3090228	Need	Pedestrian traffic in this area is dangerous
45.7827068	-108.5018917	3090228	Need	Flashing lights to indicate pedestrians are ready to cross would be helpful. Even going 25 mph it is hard to see pedestrians until you are at the crosswalk.
45.7609535	-108.5708153	3090790	Need	Traffic control on Santa Fe Blvd
45.788731	-108.5007774	3090790	Need	Sensible parking opportunities.

45.8021358	-108.4757149	3090790	Need	Enable traffic movement between the Heights and downtown
45.7724493	-108.4990608	3091246	Need	-----
45.7849004	-108.6401664	3091246	Need	-----
45.7652647	-108.579055	3091246	Need	-----
45.8190803	-108.4786999	3092104	Need	Connect to west end and Lockwood
45.8279789	-108.4709083	3092308	Need	Inadequate safe intersections for youth living west of Main assigned to MC Middle School to cross Main and other major roads safely.
45.8347368	-108.4660374	3092308	Need	Stop Light needed during school drop off and pick up hours
45.8272313	-108.4772275	3092308	Need	additional bus routes for high school and middle school to accommodate center students and athletes.
45.8245857	-108.5873695	3092586	Need	Direct connection to the heights
45.783788	-108.6591289	3092999	Need	Bus Service to Ben Steele Middle School
45.7920825	-108.4885894	3078676	Opportunity	Connect and encourage infill with protecting pedestrian walkways down town, add trolley or rail system that makes stops by Metra, Downtown, along Grand, and near West End. A rail with known stops at popular places that already have stores. Connect Billings. Covered rail stations, bike lock buildings with showers inside
45.8449588	-108.4470894	3078787	Opportunity	How the new bridge connects through the northern edge of the Heights is an opportunity to create an economic and cultural center for the Heights.
45.74381	-108.486587	3078787	Opportunity	Biking and x-cross country trails in this region can provide a major new source of outdoor recreation.
45.784477	-108.5194364	3078787	Opportunity	Grand/ 6th Ave if developed with density multi-modal transportation in mind can become a major economic and residential center for Billings downtown and midtown.
45.7883674	-108.5153595	3078787	Opportunity	A bus or trolley connecting downtown, south side, up to the north elevation, including the medical corridor and the university can be the center of a multi-modal lifestyle development.
45.7572364	-108.5528246	3078787	Opportunity	There is room for multi-modal transit on Laurel Road. This should be connected to King Ave W.
45.7152911	-108.5646929	3078787	Opportunity	Biking and x-cross country trails in this region can provide a major new source of outdoor recreation.
45.7950747	-108.6015641	3079085	Opportunity	true turn signal not just a flashing yellow turn light.
45.8111589	-108.4137759	3079119	Opportunity	alternative route for becraft
45.7848406	-108.5066711	3079094	Opportunity	traffic calming measures on 27th and more greenscape
45.8418527	-108.481208	3079128	Opportunity	Create additional ways out of Skyview High School through the lower neighborhoods. Connect a few of the back roads.
45.7568897	-108.4850286	3079133	Opportunity	Bike ways to and from the river to downtown
45.7984318	-108.5277282	3079139	Opportunity	Blind intersection. Mirror needs to be placed across the street for traffic going left.

45.7820419	-108.5067569	3079076 Opportunity	Turn one-ways into two-ways to slow down traffic, reduce navigability difficulty/confusion, increase safety, and incentivize stopping/shopping downtown.
45.782663	-108.5098693	3079178 Opportunity	Switching the one way roads to 2-way would slow traffic and help retail downtown.
45.7812264	-108.5067365	3079178 Opportunity	Adding bike lanes downtown would attract more people and downtown living/culture
45.9679926	-108.6518394	3079617 Opportunity	-----
45.7951346	-108.6942398	3079693 Opportunity	Widen this road to make a good, safe way to get to other parts of Billings, (like Shiloh)
45.8208015	-108.6996471	3079693 Opportunity	We need another connector to the heights from the west end. That would be a great help .
45.7829851	-108.5069906	3079725 Opportunity	Two way streets downtown
45.7970517	-108.4869798	3079941 Opportunity	add/create a two-way cycletrack on 6ht Ave North to provide safe connection from Heights to Downtown.
45.7914919	-108.5278492	3079941 Opportunity	Virginia seems like a perfect street to add a bike lane.
45.7947535	-108.5278492	3079941 Opportunity	A missed opportunity when the intersection of Virginia and Poly was re-done. A roundabout would have worked much better than the "change". No one uses the left turn lane south of Poly, they still try to turn in the intersection and jam up traffic.
45.7974018	-108.5516755	3080043 Opportunity	-----
45.795068	-108.5328685	3080132 Opportunity	Opportunity to utilize the BBWA Canal for Bike and Pedestrian use.
45.8038112	-108.5619747	3080151 Opportunity	Improve parking, walkability, and biking between Zimmerman Trail and Black Otter Trail paths.
45.80408	-108.4840236	3080151 Opportunity	Consider roundabout intersection control at Aronson and Alkali Creek
45.7952688	-108.4864483	3080151 Opportunity	Remove parking from 4th Avenue North and consider adding another lane from the lane drop at North 13th (?) towards Exposition.
45.7976924	-108.4814916	3080151 Opportunity	Pedestrian crossing between the west and east side of Exposition.
45.803372	-108.4350027	3080159 Opportunity	-----
45.7703708	-108.527328	3080161 Opportunity	Really unsafe intersection
45.7936715	-108.489914	3080161 Opportunity	Consistent Speeds with Indianapolis Speedway
45.7801394	-108.5152428	3080201 Opportunity	Division is like a moat that keeps bicyclists from entering or exiting downtown to the west. This intersection with a bike box and contra flow lane would be ideal for bridging Division.
45.791994	-108.4719648	3080201 Opportunity	Cross river on trail attached to Interstate bridge.
45.7933977	-108.4936899	3080201 Opportunity	Rails to trails at rail spur.
45.7738238	-108.4877989	3080201 Opportunity	Connect city to river with trail at underpass.

45.8419153	-108.4677558	3080574	Opportunity	I happen to know there are a lot of people who live in Roundup and drive to Billings for work. Perhaps MET Transit could create a Park and Ride location where K-Mart used to be. The spaces should be clearly marked as such, and perhaps signage should be placed along Main St. indicating there is a park and ride location there.
45.8025884	-108.5380469	3080574	Opportunity	Quite a few people fly in and out of Billings. If MET Transit provided bus service to/from the airport, it could have the potential to greatly improve ridership
45.7814757	-108.5032923	3081154	Opportunity	Pedestrian/bicycle bridges over railroad tracks
45.7938779	-108.5297023	3081250	Opportunity	more frequent buses downtown from west end
45.7443175	-108.5562772	3082342	Opportunity	Mullowney Lane needs to be brought to city standards
45.741023	-108.5479945	3082342	Opportunity	Implement a multi-use trail on this ditch.
45.8093288	-108.4138307	3082342	Opportunity	Improve Johnson Lane south to an urban standard
45.7918562	-108.4718093	3082342	Opportunity	Provide multi-modal connection across the river
45.7970028	-108.4812936	3082342	Opportunity	Implement the EBURD recommendations for this corridor
45.7826345	-108.5064999	3082447	Opportunity	Making the streets in downtown two-way could improve the pedestrian safety downtown and allow for the creation of additional successful urban streets like Broadway.
45.7571211	-108.5534774	3082456	Opportunity	Make Old Laurel Road look inviting to community.
45.7914242	-108.4795692	3082456	Opportunity	Build a connector from Highway 3 to I-90
45.8131888	-108.4975795	3082462	Opportunity	Trail under power line
45.7853643	-108.5024904	3082463	Opportunity	Run the buses system on natural gas rather than diesel. Or use electric buses for cleaner air in the area and smaller carbon footprint.
45.792262	-108.5522776	3082461	Opportunity	Pedestrian/Bicycle facility along BBWA Canal is a significant opportunity for people to travel through the community safely and enjoy the water feature and "greenway" feel of this iconic canal corridor.
45.764993	-108.4765998	3082463	Opportunity	Add a bike/ped bridge to cross the yellowstone river over to the Pictograph caves
45.7909142	-108.4915739	3082472	Opportunity	bring downtown to this area, would make it much safer and would remove the scary zone between downtown and the heights
45.7818754	-108.511273	3082463	Opportunity	Evaluate alternatives to bring in more electric charging stations for cars. Perhaps brainstorm ideas to bring in businesses with electric charging stations. This appears to be the way of the future.
45.7686775	-108.5084384	3082461	Opportunity	The massive ROW on State Ave. could easily accommodate bike lanes on this corridor and improve safe travel options for cyclists in this part of town.
45.7945362	-108.4756511	3082461	Opportunity	This entryway into Billings is non-welcoming, dirty, and poorly kept. Ironically, a good portion of the adjacent property is owned by the County and MDT. DO these entities have no civic pride or desire to be good stewards of their property on this high-traffic corridor into our community? We can do better.
45.8399393	-108.4382927	3082487	Opportunity	continue to develop more to the east and less to the west where farmland is being removed for useless apartment buidlings
45.7738861	-108.5347664	3082504	Opportunity	Some street lights take soooooo long and at some times of the day, there is no traffic. Installing lights that are sensitive to the presence or absence of vehicles and regulating traffic flow accordingly, at least at some parts of the day, would make travel across Billings quicker and considerably less frustrating.

45.8040105	-108.5448883	3082880 Opportunity	-----
45.793429	-108.542813	3082945 Opportunity	Close the 11th Street Bridge to pedestrian only traffic. This will reduce/eliminate speeding vehicles through this area around Highland Elementary as children are walking to/from school
45.7382085	-108.5565673	3082967 Opportunity	Development in this area of town brings the need for safe pedestrian travel. Schools in the area and absolutely nowhere to walk except the road. Builders and property owners should be required to develop side walks from the intersection at I-90 to the most populated area and continue to the schools.
45.7132578	-108.6853079	3083041 Opportunity	Build up everything between Billings and laurel to add to our community so that its similar and competes with Bozeman and belgrade
45.8247471	-108.3867598	3083094 Opportunity	-----
45.8241511	-108.4564888	3083178 Opportunity	-----
45.8261054	-108.4077832	3083213 Opportunity	-----
45.7957031	-108.5194885	3083259 Opportunity	BBWA canal ROW is a great opportunity to create a connected bike ped trail from the far west end all the way into downtown.
45.7876836	-108.5038458	3083259 Opportunity	The old 5th street ROW is an opportunity to create bike ped connection eastward into EBURD and MetraPark
45.7882378	-108.4767517	3083474 Opportunity	Don't force the liability of corvette power plant location to follow the new investor.
45.7726744	-108.598978	3083474 Opportunity	Sell off some city park land that the city is not developing or maintaining. Use the proceeds to go toward new infrastructure.
45.7391116	-108.5676346	3083522 Opportunity	Improve this area. Lots of new development and folks living in this part of town
45.7806165	-108.5041186	3083522 Opportunity	Continue efforts to make Billings' downtown a special place for our community.
45.8047685	-108.5955345	3083539 Opportunity	Improve Zimmerman Trail Access
45.789515	-108.5011238	3083689 Opportunity	paint parking areas along both 4th and 6th to make these streets feel narrower, slow traffic and become more pedestrian friendly
45.8285471	-108.5376114	3084183 Opportunity	Need a new roadway connecting the Heights to the rest of town. This has been talked about, but lets do it!
45.7649182	-108.5357212	3084479 Opportunity	Connecting 8th W and SBB would greatly increase traffic flow.
45.7143002	-108.5119998	3084479 Opportunity	Another entrance into Briarwood would ease traffic volume here.
45.7167573	-108.5044574	3084479 Opportunity	A sidewalk on Prestwick and Brairwood as whole would make it safer for pedestrians.
45.7944763	-108.4827959	3085457 Opportunity	Make 2nd Ave N a 1-way going east so there is another way to get to Main Street at 5 pm.
45.7854045	-108.5047533	3085839 Opportunity	Partner with the hospitals so that their employees can take public transportation. Everyday there are way too many single person cars going to the hospital area
45.7810098	-108.5296809	3086153 Opportunity	If Lewis is going to continue to be the bikeway into downtown it needs a dedicated lane east of 8th St so that bikes and cars don't have to share space. I would recommend eliminating on street parking between 8th St and Division. The majority of houses have garages and there is significant on street parking on the numbered streets. Eliminating on street parking to facilitate a bike lane here would enable safer bike traffic. It's worth noting that even though this is officially a bike space I consistently see riders making use of the sidewalks which suggests that we haven't yet provided sufficient safety to make riders feel safe in the streets.

45.7840028	-108.5111383	3086153 Opportunity	It would be nice to have a bike lane that crosses downtown from north to south. It seems that 27th is probably too high traffic for such a lane. Both Broadway and 29th have the advantage of crossing the railroad tracks and this would allow them to help connect the Southside to downtown, but they both have significant on street parking that would be lost if such a lane were created. So maybe make a lane and a pedestrian bridge on 30th? We could make 30th a 2 way with bike lanes on either side, perhaps?
45.7818154	-108.5117964	3086153 Opportunity	I'm not entirely sure where the placement should be but it would be great to have bike lanes moving north to south in downtown.
45.7590373	-108.5062706	3086177 Opportunity	It would be useful to have more bike lanes in the downtown area generally. My understanding of relevant research is that re-purposing parking for bike lanes does not hurt local businesses, and making it easier for riders to access to the downtown area would likely improve the value of homes in the Central and Southside neighborhoods since those are the areas closest to downtown. If we want to pursue in-fill development and support the downtown over the long term I think that additional bike infrastructure would be a wise investment.
45.7432262	-108.7493431	3086177 Opportunity	The South Side has a fairly dense population. Can hours be extended for bus service?
45.7781963	-108.5285865	3086177 Opportunity	Billings - Laurel shuttle. Any hope of getting a workers schedule there?
45.8083584	-108.4630119	3087520 Opportunity	Billings has or will have 50% of its population over 60. Lets get the public transit needs survey to those folks. The hospitals finally stopped their shuttle lets work around that and hit them for sponsored.
45.802136	-108.6022258	3087580 Opportunity	A pedestrian/bike trail exists from the Heights to South 27th, but it would be great to have a better, more direct, SAFE trail to downtown Billings -- perhaps along 6th Ave. N. The problem is the traffic from the heights onto 6th is often traveling at a speed greater than the posted speed limit and is very dangerous for bicyclists and pedestrians alike. Some kind of safety barrier is needed between a trail and 6th Ave. N. to at least North Park area or 27th Street.
45.7839429	-108.5079838	3087580 Opportunity	Bike trail up Zimmerman
45.7773718	-108.6522641	3088333 Opportunity	Better publicized bus schedules
45.826065	-108.4722816	3088930 Opportunity	Slow down make safer
45.7806821	-108.5753274	3089848 Opportunity	Main street is ugly and impedes commerce
45.7599955	-108.6418831	3089864 Opportunity	I think it would be incredible if Lewis could be a designated bicycle route, where bicycles commuters were encouraged to travel here. That way we wouldn't see bikes on streets like Grand and Broadwater. I lived in Portland, OR and they had a street just one block south of a major road for this purpose. It let bikes commute without car interference and let cars commute without bike interference. Of course if you lived on that street, you could drive on it, but it was marked in a way to encourage you to drive one block north or south.
45.7855289	-108.5085692	3089899 Opportunity	Before westward expansion of residential and commercial development occurs, a plan for street improvements and amenities (landscaping and pathways) can be prepared.
45.770773	-108.6187946	3089981 Opportunity	Opportunity to make the downtown area more inviting, a hub of pedestrian activity
45.798946	-108.5392619	3089981 Opportunity	There is an opportunity in the far west-end to develop more bus transit routes. However, it must be convenient and have longer hours
45.7897899	-108.5108949	3089981 Opportunity	Opportunity to direct more services for both MSUB and RMC students.
45.7838909	-108.6443636	3090050 Opportunity	Opportunity to provide more services to the hospital corridor.
			Slower speed limit

45.7938026	-108.4586701	3090089	Opportunity	I expect at some point in the future there may be a major accident on the off ramp here. Folks coming over the bridge cannot see the traffic that is sometimes backed all the way along the exit ramp and onto the interstate
45.7908328	-108.4981865	3090182	Opportunity	multi-modal corridor from downtown to MetraPark through EBURD
45.7509505	-108.6195008	3090998	Opportunity	-----
45.8466436	-108.4618155	3092104	Opportunity	Place a sams or larger store in this location. Capture the business from the North-east
45.8416135	-108.4680759	3092308	Opportunity	connect the bike path with the lake elmo area and the hiltop bike paths to create a functional loop
45.7066822	-108.4992416	3092999	Opportunity	Bus Service to Briarwood



MET Transit Interview

Debra Hagel and Kevin Ploehn

May 16, 2018, 9:30 – 10:30 AM

MET Transit, 1705 Monad Road

In-Person by Andy Daleiden and Bryan Graveline (Kittelson)

Action Items:

- MET will send ridership data to Kittelson at the end of the fiscal year.
- MET will send maps showing route changes to Kittelson once they've gone to print.
- Kittelson will coordinate with MET on wording for airport section of LRTP, especially regarding new terminal expansion.
- Kittelson will review meeting notes below as aid in development of 2018 LRTP update.

Meeting Notes:

- The conversation began with a discussion of MET's vision for the future. When Kevin first took over, they were struggling financially. Their first step was to get on stable financial footing. Their next challenge is fleet replacement which can be very expensive. Bus replacements can be over \$400K, so MET is looking at smaller buses and rehabilitation options as well. Another next step for MET is technology improvement. They're implementing an automatic vehicle locator system, which is important for customer service.
- An additional anticipated improvement is a route extending to the airport on half hour rotation that moves people between hospital and airport. Might also benefit employee group. Also expanding south side service, which could benefit a lower-income group. Josephine Crossing, on the south side, is a walkable area. Both improvements are slated to occur in July.
- The strategic long-term vision has been mostly on hold in preference of quick fixes, lately. For example, the MET building was leaking, so some capital dollars had to go there. As discussed previously, MET is now moving towards more strategic long-term goals.
- Additional goals include enhanced lighting and transfer centers with monitors the public can use to look at the whole system.
- MET is currently a flag-down system. Andy added that when Boise went to fixed-stop, there was a large cost, but it was mostly paid for through grants. Destination announcements are also an anticipated improvement.
- Another long-term goal is to keep up with the growth of the city. That can be tough to do with stagnant funding. Funding is likely the biggest barrier. In order for MET to meet its long-term objectives, additional funding of some kind will be required. It's tough to pass a mill levy. Other levies for public safety and high school have failed. Passing a mill levy requires a large marketing effort.
- Once the Inner Belt Loop improvement occurs, there will be a lot of development above the Rims that MET isn't able to serve.
- This is the first year with a slight uptick in ridership. That reflects that MET is trying to make changes that are helpful for riders. This is still difficult without an increase in funding.

- 17 out of 25 buses are past their useful life. MET is going through an asset management plan right now with a goal of having no more than 25% of the fleet be past its useful life. They're also looking at refurbishing buses.
- Deb had goals that they will fill MPO in on in July/August. Don't need to have their approval. Andy: we don't need to have the targets, we just need to know it's being worked on. Nice to have, though.
- Changes coming up: going to the airport, changes on the south side.
- Mill levy has started to float up as result of property tax being done on two-year cycle instead of seven-year cycle. Helps keep them out of the red. Capital still lacking. Changes to staff as well.
- Airport is much easier. They have PFC's. Airport is trying to do 50-million-dollar expansion. Snapshot: expansion of concourse area. Going to build new concourses. Airport is regional hub. Health, retirement, etc.
- Airport is striving to accommodate a doubled Billings population. Goal is to improve concessions for passengers but also to add three more gates. Build it so it's easy to add more gates past that. Runway is one of best in state. It's also tilted, so Boeing likes to do testing there. Bluff makes the landing a bit unorthodox. There's a pilot shortage nationwide that small airports especially feel.
- This year: goal is to replace three buses. Or just to rehab old buses. Renews life for 12 years.
- Good chance they'll go out for the Mill Levy before 2022. Especially if gas prices increase. "Probable."
- More technology you can put on a cell phone, more likely you're going to get the millennials to start riding. Focus is on transit-dependent group. Look at transit as a community service. That's how he would sell it. School ridership is a big factor.
- Tripper routes (school routes) do well all the time.
- Regarding data, MET has ridership by route and by category. Deb can redo and send to Andy at the end of fiscal year.
- Andy: our timing is a draft chapter in June. We'll do an updated version some time in September.
- Strengths as an organization. One strength is recognizability. Lots of people who know the MET. Another strength is reliability. Construction is a burden, especially for major routes. Had to do some adjustments. Have improved relationship with public works group. Incorporating changes into construction. Very safe. Never had any major issues. Parents say it's not safe to ride the bus, but they've never had any major problems. Reliable and safe. On-time performance. Safer to be on the bus. Data sources on on-time performance? New AVL system will give them that. Anecdotally, on-time 95% of the time. Cameras on buses to check performance. Helped in terms of liability claims. Occasionally tripper buses have fights on them.
- Comments that come out from public are good for MET to use. Phrase it that for MET to continue to grow, funding is an issue. As far as the rest of the plan, lots of transportation improvements focus outside of MET operations.
- Flag-down vs. fixed route. Five years out, may need to give more serious thought to fixed. Looking at going from pulse system to grid system. Getting better driver utilization. Breaks killed their system. Hampered ability to be efficient. Looking at improving efficiencies. Potential for more service for the community.
- Plan moving forward: wrap up initial draft. Meeting tomorrow, give an update on this to SC. June meeting will have some more discussion on transit.
- MET can help out on terminal expansion wording. Route changes with mapping – Kittelson will want to this information. Deb wants to go to print with new maps next couple weeks.



Stakeholder Interview Notes

Daniel Brooks

Billings Chamber of Commerce

May 14, 2018, 9:00 – 10:00 AM
DOWL's Large Conference Room

In-Person by Andy Daleiden, Bryan Graveline, Robyn Austin (Kittelson)

Action Items:

- Kittelson will review meeting notes below as aid in development of 2018 LRTP update.
 - See discussion of data from 2016 citizens' survey showing that citizens support a parks system in Billings.
 - See discussion of ongoing railroad and downtown studies in LRTP update.
 - See discussion of need for wayfinding and key location markers for tourism in LRTP update.

Meeting Notes:

- Daniel Brooks introduced himself as the business advocacy manager for the Billings Chamber of Commerce. His role includes lobbying elected officials, awareness campaigns, and engagement.
- Andy, Robyn, and Bryan introduced themselves and gave a brief background on the Long Range Transportation Plan (LRTP) and update process.
 - LRTPs are a federal requirement for Metropolitan Planning Organizations (MPOs). The LRTP is updated every four years. Kittelson and Associates, Inc. (KAI) worked on the 2014 update and is working on the 2018 update as well.
 - Partners in the LRTP process include City of Billings, Yellowstone County, Billings MPO
- Andy gave brief background of transportation plan:
 - Description of KAI, our role in plan, retained by City of Billings and Yellowstone County
 - LRTP is federal requirement if you're an MPO (50k or more people).
 - Partners include City/County planning, City of Billings Public Works/Engineering, MPO, MET, Yellowstone County Public Works, Lockwood, MDT Planning, MDT Billings District
 - Process starts with outreach to stakeholders, public open house.
 - What is out there today? What type of project should be in place next 20 years?
 - Plan covers freight, trucking, rail, pedestrian, bike, transit, auto, streets, intersections, trails, etc. LU as well.
- Dan stated that the Chamber's strategic goal is to create a business climate and community that's attractive to the next generation of workforce. This ranges from reducing ordinances that impede growth to creating a community of amenities that people desire. This includes a range of actions:
 - Reduce ordinances that stymie growth

- Create a community of amenities people look for: bikeable, walkability, downtown connectivity, public transportation. Make sure Billings is a community people are choosing, because they do choose.
- Road connectivity: inner belt loop and billings bypass are going. Chamber's big focus is River to Rims initiative. Connect through trail. Marathon loop has a few segments that need to be in place. Good trails in a lot of places, but a couple areas to fill in. Most beneficial is skyline trail.
- Billings bypass: bridge will have a pedestrian aspect.
- I-90/94 bridge over the water needs to have a pedestrian crossing. Chamber will push for this.
- Billings lacks density to make public transportation effective. Maybe needs to reevaluate who and where money goes to. Or refocus downtown density to make it more effective.
- River to Rims: Is there a formal group? Trails committee meets once a month to talk about trails. Connect neighborhoods, get kids to school safely, exercise. Area near Shiloh, also Dover Park, areas this group has helped with. Connectivity for residents to walk up to the Rims is a big benefit.
- BikeNET: big community partner, works on trails, bike lanes throughout city, Chamber supports bike lanes, bike lanes are currently very ad hoc.
- Andy: Is there a priority list within the chamber or among trails committee? It's more informal and conversation, limited to one project at a time, overall goal is marathon loop completion, then skyline trail.
- Robyn: What are the key hurdles? Other than funding, that is. Members of city council and county commission don't view trail connectivity/bike lanes as a necessity. Chamber views these things as a necessity for the next generation of work force. Millennials want downtown walkability and bikeable. Political will and support is a hurdle in addition to funding. Generational nature. Need an argument with graphics, Return on investment.
- Robyn: we're reaching out to middle schools. Dan: talked to MS and HS about workforce issues, Billings isn't getting enough workers. It has to figure out how to keep next generation here. Kids don't want to stay here. It's very concerning.
- Andy: Rims and Skyline Trail came out of Highway 3 Study, funding (\$4-5 million) for trail will not come from DOT, Billings hasn't even hit the \$1 million mark. Need big donors to encourage small donors.
- Andy: limited on-street bike facilities. Bike master plan was recently updated. Did chamber participate? Dan wasn't involved. He was unaware it was going on. Just skimmed it last couple months. Sees that we have a bike master plan. We use that as a lead-in for bike element. Bike master plan includes a lot of on the ground projects that can actually be implemented.
- 2016 Citizens Survey: voters overwhelmingly thought it was very important we had a great park system. Tie that data in as well.
- One Big Sky District: convention center, medical campus facility in health care corridor, has anyone reached out to us? Andy: meeting with City Engineering, City Planning this afternoon. Mike Tuss CTA. Andy will get in his ear about this comp planning effort. Andy: several

downtown projects. First avenue north, MDT 27th street RR crossing study to improve at-grade crossing, third one looks at whole downtown itself. Technical analysis of traffic conditions. One-way vs. two-way analysis, One Big Sky may be an alternative.

- Dan: by making it two-way, provide more opportunities for people to stop, increase connectivity. Two-way slows it down. Some of the facilities have 3 or 4 lanes, may only need two lanes.
- Regarding RR crossing study: social barrier, economic barrier, vehicles queued up waiting on railway during business day is time lost. Prohibits business growth on Minnesota, 1st avenue south. Statement in 2018 LRTP that RR plan is ongoing.
- What else do we foresee on where we have chokepoints and need upgrades? Rimrock may need widening. Andy hasn't gone through CIP yet, doing traffic analysis at 200+ intersections. Analysis will help identify if anything's missing. 27th street rail is essential.
- Andy: anything on tourism? Dan: element of signage. Wayfinding elements. Incorporate iconic spots downtown. Ensure design is uniform, adheres to western heritage. No group working on this as far as Dan knows of. More marketing than navigation. Consistent branding in signage. Robyn: Incorporate with each project.
- Regarding parking, Dan doesn't think Billings has done a study. He's never not had a place to park within 500 yards. Made out to be a huge issue, but it's not. Four good garages, plenty of metered spots. Dan sits on parking board, deny 10-minute spots in deference to 2-hour spots. Don't build a huge parking garage when 30 years from now most people might be in autonomous vehicles. Up in hospital area, need more parking or a structure.
 - Andy: in his role on parking board, is there a discussion of technology being used to manage parking? New meters within 6-8 months. 800 meters downtown, 100 replaced, credit card reader meters. Sensors that connect to gateway that will eventually coordinate with app that notifies about available spaces. Hopefully glitches with sensors and gateway get fixed, people start using app, incorporate technology.

Stakeholder Interview Notes

Brad Shoemaker

Yellowstone County Fire and Emergency Services Director

May 16, 2018, 4:00 – 5:00 PM
DOWL's Large Conference Room

In-Person by Andy Daleiden and Bryan Graveline (Kittelson)

Action Items:

- Brad will send Kittelson the draft emergency operations plan.
- Revise Security Considerations/Coordination section to show that Yellowstone County Disaster and Emergency Services are not responsible for serving as the County Fire Chief.
- Contact Bill Rash or Pepper Valdez if we wish to acquire the Billings Fire Station Study.
- Brad will send Kittelson additional GIS shapefile information on fire and emergency service zones and locations.
- Kittelson will review meeting notes below as aid in development of 2018 LRTP update.
 - See discussion of Security Considerations/Coordination section regarding County Fire Chief role.
 - See discussion of drainage ditches running throughout city

Meeting Notes:

- Brad Shoemaker is the director of emergency services (fire, EMS, floods, emergency management) for Yellowstone County. He'd like to see what issues we're looking at and give his perspective.
- Andy introduced KAI. Topics of interest for Brad include safety and security. Safety includes crash details, while the study area includes a couple of annexation areas. Also link to community safety plan. Security chapter – two pieces: emergency operations plan, and multijurisdictional pre-disaster mitigation plan.
- Brad: note Fipps Park. Technically a City park but not covered by Billings City Fire (is covered unofficially though).
- Brad: Emergency operations plan being rewritten. Probably can't glean much in draft form. TetraTech Helena is doing the plan. City/County is 85% of the way done writing emergency operations plan. Reformatting to fit any type of disaster, not just one. Doing by "annex." Brad will send Kittelson draft copies of this plan.
- Critical infrastructure is in goals and objectives. Highlight critical connections, should be part of new pre-disaster management plan.
- Brad: we'll be fine with most of this
 - Last bullet point under security considerations. Delete reference to fire cheap, leave reference to fire warden. Hazards won't really change. Earthquake and volcanic ash may just get taken out.
 - Working with MDT on bridge inventory
 - Brad: some bridges are outside analysis area.

-
- Bill Rash or Pepper Valdez will get us station study. Build out of fire service is 2 or 3 stations behind.
 - Areas like Fipps Park and Billings above the rim are serviced by volunteer fire department. Big limitations in day to day services in lots of these places.
 - Ask Brad for maps. GIS department will send them over. Shapefiles.
 - One station up in the Heights, next station going in Heights as well. Rest of them will go in West Billings.
 - Nothing at all south of the river. No fire, EMS, etc.
 - Lockwood has their own fire but needs assistance frequently. They have good emergency response, though.
 - Rail: lots of hazardous materials through the center of Billings.
 - No assessment for public works infrastructure. Surface transportation: poor drainage in hospital corridor/27th street. Underpass could flood with water.
 - Ditch broke near Alkali Creed Road last year. Large unmitigated threat throughout city. Large amounts of water with potential for impact.
 - In terms of surface transportation otherwise mostly good.
 - Roundabouts not a big deal. Keep traffic moving.
 - Connections are tough west of 65th street. Would take longer than going on Zimmerman with traffic. Opening a new road up for larger vehicle traffic would still be very helpful.
 - Billings Heights to West Billings connection is really important. Too much traffic going through 312 and downtown Billings.
 - Interstate is fine.
 - Zimmerman closes less than 5 times a year during the winter due to rock slides.
 - Sign denoting Zimmerman as closed is past the roundabout, leads to lots of illegal u-turns. Consider putting one up on the roundabout.



Stakeholder Interview Notes

Rimrock Task Force

May 17, 2018, 4:00 – 5:00 PM

DOWL's Large Conference Room

In-Person by Andy Daleiden and Bryan Graveline (Kittelson)

Action Items:

- Andy will email Cheryl and Lyle with a map to mark up.
- Cheryl and Lyle will mark up map and return it via email to Andy and Scott Walker.
- Rimrock Task Force members to fill out survey if they haven't already and encourage others to voice their opinion by doing the same.
- Kittelson will review meeting notes below as aid in development of 2018 LRTP update.

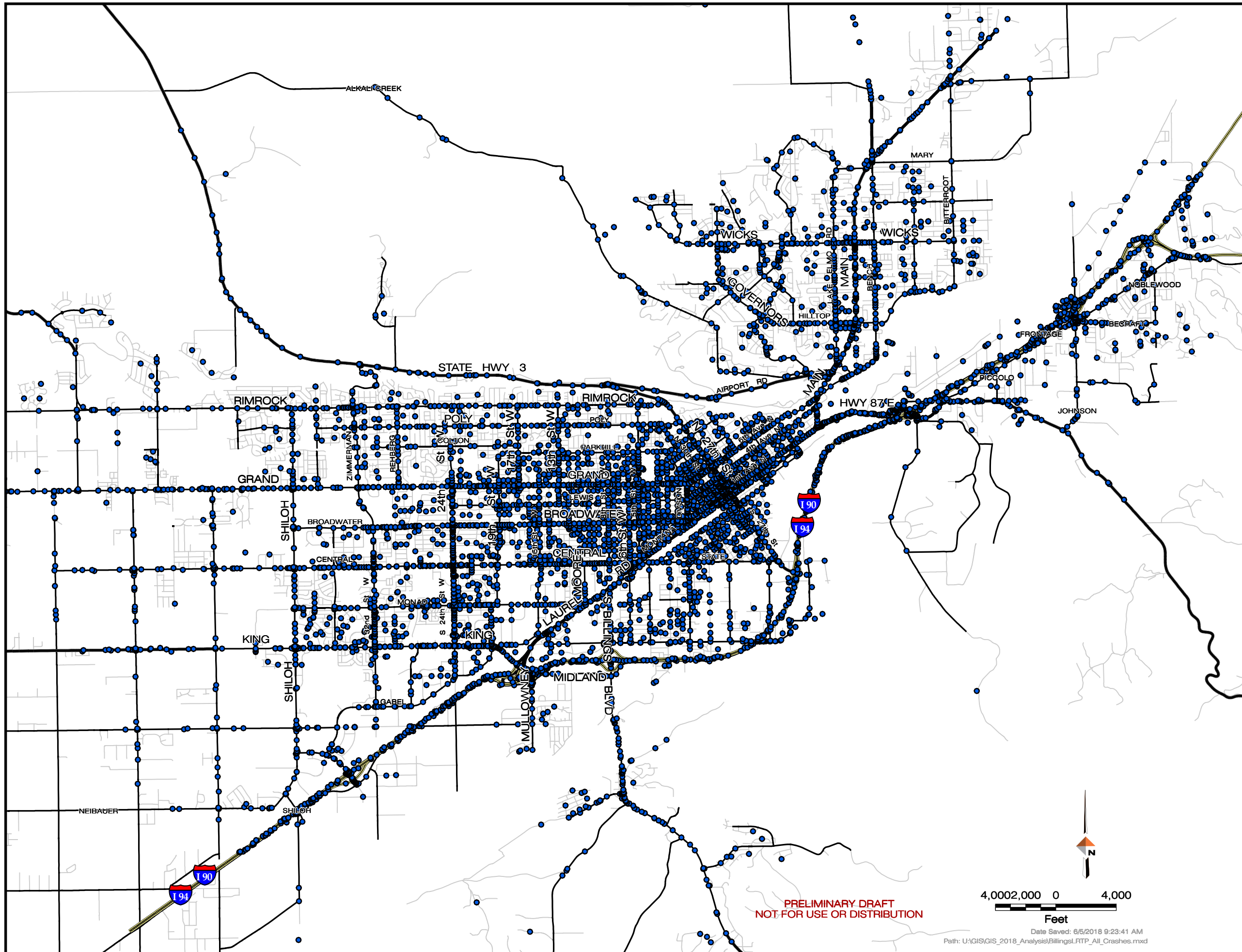
Attendees:

- Lyle: Lives on Zimmerman Trail. Head of Rimrock Task Force.
- Cheryl: Lives below Zimmerman Trail north of Rimrock. Believes there are opportunities for Billings to act proactively to make improvements to its transportation system.
- Alice: Secretary. Got involved for trash cleanup on rim, etc. Looks at aesthetics, zonings, etc. Lives on rims. Zimmerman Trail traffic is unbelievable. People drive way faster than 25 mph. Important to have a path off the rims other than Zimmerman Trail.
- Dennis: retired railroader, corporate finance. Lives near Rimrock/Shiloh, below the rim.

Meeting Notes:

- Cheryl has some concerns and ideas. Concerned that we wait to buy land for roadways until after it's really expensive. Also concerned about traffic flow.
- Lyle: Rimrock task force was formed 7 years ago to deal with transportation issues. Concerned with safety of travelers on Zimmerman Trail. Taskforce keeps a log of when trail closes. Want the inner belt loop to be connected to a route off the rims, further west off of Zimmerman Trail. Adding more traffic to the Trail is going to make it less safe.
- Look at Molt Road Highway 3 connector. It almost happened but a developer in Ironwood stopped it. Rimrock task force thinks connection should go there. The longer we wait, the longer developers have to build in the way of a future road.
- Lyle's vision: would like to see the road that comes off the rims connect to the interstate.
- The Taskforce wants the city to listen to people who live here. Zimmerman Trail has bad experiences for those who live here. Billings needs another connection, and people who live here feel that way.
- Lyle wants to know how to get that done. Andy replied that we're really constrained right now because of the Billings Bypass. Possibility of doing it once that's completed. Lyle wants to know if we can just buy the land to build the road. Andy responded that it depends. We need a study to define the purpose and move it into preservation. We have to answer the question of why we're building the road or new connection.

- Cheryl: there are two main reasons why we need this. Lots of semitrucks going down Zimmerman Trail. Trying to keep speed up further west. Huge concern is trucks having to come through town. Keep them away from Zimmerman Trail. Saves them money and time.
- Lyle: the problem is that 20 or 30 years ago, people were saying the same thing. Don't want someone sitting here 20 years from now saying the same thing.
- Billings Bypass isn't the key to creating a first-class city according to Lyle. Andy described purpose of bypass. It will alleviate congestion from vehicles coming from northwest on Highway 3 and northeast. It's one piece that helps congestion in the system and provides additional routes for emergencies, especially at the pinch point near Airport and Main.
- The answer to the question of who will lead the project for a new road will hinge on what the purpose of the new road is.
- The airport director said that the airport is fine for a population of 200,000. However, the topic of connectivity to the airport didn't come up.
- Taskforce believes that when we connect the Inner Belt Loop, we'll create another bottleneck on Zimmerman.
- Andy described the travel demand model as a way of gauging these effects. It will include updated figures showing traffic on Zimmerman Trail.
- Andy advised the Rimrock Task Force: encourage a study for purpose of connection to Molt Road.
- LRTP likely can't lay out where the potential roadway would go, but it can say there needs to be a study.
- Task force supports bike/ped improvements, especially around the Rims so everyone can enjoy it. Worked with TrailNet.
- More comments on potential roadway locations?
- If an individual comes to Lyle with a route, who should Lyle direct them to? In the next two weeks, they should fill out comments on the website. Otherwise, Lyle should have them mark up a map, scan it, and send it to Andy, Scott Walker, etc.
- Andy will email Cheryl and Lyle with a map to mark up.



Billings, Montana

**Crash Locations
(2013-2017)**

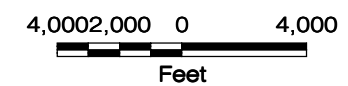
Legend

- Crash Location



Digital Vector Data Source:
Kittleson & Associates, Inc., Transportation
Engineering / Planning
Boise, Idaho 83702

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Billings, Montana

Segment and Intersection Crash Rates (2013-2017)

Legend

Intersections

Crash Rate

- 0.5-1
- 1-1.5
- >1.5

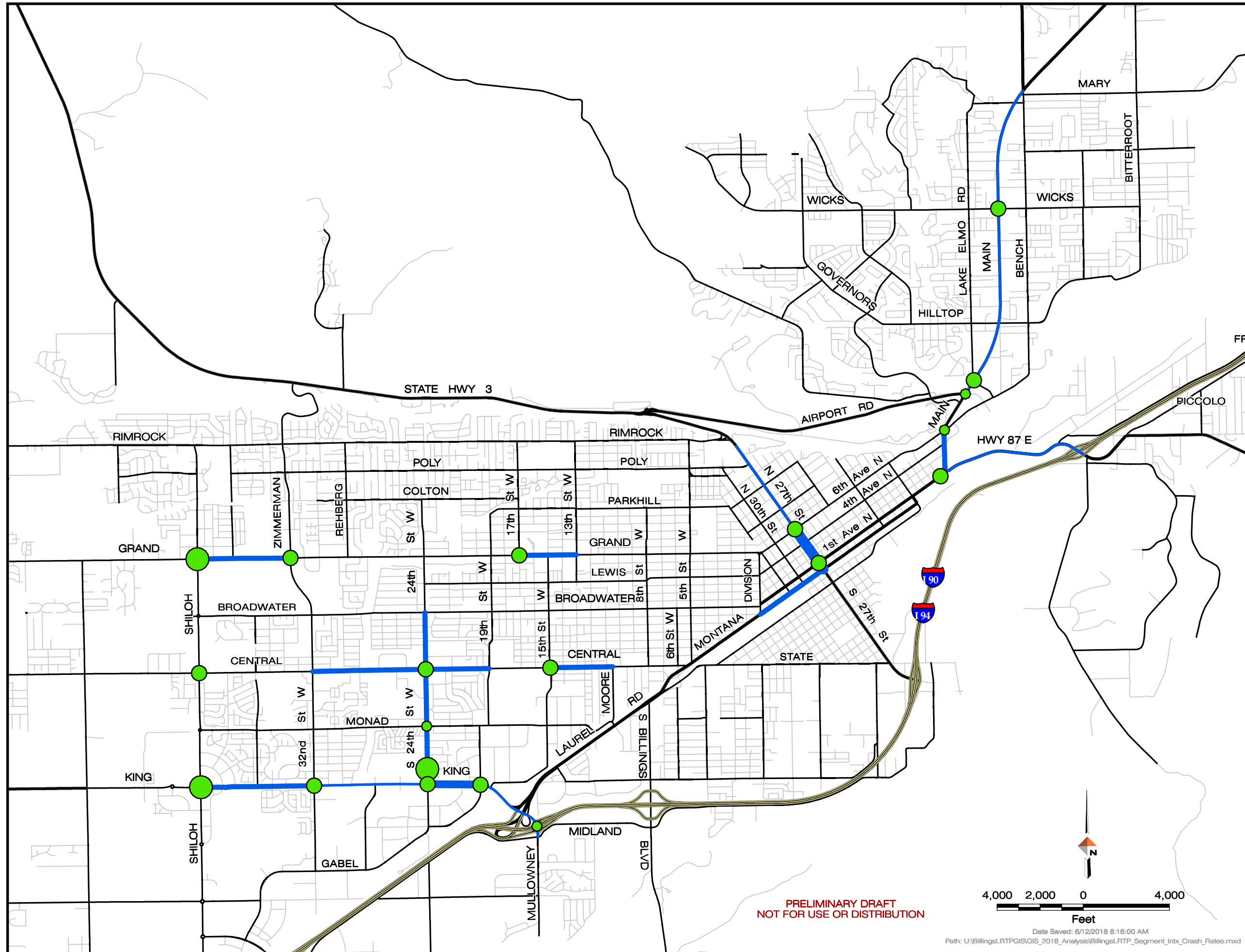
Segments

Crash Rate

- 5-10
- 10-15
- 15-20
- >20



Digital Vector Data Source:
Kittleson & Associates, Inc., Transportation
Engineering / Planning
Boise, Idaho 83702

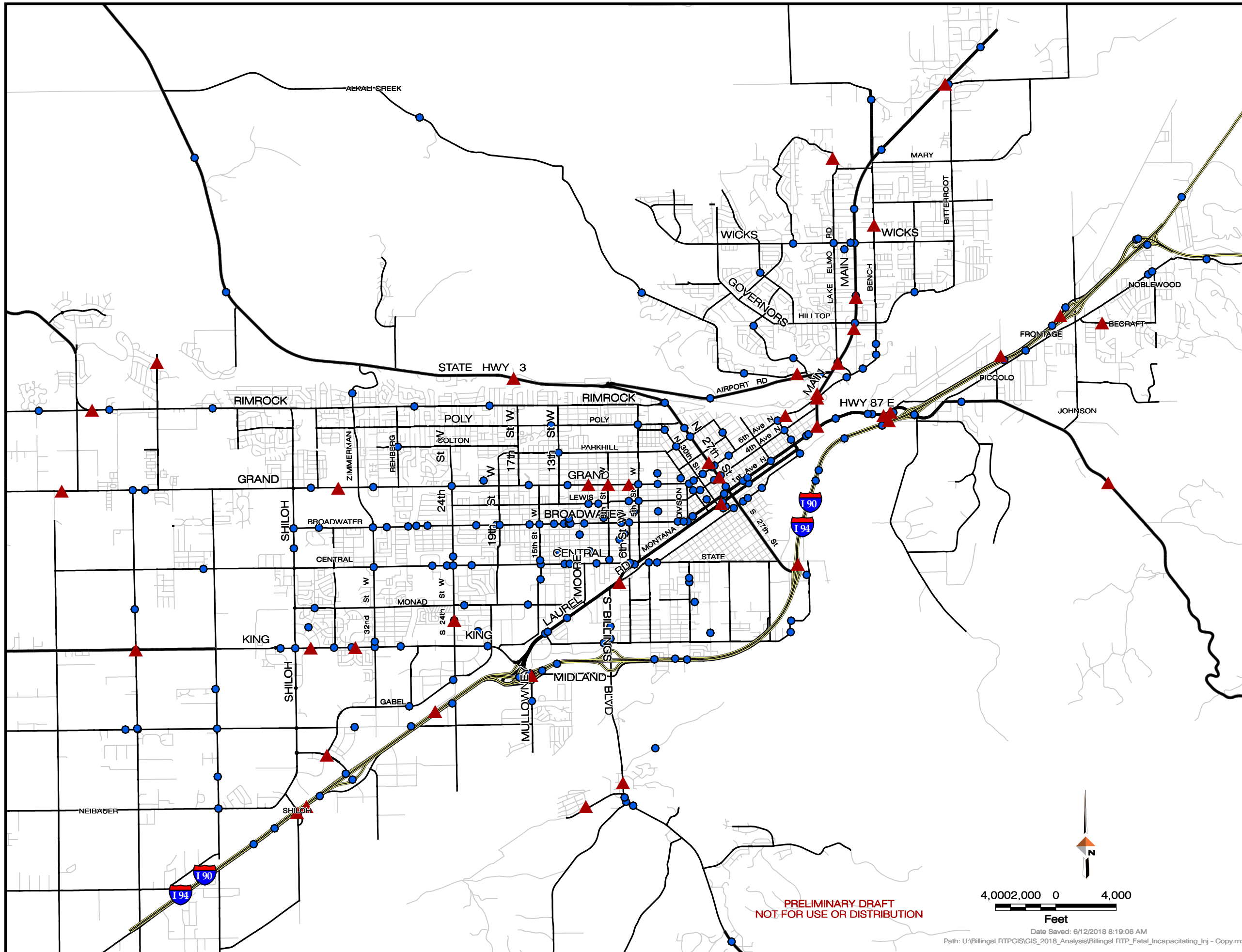


Billings, Montana

Fatal & Incapacitating Injury Crashes (2013-2017)

Legend

- ▲ Fatal Crash
- Incapacitating Injury Crash



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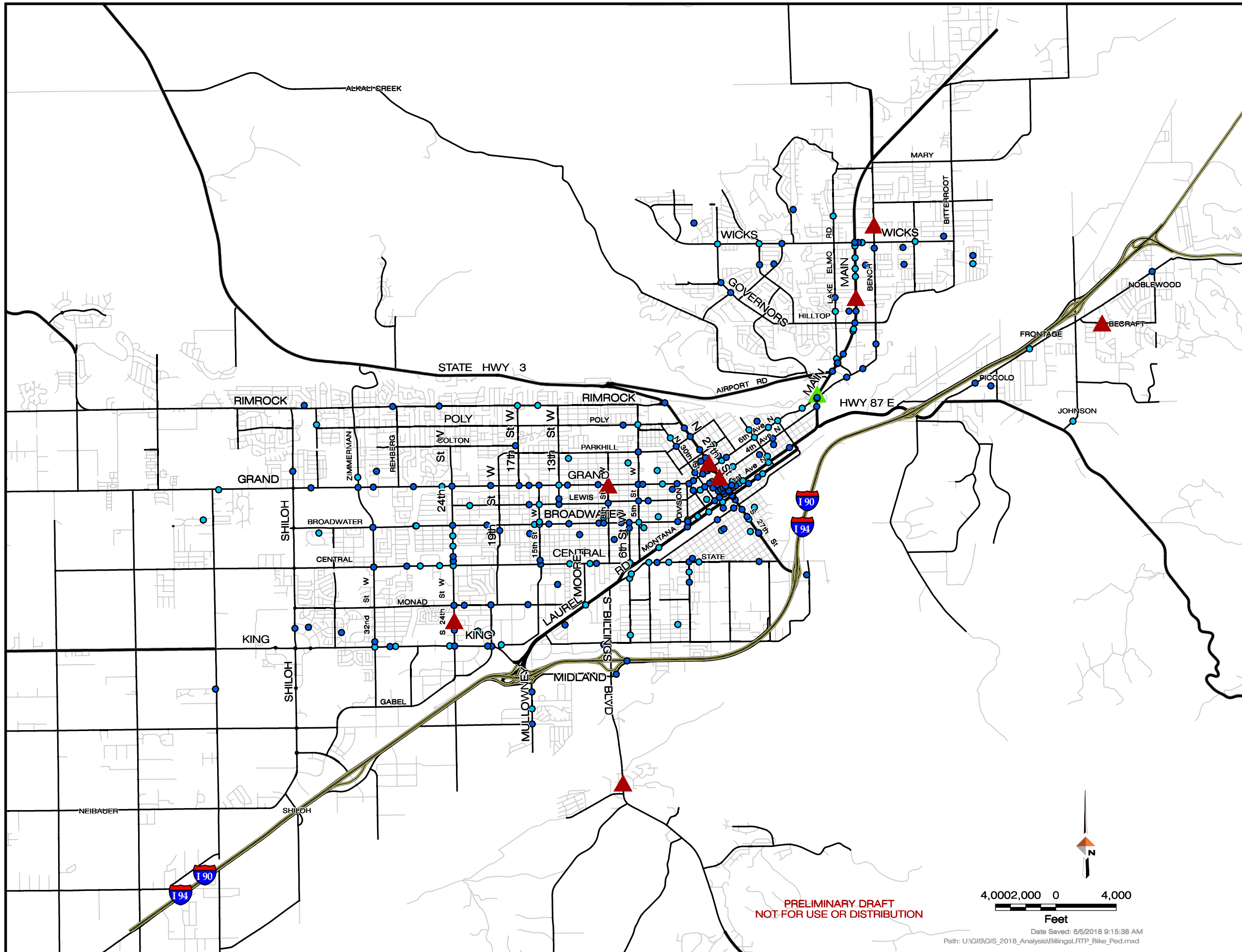
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Engineering / Planning
Boise, Idaho 83702

Billings, Montana

Bicycle & Pedestrian Crashes (2013-2017)

Legend

-  Pedestrian Crash
-  Fatal Pedestrian Crash
-  Bicycle Crash
-  Fatal Bicycle Crash



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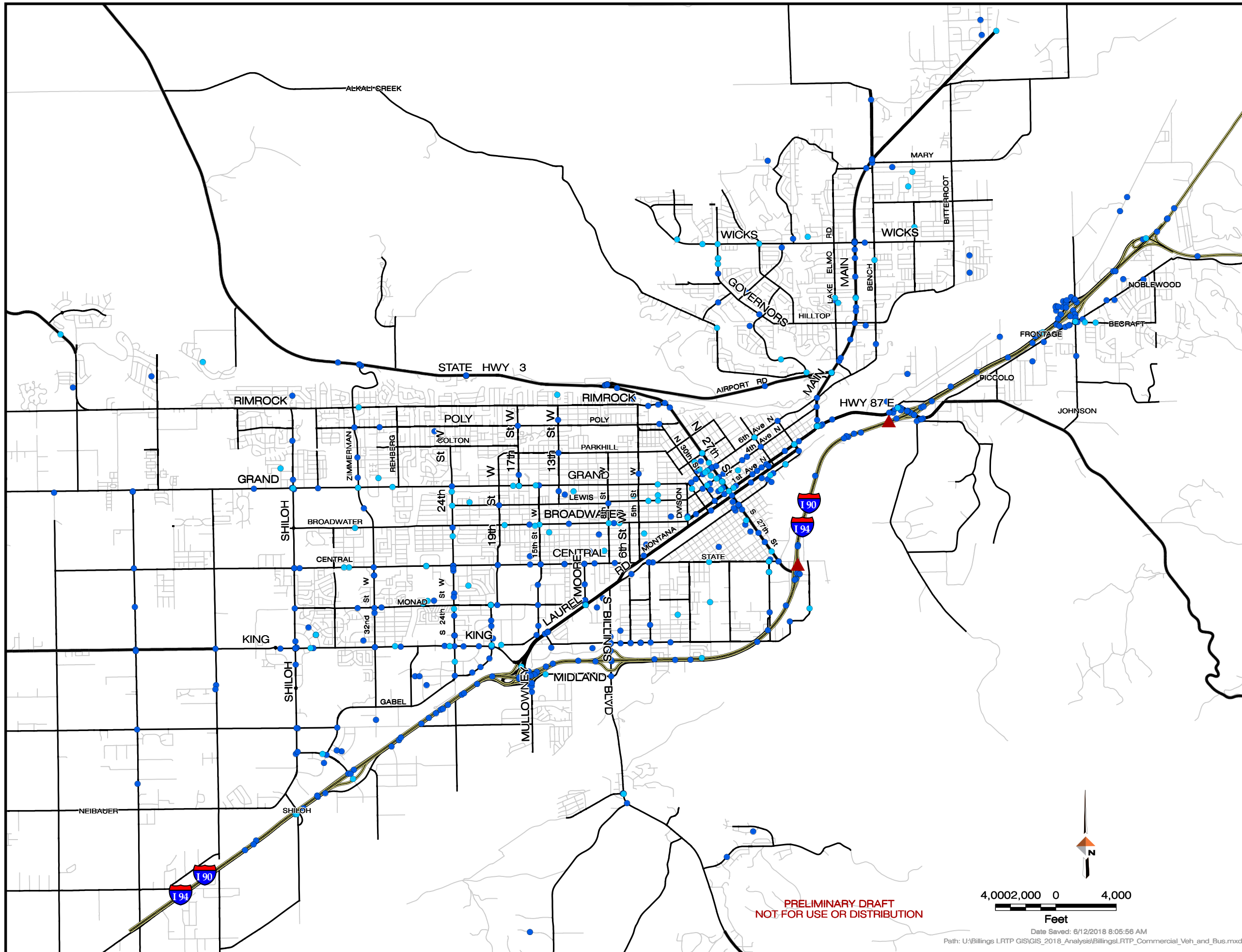
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Engineering / Planning
Boise, Idaho 83702

Billings, Montana

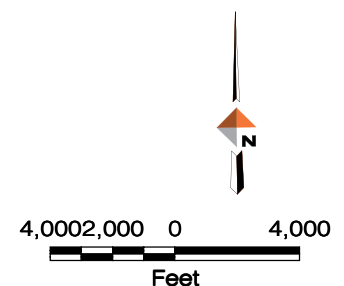
Commercial Vehicle and Bus Crashes (2013-2017)

Legend

- Bus Crash
- Commercial Vehicle Crash
- ▲ Fatal Commercial Vehicle Crash



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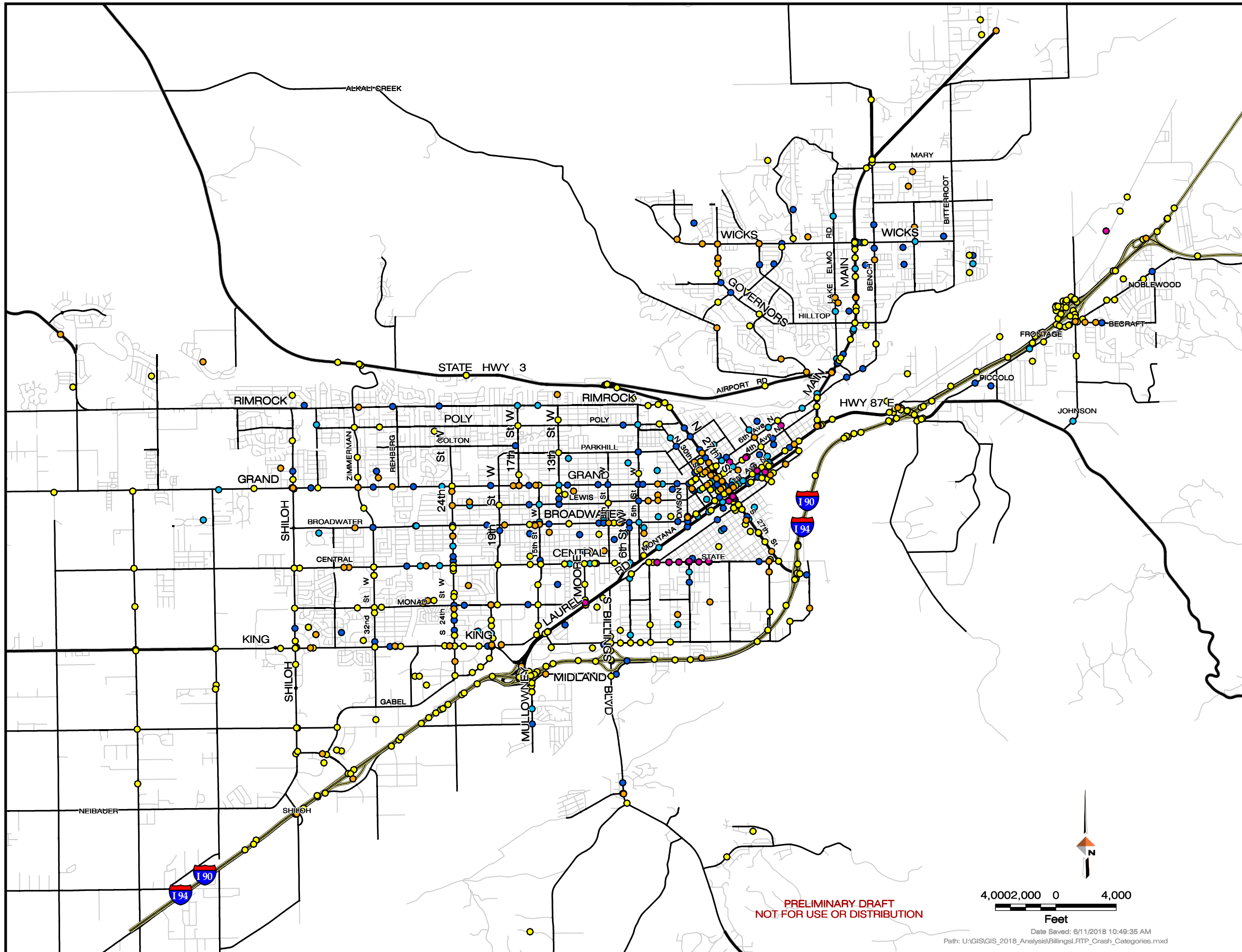
Digital Vector Data Source:
Kittleson & Associates, Inc., Transportation
Engineering / Planning
Boise, Idaho 83702

Billings, Montana

Crashes by Category (2013-2017)

Legend

- Rail Crossing Crash
- Bus Crash
- Commercial Vehicle Crash
- Pedestrian Crash
- Bicycle Crash



PRELIMINARY DRAFT
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Digital Vector Data Source:
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Engineering / Planning
Boise, Idaho 83702

2018



BILLINGS URBAN AREA



LONG RANGE TRANSPORTATION PLAN

Steering Committee Meeting #6 Sign-In Sheet

June 14, 2018 @ 10:00 AM - 12:00 PM,
1st Floor Conference Room - Miller Building

Name	Organization	Email address
ANDY DALE IDEN	KITTELSON & ASSOC.	adaleiden@kittelson.com
Lora mattox	Planning	mattoxl@ci.billings.mt.us
Mike Black	Yellowstone County	mblack@co.yellowstone.mt.gov
Bob Reichl	Lockwood	bsriehl@gmail.com
Debra Hagel	MET Transit	hagold@ci.billings.mt.us
Rod Nelson	MDT-Billings	rodnelson@mt.gov
Elyse Monot	Planning	monate@ci.billings.mt.us
Scott WALKER	CI Planning	walkers@ci.billings.mt.us
Bryan Graveline	Kittelson (by phone)	
Mike Aronson	Kittelson (by phone)	
Katie Potts	MDT ^{Planning} Transit (by phone)	
Rebecca Goodman	MDT-Planning (by phone)	
Sheila Ludlow	MDT-Planning (by phone)	
Eric Romero	MDT-Planning (by phone)	



Steering Committee Meeting #6

June 14, 2018, 10:00 AM – 12:00 PM
Miller Building 1st Floor Conference Room
In-Person Meeting

Action Items:

- Steering Committee to return comments on safety analysis by June 22.
- KAI will clarify Lockwood Fire Department role and add to stakeholder meeting notes.
- KAI will send final Public Participation Plan to Steering Committee for review by June 22nd.
- KAI will prepare intersection operations summary map, pedestrian/bicycle chapter, safety chapter, security chapter, and land use forecasts for discussion at July Steering Committee meeting. KAI will coordinate with DOWL on the following items related to the safety analysis:
 - distinguish between bus and other heavy vehicle crashes in safety analysis visualization
 - identify the cause of fatal crashes, including whether seat belts were used and if impaired driving was a contributing factor
- KAI will prepare goals, objectives, performance measures, and targets chapter, public transportation chapter, rail chapter, and truck chapter for discussion at the August Steering Committee meeting.
- KAI will add study area boundary to the zip code and other maps being used for documentation.
- KAI will send an email to Scott to kick-off the review of the functional classification map.
- KAI will send email to gauge availability for September Steering Committee meeting date and corresponding outreach that week.
- KAI will send weekly emails to Steering Committee outlining progress.

Attendees: see sign-in sheet

Meeting Notes:

- Andy stated that we're approximately at the halfway point of the LRTP process. The focus for the meeting is on:
 - Public comments from the community outreach
 - Resource agency and stakeholder notes
 - Public participation plan updates
 - Intersection and safety analysis
 - Draft LRTP chapter development
 - Travel demand model update
- Public comment summary
 - KAI conducted outreach at Riverside Middle School, through a public open house, and through an online survey that ran from May 14th through May 29th.

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- The public survey participants were fairly well distributed throughout the Billings area. It was a bit surprising there wasn't more representation from the West End area.
 - Participants were mostly over the age of 26 and mostly white.
 - Seat belt usage was tracked, with 92% of respondents always using a seat belt.
 - Majority of respondents use personal vehicles, with a fair amount of walking and biking and a low amount of public transit use.
 - Safe, efficient, and effective was the top prioritized goal, with multimodal and economic vitality goals also ranking high. Prioritized improvements and functional integrity were ranked the lowest.
 - Roadways, intersections, and bicycles were the highest rated focus areas, with railroads, trucks, and freight rated the lowest.
 - Received map-based comments on needs and opportunities. Over the next two months, KAI will be vetting these comments and identifying the most actionable to address.
 - Comment themes included pedestrian crossings, bicycle facilities, and better bus frequency. The working group didn't find these themes surprising.
 - Andy mentioned that the connection between the rims and lower part of the City was mentioned in the comments and was a topic of concern at the Rimrock task force meeting. One takeaway was the potential need for a study to gauge the purpose of this roadway and to then assign a lead to the planning process.
- Resource Agency/Stakeholder Feedback
 - Stakeholder meetings were conducted with a variety of resource agencies, MET Transit, and the One Big Sky Center.
 - KAI will clarify comments on the Lockwood fire department in stakeholder outreach meeting notes. It's currently unclear whether Lockwood FD is able to respond to all applicable emergencies in Lockwood or whether they need further support.
 - KAI will reach out to the resource agencies again in July/August and let them know that we are available for in-person meetings at the August and September Steering Committee Meetings.
- Public Participation Plan
 - Steering Committee provided comments on the draft PPP, which KAI addressed. KAI is now working on graphic and layout and will send final draft to Steering Committee by June 22.
 - Public comment period will last from July to August 2018, with final adoption slated for September 2018. If large changes occur based on public comments (which is unlikely), KAI will coordinate with Steering Committee before finalization.
 - It was noted that the MPO could begin the adoption process with TAC and other groups during the 45-day comment period to meet the adoption timeline for PCC in September.
- Level of Service Analysis at Study Intersections
 - Conducting HCM planning-level analysis operations analysis at most collector/collector or higher intersections.

- Signalized intersections are being analyzed with a planning-level excel tool. Unsignalized intersections are being analyzed with Synchro and roundabout intersections are being analyzed with SIDRA.
- Draft analysis to be completed by June 22. Then KAI will prepare a summary map and discuss at the July Steering Committee meeting.
- At some locations, KAI will reference that the intersection analysis is being performed by another study.
- Safety Analysis
 - Preliminary safety analysis from year 2013 to 2017 has been completed. DOWL has been leading this effort [for](#) the team.
 - This includes 14,577 crashes, 4,005 injury crashes, and 42 fatal crashes in the study area.
 - A refined effort was conducted to understand commercial vehicle crashes.
 - Sorting fatal crashes by factors such as location, seat belt usage, and impaired driving will be productive.
 - Segment and intersection crash rates were performed. Findings were similar as in 2014 LRTP, with the exceptions of a couple of segments (Grand Avenue, King Avenue) and intersections (3 roundabout intersections on Shiloh Road).
 - Steering Committee also discussed the Johnson Lane interchange with I-90 as a potential location of concern.
 - Many of the safety areas of concern are being addressed by ongoing projects or plans.
 - Total pedestrian, bicycle, and commercial vehicle crashes were also tracked by location. KAI and DOWL are still refining some elements of this analysis, such as heavy vehicle classification. Steering Committee suggested differentiating heavy truck and bus crashes with different colors.
 - Steering Committee to return comments on safety analysis by June 22.
- Draft LRTP Chapter Development
 - Goals, Objectives, Performance Measures, and Targets
 - KAI is developing a separate chapter for this topic. Great Falls Appendix I has a good template for this.
 - Plan to have detailed discussion of this chapter at August meeting.
 - Public Transportation
 - Draft chapter mostly complete, but waiting to incorporate a few updates such as ridership, route changes, and comments.
 - Plan to have detailed discussion of this chapter at August meeting.
 - Pedestrian and Bicycle
 - Draft chapter mostly complete, but still incorporating updates based on future bike network from master plan and public comments.
 - Plan to have detailed discussion at July meeting.
 - Safety
 - Updating with public comments.
 - Plan to have detailed discussion at July meeting.

-
- Security
 - Update with latest comments from resource agency interview.
 - Plan to have detailed discussion at July meeting.
 - Other Items
 - Functional classification system map to be discussed at July or August meeting.
 - Important to make sure this is as accurate and updated as possible.
 - KAI will send an email to Scott to kick-off the review of the functional classification map.
 - We'll discuss land use at the July meeting, with other chapters such as streets and highways, rail, truck services, etc. coming later.
 - Further public outreach will be conducted in September 2018. The Steering Committee is set for September 13th, with other public outreach events planned for that week.
 - Montana Association of Planners has an event that week, so some staff would be gone.
 - Andy will send an email on this meeting to gauge staff availability.
 - Travel Demand Model
 - Mike provided an update on the progress of the travel demand model, including an overview of the schedule for submitting the memoranda and working model.
 - It was mentioned that there would be value in holding a separate meeting to review the travel demand model in more detail with interested parties.
 - Next Meetings and Topics
 - Steering Committee would like to receive weekly updates with KAI's progress so they can better relay project status to public and other stakeholders.

June 14, 2018 @ 10:00 AM – 12:00 PM,
 1st Floor Conference Room - Miller Building

1. Introductions (Sign-in sheet)
2. Public Comment Summary (Attachment A) — ZIP code
3. Meeting Notes with Resource Agencies/Stakeholders (Attachment B)
4. Public Participation Plan
 - a. Update
 - b. Schedule for Plan Adoption
5. Plan Updates
 - a. Planning Level HCM Analysis at Study Intersections
 - b. Safety Analysis (Attachment C)
 - c. Chapter development
 - i. Goals, Objectives, Performance Measures, & Targets
 - ii. Public Transportation
 - iii. Pedestrian / Bicycle
 - iv. Safety
 - v. Security

Scott
 Misa
 Djo
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 And
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 Lisa M.

Kate
 Nelson
 Shasha L
 Eric C

Maria - Kroll
 Mrs. G - "

10:20

10

Lockwood Falls (Y.C. Falls)
 Child Studies @ Lockwood

West End P.P.
 concerned w/ west end land use developments

2018 PM Photo

10:40

cause

① Faded/under
 → were scott's kids used?

② impaired / under the influence

Johnson/I-90
 showing map

comment sent → others (with Kiraan)

→ differentiate the colors on the map

Faded → increase in city center

* with maps & documents

Add to back page
 • suburban blurb

P. and
 3000 lbs?
 center - rural
 suburban

Cars - rural
 suburban
 City

Next Meetings
 Action → Miller
 address

- a. SC Meeting #7 – July 12, 10 AM – 12 PM
- b. SC Meeting #8 – August 9, 10 AM – 12 PM
- c. SC Meeting #9 – September 13, 10 AM – 12 PM

And send email w/ date/stakeholder



Appendix G

Steering Committee Meeting #7

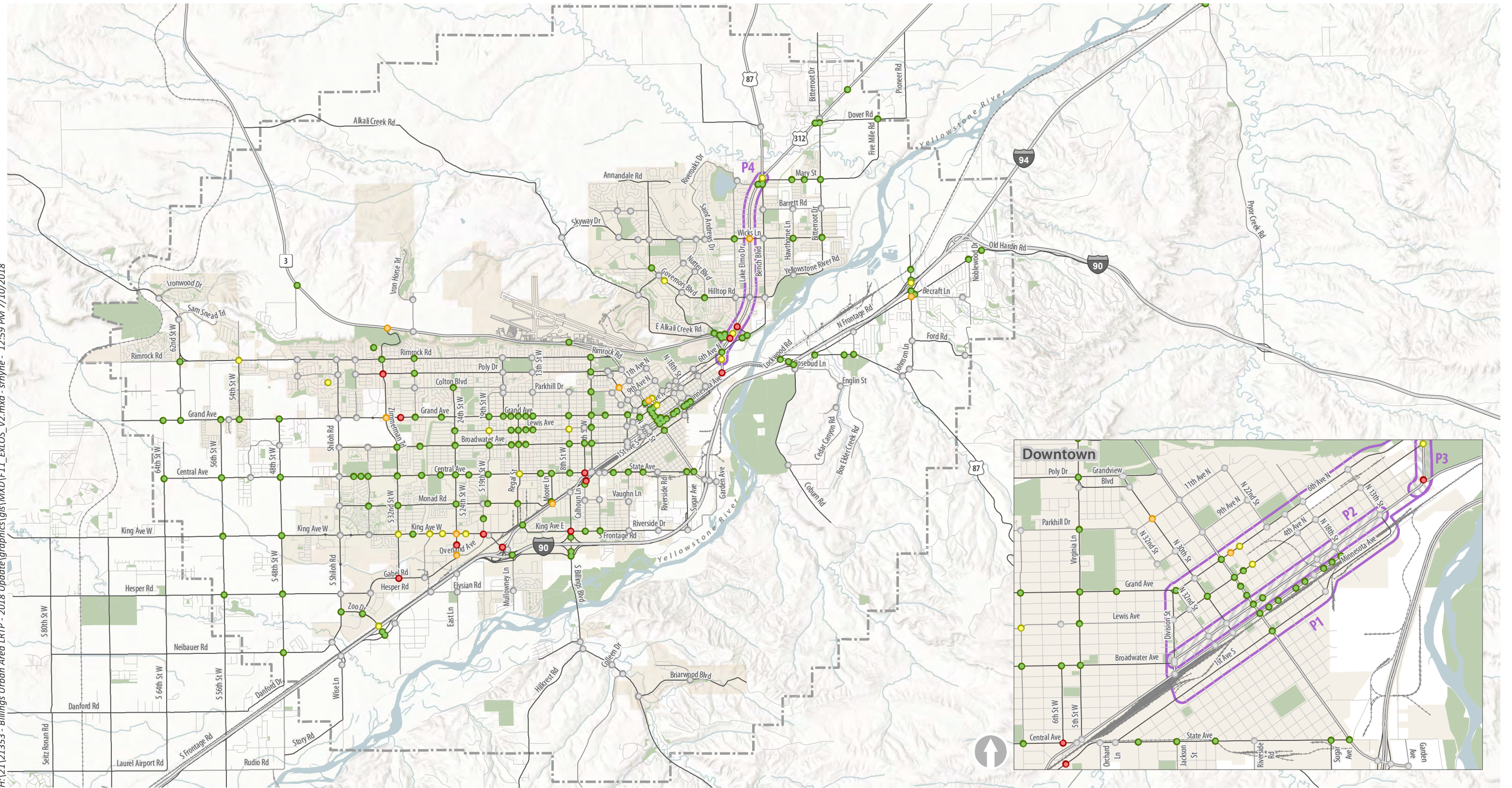


Steering Committee Meeting #7 Agenda

July 12, 2018 @ 10:00 AM – 12:00 PM,
1st Floor Conference Room - Miller Building

1. Introductions (Sign-in sheet)
2. Public Participation Plan
 - a. Update
 - b. Schedule for plan adoption
3. Plan Updates
 - a. LOS analysis at study intersections (Attachment A)
 - b. Land Use (Attachment B)
 - c. Project ideas and review from public outreach
 - d. Chapter development
 - i. Draft chapter for Pedestrian / Bicycle (Attachment C)
 - ii. Draft chapter for Security (Attachment D)
 - iii. Draft chapter for Safety (Attachment E)
 - e. Other activities
4. Travel Demand Model
5. Next Meetings
 - a. SC Meeting #8 – August 9, 10 AM – 12 PM
 - b. SC Meeting #9 – September 13, 10 AM – 12 PM
 - c. Public Outreach
 - d. SC Meeting #10 – October 11, 10 AM – 12 PM

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- Level of Service**
- A thru C
 - D
 - E
 - F
 - Intersections with No Data (Collector, Arterial, Highway)

- Roadway Classification**
- Interstate
 - Arterial
 - Collector
 - Local Streets

- More detailed analysis is being performed in these areas by other studies/projects
- P1 - Downtown Traffic Study
- P2 - 1st Avenue North
- P3 - 1st Avenue N / Expo
- P4 - Main Street Signal Timing

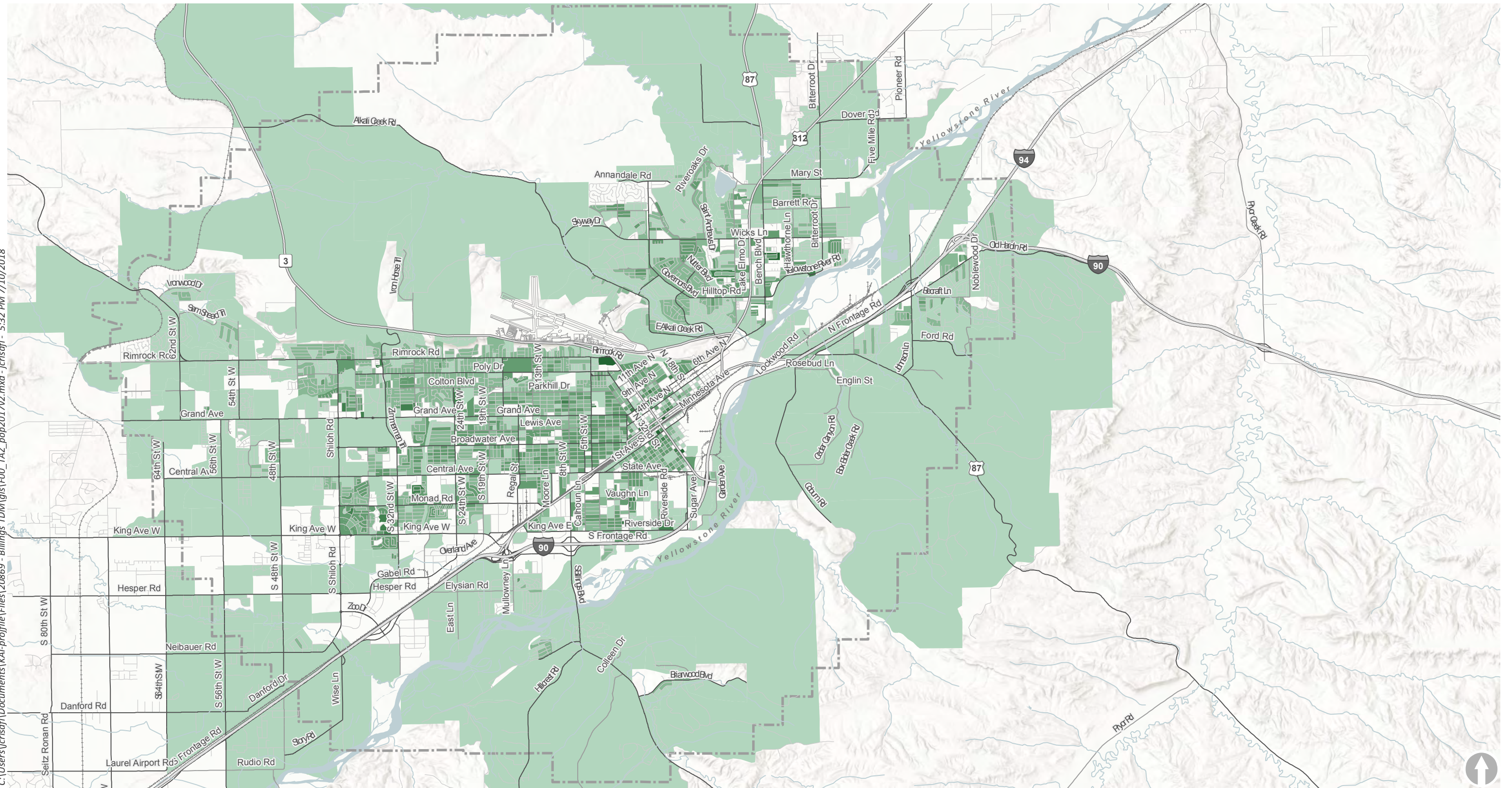
- Study Area
- Park
- City of Billings

DRAFT

Figure A
**Current (Collector or Higher Classified Roadway)
 Intersection Level of Service**

Intersection	LOS
State Avenue & Underpass Avenue	F
1st Avenue N & Main Street	F
King Ave W & Laurel Rd	F
King Ave W & S 20th St/W Overland Ave	F
Aronson Avenue & Main St (Hwy 87)	F
Lake Elmo Drive & Main St (Hwy 87)	F
Zimmerman Trail & Poly Drive	F
Gabel Road & 32nd Street W	F
Central Avenue & 6th Street W	F
24th Street W & Grant Road	F
Grand Avenue & 32nd Street W	F
Grand Avenue & 24th Street W	F
King Avenue & S Billings Boulevard	F
King Avenue W & S 24th St W	E
Laurel Road & Moore Lane	E
Wicks Lane & Main Street	E
Johnson Lane & Old Hardin Rd	E
Grand Avenue & Zimmerman Trail	E
6th Avenue N & N 26th Street	E
24th Street W & Overland Avenue	E
11th Avenue N & N 30th Street	E
Zimmerman Trail/Private Driveway & Highway 3	E
Zoo Drive & I-90 WB Ramps	D
King Ave W & S 29th St W	D
King Ave W & S 32nd St SW	D
Mullowney Lane & Midland Road	D
Roundup Ln (Hwy 87)/Bench Ln & Main St (Hwy 87)	D
Johnson Lane & I-90 WB Ramps	D
4th Avenue N & Main St (Hwy 87)	D
E Airport Road & Main St (Hwy 87)	D
6th Avenue N & N 25th Street	D
4th Avenue N & N 25th Street	D
Central Avenue & 15th Street W	D
Governors Boulevard & Babcock Boulevard	D
Lewis Avenue & 19th Street W	D
Lewis Avenue & 8th Street W	D
Rimrock Road & 54th Street W	D
King Ave W & Costco Access	D
King Ave W & Home Depot Access	D

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Study Area Population Density (residents/acre)

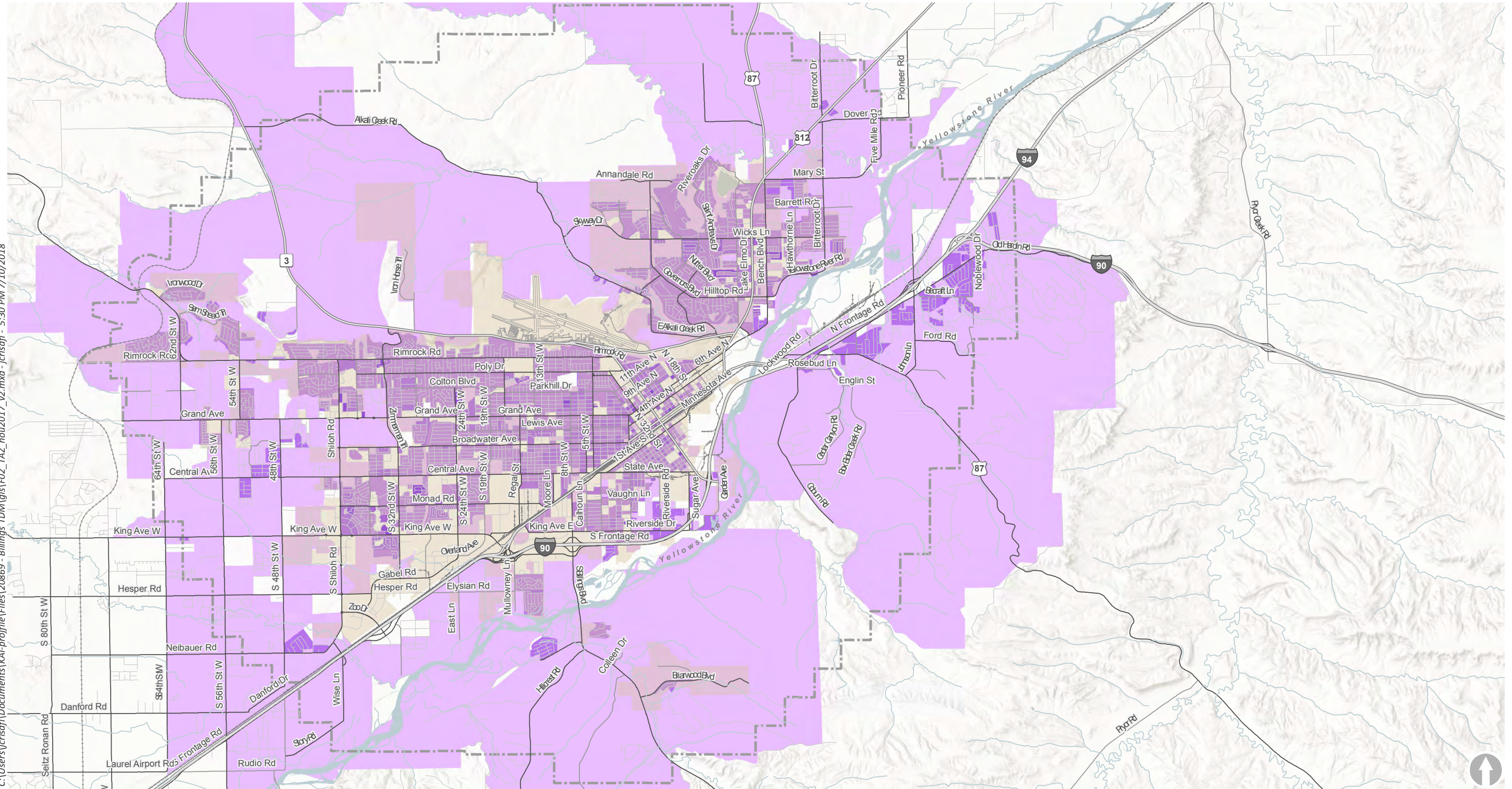
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Figure 0
2017 Population Density

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 Study Area
 City of Billings
 Housing Density (homes/acre)

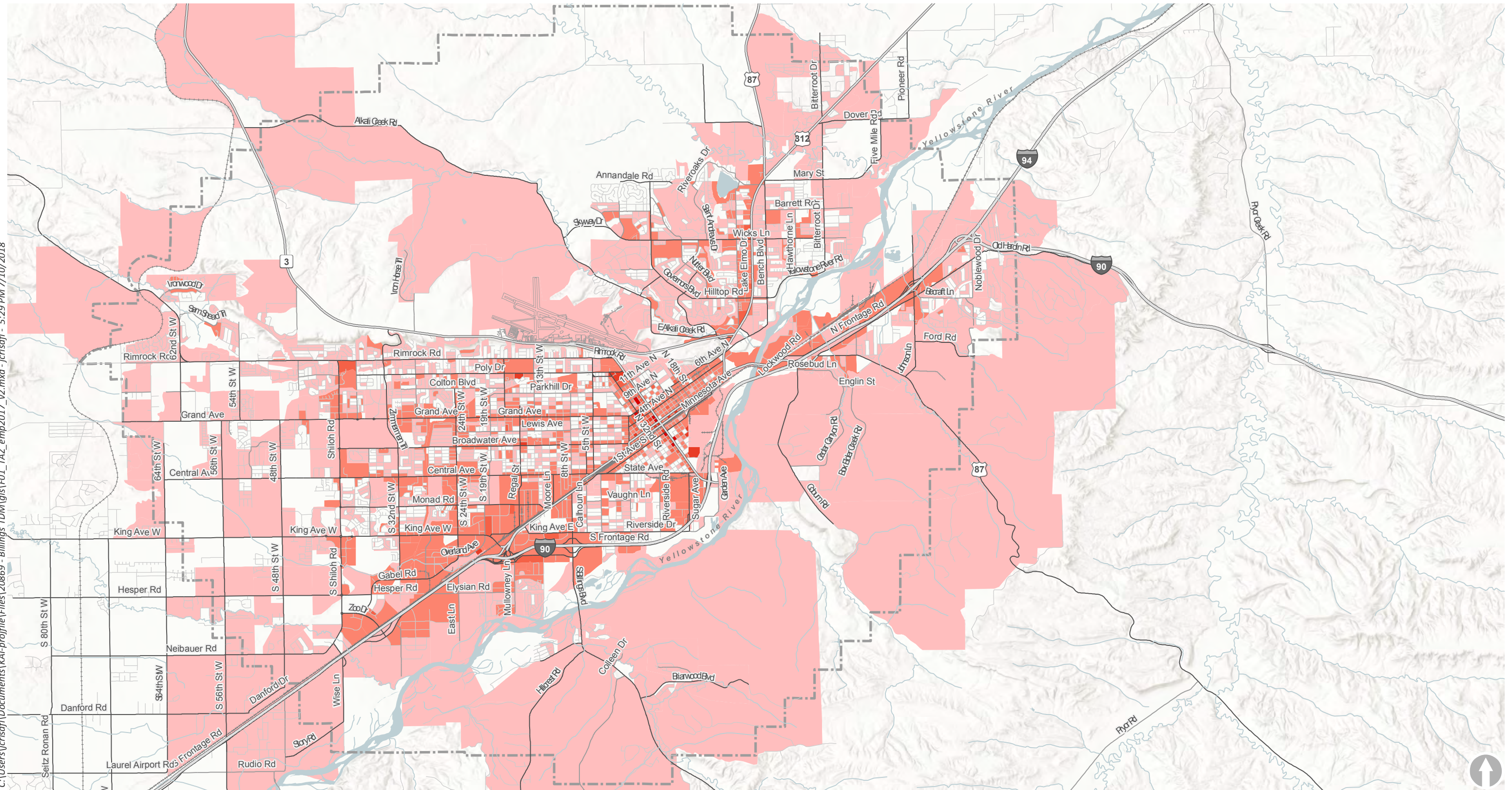
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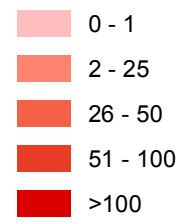
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Figure 2
2017 Housing Density

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Study Area Employment Density (jobs/acre)



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Figure 1
2017 Employment Density

Chapter 8 Pedestrian and Bicycle Facilities

The Billings Urban Area has been upgrading sidewalk facilities, constructing trail systems, and adding bike lanes to roadways over the last 25 years. Recent examples by the City of Billings, Lockwood, and the MPO include the following:

- The City of Billings has taken steps toward this goal by promoting programs such as Safe Routes to School, Trail Trek, Ales for Trails; and adopting planning studies such as the BikeNet Plan (1995), Heritage Trail Plan (2004), Billings Area Bikeway and Trail Master Plan (2011) and Update (2017), and Complete Streets Policy (2011), Benchmark Study (2013), and Progress Report (2017).
- Lockwood has taken recent steps towards this goal with the completion of a Non-Motorized Transportation Plan (2015).
- Promoting alternate modes of transportation has led to the adoption of two Safe Routes to School Studies (SRTS) in Billings and Lockwood that aim to enhance student safety and encourage more students to walk and bike to school.
- The MPO has added a Pedestrian and Bicycle Coordinator to help lead and coordinate these efforts.

Active transportation continues to be a priority of both communities and the MPO.

Call Out Box: A goal of the region is to establish one of the most comprehensive bicycle and trail networks in the State of Montana, and a 'Gold Bicycle Friendly Community' rating by the League of American Bicyclists by the year 2030.

As such, the 2018 LRTP outlines several goals related to pedestrian and bicycle elements:

Call Out Box:

- Goal 1: Safe – To develop a safe transportation system.
- Goal 4: Environment – To develop a transportation system that protects the natural environment and promotes a healthy sustainable community.
- Goal 6: Pedestrians and Bicyclists – To create a transportation system that supports the practical and efficient use of active transportation such as walking and bicycling
- Goal 7: Economic Vitality – To ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce.

Literature Review

Recent studies/plans were reviewed for existing conditions, available data, and short/long-term projects related to pedestrian and bicycle facilities in the study area. These studies/plans are described below:

- **2014 Billings Urban Area Long Range Transportation Plan (8-1):** This plan summarizes active transportation in the Urban Area and identifies priority projects for the area.
- **Billings Area Bikeway and Trail Master Plan Update (8-2):** This plan identifies eight goals associated with the bikeway and trail system in the Billings Urban Area. The plan includes a demographic analysis, inventory of existing facilities, project recommendations, program and policy recommendations, and implementation plan. This plan is an excellent technical resource for the community regarding bikeway and trail facilities, usage, and project recommendations.
- **Trail Asset Management Plan (8-3):** The plan discusses the maintenance needs of the existing and future trail system including a discussion of potential funding sources.

- **Safe Routes to School Study Phase I & Phase II (8-4):** The plan evaluates active transportation options to and from the 22 existing elementary schools in the City of Billings. Two goals are identified by the project: 1) enhance the safety for students traveling to and from school, and 2) increase the number of students walking or bicycling to school. The study focuses primarily on engineering improvements but discusses the 5 E's for SRTS efforts: Engineering, Enforcement, Encouragement, Education, and Evaluation.
- **Complete Streets Progress Report (8-5):** This report offers a performance-based approach to the Billings transportation system to ensure it works for all people of all abilities. It examines current and future opportunities for a balanced transportation network using data from the previous three years.
- **Lockwood Non-Motorized Transportation Plan (8-6):** This plan seeks to eliminate fatalities and serious injuries caused by vehicular and pedestrian conflicts throughout the Lockwood area. It identifies a five-year work plan and 20-year desired project list in the areas of education, enforcement, engineering, evaluation, and partnerships and funding to achieve this goal.

The studies listed below were also reviewed, but either had a larger scope than just pedestrian/bicycle elements or focused on a particular section of the urban area.

- Billings-Yellowstone County Household Travel Survey (2017)
- TranPlanMT (2017)
- City of Billings Growth Policy (2016)
- Lockwood Growth Policy (2016)
- West End Multimodal Planning Study (2016)
- Rims to Valley Study (2016)

Existing Conditions

The existing facilities for the study area were summarized into three categories: pedestrian facilities, bicycle facilities, and trail facilities. Existing facilities and available data are discussed for each category, as well as, available mode share data for the entire system. A safety analysis was also completed for all pedestrian and bicycle related crashes in the study area.

MODE SHARE

Year 2016 mode share data was obtained through the American Community Survey (ACS). Table 8.1 summarizes the mode share data for commuters in Billings.

Table 8.1 Year 2016 Mode Share for Commuters in the City of Billings

Mode Used	Number of Commuters	Percent of Commuters
Drove Alone	44,908	81.0%
Carpool (2 people)	4,180	7.5%
Carpool (3+ people)	1,108	2.0%
Public Transportation	592	1.1%
Bike	425	0.8%
Walk	1,760	3.2%
Other	390	0.7%

Mode Used	Number of Commuters	Percent of Commuters
Worked at Home	2,045	3.7%
Total	55,408	100%

Source: ACS 2016

As shown in Table 8.1, driving alone to work is the most common commuter mode share (81.0%). Active transportation (biking and walking) makes up 4.0% of commuter mode share.

As part of the 2013 Complete Streets Benchmark Study (8-5), bicycle and pedestrian counts were collected on a weekday and weekend in September 2013 at the following six intersections:

- Minnesota Avenue & South 25th Street - unsignalized
- Philip Street & Calhoun Drive - unsignalized
- 38th Street & Rimrock Rd - unsignalized
- 32nd Street & King Avenue - signalized
- Nutter Boulevard & Wicks Lane - signalized
- 6th Avenue & North 30th Street – signalized

The 2017 Complete Streets Progress Report again measured bicycle and pedestrian counts at these six intersections. These counts were taken in in May 2016 and May 2017, making an annual comparison to the 2013 data difficult.

The pedestrian and bicycle counts across the three years are shown in Exhibits 8.1 and 8.2, respectively. Pedestrian and bicycle usage was found to be consistently higher on weekdays than weekends. The 2017 pedestrian volumes increased at all counted locations from 2016. The 2017 bicycle volumes increased significantly at all locations from 2016, except for the Minnesota Avenue/27th Street location. Note that counts were not taken at Minnesota Avenue/27th Street in 2013, Phillip Street/Calhoun Drive in 2016, or 6th Avenue/30th Street in 2017.

Exhibit 8.1 Billings Pedestrian Counts by Location

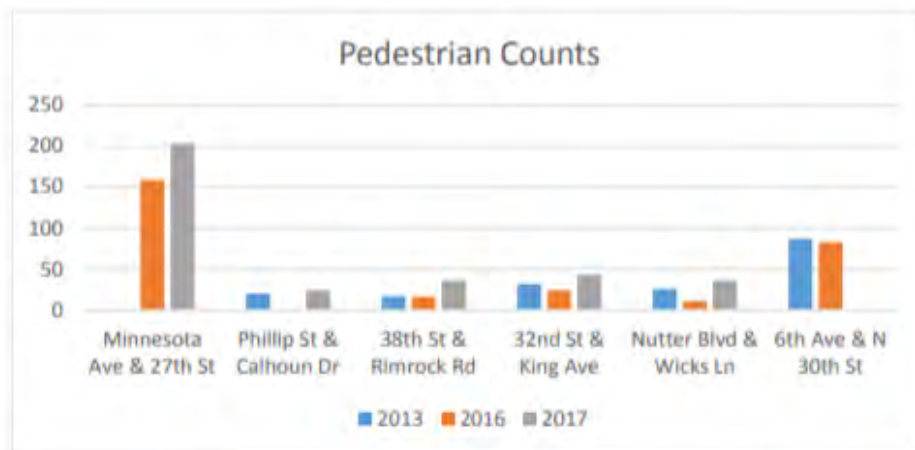
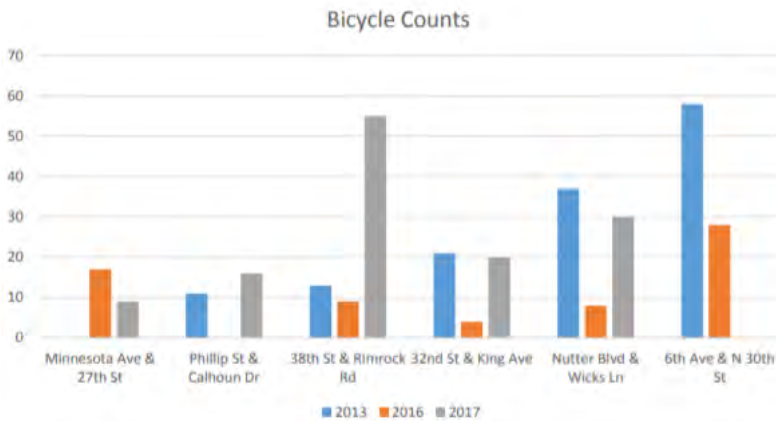


Exhibit 8.2 Billings Bicycle Counts by Location



Call Out Box: Biking and walking trips account for 4% of the commuter mode share.

School-Related Mode Share

In October of 2007, a survey was administered to parents of students in kindergarten through sixth grade. The survey covered 21 of the 22 elementary schools in the Billings Urban Area and determined the percentages of students that walk, bike, take the bus, take a single vehicle, carpool, or take a daycare van/other to school. The daycare van/other include students that use public transit to get to school. The survey data is summarized in Table 8.2.

The Billings-Yellowstone County travel survey collected data in early 2017. Table 8.2 uses data from this survey to show mode share to school across the Billings area. As shown, about 75% of respondents reported typically driving to school, either as the driver or passenger, and a similar rate did drive to school on the day of the survey. About 6.5% of respondents reported typically walking or bicycling to school and a similar rate did walk or bicycle to school on the day of the survey.

As shown in Table 8.2, driving to school and being driven to school are still the most popular mode choices. Because over 5% of students walk to school, the City of Billings has increased focus on providing safe travel for students walking to school. This includes updating and maintaining sidewalk facilities, using speed zones to reduce speeds near schools, and providing crossing guards at popular locations. In 2011, the City of Billings Safe Routes to School Study (SRTS) evaluated the facilities for all modes at each of the twenty-two elementary schools and recommended improvements at each school.

Table 8.2 School-Related Mode Share

Actual School Mode	Typical School Mode							Grand Total
	Passenger	Driver	School Bus	Walk	Carpool	Public Transit	Bike	
Passenger	42.98%	0.85%	3.40%	1.28%	2.55%		0.43%	51.49%
Driver	6.81%	16.17%	0.43%					23.40%
School Bus	4.68%	0.43%	10.21%	0.43%	0.43%			16.17%
Walk	0.85%			4.26%				5.11%
Carpool	0.85%				0.85%			1.70%
Public Transit						0.43%		0.43%
Bike	0.85%		0.85%					1.70%
Total	57.02%	17.45%	14.89%	5.96%	3.83%	0.43%	0.43%	100.00%

Source: Billings-Yellowstone County Travel Survey

PEDESTRIAN FACILITIES

Figure 8-1 shows the existing pedestrian and trail facilities in the study area. Sidewalk facilities exist in the downtown area, approximately from N 32nd Street to N 22nd Street and Montana Avenue to 6th Avenue, and most areas throughout the city. Exhibits 8.3, 8.4, and 8.5 illustrate some of the existing pedestrian facilities in the region.

Figure 8-1 Existing Pedestrian and Trail Facilities

Exhibit 8.3 Sidewalks and Pedestrian Buffer Zone in Downtown Billings



Exhibit 8.4 Pedestrian Hybrid Beacon (HAWK) at 4th Avenue in Downtown Billings



Exhibit 8.5 Rectangular Rapid Flashing Beacon (RRFB) on King Avenue



BIKEWAY FACILITIES

Development of the City's bicycle facilities has mostly occurred over the last fifteen years, including 6.5 miles of new bike lanes provided during 2010. The overall rate of bike lane implementation has remained essentially constant at a rate of close to two miles per year over this time. The City of Billings currently maintains close to 30 miles of bikeway facilities, classified as bike lanes or shared roadways. Figure 8-2 shows the existing bikeway and trail facilities in the study area. Existing bikeway and trail facilities work together to provide good connectivity around the city.

Figure 8-2 Existing Bikeway and Trail Facilities

The types of bikeways are described below.

- **Bike Lanes:** This type of facility provides a dedicated space within the roadway for bicyclists to travel and uses signage and striping to delineate the right-of-way assigned to bicyclists and motorists. Billings currently has 26 miles of bike lanes in its transportation system.
- **Shared Roadways:** Shared roadways are designated by signage and/or shared lane markings. Shared lane markings are pavement markings that indicate the position within a roadway where bicyclists should ride. They also provide wayfinding guidance to bicyclists and indicate to motorists to be aware that bicyclists will be travelling in the roadway. Streets marked with shared lane markings, or sharrows, are intended to be shared streets, with motorists and bicyclists sharing the travel lane. Billings currently has 2.6 miles of shared roadways in its transportation system.

In addition to these existing types of bikeways, the Bikeways and Trails Master Plan Update describes a variety of new bikeway types that could help provide low-stress connections for bicyclists in areas of high traffic volumes. These include:

- **Separated Bike Lanes:** Of all on-street bicycle facilities, separated bike lanes offer the most protection and separation from adjacent motor vehicle traffic. Separated bike lanes are bicycle facilities that are physically separated from motor vehicle traffic by a painted buffer and physical barriers such as flexible delineators, curbs, or planters.
- **Bicycle Boulevards:** Bicycle boulevards are local streets with low motorized traffic volumes and speeds that have been designated as bicycle routes. Bicycle boulevards should have a maximum posted speed of 25 mph and target motor vehicle volumes of less than 1,500 vehicles per day. Many streets in Billings exhibit these characteristics already, and minor modifications such as the addition of signage and pavement markings could cost-effectively designate key corridors as bicycle boulevards.
- **Buffered Bike Lanes:** Buffered bike lanes are conventional bike lanes that are enhanced through the application of diagonally striped buffer space. While not providing physical separation, this creates a wider buffer area between vehicles and bicyclists than a conventional six-inch bike lane stripe.

As shown in Figure 8-2, the bikeway and trail system almost provide a complete "loop" around Billings, as well as north-south connectivity in the Heights and the west end on Shiloh Road. To promote the construction of consistent facilities, the City of Billings has adopted specific design standards for all types of bikeway facilities, included in their Design Standards for Trails & Bikeways (8-7). Exhibits 8.6, 8.7, 8.8, and 8.9 illustrate some of the existing bike facilities in the region.

Call Out Box: Implementing bike lanes, sharrows, cycle tracks, and bike boulevards on roadways, in conjunction with wayfinding signs, bike racks, and other amenities are great ways to increase bicycle awareness and usage in the region.

Exhibit 8.6 Bike Rack in Downtown Billings



Exhibit 8.7 Bikes Lanes on Rimrock Road



Exhibit 8.8 Bikes Lanes on Monad Road



Exhibit 8.9 Buffered Bike Lane on Monad Road



TRAIL FACILITIES

The City of Billings currently maintains approximately 81 miles of trails throughout the study area. As shown in Figures 8-1 and 8-2, multi-use trails are provided along Shiloh Road from Rimrock Road to past Zoo Drive, from Alkali Creek Road and Mary Street in the Heights to an area close to the 27th Street interchange with I-90, and east-west across the rims parallel to Airport Road. Soft surface trails are also provided through Riverfront Park to the south, Two Moon Park in the Heights, and around Lake Elmo. Most of the neighborhood trails are provided in neighborhoods between Shiloh Road, 32nd Street, King Avenue, and Monad Road. Some of the cities unimproved trails are in Phipps Ranch, located outside of the MPO boundary and others connect multi-use paths in Zimmerman Park to those on the eastern half of the rims, connecting into the Heights. The other major segment of unimproved trails runs parallel to the rims, connecting a multi-use path to Zimmerman Park. Table 8.4 summarizes the types and lengths of trails.

Table 8.4 Type and Length of Existing Trails in the Billings Urban Area

Type of Facility	Multi-Use	Soft Surface	Neighborhood	Unimproved	Total
Length (miles)	45	11	11	14	81

Source: GIS data provided by City of Billings

Exhibits 8.10 and 8.11 illustrate some of the existing trail facilities in the region.

Exhibit 8.10 Jim Dutcher Trail by MetraPark Arena



Exhibit 8.11 Swords Park Trail Near the Airport



Trail Counts

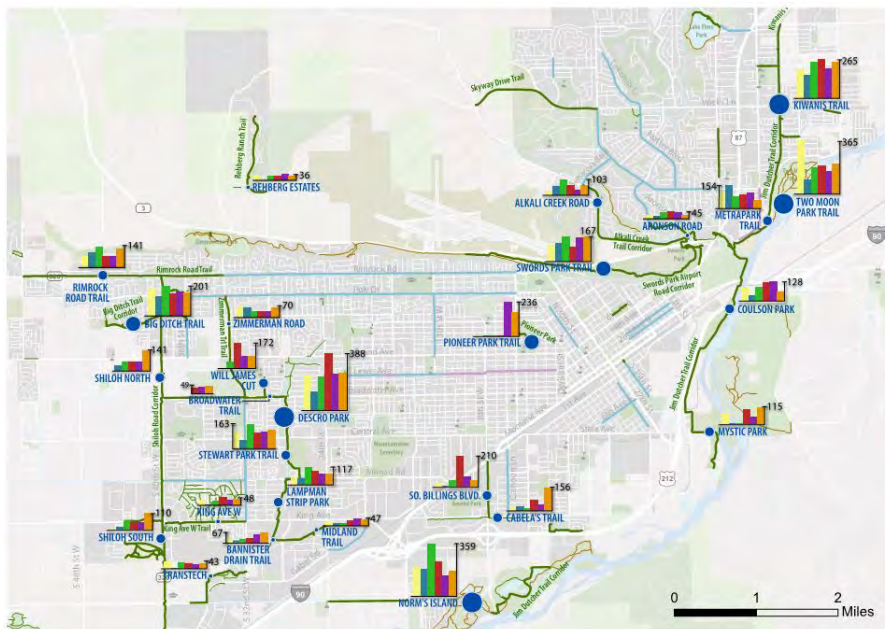
Billings currently uses two methods to count people walking and biking on its trails: automated trail counters and manual counts.

Automated counters are typically left alongside a trail for one week and then rotated to a new location. The City owns twenty-six counters and rotates them such as that the same location is counted during the same time frame each year, making year-to-year comparisons possible. Two locations use permanently installed counters along shared-used paths.

In addition to automatic counts, Billings has been conducting manual counts at key locations throughout the area to better understand bicycle and pedestrian transportation patterns. Between 2013 and 2015, counts were conducted at twenty-five different locations, with the largest concentration in downtown Billings. However, because no locations was counted twice, annual or seasonal comparisons should not be drawn.

As shown in Exhibit 8.12, trail usage in the study area has steadily increased over the last six years. The total annual number of trail users counted on the system has steadily risen from 2,287 in 2010 to 2,617 in 2015, an increase of 21% over that timeframe.

Exhibit 8.12 Daily Average Trail Counts Per Year



Source: 2017 Billings Area Bikeway and Trails Master Plan Update

CRASH HISTORY

Crash data for the study area was reviewed to identify crashes involving a pedestrian or bicyclist over the five-year period from 2013 to 2017. Table 8.6 summarizes the pedestrian and bicycle related crashes. Figure 8-3 shows the approximate location of pedestrian-related crashes in the study area from 2013 – 2017 and Figure 8-4 shows the approximate location of bicycle-related crashes in the study area from 2013-2017.

Figure 8-3 Pedestrian Crashes

Figure 8-4 Bicycle Crashes

As shown in Table 8.6, there have been 350 reported crashes involving a pedestrian or bicyclist over the five-year time period. 80% of the crashes involving a pedestrian or bicyclist resulted in some type of injury. Nine fatal crashes involving a pedestrian or bicyclist occurred during the five-year time period. Eight involved pedestrians and one involved a bicyclist.

Table 8.6 Pedestrian and Bicycle Crash Summary by Severity (2013-2017)

Category	Possible Injury	Non-incapacitating (Injury Evident)	Incapacitating Injury	Property Damage Only	Fatal	Unknown	Total
Pedestrian	84	42	31	42	8	3	210
Bicycle	68	35	8	28	1	0	140
Total	152 (43%)	77 (22%)	39 (11%)	70 (20%)	9 (3%)	3 (1%)	350

As shown in Table 8.7, bicycle and pedestrian crash occurrences have stayed relatively constant over the five-year period from 2013 to 2017. Crash occurrences of both kinds fell slightly from 2013 to 2015 but then rose slightly from 2015 to 2017.

Table 8.7. Pedestrian and Bicycle Crash Summary by Year (2013-2017)

Year	2013	2014	2015	2016	2017
Bicycle Crashes	31	23	28	31	27
Pedestrian Crashes	49	38	40	37	46

Deficiencies and Needs

In order to guide identification of short and long-range bicycle and pedestrian projects, deficiencies and needs were collected from the general public, Steering Committee, and review of past plans/studies.

PUBLIC AND SC FEEDBACK

Forty-four percent of the public comments received corresponded to bicycle, pedestrian, or multi-use facilities. In addition, public comment identified the bicycle and pedestrian element of the LRTP to be among the most important elements of the 2018 LRTP update. Review of the public comment feed-back and SC comments suggested the following themes:

THIS SECTION IS STILL BEING DEVELOPED BASED ON COMMENTS FROM THE PUBLIC

- Bicycle Related Comments
 - Continue adding bike lanes to roadways, especially those near schools and desired destinations to improve connectivity

- Include sharrows along roadways that see a high volume of cyclists
- Provide a safe route for bicyclists between the heights and downtown
- Provide bike lanes to connect developments on the west end
- Pedestrian Related Comments
 - Improve pedestrian facilities around Minnesota Avenue in the downtown area
 - Complete pedestrian facilities and provide controlled crossings near schools
- Other Comments
 - Continue to connect the trail system to bicycle and pedestrian facilities around the city
 - Continue emphasis and education for non- motorized travel, vehicles in some areas do not yield
 - Provide more facilities that connect pedestrians and bicyclists to the transit system

NEEDS DEFINED IN PREVIOUS STUDIES/PLANS

Several recent city-wide studies/plans identified pedestrian and bicycle facility needs. Key needs from these studies/plans include:

- **2014 Billings Urban Area Long Range Transportation Plan:** Prioritized projects related to on-street bikeways and multi-use trails with the following criteria.
 - On-street bikeways- route continuity, nonmotorized travel demand, bicycle compatibility index and public opinion
 - Multi-use trails- safety, connectivity/ accessibility, route continuity, aesthetics/recreational value, nonmotorized travel demand, and public opinion
- **Billings Area Bikeway and Trail Master Plan Update:** Prioritized bikeway and trail projects according to a needs assessment, system coverage, safety, connectivity, and connections to adjacent jurisdictions. The top noted priorities for investment in the bicycle and trail system include:
 1. Expansion of the trail network
 2. Maintenance of the existing bikeway and trail network, and
 3. Expansion of existing on-street bikeways

The most critical gaps in the existing bicycle and trail system include:

1. Riverfront trails along the Yellowstone River
 2. Connections from West Billings to Downtown
 3. Connection atop the Rimrocks from 27th Street to Zimmerman Trail
 4. Connection from Billings Heights to Downtown
 5. Connection from the river/Lockwood to Downtown
 6. Connection from the Rimrocks to Downtown, and
 7. Connections from South Billings to Downtown
- **Trail Asset Management Plan:** Identifies need to maintain existing trail facilities related to safety and aesthetics.
 - **Safe Routes to School Study Phase I & II:** Projects were identified to enhance safety and increase the number of students walking or biking to school.
 - **Lockwood Non-Motorized Transportation Plan:** Identifies education, enforcement, encouragement, engineering, evaluation, and partnership and funding action items to improve non-motorized transportation safety in the Lockwood area.
 - **Other Documents Reviewed:** Recommendations based on projects that would best improve facilities in the specific study area. These studies/ plans included:
 - West End Multimodal Planning Study (8-8)
 - Rims to Valley Study (8-9)

Project List Related to Pedestrian and Bicycle Facilities

Pedestrian, bicycle, and multi-use path projects were identified from the needs and deficiencies assessment. The LRTP identifies a total of XX pedestrian facility projects, XX bicycle facility projects, and XX trail projects. Investing in these types of projects supports the plan's goals and the region's desire to implement one of the most comprehensive bicycle and trail networks in the State of Montana.

A project description and planning-level cost estimate was developed for each project. The planning-level cost estimates were developed from cost estimates included in past plans/studies, engineer's estimates made by the consultant team, or City of Billings Capital Improvement Plan, FY 2019 – 2023 (8-10).

Pedestrian projects include pedestrian crossings, safe routes to school projects, and sidewalk projects. Safe Routes to School (SRTS) projects are listed by school name and include a brief description. Table 8.8 summarizes the pedestrian projects. Figure 8-5 shows the approximate location of each project.

Bikeway projects include on-street bike lanes, shared roadways, and bicycle boulevards. Bicycle routes and boulevards are classified as secondary bikeways. Table 8.9 summarizes the bikeway projects. Figure 8-6 shows the approximate location of each project.

Multi-use trail projects include both soft-surface and paved trails. Table 8.10 summarizes the multi-use trail projects.

Figure 8-5 Pedestrian Project Locations – Not completed yet

Figure 8-6 Bicycle Project Locations – Not completed yet

Table 8.8 Pedestrian Projects – Refer to Excel file

Table 8.9 Bikeway Projects – Refer to Excel file

Table 8.10 Trail Projects – Refer to Excel file

Closing

One of Billings' seven goals for this plan is to create a transportation system that supports the practical and efficient use of active transportation such as walking and bicycling. By investing in active transportation infrastructure such as sidewalks, trails, and bike lanes, the City can increase the safety and comfort of these modes and thus increase their use.

Billings is pursuing this goal because of the wide variety of community benefits caused by prioritizing active transportation. As described in the Billings Bikeway and Trails Master Plan Update, increasing active transportation mode share can lead to community benefits.

Given the existing usage of the bicycle and pedestrian system, the plan estimates the total value of the health benefits associated with frequent exercise, environmental benefits associated with not generating vehicle emissions, and economic benefits associated with additional transportation options for those without access to vehicles at over eight million dollars per year. The plan also estimates that, with high growth in biking and walking mode share, this value could increase to over 22 million dollars.

To achieve this high level of growth in pedestrian and bicycle use, the City of Billings, Lockwood, and the MPO will need to continue to invest in its pedestrian and bicycle system and continue to strive to make its transportation system appealing to all modes.

References – Chapter 8

- 8-1. Billings Urban Area Long Range Transportation Plan, 2014 Update. Yellowstone County/City of Billings Metropolitan Planning Organization. August 2014.
- 8-2. Billings Area Bikeway and Trail Master Plan Update. City of Billings/Yellowstone County. 2017.
- 8-3. Safe Routes to School Study, Phases I and II. City of Billings. 2011.
- 8-4. Trail Asset Management Plan. City of Billings/Yellowstone County. June 2011.
- 8-5. Complete Streets Progress Report. City of Billings. 2017.
- 8-6. Design Standards for Trails & Bikeways. City of Billings.
- 8-7. West End Multimodal Planning Study. City of Billings. April 2016.
- 8-8. Rimrocks to Valley Bikeped Feasibility Study. City of Billings. July 2016.
- 8-9. Lockwood Non-Motorized Transportation Plan. Yellowstone County. June 2015.
- 8-10. Capital Improvement Program, FY 2019 – 2023. City of Billings. March 2018.

Chapter 10 Security

This chapter addresses security planning for the Billings Urban Area regional transportation system, including federal requirements; state and local plans; agency coordination; potential hazards; community priorities; and strategies.

Transportation security planning can reduce the negative impacts to the regional transportation system from major natural or manmade events. Some examples of these events are listed below:

- natural disasters, such as tornadoes, flooding, or blizzards;
- attempts to destroy elements of the regional transportation network to cause disruption;
- use of an element of the transportation system as a weapon, such as crashing a truck through a wall to deliver explosive materials; or
- large planned events, such as a state fair or parade.

The impacts of major events are reduced by being prepared; expediting responses; and aiding the recovery to normal services. In addition to preparing against, expediting responses to, and aiding in recovery from major events, transportation security planning helps keep people and goods moving, protects public health and life safety, supports economic productivity, and minimizes impacts of major events on the environment (10-1).

Background

FEDERAL REQUIREMENTS

There are several federal requirements associated with MPOs and the transportation planning process included in the 23 CFR Part 450 for Metropolitan Transportation Planning and Programming. The planning process should address increasing the security of the transportation system for motorized and non-motorized users. In carrying out the metropolitan transportation planning process, MPOs, States, and public transportation operators may incorporate or reference applicable emergency relief and disaster preparedness plans and strategies and policies that support homeland security, as appropriate to safeguard the personal security of all motorized and non-motorized users (10-2).

A local mitigation plan (for Yellowstone County, this is the Multijurisdictional Pre-Disaster Mitigation Plan) should be developed and prepared in compliance with federal, state and local hazard mitigation planning requirements published under 44 CFR Part 201 (10-3). The local mitigation plan is the representation of the jurisdiction's commitment to reduce risks from natural hazards, serving as a guide for decision makers as they commit resources to reducing the effects of natural hazards. Local plans will also serve as the basis for the State to provide technical assistance and to prioritize project funding (10-3).

The FEMA Disaster Mitigation Act of 2000 provides the legal basis for FEMA mitigation planning requirements for State, local and Indian Tribal governments as a condition of mitigation grant assistance (10-4).

Call out box: On June 20, 2010, a tornado came through Billings and caused damage to the MetraPark, businesses, homes, and transportation infrastructure in the area. Planning for and developing a transportation system with multiple connections and parallel routes allows the region to actively plan for potential natural or manmade hazards.

STATE PLANS

TranPlanMT (2017)

Originally adopted in 1995 as TranPlan 21 and updated in 2017, TranPlanMT defines MDT's policy direction for operating, preserving, and improving Montana's transportation system over a 20-year period. A transportation system security section was created in the 2007 update and includes transportation security related goals and actions to support the statewide transportation planning process (10-5).

Montana Emergency Response Framework (2017)

Montana Emergency Response Framework (MERF, 2017) presents a structure for utilizing the emergency response and recovery resources of state, local, and other agencies. It describes the activities necessary to prepare for and respond to events stemming from natural, technological, and man-made hazards and the roles and responsibilities of all participants dealing with these events. This plan also provides a comprehensive all-hazards plan designed to provide the basis for an effective and coordinated response to disasters and emergencies that impact our state (10-6).

LOCAL PLANS

Multijurisdictional Pre-Disaster Mitigation Plan (2012)

The Yellowstone County Disaster and Emergency Services prepared a Multijurisdictional Pre- Disaster Mitigation Plan (PDM) in 2012. This PDM is an update to the 2004 plan and consists of a multi-jurisdictional assessment of each identified hazard, and updated recommendations for hazard mitigation planning actions moving forward. The 2012 PDM Update identifies opportunities and suggestive actions, which could reduce the impact of future disasters or emergencies (10-7).

Emergency Operations Plan for Billings, Laurel, & Broadview and Yellowstone County (2011)

The Emergency Operations Plan (EOP) provide s public officials of the City of Billings, City of Laurel, Town of Broadview, and Yellowstone County with a plan for carrying out their responsibilities in case of a disaster that threatens the lives and property of city and county citizens and is beyond the capacity of the appropriate emergency service(s) to control. It provides an organizational framework and response capability from which the cities and county can respond to natural, technological, or war caused emergencies that require comprehensive and integrated responses thus meeting the emergency services legal mandates. This document is currently being updated with an expected publication date of late 2018 (10-8).

Security Considerations

COORDINATION

The Yellowstone County Disaster and Emergency Services is an integrated effort to prevent or minimize the seriousness of emergencies and disasters, and to plan and coordinate the community's response to them should they occur. This effort requires establishing partnerships among professional emergency management personnel to prevent, respond to, and recover from disasters. Coordination is a key factor in establishing an emergency management program, and continual improvement saves lives and reduces losses from disasters. The Yellowstone County Disaster and Emergency Services are responsible for:

- Developing and updating emergency plans,
- Coordinating communications of emergency responders,
- Maintaining a county-wide system of alerting sirens,

- Maintaining the emergency operations center,
- Participating and coordinating exercises with all emergency responders,
- Recommending an emergency declaration or disaster declaration to the policy bodies of city and county government, preparing disaster declaration resolutions, serving as the City and/ or County's authorized agent for FEMA declare disasters (e.g. floods of 1978 and 1997), and managing the authorized emergency levy, and
- Serving as the County Fire Warden and administrator of the rural fire protection program.

In addition to the Yellowstone County Disaster and Emergency Services, there are several agencies and organizations that are involved with planning and implementation of security within the Billings Urban Area. The EOP and Multijurisdictional PDM identify the various agencies involved in these planning and implementation efforts and can be used as future references for agency consultation.

POTENTIAL HAZARDS

The Multijurisdictional PDM reviewed and identified the potential hazards for the Yellowstone County. Table 10.1 presents the potential hazards for the Yellowstone County. The Multijurisdictional PDM presents information on each potential hazard, latest occurrence(s), and summary of vulnerability and impact to Yellowstone County. Below is an overview of the information presented on transportation/mobile incidents in the Multijurisdictional PDM as it relates directly to the regional transportation system.

Table 10.1 Potential Hazards in Yellowstone County

Hazard Type	Event	Data Sources	Location Specific
Water	Flooding	Preliminary Flood Insurance Study 2010	Yes
	Dam Failure	2004 PDM Plan / Montana Department of Natural Resources & Conservation	Yes
Wildfire	Wildfire	Community Wildfire Protection Plan	Yes
Weather	Wind and Hail Storm	Spatial Hazard Events & Losses Database	County
	Tornado	Spatial Hazard Events & Losses Database	County
	Winter Storm	Spatial Hazard Events & Losses Database	County
	Drought / Insect Infestation	Montana Department of Natural Resources & Conservation	County
Geologic	Expansive Soil	Montana Bureau of Mines & Geology	Yes
	Landslide	Montana Bureau of Mines & Geology	Yes
	Earthquake	HAZUS	County
	Volcanic Ash	US Geological Survey	County
Manmade	Urban Fire	2004 PDM Plan	County
	Transportation/Mobile Incident	US Department of Transportation	County
	Hazardous Materials Incident/Accident-Fixed	US Environmental Protection Agency Triexplor Database	County
	Terrorism/Bio-Terrorism	2004 PDM Plan	County

Hazard Type	Event	Data Sources	Location Specific
	Civil Disturbance/Riot/Labor Unrest	2004 PDM Plan	County
	Enemy Attack	2004 PDM Plan	County

Yellowstone County is identified as a high probability of occurrences of transportation/mobile incidents because of the larger population, industrial base within the County, interstate highways, and major rail lines running through downtown. A transportation/mobile incident is any incident that occurs for which the exact location cannot be predetermined. Any incident involving a mode of transportation including car, truck, rail, pipeline, air, or mass transit is classified as a mobile incident. These can include incidents involving the transport of hazardous materials. Risks will increase as the population of the Billings Urban Area continues to increase. Additionally, damaging impacts to transportation infrastructure by the secondary effects of other potential hazards (storms, flooding, earthquakes, landslides, etc.) could also contribute to increased risks of future transportation/mobile incidents.

With each of the potential hazards, it is critical to provide connectivity and alternate routes and maintain this infrastructure throughout the regional transportation system. For more details on the potential hazards in Yellowstone County, refer to the latest Multijurisdictional PDM.

CRITICAL INFRASTRUCTURE

The entire multimodal transportation system plays a role in providing for local, regional, and national security. Facilities that are considered crucial or vital to security include elements of the system that are perceived or known to be most vulnerable. These tend to be at specific points and on connecting segments of the transportation system. Examples of the specific points on the system are bridges, interchanges, and intermodal facilities. Examples of connecting segments are evacuation routes, state and interstate highways/freeways, transmission lines, and mainline freight and passenger rail lines.

As shown in Figure 10-1, critical roadways that are part of the National Highway System (NHS) in the Billings Urban Area include the following (10-9):

- Interstate 90 (NHS, Eisenhower Interstate System)
- Interstate 94 (NH, Eisenhower Interstate System)
- Montana Route 3 (NHS, STRAHNET Route)
- US Route 87 (NHS, Other NHS Route)
- King Avenue (MAP-21 NHS Principal Arterial)
- Zoo Drive (MAP-21 NHS Principal Arterial)
- Laurel Road (MAP-21 NHS Principal Arterial)
- 1st Avenue S (MAP-21 NHS Principal Arterial)
- Montana Avenue (MAP-21 NHS Principal Arterial)
- 1st Avenue N (MAP-21 NHS Principal Arterial)

Figure 10-1. National Highway System: Billings, MT

The National Highway System (NHS) consists of roadways important to the nation’s economy, defense, and mobility. The NHS includes the following categories within the Billings Urban Area:

- Interstate: The Eisenhower Interstate System of highways retains its separate identity within the NHS.

- Other Principal Arterials: These are highways in rural and urban areas which provide access between an arterial and a major port, airport, public transportation facility, or other intermodal facility.
- Strategic Highway Network (STRAHNET): This is a network of highways which are important to the United States' strategic defense policy and which provide defense access, continuity, and emergency capabilities for defense purposes.

Significant intermodal facilities within the Billings Urban Area include:

- MET Transfer Centers (Stewart Park and Downtown),
- Billings Logan International Airport,
- Montana Rail Link railroad facilities, and
- Burlington Northern Santa Fe railroad facilities.

COMMUNITY PRIORITIES

As part of the 2004 Multijurisdictional PDM, a community involvement process was conducted to assess the community's ranking of all potential hazards. This ranking was reviewed for the 2012 Multijurisdictional PDM with the rankings staying unchanged. Table 10-2 summarizes the community rankings of potential natural and man-made hazards.

As shown in Table 10.2, the top rankings have a direct relationship with the regional transportation system (i.e., connectivity, providing alternate routes, etc.) in the event one occurred. Therefore, it is critical for the MPO and region to continue to collaborate on security items as part of the transportation planning process and maintenance of the Multijurisdictional PDM.

Table 10.2. Community Rankings of Natural and Man-made Hazards in Yellowstone County

Hazard	History	Vulnerability	Maximum	Probability	Rank
Natural Hazard Vulnerability Ranking for Yellowstone County					
Flooding	High	High	High	High	1
Wildfire	High	High	High	High	2
Wind and Hail Storms	High	High	High	High	3
Tornado	Moderate	Moderate	Moderate	Moderate	4
Winter Storms	High	Moderate	Moderate	Moderate	5
Drought	High	Low	Moderate	Moderate	6
Insect Infestations	Moderate	Moderate	Moderate	Moderate	7
Urban Fire	Low	Low	Moderate	Low	8
Dam Failure	Low	Moderate	Moderate	Low	9
Expansive Soil	Moderate	Low	Low	Moderate	10
Landslides	Moderate	Low	Low	Low	11
Earthquake	Low	Low	Low	Low	12
Volcanic Ash	Low	Low	Low	Low	13

Hazard	History	Vulnerability	Maximum	Probability	Rank
Manmade Hazard Vulnerability Ranking for Yellowstone County					
Transportation/Mobile Incident	Moderate	Moderate	High	High	1
Hazardous Materials Incident/ Accident-Fixed	Moderate	Moderate	High	High	2
Terrorism/Bio-Terrorism	Low	Moderate	High	Low	3
Civil Disturbance/Riot/Labor Unrest	Moderate	Moderate	Moderate	Moderate	4
Enemy Attack	Low	Moderate	High	Low	5

Recommended Strategies

Several recommended strategies are identified for incorporating security in the transportation planning process. These recommended strategies include:

- Continue to establish partnerships between agencies to incorporate security elements into existing and future plans.
- Implement the proposed mitigation actions identified in the Yellowstone County Multijurisdictional PDM, in particular the following related transportation projects:
 - Highway 3 Stormwater Controls: Study options for mitigating stormwater runoff from Highway 3 near the Airport.
 - Continued community outreach on floodplain awareness, firewise demonstrations, severe storm education, and school safety.
- Involve identified security stakeholders throughout the transportation planning process, including analysis of transportation system security at the program and project levels associated with both the development of subsequent LRTPs and transportation improvement program (TIP) updates, as well as ongoing corridor and system-wide project evaluations.
- Implement key transportation projects that provide alternate routes and connections within the Billings Urban Area, such as the Billings Bypass Arterial and Inner Belt Loop.
- Implement ITS technologies (i.e., signage, signal systems, wayfinding, etc.) to improve communications, manage the transportation system, and allow for deployment of signal timing contingency plans during potential hazards/events.

References – Chapter 10

- 10-1. Fitting the Pieces Together, Improving Transportation Security Planning in the Delaware Valley. Delaware Valley Regional Planning Commission. March 2011.
- 10-2. Code of Federal Regulations (23 CFR 450.306). Scope of the Metropolitan Transportation Planning Process. Federal Highway Administration Department of Transportation. April 1, 2017
- 10-3. Code of Federal Regulations (44 CFR 201.6). Local Mitigation Plans. Federal Emergency Management Agency. Department of Homeland Security. October 1, 2017
- 10-4. Disaster Mitigation Act of 2000. Federal Emergency Management Agency. October 1, 2000.

10-5. TranPlanMT – Plan Summary. Montana Department of Transportation. DOWL. November 2017.

10-6. Montana Emergency Response Framework. Montana Disaster & Emergency Services. 2017.

10-7. Multi-Jurisdictional Pre-Disaster Mitigation Plan Update 2012. Yellowstone County Disaster and Emergency Services. Atkins. January 2012.

10-8. Emergency Operations Plan for Billings, Laurel, & Broadview and Yellowstone County. Yellowstone County Disaster and Emergency Services. June 2011.

10-9. Map of National Highway System: Billings, MT. U.S. Department of Transportation Federal Highway Administration. May 1, 2015.

Chapter 9 Safety

A variety of federal, state, and local requirements and guidelines address incorporating safety into the transportation planning process. This chapter presents background information, analysis, and strategies to address safety within the Billings Urban Area. Previous chapters also include discussion on crash data and analysis for their respective modes.

Overall, safety is a key element in the transportation planning process. As such, the 2018 LRTP outlines several goals related to safety elements:

- Goal 1: Safe – Develop a safe transportation system.
- Goal 4: Environment – Develop a transportation system that protects the natural environment and promotes a healthy sustainable community.

With new research and available data, safety can be incorporated in planning, project development, and operation/maintenance activities to effectively identify countermeasures to reduce crashes and crash severity for the Billings community.

Background

FEDERAL REQUIREMENTS

MPOs must comply with federal requirements associated with the transportation planning process as outlined in the 23 CFR Part 450 for Metropolitan Transportation Planning and Programming. The planning process should address increasing the safety of the transportation system for motorized and non-motorized users. The metropolitan transportation planning process should be consistent with the Strategic Highway Safety Plan, as specified in 23 U.S.C. 148, and other transit safety and security planning and review processes, plans, and programs, as appropriate (9-1).

STATE PLANS

TranPlanMT, Montana's long-range transportation plan, was last amended in 2017 (9-2). This plan cites safety as an overarching goal which is applied in nearly every MDT decision-making process for all projects and programs. The MPO participated in a workshop in October 2016 to review statewide and MPO goals to ensure consistency and foster collaboration. The statewide plan lists the following eight goals to improve transportation system safety.

- Maintain infrastructure condition to provide safe conditions for the traveling public.
- Continue improvements to the safety rest area program to provide safe stopping locations for the traveling public.
- Target safety improvement projects to address crash pattern locations.
- Incorporate technology advancements in project development to improve safety.
- Leverage relationships with education, enforcement, emergency medical services, and engineering partners to foster a culture of safety on Montana roadways.
- Reduce unsafe driving behavior through targeted focus on transportation safety emphasis areas identified in Montana's Comprehensive Highway Safety Plan.
- Enhance crash data integration and analysis to support decision making and data-driven problem identification.
- Provide leadership in air traveler safety through promotion of flight safety, accident prevention, and air search and rescue programs.

Montana’s Comprehensive Highway Safety Plan (9-3) was amended in 2015, as required by the 2014 Moving Ahead for Progress in the 21st Century Act (MAP-21) federal legislation. The CHSP is intended to be a living document to help guide the State of Montana to effectively address the state’s safety needs. The vision of the plan is “zero fatalities and zero serious injuries” on any public roadway in the State. The goal of the plan is “to reduce fatalities and incapacitating injuries in the State of Montana by half in two decades, from 1,704 in 2007 to 852 by 2030.” To accomplish the goal, the State has established three overarching safety strategy areas:

- Improve the accuracy, completeness, integration, timeliness, uniformity, and accessibility of data used in traffic safety analysis;
- Support the essential role of Emergency Medical Services in reducing the severity of injury outcomes and the technologies and systems necessary to advance collaboration with all safety partners; and
- Collaborate across agencies, organizations, and with the public to improve the safety culture and promote the institutionalization of Vision Zero.

In addition, three emphasis areas are identified in the CHSP: roadway departure and intersection crashes, impaired driving crashes, and occupant protection.

LOCAL PLANS

The Billings Community Transportation Safety Plan, shown in Figure 9-1 was completed in 2016 (9-4). The plan takes a data-driven approach to identify safety issues, determine areas in need of increased emphasis, and define strategies to reduce roadway fatalities and serious injuries. The goal for the plan is to reduce fatalities and serious injuries in the Billings MPO area by 20% from 70 in 2014 to 56 by 2020 based on a five-year rolling average calculation. The plan defines three emphasis areas: unrestrained occupants, impaired driving, and inattentive driving/speeding. A group of local Billings safety partners representing education, law enforcement, emergency medical services, and engineering organizations met monthly to evaluate crash trends, review existing safety programs and best practices, identify gaps, and develop safety strategies outlining specific methods, implementation partners, resources, and action steps to reduce fatalities and serious injuries in Billings.

Figure 9-1. Recent Safety Plan Completed by the MPO



The Yellowstone County and City of Billings 2016 Growth Policy (9-5) is a guide for local officials and community members in making decisions that will affect the future of the community. The plan has several growth guidelines that focus on safety within different elements of the plan. The following three guidelines were listed as essential investments related to safety:

- The **safety** of all users and the connectivity of the transportation system are important criteria to consider in roadway design and transportation plans.

- Planning and construction of **safe** and affordable interconnected sidewalks and trails are important to the economy and livability of Billings.
- Public health, **safety** and emergency service response are critical to the well-being of Billings' residents, businesses, and visitors.

City of Billings Safe Routes to School Study (2011) developed recommendations for 22 elementary schools in Billings (9-6). The goals of the study were to 1) enhance the safety of students traveling to and from school and 2) increase the number of students walking or bicycling to school. Projects from the SRTS study are included in the project lists for pedestrians and bicyclists in Chapter 8.

Lockwood School District Safe Route to School Plan (2009) developed recommendations to enhance the safety of students traveling to and from school in Lockwood School District (9-7). Projects from the plan have been included in the project lists for pedestrians and bicyclists in Chapter 8.

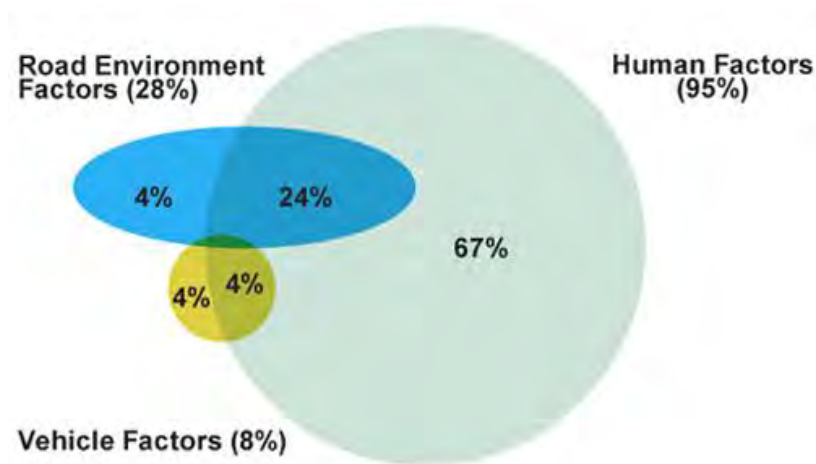
Billings Area Bikeway and Trail Master Plan Update (2017) developed recommendations to provide connectivity and options for bicyclists in the Billings Urban Area. Two of the eight goals focused on safety: 1) Enforcement: Increase enforcement on City/County streets, trails and bikeways to make interactions between motorists, bicyclists, and pedestrians safety; and 2) Health and Safety: Encourage healthy activities through increased access and safe infrastructure for bicyclists and pedestrians. Projects from the plan have been included in the project lists for pedestrians and bicyclists in Chapter 8.

Safety Considerations

INTRODUCTION TO THE 5 “E” APPROACH TO SAFETY

Motor vehicle crashes generally involve multiple contributing factors, shown in Figure 9-2, which may be related to drivers, the roadway, or the vehicles(s) involved, thus making transportation safety a multidisciplinary concern. Human factors are involved in 95% of crashes, while the road environment is a contributing factor in only 28% of crashes (9-8).

Figure 9-2. Contributing Factors to Crashes



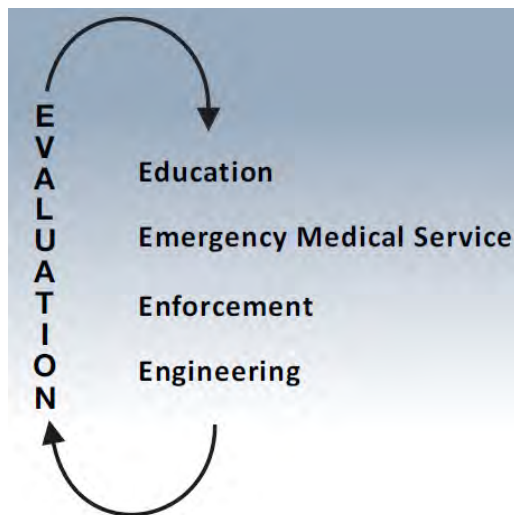
This means we cannot “engineer” our way to safety, and that education and enforcement must be integrated into a safety culture and implementation strategies. The State of Montana and the Billings Urban Area safety goals cannot be achieved by one agency working alone. Accomplishing the Billings community’s safety goals

requires a collaborative approach that draws from several key areas associated with traffic safety, as listed below.

- **Education** – States and cities incorporating strong educational components report declines in fatality rates (9-9). Effective prevention education programs typically include some combination of knowledge content, social norming, personal commitment, and resistance skill strategies (9-10).
- **Enforcement** – Law enforcement officials can encourage behavior changes of transportation system users through enforcement, education, and incarceration.
- **Emergency Medical Service (EMS)** – EMS provides the last opportunity to improve health outcomes from motor vehicle crashes and other medical emergencies. EMS data is highly reliable and valuable to crash analysis
- **Engineering** – State, county, and city engineers consider safety during planning, design, construction, operation, and maintenance of transportation facilities.
- **Evaluation** – The MPO ties the previous four elements together by measuring the effectiveness of implemented solutions and deploying new solutions to address evolving needs.

The 5 E's of safety, as shown in Figure 9-3 define the broad stakeholder communities who are responsible for making the transportation system safe for all users.

Figure 9-3. The 5 E's



Safety Analysis

CRASH DATA SUMMARY

MDT provided historical crash data for crashes involving various modes over the five-year period from January 1, 2013 to December 31, 2017. A total of 14,577 crashes were reported over the five-year period in the study area. Figure 9-4 illustrates the locations of each crash type.

Insert Map Figure 9-4. Crashes by Category (2013-2017)

A total of 4,005 injury crashes occurred (27% of total crashes) which resulted in 5,940 injuries over the five-year period. Of the injury crashes, 243 (6% of injury crashes) resulted in an incapacitating injury.

In addition, 42 fatal crashes (0.3% of total crashes) resulted in 42 fatalities. Tables 9.1 and 9.2 show the breakdown of fatalities by road user type, drug/alcohol involvement, and seatbelt use. Motorcyclists made up 40% of all fatalities, followed by motor vehicle occupants (36%). Impaired driving factored into 40% of the fatal crashes; 60% of motor vehicle occupant fatalities were not wearing a seatbelt.

Table 9.1 Fatal Crash Road User Types (2013-2017)

Road User Type	Motor Vehicle Occupant	Motorcyclist	Pedestrian	Bicyclist	ATV
# Fatalities (Percent of Total)	15 (36%)	17 (40%)	8 (19%)	1 (2%)	1 (2%)

Table 9.2 Fatal Crash Attributing Factors (2013-2017)

Drugs / Alcohol Involved	Yes	No	Unknown
# Fatalities (Percent of Total)	17 (40%)	22 (52%)	3 (7%)
Seatbelt Used (Motor Vehicle Occupants Only)	Yes	No	Unknown
# Fatalities (Percent of Total)	3 of 15 (20%)	9 of 15 (60%)	3 of 15 (20%)

The goal set in the Billings CTSP is to reduce fatalities and serious injuries in the Billings MPO area by 20% from 70 in 2014 to 56 by 2020 (based on a five-year rolling average). As of 2017, there were an average of 65 fatalities and serious injuries in the study area per year, as shown in Figure 9-5. This represents a 7% reduction from the average of 70 reported in the CTSP for the 2010-2014 period. An additional 14% reduction will be required to meet the CTSP goal, which is to reduce the average to 56 by year 2020.

Figure 9-5. Fatal and Serious Injury Crashes (Five-Year Rolling Average)

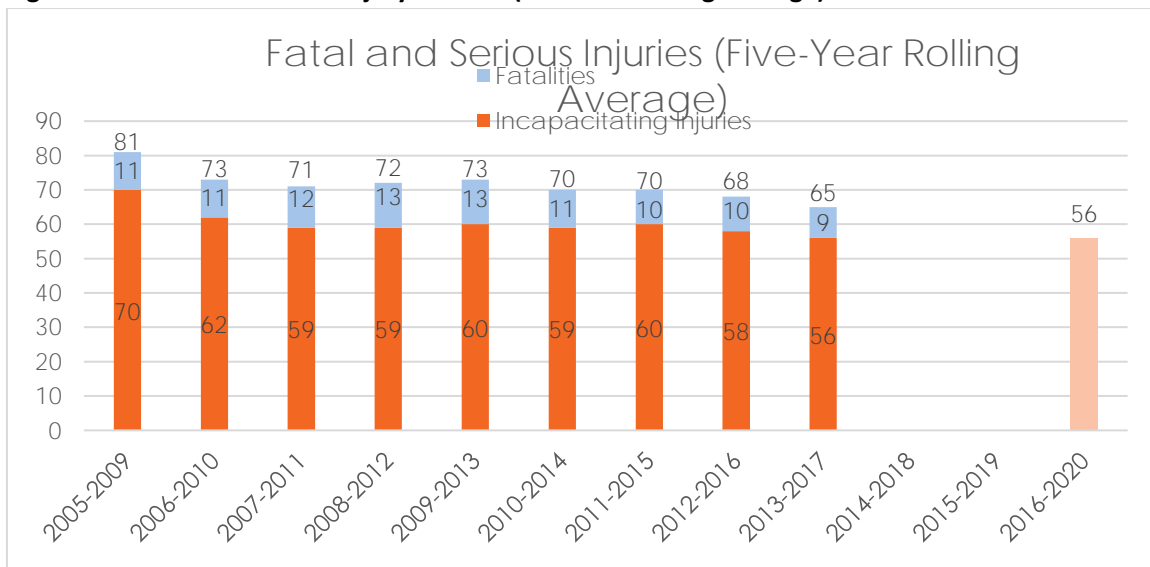


Figure 9-6 shows the location of crashes that resulted in a fatality or an incapacitating injury.

Insert Map Figure 9-6. Fatal and Serious Injury Crashes (2013-2017)

CRASH TYPES

This LRTP is focused on addressing safety for all transportation modes. Table 9.3 summarizes the crash severity for crashes involving a commercial vehicle, bus, at-grade rail crossing, pedestrian, or bicyclist. There were eight fatal pedestrian crashes and one fatal bicycle crash in the five-year period. There were two fatal crashes involving commercial vehicles.

Table 9.3 Commercial, Bus, Rail Pedestrian and Bicycle Crash Summary (2013-2017)

Category	Property Damage Only	Possibly Injury	Non-Incapacitating Injury	Incapacitating Injury	Fatal	Unknown	Total
Crash Involving a Commercial Vehicle (Truck >10,000 pounds)	410	64	25	9	2	3	513
Crash Involving a School Bus	37	12	2	0	0	1	52
Crash Involving MET Bus	1	2	0	0	0	0	3
Crash Involving Other Bus Types (e.g., Charter Bus)	52	11	1	0	0	0	64
Crash Related to At-Grade Rail Crossing	64	16	5	1	0	2	88
Pedestrian	42	84	42	31	8	3	210
Bicycle	28	68	35	8	1	0	140

CRASH RATES

Intersection and roadway segment crash rates are reported for high crash locations within the study area. The crash rate provides more information than crash frequency alone, as it factors in the number of vehicles entering an intersection or roadway segment. This makes the crash rate an effective tool for comparing the relative safety of one intersection or segment to another. Of note, due to different crash reporting methods used in different jurisdictions, the crash rate is best used to compare the relative safety of an intersection compared to similar intersections within the same jurisdiction.

The crash rate equations are provided below. Intersection crash rate is the number of crashes occurring per million entering vehicles, while segment crash rate is the number of crashes per million vehicle miles of travel on the segment. All crash rates were calculated using annual average daily traffic (AADT) volumes from the 2017 Billings Urban Area Traffic Count Map (9-11).

$$\text{Intersection Crash Rate} = \frac{\text{Total Number of Crashes} * 1,000,000 \text{ Vehicles}}{\text{Vehicles per Day} * \text{Number of Years} * 365 \text{ Days per Year}}$$

$$\text{Segment Crash Rate} = \frac{\text{Total Number of Crashes} * 1,000,000 \text{ Vehicles}}{\text{Vehicles per Day} * \text{Number of Years} * 365 \text{ Days per Year} * \text{Segment Length}}$$

Table 9.4 shows the crash rates for the intersections with the highest number of crashes. Three of the intersections in the top ten are roundabouts located on the Shiloh Road corridor.

Table 9.4 Intersections with High Crash Rates (2013-2017)

	Intersection	Control Type	Total Crashes	Crash Rate
1	Shiloh Road & King Avenue W	Roundabout	149	3.57
2	Shiloh Road & Grand Avenue	Roundabout	129	2.67
3	24 th Street W & Rosebud Drive	Signal	84	1.62
4	Shiloh Road & Central Avenue	Roundabout	58	1.49
5	Central Avenue & N 15 th Street W	Signal	64	1.46
6	Main Street & 1 st Avenue N	Signal	92	1.35
7	27 th Street & 6 th Avenue N	Signal	85	1.35
8	King Avenue W & 24 th Street W	Signal	101	1.25
9	Main Street & Lake Elmo Drive	Signal	113	1.17
10	King Avenue W & 32 nd Street W	Signal	72	1.15
11	27 th Street & 1 st Avenue N	Signal	53	1.13
12	Central Avenue & 24 th Street W	Signal	81	1.13
13	Grand Avenue & N 17 th Street W	Signal	59	1.13
14	King Avenue W & S 20 th Street W	Signal	94	1.07
15	Grand Avenue & Zimmerman Trail	Signal	56	1.07
16	Main Street & Wicks Lane	Signal	62	1.02
17	24 th Street W & Monad Road	Signal	53	0.85
18	King Avenue W & Interstate-90 Single Point Interchange (SPI)	Signal	68	0.81
19	Main Street & Airport Road	Signal	66	0.71
20	Main Street & 6 th Avenue N	Signal	53	0.53

Table 9.5 shows crash rates for the roadway segments with the highest number of crashes. Three of the segments in the top ten are located on South 24th Street West from King Avenue to Broadwater. Additionally, five roadways, King Avenue, 24th Street, Central Avenue, Grand Avenue, and Main Street had multiple segments with the high crash rates in the study area.

Table 9.5 Roadway Segments with High Crash Rates (2013-2017)

Roadway Segment		Extent	ADT	Length (miles)	Total Crashes	Crash Rate
1	N 27th Street	Montana Avenue to 6 th Avenue N	16,595	0.4	386	29.5
2	King Avenue W	20 th Street to 24 th Street	24,100	0.5	310	15.2
3	Montana Avenue	27 th Street to Division Street	10,980	0.7	203	14.9
4	S 24 th Street W	King Avenue W to Monad Road	24,660	0.5	334	14.6
5	Central Avenue	19 th Street to 24 th Street	15,640	0.6	224	14.0
6	S 24 th Street W	Monad Road to Central Avenue	26,280	0.5	317	13.2
7	Central Avenue	Moore Lane to 15 th Street	16,895	0.5	219	12.9
8	Grand Avenue	Zimmerman Trail to Shiloh Road	12,160	0.8	230	12.8
9	24th Street W	Central Avenue to Broadwater Avenue	22,685	0.5	257	12.4
10	Grand Avenue	13 th Street to 17 th Street	18,810	0.5	214	12.4
11	King Avenue W	32 nd Avenue to Shiloh Road	14,290	1.0	294	11.8
12	Central Avenue	24 th Street to 32 nd Street	13,790	1.0	277	11.1
13	Main Street	1 st Avenue N to 6 th Avenue N	36,440	0.4	248	10.5
14	N 27 th Street	6 th Avenue N to Rimrock Road	15,255	0.9	247	9.9
15	King Avenue W	24 th Street to 32 nd Street	25,660	1.0	368	7.9
16	Main Street	Airport Road to Hilltop Road	44,550	0.7	369	6.5
17	King Avenue W	Midland Road at Mallowney Lane to 20 th Street	40,470	0.7	349	6.5
18	Main Street	Hilltop Road to Wicks Lane	27,220	1.0	306	6.1
19	Main Street	Wicks Lane to US 87	16,840	1.1	199	6.0
20	Highway 87E	Interstate 90 to 1 st Avenue N	26,040	1.3	347	5.6

USE OF THE HIGHWAY SAFETY MANUAL IN PROJECT DEVELOPMENT

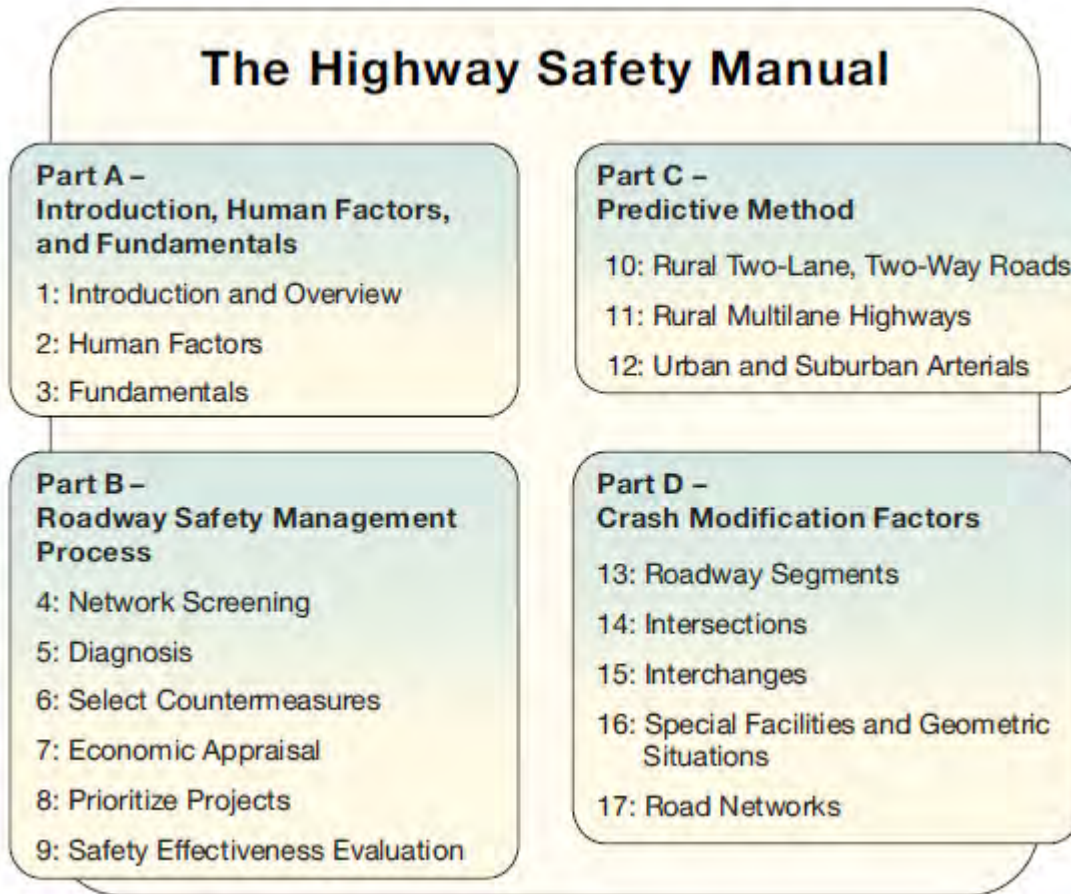
Roadway safety evaluation tools have historically included methods based on current and past data, typically centered on calculations dealing with crash rate, crash frequency, and crash severity. Planners and engineers now use a more comprehensive method available for examining roadway safety. The First Edition of the Highway Safety Manual (HSM) outlines methods and procedures to comprehensively manage roadway facilities and guide project decisions. HSM concepts include an integrated approach to safety-based improvements applicable to all aspects of planning, project development, and operation/maintenance.

Insert Text Box – How can the HSM be used on Projects?

- Planning – The HSM can be used to assess the safety performance of different corridor and intersection alternatives, as well as evaluate countermeasure costs and effectiveness.
- Design – The HSM can be used to assess the safety performance of design alternatives and design exceptions, such as lane width, shoulder width/type, median width/type, and intersection control.
- Implementation and policy projects - The HSM can be used to assess the safety effectiveness of potential countermeasures and to modify policies and design criteria.

The organization of the HSM is shown below in Figure 9-7 (9-12).

Figure 9-7. Organization of the Highway Safety Manual



Recommended Strategies

Several recommended strategies are identified for incorporating safety in the transportation planning process and furthering the implementation effort to meet the Billings community's safety goals. These recommended strategies include:

- Continuing to establish partnerships between agencies to incorporate safety elements into existing and future plans
- Continuing to support implementation of the recommended projects and strategies from the Billings Community Transportation Safety Plan, City of Billings Safe Routes to School Study, and Lockwood School District Safe Routes to School Plan
- Integrating the Highway Safety Manual methods and procedures into the planning, design, and
- policy components of the project development process
- Evaluating the high crash rate locations in more detail to determine specific countermeasures to address specific crash types

References – Chapter 9

- 9-1. Code of Federal Regulations (23 CFR 450.306). Scope of the Metropolitan Transportation Planning Process. Federal Highway Administration Department of Transportation. April 1, 2017.
- 9-2. *TranPlanMT – Plan Summary*. Montana Department of Transportation. DOWL. November 2017.
- 9-3. *Montana Comprehensive Highway Safety Plan*. Montana Department of Transportation. May 2015.
- 9-4. *Billings Community Transportation Safety Plan*. City of Billings/Yellowstone County Metropolitan Planning Organization. DOWL. December 2016.
- 9-5. *2016 City of Billings Growth Policy*. City-County Planning Division. August 2016.
- 9-6. *City of Billings Safe Routes to School Study*. City of Billings Engineering Division. Sanderson Stewart. August 2011.
- 9-7. *Lockwood School District Safe Routes to School Plan*. Lockwood School District. Peaks to Plains Design. 2009.
- 9-8. *Highway Safety Improvement Program Manual*.
<https://safety.fhwa.dot.gov/hsip/resources/fhwas09029/sec3.cfm>. Federal Highway Administration. July 2011.
- 9-9. *Other Measures*. <https://safety.fhwa.dot.gov/saferjourney1/library/countermeasures/59.htm>. Federal Highway Administration. November 2011.
- 9-10. *A Conceptual Framework for Reducing Risky Teen Driving Behaviors Among Minority Youth. Injury Prevention*. Juarez, P; Schlundt, D.G.; Goldzweig, I; Stinson Jr, N. April 2006.
- 9-11. *2017 Billings Urbanized Area Traffic Count Map*. <http://ci.billings.mt.us/2336/Transportation-Resources>. January 2018.

9-12. *Highway Safety Manual, 1st Edition*. American Association of State Highway and Transportation Officials. 2010.

2018 Billings Urban Area LRTP, TDM, & PPP

Steering Committee Meeting #7 (10 AM - 12 PM)

July 12, 2018

What We'll Cover Today

- ▶ Introductions
- ▶ Public participation plan
- ▶ Updates
 - ▶ Land use
 - ▶ Project ideas/review from public outreach
 - ▶ Intersection LOS analysis
- ▶ Chapter development
 - ▶ Draft pedestrian/bicycle
 - ▶ Draft security
 - ▶ Draft safety
- ▶ Other activities
- ▶ Travel demand model
- ▶ Next meeting

Public Participation Plan

- ▶ Update PPP based on SC comments and final team review
- ▶ Submitted Final PPP to MPO on July 6, 2018

YELLOWSTONE COUNTY PLANNING BOARD



public participation plan

July 6, 2018

prepared by

K KITTELSON
& ASSOCIATES

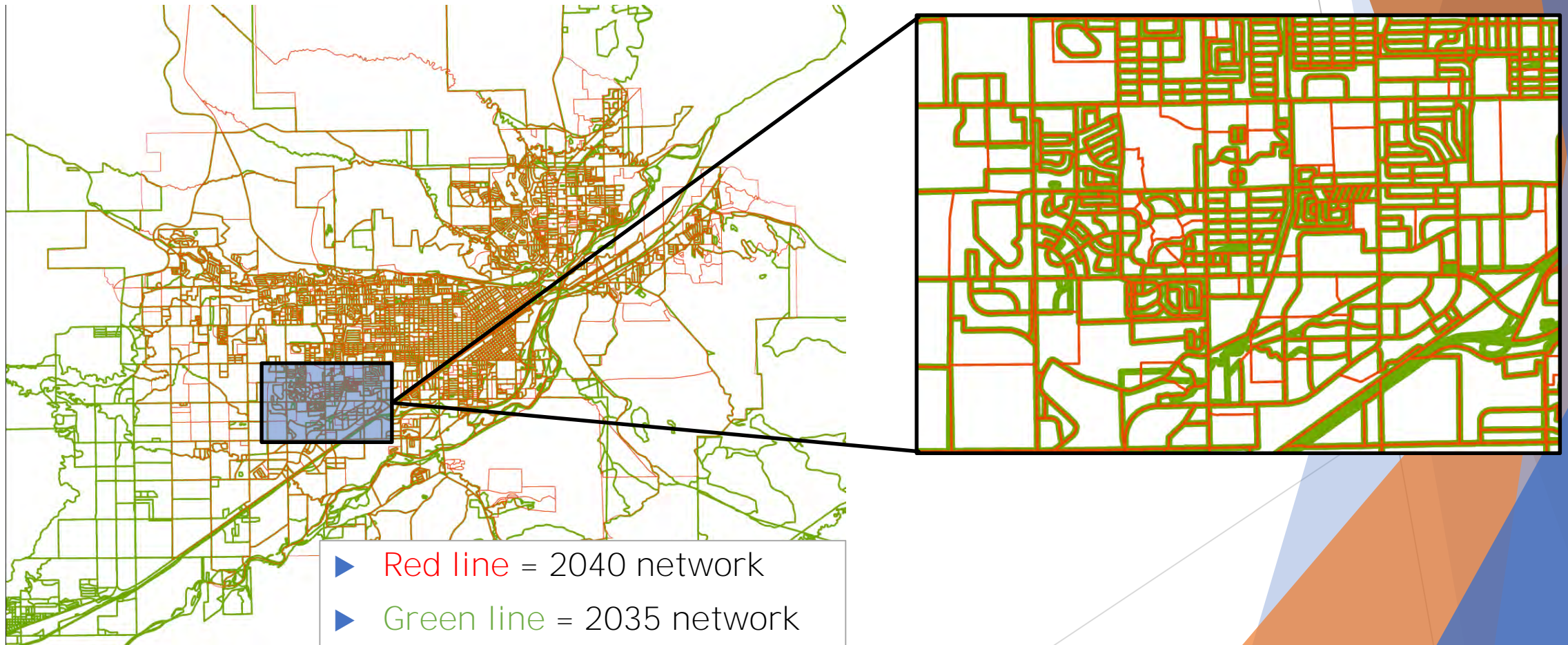
Adoption Schedule for Public Participation Plan

Group	Date	Public Comment Period
TAC	July 19	45 day comment period
Planning Board #1	July 24	
Planning Board #2	August 14	
City Council Work Session	August 20	
City Council	August 27	
Commissioners Discussion	August 20	
Commissioners	August 28	
PCC	September 11	

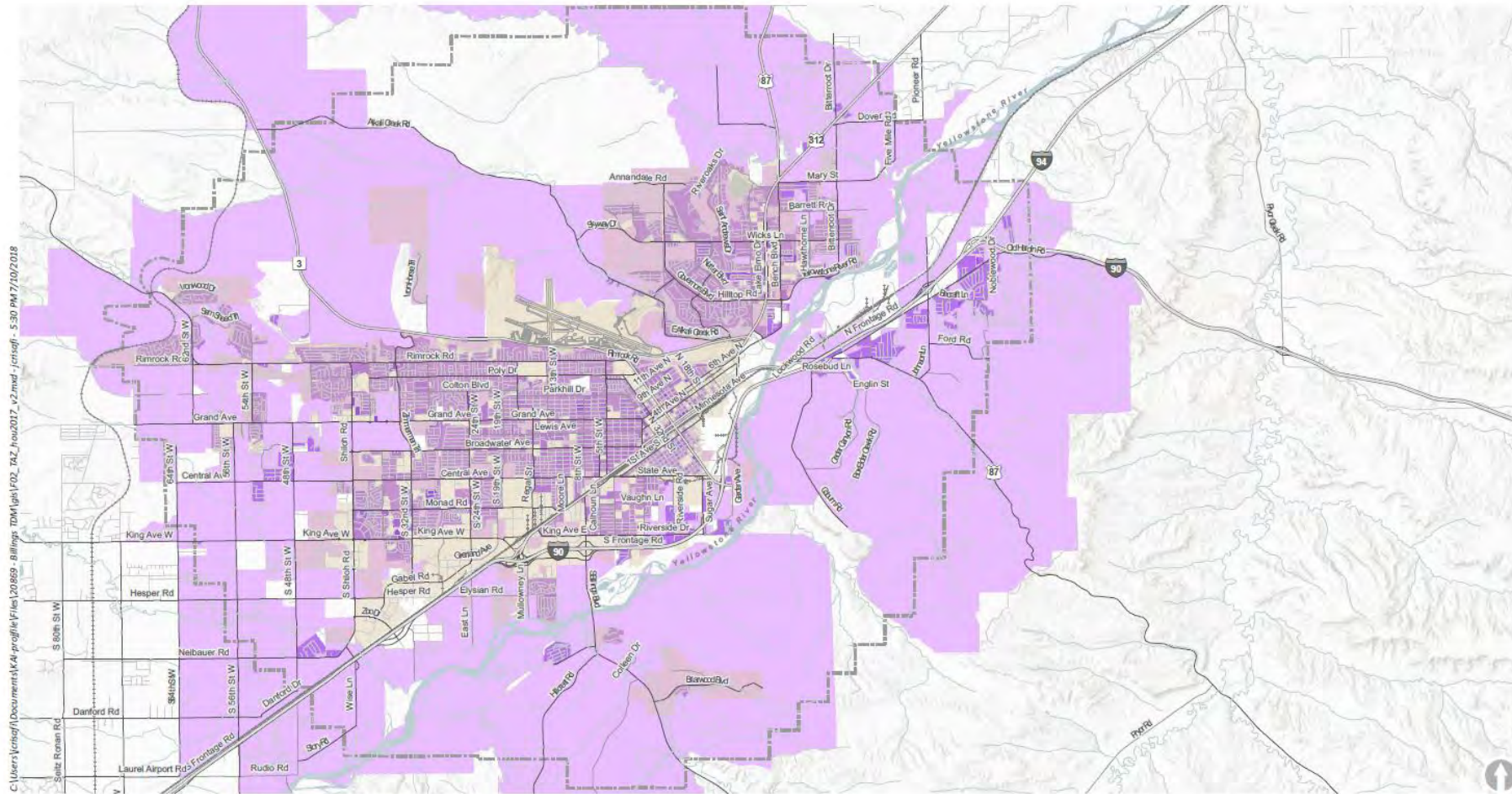
Land Use

- ▶ Prepared existing land use maps based on TAZ development (2,700 active TAZs) for the travel demand model
 - ▶ 2017 population density
 - ▶ 2017 housing density
 - ▶ 2017 employment density
- ▶ Working with MPO on future forecasts
 - ▶ 2035 forecasts from 2014 LRTP
 - ▶ Billings Growth Policy
 - ▶ Lockwood Growth Policy
- ▶ Provide 2040 maps and Draft Land Use Chapter at August SC Meeting

TAZ Network for Travel Demand Model and Land Use Chapter



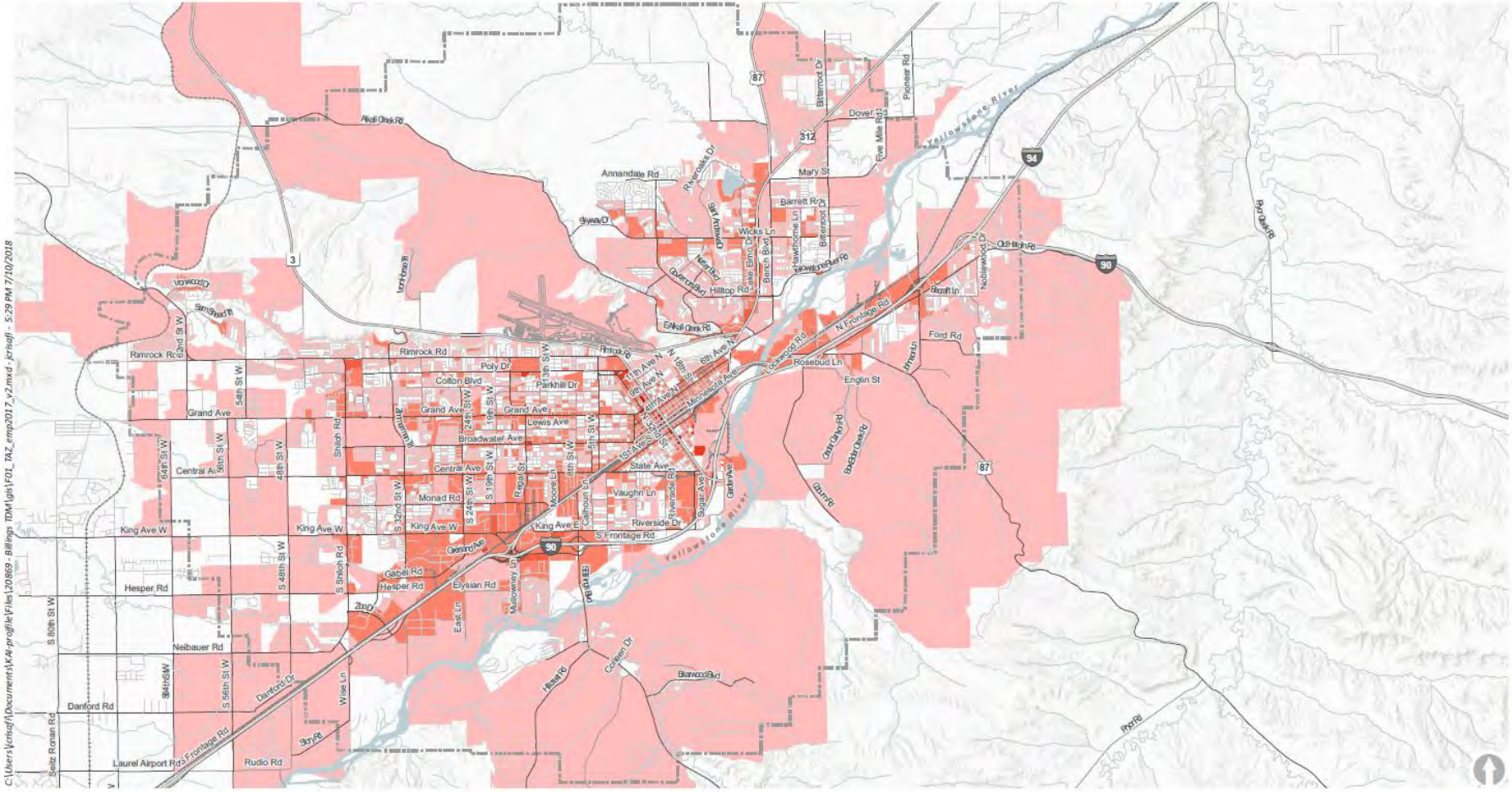
2017 Housing Density



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Figure 2
2017 Housing Density

2017 Employment Density



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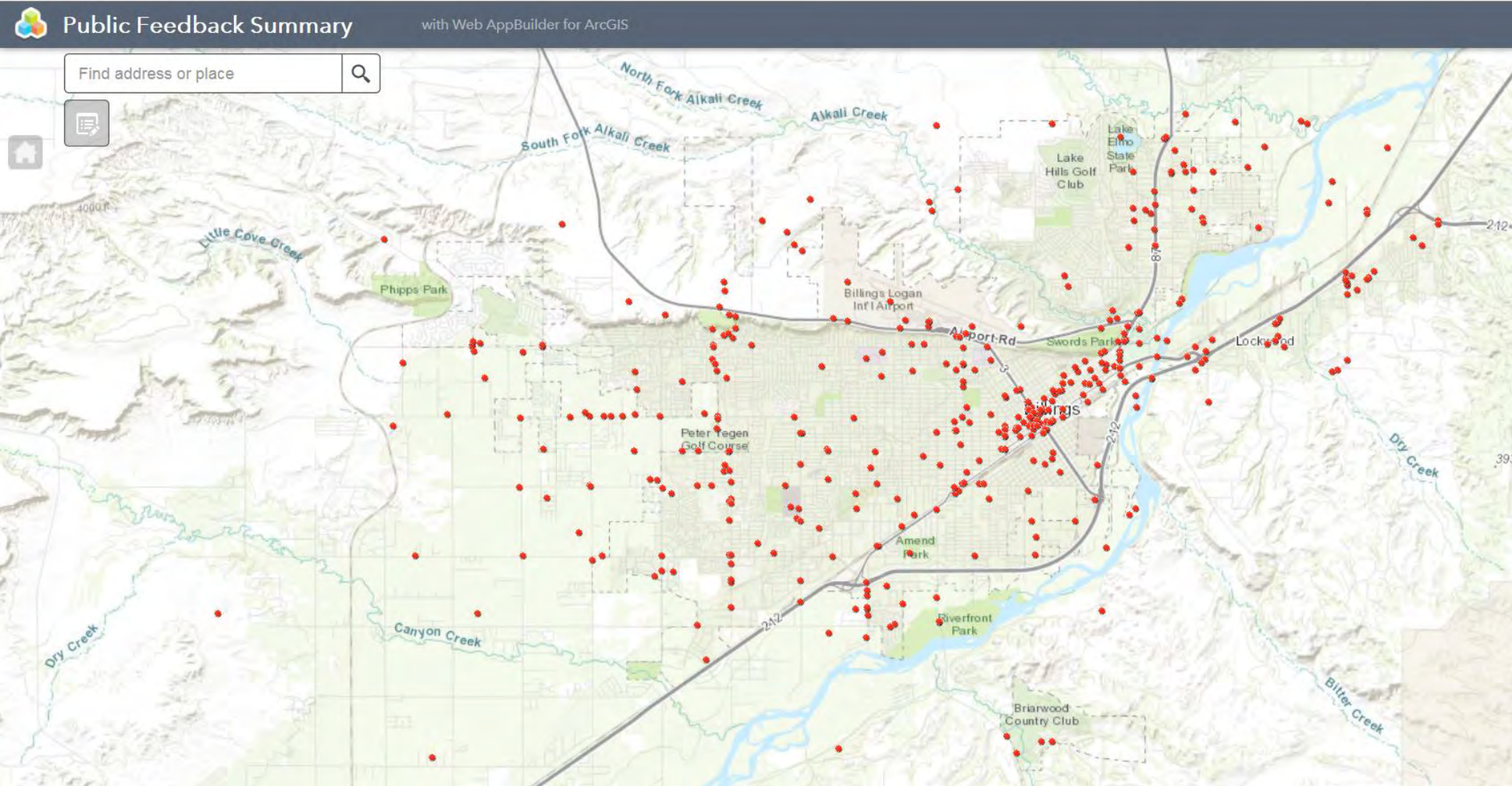
Study Area Employment Density (jobs/acre)

- 0 - 1
- 2 - 25
- 26 - 50
- 51 - 100
- >100

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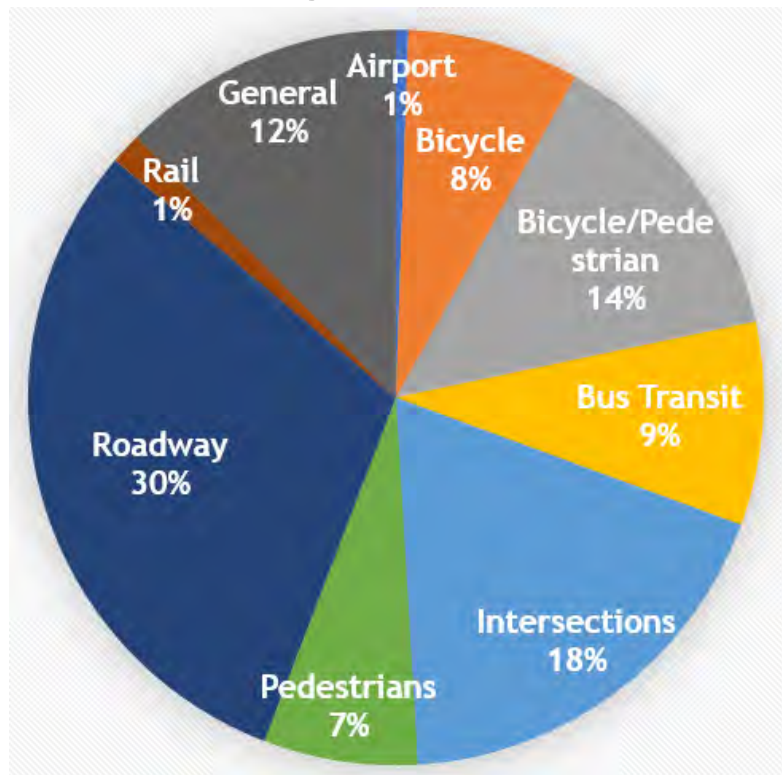
Figure 1
2017 Employment Density

Public Comment Map for Project Ideas



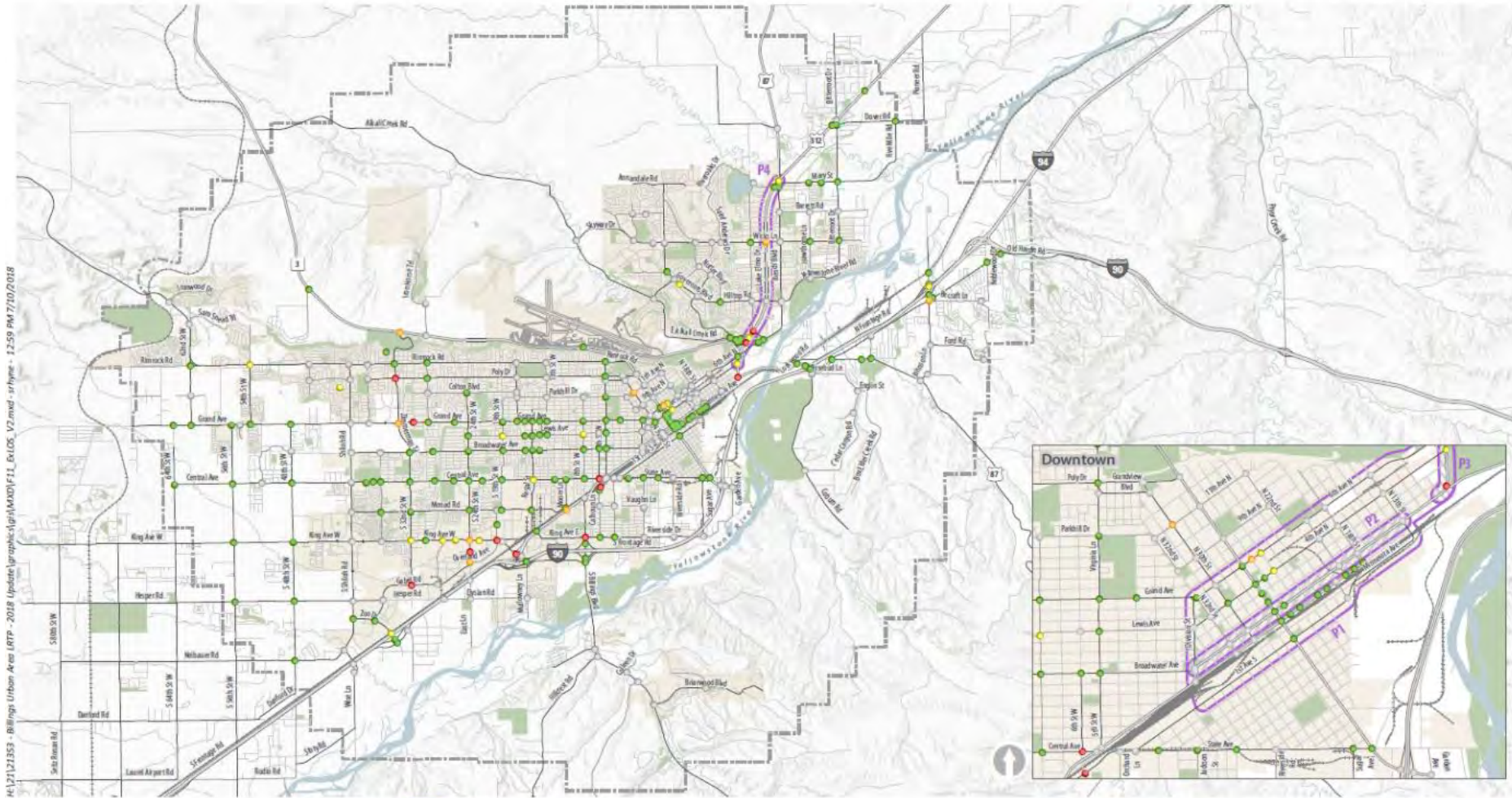
Project Ideas & Further Review

- ▶ 369 comments within the following focus areas



- ▶ General - 236
- ▶ Project identified in 2014 LRTP - 54
- ▶ Project with other study/plan - 21
- ▶ **Project potential - 58**
 - ▶ Analyzing these in more detail

Existing Conditions Level of Service Map



- ▶ LOS F
 - ▶ 13 intersections
- ▶ LOS E
 - ▶ 9 intersections
- ▶ LOS D
 - ▶ 17 intersections

Level of Service

- A thru C
- D
- E
- F
- Intersections with No Data (Collector, Arterial, Highway)

Roadway Classification

- Interstate
- Arterial
- Collector
- Local Streets

More detailed analysis is being performed in these areas by other studies/projects

- P1 - Downtown Traffic Study
- P2 - 1st Avenue North
- P3 - 1st Avenue N / Expo
- P4 - Main Street Signal Timing

Study Area

- Park
- City of Billings

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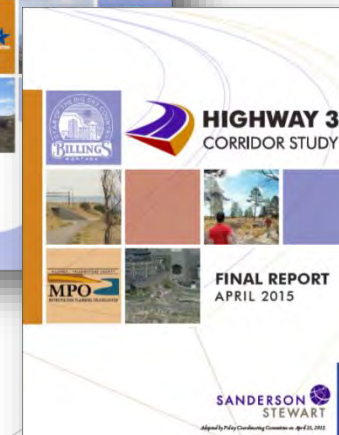
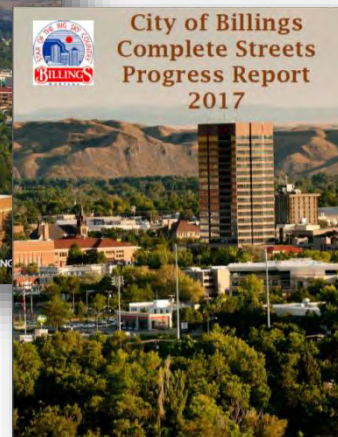
Figure A
Current (Collector or Higher Classified Roadway)
Intersection Level of Service

Pedestrian and Bicycle Chapter - Introduction

▶ Related goals...

- ▶ Safe, Environment, Pedestrians and Bicyclists, and Economic Vitality

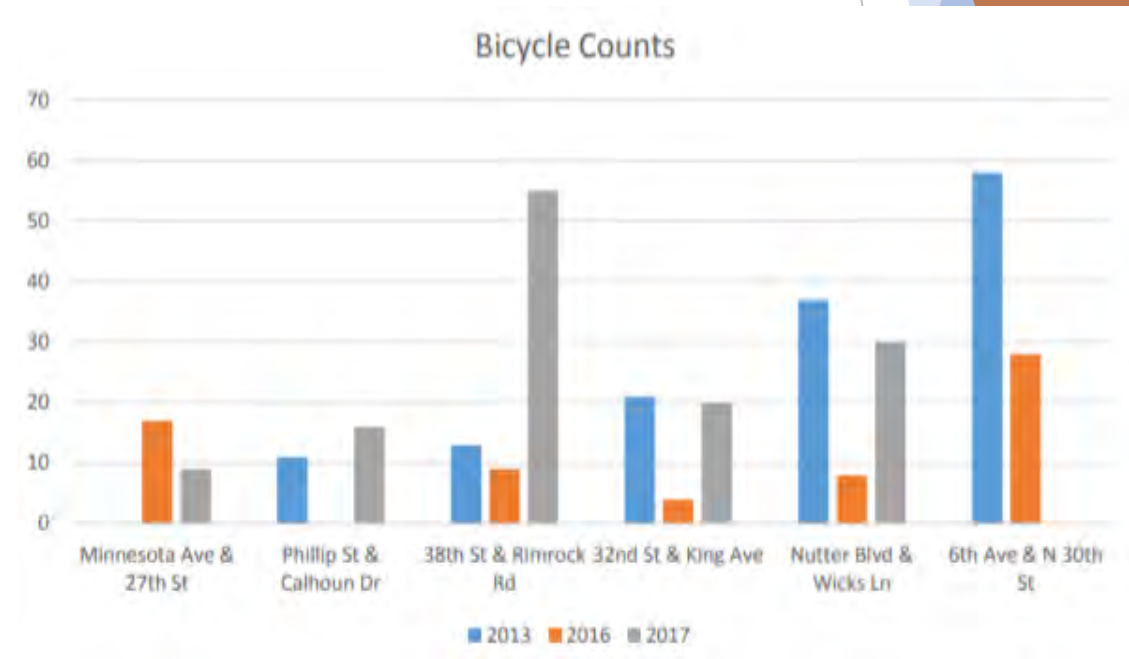
▶ Literature Review



Pedestrian and Bicycle Chapter - Existing Conditions

- ▶ American Community Survey (ACS) mode share
- ▶ Pedestrian/bicycle counts
- ▶ School-related mode share

Typical School Mode								
	Passenger	Driver	School Bus	Walk	Carpool	Public Transit	Bike	Grand Total
<i>Actual School Mode</i>								
Passenger	42.98%	0.85%	3.40%	1.28%	2.55%		0.43%	51.49%
Driver	6.81%	16.17%	0.43%					23.40%
School Bus	4.68%	0.43%	10.21%	0.43%	0.43%			16.17%
Walk	0.85%			4.26%				5.11%
Carpool	0.85%				0.85%			1.70%
Public Transit						0.43%		0.43%
Bike	0.85%		0.85%					1.70%
Total	57.02%	17.45%	14.89%	5.96%	3.83%	0.43%	0.43%	100.00%



Pedestrian and Bicycle Chapter - Existing Conditions (Pedestrians and Trails)

- ▶ Discussion on sidewalks and crossings
- ▶ Map identifying pedestrian and trail facilities

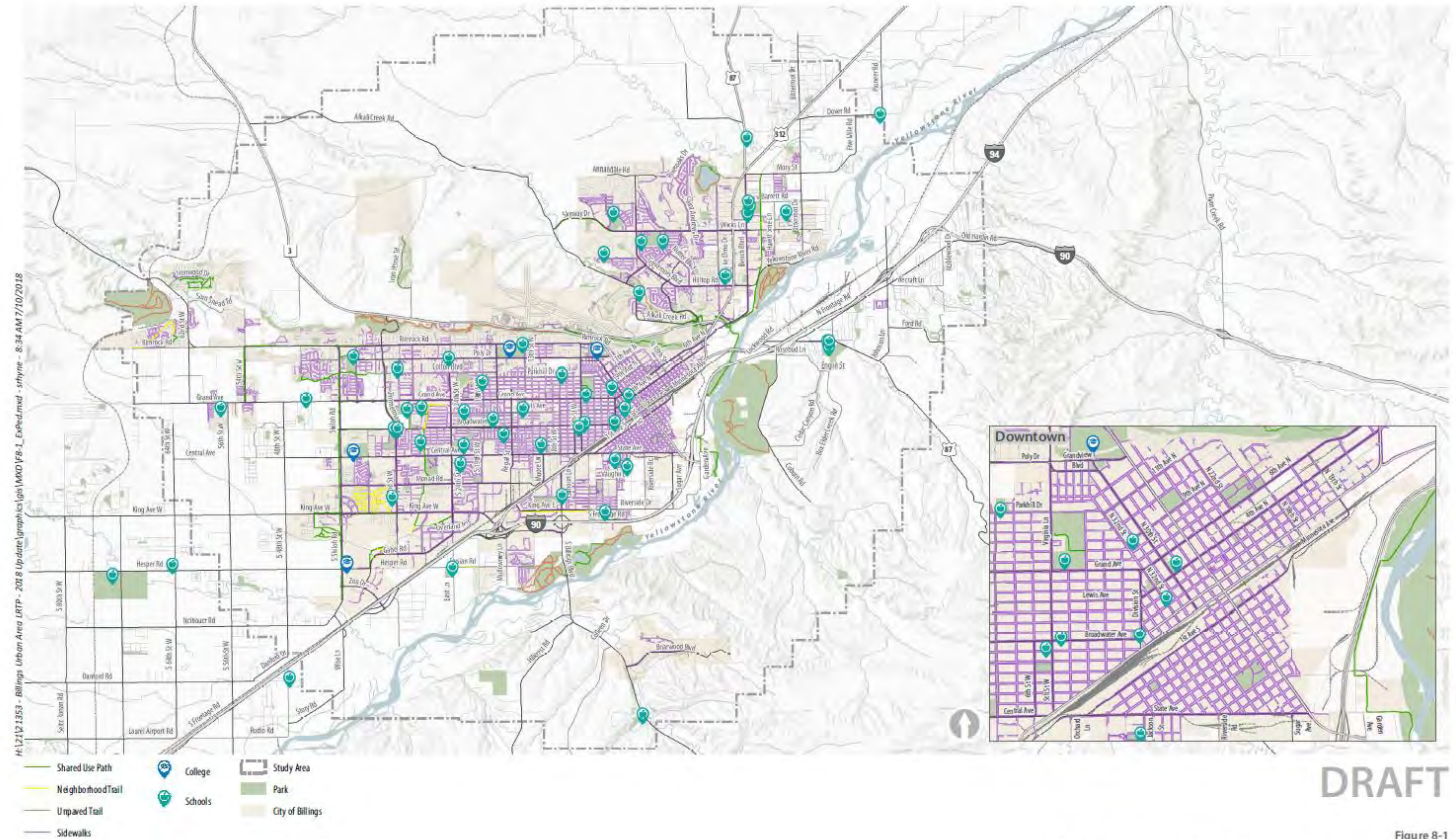


Figure 8-1
Existing Pedestrian and Trail Facilities

Pedestrian and Bicycle Chapter - Existing Conditions (Bikeways and Trails)

- ▶ Discussion on bike lanes, shared roadways, separated bike lanes, bicycle boulevards, and buffered bike lanes
- ▶ Map identifying bikeways and trail facilities

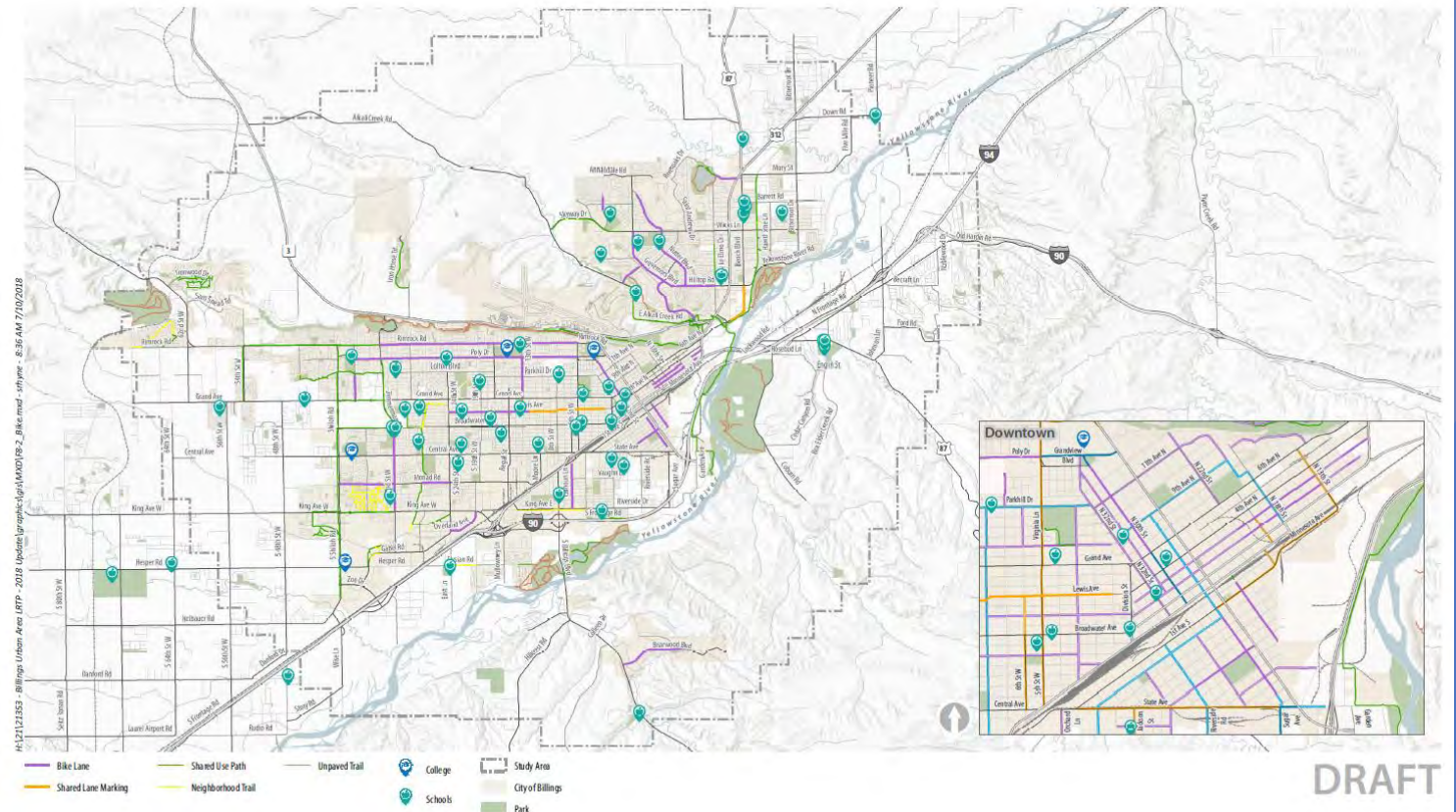


Figure B-2
Existing Bikeways and Trail Facilities

Pedestrian and Bicycle Chapter - Crash History

- ▶ Summarizes pedestrian and bicycle crashes by severity and annual crashes

Category	Possible Injury	Non-incapacitating (Injury Evident)	Incapacitating Injury	Property Damage Only	Fatal	Unknown	Total
Pedestrian	84	42	31	42	8	3	210
Bicycle	68	35	8	28	1	0	140
Total	152 (43%)	77 (22%)	39 (11%)	70 (20%)	9 (3%)	3 (1%)	350

- ▶ Maps identifying location of crashes

Year	2013	2014	2015	2016	2017
Bicycle Crashes	31	23	28	31	27
Pedestrian Crashes	49	38	40	37	46

Pedestrian and Bicycle Chapter - Needs and Initial Project List

▶ Refer to Excel File

▶ Based on the following...

- ▶ Needs and deficiencies from past studies
- ▶ Project list in 2014 LRTP
- ▶ New projects from:
 - ▶ West End Multimodal Planning Study
 - ▶ Lockwood Non-Motorized Transportation Plan
 - ▶ Billings Area Bikeway and Trails Master Plan
 - ▶ Highway 3 Corridor Study

A	B	C	D	E	F	G	
1	L RTP	Project ID	Proposed Name	Length (miles)	Project Description	Planning-Level Cost	Cost Reference
	2018	ENG-11	Upper Lockwood Irrigation Ditch	n/a	Placing trails in the Lockwood Irrigation Ditch District; upper ditch trail would run from Dickie Rd, past Coburn Rd, and provides an alternative trail alignment for people wishing to connect from the Johnson area to Lockwood School; greatest potential to safely move people from east side of Lockwood urbanized area to the west side; opportunities for tourism route	\$30 per linear foot	Lockwood Pedestrian Safety District Non-Motorized Transportation Plan (2015)
54	2018	ENG-12	Billings Bypass Sidewalk	n/a	Current 8-foot shoulder planned; letter submitted to the Yellow County Commission indicating desire for a separated facility parallel to the road to provide pedestrian safety	\$600,000	Lockwood Pedestrian Safety District Non-Motorized Transportation Plan (2015)
55	2018	ENG-13	Johnson Lane	n/a	Interest from property owners to construct trail corridor linking Johnson Ln at I-90 north to the Yellowstone River	Unknown	Lockwood Pedestrian Safety District Non-Motorized Transportation Plan (2015)
56	2018	ENG-14	Bicycle Tourist Route	n/a	Route to promote tourism within the LPSD; starting point at Holiday Inn Express; route follows Lockwood Irrigation District canal over to Coburn Rd; route then extends to the Four Dances Natural Area and Pictograph Caves State Park; route could extend to Billings with an Interstate Bridge connection, connecting into the proposed "Marathon Loop"; tourists staying at Holiday Inn Express could potential ride north towards the future Dover Park, connect to the Heights Kiwanis Bike trail, and also tie into the Marathon Loop	Unknown	Lockwood Pedestrian Safety District Non-Motorized Transportation Plan (2015)
57	2018		Grand Ave/54th St Crosswalk	n/a	Crosswalk enhancements; possibly a traffic signal; improve pedestrian safety near school zone	Unknown	West End Multimodal Planning Study (2016)
58	2018		Grand Ave Mid-block Crossing	n/a	Midway between 56th St W and 58th St W; mid-block pedestrian-actuated beacon, possibly a pedestrian hybrid beacon (HAWK signal) or rectangular rapid flashing beacon (RRFB)	Unknown	West End Multimodal Planning Study (2016)
59	2018		54th St W Mid-block Crossing	n/a	At terminus of multi-use path (north end of Cottonwood Park); mid-block pedestrian-actuated beacon, possibly a pedestrian hybrid beacon (HAWK Signal) or rectangular rapid flashing beacon (RRFB)	Unknown	West End Multimodal Planning Study (2016)
60	2018		Rimrock Rd/54th St Crosswalk	n/a	Crosswalk enhancements; possibly a traffic signal; to connect multi-use paths	Unknown	West End Multimodal Planning Study (2016)
61	2018		Grand Ave Multi-use Path	n/a	From 52nd Street West to west boundary of Tralis West Subdivision	Unknown	West End Multimodal Planning Study (2016)
62	2018		Grand Ave Sidewalk	n/a	From west boundary of Forta II Subdivision to HAWK signal	Unknown	West End Multimodal Planning Study (2016)
63	2018		54th St W Multi-use Path	n/a	From Grand Ave to north boundary of Cottonwood Park, along west side of 54th Street West	Unknown	West End Multimodal Planning Study (2016)
64	2018		54th Street W Sidewalk	n/a	From Grand Ave to north boundary of Grand Peak Subdivision, along east side of 54th Street West	Unknown	West End Multimodal Planning Study (2016)
65					Bicycle Lane Projects		
66	2014	BL1	Poly Drive	1.5	Add bike lanes from N 27th St to 13th St and 32nd St to 38th St W	\$88,704	Engineer's Estimate from Consultant Team
67	2014	BL2	Lake Elmo Drive	2.5	Add bike lanes from Main St to Pemberton Ln	\$110,880	Engineer's Estimate from Consultant Team
68	2014	BL3	Mary Street	2	Add bike lanes from Main St (Bench Blvd) to Five Mile Cr	\$118,272	Engineer's Estimate from Consultant Team
69	2014	BL4	S 24th Street West/Gabel Road	2.5	Add bike lanes from King Ave W to Zoo Dr	\$36,960	Engineer's Estimate from Consultant Team
70	2014	BL5	Lewis Avenue	3	Add bike lanes from Parkview Dr to Division St	\$44,352	Engineer's Estimate from Consultant Team
71	2014	BL6	Parkhill Drive	2	Add bike lanes from 19th St W to N 32nd St	\$29,568	Engineer's Estimate from Consultant Team
72	2014	BL7	Monad Road	3	Add bike lanes from 24th St W to Moore Ln	\$44,352	Engineer's Estimate from Consultant Team
73							

▶ List will be updated based on SC comments and public comments

Security Chapter

- ▶ Utilizes framework from 2014 LRTP
- ▶ Key updates...
 - ▶ Input from resource agencies
 - ▶ State plans (TranPlanMT and MERF)
 - ▶ Add National Highway System Map - Billings, MT
 - ▶ Recommended strategies
 - ▶ Some text edits

Chapter 10 Security

This chapter addresses security planning for the Billings Urban Area regional transportation system, including federal requirements; state and local plans; agency coordination; potential hazards; community priorities; and strategies.

Transportation security planning can reduce the negative impacts to the regional transportation system from major natural or manmade events. Some examples of these events are listed below:

- natural disasters, such as tornadoes, flooding, or blizzards;
- attempts to destroy elements of the regional transportation network to cause disruption;
- use of an element of the transportation system as a weapon, such as crashing a truck through a wall to deliver explosive materials; or
- large planned events, such as a state fair or parade.

The impacts of major events are reduced by being prepared; expediting responses; and aiding the recovery to normal services. In addition to preparing against, expediting responses to, and aiding in recovery from major events, transportation security planning helps keep people and goods moving, protects public health and life safety, supports economic productivity, and minimizes impacts of major events on the environment (10-1).

Background

FEDERAL REQUIREMENTS

There are several federal requirements associated with MPOs and the transportation planning process included in the 23 CFR Part 450 for Metropolitan Transportation Planning and Programming. The planning process should address increasing the security of the transportation system for motorized and non-motorized users. In carrying out the metropolitan transportation planning process, MPOs, States, and public transportation operators may incorporate or reference applicable emergency relief and disaster preparedness plans and strategies and policies that support homeland security, as appropriate to safeguard the personal security of all motorized and non-motorized users (10-2).

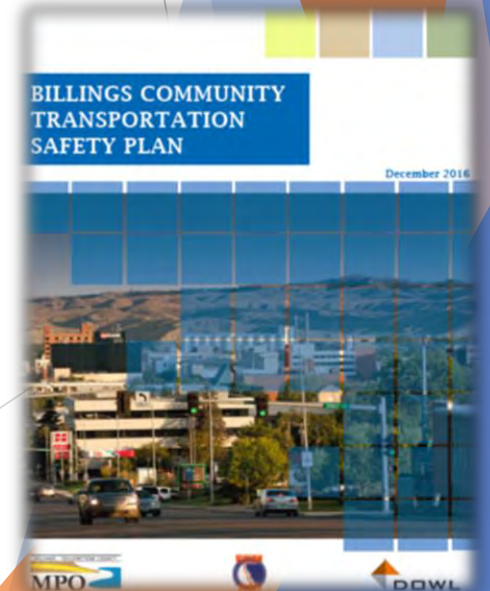
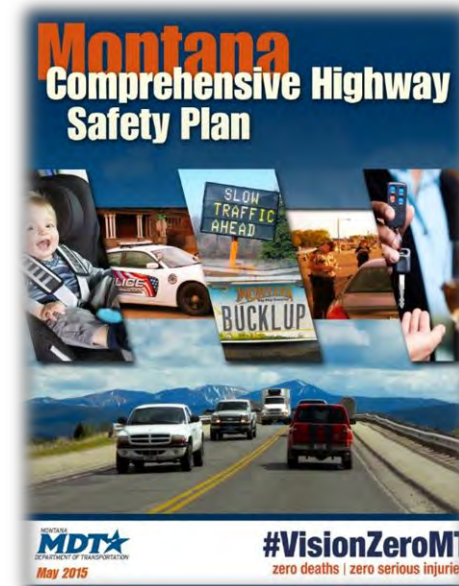
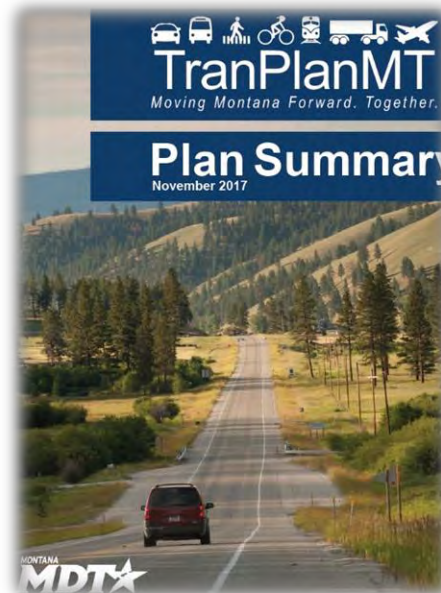
A local mitigation plan (for Yellowstone County, this is the Multijurisdictional Pre-Disaster Mitigation Plan) should be developed and prepared in compliance with federal, state and local hazard mitigation planning requirements published under 44 CFR Part 201 (10-3). The local mitigation plan is the representation of the jurisdiction's commitment to reduce risks from natural hazards, serving as a guide for decision makers as they commit resources to reducing the effects of natural hazards. Local plans will also serve as the basis for the State to provide technical assistance and to prioritize project funding (10-3).

The FEMA Disaster Mitigation Act of 2000 provides the legal basis for FEMA mitigation planning requirements for State, local and Indian Tribal governments as a condition of mitigation grant assistance (10-4).

Call out box: On June 20, 2010, a tornado came through Billings and caused damage to the MetraPark, businesses, homes, and transportation infrastructure in the area. Planning for and developing a transportation system with multiple connections and parallel routes allows the region to actively plan for potential natural or manmade hazards.

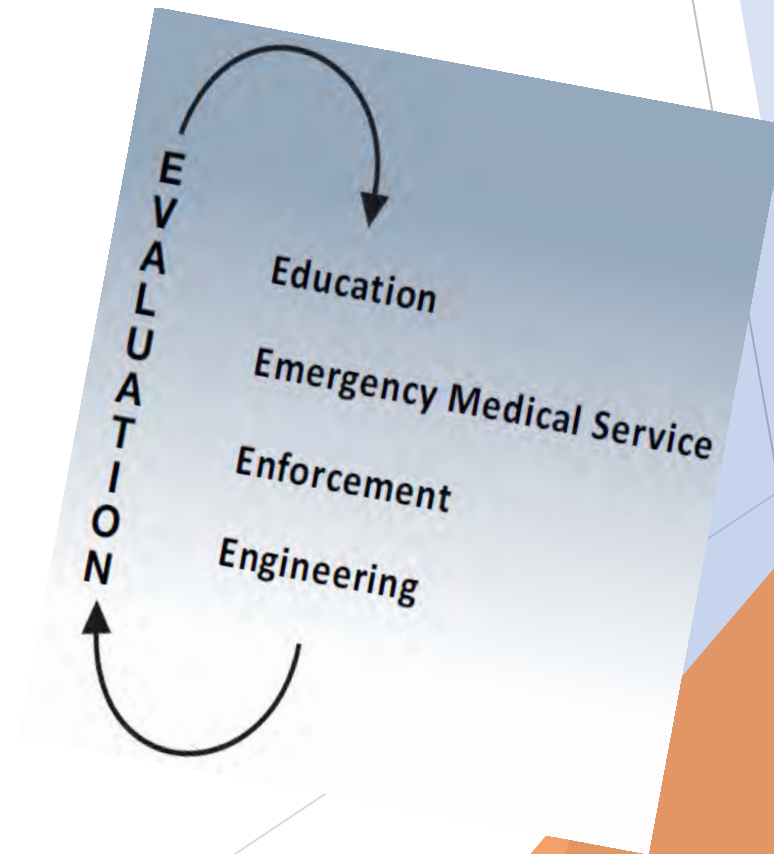
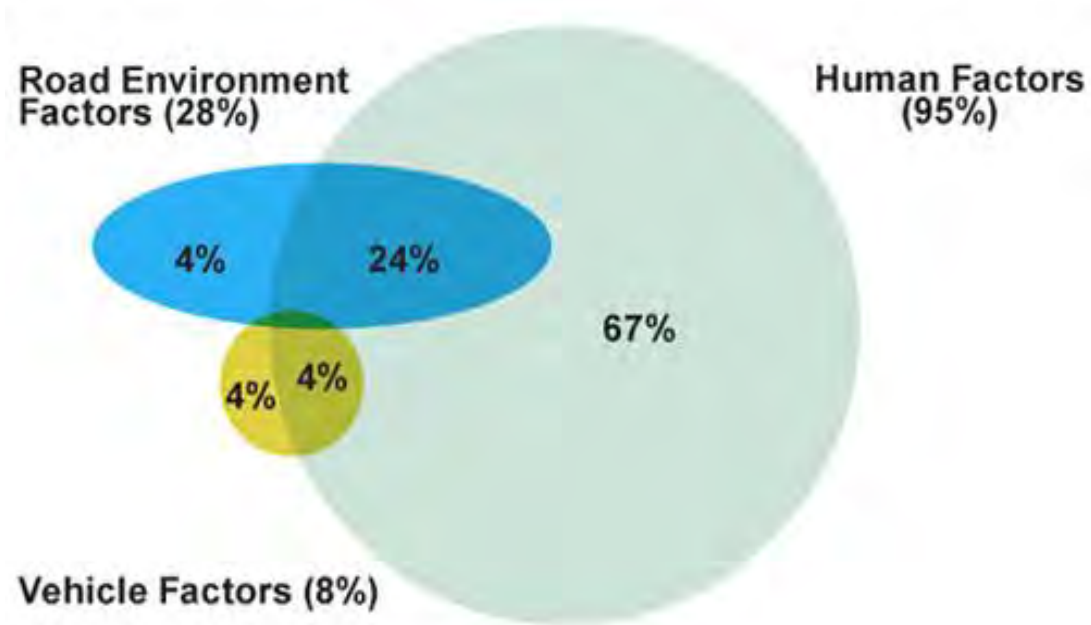
Safety Chapter - Introduction

- ▶ Utilizes framework from 2014 LRTP
- ▶ Related goals...
 - ▶ Safe and Environment
- ▶ Literature Review



Safety Chapter - Safety Considerations

- ▶ Contributing factors to crashes and the 5 E's of safety



Safety Chapter - Safety Analysis

- ▶ Review of crash data
 - ▶ 2013 - 2017 data
 - ▶ 14,577 reported crashes
 - ▶ 42 fatalities
 - ▶ Map of crashes by type and category

- ▶ Updated based on SC comments from last meeting
 - ▶ Fatal crash user types
 - ▶ Fatal crash attributing factors

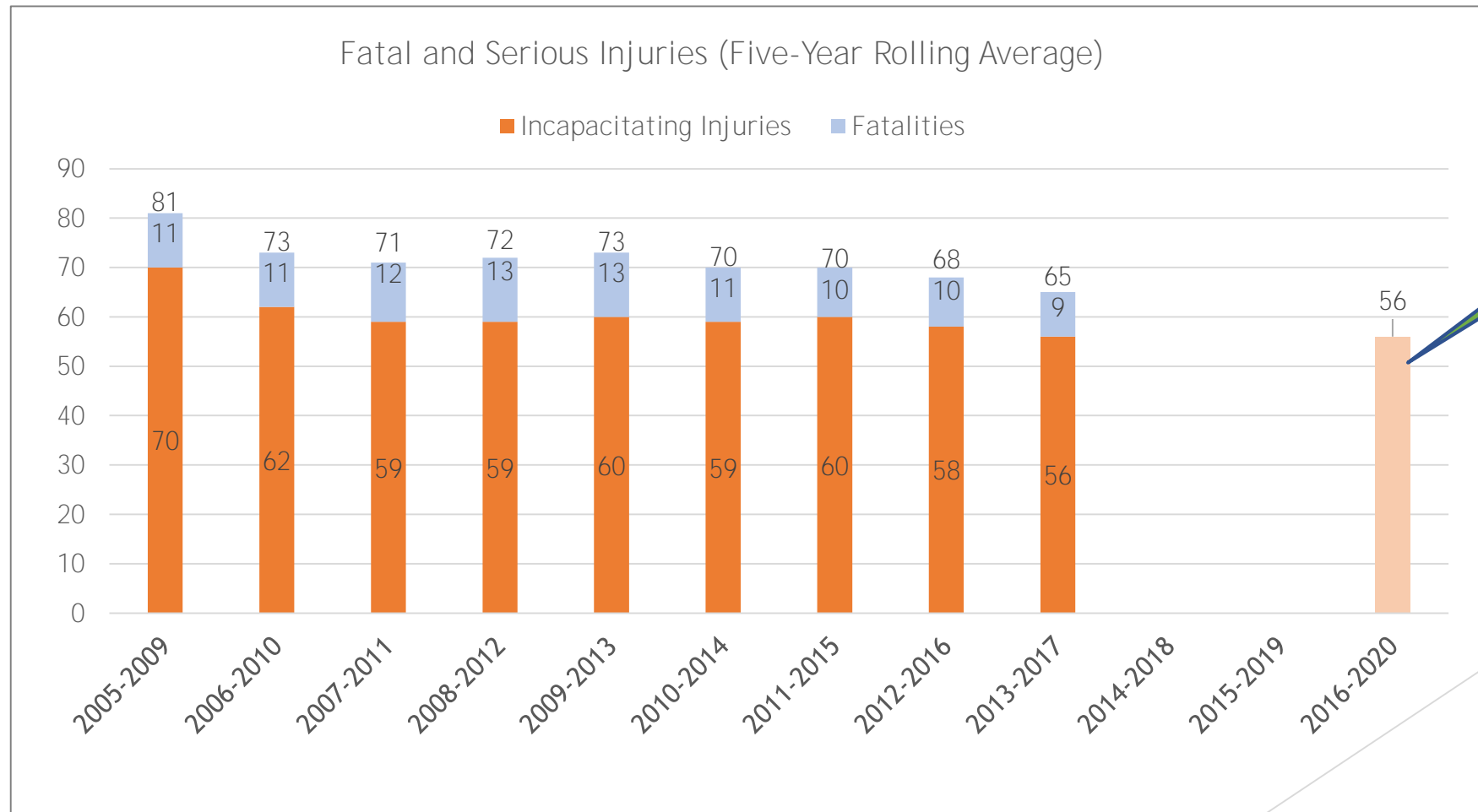
Table 9.1 Fatal Crash Road User Types (2013-2017)

Road User Type	Motor Vehicle Occupant	Motorcyclist	Pedestrian	Bicyclist	ATV
# Fatalities (Percent of Total)	15 (36%)	17 (40%)	8 (19%)	1 (2%)	1 (2%)

Table 9.2 Fatal Crash Attributing Factors (2013-2017)

Drugs / Alcohol Involved	Yes	No	Unknown
# Fatalities (Percent of Total)	17 (40%)	22 (52%)	3 (7%)
Seatbelt Used (Motor Vehicle Occupants Only)	Yes	No	Unknown
# Fatalities (Percent of Total)	3 of 15 (20%)	9 of 15 (60%)	3 of 15 (20%)

Safety Chapter - Fatal and Serious Injury Crashes & CTSP Target



CTSP Goal

Safety Chapter - Crash Types by Category

- ▶ Review of crash data
 - ▶ Commercial vehicle
 - ▶ Bus
 - ▶ At-grade rail crossing
 - ▶ Pedestrian
 - ▶ Bicyclist

- ▶ Updated based on SC comments from last meeting
 - ▶ Defined commercial vehicle (>10,000 pounds)
 - ▶ Bus type
 - ▶ School bus
 - ▶ MET bus
 - ▶ Other bus (charter bus)

Table 9.3 Commercial, Bus, Rail Pedestrian and Bicycle Crash Summary (2013-2017)

Category	Property Damage Only	Possibly Injury	Non-Incapacitating Injury	Incapacitating Injury	Fatal	Unknown	Total
Crash Involving a Commercial Vehicle (Truck >10,000 pounds)	410	64	25	9	2	3	513
Crash Involving a School Bus	37	12	2	0	0	1	52
Crash Involving MET Bus	1	2	0	0	0	0	3
Crash Involving Other Bus Types (e.g., Charter Bus)	52	11	1	0	0	0	64
Crash Related to At-Grade Rail Crossing	64	16	5	1	0	2	88
Pedestrian	42	84	42	31	8	3	210
Bicycle	28	68	35	8	1	0	140

Safety Chapter - Intersection Crash Rates

- ▶ Top 20 list (0.53 to 3.57)
- ▶ 3 multilane roundabouts
- ▶ 17 traffic signals

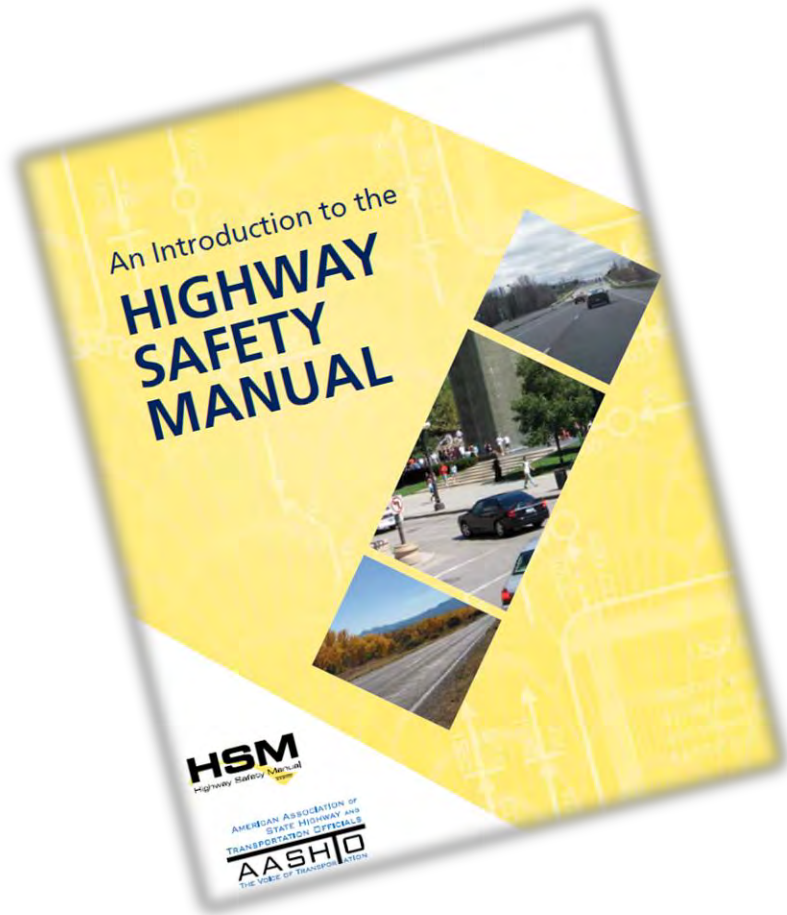
	Intersection	Control Type	Total Crashes	Crash Rate
1	Shiloh Road & King Avenue W	Roundabout	149	3.57
2	Shiloh Road & Grand Avenue	Roundabout	129	2.67
3	24 th Street W & Rosebud Drive	Signal	84	1.62
4	Shiloh Road & Central Avenue	Roundabout	58	1.49
5	Central Avenue & N 15 th Street W	Signal	64	1.46
6	Main Street & 1 st Avenue N	Signal	92	1.35
7	27 th Street & 6 th Avenue N	Signal	85	1.35
8	King Avenue W & 24 th Street W	Signal	101	1.25
9	Main Street & Lake Elmo Drive	Signal	113	1.17
10	King Avenue W & 32 nd Street W	Signal	72	1.15
11	27 th Street & 1 st Avenue N	Signal	53	1.13
12	Central Avenue & 24 th Street W	Signal	81	1.13
13	Grand Avenue & N 17 th Street W	Signal	59	1.13
14	King Avenue W & S 20 th Street W	Signal	94	1.07
15	Grand Avenue & Zimmerman Trail	Signal	56	1.07
16	Main Street & Wicks Lane	Signal	62	1.02
17	24 th Street W & Monad Road	Signal	53	0.85
18	King Avenue W & Interstate-90 Single Point Interchange (SPI)	Signal	68	0.81
19	Main Street & Airport Road	Signal	66	0.71
20	Main Street & 6 th Avenue N	Signal	53	0.53

Safety Chapter - Roadway Segment Crash Rates

- ▶ Top 20 list (5.6 to 29.5)
- ▶ Majority occurred on these five roadways (with multiple segments)
 - ▶ S 24th Street West
 - ▶ King Avenue
 - ▶ Central Avenue
 - ▶ Grand Avenue
 - ▶ Main Street

Roadway Segment		Extent	ADT	Length (miles)	Total Crashes	Crash Rate
1	N 27th Street	Montana Avenue to 6 th Avenue N	16,595	0.4	386	29.5
2	King Avenue W	20 th Street to 24 th Street	24,100	0.5	310	15.2
3	Montana Avenue	27 th Street to Division Street	10,980	0.7	203	14.9
4	S 24 th Street W	King Avenue W to Monad Road	24,660	0.5	334	14.6
5	Central Avenue	19 th Street to 24 th Street	15,640	0.6	224	14.0
6	S 24 th Street W	Monad Road to Central Avenue	26,280	0.5	317	13.2
7	Central Avenue	Moore Lane to 15 th Street	16,895	0.5	219	12.9
8	Grand Avenue	Zimmerman Trail to Shiloh Road	12,160	0.8	230	12.8
9	24th Street W	Central Avenue to Broadwater Avenue	22,685	0.5	257	12.4
10	Grand Avenue	13 th Street to 17 th Street	18,810	0.5	214	12.4
11	King Avenue W	32 nd Avenue to Shiloh Road	14,290	1.0	294	11.8
12	Central Avenue	24 th Street to 32 nd Street	13,790	1.0	277	11.1
13	Main Street	1 st Avenue N to 6 th Avenue N	36,440	0.4	248	10.5
14	N 27 th Street	6 th Avenue N to Rimrock Road	15,255	0.9	247	9.9
15	King Avenue W	24 th Street to 32 nd Street	25,660	1.0	368	7.9
16	Main Street	Airport Road to Hilltop Road	44,550	0.7	369	6.5
17	King Avenue W	Midland Road at Mullowney Lane to 20 th Street	40,470	0.7	349	6.5
18	Main Street	Hilltop Road to Wicks Lane	27,220	1.0	306	6.1
19	Main Street	Wicks Lane to US 87	16,840	1.1	199	6.0
20	Highway 87E	Interstate 90 to 1 st Avenue N	26,040	1.3	347	5.6

Safety Chapter - Use of the HSM and Recommended Strategies



► Strategies...

- Continue to establish partnerships between agencies to incorporate safety elements into existing and future plans
- Continue to support implementation of the projects and strategies from the various plans/studies
- Integrate the Highway Safety Manual into the project development process
- Evaluate the high crash rate locations to identify specific countermeasures to address specific crash types

Other Items

- ▶ Functional Classification System Map
 - ▶ Discussion at August SC meeting
- ▶ Other Chapters
 - ▶ Goals, Objectives, Performance Measures
 - ▶ Land Use
 - ▶ Streets and Highways
- ▶ Truck Services and Facilities
- ▶ Rail Facilities
- ▶ Public Transportation
- ▶ Project List
- ▶ Financial / Funding
- ▶ Conformity
- ▶ Public Outreach
 - ▶ September 2018

Travel Demand Model Update

- ▶ Transportation Analysis Zones
 - ▶ Completed TAZ system, numbering, and connectors
 - ▶ ~2,700 TAZs with numbering up to 4,490 for future expansion/detailing
 - ▶ Established external gateways, gateway traffic counts and annual growth factors for external trips
 - ▶ Completed major corrections to employment database and estimates of school enrollment
 - ▶ Compiled 2017 base year population, housing and geocoded employment into TAZs
 - ▶ Established initial trip generation rates and mode splits based on Billings household survey and national references (use of NCHRP 716 report)

Travel Demand Model Update

▶ Traffic Counts

- ▶ Compiled recent peak hour and peak period counts from intersection turn movements
- ▶ Finalizing conversion of 24 hour tube counts

▶ Model Operations

- ▶ Initiated development of scripting to get the model operational
- ▶ Coordinating this effort with Dean Munn

Comments on Meeting Materials

- ▶ Requesting comments by July 27th
 - ▶ Existing Land Use Maps
 - ▶ Existing Conditions LOS Map
 - ▶ Draft Pedestrian and Bicycle Chapter
 - ▶ Draft Security Chapter
 - ▶ Draft Safety Chapter

Next Meetings & Topics

- ▶ Steering Committee Meeting #8
 - ▶ August 9 (10 AM - 12 PM)
 - ▶ Steering Committee Meeting #9
 - ▶ September 13 (10 AM - 12 PM)
 - ▶ Steering Committee Meeting #10
 - ▶ October 11 (10 AM - 12 PM)
- ▶ Draft chapters (updates)
 - ▶ Land use (forecasts)
 - ▶ LOS analysis (map)
 - ▶ Year 2040
 - ▶ Functional classification map
 - ▶ Draft project list
 - ▶ Public outreach activities
 - ▶ Travel demand model (updates)



Steering Committee Meeting #7 Sign-In Sheet

July 12, 2018 @ 10:00 AM – 12:00 PM,
1st Floor Conference Room - Miller Building

Name	Organization	Email address
SCOTT WALKER	C/C PLNE.	
ERIN CLAUNCH	PW-ENG	claunch@ci.billings.mt.us
DAG ENDERSON	DOWL	denderson@dowl.com
DAVE TUNNICLIFF	City/County Planning	dtunnicliff@ci.billings.mt.us
Debra Hagel	MET Transit	hageld@ci.billings.mt.us
Bob Riehl	Lockwood	bsriehl@gmail.com
Mike Black	Yellowstone County Public Works	mblack@co.yellowstone.mt.gov
Elyse Morat	C/C planning	morate@ci.billings.mt.us

Steering Committee
 Meeting #7 Agenda

July 12, 2018 @ 10:00 AM – 12:00 PM,
 1st Floor Conference Room - Miller Building

Final @ 11:40 AM

- | | | | |
|----------------------------------|----------|---------------------|------------------|
| 1. Introductions (Sign-in sheet) | Scott W. | Andy D. | MOT |
| | Doug E. | Bryan G. | - Katie Polke |
| 2. Public Participation Plan | Debra H. | Lisa - Planni | - Eric Lynch |
| a. Update | EriAC | Danny - City Grants | - Rebecca Graham |
| b. Schedule for plan adoption | | Bill N. | MOT |
| | | Mike B. - County | - Ned Nelson |

3. Plan Updates

- a. LOS analysis at study intersections (Attachment A) → see comments from City
 → sud / parallel map
- b. Land Use (Attachment B) → no comments
- c. Project ideas and review from public outreach → Any new projects? → ~~Scott W.~~ Scott W.
- d. Chapter development

- i. Draft chapter for Pedestrian / Bicycle (Attachment C) - 321 projects
 - Any priorities
 - not too many comments
- ii. Draft chapter for Security (Attachment D) → no comments
- iii. Draft chapter for Safety (Attachment E) → what is the best on 24th and Grand?
 → southside side → no high crash locations
 → what are the curb types?
 = side curbs
 = rear ends
 - any left turns?

check #1s per Bids comments

Are neighborhood comments → compare rates

- e. Other activities
- 4. Travel Demand Model
- 5. Next Meetings
 - a. SC Meeting #8 – August 9, 10 AM – 12 PM
 - b. SC Meeting #9 – September 13, 10 AM – 12 PM
 - c. Public Outreach
 - d. SC Meeting #10 – October 11, 10 AM – 12 PM



Appendix H

Steering Committee Meeting #8



Steering Committee Meeting #8 Agenda

August 9, 2018 @ 10:00 AM – 12:00 PM,
1st Floor Conference Room - Miller Building

1. Introductions (Sign-in sheet)
2. Public Participation Plan
 - a. Plan adoption update
3. Plan Updates
 - a. Traffic count database
 - b. Chapter development
 - i. Draft chapter - Introduction (Attachment A)
 - ii. Draft chapter - Interagency and Public Involvement (Attachment B)
 - iii. Draft chapter - Goals, Objectives, Performance Measures & Targets (Attachment C)
 - iv. Draft chapter - Land Use (Attachment D)
 - v. Draft chapter - Public Transportation (Attachment E)
 - vi. Draft chapter – Conformity Analysis/Determination (Attachment F)
 - c. Other activities
4. Functional Classification Map (Attachment G)
 - a. Review and discussion
5. Travel Demand Model
 - a. Draft Memorandum - Land Use Trip Generation (Attachment H)
 - b. Draft Memorandum – Household Travel Survey (Attachment I)
 - c. Update on Model Operations and Validation
6. Next Meetings
 - a. SC Meeting #9 – September 13, 10 AM – 12 PM
 - b. Public Informational Meeting – September 25, 4:30 PM – 6:30 PM
 - c. SC Meeting #10 – October 11, 10 AM – 12 PM

Chapter 1 Introduction

The Billings Urban Area Long Range Transportation Plan (LRTP) is a framework to guide the development and implementation of multimodal transportation system projects for the Billings Urban Area. The LRTP is updated every four years. This LRTP assesses today's (2017) land use and transportation conditions and projects into the future (year 2040) to identify and strategize transportation improvements for the region.

The Billings Urban Area lies at the western edge of the northern High Plains. It serves as a central hub for a large region comprised of Montana, northern Wyoming, and the western Dakota's. Due to its location, Billings has developed as an important economic, cultural, educational, and transportation urban center for the entire region. Billings is located in Yellowstone County between Minneapolis and Seattle (east to west), and Calgary and Denver (north to south) and is one of the largest cities between these major cities, including the largest in Montana. Figure 1-1 illustrates the location and regional importance of Billings.

Figure 1-1 Location and Regional Importance of the Billings Urban Area

Transportation is a vital element to the residents and businesses of Billings and connects commerce from the Billings Urban Area to other parts of Montana and metropolitan areas via road, rail, and air. The region's transportation infrastructure is robust and includes streets, highways, freeways, rail, transit, sidewalks, bicycle facilities, trails, and an airport. Given the importance of the transportation infrastructure, this document plans for transportation facilities and services to ensure mobility and accessibility throughout the Billings Urban Area.

The Yellowstone County Board of Planning is the designated Metropolitan Planning Organization (MPO) and oversees transportation planning for the Billings Urban Area. The area encompasses the City of Billings, as well as the planning area extending approximately 4.5 miles outside the City limits. Figure 1-2 illustrates the study area.

Figure 1-2 Study Area

Call-out box

What topics are covered in this LRTP?

Goals, objectives, performance measures, and target

Public and interagency involvement

Forecasts of population, households, and employment anticipated in 2040

Inventory of needs and opportunities for transportation elements: streets and highways, public transit and transportation (bus, paratransit, and air), freight (truck and rail), pedestrians, bicyclists, trails, safety, security

Funding sources and projected revenue

Project recommendations and implementation strategies

Development of this plan was guided by a Steering Committee (SC), which consisted of representatives from the following agencies: Billings City Council, Billings Metropolitan Transit, Billings Planning, Billings Public Works, , Billings/Yellowstone County MPO, Lockwood Steering Committee, Montana Department of Transportation (MDT), Yellowstone Board of County Commissioners, and Yellowstone County Public Works. Additional input was received from the Billings City Council, Billings City/Yellowstone County Planning Board, Billings Technical Advisory Committee, Federal Highway Administration, Policy Coordinating Committee, Yellowstone Board of

County Commissioners, neighborhood groups, members of the public, and other consultation efforts conducted through the 10-month planning process.

Historical Context

Transportation planning has been a key element of the City's planning efforts for over 100 years since its inception as a major rail hub. As such, one of the first transportation surveys was completed in 1954, which included a transportation inventory, traffic counts, parking, and other related data. Ten transportation plans (1961, 1964, 1969, 1977, 1983, 1990, 2000, 2005, 2007, 2009, 2014) have been completed since 1961. Figure 1-3 illustrates some of the transportation plan covers from past efforts.

Figure 1-3 Past Transportation Plans

Similar to today's planning efforts, the past transportation plans assessed existing and future transportation conditions to identify a set of financially constrained improvements for the Billings Urban Area. Figure 1-4 illustrates roadway and bicycles element from past transportation plans.

Figure 1-4 Elements of Past Transportation Plans

Since the 1950s, the Billings Urban Area has seen considerable growth in the development of population and employment areas in the downtown, along the Rims, and to the west. Recognizing the ongoing growth in the Billings Urban Area, it is critical that the MPO and local agencies continue to invest in long range transportation and land use planning efforts. These efforts identify, preserve, support, and maintain the infrastructure of the region's transportation system.

Transportation Plan Implementation Since 2009

The previous LRTP, completed in 2014 (1-1) included several key elements:

- Implemented a robust public and stakeholder involvement plan
- Maintained the planning horizon of year 2035
- Confirmed study area boundaries and plan goals
- Assessed existing and future transportation and land use conditions
- Reviewed and updated non-motorized, bus, safety, security, and conformity elements
- Prepared a short- and long-range project list and financial plan

Since the 2014 plan adoption, several transportation projects and studies have been completed that play a role in the overall transportation system. Figure 1-5 illustrates the completed projects, studies, and plans since 2014. Over 30 major projects and 15 studies have been completed in the last four years, which shows a commitment from the agencies and community to continue to invest in the transportation system for the next generation. There are many other completed transportation projects, such as sidewalk and ramp enhancements, street signing, overlays, etc., that are not depicted on Figure 1-5, but have been completed and are important elements of enhancing and maintaining the transportation system. These completed projects along with new federal requirements served as a basis for this transportation update.

Figure 1-5 Completed Projects, Studies, and Plans Since 2014

Plan Requirements and Process

Fundamental elements of this transportation plan were to encompass all transportation modes and identify how these modes are accommodated through the new planning horizon of year 2040. In developing this

transportation plan, several federal, state, and local planning requirements were addressed to ensure compliance and consistency with these regulatory requirements.

FEDERAL REQUIREMENTS

The scope of the planning process (1-2) for an MPO (urban areas with a population of more than 50,000 individuals) is to develop long-range transportation plans and TIPs through a performance-driven, outcome-based approach to planning for metropolitan areas of the State, such as Billings, MT. Additionally, this process needs to be continuous, cooperative, and comprehensive, and provide for consideration and implementation of projects, strategies, and services that will address the following planning factors:

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

The Moving Ahead for Progress in the 21st Century (MAP-21) Act (1-3) transformed the Federal-aid highway program by establishing requirements for performance management to promote the most efficient investment of Federal transportation funds. The Fixing America's Surface Transportation (FAST) Act (1-4) continues this performance-based approach to increase the accountability and transparency of this program and to support improved investment decisions through a focus on performance outcomes for the national planning factors listed above.

The Billings LRTP is consistent with the national transportation program, addresses priority issues, and leverages funding opportunities and initiatives incorporated in the national program. This LRTP was prepared in accordance with the above federal requirements.

STATE PLANNING REQUIREMENTS

TranPlanMT, Montana's long-range transportation plan, was last amended in 2017 (1-5). TranPlanMT identifies key transportation priorities and outlines long-range policy goals and strategies to assist MDT in addressing aging infrastructure, changing environmental conditions, and ongoing funding challenges. It also provides a framework for MDT to advance and manage its transportation programs in compliance with evolving federal requirements. In support of MDT and national goals, MDT conducts performance-based planning in the following key areas mandated through federal regulations:

- Safety
- Infrastructure Condition

- Transit Asset Management
- System Reliability
- Freight Movement and Economic Vitality
- Environmental Sustainability

TranPlanMT cites safety as an overarching goal which is applied in nearly every MDT decision-making process for all projects and programs.

Montana’s Comprehensive Highway Safety Plan (1-6) was amended in 2015, as required by the MAP-21 federal legislation. The CHSP is intended to be a living document to help guide the State of Montana to effectively address the state’s safety needs. The vision of the plan is “zero fatalities and zero serious injuries” on any public roadway in the State. The goal of the plan is “to reduce fatalities and incapacitating injuries in the State of Montana by half in two decades, from 1,704 in 2007 to 852 by 2030.”

Figure 1-7 Plan Development Process

LOCAL PLANNING REQUIREMENTS

Several local plans, studies, and policies were reviewed to inform the process and elements to be considered in development of the plan. It is important to review and incorporate these documents into the planning process, as to ensure that the integrity and value discussion of past planning efforts are carried forward into today’s planning effort. Development of this plan was coordinated with guidelines developed in the Yellowstone County Board of Planning Public Participation Plan (2009 and most recent update in conjunction with this plan update in 2018), the 2014 Billings Urban Area Long Range Transportation Plan, and past transportation and land use plans/studies/policies highlighted in the text box.

INSERT PLANS / STUDIES LIST

Transportation Plans / Studies

- Billings Complete Streets Benchmark Report
- Billings-Yellowstone County Household Travel Survey
- Billings Area Bikeway + Trails Master Plan Update
- Billings Community Transportation Safety Plan
- Highway 3 Corridor Study
- Lockwood Non-Motorized Transportation Plan
- Montana’s Comprehensive Highway Safety Plan
- Montana Rail Grade Separation Study
- Old Highway 312 Corridor Study
- Rims to Valley Study
- TranPlanMT
- Underpass Avenue Improvements Concept Design
- West End Multimodal Planning Study

Land Use Plans / Policies

- Billings Design Standards for Trails and Bikeways
- Billings Growth Policy
- Billings Stormwater Management Manual

- Downtown Billings Alliance Strategic Plan
- Lockwood Growth Policy
- Lockwood Targeted Economic Development District Comprehensive Development Plan
- Lockwood Targeted Economic Development District Strategic Plan
- Yellowstone County Board of Planning Participation Plan

PLAN DEVELOPMENT PROCESS

The plan effort was initiated in November 2017 and completed with consideration for plan adoption in October 2018. Figure 1-7 illustrates the plan development process, which is described in more detail throughout this document.

References – Chapter 1

- 1-1. 2014 Billings Urban Area Long Range Transportation Plan. Yellowstone County/City of Billings Metropolitan Planning Organization. August 2014.
- 1-2 *Title 23. Chapter 1. Subchapter E. Part 450-Planning Assistance and Standards*. Code of Federal Regulations. August 1, 2018.
- 1-3 *Moving Ahead for Progress in the 21st Century*. Federal Highway Administration. July 6, 2012.
- 1-4 *Fixing America's Surface Transportation Act*. Federal Highway Administration. December 4, 2015.
- 1-5 *TranPlanMT – Plan Summary*. Montana Department of Transportation. DOWL. November 2017.
- 1-6. *Montana Comprehensive Highway Safety Plan*. Montana Department of Transportation. May 2015.

Chapter 2 Interagency and Public Involvement Program

Public involvement and agency coordination during this plan is critical for plan development, acceptance, and adoption by the Policy Coordinating Committee (PCC), Yellowstone County Planning Board (YCPB), Federal Highway Administration (FHWA), Montana Department of Transportation (MDT), and City of Billings. The public involvement plan (PIP) for this LRTP was developed based on past public involvement efforts for the 2014 LRTP and to be consistent with the public involvement elements of the YCBP 2009 Participation Plan (2-1), the development of the YCBP Public Participation Plan (2-2) in conjunction with this LRTP, and MDT's 2018 Public Involvement Plan (2-3).

Call-out box

Over XXX comments were received from the public to help inform the development of the plan. Thank you for your participation!

A collaborative and context-sensitive public engagement process was used in developing the plan. The public involvement approach strived to achieve the goals listed below.

- Facilitate an open, honest, and transparent decision-making process conducted through constructive two-way communication between the project team, agencies, and the public.
- Provide early and continuous opportunities for the public to share values, understand the opportunities and constraints within the study area, develop potential solutions, and raise issues and concerns to be considered.
- Inform and encourage community participation.
- Improve the public involvement process by measuring the effectiveness and modifying methods based on evaluation.

Interagency coordination and public involvement were achieved through the following methods:

- Building Awareness of the Plan
 - Steering Committee
 - Resource agencies
 - Neighborhood meetings
 - Commissions, councils, and committees
- Utilizing Various Outreach Methods
 - Branding and logo
 - Webpage
 - Media coordination
 - Email updates
 - Youth engagement
 - Online engagement
 - Stakeholder interviews
 - Public informational meetings
 - Social media
- Facilitating Plan Review and Approval

Building Awareness of the Plan

Prior to kicking off the project, the MPO formed a Steering Committee (SC) that represented agencies within the Billings Urban Area to help guide the plan development. Early in the process, team members connected with established regional boards and commissions and other community groups. The scope and schedule of the LRTP update was shared with boards, commissions, and community groups, which in turn provided valuable feedback on the initial direction of the plan development. The initial groups, which are identified in the following lists, also supplied additional contacts that helped the outreach effort extend deeper into the community.

STEERING COMMITTEE

The SC served as the primary sounding board for the development of the plan. The SC's responsibilities included reviewing project deliverables and providing guidance to the consultant team throughout plan development. The SC included staff from:

- City of Billings Administration
- City of Billings City Council
- City of Billings Planning
- City of Billings Public Works
- Lockwood Steering Committee
- MDT District 5
- MDT Planning
- MET Transit
- Yellowstone County Commission
- Yellowstone County Planning Board (YCPB)
- Yellowstone County Public Works

The consultant team, with assistance from the MPO, scheduled and led ten meetings with the SC throughout the duration of the project. The goal of the SC meetings was to solicit feedback concerning the development of project deliverables and determine next steps for the consultant team. The consultant team would provide materials to the SC, prior to the meeting, for review and comment. All meeting agendas and minutes are included in the Appendix.

RESOURCE AGENCIES

Prior to the first Public Involvement Meeting in May, the MPO sent a letter to resource agencies and stakeholders in the Billings Urban Area to notify them of the LRTP update. The letter also invited any interested groups to coordinate meetings with the consultant team to discuss the transportation planning process for the 2018 LRTP, changes in federal requirements through FAST Act, consistency with other plans, opportunities and constraints, ideas for implementation, and any questions they had about the project. Agencies or organizations highlighted with bold text participated in 1-on-1 meetings with the consultant team.

- Big Sky Economic Development Authority
- **Billings Area Chamber of Commerce**
- Billings Association of Realtors
- Billings TrailNet
- **Billings Emergency Services/Yellowstone County EMS**
- Billings Fire Department

- Billings Police Department
- Billings School District 2
- Billings Bicycle and Pedestrian Advisory Committee
- Billings Traffic Control Board
- Billings Community Development Board
- Billings Board of Adjustment
- Billings Zoning Commission
- Billings Aviation and Transit Board
- Billings Parking Board
- Bureau of Indian Affairs
- Downtown Billings Partnership, Inc
- Housing Authority of Billings
- Living Independently for Today & Tomorrow (LIFTT)
- **MET Transit**
- Montana Department of Environmental Quality
- Montana Department of Fish, Wildlife, and Parks
- Montana Department of Natural Resources & Conservation
- Montana Rail Link
- Neighborhood Task Force
 - Central Terry Neighborhood Task Force
 - Heights Neighborhood Task Force
 - North Park Neighborhood Task Force
 - Pioneer Park Neighborhood Task Force
 - **Rimrock Neighborhoods Task Force**
 - Southside Neighborhood Task Force
 - Southwest Corridor Neighborhood Task Force
 - Westend Neighborhood Task Force
- Riverstone Health (Yellowstone County Health Department)
- Weave Management Group, Inc.
- U.S. Bureau of Land Management
- U.S. Bureau of Reclamation
- Yellowstone County Sheriff's Office
- Yellowstone County Superintendent of Schools

NEIGHBORHOOD MEETINGS

MPO staff provided updates to various neighborhood association groups and encouraged them to provide comments via the project website or interactive web map.

COMMISSIONS, COUNCILS, AND COMMITTEES

The project team and MPO met with other committees and officials throughout the LRTP development process. These meetings were meant to update these various groups of the progress being made and to solicit feedback at key stages of the project. These committees include:

- City of Billings City Council

- City of Billings / Yellowstone County Planning Board
- Policy Coordinating Committee
- Yellowstone Board of County Commissioners
- Technical Advisory Committee

Utilizing Various Outreach Methods

The public involvement activities for plan development reflected a multi-faceted approach. The outreach methods were created to facilitate communication between the public and project team throughout the project and gather insights and direction for plan development.

BRANDING AND LOGO

A logo, color scheme and reporting templates were developed and implemented with this LRTP to provide brand awareness and cohesiveness with plan materials through the planning and adoption of the plan.

PROJECT WEBPAGE

The project website (provided at URL www.BillingsLRTP.com, shown in Exhibit 2.1) was maintained by the consultant team and served as the primary, public, 24-hour source for information on the project. The website included maps, purpose, public involvement contacts, agency involvement, project schedule, documents, meeting information, and a place for the public to provide input, comments, or questions to the team.

Exhibit 2.1 Homepage of the 2018 Billings Urban Area LRTP Project Website

MEDIA COORDINATION

Outreach was conducted to appropriate media outlets to disseminate information regarding information on the plan and advising the community of public involvement opportunities. Media releases were provided to local media outlets in May and September 2018 regarding the plan development.

EMAIL UPDATES

The consultant team provided email updates to the MPO, which summarized the following:

- Consultant work tasks associated with the LRTP, PPP, and TDM - Included a summary of completed and on-going work tasks of the consultant's responsibility
- Action Items for MPO - Requests for guidance or materials review for the MPO from the consultant team
- Upcoming Meetings - Location, date, and time for any upcoming meetings

The goal of the updates was to keep a consistent line of communication between the MPO and the consultant team throughout the LRTP process. Additionally, the email updates were forwarded on to other agencies, committees, and elected officials to keep them apprised of the LRTP schedule.

YOUTH ENGAGEMENT

Involving elementary, middle, and high school teachers is a good way to inform and involve not only students, but also their parents. Social studies and government classes provide a good connection to this planning effort. Youth involvement is also a recommendation of Environmental Justice/Title VI best practices.

The consultant team presented to three classes (two geography classes and one social studies class) at the Riverside Middle on Tuesday May 15th, 2018. These three classes included approximately 50 students. A presentation was provided on transportation planning and asking students to map how they traveled to school and to after school or weekend activities. The students mapped the routes they took, and color coded them by

ONLINE ENGAGEMENT

Two online surveys were used during plan development to collect feedback and comments from the public.

Online Survey #1 – The first online survey was developed and implemented in conjunction with the public informational meeting #1 in May 2018. This survey was developed to provide information on the LRTP, collect feedback on goals, priorities and allow users to map their comments regarding needs and deficiencies. The same questions were asked on the survey as at the public informational meeting. The online survey ran from May 14th to May 29th and had 139 participants. The site is no longer active, but the demo site can be viewed at:

<https://2018BillingsLRTP-demo.metroquest.com>. Exhibit 2.3 shows the online survey #1.

Exhibit 2.3 Screenshot of Online Survey #1

Online Survey #2 – The second online survey was developed and implemented in conjunction with the public informational meeting #2 in September 2018. This survey was developed to provide information on the LRTP and collect feedback on the project lists and prioritization. The same questions were asked on the survey as at the public informational meeting. The online survey ran from **September 25, 2018 to October 9, 2018 and had XX participants**. Exhibit 2.4 shows the online survey #2.

Exhibit 2.4 Screenshot of Online Survey #2

SOCIAL MEDIA

Social media content and graphics were developed and provided to the MPO to publish on their existing social media networks. This information was used to provide updates on the plan and to promote meetings and opportunities for online engagement.

STAKEHOLDER INTERVIEWS

One-on-one meetings were held with various individuals and groups who have a key interest or stake in the plan. The purpose of these meetings included: introduce the plan, identify existing transportation deficiencies and/or concerns that should be addressed with the plan, and gather input on the proposed projects included in the plan. As noted in the resource agencies section, meetings were held with the Billings Area Chamber of Commerce, Billings Emergency Services/Yellowstone County EMS, MET Transit, and Rimrock Neighborhoods Task Force.

PUBLIC INFORMATIONAL MEETINGS

Public Informational Meeting #1

The public informational meeting #1 was held on May 14th at the Billings Library from 4 PM to 7 PM. The purpose of the open house was to give the public an opportunity to learn about the plan, review technical information about the LRTP, and provide comment on the following three items:

- What goals are most important to you for the plan?
- What transportation needs and opportunities exist today?
- What you like to see for the future transportation system?

Attendees were able to review materials on the LRTP, provide mapped comments regarding needs and opportunities, and provide feedback on goals and focus areas. 25 people signed into the meeting, 32 map comments were received and three comment sheets. Exhibits 2.5 and 2.6 show the room layout and public at PIM #1.

Exhibit 2.5 PIM #1

Exhibit 2.6 PIM #1

Public Informational Meeting #2

The public informational meeting #2 was held on September 25, 2018 at the Billings Library from 4:30 PM to 5:30 PM. The purpose of the open house was to give the public an opportunity to learn about the plan, review technical information about the LRTP, and provide comment on the following three items:

- What goals are most important to you for the plan?
- What transportation needs and opportunities exist today?
- What you like to see for the future transportation system?

Attendees were able to review materials on the LRTP, provide mapped comments regarding needs and opportunities, and provide feedback on goals and focus areas. 25 people signed into the meeting, 32 map comments were received and three comment sheets. Exhibits 2.7 and 2.8 show the room layout and public at PIM #2.

Exhibit 2.7 PIM #2

Exhibit 2.8 PIM #2

Summary of Comments from Online Survey, PIM #1 and PIM #2

Public comments from the online survey, PIM #1, and PIM #2 were summarized in this section. Table 2.1 summarizes the total comments received during the public involvement process.

Table 2.1 Total Comments Received During the Public Involvement Process

Activity	Comment Sheets	E-mail	Online Survey	Project Website	Total
PIM #1 (May 14 th – May 29 th , 2018)	3	2	369	0	374
PIM #2 (September 25 th – October 9 th , 2018)					
Total					

Exhibit 2.9 illustrates the percentage of zip codes represented during the May and September 2018 outreach efforts.

Exhibit 2.9 Map of Zip Code Representation

At PIM #1, focus areas with the most support were roadways, intersections, and bicycles followed by pedestrians, airport, and bus transit followed by railroad and truck/freight. Additionally, the public were asked to use the map to tell us about needs and opportunities with the existing transportation system in the Billings Urban Area.

Exhibit 2.10 illustrates the needs and opportunities identified by category within the urban area at PIM #1 and via online survey #1.

Exhibit 2.10 Map of Needs and Opportunities from PIM #1 and Online Survey #1

At PIM #2, the public were asked to use the project map to identify priority projects for consideration in the LRTP. Table 2.2 summarizes the project priorities identified by the public at PIM #2 and via online survey #2.

Table 2.2 Summary Table of Project Priorities from PIM #2 and Online Survey #2

For more information about the content and summaries from the two PIMs, Public Comment Summary #1 and #2 are included in the Appendix.

Facilitating Plan Review and Approval

The final phase of the plan update is completion and adoption of the LRTP. Between June and August, the SC reviewed the draft chapters of the LRTP and provided comments to the consultant team for incorporating in the final draft plan. In September, the draft LRTP was presented to the SC and public for review and comment. Additionally, the Technical Advisory Committee (TAC) met twice in October 2018 to review the draft plan, provide comments on the draft plan, and recommend approval of the LRTP to the Planning Board, Billings City Council, Yellowstone County Commissioners, and the Policy Coordinating Committee (PCC). The draft plan was also available to the public for review and comment in September and October 2018. Much like the development of the plan, continued awareness and review of the draft plan are important steps toward plan adoption.

In October, the draft plan was presented to the Planning Board, Commission, and City Council. Following these meetings and work sessions, a public hearing was scheduled with each body to hear public comments and a recommendation for plan adoption. The plan was presented and adopted unanimously by the PCC on **ADD DATE 2018**. The consultant team assisted the MPO throughout the adoption process by providing materials and information for these review and recommendation meetings.

References – Chapter 2

- 2-1. *Yellowstone County Planning Board Participation Plan*. Yellowstone County Planning Board. January 2009.
- 2-2. *Public Participation Plan*. Yellowstone County Planning Board. September 2018.
- 2-3. *Public Involvement Plan*. Montana Department of Transportation. January 2018.

Chapter 3 Goals, Objectives, Performance Measures, and Targets

This chapter describes the goals, objectives, performance measures, and targets that will be used to measure the Billings urban area's success in establishing a transportation system that 1) aligns with national and state standards and 2) fulfills community desires and needs. The establishment of these goals fosters accountability, encourages measurement of progress, and creates actionable steps for the MPO to take to improve transportation in the Billings urban area.

Federal and state targets to which the Billings urban area plans to adhere to are presented first in this chapter. Goals, objectives, and performance measures specific to the Billings urban area and created by the MPO are presented second. Together, these metrics ensure that the Billings urban area establishes a transportation system that both meets federal and state criteria and reflects the unique needs and desires of the community it serves.

Federal and State Targets

The FAST Act aligns with federal code of regulations 23.450.306, which states that MPOs shall develop long-range transportation plans through a performance-driven, outcome-based approach to planning for metropolitan areas of the State. It also states that this planning process should address the ten planning factors listed below. These factors were first introduced through the MAP-21 Act and were expanded upon by the FAST Act.

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

Three Federal-aid programs manage the funds apportioned through the FAST Act: the Highway Safety Improvement Program (HSIP), the National Highway Performance Program (NHPP), and the Congestion Mitigation and Air Quality (CMAQ) Improvement Program. Each of these, and the Federal Transit Administration (FTA), prescribe targets to assess performance of the transportation system. MDT has implemented these national targets with exceptions made based on Montana's urban population sizes and lack of public transportation rail assets.

ADOPTED STATEWIDE TARGETS

Adopted statewide targets are summarized in Tables 3.1, 3.2, 3.3, and 3.4.

Table 3.1 Safety Performance Targets*

Performance Measure	2019 Target 5-Year Average
Number of Fatalities	187.4
Fatality Rate	1.462
Number of Serious Injuries	892.8
Serious Injury Rate	6.968
Number of combined non-motorized fatalities and non-motorized serious injuries	73.2

* Safety performance targets are statewide totals or rates for 2018. Targets are based on a rolling 5-year average and determined annually.

Table 3.2 NHS Pavement and Bridge Condition Targets

Performance Measure	2-Year Target	4-Year Target
Interstate Pavement	-	54% = Good Condition 3% = Poor Conditions
Non-Interstate NHS Pavement	44% = Good Condition 6% = Poor Condition	44% = Good Condition 6% = Poor Condition
NHS Bridge Deck Area	12% = Good Condition 9% = Poor Condition	12% = Good Condition 9% = Poor Condition

Table 3.3 System Performance and Freight Targets

Category	2-Year Targets	4-Year Targets
Interstate Travel Time Reliability (TTR) (% Reliable – person miles)	98%	98%
Non-Interstate NHS TTR (% Reliable – person miles)	-	80%
Interstate Truck TTR (TTTR) (Truck Travel Time Reliability Index)	1.30	1.30

Table 3.4 CMAQ On-Road Emissions Sources Targets

Category	2-Year and 4-Year Targets*
CO Emissions	>0 kg/day
PM ₁₀ Emissions	
PM _{2.5} Emissions	

Transit Targets

FTA requires federally-funded public transportation providers to develop and implement transit asset management plans (TAMPs) with asset inventories, condition assessments of inventoried assets, and a prioritized list of investments to improve the state of good repair of their capital assets. The final rule (effective as of October 1, 2016) also established “state of good repair” (SGR) standards and four associated performance measures including:

- The percentage of non-revenue, support-service, and maintenance vehicles that have either met or exceeded their useful life benchmark (ULB);
- The percentage of rolling stock vehicles that have either met or exceeded their ULB;

- The percentage of track segments with performance restrictions for rail fixed guideway, track, signals, and systems; and
- The percentage of facilities rated below condition 3 on the Transit Economic Requirements Model (TERM) scale.

NOTE – MET is currently updating its transit asset management plan (TAMP), with projected completion by late September. Once this plan is complete, this section will be updated to reflect the most current transit performance targets.

L RTP Goals, Objectives, and Performance Measures

In addition to the federal and state targets listed above, the MPO created the following goals, objectives, and performance measures tailored specifically to the Billings urban area. Many of the goals established by the MPO are similar to the federal and state targets listed above. Both focus on a long-term vision for a safe, efficient, and sustainable transportation system, but the MPO's goals reflect feedback gathered by the Billings community, as well as align with other adopted plans within the Billings urban area. These goals are intended to more closely align with community desires and needs. Table 3.5 summarizes the 2018 L RTP goals, objectives and performance measures. Table 3.6 shows how the adopted state targets intersect with the L RTP goals established by the MPO.

Call out Box:

Goals – Intended downstream outcomes of accomplishing the proposed objectives

Objectives – Trackable action items that align with the goals

Performance Measures – Type of data to be collected to track the objectives.

Call out Box: The 2018 L RTP goals are:

1. Safety – Develop a safe transportation system
2. Functional Integrity and Efficiency – Optimize, preserve, and enhance the existing transportation system
3. Prioritized Improvements – Identify and prioritize projects that mitigate deficiencies, maximize the use of existing facilities, and balance anticipated needs with available funding
4. Environment – Develop a transportation system that protects the natural environment and promotes a healthy, sustainable community
5. Public Transit and Transportation – Create a transportation system that supports the practical and efficient use of transit
6. Pedestrians and Bicyclists – Create a transportation system that supports the practical and efficient use of active transportation such as walking and bicycling
7. Economic Vitality – Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce.

Table 3.5 LRTP Goals, Objectives, and Performance Measures

2014 LRTP Goal	Objective	Performance Measure(s)	Data Source	Related Federal Planning Factors	Supportive Plan / Policy
Safety	Reduce the rolling five-year average number of fatal and serious injury crashes by 20% between 2018 and 2023.	Fatal and serious injury crashes	MDT / City of Billings	1, 2, 3, 4, 6, 7, 8, 9, 10	Billings Community Transportation Safety Plan
	Reduce the rolling five-year average rate of fatal crashes and serious injury crashes per 100 million vehicle miles travelled by 20% between 2018 and 2023.	Fatal and serious injury crashes; vehicle miles travelled	MDT / City of Billings		
	Reduce the rolling five-year average number of fatal crashes and serious injury crashes involving non-motorized modes by 20% between 2018 and 2023.	Non-motorized fatal and serious injury crashes	MDT / City of Billings		
Functional Integrity and Efficiency	Develop an inventory of critical infrastructure. Update the regional emergency response plan at least once by 2023.	Critical infrastructure inventory and regional emergency response plan.	City of Billings / Yellowstone County	1, 3, 4, 6, 7, 8, 9, 10	Functional Classification Map Various Corridor and Intersection Studies Emergency Operations Plan Multi-Jurisdictional Pre-Disaster Mitigation Plan Update
	Reduce the number of intersections identified as operating at LOS E or worse during the peak hour in the 2018 LRTP by 10% between 2018 and year 2023.	Intersection level of service (LOS)	City of Billings / Yellowstone County		
	Reduce weekday peak hour vehicular and freight travel time on selected principal arterial corridors by 5% between year 2018 and 2023.	Weekday peak hour travel time	City of Billings/Yellowstone County		
Prioritized Improvements	Create an annual prioritized list of fiscally constrained projects.	List creation	City of Billings / Yellowstone County	7, 8	Transportation Improvement Program (TIP) Unified Planning Work Plan (UPWP)
Environment	Develop and codify a stormwater management ordinance for the Billings urban area that establishes minimum stormwater management requirements and controls for major developments by year 2023.	Ordinance development and codification	City of Billings / Yellowstone County	5, 9	2017 Comprehensive Parks & Recreation Master Plan 2016 Billings Growth Policy

					2016 Lockwood Growth Policy
Public Transit and Transportation	Maintain annual transit ridership each year from 2018 to 2023.	Total annual ridership	MET Transit	2, 3, 4, 6, 10	MET Business Plan
	Maintain 2018 number of routes, hours of service of each route, and headways on each route for the next 5 years.	Number of routes, hours of service, headways	MET Transit		
	Maintain 2018 rate of replacement of buses for next 5 years.	Number of buses replaced	MET Transit		
Pedestrians and Bicyclists	Increase number of bicycle lane miles by 10% between year 2018 and 2023.	Number of bicycle lane miles	City of Billings / Yellowstone County	2, 3, 4, 6, 10	City of Billings Complete Streets Policy – 2016 Billings Area Bikeway and Trails Master Plan Update Lockwood Non-Motorized Transportation Plan Rims to Valley Study Highway 3 Corridor Study
	Increase number of shared-use trail miles by 10% between 2018 and 2023.	Number of trail miles	City of Billings / Yellowstone County		
	Incorporate bicycle or pedestrian facilities on 75% of projects between 2018 and 2023.	Number of projects with bicycle or pedestrian facilities incorporated	City of Billings / Yellowstone County		
	Increase bicycle and pedestrian traffic counts at selected trails and intersections by 10% between 2018 and 2023.	Number of bicyclists, number of pedestrians	City of Billings / Yellowstone County		
Economic Vitality	None – based on objectives shown for Functional Integrity and Prioritized Improvement Goals			1, 5, 10	None

Table 3.6 Statewide Targets and LRTP Goals

			Billings Urban Area LRTP Goals						
			Safety	Functional Integrity and Efficiency	Prioritized Improvements	Environment	Public Transit and Transportation	Pedestrians and Bicyclists	Economic Vitality
Statewide Targets	Pavement And Bridge Condition	Percentage of pavements on the Interstate System in Good condition		X	X				
		Percentage of pavements on the Interstate System in Poor condition		X	X				
		Percentage of pavements on the NHS (excluding the Interstate System) in good condition		X	X				
		Percentage of pavements on the NHS (excluding the Interstate System) in poor condition		X	X				
		Percentage of NHS bridges classified as in Good condition		X	X				
		Percentage of NHS bridges classified as in Poor condition		X	X				
	Safety Performance	Number of fatalities	X						
		Rate of fatalities per vehicles miles traveled (VMT)	X						
		Number of serious injuries	X						
		Rate of serious injuries per VMT	X						
		Number of combined non-motorized fatalities and non-motorized serious injuries	X					X	
	System Performance/Freight Movement/Congestion/CMAQ	Percent of reliable person-miles traveled on the Interstate		X					X
		Percent of reliable person-miles traveled on the non-Interstate NHS		X					X
		Percentage of Interstate system mileage providing for reliable truck travel time (Truck Travel Time Reliability Index)		X					X
		Total emissions reductions for applicable pollutants				X			
	Transit Asset Management	Percentage of non-revenue, support-service and maintenance vehicles that have either met or exceeded their useful life benchmark (ULB)			X		X		
		Percentage of rolling stock vehicles that have either met or exceeded their ULB			X		X		
		Percentage of facilities rated below condition 3 on the Transit Economic Requirements Model (TERM) scale			X		X		

Reporting Progress Towards Achieving Performance Targets

The MPO will incorporate adopted statewide targets and MPO goals, objectives, and performance measures into the LRTP and discuss how the targets will be advanced and linked to investment priorities. The MPO will coordinate with MDT to obtain routinely collected data from the agency about the condition of roadway pavement and bridges, safety performance, and the overall operation of the transportation system within the Billings urban area. The information will help the MPO identify and advance projects in the LRTP which support adopted statewide targets and MPO goals, objectives and performance measures at the statewide and local level.

Chapter 4 Land Use

This chapter summarizes the land use patterns under existing and future year 2040 forecast conditions in the study area. Knowing the locations of both existing (2017) and future 2040 population and employment patterns is critical for development of the base year 2017 and 2040 travel demand model.

The Billings urban area lies at the western edge of the northern High Plains. It serves as a central hub for a large region comprised of Montana, northern Wyoming, and the western Dakota's. Due to its location, Billings has developed as an important economic, cultural, educational, and transportation urban center for the entire region. A critical part to developing a long-range transportation plan is understanding the current land use patterns and opportunities envisioned for growth. Through this understanding, the transportation system and land use vision can be integrated to effectively match future infrastructure and system management projects with the desires of the community.

Recent city-wide studies/plans were reviewed to gain an understanding of the existing and future land use patterns and policies that guide the community, including:

- Billings Urban-Area Long Range Transportation Plan (2014)
- West End Multimodal Planning Study (2016)
- City of Billings Growth Policy (2016)
- Lockwood Growth Policy (2016)
- Lockwood Targeted Economic Development District Comprehensive Development Plan (2016)
- Lockwood TEDD Strategic Plan (2017)
- Billings-Yellowstone County Household Travel Survey (2017)
- Downtown Billings Alliance Strategic Plan (2018)

Call-out box: The Billings urban area is expected to increase from a population of 127,056 to approximately 169,767 by 2040. Having an interconnected, multimodal transportation system is an important part to providing for this growth and creating a livable community.

Land Use Analysis

A key component of the land use analysis is incorporating the existing and future population/employment data in the regional travel demand model to develop traffic volume projections.

The Billings MPO travel demand model is developed with transportation analysis zones (TAZs) that represent geographic groupings of population and employment. An individual TAZ is intended to group land uses that have common access to the transportation system (for example, a group of houses that all use local streets to access the same blocks of two collector streets). Physical barriers (such as hillsides, rivers, freeways or railroad tracks) are typical borders because traffic cannot traverse these without the roadway network. TAZs are typically bordered by major roadways (e.g. arterials and collectors) because it is assumed that traffic does not pass through them, but either starts or ends a trip there. TAZs often have uniform (or relatively similar) land use where trips are attracted and produced, but this is not a requirement. For the Billings travel demand model, the TAZs were based on census blocks defined by the 2010 United States Census. A portion of the census blocks were then aggregated or split as appropriate to best represent the access for individual land uses. Figure 4-1 shows the TAZs used for the analysis.

Figure 4-1 TAZ Boundaries

The existing population and employment data was derived from the 2010 United States Census and other records to identify the 2017 population and employment total. In order to anticipate projections in population and employment to year 2040, coordination with the MPO was conducted to illustrate growth in the region beyond simple historical projections. Local knowledge from the MPO was utilized to anticipate where growth in population and employment would increase or stagnate. The refined year 2040 population and employment dataset was then incorporated into the regional travel demand model to develop traffic volume forecasts.

Existing Characteristics and Demographics

The Billings urban area currently encompasses approximately 151.2 square miles and includes all of the City of Billings (44.9 square miles) and Lockwood, as well as a planning area extending 4 miles outside of the city limits and into Yellowstone County. Figure 4-2 shows the existing zoning map and key destinations within the study area.

Figure 4-2 Existing Zoning Map

The primary drivers of transportation demand and regional travel patterns are the scale and geographic distribution of population and employment. The relationships between land-use development and the effects on generating travel demand are well-defined. Established land uses in the urban area have influenced the travel patterns that exist today. Understanding the relationship between the distribution of population/housing and employment (and the resulting regional travel patterns) is key to projecting future transportation demand. Therefore, a review of existing land use conditions is necessary to understand how the traffic network is affected by the components of where people live and where people work and/or shop.

POPULATION, HOUSING, AND EMPLOYMENT

Yellowstone County has the highest population of any county in Montana with a reported 2010 population of 147,972 persons (US 2010 Census). Billings remains the largest city in Montana with a 2010 population of 104,170. This is an increase of 15.9 percent (addition of 14,323 persons) over the 2000 population.

Figures 4-3 and 4-4 show the 2017 population and housing concentrations, respectively in the study area. The 2017 total population is 127,056 in the study area. The 2017 total housing units is 55,464 in the study area.

Figure 4-3 2017 Population

Figure 4-4 2017 Housing

Employment is typically broken up into two primary components: retail and non-retail employment. These uses are differentiated because they typically exhibit different travel patterns in terms of mode choice, the time-of-day trips utilize the network, etc. Table 4.1 summarizes the 2017 employment within the study area. Figure 4-5 shows the current geographic concentrations of employment centers in the study area.

Table 4.1 2017 Billings Urban Area Employment

Zoned Land Use	Percent of Total
Retail	
Non-retail	
TOTAL	77,639

Source: City/County Planning Division

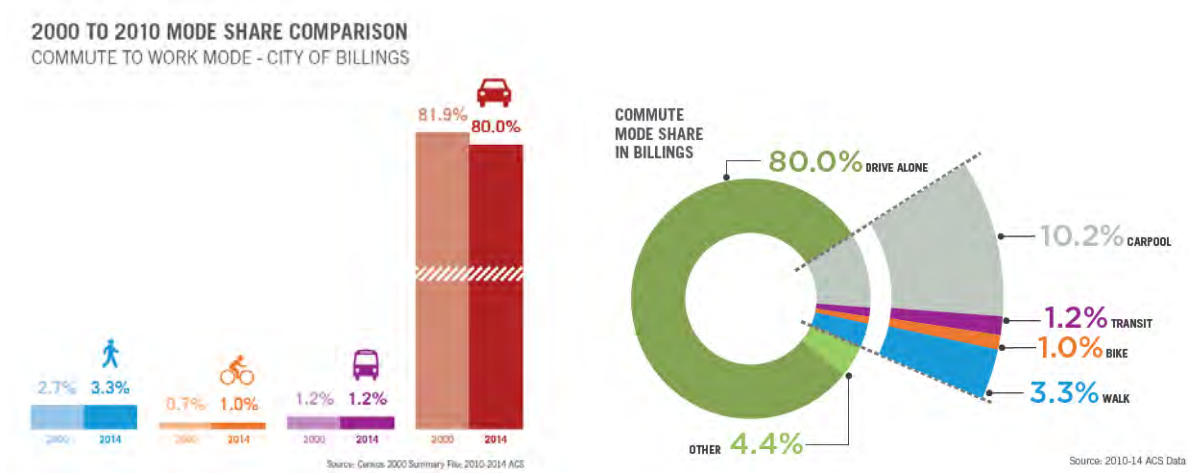
Figure 4-5 shows employment concentrations are greatest around the major employment centers including Billings Airport, Downtown Billings, Saint Vincent Hospital, Rimrock Mall, and industrial facilities to the south of the Exit 446 Interchange on Interstate 90.

Figure 4-5 2017 Employment

TRAVEL PATTERNS

American Community Survey

Data was summarized based on travel characteristics captured in the 2000 and 2010-2014 American Community Survey (ACS, 4-1) and presented in the recently completed Billings Area Bikeway and Trails Master Plan Update (4-2).



Work trips comprise the majority of peak period travel, which has the highest impact on the transportation system. As shown, the predominant motorized mode is the single occupant vehicle, which is similar to other North American cities. Walking is the predominant non-motorized mode. Both walking and bicycling increased its' mode share since 2000. A significant percent of work trips in the city (approximately 10.2 percent), are made by carpool.

In the Billings Area Bikeway and Trails Master Plan Update, travel time to work was summarized in detail. It was identified that the closer one lives to downtown Billings, the shorter their commute time is. The median trip length for the majority of the City of Billings ranges from less than 12 minutes to 17 minutes. There are a significant number of work trips made that are less than 15 minutes, which are trips that could be completed via a bicycle within a similar frame, especially when the time it takes to park a vehicle and access the final destination is included in the travel time calculation.

Yellowstone County Household Survey

The 2017 Billings / Yellowstone County Household Travel Survey (HTS, 4-3) was sponsored by the MPO with support from MDT. The 2017 survey was undertaken with the purpose of understanding the demographics and travel behavior of residents of Billings and Yellowstone County. Below is a summary of selected characteristics from the HTS results, as reported in the HTS:

- A typical surveyed household in the region makes 7.9 trips a day and a typical person makes 3.86 trips per day.
 - After applying weights, the average number of household trips rises to 8.6 per day and the average person trip rate falls to 3.75.
- The majority of trips made (89.7 percent) in the region are as the driver or passenger of an automobile, van or truck.
- Non-motorized trips (by bike or walking) account for 6.9 percent of the total.
- Trips made using a private vehicle take 15.6 minutes and covered 5.7 miles on average compared to transit trips which take 23.4 minutes and covered 2.8 miles.
- Work trips take an average of 16 minutes in the region.
- The average distance traveled was 5.3 miles.
- Work trips account for 13.7 percent of all trips made in the region.
- Trips not categorized as work, school, shopping, or recreational account for 22.5 percent of all trips made (these include escorting minors, and non-mandatory errands and maintenance activities).

Data and results from the HTS were used in development of the travel demand model for Billings urban area.

Forecast Demographics

Using historical growth patterns and discussions with the MPO and SC, future population/housing and employment concentrations were developed for the horizon year 2040 to help determine where future travel demand occurs on the roadway network.

HISTORICAL AND FUTURE GROWTH

New residents are attracted to Billings by its quality of life, economic and recreational opportunities, and small town atmosphere with the amenities of a large urban center. The population projections for the Billings urban area from 2017 to 2040 are anticipated to increase by 42,712 persons, for an average increase of 1,857 persons per year.

As depicted in Figures 4-3 and 4-4, the strongest concentrations of population and housing are in the “Heights” area and to the west of downtown Billings. Smaller pockets of dense population in the central portion of the MPO along Rimrock Road represent the student population at Montana State University Billings and Rocky Mountain College. Aside from the Heights neighborhoods in the north of the city, population and housing is relatively spread out across the metropolitan area. Typically, this distribution of population/housing tends to generate more vehicle-based trips because of the longer trips distances that result and the relative cost ineffectiveness of providing transit to residential areas with low population density.

POPULATION AND HOUSING PROJECTIONS

In 2017, the Billings urban area population was approximately 127,056 persons residing in 55,464 dwelling units. By 2040, the population is expected to grow to approximately 169,768 persons in 73,656 dwelling units. The growth in population and housing between 2010 and 2040 within the Billings urban area is summarized in Table 4.3.

Table 4.3 Billings Urban Area Population and Housing 2017-2040

Demographic	2017	2040	Change	Percent Change
Population	127,056	169,767	42,711	+33.6%
Housing (Dwelling Units)	55,464	73,663	18,199	+32.8%

Source: MPO / Travel Demand Model

Figure 4-6 shows the population growth between 2017 and 2040. As depicted in the figure, residential growth is mostly expected to reach westward towards the urban area boundary, particularly west of Shiloh Road. Additionally, more residential growth is expected to occur along Highway 3 and Alkali Creek Road to the north of the city limits. Residential in-fill is expected to be limited around the downtown and Central Billings areas. Infill is projected to occur in the southern areas within the city limits, Lockwood, and the Heights neighborhoods.

Figure 4-6 Population Growth (2017 – 2040)

FUTURE EMPLOYMENT

With growth in population, the employment sector within the study area is also expected to grow. As of 2017, the estimated total employment in the Billings urban area was approximately 77,639 jobs. By 2040, employment is projected to add another 26,690 jobs to result in an approximate 104,329 jobs in the Billings urban area. Table 4.4 summarizes the projected employment growth from 2017 to 2040.

Table 4.4 Billings Urban Area Employment Growth 2017-2040

Demographic	2017	2040	Change	Percent Change
Employment (Retail)				
Employment (Non-retail)				
Total Employment	77,639	104,329	+26,690	+34.3%

Source: MPO / Travel Demand Model

Figure 4-7 shows the comparison between 2017 and 2040 employment distributions. Employment growth within the Billings Urban Area is expected to expand generally within current commercial areas and to “densify” current employment locations. These commercial areas include S. 24th Street, Shiloh Road, the airport, downtown, and near the I-90 interchanges.

Figure 4-7 Employment Growth (2017 – 2040)

Potential Effects of Growth on Transportation System

While the western portions of the urban area are expected to grow in population, these areas are expected to be relatively stagnant in terms of employment growth. This potentially translates into encouraging more people to commute by driving themselves rather than alternative modes because the trip distances are too far to be an appealing option. Additionally, there is currently no existing transit service northwest of King Avenue and Shiloh Road and to/from Lockwood to provide this option.

Generally, the residential population is projected to continue to spread out within the study area, with greatest density occurring west of Shiloh Road and north of Highway 3 near Zimmerman Trail. However, employment is expected to mostly increase in density around the following areas: Shiloh Road (south of Grand Avenue); Downtown Billings; Highway 3 near and at the airport; TEDD area in Lockwood; and near the Zoo Drive, S Billings Boulevard, and Johnson Lane interchanges along I-90. This type of growth pattern results in future residents having longer commute distances than today.

To manage these commute distances, the MPO and represented agencies should continue to implement and evaluate strategies that can improve the mode split of the urban area. The MPO has probably observed positive outcomes from current strategies, such as the recent Growth Policy's by the City of Billings and Lockwood, as well as recent Strategic Plan's by the Downtown Billings Alliance and TEDD. These elements should be continued with an emphasis on integrating land use and transportation to provide options and enhance the quality of life in the region.

References – Chapter 4

- 4-1. *2010-2014 American Community Survey*. United Census Bureau. November 24, 2015.
- 4-2. *Billings Area Bikeway and Trail Master Plan Update*. City of Billings/Yellowstone County. 2017.
- 4-3. *2017 Billings-Yellowstone County Household Travel Survey*. Billings-Yellowstone County MPO. November 10, 2017.

Chapter 6 – Public Transit and Transportation

Like most public transportation systems, MET Transit (herein, referred to as MET) has been effective in developing a transit system with the limited funding resources available. Marginal revenue growth and rising operational costs have allowed for minimal service expansion over the past few years. For public transit service to be expanded significantly in the region, an increase in the operations funding would need to occur through an increase in the local mill levy, other local funding sources, and additional federal funds. Through this LRTP process, the community continued to identify projects and support for the public transportation system.

Other services that complement MET include private for-profit public transportation providers, transportation network companies such as Uber and Lyft, and air service through the Billings Logan International Airport.

Call out Box: MET started in 1973 with five fixed routes in the Billings Urban Area. MET currently operates 18 routes with flag service and bus stops, transfer centers, and other amenities.

Public transportation continues to be a priority of the community. Public transportation provides access to employment, recreation, shopping and social opportunities and also encourages active transportation such as walking and bicycling to reach transit routes. As such, the 2018 LRTP outlines several goals related to public transportation:

Call out Box:

Goal 1: Safety – Develop a safe transportation system

Goal 2: Functional Integrity and Efficiency – Optimize, preserve, and enhance the existing transportation system

Goal 5: Public Transit and Transportation – Create a transportation system that supports the practical and efficient use of transit

Goal 6: Pedestrians and Bicyclists – Create a transportation system that supports the practical and efficient use of active transportation such as walking and bicycling.

Goal 7: Economic Vitality – Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce.

Existing Public Transit Services

PUBLIC FIXED ROUTE

MET serves as the City of Billings fixed-route public transit service provider. Established in 1973 with only five routes, MET currently operates with eighteen routes and has two primary transfer centers. The MET complex is a 31,000 square-foot facility located at 1705 Monad Road in Billings. This complex, built in 1983 with renovations in 1998 and 2000 provides a centrally located facility for MET operations that includes administration, dispatch, vehicle maintenance, washing, and fueling. MET operates all routes through two transfer centers:

1. Stewart Park Transfer Center – This transfer center was constructed in 1993 and renovated in 2003, and is located next to the Rimrock Mall off of Central Avenue. This transfer center has ten bus parking spaces, passenger shelters and benches, and a driver break area.
2. Downtown Transfer Center – This transfer center (shown in Exhibit 6.1) was constructed in 2008 (opened in 2009) and is located at 220 N 25th Street in Downtown Billings. This transfer center has fifteen bus parking spaces, passenger shelters and benches, a covered passenger pavilion, and a driver break

area. These transfer centers operate a “pulse” system where buses arrive and depart from the transfer center simultaneously.

Fleet

MET operates a fleet of 40 vehicles as detailed in Table 6.1. Exhibit 6.2 shows an example of a typical bus in the MET fleet. Exhibit 6.3 shows a bicycle on the bus.

Exhibit 6.1 Downtown Transfer Center (Source: MET)



Exhibit 6.2 Typical MET Bus (Source: MET)



Exhibit 6.3 Bicycle on a MET Bus (Source: MET)



Table 6.1 MET Fleet

Manufacturer	Description	Number of Vehicles	Equipment
Gillig LLC	35' low floor type	2	Wheelchair ramps, front bumper two-slot bicycle racks
Gillig LLC	35' standard floor type	17	Wheelchair lifts, front bumper two-slot bicycle racks
Champion	30' standard floor type	6	Wheelchair ramps, front bumper three-slot bicycle racks
Gasoline Powered Van	25', 13 passenger van	15	Wheelchair lifts and tie down areas
Total		40 Vehicles	

Source: MET

SERVICE

MET currently provides eighteen fixed routes within the Billings city limits. These eighteen fixed routes include:

- nine all-day routes;
- four peak-hour routes;
- one midday-only route; and
- four tripper routes.

On July 2, 2018, MET updated the bus routes and schedules. Seven routes operate on Saturdays. No service is provided on Sunday. Figures 6-1 and 6-2 show the weekday and Saturday routes, respectively. Routes shown in Figures 6-1 and 6-2 reflect the updated route changes that took place in July 2018. MET also provides six tripper routes to and from middle and senior high schools in the area. Current service hours are shown in Table 6.2.

Call out Box: The downtown transfer center opened in 2009 and is one of the only transit centers in the US that is Leadership in Energy and Environmental Design (LEED) certified Platinum.

Table 6.2 MET Service Hours

Day(s)	Time Service is Available
Monday through Friday	5:50 AM – 6:50 PM
Saturday	8:10 AM – 5:45 PM
Sunday	No Service Available

Source: MET

Figure 6-1. Existing Weekday Transit Routes

Figure 6-2. Existing Saturday Transit Routes

MET does not provide service on the following holidays: New Year’s Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day. The weekday routes typically operate on 60-minute headways with the exception of two routes: the 1 route operates on 30- to 55-minute headways and the 18 and 19 routes operate on 55-minute to two-hour headways.

MET operates a fixed route system with 24 bus shelters in addition to bus benches and signed stops along the routes. MET riders can also flag down the bus at any safe intersection. Shelters are mostly concentrated along the high-volume routes to provide the most heavily used stops with protection from weather. Exhibit 6.4 shows an example of a MET bus shelter. Signed stops are located along all routes to help maintain headways and allow for a more orderly system of boarding and alighting. Additionally, benches are provided at many of the stops.

The current extent of service reaches most every geographic location within the Billings city limits including service to the Billings Logan International Airport. Transit service is not provided in the newer residential areas west of Shiloh Road, except for a short section on King Avenue West. Within the urban area, transit service is not

provided to Lockwood. Lockwood is located outside of MET’s service area, since MET only serves the City of Billings.

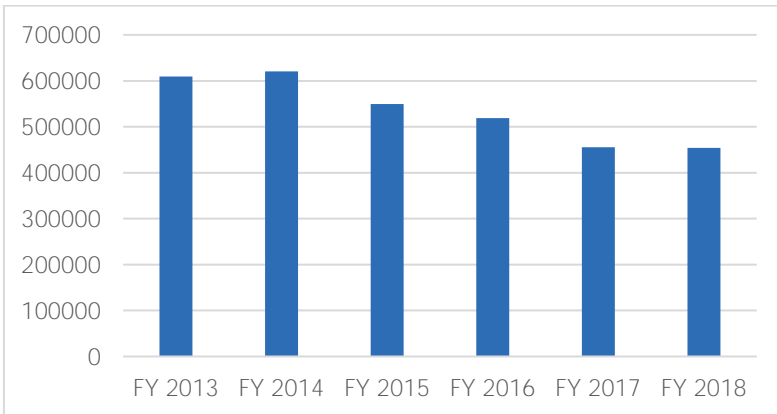
Exhibit 6.4 Typical MET Bus Shelter (Source: MET)



Ridership

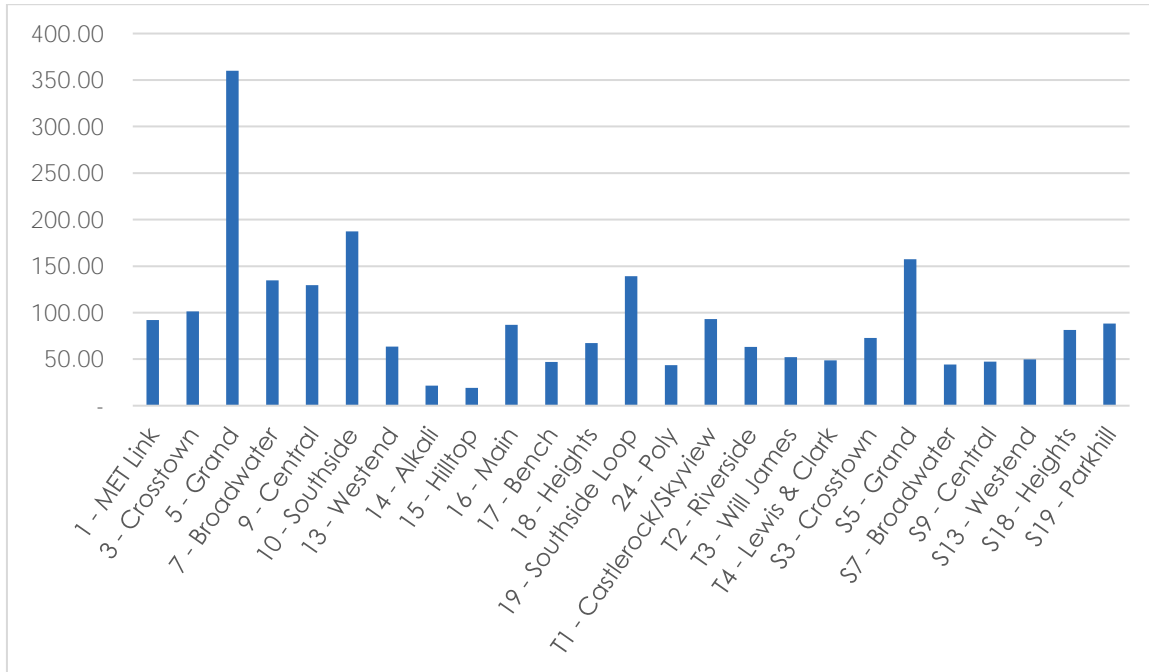
Exhibit 6.5 shows the annual ridership trends on the fixed route service between 2013 and 2017.

Exhibit 6.5 MET Annual Ridership Trends (FY 2013-FY 2018) (Source: MET)



As shown in Exhibit 6.5, fixed route ridership is in a steady decline. Fiscal year 2018 saw a total of 454,395 MET riders and was similar to the FY 2017 ridership total. Exhibit 6.6 shows fiscal year 2018 ridership by route. As shown in Exhibit 6.6, the most productive weekday routes are Grand, Southside, and Southside Loop. Grand is also the most productive weekend route. Additionally, based on conversations with MET staff, the Tripper routes are productive during the school year.

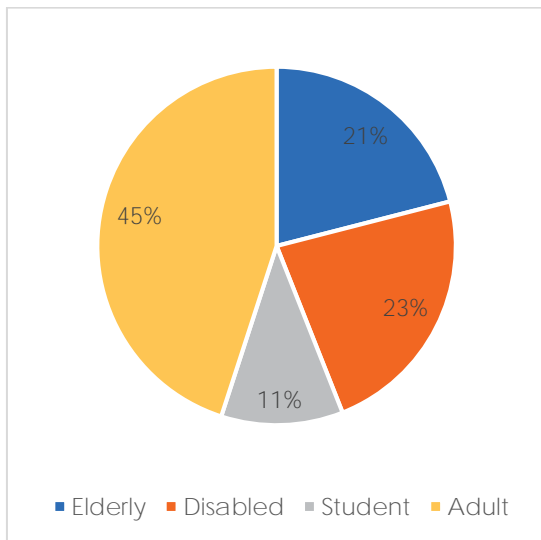
Exhibit 6.6 FY 2018 Average Daily Ridership by Route



The demographic composition of MET ridership is shown in Exhibit 6.7 (6-1). The largest demographic of MET riders is students who make repeated use of the school tripper routes.

Call out Box: Public transportation makes up about 1.6% of commute trips in the Billings Urban Area (Source: ACS 2011)

Exhibit 6.7 MET Ridership



FINANCES

MET is primarily funded through the local transit-designated 10-mill levy property tax approved by voters in 1980. Funding is further supplemented by farebox revenue, advertising revenue, and by Federal Transit Administration (FTA) grants. In 2017, property taxes supported about 42.3% of the total annual operating cost

(see Table 6.3) whereas the farebox revenue only supported approximately 11.7% of the total operating cost. Exhibit 6.8 shows the breakdown of actual FY 2017 funding sources.

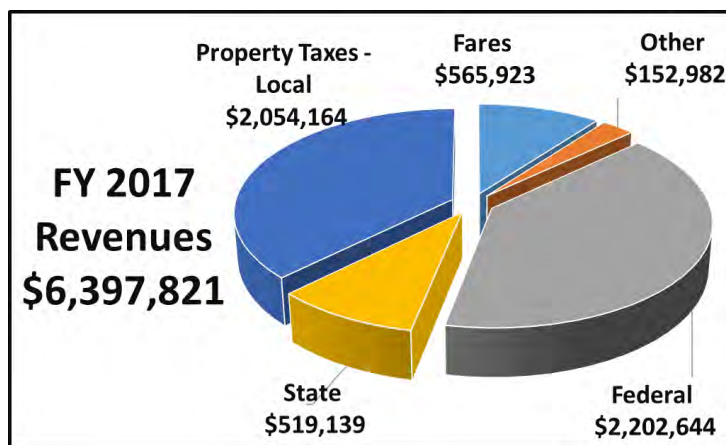
The breakdown of METs expenditures for fiscal years 2017 through 2022 is shown in Table 6.3. The current rate for MET passengers is \$1.75 per trip. The fiscal year 2017 cost per MET passenger was \$7.58.

Table 6.3 MET Expenditures FY 2017 to FY 2022

Expenditures	Assumed Annual Growth	FY 2017 Actual	FY 2018 Budget	FY 2019 Projected	FY 2020 Projected	FY 2021 Projected	FY 2022 Projected
Operating Expenditures							
Personnel Services	5%	\$3,696,042	\$3,907,846	\$4,103,238.30	\$4,308,400	\$4,523,820	\$4,750,011
Operations & Maintenance	3%	\$871,961	\$1,410,785	\$1,453,109	\$1,496,702	\$1,541,603	\$1,587,851
Fuel	2%	\$284,785	\$400,451	\$408,460	\$416,629	\$424,962	\$433,461
Total Operating		\$4,852,788	\$5,719,082	\$5,964,807	\$6,221,731	\$6,490,385	\$6,771,323
Capital Expenditures							
Federal Capital		\$850,385	\$1,006,264	\$944,077	\$1,350,000	\$500,000	\$800,000
Local Capital		\$212,596	\$251,566	\$236,019	\$337,500	\$125,000	\$200,000
Total Capital		\$1,062,981	\$1,257,830	\$1,180,096	\$1,687,500	\$625,000	\$1,000,000
Total Expenditures		\$5,915,769	\$6,976,912	\$7,144,903	\$7,909,231	\$7,115,385	\$7,771,323

Source: MET

Exhibit 6.8 MET FY 2017 Revenue Sources (Source: MET)



Public Paratransit

MET also operates MET Special Transit (MST) which serves as a specialized, demand-responsive paratransit service. The MST service provides public transportation to persons whose disabling condition prevents the use of fixed route transit. MST is also available for local agencies to contract to provide service to clientele. It also serves as the City’s MET-PLUS day-before advance reservation service that provides full compliance with the Americans with Disabilities Act (ADA) requirements. Persons who use this service must be certified as ADA complementary paratransit eligible. A person may be eligible for all or some of their trip needs. Exhibit 6.9 shows an example of a typical MST bus.

Exhibit 6.9 MST Bus (Source: MET)



Service

MST operates 15 paratransit buses and provides ADA complementary paratransit service within all areas of the City of Billings. All trips must take place within this defined service area. The service schedule (i.e. when trips can be scheduled) is shown in Table 6.4.

Table 6.4 MST Service Hours

Day(s)	Time Service is Available
Monday through Friday	5:50AM – 6:50PM
Saturday	8:10AM – 5:45PM
Sunday	No Service Available

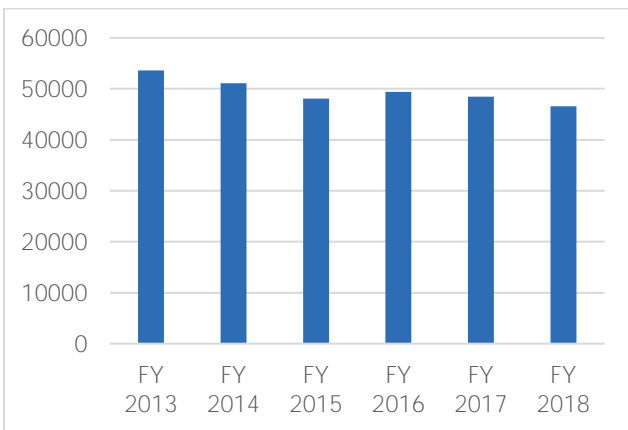
Source: MET

MST does not provide service on the following holidays: New Year’s Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day.

Ridership

Ridership for MST has fallen in recent years, as shown in Exhibit 6.10. Paratransit ridership decreased from 53,500 rides in FY 2013 to 46,575 rides in FY 2018.

Exhibit 6.10 MST Annual Ridership Trends (FY 2013 - FY 2018)



Finances

The current rate for paratransit passengers is \$3.50 per trip. The FY 2017 average cost per paratransit customer is \$33.46 (up from \$27.02 in 2013). MST operates at a deficit, which is not uncommon for paratransit systems. The budget for MST is incorporated in MET’s overall budget.

PRIVATE OPERATORS

Private for-profit public transportation providers operating in and through the Billings Urban Area include intercity bus lines, charter and rental bus services, and taxicab services. Jefferson Lines provides the most extensive service connecting to Bozeman, Butte, Glendive, Livingston, Miles City, Missoula, and Sidney. Table 6.5 shows the private bus operators and their primary connections.

Billings also has several transportation network companies and private taxi services available:

- Uber
- Lyft
- Transportation Services LLC
- Billings Yellow Cab
- Taxiing Services
- City Cab
- Total Transportation (A Plus Limos)
- Billings Limousine Service
- Red Lodge Tour and Taxi

Table 6.5 Private Operator Connections

Company	Connections
Greyhound Lines	Missoula, Superior
Powder River Trailways	Cody, Lovell, Sheridan, WY
Jefferson Lines	Billings, Bozeman, Butte, Glendive, Livingston, Miles City, Missoula, Sidney
Flathead Transit	Missoula, Kalispell, Whitefish
Salt Lake Express	Dillon, Butte

Existing Airport Facilities/ Access

Billings Municipal Airport was officially opened in 1928. In 1971, the airport was renamed, as it is presently referred to, Billings Logan International Airport (airport code is BIL). The Billings Logan International Airport Master Plan was completed in March 2010 (6-3). This Master Plan documents planned expansions and improvements for the airport over the next twenty years.

AIRPORT SERVICE

Currently, the airport serves as a regional hub for air traffic (shown in Exhibit 6.11) with nonstop service to five cities in Montana and ten U.S. cities outside of Montana:

- | | |
|---|--|
| <ul style="list-style-type: none"> • Chicago (seasonal) • Dallas • Denver • Las Vegas – biweekly • Los Angeles - seasonal • Mesa • Minneapolis | <ul style="list-style-type: none"> • Portland • Salt Lake City • Seattle • Phoenix – biweekly • Sidney, Wolf Point, Havre, Glasgow, and Glendive, Montana |
|---|--|

The Federal Aviation Administration (FAA) classifies the airport as a small hub with a local market area extending throughout central and eastern Montana.

The airport’s importance to the region and State has been growing with passenger enplanements of 437,810 in FY 2017.

The airport has cargo and mail operations with 41,324 tons passing through in FY 2017. United Parcel Service and Federal Express serve the Billings market as well as several smaller cargo feeder airlines. The airlines currently serving the airport are shown in Table 6.6.

Table 6.6 Private Operator Connections

Airline	Direct Services	Daily Departures from BIL	Weekly Departures from BIL
Delta	Minneapolis, Minnesota and Salt Lake City, Utah	5	
United	Denver, Colorado and seasonally to Chicago, Illinois	5	
Alaskan	Seattle, Washington and Portland, Oregon	3	
American	Dallas, Texas	1	
Allegiant	Mesa, Arizona; Las Vegas, Nevada; and seasonal to Los Angeles, California		6
Cape Air	Glasgow, Glendive, Havre, Sidney and Wolfpoint, Montana	13	

Exhibit 6.11 National and Regional Direct Flights from BIL



Needs and Deficiencies

To guide identification of future public transportation strategies, deficiencies and needs were collected from the public and MET.

PUBLIC FEEDBACK

Nine percent of the public comments corresponded to transit deficiencies and needs in the study area. Review of the public comment feedback suggested the following themes:

- Better bus frequency, especially to:
 - Billings Heights

- West End
- Montana State University – Billings (MSUB)
- Hospitals
- Longer service spans, especially in:
 - Billings Heights
 - West End
 - South Side
- New service to:
 - Laurel
 - Briarwood
 - Schools throughout the Billings urban area
- More bus stops and bus shelters
- Better schedule coordination for transfers, especially downtown
- Better bus schedule advertisement and publicization
- Right-sized buses
- Sustainable fuel sources for buses
- More affordable flights at Billings Logan International Airport

MET NEEDS IDENTIFICATION

Key needs identified through discussions with MET include:

- Funding – Explore opportunities to increase funding through federal and local sources.
- Capital Assets – Specific asset needs will be defined in the transit asset management plan, which is currently being developed by MET. Needs include rolling stock, equipment, and facilities.
- Service – MET intends to have an all-day fixed-route service to Billings Heights by 2020.
- Technology – MET intends to provide all fixed-route buses with Automatic Vehicle Locators (AVL) by 2019 and to provide all fixed-route buses with automated fare collection systems and automated passenger counters by 2025.
- Transit Stops – MET intends to implement designated fixed-route bus stops by year 2025.
- Service Analysis – MET intends to complete a comprehensive service analysis by year 2025.

MET will monitor its progress towards addressing these needs to align with the goals, objectives, and targets established in Chapter 3.

Public Transportation Strategies

At this time, MET does not have the ability to expand the public transit system based on the current and projected operational funds. For public transit service to be expanded significantly in the region, an increase in the operations funding would need to occur through an increase in the local mill levy, other local funding source, and/or additional federal funds. Through this LRTP process, the community continued to identify projects and support for the public transportation system. Public transportation continues to be a priority of the community. It is recommended that the MPO and MET partner and investigate further the operations funding options for the region, what support there is within the community to fund transit, and determine a plan to begin funding expansion of public transit in the Billings urban area. It is also recommended that MET monitor its progress towards the funding, capital assets, and service analysis related goals described above.

Chapter 14 Conformity Analysis/Determination

On November 15, 1990, the Clean Air Act Amendments (CAAA) of 1990 was signed into law. The CAAA is an extremely detailed and complex law that has had a major impact on the programs of the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA). The Act requires substantial emission reductions from the transportation sector. The purpose of the conformity provision of the CAAA is to ensure consistency between the Federal transportation planning process and Federal air quality planning process. The regulations require that for an urban area designated as nonattainment of National Ambient Air Quality Standards (NAAQS) for transportation-related criteria pollutants, or which has a maintenance plan for such pollutants, a conformity determination must be conducted to demonstrate that its LRTP, transportation improvement plan (TIP), or any revisions to its plan will not adversely affect air quality (14-1).

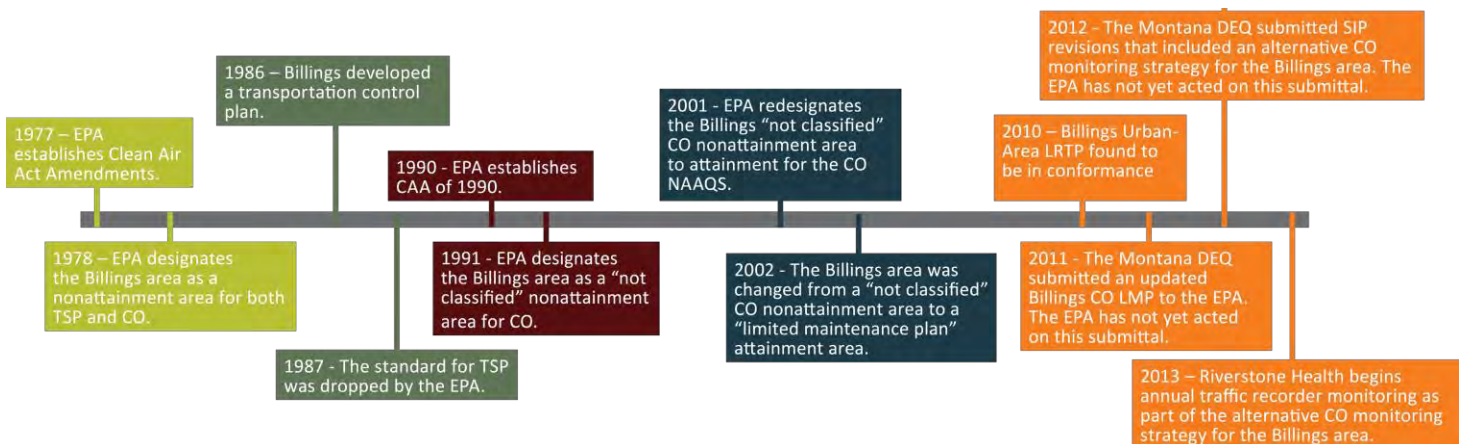
The conformity analysis and determination was developed based on the applicable federal, state, and local requirements; input from the MPO; 2017-2021 Billings Transportation Improvement Program (14- 2); and information presented in Chapter 13, Conformity Analysis/Determination of the adopted Billings Urban Area LRTP 2014 (14-3).

Background

TIMELINE OF CONFORMITY REGULATIONS AND ACTIONS

Over the last 30 years, several regulations have passed and actions have occurred within the State of Montana and Billings area that have changed certain requirements for determining conformity of a LRTP. Figure 14-1 illustrates a timeline of the different regulations and actions for conformity.

Figure 14-1 Timeline of Conformity Regulations and Actions for the Billings Area



DETAILS

Billings was designated as a nonattainment area by the Environmental Protection Agency (EPA) for both Total Suspended Particulates (TSP) and Carbon Monoxide (CO) in a Federal Register (FR) notice on March 3, 1978 (43 FR 8962) as a result of the Clean Air Act Amendments (CAAA) of 1977. The NAAQS for CO is 9.0 parts per million (ppm) for an 8-hour average concentration, not to be exceeded more than once per calendar year.

At that time, a transportation control plan (TCP) was developed to bring Billings back into compliance following the nonattainment designation. The CO violation was attributed primarily to motor vehicle emissions. The initial CO TCP concentrated on an intersection reconstruction at Exposition Drive and 1st Avenue N. The final CO TCP incorporated computer modeling with the intersection reconstruction and was approved in the Federal Register

on January 16, 1986 (51 FR 2397). Additionally, in 1987 the standard for TSP was dropped, and a new standard for particulate matter under 10 microns in size (PM - 10) was adopted (52 FR 24854). The EPA has also adopted the PM 2.5 standard and Billings is considered to be in compliance with both of these new standards. Billings was reevaluated in September 1990, based on the 1990 CAAA and the lack of exceedances in the CO monitoring data for 1988 and 1989. In a November 6, 1991 Federal Register notice (56 FR 56799), Billings was listed as a “not classified” nonattainment area for CO.

The Montana Department of Environmental Quality (DEQ) developed this redesignation request with guidance from the 1990 CAAA and a September 4, 1992 EPA memo from John Calcagni to the EPA Regional Air Directors. Section 107(d)(3)(E) of the CAAA defines the five required criteria of a redesignation request.

The criteria are as follows:

- Criterion 1: Attainment of the Applicable NAAQS
- Criterion 2: State Implementation Plan Approval
- Criterion 3: Permanent and Enforceable Improvements in Air Quality
- Criterion 4: Fulfillment of CAAA Section 110 and Part D Requirements
- Criterion 5: Fully Approved Maintenance Plan under CAAA Section 175A

Each of these criteria were accomplished and demonstrated in the CO redesignation request submitted in 2001. On February 9, 2001, the Governor of Montana submitted a request to redesignate the Billings “not classified” carbon monoxide (CO) nonattainment area to attainment for the CO NAAQS. The Governor also submitted a CO maintenance plan with this request. In this action, the EPA approved the Billings CO designation request and the 10-year maintenance plan effective on April 22, 2002. With this action, the Billings area legal designation was changed from “not classified” nonattainment for CO to a “limited maintenance plan” attainment area.

With the redesignation to attainment, the Billings area was required to comply with the provisions of the 2002 Carbon Monoxide Limited Maintenance Plan (2001 LMP Submittal) and submit a CAA section 175A(b) required revised maintenance plan in 2010 that provided for maintenance of the CO standards for an additional ten years. The Billings area can request full attainment status if the Billings area does not have any further CO NAAQS violations during the maintenance period.

The Montana DEQ submitted an updated Billings Carbon Monoxide Limited Maintenance Plan (2011 LMP Submittal) on July 13, 2011, as required by 42 USC 7505(A). The 2011 LMP submittal documents the first ten years of CO monitoring under the 2002 LMP, and details strategies for maintaining CO standards for the subsequent ten years. As such, the 2011 LMP document fulfills the criteria established in 40 CFR Part 51, Appendix V. However, the EPA has not yet acted on this submittal.

On June 22, 2012, the Montana DEQ submitted SIP revisions that included an alternative CO monitoring strategy due to the Billings area monitoring consistently low levels of CO for over a decade. The DEQ determined that using the resource-intensive CO analyzers to confirm CO levels was not justifiable.

The alternative CO monitoring strategy includes the following:

- reviewing the traffic volumes annually in each of the CO maintenance areas using the data from the MDT’s permanent automatic traffic recorders (ATR) in Billings,

- comparing the latest 3-year monthly average of the average daily traffic (ADT) volumes during the traditional CO concentration season of November through February against baseline 2008-2010 ADT average for those months, and
- implementing a contingency plan, so that if the most recent, consecutive 3-year period ADT in the CO maintenance area increases by greater than 25% from the baseline 2008-2010 period (The contingency plan includes reinstating the gaseous monitoring at the 2008-2010 monitoring location or at a site expected to read greater CO than that site.). (14-4).

Since the EPA has not acted on the July 13, 2011 or the June 22, 2012 submittals, the 2002 LMP is the controlling document for this air quality conformity determination. However, the ATR monitoring is included in the discussion as a reference for future updates to the LRTP.

The following conformity determination was made in accordance with the above referenced Federal regulations. The determination is for CO and applies to the 2018 Billings Urban Area LRTP and the Carbon Monoxide State Implementation Plan (SIP) for the State of Montana. As of the date of this conformity determination, the Billings Urban Area is not designated as a nonattainment or maintenance area for any other air pollutant.

Conformity Determination

INTERAGENCY CONSULTATION

The consultation guidance contained in the State of Montana Air Quality Rules on Conformity (ARM Chapter 17 Chapter 8 Subchapter 13) was used in the preparation of this conformity determination and emissions analysis. These rules incorporate by reference Federal regulations contained in 40 CFR Part 93, Subpart A. This consultation generally involved a cooperative and coordinated process including the MDT, Montana DEQ, and Yellowstone County Planning Board.

The Montana DEQ and MDT coordinate regarding air quality and transportation conformity on behalf of MPOs such as the City of Billings-Yellowstone County MPO. Coordination is conducted in accordance with applicable Federal code (40 CFR 93) and state administrative rules (ARM Chapter 17 Chapter 8 Subchapter 13). Coordination typically takes the form of consultation through letter correspondence between the state agencies.

Air quality planning is an integral part of the Billings Urban Area transportation planning process. As such, air quality has received specific attention during development of the numerous plans, programs, and projects over the last 30 years. The actions and activities of the 2018 Billings Urban Area LRTP and process closely parallel those of the SIP and support its intentions of achieving and maintaining the NAAQS.

PUBLIC, STAKEHOLDER, AND INTERAGENCY INVOLVEMENT

The City of Billings-Yellowstone County MPO conducts ongoing public, stakeholder, and interagency outreach for all transportation planning activities in the Billings urban area. Guidance for the outreach is included in the Yellowstone County Planning Board Public Participation Plan (14-5), which was updated by the MPO and adopted by the PCC in September 2018. The plan is reviewed and updated periodically by the MPO.

For this LRTP, a public involvement plan was established at the beginning of the project and used to guide the public, stakeholder, and interagency involvement (14-6). Chapter 2 of this LRTP summarizes the process and outreach activities incorporated for development of this plan.

LATEST PLANNING ASSUMPTIONS AND REGIONAL EMISSIONS ANALYSIS

An October 6, 1995 EPA policy memorandum for LMPs in non-classifiable CO nonattainment areas included a discussion of the applicability of the conformity rule requirements in these areas. According to this policy, a LMP

attainment area is not required to project emissions over the maintenance period, because the air quality design value for the area is low enough that the stationary source permitting program, existing SIP controls and Federal control measures provide adequate assurance of maintenance of the CO standard over the initial 10-year maintenance period. The design value must continue to be at or below 7.65 ppm. The CO average design value for the Billings area is 5.5 ppm, which is well below the requirement. Therefore, the Billings area adequately demonstrates maintenance.

Under a CO LMP, the following elements are applicable regarding the regional emissions analysis:

- No regional emissions analysis is required for applicable pollutants/precursors and analysis years.
- Transportation plan, TIP, and project conformity determinations are still required.
- For applicable projects, hot-spot analyses are still required. 40 CFR Section 93.109(e).

The Transportation Improvement Program (TIP) is a required planning program for federally assisted highway and transit improvements for the Billings metropolitan planning area and the MDT over a five-year period. The TIP is prepared every five years and amended as needed, and is in conformance with 23 CFR, Part 450 324-330.

Therefore, conformity demonstration using regional emissions analysis is not required for the LRTP.

Incorporation of the 2012 LMP Alternative CO Monitoring Strategy

As identified in the 2012 LMP, an alternative CO monitoring strategy was identified that included monitoring traffic volumes annually in each of the CO maintenance areas using the data from the MDT’s permanent automatic traffic recorders (ATR) in Billings. The ATR location is Site A-050 (US 87, Main Street, between Milton and Hansen) in Billings (14-9). Table 14.1 summarizes the rolling three year monthly ADT comparison between the 2008-2010 base year and the most recent 2011-2013 year time period.

Table 14.1 Rolling Three Year Monthly Average Daily Traffic (ADT) Comparison

Year	Monthly Average Nov-Feb ADT
2016-2018	31,287
2008-2010	33,952
% Difference	-8.8%

Source: MDT’s Monthly Automatic Traffic Recorder Comparison (14-10)

As shown in Table 14.1, the most recent rolling three-year monthly ADT is 8.8 percent lower than the baseline ADT. Therefore, the alternative CO monitoring strategy meets the requirements and is in conformance with the 2012 LMP.

TIMELY IMPLEMENTATION OF SIP TRANSPORTATION CONTROL MEASURES

Specific TCMs have not been proposed for Billings. There are no TCM’s in the SIP and no specific TCM’s are recommended for implementation in this LRTP. Therefore, the TCM timely implementation requirement is not applicable to this conformity determination.

FISCAL CONSTRAINT

Metropolitan transportation plans are required to meet Federal fiscal constraint requirements as detailed in 23CFR450.322(b) (11). For LMP areas such as Billings, this fiscal constraint requirement must be met before a conformity determination is approved. Chapter 13 of this LRTP documents that planned expenditures are

consistent with existing and proposed funding sources that can reasonably be expected to be available for transportation uses. As such, the LRTP meets that fiscal constraint requirement.

Conclusion

In addition to the above conditions and requirements, it is concluded that the 2018 Billings Urban Area Long Range Transportation Plan is found to be in conformance with the applicable provisions of Section 176(c) of the Clean Air Act, 40 CFR 93 Subpart A, and the Billings Carbon Monoxide Limited Maintenance Plan element of State Implementation Plan for the State of Montana.

References – Chapter 14

14-1. Code of Federal Regulations (40 CFR 93.102 (a)). Title 40 – Protection of Environment, Chapter 1, Subchapter C, Part 93, Subpart A. July 1, 2017.

14-2. 2017-2021 Billings Urban Area Transportation Improvement Program. Yellowstone County Board of Planning and Billings Metropolitan Planning Organization. May 18, 2017.

14-3. Billings Urban Area Long Range Transportation Plan, 2014 Update. Yellowstone County/City of Billings Metropolitan Planning Organization. August 2014.

14-4. State of Montana Alternative CO Monitoring Strategy Billings and Great Falls CO Maintenance Areas. Montana Department of Environment Quality. June 22, 2012.

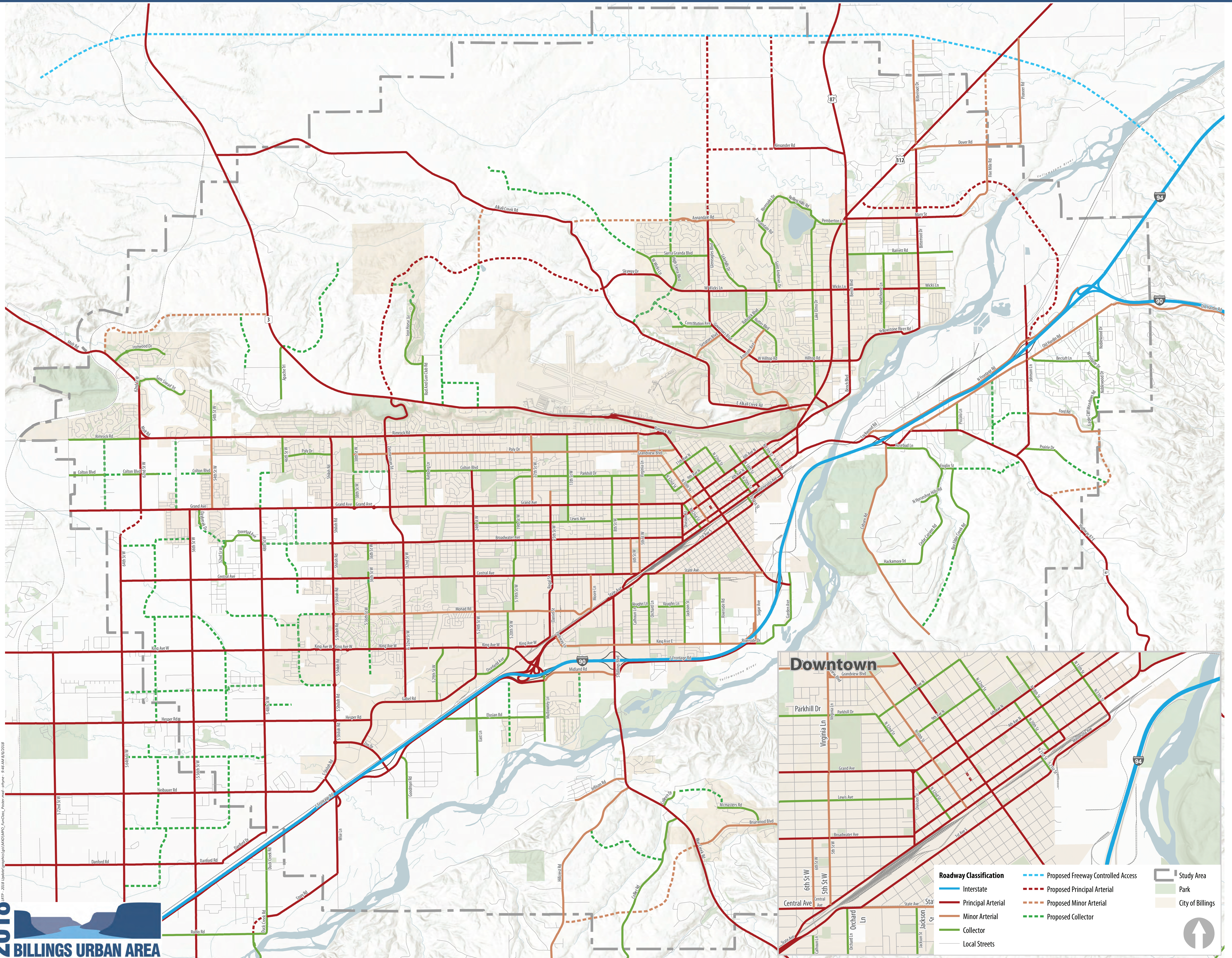
14-5. *Public Participation Plan*. Yellowstone County Planning Board. September 2018.

14-6. Public Involvement Plan for Billings Urban Area Long Range Transportation Plan. Kittelson & Associates, Inc. December 2017.

14-7. State of Montana Alternative CO Monitoring Strategy Methodology. Montana Department of Environment Quality. 2014.

14-8. Technical Report for Third Quarter FY2014. Riverstone Health Air Quality Program. 2014.

ROADWAY FUNCTIONAL CLASSIFICATION





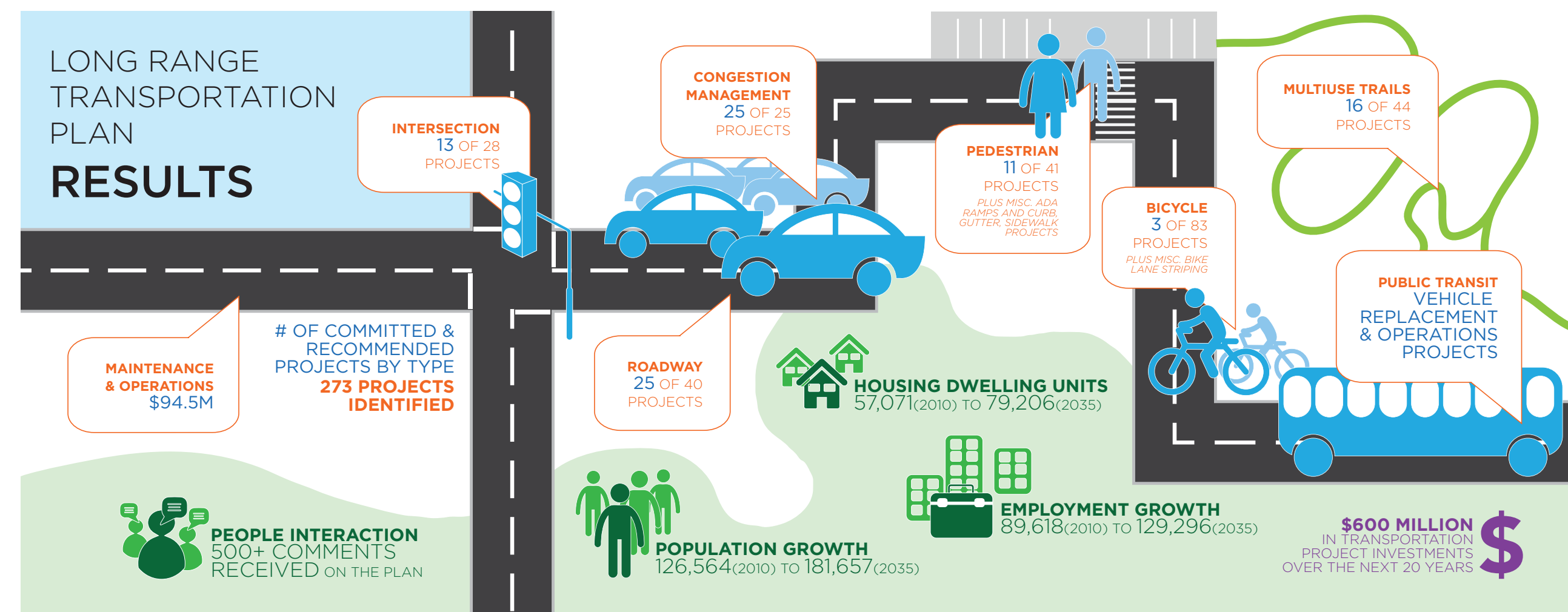
Introduction

Transportation planning has been a key element of the City's planning efforts for over 100 years since its inception as a major rail hub. As such, one of the first transportation surveys was completed in 1954, which included a transportation inventory, traffic counts, parking, and other related data. Ten transportation plans (1961, 1964, 1969, 1977, 1983, 1990, 2000, 2005, and 2009) have been completed since 1961. Most recently, the Yellowstone County Board of Planning, the designated Metropolitan Planning Organization (MPO) and oversight for

transportation planning for the Billings Urban Area, adopted the 2014 Billings Urban Area Long Range Transportation Plan (LRTP). The area encompasses the City of Billings, as well as the planning area extending approximately 4.5 miles outside the City limits in Yellowstone County.

The Billings Urban Area LRTP is a framework to guide development and implementation of multimodal transportation system projects for the Billings Urban Area. The LRTP is updated every four years, and looks at today's land use and transportation conditions and plans for the future through year 2035. Transportation is a vital element to the residents and businesses of Billings and connects commerce from the Billings Urban Area to other parts of Montana and metropolitan areas via road, rail, and air. The region's transportation infrastructure is robust and includes streets, highways, freeways, rail, transit, sidewalks, bicycle lanes and routes, trails, and an airport. Given the importance of transportation infrastructure, the LRTP includes goals and objectives that support transportation mobility and accessibility throughout the Billings Urban Area.

This double-sided map focuses on the functional classification system and typical cross sections within the City of Billings and Yellowstone County. Please refer to the adopted LRTP document for more details on the planning process, interagency and public involvement program, land use, public transit and transportation, truck services and



Functional Classification

The Roadway Functional Classification System defines a road's role in the overall context of the highway transportation system. In addition, it helps to define which standards are generally desirable for roadway width, right of way needs, access spacing, pedestrian and bicycle facilities and other specifications. The functional classification system hierarchy is typically established by the following hierarchy:

Freeways serve high speed, long distance travel movements and provide limited access to adjacent lands. Often included in the Arterial classification, freeways are unique in that they provide access to other arterial roadways via grade-separated interchanges. In the Billings Urban Area, the freeways are classified as Interstate.

Arterials represent the highest class of highways and roads. These roadways are intended to serve higher volumes of traffic, particularly through-traffic, at higher speeds. They also serve truck movements and should emphasize traffic movement over access to adjacent property. Arterial roadways are further designated as Principal Arterials and Minor Arterials.

Collectors represent the intermediate class. As the name suggests, these roadways collect traffic from the local street system and link travel to the arterial roadway system. These roadways provide a balance between through-traffic movement and property access and provide extended continuity to facilitate traffic circulation within an urban community or rural area.

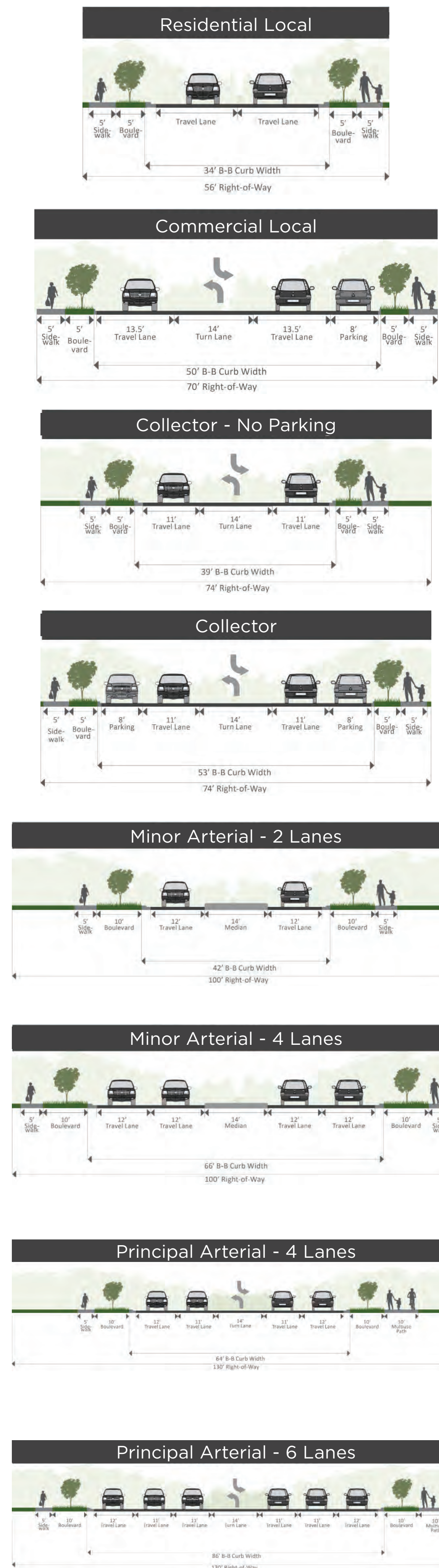
Local Roads and Streets are the lowest classification. Their primary purpose is to carry locally generated traffic at relatively low speeds to the collector street system and to provide more frequent access to individual businesses and residential property. Local streets provide connectivity through neighborhoods, but generally should be designed to discourage cutthrough vehicular traffic.

In addition to the above roadway classifications, a limited number of principal arterials are further identified as Interstate routes and National Highway System (NHS) routes. The Interstition System designations are Interstate 90 and Interstate 94. The Moving Ahead for Progress in the 21st Century Act (MAP-21) NHS Principal Arterial designations are King Avenue, Laurel Road, Montana Avenue, Zoo Drive, 1st Avenue North, and 1st Avenue South. The Other NHS Route designations are Main Street and US Route 87 and a Non-Interstate Strategic Highway Network (STRAHNET) Route designation is Montana Highway 3.

Functional Classification Map and Cross Sections

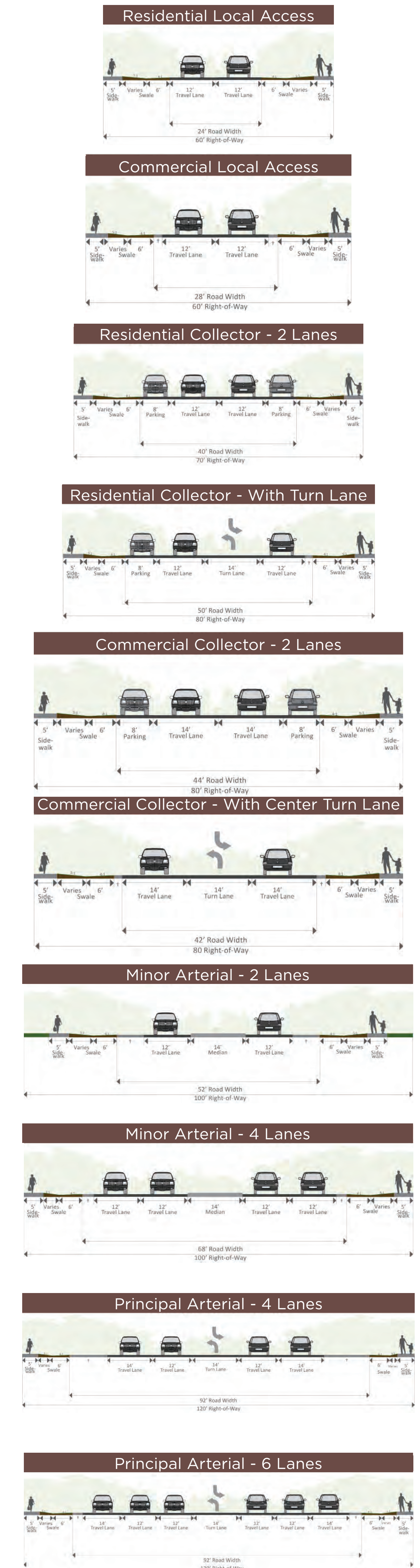
The LRTP planning process led to the development of the Functional Classification Map, shown on the front page. The City of Billings, Yellowstone County, and Montana Department of Transportation review and update this map regularly as part of the planning efforts within the Urban Area. To support the Functional Classification Map, typical roadway cross sections are illustrated to the right for the City of Billings and Yellowstone County. More details and guidance on these cross sections can be found in the City of Billings and Yellowstone County's Subdivision Regulations.

Sample City of Billings Cross Sections*



* For more details and guidelines on the cross sections, refer to the City of Billings Subdivision Regulations Table 23.406.B.1 Required Dedications and Street Improvements for Subdivisions within City Limits. A traffic impact study is required for major

Sample Yellowstone County Cross Sections*



*For details and guidelines on the cross sections, refer to the Yellowstone County Subdivision Regulations, Chapter 4 and Table 4.6.C.1 Required Dedications and Street Improvements for Subdivisions. A Road Evaluation Study or Traffic Impact Study may be required by Yellowstone County to determine the cross section.

*Shoulders shall be required on both sides of all roads where no curb and gutter or parking lanes are required. The shoulders shall be two (2) feet wide and graveled, and must meet the specification of County Public Works.

DRAFT MEMORANDUM

Date: August 6, 2018

Project #:
20896

To: Ms. Lora Mattox
Billings MPO
2825 3rd Avenue North, 4th Floor
Billings, MT 59101

From: Mike Aronson
Project: Billings MPO Travel Model
Subject: Land Use Categories and Trip Generation

This memorandum summarizes proposed land use categories and trip generation rates for use in the Billings MPO travel model.

LAND USE CATEGORIES

The proposed land use inputs to the model are divided into 3 population, 5 residential, 20 non-residential and 4 school categories (Table 1).

Population Categories

The proposed population categories include household population and two categories of group quarters (non-household) population. The total household population is not used directly for trip generation, but is used to estimate future school enrollment. The Group Quarters populations in student housing are used to generate trips generated by these non-household persons. The Group Quarters Other category includes population in facilities such as assisted living (or prisons) who do not make independent trips, but their population is included in the inventory to match control totals for total population.

Residential Categories

Three basic input household types are proposed:

1. SF: Single family (Census categories RU1 and RU2)
2. MF: Multi-family (Census categories RU3 through RU8)
3. MH: Mobile home (Census categories RU9 and RU10)

Table 1: Proposed Land Use Categories

Land Use	Land Use Category	Forecast Category	Units	Comments
POPULATION				
1	Household Population	Population	Persons	
2	Group Quarters Student	College	Persons	
3	Group Quarters Other	Population	Persons	Assisted living, etc...
4	<i>Unused</i>			
HOUSING				
5	Single Family Detached	Single Family	Dwelling Units	
6	Multi Family Attached	Multi Family	Dwelling Units	
7	Mobile Homes	Multi Family	Dwelling Units	
8	Senior Housing	Multi Family	Dwelling Units	Not in current inventory
9	Recreational Homes	Single Family	Dwelling Units	Not in current inventory
10	<i>Unused</i>			
EMPLOYMENT				
11	Construction	Basic	Employees	
12	Manufacturing	Basic	Employees	
13	Warehouse/Trucking	Basic	Employees	
14	Retail	Retail	Employees	
15	Retail High	Retail	Employees	Convenience stores, gas stations
16	Retail Warehouse	Retail	Employees	Costco., etc...
17	Restaurant	Retail	Employees	
18	Restaurant High	Retail	Employees	Fast food
19	Hotel	Service	Employees	
20	Service Commercial	Service	Employees	Auto repair, plumbers, etc...
21	Recreation	Service	Employees	Health clubs, bowling, etc...
22	Hospital	Service	Employees	
23	Medical Office	Service	Employees	
24	Office	Service	Employees	
25	Education	Service	Employees	Employee-oriented trips
26	Institutional	Service	Employees	Churches, clubs, etc...
27	Government	Service	Employees	
28	Government High	Service	Employees	Post office, DMV
29	Military	Service	Employees	
30	Other	Basic	Employees	Transportation, utilities, etc...
31-35	<i>Unused</i>		Employees	
SCHOOL				
36	Elementary School	Population	Students	
37	Middle School	Population	Students	
38	High School	Population	Students	
39	College	College	Students	Full-time equivalents
40	<i>Unused</i>			

The land use and trip generation calculations have also been set up to include senior housing and recreational homes. These housing types were not included in the 2017 base year inventory as they are not separately identified in the census data.

Household Stratification

The proposed trip generation for housing does not directly use the input categories, but is instead based on a cross-classification of households by household size and household income. Each of the household types (single-family, multi-family, mobile home) are converted into 16 household categories, based on four household size categories and four household income categories (Table 2). The stratifications are based on data from the 2010 Census. Table 2 also lists the numbers of Billings MPO study area households in each size and income category.

Table 2: Household Stratification and 2017 Base Year Households

Income Group	Household Size 1	Household Size 2	Household Size 3	Household Size 4+	TOTAL
Income Group 1: <\$20K	5,931	1,621	646	584	8,782
Income Group 2: \$20K-\$50K	5,556	3,455	1,051	1,218	11,290
Income Group 3: \$50K-\$100K	4,232	8,092	2,688	4,214	19,226
Income Group 4: >\$100K	1,403	6,462	3,238	4,278	15,381
TOTAL	17,122	19,630	7,623	10,294	54,679

Employment Categories

The minimum stratification recommended for employment would be three categories:

1. Basic
2. Retail
3. Service

Because a new detailed inventory has been conducted for the Billings MPO model, it is recommended that additional categories be considered to better define different types of land uses and trip generation. These include 4 types of basic employment, 5 types of retail to separate higher and lower generating uses, and 11 types of service employment. It is particularly recommended to divide service into categories for office, medical and government uses.

School Categories

Four types of school categories are recommended. College enrollment would represent full-time equivalent students, so part-time students would typically be counted as 0.5 full-time equivalents.

TRIP GENERATION

The trip generation step quantifies the total magnitude of travel (person trips) generated in each zone based upon land uses within the zone.

Trip Stratification

Trips are stratified by trip purposes. The trip ends generated within any area are further classified as either trip end productions or trip end attractions. The trip purposes are estimated separately and then later combined prior to assignment to the networks.

Trip Purposes

For the Billings travel model, trip generation rates for eight trip purposes are recommended:

1. Home-Work (HW)
2. Home-School (SC)
3. Home-College (CO)
4. Home-Shop (HS)
5. Home-Maintenance (HM)
6. Home-Other (HO)
7. Work-Other (WO)
8. Other-Other (OO)

For every land use category, trip generation rates are considered for each of the eight purposes.

Productions and Attractions

Consistent with conventional trip-based modeling practice, each one-way trip is defined as having two trip ends in the trip generation process:

- **Trip Production.** This is defined as the home end of any home-based trip, regardless of whether the trip is directed to or from home. If neither end of the trip is a home (i.e., non-home based), it is defined as the origin end.
- **Trip Attraction.** This is the non-home end (e.g., place of work, school or shopping) of a home-based trip. If neither end of the trip is a home (i.e., it is a non-home based trip), the trip attraction is defined as the destination end.

In other words, trip productions are generally home related while trip attractions are generally related to place of work. For example, a typical commute from home to work in the morning and then back home in the evening represents two separate one-way trips, and there are two trip ends produced in the home zone and two trip ends attracted in the work zone.

Trip Generation Rates

Recommended trip generation rates for the Billings travel model are based on several sources:

- Household travel survey data from the 2017 2017 Billings-Yellowstone County Household Travel Survey.
- ITE *Trip Generation* (10th Edition), 2017.
- *Travel Demand Forecasting: Parameters and Techniques*, National Cooperative Highway Research Report 716, 2012 (NCHRP 716), which includes a summary of rates used in travel models for other metropolitan areas.

Total daily person trip generation rates are summarized in Table 3. The model uses person trip rates as input, which represent trips by all modes including drivers, passengers, transit, bike and walk. The approximate vehicle trip rates include an adjustment based on the average auto occupancies for each of the eight trip purposes (from the household survey).

The model actually uses separate trip generation rates for each of the eight trip purposes. The separate purpose rates sum up to the totals shown in the table.

Group Quarters Population Trip Generation

The transportation survey sample size was not significant for Billings-area residents living in group quarters. Work and school trips are described below. For non-work trips, the trip generation rates were estimated based on the survey results for one-person households, averaged across all income groups. Based on these averages, the group quarters population was assumed to generate 0.5 home-shop, 0.5 home-maintenance and 0.5 home-other trips per day.

Group Quarters Student

Students living in group quarters were assumed to primarily generate college trips. A rate of 1.80 trips per day was assumed, representing an average of one daily round trip by 90 percent of student residents. A small amount of home-work trips were also assumed, representing one daily round trip by 10 percent of student residents.

Table 3: Proposed Total Trip Generation Rates

Land Use	Land Use Category	Units	Daily Person Trip Rate	Estimated Daily Vehicle Trip Rate
POPULATION				
1	Household Population	Persons	0.0	0.0
2	Group Quarters Student	Persons	3.50	2.34
3	Group Quarters Military	Persons	3.30	2.70
HOUSING				
5-10	1 Person Household (average)	Dwelling Units	3.88	2.69
5-10	2 Person Household (average)	Dwelling Units	7.11	4.99
5-10	3 Person Household (average)	Dwelling Units	8.70	5.94
5-10	4+ Person Household (average)	Dwelling Units	13.19	8.27
EMPLOYMENT				
11	Construction	Employees	2.75	2.13
12	Manufacturing	Employees	2.75	2.13
13	Warehouse/Trucking	Employees	11.67	8.21
14	Retail	Employees	40.73	28.00
15	Retail High	Employees	90.59	62.00
16	Retail Warehouse	Employees	68.49	46.93
17	Restaurant	Employees	18.73	13.00
18	Restaurant High	Employees	55.39	38.00
19	Hotel	Employees	19.43	13.50
20	Service Commercial	Employees	28.95	20.00
21	Recreation	Employees	51.04	35.00
22	Hospital	Employees	7.02	5.20
23	Medical Office	Employees	12.00	8.91
24	Office	Employees	4.50	3.32
25	Education	Employees	2.76	2.13
26	Institutional	Employees	28.96	20.00
27	Government	Employees	4.42	3.32
28	Government High	Employees	57.82	40.00
29	Military	Employees	2.76	2.13
30	Other	Employees	2.75	2.13
SCHOOL				
36	Elementary School	Students	1.97	1.02
37	Middle School	Students	2.45	1.35
38	High School	Students	2.58	1.44
39	College	Students	2.66	1.50

Household Trip Generation

The Billings Transportation Survey was based on households. Therefore, it is most useful for determining travel characteristics at households as opposed to employment.

Household Trip Productions

The household survey was used as the starting point for trips per household for each of the 16 cross-classification categories. To the extent possible, the household trip production rates from the survey were used without adjustment. However, for several trip purposes, adjustments were applied so that the home-end trips would match in a more logical way with the non-home-end of trips (Table 4).

Table 4: Home-Based Trip Production Adjustments by Trip Purpose

Trip Purpose	Survey Trip Production Adjustment	Comments
Home-Work	1.20	Increased to match employment attraction estimates
Home-School (K-12)	0.80	Reduced to more closely match school enrollment
Home-College	None	
Home-Shop	None	
Home-Maintenance	1.80	Increased to match employment attraction estimates
Home-Other	1.80	Increased to more closely match typical social-recreational attractions at other households and employment sites.

Household Trip Attractions

Residential neighborhoods can also attract trips made by non-residents. These include social visits, which are classified as Home-Other attractions, and service trips such as deliveries or plumbers, which are considered Non-Home trips (could be either productions or attractions). The household transportation survey does not provide sufficient information to estimate these trips, so the trip generation rates are estimated from other sources.

The NCHRP 716 report includes average trip generation rates based on travel models around the country. The average NCHRP 716 attraction rates for households were 1.2 home-other and 0.6 non-home trips per household. These average rates were used as the starting point for Billings households. The average rates were then adjusted up or down for each of the 16 cross-classification categories based on the ratio of the Billings survey-based total home-based trips for each category compared to the regional average. For example, a 2-person household in the highest income group generates 5.12 home-based trips compared to the regional average of 6.41 home-based trips, or 80

percent. Therefore, that household category was assumed to attract 0.96 home-other (1.20 x 80%) and 0.48 non-home (0.60 x 80%) weekday trips.

Non-home production rates at households were set to be equal to the non-home attraction rates.

Employment Trip Generation

Employment uses are assumed to primarily generate trip attractions. Since the Billings transportation survey was focused on the household end of trips, the specific employment trip generation rates were primarily based on NCHRP 716. However, the Billings survey results were used as the control totals wherever possible.

Employment Trip Totals

The total trips generated by each employment type were estimated using information from ITE *Trip Generation*. For some categories, *Trip Generation* actually provides national average weekday trips per employee. For other categories, the trips per employee were estimated using *Trip Generation* rates for other variables such as square footage, and then converting to trips per employee using typical employment densities.

The trip generation rates based on *Trip Generation* are not divided into trip purposes, and represent vehicle trips rather than the person trips used in the Billings travel model. Therefore, they are only used as control totals on the model person trip rates after conversion from person to vehicle trips. The average person/vehicle conversion factors for each trip purpose are from the Billings transportation survey.

Employment Trip Productions

The only trip productions assumed at employment land uses are Work-Other and Other-Other trips. The trip production rates for these purposes are set to be equal to the trip attraction rates, described in the following section.

Employment Trip Attractions

The starting point for employment trip attraction rates were the national averages reported in NCHRP 716 (Table 5). Each trip purpose category was adjusted to represent the more detailed trip purposes in the Billings model, and to balance with the corresponding trip productions for each trip purpose from the Billings transportation survey.

Table 5: Average Person Trip Attraction Rates from NCHRP 716

Land Use Type	Home-Work	Home-Non-Work	Non-Home
Household		1.2	0.6
Basic Employee	1.20	0.2	0.5
Retail Employee	1.20	8.1	4.7
Service Employee	1.20	1.5	1.4
School Student		1.4	

Work Trips

The NCRHP 716 average rate of 1.20 trips per employee is proposed as a starting point. This may be adjusted during model calibration to more closely match the household survey results.

Non-Work Trips

Home Non-Work trip attractions were divided among the three corresponding Billings model trip purposes: Home-Shop, Home-Maintenance and Home-Other. For retail employment types, the 8.1 trip attractions were split nearly equally between Shop and Maintenance. For most service employment types, such as office or medical, the 1.5 trip attractions were split between Maintenance and Other. The splits were adjusted to balance with the trip productions generated by households using the rates from the household survey.

Non-Home Trips

Non-Home trips (Work-Other and Other-Other) include all of the short trips between employment locations and other non-home destinations. It is assumed that these are the most likely types of trips to be underrepresented in the household survey, as people may not remember to log every intermediate stop they make during a series of errands. The ITE *Trip Generation* control totals are assumed to be a more accurate measure of total trip activity at land uses. Therefore, instead of using the household survey or the NCHRP 716 averages to determine non-home trip generation rates for non-residential uses, the following process was used:

- Calculate the total home-based work and non-work trips attracted to each employment type, controlling to the household trips according to the rates from the Billings transportation survey.
- Convert the home-based person trips to vehicle trips using the average person/vehicle conversion factors for each trip purpose from the Billings transportation survey
- Subtract the home-based vehicle trips per employee from the control total vehicle trips per employee, which is based on ITE *Trip Generation*.
- The remaining vehicle trips per employee are assumed to be non-home based trips, and are split equally between productions and attractions.

- The non-home based vehicle trips per employee are converted back to person trips using the average person/vehicle conversion factor.

The result of this process is a set of trip generation rates for each employment type where the total trips reflect the ITE *Trip Generation* control totals, but the home-based trips by purpose reflect the Billings transportation survey.

School Trip Generation

School trip generation is based on a combination of employment and enrollment. Both the employment and enrollment need to be entered at a school site to fully account for the school's trip generation.

School Employee Trips

Trips related to employment at schools (commute and service trips) are accounted for by the Education Employment.

Student Trips

Student trips are calculated from enrollment for four school types: elementary school, middle school, high school and college. As a starting point, the 1.4 trips per student from NCHRP 716 is proposed. This may be adjusted during model calibration to more closely match the household survey results.

School Non-Home Trips

Similar to the employment land uses, the total vehicle trips per student for each type of school are used as a control total for total trips. The work trips (using a conversion factor of 1 employee per 8 students) and student trips are converted from person trips to vehicle trips and subtracted from the *Trip Generation* vehicle trip control total. The remaining trips are assumed to be non-home trips and are split between productions and attractions, then converted back to person trips.

DRAFT MEMORANDUM

Date: August 6, 2018

Project #:
20896

To: Ms. Lora Mattox
Billings MPO
2825 3rd Avenue North, 4th Floor
Billings, MT 59101

From: Mike Aronson, David Reinke, Like Liu
Project: Billings MPO Travel Model
Subject: Household Survey Analysis

This memorandum summarizes the analysis of the 2017 Billings-Yellowstone County Household Travel Survey for use in the Billings MPO travel model.

SURVEY METHODOLOGY

The 2017 Billings-Yellowstone County Household Travel Survey was conducted by Westat. This household travel survey included the collection of one-day of household travel behavior and was designed to meet the needs of regional transportation modeling. The transportation survey is described in detail in the survey report (*2017 Billings-Yellowstone County Household Travel Survey Final Report*, prepared by Westat for Billings-Yellowstone County MPO, November, 2017). This section summarizes the survey methodology and key findings used in the travel model development.

The transportation survey included household activity logs combined with GPS vehicle tracking.

Household Survey

Survey Methodology

The survey data collection effort included completed interviews with 1,066 households during May of 2017, about 1.7 percent of total households. Participating households were asked to keep a travel log for each member of their household (5 years old or older). Various processes were used to retrieve and check the travel log data from each household. The activity locations were geocoded to specific points wherever possible.

Survey Weighting

The characteristics of the 1,066 responding households were compared to the general characteristics of the Billings area, using data from the 2010 United States Census. A weighting factor was developed for each household so that its responses would more correctly represent the proportions of similar households. The weighting factors were based on the following characteristics:

- Household size
- Vehicles per household
- Workers per household
- Household income

The household weighting factors range from 14 to 314, and average about 58. A weighting factor of 58 would be consistent with the average sampling of 1.7 percent of Billings area households. A weighting factor of 100 would indicate that the survey captured one percent of a particular combination of household size, vehicles, workers and income category.

GPS Survey

In addition to inclusion in the travel behavior survey, a subsample of households participating in the survey applied a smartphone app to provide GPS tracking of trips. Approximately 352 households applied the app and also confirmed all trip details associated with the GPS records.

SURVEY PROCESSING

The complete survey databases were received from Westat and further processed for travel model applications. The survey database includes the following data tables:

- Households, listing household characteristics such as numbers of persons or vehicles
- Persons, including associated household, age, gender, etc.
- Vehicles, including associated household, model year, model, etc.
- Locations, with latitude and longitude
- Places for each recorded activity, including associated household, person, vehicle and location, as well as type of activity, arrival and departure times, travel mode, etc.

The records in the "Place" data were linked to form trips from one location to another, creating a "Trips" database. Each trip record has information on origin and destination locations, origin and destination activities, time of day, time duration of trip, and travel mode.

Trip Purposes

The 21 activity types recorded in the transportation survey were consolidated into six more general trip purpose categories used in the travel model (Table 1).

Table 1: Survey Activity Categories

Survey Activity Type	Model Activity Category	Comments
1. Typical home activities	Home	
2. Working at home (paid)	Home	
3. Work at fixed work location	Work	
4. Work at non-fixed work location	Work	
5. Work-related (off-site meeting)	Other	Work-Other trip purpose
6. School / Studying	School	Further stratified into non-college and college
7. Volunteering	Other	
8. Non-routine shopping	Shop	Major purchases such as appliances, cars, furniture, etc...
9. Routine shopping	Shop	Groceries, clothing, etc...
10. Drive-thru errands	Maintenance	ATM, dry cleaning, pharmacy, etc...
11. Vehicle service	Maintenance	
12. Health care visit	Maintenance	
13. Non-shopping errands	Maintenance	Bank, post office, government, etc...
14. Drive thru/take-out dining	Shop	
15. Eat out	Shop	
16. Socialize with friends / relatives	Other	
17. Religious or community event	Other	
18. Exercise or recreation	Other	
19. Attend major special event	Other	
20. Drop off / Pick up passenger	Serve Passenger	Changed to "School" activity if associated with another person going to/from school
21. Change / Transfer trip mode	Change Mode	Transit access trips linked to ultimate origin and destination of total transit trip
97. Other (specify)	Other	

Trip Data Checks

Additional manual data checking steps were implemented:

- There were a number of cases where a place was coded as the home location, but the purpose was something else not appropriate for a home location (e.g., shopping, or change mode). These were recoded as “home” locations.
- Access trips to transit (walking to a bus stop) were linked to their ultimate destination.
- “Serve Passenger” trips were recoded as “School” trips if the trip went to a school TAZ identified by a school trip in the same household, and if the times of the trips were similar.
- There were a number of trips where the origin and destination were both home, but the location file indicated that the person had traveled a nonzero distance. These were recoded as “home-other” trips.

Household Cross-Classification

The travel model trips generated by households are based on household size and income groupings. The household size categories were set to be four categories (1, 2, 3 and 4+ person households). The survey classifications include nine categories of household income. In order to provide adequate sample sizes for trip analysis, the nine income categories needed to be consolidated into a smaller number of income groupings. The income groupings were determined based on a statistical analysis of the transportation survey data.

The following considerations were used to determine the income groupings:

- Sufficient sample size for a combination of household size and income category (a minimum of 20 surveyed households was assumed)
- Statistical variation between trips per household for various groupings
- Significant variation for specific trip characteristics, such as use of the transit mode

Based on this analysis, the following four household annual income groupings were selected:

- Income Group 1: Less than \$20,000
- Income Group 2: \$20,000 to \$50,000
- Income Group 3: \$50,000 to \$100,000
- Income Group 4: Greater than \$100,000

These groupings are not equivalent to income “quartiles,” but correlate more closely to differences in travel behavior.

The four household sizes and four income groupings result in 16 possible household cross-classifications (Table 2). Statistical testing was used to determine which of the 16 cross-classifications could be used for independent derivation of trip information. Initially, all possible splits of income quartiles by household size were tested. Mean trip rates and standard errors were computed. Since

household weights were used to weight the data rather than raw survey responses, a statistical “bootstrap” methodology was developed to estimate the standard errors of the means. The coefficients of variation and the differences in trip rates were computed between succeeding income groupings divided by standard deviation (square root of sum of squares of standard errors), which is an approximate t-statistic. The p-values were also computed to show the significance computed from the t value.

Table 2: Billings Survey Households by Classification

Household Size	Household Income				Not Reported	TOTAL
	<\$20K	<\$20K-\$50K	<\$50K-\$100K	>\$100K		
HH Size 1	68	144	82	17	1	312
HH Size 2	21	148	188	107	10	474
HH Size 3	3	30	49	31	4	117
HH Size 4+	8	34	75	44	2	163
TOTAL	100	356	394	199	17	1,066

Based on this analysis, the following 12 household cross-classifications were used for trip analysis:

- Household size 1: Income groups 1 and 2 (\$0-\$50K) evaluated separately, income groups 3 and 4 (>\$50K) combined
- Household sizes 2 to 4: Income groups 1 and 2 (\$0-\$50K) combined, income groups 3 and 4 (>\$50K) evaluated separately

SURVEY RESULTS

The 2017 Billings Transportation Survey was used to evaluate trip characteristics such as number of trips by purpose, trip lengths and travel modes. This section provides summary statistics derived from the transportation survey.

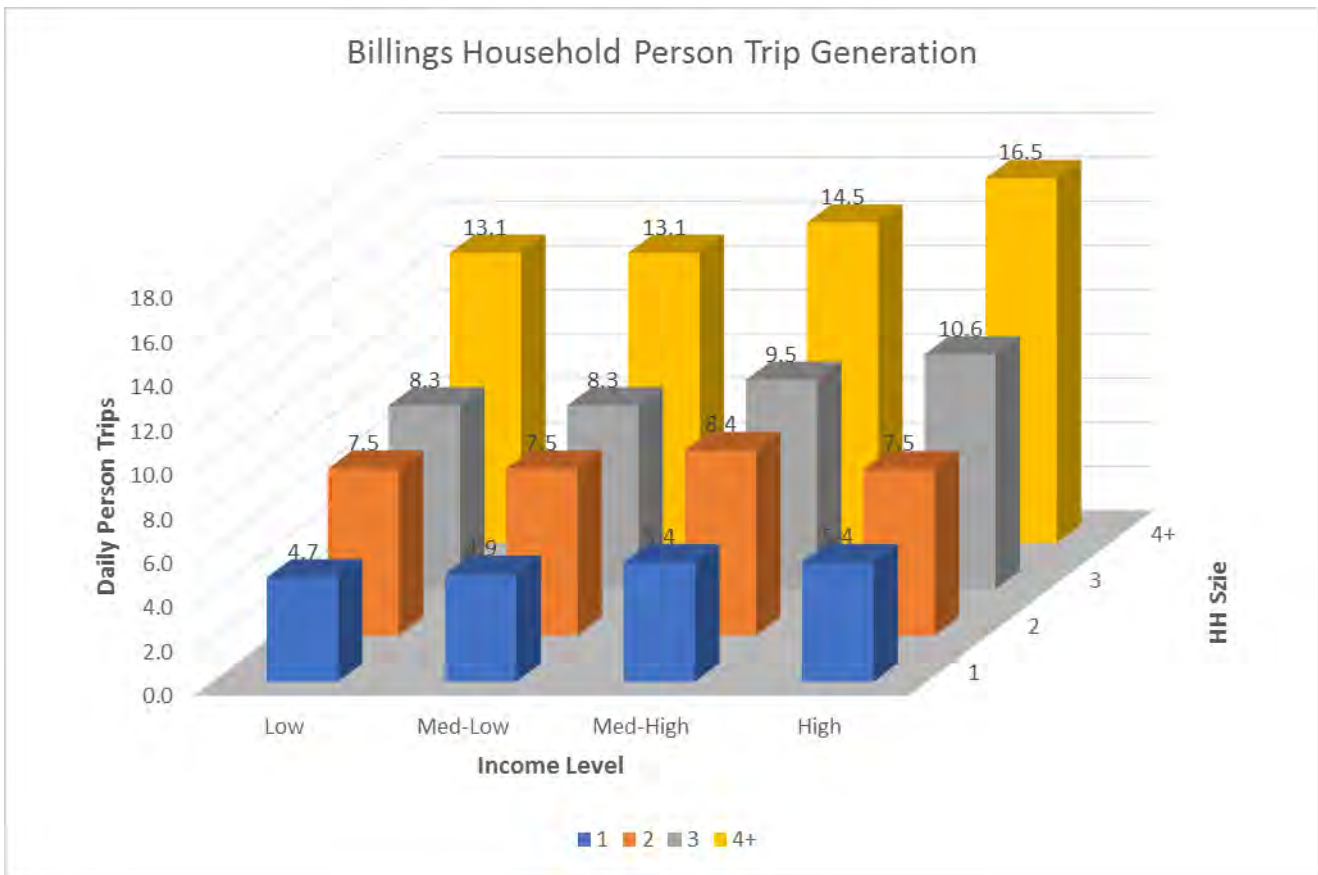
Person Trips per Household

Average weekday person trips per household were calculated for each of the 16 (12 different) cross-classification categories (Table 3 and Figure 1). The weekday person trips per household ranged from 4 to over 16. The average daily person trips per household for all household types was 8.3. The highest income households on average produced trips 10 to 20 percent higher than the lowest income households of the same size.

Table 3: Billings Average Weekday Person Trips per Household from Transportation Survey

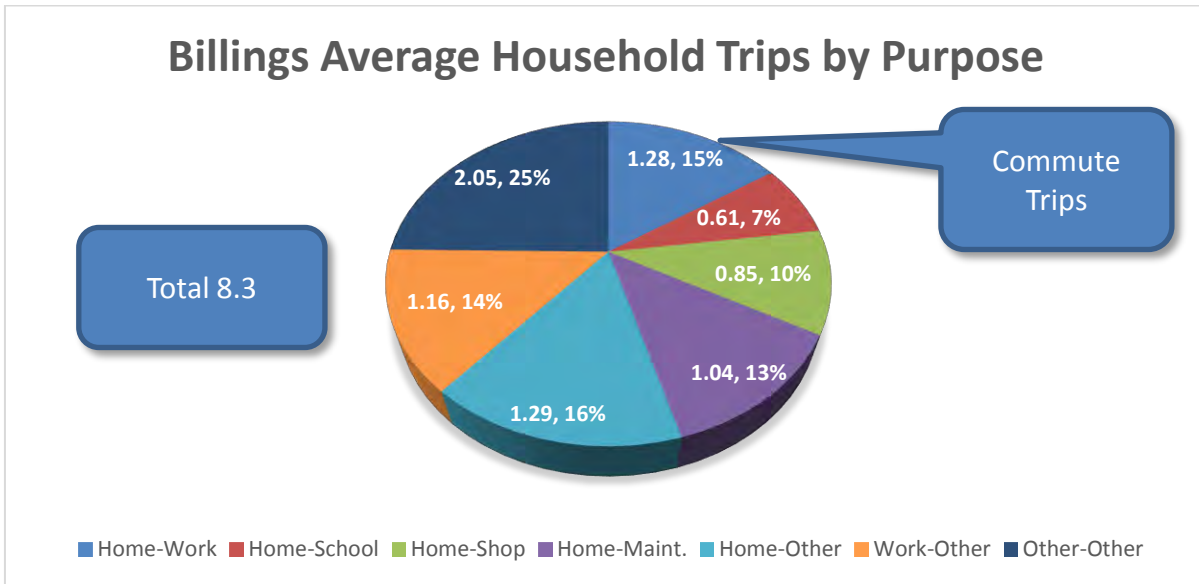
	Household Income			
Household Size	<\$20K	<\$20K-\$50K	<\$50K-\$100K	>\$100K
HH Size 1	4.7	4.9	5.4	5.4
HH Size 2	7.5	7.5	8.4	7.5
HH Size 3	8.3	8.3	9.5	10.6
HH Size 4+	13.1	13.1	14.5	16.5

Figure 1: Billings Average Weekday Person Trips per Household from Transportation Survey



The trips by eight aggregated trip purposes were compared (Figure 2). Home-Work trips are very important when considering peak hour congestion issues, but only make up 15 percent of total daily household trips. The largest category of trips were Other-Other, which represent trips between non-home/non-work locations (such as school to shopping).

Figure 2: Billings Average Household Trips by Purpose



Trips per household were compared for specific trip purposes, including work trips (Figure 3) and school trips (Figure 4). The work trips show more variation between lower and higher income households. The school trips are significantly higher for households with four or more occupants than for smaller households.

Figure 3: Billings Average Weekday Work Person Trips per Household from Transportation Survey

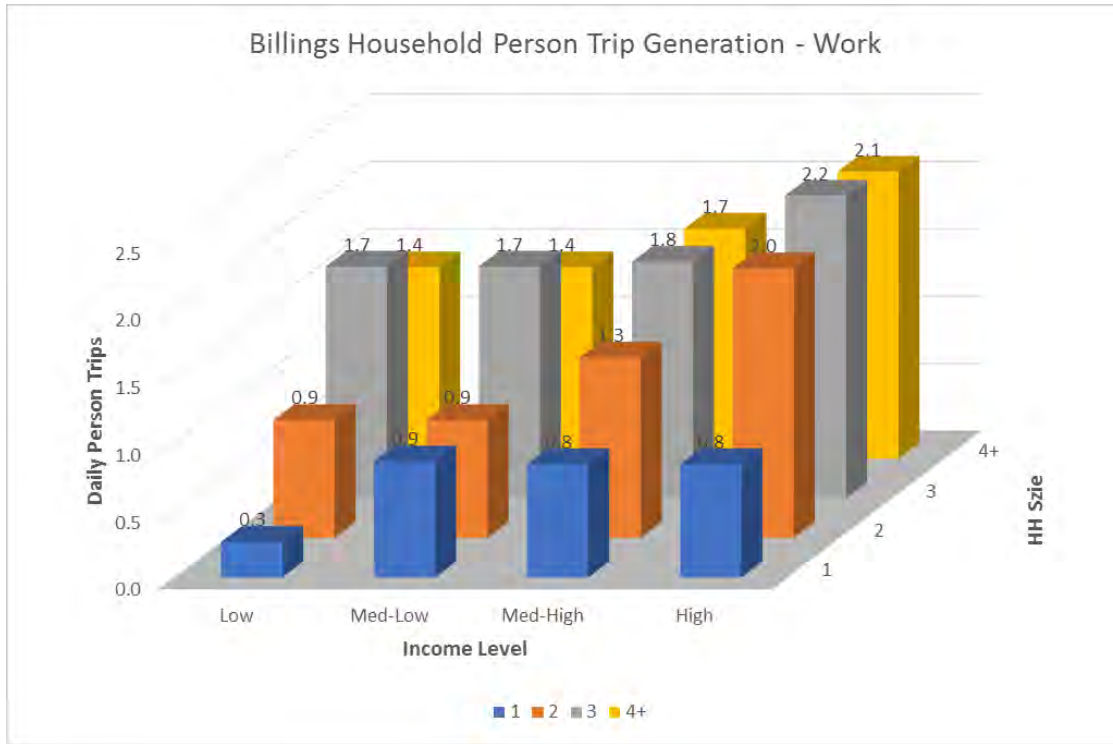
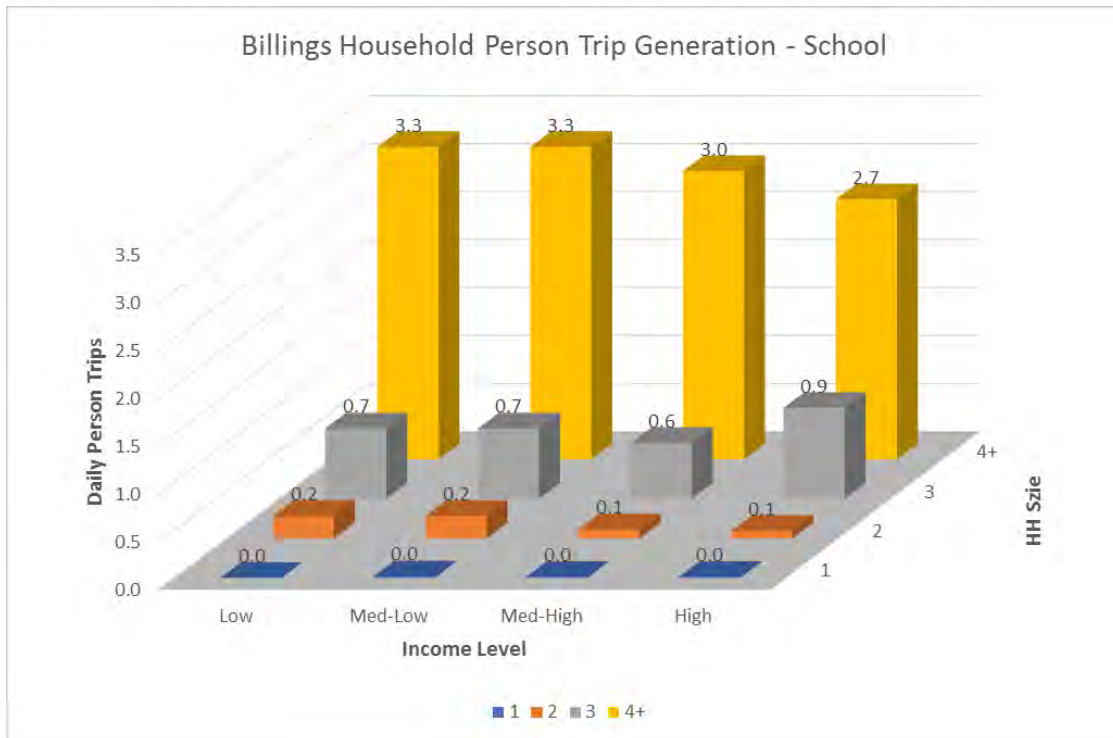


Figure 4: Billings Average Weekday School Person Trips per Household from Transportation Survey

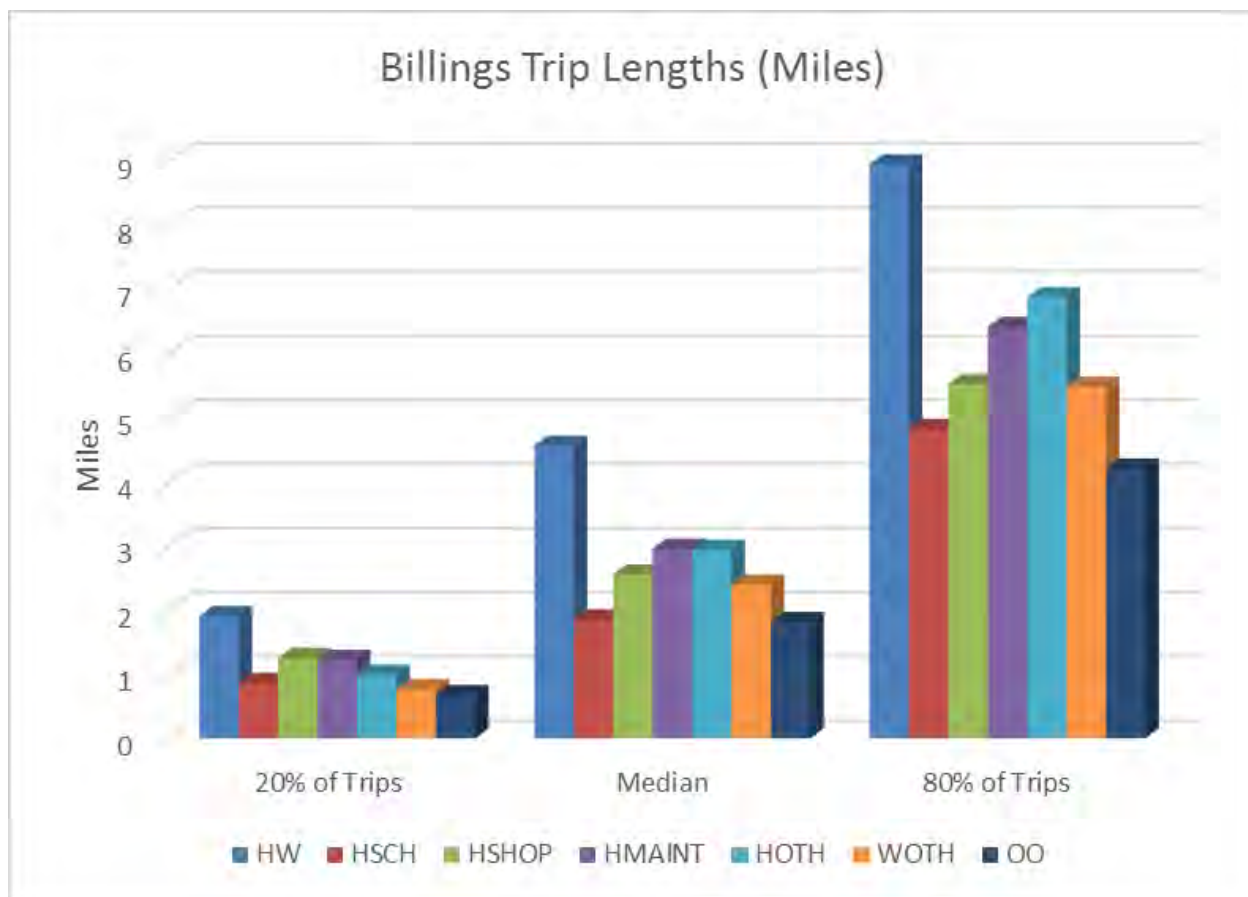


Trip Lengths

The durations of trips were compiled in both distance (Figure 5) and travel time (Figure 6).

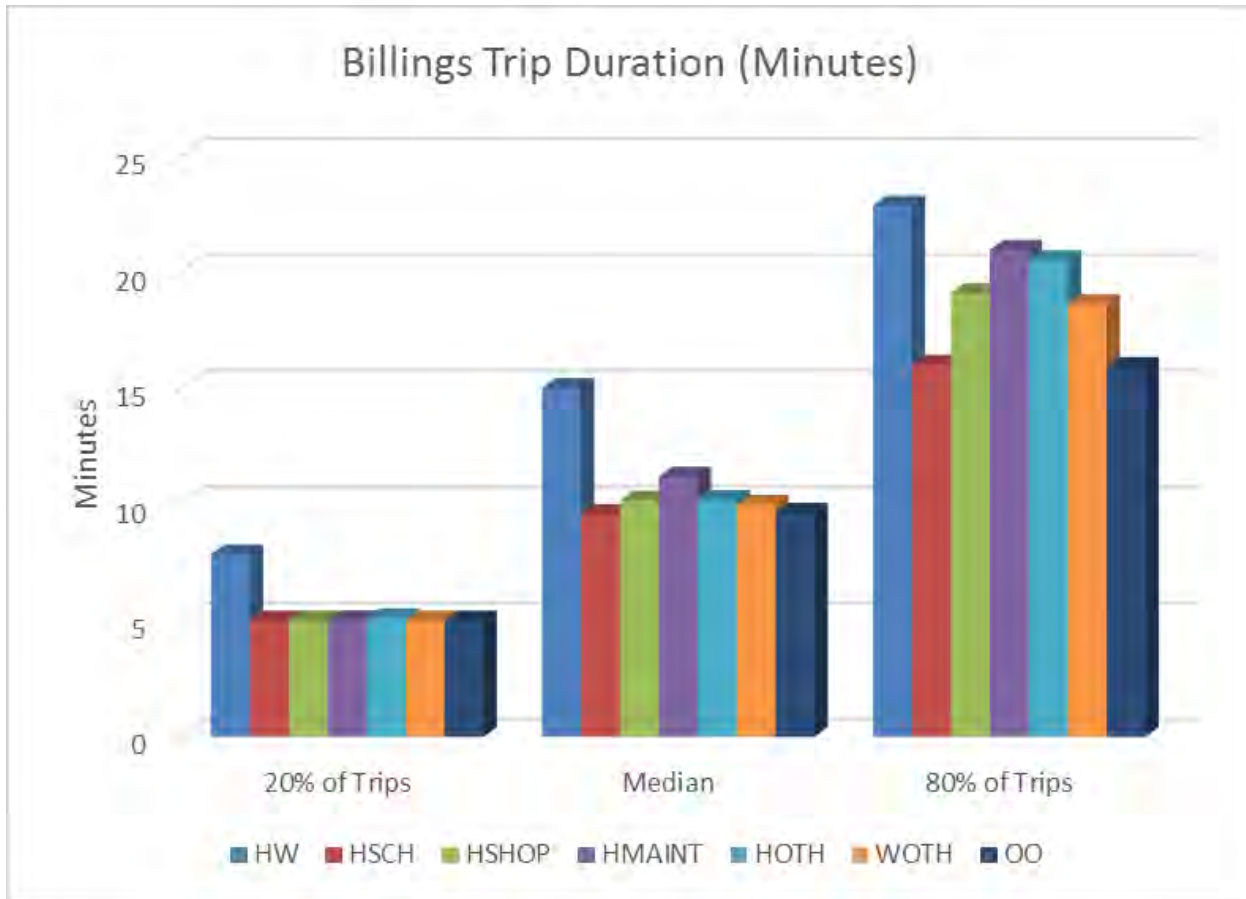
The median trip length for work trips was over four miles. The median trip length for school trips was under two miles. The median trip lengths for other trip purposes was between two and three miles. Other-Other trips, which represent connected trips away from home, tend to be the shortest trips reported. At the 80th percent level, 80 percent of work trips were nine miles or less, while 80% of school trips were less than five miles. The second longest trips reported were Home-Other, which are primarily social and recreational trips.

Figure 5: Billings Trip Lengths in Miles from Transportation Survey



There was less variation in the reported travel times. The median travel time for work trips was about 15 minutes, while the median travel times for all other trips purposes were all about 10 minutes. At the 80th percentile, 80 percent of work trips were reported to take 23 minutes or less, while 80 percent of school and Other-Other trips were 15 minutes or less.

Figure 6: Billings Trip Lengths in Minutes from Transportation Survey



Travel Modes

The modes of travel were compared for all weekday trips (Table 4). Drive alone trips account for a high percentage of home-work trips but only about half of all trip types. The average vehicle occupancy for all Billings trips was 1.31.

Table 4: Billings Weekday Trips by Purpose and Mode

Mode	Home-Work	Home-K12	Home-College	Home-Shop	Home-Maintenance	Home-Other	Work-Other	Other-Other	TOTAL
Drive Alone	83.0%	15.1%	15.1%	42.6%	52.7%	44.8%	73.2%	36.8%	50.7%
Shared Ride 2	11.5%	51.8%	51.8%	46.2%	37.3%	35.2%	12.7%	49.8%	35.0%
Shared Ride 3+	0.4%	16.1%	16.1%	5.2%	3.0%	8.1%	1.1%	6.0%	5.3%
Transit	0.9%	0.3%	0.3%	1.1%	0.1%	0.3%	1.2%	0.7%	0.7%
Bike	1.9%	0.8%	0.8%	0.8%	1.3%	3.3%	0.5%	1.8%	1.6%
Walk	1.5%	7.4%	7.4%	3.8%	5.2%	7.7%	9.6%	3.6%	5.1%
Other	0.8%	8.5%	8.5%	0.3%	0.4%	0.6%	1.7%	1.3%	1.6%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Average Person/Vehicle	1.125	2.193	2.193	1.488	1.385	1.545	1.252	1.577	1.434
Average Vehicle Occupancy	1.07	1.82	1.82	1.40	1.29	1.36	1.09	1.46	1.31

Note: Home-College trips combined with Home-K12 due to small sample size.

Time of Day

The household survey can be used to identify the times of day that different types of trips occur. Figure 7 through Figure 13 display the start times for trips for the different trip purposes.

As expected, work trips peak around 7:00-7:30 AM and 4:00-5:00 PM. School trips are even more sharply peaked at 7:30 AM and 3:00 PM.

Shopping trips gradually increase to a peak at the end of the workday, while maintenance trips (non-shopping errands) peak in the early afternoon.

Work-other trips have peaks at the beginning and the end of the workday as well as at lunchtime.

Other-other trips are distributed throughout the day but have peaks at the end of the school day and work day.

Figure 7: Billings Trip Start Times from Transportation Survey – Home-Work Trips

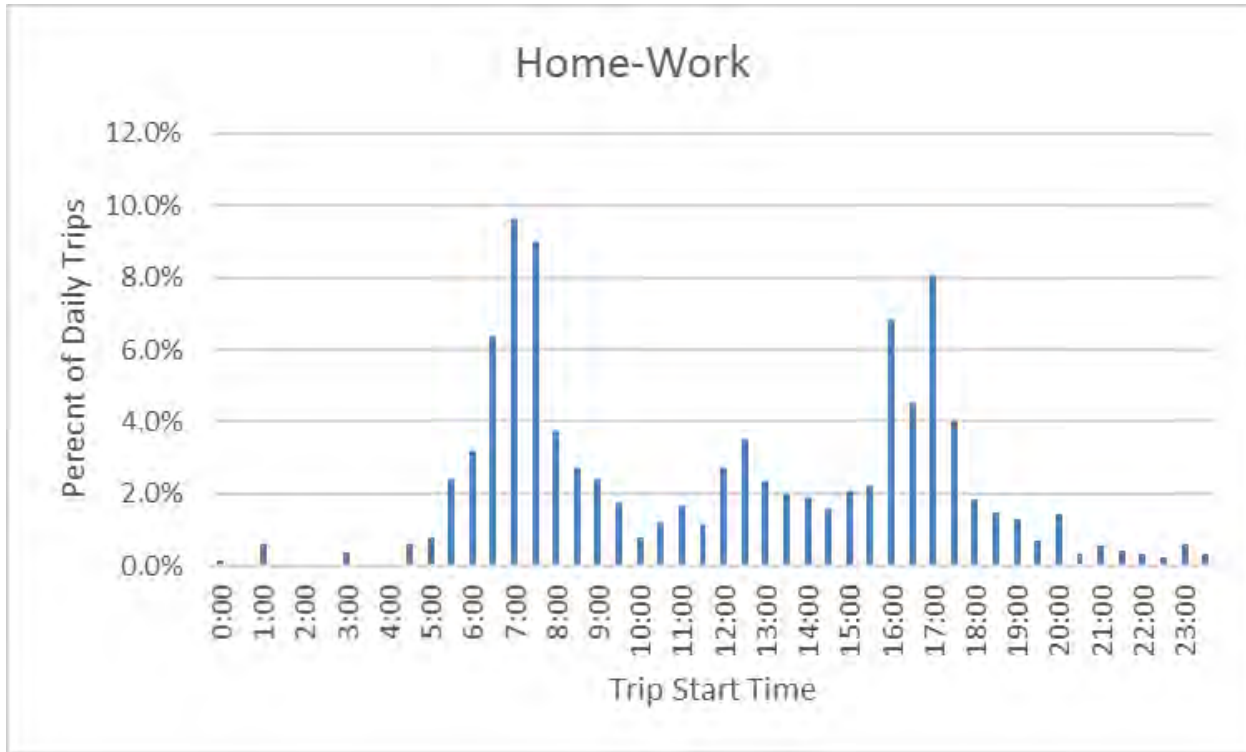


Figure 8: Billings Trip Start Times from Transportation Survey – Home-School Trips

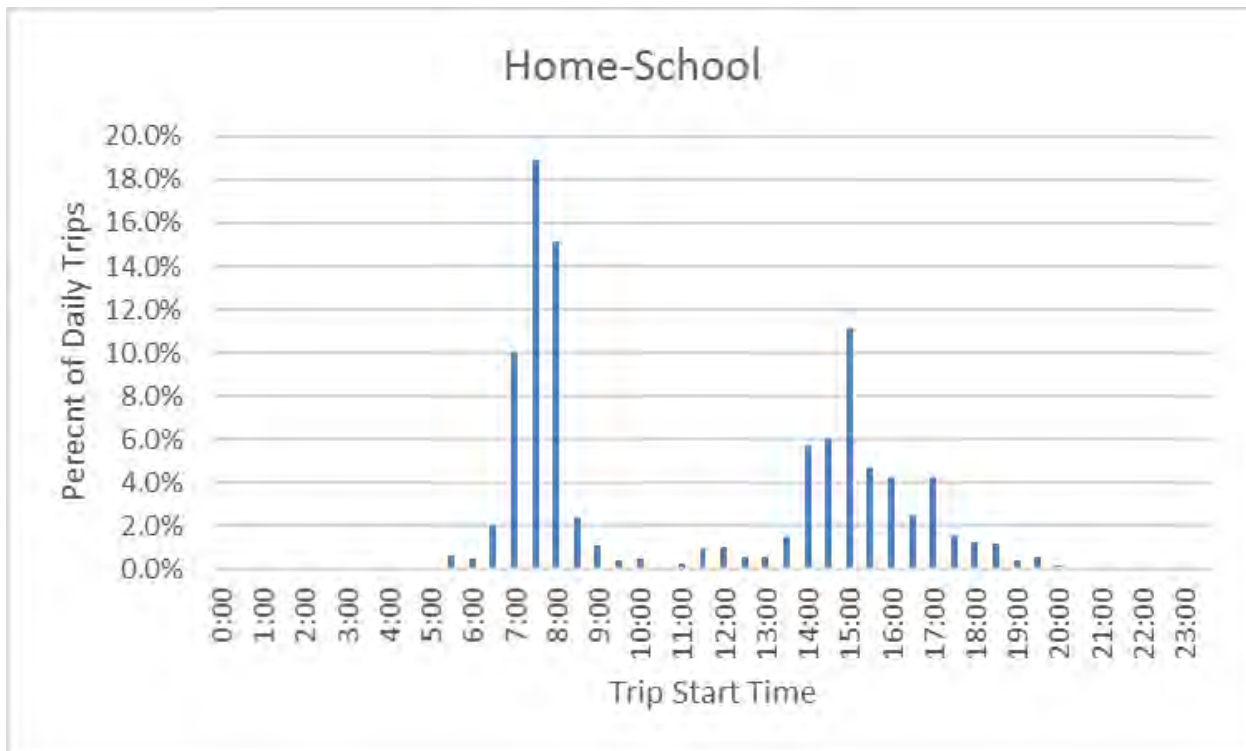


Figure 9: Billings Trip Start Times from Transportation Survey – Home-Shop Trips

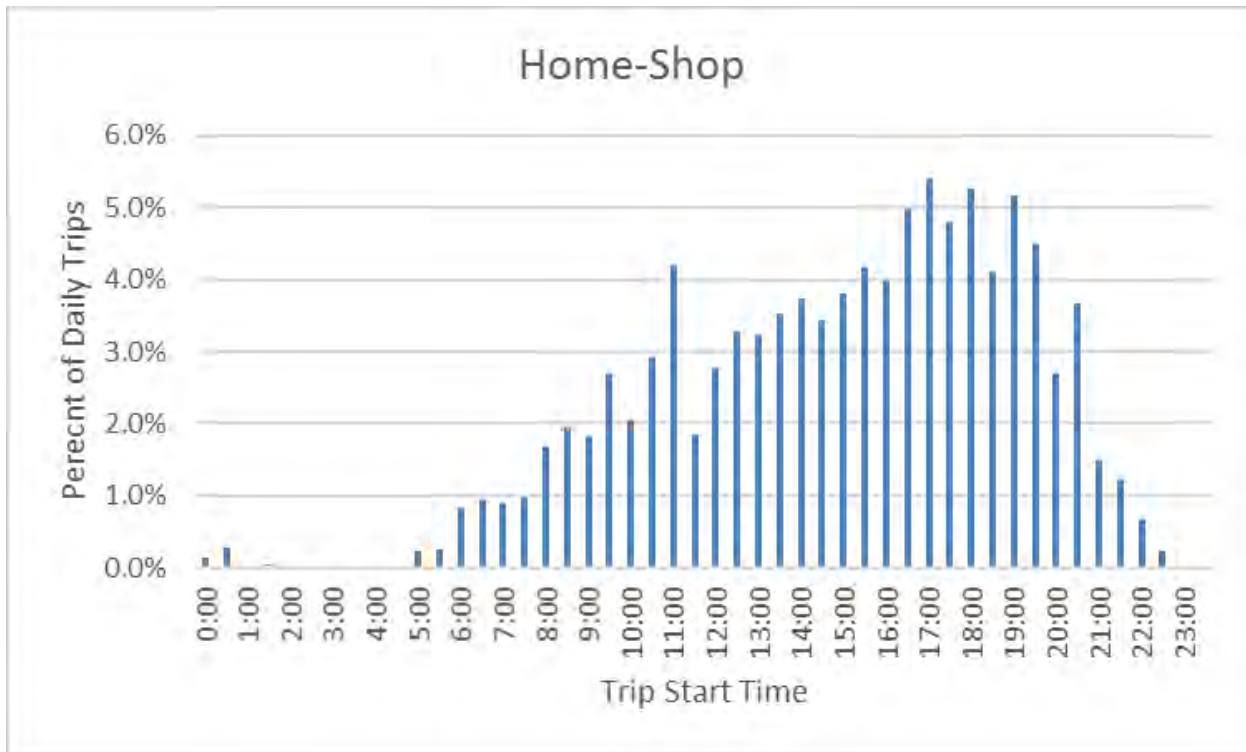


Figure 10: Billings Trip Start Times from Transportation Survey – Home-Maintenance Trips

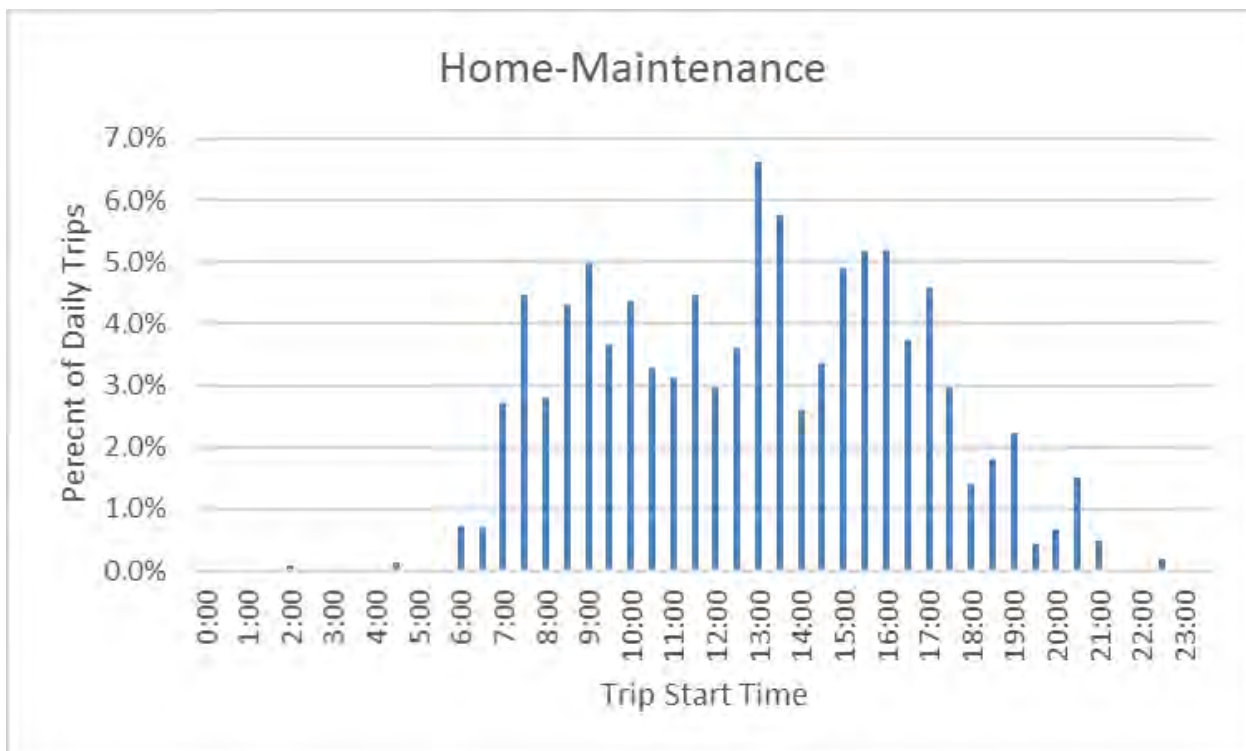


Figure 11: Billings Trip Start Times from Transportation Survey – Home-Other Trips

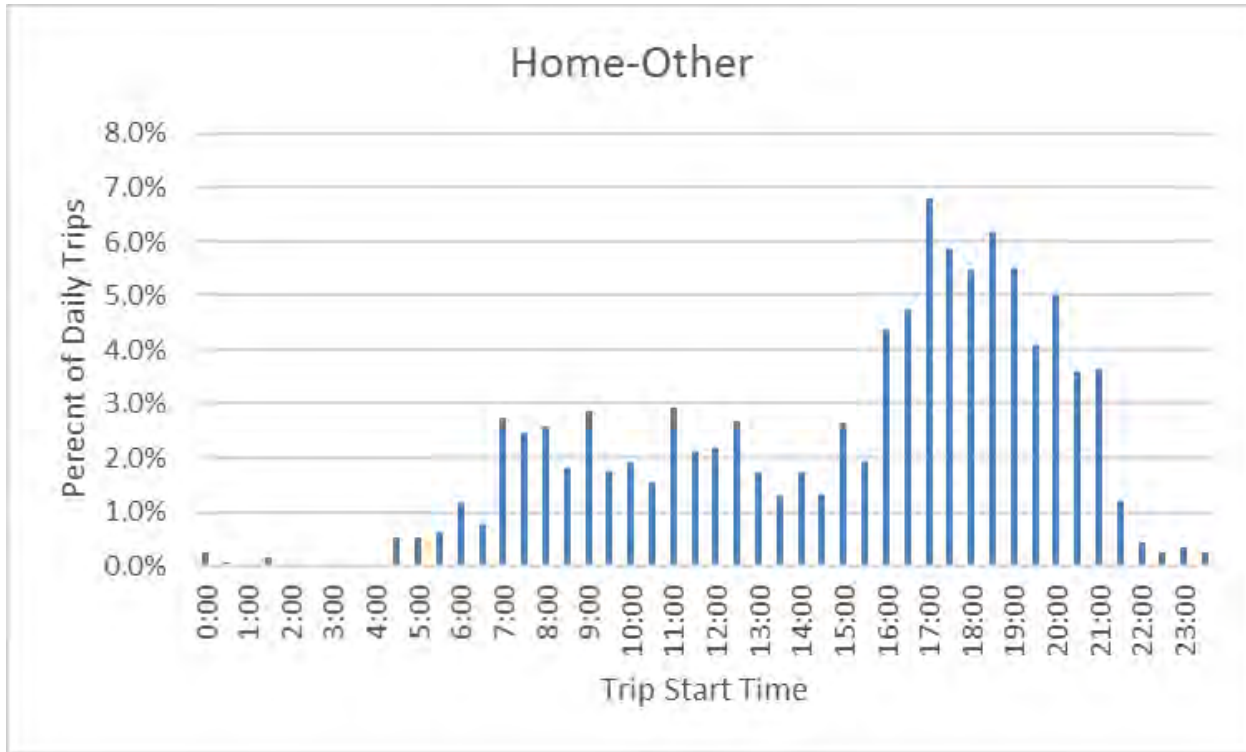


Figure 12: Billings Trip Start Times from Transportation Survey – Work-Other Trips

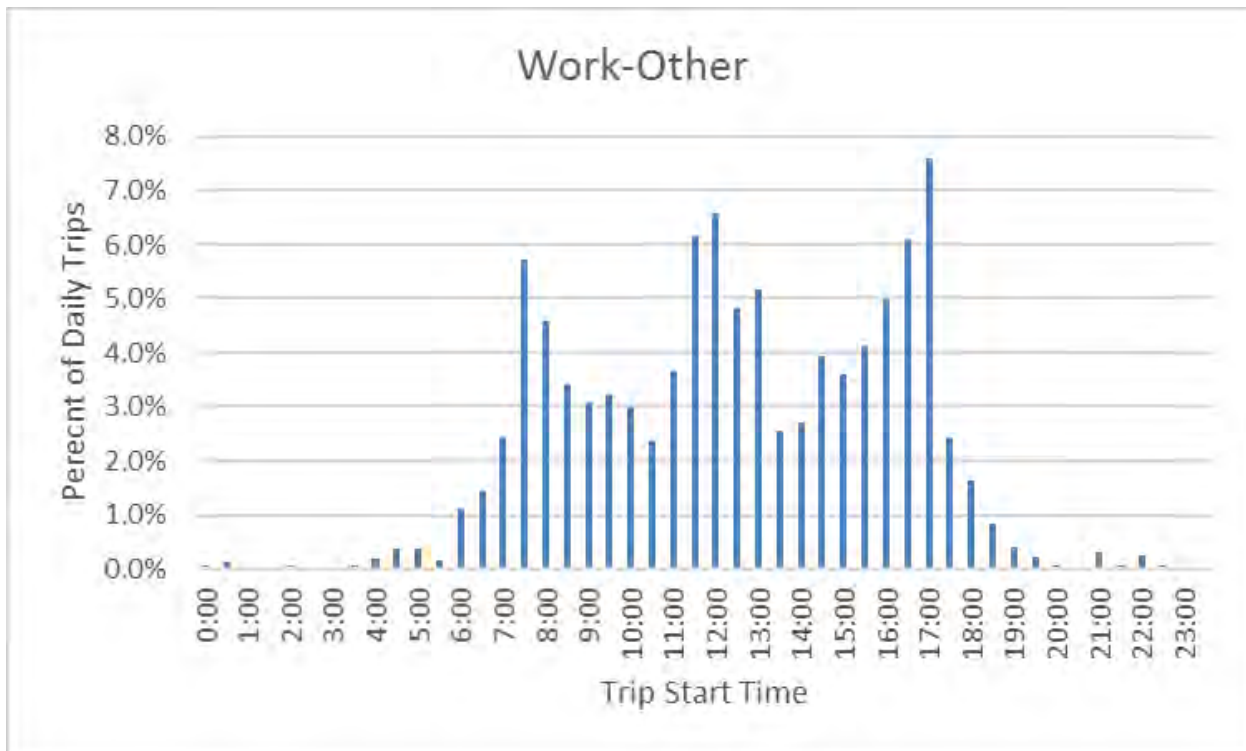
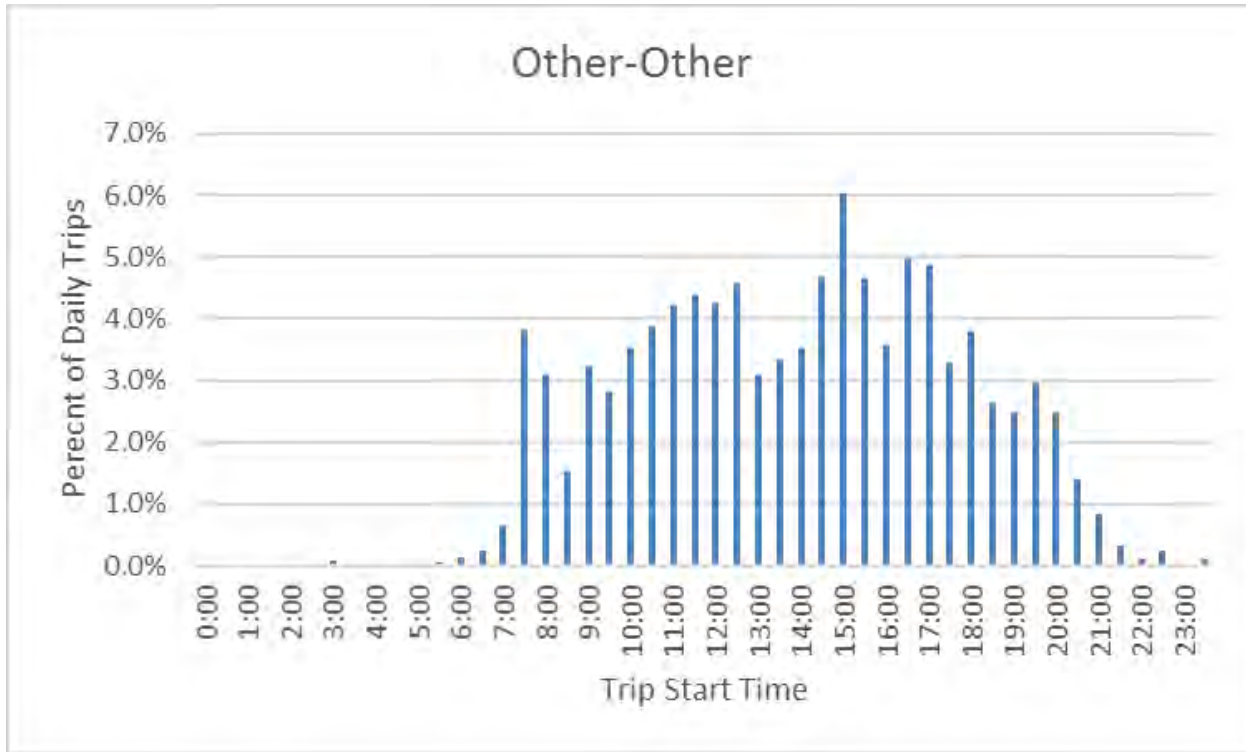


Figure 13: Billings Trip Start Times from Transportation Survey – Other-Other Trips



2018 Billings Urban Area LRTP, TDM, & PPP

Steering Committee Meeting #8 (10 AM - 12 PM)

August 9, 2018

What We'll Cover Today

- ▶ Introductions
- ▶ Public participation plan
- ▶ Updates
 - ▶ Traffic count database
- ▶ Chapter development
 - ▶ Draft introduction
 - ▶ Draft interagency & public involvement program
 - ▶ Draft goals, objectives, performance measures, & targets
- ▶ Draft land use
- ▶ Draft public transit & transportation
- ▶ Draft conformity analysis/determination
- ▶ Other activities
- ▶ Functional classification map
- ▶ Travel demand model
- ▶ Next meetings

Adoption Schedule for Public Participation Plan

YELLOWSTONE COUNTY
PLANNING BOARD



public participation plan

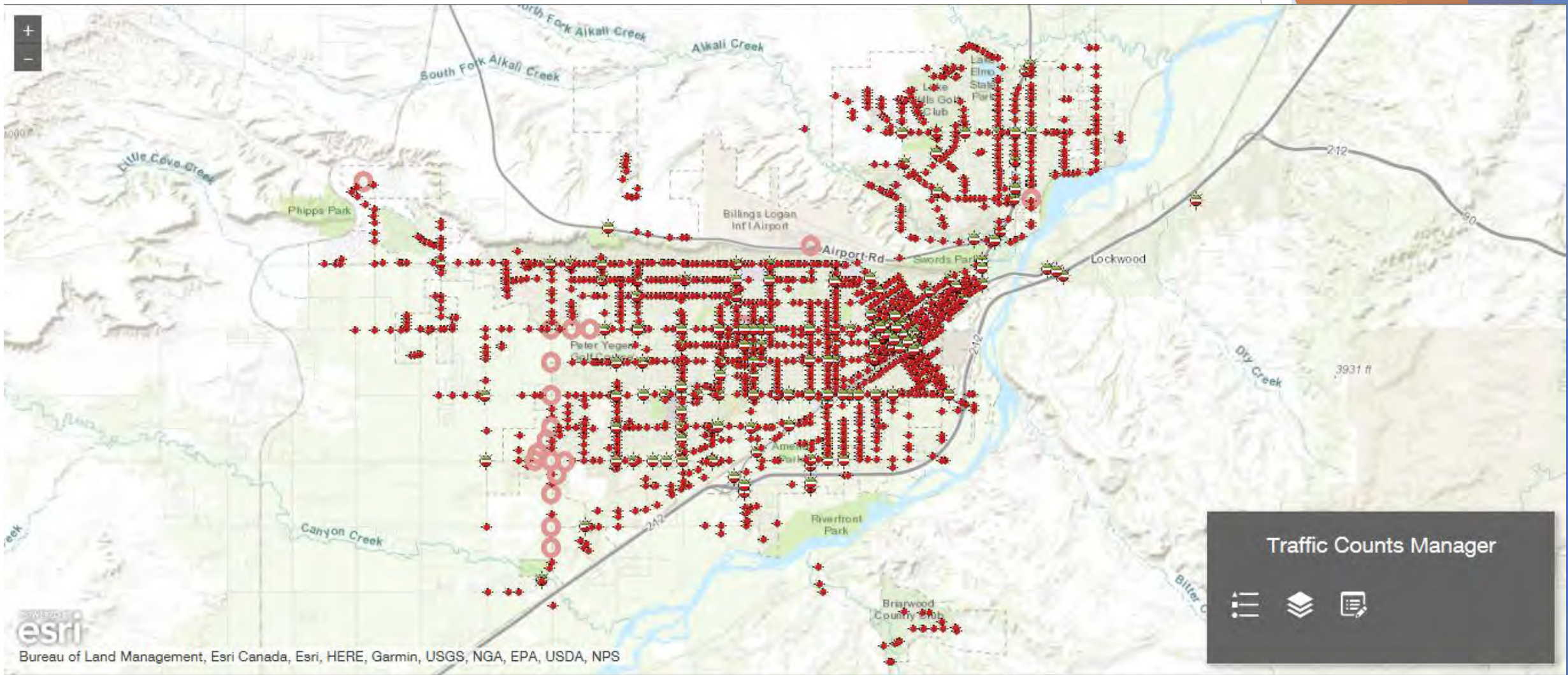
Group	Date	Public Comment Period
TAC	July 19	45 day comment period
Planning Board #1	July 24	
Planning Board #2	August 14	
City Council Work Session	August 20	
City Council	August 27	
Commissioners Discussion	August 20	
Commissioners	August 28	
PCC	September 11	

prepared by
KITTELSON
& ASSOCIATES

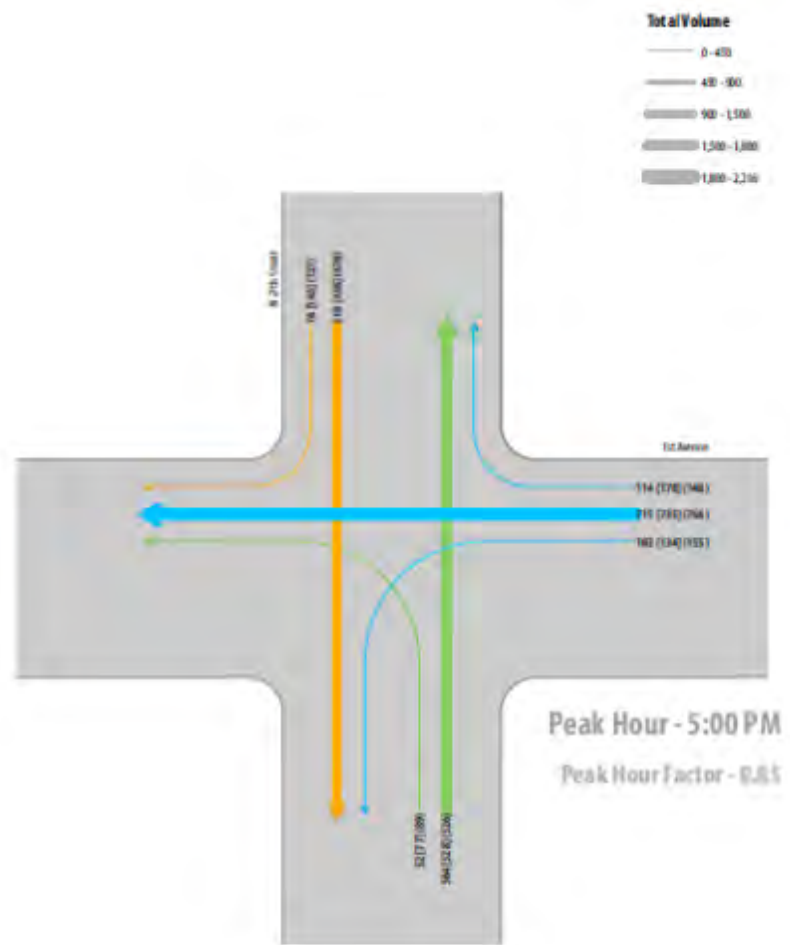
Traffic Count Database (Online)

- ▶ Creating an online (ArcGIS) count database
 - ▶ Peak hour (weekday AM peak, weekday midday peak, weekday PM peak, and weekend peak, as provided)
 - ▶ Peak hour vehicle turning movement counts by movement
 - ▶ Peak hour pedestrian counts by crosswalk
 - ▶ Peak hour bicycle counts by approach
 - ▶ Peak hour heavy vehicle percentage by movement
 - ▶ Peak hour factor
 - ▶ Year of count
- ▶ TMC database based on five sets of count formats
- ▶ User is able to bundle intersections to create PDFs of the counts

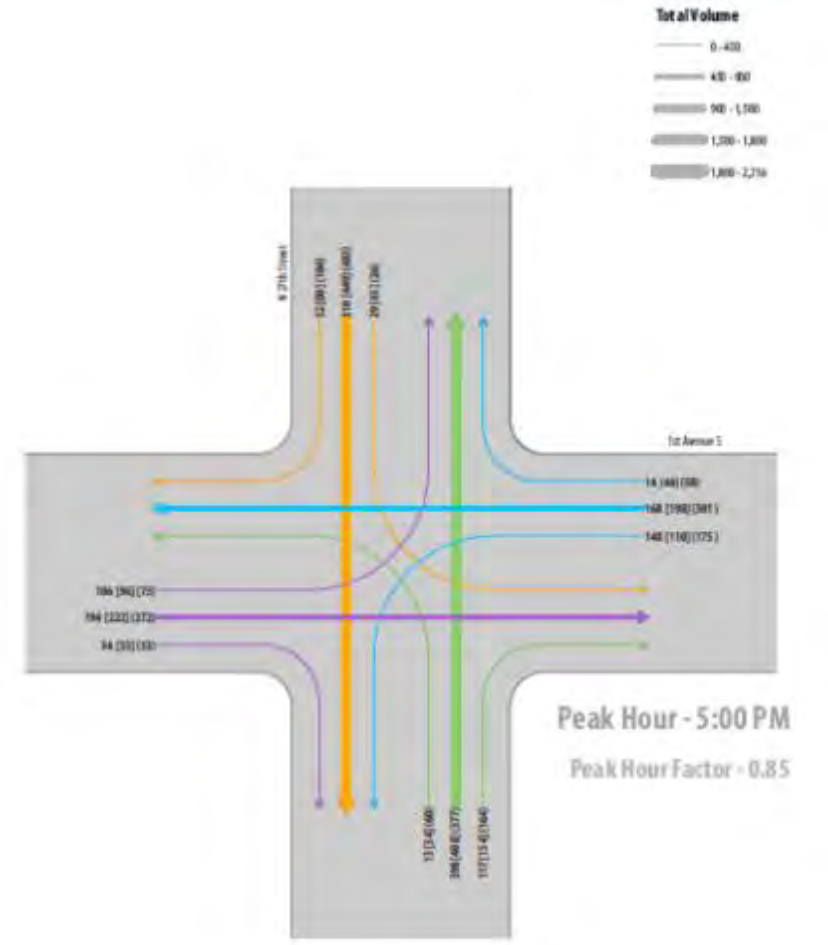
Traffic Count Database (Online)



Traffic Count Database (Online)



AM [Midday] (PM) Peak Hour Volume



AM [Midday] (PM) Peak Hour Volume

Introduction Chapter

- ▶ Provides an overview of the LRTP
- ▶ Identifies federal, state, and local planning requirements
- ▶ Highlights relevant plans and studies
- ▶ Includes timeline for development of the LRTP

Interagency & Public Involvement Program Chapter - Overview

- ▶ Introduces process, goals, and methods used for stakeholder and public outreach
- ▶ Summarizes partners for the LRTP
 - ▶ Steering committee
 - ▶ Resource agencies
 - ▶ Neighborhood task forces
 - ▶ Commissions, councils, and committees

Interagency & Public Involvement Program Chapter - Outreach Methods

- ▶ Branding and logo
- ▶ Webpage
- ▶ Media coordination
- ▶ Email updates
- ▶ Youth engagement
- ▶ Online engagement
- ▶ Social media
- ▶ Stakeholder interviews
- ▶ Public informational meetings (#1 and #2)

Goals, Objectives, Performance Measures, & Targets Chapter

- ▶ Discusses federal and state targets
 - ▶ 10 planning factors
 - ▶ Adopted statewide targets
 - ▶ Safety performance
 - ▶ NHS pavement and bridge condition
 - ▶ System performance and freight
 - ▶ CMAQ on-road emissions sources
 - ▶ Transit

Goals, Objectives, Performance Measures, & Targets Chapter

Table 3.6 Statewide Targets and LRTP Goals

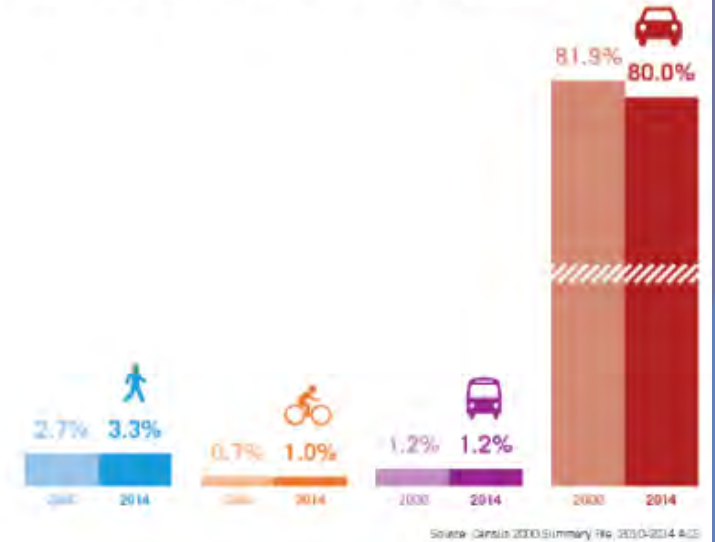
- ▶ Specific goals, objectives and performance measures for the LRTP
 - ▶ 7 goals with performance measures
 - ▶ Safety
 - ▶ Functional Integrity and Efficiency
 - ▶ Prioritized Improvements
 - ▶ Environment
 - ▶ Public Transit and Transportation
 - ▶ Pedestrians and Bicyclists
 - ▶ Economic Vitality

		Billings Urban Area LRTP Goals						
		Safety	Functional Integrity and Efficiency	Prioritized Improvements	Environment	Public Transit and Transportation	Pedestrians and Bicyclists	Economic Vitality
Statewide Targets	Pavement And Bridge Condition	Percentage of pavements on the Interstate System in Good condition	X	X				
		Percentage of pavements on the Interstate System in Poor condition	X	X				
		Percentage of pavements on the NHS (excluding the Interstate System) in good condition	X	X				
		Percentage of pavements on the NHS (excluding the Interstate System) in poor condition	X	X				
		Percentage of NHS bridges classified as in Good condition	X	X				
		Percentage of NHS bridges classified as in Poor condition	X	X				
	Safety Performance	Number of fatalities	X					
		Rate of fatalities per vehicles miles traveled (VMT)	X					
		Number of serious injuries	X					
		Rate of serious injuries per VMT	X					
		Number of combined non-motorized fatalities and non-motorized serious injuries	X				X	
	System Performance/Freight Movement/Corrosion/OWAQ	Percent of reliable person-miles traveled on the interstate		X				X
		Percent of reliable person-miles traveled on the non-interstate NHS		X				X
		Percentage of Interstate system mileage providing for reliable truck travel time (Truck Travel Time Reliability Index)		X				X
		Total emissions reductions for applicable pollutants				X		
	Transit Asset Management	Percentage of non-revenue, support-service and maintenance vehicles that have either met or exceeded their useful life benchmark (ULB)			X		X	
		Percentage of rolling stock vehicles that have either met or exceeded their ULB			X		X	
		Percentage of facilities rated below condition 3 on the Transit Economic Requirements Model (TERM) scale			X		X	

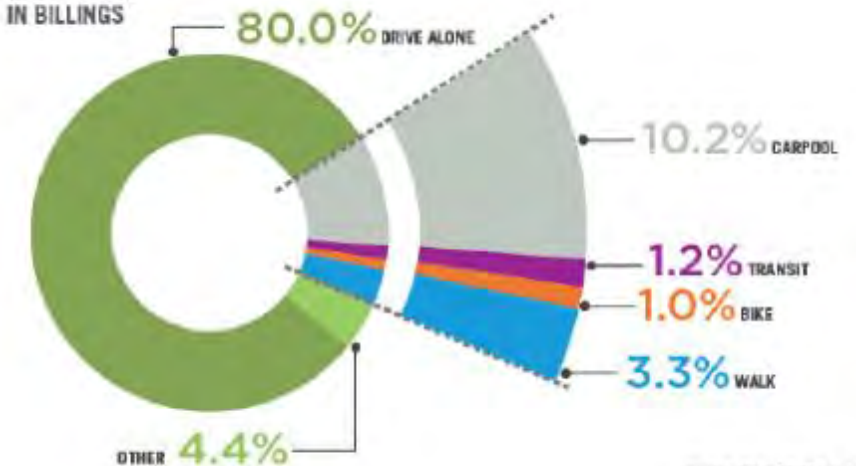
Land Use Chapter - Introduction and Existing Uses

- ▶ Identifies relevant studies/plans and policies
- ▶ Discusses TAZs and travel demand model
- ▶ Existing characteristics and demographics
 - ▶ Zoning map and activity centers
 - ▶ 2017 population, housing, and employment maps
 - ▶ Travel patterns from American Community Survey and Household Travel Survey

2000 TO 2010 MODE SHARE COMPARISON
COMMUTE TO WORK MODE - CITY OF BILLINGS



COMMUTE
MODE SHARE
IN BILLINGS



Source: 2010-14 ACS Data

Land Use Chapter - Forecast Demographics

Table 4.3 Billings Urban Area Population and Housing 2017-2040

Demographic	2017	2040	Change	Percent Change
Population	127,056	169,767	42,711	+33.6%
Housing (Dwelling Units)	55,464	73,663	18,199	+32.8%

Source: MPO / Travel Demand Model

Table 4.4 Billings Urban Area Employment Growth 2017-2040

Demographic	2017	2040	Change	Percent Change
Employment (Retail)				
Employment (Non-retail)				
Total Employment	77,639	104,329	+26,690	+34.3%

Source: MPO / Travel Demand Model

Land Use Chapter - 2017-2040 Change in Population

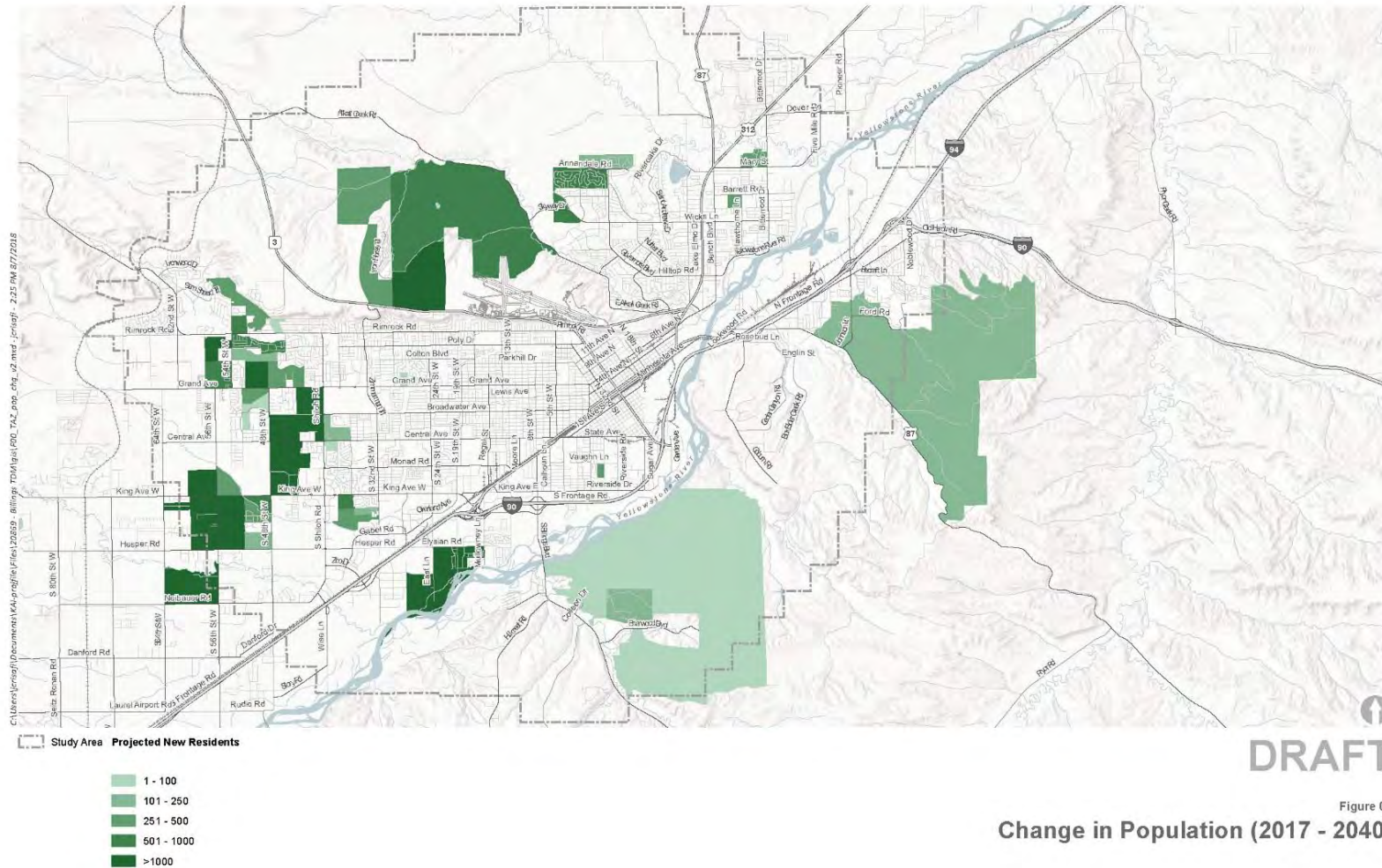
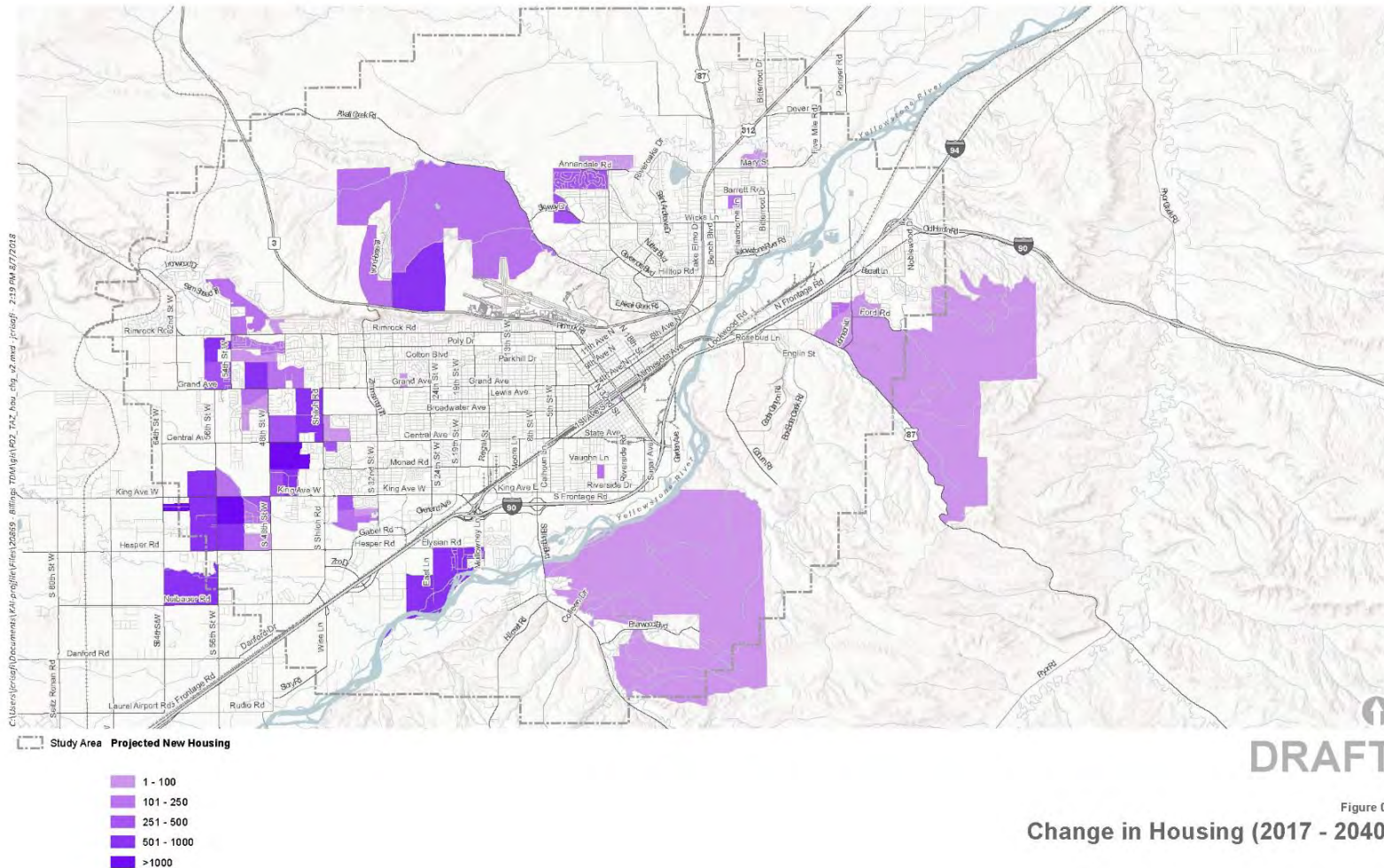


Figure 00
Change in Population (2017 - 2040)

Land Use Chapter - 2017-2040 Change in Housing



Land Use Chapter - 2017-2040 Change in Employment

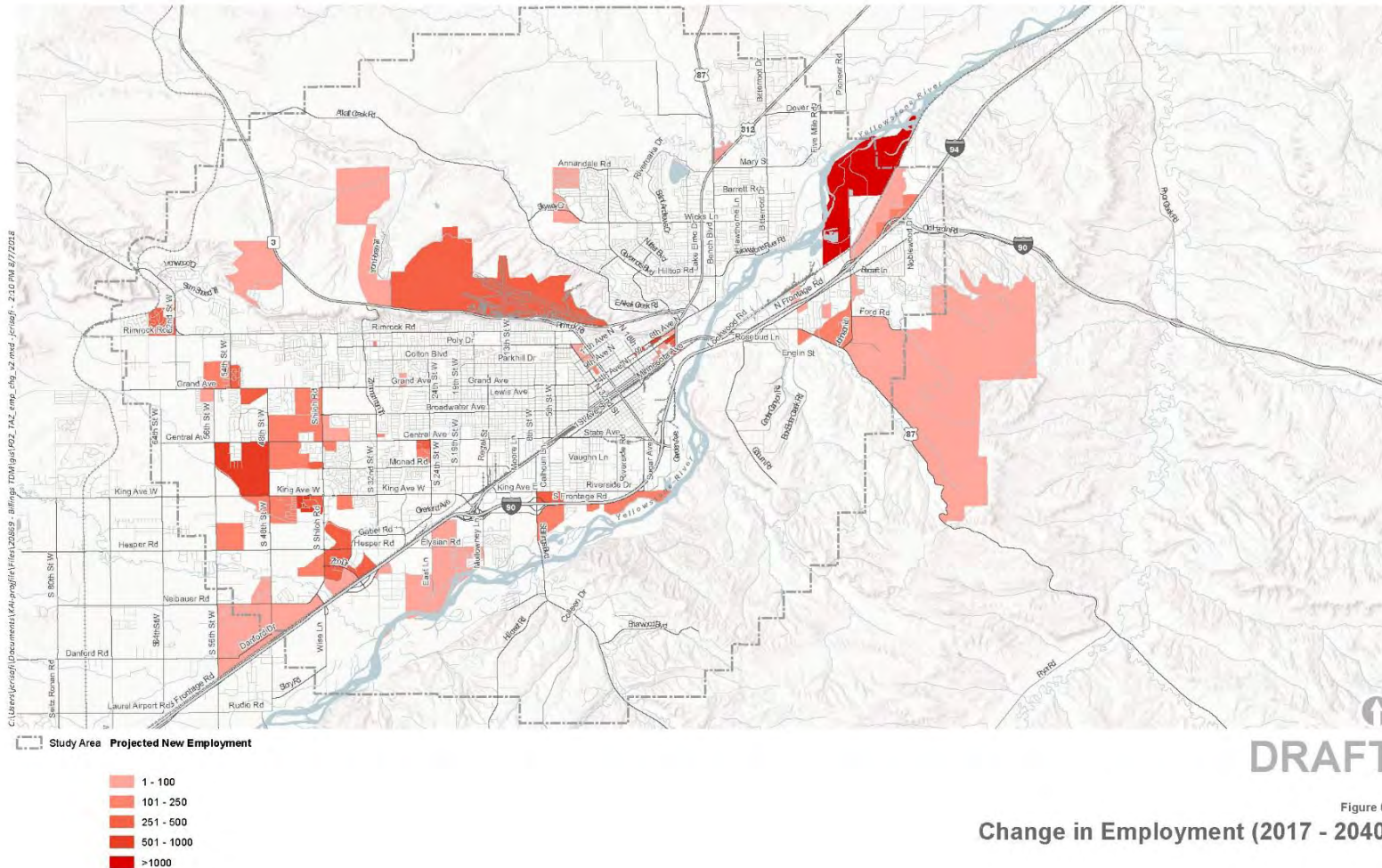


Figure 01
Change in Employment (2017 - 2040)

Public Transit & Transportation Chapter - Overview

- ▶ Coordinated with MET on the chapter development
- ▶ Includes the following
 - ▶ Existing public transit service (e.g. fleet, routes, service, and ridership)
 - ▶ Operating and capital costs
 - ▶ Revenue sources
 - ▶ Existing public paratransit (e.g. fleet, service, and ridership)
 - ▶ Private operators
 - ▶ Airport facilities and access

Exhibit 6.5 MET Annual Ridership Trends (FY 2013-FY 2018) (Source: MET)

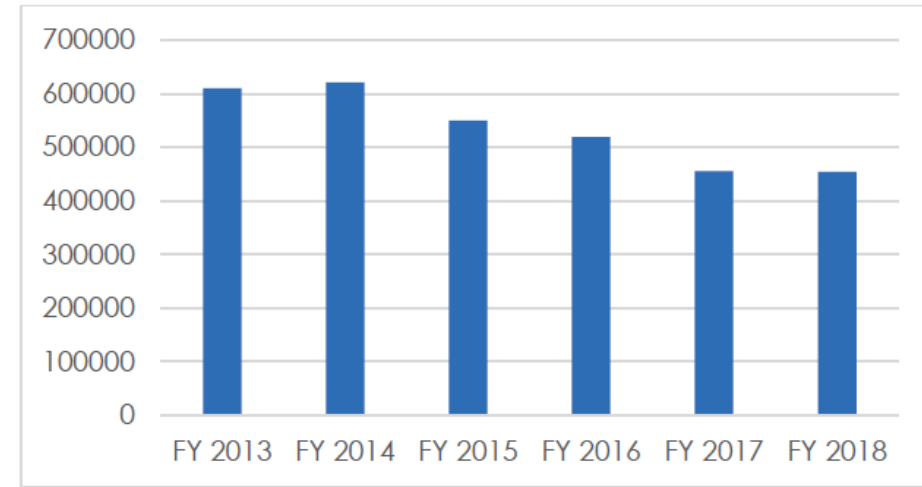
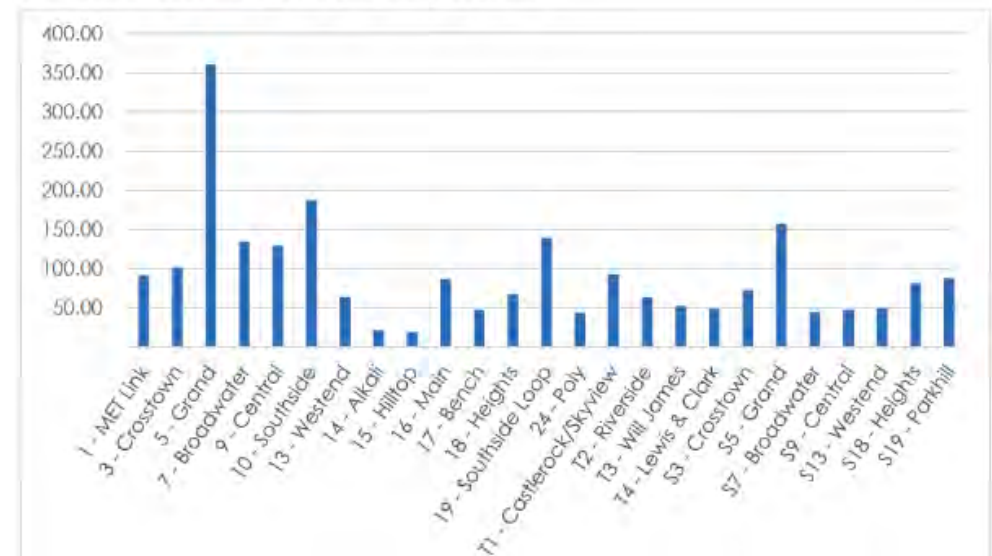


Exhibit 6.6 FY 2018 Average Daily Ridership by Route



Public Transit & Transportation Chapter - Needs and Deficiencies

▶ Public feedback

- ▶ Better bus frequency (Heights, West End, MSUB, hospitals)
- ▶ Longer service spans (Heights, West End, South Billings)
- ▶ New service (Laurel, Briarwood, schools)
- ▶ More bus stops and bus shelters
- ▶ Better schedule coordination for transfers and advertisement
- ▶ Sustainable fuel sources
- ▶ More affordable flights

▶ MET needs identification

- ▶ Explore funding opportunities
- ▶ Complete asset management plan
- ▶ Add an all-day service to Billings Heights
- ▶ Add AVL and automated fare collection systems and automated passenger counts
- ▶ Implement transit stops for fixed routes
- ▶ Complete a comprehensive service analysis

Conformity Analysis/Determination Chapter

- ▶ Similar format to 2014 LRTP
- ▶ Conducted to demonstrate that its LRTP, transportation improvement plan (TIP), or any revisions to its plan will not adversely affect air quality
- ▶ Updated ADT Comparison table

Table 14.1 Rolling Three Year Monthly Average Daily Traffic (ADT) Comparison

Year	Monthly Average Nov-Feb ADT
2015-2017	29,522
2008-2010	33,952
% Difference	-13.0%

Source: MDT's Monthly Automatic Traffic Recorder Comparison (14-8)

Draft Chapters for LRTP - Status

#	Chapter Title	Submitted to SC	Updated with SC Comments
1	Introduction	X	Sept 2018
2	Interagency & Public Involvement Program	X	Sept 2018
3	Goals, Objectives, Performance Measures, & Targets	X	Sept 2018
4	Land Use	X	Sept 2018
5	Streets & Highways	Sept 2018	Oct 2018
6	Public Transit & Transportation	X	Sept 2018
7	Truck Services and Facilities	Sept 2018	Oct 2018
8	Rail Services and Facilities	Sept 2018	Oct 2018
9	Pedestrians and Bicycle Facilities	X	X
10	Safety	X	X
11	Security	X	X
12	Recommended Plan	Sept 2018	Oct 2018
13	Financial Plan	Sept 2018	
14	Conformity Analysis/Determination	X	Sept 2018

Other Items

- ▶ Other Chapters

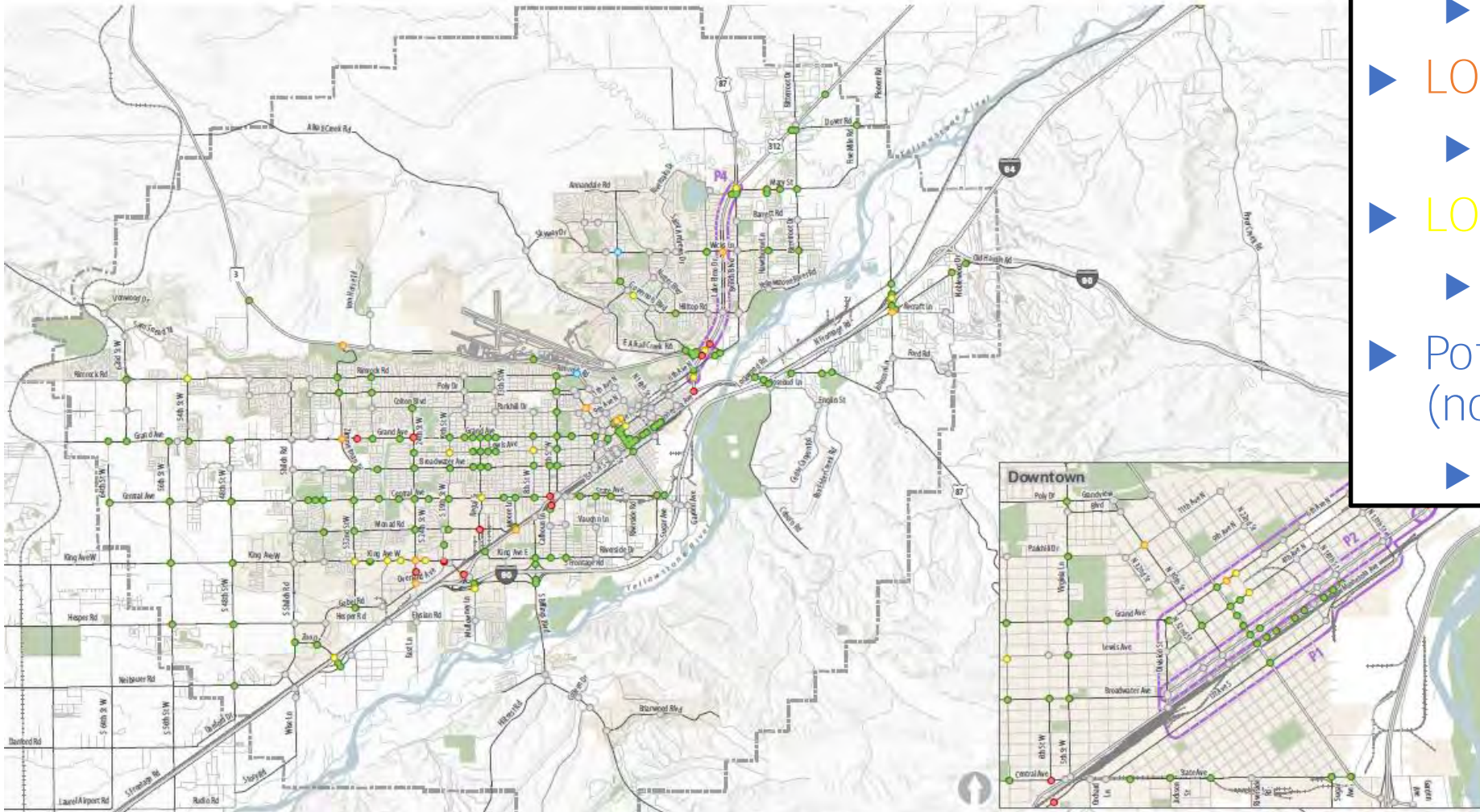
- ▶ Streets and Highways
- ▶ Truck Services and Facilities
- ▶ Rail Facilities
- ▶ Project List
- ▶ Financial / Funding

- ▶ Public Outreach

September 25, 2018
4:30 - 6:30 PM
Billings Public Library

- ▶ Plan Adoption Process

Existing Conditions Level of Service Map (Updated based on SC Comments)

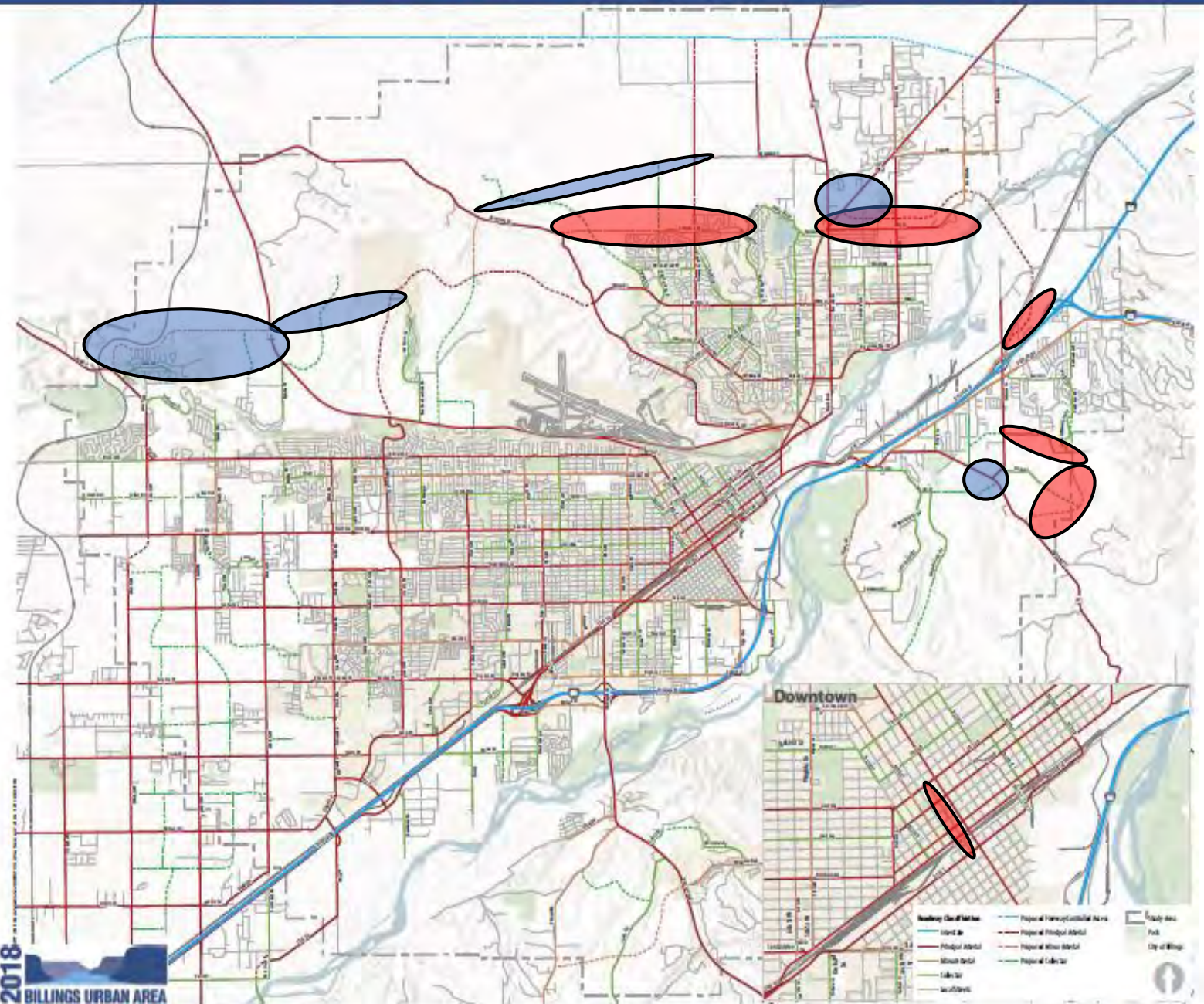


- ▶ **LOS F**
 - ▶ 11 intersections
- ▶ **LOS E**
 - ▶ 9 intersections
- ▶ **LOS D**
 - ▶ 17 intersections
- ▶ **Potentially Congested (no data)**
 - ▶ 2 intersections

Suggested Changes


- ▶ Annandale (MA→C)
- ▶ Mary (PA→MA or C)
- ▶ Ford (MA→C)
- ▶ N Frontage, east of Johnson (MA→C)
- ▶ Broadway (PA→MA or C)
- ▶ Modify Billings Bypass alignment

- ▶ Extend Alexander?
- ▶ Inner Belt Loop to Hwy 3?
- ▶ Molt Rd connection?
- ▶ Englin to Johnson?



FC Map (Page 2)

- ▶ Any suggested changes to the content?
- ▶ Any suggested changes to the cross sections?
- ▶ Any new cross sections to add?
- ▶ Other comments?




Introduction

Transportation planning has been a key element of the City's planning efforts for over 100 years since its inception as a major rail hub. As such, one of the first transportation surveys was completed in 1954, which included a transportation inventory, traffic counts, parking, and other related data. Ten transportation plans (1961, 1964, 1969, 1977, 1983, 1990, 2000, 2005, and 2009) have been completed since 1961. Most recently, the Yellowstone County Board of Planning, the designated Metropolitan Planning Organization (MPO) and oversight for transportation planning for the Billings Urban Area, adopted the 2014 Billings Urban Area Long Range Transportation Plan (LRTP). The area encompasses the City of Billings, as well as the planning area extending approximately 4.5 miles outside the City limits in Yellowstone County.

The Billings Urban Area LRTP is a framework to guide development and implementation of multimodal transportation system projects for the Billings Urban Area. The LRTP is updated every four years, and looks at today's land use and transportation conditions and plans for the future through year 2035. Transportation is a vital element to the residents and businesses of Billings and connects commerce from the Billings Urban Area to other parts of Montana and metropolitan areas via road, rail, and air. The region's transportation infrastructure is robust and includes streets, highways, freeways, rail, transit, sidewalks, bicycle lanes and routes, trails, and an airport. Given the importance of transportation infrastructure, the LRTP includes goals and objectives that support transportation mobility and accessibility throughout the Billings Urban Area.

This double-sided map focuses on the functional classification system and typical cross sections within the City of Billings and Yellowstone County. Please refer to the adopted LRTP document for more details on the planning process, interagency and public involvement program, land use, public transit and transportation, truck services and



Functional Classification

The Roadway Functional Classification System defines a road's role in the overall context of the highway transportation system. In addition, it helps to define which standards are generally desirable for roadway width, right of way needs, access spacing, pedestrian and bicycle facilities and other specifications. The functional classification system hierarchy is typically established by the following hierarchy:

Freeways serve high speed, long distance travel movements and provide limited access to adjacent lands. Often included in the Arterial classification, freeways are unique in that they provide access to other arterial roadways via grade-separated interchanges. In the Billings Urban Area, the freeways are classified as Interstate.

Arterials represent the highest class of highways and roads. These roadways are intended to serve higher volumes of traffic, particularly through-traffic, at higher speeds. They also serve truck movements and should emphasize traffic movement over access to adjacent property. Arterial roadways are further designated as Principal Arterials and Minor Arterials.

Collectors represent the intermediate class. As the name suggests, these roadways collect traffic from the local street system and link travel to the arterial roadway system. These roadways provide a balance between through-traffic movement and property access and provide extended continuity to facilitate traffic circulation within an urban community or rural area.

Local Roads and Streets are the lowest classification. Their primary purpose is to carry locally generated traffic at relatively low speeds to the collector street system and to provide more frequent access to individual businesses and residential property. Local streets provide connectivity through neighborhoods, but generally should be designed to discourage cutthrough vehicular traffic.

In addition to the above roadway classifications, a limited number of principal arterials are further identified as Interstate routes and National Highway System (NHS) routes. The Interarterial System designations are Interstate 90 and Interstate 94. The Moving Ahead for Progress in the 21st Century Act (MAP-21) NHS Principal Arterial designations are King Avenue, Laurel Road, Montana Avenue, Zoo Drive, 1st Avenue North, and 1st Avenue South. The Other NHS Route designations are Main Street and US Route 87 and a Non-Interstate Strategic Highway Network (STRAHNET) Route designation is Montana Highway 3.

Functional Classification Map and Cross Sections

The LRTP planning process led to the development of the Functional Classification Map, shown on the front page. The City of Billings, Yellowstone County, and Montana Department of Transportation review and update this map regularly as part of the planning efforts within the Urban Area. To support the Functional Classification Map, typical roadway cross sections are illustrated to the right for the City of Billings and Yellowstone County. More details and guidance on these cross sections can be found in the City of Billings and Yellowstone County's Subdivision Regulations.

Sample City of Billings Cross Sections*

- Residential Local
- Commercial Local
- Collector - No Parking
- Collector
- Minor Arterial - 2 Lanes
- Minor Arterial - 4 Lanes
- Principal Arterial - 4 Lanes
- Principal Arterial - 6 Lanes

* For more details and guidance on the cross sections, refer to the City of Billings Subdivision Regulations Table 21.40C.B1 Required Deductions and Street Improvements for Subdivisions within City Limits. A traffic impact study is required for major

Sample Yellowstone County Cross Sections*

- Residential Local Access
- Commercial Local Access
- Residential Collector - 2 Lanes
- Residential Collector - With Turn Lane
- Commercial Collector - 2 Lanes
- Commercial Collector - 2 Lanes
- Minor Arterial - 2 Lanes
- Minor Arterial - 4 Lanes
- Minor Arterial - 2 Lanes
- Minor Arterial - 4 Lanes
- Principal Arterial - 4 Lanes
- Principal Arterial - 6 Lanes

*For details and guidance on the cross sections, refer to the Yellowstone County Subdivision Regulations, Chapter 4 and Table 4.0.C.1 Required Deductions and Street Improvements for Subdivisions. A Road Evaluation Study or Traffic Impact Study may be required by Yellowstone County to determine the cross section.

*Shoulders shall be required on both sides of all roads where no curb and gutter or parking lanes are required. The shoulders shall be (2) feet wide and graded, and must meet the specification of County Public Works.

2018 Billings Urban Area Long Range Transportation Plan | JULY 2018

Travel Demand Model Update

- ▶ Network
 - ▶ Added bus network
- ▶ Land Use
 - ▶ Complete database of 2017 population, housing, employment and schools (32 total categories)
 - ▶ Established trip generation rates
- ▶ Traffic Counts
 - ▶ Adding to database focusing on directional counts by time period
- ▶ Model Programming and Interface
 - ▶ In progress

Land Use/Trip Generation:

Proposed Land Use Categories

Population	Housing	Employment	Schools
Household	Single Family	Basic (4 categories)	Elementary
Group Quarters - Student	Multi Family	Retail (5 categories)	Middle
Group Quarters - Other	Mobile Home	Service (11 categories)	High
	<i>Senior Housing</i>		College
	<i>Recreational Home</i>		

Land Use/Trip Generation: Proposed Employment Categories

Basic	Retail	Service	
Construction	Retail	Hotel	Education
Manufacturing	Retail High Turnover	Service Commercial	Institutional
Warehouse/Trucking	Retail Warehouse	Recreation	Government
Other	Restaurant	Hospital	Government High
	Restaurant High Turnover	Medical Office	Military
		Office	

Land Use/Trip Generation:

Household Stratification and 2017 Base Year Households

Income Group	Household Size 1	Household Size 2	Household Size 3	Household Size 4+	TOTAL
Income Group 1: <\$20K	5,930	1,620	650	580	8,780
Income Group 2: \$20K-\$50K	5,560	3,460	1,050	1,220	11,290
Income Group 3: \$50K-\$100K	4,230	8,090	2,690	4,210	19,230
Income Group 4: >\$100K	1,400	6,460	3,240	4,280	15,380
TOTAL	17,120	19,630	7,620	10,290	54,680

Land Use/Trip Generation

Selected Daily Trip Generation Rates

Land Use	Units	Daily Vehicle Trip Generation
Housing, All Types	Housing Unit	6.4
Housing, 3+ Persons	Housing Unit	9.3
Manufacturing	Employee	2.1
Retail	Employee	28.0
Retail Warehouse	Employee	46.9
Hospital	Employee	5.2
Office	Employee	3.3
Elementary School	Student	1.0
High School	Student	1.4

Travel Survey

- ▶ 1,066 households with completed surveys
- ▶ About 1.7% of Yellowstone County
- ▶ Interviews supplemented by GPS tracking
- ▶ Manual updates
 - ▶ Correct “home” to actual trip purpose
 - ▶ “Serve Passenger” converted to actual purpose, most often school

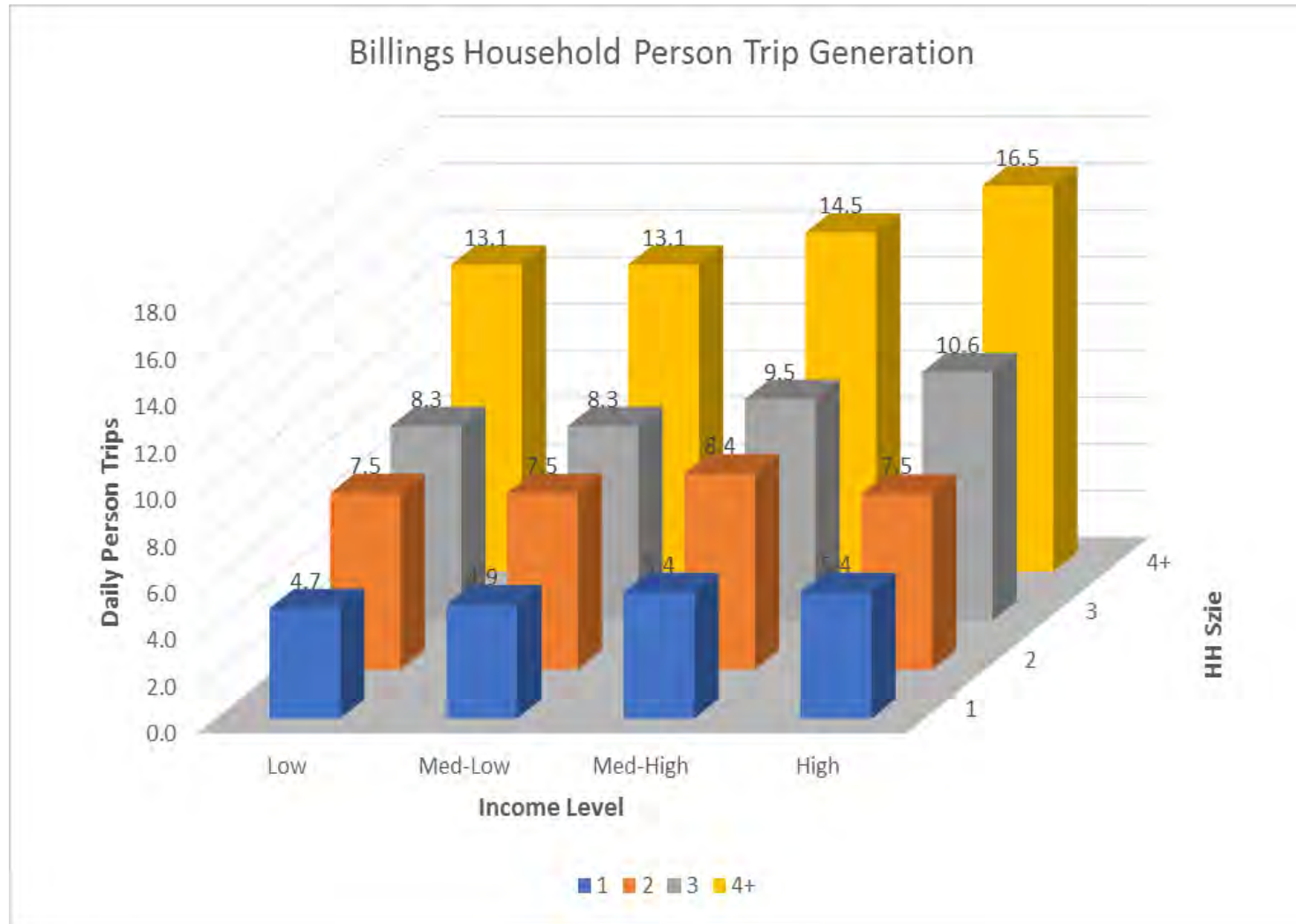
Travel Survey:

Household Size and Income

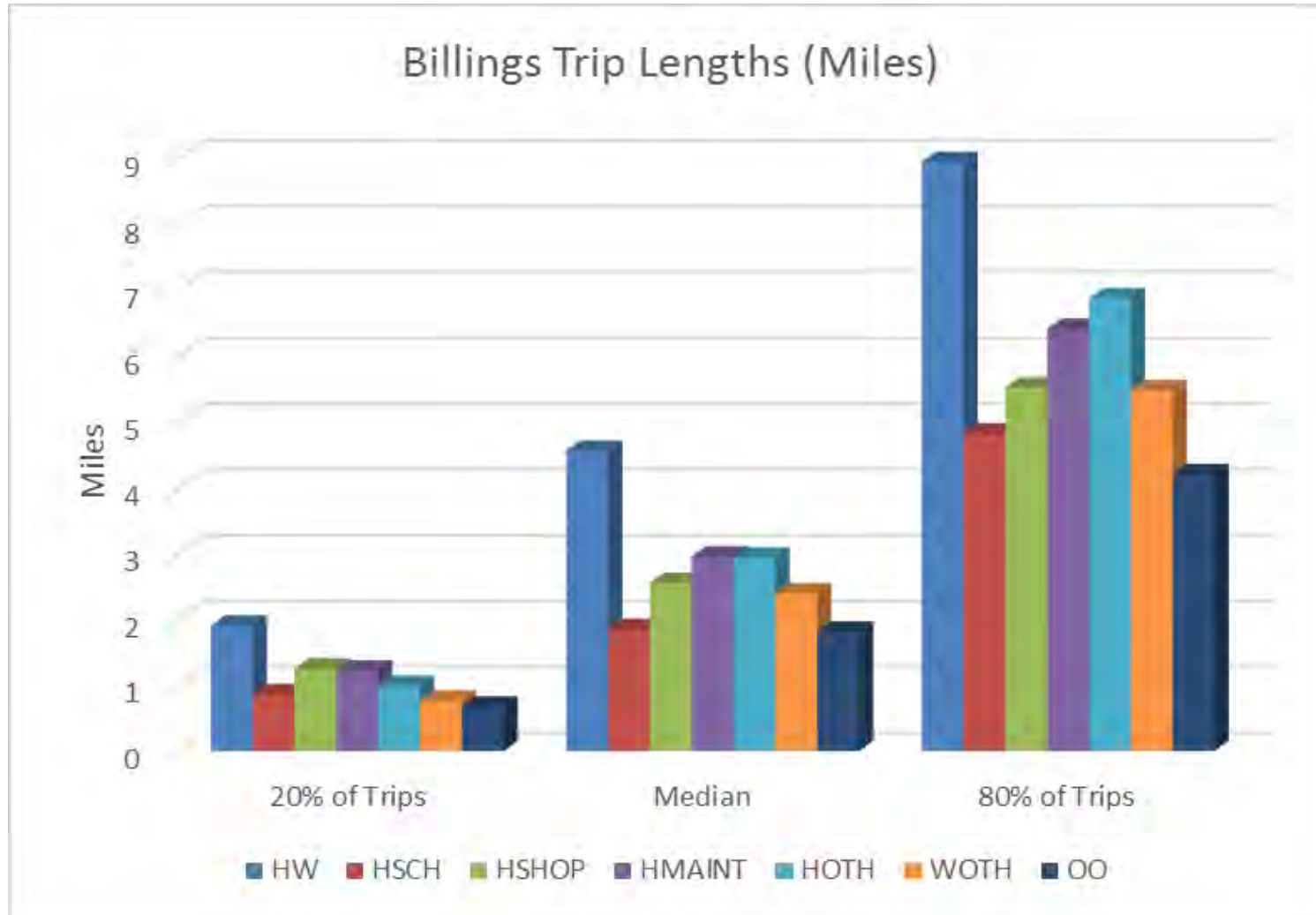
Household Size	Household Income					TOTAL
	<\$20K	<\$20K-\$50K	<\$50K-\$100K	>\$100K	Not Reported	
HH Size 1	68	144	82	17	1	312
HH Size 2	21	148	188	107	10	474
HH Size 3	3	30	49	31	4	117
HH Size 4+	8	34	75	44	2	163
TOTAL	100	356	394	199	17	1,066

Groupings for statistical significance

Travel Survey: Household Trips (presented previously)



Travel Survey: Trip Lengths by Purpose (Miles)

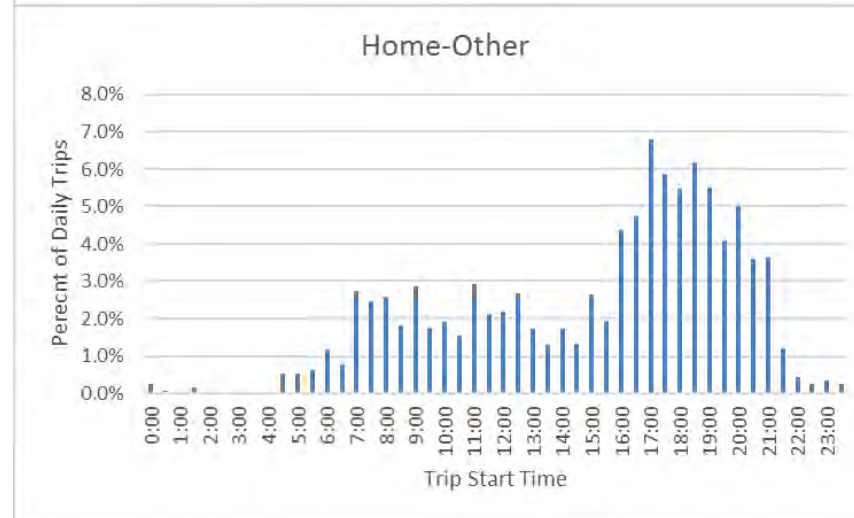
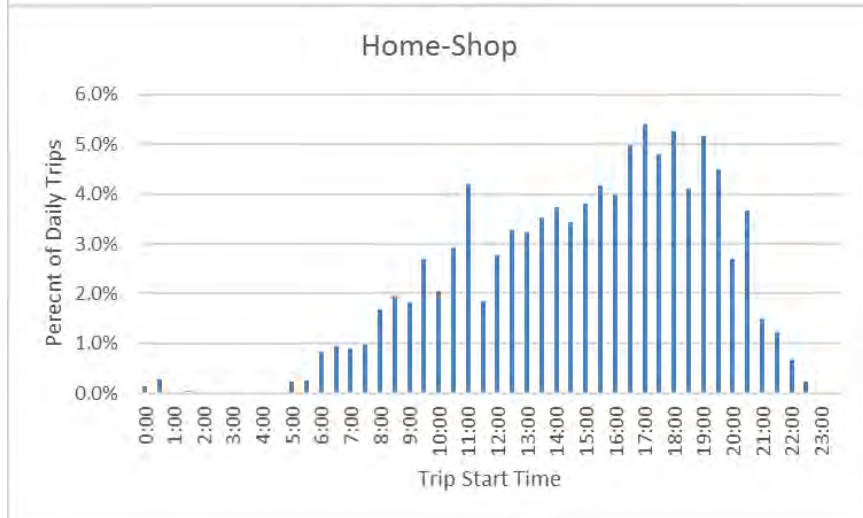
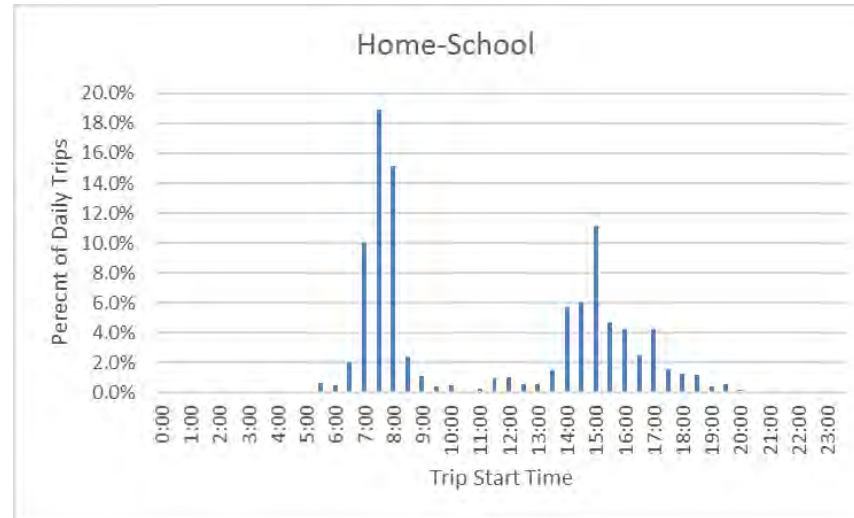
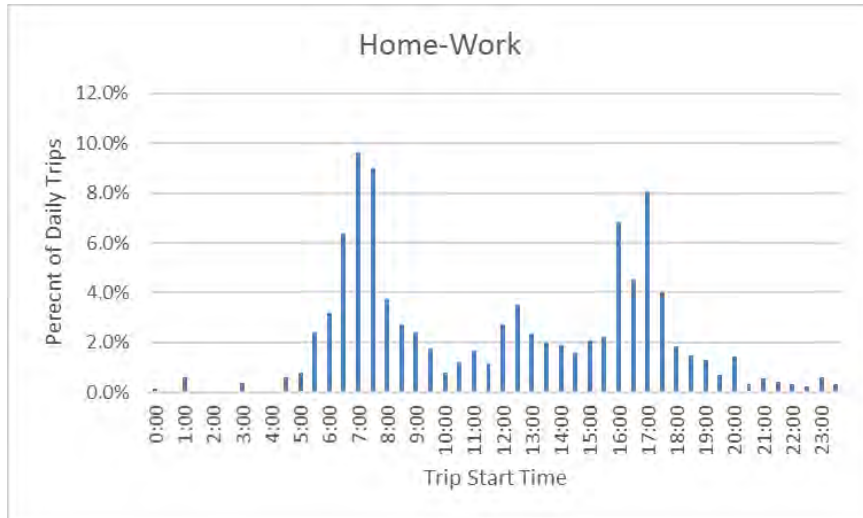


Travel Survey:

Travel Modes by Purpose

Mode	Home-Work	Home-School	Home-Shop	Home-Maintenance	Home-Other	Work-Other	Other-Other	TOTAL
Drive Alone	83.0%	15.1%	42.6%	52.7%	44.8%	73.2%	36.8%	50.7%
Shared Ride 2	11.5%	51.8%	46.2%	37.3%	35.2%	12.7%	49.8%	35.0%
Shared Ride 3+	0.4%	16.1%	5.2%	3.0%	8.1%	1.1%	6.0%	5.3%
Transit	0.9%	0.3%	1.1%	0.1%	0.3%	1.2%	0.7%	0.7%
Bike	1.9%	0.8%	0.8%	1.3%	3.3%	0.5%	1.8%	1.6%
Walk	1.5%	7.4%	3.8%	5.2%	7.7%	9.6%	3.6%	5.1%
Other	0.8%	8.5%	0.3%	0.4%	0.6%	1.7%	1.3%	1.6%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Average Person/Vehicle	1.125	2.193	1.488	1.385	1.545	1.252	1.577	1.434
Average Vehicle Occupancy	1.07	1.82	1.40	1.29	1.36	1.09	1.46	1.31

Travel Survey: Trip Start Times



Travel Demand Model Next Steps

- ▶ Deliverables
 - ▶ Model Validation Draft Memo (August 23)
- ▶ Technical Work
 - ▶ Complete model process script
 - ▶ Join traffic counts to model
 - ▶ Fine-tune model parameters

Comments on Meeting Materials

Requesting comments by Monday, August 20

- ▶ Long Range Transportation Plan
 - ▶ Draft Introduction Chapter
 - ▶ Draft Interagency and Public Involvement Program Chapter
 - ▶ Draft Goals, Objectives, Performance Measures & Targets Chapter
 - ▶ Draft Land Use Chapter
 - ▶ Draft Public Transit and Transportation Chapter
 - ▶ Draft Conformity Chapter
 - ▶ Draft Functional Classification Map Poster

- ▶ Travel Demand Model
 - ▶ Draft TDM Land Use Trip Generation Memorandum
 - ▶ Draft TDM Household Travel Survey Memorandum

Next Meetings & Topics

- ▶ Steering Committee Meeting #9
 - ▶ September 13 (10 AM - 12 PM)
- ▶ Steering Committee Meeting #10
 - ▶ October 11 (10 AM - 12 PM)
- ▶ Draft chapters (updates)
- ▶ LOS analysis (map)
 - ▶ Year 2040
- ▶ Draft project list
- ▶ Public outreach activities
- ▶ Travel demand model (updates)

Steering Committee
Meeting #8 Sign-In Sheet

August 9, 2018 @ 10:00 AM – 12:00 PM,
1st Floor Conference Room - Miller Building

Name	Organization	Email address
Andy Daleiden	Kittelson & Assoc.	adaleiden@kittelson.com
Mike Black	Yellowstone County Public Work	mblack@co.yellowstone.mt.gov
Doug Emerson	DOWL	denderson@dowl.com
Debra Hagel	MET Transit	hageld@ci.billings.mt.us
Zach Kirkemo	MDT	zkirkemo@mt.gov
Rod Nelson	MDT	rodnelson@mt.gov
ERIN CLANCHAT	CITY OF BILLINGS	clanchat@ci.billings.mt.us
Lera Mattox	c/c Planning	mattox1@ci.billings.mt.us
Scott Walker	c/c PLANS	
Elyse Monat	c/c planning	monate@ci.billings.mt.us
Mike Dotson	city of Billings	dotsonm@ci.billings.mt.us
Katie Dicks		
Rebecca		
Sheila L		
Eric L.		
Mike A.		

1. Introductions (Sign-in sheet)

2. Public Participation Plan

a. Plan adoption update *→ looks good -*

3. Plan Updates

a. Traffic count database *→ count 1
 items / steps to count on plans GIS*

b. Chapter development *→ database → merge this info. # update every 4 years*

i. Draft chapter - Introduction (Attachment A)

ii. Draft chapter - Interagency and Public Involvement (Attachment B)

iii. Draft chapter - Goals, Objectives, Performance Measures & Targets (Attachment C)

iv. Draft chapter - Land Use (Attachment D) *→ plan's staff confidential base.*

v. Draft chapter - Public Transportation (Attachment E)

vi. Draft chapter - Conformity Analysis/Determination (Attachment F)

c. Other activities *P
 add location.*

4. Functional Classification Map (Attachment G)

a. Review and discussion

5. Travel Demand Model

a. Draft Memorandum - Land Use Trip Generation (Attachment H) *→ MOT request
 → pursue firms estimates?
 → send to Eric @ MOT*

b. Draft Memorandum - Household Travel Survey (Attachment I) *✓*

c. Update on Model Operations and Validation

6. Next Meetings

a. SC Meeting #9 – September 13, 10 AM – 12 PM

b. Public Informational Meeting – September 25, 4:30 PM – 6:30 PM

c. SC Meeting #10 – October 11, 10 AM – 12 PM

*June Belt Loop
 ↳ 2 phases
 ↳ \$14 million
 ↳ 7 years for PM 12
 ↳ 500 top increase*

*# Annual Forecast
 Add more info.*

check notes

MOT request

20-min presentation

5-5:30 presentation

FC Map

Map → now or later

- impacts to main
- hub w/ less direct access
to arterials

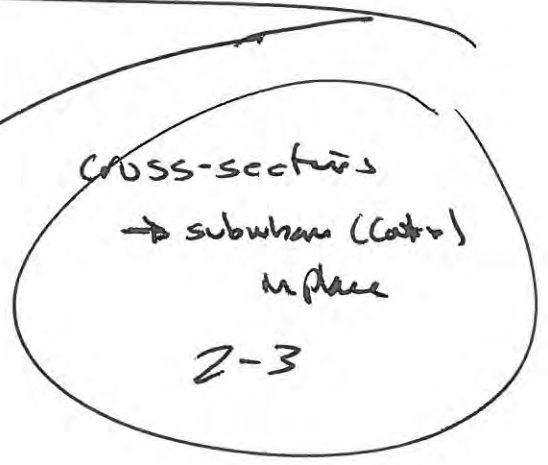
① ~~Armeda~~ → keep MA designation
east of Mission
(collector) } → Ex (green solid)

Ford? → remain as MA
→ check headend plan

② ~~Brady~~ → local street

dotted lines?

future?



③ ~~Aronson~~ → General further
change to collector

④ ~~Bypass~~



Appendix I

Steering Committee Meeting #9



Steering Committee Meeting #9 Agenda

September 13, 2018 @ 10:00 AM – 12:00 PM
1st Floor Conference Room - Miller Building

1. Introductions (Sign-in sheet)
2. Public Participation Plan
 - a. Plan adoption update
3. Plan Updates
 - a. Draft plan (Attachment A)
4. Functional Classification Map (Attachment B)
5. Travel Demand Model
 - a. Model Validation Update (Attachment C)
6. Plan Adoption Schedule
 - a. TAC - September 20 (may change)
 - b. Commissioners Discussion – October 8
 - c. Planning Board #1 – October 9
 - d. City Council Work Session – October 15
 - e. Commissioners - October 16
 - f. City Council – October 22
 - g. Planning Board #2 – October 23
 - h. PCC - October 30
7. Next Public and SC Meetings
 - a. Public Informational Meeting – September 25, 4:30 PM – 6:30 PM
 - b. Resource Agency Meetings – September 24 and 25
 - c. SC Meeting #10 – October 9 (TBD)
 - d. SC Meeting #11 – November 8, 10:00 AM – 12:00 PM

2018 Billings Urban Area Long Range Transportation Plan



August 2018

prepared by





Chapter 1

Introduction



INTRODUCTION

The Billings Urban Area Long Range Transportation Plan (LRTP) is a framework to guide the development and implementation of multimodal transportation system projects for the Billings Urban Area. The LRTP is updated every four years. This LRTP assesses today's (2017) land use and transportation conditions and projects into the future (year 2040) to identify and strategize transportation improvements for the region.

The Billings Urban Area lies at the western edge of the northern High Plains. It serves as a central hub for a large region comprised of Montana, northern Wyoming, and the western Dakota's. Due to its location, Billings has developed as an important economic, cultural, educational, and transportation urban center for the entire region. Billings is located in Yellowstone County between Minneapolis and Seattle (east to west), and Calgary and Denver (north to south) and is one of the largest cities between these major cities, including the largest in Montana. Exhibit 1.1 illustrates the location and regional importance of Billings.

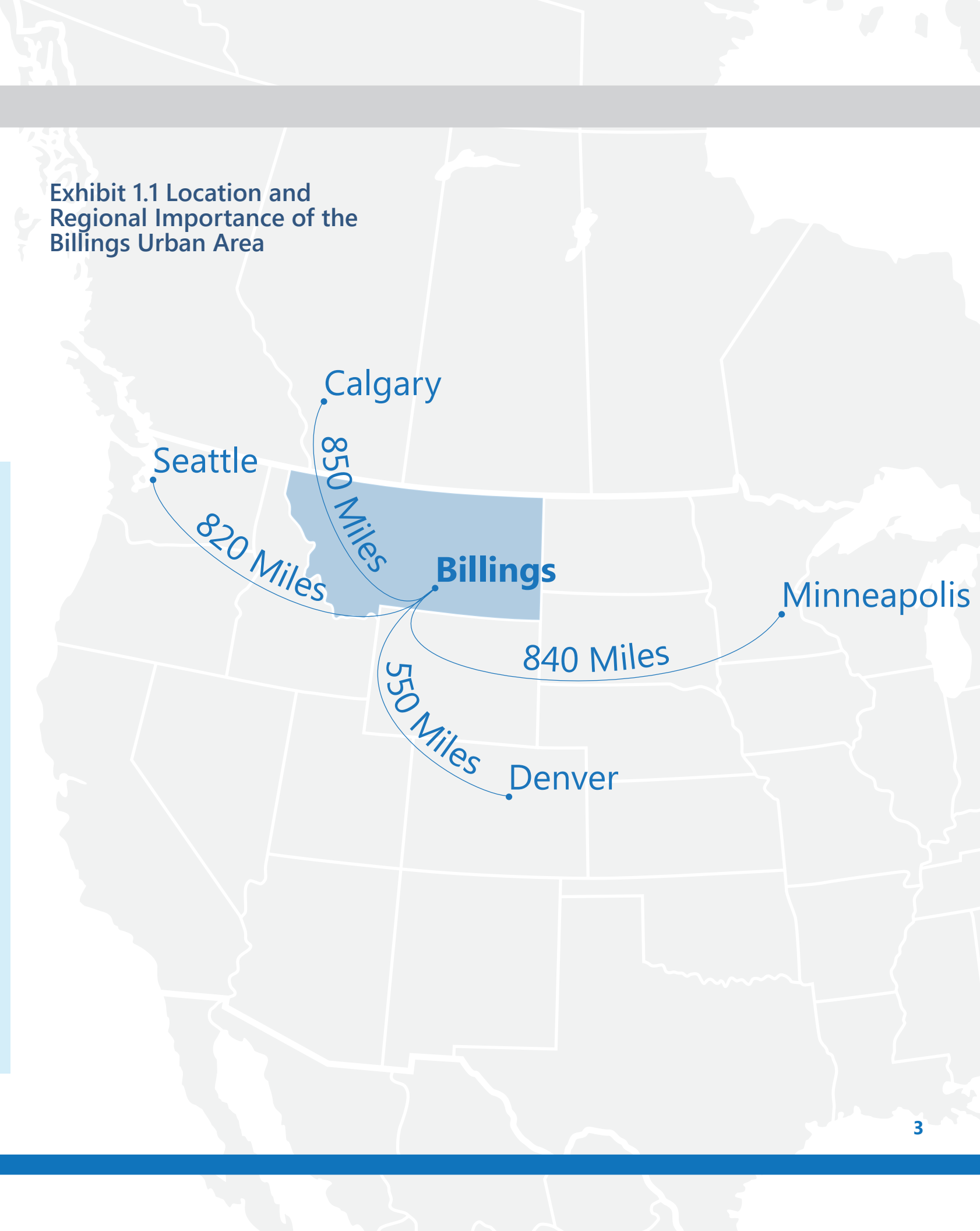
Transportation is a vital element to the residents and businesses of Billings and connects commerce from the Billings Urban Area to other parts of Montana and metropolitan areas via road, rail (freight), and air. The region's transportation infrastructure is robust and includes streets, highways, Interstate, rail, transit, sidewalks, bicycle facilities, trails, and an airport. Given the importance of the transportation infrastructure, this document plans for

transportation facilities and services to ensure mobility and accessibility throughout the Billings Urban Area. The Yellowstone County Board of Planning is the designated Metropolitan Planning Organization (MPO) and oversees transportation planning for the Billings Urban Area. The area encompasses the City of Billings, as well as the planning area extending approximately 4.5 miles outside the City limits. Figure 1-1 illustrates the study area.

What topics are covered in this LRTP?

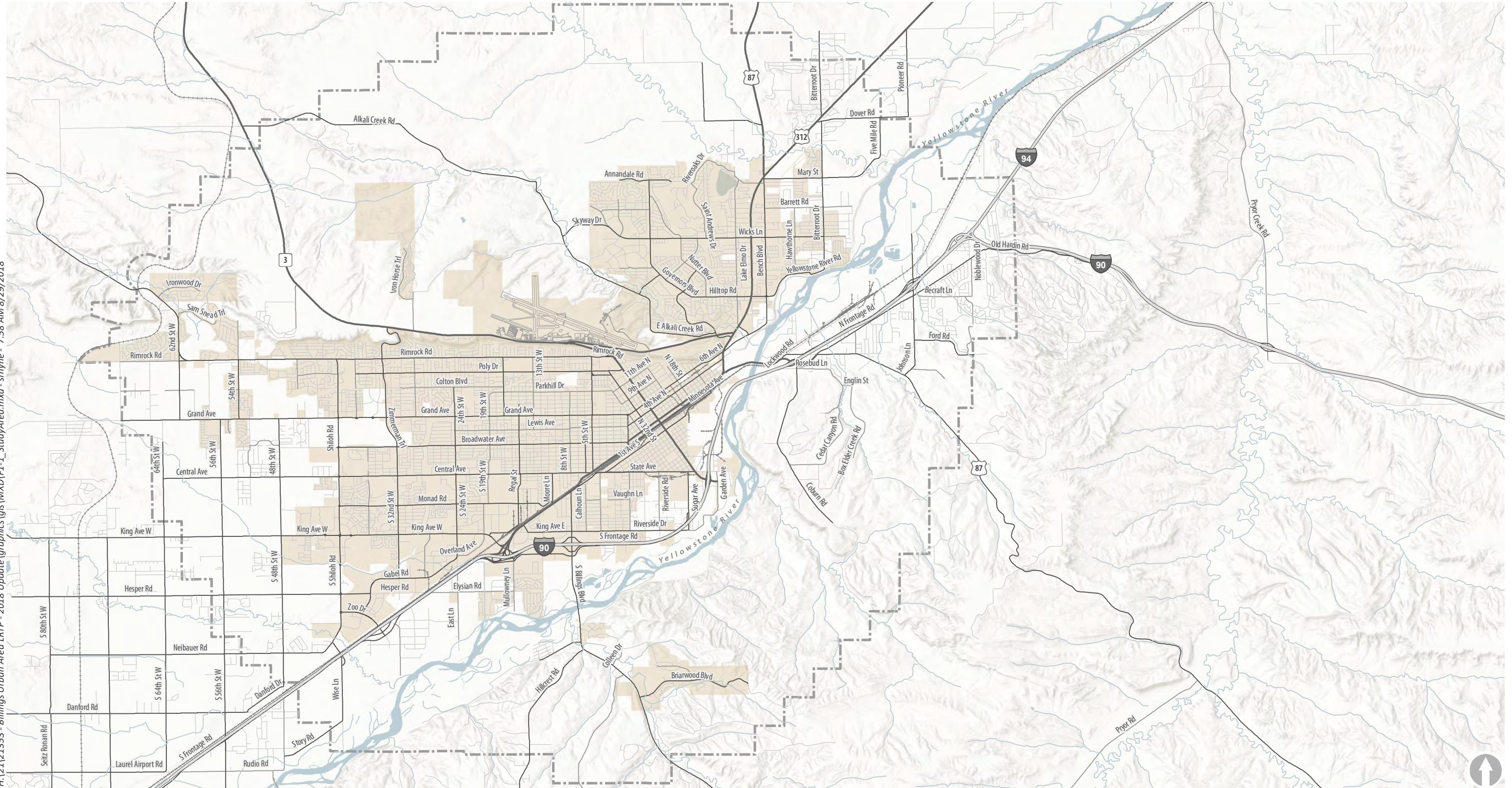
- Goals, objectives, performance measures, and target
- Public and interagency involvement
- Forecasts of population, households, and employment anticipated in 2040
- Inventory of needs and opportunities for transportation elements: streets and highways, public transit and transportation (bus, paratransit, and air), freight (truck and rail), pedestrians, bicyclists, trails, safety, security
- Funding sources and projected revenue
- Project recommendations and implementation strategies

Exhibit 1.1 Location and Regional Importance of the Billings Urban Area



2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN

H:\21\21353 - Billings Urban Area LRTP - 2018 Update\graphics\gis\MXD\FI-1_StudyArea.mxd - srhyne - 7:58 AM 8/29/2018



Study Area City of Billings

DRAFT

Figure 1-1
Study Area

Development of this plan was guided by a Steering Committee (SC), which consisted of representatives from the following agencies:

- Billings City Council
- Billings/Yellowstone County Planning Board
- Billings Metropolitan Transit
- Billings Planning
- Billings Public Works
- Billings/Yellowstone County MPO
- Lockwood Steering Committee
- Montana Department of Transportation (MDT)
- Yellowstone Board of County Commissioners
- Yellowstone County Public Works

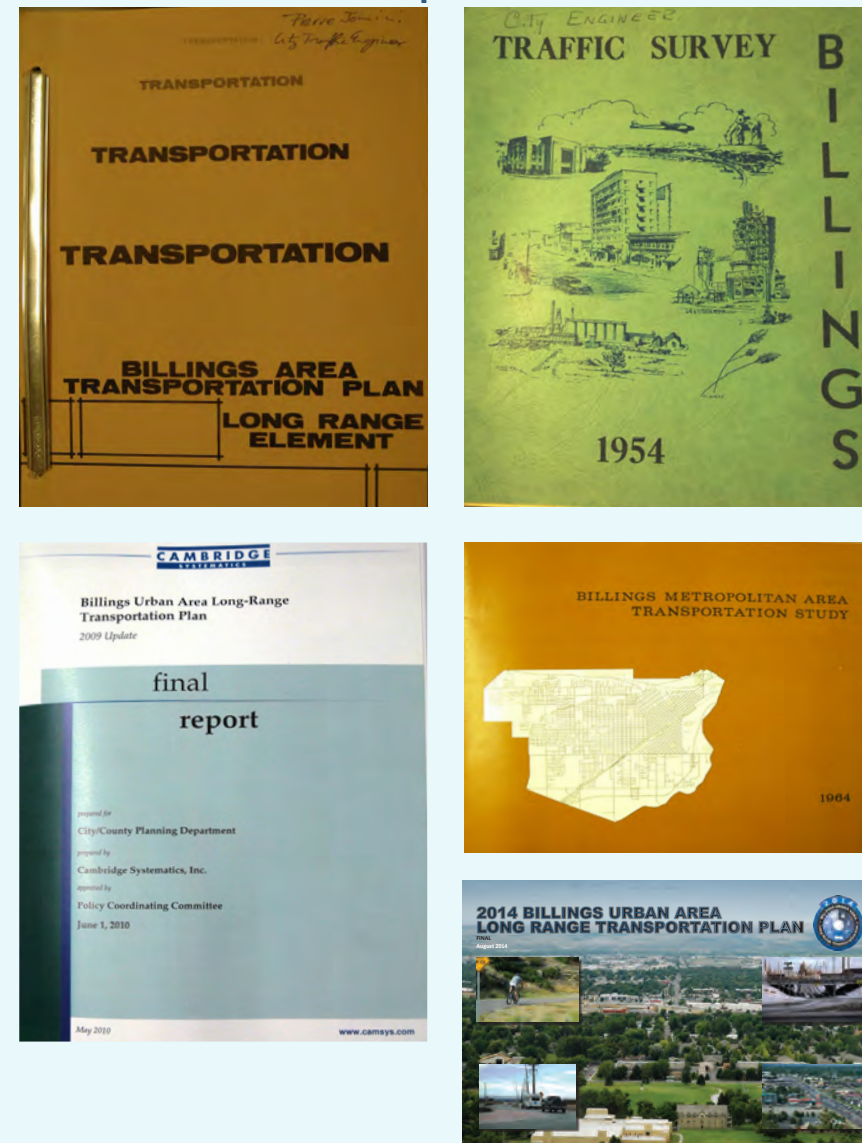
Additional input was received from the Billings Technical Advisory Committee, Federal Highway Administration, Policy Coordinating Committee, Yellowstone Board of County Commissioners, neighborhood groups, members of the public, and other consultation efforts conducted through the 10-month planning process.

HISTORICAL CONTEXT

Transportation planning has been a key element of the City's planning efforts for over 100 years since its inception as a major rail hub. As such, one of the first transportation surveys was completed in 1954, which included a transportation inventory, traffic counts, parking, and other related data. Ten transportation plans (1961, 1964, 1969, 1977, 1983, 1990, 2000, 2005, 2007, 2009, 2014) have been completed since 1961.

Exhibit 1.2 illustrates some of the transportation plan covers from past efforts.

Exhibit 1.2 Past Transportation Plans



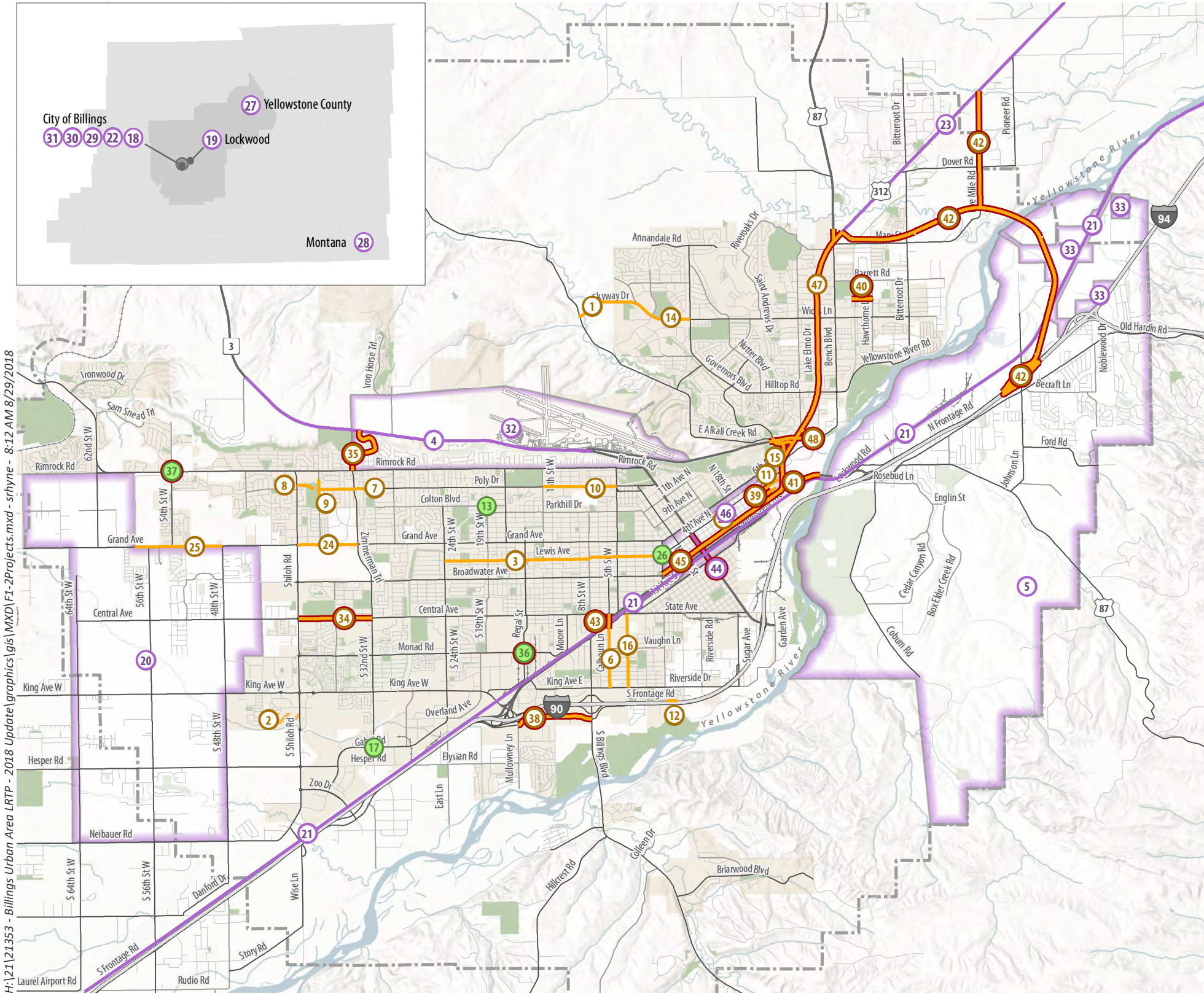
Similar to today's planning efforts, the past transportation plans assessed existing and future transportation conditions to identify a set of financially constrained improvements for the Billings Urban Area. Exhibit 1.3 illustrates roadway and bicycle elements from past transportation plans.

Exhibit 1.3 Elements of Past Transportation Plans



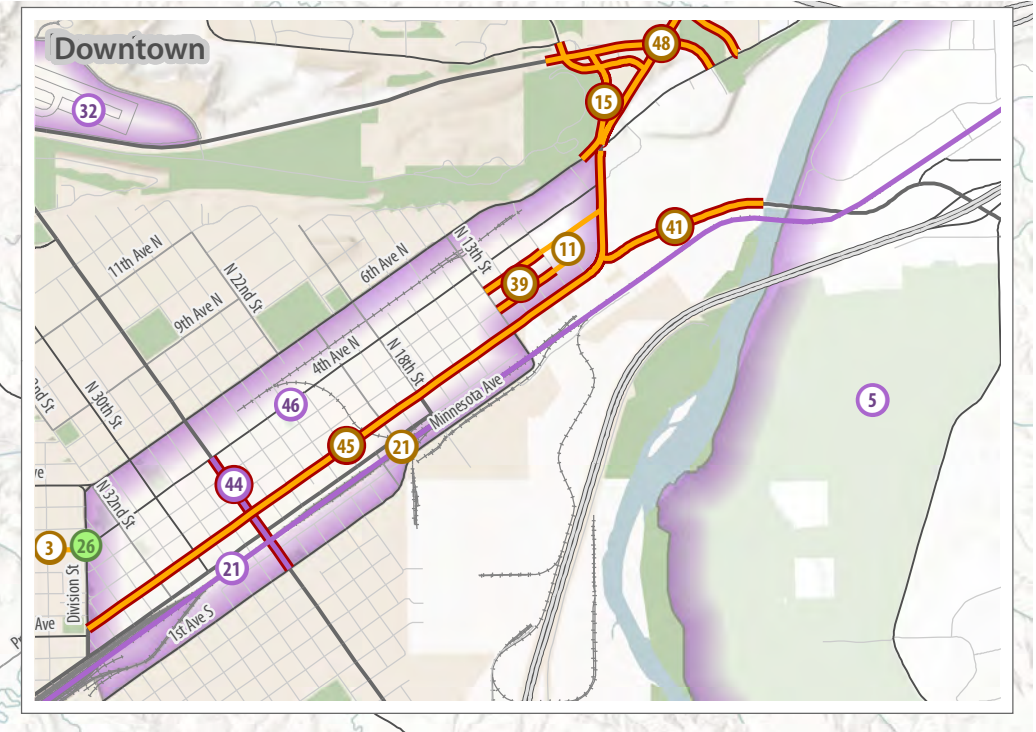
Since the 1950s, the Billings Urban Area has seen considerable growth in the development of population and employment areas in the downtown, along the Rims, and to the west. Recognizing the ongoing growth in the Billings Urban Area, it is critical that the MPO and local agencies continue to invest in long range transportation and land use planning efforts. These efforts identify, preserve, support, and maintain the infrastructure of the region's transportation system.

2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN



ID	Name
1	Inner Belt Loop Phase 1
2	Shiloh Conservation Area (Trail)
3	Lewis Avenue Bike Lanes (24th Street W to Division Street)
4	Highway 3 Corridor Study
5	Non-Motorized Transportation Plan
6	Calhoun Lane (King East to Underpass Avenue)
7	Poly Drive (32nd Street W to 38th Street W)
8	Arrowhead Trail (Arrowhead Elementary School to Shiloh Road)
9	Poly Drive School Sidewalks
10	Poly Drive/Virginia Lane Traffic Signal Reconstruction & Bike Lanes (Poly from Virginia to 13th St W)
11	Exposition Gateway (2nd & 3rd Ave N from Main Street to N. 10th)
12	Ponderosa Trail
13	19th St W & Colton School Crossing
14	Wicks Lane Trail (Siesta to Governors)
15	Swords Park Outlet Trail (Aronson to 6th Ave N)
16	Orchard Lane (King East to State Ave)
17	Gabel Road & 32nd Street West Traffic Signal
18	City of Billings Growth Policy
19	Lockwood Growth Policy
20	West End Multimodal Planning Study
21	Montana Rail Grade Separation Study
22	Billings Community Transportation Safety Plan
23	Old Highway 312 Corridor Study
24	Grand Avenue Widening (32nd Street West to Shiloh Road)

ID	Name
25	Grand Avenue (48th to 58th Streets West)
26	4th Ave N & Division Street Signal Reconstruction
27	Billings-Yellowstone Household Travel Survey
28	TranPlanMT
29	Billings Area Bikeways + Trails Master Plan Update
30	City of Billings Complete Streets Progress Report
31	City of Billings Comprehensive Parks and Recreation Master Plan
32	Rims to Valley Bike-Pedestrian Feasibility Study
33	Targeted Economic Development District (TEDD)
34	Central Avenue (32nd St W to Shiloh Road)
35	Zimmerman Trail (Rimrock Road to Hwy 3)
36	Monad & Daniel Traffic Signal
37	Rimrock & 54th St W Traffic Signal
38	Midland Road (S. Billings Blvd. to Mullowney Ln)
39	EBURD Reconstruct (2nd & 3rd Ave N from N. 13th to N. 10th)
40	Kyhl Lane (BBWA to Hawthorne)
41	1st Avenue North & Exposition Drive
42	Billings Bypass Arterial
43	Underpass Avenue Improvements
44	27th Street Railroad Crossing Study
45	1st Avenue North Billings
46	Billings Downtown Traffic Study
47	Main Street Signal Timing
48	Airport & Main Intersection



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- Intersection Project
- Ongoing Intersection Project
- Project
- On-Going Project
- Study/Plan/Policy
- Study/Plan/Policy
- Ongoing Study/Plan/Policy
- Study Area
- Park
- City of Billings
- ↑

DRAFT

Figure 1-2
Projects/Plans/Studies/Policies
Completed Since 2014 LRTP

TRANSPORTATION PLAN IMPLEMENTATION SINCE 2009

The previous LRTP, completed in 2014 (1-1) included several key elements:

- Implemented a robust public and stakeholder involvement plan
- Maintained the planning horizon of year 2035
- Confirmed study area boundaries and plan goals
- Assessed existing and future transportation and land use conditions
- Reviewed and updated non-motorized, bus, safety, security, and conformity elements
- Prepared a short- and long-range project list and financial plan

Since the 2014 plan adoption, several transportation projects and studies have been completed that play a role in the overall transportation system. Figure 1-2 illustrates the completed projects, studies, and plans since 2014. Over 30 major projects and 15 studies have been completed in the last four years, which shows a commitment from the agencies and community to continue to invest in the transportation system for the next generation. There are many other completed transportation projects, such as sidewalk and ramp enhancements, street signing, overlays, etc., that are not depicted on Figure 1-2, but have been completed and are important elements of enhancing and maintaining the transportation system. These completed projects along with new federal requirements served as a basis for this transportation update.

PLAN REQUIREMENTS AND PROCESS

Fundamental elements of this transportation plan were to encompass all transportation modes and identify how these modes are accommodated through the new planning horizon of year 2040. In developing this transportation plan, several federal, state, and local planning requirements were addressed to ensure compliance and consistency with these regulatory requirements.

FEDERAL REQUIREMENTS

The scope of the planning process (1-2) for an MPO (urban areas with a population of more than 50,000 individuals) is to develop long-range transportation plans and Transportation Improvement Plans (TIPs) through a performance-driven, outcome-based approach to planning for metropolitan areas of the State, such as Billings, MT. Additionally, this process needs to be continuous, cooperative, and comprehensive, and provide for consideration and implementation of projects, strategies, and services that will address the following planning factors:

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
2. Increase the safety of the transportation system for motorized and non-motorized users;
3. Increase the security of the transportation system for motorized and non-motorized users;

4. Increase accessibility and mobility of people and freight;
5. Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
7. Promote efficient system management and operation;
8. Emphasize the preservation of the existing transportation system;
9. Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation; and
10. Enhance travel and tourism

The Moving Ahead for Progress in the 21st Century (MAP-21) Act (1-3) transformed the Federal-aid highway program by establishing requirements for performance management to promote the most efficient investment of Federal transportation funds. The Fixing America's Surface Transportation (FAST) Act (1-4) continues this performance-based approach to increase the accountability and transparency of this program and to

support improved investment decisions through a focus on performance outcomes for the national planning factors. Additional information on the FAST Act is provided on FHWA's Fast Act website, as shown in Exhibit 1.4.

Exhibit 1.4 FAST Act Website



The Billings LRTP is consistent with the national transportation program, addresses priority issues, and leverages funding opportunities and initiatives incorporated in the national program. This LRTP was prepared in accordance with these federal requirements.

STATE PLANNING REQUIREMENTS

TranPlanMT, Montana’s long-range transportation plan, was last amended in 2017 (1-5). TranPlanMT identifies key transportation priorities and outlines long-range policy goals and strategies to assist MDT in addressing aging infrastructure, changing environmental conditions, and ongoing funding challenges. It also provides a framework for MDT to advance and manage its transportation programs in compliance with evolving federal requirements. In support of MDT and national goals, MDT conducts performance-based planning in the following key areas mandated through federal regulations:

- Safety
- Infrastructure Condition
- Transit Asset Management
- System Reliability
- Freight Movement and Economic Vitality
- Environmental Sustainability

TranPlanMT cites safety as an overarching goal which is applied in nearly every MDT decision-making process for all projects and programs.

Montana’s Comprehensive Highway Safety Plan (1-6) was amended in 2015, as required by the MAP-21 federal legislation. The CHSP is intended to be a living document to help guide the State of Montana to effectively address the state’s safety needs. The vision of the plan is “zero fatalities and zero serious injuries” on any public roadway in the State. The goal of the plan is “to reduce fatalities and incapacitating injuries in the State of Montana by half in two decades, from 1,704 in 2007 to 852 by 2030.”

Exhibit 1.5 Past Statewide Plans



LOCAL PLANNING REQUIREMENTS

Several local plans, studies, and policies were reviewed to inform the process and elements to be considered in development of the plan. It is important to review and incorporate these documents into the planning process, as to ensure that the integrity and value discussion of past planning efforts are carried forward into today’s planning effort. Development of this plan was coordinated with guidelines developed in the Yellowstone County Board of Planning Public Participation Plan (2009 and most recent update in conjunction with this plan update in 2018), the 2014 Billings Urban Area Long Range Transportation Plan, and past transportation and land use plans/studies/policies highlighted in the text box.

Transportation Plans/Studies (Completed since 2014)

- Airport Road / Main Street Intersection Transportation Study
- Billings Complete Streets Benchmark Report
- Billings-Yellowstone County Household Travel Survey
- Billings Area Bikeway + Trails Master Plan Update
- Billings Community Transportation Safety Plan
- Highway 3 Corridor Study
- Lockwood Non-Motorized Transportation Plan
- Montana’s Comprehensive Highway Safety Plan
- Montana Rail Grade Separation Study
- Old Highway 312 Corridor Study
- Rims to Valley Study
- TranPlanMT
- Underpass Avenue Improvements Concept Design
- West End Multimodal Planning Study

Land Use Plans/Policies (Completed since 2014)

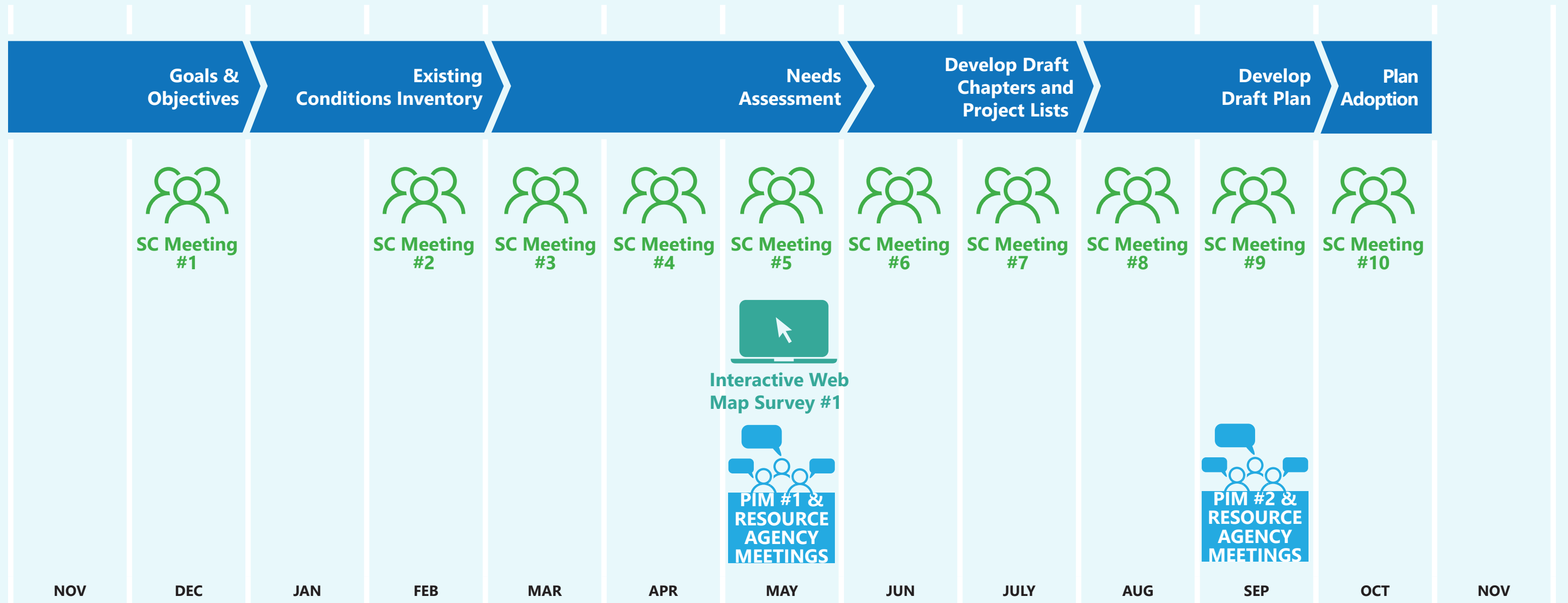
- Billings Growth Policy
- Billings Stormwater Management Manual
- Downtown Billings Alliance Strategic Plan
- Lockwood Growth Policy
- Lockwood Targeted Economic Development District Comprehensive Development Plan
- Lockwood Targeted Economic Development District Strategic Plan

PLAN DEVELOPMENT PROCESS

The plan effort was initiated in November 2017 and completed with consideration for plan adoption in October 2018.

Exhibit 1.6 illustrates the plan development process, which is described in more detail throughout this document.

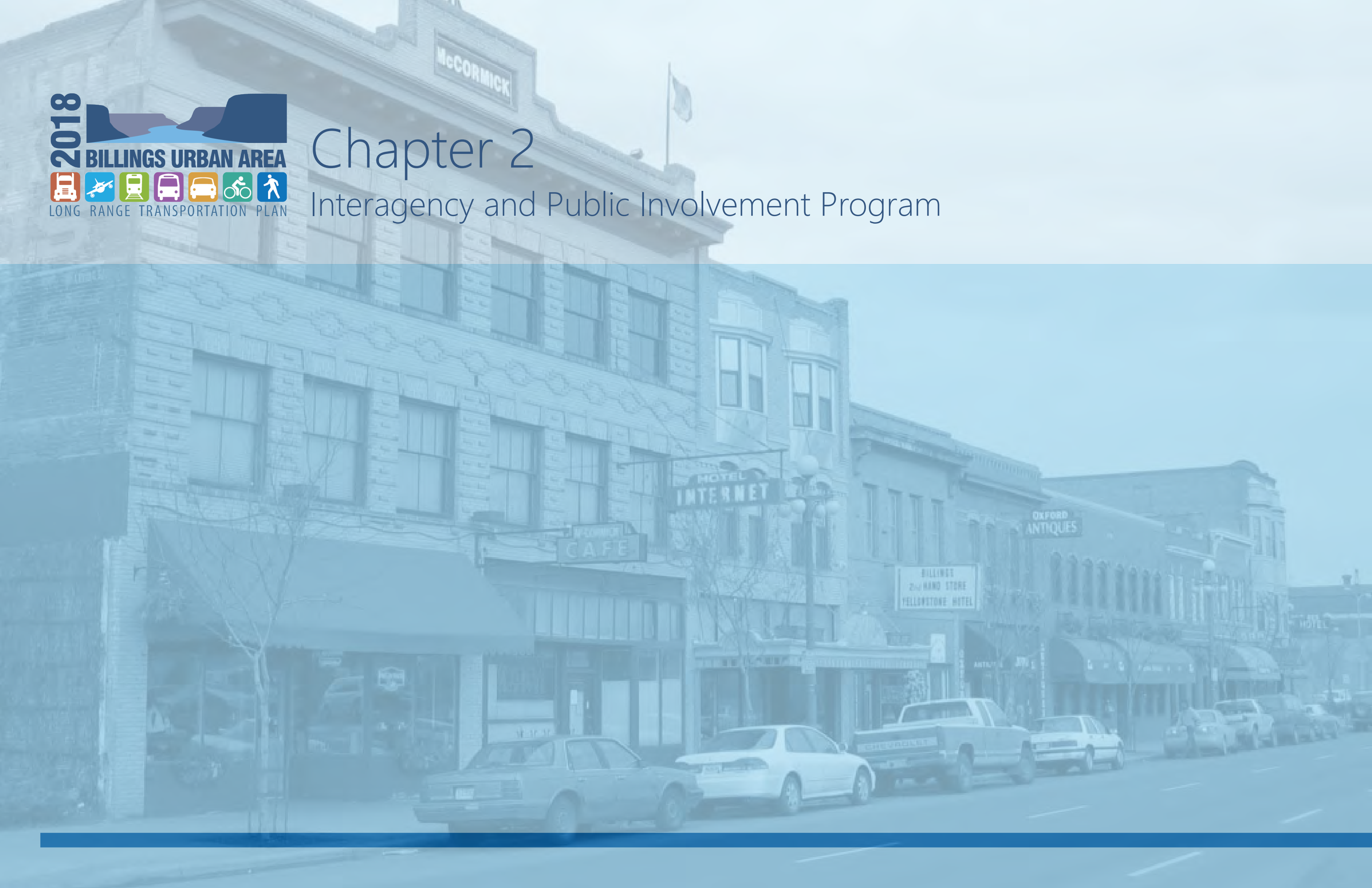
Exhibit 1.6 Plan Development Process





Chapter 2

Interagency and Public Involvement Program



INTERAGENCY AND PUBLIC INVOLVEMENT PROGRAM

Public involvement and agency coordination during this plan is critical for plan development, acceptance, and adoption by the following groups:

- Policy Coordinating Committee (PCC), which is comprised of a representative from the Yellowstone County Planning Board, Yellowstone Board of County Commissioners, City Council, and Montana Department of Transportation
- Federal Highway Administration (FHWA)
- Montana Department of Transportation (MDT)
- City of Billings
- Yellowstone Board of County Commissioners
- Yellowstone County Planning Board (YCPB)

The public involvement plan (PIP) for this LRTP was developed based on past public involvement efforts for the 2014 LRTP and to be consistent with the public involvement elements of the YCBP 2009 Participation Plan (2-1), the development of the YCBP Public Participation Plan (2-2) in conjunction with this LRTP, and MDT's 2018 Public Involvement Plan (2-3).

Over XXX comments were received from the public to help inform the development of the plan. Thank you for your participation!

A collaborative and context-sensitive public engagement process was used in developing the plan. The public involvement approach strived to achieve the goals listed below.

- Facilitate an open, honest, and transparent decision-making process conducted through constructive two-way communication between the project team, agencies, and the public.
- Provide early and continuous opportunities for the public to share values, understand the opportunities and constraints within the study area, develop potential solutions, and raise issues and concerns to be considered.
- Inform and encourage community participation.
- Improve the public involvement process by measuring the effectiveness and modifying methods based on evaluation.

Interagency coordination and public involvement were achieved through the following methods:

Building Awareness of the Plan

- Steering Committee
- Neighborhood meetings
- Resource agencies
- Commissions, councils, and committees

Utilizing Various Outreach Methods

- Branding and logo
- Online engagement
- Webpage
- Stakeholder interviews
- Media coordination
- Public informational meetings
- Email updates
- Social media
- Youth engagement

Facilitating Plan Review and Approval

PLACEHOLDER

PLACEHOLDER

BUILDING AWARENESS OF THE PLAN

Prior to kicking off the project, the MPO formed a Steering Committee (SC) that represented agencies within the Billings Urban Area to help guide the plan development. Early in the process, team members connected with established regional boards and commissions and other community groups. The scope and schedule of the LRTP update was shared with boards, commissions, and community groups, which in turn provided valuable feedback on the initial direction of the plan development. The initial groups, which are identified in the following lists, also supplied additional contacts that helped the outreach effort extend deeper into the community.

STEERING COMMITTEE

The SC served as the primary sounding board for the development of the plan. The SC's responsibilities included reviewing project deliverables and providing guidance to the consultant team throughout plan development. The SC included staff from:

- City of Billings Administration
- City of Billings City Council
- City of Billings Planning
- City of Billings Public Works
- Lockwood Steering Committee
- MDT Billings District
- MDT Planning
- MET Transit
- Yellowstone County Commission
- Yellowstone County Planning Board
- Yellowstone County Public Works

The consultant team, with assistance from the MPO, scheduled and led ten meetings with the SC throughout the duration of the project. The goal of the SC meetings was to solicit feedback concerning the development of project deliverables and determine next steps for the consultant team. The consultant team would provide materials to the SC, prior to the meeting, for review and comment. All meeting agendas and minutes are included in the Appendix.

NEIGHBORHOOD MEETINGS

MPO staff provided updates to various neighborhood association groups and encouraged them to provide comments via the project website or interactive web map.

COMMISSIONS, COUNCILS, AND COMMITTEES

The project team and MPO met with other committees and officials throughout the LRTP development process. These meetings were meant to update these various groups of the progress being made and to solicit feedback at key stages of the project. These committees include:

- City of Billings City Council
- City of Billings / Yellowstone County Planning Board
- Policy Coordinating Committee
- Yellowstone Board of County Commissioners
- Technical Advisory Committee

RESOURCE AGENCIES

Prior to the first Public Involvement Meeting in May, the MPO sent a letter to resource agencies and stakeholders in the Billings Urban Area to notify them of the LRTP update. The letter also invited any interested groups to coordinate meetings with the consultant team to discuss the transportation planning process for the 2018 LRTP, changes in federal requirements through FAST Act, consistency with other plans, opportunities and constraints, ideas for implementation, and any questions they had about the project. Agencies or organizations highlighted with **bold** text participated in 1-on-1 meetings with the consultant team.

- Big Sky Economic Development Authority
- **Billings Area Chamber of Commerce**
- Billings Association of Realtors
- Billings TrailNet
- **Billings Emergency Services/ Yellowstone County EMS**
- Billings Fire Department
- Billings Police Department
- Billings School District 2
- Billings Bicycle and Pedestrian Advisory Committee
- Billings Traffic Control Board
- Billings Community Development Board
- Billings Board of Adjustment
- Billings Zoning Commission
- Billings Aviation and Transit Board
- Billings Parking Board
- Bureau of Indian Affairs
- Downtown Billings Partnership, Inc
- Housing Authority of Billings
- Living Independently for Today & Tomorrow (LIFTT)
- **MET Transit**
- Montana Department of Environmental Quality
- Montana Department of Fish, Wildlife, and Parks
- Montana Department of Natural Resources & Conservation
- Montana Rail Link
- Neighborhood Task Force
- Central Terry Neighborhood Task Force
- Heights Neighborhood Task Force
- North Park Neighborhood Task Force
- Pioneer Park Neighborhood Task Force
- **Rimrock Neighborhoods Task Force**
- Southside Neighborhood Task Force
- Southwest Corridor Neighborhood Task Force
- Westend Neighborhood Task Force
- Riverstone Health (Yellowstone County Health Department)
- Weave Management Group, Inc.
- U.S. Bureau of Land Management
- U.S. Bureau of Reclamation
- Yellowstone County Sheriff's Office
- Yellowstone County Superintendent of Schools

UTILIZING VARIOUS OUTREACH METHODS

The public involvement activities for plan development reflected a multi-faceted approach. The outreach methods were created to facilitate communication between the public and project team throughout the project and gather insights and direction for plan development.


BRANDING AND LOGO

A logo, color scheme and reporting templates were developed and implemented with this LRTP to provide brand awareness and cohesiveness with plan materials through the planning and adoption of the plan.

PROJECT WEBPAGE

The project website (provided at URL www.BillingsLRTP.com, shown in Exhibit 2.1) was maintained by the consultant team and served as the primary, public, 24-hour source for information on the project. The website included maps, purpose, public involvement contacts, agency involvement, project schedule, documents, meeting information, and a place for the public to provide input, comments, or questions to the team.

Exhibit 2.1 Homepage of the 2018 Billings Urban Area LRTP Project Website



The screenshot shows the homepage of the 2018 Billings Urban Area Long Range Transportation Plan website. At the top left is the project logo, which includes the year '2018', a stylized landscape graphic, and the text 'BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN' with icons for various transportation modes. At the top right is the MPO logo. Below the logos is a navigation menu with the following items: HOME, LATEST NEWS, MEETINGS, PROJECT DOCUMENTS, WHO'S INVOLVED, PUBLIC INVOLVEMENT, GOALS, and CONTACT. The main heading reads '2018 Billings Urban Area Long Range Transportation Plan' with the subtext 'Help plan the future of transportation in your community!'. Below the heading are three images: a scenic view of a river and hills, an aerial view of a city street, and a blue sign for a transit station. The text below the images provides details about the project's purpose, why it is needed, and how it will be implemented.

What: The Yellowstone County Planning Board is the designated Metropolitan Planning Organization (MPO) and oversees transportation planning for the Billings Urban Area. The [study area](#) encompasses the City of Billings and a planning area extending approximately 4.5 miles outside the City limits. The MPO is preparing a long range transportation plan (LRTP) to address all transportation forms and elements (streets and highways, public transit and transportation, freight, pedestrian and bicycle, safety, and security) and meet the local, state, and federal requirements.

Why: MPOs are required to update their transportation plans every four years. The last plan update was in 2014. Through this effort and with your input, we will identify effective ways to build upon our existing transportation system and make strong investments for the future that provide transportation choices for the community.

How: The LRTP includes technical work (data gathering, future growth projections, assessment of auto, truck, rail, transit, air, pedestrian, and bicycle modes), identification of short and long range transportation projects, and development of a final plan for review and comment. Additionally, the process includes continuous opportunities for the public to provide comments and participate in the development of this community plan.

Click [HERE](#) to learn more about the Public Involvement and how to get involved!

MEDIA COORDINATION

Outreach was conducted to appropriate media outlets to disseminate information regarding information on the plan and advising the community of public involvement opportunities. Media releases were provided to local media outlets in May and September 2018 regarding the plan development.

EMAIL UPDATES

The consultant team provided email updates to the MPO, which summarized the following:

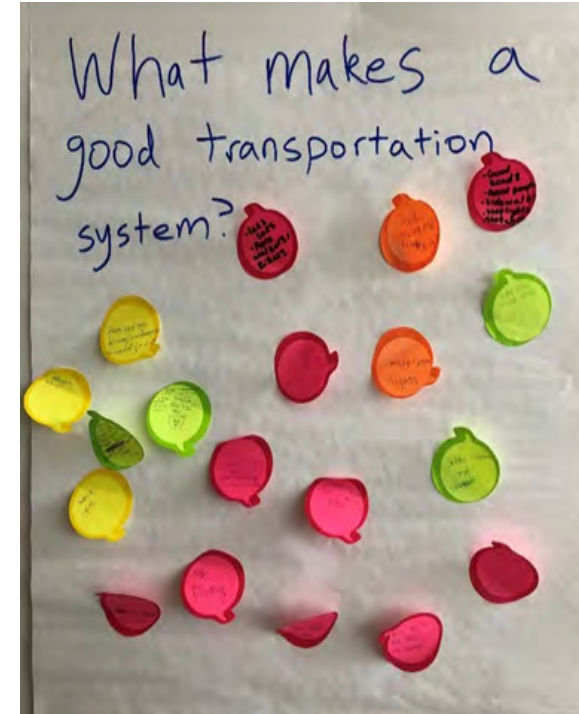
- Consultant work tasks associated with the LRTP, PPP, and TDM - Included a summary of completed and on-going work tasks of the consultant's responsibility
- Action Items for MPO - Requests for guidance or materials review for the MPO from the consultant team
- Upcoming Meetings - Location, date, and time for any upcoming meetings

The goal of the updates was to keep a consistent line of communication between the MPO and the consultant team throughout the LRTP process. Additionally, the email updates were forwarded on to other agencies, committees, and elected officials to keep them apprised of the LRTP schedule.

YOUTH ENGAGEMENT

Involving elementary, middle, and high school teachers is a good way to inform and involve not only students, but also their parents. Social studies and government classes provide a good connection to this planning effort. Youth involvement is also a recommendation of Environmental Justice/Title VI best practices. The consultant team presented to three classes (two geography classes and one social studies class) at the Riverside Middle School on Tuesday May 15th, 2018. These three classes included approximately 50 students. A presentation was provided on transportation planning and asking students to map how they traveled to school and to after school or weekend activities. The students mapped the routes they took, and color coded them by what mode of transportation they used. The students then discussed issues about these routes. Students were also asked "What makes a good transportation system?". They wrote these ideas down on sticky notes and placed them on a board for group discussion. These notes were also presented at the public open house in May 2018. Exhibit 2.2 shows a few of the completed maps, sticky notes, and ideas associated with what makes a good transportation system and challenges that exist today.

Exhibit 2.2 Middle School Outreach – What Makes a Good Transportation System? What Challenges Exist?



Signs
 sidewalks bike
 crosswalks
 Stop one streets
 roads
 safety Less
 drivers people driving
 lights More
 Safer Safe drunks cars
 traffic ways routes ride
 drains Better
 Crossings potholes
 services available
 Good

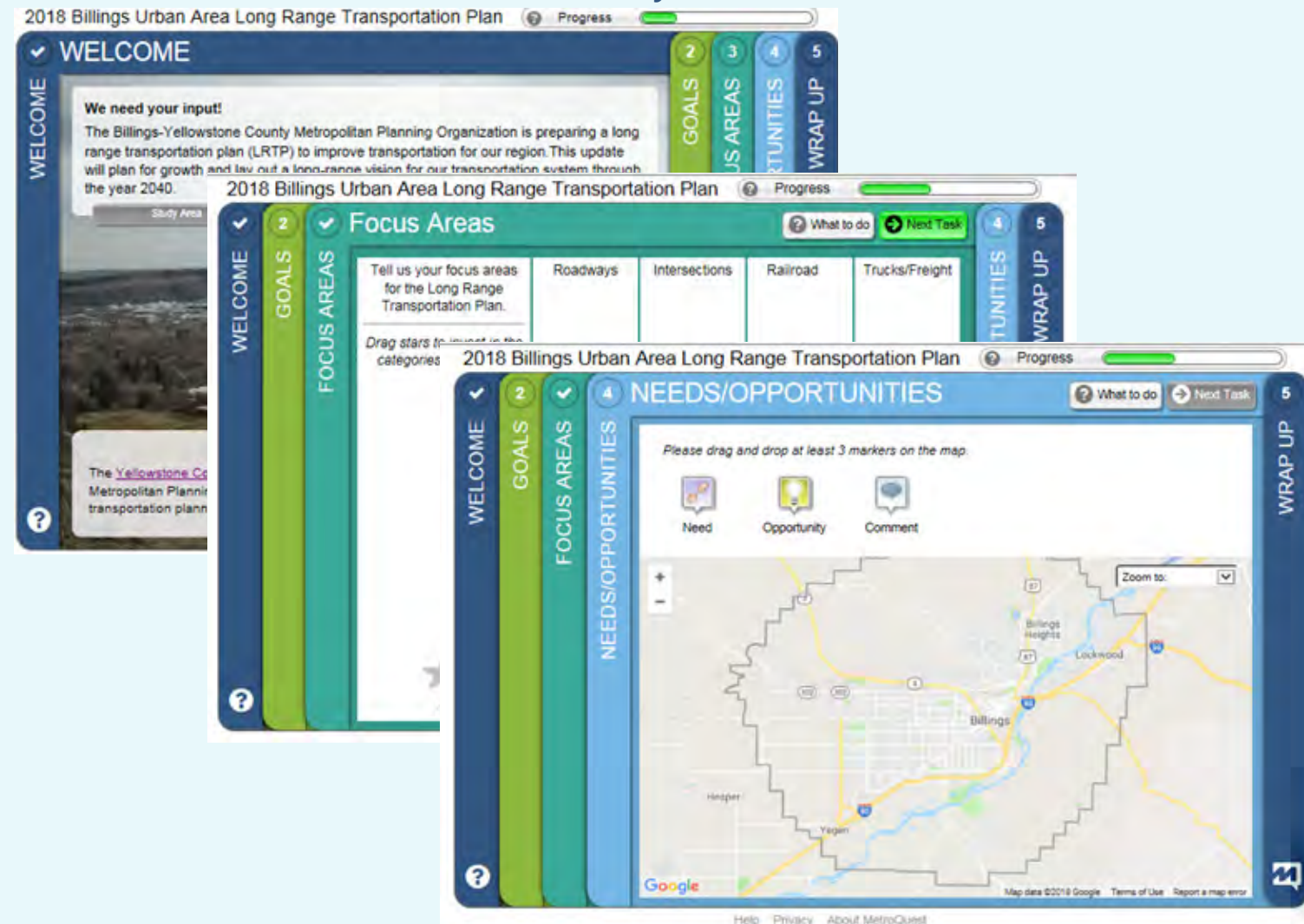


ONLINE ENGAGEMENT

Two online surveys were used during plan development to collect feedback and comments from the public.

Online Survey #1 – The first online survey was developed and implemented in conjunction with the public informational meeting #1 in May 2018. This survey was developed to provide information on the LRTP, collect feedback on goals, priorities and allow users to map their comments regarding needs and deficiencies. The same questions were asked on the survey as at the public informational meeting. The online survey ran from May 14th to May 29th and had 139 participants. The site is no longer active, but the demo site can be viewed at: <https://2018BillingsLRTP-demo.metroquest.com>. Exhibit 2.3 shows the online survey #1.

Exhibit 2.3 Screenshot of Online Survey #1



Online Survey #2 – The second online survey was developed and implemented in conjunction with the public informational meeting #2 in September 2018. This survey was developed to provide information on the LRTP and collect feedback on the project lists and prioritization. The same questions were asked on the survey as at the public informational meeting. The online survey ran from September 25, 2018 to October 9, 2018 and had XX participants. Exhibit 2.4 shows the online survey #2.

Exhibit 2.4 Screenshot of Online Survey #2

PLACEHOLDER

SOCIAL MEDIA

Social media content and graphics were developed and provided to the MPO to publish on their existing social media networks. This information was used to provide updates on the plan and to promote meetings and opportunities for online engagement.

STAKEHOLDER INTERVIEWS

One-on-one meetings were held with various individuals and groups who have a key interest or stake in the plan. The purpose of these meetings included: introduce the plan, identify existing transportation deficiencies and/or concerns that should be addressed with the plan, and gather input on the proposed projects included in the plan. As noted in the resource agencies section, meetings were held with the Billings Area Chamber of Commerce, Billings Emergency Services/Yellowstone County EMS, MET Transit, and Rimrock Neighborhoods Task Force.

PUBLIC INFORMATIONAL MEETINGS

Public Informational Meeting #1

The public informational meeting #1 was held on May 14th at the Billings Library from 4 PM to 7 PM. The purpose of the open house was to give the public an opportunity to learn about the plan, review technical information about the L RTP, and provide comment on the following three items:

What goals are most important to you for the plan?

What transportation need and opportunities exist today?

What you like to see for the future transportation system?

Attendees were able to review materials on the L RTP, provide mapped comments regarding needs and opportunities, and provide feedback on goals and focus areas. 25 people signed into the meeting, 32 map comments were received and three comment sheets. Exhibits 2.5, 2.6, and 2.7 show the room layout and public at PIM #1.

Exhibit 2.5 PIM #1 Display Boards



Exhibit 2.6 PIM #1 Public Using the Comment Map

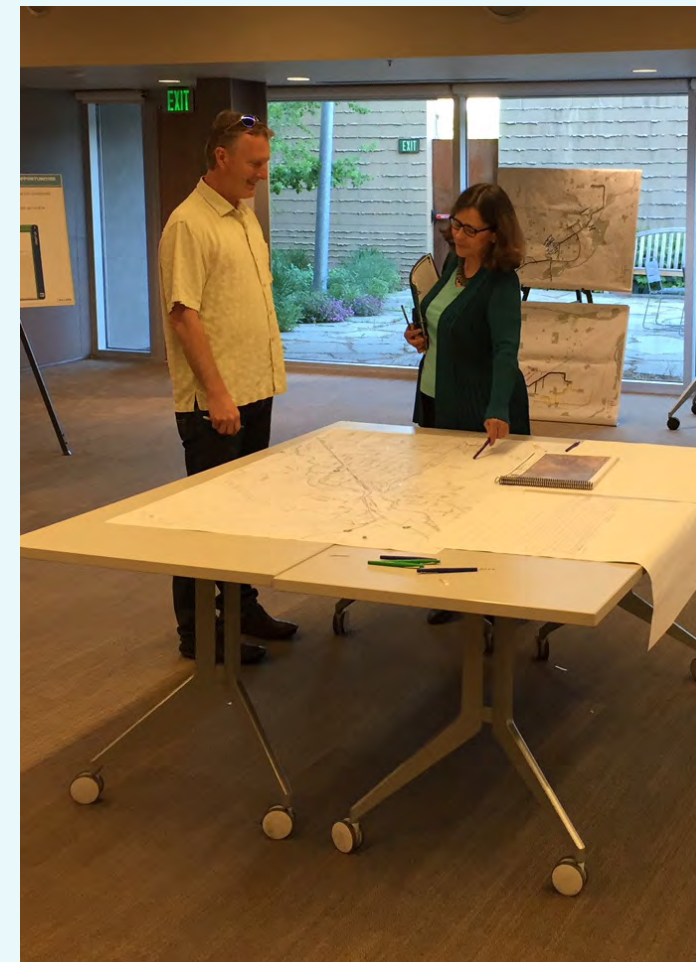


Exhibit 2.7 PIM #1 Public Discussion



Public Informational Meeting #2

The public informational meeting #2 was held on September 25, 2018 at the Billings Library from 4:30 PM to 6:30 PM. The purpose of the open house was to give the public an opportunity to learn about the plan, review technical information about the LRTP, and provide comment on the following three items:

What goals are most important to you for the plan?

What transportation need and opportunities exist today?

What you like to see for the future transportation system?

Attendees were able to review materials on the LRTP, provide mapped comments regarding needs and opportunities, and provide feedback on goals and focus areas. 25 people signed into the meeting, 32 map comments were received and three comment sheets. Exhibits 2.7 and 2.8 show the room layout and public at PIM #2.

Exhibit 2.8 PIM #2

Exhibit 2.9 PIM #2

Exhibit 2.10 PIM #2

PLACEHOLDER

PLACEHOLDER

PLACEHOLDER

Summary of Comments from Online Survey, PIM #1 and PIM #2

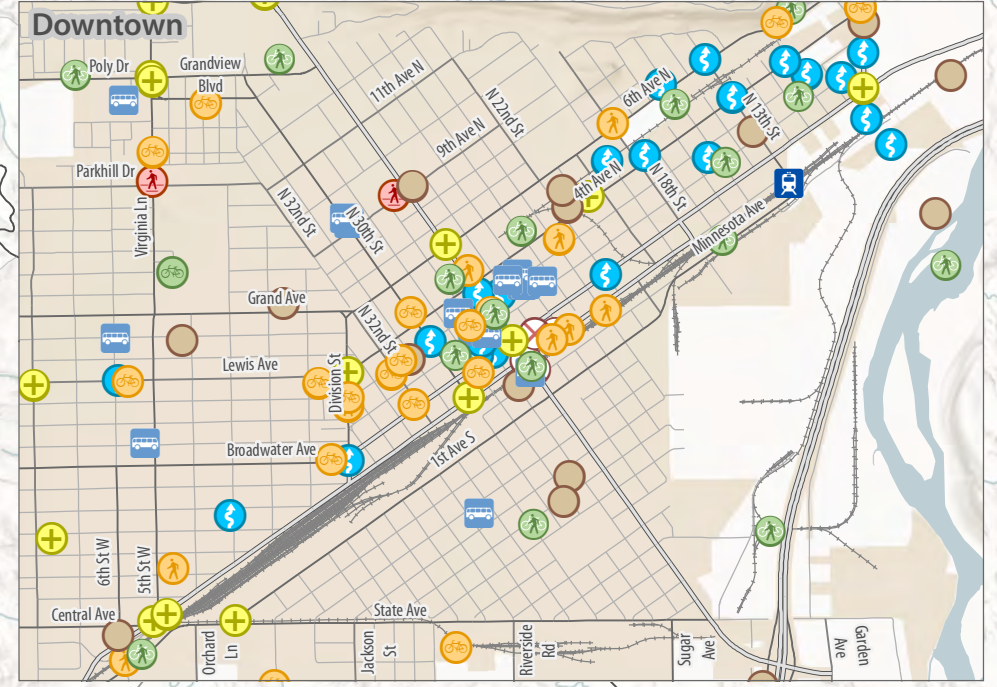
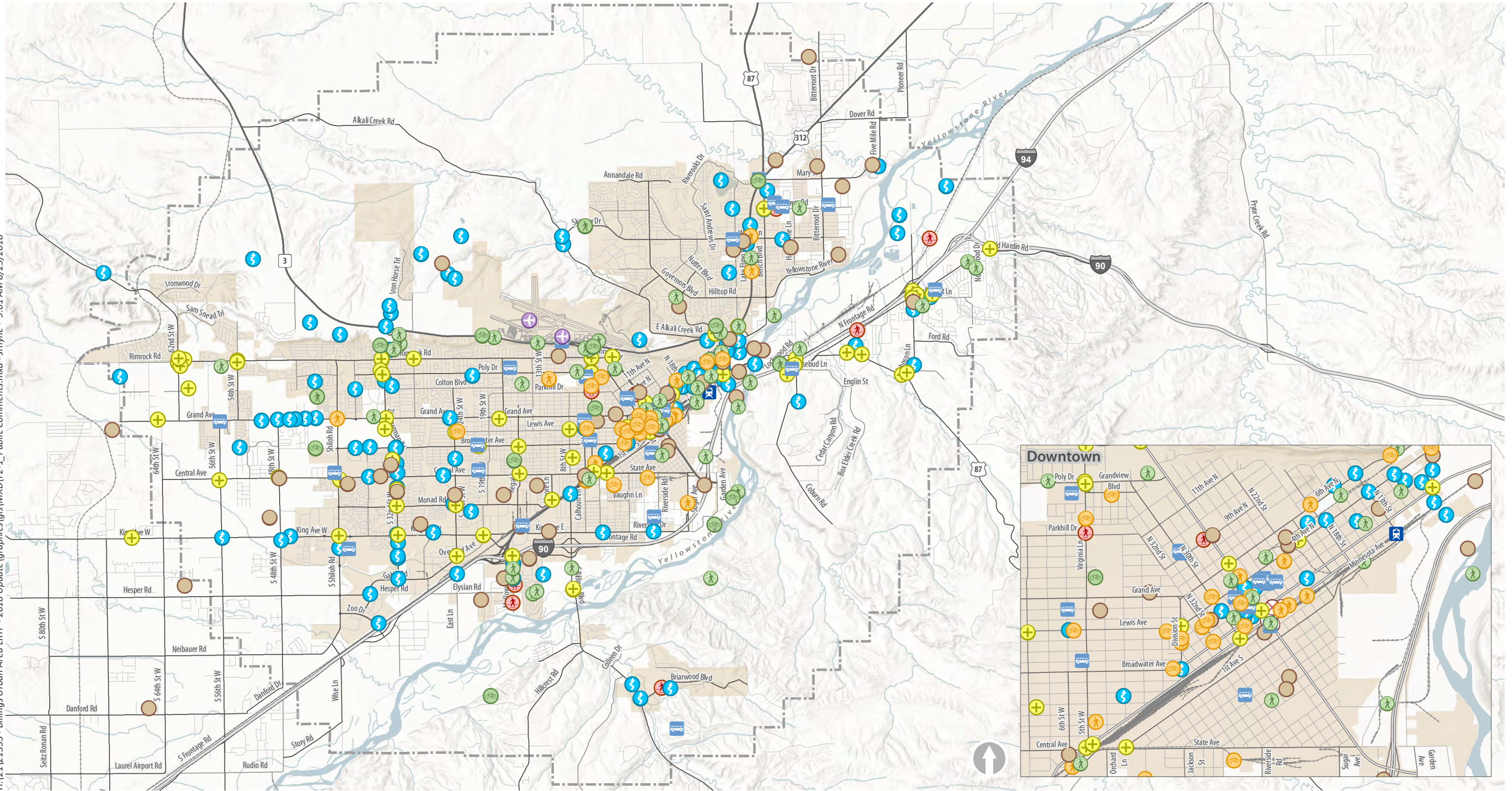
Public comments from the online survey, PIM #1, and PIM #2 were summarized in this section. Table 2.1 summarizes the total comments received during the public involvement process.

Table 2.1 Total Comments Received During the Public Involvement Process

	Activity		Total
	PIM #1 (May 14th – May 29th, 2018)	PIM #2 (September 25th – October 9th, 2018)	
Comment Sheets	3		
E-mail	2		
Online Survey	369		
Project Website	0		
Total	374		

Exhibit 2.11 illustrates the percentage of zip codes represented during the May and September 2018 outreach efforts.

H:\121121353 - Billings Urban Area LRTP - 2018 Update\graphics\gis\MXD\F2-1_Public Comments.mxd - srhyne - 9:01 AM 8/29/2018



- Public Feedback Categories**
- Airport
 - Bike/Pedestrian
 - Pedestrian Crossing
 - Sidewalks
 - Study Area
 - Bus Transit
 - Pedestrian Trail
 - Trains
 - General
 - Railroad
 - Intersection
 - Roadway
 - Bike Trail

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Figure 2-1

**Needs and Opportunities
from Public Comments**

At PIM #1, focus areas with the most support were roadways, intersections, and bicycles followed by pedestrians, airport, and bus transit followed by railroad and truck/freight. Additionally, the public were asked to use the map to tell us about needs and opportunities with the existing transportation system in the Billings Urban Area. Figure 2-1 illustrates the needs and opportunities identified by category within the urban area at PIM #1 and via online survey #1.

Figure 2-1 Map of Needs and Opportunities from Public Comments (May 14th to May 29th, 2018)

At PIM #2, the public were asked to use the project map to identify priority projects for consideration in the LRTP. Table 2.2 summarizes the project priorities identified by the public at PIM #2 and via online survey #2.

Table 2.2 Summary Table of Project Priorities from Public Comments (September 25th to October 9th, 2018)

PLACEHOLDER

For more information about the content and summaries from the two PIMs, Public Comment Summary #1 and #2 are included in the Appendix.

FACILITATING PLAN REVIEW AND APPROVAL

The final phase of the plan update is completion and adoption of the LRTP. Between June and September, the SC reviewed the draft chapters of the LRTP and provided comments to the consultant team for incorporating in the final draft plan. In September, the draft LRTP was presented to the SC and public for review and comment. Additionally, the Technical Advisory Committee (TAC) met in September 2018 to review the draft plan, provide comments on the draft plan, and recommend approval of the LRTP to the Planning Board, Billings City Council, Yellowstone County Commissioners, and the PCC. The draft plan was also available to the public for review and comment in September and October 2018. Much like the development of the plan, continued awareness and review of the draft plan are important steps toward plan adoption. In October, the draft plan was presented to the Planning Board, Commission, and City Council. Following these meetings and work sessions, a public hearing was scheduled with each body to hear public comments and a recommendation for plan adoption. The plan was presented and adopted unanimously by the PCC on October 30, 2018. The consultant team assisted the MPO throughout the adoption process by providing materials for review and attending some of the meetings in-person or over the phone to present information on the LRTP and address questions that came up during the meetings.



Chapter 3

Goals, Objectives, Performance Measures, and Targets



GOALS, OBJECTIVES, PERFORMANCE MEASURES, AND TARGETS

This chapter describes the goals, objectives, performance measures, and targets that will be used to measure the Billings urban area's success in establishing a transportation system that 1) aligns with national and state standards and 2) fulfills community desires and needs. The establishment of these goals fosters accountability, encourages measurement of progress, and creates actionable steps for the MPO to take to improve transportation in the Billings urban area. Federal and state targets to which the Billings urban area plans to adhere to are presented first in this chapter. Goals, objectives, and performance measures specific to the Billings urban area and created by the MPO are presented second. Together, these metrics ensure that the Billings urban area establishes a transportation system that both meets federal and state criteria and reflects the unique needs and desires of the community it serves.

FEDERAL AND STATE TARGETS

The FAST Act aligns with federal code of regulations 23.450.306, which states that MPOs shall develop long-range transportation plans through a performance-driven, outcome-based approach to planning for metropolitan areas of the State. It also states that this planning process should address the ten planning factors listed below. These factors were first introduced through the MAP-21 Act and were expanded upon by the FAST Act.

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

Three Federal-aid programs manage the funds apportioned through the FAST Act: the Highway Safety Improvement Program (HSIP), the National Highway Performance Program (NHPP), and the Congestion Mitigation and Air Quality (CMAQ) Improvement Program. Each of these, and the Federal Transit Administration (FTA), prescribe targets to assess performance of the transportation system. MDT has implemented these national targets with exceptions made based on Montana's urban population sizes and lack of public transportation rail assets.

ADOPTED STATEWIDE TARGETS

Adopted statewide targets are summarized in Tables 3.1, 3.2, 3.3, and 3.4. The MPO has formally agreed to support the statewide targets.

Table 3.1 Safety Performance Targets*

Performance Measure	2019 Target 5-Year Average
Number of Fatalities	187.4
Fatality Rate	1.462
Number of Serious Injuries	892.8
Serious Injury Rate	6.968
Number of combined non-motorized fatalities and non-motorized serious injuries	73.2

* Safety performance targets are statewide totals or rates for 2018. Targets are based on a rolling 5-year average and determined annually.

Table 3.2 NHS Pavement and Bridge Condition Targets

Performance Measure	2-Year Target	4-Year Target
Interstate Pavement	-	54% = Good Condition 3% = Poor Conditions
Non-Interstate NHS Pavement	44% = Good Condition 6% = Poor Condition	44% = Good Condition 6% = Poor Condition
NHS Bridge Deck Area	12% = Good Condition 9% = Poor Condition	12% = Good Condition 9% = Poor Condition

Table 3.3 System Performance and Freight Targets

Category	2-Year Targets	4-Year Targets
Interstate Travel Time Reliability (TTR) (% Reliable – person miles)	98%	98%
Non-Interstate NHS TTR (% Reliable – person miles)	-	80%
Interstate Truck TTR (TTTR) (Truck Travel Time Reliability Index)	1.30	1.30

Table 3.4 CMAQ On-Road Emissions Sources Targets

Category	2-Year and 4-Year Targets*
CO Emissions	>0 kg/day
PM10 Emissions	
PM2.5 Emissions	

Transit Targets

FTA requires federally-funded public transportation providers to develop and implement transit asset management plans (TAMPs) with asset inventories, condition assessments of inventoried assets, and a prioritized list of investments to improve the state of good repair of their capital assets. The final rule (effective as of October 1, 2016) also established “state of good repair” (SGR) standards and four associated performance measures including:

- The percentage of non-revenue, support-service, and maintenance vehicles that have either met or exceeded their useful life benchmark (ULB);
- The percentage of rolling stock vehicles that have either met or exceeded their ULB;
- The percentage of track segments with performance restrictions for rail fixed guideway, track, signals, and systems; and
- The percentage of facilities rated below condition 3 on the Transit Economic Requirements Model (TERM) scale.

The performance targets and measures set by the MET Transit Fiscal Year 2019 Transit Asset Management Plan are shown below:

Table 3.5 Transit Targets

Asset Category – Performance Measures	Asset Class	Targets				
		2019	2020	2021	2022	2023
Revenue Vehicles						
Age - % of revenue vehicles within a particular asset class that have met or exceeded their Useful Life Benchmark	BU – Bus	47%	42%	37%	32%	26%
	CU – Cutaway Bus	17%	17%	17%	17%	17%
	VN – Van	6%	14%	14%	14%	14%
Equipment						
Age - % of vehicles that have met or exceeded their useful life benchmark (ULB)	Non-Revenue/ Service Automobile	66%	66%	66%	66%	66%
	Trucks and other Rubber Tire Vehicles	75%	75%	75%	75%	75%
	Facility Maintenance Vehicle	75%	75%	75%	75%	75%
Facilities						
Condition - % of facilities with a condition rating below 3.0 on the FTA Transit Economic Requirements Model (TERM) Scale	Passenger Facilities	33%	33%	33%	33%	33%
	Administration and Maintenance	33%	33%	33%	33%	33%

NOTE – MET is currently updating its transit asset management plan (TAMP), with projected completion by late September. The targets shown above reflect the most updated draft version. Once this plan is finalized, this section will be updated to reflect the most current transit performance targets.

L RTP GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

In addition to the federal and state targets listed above, the MPO created the following goals, objectives, and performance measures tailored specifically to the Billings urban area. Many of the goals established by the MPO are similar to the federal and state targets listed above. Both focus on a long-term vision for a safe, efficient, and sustainable transportation system, but the MPO's goals reflect feedback gathered by the Billings community, as well as align with other adopted plans within the Billings urban area. These goals are intended to more closely align with community desires and needs. Table 3.5 summarizes the 2018 LRTP goals, objectives and performance measures. Table 3.6 shows how the adopted state targets intersect with the LRTP goals established by the MPO.

Goals

Intended downstream outcomes of accomplishing the proposed objectives

Objectives

Trackable action items that align with the goals

Performance Measures

Type of data to be collected to track the objectives.

The 2018 LRTP goals are:

Safety – Develop a safe transportation system

Functional Integrity and Efficiency – Optimize, preserve, and enhance the existing transportation system

Prioritized Improvements – Identify and prioritize projects that mitigate deficiencies, maximize the use of existing facilities, and balance anticipated needs with available funding

Environment – Develop a transportation system that protects the natural environment and promotes a healthy, sustainable community

Public Transit and Transportation – Create a transportation system that supports the practical and efficient use of transit

Pedestrians and Bicyclists – Create a transportation system that supports the practical and efficient use of active transportation such as walking and bicycling

Economic Vitality – Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce.

Table 3.5 LRTP Goals, Objectives, and Performance Measures

2014 LRTP Goal	Objective	Performance Measure(s)	Data Source	Related Federal Planning Factors	Supportive Plan / Policy
Safety	Reduce the rolling five-year average number of fatal and serious injury crashes by 20% between 2018 and 2023.	Fatal and serious injury crashes	MDT / City of Billings	1, 2, 3, 4, 6, 7, 8, 9, 10	Billings Community Transportation Safety Plan
	Reduce the rolling five-year average rate of fatal crashes and serious injury crashes per 100 million vehicle miles travelled by 20% between 2018 and 2023.	Fatal and serious injury crashes; vehicle miles travelled	MDT / City of Billings		
	Reduce the rolling five-year average number of fatal crashes and serious injury crashes involving non-motorized modes by 20% between 2018 and 2023.	Non-motorized fatal and serious injury crashes	MDT / City of Billings		
Functional Integrity and Efficiency	Develop an inventory of critical infrastructure. Update the regional emergency response plan at least once by 2023.	Critical infrastructure inventory and regional emergency response plan.	City of Billings / Yellowstone County	1, 3, 4, 6, 7, 8, 9, 10	Functional Classification Map Various Corridor and Intersection Studies Emergency Operations Plan Multi-Jurisdictional Pre-Disaster Mitigation Plan Update
	Reduce the number of intersections identified as operating at LOS E or worse during the peak hour in the 2018 LRTP by 10% between 2018 and year 2023.	Intersection level of service (LOS)	City of Billings / Yellowstone County		
	Reduce weekday peak hour vehicular and freight travel time on selected principal arterial corridors by 5% between year 2018 and 2023.	Weekday peak hour travel time	City of Billings/Yellowstone County		
Prioritized Improvements	Create an annual prioritized list of fiscally constrained projects.	List creation	City of Billings / Yellowstone County	7, 8	Transportation Improvement Program (TIP) Unified Planning Work Plan (UPWP)
Environment	Develop and codify a stormwater management ordinance for the Billings urban area that establishes minimum stormwater management requirements and controls for major developments by year 2023.	Ordinance development and codification	City of Billings / Yellowstone County	5, 9	2017 Comprehensive Parks & Recreation Master Plan 2016 Billings Growth Policy 2016 Lockwood Growth Policy
Public Transit and Transportation	Maintain annual transit ridership each year from 2018 to 2023.	Total annual ridership	MET Transit	2, 3, 4, 6, 10	MET Business Plan
	Maintain 2018 number of routes, hours of service of each route, and headways on each route for the next 5 years.	Number of routes, hours of service, headways	MET Transit		
	Maintain 2018 rate of replacement of buses for next 5 years.	Number of buses replaced	MET Transit		
Pedestrians and Bicyclists	Increase number of bicycle lane miles by 10% between year 2018 and 2023.	Number of bicycle lane miles	City of Billings / Yellowstone County	2, 3, 4, 6, 10	City of Billings Complete Streets Policy – 2016 Billings Area Bikeway and Trails Master Plan Update Lockwood Non-Motorized Transportation Plan Rims to Valley Study Highway 3 Corridor Study
	Increase number of shared-use trail miles by 10% between 2018 and 2023.	Number of trail miles	City of Billings / Yellowstone County		
	Incorporate bicycle or pedestrian facilities on 75% of projects between 2018 and 2023.	Number of projects with bicycle or pedestrian facilities incorporated			
	City of Billings / Yellowstone County				
	Increase bicycle and pedestrian traffic counts at selected trails and intersections by 10% between 2018 and 2023.	Number of bicyclists, number of pedestrians	City of Billings / Yellowstone County		
Economic Vitality	None – based on objectives shown for Functional Integrity and Prioritized Improvement Goals			1, 5, 10	None



Table 3.6 Statewide Targets and LRTP Goals

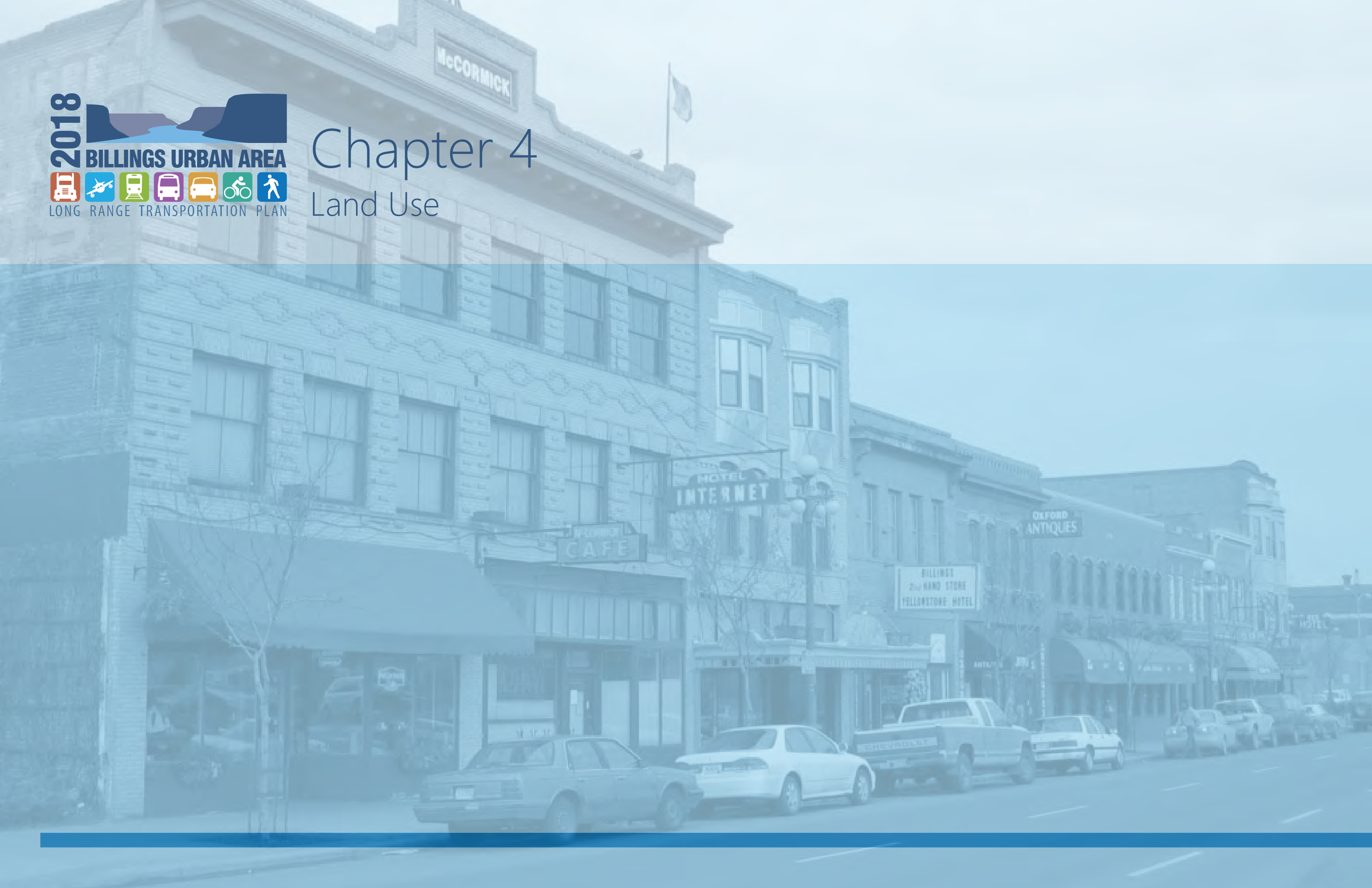
			Billings Urban Area LRTP Goals						
			Safety	Functional Integrity and Efficiency	Prioritized Improvements	Environment	Public Transit and Transportation	Pedestrians and Bicyclists	Economic Vitality
Statewide Targets	Pavement and Bridge Condition	Percentage of pavements on the Interstate System in Good condition		✓	✓				
		Percentage of pavements on the Interstate System in Poor condition		✓	✓				
		Percentage of pavements on the NHS (excluding the Interstate System) in good condition		✓	✓				
		Percentage of pavements on the NHS (excluding the Interstate System) in poor condition		✓	✓				
		Percentage of NHS bridges classified as in Good condition		✓	✓				
		Percentage of NHS bridges classified as in Poor condition		✓	✓				
	Safety Performance	Number of fatalities	✓						
		Rate of fatalities per vehicles miles traveled (VMT)	✓						
		Number of serious injuries	✓						
		Rate of serious injuries per VMT	✓						
		Number of combined non-motorized fatalities and non-motorized serious injuries	✓					✓	
	System Performance/Freight Movement/Congestion/CMAQ	Percent of reliable person-miles traveled on the Interstate		✓					✓
		Percent of reliable person-miles traveled on the non-Interstate NHS		✓					✓
		Percentage of Interstate system mileage providing for reliable truck travel time (Truck Travel Time Reliability Index)		✓					✓
		Total emissions reductions for applicable pollutants				✓			
	Transit Asset Management	Percentage of non-revenue, support-service and maintenance vehicles that have either met or exceeded their useful life benchmark (ULB)			✓		✓		
		Percentage of rolling stock vehicles that have either met or exceeded their ULB			✓		✓		
		Percentage of facilities rated below condition 3 on the Transit Economic Requirements Model (TERM) scale			✓		✓		

REPORTING PROGRESS TOWARDS ACHIEVING PERFORMANCE TARGETS

The MPO will incorporate adopted statewide targets and MPO goals, objectives, and performance measures into the LRTP and discuss how the targets will be advanced and linked to investment priorities. The MPO will coordinate with MDT to obtain routinely collected data from the agency about the condition of roadway pavement and bridges, safety performance, and the overall operation of the transportation system within the Billings urban area. The information will help the MPO identify and advance projects in the LRTP which support adopted statewide targets and MPO goals, objectives and performance measures at the statewide and local level.

Chapter 4

Land Use



LAND USE

This chapter summarizes the land use patterns under existing and future year 2040 forecast conditions in the study area. Knowing the locations of both existing (2017) and future 2040 population and employment patterns is critical for development of the base year 2017 and 2040 travel demand model.

The Billings urban area lies at the western edge of the northern High Plains. It serves as a central hub for a large region comprised of Montana, northern Wyoming, and the western Dakota's. Due to its location, Billings has developed as an important economic, cultural, educational, medical, and transportation urban center for the entire region. A critical part to developing a long-range transportation plan is understanding the current land use patterns and opportunities envisioned for growth. Through this understanding, the transportation system and land use vision can be integrated to effectively match future infrastructure and system management projects with the desires of the community.

Recent city-wide studies/plans were reviewed to gain an understanding of the existing and future land use patterns and policies that guide the community, including:

- Billings Urban-Area Long Range Transportation Plan (2014)
- West End Multimodal Planning Study (2016)
- City of Billings Growth Policy (2016)
- Lockwood Growth Policy (2016)
- Lockwood Targeted Economic Development District Comprehensive Development Plan (2016)
- Lockwood TEDD Strategic Plan (2017)
- Billings-Yellowstone County Household Travel Survey (2017)
- Downtown Billings Alliance Strategic Plan (2018)

The Billings urban area is expected to increase from a population of 127,056 to approximately 169,767 by 2040. Having an interconnected, multimodal transportation system is an important part to providing for this growth and creating a livable community.

PLACEHOLDER

PLACEHOLDER

LAND USE ANALYSIS

A key component of the land use analysis is incorporating the existing and future population/employment data in the regional travel demand model to develop traffic volume projections.

The Billings MPO travel demand model is developed with transportation analysis zones (TAZs) that represent geographic groupings of population and employment. An individual TAZ is intended to group land uses that have common access to the transportation system (for example, a group of houses that all use local streets to access the same blocks of two collector streets). Physical barriers (such as hillsides, rivers, freeways or railroad tracks) are typical borders because traffic cannot traverse these without the roadway network. TAZs are typically bordered by major roadways (e.g. arterials and collectors) because it is assumed that traffic does not pass through them, but either starts or ends a trip there. TAZs often have uniform (or relatively similar) land use where trips are attracted and produced, but this is not a requirement. For the Billings travel demand model, the TAZs were based on census blocks defined by the 2010 United States Census. A portion of the census blocks were then aggregated or split as appropriate to best represent the access for individual land uses. Figure 4-1 shows the TAZs used for the analysis.

The existing population and employment data was derived from the 2010 United States Census and other records to identify the 2017 population and employment total. In order to anticipate projections in population and employment to year 2040, coordination with the MPO was conducted to illustrate growth in the region beyond simple historical projections. Local knowledge from the MPO was utilized to anticipate where growth in population and employment would increase or stagnate. The refined year 2040 population and employment dataset was then incorporated into the regional travel demand model to develop traffic volume forecasts.

EXISTING CHARACTERISTICS AND DEMOGRAPHICS

The Billings urban area currently encompasses approximately 151.2 square miles and includes all of the City of Billings (44.9 square miles) and Lockwood, as well as a planning area extending 4.5 miles outside of the city limits and into Yellowstone County. Figure 4-2 shows the existing zoning map and key destinations within the study area.

The primary drivers of transportation demand and regional travel patterns are the scale and geographic distribution of population and employment. The relationships between land-use development and the effects on generating travel demand are well-defined. Established land uses in the urban area have influenced the travel patterns that exist today. Understanding the relationship between the distribution of population/housing and employment (and the resulting regional travel patterns) is key to projecting future transportation demand. Therefore, a review of existing land use conditions is necessary to understand how the traffic network is affected by the components of where people live and where people work and/or shop.

POPULATION, HOUSING, AND EMPLOYMENT

Yellowstone County has the highest population of any county in Montana with a reported 2010 population of 147,972 persons (US 2010 Census). Billings remains the largest city in Montana with a 2010 population of 104,170. This is an increase of 15.9 percent (addition of 14,323 persons) over the 2000 population. Figures 4-3 and 4-4 show the 2017 population and housing concentrations, respectively in the study area. The 2017 total population is 127,056 in the study area. The 2017 total housing units is 55,464 in the study area.

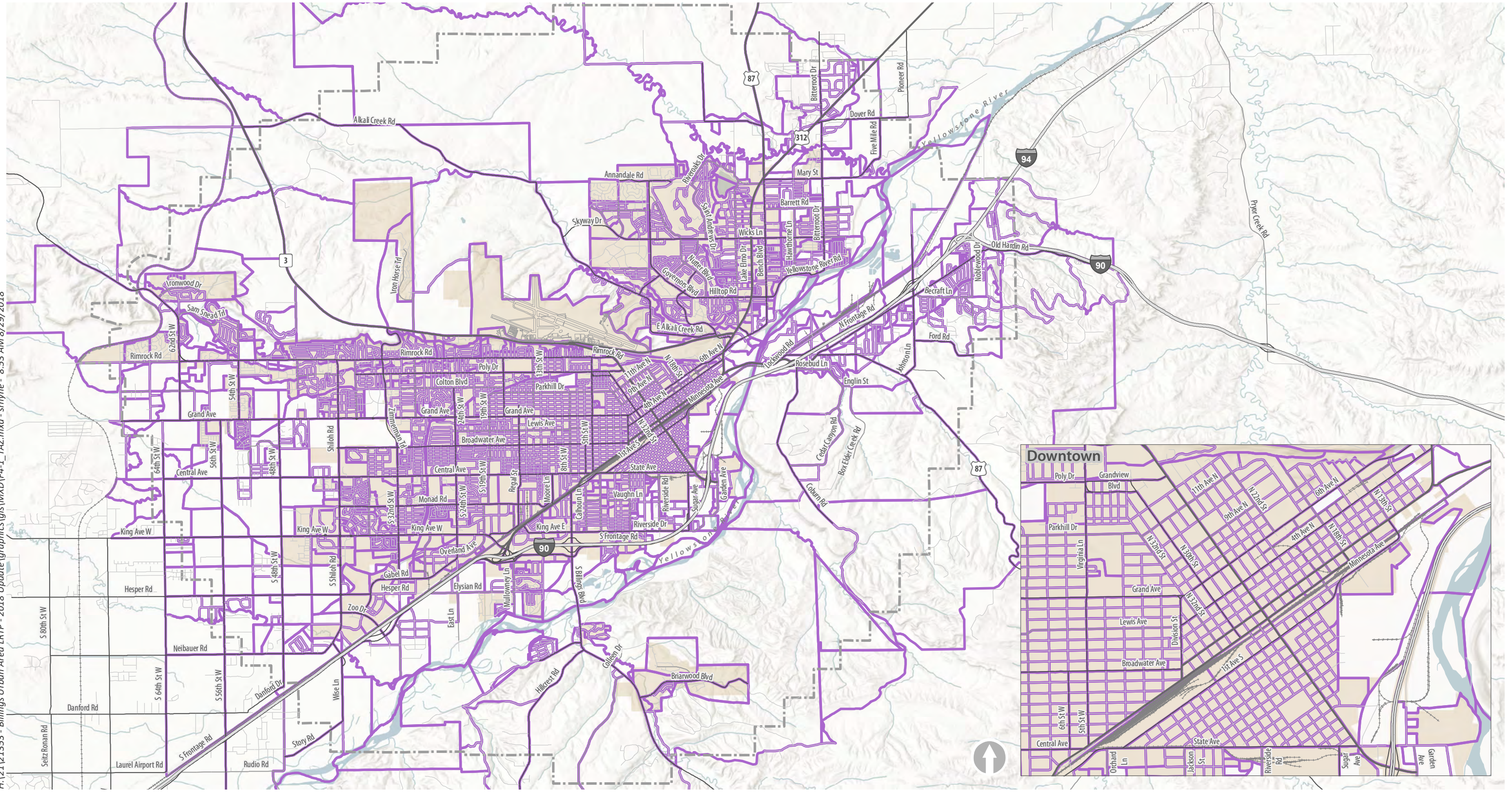
Employment is typically broken up into two primary components: retail and non-retail employment. These uses are differentiated because they typically exhibit different travel patterns in terms of mode choice, the time-of-day trips utilize the network, etc. Table 4.1 summarizes the 2017 employment within the study area. Figure 4-5 shows the current geographic concentrations of employment centers in the study area.

Table 4.1 2017 Billings Urban Area Employment

Zoned Land Use	Percent of Total
Retail	21,739
Non-retail	55,900
TOTAL	77,639

Source: City/County Planning Division

Figure 4-5 shows employment concentrations are greatest around the major employment centers including Billings Airport, Downtown Billings, Saint Vincent and Billings Clinic Hospitals, Rimrock Mall, and industrial facilities to the south of the Exit 446 Interchange on Interstate 90.



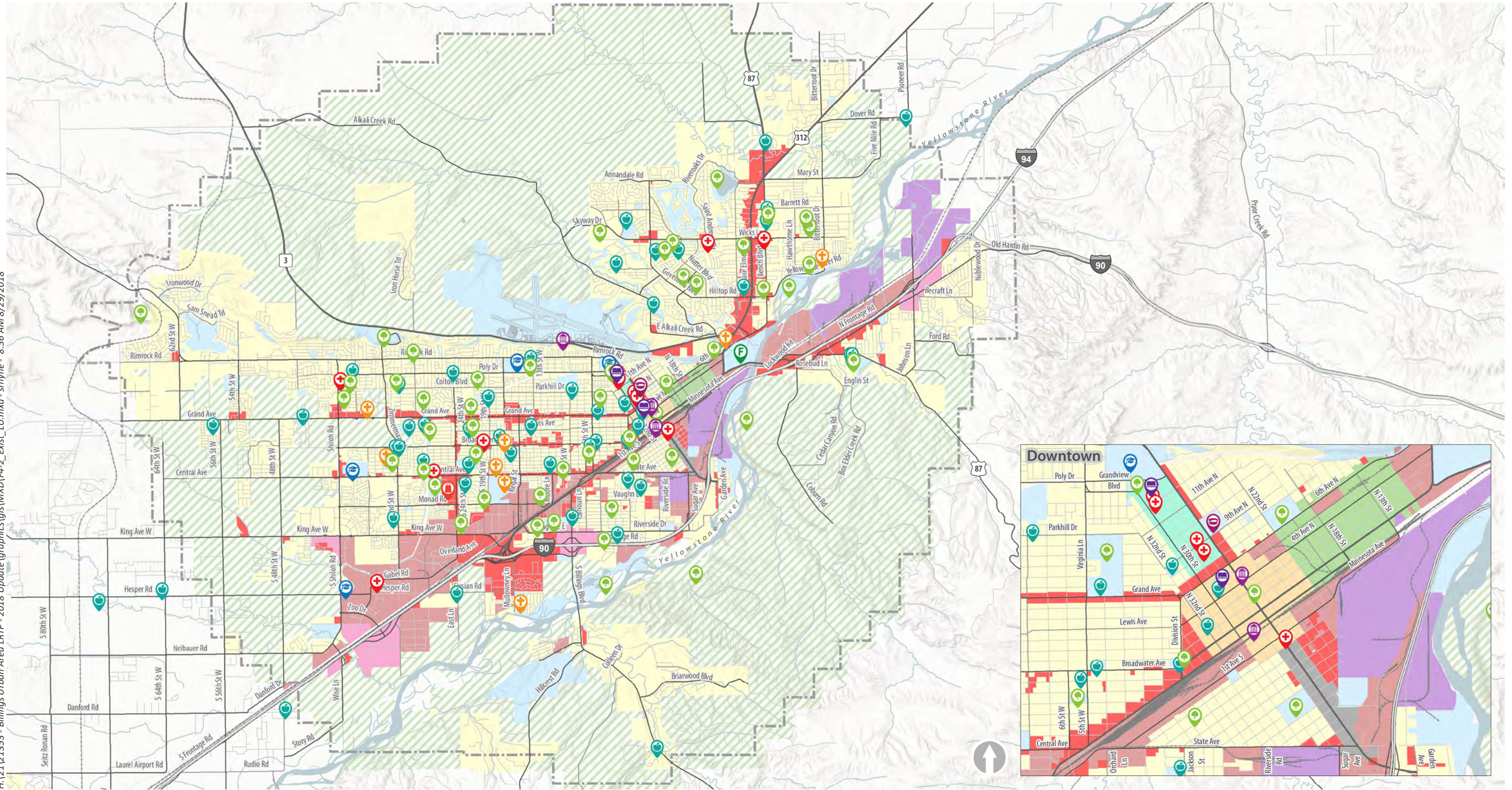
 Traffic Analysis Zone  Study Area

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Figure 4-1
TAZ Boundaries

2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN

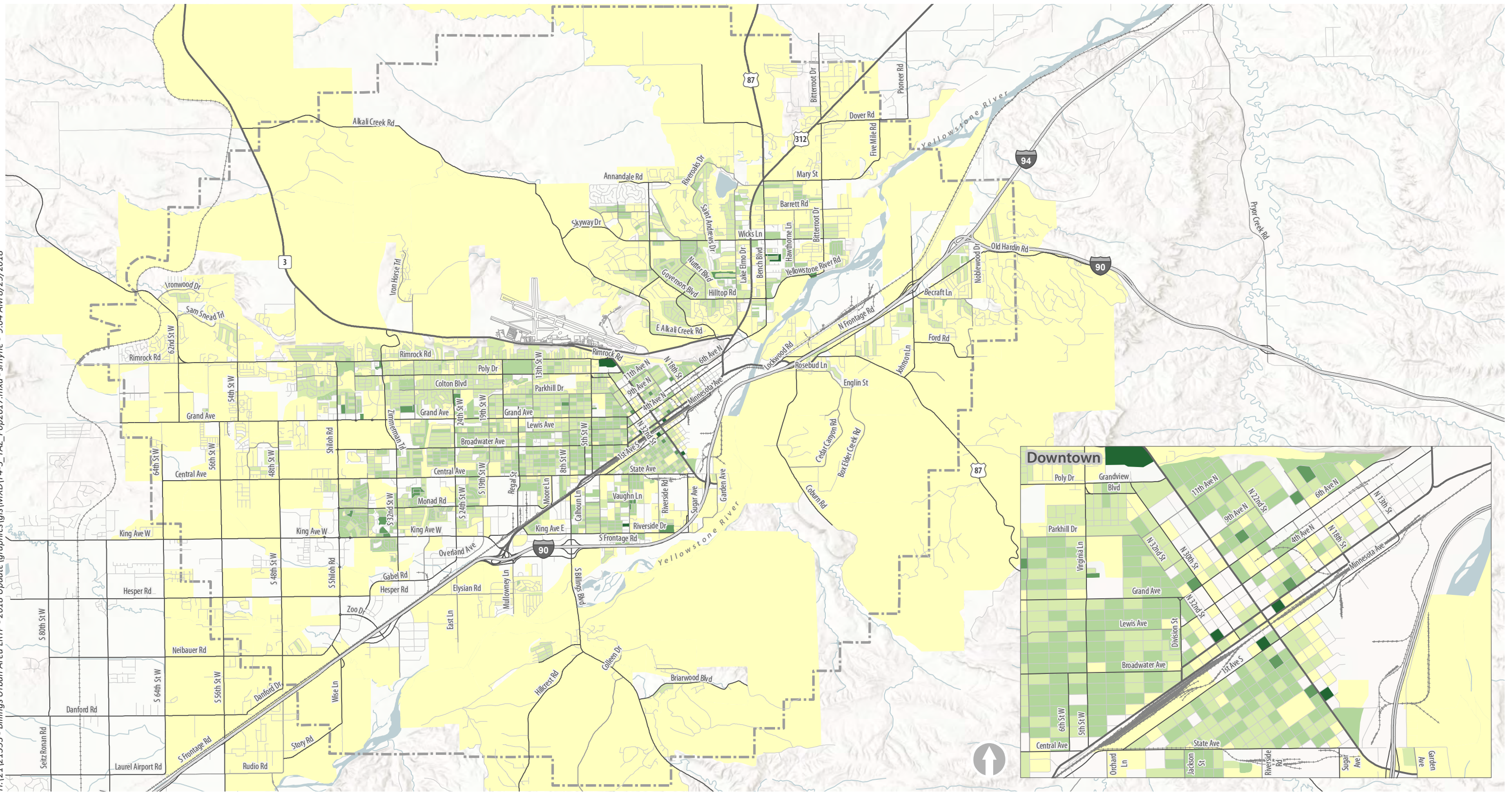
H:\1214353 - Billings Urban Area LRTP - 2018 Update\graphics\gis\MXD\F4-2_Exist_LU.mxd - srhyme - 8:56 AM 8/29/2018



- | | | | | | | | | | |
|---------|---------------|---------|-------------|----------|-----------------------|---------------------------|------------------|-------------------------------------|------------|
| College | Shopping Mall | Stadium | Fairgrounds | Cemetery | Residential | Central Business District | Light Industrial | Entryway | Study Area |
| Schools | Museum | Library | Park | Hospital | Commercial | Medical Corridor Permit | Heavy Industrial | South 27th Street Corridor | |
| | | | | | Commercial/Industrial | Public | Agricultural | East Billing Urban Renewal District | |

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Figure 4-2
Existing Zoning Map



Population Density (residents/acre)

Study Area

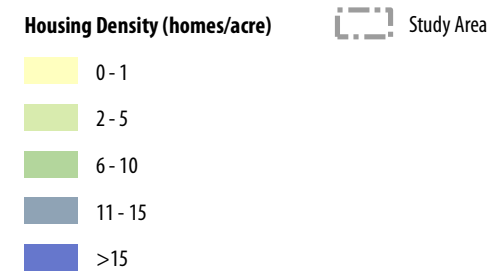
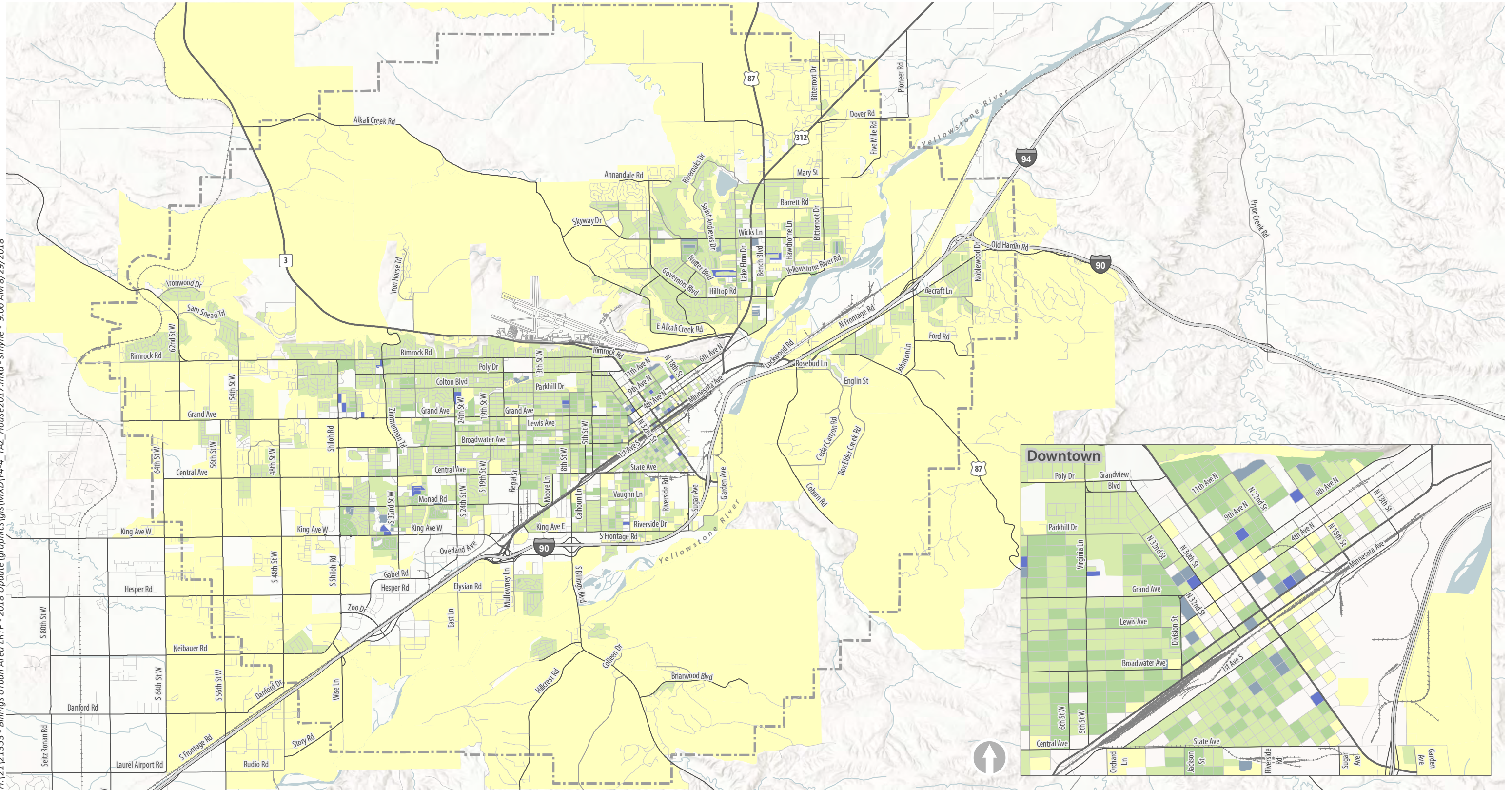
- 1 - 5
- 6 - 10
- 11 - 25
- 26 - 50
- >50

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Figure 4-3
2017 Population

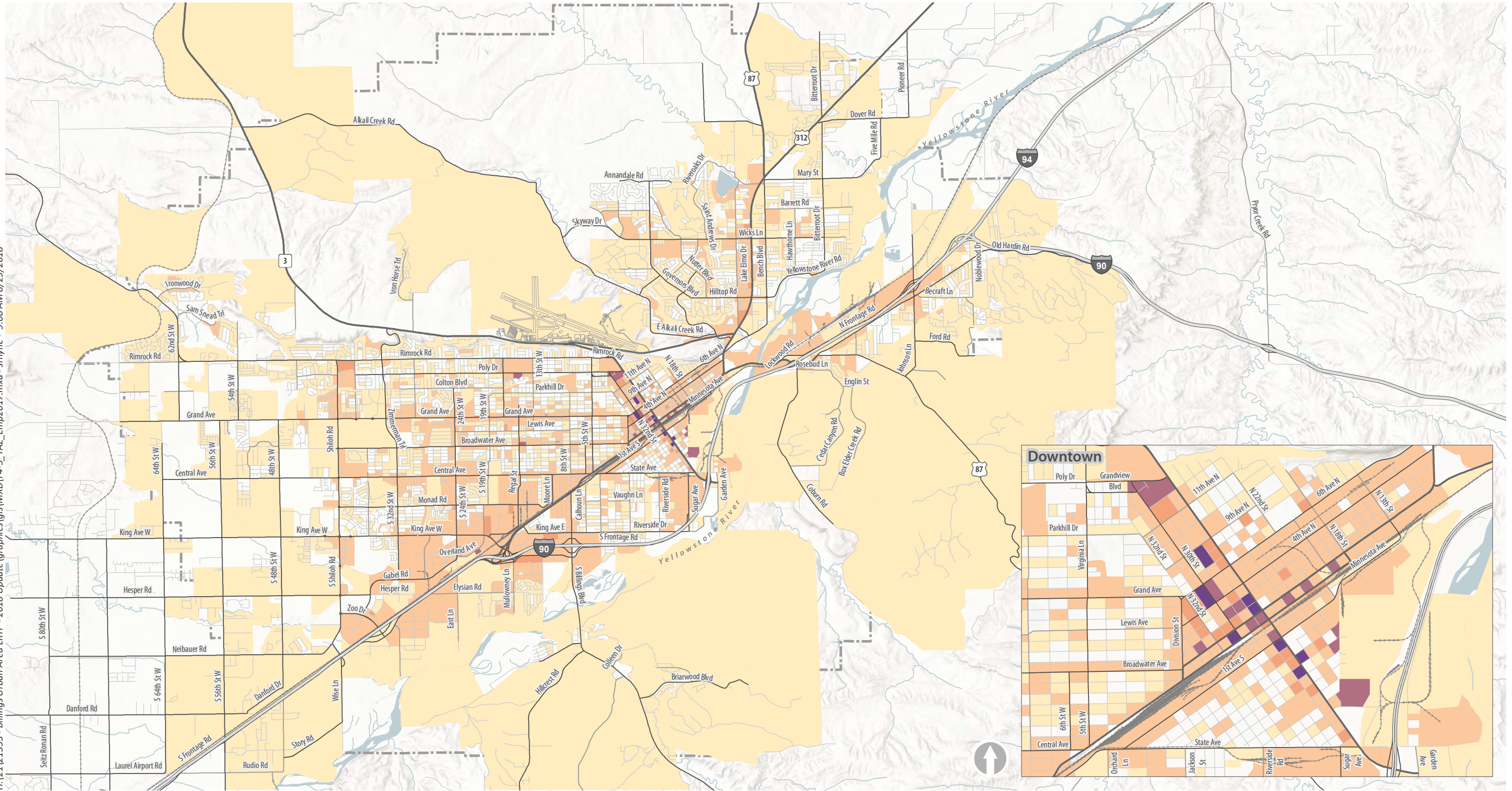
2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN

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Figure 4-4
2017 Housing



Employment Density (jobs/acre)

Study Area

- 0 - 1
- 2 - 25
- 26 - 50
- 51 - 100
- >100

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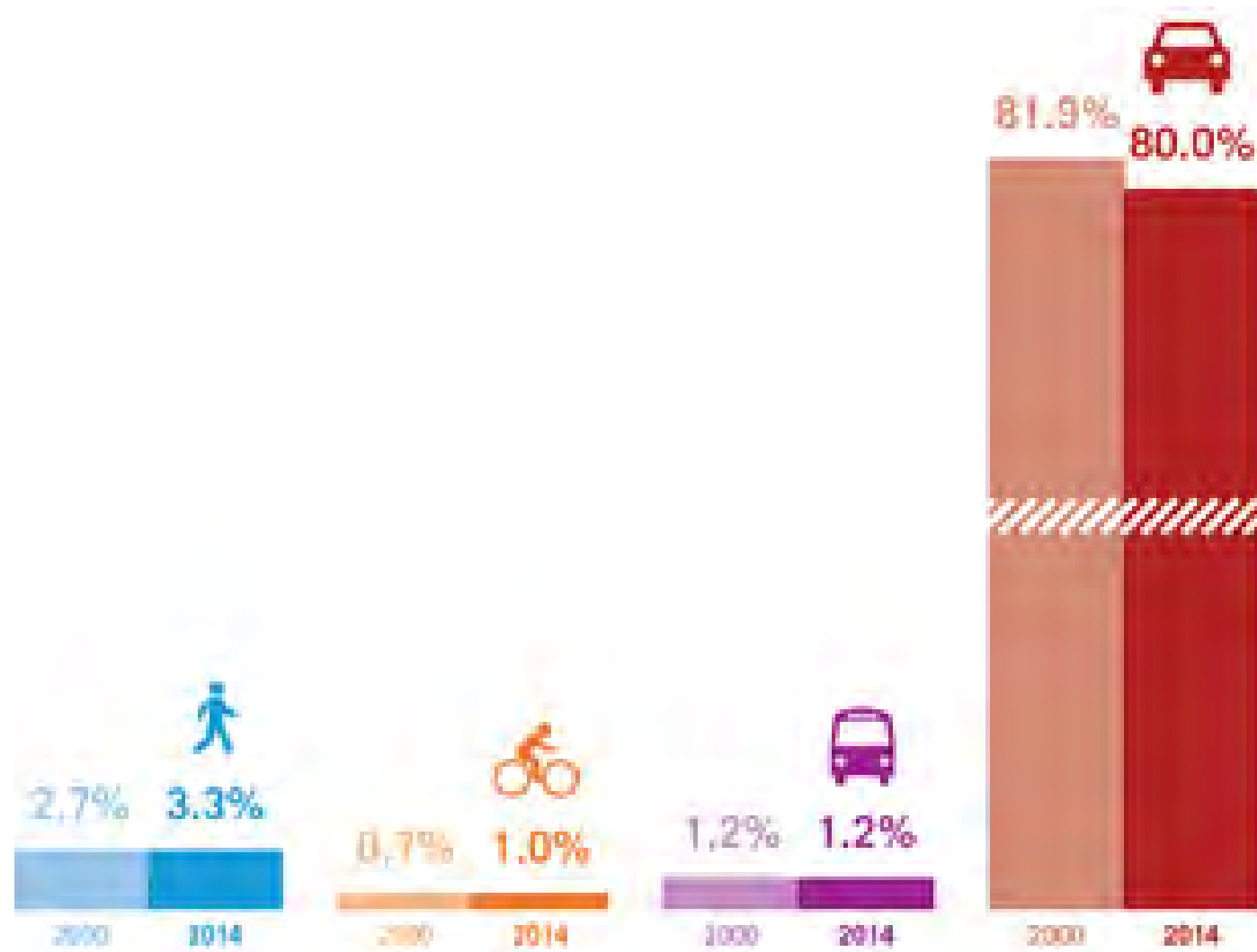
Figure 4-5
2017 Employment

TRAVEL PATTERNS

American Community Survey

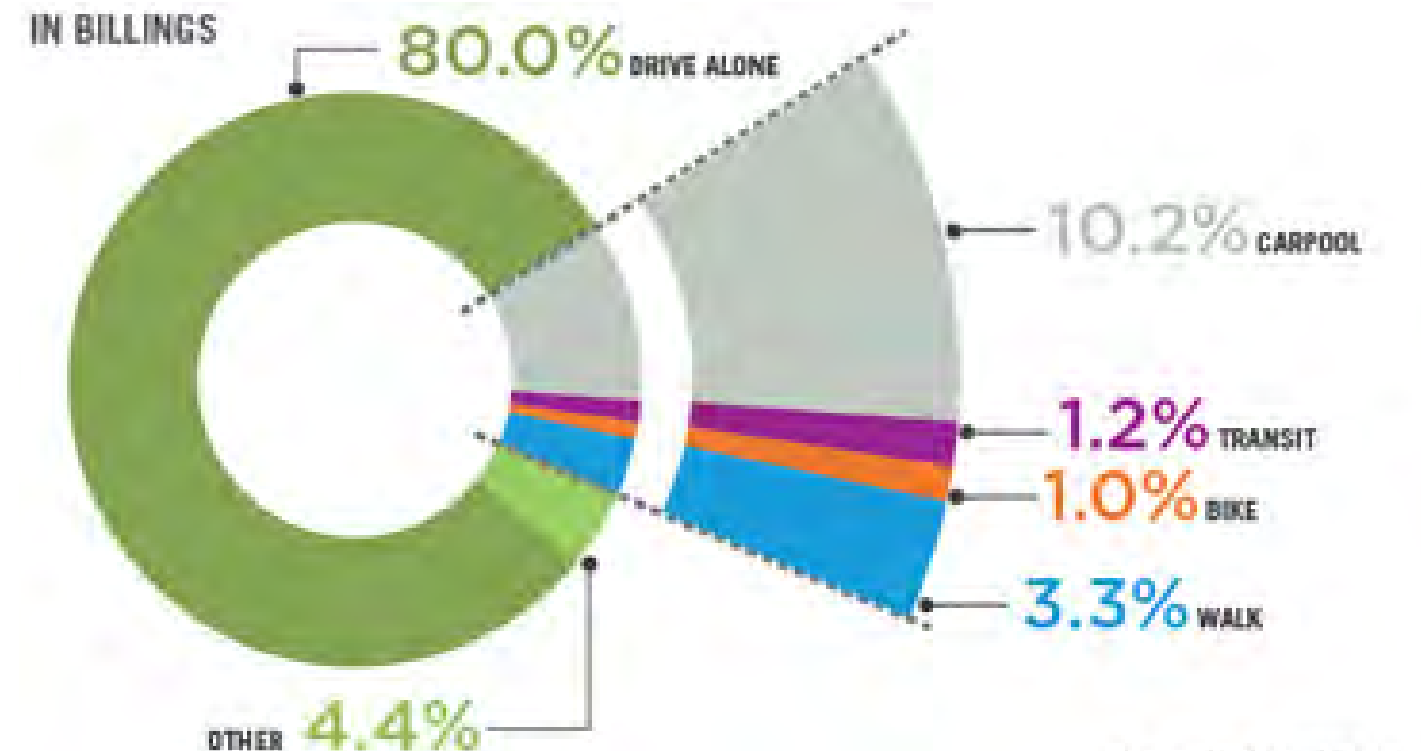
Data was summarized based on travel characteristics captured in the 2000 and 2010-2014 American Community Survey (ACS, 4-1) and presented in the recently completed Billings Area Bikeway and Trails Master Plan Update (4-2). Exhibit 4.1 illustrates the 2000 to 2014 mode share comparison for commute to work mode in the City of Billings. Exhibit 4.2 illustrates the 2014 mode share (commute to work trips) in the City of Billings.

Exhibit 4.1 2000 to 2014 Mode Share Comparison Commute to Work Mode (City of Billings)



Source: Census 2000 Summary File, 2010-2014 ACS

Exhibit 4.2 2014 Commute Mode Share (City of Billings)



Source: 2010-2014 ACS Data

Work trips comprise the majority of peak period travel, which has the highest impact on the transportation system. As shown, the predominant motorized mode is the single occupant vehicle, which is similar to other North American cities. Walking is the predominant non-motorized mode. Both walking and bicycling increased its' mode share since 2000 from a mode share percentage of 2.7% to 3.3% and 0.7% to 1.0%, respectively, which are both higher than the national average but lower than the cities of Bozeman, Helena, and Missoula in MT. A significant percent of work trips in the city (approximately 10.2 percent), are made by carpool, which is similar to the national average. In the Billings Area Bikeway and Trails Master Plan Update, travel time to work was summarized in detail. It was identified that the closer one lives to downtown Billings, the shorter their commute time is. The median trip length for the majority of the City of Billings ranges from less than 12 minutes to 17 minutes. There are a significant number of work trips made that are less than 15 minutes, which are trips that could be completed via a bicycle within a similar frame, especially when the time it takes to park a vehicle and access the final destination is included in the travel time calculation.

Yellowstone County Household Survey

The 2017 Billings / Yellowstone County Household Travel Survey (HTS, 4-3) was sponsored by the MPO with support from MDT. The 2017 survey was undertaken with the purpose of understanding the demographics and travel behavior of residents of Billings and Yellowstone County. Below is a summary of selected characteristics from the HTS results, as reported in the HTS:

- 1,066 households with completed surveys (about 1.7 percent of Yellowstone County)
- A typical surveyed household in the region makes 7.9 trips a day and a typical person makes 3.86 trips per day.
 - After applying weights, the average number of household trips rises to 8.6 per day and the average person trip rate falls to 3.75.
- The majority of trips made (89.7 percent) in the region are as the driver or passenger of an automobile, van or truck.
- Non-motorized trips (biking or walking) account for 6.9 percent of the total.
- Trips made using a private vehicle take 15.6 minutes and covered 5.7 miles on average compared to transit trips which take 23.4 minutes and covered 2.8 miles.
- Work trips take an average of 16 minutes in the region.
- The average distance traveled was 5.3 miles.
- Work trips account for 13.7 percent of all trips made in the region.
- Trips not categorized as work, school, shopping, or recreational account for 22.5 percent of all trips made (these include escorting minors, and non-mandatory errands and maintenance activities).

Data and results from the HTS were used in development of the travel demand model for Billings urban area.

FORECAST DEMOGRAPHICS

Using historical growth patterns and discussions with the MPO and SC, future population/housing and employment concentrations were developed for the horizon year 2040 to help determine where future travel demand occurs on the roadway network.

HISTORICAL AND FUTURE GROWTH

New residents are attracted to Billings by its quality of life, economic and recreational opportunities, and small town atmosphere with the amenities of a large urban center. The population projections for the Billings urban area from 2017 to 2040 are anticipated to increase by 42,712 persons, for an average increase of 1,857 persons per year.

As depicted in Figures 4-3 and 4-4, the strongest concentrations of population and housing are in the “Heights” area and to the west of downtown Billings. Smaller pockets of dense population in the central portion of the MPO along Rimrock Road represent the student population at Montana State University Billings and Rocky Mountain College. Aside from the Heights neighborhoods in the north of the city, population and housing is relatively spread out across the metropolitan area. Typically, this distribution of population/housing tends to generate more vehicle-based trips because of the longer trips distances that result and the relative cost ineffectiveness of providing transit to residential areas with low population density.

POPULATION AND HOUSING PROJECTIONS

In 2017, the Billings urban area population was approximately 127,056 persons residing in 55,464 dwelling units. By 2040, the population is expected to grow to approximately 169,768 persons in 73,656 dwelling units. The growth in population and housing between 2010 and 2040 within the Billings urban area is summarized in Table 4.3.

Table 4.3 Billings Urban Area Population and Housing 2017-2040

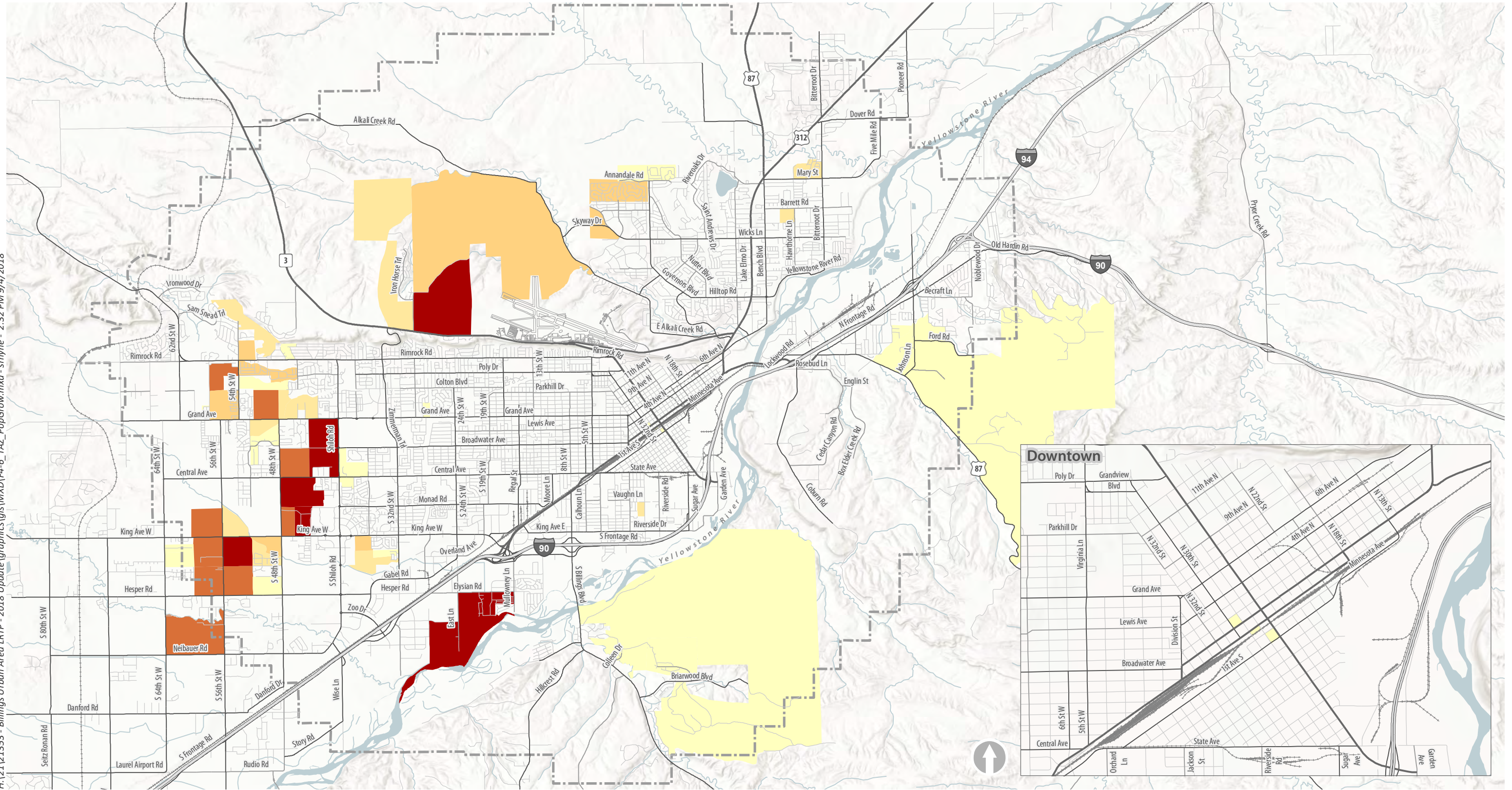
Demographic	2017	2040	Change	Percent Change
Population	127,056	169,767	42,711	+33.6%
Housing (Dwelling Units)	55,464	73,663	18,199	+32.8%

Source: MPO / Travel Demand Model

Figure 4-6 shows the population growth between 2017 and 2040. As depicted in the figure, residential growth is mostly expected to reach westward towards the urban area boundary, particularly west of Shiloh Road. Additionally, more residential growth is expected to occur along Highway 3 and Alkali Creek Road to the north of the city limits. Residential in-fill is expected to be limited around the downtown and Central Billings areas. Infill is projected to occur in the southern areas within the city limits, Lockwood, and the Heights neighborhoods.

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Population Change

 2 - 250	 251 - 500	 501 - 1,000	 1,001 - 1,500	 1,501 - 2,588	 Study Area
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Figure 4-6
Population Growth (2017 to 2040)

FUTURE EMPLOYMENT

With growth in population, the employment sector within the study area is also expected to grow. As of 2017, the estimated total employment in the Billings urban area was approximately 77,639 jobs. By 2040, employment is projected to add another 26,690 jobs to result in an approximate 104,329 jobs in the Billings urban area. Table 4.4 summarizes the projected employment growth from 2017 to 2040.

Table 4.4 Billings Urban Area Employment Growth 2017-2040

Demographic	2017	2040	Change	Percent Change
Employment (Retail)	21,739	29,255	7,516	34.5%
Employment (Non-retail)	55,900	75,074	19,174	34.3%
Total Employment	77,639	104,329	+26,690	+34.3%

Source: MPO / Travel Demand Model

Figure 4-7 shows the comparison between 2017 and 2040 employment distributions. Employment growth within the Billings Urban Area is expected to expand generally within current commercial areas and to “densify” current employment locations. These commercial areas include S. 24th Street, Shiloh Road, the airport, downtown, and near the I-90 interchanges.

POTENTIAL EFFECTS OF GROWTH ON TRANSPORTATION SYSTEM

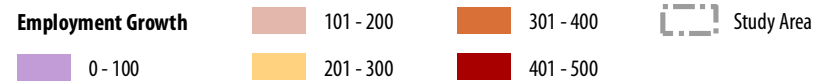
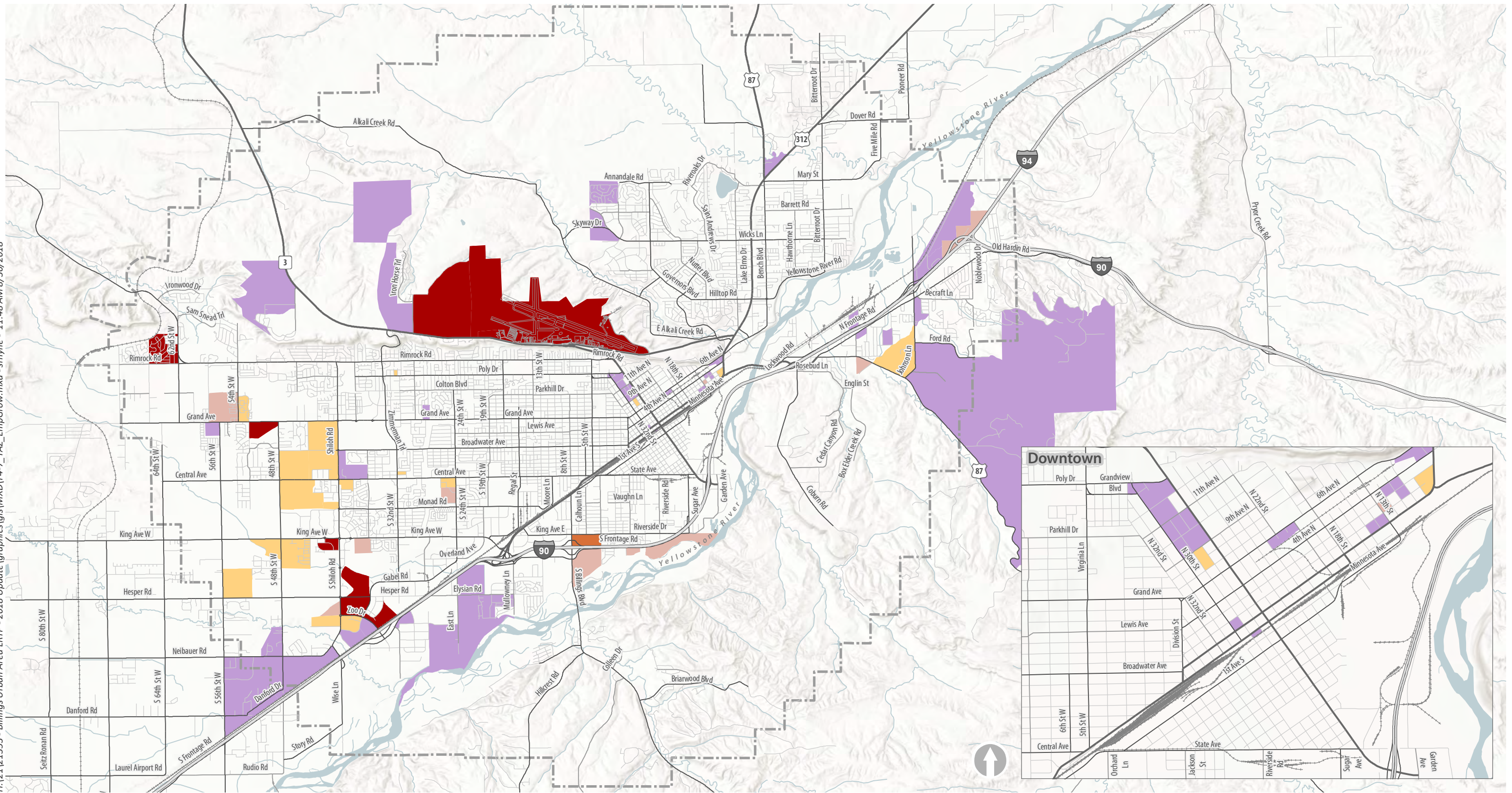
While the western portions of the urban area are expected to grow in population, these areas are expected to be relatively stagnant in terms of employment growth. This potentially translates into encouraging more people to commute by driving themselves rather than alternative modes because the trip distances are too far to be an appealing option. Additionally, there is currently no existing transit service northwest of King Avenue and Shiloh Road and to/from Lockwood to provide this option.

Generally, the residential population is projected to continue to spread out within the study area, with greatest density occurring west of Shiloh Road and north of Highway 3 near Zimmerman Trail. However, employment is expected to mostly increase in density around the following areas: Shiloh Road (south of Grand Avenue); Downtown Billings; Highway 3 near and at the airport; TEDD area in Lockwood; and near the Zoo Drive, S Billings Boulevard, and Johnson Lane interchanges along I-90. This type of growth pattern results in future residents having longer commute distances than today.

To manage these commute distances, the MPO and represented agencies should continue to implement and evaluate strategies that can improve the mode split of the urban area. The MPO has probably observed positive outcomes from current strategies, such as the recent Growth Policy’s by the City of Billings and Lockwood, as well as recent Strategic Plan’s by the Downtown Billings Alliance and TEDD. These elements should be continued with an emphasis on integrating land use and transportation to provide options and enhance the quality of life in the region.

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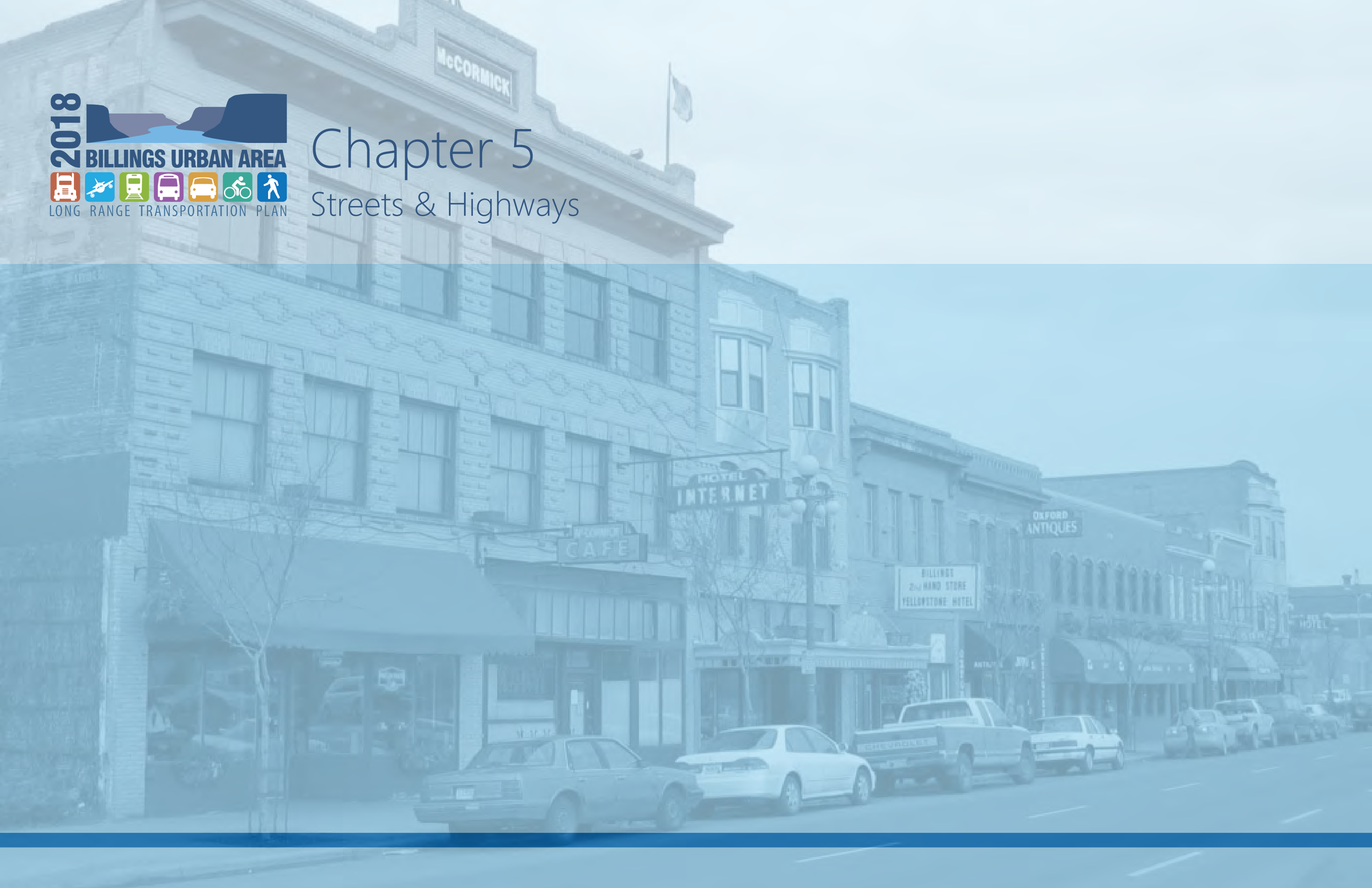
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Figure 4-7
Employment Growth (2017 to 2040)



Chapter 5

Streets & Highways



STREETS AND HIGHWAYS

People in the Billings Urban Area travel using many modes of transportation. The automobile is the primary mode of transportation for residents but other modes such as transit, walking, and bicycling also play significant roles. The US Census Bureau estimates that approximately 90% of Billings Urban Area commuters travel to work in a private vehicle, with approximately 81% driving alone. This chapter explores the existing and future mobility of the region's streets and highways and identifies a list of projects to address operational and safety deficiencies and needs.

Goal 1: Safety – Develop a safe transportation system

Goal 2: Functional Integrity and Efficiency – Optimize, preserve, and enhance the existing transportation system

Goal 3: Prioritized Improvements – Identify and prioritize projects that mitigate deficiencies, maximize the use of existing facilities, and balance anticipated needs with available funding

Goal 4: Environment – Develop a transportation system that protects that natural environment and promotes a healthy, sustainable community.

Goal 7: Economic Vitality – Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce.

FUNCTIONAL CLASSIFICATION

The Roadway Functional Classification System defines a road's role in the overall context of the highway transportation system. In addition, it helps to define which standards are generally desirable for roadway width, right-of-way needs, access spacing, pedestrian and bicycle facilities, and other specifications. The functional classification system is typically established by the following hierarchy:

- **Freeways** serve high speed, long distance travel movements and provide limited access to adjacent lands. Often included in the Arterial classification, freeways are unique in that they provide access to other arterial roadways via grade-separated interchanges. In the Billings Urban Area, the freeways are classified as Interstate.
- **Arterials** are intended to serve higher volumes of traffic, particularly through-traffic, at higher speeds. They also serve truck movements and should emphasize traffic movement over access to adjacent property. Arterial roadways are further designated as Principal Arterials and Minor Arterials.
- **Collectors** represent the intermediate class. As the name suggests, these roadways collect traffic from the local street system and link travel to the arterial roadway system. These roadways provide a balance between through- traffic movement and property access and provide extended continuity to facilitate traffic circulation within an urban community or rural area.
- **Local Roads and Streets** are the lowest classification. Their primary purpose is to carry locally generated traffic at relatively low speeds to the collector street system and to provide more frequent access to individual businesses and residential property. Local streets provide connectivity through neighborhoods, but generally should be designed to discourage cut-through vehicular traffic.

In addition to the above functional classifications, a limited number of principal arterials are further identified as Interstate routes and National Highway System (NHS) routes. Within the Billings Urban Area, there are several roadways designated as NHS Routes (shown in Table 5.1). Exhibits 5.1 through 5.7 show a few different roadway types in the Billings Urban Area.

Exhibit 5.1 Main Street, Principal Arterial



Exhibit 5.3 Rimrock Road, Principal Arterial



Exhibit 5.5 Lewis Avenue, Collector



Exhibit 5.7 Sedgwick Place, Local Street



Exhibit 5.2 Laurel Road, Principal Arterial



Exhibit 5.4 Monad Road, Minor Arterial



Exhibit 5.6 Maurine Street, Local Street



Exhibit 5.8 Saddle Lane, Local Street



As shown in the exhibits, each of the classified roadways has some similar design characteristics, but there is some flexibility in the cross-section elements, number of lanes, and posted speed included for each category. As part of the LRTP planning process, the existing functional classification map was updated to reflect completed roadway projects, new connections, and future connections. The Federal Highway Administration (FHWA) makes the final functional classification determination. Figure 5-1 illustrates the updated functional classification map for the Billings Urban Area. The functional classification map is used for local planning purposes by the MPO and does not represent the federally approved system.

As shown in Figure 5-1, the future connections provide additional connectivity throughout the Billings Urban Area. The major proposed connections, listed in order of functional classification, include:

- Freeway Connection – provides an east-west connection from Interstate 94 to Highway 3, north of the Heights area and continues west of Highway 3 with a possible connection to Laurel (a study has not been completed to date)
- Billings Bypass Arterial – provides a connection from the junction of US 87 and Highway 312 to Interstate 90 at Johnson Lane (project currently in design and programmed for construction, Billings Bypass Environmental Impact Statement, 2014)

- Ikali Creek Road to Highway 3 Arterial – provides a connection from Alkali Creek Road to Highway 3, north and west of the airport (programmed for construction, Inner Belt Loop Study, 2005)
- Molt Road to Highway 3 Arterial – provides a connection from Highway 3 to Molt Road (Molt Road/Highway 3 Study, 2004)

The 1964 Transportation Plan identified many of the roads that are in place today and planned in the future.

Exhibit 5.9 Future Roadway Network Identified in 1964



EXISTING CONDITIONS

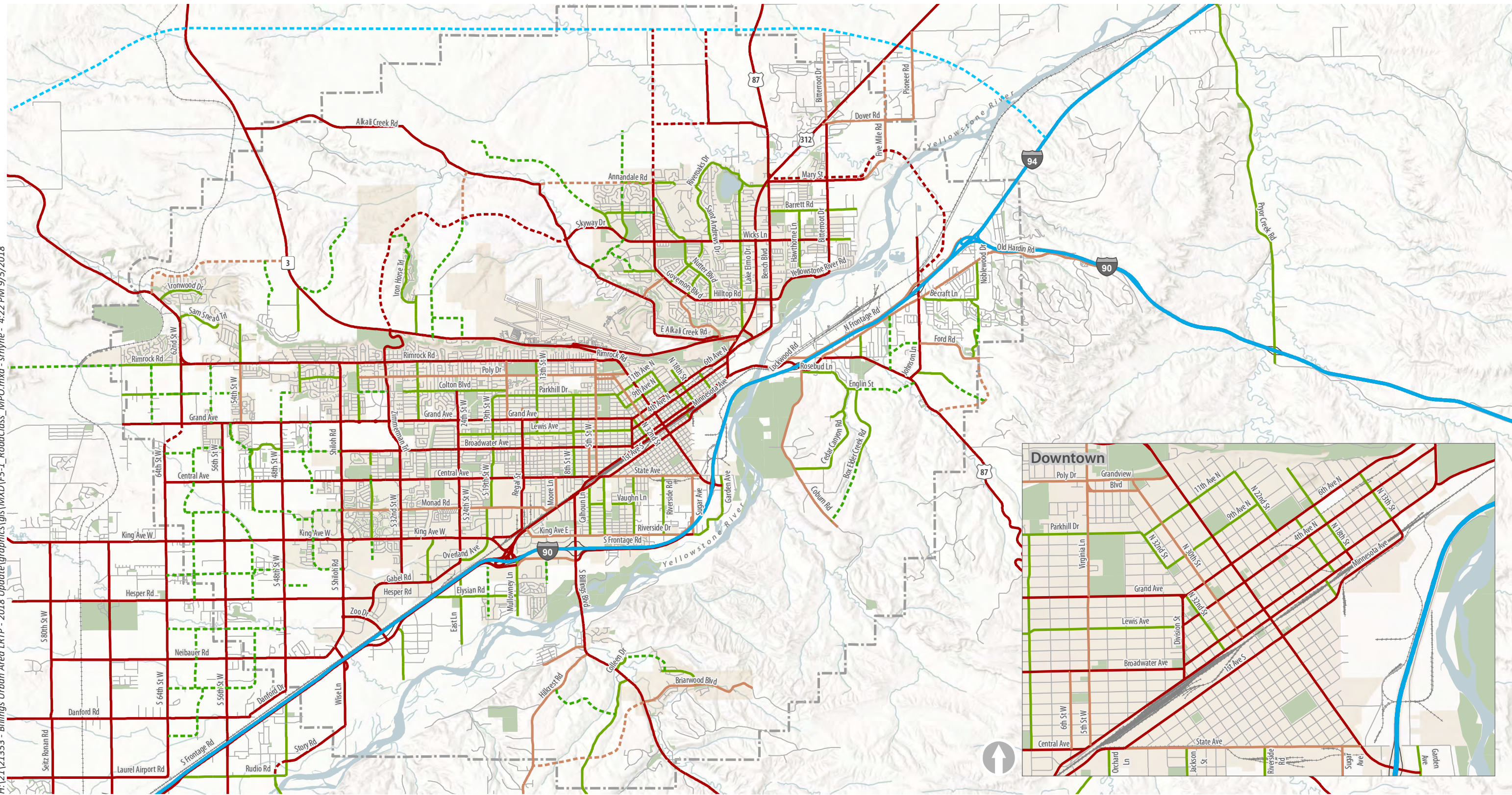
This section summarizes the existing roadway facilities, traffic volumes, and operations within the study area.

FACILITIES

Several major highways and roadways serve the Billings Urban Area, including Interstate 90, Interstate 94, US Route 87, and Montana Highway 3. Billings also lies along the Camino Real Corridor, a high priority corridor on the National Highway System and part of the North American Free Trade Agreement (NAFTA) that connects Canada, the United States, and Mexico. In total, the Billings Urban Area encompasses 970 miles of roadway, 173 signalized intersections, and 18 roundabouts.

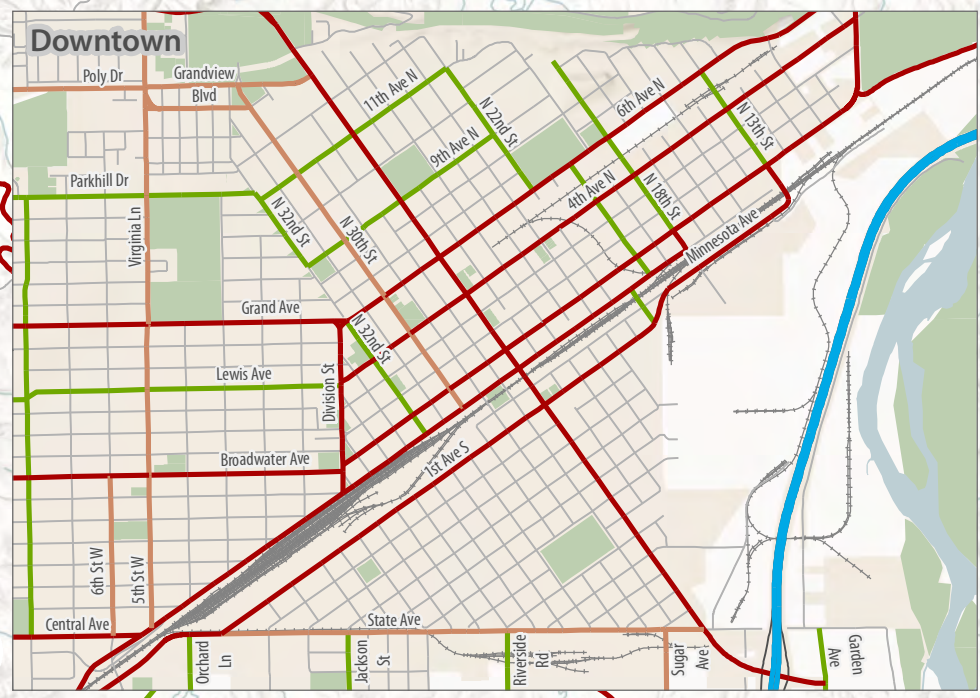
As shown in Figure 5-1, Interstate 90, Montana Highway 3, and US Route 87 are the three major roadways that converge near downtown Billings. Figure 5-2A through 5-2D show the existing roadways and traffic control devices.

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Roadway Classification		Proposed		Other	
	Interstate		Principal Arterial		Proposed Principal Arterial
	Collector		Proposed Collector		Proposed Freeway Controlled Access
	Minor Arterial		Proposed Minor Arterial		Study Area
	Local Streets		Park		City of Billings

Note: This functional classification map does not represent the federally approved system.

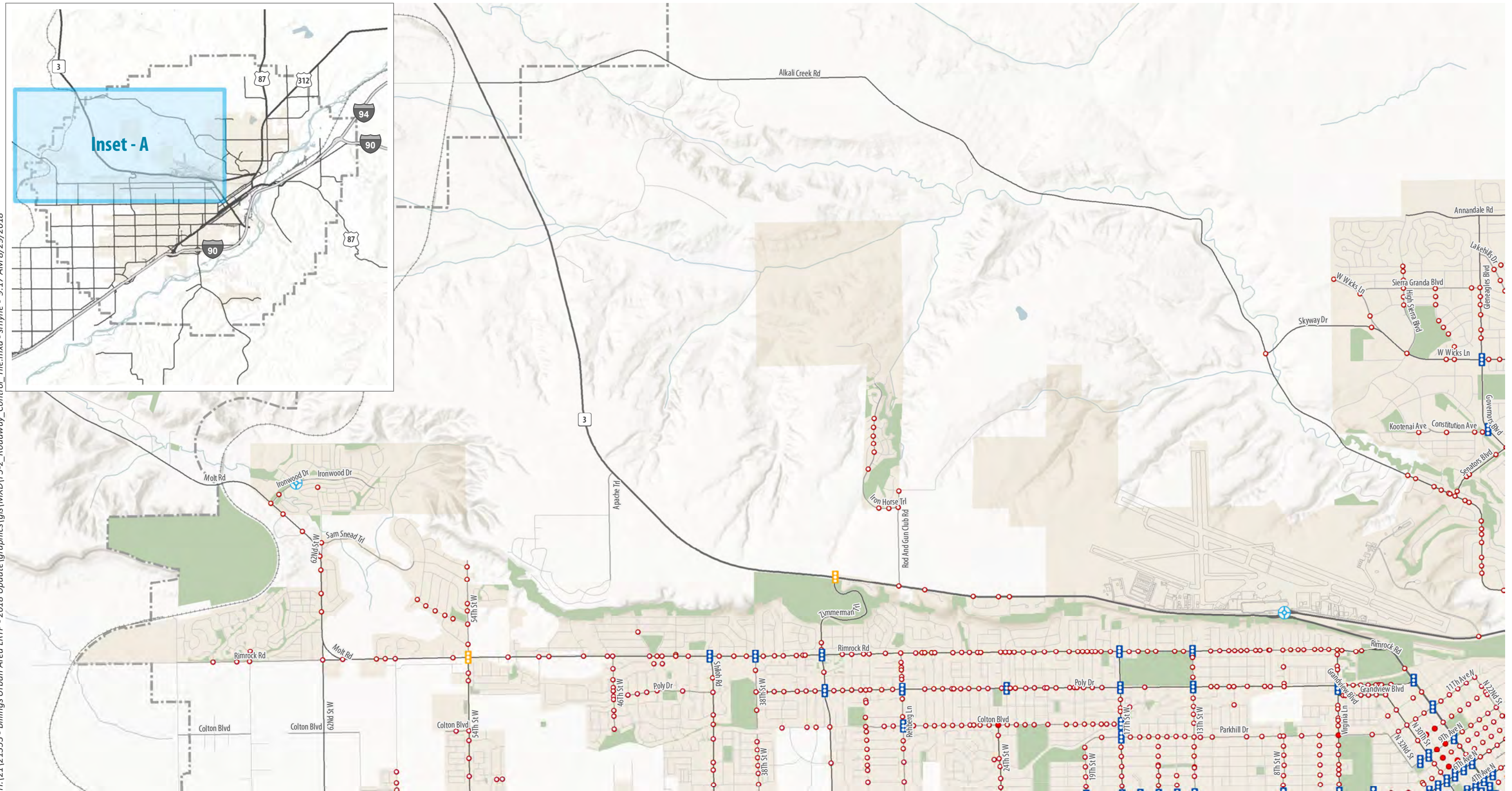


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Figure 5-1

Functional Classification Map

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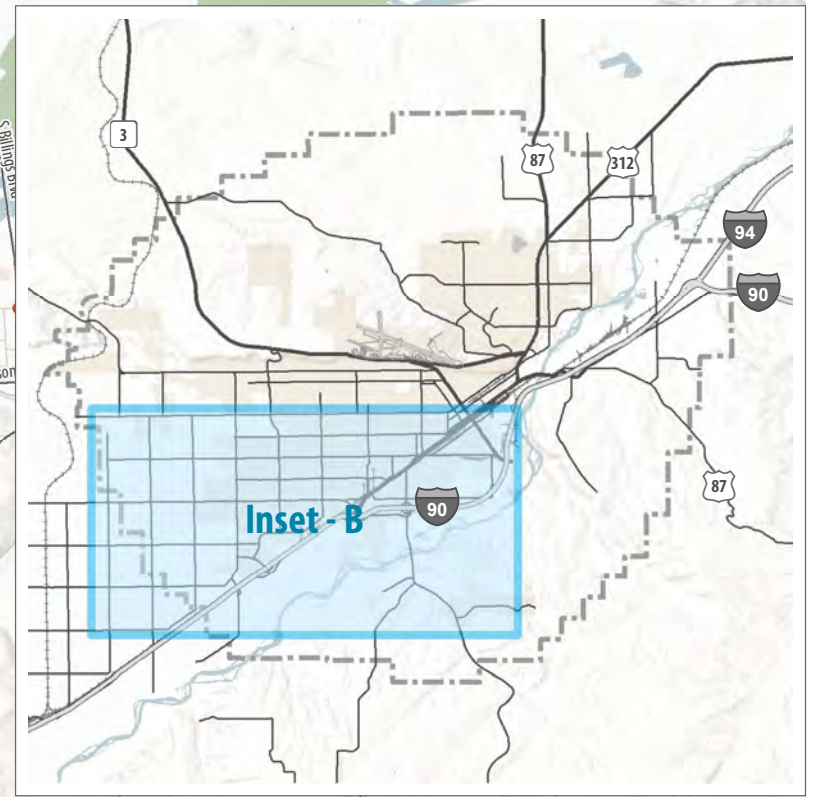
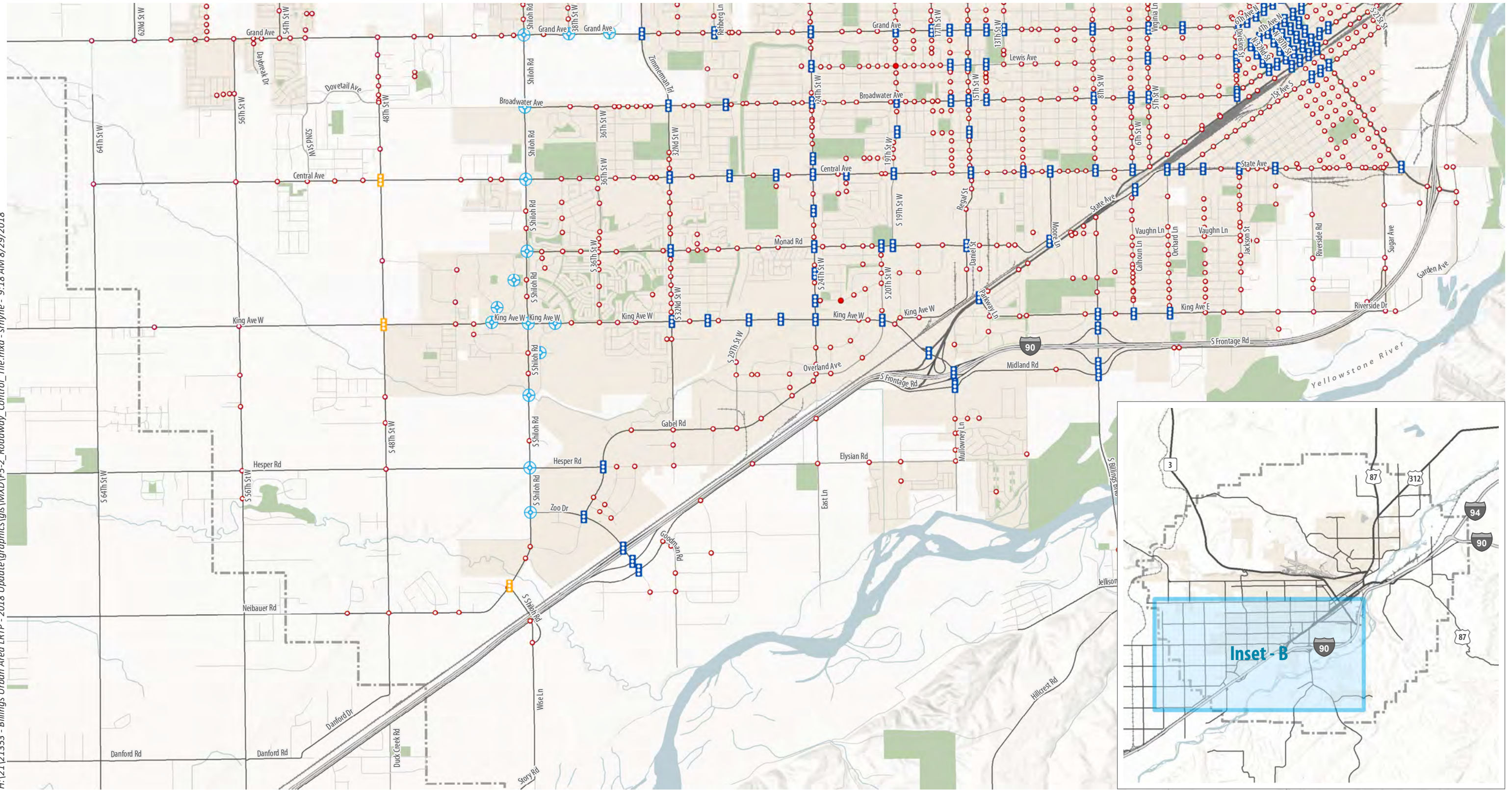


- | | | | | |
|--------------|---------------------------|------------|------------|------------------|
| Signal | Stop with Flashing Beacon | Roundabout | Interstate | Study Area |
| All-Way Stop | Hawk Signal | Park | Highway | City of Billings |
| Stop | RRFB | | Arterial | |
| | | | Collector | |
| | | | Local | |



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Figure 5-2a
Existing Roadways and Traffic Control Devices

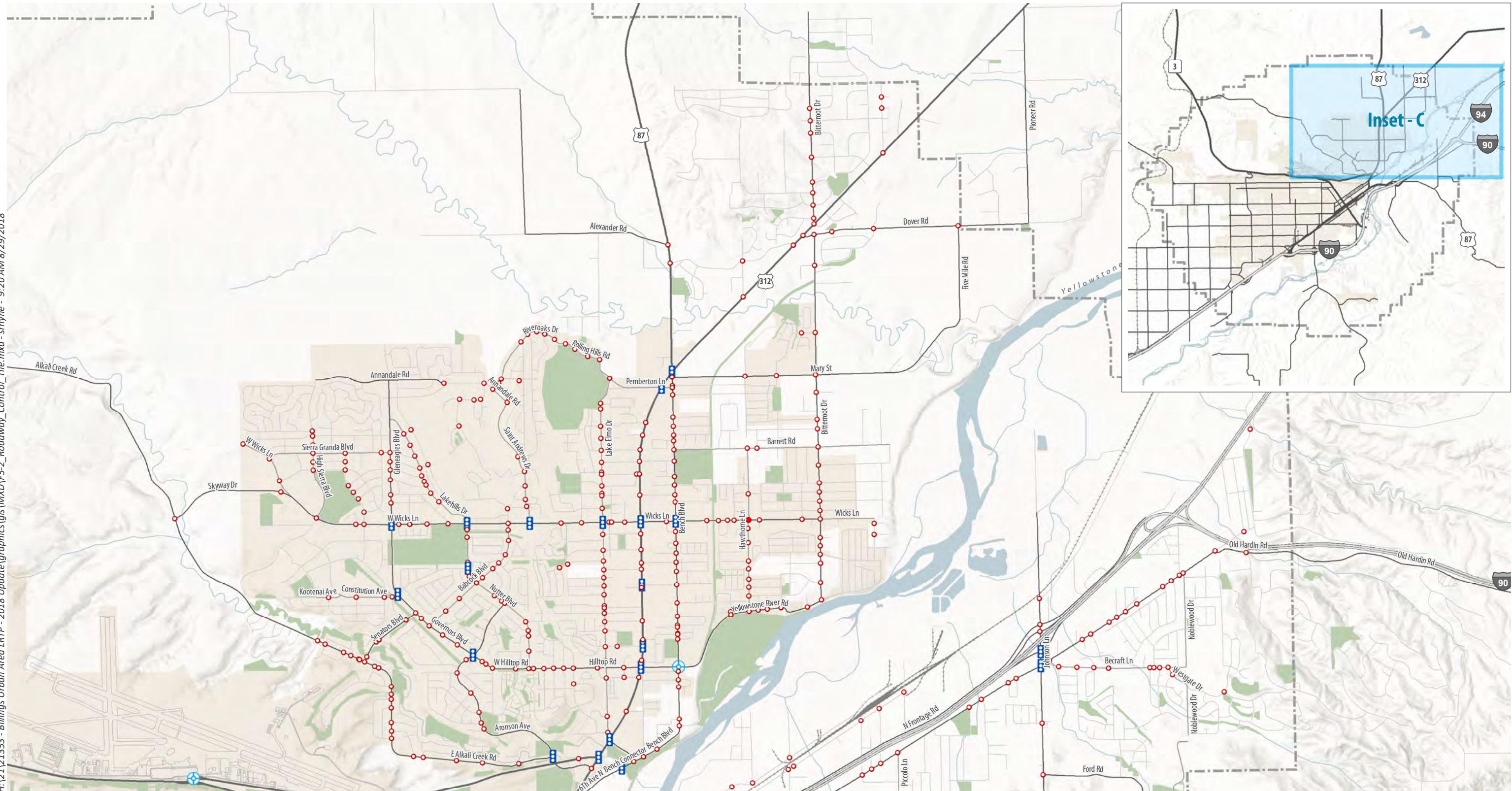


- | | | | | |
|--------------|---------------------------|------------|------------|------------------|
| Signal | Stop with Flashing Beacon | Roundabout | Interstate | Study Area |
| All-Way Stop | Hawk Signal | Highway | Park | City of Billings |
| Stop | RRFB | Arterial | Collector | |
| | | Local | | |



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|--------------|---------------------------|------------|------------|------------------|
| Signal | Stop with Flashing Beacon | Roundabout | Interstate | Study Area |
| All-Way Stop | Hawk Signal | Highway | Park | City of Billings |
| Stop | RRFB | Arterial | Collector | Local |

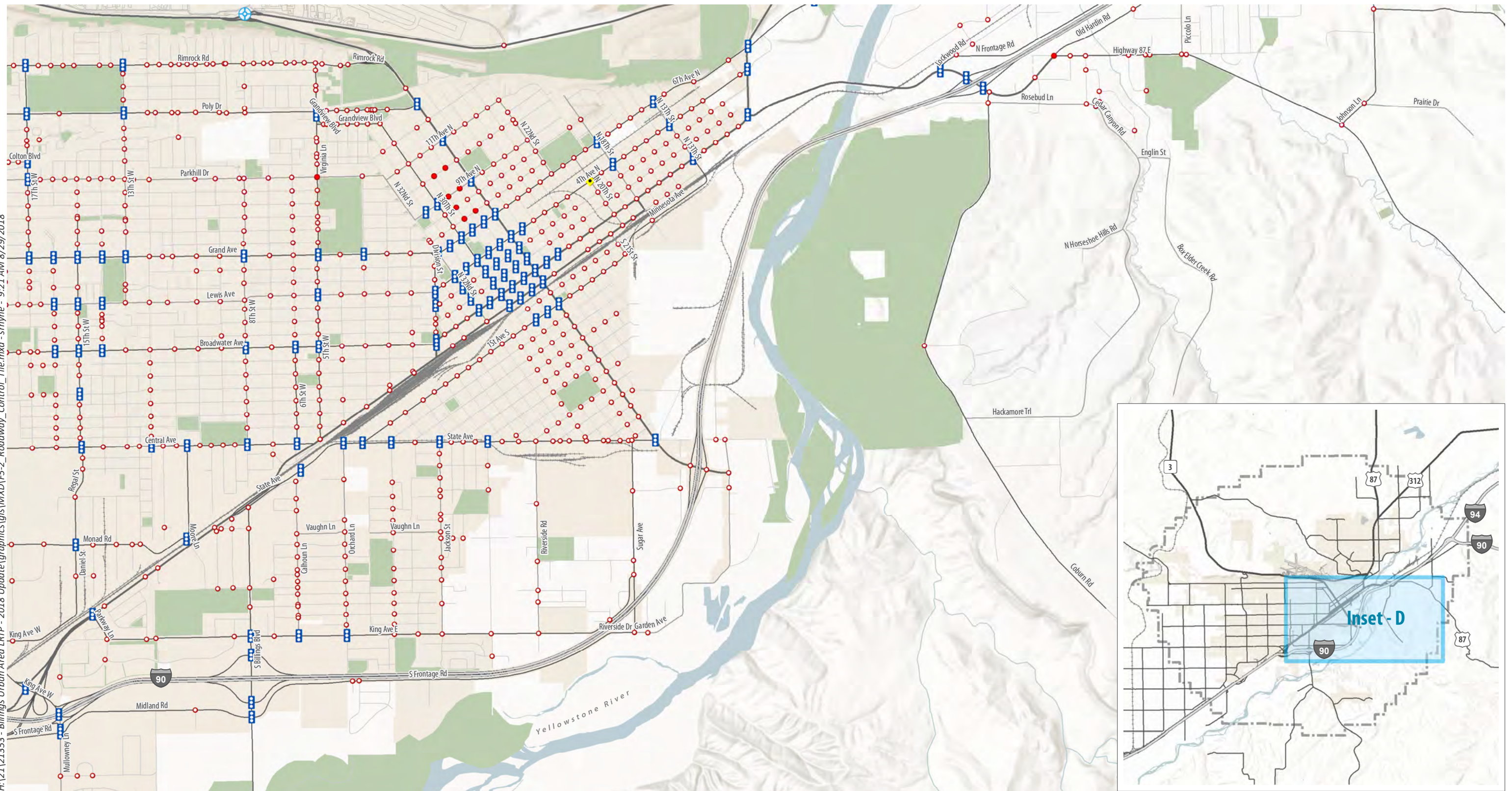


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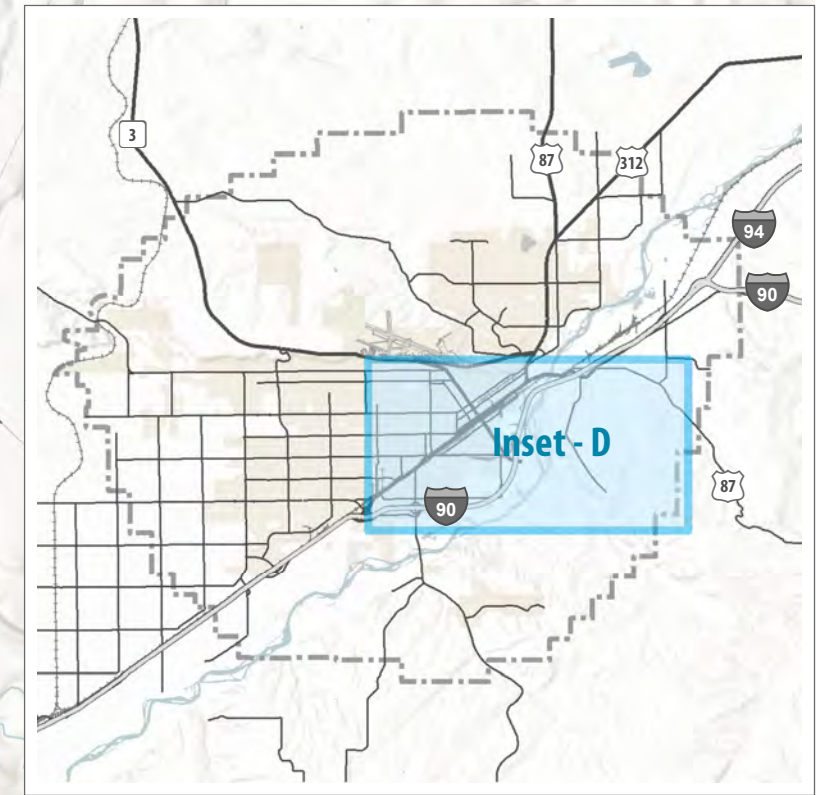
Existing Roadways and Traffic Control Devices

Figure 5-2c

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- | | | | | |
|--------------|---------------------------|------------|------------|------------------|
| Signal | Stop with Flashing Beacon | Roundabout | Interstate | Study Area |
| All-Way Stop | Hawk Signal | Highway | Park | City of Billings |
| Stop | RRFB | Arterial | Collector | |
| | | Local | | |



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Figure 5-2d
Existing Roadways and Traffic Control Devices

Critical roadways that are part of the National Highway System (NHS) in the Billings Urban Area include the following:

- Interstate 90 (NHS, Eisenhower Interstate System)
- Interstate 94 (NHS, Eisenhower Interstate System)
- Montana Highway 3 (NHS, STRAHNET Route)
- US Route 87 (NHS, Other NHS Route)
- King Avenue (MAP-21 NHS Principal Arterial)
- Zoo Drive (MAP-21 NHS Principal Arterial)
- Laurel Road (MAP-21 NHS Principal Arterial)
- 1st Avenue S (MAP-21 NHS Principal Arterial)
- Montana Avenue (MAP-21 NHS Principal Arterial)
- 1st Avenue N (MAP-21 NHS Principal Arterial)

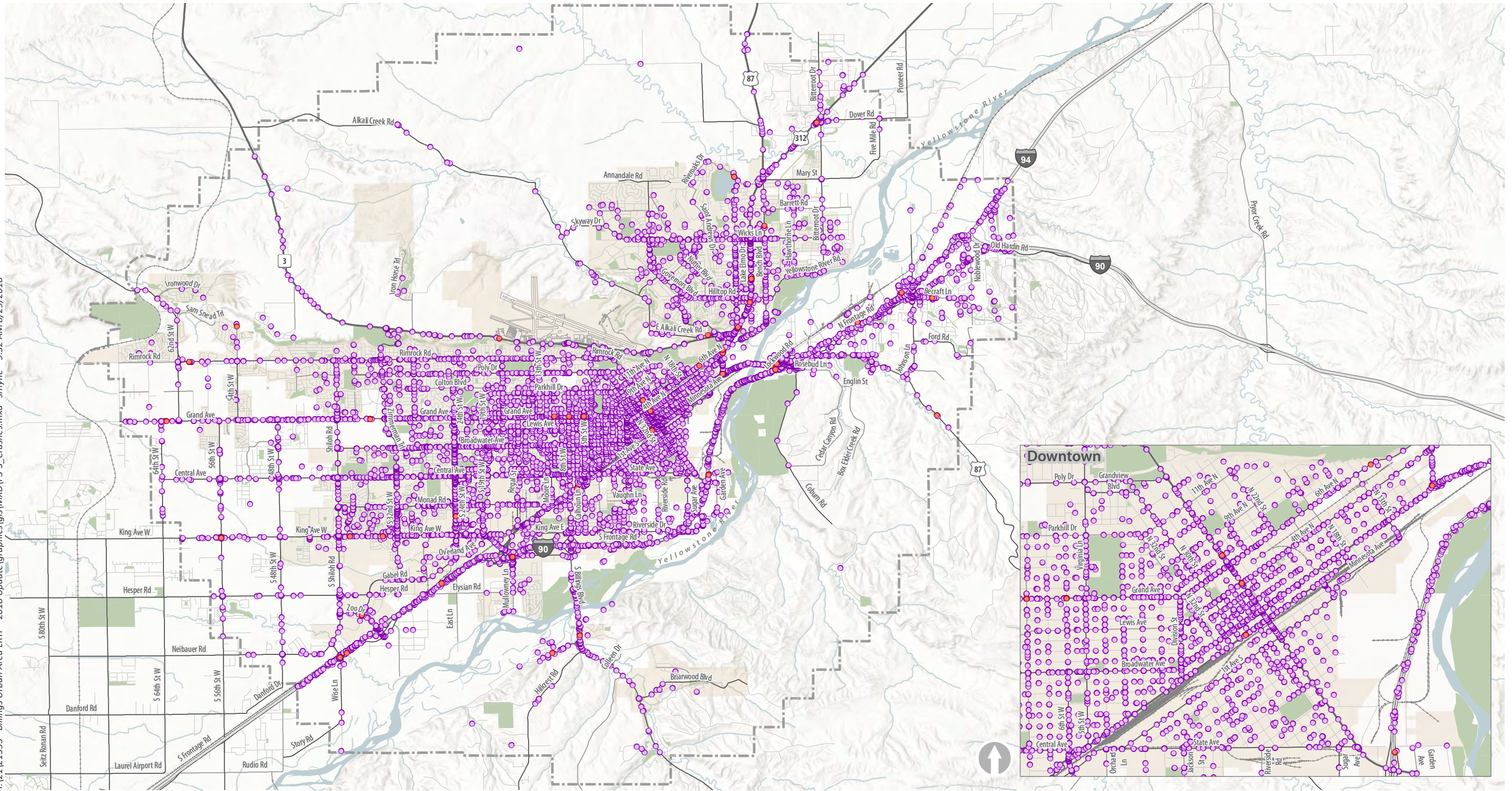
SAFETY

Consideration of highway accident data and safety issues is a critical element in the planning and design of any transportation system. A review of 2013-2017 highway accident data for the arterial and collector roadways within the study area was completed to identify roadways and intersections that had significantly higher crash rates. A total of 14,577 reported crashes occurred in the Billings Urban Area during this five-year period. Figure 5-3 shows all reported crashes over this five-year time period. Tables 5.2 and 5.3 show the crash rates for the intersections and roadway segments with the highest crash rates. Three of the top four intersections are roundabouts located on the Shiloh Road corridor. As shown in Table 5.2, the King Avenue West and Main Street corridors both have five high crash intersections, while the 24th Street West corridor has four. Figure 5-4 illustrates the location of these intersections and roadway segments.

Table 5.2 Intersections with High Crash Rates (2013-2017)

	Intersection	Control Type	Total Crashes	Crash Rate
1	Shiloh Road & King Avenue W	Roundabout	149	3.57
2	Shiloh Road & Grand Avenue	Roundabout	129	2.67
3	24th Street W & Rosebud Drive	Signal	84	1.62
4	Shiloh Road & Central Avenue	Roundabout	58	1.49
5	Central Avenue & N 15th Street W	Signal	64	1.46
6	Main Street & 1st Avenue N	Signal	92	1.35
7	27th Street & 6th Avenue N	Signal	85	1.35
8	King Avenue W & 24th Street W	Signal	101	1.25
9	Main Street & Lake Elmo Drive	Signal	113	1.17
10	King Avenue W & 32nd Street W	Signal	72	1.15
11	27th Street & 1st Avenue N	Signal	53	1.13
12	Central Avenue & 24th Street W	Signal	81	1.13
13	Grand Avenue & N 17th Street W	Signal	59	1.13
14	King Avenue W & S 20th Street W	Signal	94	1.07
15	Grand Avenue & Zimmerman Trail	Signal	56	1.07
16	Main Street & Wicks Lane	Signal	62	1.02
17	24th Street W & Monad Road	Signal	53	0.85
18	King Avenue W & Interstate-90 Single Point Interchange (SPI)	Signal	68	0.81
19	Main Street & Airport Road	Signal	66	0.71
20	Main Street & 6th Avenue N	Signal	53	0.53

Source: MDT Crash Data (2013 - 2017)
Crash rates were calculated based on Total Number of Crashes x 1,000,000 vehicles / Vehicles per day x Number of Years x 365 days per year.



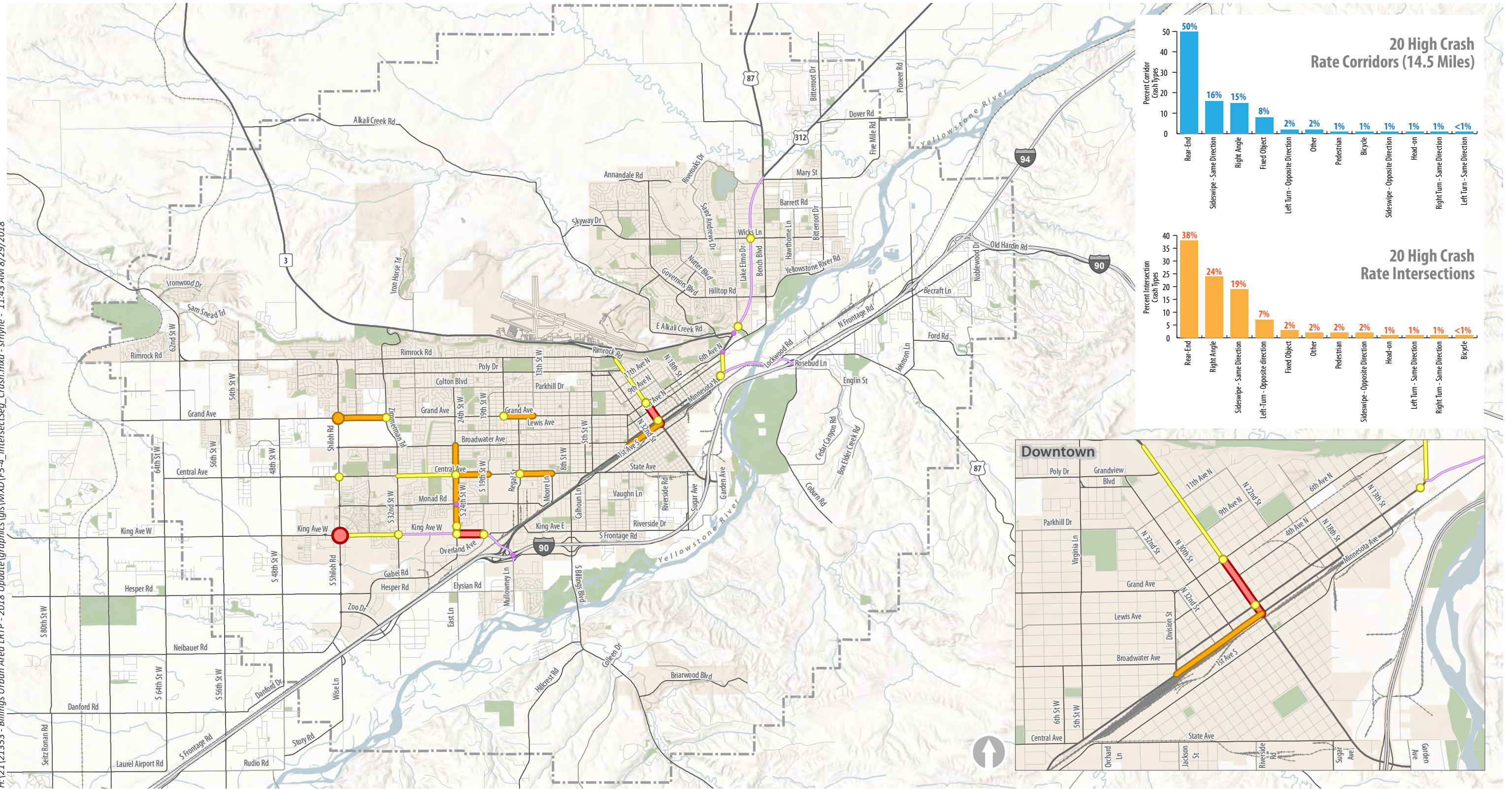
- Reported Fatal Crashes
- Reported Crashes

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Figure 5-3
Total Reported Crashes (2013 - 2017)

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Figure 5-4
Intersection and Corridor Crash Rates

Table 5.3 Roadway Segments with High

Roadway Segment	Extent	ADT	Length (miles)	Total Crashes	Crash Rate	
1	N 27th Street	Montana Avenue to 6th Avenue N	16,595	0.4	386	29.5
2	King Avenue W	20th Street to 24th Street	24,100	0.5	310	15.2
3	Montana Avenue	27th Street to Division Street	10,980	0.7	203	14.9
4	S 24th Street W	King Avenue W to Monad Road	24,660	0.5	334	14.6
5	Central Avenue	19th Street to 24th Street	15,640	0.6	224	14.0
6	S 24th Street W	Monad Road to Central Avenue	26,280	0.5	317	13.2
7	Central Avenue	Moore Lane to 15th Street	16,895	0.5	219	12.9
8	Grand Avenue	Zimmerman Trail to Shiloh Road	12,160	0.8	230	12.8
9	24th Street W	Central Avenue to Broadwater Avenue	22,685	0.5	257	12.4
10	Grand Avenue	13th Street to 17th Street	18,810	0.5	214	12.4
11	King Avenue W	32nd Avenue to Shiloh Road	14,290	1.0	294	11.8
12	Central Avenue	24th Street to 32nd Street	13,790	1.0	277	11.1
13	Main Street	1st Avenue N to 6th Avenue N	36,440	0.4	248	10.5
14	N 27th Street	6th Avenue N to Rimrock Road	15,255	0.9	247	9.9
15	King Avenue W	24th Street to 32nd Street	25,660	1.0	368	7.9
16	Main Street	Airport Road to Hilltop Road	44,550	0.7	369	6.5
17	King Avenue W	Midland Road at Mallowney Lane to 20th Street	40,470	0.7	349	6.5
18	Main Street	Hilltop Road to Wicks Lane	27,220	1.0	306	6.1
19	Main Street	Wicks Lane to US 87	16,840	1.1	199	6.0
20	Highway 87E	Interstate 90 to 1st Avenue N	26,040	1.3	347	5.6

Source: MDT Crash Data (2013 - 2017)

Crash rates were calculated based on Total Number of Crashes x 1,000,000 vehicles / Vehicles per day x Number of Years x 365 days per year x Length of Segment.

TRAFFIC OPERATIONS

Intersection turning movement count data from a variety of sources informed peak hour level of service estimates at approximately 300 intersections throughout the Billings Urban Area. These estimates included most intersections featuring both approaches with collector or higher roadway classification. Turning movement counts taken before 2018 were normalized to 2018 levels by assuming a constant 1% annual growth rate. Figure 5-5 shows existing intersection peak hour level of service. Intersections operating at a critical peak hour level of service E or F or identified by the SC as potentially congested are shown in Table 5.4.

Table 5.4. Summary of LOS E, LOS F, and Potentially Congested Intersections During Critical Peak Hour (Year 2018)

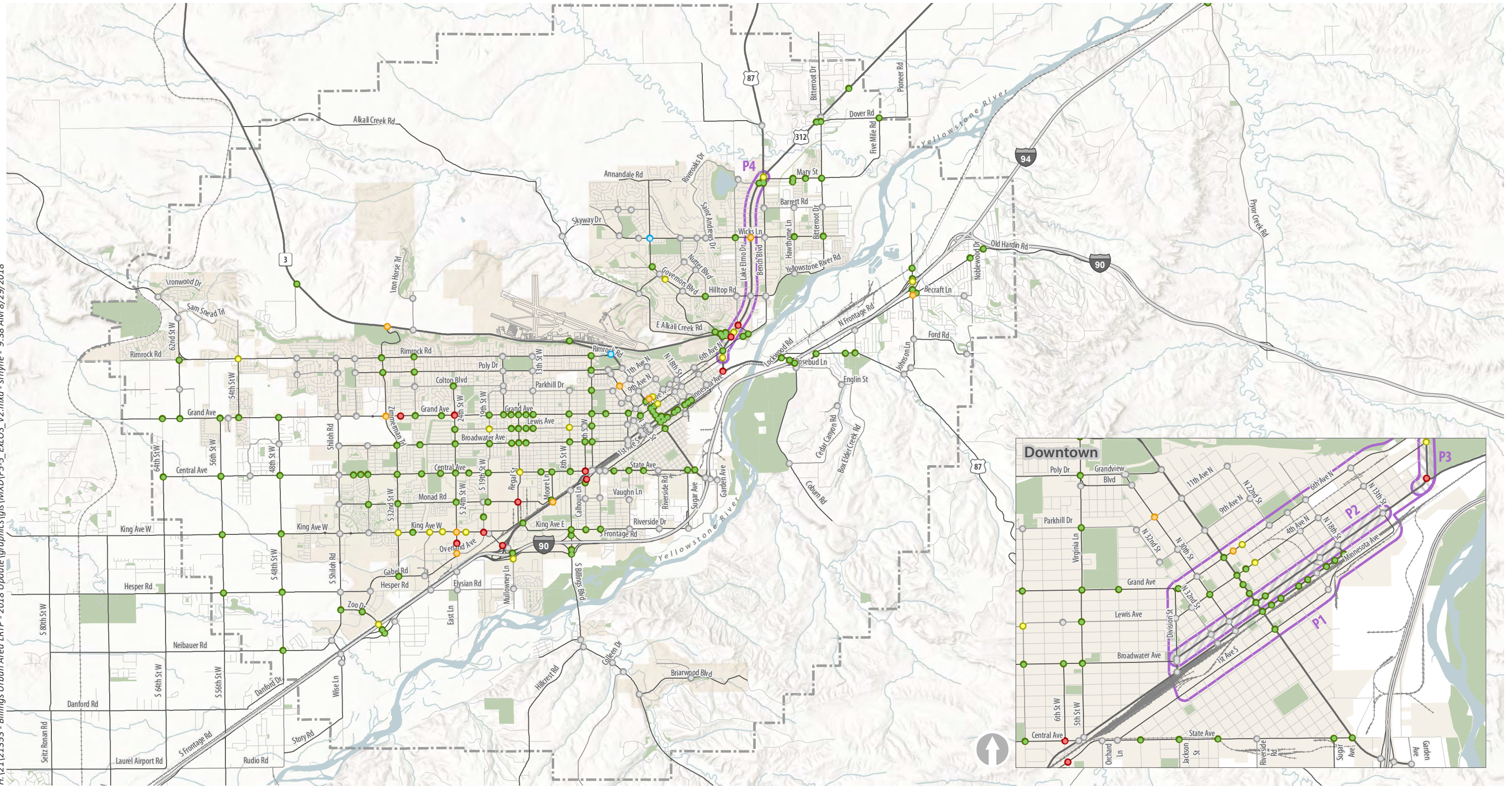
Intersections Operating at LOS E	Intersections Operating at LOS F	Intersections Identified by SC as Potentially Congested
<ul style="list-style-type: none"> Johnson Lane & Old Hardin Road Laurel Road & Moore Lane Wicks Lane & Main Street Zimmerman Trail & Grand Avenue Zimmerman Trail & Highway 3 6th Avenue N & N 26th Street 11th Avenue N & N 30th Street 24th Street W & King Avenue W 24th Street W & Overland Avenue 	<ul style="list-style-type: none"> Aronson Avenue & Main Street Daniel Street & Monad Road King Avenue W & Laurel Road King Avenue W & S 20th Street/W Overland Avenue Lake Elmo Drive & Main Street State Avenue & Underpass Avenue 1st Avenue N & Main Street 6th Street W & Central Avenue 24th Street W & Grant Road 24th Street W & Grand Avenue 32nd Street W & Grand Avenue 	<ul style="list-style-type: none"> Governors Boulevard & Wicks Lane N 27th Avenue & Rimrock Road

EXISTING DAILY TRAFFIC VOLUMES

In conjunction with the LRTP, the MPO developed a travel demand model for use in estimating traffic volumes and travel mode splits within the Billings Urban Area. The travel demand model includes a base year of 2017 and a future year of 2040. Existing daily traffic volumes for all roadway segments in the Billings Urban Area are shown in Figure 5-6.

2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN

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- | | | | |
|-------------------------|--|-------------------------------|--------------------|
| Level of Service | ● Intersections with No Data and Identified as Potentially Congested | Roadway Classification | ▭ Study Area |
| ● A thru C | ● Intersections with No Data | — Interstate | ▭ Park |
| ● D | ▭ More detailed analysis is being performed in these areas by other studies/projects | — Highway | ▭ City of Billings |
| ● E | P1 - Downtown Traffic Study | — Arterial | |
| ● F | P2 - 1st Avenue North | — Collector | |
| | P3 - 1st Avenue N / Expo | — Local | |
| | P4 - Main Street Signal Timing | | |

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Figure 5-5
Existing Conditions and
Level of Service

PLACEHOLDER for Figure 5-6 Existing Conditions Daily Traffic Volumes – Not completed yet

FUTURE CONDITIONS

This section summarizes the year 2040 traffic volumes and traffic operations within the study area.

TRAFFIC OPERATIONS

For the year 2040 conditions, the travel demand model was updated to include major committed and recommended projects within the Billings Urban Area. The major committed and recommended projects include:

Committed Projects

- Billings Bypass Arterial: 2-lane roadway from Johnson Lane interchange to Old Highway 312 and US 87
- Central Avenue: 5-lane roadway between 32nd Street W and Shiloh Road
- Five Mile Road: 2-lane roadway from Dover Road to Old Highway 312
- Inner Belt Loop: 2-lane roadway from Alkali Creek Road to Montana Highway 3
- King Avenue West: 5-lane roadway between Shiloh Road and 72nd Avenue
- Wicks Lane: 3-lane roadway between Bench Boulevard and Hawthorne Lane
- Zimmerman Trail: Add two-way left-turn lane between Montana Highway 3 and Rimrock Road
- 32nd Street West: 3-lane roadway between King Avenue W and Gabel Road
- Intersection improvements at Underpass Avenue, Airport/Main, Central Avenue/56th Street, Central Avenue/24th Street, Monad Road/19th Street/20th Street, 13th Street/1st Avenue N, Hillcrest Road/Blue Creek Road, Frontage Road/Wise Lane

Recommended Projects

- Interstate 90 – Add 3rd lane in each direction between S Billings Boulevard Interchange and Johnson Lane Interchange)
- Montana Highway 3 - Add two-way left-turn lane between Zimmerman Trail and Airport Road
- Blue Creek Road - Turn lane improvements on Blue Creek Road
- Intersection improvements at 1st Avenue N/Exposition Drive

The travel demand model was used to estimate future year 2040 daily traffic volumes in the Billings Urban Area. Based on the year 2017 and 2040 traffic volumes, growth rates were identified for individual regions of the Billings Urban Area and then applied to the existing peak hour intersection volumes to calculate year 2040 peak hour traffic volumes at the intersections. Figure 5-7 shows year 2040 level of service estimates at approximately 300 intersections throughout the Billings Urban Area and Table 5.5 shows intersections operating at level of service E or F in year 2040.

Table 5.5. Summary of LOS E, LOS F, and Potentially Congested Intersections During Critical Peak Hour (Year 2040)

HEADING A	HEADING B	HEADING C	HEADING D
Fecum usum intilis Maedi	15,000	10,000	12,000
Horum ipio, quo nihina	10,000	5,000	6,000
Git quia sument odit officiam	600	800	900
Ante clego hos concum	18,000	19,000	21,500
Mae conduce acesser	13,000	12,500	10,000
Cuperem oenihil habust	500	700	750

Projected average daily traffic volumes for all roadway segments in the Billings Urban Area in year 2040 are shown in Figure 5-8.

PLACEHOLDER for Figure 5-7 Year 2040 Projected Critical Peak Hour Level of Service – Not completed yet

PLACEHOLDER for Figure 5-8 Year 2040 Projected Daily Traffic Volumes – Not completed yet

NEEDS AND DEFICIENCIES

In order to guide identification of short- and long- range projects, deficiencies and needs were collected from the general public, the SC, and through a review of past plans/studies.

PUBLIC AND SC FEEDBACK

Forty-nine percent of the public comments corresponded to streets and highways or intersection deficiencies and needs in the study area. Review of the public comment feedback and SC comments suggested the following themes:

- Redesign unsafe intersections using roundabouts and traffic signals
- Improve traffic flow through signal retiming on congested corridors
- Provide better connectivity between the West End, Downtown, and Billings Heights
- Provide better connectivity between The Rims and the West End
- Maintain roadways, decrease the number of potholes, and improve snow removal
- Lower speed limits and calm streets with infrastructure improvements to reduce speeding
- Widen roadways to improve congestion
- Provide better connectivity between the west end and Lockwood
- Provide Inner Belt Loop and Outer Belt Loop connections
- Provide better connectivity over the Yellowstone River
- Increase capacity of railroad underpasses

NEEDS DEFINED IN PREVIOUS STUDIES/PLANS

There have been several city-wide studies/plans, highlighted in Exhibit 5.10, that focus on streets and highway facilities in the City of Billings. Below is a list of these studies/plans and their key needs and findings:

- **Highway 3 Corridor Planning Study (2015)** provides an access management and transportation circulation plan for the Highway 3 corridor from North 27th Street to Apache Trail (approximately 5 miles). It incorporates bicycle/pedestrian facilities, a parking plan, and a stormwater management plan along the top of the Rims. Key improvements include intersection control and bicycle/pedestrian infrastructure implementation.
- **Old Highway 312 Corridor Study (2016)** develops a comprehensive long-range plan for managing the corridor and determining what can be done to improve the corridor, which connects the growing communities of Huntley, Shepherd, and Worden with Billings. Key improvements include safety measures such as overhead lighting, intersection control, and intersection realignment.
- **West End Multimodal Planning Study (2016)** develops a transportation model to project development and traffic demand growth on the west end and provides recommendations on scope and priority of improvement projects to mitigate projected impacts. Key improvements include intersection control implementation

at intersections throughout the West End.

- **Underpass Avenue Improvements Conceptual Design Report (2016)** reviews and analyzes the existing site conditions and traffic needs to prepare possible improvement options to Underpass Avenue.
- **Lockwood TEDD Infrastructure Master Plan (2017)** documents the infrastructure needs of the Lockwood Targeted Economic Development District (TEDD) and addresses those needs while optimizing the potential of the Lockwood TEDD area for development. Key improvements include roadway segments to be implemented with development of the study area.
- **Billings Urban Area Long-Range Transportation Plan (2014)** summarizes several streets and highway projects in the urban area and details relevant studies and plans completed between 2008 and 2014:
 - Lockwood Transportation Study (2008): This study identifies a set of short and long-term improvements at intersections and roadways within in the Lockwood area (5-2).
 - Billings Bypass EIS Project (2014): The Billings Bypass Project proposes to construct a new principal arterial connecting Interstate 90 (I-90) east of Billings with Old Highway 312. The purpose of the proposed project is to improve access and connectivity between I-90 and Old Highway 312 to improve mobility in the eastern area of Billings. The Record of Decision (ROD) was issued on July 28, 2014. The Preferred Alternative

Exhibit 5.10 Study Covers



has been separated into two phases, which are referred to throughout the FEIS as Phase 1 (an initial two-lane road) and the Full Buildout (a final four-lane road). Phase 1 will design and construct the initial two lanes of road along the entire length of the Preferred Alternative alignment and pursue right-of-way acquisition for a future four-lane road. The second phase will require a NEPA re-evaluation and separate ROD(s) to design and construct the Full Buildout four-lane road along this alignment (5-4).

- I-90 Corridor Planning Study (2012): The study recommends a set of near-term and long-term improvements to the I-90 corridor (mainline and interchanges) from the Laurel interchange to the Pinehills interchange. The improvements include mainline widening, bridge reconstruction, safety improvements, and geometric improvements (5- 4).
- Molt Road/Highway 3 Collector Road Planning Feasibility Study (2004): The study demonstrated that a proposed collector alternative is feasible from a preliminary engineering analysis (5-5).
- Billings Hospitality Corridor Planning Study (2013): This study identifies a set of near-term and long-term projects for the Main Street, Exposition Boulevard, and Highway 87 roadway segments and intersections. Key improvements include streetscape, sidewalk, pedestrian crossings, and roundabout at the 1st Street N./ Exposition Boulevard/Highway 87 intersection (5-6).

PROJECT LIST

Roadway, intersection, and congestion management projects were identified from the needs and deficiencies assessment and committed projects in the City of Billings Transportation Improvement Program, FY 2017-2021, Capital Improvement Program (5-8), Capital Improvement Program FY 2019 – 2023 (5-9), and MDT project programming. The LRTP identifies a total of 78 roadway projects, 72 intersection projects, and 34 congestion management projects. Investing in these types of projects supports the plan’s goals and the region’s desire to provide a robust, interconnected transportation system.

A project description and planning-level cost estimate was developed for each project. The planning-level cost estimates were developed from cost estimates included in past plans/studies, engineer’s estimates made by the consultant team, or the sources described above.

Roadway projects include reconstruction of roadways, extension of existing roadways, and construction of new roadways. These projects represent maintenance, capacity, safety, and/or connectivity type projects. Table 5.6 summarizes the roadway projects. Figure 5-9 shows the approximate location of each project.

Intersection projects include reconstruction/ modifications of intersections, installation of traffic signals and/or roundabouts, and construction of new intersections. These projects represent maintenance, capacity, safety, and/or connectivity type projects. Table 5.7 summarizes the intersection projects. Figure 5-9 shows the approximate location of each project.

Congestion management projects include signal retiming or traffic signal upgrades on the roadway system. Other types of congestion management strategies could include promoting alternative modes, parking management, land use managements, and other traffic operational enhancements. Table 5.8 summarizes the congestion management projects. Figure 5-10 shows the approximate location of each project.

Table 5.6 Roadway Projects

HEADING A	HEADING B
Fecum usum	Fecum usum intilis Maedi
Horum ipio,	Horum ipio, quo nihina
Git quia	Git quia sument odit officiam
Ante clego	Ante clego hos concum
Mae	Mae conduce acesser
Cuperem	Cuperem oenihil habust

Table 5.7 Intersection Projects

HEADING A	HEADING B
Fecum usum	Fecum usum intilis Maedi
Horum ipio,	Horum ipio, quo nihina
Git quia	Git quia sument odit officiam
Ante clego	Ante clego hos concum
Mae	Mae conduce acesser
Cuperem	Cuperem oenihil habust

Table 5.8 Congestion Management Projects

HEADING A	HEADING B
Fecum usum	Fecum usum intilis Maedi
Horum ipio,	Horum ipio, quo nihina
Git quia	Git quia sument odit officiam
Ante clego	Ante clego hos concum
Mae	Mae conduce acesser
Cuperem	Cuperem oenihil habust

PLACEHOLDER for Figure 5-9 Roadway and Intersection Projects – Not completed yet

PLACEHOLDER for Figure 5-10 Congestion Management Projects – Not completed yet



Chapter 6

Public Transit and Transportation



PUBLIC TRANSIT AND TRANSPORTATION

Like most public transportation systems, MET Transit (herein, referred to as MET) has been effective in developing a transit system with the limited funding resources available. Marginal revenue growth and rising operational costs have allowed for minimal service expansion over the past few years. For public transit service to be expanded significantly in the region, an increase in the operations funding would need to occur through an increase in the local mill levy, other local funding sources, and additional federal funds. Through this LRTP process, the community continued to identify projects and support for the public transportation system. Other services that complement MET include private for-profit public transportation providers, transportation network companies such as Uber and Lyft, and air service through the Billings Logan International Airport.

MET started in 1973 with five fixed routes in the Billings Urban Area. MET currently operates 18 routes with flag service and bus stops, transfer centers, and other amenities.

Public transportation continues to be a priority of the community. Public transportation provides access to employment, recreation, shopping and social opportunities and also encourages active transportation such as walking and bicycling to reach transit routes. As such, the 2018 LRTP outlines several goals related to public transportation:

PLACEHOLDER

PLACEHOLDER

- Goal 1: Safety* – Develop a safe transportation system
- Goal 2: Functional Integrity and Efficiency* – Optimize, preserve, and enhance the existing transportation system
- Goal 5: Public Transit and Transportation* – Create a transportation system that supports the practical and efficient use of transit
- Goal 6: Pedestrians and Bicyclists* – Create a transportation system that supports the practical and efficient use of active transportation such as walking and bicycling.
- Goal 7: Economic Vitality* – Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce.

EXISTING PUBLIC TRANSIT SERVICES

PUBLIC FIXED ROUTE

MET serves as the City of Billings fixed-route public transit service provider. Established in 1973 with only five routes, MET currently operates with eighteen routes and has two primary transfer centers. The MET complex is a 31,000 square-foot facility located at 1705 Monad Road in Billings. This complex, built in 1983 with renovations in 1998, 2000, and 2016 provides a centrally located facility for MET operations that includes administration, dispatch, vehicle maintenance, washing, and fueling. MET operates all routes through two transfer centers:

1. **Stewart Park Transfer Center** – This transfer center was constructed in 1993 and renovated in 2003, and is located next to the Rimrock Mall off of Central Avenue. This transfer center has ten bus parking spaces, passenger shelters and benches, and a driver break area.
2. **Downtown Transfer Center** – This transfer center (shown in Exhibit 6.1) was constructed in 2008 (opened in 2009) and is located at 220 N 25th Street in Downtown Billings. This transfer center has fifteen bus parking spaces, passenger shelters and benches, a covered passenger pavilion, and a driver break area. These transfer centers operate a “pulse” system where buses arrive and depart from the transfer center simultaneously.

Fleet

MET operates a fleet of 40 vehicles as detailed in Table 6.1. Exhibit 6.2 shows an example of a typical bus in the MET fleet. Exhibit 6.3 shows a bicycle on the bus.

Table 6.1 MET Fleet

Manufacturer	Description	Number of Vehicles	Equipment
Gillig LLC	35' low floor type	2	Wheelchair ramps, front bumper two-slot bicycle racks
Gillig LLC	35' standard floor type	17	Wheelchair lifts, front bumper two-slot bicycle racks
Champion	30' standard floor type	6	Wheelchair ramps, front bumper three-slot bicycle racks
Gasoline Powered Van	25', 13 passenger van	15	Wheelchair lifts and tie down areas
Total		40 Vehicles	

Source: MET

Exhibit 6.1 Downtown Transfer Center

Source: MET



Exhibit 6.2 Typical MET Bus

Source: MET



Exhibit 6.3 Bicycle on a MET Bus



Source: MET

SERVICE

MET currently provides eighteen fixed routes within the Billings city limits. These eighteen fixed routes include: nine all-day routes; four peak-hour routes; one midday-only route; and four tripper routes.

On July 2, 2018, MET updated the bus routes and schedules. Seven routes operate on Saturdays. No service is provided on Sunday. Figures 6-1 and 6-2 show the weekday and Saturday routes, respectively. Routes shown in Figures 6-1 and 6-2 reflect the updated route changes that took place in July 2018. MET also provides four tripper routes to and from middle and senior high schools in the area. Current service hours are shown in Table 6.2.

The downtown transfer center opened in 2009 and is one of the only transit centers in the US that is Leadership in Energy and Environmental Design (LEED) certified Platinum.

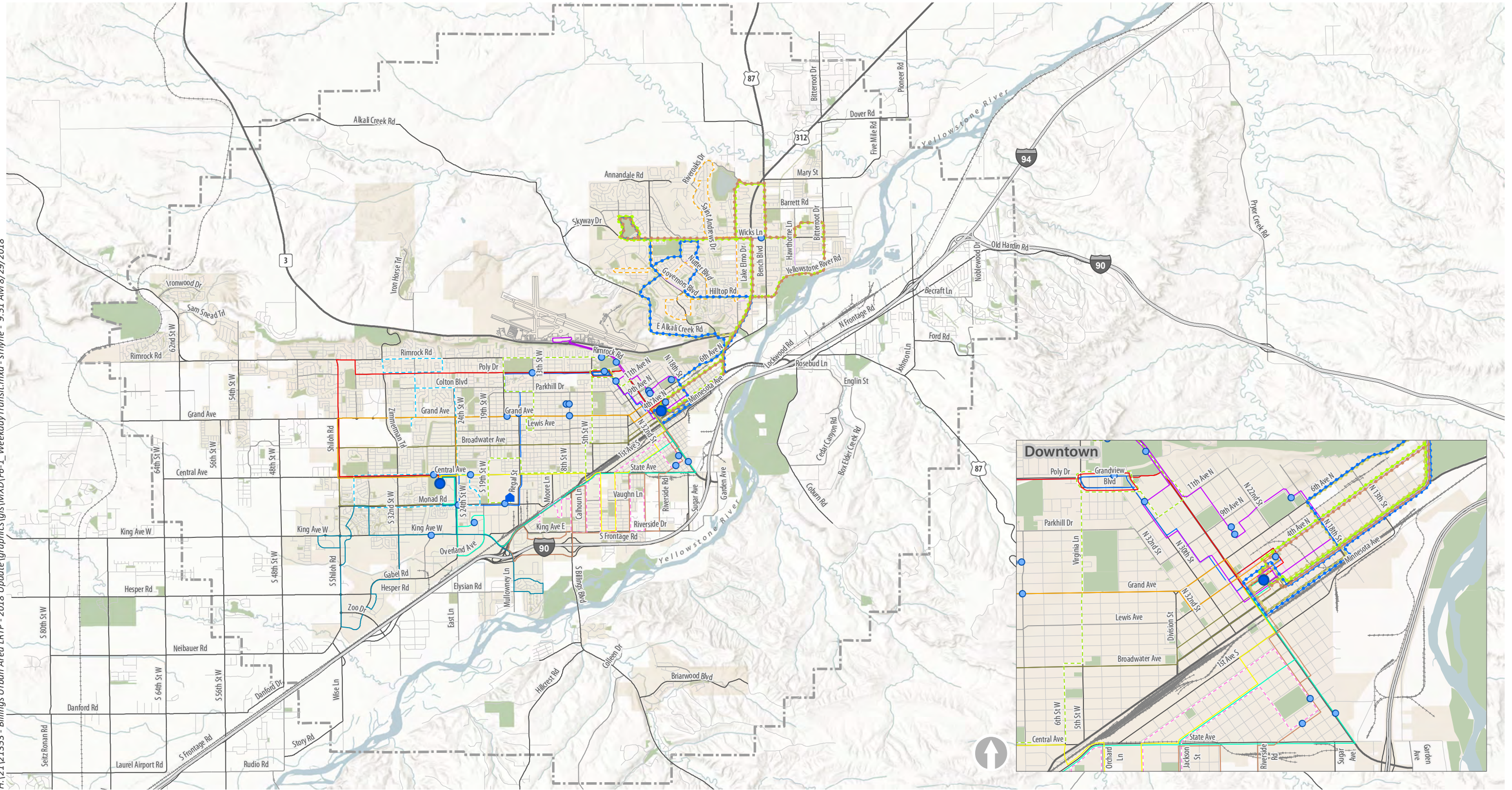
Table 6.2 MET Service Hours

Day(s)	Time Service is Available
Monday through Friday	5:50 AM – 6:50 PM
Saturday	8:10 AM – 5:45 PM
Sunday	No Service Available

Source: MET

2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN

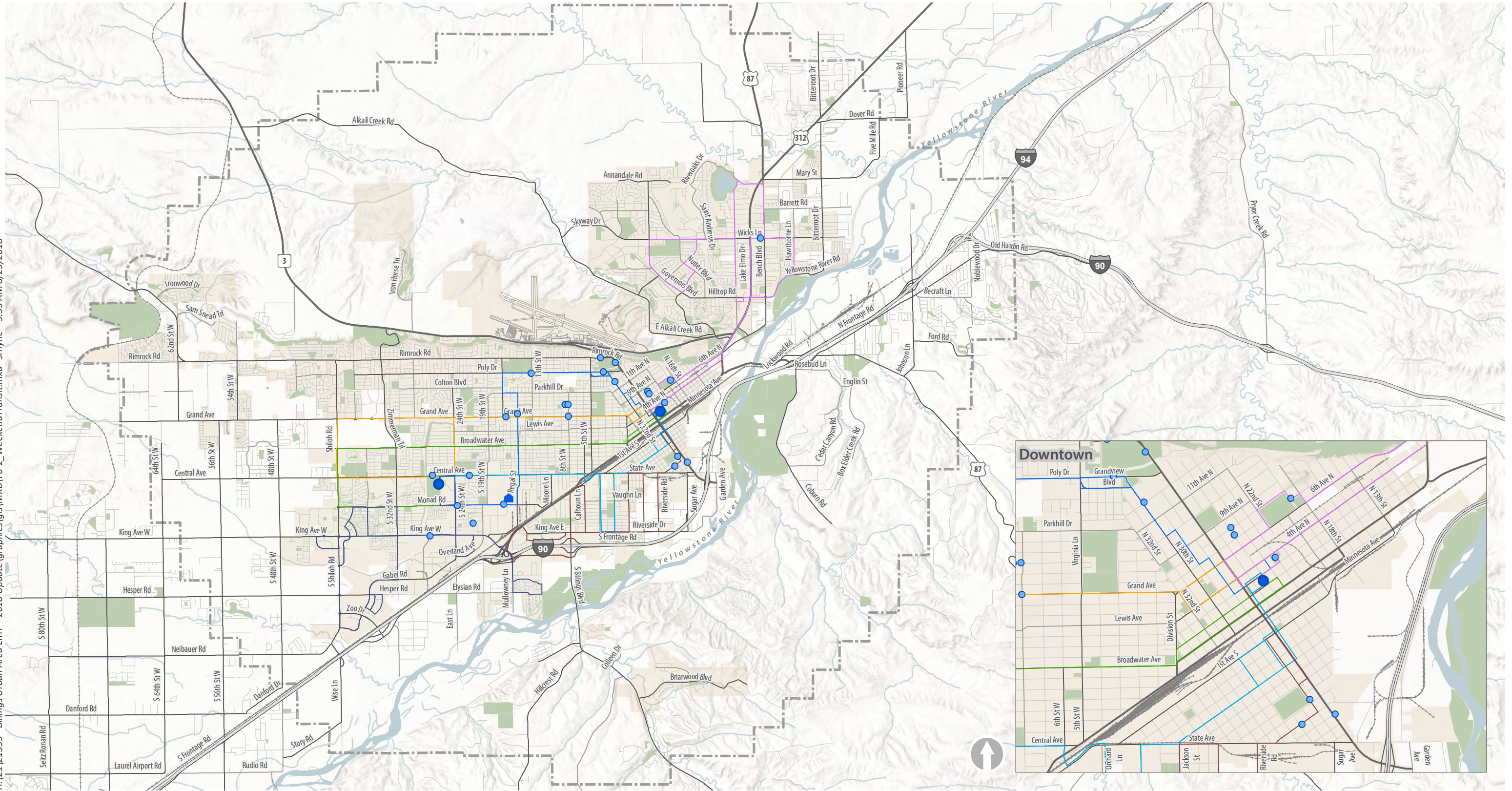
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Bus Shelter	Bus Route Number	7	14	18	T2	Study Area
Transit Office	1	9	15	19	T3	City of Billings
Transfer Station	3	10	16	24	T4	Park
	5	13	17	T1		

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Figure 6-1
Existing Weekday Transit Routes



- | | | | | | |
|------------------|---------------------|----|-----|-----|------------------|
| Bus Shelter | Route Number | S5 | S9 | S18 | Study Area |
| Transit Office | S3 | S7 | S13 | S19 | Park |
| Transfer Station | | | | | City of Billings |

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Figure 6-2
Existing Saturday Transit Routes

MET does not provide service on the following holidays: New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day. The weekday routes typically operate on 60-minute headways with the exception of two routes: the 1 route operates on 30- to 55-minute headways and the 18 and 19 routes operate on 55-minute to two-hour headways.

MET operates a fixed route system with 24 bus shelters in addition to bus benches and signed stops along the routes. MET riders can also flag down the bus at any safe intersection. Shelters are mostly concentrated along the high-volume routes to provide the most heavily used stops with protection from weather. Exhibit 6.4 shows an example of a MET bus shelter. Signed stops are located along all routes to help maintain headways and allow for a more orderly system of boarding and alighting. Additionally, benches are provided at many of the stops.

The current extent of service reaches most every geographic location within the Billings city limits including service to the Billings Logan International Airport. Transit service is not provided in the newer residential areas west of Shiloh Road, except for a short section on King Avenue West. Within the urban area, transit service is not provided to Lockwood. Lockwood is located outside of MET's service area, since MET only serves the City of Billings.

Ridership

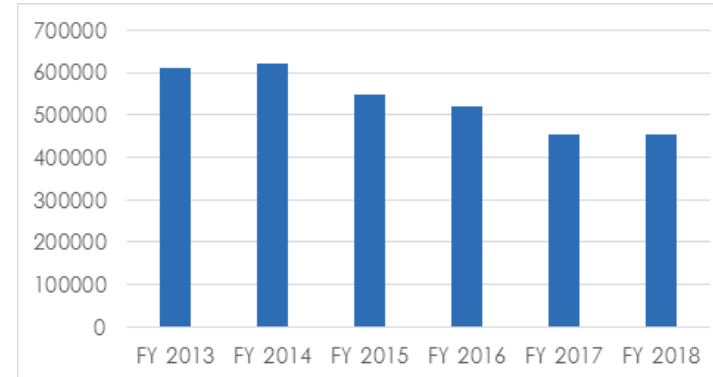
Exhibit 6.5 shows the annual ridership trends on the fixed route service between 2013 and 2018.

Exhibit 6.4 Typical MET Bus Shelter



Source: MET

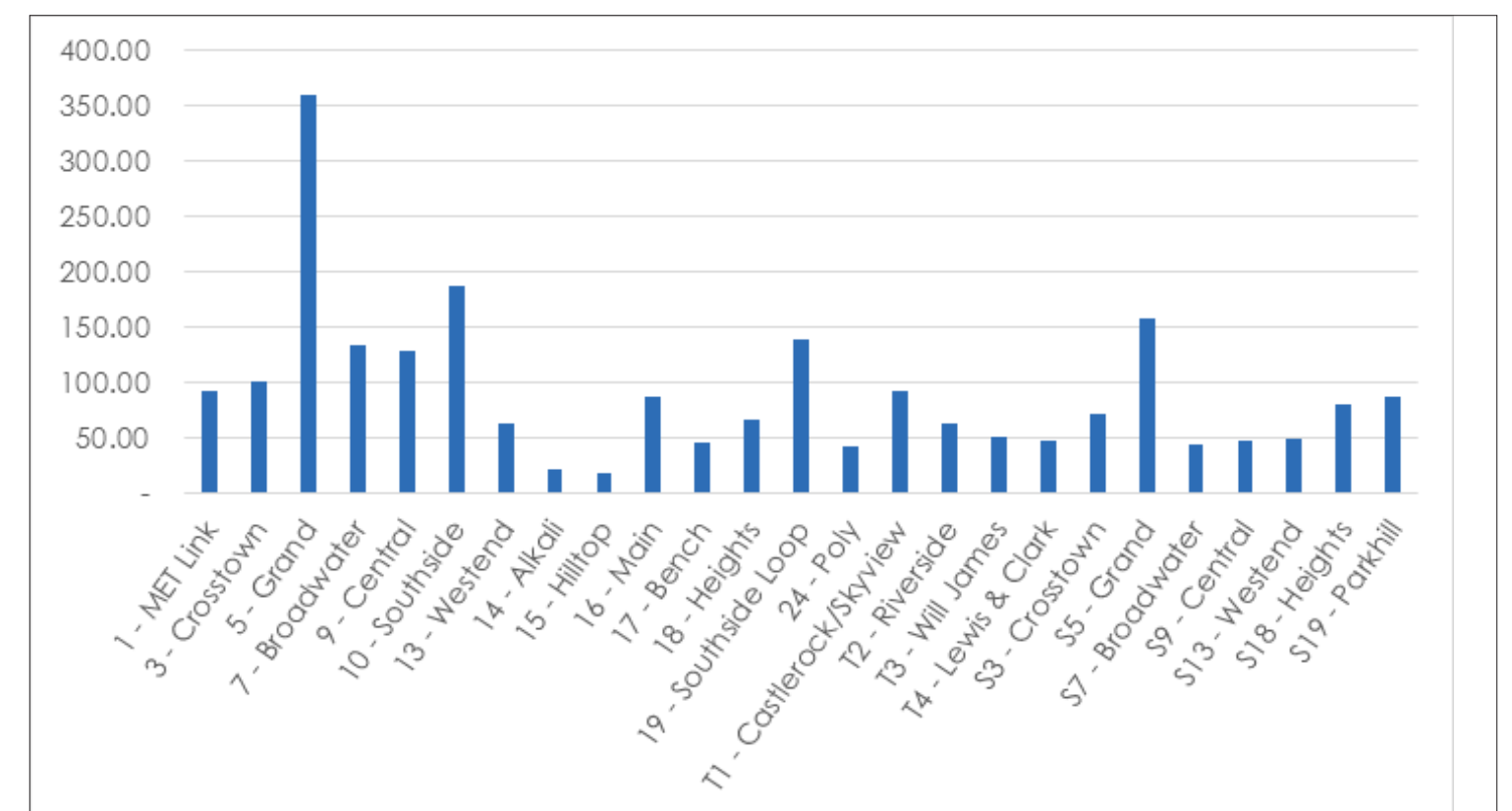
Exhibit 6.5 MET Annual Ridership Trends (FY 2013-FY 2018)



Source: MET

As shown in Exhibit 6.5, fixed route ridership is in a steady decline. Fiscal year 2018 saw a total of 454,395 MET riders and was similar to the FY 2017 ridership total. Exhibit 6.6 shows fiscal year 2018 ridership by route. As shown in Exhibit 6.6, the most productive weekday routes are Grand, Southside, and Southside Loop. Grand is also the most productive weekend route.

Exhibit 6.6 FY 2018 Average Daily Ridership by Route



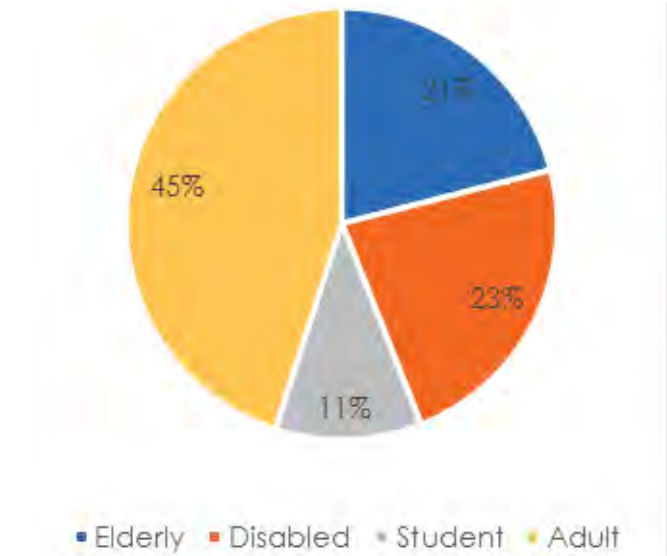
Source: MET

Additionally, based on conversations with MET staff, the Tripper routes are productive during the school year.

The demographic composition of MET ridership is shown in Exhibit 6.7 (6-1). The largest demographic of MET riders is students who make repeated use of the school tripper routes.

Public transportation makes up about 1.6% of commute trips in the Billings Urban Area (Source: ACS 2011)

Exhibit 6.7 MET Ridership



Source: MET

FINANCES

MET is primarily funded through the local transit-designated 10-mill levy property tax approved by voters in 1980. Funding is further supplemented by farebox revenue, advertising revenue, and by Federal Transit Administration (FTA) grants. In 2017, property taxes supported about 42.3% of the total annual operating cost (see Table 6.3) whereas the farebox revenue only supported approximately 11.7% of the total operating cost. Exhibit 6.8 shows the breakdown of actual FY 2017 funding sources.

The breakdown of METs expenditures for fiscal years 2017 through 2022 is shown in Table 6.3. The current rate for MET passengers is \$1.75 per trip. The fiscal year 2017 cost per MET passenger was \$7.58.

Table 6.3 MET Expenditures FY 2017 to FY 2022

Expenditures	Assumed Annual Growth	FY 2017 Actual	FY 2018 Budget	FY 2019 Projected	FY 2020 Projected	FY 2021 Projected	FY 2022 Projected
Operating Expenditures							
Personnel Services	5%	\$3,696,042	\$3,907,846	\$4,103,238.30	\$4,308,400	\$4,523,820	\$4,750,011
Operations & Maintenance	3%	\$871,961	\$1,410,785	\$1,453,109	\$1,496,702	\$1,541,603	\$1,587,851
Fuel	2%	\$284,785	\$400,451	\$408,460	\$416,629	\$424,962	\$433,461
Total Operating		\$4,852,788	\$5,719,082	\$5,964,807	\$6,221,731	\$6,490,385	\$6,771,323
Capital Expenditures							
Federal Capital		\$850,385	\$1,006,264	\$944,077	\$1,350,000	\$500,000	\$800,000
Local Capital		\$212,596	\$251,566	\$236,019	\$337,500	\$125,000	\$200,000
Total Capital		\$1,062,981	\$1,257,830	\$1,180,096	\$1,687,500	\$625,000	\$1,000,000
Total Expenditures		\$5,915,769	\$6,976,912	\$7,144,903	\$7,909,231	\$7,115,385	\$7,771,323

Source: MET

Exhibit 6.8 MET FY 2017 Revenue Sources



Source: MET

PUBLIC PARATRANSIT

MET also operates MET Special Transit (MST) which serves as a specialized, demand-responsive paratransit service. The MST service provides public transportation to persons whose disabling condition prevents the use of fixed route transit. MST is also available for local agencies to contract to provide service to clientele. It also serves as the City's MET-PLUS day-before advance reservation service that provides full compliance with the Americans with Disabilities Act (ADA) requirements. Persons who use this service must be certified as ADA complementary paratransit eligible. A person may be eligible for all or some of their trip needs. Exhibit 6.9 shows an example of a typical MST bus.

Exhibit 6.9 MST Bus



Source: MET

Service

MST operates 15 paratransit buses and provides ADA complementary paratransit service within all areas of the City of Billings. All trips must take place within this defined service area. The service schedule (i.e. when trips can be scheduled) is shown in Table 6.4.

Table 6.4 MST Service Hours

Day(s)	Time Service is Available
Monday through Friday	5:50AM – 6:50PM
Saturday	8:10AM – 5:45PM
Sunday	No Service Available

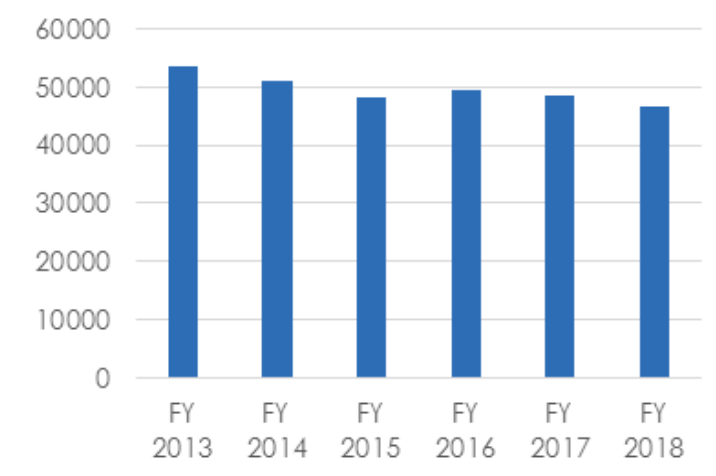
Source: MET

MST does not provide service on the following holidays: New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day.

Ridership

Ridership for MST has fallen in recent years, as shown in Exhibit 6.10. Paratransit ridership decreased from 53,500 rides in FY 2013 to 46,575 rides in FY 2018.

Exhibit 6.10 MST Annual Ridership Trends (FY 2013 - FY 2018)



Source: MET

Finances

The current rate for paratransit passengers is \$3.50 per trip. The FY 2017 average cost per paratransit customer is \$33.46 (up from \$27.02 in 2013). MST operates at a deficit, which is not uncommon for paratransit systems. The budget for MST is incorporated in MET's overall budget.

PRIVATE OPERATORS

Private for-profit public transportation providers operating in and through the Billings Urban Area include intercity bus lines, charter and rental bus services, and taxicab services. Jefferson Lines provides the most extensive service connecting to Bozeman, Butte, Glendive, Livingston, Miles City, Missoula, and Sidney. Table 6.5 shows the private bus operators and their primary connections.

Billings also has several transportation network companies and private taxi services available:

- Uber
- Lyft
- Transportation Services LLC
- Billings Yellow Cab
- Taxiing Services
- City Cab
- Total Transportation (A Plus Limos)
- Billings Limousine Service
- Red Lodge Tour and Taxi

Table 6.5 Private Operator Connections

Company	Connections
Greyhound Lines	Missoula, Superior
Powder River Trailways	Cody, Lovell, Sheridan, WY
Jefferson Lines	Billings, Bozeman, Butte, Glendive, Livingston, Miles City, Missoula, Sidney
Flathead Transit	Missoula, Kalispell, Whitefish
Salt Lake Express	Dillon, Butte

EXISTING AIRPORT FACILITIES/ ACCESS

Billings Municipal Airport was officially opened in 1928. In 1971, the airport was renamed, as it is presently referred to, Billings Logan International Airport (airport code is BIL). The Billings Logan International Airport Master Plan was completed in March 2010 (6-3). This Master Plan documents planned expansions and improvements for the airport over the next twenty years. One of the improvements documented is the design for an expanded concourse area that will allow for more passenger gates and aircraft parking positions to accommodate the growing number of passengers. The existing five aircraft loading positions will be expanded to at least eight, with expanded passenger hold rooms, restrooms, and concessions. The terminal improvements are expected to be completed by 2021.

AIRPORT SERVICE

Currently, the airport serves as a regional hub for air traffic (shown in Exhibit 6.11) with nonstop service to five cities in Montana and ten U.S. cities outside of Montana:

- Chicago (seasonal)
- Dallas
- Denver
- Las Vegas – biweekly
- Los Angeles – seasonal
- Mesa – biweekly
- Minneapolis
- Portland
- Salt Lake City

- Seattle
- Sidney, Wolf Point, Havre, Glasgow, and Glendive, Montana

The Federal Aviation Administration (FAA) classifies the airport as a small hub with a local market area extending throughout central and eastern Montana.

The airport's importance to the region and State has been growing with passenger enplanements of 437,810 in FY 2017.

The airport has cargo and mail operations with 41,324 tons passing through in FY 2017. United Parcel Service and Federal Express serve the Billings market as well as several smaller cargo feeder airlines. The airlines currently serving the airport are shown in Table 6.6.

Table 6.6 Private Operator Connections

Airline	Direct Services	Daily Departures from BIL	Weekly Departures from BIL
Delta	Minneapolis, Minnesota and Salt Lake City, Utah	5	
United	Denver, Colorado and seasonally to Chicago, Illinois	5	
Alaskan	Seattle, Washington and Portland, Oregon	3	
American	Dallas, Texas	1	
Allegiant	Mesa, Arizona; Las Vegas, Nevada; and seasonal to Los Angeles, California		6
Cape Air	Glasgow, Glendive, Havre, Sidney and Wolf Point, Montana	13	

Exhibit 6.11 National and Regional Direct Flights from BIL



NEEDS AND DEFICIENCIES

To guide identification of future public transportation strategies, deficiencies and needs were collected from the public and MET.

PUBLIC FEEDBACK

Nine percent of the public comments corresponded to transit deficiencies and needs in the study area. Review of the public comment feedback suggested the following themes:

- Better bus frequency, especially to:
 - Billings Heights
 - West End
 - Montana State University – Billings (MSUB)
 - Hospitals
- Longer service spans, especially in:
 - Billings Heights
 - West End
 - South Side
- New service to:
 - Laurel
 - Briarwood
 - Schools throughout the Billings urban area
- More bus stops and bus shelters
- Better schedule coordination for transfers, especially downtown
- Better bus schedule advertisement and publicization
- Right-sized buses
- Sustainable fuel sources for buses
- More affordable flights at Billings Logan International Airport

MET NEEDS IDENTIFICATION

Key needs identified through discussions with MET include:

- **Funding** – Explore opportunities to increase funding through federal and local sources.
- **Capital Assets** – Specific asset needs will be defined in the transit asset management plan, which is currently being developed by MET. Needs include rolling stock, equipment, and facilities.
- **Service** – MET intends to have an all-day fixed-route service to Billings Heights by 2020.
- **Technology** – MET intends to provide all fixed-route buses with Automatic Vehicle Locators (AVL) by 2019 and to provide all fixed-route buses with automated fare collection systems and automated passenger counters by 2025.
- **Transit Stops** – MET intends to implement designated fixed-route bus stops by year 2025.
- **Service Analysis** – MET intends to complete a comprehensive service analysis by year 2025.

MET will monitor its progress towards addressing these needs to align with the goals, objectives, and targets established in Chapter 3.

PUBLIC TRANSPORTATION STRATEGIES

At this time, MET does not have the ability to expand the public transit system based on the current and projected operational funds. For public transit service to be expanded significantly in the region, an increase in the operations funding would need to occur through an increase in the local mill levy, other local funding source, and/or additional federal funds. Through this LRTP process, the community continued to identify projects and support for the public transportation system. Public transportation continues to be a priority of the community. It is recommended that the MPO and MET partner and investigate further the operations funding options for the region, what support there is within the community to fund transit and determine a plan to begin funding expansion of public transit in the Billings urban area. It is also recommended that MET monitor its progress towards the funding, capital assets, and service analysis related goals described above.



Chapter 7

Truck Services and Facilities



TRUCK SERVICES AND FACILITIES

The movement of goods and services is an economic driver for the City of Billings. As the largest city in Montana, Billings experiences a significant amount of truck traffic on its roadway system due to the geographic location and proximity to other major hubs. Exhibit 7.1 shows the designated National Highway Freight Network in Montana (7-1). Exhibit 7.2 shows the level of commercial truck traffic on highways within Montana (7-2). As shown in Exhibit 7.1, Interstate 90 through Billings is designated on the freight network and connects with other cities to the west in Montana and to the south in Wyoming. As shown in Exhibit 7.2, Interstate 90 is the busiest Interstate route within the state, with commercial vehicle activity being the greatest in the Billings area. Several of the 2014 LRTP goals correspond to the movement of goods and services:

Goal 1: Safety – Develop a safe transportation system

Goal 2: Functional Integrity and Efficiency – Optimize, preserve, and enhance the existing transportation system

Goal 7: Economic Vitality – Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce.

Exhibit 7.1 National Highway Freight Network in Montana

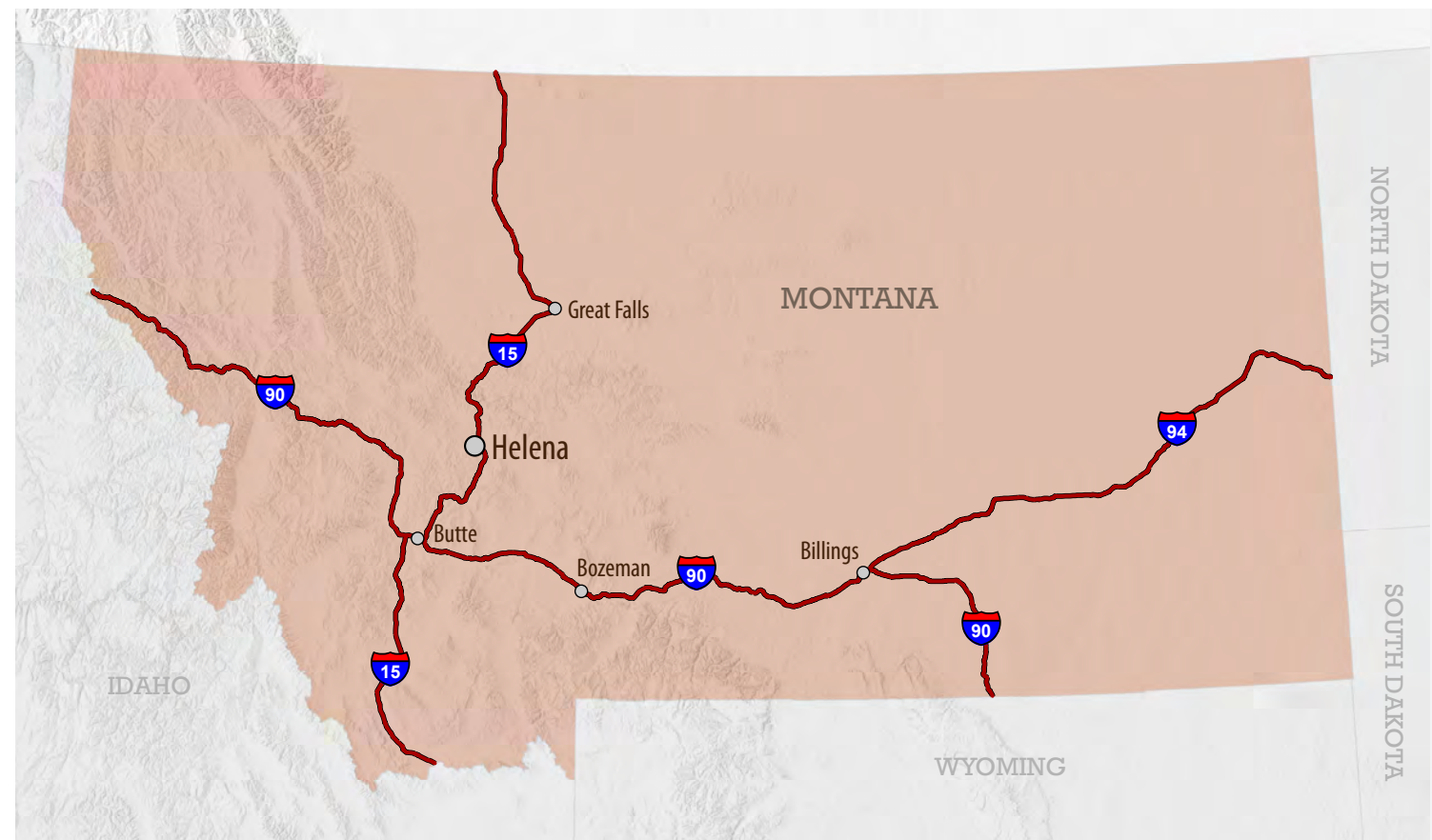
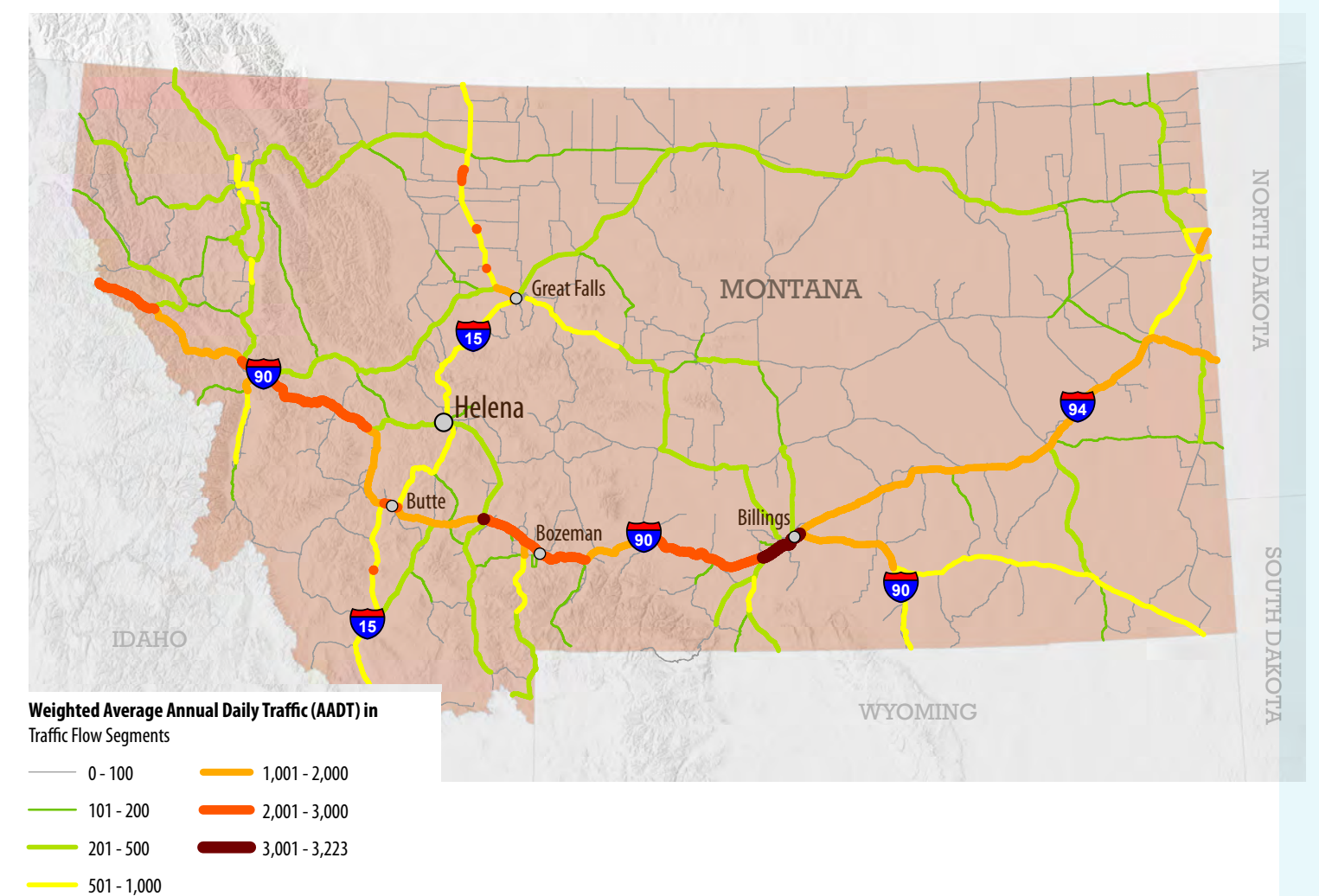


Exhibit 7.2 Montana Commercial Truck Traffic 2015



LITERATURE REVIEW

Recent city and statewide studies/plans were reviewed for existing conditions, available data, and short and long-range projects related to railroad facilities in the study area. These studies/plans are described below:

- **2017 Montana Freight Plan** (7-2) represents the first plan specific to freight for MDT and for the state. This plan provides a comprehensive evaluation of freight transportation in Montana and provides guidance for both short and long-term freight-related transportation investment decisions.
- **2016 City of Billings Growth Policy** (7-3) includes a goal that the transportation system is designed to be safer and more efficient for all users. This goal has an objective on rail and freight, specifically for safe railroad crossings (both vehicle and pedestrian) and passenger rail.
- **2016 Lockwood Growth Policy** (7-4) has a growth guideline for the TEDD, which is an area located in the northeast area of Lockwood that has an emphasis on industrial uses and connectivity with the railroad.
- **Lockwood TEDD Strategic Plan** (7-5) provides a path for further developing a competitive advantage for Yellowstone County over competing locations for business and professional employment. The purpose of the Lockwood TEDD is to provide planned industrial space in order to attract and retain industrial and manufacturing businesses in Yellowstone County. The

location of the Lockwood TEDD is located next to the rail service provided by MRL. The plan identifies that additional rail spurs and a transloading facility would benefit the development of the Lockwood TEDD.

- **Montana Freight Assessment:** Trends and Opportunities to Improve Access and Create Freight Efficiencies for Montana Companies (7-6) summarizes the potential for improving Montana's freight infrastructure to benefit producers and manufacturers.
- **Freight Analysis Framework** (7-7) produced through a partnership between BTS and FHWA, integrates data from a variety of sources to create a comprehensive picture of freight movement among states and major metropolitan areas by all modes of transportation. FAF version 4 (FAF4) provides estimates for tonnage (in thousand tons) and value (in million dollars) by regions of origin and destination, commodity type, and mode. Available data used for the 2018 LRTP includes data from 2016 and forecasts to 2045.
- **Billings Montana City Code Article 24-900** – Truck Travel and Truck Routes (7-8) designates the routes for intracity and intercity truck travel.
- **Yellowstone County Ordinance 07-107 to Limit Truck Traffic on Certain County Roads** (7-9, 7-10) designates routes for truck travel within Yellowstone County.

EXISTING CONDITIONS

This section includes a summary of existing truck facilities, routes, and high freight activity zones within the study area. A brief safety and operations analysis was performed to identify any trends related to truck traffic along key corridors and at key intersections.

FACILITIES

Figure 7-1 shows the existing truck routes, restrictions, and local generators within Billings. As shown in Figure 7-1, the study area is served by Interstate 90, Interstate 94, US Route 87, US Route 312, and Montana Route 3. Billings lies along the Camino Real Corridor, a high priority corridor on the National Highway System and part of the North American Free Trade Agreement

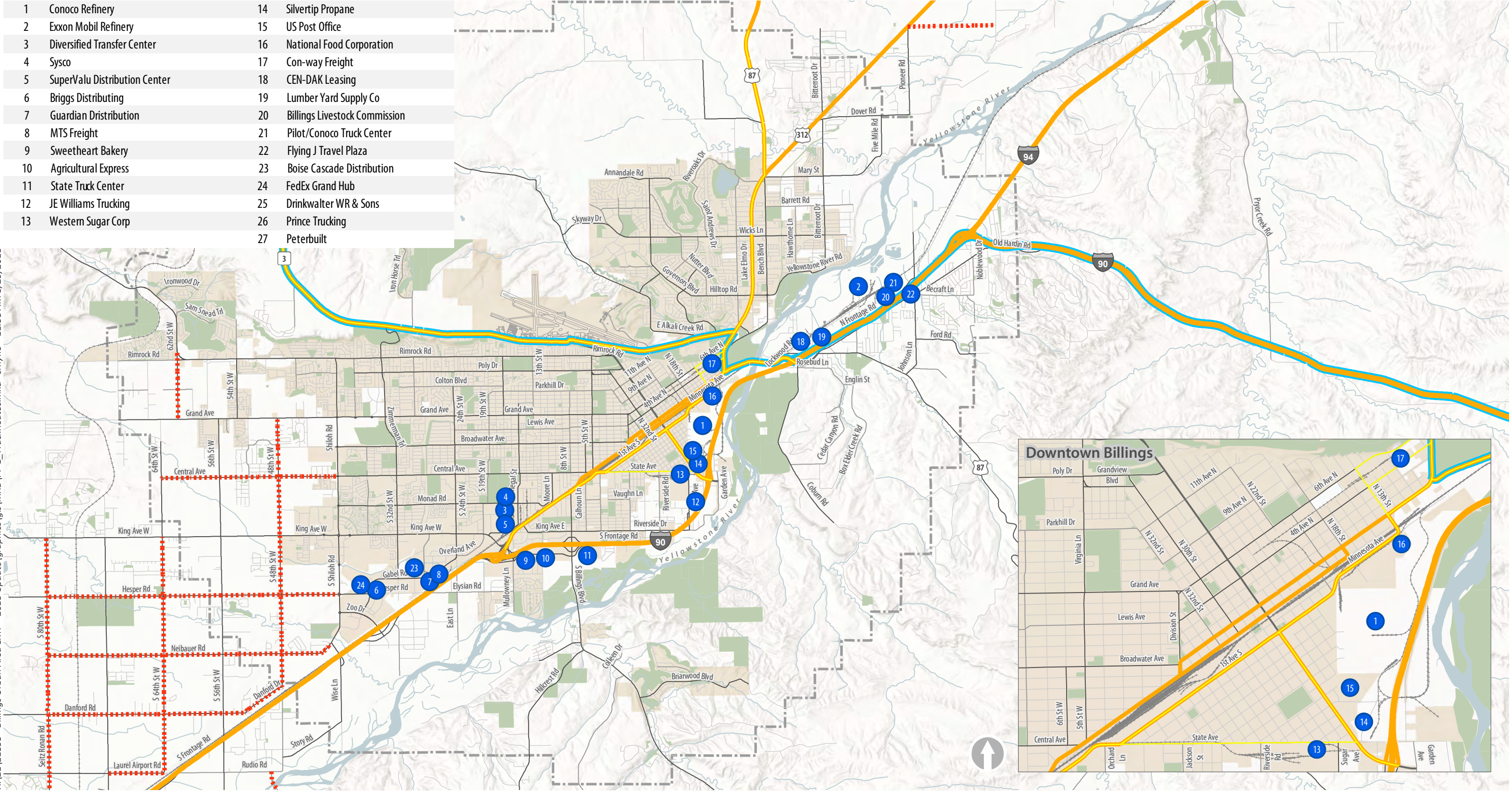
(NAFTA) that connects Canada, United States, and Mexico. In Montana, the Camino Real Corridor follows Interstate 90 from Buffalo, WY to Billings, MT, then continues north on Montana Route 3, US Route 12, US Route 191, US Route 87 to Interstate 15 at Great Falls and continues from Great Falls on Interstate 15 to the Canadian border. Truck traffic within Billings plays a critical part in the economic vitality and movement of commerce throughout the state, country, and world.

PLACEHOLDER

2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN

1	Conoco Refinery	14	Silvertip Propane
2	Exxon Mobil Refinery	15	US Post Office
3	Diversified Transfer Center	16	National Food Corporation
4	Sysco	17	Con-way Freight
5	SuperValu Distribution Center	18	CEN-DAK Leasing
6	Briggs Distributing	19	Lumber Yard Supply Co
7	Guardian Distribution	20	Billings Livestock Commission
8	MTS Freight	21	Pilot/Conoco Truck Center
9	Sweetheart Bakery	22	Flying J Travel Plaza
10	Agricultural Express	23	Boise Cascade Distribution
11	State Truck Center	24	FedEx Grand Hub
12	JE Williams Trucking	25	Drinkwater WR & Sons
13	Western Sugar Corp	26	Prince Trucking
		27	Peterbilt

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- Major Truck Activity
- Highway Truck Route
- Camino Real Corridor (Federal)
- Intercity Truck Route (City of Billings)
- Restricted Truck Routes (Yellowstone county)
- Study Area
- Park
- City of Billings

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Figure 7-1
Existing Truck Routes, Restrictions,
and Local Generators

Table 7.1 summarizes the roadway characteristics for the existing truck routes within the study area.

Table 7.1 Truck Route Roadway Characteristics

Roadway ¹	Functional Classification ²	Truck Route Designation ³	Access Type	# of Through Lanes	Posted Speed (mph ⁴)	AADT ^{5, 6}	Truck % ⁷
Interstate 90	Interstate	Highway, Camino Real, Intercity	Grade Separated	4	75	30,000	10% - 18%
Interstate 94	Interstate	Highway	Grade Separated	4	75	9,000	15% - 21%
US Route 87	Principal Arterial	Highway, Camino Real, Intercity	Limited Access	2	70	5,000	5%
US Route 312	Principal Arterial	Highway, Intercity	Limited Access	2	60	11,500	
Montana Route 3	Principal Arterial	Highway, Camino Real, Intercity	Limited Access	2	60	4,200 - 14,400	
Main Street	Principal Arterial	Highway, Camino Real, Intercity	Signalized	6	45	18,500 - 44,200	2%
27th Street	Principal Arterial	Intercity	Signalized	4	30	13,000 - 18,500	
6th Avenue N	Principal Arterial	Intercity	Signalized	4	35	13,700	
4th Avenue N	Principal Arterial	Intercity	Signalized	3	35	11,700	
1st Avenue N	Principal Arterial	Intercity	Signalized	4	35	13,800 - 26,200	
N 13th Street	Collector	Intercity	Signalized	4	25	4,800	
Laurel Road	Principal Arterial	Highway, Intracity	Signalized	4	45	20,700 - 23,900	
Shiloh Road	Principal Arterial	Intracity	Roundabout	4	45	13,300 - 16,400	
Zoo Drive	Principal Arterial	Intracity	Signalized	4	35	4,700 - 10,000	
King Avenue W	Principal Arterial	Intracity	Signalized	4	35	5,000 - 43,500	
State Avenue	Minor Arterial	Intracity	Signalized	2	35	5,700 - 6,700	
Zimmerman Trail	Principal Arterial	Intracity	Signalized	2	25	9,000 - 12,800	
S. Billings Blvd	Principal Arterial	Intracity	Signalized	2	35	9,500 - 16,500	
1st Avenue S - Minnesota Avenue	Principal Arterial	Intercity	Signalized	2 to 4	25	9,200 - 10,200	
Old Hardin Road	Principal Arterial	-	Unsignalized	2	45	3,900 - 9,100	
Johnson Lane	Principal Arterial	-	Signalized	2	45	2,100 - 13,300	12% - 16%

¹Refer to Figure 7-1 for limits of truck routes

²Billings Urban Area Functional Classification Map (7-11)

³GIS data provided by the City of Billings

⁴mph - miles per hour

⁵MDT Traffic Data (7-12); 2017 Traffic Count Map (7-13); Yellowstone County Traffic Counts (7-14) - range provided if multiple AADT values were given.

⁶AADT - Average Annual Daily Traffic

⁷Truck percentages

As shown in Table 7.1 and Figure 7-1, the area is connected by a number of major highway and interstate facilities. These facilities provide trucks with direct access to several Principal Arterial roadways to travel through the City and access to various land uses associated with truck activity. Key characteristics of the truck routes are identified in Table 7.1, such as signalized corridors along Main Street and King Avenue, and a roundabout corridor along Shiloh Road. The City of Billings and Yellowstone County have designated truck travel and truck routes within the city limits.

- The Billings Montana City Code (BMCC) Article 24-900 – Truck Travel and Truck Routes (7-8) designates the routes for intracity and intercity truck travel. A truck is defined as a vehicle with a combined gross vehicle weight of 8,000 pounds (except for unloaded agricultural vehicles being used for passenger transportation) or more, which includes medium trucks, delivery trucks, dump trucks, tractor trailer trucks, heavy trucks, and super-heavy trucks. The BMCC directs truck routes passing through the City to an outside destination to use the major highways and arterials to connect with Interstate 90. The BMCC discourages truck use on Zimmerman Trail and 27th Street.
- Yellowstone County Ordinance 07-107 to Limit Truck Traffic on Certain County Roads (7-9, 7-10) designates routes for truck travel within Yellowstone County. A truck is defined as a vehicle with a combined gross vehicle weight of 16,000 pounds or more, which includes some medium trucks, delivery trucks, dump trucks, tractor trailer trucks, heavy trucks, and super-heavy trucks. The ordinance restricts truck activity along several county roads with the intent to reduce deterioration of the roads.

MAJOR TRUCK ACTIVITY CENTERS

Figure 7-1 identifies the location of major truck activity centers. These activity centers typically generate more truck traffic than other uses in the city. As shown in Figure 7-1, most of the truck destinations identified lie near Interstate 90, usually close to an existing interchange. Access is provided to Interstate 90 with interchanges at Shiloh Road/Zoo Drive, King Avenue (West Billings), South Billings Boulevard, South 27th Street, Old US 87 (Lockwood), and Johnson Lane. From a network perspective, truck traffic leaving the city to travel east or west is located close to the Interstate, providing easy travel for commercial trucks traveling east-west. However, trucks traveling north

The Johnson Lane/ Interstate 90 interchange area experiences a large proportion of daily truck activity. Improvements to this area with the Billings Bypass and Montana’s first diverging diamond interchange will enhance truck mobility and the movement of goods to and from Billings.

must pass through Billings to connect with Montana Route 3, US Route 87, or Old Highway 312. The lack of north-south routes in the city make this difficult for truck travel. Additionally, two of the existing north-south routes, N. 27th Street and Zimmerman Trail, have steep grades that make it challenging for truck/commercial vehicles to traverse and are discouraged for truck use by the BMCC. Additionally, Main Street, the other north-south route, includes several signalized intersections and a few congested intersections during the morning and evening peak hours, which increases the travel time and adds difficulty for trucks that stop and have to get started again. In addition to the overall network/system, the local

connections from the Interstate are critical to support freight movement between the region and local uses. Exhibit 7.3 shows truck activity centers near the Johnson Lane interchange in Lockwood. As shown in Exhibit 7.3, access to this truck activity center is served by the Johnson Lane interchange with Interstate 90. The interchange has two signalized intersections and larger radii at the intersections to accommodate truck travel. This interchange area experiences heavy truck activity, as shown in Exhibits 7.4, 7.5, and 7.6.

Exhibit 7.4 Truck Activity Center near Johnson Lane Interchange



Exhibit 7.5 Turning Trucks at the Johnson Lane and Frontage Road Intersection



Exhibit 7.6 Single Truck at the Johnson Lane and Frontage Road Intersection



Exhibit 7.7 Truck Activity at the Pilot/Conoco Truck Center



SAFETY

Crash data for the study area was reviewed to identify crashes involving commercial vehicles over the five-year period from 2013 to 2017. Table 7.2 summarizes the commercial vehicle related crashes.

Table 7.2 Commercial Vehicle Related Crash Summary (2013-2017)

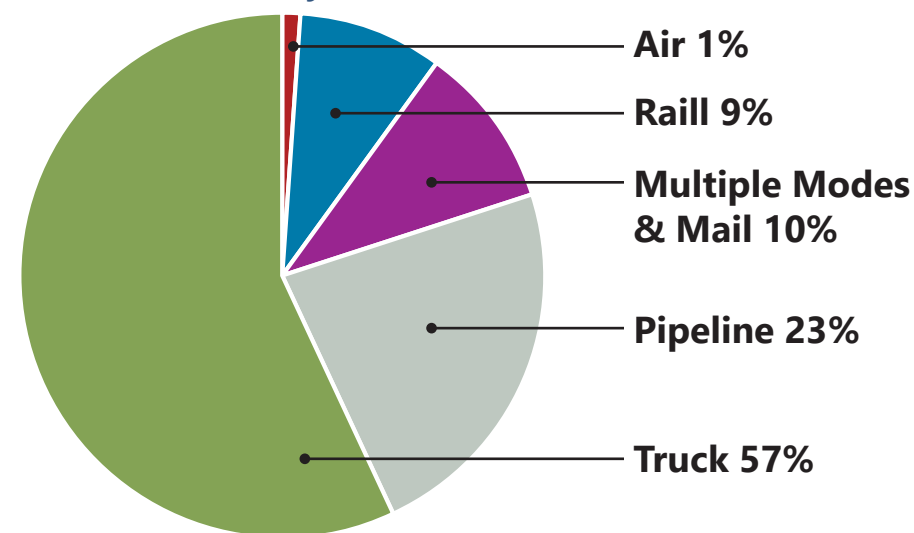
Category	Property Damage Only	Possible Injury	Non- Incapacitating Injury	Incapacitating Injury	Fatal	Unknown	Total
Crash Involving a Commercial Vehicle (Truck >10,000 pounds)	410 (80%)	64 (12%)	25 (5%)	9 (2%)	2 (<1%)	3 (<1%)	513

As shown in Table 7.2, there have been 513 reported crashes involving a commercial vehicle over the five-year time period. Of the crashes, 80% were property damage only crashes. Of the 100 crashes that did result in a type of injury, two of them were fatal crashes. Figure 7-2 shows the location and severity of commercial vehicle related crashes within the study area.

FUTURE TRUCK DEMAND

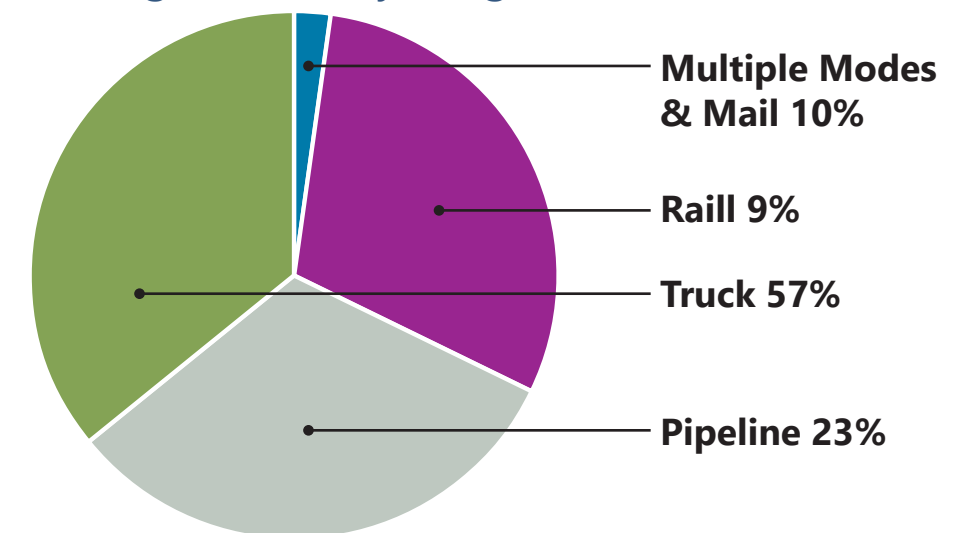
To aid in the identification of truck facility needs, year 2015/2016 and future year (year 2045) rail demand was summarized based on data provided in the Freight Analysis Framework by Federal Highway Administration (FHWA) (7-10). Exhibit 7.8 and Exhibit 7.9 show the percent breakdown of mode choice for moving freight by value and by weight in 2015, respectively.

Exhibit 7.8 Montana Freight Value Moved by Mode (2015)



Source: US DOT FHWA Freight Management and Operations - Montana Freight Profiles and Maps (http://ops.fhwa.dot.gov/freight/freight_analysis/state_info/montana/mt.htm)

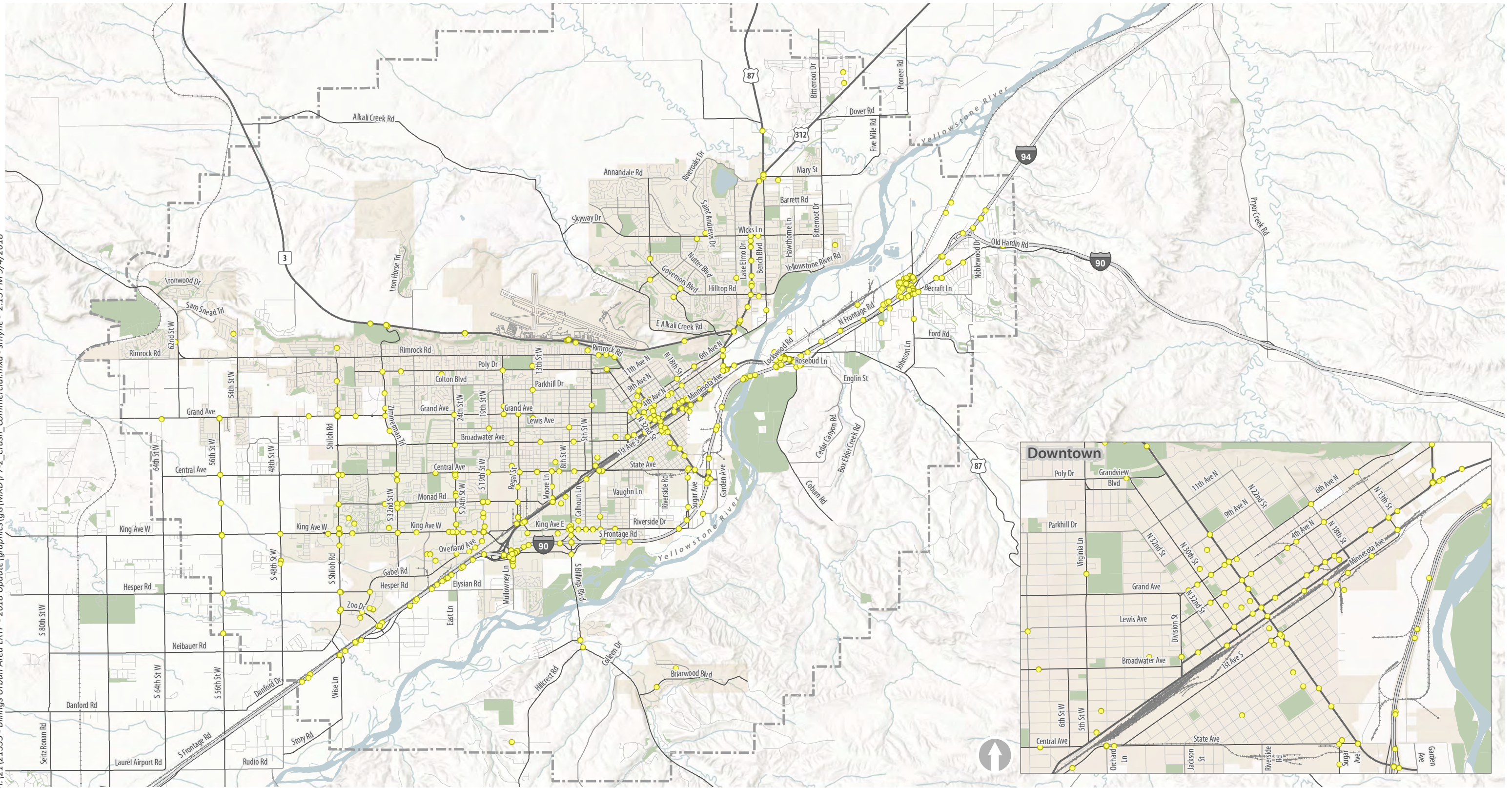
Exhibit 7.9 Montana Freight Tonnage Moved by Weight (2015)



Source: US DOT FHWA Freight Management and Operations - Montana Freight Profiles and Maps (http://ops.fhwa.dot.gov/freight/freight_analysis/state_info/montana/mt.htm)

2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN

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● Medium/Heavy Vehicle Crash

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Figure 7-2
Commercial Vehicle Crashes (2013 - 2017)

Billings serves as a central location for trucking traffic in the state and the region. The area projects to continue serving in this capacity based on the future freight tonnage moved by truck within Montana. Exhibits 7.10 and 7.11 show the major flows by truck to, from, and within Montana in 2012 and 2045, respectively.

Exhibit 7.10 Major Flows by Truck To, From, and Within Montana (2012)

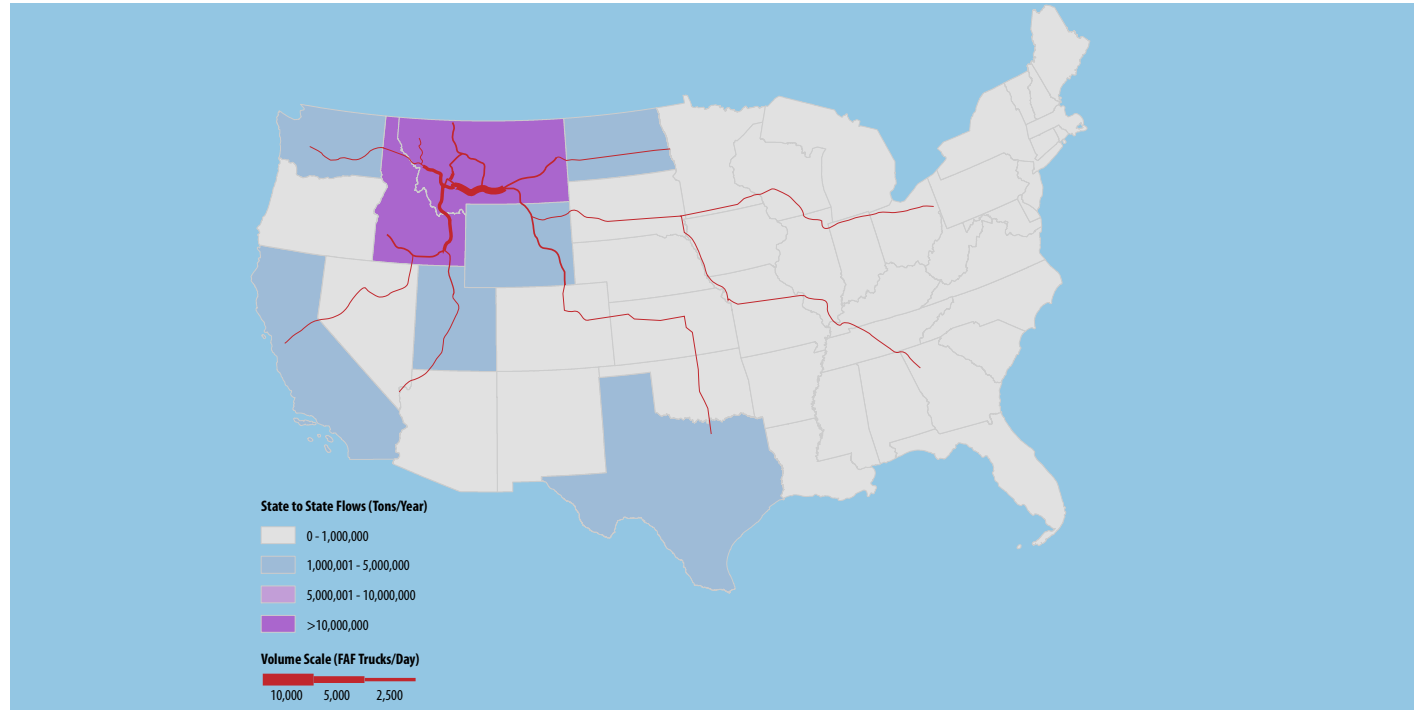
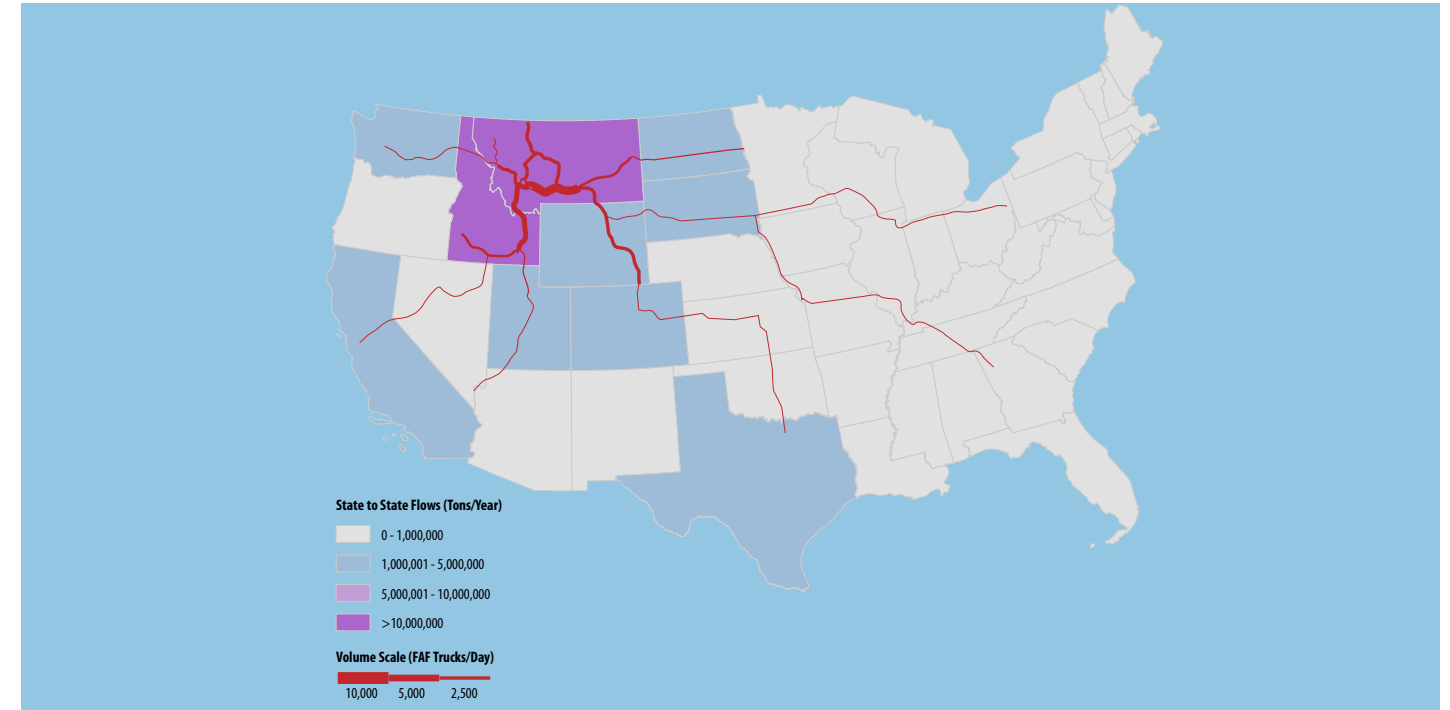


Exhibit 7.11 Major Flows by Truck To, From, and Within Montana (2045)



As shown in Exhibits 7.10 and 7.11, I-90 through Billings carries the highest truck activity in the state currently and projected in 2045. Table 7.3 compares the year 2016 and projected year 2045 rail demand within, from, and to the state in millions of tons and millions of dollars.

Table 7.3 Year 2016 and 2045 Total Freight Moved by Truck

Montana Truck Shipments	Within State			From State			To State		
	2016	2045	% change	2016	2045	% change	2016	2045	% change
In Millions of Tons (% moved by Truck)	29.8 (59%)	40.7 (39%)	37%	16.8 (21%)	21.9 (22%)	30%	12.8 (48%)	24.1 (55%)	88%
In Millions of Dollars (% moved by Truck)	\$15,143 (56%)	\$21,416 (52%)	41%	\$12,256 (42%)	\$24,419 (46%)	99%	\$22,682 (63%)	\$67,207 (75%)	196%

Source: Freight Analysis Framework by Federal Highway Administration (FHWA) - Freight Management and Operations (8-10)

Total freight moved by truck within, from, and to Montana is expected to increase by 46% between 2016 and 2045. As shown in Table 7.3, truck traffic is projected to continue to be a vital part of the City's economy, so it is important to continue to make investments for maintenance, capacity, and safety projects on the truck routes within the Billings urban area.

NEEDS AND DEFICIENCIES

In order to guide identification of short and long-range truck projects, deficiencies and needs were collected from the public, SC, and review of past plans/studies.

PUBLIC AND SC FEEDBACK

Four percent of the public comments corresponded to truck deficiencies and needs in the study area. Review of the public comment feedback and SC comments suggested the following themes:

- Rebuild the underpass at North 13th Street to accommodate large trucks
- Rebuild the underpass at North 21st Street to accommodate large trucks
- Improve operations on Main Street, Exposition Drive, and US 87
- Improve the operations for trucks at the I-90 interchanges
- Connect Montana Highway 3 to Molt Road
- Provide a major north-south corridor on the western edge of the Billings urban area that connects Montana Highway 3 to Interstate 90
- Maintain a safe and efficient balance between residential and truck traffic on the roadway network.

NEEDS DEFINED IN PREVIOUS STUDIES/PLANS

Several recent city-wide studies/plans focus on facilities that currently support most of the truck traffic in the Billings urban area. Key needs from these studies/plans include:

- **2017 Montana Freight Plan** (7-2) identifies the following strategies and two specific infrastructure project for improving truck mobility and alleviating congestion in Billings and other locations in the state:
 - Address heavy vehicle impacts on infrastructure
 - Mitigate delay caused by freight
 - Alleviate freight mobility issues on state owned infrastructure caused by recurring or non-recurring congestion.
 - Utilize innovative technology for the safe, secure, and efficient movement of freight.
 - The Billings Bypass Arterial project will construct an alternate route in Billings to promote connectivity, improve access, decrease congestion and improve operations (LOS) on major routes in the Billings area. This project includes new (and improved) roadway network between Interstate 90 (at the Johnson Lane Interchange) and US-87 (near the Old Highway 312 intersection), as well as a roadway extension of Five Mile Road to connect with Old Highway 312.
- I-90 Yellowstone River – Billings is a bridge replacement project on Interstate 90 in Billings to improve operations (increase LOS), decrease congestion and promote safety. This project includes additional lanes, new structures and ramp modifications.
- **2016 City of Billings Growth Policy** (8-3) calls out reduced congestion, improved traffic flow, and designated truck routes to support freight.
- **2016 Lockwood Growth Policy** (8-4) identifies growth guidelines for the TEDD, which is an area located in the northeast area of Lockwood that has an emphasis on industrial uses and connectivity with the railroad.
- **Lockwood TEDD Strategic Plan** (7-5) provides a path for further developing a competitive advantage for Yellowstone County over competing locations for business and professional employment. The purpose of the Lockwood TEDD is to provide planned industrial space in order to attract and retain industrial and manufacturing businesses in Yellowstone County. This plan includes new roadway connections to serve the industrial uses and connect to/from Interstate 90.

- **Billings Urban Area Long Range Transportation Plan** (2014, 7-15) summarizes several streets and highway projects in the urban area and details relevant studies and plans completed between 2008 and 2014 related to improving truck mobility:
 - **Lockwood Transportation Study** (7-16) identifies that the Lockwood area intersections and roadways should improve to accommodate heavy commercial trucking vehicles.
 - **Billings Bypass Arterial** (7-17) provides a new roadway connecting Lockwood and Billings.
 - **East Billings Urban Renewal District (EBURD) Master Plan** (7-18) identifies that new roadway facilities need to be developed that maintain access and circulation for large trucks.
 - **I-90 Corridor Planning Study** (7-19) identifies several capacity and safety projects at interchanges and the mainline segment along I-90.

PROJECT LIST RELATED TO FREIGHT FACILITIES FOR TRUCKS

A list of projects related to freight facilities for trucks were identified through the literature review and the discussion of existing deficiencies and needs with the public and SC. Table 7.4 summarizes truck projects in the Billings Urban Area.

Table 7.4 Truck Projects

Project ID	Name	Description	Estimated Planning Level Cost	Referenced Plan/Study
FT1	Billings Bypass Arterial		\$122,160,000	A, B, E, G
FT2	I-90 Yellowstone River – Billings	Replace bridges	\$72,160,000	B
FT3	Inner Belt Loop – Alkali Creek Rd to Highway 3	Construction of a new road from Alkali Creek Road to Highway 3.	\$7,000,000	C
FT4	Old Hardin Road – Lockwood Interchange to Johnson Lane	Reconstruct to a 3-lane urban roadway	\$5,700,000	H
FT5	Highway 3 to Molt Road Connection	Construct a new Roadway connecting Highway 3 to Molt Road	\$11,605,115	I
FT6	Highway 3 Widening – Zimmerman to Apache	Widen Highway 3 from Zimmerman Trail to Apache Trail with TWLTL	\$2,600,000	J
FT7	I-90 from S Billings Boulevard interchange to 27th Street interchange	Add a third travel lane in each direction on I-90	\$4,000,000	E, G
FT8	I-90 from Lockwood interchange to Johnson Lane interchange	Add a third travel lane in each direction on I-90	\$3,000,000	E, G
FT9	Lockwood Road & N Frontage Road	Reconfiguration of existing intersection	\$495,000	H
FT10	US 87 & Old Hardin Road	Upgrade 3-way stop intersection to a roundabout	\$1,000,000	H
FT10A	West Billings Interchange	Update geometry to match C standards, improve landscaping and improve pedestrian facilities	\$6,900,000	E, G
FT10B		Construct additional EB and WB mainline lanes through interchange, modify vertical curve, reconstruct bridge segments and restripe WB off-ramp at West Billings Interchange.	\$12,600,000	E, G
FT11	Shiloh Interchange	Geometric improvements to improve operations and safety	\$1,900,000	E, G
FT12	South Billings Blvd Interchange	Additional EB and WB mainline lanes under and through the Interchange	\$1,600,000	E, G
FT13	27th Street Interchange	Construct additional EB and WB mainline lanes under and through Interchange. Restripe EB off-ramp and improve pedestrian facilities	\$1,900,000	E, G
FT14	Lockwood Interchange	Construct additional EB and WB mainline lanes under and through the Lockwood Interchange and improve pedestrian facilities	\$1,900,000	E, G
FT15	Johnson Ln Interchange	Geometric improvements to improve operations and safety	Included with Bypass project	A, B, E, G
FT16	21st Street Underpass	Add capacity and pedestrian/bicycle enhancements at the 21st Street underpass	\$3,052,000	D
FT17	13th Street Underpass	Add capacity and pedestrian/bicycle enhancements at the 13th Street underpass	\$18,400,000	D, G
FT18	Lockwood TEDD Rail Coordination	Coordinate with the Lockwood TEDD regarding rail infrastructure improvements for this area	-	F
FT19	Exposition Drive & 1st Avenue N Blgs	Intersection improvement	\$1,600,000	B
FT20	Underpass Avenue Improvements	Intersection Improvements	\$8,600,000	B
FT21	Laurel & Moore Lane	Study for capacity improvements	\$250,000	H
FT22	Airport Rd & Main St – BLGS	Intersection Improvements	\$11,700,000	B

A – Montana Freight Plan

B - Billings Urban Area Transportation Improvement Program, FY 2017-2021

C - City of Billings Capital Improvement Program, FY 2019-2023

D - 2016 Montana Rail Grade Separation Study

E – I-90 Corridor Planning Study

F – Lockwood TEDD Strategic Plan

G – MDT

H – Consultant Team

I – Molt Road/Highway 3 Collector Road Planning Feasibility Study (7-20)

J – Highway 3 Corridor Planning Study (7-21)



Chapter 8

Rail Services and Facilities



RAIL SERVICES AND FACILITIES

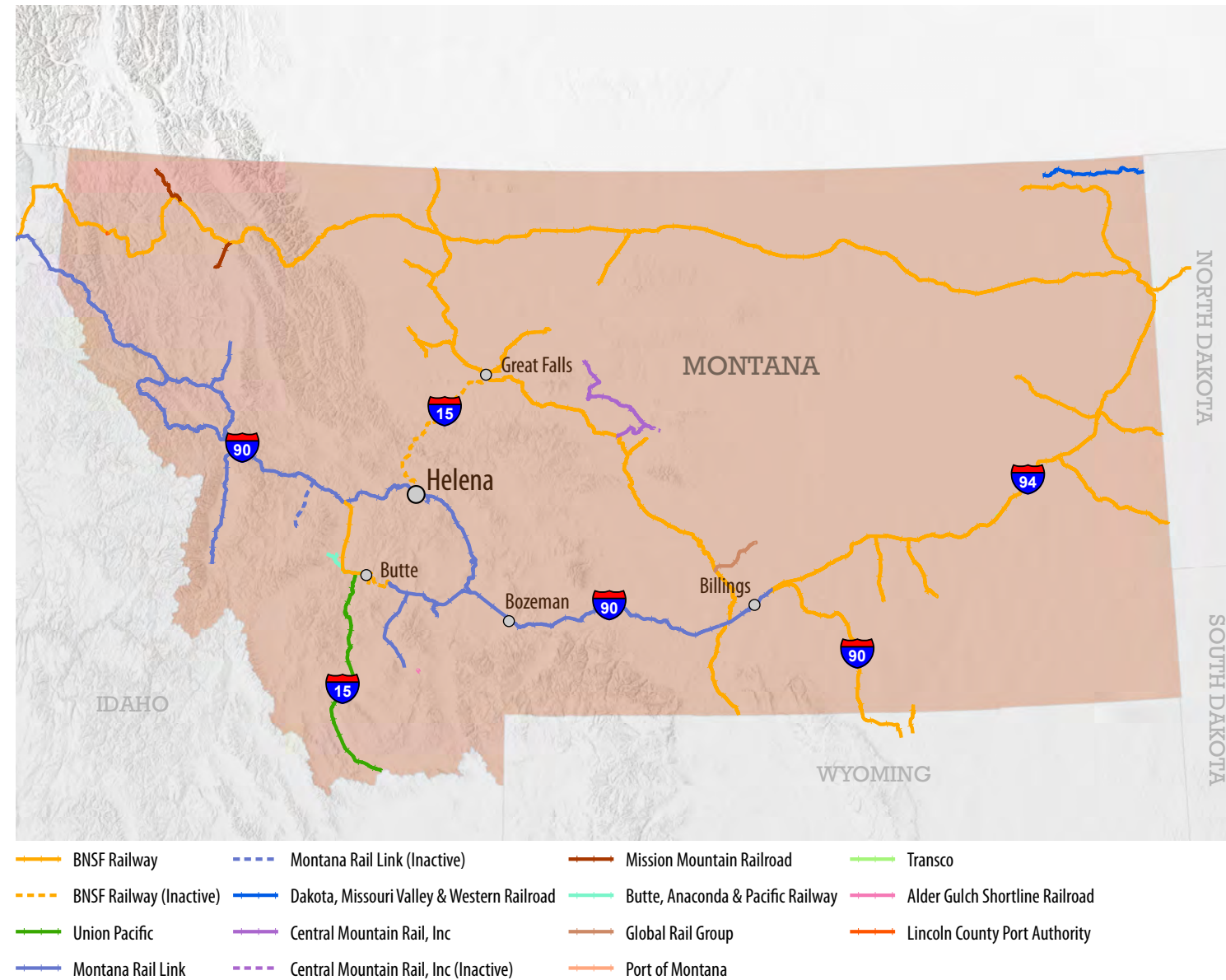
Billings serves as a regional hub for freight rail traffic due to the geographic location and rail system that runs through the City and connects with adjacent states. Exhibit 8-1 shows the location of Billings and active railway lines in the state of Montana. No passenger rail service is provided through the City of Billings. Rail traffic within Billings plays a critical part in the economic vitality and movement of commerce throughout the state, country, and world. As such, the 2018 LRTP outlines several goals related to rail services and facilities:

Goal 1: Safety – Develop a safe transportation system

Goal 2: Functional Integrity and Efficiency – Optimize, preserve, and enhance the existing transportation system

Goal 7: Economic Vitality – Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce.

Exhibit 8-1. Montana Rail System



LITERATURE REVIEW

Recent city and statewide studies/plans were reviewed for existing conditions, available data, and short and long-range projects related to railroad facilities in the study area. These studies/plans are described below:

- **2017 Montana Freight Plan** (8-1) represents the first plan specific to freight for MDT and for the state. This plan provides a comprehensive evaluation of freight transportation in Montana and provides guidance for both short and long-term freight-related transportation investment decisions.
- **2010 Montana State Rail Plan** (8-2) summarizes statewide rail trends and facilities, feasibility of passenger rail service, and estimates rail trends for year 2035.
- **2016 City of Billings Growth Policy** (8-3) includes a goal that the transportation system is designed to be safer and more efficient for all users. This goal has an objective on rail and freight, specifically for safe railroad crossings (both vehicle and pedestrian) and passenger rail.
- **2016 Lockwood Growth Policy** (8-4) has a growth guideline for the TEDD, which is an area located in the northeast area of Lockwood that has an emphasis on industrial uses and connectivity with the railroad.
- **Lockwood TEDD Strategic Plan** (8-5) provides a path for further developing a competitive advantage for Yellowstone County over competing locations for

business and professional employment. The purpose of the Lockwood TEDD is to provide planned industrial space in order to attract and retain industrial and manufacturing businesses in Yellowstone County. The location of the Lockwood TEDD is located next to the rail service provided by MRL. The plan identifies that additional rail spurs and a transloading facility would benefit the development of the Lockwood TEDD.

- **2016 Montana Rail Grade Separation Study** (8-6) addresses changed conditions from the 2003 Montana Rail Grade Separation Study and assesses highway-rail crossing needs across that state. The 2016 Montana Rail Grade Separation Study used a data-driven evaluation process to identify a list of at-grade and grade-separated railroad crossings where potential feasible improvements may be considered. The findings included four locations in Billings—27th Street, Moore Lane, 13th Street, and 21st Street with more details provided below:
 - 27th Street (at-grade) – MDT is currently conducting a more detailed feasibility study at this location.
 - Moore Lane (at-grade) – An undercrossing is recommended at this location.
 - 13th Street (underpass) – Improvement options include modification to the horizontal and vertical clearances at the crossing locations to facilitate legal height truck usage.
 - 21st Street (underpass) - Improvement options include lowering the roadway

to increase the vertical clearance of the underpass to enhance capacity.

- **27th Street Railroad Crossing Study** (8-7) is an ongoing feasibility study to develop improvement options at the 27th Street at-grade crossing location in downtown Billings.
- **Billings Railroad Crossing Feasibility Study** (8-8) examined current and future conditions with emphasis placed on effective delivery of emergency services, safety, and efficiency for all travel modes, business viability, and elimination of any real or perceived socio-economic division of the community created by the railroad tracks. This study identified several possible alternatives ranging from do nothing to technology upgrades to grade-separation (underpass or overpass) on 27th Street to relocating the main railroad line and/or operations.
- **Montana Freight Assessment: Trends and Opportunities to Improve Access and Create Freight Efficiencies for Montana Companies** (8-9) summarizes the potential for improving Montana’s freight infrastructure to benefit producers and manufacturers.
- **Freight Analysis Framework** (8-10) produced through a partnership between BTS and FHWA, integrates data from a variety of sources to create a comprehensive picture of freight movement among states and major metropolitan areas by all modes of transportation. FAF version 4 (FAF4) provides estimates for tonnage (in thousand

tons) and value (in million dollars) by regions of origin and destination, commodity type, and mode. Available data used for the 2018 LRTP includes data from 2016 and forecasts to 2045.

EXISTING CONDITIONS

This section includes a summary of existing rail facilities, operators, and crossings in the study area. A brief safety analysis was performed to identify any trends related to accidents near railroad crossing facilities.

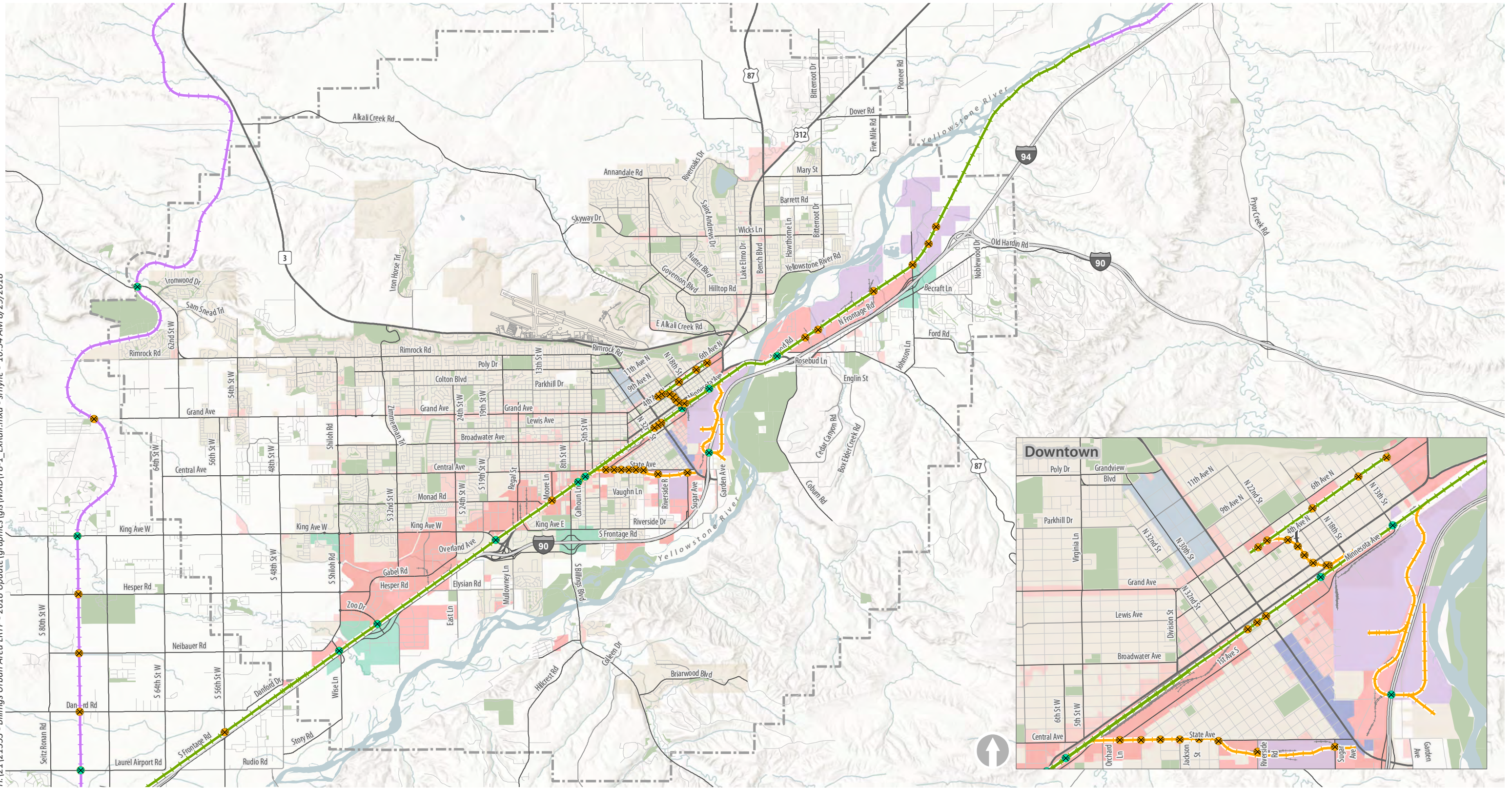
RAIL FACILITIES AND OPERATORS

The Billings Urban Area is served by two railroad operators, Burlington Northern Santa Fe (BNSF) and Montana Rail Link (MRL). MRL enters the study area from the east and continues parallel to Interstate 90 to the west, connecting Billings with Bozeman, Helena, Missoula, and eventually entering Northern Idaho. BNSF breaks off of the MRL line west of the city and continues north. In addition to the railroad lines operated by BNSF and MRL, there is a section of abandoned rail to the west of Billings and several rail spurs that serve industrial zones in the study area. Figure 8-1 shows the existing rail facilities and crossings in the study area.

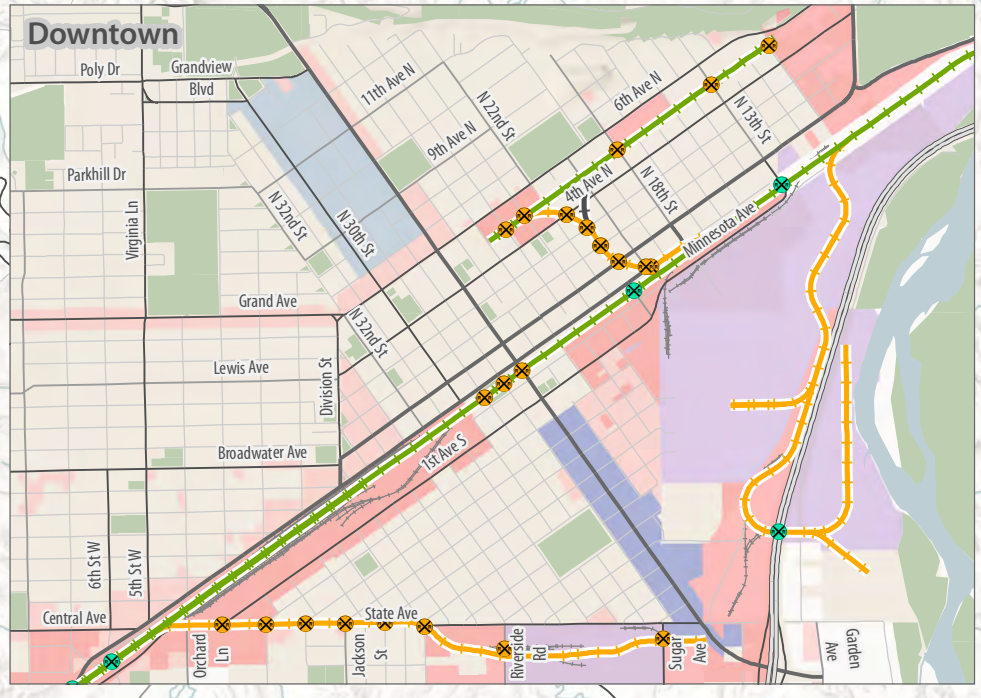
There are 27 grade crossings of the BNSF and MRL lines, of which 16 crossings are located at-grade within the Billings Urban Area

PLACEHOLDER

PLACEHOLDER



- At Grade Crossing
- Grade Separated Crossing
- Burlington Northern Santa Fe
- Montana Rail Link
- Spur
- Study Area
- Park
- Commercial
- Commercial/Industrial
- Heavy Industrial
- Light Industrial
- Medical Corridor Permit
- South 27th Street Corridor
- Entryway
- City of Billings



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Figure 8-1
Existing Railroad Facilities

RAIL CROSSINGS AND FREQUENCY

The MRL railroad tracks generally traverse along the north side of Interstate 90, along the south side of 1st Avenue South, and along the north side of Interstate 94 through the study area. The BNSF railroad tracks, although located mostly outside of the MPO study area follow Highway 3 to the north. The Manual for Uniform Traffic Control Devices (MUTCD) (8-11), defines an active crossing as any active traffic control that notifies the road user of rail traffic at grade crossings. The types of traffic control can include, but are not limited to, four-quadrant gate systems, automatic gates, flashing-light signals, traffic control signals, and actuated blank-out and variable message signs. A passive crossing would not include any of these traffic control devices.

There are 27 grade crossings of the BNSF and MRL lines, as shown in Figure 8-1. Table 8.1 summarizes the characteristics and level of train activity at the rail crossings for the BNSF and MRL lines the study area.

Table 8.1 Major Rail Crossing Characteristics – MRL and BNSF

Location of Railroad Crossing	Rail Operator	Type	Active or Passive	Number of Trains ¹		Roadway AADT ² at Crossing Location	Pedestrian Crossing Treatment
				Thru Movements	Switching Movements		
72nd Street	MRL	At-Grade	Active	32	0	2,000	No
56th Street	MRL	At-Grade	Active	32	0	2,000	No
Shiloh Road	MRL	Grade Separated	N/A	32	0	5,000	N/A
Zoo Drive	MRL	Grade Separated	N/A	32	0	10,000	N/A
King Avenue W (Access Road)	MRL	Grade Separated	N/A	32	0	40,000	No
Moore Lane	MRL	At-Grade	Active	32	0	10,000	No
Montana Avenue	MRL	Grade Separated	N/A	32	0	20,000	N/A
6th Street	MRL	Grade Separated	N/A	32	0	10,000	N/A
29th Street	MRL	At-Grade	Active	32	10	2,600	Yes
28th Street	MRL	At-Grade	Active	32	6	2,100	Yes
27th Street	MRL	At-Grade	Active	32	6	15,000	Yes
N 21st Street	MRL	Grade Separated (underpass)	N/A	32	0	2,600	N/A
N 13th Street	MRL	Grade Separated (underpass)	N/A	32	0	10,000	N/A
US 87	MRL	Grade Separated	N/A	30	0	26,000	N/A
Steffes Road	MRL	At-Grade	Active	30	0	Not Available	No
Brickyard Lane	MRL	At-Grade	Active	30	0	Not Available	No
Exxon Refinery Road	MRL	At-Grade	Active	30	2	Not Available	No
Johnson Lane	MRL	At-Grade	Active (no gates)	30	0	500	No
Gravel Pit Road	MRL	At-Grade	Active	30	2	Not Available	No
Local Road	MRL	At-Grade	Passive	30	0	Not Available	No
Laurel Airport Road	BNSF	Grade Separated	N/A	6	0	2,000	N/A
Danford Road	BNSF	At-Grade	Passive	6	0	500	No
Neibauer Road	BNSF	At-Grade	Passive	6	0	500	No
Hesper Road	BNSF	At-Grade	Passive (stop sign)	6	0	500	No
King Avenue West	BNSF	Grade Separated	N/A	6	0	4,000	N/A
Grand Avenue	BNSF	At-Grade	Active	6	0	4,500	No
Molt Road	BNSF	Grade Separated	N/A	6	0	3,500	N/A

¹Source: Federal Rail Administration

²Source: Billings Urbanized Area Traffic Count Map (8-12), Yellowstone County Traffic Counts Map (8-13)

As shown in Figure 8-1, there are several at-grade crossings in the downtown area that cross the MRL railroad tracks and spur lines. As shown in Table 8.1, AADT is reported for roadways that intersect rail lines in the study area. AADT's on roadways with at-grade crossings are typically below 5,000 vehicles, with the exception of 27th Street and Moore Lane, which both have an AADT of greater than 10,000 vehicles. As shown in Table 8.2, the train traffic through the study area is consistent and accommodations should be made to balance rail movement with other modes. Switching movements create additional delays compared to thru movements, as switching movements require the trains to stop for some amount of time.

The Montana Rail Link has approximately 30 to 32 daily trains that pass through the Billings Urban Area.

Pedestrian crossing treatments are included at three at-grade rail crossings in the downtown area. Exhibit 8.2 shows the railroad crossing and pedestrian treatment at 27th Street.

Crossing warning signals and technology upgrades, similar to those installed at 27th Street, have also been installed at 28th Street, 29th Street, and Moore Lane. Crossing upgrades such as these are completed through MDT with federal safety funds provided by the Administrative Rules of Montana (ARM 18.6.304) (8-14). Upgrades at 27th Street, 28th Street, and 29th Street were completed through the Billings Quiet Zone project in 2008 (8-15). There are currently two grade-separated rail crossings within the downtown area, located at 21st Street and 13th Street. Exhibit 8.3 and 8.4 show the crossings at 13th Street and 21st Street, respectively. The crossing at 13th Street is signed with a vertical clearance of 13 feet 8 inches, while the MDT BMS documents the vertical clearance at 14 feet. The underpass is approximately a half-mile long with sidewalk on the west side only and serves an AADT of approximately 10,000 vehicles per day. The crossing at 21st Street has a clearance of 8 feet with sidewalk on both sides of the road. The underpass is approximately a tenth of a mile long and has an AADT of approximately 2,500 vehicles per day. Improvement options were identified at both of these crossing locations in the 2016 Montana Rail Grade Separation Study.

Exhibit 8.2 Rail and Pedestrian Crossing at 27th Street



Exhibit 8.3 Rail Crossing at 13th Street

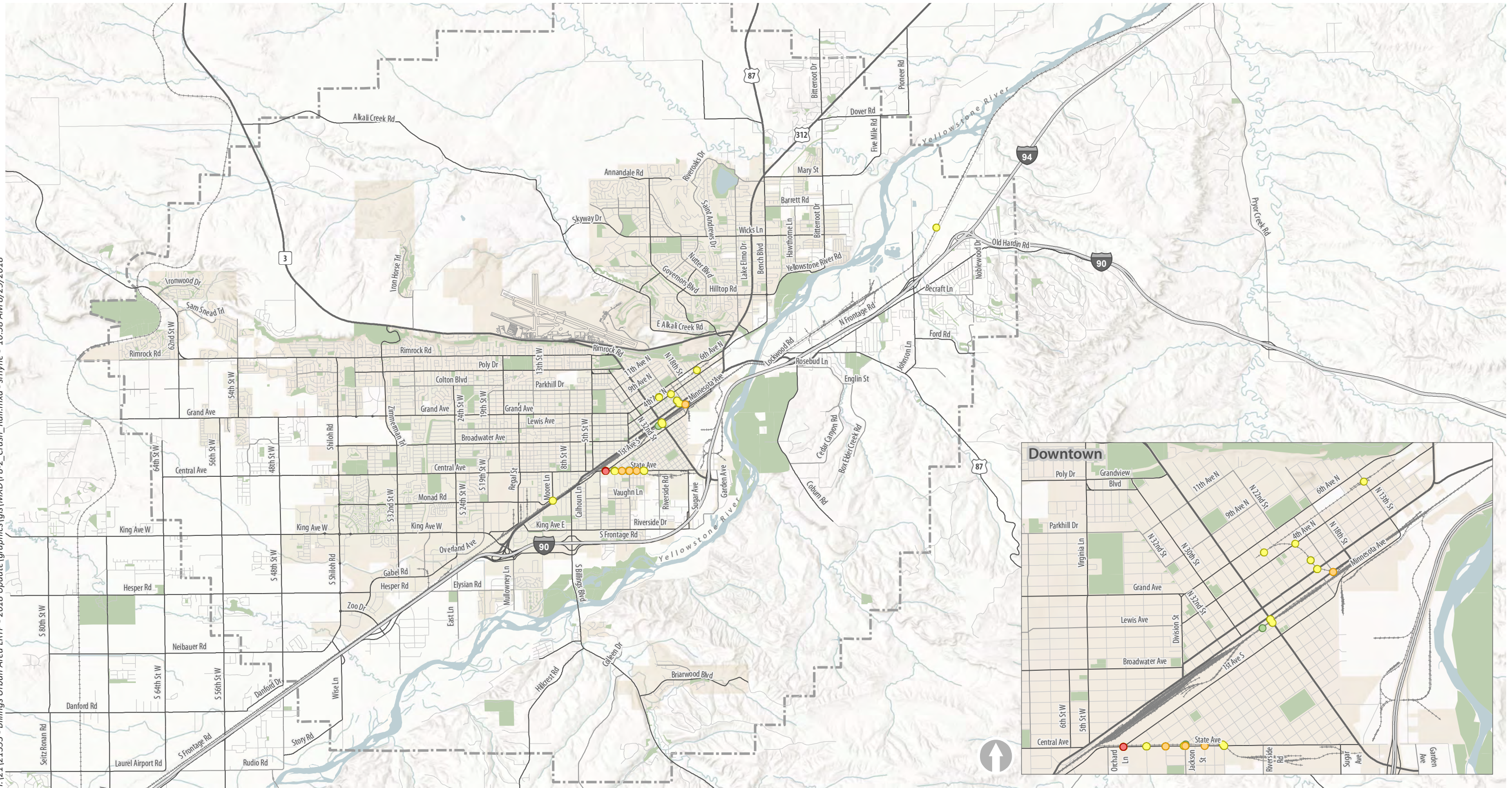


Exhibit 8.4 Rail Crossing at 21st Street



2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN

H:\121121353 - Billings Urban Area L RTP - 2018 Update\graphics\gis\MXD\F8-2_Crash_Rail.mxd - srhnye - 10:58 AM 8/29/2018



- Crash Severity**
- Incapacitating Injury Accident
 - Non-Incapacitating Evident Injury Accident
 - Non-Injury Accident (Property-Damage-Only-Accident)
 - Possible Injury Accident
 - Unknown

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Figure 8-2
At-Grade Rail Crossings Crashes (2013 - 2017)

SAFETY

Crash data for the study area was reviewed to identify crashes related to the rail crossings over the five year period from 2013 to 2017. Table 8.2 summarizes the crashes related to rail crossings in the study area. Figure 8-2 summarizes the rail related crashes in the study area.

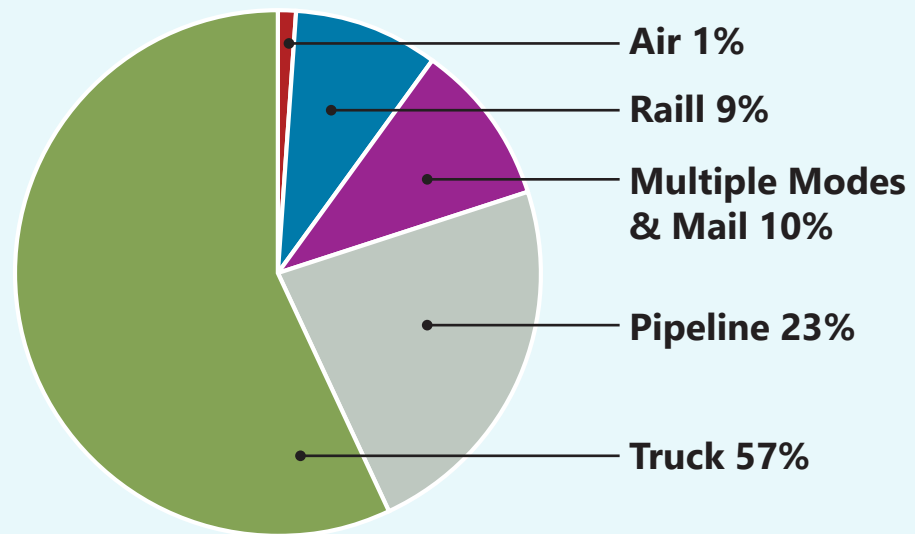
Table 8.2 At-Grade Rail Crossings Crash Summary (2013-2017)

Category	Property Damage Only	Possible Injury	Non- Incapacitating Injury	Incapacitating Injury	Fatal	Unknown	Total
Crash Related to At-Grade Rail Crossing	64 (73%)	16 (18%)	5 (6%)	1 (1%)	0 (0%)	2 (2%)	88

EXISTING AND FUTURE RAIL DEMAND

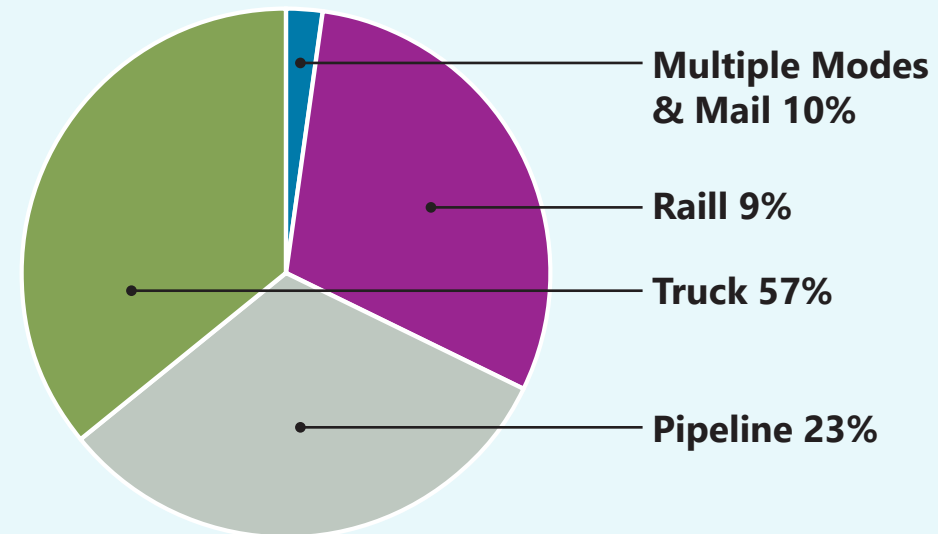
To aid in the identification of rail facility needs, year 2015/2016 and future year (year 2045) rail demand was summarized based on data provided in the Freight Analysis Framework by Federal Highway Administration (FHWA) (8-10). Exhibit 8.5 and Exhibit 8.6 show the percent breakdown of mode choice for moving freight by value and by weight in 2015, respectively.

Exhibit 8.5 Montana Freight Value Moved by Mode (2015)



Source: US DOT FHWA Freight Management and Operations - Montana Freight Profiles and Maps (http://ops.fhwa.dot.gov/freight/freight_analysis/state_info/montana/mt.htm)

Exhibit 8.6 Montana Freight Tonnage Moved by Weight (2015)



Source: US DOT FHWA Freight Management and Operations - Montana Freight Profiles and Maps (http://ops.fhwa.dot.gov/freight/freight_analysis/state_info/montana/mt.htm)

Rail is projected to continue to serve as a valuable economic driver in Billings and Montana. Approximately 30% of freight shipments by weight was moved by rail in 2015. Freight moved from the state by rail continues to account for the majority of rail traffic in the state. Coal accounts for a significant amount of freight tonnage originating in the state. Montana is the nation’s sixth largest coal producing state with over 93% of it being shipped via rail (8-1, 8-10). Most of this production is in the rural southeast corner of the state, which is the reason for the high level of train activity through Billings. Table 8.3 compares the year 2016 and projected year 2045 rail demand within, from, and to the state in millions of tons and millions of dollars.

Table 8.3 Year 2016 and 2045 Total Freight Moved by Rail

Montana Rail Shipments	Within State			From State			To State		
	2016	2045	% change	2016	2045	% change	2016	2045	% change
In Millions of Tons (% moved by Rail)	4.2 (8%)	5.5 (5%)	31%	39.6 (48%)	32.0 (32%)	-20%	6.4 (24%)	8.8 (20%)	18%
In Millions of Dollars (% moved by Rail)	\$1,158 (4%)	\$1,584 (4%)	37%	\$4,029 (14%)	\$6,561 (12%)	60%	\$2,960 (8%)	\$6,221 (7%)	110%

Source: *Freight Analysis Framework by Federal Highway Administration (FHWA) - Freight Management and Operations (8-10)*

As shown in Table 8.3, freight moved from the state by rail is projected to decrease by 20% in total tonnage by the year 2045. Overall, the amount of freight moved around and across the state of Montana is projected to increase by 2045. Billings is anticipated to continue serving as a central hub for rail transport in Montana and several surrounding areas.

NEEDS AND DEFICIENCIES

In order to guide identification of short and long-range rail projects, deficiencies and needs were collected from the public, SC, and review of past plans/studies.

PUBLIC AND SC FEEDBACK

Comments and feedback received identified delays during closures of roadways at the at-grade crossings as the primary concern regarding rail traffic in the study area. Comments from the Public Open House and feedback received from the SC identified the following focus areas for projects related to freight rail traffic.

- Provide a grade separated crossing of the railroad tracks on 27th Street in downtown Billings.
- Move the railroad tracks a way from downtown (A major urban center does not have a train track dividing its core downtown area in half).
- Provide an alternate route to 27th Street during closures/train delays – consider improvements to the underpasses at 13th Street and 21st Street.
- Consider advanced warnings, signal modifications, and other smart technology solutions for alerting motorists of trains. Real-time information is needed to alert transportation users of the time table of approaching trains in downtown and to expect delays. Advanced warning systems linked to websites and mobile devices could warn roadway users of delays at the at-grade intersections and identify potential alternate routes.
- Address capacity and design issues at railroad underpasses with 13th Street and 21st Street.

NEEDS DEFINED IN PREVIOUS STUDIES/PLANS

Review of recent studies/plans identified several needs for rail facilities, listed below and used to identify recommended projects.

- **2017 Montana Freight Plan (8-1)** represents the first plan specific to freight for MDT and for the state. This plan identified the following strategies related to rail:
 - BNSF invested approximately \$180 million in Montana for capital improvements in 2016. This included maintaining and expanding the core network and related assets; new locomotives, freight cars, and other equipment; continuing implementation of positive train control (PTC); and investing in expansion and efficiency projects to enhance productivity and velocity.
 - The at-grade railroad crossings located at 27th Street and Moore Lane should be evaluated further to determine if improvements at these locations are viable and cost effective.
 - MDT will continue to work with railroad owners/lessees to implement effective safety technologies, particularly where rail and highway systems meet.
- **2016 City of Billings Growth Policy (8-3)** calls out providing safe railroad crossings (both vehicle and pedestrian) and passenger rail.

- **2016 Lockwood Growth Policy** (8-4) identifies growth guidelines for the TEDD, which is an area located in the northeast area of Lockwood that has an emphasis on industrial uses and connectivity with the railroad.
- **Lockwood TEDD Strategic Plan** (8-5) identifies that additional rail spurs and a transloading facility would benefit the development of the Lockwood TEDD.
- **2016 Montana Rail Grade Separation Study** (8-6) included four locations in Billings—27th Street, Moore Lane, 13th Street, and 21st Street with more details provided below:
 - 27th Street (at-grade) – The underpass improvements were identified at \$73.9 million. The overpass improvements were identified at \$39.2 million. MDT is currently conducting a more detailed feasibility study at this location, titled 27th Street Railroad Crossing Study.
 - Moore Lane (at-grade) – An undercrossing is recommended at this location with the cost estimate at \$31 million.
 - 13th Street (underpass) – Improvement options include modification to the horizontal and vertical clearances at the crossing locations to facilitate legal height truck usage. The cost estimate is \$1-2 million.
 - 21st Street (underpass) – Improvement options include lowering the roadway to increase the vertical clearance of the underpass to enhance capacity. The cost estimate is \$1.5-3 million.
- **27th Street Railroad Crossing Study** (8-6) is an ongoing feasibility study to develop improvement options at the 27th Street at-grade crossing location in downtown Billings.
- **Billings Railroad Crossing Feasibility Study** (8-7) identified several possible alternatives ranging from do nothing to technology upgrades to grade-separation (underpass or overpass) on 27th Street to relocating the main railroad line and/or operations. The alternatives present significant challenges for implementation due to physical constraints and project cost. As a result, the grade separated crossings located at 13th Street and 21st Street are a high priority for potential improvements as they are the only grade separated crossings in the downtown area. Geometric improvements are needed to improve drainage, visibility, and accommodate emergency services vehicles and large trucks. In addition, pedestrian and bicycle facilities are needed at the two underpasses to improve connectivity and safety for non-motorized users. These two underpasses are identified with potential improvements in the 2016 Montana Rail Grade Separation Study.
- **Montana Freight Assessment: Trends and Opportunities to Improve Access and Create Freight Efficiencies for Montana Companies:** This assessment identifies the challenges of freight services in Montana (8-8).

FREIGHT PROJECTS RELATED TO RAIL TRAFFIC

A list of projects related to freight facilities for rail were identified through the literature review and the discussion of existing deficiencies and needs with the public and SC. Table 8.4 summarizes rail projects in the Billings Urban Area.

Table 8.4 Rail Projects

Project ID	Name	Description	Estimated Planning Level Cost	Referenced Plan/Study
FR1	27th Street Railroad Crossing Study	Complete the feasibility study for the at-grade rail crossing at 27th Street	Ongoing	A, B, C
FR2	Moore Lane Railroad Crossing Study	Perform a feasibility study for the at-grade rail crossing at Moore Lane	\$300,000	A, B
FR3	21st Street Underpass	Add capacity and pedestrian/bicycle enhancements at the 21st Street underpass	\$3,000,000	B
FR4	13th Street Underpass	Add capacity and pedestrian/bicycle enhancements at the 13th Street underpass	\$2,000,000	B
FR5	Lockwood TEDD Rail Coordination	Coordinate with the Lockwood TEDD regarding rail infrastructure improvements for this area	-	D

A - Montana Freight Plan, B - 2016 Montana Rail Grade Separation Study, C - 27th Street Railroad Crossing Study, D - Lockwood TEDD Strategic Plan



Chapter 9

Pedestrian and Bicycle Facilities



PEDESTRIAN AND BICYCLE FACILITIES

The Billings Urban Area has been upgrading sidewalk facilities, constructing trail systems, and adding bike lanes to roadways over the last 25 years. Recent examples by the City of Billings, Lockwood, and the MPO include the following:

- The City of Billings has taken steps toward this goal by promoting programs such as Safe Routes to School and Ales for Trails, by partnering with St. Vincent Healthcare and School District #2 to develop bicycle education and repair events at elementary schools, and by adopting planning studies such as the BikeNet Plan (1995), Heritage Trail Plan (2004), Billings Area Bikeway and Trail Master Plan (2011) and Update (2017), and Complete Streets Policy (2011 and 2016), Benchmark Study (2013), and Progress Report (2017).
- Lockwood has taken recent steps towards this goal with the completion of a Non-Motorized Transportation Plan (2015).
- Promoting alternate modes of transportation has led to the completion of nine Safe Routes to School Studies (SRTS) for elementary schools in Yellowstone County. Additional studies are in progress as of this report's publication. These studies aim to enhance student safety and encourage more students to walk and bike to school.
- The MPO has added an Active Transportation Planner to help lead and coordinate these efforts.

Active transportation continues to be a priority of both communities and the MPO. Active transportation also supports transit use, as many transit trips begin and end with walking or bicycling. As such, the 2018 LRTP outlines several goals related to pedestrian and bicycle elements:

A goal of the region is to establish one of the most comprehensive bicycle and trail networks in the State of Montana, and a 'Gold Bicycle Friendly Community' rating by the League of American Bicyclists by the year 2030.

Goal 1: Safe – To develop a safe transportation system.

Goal 4: Environment – To develop a transportation system that protects the natural environment and promotes a healthy sustainable community.

Goal 6: Pedestrians and Bicyclists – To create a transportation system that supports the practical and efficient use of active transportation such as walking and bicycling

Goal 7: Economic Vitality – To ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce.

PLACEHOLDER

PLACEHOLDER

LITERATURE REVIEW

Recent studies/plans were reviewed for existing conditions, available data, and short/long-term projects related to pedestrian and bicycle facilities in the study area. These studies/plans are described below:

- **2014 Billings Urban Area Long Range Transportation Plan (9-1):** This plan summarizes active transportation in the Urban Area and identifies priority projects for the area.
- **Billings Area Bikeway and Trail Master Plan Update (9-2):** This plan identifies eight goals associated with the bikeway and trail system in the Billings Urban Area. The plan includes a demographic analysis, inventory of existing facilities, project, program and policy recommendations, and implementation plan. This plan is an excellent technical resource for the community regarding bikeway and trail facilities, usage, and project recommendations.
- **Trail Asset Management Plan (9-3):** The plan discusses the maintenance needs of the existing and future trail system including a discussion of potential funding sources.
- **Safe Routes to School Study Phase I & Phase II (9-4):** The plan evaluates active transportation options to and from the 22 existing elementary schools in the City of Billings. Two goals are identified by the project: 1) enhance the safety for students traveling to and from school, and 2) increase the number of students walking or bicycling to school. The study focuses primarily on engineering improvements but discusses

the 5 E's for SRTS efforts: Engineering, Enforcement, Encouragement, Education, and Evaluation.

- **Complete Streets Progress Report (9-5):** This report offers a performance-based approach to the Billings transportation system to ensure it works for all people of all abilities. It examines current and future opportunities for a balanced transportation network using data from the previous three years.
- **Lockwood Non-Motorized Transportation Plan (9-6):** This plan seeks to eliminate fatalities and serious injuries caused by vehicular and pedestrian conflicts throughout the Lockwood area. It identifies a five-year work plan and 20-year desired project list in the areas of education, enforcement, engineering, evaluation, and partnerships and funding to achieve this goal.

The studies listed below were also reviewed, but either had a larger scope than just pedestrian/bicycle elements or focused on a particular section of the urban area.

- Billings-Yellowstone County Household Travel Survey (2017)
- TranPlanMT (2017)
- Billings Community Transportation Safety Plan (2016)
- City of Billings Growth Policy (2016)
- Lockwood Growth Policy (2016)
- West End Multimodal Planning Study (2016)
- Rims to Valley Study (2016)

EXISTING CONDITIONS

The existing facilities for the study area were summarized into three categories: pedestrian facilities, bicycle facilities, and trail facilities. Existing facilities and available data are discussed for each category, as well as, available mode share data for the entire system. A safety analysis was also completed for all pedestrian and bicycle related crashes in the study area.

MODE SHARE

Year 2016 mode share data was obtained through the American Community Survey (ACS). Table 9.1 summarizes the mode share data for commuters in Billings.

Table 9.1 Year 2016 Mode Share for Commuters in the City of Billings

Mode Used	Number of Commuters	Percent of Commuters
Drove Alone	44,908	81.0%
Carpool (2 people)	4,180	7.5%
Carpool (3+ people)	1,108	2.0%
Public Transportation	592	1.1%
Bike	425	0.8%
Walk	1,760	3.2%
Other	390	0.7%
Worked at Home	2,045	3.7%
Total	55,408	100%

Source: ACS 2016

As shown in Table 9.1, driving alone to work is the most common commuter mode share (81.0%). Active transportation (biking and walking) makes up 4.0% of commuter mode share. Public transportation, which relies on the active transportation network for many of its users to begin and end their trips, makes up 1.1% of the commuter mode share.

Biking and walking trips account for 4% of the commuter mode share.

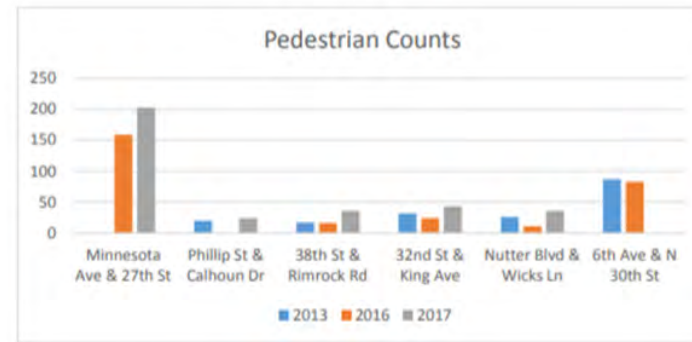
As part of the 2013 Complete Streets Benchmark Study (9-5), bicycle and pedestrian counts were collected on a weekday and weekend in September 2013 at the following six intersections:

- Minnesota Avenue & South 25th Street - unsignalized
- Philip Street & Calhoun Drive - unsignalized
- 38th Street & Rimrock Rd - unsignalized
- 32nd Street & King Avenue - signalized
- Nutter Boulevard & Wicks Lane - signalized
- 6th Avenue & North 30th Street – signalized

The 2017 Complete Streets Progress Report again measured bicycle and pedestrian counts at these six intersections. These counts were taken in May 2016 and May 2017, making an annual comparison to the 2013 data difficult.

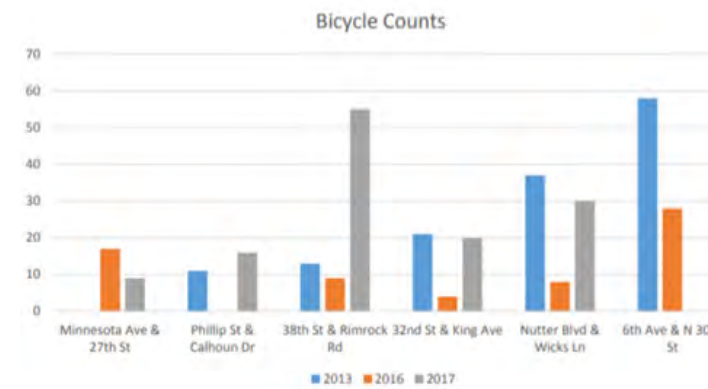
The pedestrian and bicycle counts across the three years are shown in Exhibits 9.1 and 9.2, respectively. Pedestrian and bicycle usage was found to be consistently higher on weekdays than weekends. The 2017 pedestrian volumes increased at all counted locations from 2016. The 2017 bicycle volumes increased significantly at all locations from 2016, except for the Minnesota Avenue/27th Street location.

Exhibit 9.1 Billings Pedestrian Counts by Location



* Note that data gaps represent counts not taken due to road construction

Exhibit 9.2 Billings Bicycle Counts by Location



School-Related Mode Share

The Billings-Yellowstone County travel survey collected data in early 2017. Table 9.2 uses data from this survey to show mode share to school across the Billings area. As shown, about 75% of respondents reported typically driving to school, either as the driver or passenger, and a similar rate did drive to school on the day of the survey. About 6.5% of respondents reported typically walking or bicycling to school and a similar rate did walk or bicycle to school on the day of the survey.

As shown in Table 9.2, driving to school and being driven to school are still the most popular mode choices. Because over 5% of students walk to school, the City of Billings has increased focus on providing safe travel for students walking to school. This includes updating and maintaining sidewalk facilities, using speed zones to reduce speeds near schools, and providing crossing guards at popular locations.

The City of Billings SRTS program is in the process of evaluating the pedestrian and bicyclist network supporting elementary schools in Yellowstone County. These studies recommend improvements at each school to make active transportation a safer choice for children’s commutes.

Table 9.2 School-Related Mode Share

Actual School Mode	Typical School Mode							Grand Total
	Passenger	Driver	School Bus	Walk	Carpool	Public Transit	Bike	
Passenger	42.98%	0.85%	3.40%	1.28%	2.55%		0.43%	51.149%
Driver	6.81%	16.17%	0.43%					23.40%
School Bus	4.68%	0.43%	10.21%	0.43%	0.43%			16.17%
Walk	0.85%			4.26%				5.11%
Carpool	0.85%				0.85%			1.70%
Public Transit						0.43%		0.43%
Bike	0.85%		0.85%					1.70%
Total	57.02%	17.45%	14.89%	5.96%	3.83%	0.43%	0.43%	100.00%

Source: Billings-Yellowstone County Travel Survey

PEDESTRIAN FACILITIES

Figure 9-1 shows the existing pedestrian and trail facilities in the study area. Sidewalk facilities exist in the downtown area, approximately from N 32nd Street to N 22nd Street and Montana Avenue to 6th Avenue, and most areas throughout the city. Exhibits 9.3, 9.4, and 9.5 illustrate some of the existing pedestrian facilities in the region.

Exhibit 9.3 Sidewalks and Pedestrian Buffer Zone in Downtown Billings

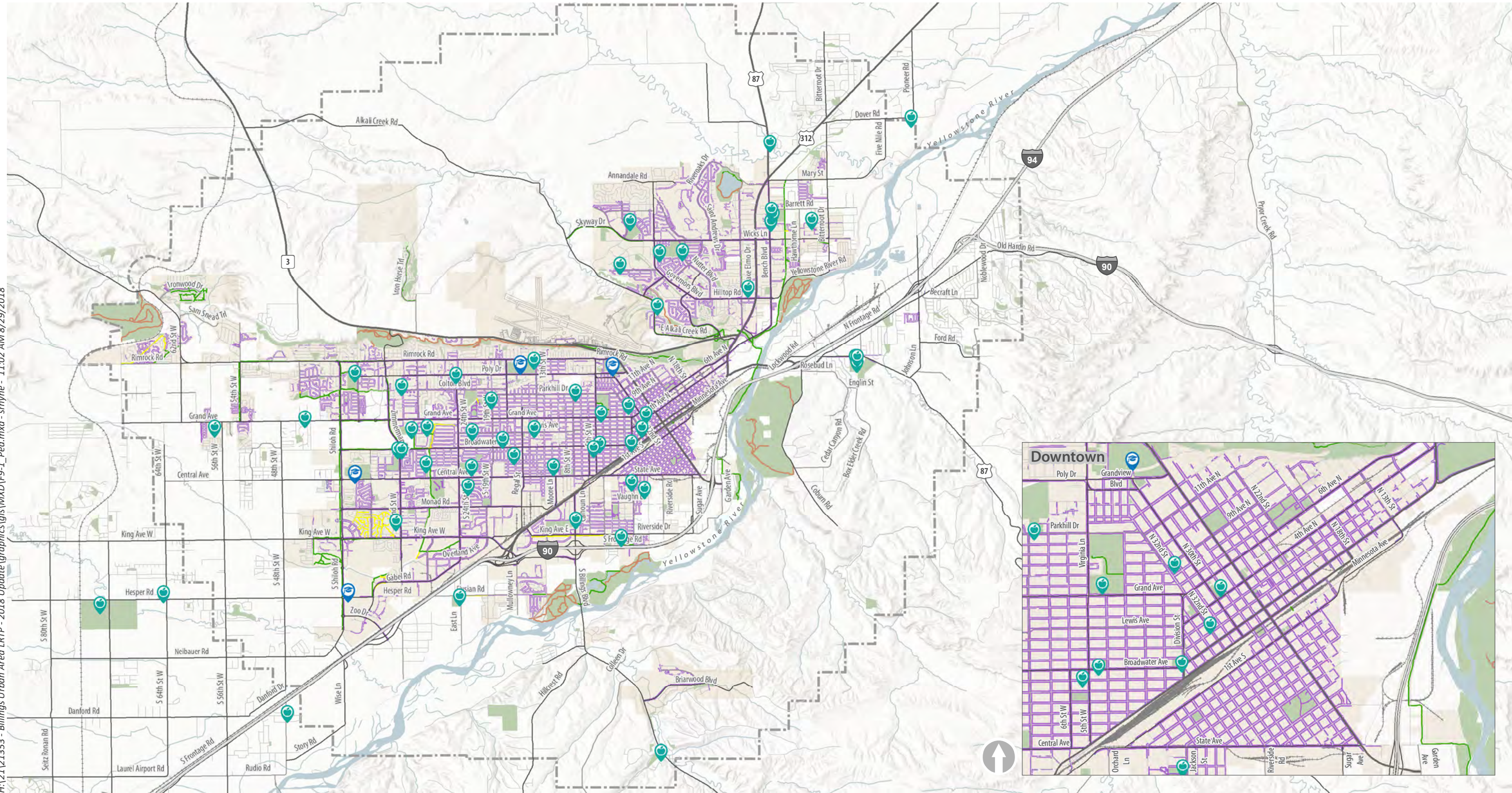


Exhibit 9.4 Pedestrian Hybrid Beacon (HAWK) at 4th Avenue in Downtown Billings



Exhibit 9.5 Rectangular Rapid Flashing Beacon (RRFB) on King Avenue





- Shared Use Path
- Neighborhood Trail
- Unpaved Trail
- Sidewalks
- College
- Schools
- Park
- City of Billings
- Study Area

DRAFT

Figure 9-1
Existing Pedestrian and Trail Facilities

BIKEWAY FACILITIES

Development of the City's bicycle facilities has mostly occurred over the last fifteen years, including 6.5 miles of new bike lanes provided during 2010. The overall rate of bike lane implementation has remained essentially constant at a rate of close to two miles per year over this time. The City of Billings currently maintains close to 30 miles of bikeway facilities, classified as bike lanes or shared roadways. Figure 9-2 shows the existing bikeway and trail facilities in the study area. Existing bikeway and trail facilities work together to provide good connectivity around the city.

The types of bikeways are described below.

- **Bike Lanes:** This type of facility provides a dedicated space within the roadway for bicyclists to travel and uses signage and striping to delineate the right-of-way assigned to bicyclists and motorists. Billings currently has 26 miles of bike lanes in its transportation system.
- **Shared Roadways:** Shared roadways are designated by signage and/or shared lane markings. Shared lane markings are pavement markings that indicate the position within a roadway where bicyclists should ride. They also provide wayfinding guidance to bicyclists and indicate to motorists to be aware that bicyclists will be travelling in the roadway. Streets marked with shared lane markings, or sharrows, are intended to be shared streets, with motorists and bicyclists sharing the travel lane. Billings currently has 2.6 miles of shared roadways in its transportation system.

In addition to these existing types of bikeways, the Bikeway and Trails Master Plan Update describes a variety of new bikeway types that could help provide low-stress connections for bicyclists in areas of high traffic volumes. These include:

- **Separated Bike Lanes:** Of all on-street bicycle facilities, separated bike lanes offer the most protection and separation from adjacent motor vehicle traffic. Separated bike lanes are bicycle facilities that are physically separated from motor vehicle traffic by a painted buffer and physical barriers such as flexible delineators, curbs, or planters.
- **Bicycle Boulevards:** Bicycle boulevards are local streets with low motorized traffic volumes and speeds that have been designated as bicycle routes. Bicycle boulevards should have a maximum posted speed of 25 mph and target motor vehicle volumes of less than 1,500 vehicles per day. Many streets in Billings exhibit these characteristics already, and minor modifications such as the addition of signage and pavement markings could cost-effectively designate key corridors as bicycle boulevards.
- **Buffered Bike Lanes:** Buffered bike lanes are conventional bike lanes that are enhanced through the application of diagonally striped buffer space. While not providing physical separation, this creates a wider buffer area between vehicles and bicyclists than a conventional six-inch bike lane stripe.

As shown in Figure 9-2, the bikeway and trail system almost provide a complete "loop" around Billings, as well as north-south connectivity in the Heights and the west end on Shiloh Road. To promote the construction of consistent facilities, the City of Billings has adopted specific design standards for all types of bikeway facilities, included in their Design Standards for Trails & Bikeways (9-7). Exhibits 9.6, 9.7, 9.8, and 9.9 illustrate some of the existing bike facilities in the region.

Implementing bike lanes, sharrows, cycle tracks, and bike boulevards on roadways, in conjunction with wayfinding signs, bike racks, and other amenities are great ways to increase bicycle awareness and usage in the region.

Exhibit 9.6 Bike Rack in Downtown Billings



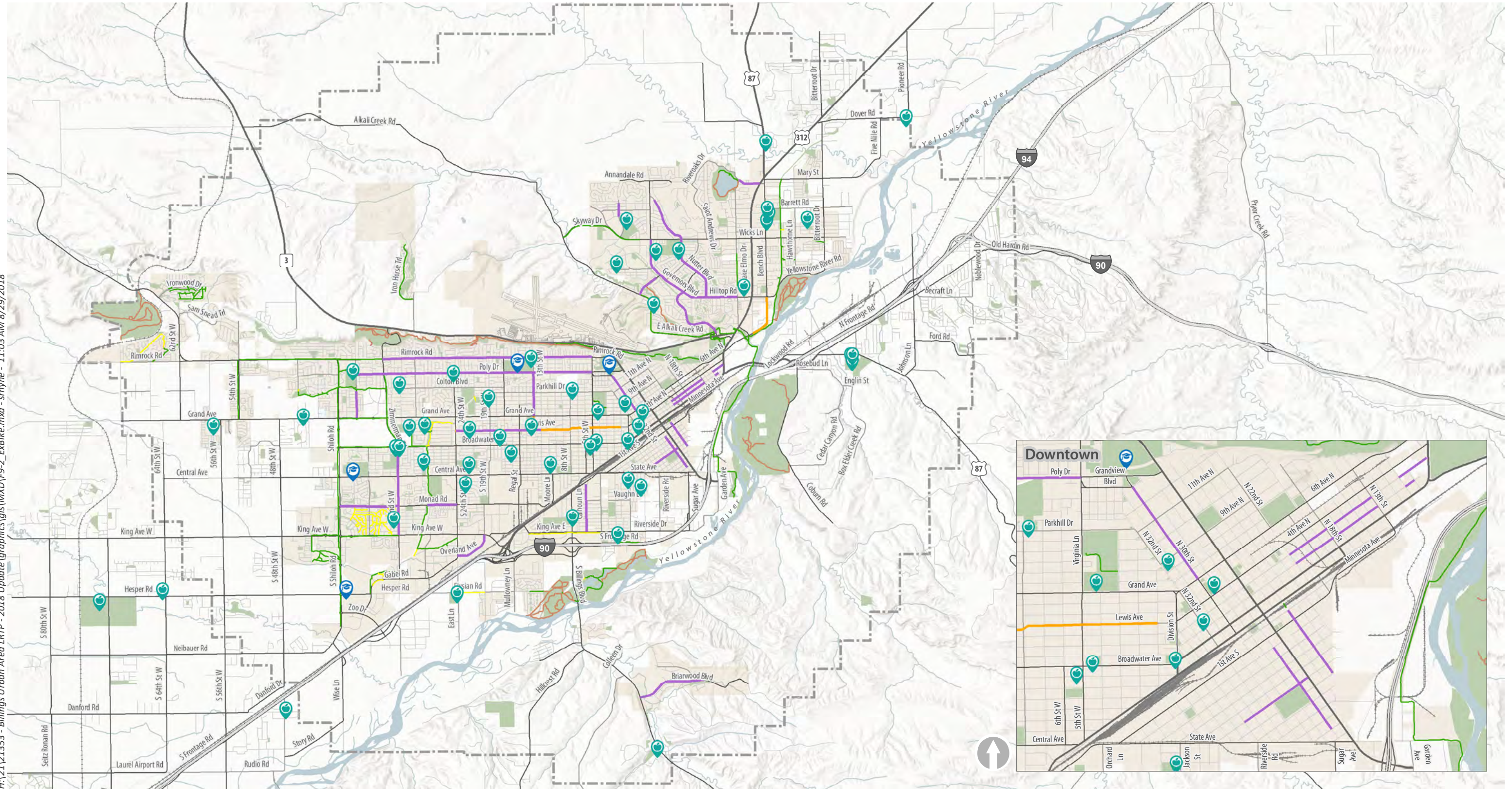
Exhibit 9.7 Bikes Lanes on Rimrock Road



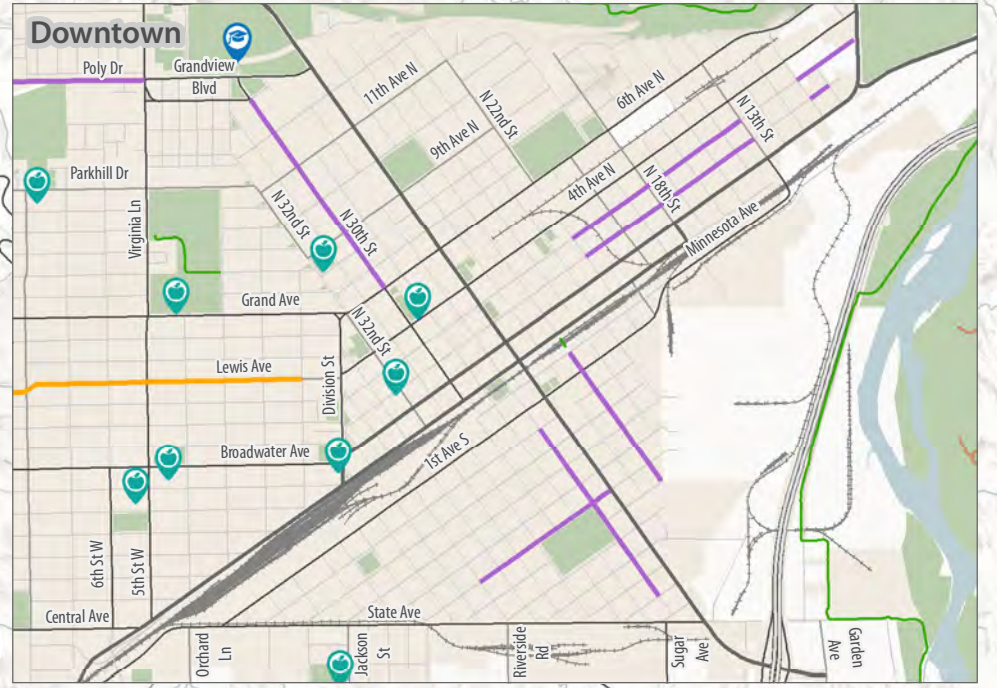
Exhibit 9.8 Bikes Lanes on Monad Road



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- | | | | |
|---------------------|--------------------|------------------|------------|
| Bike Lane | Shared Use Path | College | Study Area |
| Shared Lane Marking | Neighborhood Trail | Schools | Park |
| Unpaved Trail | | City of Billings | |



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Figure 9-2
Existing Bikeway and Trail Facilities

Exhibit 9.9 Buffered Bike Lane on Monad Road



TRAIL FACILITIES

The City of Billings currently maintains approximately 81 miles of trails throughout the study area. As shown in Figures 9-1 and 9-2, multi-use trails are provided along Shiloh Road from Rimrock Road to past Zoo Drive, from Alkali Creek Road and Mary Street in the Heights to an area close to the 27th Street interchange with I-90, and east-west across the rims parallel to Airport Road from Billings Logan International Airport to Skeleton Cliff. Soft surface trails are also provided through Riverfront Park to the south, Two Moon Park in the Heights, and around Lake Elmo. Most of the neighborhood trails are provided in neighborhoods between Shiloh Road, 32nd Street, King Avenue, and Monad Road. Some of the cities unimproved trails are in Phipps Ranch Park, located outside of the MPO boundary and others connect multi-use paths in Zimmerman Park to those on the eastern half of the rims, connecting into the Heights. The other major segment of unimproved trails runs parallel to the rims, connecting a multi-use path to Zimmerman Park. Table 9.4 summarizes the types and lengths of trails.

Table 9.4 Type and Length of Existing Trails in the Billings Urban Area

Type of Facility	Mutli-Use	Soft Surface	Neighborhood	Unimproved	Total
Length (miles)	45	11	11	14	81

Source: GIS data provided by City of Billings

Exhibits 9.10 and 9.11 illustrate some of the existing trail facilities in the region.

Exhibit 9.10 Jim Dutcher Trail by MetraPark Arena



Exhibit 9.11 Swords Park Trail Near the Airport



Trail Counts

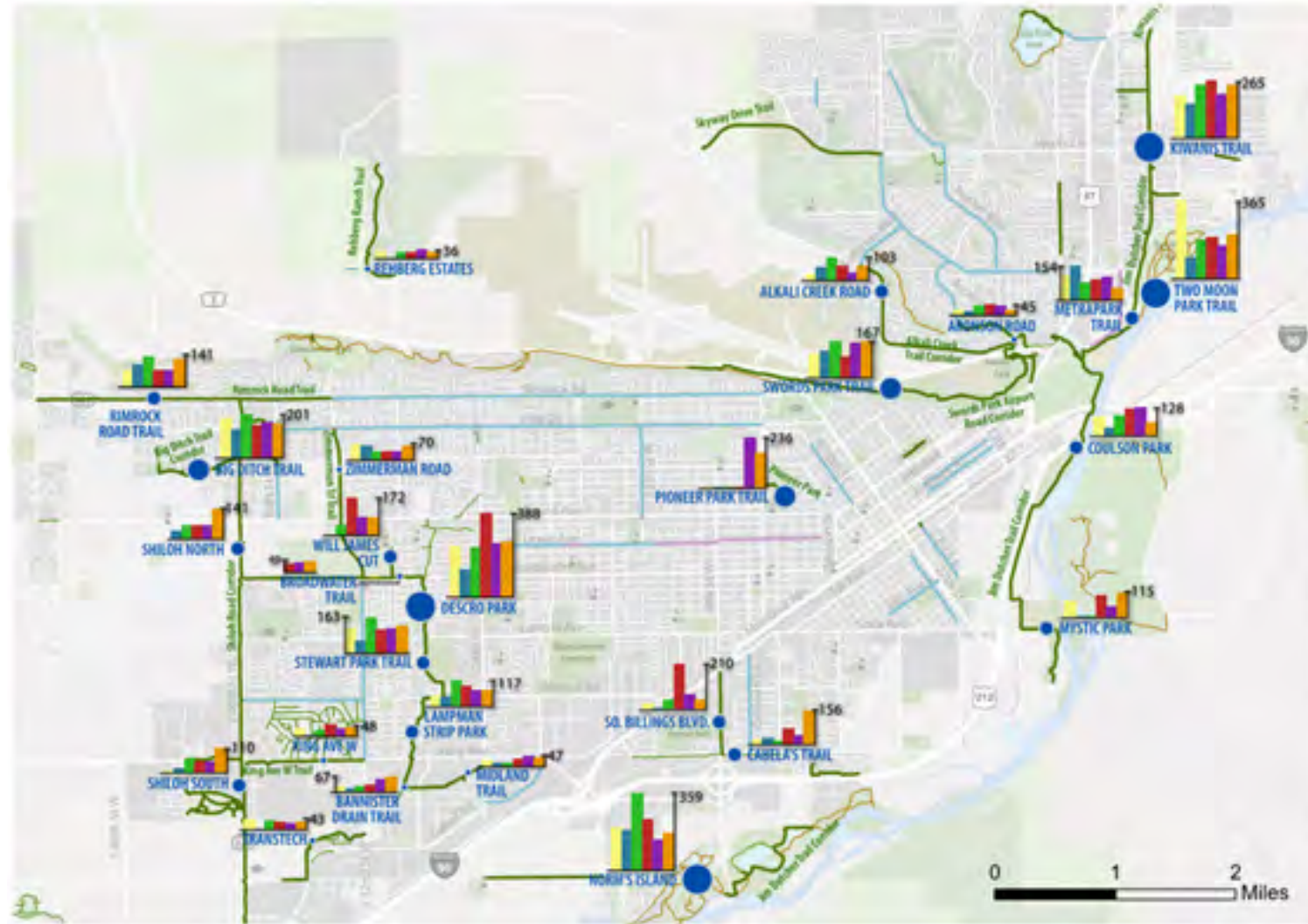
Billings currently uses two methods to count people walking and biking on its trails: automated trail counters and manual counts.

Automated counters are typically left alongside a trail for one week and then rotated to a new location. The City owns twenty-six counters and rotates them such as that the same location is counted during the same time frame each year, making year-to-year comparisons possible. Two locations use permanently installed counters along shared-used paths.

In addition to automatic counts, Billings has been conducting manual counts at key locations throughout the area to better understand bicycle and pedestrian transportation patterns. Between 2013 and 2015, counts were conducted at twenty-five different locations, with the largest concentration in downtown Billings. However, because no locations was counted twice, annual or seasonal comparisons should not be drawn.

As shown in Exhibit 9.12, trail usage in the study area has steadily increased over the last six years. The total annual number of trail users counted on the system has steadily risen from 2,287 in 2010 to 2,617 in 2015, an increase of 21% over that timeframe.

Exhibit 9.12 Daily Average Trail Counts Per Year



Source: 2017 Billings Area Bikeway and Trails Master Plan Update

CRASH HISTORY

Crash data for the study area was reviewed to identify crashes involving a pedestrian or bicyclist over the five-year period from 2013 to 2017. Table 9.6 summarizes the pedestrian and bicycle related crashes. Figure 9-3 shows the approximate location of pedestrian-related crashes in the study area from 2013 – 2017 and Figure 9-4 shows the approximate location of bicycle-related crashes in the study area from 2013-2017.

As shown in Table 9.6, there have been 350 reported crashes involving a pedestrian or bicyclist over the five- year time period. 80% of the crashes involving a pedestrian or bicyclist resulted in some type of injury. Nine fatal crashes involving a pedestrian or bicyclist occurred during the five-year time period. Eight involved pedestrians and one involved a bicyclist.

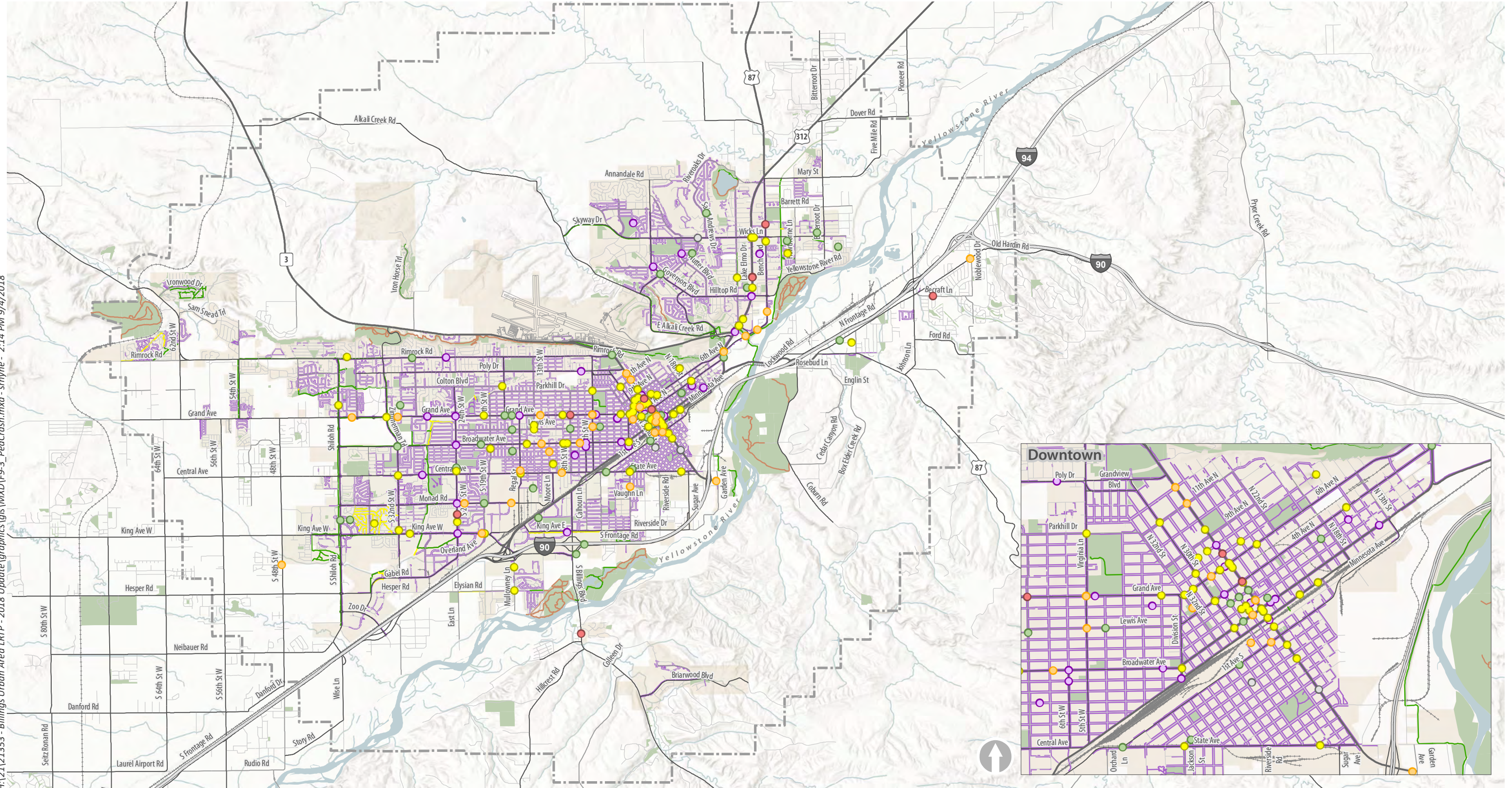
Table 9.6 Pedestrian and Bicycle Crash Summary by Severity (2013-2017)

Category	Possible Injury	Non-incapacitating (Injury Evident)	Incapacitating Injury	Property Damage Only	Fatal	Unknown	Total
Pedestrian	84	42	31	42	8	3	210
Bicycle	68	35	8	28	1	0	140
Total	152 (43%)	77 (22%)	39 (11%)	70 (20%)	9 (3%)	3 (1%)	350

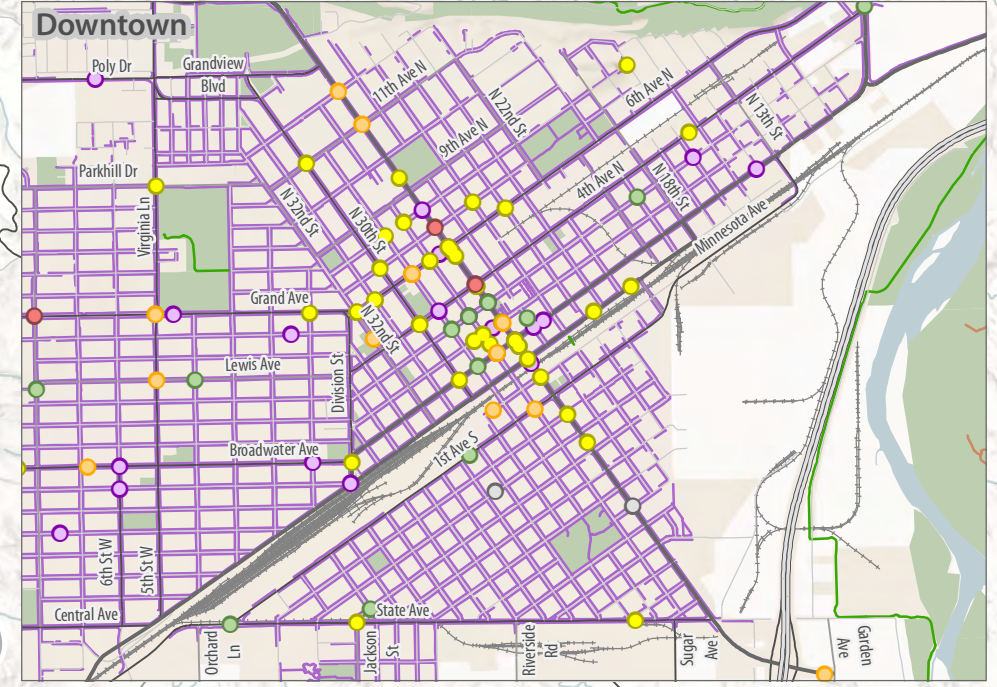
As shown in Table 9.7, bicycle and pedestrian crash occurrences have stayed relatively constant over the five-year period from 2013 to 2017. Crash occurrences of both kinds fell slightly from 2013 to 2015 but then rose slightly from 2015 to 2017. Table 9.7. Pedestrian and Bicycle Crash Summary by Year (2013-2017)

2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN

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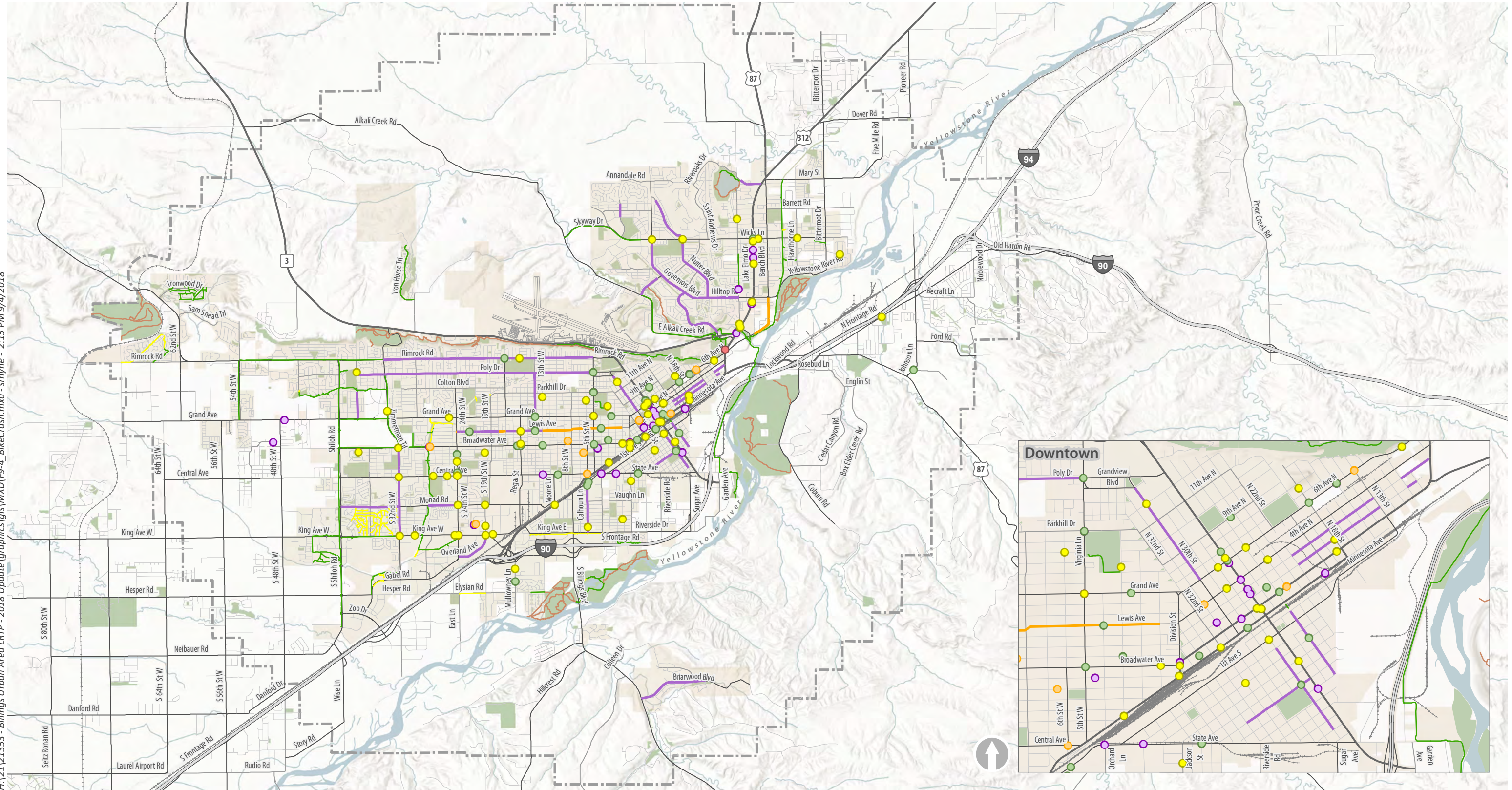


- Crash Severity**
- Fatal Accident
 - Incapacitating Injury Accident
 - Possible Injury Accident
 - Non-Incapacitating Evident Injury Accident
 - Non-Injury Accident (Propoert- Damage-Only Accident)
 - Unknown
 - Shared Use Path
 - Neighborhood Trail
 - Unpaved Trail
 - Sidewalks
 - Study Area
 - Park
 - City of Billings



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Figure 9-3
Pedestrian Crashes (2013 - 2017)



- Crash Severity**
- Fatal Accident
 - Incapacitating Injury Accident
 - Possible Injury Accident
 - Non-Incapacitating Evident Injury Accident
 - Non-Injury Accident (Propoert- Damage-Only Accident)
 - Unknown

- Bike Lane
- Shared Lane Marking
- Shared Use Path
- Neighborhood Trail
- Unpaved Trail
- Study Area
- City of Billings
- Park

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Figure 9-4
Bicycle Crashes (2013 - 2017)

DEFICIENCIES AND NEEDS

In order to guide identification of short and long-range bicycle and pedestrian projects, deficiencies and needs were collected from the general public, Steering Committee, and review of past plans/studies.

PUBLIC AND SC FEEDBACK

Forty-four percent of the public comments received corresponded to bicycle, pedestrian, or multi-use facilities. In addition, public comment identified the bicycle and pedestrian element of the LRTP to be among the most important elements of the 2018 LRTP update. Review of the public comment feed-back and SC comments suggested the following themes:

THIS SECTION IS STILL BEING DEVELOPED BASED ON COMMENTS FROM THE PUBLIC

- **Bicycle Related Comments**
 - Continue adding bike lanes to roadways, especially those near schools and desired destinations to improve connectivity
 - Include sharrows along roadways that see a high volume of cyclists
 - Provide a safe route for bicyclists between the heights and downtown
 - Provide bike lanes to connect developments on the west end
- **Pedestrian Related Comments**
 - Improve pedestrian facilities around Minnesota Avenue in the downtown area
 - Complete pedestrian facilities and provide

- controlled crossings near schools
- **Other Comments**
 - Continue to connect the trail system to bicycle and pedestrian facilities around the city
 - Continue emphasis and education for non- motorized travel, vehicles in some areas do not yield
 - Provide more facilities that connect pedestrians and bicyclists to the transit system

NEEDS DEFINED IN PREVIOUS STUDIES/PLANS

Several recent city-wide studies/plans identified pedestrian and bicycle facility needs. Key needs from these studies/plans include:

- **2014 Billings Urban Area Long Range Transportation Plan:** Prioritized projects related to on-street bikeways and multi-use trails with the following criteria.
 - On-street bikeways- route continuity, nonmotorized travel demand, bicycle compatibility index and public opinion
 - Multi-use trails- safety, connectivity/ accessibility, route continuity, aesthetics/recreational value, nonmotorized travel demand, and public opinion
- **Billings Area Bikeway and Trail Master Plan Update:** Prioritized bikeway and trail projects according to a needs assessment, system coverage, safety, connectivity, and connections to adjacent jurisdictions. The top noted priorities for investment in the bicycle and trail system include:
 1. Expansion of the trail network
 2. Maintenance of the existing bikeway and trail network, and
 3. Expansion of existing on-street bikeways

The most critical gaps in the existing bicycle and trail system include:

1. Riverfront trails along the Yellowstone River
2. Connections from West Billings to Downtown

3. Connection atop the Rimrocks from 27th Street to Zimmerman Trail
 4. Connection from Billings Heights to Downtown
 5. Connection from the river/Lockwood to Downtown
 6. Connection from the Rimrocks to Downtown, and
 7. Connections from South Billings to Downtown
- **Trail Asset Management Plan:** Identifies need to maintain existing trail facilities related to safety and aesthetics.
 - **Safe Routes to School Study Phase I & II:** Projects were identified to enhance safety and increase the number of students walking or biking to school.
 - **Lockwood Non-Motorized Transportation Plan:** Identifies education, enforcement, encouragement, engineering, evaluation, and partnership and funding action items to improve non-motorized transportation safety in the Lockwood area.
 - **Other Documents Reviewed:** Recommendations based on projects that would best improve facilities in the specific study area. These studies/ plans included:
 - West End Multimodal Planning Study (9-8)
 - Rims to Valley Study (9-9)

PROJECT LIST RELATED TO PEDESTRIAN AND BICYCLE FACILITIES

Pedestrian, bicycle, and multi-use path projects were identified from the needs and deficiencies assessment. The LRTP identifies a total of XX pedestrian facility projects, XX bicycle facility projects, and XX trail projects. Investing in these types of projects supports the plan's goals and the region's desire to implement one of the most comprehensive bicycle and trail networks in the State of Montana.

A project description and planning-level cost estimate was developed for each project. The planning-level cost estimates were developed from cost estimates included in past plans/studies, engineer's estimates made by the consultant team, or City of Billings Capital Improvement Plan, FY 2019 – 2023 (9-10).

Pedestrian projects include pedestrian crossings, safe routes to school projects, and sidewalk projects. Safe Routes to School (SRTS) projects are listed by school name and include a brief description. Table 9.8 summarizes the pedestrian projects. Figure 9-5 shows the approximate location of each project.

Bikeway projects include on-street bike lanes, shared roadways, and bicycle boulevards. Bicycle routes and boulevards are classified as secondary bikeways. Table 9.9 summarizes the bikeway projects. Figure 9-6 shows the approximate location of each project.

Multi-use trail projects include both soft-surface and paved trails. Table 9.10 summarizes the multi-use trail projects.

PLACEHOLDER for Figure 9-5 Pedestrian Project Locations – Not completed yet

PLACEHOLDER for Figure 9-6 Bicycle Project Locations – Not completed yet

Table 9.9 Pedestrian Projects – Refer to Excel file

PLACEHOLDER

Table 9.9 Bikeway Projects – Refer to Excel file

PLACEHOLDER

Table 9.10 Trail Projects – Refer to Excel file

PLACEHOLDER

CLOSING

One of Billings' seven goals for this plan is to create a transportation system that supports the practical and efficient use of active transportation such as walking and bicycling. By investing in active transportation infrastructure such as sidewalks, trails, and bike lanes, the City can increase the safety and comfort of these modes and thus increase their use.

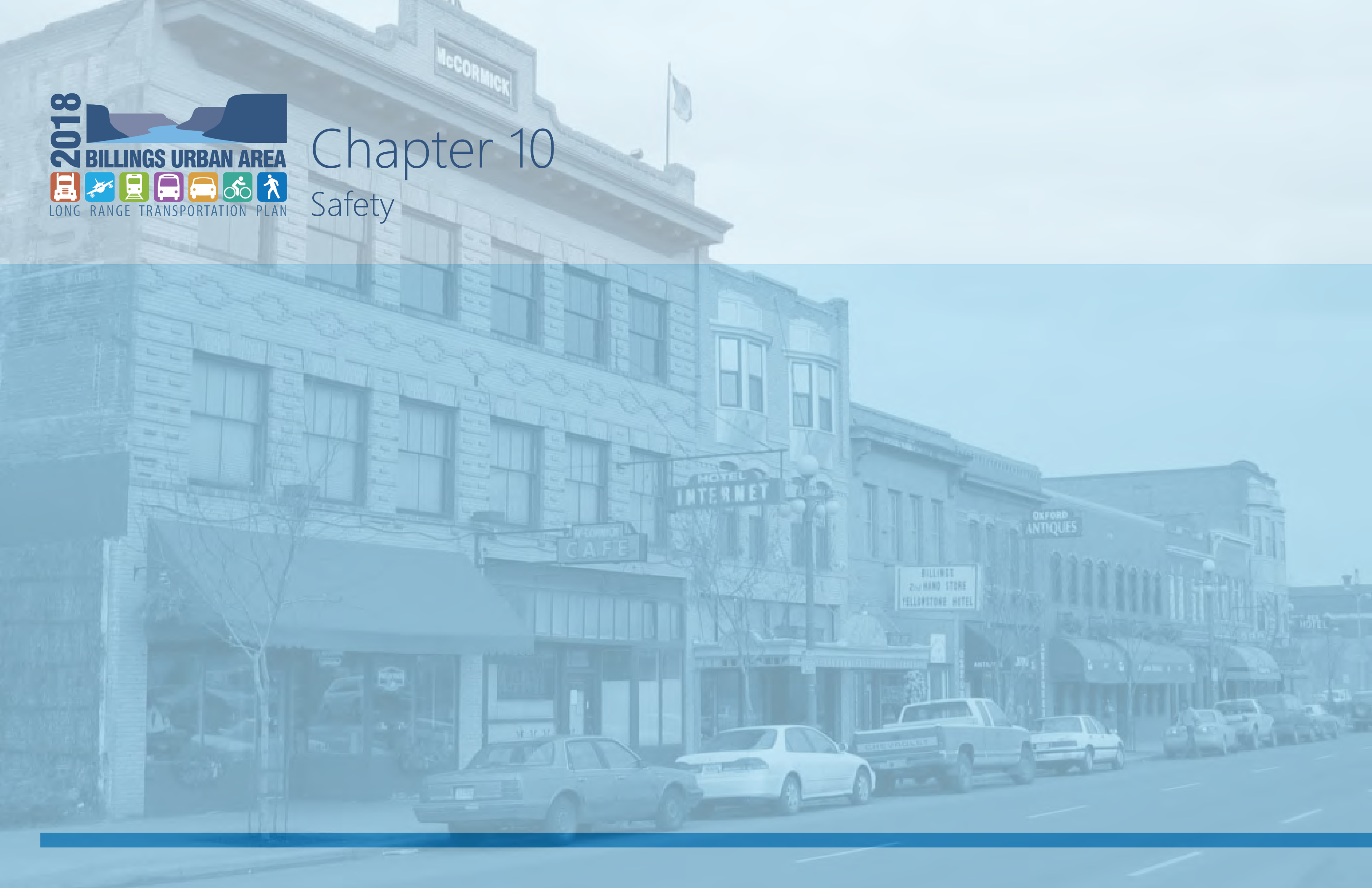
Billings is pursuing this goal because of the wide variety of community benefits caused by prioritizing active transportation. As described in the Billings Bikeway and Trails Master Plan Update, increasing active transportation mode share can lead to community benefits.

Given the existing usage of the bicycle and pedestrian system, the plan estimates the total value of the health benefits associated with frequent exercise, environmental benefits associated with not generating vehicle emissions, and economic benefits associated with additional transportation options for those without access to vehicles at over eight million dollars per year. The plan also estimates that, with high growth in biking and walking mode share, this value could increase to over 22 million dollars.

To achieve this high level of growth in pedestrian and bicycle use, the City of Billings, Lockwood, and the MPO will need to continue to invest in its pedestrian and bicycle system and continue to strive to make its transportation system appealing to all modes.

Chapter 10

Safety



A variety of federal, state, and local requirements and guidelines address incorporating safety into the transportation planning process. This chapter presents background information, analysis, and strategies to address safety within the Billings Urban Area. Previous chapters also include discussion on crash data and analysis for their respective modes. Overall, safety is a key element in the transportation planning process. As such, the 2018 LRTP outlines several goals related to safety elements:

Goal 1: Safe – Develop a safe transportation system.

Goal 4: Environment – Develop a transportation system that protects the natural environment and promotes a healthy sustainable community.

With new research and available data, safety can be incorporated in planning, project development, and operation/maintenance activities to effectively identify countermeasures to reduce crashes and crash severity for the Billings community.

BACKGROUND FEDERAL REQUIREMENTS

MPOs must comply with federal requirements associated with the transportation planning process as outlined in the 23 CFR Part 450 for Metropolitan Transportation Planning and Programming. The planning process should address increasing the safety of the transportation system for motorized and non-motorized users. The metropolitan transportation planning process should be consistent with the Strategic Highway Safety Plan, as specified in 23 U.S.C. 148, and other transit safety and security planning and review processes, plans, and programs, as appropriate (10-1).

STATE PLANS

TranPlanMT, Montana's long-range transportation plan, was last amended in 2017 (10-2). This plan cites safety as an overarching goal which is applied in nearly every MDT decision-making process for all projects and programs. The MPO participated in a workshop in October 2016 to review statewide and MPO goals to ensure consistency and foster collaboration. The statewide plan lists the following eight goals to improve transportation system safety.

- Maintain infrastructure condition to provide safe conditions for the traveling public.
- Continue improvements to the safety rest area program to provide safe stopping locations for the traveling public.
- Target safety improvement projects to address crash pattern locations.

- Incorporate technology advancements in project development to improve safety.
- Leverage relationships with education, enforcement, emergency medical services, and engineering partners to foster a culture of safety on Montana roadways.
- Reduce unsafe driving behavior through targeted focus on transportation safety emphasis areas identified in Montana's Comprehensive Highway Safety Plan.
- Enhance crash data integration and analysis to support decision making and data-driven problem identification.
- Provide leadership in air traveler safety through promotion of flight safety, accident prevention, and air search and rescue programs.

Montana's Comprehensive Highway Safety Plan

(10-3) was amended in 2015, as required by the 2014 Moving Ahead for Progress in the 21st Century Act (MAP-21) federal legislation. The CHSP is intended to be a living document to help guide the State of Montana to effectively address the state's safety needs. The vision of the plan is "zero fatalities and zero serious injuries" on any public roadway in the State. The goal of the plan is "to reduce fatalities and incapacitating injuries in the State of Montana by half in two decades, from 1,704 in 2007 to 852 by 2030." To accomplish the goal, the State has established three overarching safety strategy areas:

- Improve the accuracy, completeness, integration, timeliness, uniformity, and accessibility of data used in traffic safety analysis;

- Support the essential role of Emergency Medical Services in reducing the severity of injury outcomes and the technologies and systems necessary to advance collaboration with all safety partners; and
- Collaborate across agencies, organizations, and with the public to improve the safety culture and promote the institutionalization of Vision Zero.

In addition, three emphasis areas are identified in the CHSP: roadway departure and intersection crashes, impaired driving crashes, and occupant protection.

LOCAL PLANS

The Billings Community Transportation Safety Plan, shown in Exhibit 10.1 was completed in 2016 (10-4). The plan takes a data-driven approach to identify safety issues, determine areas in need of increased emphasis, and define strategies to reduce roadway fatalities and serious injuries. The goal for the plan is to reduce fatalities and serious injuries in the Billings MPO area by 20% from 70 in 2014 to 56 by 2020 based on a five-year rolling average calculation. The plan defines three emphasis areas: unrestrained occupants, impaired driving, and inattentive driving/speeding. A group of local Billings safety partners representing education, law enforcement, emergency medical services, and engineering organizations met monthly to evaluate crash trends, review existing safety programs and best practices, identify gaps, and develop safety strategies outlining specific methods, implementation partners, resources, and action steps to reduce fatalities and serious injuries in Billings.

Exhibit 10.1 Recent Safety Plan Completed by the MPO



The Yellowstone County and City of Billings 2016

Growth Policy (10-5) is a guide for local officials and community members in making decisions that will affect the future of the community. The plan has several growth guidelines that focus on safety within different elements of the plan. The following three guidelines were listed as essential investments related to safety:

- The **safety** of all users and the connectivity of the transportation system are important criteria to consider in roadway design and transportation plans.
- Planning and construction of **safe** and affordable interconnected sidewalks and trails are important to the economy and livability of Billings.
- Public health, **safety** and emergency service response are critical to the well-being of Billings' residents, businesses, and visitors.

City of Billings Safe Routes to School Study (2011) developed recommendations for 22 elementary schools in Billings (10-6). The goals of the study were to 1) enhance

the safety of students traveling to and from school and 2) increase the number of students talking or bicycling to school. Projects from the SRTS study are included in the project lists for pedestrians and bicyclists in Chapter 9.

Lockwood School District Safe Route to School

Plan (2009) developed recommendations to enhance the safety of students traveling to and from school in Lockwood School District (10-7). Projects from the plan have been included in the project lists for pedestrians and bicyclists in Chapter 9.

Billings Area Bikeway and Trail Master Plan

Update (2017) developed recommendations to provide connectivity and options for bicyclists in the Billings Urban Area (10-8). Two of the eight goals focused on safety: 1) Enforcement: Increase enforcement on City/County streets, trails and bikeways to make interactions between motorists, bicyclists, and pedestrians safety; and 2) Health and Safety: Encourage healthy activities through increased access and safe infrastructure for bicyclists and pedestrians. Projects from the plan have been included in the project lists for pedestrians and bicyclists in Chapter 9.

Lockwood Non-Motorized Transportation Plan

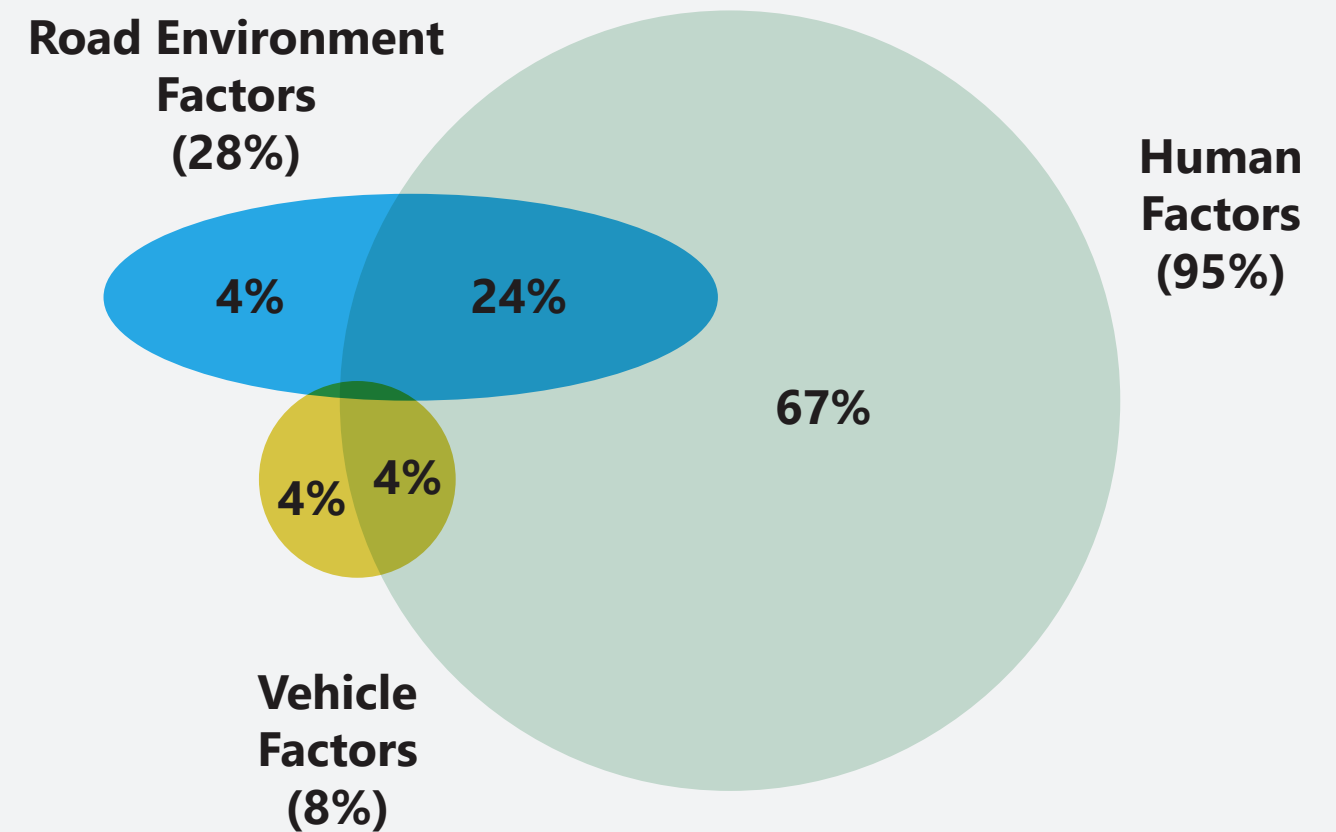
(2015) seeks to eliminate fatalities and serious injuries caused by vehicular and pedestrian conflicts throughout the Lockwood area (10-9). It identifies a five-year work plan and 20-year desired project list in the areas of education, enforcement, engineering, evaluation, and partnerships and funding to achieve this goal.

SAFETY CONSIDERATIONS INTRODUCTION TO THE 5 "E" APPROACH TO SAFETY

Motor vehicle crashes generally involve multiple contributing factors, shown in Exhibit 10.2, which may be related to drivers, the roadway, or the vehicles(s) involved, thus making transportation safety a multidisciplinary concern. Human factors are involved in 95% of crashes, while the road environment is a contributing factor in only 28% of crashes (10-10).

This means we cannot "engineer" our way to safety, and that education and enforcement must be integrated into a safety culture and implementation strategies. The State of Montana and the Billings Urban Area safety goals cannot be achieved by one agency working alone. Accomplishing the Billings community's safety goals requires a collaborative approach that draws from several key areas associated with traffic safety, as listed below.

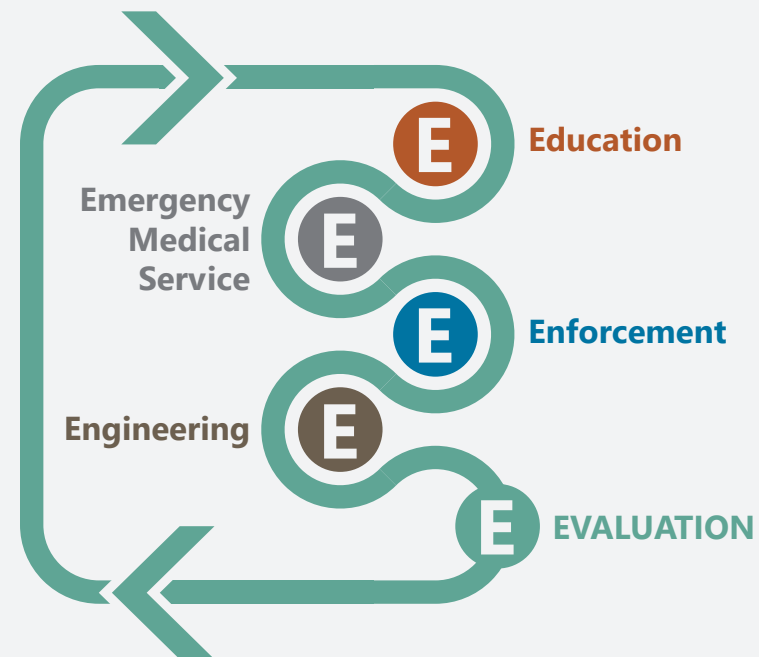
Exhibit 10.2 Contributing Factors to Crashes



- **Education** – States and cities incorporating strong educational components report declines in fatality rates (10-11). Effective prevention education programs typically include some combination of knowledge content, social norming, personal commitment, and resistance skill strategies (10-12).
- **Enforcement** – Law enforcement officials can encourage behavior changes of transportation system users through enforcement, education, and incarceration.
- **Emergency Medical Service (EMS)** – EMS provides the last opportunity to improve health outcomes from motor vehicle crashes and other medical emergencies. EMS data is highly reliable and valuable to crash analysis
- **Engineering** – State, county, and city engineers consider safety during planning, design, construction, operation, and maintenance of transportation facilities.
- **Evaluation** – The MPO ties the previous four elements together by measuring the effectiveness of implemented solutions and deploying new solutions to address evolving needs.

The 5 E's of safety, as shown in Exhibit 10.3 define the broad stakeholder communities who are responsible for making the transportation system safe for all users.

Exhibit 10.3. The 5 E's



SAFETY ANALYSIS CRASH DATA SUMMARY

MDT provided historical crash data for crashes involving various modes over the five-year period from January 1, 2013 to December 31, 2017. A total of 14,577 crashes were reported over the five-year period in the study area. Figure 10-1 illustrates the locations of each crash type.

A total of 4,005 injury crashes occurred (27% of total crashes) which resulted in 5,940 injuries over the five-year period. Of the injury crashes, 243 (6% of injury crashes) resulted in an incapacitating injury.

In addition, 42 fatal crashes (0.3% of total crashes) resulted in 42 fatalities. Tables 10.1 and 10.2 show the breakdown of fatalities by road user type, drug/alcohol involvement, and seatbelt use. Motorcyclists made up 40% of all fatalities, followed by motor vehicle occupants (36%). Impaired driving factored into 40% of the fatal crashes; 60% of motor vehicle occupant fatalities were not wearing a seatbelt.

Table 10.1 Fatal Crash Road User Types (2013-2017)

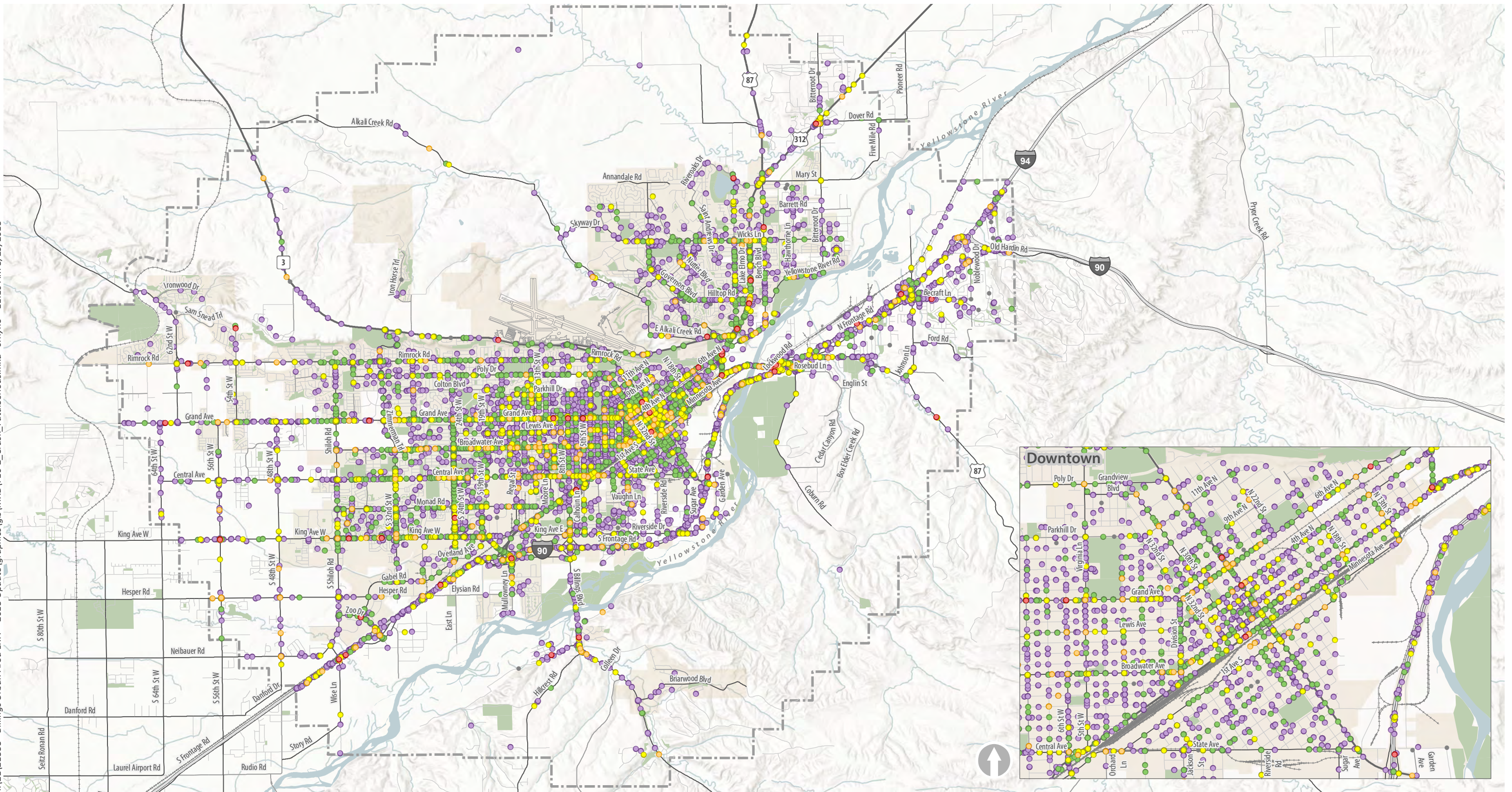
Road User Type	Motor Vehicle Occupant	Motorcyclist	Pedestrian	Bicyclist	ATV
# Fatalities (Percent of Total)	15 (36%)	17 (40%)	8 (19%)	1 (2%)	1 (2%)

Table 10.2 Fatal Crash Attributing Factors (2013-2017)

Drugs / Alcohol Involved	Yes	No	Unknown
# Fatalities (Percent of Total)	17 (40%)	22 (52%)	3 (7%)
Seatbelt Used (Motor Vehicle Occupants Only)	Yes	No	Unknown
# Fatalities (Percent of Total)	3 of 15 (20%)	9 of 15 (60%)	3 of 15 (20%)

The goal set in the Billings CTSP is to reduce fatalities and serious injuries in the Billings MPO area by 20% from 70 in 2014 to 56 by 2020 (based on a five-year rolling average). As of 2017, there were an average of 65 fatalities and serious injuries in the study area per year, as shown in Exhibit 10.4. This represents a 7% reduction from the average of 70 reported in the CTSP for the 2010-2014 period. An additional 14% reduction will be required to meet the CTSP goal, which is to reduce the average to 56 by year 2020.

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Crash Severity

- Fatal Accident
- Incapacitating Injury Accident
- Non-Incapacitating Evident Injury Accident
- Possible Injury Accident
- Non-Injury Accident (Property- Damage-Only Accident)
- Unknown

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Figure 10-2

Fatal and Serious Injury Crashes (2013 - 2017)

Exhibit 10.4 Fatal and Serious Injury Crashes (Five-Year Rolling Average)

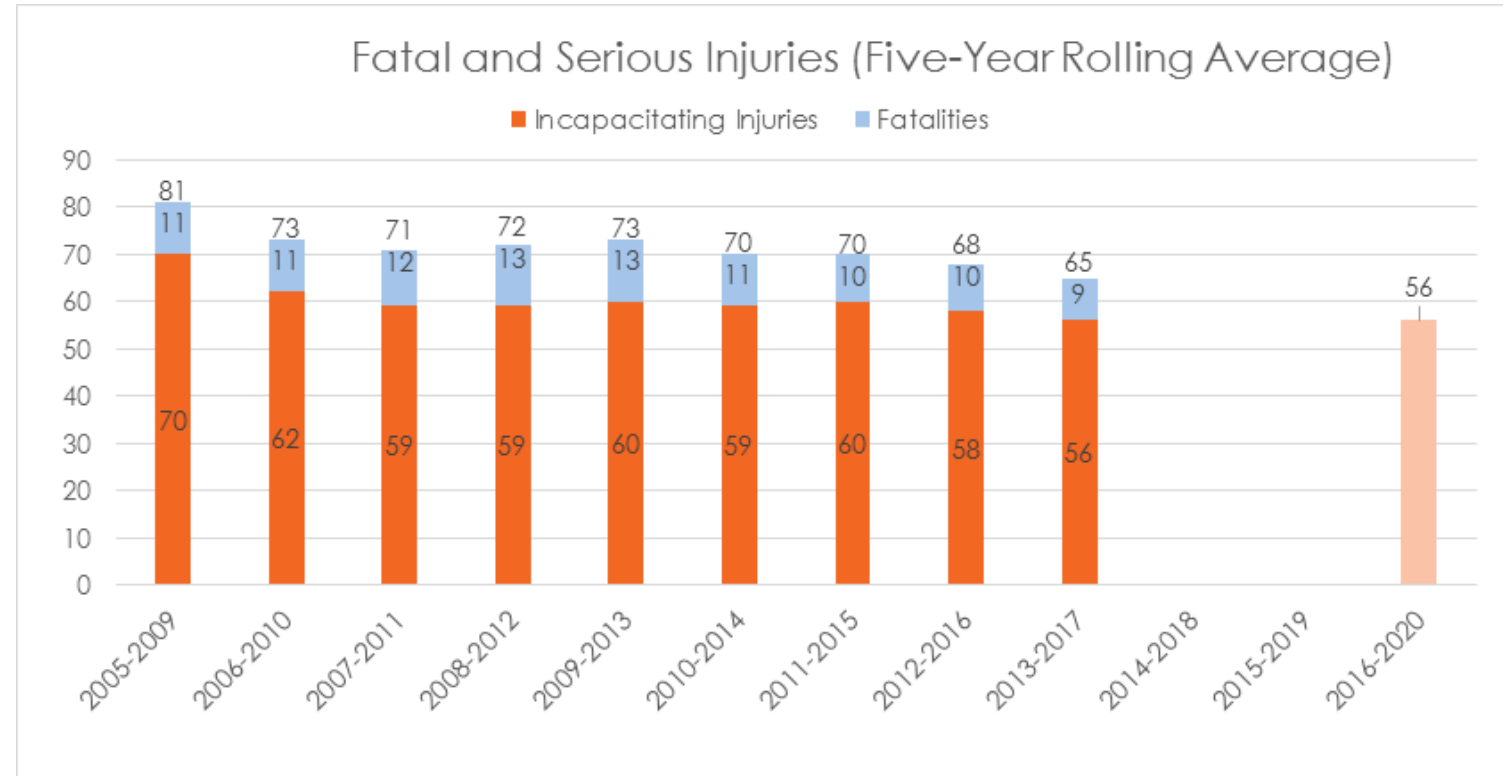


Figure 10-2 shows the location of crashes that resulted in a fatality or an incapacitating injury.

CRASH TYPES

This LRTP is focused on addressing safety for all transportation modes. Table 10.3 summarizes the crash severity for crashes involving a commercial vehicle, bus, at-grade rail crossing, pedestrian, or bicyclist. There were eight fatal pedestrian crashes and one fatal bicycle crash in the five-year period. There were two fatal crashes involving commercial vehicles.

Table 10.3 Commercial, Bus, Rail Pedestrian and Bicycle Crash Summary (2013-2017)

Category	Property Damage Only	Possibly Injury	Non-Incapacitating Injury	Incapacitating Injury	Fatal	Unknown	Total
Crash Involving a Commercial Vehicle (Truck >10,000 pounds)	410	64	25	9	2	3	513
Crash Involving a School Bus	37	12	2	0	0	1	52
Crash Involving MET Bus	1	2	0	0	0	0	3
Crash Involving Other Bus Types (e.g., Charter Bus)	52	11	1	0	0	0	64
Crash Related to At-Grade Rail Crossing	64	16	5	1	0	2	88
Pedestrian	42	84	42	31	8	3	210
Bicycle	28	68	35	8	1	0	140

CRASH RATES

Intersection and roadway segment crash rates are reported for high crash locations within the study area. The crash rate provides more information than crash frequency alone, as it factors in the number of vehicles entering an intersection or roadway segment. This makes the crash rate an effective tool for comparing the relative safety of one intersection or segment to another. Of note, due to different crash reporting methods used in different jurisdictions, the crash rate is best used to compare the relative safety of an intersection compared to similar intersections within the same jurisdiction.

The crash rate equations are provided below. Intersection crash rate is the number of crashes occurring per million entering vehicles, while segment crash rate is the number of crashes per million vehicle miles of travel on the segment. All crash rates were calculated using annual average daily traffic (AADT) volumes from the 2017 Billings Urban Area Traffic Count Map (10-13).

$$\text{Intersection Crash Rate} = \frac{(\text{Total Number of Crashes} \times 1,000,000 \text{ Vehicles})}{(\text{Vehicles per Day} \times \text{Number of Years} \times 365 \text{ Days per Year})}$$

$$\text{Segment Crash Rate} = \frac{(\text{Total Number of Crashes} \times 1,000,000 \text{ Vehicles})}{(\text{Vehicles per Day} \times \text{Number of Years} \times 365 \text{ Days per Year} \times \text{Segment Length})}$$

Table 10.4 shows the crash rates for the intersections with the highest number of crashes. Three of the intersections in the top ten are roundabouts located on the Shiloh Road corridor.

Table 10.4 Intersections with High Crash Rates (2013-2017)

	Intersection	Control Type	Total Crashes	Crash Rate
1	Shiloh Road & King Avenue W	Roundabout	149	3.57
2	Shiloh Road & Grand Avenue	Roundabout	129	2.67
3	24th Street W & Rosebud Drive	Signal	84	1.62
4	Shiloh Road & Central Avenue	Roundabout	58	1.49
5	Central Avenue & N 15th Street W	Signal	64	1.46
6	Main Street & 1st Avenue N	Signal	92	1.35
7	27th Street & 6th Avenue N	Signal	85	1.35
8	King Avenue W & 24th Street W	Signal	101	1.25
9	Main Street & Lake Elmo Drive	Signal	113	1.17
10	King Avenue W & 32nd Street W	Signal	72	1.15
11	27th Street & 1st Avenue N	Signal	53	1.13
12	Central Avenue & 24th Street W	Signal	81	1.13
13	Grand Avenue & N 17th Street W	Signal	59	1.13
14	King Avenue W & S 20th Street W	Signal	94	1.07
15	Grand Avenue & Zimmerman Trail	Signal	56	1.07
16	Main Street & Wicks Lane	Signal	62	1.02
17	24th Street W & Monad Road	Signal	53	0.85
18	King Avenue W & Interstate-90 Single Point Interchange (SPI)	Signal	68	0.81
19	Main Street & Airport Road	Signal	66	0.71
20	Main Street & 6th Avenue N	Signal	53	0.53

Table 10.5 shows crash rates for the roadway segments with the highest number of crashes. Three of the segments in the top ten are located on South 24th Street West from King Avenue to Broadwater. Additionally, five roadways, King Avenue, 24th Street, Central Avenue, Grand Avenue, and Main Street had multiple segments with the high crash rates in the study area.

Table 10.5 Roadway Segments with High Crash Rates (2013-2017)

Roadway Segment	Extent	ADT	Length (miles)	Total Crashes	Crash Rate	
1	N 27th Street	Montana Avenue to 6th Avenue N	16,595	0.4	386	29.5
2	King Avenue W	20th Street to 24th Street	24,100	0.5	310	15.2
3	Montana Avenue	27th Street to Division Street	10,980	0.7	203	14.9
4	S 24th Street W	King Avenue W to Monad Road	24,660	0.5	334	14.6
5	Central Avenue	19th Street to 24th Street	15,640	0.6	224	14.0
6	S 24th Street W	Monad Road to Central Avenue	26,280	0.5	317	13.2
7	Central Avenue	Moore Lane to 15th Street	16,895	0.5	219	12.9
8	Grand Avenue	Zimmerman Trail to Shiloh Road	12,160	0.8	230	12.8
9	24th Street W	Central Avenue to Broadwater Avenue	22,685	0.5	257	12.4
10	Grand Avenue	13th Street to 17th Street	18,810	0.5	214	12.4
11	King Avenue W	32nd Avenue to Shiloh Road	14,290	1.0	294	11.8
12	Central Avenue	24th Street to 32nd Street	13,790	1.0	277	11.1
13	Main Street	1st Avenue N to 6th Avenue N	36,440	0.4	248	10.5
14	N 27th Street	6th Avenue N to Rimrock Road	15,255	0.9	247	9.9
15	King Avenue W	24th Street to 32nd Street	25,660	1.0	368	7.9
16	Main Street	Airport Road to Hilltop Road	44,550	0.7	369	6.5
17	King Avenue W	Midland Road at Mallowney Lane to 20th Street	40,470	0.7	349	6.5
18	Main Street	Hilltop Road to Wicks Lane	27,220	1.0	306	6.1
19	Main Street	Wicks Lane to US 87	16,840	1.1	199	6.0
20	Highway 87E	Interstate 90 to 1st Avenue N	26,040	1.3	347	5.6

USE OF THE HIGHWAY SAFETY MANUAL IN PROJECT DEVELOPMENT

Roadway safety evaluation tools have historically included methods based on current and past data, typically centered on calculations dealing with crash rate, crash frequency, and crash severity. Planners and engineers can use a more comprehensive method available for examining roadway safety. The 1st Edition of the Highway Safety Manual (HSM) outlines methods and procedures to comprehensively manage roadway facilities and guide project decisions (10-14). HSM concepts include an integrated approach to safety-based improvements applicable to all aspects of planning, project development, and operation/maintenance.

Additionally, NCHRP Project 17-71 (10-15) is developing the 2nd Edition of the Highway Safety Manual. The 2nd Edition is expected to contain additional technical content, as well as content aimed at making the manual more user-friendly to practitioners. Technical content will include new research that has been completed, or is currently ongoing, since the 1st Edition was published, including predictive models for roundabouts, one-way streets, six-lane arterials, and other intersection and roadway configurations. The 2nd Edition is also expected to include comprehensive sample problems illustrating real-world scenarios and more content related to pedestrian and bicycle safety.

How can the HSM be used on Projects?

Planning – The HSM can be used to assess the safety performance of different corridor and intersection alternatives, as well as evaluate countermeasure costs and effectiveness.

Design – The HSM can be used to assess the safety performance of design alternatives and design exceptions, such as lane width, shoulder width/type, median width/type, and intersection control.

Implementation and policy projects - The HSM can be used to assess the safety effectiveness of potential countermeasures and to modify policies and design criteria.

The organization of the HSM is shown below in Exhibit 10.5.

Exhibit 10.5 Organization of the Highway Safety Manual



RECOMMENDED STRATEGIES

Several recommended strategies are identified for incorporating safety in the transportation planning process and furthering the implementation effort to meet the Billings community's safety goals.

These recommended strategies include:

- Continuing to establish partnerships between agencies to incorporate safety elements into existing and future plans,
- Continuing to support implementation of the recommended projects and strategies from the Billings Community Transportation Safety Plan, City of Billings Safe Routes to School Study, and Lockwood School District Safe Routes to School Plan,
- Integrating the Highway Safety Manual methods and procedures into the planning, design, and policy components of the project development process, and
- Evaluating the high crash rate locations in more detail to determine specific countermeasures to address specific crash types.

Chapter 11

Security



SECURITY

This chapter addresses security planning for the Billings Urban Area regional transportation system, including federal requirements; state and local plans; agency coordination; potential hazards; community priorities; and strategies.

Transportation security planning can reduce the negative impacts to the regional transportation system from major natural or manmade events. Some examples of these events are listed below:

- natural disasters, such as tornadoes, flooding, or blizzards;
- attempts to destroy elements of the regional transportation network to cause disruption;
- use of an element of the transportation system as a weapon, such as crashing a truck through a wall to deliver explosive materials; or
- large planned events, such as a state fair or parade.

The impacts of major events are reduced by being prepared; expediting responses; and aiding the recovery to normal services. In addition to preparing against, expediting responses to, and aiding in recovery from major events, transportation security planning helps keep people and goods moving, protects public health and life safety, supports economic productivity, and minimizes impacts of major events on the environment (11-1).

BACKGROUND FEDERAL REQUIREMENTS

There are several federal requirements associated with MPOs and the transportation planning process included in the 23 CFR Part 450 for Metropolitan Transportation Planning and Programming. The planning process should address increasing the security of the transportation system for motorized and non-motorized users. In carrying out the metropolitan transportation planning process, MPOs, States, and public transportation operators may incorporate or reference applicable emergency relief and disaster preparedness plans and strategies and policies that support homeland security, as appropriate to safeguard the personal security of all motorized and non-motorized users (11-2).

A local mitigation plan (for Yellowstone County, this is the Multijurisdictional Pre-Disaster Mitigation Plan) should be developed and prepared in compliance with federal, state and local hazard mitigation planning requirements published under 44 CFR Part 201 (11-3). The local mitigation plan is the representation of the jurisdiction's commitment to reduce risks from natural hazards, serving as a guide for decision makers as they commit resources to reducing the effects of natural hazards. Local plans will also serve as the basis for the State to provide technical assistance and to prioritize project funding (11-3).

The FEMA Disaster Mitigation Act of 2000 provides the legal basis for FEMA mitigation planning requirements for State, local and Indian Tribal governments as a condition of mitigation grant assistance (11-4).

On June 20, 2010, a tornado came through Billings and caused damage to the MetraPark, businesses, homes, and transportation infrastructure in the area. Planning for and developing a transportation system with multiple connections and parallel routes allows the region to actively plan for potential natural or manmade hazards.

STATE PLANS

TranPlanMT (2017)

Originally adopted in 1995 as TranPlan 21 and updated in 2017, TranPlanMT defines MDT's policy direction for operating, preserving, and improving Montana's transportation system over a 20-year period. A transportation system security section was created in the 2007 update and includes transportation security related goals and actions to support the statewide transportation planning process (11-5).

Montana Emergency Response Framework (2017)

Montana Emergency Response Framework (MERF, 2017) presents a structure for utilizing the emergency response and recovery resources of state, local, and other agencies. It describes the activities necessary to prepare for and respond to events stemming from natural, technological, and man-made hazards and the roles and responsibilities of all participants dealing with these events. This plan also provides a comprehensive all-hazards plan designed to provide the basis for an effective and coordinated response to disasters and emergencies that impact our state (11-6).

LOCAL PLANS

Multijurisdictional Pre-Disaster Mitigation Plan (2012)

The Yellowstone County Disaster and Emergency Services prepared a Multijurisdictional Pre- Disaster Mitigation Plan (PDM) in 2012. This PDM is an update to the 2004 plan and consists of a multi-jurisdictional assessment of each identified hazard, and updated recommendations for hazard mitigation planning actions moving forward. The 2012 PDM Update identifies opportunities and suggestive actions, which could reduce the impact of future disasters or emergencies (11-7).

Emergency Operations Plan for Billings, Laurel, & Broadview and Yellowstone County (2011)

The Emergency Operations Plan (EOP) provide s public officials of the City of Billings, City of Laurel, Town of Broadview, and Yellowstone County with a plan for carrying out their responsibilities in case of a disaster that threatens the lives and property of city and county citizens and is beyond the capacity of the appropriate emergency service(s) to control. It provides an organizational framework and response capability from which the cities and county can respond to natural, technological, or war caused emergencies that require comprehensive and integrated responses thus meeting the emergency services legal mandates. This document is currently being updated with an expected publication date of late 2018 (11-8).

SECURITY CONSIDERATIONS COORDINATION

The Yellowstone County Disaster and Emergency Services is an integrated effort to prevent or minimize the seriousness of emergencies and disasters, and to plan and coordinate the community's response to them should they occur. This effort requires establishing partnerships among professional emergency management personnel to prevent, respond to, and recover from disasters. Coordination is a key factor in establishing an emergency management program, and continual improvement saves lives and reduces losses from disasters. The Yellowstone County Disaster and Emergency Services are responsible for:

- Developing and updating emergency plans,
- Coordinating communications of emergency responders,
- Maintaining a county-wide system of alerting sirens,
- Maintaining the emergency operations center,
- Participating and coordinating exercises with all emergency responders,
- Recommending an emergency declaration or disaster declaration to the policy bodies of city and county government, preparing disaster declaration resolutions, serving as the City and/ or County's authorized agent for FEMA declare disasters (e.g. floods of 1978 and 1997), and managing the authorized emergency levy, and
- Serving as the County Fire Warden and administrator of the rural fire protection program.

In addition to the Yellowstone County Disaster and Emergency Services, there are several agencies and organizations that are involved with planning and implementation of security within the Billings Urban Area. The EOP and Multijurisdictional PDM identify the various agencies involved in these planning and implementation efforts and can be used as future references for agency consultation.

POTENTIAL HAZARDS

The Multijurisdictional PDM reviewed and identified the potential hazards for the Yellowstone County. Table 11.1 presents the potential hazards for the Yellowstone County. The Multijurisdictional PDM presents information on each potential hazard, latest occurrence(s), and summary of vulnerability and impact to Yellowstone County. Below is an overview of the information presented on transportation/mobile incidents in the Multijurisdictional PDM as it relates directly to the regional transportation system.

Table 11.1 Potential Hazards in Yellowstone County

Hazard Type	Event	Data Sources	Location Specific
Water	Flooding	Preliminary Flood Insurance Study 2010	Yes
	Dam Failure	2004 PDM Plan / Montana Department of Natural Resources & Conservation	Yes
Wildfire	Wildfire	Community Wildfire Protection Plan	Yes
Weather	Wind and Hail Storm	Spatial Hazard Events & Losses Database	County
	Tornado	Spatial Hazard Events & Losses Database	County
	Winter Storm	Spatial Hazard Events & Losses Database	County
	Drought / Insect Infestation	Montana Department of Natural Resources & Conservation	County
Geologic	Expansive Soil	Montana Bureau of Mines & Geology	Yes
	Landslide	Montana Bureau of Mines & Geology	Yes
	Earthquake	HAZUS	County
	Volcanic Ash	US Geological Survey	County
Manmade	Urban Fire	2004 PDM Plan	County
	Transportation/ Mobile Incident	US Department of Transportation	County
	Hazardous Materials Incident/Accident-Fixed	US Environmental Protection Agency Triexplor Database	County
	Terrorism/Bio-Terrorism	2004 PDM Plan	County
	Civil Disturbance/ Riot/Labor Unrest	2004 PDM Plan	County
	Enemy Attack	2004 PDM Plan	County

Yellowstone County is identified as a high probability of occurrences of transportation/mobile incidents because of the larger population, industrial base within the County, interstate highways, and major rail lines running through downtown. A transportation/mobile incident is any incident that occurs for which the exact location cannot be predetermined. Any incident involving a mode of transportation including car, truck, rail, pipeline, air, or mass transit is classified as a mobile incident. These can include incidents involving the transport of hazardous materials. Risks will increase as the population of the Billings Urban Area continues to increase. Additionally, damaging impacts to transportation infrastructure by the secondary effects of other potential hazards (storms, flooding, earthquakes, landslides, etc.) could also contribute to increased risks of future transportation/mobile incidents.

With each of the potential hazards, it is critical to provide connectivity and alternate routes and maintain this infrastructure throughout the regional transportation system. For more details on the potential hazards in Yellowstone County, refer to the latest Multijurisdictional PDM.

CRITICAL INFRASTRUCTURE

The entire multimodal transportation system plays a role in providing for local, regional, and national security. Facilities that are considered crucial or vital to security include elements of the system that are perceived or known to be most vulnerable. These tend to be at specific points and on connecting segments of the transportation system. Examples of the specific points on the system

are bridges, interchanges, and intermodal facilities. Examples of connecting segments are evacuation routes, state and interstate highways/freeways, transmission lines, and mainline freight and passenger rail lines.

As shown in Exhibit 11-1, critical roadways that are part of the National Highway System (NHS) in the Billings Urban Area include the following (11-9):

- Interstate 90 (NHS, Eisenhower Interstate System)
- Interstate 94 (NH, Eisenhower Interstate System)
- Montana Route 3 (NHS, STRAHNET Route)
- US Route 87 (NHS, Other NHS Route)
- King Avenue (MAP-21 NHS Principal Arterial)
- Zoo Drive (MAP-21 NHS Principal Arterial)
- Laurel Road (MAP-21 NHS Principal Arterial)
- 1st Avenue S (MAP-21 NHS Principal Arterial)
- Montana Avenue (MAP-21 NHS Principal Arterial)
- 1st Avenue N (MAP-21 NHS Principal Arterial)

The National Highway System (NHS) consists of roadways important to the nation's economy, defense, and mobility. The NHS includes the following categories within the Billings Urban Area:

- Interstate: The Eisenhower Interstate System of highways retains its separate identity within the NHS.
- Other Principal Arterials: These are highways in rural and urban areas which provide access between an arterial and a major port, airport, public transportation facility, or other intermodal facility.
- Strategic Highway Network (STRAHNET): This is a network of highways which are important to the United States' strategic defense policy and

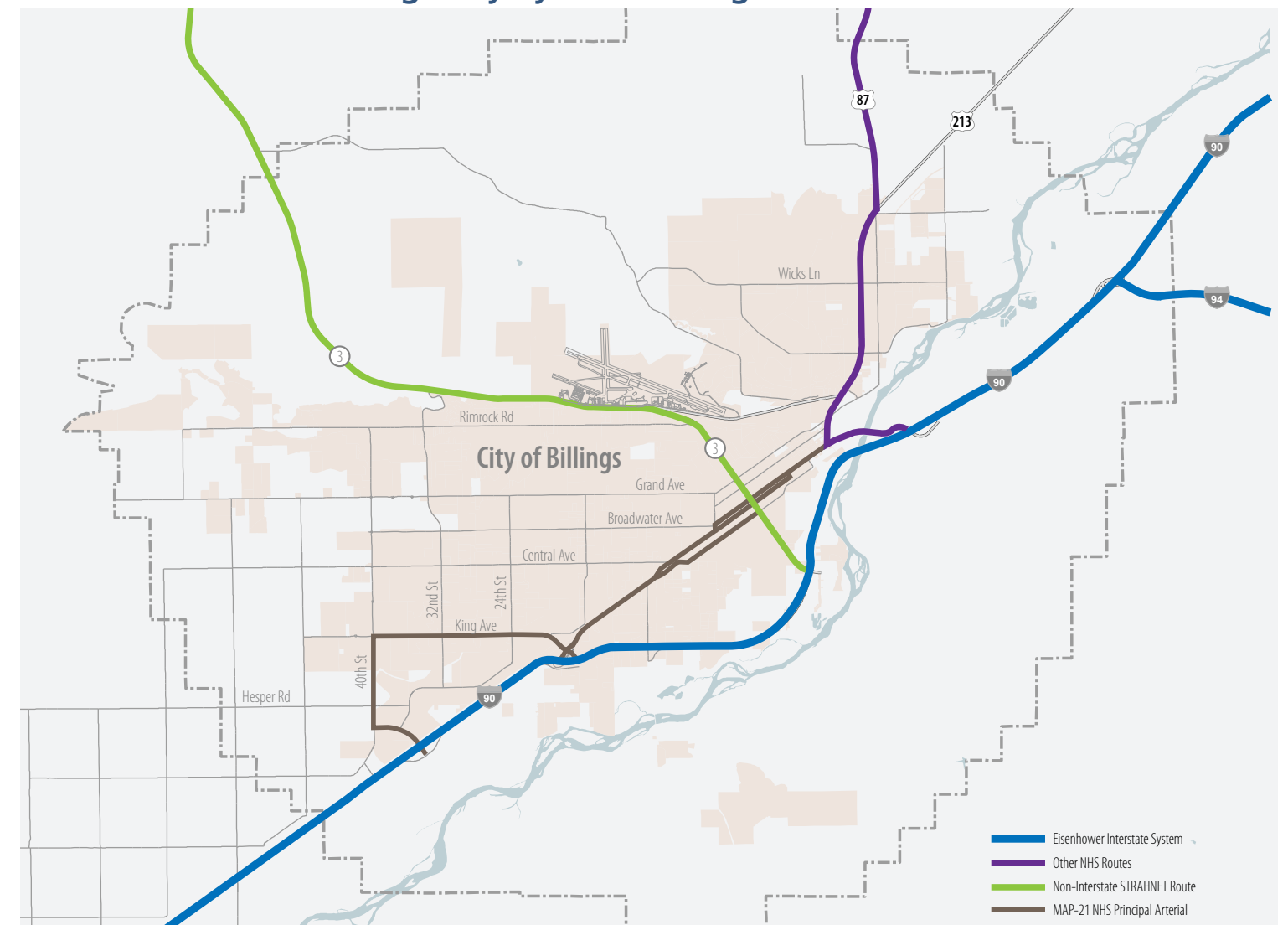
which provide defense access, continuity, and emergency capabilities for defense purposes.

The National Highway System (NHS) consists of roadways important to the nation's economy, defense, and mobility. The NHS includes the following categories within the Billings Urban Area:

- Interstate: The Eisenhower Interstate System of highways retains its separate identity within the NHS.

- Other Principal Arterials: These are highways in rural and urban areas which provide access between an arterial and a major port, airport, public transportation facility, or other intermodal facility.
- Strategic Highway Network (STRAHNET): This is a network of highways which are important to the United States' strategic defense policy and which provide defense access, continuity, and emergency capabilities for defense purposes.

Exhibit 11-1. National Highway System: Billings, MT



Significant intermodal facilities within the Billings Urban Area include:

- MET Transfer Centers (Stewart Park and Downtown),
- Billings Logan International Airport,
- Montana Rail Link railroad facilities, and
- Burlington Northern Santa Fe railroad facilities.

COMMUNITY PRIORITIES

As part of the 2004 Multijurisdictional PDM, a community involvement process was conducted to assess the community's ranking of all potential hazards. This ranking was reviewed for the 2012

Multijurisdictional PDM with the rankings staying unchanged. Table 11.2 summarizes the community rankings of potential natural and man-made hazards.

As shown in Table 11.2, the top rankings have a direct relationship with the regional transportation system (i.e., connectivity, providing alternate routes, etc.) in the event one occurred. Therefore, it is critical for the MPO and region to continue to collaborate on security items as part of the transportation planning process and maintenance of the Multijurisdictional PDM.

RECOMMENDED STRATEGIES

Several recommended strategies are identified for incorporating security in the transportation planning process. These recommended strategies include:

- Continue to establish partnerships between agencies to incorporate security elements into existing and future plans.
- Implement the proposed mitigation actions identified in the Yellowstone County Multijurisdictional PDM, in particular the following related transportation projects:
 - Highway 3 Stormwater Controls: Study options for mitigating stormwater runoff from Highway 3 near the Airport.
 - Continued community outreach on floodplain awareness, firewise demonstrations, severe storm education, and school safety.

- Involve identified security stakeholders throughout the transportation planning process, including analysis of transportation system security at the program and project levels associated with both the development of subsequent LRTPs and transportation improvement program (TIP) updates, as well as ongoing corridor and system-wide project evaluations.
- Implement key transportation projects that provide alternate routes and connections within the Billings Urban Area, such as the Billings Bypass Arterial and Inner Belt Loop.
- Implement ITS technologies (i.e., signage, signal systems, wayfinding, etc.) to improve communications, manage the transportation system, and allow for deployment of signal timing contingency plans during potential hazards/events.

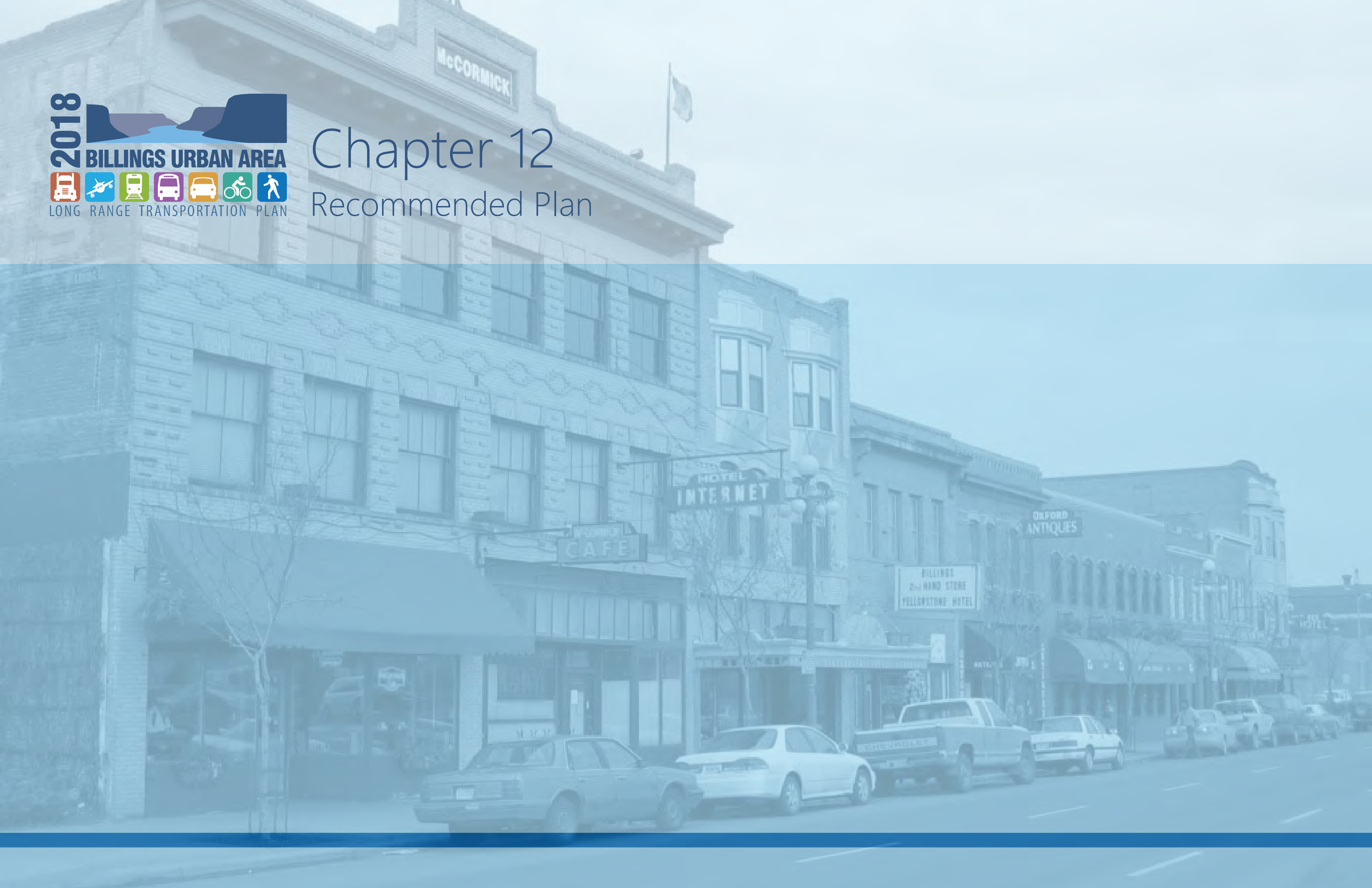
Table 11.2. Community Rankings of Natural and Man-made Hazards in Yellowstone County

Hazard	History	Vulnerability	Maximum	Probability	Rank
Natural Hazard Vulnerability Ranking for Yellowstone County					
Flooding	High	High	High	High	1
Wildfire	High	High	High	High	2
Wind and Hail Storms	High	High	High	High	3
Tornado	Moderate	Moderate	Moderate	Moderate	4
Winter Storms	High	Moderate	Moderate	Moderate	5
Drought	High	Low	Moderate	Moderate	6
Insect Infestations	Moderate	Moderate	Moderate	Moderate	7
Urban Fire	Low	Low	Moderate	Low	8
Dam Failure	Low	Moderate	Moderate	Low	9
Expansive Soil	Moderate	Low	Low	Moderate	10
Landslides	Moderate	Low	Low	Low	11
Earthquake	Low	Low	Low	Low	12
Volcanic Ash	Low	Low	Low	Low	13
Manmade Hazard Vulnerability Ranking for Yellowstone County					
Transportation/ Mobile Incident	Moderate	Moderate	High	High	1
Hazardous Materials Incident/ Accident-Fixed	Moderate	Moderate	High	High	2
Terrorism/Bio-Terrorism	Low	Moderate	High	Low	3
Civil Disturbance/ Riot/Labor Unrest	Moderate	Moderate	Moderate	Moderate	4
Enemy Attack	Low	Moderate	High	Low	5



Chapter 12

Recommended Plan





Chapter 13

Financial Plan





Chapter 14

Conformity Analysis/Determination



CONFORMITY ANALYSIS/ DETERMINATION

On November 15, 1990, the Clean Air Act Amendments (CAAA) of 1990 was signed into law. The CAAA is an extremely detailed and complex law that has had a major impact on the programs of the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA). The Act requires substantial emission reductions from the transportation sector. The purpose of the conformity provision of the CAAA is to ensure consistency between the Federal transportation planning process and Federal air quality planning process. The regulations require that for an urban area designated as nonattainment of National Ambient Air Quality Standards (NAAQS) for transportation-related criteria pollutants, or which has a maintenance plan for such pollutants, a conformity determination must be conducted to demonstrate that its LRTP, transportation improvement plan (TIP), or any revisions to its plan will not adversely affect air quality (14-1).

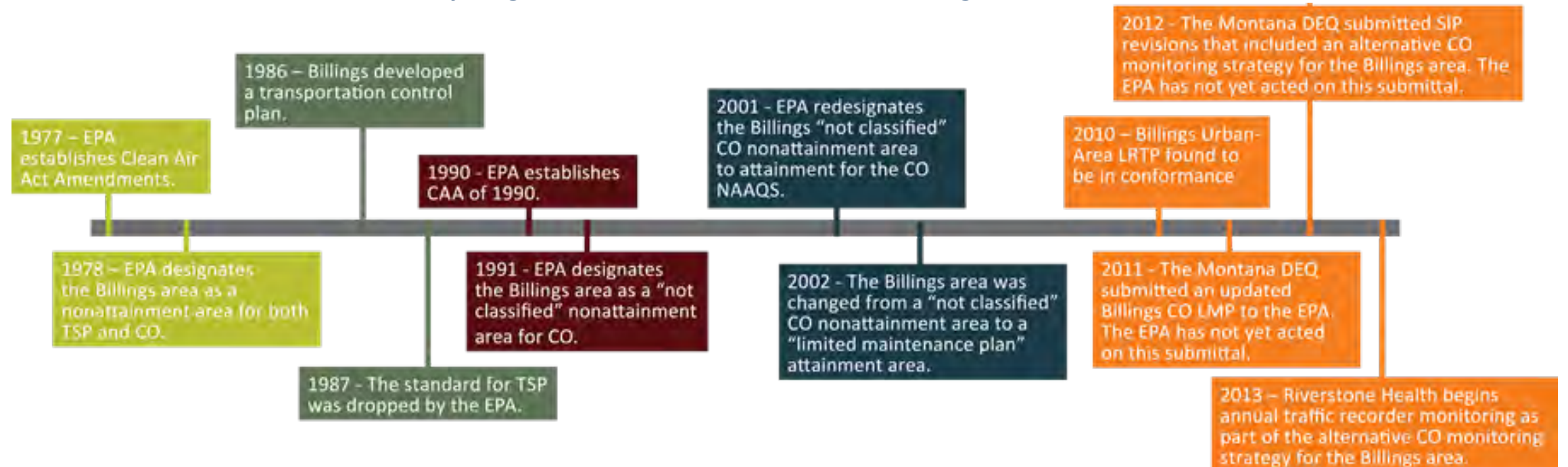
The conformity analysis and determination was developed based on the applicable federal, state, and local requirements; input from the MPO; 2017-2021 Billings Transportation Improvement Program (14-2); and information presented in Chapter 13, Conformity Analysis/Determination of the adopted Billings Urban Area LRTP 2014 (14-3).

BACKGROUND

TIMELINE OF CONFORMITY REGULATIONS AND ACTIONS

Over the last 30 years, several regulations have passed and actions have occurred within the State of Montana and Billings area that have changed certain requirements for determining conformity of a LRTP. Exhibit 14.1 illustrates a timeline of the different regulations and actions for conformity.

Exhibit 14.1 Timeline of Conformity Regulations and Actions for the Billings Area



DETAILS

Billings was designated as a nonattainment area by the Environmental Protection Agency (EPA) for both Total Suspended Particulates (TSP) and Carbon Monoxide (CO) in a Federal Register (FR) notice on March 3, 1978 (43 FR 8962) as a result of the Clean Air Act Amendments (CAAA) of 1977. The NAAQS for CO is 9.0 parts per million (ppm) for an 8-hour average concentration, not to be exceeded more than once per calendar year.

At that time, a transportation control plan (TCP) was developed to bring Billings back into compliance following the nonattainment designation. The CO violation was attributed primarily to motor vehicle emissions. The initial CO TCP concentrated on an intersection reconstruction at Exposition Drive and 1st Avenue N. The final CO TCP incorporated computer modeling with the intersection reconstruction and was approved in the Federal Register on January 16, 1986 (51 FR 2397). Additionally, in 1987 the standard for TSP was dropped, and a new standard for particulate matter under 10 microns in size (PM - 10) was adopted (52 FR 24854). The EPA has also adopted the PM 2.5 standard and Billings is considered to

be in compliance with both of these new standards. Billings was reevaluated in September 1990, based on the 1990 CAAA and the lack of exceedances in the CO monitoring data for 1988 and 1989. In a November 6, 1991 Federal Register notice (56 FR 56799), Billings was listed as a “not classified” nonattainment area for CO.

The Montana Department of Environmental Quality (DEQ) developed this redesignation request with guidance from the 1990 CAAA and a September 4, 1992 EPA memo from John Calcagni to the EPA Regional Air Directors. Section 107(d)(3)(E) of the CAAA defines the five required criteria of a redesignation request. The criteria are as follows:

- Criterion 1: Attainment of the Applicable NAAQS
- Criterion 2: State Implementation Plan Approval
- Criterion 3: Permanent and Enforceable Improvements in Air Quality
- Criterion 4: Fulfillment of CAAA Section 110 and Part D Requirements
- Criterion 5: Fully Approved Maintenance Plan under CAAA Section 175A

Each of these criteria were accomplished and demonstrated in the CO redesignation request submitted in 2001. On February 9, 2001, the Governor of Montana submitted a request to redesignate the Billings “not classified” carbon monoxide (CO) nonattainment area to attainment for the CO NAAQS. The Governor also submitted a CO maintenance plan with this request. In this action, the EPA approved

the Billings CO designation request and the 10-year maintenance plan effective on April 22, 2002. With this action, the Billings area legal designation was changed from “not classified” nonattainment for CO to a “limited maintenance plan” attainment area.

With the redesignation to attainment, the Billings area was required to comply with the provisions of the 2002 Carbon Monoxide Limited Maintenance Plan (2001 LMP Submittal) and submit a CAA section 175A(b) required revised maintenance plan in 2010 that provided for maintenance of the CO standards for an additional ten years. The Billings area can request full attainment status if the Billings area does not have any further CO NAAQS violations during the maintenance period.

The Montana DEQ submitted an updated Billings Carbon Monoxide Limited Maintenance Plan (2011 LMP Submittal) on July 13, 2011, as required by 42 USC 7505(A). The 2011 LMP submittal documents the first ten years of CO monitoring under the 2002 LMP, and details strategies for maintaining CO standards for the subsequent ten years. As such, the 2011 LMP document fulfills the criteria established in 40 CFR Part 51, Appendix V. However, the EPA has not yet acted on this submittal.

On June 22, 2012, the Montana DEQ submitted SIP revisions that included an alternative CO monitoring strategy due to the Billings area monitoring consistently low levels of CO for over a decade. The DEQ determined that using the resource-intensive CO analyzers to confirm CO levels was not justifiable.

The alternative CO monitoring strategy includes the following:

- reviewing the traffic volumes annually in each of the CO maintenance areas using the data from the MDT’s permanent automatic traffic recorders (ATR) in Billings,
- comparing the latest 3-year monthly average of the average daily traffic (ADT) volumes during the traditional CO concentration season of November through February against baseline 2008-2010 ADT average for those months, and
- implementing a contingency plan, so that if the most recent, consecutive 3-year period ADT in the CO maintenance area increases by greater than 25% from the baseline 2008-2010 period (The contingency plan includes reinstating the gaseous monitoring at the 2008-2010 monitoring location or at a site expected to read greater CO than that site.). (14-4).

Since the EPA has not acted on the July 13, 2011 or the June 22, 2012 submittals, the 2002 LMP is the controlling document for this air quality conformity determination. However, the ATR monitoring is included in the discussion as a reference for future updates to the LRTP.

The following conformity determination was made in accordance with the above referenced Federal regulations. The determination is for CO and applies to the 2018 Billings Urban Area LRTP and the Carbon Monoxide State Implementation Plan (SIP) for the State of Montana. As of the date of this conformity determination, the Billings Urban Area is not designated as a nonattainment or maintenance area for any other air pollutant.

CONFORMITY DETERMINATION INTERAGENCY CONSULTATION

The consultation guidance contained in the State of Montana Air Quality Rules on Conformity (ARM Chapter 17 Chapter 8 Subchapter 13) was used in the preparation of this conformity determination and emissions analysis. These rules incorporate by reference Federal regulations contained in 40 CFR Part 93, Subpart A. This consultation generally involved a cooperative and coordinated process including the MDT, Montana DEQ, and Yellowstone County Planning Board.

The Montana DEQ and MDT coordinate regarding air quality and transportation conformity on behalf of MPOs such as the City of Billings-Yellowstone County MPO. Coordination is conducted in accordance with applicable Federal code (40 CFR 93) and state administrative rules (ARM Chapter 17 Chapter 8 Subchapter 13). Coordination typically takes the form of consultation through letter correspondence between the state agencies.

Air quality planning is an integral part of the Billings Urban Area transportation planning process. As such, air quality has received specific attention during development of the numerous plans, programs, and projects over the last 30 years. The actions and activities of the 2018 Billings Urban Area LRTP and process closely parallel those of the SIP and support its intentions of achieving and maintaining the NAAQS.

PUBLIC, STAKEHOLDER, AND INTERAGENCY INVOLVEMENT

The City of Billings-Yellowstone County MPO conducts ongoing public, stakeholder, and interagency outreach for all transportation planning activities in the Billings urban area. Guidance for the outreach is included in the Yellowstone County Planning Board Public Participation Plan (14-5), which was updated by the MPO and adopted by the PCC in September 2018. The plan is reviewed and updated periodically by the MPO.

For this LRTP, a public involvement plan was established at the beginning of the project and used to guide the public, stakeholder, and interagency involvement (14-6). Chapter 2 of this LRTP summarizes the process and outreach activities incorporated for development of this plan.

LATEST PLANNING ASSUMPTIONS AND REGIONAL EMISSIONS ANALYSIS

An October 6, 1995 EPA policy memorandum for LMPs in non-classifiable CO nonattainment areas included a discussion of the applicability of the conformity rule requirements in these areas. According to this policy, a LMP attainment area is not required to project emissions over the maintenance period, because the air quality design value for the area is low enough that the stationary source permitting program, existing SIP controls and Federal control measures provide adequate assurance of maintenance of the CO standard over the initial 10-year maintenance period. The design value must continue to be at or below 7.65 ppm. The CO

average design value for the Billings area is 5.5 ppm, which is well below the requirement. Therefore, the Billings area adequately demonstrates maintenance.

Under a CO LMP, the following elements are applicable regarding the regional emissions analysis:

- No regional emissions analysis is required for applicable pollutants/precursors and analysis years.
- Transportation plan, TIP, and project conformity determinations are still required.
- For applicable projects, hot-spot analyses are still required. 40 CFR Section 93.109(e).

The Transportation Improvement Program (TIP) is a required planning program for federally assisted highway and transit improvements for the Billings metropolitan planning area and the MDT over a five-year period. The TIP is prepared every five years and amended as needed, and is in conformance with 23 CFR, Part 450 324-330.

Therefore, conformity demonstration using regional emissions analysis is not required for the LRTP.

Incorporation of the 2012 LMP Alternative CO Monitoring Strategy

As identified in the 2012 LMP, an alternative CO monitoring strategy was identified that included monitoring traffic volumes annually in each of the CO maintenance areas using the data from the MDT's permanent automatic traffic recorders (ATR) in Billings. The ATR location is Site A-050 (US 87, Main Street,

between Milton and Hansen) in Billings (14-9). Table 14.1 summarizes the rolling three year monthly average daily traffic (ADT) comparison between the 2008-2010 base year and the most recent 2015-2017 year time-period.

Table 14.1 Rolling Three Year Monthly Average Daily Traffic (ADT) Comparison

Year	Monthly Average Nov-Feb ADT
2015-2017	29,522
2008-2010	33,952
% Difference	-13.0%

Source: MDT's Monthly Automatic Traffic Recorder Comparison (14-8)

As shown in Table 14.1, the most recent rolling three-year monthly ADT is 13.0 percent lower than the baseline ADT. Therefore, the alternative CO monitoring strategy meets the requirements and is in conformance with the 2012 LMP.

TIMELY IMPLEMENTATION OF SIP TRANSPORTATION CONTROL MEASURES

Specific TCMs have not been proposed for Billings. There are no TCM's in the SIP and no specific TCM's are recommended for implementation in this LRTP. Therefore, the TCM timely implementation requirement is not applicable to this conformity determination.

FISCAL CONSTRAINT

Metropolitan transportation plans are required to meet Federal fiscal constraint requirements as detailed in 23CFR450.322(b) (11). For LMP areas such as Billings, this fiscal constraint requirement must be met before a conformity determination is approved. Chapter 13 of this LRTP documents that planned expenditures are consistent with existing and proposed funding sources that can reasonably be expected to be available for transportation uses. As such, the LRTP meets that fiscal constraint requirement.

CONCLUSION

In addition to the above conditions and requirements, it is concluded that the 2018 Billings Urban Area Long Range Transportation Plan is found to be in conformance with the applicable provisions of Section 176(c) of the Clean Air Act, 40 CFR 93 Subpart A, and the Billings Carbon Monoxide Limited Maintenance Plan element of State Implementation Plan for the State of Montana.

Chapter X

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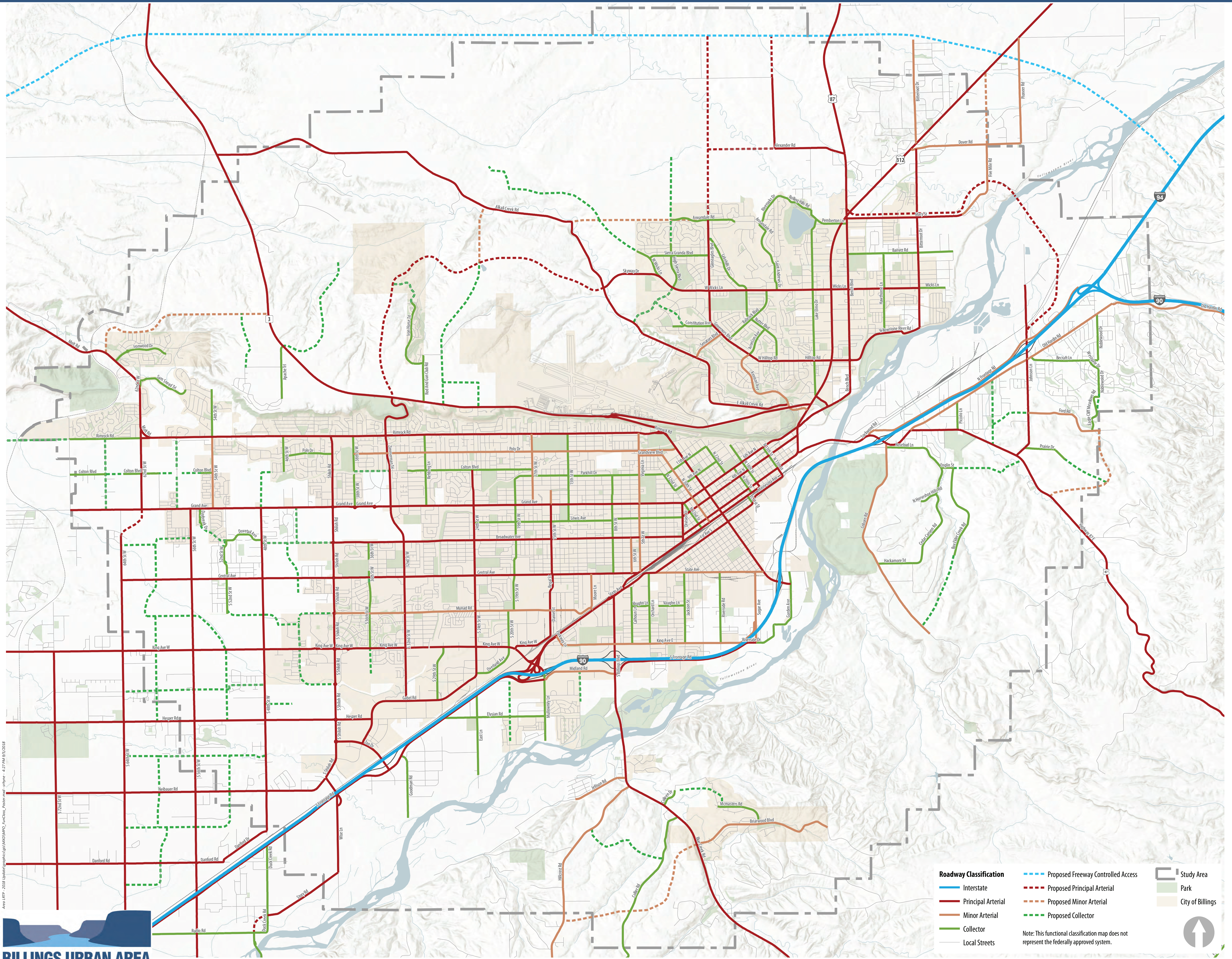
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ROADWAY FUNCTIONAL CLASSIFICATION



Roadway Classification	Proposed Freeway Controlled Access	Study Area
Interstate	Proposed Principal Arterial	Park
Principal Arterial	Proposed Minor Arterial	City of Billings
Minor Arterial	Proposed Collector	
Collector		
Local Streets		

Note: This functional classification map does not represent the federally approved system.

2018
BILLINGS URBAN AREA
 LONG RANGE TRANSPORTATION PLAN

KITTELSON & ASSOCIATES
DOWL



Introduction

Transportation planning has been a key element of the City's planning efforts for over 100 years since its inception as a major rail hub. As such, one of the first transportation surveys was completed in 1954, which included a transportation inventory, traffic counts, parking, and other related data. Eleven transportation plans (1961, 1964, 1969, 1977, 1983, 1990, 2000, 2005, 2009, and 2014) have been completed since 1961. Most recently, the Yellowstone County Board of Planning, the designated Metropolitan Planning Organization (MPO)

and oversight for transportation planning for the Billings Urban Area, adopted the 2018 Billings Urban Area Long Range Transportation Plan (LRTP). The area encompasses the City of Billings, as well as the planning area extending approximately 4.5 miles outside the City limits in Yellowstone County.

The Billings Urban Area LRTP is a framework to guide development and implementation of multimodal transportation system projects for the Billings Urban Area. The LRTP is updated every four years, and looks at today's land use and transportation conditions and plans for the future through year 2040. Transportation is a vital element to the residents and businesses of Billings and connects commerce from the Billings Urban Area to other parts of Montana and metropolitan areas via road, rail, and air. The region's transportation infrastructure is robust and includes streets, highways, freeways, rail, transit, sidewalks, bicycle lanes and routes, trails, and an airport. Given the importance of transportation infrastructure, the LRTP includes goals and objectives that support transportation mobility and accessibility throughout the Billings Urban Area.

This double-sided map focuses on the functional classification system and typical cross sections within the City of Billings and Yellowstone County. Please refer to the adopted LRTP document for more details on the plan.

Functional Classification

The Roadway Functional Classification System defines a road's role in the overall context of the highway transportation system. In addition, it helps to define which standards are generally desirable for roadway width, right of way needs, access spacing, pedestrian and bicycle facilities and other specifications. The functional classification system hierarchy is typically established by the following hierarchy:

Freeways serve high speed, long distance travel movements and provide limited access to adjacent lands. Often included in the Arterial classification, freeways are unique in that they provide access to other arterial roadways via grade-separated interchanges. In the Billings Urban Area, the freeways are classified as Interstate.

Arterials represent the highest class of highways and roads. These roadways are intended to serve higher volumes of traffic, particularly through-traffic, at higher speeds. They also serve truck movements and should emphasize traffic movement over access to adjacent property. Arterial roadways are further designated as Principal Arterials and Minor Arterials.

Collectors represent the intermediate class. As the name suggests, these roadways collect traffic from the local street system and link travel to the arterial roadway system. These roadways provide a balance between through-traffic movement and property access and provide extended continuity to facilitate traffic circulation within an urban community or rural area.

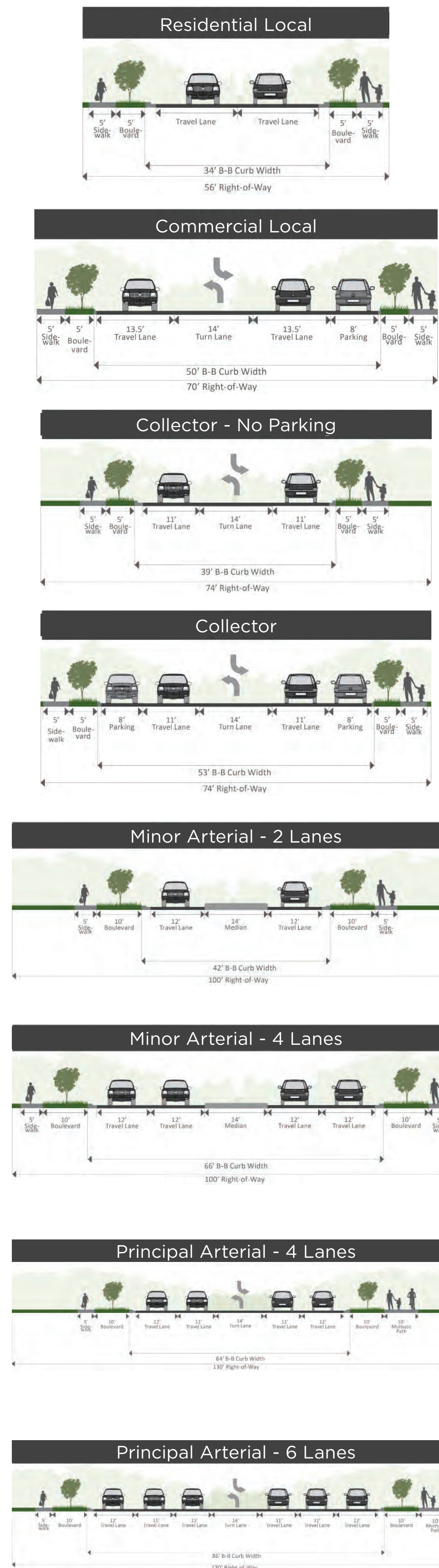
Local Roads and Streets are the lowest classification. Their primary purpose is to carry locally generated traffic at relatively low speeds to the collector street system and to provide more frequent access to individual businesses and residential property. Local streets provide connectivity through neighborhoods, but generally should be designed to discourage cutthrough vehicular traffic.

In addition to the above roadway classifications, a limited number of principal arterials are further identified as Interstate routes and National Highway System (NHS) routes. The Interstate System designations are Interstate 90 and Interstate 94. The Moving Ahead for Progress in the 21st Century Act (MAP-21) NHS Principal Arterial designations are King Avenue, Laurel Road, Montana Avenue, Zoo Drive, 1st Avenue North, and 1st Avenue South. The Other NHS Route designations are Main Street and US Route 87 and a Non-Interstate Strategic Highway Network (STRAHNET) Route designation is Montana Highway 3.

Functional Classification Map and Cross Sections

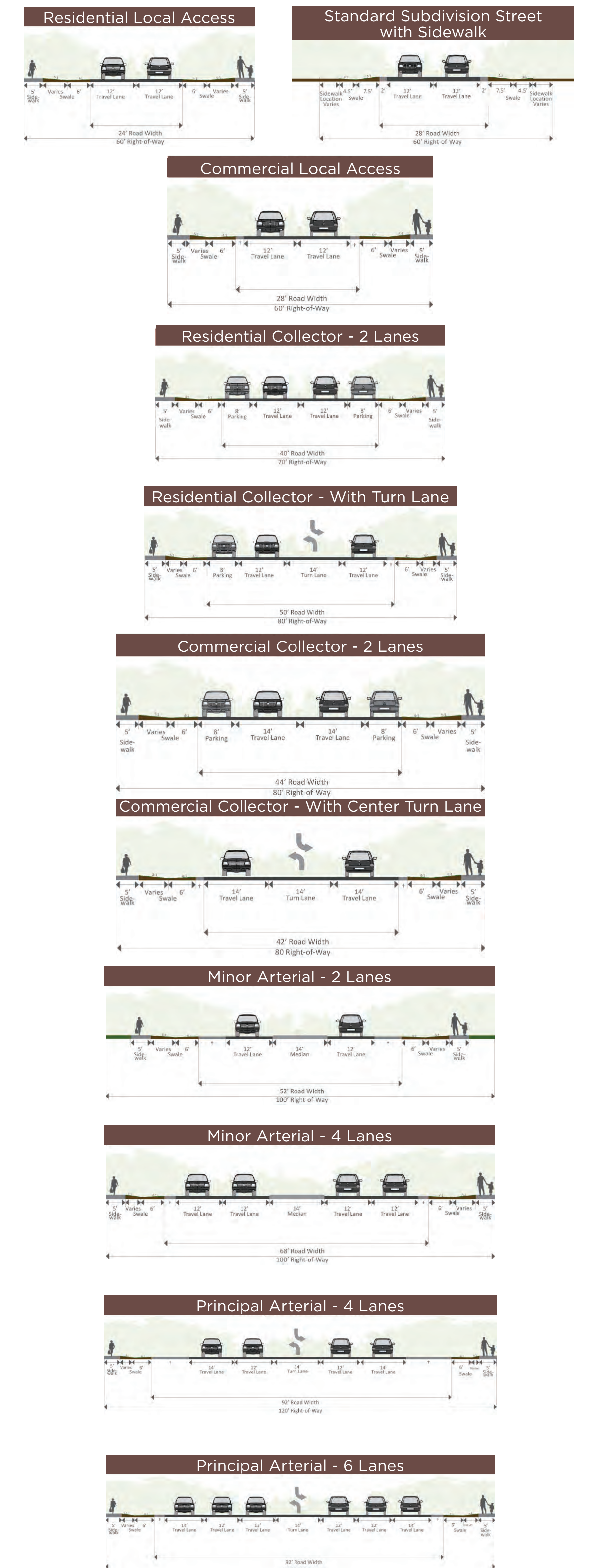
The LRTP planning process led to the development of the Functional Classification Map, shown on the front page. The City of Billings and Yellowstone County review and update this map regularly as part of the planning efforts within the Urban Area. To support the Functional Classification Map, typical roadway cross sections are illustrated to the right for the City of Billings and Yellowstone County. More details and guidance on these cross sections can be found in the City of Billings and Yellowstone County's Subdivision Regulations.

Sample City of Billings Cross Sections*



* For more details and guidelines on the cross sections, refer to the City of Billings Subdivision Regulations Table 23.406.B.1 Required Dedications and Street Improvements for Subdivisions within City Limits. A traffic impact study is required for major and principal arterials, and may be required to determine other cross sections within the city.

Sample Yellowstone County Cross Sections*



*For details and guidelines on the cross sections, refer to the Yellowstone County Subdivision Regulations, Chapter 4 and Table 4.6.C.1 Required Dedications and Street Improvements for Subdivisions. A Road Evaluation Study or Traffic Impact Study may be required by Yellowstone County to determine the cross section.

† Shoulders shall be required on both sides of all roads where no curb and gutter or parking lanes are required. The shoulders shall be two (2) feet wide and graded, and must meet the specification of County Public Works.

Travel Demand Model Update

- ▶ Traffic Counts
 - ▶ Daily counts on 550 directional segments
 - ▶ Peak hour/period counts on subset
- ▶ Road Network
 - ▶ Updates to road classifications for consistency with LRTP
 - ▶ Updates to speed assumptions
- ▶ Model Programming and Interface
 - ▶ In progress
- ▶ Model Validation
 - ▶ Comparison of model estimates to counts

Draft Validation Highlights

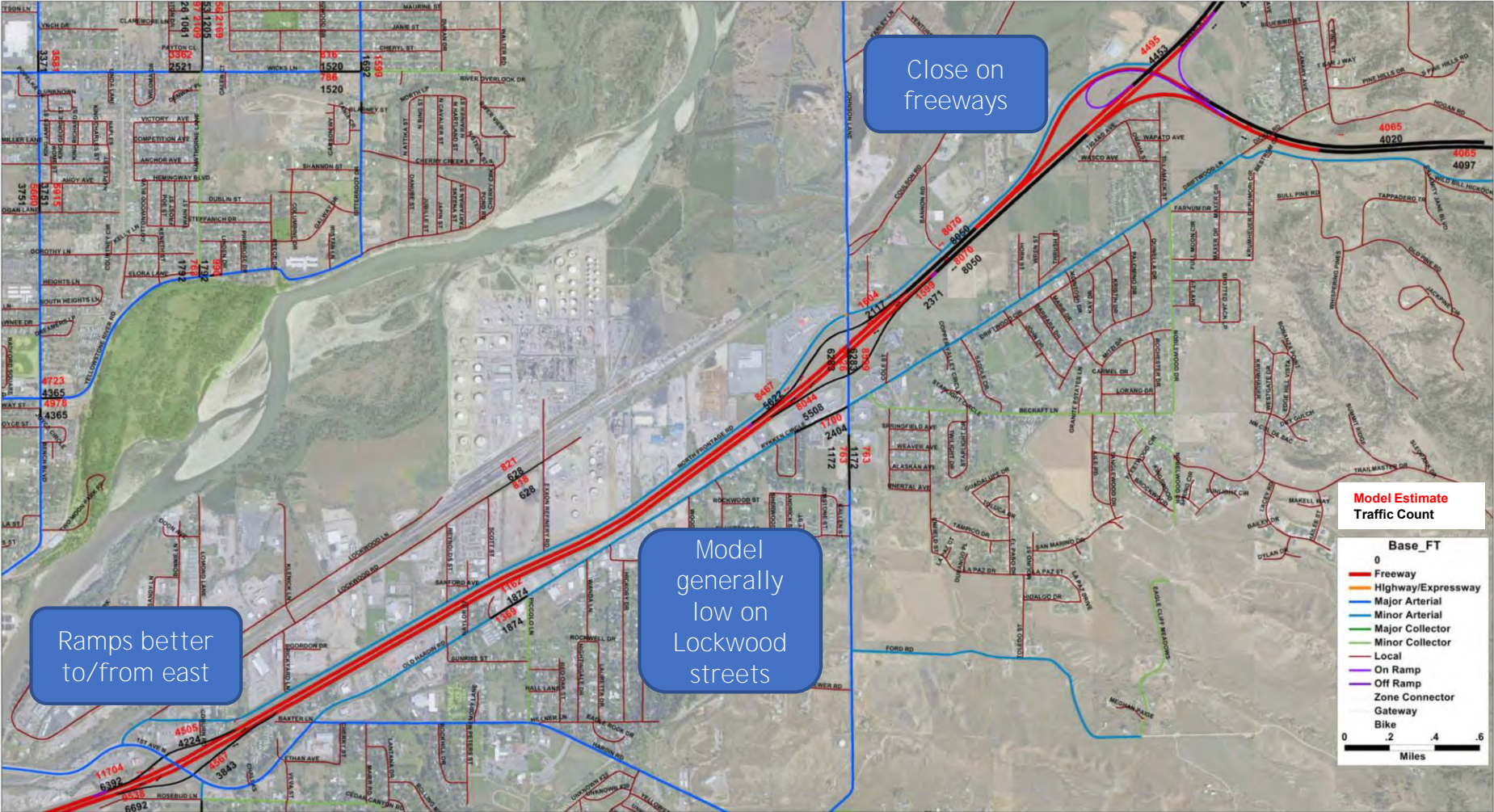
- ▶ Model replicates counts well on many segments
- ▶ Model overestimates on arterials serving commercial areas
- ▶ Overall 26% high
- ▶ Next adjustments:
 - ▶ Shorten trip lengths based on survey
 - ▶ Trip generation for retail - possibly lower
 - ▶ Adjust freeway through trips



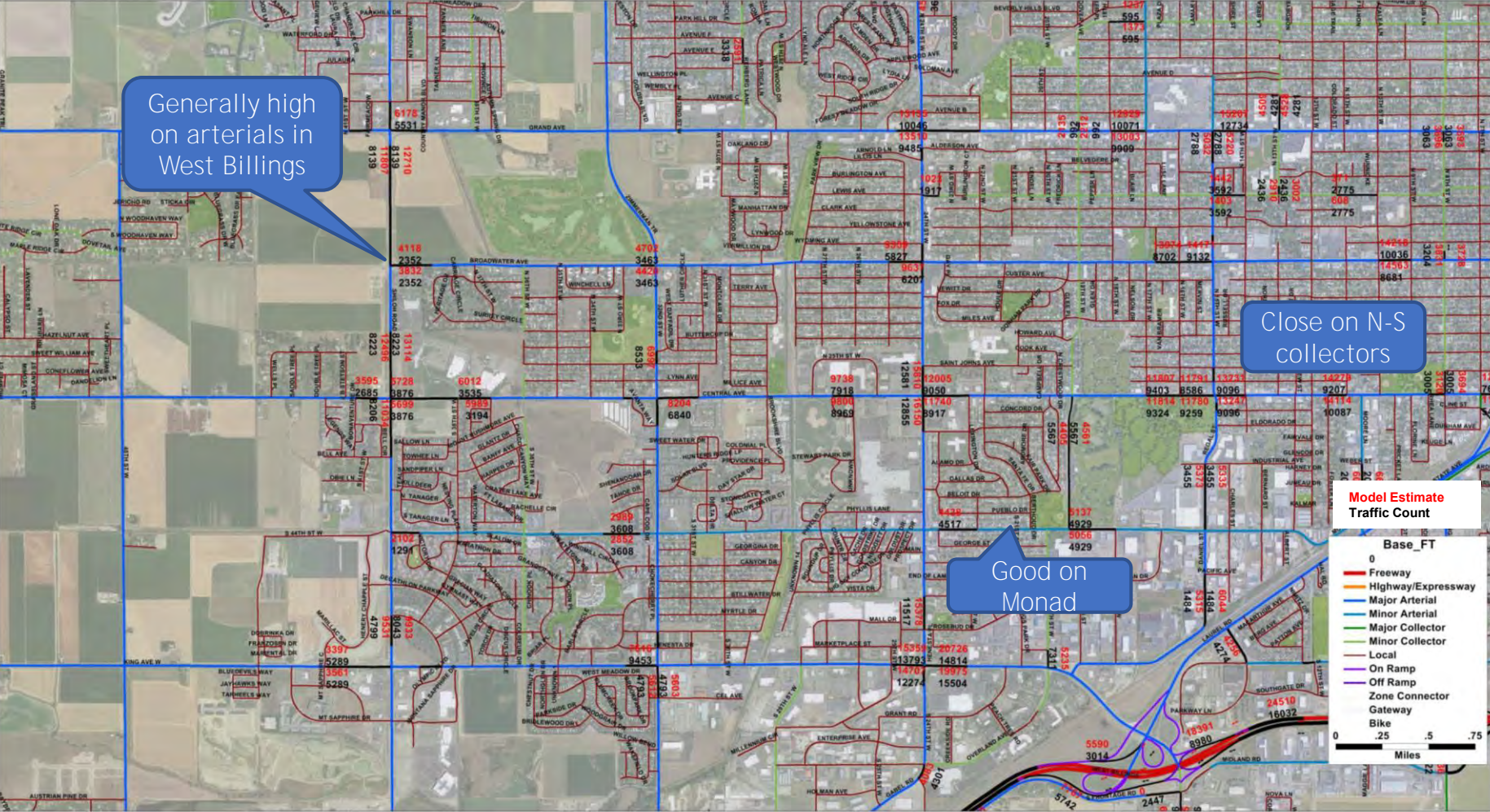
Draft Daily Validation: Downtown



Draft Daily Validation: Lockwood



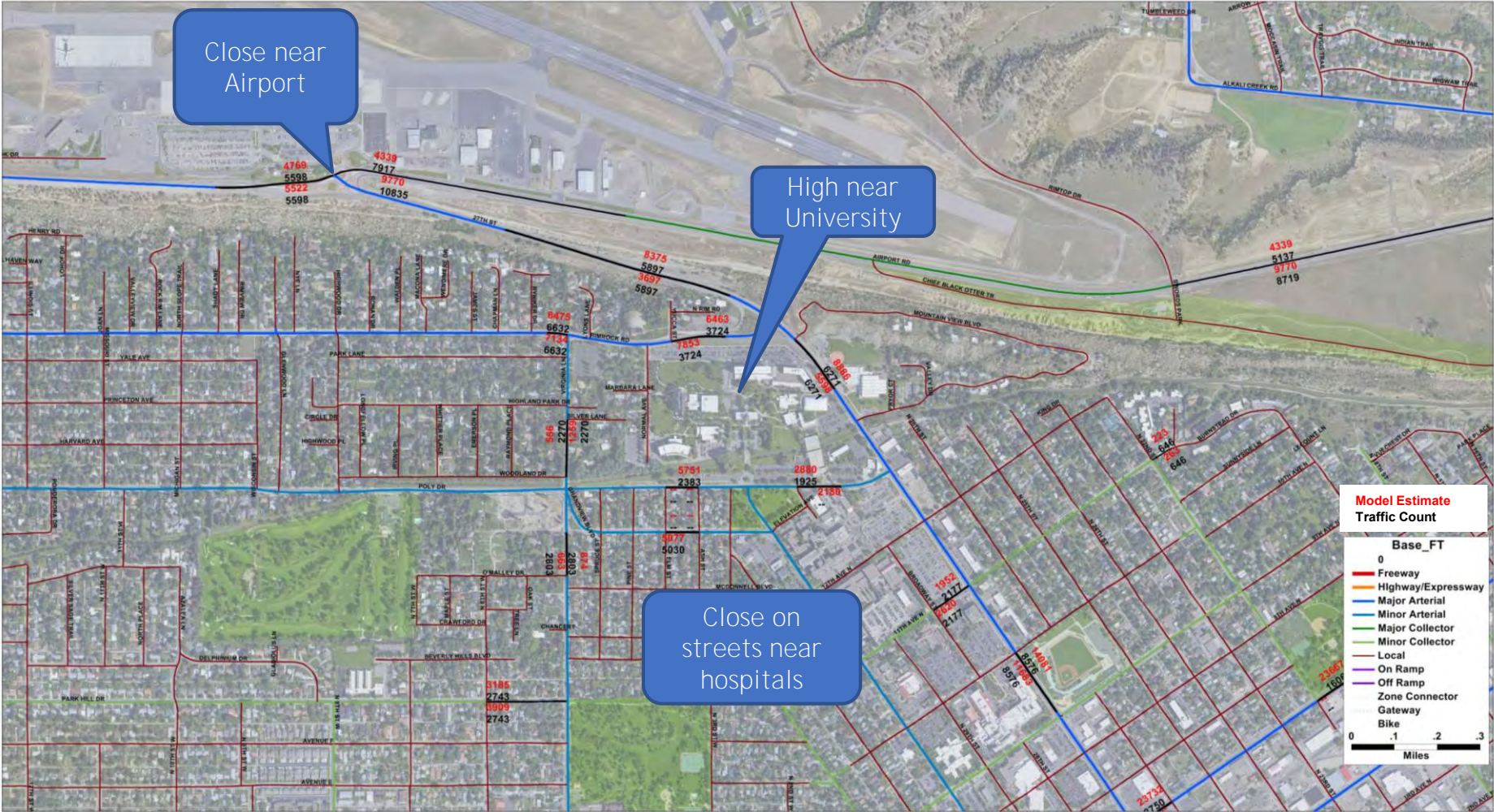
Draft Daily Validation: Southwest



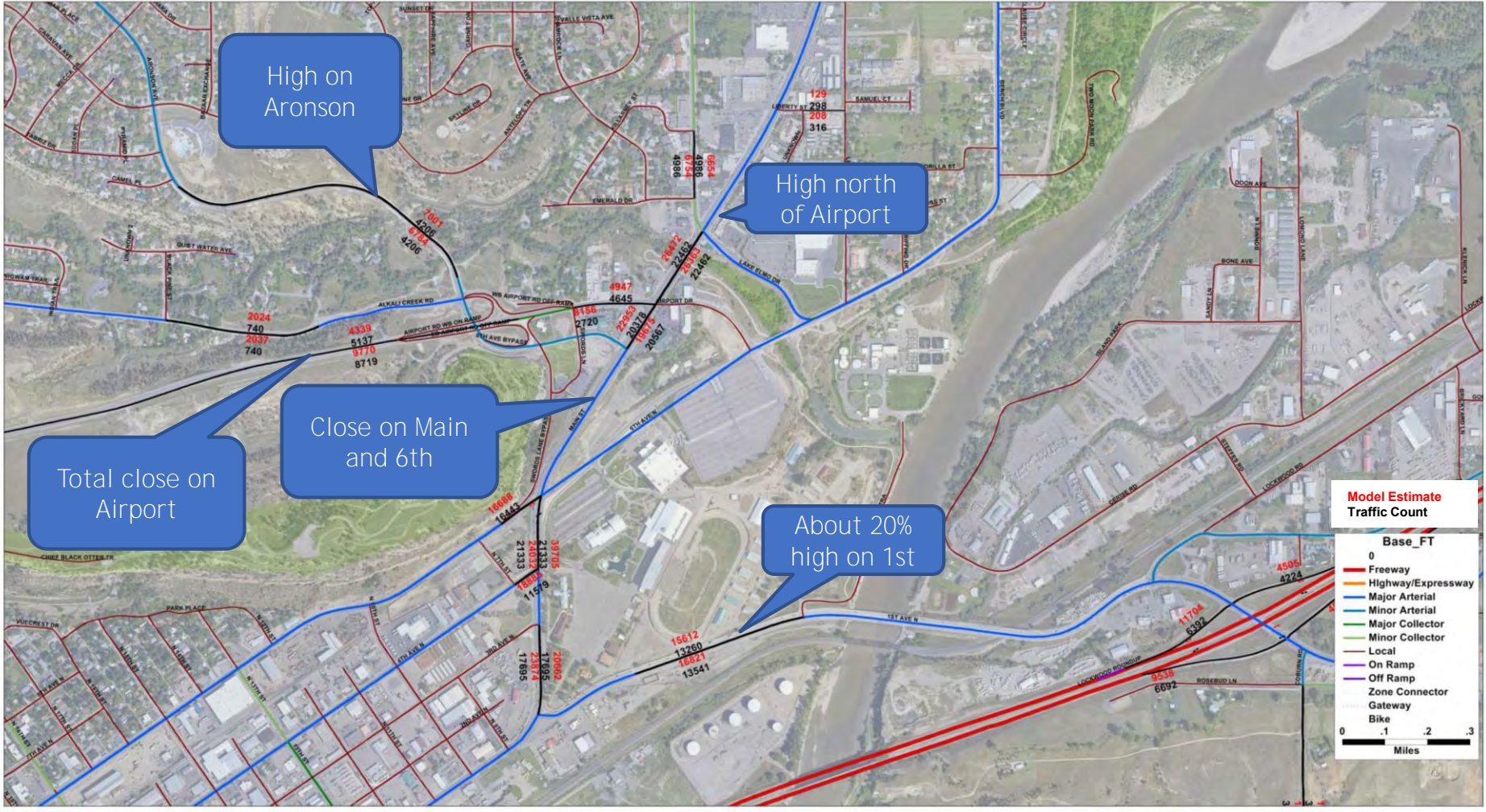
Draft Daily Validation: Northwest



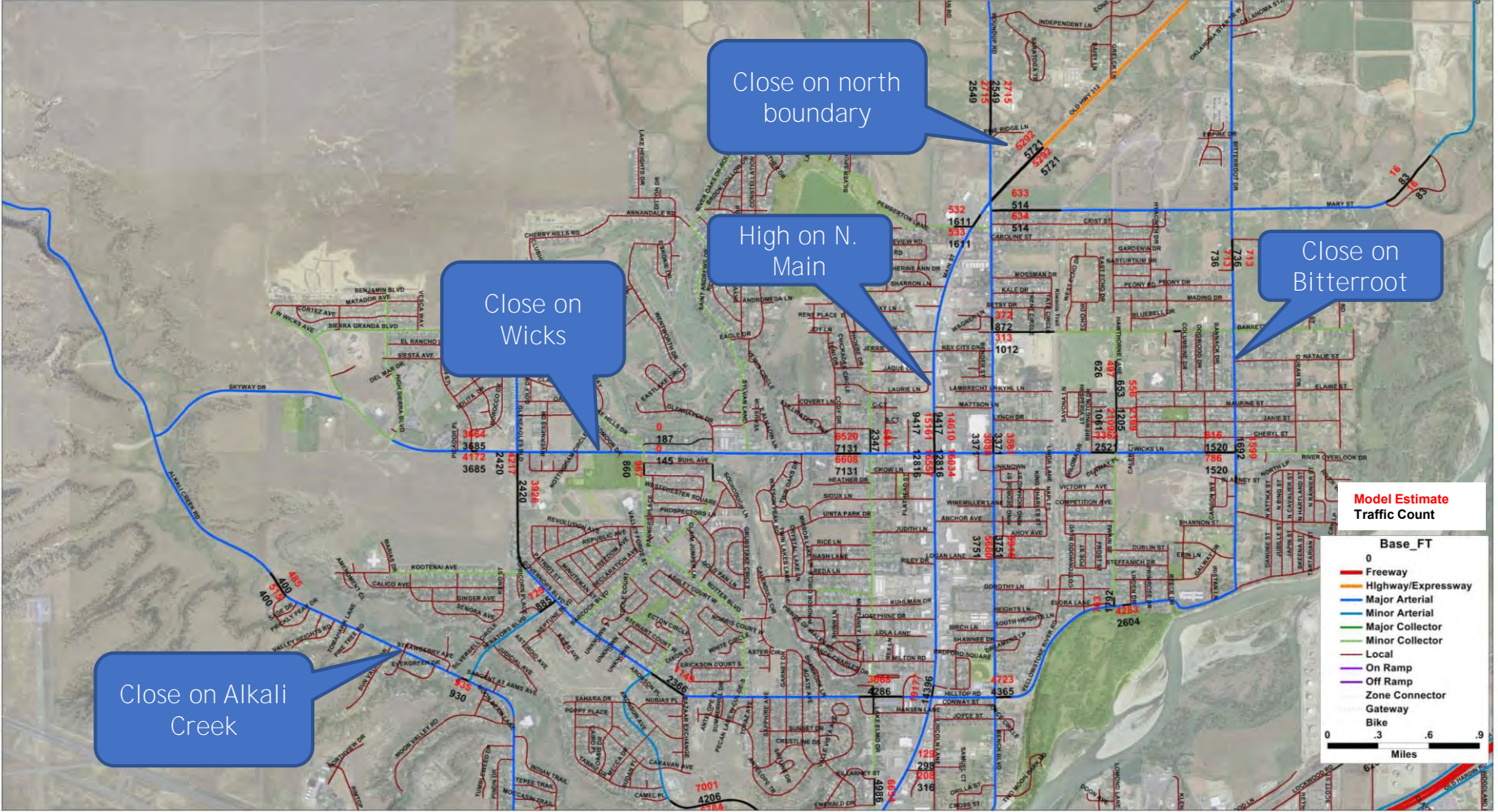
Draft Daily Validation: Airport/MSU



Draft Daily Validation: Main/First



Draft Daily Validation: Northeast



Travel Demand Model Next Steps

- ▶ Daily Validation
 - ▶ Adjust trip lengths to survey
 - ▶ Trip generation for retail
 - ▶ Achieve +/- 5% comparison between model and counts
- ▶ Daily Forecasts
 - ▶ Accelerate for LRTP needs in September
 - ▶ Growth factors for capacity analysis
- ▶ Model Completion
 - ▶ Full mode choice (currently using factors from survey)
 - ▶ Peak hours/periods
 - ▶ Documentation



Steering Committee
Meeting #9 Sign-In Sheet

September 13, 2018 @ 10:00 AM – 12:00 PM,
1st Floor Conference Room - Miller Building

Name	Organization	Email address
Amy Daleiden	Kittelson & Associates	adaleiden@kittelson.com
Bob Riehl	Lochwood	bsriehl@gmail.com
Michael Detsan	Public Works - Billings	detsanm@ci.billings.us
SCOTT WALKER	c/c Plug.	
Mike Bluck	Yellowstone County Public Work	mbluck@co.yellowstone.mt.gov
Debra Hagel	MET Transit	hageld@ci.billings.MT.US
Zach Kirkero	MDT	zkirkero@mt.gov
Rod Nelson	MDT - Billings	rodnelson@mt.gov

1. Introductions (Sign-in sheet)
 - a. Andy kicked off the meeting with introductions and discussed the main topics:
 - i. Draft LRTP
 - ii. Functional classification map update
 - iii. Travel demand model validation effort
 - iv. Plan adoption schedule and looking ahead to the last round of meetings with the public and our next steering committee meeting
2. Public Participation Plan
 - a. Billings City Council adopted the plan
 - b. Andy noted that the “311” element was added as an outreach tool late in the process
3. Plan Updates
 - a. Andy walked through each of the chapters of the draft plan and noted that the recommended plan and financial plans are still TBD.
 - i. Andy noted that the “placeholder” locations in the draft document are still being filled in with new photography as KAI makes additional trips to Billings.
 - ii. Per a question on public comment summaries, Andy commented that an appendix will include every comment.
 - iii. Andy also clarified that there will be a table of contents broken out by chapter and subsections, along with a list of tables, figures, and exhibits.
 - iv. Andy clarified that the picture on each of the chapter covers is a placeholder – it will be replaced in each chapter with a picture pertinent to the specific chapter.
 - v. Andy asked for the steering committee to provide updates or additional text where needed on the project list descriptions. KAI will update this draft based

on the most recent round of updates. That update will be ready by the second public meeting later this month.

1. Katie asked when the project list would be ready for review. Andy will send both of these tables today.

4. Functional Classification Map (Attachment B)

- a. Andy discussed minor adjustments made to the functional classification map based on previous comments received. This included an additional Yellowstone County cross-section added to the back.

5. Travel Demand Model

- a. Mike discussed that the current effort is to make the model functional to get reliable growth forecasts that will allow us to finalize the LRTP. After this is complete, KAI will work on improving the aesthetics. There are a number of specific locations and segments that KAI is looking at more closely to validate results.
 - i. Rebecca asked what types of validation techniques KAI would use for validation. Mike responded that aggregate data would be reported at the end of the process. RSME (a measure of average error) will be used. Load type and volume classification will also be used.
 - ii. Katie asked whether this model will be used for alternative scenario analysis for the LRTP. Andy replied that no scenarios are being tested for this LRTP, but the 2040 model will have the list of the major committed and recommended projects included. In other words, KAI feels that none of the project recommendations need to be modeled. If there's interest from MDT or other groups, this could be done. However, it's not needed for the LRTP's purpose.
 - iii. If the model output helps identify a location that is not currently included in the project lists KAI has, KAI will add this at least to the recommended list.
 - iv. Bob noted that construction of the Lockwood High School will lead to an increase in traffic at Johnson Lane, Old Hardin Road, etc. Mike commented that if the model comes in a bit low in the existing conditions at this location, KAI will apply an error factor to the future results as well.

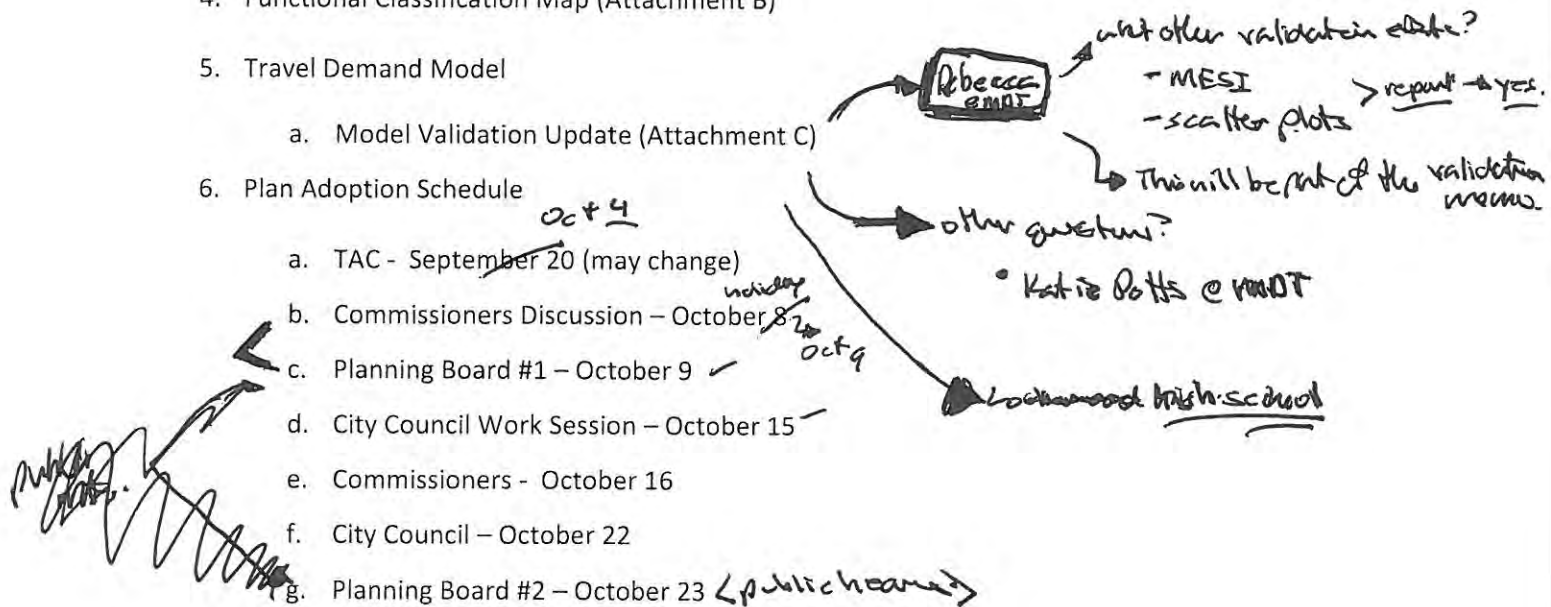
6. Plan Adoption Schedule

- a. Andy walked through the plan adoption schedule as shown in the agenda.
 - i. A couple tweaks to the schedule were proposed:
 1. TAC proposed to be moved to October 4.
 2. Note that the October 8 meeting for the commissioner's discussion will need to be tweaked to account for Columbus Day. Likely it will be moved to October 9.

7. Next Meetings

- a. All upcoming meetings remain on same schedule.
 - i. SC Meeting #10 will be during morning (10am-12pm) to fit with Commissioner's Discussion at 2pm.

1. Introductions (Sign-in sheet) *Verban*
2. Public Participation Plan *Rebecca*
 - a. Plan adoption update *Rebecca*
 - Mary H.*
3. Plan Updates *→ DCC adopted the plan.*
 - a. Draft plan (Attachment A)
4. Functional Classification Map (Attachment B)
5. Travel Demand Model
 - a. Model Validation Update (Attachment C)
6. Plan Adoption Schedule
 - a. TAC - September 20 (may change) *Oct 4*
 - b. Commissioners Discussion - October 8 *holiday*
 - c. Planning Board #1 - October 9 *Oct 9*
 - d. City Council Work Session - October 15
 - e. Commissioners - October 16
 - f. City Council - October 22
 - g. Planning Board #2 - October 23 *← public hearing →*
 - h. PCC - October 30
7. Next Public and SC Meetings
 - a. Public Informational Meeting - September 25, 4:30 PM - 6:30 PM
 - b. Resource Agency Meetings - September 24 and 25
 - c. SC Meeting #10 - October 9 (TBD) *e 10-12*
 - d. SC Meeting #11 - November 8, 10:00 AM - 12:00 PM



Asch



Appendix J

Steering Committee Meeting #10



Steering Committee Meeting #10 Agenda

October 10, 2018 @ 10:00 AM – 12:00 PM
1st Floor Conference Room - Miller Building

1. Introductions (Sign-in sheet)
2. Public Open House (Held on September 25th)
 - a. Open House Materials
 - i. Access the Open House Materials at <http://www.billingslrtp.com/websites/14/pages/307>
 - b. Draft Public Comment Summary #2
 - i. Access the Public Comment Summary #2 at <http://www.billingslrtp.com/websites/14/pages/307>
3. Plan Updates
 - a. Draft plan
 - i. Access the Draft Plan at <http://www.billingslrtp.com/websites/14/pages/316>
4. Plan Adoption Schedule
 - a. TAC - October 4th (completed)
 - b. Yellowstone County BOCC – October 9th
 - c. Yellowstone County Board of Planning – October 10th
 - d. Billings City Council – October 15th
 - e. Yellowstone County BOCC – October 16th
 - f. Billings City Council – October 22nd
 - g. Yellowstone County Board of Planning – October 23rd
 - h. Policy Coordinating Committee – October 30th
5. Travel Demand Model Update
6. Next Public and SC Meetings
 - a. SC Meeting #11 – November 8, 10:00 AM – 12:00 PM

MEMORANDUM

Date: October 2, 2018

Project #: 21353

To: Steering Committee

From: Andy Daleiden, PE and Bryan Graveline

Project: 2018 Billings Urban Area Long Range Transportation Plan

Subject: Public Comment Summary #2

This memorandum summarizes public feedback received for the 2018 Billings Urban Area Long Range Transportation Plan (LRTP) through the public open house conducted on September 25th, 2018.

INTRODUCTION

The Yellowstone County Metropolitan Planning Organization (MPO) followed up on the public outreach it collected in May 2018 with a second public informational meeting in September 2018. This meeting was used to continue to inform the public of the plan update and to collect feedback on project prioritization. The public open house was held at the Billings Public Library Community Room from 4:30 to 6:30 PM. The public comment period for the open house ran from September 27th, 2018 to October 9th, 2018. **Please note that this memorandum will be updated at the end of the public comment period to reflect any further comments received.**

Attendees were able to review LRTP materials, listen to a presentation on the LRTP update progress to date, rank project areas to prioritize, and provide mapped comments related to proposed projects. 35 people signed into the meeting and the project team received 50 map comments and four comment sheets. This information was also posted to the project website: billingslrtp.com. Appendix A shows the open house display boards, Appendix B shows the completed comment sheets, and Appendix C shows the sign-in sheets.

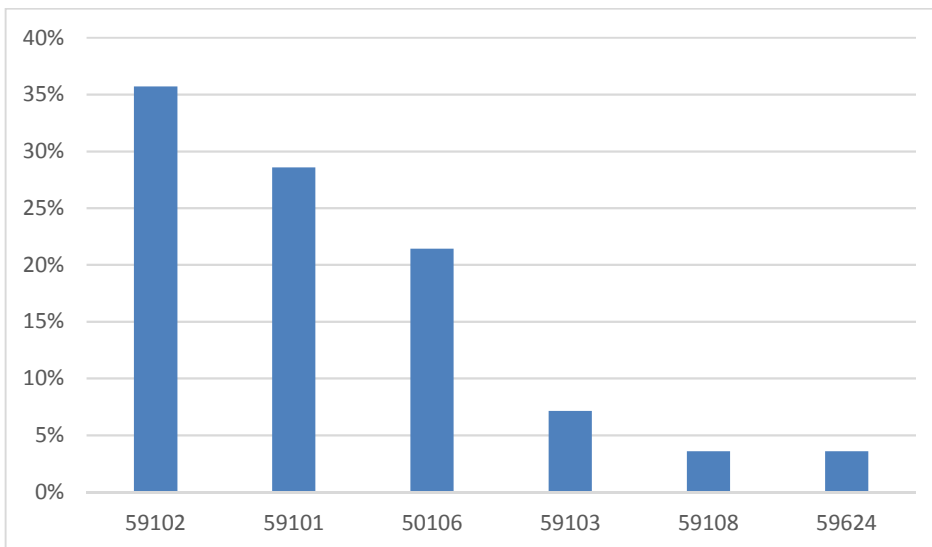


COMMENT SUMMARY

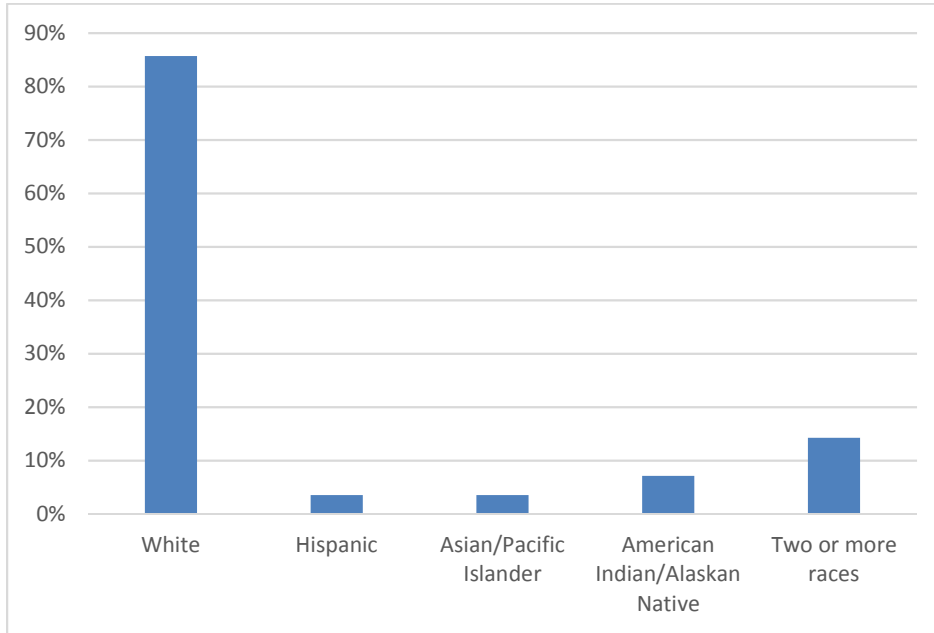
The following summarizes feedback and comments collected from open house attendees through the sign-in sheet, returned comment sheets, and project map comments.

DEMOGRAPHICS

1) What zip code do you live in?



2) What is your ethnicity?



US Census Data Demographics for Yellowstone County: White/Caucasian: 91% | Hispanic or Latino: 5.5% | Asian/Pacific Islander: 0.8% | American Indian/Alaska Native: 4.6% | Two or more races: 2.9%

PROJECT AREA PRIORITIZATION

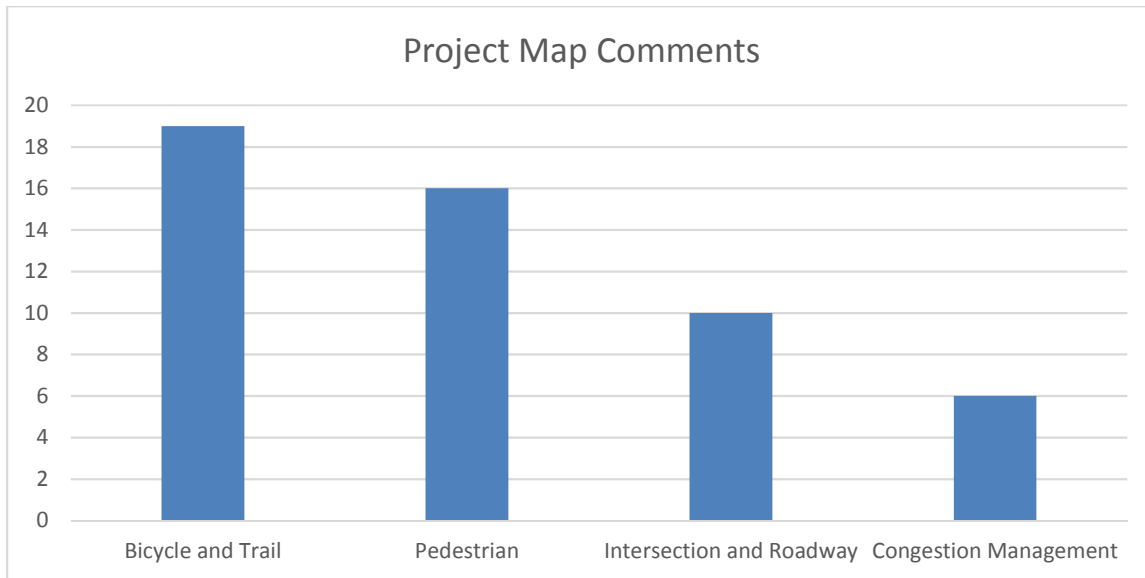
Prioritizing project areas helps the MPO guide project implementation. Attendees were asked to rank their top 3 project areas they would most like to see prioritized. They prioritized the project areas as follows:

- 1) Bicycle Projects
- 2) Roadway Projects
Pedestrian Projects
- 4) Congestion Management Projects
Other Projects (Electric Vehicle Infrastructure)
- 6) Intersection Projects
Rail Projects
Trail Projects
- 9) Transit Projects
- 10) Freight Projects

PROJECT COMMENTS

Using maps denoting planned projects for the Billings Urban Area, attendees were asked to comment on any projects they wanted to see changed, removed, or prioritized. The project maps are included in

Appendix D and the comment sheets are shown below. 51 total comments were received in the following categories:



Upon review of the project comments, the project team found that the attendees most wanted to see the following project types prioritized:

- Projects that improve pedestrian safety around schools through infrastructure such as crossings, sidewalks, and trails.
- Projects that improve bicycle safety and convenience through reconfiguration of streets to add bicycle infrastructure.
- Projects that improve vehicular safety through improvements to sight distance and lighting and through addition of turn lanes on high speed approaches.
- Projects that decrease congestion through addition of turn lanes at intersections.

Table 1. Map Comments

Category	Sticker Number	Project Number	Comment
Pedestrian	69	9	A remote drop/p/u area at Sam’s Club would reduce ped bike crash incidence & conflict.
	42	All schools	Please consider remote drop/pickup for vehicles in order to reduce pedcar crash or bike car crash
	66	16	Very important at this corner because cars cut in at high speeds at 2 school boundaries have been combined this corner.
	47	-	Crosswalk needs to be reinstated between park and housing 13 th and Ave D.
	51	-	Sidewalks on Southgate by T&E, Mdu, and Blm.
	56	-	ADA Southeast & Southwest King E & Parkway Ln.
	43	-	Sidewalk in front of The Storage Place King Ave E.
	76	-	Southeast corner of sidewalk Remove the fence post or cornerpost complete the sidewalk.
	75	-	Sidewalk between Little Horn Bank & apts to the west.
	71	-	Need paved ped trail for school kids to get to school.
	72	-	Need paved hike/bike trail to connect to Riverfront Park.
	73	-	Need paved hike/bike trail for residents of Bleins Mobile Home Park (big safety issue).
	52	-	Narrow turning radius at 27 th and 1 st S.
	103	22	Important way to address food desert/equity!
	Bicycle and Trail	14	53
111		-	Need sidewalks in Forest Park Subdivision
57		BL2	Poly Drive doesn’t make sense? But yes on BL from Zimm to 72 nd ? Or however far.
6		-	Zimmerman bike route designer.
10		-	Add multi use path that connect King Ave path between the RRFB & 32 nd St West
11		-	Name the trails & sign them!
12		-	Provide distance & directional signage on the trails. An example is the sign at the Swords Rimrock trailhead. It lists distance to Coulson & Two Moon – etc.
14		-	Laurel Road could be reconfigured (reduce the size of the island) in order to create buffered bike lanes.
15		-	Bike lane/multiuse path that follows King to Shiloh Rd.
17		BL6	Bike path on Montana Ave – would increase pedestrian traffic & accessibility to businesses on Montana; downtown commerce.
1		-	Bike boulevards and buffered lanes are increasing in importance due to distracted driving – need to have more buffered places to ride.
2		-	Downtown projects – very important due to high density and travel patters to and from.
3		4	Important thoroughfare.
4		5	Important thoroughfare.
5		BB7	Important thoroughfare.
7		7	Priority.
8		-	Please prioritize routes near schools.
9		-	Grand Avenue is very difficult/dangerous to cross even at signals but esp. anywhere else. What can be done?
13		-	Would like a north south connector bike lane on 8th or 13th or 15th.
20		BB35	Needed!
16	MT45	Would be a great way to address food desert/equitable access.	
Roadway and Intersection	121	20	This roadway is a definite need to accommodate the growth of Billings.
	123	-	Full lane Laurel Rd overpass State Ave to Moore Lane
	125	16	Improve visibility, provide light 2 Virginia Ln & Rimrock Rd
	126	R17	Left turn signal is needed for traffic flow and optimizing safety

	127	-	Inner Belt Loop has been studied to death and is long overdue!!
	128	67	Badly need left turn lanes at these three intersections
	129	29	Badly need left turn lanes at these three intersections
	130	67	Badly need left turn lanes at these three intersections
	131	-	Reconfigure Laurel Road by reducing the concrete island in order to add buffered bike lanes,
	132	-	Heading east on Zoo Drive up to overpass, most traffic heads over to frontage road or to east on I90. Traffic really backs up & takes a while to get across overpass. Right hand turn lanes so right turns can get quickly w/o having to wait so long. Thank you.
Congestion Management	121		Intersection Hwy 3 & Rimrock Rd – Temporary signal needs to be permanent.
	122		SB Zimmerman need aux rt-turn lane
	123		Need left turn lane into Park; might need traffic light
	124		Monad & 15 th traffic add lanes
	125		Modify EB rt-only to rt/thru
	121		Yes... Permanent light! No roundabout there. Medical personnel & ambulance people use that intersection a lot. Light great for them. Roundabout horrible for ambulance traffic. Medical people said please no roundabout ever @ 27 th Rimrock light yes.

Appendix A Public Open House #2 Display
Boards

WELCOME!

Thank you for attending tonight's open house for the Billings Urban Area Long Range Transportation Plan. The purpose of this open house is to give you an opportunity to learn about the draft plan, review technical information, and provide feedback on proposed projects in the following areas:

- Streets and Highways
- Pedestrians and Bicyclists
- Transit, Rail, and Truck

Who Is Involved?



The primary sounding board is the Steering Committee (SC), which includes representatives from the above agencies. Public involvement is a major contributor to the plan development.

The consultant team for the project includes Kittelson & Associates, Inc. and DOWL.

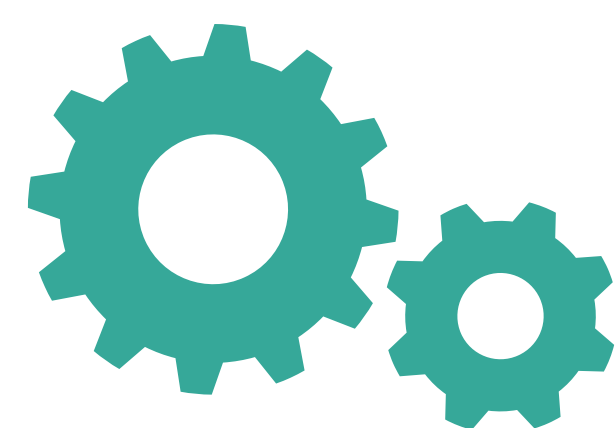


2018 LRTP GOALS



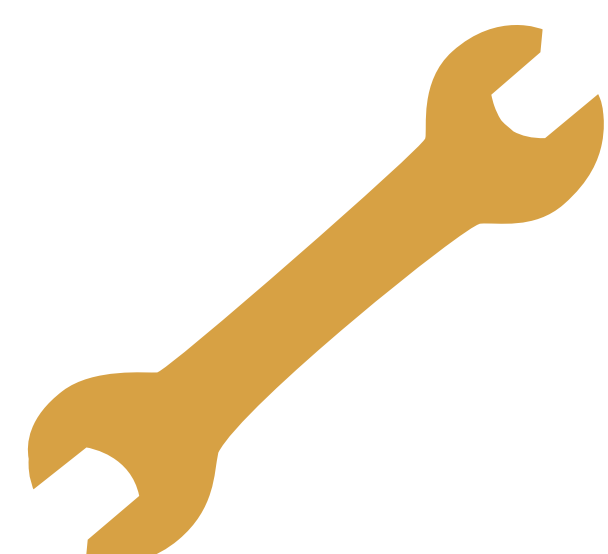
Safety

Develop a safe transportation system



Functional Integrity and Efficiency

Optimize, preserve, and enhance the existing transportation system



Prioritized Improvements

Identify and prioritize projects that mitigate deficiencies, maximize the use of existing facilities, and balance anticipated needs with available funding



Environment

Develop a transportation system that protects the natural environment and promotes a healthy, sustainable community



Public Transit and Transportation

Create a transportation system that supports the practical and efficient use of transit



Pedestrians and Bicyclists

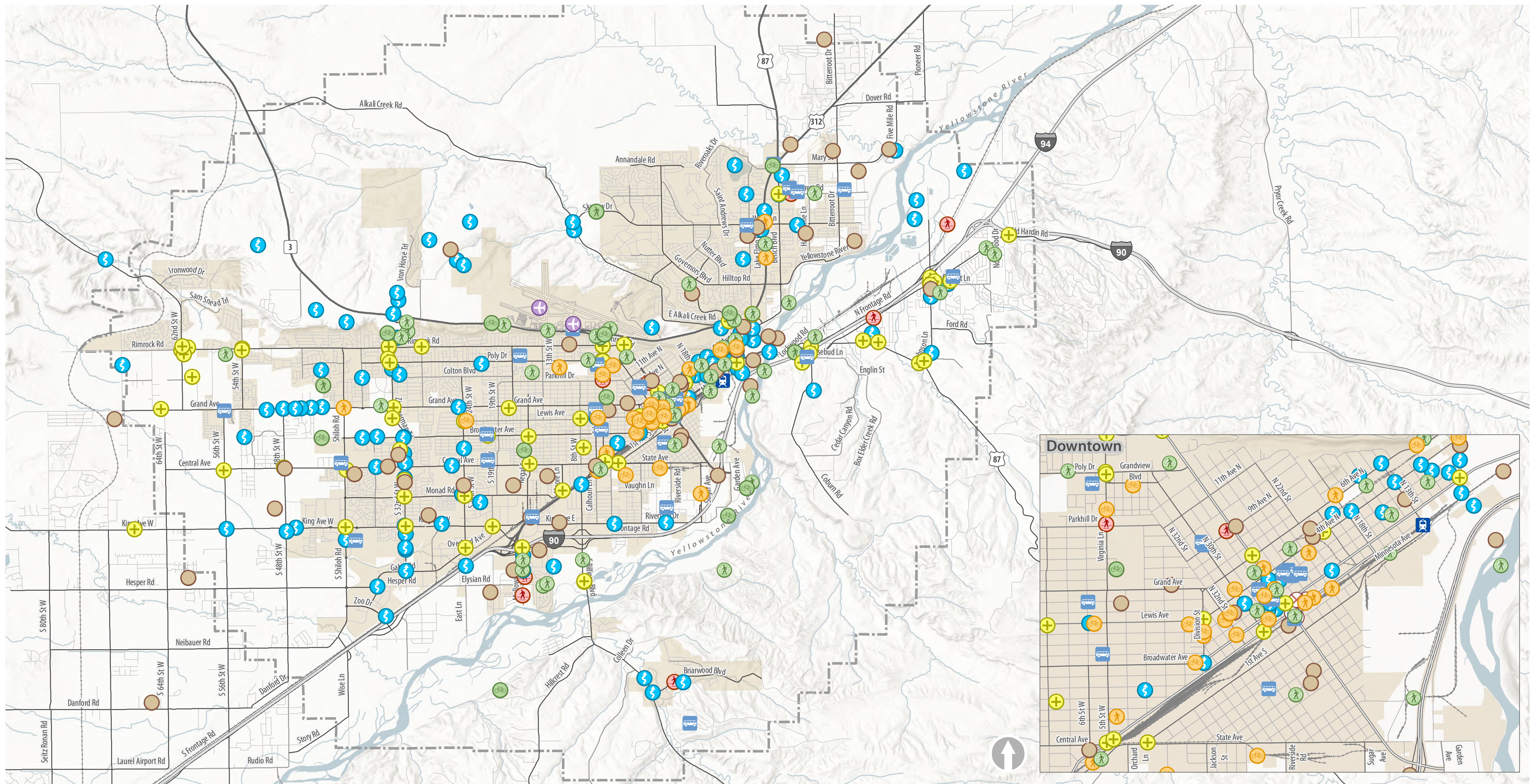
Create a transportation system that supports the practical and efficient use of active transportation such as walking and bicycling



Economic Vitality

Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce

NEEDS AND OPPORTUNITIES FROM PUBLIC COMMENTS



Public Feedback Categories

- Airport
- Bus Transit
- Bike Route
- Bike Trail
- Bike/Pedestrian
- General
- Intersection
- Roadway
- Pedestrian Crossing
- Pedestrian Trail
- Railroad
- Sidewalks
- Trains
- Study Area

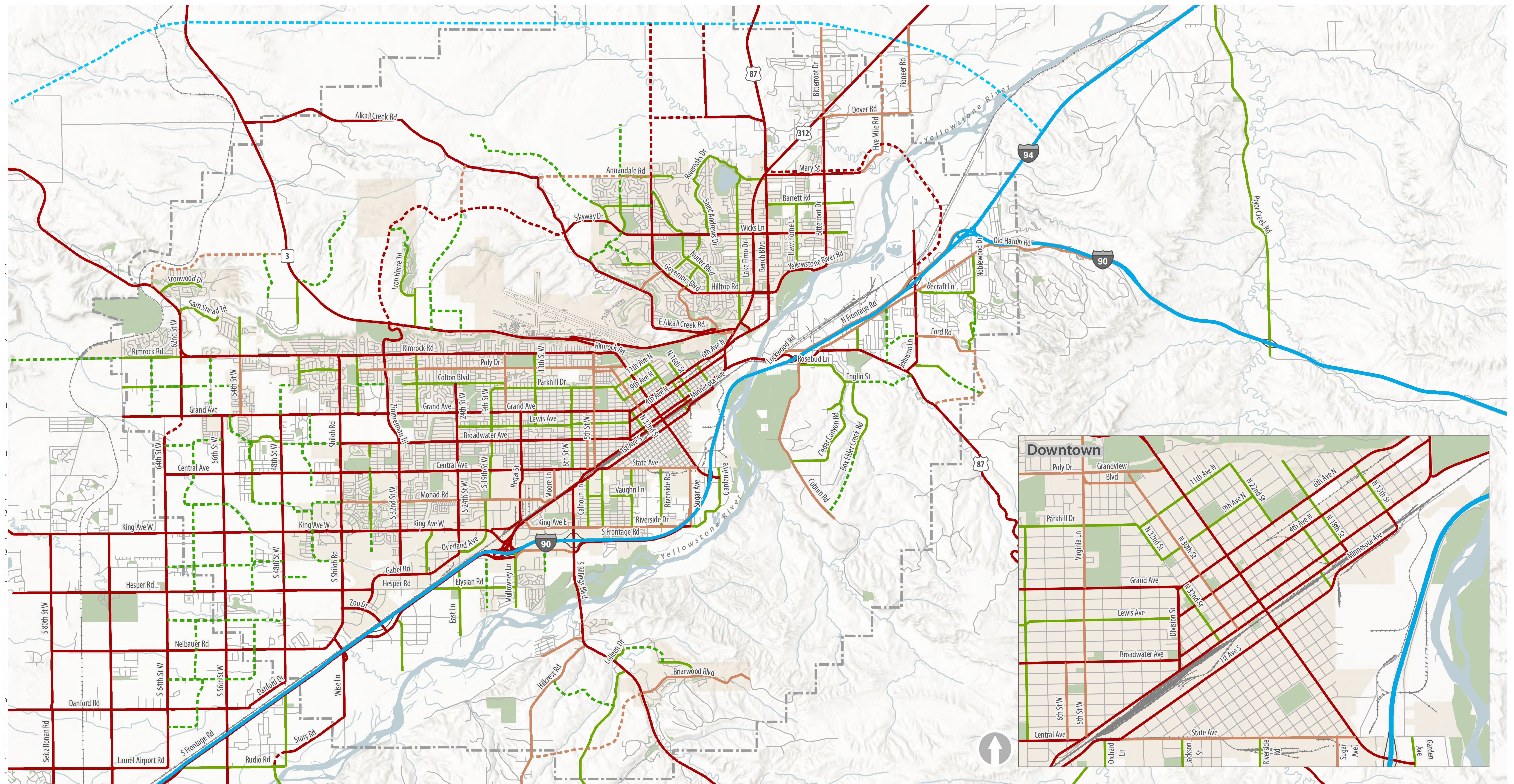
369 total comments
 112 on Roadways
 68 on Intersections

50 on Bicycle/
 Pedestrian
 28 on Bicycles

25 on Pedestrians
 2 on the Airport
 33 on Transit

5 on Rail
 46 on General

FUNCTIONAL CLASSIFICATION



- | | | | | |
|-------------------------------|----------------|------------------------------------|-------------------------|------------------|
| Roadway Classification | Minor Arterial | Proposed Freeway Controlled Access | Proposed Minor Arterial | Study Area |
| Interstate | Collector | Proposed Principal Arterial | Proposed Collector | Park |
| Principal Arterial | Local Streets | | | City of Billings |

Note: This functional classification map does not represent the federally approved system.

970 Miles of roads

18 Roundabouts

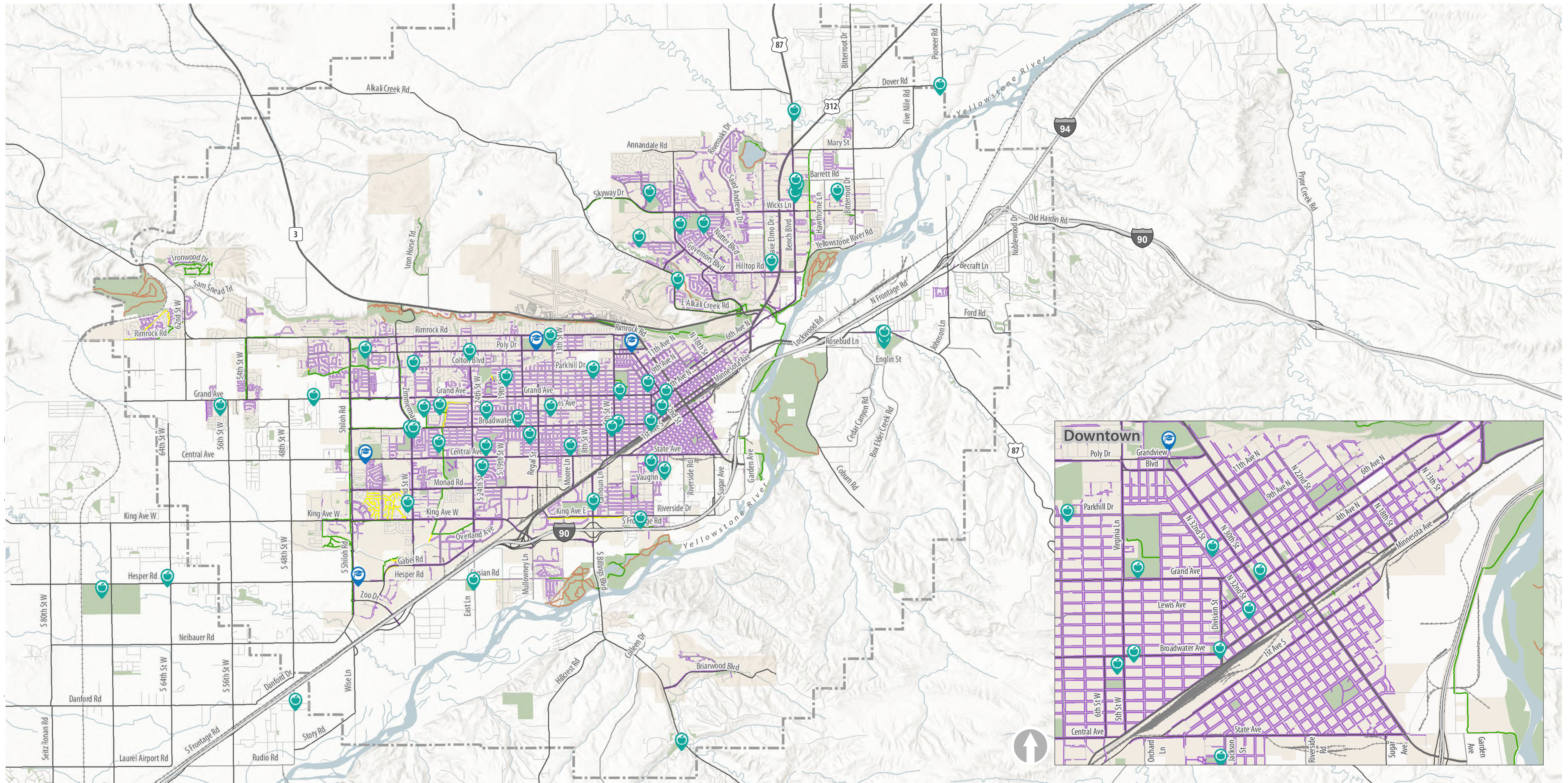
173 Signalized intersections

Freeways serve high speed, long distance travel movements and provide limited access to adjacent lands.

Arterials serve higher volumes of traffic, particularly through-traffic, at higher speeds.

Collectors carry locally generated traffic at lower speeds.

EXISTING PEDESTRIAN AND TRAIL FACILITIES

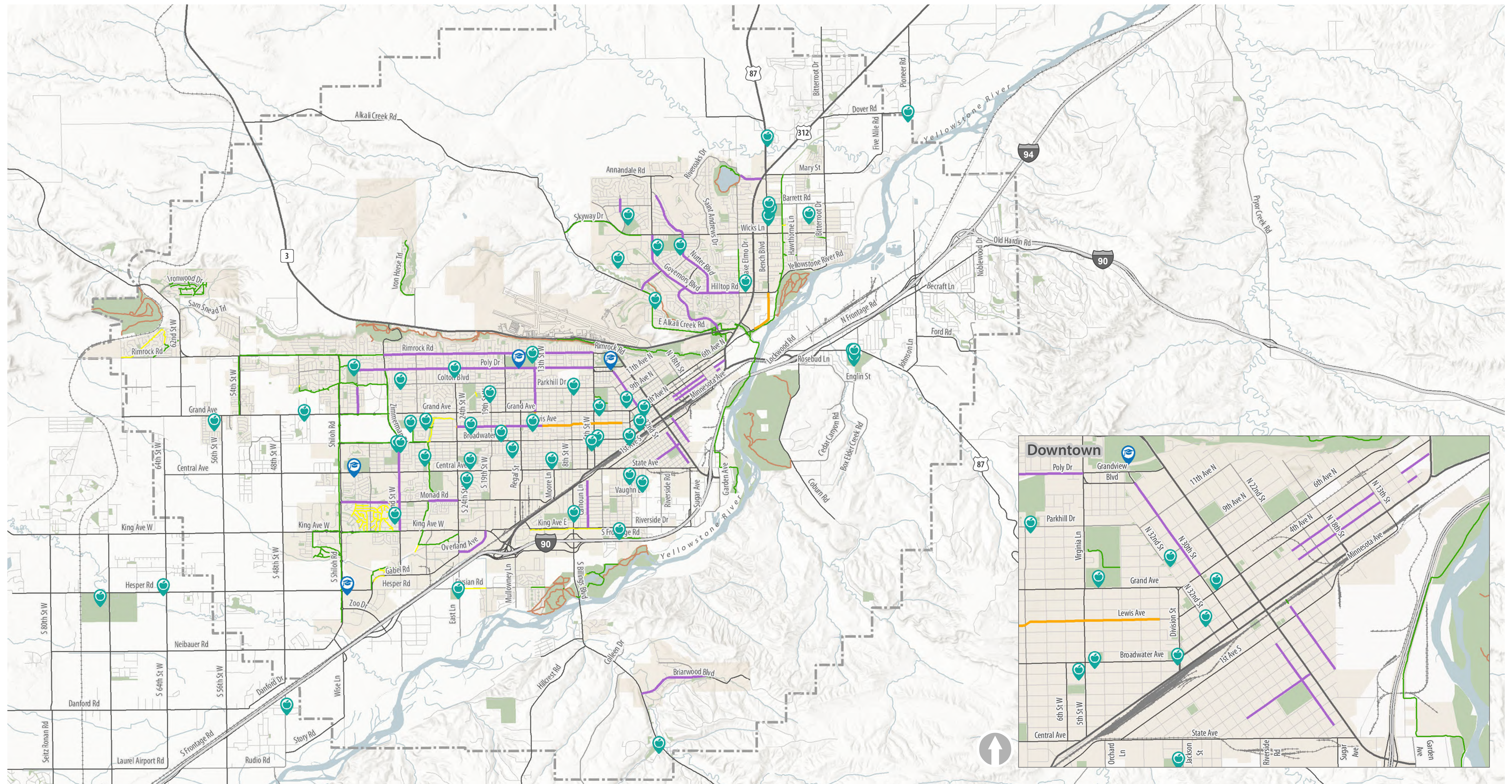


660 Miles of sidewalks
11 Miles of neighborhood trails

45 Miles of shared use paths
3.2% Billings residents commute by walking*

*2016 ACS Data

EXISTING BIKEWAYS AND TRAIL FACILITIES



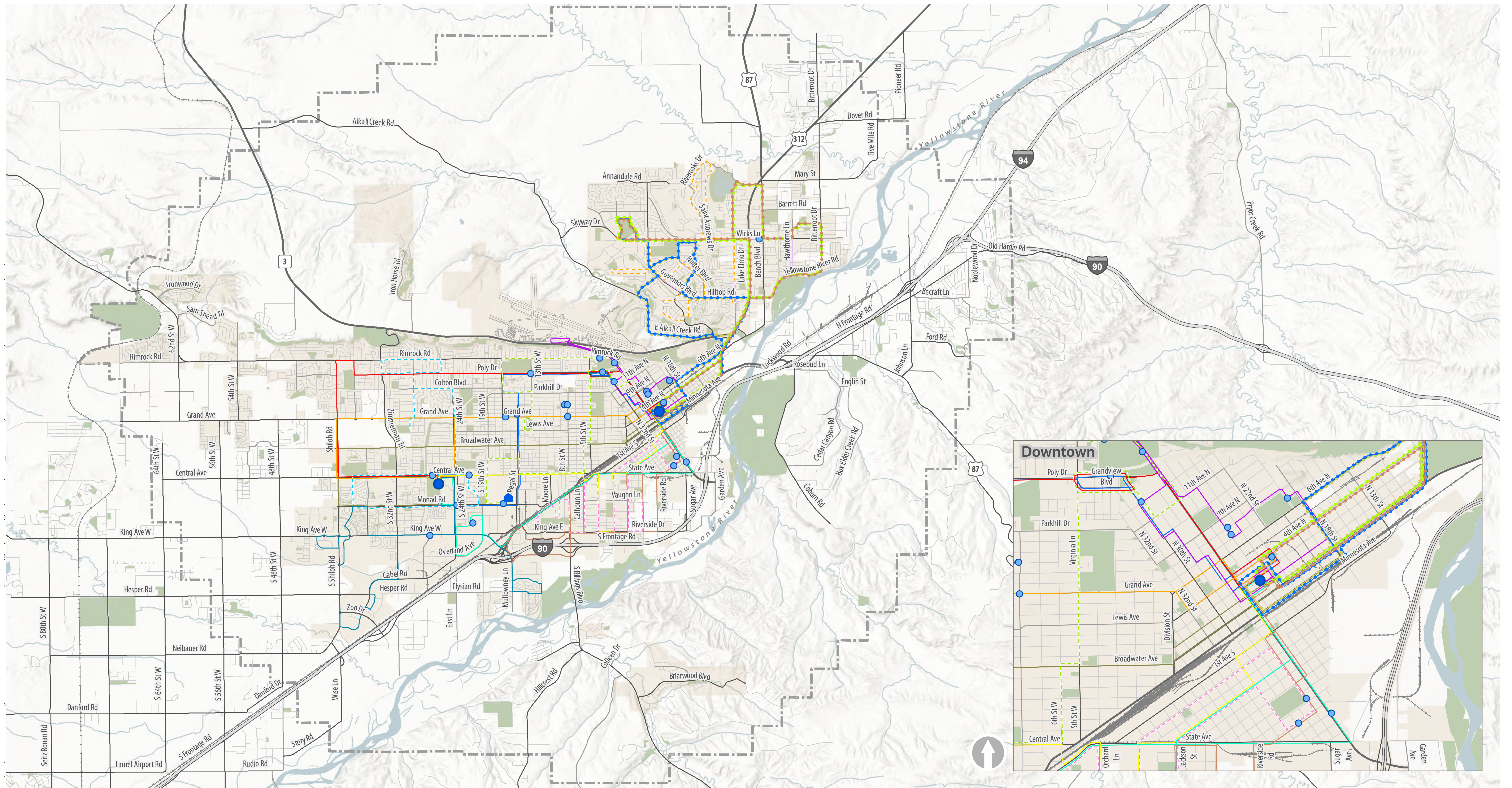
- Bike Lane
- Shared Use Path
- Shared Lane Marking
- Neighborhood Trail
- Unpaved Trail
- College
- Schools
- Study Area
- Park
- City of Billings

26 Miles of bike lanes
 2.6 Miles of shared lanes
 11 Miles of neighborhood trails

45 Miles of shared use paths
 1% Billings Residents Commute by bike*

*2016 ACS Data

EXISTING BUS ROUTES



● Bus Shelter	Bus Route Number	7	14	18	T2	Study Area
■ Transit Office	1	9	15	19	T3	City of Billings
● Transfer Station	3	10	16	24	T4	Park
	5	13	17	T1		

18 Routes

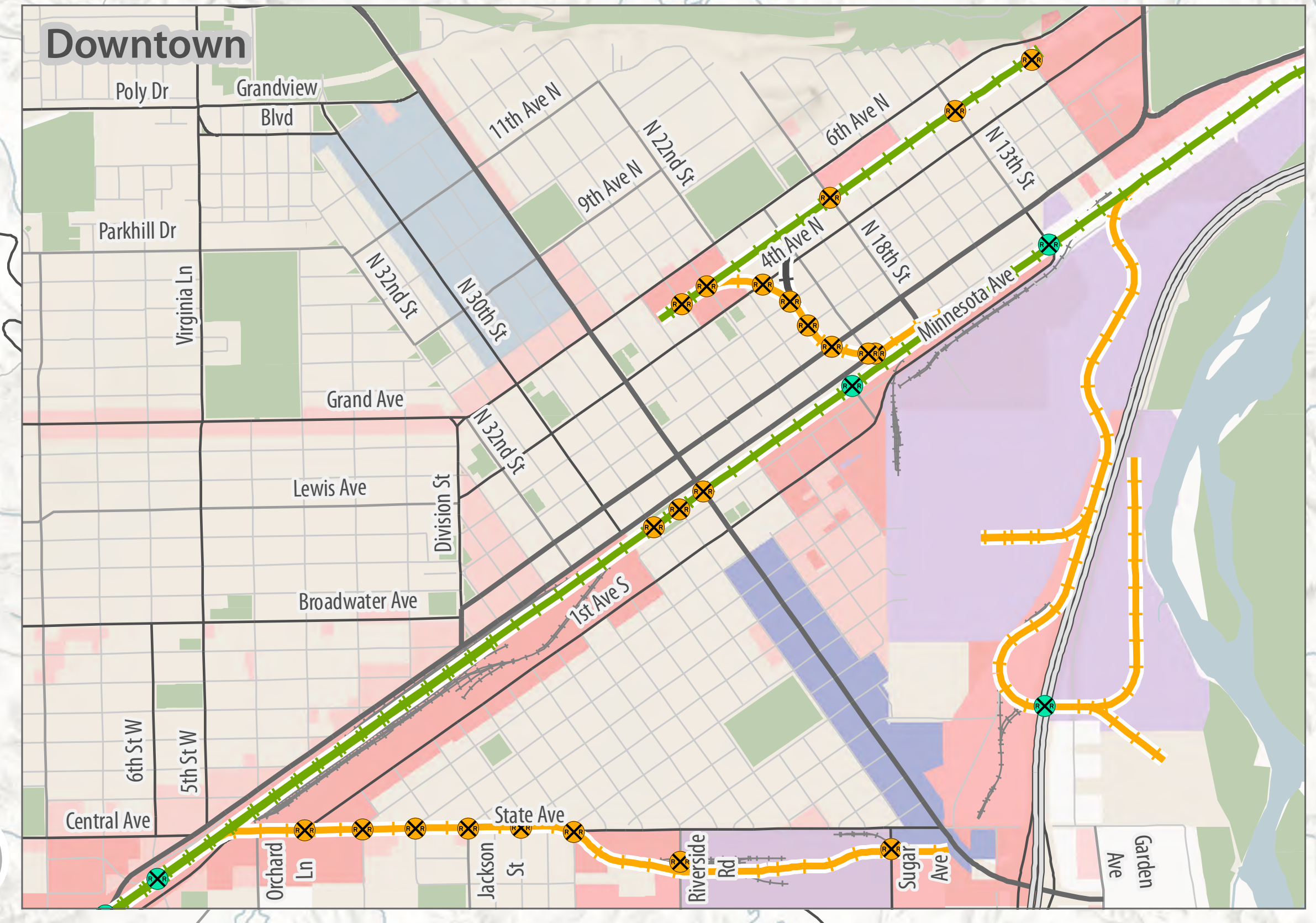
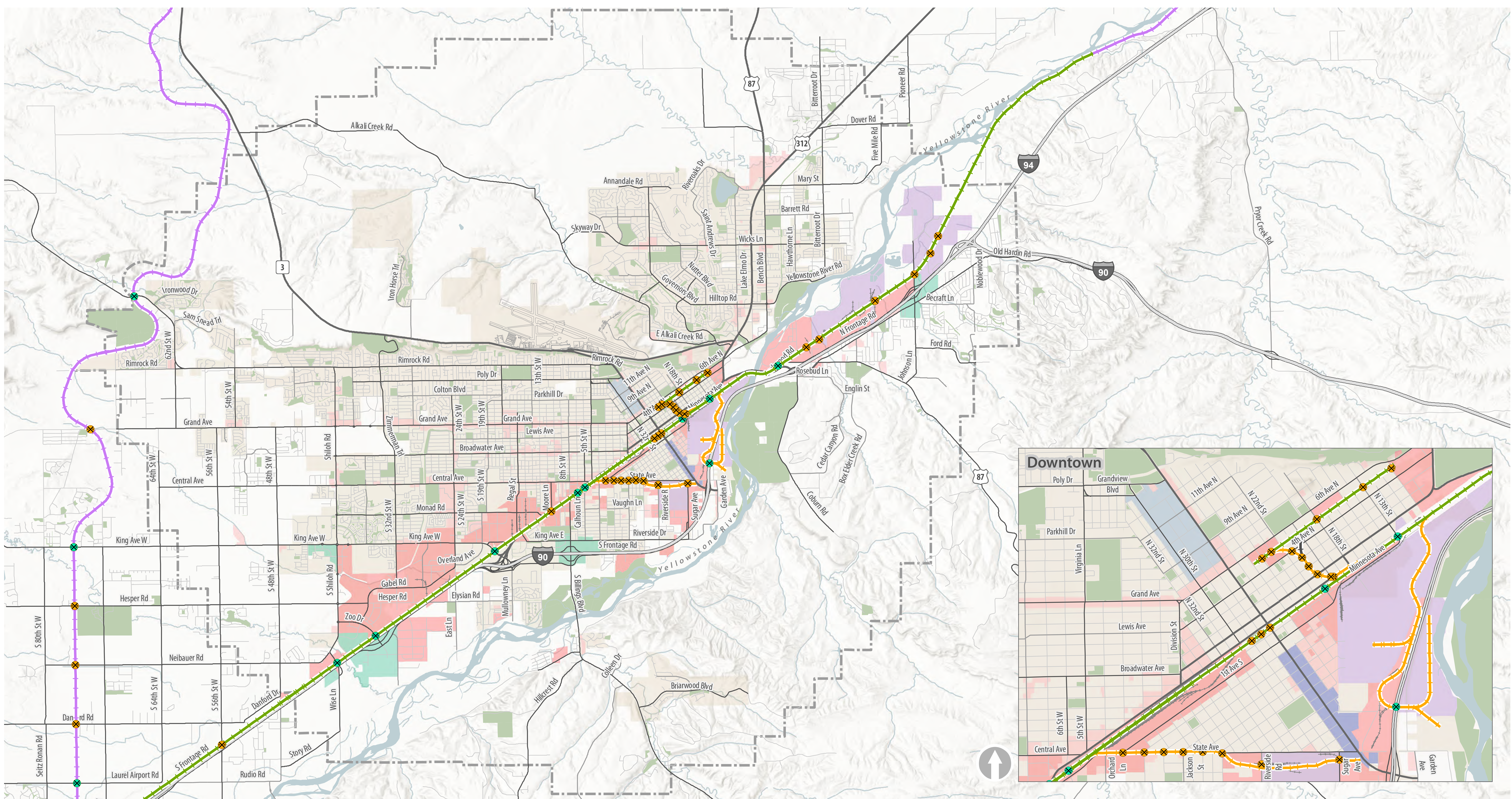
1% Billings Residents Commute by bus*

5:50a-6:50p Weekday hours

8:10a-5:45p Saturday hours

*2016 ACS Data

EXISTING RAILROAD FACILITIES

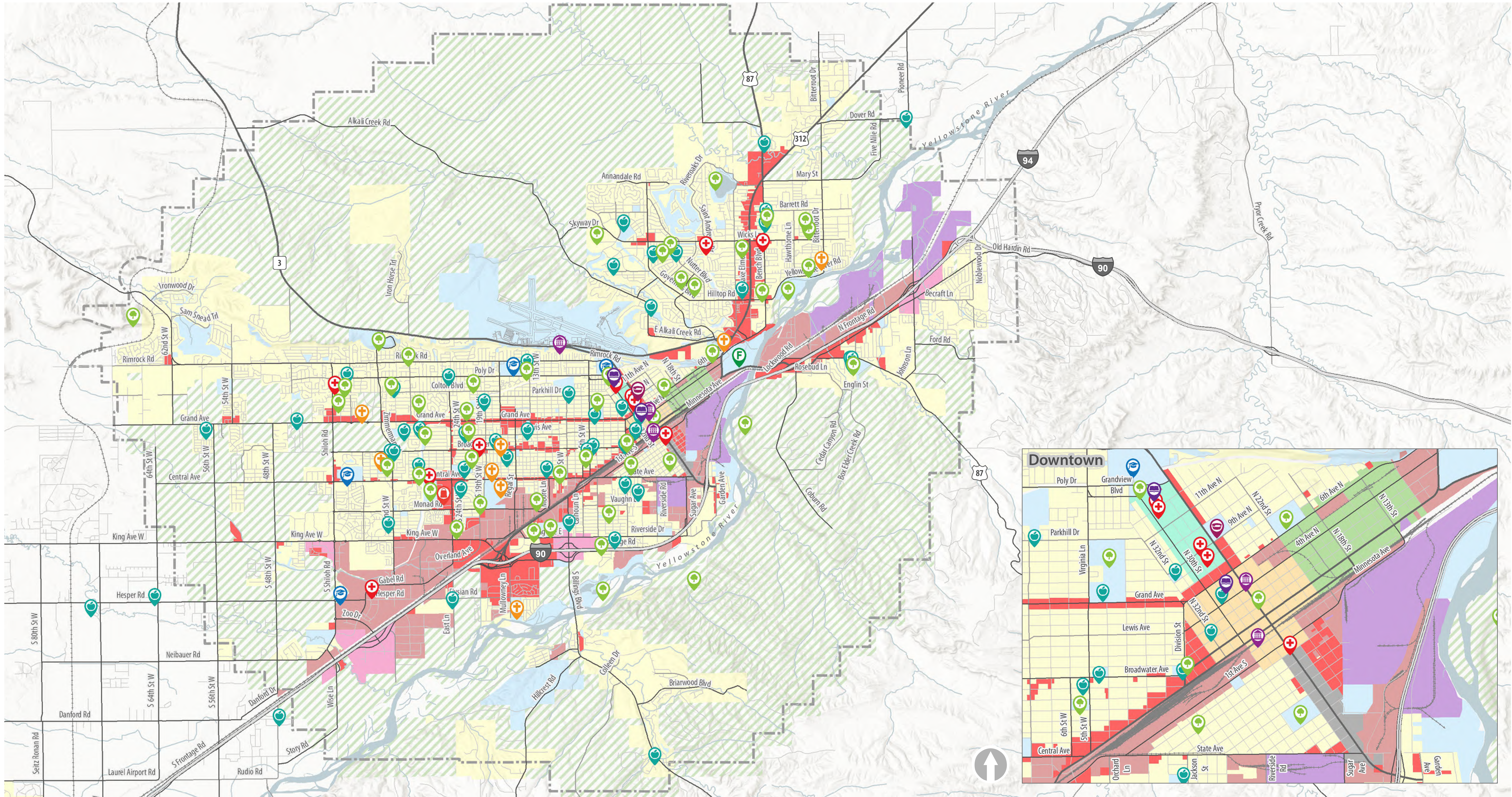


- At Grade Crossing
- Grade Separated Crossing
- Burlington Northern Santa Fe
- Montana Rail Link
- Study Area
- Park
- Commercial
- Commercial/Industrial
- Medical Corridor Permit
- South 27th Street Corridor
- Heavy Industrial
- Entryway
- Light Industrial
- City of Billings
- Spur

34 at-grade railroad crossings

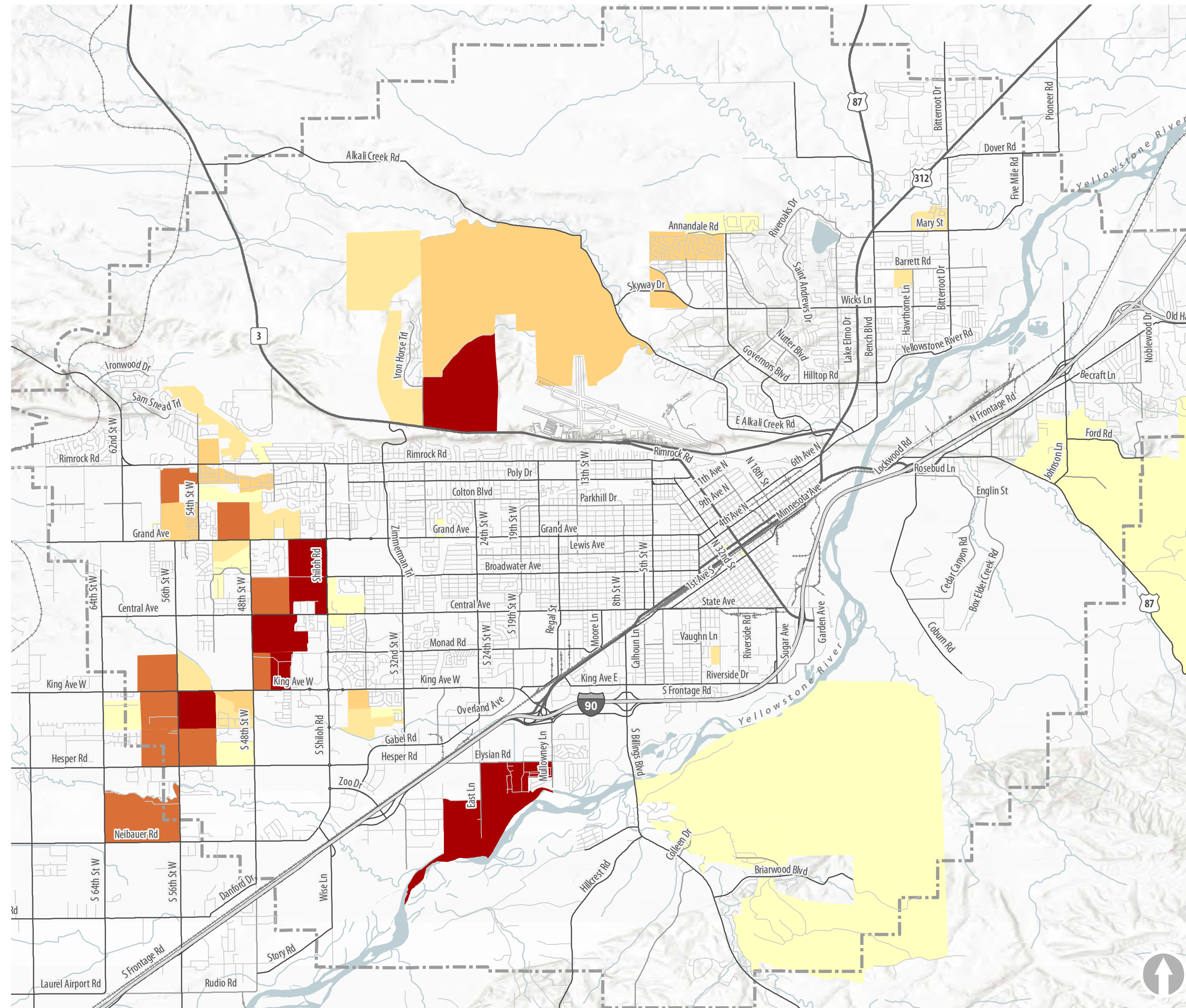
12 grade-separated railroad crossings

EXISTING LAND USE



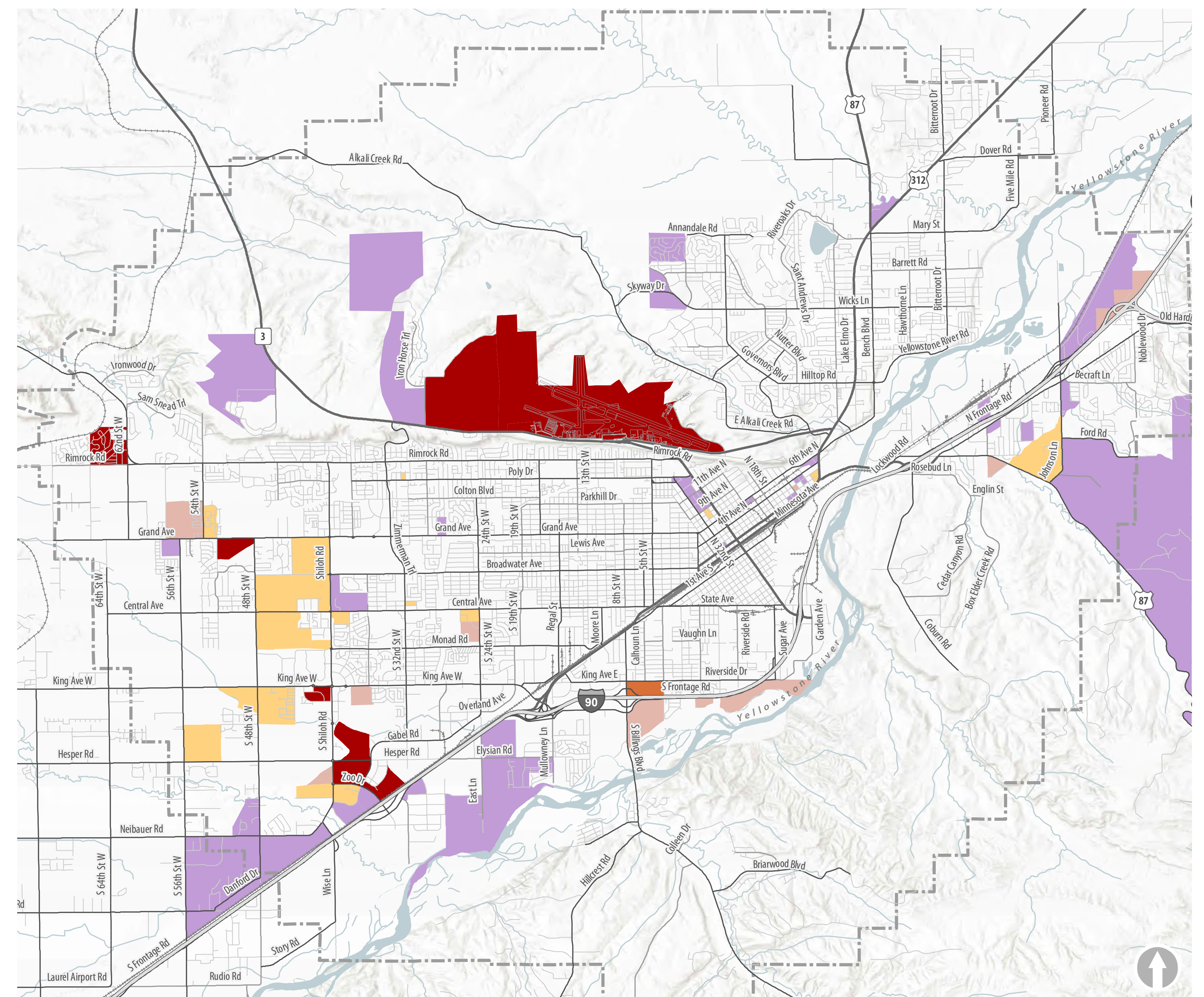
- | | | | | | | | | | |
|---------|---------------|---------|-------------|----------|-----------------------|---------------------------|------------------|-------------------------------------|------------|
| College | Shopping Mall | Stadium | Fairgrounds | Cemetery | Residential | Central Business District | Light Industrial | Entryway | Study Area |
| Schools | Museum | Library | Park | Hospital | Commercial | Medical Corridor Permit | Heavy Industrial | South 27th Street Corridor | |
| | | | | | Commercial/Industrial | Public | Agricultural | East Billing Urban Renewal District | |

PROJECTED POPULATION AND EMPLOYMENT GROWTH BY 2040



Population Change
 2 - 250 251 - 500 1,001 - 1,500 Study Area
 501 - 1,000 1,501 - 2,588

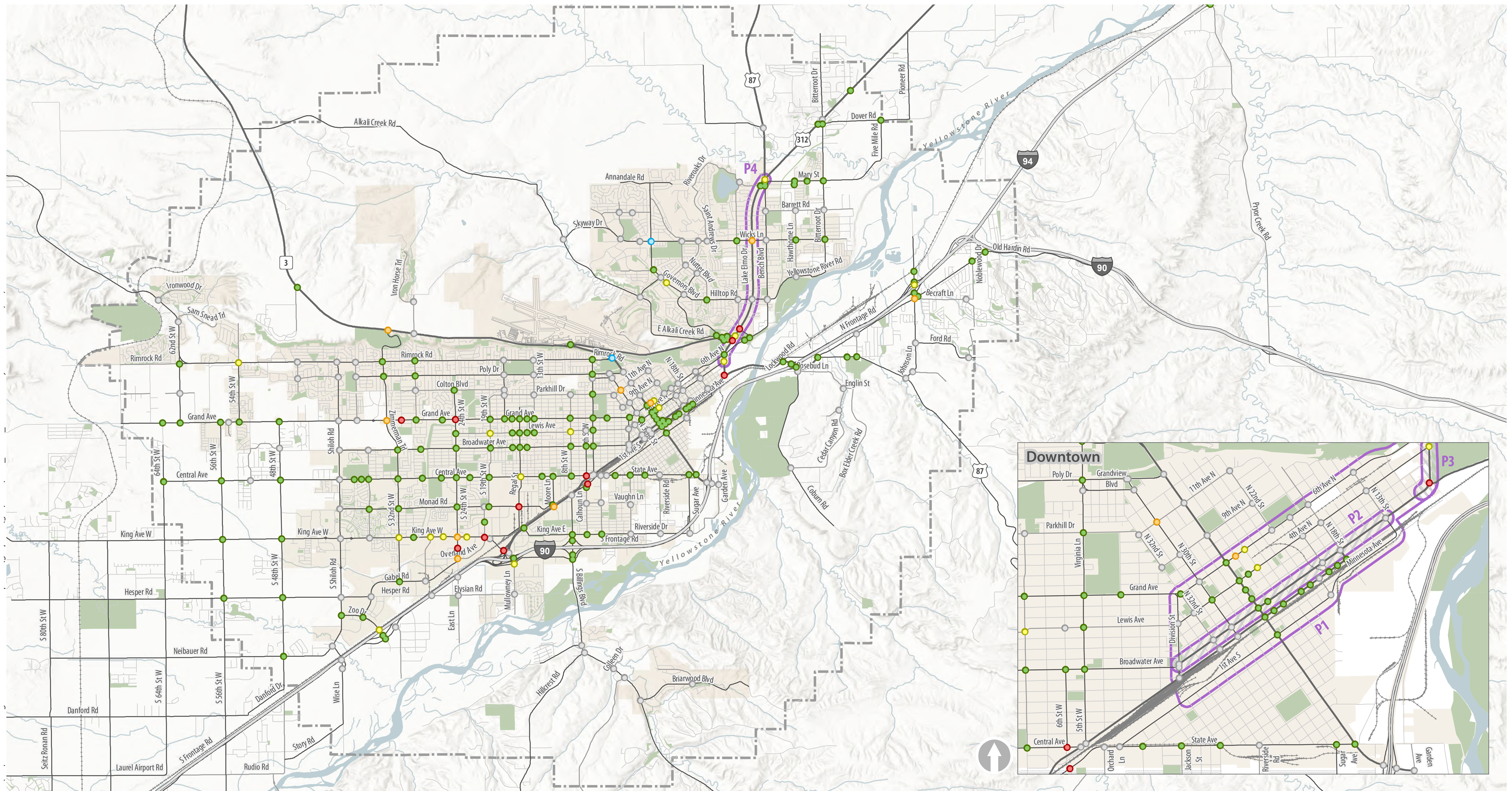
Population projected to grow by
33.6% by 2040
 2040 population projection = **170,000**



Employment Growth
 0 - 100 101 - 200 201 - 300 301 - 400 401 - 500 Study Area

Employment projected to grow by
34.3% by 2040
 2040 jobs projection = **104,000**

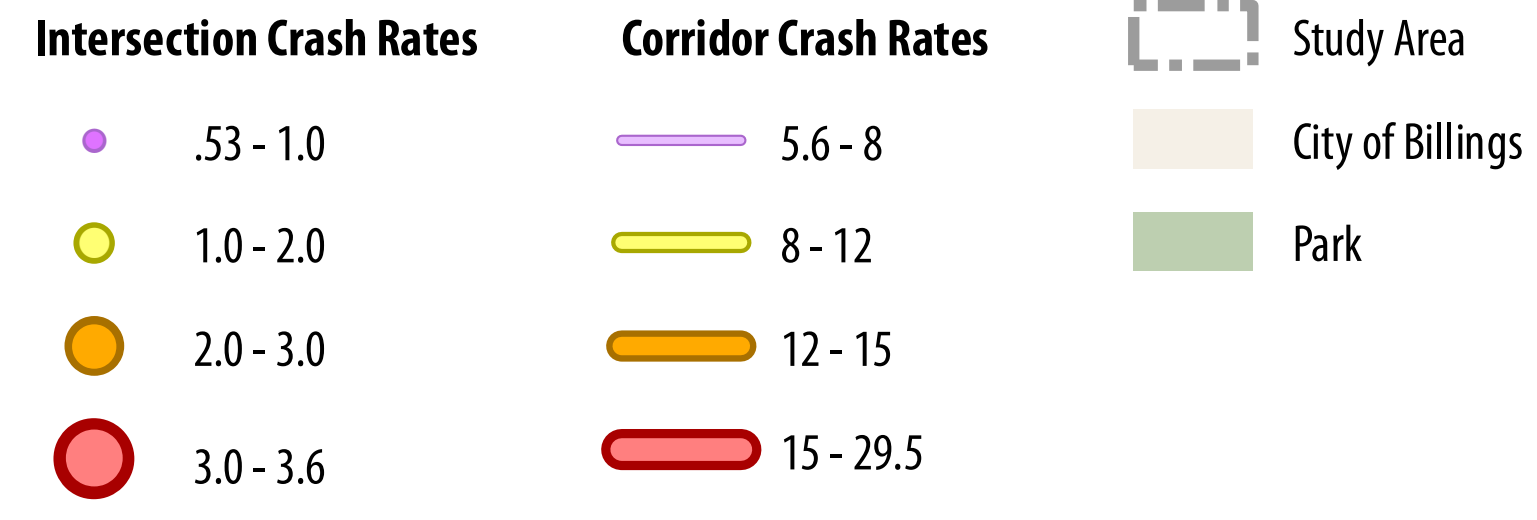
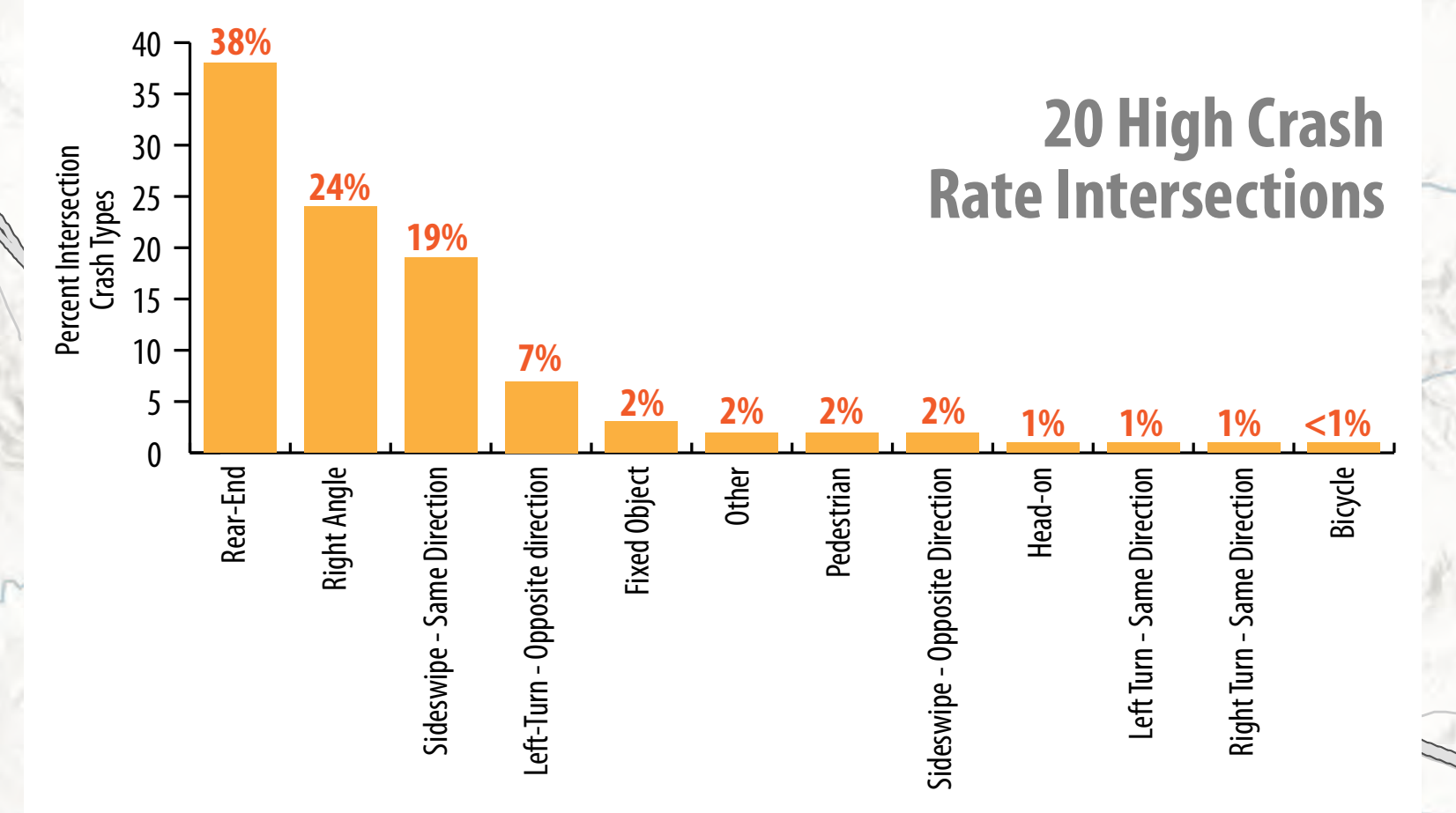
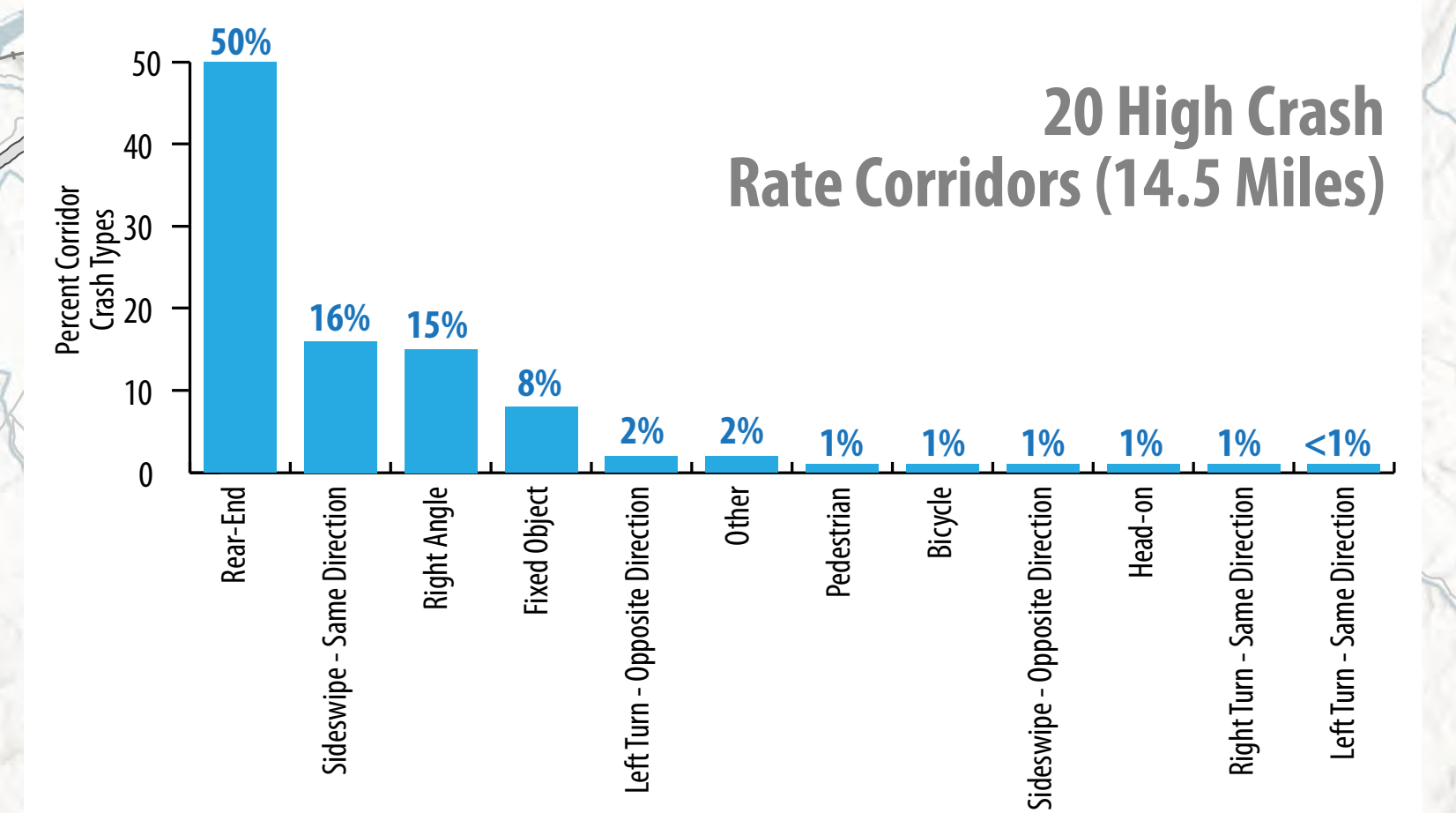
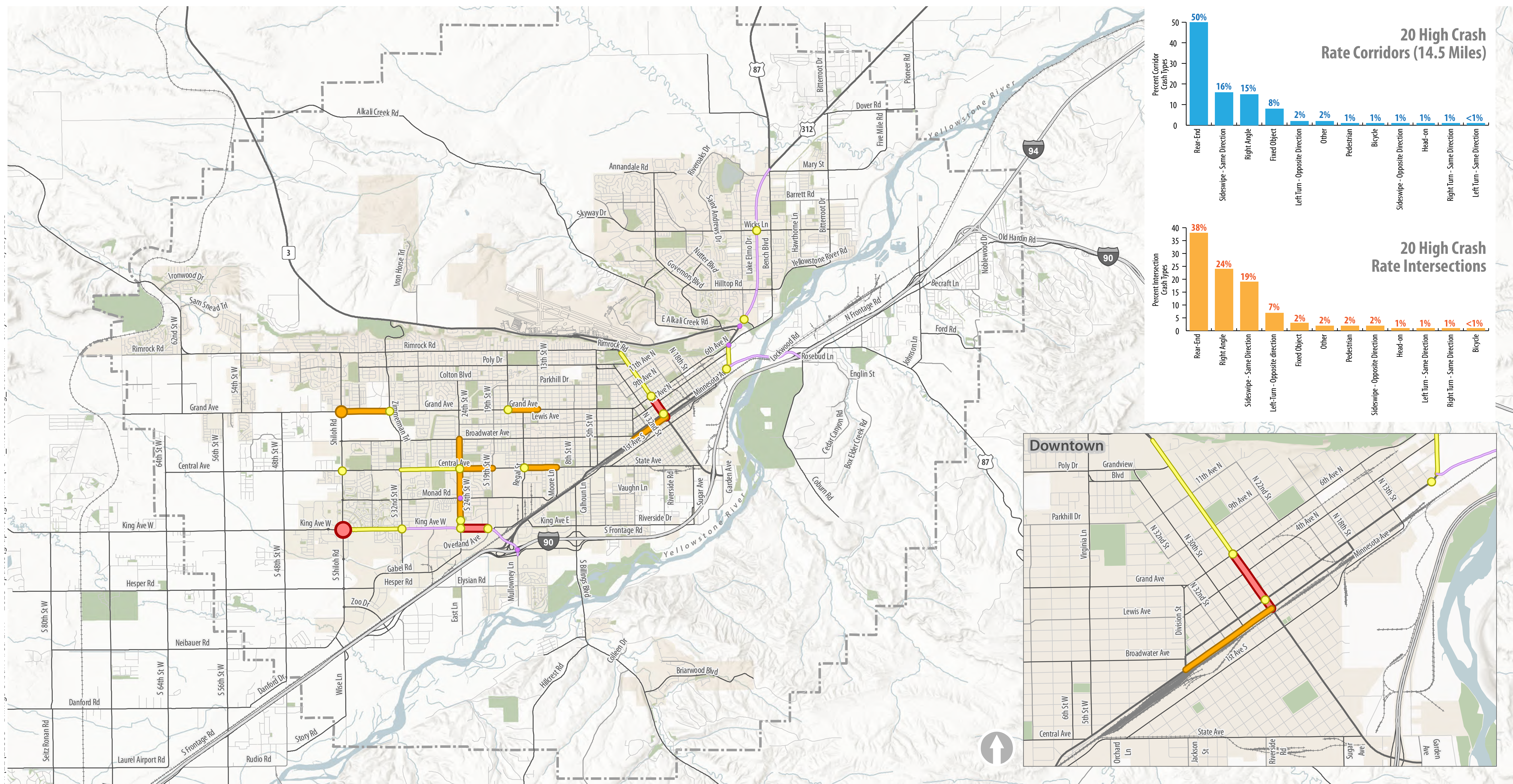
EXISTING CONDITIONS AND LEVEL OF SERVICE



- | | | | |
|-------------------------|--|-------------------------------|--------------------|
| Level of Service | ● Intersections with No Data and Identified as Potentially Congested | Roadway Classification | ▭ Study Area |
| ● A thru C | ○ Intersections with No Data | — Interstate | ▭ Park |
| ● D | ▭ More detailed analysis is being performed in these areas by other studies/projects | — Highway | ▭ City of Billings |
| ● E | P1 - Downtown Traffic Study | — Arterial | |
| ● F | P2 - 1st Avenue North | — Collector | |
| | P3 - 1st Avenue N / Expo | — Local | |

22 potentially congested intersections identified (LOS E or worse)

INTERSECTIONS AND CORRIDORS WITH HIGH CRASH RATES



CRASH SUMMARY:
 14,577 reported crashes between 2013 and 2017
 42 fatal crashes

4,005 injury crashes
 10,430 property damage only crashes
 210 pedestrian crashes (8 fatal)
 140 bicycle crashes (1 fatal)

NEXT STEPS

Stay Involved

- Sign up on the “Notify Me” list on the City’s website: <http://ci.billings.mt.us/>
- Check back frequently for updates on our project website at www.billingslrtp.com
- Contact **Scott Walker** (MPO) at 406.657.8246 or via email at walkers@ci.billings.mt.us

What is Next?

- Review and address comments received from the public on the Draft LRTP
- Finalize the LRTP for plan adoption
- Coordinate the plan adoption process in October 2018

All displays and handouts from tonight will be posted on the project website at www.billingslrtp.com for review and comment.

Thank you for participating!

Appendix B Public Open House #2
Comment Sheets

What zip code do you live in? 59102

What modes of transportation do you use? (check all that apply)

- Car/Truck/Motorcycle
 Bike
 Walk
 Public Transportation
 Other: _____



Project Areas

Please rank below the project areas that you would most like to see the MPO prioritize.

Project Area	Rank Top 3 (1, 2, 3)
Roadway	
Intersection	3
Congestion Management	
Pedestrian	2
Bicycle	1
Trail	
Transit	
Freight	
Rail	
Other	

Are there any projects you did not see on the project maps that you would like to see added? Please explain.

No - great coverage!

Are there any projects you saw on the project maps that you would like to see revised or removed? Please explain.

N/A

If you would like to receive project updates, please fill out the information below.

Name: Melissa HendersonEmail: melissa.hen@riverstonehealth.org

Please leave your completed comment sheet at the sign-in table. If you would like to complete it at a later date, please send it to the YCPB, 2825 3rd Avenue North, 4th Floor, Billings, MT 59101.

While your comments are always welcome, they can be best utilized if received by October 9, 2018.

Thank you!

What zip code do you live in? 59102

What modes of transportation do you use? (check all that apply)

- Car/Truck/Motorcycle
 Bike
 Walk
 Public Transportation
 Other: _____



Project Areas

Please rank below the project areas that you would most like to see the MPO prioritize.

Project Area	Rank Top 3 (1, 2, 3)
Roadway	3
Intersection	
Congestion Management	1
Pedestrian	
Bicycle	
Trail	
Transit	
Freight	
Rail	2
Other	

Are there any projects you did not see on the project maps that you would like to see added? Please explain.

Are there any projects you saw on the project maps that you would like to see revised or removed? Please explain.

If you would like to receive project updates, please fill out the information below.

Name: Gordon JacksonEmail: gjackson@nade-naha.org

Please leave your completed comment sheet at the sign-in table. If you would like to complete it at a later date, please send it to the YCPB, 2825 3rd Avenue North, 4th Floor, Billings, MT 59101. **While your comments are always welcome, they can be best utilized if received by October 9, 2018.**

Thank you!



What zip code do you live in? _____

What modes of transportation do you use? (check all that apply)

- Car/Truck/Motorcycle
- Bike
- Walk
- Public Transportation
- Other: _____

Project Areas

Please rank below the project areas that you would most like to see the MPO prioritize.

Project Area	Rank Top 3 (1, 2, 3)
Roadway	
Intersection	
Congestion Management	
Pedestrian	
Bicycle	2
Trail	
Transit (Mass)	3
Freight	
Rail	
Other Electric Mobility	1

Are there any projects you did not see on the project maps that you would like to see added? Please explain.

Electric Vehicle charging infrastructure, Solar powered mass transit, i.e., Electric buses. Examples: Austin, TX Airport w/ EV charging stations in city owned parking; Sacramento, CA Electric powered mass transit system (buses, streetcars, rail)

Are there any projects you saw on the project maps that you would like to see revised or removed? Please explain.

If you would like to receive project updates, please fill out the information below.

Name: _____

Email: j-g.vamay@gmail.com

Please leave your completed comment sheet at the sign-in table. If you would like to complete it at a later date, please send it to the YCPB, 2825 3rd Avenue North, 4th Floor, Billings, MT 59101. **While your comments are always welcome, they can be best utilized if received by October 9, 2018.**

Thank you!

What zip code do you live in? 59106

What modes of transportation do you use? (check all that apply)

- Car/Truck/Motorcycle
 Bike
 Walk
 Public Transportation
 Other: _____



Project Areas

Please rank below the project areas that you would most like to see the MPO prioritize.

Project Area	Rank Top 3 (1, 2, 3)
Roadway	(1)
Intersection	
Congestion Management	
Pedestrian	
Bicycle	(3)
Trail	(2)
Transit	
Freight	
Rail	
Other	

Are there any projects you did not see on the project maps that you would like to see added? Please explain.

A feasibility and alignment study be done on a highway connecting the interstate and highway 3. This should be done to improve connectivity from the interstate to highway 3 including the Bldg Airport. (see back) →

Are there any projects you saw on the project maps that you would like to see revised or removed? Please explain.

An updated alignment study be done on the 2004 Planning Feasibility Study of the Moltke Highway 3 Connector Rd. Currently on the Long Range Transp. Plan.

If you would like to receive project updates, please fill out the information below.

Name: Lyle Gabrian

Email: lgabrian@bresnan.net

Please leave your completed comment sheet at the sign-in table. If you would like to complete it at a later date, please send it to the YCPB, 2825 3rd Avenue North, 4th Floor, Billings, MT 59101. **While your comments are always welcome, they can be best utilized if received by October 9, 2018.**

Thank you!

Appendix C Public Open House #2
Sign-In Sheet

Please Sign In

Public Open House
September 25, 2018

Requested Information

Voluntary Information

Name Mailing Address E-Mail Address

1. Becky Bey 2611 GABEL Rd. becky.bey@kljng.com

2. Elyse Monet 401 Bridgeway Ave. monet@kljillings.com

3. Linda Nelson 703 N 29th #202 ljnelson@charter.net

4. Lauren Wright PO Box 1235 lwright@illings.com
communityfounder.org

Male Female

Disabled

Male Female

Disabled

Male Female

Disabled

Male Female

Disabled

Male Female

Disabled

Male Female

Disabled

Male Female

Disabled

American Indian/Alaskan Native
 Asian/Pacific Islander

Black Hispanic
 White Other

American Indian/Alaskan Native
 Asian/Pacific Islander

Black Hispanic
 White Other

American Indian/Alaskan Native
 Asian/Pacific Islander

Black Hispanic
 White Other

American Indian/Alaskan Native
 Asian/Pacific Islander

Black Hispanic
 White Other

American Indian/Alaskan Native
 Asian/Pacific Islander

Black Hispanic
 White Other

American Indian/Alaskan Native
 Asian/Pacific Islander

Black Hispanic
 White Other

American Indian/Alaskan Native
 Asian/Pacific Islander

Black Hispanic
 White Other

Please Sign In

Public Open House
September 25, 2018

Requested Information

Voluntary Information

Name	Mailing Address	E-Mail Address	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> American Indian/Alaskan Native <input checked="" type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input checked="" type="checkbox"/> White <input type="checkbox"/> Other
5. Danny Chioriki	PO Box 211 5740 59103	danny@choriki.com for.montana.com	<input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input checked="" type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input checked="" type="checkbox"/> White <input type="checkbox"/> Other
6. Bill Cole	Mayor	coleb@ci.billings,mt.us	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> White <input type="checkbox"/> Other
7. Denise Joy	City Council		<input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> White <input type="checkbox"/> Other
8. Robert Marvin	PO Box 80785 Billings 59108	BOB@MARVINASSOCIATES.COM	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> White <input type="checkbox"/> Other
9. Claire Oakley	1903 Northside	Claire.oakley@rivarsfornc.com nc.oh.org	<input type="checkbox"/> Male <input checked="" type="checkbox"/> Female <input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input checked="" type="checkbox"/> White <input type="checkbox"/> Other
10. Jan Lubbey	4401 Hwy 3	jan@whysandh.com	<input type="checkbox"/> Male <input type="checkbox"/> Female <input checked="" type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> White <input type="checkbox"/> Other

Requested InformationVoluntary Information

Name	Mailing Address	E-Mail Address	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> American Indian/Alaskan Native
			<input type="checkbox"/> Disabled	<input type="checkbox"/> Asian/Pacific Islander
			<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> Black <input type="checkbox"/> Hispanic
			<input type="checkbox"/> Disabled	<input type="checkbox"/> White <input type="checkbox"/> Other
			<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> American Indian/Alaskan Native
			<input type="checkbox"/> Disabled	<input type="checkbox"/> Asian/Pacific Islander
			<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> Black <input type="checkbox"/> Hispanic
			<input type="checkbox"/> Disabled	<input type="checkbox"/> White <input type="checkbox"/> Other
			<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> American Indian/Alaskan Native
			<input type="checkbox"/> Disabled	<input type="checkbox"/> Asian/Pacific Islander
			<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> Black <input type="checkbox"/> Hispanic
			<input type="checkbox"/> Disabled	<input type="checkbox"/> White <input type="checkbox"/> Other
			<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> American Indian/Alaskan Native
			<input type="checkbox"/> Disabled	<input type="checkbox"/> Asian/Pacific Islander
				<input type="checkbox"/> Black <input type="checkbox"/> Hispanic
				<input type="checkbox"/> White <input type="checkbox"/> Other
18. Alcolshon	108 Sky Ranch Colahon@broadnet.net			
19. Auzie Blevins	3328 Agui Este Dr albmrvb@wispwest.net			
20. POK OLSEN	2112 FARRVIEW 3142 Zimmer- man Place	Dono@OZARCHIVE.NE.S		
21. Lyke Gabrian		lgabrian@bresnan.net		
22. Mike Ferguson	412 Bay Place 17 N 26th	Mkysin@hampgreek.com		
23. Gordon Jackson	1395 MT 59101	gjackson@nadc-nolan.org		

Please Sign In

Public Open House
September 25, 2018

Requested Information

Voluntary Information

Name	Mailing Address	E-Mail Address	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input checked="" type="checkbox"/> White <input type="checkbox"/> Other
24. Dean Welliver	5325 Cabernet Ln. Dwellpen@gmail.com		<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input checked="" type="checkbox"/> White <input type="checkbox"/> Other
25. Doug Habermann	PO Box 584 Helena MT 59624 doug@bike.wy.kmontana.org		<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input checked="" type="checkbox"/> White <input type="checkbox"/> Other
26. Jora Nettek	c/o Planning		<input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> White <input type="checkbox"/> Other
27. Darrell Tunnicliffe	2344 Gen'l Court Billings 59101 DTunnicliffe@aol.com		<input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> White <input type="checkbox"/> Other
28. Melissa Henderson	1238 27th Street Billings 59101	melissa.hen@investstonehead.com	<input type="checkbox"/> Male <input checked="" type="checkbox"/> Female <input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input checked="" type="checkbox"/> White <input type="checkbox"/> Other
29. Caroline Canarios	220 S. 27th St, 59101	caroline@northernplains.org	<input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input checked="" type="checkbox"/> White <input type="checkbox"/> Other

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Cheryl
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 White Other

Male Female
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American Indian/Alaskan Native
 Asian/Pacific Inlander
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 White Other

Please Sign In

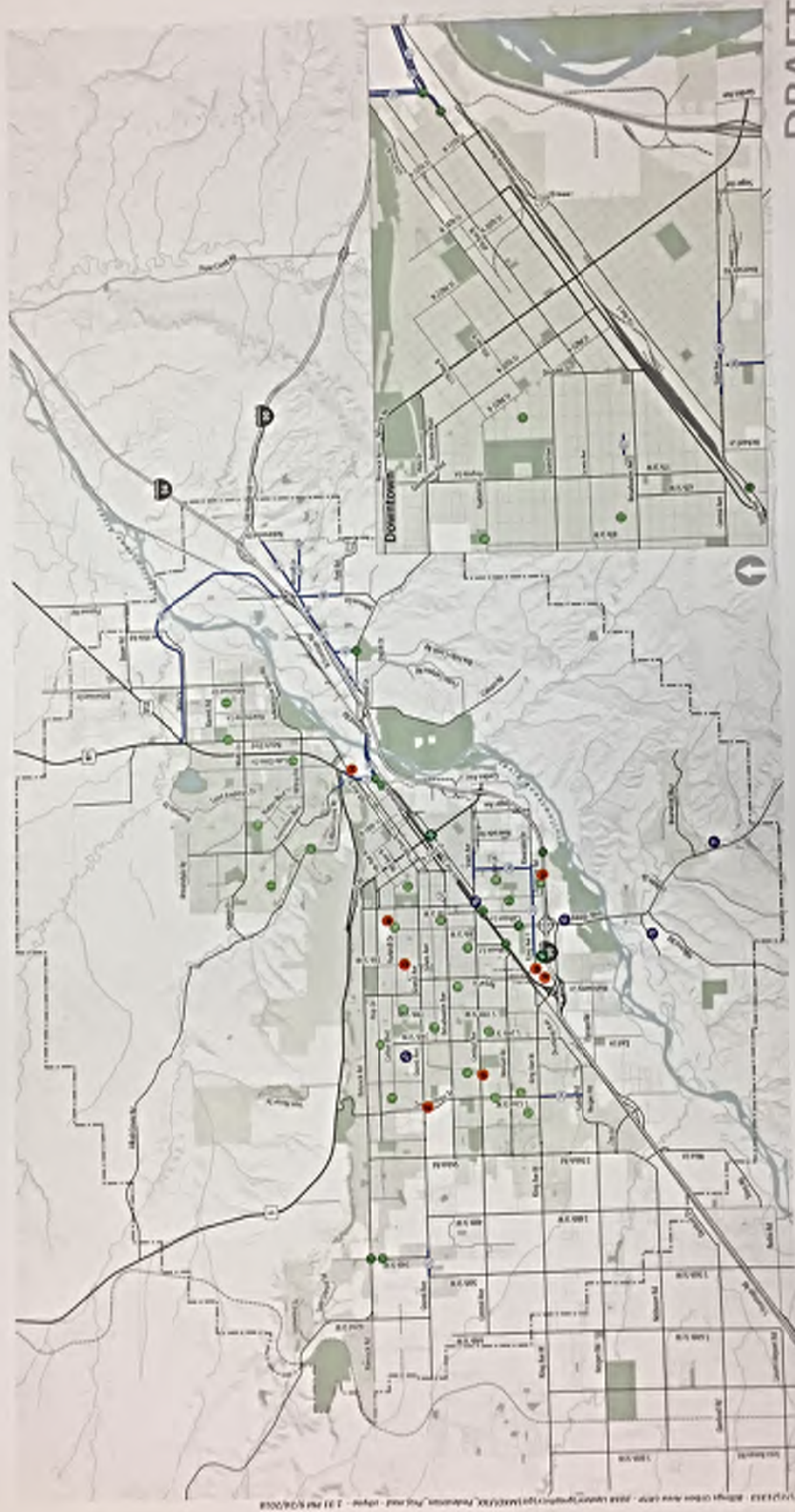
Public Open House
September 25, 2018

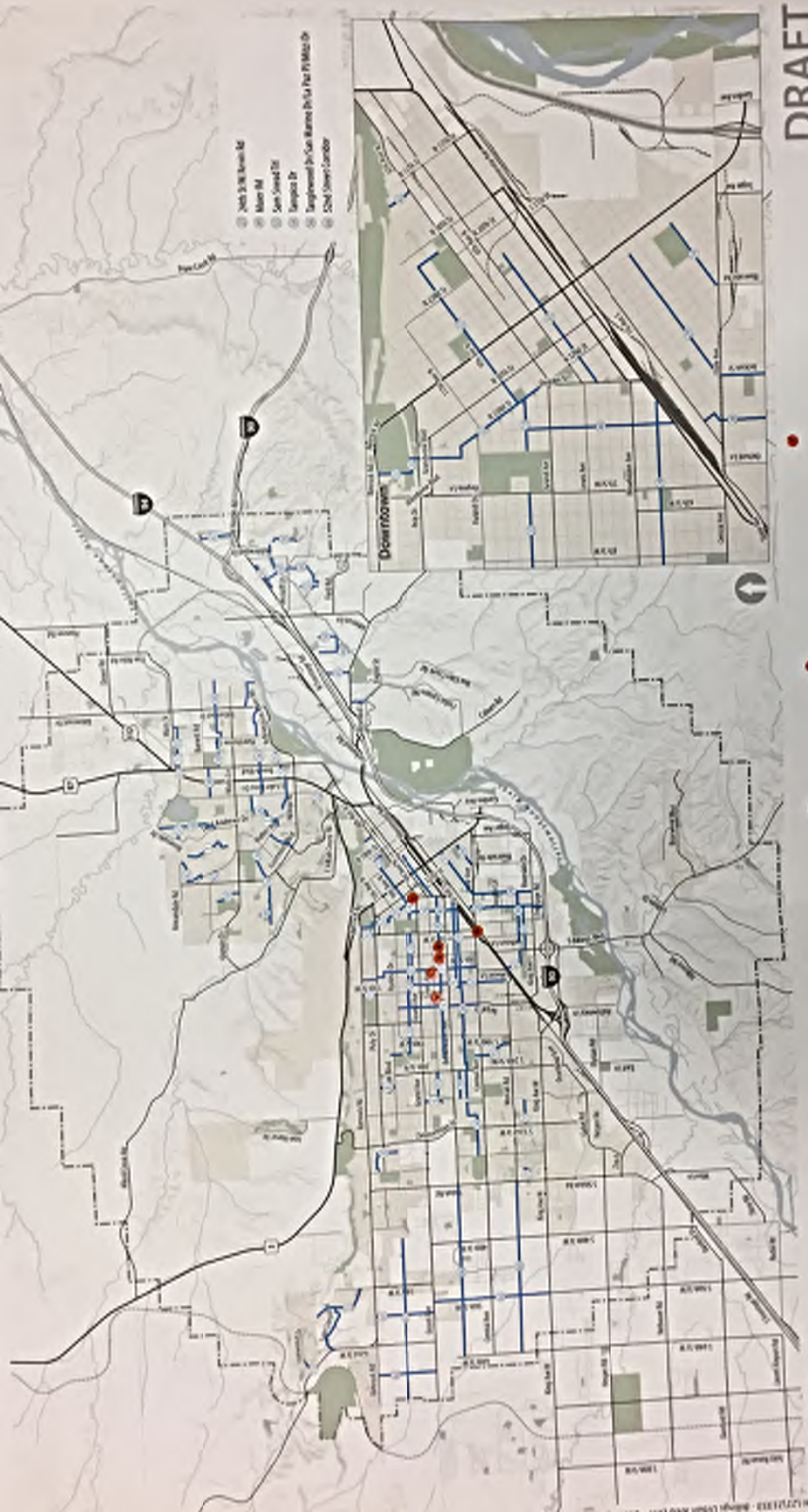
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Voluntary Information

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31. Kevin Nelson	PO Box 23107	geos59101@gmail.com 59107	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> White <input type="checkbox"/> Other
32. TINA VOLEK	3214 HORTON SMITH	STEVEVOLEK@MSN.COM	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> White <input type="checkbox"/> Other
33. Joe R Ampy	PO Box 231	j.g.rampy@gmail.com	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> White <input type="checkbox"/> Other
34. Thom MacLean	222 N. 32nd St Ste 200	thom@byskyeda.org	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> White <input type="checkbox"/> Other
35. Morgan Miller	123 S. 27th St.	morgan.mil@riverstonehealth.org	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> White <input type="checkbox"/> Other

Appendix D Project Maps





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Figure XX

Bicycle Boulevard Projects

— Bicycle Boulevard



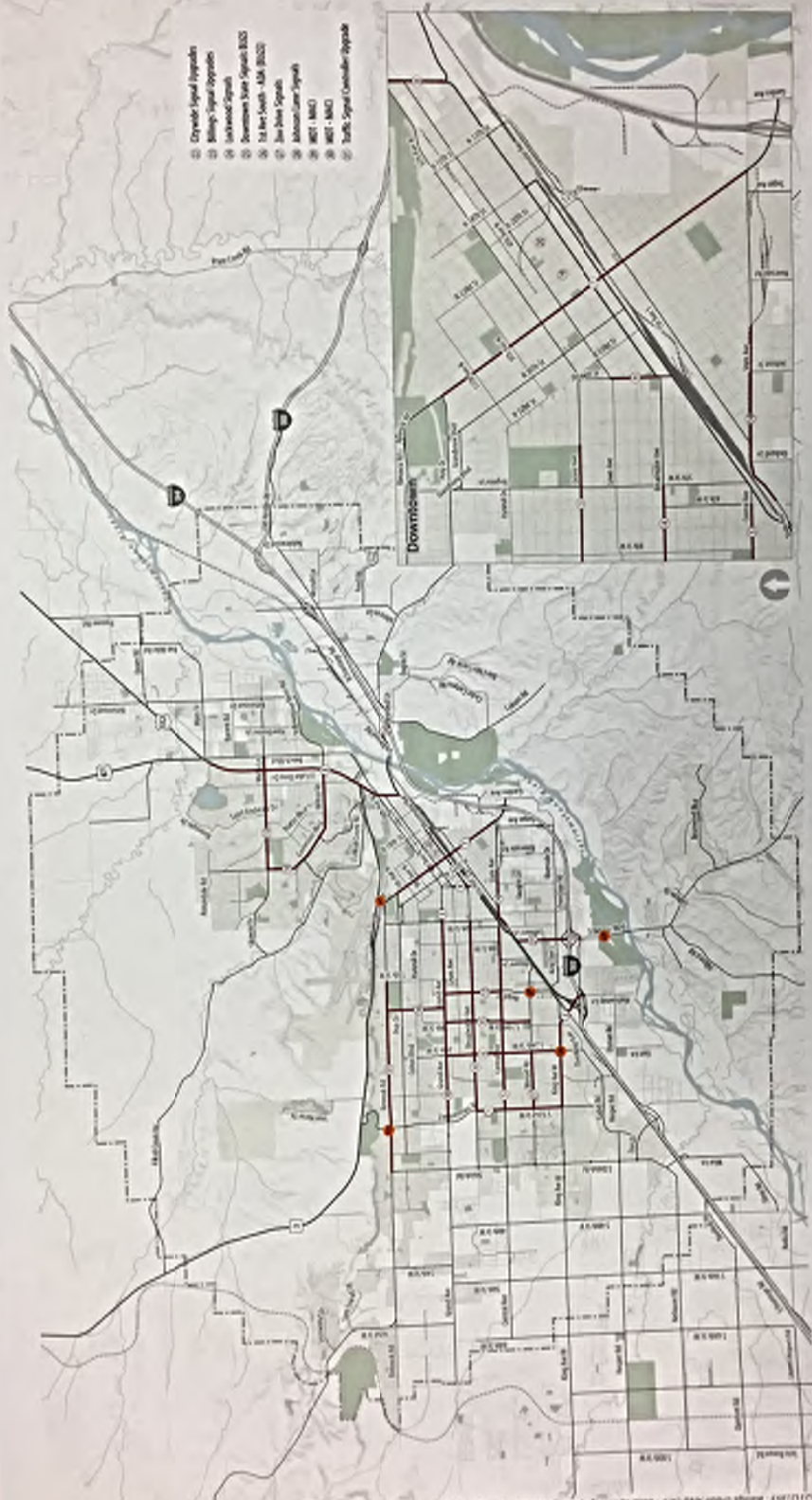
- 1. 200' Street - 70' Sid 1/2 to 1/4 mile
- 2. Road Zone - Reconstruction
- 3. Street Project
- 4. 400' Roadway Maintenance
- 5. 800' - 100'
- 6. Approach - 200' to 100'
- 7. 200' - 100'
- 8. 100' - 50'
- 9. 50' - 25'
- 10. 25' - 10'
- 11. 10' - 5'
- 12. 5' - 2'
- 13. 2' - 1'
- 14. 1' - 0'
- 15. 0' - 1'
- 16. 1' - 2'
- 17. 2' - 3'
- 18. 3' - 4'
- 19. 4' - 5'
- 20. 5' - 6'
- 21. 6' - 7'
- 22. 7' - 8'
- 23. 8' - 9'
- 24. 9' - 10'
- 25. 10' - 11'
- 26. 11' - 12'
- 27. 12' - 13'
- 28. 13' - 14'
- 29. 14' - 15'
- 30. 15' - 16'

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Figure XX
Intersection and Roadway Projects

Intersection Projects
Roadway Projects

- ① Citywide Signal Approach
- ② Milling Signal Approach
- ③ Lockwood Signal
- ④ Downtown Area Signal (2023)
- ⑤ 7th Ave South - I-24 (2022)
- ⑥ 2nd Street Signal
- ⑦ Johnson-Cramer Signal
- ⑧ MS1 - MS2
- ⑨ MS1 - MS2
- ⑩ Traffic Signal Conversion Approach



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Figure 23
Congestion Management Projects

— Congestion Management

2018 Billings Urban Area Long Range Transportation Plan



September 27, 2018

2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN

BILLINGS, MONTANA

Prepared for:

City of Billings

Prepared by:

Kittelson & Associates, Inc. and DOWL

September 2018 -Draft



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Chapter 1

Introduction



INTRODUCTION

The Billings Urban Area Long Range Transportation Plan (LRTP) is a framework to guide the development and implementation of multimodal transportation system projects for the Billings Urban Area. The LRTP is updated every four years. This LRTP assesses today's (2017) land use and transportation conditions and projects into the future (year 2040) to identify and strategize transportation improvements for the region.

The Billings Urban Area lies at the western edge of the northern High Plains. It serves as a central hub for a large region comprised of Montana, northern Wyoming, and the western Dakota's. Due to its location, Billings has developed as an important economic, cultural, educational, and transportation urban center for the entire region. Billings is located in Yellowstone County between Minneapolis and Seattle (east to west), and Calgary and Denver (north to south) and is one of the largest cities between these major cities, including the largest in Montana. Exhibit 1.1 illustrates the location and regional importance of Billings.

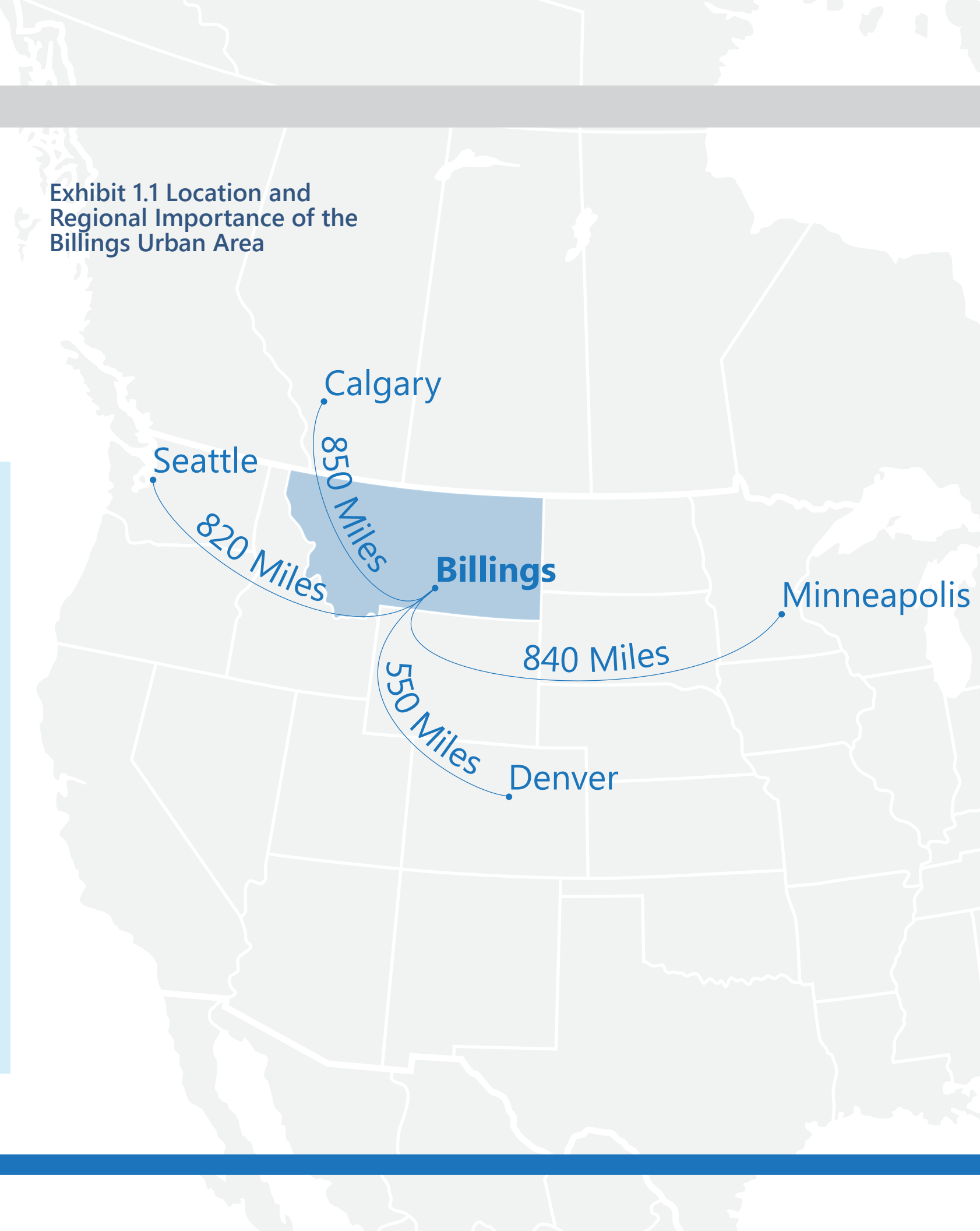
Transportation is a vital element to the residents and businesses of Billings and connects commerce from the Billings Urban Area to other parts of Montana and metropolitan areas via road, rail (freight), and air. The region's transportation infrastructure is robust and includes streets, highways, Interstate, rail, transit, sidewalks, bicycle facilities, trails, and an airport. Given the importance of the transportation infrastructure, this document plans for

transportation facilities and services to ensure mobility and accessibility throughout the Billings Urban Area. The Yellowstone County Board of Planning is the designated Metropolitan Planning Organization (MPO) and oversees transportation planning for the Billings Urban Area. The area encompasses the City of Billings, as well as the planning area extending approximately 4.5 miles outside the City limits. Figure 1-1 illustrates the study area.

What topics are covered in this LRTP?

- Goals, objectives, performance measures, and target
- Public and interagency involvement
- Forecasts of population, households, and employment anticipated in 2040
- Inventory of needs and opportunities for transportation elements: streets and highways, public transit and transportation (bus, paratransit, and air), freight (truck and rail), pedestrians, bicyclists, trails, safety, security
- Funding sources and projected revenue
- Project recommendations and implementation strategies

Exhibit 1.1 Location and Regional Importance of the Billings Urban Area



Development of this plan was guided by a Steering Committee (SC), which consisted of representatives from the following agencies:

- Billings City Council
- Billings/Yellowstone County Planning Board
- Billings Metropolitan Transit
- Billings Planning
- Billings Public Works
- Billings/Yellowstone County MPO
- Lockwood Steering Committee
- Montana Department of Transportation (MDT)
- Yellowstone Board of County Commissioners
- Yellowstone County Public Works

Additional input was received from the Billings Technical Advisory Committee, Federal Highway Administration, Policy Coordinating Committee, Yellowstone Board of County Commissioners, neighborhood groups, members of the public, and other consultation efforts conducted through the 10-month planning process.

HISTORICAL CONTEXT

Transportation planning has been a key element of the City's planning efforts for over 100 years since its inception as a major rail hub. As such, one of the first transportation surveys was completed in 1954, which included a transportation inventory, traffic counts, parking, and other related data. Ten transportation plans (1961, 1964, 1969, 1977, 1983, 1990, 2000, 2005, 2007, 2009, 2014) have been completed since 1961.

Exhibit 1.2 illustrates some of the transportation plan covers from past efforts.

Exhibit 1.2 Past Transportation Plans



Similar to today's planning efforts, the past transportation plans assessed existing and future transportation conditions to identify a set of financially constrained improvements for the Billings Urban Area. Exhibit 1.3 illustrates roadway and bicycle elements from past transportation plans.

Exhibit 1.3 Elements of Past Transportation Plans



Since the 1950s, the Billings Urban Area has seen considerable growth in the development of population and employment areas in the downtown, along the Rims, and to the west. Recognizing the ongoing growth in the Billings Urban Area, it is critical that the MPO and local agencies continue to invest in long range transportation and land use planning efforts. These efforts identify, preserve, support, and maintain the infrastructure of the region's transportation system.

TRANSPORTATION PLAN IMPLEMENTATION SINCE 2014

The previous LRTP, completed in 2014 (1-1) included several key elements:

- Implemented a robust public and stakeholder involvement plan
- Updated the planning horizon to year 2040
- Confirmed study area boundaries and plan goals
- Assessed existing and future transportation and land use conditions
- Reviewed and updated non-motorized, bus, safety, security, and conformity elements
- Prepared a short- and long-range project list and financial plan

Since the 2014 plan adoption, several transportation projects and studies have been completed that play a role in the overall transportation system. Figure 1-2 illustrates the completed and ongoing projects, studies, and plans since 2014. Over 31 major projects and 17 studies have been completed in the last four years, which shows a commitment from the agencies and community to continue to invest in the transportation system for the next generation. There are many other completed transportation projects, such as sidewalk and ramp enhancements, street signing, overlays, etc., that are not depicted on Figure 1-2, but have been completed and are important elements of enhancing and maintaining the transportation system. These completed projects along with new federal requirements served as a basis for this transportation update.

PLAN REQUIREMENTS AND PROCESS

Fundamental elements of this transportation plan were to encompass all transportation modes and identify how these modes are accommodated through the new planning horizon of year 2040. In developing this transportation plan, several federal, state, and local planning requirements were addressed to ensure compliance and consistency with these regulatory requirements.

FEDERAL REQUIREMENTS

The scope of the planning process (1-2) for an MPO (urban areas with a population of more than 50,000 individuals) is to develop long-range transportation plans and Transportation Improvement Program (TIPs) through a performance-driven, outcome-based approach to planning for metropolitan areas of the State, such as Billings, MT. Additionally, this process needs to be continuous, cooperative, and comprehensive, and provide for consideration and implementation of projects, strategies, and services that will address the following planning factors:

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
2. Increase the safety of the transportation system for motorized and non-motorized users;
3. Increase the security of the transportation system for motorized and non-motorized users;

4. Increase accessibility and mobility of people and freight;
5. Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
7. Promote efficient system management and operation;
8. Emphasize the preservation of the existing transportation system;
9. Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation; and
10. Enhance travel and tourism

The Moving Ahead for Progress in the 21st Century (MAP-21) Act (1-3) transformed the Federal-aid highway program by establishing requirements for performance management to promote the most efficient investment of Federal transportation funds. The Fixing America's Surface Transportation (FAST) Act (1-4) continues this performance-based approach to increase the accountability and transparency of this program and to

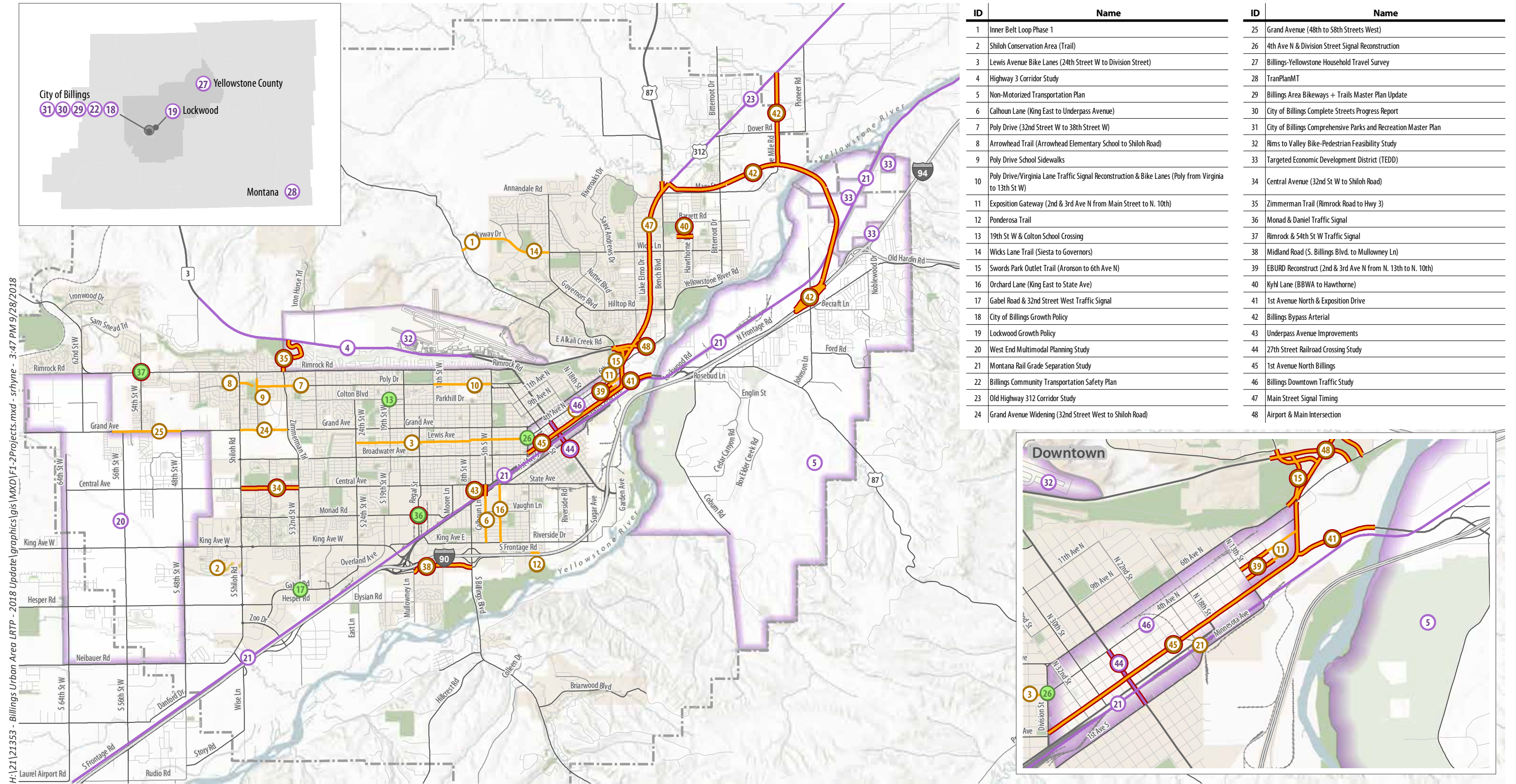
support improved investment decisions through a focus on performance outcomes for the national planning factors. Additional information on the FAST Act is provided on FHWA's Fast Act website, as shown in Exhibit 1.4.

Exhibit 1.4 FAST Act Website



The Billings LRTP is consistent with the national transportation program, addresses priority issues, and leverages funding opportunities and initiatives incorporated in the national program. This LRTP was prepared in accordance with these federal requirements.

2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN



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Figure 1-2
Projects/Plans/Studies/Policies
Completed and On-Going Since 2014 LRTP

STATE PLANNING REQUIREMENTS

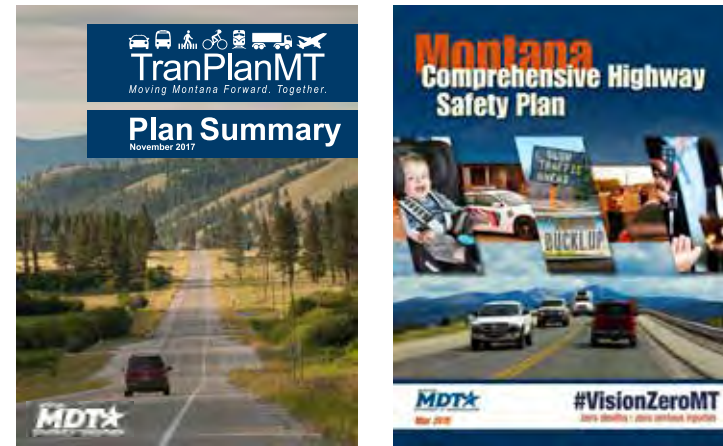
TranPlanMT, Montana's long-range transportation plan, was last amended in 2017 (1-5). TranPlanMT identifies key transportation priorities and outlines long-range policy goals and strategies to assist MDT in addressing aging infrastructure, changing environmental conditions, and ongoing funding challenges. It also provides a framework for MDT to advance and manage its transportation programs in compliance with evolving federal requirements. In support of MDT and national goals, MDT conducts performance-based planning in the following key areas mandated through federal regulations:

- Safety
- Infrastructure Condition
- Transit Asset Management
- System Reliability
- Freight Movement and Economic Vitality
- Environmental Sustainability

TranPlanMT cites safety as an overarching goal which is applied in nearly every MDT decision-making process for all projects and programs.

Montana's Comprehensive Highway Safety Plan (1-6) was amended in 2015, as required by the MAP-21 federal legislation. The CHSP is intended to be a living document to help guide the State of Montana to effectively address the state's safety needs. The vision of the plan is "zero fatalities and zero serious injuries" on any public roadway in the State. The goal of the plan is "to reduce fatalities and incapacitating injuries in the State of Montana by half in two decades, from 1,704 in 2007 to 852 by 2030."

Exhibit 1.5 Past Statewide Plans



LOCAL PLANNING REQUIREMENTS

Several local plans, studies, and policies were reviewed to inform the process and elements to be considered in development of the plan. It is important to review and incorporate these documents into the planning process, as to ensure that the integrity and value discussion of past planning efforts are carried forward into today's planning effort. Development of this plan was coordinated with guidelines developed in the Yellowstone County Board of Planning Public Participation Plan (2009 and most recent update in conjunction with this plan update in 2018), the 2014 Billings Urban Area Long Range Transportation Plan, and past transportation and land use plans/studies/policies highlighted in the text box.

Transportation Plans/Studies (Completed since 2014)

- Airport Road / Main Street Intersection Transportation Study
- Billings Complete Streets Benchmark Report
- Billings-Yellowstone County Household Travel Survey
- Billings Area Bikeway + Trails Master Plan Update
- Billings Community Transportation Safety Plan
- Highway 3 Corridor Study
- Lockwood Non-Motorized Transportation Plan
- MET Transit Asset Management Plan
- Montana's Comprehensive Highway Safety Plan
- Montana Rail Grade Separation Study
- Old Highway 312 Corridor Study
- Rims to Valley Study
- TranPlanMT
- Underpass Avenue Improvements Concept Design

- West End Multimodal Planning Study

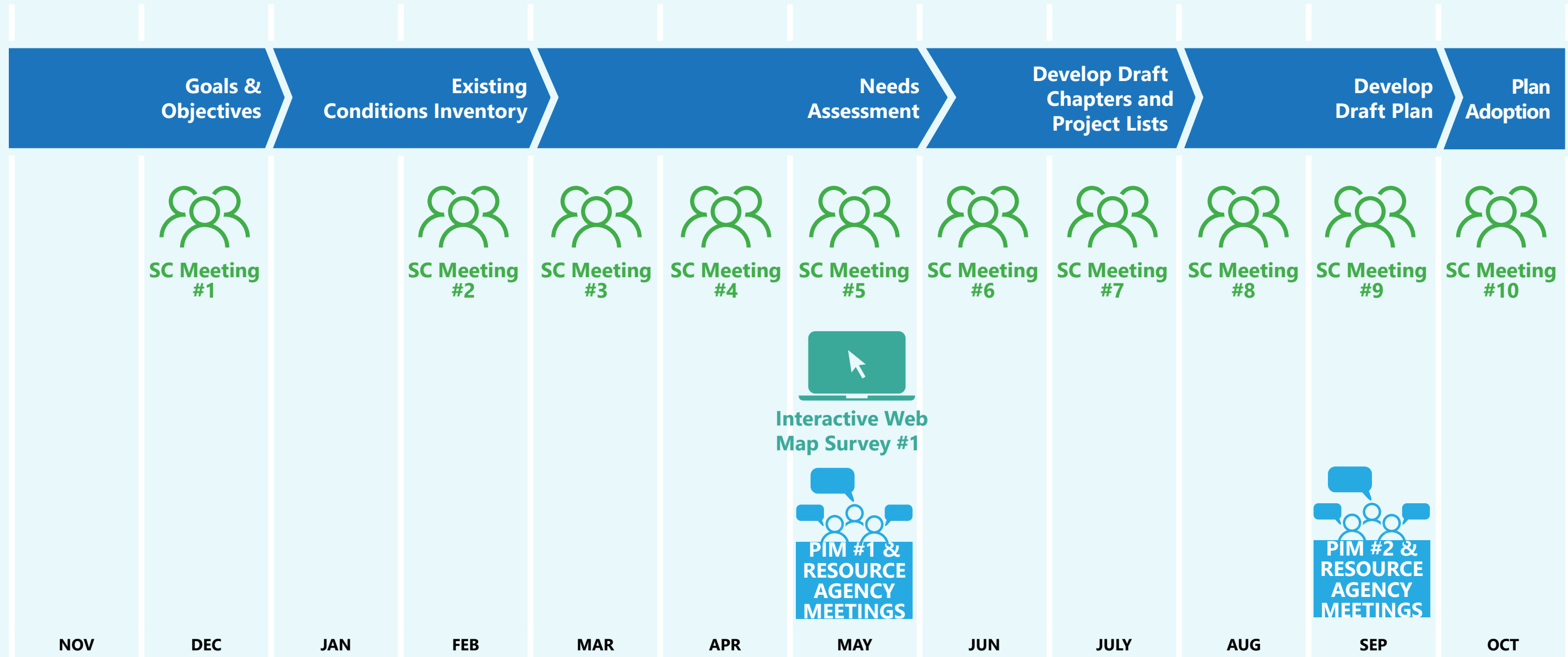
Land Use Plans/Policies (Completed since 2014)

- Billings Growth Policy
- Billings Stormwater Management Manual
- Downtown Billings Alliance Strategic Plan
- Lockwood Growth Policy
- Lockwood Targeted Economic Development District Comprehensive Development Plan
- Lockwood Targeted Economic Development District Strategic Plan

PLAN DEVELOPMENT PROCESS

The plan effort was initiated in November 2017 and completed with consideration for plan adoption in October 2018. Exhibit 1.6 illustrates the plan development process, which is described in more detail throughout this document.

Exhibit 1.6 Plan Development Process





Public and Interagency Involvement

► Project team met with representatives from the following agencies:

Chapter 2

Interagency and Public Involvement Program



INTERAGENCY AND PUBLIC INVOLVEMENT PROGRAM

Public involvement and agency coordination during this plan is critical for plan development, acceptance, and adoption by the following groups:

- Policy Coordinating Committee (PCC), which is comprised of a representative from the Yellowstone County Planning Board, Yellowstone Board of County Commissioners, City Council, and Montana Department of Transportation
- Federal Highway Administration (FHWA)
- Montana Department of Transportation (MDT)
- City of Billings
- Yellowstone Board of County Commissioners
- Yellowstone County Planning Board (YCPB)

The public involvement plan (PIP) for this LRTP was developed based on past public involvement efforts for the 2014 LRTP and to be consistent with the public involvement elements of the YCBP 2009 Participation Plan (2-1), the development of the YCBP 2018 Public Participation Plan (2-2) in conjunction with this LRTP, and MDT's 2018 Public Involvement Plan (2-3).

Over 430 comments were received from the public to help inform the development of the plan. Thank you for your participation!

A collaborative and context-sensitive public engagement process was used in developing the plan. The public involvement approach strived to achieve the goals listed below.

- Facilitate an open, honest, and transparent decision-making process conducted through constructive two-way communication between the project team, agencies, and the public.
- Provide early and continuous opportunities for the public to share values, understand the opportunities and constraints within the study area, develop potential solutions, and raise issues and concerns to be considered.
- Inform and encourage community participation.
- Improve the public involvement process by measuring the effectiveness and modifying methods based on evaluation.



Interagency coordination and public involvement were achieved through the following methods:

Building Awareness of the Plan

- Steering Committee
- Neighborhood meetings
- Resource agencies
- Commissions, councils, and committees

Utilizing Various Outreach Methods

- Branding and logo
- Online engagement
- Webpage
- Stakeholder interviews
- Media coordination
- Public informational meetings
- Email updates
- Social media
- Youth engagement

Facilitating Plan Review and Approval

BUILDING AWARENESS OF THE PLAN

Prior to kicking off the project, the MPO formed a Steering Committee (SC) that represented agencies within the Billings Urban Area to help guide the plan development. Early in the process, team members connected with established regional boards and commissions and other community groups. The scope and schedule of the LRTP update was shared with boards, commissions, and community groups, which in turn provided valuable feedback on the initial direction of the plan development. The initial groups, which are identified in the following lists, also supplied additional contacts that helped the outreach effort extend deeper into the community.

STEERING COMMITTEE

The SC served as the primary sounding board for the development of the plan. The SC's responsibilities included reviewing project deliverables and providing guidance to the consultant team throughout plan development. The SC included staff from:

- City of Billings Administration
- City of Billings City Council
- City of Billings Planning
- City of Billings Public Works
- Lockwood Steering Committee
- MDT Billings District
- MDT Planning
- MET Transit
- Yellowstone County Commission
- Yellowstone County Planning Board
- Yellowstone County Public Works

The consultant team, with assistance from the MPO, scheduled and led ten meetings with the SC throughout the duration of the project. The goal of the SC meetings was to solicit feedback concerning the development of project deliverables and determine next steps for the consultant team. The consultant team would provide materials to the SC, prior to the meeting, for review and comment. All meeting agendas and minutes are included in the Appendix.

NEIGHBORHOOD MEETINGS

MPO staff provided updates to various neighborhood association groups and encouraged them to provide comments via the project website or interactive web map.

COMMISSIONS, COUNCILS, AND COMMITTEES

The project team and MPO met with other committees and officials throughout the LRTP development process. These meetings were meant to update these various groups of the progress being made and to solicit feedback at key stages of the project. These committees include:

- City of Billings City Council
- City of Billings / Yellowstone County Planning Board
- Policy Coordinating Committee
- Yellowstone Board of County Commissioners
- Technical Advisory Committee

RESOURCE AGENCIES

Prior to the first Public Involvement Meeting in May, the MPO sent a letter to resource agencies and stakeholders in the Billings Urban Area to notify them of the LRTP update. The letter also invited any interested groups to coordinate meetings with the consultant team to discuss the transportation planning process for the 2018 LRTP, changes in federal requirements through FAST Act, consistency with other plans, opportunities and constraints, ideas for implementation, and any questions they had about the project. Agencies or organizations highlighted with **bold** text participated in 1-on-1 meetings with the consultant team.

- Big Sky Economic Development Authority
- **Billings Area Chamber of Commerce (met twice)**
- Billings Association of Realtors
- Billings TrailNet
- **Billings Emergency Services/ Yellowstone County EMS**
- Billings Fire Department
- Billings Police Department
- Billings School District 2
- Billings Bicycle and Pedestrian Advisory Committee
- Billings Traffic Control Board
- Billings Community Development Board
- Billings Board of Adjustment
- Billings Zoning Commission
- Billings Aviation and Transit Board
- Billings Parking Board
- Bureau of Indian Affairs
- Downtown Billings Partnership, Inc
- Housing Authority of Billings
- Living Independently for Today & Tomorrow (LIFTT)
- **MET Transit**
- Montana Department of Environmental Quality
- Montana Department of Fish, Wildlife, and Parks
- Montana Department of Natural Resources & Conservation
- Montana Rail Link
- Central Terry Neighborhood Task Force
- Heights Neighborhood Task Force
- North Park Neighborhood Task Force
- Pioneer Park Neighborhood Task Force
- **Rimrock Neighborhood Task Force (met twice)**
- Southside Neighborhood Task Force
- Southwest Corridor Neighborhood Task Force
- **Westend Neighborhood Task Force**
- Riverstone Health (Yellowstone County Health Department)
- Weave Management Group, Inc.
- U.S. Bureau of Land Management
- U.S. Bureau of Reclamation
- Yellowstone County Sheriff's Office
- Yellowstone County Superintendent of Schools

UTILIZING VARIOUS OUTREACH METHODS

The public involvement activities for plan development reflected a multi-faceted approach. The outreach methods were created to facilitate communication between the public and project team throughout the project and gather insights and direction for plan development.

BRANDING AND LOGO

A logo, color scheme and reporting templates were developed and implemented with this LRTP to provide brand awareness and cohesiveness with plan materials through the planning and adoption of the plan.

PROJECT WEBPAGE

The project website (provided at URL www.BillingsLRTP.com, shown in Exhibit 2.1) was maintained by the consultant team and served as the primary, public, 24-hour source for information on the project. The website included maps, purpose, public involvement contacts, agency involvement, project schedule, documents, meeting information, and a place for the public to provide input, comments, or questions to the team.

Exhibit 2.1 Homepage of the 2018 Billings Urban Area LRTP Project Website



MEDIA COORDINATION

Outreach was conducted to appropriate media outlets to disseminate information regarding information on the plan and advising the community of public involvement opportunities. Media releases were provided to local media outlets in May and September 2018 regarding the plan development.

EMAIL UPDATES

The consultant team provided email updates to the MPO, which summarized the following:

- Consultant work tasks associated with the LRTP, PPP, and TDM - Included a summary of completed and on-going work tasks of the consultant's responsibility
- Action Items for MPO - Requests for guidance or materials review for the MPO from the consultant team
- Upcoming Meetings - Location, date, and time for any upcoming meetings

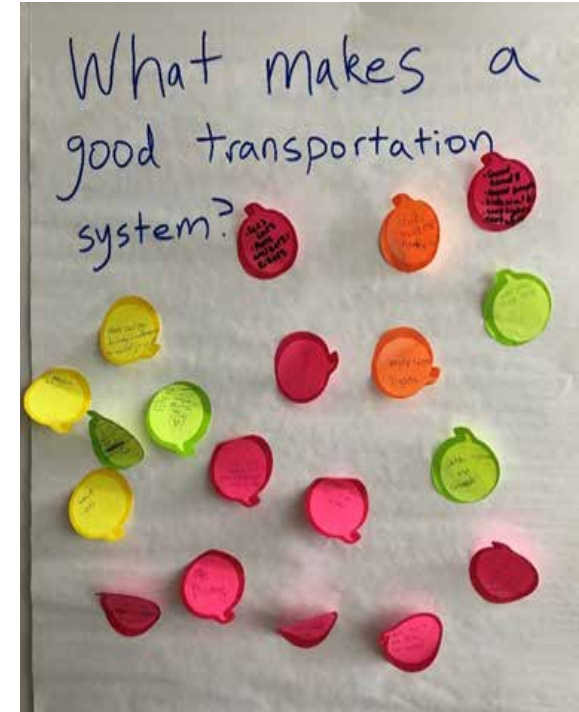
The goal of the updates was to keep a consistent line of communication between the MPO and the consultant team throughout the LRTP process. Additionally, the email updates were forwarded on to other agencies, committees, and elected officials to keep them apprised of the LRTP schedule.

YOUTH ENGAGEMENT

Involving elementary, middle, and high school teachers is a good way to inform and involve not only students, but also their parents. Social studies and government classes provide a good connection to this planning effort. Youth involvement is also a recommendation of Environmental Justice/Title VI best practices.

The consultant team presented to three classes (two geography classes and one social studies class) at the Riverside Middle School on Tuesday May 15th, 2018. These three classes included approximately 50 students. A presentation was provided on transportation planning and asking students to map how they traveled to school and to after school or weekend activities. The students mapped the routes they took, and color coded them by what mode of transportation they used. The students then discussed issues about these routes. Students were also asked "What makes a good transportation system?". They wrote these ideas down on sticky notes and placed them on a board for group discussion. These notes were also presented at the public open house in May 2018. Exhibit 2.2 shows a few of the completed maps, sticky notes, and ideas associated with what makes a good transportation system and challenges that exist today.

Exhibit 2.2 Middle School Outreach – What Makes a Good Transportation System? What Challenges Exist?



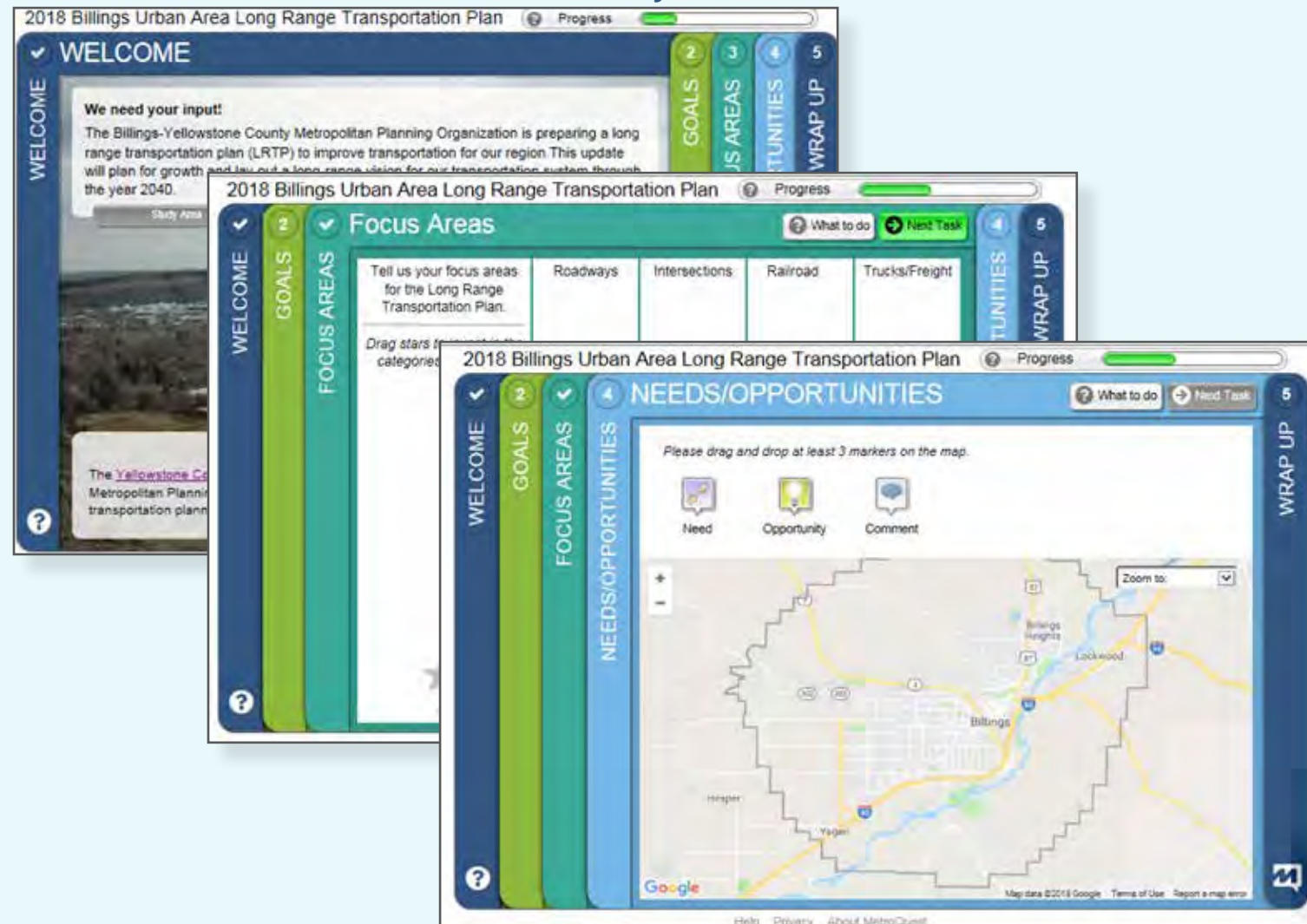
Signs
sidewalks bike
crosswalks
Stop one streets
roads
safety Less
drivers people driving
lights More
Safer Safe drunks cars
traffic ways routes ride
drains Better
Crossings potholes
services available
Good

ONLINE ENGAGEMENT

Two online outreach efforts were used during plan development to collect feedback and comments from the public.

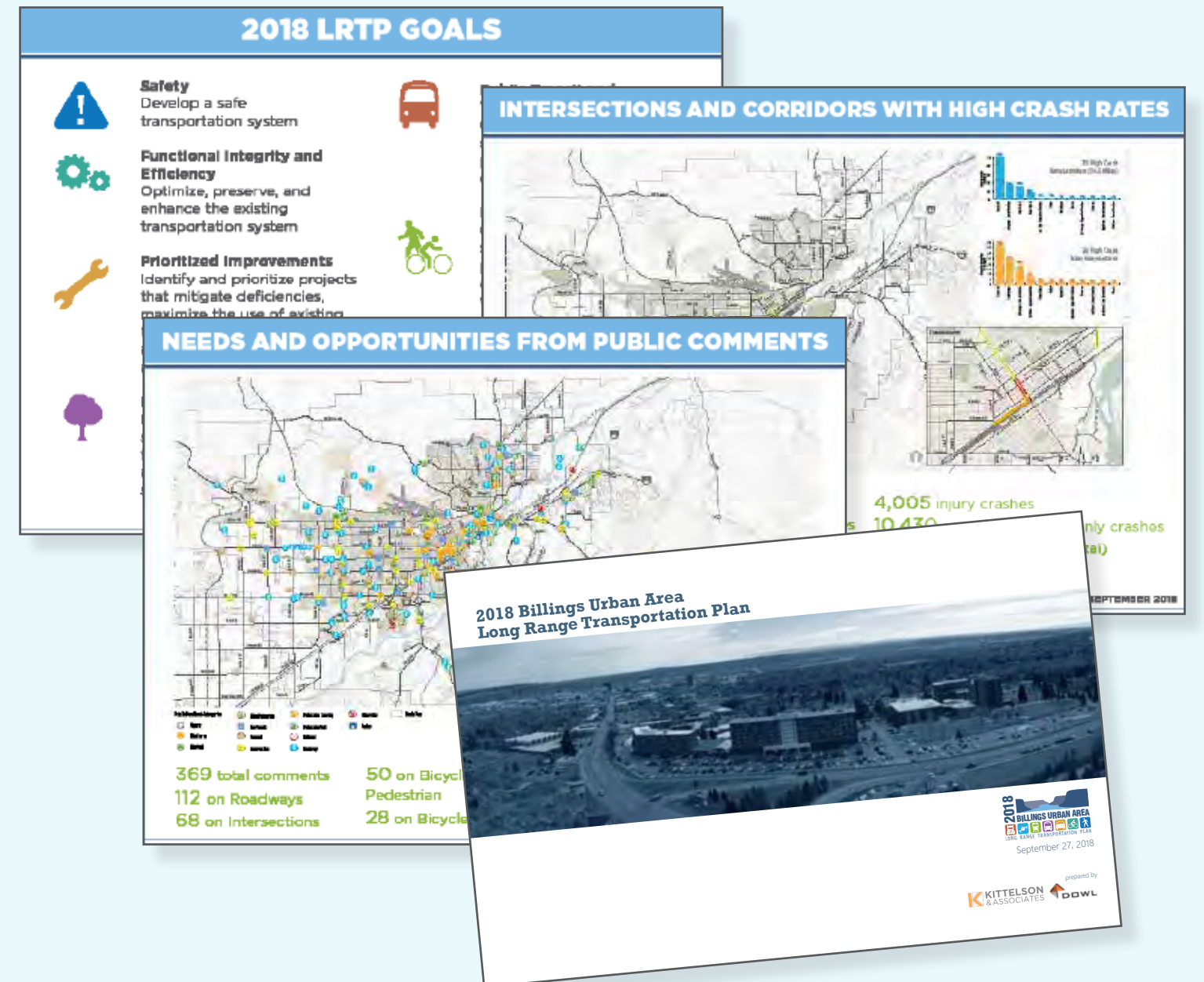
Online Outreach #1 – An online survey was developed and implemented in conjunction with the public informational meeting #1 in May 2018. This survey was developed to provide information on the LRTP, collect feedback on goals, priorities and allow users to map their comments regarding needs and deficiencies. The same questions were asked on the survey as at the public informational meeting. The online survey ran from May 14th to May 29th and had 139 participants. The site is no longer active, but the demo site can be viewed at: <https://2018BillingsLRTP-demo.metroquest.com>. Exhibit 2.3 shows the online survey #1.

Exhibit 2.3 Screenshot of Online Survey #1



Online Outreach #2 – The Public Informational Meeting #2 materials and Draft Plan of the LRTP was uploaded to the project website on September 27, 2018. This information was available for public comment through October 9, 2018. Exhibit 2.4 shows the information available for public comment between September 27, 2018 and October 9, 2018.

Exhibit 2.4 Screenshot of PIM #2 Materials and Draft LRTP



SOCIAL MEDIA

Social media content and graphics were developed and provided to the MPO to publish on their existing social media networks. This information was used to provide updates on the plan and to promote meetings and opportunities for online engagement.

STAKEHOLDER INTERVIEWS

One-on-one meetings were held with various individuals and groups who have a key interest or stake in the plan. The purpose of these meetings included: introduce the plan, identify existing transportation deficiencies and/or concerns that should be addressed with the plan, and gather input on the proposed projects included in the plan. As noted in the resource agencies section, meetings were held with the Billings Area Chamber of Commerce, Billings Emergency Services/Yellowstone County EMS, MET Transit, and Rimrock Neighborhoods Task Force.

PUBLIC INFORMATIONAL MEETINGS

Public Informational Meeting #1

The public informational meeting #1 was held on May 14th at the Billings Library from 4 PM to 7 PM. The purpose of the open house was to give the public an opportunity to learn about the plan, review technical information about the LRTP, and provide comment on the following three items:

What goals are most important to you for the plan?

What transportation need and opportunities exist today?

What you like to see for the future transportation system?

Attendees were able to review materials on the LRTP, provide mapped comments regarding needs and opportunities, and provide feedback on goals and focus areas. 25 people signed into the meeting, 32 map comments were received and three comment sheets. Exhibits 2.5, 2.6, and 2.7 show the room layout and public at PIM #1.

Exhibit 2.5 PIM #1 Display Boards

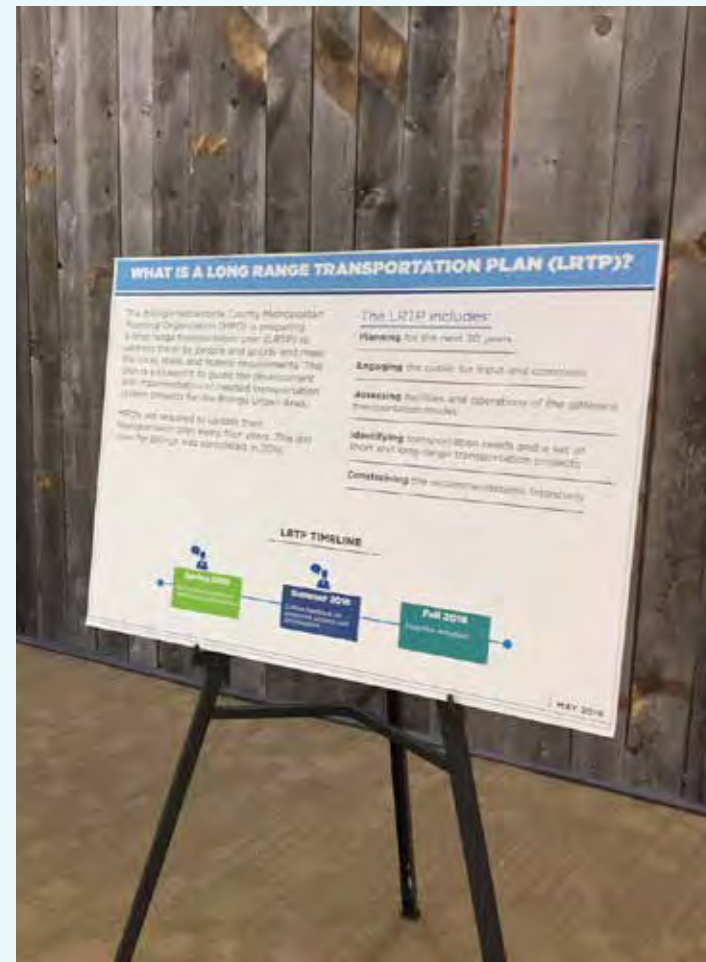


Exhibit 2.6 PIM #1 Public Using the Comment Map

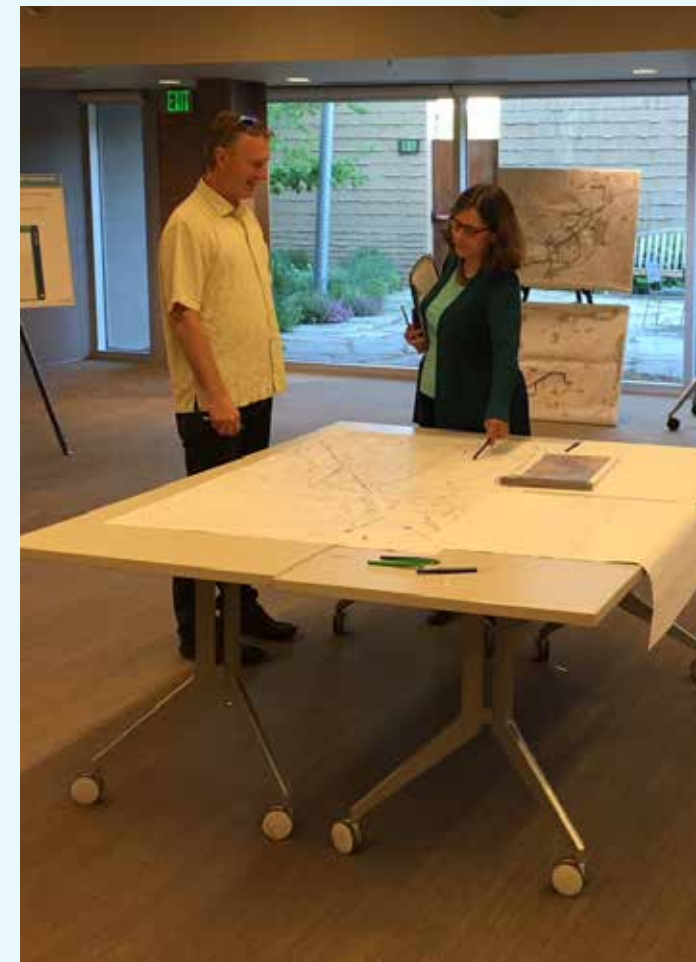


Exhibit 2.7 PIM #1 Public Discussion



Public Informational Meeting #2

The public informational meeting #2 was held on September 25, 2018 at the Billings Library from 4:30 PM to 6:30 PM. The purpose of the open house was to give the public an opportunity to learn about the plan, review draft project lists for the LRTP, and provide comment on the following three items:

Rank the project areas that you would most like to see the MPO prioritize.	Are there any projects not shown on the project maps that you would like to see added? Please explain.	Are there any projects shown on the project maps that you would like to see revised or removed? Please explain.
--	--	---

Attendees were able to review materials on the LRTP, provide feedback on the project area priorities for the MPO, and provide comments on maps for the draft project lists. 35 people signed into the meeting, 51 map comments were received and four comment sheets were turned in. Exhibits 2.8, 2.9, and 2.10 show the room layout and public at PIM #2.

Exhibit 2.8 PIM #2



Exhibit 2.9 PIM #2



Exhibit 2.10 PIM #2

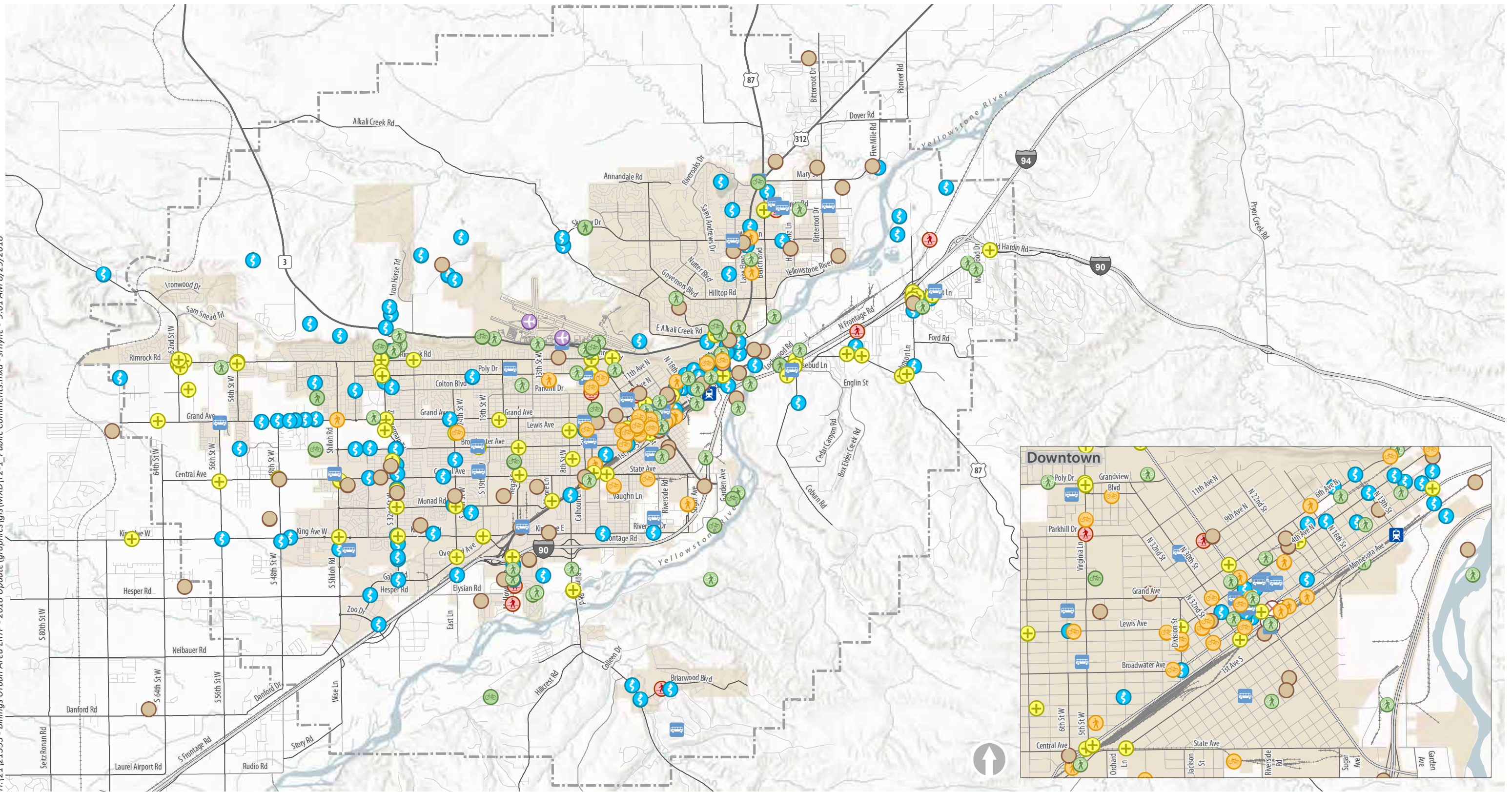


Summary of Comments from Online Survey, PIM #1 and PIM #2

Public comments from the online survey, PIM #1, and PIM #2 were summarized in this section. Table 2.1 summarizes the total comments received during the public involvement process.

Table 2.1 Total Comments Received During the Public Involvement Process

	Activity		Total
	PIM #1 (May 14th – May 29th, 2018)	PIM #2 (September 25th – October 9th, 2018)	
Comment Sheets	3	4	7
E-mail	2	1	3
Online Survey / Mapped Comments	369	51	420
Project Website	0	2	2
Total	374	58	432



- | Public Feedback Categories | | | | |
|----------------------------|-----------------|---------------------|-----------|------------|
| | | | | |
| Airport | Bike/Pedestrian | Pedestrian Crossing | Sidewalks | Study Area |
| | | | | |
| Bus Transit | General | Pedestrian Trail | Trains | |
| | | | | |
| Bike Route | Intersection | Railroad | | |
| | | | | |
| Bike Trail | | Roadway | | |

DRAFT

Figure 2-1

Needs and Opportunities from Public Comments

At PIM #1, focus areas with the most support were roadways, intersections, and bicycles followed by pedestrians, airport, and bus transit followed by railroad and truck/freight. Additionally, the public were asked to use the map to tell us about needs and opportunities with the existing transportation system in the Billings Urban Area. Figure 2-1 illustrates the needs and opportunities identified by category within the urban area at PIM #1 and via online survey #1. At PIM #2, the public were asked to use project maps by categories (bicycle and trail projects, congestion management projects, pedestrian projects, and roadway and intersection projects) to identify changes or additions to the project lists projects for consideration in the LRTP. Table 2.2 summarizes the project priorities identified by the public at PIM #2 and via online survey #2.

Table 2.2 Summary Table of Public Comments on Project Lists (September 25th, 2018)

Type	# of Comments on Existing Projects	# of New Projects Identified	# of General Comments	Total Comments	Common Themes
Bicycle and Trail Projects	8	6	5	19	<ul style="list-style-type: none"> Bike boulevards and buffered bike lanes are critical for the safety of cyclists Identified several east-west and north-south corridors as priorities Identified a few new multiuse trails Suggestions for road diets for buffered bike lanes and adding more wayfinding/signage for the multiuse trails
Congestion Management Projects	0	6	0	6	<ul style="list-style-type: none"> Install permanent traffic signal at 27th/Rimrock intersection Add right turn lanes at a few intersections
Pedestrian Projects	4	10	2	16	<ul style="list-style-type: none"> Consider remote drop/pick-up for vehicles at schools to reduce conflicts between students biking and walking Add crossings to improve food dessert/equity due to railroad tracks and arterial roadway Install additional sidewalks to fill in gaps near schools
Roadway and Intersection Projects	7	3	0	10	<ul style="list-style-type: none"> Build the Inner Belt Loop Left turn lanes are needed on Blue Creek Boulevard Reconfigure the raised median on Laurel Road to add buffered bike lane Improve the overcrossing on Zoo Drive Left turn signal is needed at Montana/27th and 1st Avenue N/27th intersections Signalize Virginia/Rimrock intersection Build the new roadway between Highway 3 and Molt Road (this roadway is needed to accommodate growth in the City)
Total	19	29	7	51	

For more information about the content and summaries from the two PIMs, Public Comment Summary #1 and #2 are included in the Appendix.

FACILITATING PLAN REVIEW AND APPROVAL

The final phase of the plan update is completion and adoption of the LRTP. Between June and September, the SC reviewed the draft chapters of the LRTP and provided comments to the consultant team for incorporating in the final draft plan. In September, the draft LRTP was presented to the SC and public for review and comment. Additionally, the Technical Advisory Committee (TAC) met in October 2018 to review the draft plan, provide comments on the draft plan, and recommend approval of the LRTP to the Planning Board, Billings City Council, Yellowstone County Commissioners, and the PCC. The draft plan was also available to the public for review and comment from September 25th to October 30th 2018. Much like the development of the plan, continued awareness and review of the draft plan are important steps toward plan adoption. In October, the draft plan was presented to the Planning Board, Commission, and City Council. Following these meetings and work sessions, a public hearing was scheduled with each body to hear public comments and a recommendation for plan adoption. The plan was presented and adopted unanimously by the PCC on October 30, 2018. The consultant team assisted the MPO throughout the adoption process by providing materials for review and attending some of the meetings in-person or over the phone to present information on the LRTP and address questions that came up during the meetings.



Chapter 3

Goals, Objectives, Performance Measures, and Targets



GOALS, OBJECTIVES, PERFORMANCE MEASURES, AND TARGETS

This chapter describes the goals, objectives, performance measures, and targets that will be used to measure the Billings urban area's success in establishing a transportation system that 1) aligns with national and state standards and 2) fulfills community desires and needs. The establishment of these goals fosters accountability, encourages measurement of progress, and creates actionable steps for the MPO to take to improve transportation in the Billings urban area. Federal and state targets to which the Billings urban area plans to adhere to are presented first in this chapter. Goals, objectives, and performance measures specific to the Billings urban area and created by the MPO are presented second. Together, these metrics ensure that the Billings urban area establishes a transportation system that both meets federal and state criteria and reflects the unique needs and desires of the community it serves.

FEDERAL AND STATE TARGETS

The FAST Act aligns with federal code of regulations 23.450.306, which states that MPOs shall develop long-range transportation plans through a performance-driven, outcome-based approach to planning for metropolitan areas of the State. It also states that this planning process should address the ten planning factors listed below. These factors were first introduced through the MAP-21 Act and were expanded upon by the FAST Act.

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

Three Federal-aid programs manage the funds apportioned through the FAST Act: the Highway Safety Improvement Program (HSIP), the National Highway Performance Program (NHPP), and the Congestion Mitigation and Air Quality (CMAQ) Improvement Program. Each of these, and the Federal Transit Administration (FTA), prescribe targets to assess performance of the transportation system. MDT has implemented these national targets with exceptions made based on Montana's urban population sizes and lack of public transportation rail assets.

ADOPTED STATEWIDE TARGETS

Adopted statewide targets are summarized in Tables 3.1, 3.2, 3.3, and 3.4. The MPO has formally agreed to support the statewide targets.

Table 3.1 Safety Performance Targets*

Performance Measure	2019 Target 5-Year Average
Number of Fatalities	187.4
Fatality Rate	1.462
Number of Serious Injuries	892.8
Serious Injury Rate	6.968
Number of combined non-motorized fatalities and non-motorized serious injuries	73.2

* Safety performance targets are statewide totals or rates for 2018. Targets are based on a rolling 5-year average and determined annually.

Table 3.2 NHS Pavement and Bridge Condition Targets

Performance Measure	2-Year Target	4-Year Target
Interstate Pavement	-	54% = Good Condition 3% = Poor Condition
Non-Interstate NHS Pavement	44% = Good Condition 6% = Poor Condition	44% = Good Condition 6% = Poor Condition
NHS Bridge Deck Area	12% = Good Condition 9% = Poor Condition	12% = Good Condition 9% = Poor Condition

Table 3.3 System Performance and Freight Targets

Category	2-Year Targets	4-Year Targets
Interstate Travel Time Reliability (TTR) (% Reliable – person miles)	98%	98%
Non-Interstate NHS TTR (% Reliable – person miles)	-	80%
Interstate Truck TTR (TTTR) (Truck Travel Time Reliability Index)	1.30	1.30

Table 3.4 CMAQ On-Road Emissions Sources Targets

Category	2-Year and 4-Year Targets*
CO Emissions	>0 kg/day
PM10 Emissions	
PM2.5 Emissions	

Transit Targets

FTA requires federally-funded public transportation providers to develop and implement transit asset management plans (TAMPs) with asset inventories, condition assessments of inventoried assets, and a prioritized list of investments to improve the state of good repair of their capital assets. The final rule (effective as of October 1, 2016) also established “state of good repair” (SGR) standards and four associated performance measures including:

- The percentage of non-revenue, support-service, and maintenance vehicles that have either met or exceeded their useful life benchmark (ULB);
- The percentage of rolling stock vehicles that have either met or exceeded their ULB;
- The percentage of track segments with performance restrictions for rail fixed guideway, track, signals, and systems; and
- The percentage of facilities rated below condition 3 on the Transit Economic Requirements Model (TERM) scale.

MET Transit completed a Transit Asset Management (TAM) Plan in 2019. This plan includes a summary of the current state of MET Transit assets and is intended to be used as a tool supporting state of good repair (3-1). The performance targets and measures set by the MET Transit Fiscal Year 2019 Transit Asset Management Plan are shown in Table 3.5.

Table 3.5 Transit Targets

Asset Category – Performance Measures	Asset Class	Targets				
		2019	2020	2021	2022	2023
Revenue Vehicles						
Age - % of revenue vehicles within a particular asset class that have met or exceeded their Useful Life Benchmark	BU – Bus	47%	42%	37%	32%	26%
	CU – Cutaway Bus	17%	17%	17%	17%	17%
	VN – Van	6%	14%	14%	14%	14%
Equipment						
Age - % of vehicles that have met or exceeded their useful life benchmark (ULB)	Non-Revenue/ Service Automobile	66%	66%	66%	66%	66%
	Trucks and other Rubber Tire Vehicles	75%	75%	75%	75%	75%
	Facility Maintenance Vehicle	75%	75%	75%	75%	75%
Facilities						
Condition - % of facilities with a condition rating below 3.0 on the FTA Transit Economic Requirements Model (TERM) Scale	Passenger Facilities	33%	33%	33%	33%	33%
	Administration and Maintenance	33%	33%	33%	33%	33%

L RTP GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

In addition to the federal and state targets listed above, the MPO created the following goals, objectives, and performance measures tailored specifically to the Billings urban area. Many of the goals established by the MPO are similar to the federal and state targets listed above. Both focus on a long-term vision for a safe, efficient, and sustainable transportation system, but the MPO's goals reflect feedback gathered by the Billings community, as well as align with other adopted plans within the Billings urban area. These goals are intended to more closely align with community desires and needs. Table 3.6 summarizes the 2018 LRTP goals, objectives and performance measures. Table 3.7 shows how the adopted state targets intersect with the LRTP goals established by the MPO.

Goals

Intended downstream outcomes of accomplishing the proposed objectives

Objectives

Trackable action items that align with the goals

Performance Measures

Type of data to be collected to track the objectives.

The 2018 LRTP goals are:

Safety – Develop a safe transportation system

Functional Integrity and Efficiency – Optimize, preserve, and enhance the existing transportation system

Prioritized Improvements – Identify and prioritize projects that mitigate deficiencies, maximize the use of existing facilities, and balance anticipated needs with available funding

Environment – Develop a transportation system that protects the natural environment and promotes a healthy, sustainable community

Public Transit and Transportation – Create a transportation system that supports the practical and efficient use of transit

Pedestrians and Bicyclists – Create a transportation system that supports the practical and efficient use of active transportation such as walking and bicycling

Economic Vitality – Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce.

Table 3.6 LRTP Goals, Objectives, and Performance Measures

2018 LRTP Goal	Objective	Performance Measure(s)	Data Source	Related Federal Planning Factors	Supportive Plan / Policy
Safety	Reduce the rolling five-year average number of fatal and serious injury crashes by 20% between 2018 and 2023.	Fatal and serious injury crashes	MDT / City of Billings	1, 2, 3, 4, 6, 7, 8, 9, 10	Billings Community Transportation Safety Plan
	Reduce the rolling five-year average rate of fatal crashes and serious injury crashes per 100 million vehicle miles travelled by 20% between 2018 and 2023.	Fatal and serious injury crashes; vehicle miles travelled	MDT / City of Billings		
	Reduce the rolling five-year average number of fatal crashes and serious injury crashes involving non-motorized modes by 20% between 2018 and 2023.	Non-motorized fatal and serious injury crashes	MDT / City of Billings		
Functional Integrity and Efficiency	Develop an inventory of critical infrastructure. Update the regional emergency response plan at least once by 2023.	Critical infrastructure inventory and regional emergency response plan.	City of Billings / Yellowstone County	1, 3, 4, 6, 7, 8, 9, 10	Functional Classification Map Various Corridor and Intersection Studies Emergency Operations Plan Multi-Jurisdictional Pre-Disaster Mitigation Plan Update
	Reduce the number of intersections identified as operating at LOS E or worse during the peak hour in the 2018 LRTP by 10% between 2018 and year 2023.	Intersection level of service (LOS)	City of Billings / Yellowstone County		
	Reduce weekday peak hour vehicular and freight travel time on selected principal arterial corridors by 5% between year 2018 and 2023.	Weekday peak hour travel time	City of Billings/Yellowstone County		
Prioritized Improvements	Create an annual prioritized list of fiscally constrained projects.	List creation	City of Billings / Yellowstone County	7, 8	Transportation Improvement Program (TIP) Capital Improvement Plan (CIP) Unified Planning Work Plan (UPWP)
Environment	Develop and codify a stormwater management ordinance for the Billings urban area that establishes minimum stormwater management requirements and controls for major developments by year 2023.	Ordinance development and codification	City of Billings / Yellowstone County	5, 9	2017 Comprehensive Parks & Recreation Master Plan 2016 Billings Growth Policy 2016 Lockwood Growth Policy
Public Transit and Transportation	Maintain annual transit ridership each year from 2018 to 2023.	Total annual ridership	MET Transit	2, 3, 4, 6, 10	MET Business Plan MET Transit Asset Management Plan
	Maintain 2018 number of routes, hours of service of each route, and headways on each route for the next 5 years.	Number of routes, hours of service, headways	MET Transit		
	Maintain 2018 rate of replacement of buses for next 5 years.	Number of buses replaced	MET Transit		
Pedestrians and Bicyclists	Increase number of bicycle lane miles by 10% between year 2018 and 2023.	Number of bicycle lane miles	City of Billings / Yellowstone County	2, 3, 4, 6, 10	City of Billings Complete Streets Policy – 2016 Billings Area Bikeway and Trails Master Plan Update Lockwood Non-Motorized Transportation Plan Rims to Valley Study Highway 3 Corridor Study
	Increase number of shared-use trail miles by 10% between 2018 and 2023.	Number of trail miles	City of Billings / Yellowstone County		
	Incorporate bicycle or pedestrian facilities on 75% of projects between 2018 and 2023. City of Billings / Yellowstone County	Number of projects with bicycle or pedestrian facilities incorporated			
	Increase bicycle and pedestrian traffic counts at selected trails and intersections by 10% between 2018 and 2023.	Number of bicyclists, number of pedestrians	City of Billings / Yellowstone County		
Economic Vitality	None – based on objectives shown for Functional Integrity and Prioritized Improvement Goals			1, 5, 10	None



Table 3.7 Statewide Targets and LRTP Goals

			Billings Urban Area LRTP Goals						
			Safety	Functional Integrity and Efficiency	Prioritized Improvements	Environment	Public Transit and Transportation	Pedestrians and Bicyclists	Economic Vitality
Statewide Targets	Pavement and Bridge Condition	Percentage of pavements on the Interstate System in Good condition		✓	✓				
		Percentage of pavements on the Interstate System in Poor condition		✓	✓				
		Percentage of pavements on the NHS (excluding the Interstate System) in good condition		✓	✓				
		Percentage of pavements on the NHS (excluding the Interstate System) in poor condition		✓	✓				
		Percentage of NHS bridges classified as in Good condition		✓	✓				
		Percentage of NHS bridges classified as in Poor condition		✓	✓				
	Safety Performance	Number of fatalities	✓						
		Rate of fatalities per vehicles miles traveled (VMT)	✓						
		Number of serious injuries	✓						
		Rate of serious injuries per VMT	✓						
		Number of combined non-motorized fatalities and non-motorized serious injuries	✓					✓	
	System Performance/Freight Movement/Congestion/CMAQ	Percent of reliable person-miles traveled on the Interstate		✓					✓
		Percent of reliable person-miles traveled on the non-Interstate NHS		✓					✓
		Percentage of Interstate system mileage providing for reliable truck travel time (Truck Travel Time Reliability Index)		✓					✓
		Total emissions reductions for applicable pollutants				✓			
	Transit Asset Management	Percentage of non-revenue, support-service and maintenance vehicles that have either met or exceeded their useful life benchmark (ULB)			✓		✓		
		Percentage of rolling stock vehicles that have either met or exceeded their ULB			✓		✓		
		Percentage of facilities rated below condition 3 on the Transit Economic Requirements Model (TERM) scale			✓		✓		

REPORTING PROGRESS TOWARDS ACHIEVING PERFORMANCE TARGETS

The MPO will incorporate adopted statewide targets and MPO goals, objectives, and performance measures into the LRTP and discuss how the targets will be advanced and linked to investment priorities. The MPO will coordinate with MDT to obtain routinely collected data from the agency about the condition of roadway pavement and bridges, safety performance, and the overall operation of the transportation system within the Billings urban area. The information will help the MPO identify and advance projects in the LRTP which support adopted statewide targets and MPO goals, objectives and performance measures at the statewide and local level.



Chapter 4

Land Use



LAND USE

This chapter summarizes the land use patterns under existing and future year 2040 forecast conditions in the study area. Knowing the locations of both existing (2017) and future 2040 population and employment patterns is critical for development of the base year 2017 and 2040 travel demand model.

The Billings urban area lies at the western edge of the northern High Plains. It serves as a central hub for a large region comprised of Montana, northern Wyoming, and the western Dakota's. Due to its location, Billings has developed as an important economic, cultural, educational, medical, and transportation urban center for the entire region. A critical part to developing a long-range transportation plan is understanding the current land use patterns and opportunities envisioned for growth. Through this understanding, the transportation system and land use vision can be integrated to effectively match future infrastructure and system management projects with the desires of the community.

Recent city-wide studies/plans were reviewed to gain an understanding of the existing and future land use patterns and policies that guide the community, including:

- Billings Urban-Area Long Range Transportation Plan (2014)
- West End Multimodal Planning Study (2016)
- City of Billings Growth Policy (2016)
- Lockwood Growth Policy (2016)
- Lockwood Targeted Economic Development District Comprehensive Development Plan (2016)
- Lockwood TEDD Strategic Plan (2017)
- Billings-Yellowstone County Household Travel Survey (2017)
- Downtown Billings Alliance Strategic Plan (2018)

The Billings urban area is expected to increase from a population of 127,056 to approximately 169,767 by 2040. Having an interconnected, multimodal transportation system is an important part to providing for this growth and creating a livable community.



LAND USE ANALYSIS

A key component of the land use analysis is incorporating the existing and future population/employment data in the regional travel demand model to develop traffic volume projections.

The Billings MPO travel demand model is developed with transportation analysis zones (TAZs) that represent geographic groupings of population and employment. An individual TAZ is intended to group land uses that have common access to the transportation system (for example, a group of houses that all use local streets to access the same blocks of two collector streets). Physical barriers (such as hillsides, rivers, freeways or railroad tracks) are typical borders because traffic cannot traverse these without the roadway network. TAZs are typically bordered by major roadways (e.g. arterials and collectors) because it is assumed that traffic does not pass through them, but either starts or ends a trip there. TAZs often have uniform (or relatively similar) land use where trips are attracted and produced, but this is not a requirement. For the Billings travel demand model, the TAZs were based on census blocks defined by the 2010 United States Census. A portion of the census blocks were then aggregated or split as appropriate to best represent the access for individual land uses. Figure 4-1 shows the TAZs used for the analysis.

The existing population and employment data was derived from the 2010 United States Census and other records to identify the 2017 population and employment total. In order to anticipate projections in population and employment to year 2040, coordination with the MPO was conducted to illustrate growth in the region beyond simple historical projections. Local knowledge from the MPO was utilized to anticipate where growth in population and employment would increase or stagnate. The refined year 2040 population and employment dataset was then incorporated into the regional travel demand model to develop traffic volume forecasts.

EXISTING CHARACTERISTICS AND DEMOGRAPHICS

The Billings urban area currently encompasses approximately 151.2 square miles and includes all of the City of Billings (44.9 square miles) and Lockwood, as well as a planning area extending 4.5 miles outside of the city limits and into Yellowstone



County. Figure 4-2 shows the existing zoning map and key destinations within the study area. The primary drivers of transportation demand and regional travel patterns are the scale and geographic distribution of population and employment. The relationships between land-use development and the effects on generating travel demand are well-defined. Established land uses in the urban area have influenced the travel patterns that exist today. Understanding the relationship between the distribution of population/housing and employment (and the resulting regional travel patterns) is key to projecting future transportation demand. Therefore, a review of existing land use conditions is necessary to understand how the traffic network is affected by the components of where people live and where people work and/or shop.

POPULATION, HOUSING, AND EMPLOYMENT

Yellowstone County has the highest population of any county in Montana with a reported 2010 population of 147,972 persons (US 2010 Census). Billings remains the largest city in Montana with a 2010 population of 104,170. This is an increase of 15.9 percent (addition of 14,323 persons) over the 2000 population.

Figures 4-3 and 4-4 show the 2017 population and housing concentrations, respectively in the study area. The 2017 total population is 127,056 in the study area. The 2017 total housing units is 55,464 in the study area.

Employment is typically broken up into two primary components: retail and non-retail employment. These uses are differentiated because they typically exhibit different travel patterns in terms of mode choice, the time-of-day trips utilize the network, etc. Table 4.1 summarizes the 2017 employment within the study area. Figure 4-5 shows the current geographic concentrations of employment centers in the study area.

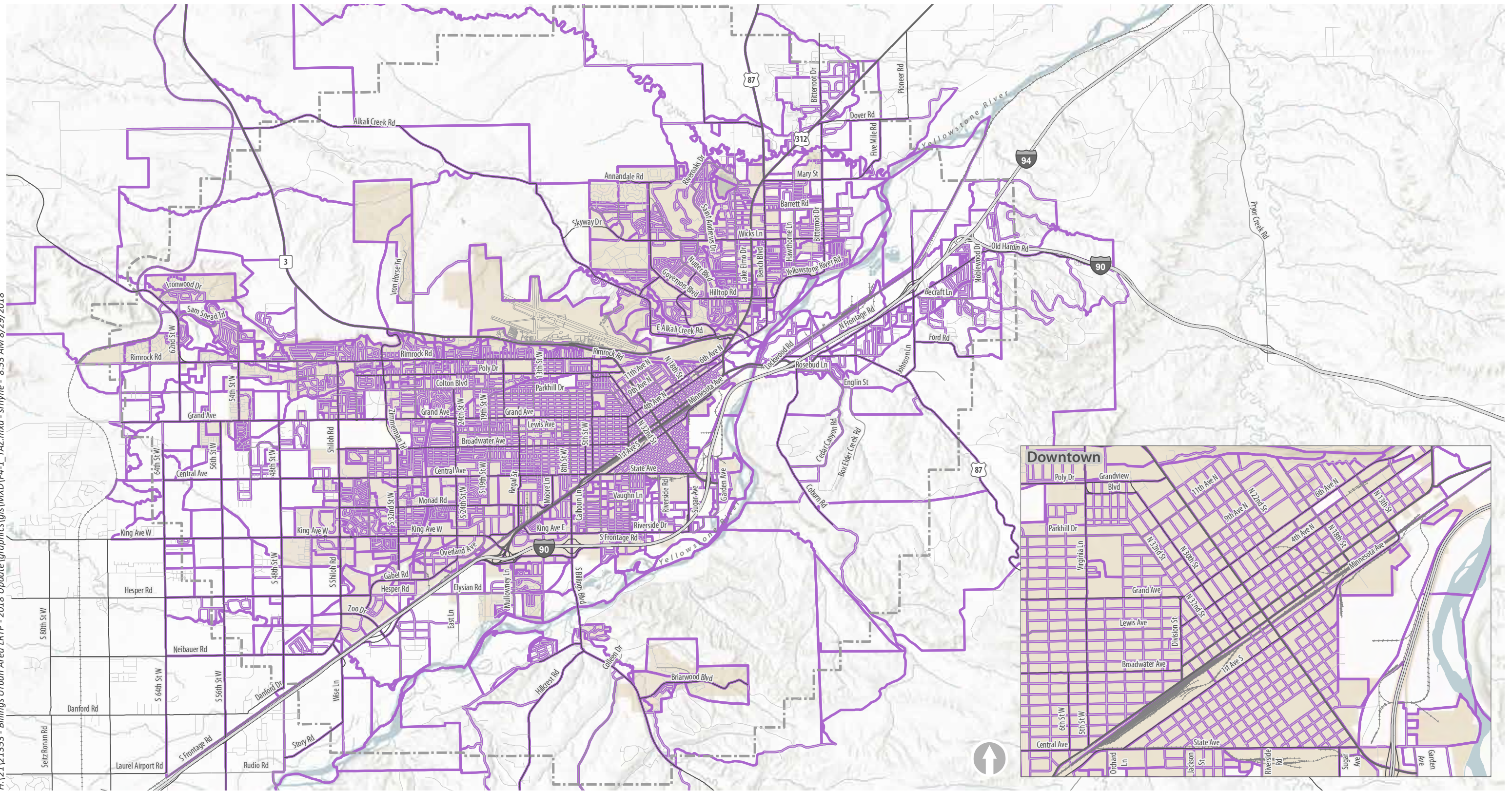
Table 4.1 2017 Billings Urban Area Employment

Zoned Land Use	Percent of Total
Retail	21,739
Non-retail	55,900
TOTAL	77,639

Source: City/County Planning Division

Figure 4-5 shows employment concentrations are greatest around the major employment centers including Billings Airport, Downtown Billings, Saint Vincent and Billings Clinic Hospitals, Rimrock Mall, and industrial facilities to the south of the Exit 446 Interchange on Interstate 90.

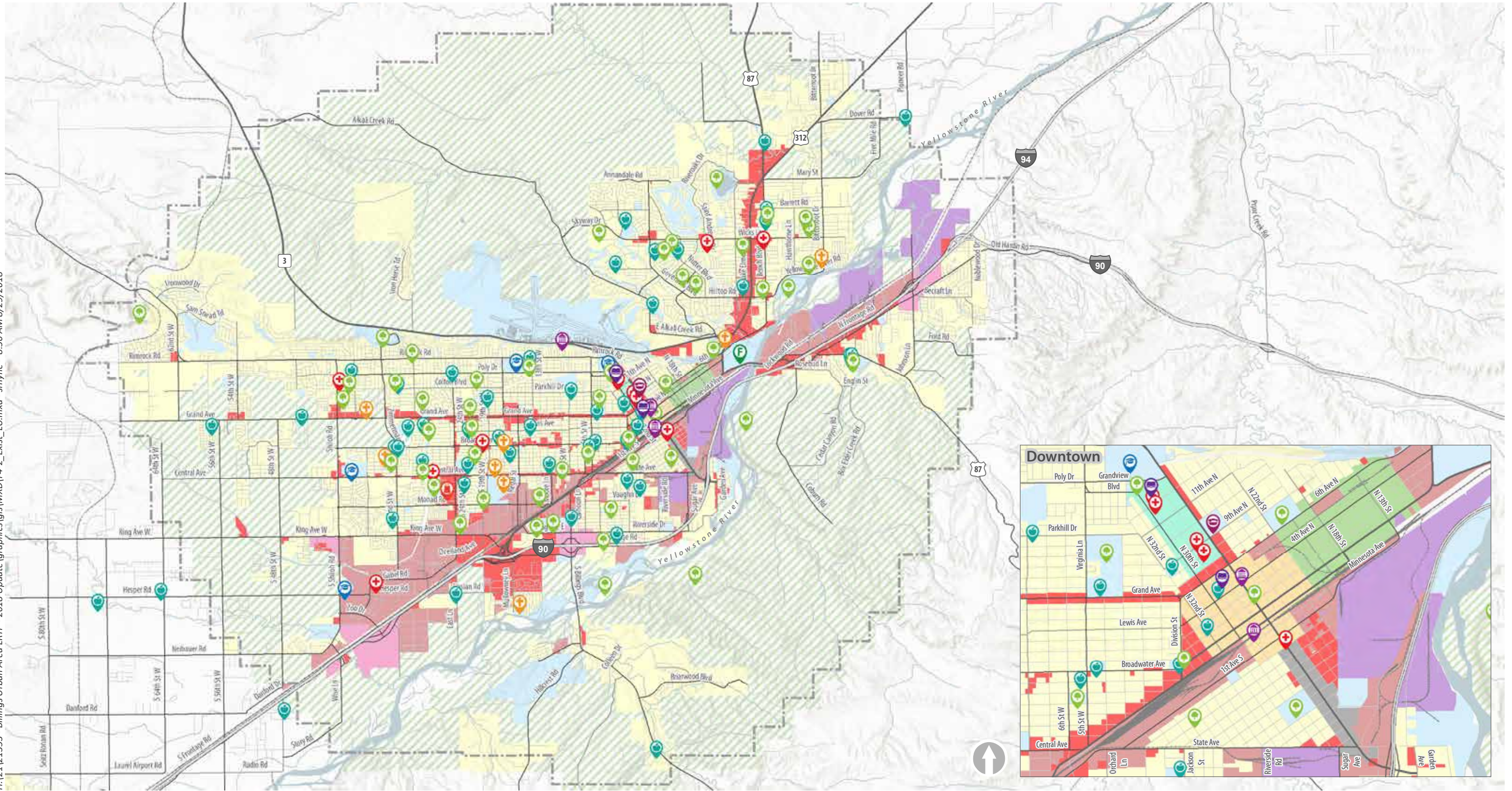
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Traffic Analysis Zone
 Study Area

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Figure 4-1
TAZ Boundaries

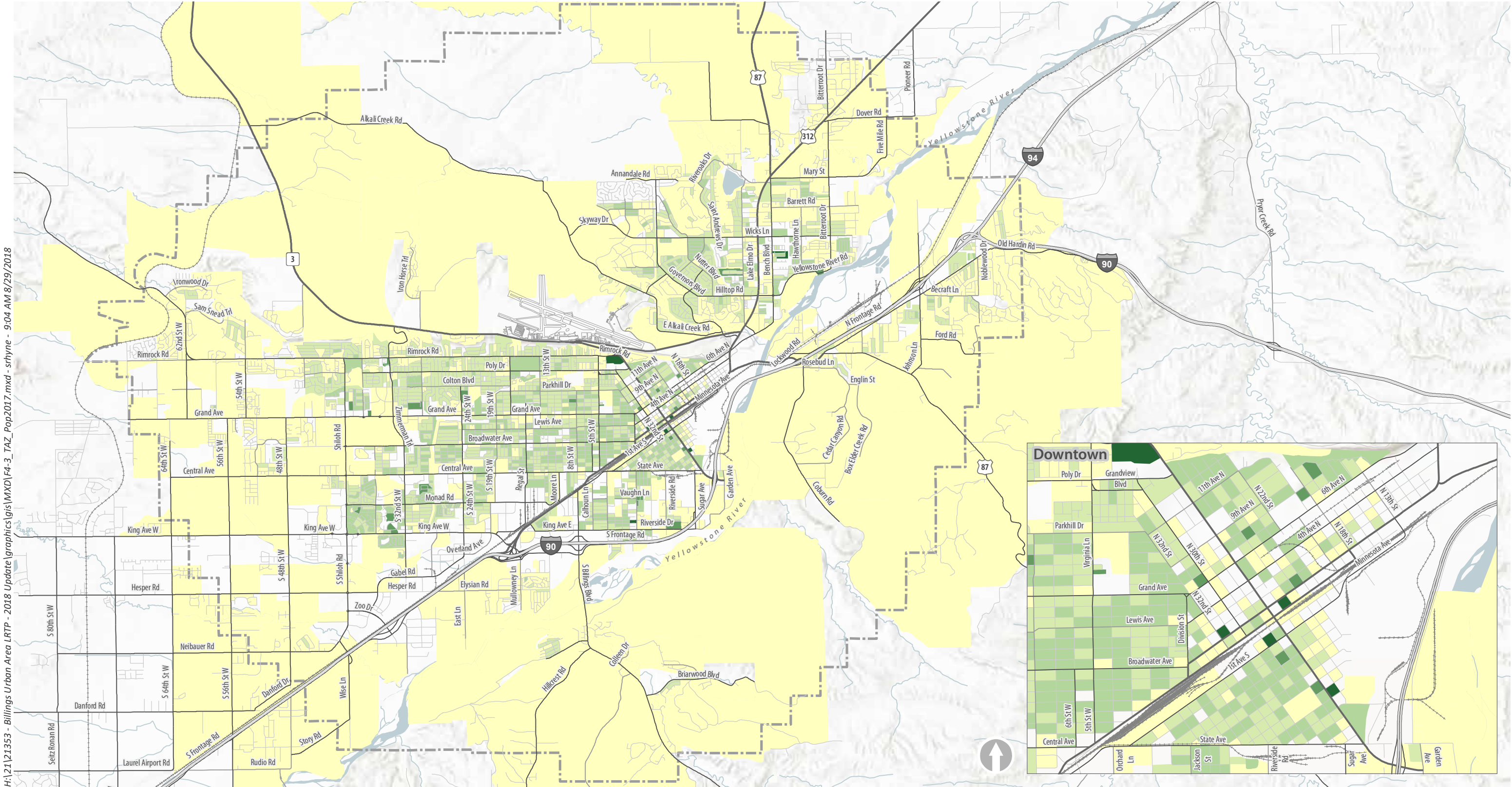


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|---------|---------------|---------|-------------|----------|-----------------------|---------------------------|------------------|-------------------------------------|------------|
| College | Shopping Mall | Stadium | Fairgrounds | Cemetery | Residential | Central Business District | Light Industrial | Entryway | Study Area |
| Schools | Museum | Library | Park | Hospital | Commercial | Medical Corridor Permit | Heavy Industrial | South 27th Street Corridor | |
| | | | | | Commercial/Industrial | Public | Agricultural | East Billing Urban Renewal District | |

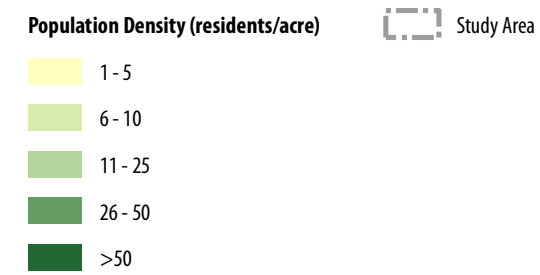
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Figure 4-2
Existing Zoning Map

2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN

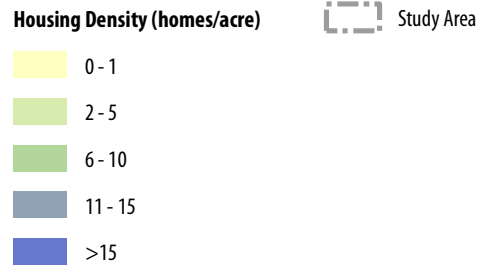
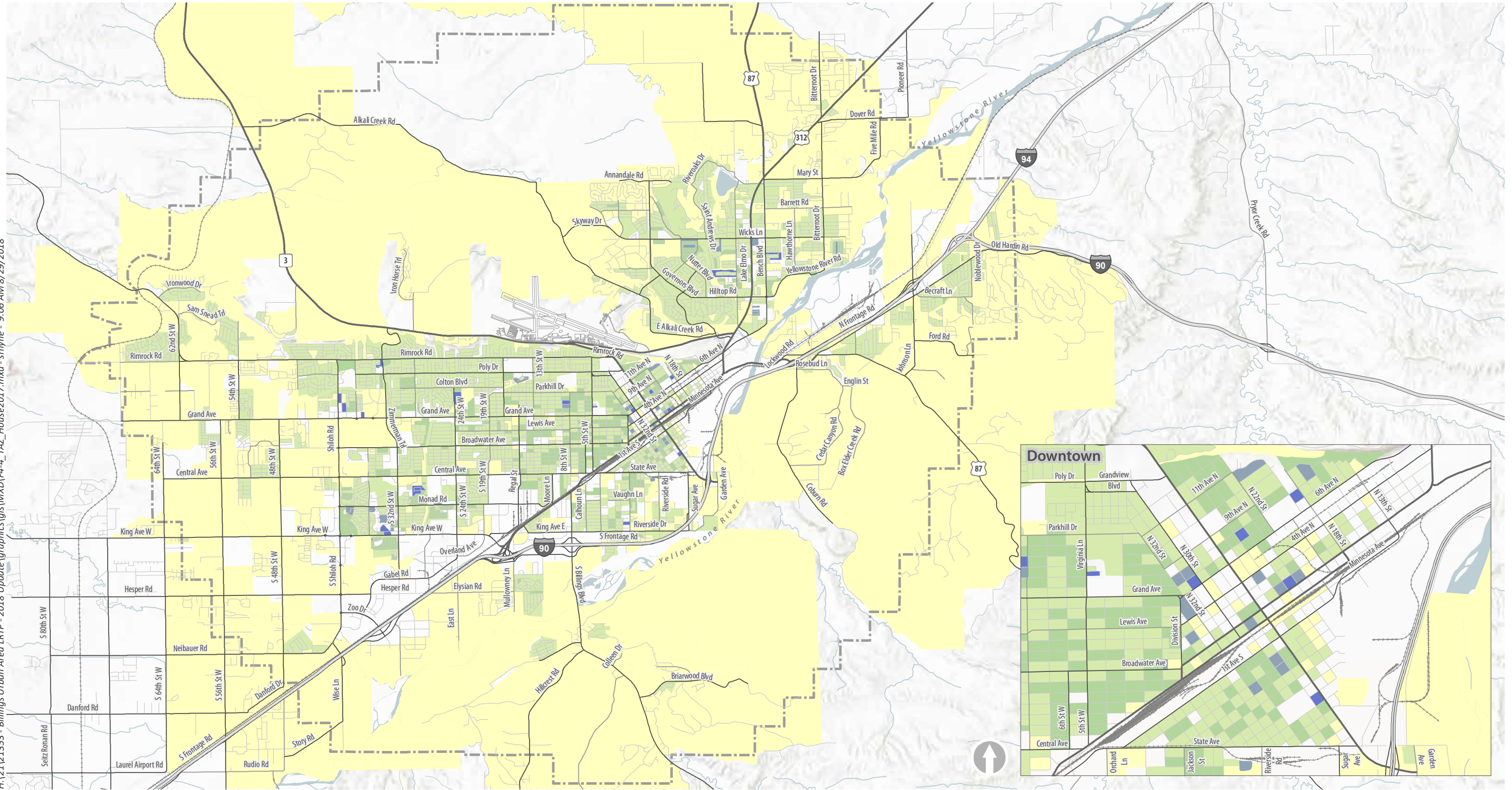


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Figure 4-3
2017 Population

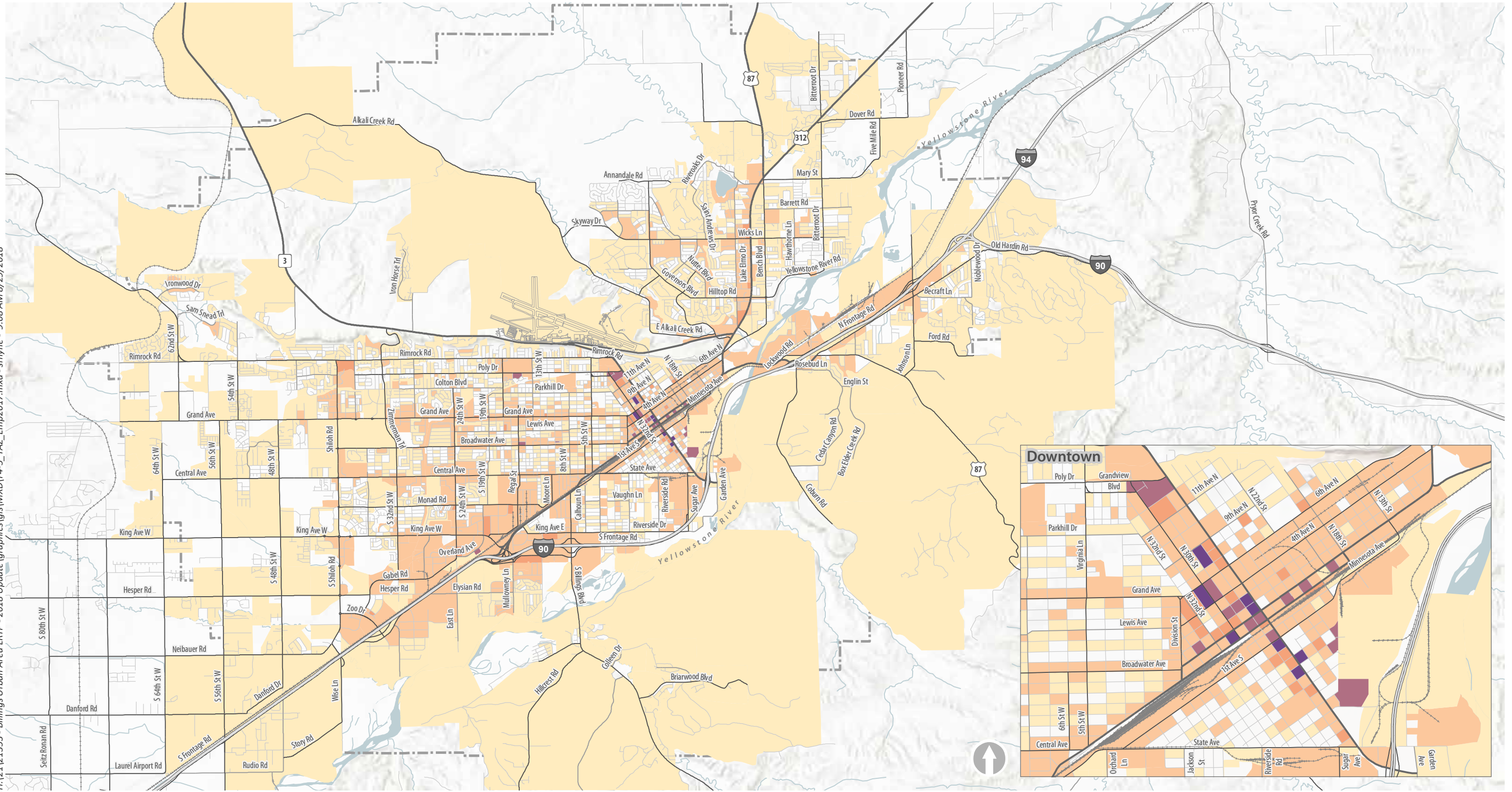


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Figure 4-4
2017 Housing

2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN

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Employment Density (jobs/acre)

Study Area

- 0 - 1
- 2 - 25
- 26 - 50
- 51 - 100
- >100

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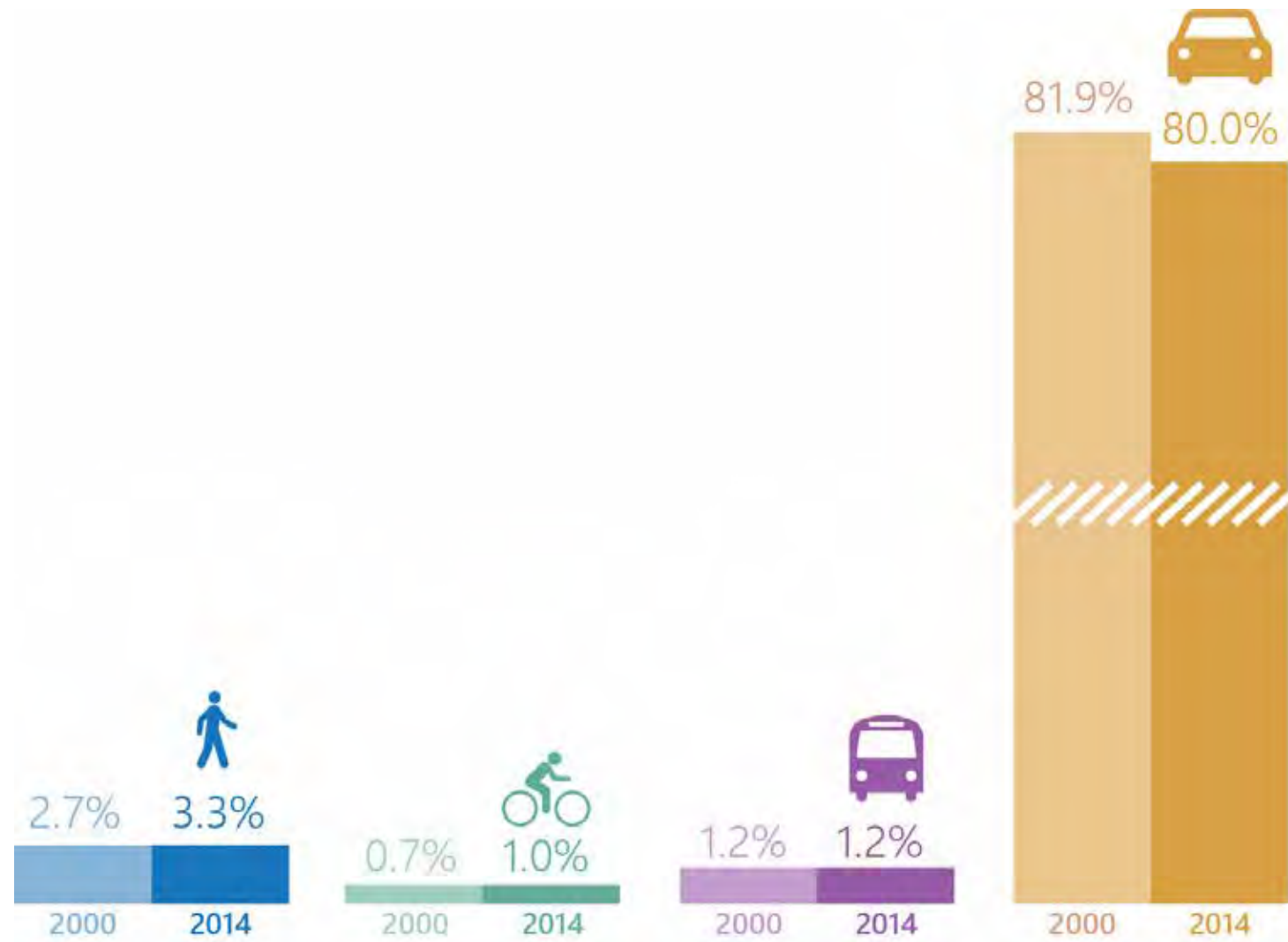
Figure 4-5
2017 Employment

TRAVEL PATTERNS

American Community Survey

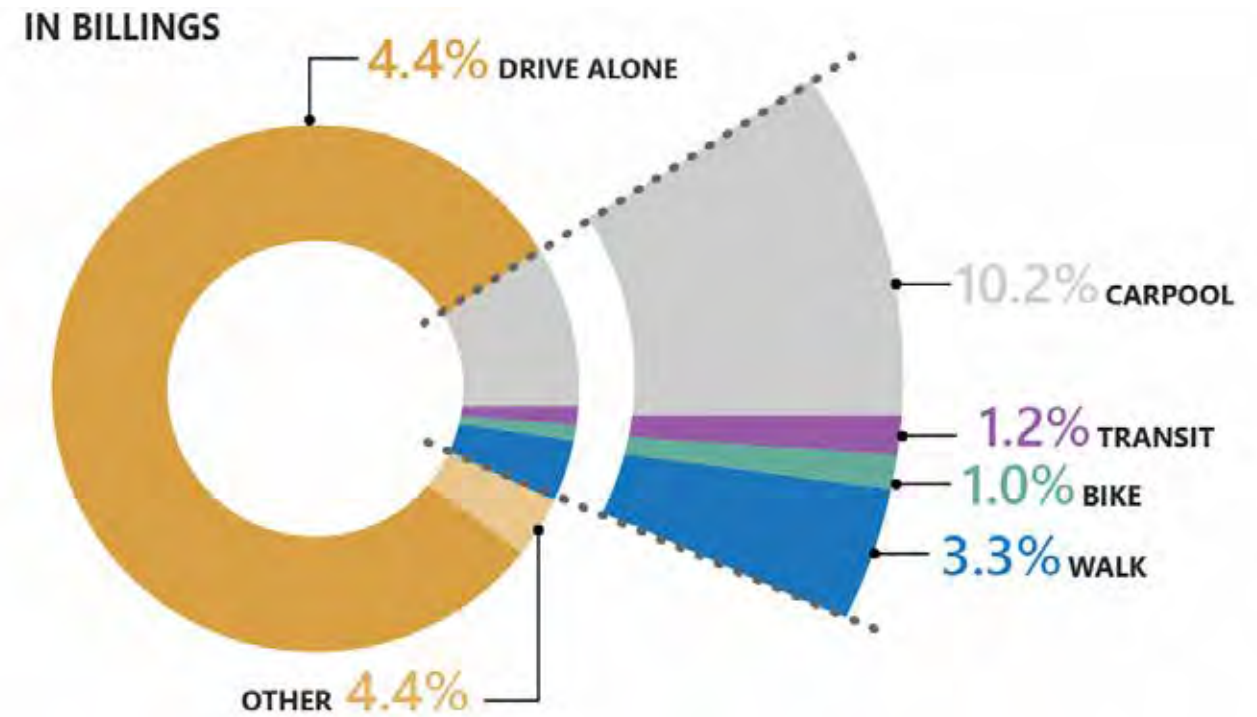
Data was summarized based on travel characteristics captured in the 2000 and 2010-2014 American Community Survey (ACS, 4-1) and presented in the recently completed Billings Area Bikeway and Trails Master Plan Update (4-2). Exhibit 4.1 illustrates the 2000 to 2014 mode share comparison for commute to work mode in the City of Billings. Exhibit 4.2 illustrates the 2014 mode share (commute to work trips) in the City of Billings.

Exhibit 4.1 2000 to 2014 Mode Share Comparison Commute to Work Mode (City of Billings)



Source: Census 2000 Summary File, 2010-2014 ACS

Exhibit 4.2 2014 Commute Mode Share (City of Billings)



Source: 2010-2014 ACS Data

Work trips comprise the majority of peak period travel, which has the highest impact on the transportation system. As shown, the predominant motorized mode is the single occupant vehicle, which is similar to other North American cities. Walking is the predominant non-motorized mode. Both walking and bicycling increased its' mode share since 2000 from a mode share percentage of 2.7% to 3.3% and 0.7% to 1.0%, respectively, which are both higher than the national average but lower than the cities of Bozeman, Helena, and Missoula in MT. A significant percent of work trips in the city (approximately 10.2 percent), are made by carpool, which is similar to the national average. In the Billings Area Bikeway and Trails Master Plan Update, travel time to work was summarized in detail. It was identified that the closer one lives to downtown Billings, the shorter their commute time is. The median trip length for the majority of the City of Billings ranges from less than 12 minutes to 17 minutes. There are a significant number of work trips made that are less than 15 minutes, which are trips that could be completed via a bicycle within a similar frame, especially when the time it takes to park a vehicle and access the final destination is included in the travel time calculation.

Yellowstone County Household Survey

The 2017 Billings / Yellowstone County Household Travel Survey (HTS, 4-3) was sponsored by the MPO with support from MDT. The 2017 survey was undertaken with the purpose of understanding the demographics and travel behavior of residents of Billings and Yellowstone County. Below is a summary of selected characteristics from the HTS results, as reported in the HTS:

- 1,066 households with completed surveys (about 1.7 percent of Yellowstone County)
- A typical surveyed household in the region makes 7.9 trips a day and a typical person makes 3.86 trips per day.
 - After applying weights, the average number of household trips rises to 8.6 per day and the average person trip rate falls to 3.75.
- The majority of trips made (89.7 percent) in the region are as the driver or passenger of an automobile, van or truck.
- Non-motorized trips (biking or walking) account for 6.9 percent of the total.
- Trips made using a private vehicle take 15.6 minutes and covered 5.7 miles on average compared to transit trips which take 23.4 minutes and covered 2.8 miles.
- Work trips take an average of 16 minutes in the region.
- The average distance traveled was 5.3 miles.
- Work trips account for 13.7 percent of all trips made in the region.
- Trips not categorized as work, school, shopping, or recreational account for 22.5 percent of all trips made (these include escorting minors, and non-mandatory errands and maintenance activities).

Data and results from the HTS were used in development of the travel demand model for Billings urban area.

FORECAST DEMOGRAPHICS

Using historical growth patterns and discussions with the MPO and SC, future population/housing and employment concentrations were developed for the horizon year 2040 to help determine where future travel demand occurs on the roadway network.

HISTORICAL AND FUTURE GROWTH

New residents are attracted to Billings by its quality of life, economic and recreational opportunities, and small town atmosphere with the amenities of a large urban center. The population projections for the Billings urban area from 2017 to 2040 are anticipated to increase by 42,712 persons, for an average increase of 1,857 persons per year.

As depicted in Figures 4-3 and 4-4, the strongest concentrations of population and housing are in the “Heights” area and to the west of downtown Billings. Smaller pockets of dense population in the central portion of the MPO along Rimrock Road represent the student population at Montana State University Billings and Rocky Mountain College. Aside from the Heights neighborhoods in the north of the city, population and housing is relatively spread out across the metropolitan area. Typically, this distribution of population/housing tends to generate more vehicle-based trips because of the longer trips distances that result and the relative cost ineffectiveness of providing transit to residential areas with low population density.

POPULATION AND HOUSING PROJECTIONS

In 2017, the Billings urban area population was approximately 127,056 persons residing in 55,464 dwelling units. By 2040, the population is expected to grow to approximately 169,768 persons in 73,656 dwelling units. The growth in population and housing between 2010 and 2040 within the Billings urban area is summarized in Table 4.3.

Table 4.3 Billings Urban Area Population and Housing 2017-2040

Demographic	2017	2040	Change	Percent Change
Population	127,056	169,767	42,711	+33.6%
Housing (Dwelling Units)	55,464	73,663	18,199	+32.8%

Source: MPO / Travel Demand Model

Figure 4-6 shows the population growth between 2017 and 2040. As depicted in the figure, residential growth is mostly expected to reach westward towards the urban area boundary, particularly west of Shiloh Road. Additionally, more residential growth is expected to occur along Highway 3 and Alkali Creek Road to the north of the city limits. Residential in-fill is expected to be limited around the downtown and Central Billings areas. Infill is projected to occur in the southern areas within the city limits, Lockwood, and the Heights neighborhoods.

FUTURE EMPLOYMENT

With growth in population, the employment sector within the study area is also expected to grow. As of 2017, the estimated total employment in the Billings urban area was approximately 77,639 jobs. By 2040, employment is projected to add another 26,690 jobs to result in an approximate 104,329 jobs in the Billings urban area. Table 4.4 summarizes the projected employment growth from 2017 to 2040.

Table 4.4 Billings Urban Area Employment Growth 2017-2040

Demographic	2017	2040	Change	Percent Change
Employment (Retail)	21,739	29,255	7,516	34.5%
Employment (Non-retail)	55,900	75,074	19,174	34.3%
Total Employment	77,639	104,329	+26,690	+34.3%

Source: MPO / Travel Demand Model

Figure 4-7 shows the comparison between 2017 and 2040 employment distributions. Employment growth within the Billings Urban Area is expected to expand generally within current commercial areas and to “densify” current employment locations. These commercial areas include S. 24th Street, Shiloh Road, the airport, downtown, and near the I-90 interchanges.

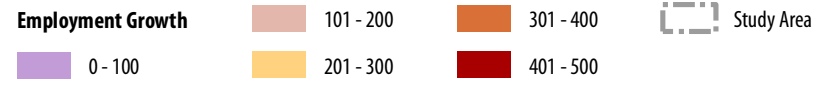
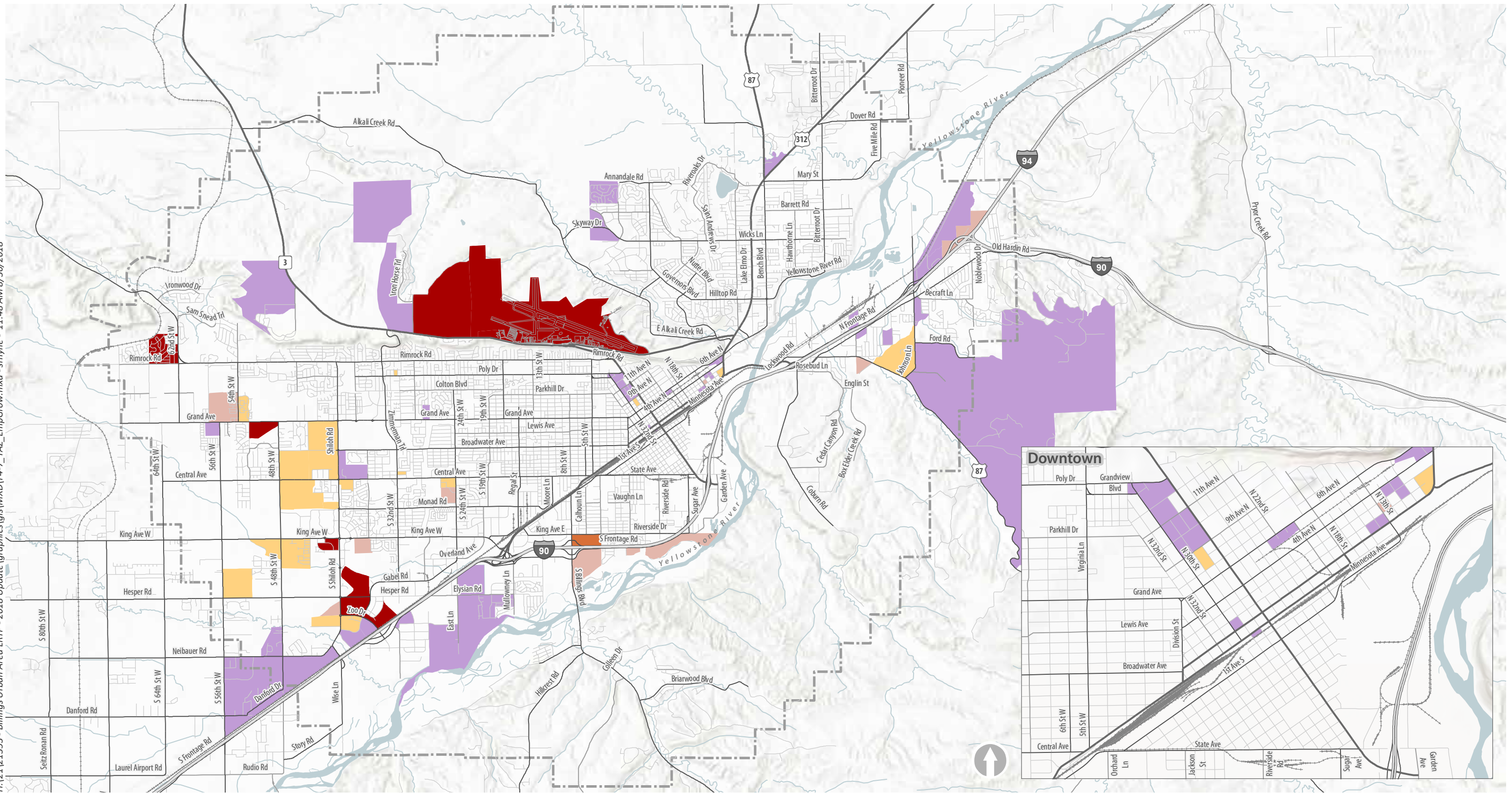
POTENTIAL EFFECTS OF GROWTH ON TRANSPORTATION SYSTEM

While the western portions of the urban area are expected to grow in population, these areas are expected to be relatively stagnant in terms of employment growth. This potentially translates into encouraging more people to commute by driving themselves rather than alternative modes because the trip distances are too far to be an appealing option. Additionally, there is currently no existing transit service northwest of King Avenue and Shiloh Road and to/from Lockwood to provide this option.

Generally, the residential population is projected to continue to spread out within the study area, with greatest density occurring west of Shiloh Road and north of Highway 3 near Zimmerman Trail. However, employment is expected to mostly increase in density around the following areas: Shiloh Road (south of Grand Avenue); Downtown Billings; Highway 3 near and at the airport; TEDD area in Lockwood; and near the Zoo Drive, S Billings Boulevard, and Johnson Lane interchanges along I-90. This type of growth pattern results in future residents having longer commute distances than today.

To manage these commute distances, the MPO and represented agencies should continue to implement and evaluate strategies that can improve the mode split of the urban area. The MPO has probably observed positive outcomes from current strategies, such as the recent Growth Policy’s by the City of Billings and Lockwood, as well as recent Strategic Plan’s by the Downtown Billings Alliance and TEDD. These elements should be continued with an emphasis on integrating land use and transportation to provide options and enhance the quality of life in the region.





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Figure 4-7
Employment Growth (2017 to 2040)



Chapter 5

Streets & Highways



People in the Billings Urban Area travel using many modes of transportation. The automobile is the primary mode of transportation for residents but other modes such as transit, walking, and bicycling also play significant roles. The US Census Bureau estimates that approximately 90% of Billings Urban Area commuters travel to work in a private vehicle, with approximately 81% driving alone. This chapter explores the existing and future mobility of the region's streets and highways and identifies a list of projects to address operational and safety deficiencies and needs.

2018 LRTP Goals Related to Streets and Highways

Goal 1: Safety – Develop a safe transportation system

Goal 2: Functional Integrity and Efficiency – Optimize, preserve, and enhance the existing transportation system

Goal 3: Prioritized Improvements – Identify and prioritize projects that mitigate deficiencies, maximize the use of existing facilities, and balance anticipated needs with available funding

Goal 4: Environment – Develop a transportation system that protects that natural environment and promotes a healthy, sustainable community.

Goal 7: Economic Vitality – Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce.

FUNCTIONAL CLASSIFICATION

The Roadway Functional Classification System defines a road's role in the overall context of the highway transportation system. In addition, it helps to define which standards are generally desirable for roadway width, right-of-way needs, access spacing, pedestrian and bicycle facilities, and other specifications. The functional classification system is typically established by the following hierarchy:

- **Freeways** serve high speed, long distance travel movements and provide limited access to adjacent lands. Often included in the Arterial classification, freeways are unique in that they provide access to other arterial roadways via grade-separated interchanges. In the Billings Urban Area, the freeways are classified as Interstate.
- **Arterials** are intended to serve higher volumes of traffic, particularly through-traffic, at higher speeds. They also serve truck movements and should emphasize traffic movement over access to adjacent property. Arterial roadways are further designated as Principal Arterials and Minor Arterials.
- **Collectors** represent the intermediate class. As the name suggests, these roadways collect traffic from the local street system and link travel to the arterial roadway system. These roadways provide a balance between through- traffic movement and property access and provide extended continuity to facilitate traffic circulation within an urban community or rural area.
- **Local Roads and Streets** are the lowest classification. Their primary purpose is to carry locally generated traffic at relatively low speeds to the collector street system and to provide more frequent access to individual businesses and residential property. Local streets provide connectivity through neighborhoods, but generally should be designed to discourage cut-through vehicular traffic.

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In addition to the above functional classifications, a limited number of principal arterials are further identified as Interstate routes and National Highway System (NHS) routes. Within the Billings Urban Area, there are several roadways designated as NHS Routes (shown in Table 5.1). Exhibits 5.1 through 5.7 show a few different roadway types in the Billings Urban Area.

Exhibit 5.1 Main Street, Principal Arterial



Exhibit 5.3 Rimrock Road, Principal Arterial



Exhibit 5.5 Lewis Avenue, Collector



Exhibit 5.7 Sedgwick Place, Local Street



Exhibit 5.2 Laurel Road, Principal Arterial



Exhibit 5.4 Monad Road, Minor Arterial



Exhibit 5.6 Maurine Street, Local Street



Exhibit 5.8 Saddle Lane, Local Street



As shown in the exhibits, each of the classified roadways has some similar design characteristics, but there is some flexibility in the cross-section elements, number of lanes, and posted speed included for each category. As part of the LRTP planning process, the existing functional classification map was updated to reflect completed roadway projects, new connections, and future connections. The Federal Highway Administration (FHWA) makes the final functional classification determination. Figure 5-1 illustrates the updated functional classification map for the Billings Urban Area. The functional classification map is used for local planning purposes by the MPO and does not represent the federally approved system.

As shown in Figure 5-1, the future connections provide additional connectivity throughout the Billings Urban Area. The major proposed connections, listed in order of functional classification, include:

- **Freeway Connection** – provides an east-west connection from Interstate 94 to Highway 3, north of the Heights area and continues west of Highway 3 with a possible connection to Laurel (a study has not been completed to date)
- **Billings Bypass Arterial** – provides a connection from the junction of US 87 and Highway 312 to Interstate 90 at Johnson Lane (project currently in design and programmed for construction, Billings Bypass Environmental Impact Statement, 2014)

- **Alkali Creek Road to Highway 3 Arterial (Inner Belt Loop)** – provides a connection from Alkali Creek Road to Highway 3, north and west of the airport (programmed for construction, Inner Belt Loop Study, 2005)
- **Molt Road to Highway 3 Arterial** – provides a connection from Highway 3 to Molt Road (Molt Road/Highway 3 Study, 2004)

The 1964 Transportation Plan identified many of the roads that are in place today and planned in the future.

Exhibit 5.9 Future Roadway Network Identified in 1964



EXISTING CONDITIONS

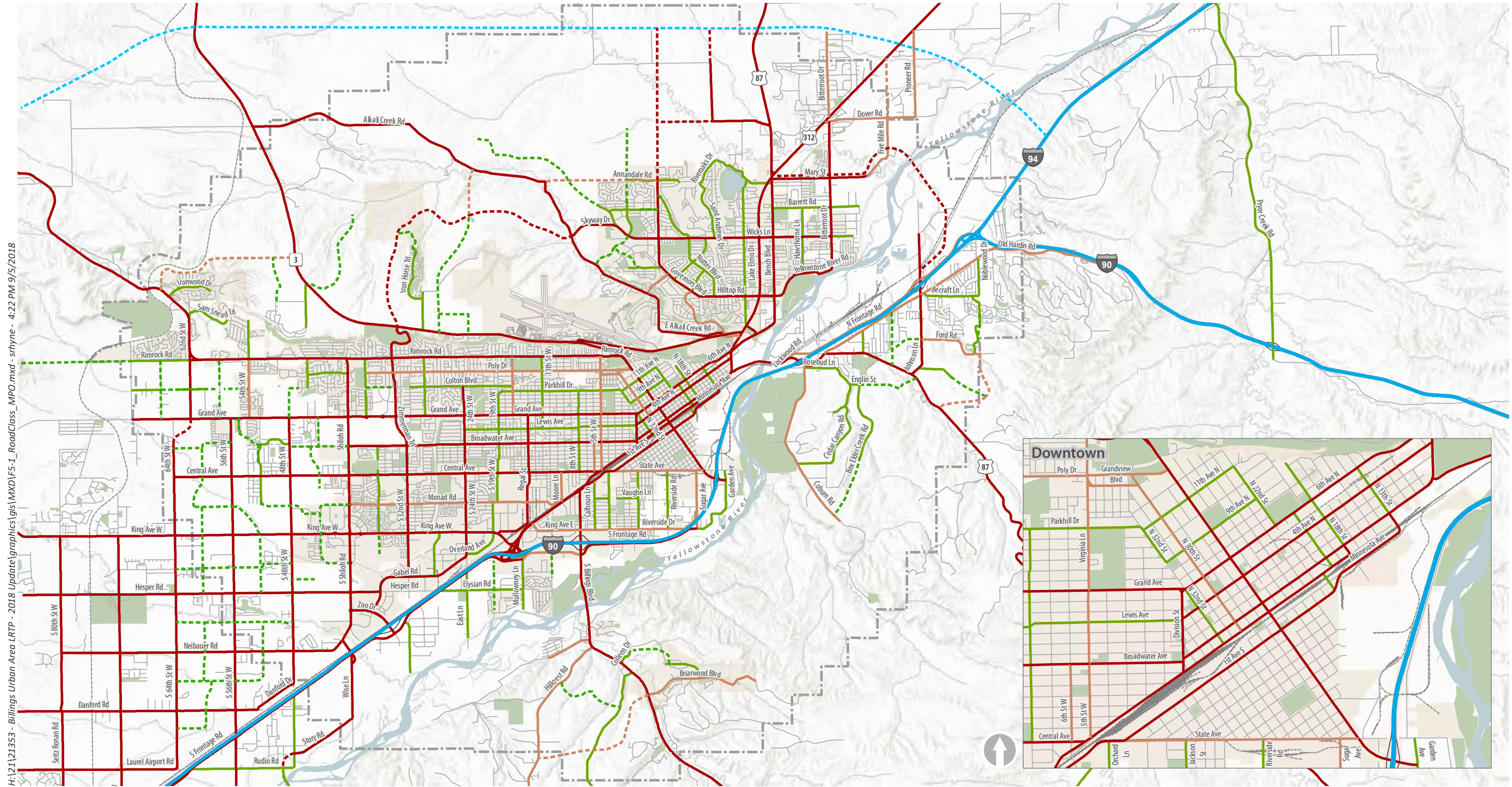
This section summarizes the existing roadway facilities, traffic volumes, and operations within the study area.

FACILITIES

Several major highways and roadways serve the Billings Urban Area, including Interstate 90, Interstate 94, US Route 87, and Montana Highway 3. Billings also lies along the Camino Real Corridor, a high priority corridor on the National Highway System and part of the North American Free Trade Agreement (NAFTA) that connects Canada, the United States, and Mexico. In total, the Billings Urban Area encompasses 970 miles of roadway, 173 signalized intersections, and 18 roundabouts.

As shown in Figure 5-1, Interstate 90, Montana Highway 3, and US Route 87 are the three major roadways that converge near downtown Billings. Figure 5-2A through 5-2D show the existing roadways and traffic control devices.

2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN



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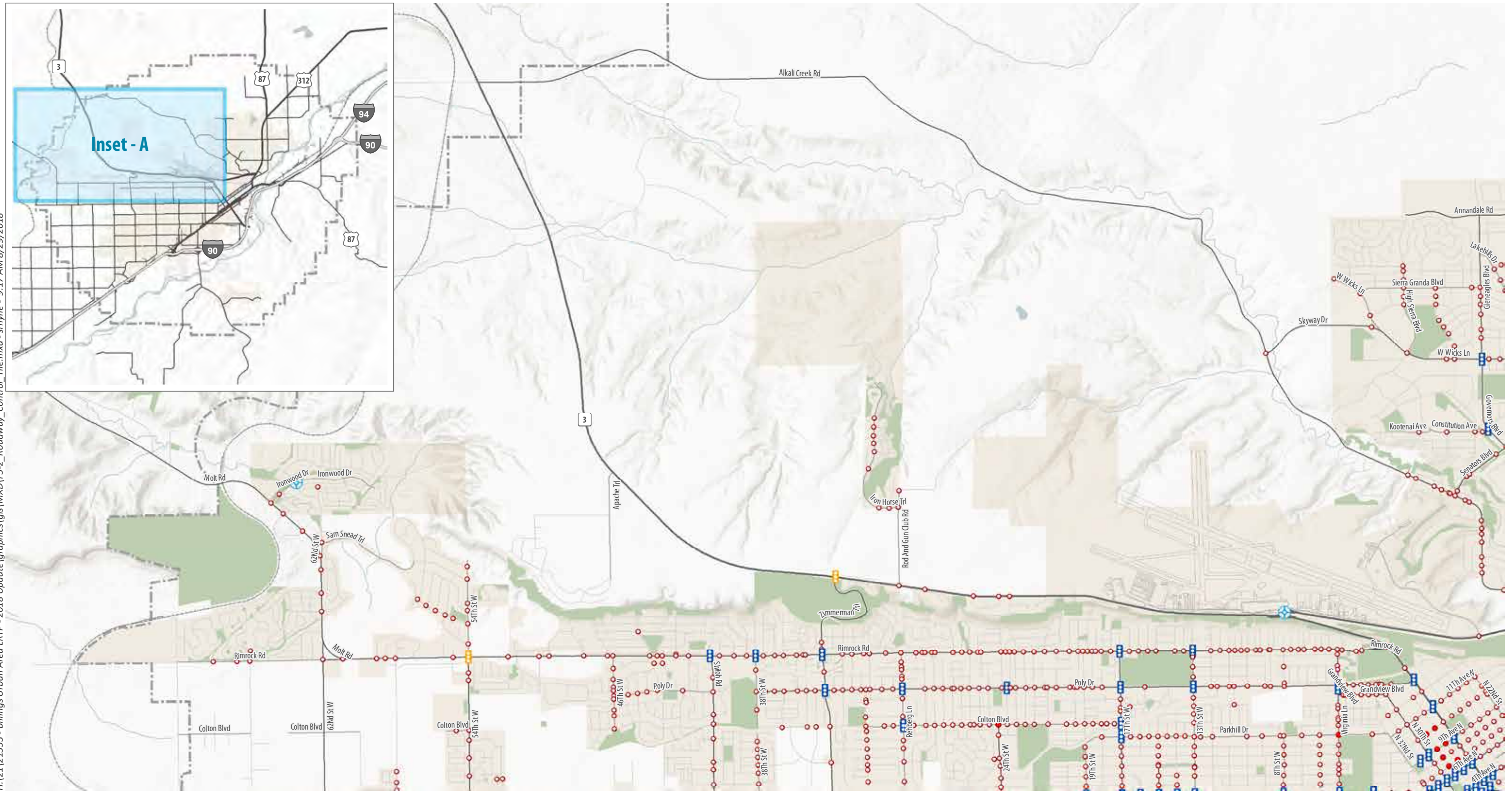
- | | | | | |
|-------------------------------|----------------|------------------------------------|-------------------------|------------------|
| Roadway Classification | Minor Arterial | Proposed Freeway Controlled Access | Proposed Minor Arterial | Study Area |
| Interstate | Collector | Proposed Principal Arterial | Proposed Collector | Park |
| Principal Arterial | Local Streets | | | City of Billings |
















Note: This functional classification map does not represent the federally approved system.

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Figure 5-1

Functional Classification Map



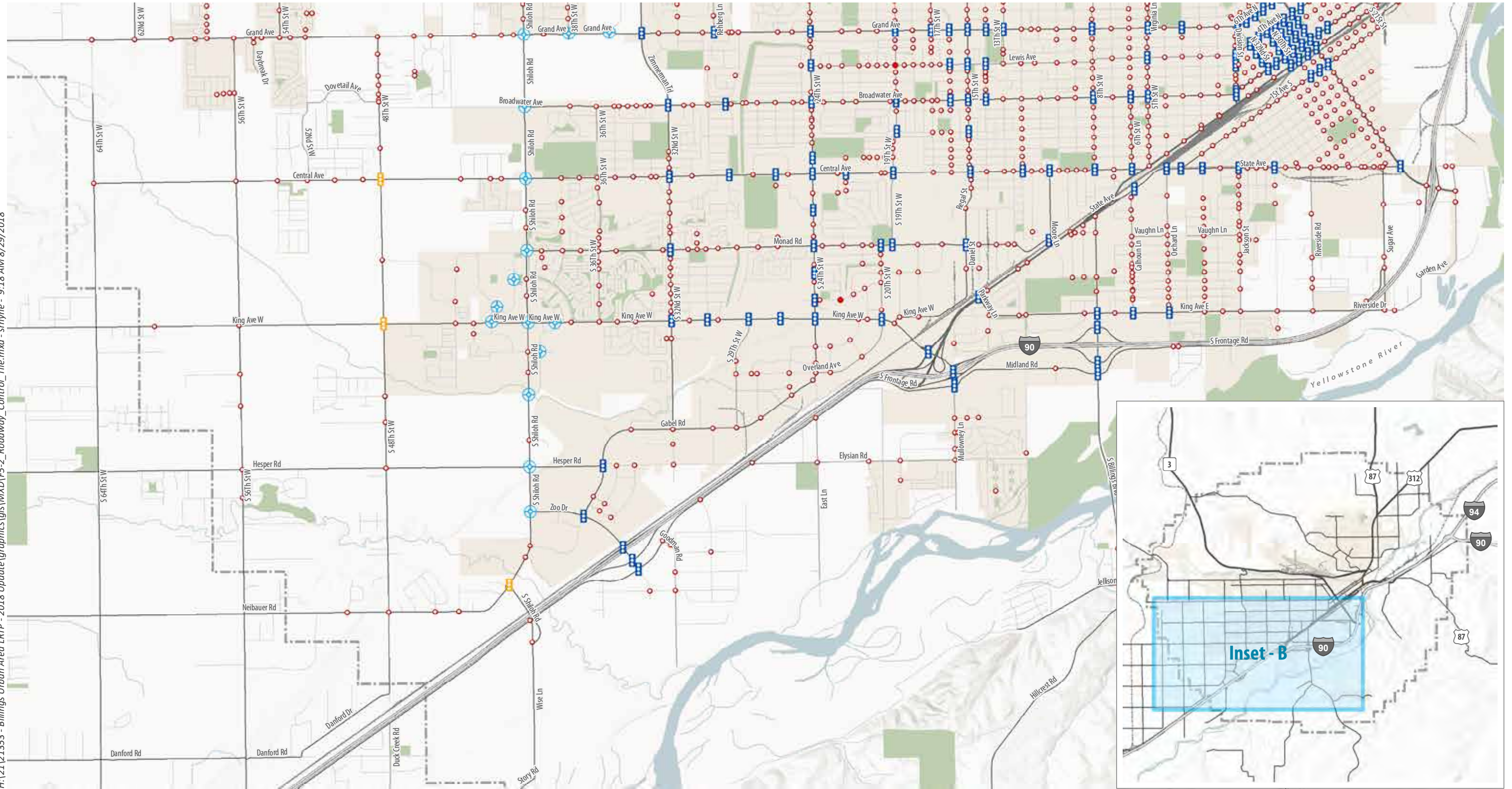
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|--|---|--|--|--|
|  Signal |  Stop with Flashing Beacon |  Roundabout |  Interstate |  Study Area |
|  All-Way Stop |  Hawk Signal | |  Highway |  Park |
|  Stop |  RRFB | |  Arterial |  City of Billings |
| | | |  Collector | |
| | | |  Local | |

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Figure 5-2a
Existing Roadways and Traffic Control Devices

2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN

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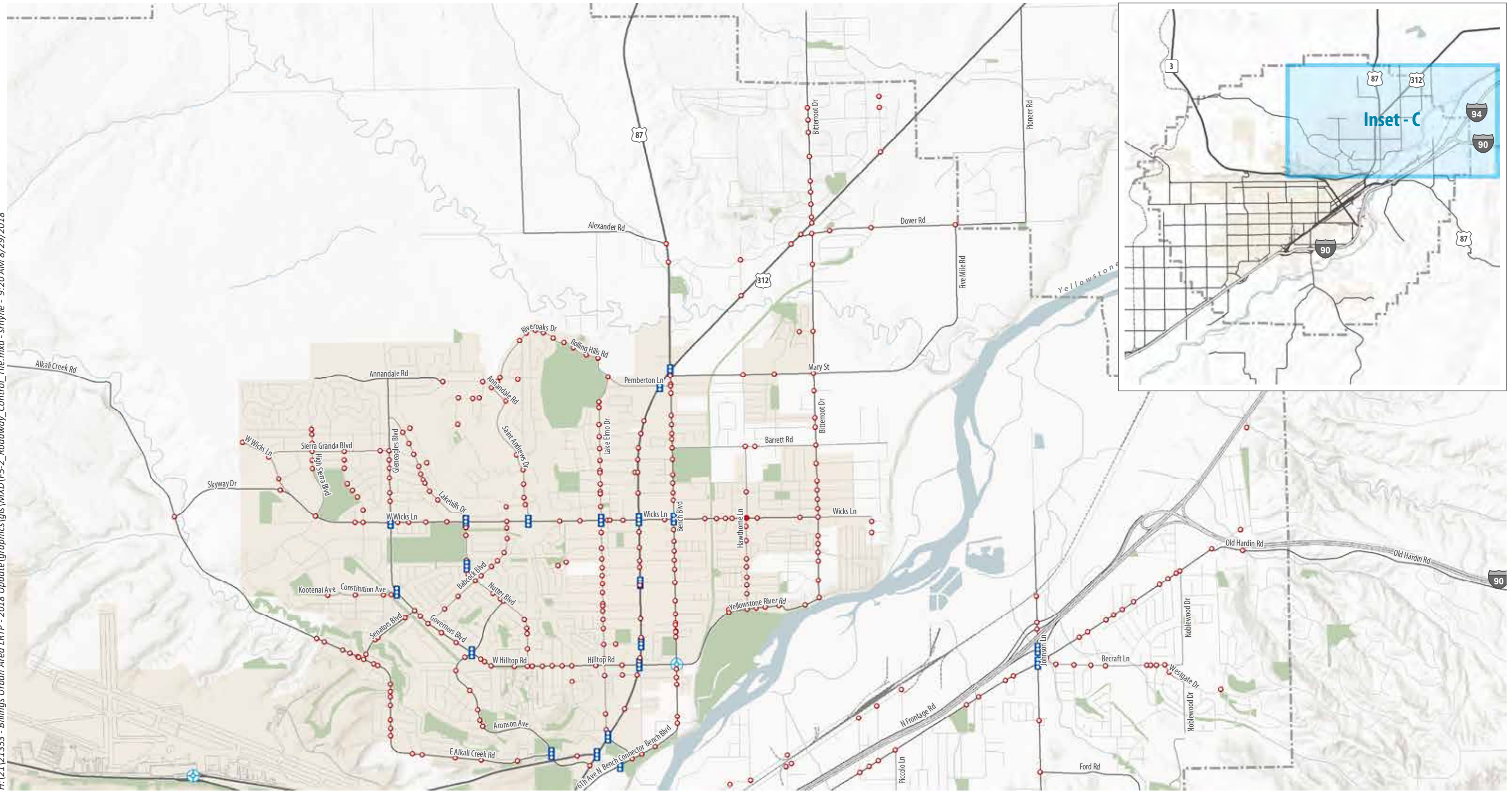
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|--|--------------|--|---------------------------|--|------------|--|------------|--|------------------|
| | Signal | | Stop with Flashing Beacon | | Roundabout | | Interstate | | Study Area |
| | All-Way Stop | | Hawk Signal | | Park | | Highway | | City of Billings |
| | Stop | | RRFB | | Arterial | | Collector | | |
| | | | | | Local | | | | |



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Figure 5-2b
Existing Roadways and Traffic Control Devices

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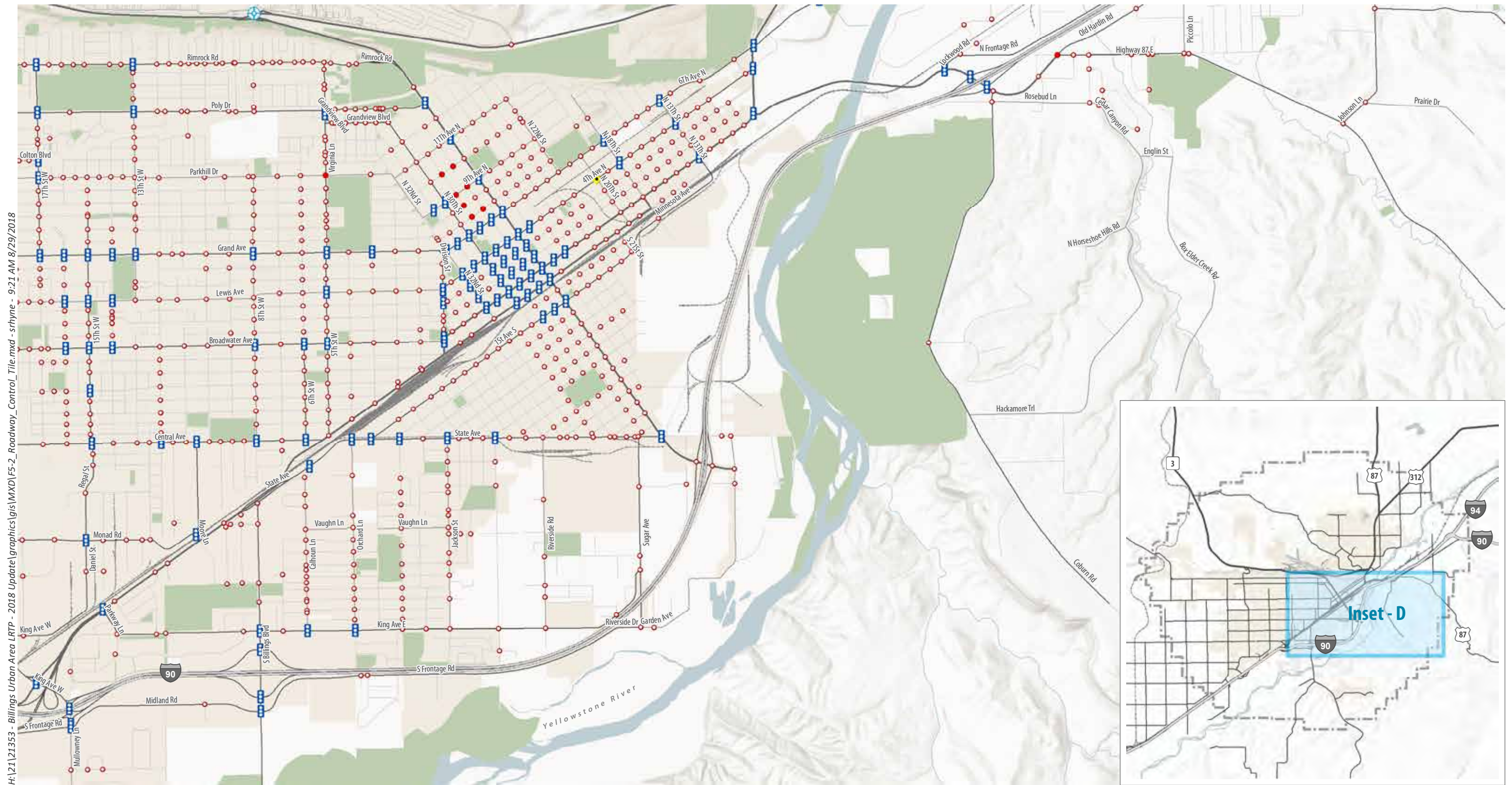


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|--------------|---------------------------|------------|------------|------------------|
| Signal | Stop with Flashing Beacon | Roundabout | Interstate | Study Area |
| All-Way Stop | Hawk Signal | Highway | Park | City of Billings |
| Stop | RRFB | Arterial | Collector | |
| | | Local | | |



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Figure 5-2c
Existing Roadways and Traffic Control Devices



- | | | | | | | | | | |
|--|--------------|--|---------------------------|--|------------|--|------------|--|------------------|
| | Signal | | Stop with Flashing Beacon | | Roundabout | | Interstate | | Study Area |
| | All-Way Stop | | Hawk Signal | | Park | | Highway | | City of Billings |
| | Stop | | RRFB | | Arterial | | Collector | | |
| | | | | | Local | | | | |



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Figure 5-2d
Existing Roadways and Traffic Control Devices

Critical roadways that are part of the National Highway System (NHS) in the Billings Urban Area include the following:

- Interstate 90 (NHS, Eisenhower Interstate System)
- Interstate 94 (NHS, Eisenhower Interstate System)
- Montana Highway 3 (NHS, STRAHNET Route)
- US Route 87 (NHS, Other NHS Route)
- King Avenue (MAP-21 NHS Principal Arterial)
- Zoo Drive (MAP-21 NHS Principal Arterial)
- Laurel Road (MAP-21 NHS Principal Arterial)
- 1st Avenue S (MAP-21 NHS Principal Arterial)
- Montana Avenue (MAP-21 NHS Principal Arterial)
- 1st Avenue N (MAP-21 NHS Principal Arterial)

SAFETY

Consideration of highway crash data and safety issues is a critical element in the planning and design of any transportation system. A review of 2013-2017 highway crash data for the arterial and collector roadways within the study area was completed to identify roadways and intersections that had significantly higher crash rates. A total of 14,577 reported crashes occurred in the Billings Urban Area during this five-year period. Figure 5-3 shows all reported crashes over this five-year time period.

Tables 5.2 and 5.3 show the crash rates for the intersections and roadway segments with the highest crash rates. Three of the top four intersections are roundabouts located on the Shiloh Road corridor. As shown in Table 5.2, the King Avenue West and Main Street corridors both have five high crash intersections, while the 24th Street West corridor has four. Figure 5-4 illustrates the location of these intersections and roadway segments.

Table 5.2 Intersections with High Crash Rates (2013-2017)

	Intersection	Control Type	Total Crashes	Crash Rate
1	Shiloh Road & King Avenue W	Roundabout	149	3.57
2	Shiloh Road & Grand Avenue	Roundabout	129	2.67
3	24th Street W & Rosebud Drive	Signal	84	1.62
4	Shiloh Road & Central Avenue	Roundabout	58	1.49
5	Central Avenue & N 15th Street W	Signal	64	1.46
6	Main Street & 1st Avenue N	Signal	92	1.35
7	27th Street & 6th Avenue N	Signal	85	1.35
8	King Avenue W & 24th Street W	Signal	101	1.25
9	Main Street & Lake Elmo Drive	Signal	113	1.17
10	King Avenue W & 32nd Street W	Signal	72	1.15
11	27th Street & 1st Avenue N	Signal	53	1.13
12	Central Avenue & 24th Street W	Signal	81	1.13
13	Grand Avenue & N 17th Street W	Signal	59	1.13
14	King Avenue W & S 20th Street W	Signal	94	1.07
15	Grand Avenue & Zimmerman Trail	Signal	56	1.07
16	Main Street & Wicks Lane	Signal	62	1.02
17	24th Street W & Monad Road	Signal	53	0.85
18	King Avenue W & Interstate-90 Single Point Interchange (SPI)	Signal	68	0.81
19	Main Street & Airport Road	Signal	66	0.71
20	Main Street & 6th Avenue N	Signal	53	0.53

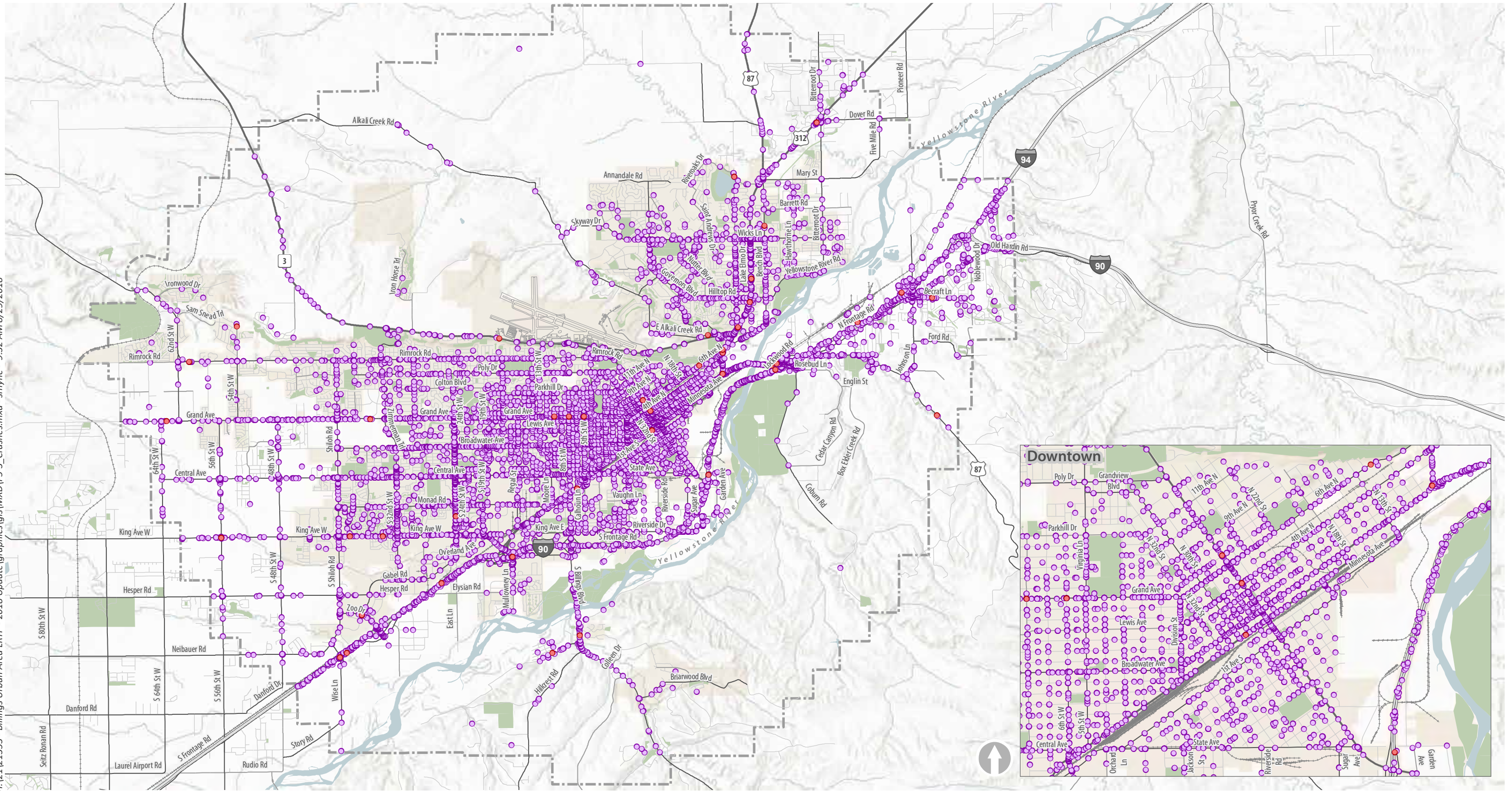
Source: MDT Crash Data (2013 - 2017)

Crash rates were calculated based on Total Number of Crashes x 1,000,000 vehicles / Vehicles per day x Number of Years x 365 days per year.



2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN

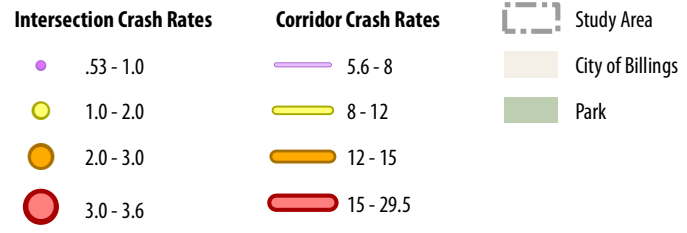
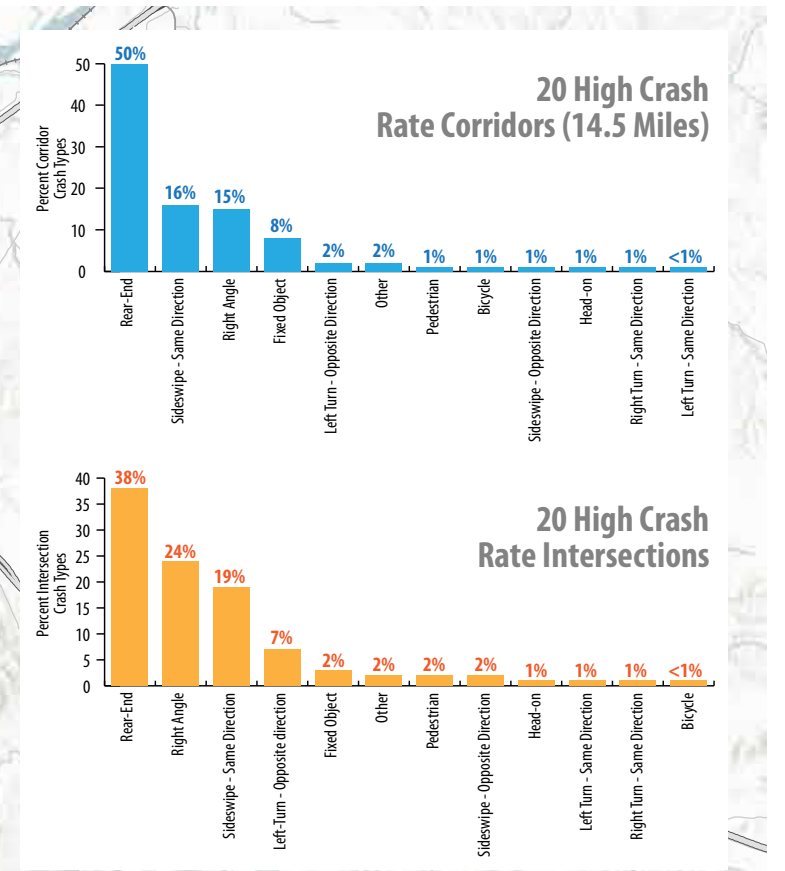
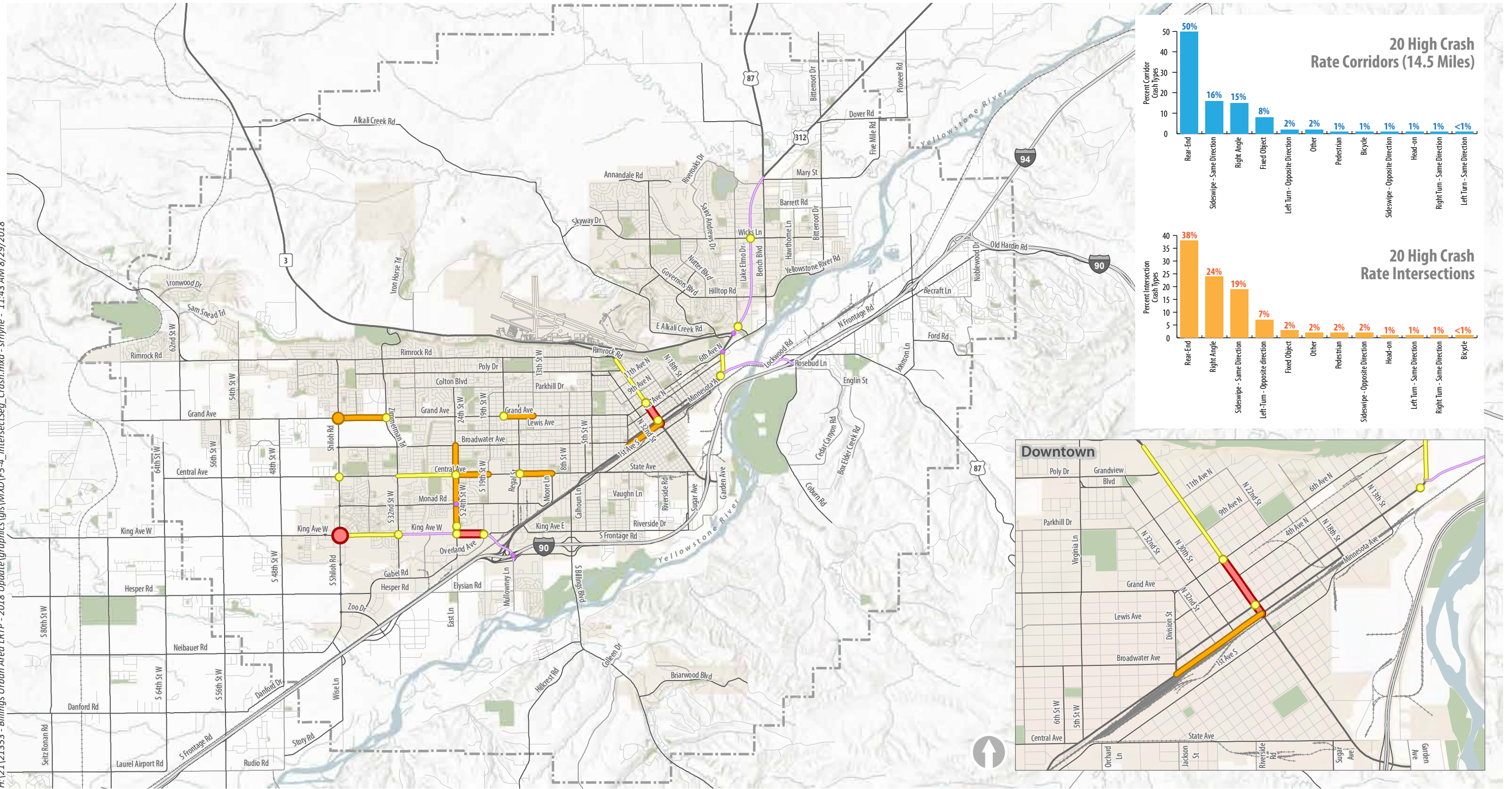
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- Reported Fatal Crashes
- Reported Crashes

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Figure 5-3
Total Reported Crashes (2013 - 2017)



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Figure 5-4
Intersection and Corridor Crash Rates

Table 5.3 Roadway Segments with High Crash Rates (2013 - 2017)

Roadway Segment	Extent	ADT	Length (miles)	Total Crashes	Crash Rate	
1	N 27th Street	Montana Avenue to 6th Avenue N	16,595	0.4	386	29.5
2	King Avenue W	20th Street to 24th Street	24,100	0.5	310	15.2
3	Montana Avenue	27th Street to Division Street	10,980	0.7	203	14.9
4	S 24th Street W	King Avenue W to Monad Road	24,660	0.5	334	14.6
5	Central Avenue	19th Street to 24th Street	15,640	0.6	224	14.0
6	S 24th Street W	Monad Road to Central Avenue	26,280	0.5	317	13.2
7	Central Avenue	Moore Lane to 15th Street	16,895	0.5	219	12.9
8	Grand Avenue	Zimmerman Trail to Shiloh Road	12,160	0.8	230	12.8
9	24th Street W	Central Avenue to Broadwater Avenue	22,685	0.5	257	12.4
10	Grand Avenue	13th Street to 17th Street	18,810	0.5	214	12.4
11	King Avenue W	32nd Avenue to Shiloh Road	14,290	1.0	294	11.8
12	Central Avenue	24th Street to 32nd Street	13,790	1.0	277	11.1
13	Main Street	1st Avenue N to 6th Avenue N	36,440	0.4	248	10.5
14	N 27th Street	6th Avenue N to Rimrock Road	15,255	0.9	247	9.9
15	King Avenue W	24th Street to 32nd Street	25,660	1.0	368	7.9
16	Main Street	Airport Road to Hilltop Road	44,550	0.7	369	6.5
17	King Avenue W	Midland Road at Mallowney Lane to 20th Street	40,470	0.7	349	6.5
18	Main Street	Hilltop Road to Wicks Lane	27,220	1.0	306	6.1
19	Main Street	Wicks Lane to US 87	16,840	1.1	199	6.0
20	Highway 87E	Interstate 90 to 1st Avenue N	26,040	1.3	347	5.6

Source: MDT Crash Data (2013 - 2017)

Crash rates were calculated based on Total Number of Crashes x 1,000,000 vehicles / Vehicles per day x Number of Years x 365 days per year x Length of Segment.

TRAFFIC OPERATIONS

Intersection turning movement count data from a variety of sources informed peak hour level of service estimates at approximately 300 intersections throughout the Billings Urban Area. These estimates included most intersections featuring both approaches with collector or higher roadway classification. Turning movement counts taken before 2018 were normalized to 2018 levels by assuming a constant 1% annual growth rate. Figure 5-5 shows existing intersection peak hour level of service. Intersections operating at a critical peak hour level of service E or F or identified by the SC as potentially congested are shown in Table 5.4.

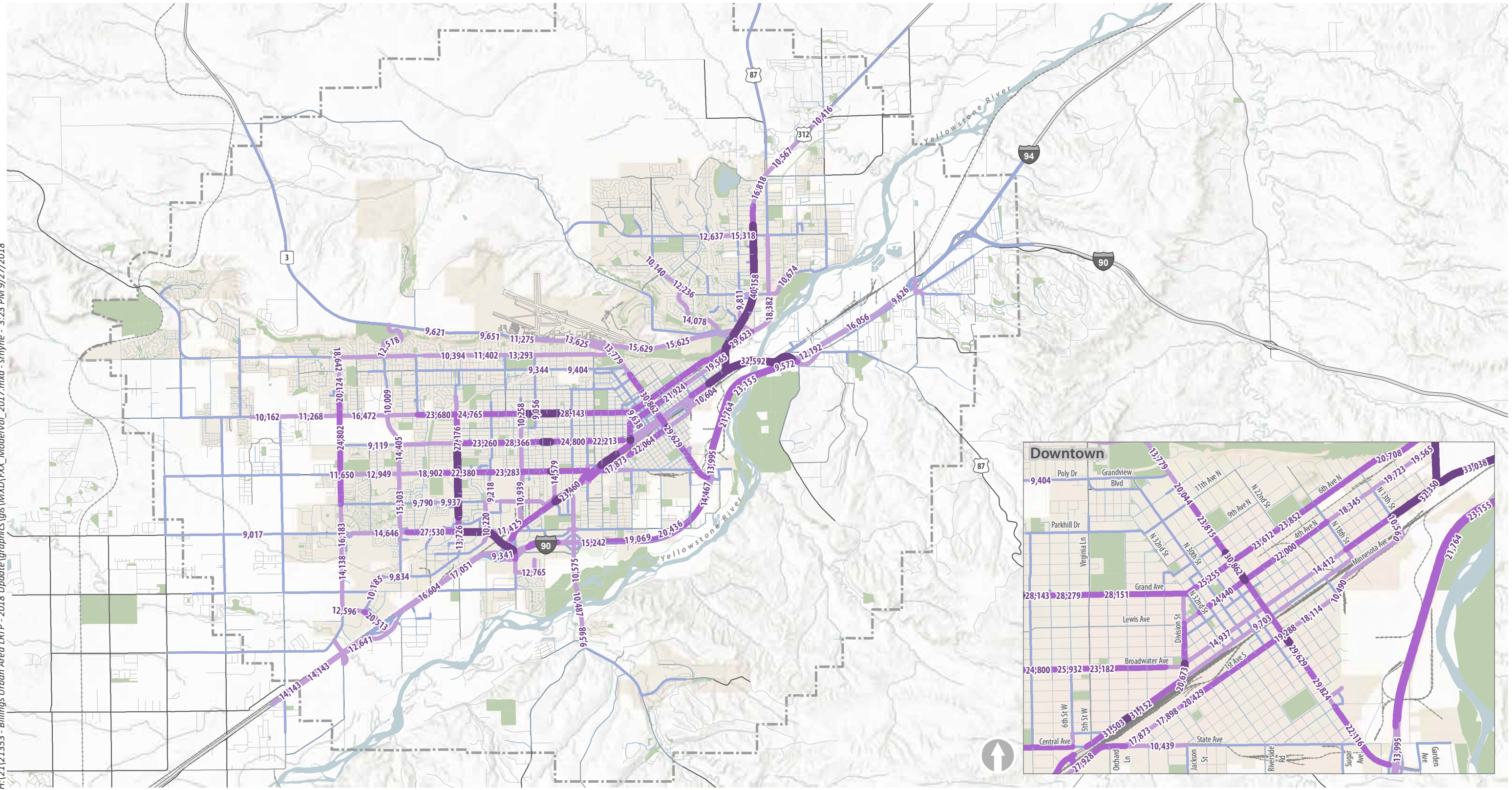
Table 5.4. Summary of LOS E, LOS F, and Potentially Congested Intersections During Critical Peak Hour (Year 2018)

Intersections Operating at LOS E	Intersections Operating at LOS F	Intersections Identified by SC as Potentially Congested
<ul style="list-style-type: none"> Johnson Lane & Old Hardin Road Laurel Road & Moore Lane Wicks Lane & Main Street Zimmerman Trail & Grand Avenue Zimmerman Trail & Highway 3 6th Avenue N & N 26th Street 11th Avenue N & N 30th Street 24th Street W & King Avenue W 24th Street W & Overland Avenue 	<ul style="list-style-type: none"> Aronson Avenue & Main Street Daniel Street & Monad Road King Avenue W & Laurel Road King Avenue W & S 20th Street/W Overland Avenue Lake Elmo Drive & Main Street State Avenue & Underpass Avenue 1st Avenue N & Main Street 6th Street W & Central Avenue 24th Street W & Grant Road 24th Street W & Grand Avenue 32nd Street W & Grand Avenue 	<ul style="list-style-type: none"> Governors Boulevard & Wicks Lane N 27th Avenue & Rimrock Road

EXISTING DAILY TRAFFIC VOLUMES

In conjunction with the LRTP, the MPO developed a travel demand model for use in estimating traffic volumes and travel mode splits within the Billings Urban Area. The travel demand model includes a base year of 2017 and a future year of 2040. Existing daily traffic volumes for all roadway segments in the Billings Urban Area are shown in Figure 5-6.

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- | | | |
|---|---|---|
| 2017 Model Volume | — 10,001 - 20,000 | Study Area |
| — 500 - 3,000 | — 20,001 - 30,000 | Park |
| — 3,001 - 10,000 | — 30,001 - 50,000 | City of Billings |

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Figure 5-6
**Existing Model Year (2017)
 Average Daily Traffic (ADT)**

FUTURE CONDITIONS

This section summarizes the year 2040 traffic volumes and traffic operations within the study area.

TRAFFIC OPERATIONS

For the year 2040 conditions, the travel demand model was updated to include major committed and recommended projects within the Billings Urban Area. The major committed and recommended projects include:

Committed Projects

- Billings Bypass Arterial: 2-lane roadway from Johnson Lane interchange to Old Highway 312 and US 87
- Central Avenue: 5-lane roadway between 32nd Street W and Shiloh Road
- Five Mile Road: 2-lane roadway from Dover Road to Old Highway 312
- Inner Belt Loop: 2-lane roadway from Alkali Creek Road to Montana Highway 3
- King Avenue West: 5-lane roadway between Shiloh Road and 72nd Avenue
- Wicks Lane: 3-lane roadway between Bench Boulevard and Hawthorne Lane
- Zimmerman Trail: Add two-way left-turn lane between Montana Highway 3 and Rimrock Road
- 32nd Street West: 3-lane roadway between King Avenue W and Gabel Road

- Intersection improvements at Underpass Avenue, Airport/Main, Central Avenue/56th Street, Central Avenue/24th Street, Monad Road/19th Street/20th Street, 13th Street/1st Avenue N, Hillcrest Road/Blue Creek Road, Frontage Road/Wise Lane

Recommended Projects

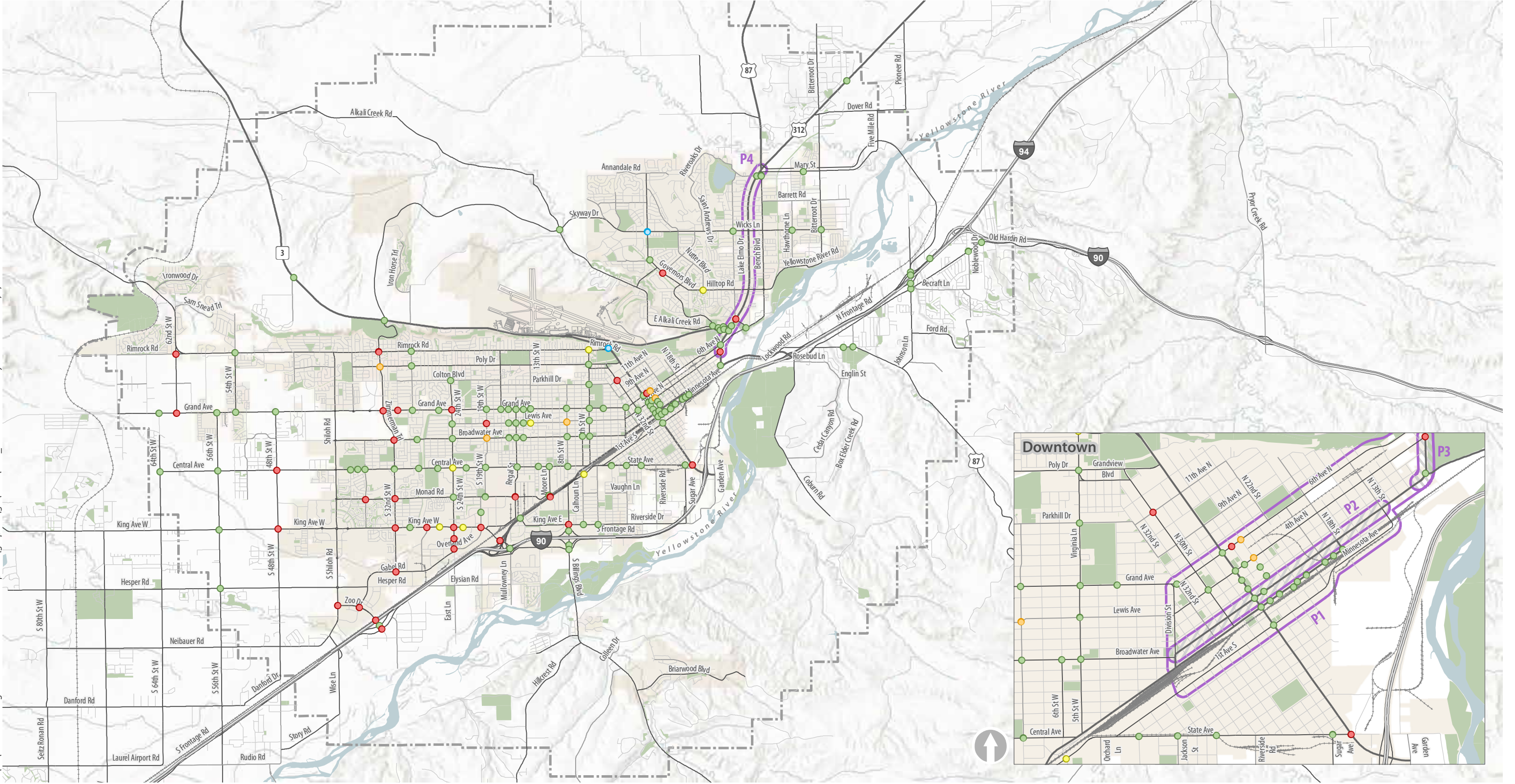
- Interstate 90 – Add 3rd lane in each direction between S Billings Boulevard Interchange and Johnson Lane Interchange)
- Montana Highway 3 - Add two-way left-turn lane between Zimmerman Trail and Airport Road
- Blue Creek Road - Turn lane improvements on Blue Creek Road
- Intersection improvements at 1st Avenue N/Exposition Drive

The travel demand model was used to estimate future year 2040 daily traffic volumes with the committed projects in place in the Billings Urban Area. Based on the year 2017 and 2040 traffic volumes, growth rates were identified for individual regions of the Billings Urban Area and then applied to the existing peak hour intersection volumes to calculate year 2040 peak hour traffic volumes at the intersections. Figure 5-7 shows year 2040 level of service estimates at approximately 300 intersections throughout the Billings Urban Area and Table 5.5 shows intersections operating at level of service E or F in year 2040. Projected average daily traffic volumes for all roadway segments in the Billings Urban Area in year 2040 are shown in Figure 5-8.

Table 5.5. Summary of LOS E, LOS F, and Potentially Congested Intersections During Critical Peak Hour (Year 2040)

Intersections Projected to Operate at LOS E	Intersections Projected to Operate at LOS F		Intersections Identified by SC as Potentially Congested
<ul style="list-style-type: none"> • 4th Avenue N & N 25th Street • 6th Avenue N & N 25th Street • Broadwater Avenue & 19th Street W • Lewis Avenue & 8th Street W • Wicks Lane & Main Street • Zimmerman Trail & Poly Drive 	<ul style="list-style-type: none"> • 1st Avenue N & Exposition Drive • 6th Avenue N & N 26th Street • 11th Avenue N & N 30th Street • 24th Street W & King Avenue W • 24th Street W & Overland Avenue • 24th Street W & Grant Road • 24th Street W & Grand Avenue • 32nd Street W & Grand Avenue • 48th Street W & Central Avenue • 48th Street W & King Avenue • 62nd Street W & Rimrock Road • 62nd Street W & Grand Avenue • Broadwater Avenue & 32nd Street W • Gabel Road & 32nd Street W • Grand Avenue & 19th Street W • Governors Boulevard Babcock Boulevard • King Avenue W & Laurel Road • King Avenue W & S 20th Street/W Overland Avenue • King Ave W & S 29th St W • King Ave W & S 32nd St SW • King Avenue & S Billings Boulevard 	<ul style="list-style-type: none"> • Lake Elmo Drive & Main Street • Laurel Road & Moore Lane • Lewis Avenue & 19th Street W • Monad Road & Daniel Street • Monad Road & 32nd Street W • Monad Road & 36th Street W • Mallowney Lane & Midland Road • Rimrock Road & Zimmerman Trail • State Avenue & S 27th Street • Zimmerman Trail & Grand Avenue • Zoo Drive & I-90 WB Ramps • Zoo Drive & I-90 EB Ramps • Zoo Drive & S Frontage Road • Zoo Drive & Gabel Road • Zoo Drive & S Shiloh Road 	<ul style="list-style-type: none"> • Governors Boulevard & Wicks Lane • N 27th Avenue & Rimrock Road

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- Level of Service**
- A thru C
 - D
 - E
 - F
 - Intersections with No Data and Identified as Potentially Congested

- More detailed analysis is being performed in these areas by other studies/projects
- P1 - Downtown Traffic Study
- P2 - 1st Avenue North
- P3 - 1st Avenue N / Expo
- P4 - Main Street Signal Timing

- Roadway Classification**
- Interstate
 - Highway
 - Arterial
 - Collector
 - Local

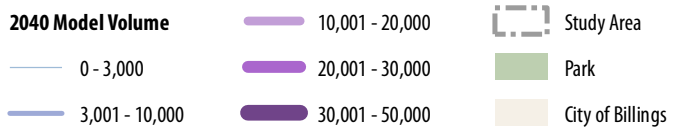
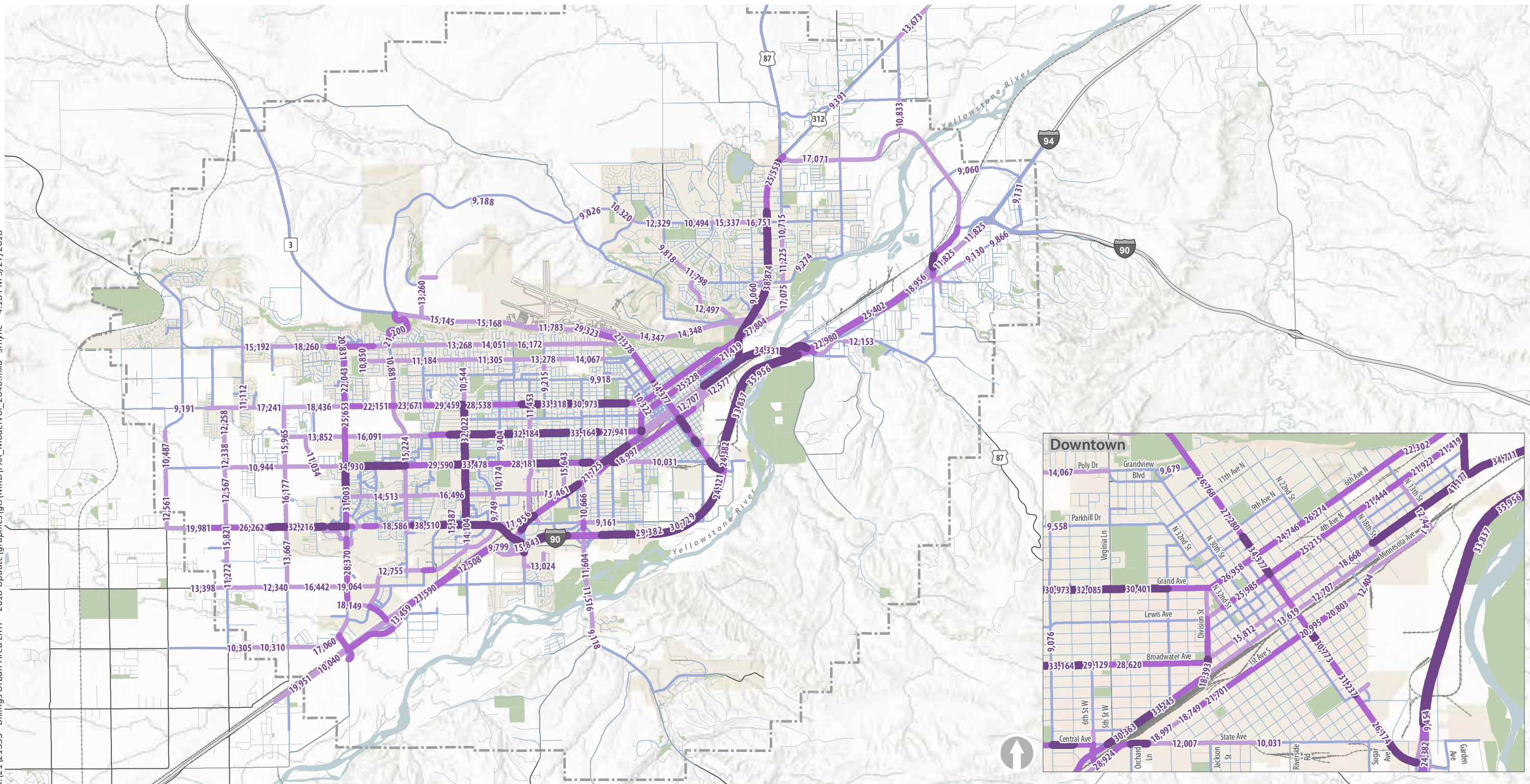
- Study Area
- Park
- City of Billings

NOTE: Some intersections included in Figure 5-5 were not analyzed for future conditions and are not shown in this figure.

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Figure 5-7
Future Conditions (2040) and Level of Service

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Figure 5-8
Future Model Year (2040)
Average Daily Traffic (ADT)

NEEDS AND DEFICIENCIES

In order to guide identification of short- and long- range projects, deficiencies and needs were collected from the general public, the SC, and through a review of past plans/studies.

PUBLIC AND SC FEEDBACK

Forty-nine percent of the public comments corresponded to streets and highways or intersection deficiencies and needs in the study area. Review of the public comment feedback and SC comments suggested the following themes:

- Redesign unsafe intersections using roundabouts and traffic signals
- Improve traffic flow through signal retiming on congested corridors
- Provide better connectivity between the West End, Downtown, and Billings Heights
- Provide better connectivity between The Rims and the West End
- Maintain roadways, decrease the number of potholes, and improve snow removal
- Lower speed limits and calm streets with infrastructure improvements to reduce speeding
- Widen roadways to improve congestion
- Provide better connectivity between the west end and Lockwood
- Provide Inner Belt Loop and Outer Belt Loop connections
- Provide better connectivity over the Yellowstone River
- Increase capacity of railroad underpasses

NEEDS DEFINED IN PREVIOUS STUDIES/PLANS

There have been several city-wide studies/plans, highlighted in Exhibit 5.10, that focus on streets and highway facilities in the City of Billings. Below is a list of these studies/plans and their key needs and findings:

- **Highway 3 Corridor Planning Study (2015)** provides an access management and transportation circulation plan for the Highway 3 corridor from North 27th Street to Apache Trail (approximately 5 miles). It incorporates bicycle/pedestrian facilities, a parking plan, and a stormwater management plan along the top of the Rims. Key improvements include intersection control and bicycle/pedestrian infrastructure implementation.
- **Old Highway 312 Corridor Study (2016)** develops a comprehensive long-range plan for managing the corridor and determining what can be done to improve the corridor, which connects the growing communities of Huntley, Shepherd, and Worden with Billings. Key improvements include safety measures such as overhead lighting, intersection control, and intersection realignment.
- **West End Multimodal Planning Study (2016)** develops a transportation model to project development and traffic demand growth on the west end and provides recommendations on scope and priority of improvement projects to mitigate projected impacts. Key improvements include intersection control implementation

at intersections throughout the West End.

- **Underpass Avenue Improvements Conceptual Design Report (2016)** reviews and analyzes the existing site conditions and traffic needs to prepare possible improvement options to Underpass Avenue.
- **Lockwood TEDD Infrastructure Master Plan (2017)** documents the infrastructure needs of the Lockwood Targeted Economic Development District (TEDD) and addresses those needs while optimizing the potential of the Lockwood TEDD area for development. Key improvements include roadway segments to be implemented with development of the study area.
- **Billings Urban Area Long-Range Transportation Plan (2014)** summarizes several streets and highway projects in the urban area and details relevant studies and plans completed between 2008 and 2014:
 - **Lockwood Transportation Study (2008):** This study identifies a set of short and long-term improvements at intersections and roadways within in the Lockwood area (5-2).
 - **Billings Bypass EIS Project (2014):** The Billings Bypass Project proposes to construct a new principal arterial connecting Interstate 90 (I-90) east of Billings with Old Highway 312. The purpose of the proposed project is to improve access and connectivity between I-90 and Old Highway 312 to improve mobility in the eastern area of Billings. The Record of Decision (ROD) was issued on July 28, 2014. The Preferred Alternative

Exhibit 5.10 Study Covers



has been separated into two phases, which are referred to throughout the FEIS as Phase 1 (an initial two-lane road) and the Full Buildout (a final four-lane road). Phase 1 will design and construct the initial two lanes of road along the entire length of the Preferred Alternative alignment and pursue right-of-way acquisition for a future four-lane road. The second phase will require a NEPA re-evaluation and separate ROD(s) to design and construct the Full Buildout four-lane road along this alignment (5-4).

- **I-90 Corridor Planning Study (2012):** The study recommends a set of near-term and long-term improvements to the I-90 corridor (mainline and interchanges) from the Laurel interchange to the Pinehills interchange. The improvements include mainline widening, bridge reconstruction, safety improvements, and geometric improvements (5- 4).
- **Molt Road/Highway 3 Collector Road Planning Feasibility Study (2004):** The study demonstrated that a proposed collector alternative is feasible from a preliminary engineering analysis (5-5).
- **Billings Hospitality Corridor Planning Study (2013):** This study identifies a set of near-term and long-term projects for the Main Street, Exposition Boulevard, and Highway 87 roadway segments and intersections. Key improvements include streetscape, sidewalk, pedestrian crossings, and roundabout at the 1st Street N./ Exposition Boulevard/Highway 87 intersection (5-6).

PROJECT LIST

Roadway, intersection, and congestion management projects were identified from the needs and deficiencies assessment and committed projects in the City of Billings Transportation Improvement Program, FY 2017-2021, Capital Improvement Program (5-8), Capital Improvement Program FY 2019 – 2023 (5-9), and MDT project programming. The LRTP identifies a total of 58 roadway projects, 62 intersection projects, and 28 congestion management projects. Investing in these types of projects supports the plan’s goals and the region’s desire to provide a robust, interconnected transportation system.

A project description and planning-level cost estimate was developed for each project. The planning-level cost estimates were developed from cost estimates included in past plans/studies, engineer’s estimates made by the consultant team, or the sources described above.

Roadway projects include reconstruction of roadways, extension of existing roadways, and construction of new roadways. These projects represent maintenance, capacity, safety, and/or connectivity type projects. Table 5.6 summarizes the roadway projects. Figure 5-9 shows the approximate location of each project.

Intersection projects include reconstruction/ modifications of intersections, installation of traffic signals and/or roundabouts, and construction of new intersections. These projects represent maintenance, capacity, safety, and/or connectivity type projects. Table 5.7 summarizes the intersection projects. Figure 5-9 shows the approximate location of each project.

Congestion management projects include signal retiming or traffic signal upgrades on the roadway system. Other types of congestion management strategies could include promoting alternative modes, parking management, land use managements, and other traffic operational enhancements. Table 5.8 summarizes the congestion management projects. Figure 5-10 shows the approximate location of each project.

Table 5.6 Roadway Projects

Project ID	Proposed Name	Length (miles)	Project Description	System	Estimated Planning-Level Cost
R1	32nd Street West - King Ave West to Gabel Rd	0.8	Reconstruct to a 3-lane urban roadway	Primary	\$4,100,000
R2	Old Hardin Road - Lockwood Interchange to Johnson Ln	2.4	Reconstruct to a 3-lane urban roadway	Primary	\$5,700,000
R3	Wicks Lane (Main to Hawthorne)	0.5	Reconstruct to a 3-lane urban roadway (includes Bitterroot)	Secondary	\$300,000
R4	I-90 Yellowstone River - Billings	0.2	Replace bridges	Interstate	\$72,160,000
R5	Inner Belt Loop - Alkali Creek Rd to Highway 3	5	Construction of a new road from Alkali Creek Road to Highway 3.	Primary	\$7,000,000
R6	1st Avenue South- Minnesota Avenue - 21st St to N 13th St	0.6	Reconstruct to urban roadway	Secondary	\$1,000,000
R7	Pemberton Lane - BBWA to Lake Elmo Dr	0.5	Reconstruct to urban roadway	Local	\$2,900,000
R8	Broadwater Avenue – BBWA to Shiloh Rd	1.5	Reconstruct to urban roadway	Primary	\$4,000,000
R9	48th Street West – King Ave to Grand Ave	2	Reconstruct – cross section to be determined	Secondary	\$5,500,000

2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN

Project ID	Proposed Name	Length (miles)	Project Description	System	Estimated Planning-Level Cost
R10	King Avenue East – Orchard Ln to Sugar Ave	1.7	Reconstruct to a 3-lane urban roadway	Primary	\$1,528,586
R11	Billings Bypass - Five Mile Road		New roadway and intersection improvements	Primary	\$4,500,000
	Billings Bypass - Yellowstone River		New roadway and bridge	Primary	\$52,760,000
	Billings Bypass - RR O'pass		New roadway and overpass	Primary	\$14,400,000
	Billings Bypass - Johnson Ln Interchange - RR O'Pass		New roadway and overpass	Primary	\$8,700,000
	Billings Bypass - Five Mile Road to US 87		New roadway and intersection improvements	Primary	\$16,000,000
	Billings Bypass - Johnson Lane Interchange		New interchange, roadway, and intersection improvements	Primary	\$25,800,000
R12	N 21st Street – Montana Ave to 1st Ave S	0.1	Reconstruct railroad underpass	Secondary	\$3,052,000
R13	N 13th Street – 1st Ave N to Minnesota Ave	0.1	Reconstruct railroad underpass	Secondary	\$18,400,000
R14	27th Street – 1st Ave S to Airport Rd	2.99	Signal Optimization, Mill Overlay, ADA Corners, Sidewalks	Primary	\$15,300,000
R15	Main St - Billings	3.7	Pavement preservation with ADA work	Primary	\$5,735,460
R16	1st Avenue North - Division St to Main St	2	Reconstruct existing cross section	Primary	\$14,500,000
R17	Hawthorne Lane Reconstruction	0.6	Reconstruct the roadway between Yellowstone River Road and Wicks Lane	Local	\$1,000,000

Project ID	Proposed Name	Length (miles)	Project Description	System	Estimated Planning-Level Cost
R18	Lincoln Lane Reconstruction	0.6	Reconstruct the roadway between Bench Boulevard and Conway	Local	\$1,000,000
R19	Daniel Street Reconstruction	1	Reconstruct the roadway between Monad Road and King Avenue	Secondary	\$2,800,000
R20	Various Projects	N/A	Pavement Preservation	N/A	Per Project
R21	MDT Preventive Maintenance	N/A	Pavement Preservation	N/A	Per Project
R22	Billings - NW	N/A	Pavement Preservation	N/A	\$5,035,360
R23	Airport Rd - Zimmerman Trail	N/A	Pavement Preservation	Primary	\$2,303,073
R24 - A	PAVER Program	N/A	Annual Program responsible for crack sealing, overlay, and chip seals of various streets throughout the City. BARSAA funding will be used in PAVER replacing some of the previously approved gas tax funding. The savings in gas tax funding will be used for the Inner Belt Loop project.	N/A	\$14,725,000
R25 - A	Travel Corridor Coordination	N/A	Engineering will be done within Public Works.	N/A	\$400,000
R26 - A	Misc. curb, gutter, and sidewalk	N/A	Annual replacement and infill program of curb, gutter, and sidewalk	N/A	\$3,825,000
R27 - A	Annual ADA Replacement	N/A	Replace handicapped ramps in accordance with the signed agreement between the City of Billings and the Department of Justice	N/A	\$1,250,000
R28 - A	Annual SID Contribution	N/A	This project will provide SID funding for Public Work's property that may be included in an SID for a given year.	N/A	\$6,650,000

Project ID	Proposed Name	Length (miles)	Project Description	System	Estimated Planning-Level Cost
R29 - A	Snow Melt Facility	N/A	Snow melting system to melt some of the snow hauled from the City's streets. Additional funding in FY 2019 will allow development of a storage and melting location in addition to the other sites that will be used.	N/A	\$1,200,000
R30	Mullowney Lane	0.8	Road reconstruction south of Midland Road	Secondary	\$4,100,000
R31	Hallowell Lane Improvements	1	Reconstruct to urban roadway	Secondary	\$1,781,058
R32 - A	SBURA Unimproved Streets Improvements	N/A		N/A	\$1,500,000
R33	King Ave E	0.47	Pavement Preservation	Primary	\$100,000
R34	Grand - 24th to Zimmerman	1.17	Pavement Preservation	Primary	\$1,350,000
R35	Hardin Road	2.08	Pavement Preservation	Secondary	\$240,000
R36	Shiloh Road	1.99	Pavement Preservation	Primary	\$60,000
R37	Blue Creek Road	2.59	Pavement Preservation	Primary	\$881,000
R38	Billings Blvd	0.2	Pavement Preservation	Primary	\$60,000
R39	Highway 3 Widening - Zimmerman to Apache	2	Widen Highway 3 from Zimmerman Trail to Apache Trail with TWLTL	Primary	\$2,600,000
R40	Highway 312 Capacity Improvements - Shoulder Widening	2.5	Shoulder Widening	Primary	\$341,000
R41	Highway 312 Capacity Improvements - Three-lane Section	0.4	Three-lane section, including bridge replacement at seven mile creek	Primary	\$450,000
R42	Highway 312 Pavement Preservation	2.3	Pavement Preservation	Primary	\$2,000,000

Project ID	Proposed Name	Length (miles)	Project Description	System	Estimated Planning-Level Cost
R43	Highway 312 Traffic Control Devices and Safety/ Warning Features	N/A	Signing	Primary	\$3500 per assembly
R44	Grand Ave - Shiloh Rd to 62nd St West	2.8	Widening/Reconstruction (5-lane section)	Primary	\$11,000,000
R45	Rimrock Rd - Shiloh Rd to 62nd St West	2.8	Widening/Reconstruction (5-lane section/3-lane section)	Primary	\$10,300,000
R46	King Ave West - MT Sapphire Dr to 64th St West	2.6	Widening/Reconstruction (5-lane section/3-lane section)	Primary	\$9,300,000
R47	54th St West - Grand Ave to Rimrock Rd	1	Widening/Reconstruction (3-lane section)	Secondary	\$3,300,000
R48	Central Ave - Shiloh Rd to 48th St West	1	Widening/Reconstruction (3-lane section)	Primary	\$3,100,000
R49	62nd St West - Rimrock Rd to Western Bluffs Boulevard	0.5	Widening/Reconstruction (3-lane section)	Primary	\$1,100,000
R50	South Frontage Road	3.75	Pavement Preservation	Primary	\$670,000
R51	SF 169 Blgs Area Safety Imprv.	N/A	Signage -- RP 1.7 - 2.17 (U-1026, King Ave. E); RP 3.45 - 3.65 (U-1027, Yellowstone River Rd); RP 2.35 - 2.45 (L-56-2389, Lake Elmo Drive); RP 1.9 - 2.1 (X-56395, South Frontage Road); RP 0 - 1.379 (L-56-982, Garden Ave); RP 0 - 0.76 (L-56-23, Nahmis Ave); RP 0.05 - 0.3 (L-56-1665, Story Road)	Primary	\$21,000
R52	SF 169 I90 W King Ave Lighting	1.7	Roadway Lighting	Interstate	\$345,000
R53	King Avenue - Shiloh to 72nd	4	Reconstruct to a five lane section	Primary	\$8,000,000

Project ID	Proposed Name	Length (miles)	Project Description	System	Estimated Planning-Level Cost
R54	I-90 from S Blgs Blvd Inch to 27th St Intch	2.9	Add a third travel lane to I-90	Interstate	\$4,000,000
R55	I-90 from Lockwood Intch to Johnson Lane Intch	2.5	Add a third travel lane to I-90	Interstate	\$3,000,000
R56	Hwy 3 from Airport to Zimmerman Trail	3	Widen with two-way, left-turn lane	Primary	\$3,200,000
R57	Various Projects 2017-2021	N/A	Pavement Preservation	N/A	\$2,500,000
R58	Highway 3 to Molt Road Connection Study	2.6	Study the feasibility of constructing a new Roadway connecting Highway 3 to Molt Road	Primary	\$250,000

Table 5.7 Intersection Projects

Project ID	Proposed Name	Project Description	Estimated Planning-Level Cost
I1	Rimrock Rd/N 27th St	Improve intersection capacity, operations, and safety	\$4,700,000
I2	Exposition Drive & 1st Ave N Blgs	Intersection Improvement	\$1,600,000
I3	Monad Rd/Daniel Ln	Improve intersection capacity, operations, and safety	\$400,000
I4	Central Ave/24th St W	Improve intersection capacity, operations, and safety	\$400,000
I5	Airport Rd & Main St - BLGS	Intersection Improvements	\$11,700,000
I6	Rimrock Rd/Virginia Ln	Improve intersection capacity, operations, and safety	\$410,000

Project ID	Proposed Name	Project Description	Estimated Planning-Level Cost
I7	Underpass Avenue Improvements	Intersection Improvements	\$8,600,000
I8	King Ave/24th St	Evaluate intersection to identify alternative intersection treatment	\$1,500,000
I9	Grand Ave/24th St	Evaluate intersection to identify alternative intersection treatment	\$250,000
I10	Division/Grand/6th Ave/N 32nd St	Improve intersection capacity, operations, and safety	\$560,000
I11	Division/Broadway/1st Ave N	Improve intersection capacity, operations, and safety	\$560,000
I12	Lockwood Road & N Frontage Road	Reconfiguration of existing intersection	\$495,000
I13	US Highway 87 & Old Hardin Road	Upgrade 3-way stop intersection to a roundabout	\$630,000
I14	Johnson Lane & Old Hardin Road	Intersection improvements and access management around Johnson Lane Interchange	Included with R23
I15	Shiloh Interchange	Geometric improvements to improve operations and safety	\$1,900,000
I16	South Billings Blvd Interchange	Additional EB and WB mainline lanes under and through the Interchange	\$1,600,000
I17	27th Street Interchange	Construct additional EB and WB mainline lanes under and through Interchange. Restripe EB off-ramp and improve pedestrian facilities	\$1,900,000
I18	Lockwood Interchange	Construct additional EB and WB mainline lanes under and through the Lockwood Interchange and improve pedestrian facilities	\$1,900,000
I19	Johnson Ln Interchange	Geometric improvements to improve operations and safety	Included with R23
I20A	West Billings Interchange	Update geometry to match C standards, improve landscaping and improve pedestrian facilities	\$6,900,000

Project ID	Proposed Name	Project Description	Estimated Planning-Level Cost
I20B		Construct additional EB and WB mainline lanes through interchange, modify vertical curve, reconstruct bridge segments and restripe WB off-ramp at West Billings Interchange.	\$12,600,000
I21	SF 129-RNDABOUT KING 56TH	Construct a roundabout at this intersection	\$4,246,201
I22	SF 139-RNDABOUT CENTRAL/56TH	Construct a roundabout at this intersection	\$3,500,000
I23	Pinehills Intch-Pryor CR Intch	Pavement Preservation	\$887,557
I24	W Blgs Intch - Pinehills Intch	Mill Fill	\$4,462,609
I25	27th Street RR Crossing	Railroad crossing study	\$300,000
I26	SF-149 HILLCREST RIGHT TURN LN	Intersection Improvement	\$331,073
I27	SF 129 BILLINGS HORIZONTAL CURVE SIGNAGE	Signage	\$1,126,611
I28	SF 169 ROUNDABOUT RIMROCK & 62ND ST. W	Roundabout	\$3,655,843
I29	SF 169 ITS INTERSECTION DETECTION	Intersection Improvement	\$73,000
I30	SF 169 KING AVE E. RUMBLE STRIPS	Rumble Strips	\$11,000
I31	SF 169 YELLOWSTONE RIVER RD CHEVRONS	Signage	\$6,000
I32	SF 169 JOHNSON LANE DELINEATION	Signage	\$700
I33	SF 169 LAKE ELMO DRIVE DELINEATION	Signage	\$420
I34	SF 169 SOUTH FRONTAGE ROAD SIGNAGE	Signage	\$6,700

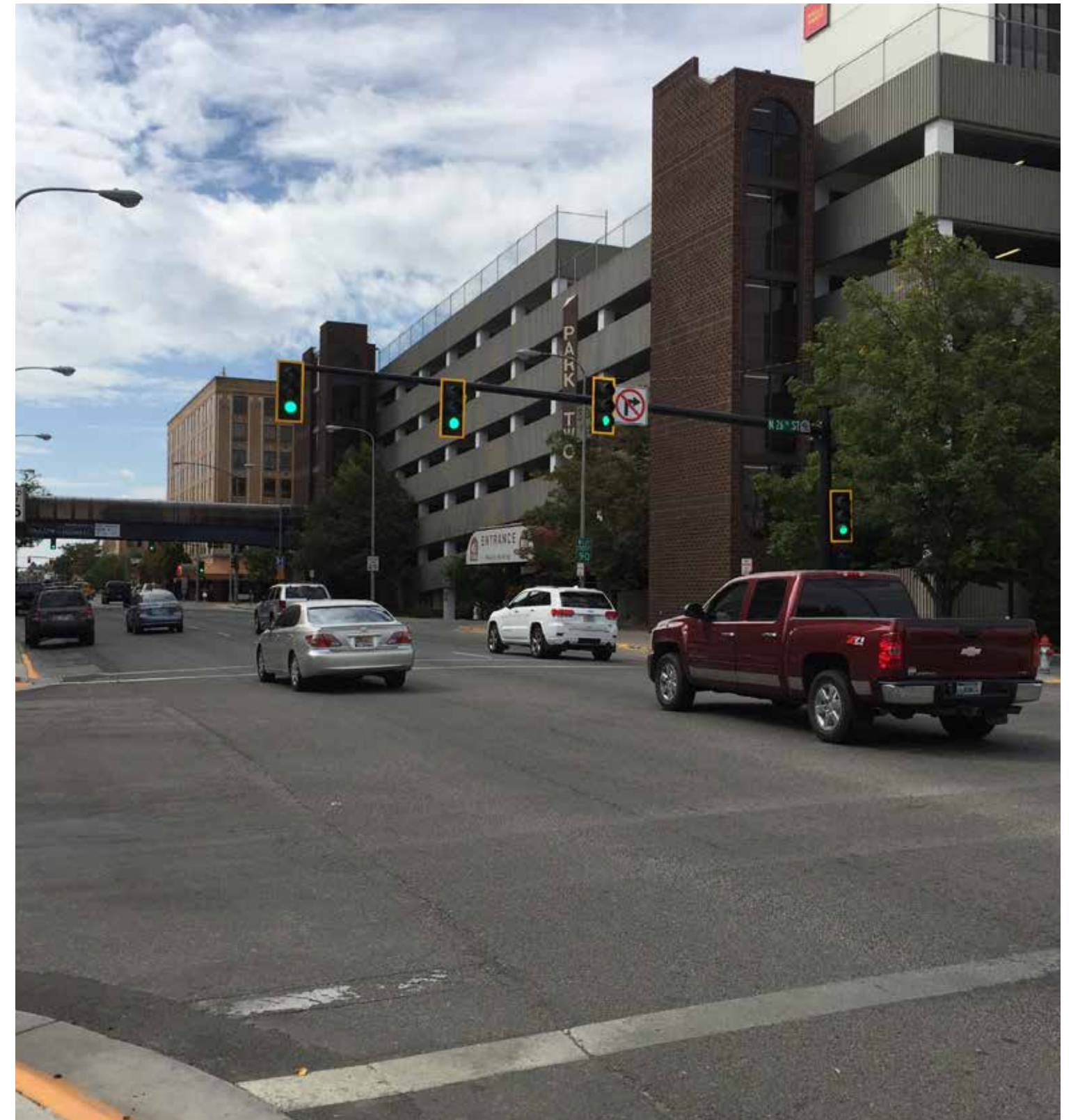
Project ID	Proposed Name	Project Description	Estimated Planning-Level Cost
I35	SF 169 OLD HIGHWAY 312 DELINEATION	Signage	\$3,500
I36	SF 169 GARDEN AVE SIGNAGE	Signage	\$26,000
I37	SF 169 NAHMIS AVE DELINEATION	Signage	\$7,500
I38	SF 169 STORY RD SIGNAGE	Signage	\$3,000
I39	SF 149 - KING INTCH SFTY IMPRV	Safety	\$14,942
I40	Intersection Capacity Improvements	Evaluate and construct improvements to selected intersection trouble areas.	\$2,000,000
I41	Monad and 19th/20th St W Intersection Reconstruction		\$3,500,000
I42	SF-169 Frontage Rd Wise Ln Intx	Intersection Improvement	\$97,800
I43	Highway 3/Rod & Gun Club Road	Install roundabout at Highway 3/Rod & Gun Club Road, including single circulating lane, single-lane approaches, and bike and pedestrian accommodations	\$1,500,000
I44	Highway 312 Intersection Improvements - Intersection Control	Intersection Control	\$1500000 per intersection
I45	Neibauer Rd & 56th St West	All-way stop control/OH Flashing Beacons/Transverse Rumble Strips	\$200,000
I46	Neibauer Rd & 48th St West	OH Flashing Beacons/Transverse Rumble Strips	\$200,000
I47	Grand Ave & 48th St West	Traffic Signal or Roundabout	\$1,500,000
I48	Grand Ave & 56th St West	Traffic Signal or Roundabout	\$1,500,000
I49	King Ave West & 48th St West	Traffic Signal or Roundabout	\$1,500,000
I50	Central Ave & 48th St West	Traffic Signal or Roundabout	\$1,500,000
I51	King Ave West & 64th St West	Traffic Signal or Roundabout	\$1,500,000

Project ID	Proposed Name	Project Description	Estimated Planning-Level Cost
I52	Grand Ave & 62nd St West	Traffic Signal or Roundabout	\$1,500,000
I53	Hesper Rd & 56th St West	All-Way Stop	\$200,000
I54	King Ave/20th St	Evaluate intersection to identify alternative intersection treatment	\$1,500,000
I55	Various Safety Projects	Safety	\$4,500,000
I56	Laurel Road & Moore Lane	Study for capacity improvements	\$250,000
I57	24th Street W & Overland Avenue	Study for capacity improvements	\$250,000
I58	11th Avenue N & N 30th Street	Study for capacity improvements	\$250,000
I59	24th Street W & Grant Road	Study for capacity improvements	\$250,000
I60	24th Street West and Rosebud Drive/Market Place	Study for safety improvements	\$250,000
I61	Blue Creek Rd at Briarwood and Riverfront Park	Add left turn lanes at the two intersections	\$1,000,000
I62	Rimrock Rd/N 27th St	Study for safety improvements	\$250,000

Table 5.8 Congestion Management Projects

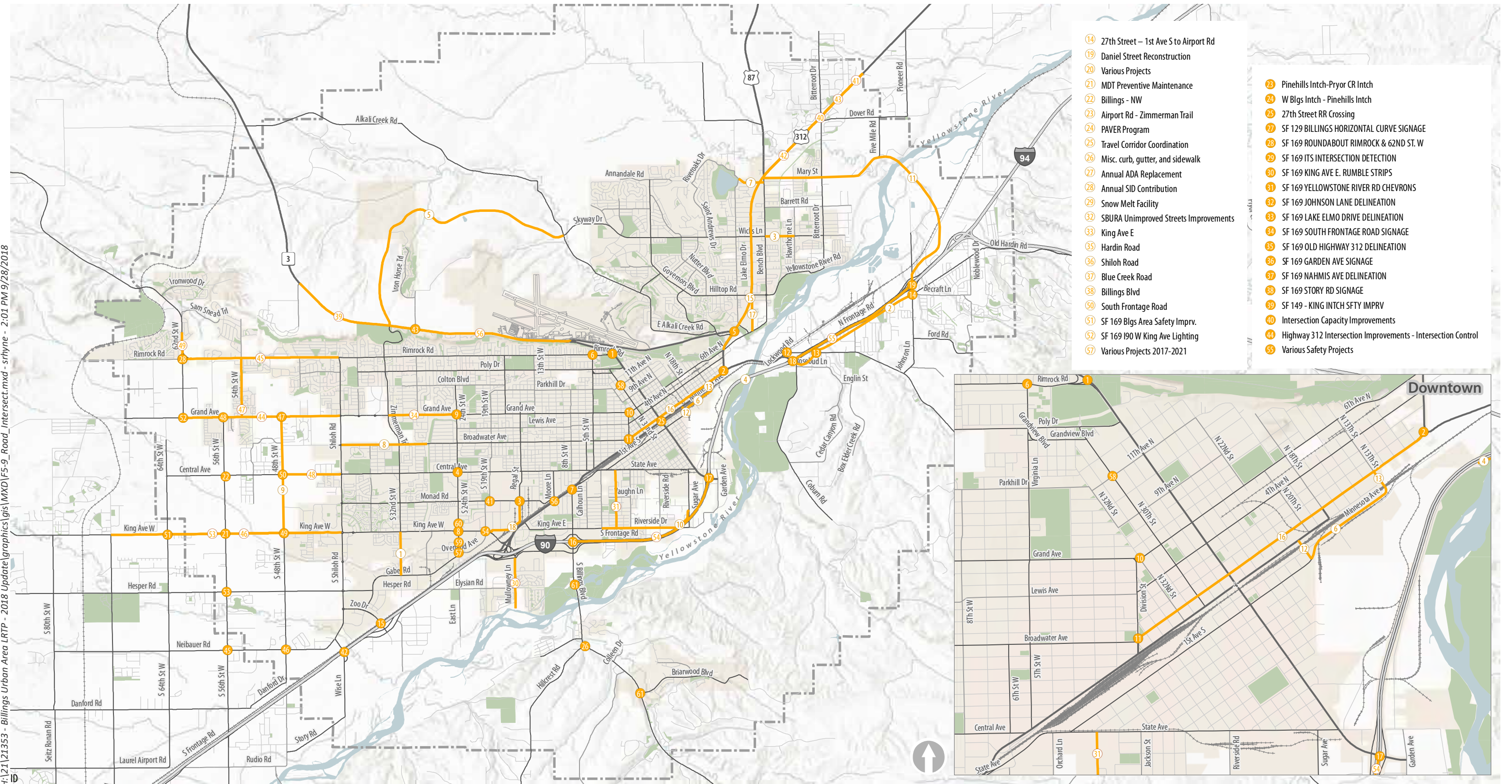
Project ID	Proposed Name	Length (Miles)	Project Description	Estimated Planning-Level Cost
CM1	Grand Avenue – 3rd St W to 24th St W	2.6	Update signal timing for 10 signals	\$100,000
CM2	Broadwater Avenue – 5th St W to Zimmerman	3.3	Update signal timing for 8 signals	\$80,000
CM3	Central Avenue – 6th St W to Zimmerman	3.2	Update signal timing for 10 signals	\$100,000
CM4	24th St West Signal Improvements	2	Upgrade of signals from King Avenue to Grand Avenue	\$220,000
CM5	27th Street – State Ave to Poly Dr	2.1	Update signal timing for 11 signals	\$110,000
CM6	Main Street – 1st Ave N to Permberton Ln	3.4	Signals	\$218,000
CM7	Division Street – Broadwater Ave to 4th Ave N	0.3	Update signal timing for 3 signals	\$30,000
CM8	Grand Avenue – 24th St W to Zimmerman	1.2	Update signal timing for 3 signals	\$30,000
CM9	Rimrock Road – 38th St W to 13th St W	2.6	Update signal timing for 5 signals	\$50,000
CM10	15th Street West – Central Ave to Grand Ave	1	Update signal timing for 5 signals	\$50,000
CM11	Wicks Lane – Governors Blvd to Bench Blvd	2	Update signal timing for 5 signals	\$50,000
CM12	19th Street West – Monad Rd to Grand Ave	1.5	Update signal timing for 5 signals	\$50,000
CM13	17th Street West – Grand Ave to Rimrock	1	Update signal timing for 5 signals	\$50,000
CM14	Monad Road – 19th St W to 32nd St W	1	Update signal timing for 4 signals	\$40,000

Project ID	Proposed Name	Length (Miles)	Project Description	Estimated Planning-Level Cost
CM15	Governors Boulevard/Hilltop Road – Wicks Ln to Main St	2.4	Update signal timing for 3 signals	\$30,000
CM16	ITS Signage and Advanced Warning System	N/A	Implement a signage and advanced warning system to inform transportation users of crossing delays due to incoming and stopped trains	\$500,000
CM17	Downtown Billings Signal Upgrades (No 27th Street signals)	N/A	Traffic signal controller and signal timing upgrades at 36 signals in the downtown area, excluding 27th Street	\$305,875
CM18	Downtown Billings Signal Upgrades	N/A	Traffic signal controller and timing upgrades at 13 signals in downtown	\$316,091
CM19	Downtown Billings Signal Upgrades	N/A	Traffic signal controller and timing upgrades in the downtown area	\$3,160,911
CM20	Citywide Signal Timing	N/A	Traffic signal controller and timing upgrades at 24 signals within Billings	\$372,000
CM21	Billings Signal Upgrades	N/A	Signal Optimization	\$320,869
CM22	Lockwood Signals	N/A	Signal Optimization	\$18,948
CM23	Downtown State Signals BLGS		Signals	\$6,522,824
CM24	Zoo Drive Signals		Signals	\$50,000
CM25	Johnson Lane Signals		Signals	\$12,970
CM26	MDT - MACI	N/A	Statewide CMAQ - Various	\$1,000,000
CM27	MDT - MACI	N/A	Statewide CMAQ - ADA Compliance	\$1,750,000
CM28	Traffic Signal Controller Upgrade	N/A	Traffic signal upgrades throughout the City	\$3,225,000



2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN

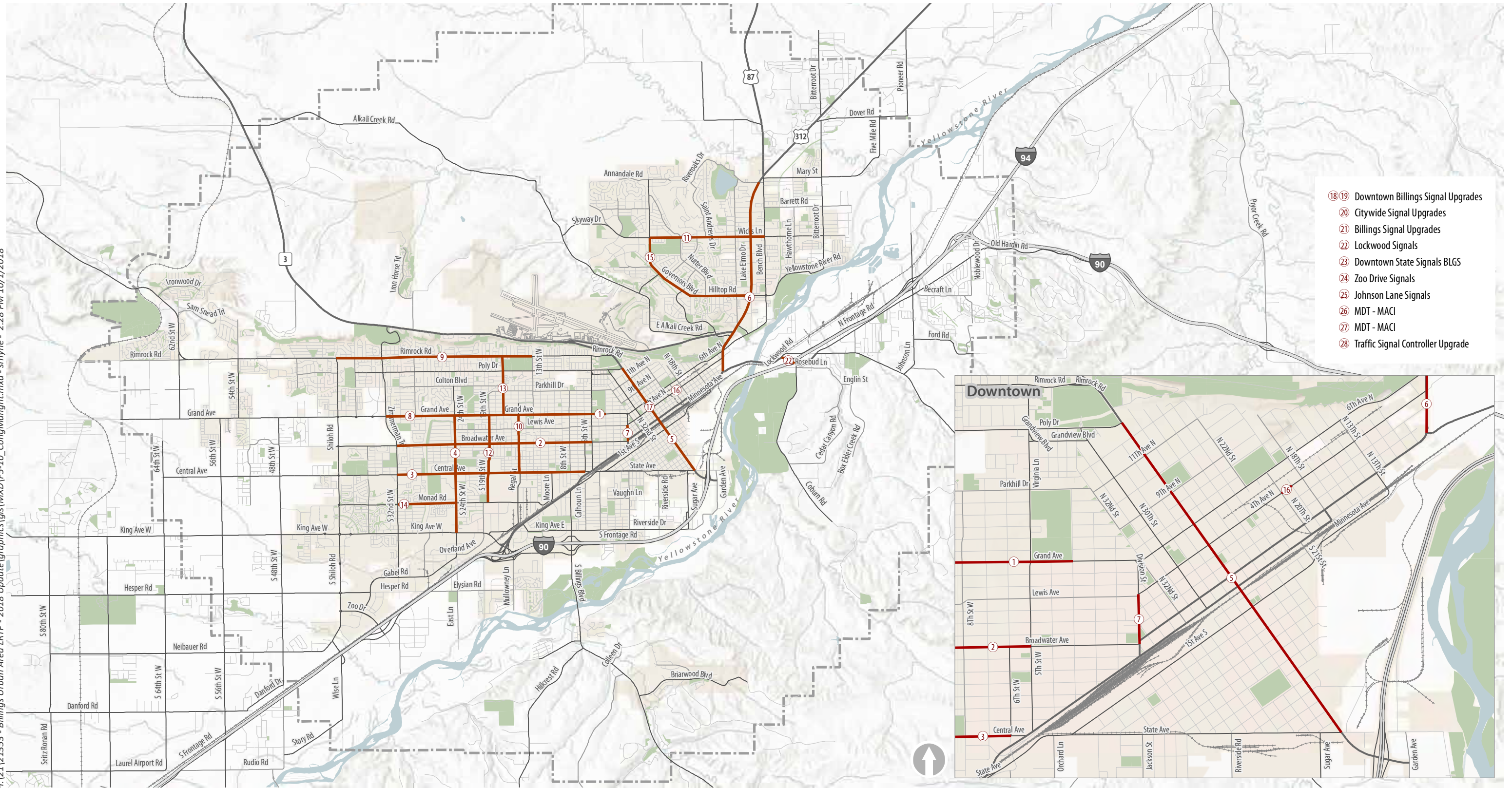
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● Intersection Projects
 — Roadway Projects

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Figure 5-9
 Intersection and Roadway Projects



- 18 19 Downtown Billings Signal Upgrades
- 20 Citywide Signal Upgrades
- 21 Billings Signal Upgrades
- 22 Lockwood Signals
- 23 Downtown State Signals BLGS
- 24 Zoo Drive Signals
- 25 Johnson Lane Signals
- 26 MDT - MACI
- 27 MDT - MACI
- 28 Traffic Signal Controller Upgrade

Congestion Management

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Figure 5-10
Congestion Management Projects

Chapter 6

Public Transit and Transportation



PUBLIC TRANSIT AND TRANSPORTATION

Like most public transportation systems, MET Transit (herein, referred to as MET) has been effective in developing a transit system with the limited funding resources available. Marginal revenue growth and rising operational costs have allowed for minimal service expansion over the past few years. For public transit service to be expanded significantly in the region, an increase in the operations funding would need to occur through an increase in the local mill levy, other local funding sources, and additional federal funds. Through this LRTP process, the community continued to identify projects and support for the public transportation system. Other services that complement MET include private for-profit public transportation providers, transportation network companies such as Uber and Lyft, and air service through the Billings Logan International Airport.

MET started in 1973 with five fixed routes in the Billings Urban Area. MET currently operates 18 routes with flag service and bus stops, transfer centers, and other amenities.

Public transportation continues to be a priority of the community. Public transportation provides access to employment, recreation, shopping and social opportunities and also encourages active transportation such as walking and bicycling to reach transit routes. As such, the 2018 LRTP outlines several goals related to public transportation:



2018 LRTP Goals Related to Public Transit and Transportation

Goal 1: Safety – Develop a safe transportation system

Goal 2: Functional Integrity and Efficiency – Optimize, preserve, and enhance the existing transportation system

Goal 5: Public Transit and Transportation – Create a transportation system that supports the practical and efficient use of transit

Goal 6: Pedestrians and Bicyclists – Create a transportation system that supports the practical and efficient use of active transportation such as walking and bicycling.

Goal 7: Economic Vitality – Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce.

EXISTING PUBLIC TRANSIT SERVICES

PUBLIC FIXED ROUTE

MET serves as the City of Billings fixed-route public transit service provider. Established in 1973 with only five routes, MET currently operates with eighteen routes and has two primary transfer centers. The MET complex is a 31,000 square-foot facility located at 1705 Monad Road in Billings. This complex, built in 1983 with renovations in 1998, 2000, and 2016 provides a centrally located facility for MET operations that includes administration, dispatch, vehicle maintenance, washing, and fueling. MET operates all routes through two transfer centers:

1. **Stewart Park Transfer Center** – This transfer center was constructed in 1993 and renovated in 2003, and is located next to the Rimrock Mall off of Central Avenue. This transfer center has ten bus parking spaces, passenger shelters and benches, and a driver break area.
2. **Downtown Transfer Center** – This transfer center (shown in Exhibit 6.1) was constructed in 2008 (opened in 2009) and is located at 220 N 25th Street in Downtown Billings. This transfer center has fifteen bus parking spaces, passenger shelters and benches, a covered passenger pavilion, and a driver break area. These transfer centers operate a “pulse” system where buses arrive and depart from the transfer center simultaneously.

Fleet

MET operates a fleet of 40 vehicles as detailed in Table 6.1. Exhibit 6.2 shows an example of a typical bus in the MET fleet. Exhibit 6.3 shows a bicycle on the bus.

Table 6.1 MET Fleet

Manufacturer	Description	Number of Vehicles	Equipment
Gillig LLC	35' low floor type	2	Wheelchair ramps, front bumper two-slot bicycle racks
Gillig LLC	35' standard floor type	17	Wheelchair lifts, front bumper two-slot bicycle racks
Champion	30' standard floor type	6	Wheelchair ramps, front bumper three-slot bicycle racks
Gasoline Powered Van	25', 13 passenger van	15	Wheelchair lifts and tie down areas
Total		40 Vehicles	

Source: MET

Exhibit 6.1 Downtown Transfer Center

Source: MET



Exhibit 6.2 Typical MET Bus

Source: MET



Exhibit 6.3 Bicycle on a MET Bus



Source: MET

SERVICE

MET currently provides eighteen fixed routes within the Billings city limits. These eighteen fixed routes include: nine all-day routes; four peak-hour routes; one midday-only route; and four tripper routes.

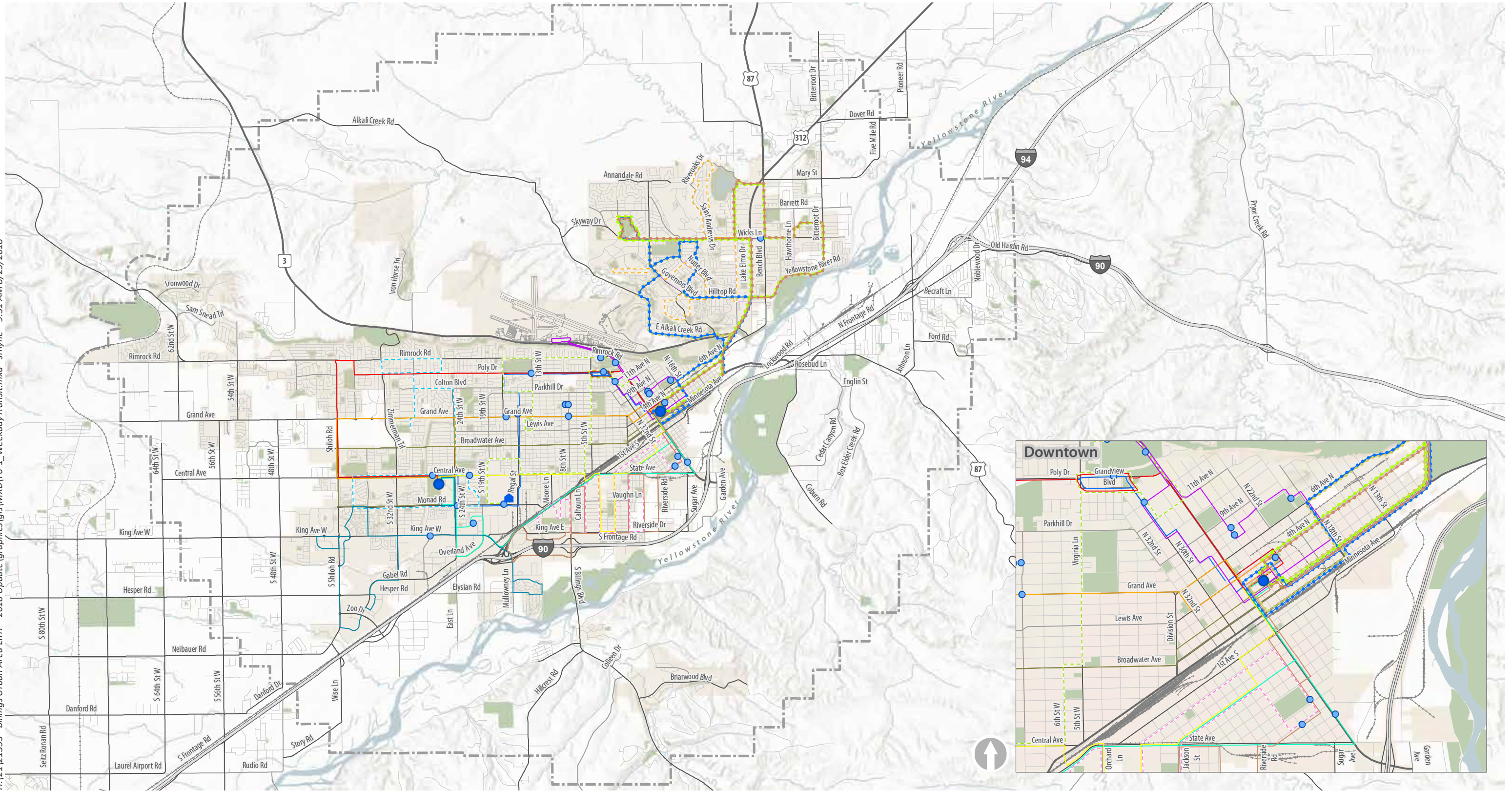
On July 2, 2018, MET updated the bus routes and schedules. Seven routes operate on Saturdays. No service is provided on Sunday. Figures 6-1 and 6-2 show the weekday and Saturday routes, respectively. Routes shown in Figures 6-1 and 6-2 reflect the updated route changes that took place in July 2018. MET also provides four tripper routes to and from middle and senior high schools in the area. Current service hours are shown in Table 6.2.

The downtown transfer center opened in 2009 and is one of the only transit centers in the US that is Leadership in Energy and Environmental Design (LEED) certified Platinum.

Table 6.2 MET Service Hours

Day(s)	Time Service is Available
Monday through Friday	5:50 AM – 6:50 PM
Saturday	8:10 AM – 5:45 PM
Sunday	No Service Available

Source: MET



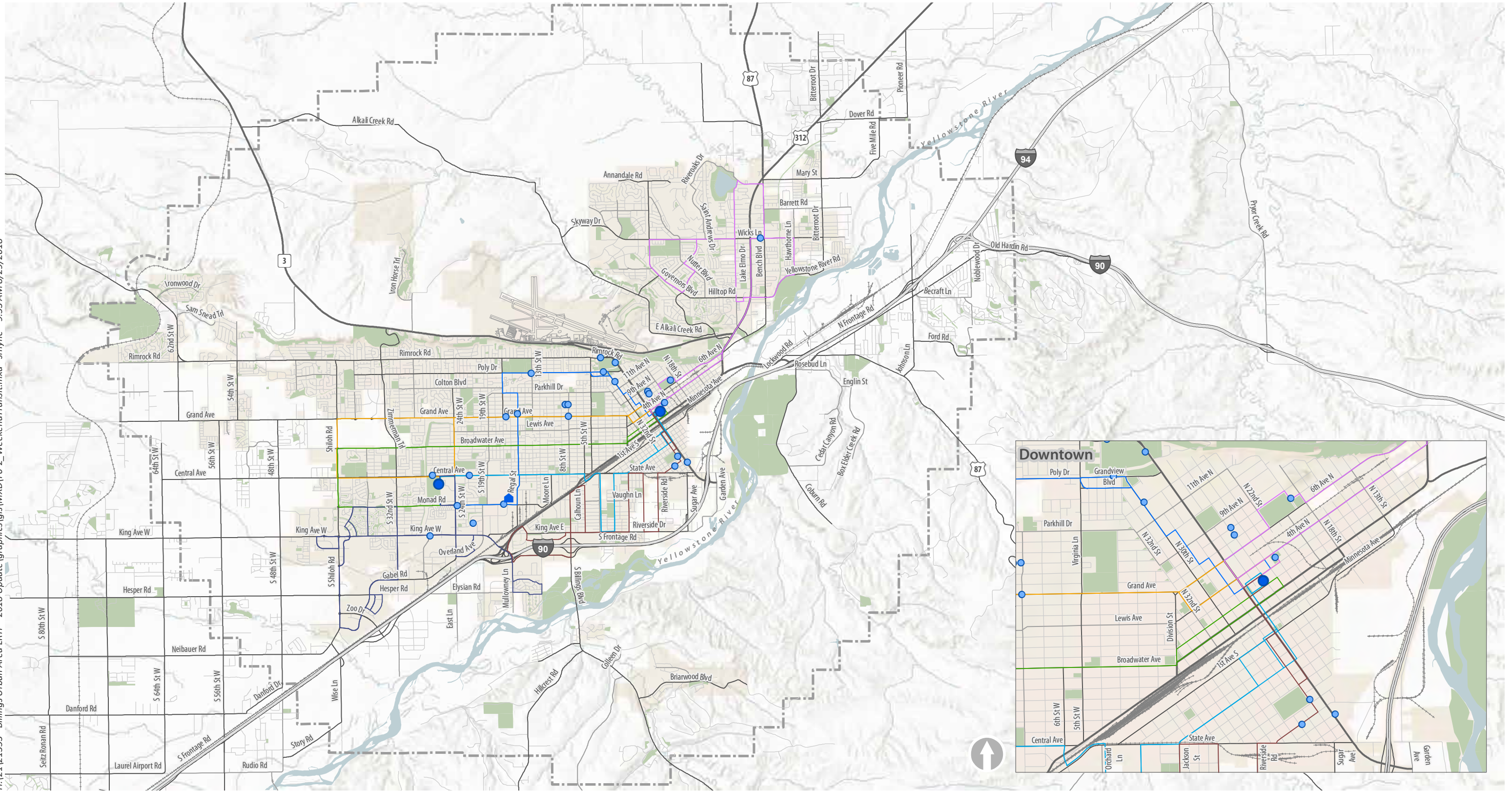
Bus Shelter	Bus Route Number	7	14	18	T2	Study Area
Transit Office	1	9	15	19	T3	City of Billings
Transfer Station	3	10	16	24	T4	Park
	5	13	17	T1		

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Figure 6-1
Existing Weekday Transit Routes

2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN

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- | | | | | | |
|--|--|--|---|---|---|
| ● Bus Shelter | Route Number | — S5 | — S9 | — S18 | Study Area |
| ■ Transit Office | — S3 | — S7 | — S13 | — S19 | Park |
| ● Transfer Station | | | | | City of Billings |

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Figure 6-2
Existing Saturday Transit Routes

MET does not provide service on the following holidays: New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day. The weekday routes typically operate on 60-minute headways with the exception of two routes: the 1 route operates on 30- to 55-minute headways and the 18 and 19 routes operate on 55-minute to two-hour headways.

MET operates a fixed route system with 24 bus shelters in addition to bus benches and signed stops along the routes. MET riders can also flag down the bus at any safe intersection. Shelters are mostly concentrated along the high-volume routes to provide the most heavily used stops with protection from weather. Exhibit 6.4 shows an example of a MET bus shelter. Signed stops are located along all routes to help maintain headways and allow for a more orderly system of boarding and alighting. Additionally, benches are provided at many of the stops.

The current extent of service reaches most every geographic location within the Billings city limits including service to the Billings Logan International Airport. Transit service is not provided in the newer residential areas west of Shiloh Road, except for a short section on King Avenue West. Within the urban area, transit service is not provided to Lockwood. Lockwood is located outside of MET's service area, since MET only serves the City of Billings.

Ridership

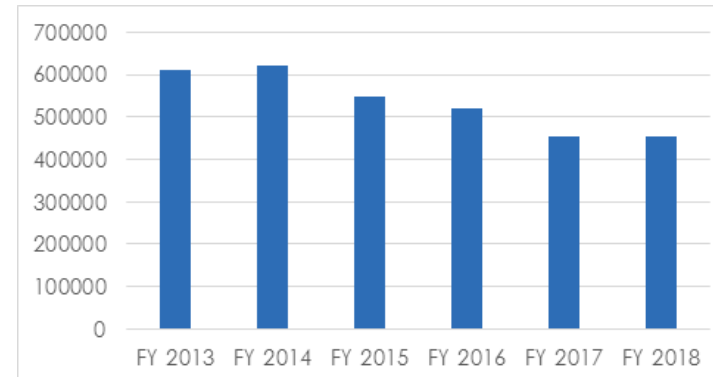
Exhibit 6.5 shows the annual ridership trends on the fixed route service between 2013 and 2018.

Exhibit 6.4 Typical MET Bus Shelter



Source: MET

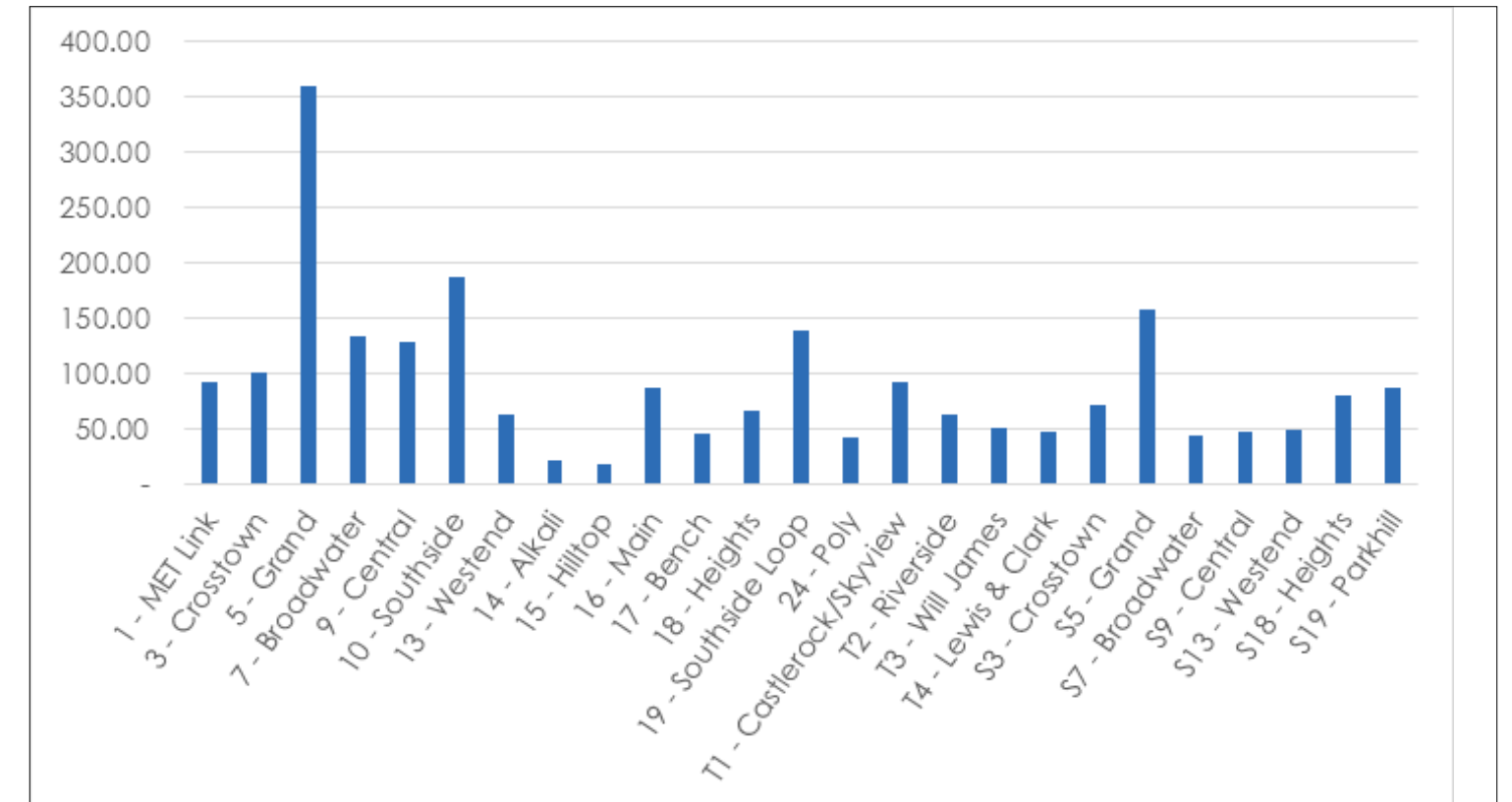
Exhibit 6.5 MET Annual Ridership Trends (FY 2013-FY 2018)



Source: MET

As shown in Exhibit 6.5, fixed route ridership is in a steady decline. Fiscal year 2018 saw a total of 454,395 MET riders and was similar to the FY 2017 ridership total. Exhibit 6.6 shows fiscal year 2018 ridership by route. As shown in Exhibit 6.6, the most productive weekday routes are Grand, Southside, and Southside Loop. Grand is also the most productive weekend route.

Exhibit 6.6 FY 2018 Average Daily Ridership by Route



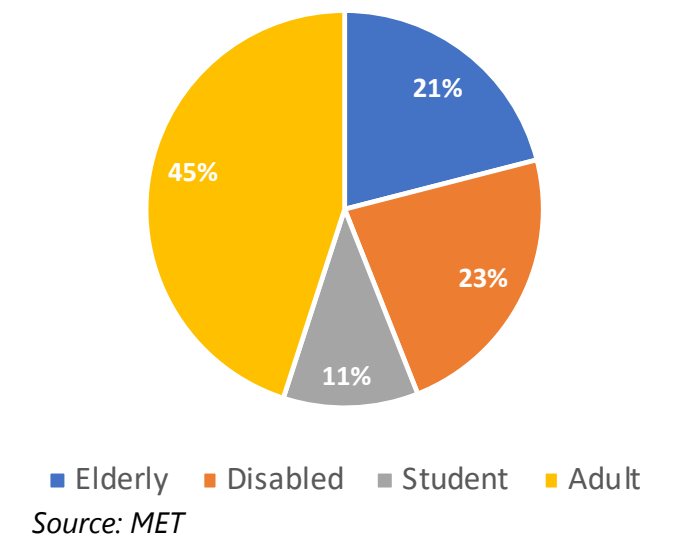
Source: MET

Additionally, based on conversations with MET staff, the Tripper routes are productive during the school year.

The demographic composition of MET ridership is shown in Exhibit 6.7 (6-1). Students represent the 2nd highest rider from their repeated use of the school tripper routes.

Public transportation makes up about 1.6% of commute trips in the Billings Urban Area (Source: ACS 2011)

Exhibit 6.7 MET Ridership



FINANCES

MET is primarily funded through the local transit-designated 10-mill levy property tax approved by voters in 1980. Funding is further supplemented by farebox revenue, advertising revenue, and by Federal Transit Administration (FTA) grants. In 2017, property taxes supported about 42.3% of the total annual operating cost (see Table 6.3) whereas the farebox revenue only supported approximately 11.7% of the total operating cost. Exhibit 6.8 shows the breakdown of actual FY 2017 funding sources.

The breakdown of METs expenditures for fiscal years 2017 through 2022 is shown in Table 6.3. The current rate for MET passengers is \$1.75 per trip. The fiscal year 2017 cost per MET passenger was \$7.58.

Table 6.3 MET Expenditures FY 2017 to FY 2022

Expenditures	Assumed Annual Growth	FY 2017 Actual	FY 2018 Budget	FY 2019 Projected	FY 2020 Projected	FY 2021 Projected	FY 2022 Projected
Operating Expenditures							
Personnel Services	5%	\$3,696,042	\$3,907,846	\$4,103,238.30	\$4,308,400	\$4,523,820	\$4,750,011
Operations & Maintenance	3%	\$871,961	\$1,410,785	\$1,453,109	\$1,496,702	\$1,541,603	\$1,587,851
Fuel	2%	\$284,785	\$400,451	\$408,460	\$416,629	\$424,962	\$433,461
Total Operating		\$4,852,788	\$5,719,082	\$5,964,807	\$6,221,731	\$6,490,385	\$6,771,323
Capital Expenditures							
Federal Capital		\$850,385	\$1,006,264	\$944,077	\$1,350,000	\$500,000	\$800,000
Local Capital		\$212,596	\$251,566	\$236,019	\$337,500	\$125,000	\$200,000
Total Capital		\$1,062,981	\$1,257,830	\$1,180,096	\$1,687,500	\$625,000	\$1,000,000
Total Expenditures		\$5,915,769	\$6,976,912	\$7,144,903	\$7,909,231	\$7,115,385	\$7,771,323

Source: MET

Exhibit 6.8 MET FY 2017 Revenue Sources



Source: MET

PUBLIC PARATRANSIT

MET also operates MET Special Transit (MST) which serves as a specialized, demand-responsive paratransit service. The MST service provides public transportation to persons whose disabling condition prevents the use of fixed route transit. MST is also available for local agencies to contract to provide service to clientele. It also serves as the City's MET-PLUS day-before advance reservation service that provides full compliance with the Americans with Disabilities Act (ADA) requirements. Persons who use this service must be certified as ADA complementary paratransit eligible. A person may be eligible for all or some of their trip needs. Exhibit 6.9 shows an example of a typical MST bus.

Exhibit 6.9 MST Bus



Source: MET

Service

MST operates 15 paratransit buses and provides ADA complementary paratransit service within all areas of the City of Billings. All trips must take place within this defined service area. The service schedule (i.e. when trips can be scheduled) is shown in Table 6.4.

Table 6.4 MST Service Hours

Day(s)	Time Service is Available
Monday through Friday	5:50AM – 6:50PM
Saturday	8:10AM – 5:45PM
Sunday	No Service Available

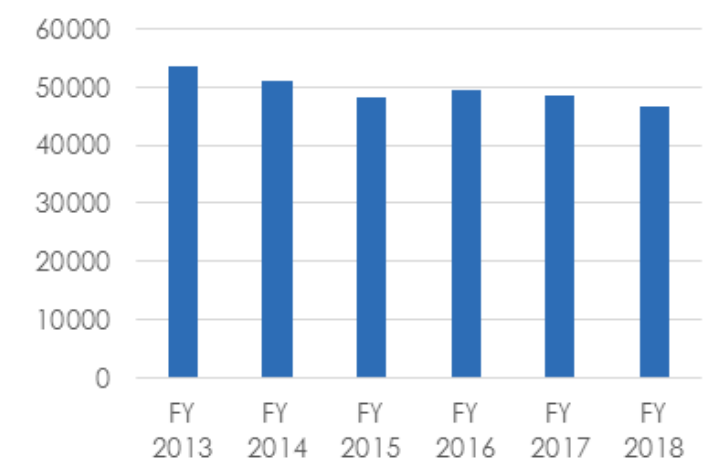
Source: MET

MST does not provide service on the following holidays: New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day.

Ridership

Ridership for MST has fallen in recent years, as shown in Exhibit 6.10. Paratransit ridership decreased from 53,500 rides in FY 2013 to 46,575 rides in FY 2018.

Exhibit 6.10 MST Annual Ridership Trends (FY 2013 - FY 2018)



Source: MET

Finances

The current rate for paratransit passengers is \$3.50 per trip. The FY 2017 average cost per paratransit customer is \$33.46 (up from \$27.02 in 2013). MST operates at a deficit, which is not uncommon for paratransit systems. The budget for MST is incorporated in MET's overall budget.

PRIVATE OPERATORS

Private for-profit public transportation providers operating in and through the Billings Urban Area include intercity bus lines, charter and rental bus services, and taxicab services. Jefferson Lines provides the most extensive service connecting to Bozeman, Butte, Glendive, Livingston, Miles City, Missoula, and Sidney. Table 6.5 shows the private bus operators and their primary connections.

Billings also has several transportation network companies and private taxi services available:

- Uber
- Lyft
- Transportation Services LLC
- Billings Yellow Cab
- Taxiing Services
- City Cab
- Total Transportation (A Plus Limos)
- Billings Limousine Service
- Red Lodge Tour and Taxi

Table 6.5 Private Operator Connections

Company	Connections
Greyhound Lines	Missoula, Superior
Powder River Trailways	Cody, Lovell, Sheridan, WY
Jefferson Lines	Billings, Bozeman, Butte, Glendive, Livingston, Miles City, Missoula, Sidney
Flathead Transit	Missoula, Kalispell, Whitefish
Salt Lake Express	Dillon, Butte

EXISTING AIRPORT FACILITIES/ ACCESS

Billings Municipal Airport was officially opened in 1928. In 1971, the airport was renamed, as it is presently referred to, Billings Logan International Airport (airport code is BIL). The Billings Logan International Airport Master Plan was completed in March 2010 (6-3). This Master Plan documents planned expansions and improvements for the airport over the next twenty years. One of the improvements documented is the design for an expanded concourse area that will allow for more passenger gates and aircraft parking positions to accommodate the growing number of passengers. The existing five aircraft loading positions will be expanded to at least eight, with expanded passenger hold rooms, restrooms, and concessions. The terminal improvements are expected to be completed by 2021.

AIRPORT SERVICE

Currently, the airport serves as a regional hub for air traffic (shown in Exhibit 6.11) with nonstop service to five cities in Montana and ten U.S. cities outside of Montana:

- Chicago (seasonal)
- Dallas
- Denver
- Las Vegas – biweekly
- Los Angeles – seasonal
- Mesa – biweekly
- Minneapolis
- Portland
- Salt Lake City

- Seattle
- Sidney, Wolf Point, Havre, Glasgow, and Glendive, Montana

The Federal Aviation Administration (FAA) classifies the airport as a small hub with a local market area extending throughout central and eastern Montana.

The airport’s importance to the region and State has been growing with passenger enplanements of 437,810 in FY 2017.

The airport has cargo and mail operations with 41,324 tons passing through in FY 2017. United Parcel Service and Federal Express serve the Billings market as well as several smaller cargo feeder airlines. The airlines currently serving the airport are shown in Table 6.6.

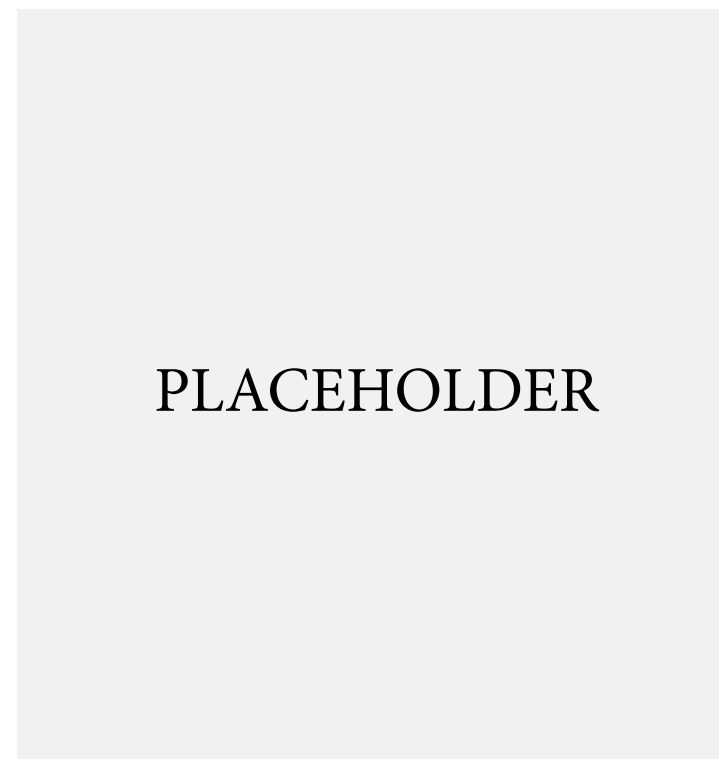


Table 6.6 Private Operator Connections

Airline	Direct Services	Daily Departures from BIL	Weekly Departures from BIL
Delta	Minneapolis, Minnesota and Salt Lake City, Utah	5	
United	Denver, Colorado and seasonally to Chicago, Illinois	5	
Alaskan	Seattle, Washington and Portland, Oregon	3	
American	Dallas, Texas	1	
Allegiant	Mesa, Arizona; Las Vegas, Nevada; and seasonal to Los Angeles, California		6
Cape Air	Glasgow, Glendive, Havre, Sidney and Wolf Point, Montana	13	

Exhibit 6.11 National and Regional Direct Flights from BIL



NEEDS AND DEFICIENCIES

To guide identification of future public transportation strategies, deficiencies and needs were collected from the public and MET.

PUBLIC FEEDBACK

Nine percent of the public comments corresponded to transit deficiencies and needs in the study area. Review of the public comment feedback suggested the following themes:

- Better bus frequency, especially to:
 - Billings Heights
 - West End
 - Montana State University – Billings (MSUB)
 - Hospitals
- Longer service spans, especially in:
 - Billings Heights
 - West End
 - South Side
- New service to:
 - Laurel
 - Briarwood
 - Schools throughout the Billings urban area
- More bus stops and bus shelters
- Better schedule coordination for transfers, especially downtown
- Better bus schedule advertisement and publicization
- Right-sized buses
- Sustainable fuel sources for buses
- More affordable flights at Billings Logan International Airport

MET NEEDS IDENTIFICATION

Key needs identified through discussions with MET include:

- **Funding** – Explore opportunities to increase funding through federal and local sources.
- **Capital Assets** – Specific asset needs are defined in the Transit Asset Management Plan, which was recently completed by MET. These needs include rolling stock, equipment, and facilities.
- **Service** – MET intends to have an all-day fixed-route service to Billings Heights by 2020.
- **Technology** – MET intends to provide all fixed-route buses with Automatic Vehicle Locators (AVL) by 2019 and to provide all fixed-route buses with automated fare collection systems and automated passenger counters by 2025.
- **Transit Stops** – MET intends to implement designated fixed-route bus stops by year 2025.
- **Service Analysis** – MET intends to complete a comprehensive service analysis by year 2025.

MET will monitor its progress towards addressing these needs to align with the goals, objectives, and targets established in Chapter 3.

PUBLIC TRANSPORTATION STRATEGIES

At this time, MET does not have the ability to expand the public transit system based on the current and projected operational funds. For public transit service to be expanded significantly in the region, an increase in the operations funding would need to occur through an increase in the local mill levy, other local funding source, and/or additional federal funds. Through this LRTP process, the community continued to identify projects and support for the public transportation system. Public transportation continues to be a priority

of the community. It is recommended that the MPO and MET partner and investigate further the operations funding options for the region, what support there is within the community to fund transit and determine a plan to begin funding expansion of public transit in the Billings urban area. It is also recommended that MET monitor its progress towards the funding, capital assets, and service analysis related goals described above.





Chapter 7

Truck Services and Facilities



TRUCK SERVICES AND FACILITIES

The movement of goods and services is an economic driver for the City of Billings. As the largest city in Montana, Billings experiences a significant amount of truck traffic on its roadway system due to the geographic location and proximity to other major hubs. Exhibit 7.1 shows the designated National Highway Freight Network in Montana (7-1). Exhibit 7.2 shows the level of commercial truck traffic on highways within Montana (7-2). As shown in Exhibit 7.1, Interstate 90 through Billings is designated on the freight network and connects with other cities to the west in Montana and to the south in Wyoming. As shown in Exhibit 7.2, Interstate 90 is the busiest Interstate route within the state, with commercial vehicle activity being the greatest in the Billings area. Several of the 2014 LRTP goals correspond to the movement of goods and services:

2018 LRTP Goals Related to Truck Services and Facilities

Goal 1: Safety – Develop a safe transportation system

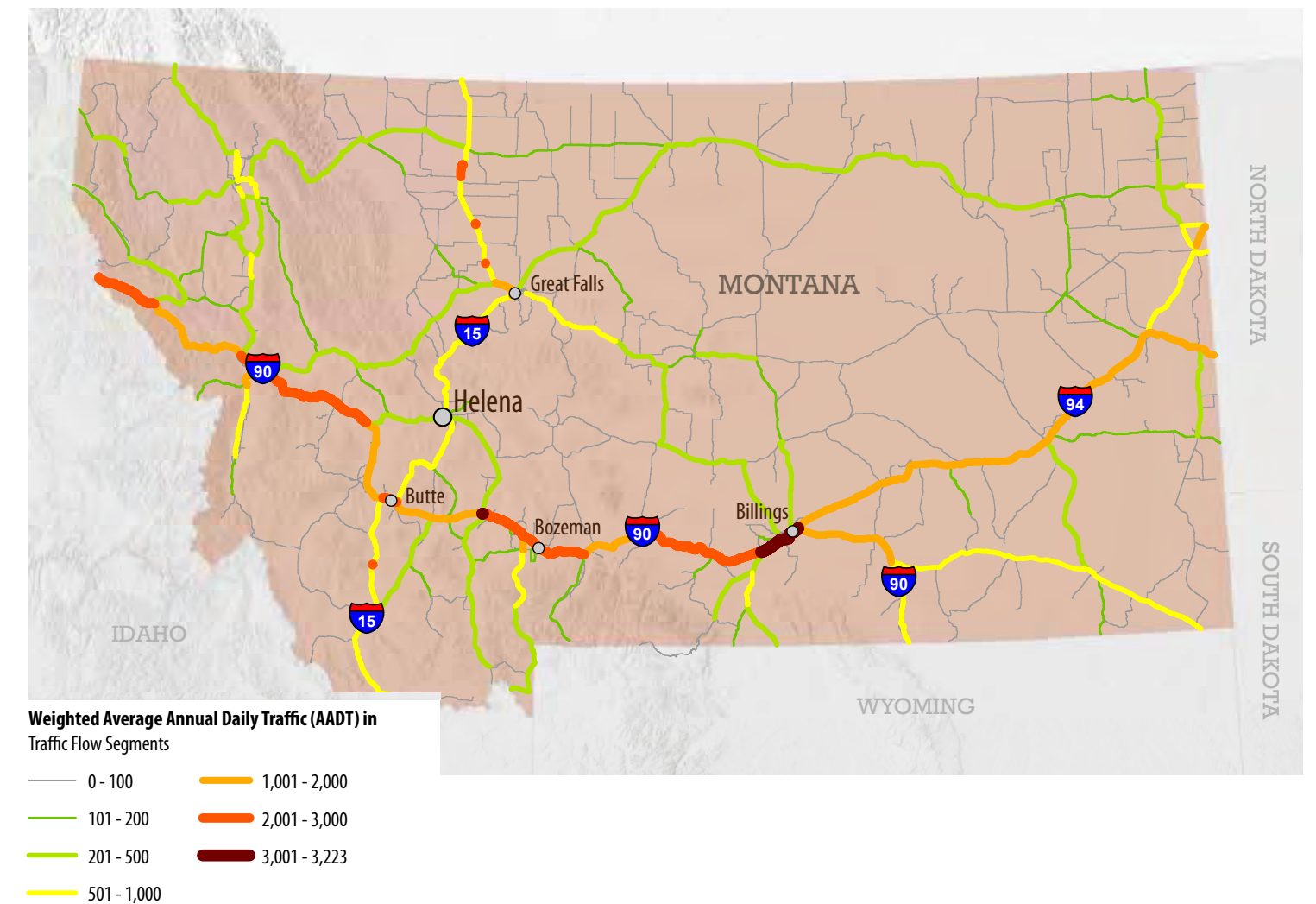
Goal 2: Functional Integrity and Efficiency – Optimize, preserve, and enhance the existing transportation system

Goal 7: Economic Vitality – Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce.

Exhibit 7.1 National Highway Freight Network in Montana



Exhibit 7.2 Montana Commercial Truck Traffic 2015



LITERATURE REVIEW

Recent city and statewide studies/plans were reviewed for existing conditions, available data, and short and long-range projects related to railroad facilities in the study area. These studies/plans are described below:

- **2017 Montana Freight Plan** (7-2) represents the first plan specific to freight for MDT and for the state. This plan provides a comprehensive evaluation of freight transportation in Montana and provides guidance for both short and long-term freight-related transportation investment decisions.
- **2016 City of Billings Growth Policy** (7-3) includes a goal that the transportation system is designed to be safer and more efficient for all users. This goal has an objective on rail and freight, specifically for safe railroad crossings (both vehicle and pedestrian) and passenger rail.
- **2016 Lockwood Growth Policy** (7-4) has a growth guideline for the TEDD, which is an area located in the northeast area of Lockwood that has an emphasis on industrial uses and connectivity with the railroad.
- **Lockwood TEDD Strategic Plan** (7-5) provides a path for further developing a competitive advantage for Yellowstone County over competing locations for business and professional employment. The purpose of the Lockwood TEDD is to provide planned industrial space in order to attract and retain industrial and manufacturing businesses in Yellowstone County. The

location of the Lockwood TEDD is located next to the rail service provided by MRL. The plan identifies that additional rail spurs and a transloading facility would benefit the development of the Lockwood TEDD.

- **Montana Freight Assessment:** Trends and Opportunities to Improve Access and Create Freight Efficiencies for Montana Companies (7-6) summarizes the potential for improving Montana's freight infrastructure to benefit producers and manufacturers.
- **Freight Analysis Framework** (7-7) produced through a partnership between BTS and FHWA, integrates data from a variety of sources to create a comprehensive picture of freight movement among states and major metropolitan areas by all modes of transportation. FAF version 4 (FAF4) provides estimates for tonnage (in thousand tons) and value (in million dollars) by regions of origin and destination, commodity type, and mode. Available data used for the 2018 LRTP includes data from 2016 and forecasts to 2045.
- **Billings Montana City Code Article 24-900** – Truck Travel and Truck Routes (7-8) designates the routes for intracity and intercity truck travel.
- **Yellowstone County Ordinance 07-107 to Limit Truck Traffic on Certain County Roads** (7-9, 7-10) designates routes for truck travel within Yellowstone County.

EXISTING CONDITIONS

This section includes a summary of existing truck facilities, routes, and high freight activity zones within the study area. A brief safety and operations analysis was performed to identify any trends related to truck traffic along key corridors and at key intersections.

FACILITIES

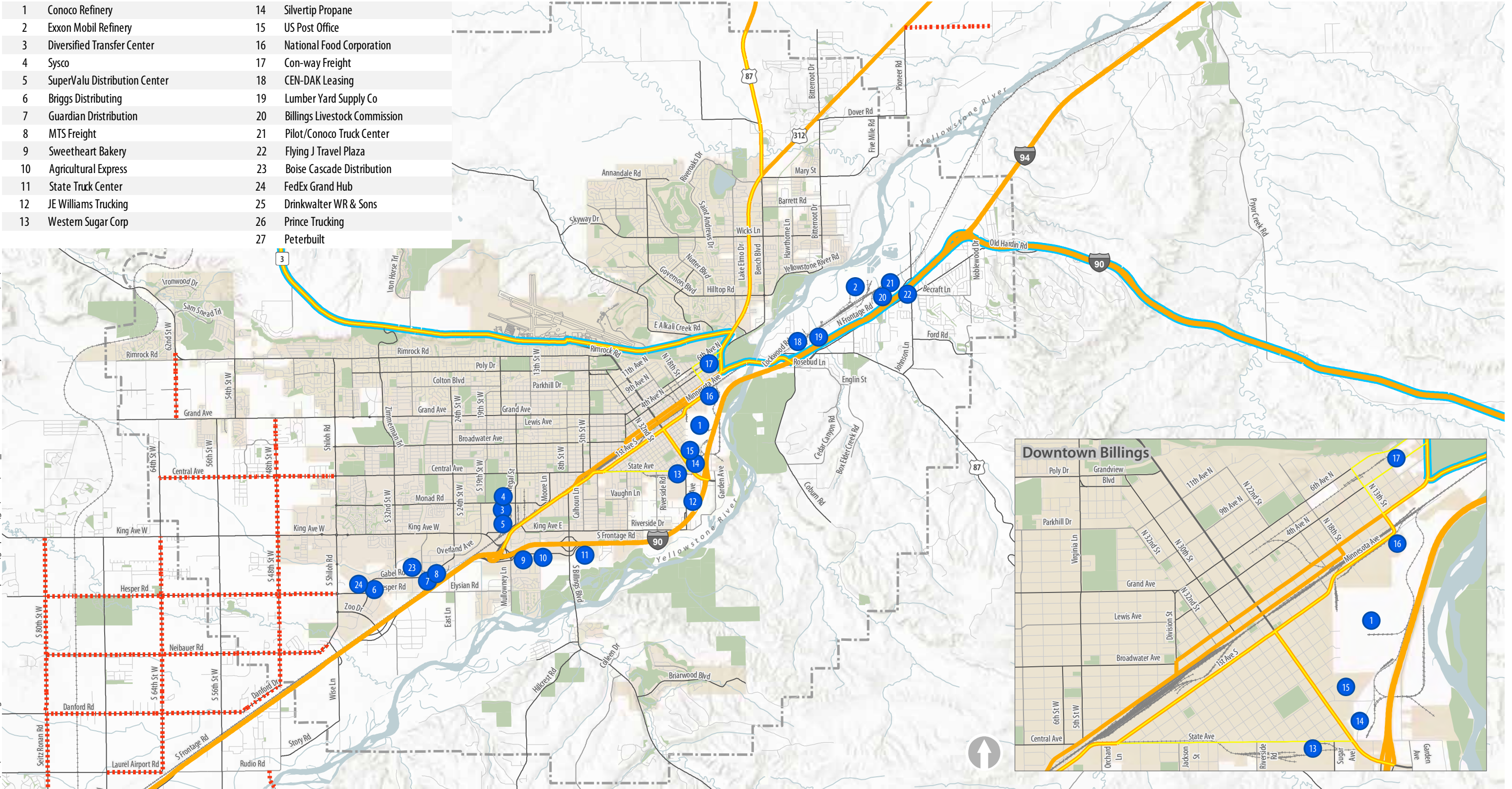
Figure 7-1 shows the existing truck routes, restrictions, and local generators within Billings. As shown in Figure 7-1, the study area is served by Interstate 90, Interstate 94, US Route 87, US Route 312, and Montana Route 3. Billings lies along the Camino Real Corridor, a high priority corridor on the National Highway System and part of the North American Free Trade Agreement

(NAFTA) that connects Canada, United States, and Mexico. In Montana, the Camino Real Corridor follows Interstate 90 from Buffalo, WY to Billings, MT, then continues north on Montana Route 3, US Route 12, US Route 191, US Route 87 to Interstate 15 at Great Falls and continues from Great Falls on Interstate 15 to the Canadian border. Truck traffic within Billings plays a critical part in the economic vitality and movement of commerce throughout the state, country, and world.



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1	Conoco Refinery	14	Silvertip Propane
2	Exxon Mobil Refinery	15	US Post Office
3	Diversified Transfer Center	16	National Food Corporation
4	Sysco	17	Con-way Freight
5	SuperValu Distribution Center	18	CEN-DAK Leasing
6	Briggs Distributing	19	Lumber Yard Supply Co
7	Guardian Distribution	20	Billings Livestock Commission
8	MTS Freight	21	Pilot/Conoco Truck Center
9	Sweetheart Bakery	22	Flying J Travel Plaza
10	Agricultural Express	23	Boise Cascade Distribution
11	State Truck Center	24	FedEx Grand Hub
12	JE Williams Trucking	25	Drinkwater WR & Sons
13	Western Sugar Corp	26	Prince Trucking
		27	Peterbilt



- Major Truck Activity
- Highway Truck Route
- Camino Real Corridor (Federal)
- Intercity Truck Route (City of Billings)
- - - Restricted Truck Routes (Yellowstone county)
- Study Area
- Park
- City of Billings

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Figure 7-1

Existing Truck Routes, Restrictions, and Local Generators

Table 7.1 summarizes the roadway characteristics for the existing truck routes within the study area.

Table 7.1 Truck Route Roadway Characteristics

Roadway ¹	Functional Classification ²	Truck Route Designation ³	Access Type	# of Through Lanes	Posted Speed (mph ⁴)	AADT ^{5, 6}	Truck % ⁷
Interstate 90	Interstate	Highway, Camino Real, Intercity	Grade Separated	4	75	30,000	10% - 18%
Interstate 94	Interstate	Highway	Grade Separated	4	75	9,000	15% - 21%
US Route 87	Principal Arterial	Highway, Camino Real, Intercity	Limited Access	2	70	5,000	5%
Roadway ¹	Functional Classification ²	Truck Route Designation ³	Access Type	# of Through Lanes	Posted Speed (mph ⁴)	AADT ^{5, 6}	Truck % ⁷
US Route 312	Principal Arterial	Highway, Intercity	Limited Access	2	60	11,500	
Montana Route 3	Principal Arterial	Highway, Camino Real, Intercity	Limited Access	2	60	4,200 - 14,400	
Main Street	Principal Arterial	Highway, Camino Real, Intercity	Signalized	6	45	18,500 - 44,200	2%
27th Street	Principal Arterial	Intercity	Signalized	4	30	13,000 – 18,500	
6th Avenue N	Principal Arterial	Intercity	Signalized	4	35	13,700	
4th Avenue N	Principal Arterial	Intercity	Signalized	3	35	11,700	
1st Avenue N	Principal Arterial	Intercity	Signalized	4	35	13,800 – 26,200	
N 13th Street	Collector	Intercity	Signalized	4	25	4,800	
Laurel Road	Principal Arterial	Highway, Intracity	Signalized	4	45	20,700 – 23,900	
Shiloh Road	Principal Arterial	Intracity	Roundabout	4	45	13,300 - 16,400	
Zoo Drive	Principal Arterial	Intracity	Signalized	4	35	4,700 - 10,000	
King Avenue W	Principal Arterial	Intracity	Signalized	4	35	5,000 - 43,500	
State Avenue	Minor Arterial	Intracity	Signalized	2	35	5,700 – 6,700	
Zimmerman Trail	Principal Arterial	Intracity	Signalized	2	25	9,000 - 12,800	
S. Billings Blvd	Principal Arterial	Intracity	Signalized	2	35	9,500 - 16,500	
1st Avenue S – Minnesota Avenue	Principal Arterial	Intercity	Signalized	2 to 4	25	9,200 - 10,200	
Old Hardin Road	Principal Arterial	-	Unsignalized	2	45	3,900 - 9,100	
Johnson Lane	Principal Arterial	-	Signalized	2	45	2,100 - 13,300	12% - 16%

¹Refer to Figure 7-1 for limits of truck routes

²Billings Urban Area Functional Classification Map (7-11)

³GIS data provided by the City of Billings

⁴mph – miles per hour

⁵MDT Traffic Data (7-12); 2017 Traffic Count Map (7-13); Yellowstone County Traffic Counts (7-14) - range provided if multiple AADT values were given.

⁶AADT – Average Annual Daily Traffic

⁷Truck percentages

As shown in Table 7.1 and Figure 7-1, the area is connected by a number of major highway and interstate facilities. These facilities provide trucks with direct access to several Principal Arterial roadways to travel through the City and access to various land uses associated with truck activity. Key characteristics of the truck routes are identified in Table 7.1, such as signalized corridors along Main Street and King Avenue, and a roundabout corridor along Shiloh Road. The City of Billings and Yellowstone County have designated truck travel and truck routes within the city limits.

- The Billings Montana City Code (BMCC) Article 24-900 – Truck Travel and Truck Routes (7-8) designates the routes for intracity and intercity truck travel. A truck is defined as a vehicle with a combined gross vehicle weight of 8,000 pounds (except for unloaded agricultural vehicles being used for passenger transportation) or more, which includes medium trucks, delivery trucks, dump trucks, tractor trailer trucks, heavy trucks, and super-heavy trucks. The BMCC directs truck routes passing through the City to an outside destination to use the major highways and arterials to connect with Interstate 90. The BMCC discourages truck use on Zimmerman Trail and 27th Street.
- Yellowstone County Ordinance 07-107 to Limit Truck Traffic on Certain County Roads (7-9, 7-10) designates routes for truck travel within Yellowstone County. A truck is defined as a vehicle with a combined gross vehicle weight of 16,000 pounds or more, which includes some medium trucks, delivery trucks, dump trucks, tractor trailer trucks, heavy trucks, and super-heavy trucks. The ordinance restricts truck activity along several county roads with the intent to reduce deterioration of the roads.

MAJOR TRUCK ACTIVITY CENTERS

Figure 7-1 identifies the location of major truck activity centers. These activity centers typically generate more truck traffic than other uses in the city. As shown in Figure 7-1, most of the truck destinations identified lie near Interstate 90, usually close to an existing interchange. Access is provided to Interstate 90 with interchanges at Shiloh Road/Zoo Drive, King Avenue (West Billings), South Billings Boulevard, South 27th Street, Old US 87 (Lockwood), and Johnson Lane. From a network perspective, truck traffic leaving the city to travel east or west is located close to the Interstate, providing easy travel for commercial trucks traveling east-west. However, trucks traveling north

The Johnson Lane/ Interstate 90 interchange area experiences a large proportion of daily truck activity. Improvements to this area with the Billings Bypass and Montana's first diverging diamond interchange will enhance truck mobility and the movement of goods to and from Billings.

must pass through Billings to connect with Montana Route 3, US Route 87, or Old Highway 312. The lack of north-south routes in the city make this difficult for truck travel. Additionally, two of the existing north-south routes, N. 27th Street and Zimmerman Trail, have steep grades that make it challenging for truck/commercial vehicles to traverse and are discouraged for truck use by the BMCC. Additionally, Main Street, the other north-south route, includes several signalized intersections and a few congested intersections during the morning and evening peak hours, which increases the travel time and adds difficulty for trucks that stop and have to get started again. In addition to the overall network/system, the local

connections from the Interstate are critical to support freight movement between the region and local uses. Exhibit 7.3 shows truck activity centers near the Johnson Lane interchange in Lockwood. As shown in Exhibit 7.3, access to this truck activity center is served by the Johnson Lane interchange with Interstate 90. The interchange has two signalized intersections and larger radii at the intersections to accommodate truck travel. This interchange area experiences heavy truck activity, as shown in Exhibits 7.4, 7.5, and 7.6.

Exhibit 7.4 Truck Activity Center near Johnson Lane Interchange

PLACEHOLDER

Exhibit 7.5 Turning Trucks at the Johnson Lane and Frontage Road Intersection



Exhibit 7.6 Single Truck at the Johnson Lane and Frontage Road Intersection



Exhibit 7.7 Truck Activity at the Pilot/Conoco Truck Center



SAFETY

Crash data for the study area was reviewed to identify crashes involving commercial vehicles over the five-year period from 2013 to 2017. Table 7.2 summarizes the commercial vehicle related crashes.

Table 7.2 Commercial Vehicle Related Crash Summary (2013-2017)

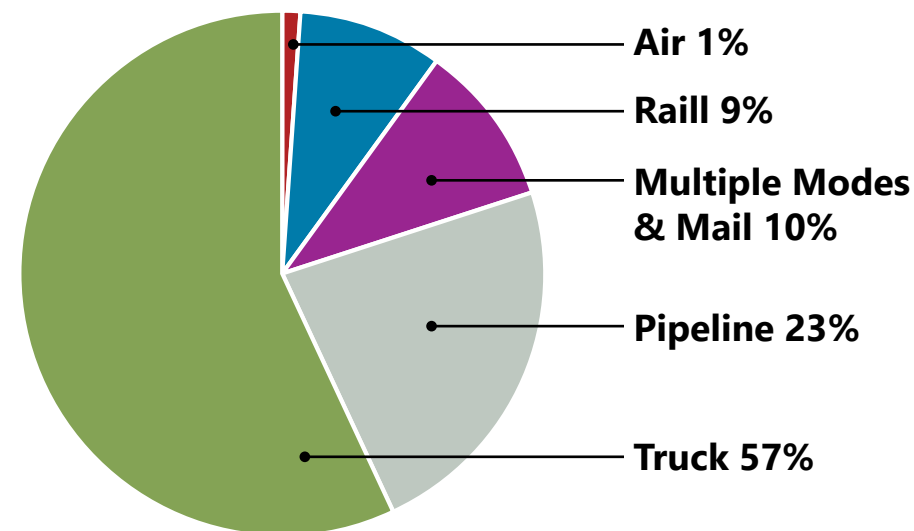
Category	Property Damage Only	Possible Injury	Non- Incapacitating Injury	Incapacitating Injury	Fatal	Unknown	Total
Crash Involving a Commercial Vehicle (Truck >10,000 pounds)	410 (80%)	64 (12%)	25 (5%)	9 (2%)	2 (<1%)	3 (<1%)	513

As shown in Table 7.2, there have been 513 reported crashes involving a commercial vehicle over the five-year time period. Of the crashes, 80% were property damage only crashes. Of the 100 crashes that did result in a type of injury, two of them were fatal crashes. Figure 7-2 shows the location and severity of commercial vehicle related crashes within the study area.

FUTURE TRUCK DEMAND

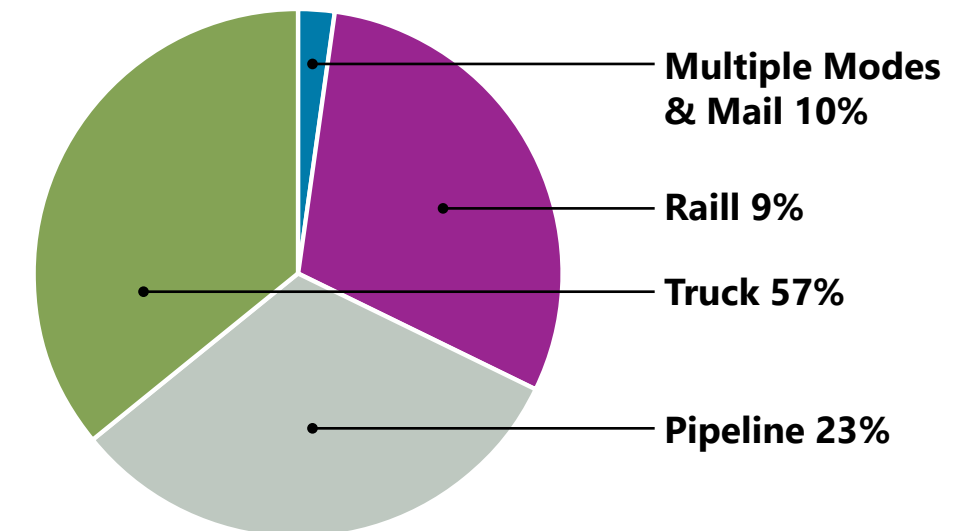
To aid in the identification of truck facility needs, year 2015/2016 and future year (year 2045) rail demand was summarized based on data provided in the Freight Analysis Framework by Federal Highway Administration (FHWA) (7-10). Exhibit 7.8 and Exhibit 7.9 show the percent breakdown of mode choice for moving freight by value and by weight in 2015, respectively.

Exhibit 7.8 Montana Freight Value Moved by Mode (2015)

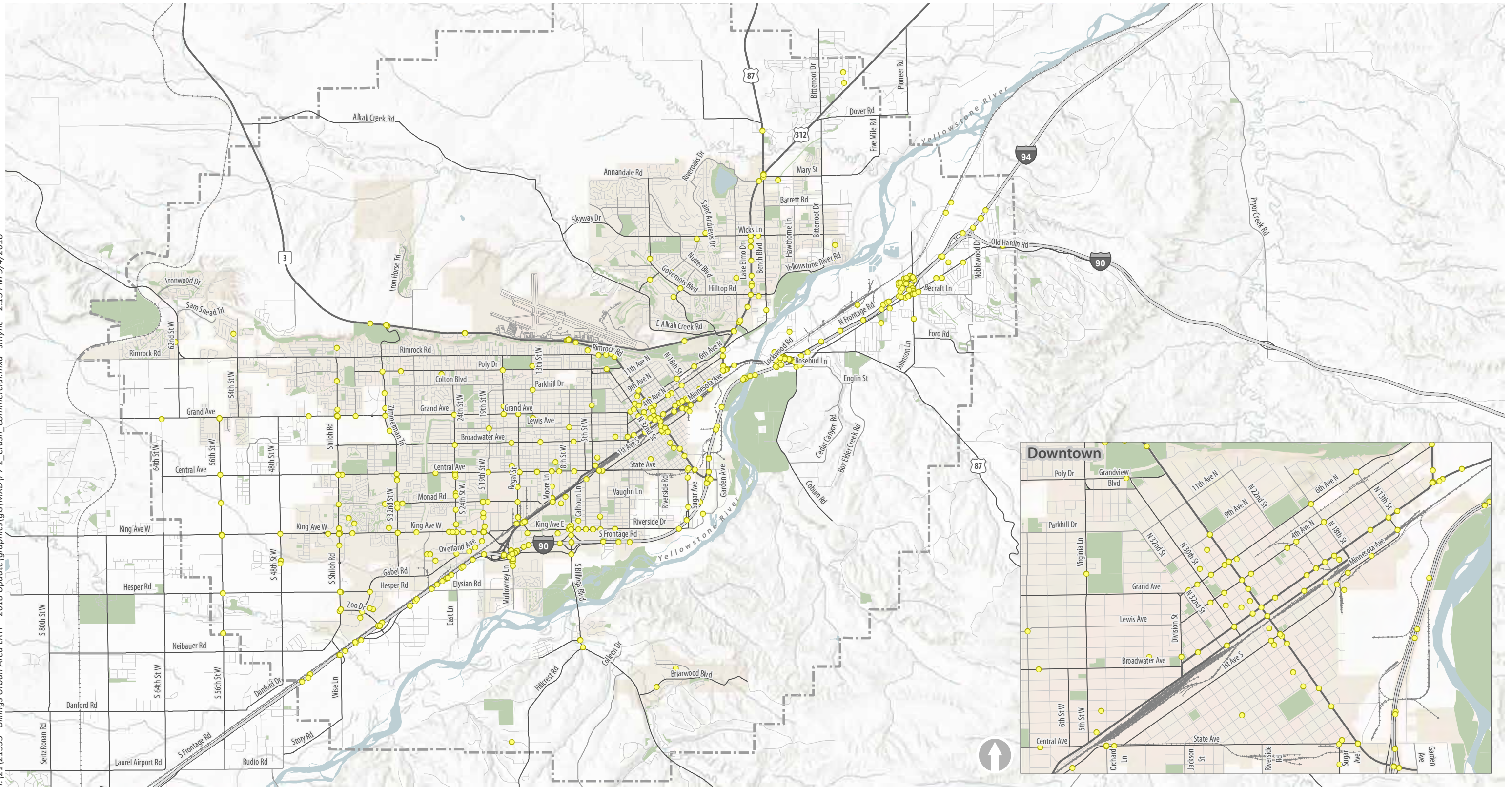


Source: US DOT FHWA Freight Management and Operations - Montana Freight Profiles and Maps (http://ops.fhwa.dot.gov/freight/freight_analysis/state_info/montana/mt.htm)

Exhibit 7.9 Montana Freight Tonnage Moved by Weight (2015)



Source: US DOT FHWA Freight Management and Operations - Montana Freight Profiles and Maps (http://ops.fhwa.dot.gov/freight/freight_analysis/state_info/montana/mt.htm)



● Medium/Heavy Vehicle Crash

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Figure 7-2
Commercial Vehicle Crashes (2013 - 2017)

Billings serves as a central location for trucking traffic in the state and the region. The area projects to continue serving in this capacity based on the future freight tonnage moved by truck within Montana. Exhibits 7.10 and 7.11 show the major flows by truck to, from, and within Montana in 2012 and 2045, respectively.

Exhibit 7.10 Major Flows by Truck To, From, and Within Montana (2012)

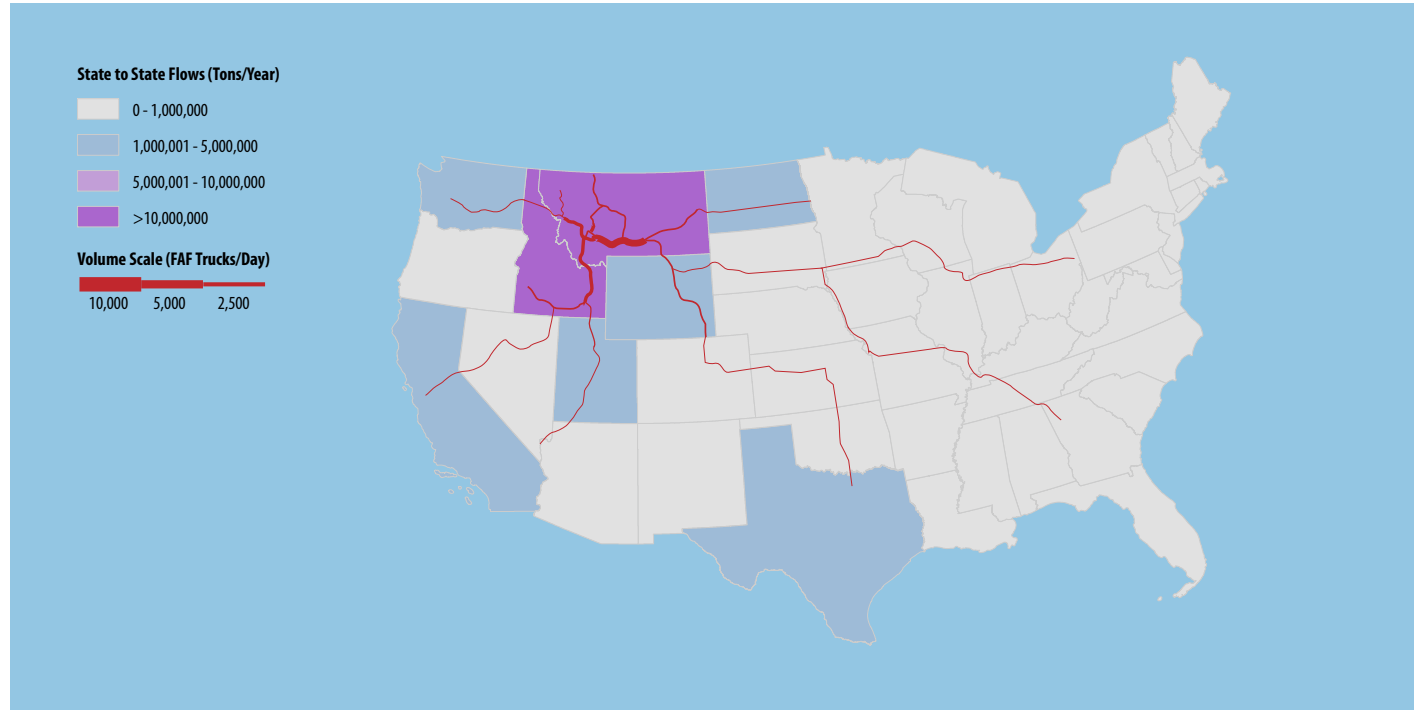
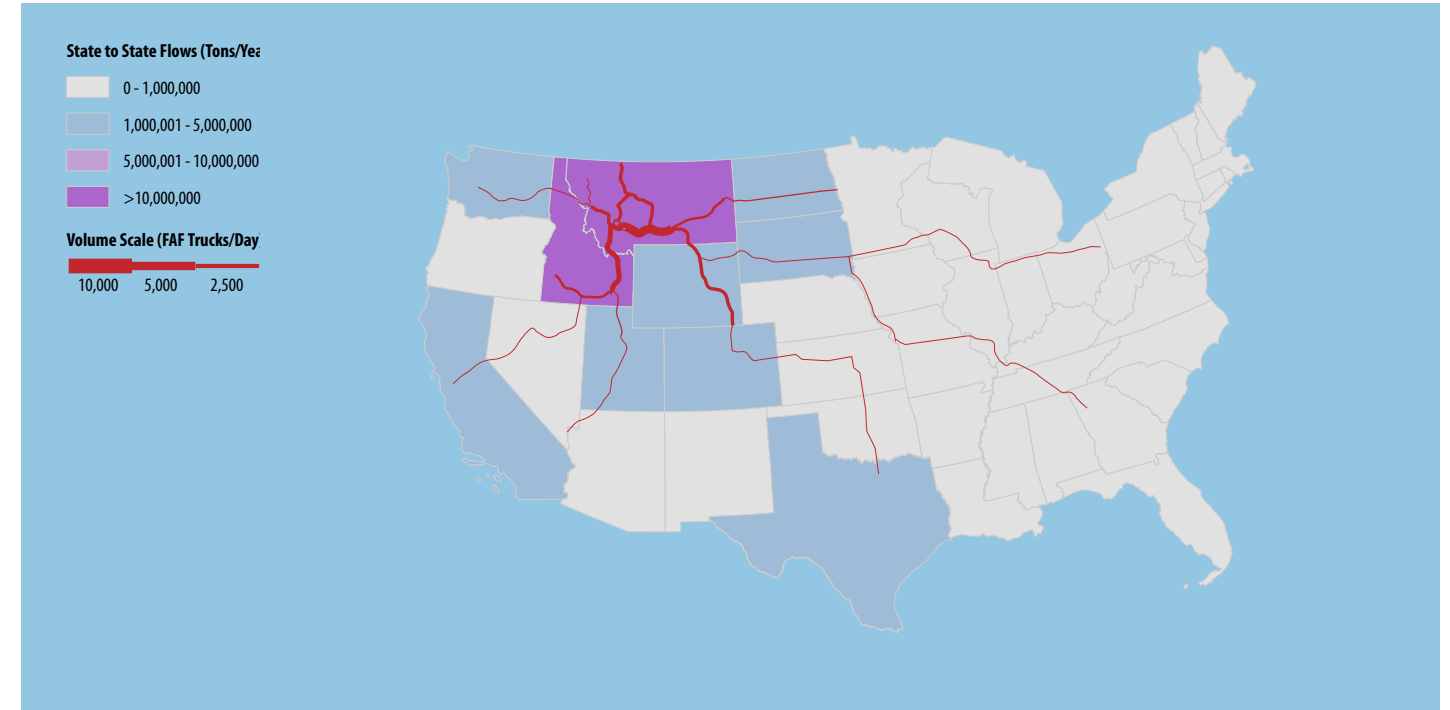


Exhibit 7.11 Major Flows by Truck To, From, and Within Montana (2045)



As shown in Exhibits 7.10 and 7.11, I-90 through Billings carries the highest truck activity in the state currently and projected in 2045. Table 7.3 compares the year 2016 and projected year 2045 rail demand within, from, and to the state in millions of tons and millions of dollars.

Table 7.3 Year 2016 and 2045 Total Freight Moved by Truck

Montana Truck Shipments	Within State			From State			To State		
	2016	2045	% change	2016	2045	% change	2016	2045	% change
In Millions of Tons (% moved by Truck)	29.8 (59%)	40.7 (39%)	37%	16.8 (21%)	21.9 (22%)	30%	12.8 (48%)	24.1 (55%)	88%
In Millions of Dollars (% moved by Truck)	\$15,143 (56%)	\$21,416 (52%)	41%	\$12,256 (42%)	\$24,419 (46%)	99%	\$22,682 (63%)	\$67,207 (75%)	196%

Source: Freight Analysis Framework by Federal Highway Administration (FHWA) - Freight Management and Operations (8-10)

Total freight moved by truck within, from, and to Montana is expected to increase by 46% between 2016 and 2045. As shown in Table 7.3, truck traffic is projected to continue to be a vital part of the City's economy, so it is important to continue to make investments for maintenance, capacity, and safety projects on the truck routes within the Billings urban area.

NEEDS AND DEFICIENCIES

In order to guide identification of short and long-range truck projects, deficiencies and needs were collected from the public, SC, and review of past plans/studies.

PUBLIC AND SC FEEDBACK

Four percent of the public comments corresponded to truck deficiencies and needs in the study area. Review of the public comment feedback and SC comments suggested the following themes:

- Rebuild the underpass at North 13th Street to accommodate large trucks
- Rebuild the underpass at North 21st Street to accommodate large trucks
- Improve operations on Main Street, Exposition Drive, and US 87
- Improve the operations for trucks at the I-90 interchanges
- Connect Montana Highway 3 to Molt Road
- Provide a major north-south corridor on the western edge of the Billings urban area that connects Montana Highway 3 to Interstate 90
- Maintain a safe and efficient balance between residential and truck traffic on the roadway network.

NEEDS DEFINED IN PREVIOUS STUDIES/PLANS

Several recent city-wide studies/plans focus on facilities that currently support most of the truck traffic in the Billings urban area. Key needs from these studies/plans include:

- **2017 Montana Freight Plan** (7-2) identifies the following strategies and two specific infrastructure project for improving truck mobility and alleviating congestion in Billings and other locations in the state:
 - Address heavy vehicle impacts on infrastructure
 - Mitigate delay caused by freight
 - Alleviate freight mobility issues on state owned infrastructure caused by recurring or non-recurring congestion.
 - Utilize innovative technology for the safe, secure, and efficient movement of freight.
 - The Billings Bypass Arterial project will construct an alternate route in Billings to promote connectivity, improve access, decrease congestion and improve operations (LOS) on major routes in the Billings area. This project includes new (and improved) roadway network between Interstate 90 (at the Johnson Lane Interchange) and US-87 (near the Old Highway 312 intersection), as well as a roadway extension of Five Mile Road to connect with Old Highway 312.
- **2016 City of Billings Growth Policy** (8-3) calls out reduced congestion, improved traffic flow, and designated truck routes to support freight.
- **2016 Lockwood Growth Policy** (8-4) identifies growth guidelines for the TEDD, which is an area located in the northeast area of Lockwood that has an emphasis on industrial uses and connectivity with the railroad.
- **Lockwood TEDD Strategic Plan** (7-5) provides a path for further developing a competitive advantage for Yellowstone County over competing locations for business and professional employment. The purpose of the Lockwood TEDD is to provide planned industrial space in order to attract and retain industrial and manufacturing businesses in Yellowstone County. This plan includes new roadway connections to serve the industrial uses and connect to/from Interstate 90.
- I-90 Yellowstone River – Billings is a bridge replacement project on Interstate 90 in Billings to improve operations (increase LOS), decrease congestion and promote safety. This project includes additional lanes, new structures and ramp modifications.

- **Billings Urban Area Long Range Transportation Plan** (2014, 7-15) summarizes several streets and highway projects in the urban area and details relevant studies and plans completed between 2008 and 2014 related to improving truck mobility:
 - **Lockwood Transportation Study** (7-16) identifies that the Lockwood area intersections and roadways should improve to accommodate heavy commercial trucking vehicles.
 - **Billings Bypass Arterial** (7-17) provides a new roadway connecting Lockwood and Billings.
 - **East Billings Urban Renewal District (EBURD) Master Plan** (7-18) identifies that new roadway facilities need to be developed that maintain access and circulation for large trucks.
 - **I-90 Corridor Planning Study** (7-19) identifies several capacity and safety projects at interchanges and the mainline segment along I-90.

PROJECT LIST RELATED TO FREIGHT FACILITIES FOR TRUCKS

A list of projects related to freight facilities for trucks were identified through the literature review and the discussion of existing deficiencies and needs with the public and SC. Table 7.4 summarizes truck projects in the Billings Urban Area.

Table 7.4 Truck Projects

Project ID	Name	Description	Estimated Planning Level Cost	Referenced Plan/Study
FT1	Billings Bypass Arterial	Construct new roadway from US 87/Old Highway 312/Main Street intersection to Johnson Lane/I-90 and the Five Mile Road extension to Old Highway 312	\$166,000,000	A, B, E, G
FT2	I-90 Yellowstone River – Billings	Replace bridges	\$72,160,000	B
FT3	Inner Belt Loop – Alkali Creek Rd to Highway 3	Construction of a new road from Alkali Creek Road to Highway 3.	\$7,000,000	C
FT4	Old Hardin Road – Lockwood Interchange to Johnson Lane	Reconstruct to a 3-lane urban roadway	\$5,700,000	H
FT5	Highway 3 to Molt Road Connection	Construct a new Roadway connecting Highway 3 to Molt Road	\$11,605,115	I
FT6	Highway 3 Widening – Zimmerman to Apache	Widen Highway 3 from Zimmerman Trail to Apache Trail with TWLTL	\$2,600,000	J
FT7	I-90 from S Billings Boulevard interchange to 27th Street interchange	Add a third travel lane in each direction on I-90	\$4,000,000	E, G
FT8	I-90 from Lockwood interchange to Johnson Lane interchange	Add a third travel lane in each direction on I-90	\$3,000,000	E, G
FT9	Lockwood Road & N Frontage Road	Reconfiguration of existing intersection	\$495,000	H
FT10	US 87 & Old Hardin Road	Upgrade 3-way stop intersection to a roundabout	\$1,000,000	H
FT10A	West Billings Interchange	Update geometry to match C standards, improve landscaping and improve pedestrian facilities	\$6,900,000	E, G
FT10B		Construct additional EB and WB mainline lanes through interchange, modify vertical curve, reconstruct bridge segments and restripe WB off-ramp at West Billings Interchange.	\$12,600,000	E, G
FT11	Shiloh Interchange	Geometric improvements to improve operations and safety	\$1,900,000	E, G
FT12	South Billings Blvd Interchange	Additional EB and WB mainline lanes under and through the Interchange	\$1,600,000	E, G
FT13	27th Street Interchange	Construct additional EB and WB mainline lanes under and through Interchange. Restripe EB off-ramp and improve pedestrian facilities	\$1,900,000	E, G
FT14	Lockwood Interchange	Construct additional EB and WB mainline lanes under and through the Lockwood Interchange and improve pedestrian facilities	\$1,900,000	E, G
FT15	Johnson Ln Interchange	Geometric improvements to improve operations and safety	Included with Bypass project	A, B, E, G
FT16	21st Street Underpass	Add capacity and pedestrian/bicycle enhancements at the 21st Street underpass	\$3,052,000	D
FT17	13th Street Underpass	Add capacity and pedestrian/bicycle enhancements at the 13th Street underpass	\$18,400,000	D, G
FT18	Lockwood TEDD Rail Coordination	Coordinate with the Lockwood TEDD regarding rail infrastructure improvements for this area	-	F
FT19	Exposition Drive & 1st Avenue N Blgs	Intersection improvement	\$1,600,000	B
FT20	Underpass Avenue Improvements	Intersection Improvements	\$8,600,000	B
FT21	Laurel & Moore Lane	Study for capacity improvements	\$250,000	H
FT22	Airport Rd & Main St – BLGS	Intersection Improvements	\$11,700,000	B

A – Montana Freight Plan

B - Billings Urban Area Transportation Improvement Program, FY 2017-2021

C - City of Billings Capital Improvement Program, FY 2019-2023

D - 2016 Montana Rail Grade Separation Study

E – I-90 Corridor Planning Study

F – Lockwood TEDD Strategic Plan

G – MDT

H – Consultant Team

I – Molt Road/Highway 3 Collector Road Planning Feasibility Study (7-20)

J – Highway 3 Corridor Planning Study (7-21)



Chapter 8

Rail Services and Facilities



RAIL SERVICES AND FACILITIES

Billings serves as a regional hub for freight rail traffic due to the geographic location and rail system that runs through the City and connects with adjacent states. Exhibit 8-1 shows the location of Billings and active railway lines in the state of Montana. No passenger rail service is provided through the City of Billings. Rail traffic within Billings plays a critical part in the economic vitality and movement of commerce throughout the state, country, and world. As such, the 2018 LRTP outlines several goals related to rail services and facilities:

2018 LRTP Goals Related to Rail Services and Facilities

Goal 1: Safety – Develop a safe transportation system

Goal 2: Functional Integrity and Efficiency – Optimize, preserve, and enhance the existing transportation system

Goal 7: Economic Vitality – Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce.

Exhibit 8-1. Montana Rail System



LITERATURE REVIEW

Recent city and statewide studies/plans were reviewed for existing conditions, available data, and short and long-range projects related to railroad facilities in the study area. These studies/plans are described below:

- **2017 Montana Freight Plan** (8-1) represents the first plan specific to freight for MDT and for the state. This plan provides a comprehensive evaluation of freight transportation in Montana and provides guidance for both short and long-term freight-related transportation investment decisions.
- **2010 Montana State Rail Plan** (8-2) summarizes statewide rail trends and facilities, feasibility of passenger rail service, and estimates rail trends for year 2035.
- **2016 City of Billings Growth Policy** (8-3) includes a goal that the transportation system is designed to be safer and more efficient for all users. This goal has an objective on rail and freight, specifically for safe railroad crossings (both vehicle and pedestrian) and passenger rail.
- **2016 Lockwood Growth Policy** (8-4) has a growth guideline for the TEDD, which is an area located in the northeast area of Lockwood that has an emphasis on industrial uses and connectivity with the railroad.
- **Lockwood TEDD Strategic Plan** (8-5) provides a path for further developing a competitive advantage for Yellowstone County over competing locations for

business and professional employment. The purpose of the Lockwood TEDD is to provide planned industrial space in order to attract and retain industrial and manufacturing businesses in Yellowstone County. The location of the Lockwood TEDD is located next to the rail service provided by MRL. The plan identifies that additional rail spurs and a transloading facility would benefit the development of the Lockwood TEDD.

- **2016 Montana Rail Grade Separation Study** (8-6) addresses changed conditions from the 2003 Montana Rail Grade Separation Study and assesses highway-rail crossing needs across that state. The 2016 Montana Rail Grade Separation Study used a data-driven evaluation process to identify a list of at-grade and grade-separated railroad crossings where potential feasible improvements may be considered. The findings included four locations in Billings—27th Street, Moore Lane, 13th Street, and 21st Street with more details provided below:
 - 27th Street (at-grade) – MDT is currently conducting a more detailed feasibility study at this location.
 - Moore Lane (at-grade) – An undercrossing is recommended at this location.
 - 13th Street (underpass) – Improvement options include modification to the horizontal and vertical clearances at the crossing locations to facilitate legal height truck usage.
 - 21st Street (underpass) - Improvement options include lowering the roadway

to increase the vertical clearance of the underpass to enhance capacity.

- **27th Street Railroad Crossing Study** (8-7) is an ongoing feasibility study to develop improvement options at the 27th Street at-grade crossing location in downtown Billings.
- **Billings Railroad Crossing Feasibility Study** (8-8) examined current and future conditions with emphasis placed on effective delivery of emergency services, safety, and efficiency for all travel modes, business viability, and elimination of any real or perceived socio-economic division of the community created by the railroad tracks. This study identified several possible alternatives ranging from do nothing to technology upgrades to grade-separation (underpass or overpass) on 27th Street to relocating the main railroad line and/or operations.
- **Montana Freight Assessment: Trends and Opportunities to Improve Access and Create Freight Efficiencies for Montana Companies** (8-9) summarizes the potential for improving Montana’s freight infrastructure to benefit producers and manufacturers.
- **Freight Analysis Framework** (8-10) produced through a partnership between BTS and FHWA, integrates data from a variety of sources to create a comprehensive picture of freight movement among states and major metropolitan areas by all modes of transportation. FAF version 4 (FAF4) provides estimates for tonnage (in thousand

tons) and value (in million dollars) by regions of origin and destination, commodity type, and mode. Available data used for the 2018 LRTP includes data from 2016 and forecasts to 2045.

EXISTING CONDITIONS

This section includes a summary of existing rail facilities, operators, and crossings in the study area. A brief safety analysis was performed to identify any trends related to crashes near railroad crossing facilities.

RAIL FACILITIES AND OPERATORS

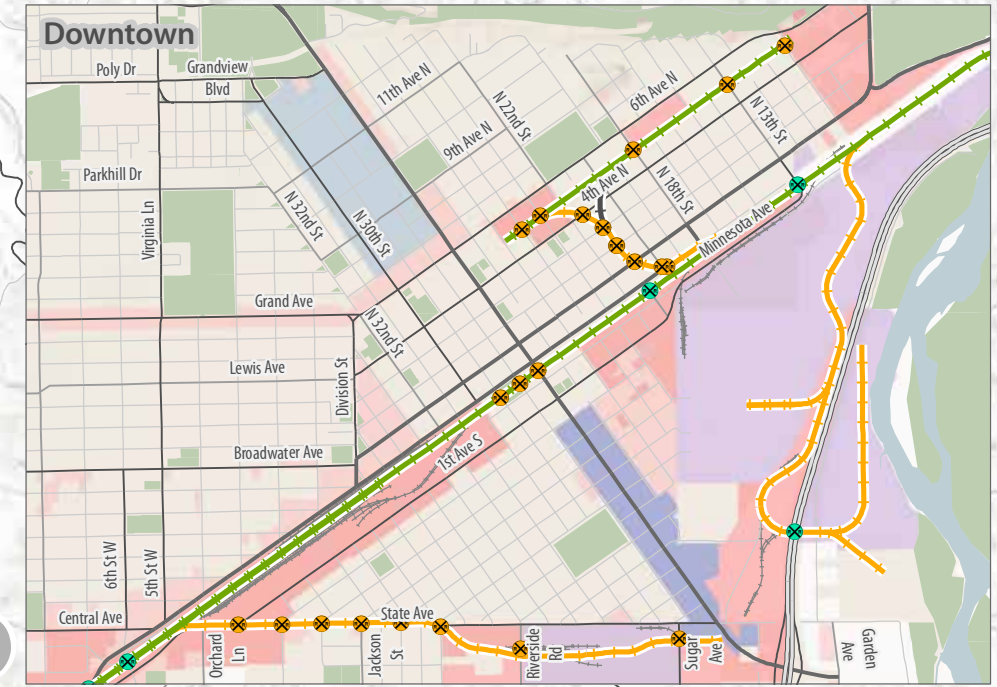
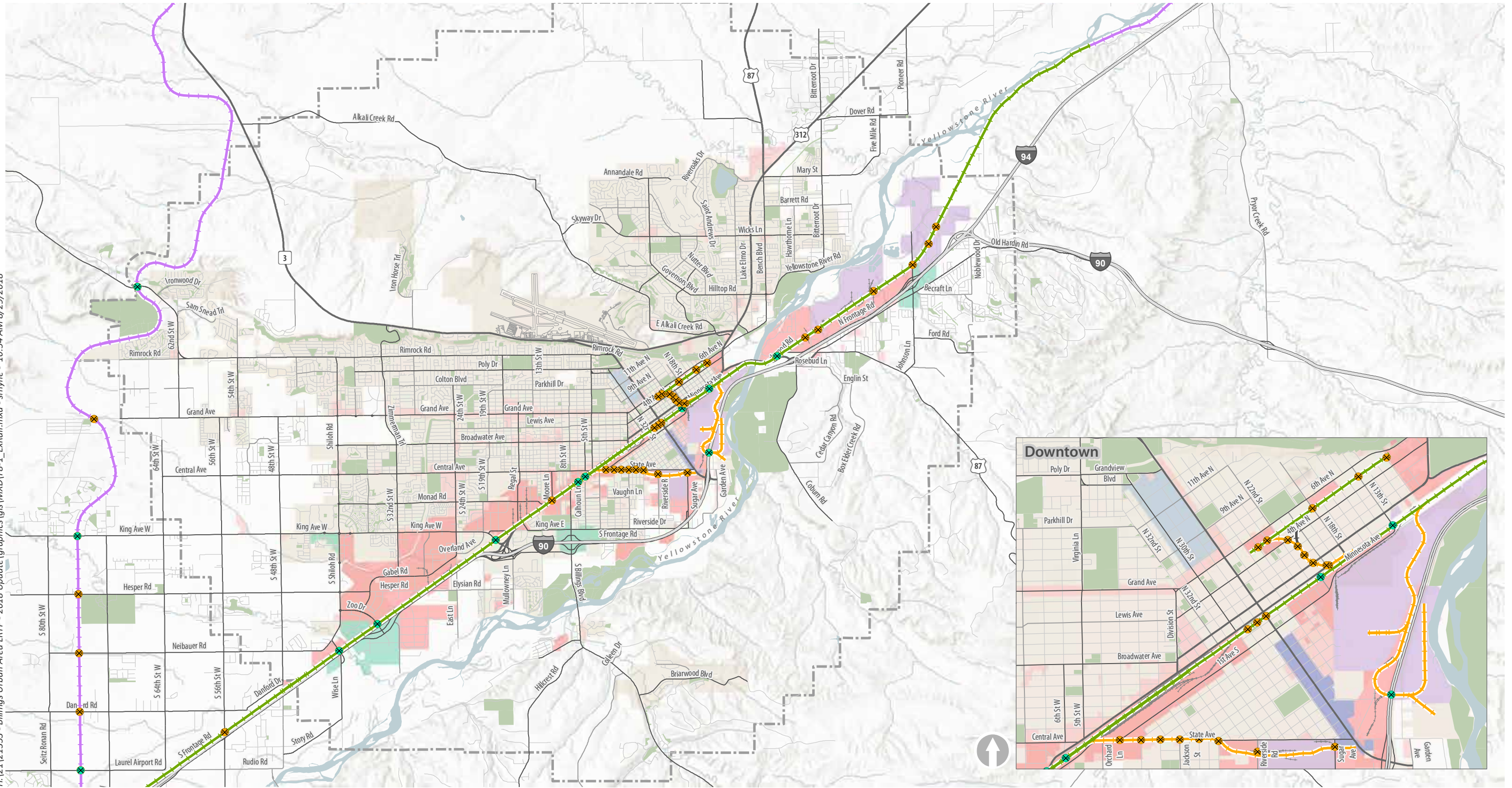
The Billings Urban Area is served by two railroad operators, Burlington Northern Santa Fe (BNSF) and Montana Rail Link (MRL). MRL enters the study area from the east and continues parallel to Interstate 90 to the west, connecting Billings with Bozeman, Helena, Missoula, and eventually entering Northern Idaho. BNSF breaks off of the MRL line west of the city and continues north. In addition to the railroad lines operated by BNSF and MRL, there is a section of abandoned rail to the west of Billings and several rail spurs that serve industrial zones in the study area. Figure 8-1 shows the existing rail facilities and crossings in the study area.

There are 27 grade crossings of the BNSF and MRL lines, of which 16 crossings are located at-grade within the Billings Urban Area



2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN

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- | | | | | |
|--------------------------|------------------------------|------------|-----------------------|----------------------------|
| At Grade Crossing | Burlington Northern Santa Fe | Study Area | Commercial | Medical Corridor Permit |
| Grade Separated Crossing | Montana Rail Link | Park | Commercial/Industrial | South 27th Street Corridor |
| Spur | | | Heavy Industrial | Entryway |
| | | | Light Industrial | City of Billings |

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Figure 8-1
Existing Railroad Facilities

RAIL CROSSINGS AND FREQUENCY

The MRL railroad tracks generally traverse along the north side of Interstate 90, along the south side of 1st Avenue South, and along the north side of Interstate 94 through the study area. The BNSF railroad tracks, although located mostly outside of the MPO study area follow Highway 3 to the north. The Manual for Uniform Traffic Control Devices (MUTCD) (8-11), defines an active crossing as any active traffic control that notifies the road user of rail traffic at grade crossings. The types of traffic control can include, but are not limited to, four-quadrant gate systems, automatic gates, flashing-light signals, traffic control signals, and actuated blank-out and variable message signs. A passive crossing would not include any of these traffic control devices.

There are 27 grade crossings of the BNSF and MRL lines, as shown in Figure 8-1. Table 8.1 summarizes the characteristics and level of train activity at the rail crossings for the BNSF and MRL lines the study area.

Table 8.1 Major Rail Crossing Characteristics – MRL and BNSF

Location of Railroad Crossing	Rail Operator	Type	Active or Passive	Number of Trains ¹		Roadway AADT ² at Crossing Location	Pedestrian Crossing Treatment
				Thru Movements	Switching Movements		
72nd Street	MRL	At-Grade	Active	32	0	2,000	No
56th Street	MRL	At-Grade	Active	32	0	2,000	No
Shiloh Road	MRL	Grade Separated	N/A	32	0	5,000	N/A
Zoo Drive	MRL	Grade Separated	N/A	32	0	10,000	N/A
King Avenue W (Access Road)	MRL	Grade Separated	N/A	32	0	40,000	No
Moore Lane	MRL	At-Grade	Active	32	0	10,000	No
Montana Avenue	MRL	Grade Separated	N/A	32	0	20,000	N/A
6th Street	MRL	Grade Separated	N/A	32	0	10,000	N/A
29th Street	MRL	At-Grade	Active	32	10	2,600	Yes
28th Street	MRL	At-Grade	Active	32	6	2,100	Yes
27th Street	MRL	At-Grade	Active	32	6	15,000	Yes
N 21st Street	MRL	Grade Separated (underpass)	N/A	32	0	2,600	N/A
N 13th Street	MRL	Grade Separated (underpass)	N/A	32	0	10,000	N/A
US 87	MRL	Grade Separated	N/A	30	0	26,000	N/A
Steffes Road	MRL	At-Grade	Active	30	0	Not Available	No
Brickyard Lane	MRL	At-Grade	Active	30	0	Not Available	No
Exxon Refinery Road	MRL	At-Grade	Active	30	2	Not Available	No
Johnson Lane	MRL	At-Grade	Active (no gates)	30	0	500	No
Gravel Pit Road	MRL	At-Grade	Active	30	2	Not Available	No
Local Road	MRL	At-Grade	Passive	30	0	Not Available	No
Laurel Airport Road	BNSF	Grade Separated	N/A	6	0	2,000	N/A
Danford Road	BNSF	At-Grade	Passive	6	0	500	No
Neibauer Road	BNSF	At-Grade	Passive	6	0	500	No
Hesper Road	BNSF	At-Grade	Passive (stop sign)	6	0	500	No
King Avenue West	BNSF	Grade Separated	N/A	6	0	4,000	N/A
Grand Avenue	BNSF	At-Grade	Active	6	0	4,500	No
Molt Road	BNSF	Grade Separated	N/A	6	0	3,500	N/A

¹Source: Federal Rail Administration

²Source: Billings Urbanized Area Traffic Count Map (8-12), Yellowstone County Traffic Counts Map (8-13)

As shown in Figure 8-1, there are several at-grade crossings in the downtown area that cross the MRL railroad tracks and spur lines. As shown in Table 8.1, AADT is reported for roadways that intersect rail lines in the study area. AADT's on roadways with at-grade crossings are typically below 5,000 vehicles, with the exception of 27th Street and Moore Lane, which both have an AADT of greater than 10,000 vehicles. As shown in Table 8.2, the train traffic through the study area is consistent and accommodations should be made to balance rail movement with other modes. Switching movements create additional delays compared to thru movements, as switching movements require the trains to stop for some amount of time.

The Montana Rail Link has approximately 30 to 32 daily trains that pass through the Billings Urban Area.

Pedestrian crossing treatments are included at three at-grade rail crossings in the downtown area. Exhibit 8.2 shows the railroad crossing and pedestrian treatment at 27th Street.

Crossing warning signals and technology upgrades, similar to those installed at 27th Street, have also been installed at 28th Street, 29th Street, and Moore Lane. Crossing upgrades such as these are completed through MDT with federal safety funds provided by the Administrative Rules of Montana (ARM 18.6.304) (8-14). Upgrades at 27th Street, 28th Street, and 29th Street were completed through the Billings Quiet Zone project in 2008 (8-15). There are currently two grade-separated rail crossings within the downtown area, located at 21st Street and 13th Street. Exhibit 8.3 and 8.4 show the crossings at 13th Street and 21st Street, respectively. The crossing at 13th Street is signed with a vertical clearance of 13 feet 8 inches, while the MDT BMS documents the vertical clearance at 14 feet. The underpass is approximately a half-mile long with sidewalk on the west side only and serves an AADT of approximately 10,000 vehicles per day. The crossing at 21st Street has a clearance of 8 feet with sidewalk on both sides of the road. The underpass is approximately a tenth of a mile long and has an AADT of approximately 2,500 vehicles per day. Improvement options were identified at both of these crossing locations in the 2016 Montana Rail Grade Separation Study.

Exhibit 8.2 Rail and Pedestrian Crossing at 27th Street

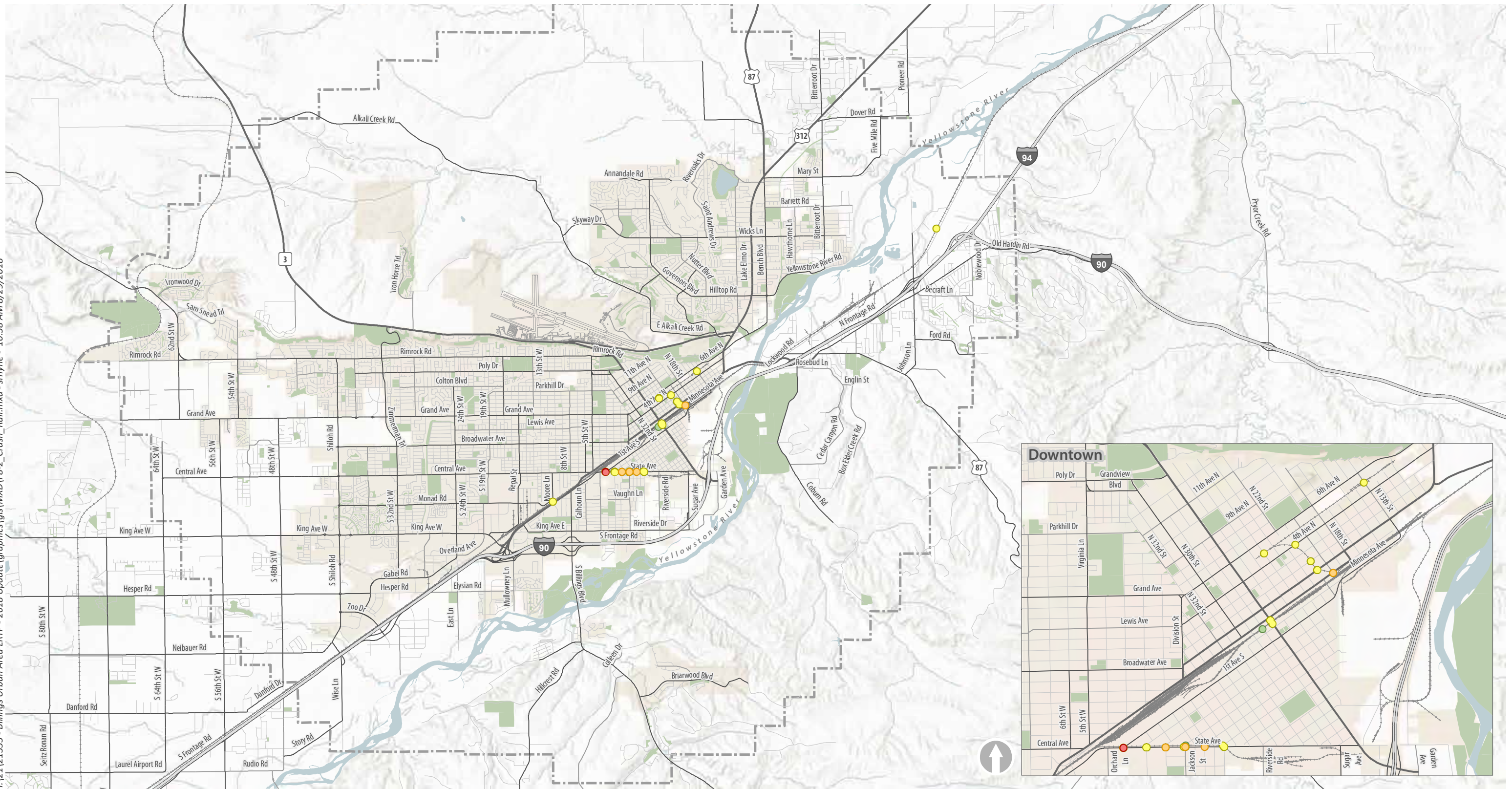


Exhibit 8.3 Rail Crossing at 13th Street



Exhibit 8.4 Rail Crossing at 21st Street





- Crash Severity**
- Incapacitating Injury Accident
 - Non-Incapacitating Evident Injury Accident
 - Non-Injury Accident (Property-Damage-Only-Accident)
 - Possible Injury Accident
 - Unknown

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Figure 8-2
At-Grade Rail Crossings Crashes (2013 - 2017)

SAFETY

Crash data for the study area was reviewed to identify crashes related to the rail crossings over the five year period from 2013 to 2017. Table 8.2 summarizes the crashes related to rail crossings in the study area. Figure 8-2 summarizes the rail related crashes in the study area.

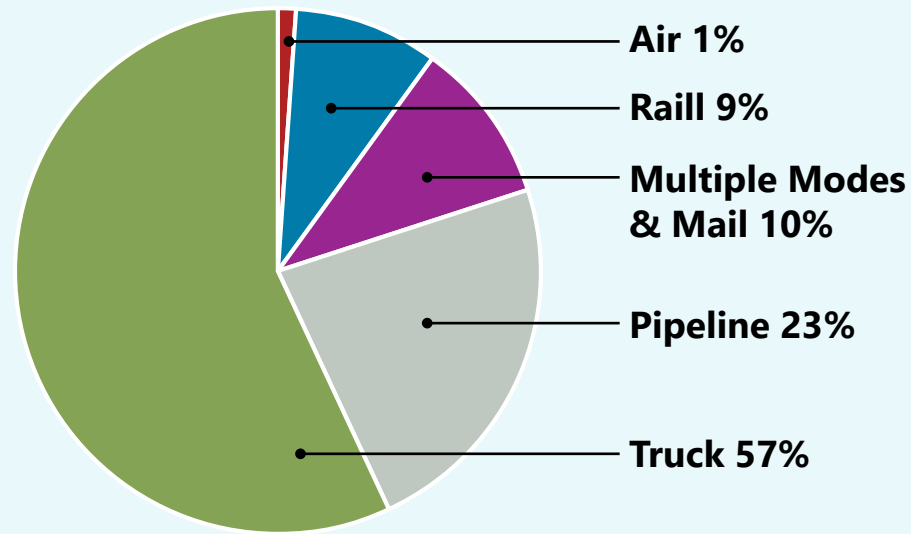
Table 8.2 At-Grade Rail Crossings Crash Summary (2013-2017)

Category	Property Damage Only	Possible Injury	Non- Incapacitating Injury	Incapacitating Injury	Fatal	Unknown	Total
Crash Related to At-Grade Rail Crossing	64 (73%)	16 (18%)	5 (6%)	1 (1%)	0 (0%)	2 (2%)	88

EXISTING AND FUTURE RAIL DEMAND

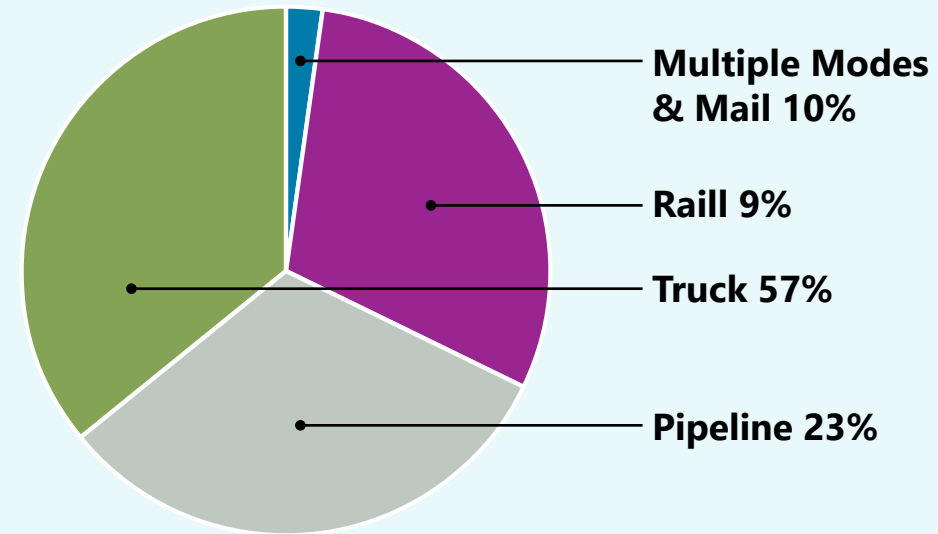
To aid in the identification of rail facility needs, year 2015/2016 and future year (year 2045) rail demand was summarized based on data provided in the Freight Analysis Framework by Federal Highway Administration (FHWA) (8-10). Exhibit 8.5 and Exhibit 8.6 show the percent breakdown of mode choice for moving freight by value and by weight in 2015, respectively.

Exhibit 8.5 Montana Freight Value Moved by Mode (2015)



Source: US DOT FHWA Freight Management and Operations - Montana Freight Profiles and Maps (http://ops.fhwa.dot.gov/freight/freight_analysis/state_info/montana/mt.htm)

Exhibit 8.6 Montana Freight Tonnage Moved by Weight (2015)



Source: US DOT FHWA Freight Management and Operations - Montana Freight Profiles and Maps (http://ops.fhwa.dot.gov/freight/freight_analysis/state_info/montana/mt.htm)

Rail is projected to continue to serve as a valuable economic driver in Billings and Montana. Approximately 30% of freight shipments by weight was moved by rail in 2015. Freight moved from the state by rail continues to account for the majority of rail traffic in the state. Coal accounts for a significant amount of freight tonnage originating in the state. Montana is the nation's sixth largest coal producing state with over 93% of it being shipped via rail (8-1, 8-10). Most of this production is in the rural southeast corner of the state, which is the reason for the high level of train activity through Billings. Table 8.3 compares the year 2016 and projected year 2045 rail demand within, from, and to the state in millions of tons and millions of dollars.

Table 8.3 Year 2016 and 2045 Total Freight Moved by Rail

Montana Rail Shipments	Within State			From State			To State		
	2016	2045	% change	2016	2045	% change	2016	2045	% change
In Millions of Tons (% moved by Rail)	4.2 (8%)	5.5 (5%)	31%	39.6 (48%)	32.0 (32%)	-20%	6.4 (24%)	8.8 (20%)	18%
In Millions of Dollars (% moved by Rail)	\$1,158 (4%)	\$1,584 (4%)	37%	\$4,029 (14%)	\$6,561 (12%)	60%	\$2,960 (8%)	\$6,221 (7%)	110%

Source: *Freight Analysis Framework by Federal Highway Administration (FHWA) - Freight Management and Operations (8-10)*

As shown in Table 8.3, freight moved from the state by rail is projected to decrease by 20% in total tonnage by the year 2045. Overall, the amount of freight moved around and across the state of Montana is projected to increase by 2045. Billings is anticipated to continue serving as a central hub for rail transport in Montana and several surrounding areas.



NEEDS AND DEFICIENCIES

In order to guide identification of short and long-range rail projects, deficiencies and needs were collected from the public, SC, and review of past plans/studies.

PUBLIC AND SC FEEDBACK

Comments and feedback received identified delays during closures of roadways at the at-grade crossings as the primary concern regarding rail traffic in the study area. Comments from the Public Open House and feedback received from the SC identified the following focus areas for projects related to freight rail traffic.

- Provide a grade separated crossing of the railroad tracks on 27th Street in downtown Billings.
- Move the railroad tracks a way from downtown (A major urban center does not have a train track dividing its core downtown area in half).
- Provide an alternate route to 27th Street during closures/train delays – consider improvements to the underpasses at 13th Street and 21st Street.
- Consider advanced warnings, signal modifications, and other smart technology solutions for alerting motorists of trains. Real-time information is needed to alert transportation users of the time table of approaching trains in downtown and to expect delays. Advanced warning systems linked to websites and mobile devices could warn roadway users of delays at the at-grade intersections and identify potential alternate routes.
- Address capacity and design issues at railroad underpasses with 13th Street and 21st Street.

NEEDS DEFINED IN PREVIOUS STUDIES/PLANS

Review of recent studies/plans identified several needs for rail facilities, listed below and used to identify recommended projects.

- **2017 Montana Freight Plan (8-1)** represents the first plan specific to freight for MDT and for the state. This plan identified the following strategies related to rail:
 - BNSF invested approximately \$180 million in Montana for capital improvements in 2016. This included maintaining and expanding the core network and related assets; new locomotives, freight cars, and other equipment; continuing implementation of positive train control (PTC); and investing in expansion and efficiency projects to enhance productivity and velocity.
 - The at-grade railroad crossings located at 27th Street and Moore Lane should be evaluated further to determine if improvements at these locations are viable and cost effective.
 - MDT will continue to work with railroad owners/lessees to implement effective safety technologies, particularly where rail and highway systems meet.
- **2016 City of Billings Growth Policy (8-3)** calls out providing safe railroad crossings (both vehicle and pedestrian) and passenger rail.

- **2016 Lockwood Growth Policy** (8-4) identifies growth guidelines for the TEDD, which is an area located in the northeast area of Lockwood that has an emphasis on industrial uses and connectivity with the railroad.
- **Lockwood TEDD Strategic Plan** (8-5) identifies that additional rail spurs and a transloading facility would benefit the development of the Lockwood TEDD.
- **2016 Montana Rail Grade Separation Study** (8-6) included four locations in Billings—27th Street, Moore Lane, 13th Street, and 21st Street with more details provided below:
 - 27th Street (at-grade) – The underpass improvements were identified at \$73.9 million. The overpass improvements were identified at \$39.2 million. MDT is currently conducting a more detailed feasibility study at this location, titled 27th Street Railroad Crossing Study.
 - Moore Lane (at-grade) – An undercrossing is recommended at this location with the cost estimate at \$31 million.
 - 13th Street (underpass) – Improvement options include modification to the horizontal and vertical clearances at the crossing locations to facilitate legal height truck usage. The cost estimate is \$1-2 million.
 - 21st Street (underpass) – Improvement options include lowering the roadway to increase the vertical clearance of the underpass to enhance capacity. The cost estimate is \$1.5-3 million.
- **27th Street Railroad Crossing Study** (8-6) is an ongoing feasibility study to develop improvement options at the 27th Street at-grade crossing location in downtown Billings.
- **Billings Railroad Crossing Feasibility Study** (8-7) identified several possible alternatives ranging from do nothing to technology upgrades to grade-separation (underpass or overpass) on 27th Street to relocating the main railroad line and/or operations. The alternatives present significant challenges for implementation due to physical constraints and project cost. As a result, the grade separated crossings located at 13th Street and 21st Street are a high priority for potential improvements as they are the only grade separated crossings in the downtown area. Geometric improvements are needed to improve drainage, visibility, and accommodate emergency services vehicles and large trucks. In addition, pedestrian and bicycle facilities are needed at the two underpasses to improve connectivity and safety for non-motorized users. These two underpasses are identified with potential improvements in the 2016 Montana Rail Grade Separation Study.
- **Montana Freight Assessment: Trends and Opportunities to Improve Access and Create Freight Efficiencies for Montana Companies:** This assessment identifies the challenges of freight services in Montana (8-8).

FREIGHT PROJECTS RELATED TO RAIL TRAFFIC

A list of projects related to freight facilities for rail were identified through the literature review and the discussion of existing deficiencies and needs with the public and SC. Table 8.4 summarizes rail projects in the Billings Urban Area.

Table 8.4 Rail Projects

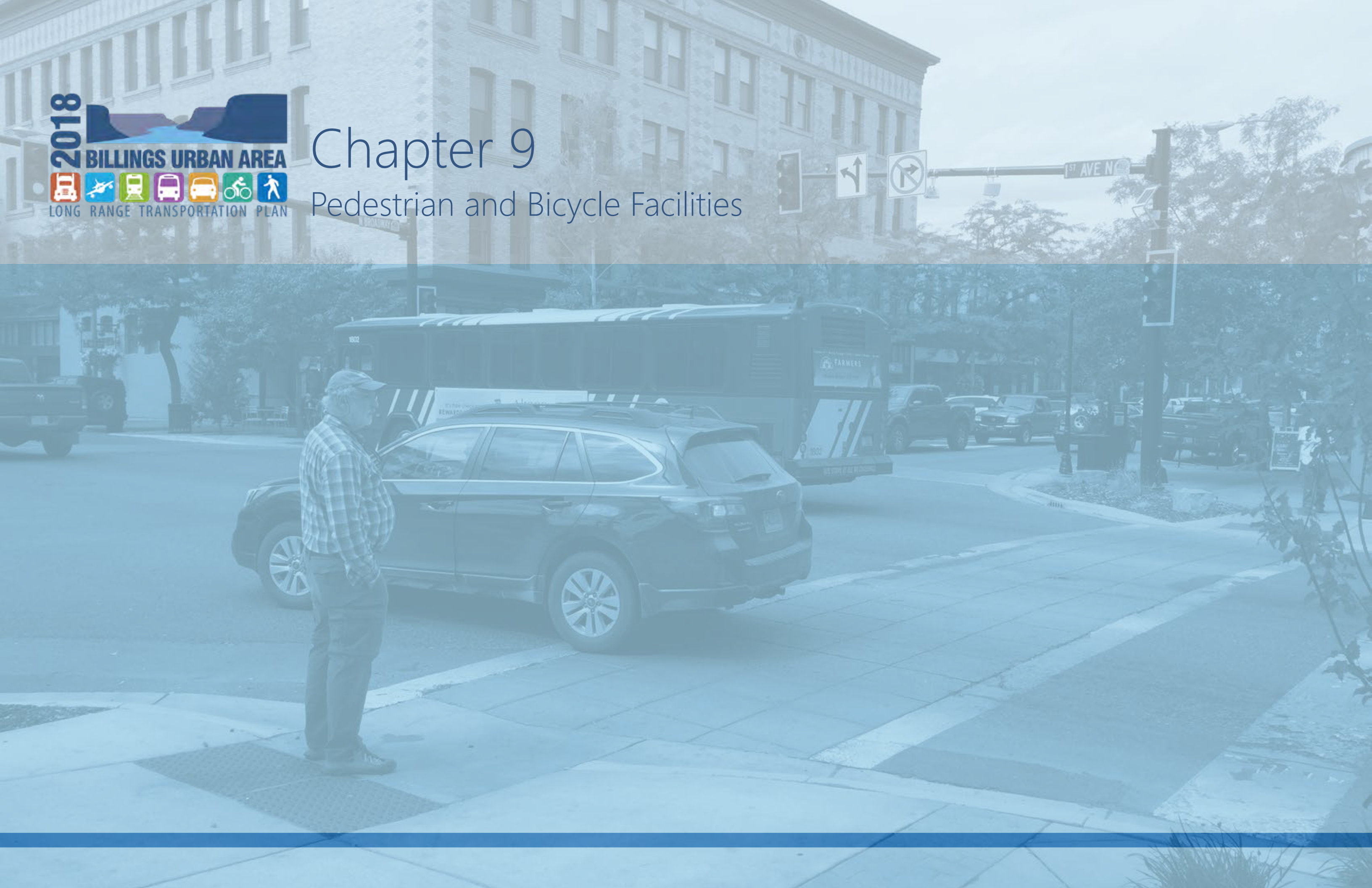
Project ID	Name	Description	Estimated Planning Level Cost	Referenced Plan/Study
FR1	27th Street Railroad Crossing Study	Complete the feasibility study for the at-grade rail crossing at 27th Street	Ongoing	A, B, C
FR2	Moore Lane Railroad Crossing Study	Perform a feasibility study for the at-grade rail crossing at Moore Lane	\$300,000	A, B
FR3	21st Street Underpass	Add capacity and pedestrian/bicycle enhancements at the 21st Street underpass	\$3,000,000	B
FR4	13th Street Underpass	Add capacity and pedestrian/bicycle enhancements at the 13th Street underpass	\$2,000,000	B
FR5	Lockwood TEDD Rail Coordination	Coordinate with the Lockwood TEDD regarding rail infrastructure improvements for this area	-	D

A - Montana Freight Plan, B - 2016 Montana Rail Grade Separation Study, C - 27th Street Railroad Crossing Study, D – Lockwood TEDD Strategic Plan



Chapter 9

Pedestrian and Bicycle Facilities



PEDESTRIAN AND BICYCLE FACILITIES

The Billings Urban Area has been upgrading sidewalk facilities, constructing trail systems, and adding bike lanes to roadways over the last 25 years. Recent examples by the City of Billings, Lockwood, and the MPO include the following:

- The City of Billings has taken steps toward this goal by promoting programs such as Safe Routes to School, by partnering with St. Vincent Healthcare and School District #2 to develop bicycle education and repair events at elementary schools, and by adopting planning studies such as the BikeNet Plan (1995), Heritage Trail Plan (2004), Billings Area Bikeway and Trail Master Plan (2011) and Update (2017), and Complete Streets Policy (2011 and 2016), Benchmark Study (2013), and Progress Report (2017).
- Lockwood has taken recent steps towards this goal with the completion of a Non-Motorized Transportation Plan (2015).
- Promoting active transportation has led to the completion of nine Safe Routes to School Studies (SRTS) for elementary schools in Yellowstone County by RiverStone Health. Additional studies are in progress as of this report's publication. These studies aim to enhance student safety and encourage more students to walk and bike to school.
- The MPO has added an Active Transportation Planner to help lead and coordinate these efforts.

Active transportation continues to be a priority of both communities and the MPO. Active transportation also supports transit use, as many transit trips begin and end with walking or bicycling. As such, the 2018 LRTP outlines several goals related to pedestrian and bicycle elements:

A goal of the region is to establish one of the most comprehensive bicycle and trail networks in the State of Montana, and a 'Gold Bicycle Friendly Community' rating by the League of American Bicyclists by the year 2030.

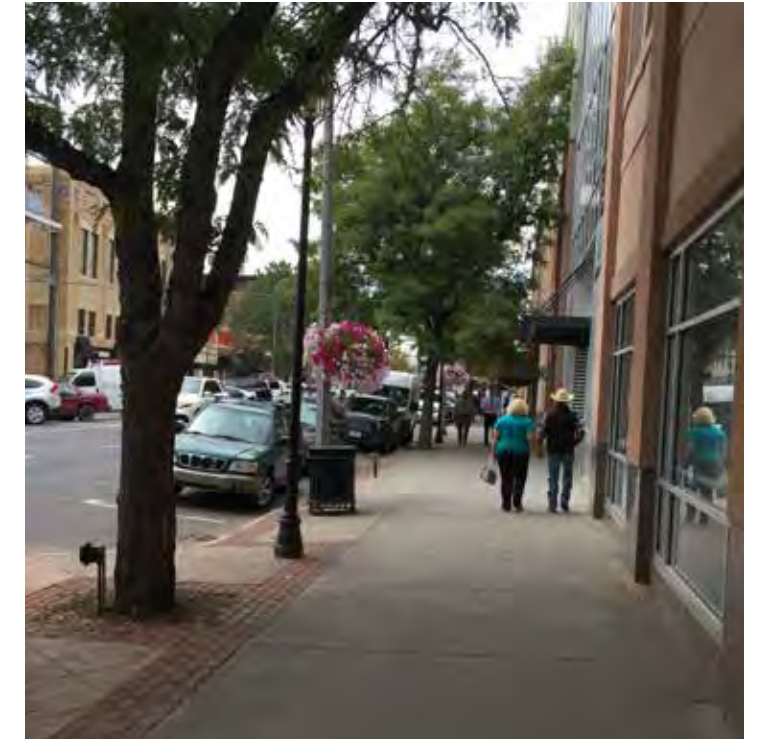
2018 LRTP Goals Related to Active Transportation

Goal 1: Safe – To develop a safe transportation system.

Goal 4: Environment – To develop a transportation system that protects the natural environment and promotes a healthy sustainable community.

Goal 6: Pedestrians and Bicyclists – To create a transportation system that supports the practical and efficient use of active transportation such as walking and bicycling

Goal 7: Economic Vitality – To ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce.



LITERATURE REVIEW

Recent studies/plans were reviewed for existing conditions, available data, and short/long-term projects related to pedestrian and bicycle facilities in the study area. These studies/plans are described below:

- **2014 Billings Urban Area Long Range Transportation Plan (9-1):** This plan summarizes active transportation in the Urban Area and identifies priority projects for the area.
- **Billings Area Bikeway and Trail Master Plan Update (9-2):** This plan identifies eight goals associated with the bikeway and trail system in the Billings Urban Area. The plan includes a demographic analysis, inventory of existing facilities, project, program and policy recommendations, and implementation plan. This plan is an excellent technical resource for the community regarding bikeway and trail facilities, usage, and project recommendations.
- **Trail Asset Management Plan (9-3):** The plan discusses the maintenance needs of the existing and future trail system including a discussion of potential funding sources.
- **Safe Routes to School Study Phase I & Phase II (9-4):** The plan evaluates active transportation options to and from the 22 existing elementary schools in the City of Billings. Two goals are identified by the project: 1) enhance the safety for students traveling to and from school, and 2) increase the number of students walking or bicycling to school. The study focuses primarily on engineering improvements but discusses

the 5 E's for SRTS efforts: Engineering, Enforcement, Encouragement, Education, and Evaluation.

- **Complete Streets Progress Report (9-5):** This report offers a performance-based approach to the Billings transportation system to ensure it works for all people of all abilities. It examines current and future opportunities for a balanced transportation network using data from the previous three years.
- **Lockwood Non-Motorized Transportation Plan (9-6):** This plan seeks to eliminate fatalities and serious injuries caused by vehicular and pedestrian conflicts throughout the Lockwood area. It identifies a five-year work plan and 20-year desired project list in the areas of education, enforcement, engineering, evaluation, and partnerships and funding to achieve this goal.

The studies listed below were also reviewed, but either had a larger scope than just pedestrian/bicycle elements or focused on a particular section of the urban area.

- Billings-Yellowstone County Household Travel Survey (2017)
- TranPlanMT (2017)
- Billings Community Transportation Safety Plan (2016)
- City of Billings Growth Policy (2016)
- Lockwood Growth Policy (2016)
- West End Multimodal Planning Study (2016)
- Rims to Valley Study (2016)

EXISTING CONDITIONS

The existing facilities for the study area were summarized into three categories: pedestrian facilities, bicycle facilities, and trail facilities. Existing facilities and available data are discussed for each category, as well as available mode share data for the entire system. A safety analysis was also completed for all pedestrian and bicycle related crashes in the study area.

MODE SHARE

Year 2016 mode share data was obtained through the American Community Survey (ACS). Table 9.1 summarizes the mode share data for commuters in Billings.

Table 9.1 Year 2016 Mode Share for Commuters in the City of Billings

Mode Used	Number of Commuters	Percent of Commuters
Drove Alone	44,908	81.0%
Carpool (2 people)	4,180	7.5%
Carpool (3+ people)	1,108	2.0%
Public Transportation	592	1.1%
Bike	425	0.8%
Walk	1,760	3.2%
Other	390	0.7%
Worked at Home	2,045	3.7%
Total	55,408	100%

Source: ACS 2016

As shown in Table 9.1, driving alone to work is the most common commuter mode share (81.0%). Active transportation (biking and walking) makes up 4.0% of commuter mode share. Public transportation, which relies on the active transportation network for many of its users to begin and end their trips, makes up 1.1% of the commuter mode share.

Biking and walking trips account for 4% of the commuter mode share.

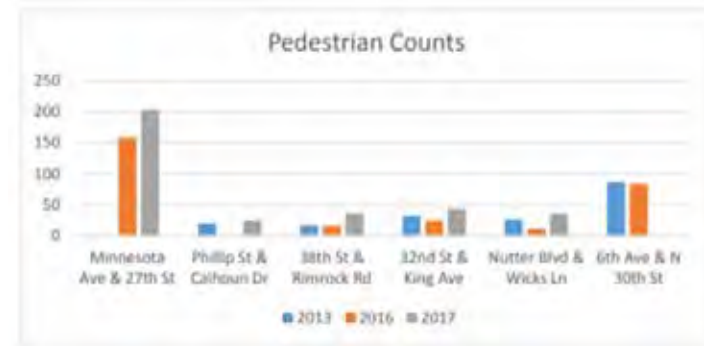
As part of the 2013 Complete Streets Benchmark Study (9-5), bicycle and pedestrian counts were collected on a weekday and weekend in September 2013 at the following six intersections:

- Minnesota Avenue & South 25th Street - unsignalized
- Philip Street & Calhoun Drive - unsignalized
- 38th Street & Rimrock Rd - unsignalized
- 32nd Street & King Avenue - signalized
- Nutter Boulevard & Wicks Lane - signalized
- 6th Avenue & North 30th Street – signalized

The 2017 Complete Streets Progress Report again measured bicycle and pedestrian counts at these six intersections. These counts were taken in May 2016 and May 2017, making an annual comparison to the 2013 data difficult.

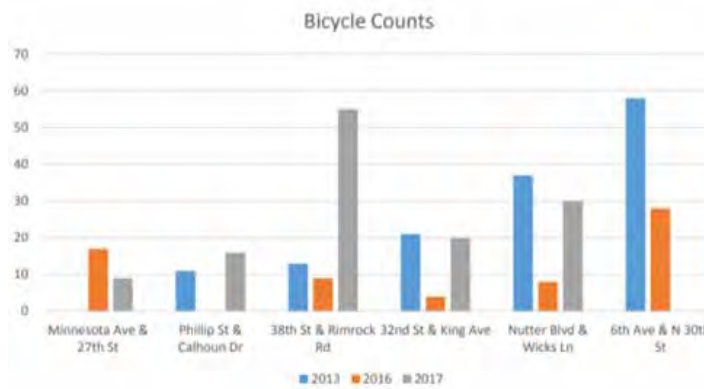
The pedestrian and bicycle counts across the three years are shown in Exhibits 9.1 and 9.2, respectively. Pedestrian and bicycle usage was found to be consistently higher on weekdays than weekends. The 2017 pedestrian volumes increased at all counted locations from 2016. The 2017 bicycle volumes increased significantly at all locations from 2016, except for the Minnesota Avenue/27th Street location.

Exhibit 9.1 Billings Pedestrian Counts by Location



* Note that data gaps represent counts not taken due to road construction

Exhibit 9.2 Billings Bicycle Counts by Location



School-Related Mode Share

The Billings-Yellowstone County travel survey collected data in early 2017. Table 9.2 uses data from this survey to show mode share to school across the Billings area. As shown, about 75% of respondents reported typically driving to school, either as the driver or passenger, and a similar rate did drive to school on the day of the survey. About 6.5% of respondents reported typically walking or bicycling to school and a similar rate did walk or bicycle to school on the day of the survey.

As shown in Table 9.2, driving to school and being driven to school are still the most popular mode choices. Because over 5% of students walk to school, the City of Billings has increased focus on providing safe travel for students walking to school. This includes updating and maintaining sidewalk facilities, using speed zones to reduce speeds near schools, and providing crossing guards at popular locations.

The RiverStone Health SRTS program is in the process of evaluating the pedestrian and bicyclist network supporting elementary schools in Yellowstone County. These studies recommend improvements at each school to make active transportation a safer choice for children’s commutes.

Table 9.2 School-Related Mode Share

Actual School Mode	Typical School Mode							Grand Total
	Passenger	Driver	School Bus	Walk	Carpool	Public Transit	Bike	
Passenger	42.98%	0.85%	3.40%	1.28%	2.55%		0.43%	51.149%
Driver	6.81%	16.17%	0.43%					23.40%
School Bus	4.68%	0.43%	10.21%	0.43%	0.43%			16.17%
Walk	0.85%			4.26%				5.11%
Carpool	0.85%				0.85%			1.70%
Public Transit						0.43%		0.43%
Bike	0.85%		0.85%					1.70%
Total	57.02%	17.45%	14.89%	5.96%	3.83%	0.43%	0.43%	100.00%

Source: Billings-Yellowstone County Travel Survey

PEDESTRIAN FACILITIES

Figure 9-1 shows the existing pedestrian and trail facilities in the study area. Sidewalk facilities exist in the downtown area, approximately from N 32nd Street to N 22nd Street and Montana Avenue to 6th Avenue, and most areas throughout the city. Exhibits 9.3, 9.4, and 9.5 illustrate some of the existing pedestrian facilities in the region.

Exhibit 9.3 Sidewalks and Pedestrian Buffer Zone in Downtown Billings



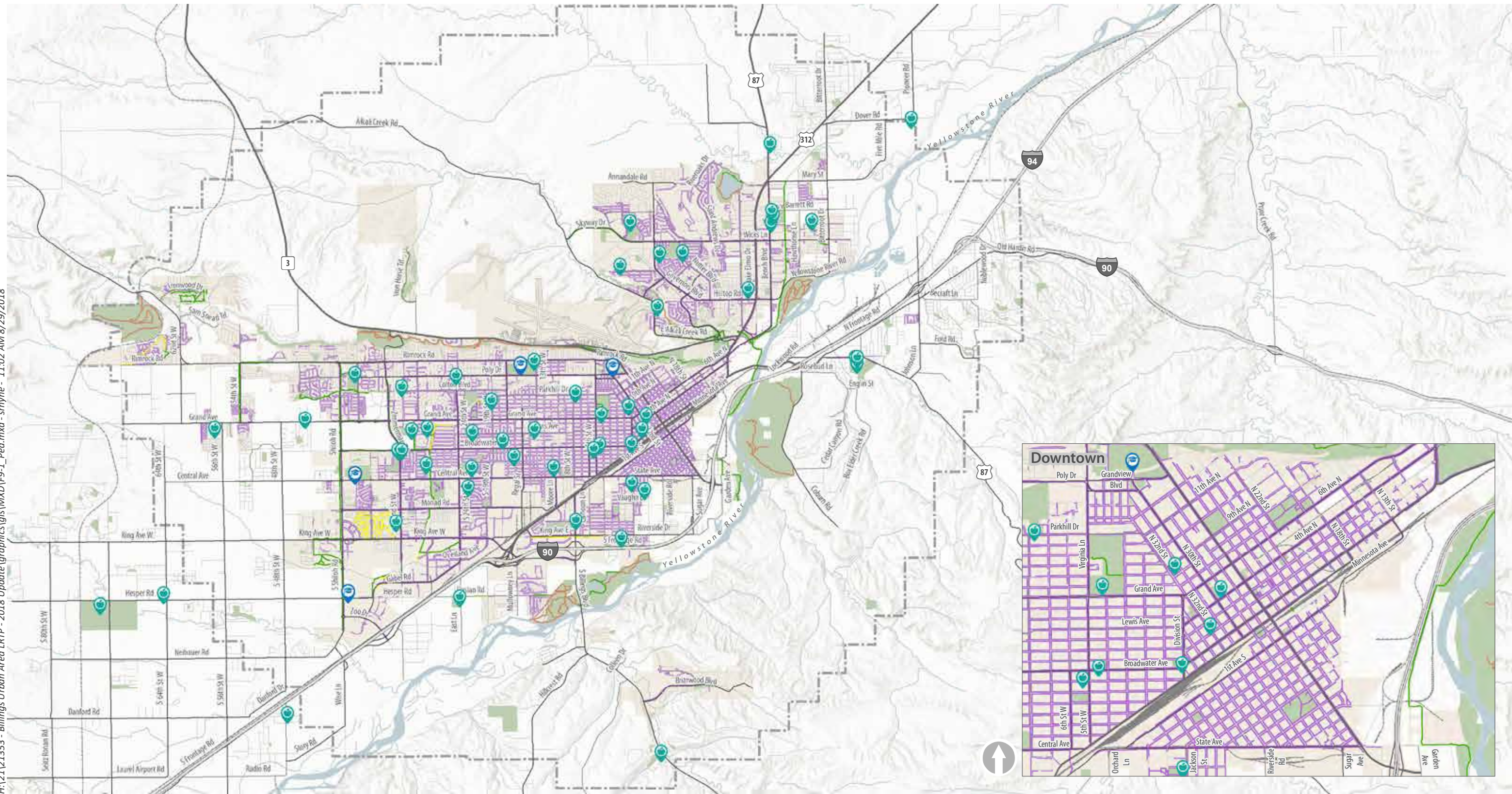
Exhibit 9.4 Pedestrian Hybrid Beacon (HAWK) at 4th Avenue in Downtown Billings



Exhibit 9.5 Rectangular Rapid Flashing Beacon (RRFB) on King Avenue



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Figure 9-1
Existing Pedestrian and Trail Facilities

BIKEWAY FACILITIES

Development of the City's bicycle facilities has mostly occurred over the last fifteen years, including 6.5 miles of new bike lanes provided during 2010. The overall rate of bike lane implementation has remained essentially constant at a rate of close to two miles per year over this time. The City of Billings currently maintains close to 30 miles of bikeway facilities, classified as bike lanes or shared roadways. Figure 9-2 shows the existing bikeway and trail facilities in the study area. Existing bikeway and trail facilities work together to provide good connectivity around the city.

The types of bikeways are described below.

- **Bike Lanes:** This type of facility provides a dedicated space within the roadway for bicyclists to travel and uses signage and striping to delineate the right-of-way assigned to bicyclists and motorists. Billings currently has 26 miles of bike lanes in its transportation system.
- **Shared Roadways:** Shared roadways are designated by signage and/or shared lane markings. Shared lane markings are pavement markings that indicate the position within a roadway where bicyclists should ride. They also provide wayfinding guidance to bicyclists and indicate to motorists to be aware that bicyclists will be travelling in the roadway. Streets marked with shared lane markings, or sharrows, are intended to be shared streets, with motorists and bicyclists sharing the travel lane. Billings currently has 2.6 miles of shared roadways in its transportation system.

In addition to these existing types of bikeways, the Bikeway and Trails Master Plan Update describes a variety of new bikeway types that could help provide low-stress connections for bicyclists in areas of high traffic volumes. These include:

- **Separated Bike Lanes:** Of all on-street bicycle facilities, separated bike lanes offer the most protection and separation from adjacent motor vehicle traffic. Separated bike lanes are bicycle facilities that are physically separated from motor vehicle traffic by a painted buffer and physical barriers such as flexible delineators, curbs, or planters.
- **Bicycle Boulevards:** Bicycle boulevards are local streets with low motorized traffic volumes and speeds that have been designated as bicycle routes. Bicycle boulevards should have a maximum posted speed of 25 mph and target motor vehicle volumes of less than 1,500 vehicles per day. Many streets in Billings exhibit these characteristics already, and minor modifications such as the addition of signage and pavement markings could cost-effectively designate key corridors as bicycle boulevards.
- **Buffered Bike Lanes:** Buffered bike lanes are conventional bike lanes that are enhanced through the application of diagonally striped buffer space. While not providing physical separation, this creates a wider buffer area between vehicles and bicyclists than a conventional six-inch bike lane stripe.

As shown in Figure 9-2, the bikeway and trail system almost provide a complete "loop" around Billings, as well as north-south connectivity in the Heights and the west end on Shiloh Road. To promote the construction of consistent facilities, the City of Billings has adopted specific design standards for all types of bikeway facilities, included in their Design Standards for Trails & Bikeways (9-7). Exhibits 9.6, 9.7, 9.8, and 9.9 illustrate some of the existing bike facilities in the region.

Implementing bike lanes, sharrows, cycle tracks, and bike boulevards on roadways, in conjunction with wayfinding signs, bike racks, and other amenities are great ways to increase bicycle awareness and usage in the region.

Exhibit 9.6 Bike Rack in Downtown Billings



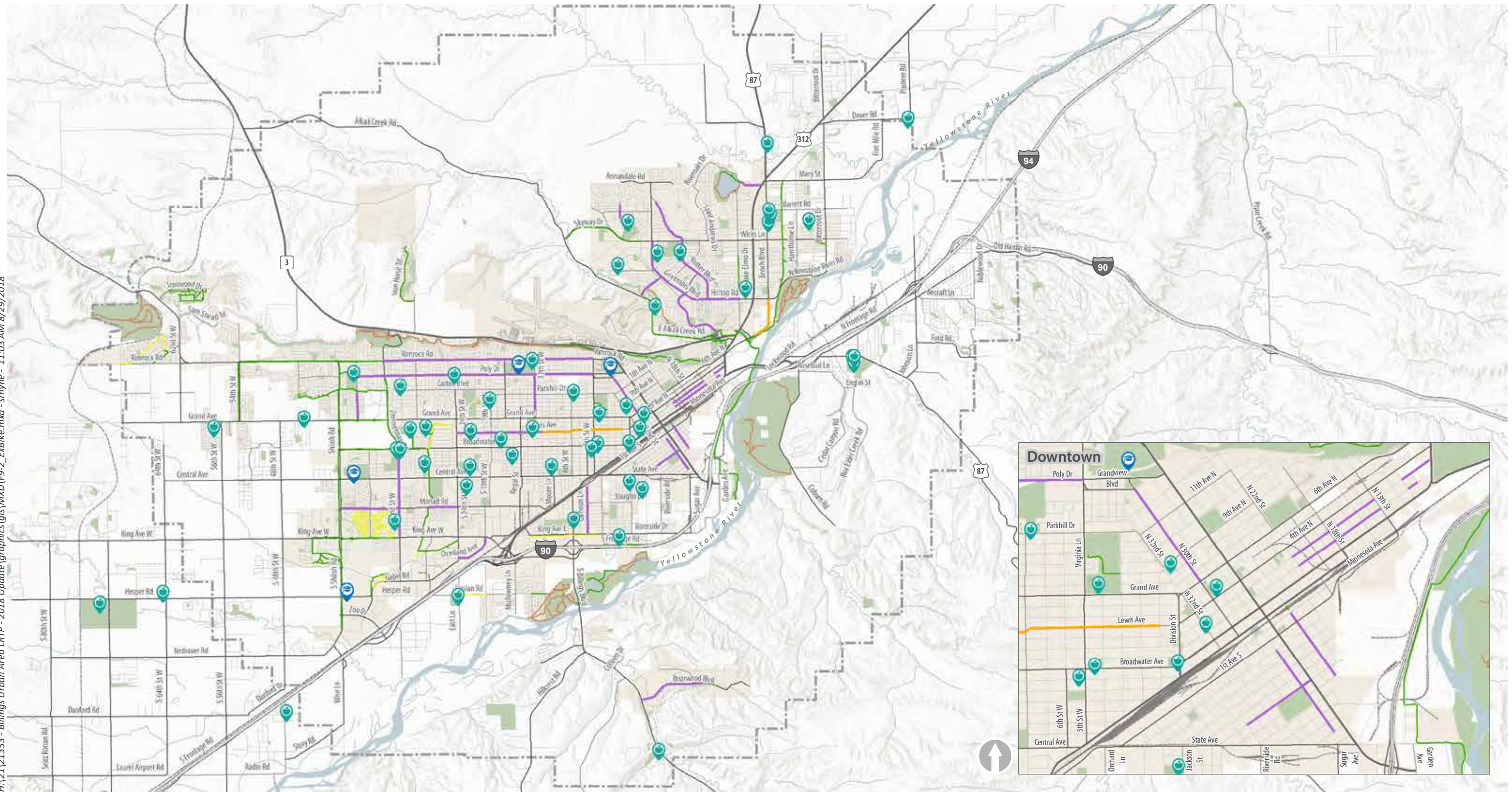
Exhibit 9.7 Bikes Lanes on Rimrock Road



Exhibit 9.8 Bikes Lanes on Monad Road



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Figure 9-2
Existing Bikeway and Trail Facilities

Exhibit 9.9 Buffered Bike Lane on Monad Road



TRAIL FACILITIES

The City of Billings currently maintains approximately 81 miles of trails throughout the study area. As shown in Figures 9-1 and 9-2, multi-use trails are provided along Shiloh Road from Rimrock Road to past Zoo Drive, from Alkali Creek Road and Mary Street in the Heights to an area close to the 27th Street interchange with I-90, and east-west across the rims parallel to Airport Road from Billings Logan International Airport to Skeleton Cliff. Soft surface trails are also provided through Riverfront Park to the south, Two Moon Park in the Heights, and around Lake Elmo. Most of the neighborhood trails are provided in neighborhoods between Shiloh Road, 32nd Street, King Avenue, and Monad Road. Some of the cities unimproved trails are in Phipps Ranch Park, located outside of the MPO boundary and others connect multi-use paths in Zimmerman Park to those on the eastern half of the rims, connecting into the Heights. Table 9.4 summarizes the types and lengths of trails.

Table 9.4 Type and Length of Existing Trails in the Billings Urban Area

Type of Facility	Mutli-Use	Soft Surface	Neighborhood	Unimproved	Total
Length (miles)	45	11	11	14	81

Source: GIS data provided by City of Billings

Exhibits 9.10 and 9.11 illustrate some of the existing trail facilities in the region.

Exhibit 9.10 Jim Dutcher Trail by MetraPark Arena



Exhibit 9.11 Swords Park Trail Near the Airport



Trail Counts

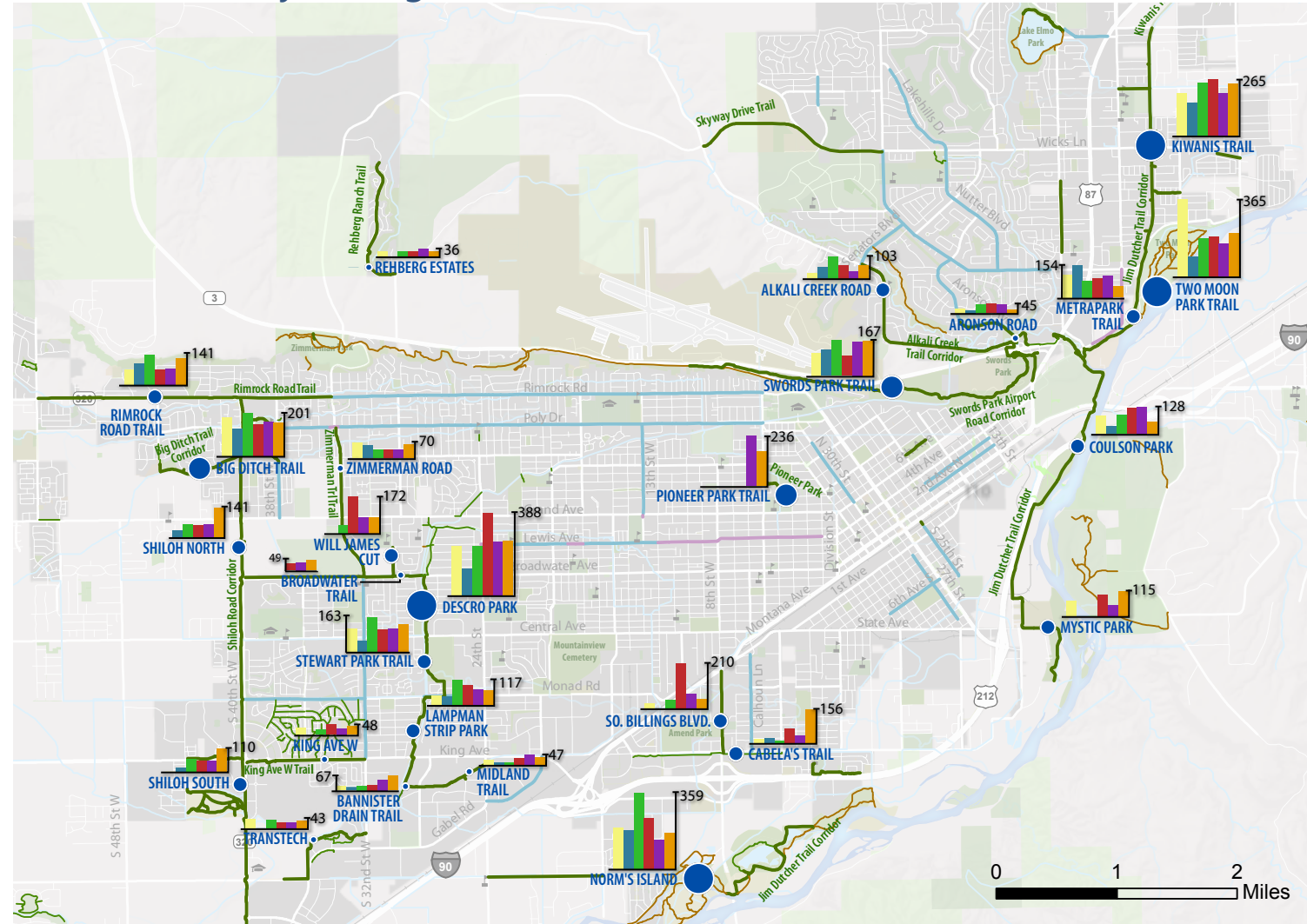
Billings currently uses two methods to count people walking and biking on its trails at 26 locations: automated trail counters and manual counts.

Automated counters are typically left alongside a trail for one week and then rotated to a new location. The City owns three counters and rotates them such as that the same location is counted during the same time frame each year, making year-to-year comparisons possible. Two locations use permanently installed counters along shared-used paths.

In addition to automatic counts, Billings has been conducting manual counts at key locations throughout the area to better understand bicycle and pedestrian transportation patterns. Between 2013 and 2015, counts were conducted at twenty-five different locations, with the largest concentration in downtown Billings. However, because no locations was counted twice, annual or seasonal comparisons should not be drawn.

As shown in Exhibit 9.12, trail usage in the study area has steadily increased over the last six years. The total annual number of trail users counted on the system has steadily risen from 2,287 in 2010 to 2,617 in 2015, an increase of 21% over that timeframe.

Exhibit 9.12 Daily Average Trail Counts Per Year



Source: 2017 Billings Area Bikeway and Trails Master Plan Update

CRASH HISTORY

Crash data for the study area was reviewed to identify crashes involving a pedestrian or bicyclist over the five-year period from 2013 to 2017. Table 9.6 summarizes the pedestrian and bicycle related crashes. Figure 9-3 shows the approximate location of pedestrian-related crashes in the study area from 2013 – 2017 and Figure 9-4 shows the approximate location of bicycle-related crashes in the study area from 2013-2017.

As shown in Table 9.6, there have been 350 reported crashes involving a pedestrian or bicyclist over the five- year time period. 80% of the crashes involving a pedestrian or bicyclist resulted in some type of injury. Nine fatal crashes involving a pedestrian or bicyclist occurred during the five-year time period. Eight involved pedestrians and one involved a bicyclist.

Table 9.6 Pedestrian and Bicycle Crash Summary by Severity (2013-2017)

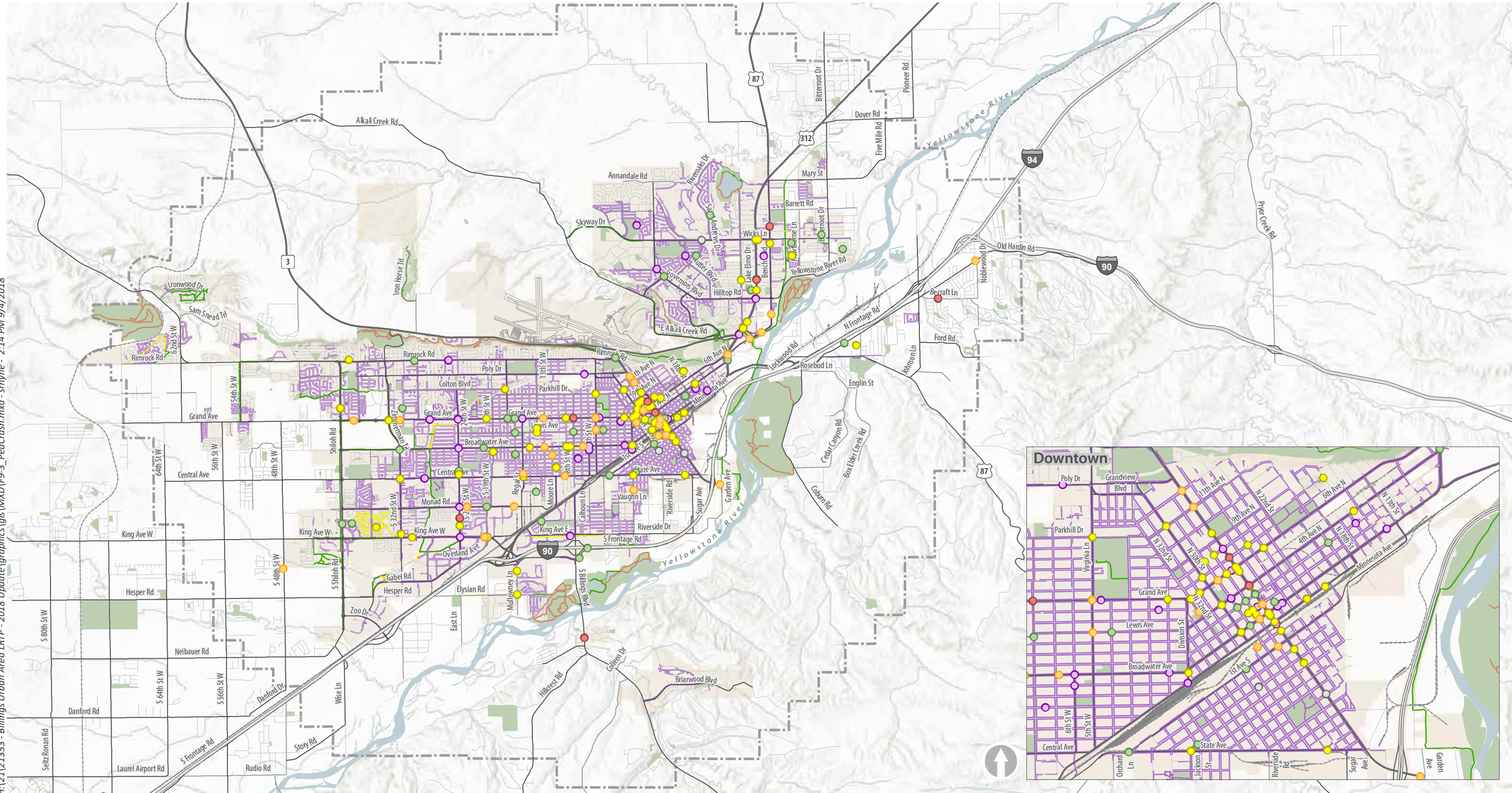
Category	Possible Injury	Non-incapacitating (Injury Evident)	Incapacitating Injury	Property Damage Only	Fatal	Unknown	Total
Pedestrian	84	42	31	42	8	3	210
Bicycle	68	35	8	28	1	0	140
Total	152 (43%)	77 (22%)	39 (11%)	70 (20%)	9 (3%)	3 (1%)	350

As shown in Table 9.7, bicycle and pedestrian crash occurrences have stayed relatively constant over the five-year period from 2013 to 2017. Crash occurrences of both kinds fell slightly from 2013 to 2015 but then rose slightly from 2015 to 2017.

Table 9.7 . Pedestrian and Bicycle Crash Summary by Year (2013-2017)

Year	2013	2014	2015	2016	2017
Bicycle Crashes	31	23	28	31	27
Pedestrian Crashes	49	39	40	37	46

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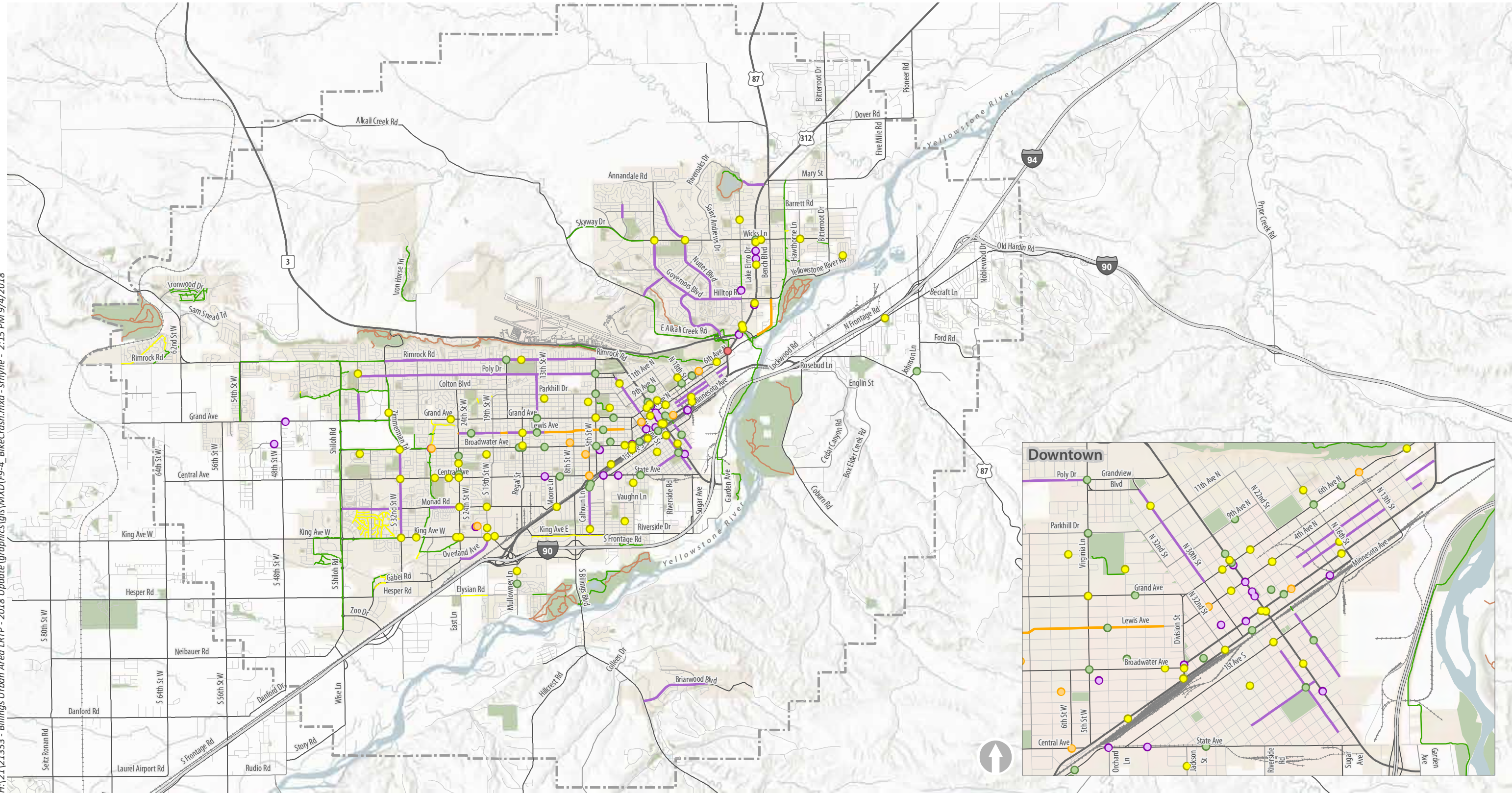
- | | | |
|--|--|---|
| Crash Severity | — Shared Use Path | Study Area |
| ● Fatal Accident | ● Non-Incapacitating Evident Injury Accident | Park |
| ● Incapacitating Injury Accident | ● Non-Injury Accident (Propoert- Damage-Only Accident) | City of Billings |
| ● Possible Injury Accident | ● Unknown | — Neighborhood Trail |
| | — Sidewalks | — Unpaved Trail |

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Figure 9-3
Pedestrian Crashes (2013 - 2017)

2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN

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- Crash Severity**
- Fatal Accident
 - Incapacitating Injury Accident
 - Possible Injury Accident
 - Non-Incapacitating Evident Injury Accident
 - Non-Injury Accident (Propoert- Damage-Only Accident)
 - Unknown

- Bike Lane
- Shared Lane Marking
- Shared Use Path
- Neighborhood Trail
- Unpaved Trail
- ▭ Study Area
- ▭ City of Billings
- ▭ Park

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Figure 9-4
Bicycle Crashes (2013 - 2017)

DEFICIENCIES AND NEEDS

In order to guide identification of short and long-range bicycle and pedestrian projects, deficiencies and needs were collected from the general public, Steering Committee, and review of past plans/studies.

PUBLIC AND SC FEEDBACK

Forty-four percent of the public comments received corresponded to bicycle, pedestrian, or multi-use facilities. In addition, public comment identified the bicycle and pedestrian element of the LRTP to be among the most important elements of the 2018 LRTP update.



NEEDS DEFINED IN PREVIOUS STUDIES/PLANS

Several recent city-wide studies/plans identified pedestrian and bicycle facility needs. Key needs from these studies/plans include:

- **2014 Billings Urban Area Long Range Transportation Plan:** Prioritized projects related to on-street bikeways and multi-use trails with the following criteria.
 - On-street bikeways- route continuity, nonmotorized travel demand, bicycle compatibility index and public opinion
 - Multi-use trails- safety, connectivity/ accessibility, route continuity, aesthetics/recreational value, nonmotorized travel demand, and public opinion
- **Billings Area Bikeway and Trail Master Plan Update:** Prioritized bikeway and trail projects according to a needs assessment, system coverage, safety, connectivity, and connections to



adjacent jurisdictions. The top noted priorities for investment in the bicycle and trail system include:

1. Expansion of the trail network
2. Maintenance of the existing bikeway and trail network, and
3. Expansion of existing on-street bikeways

The most critical gaps in the existing bicycle and trail system include:

1. Riverfront trails along the Yellowstone River
2. Connections from West Billings to Downtown
3. Connection atop the Rimrocks from 27th Street to Zimmerman Trail
4. Connection from Billings Heights to Downtown
5. Connection from the river/Lockwood to Downtown
6. Connection from the Rimrocks to Downtown, and
7. Connections from South Billings to Downtown

- **Trail Asset Management Plan:** Identifies need to maintain existing trail facilities related to safety and aesthetics.
- **Safe Routes to School Study Phase I & II:** Projects were identified to enhance safety and increase the number of students walking or biking to school.
- **Lockwood Non-Motorized Transportation Plan:** Identifies education, enforcement, encouragement, engineering, evaluation, and partnership and funding action items to improve non-motorized transportation safety in the Lockwood area.
- **Other Documents Reviewed:** Recommendations based on projects that would best improve facilities in the specific study area. These studies/ plans included:
 - West End Multimodal Planning Study (9-8)
 - Rims to Valley Study (9-9)



PROJECT LIST RELATED TO PEDESTRIAN AND BICYCLE FACILITIES

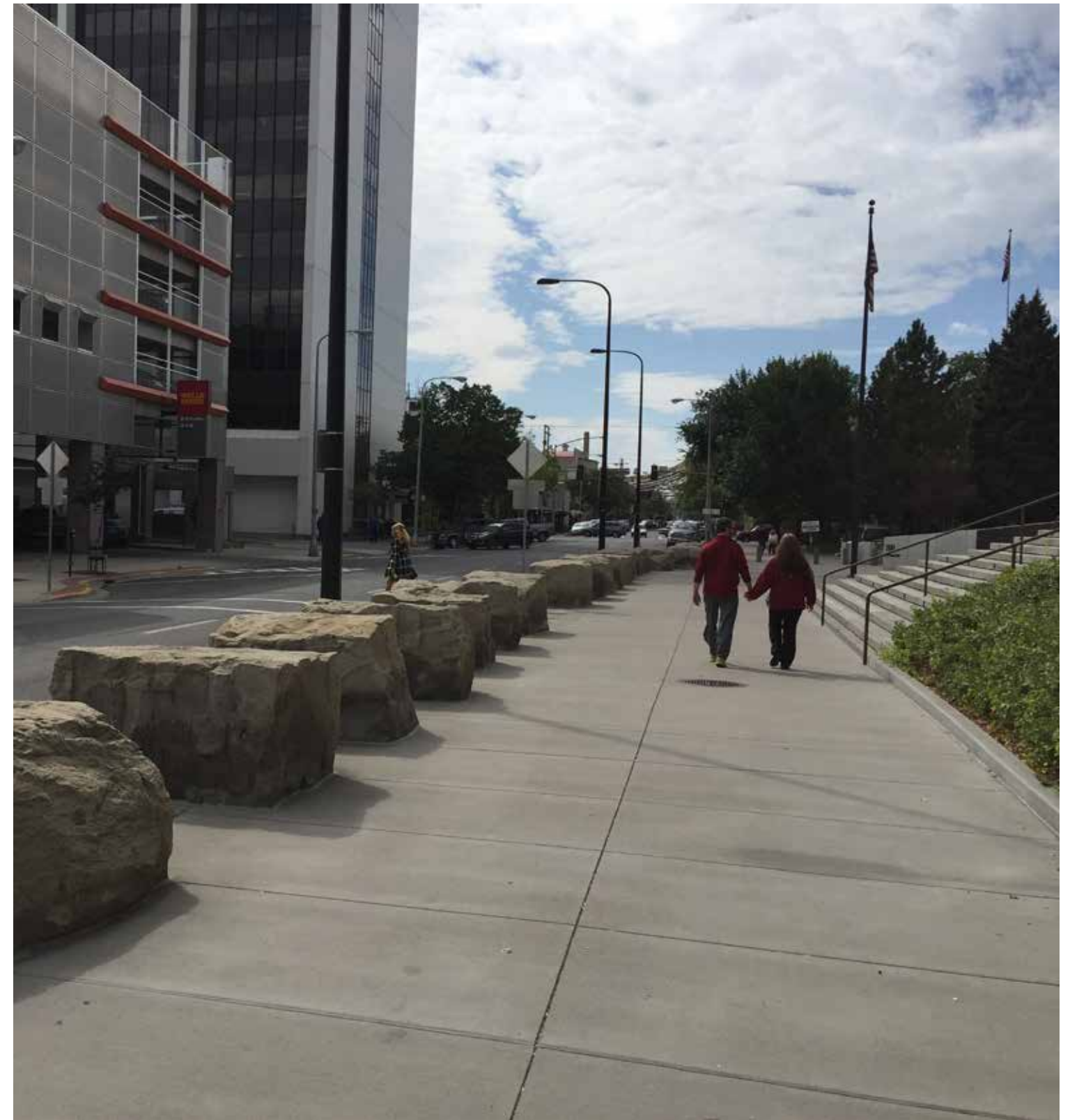
Pedestrian, bicycle, and multi-use path projects were identified from the needs and deficiencies assessment. The LRTP identifies a total of 53 pedestrian facility projects, 144 bicycle facility projects, and 116 trail projects. Investing in these types of projects supports the plan's goals and the region's desire to implement one of the most comprehensive bicycle and trail networks in the State of Montana.

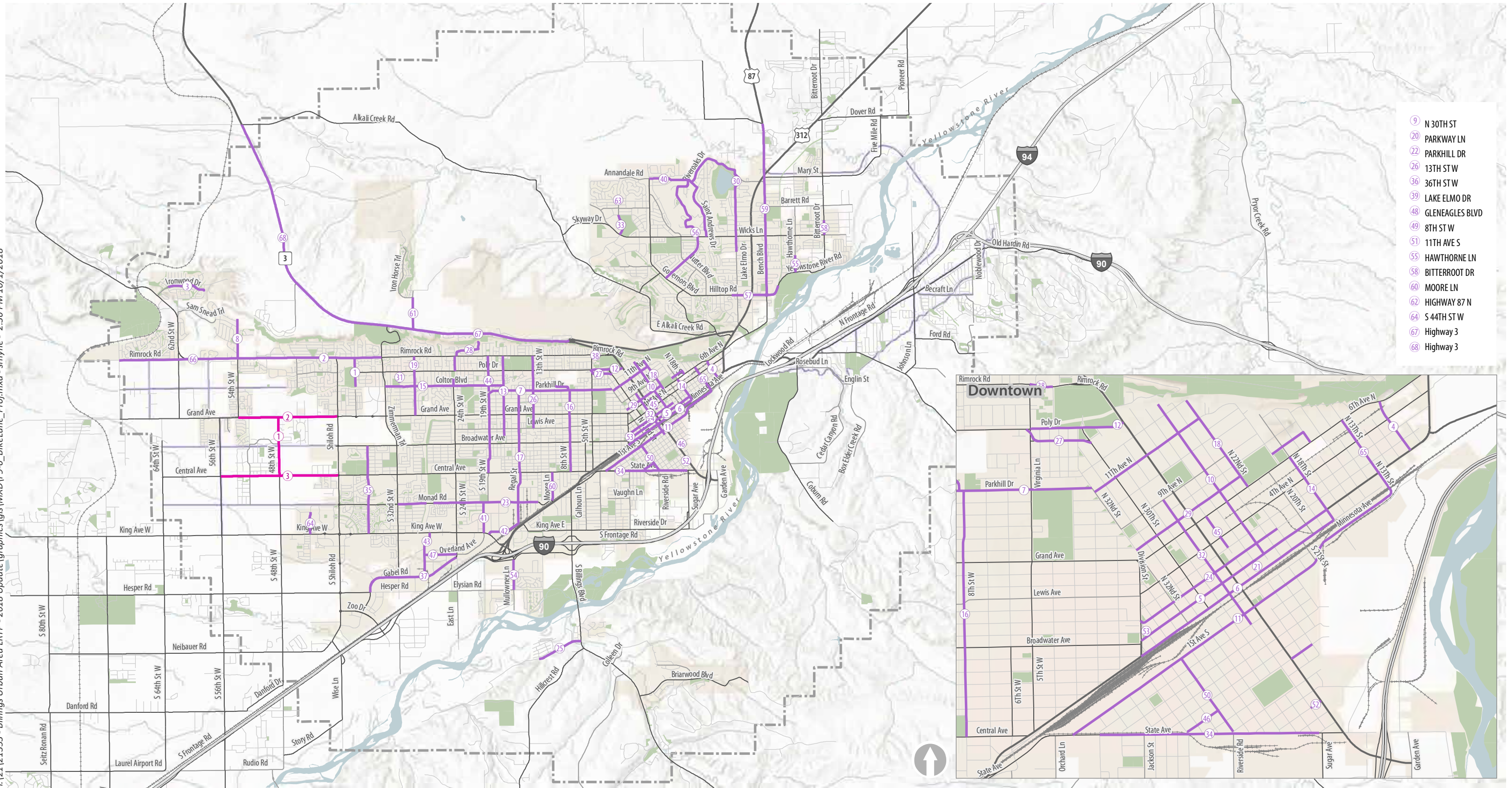
A project description and planning-level cost estimate was developed for each project. The planning-level cost estimates were developed from cost estimates included in past plans/studies, engineer's estimates made by the consultant team, or City of Billings Capital Improvement Plan, FY 2019 – 2023 (9-10).

Pedestrian projects include pedestrian crossings, safe routes to school projects, and sidewalk projects. Safe Routes to School (SRTS) projects are listed by school name and include a brief description. Table 9.8 summarizes the pedestrian projects. Figure 9-5 shows the approximate location of each project.

Bikeway projects include on-street bike lanes, shared roadways, and bicycle boulevards. Bicycle routes and boulevards are classified as secondary bikeways. Table 9.9 summarizes the bikeway projects. Figure 9-6 and Figure 9-7 show the approximate location of each project.

Multi-use trail projects include both soft-surface and paved trails. Table 9.10 summarizes the multi-use trail projects.



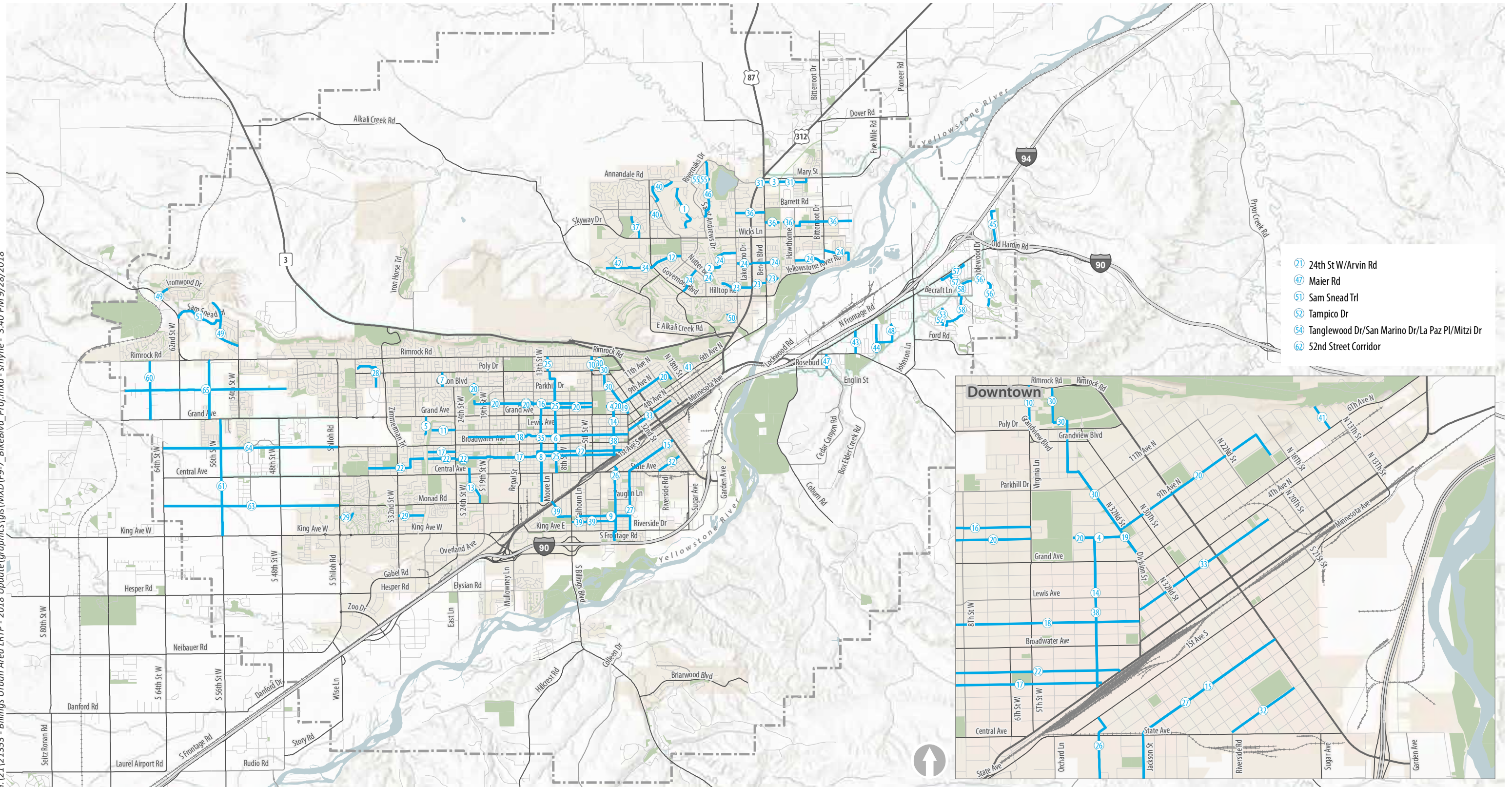


— Bicycle Lane
— Buffered Bike Lane

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Figure 9-6
Bicycle Lane and Buffered Bike Projects

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— Bicycle Boulevard

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Figure 9-7
Bicycle Boulevard Projects

Table 9.8 Pedestrian Projects

Project ID	Proposed Name	Project Description	Estimated Planning-Level Cost
P1	SRTS - Beartooth	Install a crosswalk on Barrett Road at Linden Drive and install a new sidewalk or multi-use trail along the south side of Barrett and the west side of the alley; install sidewalk along the east side of Bitterroot Drive from Cherry Creek Estates to Wicks Lane with a school crosswalk at Wicks Lane and the access to Emma Jean Estates Subdivision. Installation of sidewalk will likely require private property easements from adjacent landowners; Sign alley adjacent to school one-way northbound.	\$524,621
P2	SRTS - Bench	Install an east-west sidewalk or trail connection to the north end of school property along Lola Lane. This connection would shorten the walking distance coming from the north on Lake Elmo Drive. Install sidewalks on Rex Lane.	\$102,199
P3	SRTS - Bitterroot	Construct pedestrian path connection and crossing over the Holling Drain from residential area to the east. (Requires local SID for roadwork). Install sidewalk or pedestrian path along Barrett Road. Installation of sidewalk will likely require private property easements from adjacent landowners. Install fluorescent yellow school crossing signs and ladder-style crosswalk at the multi-use trail crossing on Barrett Road.	\$840,585
P4	SRTS - Boulder	Install sidewalks and curb and gutter along Boulder Avenue. Consider installing a flasher on the existing school zone speed limit sign. Install sidewalks on Poly Drive west of 32nd Street West.	\$354,289
P5	SRTS - Eagle Cliffs	Construct a trail connection from the intersection of Constitution Avenue and Kootenai Avenue to Marias Drive. Permission must be obtained from DNRC.	\$115,825
P6	SRTS - Meadowlark	Install enhanced school crossing with curb extensions or pedestrian refuge island on 32nd Street West near the intersection with St. John's Avenue.	\$144,782
P7	SRTS - Newman	Install sidewalks where missing along Calhoun Lane. Install sidewalks where missing along east-west side streets.	\$1,140,880
P8	SRTS - Poly Drive Sidewalk Improvements	Pedestrian Improvements at the Poly Drive and Arvin Road Intersection	\$97,147

Project ID	Proposed Name	Project Description	Estimated Planning-Level Cost
P9	SRTS - Ponderosa	Improve the landing/pedestrian storage area on the northeast corner of King Avenue East and Hallowell Lane. Reconfigure intersection of Hallowell, Arlington, and school access to reduce pedestrian conflicts and improve traffic operations. Install trail connection and ditch crossing between Kings Green Subdivision and south end of school property. Construct a pedestrian path along King Avenue East.	\$1,192,320
P10	SRTS - Sandstone	Install sidewalks on neighborhood streets southeast of Babcock Boulevard. Install sidewalks on neighborhood streets north of Wicks Lane. Consolidate crosswalks on Nutter Boulevard in front of school to the north location and restripe as a ladder style crosswalk.	\$1,111,816
P11	SRTS - Alkali Creek	Install sidewalk along south side of Alkali Creek Road northwest of school. Install sidewalk along Pinon Drive just west of Alkali Creek Road. Install sidewalk along south side of Indian Trail.	\$472,443
P12	SRTS - Big Sky	Enhance crossing at 32nd Street West and Lampman Drive or move crossing to Granger Avenue and signalize. Perform a signal warrant analysis at 32nd Street West and Granger Avenue. If warranted, move the school crossing from Lampman Drive to Granger and signalize the intersection. Install crosswalk markings on the south leg of the intersection of Monad Road and 36th Street West. Enhance existing crossing on west leg.	\$182,678
P13	SRTS - Broadwater	Install curb extensions at the intersection of 4th Street West and Wyoming Avenue. Improve loading zone through alley by defining entry to separate from local business, improve sight distance around corner, reducing the exit to a single lane and providing physical separation between the walking area and the parking area.	\$398,427
P14	SRTS - Burlington	Install curb extensions at the intersection of Lewis Avenue and 22nd Street West. Install signing, striping and curb extensions for midblock crossing on 22nd Street West directly in front of main school entrance and consider requiring students to use this entrance.	\$119,686

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Project ID	Proposed Name	Project Description	Estimated Planning-Level Cost
P15	SRTS - Central Heights	Widen sidewalks on Lexington Drive, Alamo Drive, and Pueblo Drive, and install curb extensions at mid-block crossings on Alamo Drive and Lexington Drive. Install curb extensions at intersection of Lexington Drive and Eldorado Drive and marked crosswalk on east leg. Install curb extensions or another form of traffic calming at Santa Fe Drive and Eldorado Drive. Install curb extensions for crosswalk at Monad Road/Monterey Drive.	\$444,096
P16	SRTS - Highland	Install sidewalks and curb extensions at the intersection of O'Malley Drive and Virginia Lane. Install crosswalks with enhancements to shorten crossing distance at Rimrock Road/Missouri Street and Rimrock Road/Virginia Lane. Install sidewalk and/or a bike lane on Virginia Lane from Rimrock Road to Parkhill Drive.	\$330,710
P17	SRTS - McKinley	Install pedestrian crossings and enhancements at the intersections of Parkhill Drive/North 32nd Street and 11th Avenue North/North 32nd Street. Install curb extensions at 9th Avenue North/North 31st Street. Install curb extensions at 8th Avenue North/North 31st Street. Install curb extensions at 8th Avenue North/North 32nd Street.	\$403,151
P18	SRTS - Miles Avenue	Install curb extensions at 16th Street West and Miles Avenue. Install pull-out area along east side of alley to enhance loading zone and move loading away from pedestrian traffic. Sign alley "one-way" northbound, but allow exception for garbage trucks.	\$149,607
P19	SRTS - Orchard	Install curb extensions and crosswalk enhancements on Jackson Street crossings.	\$129,134
P20	SRTS - Rose Park	Install curb extensions at 19th Street West/Avenue E; eliminate crosswalk on south leg of this intersection and south leg of Avenue F intersection. Install traffic calming improvements on 19th Street West to slow traffic speeds. Complete curb and sidewalk on Parkhill Drive to provide continuous walking route, including curb extensions at corner; would also prevent most U-turns.	\$305,513
P21	S 32nd Street Pedestrian Crossing	Install a midblock crossing on S 32nd Street	\$210,000

Project ID	Proposed Name	Project Description	Estimated Planning-Level Cost
P22	6th Ave Underpass	Pedestrian Improvements to Existing Underpass	\$102,211
P23	King Ave Pedestrian Crossings	Seven proposed crossings along King Ave	\$264,992
P24	S. Billings Blvd & Simpson St Crossing	Pedestrian crossing treatment to be determined	\$158,995
P25	State Ave Pedestrian Crossings	Three proposed crossings along State Ave	\$149,910
P26	Moore Ln & Laurel Rd Pedestrian Crossing	Pedestrian crossing treatment to be determined	\$210,000
P27	Washington St Pedestrian Crossing	Overpass or underpass crossing of Interstate 90	\$1,680,000
P28	1st Ave N/ US 87/ Main St (Exposition Dr)	Add pedestrian crossings to existing intersections	\$28,000
P29	US 87 Pedestrian Easement	1.0 miles adjacent to Metra Park from Airport Rd to Yellowstone River	\$369,600
P30	N 10th St/1st Ave N	Add pedestrian crossings to existing intersection (potential new signal with pedestrian phase)	\$280,000
P31	1st Ave N/US 87 Sidewalk	Add 0.7 miles of sidewalks to N 10th Street to Yellowstone River	\$258,720
P32	US 87 Sidewalks	Add 0.3 miles of sidewalks to northside of Bridge crossing Yellowstone River	\$110,880
P33	N 32nd Street Pedestrian Crossing	Install a midblock crossing on N 32nd Street	\$210,000
P34	Aronson Ave Sidewalk	Add sidewalk along Aronson Ave south of E Alkali Creek	\$73,920

Project ID	Proposed Name	Project Description	Estimated Planning-Level Cost
P35	Jackson Street Sidewalks	Construct new 5-foot sidewalk on west side of Jackson/crossing at Orchard	\$216,500
P36	Broadwater Elementary School	Install sidewalk, fencing, and landscaping	\$131,290
P37	Evaluate re-opening of cut-through path at East Ridge Estates	Cut-through to connect residents to Highway 87 Sidewalk	Unknown
P38	School Bus Stop Waiting Areas	Lighting for students at bus stops; waiting area so children aren't forced to wait in street due to snow; install curb and gutter to add buffer for pedestrians; install bus stops every other year	\$350,000
P39	Becraft Lane Sidewalk	Path from Old Hardin Rd to Noblewood Drive; serves as Pedestrian Connection to the commercial area at the Old Hardin Rd/Johnson Ln intersection and to Harris Park; path to run along north side of Becraft Lane	\$410,000
P40	Piccolo Ln	Five foot concrete curb-walk from Old Harding Rd to Highway 87; serving housing along street and create a pedestrian connection to the IGA convenience store on the southwest corner of the Piccolo Ln/Old Hardin Rd intersection; Piccolo Ln has potential to become neighborhood shareway/greenway or a woonerf	\$250,000
P41	Old Hardin Road Sidewalk (Segment 1)	Path from Johnson Lane to Noblewood Drive; path to run on the south side of Old Hardin Rd; possibility of using irrigation canal as a location for a pedestrian path	\$625,000
P42	Old Hardin Road Sidewalk (Segment 2)	Path from the I-90 Interchange to Ford Rd; pedestrian connection to Lockwood School and connection to Hillner Park; opportunity to use irrigation canal to construct pedestrian path; path would run along the west side of Johnson Ln from Old Hardin Rd to the irrigation canal, run along the north side of the canal from Johnson Lane to Greenwood Ave, run along the south side of Sunrise Ave, and along the east side of Hemlock Dr	\$587,000
P43	Old Hardin Road Sidewalk (Segment 3)	Current 8-foot shoulder planned; letter submitted to the Yellow County Commission indicating desire for a separated facility parallel to the road to provide pedestrian safety	\$600,000

Project ID	Proposed Name	Project Description	Estimated Planning-Level Cost
P44	Old Hardin Rd Sidewalk (Segment 4)	At terminus of multi-use path (north end of Cottonwood Park); mid-block pedestrian-actuated beacon, possibly a pedestrian hybrid beacon (HAWK Signal) or rectangular rapid flashing beacon (RRFB)	Unknown
P45	Johnson Ln	From west boundary of Foxtail Subdivision to HAWK signal	Unknown
P46	Billings Bypass Sidewalk	The East End TIFF will determine if adequate funding is available for this project in FY 2019	\$3,500,000
P47	54th St W Mid-block Crossing	Path from US 87 to Piccolo Lane; path to run on the south side of Old Hardin Rd; possibility of using irrigation canal as a location for a pedestrian path	\$350,000
P48	Grand Ave Sidewalk	Path from Piccolo Lane to Greenwood Avenue; path to run on the south side of Old Hardin Rd; possibility of using irrigation canal as a location for a pedestrian path	\$410,000
P49	Pedestrian Overpass on Main Street	Path from Greenwood Avenue to Johnson Lane; path to run on the south side of Old Hardin Rd; possibility of using irrigation canal as a location for a pedestrian path	\$250,000

Table 9.9 Bikeway Projects

Project ID1	Proposed Name	Length (Miles)	Project Description	Estimated Planning-Level Cost
Bicycle Lane Projects				
BL1	38TH ST W	0.5	Bicycle Lane from Rimrock Rd to S of Colin Dr	\$32,330
BL2	RIMROCK RD	2	Bicycle Lane from Poly Dr to Zimmerman Trl	\$129,320
BL3	IRONWOOD DR	0.25	Bicycle Lane from Woodcreek Dr to Molt Rd	\$16,165
BL4	N 10TH ST	0.25	Bicycle Lane from 6th Ave N to 1st Ave N	\$16,165
BL5	1ST AVE N	1.25	Bicycle Lane from N 13th St to N 36th St	\$80,825
BL6	MONTANA AVE	0.5	Bicycle Lane from N 18th St to Division St	\$32,330
BL7	11TH AVE N	0.75	Bicycle Lane from N 22nd St to 19th St W	\$48,495
BL8	54TH ST W	0.75	Bicycle Lane from N of Billy Casper Dr to Rimrock Rd	\$48,495
BL9	N 30TH ST	0.25	Bicycle Lane from N 27th St to Virginia Ln	\$16,165
BL10	N 24TH ST	0.5	Bicycle Lane from 1st Ave N to North of 12th Ave N	\$32,330
BL11	N 13TH ST	2.25	Bicycle Lane from N 13th St to State Av	\$145,485
BL12	POLY DR	0.25	Bicycle Lane from N 27th St to Virginia Ln	\$16,165
BL13	17TH ST W	1	Bicycle Lane from Rimrock Rd to Yellowstone Ave	\$64,660
BL14	N 18TH ST	0.5	Bicycle Lane from 6th ave N to Montana Ave	\$32,330
BL15	COLTON BLVD	1.5	Bicycle Lane from 17th St W to Zimmerman Trl	\$96,990
BL16	8TH ST W	1	Bicycle Lane from Azalea Ln to Central Ave	\$64,660
BL17	15TH ST W	2.25	Bicycle Lane from Parkhill Dr to King Ave W	\$145,485

Project ID1	Proposed Name	Length (Miles)	Project Description	Estimated Planning-Level Cost
BL18	N 22ND ST	0.5	Bicycle Lane from 6th Ave N to 12th Ave N	\$32,330
BL19	REHBERG LN	1	Bicycle Lane from Rimrock Rd to Grand Ave	\$64,660
BL20	PARKWAY LN	0.25	Bicycle Lane from Laurel Rd to S Billings Blvd	\$16,165
BL21	N 25TH ST	0.25	Bicycle Lane from 1st Ave N to Montana Ave	\$16,165
BL22	PARKHILL DR	1.5	Bicycle Lane from N 22nd St to 19th St W	\$96,990
BL23	MONAD RD	0.5	Bicycle Lane from S Plainview St to S 32nd St W	\$32,330
BL24	2ND AVE N	0.25	Bicycle Lane from N 22nd St to Yellowstone Ave	\$16,165
BL25	JELLISON RD	0.75	Bicycle Lane from Quanta Ln to Aldonna St	\$48,495
BL26	13TH ST W	0.25	Bicycle Lane from Rimrock Rd to Lewis Ave	\$16,165
BL27	GRANDVIEW BLVD	0.5	Bicycle Lane from N 27th St to Virginia Ln	\$32,330
BL28	24TH ST W	0.25	Bicycle Lane from Country Club Cir to Colton Blvd	\$16,165
BL29	7TH AVE N	0.75	Bicycle Lane from 6th Ave N to N 32nd St	\$48,495
BL30	ROLLING HILLS RD	1.25	Bicycle Lane from Annandale Rd to Uinta Park Dr	\$80,825
BL31	32ND ST W	0.5	Bicycle Lane from Poly Dr to Boulder Ave	\$32,330
BL32	N BROADWAY	0.75	Bicycle Lane from 9th Ave N to State Ave	\$48,495
BL33	HIGH SIERRA BLVD	0.25	Bicycle Lane from Siesta Ave to W Wicks Ln	\$16,165
BL34	STATE AVE	1.25	Bicycle Lane from Sugar Ave to Hallowell Ln	\$80,825

Project ID1	Proposed Name	Length (Miles)	Project Description	Estimated Planning-Level Cost
BL35	S 36TH ST W	0.75	Bicycle Lane from Broadwater Ave to King Ave W	\$48,495
BL36	MONAD RD	1	Bicycle Lane from S Plainview St to S 32nd St W	\$64,660
BL37	GABEL RD	1.75	Bicycle Lane from S 24th St W to Hesper Rd	\$113,155
BL38	RIMROCK RD	0.25	Bicycle Lane from Normal Ave to Virginia Ln	\$16,165
BL39	LAKE ELMO DR	1.25	Bicycle Lane from Annandale Rd to Uinta Park Dr	\$80,825
BL40	SAINT ANDREWS DR	1.75	Bicycle Lane from Gleneagles Blvd to Wicks Ln	\$113,155
BL41	S 20TH ST W	0.5	Bicycle Lane from Rimrock Rd to King Ave W	\$32,330
BL42	KING AVE W	0.25	Bicycle Lane from S 15th St W to King Ave W	\$16,165
BL43	S 29TH ST W	0.75	Bicycle Lane from King Ave W to Gabel Rd	\$48,495
BL44	S 19TH ST W	0.5	Bicycle Lane from Rimrock Rd to King Ave W	\$32,330
BL45	N 26TH ST	0.25	Bicycle Lane from 6th Ave N to 3rd Ave N	\$16,165
BL46	6TH AVE S	0.25	Bicycle Lane from S 25th St to State Ave	\$16,165
BL47	OVERLAND AVE	0.5	Bicycle Lane from S 24th St W to Hesper Rd	\$32,330
BL48	GLENEAGLES BLVD	0.5	Bicycle Lane from Black Diamond Rd to W Wicks Ln	\$32,330
BL49	8TH ST W	0.25	Bicycle Lane from Azalea Ln to Central Ave	\$16,165
BL50	S 34TH ST	0.5	Bicycle Lane from 1st Ave S to State Ave	\$32,330
BL51	11TH AVE S	0.25	Bicycle Lane from 9th Ave N to State Ave	\$16,165

Project ID1	Proposed Name	Length (Miles)	Project Description	Estimated Planning-Level Cost
BL52	10TH AVE S	0.25	Bicycle Lane from S 29th St to S 28th St	\$16,165
BL53	N 35TH ST	0.25	Bicycle Lane from 2nd Ave N to 1st Ave N	\$16,165
BL54	MULLOWNEY LN	0.5	Bicycle Lane from Midland Rd to Elysian Rd	\$32,330
BL55	HAWTHORNE LN	0.25	Bicycle Lane from Hemingway Ave to Yellowstone River Rd	\$16,165
BL56	BABCOCK BLVD	1	Bicycle Lane from Annandale Rd to Governors Blvd	\$64,660
BL57	YELLOWSTONE RIVER RD	0.25	Bicycle Lane from E of Bench Blvd to West of Hansen Ln	\$16,165
BL58	BITTERROOT DR	0.25	Bicycle Lane from Elaine St to Wicks Ln	\$16,165
BL59	BENCH BLVD	0.5	Bicycle Lane from Alexander Rd to Hilltop Rd	\$32,330
BL60	MOORE LN	0.5	Bicycle Lane from Rimrock Rd to Monad Rd	\$32,330
BL61	ROD AND GUN CLUB RD	0.5	Bicycle Lane from Iron Horse Trl to High Way 3	\$32,330
BL62	HIGHWAY 87 N	0.75	Bicycle Lane from Alexander Rd to Hilltop Rd	\$48,495
BL63	HIGH SIERRA BLVD	0.25	Bicycle Lane from Benjamin Blvd to Matador Ave	\$16,165
BL64	S 44TH ST W	0.5	Bicycle Lane from Georgina Dr to Hesper Rd	\$32,330
BL65	N 13TH ST	0.5	Bicycle Lane from 6th Ave N to Minnesota Ave	\$32,330
BL66	RIMROCK RD	0.25	Bicycle Lane from Rimrock to 50th St W	\$16,165
BL67	Highway 3	3	Bike Lanes from North 27th St to Zimmerman Trail	\$4,500,000
BL68	Highway 3	2	Bike Lanes from Zimmerman Trail to Apache Trail	\$2,600,000

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Project ID1	Proposed Name	Length (Miles)	Project Description	Estimated Planning-Level Cost
Bicycle Boulevard Projects				
BB1	Wentworth Drive	1.5	Bicycle route from Annandale Rd to Wicks Ln	\$10,080
BB2	Butterfly Lake Lane	1	Bicycle route from Nutter Blvd to Uninta Park Dr	\$6,720
BB3	Crist Drive	0.5	Bicycle route from Main St to Yellowstone River Trail	\$3,360
BB4	Avenue C	0.5	Bicycle route from 3rd St W to N 32nd St	\$3,360
BB5	28th Street West	0.5	Bicycle route from Grand Ave to Broadwater Ave	\$3,360
BB6	10th Street West	1.5	Bicycle route from Parkhill Dr to Central Ave	\$10,080
BB7	Wingate Lane	0.5	Bicycle route from Rimrock Rd to Colton Blvd	\$3,360
BB8	12th Street West	1	Bicycle route from Lewis Ave to Central Ave	\$6,720
BB9	Simpson Street	1	Bicycle route from Newman Ln to Jackson St	\$6,720
BB10	Virginia Lane	0.5	Bicycle route from Rimrock Rd to Poly Dr	\$3,360
BB11	Lewis Avenue	0.5	Bicycle route from 24th St W to Parkview Dr	\$3,360
BB12	Kootenai Ave/ Constitution Avenue	1	Bicycle Boulevard from Calico Ave to Nutter Blvd	\$337,459
BB13	Berthoud Drive/ Santa Fe Drive	1	Bicycle Boulevard from Monad Rd to St Johns Ave	\$194,039
BB14	2nd Street West	1	Bicycle Boulevard from Avenue C to Miles Ave	\$230,597
BB15	4th Avenue South	1	Bicycle Boulevard from S 27th St to State Ave	\$258,719

Project ID1	Proposed Name	Length (Miles)	Project Description	Estimated Planning-Level Cost
BB16	Avenue D	2	Bicycle Boulevard from 21st St W to Virginia Ln	\$568,056
BB17	Miles Avenue/ Terry Avenue	3.5	Bicycle Boulevard from 28th St W to Montana Ave	\$928,013
BB18	Yellowstone Avenue	3	Bicycle Boulevard from 22nd St W to Division St	\$815,526
BB19	North 32nd Street	1	Bicycle Boulevard from Grand Ave to Poly Dr	\$230,597
BB20	Lyman Ave/Avenue D/ Avenue C/9th Ave		Bicycle Boulevard from 7th Ave N to West to Meadowood St	\$244,000
BB21	24th St W/Arvin Rd		Bicycle Boulevard from Country Club Cir to Colton Blvd	\$133,000
BB22	Terry Ave/Howard Ave/24th St W		Bicycle Boulevard from Montana Ave to 36th St W	\$68,000
BB23	Milton/Prince of Wales/ Heights Ln/Shawnee Dr/Arronson/Nutter		Bicycle Boulevard from Heights Ln to West of Prince Charles Dr	\$50,000
BB24	Arronson/Uninta Park Dr/ Riley/Cherry Creek Lp		Bicycle Boulevard from Cherry Creek Loop to Governors Blvd	\$44,000
BB25	Azalea Ln/10th St W/11th St W/Missouri St/Moore Ln		Bicycle Boulevard from Rimrock Rd to Monad Rd	\$75,000
BB26	S 41st St/Hallowell Ln/Arlington Dr/ Carlton Ave SW		Bicycle Boulevard from 1st Ave S to Carlton Ave SW	\$20,000
BB27	4th Ave S/Jackson St		Bicycle Boulevard from S 28th St to King Ave E	\$28,000
BB28	Avalong Rd/Vickery Dr/Vickery Ct		Bicycle Boulevard from Colton Blvd to Vickery Ct	\$11,000

Project ID1	Proposed Name	Length (Miles)	Project Description	Estimated Planning-Level Cost
BB29	Lampman Dr/Decathlon Pkwy/S 38th St W		Bicycle Boulevard from S 29th St W to S Shiloh Rd	\$12,000
BB30	Normal Ave/Ash St/ Colton Blvd/N 32nd St		Bicycle Boulevard from Rimrock Rd/South of Avenue B	\$19,000
BB31	Pemberton Ln/Crist Dr/Columbine Dr		Bicycle Boulevard from Mary St/Main St	\$13,000
BB32	8th Ave S		Bicycle Boulevard from S 28th to S 34th St	\$7,000
BB33	Yellowstone/Clark		Bicycle Boulevard from Division to 10th St W	\$90,000
BB34	Constitution/Kootenai		Bicycle Boulevard from Nutter Blvd to West of Amendment Cir	\$20,000
BB35	12st W		Bicycle Boulevard from Avenue C to South of Kalmar Dr	\$24,000
BB36	Jerrie Ln/Kyhl Ln/Elaine/ Primrose/Maurine		Bicycle Boulevard from East of Walter Rd to Lake Elmo Dr	\$162,000
BB37	Fantan St		Bicycle Boulevard from Siesta Ave to Wicks Ln	\$7,000
BB38	2nd St W		Bicycle Boulevard from Avenue C to Montana Ave	\$13,000
BB39	Simpson St/Moore Ln/Stone St		Bicycle Boulevard from Carlton Ave SW to Moore Ln	\$19,000
BB40	Cherry Hills/ Black Diamond		Bicycle Boulevard from Saint Andrews Dr to Gleneagles Blvd	\$14,000
BB41	N 14th St		Bicycle Boulevard from Park Pl to 6th Ave N	\$3,000
BB42	Marias Dr		Bicycle Boulevard from Keno St to Kootenai Ave	\$3,000
BB43	Piccolo Ln		Bicycle Boulevard from Old Hardin Rd to Highway 87E	\$6,000

Project ID1	Proposed Name	Length (Miles)	Project Description	Estimated Planning-Level Cost
BB44	Hemlock Dr		Bicycle Boulevard from Clayton St to Hillner Ln	\$8,000
BB45	Bobolink St/Canary Ave		Bicycle Boulevard from Dickie Rd to Old Hardin Rd	\$9,000
BB46	Constellation Trl/Eagle/ Southern Hills/Venus		Bicycle Boulevard from Riveroaks Dr to Saint Andrews Dr	\$15,000
BB47	Maier Rd		Bicycle Boulevard from Highway 87E Rosebud Ln	\$4,000
BB48	Sunrise Ave/ Greenwood Ave		Bicycle Boulevard from Nutter Blvd to West of Amendment Cir	\$9,000
BB49	Ironwood Dr/ Ben Hogan Ln		Bicycle Boulevard from Molt Rd to 54th St W	\$32,000
BB50	Shamrock Ln		Bicycle Boulevard from North of Killarney St to Emerald Dr	\$3,000
BB51	Sam Snead Trl		Bicycle Boulevard from Ben Hogan Ln to Molt Rd	\$14,000
BB52	Tampico Dr		Bicycle Boulevard from El Paso St to Baja Pl	\$1,000
BB53	El Paso St/Tampico Dr		Bicycle Boulevard from Guadeloupe Dr to La Paz Dr	\$6,000
BB54	Tanglewood Dr/ San Marino Dr/La Paz Pl/Mitzi Dr		Bicycle Boulevard from N 13th St to N 36th St	\$9,000
BB55	Lakewood Ln		Bicycle Boulevard from East of Constellation Trl to Riveroaks Dr	\$125,000
BB56	Spotted Jack Loop S/Westgate Dr		Bicycle Boulevard from Spotted Jack Loop E to Trailmaster Dr	\$9,000
BB57	Driftwood Ln/Marie Dr		Bicycle Boulevard from Driftwood Ln to Mitzi Dr	\$12,000

Project ID1	Proposed Name	Length (Miles)	Project Description	Estimated Planning-Level Cost
BB58	Tanglewood Dr/ San Marino Dr/La Paz Pl/Mitzi Dr		Bicycle Boulevard from Noblewood Dr to La Paz Dr	\$17,000
BB59	58th Street		Construct Low-Stress Roadway from Rimrock Road to Grand Ave	Unknown
BB60	66th Street		Construct Low-Stress Roadway from Rimrock Road to Grand Ave	Unknown
BB61	60th Street Corridor		Construct Low-Stress Roadway along 60th St corridor	Unknown
BB62	52nd Street Corridor		Construct Low-Stress Roadway along 52nd St corridor	Unknown
BB63	Monad Road		Construct Low-Stress Roadway Extension of Monad Rd	Unknown
BB64	Broadwater Ave		Construct Low-Stress Roadway Extension of Broadwater Ave	Unknown
BB65	Colton Blvd		Construct Low-Stress Roadway Extension of Colton Blvd	Unknown
Separated or Buffered Bicycle Facility Projects				
BBL1	54th St		Improvements from Rimrock Rd to Grand Ave; could include shoulder widening, protected bicycle lane, or sidepaths	Unknown
BBL2	48th St		Improvements from Central Ave to Grand Ave; could include shoulder widening, protected bicycle lane, or sidepaths	Unknown
BBL3	Grand Ave		Improvements from 58th St to Shiloh Rd; could include shoulder widening, protected bicycle lane, or sidepaths	Unknown

1 BL = Bike Lane Project, BB = Bicycle Boulevard Project, BBL = Buffered Bicycle Lane Project

Table 9.10 Multi-use Trail Projects

Project ID1	Proposed Name	Length (Miles)	Project Description	Estimated Planning-Level Cost
MT1	Audubon Conservation Education Center Connector Trail	0.5	Construct a multi-use trail from ACEC Trails to Mullowney Lane	\$274,017
MT2	Audubon Conservation Education Center Trail	0.5	Construct a multi-use trail from Riverfront Park to Josephine Crossing	\$456,695
MT3	Alkali Creek Trail	0.5	Extend trail from Swords Park northeast along Alkali Creek or Swords Lane to Main Street Pedestrian Underpass	\$250,000
MT4	Arnold Drain Trail	0.5	Construct a multi-use trail from Arnold Drain Connector to Grand Ave	\$456,695
MT5	Arnold Drain/Shiloh Road Connector Trail	1	Construct a multi-use trail from Broadwater Ave to Shiloh Rd	\$913,390
MT6	BNSF Rail with Trail	15	Construct a multi-use trail from MRL Rail with Trail to Highway 3	\$8,220,506
MT7	Briarwood to Blue Creek School	1.5	Construct a multi-use trail from Briarwood Blvd to Blue Creek School	\$1,370,084
MT8	Briarwood to Pictograph Caves	2.5	Construct a multi-use trail from Briarwood Blvd to Pictograph Caves State Park	\$1,370,084
MT9	Canyon Creek	6	Construct a multi-use trail from Zoo Montana to BNSF Rail with Trail	\$3,288,202
MT10	Castle Rock	1	Construct a multi-use trail from Governors Blvd to BBWA Canal	\$913,390
MT11	Colton Connector	1	Construct a multi-use trail from 32nd St W to 38 St W	\$913,390
MT12	Cove Ditch	2	Construct a multi-use trail from Molt Rd to Hogans Slough	\$1,096,067
MT13	Downtown - Coulson Park Trail Connection	1	Extend trail from South 25th Street to 8th Ave. South to South 26th Street to Lillian Avenue and Coulson Park Trail	\$1,000,000

Project ID1	Proposed Name	Length (Miles)	Project Description	Estimated Planning-Level Cost
MT14	Four Dances Connector	1	Construct a multi-use trail from Lockwood Trail to Four Dances Natural Area	\$548,034
MT15	Heights BBWA	3	Construct a multi-use trail from Aronson Ave to Lake Elmo State Park	\$2,740,169
MT16	Heights Upper Loop	4.5	Construct a multi-use trail from Yellowstone River to Alkali Creek Rd	\$4,110,253
MT17	High Ditch	4	Construct a multi-use trail from Rimrock West Trail to Hogans Slough	\$2,192,135
MT18	Hogans Slough	5.5	Construct a multi-use trail from Shiloh Rd to BNSF Rail with Trail	\$3,014,186
MT19	Inner Belt Loop	6.5	Construct a multi-use trail from Governors Blvd to Highway 3	\$5,937,032
MT20	King Avenue	1	Construct a multi-use trail from S 44th St W to Hogans Slough	\$913,390
MT21	Lockwood	6	Construct a multi-use trail from Interstate-90 to Shiloh Rd	\$5,480,337
MT22	Monad	1	Construct a multi-use trail from S 45th St W to Hogans Slough	\$913,390
MT23	Monad	2.5	Construct a multi-use trail from BBWA Canal Trail to 48th St W	\$2,283,474
MT24	MRL Rail with Trail	9	Construct a multi-use trail from Interstate-90 to Highway 312	\$8,220,506
MT25	Rehberg Ranch	1	Construct a multi-use trail from Extension of Existing Trail to Inner Belt Loop	\$913,390
MT26	Rimrock Road	1.5	Construct a multi-use trail from 54th St W to Cove Ditch	\$1,370,084
MT27	Senators Park	1	Construct a multi-use trail from Aronson Ave to Inner Belt Loop Trail	\$913,390

Project ID1	Proposed Name	Length (Miles)	Project Description	Estimated Planning-Level Cost
MT28	Snow Ditch	2	Construct a multi-use trail from Shiloh Rd to Big Ditch	\$1,096,067
MT29	South Hogans Slough	1	Construct a multi-use trail from Suburban Ditch to MRL Rail with Trail	\$913,390
MT30	Spring Creek Extension	1	Construct a multi-use trail from 24th St W to 15th St W	\$913,390
MT31	Transtech Connector	0.5	Bring McCail trail segment up to standards and complete connection to Transtech Center Trail at 32nd Street West	\$480,000
MT32	Two Moon Park to Five Mile Creek	3	Construct a multi-use trail from Kiwanis Trail to Five Mile Creek	\$2,740,169
MT33	Western Yellowstone River Trail	5	Construct a multi-use trail from Josephine Crossing Trail to Shiloh Rd Trail	\$4,566,948
MT34	Riverfront Park	2.5	Construct a multi-use trail from Mystic Park Trails to Riverfront Park Trails	\$1,500,000
MT35	25th Street Railroad Bridge	0.5	Construct a multi-use trail from Montana Avenue to Minnesota Avenue	\$1,700,000
MT36	BBWA to Swords Park Trail	5.5	Construct a multi-use trail from Lillis Park to Aronson Ave	\$5,023,643
MT37	Rim Top Trail from 27th Street West/ Airport Road to Zimmerman Trail Vicinity	3.5	New Trail along the Rims resulting from Highway 3 corridor study	\$1,200,000
MT38	Downtown BBWA Corridor Trail/On Street Facilities	1.5	Complete Trail through MSU-B Campus in alignment with MSU-B Master Plan and trail/on-street facilities along Poly Dr. through Virginia Lane intersection to 13th/Poly Drive	\$210,000
MT39	34th Street Pedestrian Bridge	0.25	Construct a multi-use bridge to cross the tracks near 34th Street	\$2,000,000

2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN

Project ID1	Proposed Name	Length (Miles)	Project Description	Estimated Planning-Level Cost
MT40	44th Street West	0.5	Construct a multiuse bike/pedestrian path along 44th Street from Shiloh Conservation Area to King Avenue West	\$102,000
MT41	Heights Middle School Path	0.25	Construct a trail from the Kiwanis trail to New Heights Middle School near Bench and Barrett	\$131,290
MT42	6th Avenue N		Multi-use Trail from 6th Avenue Bypass to N 19th St	\$1,062,000
MT43	BBWA Canal Trail		Multi-use Trail from 6th Avenue N to Transtech Way	\$6,115,000
MT44	Montana Ave/ Underpass Ave		Multi-use Trail from Division St to S Billings Blvd	\$1,509,000
MT45	Wicks Ln		Multi-use Trail from Gleneagles Blvd to Kiwanis Trail	\$2,351,000
MT46	Rosebud Ln		Multi-use Trail from Highway 87E to West of Rosebud Ln	\$2,765,000
MT47	N 27th St		Multi-use Trail from Rimrock Rd to Mountain View Blvd	\$312,000
MT48	Grand Ave		Multi-use Trail from 24th St W to Zimmerman Trl	\$674,000
MT49	Hesper Rd		Multi-use Trail from East of Shiloh Rd to S Shiloh Rd	\$181,000
MT50	Highway 87E		Multi-use Trail from Johnson Ln to Old Hardin Rd	\$824,000
MT51	24th		Multi-use Trail from Stillwater to South of King Ave W	\$332,000
MT52	Broadwater Ave		Multi-use Trail from 24th St W to 28th St W	\$505,000
MT53	1st Ave/Old Hardin Rd/Highway 87E		Multi-use Trail from N 13th St to Hogan Rd	\$6,168,000

Project ID1	Proposed Name	Length (Miles)	Project Description	Estimated Planning-Level Cost
MT54	BBWA Canal Trail North		Multi-use Trail from East of Shadow Heights to Aronsen Ave	\$3,337,000
MT55	26th St Trail		Multi-use Trail from S 25th St to S 27th St	\$177,000
MT56	Gabel Rd		Multi-use Trail from Hesper Rd to Zoo Rd	\$317,000
MT57	South of Emerald Dr/Sword Ln		Multi-use Trail from Emerald Dr to Sword Lane	\$540,000
MT58	Rimrock Rd		Multi-use Trail from 54th St W to 66th St W	\$855,000
MT59	King Ave E		Multi-use Trail from Sugar Ave to King Ave W	\$1,297,000
MT60	King Ave W/Moland Rd		Multi-use Trail from S 29th St W to S Frontage Rd	\$2,796,000
MT61	Arnold Drain Trail		Multi-use Trail from 18th St W to 25th St W	\$849,000
MT62	Chrysalis Acres		Multi-use Trail from Van Buren St to Hallowell Ln	\$75,000
MT63	Suburban Ditch Trail		Multi-use Trail from Songbird Dr to Mallowney Ln	\$526,000
MT64	Falcon Ridge		Multi-use Trail; unspecified	\$200,000
MT65	Kiwanis Trail Corridor		Multi-use Trail from Bitterroot Dr to Mary St	\$559,000
MT66	Highway 87 Bypass		Multi-use Trail from Roundup Rd to Johnson Ln	\$6,747,000
MT67	Jim Dutcher Trail		Multi-use Trail from South of Mary St to E&F St	\$1,479,000
MT68	Mallowney Ln		Multi-use Trail from S Frontage Rd to Story Rd	\$432,000
MT69	Terrace Park Trail		Multi-use Trail from High Sierra Blvd to Alkali Creek Rd	\$1,295,000

Project ID1	Proposed Name	Length (Miles)	Project Description	Estimated Planning-Level Cost
MT70	Tania Cir Ditch Trail		Multi-use Trail from Naples St to Bitterroot Dr	\$436,000
MT71	Colton Blvd		Multi-use Trail from Zimmerman Trl to 36th St W	\$304,000
MT72	S Billings Blvd/ Blue Creek Rd		Multi-use Trail from King Ave S to Glengary Ln	\$3,712,000
MT73	SE Shiloh Rd/Entryway Dr/Shakelford Ln		Multi-use Trail from East of Mullowney Ln to Shiloh Rd	\$4,450,000
MT74	Gabel Rd		Multi-use Trail from S 32nd St W to Transtech Way	\$194,000
MT75	62nd St W		Multi-use Trail from Falcon Ridge Way to Rimrock Rd	\$183,000
MT76	West Wicks Ln		Multi-use Trail from Annandale Rd to Skyway Dr	\$1,012,000
MT77	Hesper Rd		Multi-use Trail from East of Majestic Ln to Gabel Rd	\$190,000
MT78	Alkali Creek Rim Trail		Multi-use Trail from Judicial Ave to Alkali Creek Rd	\$317,000
MT79	Peters St		Multi-use Trail from Highway 87E to East of Peters St	\$465,000
MT80	State Ave/S 27th St		Multi-use Trail from 12th Ave S to Garden Ave	\$601,000
MT81	Railroad/State Ave Trail		Multi-use Trail from 2nd Ave S to Trail near S 24th St W	\$3,225,000
MT82	Shiloh Rd		Multi-use Trail from Pierce Pkwy to Autumn Ln	\$755,000
MT83	Zimmerman Trl		Multi-use Trail from Highway 3 to Poly Dr	\$1,308,000
MT84	Unita Park/Twin Oaks Park		Multi-use Trail from Wicks Ln to Ditch Trail	\$547,000

Project ID1	Proposed Name	Length (Miles)	Project Description	Estimated Planning-Level Cost
MT85	South of Governors Blvd		Multi-use Trail from W Wicks Ln to Aronson Ave	\$871,000
MT86	Lockwood Tributary Trail		Multi-use Trail from Old Hardin Rd to Highway 87E	\$1,804,000
MT87	Central Ave		Multi-use Trail from Shiloh Rd to East of 64th St W	\$1,541,000
MT88	West of Governors Blvd		Multi-use Trail from South of W Wicks Ln to Constitution Ave	\$219,000
MT89	Innter Belt Loop Trail		Multi-use Trail from Alkali Creek Rd to Highway 3	\$3,367,000
MT90	Blue Creek Rd		Multi-use Trail from Colleen Dr to Prestwick Rd	\$430,000
MT91	Broadwater Ave		Multi-use Trail from Shiloh Rd to unspecified	\$806,000
MT92	Monad Rd		Multi-use Trail from S 12th St W to Laurel Rd	\$221,000
MT93	Hogans Slough Trail		Multi-use Trail from S 48th St W to Discovery Dr	\$1,778,000
MT94	Monad Rd		Multi-use Trail from S Shiloh Rd to East of S 64th St W	\$1,676,000
MT95	King Ave W		Multi-use Trail from S 44th St W to East of S 72nd St W	\$1,974,000
MT96	Lockwood Canal		Multi-use Trail from Nobelwood Dr to Hillner Ln	\$2,642,000
MT97	Coburn Rd		Multi-use Trail from Old Hardin Rd to South extent of Coburn Rd	\$2,921,000
MT98	Johnson Ln/Highway 87E		Multi-use Trail from Jim Dutchner Trail to Stonehaven Trl	\$5,123,000
MT99	Krumheuer Dr		Multi-use Trail from Old Hardin Rd to Mitzi Dr	\$497,000

Project ID1	Proposed Name	Length (Miles)	Project Description	Estimated Planning-Level Cost
MT100	Enfield St/Toledo St/La Paz Dr		Multi-use Trail from Becraft Ln to Ford Rd	\$580,000
MT101	Ford Rd		Multi-use Trail from East of Eagle Cliff Meadows Rd to Johnson Ln	\$669,000
MT102	S 52nd St W		Multi-use Trail from North of Rich Ln to South of Onyx Blvd	\$712,000
MT103	Nobelwood Dr		Multi-use Trail from Old Hardin Rd to Ford Rd	\$1,063,000
MT104	Highway 3 Multi-use Trail		Consider future paved multi-use trail on north side of highway as development occurs	\$2,000,000
MT105	6th Avenue North Widening		Street widening project for a multi-use path from Main St. to 13th. PAVER funds will be used for the overlay.	\$450,000
MT106	Johnson Lane Multiuse Trail		Connects new trail alignment with Bypass	\$500,000
MT107	Lower Lockwood Irrigation Ditch	n/a	Placing trails in the Lockwood Irrigation Ditch District; lower ditch trail would run from Maier Rd to Rykken Circle and Old Hardin Rd; parallel to Old Hardin Rd, may be an alternate route until solution for Old Hardin Rd can be obtained	\$200,000
MT108	Upper Lockwood Irrigation Ditch	n/a	Placing trails in the Lockwood Irrigation Ditch District; upper ditch trail would run from Dickie Rd, past Coburn Rd, and provides an alternative trail alignment for people wishing to connect from the Johnson area to Lockwood School; greatest potential to safely move people from east side of Lockwood urbanized area to the west side; opportunities for tourism route	\$30 per linear foot
MT109	Johnson Lane	n/a	Interest from property owners to construct trail corridor linking Johnson Ln at I-90 north to the Yellowstone River	Unknown

Project ID1	Proposed Name	Length (Miles)	Project Description	Estimated Planning-Level Cost
MT110	Bicycle Tourist Route	n/a	Route to promote tourism within the LPSD; starting point at Holiday Inn Express; route follows Lockwood Irrigation District canal over to Coburn Rd; route then extends to the Four Dances Natural Area and Pictograph Caves State Park; route could extend to Billings with an Interstate Bridge connection, connecting into the proposed "Marathon Loop"; tourists staying at Holiday Inn Express could potential ride north towards the future Dover Park, connect tot the Heights Kiwanis Bike trail, and also tie into the Marathon Loop	Unknown

CLOSING

One of Billings' seven goals for this plan is to create a transportation system that supports the practical and efficient use of active transportation such as walking and bicycling. By investing in active transportation infrastructure such as sidewalks, trails, and bike lanes, the City can increase the safety and comfort of these modes and thus increase their use.

Billings is pursuing this goal because of the wide variety of community benefits caused by prioritizing active transportation. As described in the Billings Bikeway and Trails Master Plan Update, increasing active transportation mode share can lead to community benefits.

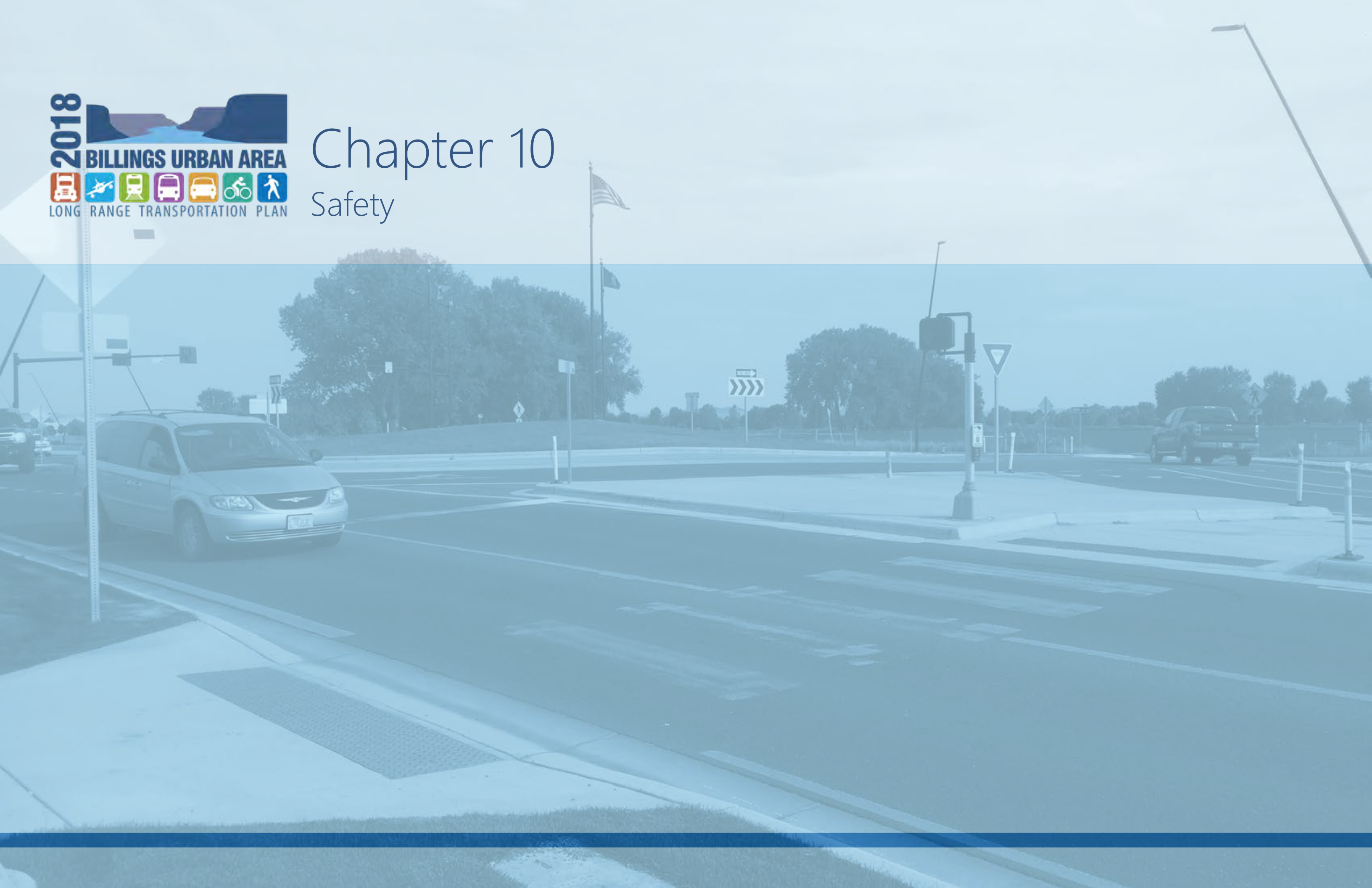
Given the existing usage of the bicycle and pedestrian system, the plan estimates the total value of the health benefits associated with frequent exercise, environmental benefits associated with not generating vehicle emissions, and economic benefits associated with additional transportation options for those without access to vehicles at over eight million dollars per year. The plan also estimates that, with high growth in biking and walking mode share, this value could increase to over 22 million dollars.

To achieve this high level of growth in pedestrian and bicycle use, the City of Billings, Lockwood, and the MPO will need to continue to invest in its pedestrian and bicycle system and continue to strive to make its transportation system appealing to all modes.



Chapter 10

Safety



A variety of federal, state, and local requirements and guidelines address incorporating safety into the transportation planning process. This chapter presents background information, analysis, and strategies to address safety within the Billings Urban Area. Previous chapters also include discussion on crash data and analysis for their respective modes. Overall, safety is a key element in the transportation planning process. As such, the 2018 LRTP outlines several goals related to safety elements:

2018 LRTP Goals Related to Safety

Goal 1: Safe – Develop a safe transportation system.

Goal 4: Environment – Develop a transportation system that protects the natural environment and promotes a healthy sustainable community.

With new research and available data, safety can be incorporated in planning, project development, and operation/maintenance activities to effectively identify countermeasures to reduce crashes and crash severity for the Billings community.

BACKGROUND FEDERAL REQUIREMENTS

MPOs must comply with federal requirements associated with the transportation planning process as outlined in the 23 CFR Part 450 for Metropolitan Transportation Planning and Programming. The planning process should address increasing the safety of the transportation system for motorized and non-motorized users. The metropolitan transportation planning process should be consistent with the Strategic Highway Safety Plan, as specified in 23 U.S.C. 148, and other transit safety and security planning and review processes, plans, and programs, as appropriate (10-1).

STATE PLANS

TranPlanMT, Montana's long-range transportation plan, was last amended in 2017 (10-2). This plan cites safety as an overarching goal which is applied in nearly every MDT decision-making process for all projects and programs. The MPO participated in a workshop in October 2016 to review statewide and MPO goals to ensure consistency and foster collaboration. The statewide plan lists the following eight goals to improve transportation system safety.

- Maintain infrastructure condition to provide safe conditions for the traveling public.
- Continue improvements to the safety rest area program to provide safe stopping locations for the traveling public.
- Target safety improvement projects to address crash pattern locations.

- Incorporate technology advancements in project development to improve safety.
- Leverage relationships with education, enforcement, emergency medical services, and engineering partners to foster a culture of safety on Montana roadways.
- Reduce unsafe driving behavior through targeted focus on transportation safety emphasis areas identified in Montana's Comprehensive Highway Safety Plan.
- Enhance crash data integration and analysis to support decision making and data-driven problem identification.
- Provide leadership in air traveler safety through promotion of flight safety, accident prevention, and air search and rescue programs.

Montana's Comprehensive Highway Safety Plan

(10-3) was amended in 2015, as required by the 2014 Moving Ahead for Progress in the 21st Century Act (MAP-21) federal legislation. The CHSP is intended to be a living document to help guide the State of Montana to effectively address the state's safety needs. The vision of the plan is "zero fatalities and zero serious injuries" on any public roadway in the State. The goal of the plan is "to reduce fatalities and incapacitating injuries in the State of Montana by half in two decades, from 1,704 in 2007 to 852 by 2030." To accomplish the goal, the State has established three overarching safety strategy areas:

- Improve the accuracy, completeness, integration, timeliness, uniformity, and accessibility of data used in traffic safety analysis;

- Support the essential role of Emergency Medical Services in reducing the severity of injury outcomes and the technologies and systems necessary to advance collaboration with all safety partners; and
- Collaborate across agencies, organizations, and with the public to improve the safety culture and promote the institutionalization of Vision Zero.

In addition, three emphasis areas are identified in the CHSP: roadway departure and intersection crashes, impaired driving crashes, and occupant protection.

LOCAL PLANS

The Billings Community Transportation Safety Plan, shown in Exhibit 10.1 was completed in 2016 (10-4). The plan takes a data-driven approach to identify safety issues, determine areas in need of increased emphasis, and define strategies to reduce roadway fatalities and serious injuries. The goal for the plan is to reduce fatalities and serious injuries in the Billings MPO area by 20% from 70 in 2014 to 56 by 2020 based on a five-year rolling average calculation. The plan defines three emphasis areas: unrestrained occupants, impaired driving, and inattentive driving/speeding. A group of local Billings safety partners representing education, law enforcement, emergency medical services, and engineering organizations met monthly to evaluate crash trends, review existing safety programs and best practices, identify gaps, and develop safety strategies outlining specific methods, implementation partners, resources, and action steps to reduce fatalities and serious injuries in Billings.

Exhibit 10.1 Recent Safety Plan Completed by the MPO



The Yellowstone County and City of Billings 2016

Growth Policy (10-5) is a guide for local officials and community members in making decisions that will affect the future of the community. The plan has several growth guidelines that focus on safety within different elements of the plan. The following three guidelines were listed as essential investments related to safety:

- The **safety** of all users and the connectivity of the transportation system are important criteria to consider in roadway design and transportation plans.
- Planning and construction of **safe** and affordable interconnected sidewalks and trails are important to the economy and livability of Billings.
- Public health, **safety** and emergency service response are critical to the well-being of Billings' residents, businesses, and visitors.

City of Billings Safe Routes to School Study (2011) developed recommendations for 22 elementary schools in Billings (10-6). The goals of the study were to 1) enhance

the safety of students traveling to and from school and 2) increase the number of students talking or bicycling to school. Projects from the SRTS study are included in the project lists for pedestrians and bicyclists in Chapter 9.

Lockwood School District Safe Route to School

Plan (2009) developed recommendations to enhance the safety of students traveling to and from school in Lockwood School District (10-7). Projects from the plan have been included in the project lists for pedestrians and bicyclists in Chapter 9.

Billings Area Bikeway and Trail Master Plan

Update (2017) developed recommendations to provide connectivity and options for bicyclists in the Billings Urban Area (10-8). Two of the eight goals focused on safety: 1) Enforcement: Increase enforcement on City/County streets, trails and bikeways to make interactions between motorists, bicyclists, and pedestrians safety; and 2) Health and Safety: Encourage healthy activities through increased access and safe infrastructure for bicyclists and pedestrians. Projects from the plan have been included in the project lists for pedestrians and bicyclists in Chapter 9.

Lockwood Non-Motorized Transportation Plan

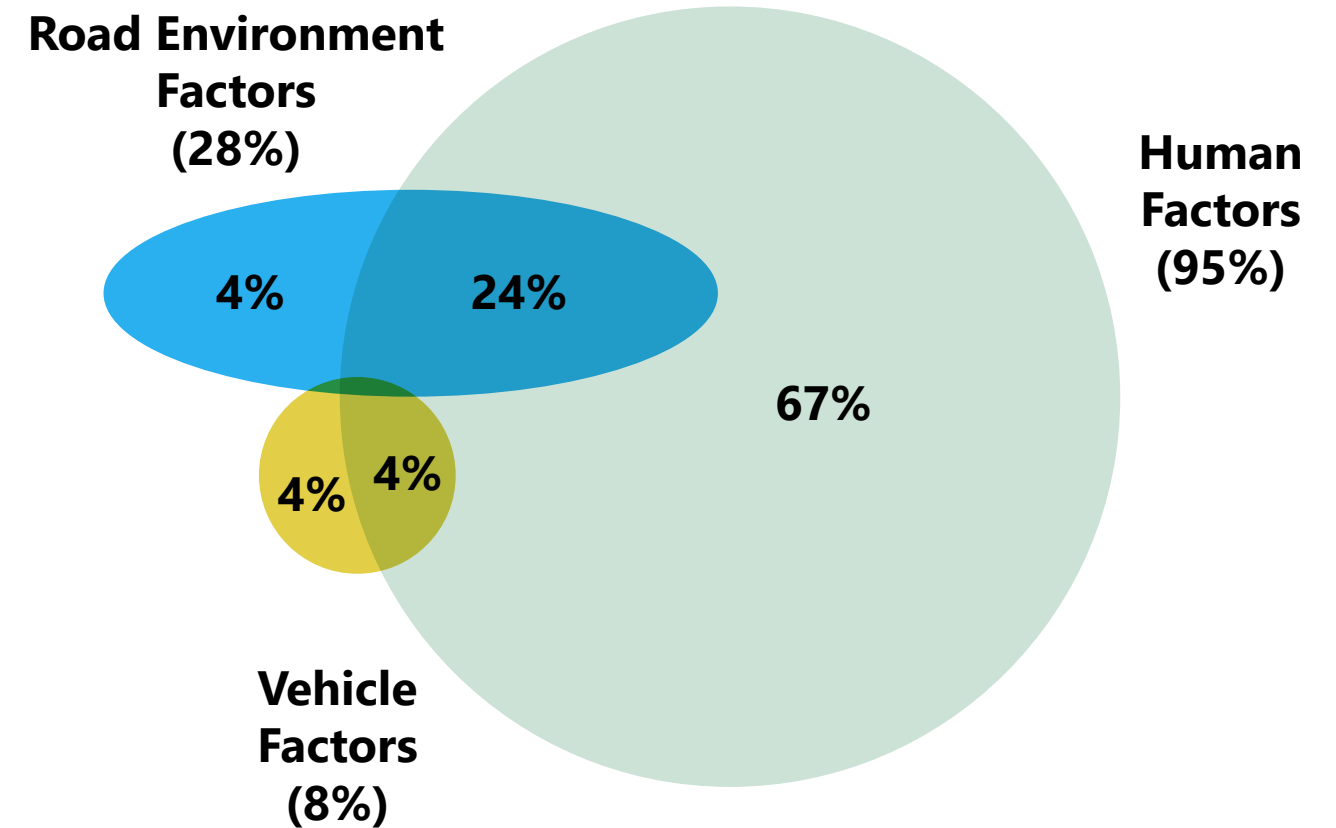
(2015) seeks to eliminate fatalities and serious injuries caused by vehicular and pedestrian conflicts throughout the Lockwood area (10-9). It identifies a five-year work plan and 20-year desired project list in the areas of education, enforcement, engineering, evaluation, and partnerships and funding to achieve this goal.

SAFETY CONSIDERATIONS INTRODUCTION TO THE 5 "E" APPROACH TO SAFETY

Motor vehicle crashes generally involve multiple contributing factors, shown in Exhibit 10.2, which may be related to drivers, the roadway, or the vehicles(s) involved, thus making transportation safety a multidisciplinary concern. Human factors are involved in 95% of crashes, while the road environment is a contributing factor in only 28% of crashes (10-10).

This means we cannot "engineer" our way to safety, and that education and enforcement must be integrated into a safety culture and implementation strategies. The State of Montana and the Billings Urban Area safety goals cannot be achieved by one agency working alone. Accomplishing the Billings community's safety goals requires a collaborative approach that draws from several key areas associated with traffic safety, as listed below.

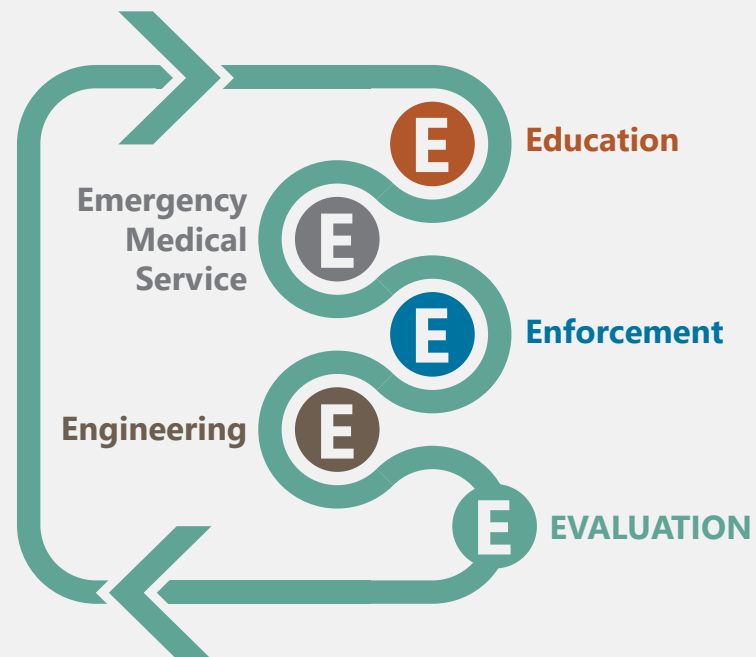
Exhibit 10.2 Contributing Factors to Crashes



- **Education** – States and cities incorporating strong educational components report declines in fatality rates (10-11). Effective prevention education programs typically include some combination of knowledge content, social norming, personal commitment, and resistance skill strategies (10-12).
- **Enforcement** – Law enforcement officials can encourage behavior changes of transportation system users through enforcement, education, and incarceration.
- **Emergency Medical Service (EMS)** – EMS provides the last opportunity to improve health outcomes from motor vehicle crashes and other medical emergencies. EMS data is highly reliable and valuable to crash analysis
- **Engineering** – State, county, and city engineers consider safety during planning, design, construction, operation, and maintenance of transportation facilities.
- **Evaluation** – The MPO ties the previous four elements together by measuring the effectiveness of implemented solutions and deploying new solutions to address evolving needs.

The 5 E's of safety, as shown in Exhibit 10.3 define the broad stakeholder communities who are responsible for making the transportation system safe for all users.

Exhibit 10.3. The 5 E's



SAFETY ANALYSIS CRASH DATA SUMMARY

MDT provided historical crash data for crashes involving various modes over the five-year period from January 1, 2013 to December 31, 2017. A total of 14,577 crashes were reported over the five-year period in the study area. Figure 10-1 illustrates the locations of each crash type.

A total of 4,005 injury crashes occurred (27% of total crashes) which resulted in 5,940 injuries over the five-year period. Of the injury crashes, 243 (6% of injury crashes) resulted in an incapacitating injury.

In addition, 42 fatal crashes (0.3% of total crashes) resulted in 42 fatalities. Tables 10.1 and 10.2 show the breakdown of fatalities by road user type, drug/alcohol involvement, and seatbelt use. Motorcyclists made up 40% of all fatalities, followed by motor vehicle occupants (36%). Impaired driving factored into 40% of the fatal crashes; 60% of motor vehicle occupant fatalities were not wearing a seatbelt.

Table 10.1 Fatal Crash Road User Types (2013-2017)

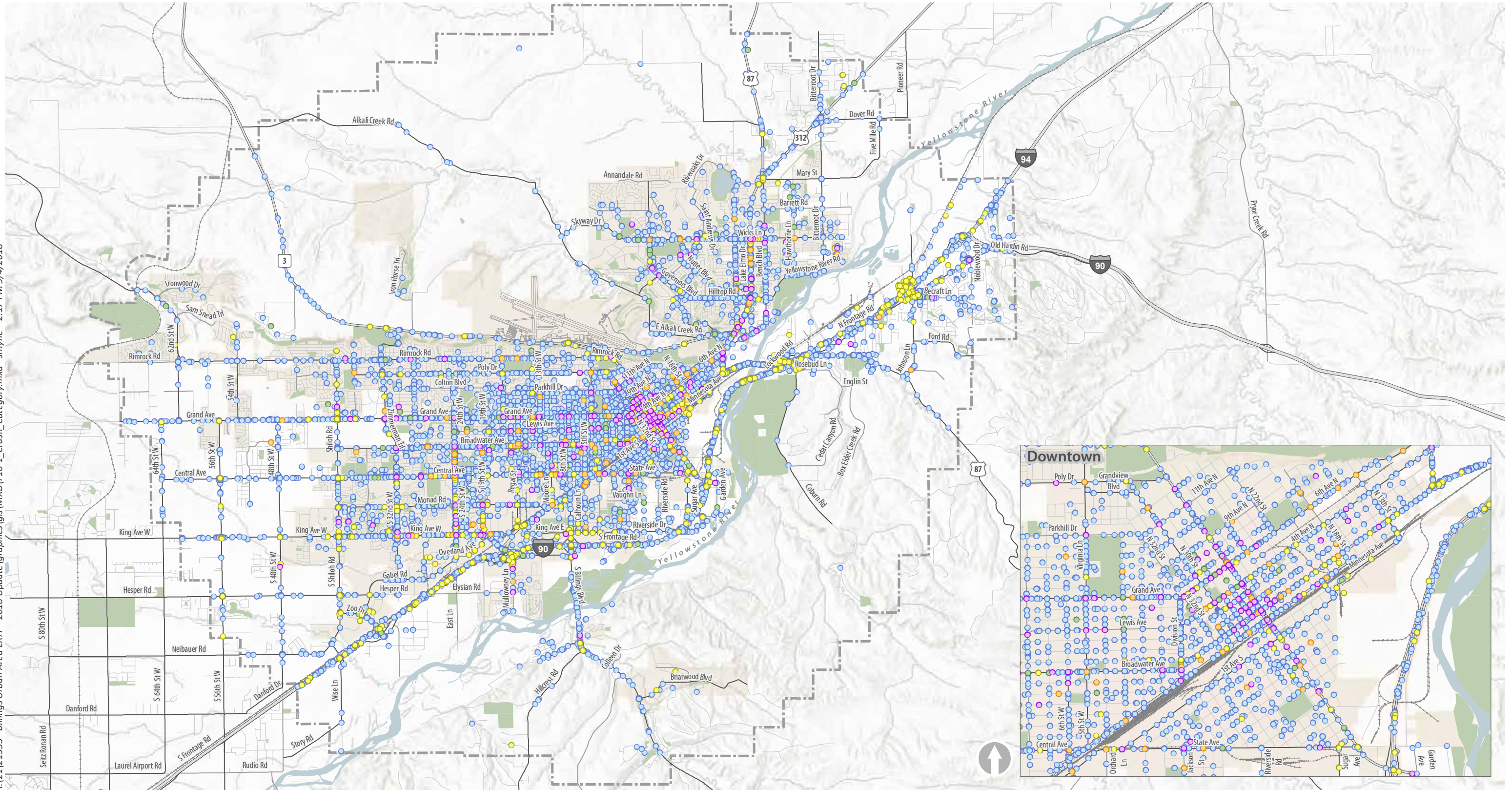
Road User Type	Motor Vehicle Occupant	Motorcyclist	Pedestrian	Bicyclist	ATV
# Fatalities (Percent of Total)	15 (36%)	17 (40%)	8 (19%)	1 (2%)	1 (2%)

Table 10.2 Fatal Crash Attributing Factors (2013-2017)

Drugs / Alcohol Involved	Yes	No	Unknown
# Fatalities (Percent of Total)	17 (40%)	22 (52%)	3 (7%)
Seatbelt Used (Motor Vehicle Occupants Only)	Yes	No	Unknown
# Fatalities (Percent of Total)	3 of 15 (20%)	9 of 15 (60%)	3 of 15 (20%)

The goal set in the Billings CTSP is to reduce fatalities and serious injuries in the Billings MPO area by 20% from 70 in 2014 to 56 by 2020 (based on a five-year rolling average). As of 2017, there were an average of 65 fatalities and serious injuries in the study area per year, as shown in Exhibit 10.4. This represents a 7% reduction from the average of 70 reported in the CTSP for the 2010-2014 period. An additional 14% reduction will be required to meet the CTSP goal, which is to reduce the average to 56 by year 2020.

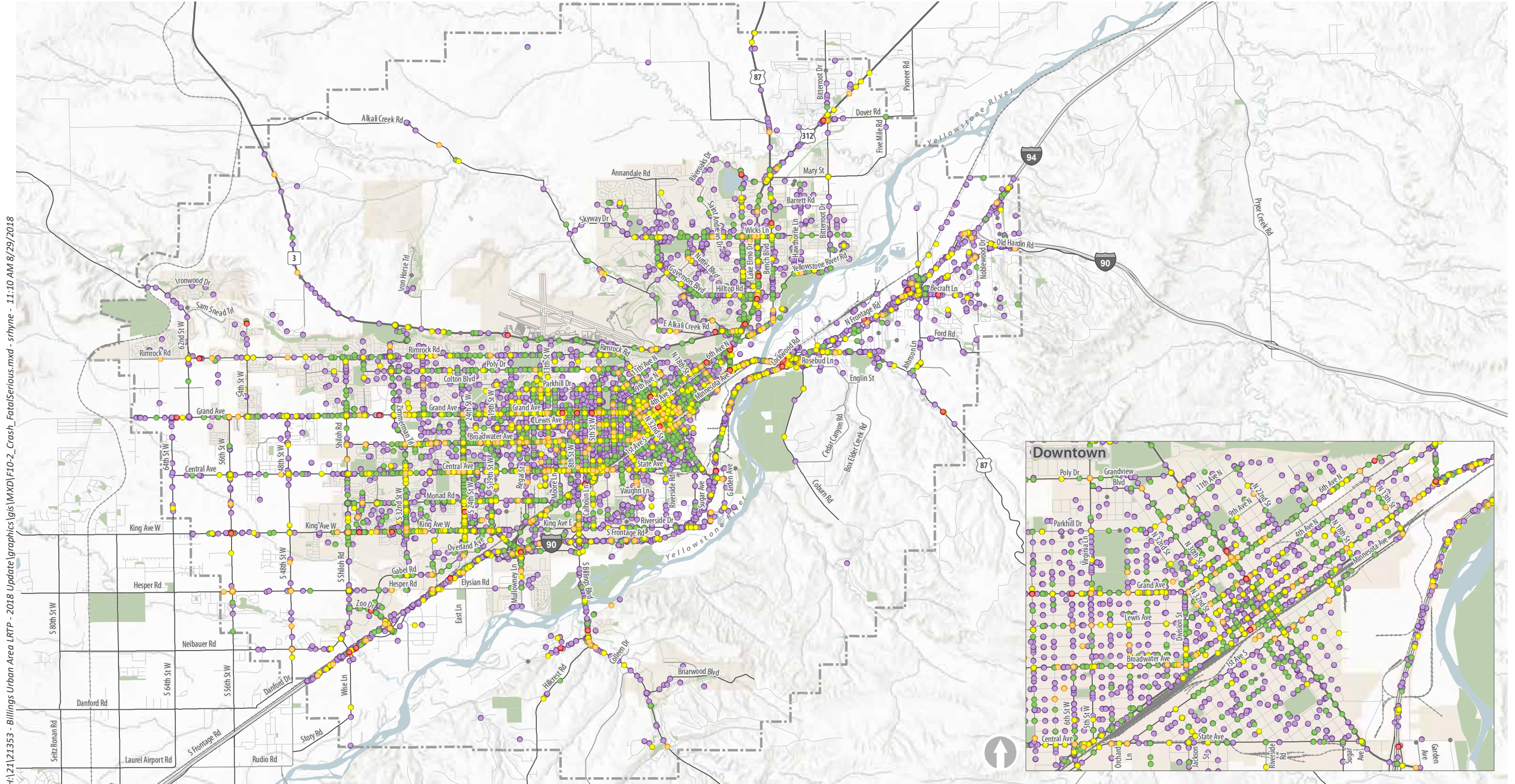
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- Pedestrian Crash
- Bike Crash
- Heavy Vehicle Crash
- Bus Crash
- Vehicle Crash
- ▭ Study Area
- ▭ Park
- ▭ City of Billings

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Figure 10-1
Crashes by Category (2013 - 2017)



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- Crash Severity**
- Fatal Accident
 - Incapacitating Injury Accident
 - Non-Incapacitating Evident Injury Accident
 - Possible Injury Accident
 - Non-Injury Accident (Property- Damage-Only Accident)
 - Unknown

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Figure 10-2
Fatal and Serious Injury Crashes (2013 - 2017)

Exhibit 10.4 Fatal and Serious Injury Crashes (Five-Year Rolling Average)

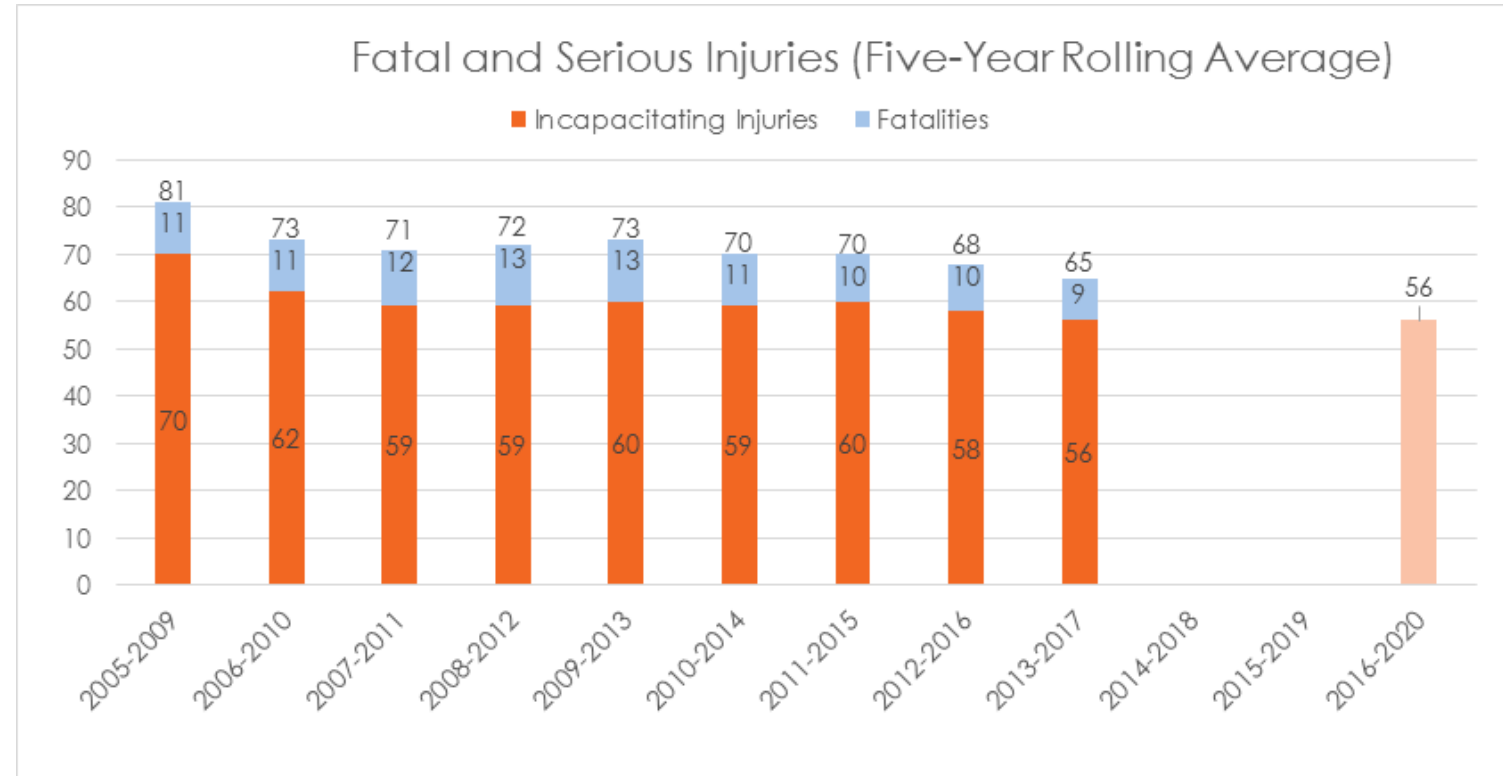


Figure 10-2 shows the location of crashes that resulted in a fatality or an incapacitating injury.

CRASH TYPES

This LRTP is focused on addressing safety for all transportation modes. Table 10.3 summarizes the crash severity for crashes involving a commercial vehicle, bus, at-grade rail crossing, pedestrian, or bicyclist. There were eight fatal pedestrian crashes and one fatal bicycle crash in the five-year period. There were two fatal crashes involving commercial vehicles.

Table 10.3 Commercial, Bus, Rail Pedestrian and Bicycle Crash Summary (2013-2017)

Category	Property Damage Only	Possibly Injury	Non-Incapacitating Injury	Incapacitating Injury	Fatal	Unknown	Total
Crash Involving a Commercial Vehicle (Truck >10,000 pounds)	410	64	25	9	2	3	513
Crash Involving a School Bus	37	12	2	0	0	1	52
Crash Involving MET Bus	1	2	0	0	0	0	3
Crash Involving Other Bus Types (e.g., Charter Bus)	52	11	1	0	0	0	64
Crash Related to At-Grade Rail Crossing	64	16	5	1	0	2	88
Pedestrian	42	84	42	31	8	3	210
Bicycle	28	68	35	8	1	0	140

CRASH RATES

Intersection and roadway segment crash rates are reported for high crash locations within the study area. The crash rate provides more information than crash frequency alone, as it factors in the number of vehicles entering an intersection or roadway segment. This makes the crash rate an effective tool for comparing the relative safety of one intersection or segment to another. Of note, due to different crash reporting methods used in different jurisdictions, the crash rate is best used to compare the relative safety of an intersection compared to similar intersections within the same jurisdiction.

The crash rate equations are provided below. Intersection crash rate is the number of crashes occurring per million entering vehicles, while segment crash rate is the number of crashes per million vehicle miles of travel on the segment. All crash rates were calculated using annual average daily traffic (AADT) volumes from the 2017 Billings Urban Area Traffic Count Map (10-13).

$$\text{Intersection Crash Rate} = \frac{(\text{Total Number of Crashes} \times 1,000,000 \text{ Vehicles})}{(\text{Vehicles per Day} \times \text{Number of Years} \times 365 \text{ Days per Year})}$$

$$\text{Segment Crash Rate} = \frac{(\text{Total Number of Crashes} \times 1,000,000 \text{ Vehicles})}{(\text{Vehicles per Day} \times \text{Number of Years} \times 365 \text{ Days per Year} \times \text{Segment Length})}$$

Table 10.4 shows the crash rates for the intersections with the highest number of crashes. Three of the intersections in the top ten are roundabouts located on the Shiloh Road corridor.

Table 10.4 Intersections with High Crash Rates (2013-2017)

	Intersection	Control Type	Total Crashes	Crash Rate
1	Shiloh Road & King Avenue W	Roundabout	149	3.57
2	Shiloh Road & Grand Avenue	Roundabout	129	2.67
3	24th Street W & Rosebud Drive	Signal	84	1.62
4	Shiloh Road & Central Avenue	Roundabout	58	1.49
5	Central Avenue & N 15th Street W	Signal	64	1.46
6	Main Street & 1st Avenue N	Signal	92	1.35
7	27th Street & 6th Avenue N	Signal	85	1.35
8	King Avenue W & 24th Street W	Signal	101	1.25
9	Main Street & Lake Elmo Drive	Signal	113	1.17
10	King Avenue W & 32nd Street W	Signal	72	1.15
11	27th Street & 1st Avenue N	Signal	53	1.13
12	Central Avenue & 24th Street W	Signal	81	1.13
13	Grand Avenue & N 17th Street W	Signal	59	1.13
14	King Avenue W & S 20th Street W	Signal	94	1.07
15	Grand Avenue & Zimmerman Trail	Signal	56	1.07
16	Main Street & Wicks Lane	Signal	62	1.02
17	24th Street W & Monad Road	Signal	53	0.85
18	King Avenue W & Interstate-90 Single Point Interchange (SPI)	Signal	68	0.81
19	Main Street & Airport Road	Signal	66	0.71
20	Main Street & 6th Avenue N	Signal	53	0.53

Table 10.5 shows crash rates for the roadway segments with the highest number of crashes. Three of the segments in the top ten are located on South 24th Street West from King Avenue to Broadwater. Additionally, five roadways, King Avenue, 24th Street, Central Avenue, Grand Avenue, and Main Street had multiple segments with the high crash rates in the study area.

Table 10.5 Roadway Segments with High Crash Rates (2013-2017)

Roadway Segment	Extent	ADT	Length (miles)	Total Crashes	Crash Rate	
1	N 27th Street	Montana Avenue to 6th Avenue N	16,595	0.4	386	29.5
2	King Avenue W	20th Street to 24th Street	24,100	0.5	310	15.2
3	Montana Avenue	27th Street to Division Street	10,980	0.7	203	14.9
4	S 24th Street W	King Avenue W to Monad Road	24,660	0.5	334	14.6
5	Central Avenue	19th Street to 24th Street	15,640	0.6	224	14.0
6	S 24th Street W	Monad Road to Central Avenue	26,280	0.5	317	13.2
7	Central Avenue	Moore Lane to 15th Street	16,895	0.5	219	12.9
8	Grand Avenue	Zimmerman Trail to Shiloh Road	12,160	0.8	230	12.8
9	24th Street W	Central Avenue to Broadwater Avenue	22,685	0.5	257	12.4
10	Grand Avenue	13th Street to 17th Street	18,810	0.5	214	12.4
11	King Avenue W	32nd Avenue to Shiloh Road	14,290	1.0	294	11.8
12	Central Avenue	24th Street to 32nd Street	13,790	1.0	277	11.1
13	Main Street	1st Avenue N to 6th Avenue N	36,440	0.4	248	10.5
14	N 27th Street	6th Avenue N to Rimrock Road	15,255	0.9	247	9.9
15	King Avenue W	24th Street to 32nd Street	25,660	1.0	368	7.9
16	Main Street	Airport Road to Hilltop Road	44,550	0.7	369	6.5
17	King Avenue W	Midland Road at Mullowney Lane to 20th Street	40,470	0.7	349	6.5
18	Main Street	Hilltop Road to Wicks Lane	27,220	1.0	306	6.1
19	Main Street	Wicks Lane to US 87	16,840	1.1	199	6.0
20	Highway 87E	Interstate 90 to 1st Avenue N	26,040	1.3	347	5.6

USE OF THE HIGHWAY SAFETY MANUAL IN PROJECT DEVELOPMENT

Roadway safety evaluation tools have historically included methods based on current and past data, typically centered on calculations dealing with crash rate, crash frequency, and crash severity. Planners and engineers can use a more comprehensive method available for examining roadway safety. The 1st Edition of the Highway Safety Manual (HSM) outlines methods and procedures to comprehensively manage roadway facilities and guide project decisions (10-14). HSM concepts include an integrated approach to safety-based improvements applicable to all aspects of planning, project development, and operation/maintenance.

Additionally, NCHRP Project 17-71 (10-15) is developing the 2nd Edition of the Highway Safety Manual. The 2nd Edition is expected to contain additional technical content, as well as content aimed at making the manual more user-friendly to practitioners. Technical content will include new research that has been completed, or is currently ongoing, since the 1st Edition was published, including predictive models for roundabouts, one-way streets, six-lane arterials, and other intersection and roadway configurations. The 2nd Edition is also expected to include comprehensive sample problems illustrating real-world scenarios and more content related to pedestrian and bicycle safety.

How can the HSM be used on Projects?

Planning – The HSM can be used to assess the safety performance of different corridor and intersection alternatives, as well as evaluate countermeasure costs and effectiveness.

Design – The HSM can be used to assess the safety performance of design alternatives and design exceptions, such as lane width, shoulder width/type, median width/type, and intersection control.

Implementation and policy projects - The HSM can be used to assess the safety effectiveness of potential countermeasures and to modify policies and design criteria.

The organization of the HSM is shown below in Exhibit 10.5.

Exhibit 10.5 Organization of the Highway Safety Manual



RECOMMENDED STRATEGIES

Several recommended strategies are identified for incorporating safety in the transportation planning process and furthering the implementation effort to meet the Billings community's safety goals.

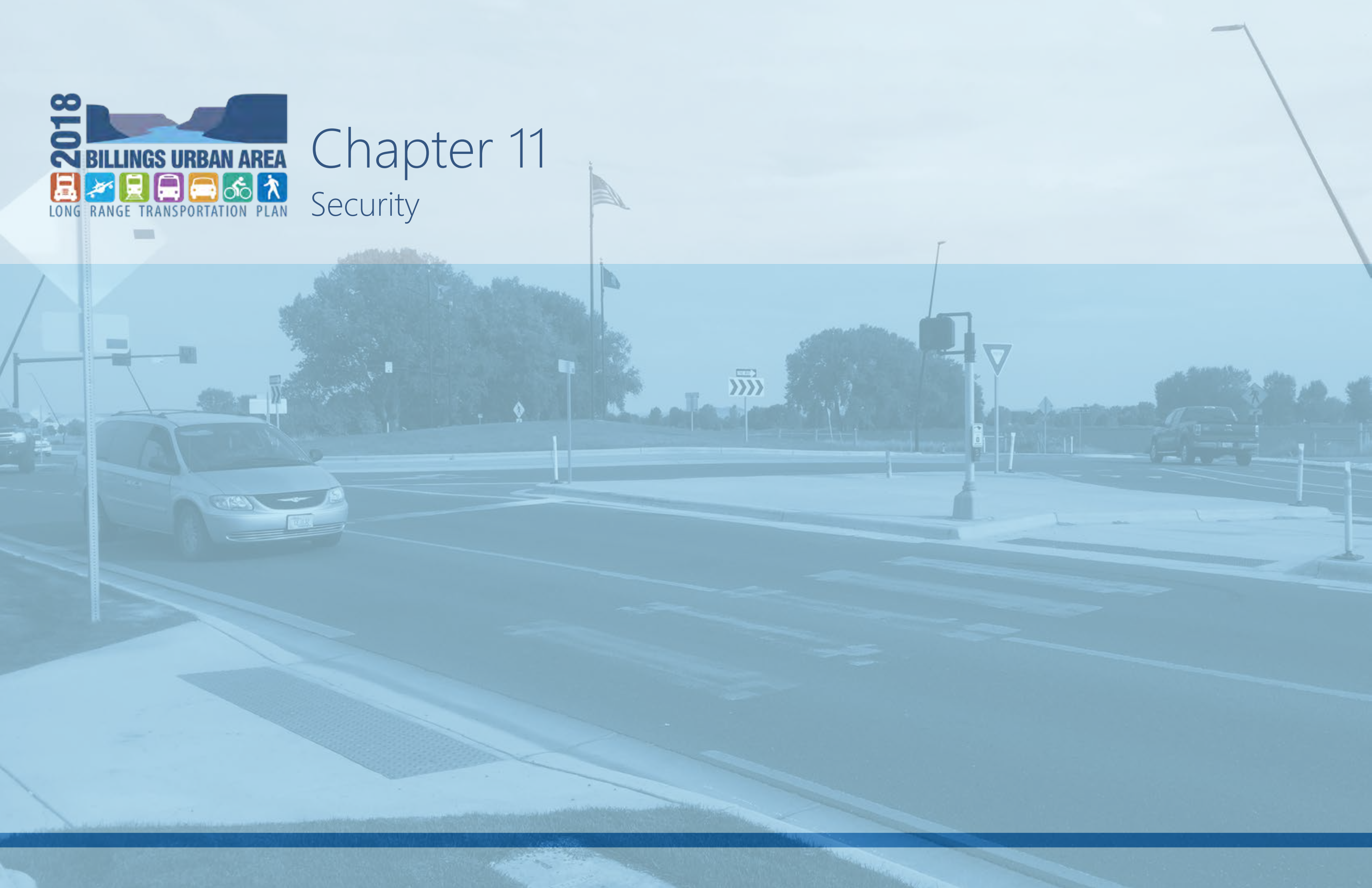
These recommended strategies include:

- Continuing to establish partnerships between agencies to incorporate safety elements into existing and future plans,
- Continuing to support implementation of the recommended projects and strategies from the Billings Community Transportation Safety Plan, City of Billings Safe Routes to School Study, and Lockwood School District Safe Routes to School Plan,
- Integrating the Highway Safety Manual methods and procedures into the planning, design, and policy components of the project development process, and
- Evaluating the high crash rate locations in more detail to determine specific countermeasures to address specific crash types.



Chapter 11

Security



This chapter addresses security planning for the Billings Urban Area regional transportation system, including federal requirements; state and local plans; agency coordination; potential hazards; community priorities; and strategies.

Transportation security planning can reduce the negative impacts to the regional transportation system from major natural or manmade events. Some examples of these events are listed below:

- natural disasters, such as tornadoes, flooding, or blizzards;
- attempts to destroy elements of the regional transportation network to cause disruption;
- use of an element of the transportation system as a weapon, such as crashing a truck through a wall to deliver explosive materials; or
- large planned events, such as a state fair or parade.

The impacts of major events are reduced by being prepared; expediting responses; and aiding the recovery to normal services. In addition to preparing against, expediting responses to, and aiding in recovery from major events, transportation security planning helps keep people and goods moving, protects public health and life safety, supports economic productivity, and minimizes impacts of major events on the environment (11-1).

BACKGROUND FEDERAL REQUIREMENTS

There are several federal requirements associated with MPOs and the transportation planning process included in the 23 CFR Part 450 for Metropolitan Transportation Planning and Programming. The planning process should address increasing the security of the transportation system for motorized and non-motorized users. In carrying out the metropolitan transportation planning process, MPOs, States, and public transportation operators may incorporate or reference applicable emergency relief and disaster preparedness plans and strategies and policies that support homeland security, as appropriate to safeguard the personal security of all motorized and non-motorized users (11-2).

A local mitigation plan (for Yellowstone County, this is the Multijurisdictional Pre-Disaster Mitigation Plan) should be developed and prepared in compliance with federal, state and local hazard mitigation planning requirements published under 44 CFR Part 201 (11-3). The local mitigation plan is the representation of the jurisdiction's commitment to reduce risks from natural hazards, serving as a guide for decision makers as they commit resources to reducing the effects of natural hazards. Local plans will also serve as the basis for the State to provide technical assistance and to prioritize project funding (11-3).

The FEMA Disaster Mitigation Act of 2000 provides the legal basis for FEMA mitigation planning requirements for State, local and Indian Tribal governments as a condition of mitigation grant assistance (11-4).

On June 20, 2010, a tornado came through Billings and caused damage to the MetraPark, businesses, homes, and transportation infrastructure in the area. Planning for and developing a transportation system with multiple connections and parallel routes allows the region to actively plan for potential natural or manmade hazards.

STATE PLANS

TranPlanMT (2017)

Originally adopted in 1995 as TranPlan 21 and updated in 2017, TranPlanMT defines MDT's policy direction for operating, preserving, and improving Montana's transportation system over a 20-year period. A transportation system security section was created in the 2007 update and includes transportation security related goals and actions to support the statewide transportation planning process (11-5).

Montana Emergency Response Framework (2017)

Montana Emergency Response Framework (MERF, 2017) presents a structure for utilizing the emergency response and recovery resources of state, local, and other agencies. It describes the activities necessary to prepare for and respond to events stemming from natural, technological, and man-made hazards and the roles and responsibilities of all participants dealing with these events. This plan also provides a comprehensive all-hazards plan designed to provide the basis for an effective and coordinated response to disasters and emergencies that impact our state (11-6).

LOCAL PLANS

Multijurisdictional Pre-Disaster Mitigation Plan (2012)

The Yellowstone County Disaster and Emergency Services prepared a Multijurisdictional Pre- Disaster Mitigation Plan (PDM) in 2012. This PDM is an update to the 2004 plan and consists of a multi-jurisdictional assessment of each identified hazard, and updated recommendations for hazard mitigation planning actions moving forward. The 2012 PDM Update identifies opportunities and suggestive actions, which could reduce the impact of future disasters or emergencies (11-7).

Emergency Operations Plan for Billings, Laurel, & Broadview and Yellowstone County (2011)

The Emergency Operations Plan (EOP) provide s public officials of the City of Billings, City of Laurel, Town of Broadview, and Yellowstone County with a plan for carrying out their responsibilities in case of a disaster that threatens the lives and property of city and county citizens and is beyond the capacity of the appropriate emergency service(s) to control. It provides an organizational framework and response capability from which the cities and county can respond to natural, technological, or war caused emergencies that require comprehensive and integrated responses thus meeting the emergency services legal mandates. This document is currently being updated with an expected publication date of late 2018 (11-8).

SECURITY CONSIDERATIONS COORDINATION

The Yellowstone County Disaster and Emergency Services is an integrated effort to prevent or minimize the seriousness of emergencies and disasters, and to plan and coordinate the community's response to them should they occur. This effort requires establishing partnerships among professional emergency management personnel to prevent, respond to, and recover from disasters. Coordination is a key factor in establishing an emergency management program, and continual improvement saves lives and reduces losses from disasters. The Yellowstone County Disaster and Emergency Services are responsible for:

- Developing and updating emergency plans,
- Coordinating communications of emergency responders,
- Maintaining a county-wide system of alerting sirens,
- Maintaining the emergency operations center,
- Participating and coordinating exercises with all emergency responders,
- Recommending an emergency declaration or disaster declaration to the policy bodies of city and county government, preparing disaster declaration resolutions, serving as the City and/ or County's authorized agent for FEMA declare disasters (e.g. floods of 1978 and 1997), and managing the authorized emergency levy, and
- Serving as the County Fire Warden and administrator of the rural fire protection program.

In addition to the Yellowstone County Disaster and Emergency Services, there are several agencies and organizations that are involved with planning and implementation of security within the Billings Urban Area. The EOP and Multijurisdictional PDM identify the various agencies involved in these planning and implementation efforts and can be used as future references for agency consultation.

POTENTIAL HAZARDS

The Multijurisdictional PDM reviewed and identified the potential hazards for the Yellowstone County. Table 11.1 presents the potential hazards for the Yellowstone County. The Multijurisdictional PDM presents information on each potential hazard, latest occurrence(s), and summary of vulnerability and impact to Yellowstone County. Below is an overview of the information presented on transportation/mobile incidents in the Multijurisdictional PDM as it relates directly to the regional transportation system.

Table 11.1 Potential Hazards in Yellowstone County

Hazard Type	Event	Data Sources	Location Specific
Water	Flooding	Preliminary Flood Insurance Study 2010	Yes
	Dam Failure	2004 PDM Plan / Montana Department of Natural Resources & Conservation	Yes
Wildfire	Wildfire	Community Wildfire Protection Plan	Yes
Weather	Wind and Hail Storm	Spatial Hazard Events & Losses Database	County
	Tornado	Spatial Hazard Events & Losses Database	County
	Winter Storm	Spatial Hazard Events & Losses Database	County
	Drought / Insect Infestation	Montana Department of Natural Resources & Conservation	County
Geologic	Expansive Soil	Montana Bureau of Mines & Geology	Yes
	Landslide	Montana Bureau of Mines & Geology	Yes
	Earthquake	HAZUS	County
	Volcanic Ash	US Geological Survey	County
Manmade	Urban Fire	2004 PDM Plan	County
	Transportation/ Mobile Incident	US Department of Transportation	County
	Hazardous Materials Incident/Accident-Fixed	US Environmental Protection Agency Triexplor Database	County
	Terrorism/Bio-Terrorism	2004 PDM Plan	County
	Civil Disturbance/ Riot/Labor Unrest	2004 PDM Plan	County
	Enemy Attack	2004 PDM Plan	County

Yellowstone County is identified as a high probability of occurrences of transportation/mobile incidents because of the larger population, industrial base within the County, interstate highways, and major rail lines running through downtown. A transportation/mobile incident is any incident that occurs for which the exact location cannot be predetermined. Any incident involving a mode of transportation including car, truck, rail, pipeline, air, or mass transit is classified as a mobile incident. These can include incidents involving the transport of hazardous materials. Risks will increase as the population of the Billings Urban Area continues to increase. Additionally, damaging impacts to transportation infrastructure by the secondary effects of other potential hazards (storms, flooding, earthquakes, landslides, etc.) could also contribute to increased risks of future transportation/mobile incidents.

With each of the potential hazards, it is critical to provide connectivity and alternate routes and maintain this infrastructure throughout the regional transportation system. For more details on the potential hazards in Yellowstone County, refer to the latest Multijurisdictional PDM.

CRITICAL INFRASTRUCTURE

The entire multimodal transportation system plays a role in providing for local, regional, and national security. Facilities that are considered crucial or vital to security include elements of the system that are perceived or known to be most vulnerable. These tend to be at specific points and on connecting segments of the transportation system. Examples of the specific points on the system

are bridges, interchanges, and intermodal facilities. Examples of connecting segments are evacuation routes, state and interstate highways/freeways, transmission lines, and mainline freight and passenger rail lines.

As shown in Exhibit 11-1, critical roadways that are part of the National Highway System (NHS) in the Billings Urban Area include the following (11-9):

- Interstate 90 (NHS, Eisenhower Interstate System)
- Interstate 94 (NH, Eisenhower Interstate System)
- Montana Route 3 (NHS, STRAHNET Route)
- US Route 87 (NHS, Other NHS Route)
- King Avenue (MAP-21 NHS Principal Arterial)
- Zoo Drive (MAP-21 NHS Principal Arterial)
- Laurel Road (MAP-21 NHS Principal Arterial)
- 1st Avenue S (MAP-21 NHS Principal Arterial)
- Montana Avenue (MAP-21 NHS Principal Arterial)
- 1st Avenue N (MAP-21 NHS Principal Arterial)

The National Highway System (NHS) consists of roadways important to the nation's economy, defense, and mobility. The NHS includes the following categories within the Billings Urban Area:

- Interstate: The Eisenhower Interstate System of highways retains its separate identity within the NHS.
- Other Principal Arterials: These are highways in rural and urban areas which provide access between an arterial and a major port, airport, public transportation facility, or other intermodal facility.
- Strategic Highway Network (STRAHNET): This is a network of highways which are important to the United States' strategic defense policy and

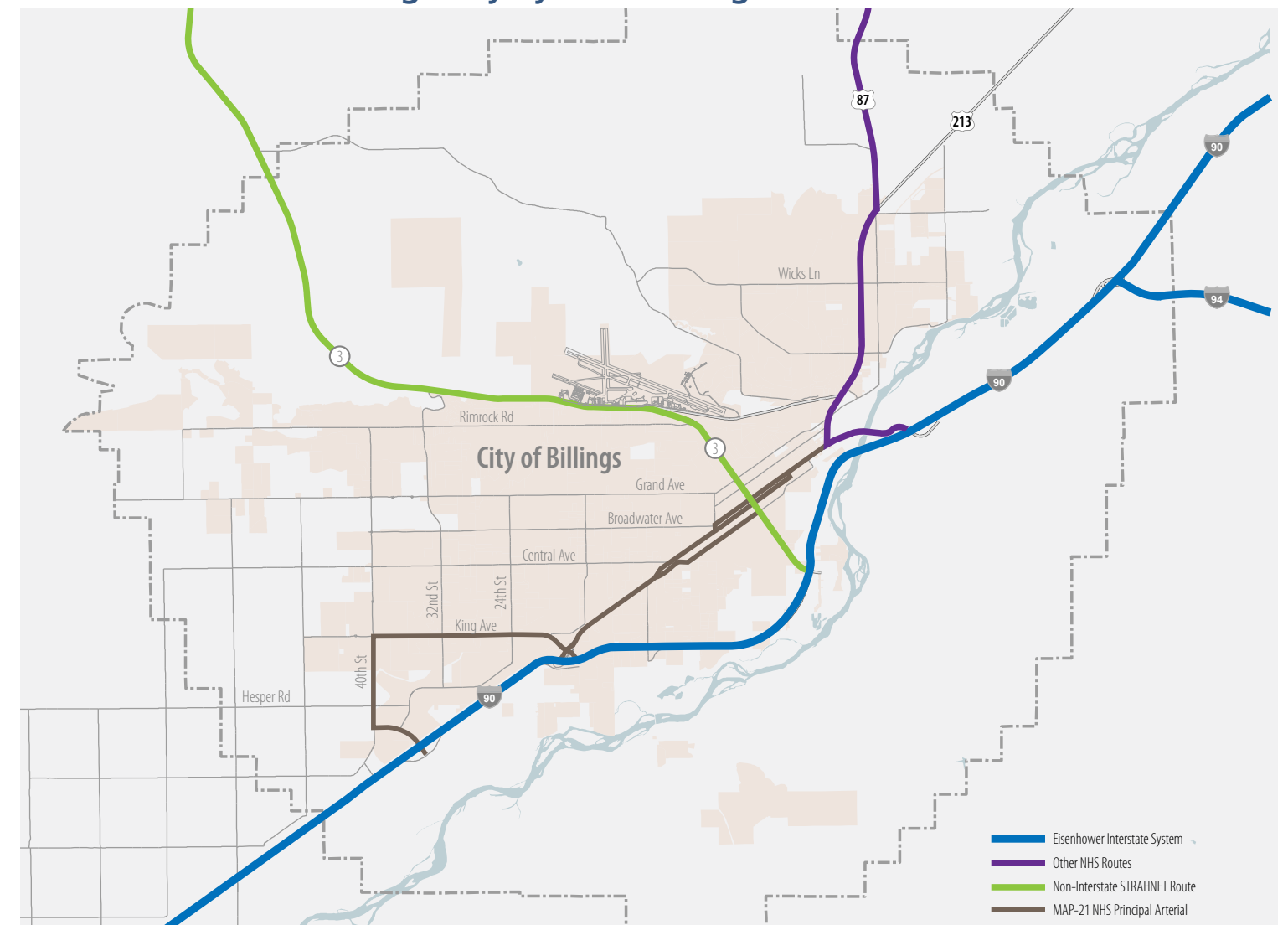
which provide defense access, continuity, and emergency capabilities for defense purposes.

The National Highway System (NHS) consists of roadways important to the nation's economy, defense, and mobility. The NHS includes the following categories within the Billings Urban Area:

- Interstate: The Eisenhower Interstate System of highways retains its separate identity within the NHS.

- Other Principal Arterials: These are highways in rural and urban areas which provide access between an arterial and a major port, airport, public transportation facility, or other intermodal facility.
- Strategic Highway Network (STRAHNET): This is a network of highways which are important to the United States' strategic defense policy and which provide defense access, continuity, and emergency capabilities for defense purposes.

Exhibit 11-1. National Highway System: Billings, MT



Significant intermodal facilities within the Billings Urban Area include:

- MET Transfer Centers (Stewart Park and Downtown),
- Billings Logan International Airport,
- Montana Rail Link railroad facilities, and
- Burlington Northern Santa Fe railroad facilities.

COMMUNITY PRIORITIES

As part of the 2004 Multijurisdictional PDM, a community involvement process was conducted to assess the community's ranking of all potential hazards. This ranking was reviewed for the 2012

Multijurisdictional PDM with the rankings staying unchanged. Table 11.2 summarizes the community rankings of potential natural and man-made hazards.

As shown in Table 11.2, the top rankings have a direct relationship with the regional transportation system (i.e., connectivity, providing alternate routes, etc.) in the event one occurred. Therefore, it is critical for the MPO and region to continue to collaborate on security items as part of the transportation planning process and maintenance of the Multijurisdictional PDM.

RECOMMENDED STRATEGIES

Several recommended strategies are identified for incorporating security in the transportation planning process. These recommended strategies include:

- Continue to establish partnerships between agencies to incorporate security elements into existing and future plans.
- Implement the proposed mitigation actions identified in the Yellowstone County Multijurisdictional PDM, in particular the following related transportation projects:
 - Highway 3 Stormwater Controls: Study options for mitigating stormwater runoff from Highway 3 near the Airport.
 - Continued community outreach on floodplain awareness, firewise demonstrations, severe storm education, and school safety.

- Involve identified security stakeholders throughout the transportation planning process, including analysis of transportation system security at the program and project levels associated with both the development of subsequent LRTPs and transportation improvement program (TIP) updates, as well as ongoing corridor and system-wide project evaluations.
- Implement key transportation projects that provide alternate routes and connections within the Billings Urban Area, such as the Billings Bypass Arterial and Inner Belt Loop.
- Implement ITS technologies (i.e., signage, signal systems, wayfinding, etc.) to improve communications, manage the transportation system, and allow for deployment of signal timing contingency plans during potential hazards/events.

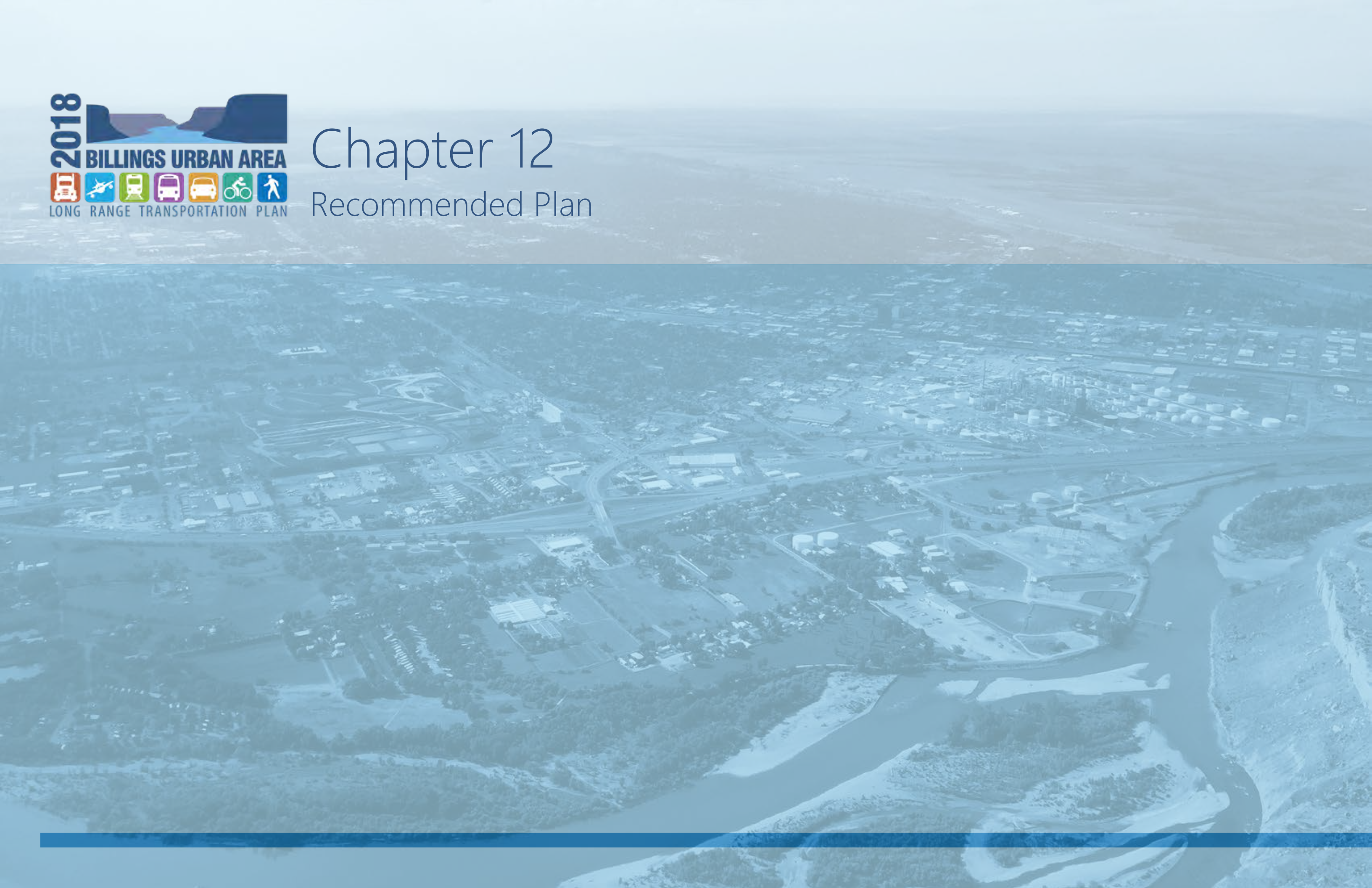
Table 11.2. Community Rankings of Natural and Man-made Hazards in Yellowstone County

Hazard	History	Vulnerability	Maximum	Probability	Rank
Natural Hazard Vulnerability Ranking for Yellowstone County					
Flooding	High	High	High	High	1
Wildfire	High	High	High	High	2
Wind and Hail Storms	High	High	High	High	3
Tornado	Moderate	Moderate	Moderate	Moderate	4
Winter Storms	High	Moderate	Moderate	Moderate	5
Drought	High	Low	Moderate	Moderate	6
Insect Infestations	Moderate	Moderate	Moderate	Moderate	7
Urban Fire	Low	Low	Moderate	Low	8
Dam Failure	Low	Moderate	Moderate	Low	9
Expansive Soil	Moderate	Low	Low	Moderate	10
Landslides	Moderate	Low	Low	Low	11
Earthquake	Low	Low	Low	Low	12
Volcanic Ash	Low	Low	Low	Low	13
Manmade Hazard Vulnerability Ranking for Yellowstone County					
Transportation/ Mobile Incident	Moderate	Moderate	High	High	1
Hazardous Materials Incident/ Accident-Fixed	Moderate	Moderate	High	High	2
Terrorism/Bio-Terrorism	Low	Moderate	High	Low	3
Civil Disturbance/ Riot/Labor Unrest	Moderate	Moderate	Moderate	Moderate	4
Enemy Attack	Low	Moderate	High	Low	5



Chapter 12

Recommended Plan



RECOMMENDED PLAN

This chapter addresses security planning for the This chapter presents the recommended set of projects that help to ensure the safe and efficient movement of people and goods within and through the Billings Urban Area. These projects were identified from the previous LRTP and recent plans/studies, projects developed through the CIP and TIP process, projects developed through the deficiencies and needs assessment, and projects developed through the LRTP public involvement and interagency process. The LRTP investments provide several benefits to the transportation system:

- Improve transportation options
- Increase road safety, connectivity, and capacity
- Manage the transportation system better
- Maintain the public transportation system
- Improve and expand pedestrian, bicycle, and multiuse trail facilities
- Enhance the signal system with new technologies and updated timings
- Integrate the transportation system with land use and community desires

A TOOLBOX OF TRANSPORTATION STRATEGIES

The Billings Urban Area has significantly invested in streets, highways, intersections, and multiuse trails infrastructure over the past 20 years. With the population and employment growth and current community vision, investment in safety and a transportation system for all modes has become a priority for the Billings Urban Area. Several strategies are presented in this section for consideration in the recommended plan.

CONGESTION MANAGEMENT

Managing traffic signals is one of the most important traffic engineering functions within a city. Few activities have equivalent impact on the public. Optimizing traffic signal timing and coordination has the potential to significantly reduce driver delay and congestion and enhance safety. Simple things—like adjusting the length of the red-green-yellow cycle for different daytime hours, weekdays versus weekends, and seasonally—can reduce traveler delay and enhance the overall travel experience. Approximately 178 intersections have traffic signals in the Billings Urban Area. Getting the timing correct is critical for minimizing delay, improving safety, and protecting non-motorized modes of transportation. The City of Billings and MDT have been working on major upgrades to the signal system and incorporating a signal timing program to analyze and update signal timings at intersections. Exhibits 12.1 and 12.2 illustrate a few of the critical signalized corridors, Main Street and 27th Street in the Billings Urban Area.

Adding road and public transportation capacity cannot be the sole strategy for addressing transportation needs. Management strategies can complement capacity expansion projects and offer other ways to make transportation more efficient, more flexible,

and less intrusive. They include optimizing the operating performance of the transportation network, creating more travel options, carefully managing road work schedules to minimize travel disruption, increasing operations efficiency, and managing demand to conserve and influence travel behavior. Events at MetraPark can create large traffic impacts. Event management planning

is another strategy that can mitigate community and travel disruption. Exhibits 12.3 and 12.4 illustrate the area around MetraPark. Collectively, these strategies can relieve stress on the available capacity in peak commute hours and can moderate travel impacts.

Exhibit 12.1 Signalized Intersection on Main Street



Exhibit 12.2 Signalized Intersections on 27th Street, Gateway to Downtown Billings



Exhibit 12.3 Rimrock Arena at MetraPark



Exhibit 12.4 Exposition Drive along MetraPark



PUBLIC TRANSPORTATION SYSTEM OPERATIONS

The MET Transit budget is between \$6 and \$7 million annually to operate the public transit and paratransit system (Exhibits 12.5 and 12.6). This annual budget increases during some years depending on capital purchases and increases in operating expenses. The cost is partially offset by operating revenues from passenger fares and advertising. However, MET Transit's ability to expand and deliver more service is directly tied to the level of operating funding. Funding is the critical issue for MET Transit throughout the LRTP planning horizon. Maintaining the momentum—increases in ridership and continued public interest in the transit system is critical. Momentum cannot be sustained in the absence of committed and stable public funding support. Available funding provides for continuing vehicle replacement over the next twenty years. However, a change in the funding will need to occur to allow MET Transit to begin implementing new routes and increasing frequency on existing routes, which should result in higher ridership and better awareness of the transit system from the public.

Exhibit 12.5 A Key Transportation Option for the Billings Urban Area



Exhibit 12.6 MET Transit Center



CONNECTING PEOPLE

Pedestrians, bicycle, and multiuse trail facilities contribute to the attractiveness and livability of the city, enhance personal health, and help foster a sense of community. These facilities are used by people to travel to and from the public transportation system, jobs, medical facilities, schools, parks, and other destinations. To create a network of facilities, it is critical for the MPO and agency partners to evaluate, design, and implement these connections throughout the Billings Urban Area. The types of connections include improving the on-street bicycle and trails connectivity (east-west and north-south), filling in the missing links of sidewalk, joining key population and employment areas with roadways, and extending public transportation routes to areas that are underserved. Exhibits 12.7 and 12.8 illustrate existing trails within the Billings Urban Area.

Exhibit 12.7 Connecting Neighborhoods with Trails



Exhibit 12.8 Trail Connection at MetraPark



ALTERNATIVE INTERSECTIONS AND INTERCHANGES

Alternative intersections and interchanges offer the potential to improve safety and reduce delay at a lower cost and with fewer impacts than traditional solutions. Some of these forms that may be applicable in the Billings Urban Area include at-grade intersections, such as the Displaced Left Turn (DLT), Median U-Turn (MUT), and Restricted Crossing U-Turn (RCUT), and interchanges, such as a Diverging Diamond Interchange (DDI). At the national level, guidance is being developed based on recent research and practical application of these forms in communities throughout the U.S (12-1).

In the Billings Urban Area, there are some intersections (i.e., King Avenue/24th Street, Grand Avenue/24th Street, and a few intersections on Main Street) and interchanges with high traffic volumes and crash rates that could potentially see an enhancement from these types of intersection forms. These types of intersections and interchanges could be incorporated as alternatives for consideration in future design projects as potential solutions to enhance operations and safety.

Exhibit 12.9 illustrates a MUT in Utah.

Exhibit 12.10 illustrates a DDI in Minnesota. MDT is planning Montana's first DDI at the Johnson Lane/Interstate 90 interchange as part of the Billings Bypass project.

Exhibit 12.9 Median U-Turn intersection in Draper, Utah



Exhibit 12.10 Diverging Diamond Interchange in Minnesota



SAFETY

Along with some of the alternative intersection forms, other strategies to improve the safety performance of our roadways and intersections for all users include the use of medians and pedestrian crossing islands, roundabouts, road diets, pedestrian hybrid beacon, and flashing yellow left-turn arrows at signalized intersections. Many of these applications are already being incorporated in the planning and design efforts by the MPO and partnering agencies. The safety performance is enhanced with these treatments. For instance, the installation of a pedestrian hybrid beacon has been shown to provide the following safety benefits: 1) up to a 69 percent reduction in pedestrian crashes; 2) up to a 29 percent reduction in total roadway crashes; and 3) 15% reduction in serious injury and fatal crashes (12-2). Exhibit 12.11 illustrates the pedestrian hybrid beacon implemented on 4th Avenue in downtown Billings.

Exhibit 12.11 Pedestrian Hybrid Beacon on 4th Avenue



Roundabouts have three basic operational principles: 1) geometry that results in a low-speed environment, creating substantial safety advantages; 2) entering traffic yields to vehicles in the circulatory roadway, leading to excellent operational performance; and 3) channelization at the entrance and deflection around a center island are designed to be effective in reducing conflict. Roundabouts have demonstrated significant reductions in fatal and injury crashes. The Highway Safety Manual (HSM) indicates the following: 1) by converting from a two-way stop control mechanism to a roundabout, a location can experience an 82 percent reduction in severe (injury/fatal) crashes and a 44 percent reduction in overall crashes, and 2) by converting from a signalized intersection to a roundabout, a location can experience a 78 percent reduction in severe (injury/fatal) crashes and a 48 percent reduction in overall crashes (12-3). Exhibit 12.12 illustrates a roundabout on the Shiloh Road Corridor.

Exhibit 12.12 Roundabout on Shiloh Road



To continue enhancing the safety performance of the transportation system, these strategies combined with education and enforcement are recommended for future transportation projects within the Billings Urban Area.

TRANSPORTATION PROJECTS TO ADDRESS THE FUTURE VISION

The transportation projects in the LRTP are broken into committed, recommended, and illustrative types.

- **Committed projects** are projects that are included in the STIP, MPO TIP, or City of Billings CIP. These projects are funded and programmed and planned for completion within the next 10 years.
- **Recommended projects** are projects that are expected to be fully funded by year 2040, but are not currently committed within the STIP, TIP, or CIP. The recommended projects were identified based on the input received during the planning process and projects identified in recent plans.
- **Illustrative projects** are projects not expected to be funded by 2040, because of fiscal constraint. These projects could be included in the adopted LRTP if additional resources beyond those identified in the financial plan become available. The illustrative projects are identified in the project lists for streets and highways, public transit, pedestrians, bicyclists, and multiuse trails in the earlier chapters.

All project costs were converted to year of expenditure (YOE) dollars using a four-percent annual inflation (Source: FHWA). The following references and documents were used in development of this section.

- Montana Department of Transportation (12-4)
- Billings Urban Area Transportation Improvement Program (TIP), FY 2017-2021 (12-5)
- City of Billings FY 2019-2023 Capital Improvement Program (CIP) (12-6)
- City of Billings Proposed Budget FY 2019 (12-7)
- MET Transit

At this time, project priorities were not assigned to the list of projects within the LRTP. However, project prioritization is determined through the MPO's TIP process. Given the current level of funding committed to transportation infrastructure in the Billings Urban Area, most of the recommended projects are not anticipated to occur until after the next plan update. Therefore, it is reasonable that these projects and priorities be reviewed as part of the TIP process and during the next LRTP update.

STREETS AND HIGHWAYS

The streets and highways committed and recommended projects are necessary to provide system connectivity, enhance efficiency, and accommodate expected future traffic demand. Additionally, these projects may include pedestrian and bicycle facilities to assist with development of a multimodal system. The intersection projects address specific capacity and/or safety problems. The congestion management projects include signal system upgrades and signal timing efforts to improve traffic flow and pedestrian timings at signalized intersections. These projects also support the rail and trucking element of the LRTP. Table 12.1 summarizes the committed and recommended projects for streets and highways.

Table 12.1 Street and Highway Projects

Project ID	Proposed Name	Project Description	Eligible Funding Source	Year of Expenditure Cost
Committed Projects				
R1	32nd Street West - King Ave West to Gabel Rd	Reconstruct to a 3-lane urban roadway	AFF	\$4,100,000.00
R3	Wicks Lane (Main to Hawthorne)	Reconstruct to a 3-lane urban roadway (includes Bitterroot)	AFF	\$300,000.00
R4	I-90 Yellowstone River - Billings	Replace bridges	IM	\$72,160,000.00
R5	Inner Belt Loop - Alkali Creek Rd to Highway 3	Construction of a new road from Alkali Creek Road to Highway 3	GT, BARSAA, AFF	\$7,000,000.00
R10	King Avenue East – Orchard Ln to Sugar Ave	Reconstruct to a 3-lane urban roadway	TIFD	\$1,528,586.00
R11	Billings Bypass - Five Mile Road	New roadway and intersection improvements	STPU	\$4,500,000.00
	Billings Bypass - Yellowstone River	New roadway and bridge	NH, CMAQ, Bridge, STPU	\$52,760,000.00
	Billings Bypass - RR O'pass	New roadway and overpass	NH, CMAQ	\$14,400,000.00
	Billings Bypass - Johnson Ln Interchange - RR O'Pass	New roadway and overpass	NH, CMAQ	\$8,700,000.00
	Billings Bypass - Five Mile Road to US 87	New roadway and intersection improvements	NH, CMAQ, STPU	\$16,000,000.00
	Billings Bypass - Johnson Lane Interchange	New interchange, roadway, and intersection improvements	IM, NH	\$25,800,000.00
R14	27th Street – 1st Ave S to Airport Rd	Signal Optimization, Mill Overlay, ADA Corners, Sidewalks	NH	\$15,300,000.00
R15	Main St - Billings	Pavement preservation with ADA work	NH	\$5,735,460.00

Project ID	Proposed Name	Project Description	Eligible Funding Source	Year of Expenditure Cost
R16	1st Avenue North - Division St to Main St	Reconstruct existing cross section	NH	\$14,500,000.00
R17	Hawthorne Lane Reconstruction	Reconstruct the roadway between Yellowstone River Road and Wicks Lane		\$1,000,000.00
R18	Lincoln Lane Reconstruction	Reconstruct the roadway between Bench Boulevard and Conway		\$1,000,000.00
R19	Daniel Street Reconstruction	Reconstruct the roadway between Monad Road and King Avenue		\$2,800,000.00
R20	Various Projects	Pavement Preservation	IM	misc.
R21	MDT Preventive Maintenance	Pavement Preservation	NH	misc.
R22	Billings - NW	Pavement Preservation	NH	\$5,035,360.00
R23	Airport Rd - Zimmerman Trail	Pavement Preservation	NH	\$2,303,073.00
R24 - A	PAVER Program	Annual Program responsible for crack sealing, overlay, and chip seals of various streets throughout the City. BARSAA funding will be used in PAVER replacing some of the previously approved gas tax funding. The savings in gas tax funding will be used for the Inner Belt Loop project.	AFF, BARSAA, GT	\$14,725,000.00
R25 - A	Travel Corridor Coordination	Engineering will be done within Public Works.	AFF	\$400,000.00

Project ID	Proposed Name	Project Description	Eligible Funding Source	Year of Expenditure Cost
R28 - A	Annual SID Contribution	This project will provide SID funding for Public Work's property that may be included in an SID for a given year.	GT, BARSAA, SID	\$6,650,000.00
R29 - A	Snow Melt Facility	Snow melting system to melt some of the snow hauled from the City's streets. Additional funding in FY 2019 will allow development of a storage and melting location in addition to the other sites that will be used.	SMF	\$1,200,000.00
R30	Muldowney Lane	Road reconstruction south of Midland Road	AFF	\$4,100,000.00
R31	Hallowell Lane Improvements	Reconstruct to urban roadway	TIFD	\$1,781,058.00
R32 - A	SBURA Unimproved Streets Improvements		TIFD	\$1,500,000.00
R33	King Ave E	Pavement Preservation	NH	\$100,000.00
R34	Grand - 24th to Zimmerman	Pavement Preservation	UPP	\$1,350,000.00
R35	Hardin Road	Pavement Preservation	UPP	\$240,000.00
R36	Shiloh Road	Pavement Preservation	UPP	\$60,000.00
R37	Blue Creek Road	Pavement Preservation	UPP	\$881,000.00
R38	Billings Blvd	Pavement Preservation	UPP	\$60,000.00
R50	South Frontage Road	Pavement Preservation	UPP	\$670,000.00

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Project ID	Proposed Name	Project Description	Eligible Funding Source	Year of Expenditure Cost
R51	SF 169 Blgs Area Safety Imprv.	Signage -- RP 1.7 - 2.17 (U-1026, King Ave. E); RP 3.45 - 3.65 (U-1027, Yellowstone River Rd); RP 2.35 - 2.45 (L-56-2389, Lake Elmo Drive); RP 1.9 - 2.1 (X-56395, South Frontage Road); RP 0 - 1.379 (L-56-982, Garden Ave); RP 0 - 0.76 (L-56-23, Nahmis Ave); RP 0.05 - 0.3 (L-56-1665, Story Road)	HSIP	\$21,000.00
R52	SF 169 I90 W King Ave Lighting	Roadway Lighting	HSIP	\$345,000.00
R57	Various Projects 2017-2021	Pavement Preservation	UPP	\$2,500,000.00
I2	Exposition Drive & 1st Ave N Blgs	Intersection Improvement	NH	\$1,600,000.00
I3	Monad Rd/Daniel Ln	Improve intersection capacity, operations, and safety		\$400,000.00
I4	Central Ave/24th St W	Improve intersection capacity, operations, and safety	AFF	\$400,000.00
I5	Airport Rd & Main St - BLGS	Intersection Improvements	NH	\$11,700,000.00
I7	Underpass Avenue Improvements	Intersection Improvements	NH	\$8,600,000.00
I14	Johnson Lane & Old Hardin Road	Intersection improvements and access management around Johnson Lane Interchange	See R11	See R11
I19	Johnson Ln Interchange	Geometric improvements to improve operations and safety	See R11	See R11
I21	SF 129-RNDABOUT KING 56TH	Construct a roundabout at this intersection	HSIP	\$4,246,201.00
I22	SF 139-RNDABOUT CENTRAL/56TH	Construct a roundabout at this intersection	HSIP	\$3,500,000.00

Project ID	Proposed Name	Project Description	Eligible Funding Source	Year of Expenditure Cost
I23	Pinehills Intch-Pryor CR Intch	Pavement Preservation	IM	\$887,557.00
I24	W Blgs Intch - Pinehills Intch	Mill Fill	IM	\$4,462,609.00
I25	27th Street RR Crossing	Railroad crossing study	STPX	\$300,000.00
I26	SF-149 HILLCREST RIGHT TURN LN	Intersection Improvement	HSIP	\$331,073.00
I27	SF 129 BILLINGS HORIZONTAL CURVE SIGNAGE	Signage	HSIP	\$1,126,611.00
I28	SF 169 ROUNDABOUT RIMROCK & 62ND ST. W	Roundabout	HSIP	\$3,655,843.00
I29	SF 169 ITS INTERSECTION DETECTION	Intersection Improvement	HSIP	\$73,000.00
I30	SF 169 KING AVE E. RUMBLE STRIPS	Rumble Strips	HSIP	\$11,000.00
I31	SF 169 YELLOWSTONE RIVER RD CHEVRONS	Signage	HSIP	\$6,000.00
I32	SF 169 JOHNSON LANE DELINEATION	Signage	HSIP	\$700.00
I33	SF 169 LAKE ELMO DRIVE DELINEATION	Signage	HSIP	\$420.00
I34	SF 169 SOUTH FRONTAGE ROAD SIGNAGE	Signage	HSIP	\$6,700.00
I35	SF 169 OLD HIGHWAY 312 DELINEATION	Signage	HSIP	\$3,500.00
I36	SF 169 GARDEN AVE SIGNAGE	Signage	HSIP	\$26,000.00
I37	SF 169 NAHMIS AVE DELINEATION	Signage	HSIP	\$7,500.00

Project ID	Proposed Name	Project Description	Eligible Funding Source	Year of Expenditure Cost
I38	SF 169 STORY RD SIGNAGE	Signage	HSIP	\$3,000.00
I39	SF 149 - KING INTCH SFTY IMPRV	Safety	HSIP	\$14,942.00
I40	Intersection Capacity Improvements	Evaluate and construct improvements to selected intersection trouble areas.	AFF	\$2,000,000.00
I41	Monad and 19th/20th St W Intersection Reconstruction		AFF	\$3,500,000.00
I42	SF-169 Frontage Rd Wise Ln Intx	Intersection Improvement	HSIP	\$97,800.00
I55	Various Safety Projects	Safety	HSIP	\$4,500,000.00
CM4	24th St West Signal Improvements	Upgrade of signals from King Avenue to Grand Avenue	AFF	\$220,000.00
CM21	Billings Signal Upgrades	Signal Optimization	MACI	\$320,869.00
CM22	Lockwood Signals	Signal Optimization	MACI	\$18,948.00
CM23	Downtown State Signals BLGS	Signals	MACI	\$6,522,824.00
CM24	Zoo Drive Signals	Signals	MACI	\$50,000.00
CM25	Johnson Lane Signals	Signals	MACI	\$12,970.00
CM26	MDT - MACI	Statewide CMAQ - Various	MACI	\$1,000,000.00
CM27	MDT - MACI	Statewide CMAQ - ADA Compliance	MACI	\$1,750,000.00

Project ID	Proposed Name	Project Description	Eligible Funding Source	Year of Expenditure Cost
CM28	Traffic Signal Controller Upgrade		AFF	\$3,225,000.00
Total Committed Streets & Highways Project Costs \$356,086,604.00				
Recommended Projects				
R12	N 21st Street – Montana Ave to 1st Ave S	Reconstruct railroad underpass	AFF, STPU, MACI/ CMAQ	\$3,052,000.00
R13	N 13th Street – 1st Ave N to Minnesota Ave	Reconstruct railroad underpass	AFF, STPU, MACI/ CMAQ	\$18,400,000.00
R53	King Avenue - Shiloh to 72nd	Reconstruct to a five lane section	S, HSIP, STPU	\$8,000,000.00
R54	I-90 from S Blgs Blvd Inch to 27th St Intch	Add a third travel lane to I-90	IM, MACI/ CMAQ	\$4,000,000.00
R55	I-90 from Lockwood Intch to Johnson Lane Intch	Add a third travel lane to I-90	IM, MACI/ CMAQ	\$3,000,000.00
R56	Hwy 3 from Airport to Zimmerman Trail	Widen with two-way, left-turn lane	NH, HSIP	\$3,200,000.00
I1	Rimrock Rd/N 27th St	Improve intersection capacity, operations, and safety	AFF, HSIP	\$4,700,000.00
I6	Rimrock Rd/Virginia Ln	Improve intersection capacity, operations, and safety	AFF	\$410,000.00
I8	King Ave/24th St	Evaluate intersection to identify alternative intersection treatment	AFF, HSIP	\$1,500,000.00
I9	Grand Ave/24th St	Evaluate intersection to identify alternative intersection treatment	AFF, HSIP	\$250,000.00
I10	Division/Grand/6th Ave/N 32nd St	Improve intersection capacity, operations, and safety	AFF, HSIP	\$560,000.00

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Project ID	Proposed Name	Project Description	Eligible Funding Source	Year of Expenditure Cost
I11	Division/Broadway/1st Ave N	Improve intersection capacity, operations, and safety	AFF, HSIP	\$560,000.00
I12	Lockwood Road & N Frontage Road	Reconfiguration of existing intersection	AFF, HSIP	\$495,000.00
I13	US Highway 87 & Old Hardin Road	Upgrade 3-way stop intersection to a roundabout	AFF, NH, HSIP	\$630,000.00
I17	27th Street Interchange	Construct additional EB and WB mainline lanes under and through Interchange. Restripe EB off-ramp and improve pedestrian facilities	IM, NH	\$1,900,000.00
I18	Lockwood Interchange	Construct additional EB and WB mainline lanes under and through the Lockwood Interchange and improve pedestrian facilities	IM, NH	\$1,900,000.00
I45	Neibauer Rd & 56th St West	All-way stop control/ OH Flashing Beacons/ Transverse Rumble Strips	AFF, HSIP	\$200,000.00
I46	Neibauer Rd & 48th St West	OH Flashing Beacons/ Transverse Rumble Strips	AFF, HSIP	\$200,000.00
I47	Grand Ave & 48th St West	Traffic Signal or Roundabout	AFF, HSIP	\$1,500,000.00
I48	Grand Ave & 56th St West	Traffic Signal or Roundabout	AFF, HSIP	\$1,500,000.00
I49	King Ave West & 48th St West	Traffic Signal or Roundabout	AFF, HSIP	\$1,500,000.00
I50	Central Ave & 48th St West	Traffic Signal or Roundabout	AFF, HSIP	\$1,500,000.00
I51	King Ave West & 64th St West	Traffic Signal or Roundabout	AFF, HSIP	\$1,500,000.00

Project ID	Proposed Name	Project Description	Eligible Funding Source	Year of Expenditure Cost
I52	Grand Ave & 62nd St West	Traffic Signal or Roundabout	AFF, HSIP	\$1,500,000.00
I53	Hesper Rd & 56th St West	All-Way Stop	AFF, HSIP	\$200,000.00
I54	King Ave/20th St	Evaluate intersection to identify alternative intersection treatment	AFF, HSIP	\$1,500,000.00
I56	Laurel Road & Moore Lane	Study for capacity improvements	AFF, HSIP, NH	\$250,000.00
I57	24th Street W & Overland Avenue	Study for capacity improvements	AFF	\$250,000.00
I58	11th Avenue N & N 30th Street	Study for capacity improvements	AFF	\$250,000.00
I59	24th Street W & Grant Road	Study for capacity improvements	AFF	\$250,000.00
I60	24th Street West and Rosebud Drive/Market Place	Study for safety improvements	AFF	\$250,000.00
I61	Blue Creek Rd at Briarwood and Riverfront Park	Add left turn lanes at the two intersections	UPP	\$1,000,000.00
I62	Rimrock Rd/N 27th St	Study for safety improvements	AFF, HSIP	\$250,000.00
CM1	Grand Avenue – 3rd St W to 24th St W	Update signal timing for 10 signals	AFF	\$100,000.00
CM2	Broadwater Avenue – 5th St W to Zimmerman	Update signal timing for 8 signals	AFF	\$80,000.00
CM3	Central Avenue – 6th St W to Zimmerman	Update signal timing for 10 signals	AFF	\$100,000.00
CM5	27th Street – State Ave to Poly Dr	Update signal timing for 11 signals	MACI	\$110,000.00

Project ID	Proposed Name	Project Description	Eligible Funding Source	Year of Expenditure Cost
CM6	Main Street – 1st Ave N to Permberton Ln	Signals	MACI	\$218,000.00
CM7	Division Street – Broadwater Ave to 4th Ave N	Update signal timing for 3 signals	MACI	\$30,000.00
CM8	Grand Avenue – 24th St W to Zimmerman	Update signal timing for 3 signals	MACI	\$30,000.00
CM9	Rimrock Road – 38th St W to 13th St W	Update signal timing for 5 signals	AFF	\$50,000.00
CM10	15th Street West – Central Ave to Grand Ave	Update signal timing for 5 signals	AFF	\$50,000.00
CM11	Wicks Lane – Governors Blvd to Bench Blvd	Update signal timing for 5 signals	AFF	\$50,000.00
CM12	19th Street West – Monad Rd to Grand Ave	Update signal timing for 5 signals	AFF	\$50,000.00
CM13	17th Street West – Grand Ave to Rimrock	Update signal timing for 5 signals	AFF	\$50,000.00
CM14	Monad Road – 19th St W to 32nd St W	Update signal timing for 4 signals	AFF	\$40,000.00
CM15	Governors Boulevard/Hilltop Road – Wicks Ln to Main St	Update signal timing for 3 signals	AFF	\$30,000.00
CM16	ITS Signage and Advanced Warning System	Implement a signage and advanced warning system to inform transportation users of crossing delays due to incoming and stopped trains	AFF, MACI	\$500,000.00
CM17	Downtown Billings Signal Upgrades (No 27th Street signals)	Traffic signal controller and signal timing upgrades at 36 signals in the downtown area, excluding 27th Street	AFF, MACI	\$305,875.00

Project ID	Proposed Name	Project Description	Eligible Funding Source	Year of Expenditure Cost
CM18	Downtown Billings Signal Upgrades	Traffic signal controller and timing upgrades at 13 signals in downtown	AFF, MACI	\$316,091.00
CM19	Downtown Billings Signal Upgrades	Traffic signal controller and timing upgrades in the downtown area	AFF, MACI	\$3,160,911.00
CM20	Citywide Signal Timing	Traffic signal controller and timing upgrades at 24 signals within Billings	AFF	\$372,000.00
R2	Old Hardin Road - Lockwood Interchange to Johnson Ln	Reconstruct to a 3-lane urban roadway	STPU, HSIP	\$5,700,000.00
R6	1st Avenue South-Minnesota Avenue - 21st St to N 13th St	Reconstruct to urban roadway	STPU, HSIP	\$1,000,000.00
R7	Pemberton Lane - BBWA to Lake Elmo Dr	Reconstruct to urban roadway	AFF	\$2,900,000.00
R8	Broadwater Avenue – BBWA to Shiloh Rd	Reconstruct to urban roadway	AFF	\$4,000,000.00
R9	48th Street West – King Ave to Grand Ave	Reconstruct – cross section to be determined	AFF	\$5,500,000.00
R39	Highway 3 Widening - Zimmerman to Apache	Widen Highway 3 from Zimmerman Trail to Apache Trail with TWLTL	NH, HSIP	\$2,600,000.00
R40	Highway 312 Capacity Improvements - Shoulder Widening	Shoulder Widening	NH, HSIP	\$341,000.00
R41	Highway 312 Capacity Improvements - Three-lane Section	Three-lane section, including bridge replacement at seven mile creek	NH, HSIP	\$450,000.00
R42	Highway 312 Pavement Preservation	Pavement Preservation	NH, HSIP	\$2,000,000.00

Project ID	Proposed Name	Project Description	Eligible Funding Source	Year of Expenditure Cost
R43	Highway 312 Traffic Control Devices and Safety/ Warning Features	Signing	NH, HSIP	misc.
R44	Grand Ave - Shiloh Rd to 62nd St West	Widening/Reconstruction (5-lane section)	AFF	\$11,000,000.00
R45	Rimrock Rd - Shiloh Rd to 62nd St West	Widening/Reconstruction (5-lane section/3-lane section)	AFF	\$10,300,000.00
R46	King Ave West - MT Sapphire Dr to 64th St West	Widening/Reconstruction (5-lane section/3-lane section)	AFF	\$9,300,000.00
R47	54th St West - Grand Ave to Rimrock Rd	Widening/Reconstruction (3-lane section)	AFF	\$3,300,000.00
R48	Central Ave - Shiloh Rd to 48th St West	Widening/Reconstruction (3-lane section)	AFF	\$3,100,000.00
R49	62nd St West - Rimrock Rd to Western Bluffs Boulevard	Widening/Reconstruction (3-lane section)	AFF	\$1,100,000.00
R58	Highway 3 to Molt Road Connection Study	Study the feasibility of constructing a new Roadway connecting Highway 3 to Molt Road		\$250,000.00
I15	Shiloh Interchange	Geometric improvements to improve operations and safety	IM, NH	\$1,900,000.00
I16	South Billings Blvd Interchange	Additional EB and WB mainline lanes under and through the Interchange	IM, NH	\$1,600,000.00
I20A	West Billings Interchange	Update geometry to match C standards, improve landscaping and improve pedestrian facilities	IM, NH	\$6,900,000.00

Project ID	Proposed Name	Project Description	Eligible Funding Source	Year of Expenditure Cost
I20B		Construct additional EB and WB mainline lanes through interchange, modify vertical curve, reconstruct bridge segments and restripe WB off-ramp at West Billings Interchange.	IM, NH	\$12,600,000.00
I43	Highway 3/Rod & Gun Club Road	Install roundabout at Highway 3/ Rod & Gun Club Road, including single circulating lane, single-lane approaches, and bike and pedestrian accommodations		\$1,500,000.00
I44	Highway 312 Intersection Improvements - Intersection Control	Intersection Control	AFF, HSIP	misc.
Total Recommended Streets & Highways Project Costs				\$159,140,877.00

PEDESTRIAN, BICYCLE, AND MULTIUSE TRAILS

The pedestrian, bicycle, and multiuse trails committed and recommended projects provide for new bike facilities on a few of the east-west and north-south corridors, filling in gaps in the sidewalk system, providing crossing enhancements, and additional connectivity with multiuse trails. Additionally, the City includes a few annual programs that implement striping for bike lanes; curb, gutter, and sidewalk; and ramp replacement for ADA compliance. These programs can be used to implement some of the pedestrian projects associated with the Safe Routes to School program. Table 12.2 summarizes the committed and recommended projects for pedestrians, bicycles, and multiuse trails.

Table 12.2 Pedestrian and Bike Projects

2018 Project ID	Proposed Name	Project Description	Eligible Funding Source	Anticipated Year of Construction	Year of Expenditure Cost
Committed Projects					
P8	SRTS - Poly Drive Sidewalk Improvements	Pedestrian Improvements at the Poly Drive and Arvin Road Intersection		2019	\$97,147.00

2018 Project ID	Proposed Name	Project Description	Eligible Funding Source	Anticipated Year of Construction	Year of Expenditure Cost
P49	Pedestrian Overpass on Main Street	The East End TIFF will determine if adequate funding is available for this project in FY 2019	TIFD	2019	\$3,500,000.00
MT3	Alkali Creek Trail	Extend trail from Swords Park northeast along Alkali Creek or Swords Lane to Main Street Pedestrian Underpass	RTP, PC, BTN	2020	\$350,000.00
MT13	Downtown - Coulson Park Trail Connection	"Extend trail from South 25th Street to 8th Ave. South to South 26th Street to Lillian Avenue and Coulson Park Trail"	TAP, DM, PC	2021	\$750,000.00
MT31	Transtech Connector	"Bring McCail trail segment up to standards and complete connection to Transtech Center Trail at 32nd Street West"	TAP, RTP, BTN	2021	\$700,000.00
MT34	Riverfront Park	Construct a multi-use trail from Mystic Park Trails to Riverfront Park Trails	TAP, PC, RTP	2020	\$1,500,000.00
MT37	Rim Top Shared Use Pathway Phase I (Highway 3) (SKYLINE TRAIL)	Construct a multi-use trail along the rims	HSIP, TAP, BTN	2019	\$3,506,065.00
MT38	Downtown BBWA Corridor Trail/On Street Facilities	Complete Trail through MSU-B Campus in alignment with MSU-B Master Plan and trail/on-street facilities along Poly Dr. through Virginia Lane intersection to 13th/Poly Drive	PC, BTN	2020	\$220,000.00

2018 Project ID	Proposed Name	Project Description	Eligible Funding Source	Anticipated Year of Construction	Year of Expenditure Cost
MT105	6th Avenue North Widening	Street widening project for a multi-use path from Main St. to 13th. PAVER funds will be used for the overlay.	AFF	2019	\$450,000.00
MT83	Stagecoach Trail (Rimrock Road to Highway 3) - Zimmerman Trail	Construct a multi-use trail from Highway 3 to Rimrock Road	TAP, PC, FA	2020	\$3,150,000.00
R27 - A	Annual ADA Replacement	Replace handicapped ramps in accordance with the signed agreement between the City of Billings and the Department of Justice	AFF, GT	2019	\$1,250,000.00
R26 - A	Misc. curb, gutter, and sidewalk	Annual replacement and infill program of curb, gutter, and sidewalk	SB, GT, SD	2019	\$3,825,000.00
P22	6th Ave Underpass	Pedestrian Improvements to Existing Underpass	See I7	See I7	See I7
P28	1st Ave N/US 87/ Main St (Exposition Dr)	Add pedestrian crossings to existing intersections	See I2	See I2	See I2
P31	1st Ave N/US 87 Sidewalk	Add 0.7 miles of sidewalks to N 10th Street to Yellowstone River	See I2	See I2	See I2
P32	US 87 Sidewalks	Add 0.3 miles of sidewalks to northside of Bridge crossing Yellowstone River	See I2	See I2	See I2
MT42	6th Avenue N	Multi-use Trail from 6th Avenue Bypass to N 19th St	See MT 105	See MT 105	See MT 105
BL67	Highway 3	Bike Lanes from North 27th St to Zimmerman Trail	See MT 37	See MT 37	See MT 37
BL68	Highway 3	Bike Lanes from Zimmerman Trail to Apache Trail	See MT 37	See MT 37	See MT 37

2018 Project ID	Proposed Name	Project Description	Eligible Funding Source	Anticipated Year of Construction	Year of Expenditure Cost
Total Committed Pedestrian, Bicycle, and Multiuse Trail Projects \$19,298,212.00					
P1	SRTS - Beartooth	Install a crosswalk on Barrett Road at Linden Drive and install a new sidewalk or multi-use trail along the south side of Barrett and the west side of the alley; install sidewalk along the east side of Bitterroot Drive from Cherry Creek Estates to Wicks Lane with a school crosswalk at Wicks Lane and the access to Emma Jean Estates Subdivision. Installation of sidewalk will likely require private property easements from adjacent landowners; Sign alley adjacent to school one-way northbound.	TAP, BTN, PC, AFF	>2028	\$524,621.00
P2	SRTS - Bench	"Install an east-west sidewalk or trail connection to the north end of school property along Lola Lane. This connection would shorten the walking distance coming from the north on Lake Elmo Drive. Install sidewalks on Rex Lane.	TAP, BTN, PC, AFF	>2028	\$102,199.00

2018 Project ID	Proposed Name	Project Description	Eligible Funding Source	Anticipated Year of Construction	Year of Expenditure Cost
P3	SRTS - Bitterroot	"Construct pedestrian path connection and crossing over the Holling Drain from residential area to the east. (Requires local SID for roadwork). Install sidewalk or pedestrian path along Barrett Road. Installation of sidewalk will likely require private property easements from adjacent landowners. Install fluorescent yellow school crossing signs and ladder-style crosswalk at the multi-use trail crossing on Barrett Road.	TAP, BTN, PC, AFF	>2028	\$840,585.00
P4	SRTS - Boulder	"Install sidewalks and curb and gutter along Boulder Avenue. Consider installing a flasher on the existing school zone speed limit sign. Install sidewalks on Poly Drive west of 32nd Street West.	TAP, BTN, PC, AFF	>2028	\$354,289.00
P5	SRTS - Eagle Cliffs	Construct a trail connection from the intersection of Constitution Avenue and Kootenai Avenue to Marias Drive. Permission must be obtained from DNRC.	TAP, BTN, PC, AFF	>2028	\$115,825.00
P6	SRTS - Meadowlark	Install enhanced school crossing with curb extensions or pedestrian refuge island on 32nd Street West near the intersection with St. John's Avenue.	TAP, BTN, PC, AFF	>2028	\$144,782.00

2018 Project ID	Proposed Name	Project Description	Eligible Funding Source	Anticipated Year of Construction	Year of Expenditure Cost
P7	SRTS - Newman	"Install sidewalks where missing along Calhoun Lane. Install sidewalks where missing along east-west side streets.	TAP, BTN, PC, AFF	>2028	\$1,140,880.00
P9	SRTS - Ponderosa	"Improve the landing/ pedestrian storage area on the northeast corner of King Avenue East and Hallowell Lane. Reconfigure intersection of Hallowell, Arlington, and school access to reduce pedestrian conflicts and improve traffic operations. Install trail connection and ditch crossing between Kings Green Subdivision and south end of school property. Construct a pedestrian path along King Avenue East.	TAP, BTN, PC, AFF	>2028	\$1,192,320.00
P10	SRTS - Sandstone	Install sidewalks on neighborhood streets southeast of Babcock Boulevard. Install sidewalks on neighborhood streets north of Wicks Lane. Consolidate crosswalks on Nutter Boulevard in front of school to the north location and restripe as a ladder style crosswalk.	TAP, BTN, PC, AFF	>2028	\$1,111,816.00
P11	SRTS - Alkali Creek	"Install sidewalk along south side of Alkali Creek Road northwest of school. Install sidewalk along Pinon Drive just west of Alkali Creek Road. Install sidewalk along south side of Indian Trail.	TAP, BTN, PC, AFF	>2028	\$472,443.00

2018 Project ID	Proposed Name	Project Description	Eligible Funding Source	Anticipated Year of Construction	Year of Expenditure Cost
P12	SRTS - Big Sky	"Enhance crossing at 32nd Street West and Lampman Drive or move crossing to Granger Avenue and signalize. Perform a signal warrant analysis at 32nd Street West and Granger Avenue. If warranted, move the school crossing from Lampman Drive to Granger and signalize the intersection. Install crosswalk markings on the south leg of the intersection of Monad Road and 36th Street West. Enhance existing crossing on west leg.	TAP, BTN, PC, AFF	>2028	\$182,678.00
P13	SRTS - Broadwater	"Install curb extensions at the intersection of 4th Street West and Wyoming Avenue. Improve loading zone through alley by defining entry to separate from local business, improve sight distance around corner, reducing the exit to a single lane and providing physical separation between the walking area and the parking area.	TAP, BTN, PC, AFF	>2028	\$398,427.00

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2018 Project ID	Proposed Name	Project Description	Eligible Funding Source	Anticipated Year of Construction	Year of Expenditure Cost
P14	SRTS - Burlington	"Install curb extensions at the intersection of Lewis Avenue and 22nd Street West. Install signing, striping and curb extensions for midblock crossing on 22nd Street West directly in front of main school entrance and consider requiring students to use this entrance.	TAP, BTN, PC, AFF	>2028	\$119,686.00
P15	SRTS - Central Heights	"Widen sidewalks on Lexington Drive, Alamo Drive, and Pueblo Drive, and install curb extensions at mid-block crossings on Alamo Drive and Lexington Drive. Install curb extensions at intersection of Lexington Drive and Eldorado Drive and marked crosswalk on east leg. Install curb extensions or another form of traffic calming at Santa Fe Drive and Eldorado Drive. Install curb extensions for crosswalk at Monad Road/Monterey Drive.	TAP, BTN, PC, AFF	>2028	\$444,096.00

2018 Project ID	Proposed Name	Project Description	Eligible Funding Source	Anticipated Year of Construction	Year of Expenditure Cost
P16	SRTS - Highland	"Install sidewalks and curb extensions at the intersection of O'Malley Drive and Virginia Lane. Install crosswalks with enhancements to shorten crossing distance at Rimrock Road/Missouri Street and Rimrock Road/Virginia Lane. Install sidewalk and/or a bike lane on Virginia Lane from Rimrock Road to Parkhill Drive.	TAP, BTN, PC, AFF	>2028	\$330,710.00
P17	SRTS - McKinley	"Install pedestrian crossings and enhancements at the intersections of Parkhill Drive/North 32nd Street and 11th Avenue North/North 32nd Street. Install curb extensions at 9th Avenue North/North 31st Street. Install curb extensions at 8th Avenue North/North 31st Street. Install curb extensions at 8th Avenue North/North 32nd Street.	TAP, BTN, PC, AFF	>2028	\$403,151.00
P18	SRTS - Miles Avenue	Install curb extensions at 16th Street West and Miles Avenue. Install pull-out area along east side of alley to enhance loading zone and move loading away from pedestrian traffic. Sign alley "one-way" northbound, but allow exception for garbage trucks.	TAP, BTN, PC, AFF	>2028	\$149,607.00

2018 Project ID	Proposed Name	Project Description	Eligible Funding Source	Anticipated Year of Construction	Year of Expenditure Cost
P19	SRTS - Orchard	Install curb extensions and crosswalk enhancements on Jackson Street crossings.	TAP, BTN, PC, AFF	>2028	\$129,134.00
P20	SRTS - Rose Park	"Install curb extensions at 19th Street West/ Avenue E; eliminate crosswalk on south leg of this intersection and south leg of Avenue F intersection. Install traffic calming improvements on 19th Street West to slow traffic speeds. Complete curb and sidewalk on Parkhill Drive to provide continuous walking route, including curb extensions at corner; would also prevent most U-turns.	TAP, BTN, PC, AFF	>2028	\$305,513.00
P21	S 32nd Street Pedestrian Crossing	Install a midblock crossing on S 32nd Street	TAP, BTN, PC, AFF	>2028	\$210,000.00
P29	US 87 Pedestrian Easement	1.0 miles adjacent to Metra Park from Airport Rd to Yellowstone River	TAP, BTN, PC, AFF	>2028	\$369,600.00
P30	N 10th St/1st Ave N	Add pedestrian crossings to existing intersection (potential new signal with pedestrian phase)	TAP, BTN, PC, AFF	>2028	\$280,000.00
P35	Jackson Street Sidewalks	Construct new 5-foot sidewalk on west side of Jackson/ crossing at Orchard	TAP, BTN, PC, AFF	>2028	\$216,500.00
P36	Broadwater Elementary School	Install sidewalk, fencing, and landscaping	TAP, BTN, PC, AFF	>2028	\$131,290.00

2018 Project ID	Proposed Name	Project Description	Eligible Funding Source	Anticipated Year of Construction	Year of Expenditure Cost
P39	Becraft Lane Sidewalk	Path from Old Hardin Rd to Noblewood Drive; serves as Pedestrian Connection to the commercial area at the Old Hardin Rd/ Johnson Ln intersection and to Harris Park; path to run along north side of Becraft Lane	TAP, BTN, PC, AFF	>2028	\$500,000.00
P40	Piccolo Ln	Five foot concrete curb-walk from Old Harding Rd to Highway 87; serving housing along street and create a pedestrian connection to the IGA convenience store on the southwest corner of the Piccolo Ln/Old Hardin Rd intersection; Piccolo Ln has potential to become neighborhood shareway/ greenway or a woonerf	TAP, BTN, PC, AFF	>2028	\$250,000.00
P41	Old Hardin Road Sidewalk (Segment 1)	Path from US 87 to Piccolo Lane; path to run on the south side of Old Hardin Rd; possibility of using irrigation canal as a location for a pedestrian path	TAP, BTN, PC, AFF	>2028	\$350,000.00
P42	Old Hardin Road Sidewalk (Segment 2)	Path from Piccolo Lane to Greenwood Avenue; path to run on the south side of Old Hardin Rd; possibility of using irrigation canal as a location for a pedestrian path	TAP, BTN, PC, AFF	>2028	\$410,000.00

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2018 Project ID	Proposed Name	Project Description	Eligible Funding Source	Anticipated Year of Construction	Year of Expenditure Cost
P43	Old Hardin Road Sidewalk (Segment 3)	Path from Greenwood Avenue to Johnson Lane; path to run on the south side of Old Hardin Rd; possibility of using irrigation canal as a location for a pedestrian path	TAP, BTN, PC, AFF	>2028	\$250,000.00
P44	Old Hardin Rd Sidewalk (Segment 4)	Path from Johnson Lane to Noblewood Drive; path to run on the south side of Old Hardin Rd; possibility of using irrigation canal as a location for a pedestrian path	TAP, BTN, PC, AFF	>2028	\$625,000.00
P45	Johnson Ln	Path from the I-90 Interchange to Ford Rd; pedestrian connection to Lockwood School and connection to Hillner Park; opportunity to use irrigation canal to construct pedestrian path; path would run along the west side of Johnson Ln from Old Hardin Rd to the irrigation canal, run along the north side of the canal from Johnson Lane to Greenwood Ave, run along the south side of Sunrise Ave, and along the east side of Hemlock Dr	TAP, BTN, PC, AFF	>2028	\$587,000.00
P46	Billings Bypass Sidewalk	Current 8-foot shoulder planned; letter submitted to the Yellow County Commission indicating desire for a separated facility parallel to the road to provide pedestrian safety	TAP, BTN, PC, AFF	>2028	\$600,000.00

2018 Project ID	Proposed Name	Project Description	Eligible Funding Source	Anticipated Year of Construction	Year of Expenditure Cost
BL1	38TH ST W	Bicycle Lane from Rimrock Rd to S of Colin Dr	TAP, BTN, PC, AFF	>2028	\$32,330.00
BL2	RIMROCK RD	Bicycle Lane from 50th St W to Zimmerman Trl	TAP, BTN, PC, AFF	>2028	\$129,320.00
BL3	IRONWOOD DR	Bicycle Lane from Woodcreek Dr to Molt Rd	TAP, BTN, PC, AFF	>2028	\$16,165.00
BL4	N 10TH ST	Bicycle Lane from 6th Ave N to 1st Ave N	TAP, BTN, PC, AFF	>2028	\$16,165.00
BL5	1ST AVE N	Bicycle Lane from N 13th St to N 36th St	TAP, BTN, PC, AFF	>2028	\$80,825.00
BL6	MONTANA AVE	Bicycle Lane from N 18th St to Division St	TAP, BTN, PC, AFF	>2028	\$32,330.00
BL7	11TH AVE N	Bicycle Lane from N 22nd St to 19th St W	TAP, BTN, PC, AFF	>2028	\$48,495.00
BL8	54TH ST W	Bicycle Lane from N of Billy Casper Dr to Rimrock Rd	TAP, BTN, PC, AFF	>2028	\$48,495.00
BL9	N 30TH ST	Bicycle Lane from 6th Ave N to Montana Ave	TAP, BTN, PC, AFF	>2028	\$16,165.00
BL10	N 24TH ST	Bicycle Lane from 1st Ave N to North of 12th Ave N	TAP, BTN, PC, AFF	>2028	\$32,330.00
BL11	N 13TH ST	Bicycle Lane from 6th Ave N to Minnesota Ave	TAP, BTN, PC, AFF	>2028	\$145,485.00
BL12	POLY DR	Bicycle Lane from N 27th St to Virginia Ln	TAP, BTN, PC, AFF	>2028	\$16,165.00
BL13	17TH ST W	Bicycle Lane from Rimrock Rd to Yellowstone Ave	TAP, BTN, PC, AFF	>2028	\$64,660.00
BL14	N 18TH ST	Bicycle Lane from 6th ave N to Montana Ave	TAP, BTN, PC, AFF	>2028	\$32,330.00
BL15	COLTON BLVD	Bicycle Lane from 17th St W to Zimmerman Trl	TAP, BTN, PC, AFF	>2028	\$96,990.00

2018 Project ID	Proposed Name	Project Description	Eligible Funding Source	Anticipated Year of Construction	Year of Expenditure Cost
BL16	8TH ST W	Bicycle Lane from Azalea Ln to Central Ave	TAP, BTN, PC, AFF	>2028	\$64,660.00
BL17	15TH ST W	Bicycle Lane from Parkhill Dr to King Ave W	TAP, BTN, PC, AFF	>2028	\$145,485.00
BL18	N 22ND ST	Bicycle Lane from 6th Ave N to 12th Ave N	TAP, BTN, PC, AFF	>2028	\$32,330.00
BL19	REHBERG LN	Bicycle Lane from Rimrock Rd to Grand Ave	TAP, BTN, PC, AFF	>2028	\$64,660.00
BL20	PARKWAY LN	Bicycle Lane from Laurel Rd to S Billings Blvd	TAP, BTN, PC, AFF	>2028	\$16,165.00
BL21	N 25TH ST	Bicycle Lane from 1st Ave N to Montana Ave	TAP, BTN, PC, AFF	>2028	\$16,165.00
BL22	PARKHILL DR	Bicycle Lane from N 22nd St to 19th St W	TAP, BTN, PC, AFF	>2028	\$96,990.00
BL23	MONAD RD	Bicycle Lane from S Plainview St to S 32nd St W	TAP, BTN, PC, AFF	>2028	\$32,330.00
BL24	2ND AVE N	Bicycle Lane from N 22nd St to Yellowstone Ave	TAP, BTN, PC, AFF	>2028	\$16,165.00
BL25	JELLISON RD	Bicycle Lane from Quanta Ln to Aldonna St	TAP, BTN, PC, AFF	>2028	\$48,495.00
BL26	13TH ST W	Bicycle Lane from Rimrock Rd to Lewis Ave	TAP, BTN, PC, AFF	>2028	\$16,165.00
BL27	GRANDVIEW BLVD	Bicycle Lane from N 27th St to Virginia Ln	TAP, BTN, PC, AFF	>2028	\$32,330.00
BL28	24TH ST W	Bicycle Lane from Country Club Cir to Colton Blvd	TAP, BTN, PC, AFF	>2028	\$16,165.00
BL29	7TH AVE N	Bicycle Lane from 6th Ave N to N 32nd St	TAP, BTN, PC, AFF	>2028	\$48,495.00
BL30	ROLLING HILLS RD	Bicycle Lane from Annandale Rd to Uinta Park Dr	TAP, BTN, PC, AFF	>2028	\$80,825.00

2018 Project ID	Proposed Name	Project Description	Eligible Funding Source	Anticipated Year of Construction	Year of Expenditure Cost
BL31	32ND ST W	Bicycle Lane from Poly Dr to Boulder Ave	TAP, BTN, PC, AFF	>2028	\$32,330.00
BL32	N BROADWAY	Bicycle Lane from 9th Ave N to State Ave	TAP, BTN, PC, AFF	>2028	\$48,495.00
BL33	HIGH SIERRA BLVD	Bicycle Lane from Siesta Ave to W Wicks Ln	TAP, BTN, PC, AFF	>2028	\$16,165.00
BL34	STATE AVE	Bicycle Lane from Sugar Ave to Hallowell Ln	TAP, BTN, PC, AFF	>2028	\$80,825.00
BL35	S 36TH ST W	Bicycle Lane from Broadwater Ave to King Ave W	TAP, BTN, PC, AFF	>2028	\$96,990.00
BL36	MONAD RD	Bicycle Lane from S Plainview St to S 32nd St W	TAP, BTN, PC, AFF	>2028	\$64,660.00
BL37	GABEL RD	Bicycle Lane from S 24th St W to Hesper Rd	TAP, BTN, PC, AFF	>2028	\$113,155.00
BL38	RIMROCK RD	Bicycle Lane from Normal Ave to Virginia Ln	TAP, BTN, PC, AFF	>2028	\$16,165.00
BL39	LAKE ELMO DR	Bicycle Lane from Annandale Rd to Uinta Park Dr	TAP, BTN, PC, AFF	>2028	\$80,825.00
BL40	SAINT ANDREWS DR	Bicycle Lane from Gleneagles Blvd to Wicks Ln	TAP, BTN, PC, AFF	>2028	\$113,155.00
BL41	S 20TH ST W	Bicycle Lane from Rimrock Rd to King Ave W	TAP, BTN, PC, AFF	>2028	\$32,330.00
BL42	KING AVE W	Bicycle Lane from S 15th St W to King Ave W	TAP, BTN, PC, AFF	>2028	\$16,165.00
BL43	S 29TH ST W	Bicycle Lane from King Ave W to Gabel Rd	TAP, BTN, PC, AFF	>2028	\$48,495.00
BL44	S 19TH ST W/ Hoover Avenue	Bicycle Lane from Rimrock Rd to King Ave W	TAP, BTN, PC, AFF	>2028	\$32,330.00

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2018 Project ID	Proposed Name	Project Description	Eligible Funding Source	Anticipated Year of Construction	Year of Expenditure Cost
BL45	N 26TH ST	Bicycle Lane from 6th Ave N to 3rd Ave N	TAP, BTN, PC, AFF	>2028	\$16,165.00
BL46	6TH AVE S	Bicycle Lane from S 25th St to State Ave	TAP, BTN, PC, AFF	>2028	\$16,165.00
BL47	OVERLAND AVE	Bicycle Lane from S 24th St W to Hesper Rd	TAP, BTN, PC, AFF	>2028	\$32,330.00
BL48	GLENEAGLES BLVD	Bicycle Lane from Black Diamond Rd to W Wicks Ln	TAP, BTN, PC, AFF	>2028	\$32,330.00
BL49	8TH ST W	Bicycle Lane from Azalea Ln to Central Ave	TAP, BTN, PC, AFF	>2028	\$16,165.00
BL50	S 34TH ST	Bicycle Lane from 1st Ave S to State Ave	TAP, BTN, PC, AFF	>2028	\$32,330.00
BL51	11TH AVE S	Bicycle Lane from 9th Ave N to State Ave	TAP, BTN, PC, AFF	>2028	\$16,165.00
BL52	10TH AVE S	Bicycle Lane from S 29th St to S 28th St	TAP, BTN, PC, AFF	>2028	\$16,165.00
BL53	N 35TH ST	Bicycle Lane from 2nd Ave N to 1st Ave N	TAP, BTN, PC, AFF	>2028	\$16,165.00
BL54	MULLOWNEY LN	Bicycle Lane from Midland Rd to Elysian Rd	TAP, BTN, PC, AFF	>2028	\$32,330.00
BL55	HAWTHORNE LN	Bicycle Lane from Hemingway Ave to Yellowstone River Rd	TAP, BTN, PC, AFF	>2028	\$16,165.00
BL56	BABCOCK BLVD	Bicycle Lane from Annandale Rd to Governors Blvd	TAP, BTN, PC, AFF	>2028	\$64,660.00
BL57	YELLOWSTONE RIVER RD	Bicycle Lane from E of Bench Blvd to West of Hansen Ln	TAP, BTN, PC, AFF	>2028	\$16,165.00
BL58	BITTERROOT DR	Bicycle Lane from Elaine St to Wicks Ln	TAP, BTN, PC, AFF	>2028	\$16,165.00

2018 Project ID	Proposed Name	Project Description	Eligible Funding Source	Anticipated Year of Construction	Year of Expenditure Cost
BL59	BENCH BLVD	Bicycle Lane from Alexander Rd to Hilltop Rd	TAP, BTN, PC, AFF	>2028	\$32,330.00
BL60	MOORE LN	Bicycle Lane from Rimrock Rd to Monad Rd	TAP, BTN, PC, AFF	>2028	\$32,330.00
BL61	ROD AND GUN CLUB RD	Bicycle Lane from Iron Horse Trl to High Way 3	TAP, BTN, PC, AFF	>2028	\$32,330.00
BL62	HIGHWAY 87 N	Bicycle Lane from Alexander Rd to Hilltop Rd	TAP, BTN, PC, AFF	>2028	\$48,495.00
BL63	HIGH SIERRA BLVD	Bicycle Lane from Benjamin Blvd to Matador Ave	TAP, BTN, PC, AFF	>2028	\$16,165.00
BL64	S 44TH ST W	Bicycle Lane from Georgina Dr to Hesper Rd	TAP, BTN, PC, AFF	>2028	\$32,330.00
BL65	N 13TH ST	Bicycle Lane from 6th Ave N to Minnesota Ave	TAP, BTN, PC, AFF	>2028	\$32,330.00
BL66	RIMROCK RD	Bicycle Lane from 50th St W to 70th St W	TAP, BTN, PC, AFF	>2028	\$16,165.00
BB20	Lyman Ave/ Avenue D/Avenue C/9th Ave	Bicycle Boulevard from 7th Ave N to West to Meadowood St	TAP, BTN, PC, AFF	>2028	244,000
BB21	24th St W/ Arvin Rd	Bicycle Boulevard from Country Club Cir to Colton Blvd	TAP, BTN, PC, AFF	>2028	\$133,000.00
BB22	Terry Ave/Howard Ave/24th St W	Bicycle Boulevard from Montana Ave to 36th St W	TAP, BTN, PC, AFF	>2028	\$68,000.00
BB23	Milton/Prince of Wales/Heights Ln/Shawnee Dr/ Arronson/Nutter	Bicycle Boulevard from Heights Ln to West of Prince Charles Dr	TAP, BTN, PC, AFF	>2028	\$50,000.00
BB24	Arronson/Uinta Park Dr/Riley/ Cherry Creek Lp	Bicycle Boulevard from Cherry Creek Loop to Governors Blvd	TAP, BTN, PC, AFF	>2028	\$44,000.00

2018 Project ID	Proposed Name	Project Description	Eligible Funding Source	Anticipated Year of Construction	Year of Expenditure Cost
BB25	Azalea Ln/10th St W/11th St W/ Missouri St/ Moore Ln	Bicycle Boulevard from Rimrock Rd to Monad Rd	TAP, BTN, PC, AFF	>2028	\$75,000.00
BB26	S 41st St/Hallowell Ln/Arlington Dr/ Carlton Ave SW	Bicycle Boulevard from 1st Ave S to Carlton Ave SW	TAP, BTN, PC, AFF	>2028	\$20,000.00
BB27	4th Ave S/ Jackson St	Bicycle Boulevard from S 28th St to King Ave E	TAP, BTN, PC, AFF	>2028	\$28,000.00
BB28	Avalong Rd/ Vickery Dr/ Vickery Ct	Bicycle Boulevard from Colton Blvd to Vickery Ct	TAP, BTN, PC, AFF	>2028	\$11,000.00
BB29	Lampman Dr/ Decathlon Pkwy/S 38th St W	Bicycle Boulevard from S 29th St W to S Shiloh Rd	TAP, BTN, PC, AFF	>2028	\$12,000.00
BB30	Normal Ave/ Ash St/Colton Blvd/N 32nd St	Bicycle Boulevard from Rimrock Rd/ South of Avenue B	TAP, BTN, PC, AFF	>2028	\$19,000.00
BB31	Pemberton Ln/Crist Dr/ Columbine Dr	Bicycle Boulevard from Mary St/Main St	TAP, BTN, PC, AFF	>2028	\$13,000.00
BB32	8th Ave S	Bicycle Boulevard from S 28th to S 34th St	TAP, BTN, PC, AFF	>2028	\$7,000.00
BB33	Yellowstone/Clark	Bicycle Boulevard from Division to 10th St W	TAP, BTN, PC, AFF	>2028	\$90,000.00
BB34	Constitution/ Kootenai	Bicycle Boulevard from Nutter Blvd to West of Amendment Cir	TAP, BTN, PC, AFF	>2028	\$20,000.00
BB35	12st W	Bicycle Boulevard from Avenue C to South of Kalmar Dr	TAP, BTN, PC, AFF	>2028	\$24,000.00
BB36	Jerrie Ln/Kyhl Ln/ Elaine/Primrose/ Maurine	Bicycle Boulevard from East of Walter Rd to Lake Elmo Dr	TAP, BTN, PC, AFF	>2028	\$162,000.00

2018 Project ID	Proposed Name	Project Description	Eligible Funding Source	Anticipated Year of Construction	Year of Expenditure Cost
BB37	Fantan St	Bicycle Boulevard from Siesta Ave to Wicks Ln	TAP, BTN, PC, AFF	>2028	\$7,000.00
BB38	2nd St W	Bicycle Boulevard from Avenue C to Montana Ave	TAP, BTN, PC, AFF	>2028	\$13,000.00
BB39	Simpson St/ Moore Ln/ Stone St	Bicycle Boulevard from Carlton Ave SW to Moore Ln	TAP, BTN, PC, AFF	>2028	\$19,000.00
BB40	Cherry Hills/ Black Diamond	Bicycle Boulevard from Saint Andrews Dr to Gleneagles Blvd	TAP, BTN, PC, AFF	>2028	\$14,000.00
BB41	N 14th St	Bicycle Boulevard from Park Pl to 6th Ave N	TAP, BTN, PC, AFF	>2028	\$3,000.00
BB42	Marias Dr	Bicycle Boulevard from Keno St to Kootenai Ave	TAP, BTN, PC, AFF	>2028	\$3,000.00
BB43	Piccolo Ln	Bicycle Boulevard from Old Hardin Rd to Highway 87E	TAP, BTN, PC, AFF	>2028	\$6,000.00
BB44	Hemlock Dr	Bicycle Boulevard from Clayton St to Hillner Ln	TAP, BTN, PC, AFF	>2028	\$8,000.00
BB45	Bobolink St/ Canary Ave	Bicycle Boulevard from Dickie Rd to Old Hardin Rd	TAP, BTN, PC, AFF	>2028	\$9,000.00
BB46	Constellation Trl/ Eagle/Southern Hills/Venus	Bicycle Boulevard from Riveroaks Dr to Saint Andrews Dr	TAP, BTN, PC, AFF	>2028	\$15,000.00
BB47	Maier Rd	Bicycle Boulevard from Highway 87E Rosebud Ln	TAP, BTN, PC, AFF	>2028	\$4,000.00
BB48	Sunrise Ave/ Greenwood Ave	Bicycle Boulevard from Nutter Blvd to West of Amendment Cir	TAP, BTN, PC, AFF	>2028	\$9,000.00
BB49	Ironwood Dr/ Ben Hogan Ln	Bicycle Boulevard from Molt Rd to 54th St W	TAP, BTN, PC, AFF	>2028	\$32,000.00

2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN

2018 Project ID	Proposed Name	Project Description	Eligible Funding Source	Anticipated Year of Construction	Year of Expenditure Cost
BB50	Shamrock Ln	Bicycle Boulevard from North of Killarney St to Emerald Dr	TAP, BTN, PC, AFF	>2028	\$3,000.00
BB51	Sam Snead Trl	Bicycle Boulevard from Ben Hogan Ln to Molt Rd	TAP, BTN, PC, AFF	>2028	\$14,000.00
BB52	Tampico Dr	Bicycle Boulevard from El Paso St to Baja Pl	TAP, BTN, PC, AFF	>2028	\$1,000.00
BB53	El Paso St/ Tampico Dr	Bicycle Boulevard from Guadeloupe Dr to La Paz Dr	TAP, BTN, PC, AFF	>2028	\$6,000.00
BB54	Tanglewood Dr/ San Marino Dr/ La Paz Pl/Mitzi Dr	Bicycle Boulevard from N 13th St to N 36th St	TAP, BTN, PC, AFF	>2028	\$9,000.00
BB55	Lakewood Ln	Bicycle Boulevard from East of Constellation Trl to Riveroaks Dr	TAP, BTN, PC, AFF	>2028	\$125,000.00
BB56	Spotted Jack Loop S/Westgate Dr	Bicycle Boulevard from Spotted Jack Loop E to Trailmaster Dr	TAP, BTN, PC, AFF	>2028	\$9,000.00
BB57	Driftwood Ln/ Marie Dr	Bicycle Boulevard from Driftwood Ln to Mitzi Dr	TAP, BTN, PC, AFF	>2028	\$12,000.00
BB58	Tanglewood Dr/ San Marino Dr/ La Paz Pl/Mitzi Dr	Bicycle Boulevard from Noblewood Dr to La Paz Dr	TAP, BTN, PC, AFF	>2028	\$17,000.00
MT35	25th Street Railroad Bridge	Construct a multi-use trail from Montana Avenue to Minnesota Avenue	TAP, BTN, PC, AFF	>2028	\$1,700,000.00
MT39	34th Street Pedestrian Bridge	Construct a multi-use bridge to cross the tracks near 34th Street	TAP, BTN, PC, AFF	>2028	\$2,000,000.00

2018 Project ID	Proposed Name	Project Description	Eligible Funding Source	Anticipated Year of Construction	Year of Expenditure Cost
MT40	44th Street West	Construct a multiuse bike/ pedestrian path along 44th Street from Shiloh Conservation Area to King Avenue West	TAP, BTN, PC, AFF	>2028	\$102,000.00
MT106	Johnson Lane Multiuse Trail	Connects new trail alignment with Bypass	TAP, BTN, PC, AFF	>2028	\$500,000.00
MT107	Lower Lockwood Irrigation Ditch	Placing trails in the Lockwood Irrigation Ditch District; lower ditch trail would run from Maier Rd to Rykken Circle and Old Hardin Rd; parallel to Old Hardin Rd, may be an alternate route until solution for Old Hardin Rd can be obtained	TAP, BTN, PC, AFF	>2028	\$200,000.00
P26	Moore Ln & Laurel Rd Pedestrian Crossing	Pedestrian crossing treatment to be determined	TAP, BTN, PC, AFF	>2028	\$210,000.00
Total Recommended Pedestrian, Bicycle, and Multiuse Trail Projects \$21,977,852.00					

PUBLIC TRANSPORTATION

The public transportation committed and recommended projects are focused on the purchase of new vehicles for operating the transit system. Table 12.3 summarizes the committed and recommended projects for public transportation. It is recommended that additional funding be pursued by the MPO and MET Transit to support future expansion of the public transportation system.

Utilizing Performance Measures in Future Planning Efforts

Table 12.3 Public Transit Projects

Project ID	Proposed Name	Project Description	Eligible Funding Source	Anticipated Year of Construction	Year of Expenditure Cost
Committed Projects					
	Transit Operations	Operations for MET Transit	FTA Section 5307 and local funds	2019-2023	\$21,429,034.00
	Transit Operations	Operations for MET Transit	TRANSADE	2019-2023	\$350,000.00
	Transit Capital	Replacement Vehicles	FTA Section 5310 and local funds	2019-2023	\$960,000.00
	Transit Capital	Replacement Vehicles	FTA Section 5339 and local funds	2019-2023	\$2,625,000.00
Total Committed Public Transit Project Costs (Operations and Capital) \$25,364,034.00					
Recommended Projects					
Transit Operations					
	Transit Operations	Operations for MET Transit	FTA Section 5307 and local funds	2024-2028	\$21,429,034.00
	Transit Operations	Operations for MET Transit	FTA Section 5307 and local funds	2029-2033	\$21,429,034.00
	Transit Operations	Operations for MET Transit	FTA Section 5307 and local funds	2034-2038	\$21,429,034.00
	Transit Operations	Operations for MET Transit	FTA Section 5307 and local funds	2038-2040	\$8,571,613.60
	Transit Operations	Operations for MET Transit	TRANSADE	2024-2028	\$350,000.00

Project ID	Proposed Name	Project Description	Eligible Funding Source	Anticipated Year of Construction	Year of Expenditure Cost
	Transit Operations	Operations for MET Transit	TRANSADE	2029-2033	\$350,000.00
	Transit Operations	Operations for MET Transit	TRANSADE	2034-2038	\$350,000.00
	Transit Operations	Operations for MET Transit	TRANSADE	2038-2040	\$140,000.00
Total Operations Costs \$74,048,715.60					
Transit Capital					
	Transit Capital	Replacement Vehicles	FTA Section 5310 and local funds	2024-2028	\$960,000.00
	Transit Capital	Replacement Vehicles	FTA Section 5310 and local funds	2029-2033	\$960,000.00
	Transit Capital	Replacement Vehicles	FTA Section 5310 and local funds	2034-2038	\$960,000.00
	Transit Capital	Replacement Vehicles	FTA Section 5310 and local funds	2038-2040	\$384,000.00
	Transit Capital	Replacement Vehicles	FTA Section 5339 and local funds	2024-2028	\$2,625,000.00
	Transit Capital	Replacement Vehicles	FTA Section 5339 and local funds	2029-2033	\$2,625,000.00
	Transit Capital	Replacement Vehicles	FTA Section 5339 and local funds	2034-2038	\$2,625,000.00

Project ID	Proposed Name	Project Description	Eligible Funding Source	Anticipated Year of Construction	Year of Expenditure Cost
	Transit Capital	Replacement Vehicles	FTA Section 5339 and local funds	2038-2040	\$1,050,000.00
Total Capital Costs \$12,189,000.00					
Total Recommended Public Transit Project Costs (Operations and Capital) \$86,237,715.60					

The 2040 LRTP network consists of a comprehensive transportation network for streets and highways, public transportation, pedestrian, bicycle, and multiuse trails. This network is discussed in the early chapters and further explained in this chapter regarding the specific projects that are committed and recommended for the LRTP. Performance measures are identified as part of this planning process and highlighted in Chapter 3. The performance measures are directly related to the goals and objectives and provide a means to measure progress toward achieving the goals and objectives. The performance measures incorporate all transportation modes, safety, and environmental elements to help with plan implementation and monitoring. These performance measures

should be incorporated into the planning process moving forward with the MPO and partnering agencies. As part of the next LRTP update, these performance measures can be reviewed and assessed to better understand any missing data needs and how the MPO is doing related to implementation and performance of the LRTP.

Summary of LRTP Recommendations

UTILIZING PERFORMANCE MEASURES IN FUTURE PLANNING EFFORTS

The 2040 LRTP network consists of a comprehensive transportation network for streets and highways, public transportation, pedestrian, bicycle, and multiuse trails. This network is discussed in the early chapters and further explained in this chapter regarding the specific projects that are committed and recommended for the LRTP. Performance measures are identified as part of this planning process and highlighted in Chapter 3. The performance measures are directly related to the goals and objectives and provide a means to measure progress toward achieving the goals and objectives. The performance measures incorporate all transportation modes, safety, and environmental elements to help with plan implementation and monitoring. These performance measures should be incorporated into the planning process moving forward with the MPO and partnering agencies. As part of the next LRTP update, these performance measures can be reviewed and assessed to better understand any missing data needs and how the MPO is doing related to implementation and performance of the LRTP.

SUMMARY OF LRTP RECOMMENDATIONS

The recommended 2040 LRTP provides the framework for the development, operations, and maintenance of the multimodal transportation system to meet the travel needs of the Billings Urban Area through the year 2040. The LRTP meets the requirements set forth by the current federal legislation and regulations, but most importantly incorporates the community's desires into the transportation planning process. Table 12.4 summarizes the capital costs of the committed and recommended LRTP projects by mode.

Table 12.4 Summary of LRTP Projects Cost

Mode	Committed	Recommended	2040 Fiscally Constrained Total	2040 Revenue Projection Total	Difference
Streets and Highways	\$314,856,438	\$129,140,877	\$443,997,315	\$613,535,000	\$169,537,685
System Operations and Maintenance	\$41,230,166	\$30,000,000	\$71,230,166	\$137,420,000	\$66,189,834
Pedestrian, Bicycle, and Multiuse Trails	\$19,298,212	\$21,977,852	\$41,276,064	\$45,495,000	\$4,218,936
Public Transportation (Capital Only)	\$3,585,000	\$12,189,000	\$15,774,000	\$16,770,000	\$996,000
Public Transportation (Operations)	\$21,779,034	\$74,048,715	\$95,827,749	\$101,620,000	\$5,792,250
TOTAL	\$400,748,850	\$267,356,444	\$668,105,294	\$914,840,000	\$246,734,705



Chapter 13

Financial Plan



FINANCIAL PLAN

This chapter discusses the financial plan for the 2040 LRTP. Federal legislation requires that the LRTP be “financially constrained”; in other words, the cost of implementing and maintaining transportation improvements should be within a funding amount that can reasonably be expected to be available during the life of the plan. Federal regulations establish the requirements for the financial plan in Title 23, Section 450.322(f) (10), of the Code of Federal Regulations. To summarize, the regulations state that the financial plan should include the following:

- Estimates of costs and revenue sources needed to operate and maintain federal-aid highways and public transportation
- Estimates of funds that will be available to support the LRTP implementation and that are agreed upon by the MPO, public transportation operator(s), and the state
- Recommendations on any additional financing strategies to fund projects and programs included in the LRTP
- Revenue and cost estimates that use an inflation rate to reflect “year of expenditure dollars” and that have been developed cooperatively by the MPO, state, and public transportation operator

Funding to implement the LRTP recommendations comes from federal, state, and local sources. This financial element of the LRTP includes estimates of costs that would be required to implement the LRTP as well as estimates of existing and contemplated sources

of funds available to pay for these improvements. Different sets of revenue assumptions apply for capital, for operations and maintenance (O&M), and for each mode—non-motorized (pedestrian, bicycle, and trail facilities); public transportation; and streets and highways. The costs to design, construct, operate, and maintain all elements of the committed and recommended projects in the LRTP through 2040 are more than \$775 million. Additional funding would be required to address the illustrative projects identified in Chapter 12 of the LRTP. The following references and documents were used to develop this chapter.

- Montana Department of Transportation (13-2)
- Billings Urban Area Transportation Improvement Program (TIP), FY 2017-2021 (13-3)
- City of Billings FY 2019-2023 Capital Improvement Program (CIP) (13-4)
- City of Billings Proposed Budget FY 2019 (13-5)
- MET Transit

The 2040 LRTP will guide more than \$665 million in transportation project investments within the Billings Urban Area over the next 20 years.

FUNDING SOURCES

MDT administers a number of programs that are funded from State and Federal sources. Each year, in accordance with 60-2-127, Montana Annotated Code (MCA), the Montana Transportation Commission allocates a portion of available Federal-aid highway funds for construction purposes and for projects located on the various systems in the state as described in this chapter. Additional details of these funding mechanisms are included in the Appendix.

The Billings Urban Area is expected to receive over \$17 million for transportation infrastructure from the House Bill 473 legislation.

PLACEHOLDER

PLACEHOLDER

FEDERAL FUNDING SOURCES

In order to receive project funding under these programs, projects must be included in the State Transportation Improvement Program (STIP) and the MPO TIP, where relevant. Table 13.1 summarizes the available federal funding sources.

Table 13.1 Federal Funding Sources

Funding Source	Description	MDT Funding Program
National Highway Performance Program (NHPP)	The NHPP provides funding for the National Highway System, including the Interstate System and National Highways system roads and bridges. NHPP funds are Federally-apportioned to Montana and allocated to Districts by the Montana Transportation Commission.	<ul style="list-style-type: none"> National Highway (NH) Interstate Maintenance (IM) Bridge
Surface Transportation Program (STP)	STP funds are Federally-apportioned to Montana and allocated by the Montana Transportation Commission to various programs. Project types vary with each program, but can include roadway reconstruction and rehabilitation, to bridge construction and inspection, to highway and transit safety infrastructure, environmental mitigation, operational improvements, carpooling, and bicycle and pedestrian transportation facilities.	<ul style="list-style-type: none"> Primary Highway System (STPP) Secondary Highway System (STPS) Urban Highway System (STPU) Bridge Program (STP) Surface Transportation Program for Other Routes - Off-system (STPX) Urban Pavement Preservation Program (UPP)
Highway Safety Improvement Program (HSIP)	HSIP funds are apportioned to Montana for allocation to safety improvement projects approved by the Commission and are consistent with the strategic highway safety improvement plan. Projects described in the State strategic highway safety plan must correct or improve a hazardous road location or feature, or address a highway safety problem.	<ul style="list-style-type: none"> No other programs are included with this source.
Congestion Mitigation and Air Quality Improvement Program (CMAQ)	Federal funds available under this program are used to finance transportation projects and programs to help improve air quality and meet the requirements of the Clean Air Act. The Commission allocates funds from the MACI Guaranteed Program directly to Billings and Great Falls to address carbon monoxide issues.	<ul style="list-style-type: none"> CMAQ (formula) Montana Air & Congestion Initiative (MACI)–Guaranteed Program (flexible) Montana Air & Congestion Initiative (MACI)–Discretionary Program (flexible)

Funding Source	Description	MDT Funding Program
Transportation Alternatives Program (TA)	The TA program requires MDT to obligate 50% of the funds within the state based on population, using a competitive process, while the other 50% may be obligated in any area of the state. The Federal share for these projects is 86.58, with the non-Federal share funded by the project sponsor through the HSSR. Funds may be obligated for projects submitted by: Local governments, transit agencies, natural resource or public land agencies, school district, schools, local education authority, tribal governments, and other local government entities with responsibility for recreational trails for eligible use of these funds.	<ul style="list-style-type: none"> No other programs are included with this source.
Federal Lands Access Program (FLAP)	The FLAP was created by the MAP-21 to improve access to Federal lands. Western Federal Lands administers the funds, not MDT. However, MDT is an eligible applicant for the funds. The program is directed towards Public Highways, Roads, Bridges, Trails, and Transit systems that are under State, county, town, township, tribal, municipal, or local government jurisdiction or maintenance and provide access to Federal lands.	<ul style="list-style-type: none"> No other programs are included with this source.
Congressionally Directed or Discretionary Funds	Congressionally Directed funds may be received through either highway program authorization or annual appropriations processes. These funds are generally described as “demonstration” or “earmark” funds.	<ul style="list-style-type: none"> No other programs are included with this source.
Transit Capital & Operating Assistance Funding	The MDT Transit Section provides federal and state funding to eligible recipients through Federal and state programs. Federal funding is provided through the Section 5307, Section 5310, Section 5311, and Section 5339 transit programs and state funding is provided through the TransADE program.	<ul style="list-style-type: none"> Urbanized Area Formula Grants (Section 5307) Enhanced Mobility of Seniors and Individuals with Disabilities (Section 5310) Formula Grants for Rural Areas (Section 5311) Bus and Bus Facilities (Section 5339)

Source: MDT

STATE FUNDING SOURCES

Table 13.2 summarizes the available state funding sources.

Table 13.2 State Funding Sources

Funding Source	Description
State Special Revenue/ State Funded Construction	The State Funded Construction Program, which is funded entirely with state funds from the Highway State Special Revenue Account, provides funding for projects that are not eligible for Federal funds. This program funds projects to preserve the condition and extend the service life of highways.
State Fuel Tax	The State of Montana assesses a tax of \$0.2775 per gallon on gasoline and diesel fuel used for transportation purposes. According to State law, each incorporated city, town, and county within the State receives an allocation based upon population, street mileage, and land area. All fuel tax funds must be used for the construction, reconstruction, maintenance, and repair of rural roads or city streets and alleys. The funds may also be used for the share that the city or county might otherwise expend for proportionate matching of Federal funds allocated for the construction of roads or streets that are part of the primary, secondary, or urban system.
Rail/Loan Funds	The Montana Rail Freight Loan Program (MRFL) is a revolving loan fund administered by the Montana Department of Transportation to encourage projects for construction, reconstruction, or rehabilitation of railroads and related facilities in the State and implements MCA 60-11-113 to MCA 60-11-115. Loans are targeted to rehabilitation and improvement of railroads and their attendant facilities, including sidings, yards, buildings, and intermodal facilities. Rehabilitation and improvement assistance projects require a 30 percent loan-to-value match. Facility construction assistance projects require a 50 percent match.

Source: MDT

LOCAL FUNDING SOURCES

Local governments generate revenue from variety of sources that contribute to the funding of transportation projects in the Billings Urban Area. Table 13.3 summarizes the available local funding sources.

Table 13.3 Local Funding Sources

Funding Source	Description
Funding Source	Description
Arterial Street Fees Fund	The Arterial Street Fees Fund is for the construction and reconstruction of arterial street segments within the City.
Bike Paths and Trails Donations	This fund is used to account for the contributions and grants related to the construction of bike and pedestrian pathways.
Community Development Block Grant Program (CDBG)	This federally funding program is used by local governments to provide decent housing, a suitable living environment, and to expand economic opportunities for local income households and are issued through the US Dept. of Housing and Urban Development (HUD). These funds can be used for construction of public facilities, including transportation.
Developer Contributions	Developers contribute funds to a transportation project.
Gas Tax	This special revenue fund is managed by the Billings Public Works Department and implements the City Council's goals relating to maintaining quality streets and street maintenance. Funding for this activity is derived from the City's share of Gas Tax proceeds and a transfer from the Street Maintenance District Fund for maintenance.
Sidewalk Bonds	These bonds are issued to finance the repair and/or replacement of sidewalks throughout the community.
Special Improvement District (SID) Bonds	A SID is a group of properties that become a legal entity in order to construct public improvements. Some improvements that can be constructed through an SID include street paving, curb and gutter, water main, sewer main, and storm drain. Improvement costs are carried by property owners within the SID boundaries.
Street Maintenance Fees	The street maintenance special assessment districts provide funding to maintain quality streets and street maintenance for the safety of residents and visitors and to continue to improve the city's street network. Street Maintenance District #1 is comprised of the central downtown area and Street Maintenance District #2 is the remainder of the city. This program includes the City's Street-Traffic Division operations, PAVER Program, and Street Light Maintenance.
Tax Increment Financing (TIF)	Tax Increment Financing (TIF) is a mechanism that allows a local government or redevelopment authority to generate revenues for a group of blighted properties targeted for improvement, known as a TIF district. As improvements are made within the district, and as property values increase, the incremental increases in property tax revenue are captured in a fund that is used for public improvements within the district. The funds generated from a new TIF district could be used to finance projects such as street and parking improvements, tree planting, installation of new bike racks, trash containers and benches, and other streetscape beautification projects within the designated area. Billings currently has three active TIF districts: Downtown TIFD, East Billings TIFD, and South Billings TIFD.

Source: City of Billings Capital Improvement Program

SPENDING AND REVENUE PLAN

MDT Statewide and Urban Planning Section provided a current allocation (2018) of available transportation funding for the Billing Urban Area. The current allocation (2018) was projected to year 2023 (5-year), year 2028 (10-year), and year 2040. Table 13.4 summarizes the current and projected funding (estimated) for the Billings Urban Area.

The projects in the LRTP are broken into committed, recommended, and illustrative types.

- **Committed projects** are those projects that are included in the STIP, MPO TIP, or City of Billings CIP.
- **Recommended projects** are projects that are expected to be fully funded by year 2040, but are

not currently committed within the STIP, TIP, or CIP.

- Projects that are not expected to be funded by 2040, because of fiscal constraint, are considered **illustrative**, meaning that they could be included in the adopted LRTP if additional resources beyond those identified in the financial plan become available.

The committed and recommended projects for streets and highways; pedestrians, bicyclists, and multiuse trails; and public transit are included in Chapter 12. All project costs were converted to year of expenditure (YOE) dollars using a four-percent annual inflation (Source: FHWA).

Table 13.4 Project Funding (Estimated) by Funding Source

Funding Source	Current Annual Allocation 2018	Projected Annual Allocation Per Year	Revenue Projection 2023	Revenue Projection 2028	Revenue Projection 2040
NHPP – NH	\$3,043,525	\$8,170,000	\$65,000,000	\$130,000,000	\$179,640,000
NHPP – IM	\$3,388,406	\$4,770,000	\$45,120,000	\$62,740,000	\$105,030,000
HSIP Safety	\$1,397,065	\$1,770,000	\$14,260,000	\$21,530,000	\$38,960,000
STPU – Urban	\$2,489,770	\$2,590,000	\$12,950,000	\$25,890,000	\$56,970,000
STPS – Secondary*	\$0	\$0	\$0	\$0	\$0
STP – Bridge*	\$2,977,177	\$1,500,000	\$15,480,000	\$33,000,000	\$33,000,000
UPP – Preservation*	\$877,085	\$910,000	\$4,560,000	\$9,120,000	\$20,070,000
TA	\$250,000	\$350,000	\$3,300,000	\$4,600,000	\$7,720,000
Earmark	\$3,584,158	\$0	\$0	\$0	\$0

Funding Source	Current Annual Allocation 2018	Projected Annual Allocation Per Year	Revenue Projection 2023	Revenue Projection 2028	Revenue Projection 2040
MACI - CMAQ	\$2,101,542	\$2,190,000	\$10,930,000	\$21,860,000	\$48,080,000
Operations & Maintenance (State)	\$1,415,692	\$1,470,000	\$7,360,000	\$14,720,000	\$32,390,000
Local CMAQ Funding	\$1,539,717	\$1,600,000	\$8,010,000	\$16,010,000	\$35,230,000
State Fuel Tax (City)	\$1,762,119	\$1,830,000	\$9,160,000	\$18,330,000	\$40,320,000
State Fuel Tax (County)	\$305,512	\$320,000	\$1,590,000	\$3,180,000	\$6,990,000
Gas Tax City HB473	\$655,684	\$680,000	\$3,410,000	\$6,820,000	\$15,000,000
Gas Tax County HB473	\$112,345	\$120,000	\$580,000	\$1,170,000	\$2,570,000
FTA Sec. 5307	\$1,751,140	\$1,820,000	\$9,110,000	\$18,210,000	\$40,070,000
FTA Sec. 5310	\$160,000	\$170,000	\$830,000	\$1,660,000	\$3,660,000
FTA Sec. 5311	\$70,000	\$70,000	\$360,000	\$730,000	\$1,600,000
FTA Sec. 5339	\$420,000	\$440,000	\$2,180,000	\$4,370,000	\$9,610,000
Other (Private, Bonds, TIF, CBDG, etc.)	\$3,301,929	\$3,430,000	\$17,170,000	\$34,340,000	\$75,550,000
Local Transit Mill Levy	\$2,054,164	\$2,140,000	\$10,680,000	\$21,360,000	\$47,000,000
Fares	\$565,923	\$590,000	\$2,940,000	\$5,890,000	\$12,950,000
Other (Transit)	\$152,982	\$160,000	\$800,000	\$1,590,000	\$3,500,000
Arterial Fee Fund	\$2,670,000	\$4,324,000	\$22,480,000	\$44,970,000	\$98,930,000
TOTAL	\$37,045,936	\$41,414,000	\$268,260,000	\$502,090,000	\$914,840,000

MAJOR COMMITTED PROJECT - BILLINGS BYPASS

The Billings Bypass project proposes to construct a new principal arterial connecting Interstate 90 east of Billings with Old Highway 312. The purpose of the proposed project is to improve access and connectivity between I-90 and Old Hwy 312 and to improve mobility in the eastern area of Billings. Through the metropolitan planning process, the Billings Bypass is the number one priority for federal and state funds provided through the Surface Transportation Program – Urban and MACI funding programs. Additional sources identified to complete the funding package for the Billings Bypass include local funds, congressionally directed earmarks, Interstate Maintenance funding, national highway system funding, and bridge programs.

The total cost of the preferred alternative for the Billings Bypass is \$166 million* in year of expenditure dollars. This project is funded through the following sources.

Billings Bypass

	\$24,000,000 (secured earmarks)
	\$111,000,000 (NH, IM, Bridge)
	\$31,000,000 (Urban**, CMAQ**, Local funding)
Total	\$166,000,000*

*Costs have been revised from the EIS to reflect PE/ RW/IC + IDC and inflation

**\$2.5 million annual urban allocation (STPU), \$1.5 million annual CMAQ allocation—local commitment of funding \$31,000,000 or until completion of project

At this time, project priorities were not assigned to the list of projects within the LRTP, as project prioritization is determined through the MPO's Transportation Improvement Program (TIP) process. Given the current level of funding committed to transportation infrastructure in the Billings Urban Area, most of the recommended projects are not anticipated to occur until after the next plan update. Therefore, it is reasonable that these projects and priorities be reviewed as part of the TIP process and during the next LRTP update. Table 13.5 summarizes the fiscal constraint of this plan, including the committed and recommended projects by category and funding source and the remaining revenue available.

As identified in Chapter 12, the illustrative projects do not have a funding source within the 22-year timeframe of this plan. Therefore, these projects are not included in this summary of costs and the fiscal constraint of the LRTP.

As shown in Tables 13.5, the estimated available revenue (\$915 million) is greater than the estimated total costs (\$668 million) to implement the committed and recommended projects for this LRTP. Therefore, this plan is fiscally responsible and meets the fiscally constrained requirement.

Table 13.5 Committed and Recommended Projects by Category and Funding Source

Funding Source	2019-2028			2029-2040		
	Projected Funding	Expenditures	Difference	Projected Funding + Carryover	Expenditures	Difference
FEDERAL						
National Highway Performance Program	\$258,620,000	\$241,529,142	17,090,858	\$77,344,858	\$47,041,000	\$30,303,858
National Highway (NH)	\$130,000,000	\$122,738,533	\$7,261,467	\$25,225,467	\$13,241,000	\$11,984,467
Interstate Maintenance (IM)	\$62,740,000	\$52,910,609	\$9,829,391	\$52,119,391	\$33,800,000	\$18,319,391
National Highway Primary Bridge (NHPB)	\$33,000,000	\$33,000,000	\$-	\$-	\$-	\$-
National Highway Freight Program (NHFP)	\$32,880,000	\$32,880,000	\$-	\$-	\$-	\$-
Highway Safety Improvement Program (HSIP)	\$21,530,000	\$19,908,244	\$1,621,756	\$19,051,756	\$17,935,000	\$1,116,756
Surface Transportation Improvement Program	\$39,610,000	\$30,095,611	\$9,514,389	54,639,000	\$46,734,301	\$7,904,699

	2019-2028			2029-2040		
Funding Source	Projected Funding	Expenditures	Difference	Projected Funding + Carryover	Expenditures	Difference
Surface Transportation Program Urban Highways (STPU)	\$25,890,000	\$19,660,000	\$6,230,000	\$37,310,000	\$36,152,000	\$1,158,000
Urban Pavement Preservation Program (UPP)	\$9,120,000	\$5,861,000	\$3,259,000	\$14,209,000	\$8,500,000	\$5,709,000
Transportation Alternatives (TA)	\$4,600,000	\$4,574,611	\$25,389	\$3,120,000	\$2,082,301	\$1,037,699
Congestion Mitigation and Air Quality Improvement Program (CMAQ)	\$37,870,000	\$28,393,611	\$9,476,389	\$54,916,389	\$12,920,877	\$41,995,512
Montana Air and Congestion Initiative (MACI) - Guaranteed Program	\$21,860,000	\$16,893,611	\$4,966,389	\$31,186,389	\$-	\$31,186,389
Montana Air and Congestion Initiative (MACI) - Discretionary Program	\$16,010,000	\$11,500,000	\$4,510,000	\$23,730,000	\$12,920,877	\$10,809,123
Federal Transit Authority (FTA) Funds	\$24,240,000	\$23,817,028	\$422,972	\$29,522,972	\$29,100,000	\$422,972

	2019-2028			2029-2040		
Funding Source	Projected Funding	Expenditures	Difference	Projected Funding + Carryover	Expenditures	Difference
STATE AND LOCAL						
TransADE	\$730,000	\$700,000	\$30,000	\$900,000	\$870,000	\$30,000
Operations and Maintenance (State)	\$14,720,000	\$14,720,000	\$-	\$17,670,000	\$17,670,000	\$-
State Fuel Tax	\$21,510,000	\$17,005,684	\$4,504,316	\$30,304,316	\$23,196,000	\$7,108,316
City	\$18,330,000	\$17,005,684	\$1,324,316	\$23,314,316	\$23,196,000	\$118,316
County	\$3,180,000	\$-	\$3,180,000	\$6,990,000	\$-	\$6,990,000
HB473 Gas Tax Funds (BaRSAA)	\$7,990,000	\$6,344,316	\$1,645,684	\$11,225,684	\$8,404,000	\$2,821,684
City	\$6,820,000	\$6,344,316	\$475,684	\$8,655,684	\$8,404,000	\$251,684
County	\$1,170,000	\$-	\$1,170,000	\$2,570,000	\$-	\$2,570,000
Other (Private, Bonds, TIF, CDBG, etc.)	\$34,340,000	\$22,954,144	\$11,385,856	\$52,595,856	\$40,574,737	\$12,021,119
Local Transit Mill Levy	\$21,360,000	\$21,360,000	\$-	\$25,640,000	\$25,640,000	\$-
Transit Fares	\$5,890,000	\$5,890,000	\$-	\$7,060,000	\$7,060,000	\$-
Other (Transit)	\$1,590,000	\$1,590,000	\$-	\$1,910,000	\$1,910,000	\$-
Arterial Fee Fund	\$44,970,000	\$20,970,000	\$24,000,000	\$53,960,000	\$53,882,814	\$77,186
Total	\$534,970,000	\$455,277,780	\$79,692,220	\$436,740,831	\$312,365,877	\$156,324,954



Chapter 14

Conformity Analysis/Determination



CONFORMITY ANALYSIS/ DETERMINATION

On November 15, 1990, the Clean Air Act Amendments (CAAA) of 1990 was signed into law. The CAAA is an extremely detailed and complex law that has had a major impact on the programs of the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA). The Act requires substantial emission reductions from the transportation sector. The purpose of the conformity provision of the CAAA is to ensure consistency between the Federal transportation planning process and Federal air quality planning process. The regulations require that for an urban area designated as nonattainment of National Ambient Air Quality Standards (NAAQS) for transportation-related criteria pollutants, or which has a maintenance plan for such pollutants, a conformity determination must be conducted to demonstrate that its LRTP, transportation improvement plan (TIP), or any revisions to its plan will not adversely affect air quality (14-1).

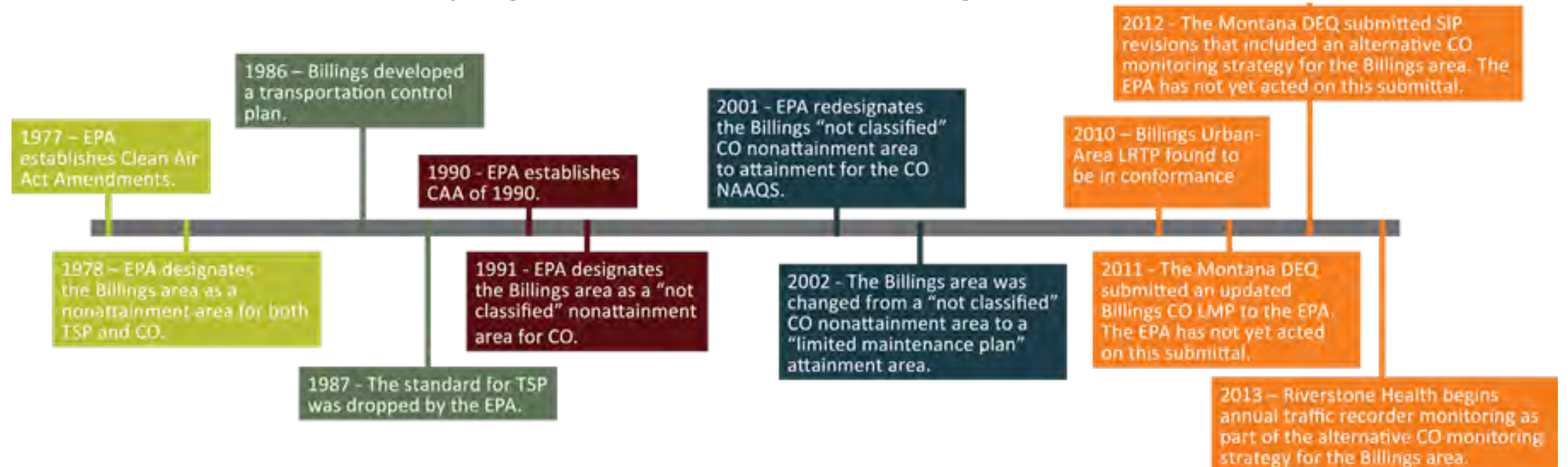
The conformity analysis and determination was developed based on the applicable federal, state, and local requirements; input from the MPO; 2017-2021 Billings Transportation Improvement Program (14-2); and information presented in Chapter 13, Conformity Analysis/Determination of the adopted Billings Urban Area LRTP 2014 (14-3).

BACKGROUND

TIMELINE OF CONFORMITY REGULATIONS AND ACTIONS

Over the last 30 years, several regulations have passed and actions have occurred within the State of Montana and Billings area that have changed certain requirements for determining conformity of a LRTP. Exhibit 14.1 illustrates a timeline of the different regulations and actions for conformity.

Exhibit 14.1 Timeline of Conformity Regulations and Actions for the Billings Area



DETAILS

Billings was designated as a nonattainment area by the Environmental Protection Agency (EPA) for both Total Suspended Particulates (TSP) and Carbon Monoxide (CO) in a Federal Register (FR) notice on March 3, 1978 (43 FR 8962) as a result of the Clean Air Act Amendments (CAAA) of 1977. The NAAQS for CO is 9.0 parts per million (ppm) for an 8-hour average concentration, not to be exceeded more than once per calendar year.

At that time, a transportation control plan (TCP) was developed to bring Billings back into compliance following the nonattainment designation. The CO violation was attributed primarily to motor vehicle emissions. The initial CO TCP concentrated on an intersection reconstruction at Exposition Drive and 1st Avenue N. The final CO TCP incorporated computer modeling with the intersection reconstruction and was approved in the Federal Register on January 16, 1986 (51 FR 2397). Additionally, in 1987 the standard for TSP was dropped, and a new standard for particulate matter under 10 microns in size (PM - 10) was adopted (52 FR 24854). The EPA has also adopted the PM 2.5 standard and Billings is considered to

be in compliance with both of these new standards. Billings was reevaluated in September 1990, based on the 1990 CAAA and the lack of exceedances in the CO monitoring data for 1988 and 1989. In a November 6, 1991 Federal Register notice (56 FR 56799), Billings was listed as a “not classified” nonattainment area for CO.

The Montana Department of Environmental Quality (DEQ) developed this redesignation request with guidance from the 1990 CAAA and a September 4, 1992 EPA memo from John Calcagni to the EPA Regional Air Directors. Section 107(d)(3)(E) of the CAAA defines the five required criteria of a redesignation request. The criteria are as follows:

- Criterion 1: Attainment of the Applicable NAAQS
- Criterion 2: State Implementation Plan Approval
- Criterion 3: Permanent and Enforceable Improvements in Air Quality
- Criterion 4: Fulfillment of CAAA Section 110 and Part D Requirements
- Criterion 5: Fully Approved Maintenance Plan under CAAA Section 175A

Each of these criteria were accomplished and demonstrated in the CO redesignation request submitted in 2001. On February 9, 2001, the Governor of Montana submitted a request to redesignate the Billings “not classified” carbon monoxide (CO) nonattainment area to attainment for the CO NAAQS. The Governor also submitted a CO maintenance plan with this request. In this action, the EPA approved

the Billings CO designation request and the 10-year maintenance plan effective on April 22, 2002. With this action, the Billings area legal designation was changed from “not classified” nonattainment for CO to a “limited maintenance plan” attainment area.

With the redesignation to attainment, the Billings area was required to comply with the provisions of the 2002 Carbon Monoxide Limited Maintenance Plan (2001 LMP Submittal) and submit a CAA section 175A(b) required revised maintenance plan in 2010 that provided for maintenance of the CO standards for an additional ten years. The Billings area can request full attainment status if the Billings area does not have any further CO NAAQS violations during the maintenance period.

The Montana DEQ submitted an updated Billings Carbon Monoxide Limited Maintenance Plan (2011 LMP Submittal) on July 13, 2011, as required by 42 USC 7505(A). The 2011 LMP submittal documents the first ten years of CO monitoring under the 2002 LMP, and details strategies for maintaining CO standards for the subsequent ten years. As such, the 2011 LMP document fulfills the criteria established in 40 CFR Part 51, Appendix V. However, the EPA has not yet acted on this submittal.

On June 22, 2012, the Montana DEQ submitted SIP revisions that included an alternative CO monitoring strategy due to the Billings area monitoring consistently low levels of CO for over a decade. The DEQ determined that using the resource-intensive CO analyzers to confirm CO levels was not justifiable.

The alternative CO monitoring strategy includes the following:

- reviewing the traffic volumes annually in each of the CO maintenance areas using the data from the MDT’s permanent automatic traffic recorders (ATR) in Billings,
- comparing the latest 3-year monthly average of the average daily traffic (ADT) volumes during the traditional CO concentration season of November through February against baseline 2008-2010 ADT average for those months, and
- implementing a contingency plan, so that if the most recent, consecutive 3-year period ADT in the CO maintenance area increases by greater than 25% from the baseline 2008-2010 period (The contingency plan includes reinstating the gaseous monitoring at the 2008-2010 monitoring location or at a site expected to read greater CO than that site.). (14-4).

Since the EPA has not acted on the July 13, 2011 or the June 22, 2012 submittals, the 2002 LMP is the controlling document for this air quality conformity determination. However, the ATR monitoring is included in the discussion as a reference for future updates to the LRTP.

The following conformity determination was made in accordance with the above referenced Federal regulations. The determination is for CO and applies to the 2018 Billings Urban Area LRTP and the Carbon Monoxide State Implementation Plan (SIP) for the State of Montana. As of the date of this conformity determination, the Billings Urban Area is not designated as a nonattainment or maintenance area for any other air pollutant.

CONFORMITY DETERMINATION INTERAGENCY CONSULTATION

The consultation guidance contained in the State of Montana Air Quality Rules on Conformity (ARM Chapter 17 Chapter 8 Subchapter 13) was used in the preparation of this conformity determination and emissions analysis. These rules incorporate by reference Federal regulations contained in 40 CFR Part 93, Subpart A. This consultation generally involved a cooperative and coordinated process including the MDT, Montana DEQ, and Yellowstone County Planning Board.

The Montana DEQ and MDT coordinate regarding air quality and transportation conformity on behalf of MPOs such as the City of Billings-Yellowstone County MPO. Coordination is conducted in accordance with applicable Federal code (40 CFR 93) and state administrative rules (ARM Chapter 17 Chapter 8 Subchapter 13). Coordination typically takes the form of consultation through letter correspondence between the state agencies.

Air quality planning is an integral part of the Billings Urban Area transportation planning process. As such, air quality has received specific attention during development of the numerous plans, programs, and projects over the last 30 years. The actions and activities of the 2018 Billings Urban Area LRTP and process closely parallel those of the SIP and support its intentions of achieving and maintaining the NAAQS.

PUBLIC, STAKEHOLDER, AND INTERAGENCY INVOLVEMENT

The City of Billings-Yellowstone County MPO conducts ongoing public, stakeholder, and interagency outreach for all transportation planning activities in the Billings urban area. Guidance for the outreach is included in the Yellowstone County Planning Board Public Participation Plan (14-5), which was updated by the MPO and adopted by the PCC in September 2018. The plan is reviewed and updated periodically by the MPO.

For this LRTP, a public involvement plan was established at the beginning of the project and used to guide the public, stakeholder, and interagency involvement (14-6). Chapter 2 of this LRTP summarizes the process and outreach activities incorporated for development of this plan.

LATEST PLANNING ASSUMPTIONS AND REGIONAL EMISSIONS ANALYSIS

An October 6, 1995 EPA policy memorandum for LMPs in non-classifiable CO nonattainment areas included a discussion of the applicability of the conformity rule requirements in these areas. According to this policy, a LMP attainment area is not required to project emissions over the maintenance period, because the air quality design value for the area is low enough that the stationary source permitting program, existing SIP controls and Federal control measures provide adequate assurance of maintenance of the CO standard over the initial 10-year maintenance period. The design value must continue to be at or below 7.65 ppm. The CO

average design value for the Billings area is 5.5 ppm, which is well below the requirement. Therefore, the Billings area adequately demonstrates maintenance.

Under a CO LMP, the following elements are applicable regarding the regional emissions analysis:

- No regional emissions analysis is required for applicable pollutants/precursors and analysis years.
- Transportation plan, TIP, and project conformity determinations are still required.
- For applicable projects, hot-spot analyses are still required. 40 CFR Section 93.109(e).

The Transportation Improvement Program (TIP) is a required planning program for federally assisted highway and transit improvements for the Billings metropolitan planning area and the MDT over a five-year period. The TIP is prepared every five years and amended as needed, and is in conformance with 23 CFR, Part 450 324-330.

Therefore, conformity demonstration using regional emissions analysis is not required for the LRTP.

Incorporation of the 2012 LMP Alternative CO Monitoring Strategy

As identified in the 2012 LMP, an alternative CO monitoring strategy was identified that included monitoring traffic volumes annually in each of the CO maintenance areas using the data from the MDT's permanent automatic traffic recorders (ATR) in Billings. The ATR location is Site A-050 (US 87, Main Street,

between Milton and Hansen) in Billings (14-9). Table 14.1 summarizes the rolling three year monthly average daily traffic (ADT) comparison between the 2008-2010 base year and the most recent 2015-2017 year time-period.

Table 14.1 Rolling Three Year Monthly Average Daily Traffic (ADT) Comparison

Year	Monthly Average Nov-Feb ADT
2015-2017	29,522
2008-2010	33,952
% Difference	-13.0%

Source: MDT's Monthly Automatic Traffic Recorder Comparison (14-8)

As shown in Table 14.1, the most recent rolling three-year monthly ADT is 13.0 percent lower than the baseline ADT. Therefore, the alternative CO monitoring strategy meets the requirements and is in conformance with the 2012 LMP.

TIMELY IMPLEMENTATION OF SIP TRANSPORTATION CONTROL MEASURES

Specific TCMs have not been proposed for Billings. There are no TCM's in the SIP and no specific TCM's are recommended for implementation in this LRTP. Therefore, the TCM timely implementation requirement is not applicable to this conformity determination.

FISCAL CONSTRAINT

Metropolitan transportation plans are required to meet Federal fiscal constraint requirements as detailed in 23CFR450.322(b) (11). For LMP areas such as Billings, this fiscal constraint requirement must be met before a conformity determination is approved. Chapter 13 of this LRTP documents that planned expenditures are consistent with existing and proposed funding sources that can reasonably be expected to be available for transportation uses. As such, the LRTP meets that fiscal constraint requirement.

CONCLUSION

In addition to the above conditions and requirements, it is concluded that the 2018 Billings Urban Area Long Range Transportation Plan is found to be in conformance with the applicable provisions of Section 176(c) of the Clean Air Act, 40 CFR 93 Subpart A, and the Billings Carbon Monoxide Limited Maintenance Plan element of State Implementation Plan for the State of Montana.



Chapter X

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2018



BILLINGS URBAN AREA



LONG RANGE TRANSPORTATION PLAN

Steering Committee Meeting #10 Sign-In Sheet

October 10, 2018 @ 10:00 AM - 12:00 PM,
1st Floor Conference Room - Miller Building

Name	Organization	Email address
Andy Daleiden	Kittelson & Associates, Inc.	adaleiden@kittelson.com
Doug ENDERSON	DOWL	denderson@dowl.com
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SCOTT WANKER	C/C Planning	
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Rod Nelson	MPT Billings	rodnelson@mt.gov
Kathy Holt	MPT Planning	
Shelba Luedden	MPT Planning	
Moby Aronson	Yellowstone	

1. Introductions (Sign-in sheet)
2. Public Open House (Held on September 25th)
 - a. Open House Materials
 - i. Access the Open House Materials at <http://www.billingslrtp.com/websites/14/pages/307>
 - b. Draft Public Comment Summary #2
 - i. Access the Public Comment Summary #2 at <http://www.billingslrtp.com/websites/14/pages/307>
3. Plan Updates
 - a. Draft plan
 - i. Access the Draft Plan at <http://www.billingslrtp.com/websites/14/pages/316>
4. Plan Adoption Schedule

- a. TAC - October 4th (completed)
- b. Yellowstone County BOCC – October 9th
- c. Yellowstone County Board of Planning – October 10th
- d. Billings City Council – October 15th
- e. Yellowstone County BOCC – October 16th
- f. Billings City Council – October 22nd
- g. Yellowstone County Board of Planning – October 23rd
- h. Policy Coordinating Committee – October 30th

Transit present → check H's to Debra

*FC map
Tada adoption date*

public hearing

5. Travel Demand Model Update → *Katrina P. → A.F.!*
6. Next Public and SC Meetings → *C+R*
 - a. SC Meeting #11 – November 8, 10:00 AM – 12:00 PM

check C+R → 10/10/18

Travel Demand Model → commercial vehicles

MOT Projects

- ① add Lockwood Island
- ② add Shiloh Road
Zoo Drive
add Handliss

*Action
- send STAFF'S legislation*



Appendix K

Steering Committee Meeting #11

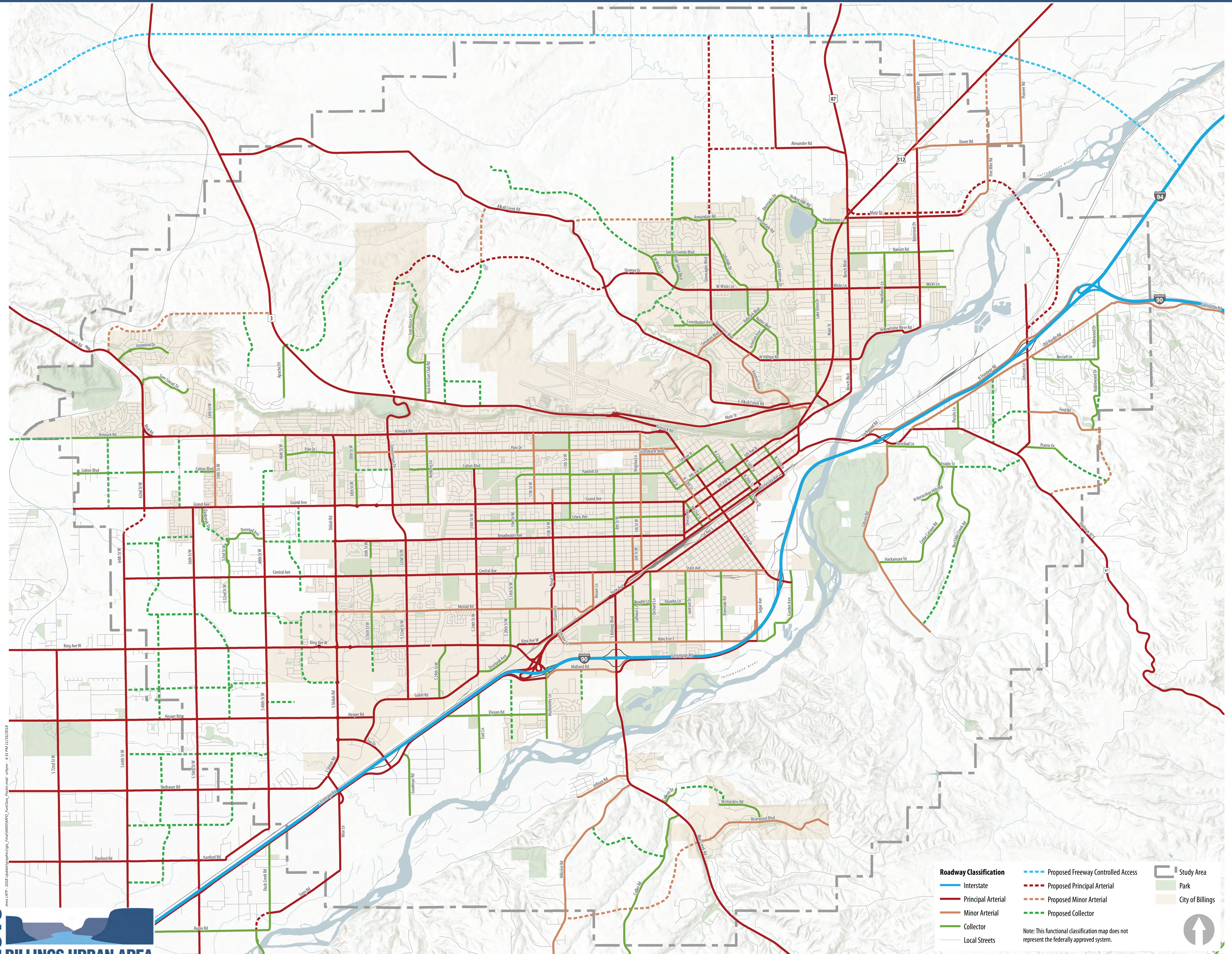


Steering Committee Meeting #11 Agenda

December 12, 2018 @ 10:00 AM – 12:00 PM
1st Floor Conference Room - Miller Building

1. Introductions (Sign-in sheet)
2. Final Long Range Transportation Plan
 - a. Access the Final Plan at <http://billingslrtp.com/websites/14/pages/90>
3. Final Functional Classification Map
4. Final Online Traffic Count Database
 - a. <http://kai.maps.arcgis.com/apps/webappviewer/index.html?id=15729063b03f401987046ea8ecb56e4b>
5. Travel Demand Model Update
6. Next Steps
 - a. Finalize the plan and provide hard copies to the MPO

ROADWAY FUNCTIONAL CLASSIFICATION





Introduction

Transportation planning has been a key element of the City's planning efforts for over 100 years since its inception as a major rail hub. As such, one of the first transportation surveys was completed in 1954, which included a transportation inventory, traffic counts, parking, and other related data. Eleven transportation plans (1961, 1964, 1969, 1977, 1983, 1990, 2000, 2005, 2009, and 2014) have been completed since 1961. Most recently, the Yellowstone County Board of Planning, the designated Metropolitan Planning Organization (MPO)

and oversight for transportation planning for the Billings Urban Area, adopted the 2018 Billings Urban Area Long Range Transportation Plan (LRTP). The area encompasses the City of Billings, as well as the planning area extending approximately 4.5 miles outside the City limits in Yellowstone County.

The Billings Urban Area LRTP is a framework to guide development and implementation of multimodal transportation system projects for the Billings urban area. The LRTP is updated every four years, and looks at today's land use and transportation conditions and plans for the future through year 2040. Transportation is a vital element to the residents and businesses of Billings and connects commerce from the Billings urban area to other parts of Montana and metropolitan areas via road, rail, and air. The region's transportation infrastructure is robust and includes streets, highways, freeways, rail, transit, sidewalks, bicycle lanes and routes, trails, and an airport. Given the importance of transportation infrastructure, the LRTP includes goals and objectives that support transportation mobility and accessibility throughout the Billings urban area.

This double-sided map focuses on the functional classification system and typical cross sections within the City of Billings and Yellowstone County. Please refer to the adopted LRTP document for more details on the plan.

Functional Classification

The Roadway Functional Classification System defines a road's role in the overall context of the highway transportation system. In addition, it helps to define which standards are generally desirable for roadway width, right of way needs, access spacing, pedestrian and bicycle facilities and other specifications. The functional classification system hierarchy is typically established by the following hierarchy:

Freeways serve high speed, long distance travel movements and provide limited access to adjacent lands. Often included in the Arterial classification, freeways are unique in that they provide access to other arterial roadways via grade-separated interchanges. In the Billings Urban Area, the freeways are classified as Interstate.

Arterials represent the highest class of highways and roads. These roadways are intended to serve higher volumes of traffic, particularly through-traffic, at higher speeds. They also serve truck movements and should emphasize traffic movement over access to adjacent property. Arterial roadways are further designated as Principal Arterials and Minor Arterials.

Collectors represent the intermediate class. As the name suggests, these roadways collect traffic from the local street system and link travel to the arterial roadway system. These roadways provide a balance between through-traffic movement and property access and provide extended continuity to facilitate traffic circulation within an urban community or rural area.

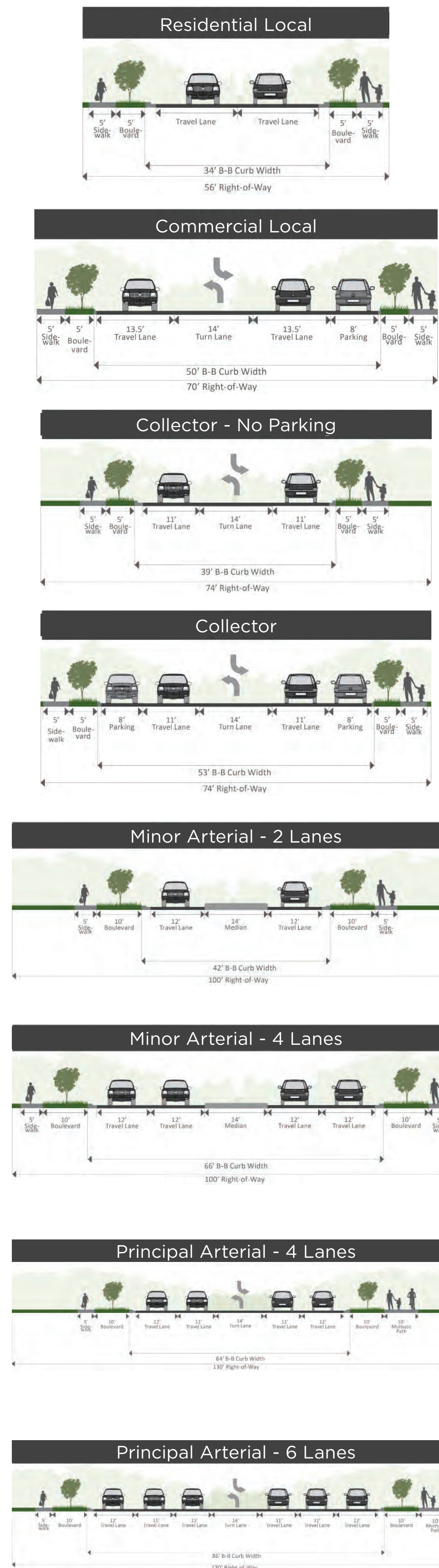
Local Roads and Streets are the lowest classification. Their primary purpose is to carry locally generated traffic at relatively low speeds to the collector street system and to provide more frequent access to individual businesses and residential property. Local streets provide connectivity through neighborhoods, but generally should be designed to discourage cutthrough vehicular traffic.

In addition to the above roadway classifications, a limited number of principal arterials are further identified as Interstate routes and National Highway System (NHS) routes. The Interstate System designations are Interstate 90 and Interstate 94. The Moving Ahead for Progress in the 21st Century Act (MAP-21) NHS Principal Arterial designations are King Avenue, Laurel Road, Montana Avenue, Zoo Drive, 1st Avenue North, and 1st Avenue South. The Other NHS Route designations are Main Street and US Route 87 and a Non-Interstate Strategic Highway Network (STRAHNET) Route designation is Montana Highway 3.

Functional Classification Map and Cross Sections

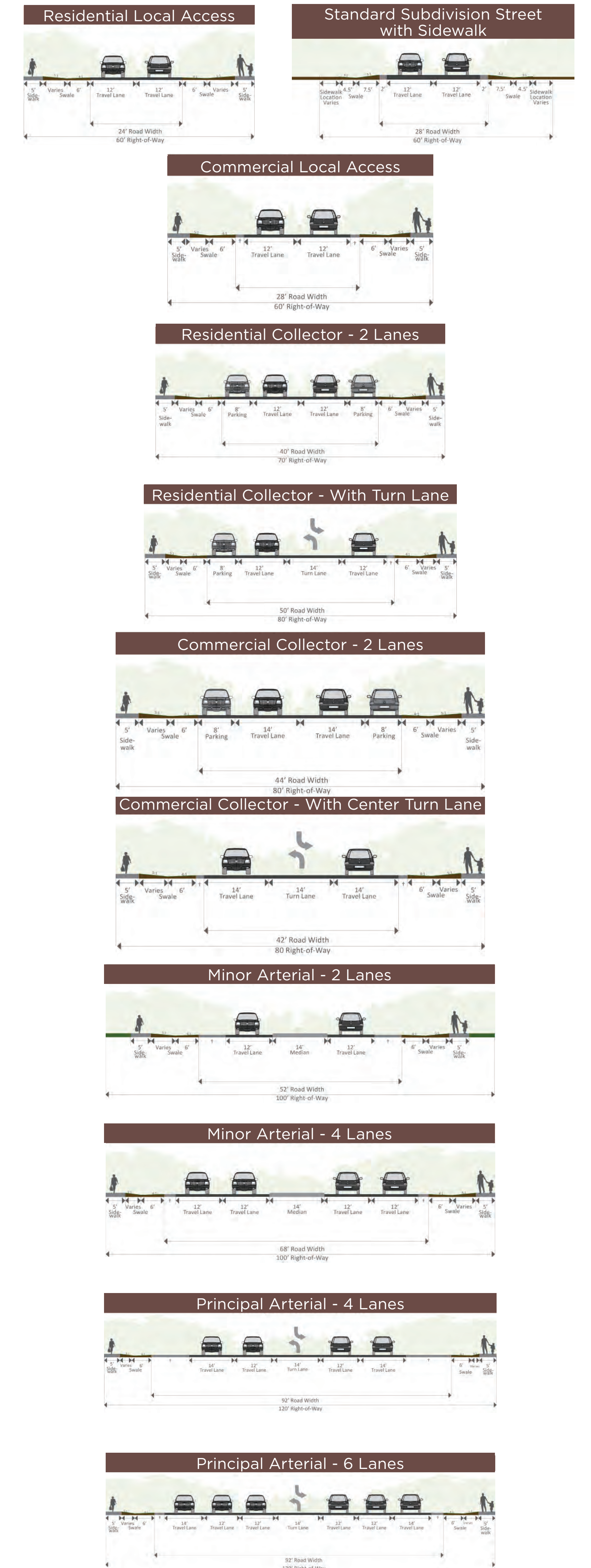
The LRTP planning process led to the development of the Functional Classification Map, shown on the front page. The City of Billings and Yellowstone County review and update this map regularly as part of the planning efforts within the urban area. To support the Functional Classification Map, typical roadway cross sections are illustrated to the right for the City of Billings and Yellowstone County. More details and guidance on these cross sections can be found in the City of Billings and Yellowstone County's Subdivision Regulations.

Sample City of Billings Cross Sections*



* For more details and guidelines on the cross sections, refer to the City of Billings Subdivision Regulations Table 23.406.B.1 Required Dedications and Street Improvements for Subdivisions within City Limits. A traffic impact study is required for major and principal arterials, and may be required to determine other cross sections within the city.

Sample Yellowstone County Cross Sections*



*For details and guidelines on the cross sections, refer to the Yellowstone County Subdivision Regulations, Chapter 4 and Table 4.6.C.1 Required Dedications and Street Improvements for Subdivisions. A Road Evaluation Study or Traffic Impact Study may be required by Yellowstone County to determine the cross section.

† Shoulders shall be required on both sides of all roads where no curb and gutter or parking lanes are required. The shoulders shall be two (2) feet wide and graded, and must meet the specification of County Public Works.

2018 Billings Urban Area LRTP, TDM, & PPP

Steering Committee Meeting #11 (10 AM - 12 PM)

December 12, 2018

What We'll Cover Today

- ▶ Introductions
- ▶ Final Long Range Transportation Plan
- ▶ Final Functional Classification Map
- ▶ Final online traffic count database
- ▶ Travel demand model
- ▶ Next steps

Final Long Range Transportation Plan

- ▶ Working to address a few final comments from MDT
- ▶ Plan to complete these items in the next few days

Long Range Transportation Plan - the highlights...

2018 Billings Urban Area Long Range Transportation Plan



prepared by
KITTELSON & ASSOCIATES **DOWL**

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Access the plan via project website...



2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN

HOME LATEST NEWS MEETINGS PROJECT DOCUMENTS WHO'S INVOLVED PUBLIC INVOLVEMENT GOALS CONTACT

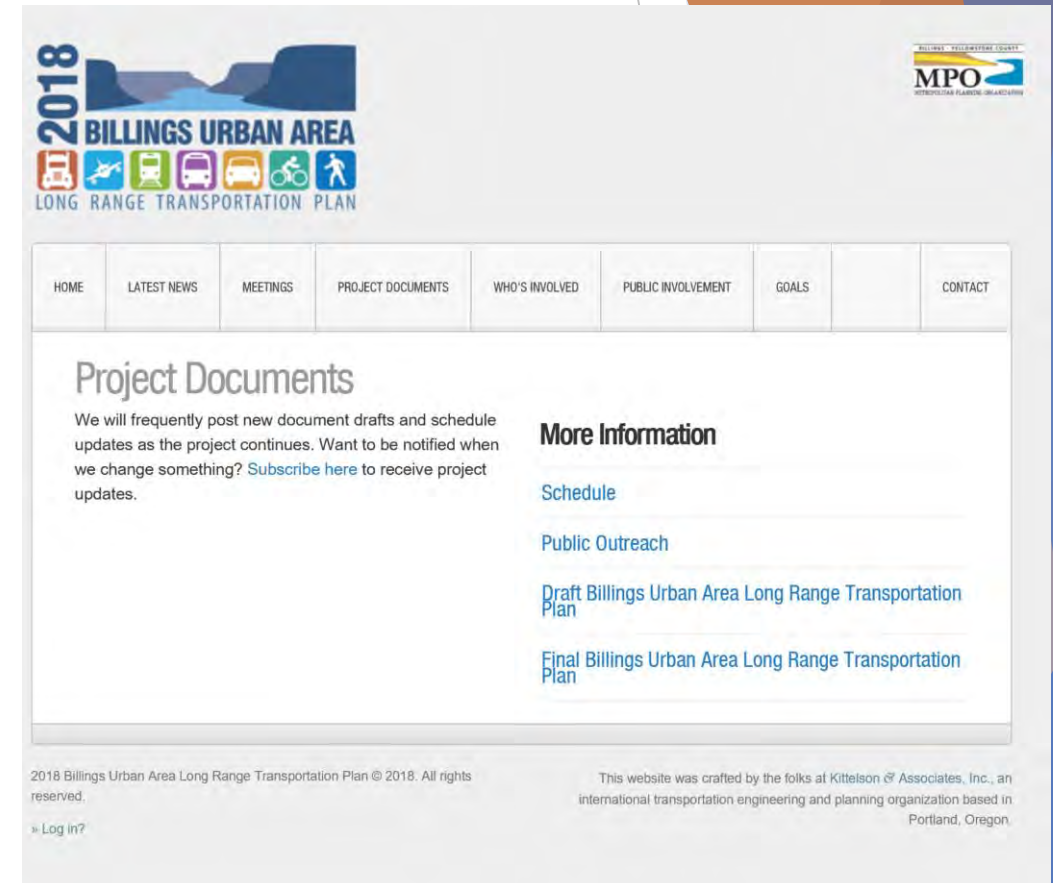
2018 Billings Urban Area Long Range Transportation Plan

Help plan the future of transportation in your community!



FINAL 2018 Billings Urban Area Long Range Transportation Plan -- Please access the FINAL 2018 Billings Urban Area Long Range Transportation Plan [HERE](#).

What: The Yellowstone County Planning Board is the designated Metropolitan Planning Organization (MPO) and oversees transportation planning for the Billings Urban Area. The [study area](#) encompasses the City of Billings and a planning area extending approximately 4.5 miles outside the City limits. The MPO is preparing a long range transportation plan (LRTP) to address all transportation forms and elements (streets and highways, public transit and transportation, freight, pedestrian and bicycle, safety, and security) and meet the local, state, and federal requirements.



2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN

HOME LATEST NEWS MEETINGS PROJECT DOCUMENTS WHO'S INVOLVED PUBLIC INVOLVEMENT GOALS CONTACT

Project Documents

We will frequently post new document drafts and schedule updates as the project continues. Want to be notified when we change something? [Subscribe here](#) to receive project updates.

More Information

- [Schedule](#)
- [Public Outreach](#)
- [Draft Billings Urban Area Long Range Transportation Plan](#)
- [Final Billings Urban Area Long Range Transportation Plan](#)

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This website was crafted by the folks at Kittelson & Associates, Inc., an international transportation engineering and planning organization based in Portland, Oregon.

» Log in?

Input from the Public

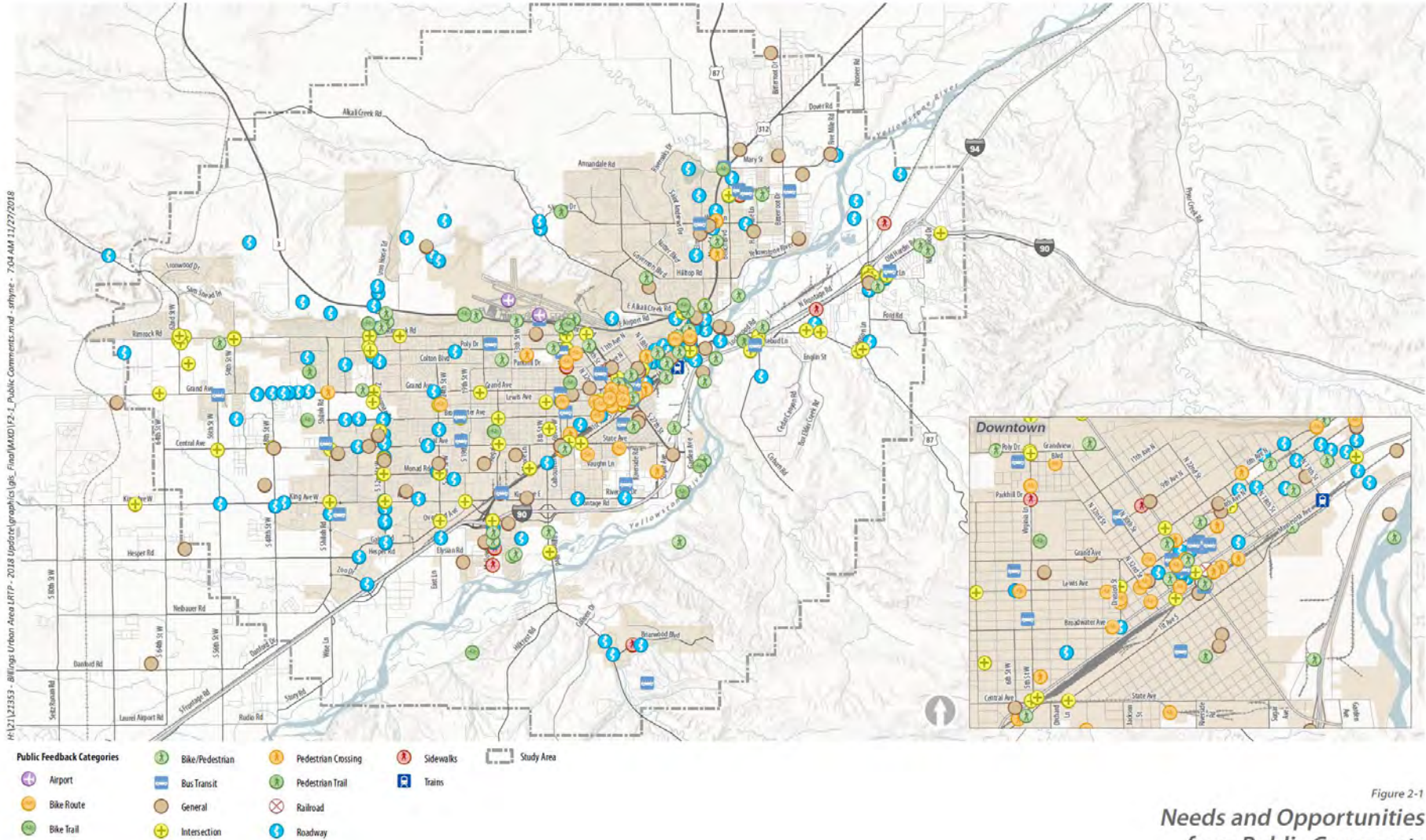
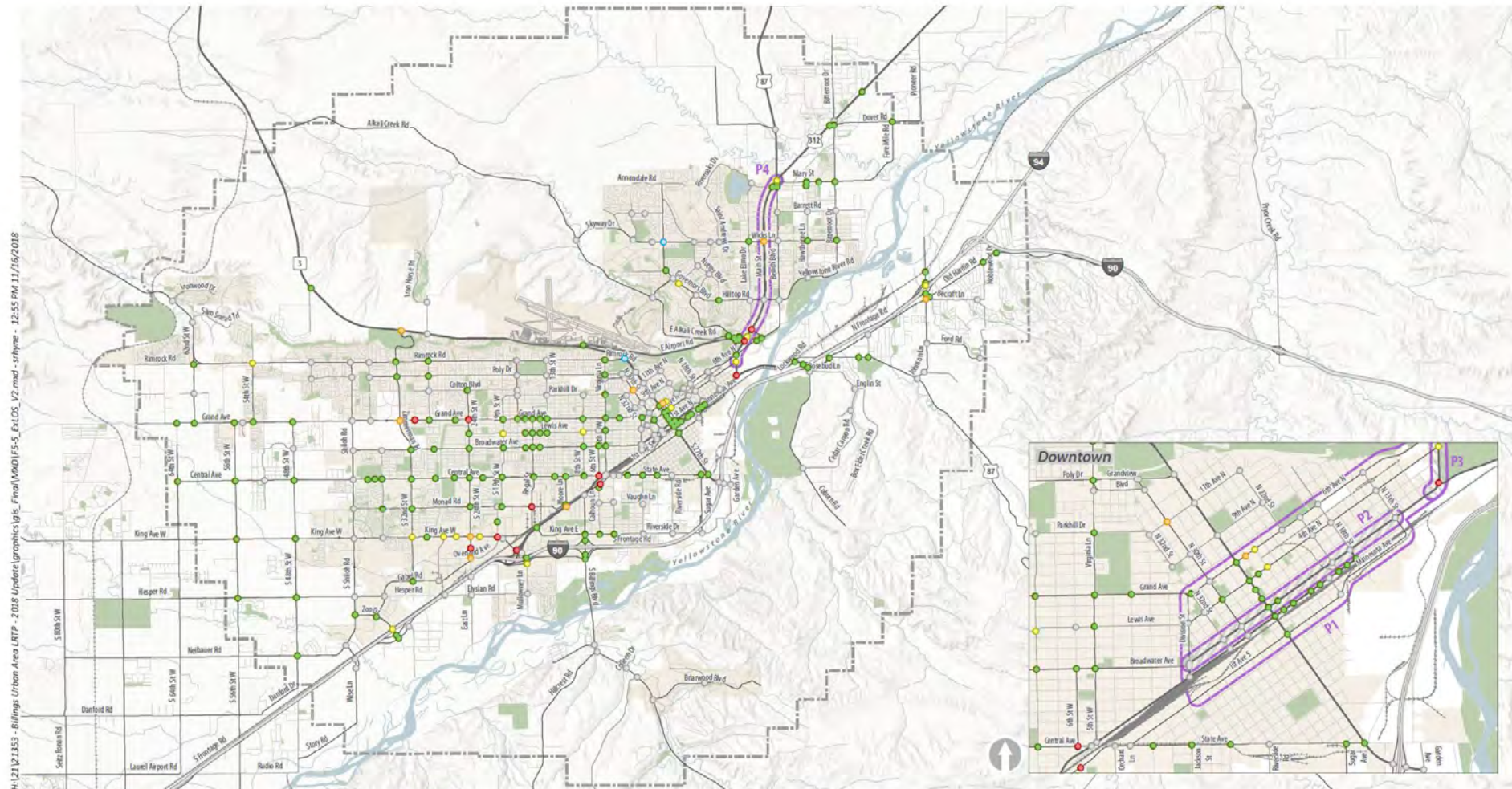


Figure 2-1

Needs and Opportunities from Public Comments

Intersection Level of Service Map



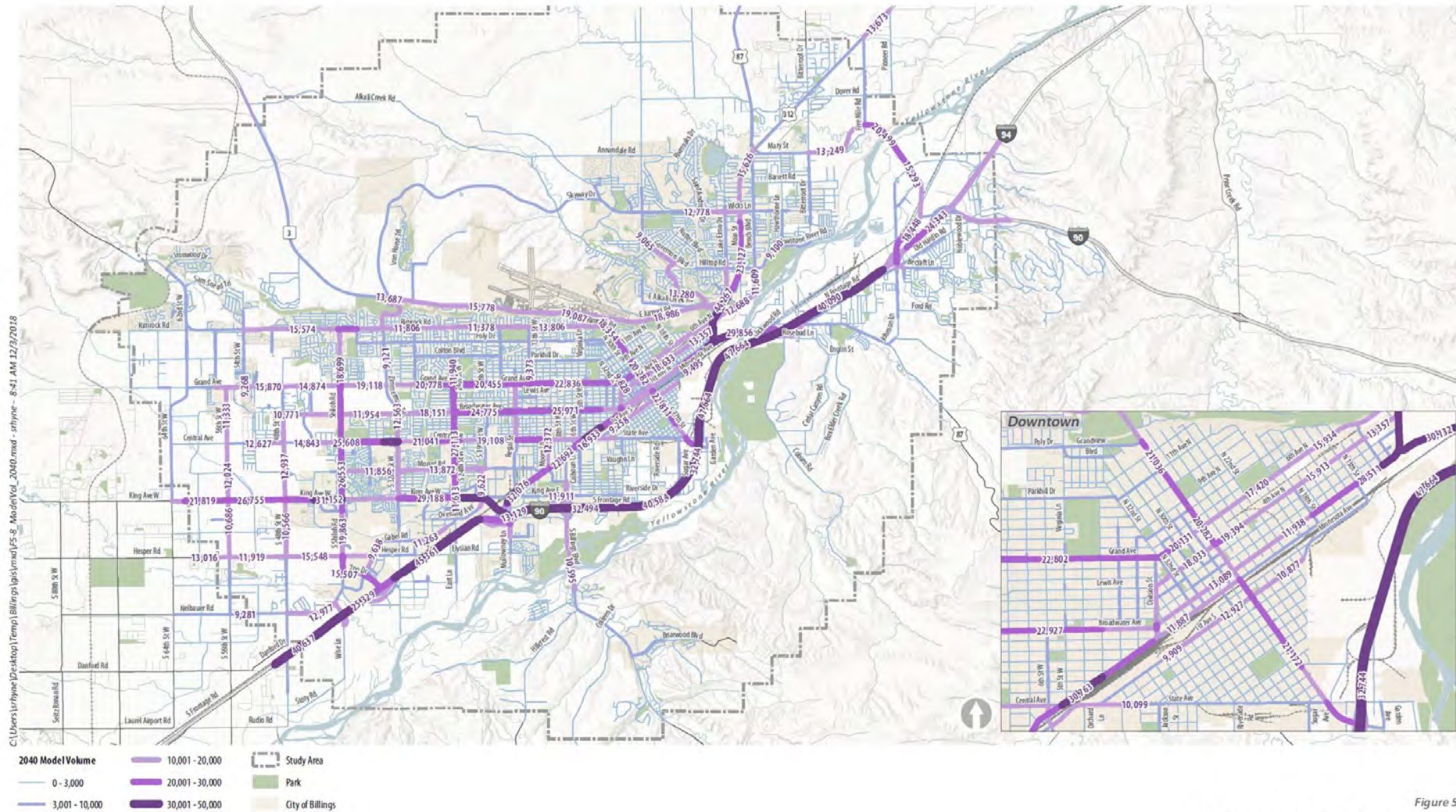
- | | | | | |
|-------------------------|--|--|-------------------------------|--------------------|
| Level of Service | ● Intersections with No Data and Identified as Potentially Congested | ▭ More detailed analysis is being performed in these areas by other studies/projects | Roadway Classification | ▭ Study Area |
| ● A thru C | ○ Intersections with No Data | P1 - Downtown Traffic Study | — Interstate | ▭ Park |
| ● D | | P2 - 1st Avenue North | — Highway | ▭ City of Billings |
| ● E | | P3 - 1st Avenue N / Expo | — Arterial | |
| ● F | | P4 - Main Street Signal Timing | — Collector | |
| | | | — Local | |



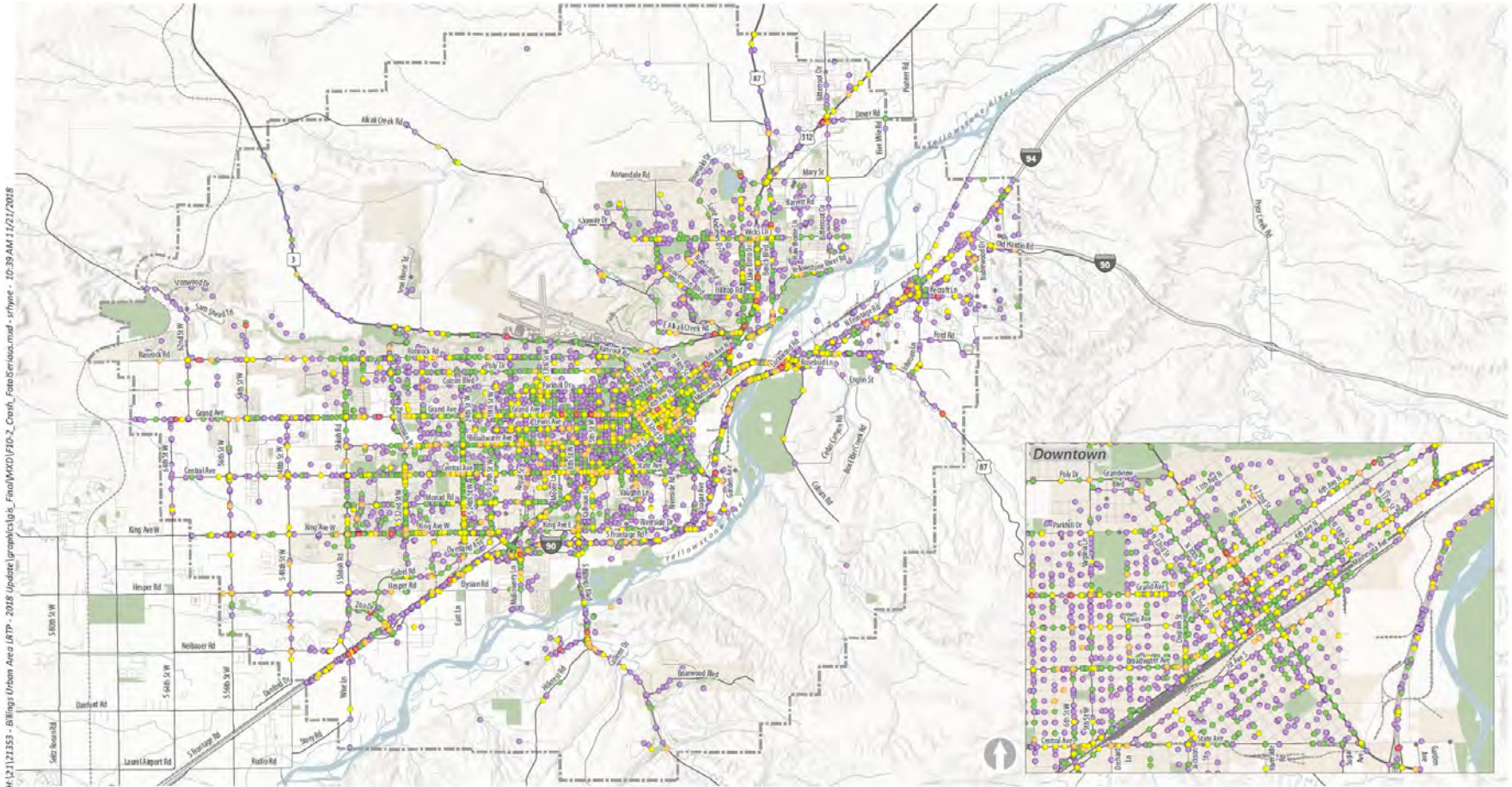
Figure 5-5

Existing Conditions and Level of Service

Base Year & Year 2040 Traffic Volumes



Updated Safety Analysis



H:\21121353 - Billings Urban Area (RTP) - 2018 Update\graphics\figs_Final\FXCD\F10-2_Crash_Severity.mxd - s:\rhyme - 10:39 AM 11/21/2018

- Crash Severity**
- Fatal Accident
 - Incapacitating Injury Accident
 - Non-Incapacitating Evident Injury Accident
 - Possible Injury Accident
 - Non-Injury Accident (Property-Damage-Only Accident)
 - Unknown

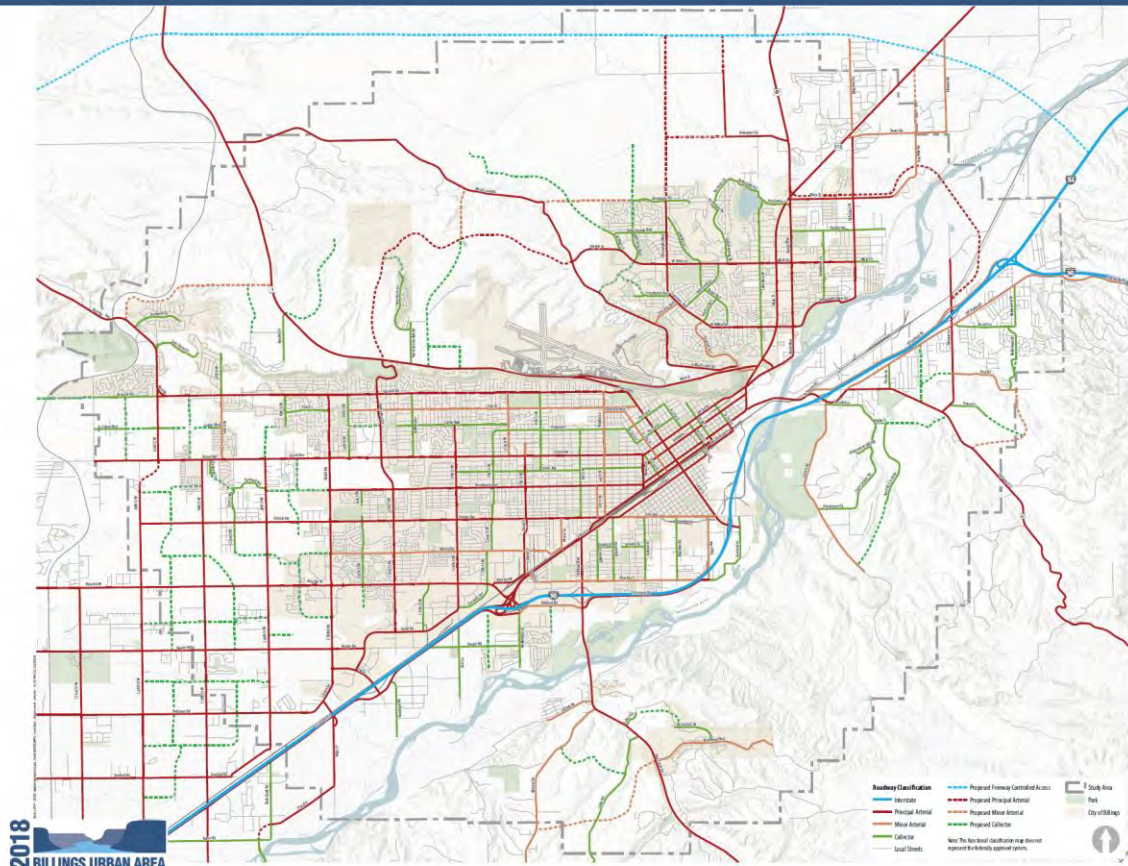
Figure 10-2
Fatal and Serious Injury Crashes (2013 - 2017)

Recommended Plan - Total Projects

- ▶ Pedestrian & Bicycle = 19 Committed / 141 Recommended
- ▶ Intersections = 30 Committed / 33 Recommended
- ▶ Roadways = 33 Committed / 23 Recommended
- ▶ Congestion Management = 9 Committed / 19 Recommended
- ▶ Supportive projects/strategies for Rail, Truck, and Transit
- ▶ Overall ~ 300+ Projects included in the Plan

Functional Classification Map

ROADWAY FUNCTIONAL CLASSIFICATION



2018
BILLINGS URBAN AREA
LONG RANGE TRANSPORTATION PLAN

KITTTELSON & ASSOCIATES
DOWL

2018 Billings Urban Area Long Range Transportation Plan | NOVEMBER 2018



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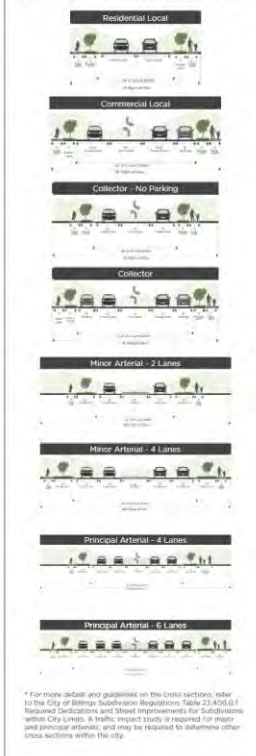
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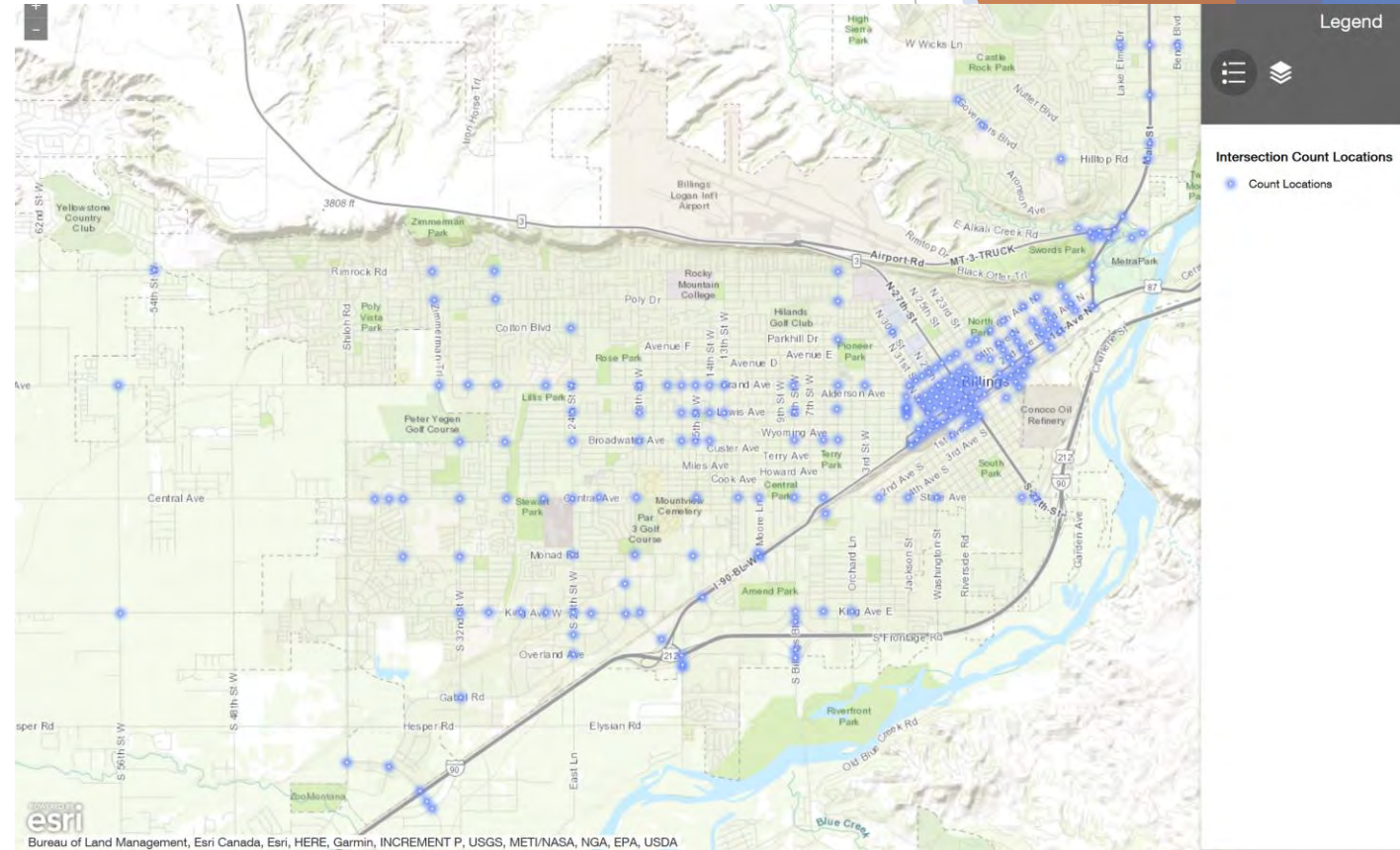
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Billings Traffic Counts Web App

- ▶ Created using GIS tools (ArcMAP)
- ▶ Compiled several counts from different count providers
 - ▶ Counting Cars
 - ▶ Quality Counts
 - ▶ Miovision
 - ▶ Petra
- ▶ Created a script to create consistent count format



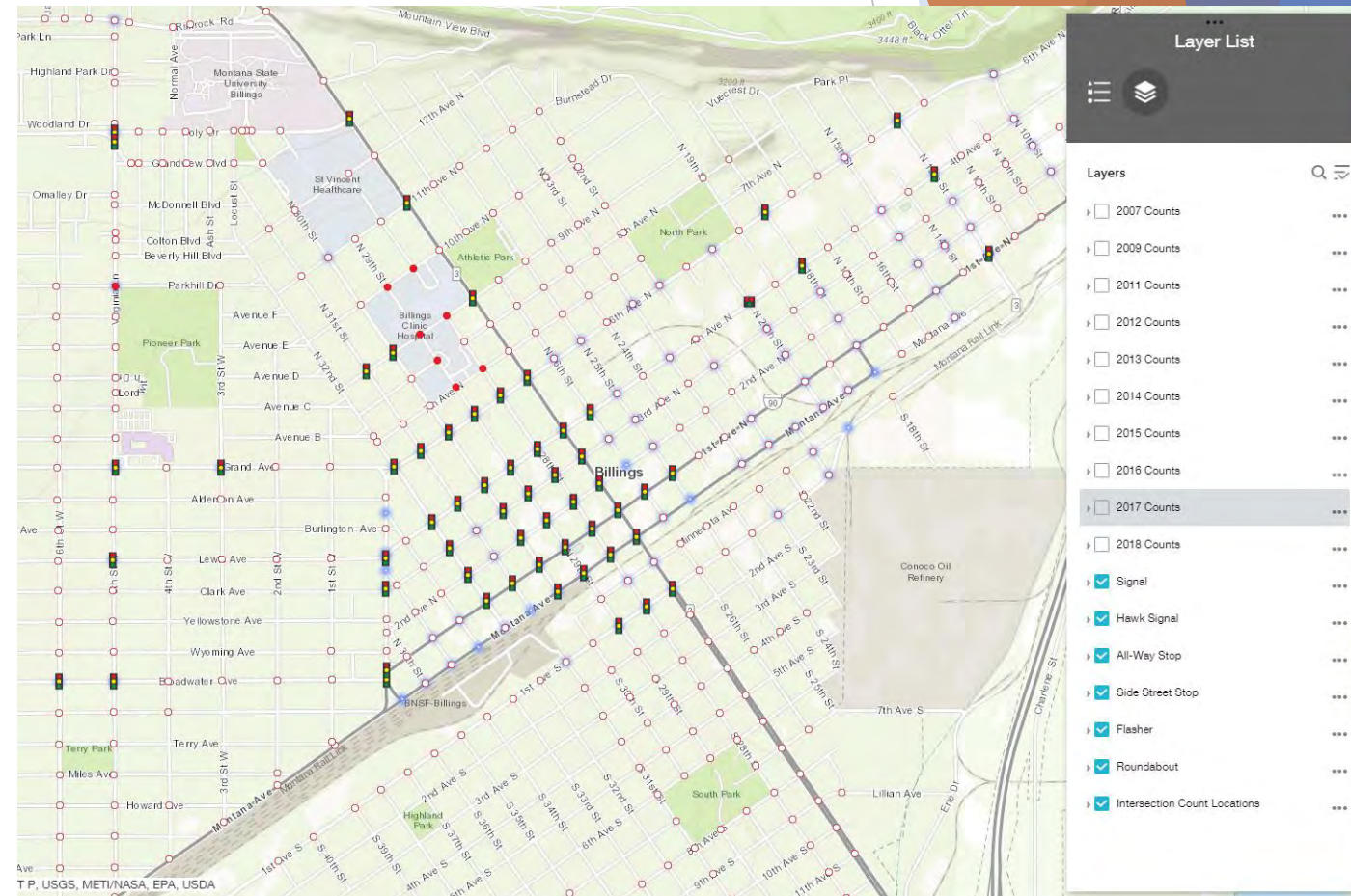
Billings Traffic Counts Web App

▶ Counts

- ▶ 2007, 2009, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018

▶ Intersection Type/Control

- ▶ Signalized, All-Way Stop, Side-Street Stop, Hawk Signal, Flasher, Roundabout



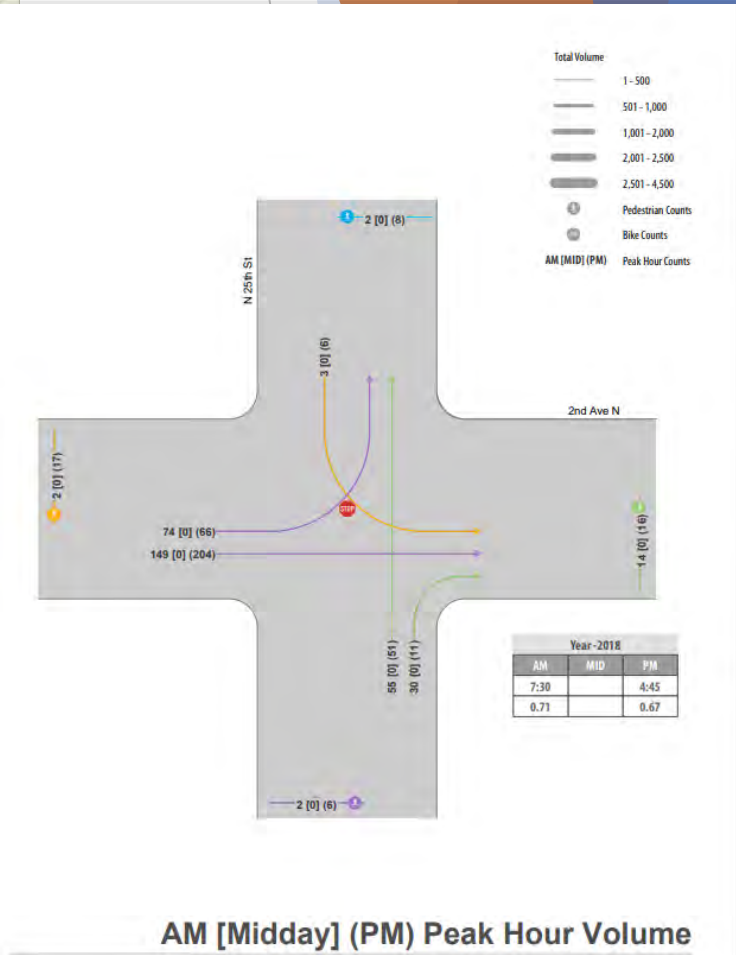
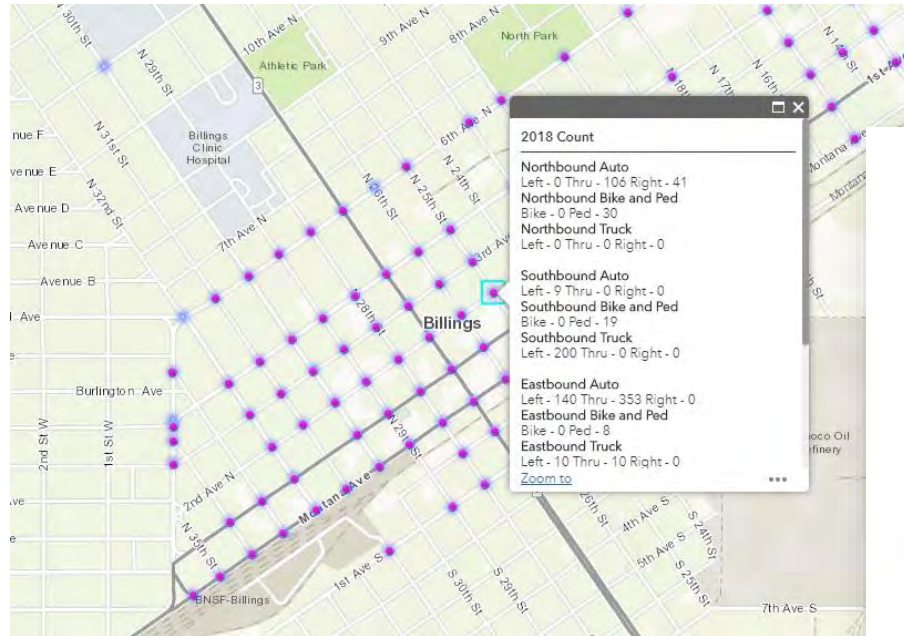
Billings Traffic Counts Web App

► Interactive

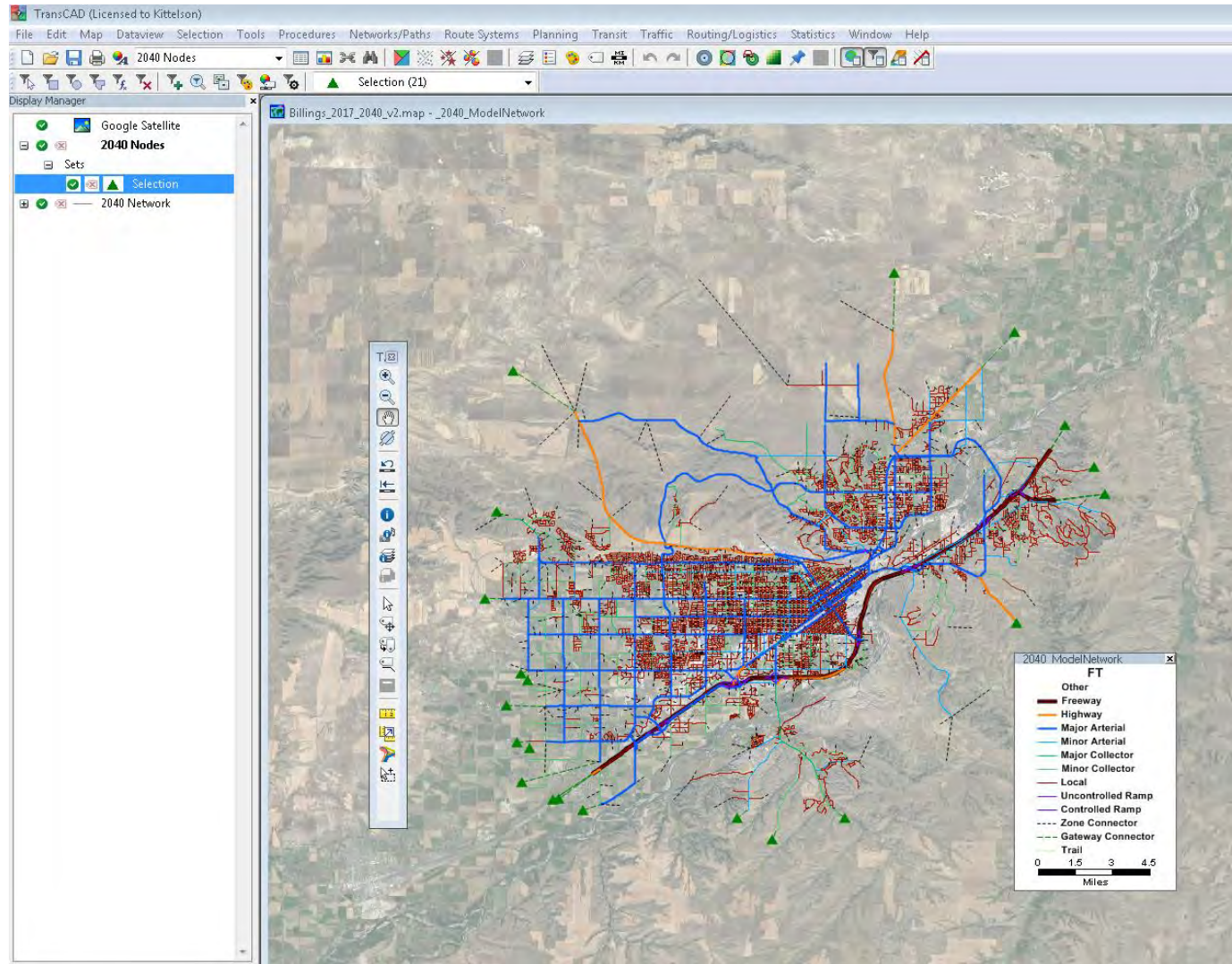
- Pop-up menu
- Traffic counts diagram

► Benefits

- Quick glance tool
- Compare and contrast historical data
- Help plan future count locations

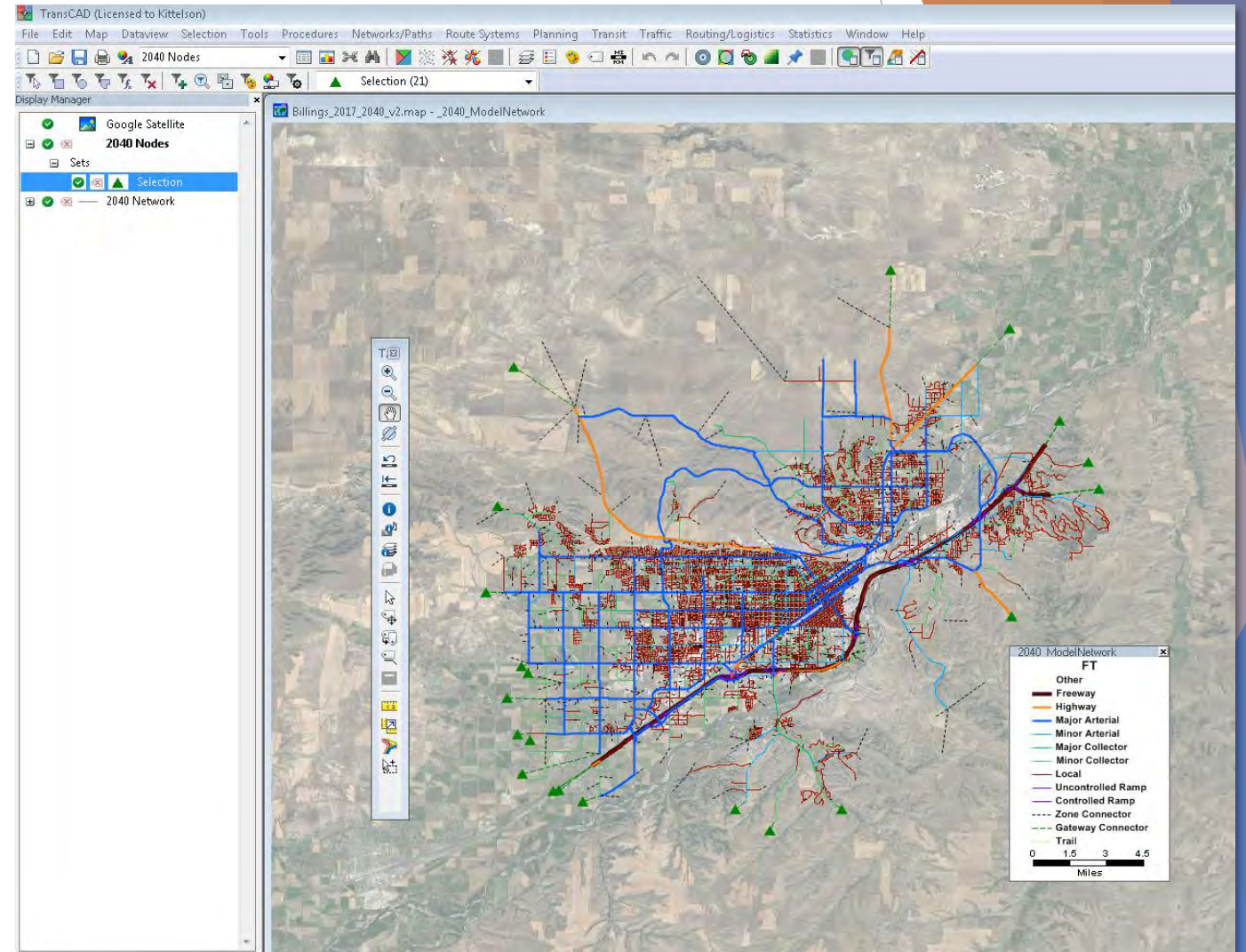


Travel Demand Model Completion



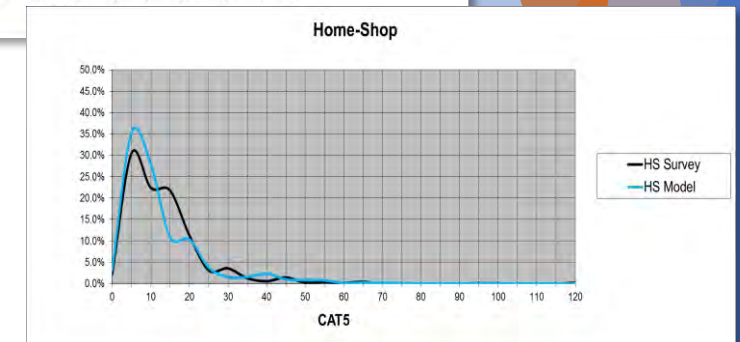
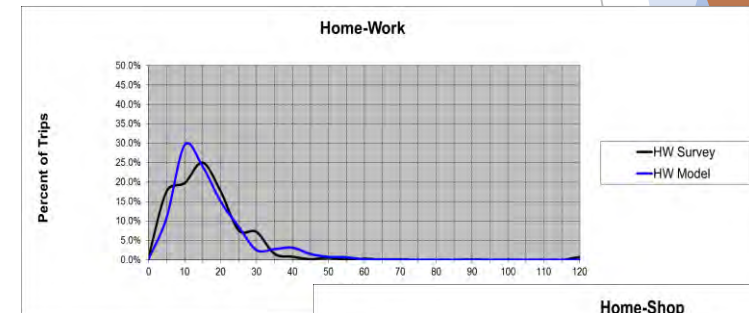
Travel Model Completion

- ▶ Model calibration
- ▶ Validation to traffic counts
- ▶ Forecast land use
- ▶ 2040 travel forecasts
- ▶ Applications of model

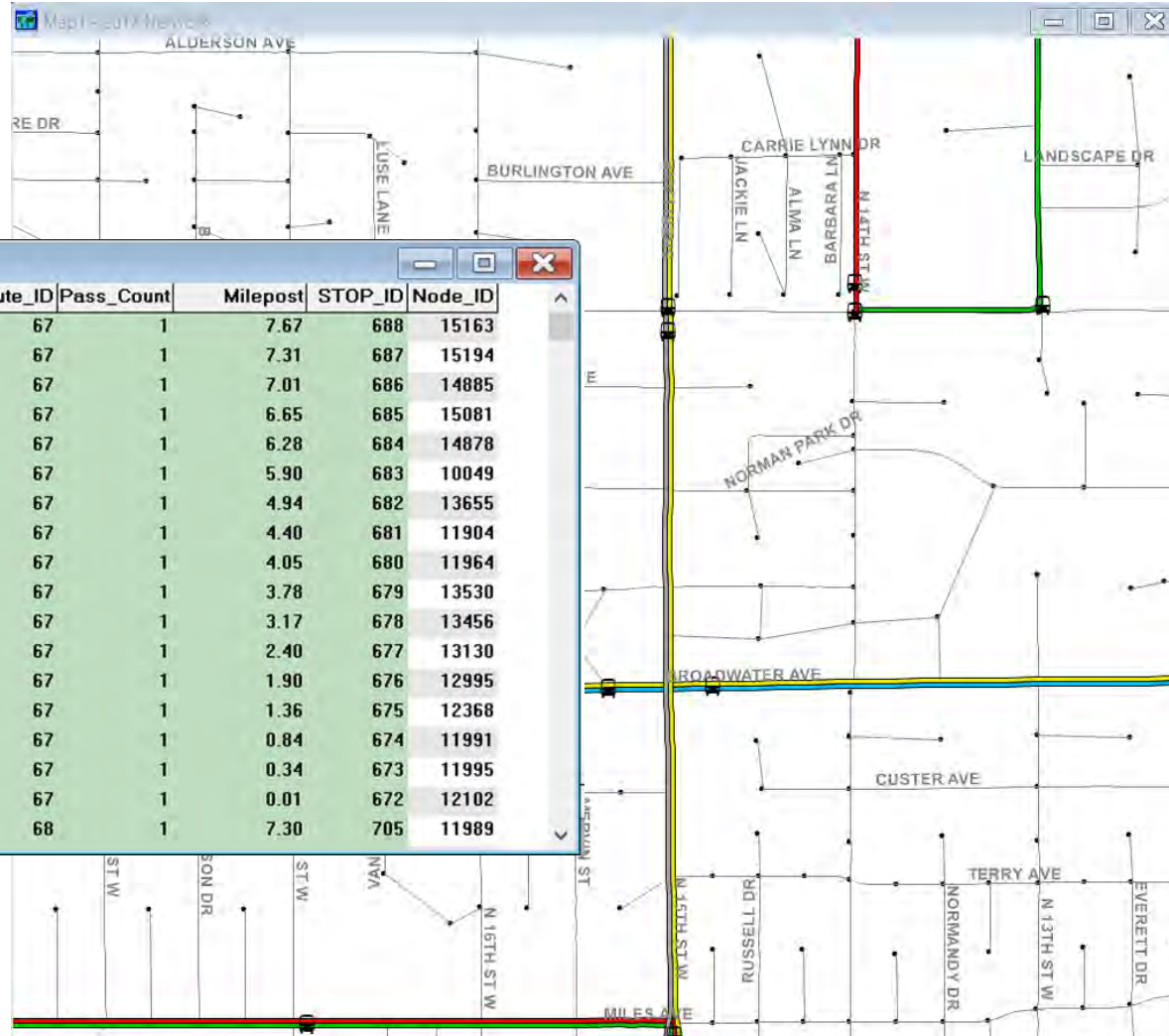


Model Calibration

- ▶ Trip Generation
 - ▶ Adjust rates for high-generating uses based on traffic counts
 - ▶ **Gas stations, convenience markets, etc...**
- ▶ Trip Distribution
 - ▶ Adjust trip lengths based on household survey
- ▶ Mode Choice
 - ▶ Adjust parameters to account for choice issues other than time and cost
 - ▶ Match surveyed percentages of each mode for work, non-work trips



Transit Network Coded with Stops



Mode Choice Model - Work Trips

The screenshot shows a software interface for a Logit Model Application. At the top, a tree structure shows a 'ROOT' node branching into five categories: 'DA', 'SR', 'Transit', 'Bike', and 'Walk'. Below this, the 'Model Management' section includes a 'Model Name' field with 'Billings MC Models' and a 'Segment' dropdown set to 'HW'. A 'Sources' tab is active, displaying a table of coefficients. The 'Coefficient' column contains values -0.025000, -0.050000, and -0.009200, which are circled in red. The table also includes columns for 'Fix', 'DA', 'SR', 'Transit', 'Bike', and 'Walk', with various matrix and time/cost parameters listed in the cells.

Field	Coefficient	Fix	DA	SR	Transit	Bike	Walk
Availability					Matrix3.Transit	Matrix2.NOMC	Matrix2.NOMC
Beta1_INVTT	-0.025000	<input type="checkbox"/>	Matrix1.TIME	Matrix1.TIME	Matrix3.In-Veh	Matrix2.BikeTII	Matrix2.WalkTI
Beta2_OVTT	-0.050000	<input type="checkbox"/>	Matrix1.OVTT_	Matrix1.OVTT_	Matrix3.OVTT		
Beta3_COST	-0.009200	<input type="checkbox"/>	Matrix1.COSTn	Matrix1.COSTn	Matrix3.CostM		

Coefficients borrowed from Ann Arbor, Michigan MPO (WATS)
Consistent with FTA guidance

Mode Choice Model - Non-Work Trips

The screenshot displays the Logit Model Application interface. At the top, a tree diagram shows a 'ROOT' node branching into five categories: 'DA', 'SR', 'Transit', 'Bike', and 'Walk'. Below this, the 'Model Management' section shows 'Model Name' as 'Billings MC Models' and 'Segment' as 'HS'. A table below lists model parameters with their coefficients and associated matrix names. The coefficients for 'Beta1_INVTT', 'Beta2_OVTT', and 'Beta3_COST' are circled in red.

Field	Coefficient	Fix	DA	SR	Transit	Bike	Walk
Availability					Matrix3.Transit	Matrix2.NOMC	Matrix2.NOMC
Beta1_INVTT	-0.012500	<input type="checkbox"/>	Matrix1.TIME	Matrix1.TIME	Matrix3.In-Veh	Matrix2.BikeTII	Matrix2.WalkTI
Beta2_OVTT	-0.025000	<input type="checkbox"/>	Matrix1.OVTT_	Matrix1.OVTT_	Matrix3.OVTT		
Beta3_COST	-0.021800	<input type="checkbox"/>	Matrix1.COSTn	Matrix1.COSTn	Matrix3.CostM		

Coefficients borrowed from Ann Arbor, Michigan MPO (WATS)
Consistent with FTA guidance

Mode Choice Model - School Trips

The screenshot shows the 'Logit Model Application: SC - BillingsMC.mdl' window. At the top is a tree diagram with 'ROOT' at the top, branching down to six categories: 'DA', 'C SR', 'C Transit', 'C Bike', 'C Walk', and 'C SchBus'. Below the tree is a 'Model Management' section with 'Model Name' set to 'Billings MC Models' and 'Segment' set to 'SC'. To the right are 'New', 'Load', and 'Save' buttons. Below that is a 'Sources' tab with 'Utilities' and 'Apply' sub-tabs. The main area is a table with columns for 'Field', 'Coefficient', 'Fix', and then columns for each mode: 'DA', 'SR', 'Transit', 'Bike', 'Walk'. The 'Coefficient' column for 'Beta1_INVTT' is circled in red and contains the value -0.012500.

Field	Coefficient	Fix	DA	SR	Transit	Bike	Walk
Availability	-				Matrix3.Transit	Matrix2.NOMC	Matrix2.NOMC
Beta1_INVTT	-0.012500	<input type="checkbox"/>	Matrix1.TIME	Matrix1.TIME	Matrix3.In-Veh	Matrix2.BikeTII	Matrix2.WalkTI
Beta2_OVTT	-0.025000	<input type="checkbox"/>	Matrix1.OVTT_	Matrix1.OVTT_	Matrix3.OVTT		
Beta3_COST	-0.021800	<input type="checkbox"/>	Matrix1.COSTn	Matrix1.COSTn	Matrix3.CostM		

Coefficients borrowed from Ann Arbor, Michigan MPO (WATS)
Consistent with FTA guidance



Mode Choice Model - Calibration Targets

MODE CHOICE MODEL TARGETS BY TRIP PURPOSE						
	DA	SR	TRANSIT	BIKE	WALK	SCHBUS
HW	84.68%	12.18%	0.26%	0.96%	1.92%	0.00%
SC	16.34%	73.29%	0.08%	0.27%	0.90%	9.12%
HS	44.31%	53.39%	0.33%	1.19%	0.78%	0.00%
HM	55.80%	42.63%	0.04%	0.13%	1.40%	0.00%
HO	48.77%	47.15%	0.10%	0.38%	3.60%	0.00%
WO	82.15%	15.52%	0.37%	1.37%	0.60%	0.00%
OO	38.62%	58.50%	0.21%	0.76%	1.91%	0.00%
CO	54.10%	43.18%	0.22%	0.80%	1.71%	0.00%

- Targeted mode shares are derived from the household survey and transit ridership statistics

Mode Choice Model - Calibration

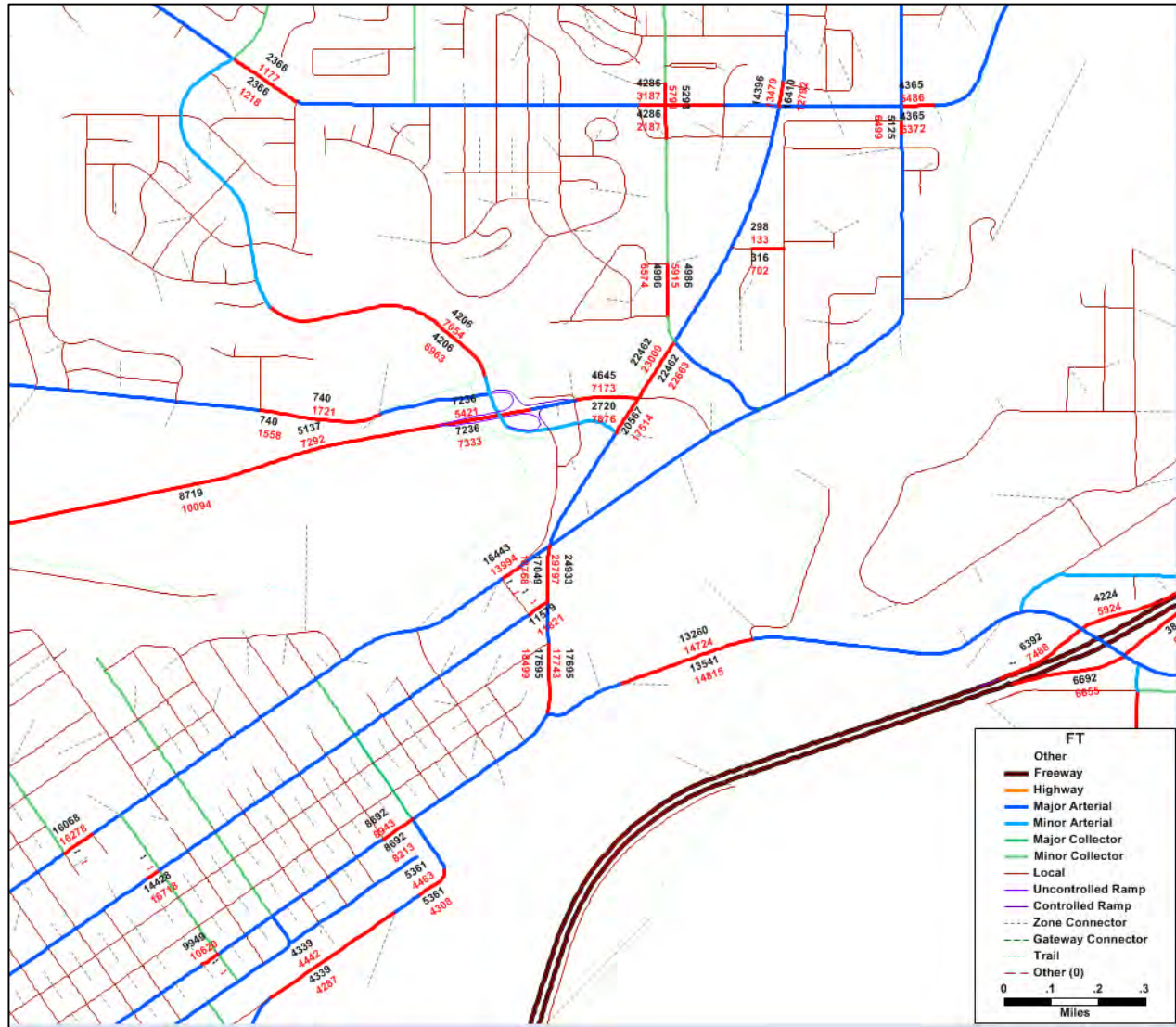
Work	DA	SR	TRANSIT	BIKE	WALK	SCHBUS
Model	83.73%	13.85%	0.33%	1.08%	1.01%	0.00%
Survey	83.10%	14.27%	0.33%	1.22%	1.09%	0.00%

NonWork	DA	SR	TRANSIT	BIKE	WALK	SCHBUS
Model	49.40%	46.99%	0.09%	0.39%	3.12%	0.00%
Survey	42.68%	54.46%	0.19%	0.69%	1.98%	0.00%

School	DA	SR	TRANSIT	BIKE	WALK	SCHBUS
Model	14.78%	73.22%	0.12%	0.31%	1.36%	10.22%
Survey	16.34%	73.29%	0.08%	0.27%	0.90%	9.12%

- Trip purposes are grouped into categories with similar mode share characteristics
 - Work: HW and WO
 - Non-Work: HS, HM, HO, OO, CO
 - School: SC
- Mode constants are adjusted in iterations until the models fit the observed data

Traffic Validation - Example



Black = 2017 Traffic Count
Red = 2017 Model Volume

Traffic Validation - Facility Type

Facility Type	No. of Segments	Observed Counts	Model Volumes	Percent Difference	Criteria	Meets Criteria
Freeway	12	125,421	131,596	4.9%	+/- 7%	YES
Highway	18	58,598	53,671	-8.4%	+/- 10%	YES
Arterial	386	2,459,537	2,425,812	-1.4%	+/- 15%	YES
Collector/Local	110	241,773	196,233	-18.8%	+/- 25%	YES
Ramps	25	111,273	139,025	24.9%	+/- 15%	NO
All Roads	551	2,996,602	2,946,337	-1.7%	+/- 5%	YES

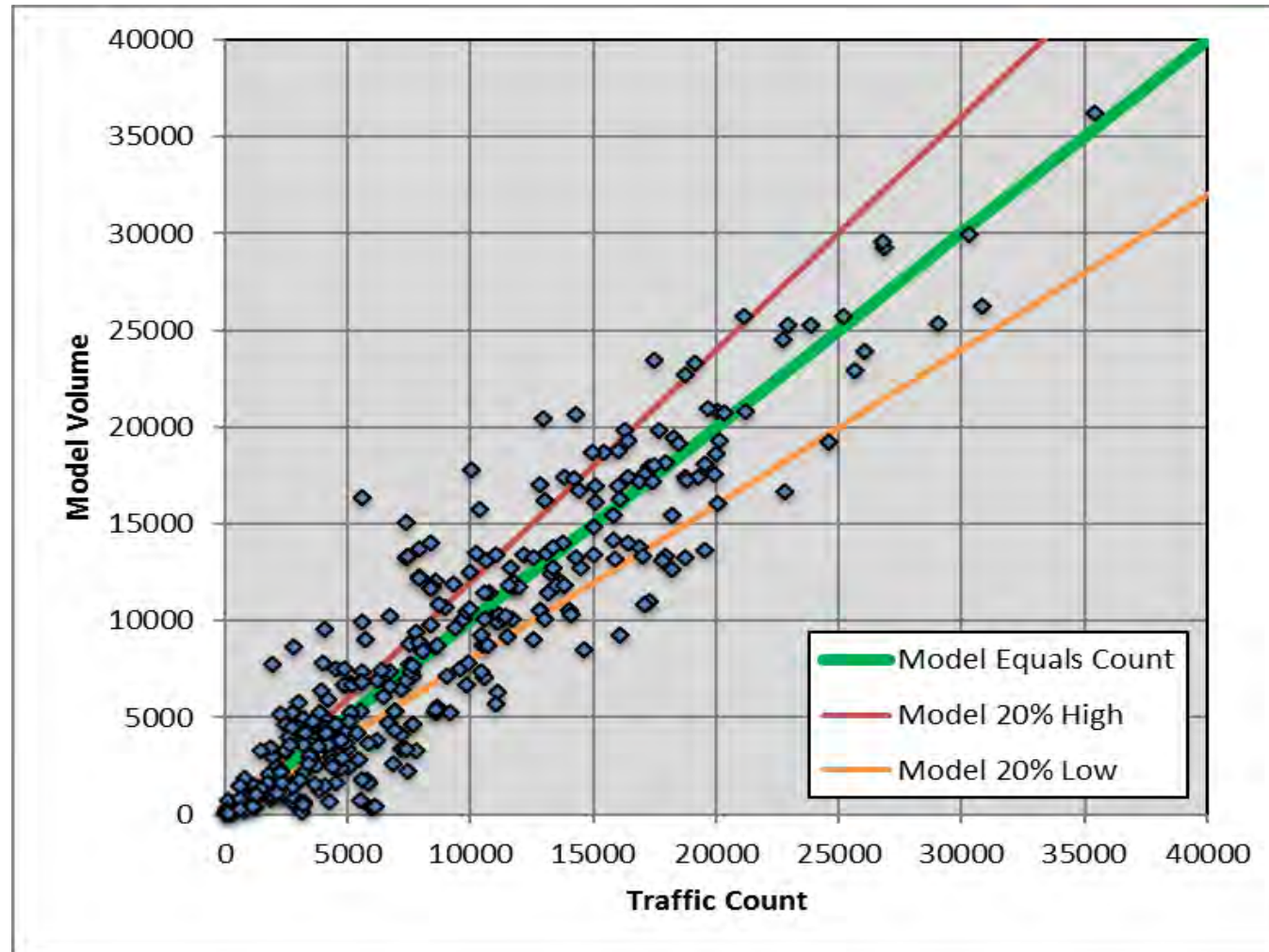
Traffic Validation - Volume Ranges

Volume Group	No. of Segments	Percent Difference	Criteria	Meets Criteria	Percent RMSE	Criteria	Meets Criteria
0 - 5000	320	0.6%	50%	YES	67%	< 100%	YES
5000 - 9999	156	-3.2%	50%	YES	23%	< 45%	YES
10000 - 14999	52	-2.9%	30%	YES	14%	< 35%	YES
15000 - 19999	16	0.3%	30%	YES	12%	< 30%	YES
20000 - 29999	7	0.0%	30%	YES	13%	< 27%	YES

- ▶ **RMSE = Root mean square error; represents “average” error in volume**

Traffic Validation - Correlation

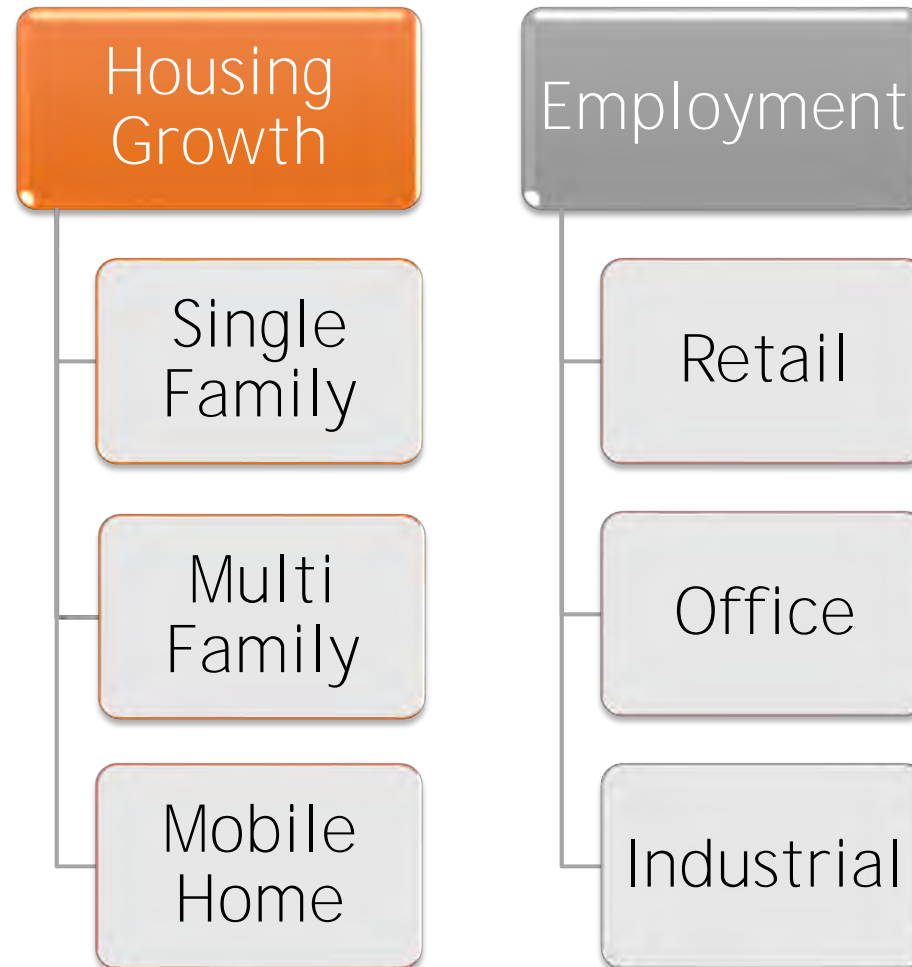
- ▶ Correlation target >0.88
- ▶ Model correlation 0.98



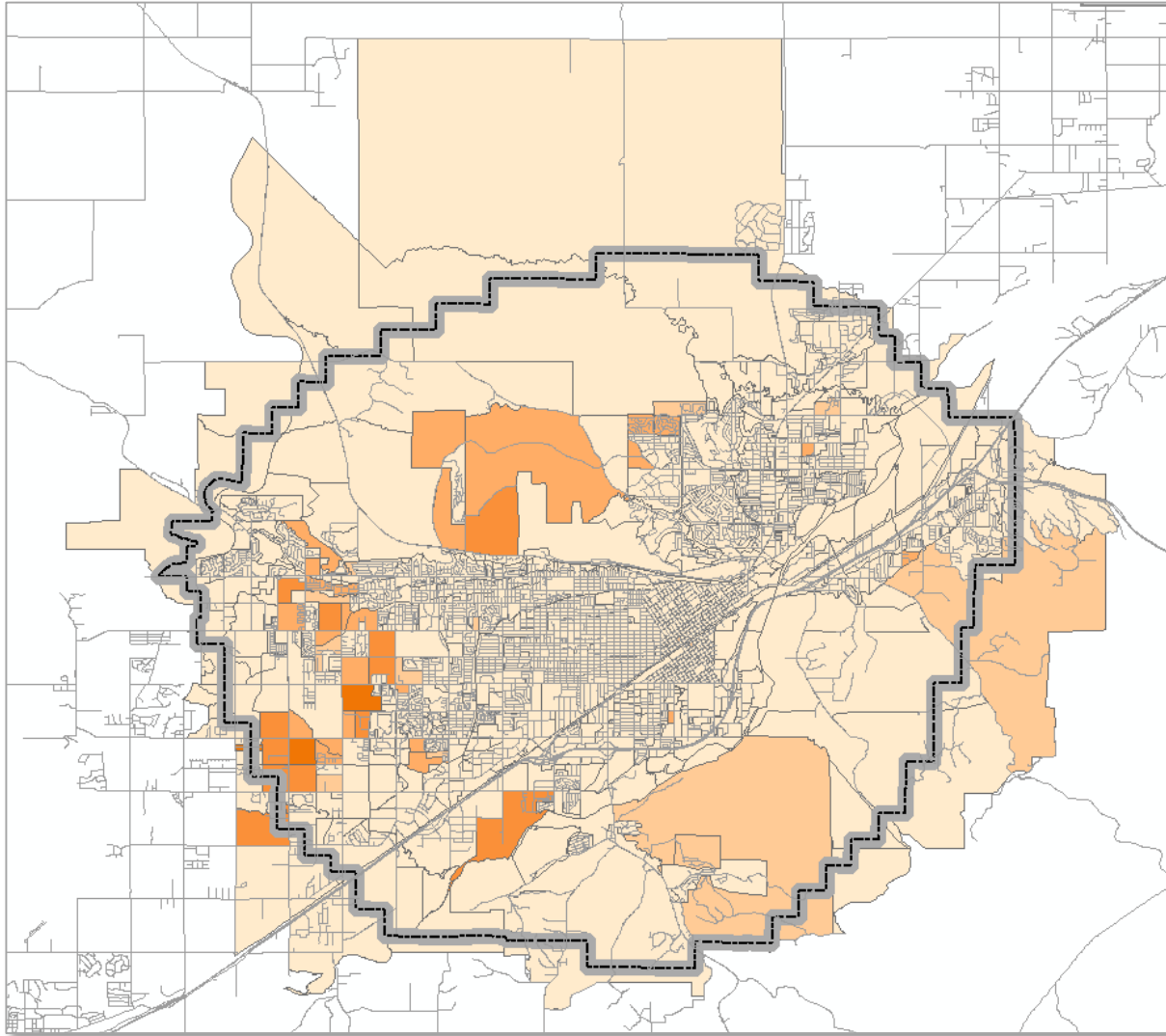
Validation - Changes since September

- ▶ **DOWL review of “real” speeds that people drive**
- ▶ Driveway access for major generators - **hospitals, etc...**
- ▶ Rail crossing delays
- ▶ More calibration of trip generation, trip lengths
- ▶ Get model to recognize prohibited turns

Land Use Forecast

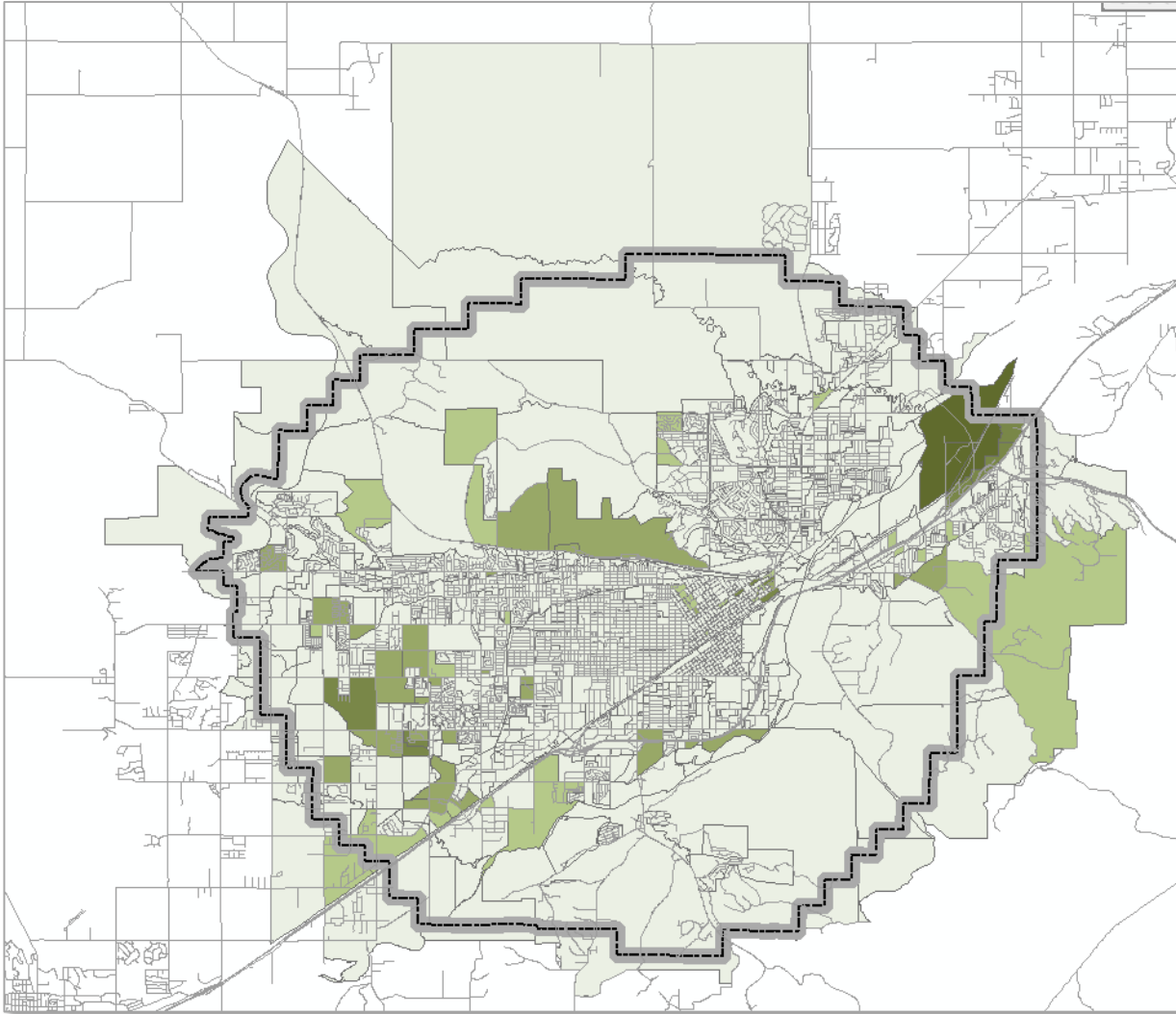


Housing Growth Locations



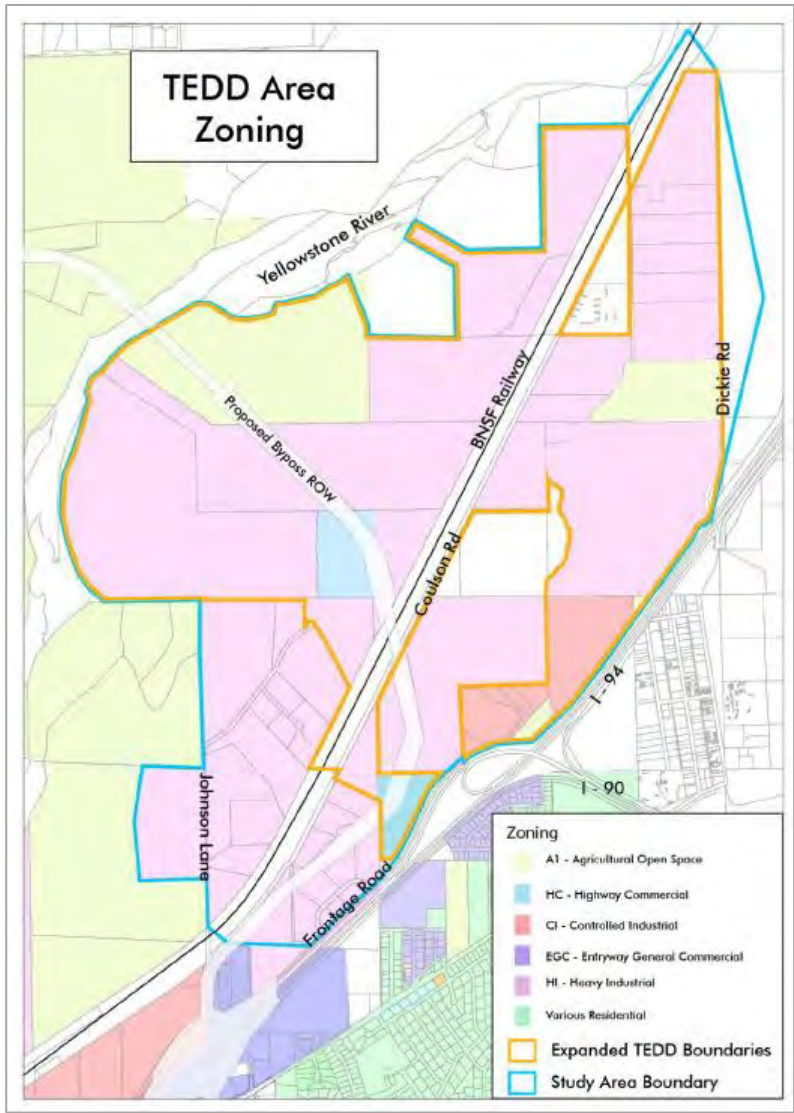
- ▶ Housing split into types (SF, MF) based on existing types in TAZ

Employment Growth Locations

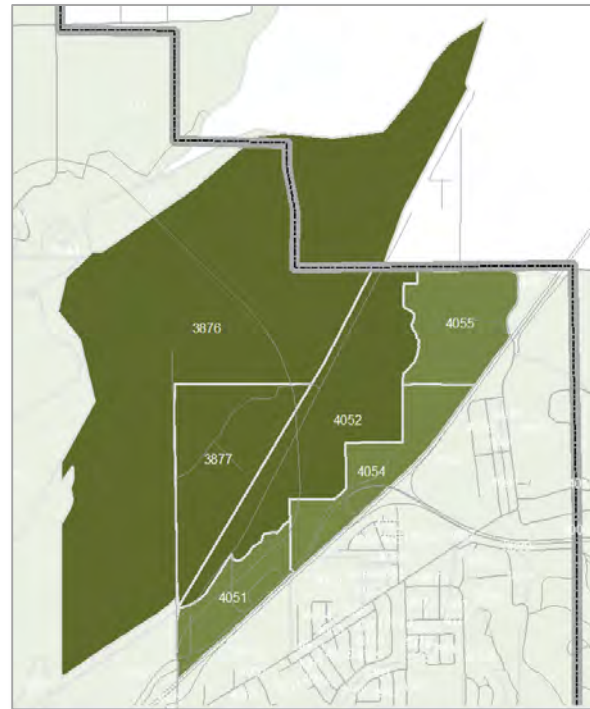


- ▶ Employment split into types based on existing types in TAZ
- ▶ If no existing employment, use areawide averages
- ▶ Manual override for specific development areas such as TEDD

Employment Growth - TEDD Area



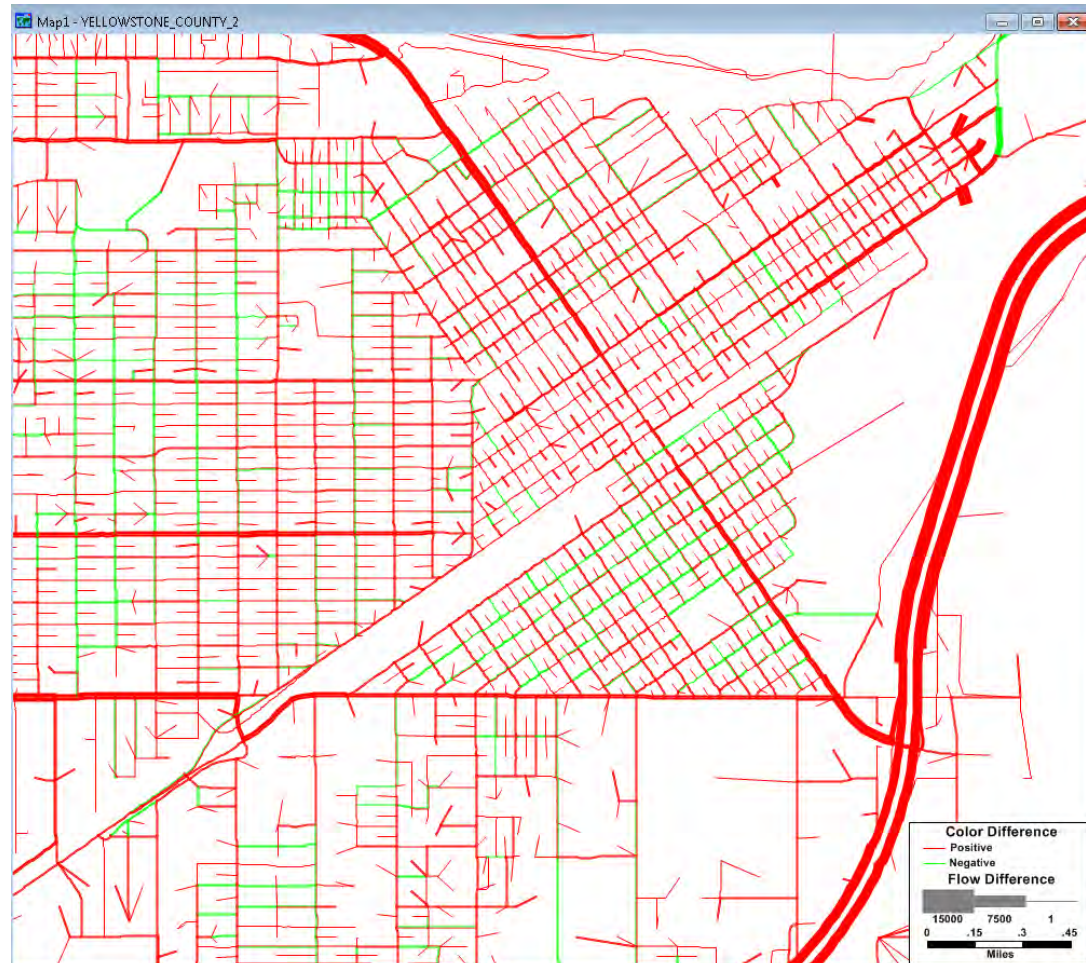
- ▶ TEDD plan allocated to 6 model TAZs
- ▶ Results in 2040 with higher proportion of industrial than existing



Forecast Land Use Summary

Land Use Category	2017	2040	2017 to 2040 Growth	Total Growth (%)	Annual Growth	Annual Growth Rate (%)
Population	135,038	177,687	42,649	32%	1,854	1.4%
Households	55,934	74,108	18,174	32%	790	1.4%
EMPLOYMENT						
Retail Uses	14,333	18,364	4,031	28%	175	1.2%
Office Uses	43,026	53,328	10,302	24%	448	1.0%
Industrial Uses	15,988	28,343	12,355	77%	537	3.4%
Total Employment	73,347	100,034	26,687	36%	1,160	1.6%
Students	25,286	33,284	7,998	32%	348	1.4%

Example Model Results: Volume Differences



Other Model Results

- ▶ Vehicle Miles of Travel
- ▶ Trips by Mode
- ▶ Total Transit Boardings



Travel Model Care and Feeding

- ▶ Training for Staff
- ▶ Believe it or not, the model is not perfect
 - ▶ Raw model output must be used with caution
 - ▶ Documentation recommends using model growth *increments* applied to actual traffic counts
- ▶ Always check specific assumptions in study area
 - ▶ Land use development
 - ▶ Road improvements
 - ▶ Development access locations

Next Steps

- ▶ **Address MDT's comments for the Final LRTP**
- ▶ Provide final documentation
 - ▶ Long Range Transportation Plan
 - ▶ Includes a Technical Appendix
 - ▶ Public Participation Plan
 - ▶ Functional Classification Map
 - ▶ Traffic Count App
 - ▶ GIS files



Steering Committee Meeting #11 Sign-In Sheet

December 12, 2018 @ 10:00 AM - 12:00 PM,
1st Floor Conference Room - Miller Building

Name	Organization	Email address
Andy Daleiden	Kittelson & Associates	adaleiden@kittelson.com
Mike Aronson	Kittelson & Associates	maronson@kittelson.com
Mike Black	Yellowstone County Public Works	mblack@co.yellowstone.mt.gov
Dan Engstrom	DOWL	denderson@dowl.com
Lora Mattox	c/c Planning	mattoxle@ci.billings.mt.us
Scott Walker	c/c Plan	walkense@ci.billings.mt.us
Bob Riehl	Lockwood	bsriehl@gmail.com
Debra Hagel	MET Transit	hageld@ci.billings.mt.us
Sarah Patterson	DOWL	spatterson@dowl.com
Steve Rhyne	Kittelson & Associates	
Bob N	MOT District	
Zach I	MOT District	
Katie P.	MOT Helena	
Sheila L	MOT Helena	
Rebecca G	MOT Helena	
Eric	MOT Helena	
Wyeth F	c/c Planning	

1. Introductions (Sign-in sheet)
2. Final Long Range Transportation Plan
3. Final Functional Classification Map
4. Final Online Traffic Count Database

a. Access the Final Plan at <http://billingslrtp.com/websites/14/pages/90>

a. <http://kai.maps.arcgis.com/apps/webappviewer/index.html?id=15729063b03f401987046ea8ecb56e4b>

5. Travel Demand Model Update
6. Next Steps

Report

- * Mode choice → will not be calculated to
- * calibration using by constant
 ↳ behavior be locked in an constant
- * what if scenarios → add for future

Ken
 Shaf
 Nelson
 Erick

Ken M.
 Jack K.

ped/bike
 ↳ TA
 ↳ runs
 ↳ would
 ↳ more (TA)
 ↳ ref.
 ↳

Action

- 1) Address MDT comments
- 2) TA comment in committed projects for ped/bike
- 3) delivery of GIS files & traffic count app
- 4) update landuse data from model to LRTP



Appendix L

Public Involvement Plan





Public Involvement Plan - DRAFT

January 2018

Prepared by



2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN - PUBLIC INVOLVEMENT PLAN

INTRODUCTION

This document presents the public involvement plan (PIP) for the 2018 Billings Urban Area Long Range Transportation Plan (LRTP). Public involvement and agency coordination during this plan is critical for plan development, acceptance, and adoption by the Policy Coordinating Committee (PCC), Yellowstone County Planning Board (YCPB), Federal Highway Administration (FHWA), Montana Department of Transportation (MDT), and City of Billings. The PIP was developed based on past public involvement efforts for the 2014 LRTP and to be consistent with the public involvement elements of the YCBP Participation Plan (2009) and MDT's Public Involvement Plan (2018). The following topics are covered:

- **Approach and Goals**
- **Agency Involvement**
- **Tools and Resources**
- **Public Involvement Action Plan**

The LRTP will include four key items: 1) changes to the Billings transportation network, land uses, and socioeconomic characteristics that have occurred since the 2014 plan; 2) integration of completed pedestrian, bicycle, transit, freight, roadway and security plans; 3) evaluation and prioritization of future infrastructure investments, and 4) incorporation of the Fixing America's Surface Transportation Act (FAST Act), MDT's statewide planning requirements, and local requirements.

Designated Public Information Contact

- **Billings Yellowstone County MPO:**
Scott Walker, 406.657.8246, walkers@ci.billings.mt.us
- **Consultant Team:**
Andy Daleiden, Project Manager, 208.338.2683, adaleiden@kittelson.com
Robyn Austin, Public Involvement Specialist, 208.338.2683, raustin@kittelson.com

APPROACH AND GOALS

A collaborative and context-sensitive public engagement process is proposed with this plan. The project team is committed to a public involvement approach that strives to achieve the goals listed below.

- Facilitate an open, honest, and transparent decision-making process conducted through constructive two-way communication between the project team, agencies, and the public.
- Provide early and continuous opportunities for the public to share values, understand the opportunities and constraints within the study area, develop potential solutions, and raise issues and concerns to be considered.
- Inform and encourage community participation.
- Improve the public involvement process by measuring the effectiveness and modifying methods based on evaluation.

This PIP outlines how and when interested parties and stakeholders can provide and receive information throughout the life of the LRTP.

AGENCY INVOLVEMENT

Steering Committee (SC): Includes the MPO staff, City of Billings staff, Yellowstone County staff, MDT staff, MET Transit staff, Lockwood Steering Committee, and elected officials from the City of Billings City Council, County Commission, and YCPB;

- Role: Attend monthly meetings with the consultant team. Review and provide comments on the project deliverables. Provide guidance and decision making to the plan development.

Technical Advisory Committee (TAC): Includes staff and representatives from the MPO, City of Billings, Yellowstone County, MET Transit, and MDT.

- Role: Provide a technical resource and sounding board to the plan development.

Elected Officials: Billings City Council, City/County Planning Board, Yellowstone County Board of Planning, and Yellowstone County Commission.

- Role: Provide insights to the project and support for plan adoption.

Policy Coordinating Committee (PCC): Includes the Board of Yellowstone County Commissioners, City of Billings Council, Yellowstone County Board of Planning, MDT, and FHWA.

- Role: Provide insights to the plan development and adopt the plan.

Resource Agencies (RA): Resource agencies provide experience and knowledge that is vital to developing a successful, community-driven, multimodal plan. These agencies will be notified of all public involvement opportunities and given the option for interviews/in-person meetings.

- Role: Provide insights to the plan development.

TOOLS AND RESOURCES

Branding and Logo

Consultant will develop a logo, color scheme and reporting templates in order to develop brand awareness and cohesiveness with plan materials.



- Evaluation: Branding implemented in all plan materials

Webpage

The primary purposes of the website are to provide a public, 24-hour source for project information and to act as a location for the public to provide comments. The website will be used to post draft and final deliverables, host links to online surveys and mapping, invite and record public comments, and information on upcoming meetings. This will be an update to the existing website:

www.BillingsLRTP.com

- Evaluation: Number of website visits

Media Coordination

Outreach will be conducted to appropriate media outlets, to disseminate information regarding information on the plan and advising the community of public involvement opportunities.

- Evaluation: Number of news articles and media events

Print Materials

The consultant team will prepare two (2) meeting mailers for each public informational meeting (PIM). The meeting mailers will introduce the project, overall schedule, and identify the date and location for the meetings. The two meeting mailers will be postmarked and distributed by the MPO. With input from the consultant team, the MPO will develop four (4) news releases for notifications about the plan development.

Youth Engagement

Involving elementary, middle, and high school teachers is a good way to inform and involve not only students, but also their parents. Social studies and government classes provide a good connection to this planning effort. Youth involvement is also a recommendation of Environmental Justice/Title VI best practices. The consultant team plans to provide outreach to two schools during the plan development.

- Evaluation: Number of students participating.

Online Engagement

A combination of online surveys and an interactive web map will be developed using the tool MetroQuest to solicit input from the public and stakeholders on the existing transportation deficiencies and successes and proposed projects included in the plan. This online survey will be linked to the website and available leading up and during the two PIMs. The survey questions will be the same ones used at the PIMs.

Two interactive maps/surveys will be developed. The first will occur during the goal setting & needs identification phase and the second map will be used during the project identification phase to present proposed projects for comment and prioritization.

- *Evaluation: Number of unique comments received*

Stakeholder Interviews

Consultant will set up, attend, and summarize one-on-one meetings with individuals and groups who have a key interest or stake in the plan. The purpose of these meetings will be to:

- Introduce the plan
- Identify existing transportation deficiencies and/or concerns that should be addressed with the plan
- Gather input on the proposed projects included in the plan

Meetings will be scheduled with several organizations. Consultant will coordinate with the MPO to identify organizations and attend these stakeholder interviews.

- *Evaluation: Feedback collected from stakeholders; stakeholders continued involvement.*

Public Informational Meetings

Two (2) public informational meetings (PIMs) are planned during the development of this plan. **These meetings are tentatively scheduled for Spring and Summer 2018.**

The Spring PIM will provide the public an opportunity to review and provide input on the following three items:

1. What transportation projects have been completed since the 2014 LRTP?
2. What transportation deficiencies exist today?
3. What would you like to see for the future transportation system?

The Summer PIM will provide the public an opportunity to review and provide input on the following items: project list, evaluation, prioritization, and funding.

The PIMs are planned to be held in the study area. Summary documents of each PIM and the public comments received will be prepared for each PIM. The consultant team will work with the MPO to ensure the PIMs are appropriately and effectively advertised to the public through a project mailer, news releases, and project website.

- *Evaluation: How many attendees; How they heard about the meeting; Demographics of participants (age, gender, race); Number of comments received*

Social Media (Plan and online survey engagement)

Social media content and graphics will be developed and provided to MPO to publish on their existing social media networks to provide updates on the plan and to promote meetings and opportunities for online engagement.

- *Evaluation: Number of social media engagements*

PUBLIC INVOLVEMENT ACTION PLAN

Activity	Major Task	Responsibility
SC Meetings	Member Recruitment	MPO
	Schedule meeting locations, date & time	MPO with KAI support
	Prepare meeting materials and meeting summaries	KAI
	Facilitate and lead meetings	KAI with MPO support
TAC/City Council/P&Z/PCC Meetings	Schedule meeting locations, date & time	MPO with KAI support
	Prepare meeting materials, facilitate and lead meetings and prepare meeting summaries	KAI
Branding and Logo	Prepare plan logo, color scheme, and document templates	KAI
Webpage	Update and maintain	KAI
Youth Engagement	Identify school and classroom opportunities	MPO with KAI support
	Develop materials and meeting summary	KAI
Media Coordination	Develop and distribute media releases	KAI with MPO support
Print Materials	Develop project flyer and meeting announcements	KAI with MPO support
Online Engagement (including MetroQuest)	Develop two online survey, mapping tools and comment summaries	KAI
Stakeholder Interviews	Develop stakeholder list	MPO with KAI support
	Schedule, conduct and summarize interviews	KAI
Public Information Meetings	Schedule meeting location, date & time	MPO with KAI support
	Notifications and media releases	KAI with MPO support
	Technical and written materials and displays, sign in and comment sheets, facilitate and lead meeting, and prepare meeting summaries	KAI
	Prepare social media content and graphics	KAI
Social Media	Post and public content and provide analytics	MPO with KAI support

TIMELINE FOR PUBLIC INVOLVEMENT

The proposed timeline for public involvement was developed to meet the LRTP plan adoption deadline of Fall 2018.





Appendix M

Public Comment Summary #1



MEMORANDUM

Date: June 12, 2018

Project #: 21353

To: Steering Committee

From: Andy Daleiden, PE

Project: 2018 Billings Urban Area Long Range Transportation Plan

Subject: Public Comment Summary #1

This memorandum summarizes public feedback received to date for the 2018 Billings Urban Area Long Range Transportation Plan (LRTP). Public comments were collected through middle school outreach, an online survey and a public open house in May 2018.

INTRODUCTION

The Yellowstone County Metropolitan Planning Organization (MPO) conducted a public outreach effort in order to introduce the LRTP and collect feedback on goals, objectives and needs. Outreach efforts included:

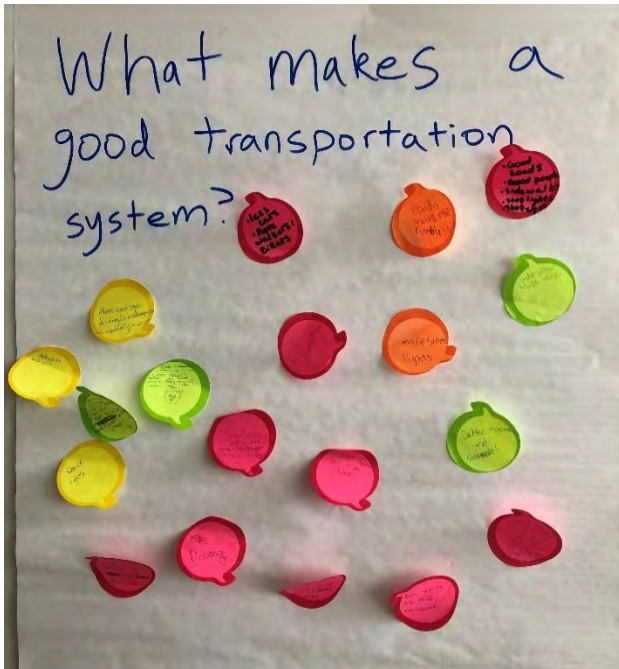
- Riverside Middle School classroom outreach
- Public open house
- Online survey

MIDDLE SCHOOL OUTREACH

Kittelson & Associates, Inc. (Kittelson) presented to three classes (two geography classes and one social studies class) at the Riverside Middle on Tuesday May 15th, 2018. These three classes included approximately 50 students. Kittelson presented information on transportation planning and then asked the students to map how they traveled to school and to after school or weekend activities. The students mapped the routes they took, and color coded them by what mode of transportation they used (see images on next page). The students then discussed issues about these routes. Next the students were asked “What makes a good transportation system?”. They wrote these ideas down on sticky notes



and placed them on a board for group discussion (see comment example below). These notes were also presented at the public open house.



Their ideas for a good transportation system included (for detailed comments from this outreach refer to Appendix A), but not limited to:

- More sidewalks
- Improve sidewalks
- Test drivers every 20 years
- Hoverboard
- Fix potholes
- More buses
- Better signal timing

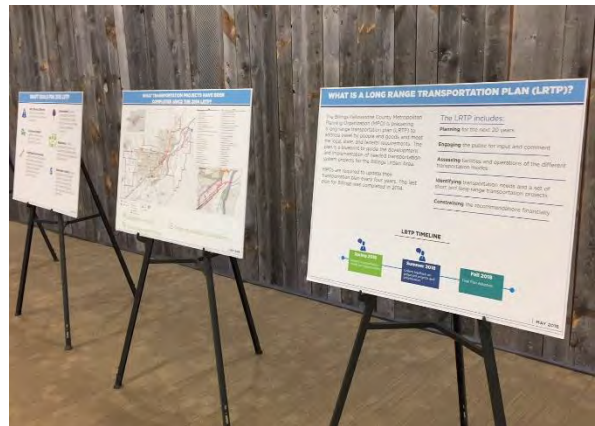


PUBLIC OPEN HOUSE

The public open house was held at the Billings Library from 4 pm to 7 pm. The purpose of the open house was to give the public an opportunity to learn about the plan, review technical information about the LRTP, and provide comment on the following three items:

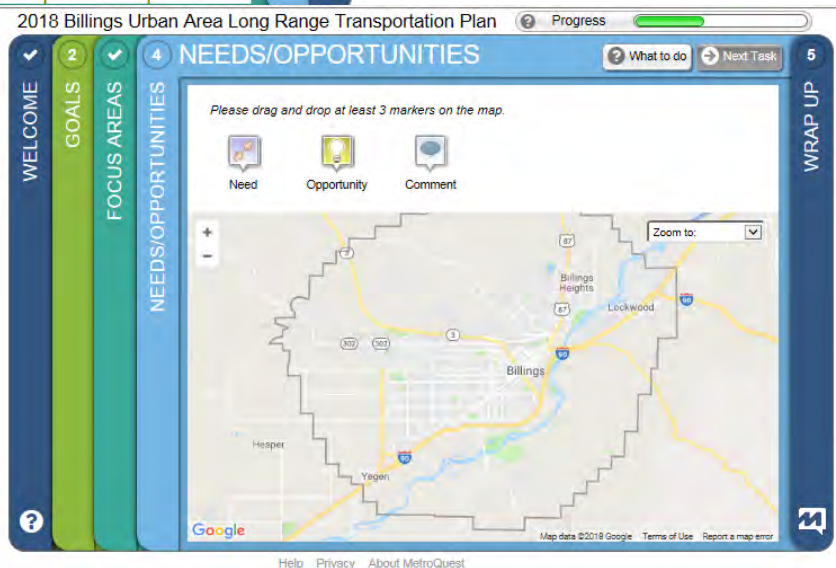
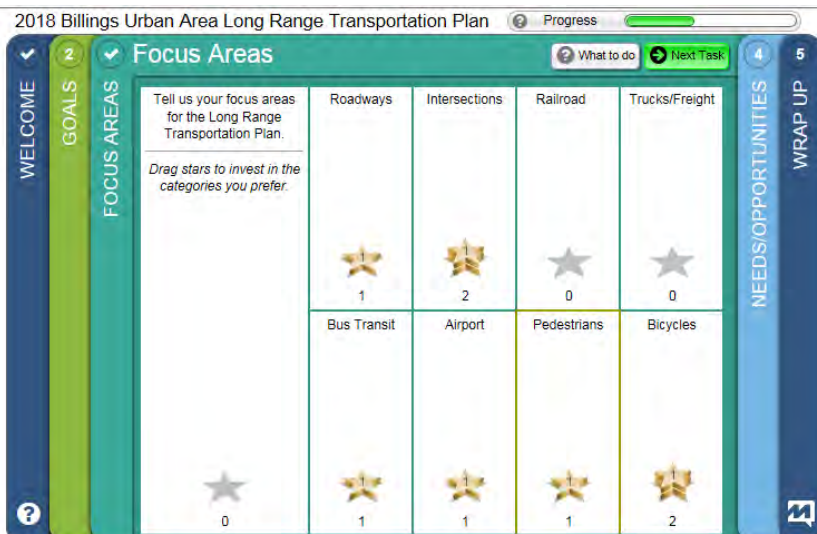
- What goals are most important to you for the plan?
- What transportation needs and opportunities exist today?
- What you like to see for the future transportation system?

Attendees were able to review materials on the LRTP, provide mapped comments regarding needs and opportunities, and provide feedback on goals and focus areas. 25 people signed into the meeting, 32 map comments were received and three comment sheets. Appendix B includes the open house display boards. Appendix C includes the completed comment sheets from the open house. Appendix D includes the sign-in sheet from the open house.



ONLINE SURVEY

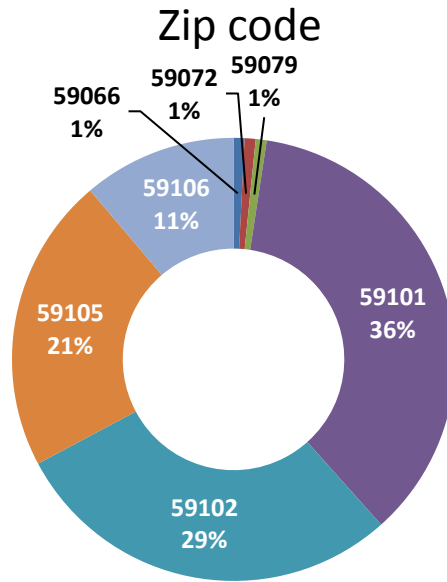
An online survey was developed to provide information on the LRTP, collect feedback on goals, priorities and allow users to map their comments regarding needs and deficiencies. The same questions were asked on the survey as at the public open house. The online survey ran from May 14th to May 29th and had 139 participants. The site is no longer active, but the demo site can be viewed at: <https://2018BillingsLRTP-demo.metroquest.com>



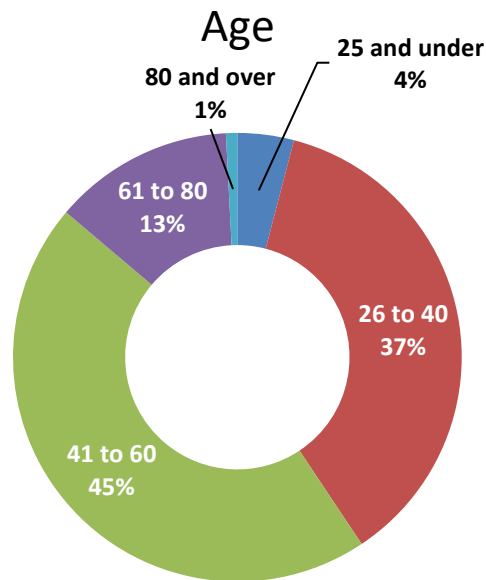
COMMENT SUMMARY

DEMOGRAPHICS

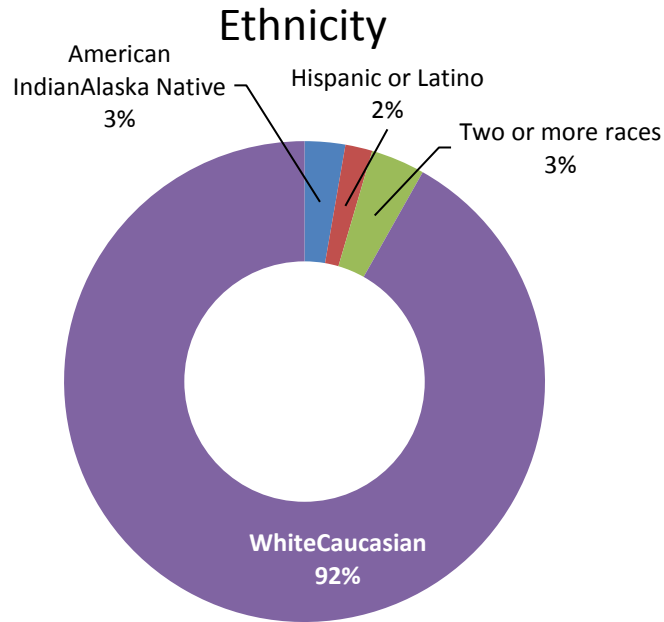
1) What zip code do you live in?



2) What is your age?



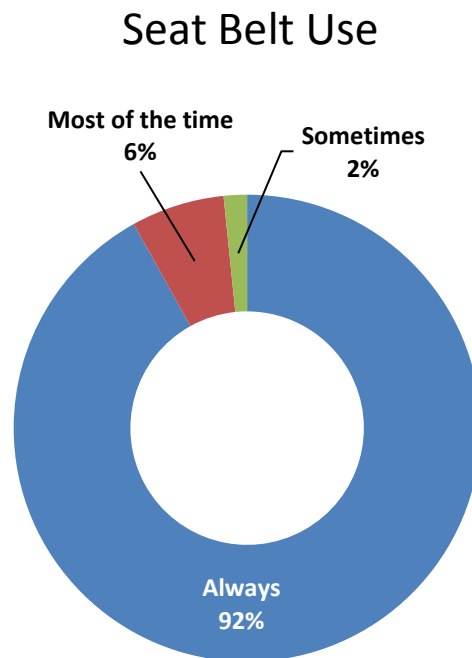
3) What is your ethnicity?



US Census Data Demographics for Yellowstone County

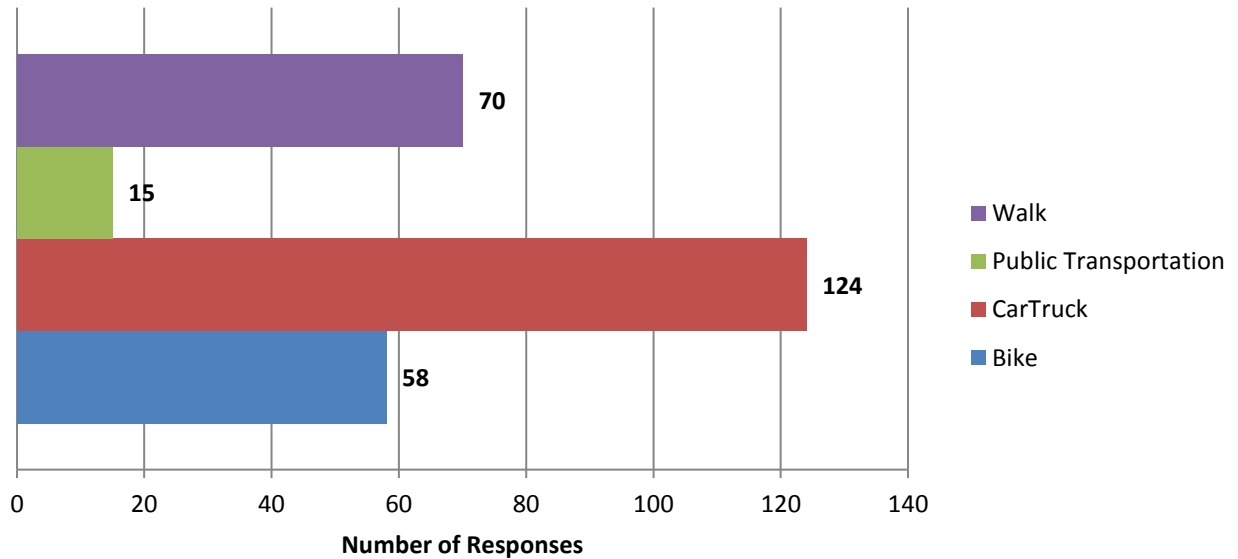
White/Caucasian:91% | American Indian/Alaska Native:4.6% | Hispanic or Latino:5.5% | Two or more races:2.9%

4) How often do you wear a seat belt?



5) What mode of transportation do you use (check all)?

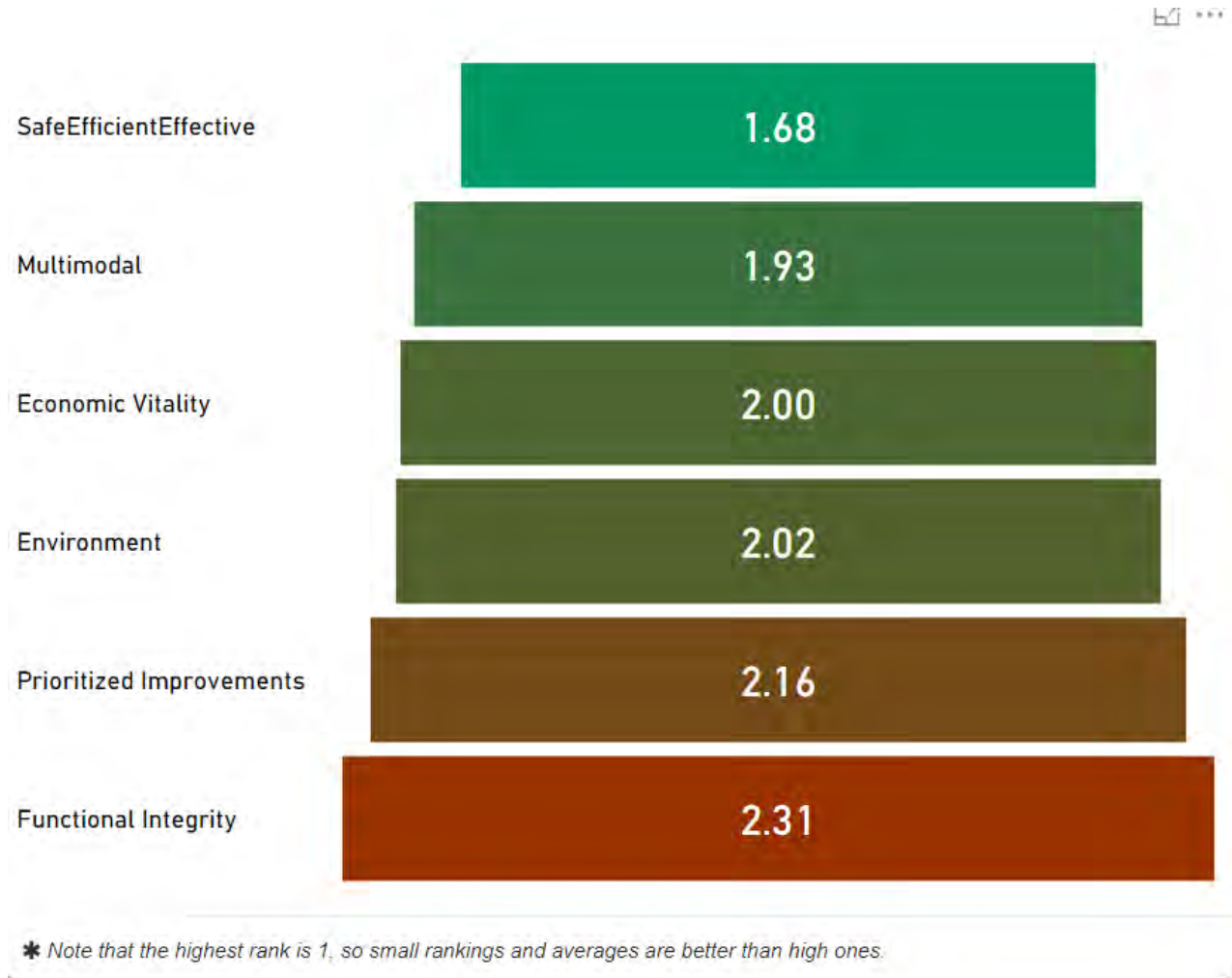
Mode of Transportation



GOALS

Prioritizing goals helps the MPO guide future project prioritization. Survey respondents were asked to rank their top 3 transportation goals.

- **Safe, Efficient, Effective:** Develop a transportation system that is safe, efficient, and effective
- **Functional Integrity:** Optimize, preserve, and enhance the existing transportation system
- **Prioritized Improvements:** Identify and prioritize projects that mitigate deficiencies, maximize the use of existing facilities, and balance anticipated needs with available funding
- **Environment:** Develop a transportation system that protects the natural environment and promotes a healthy, sustainable
- **Multimodal:** Create a transportation system that supports the practical and efficient use of all modes of transportation
- **Economic Vitality:** Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce

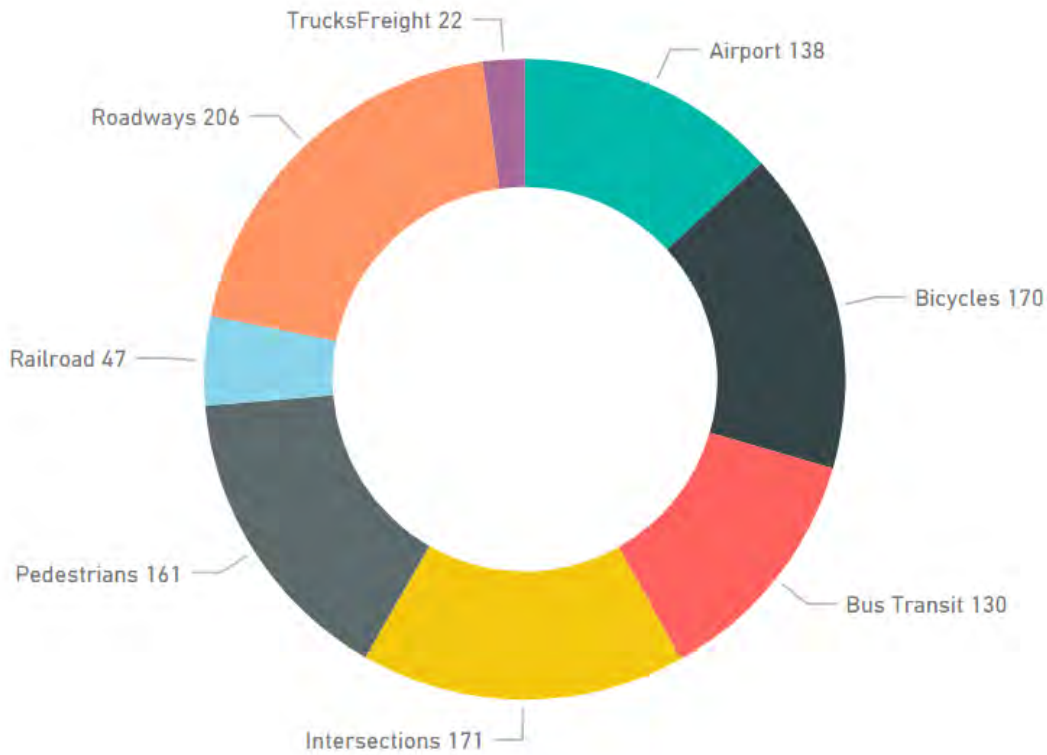


FOCUS AREAS

Survey respondents were asked to identify their focus areas for the Billings Urban Area Long Range Transportation Plan.

- Roadways
- Intersections
- Railroad
- Truck/Freight
- Bus/Transit
- Airport
- Pedestrians
- Bicycles

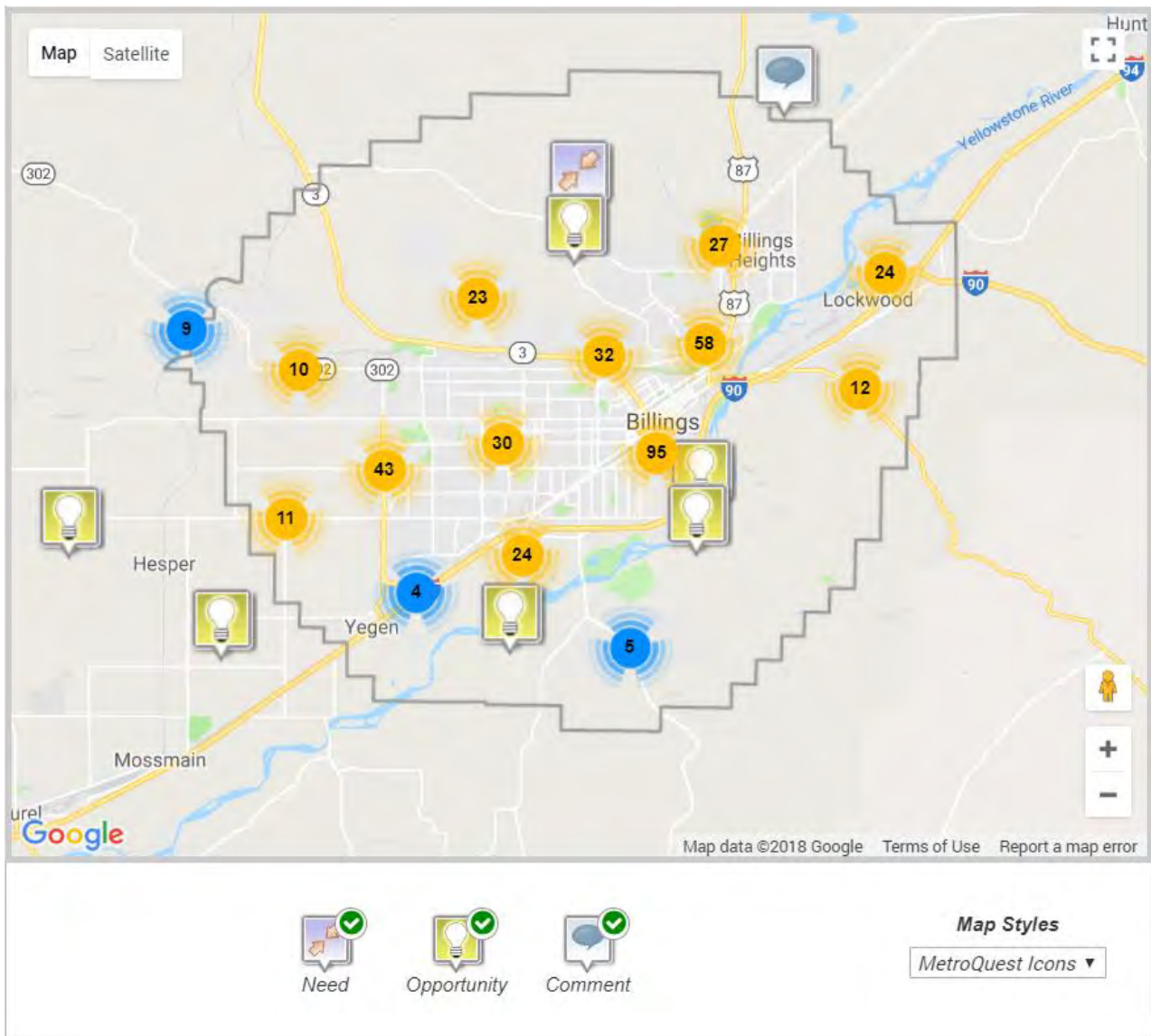
The chart on the next page summarizes the number of chips/coins dropped into a focus area. The focus areas with the most chips/coins were roadways, intersections, and bicycles followed by pedestrians, airport, and bus transit followed by railroad and truck/freight.



NEEDS AND OPPORTUNITIES

Survey respondents were asked to use the map to tell us about needs and opportunities with the existing transportation system in the Billings Urban Area. A spreadsheet of these comments is included in Appendix E. In total, 418 map comments were provided by respondents, which fell into the following categories: 89 general comments, 103 comments on opportunities, and 226 comments on needs. The map on the next page provides a snapshot of where comments were provided within the study area.

Kittelson is evaluating the comments in more detail for further use in the development of the project list for the LRTP. In short, the comments, needs and opportunities included a range of issues and project types, including but not limited to pedestrian crossings, bicycle facilities, more bus frequency, at-grade railroad crossings enhancements, roadway extensions, new roadway connections from Highway 3 to the Interstate, and intersection enhancements.



Appendix A Middle School Outreach
Comments - What Makes a
Good Transportation System?

Middle School Comments – What Makes a Good Transportation System?

1. More bridges over train track
2. More sidewalks
3. More sidewalks
4. Hoverboards
5. Good Roads
6. Good Drivers
7. More plows
8. More and better drains
9. Better sidewalks
10. More sidewalks
11. Less traffic
12. Using less non-renewable sources
13. Less red light running
14. Better safety at intersections
15. Bike paths
16. Better passage ways
17. More alternate routes
18. Flying cars
19. More available ride services
20. More available ride services
21. Better sidewalks
22. Not having to worry about getting hit
23. Underground walk ways
24. Feeling safer
25. Sidewalks in more places
26. A driving test every 20 years
27. Less Cars
28. More walkers, bikers
29. Safer neighborhoods
30. More street lights
31. Transit
32. Less potholes
33. More drains
34. Stop Signs
35. Safety/Personal Safety
36. Less drunks
37. More than one way to get somewhere
38. Subway trains
39. Road maintenance
40. Transportation out of town
41. Sidewalks
42. Pedestrian Crossings
43. Train Crossings
44. Crosswalks and more bike roads
45. Busses coming more
46. Less cars
47. More cautious driving (less dangerous especially in the winter)
48. Drivers that aren't from Billings
49. Less expensive
50. Guardrails and rumble strips
51. Better draining system
52. Slow down signs near neighborhoods
53. More sidewalks
54. Stop Signs
55. Quick lights
56. No major traffic
57. More routes to places
58. accessible
59. Safe (lots of stop signs)
60. Sidewalks
61. Better crosswalks and sidewalks

62. Signs that say "yield to pedestrians"
63. Less drunks
64. Better roads
65. Good Roads
66. Good people
67. Sidewalks
68. Stop lights
69. Stop Signs
70. Less crammed streets
71. bike lanes
72. Good roads
73. No pot holds
74. Stop signs
75. Stop lights
76. Safe driving
77. Good sidewalks
78. Less rocks
79. More stop signs
80. Fixed roads
81. More sidewalks
82. Better sidewalks
83. Less cars
84. Some people can ride bikes
85. Helicopters and jets
86. Safer old drivers
87. Less pot holes so my head doesn't hit
the car roof
88. Heated roads
89. Moving sidewalks
90. Teleportation
91. More careful drivers
92. No drunk drivers
93. Stop lights that don't change when no
one is there
94. Better stop lights
95. Calm streets
96. Safe sidewalks
97. More crosswalks
98. I want to see more bike lanes

Appendix B Public Open House #1
Display Boards

WELCOME!

Thank you for attending tonight's open house for the Billings Urban Area Long Range Transportation Plan. The purpose of this open house is to give you an opportunity to learn about the plan, review technical information, and provide comment on the following three items:

- What goals are most important to you for the plan?
- What transportation needs and opportunities exist today?
- What would you like to see for the future transportation system?

Who Is Involved?



The primary sounding board is the Steering Committee (SC), which includes representatives from the above agencies. Public involvement is a major contributor to the plan development.

The consultant team for the project includes Kittelson & Associates, Inc. and DOWL.



WHAT IS A LONG RANGE TRANSPORTATION PLAN (LRTP)?

The Billings-Yellowstone County Metropolitan Planning Organization (MPO) is preparing a long range transportation plan (LRTP) to address travel by people and goods and meet the local, state, and federal requirements. The plan is a blueprint to guide the development and implementation of needed transportation system projects for the Billings Urban Area.

MPOs are required to update their transportation plan every four years. The last plan for Billings was completed in 2014.

The LRTP includes:

Planning for the next 20 years

Engaging the public for input and comment

Assessing facilities and operations of the different transportation modes

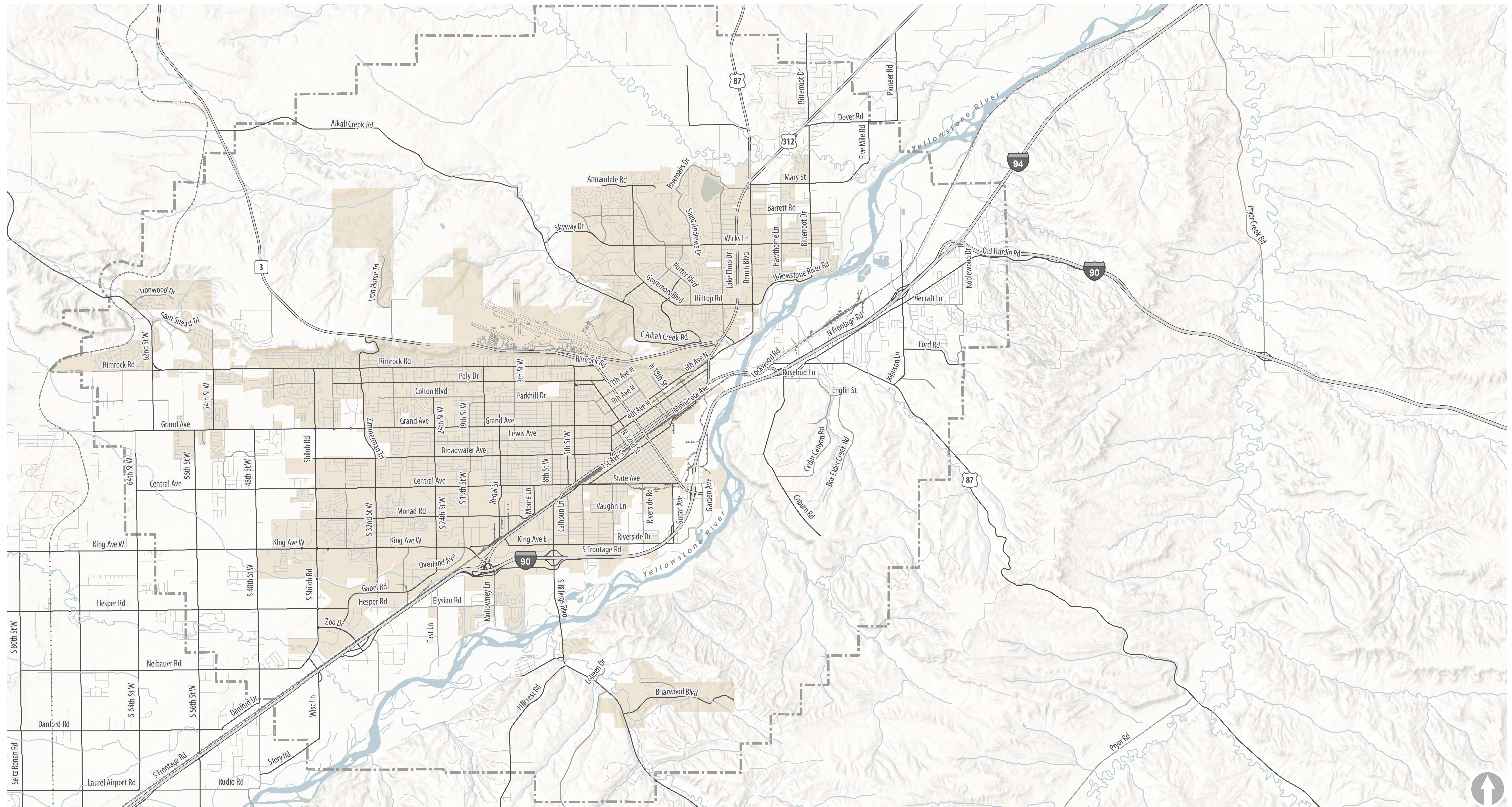
Identifying transportation needs and a set of short and long-range transportation projects

Constraining the recommendations financially

LRTP TIMELINE



STUDY AREA



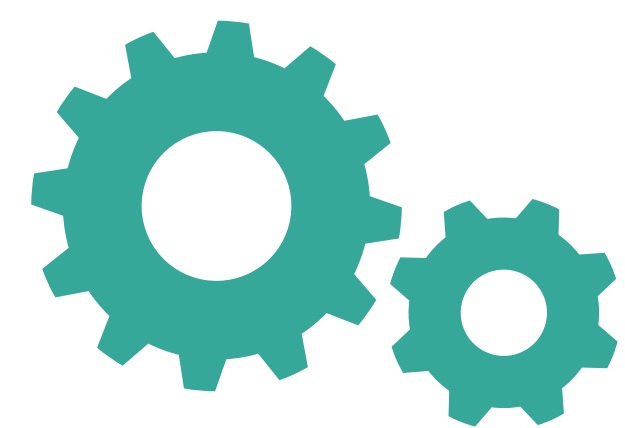
Study Area City of Billings

DRAFT GOALS FOR 2018 LRTP



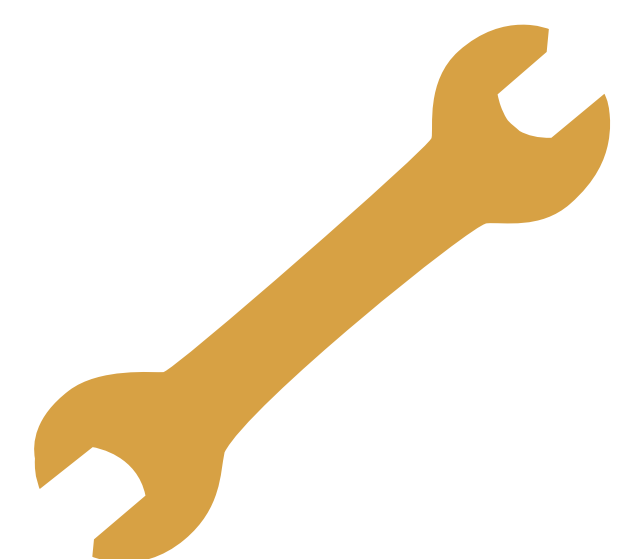
Safe, Efficient, Effective

Develop a transportation system that is safe, efficient, and effective



Functional Integrity

Optimize, preserve, and enhance the existing transportation system



Prioritized Improvements

Identify and prioritize projects that mitigate deficiencies, maximize the use of existing facilities, and balance anticipated needs with available funding



Environment Develop a transportation system that protects the natural environment and promotes a healthy, sustainable community

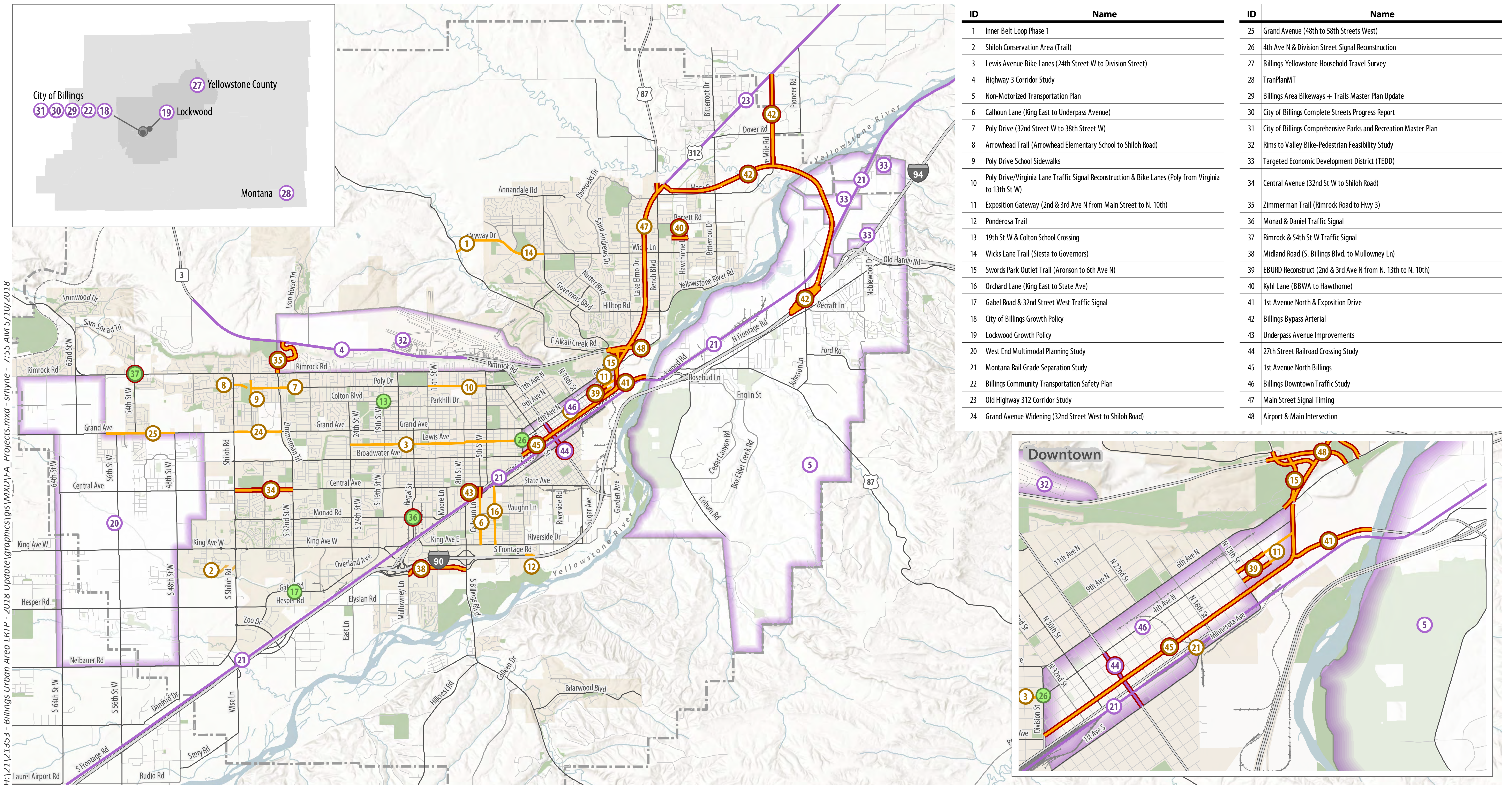


Multimodal Create a transportation system that supports the practical and efficient use of all modes of transportation



Economic Vitality Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce

WHAT TRANSPORTATION PROJECTS HAVE BEEN COMPLETED SINCE THE 2014 LRTP?



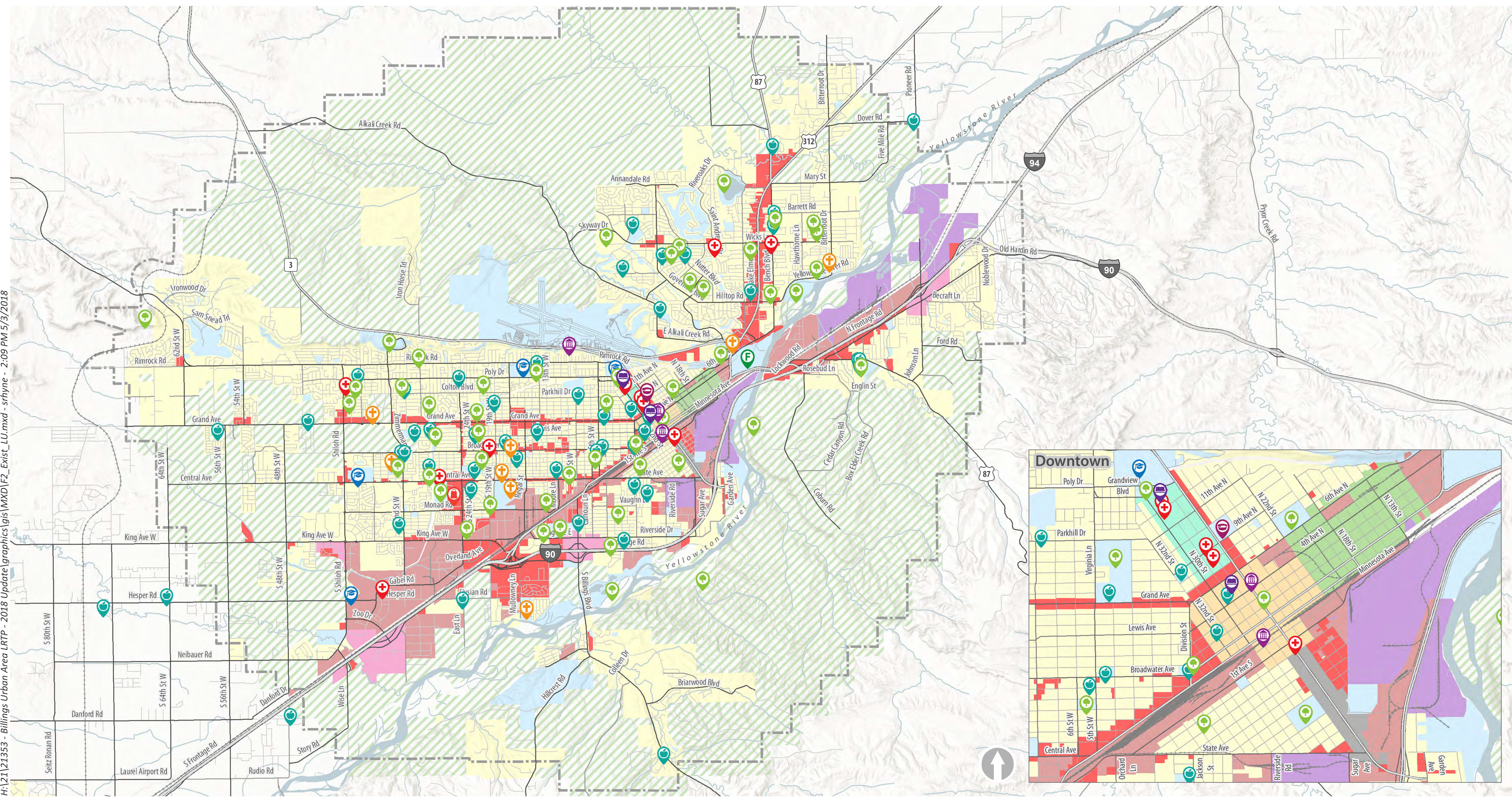
18 completed projects

15 Ongoing projects/studies/plans

15 completed studies/plans

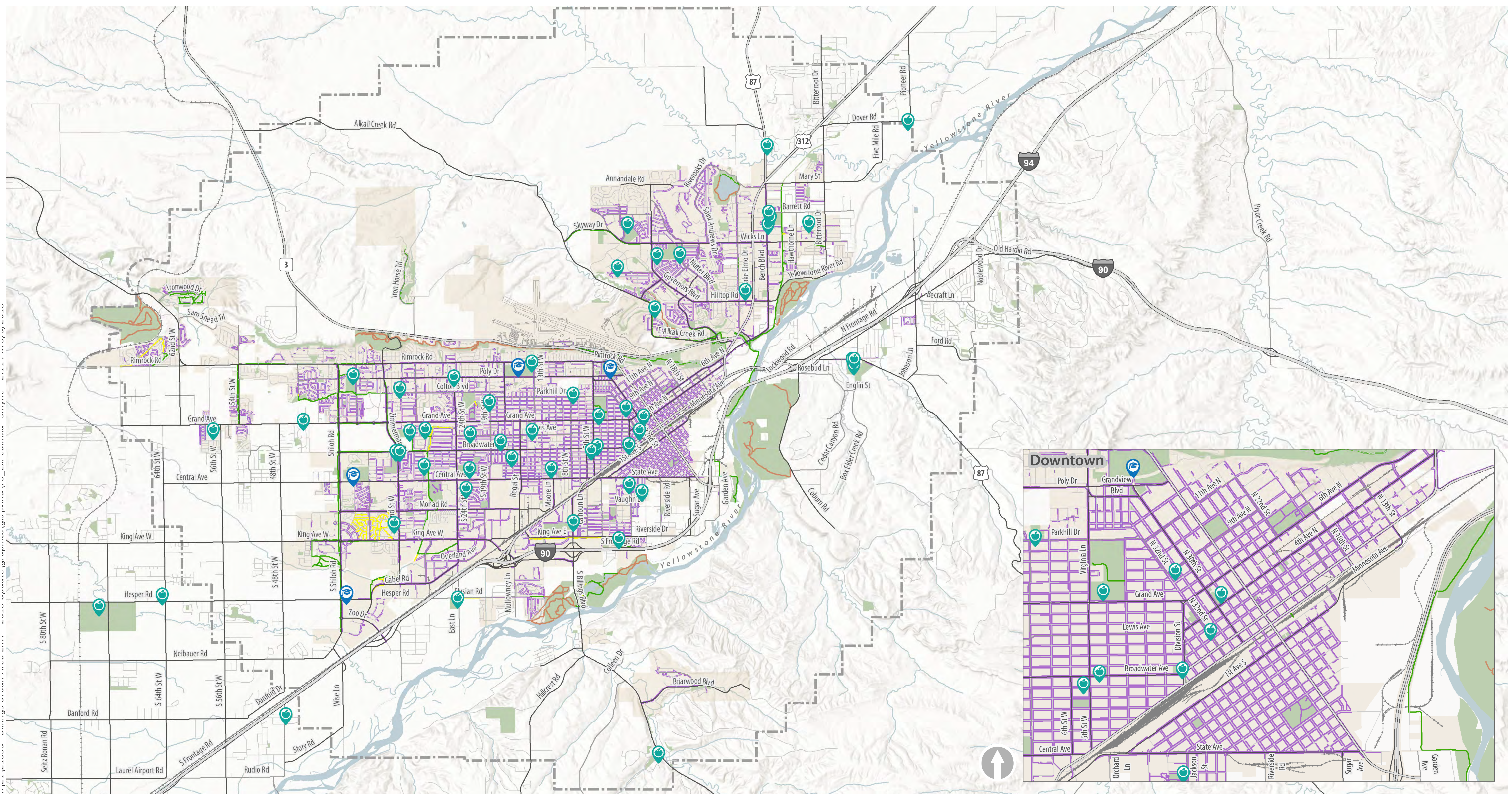
EXISTING LAND USE

HI:12121353 - Billings Urban Area L RTP - 2018 Update (graphics) [MXD] F2_Exist_LU.mxd - srhyme - 2:09 PM 5/3/2018



- | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

EXISTING PEDESTRIAN AND TRAIL FACILITIES

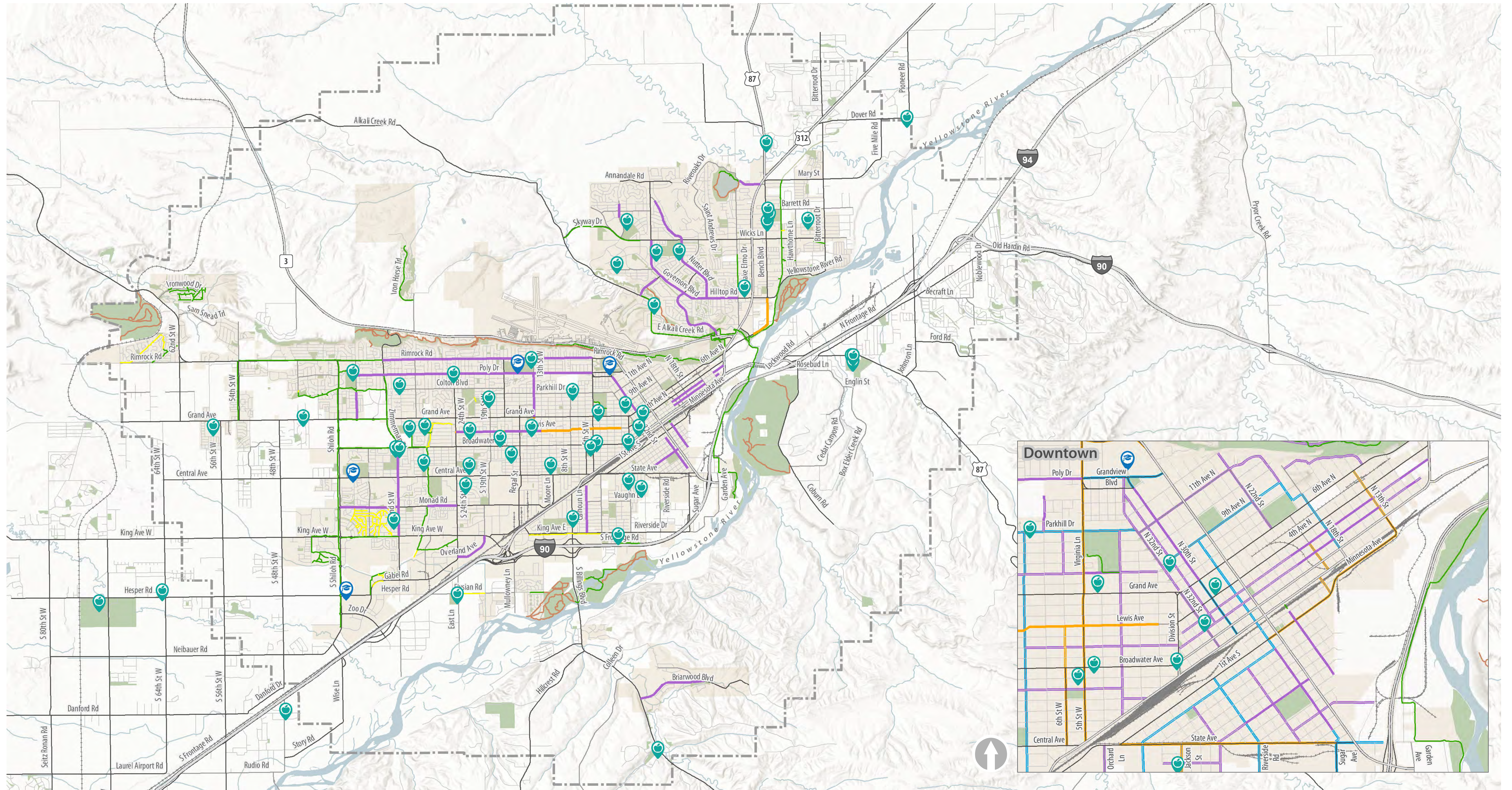


- Shared Use Path
- Neighborhood Trail
- Unpaved Trail
- Sidewalks
- College
- Schools
- Park
- Study Area
- City of Billings

660 Miles of sidewalks
11 Miles of neighborhood trails

45 Miles of shared use paths
3.3% Billings residents commute by walking*

EXISTING BIKEWAYS AND TRAIL FACILITIES



- Bike Lane
- Shared Use Path
- Shared Lane Marking
- Neighborhood Trail
- Unpaved Trail
- College
- Schools
- Study Area
- City of Billings
- Park

26 Miles of bike lanes

2.6 Miles of shared lanes

11 Miles of neighborhood trails

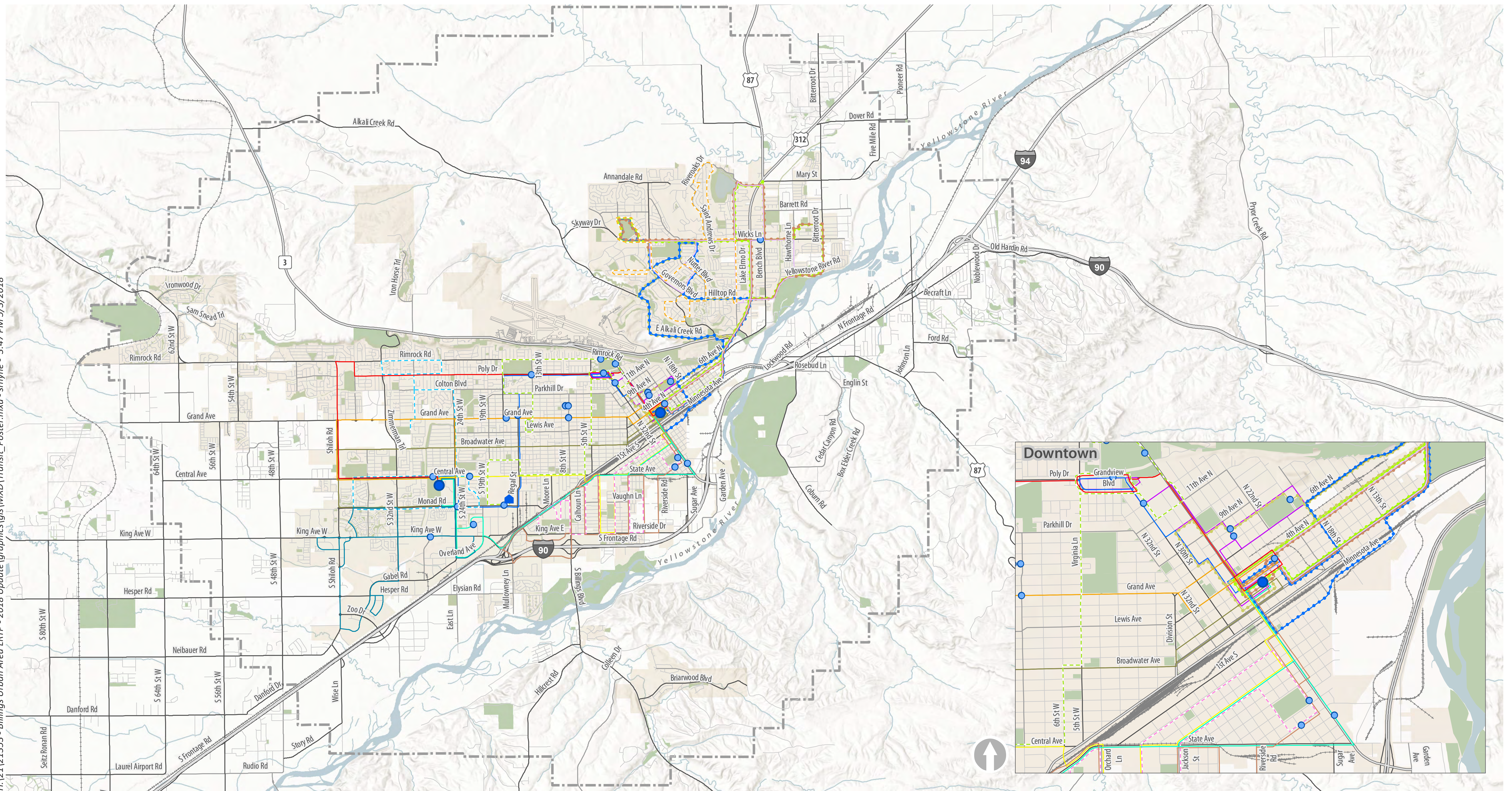
45 Miles of shared use paths

1% Billings Residents Commute by bike*

*2010-14 ACS Data

EXISTING BUS ROUTES

H:\121121353 - Billings Urban Area LRTP - 2018 Update\graphics\gis\Transit\Poster_mxd - srhnye - 3:47 PM 5/3/2018



* Bus services operating on Saturday

18 Routes

1% Billings Residents Commute by bus*

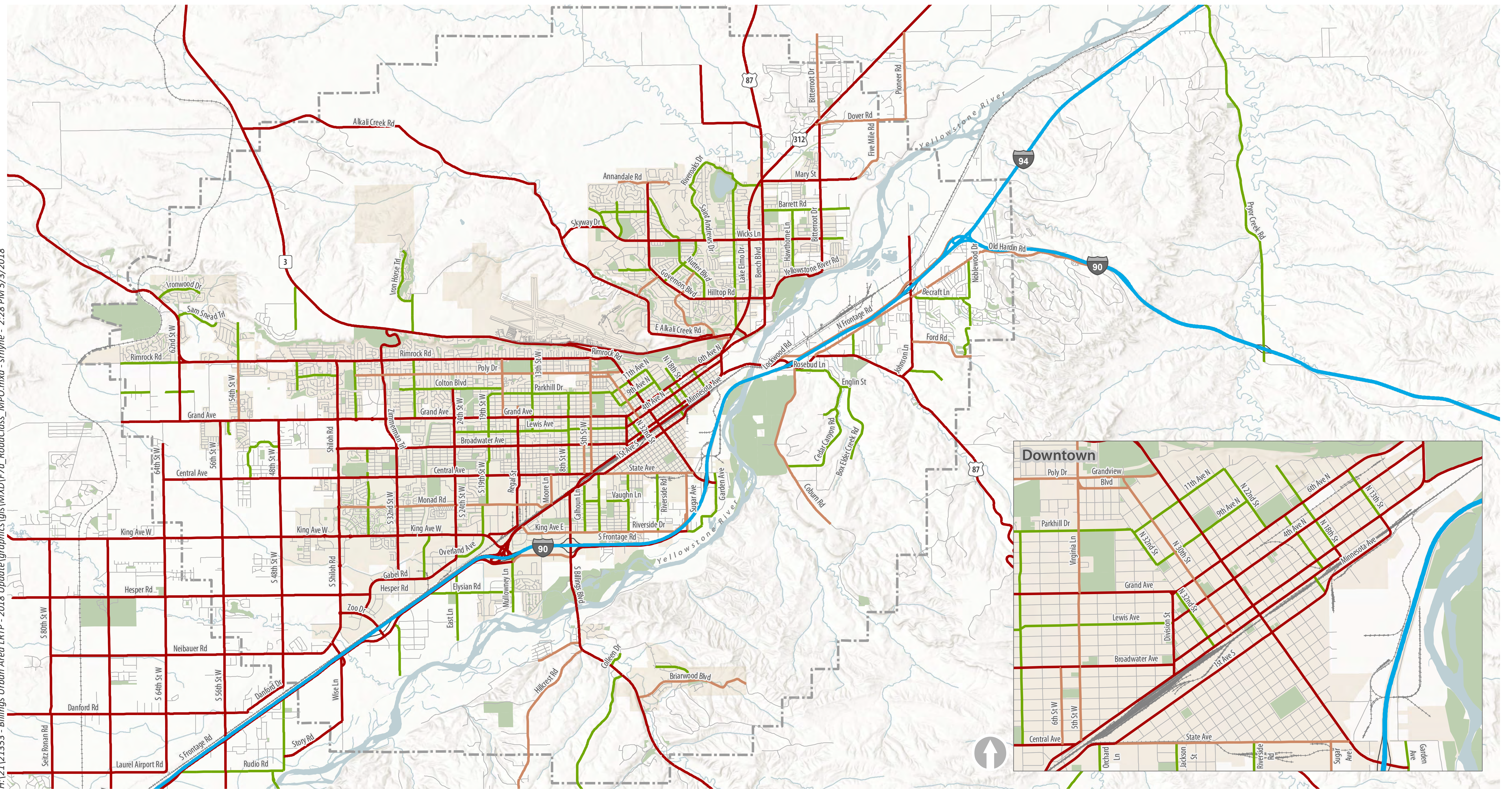
5:50a-6:50p Weekday hours

8:10a-5:45p Saturday hours

*2010-14 ACS Data

EXISTING ROADWAY FUNCTIONAL CLASSIFICATION

H:\12121353 - Billings Urban Area L RTP - 2018 Update\graphics\gis\MXD\F7a_RoadClass_MPO.mxd - sryne - 2:28 PM 5/3/2018



- | | | |
|-------------------------------|----------------|------------------|
| Roadway Classification | Minor Arterial | Study Area |
| Interstate | Collector | Park |
| Principal Arterial | Local Streets | City of Billings |

970 Miles of roads

18 Roundabouts

173 of signalized intersections

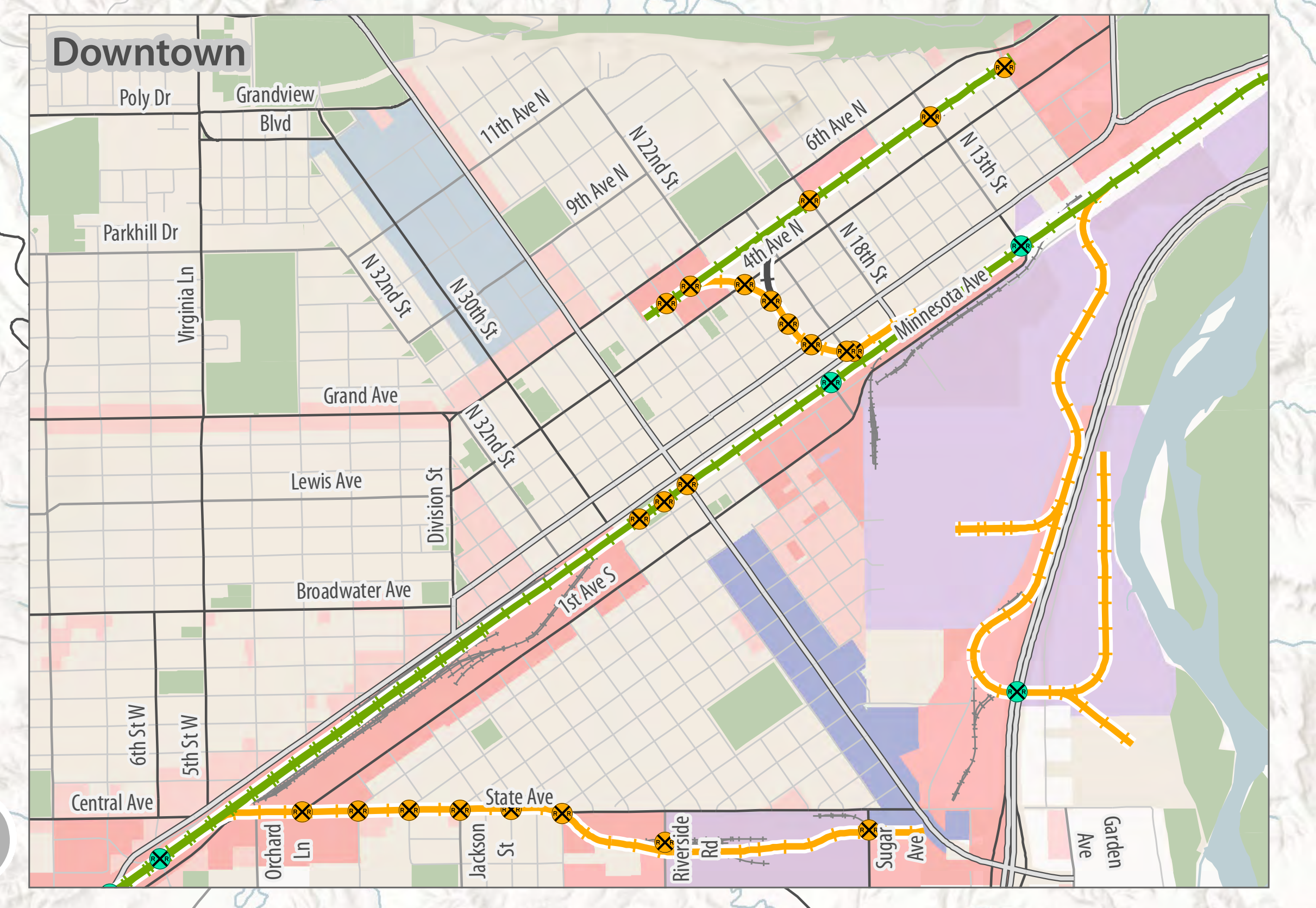
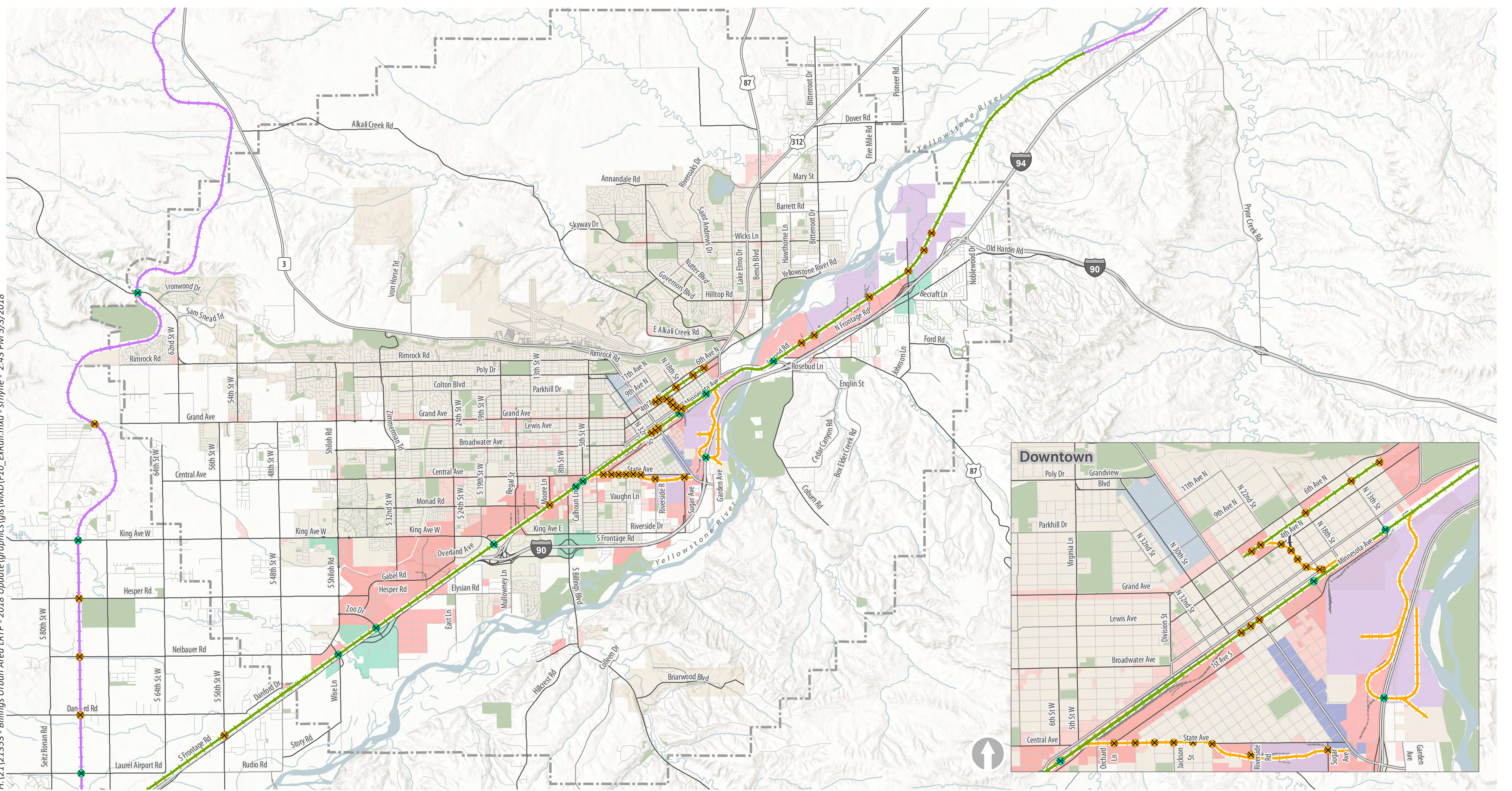
Freeways serve high speed, long distance travel movements and provide limited access to adjacent lands.

Arterials serve higher volumes of traffic, particularly through-traffic, at higher speeds.

Collectors carry locally generated traffic at lower speeds.

EXISTING RAILROAD FACILITIES

H:\21121353 - Billings Urban Area LRTP - 2018 Update\graphics\GIS\MMD\F10_Extra\mxd - srhnye - 2:43 PM 5/3/2018



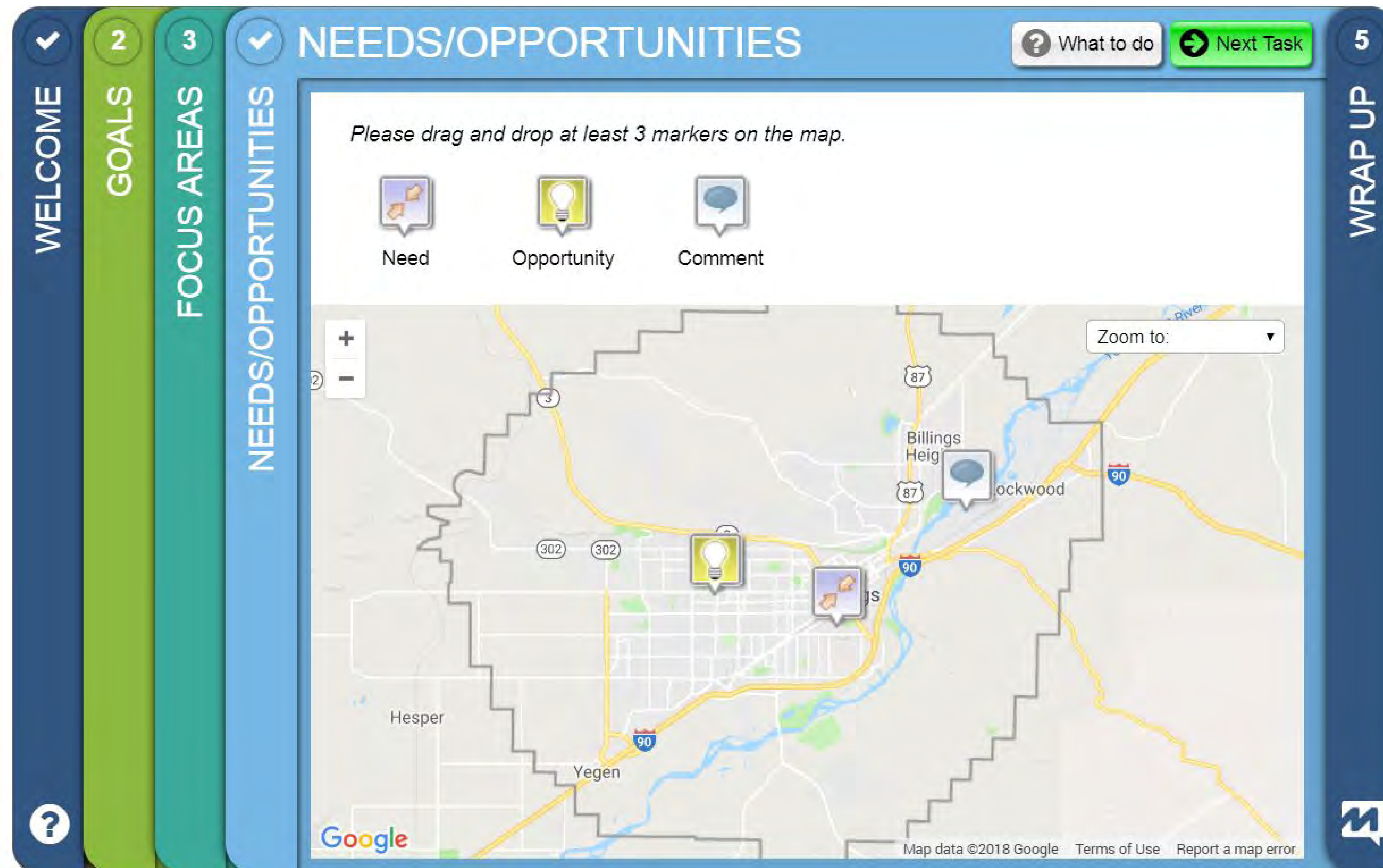
- | | | | | |
|--------------------------|------------------------------|------------|-----------------------|----------------------------|
| At Grade Crossing | Burlington Northern Santa Fe | Study Area | Commercial | Medical Corridor Permit |
| Grade Separated Crossing | Montana Rail Link | Park | Commercial/Industrial | South 27th Street Corridor |
| Spur | | | Heavy Industrial | Entryway |
| | | | Light Industrial | City of Billings |

36 at-grade railroad crossings 12 grade-separated railroad crossings

HELP US IDENTIFY THE TRANSPORTATION NEEDS AND OPPORTUNITIES

Based on your understanding of the transportation system, please use the numbered stickers and map to identify the location of needs and opportunities.

Additionally, we have an interactive survey tool (screen shot below) set-up on the iPad that you can use to identify needs and opportunities.



HELP US IDENTIFY THE FUTURE TRANSPORTATION VISION FOR THE BILLINGS-URBAN AREA

In the next phase of the LRTP, a short- and long-range project list will be identified to address current and future transportation needs. This project list will be financially constrained. To assist the project team in identifying the vision and project priorities, please use your comment sheet to identify the three areas that are most important to you.



Roadways



Trucks/Freight



Pedestrians



Intersections



Bus Transit



Bicycles



Railroad



Airport

NEXT STEPS

Stay Involved

- Sign up on the “Notify Me” list on the City’s website: <http://ci.billings.mt.us/>
- Attend future public meetings
- Check back frequently for updates on our project website at www.billingslrtp.com
- Provide comments via our interactive web map survey: <http://maps.kittelson.com/billingslrtp>
- Contact **Scott Walker** (MPO) at 406.657.8246 or via email at walkers@ci.billings.mt.us

What is Next?

- Summarize comments from Public Informational Meeting #1
- Develop and analyze year 2040 conditions
- Prepare a draft list of short and long range projects
- Present materials at Public Informational Meeting #2 (September 2018)
- Prepare draft plan for review and comment

All displays and handouts from tonight will be posted on the project website at www.billingslrtp.com for review and comment.

Thank you for participating!

Appendix C Public Open House #1
Comment Sheets

What zip code do you live in? 59101

What modes of transportation do you use? (check all that apply)

- Car/Truck/Motorcycle
- Bike
- Walk
- Public Transportation
- Other: _____



Goals

Prioritizing goals helps the MPO guide future project prioritization.

Please rank your top 3 transportation goals.

Rank Top 3 (1, 2, 3)	Goal
	Safe, Efficient, Effective: Develop a transportation system that is safe, efficient, and effective
	Functional Integrity: Optimize, preserve, and enhance the existing transportation system
	Prioritized Improvements: Identify and prioritize projects that mitigate deficiencies, maximize the use of existing facilities, and balance anticipated needs with available funding
	Environment: Develop a transportation system that protects the natural environment and promotes a healthy, sustainable
	Multimodal: Create a transportation system that supports the practical and efficient use of all modes of transportation
	Economic Vitality: Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce

Comments: WHEN BUILDING THE LOCKWOOD/HEIGHTS BYPASS
PLEASE START THE CONSTRUCTION ON THE ROADS IN LOCKWOOD
BEFORE WORKING ON THE BRIDGE. HAVING THE ROADS IN
LOCKWOOD BUILT WOULD ENCOURAGE BUSINESS DEVELOPMENT
IN THE AREA THAT PROBABLY WON'T MOVE IN UNTIL
THE MAIN ROADS ARE BUILT. THIS WOULD HELP BUILD
THE TAX BASE FOR THE SCHOOLS.

Focus Areas

Tell us your focus areas for the Long Range Transportation Plan. Check your top four (4) areas.

Check 4	Focus Area
	Roadways
	Intersections
	Railroad
	Trucks/Freight
	Bus Transit
	Airport
	Pedestrians
	Bicycles

Other Comments: _____

If you would like to receive project updates, please fill out the information below.

Name: PETER FREIVALDS
Email: PJAR42@GMAIL.COM

Please leave your completed comment sheet at the sign-in table. If you would like to complete it at a later date, please send it to the YCPB, 2825 3rd Avenue North, 4th Floor, Billings, MT 59101 or take the online survey at BillingsLRTP.com
While your comments are always welcome, they can be best utilized if received by May 29, 2018.
Thank you!

→ Send to Todd @Dowl

Focus Areas BILLINGS HEIGHTS

Tell us your focus areas for the Long Range Transportation Plan. Check your top four (4) areas.

Check 4	Focus Area
	Roadways
✓	Intersections
	Railroad
	Trucks/Freight
✓	Bus Transit
	Airport
✓	Pedestrians
✓	Bicycles

Other Comments: WALKABLE ACCESS TO GROCERY, HEALTH ENTERTAINMENT & HARDWARE/BLDG ETC. RAISED WALKWAYS & TOP & BOTTOM OF MAIN STREET FOR PEDESTRIAN & BIKE & STROLLER ETC. (MULTI FAMILY DWELLINGS NEED FOOT ACCESS!

If you would like to receive project updates, please fill out the information below.

Name: TANK FULLEN
 Email: hanwilful@yahoo.com

Please leave your completed comment sheet at the sign-in table. If you would like to complete it at a later date, please send it to the YCPB, 2825 3rd Avenue North, 4th Floor, Billings, MT 59101 or take the online survey at BillingsLRTP.com
While your comments are always welcome, they can be best utilized if received by May 29, 2018.

Thank you!



What zip code do you live in? 59105
 What modes of transportation do you use? (check all that apply)
 Car/Truck/Motorcycle
 Bike
 Walk
 Public Transportation
 Other: _____

Goals

Prioritizing goals helps the MPO guide future project prioritization.
 Please rank your top 3 transportation goals.

Rank Top 3 (1, 2, 3)	Goal
	Safe, Efficient, Effective: Develop a transportation system that is safe, efficient, and effective
	Functional Integrity: Optimize, preserve, and enhance the existing transportation system
3	Prioritized Improvements: Identify and prioritize projects that mitigate deficiencies, maximize the use of existing facilities, and balance anticipated needs with available funding
2	Environment: Develop a transportation system that protects the natural environment and promotes a healthy, sustainable
1	Multimodal: Create a transportation system that supports the practical and efficient use of all modes of transportation
	Economic Vitality: Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce

LAND TO ENCOURAGE NEW

Comments: FAMILY ACCESS TO BUSINESS BY
BICYCLES AND WALKABLE SAFE & CONTROLLED
& LIGHTED. (SIDEWALKS ARE TOO CLOSE TO
BUSY FAST STREETS -

What zip code do you live in? 59101

What modes of transportation do you use? (check all that apply)

- Car/Truck/Motorcycle
- Bike
- Walk
- Public Transportation
- Other: _____



Goals

Prioritizing goals helps the MPO guide future project prioritization.

Please rank your top 3 transportation goals.

Rank Top 3 (1, 2, 3)	Goal
3	Safe, Efficient, Effective: Develop a transportation system that is safe, efficient, and effective
	Functional Integrity: Optimize, preserve, and enhance the existing transportation system
	Prioritized Improvements: Identify and prioritize projects that mitigate deficiencies, maximize the use of existing facilities, and balance anticipated needs with available funding
	Environment: Develop a transportation system that protects the natural environment and promotes a healthy, sustainable
2	Multimodal: Create a transportation system that supports the practical and efficient use of all modes of transportation
1	Economic Vitality: Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce

Comments: Google Maps or App to help w/ MET

Make safer access to YDEF (Tumbleweed)

Focus Areas

Tell us your focus areas for the Long Range Transportation Plan. Check your top four (4) areas.

Check 4	Focus Area
✓	Roadways
	Intersections
	Railroad
	Trucks/Freight
✓	Bus Transit
	Airport
✓	Pedestrians
✓	Bicycles

Other Comments:

Love the Roundabouts

If you would like to receive project updates, please fill out the information below.

Name: *Drew Johnson*

Email: _____

Please leave your completed comment sheet at the sign-in table. If you would like to complete it at a later date, please send it to the YCPB, 2825 3rd Avenue North, 4th Floor, Billings, MT 59101 or take the online survey at BillingsLRTP.com

While your comments are always welcome, they can be best utilized if received by May 29, 2018.

Thank you!

Appendix D Public Open House #1
Sign-In Sheet

Please Sign In

Public Open House
May 14, 2018

Requested Information

Voluntary Information

Name

Mailing Address

E-Mail Address

CONRAD STROEBE 213 Johnson Ln
Billings MT 59101 stroebefam@aol.com

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

THOM MCKEAN 523 YELLOWSTONE AVE
BILLINGS, MT 59101 thommckean@gmail.com

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

LYLE GABRIAN 3142 Zimmerman Pl.
Billings, MT 59106 lgabrian@bresnan.net

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

Cheryl Lenhardt 3209 Rimrock 59102 cherlenhardt@gmail.com
(Zimrod neighbor)

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

ED GULICK 3015 10th Ave N.
Billings, MT 59101 edgulick47@alum.pomona.edu

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

Please Sign In

Public Open House
May 14, 2018

Requested Information

Voluntary Information

Name Mailing Address E-Mail Address

-Lora Matto c/o Planning

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

Teresz Hook. 213 Johnson Ln.

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

MING CABRERA 1734 POLY DR 59102

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

Deanne Lehman 3725 Hawthorn Dr. lehnd@bigskyeda.org

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

Simon Harper bar 30635 59107

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

PETER FREIVALDS 1022 NOBLEWOOD DR PJAR42@GMAIL.COM
59101

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

Please Sign In

Public Open House
May 14, 2018

Requested Information

Voluntary Information

Name Mailing Address E-Mail Address

Mike Black 4411 Toyon Dr Billings MT mblack@co.yellowstone.mt.gov

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

Leo Barsanti 3314 Pipestone Drive Leos47@MSN.com

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

- Bob Riehl 126 Rolling Meadow Drive bsriehl@gmail.com

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

- Debra Hagel 705 Monard Rd Billings, MT

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

Denise Joy joyd@ci.billings.mt.us

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

HANK FOWER hankfower@ychoo →

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

Kelli Workman ARA 1505 Ave. D.

Male Female
 Disabled
 American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

Please Sign In

Public Open House
May 14, 2018

Requested Information

Voluntary Information

Name	Mailing Address	E-Mail Address		
Danny Choriki	20 Marshall Dr	danny.choriki@gmail	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> American Indian/Alaskan Native
			<input type="checkbox"/> Disabled	<input type="checkbox"/> Asian/Pacific Inlander
				<input type="checkbox"/> Black <input type="checkbox"/> Hispanic
				<input type="checkbox"/> White <input checked="" type="checkbox"/> Other
Jack Nichols	942 N. 14 th	jacknickel555@gmail.com	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> American Indian/Alaskan Native
			<input type="checkbox"/> Disabled	<input type="checkbox"/> Asian/Pacific Inlander
				<input type="checkbox"/> Black <input type="checkbox"/> Hispanic
				<input type="checkbox"/> White <input type="checkbox"/> Other
Drew Johnson	1139 Annella Dr.	ADJ1223@gmail.com	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> American Indian/Alaskan Native
			<input type="checkbox"/> Disabled	<input type="checkbox"/> Asian/Pacific Inlander
				<input type="checkbox"/> Black <input type="checkbox"/> Hispanic
				<input type="checkbox"/> White <input type="checkbox"/> Other
Jan Rehberg	4401 Hwy 3	jan@rehberg ranch.com	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> American Indian/Alaskan Native
			<input type="checkbox"/> Disabled	<input type="checkbox"/> Asian/Pacific Inlander
				<input type="checkbox"/> Black <input type="checkbox"/> Hispanic
				<input type="checkbox"/> White <input type="checkbox"/> Other
✓ Scott Walker		c/c PLNtz.	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> American Indian/Alaskan Native
			<input type="checkbox"/> Disabled	<input type="checkbox"/> Asian/Pacific Inlander
				<input type="checkbox"/> Black <input type="checkbox"/> Hispanic
				<input type="checkbox"/> White <input type="checkbox"/> Other
✓ Monica Becker		c/c Planning	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> American Indian/Alaskan Native
			<input type="checkbox"/> Disabled	<input type="checkbox"/> Asian/Pacific Inlander
				<input type="checkbox"/> Black <input type="checkbox"/> Hispanic
				<input type="checkbox"/> White <input type="checkbox"/> Other
✓ WYETH FRIDAY		PCSD	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> American Indian/Alaskan Native
			<input type="checkbox"/> Disabled	<input type="checkbox"/> Asian/Pacific Inlander
				<input type="checkbox"/> Black <input type="checkbox"/> Hispanic
				<input checked="" type="checkbox"/> White <input type="checkbox"/> Other

Appendix E Detailed Map Comments from
Online Survey

File contains all data collected as of May-29-2018 17:10:26-UTC. Click the Refresh button in Data Center to download the latest dataset.

Latitude	Longitude	VisitId	MarkerType	Comment
45.7742453	-108.5032665	3078676	Comment	Need more development south of tracks. Bike trails, maybe a protected pedestrian space with no car access.
45.7812271	-108.5033481	3079084	Comment	we need bus routes that run longer than the current route times (earlier morning, later evening). If we want to continue engaging an active workforce on lower paying wage, we will need to help provide transportation-especially with our extreme weather conditions
45.7829851	-108.5016929	3079094	Comment	train tracks over/under pass
45.7997505	-108.4672256	3079133	Comment	Utilize the river and make it part of our town
45.7813163	-108.5152913	3079631	Comment	I appreciate that this is now a two-lane right turn (for those driving north and turning onto 4th)
45.7700265	-108.522845	3079631	Comment	I find this intersection is particularly well-done (traffic flows well from all directions)
45.8059652	-108.4836113	3079656	Comment	Bike trails in Alkali Creek are great.
45.7990773	-108.5433499	3080043	Comment	-----
45.7698603	-108.6387349	3080161	Comment	Many west end intersections in the County are dangerous. Maybe controlled intersections are warranted.
45.7851573	-108.5037861	3080574	Comment	As it is now, if you take the bus from the west-end to the heights, chances are you'll have spend a half hour waiting around at the Downtown Transfer Center. It would be more convenient if the schedules were altered so the buses that go to the Downtown Transfer Center would arrive and depart at the same times.
45.8074014	-108.4634624	3081031	Comment	-----
45.8267754	-108.4078021	3082342	Comment	Ensure that new development in the Lockwood TEDD installs boulevard sidewalks.
45.7773069	-108.5164518	3082447	Comment	It's very difficult for cyclists to move east-west because Division forces all traffic onto Broadwater, which is a poor street for cycling.
45.7769954	-108.567917	3082452	Comment	we have very bad traffic lights system (Flow, Timing and duration)
45.8108957	-108.4964825	3082460	Comment	I can't think of anything else
45.8195729	-108.57788	3082463	Comment	find a way to make the proposed inner belt loop path shorter. Perhaps a straight shot from Highway 3 to Skyway drive. The proposed route west of rehberg ranch seems like it would take too long.
45.7659832	-108.5968667	3082461	Comment	It is not necessary to widen the 32nd Street Corridor. People need to utilize the Shiloh Road corridor or other north-south corridors of they think 32nd Street West is too "congested" Millions was spent on Shiloh, and past improvements to 32nd Street West, let's not throw it away to address a few complaints.
45.7611034	-108.5458817	3082496	Comment	-----
45.7835838	-108.6005559	3082496	Comment	-----
45.7691566	-108.6170139	3082496	Comment	too many accidents at the circles, need to add signage on how to use them, or remove and replace with signals.

45.8222371	-108.580085	3082504	Comment	I have lived in many parts of the country as well as in Europe. In most I was able to organize my life so that I could bus, bike or walk to work and travel regionally by train. Unfortunately, none of those things are practical for me here so I am almost completely reliant on my car. And, it is disappointing to me that it turns out that, in my opinion, Billings has the worst drivers I've ever encountered. I have never seen more people that are completely indifferent to how their actions affect others and never even knew some of the ways in which Billings drivers suck even existed. We need focused police action on dangerous and even stupid and annoying driving habits and a focused public education on getting people to respect others and act like they live in a community. I don't know if world peace would follow but it would be a nice change of pace from the current situation.
45.8265753	-108.537142	3082939	Comment	Finish connecting to Airport rd.
45.7650571	-108.5764525	3082939	Comment	We live in the heights and totally avoid the westend on the weekends because of too much traffic.
45.7764304	-108.5008847	3082945	Comment	LOVE the bike lanes down to South Park!
45.7828354	-108.526076	3082945	Comment	LOVE the bike lanes on Lewis!
45.8026145	-108.5251533	3082967	Comment	My interests lie in at least one pedestrian/bike trail designated at either Airport Road or Zimmerman trail. Pedestrians and cyclists need a safe way connect to the trail system.
45.769679	-108.6383879	3082975	Comment	The new 4-way stop planned here shortly is an indicator of the need to plan for additional road and pedestrian/bike improvements in this area--particularly with Ben Steel Middle School.
45.7800843	-108.507378	3082975	Comment	Traffic light here gives unnecessary time in the morning to southbound traffic on N 30th.
45.7856323	-108.4983658	3082975	Comment	On street parking on 1st Ave N (and other high traffic streets in this general area) near intersections blocks vision of drivers trying to turn onto such streets...very unsafe.
45.7649402	-108.5592591	3083041	Comment	Improve the view on the interstate as you drive by Billings, the oil refineries look horrible and I've heard people who drive by Billings on how horrible it looks. Include the river into our city somehow
45.800221	-108.4702217	3083089	Comment	Use Revenue from Enforcing Red Light offenders and Cell phone use while driving tickets to go towards funding some of your projects.
45.7975355	-108.4556499	3083213	Comment	Lots of dangerous situations occur near the exit/entrance ramps.
45.7681088	-108.6142241	3083259	Comment	I get frustrated that we spend millions of dollars improving west end arterials to make it more convenient for people who live outside the city and do not pay arterial fees and city taxes to commute into town.
45.7769691	-108.6254731	3083373	Comment	More connected bike trails and keep them off the roads...most of our bike lanes on the roads are very unsafe.
45.7844515	-108.6252156	3083373	Comment	Road condition is terrible in town, so much repair and maintenance needs to be done, especially from winter. There are potholes so large around town you could lose your entire vehicle.
45.7896436	-108.6247221	3083373	Comment	Access at dead-end of 43rd Street west just North of Waterford Drive to bike/walking path across the ditch.
45.782153	-108.5057587	3083689	Comment	change most one way streets to two way
45.7579131	-108.5887797	3083768	Comment	I think the winter plowing on "side streets" was fine this year. I drive an SUV so I would be fine without it.
45.7443044	-108.5595714	3084771	Comment	Need basic service businesses to serve residential areas like this one so transportation needs are reduced. This may be an opportunity also, especially in certain areas.
45.7558036	-108.5842048	3084771	Comment	Automobiles travel far too fast on the big thoroughfares like King, Laurel Frontage Road, even Shiloh sometimes. The roundabouts on Shiloh have been very effective at allowing a thoroughfare without lights and periodic speed checking.

45.7852196	-108.503578	3086153	Comment	I don't understand why we rely on typical busses in Billings instead of passenger vans. I generally see buses carrying very few passengers and I often wonder if we couldn't get more bus service for our funding if we switched to smaller vehicles like vans. I know this leaves open the question of servicing wheelchairs. I'm not sure that I know the exact answer to that concern, but I would raise the idea that we might be able to improve our overall bus service by looking at smaller vehicles making more frequent trips rather than large buses getting limited use.
45.7759216	-108.5399162	3088735	Comment	-----
45.8719803	-108.4496223	3088930	Comment	Need a fundingv structure that shares responsibility for safe roads to schools
45.7427171	-108.555752	3088735	Comment	Improved pedestrian infrastructure (no sidewalks on arterials)
45.7479581	-108.556224	3088735	Comment	Interchange improvements
45.7625703	-108.5970151	3088735	Comment	EBR at Monad & 32nd
45.7553844	-108.5967576	3088735	Comment	Adaptive signal timing
45.7932777	-108.4182484	3088735	Comment	Right turn lane or roundabout for traffic calming
45.7842157	-108.6177833	3088735	Comment	Pedestrian Crossing @ roundabout needs signal - badly needed! (love the roundabouts :))
45.7986389	-108.6018617	3088735	Comment	Right turn lane at bottom of Zimmerman Trail
45.8101269	-108.5983855	3088735	Comment	Inner Belt Loop from Skywalk to Zimmerman
45.7841259	-108.638683	3088735	Comment	Grand Ave between Shiloh & 56th - 3 schools - need wider road for/with turning lanes - bike/walking path
45.7769521	-108.5969626	3088735	Comment	Add lanes to 32nd St. W
45.7700414	-108.5282066	3089848	Comment	There seems to be a lot of backup of people turning left here. So much so that the cars on the overpass get stopped. Since people don't slow down to 35mph on the overpass as they should, this can be kind of scary when the traffic stops all of the sudden.
45.7667245	-108.4884642	3089899	Comment	The entries to the city are dismal. If I were driving by, there is nothing that would entice me to stay in Billings and explore the area. Would like more attractive gateways to our community.
45.7693441	-108.6595127	3090050	Comment	put in a stop light. No more round abouts
45.7839872	-108.4983668	3090089	Comment	pedestrians on MT ave are an issue. Cars have a hard time seeing people wanting to cross, etc. also have seen lots of speeding vehicles in this area.
45.8347926	-108.4773804	Open House	Comment	Phoebe Lane - no pavement
45.8306064	-108.4710719	Open House	Comment	Main St - Slow traffic cleanup, main st - improve business climate
45.8246991	-108.4770749	Open House	Comment	Lake Elmo water sewer development
45.8267028	-108.4736202	Open House	Comment	Sioux Lane paving weeds large housing development, west lake elmo
45.7881123	-108.515055	Open House	Comment	Trolley from downtown to MSUB - rezone NC 32nd

45.7444639	-108.5967658	Open House	Comment	Upgrade to road on 32nd @ King to Gabel and 32nd
45.74081	-108.606808	Open House	Comment	Congestion backs up traffic coming off interstate @ rush "minute"
45.8000351	-108.4541152	Open House	Comment	trail/walkway for pedestrian safety along Metra Park and beautification connection to I90
45.7901609	-108.5279296	Open House	Comment	Needs improved sidewalks
45.7938163	-108.4164245	Open House	Comment	Roundabout @ So Johnson and Hwy 87 (slow down north to sb on 87)
45.7996808	-108.4349854	Open House	Comment	Picoco - remove congestion via?
45.7985139	-108.4321959	Open House	Comment	Hillner - remove triangle
45.7989328	-108.4375817	Open House	Comment	remove left turns into school
45.7869936	-108.4548552	Open House	Comment	Plan Basline Rd to I90 (Grand Ave of Lockwood)
45.7963297	-108.4611637	Open House	Comment	Trail over yellowstone (off roadway)
45.805784	-108.475712	Open House	Comment	Elevated foot and bike crossing for walkable improved access to grocery/health/entertainment from housing developments
45.8227138	-108.4709484	Open House	Comment	Elevated foot and bike crossing for walkable improved access to grocery/health/entertainment from housing developments
45.8130232	-108.4070904	Open House	Comment	Move Becraft to Johnson off old Hardin Rd. Remove all angle intersections (safety)
45.7623889	-108.4944231	Open House	Comment	Safe walkway/path for pedestrians to access the YCDF
45.82096	-108.3943721	Open House	Comment	Old Hardin pedestrian pathway
45.7522194	-108.617446	Open House	Comment	Underpass under Shiloh between Shiloh crossing and mt sapphire
45.7925403	-108.4977551	Open House	Comment	Peds dont use crosswalk
45.7906851	-108.4904166	Open House	Comment	Improved ped experience through traffic calming
45.7466793	-108.5356494	Open House	Comment	S Billings Blvd bike/pedestrian to the river park
45.8049271	-108.616459	Open House	Comment	Traffic connect from Rims/Hwy 3 to Shiloh
45.785897	-108.4761258	Open House	Comment	Pedestrian bridge connecting four dances and Coulson Park
45.8024141	-108.4867688	Open House	Comment	Connect Heights and Downtown with a tunnel and name it after Willard Frazer
45.7635673	-108.5422583	Open House	Comment	Intersection needs to be improved - Moore/Monad/Laurel/RR Bottleneck

45.7335577	-108.6038891	Open House	Comment	One overpass - needs more lanes, at least 2 lanes each direction with separate right turn lanes
45.7551437	-108.658692	Open House	Comment	Needs to keep King Ave traffic flowing 60 mph. for long commuters
45.7553234	-108.6905352	Open House	Comment	Overpasses across King, not roundabouts to keep traffic speed going on King to Keep long work travelers from having to slow and waste gas. They want to keep traveling 60 mph from out west into Billings on King.
45.7552643	-108.6347087	Open House	Comment	Traffic concerns on King Aves W too slow. Keep it flowing 60 mph.
45.7820273	-108.5082447	3078676	Need	More pedestrian only places, less cars. More walkability and channels to bike into downtown. More plant life, roof top gardens, and store fronts facing walkways so people can see inside. Maybe even more sky walkways for when it gets cold to keep pedestrians safe and motivated to show downtown and be downtown all year long.
45.8027342	-108.5106479	3078787	Need	Need to connect the Heights to downtown, probably with a tunnel.
45.8079325	-108.6269688	3078787	Need	We need another way to get down off the Rim connecting to the West End without seriously impacting residential neighborhoods.
45.7817849	-108.5036518	3078787	Need	A major urban center does not have a train track dividing its core downtown area in half.
45.799385	-108.4756006	3078787	Need	A fly over connecting Bench and 6th Ave would alleviate a lot of downtown/ Heights traffic.
45.8396742	-108.4016564	3078787	Need	Connect Lockwood to Johnson Lane at the northern end.
45.7951346	-108.4570037	3079084	Need	an additional stop for the city bus transportation across the johnson lane bridge
45.7914242	-108.6112415	3079085	Need	make 38th St go all the way through
45.7988448	-108.6527192	3079085	Need	a light and a turn lane for those turning left onto 54th from Rimrock Rd
45.7992038	-108.6713659	3079085	Need	This whole area is a cluster. Traffic coming from so many directions and everyone going 55 MPH and only one lane going each way. Also, the curve is terrible in bad weather
45.7893672	-108.5121029	3079084	Need	the sidewalks seem to be the first to be neglected when it comes to maintenance. In order to promote other modes of transportation, we need to be able to provide accessible walkways
45.8126545	-108.4140763	3079119	Need	better planned lights/flow during busy times
45.8139645	-108.4139905	3079119	Need	better planned lights for less sitting
45.7942968	-108.494569	3079094	Need	more traffic calming measures and more greenscapre
45.8361122	-108.4623253	3079128	Need	City bus to run on the St. Andrews/Lake Hills side of wicks. Schools are to far for kids to walk, yet not far enough for school buses.
45.7910651	-108.4956848	3079094	Need	more traffic calming measures and greenscape
45.8011866	-108.5270857	3079133	Need	Bike route to and from the Rims
45.8078798	-108.5495292	3079128	Need	We need to figure out why it is so expensive to fly out of Billings, yet Cody, Wyoming is much cheaper.
45.7986711	-108.5203897	3079139	Need	Very difficult to turn left on 27th to go to the heights. Back-up is bad at prime times (8am, noon, 5pm)

45.7710125	-108.6209404	3079140	Need	-----
45.7413564	-108.5351068	3079076	Need	Turn lanes
45.7166475	-108.5013051	3079076	Need	Streetlights in Briarwood neighborhood to increase safety!
45.8038139	-108.5378583	3079178	Need	More affordable flights to compete with Bozeman
45.7831283	-108.5070548	3079278	Need	Public transit downtown to other parts of town. Current bus transit is a joke.
45.783702	-108.5605036	3079588	Need	Turn lanes
45.7858902	-108.5073492	3079588	Need	Downtown area needs better pedestrian management
45.768237	-108.5300733	3079631	Need	Difficult for pedestrian traffic to pass through this intersection and/or the underpass
45.7693909	-108.5305212	3079631	Need	Traffic commonly backs up here during peak traffic hours (usually packed with vehicles traveling north to south)
45.8126513	-108.4139869	3079649	Need	The functionality of this area(Johnson Lane-Old Hardin Rod intersection and the ramps on and off of I-90) needs a lot of work. The light before the interstate backs up into the Old Hardin Rd -Johnson Lane interchange and often has traffic backed up well beyond Saddle Lane. Hundreds of cars are stopped for a minute at a time everytime a single car wants to turn north off of the east bound I-90 exit ramp. The light at the east bound exit ramp has really exacerbated an already problematic and congested intersection. I know there is work planned here in conjunction with the bypass, but in mean time something needs to be done with light timing and adding a longer RH turn lane from Old Hardin east of Johnson Lane for those turning north onto Johnson Lane.
45.7840585	-108.5279318	3079649	Need	-----
45.7985551	-108.4588225	3079649	Need	-----
45.7964532	-108.4699536	3079649	Need	This bridge is especially problematic in the winter given both a transverse and longitudinal slope. MUCH more attention needs to be paid to keeping this bridge de-iced and sanded. It is very hazardous and prone to accidents.
45.811948	-108.598796	3079656	Need	Bypass for the height. Connect into new Zimmerman Trail Roundabout.
45.9264554	-108.8557731	3079693	Need	-----
45.7974684	-108.6584055	3079693	Need	lower speed limit west of 54th street. The current limit hasn't been lowered to reflect all the new construction going on. There is no shoulder on the road and bikers and runners are at great risk.
45.7798126	-108.5109817	3079725	Need	Bike friendly roadways
45.7962716	-108.556472	3079725	Need	More bus routes from MSUB and Rocky to downtown Billings
45.8184088	-108.5756218	3079878	Need	Finish Inner Belt Loop from Skyway Drive to Zimmerman Trail. Connect the Heights to the West End.
45.7843019	-108.6290085	3079878	Need	Grand West of Shilo needs improvements given all the schools on this stretch. Bike and walking paths. Left and Right Turn lanes into schools.
45.7935188	-108.600856	3079878	Need	Expand Zimmerman Trail to better handle volume.

45.834756	-108.4535959	3079878	Need	Bike and Walking bath needed along Barrett Rd for Student safety.
45.8238437	-108.6467962	3079941	Need	There is a need to define a preferred alignment fro a connection from Hwy 3 to Molt Road. There was a great one, but the developer of Ironwood killed it. This needs to be a community project to provide an alternate route to N 27th and Zimmerman.
45.7809201	-108.53581	3079941	Need	The intersection of Lewis & 8th St W needs some help. The current two-way stop is not ideal, plus the site distances are limited to the north. And the odd angle makes for a potentially dangerous situation. A roundabout might work (or not with the grade) but something to slow down traffic and improve sight distance.
45.7831426	-108.5008125	3079941	Need	Slow down traffic on Montana east of 27th Street. If you are a pedestrian and try to use the crosswalks... good luck. Most vehicles do not stop for you. Do a road diet and reduce to two thru lanes.
45.7949446	-108.5279228	3080132	Need	Improve this intersection...possibly a roundabout.
45.8025182	-108.5952709	3080132	Need	Separate Bike/Ped Facility alongside Zimmerman Trail.
45.7729283	-108.5969936	3080151	Need	Improve 32nd Street Corridor to 5-lanes
45.8068028	-108.6001693	3080151	Need	Complete "inner belt loop" from Wicks to Zimmerman.
45.8034917	-108.4344878	3080159	Need	-----
45.795407	-108.4916736	3080161	Need	Billings' own Daytona Speedway. You can see Dale Earnhardt Jr. driving most days of the week.
45.7936715	-108.4856225	3080161	Need	Area in general needs more pedestrian facilities.
45.7833717	-108.5072391	3080201	Need	Two way streets in downtown that explicitly accommodate bikes. Downtown has the highest concentration of jobs and services and needs to be accessible to all.
45.8004639	-108.5286362	3080201	Need	For both commuting and tourism, a trail along 27th for bikes and peds is really needed.
45.7936777	-108.5243281	3080201	Need	Bike lane connecting Poly to N 30th.
45.7859853	-108.5266599	3080201	Need	Pave trail here as a part of bike boulevard system.
45.7685531	-108.5289945	3080201	Need	Underpass and intersections need to safely accommodate bicyclists.
45.7894392	-108.4984568	3080574	Need	-----
45.804922	-108.5970555	3080574	Need	-----
45.744455	-108.5564187	3080682	Need	Side walks and/or bike lane
45.8193659	-108.3916008	3080764	Need	bus and safe bike and walk ways
45.7698598	-108.5805354	3080907	Need	Central is an absolutely disaster, as are many of our roads right now. The amount of pot holes is completely unacceptable.
45.793999	-108.4813661	3081031	Need	traffic backs up to Yellowstone bridge at certain times events and 5pm
45.8000916	-108.4794283	3081031	Need	speed limit should be 25mph crest of the street makes it hard to see on coming from left at stop sign and right comes down hill fast

45.7840573	-108.5779542	3081049	Need	This route is very difficult - Several stop light intersections with no designated turn lanes. Did not get plowed during heavy snow fall.
45.8057631	-108.4757404	3081154	Need	Safer intersection
45.7841823	-108.600444	3081154	Need	Roundabouts throughout 32nd St at Grand, Central, Broadwater, King, etc.
45.7826504	-108.5044993	3081154	Need	This intersection desperately needs a left turn arrow for westbound traffic heading north on 27th st.
45.7498279	-108.5564489	3082342	Need	Convert to a red or green left turn arrow from the existing turn arrow and green light. Many accidents occur here.
45.7499476	-108.5761041	3082342	Need	Evaluate this intersection for a controlled intersection.
45.7451448	-108.5457079	3082342	Need	Extend Songbird to Midland Road
45.8043514	-108.433799	3082342	Need	Build sidewalk along Old Hardin Road
45.8006416	-108.4344427	3082342	Need	Improve Piccolo Ln
45.7623906	-108.5076439	3082451	Need	-----
45.7833549	-108.5059278	3082446	Need	Need to get rid of the angle parking west of Park Two parking garage -- it's super hard to see cars coming down 2nd Avenue when trying to pull out of the garage. Put the angle parking across the street and put the curblin parking on the north side of the street to make it easier to see down the street when pulling out of the
45.8442444	-108.5357963	3082451	Need	-----
45.770165	-108.5216454	3082451	Need	-----
45.7635051	-108.4784337	3082443	Need	Continue Bike Path
45.7554443	-108.5970794	3082456	Need	Better flow on 32nd from Zimmerman to Gable.
45.8346942	-108.4618217	3082443	Need	Improvements needed to improve safety of people walking in the area. Side walks should be continued the full length of Barrett RD.
45.7771152	-108.6062833	3082452	Need	we need 2 line street.
45.8351554	-108.4595787	3082460	Need	more bus routes/more frequent trips to the Heights
45.8011186	-108.5974675	3082461	Need	Pedestrian/Bicycle access from Highway 3 to Rimrock Road is needed along Zimmerman Trail.
45.8309992	-108.5294019	3082462	Need	Trail
45.7698165	-108.6025963	3082452	Need	2 line street.
45.8451917	-108.4275412	3082443	Need	Do not ruin this park by running a road through it!
45.7841616	-108.6325207	3082456	Need	Work with County to Build Grand and Central to at least 56th. Condemn property if necessary.

45.7856911	-108.5041043	3082460	Need	need last bus to leave later to the Heights in the evenings from downtown, or additional runs from downtown around quitting time
45.8023801	-108.5465991	3082462	Need	Trail off the Rims to town
45.8042899	-108.5661804	3082463	Need	Bike Trail from Airport to Zimmerman
45.8026145	-108.4788906	3082472	Need	heights to downtown rail, would cut down on metra area congestion
45.7946911	-108.4850619	3082472	Need	Major road reconstruction
45.8231164	-108.4400718	3082472	Need	This subdivision is a bane on the community, there needs to be something done about this mistake. It has tarnished the schools and the general well being of a previously wonderful area.
46.0218199	-108.5035061	3082474	Need	-----
45.7896886	-108.4862935	3082487	Need	need a better way to handle the problems with trains and traffic around this intersection. Major problems with traffic back up during peak hours.
45.7810696	-108.5303032	3082504	Need	24th - Trees along road to cool environment and calm people down. More right turn lanes to speed traffic through intersections. Cameras at intersections to stop people from running red lights. Education to get people to drive better. Driving 50 on 24th is not ok. Driving 10 on 24th is not ok. Failing to use turn signals is not ok. Getting engrossed in your phone and failing to notice that the light has changed is not ok. Some of us have places we have to go and we are unfortunately stuck with getting from place to place by motor vehicle so we need to make it possible for that to happen.
45.7855182	-108.5083489	3082880	Need	-----
45.8036515	-108.5381077	3082880	Need	-----
45.7669711	-108.5968362	3082939	Need	Should of made it wider from the start. Needs to be widened.
45.7872946	-108.5013782	3082945	Need	light-controlled cross walks on these main thoroughfares through Billings. Montana Avenue, 4th Avenue North, 6th Avenue North are all nightmares for pedestrians and/or bicycle riders to navigate.
45.7740377	-108.576195	3082939	Need	Needs to be widened.
45.7846311	-108.6047827	3082945	Need	Maybe this has been completed already - I haven't been out this far on bike/foot lately, but there was not a connecting pedestrian walkway between Zimmerman & Shiloh on Grand. Stressful when you're trying to walk/run/bike with the drag racers
45.7767596	-108.5538208	3082967	Need	Traffic traveling north south are stopped at nearly every intersection. Sometimes for long periods of time and no traffic what so ever in site. Are there more ways to trip the lighting to change the light? Early/late hours especially. Perhaps making most of these streets change to flashing red light to stop and go instead of wasting gas.
45.7984857	-108.6528265	3083052	Need	Stoplight, roundabout
45.7985156	-108.6736833	3083052	Need	Stoplight, round a bout
45.7841522	-108.6344587	3083052	Need	Widen Grand from Shiloh to 56th
45.7769093	-108.6113488	3083052	Need	widen Broadwater from Shiloh to 30th. Increase speed limit to 45.
45.7698151	-108.6066925	3083052	Need	Widen Central from Shiloh to 32nd. Round a bout at City College.

45.7671314	-108.6514762	3083079	Need	-----
45.7752696	-108.5013071	3083041	Need	Improve the south side due to crime, poverty, etc.
45.7892098	-108.4994041	3083089	Need	Better turning lanes, turn signals
45.774844	-108.5230934	3083089	Need	Better traffic flow in Monad road area for morning and evening commute
45.8240315	-108.3864938	3083094	Need	The intersection of Becraft and Old Hardin Rd and Johnson Lane is congested with Morning traffic and Semi's. There is limited ways to get on to I-90 if you live East of Johnson Lane. Suggest an entrance ramp be built somewhere near Dickie Rd. This would allow another option to get out of Lockwood. With the new road to the Heights and the New High School being built Lockwood should expect to see growth. Looking at the new building going on that growth is going to happen East of Johnson Lane adding to the problem.
45.8117664	-108.4139252	3083094	Need	This intersection needs a round about that would join Becraft.
45.8130527	-108.412509	3083094	Need	Congested area. Vehicles go through local business to avoid this area.
45.797648	-108.4860145	3083156	Need	Need for a safe and environmentally and user friendly path of connectivity between the heights and downtown for bicyclists and pedestrians.
45.751969	-108.6140398	3083156	Need	Need for public transportation that allows for residents of the heights to see movies on the west end with show times after 1:00 pm or 3:00 pm.
45.7748178	-108.506842	3083156	Need	Need for residents that may not own a car to have public transportation available past 8:00 pm and on Sundays.
45.8251081	-108.4568321	3083178	Need	commercial, retail planning and development
45.8121718	-108.4140063	3083199	Need	Intersection and traffic is a nightmare. The lot behind Casey's Corner is for sale. Please purchase this and create a cut across road for those needing to travel between Becraft and Johnson Ln. This cut across would alleviate people cutting thru the parking lot.
45.7959855	-108.4560262	3083199	Need	This light needs to be better timed. There are days when only 3 or 4 cars coming out of Lockwood can get through the light while it remains green for a long time for cars coming off I90 when no one is actually there. Morning rush hour traffic gets backed up all the way to the intersection at Old Hardin/Hwy 87E when the roads are bad. Please put in better traffic light sensors.
45.7956943	-108.4138771	3083199	Need	Johnson Lane has GOT to be widened. It is scary driving that close to the edge when the roads are icy. Plus adding in future high school traffic, it needs to have a shoulder on both sides with a middle turn lane near Ford Road and better reconfiguration at Hwy 87E.
45.812397	-108.4078441	3083199	Need	Had a broken pipe sink hole here a couple years ago. There are spots where the road feels like it is dipping again. Please re-level low areas.
45.8281984	-108.4191223	3083213	Need	Connecting Lockwood and the Heights would allow decreased traffic jams in and out of the heights.
45.7455622	-108.576008	3083056	Need	Overpass over I-90 on 24th street south of Jake's would alleviate a lot of traffic on both the King Ave exit and the Zoo Drive exit.
45.7706329	-108.5967147	3083056	Need	Better north and south flow of traffic on 32nd street west from Gable Rd all the way to Zimmerman. It should be 2 lanes each direction like 24th and better timing of lights. Morning and evening commuter traffic on this road gets congested. I suggest widening the road to accommodate more traffic.
45.8289155	-108.573197	3083056	Need	Connector road from Rehberg Ranch or Zimmerman to Skyway Drive in the heights. Getting to Skyline High from Billings West End is difficult.
45.7847807	-108.5052621	3083259	Need	Convert one-ways downtown back to two-ways

45.7988202	-108.5904447	3083275	Need	Traffic Light
45.7988884	-108.6018671	3083275	Need	Need a traffic light turn arrow for a left hand turn onto Rimrock from Zimmerman .
45.7871449	-108.4907138	3083259	Need	We need a real bike ped connection between downtown and the river. The bike lane on South 26th is a joke.
45.7820273	-108.697158	3083361	Need	Planning to address the extensive growth and additional traffic on westend roads which are generally build to County standards.
45.7960023	-108.602213	3083373	Need	Better intersection/round about
45.7815185	-108.6009255	3083373	Need	Better intersection/round about
45.7738562	-108.5984364	3083373	Need	Better intersection/round about
45.766552	-108.5969773	3083373	Need	Better intersection/round about
45.7829707	-108.5030159	3083474	Need	Move railroad tracks downtown or dig them down so 27th can have a bridge over them.
45.7681243	-108.5596676	3083474	Need	-----
45.7491094	-108.5505567	3083522	Need	This entry is important and we need to invest in it.
45.8448423	-108.4255039	3083539	Need	Eastern access into/out of Billings Heights
45.8193659	-108.4708225	3083539	Need	Access over main street for pedestrian crossings Safety concerns
45.8002167	-108.5962017	3083567	Need	-----
45.7975638	-108.6728674	3083567	Need	improve intersection of Rimrock and 62nd
45.7773333	-108.5682587	3083587	Need	More frequent buses and longer run times
45.8355625	-108.4432892	3083587	Need	More buses in the heights
45.7431758	-108.6723821	3083587	Need	Need to include Laurel
45.7933452	-108.6253637	3083689	Need	an interconnected network of streets should be required for all new developments on the edges of town (west end, heights, south of river etc,
45.7797826	-108.5153042	3083710	Need	make crossing Division St. safe for pedestrians and bicycles.
45.7994336	-108.4817809	3083710	Need	Need to create a safe route for pedestrians and bicycles from the Heights to downtown.
45.8008248	-108.5298588	3083710	Need	Need to create a safe route for pedestrians and bicycles up N. 27th St. to the Rims.
45.923112	-108.8001548	3083768	Need	-----

45.7554432	-108.5066206	3083768	Need	Roads need repair. Awful pothole almost swallowed my car.
45.7557426	-108.5435064	3083768	Need	Better parking situation
45.8012084	-108.4799976	3084183	Need	more than 1 main roadway into the Heights. Rush hour can be chaotic and time consuming due to a bottle neck at Main St and Airport Rd
45.7772834	-108.5153277	3084183	Need	better markings for roadway
45.7977029	-108.4814605	3084421	Need	Safe bike rransitio. To 3rd ave
45.8043288	-108.482098	3084421	Need	Connect heratige trial to rims trail
45.7670737	-108.5474908	3084479	Need	very confusing, dilapidated and wasteful road.
45.7414869	-108.5351204	3084479	Need	You need a southbound left turn lane here very badly.
45.717806	-108.5147356	3084479	Need	This entire road from Midland to Briarwood would greatly benefit by being two lanes north and south.
45.7404708	-108.5493576	3084771	Need	Need a way for safe, non-motorized travel to the other side of the interstate.
45.8119959	-108.5619575	3084964	Need	-----
45.8103451	-108.4106377	3085384	Need	Sidewalks, bike accessibility, street lights
45.8010588	-108.5987102	3085457	Need	Need a wider road on Zimmerman Trail.- 4-lane preferred.
45.7956133	-108.481326	3085457	Need	Widen Exposition Drive to accommodate one more lane of traffic on each side.
45.7628767	-108.5770549	3085697	Need	Congested
45.753435	-108.596709	3085697	Need	Congested
45.9274107	-108.73973	3085839	Need	-----
45.7830103	-108.5304166	3085839	Need	Increased bus transportation connecting different business centers around town.
45.7871125	-108.5087709	3086153	Need	It is not strictly a transportation need, but this intersection is a mess. It is dangerous for pedestrians and was one of the most dangerous intersections in town last year. The combination of the Albertsons on the north east corner, the gas station on the southeast corner, both selling alcohol and the homeless services slightly farther south on 27th lead to a large number of homeless individuals to be in the area and often intoxicated. The intersection is not super safe to cross anyway. It seems to me that what we have at present is a space that is unsafe for pedestrians crossing the street, offering easy access to alcohol to in a way that isn't making anyone's life better. I'd love to see this intersection redeveloped to be a less gritty, hopeless feeling place.
45.7840002	-108.505917	3086153	Need	It would be nice to have a median on 27th. Pedestrians cross mid-block in this area and a median would help avoid car-pedestrian collisions. I know they should be crossing at the corners, but I would prefer to have them safely make it across, even if crossing mid-block, and a median would facilitate that.
45.7710125	-108.5680687	3086177	Need	Short half hourly bus from West Park Promonade to down town and also one from there to Shilo.

45.7813585	-108.5030687	3086660	Need	Something needs to be done about the trains and traffic/traffic lights!
45.770134	-108.5536015	3086660	Need	needs a turn signal badly
45.7552634	-108.6175337	3086660	Need	better signage and clearer directions at ALL roundabouts!
45.8308496	-108.4595787	3086779	Need	-----
45.8392217	-108.4649002	3087520	Need	The heights needs another way in and out of the area. Build the Mary Street bridge! over 30,000 people live in the area and the heights is a go-thru for many neighboring communities (Roundup, Shepherd, Huntley, etc.) which lends to the congestion.
45.8271603	-108.459821	3087520	Need	Better curbs, gutters and sidewalks are needed throughout heights residential areas. Many of the streets are still gravel and difficult to drive because of constant potholes. Many of these lye in the County, but a lot of them don't. It would be a plus to have the unpaved streets brought to an acceptable standard.
45.7734073	-108.5553623	3087580	Need	Need north south bike trails midtown
45.7808525	-108.5172096	3087618	Need	Lewis is a terrible bikeway- it has too much traffic going too fast. Why not Yellowstone instead?
45.7812106	-108.5124406	3087618	Need	Downtown should have bike lanes! Please!
45.7820928	-108.515315	3087648	Need	-----
45.777319	-108.5152721	3087648	Need	-----
45.7870194	-108.5086906	3087648	Need	-----
45.7886346	-108.4920878	3087648	Need	-----
45.7467602	-108.5563098	3087729	Need	Bike/Pedestrian facilities along this busy collector. With the housing development along Elysian Road, high volume of vehicle trips. The roadway promotes high speeds with nowhere for pedestrians or bicyclists to be. MET Transit is expanding the bus route to Riverfront Point and Josephine Crossing, additional bike/ped facilities needed to enhance the usability of that new bus route.
45.7552946	-108.5244452	3087729	Need	Minor arterial that has a shared use path on the south side of King Ave E from S Billings to Orchard. Need to finish the SUP along King Ave E to Yellowstone County Detention Facility.
45.767049	-108.5203296	3087729	Need	Hallowell needs reconstructed to accommodate a complete street design. Hallowell meets up with 2nd Avenue South (across State) which is striped with a bike lane. This would continue a bike route from the Southside to downtown.
45.7806531	-108.5760889	3087812	Need	Intersection is poorly designed and functions even worst - needs to be restructured
45.7766956	-108.597284	3087812	Need	Zimmerman from Broadwater to Rimrock needs to be widen
45.8447227	-108.501464	3088333	Need	-----
45.7996188	-108.4799036	3088389	Need	Options to reduce congestion around the metra would be nice
45.7830249	-108.5061636	3088389	Need	Public transportation to get to and from downtown
45.8327634	-108.4183799	3088930	Need	Barrett road will kill children

45.7724493	-108.5268699	3089165	Need	Safe pedestrian crosswalks
45.7944763	-108.5697852	3089165	Need	Pavement improvements
45.7844216	-108.6810218	3089165	Need	Safe intersections
45.7496892	-108.5967582	3089848	Need	This roadway is falling apart, it has very limited pedestrian facilities and the hill is dangerous.
45.7920825	-108.5982811	3089864	Need	Zimmerman Trail cannot be expected to accommodate the impending vehicle traffic that will result from the Inner Belt Loop. It is crazy to promote a situation where high traffic volumes are dumped onto a very limited capacity roadway.
45.7550555	-108.5666617	3089848	Need	This intersection timing doesn't work at rush hour. If you are travelling north from Overland to 20th, it only allows about 3 cars through. If there is someone turning left from King onto 20th on a red, it's even less. If someone turns into the Holiday, it's the same problem. The result is that traffic gets backed up all the way to EBMS some days.
45.7625168	-108.5762619	3089848	Need	Turn arrows are needed for Monad! If you are turning from Monad onto 24th it can be very difficult to see and the traffic means you end up running a yellow or red. Scary!
45.7920825	-108.6700355	3089864	Need	Eliminate the triangle intersection past the YCC and Molt Road before someone gets killed!
45.8141017	-108.4060203	3089879	Need	Bus pick up and drop off sites
45.920246	-108.7946617	3089871	Need	-----
45.7838924	-108.505654	3089871	Need	resurface and make safer for pedestrians
45.7987297	-108.6734997	3089883	Need	-----
45.7909888	-108.4873	3089883	Need	-----
45.7942729	-108.4813628	3089883	Need	-----
45.7995269	-108.6733829	3089899	Need	Round-about and soon! This is a very dangerous curve!
45.7543743	-108.6378833	3090050	Need	King ave needs to be widened
45.7926057	-108.4812007	3090089	Need	needs to be redesigned, traffic backs up often and most vehicles are just sitting not moving.
45.750107	-108.5969107	3090182	Need	Improve 32nd - widen, plus bike/ped facilities from King to Gabel
45.8345763	-108.4660628	3090228	Need	Congestion and traffic flow in this area need improvement.
45.8056261	-108.4757959	3090228	Need	Pedestrian traffic in this area is dangerous
45.7827068	-108.5018917	3090228	Need	Flashing lights to indicate pedestrians are ready to cross would be helpful. Even going 25 mph it is hard to see pedestrians until you are at the crosswalk.
45.7609535	-108.5708153	3090790	Need	Traffic control on Santa Fe Blvd
45.788731	-108.5007774	3090790	Need	Sensible parking opportunities.

45.8021358	-108.4757149	3090790	Need	Enable traffic movement between the Heights and downtown
45.7724493	-108.4990608	3091246	Need	-----
45.7849004	-108.6401664	3091246	Need	-----
45.7652647	-108.579055	3091246	Need	-----
45.8190803	-108.4786999	3092104	Need	Connect to west end and Lockwood
45.8279789	-108.4709083	3092308	Need	Inadequate safe intersections for youth living west of Main assigned to MC Middle School to cross Main and other major roads safely.
45.8347368	-108.4660374	3092308	Need	Stop Light needed during school drop off and pick up hours
45.8272313	-108.4772275	3092308	Need	additional bus routes for high school and middle school to accommodate center students and athletes.
45.8245857	-108.5873695	3092586	Need	Direct connection to the heights
45.783788	-108.6591289	3092999	Need	Bus Service to Ben Steele Middle School
45.7920825	-108.4885894	3078676	Opportunity	Connect and encourage infill with protecting pedestrian walkways down town, add trolley or rail system that makes stops by Metra, Downtown, along Grand, and near West End. A rail with known stops at popular places that already have stores. Connect Billings. Covered rail stations, bike lock buildings with showers inside
45.8449588	-108.4470894	3078787	Opportunity	How the new bridge connects through the northern edge of the Heights is an opportunity to create an economic and cultural center for the Heights.
45.74381	-108.486587	3078787	Opportunity	Biking and x-cross country trails in this region can provide a major new source of outdoor recreation.
45.784477	-108.5194364	3078787	Opportunity	Grand/ 6th Ave if developed with density multi-modal transportation in mind can become a major economic and residential center for Billings downtown and midtown.
45.7883674	-108.5153595	3078787	Opportunity	A bus or trolley connecting downtown, south side, up to the north elevation, including the medical corridor and the university can be the center of a multi-modal lifestyle development.
45.7572364	-108.5528246	3078787	Opportunity	There is room for multi-modal transit on Laurel Road. This should be connected to King Ave W.
45.7152911	-108.5646929	3078787	Opportunity	Biking and x-cross country trails in this region can provide a major new source of outdoor recreation.
45.7950747	-108.6015641	3079085	Opportunity	true turn signal not just a flashing yellow turn light.
45.8111589	-108.4137759	3079119	Opportunity	alternative route for becraft
45.7848406	-108.5066711	3079094	Opportunity	traffic calming measures on 27th and more greenscape
45.8418527	-108.481208	3079128	Opportunity	Create additional ways out of Skyview High School through the lower neighborhoods. Connect a few of the back roads.
45.7568897	-108.4850286	3079133	Opportunity	Bike ways to and from the river to downtown
45.7984318	-108.5277282	3079139	Opportunity	Blind intersection. Mirror needs to be placed across the street for traffic going left.

45.7820419	-108.5067569	3079076 Opportunity	Turn one-ways into two-ways to slow down traffic, reduce navigability difficulty/confusion, increase safety, and incentivize stopping/shopping downtown.
45.782663	-108.5098693	3079178 Opportunity	Switching the one way roads to 2-way would slow traffic and help retail downtown.
45.7812264	-108.5067365	3079178 Opportunity	Adding bike lanes downtown would attract more people and downtown living/culture
45.9679926	-108.6518394	3079617 Opportunity	-----
45.7951346	-108.6942398	3079693 Opportunity	Widen this road to make a good, safe way to get to other parts of Billings, (like Shiloh)
45.8208015	-108.6996471	3079693 Opportunity	We need another connector to the heights from the west end. That would be a great help .
45.7829851	-108.5069906	3079725 Opportunity	Two way streets downtown
45.7970517	-108.4869798	3079941 Opportunity	add/create a two-way cycletrack on 6ht Ave North to provide safe connection from Heights to Downtown.
45.7914919	-108.5278492	3079941 Opportunity	Virginia seems like a perfect street to add a bike lane.
45.7947535	-108.5278492	3079941 Opportunity	A missed opportunity when the intersection of Virginia and Poly was re-done. A roundabout would have worked much better than the "change". No one uses the left turn lane south of Poly, they still try to turn in the intersection and jam up traffic.
45.7974018	-108.5516755	3080043 Opportunity	-----
45.795068	-108.5328685	3080132 Opportunity	Opportunity to utilize the BBWA Canal for Bike and Pedestrian use.
45.8038112	-108.5619747	3080151 Opportunity	Improve parking, walkability, and biking between Zimmerman Trail and Black Otter Trail paths.
45.80408	-108.4840236	3080151 Opportunity	Consider roundabout intersection control at Aronson and Alkali Creek
45.7952688	-108.4864483	3080151 Opportunity	Remove parking from 4th Avenue North and consider adding another lane from the lane drop at North 13th (?) towards Exposition.
45.7976924	-108.4814916	3080151 Opportunity	Pedestrian crossing between the west and east side of Exposition.
45.803372	-108.4350027	3080159 Opportunity	-----
45.7703708	-108.527328	3080161 Opportunity	Really unsafe intersection
45.7936715	-108.489914	3080161 Opportunity	Consistent Speeds with Indianapolis Speedway
45.7801394	-108.5152428	3080201 Opportunity	Division is like a moat that keeps bicyclists from entering or exiting downtown to the west. This intersection with a bike box and contra flow lane would be ideal for bridging Division.
45.791994	-108.4719648	3080201 Opportunity	Cross river on trail attached to Interstate bridge.
45.7933977	-108.4936899	3080201 Opportunity	Rails to trails at rail spur.
45.7738238	-108.4877989	3080201 Opportunity	Connect city to river with trail at underpass.

45.8419153	-108.4677558	3080574	Opportunity	I happen to know there are a lot of people who live in Roundup and drive to Billings for work. Perhaps MET Transit could create a Park and Ride location where K-Mart used to be. The spaces should be clearly marked as such, and perhaps signage should be placed along Main St. indicating there is a park and ride location there.
45.8025884	-108.5380469	3080574	Opportunity	Quite a few people fly in and out of Billings. If MET Transit provided bus service to/from the airport, it could have the potential to greatly improve ridership
45.7814757	-108.5032923	3081154	Opportunity	Pedestrian/bicycle bridges over railroad tracks
45.7938779	-108.5297023	3081250	Opportunity	more frequent buses downtown from west end
45.7443175	-108.5562772	3082342	Opportunity	Mullowney Lane needs to be brought to city standards
45.741023	-108.5479945	3082342	Opportunity	Implement a multi-use trail on this ditch.
45.8093288	-108.4138307	3082342	Opportunity	Improve Johnson Lane south to an urban standard
45.7918562	-108.4718093	3082342	Opportunity	Provide multi-modal connection across the river
45.7970028	-108.4812936	3082342	Opportunity	Implement the EBURD recommendations for this corridor
45.7826345	-108.5064999	3082447	Opportunity	Making the streets in downtown two-way could improve the pedestrian safety downtown and allow for the creation of additional successful urban streets like Broadway.
45.7571211	-108.5534774	3082456	Opportunity	Make Old Laurel Road look inviting to community.
45.7914242	-108.4795692	3082456	Opportunity	Build a connector from Highway 3 to I-90
45.8131888	-108.4975795	3082462	Opportunity	Trail under power line
45.7853643	-108.5024904	3082463	Opportunity	Run the buses system on natural gas rather than diesel. Or use electric buses for cleaner air in the area and smaller carbon footprint.
45.792262	-108.5522776	3082461	Opportunity	Pedestrian/Bicycle facility along BBWA Canal is a significant opportunity for people to travel through the community safely and enjoy the water feature and "greenway" feel of this iconic canal corridor.
45.764993	-108.4765998	3082463	Opportunity	Add a bike/ped bridge to cross the yellowstone river over to the Pictograph caves
45.7909142	-108.4915739	3082472	Opportunity	bring downtown to this area, would make it much safer and would remove the scary zone between downtown and the heights
45.7818754	-108.511273	3082463	Opportunity	Evaluate alternatives to bring in more electric charging stations for cars. Perhaps brainstorm ideas to bring in businesses with electric charging stations. This appears to be the way of the future.
45.7686775	-108.5084384	3082461	Opportunity	The massive ROW on State Ave. could easily accommodate bike lanes on this corridor and improve safe travel options for cyclists in this part of town.
45.7945362	-108.4756511	3082461	Opportunity	This entryway into Billings is non-welcoming, dirty, and poorly kept. Ironically, a good portion of the adjacent property is owned by the County and MDT. DO these entities have no civic pride or desire to be good stewards of their property on this high-traffic corridor into our community? We can do better.
45.8399393	-108.4382927	3082487	Opportunity	continue to develop more to the east and less to the west where farmland is being removed for useless apartment buidlings
45.7738861	-108.5347664	3082504	Opportunity	Some street lights take sooooooo long and at some times of the day, there is no traffic. Installing lights that are sensitive to the presence or absence of vehicles and regulating traffic flow accordingly, at least at some parts of the day, would make travel across Billings quicker and considerably less frustrating.

45.8040105	-108.5448883	3082880 Opportunity	-----
45.793429	-108.542813	3082945 Opportunity	Close the 11th Street Bridge to pedestrian only traffic. This will reduce/eliminate speeding vehicles through this area around Highland Elementary as children are walking to/from school
45.7382085	-108.5565673	3082967 Opportunity	Development in this area of town brings the need for safe pedestrian travel. Schools in the area and absolutely nowhere to walk except the road. Builders and property owners should be required to develop side walks from the intersection at I-90 to the most populated area and continue to the schools.
45.7132578	-108.6853079	3083041 Opportunity	Build up everything between Billings and laurel to add to our community so that its similar and competes with Bozeman and belgrade
45.8247471	-108.3867598	3083094 Opportunity	-----
45.8241511	-108.4564888	3083178 Opportunity	-----
45.8261054	-108.4077832	3083213 Opportunity	-----
45.7957031	-108.5194885	3083259 Opportunity	BBWA canal ROW is a great opportunity to create a connected bike ped trail from the far west end all the way into downtown.
45.7876836	-108.5038458	3083259 Opportunity	The old 5th street ROW is an opportunity to create bike ped connection eastward into EBURD and MetraPark
45.7882378	-108.4767517	3083474 Opportunity	Don't force the liability of corvette power plant location to follow the new investor.
45.7726744	-108.598978	3083474 Opportunity	Sell off some city park land that the city is not developing or maintaining. Use the proceeds to go toward new infrastructure.
45.7391116	-108.5676346	3083522 Opportunity	Improve this area. Lots of new development and folks living in this part of town
45.7806165	-108.5041186	3083522 Opportunity	Continue efforts to make Billings' downtown a special place for our community.
45.8047685	-108.5955345	3083539 Opportunity	Improve Zimmerman Trail Access
45.789515	-108.5011238	3083689 Opportunity	paint parking areas along both 4th and 6th to make these streets feel narrower, slow traffic and become more pedestrian friendly
45.8285471	-108.5376114	3084183 Opportunity	Need a new roadway connecting the Heights to the rest of town. This has been talked about, but lets do it!
45.7649182	-108.5357212	3084479 Opportunity	Connecting 8th W and SBB would greatly increase traffic flow.
45.7143002	-108.5119998	3084479 Opportunity	Another entrance into Briarwood would ease traffic volume here.
45.7167573	-108.5044574	3084479 Opportunity	A sidewalk on Prestwick and Brairwood as whole would make it safer for pedestrians.
45.7944763	-108.4827959	3085457 Opportunity	Make 2nd Ave N a 1-way going east so there is another way to get to Main Street at 5 pm.
45.7854045	-108.5047533	3085839 Opportunity	Partner with the hospitals so that their employees can take public transportation. Everyday there are way too many single person cars going to the hospital area
45.7810098	-108.5296809	3086153 Opportunity	If Lewis is going to continue to be the bikeway into downtown it needs a dedicated lane east of 8th St so that bikes and cars don't have to share space. I would recommend eliminating on street parking between 8th St and Division. The majority of houses have garages and there is significant on street parking on the numbered streets. Eliminating on street parking to facilitate a bike lane here would enable safer bike traffic. It's worth noting that even though this is officially a bike space I consistently see riders making use of the sidewalks which suggests that we haven't yet provided sufficient safety to make riders feel safe in the streets.

45.7840028	-108.5111383	3086153 Opportunity	It would be nice to have a bike lane that crosses downtown from north to south. It seems that 27th is probably too high traffic for such a lane. Both Broadway and 29th have the advantage of crossing the railroad tracks and this would allow them to help connect the Southside to downtown, but they both have significant on street parking that would be lost if such a lane were created. So maybe make a lane and a pedestrian bridge on 30th? We could make 30th a 2 way with bike lanes on either side, perhaps?
45.7840028	-108.5111383	3086153 Opportunity	I'm not entirely sure where the placement should be but it would be great to have bike lanes moving north to south in downtown.
45.7818154	-108.5117964	3086153 Opportunity	It would be useful to have more bike lanes in the downtown area generally. My understanding of relevant research is that re-purposing parking for bike lanes does not hurt local businesses, and making it easier for riders to access to the downtown area would likely improve the value of homes in the Central and Southside neighborhoods since those are the areas closest to downtown. If we want to pursue in-fill development and support the downtown over the long term I think that additional bike infrastructure would be a wise investment.
45.7590373	-108.5062706	3086177 Opportunity	The South Side has a fairly dense population. Can hours be extended for bus service?
45.7432262	-108.7493431	3086177 Opportunity	Billings - Laurel shuttle. Any hope of getting a workers schedule there?
45.7781963	-108.5285865	3086177 Opportunity	Billings has or will have 50% of its population over 60. Lets get the public transit needs survey to those folks. The hospitals finally stopped their shuttle lets work around that and hit them for sponsored.
45.8083584	-108.4630119	3087520 Opportunity	A pedestrian/bike trail exists from the Heights to South 27th, but it would be great to have a better, more direct, SAFE trail to downtown Billings -- perhaps along 6th Ave. N. The problem is the traffic from the heights onto 6th is often traveling at a speed greater than the posted speed limit and is very dangerous for bicyclists and pedestrians alike. Some kind of safety barrier is needed between a trail and 6th Ave. N. to at least North Park area or 27th Street.
45.802136	-108.6022258	3087580 Opportunity	Bike trail up Zimmerman
45.7839429	-108.5079838	3087580 Opportunity	Better publicized bus schedules
45.7773718	-108.6522641	3088333 Opportunity	Slow down make safer
45.826065	-108.4722816	3088930 Opportunity	Main street is ugly and impedes commerce
45.7806821	-108.5753274	3089848 Opportunity	I think it would be incredible if Lewis could be a designated bicycle route, where bicycles commuters were encouraged to travel here. That way we wouldn't see bikes on streets like Grand and Broadwater. I lived in Portland, OR and they had a street just one block south of a major road for this purpose. It let bikes commute without car interference and let cars commute without bike interference. Of course if you lived on that street, you could drive on it, but it was marked in a way to encourage you to drive one block north or south.
45.7599955	-108.6418831	3089864 Opportunity	Before westward expansion of residential and commercial development occurs, a plan for street improvements and amenities (landscaping and pathways) can be prepared.
45.7855289	-108.5085692	3089899 Opportunity	Opportunity to make the downtown area more inviting, a hub of pedestrian activity
45.770773	-108.6187946	3089981 Opportunity	There is an opportunity in the far west-end to develop more bus transit routes. However, it must be convenient and have longer hours
45.798946	-108.5392619	3089981 Opportunity	Opportunity to direct more services for both MSUB and RMC students.
45.7897899	-108.5108949	3089981 Opportunity	Opportunity to provide more services to the hospital corridor.
45.7838909	-108.6443636	3090050 Opportunity	Slower speed limit

45.7938026	-108.4586701	3090089 Opportunity	I expect at some point in the future there may be a major accident on the off ramp here. Folks coming over the bridge cannot see the traffic that is sometimes backed all the way along the exit ramp and onto the interstate
45.7908328	-108.4981865	3090182 Opportunity	multi-modal corridor from downtown to MetraPark through EBURD
45.7509505	-108.6195008	3090998 Opportunity	-----
45.8466436	-108.4618155	3092104 Opportunity	Place a sams or larger store in this location. Capture the business from the North-east
45.8416135	-108.4680759	3092308 Opportunity	connect the bike path with the lake elmo area and the hiltop bike paths to create a functional loop
45.7066822	-108.4992416	3092999 Opportunity	Bus Service to Briarwood



Appendix N

Public Comment Summary #2



MEMORANDUM

Date: October 9, 2018 Project #: 21353

To: Steering Committee

From: Andy Daleiden, PE and Bryan Graveline

Project: 2018 Billings Urban Area Long Range Transportation Plan

Subject: Public Comment Summary #2

This memorandum summarizes public feedback received for the 2018 Billings Urban Area Long Range Transportation Plan (LRTP) through the public open house conducted on September 25th, 2018.

INTRODUCTION

The Yellowstone County Metropolitan Planning Organization (MPO) followed up on the public outreach it collected in May 2018 with a second public informational meeting in September 2018. This meeting was used to continue to inform the public of the plan update and to collect feedback on project prioritization. The public open house was held at the Billings Public Library Community Room from 4:30 to 6:30 PM. The public comment period for the open house ran from September 27th, 2018 to October 9th, 2018.

Attendees were able to review LRTP materials, listen to a presentation on the LRTP update progress to date, rank project areas to prioritize, and provide mapped comments related to proposed projects. 35 people signed into the meeting and the project team received 50 map comments and five comment sheets. This information was also posted to the project website: billingslrtp.com. Appendix A shows the open house display boards, Appendix B shows the completed comment sheets, and Appendix C shows the sign-in sheets.

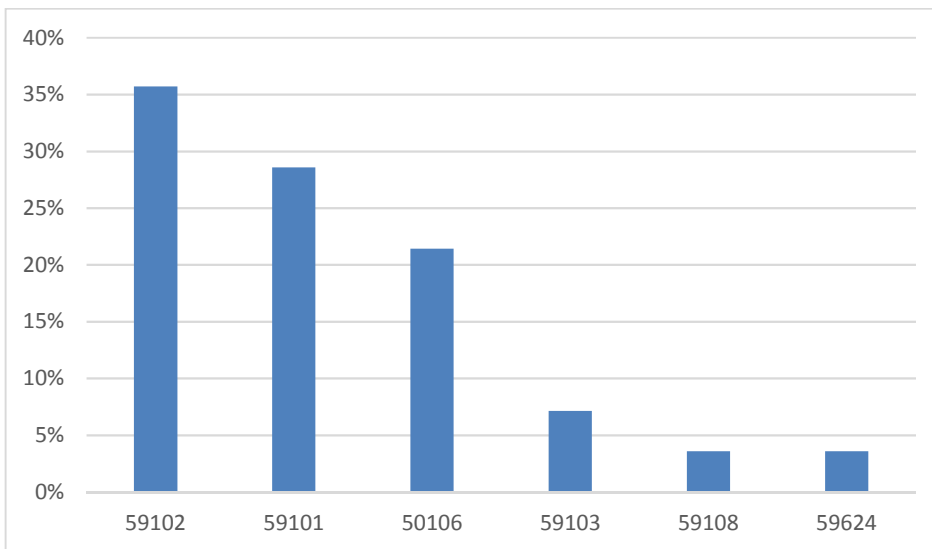


COMMENT SUMMARY

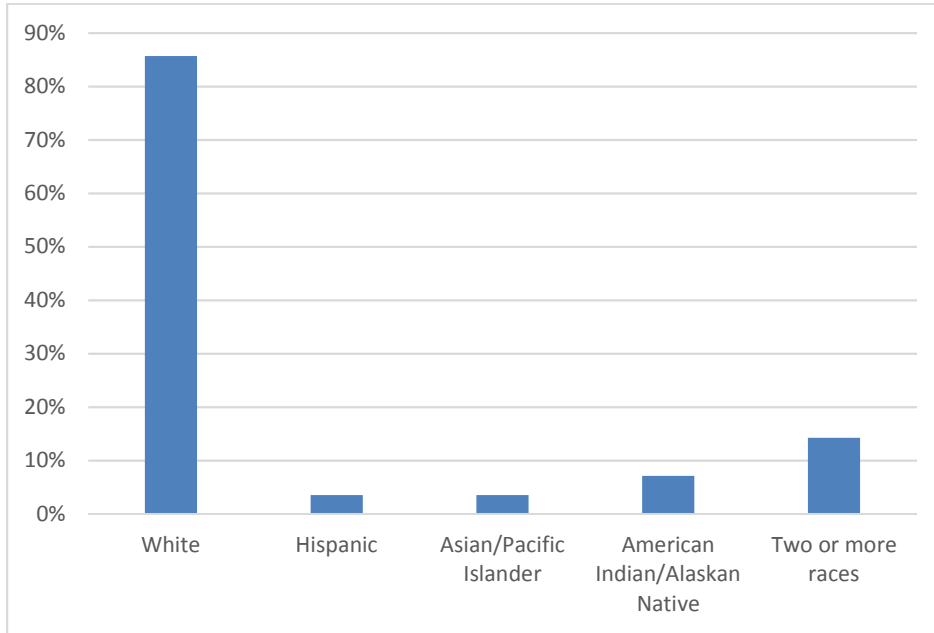
The following summarizes feedback and comments collected from open house attendees through the sign-in sheet, returned comment sheets, and project map comments.

DEMOGRAPHICS

1) What zip code do you live in?



2) What is your ethnicity?



US Census Data Demographics for Yellowstone County: White/Caucasian: 91% | Hispanic or Latino: 5.5% | Asian/Pacific Islander: 0.8% | American Indian/Alaska Native: 4.6% | Two or more races: 2.9%

PROJECT AREA PRIORITIZATION

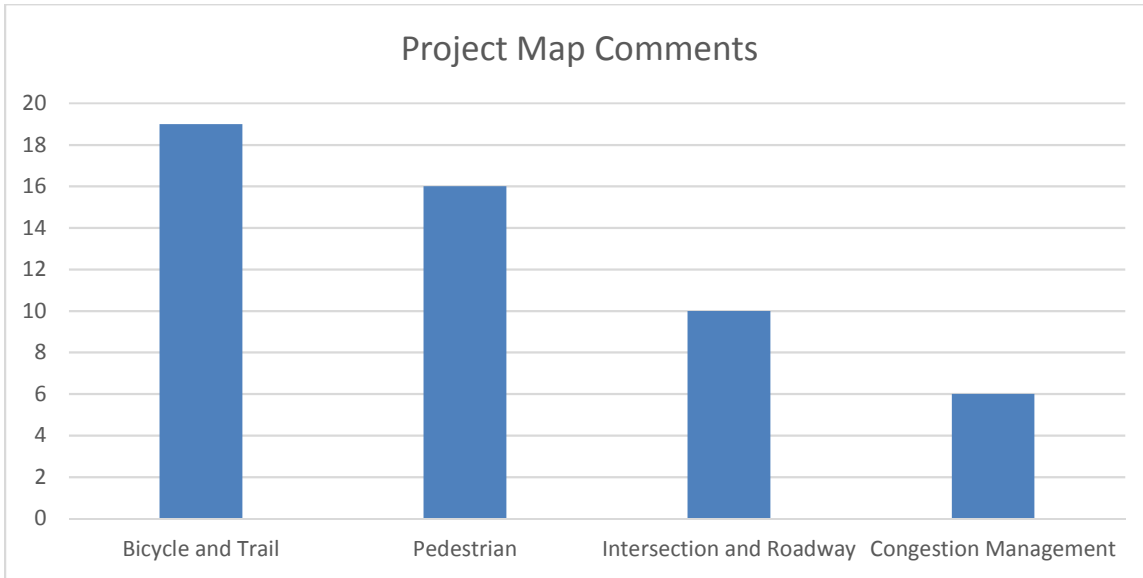
Prioritizing project areas helps the MPO guide project implementation. Attendees were asked to rank their top 3 project areas they would most like to see prioritized. They prioritized the project areas as follows:

- 1) Bicycle Projects
- 2) Roadway Projects
- 3) Congestion Management Projects
- 4) Pedestrian Projects
- 5) Trail Projects
- Other Projects (Electric Vehicle Infrastructure)
- 7) Rail Projects
- Intersection Projects
- 9) Transit Projects
- 10) Freight Projects

PROJECT COMMENTS

Using maps denoting planned projects for the Billings Urban Area, attendees were asked to comment on any projects they wanted to see changed, removed, or prioritized. The project maps are included in

Appendix D and the comment sheets are shown below. 51 total comments were received in the following categories:



Upon review of the project comments, the project team found that the attendees most wanted to see the following project types prioritized:

- Projects that improve pedestrian safety around schools through infrastructure such as crossings, sidewalks, and trails.
- Projects that improve bicycle safety and convenience through reconfiguration of streets to add bicycle infrastructure.
- Projects that improve vehicular safety through improvements to sight distance and lighting and through addition of turn lanes on high speed approaches.
- Projects that decrease congestion through addition of turn lanes at intersections.

Table 1. Map Comments

Category	Sticker Number	Project Number	Comment
Pedestrian	69	9	A remote drop/p/u area at Sam’s Club would reduce ped bike crash incidence & conflict.
	42	All schools	Please consider remote drop/pickup for vehicles in order to reduce pedcar crash or bike car crash
	66	16	Very important at this corner because cars cut in at high speeds at 2 school boundaries have been combined this corner.
	47	-	Crosswalk needs to be reinstated between park and housing 13 th and Ave D.
	51	-	Sidewalks on Southgate by T&E, Mdu, and Blm.
	56	-	ADA Southeast & Southwest King E & Parkway Ln.
	43	-	Sidewalk in front of The Storage Place King Ave E.
	76	-	Southeast corner of sidewalk Remove the fence post or cornerpost complete the sidewalk.
	75	-	Sidewalk between Little Horn Bank & apts to the west.
	71	-	Need paved ped trail for school kids to get to school.
	72	-	Need paved hike/bike trail to connect to Riverfront Park.
	73	-	Need paved hike/bike trail for residents of Bleins Mobile Home Park (big safety issue).
	52	-	Narrow turning radius at 27 th and 1 st S.
	103	22	Important way to address food desert/equity!
	Bicycle and Trail	14	53
111		-	Need sidewalks in Forest Park Subdivision
57		BL2	Poly Drive doesn’t make sense? But yes on BL from Zimm to 72 nd ? Or however far.
6		-	Zimmerman bike route designer.
10		-	Add multi use path that connect King Ave path between the RRFB & 32 nd St West
11		-	Name the trails & sign them!
12		-	Provide distance & directional signage on the trails. An example is the sign at the Swords Rimrock trailhead. It lists distance to Coulson & Two Moon – etc.
14		-	Laurel Road could be reconfigured (reduce the size of the island) in order to create buffered bike lanes.
15		-	Bike lane/multiuse path that follows King to Shiloh Rd.
17		BL6	Bike path on Montana Ave – would increase pedestrian traffic & accessibility to businesses on Montana; downtown commerce.
1		-	Bike boulevards and buffered lanes are increasing in importance due to distracted driving – need to have more buffered places to ride.
2		-	Downtown projects – very important due to high density and travel patters to and from.
3		4	Important thoroughfare.
4		5	Important thoroughfare.
5		BB7	Important thoroughfare.
7		7	Priority.
8		-	Please prioritize routes near schools.
9		-	Grand Avenue is very difficult/dangerous to cross even at signals but esp. anywhere else. What can be done?
13	-	Would like a north south connector bike lane on 8th or 13th or 15th.	
20	BB35	Needed!	
16	MT45	Would be a great way to address food desert/equitable access.	
Roadway and Intersection	121	20	This roadway is a definite need to accommodate the growth of Billings.
	123	-	Full lane Laurel Rd overpass State Ave to Moore Lane
	125	16	Improve visibility, provide light 2 Virginia Ln & Rimrock Rd
	126	R17	Left turn signal is needed for traffic flow and optimizing safety

	127	-	Inner Belt Loop has been studied to death and is long overdue!!
	128	67	Badly need left turn lanes at these three intersections
	129	29	Badly need left turn lanes at these three intersections
	130	67	Badly need left turn lanes at these three intersections
	131	-	Reconfigure Laurel Road by reducing the concrete island in order to add buffered bike lanes,
	132	-	Heading east on Zoo Drive up to overpass, most traffic heads over to frontage road or to east on I90. Traffic really backs up & takes a while to get across overpass. Right hand turn lanes so right turns can get quickly w/o having to wait so long. Thank you.
Congestion Management	121		Intersection Hwy 3 & Rimrock Rd – Temporary signal needs to be permanent.
	122		SB Zimmerman need aux rt-turn lane
	123		Need left turn lane into Park; might need traffic light
	124		Monad & 15 th traffic add lanes
	125		Modify EB rt-only to rt/thru
	121		Yes... Permanent light! No roundabout there. Medical personnel & ambulance people use that intersection a lot. Light great for them. Roundabout horrible for ambulance traffic. Medical people said please no roundabout ever @ 27 th Rimrock light yes.

Appendix A Public Open House #2 Display
Boards

WELCOME!

Thank you for attending tonight's open house for the Billings Urban Area Long Range Transportation Plan. The purpose of this open house is to give you an opportunity to learn about the draft plan, review technical information, and provide feedback on proposed projects in the following areas:

- Streets and Highways
- Pedestrians and Bicyclists
- Transit, Rail, and Truck

Who Is Involved?



The primary sounding board is the Steering Committee (SC), which includes representatives from the above agencies. Public involvement is a major contributor to the plan development.

The consultant team for the project includes Kittelson & Associates, Inc. and DOWL.

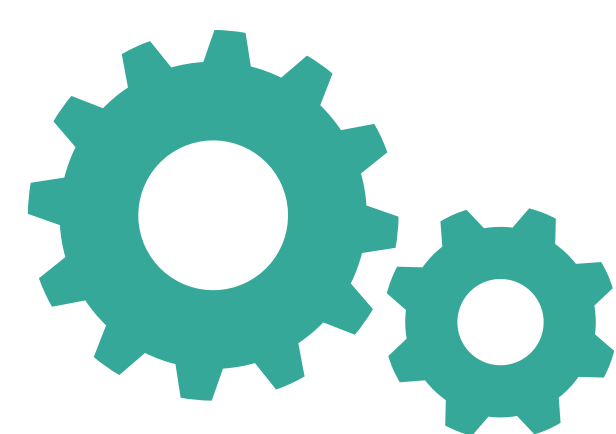


2018 LRTP GOALS



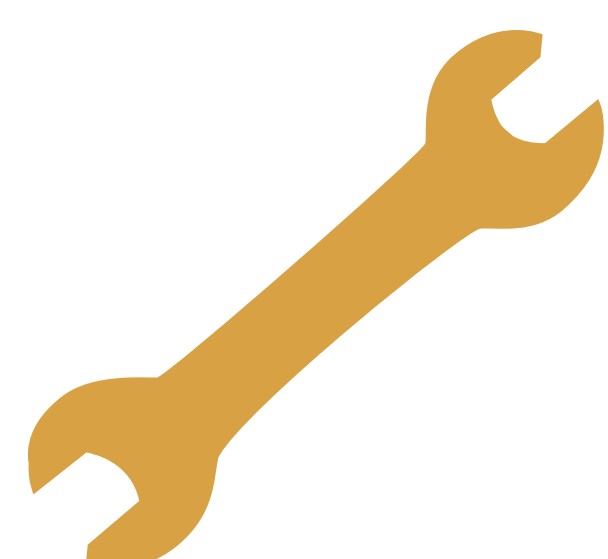
Safety

Develop a safe transportation system



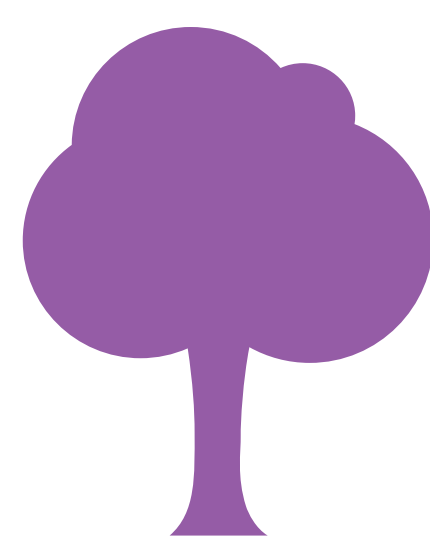
Functional Integrity and Efficiency

Optimize, preserve, and enhance the existing transportation system



Prioritized Improvements

Identify and prioritize projects that mitigate deficiencies, maximize the use of existing facilities, and balance anticipated needs with available funding



Environment

Develop a transportation system that protects the natural environment and promotes a healthy, sustainable community



Public Transit and Transportation

Create a transportation system that supports the practical and efficient use of transit



Pedestrians and Bicyclists

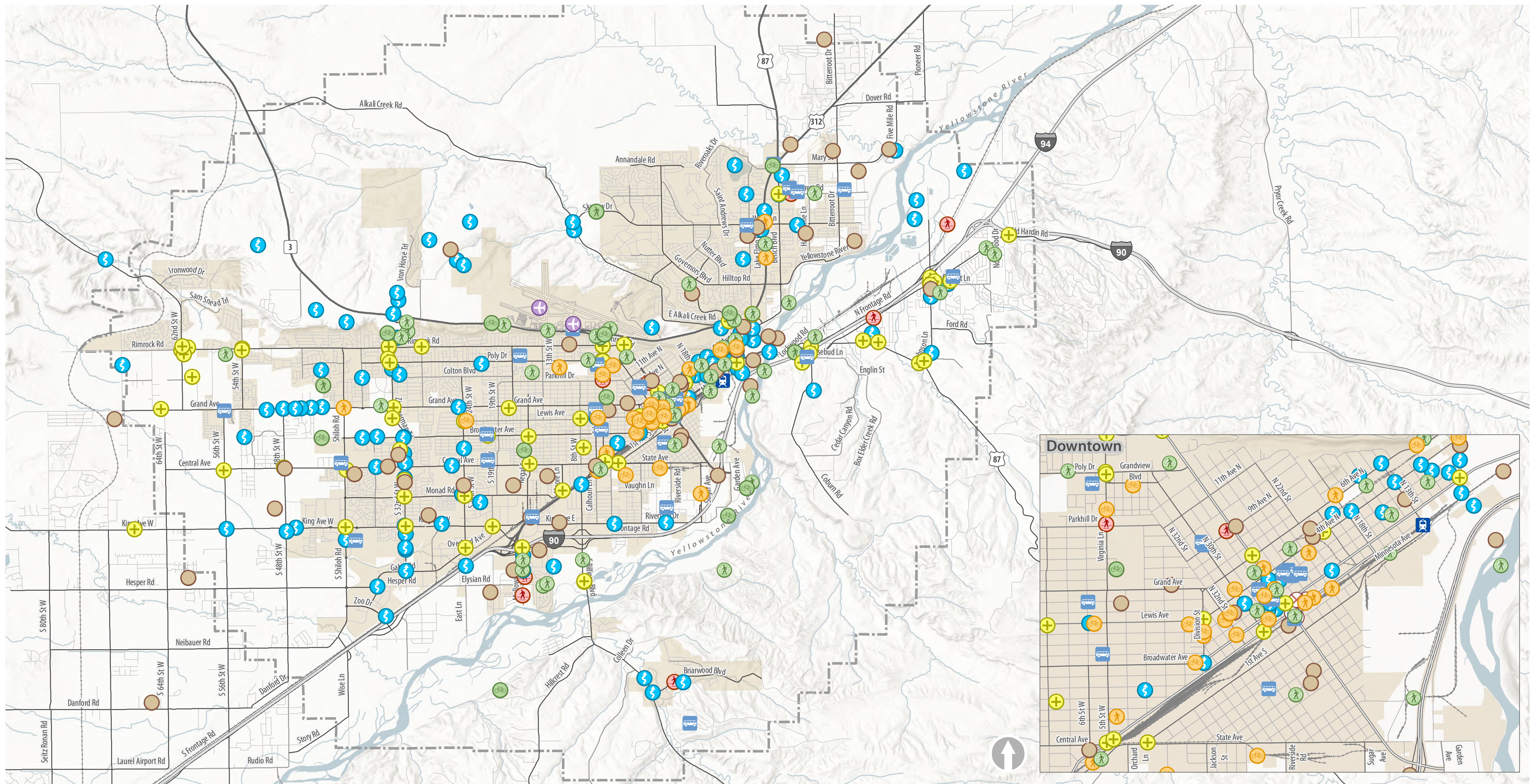
Create a transportation system that supports the practical and efficient use of active transportation such as walking and bicycling



Economic Vitality

Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce

NEEDS AND OPPORTUNITIES FROM PUBLIC COMMENTS



- Public Feedback Categories**
- Airport
 - Bus Transit
 - Bike Route
 - Bike Trail
 - Pedestrian
 - Pedestrian Trail
 - Railroad
 - Intersection
 - Sidewalks
 - Trains
 - Pedestrian Crossing
 - Roadway
 - Study Area

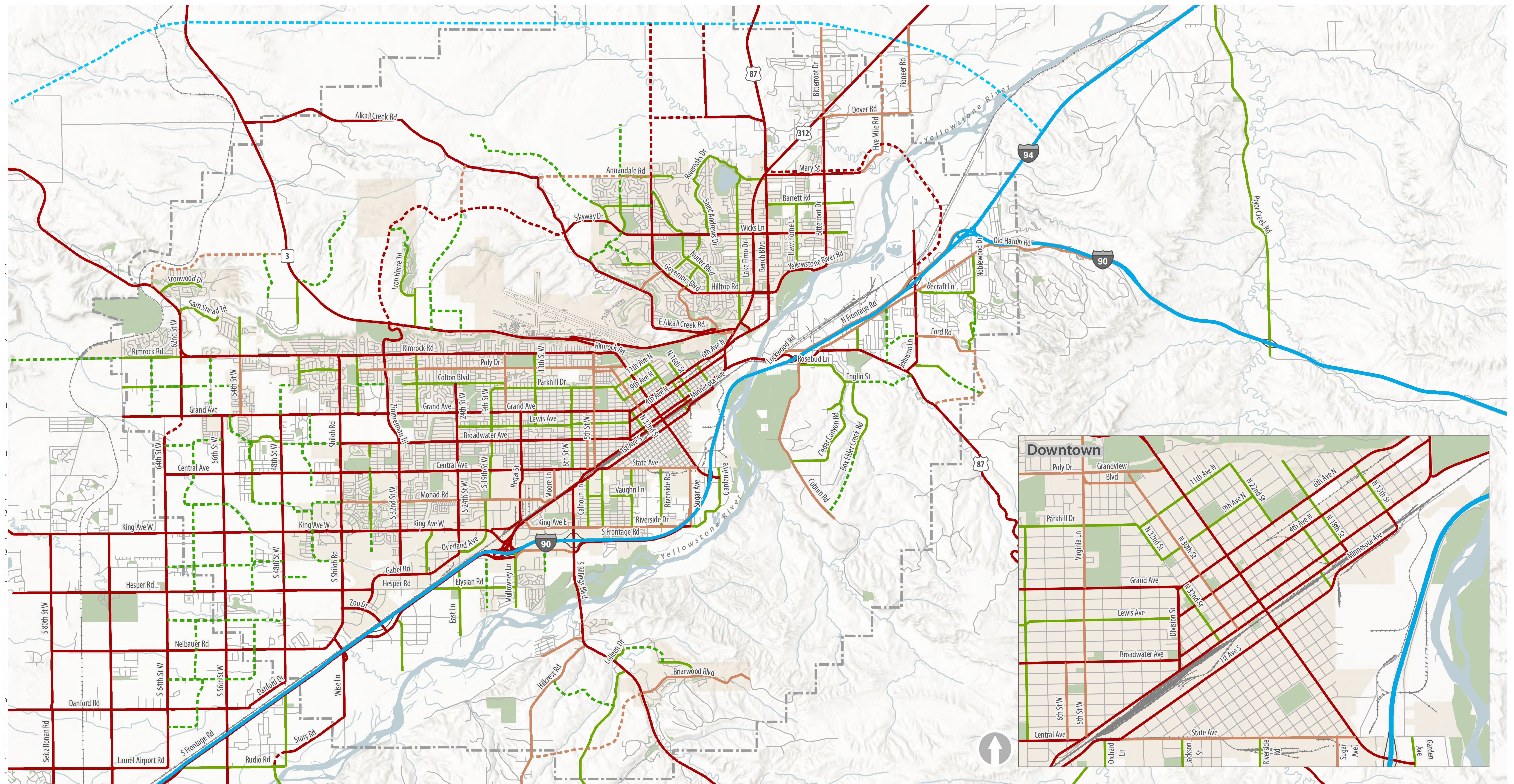
369 total comments
 112 on Roadways
 68 on Intersections

50 on Bicycle/
 Pedestrian
 28 on Bicycles

25 on Pedestrians
 2 on the Airport
 33 on Transit

5 on Rail
 46 on General

FUNCTIONAL CLASSIFICATION



- | | | | | |
|-------------------------------|----------------|------------------------------------|-------------------------|------------------|
| Roadway Classification | Minor Arterial | Proposed Freeway Controlled Access | Proposed Minor Arterial | Study Area |
| Interstate | Collector | Proposed Principal Arterial | Proposed Collector | Park |
| Principal Arterial | Local Streets | | | City of Billings |

Note: This functional classification map does not represent the federally approved system.

970 Miles of roads

18 Roundabouts

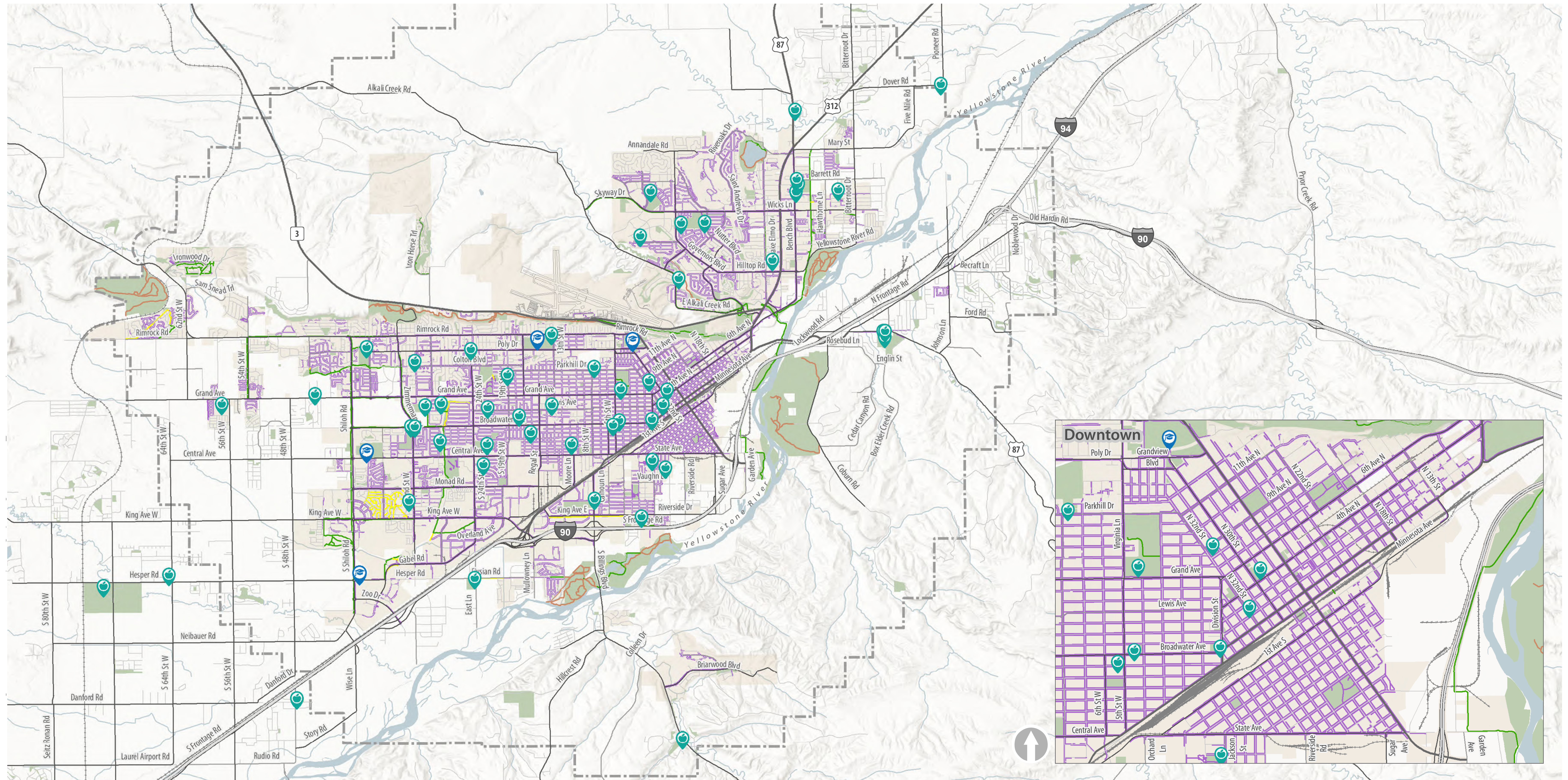
173 Signalized intersections

Freeways serve high speed, long distance travel movements and provide limited access to adjacent lands.

Arterials serve higher volumes of traffic, particularly through-traffic, at higher speeds.

Collectors carry locally generated traffic at lower speeds.

EXISTING PEDESTRIAN AND TRAIL FACILITIES

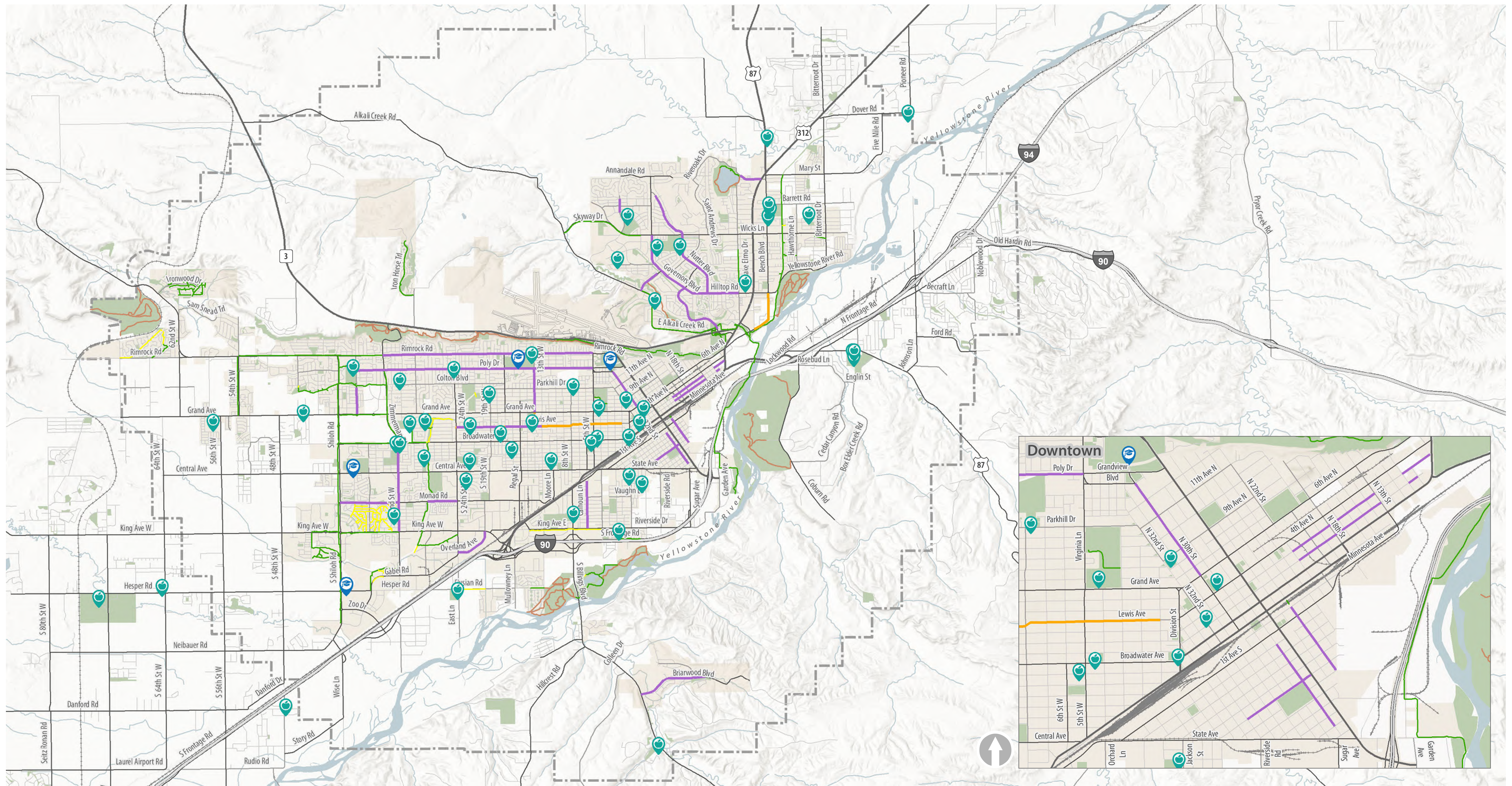


660 Miles of sidewalks
11 Miles of neighborhood trails

45 Miles of shared use paths
3.2% Billings residents commute by walking*

*2016 ACS Data

EXISTING BIKEWAYS AND TRAIL FACILITIES

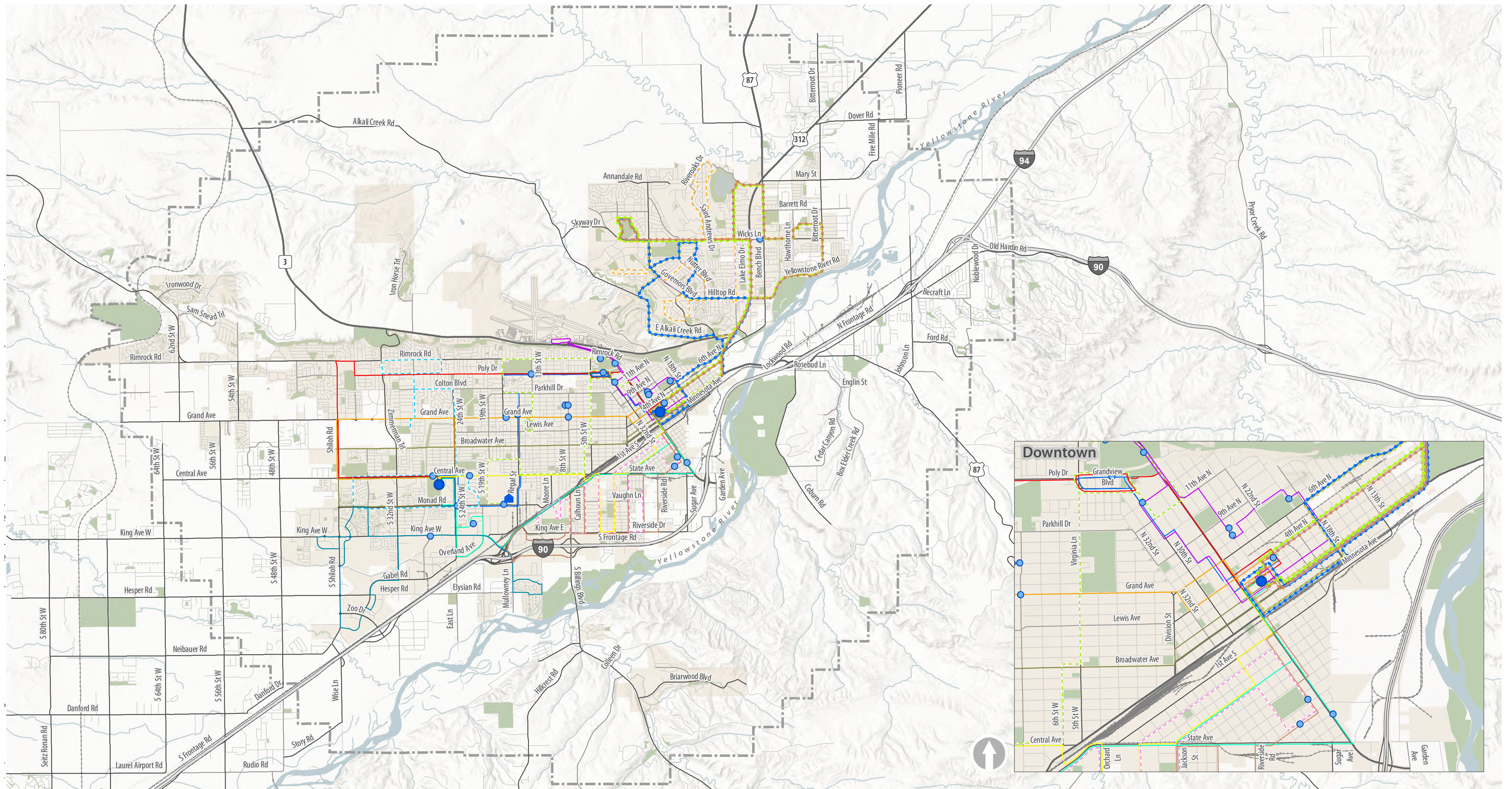


26 Miles of bike lanes
 2.6 Miles of shared lanes
 11 Miles of neighborhood trails

45 Miles of shared use paths
 1% Billings Residents Commute by bike*

*2016 ACS Data

EXISTING BUS ROUTES



● Bus Shelter	Bus Route Number	7	14	18	T2	Study Area
■ Transit Office	1	9	15	19	T3	City of Billings
● Transfer Station	3	10	16	24	T4	Park
	5	13	17	T1		

18 Routes

1% Billings Residents Commute by bus*

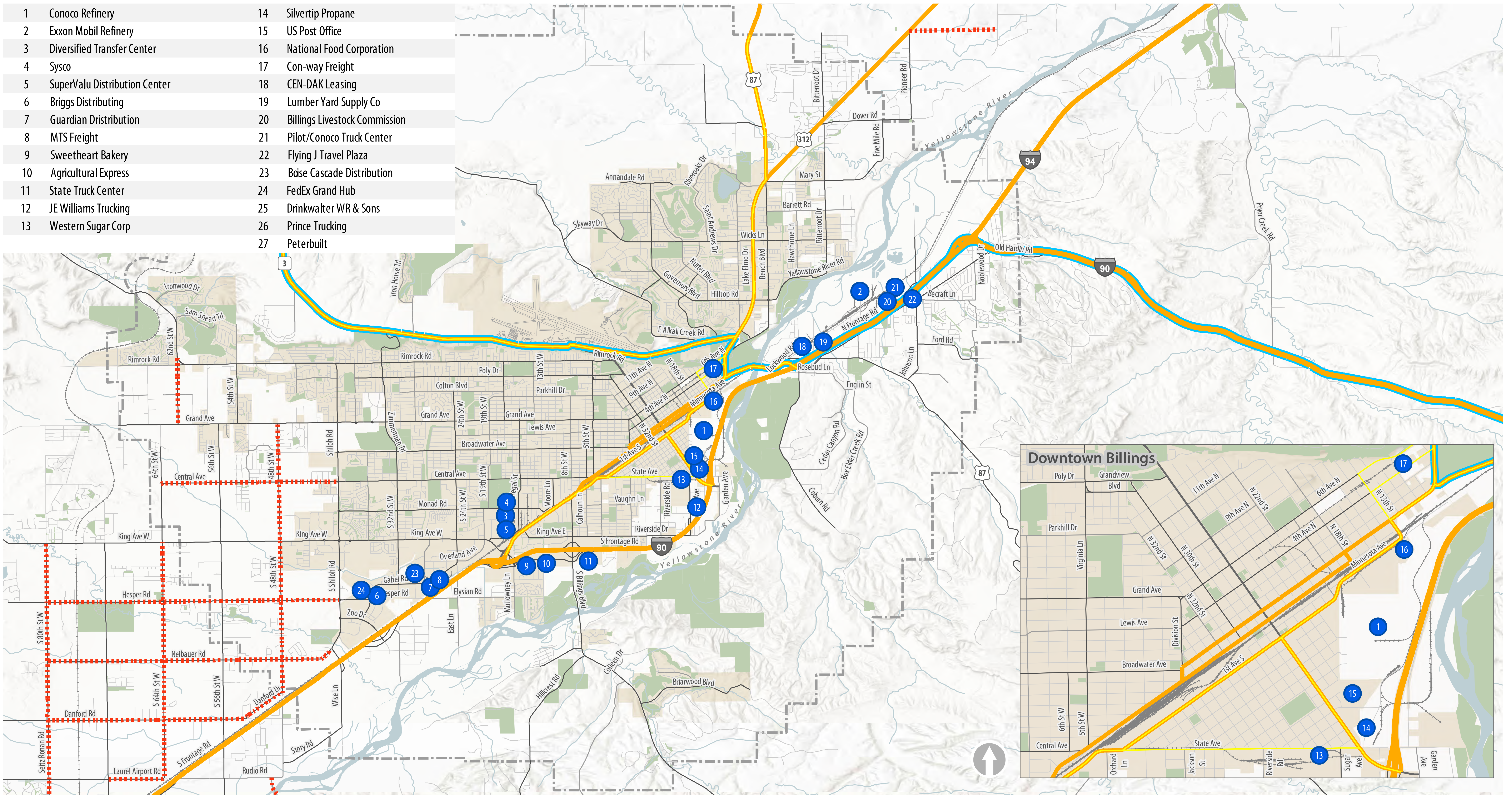
5:50a-6:50p Weekday hours

8:10a-5:45p Saturday hours

*2016 ACS Data

EXISTING TRUCK ROUTES, RESTRICTIONS, AND LOCAL GENERATORS

- | | | | |
|----|-------------------------------|----|-------------------------------|
| 1 | Conoco Refinery | 14 | Silvertip Propane |
| 2 | Exxon Mobil Refinery | 15 | US Post Office |
| 3 | Diversified Transfer Center | 16 | National Food Corporation |
| 4 | Sysco | 17 | Con-way Freight |
| 5 | SuperValu Distribution Center | 18 | CEN-DAK Leasing |
| 6 | Briggs Distributing | 19 | Lumber Yard Supply Co |
| 7 | Guardian Distribution | 20 | Billings Livestock Commission |
| 8 | MTS Freight | 21 | Pilot/Conoco Truck Center |
| 9 | Sweetheart Bakery | 22 | Flying J Travel Plaza |
| 10 | Agricultural Express | 23 | Boise Cascade Distribution |
| 11 | State Truck Center | 24 | FedEx Grand Hub |
| 12 | JE Williams Trucking | 25 | Drinkwater WR & Sons |
| 13 | Western Sugar Corp | 26 | Prince Trucking |
| | | 27 | Peterbilt |

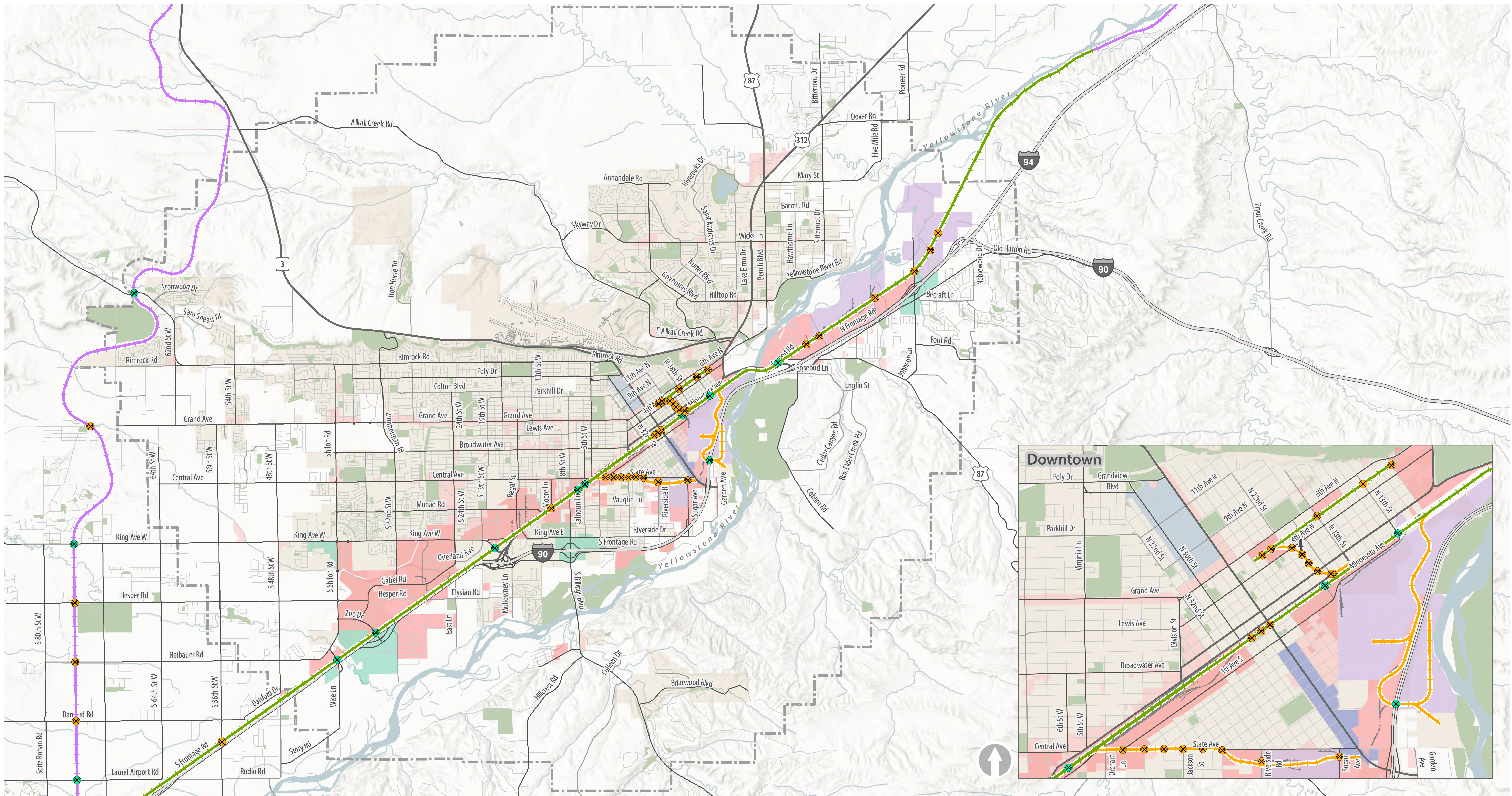


- Major Truck Activity
- Highway Truck Route
- Camino Real Corridor (Federal)
- Intercity Truck Route (City of Billings)
- - - Restricted Truck Routes (Yellowstone county)
- Study Area
- Park
- City of Billings

29.8 Million tons of freight moved by truck in Montana in 2016

Billings urban area among busiest truck hubs in state

EXISTING RAILROAD FACILITIES

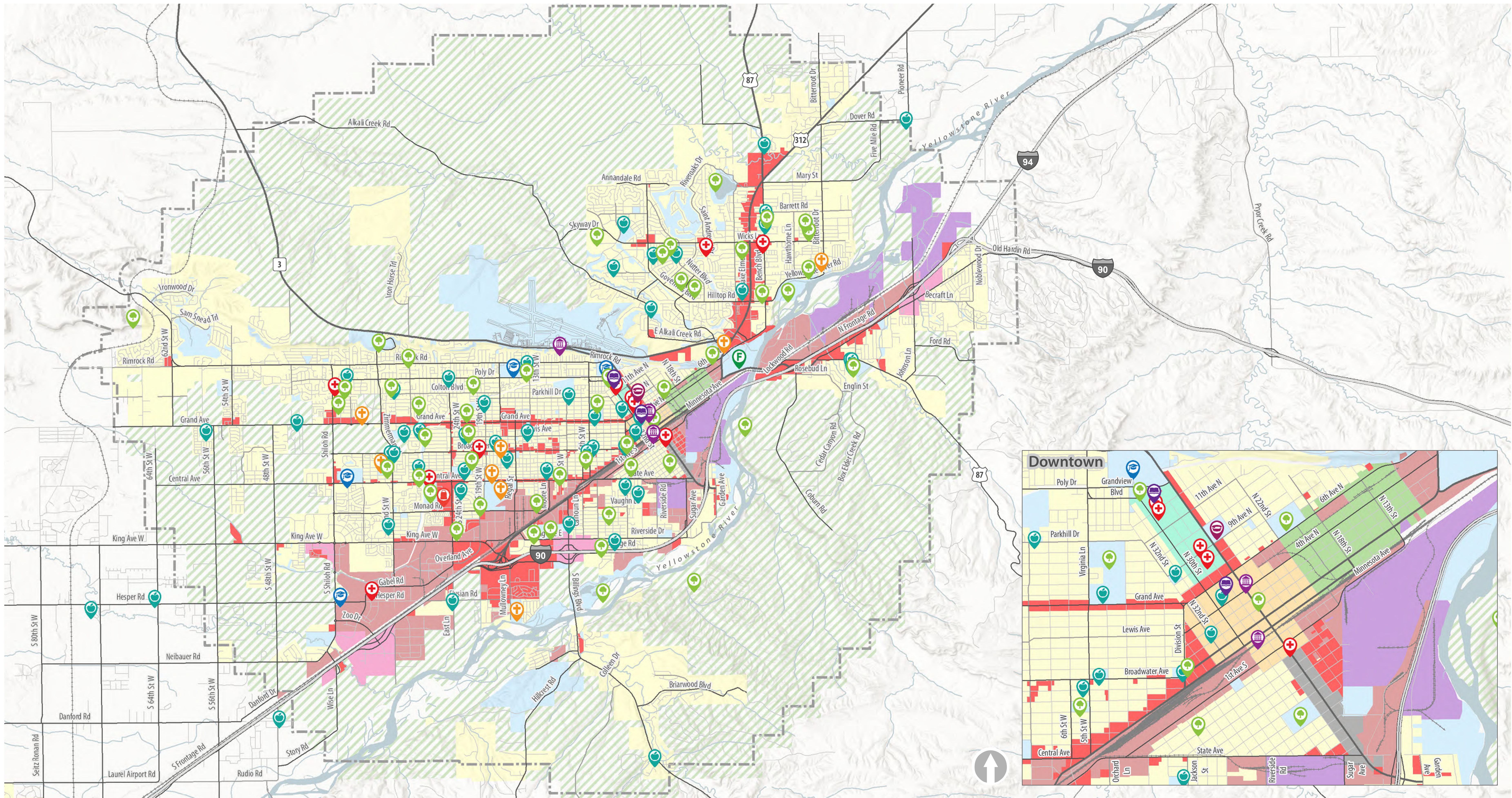


- ◆ At Grade Crossing
 — Burlington Northern Santa Fe
 Study Area
 Commercial
 Medical Corridor Permit
- ◆ Grade Separated Crossing
 — Montana Rail Link
 Park
 Commercial/Industrial
 South 27th Street Corridor
- Spur
 Heavy Industrial
 Entryway
 City of Billings
- Light Industrial
 City of Billings

34 at-grade railroad crossings

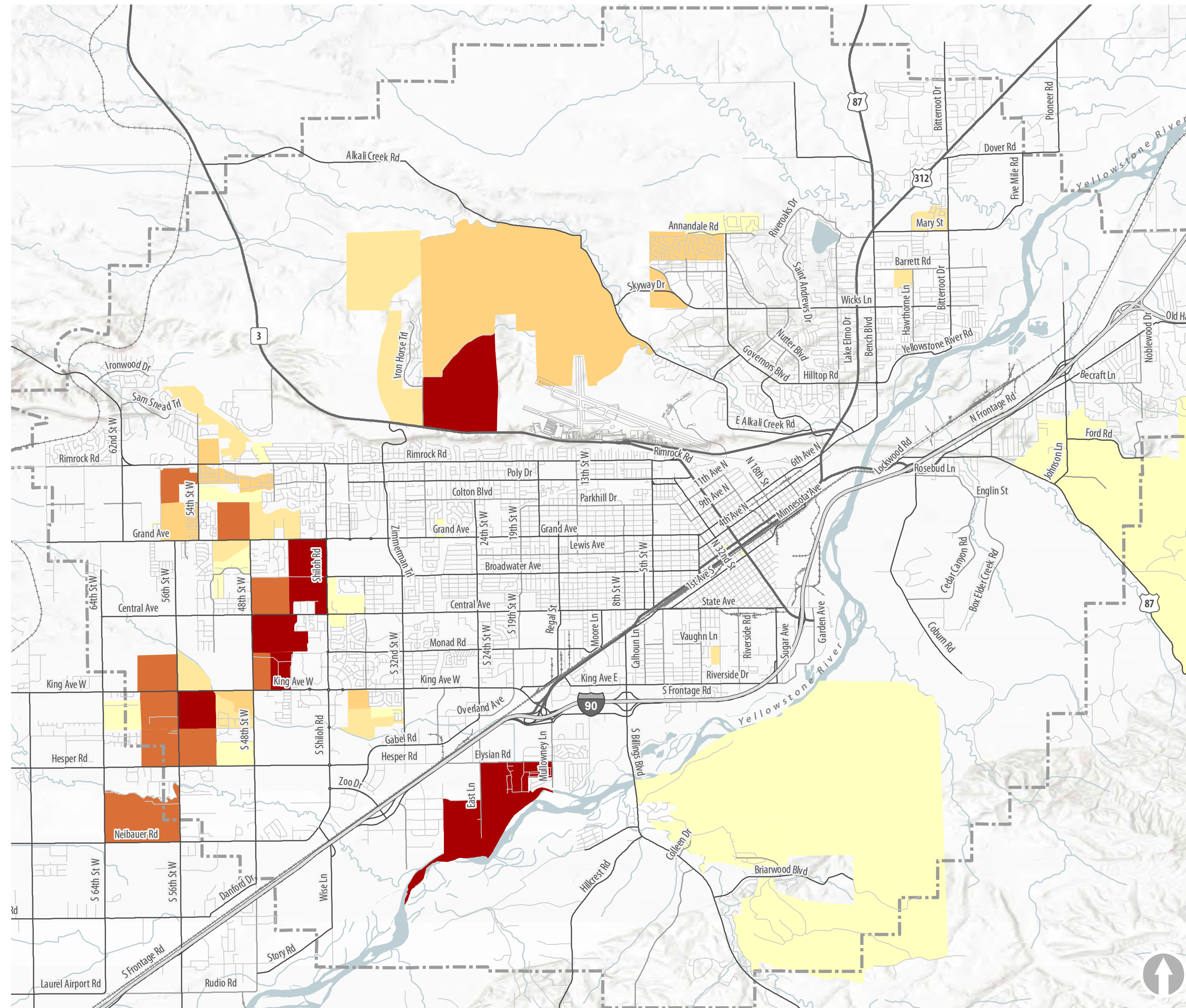
12 grade-separated railroad crossings

EXISTING LAND USE



- | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

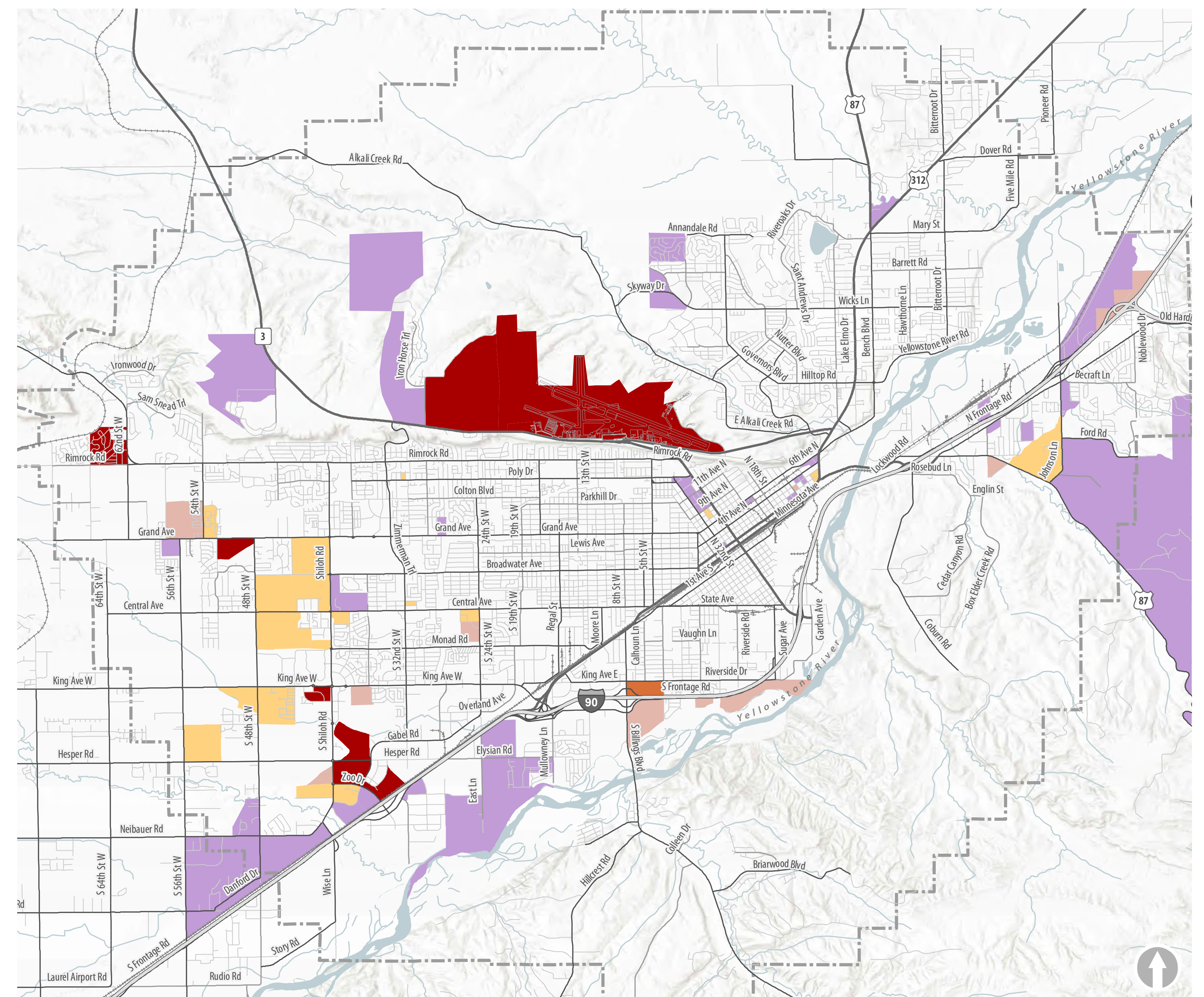
PROJECTED POPULATION AND EMPLOYMENT GROWTH BY 2040



Population Change

2 - 250	251 - 500	1,001 - 1,500	Study Area
	501 - 1,000	1,501 - 2,588	

Population projected to grow by **33.6%** by 2040
 2040 population projection = **170,000**

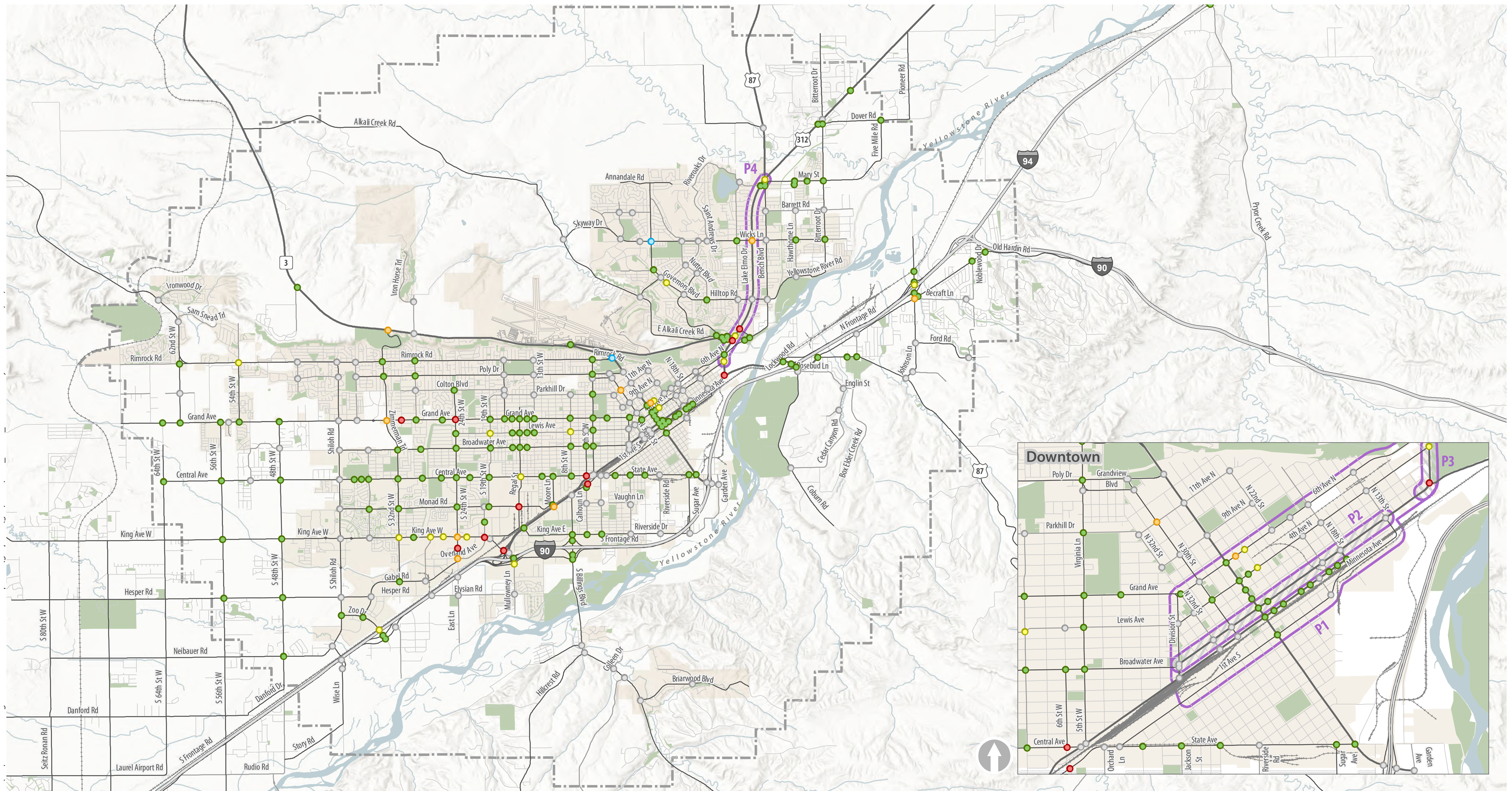


Employment Growth

0 - 100	101 - 200	301 - 400	Study Area
	201 - 300	401 - 500	

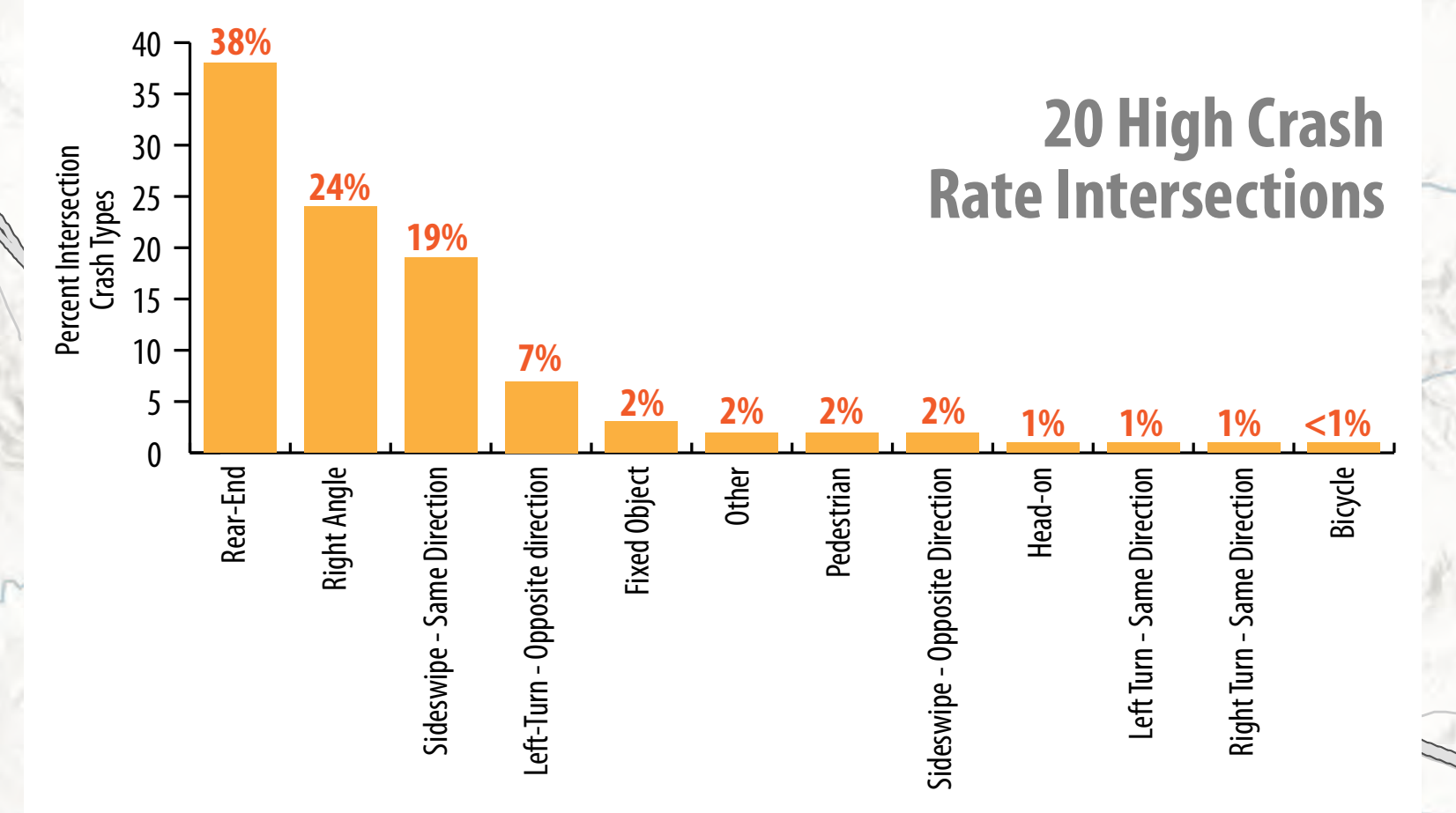
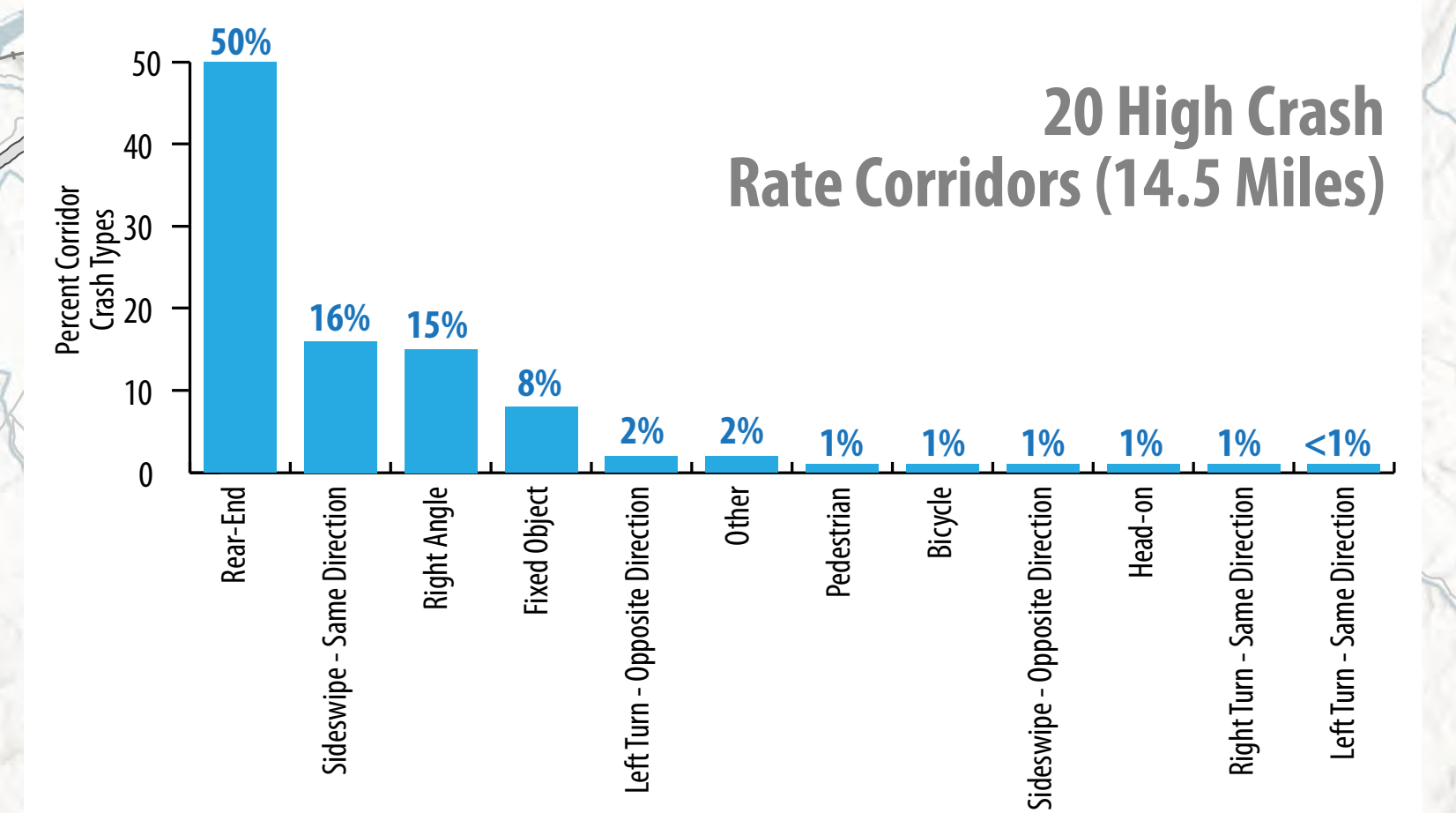
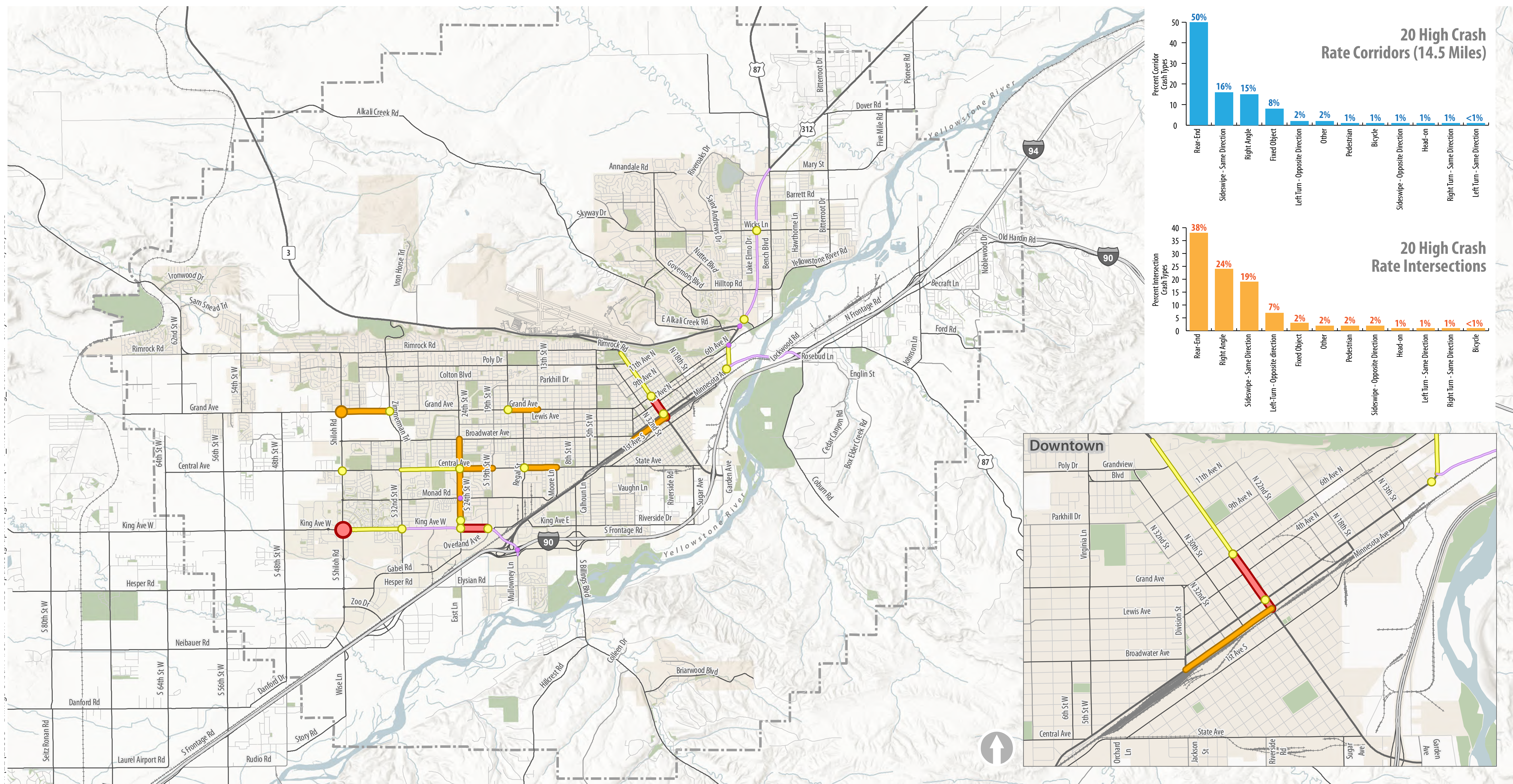
Employment projected to grow by **34.3%** by 2040
 2040 jobs projection = **104,000**

EXISTING CONDITIONS AND LEVEL OF SERVICE



22 potentially congested intersections identified (LOS E or worse)

INTERSECTIONS AND CORRIDORS WITH HIGH CRASH RATES



- Intersection Crash Rates**
- .53 - 1.0
 - 1.0 - 2.0
 - 2.0 - 3.0
 - 3.0 - 3.6
- Corridor Crash Rates**
- 5.6 - 8
 - 8 - 12
 - 12 - 15
 - 15 - 29.5
- Study Area**
- Study Area
 - City of Billings
 - Park

CRASH SUMMARY:
 14,577 reported crashes between 2013 and 2017
 42 fatal crashes

4,005 injury crashes
 10,430 property damage only crashes
 210 pedestrian crashes (8 fatal)
 140 bicycle crashes (1 fatal)

NEXT STEPS

Stay Involved

- Sign up on the “Notify Me” list on the City’s website: <http://ci.billings.mt.us/>
- Check back frequently for updates on our project website at www.billingslrtp.com
- Contact **Scott Walker** (MPO) at 406.657.8246 or via email at walkers@ci.billings.mt.us

What is Next?

- Review and address comments received from the public on the Draft LRTP
- Finalize the LRTP for plan adoption
- Coordinate the plan adoption process in October 2018

All displays and handouts from tonight will be posted on the project website at www.billingslrtp.com for review and comment.

Thank you for participating!

Appendix B Public Open House #2
Comment Sheets

What zip code do you live in? 59102

What modes of transportation do you use? (check all that apply)

- Car/Truck/Motorcycle
 Bike
 Walk
 Public Transportation
 Other: _____



Project Areas

Please rank below the project areas that you would most like to see the MPO prioritize.

Project Area	Rank Top 3 (1, 2, 3)
Roadway	
Intersection	3
Congestion Management	
Pedestrian	2
Bicycle	1
Trail	
Transit	
Freight	
Rail	
Other	

Are there any projects you did not see on the project maps that you would like to see added? Please explain.

No - great coverage!

Are there any projects you saw on the project maps that you would like to see revised or removed? Please explain.

N/A

If you would like to receive project updates, please fill out the information below.

Name: Melissa HendersonEmail: melissa.hen@riverstonehealth.org

Please leave your completed comment sheet at the sign-in table. If you would like to complete it at a later date, please send it to the YCPB, 2825 3rd Avenue North, 4th Floor, Billings, MT 59101.

While your comments are always welcome, they can be best utilized if received by October 9, 2018.

Thank you!

What zip code do you live in? 59102

What modes of transportation do you use? (check all that apply)

- Car/Truck/Motorcycle
 Bike
 Walk
 Public Transportation
 Other: _____



Project Areas

Please rank below the project areas that you would most like to see the MPO prioritize.

Project Area	Rank Top 3 (1, 2, 3)
Roadway	3
Intersection	
Congestion Management	1
Pedestrian	
Bicycle	
Trail	
Transit	
Freight	
Rail	2
Other	

Are there any projects you did not see on the project maps that you would like to see added? Please explain.

Are there any projects you saw on the project maps that you would like to see revised or removed? Please explain.

If you would like to receive project updates, please fill out the information below.

Name: Gordon Jackson

Email: gjackson@nade-naha.org

Please leave your completed comment sheet at the sign-in table. If you would like to complete it at a later date, please send it to the YCPB, 2825 3rd Avenue North, 4th Floor, Billings, MT 59101. **While your comments are always welcome, they can be best utilized if received by October 9, 2018.**

Thank you!



What zip code do you live in? _____

What modes of transportation do you use? (check all that apply)

- Car/Truck/Motorcycle
- Bike
- Walk
- Public Transportation
- Other: _____

Project Areas

Please rank below the project areas that you would most like to see the MPO prioritize.

Project Area	Rank Top 3 (1, 2, 3)
Roadway	
Intersection	
Congestion Management	
Pedestrian	
Bicycle	2
Trail	
Transit (Mass)	3
Freight	
Rail	
Other Electric Mobility	1

Are there any projects you did not see on the project maps that you would like to see added? Please explain.

Electric Vehicle charging infrastructure, Solar powered mass transit, i.e., Electric buses. Examples: Austin, TX Airport w/ EV charging stations in city owned parking; Sacramento, CA Electric powered mass transit system (buses, streetcars, rail)

Are there any projects you saw on the project maps that you would like to see revised or removed? Please explain.

If you would like to receive project updates, please fill out the information below.

Name: _____

Email: j-g.vamay@gmail.com

Please leave your completed comment sheet at the sign-in table. If you would like to complete it at a later date, please send it to the YCPB, 2825 3rd Avenue North, 4th Floor, Billings, MT 59101. **While your comments are always welcome, they can be best utilized if received by October 9, 2018.**

Thank you!

What zip code do you live in? 59106

What modes of transportation do you use? (check all that apply)

- Car/Truck/Motorcycle
 Bike
 Walk
 Public Transportation
 Other: _____



Project Areas

Please rank below the project areas that you would most like to see the MPO prioritize.

Project Area	Rank Top 3 (1, 2, 3)
Roadway	(1)
Intersection	
Congestion Management	
Pedestrian	
Bicycle	(3)
Trail	(2)
Transit	
Freight	
Rail	
Other	

Are there any projects you did not see on the project maps that you would like to see added? Please explain.

A feasibility and alignment study be done on a highway connecting the interstate and highway 3. This should be done to improve connectivity from the interstate to highway 3 including the Bldg Airport. (see back) →

Are there any projects you saw on the project maps that you would like to see revised or removed? Please explain.

An updated alignment study be done on the 2004 Planning Feasibility Study of the Moltke Highway 3 Connector Rd. Currently on the Long Range Transp. Plan.

If you would like to receive project updates, please fill out the information below.

Name: Lyle Gabrian
 Email: lgabrian@bresnan.net

Please leave your completed comment sheet at the sign-in table. If you would like to complete it at a later date, please send it to the YCPB, 2825 3rd Avenue North, 4th Floor, Billings, MT 59101. **While your comments are always welcome, they can be best utilized if received by October 9, 2018.**

Thank you!

COMMENTS



What zip code do you live in? 59106

What modes of transportation do you use? (check all that apply)

- Car/Truck/Motorcycle
- Bike
- Walk
- Public Transportation
- Other: _____

Project Areas

Please rank below the project areas that you would most like to see the MPO prioritize.

Project Area	Rank Top 3 (1, 2, 3)
Roadway	1
Intersection	
Congestion Management	2
Pedestrian	
Bicycle	
Trail	3
Transit	
Freight	
Rail	
Other	

Are there any projects you did not see on the project maps that you would like to see added? Please explain.

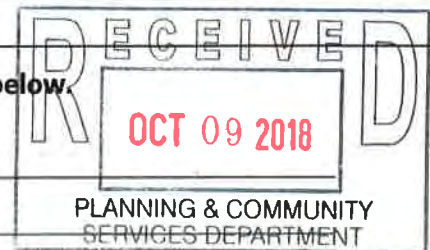
1) Signal Light at the intersection of Hwy 3 & ^{+ North 27th} ~~Rumrort Rd~~ Needs to be a permanent signal light to provide safety for cars turning left on to North + efficiency for moving traffic.
2- on the same

Are there any projects you saw on the project maps that you would like to see revised or removed? Please explain.

If you would like to receive project updates, please fill out the information below.

Name: Alice Lahnen

Email: alahnen@bresnan.net



Please leave your completed comment sheet at the sign-in table. If you would like to complete it at a later date, please send it to the YCPB, 2825 3rd Avenue North, 4th Floor, Billings, MT 59101. **While your comments are always welcome, they can be best utilized if received by October 9, 2018.**

Thank you!

2) Molt. Hwy 3 Connector Needs to be on the plan.
At minimum this project needs to be a recommended
Project. A feasibility study needs to be
conducted + associated parking services.
With the projected growth + employment
North of Hwy 3, the Traffic needs to
be addressed + a plan for this forecasted
growth.

Appendix C Public Open House #2
Sign-In Sheet

Please Sign In

Public Open House
September 25, 2018

Requested Information

Voluntary Information

Name Mailing Address E-Mail Address

1. Becky Bey 2611 GABEL Rd. becky.bey@kljng.com

2. Elyse Monet 401 Bridgeway Ave. monet@killingworth.vt.us

3. Linda Nelson 703 N 29th #202 ljnelson@charter.net

4. Lauren Wright POBox 1235 lwright@illings
communityfoundry.org

Male Female

Disabled

Male Female

Disabled

Male Female

Disabled

Male Female

Disabled

Male Female

Disabled

Male Female

Disabled

Male Female

Disabled

American Indian/Alaskan Native

Asian/Pacific Islander

Black Hispanic

White Other

American Indian/Alaskan Native

Asian/Pacific Islander

Black Hispanic

White Other

American Indian/Alaskan Native

Asian/Pacific Islander

Black Hispanic

White Other

American Indian/Alaskan Native

Asian/Pacific Islander

Black Hispanic

White Other

American Indian/Alaskan Native

Asian/Pacific Islander

Black Hispanic

White Other

American Indian/Alaskan Native

Asian/Pacific Islander

Black Hispanic

White Other

American Indian/Alaskan Native

Asian/Pacific Islander

Black Hispanic

White Other

Please Sign In

Public Open House
September 25, 2018

Requested Information

Voluntary Information

Name	Mailing Address	E-Mail Address	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input checked="" type="checkbox"/> Asian/Pacific Islander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input checked="" type="checkbox"/> White <input type="checkbox"/> Other
5. Danny Chioriki	PO Box 211 5740 59103	danny@chorikiiformentari.com	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input checked="" type="checkbox"/> Asian/Pacific Islander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input checked="" type="checkbox"/> White <input type="checkbox"/> Other
6. Bill Cole	Mayor	coleb@ci.billings,mt.us	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Islander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> White <input type="checkbox"/> Other
7. Denise Joy	City Council		<input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Islander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> White <input type="checkbox"/> Other
8. Robert Marvin	PO Box 80785 Billings 59108	BOB.M@MARVINASSOCIATES.COM	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Islander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> White <input type="checkbox"/> Other
9. Claire Oakley	1903 Northside	Claire.oakley@riversonline.net	<input type="checkbox"/> Male <input checked="" type="checkbox"/> Female <input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Islander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input checked="" type="checkbox"/> White <input type="checkbox"/> Other
10. Jan Lubbey	4401 Hwy 3	jan@whysandh.com	<input type="checkbox"/> Male <input type="checkbox"/> Female <input checked="" type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Islander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> White <input type="checkbox"/> Other

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11. Kristi Drake	246 Aulon Rd, Billings	kristi@billings-ktai.net	<input type="checkbox"/> Male <input checked="" type="checkbox"/> Female	<input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input checked="" type="checkbox"/> White <input type="checkbox"/> Other
12. Kathy Aragon	645 O'Malley Drive Billings, MT	aragon5inmontana@gmail.com	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> White <input type="checkbox"/> Other
13. Brian Kurth	2203 Losekamp St.	bkurth@bresnan.net	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> White <input type="checkbox"/> Other
14. Steve Shandera	1109 N. 31st, Blgo 59101	skshandera@gmail.com	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input checked="" type="checkbox"/> White <input type="checkbox"/> Other
15. PAT WHITE	4133 CORDON DR. BILLING 59106	PAT.WHIT@EJAUSS.COM	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> White <input type="checkbox"/> Other
16. Brian Korell	Po Box 15521 Billings 59103	Korell@ec.billings.mt.us	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> White <input type="checkbox"/> Other
17. J. D. D.	3903 HERMAGE DR. BILLINGS, MT, 59102		<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> White <input type="checkbox"/> Other

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18. Alcolshon	108 Sky Ranch	alcolshon@proton.net	<input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> White <input type="checkbox"/> Other
19. Auzie Blevins	3328 Agui Este Dr	albmrvb@wispwest.net	<input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> White <input type="checkbox"/> Other
20. POK OLSEN	2112 FARRVIEW	DOMO@OZARCONWAY.NE.S	<input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> White <input type="checkbox"/> Other
21. Lyke Gabrian	3142 Zimmerman Place	lgabrian@bresnan.net	<input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> White <input type="checkbox"/> Other
22. Mike Ferguson	412 Bay Place	Mkysin@hampgate.com	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> White <input checked="" type="checkbox"/> Other
23. Gordon Jackson	1395 MT 59101	gjackson@nadc-nolan.org	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Disabled	<input checked="" type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> White <input type="checkbox"/> Other

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24. Dean Welliver	5325 Cabernet Ln. Dwellpen@gmail.com		<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input checked="" type="checkbox"/> White <input type="checkbox"/> Other
25. Doug Habermann	PO Box 584 Helena MT 59624 doug@bike.walkmontana.org		<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input checked="" type="checkbox"/> White <input type="checkbox"/> Other
26. Jora Nettek	c/o Planning		<input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> White <input type="checkbox"/> Other
27. Darrell Tunnicliffe	2344 Gen'l Court Billings MT 59101	DTunnicliffe@aol.com	<input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input checked="" type="checkbox"/> White <input type="checkbox"/> Other
28. Melissa Henderson	1238 27th Street	melissa.hen@investstonehead.com	<input type="checkbox"/> Male <input checked="" type="checkbox"/> Female <input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input checked="" type="checkbox"/> Hispanic <input type="checkbox"/> White <input type="checkbox"/> Other
29. Caroline Canarios	220 S. 27th St, 59101	caroline@northernplains.org	<input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input checked="" type="checkbox"/> White <input type="checkbox"/> Other

Requested Information

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Name

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E-Mail Address

Cheryl
Lenhardt

3209 Rimrock
59102

cherlenhardt@gmail.com

Male Female
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American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
 White Other

Male Female
 Disabled

American Indian/Alaskan Native
 Asian/Pacific Inlander
 Black Hispanic
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Male Female
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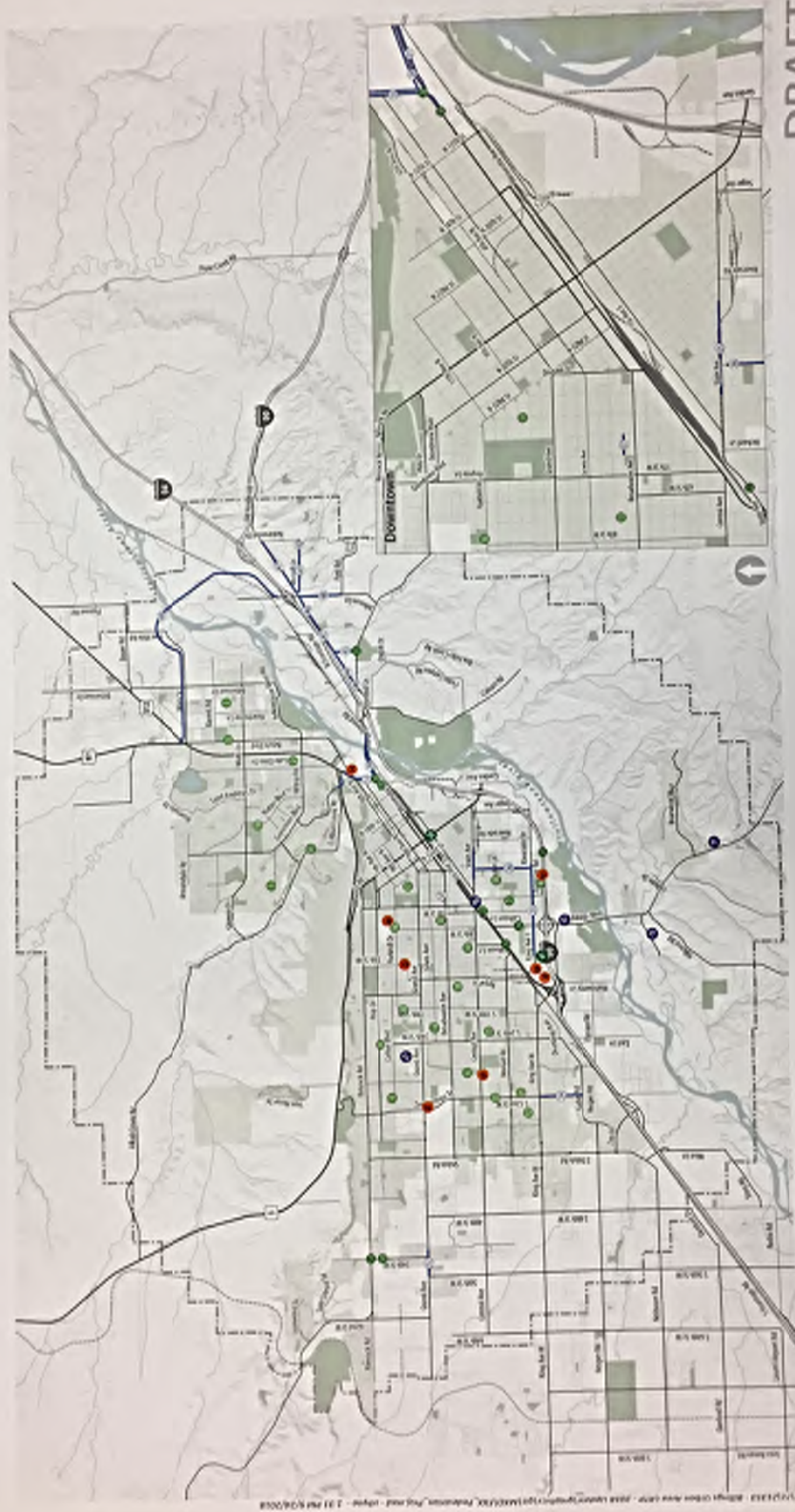
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31. Kevin Nelson	PO Box 23107	geos59101@gmail.com 59101	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> White <input type="checkbox"/> Other
32. TINA VOLEK	3214 HORTON SMITH	STEVEVOLEK@MSU.COM	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> White <input type="checkbox"/> Other
33. Joe R Ampy	PO Box 231 Payer, AK 99066	j.g.rampy@gmail.com	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> White <input type="checkbox"/> Other
34. Thom MacLean	222 N. 32 nd St Ste 200	thom@byskyeda.org	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> White <input type="checkbox"/> Other
35. Morgan Miller	123 S. 27 th St.	morgan.mil@riverstonehealth.org	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> Disabled	<input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian/Pacific Inlander <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> White <input type="checkbox"/> Other

Appendix D Project Maps

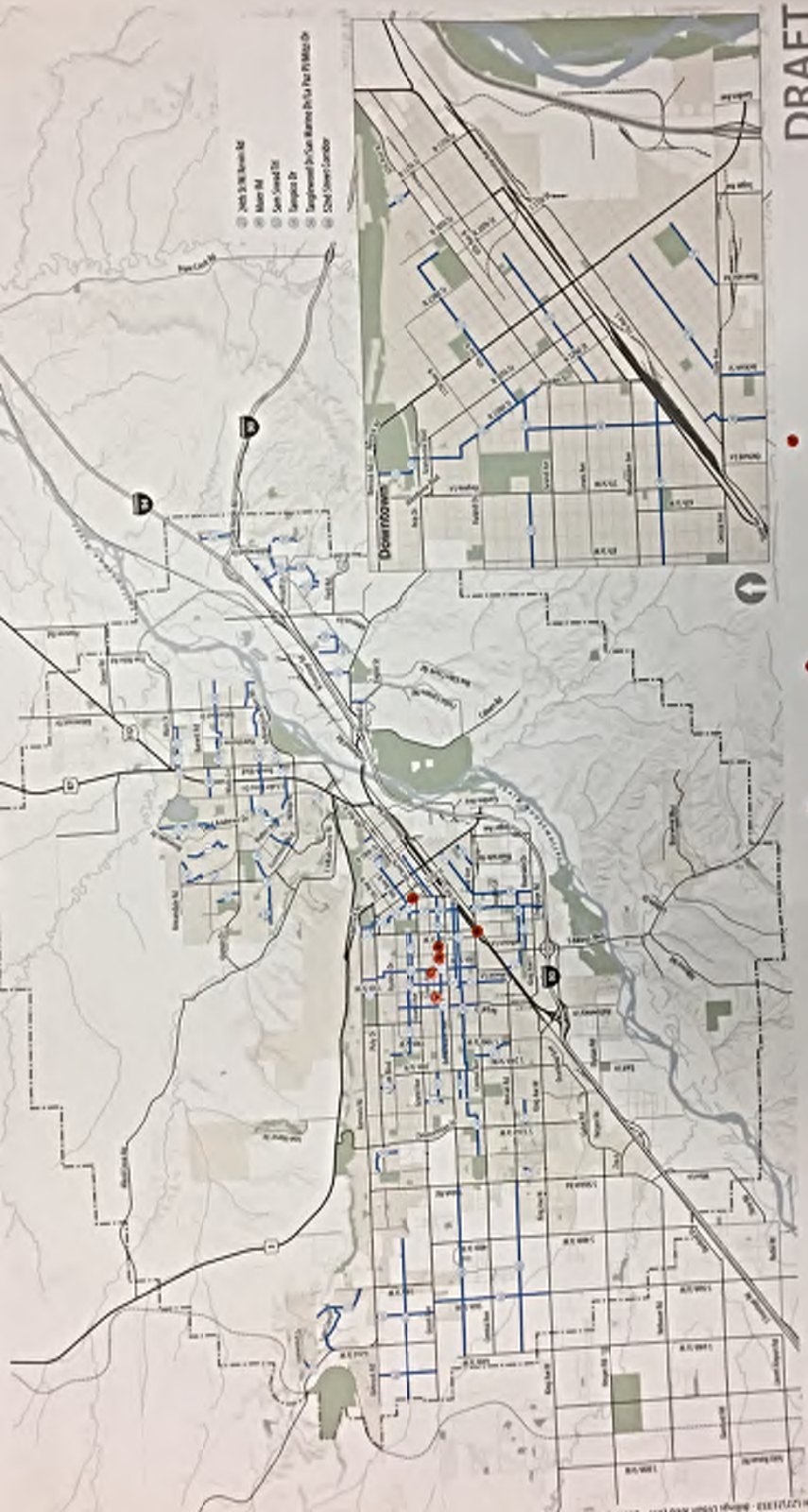


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Figure XX

Pedestrian Projects

- Pedestrian Crossing
- Safe Routes to Schools
- Pedestrian Projects

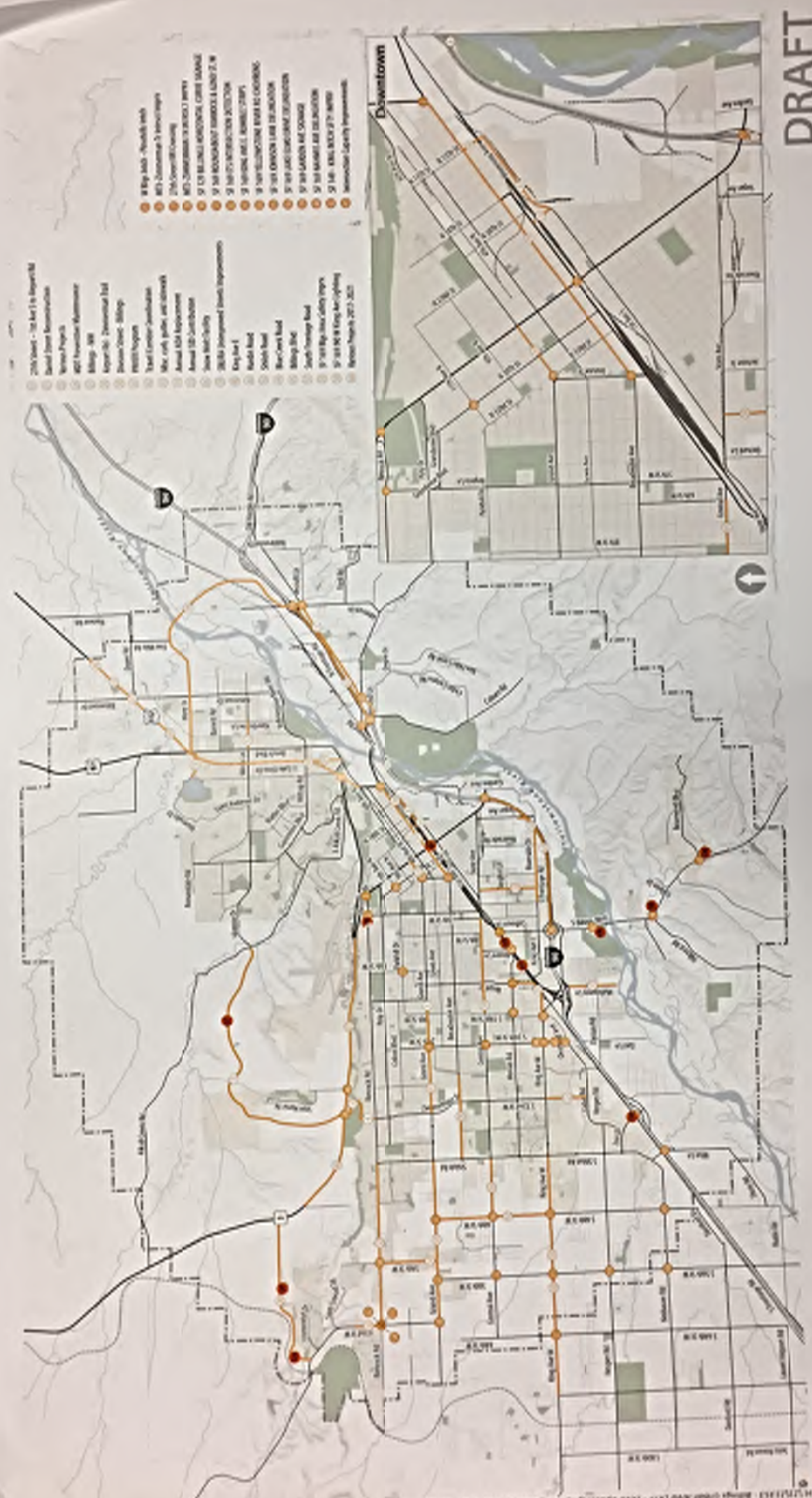


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Figure XX

Bicycle Boulevard Projects

— Bicycle Boulevard



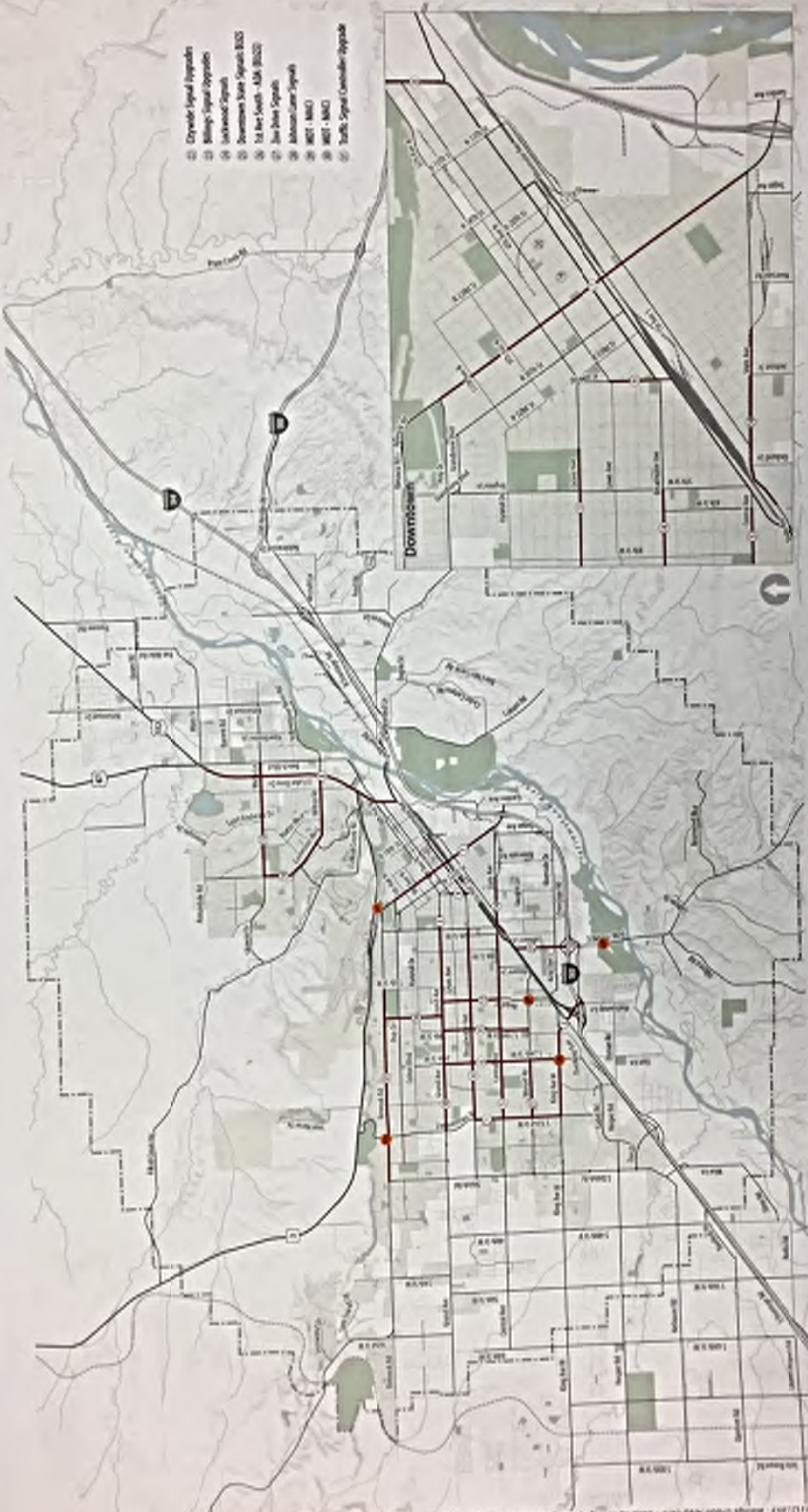
- 1. 200' Street - 70' Sid 1/2 to 1/4 mile
- 2. Road Zone - Reconstruction
- 3. Street Project
- 4. 400' Roadway Maintenance
- 5. 800' - 100'
- 6. Approach - 200' to 100'
- 7. 200' - 100'
- 8. 100' - 50'
- 9. 50' - 25'
- 10. 25' - 10'
- 11. 10' - 5'
- 12. 5' - 2'
- 13. 2' - 1'
- 14. 1' - 0'
- 15. 0' - 1'
- 16. 1' - 2'
- 17. 2' - 3'
- 18. 3' - 4'
- 19. 4' - 5'
- 20. 5' - 6'
- 21. 6' - 7'
- 22. 7' - 8'
- 23. 8' - 9'
- 24. 9' - 10'
- 25. 10' - 11'
- 26. 11' - 12'
- 27. 12' - 13'
- 28. 13' - 14'
- 29. 14' - 15'
- 30. 15' - 16'

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Figure XX
Intersection and Roadway Projects

- Intersection Projects
- Roadway Projects

- ① Citywide Signal Approach
- ② Milling Signal Approach
- ③ Lockwood Signal
- ④ Downtown Area Signal (2023)
- ⑤ 7th Ave South - 14th Street
- ⑥ 2nd Street Signal
- ⑦ Johnson Lane Signal
- ⑧ 10th - 14th
- ⑨ 10th - 14th
- ⑩ Traffic Signal Conversion Approach



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Figure 23
Congestion Management Projects

Congestion Management



Appendix O

Resource Agencies





Dear Resource Agencies,

We are currently updating the Billings Urban Area Long Range Transportation Plan (LRTP). This plan is updated every four years, with the last update occurring in 2014. The LRTP will address the different transportation forms and elements (streets and highways, public transit and transportation, freight, pedestrian and bicycle, safety, and security), identify short and long range transportation projects, and meet the local, state, and federal requirements.

We would like you to be an integral part of this transportation planning process. As a key resource agency, your experience and knowledge is vital to developing a successful, community-driven, multimodal plan. We have set-up several initial forums for you to learn about the project and provide comments to help guide the transportation planning process. These forums include:

- Providing comments via the project website (www.billingsLRTP.com)
- Providing comments directly to us via email (Robyn Austin, raustin@kittelson.com) or by phone at 208.338-2683
- Attending the public information meeting on May 15th from 4 PM to 7 PM at the Billings Public Library (510 N Broadway)

Additionally, we are planning a series of interviews/in-person meetings with the project's consultants, Kittelson & Associates, Inc. The consultant team will be in Billings and available between May 14th and 18th, and June 13th. The interviews will take about an hour and will be facilitated by the consultant team.

At these interviews, we would plan to discuss the following items with you: transportation planning process for the 2018 LRTP, changes in federal requirements through Fixing America's Surface Transportation Act (FAST Act), consistency with other plans, opportunities and constraints, ideas for implementation, and any questions you may have on the plan.

These forums are a valuable opportunity for you to contribute your ideas and we hope that you will take the time to share your personal experience and insights with the consultant team. We look forward to your participation and consider it vital to shaping the future of the Billings urban area. If you are interested in participating in an interview/in-person meeting with the consultant team, please contact Robyn Austin at Kittelson & Associates, Inc. by email at raustin@kittelson.com or by phone at 208.338-2683.

Thank you for your participation and assistance in this effort.



MET Transit Interview

Debra Hagel and Kevin Ploehn

May 16, 2018, 9:30 – 10:30 AM

MET Transit, 1705 Monad Road

In-Person by Andy Daleiden and Bryan Graveline (Kittelson)

Action Items:

- MET will send ridership data to Kittelson at the end of the fiscal year.
- MET will send maps showing route changes to Kittelson once they've gone to print.
- Kittelson will coordinate with MET on wording for airport section of LRTP, especially regarding new terminal expansion.
- Kittelson will review meeting notes below as aid in development of 2018 LRTP update.

Meeting Notes:

- The conversation began with a discussion of MET's vision for the future. When Kevin first took over, they were struggling financially. Their first step was to get on stable financial footing. Their next challenge is fleet replacement which can be very expensive. Bus replacements can be over \$400K, so MET is looking at smaller buses and rehabilitation options as well. Another next step for MET is technology improvement. They're implementing an automatic vehicle locator system, which is important for customer service.
- An additional anticipated improvement is a route extending to the airport on half hour rotation that moves people between hospital and airport. Might also benefit employee group. Also expanding south side service, which could benefit a lower-income group. Josephine Crossing, on the south side, is a walkable area. Both improvements are slated to occur in July.
- The strategic long-term vision has been mostly on hold in preference of quick fixes, lately. For example, the MET building was leaking, so some capital dollars had to go there. As discussed previously, MET is now moving towards more strategic long-term goals.
- Additional goals include enhanced lighting and transfer centers with monitors the public can use to look at the whole system.
- MET is currently a flag-down system. Andy added that when Boise went to fixed-stop, there was a large cost, but it was mostly paid for through grants. Destination announcements are also an anticipated improvement.
- Another long-term goal is to keep up with the growth of the city. That can be tough to do with stagnant funding. Funding is likely the biggest barrier. In order for MET to meet its long-term objectives, additional funding of some kind will be required. It's tough to pass a mill levy. Other levies for public safety and high school have failed. Passing a mill levy requires a large marketing effort.
- Once the Inner Belt Loop improvement occurs, there will be a lot of development above the Rims that MET isn't able to serve.
- This is the first year with a slight uptick in ridership. That reflects that MET is trying to make changes that are helpful for riders. This is still difficult without an increase in funding.

- 17 out of 25 buses are past their useful life. MET is going through an asset management plan right now with a goal of having no more than 25% of the fleet be past its useful life. They're also looking at refurbishing buses.
- Deb had goals that they will fill MPO in on in July/August. Don't need to have their approval. Andy: we don't need to have the targets, we just need to know it's being worked on. Nice to have, though.
- Changes coming up: going to the airport, changes on the south side.
- Mill levy has started to float up as result of property tax being done on two-year cycle instead of seven-year cycle. Helps keep them out of the red. Capital still lacking. Changes to staff as well.
- Airport is much easier. They have PFC's. Airport is trying to do 50-million-dollar expansion. Snapshot: expansion of concourse area. Going to build new concourses. Airport is regional hub. Health, retirement, etc.
- Airport is striving to accommodate a doubled Billings population. Goal is to improve concessions for passengers but also to add three more gates. Build it so it's easy to add more gates past that. Runway is one of best in state. It's also tilted, so Boeing likes to do testing there. Bluff makes the landing a bit unorthodox. There's a pilot shortage nationwide that small airports especially feel.
- This year: goal is to replace three buses. Or just to rehab old buses. Renews life for 12 years.
- Good chance they'll go out for the Mill Levy before 2022. Especially if gas prices increase. "Probable."
- More technology you can put on a cell phone, more likely you're going to get the millennials to start riding. Focus is on transit-dependent group. Look at transit as a community service. That's how he would sell it. School ridership is a big factor.
- Tripper routes (school routes) do well all the time.
- Regarding data, MET has ridership by route and by category. Deb can redo and send to Andy at the end of fiscal year.
- Andy: our timing is a draft chapter in June. We'll do an updated version some time in September.
- Strengths as an organization. One strength is recognizability. Lots of people who know the MET. Another strength is reliability. Construction is a burden, especially for major routes. Had to do some adjustments. Have improved relationship with public works group. Incorporating changes into construction. Very safe. Never had any major issues. Parents say it's not safe to ride the bus, but they've never had any major problems. Reliable and safe. On-time performance. Safer to be on the bus. Data sources on on-time performance? New AVL system will give them that. Anecdotally, on-time 95% of the time. Cameras on buses to check performance. Helped in terms of liability claims. Occasionally tripper buses have fights on them.
- Comments that come out from public are good for MET to use. Phrase it that for MET to continue to grow, funding is an issue. As far as the rest of the plan, lots of transportation improvements focus outside of MET operations.
- Flag-down vs. fixed route. Five years out, may need to give more serious thought to fixed. Looking at going from pulse system to grid system. Getting better driver utilization. Breaks killed their system. Hampered ability to be efficient. Looking at improving efficiencies. Potential for more service for the community.
- Plan moving forward: wrap up initial draft. Meeting tomorrow, give an update on this to SC. June meeting will have some more discussion on transit.
- MET can help out on terminal expansion wording. Route changes with mapping – Kittelson will want to this information. Deb wants to go to print with new maps next couple weeks.



Stakeholder Interview Notes

Daniel Brooks

Billings Chamber of Commerce

May 14, 2018, 9:00 – 10:00 AM
DOWL's Large Conference Room

In-Person by Andy Daleiden, Bryan Graveline, Robyn Austin (Kittelson)

Action Items:

- Kittelson will review meeting notes below as aid in development of 2018 LRTP update.
 - See discussion of data from 2016 citizens' survey showing that citizens support a parks system in Billings.
 - See discussion of ongoing railroad and downtown studies in LRTP update.
 - See discussion of need for wayfinding and key location markers for tourism in LRTP update.

Meeting Notes:

- Daniel Brooks introduced himself as the business advocacy manager for the Billings Chamber of Commerce. His role includes lobbying elected officials, awareness campaigns, and engagement.
- Andy, Robyn, and Bryan introduced themselves and gave a brief background on the Long Range Transportation Plan (LRTP) and update process.
 - LRTPs are a federal requirement for Metropolitan Planning Organizations (MPOs). The LRTP is updated every four years. Kittelson and Associates, Inc. (KAI) worked on the 2014 update and is working on the 2018 update as well.
 - Partners in the LRTP process include City of Billings, Yellowstone County, Billings MPO
- Andy gave brief background of transportation plan:
 - Description of KAI, our role in plan, retained by City of Billings and Yellowstone County
 - LRTP is federal requirement if you're an MPO (50k or more people).
 - Partners include City/County planning, City of Billings Public Works/Engineering, MPO, MET, Yellowstone County Public Works, Lockwood, MDT Planning, MDT Billings District
 - Process starts with outreach to stakeholders, public open house.
 - What is out there today? What type of project should be in place next 20 years?
 - Plan covers freight, trucking, rail, pedestrian, bike, transit, auto, streets, intersections, trails, etc. LU as well.
- Dan stated that the Chamber's strategic goal is to create a business climate and community that's attractive to the next generation of workforce. This ranges from reducing ordinances that impede growth to creating a community of amenities that people desire. This includes a range of actions:
 - Reduce ordinances that stymie growth

- Create a community of amenities people look for: bikeable, walkability, downtown connectivity, public transportation. Make sure Billings is a community people are choosing, because they do choose.
- Road connectivity: inner belt loop and billings bypass are going. Chamber's big focus is River to Rims initiative. Connect through trail. Marathon loop has a few segments that need to be in place. Good trails in a lot of places, but a couple areas to fill in. Most beneficial is skyline trail.
- Billings bypass: bridge will have a pedestrian aspect.
- I-90/94 bridge over the water needs to have a pedestrian crossing. Chamber will push for this.
- Billings lacks density to make public transportation effective. Maybe needs to reevaluate who and where money goes to. Or refocus downtown density to make it more effective.
- River to Rims: Is there a formal group? Trails committee meets once a month to talk about trails. Connect neighborhoods, get kids to school safely, exercise. Area near Shiloh, also Dover Park, areas this group has helped with. Connectivity for residents to walk up to the Rims is a big benefit.
- BikeNET: big community partner, works on trails, bike lanes throughout city, Chamber supports bike lanes, bike lanes are currently very ad hoc.
- Andy: Is there a priority list within the chamber or among trails committee? It's more informal and conversation, limited to one project at a time, overall goal is marathon loop completion, then skyline trail.
- Robyn: What are the key hurdles? Other than funding, that is. Members of city council and county commission don't view trail connectivity/bike lanes as a necessity. Chamber views these things as a necessity for the next generation of work force. Millennials want downtown walkability and bikeable. Political will and support is a hurdle in addition to funding. Generational nature. Need an argument with graphics, Return on investment.
- Robyn: we're reaching out to middle schools. Dan: talked to MS and HS about workforce issues, Billings isn't getting enough workers. It has to figure out how to keep next generation here. Kids don't want to stay here. It's very concerning.
- Andy: Rims and Skyline Trail came out of Highway 3 Study, funding (\$4-5 million) for trail will not come from DOT, Billings hasn't even hit the \$1 million mark. Need big donors to encourage small donors.
- Andy: limited on-street bike facilities. Bike master plan was recently updated. Did chamber participate? Dan wasn't involved. He was unaware it was going on. Just skimmed it last couple months. Sees that we have a bike master plan. We use that as a lead-in for bike element. Bike master plan includes a lot of on the ground projects that can actually be implemented.
- 2016 Citizens Survey: voters overwhelmingly thought it was very important we had a great park system. Tie that data in as well.
- One Big Sky District: convention center, medical campus facility in health care corridor, has anyone reached out to us? Andy: meeting with City Engineering, City Planning this afternoon. Mike Tuss CTA. Andy will get in his ear about this comp planning effort. Andy: several

downtown projects. First avenue north, MDT 27th street RR crossing study to improve at-grade crossing, third one looks at whole downtown itself. Technical analysis of traffic conditions. One-way vs. two-way analysis, One Big Sky may be an alternative.

- Dan: by making it two-way, provide more opportunities for people to stop, increase connectivity. Two-way slows it down. Some of the facilities have 3 or 4 lanes, may only need two lanes.
- Regarding RR crossing study: social barrier, economic barrier, vehicles queued up waiting on railway during business day is time lost. Prohibits business growth on Minnesota, 1st avenue south. Statement in 2018 LRTP that RR plan is ongoing.
- What else do we foresee on where we have chokepoints and need upgrades? Rimrock may need widening. Andy hasn't gone through CIP yet, doing traffic analysis at 200+ intersections. Analysis will help identify if anything's missing. 27th street rail is essential.
- Andy: anything on tourism? Dan: element of signage. Wayfinding elements. Incorporate iconic spots downtown. Ensure design is uniform, adheres to western heritage. No group working on this as far as Dan knows of. More marketing than navigation. Consistent branding in signage. Robyn: Incorporate with each project.
- Regarding parking, Dan doesn't think Billings has done a study. He's never not had a place to park within 500 yards. Made out to be a huge issue, but it's not. Four good garages, plenty of metered spots. Dan sits on parking board, deny 10-minute spots in deference to 2-hour spots. Don't build a huge parking garage when 30 years from now most people might be in autonomous vehicles. Up in hospital area, need more parking or a structure.
 - Andy: in his role on parking board, is there a discussion of technology being used to manage parking? New meters within 6-8 months. 800 meters downtown, 100 replaced, credit card reader meters. Sensors that connect to gateway that will eventually coordinate with app that notifies about available spaces. Hopefully glitches with sensors and gateway get fixed, people start using app, incorporate technology.

Stakeholder Interview Notes

Brad Shoemaker

Yellowstone County Fire and Emergency Services Director

May 16, 2018, 4:00 – 5:00 PM
DOWL's Large Conference Room

In-Person by Andy Daleiden and Bryan Graveline (Kittelson)

Action Items:

- Brad will send Kittelson the draft emergency operations plan.
- Revise Security Considerations/Coordination section to show that Yellowstone County Disaster and Emergency Services are not responsible for serving as the County Fire Chief.
- Contact Bill Rash or Pepper Valdez if we wish to acquire the Billings Fire Station Study.
- Brad will send Kittelson additional GIS shapefile information on fire and emergency service zones and locations.
- Kittelson will review meeting notes below as aid in development of 2018 LRTP update.
 - See discussion of Security Considerations/Coordination section regarding County Fire Chief role.
 - See discussion of drainage ditches running throughout city

Meeting Notes:

- Brad Shoemaker is the director of emergency services (fire, EMS, floods, emergency management) for Yellowstone County. He'd like to see what issues we're looking at and give his perspective.
- Andy introduced KAI. Topics of interest for Brad include safety and security. Safety includes crash details, while the study area includes a couple of annexation areas. Also link to community safety plan. Security chapter – two pieces: emergency operations plan, and multijurisdictional pre-disaster mitigation plan.
- Brad: note Fipps Park. Technically a City park but not covered by Billings City Fire (is covered unofficially though).
- Brad: Emergency operations plan being rewritten. Probably can't glean much in draft form. TetraTech Helena is doing the plan. City/County is 85% of the way done writing emergency operations plan. Reformatting to fit any type of disaster, not just one. Doing by "annex." Brad will send Kittelson draft copies of this plan.
- Critical infrastructure is in goals and objectives. Highlight critical connections, should be part of new pre-disaster management plan.
- Brad: we'll be fine with most of this
 - Last bullet point under security considerations. Delete reference to fire cheap, leave reference to fire warden. Hazards won't really change. Earthquake and volcanic ash may just get taken out.
 - Working with MDT on bridge inventory
 - Brad: some bridges are outside analysis area.

-
- Bill Rash or Pepper Valdez will get us station study. Build out of fire service is 2 or 3 stations behind.
 - Areas like Fipps Park and Billings above the rim are serviced by volunteer fire department. Big limitations in day to day services in lots of these places.
 - Ask Brad for maps. GIS department will send them over. Shapefiles.
 - One station up in the Heights, next station going in Heights as well. Rest of them will go in West Billings.
 - Nothing at all south of the river. No fire, EMS, etc.
 - Lockwood has their own fire department but needs assistance frequently.
 - Rail: lots of hazardous materials through the center of Billings.
 - No assessment for public works infrastructure. Surface transportation: poor drainage in hospital corridor/27th street. Underpass could flood with water.
 - Ditch broke near Alkali Creed Road last year. Large unmitigated threat throughout city. Large amounts of water with potential for impact.
 - In terms of surface transportation otherwise mostly good.
 - Roundabouts not a big deal. Keep traffic moving.
 - Connections are tough west of 65th street. Would take longer than going on Zimmerman with traffic. Opening a new road up for larger vehicle traffic would still be very helpful.
 - Billings Heights to West Billings connection is really important. Too much traffic going through 312 and downtown Billings.
 - Interstate is fine.
 - Zimmerman closes less than 5 times a year during the winter due to rock slides.
 - Sign denoting Zimmerman as closed is past the roundabout, leads to lots of illegal u-turns. Consider putting one up on the roundabout.



Stakeholder Interview Notes

Rimrock Task Force

May 17, 2018, 4:00 – 5:00 PM

DOWL's Large Conference Room

In-Person by Andy Daleiden and Bryan Graveline (Kittelson)

Action Items:

- Andy will email Cheryl and Lyle with a map to mark up.
- Cheryl and Lyle will mark up map and return it via email to Andy and Scott Walker.
- Rimrock Task Force members to fill out survey if they haven't already and encourage others to voice their opinion by doing the same.
- Kittelson will review meeting notes below as aid in development of 2018 LRTP update.

Attendees:

- Lyle: Lives on Zimmerman Trail. Head of Rimrock Task Force.
- Cheryl: Lives below Zimmerman Trail north of Rimrock. Believes there are opportunities for Billings to act proactively to make improvements to its transportation system.
- Alice: Secretary. Got involved for trash cleanup on rim, etc. Looks at aesthetics, zonings, etc. Lives on rims. Zimmerman Trail traffic is unbelievable. People drive way faster than 25 mph. Important to have a path off the rims other than Zimmerman Trail.
- Dennis: retired railroader, corporate finance. Lives near Rimrock/Shiloh, below the rim.

Meeting Notes:

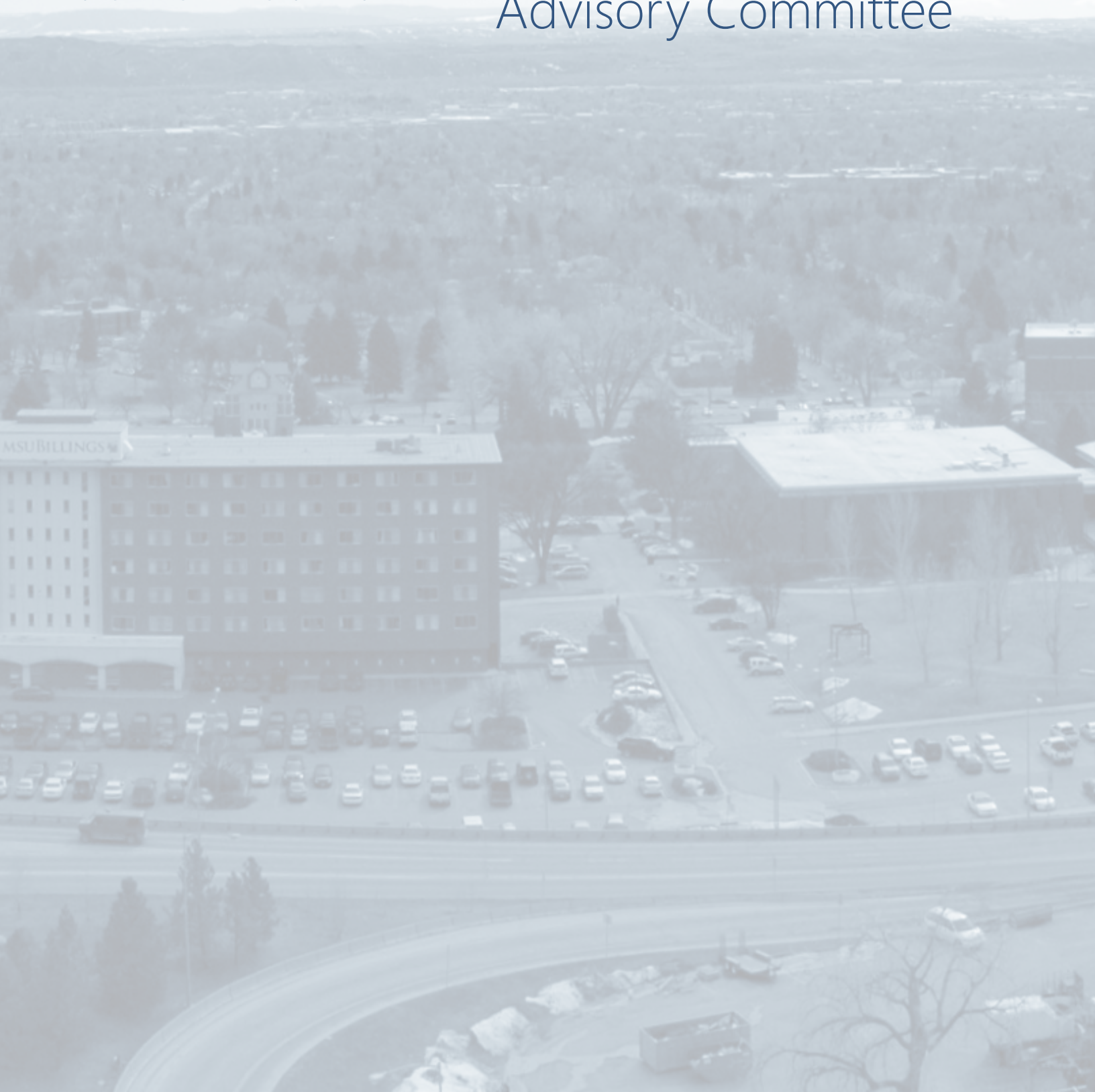
- Cheryl has some concerns and ideas. Concerned that we wait to buy land for roadways until after it's really expensive. Also concerned about traffic flow.
- Lyle: Rimrock task force was formed 7 years ago to deal with transportation issues. Concerned with safety of travelers on Zimmerman Trail. Taskforce keeps a log of when trail closes. Want the inner belt loop to be connected to a route off the rims, further west off of Zimmerman Trail. Adding more traffic to the Trail is going to make it less safe.
- Look at Molt Road Highway 3 connector. It almost happened but a developer in Ironwood stopped it. Rimrock task force thinks connection should go there. The longer we wait, the longer developers have to build in the way of a future road.
- Lyle's vision: would like to see the road that comes off the rims connect to the interstate.
- The Taskforce wants the city to listen to people who live here. Zimmerman Trail has bad experiences for those who live here. Billings needs another connection, and people who live here feel that way.
- Lyle wants to know how to get that done. Andy replied that we're really constrained right now because of the Billings Bypass. Possibility of doing it once that's completed. Lyle wants to know if we can just buy the land to build the road. Andy responded that it depends. We need a study to define the purpose and move it into preservation. We have to answer the question of why we're building the road or new connection.

- Cheryl: there are two main reasons why we need this. Lots of semitrucks going down Zimmerman Trail. Trying to keep speed up further west. Huge concern is trucks having to come through town. Keep them away from Zimmerman Trail. Saves them money and time.
- Lyle: the problem is that 20 or 30 years ago, people were saying the same thing. Don't want someone sitting here 20 years from now saying the same thing.
- Billings Bypass isn't the key to creating a first-class city according to Lyle. Andy described purpose of bypass. It will alleviate congestion from vehicles coming from northwest on Highway 3 and northeast. It's one piece that helps congestion in the system and provides additional routes for emergencies, especially at the pinch point near Airport and Main.
- The answer to the question of who will lead the project for a new road will hinge on what the purpose of the new road is.
- The airport director said that the airport is fine for a population of 200,000. However, the topic of connectivity to the airport didn't come up.
- Taskforce believes that when we connect the Inner Belt Loop, we'll create another bottleneck on Zimmerman.
- Andy described the travel demand model as a way of gauging these effects. It will include updated figures showing traffic on Zimmerman Trail.
- Andy advised the Rimrock Task Force: encourage a study for purpose of connection to Molt Road.
- LRTP likely can't lay out where the potential roadway would go, but it can say there needs to be a study.
- Task force supports bike/ped improvements, especially around the Rims so everyone can enjoy it. Worked with TrailNet.
- More comments on potential roadway locations?
- If an individual comes to Lyle with a route, who should Lyle direct them to? In the next two weeks, they should fill out comments on the website. Otherwise, Lyle should have them mark up a map, scan it, and send it to Andy, Scott Walker, etc.
- Andy will email Cheryl and Lyle with a map to mark up.



Appendix P

Plan Adoption Presentation – Technical Advisory Committee



2018 Billings Urban Area Long Range Transportation Plan

Technical Advisory Committee

October 4, 2018



What is an LRTP?

A long range transportation plan (LRTP):

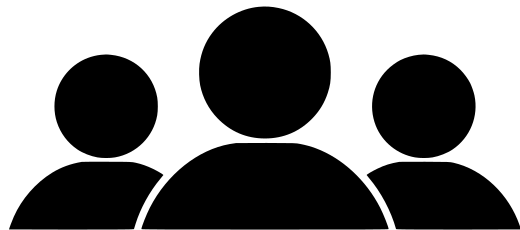
- Outlines the long-range vision for the transportation system
- Lists all transportation improvements that are expected in the next 20 years → 2040

Why are we updating it?

Metropolitan areas with populations over 50,000 (such as the Billings urban area) are federally required to update their LRTP every 4 years

Updating this document helps Billings define its vision for the transportation system and plan future projects

Who is involved?



Resource Agencies and Public

Lockwood



Where are we in the timeline?

L RTP TIMELINE



What is next?

- ▶ Draft Plan is available for review and comment
 - ▶ www.Billingslrtp.com
- ▶ Plan adoption schedule
 - ▶ TAC Meeting - October 4th
 - ▶ Yellowstone County BOCC - October 9th
 - ▶ Yellowstone County Board of Planning - October 10th
 - ▶ Billings City Council - October 15th
 - ▶ Yellowstone County BOCC - October 16th
 - ▶ Billings City Council - October 22nd
 - ▶ Yellowstone County Board of Planning - October 23rd
 - ▶ Policy Coordinating Committee - October 30th

Draft Plan is available for review and comment at www.billingslrtp.com

2018 Billings Urban Area Long Range Transportation Plan



2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN
September 27, 2018

prepared by
KITTELSON & ASSOCIATES **DOWL**

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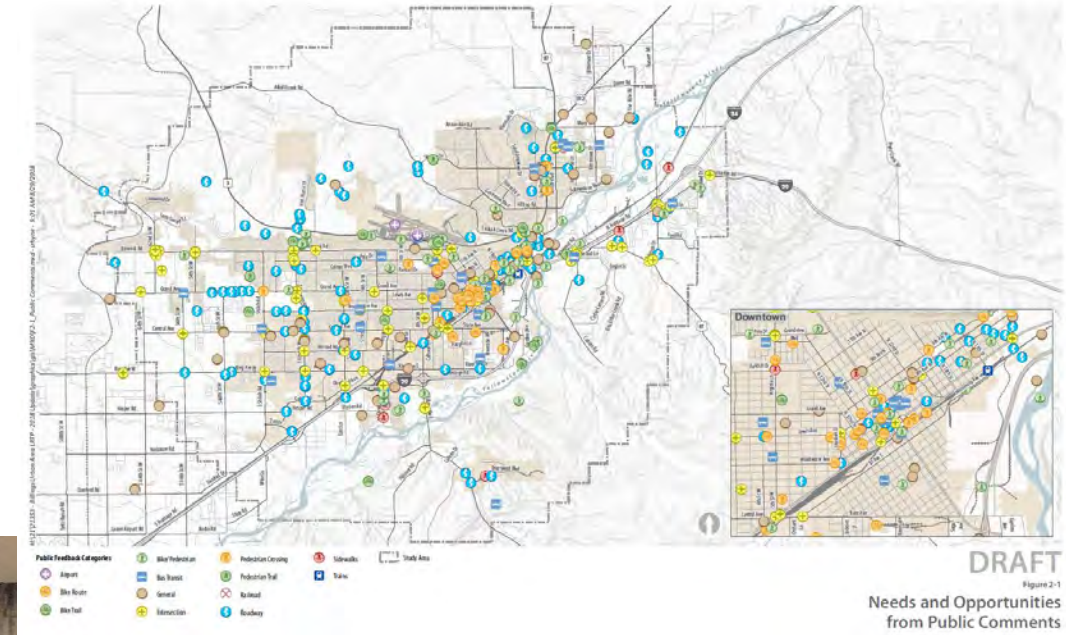
What are the elements of the 2018 LRTP?

- 15 Plans, Studies, & Policies Since 2014 LRTP
- 25 Major Projects Since 2014 LRTP
- 8 Ongoing

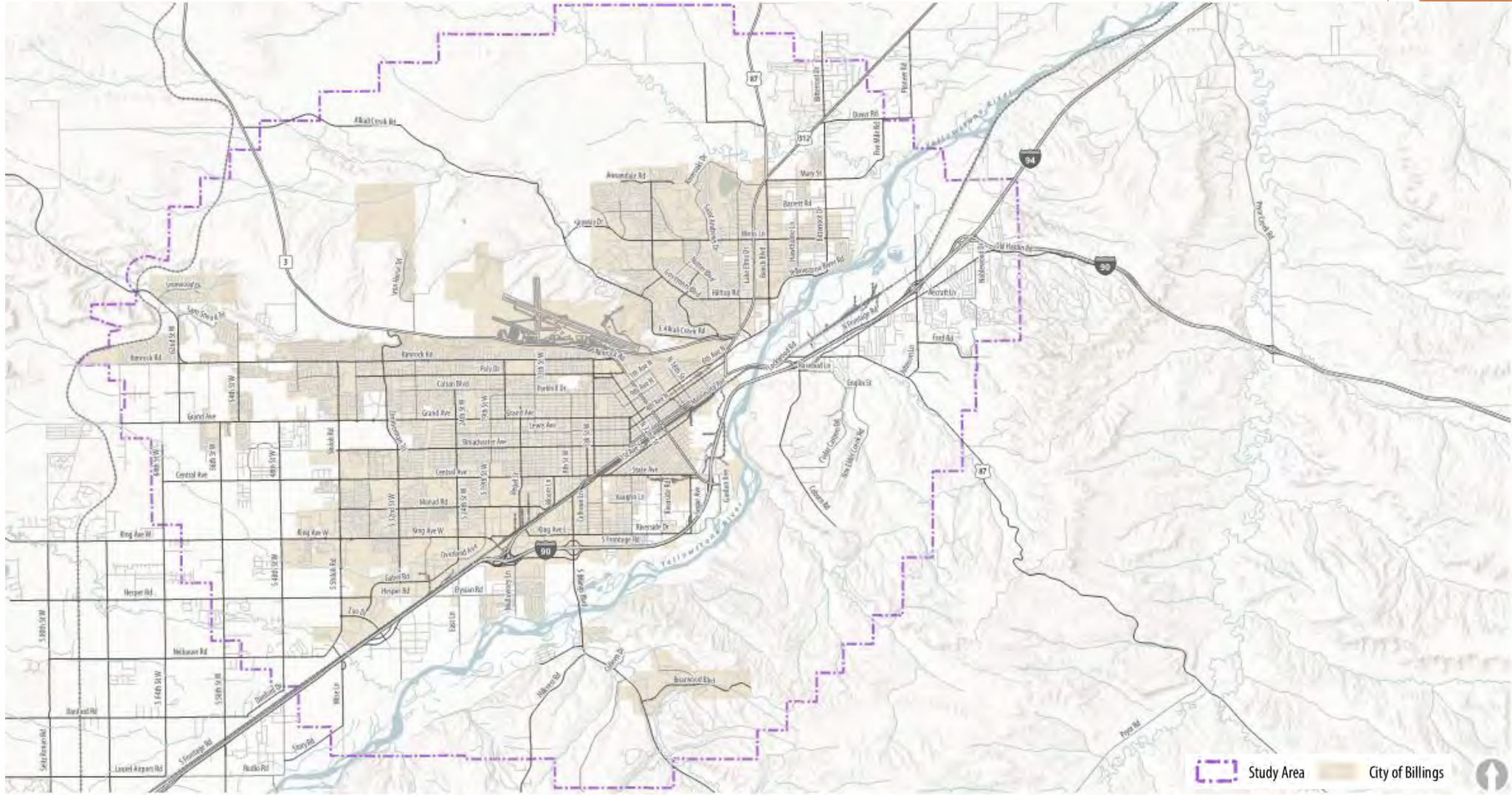


Public and Interagency Involvement

- ▶ www.billingslrtp.com
- ▶ Steering committee
- ▶ Resource agencies
- ▶ Youth engagement
- ▶ Open houses and Online survey
- ▶ Media coordination and social media
- ▶ Email updates



Where is the study area?



L RTP Goals

1. Safety

- Develop a safe transportation system

2. Functional Integrity and Efficiency

- Optimize, preserve, and enhance the existing transportation system

3. Prioritized Improvements

- Identify and prioritize projects that mitigate deficiencies, maximize the use of existing facilities, and balance anticipated needs with available funding

4. Environment

- Develop a transportation system that protects the natural environment and promotes a healthy, sustainable community

5. Public Transit and Transportation

- Create a transportation system that supports the practical and efficient use of transit

6. Pedestrians and Bicyclists

- Create a transportation system that supports the practical and efficient use of active transportation such as walking and bicycling

7. Economic Vitality

- Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce

Land Use - Population Growth

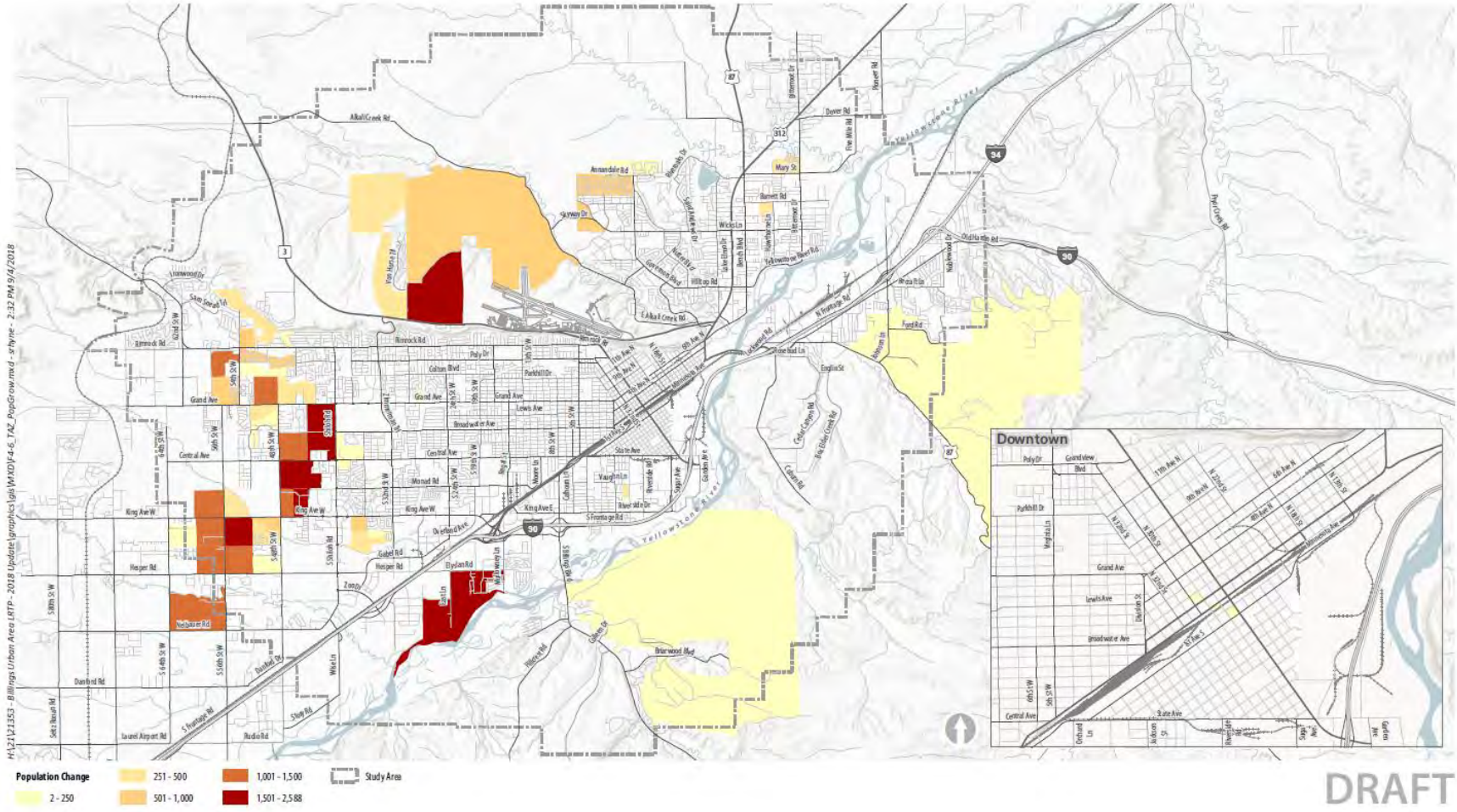


Figure 4-6
Population Growth (2017 to 2040)

Land Use - Employment Growth

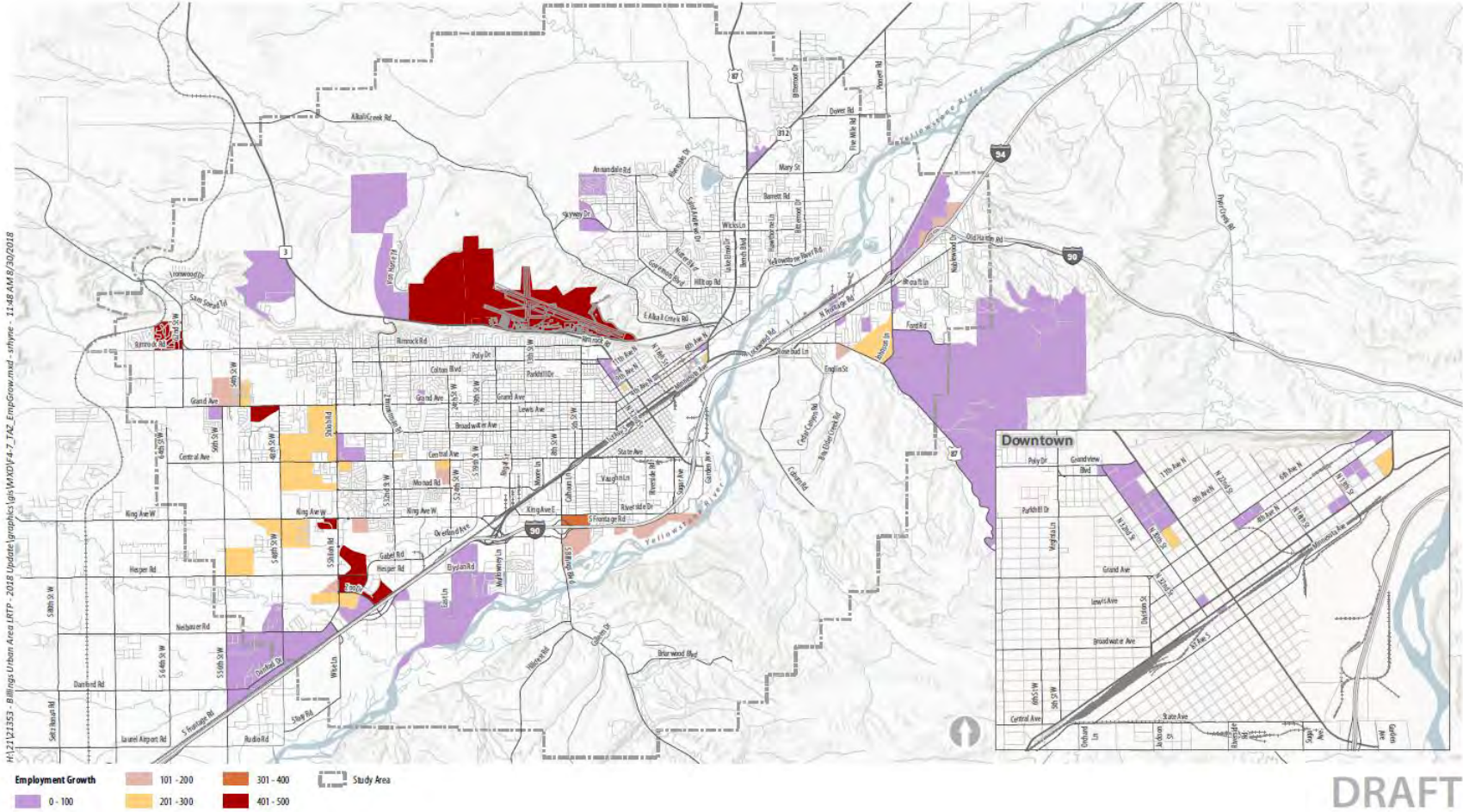
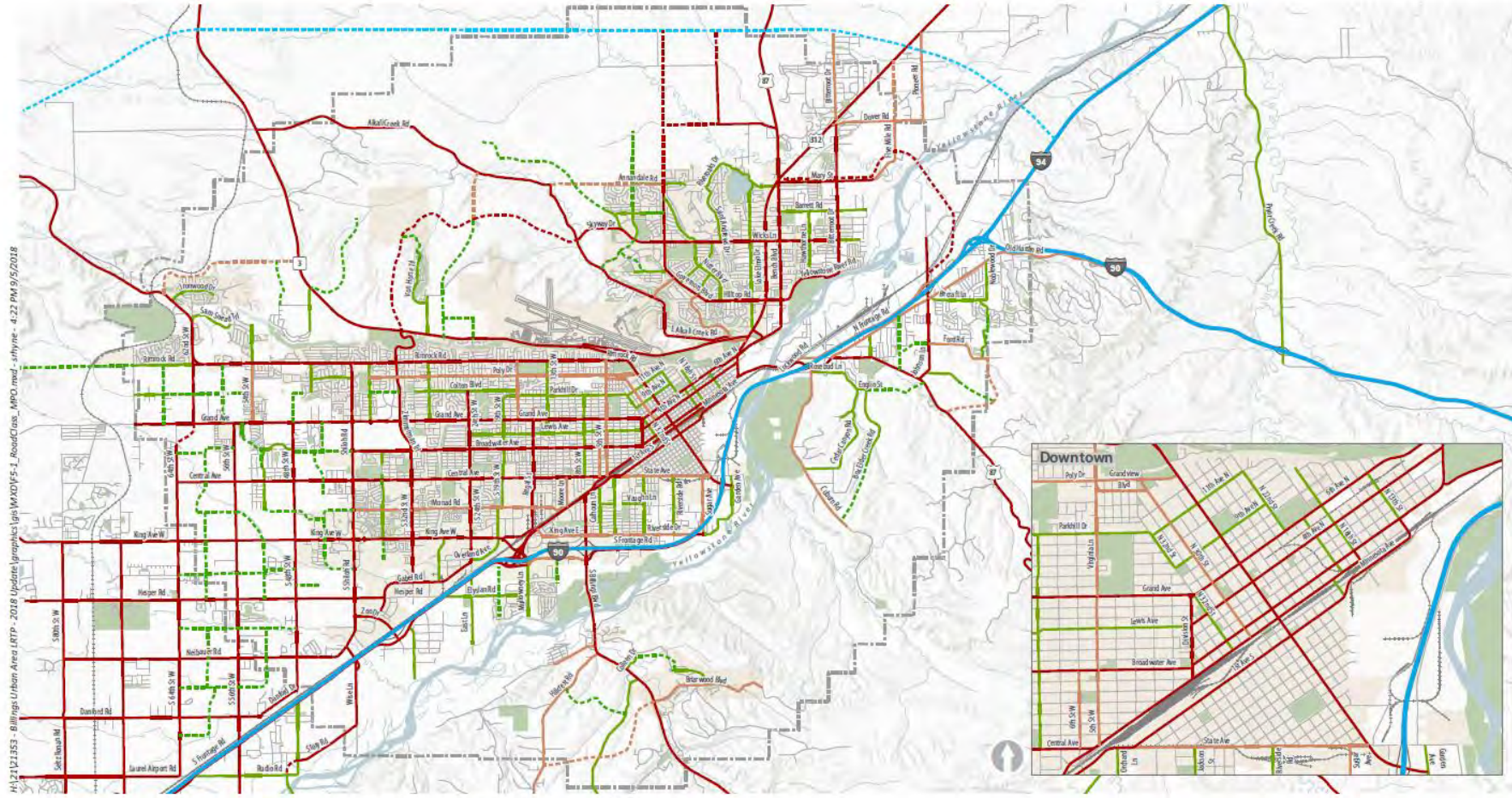


Figure 4-7
 Employment Growth (2017 to 2040)

Functional Classification Map



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- Roadway Classification**
- Minor Arterial
 - Interstate
 - Principal Arterial
 - Proposed Freeway Controlled Access
 - Proposed Collector
 - Proposed Principal Arterial
 - Proposed Collector
 - Study Area
 - Park
 - City of Billings
 - Local Streets

Note: This functional classification map does not represent the federally approved system.

DRAFT

Figure 5-1

Functional Classification Map

Draft Project List - Roadway and Intersection Projects

Committed Projects

- 33 Roadway
- 30 Intersection
- Includes several annual programs

~\$343 million

120 Total Projects

58 - Roadway

62 - Intersection

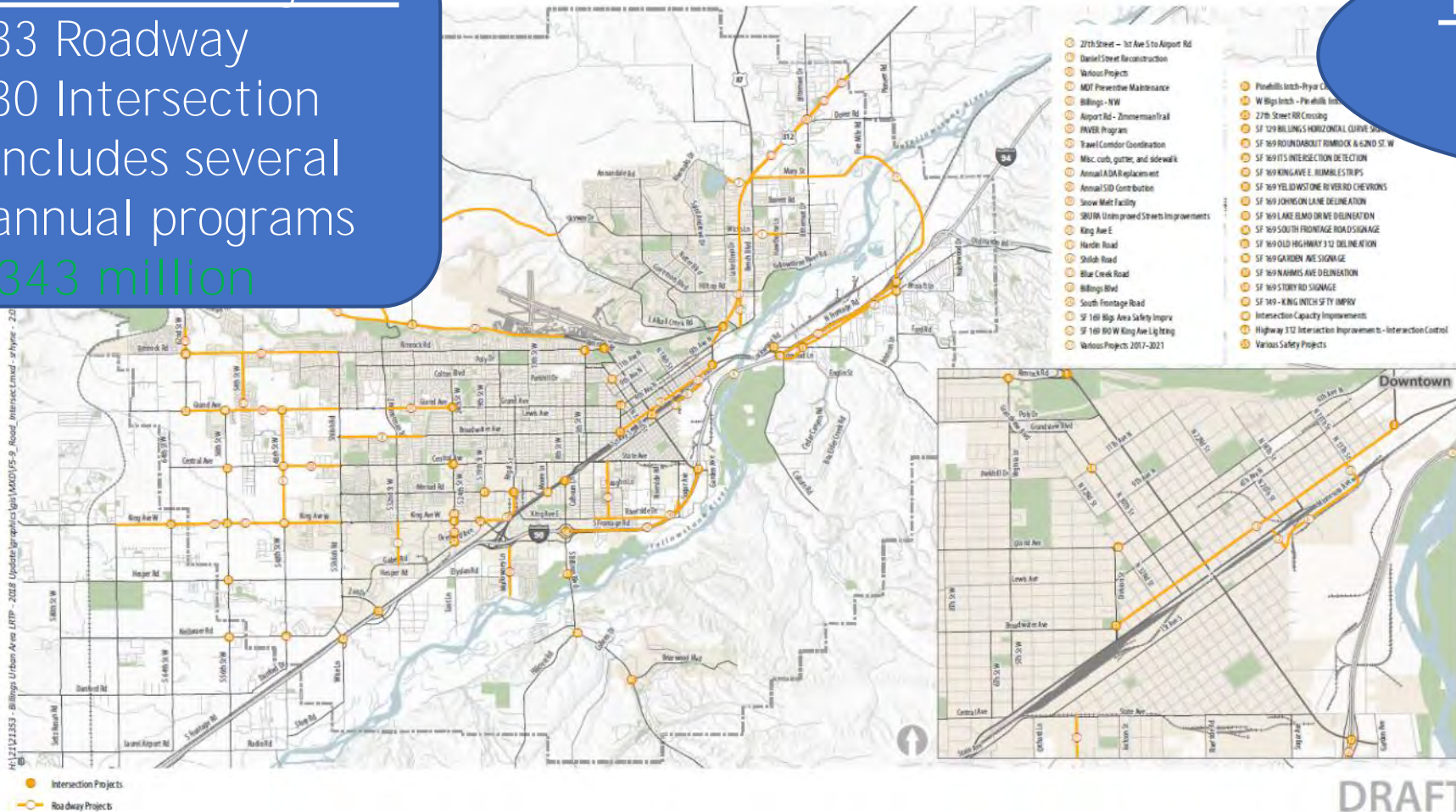


Figure 5-9
Intersection and Roadway Projects

Draft Project List - Congestion Management Projects

Committed Projects

- 8 Congestion Management
~\$13 million

28 Total Projects

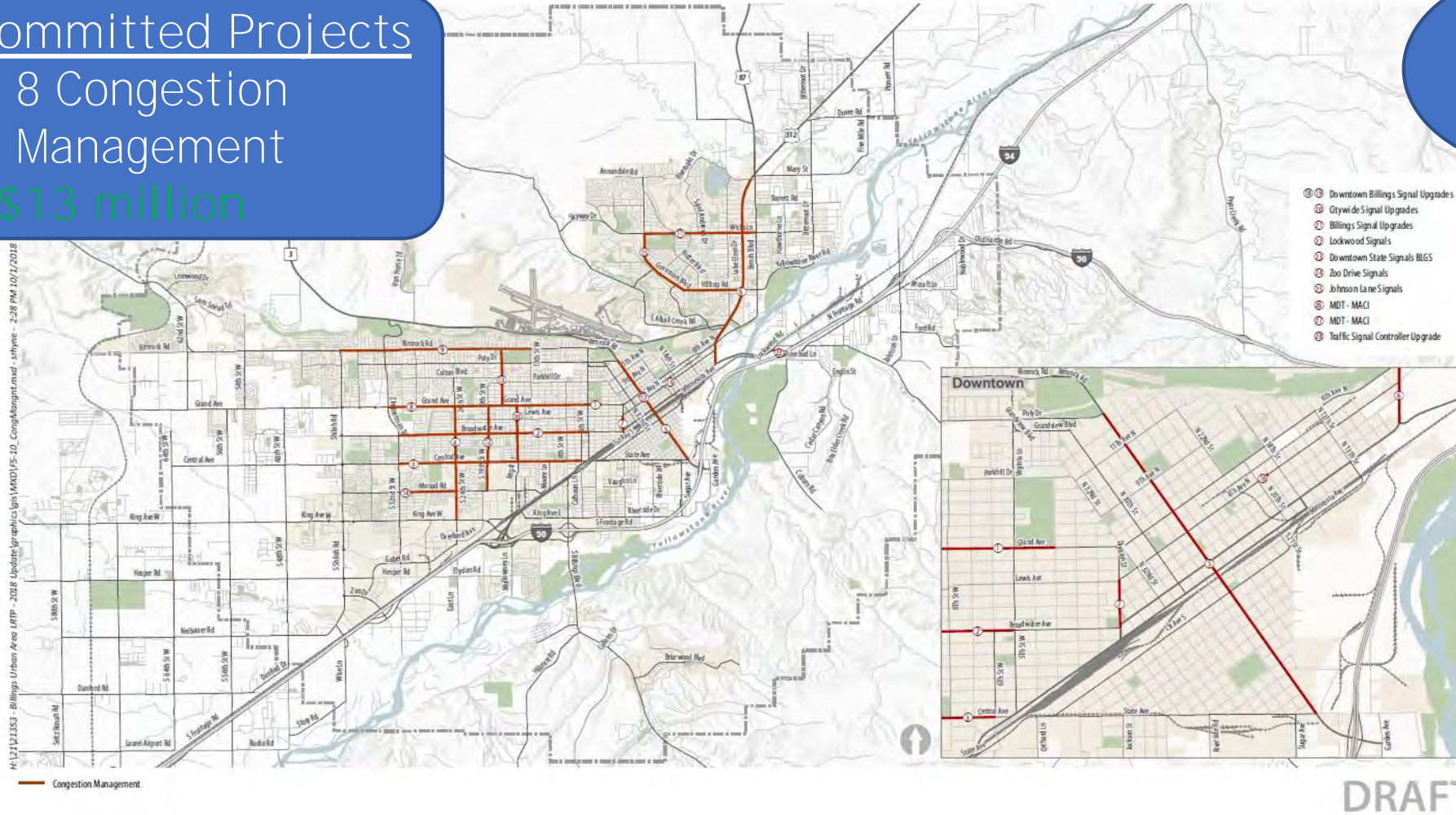
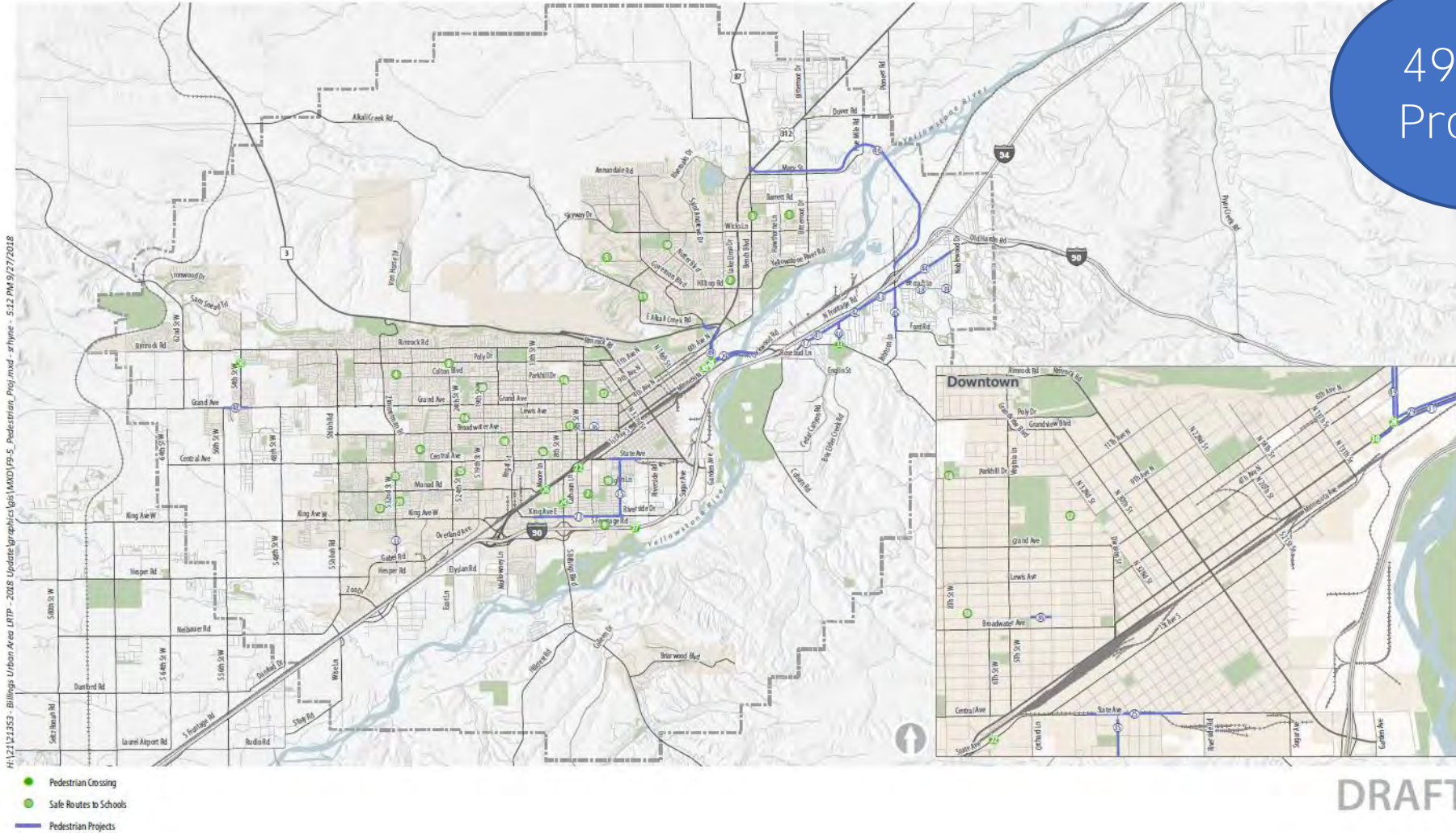


Figure 5-10
Congestion Management Projects

Draft Project List - Pedestrian Projects

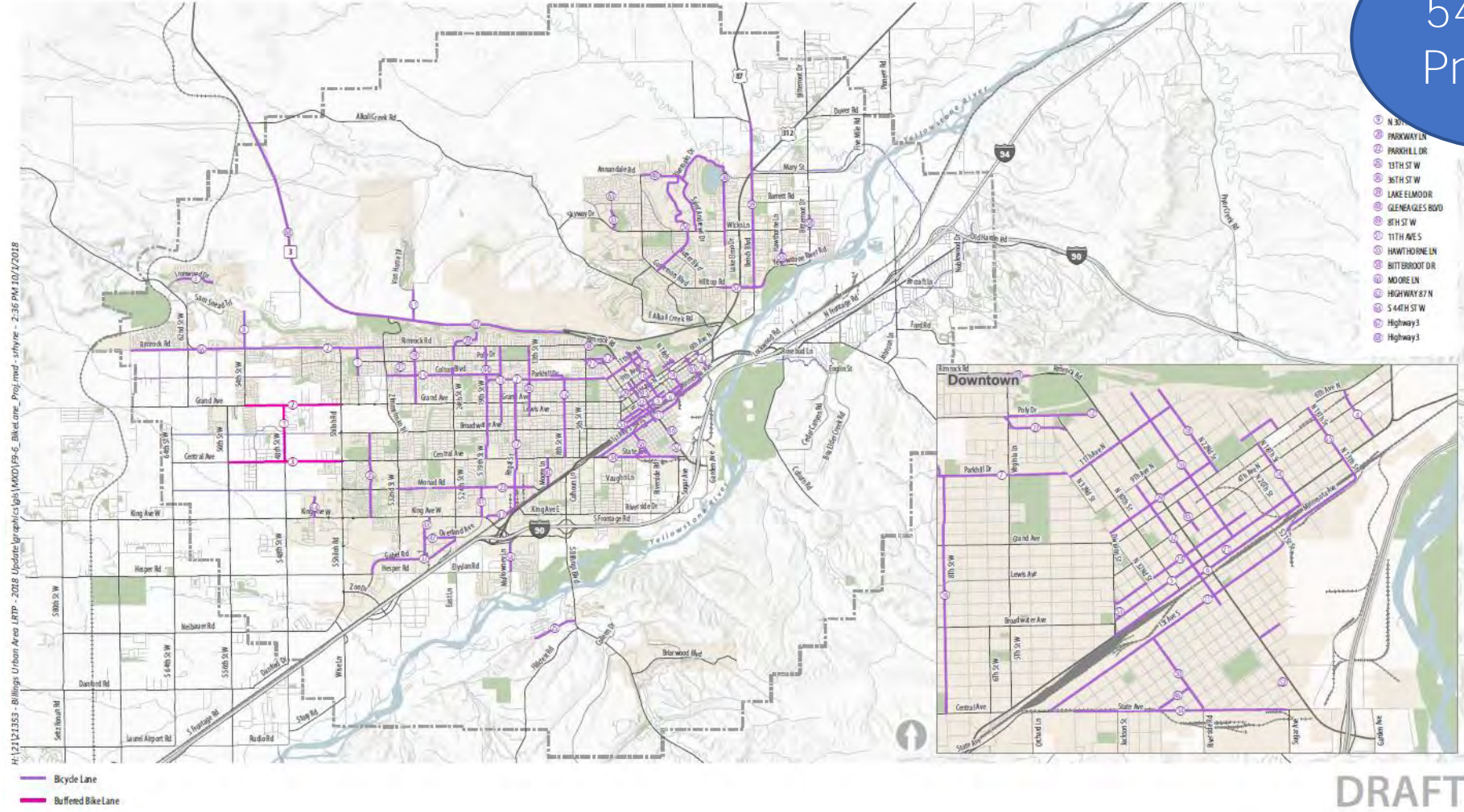
49 Total Projects



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Figure 9-5
Pedestrian Projects

Draft Project List - Bicycle Lane Projects

54 Total Projects

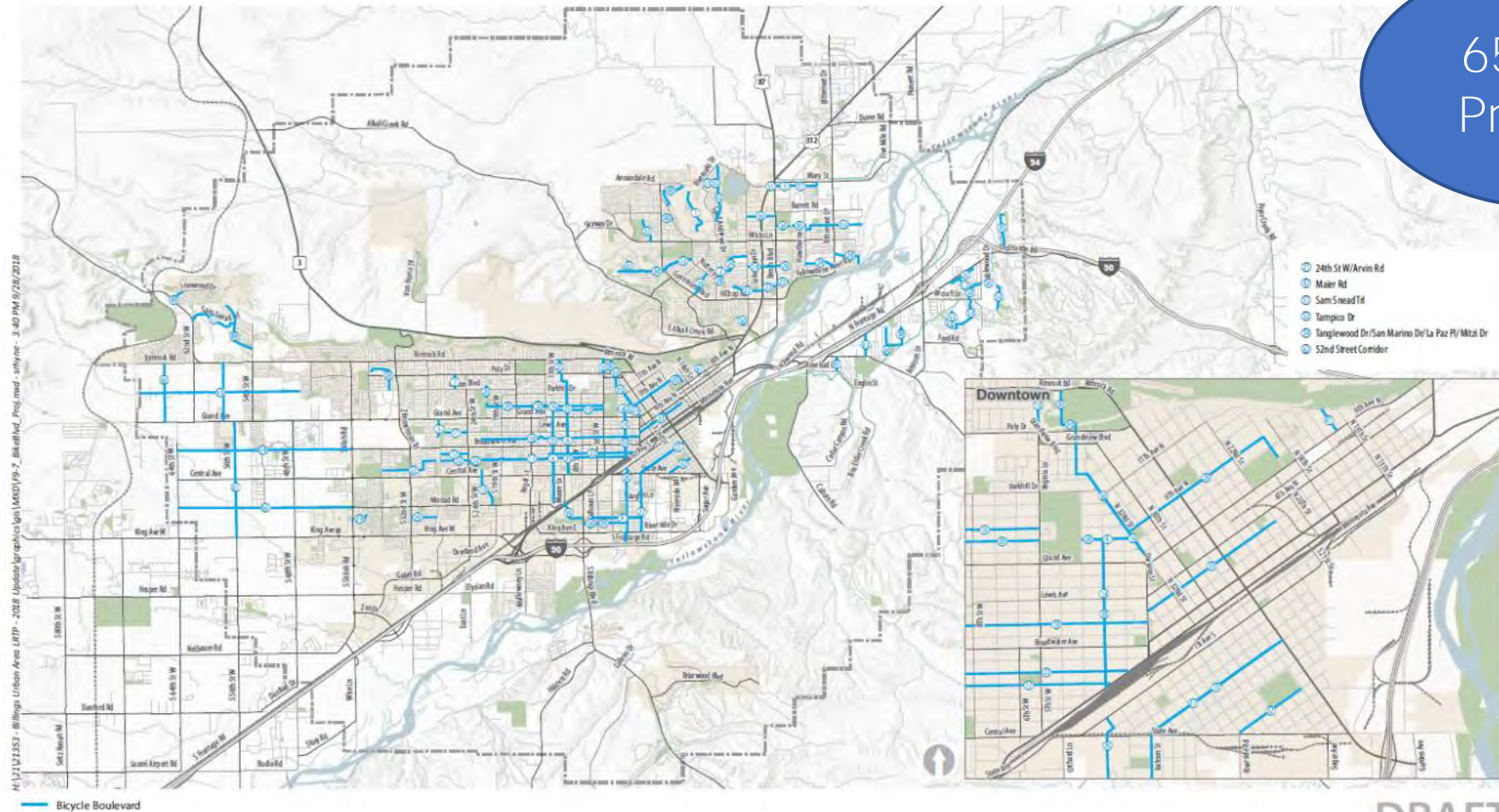


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Figure 9-6
Bicycle Lane and Buffered Bike Projects

Draft Project List - Bicycle Boulevard Projects

65 Total Projects



DRAFT
Figure 9-7
Bicycle Boulevard Projects

Draft Project List - Multi-use Trail Projects

Committed Projects

- 8 Pedestrian (*includes two annual programs*)
 - 2 Bike Lane
 - 9 Multi-use Trail
- ~\$19 million

276 Total Projects

- 49 - Pedestrian
- 54 - Bicycle Lane
- 65 - Bicycle Boulevard
- 108 - Multi-use Trail

Project ID	Proposed Name	Length (Miles)	Project Description	Estimated Planning Level Cost
MT86	South of Governors Blvd		Multi-use Trail from W Wicks Ln to Aronson Ave	\$871,000
MT80	Lodiwood Tributary Trail		Multi-use Trail from Old Hardin Rd to Highway 87E	\$1,824,000
MT87	Control Ave		Multi-use Trail from Shiloh Rd to East of 64th St W	\$1,541,000
MT88	West of Governors Blvd		Multi-use Trail from South of W Wicks Ln to Constitution Ave	\$719,000
MT89	Inner Bell Loop Trail		Multi-use Trail from Alkali Creek Rd to Highway 3	\$1,147,000
MT90	Blue Creek Rd		Multi-use Trail from Coblen Cr to Prentwick Rd	\$430,000
MT91	Broadwater Ave		Multi-use Trail from Shiloh Rd to unspecified	\$806,000
MT92	Monard Rd		Multi-use Trail from S 17th St W to Laurel Rd	\$221,000
MT93	Hogans Slough Trail		Multi-use Trail from Shiloh Rd to Division St W to Division St W to 15th St W	\$317,000
MT94	Monard Rd		Multi-use Trail from 15th St W to 15th St W	\$221,000

Project ID	Proposed Name	Length (Miles)	Project Description	Estimated Planning Level Cost
MT10	Four Dances Connector	1	Construct a multi-use trail from Lockwood Trail to Four Dances Natural Area	\$488,034
MT11	Highway 87E	3	Construct a multi-use trail from Aronson Ave to Lake Simo State Park	\$2,140,369
MT16	Highway Upper Loop	4.5	Construct a multi-use trail from Yellowstone River to Alkali Creek Rd	\$4,710,652
MT17	High Ditch	4	Construct a multi-use trail from Rimrock West Trail to Hogans Slough	\$2,192,138
MT18	Hogans Slough	5.5	Construct a multi-use trail from Shiloh Rd to BNSF Rail with Trail	\$3,014,180
MT19	Inner Bell Loop	8.5	Construct a multi-use trail from Governors Blvd to Highway 3	\$5,937,012
MT20	King Avenue	7	Construct a multi-use trail from S 34th St W to Hogans Slough	\$911,190
MT21	Lockwood	6	Construct a multi-use trail from Interstate 90 to Shiloh Rd	\$3,480,031
MT22	Monard	1	Construct a multi-use trail from S 48th St W to Hogans Slough	\$218,800
MT23	Monard	2.5	Construct a multi-use trail from BBWA Canal Trail to 48th St W	\$2,283,474
MT24	MRI Rail with Trail	9	Construct a multi-use trail from Interstate 90 to Highway 3 E	\$8,250,026
MT25	Inner Bell Loop	6	Construct a multi-use trail from Extension of Existing Trail to Inner Bell Loop	\$911,390
MT26	Rimrock Blvd	1.5	Construct a multi-use trail from 34th St W to Cove Ditch	\$1,370,084
MT27	Sensors Park	1	Construct a multi-use trail from Aronson Ave to Inner Bell Loop Trail	\$918,800

Project ID	Proposed Name	Length (Miles)	Project Description	Estimated Planning Level Cost
MT28	Snake Ditch	2	Construct a multi-use trail from Shiloh Rd to Big Ditch	\$1,098,061
MT29	South Hogans Slough	1	Construct a multi-use trail from Suburban Ditch to MRI Rail with Trail	\$911,390
MT30	Spring Creek Extension	7	Construct a multi-use trail from 64th St W to 16th St W	\$911,390
MT31	Transition Connector	0.5	Bring local trail segment up to standards and integrate connection to Transition Connector Trail at 32nd Street West	\$480,002
MT32	Two Moon Park to Five Mile Creek	3	Construct a multi-use trail from Keweenaw Trail to Five Mile Creek	\$2,740,169
MT33	Western Yellowstone River Trail	9	Construct a multi-use trail from Josephine Crossing Trail to Shiloh Rd Trail	\$4,568,948
MT34	Riverfront Park	2.5	Construct a multi-use trail from Mystic Park Trail to Riverfront Park Trails	\$1,920,000
MT35	25th Street Railroad Bridge	0.5	Construct a multi-use trail from Montana Avenue to Minnesota Avenue	\$1,700,000
MT36	BBWA to Sensors Park Trail	5.5	Construct a multi-use trail from Lulu Park to Aronson Ave	\$5,023,643
MT37	Rim Trail Trail from 27th Street (New Airport Road) to Zimmerman Trail Vicinity	3.5	New trail along the Rim resulting from Highway 3 corridor study	\$1,820,000
MT38	Downtown BBWA Corridor Trail/On Street Facilities	1.5	Complete Trail through USU-B Campus in alignment with USU-B Master Plan and trail on/under facilities along Poly Dr through Virginia Lane Intersection to 13th Poly Drive	\$210,000
MT39	34th Street Facklerian Bridge	0.25	Construct a multi-use bridge to cross the tracks near 34th Street	\$2,000,000

Project ID	Proposed Name	Length (Miles)	Project Description	Estimated Planning Level Cost
MT40	44th Street West	0.5	Construct a multi-use bike/pedestrian path along 44th Street from Shiloh Conservation Area to King Avenue West	\$101,000
MT41	Highway Middle School Path	0.25	Construct a trail from the Keweenaw Trail to New Heights Middle School near Bench and Barrett	\$131,250
MT42	6th Avenue N		Multi-use Trail from 6th Avenue N to 10th St	\$1,062,000
MT43	BBWA Canal Trail		Multi-use Trail from 6th Avenue N to Transition Way	\$6,116,000
MT44	Montana Ave/ Lincoln Ave		Multi-use Trail from Division St to S Billings Blvd	\$1,500,000
MT45	Wicks Ln		Multi-use Trail from Glenview Blvd to Keweenaw Trail	\$2,319,000
MT46	Rosebud Ln		Multi-use Trail from Highway 87E to West of Rosebud Ln	\$2,165,000
MT47	N 27th St		Multi-use Trail from Rimrock Rd to Mountain View Blvd	\$172,000
MT48	Crane Ave		Multi-use Trail from 34th St W to Zimmerman Tr	\$674,000
MT49	Hesper Rd		Multi-use Trail from East of Shiloh Rd to S Shiloh Rd	\$181,000
MT50	Highway 87E		Multi-use Trail from Johnson Ln to Old Hardin Rd	\$82,800
MT51	24th		Multi-use Trail from Stillwater to South of King Ave W	\$332,000
MT52	Broadwater Ave		Multi-use Trail from 24th St W to 38th St W	\$925,000
MT53	3rd Ave/Old Hardin Rd/Highway 87E		Multi-use Trail from N 13th St to Hogan Rd	\$6,168,000

Project ID	Proposed Name	Length (Miles)	Project Description	Estimated Planning Level Cost
MT54	BBWA Canal Trail North		Multi-use Trail from East of Shadow Heights to Aronson Ave	\$3,337,000
MT55	25th St Trail		Multi-use Trail from S 25th St to S 27th St	\$177,000
MT56	Gabel Rd		Multi-use Trail from Hegar Rd to 20th Rd	\$117,000
MT57	South of Emerald Dr/Seward Ln		Multi-use Trail from Emerald Dr to Seward Lane	\$540,000
MT58	Rimrock Rd		Multi-use Trail from 54th St W to 66th St W	\$855,000
MT59	King Ave E		Multi-use Trail from Sugar Ave to King Ave W	\$1,247,000
MT60	King Ave/Wyland Rd		Multi-use Trail from S 20th St W to S Frontage Rd	\$2,796,000
MT61	Arnold Drain Trail		Multi-use Trail from 18th St W to 25th St W	\$840,000
MT62	Chrysalis Acres		Multi-use Trail from Von Buron St to Holloway Ln	\$75,000
MT63	Suburban Ditch Trail		Multi-use Trail from Sandbird Dr to Holloway Ln	\$526,000
MT64	Falcon Ridge		Multi-use Trail unspecified	\$200,000
MT65	Keweenaw Trail Corridor		Multi-use Trail from Stillwater Dr to Mary St	\$558,000
MT66	Highway 87 Bypass		Multi-use Trail from Roundup Rd to Johnson Ln	\$6,747,000
MT67	Jim Duschler Trail		Multi-use Trail from South of Mary St to E&F St	\$1,479,000
MT68	Mulwayer Ln		Multi-use Trail from S Frontage Rd to Stry Rd	\$142,000
MT69	Seneca Park Trail		Multi-use Trail from High Sierra Blvd to Alkali Creek Rd	\$1,795,000

Draft Projects and Strategies - Other Modes

Transit

- *Increase funding* through federal or local sources
- Improve equipment and facilities
- All-day fixed route service to Billings Heights by 2020
- Vehicle tracking and automatic fare collection by 2025
- Designated fixed-route bus stops by 2025

Truck

- Major roadway projects:
 - *Billings Bypass*
 - *I-90 Yellowstone River Bridge*
 - *Inner Belt Loop*
- Widening and reconstructions throughout the Billings Urban Area

Rail

- Crossing studies at 27th Street and Moore Lane
- Improve underpasses at 21st Street and 13th Street
- Coordinate rail infrastructure improvements with Lockwood

Revenue & Project Cost Analysis - Fiscal Constraint

Estimated Revenue ~ \$900M
 Estimated C+R Projects ~ \$800M
 Difference ~ \$100M

Funding Source	2019-2028			2029-2040		
	Projected Funding	Expenditures	Difference	Projected Funding + Carryover	Expenditures	Difference
FEDERAL						
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Congestion Mitigation and Air Quality Improvement Program (CMAQ)	\$ 37,870,000	\$ 28,393,611	\$ 9,476,389	\$ 54,916,389	\$ 12,920,877	\$ 41,995,512
Federal Transit Authority (FTA) Funds	\$ 24,240,000	\$ 23,817,028	\$ 422,972	\$ 29,522,972	\$ 29,100,000	\$ 422,972
STATE AND LOCAL						
TransADE	\$ 730,000	\$ 700,000	\$ 30,000	\$ 900,000	\$ 870,000	\$ 30,000
Operations and Maintenance (State)	\$ 14,720,000	\$ 14,720,000	\$ -	\$ 17,670,000	\$ 17,670,000	\$ -
State Fuel Tax	\$ 21,510,000	\$ 17,005,684	\$ 4,504,316	\$ 30,304,316	\$ 23,196,000	\$ 7,108,316
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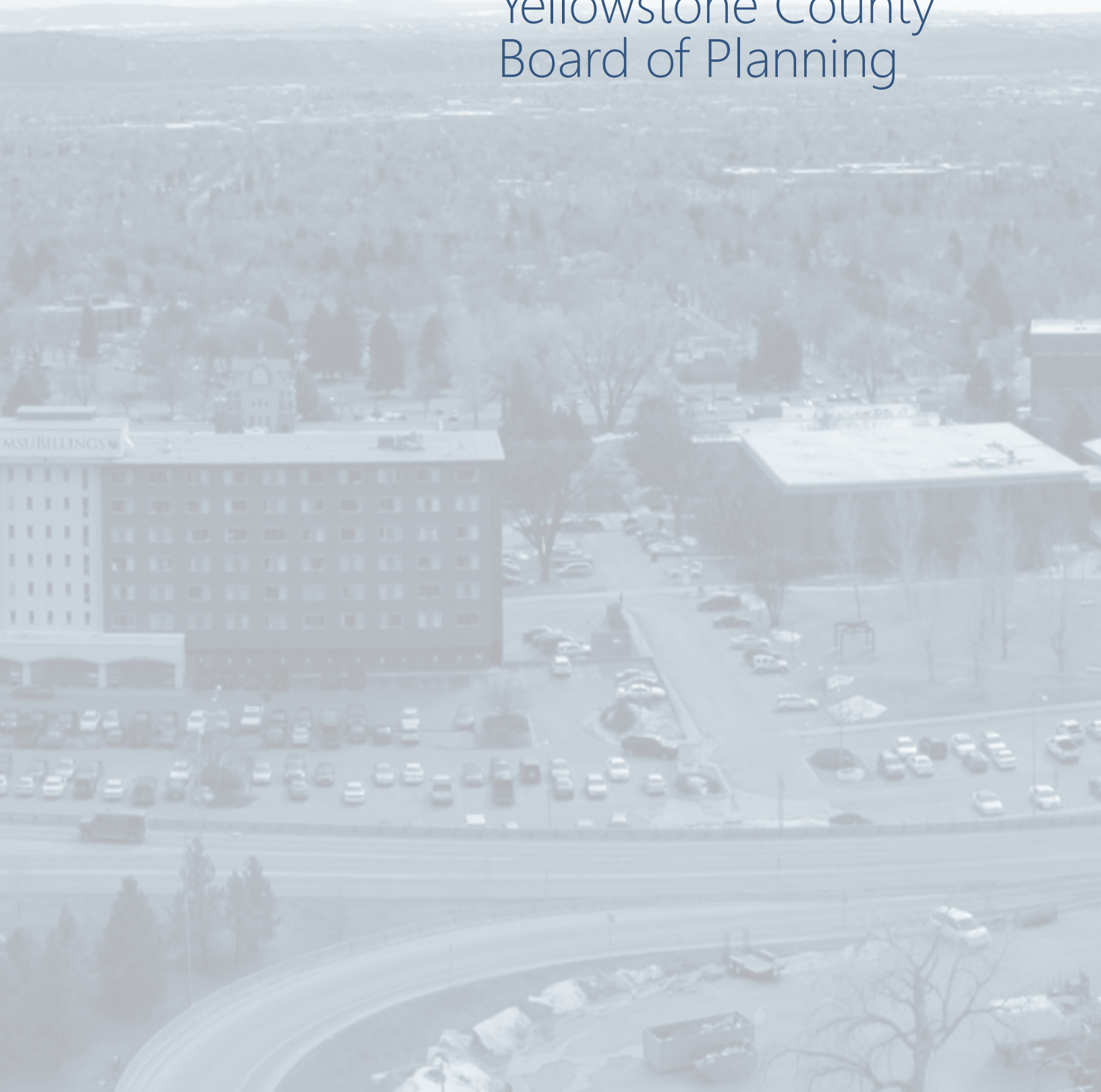
Thank You For Your Time

▶ Questions?



Appendix Q

Plan Adoption
Presentation –
Yellowstone County
Board of Planning



2018 Billings Urban Area Long Range Transportation Plan

Yellowstone County Board of Planning

October 10, 2018



What is an LRTP?

A long range transportation plan (LRTP):

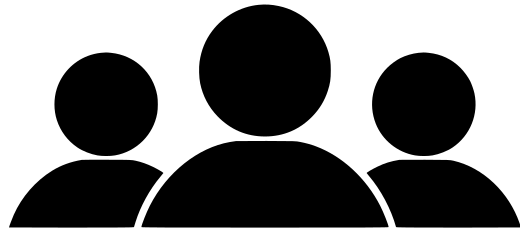
- Outlines the long-range vision for the transportation system
- Lists all transportation improvements that are expected in the next 20 years → 2040

Why are we updating it?

Metropolitan areas with populations over 50,000 (such as the Billings urban area) are federally required to update their LRTP every 4 years

Updating this document helps Billings define its vision for the transportation system and plan future projects

Who is involved?



Resource Agencies and Public



Where are we in the timeline?

L RTP TIMELINE



What is next?

- ▶ Draft Plan is available for review and comment
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2018 Billings Urban Area Long Range Transportation Plan



2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN
September 27, 2018

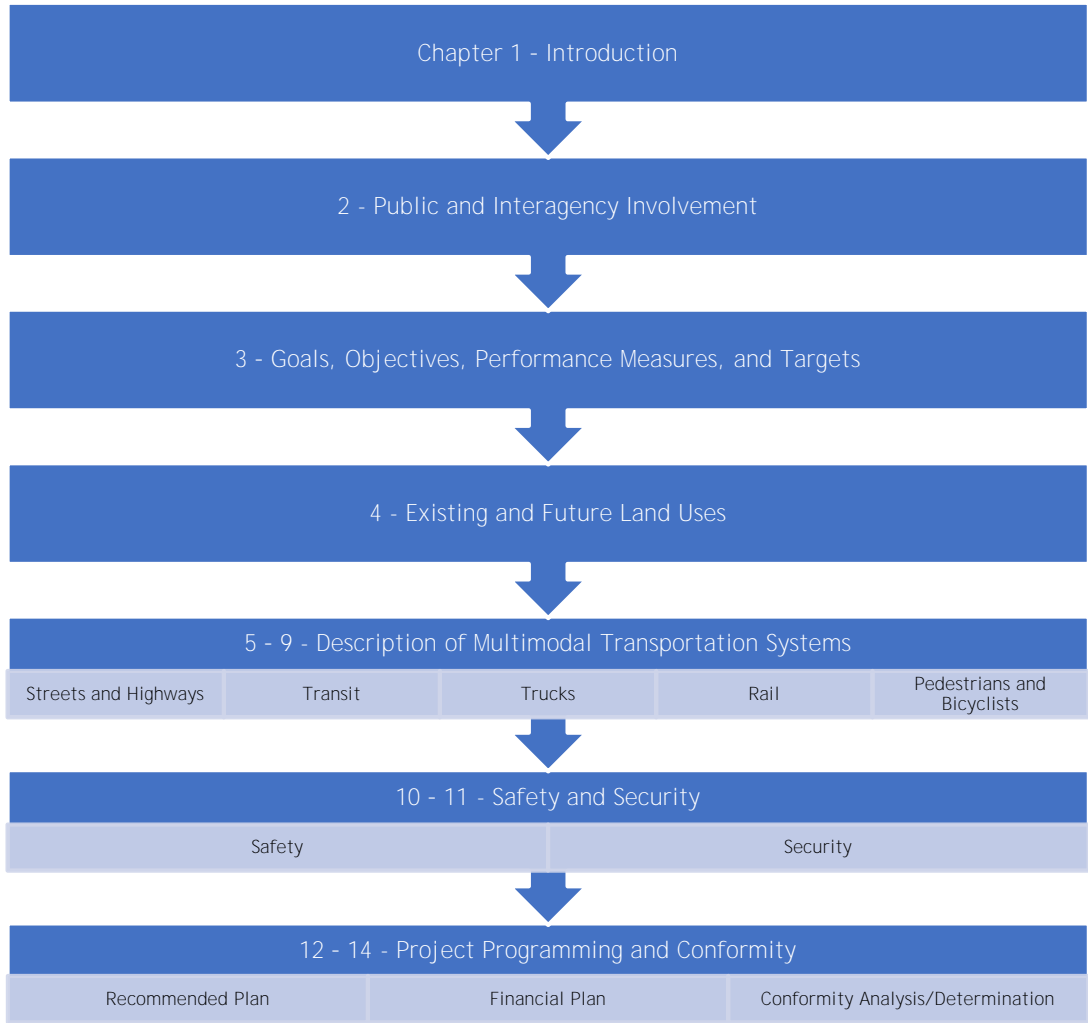
prepared by
KITTELSON & ASSOCIATES **DOWL**

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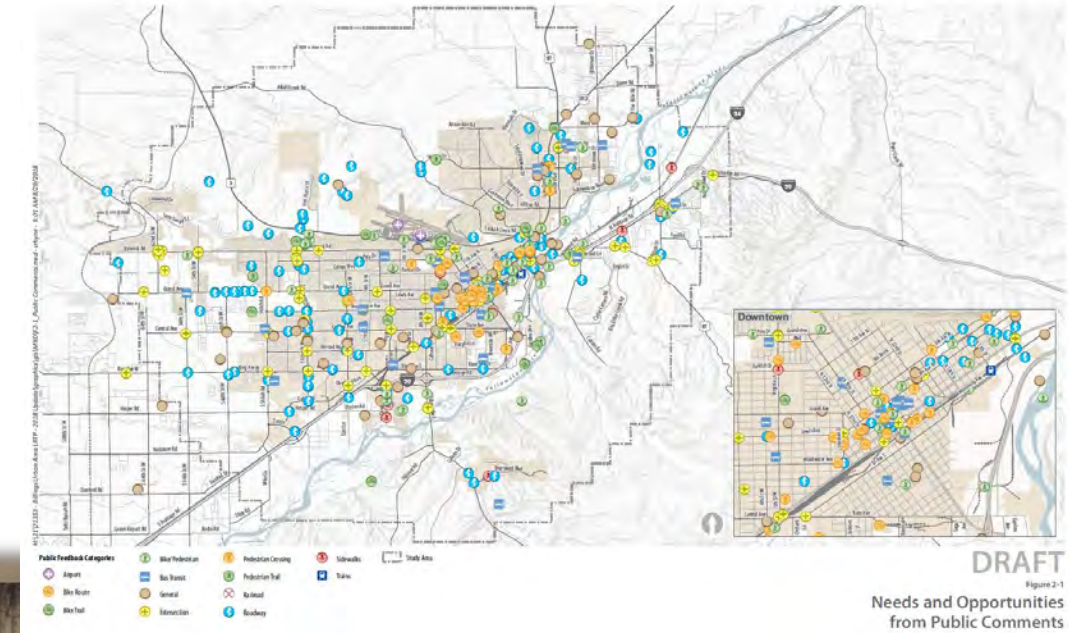
What are the elements of the 2018 LRTP?

- 15 Plans, Studies, & Policies Since 2014 LRTP
- 25 Major Projects Since 2014 LRTP
- 8 Ongoing

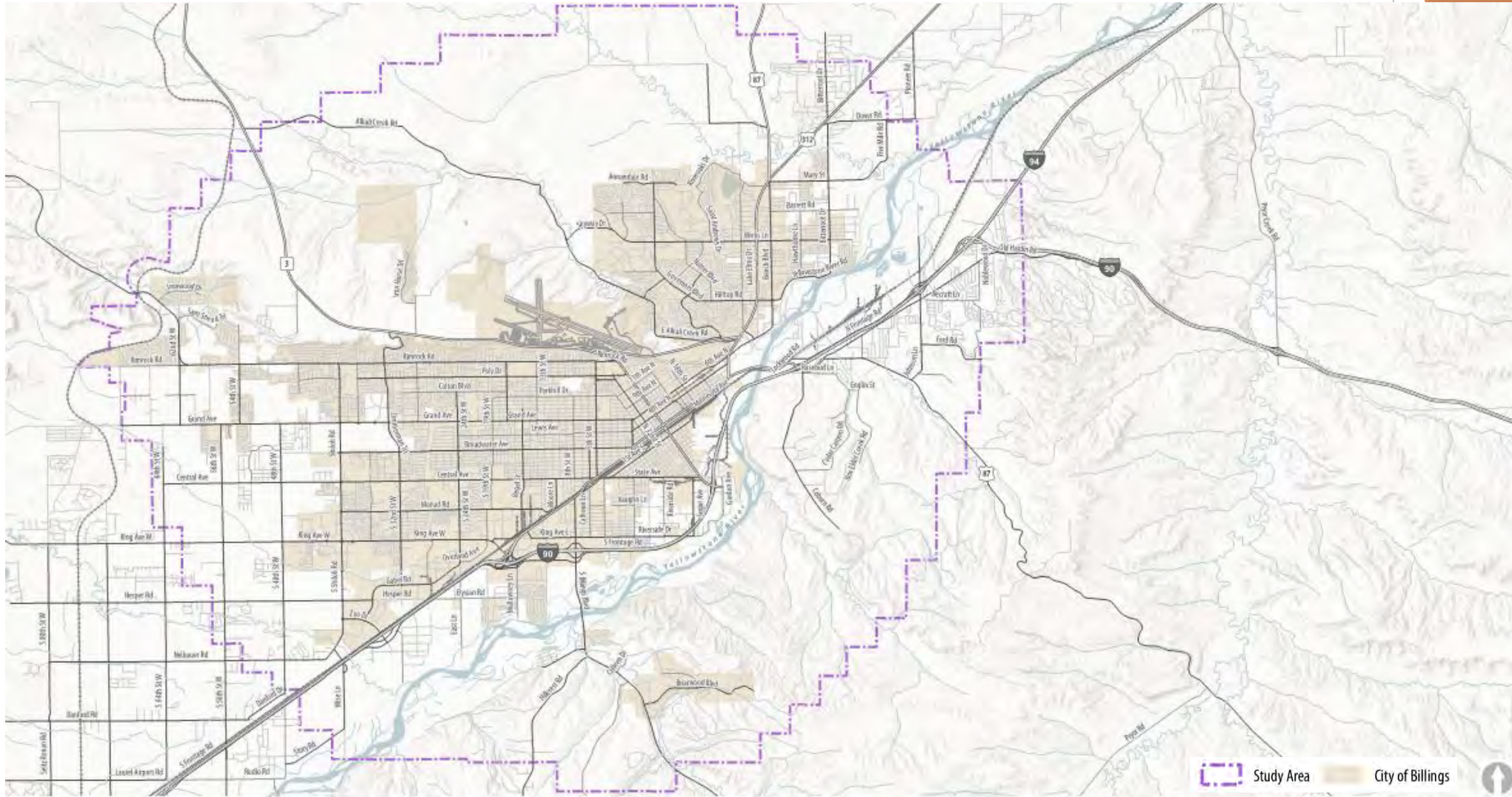


Public and Interagency Involvement

- ▶ www.billingslrtp.com
- ▶ Steering committee
- ▶ Resource agencies
- ▶ Youth engagement
- ▶ Open houses and online survey
- ▶ Media coordination and social media
- ▶ Email updates



Where is the study area?



Introduction

Background

Draft Plan

Wrap-Up

L RTP Goals

1. Safety

- Develop a safe transportation system

2. Functional Integrity and Efficiency

- Optimize, preserve, and enhance the existing transportation system

3. Prioritized Improvements

- Identify and prioritize projects that mitigate deficiencies, maximize the use of existing facilities, and balance anticipated needs with available funding

4. Environment

- Develop a transportation system that protects the natural environment and promotes a healthy, sustainable community

5. Public Transit and Transportation

- Create a transportation system that supports the practical and efficient use of transit

6. Pedestrians and Bicyclists

- Create a transportation system that supports the practical and efficient use of active transportation such as walking and bicycling

7. Economic Vitality

- Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce

Land Use - Population Growth (2017 to 2040)

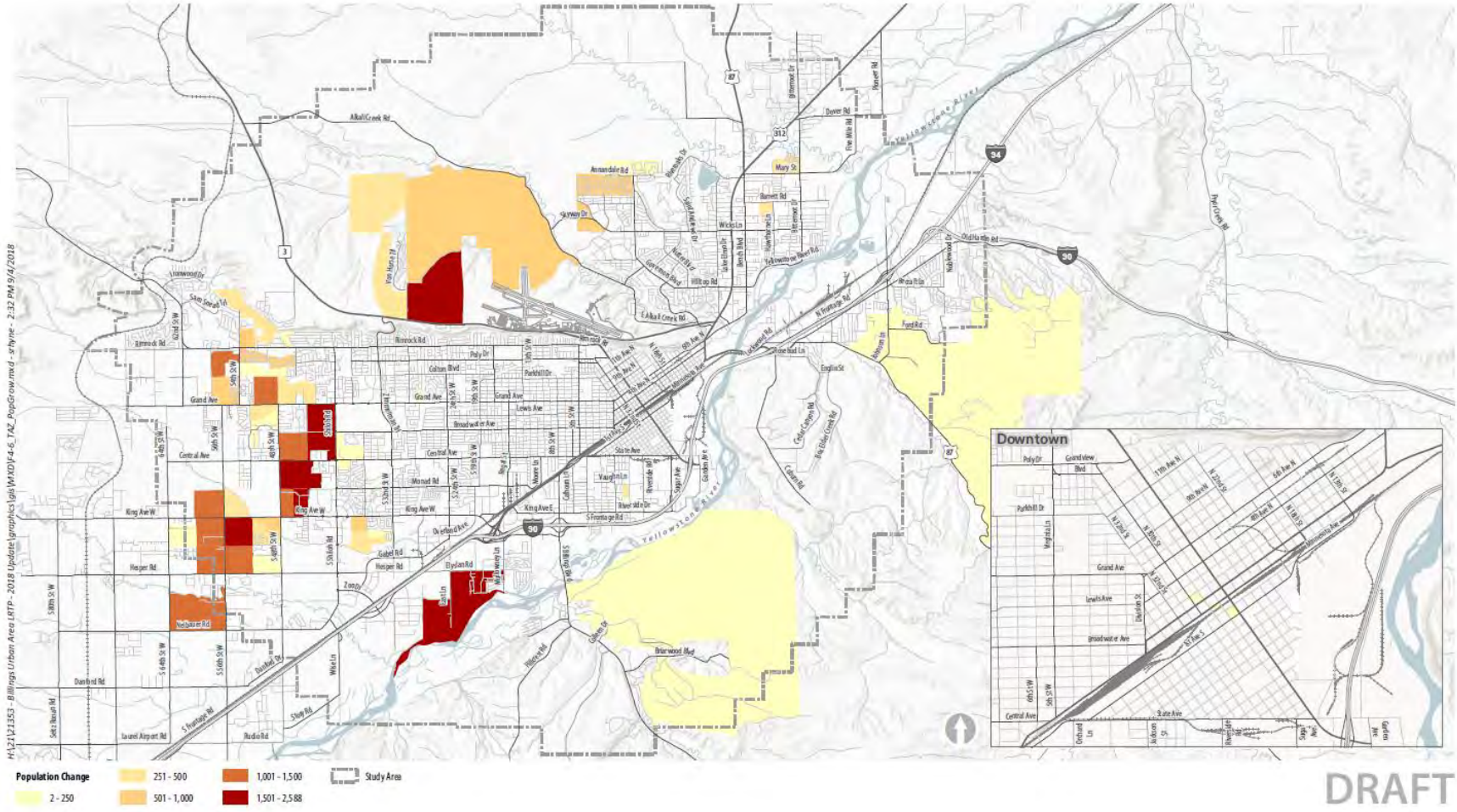


Figure 4-6
Population Growth (2017 to 2040)

Land Use - Employment Growth (2017 to 2040)

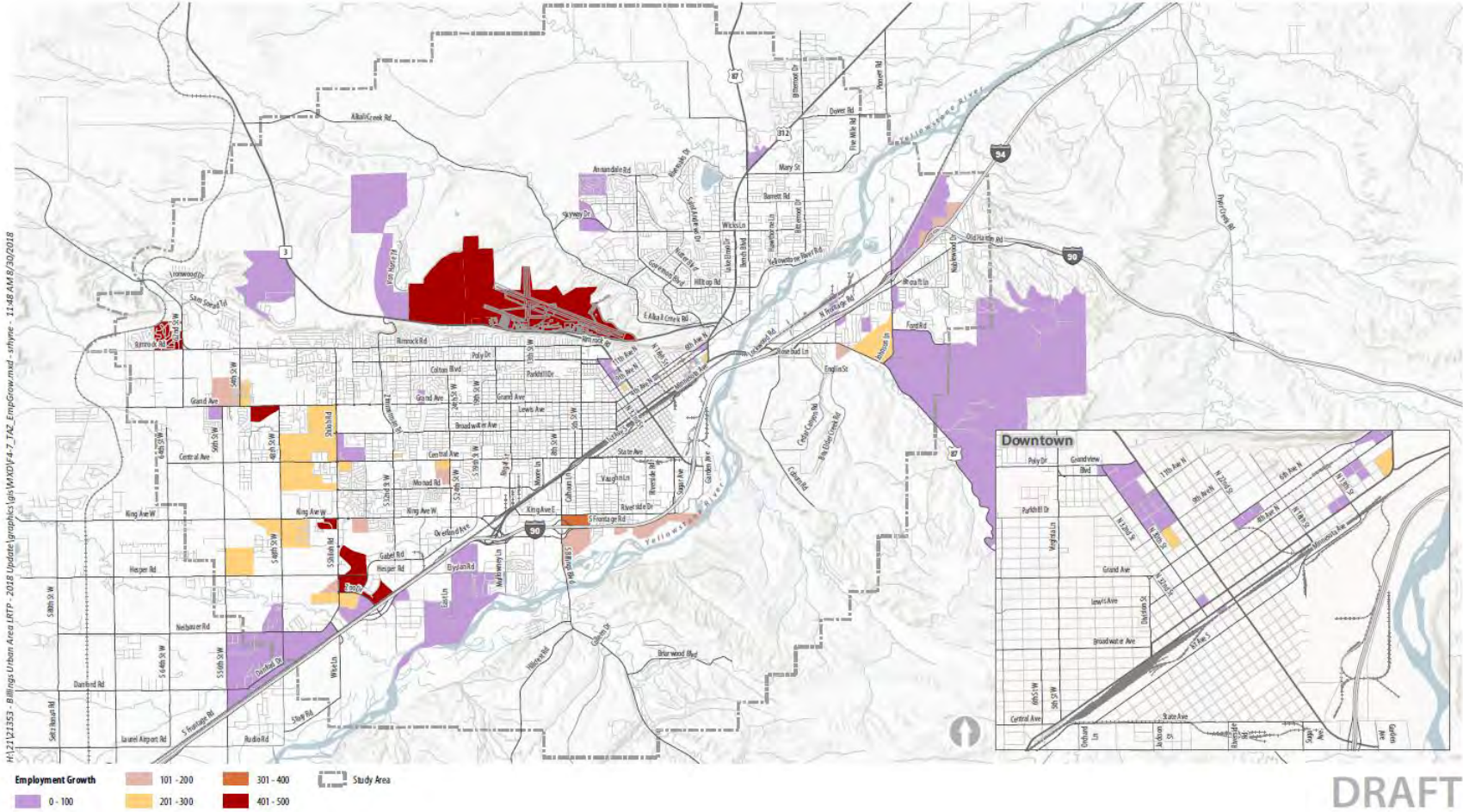
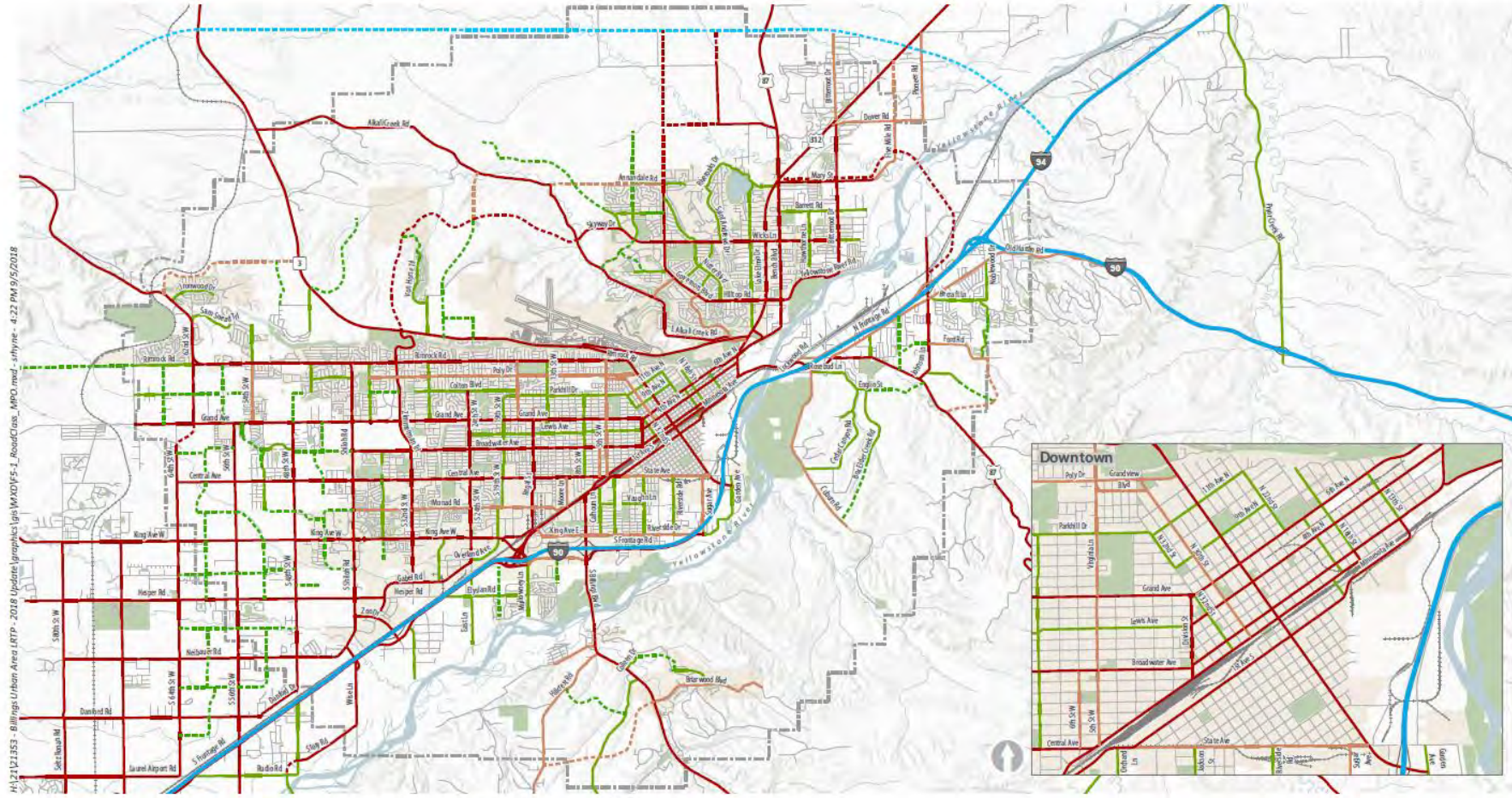


Figure 4-7
Employment Growth (2017 to 2040)

Functional Classification Map



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- Roadway Classification**
- Minor Arterial
 - Interstate
 - Principal Arterial
 - Proposed Freeway Controlled Access
 - Collector
 - Proposed Principal Arterial
 - Proposed Collector
 - Study Area
 - Park
 - City of Billings
 - Local Streets

Note: This functional classification map does not represent the federally approved system.

DRAFT

Figure 5-1

Functional Classification Map

Draft Project List - Types / Categories

Committed Projects

- Transportation Improvement Program (TIP)
- Capital Improvement Plan (CIP)
- Years 2018-2028

Recommended Projects

- Not programmed
- Upcoming projects for the TIP and CIP
- Years 2029-2040

Illustrative Projects

- Visionary
- Not expected to occur within 2040 horizon

Fiscal Constraint of LRTP

Draft Project List - Roadway and Intersection Projects



Draft Project List - Roadway and Intersection Projects

Committed Projects

- 33 Roadway
- 30 Intersection
- Includes several annual programs

~\$343 million

120 Total Projects

58 - Roadway

62 - Intersection

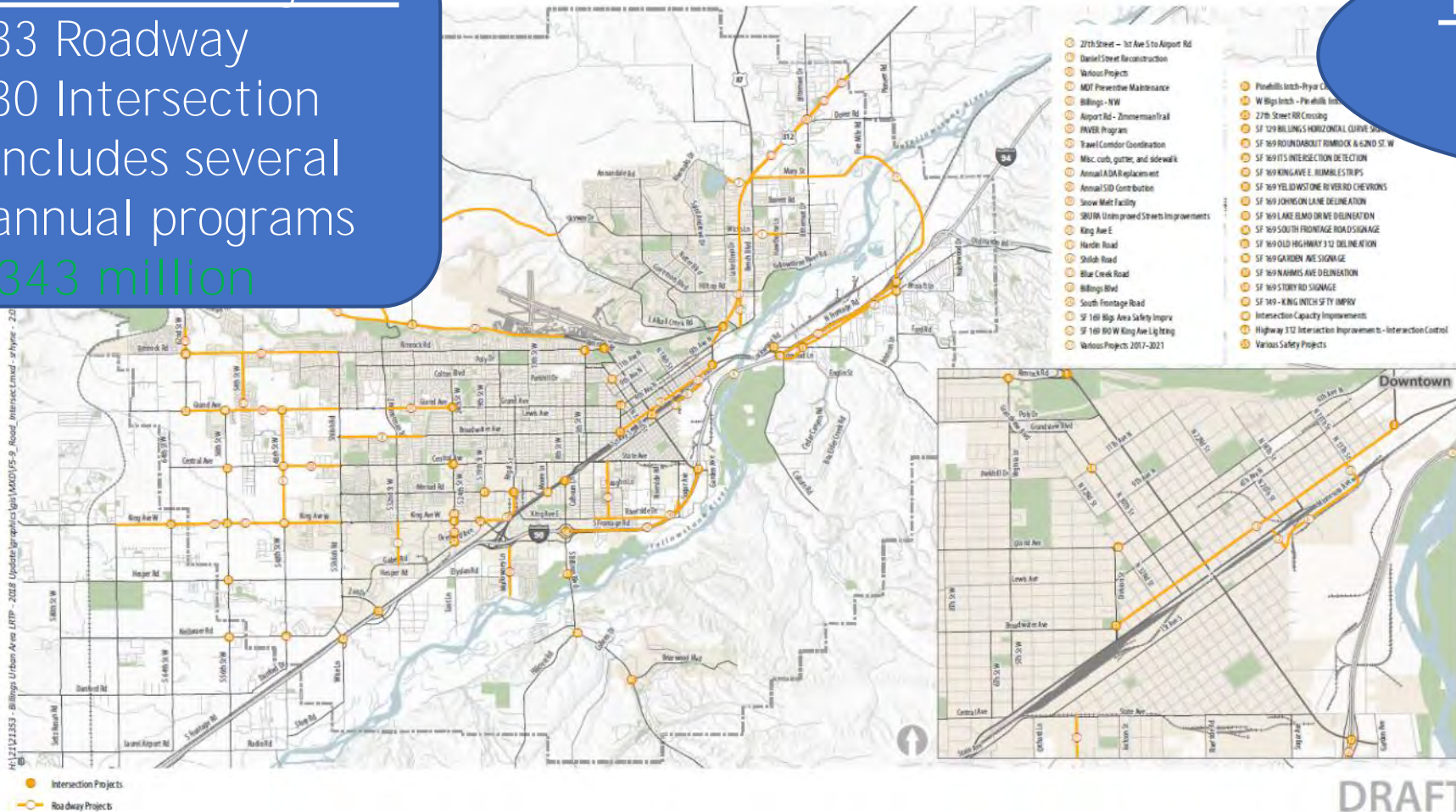


Figure 5-9
Intersection and Roadway Projects

Draft Project List - Congestion Management Projects

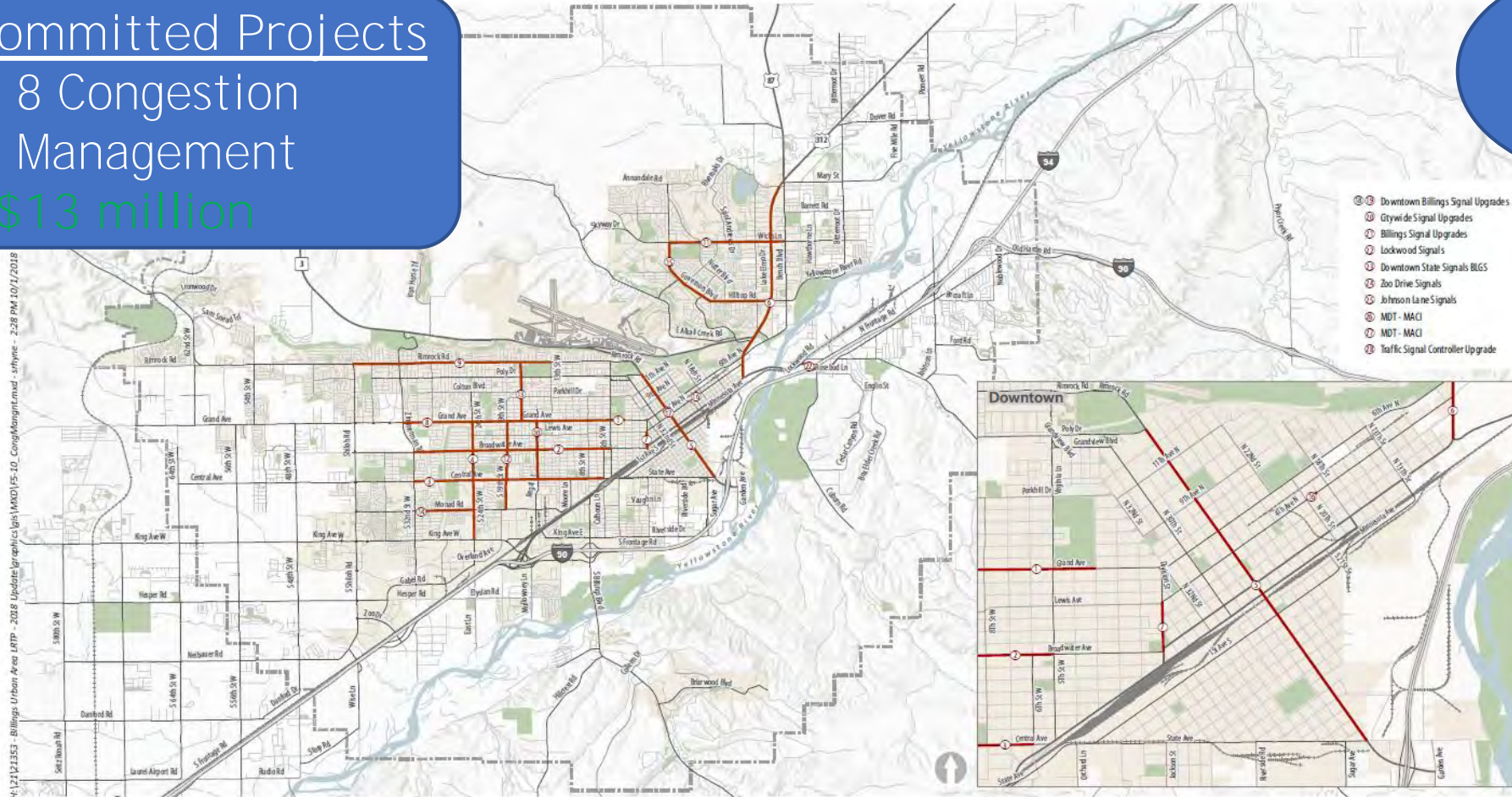


Draft Project List - Congestion Management Projects

Committed Projects

- 8 Congestion Management
~\$13 million

28 Total Projects



DRAFT

Figure 5-10
Congestion Management Projects

Draft Project List - Pedestrian, Bicycle, & Multi-use Trail Projects



Introduction

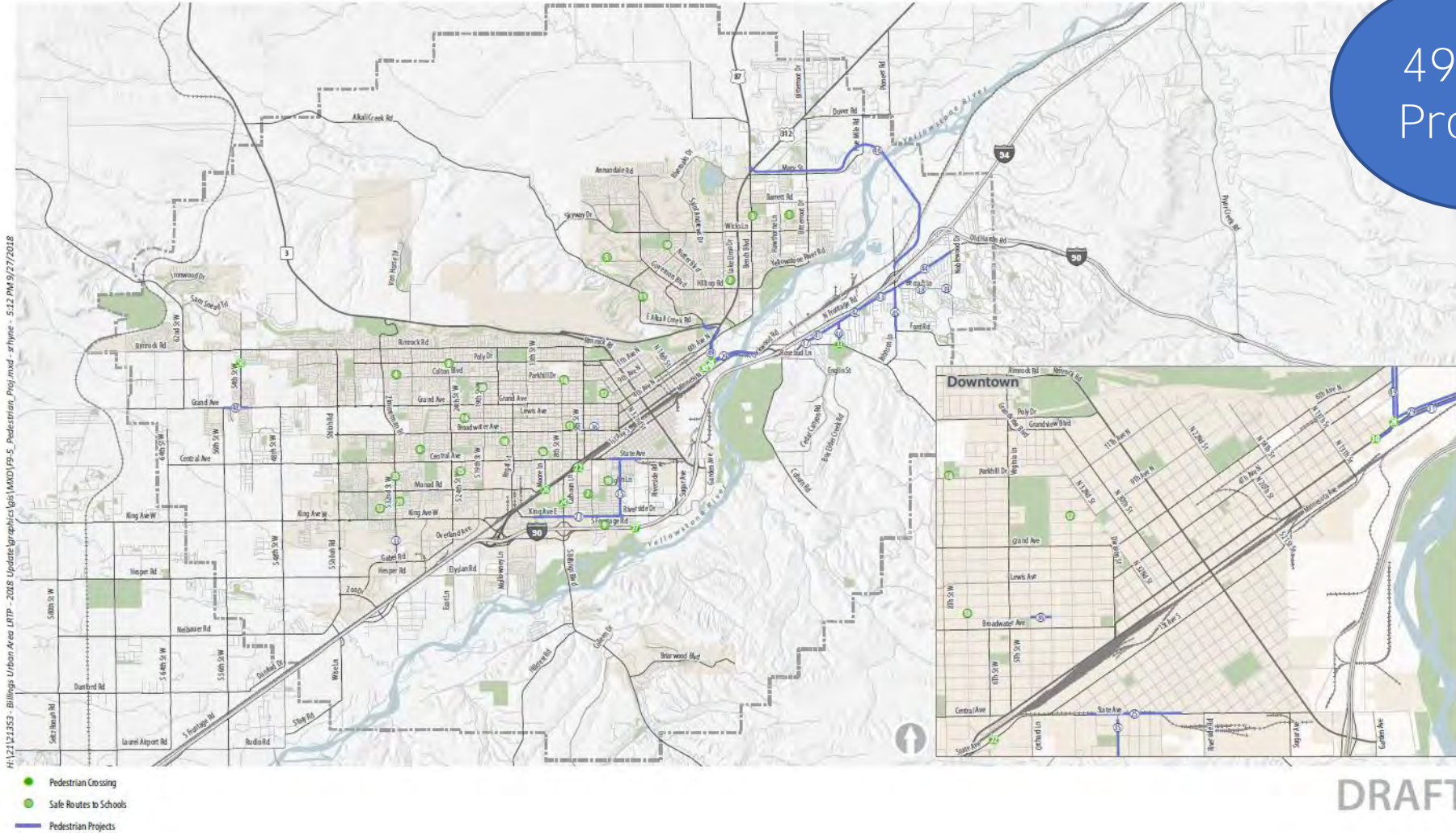
Background

Draft Plan

Wrap-Up

Draft Project List - Pedestrian Projects

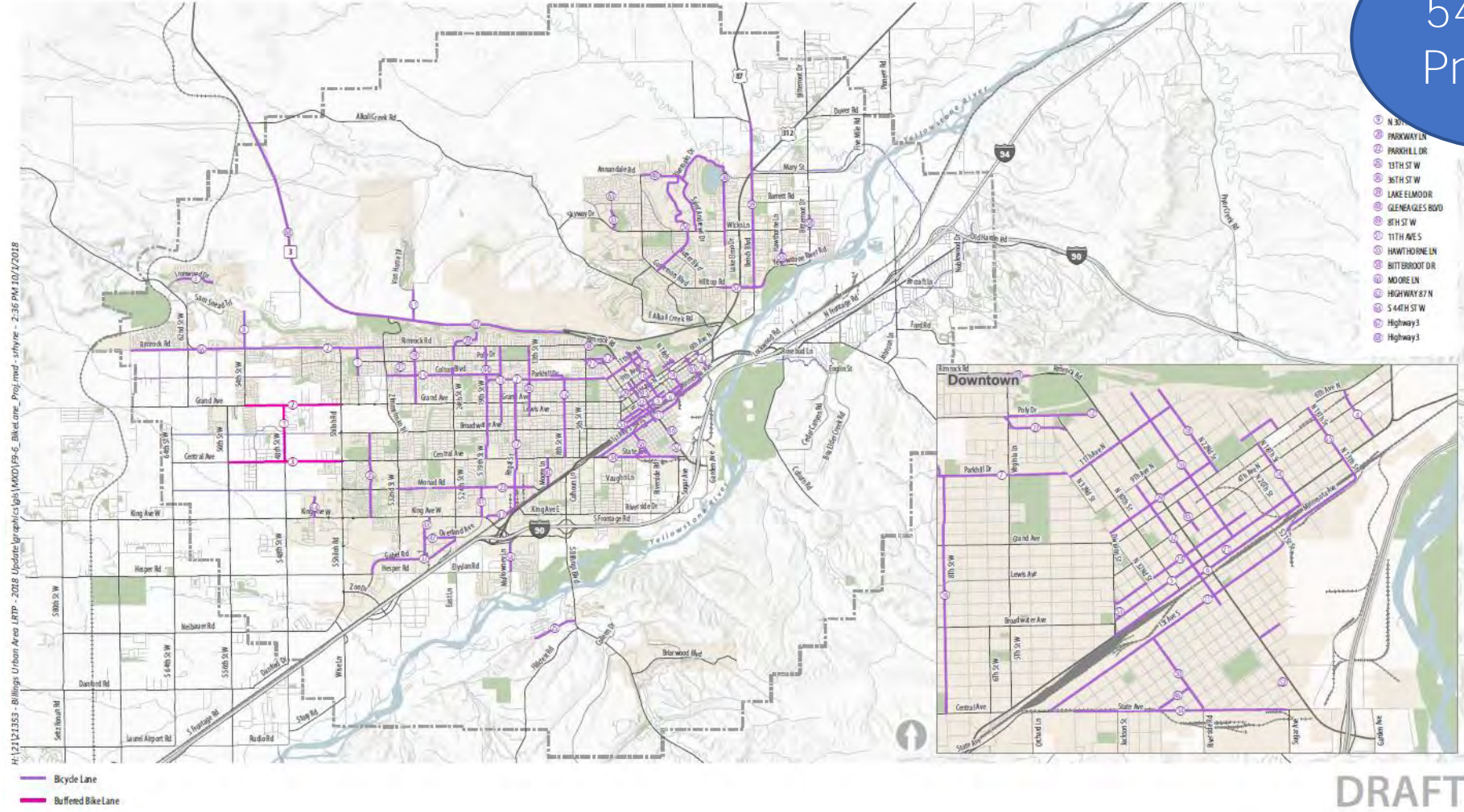
49 Total Projects



DRAFT
Figure 9-5
Pedestrian Projects

Draft Project List - Bicycle Lane Projects

54 Total Projects

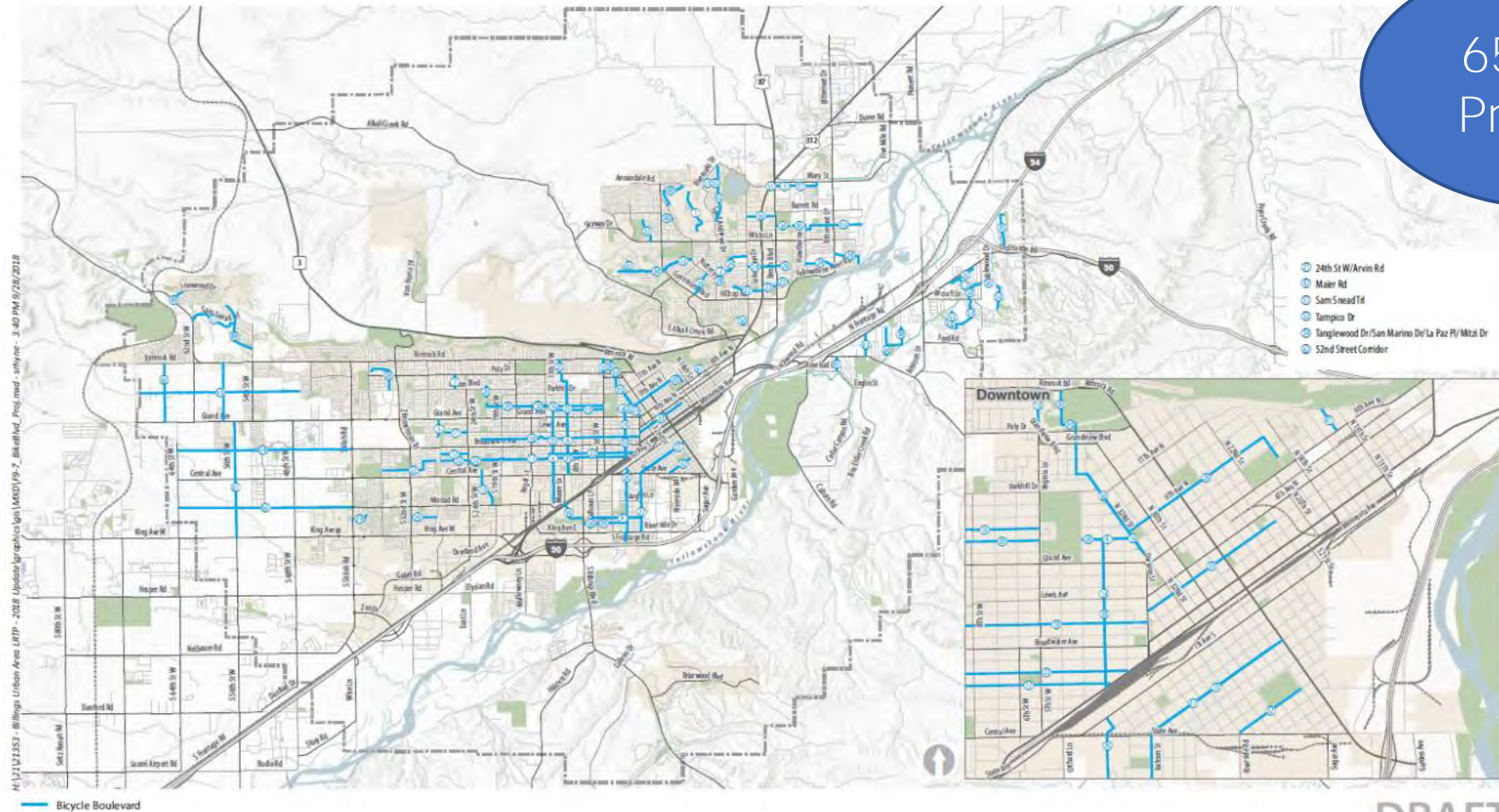


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Figure 9-6
Bicycle Lane and Buffered Bike Projects

Draft Project List - Bicycle Boulevard Projects

65 Total Projects



DRAFT

Figure 9-7
Bicycle Boulevard Projects

Draft Project List - Pedestrian, Bicyclists, & Multi-use Trails

Committed Projects

- 8 Pedestrian* (includes two annual programs)
 - 2 Bike Lane*
 - 9 Multi-use Trail
- ~\$19 million

276 Total Projects

- 49 - Pedestrian
- 54 - Bicycle Lane
- 65 - Bicycle Boulevard
- 108 - Multi-use Trail

PROJECT ID#	Proposed Name	Length (Miles)	Project Description	Estimated Planning Level Cost
MT00	Four Dances Connector	1	Construct a multi-use trail from Lockwood Trail to Four Dances Natural Area	\$400,000
MT01	Highway 88/89	1	Construct a multi-use trail from Aronson Ave to Lake Simo State Park	\$2,140,198
MT06	Highway Upper Loop	4.5	Construct a multi-use trail from Yellowstone River to Alkali Creek Rd	\$4,710,250
MT07	High Ditch	4	Construct a multi-use trail from Rimrock West Trail to Hogans Slough	\$2,100,188
MT08	Hogans Slough	8.8	Construct a multi-use trail from Shiloh Rd to 54th St (with Trail)	\$8,014,180
MT09	Inner Belt Loop	8.5	Construct a multi-use trail from Governors Blvd to Highway 3	\$5,937,010
MT10	Long Avenue	1.1	Construct a multi-use trail from E 54th St W to Hogans Slough	\$910,180
MT21	Lockwood	6	Construct a multi-use trail from Interstate 90 to Highway 3	\$5,480,000
MT22	Monad	1.1	Construct a multi-use trail from S 48th St W to Hogans Slough	\$118,300
MT23	Monad	2.8	Construct a multi-use trail from BBWA Canal Trail to 48th St W	\$2,288,474
MT24	MBL Ball with Trail	9	Construct a multi-use trail from Interstate 90 to Highway 3	\$8,250,000
MT25	Herberg Ranch	8	Construct a multi-use trail from Expansion of Existing Trail to Inner Belt Loop	\$410,380
MT26	Rimrock Road	1.5	Construct a multi-use trail from 54th St W to Cooks Ditch	\$1,373,084
MT27	Sanator Park	1.1	Construct a multi-use trail from Aronson Ave to Inner Belt Loop Trail	\$118,300
MT28	Shaw Ditch	2	Construct a multi-use trail from Shiloh Rd to Big Ditch	\$1,098,060
MT29	Slough/Hogans Slough	1	Construct a multi-use trail from Suburban Ditch to MRL Rail with Trail	\$910,380
MT30	Spring Creek Extension	1	Construct a multi-use trail from 24th St W to 10th St W	\$910,380
MT31	Transit Connector	0.5	Bring M/Cal trail segment up to standards and complete connection to Transitway Lender Trail at 32nd Street West	\$480,000
MT32	Two Moon Park to Five Mile Creek	3	Construct a multi-use trail from Kiewits Trail to Five Mile Creek	\$2,740,160
MT33	Western Yellowstone River Trail	8	Construct a multi-use trail from Josephine Crossing Trail to Shiloh Rd Trail	\$4,868,948
MT34	Riverfront Park	2.8	Construct a multi-use trail from Mystic Park Trail to Riverfront Park Trails	\$1,820,000
MT35	25th Street Railroad Bridge	0.1	Construct a multi-use trail from Montana Avenue to Minnesota Avenue	\$1,700,000
MT36	BBWA to Swords Park Trail	5.5	Construct a multi-use trail from Alkali Park to Aronson Ave	\$5,028,640
MT37	Rim Trail from 27th Street West/ Airport Road to Zimmerman Trail vicinity	3.5	New trail along the Ruts resulting from Highway 3 corridor study	\$1,820,000
MT38	Downtown BBWA Corridor Trail/Con-Street Facilities	1.5	Complete Trail through MSU-B Campus in alignment with MSU-B Master Plan and trail to downtown facilities along Poly Dr through Virginia Lane Intersection to 18th Poly Drive	\$210,000
MT39	34th Street Fackelman Bridge	0.25	Construct a multi-use bridge to cross the tracks near 34th Street	\$1,000,000
MT40	44th Street West	0.5	Construct a multi-use bike/pedestrian path along 44th Street from Shiloh Conservation Area to King Avenue West	\$110,000
MT41	Highly Middle School Path	0.25	Construct a trail from the Kiewits Trail to New Heights Middle School near Bench and Barrett	\$131,290
MT42	6th Avenue N		Multi-use Trail from 5th Avenue Bypass to N 10th St	\$1,060,000
MT43	BBWA Canal Trail		Multi-use Trail from 5th Avenue N to Transach Way	\$6,116,000
MT44	Montana Ave/ Lincolnpark Ave		Multi-use Trail from Division St to S Billings Blvd	\$1,500,000
MT45	Wicks Ln		Multi-use Trail from Glenview Blvd to Kiewits Trail	\$2,010,000
MT46	Rosebud Ln		Multi-use Trail from Highway 87F to West of Rosebud Ln	\$2,160,000
MT47	N 27th St		Multi-use Trail from Rimrock Rd to Mountain View Blvd	\$170,000
MT48	Crane Ave		Multi-use Trail from 24th St W to Zimmerman Tr	\$674,000
MT49	Hesper Rd		Multi-use Trail from East of Shiloh Rd to S Shiloh Rd	\$181,000
MT50	Highway 87E		Multi-use Trail from Johnson Ln to Old Hardin Rd	\$82,000
MT51	24th		Multi-use Trail from Stillwater to South of King Ave W	\$332,000
MT52	Broadwater Ave		Multi-use Trail from 24th St W to 38th St W	\$925,000
MT53	1st Ave/Old Hardin Rd/Highway 87E		Multi-use Trail from N 13th St to Hogan Rd	\$6,168,000
MT54	BBWA Canal Trail North		Multi-use Trail from East of Shadow Heights to Aronson Ave	\$3,337,000
MT55	25th St Trail		Multi-use Trail from S 25th St to S 27th St	\$177,000
MT56	Gabel Rd		Multi-use Trail from Hegar Rd to 20th Rd	\$117,000
MT57	South of Emerald Dr/ward Ln		Multi-use Trail from Emerald Dr to Sword Lane	\$540,000
MT58	Rimrock Rd		Multi-use Trail from 54th St W to 66th St W	\$855,000
MT59	King Ave E		Multi-use Trail from Sugar Ave to King Ave W	\$1,247,000
MT60	King Ave/Wyland Rd		Multi-use Trail from S 20th St W to S Frontage Rd	\$2,796,000
MT61	Arnold Drain Trail		Multi-use Trail from 18th St W to 25th St W	\$840,000
MT62	Chrysis Acres		Multi-use Trail from Von Buron St to Holloway Ln	\$75,000
MT63	Suburban Ditch Trail		Multi-use Trail from Songbird Dr to Muldowney Ln	\$526,000
MT64	Falcon Ridge		Multi-use Trail unspecified	\$200,000
MT65	Kiewits Trail Corridor		Multi-use Trail from Sitteroot Dr to Mary St	\$558,000
MT66	Highway 87 Bypass		Multi-use Trail from Roundup Rd to Johnson Ln	\$6,747,000
MT67	Jim Ditcher Trail		Multi-use Trail from South of Mary St to E&F St	\$1,470,000
MT68	Muldowney Ln		Multi-use Trail from S Frontage Rd to Stacy Rd	\$142,000
MT69	Sierra Park Trail		Multi-use Trail from High Sierra Blvd to Alkali Creek Rd	\$1,795,000

Draft Projects and Strategies - Other Modes

Transit

- *Increase funding* through federal or local sources
- Improve equipment and facilities
- All-day fixed route service to Billings Heights by 2020
- Vehicle tracking and automatic fare collection by 2025
- Designated fixed-route bus stops by 2025

Truck

- Major roadway projects:
 - *Billings Bypass*
 - *I-90 Yellowstone River Bridge*
 - *Inner Belt Loop*
- Widening and reconstructions throughout the Billings Urban Area

Rail

- *Crossing studies* at 27th Street and Moore Lane
- *Improve underpasses* at 21st Street and 13th Street
- Coordinate rail infrastructure improvements with Lockwood

Revenue & Project Cost Analysis - Fiscal Constraint

Estimated Revenue ~ \$900M
 Estimated C+R Projects ~ \$800M
 Difference ~ \$100M

Funding Source	2019-2028			2029-2040		
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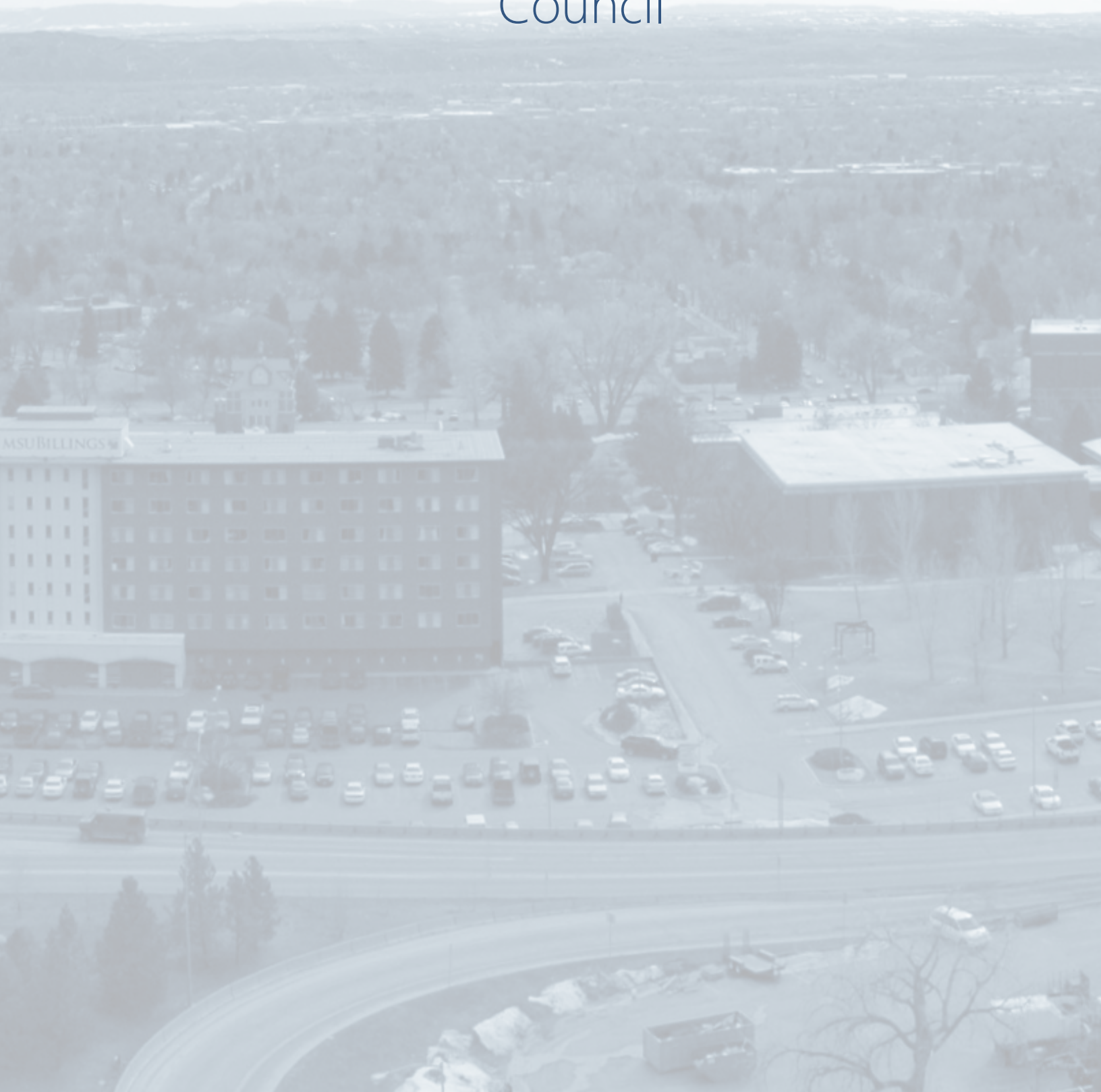
Thank You For Your Time

▶ Questions?



Appendix R

Plan Adoption Presentation – City Council



2018 Billings Urban Area Long Range Transportation Plan

Billings City Council

October 15, 2018



What is an LRTP?

A long range transportation plan (LRTP):

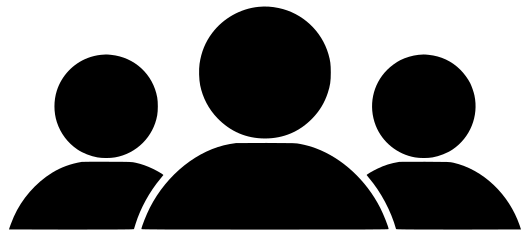
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2018 Billings Urban Area Long Range Transportation Plan



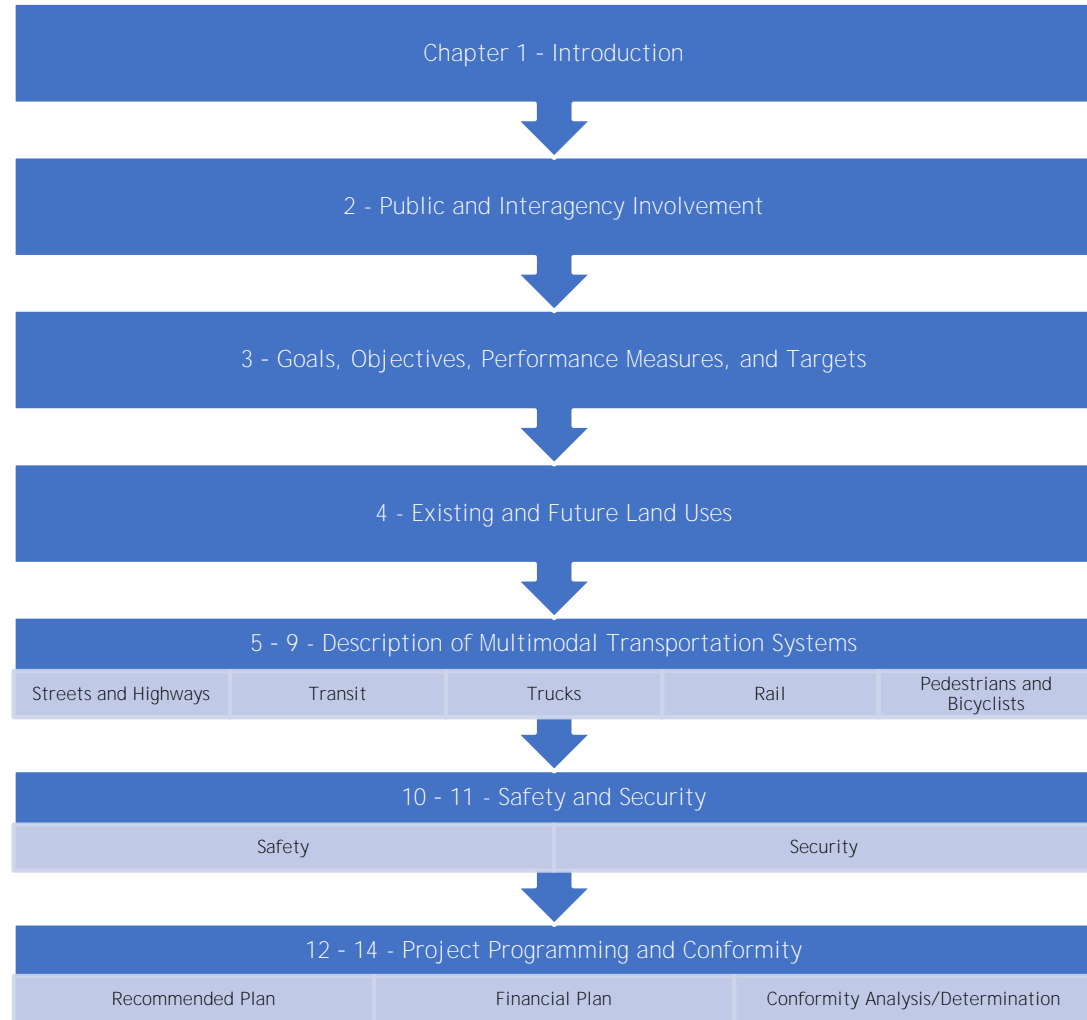
2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN
September 27, 2018

prepared by
KITTELSON & ASSOCIATES **DOWL**

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What are the elements of the 2018 LRTP?

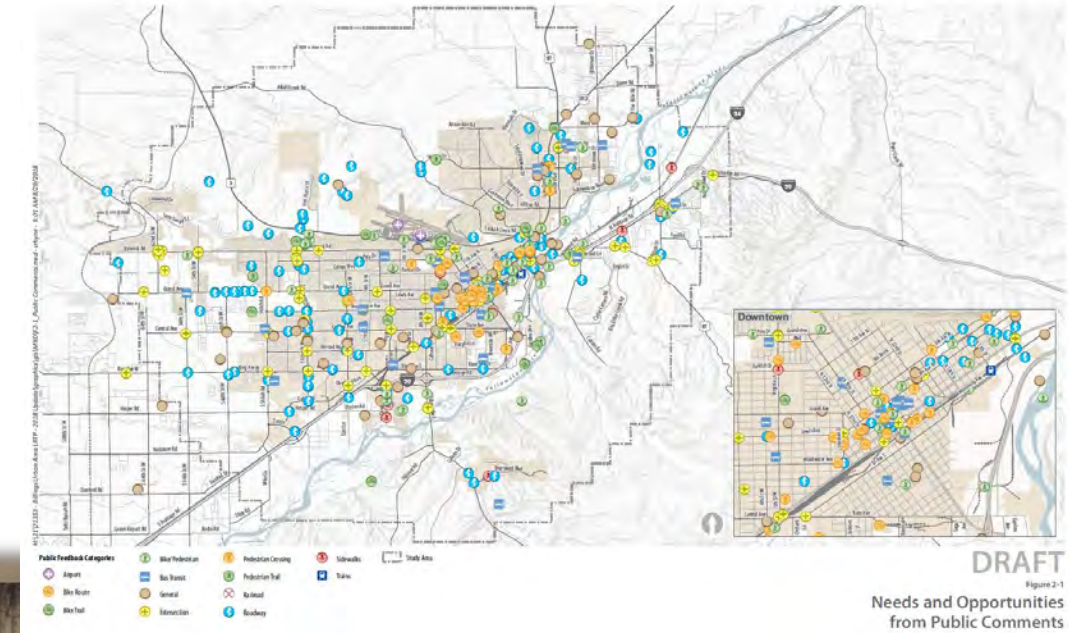


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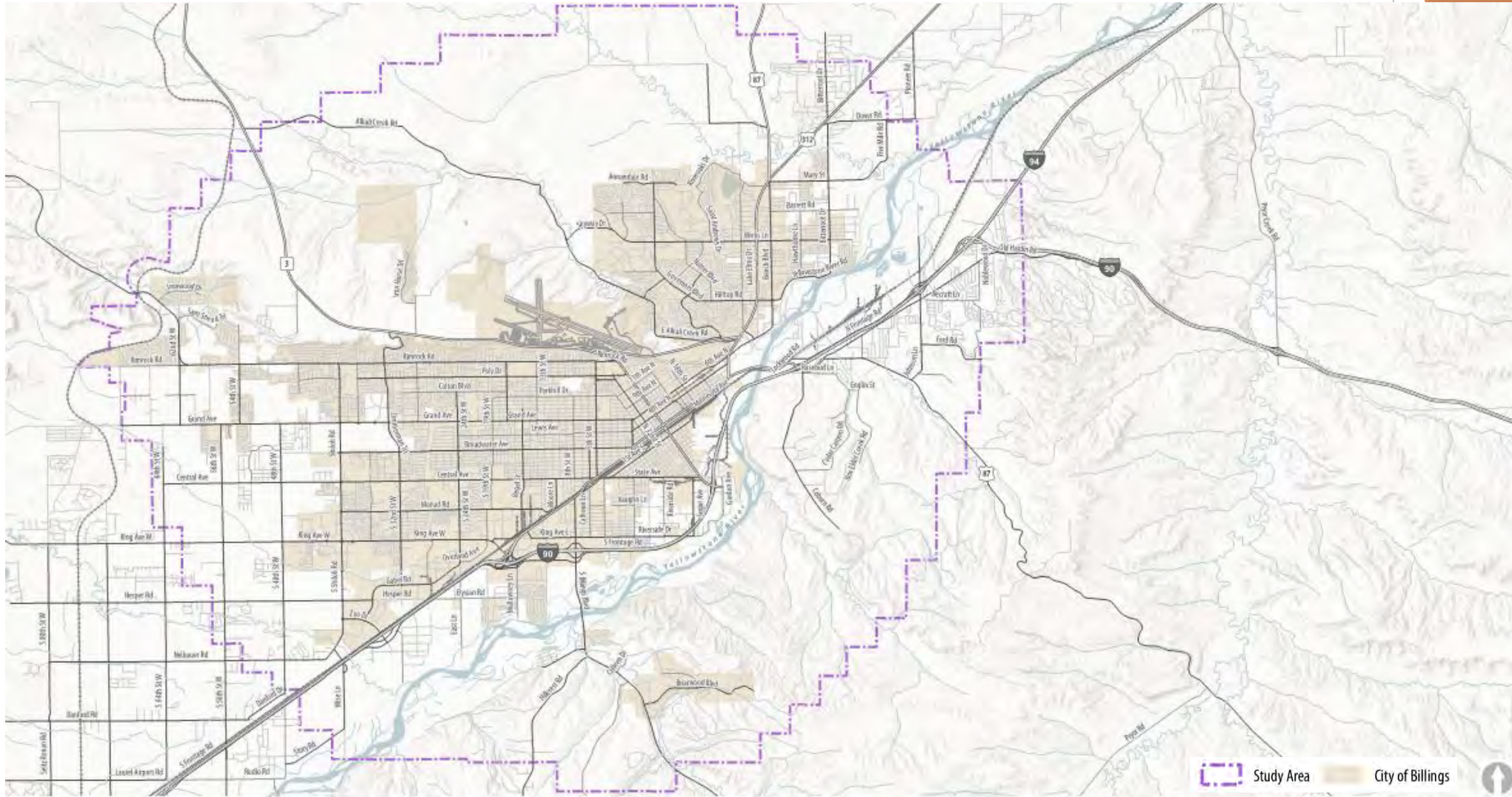


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Where is the study area?



L RTP Goals

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- Develop a safe transportation system

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- Optimize, preserve, and enhance the existing transportation system

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- Identify and prioritize projects that mitigate deficiencies, maximize the use of existing facilities, and balance anticipated needs with available funding

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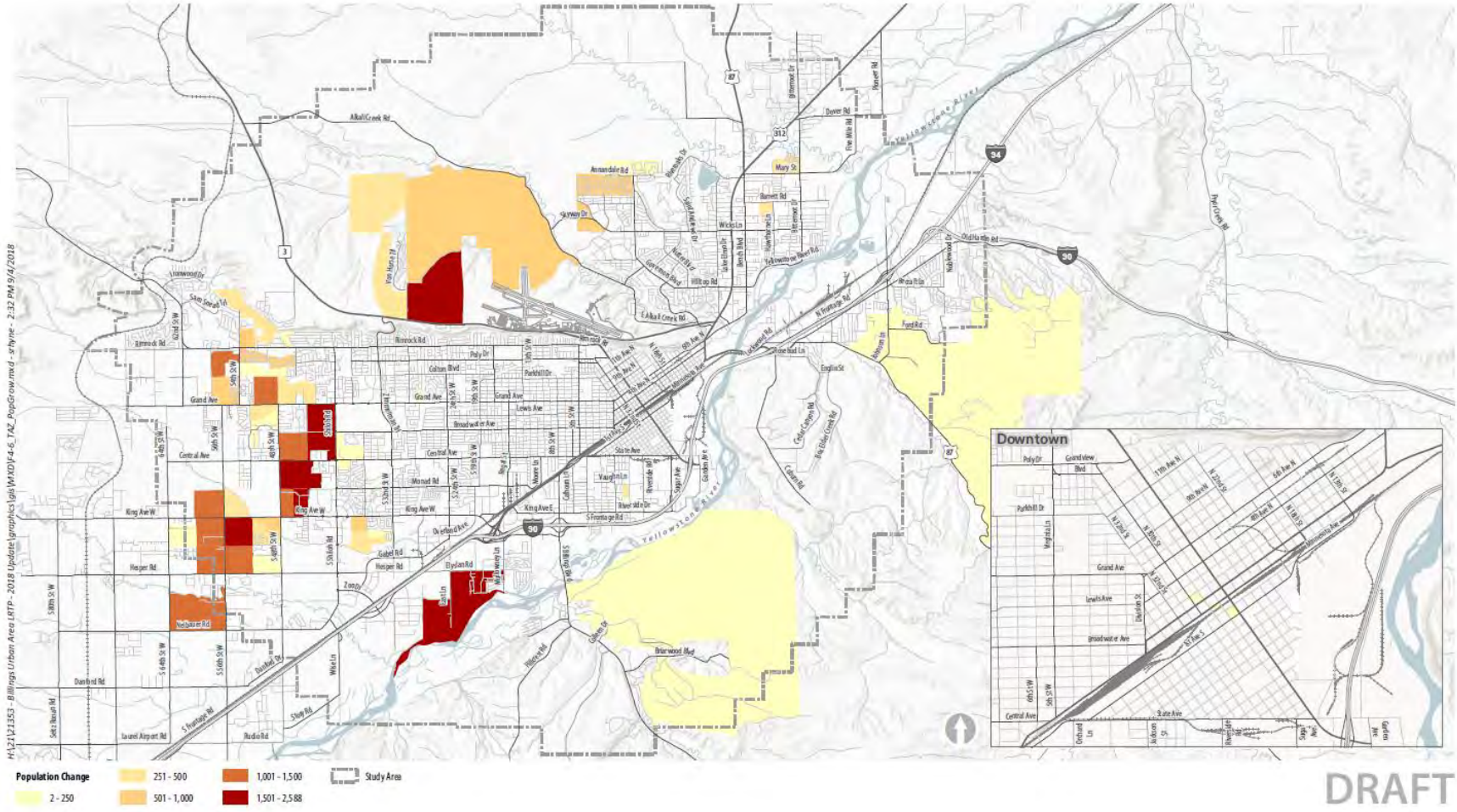


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Population Growth (2017 to 2040)

Land Use - Employment Growth (2017 to 2040)

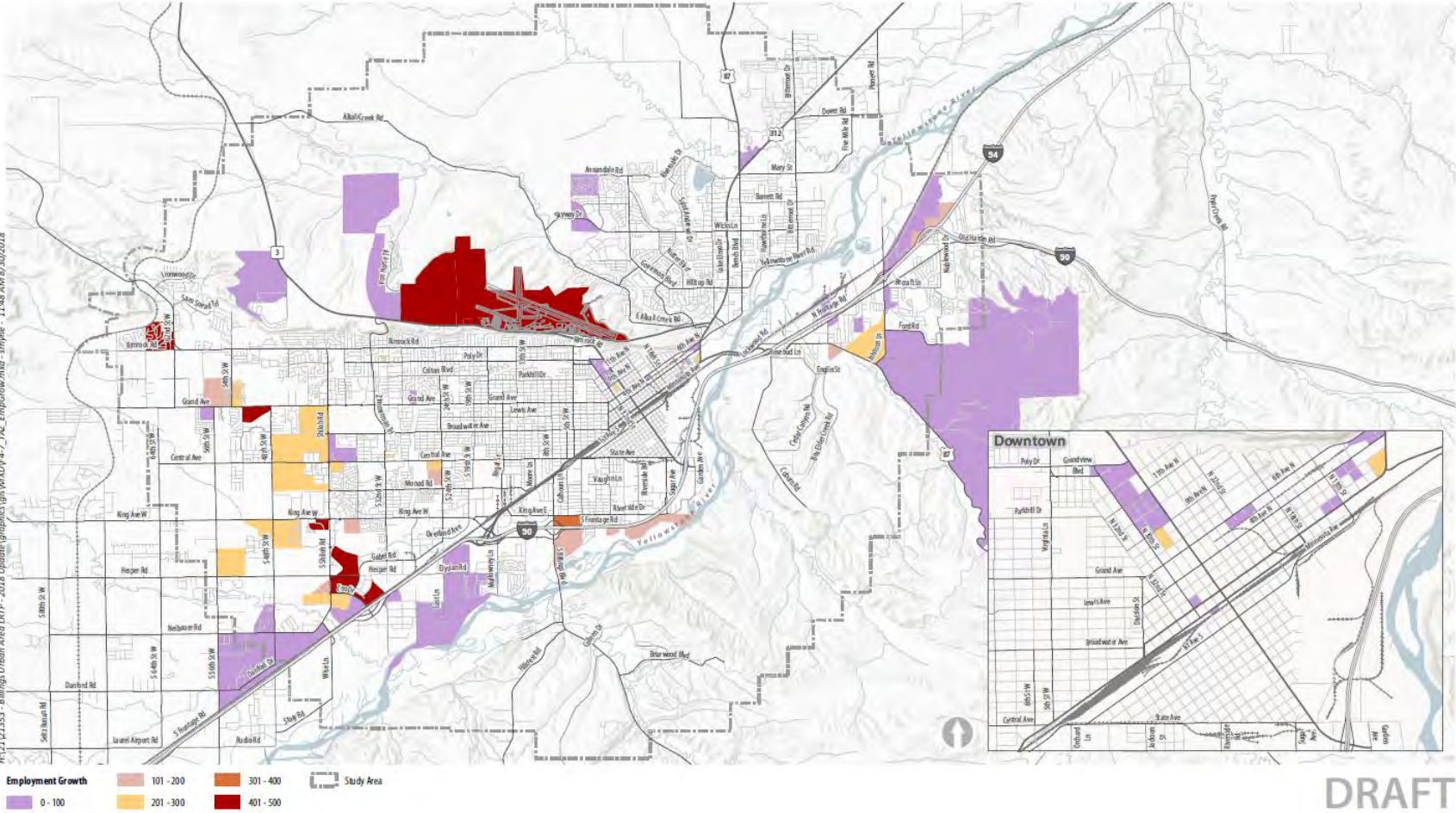
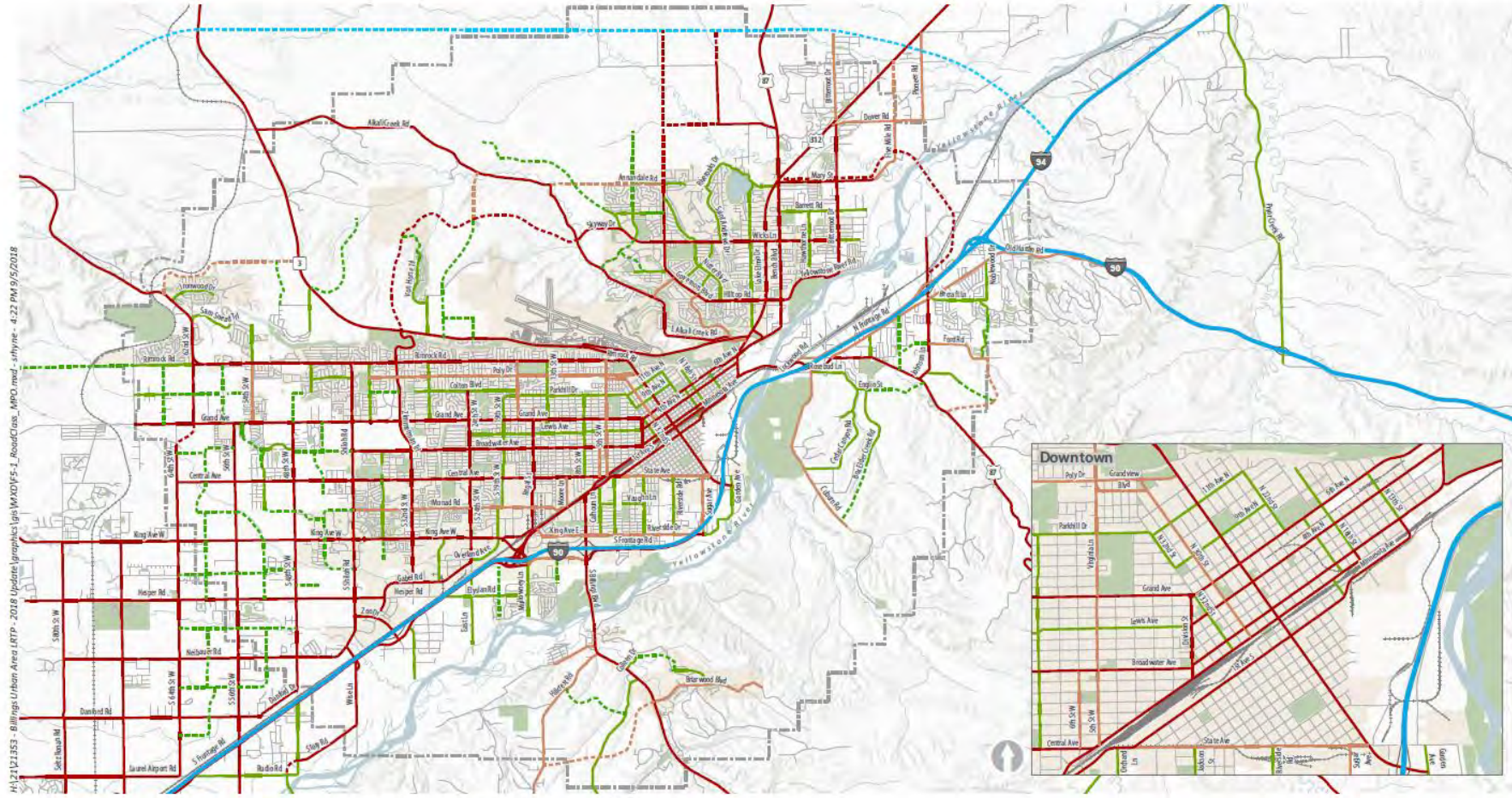


Figure 4-7
Employment Growth (2017 to 2040)

Functional Classification Map



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 - City of Billings
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Note: This functional classification map does not represent the federally approved system.



DRAFT

Figure 5-1

Functional Classification Map

Draft Project List - Types / Categories

Committed Projects

- Transportation Improvement Program (TIP)
- Capital Improvement Plan (CIP)
- Years 2018-2028

Recommended Projects

- Not programmed
- Upcoming projects for the TIP and CIP
- Years 2029-2040

Illustrative Projects

- Visionary
- Not expected to occur within 2040 horizon

Fiscal Constraint of LRTP

Draft Project List - Roadway and Intersection Projects



Draft Project List - Roadway and Intersection Projects

Committed Projects

- 33 Roadway
- 30 Intersection
- Includes several annual programs

~\$343 million

120 Total Projects

58 - Roadway

62 - Intersection

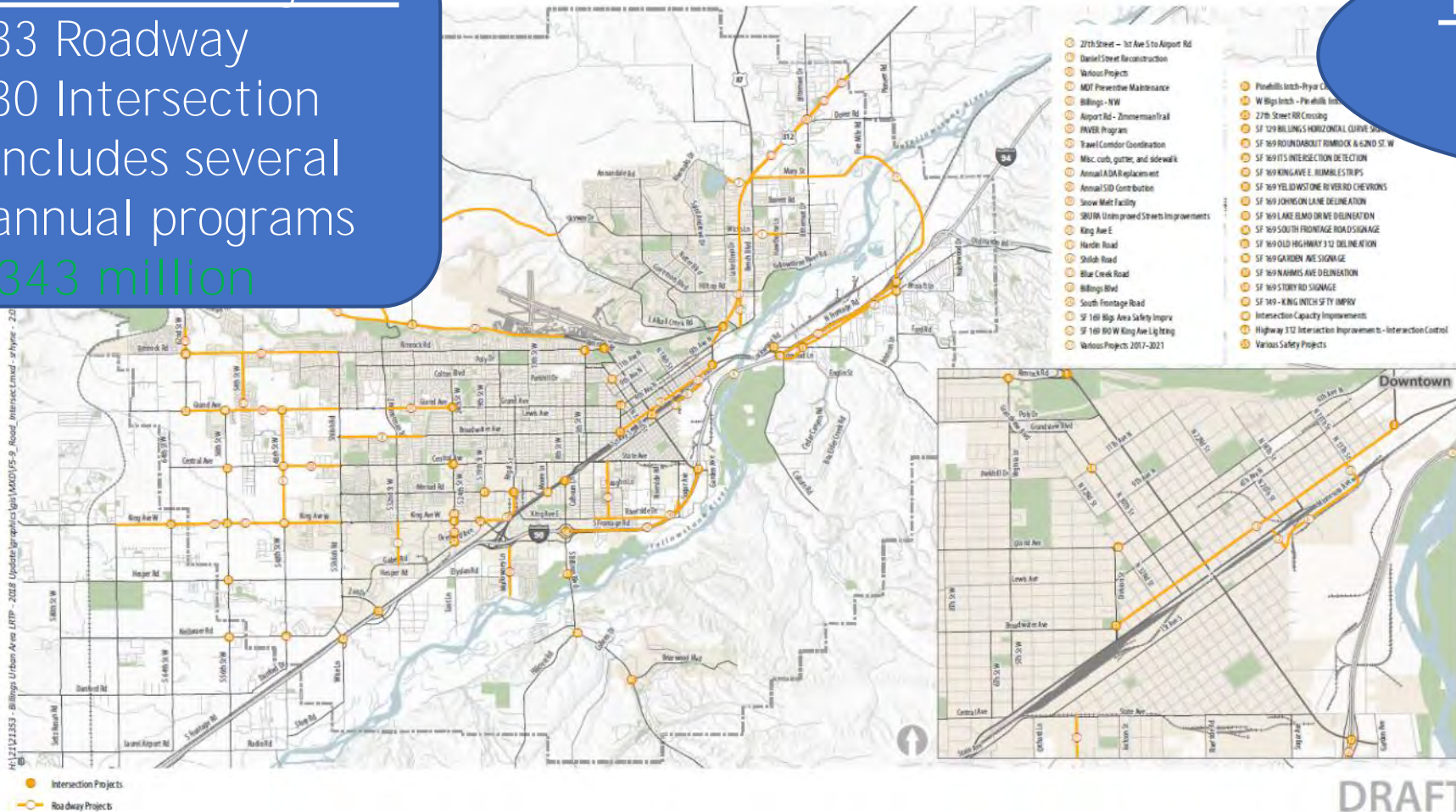


Figure 5-9
Intersection and Roadway Projects

Draft Project List - Congestion Management Projects



Draft Project List - Congestion Management Projects

Committed Projects

- 8 Congestion Management
~\$13 million

28 Total Projects

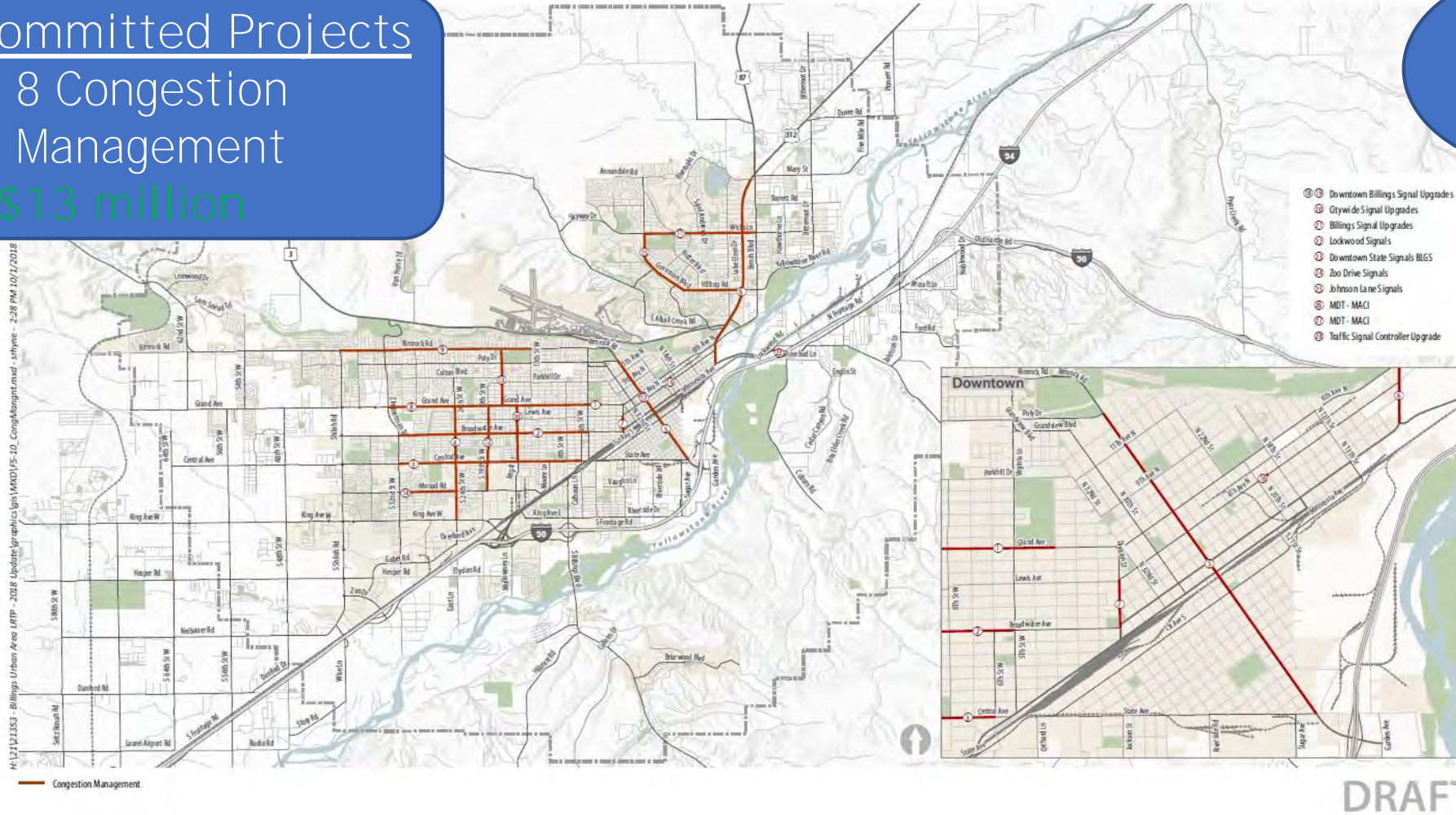


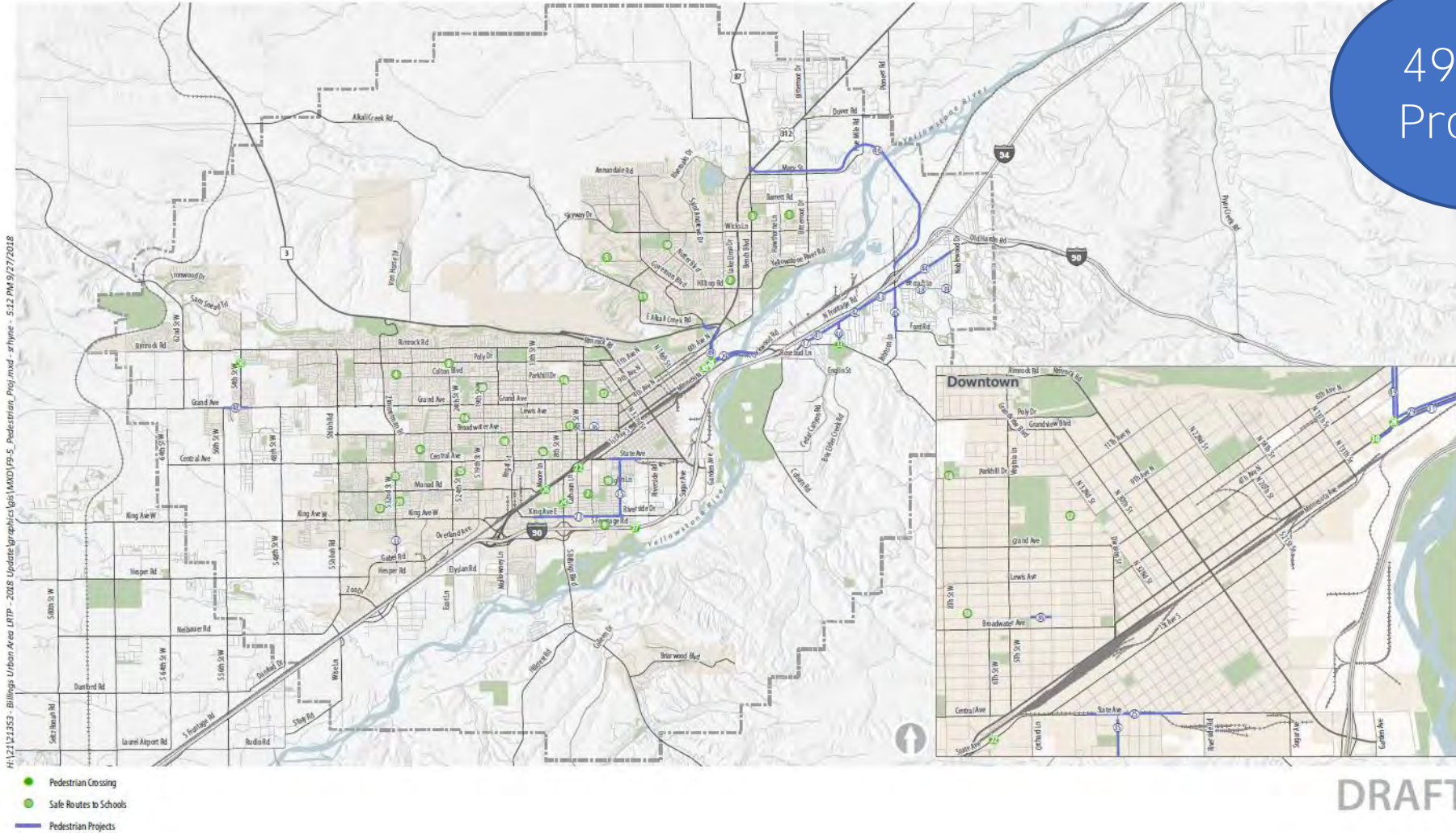
Figure 5-10
Congestion Management Projects

Draft Project List - Pedestrian, Bicycle, & Multi-use Trail Projects



Draft Project List - Pedestrian Projects

49 Total Projects



DRAFT
Figure 9-5
Pedestrian Projects

Draft Project List - Bicycle Lane Projects

54 Total Projects

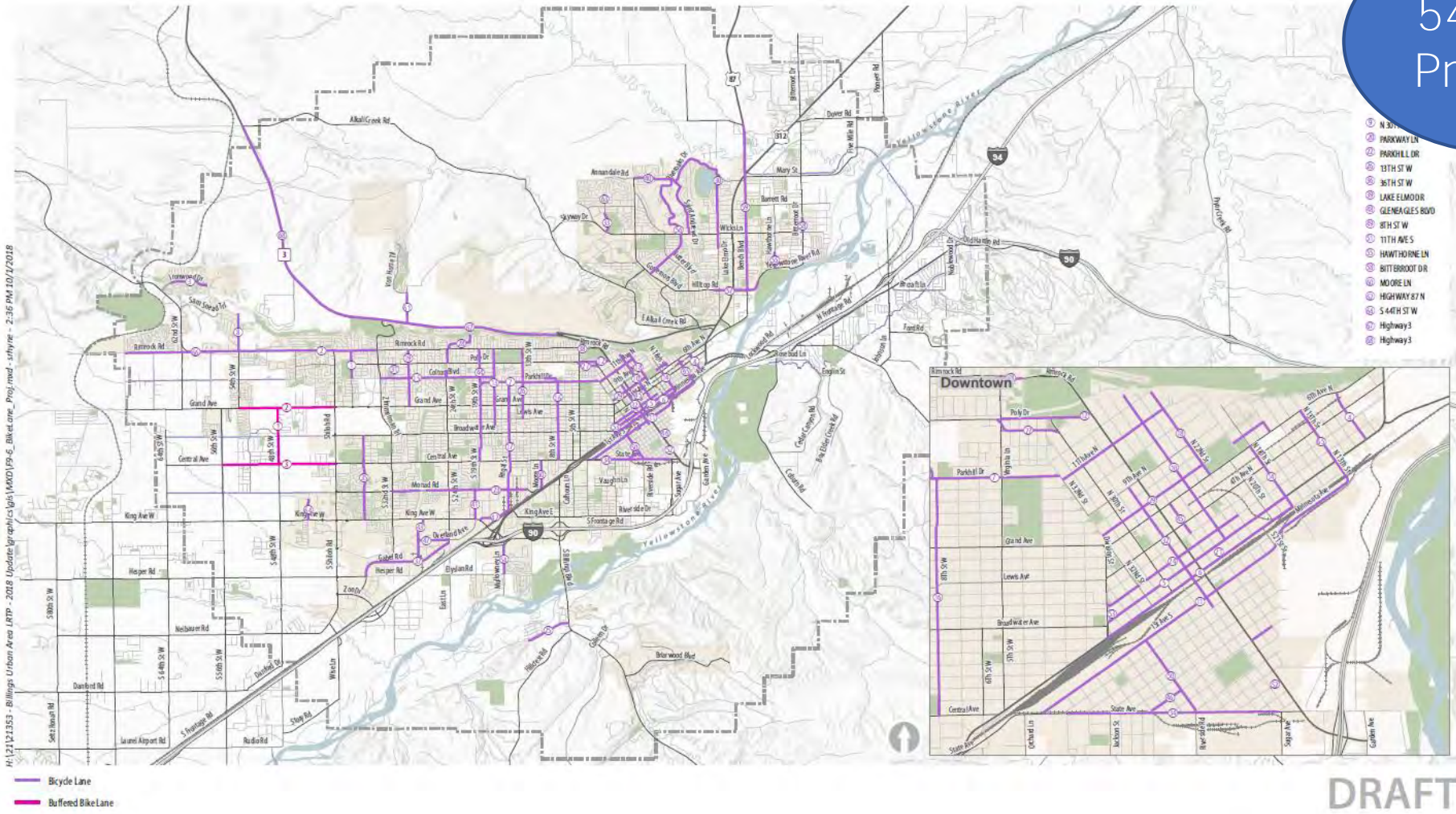
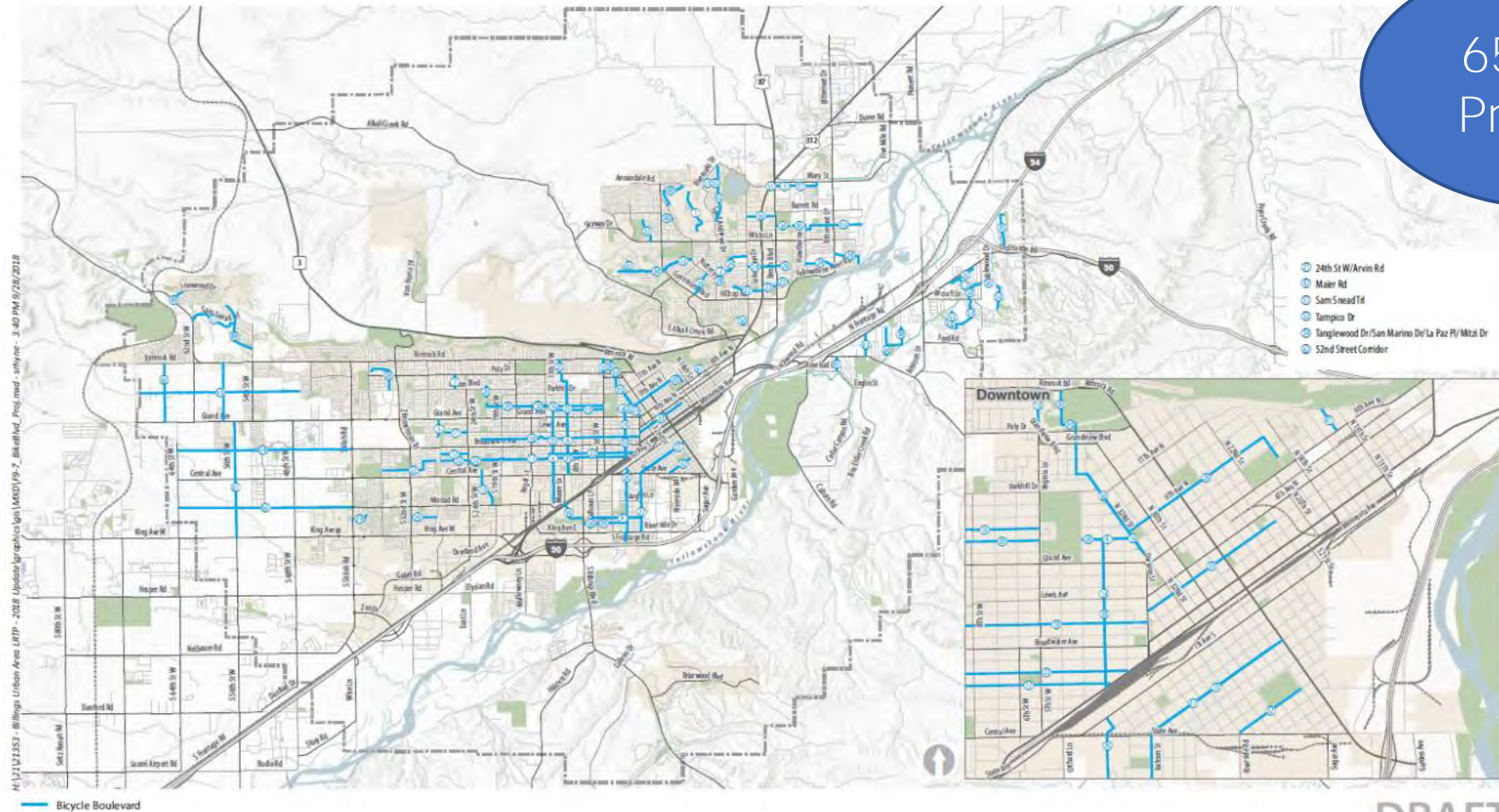


Figure 9-6
Bicycle Lane and Buffered Bike Projects

Draft Project List - Bicycle Boulevard Projects

65 Total Projects



DRAFT

Figure 9-7
Bicycle Boulevard Projects

Draft Project List - Pedestrian, Bicyclists, & Multi-use Trails

Committed Projects

- 8 Pedestrian* (includes two annual programs)
 - 2 Bike Lane*
 - 9 Multi-use Trail
- ~\$19 million

276 Total Projects

- 49 - Pedestrian
- 54 - Bicycle Lane
- 65 - Bicycle Boulevard
- 108 - Multi-use Trail

PROJECT ID#	Proposed Name	Length (Miles)	Project Description	Estimated Planning Level Cost
MT00	Four Dances Connector	1	Construct a multi-use trail from Lockwood Trail to Four Dances Natural Area	\$400,000
MT01	Highway 88/89	1	Construct a multi-use trail from Aronson Ave to Lake Simo State Park	\$2,140,198
MT06	Highway Upper Loop	4.5	Construct a multi-use trail from Yellowstone River to Alkali Creek Rd	\$4,710,250
MT07	High Ditch	4	Construct a multi-use trail from Rimrock West Trail to Hogans Slough	\$2,100,188
MT08	Hogans Slough	8.8	Construct a multi-use trail from Shilon Rd to 54th St (with Trail)	\$8,014,180
MT09	Inner Belt Loop	8.5	Construct a multi-use trail from Governors Blvd to Highway 3	\$5,937,010
MT10	Long Avenue	1.1	Construct a multi-use trail from E 54th St W to Hogans Slough	\$910,180
MT21	Lockwood	6	Construct a multi-use trail from Interstate 90 to Highway 312	\$5,480,000
MT22	Monad	1.1	Construct a multi-use trail from S 48th St W to Hogans Slough	\$118,300
MT23	Monad	2.8	Construct a multi-use trail from BBWA Canal Trail to 48th St W	\$2,288,474
MT24	MRL Ball with Trail	9	Construct a multi-use trail from Interstate 90 to Highway 312	\$8,250,000
MT25	Herberg Ranch	8	Construct a multi-use trail from Expansion of Existing Trail to Inner Belt Loop	\$410,380
MT26	Rimrock Road	1.5	Construct a multi-use trail from 54th St W to Cooks Ditch	\$1,373,084
MT27	Sanator Park	1.1	Construct a multi-use trail from Aronson Ave to Inner Belt Loop Trail	\$118,300
MT28	Shaw Ditch	2	Construct a multi-use trail from Shishon Rd to Big Ditch	\$1,098,060
MT29	Slough/Hogans Slough	1	Construct a multi-use trail from Suburban Ditch to MRL Rail with Trail	\$910,380
MT30	Spring Creek Extension	1	Construct a multi-use trail from 24th St W to 10th St W	\$910,380
MT31	Transit Connector	0.5	Bring M/Cal trail segment up to standards and complete connection to Transitway Lender Trail at 32nd Street West	\$480,000
MT32	Two Moon Park to Five Mile Creek	3	Construct a multi-use trail from Kiewits Trail to Five Mile Creek	\$2,740,160
MT33	Western Yellowstone River Trail	8	Construct a multi-use trail from Josephine Crossing Trail to Shilon Rd Trail	\$4,868,948
MT34	Riverfront Park	2.8	Construct a multi-use trail from Mystic Park Trail to Riverfront Park Trails	\$1,820,000
MT35	25th Street Railroad Bridge	0.1	Construct a multi-use trail from Montana Avenue to Minnesota Avenue	\$1,700,000
MT36	BBWA to Swords Park Trail	5.5	Construct a multi-use trail from Alkali Park to Aronson Ave	\$5,028,640
MT37	Rim Trail from 27th Street West/ Airport Road to Zimmerman Trail vicinity	3.5	New trail along the Ruts resulting from Highway 3 corridor study	\$1,820,000
MT38	Downtown BBWA Corridor Trail/Con-Street Facilities	1.5	Complete Trail through MSU-B Campus in alignment with MSU-B Master Plan and trail to downtown facilities along Poly Dr through Virginia Lane Intersection to 18th Poly Drive	\$210,000
MT39	34th Street Fackelman Bridge	0.25	Construct a multi-use bridge to cross the tracks near 34th Street	\$1,000,000
MT40	44th Street West	0.5	Construct a multi-use bike/pedestrian path along 44th Street from Shiloh Conservation Area to King Avenue West	\$110,000
MT41	Highly Middle School Path	0.25	Construct a trail from the Kiewits Trail to New Heights Middle School near Bench and Barrett	\$131,250
MT42	6th Avenue N		Multi-use Trail from 5th Avenue Bypass to N 10th St	\$1,060,000
MT43	BBWA Canal Trail		Multi-use Trail from 5th Avenue N to Transach Way	\$6,116,000
MT44	Montana Ave/ Lincolnpark Ave		Multi-use Trail from Division St to S Billings Blvd	\$1,500,000
MT45	Wicks Ln		Multi-use Trail from Glenview Blvd to Kiewits Trail	\$2,010,000
MT46	Rosebud Ln		Multi-use Trail from Highway 87F to West of Rosebud Ln	\$2,160,000
MT47	N 27th St		Multi-use Trail from Rimrock Rd to Mountain View Blvd	\$170,000
MT48	Crane Ave		Multi-use Trail from 24th St W to Zimmerman Tr	\$674,000
MT49	Hesper Rd		Multi-use Trail from East of Shilon Rd to S Shiloh Rd	\$181,000
MT50	Highway 87E		Multi-use Trail from Johnson Ln to Old Hardin Rd	\$82,000
MT51	24th		Multi-use Trail from Stillwater to South of King Ave W	\$332,000
MT52	Broadwater Ave		Multi-use Trail from 24th St W to 38th St W	\$925,000
MT53	1st Ave/Old Hardin Rd/Highway 87E		Multi-use Trail from N 13th St to Hogan Rd	\$6,168,000
MT54	BBWA Canal Trail North		Multi-use Trail from East of Shadow Heights to Aronson Ave	\$3,337,000
MT55	25th St Trail		Multi-use Trail from S 25th St to S 27th St	\$177,000
MT56	Gabel Rd		Multi-use Trail from Hegar Rd to 20th Rd	\$117,000
MT57	South of Emerald Dr/ward Ln		Multi-use Trail from Emerald Dr to Sword Lane	\$540,000
MT58	Rimrock Rd		Multi-use Trail from 54th St W to 66th St W	\$855,000
MT59	King Ave E		Multi-use Trail from Sugar Ave to King Ave W	\$1,247,000
MT60	King Ave Westland Rd		Multi-use Trail from S 20th St W to S Frontage Rd	\$2,796,000
MT61	Arnold Drain Trail		Multi-use Trail from 18th St W to 25th St W	\$840,000
MT62	Chrysis Acres		Multi-use Trail from Von Buron St to Holloway Ln	\$75,000
MT63	Suburban Ditch Trail		Multi-use Trail from Songbird Dr to Muldowney Ln	\$526,000
MT64	Falcon Ridge		Multi-use Trail unspecified	\$200,000
MT65	Kiewits Trail Corridor		Multi-use Trail from Sitteroot Dr to Mary St	\$558,000
MT66	Highway 87 Bypass		Multi-use Trail from Roundup Rd to Johnson Ln	\$6,747,000
MT67	Jim Ditcher Trail		Multi-use Trail from South of Mary St to E&F St	\$1,470,000
MT68	Muldowney Ln		Multi-use Trail from S Frontage Rd to Stacy Rd	\$142,000
MT69	Sierra Park Trail		Multi-use Trail from High Sierra Blvd to Alkali Creek Rd	\$1,795,000

Draft Projects and Strategies - Other Modes

Transit

- *Increase funding* through federal or local sources
- Improve equipment and facilities
- All-day fixed route service to Billings Heights by 2020
- Vehicle tracking and automatic fare collection by 2025
- Designated fixed-route bus stops by 2025

Truck

- Major roadway projects:
 - *Billings Bypass*
 - *I-90 Yellowstone River Bridge*
 - *Inner Belt Loop*
- Widening and reconstructions throughout the Billings Urban Area

Rail

- *Crossing studies* at 27th Street and Moore Lane
- *Improve underpasses* at 21st Street and 13th Street
- Coordinate rail infrastructure improvements with Lockwood

Revenue & Project Cost Analysis - Fiscal Constraint

Estimated Revenue ~ \$900M
 Estimated C+R Projects ~ \$800M
 Difference ~ \$100M

Funding Source	2019-2028			2029-2040		
	Projected Funding	Expenditures	Difference	Projected Funding + Carryover	Expenditures	Difference
FEDERAL						
National Highway Performance Program	\$ 258,620,000	\$ 241,529,142	\$ 17,090,858	\$ 77,344,858	\$ 47,041,000	\$ 30,303,858
Highway Safety Improvement Program (HSIP)	\$ 21,530,000	\$ 19,908,244	\$ 1,621,756	\$ 19,051,756	\$ 17,935,000	\$ 1,116,756
Surface Transportation Improvement Program	\$ 39,610,000	\$ 30,095,611	\$ 9,514,389	\$ 54,639,000	\$ 46,734,301	\$ 7,904,699
Congestion Mitigation and Air Quality Improvement Program (CMAQ)	\$ 37,870,000	\$ 28,393,611	\$ 9,476,389	\$ 54,916,389	\$ 12,920,877	\$ 41,995,512
Federal Transit Authority (FTA) Funds	\$ 24,240,000	\$ 23,817,028	\$ 422,972	\$ 29,522,972	\$ 29,100,000	\$ 422,972
STATE AND LOCAL						
TransADE	\$ 730,000	\$ 700,000	\$ 30,000	\$ 900,000	\$ 870,000	\$ 30,000
Operations and Maintenance (State)	\$ 14,720,000	\$ 14,720,000	\$ -	\$ 17,670,000	\$ 17,670,000	\$ -
State Fuel Tax	\$ 21,510,000	\$ 17,005,684	\$ 4,504,316	\$ 30,304,316	\$ 23,196,000	\$ 7,108,316
HB473 Gas Tax Funds (BaRSAA)	\$ 7,990,000	\$ 6,344,316	\$ 1,645,684	\$ 11,225,684	\$ 8,404,000	\$ 2,821,684
Other (Private, Bonds, TIF, CDBG, etc.)	\$ 34,340,000	\$ 22,954,144	\$ 11,385,856	\$ 52,595,856	\$ 40,574,737	\$ 12,021,119
Local Transit Mill Levy	\$ 21,360,000	\$ 21,360,000	\$ -	\$ 25,640,000	\$ 25,640,000	\$ -
Transit Fares	\$ 5,890,000	\$ 5,890,000	\$ -	\$ 7,060,000	\$ 7,060,000	\$ -
Other (Transit)	\$ 1,590,000	\$ 1,590,000	\$ -	\$ 1,910,000	\$ 1,910,000	\$ -
Arterial Fee Fund	\$ 44,970,000	\$ 20,970,000	\$ 24,000,000	\$ 53,960,000	\$ 53,882,814	\$ 77,186
Total	\$ 534,970,000	\$ 455,277,780	\$ 79,692,220	\$ 436,740,831	\$ 332,938,729	\$ 103,802,102

What is next?

- ▶ Draft Plan is available for review and comment
 - ▶ www.Billingslrtp.com
- ▶ Plan adoption schedule
 - ▶ TAC Meeting - October 4th (completed)
 - ▶ Yellowstone County BOCC - October 9th (completed)
 - ▶ Yellowstone County Board of Planning - October 10th (completed)
 - ▶ Billings City Council - October 15th (tonight)
 - ▶ Yellowstone County BOCC - October 16th
 - ▶ Billings City Council - October 22nd
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 - ▶ Policy Coordinating Committee - October 30th

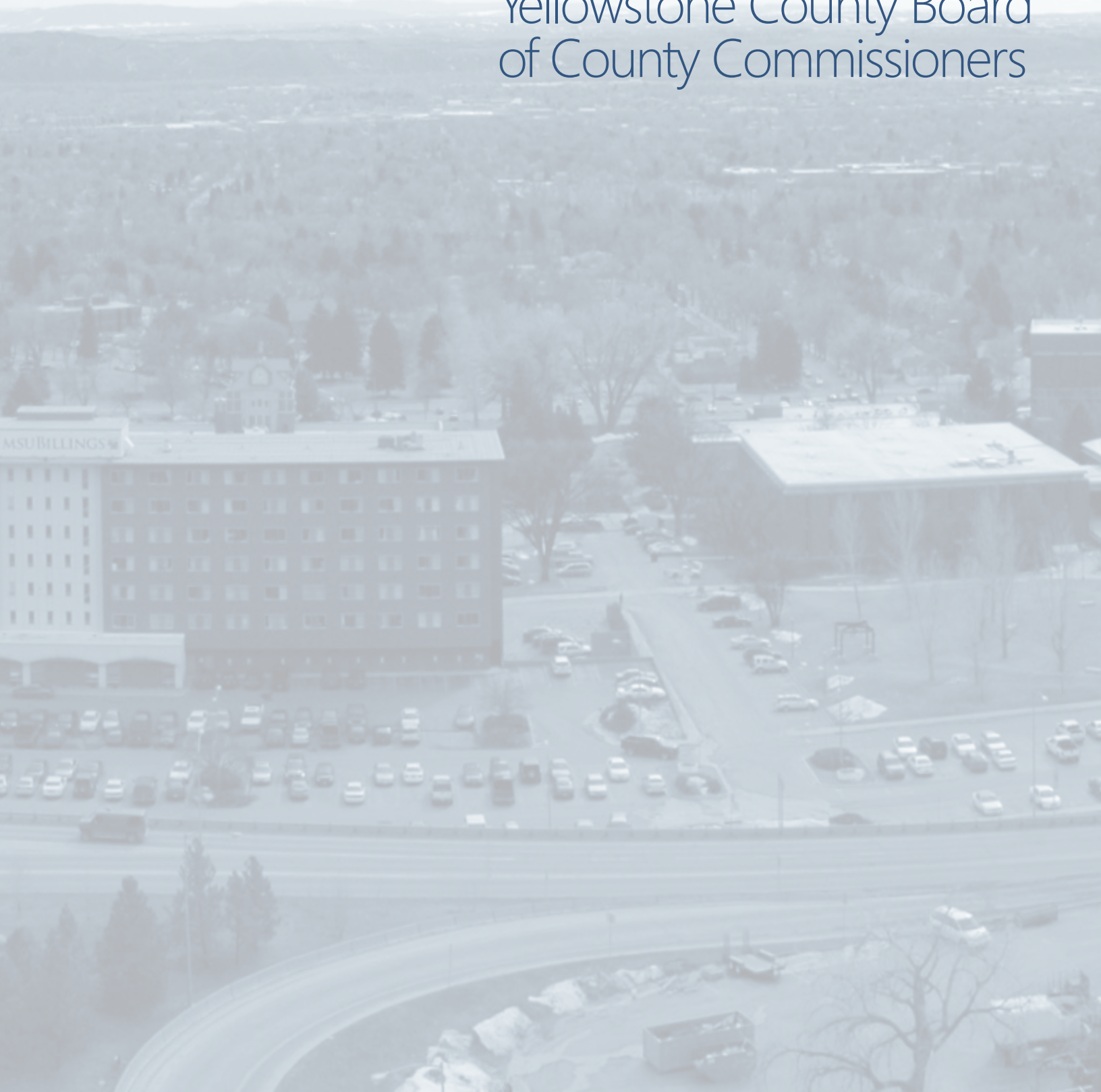
Thank You For Your Time

▶ Questions?



Appendix S

Plan Adoption
Presentation –
Yellowstone County Board
of County Commissioners



2018 Billings Urban Area Long Range Transportation Plan

Yellowstone County Board of County Commissioners

October 16, 2018



What is an LRTP?

A long range transportation plan (LRTP):

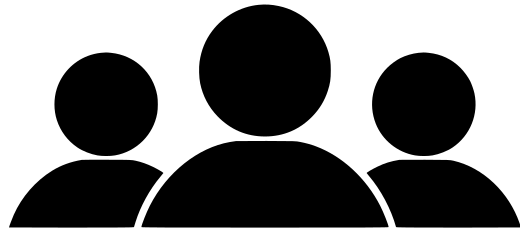
- Outlines the long-range vision for the transportation system
- Lists all transportation improvements that are expected in the next 20 years → 2040

Why are we updating it?

Metropolitan areas with populations over 50,000 (such as the Billings urban area) are federally required to update their LRTP every 4 years

Updating this document helps Billings define its vision for the transportation system and plan future projects

Who is involved?



Resource Agencies and Public



Where are we in the timeline?

LRTP TIMELINE



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2018 Billings Urban Area Long Range Transportation Plan



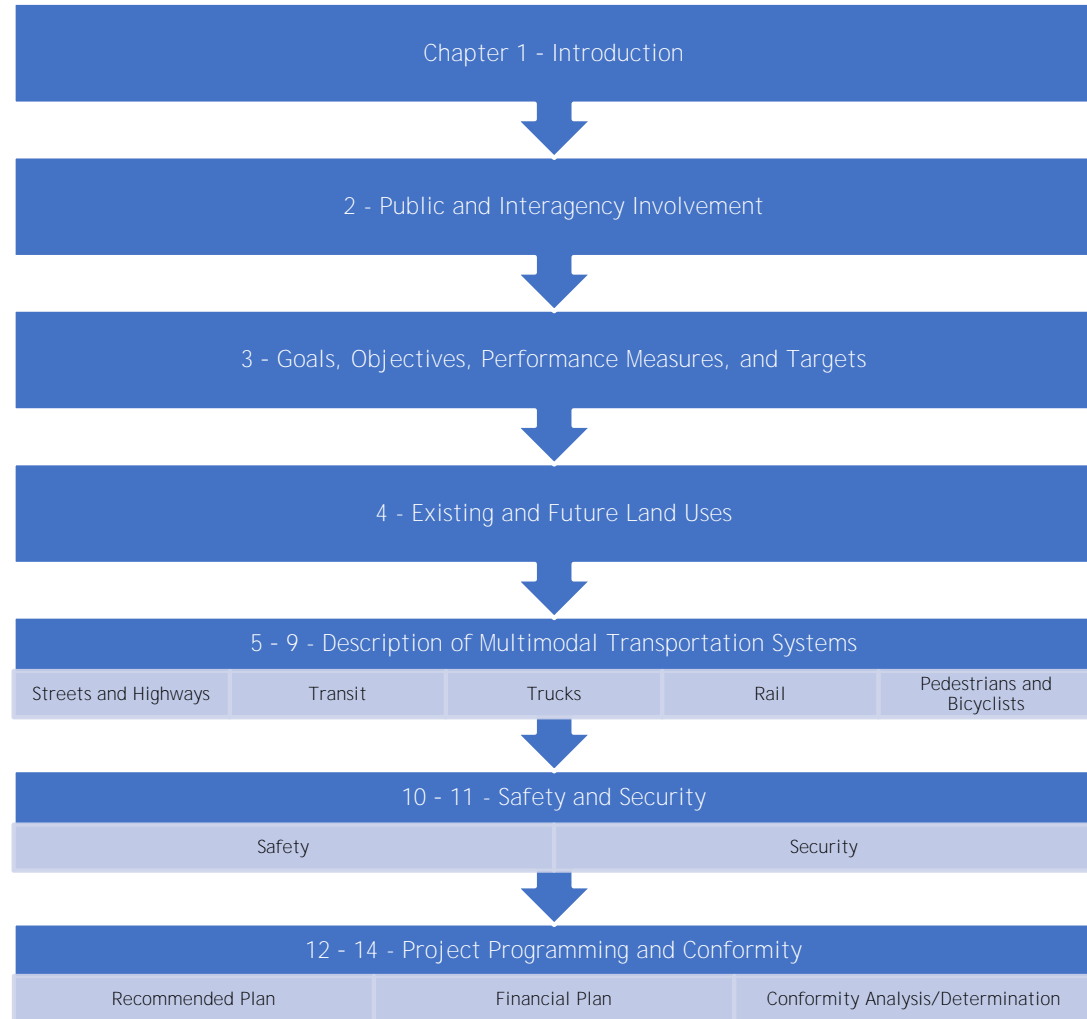
2018 BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN
September 27, 2018

prepared by
KITTELSON & ASSOCIATES **DOWL**

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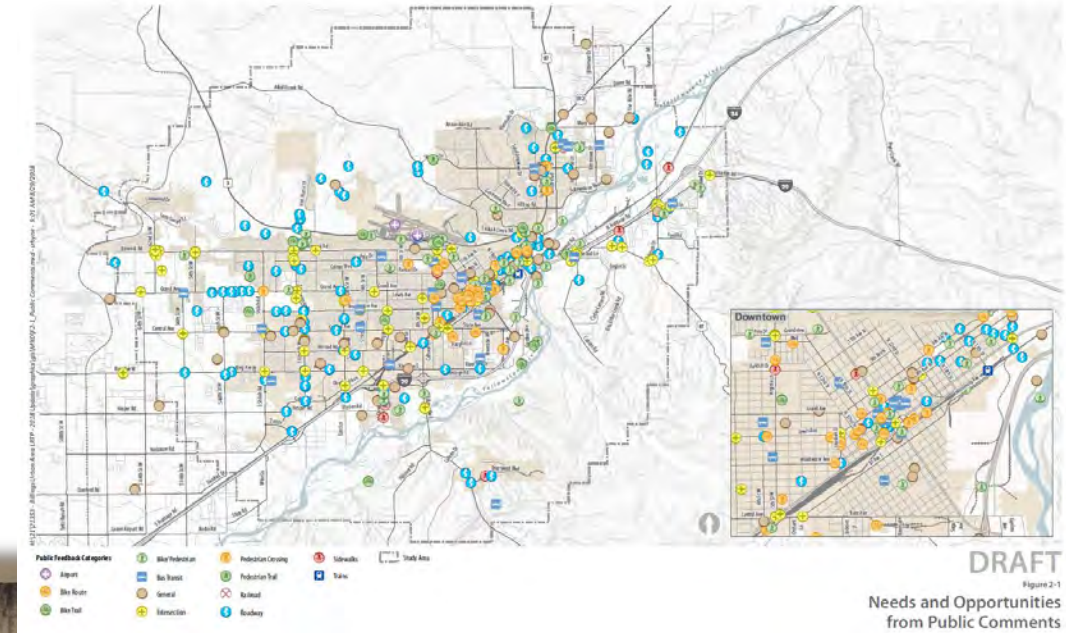


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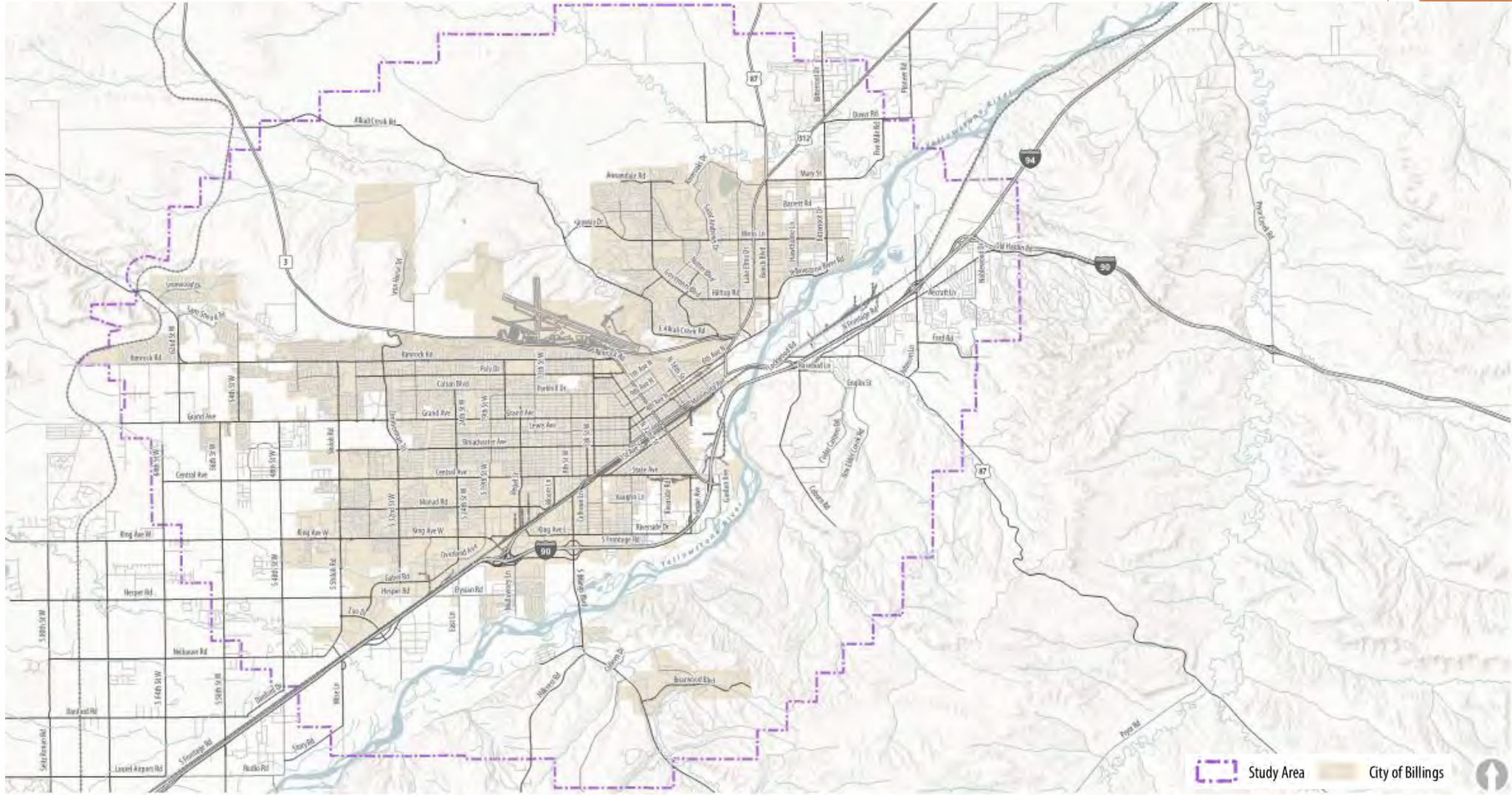


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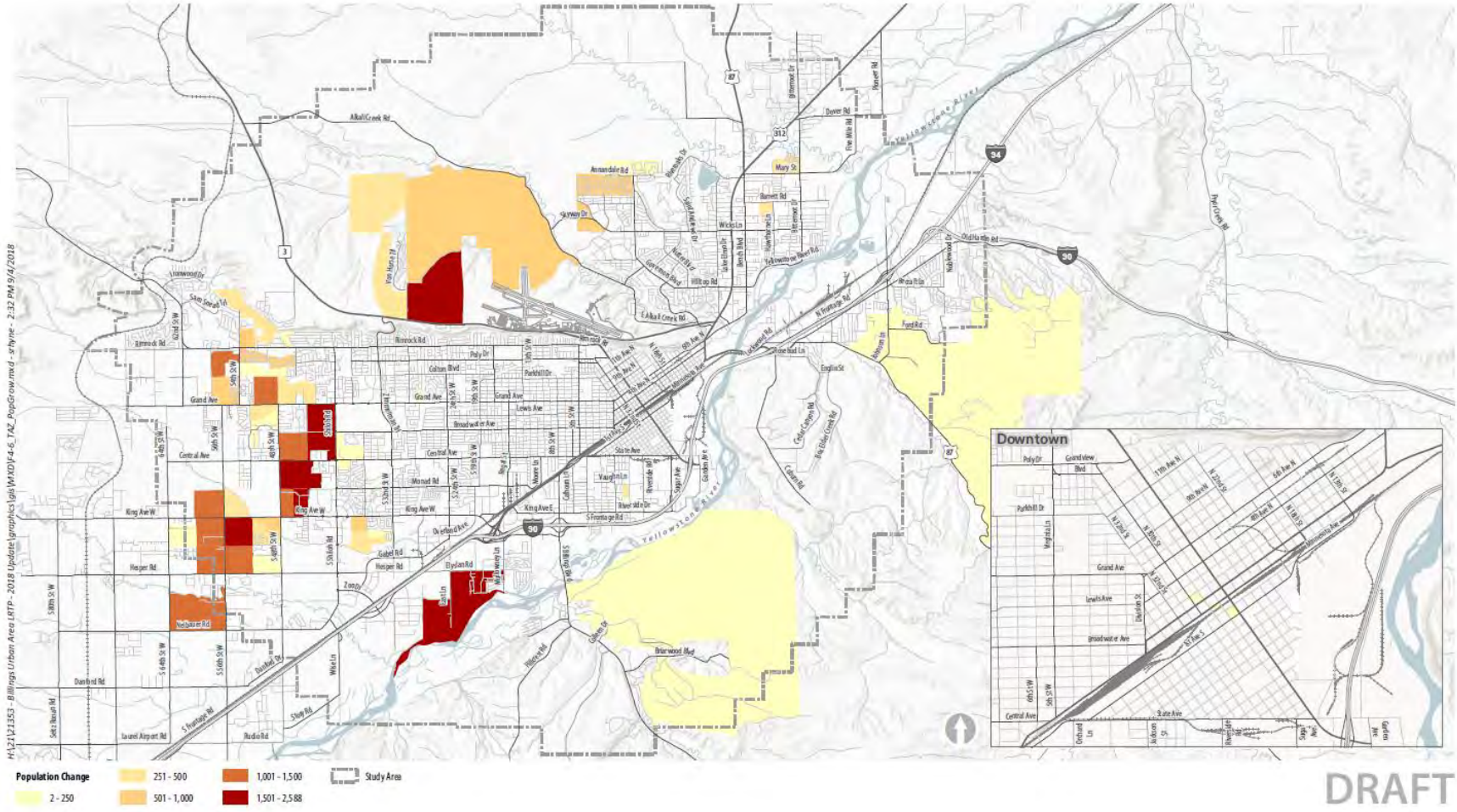


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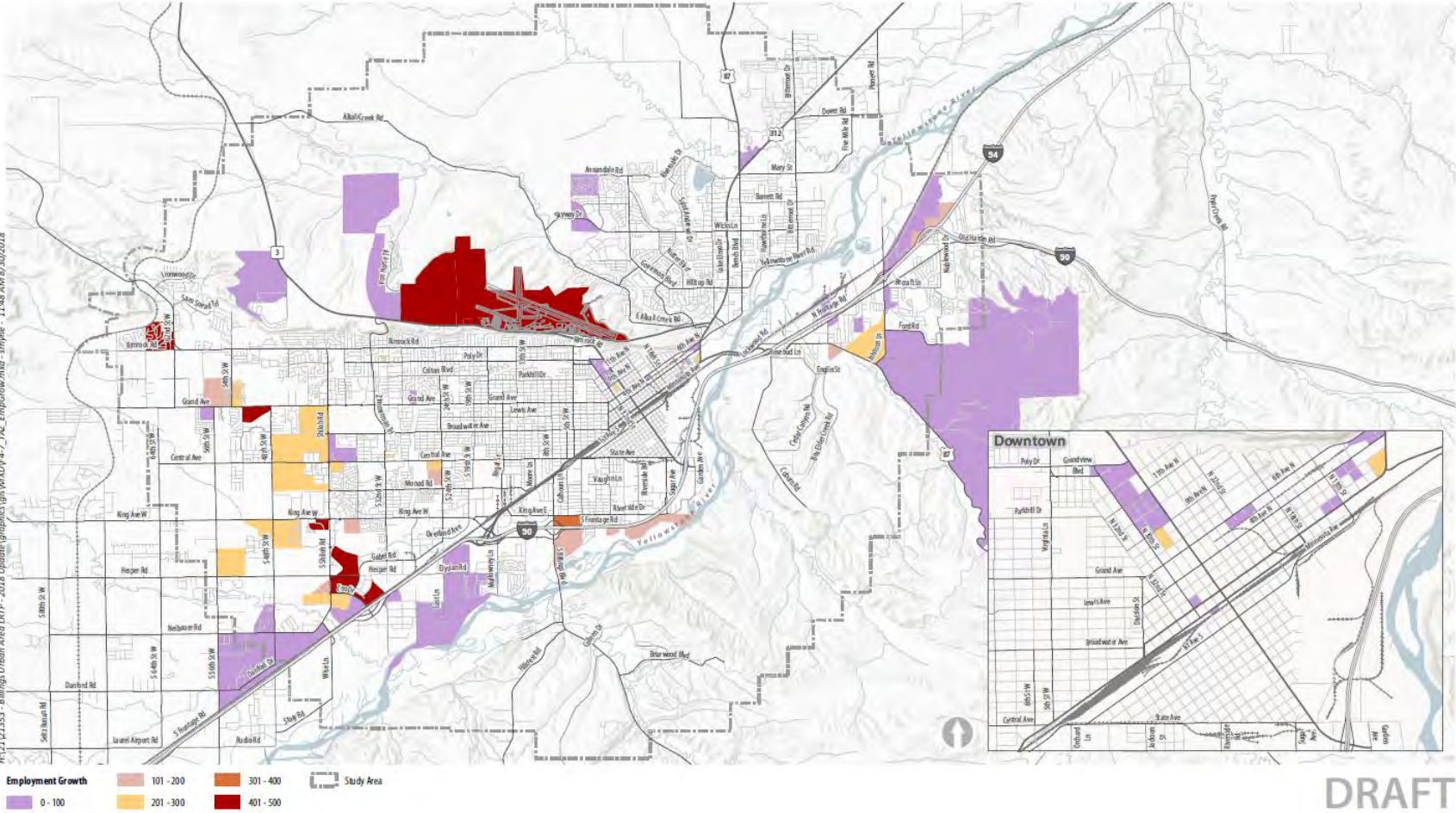
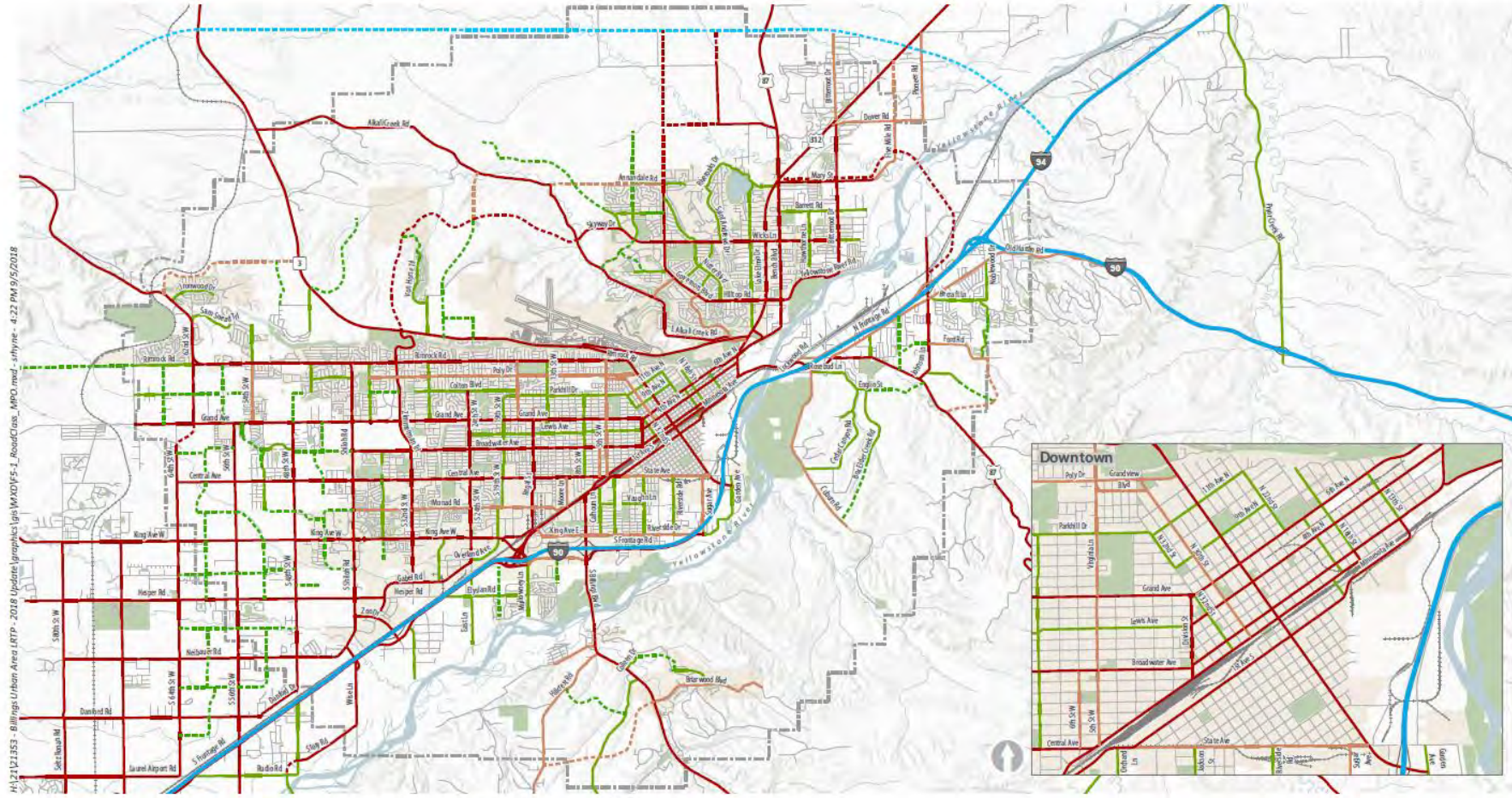


Figure 4-7
Employment Growth (2017 to 2040)

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DRAFT

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58 - Roadway

62 - Intersection

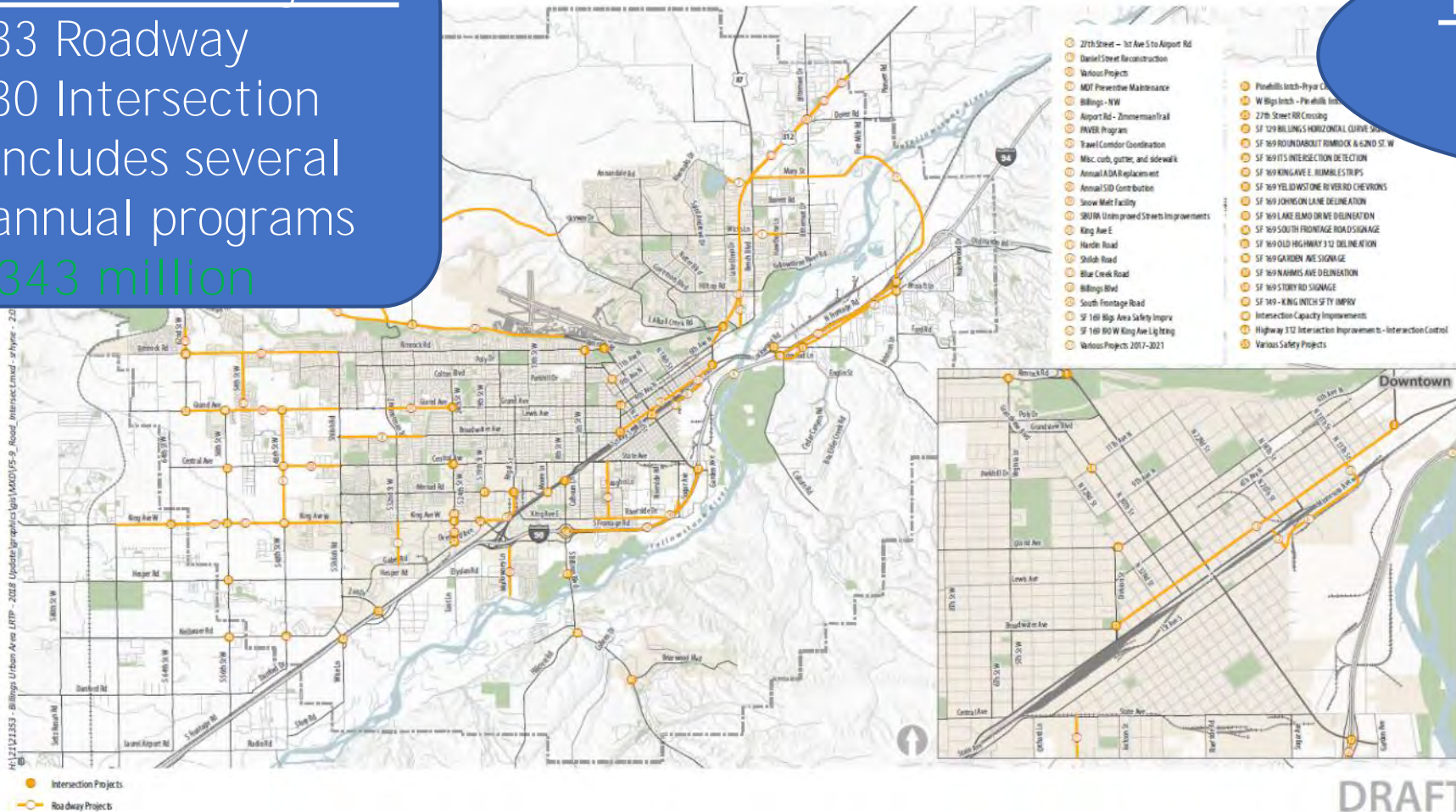


Figure 5-9
Intersection and Roadway Projects

Draft Project List - Congestion Management Projects



Draft Project List - Congestion Management Projects

Committed Projects

- 8 Congestion Management
~\$13 million

28 Total Projects

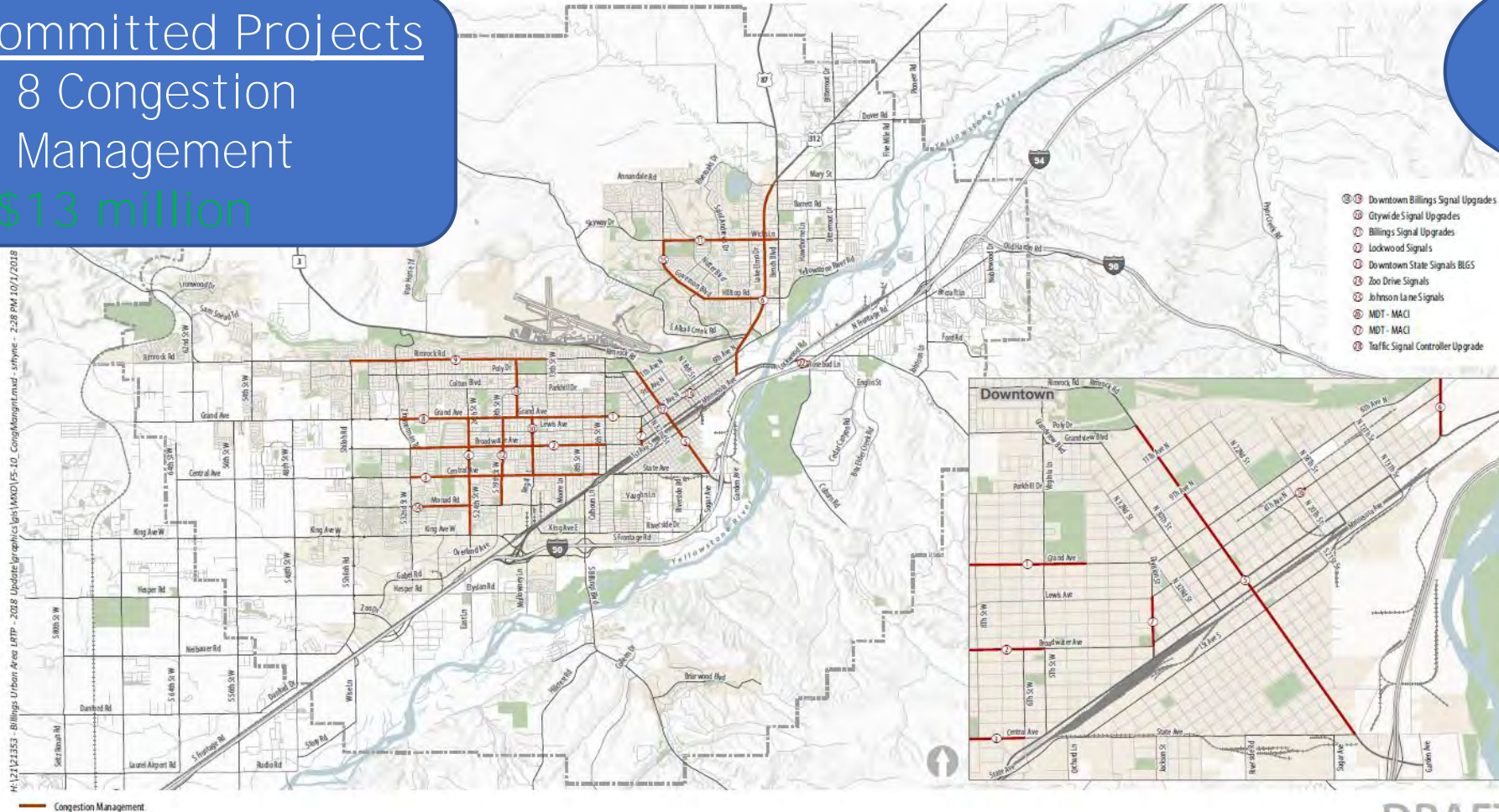


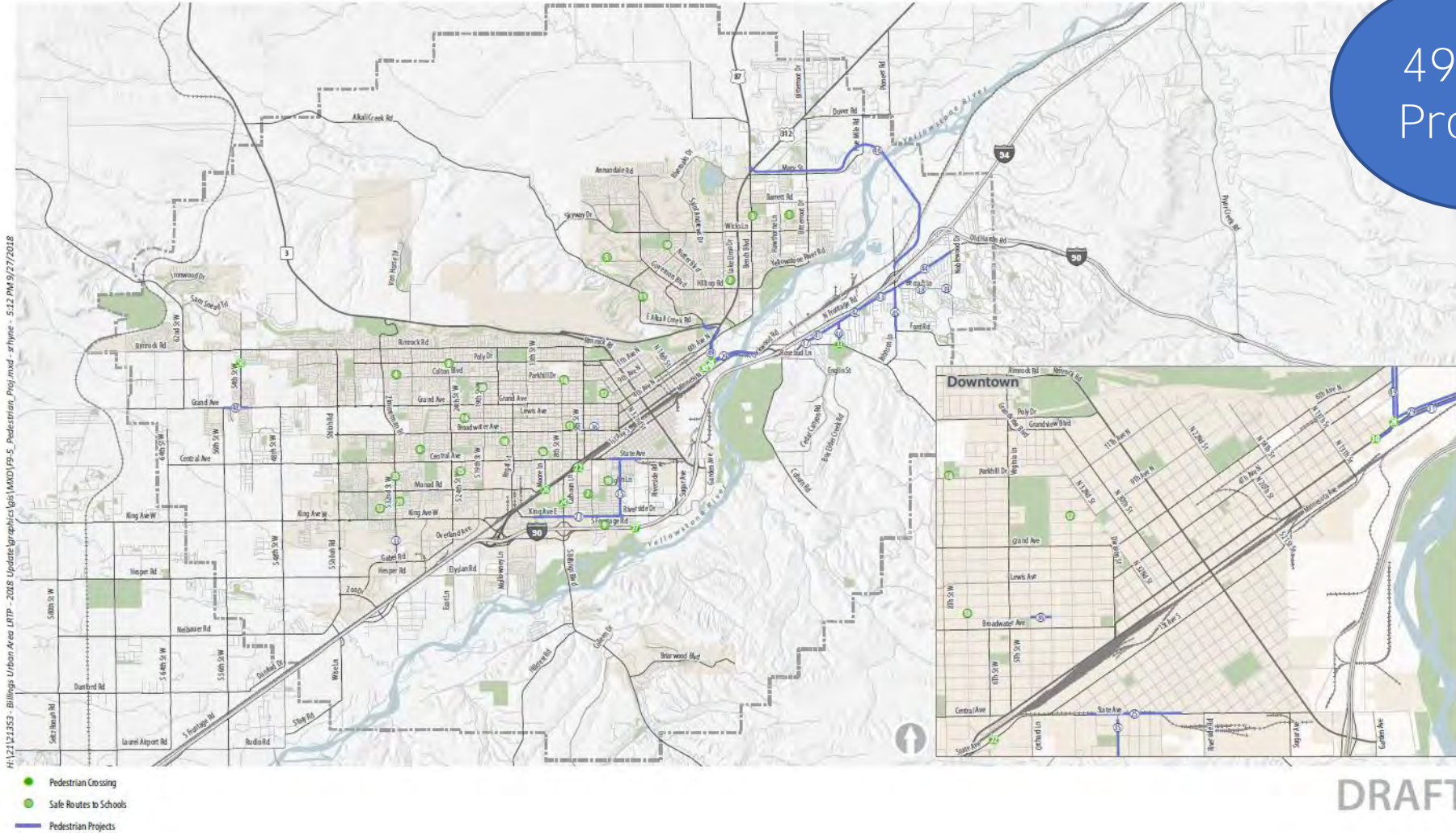
Figure 5-10
Congestion Management Projects

Draft Project List - Pedestrian, Bicycle, & Multi-use Trail Projects



Draft Project List - Pedestrian Projects

49 Total Projects



DRAFT
Figure 9-5
Pedestrian Projects

Draft Project List - Bicycle Lane Projects

54 Total Projects

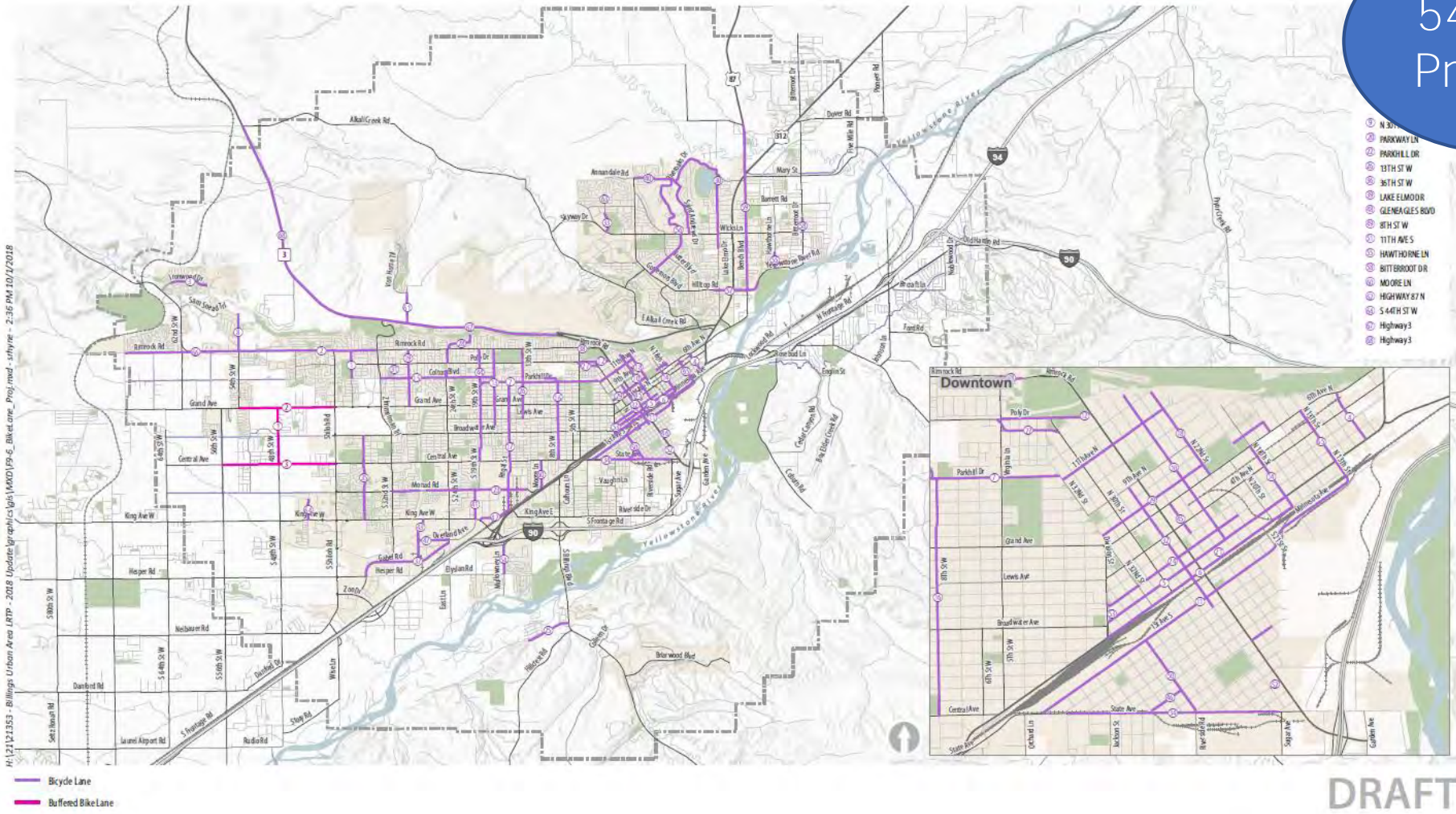
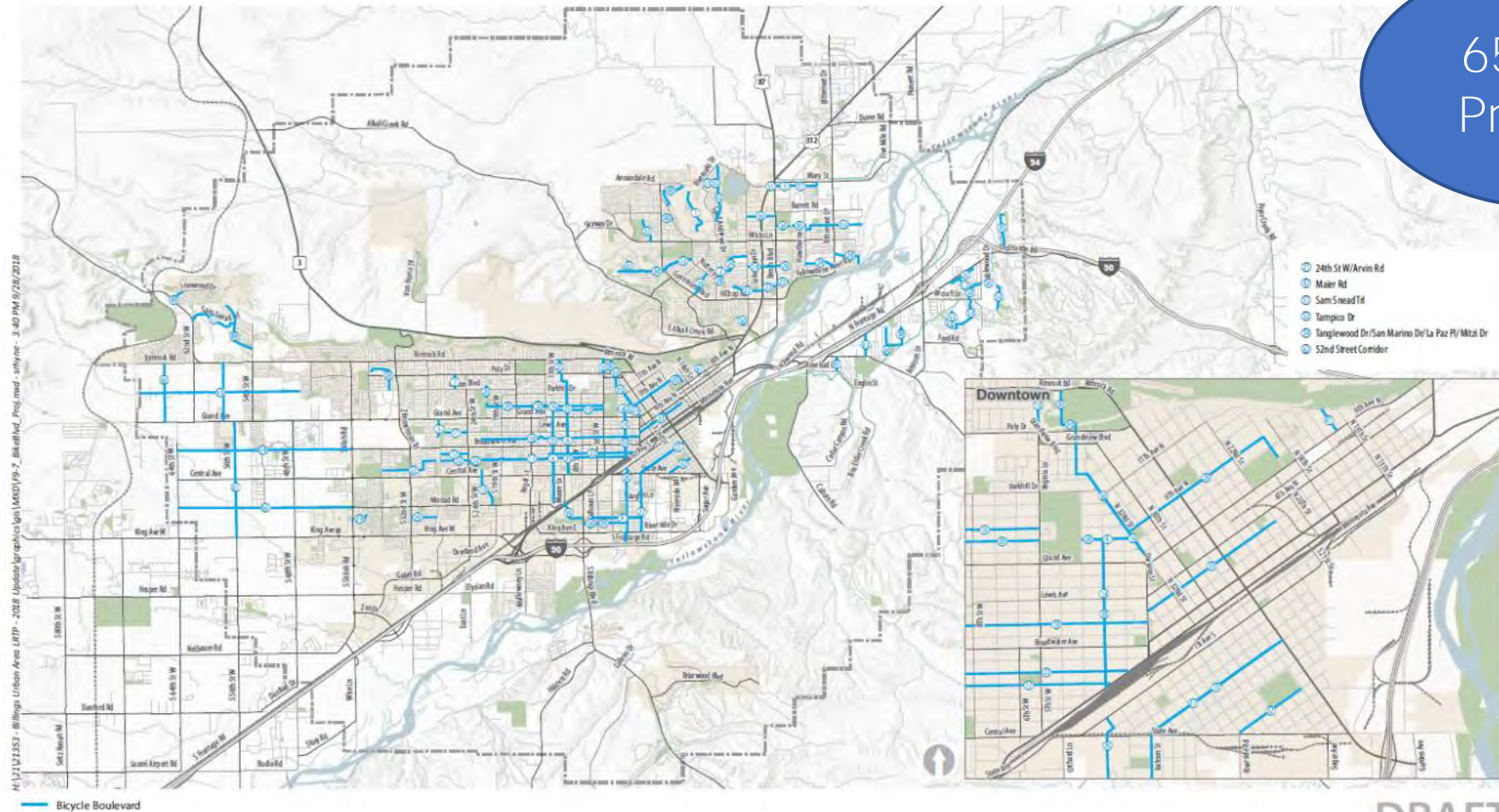


Figure 9-6
Bicycle Lane and Buffered Bike Projects

Draft Project List - Bicycle Boulevard Projects

65 Total Projects



DRAFT

Figure 9-7
Bicycle Boulevard Projects

Draft Project List - Pedestrian, Bicyclists, & Multi-use Trails

Committed Projects

- 8 Pedestrian* (includes two annual programs)
 - 2 Bike Lane*
 - 9 Multi-use Trail
- ~\$19 million

276 Total Projects

- 49 - Pedestrian
- 54 - Bicycle Lane
- 65 - Bicycle Boulevard
- 108 - Multi-use Trail

PROJECT ID#	Proposed Name	Length (Miles)	Project Description	Estimated Planning Level Cost
MT00	Four Bances Connector	1	Construct a multi-use trail from Lockwood Trail to Four Bances Natural Area	\$400,000
MT01	Highway 88/89	1	Construct a multi-use trail from Aronson Ave to Lake Simo State Park	\$2,140,198
MT06	Highway Upper Loop	4.5	Construct a multi-use trail from Yellowstone River to Alkali Creek Rd	\$4,710,250
MT07	High Ditch	4	Construct a multi-use trail from Rimrock West Trail to Hogans Slough	\$2,100,188
MT08	Hogans Slough	8.8	Construct a multi-use trail from Shilon Rd to 54th St (with Trail)	\$3,014,180
MT09	Inner Belt Loop	8.5	Construct a multi-use trail from Governors Blvd to Highway 3	\$5,937,010
MT10	Long Avenue	1.1	Construct a multi-use trail from E 54th St W to Hogans Slough	\$910,180
MT21	Lockwood	6	Construct a multi-use trail from Interstate 90 to Highway 312	\$5,480,000
MT22	Monad	1.1	Construct a multi-use trail from S 48th St W to Hogans Slough	\$118,300
MT23	Monad	2.8	Construct a multi-use trail from BBWA Canal Trail to 48th St W	\$2,288,474
MT24	MRI Ball with Trail	9	Construct a multi-use trail from Interstate 90 to Highway 312	\$8,250,000
MT25	Herberg Ranch	8	Construct a multi-use trail from Expansion of Existing Trail to Inner Belt Loop	\$410,380
MT26	Rimrock Road	1.5	Construct a multi-use trail from 54th St W to Cooks Ditch	\$1,373,084
MT27	Sanator Park	1.1	Construct a multi-use trail from Aronson Ave to Inner Belt Loop Trail	\$118,300
MT28	Shaw Ditch	2	Construct a multi-use trail from Shishon Rd to Big Ditch	\$1,098,060
MT29	Slough/Hogans Slough	1	Construct a multi-use trail from Suburban Ditch to MRI Ball with Trail	\$910,380
MT30	Spring Creek Extension	1	Construct a multi-use trail from 24th St W to 10th St W	\$910,380
MT31	Transit Connector	0.5	Bring M/Cal trail segment up to standards and complete connection to Transitway Lender Trail at 32nd Street West	\$480,000
MT32	Two Moon Park to Five Mile Creek	3	Construct a multi-use trail from Kiewits Trail to Five Mile Creek	\$2,740,160
MT33	Western Yellowstone River Trail	8	Construct a multi-use trail from Josephine Crossing Trail to Shilon Rd Trail	\$4,868,948
MT34	Riverfront Park	2.8	Construct a multi-use trail from Mystic Park Trail to Riverfront Park Trails	\$1,820,000
MT35	25th Street Railroad Bridge	0.8	Construct a multi-use trail from Montana Avenue to Minnesota Avenue	\$1,700,000
MT36	BBWA to Swords Park Trail	5.5	Construct a multi-use trail from Alkali Park to Aronson Ave	\$5,028,640
MT37	Rim Trail from 27th Street West/ Airport Road to Zimmerman Trail Vicinity	3.5	New trail along the Ruts resulting from Highway 3 corridor study	\$1,820,000
MT38	Downtown BBWA Corridor Trail/Con-Street Facilities	1.5	Complete Trail through MSU-B Campus in alignment with MSU-B Master Plan and trail to on-street facilities along Poly Dr through Virginia Lane Intersection to 18th Poly Drive	\$210,000
MT39	34th Street Fackelman Bridge	0.25	Construct a multi-use bridge to cross the tracks near 34th Street	\$1,000,000
MT40	44th Street West	0.5	Construct a multi-use bike/pedestrian path along 44th Street from Shikon Conservation Area to King Avenue West	\$110,000
MT41	Highly Middle School Path	0.25	Construct a trail from the Kiewits Trail to New Heights Middle School near Bench and Barrett	\$131,250
MT42	6th Avenue N		Multi-use Trail from 5th Avenue Bypass to N 10th St	\$1,060,000
MT43	BBWA Canal Trail		Multi-use Trail from 5th Avenue N to Transach Way	\$6,116,000
MT44	Montana Ave/ Lincolnpark Ave		Multi-use Trail from Division St to S Billings Blvd	\$1,500,000
MT45	Wicks Ln		Multi-use Trail from Glenview Blvd to Kiewits Trail	\$2,010,000
MT46	Rosebud Ln		Multi-use Trail from Highway 87F to West of Rosebud Ln	\$2,160,000
MT47	N 27th St		Multi-use Trail from Rimrock Rd to Mountain View Blvd	\$170,000
MT48	Crane Ave		Multi-use Trail from 24th St W to Zimmerman Tr	\$674,000
MT49	Hesper Rd		Multi-use Trail from East of Shikon Rd to S Shikon Rd	\$181,000
MT50	Highway 87E		Multi-use Trail from Johnson Ln to Old Hardin Rd	\$82,000
MT51	24th		Multi-use Trail from Stillwater to South of King Ave W	\$332,000
MT52	Broadwater Ave		Multi-use Trail from 24th St W to 38th St W	\$925,000
MT53	1st Ave/Old Hardin Rd/Highway 87E		Multi-use Trail from N 13th St to Hogan Rd	\$6,168,000
MT54	BBWA Canal Trail North		Multi-use Trail from East of Shadow Heights to Aronson Ave	\$3,337,000
MT55	25th St Trail		Multi-use Trail from S 25th St to S 27th St	\$177,000
MT56	Gabel Rd		Multi-use Trail from Hegar Rd to 20th Rd	\$117,000
MT57	South of Emerald Dr/ward Ln		Multi-use Trail from Emerald Dr to Sword Lane	\$540,000
MT58	Rimrock Rd		Multi-use Trail from 54th St W to 66th St W	\$855,000
MT59	King Ave E		Multi-use Trail from Sugar Ave to King Ave W	\$1,247,000
MT60	King Ave W/Island Rd		Multi-use Trail from S 20th St W to S Frontage Rd	\$2,796,000
MT61	Arnold Drain Trail		Multi-use Trail from 18th St W to 25th St W	\$840,000
MT62	Chrysis Acres		Multi-use Trail from Von Buron St to Holloway Ln	\$75,000
MT63	Suburban Ditch Trail		Multi-use Trail from Songbird Dr to Muldowney Ln	\$526,000
MT64	Falcon Ridge		Multi-use Trail unspecified	\$200,000
MT65	Kiewits Trail Corridor		Multi-use Trail from Sitteroot Dr to Mary St	\$558,000
MT66	Highway 87 Bypass		Multi-use Trail from Roundup Rd to Johnson Ln	\$6,747,000
MT67	Jim Ditcher Trail		Multi-use Trail from South of Mary St to E&F St	\$1,478,000
MT68	Muldowney Ln		Multi-use Trail from S Frontage Rd to Sissy Rd	\$142,000
MT69	Sierra Park Trail		Multi-use Trail from High Sierra Blvd to Alkali Creek Rd	\$1,795,000

Draft Projects and Strategies - Other Modes

Transit

- *Increase funding* through federal or local sources
- Improve equipment and facilities
- All-day fixed route service to Billings Heights by 2020
- Vehicle tracking and automatic fare collection by 2025
- Designated fixed-route bus stops by 2025

Truck

- Major roadway projects:
 - *Billings Bypass*
 - *I-90 Yellowstone River Bridge*
 - *Inner Belt Loop*
- Widening and reconstructions throughout the Billings Urban Area

Rail

- *Crossing studies* at 27th Street and Moore Lane
- *Improve underpasses* at 21st Street and 13th Street
- Coordinate rail infrastructure improvements with Lockwood

Revenue & Project Cost Analysis - Fiscal Constraint

Estimated Revenue ~ \$900M
 Estimated C+R Projects ~ \$800M
 Difference ~ \$100M

Funding Source	2019-2028			2029-2040		
	Projected Funding	Expenditures	Difference	Projected Funding + Carryover	Expenditures	Difference
FEDERAL						
National Highway Performance Program	\$ 258,620,000	\$ 241,529,142	\$ 17,090,858	\$ 77,344,858	\$ 47,041,000	\$ 30,303,858
Highway Safety Improvement Program (HSIP)	\$ 21,530,000	\$ 19,908,244	\$ 1,621,756	\$ 19,051,756	\$ 17,935,000	\$ 1,116,756
Surface Transportation Improvement Program	\$ 39,610,000	\$ 30,095,611	\$ 9,514,389	\$ 54,639,000	\$ 46,734,301	\$ 7,904,699
Congestion Mitigation and Air Quality Improvement Program (CMAQ)	\$ 37,870,000	\$ 28,393,611	\$ 9,476,389	\$ 54,916,389	\$ 12,920,877	\$ 41,995,512
Federal Transit Authority (FTA) Funds	\$ 24,240,000	\$ 23,817,028	\$ 422,972	\$ 29,522,972	\$ 29,100,000	\$ 422,972
STATE AND LOCAL						
TransADE	\$ 730,000	\$ 700,000	\$ 30,000	\$ 900,000	\$ 870,000	\$ 30,000
Operations and Maintenance (State)	\$ 14,720,000	\$ 14,720,000	\$ -	\$ 17,670,000	\$ 17,670,000	\$ -
State Fuel Tax	\$ 21,510,000	\$ 17,005,684	\$ 4,504,316	\$ 30,304,316	\$ 23,196,000	\$ 7,108,316
HB473 Gas Tax Funds (BaRSAA)	\$ 7,990,000	\$ 6,344,316	\$ 1,645,684	\$ 11,225,684	\$ 8,404,000	\$ 2,821,684
Other (Private, Bonds, TIF, CDBG, etc.)	\$ 34,340,000	\$ 22,954,144	\$ 11,385,856	\$ 52,595,856	\$ 40,574,737	\$ 12,021,119
Local Transit Mill Levy	\$ 21,360,000	\$ 21,360,000	\$ -	\$ 25,640,000	\$ 25,640,000	\$ -
Transit Fares	\$ 5,890,000	\$ 5,890,000	\$ -	\$ 7,060,000	\$ 7,060,000	\$ -
Other (Transit)	\$ 1,590,000	\$ 1,590,000	\$ -	\$ 1,910,000	\$ 1,910,000	\$ -
Arterial Fee Fund	\$ 44,970,000	\$ 20,970,000	\$ 24,000,000	\$ 53,960,000	\$ 53,882,814	\$ 77,186
Total	\$ 534,970,000	\$ 455,277,780	\$ 79,692,220	\$ 436,740,831	\$ 332,938,729	\$ 103,802,102

What is next?

- ▶ Draft Plan is available for review and comment
 - ▶ www.Billingslrtp.com
- ▶ Plan adoption schedule
 - ▶ TAC Meeting - October 4th (completed)
 - ▶ Yellowstone County BOCC - October 9th (completed)
 - ▶ Yellowstone County Board of Planning - October 10th (completed)
 - ▶ Billings City Council - October 15th (completed)
 - ▶ Yellowstone County BOCC - October 16th (this morning)
 - ▶ Billings City Council - October 22nd
 - ▶ Yellowstone County Board of Planning - October 23rd
 - ▶ Policy Coordinating Committee - October 30th

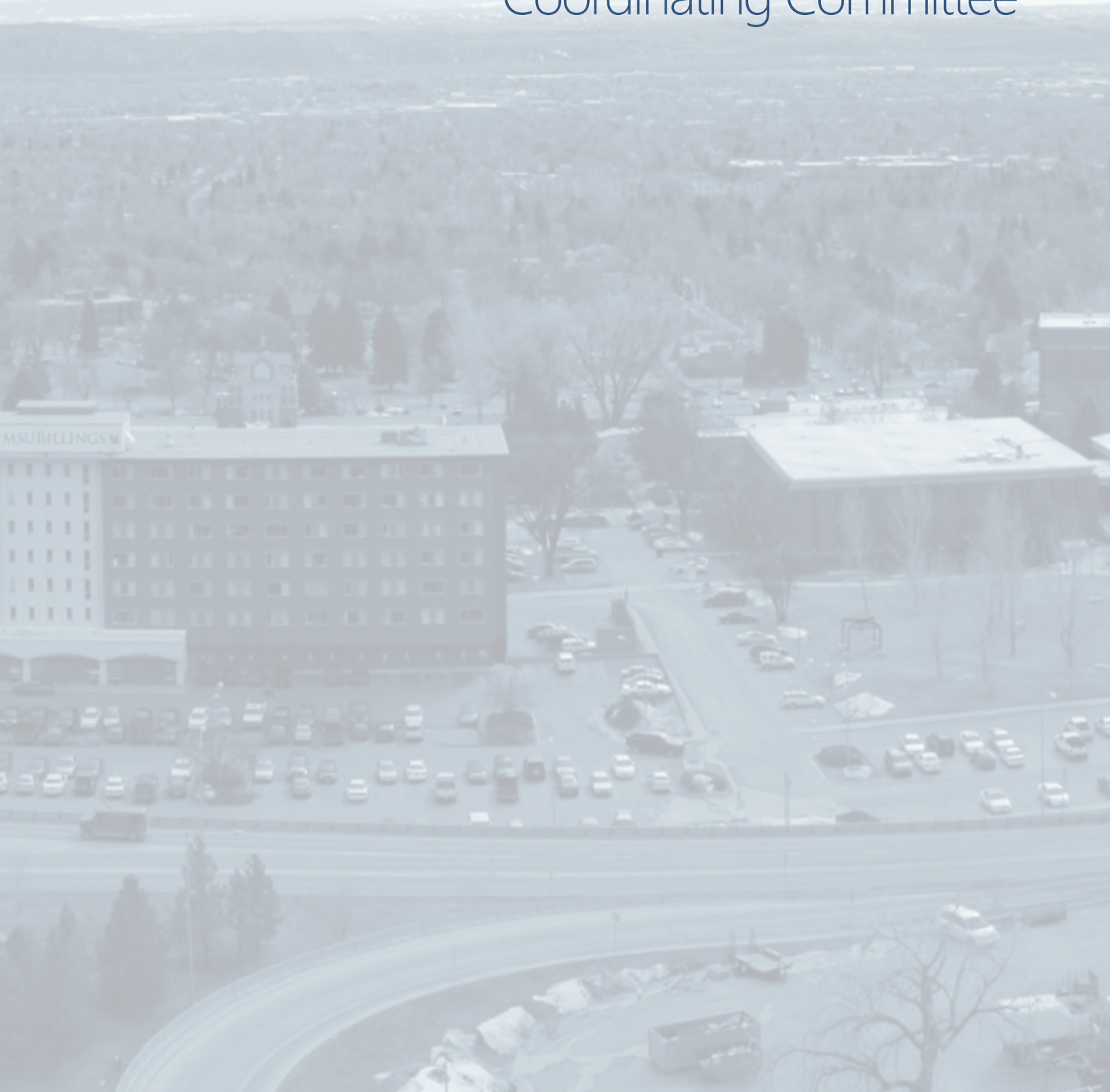
Thank You For Your Time

▶ Questions?



Appendix T

Plan Adoption
Presentation – Policy
Coordinating Committee



2018 Billings Urban Area Long Range Transportation Plan

Policy Coordinating Committee

October 30, 2018



What is an LRTP?

A long range transportation plan (LRTP):

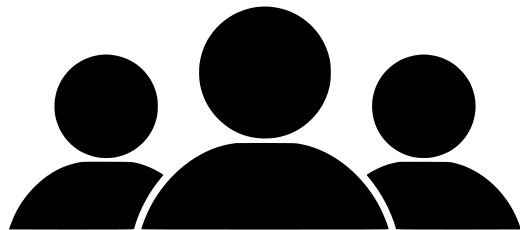
- Outlines the long-range vision for the transportation system
- Lists all transportation improvements that are expected in the next 20 years → 2040

Why are we updating it?

Metropolitan areas with populations over 50,000 (such as the Billings urban area) are federally required to update their LRTP every 4 years

Updating this document helps Billings define its vision for the transportation system and plan future projects

Who is involved?



Resource Agencies and Public



Plan is available at
www.billingslrtp.com

**2018 Billings Urban Area
 Long Range Transportation Plan**



2018
BILLINGS URBAN AREA
 LONG RANGE TRANSPORTATION PLAN
 September 27, 2018

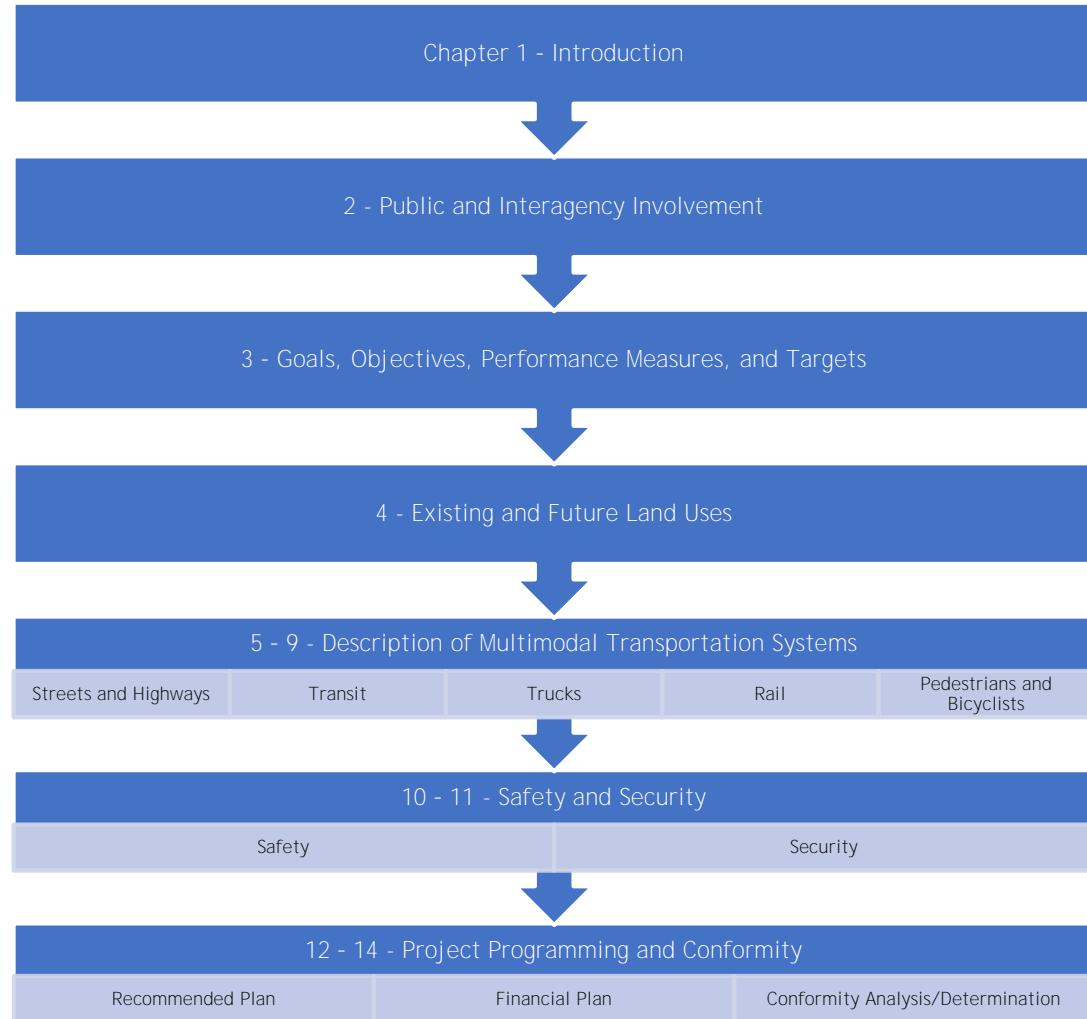
prepared by
KITTELSON & ASSOCIATES **DOWL**

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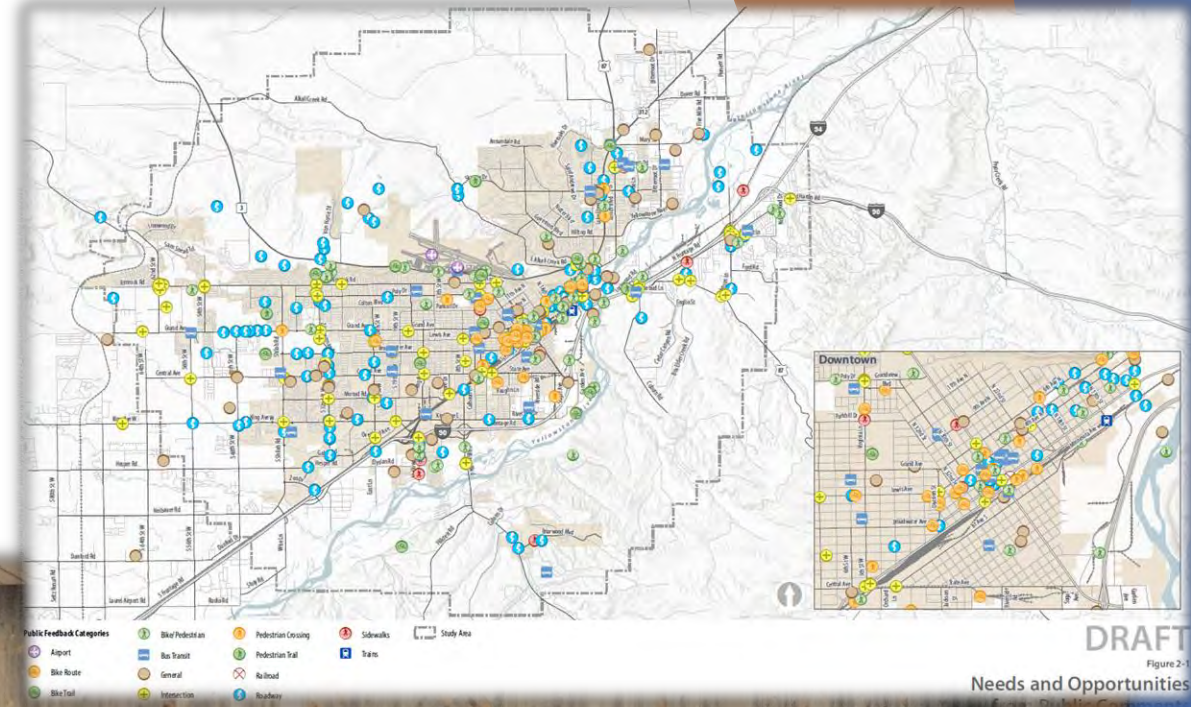
What's included in the 2018 LRTP?

- 15 Plans, Studies, & Policies Since 2014 LRTP
- 25 Major Projects Since 2014 LRTP
- 8 Ongoing

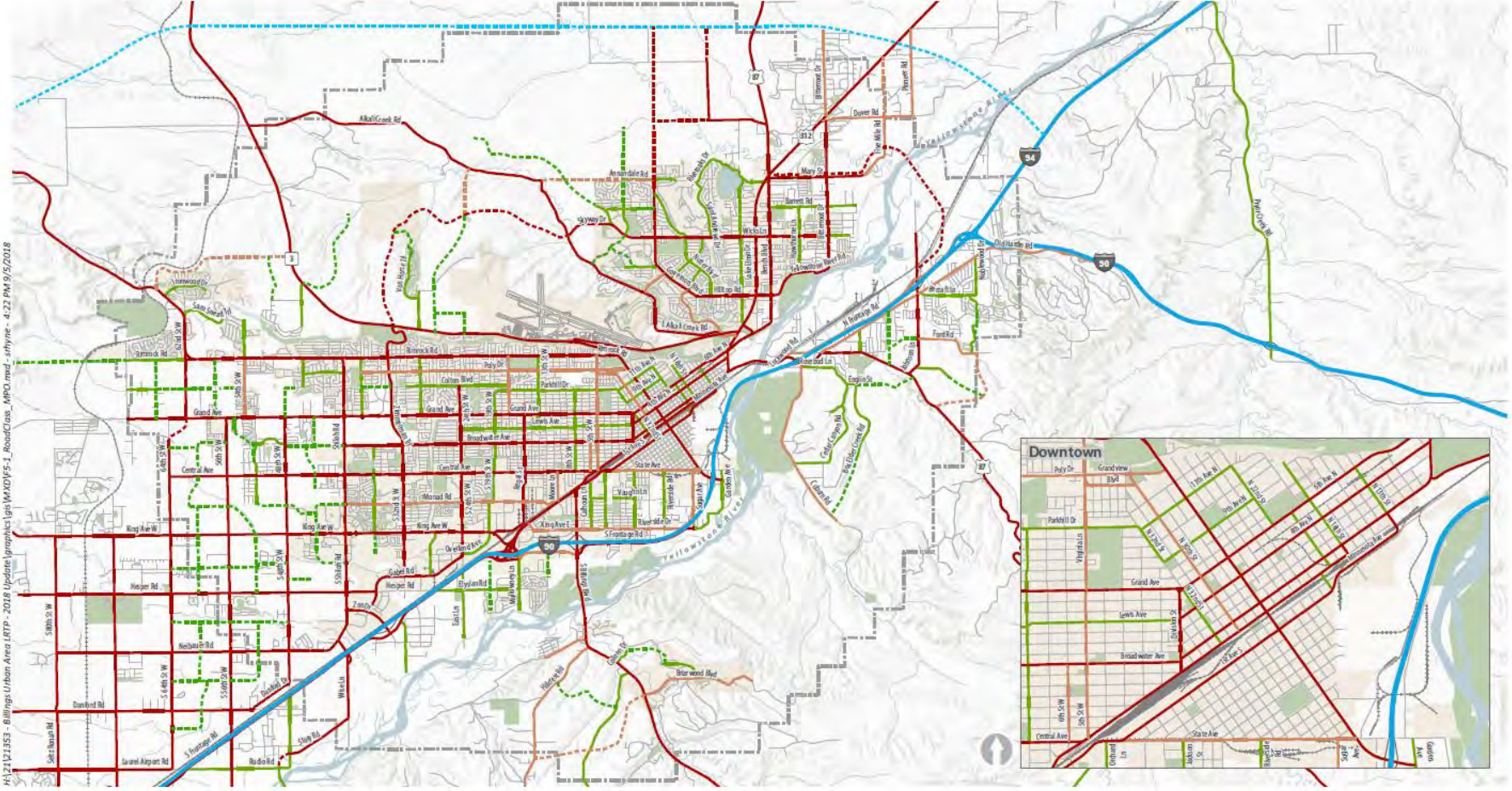


Public and Interagency Involvement

- ▶ www.billingslrtp.com
- ▶ Steering committee
- ▶ Resource agencies
- ▶ Youth engagement
- ▶ Open houses and online survey
- ▶ Media coordination and social media
- ▶ Email updates



Functional Classification Map



H:\21121353 - Billings Urban Area IRTD - 2018 Update\graphics\figs\MAOV5-1_roadClass_MPO.mxd - s:\rhyme - 4:22 PM 9/2/2018

- Roadway Classification**
- Principal Arterial
 - Minor Arterial
 - Interstate
 - Collector
 - Proposed Freeway Controlled Access
 - - - Proposed Principal Arterial
 - - - Proposed Collector
 - - - Proposed Minor Arterial
 - Study Area
 - Park
 - City of Billings
 - Local Streets

Note: This functional classification map does not represent the federally approved system.

DRAFT

Figure 5-1

Functional Classification Map

Project List - Types / Categories

Committed Projects

- Transportation Improvement Program (TIP)
- Capital Improvement Plan (CIP)
- Years 2018-2028

Recommended Projects

- Not programmed
- Upcoming projects for the TIP and CIP
- Years 2029-2040

Illustrative Projects

- Visionary
- Not expected to occur within 2040 horizon

Fiscal Constraint of LRTP

Project List - Roadway and Intersection



Project List - Congestion Management



Project List - Pedestrian, Bicycle, & Multi-use Trail



Projects & Strategies - Transit & Freight



Major Committed Projects in LRTP

- ▶ Billings Bypass
- ▶ Inner Belt Loop (Alkali Creek to Highway 3)
- ▶ 27th Street (1st to Airport)
- ▶ 32nd Street West (King W to Gabel)
- ▶ Wicks Lane (Main to Hawthorne)
- ▶ King Avenue East (Orchard to Sugar)
- ▶ I-90 Yellowstone River Bridges
- ▶ Airport & Main Intersection
- ▶ Underpass Avenue Improvements
- ▶ Central/56th Roundabout
- ▶ King/56th Roundabout
- ▶ Rimrock/62nd Roundabout
- ▶ Downtown to Coulson Park Multi-use Trail
- ▶ TransTech Connector Multi-use Trail
- ▶ Riverfront Park Multi-use Trail
- ▶ Rim Top Multi-use Trail
- ▶ Stagecoach Multi-use Trail (Rimrock to Highway 3)
- ▶ Various signal upgrades and signal timing
- ▶ Transit operations and capital
- ▶ Maintenance programs

By the numbers...

Public Comments

- 432 comments received in plan development
- 420 comments via online & map surveys
- ~200 people provided comments

Projects

- Roadways and Intersections
 - 120 projects
 - 66 committed @ ~\$342M
- Congestion Management
 - 28 projects
 - 8 committed @ ~\$13M
- Pedestrian, Bicycle, & Multi-use Trails
 - 276 projects
 - 19 committed @ ~\$19M

Fiscal Constraint

- Estimated Revenue
 - ~\$900 million
- Estimated Project Cost
 - ~800 million



Thank You For Your Time

▶ Questions?





Appendix U

Presentation – West End Task Force



2018 Billings Urban Area Long Range Transportation Plan

West End Neighborhood Task Force

October 16, 2018



What is an LRTP?

A long range transportation plan (LRTP):

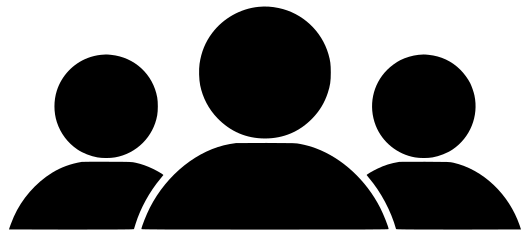
- Outlines the long-range vision for the transportation system
- Lists all transportation improvements that are expected in the next 20 years → 2040

Why are we updating it?

Metropolitan areas with populations over 50,000 (such as the Billings urban area) are federally required to update their LRTP every 4 years

Updating this document helps Billings define its vision for the transportation system and plan future projects

Who is involved?



Resource Agencies and Public



Where are we in the timeline?

L RTP TIMELINE



What is next?

- ▶ Draft Plan is available for review and comment
 - ▶ www.Billingslrtp.com
- ▶ Plan adoption schedule
 - ▶ TAC Meeting - October 4th (completed)
 - ▶ Yellowstone County BOCC - October 9th (completed)
 - ▶ Yellowstone County Board of Planning - October 10th (completed)
 - ▶ Billings City Council - October 15th (completed)
 - ▶ Yellowstone County BOCC - October 16th (completed)
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 - ▶ Yellowstone County Board of Planning - October 23rd
 - ▶ Policy Coordinating Committee - October 30th (Plan adoption)

Draft Plan is available for review and comment at www.billingslrtp.com

2018 Billings Urban Area Long Range Transportation Plan



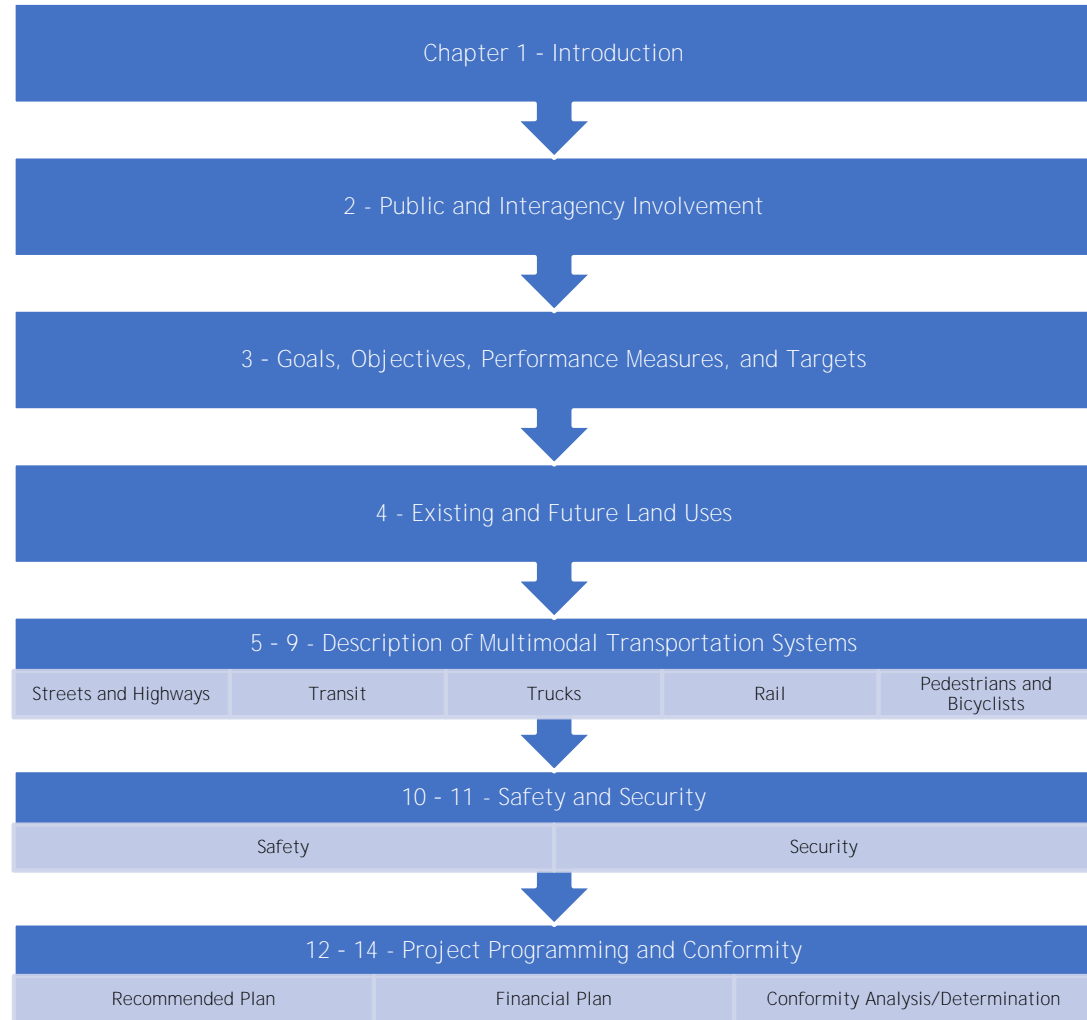
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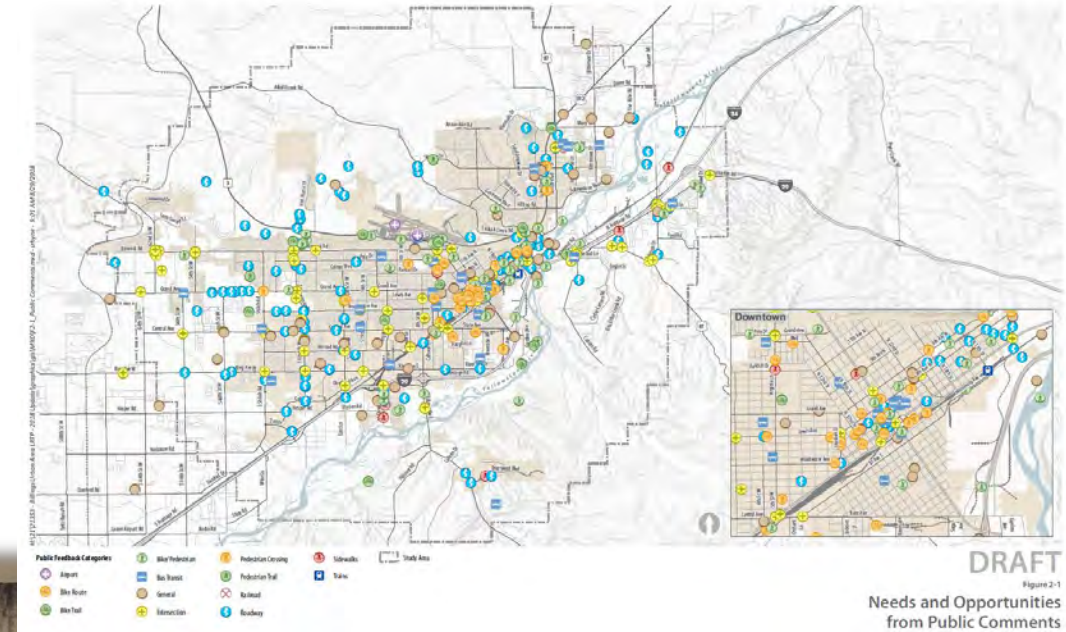
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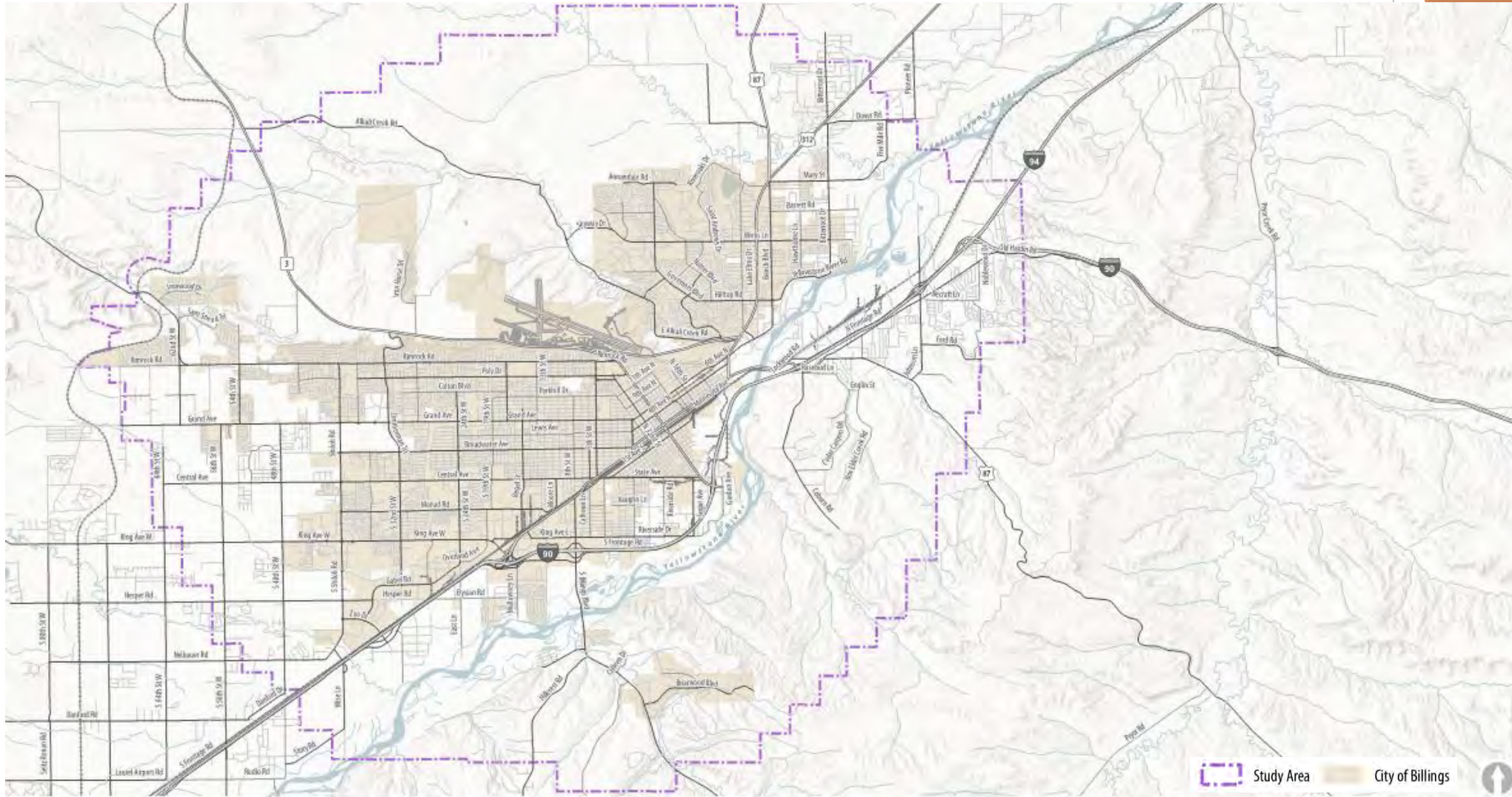


Public and Interagency Involvement

- ▶ www.billingslrtp.com
- ▶ Steering committee
- ▶ Resource agencies
- ▶ Youth engagement
- ▶ Open houses and online survey
- ▶ Media coordination and social media
- ▶ Email updates



Where is the study area?



L RTP Goals

1. Safety

- Develop a safe transportation system

2. Functional Integrity and Efficiency

- Optimize, preserve, and enhance the existing transportation system

3. Prioritized Improvements

- Identify and prioritize projects that mitigate deficiencies, maximize the use of existing facilities, and balance anticipated needs with available funding

4. Environment

- Develop a transportation system that protects the natural environment and promotes a healthy, sustainable community

5. Public Transit and Transportation

- Create a transportation system that supports the practical and efficient use of transit

6. Pedestrians and Bicyclists

- Create a transportation system that supports the practical and efficient use of active transportation such as walking and bicycling

7. Economic Vitality

- Ensure adequate transportation facilities to support the existing local economy and connect Billings to local, regional, and national commerce

Land Use - Population Growth (2017 to 2040)

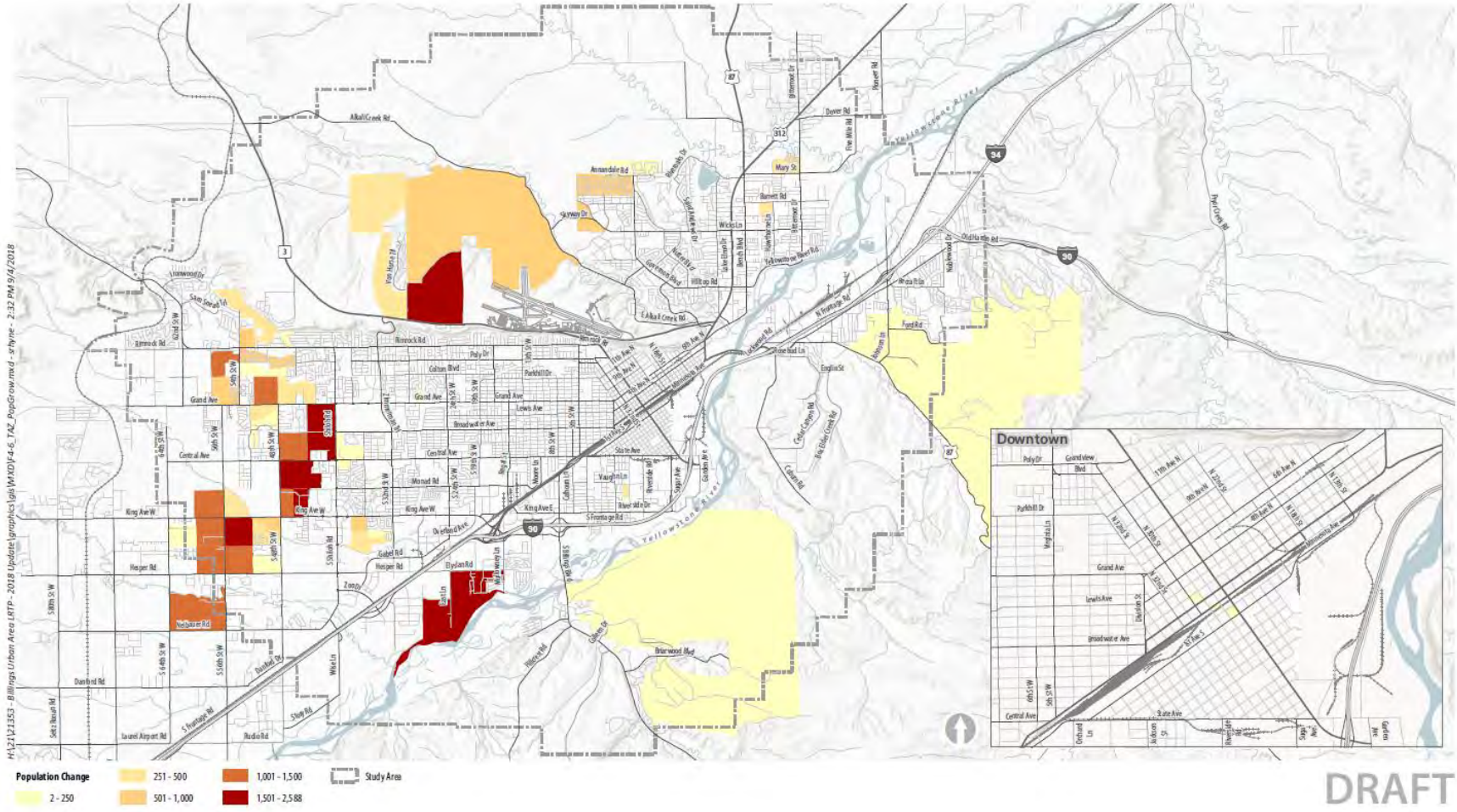


Figure 4-6
Population Growth (2017 to 2040)

Land Use - Employment Growth (2017 to 2040)

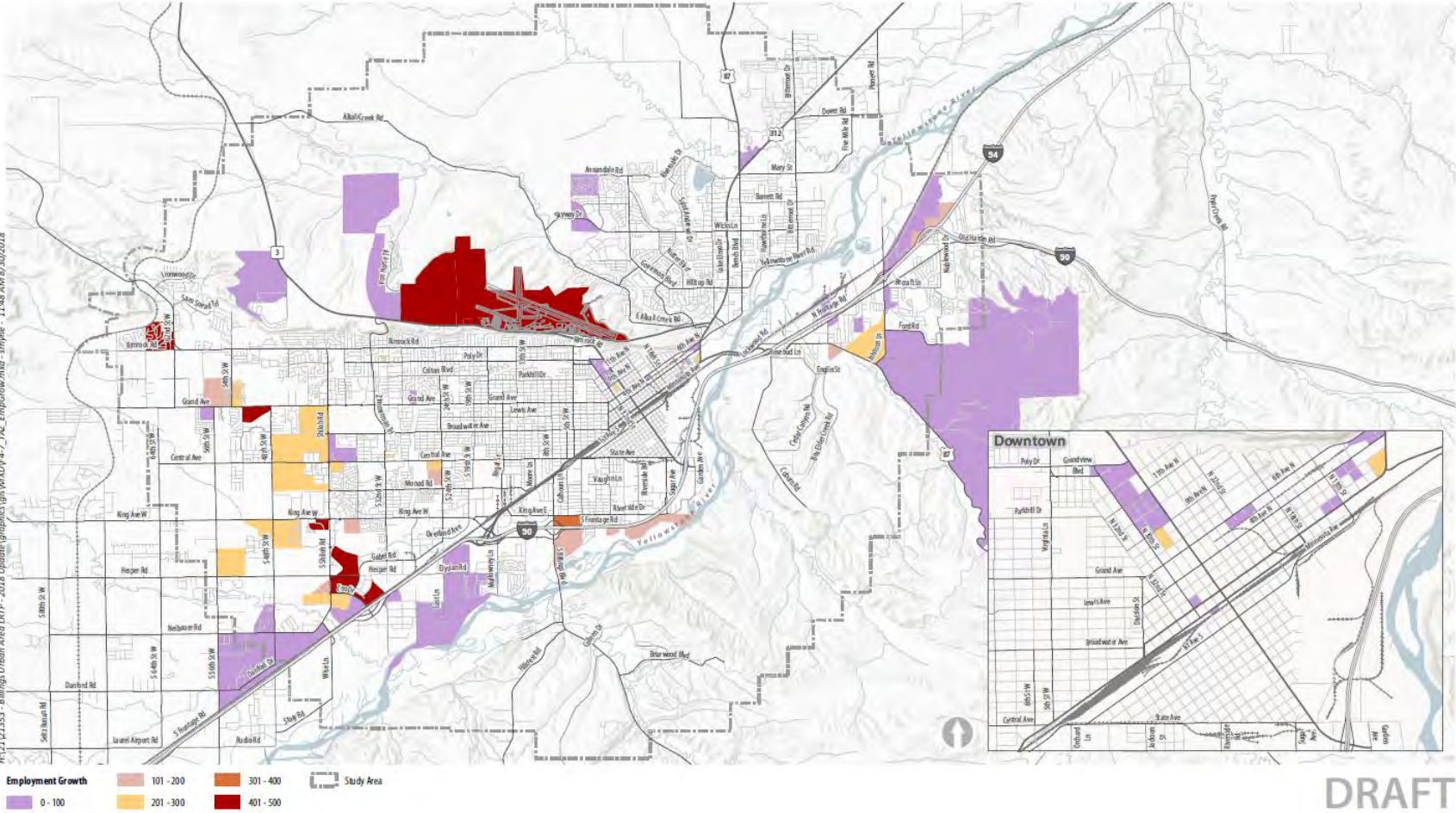
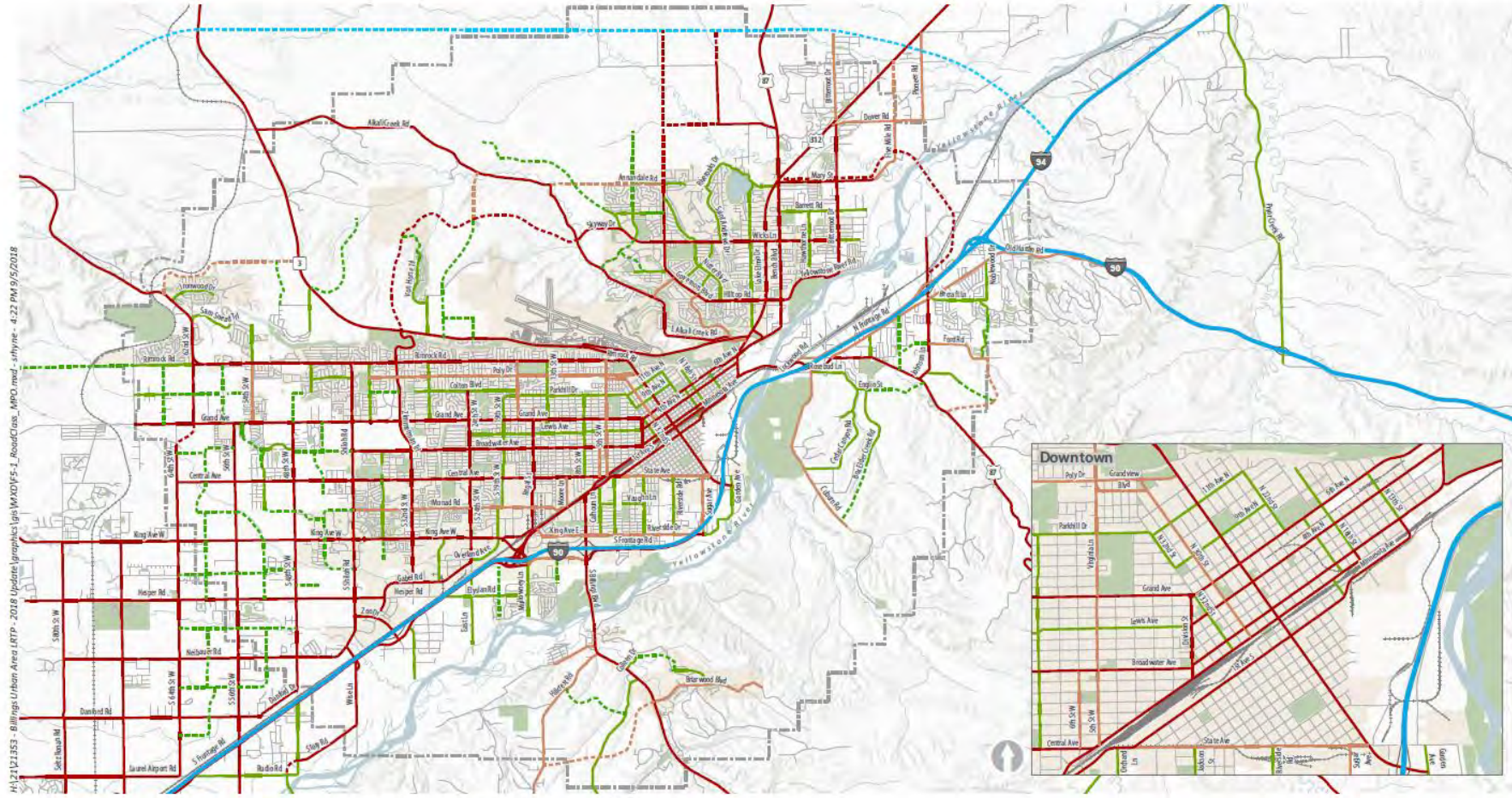


Figure 4-7
 Employment Growth (2017 to 2040)

Functional Classification Map



H:\21121353 - Billings Urban Area IRTD - 2018 Update\graphics\figs\MADVF5-1_roadClass_MPO.mxd - s:\rhyme - 4:22 PM 9/2/2018

- Roadway Classification**
- Minor Arterial
 - Interstate
 - Principal Arterial
 - Proposed Freeway Controlled Access
 - Proposed Collector
 - Proposed Principal Arterial
 - Proposed Collector
 - Study Area
 - Park
 - City of Billings
 - Local Streets

Note: This functional classification map does not represent the federally approved system.

DRAFT

Figure 5-1

Functional Classification Map

Draft Project List - Types / Categories

Committed Projects

- Transportation Improvement Program (TIP)
- Capital Improvement Plan (CIP)
- Years 2018-2028

Recommended Projects

- Not programmed
- Upcoming projects for the TIP and CIP
- Years 2029-2040

Illustrative Projects

- Visionary
- Not expected to occur within 2040 horizon

Fiscal Constraint of LRTP

Draft Project List - Roadway and Intersection Projects



Draft Project List - Roadway and Intersection Projects

Committed Projects

- 33 Roadway
- 30 Intersection
- Includes several annual programs

~\$343 million

120 Total Projects

58 - Roadway

62 - Intersection

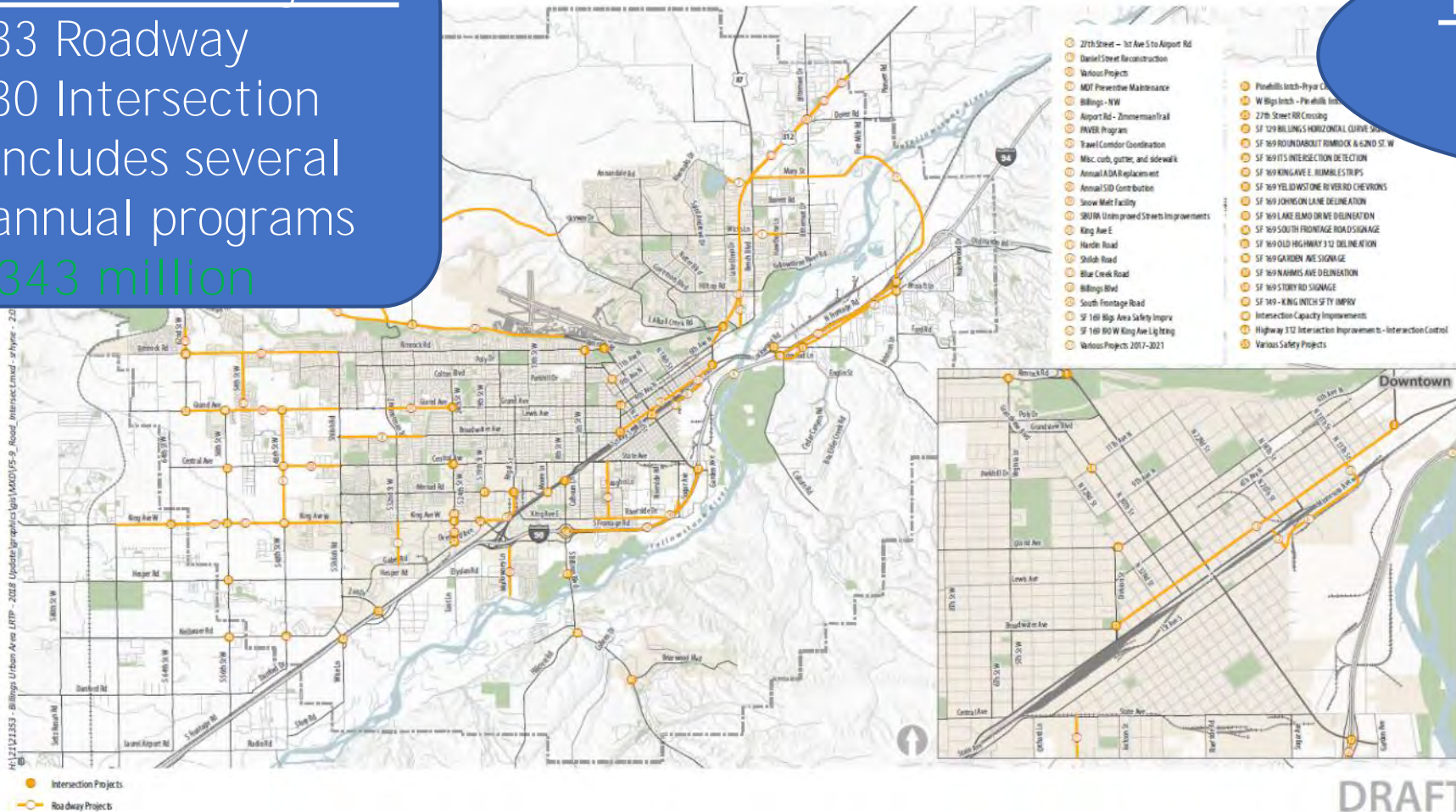


Figure 5-9
Intersection and Roadway Projects

Draft Project List - Congestion Management Projects

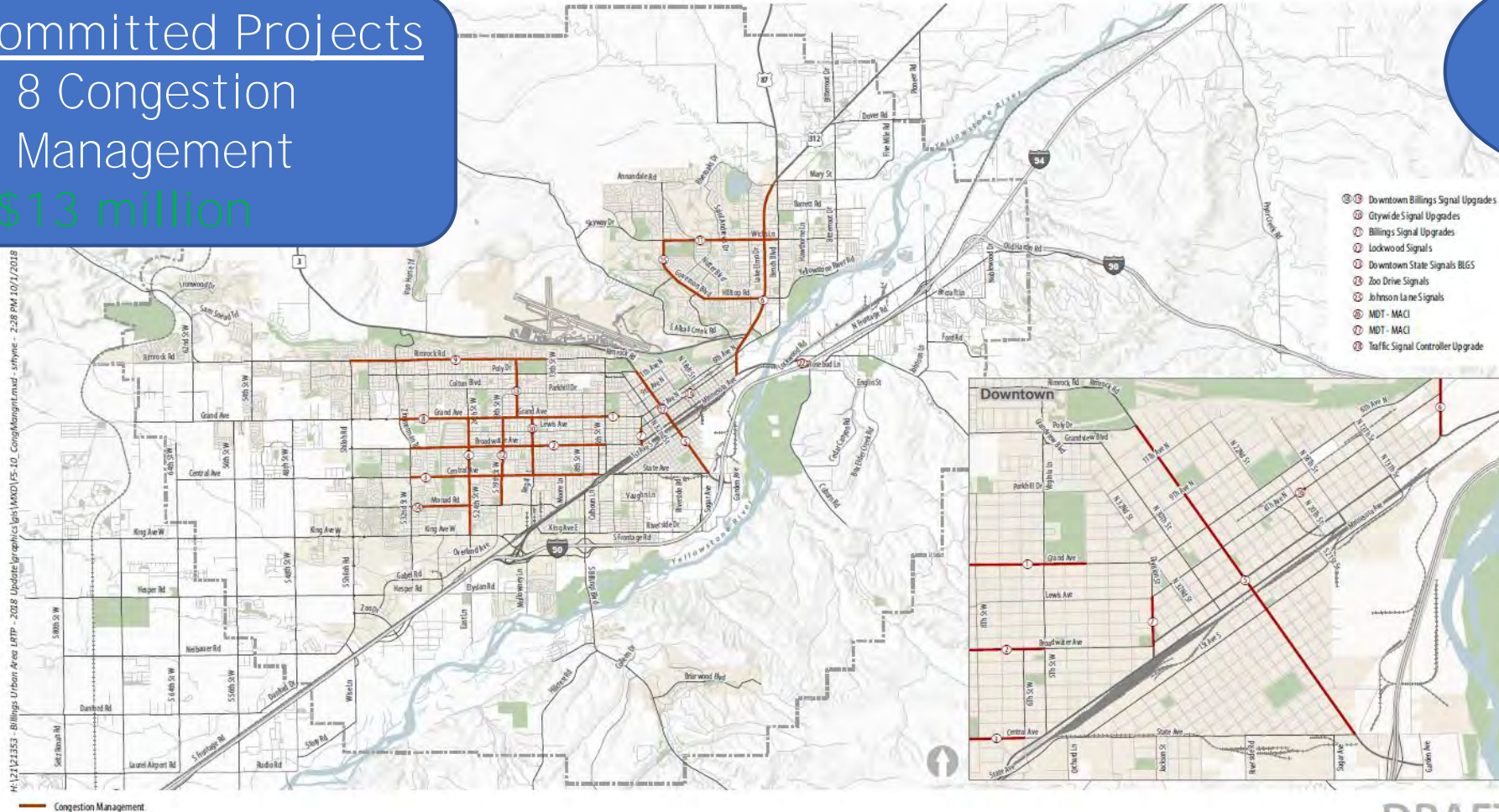


Draft Project List - Congestion Management Projects

Committed Projects

- 8 Congestion Management
~\$13 million

28 Total Projects



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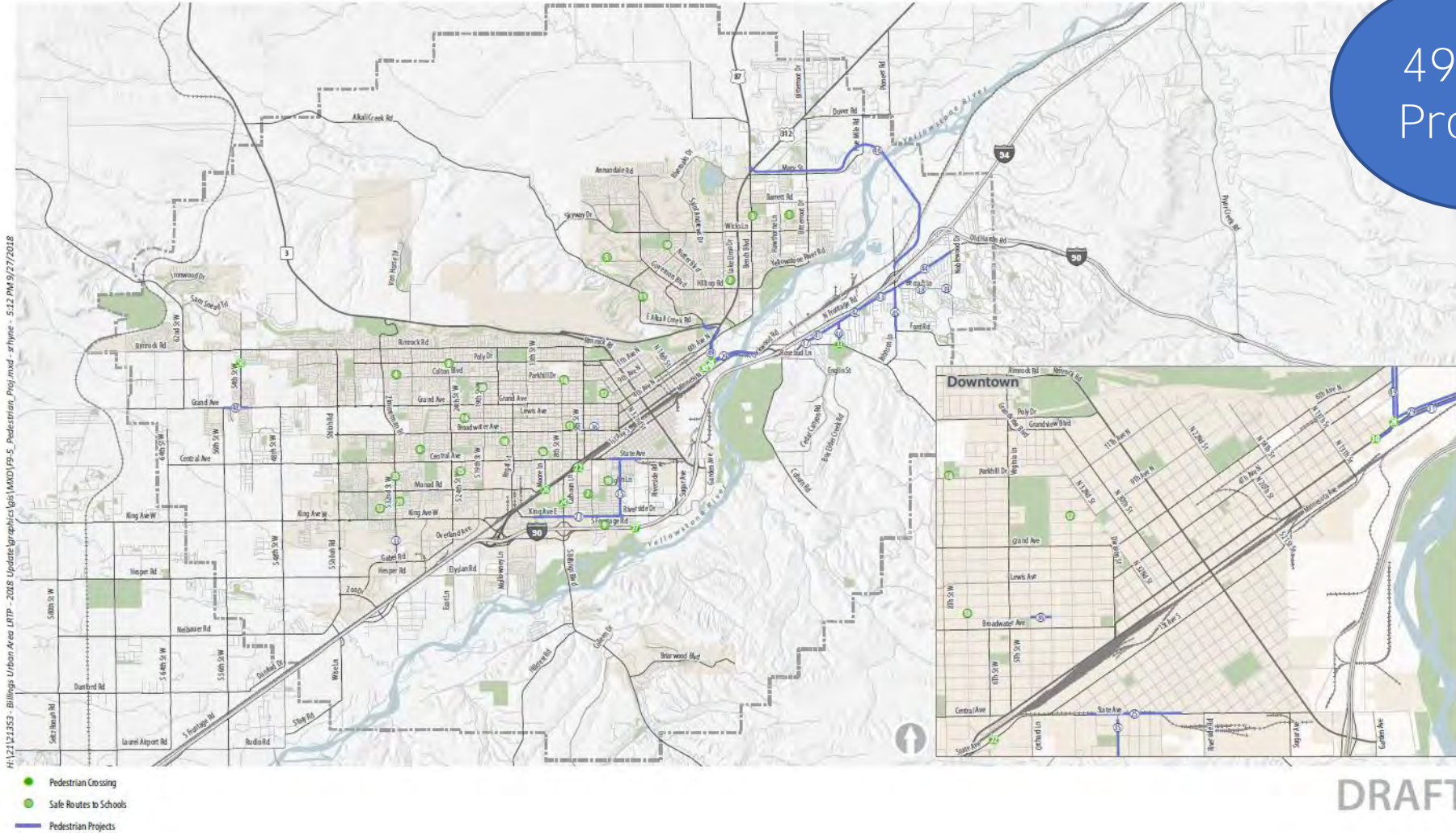
Figure 5-10
Congestion Management Projects

Draft Project List - Pedestrian, Bicycle, & Multi-use Trail Projects



Draft Project List - Pedestrian Projects

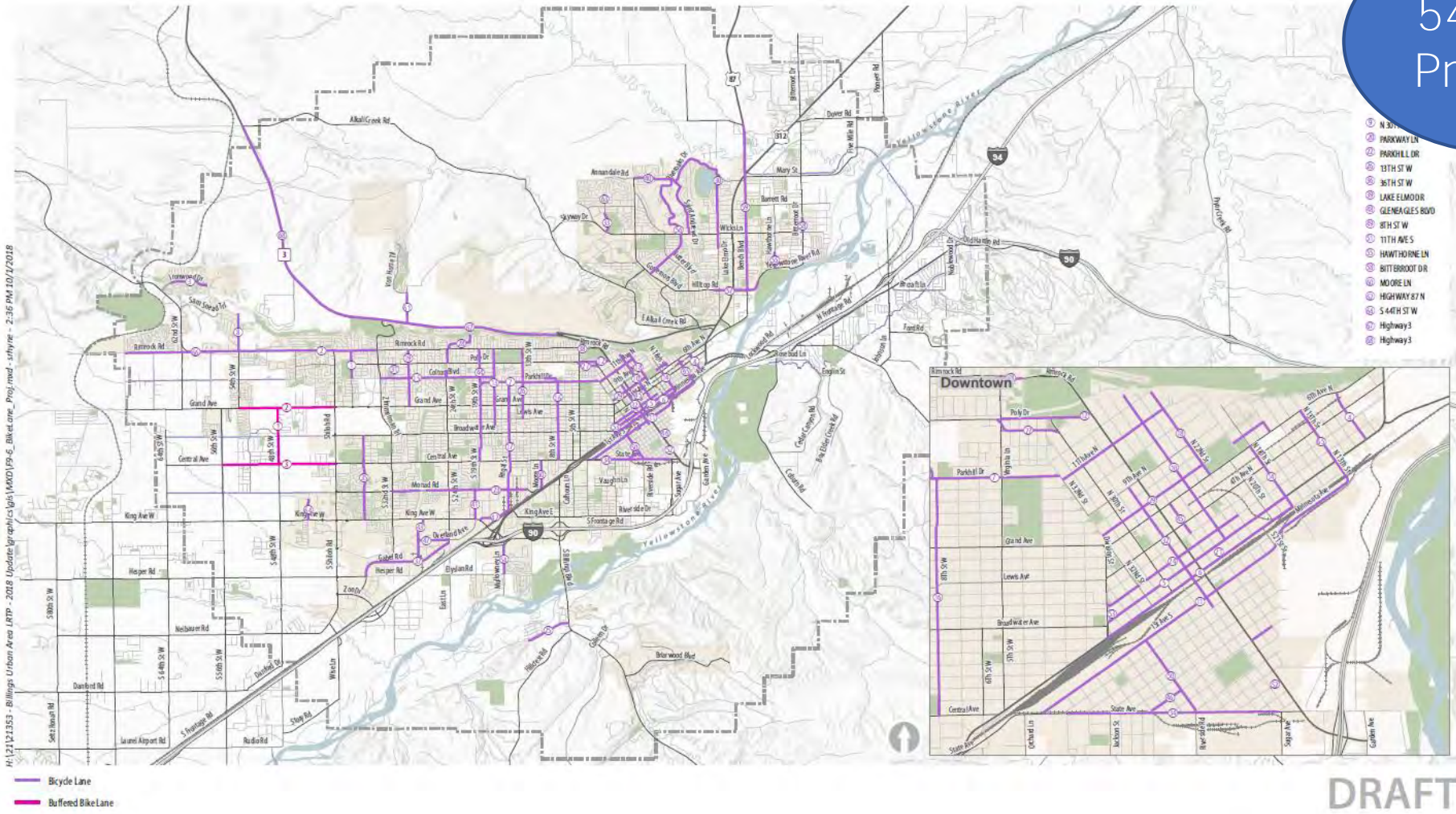
49 Total Projects



DRAFT
Figure 9-5
Pedestrian Projects

Draft Project List - Bicycle Lane Projects

54 Total Projects

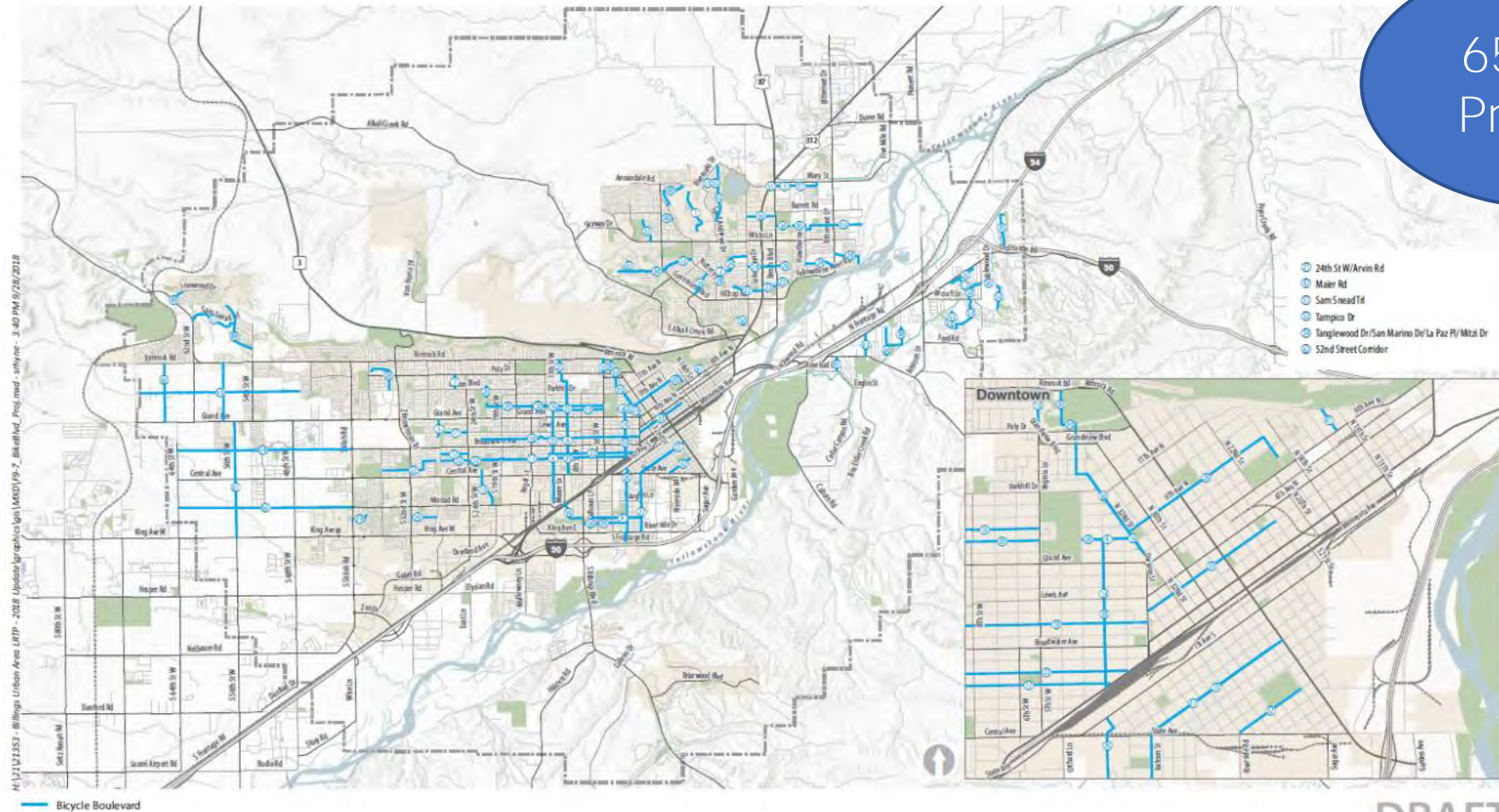


M:\12121353 - Billings Urban Area RTP - 2018 Update\graphics\fig9-6_BikeLanes_Proj.mxd - rhyne - 2:36 PM 10/11/2018

Figure 9-6
Bicycle Lane and Buffered Bike Projects

Draft Project List - Bicycle Boulevard Projects

65 Total Projects



DRAFT

Figure 9-7
Bicycle Boulevard Projects

Draft Project List - Pedestrian, Bicyclists, & Multi-use Trails

Committed Projects

- 8 Pedestrian* (includes two annual programs)
 - 2 Bike Lane*
 - 9 Multi-use Trail
- ~\$19 million

276 Total Projects

- 49 - Pedestrian
- 54 - Bicycle Lane
- 65 - Bicycle Boulevard
- 108 - Multi-use Trail

PROJECT ID#	Proposed Name	Length (Miles)	Project Description	Estimated Planning Level Cost
MT00	Four Dances Connector	1	Construct a multi-use trail from Lockwood Trail to Four Dances Natural Area	\$400,000
MT01	Highway 88/89	1	Construct a multi-use trail from Aronson Ave to Lake Simo State Park	\$2,140,198
MT06	Highway Upper Loop	4.5	Construct a multi-use trail from Yellowstone River to Alkali Creek Rd	\$4,710,250
MT07	High Ditch	4	Construct a multi-use trail from Rimrock West Trail to Hogans Slough	\$2,100,188
MT08	Hogans Slough	8.8	Construct a multi-use trail from Shilon Rd to SHRP Rail with Trail	\$8,014,180
MT09	Inner Belt Loop	8.5	Construct a multi-use trail from Governors Blvd to Highway 3	\$5,937,010
MT10	Long Avenue	1.1	Construct a multi-use trail from E 54th St W to Hogans Slough	\$910,180
MT21	Lockwood	6	Construct a multi-use trail from Interstate 90 to Highway 312	\$5,480,000
MT22	Monad	1.1	Construct a multi-use trail from S 48th St W to Hogans Slough	\$118,300
MT23	Monad	2.8	Construct a multi-use trail from BBWA Canal Trail to 48th St W	\$2,288,474
MT24	MBL Rail with Trail	9	Construct a multi-use trail from Interstate 90 to Highway 312	\$8,250,268
MT25	Herberg Ranch	8	Construct a multi-use trail from Expansion of Existing Trail to Inner Belt Loop	\$410,380
MT26	Rimrock Road	1.5	Construct a multi-use trail from 54th St W to Cooke Ditch	\$1,373,084
MT27	Sonnet Park	1.1	Construct a multi-use trail from Aronson Ave to Inner Belt Loop Trail	\$118,300
MT28	Shaw Ditch	2	Construct a multi-use trail from Shishou Rd to Big Ditch	\$1,098,060
MT29	Slough/Hogans Slough	1	Construct a multi-use trail from Suburban Ditch to MRL Rail with Trail	\$910,380
MT30	Spring Creek Extension	1	Construct a multi-use trail from 24th St W to 10th St W	\$910,380
MT31	Transit Connector	0.5	Bring M/Cal trail segment up to standards and complete connection to Transitway Lender Trail at 32nd Street West	\$480,000
MT32	Two Moon Park to Five Mile Creek	3	Construct a multi-use trail from Kiewits Trail to Five Mile Creek	\$2,740,169
MT33	Western Yellowstone River Trail	8	Construct a multi-use trail from Josephine Crossing Trail to Shilon Rd Trail	\$4,868,948
MT34	Riverfront Park	2.8	Construct a multi-use trail from Mystic Park Trail to Riverfront Park Trails	\$1,920,000
MT35	25th Street Railroad Bridge	0.1	Construct a multi-use trail from Montana Avenue to Minnesota Avenue	\$1,700,000
MT36	BBWA to Swords Park Trail	5.5	Construct a multi-use trail from Alkali Park to Aronson Ave	\$5,028,643
MT37	Rim Trail from 27th Street West/ Airport Road to Zimmerman Trail vicinity	3.5	New trail along the Ruts resulting from Highway 3 corridor study	\$1,820,000
MT38	Downtown BBWA Corridor Trail/Con-Street Facilities	1.5	Complete Trail through MSU-B Campus in alignment with MSU-B Master Plan and trail to downtown facilities along Poly Dr through Virginia Lane Intersection to 18th Poly Drive	\$210,000
MT39	34th Street Fackelman Bridge	0.25	Construct a multi-use bridge to cross the tracks near 34th Street	\$1,000,000
MT40	44th Street West	0.5	Construct a multi-use bike/pedestrian path along 44th Street from Shiloh Conservation Area to King Avenue West	\$110,000
MT41	Highly Middle School Path	0.25	Construct a trail from the Kiewits Trail to New Heights Middle School near Bench and Barrett	\$131,250
MT42	6th Avenue N		Multi-use Trail from 5th Avenue Bypass to N 10th St	\$1,060,000
MT43	BBWA Canal Trail		Multi-use Trail from 5th Avenue N to Transach Way	\$6,116,000
MT44	Montana Ave/ Lincolnpark Ave		Multi-use Trail from Division St to S Billings Blvd	\$1,500,000
MT45	Wicks Ln		Multi-use Trail from Glenview Blvd to Kiewits Trail	\$2,010,000
MT46	Rosebud Ln		Multi-use Trail from Highway 87F to West of Rosebud Ln	\$2,160,000
MT47	N 27th St		Multi-use Trail from Rimrock Rd to Mountain View Blvd	\$170,000
MT48	Crane Ave		Multi-use Trail from 24th St W to Zimmerman Tr	\$674,000
MT49	Hesper Rd		Multi-use Trail from East of Shilon Rd to S Shiloh Rd	\$181,000
MT50	Highway 87E		Multi-use Trail from Johnson Ln to Old Hardin Rd	\$82,800
MT51	24th		Multi-use Trail from Stillwater to South of King Ave W	\$332,000
MT52	Broadwater Ave		Multi-use Trail from 24th St W to 38th St W	\$925,000
MT53	1st Ave/Old Hardin Rd/Highway 87E		Multi-use Trail from N 13th St to Hogan Rd	\$6,168,000
MT54	BBWA Canal Trail North		Multi-use Trail from East of Shadow Heights to Aronson Ave	\$3,337,000
MT55	25th St Trail		Multi-use Trail from S 25th St to S 27th St	\$177,000
MT56	Gabel Rd		Multi-use Trail from Hegar Rd to 20th Rd	\$117,000
MT57	South of Emerald Dr/ward Ln		Multi-use Trail from Emerald Dr to Sword Lane	\$540,000
MT58	Rimrock Rd		Multi-use Trail from 54th St W to 66th St W	\$855,000
MT59	King Ave E		Multi-use Trail from Sugar Ave to King Ave W	\$1,247,000
MT60	King Ave/Wyland Rd		Multi-use Trail from S 20th St W to S Frontage Rd	\$2,796,000
MT61	Arnold Drain Trail		Multi-use Trail from 18th St W to 25th St W	\$849,000
MT62	Chrysis Acres		Multi-use Trail from Von Buron St to Holloway Ln	\$75,000
MT63	Suburban Ditch Trail		Multi-use Trail from Songbird Dr to Muldowney Ln	\$526,000
MT64	Falcon Ridge		Multi-use Trail unspecified	\$200,000
MT65	Kiewits Trail Corridor		Multi-use Trail from Sitteroot Dr to Mary St	\$558,000
MT66	Highway 87 Bypass		Multi-use Trail from Roundup Rd to Johnson Ln	\$6,747,000
MT67	Jim Ditcher Trail		Multi-use Trail from South of Mary St to E&F St	\$1,479,000
MT68	Muldowney Ln		Multi-use Trail from S Frontage Rd to Stacy Rd	\$142,000
MT69	Sierra Park Trail		Multi-use Trail from High Sierra Blvd to Alkali Creek Rd	\$1,795,000

Draft Projects and Strategies - Other Modes

Transit

- *Increase funding* through federal or local sources
- Improve equipment and facilities
- All-day fixed route service to Billings Heights by 2020
- Vehicle tracking and automatic fare collection by 2025
- Designated fixed-route bus stops by 2025

Truck

- Major roadway projects:
 - *Billings Bypass*
 - *I-90 Yellowstone River Bridge*
 - *Inner Belt Loop*
- Widening and reconstructions throughout the Billings Urban Area

Rail

- *Crossing studies* at 27th Street and Moore Lane
- *Improve underpasses* at 21st Street and 13th Street
- Coordinate rail infrastructure improvements with Lockwood

Revenue & Project Cost Analysis - Fiscal Constraint

Estimated Revenue ~ \$900M
 Estimated C+R Projects ~ \$800M
 Difference ~ \$100M

Funding Source	2019-2028			2029-2040		
	Projected Funding	Expenditures	Difference	Projected Funding + Carryover	Expenditures	Difference
FEDERAL						
National Highway Performance Program	\$ 258,620,000	\$ 241,529,142	\$ 17,090,858	\$ 77,344,858	\$ 47,041,000	\$ 30,303,858
Highway Safety Improvement Program (HSIP)	\$ 21,530,000	\$ 19,908,244	\$ 1,621,756	\$ 19,051,756	\$ 17,935,000	\$ 1,116,756
Surface Transportation Improvement Program	\$ 39,610,000	\$ 30,095,611	\$ 9,514,389	\$ 54,639,000	\$ 46,734,301	\$ 7,904,699
Congestion Mitigation and Air Quality Improvement Program (CMAQ)	\$ 37,870,000	\$ 28,393,611	\$ 9,476,389	\$ 54,916,389	\$ 12,920,877	\$ 41,995,512
Federal Transit Authority (FTA) Funds	\$ 24,240,000	\$ 23,817,028	\$ 422,972	\$ 29,522,972	\$ 29,100,000	\$ 422,972
STATE AND LOCAL						
TransADE	\$ 730,000	\$ 700,000	\$ 30,000	\$ 900,000	\$ 870,000	\$ 30,000
Operations and Maintenance (State)	\$ 14,720,000	\$ 14,720,000	\$ -	\$ 17,670,000	\$ 17,670,000	\$ -
State Fuel Tax	\$ 21,510,000	\$ 17,005,684	\$ 4,504,316	\$ 30,304,316	\$ 23,196,000	\$ 7,108,316
HB473 Gas Tax Funds (BaRSAA)	\$ 7,990,000	\$ 6,344,316	\$ 1,645,684	\$ 11,225,684	\$ 8,404,000	\$ 2,821,684
Other (Private, Bonds, TIF, CDBG, etc.)	\$ 34,340,000	\$ 22,954,144	\$ 11,385,856	\$ 52,595,856	\$ 40,574,737	\$ 12,021,119
Local Transit Mill Levy	\$ 21,360,000	\$ 21,360,000	\$ -	\$ 25,640,000	\$ 25,640,000	\$ -
Transit Fares	\$ 5,890,000	\$ 5,890,000	\$ -	\$ 7,060,000	\$ 7,060,000	\$ -
Other (Transit)	\$ 1,590,000	\$ 1,590,000	\$ -	\$ 1,910,000	\$ 1,910,000	\$ -
Arterial Fee Fund	\$ 44,970,000	\$ 20,970,000	\$ 24,000,000	\$ 53,960,000	\$ 53,882,814	\$ 77,186
Total	\$ 534,970,000	\$ 455,277,780	\$ 79,692,220	\$ 436,740,831	\$ 332,938,729	\$ 103,802,102

What is next?

- ▶ Draft Plan is available for review and comment
 - ▶ www.Billingslrtp.com
- ▶ Plan adoption schedule
 - ▶ TAC Meeting - October 4th (completed)
 - ▶ Yellowstone County BOCC - October 9th (completed)
 - ▶ Yellowstone County Board of Planning - October 10th (completed)
 - ▶ Billings City Council - October 15th (completed)
 - ▶ Yellowstone County BOCC - October 16th (completed)
 - ▶ Billings City Council - October 22nd
 - ▶ Yellowstone County Board of Planning - October 23rd
 - ▶ Policy Coordinating Committee - October 30th (Plan adoption)

Thank You For Your Time

▶ Questions?



Appendix V

Safety Performance Report



Safety Performance Report

The adopted statewide safety targets and 2017 baseline safety data for the Billings urban area are summarized in the table below.

Safety Performance Targets* and Baseline Data for Billings Urban Area

Performance Measure	2019 Target 5-Year Average	2017 Baseline for Billings Urban Area**
Number of Fatalities	187.4	5
Fatality Rate	1.462	0.551
Number of Serious Injuries	892.8	51
Serious Injury Rate	6.968	5.618
Number of combined non-motorized fatalities and non-motorized serious injuries	73.2	7

* Safety performance targets are statewide totals or rates for 2018. Targets are based on a rolling 5-year average and determined annually.

**based on a 2017 daily vehicle-miles travel (VMT) of 2,487,155 (Source: MDT)



Appendix W

Funding Programs



Funding Programs

Introduction

MDT administers a number of programs that are funded from State and Federal sources. Each year, in accordance with 60-2-127, Montana Code Annotated (MCA), the Montana Transportation Commission allocates a portion of available Federal-aid highway funds for construction purposes and for projects located on the various systems in the state as described throughout this document

The Fixing America's Surface Transportation Act (FAST Act) was signed into law on December 4, 2015, and authorizes federal transportation funding for federal fiscal years 2016 through 2020

1. Federal Funding Sources

The following sections summarize relevant federal transportation funding categories received by the state through Titles 23 & 49 of the U.S. Code., including state developed implementation/sub-programs that may be potential sources for projects. To receive project funding under these programs, projects must be included in the STIP, where relevant.

1.1 National Highway Performance Program (NHPP)

The National Highway Performance Program (NHPP) funds are federally apportioned for the National Highway System roads and bridges, which includes the Interstate and non-Interstate NHS routes. The purpose of the National Highway System (NHS) is to provide an interconnected system of principal arterial routes which will serve major population centers, international border crossings, intermodal transportation facilities and other major travel destinations; meet national defense requirement; and serve interstate and interregional travel. The National Highway System includes all Interstate routes, a large percentage of urban and rural principal arterials, the defense strategic highway network, and strategic highway connectors.

Allocations and Matching Requirements

NHPP funds are Federally-apportioned to Montana and allocated to Districts by the Montana Transportation Commission. Based on system performance, the funds are allocated to three programs; Interstate Maintenance, National Highway, and NHPP Bridge (see 2.1.1 – 2.1.3).

Eligibility and Planning Considerations

Activities eligible for NH funding include construction, reconstruction, resurfacing, restoration, and rehabilitation of NH segments. Construction, replacement, rehabilitation, preservation and protection of bridges on the National Highway System; and projects or part of a program supporting national goals for improving infrastructure condition, safety, mobility, or freight movements on the National Highway System. Reconstruction, resurfacing, restoration, rehabilitation, or preservation of a bridge on a non-NHS Federal-aid highway so long as bridge condition provision requirements are satisfied. Operational improvements, projects to reduce risk of failure of critical infrastructure, as well as highway safety improvements are also eligible. Other miscellaneous activities that may qualify for NH funding include bikeways and pedestrian walkways, environmental mitigation, restoration and pollution control, infrastructure based intelligent transportation systems, vehicle-to-infrastructure communication equipment, traffic and traveler monitoring and control, and construction of intra or inter-city bus

terminals serving the National Highway System. The Transportation Commission establishes priorities for the use of National Highway Performance Program funds and projects are let through a competitive bidding process.

The MDT Billings District is anticipated to receive an average annual NH apportionment of approximately \$105 million during the next five years. Current Billings District priorities already under development total an estimated construction cost of \$107 million. Eligible NH funding is currently committed through federal fiscal year (FFY) 2022 as documented in the 2018-2022 STIP. Unfunded Billings District projects total approximately \$73 million.

1.1.1 Interstate Maintenance

The Commission approves and awards projects for improvements on the Interstate Highway System which are let through a competitive bidding process. The IM Program finances highway and bridge projects to rehabilitate, restore, resurface, and reconstruct the Interstate System. MDT districts are allocated IM funds by Montana's Transportation Commission based on system performance. The federal share for this program is 91.24% and the State is responsible for the remaining 8.76%. The State share is funded through the Highway State Special Revenue Account (HSSRA).

1.1.2 National Highway

The Federal share for non-Interstate NHS projects is 86.58% and the State is responsible for the remaining 13.42%. The State share is funded through the HSSRA .

1.1.3 NHPP Bridge (NHPB)

Federal funds under this program are used to finance bridge inspection, improvement, and replacement projects on Interstate and non-Interstate National Highway System routes. NHPB program funding is established at the discretion of the state. However, Title 23 U.S.C. establishes minimum standards for NHS bridge conditions. If more than 10% of the total deck area of NHS bridges in a state is on structurally deficient bridges for three consecutive years, the state must direct NHPB funds equal to 50% of the state's FY 2009 Highway Bridge Program to improve bridges each year until the state's NHS bridge condition meets the minimum standard.

1.2 Surface Transportation Block Grant Program (STBG)

Surface Transportation Block Grant Program (STBG) funds are federally apportioned to Montana and allocated by the Montana Transportation Commission to various programs including the Surface Transportation Program Primary Highways (STPP), Surface Transportation Program Secondary Highways (STPS), the Surface Transportation Program Urban Highways (STPU), and the Surface Transportation Program – Bridge Program (STPB), as well as set-asides for programs including Transportation Alternatives (TA) and Recreational Trails. The Federal share for these projects is 86.58% with the non-Federal share typically funded through HSSRA.

The Montana Transportation Commission establishes priorities for the use of STBG funds and projects are let through a competitive bidding process.

1.2.1 Primary Highway System (STPP)¹

The Federal and State funds available under this program are used to finance transportation projects on the state-designated Primary Highway System. The Primary Highway System includes highways that have been functionally classified by MDT and FHWA as either principal or minor arterials and that have been selected by the Montana Transportation Commission to be placed on the primary highway system [MCA 60-2-125(3)].

Allocations and Matching Requirements

Primary funds are distributed statewide (MCA 60-3-205) to each of five financial districts. The Commission distributes STPP funding based on system performance. The federal share for this program is 86.58% and the State is responsible for the remaining 13.42%. The State share is funded through the HSSRA .

Eligibility and Planning Considerations

STP Primary funds are eligible for a wide range of transportation improvement projects and activities, ranging from roadway reconstruction and rehabilitation, to bridge construction and inspection, to highway and transit safety infrastructure, environmental mitigation, carpooling, vehicle-to-infrastructure communication equipment and bicycle and pedestrian transportation facilities.

1.2.2 Secondary Highway System (STPS)²

The Federal and State funds available under this program are used to finance transportation projects on the state-designated Secondary Highway System. The Secondary Highway System includes any highway that is not classified as a local route or rural minor collector and that has been selected by the Montana Transportation Commission to be placed on the Secondary Highway System. Funding is distributed by formula and is utilized to resurface, rehabilitate and reconstruct roadways and bridges on the Secondary System.

Allocations and Matching Requirements

Secondary funds are distributed statewide (MCA 60-3-206) to each of five financial districts, based on a formula, which takes into account the land area, population, road mileage and bridge square footage. Federal funds for secondary highways must be matched by non-Federal funds. The federal share for this program is 86.58% and the State is responsible for the remaining 13.42%. Normally, the match on these funds is from the HSSRA.

Eligibility and Planning Considerations

¹ State funding program developed to distribute Federal funding within Montana.

² State funding program developed to distribute Federal funding within Montana.

Eligible activities for the use of Secondary funds fall under three major types of improvements: Reconstruction, Rehabilitation, and Pavement Preservation in addition to vehicle-to-infrastructure communication equipment. The Reconstruction and Rehabilitation categories are allocated at 65% of the program funds with the remaining 35% dedicated to Pavement Preservation. Priorities are identified in consultation with the appropriate local government authorizes and approved by the Montana Transportation Commission.

1.2.3 Urban Highway System (STPU)³

The Federal and state funds available under this program are used to finance transportation projects on Montana’s Urban Highway System, as per MCA 60-3-211. STPU allocations are based on a per capita distribution and are recalculated each decade following the census.

Allocations and Matching Requirements

State law guides the allocation of Urban funds to Montana’s urban areas (population of 5,000 or greater) through a statutory formula based on each area’s population compared to the total population in all urban areas. The federal share for this program is 86.58% and the State is responsible for the remaining 13.42%. The State share is funded through the HSSRA.

Montana’s urban areas are as follows:

Anaconda	Columbia Falls	Helena	Miles City
Belgrade	Kalispell	Glendive	Missoula
Billings	Great Falls	Laurel	Sidney
Bozeman	Hamilton	Lewistown	Whitefish
Butte	Havre	Livingston	

Eligibility and Planning Considerations

Urban funds are eligible for rehabilitation, resurfacing, new construction, reconstruction of existing facilities, operational improvements, vehicle-to-infrastructure communication equipment, bicycle facilities, pedestrian walkways, carpool projects and traffic operation projects on the 430 miles on the State-designated Urban Highway System. Priorities for the use of Urban funds are established at the local level through local planning processes with final approval by the Transportation Commission.

³ State funding program developed to distribute Federal funding within Montana.

1.2.4 Bridge Program (STPB)

The Federal and state funds available under this program are used to finance bridge projects for on-system and off-system routes in Montana. Title 23 U.S.C. requires that a minimum amount (equal to 15 percent of Montana’s 2009 Federal Bridge Program apportionment) be set aside for off-system bridge projects. The remainder of the Bridge Program funding is established at the discretion of the state. Bridge Program funds are primarily used for bridge rehabilitation or reconstruction activities on Primary, Secondary, Urban or off-system routes. Projects are identified based on bridge condition and performance metrics.

1.2.5 Urban Pavement Preservation Program (UPP)⁴

The Urban Pavement Preservation Program (UPP) is a sub-allocation of the larger Surface Transportation Program that provides funding to urban areas with qualifying Pavement Management Systems (as determined jointly by MDT and FHWA). This sub-allocation is approved annually by the Transportation Commission and provides opportunities for pavement preservation work on urban routes (based on system needs identified by the local Pavement Management Systems).

1.2.6 Set-Aside (Previously “Transportation Alternatives (TA) Program” under MAP-21)

The Set-Aside Program (TA) requires MDT to obligate 50% of the funds within the state based on population, using a competitive process, while the other 50% may be obligated in any area of the state. The Federal share for this program is 86.58% and the State is responsible for the remaining 13.42%. The State share is funded through the HSSRA if the project is on-system, the sponsor provides the match if the project is off-system.

Funds may be obligated for projects submitted by:

- Local governments
- Transit agencies
- Natural resource or public land agencies
- School district, schools, or local education authority
- Tribal governments
- Other local government entities with responsibility for recreational trails for eligible use of these funds.

Eligibility and Planning Considerations

Eligible categories include:

- On-road and off-road trail facilities for pedestrians and bicyclists, including ADA improvements;
- Historic Preservation and rehabilitation of transportation facilities;

⁴ State funding program developed to distribute Federal funding within Montana.

- Archeological activities relating to impacts for a transportation project;
- Any environmental mitigation activity, including prevention and abatement to address highway related stormwater runoff and to reduce vehicle/animal collisions including habitat connectivity;
- Turnouts, overlooks, and viewing areas;
- Conversion/use of abandoned railroad corridors for trails for non-motorized users;
- Inventory, control, and removal of outdoor advertising;
- Vegetation management in transportation right of way for safety, erosion control, and controlling invasive species;
- Construction, maintenance, and restoration of trails and development and rehabilitation of trailside and trailhead facilities;
- Development and dissemination of publications and operation of trail safety and trail environmental protection programs;
- Educations funds for publications, monitoring, and patrol programs and for trail-related training;
- Planning, design, and construction of projects that will substantially improve the ability of students to walk and bicycle to school; and
- Non-infrastructure-related activities to encourage walking and bicycling to school, including public awareness campaigns, outreach to press and community leaders, traffic education and enforcement school vicinities, student sessions on bicycle and pedestrian safety, health, and environment, and funding for training.

Competitive Process

The State is required to allocate Transportation Alternative funds through a competitive process which allows eligible applicants an opportunity to submit projects for funding. MDT's process emphasizes safety, ADA, relationships to State and community planning efforts, existing community facilities, and project readiness.

1.3 National Highway Freight Program (NHFP)

The National Highway Freight Program was created by the FAST Act to invest in freight projects on the National Highway Freight Network. This program is apportioned to States by formula and a State must have a freight plan in place beginning FY 2018 in order to receive formula funding. This program provides funding for construction, operational improvements, freight planning, and performance measures. Up to 10% of these funds may be used for intermodal projects. Generally, the Federal share for this program is 91.24% and the State is responsible for the remaining 8.76%. The State share is typically funded through the HSSRA for projects on state highways and local governments provide the match for local projects.

1.4 Highway Safety Improvement Program (HSIP)

HSIP funds are apportioned to Montana for safety improvement projects approved by the Commission and are consistent with the strategic highway safety improvement plan. Projects described in the State

strategic highway safety plan must correct or improve a hazardous road location or feature, or address a highway safety problem. The Commission approves and awards the projects which are let through a competitive bidding process. Generally, the federal share for the HSIP projects is 90% and the State is responsible for the remaining 10%. Typically, the State share is funded through the HSSRA.

1.5 Congestion Mitigation and Air Quality Improvement Program (CMAQ)

Federal funds available under this program are used to finance transportation projects and programs to help improve air quality and meet the requirements of the Clean Air Act. Montana’s air pollution problems are attributed to CO and particulate matter (PM10).

Allocations and Matching Requirements

CMAQ funds are Federally-apportioned to Montana and allocated to various eligible programs by formula and by the Commission. As a minimum apportionment state a Federally-required formula based distribution of CMAQ funds goes to projects in Missoula since it was Montana’s only designated and classified air quality non-attainment area. The remaining, non-formula funds, referred to as “flexible CMAQ” is primarily directed to areas of the state with emerging air quality issues through various state programs. The Transportation Commission approves and awards all projects on MDT right-of-way. Infrastructure and capital equipment projects are let through a competitive bidding process. The federal share for this program is 86.58% and the State is responsible for the remaining 13.42%. The State share is funded through the HSSRA for projects on state highways and local governments provide the match for local projects.

Eligibility and Planning Considerations

In general, eligible activities include transit improvements, ADA upgrades, traffic signal synchronization, bicycle pedestrians projects, intersection improvements, travel demand management strategies, traffic flow improvements, air-quality equipment purchases, vehicle-to-infrastructure communication equipment, and public fleet conversions to cleaner fuels. At the project level, the use of CMAQ funds is not constrained to a particular system (i.e., Primary, Urban, and NHS). A requirement for the use of these funds is the estimation of the reduction in pollutants resulting from implementing and program/project. These estimates are reported yearly to FHWA.

- CMAQ (formula)

Mandatory CMAQ funds that come to Montana based on a Federal formula and are directed to Missoula, Montana’s only classified, moderate CO non-attainment area. Projects are prioritized through the Missoula Metropolitan planning process.

- Montana Air & Congestion Initiative (MACI)–Guaranteed Program (flexible)⁵

This is state program funded with flexible CMAQ funds that the Commission allocates annually to Billings and Great Falls to address carbon monoxide issues in these designated, but “not classified”, CO non-attainment areas. The air quality in these cities is roughly equivalent to Missoula. However, these cities

⁵ State funding program developed to distribute Federal funding within Montana.

are “not classified” so they do not get direct funding through the Federal formula. Projects are prioritized through the respective Billings and Great Falls Metropolitan planning processes.

- Montana Air & Congestion Initiative (MACI)–Discretionary Program (flexible)⁶

The MACI – Discretionary Program provides funding for projects in areas designated non-attainment or recognized as being “high-risk” for becoming non-attainment. Since 1998, MDT has used MACI-Discretionary funds to get ahead of the curve for CO and PM10 problems in non-attainment and high-risk communities across Montana. District Administrators and local governments nominate projects cooperatively. Projects are prioritized and selected based on air quality benefits and other factors. The most beneficial projects to address these pollutants have been sweepers and flushers, intersection improvements and signal synchronization projects.

1.6 Federal Lands Access Program (FLAP)

The Federal Lands Access Program was created by the “Moving Ahead for Progress in the 21st Century Act” (MAP-21) to improve access to Federal lands and is continued in the FAST Act. FHWA’s Western Federal Lands Division administers the program and MDT is an eligible applicant for the funds.

The program is directed towards Public Highways, Roads, Bridges, Trails, and Transit systems that are under State, county, town, township, tribal, municipal, or local government jurisdiction or maintenance and provide access to Federal lands. The Federal Lands Access Program funds improvements to transportation facilities that provide access to, are adjacent to, or are located within Federal lands. The program supplements State and local resources for public roads, transit systems, and other transportation facilities, with an emphasis on high-use recreation sites and economic generators. Program funds are subject to the overall Federal-aid obligation limitation. Funds are allocated among the states using a statutory formula based on road mileage, number of bridges, land area, and visitation.

Eligibility and Planning Considerations

The following activities are eligible for consideration on Federal Lands Access Transportation Facilities:

- 1) Preventive maintenance, rehabilitation, restoration, construction, and reconstruction.
- 2) Adjacent vehicular parking areas.
- 3) Acquisition of necessary scenic easements and scenic or historic sites.
- 4) Provisions for pedestrian and bicycles.
- 5) Environmental mitigation in or adjacent to Federal land to improve public safety and reduce vehicle-wildlife mortality while maintaining habitat connectivity.
- 6) Construction and reconstruction of roadside rest areas, including sanitary and water facilities.
- 7) Operation and maintenance of transit facilities.

Proposed projects must be located on a public highway, road, bridge, trail or transit system that is located on, is adjacent to, or provides access to Federal lands for which title or maintenance responsibility is vested in a State, county, town, township, tribal, municipal, or local government.

⁶ State funding program developed to distribute Federal funding within Montana.

Allocation and Matching Requirements

The federal share for this program is 86.58% and the State provides match for projects on state highways that address MDT identified infrastructure condition deficiencies; local governments provide the match for off-system projects. State share is funded through the HSSRA. Funding is authorized and allocated for each state under U.S.C. Title 23, Chapter 2, MAP-21, Division A, Title I, Subtitle A, Section 1119 distribution formula.

1.7 Congressionally-directed or Discretionary Funds

Congressionally-directed funds may be received through highway program authorization or annual appropriations processes. These funds are generally described as “demonstration” or “earmark” funds. Discretionary funds are typically awarded through a federal application process or Congressional direction. If a locally-sponsored project receives these types of funds, MDT will administer the funds in accordance with the Montana Transportation Commission Policy #5 – *“Policy resolution regarding Congressionally-directed funding: including Demonstration Projects, High Priority Projects, and Project Earmarks.”*

1.7.1 Nationally Significant Freight and Highway Projects

This program was also established by the FAST Act to create competitive grants or TIFA loans for projects >\$100 million. This is a discretionary freight-focused grant program that allows States, MPOs, local governments, tribal governments, special purpose districts and public authorities (including port authorities), and other parties to apply for funding to complete projects that improve safety and hold the greatest promise to eliminate freight bottlenecks and improve critical freight movements. Generally, the Federal share for this program is 91.24% and the State is responsible for the remaining 8.76%. The State provides match for projects on state highways that address MDT identified infrastructure condition deficiencies; local governments provide the match for off-system projects. The State share is typically funded through the HSSRA.

Eligible Activities

- Highway freight projects on the National Highway Freight Network
- NHS highway/bridge projects, projects in National Scenic Areas
- Freight rail/intermodal/port projects
- Rail-highway grade crossings or grade separation projects

1.8 Transit Capital & Operating Assistance Funding

The MDT Transit Section provides federal and state funding to eligible recipients through Federal and state programs. Federal funding is provided through the Section 5310 and Section 5311 transit programs and state funding is provided through the TransADE program. MAP-21 incorporated the JARC and New Freedoms Programs into the Section 5311 and 5310 programs, respectively. It also created a new bus and bus facilities discretionary formula program (Section 5339) for fixed route bus operators. All projects funded must be derived from a locally developed, coordinated public transit-human services transportation plan (a “coordinated plan”).

The coordinated plan must be developed through a process that includes representatives of public, private, and nonprofit transportation and human service providers and participation from the public.

1.8.1 Bus and Bus Facilities (Section 5339)

This program provides capital funding to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities. Federal funds pay 80 percent of capital costs. The remaining 20 percent must come from the local recipient. Funds are eligible to be transferred by the state to supplement urban and rural formula grant programs (5307 and 5311, respectively).

1.8.2 Enhanced Mobility of Seniors and Individuals with Disabilities (Section 5310)

Section 5310 authorizes capital grants to eligible organizations to assist in providing transportation for the elderly and/or persons with disabilities. Federal Transit Administration (FTA) funds 80 percent of all costs for equipment, with 20 percent match provided by the local recipient. Eligible recipients for this program are private, nonprofit organizations; public bodies approved by the State to coordinate services for elderly persons and persons with disabilities; or public bodies which certify to the Governor that no nonprofit organization is readily available in a service area to provide this transportation service. Ten percent of the state's Section 5310 apportionment can be used to administer the program, to plan, and to provide technical assistance.

1.8.3 Formula Grants for Rural Areas (Section 5311)

This program enhances the access of people in non-urbanized (<50,000 population) areas by providing public transportation. Federal funds pay 86.58 percent of capital costs and 54.11 percent of deficit operating costs, 80 percent of administrative costs, and 80 percent of maintenance costs. The remaining 13.42, 45.89, 20, and 20 percent respectively must come from the local recipient. Eligible recipients of these funds can be a state agency, a local public body, a nonprofit agency, or an operator of public transportation services. Ten percent of the state's Section 5311 apportionment is dedicated to carry out a program to develop and support intercity bus transportation.

1.8.4 Urbanized Area Formula Grants (Section 5307)

This program enhances the access of people in urbanized areas by providing public transportation. Federal funds pay 80 percent of capital costs and 50 percent of deficit operating costs. The remaining 20 and 50 percent respectively must come from the local recipient. The designated recipient of Section 5307 funds is the Governor who in turn can designate the funds to a public body. In Montana, the Governor has designated Missoula, Great Falls, and Billings as the recipients of the Section 5307 funds.

2.0 State Funding Sources

2.1 Rail/Loan Funds

Administration and Matching Requirements

The Montana Rail Freight Loan Program (MRFL) is a revolving loan fund administered by the Montana Department of Transportation to encourage projects for construction, reconstruction, or rehabilitation of railroads and related facilities in the State and implements MCA 60-11-113 to MCA 60-11-115. Loans are targeted to rehabilitation and improvement of railroads and their attendant facilities, including sidings, yards, buildings, and intermodal facilities. Rehabilitation and improvement assistance projects require a 30 percent loan-to value match. Facility construction assistance projects require a 50 percent match.

Eligibility and Planning Consideration

Eligible applicants for loans under the program include railroads, cities, counties, companies, and regional rail authorities. Port authorities may also qualify, provided they have been included in the state transportation planning process. Projects must be integrally related to the railroad transportation system in the State and demonstrate that they will preserve and enhance cost-effective rail service to Montana communities and businesses.

2.2 TransADE

The TransADE grant program offers operating assistance to eligible organizations providing transportation to the elderly and persons with disabilities.

Allocations and Matching Requirements

This is a state funding program within Montana statute. State funds pay 54.11 percent of deficit operating costs, 80 percent of administrative costs, and 80 percent of maintenance costs. The remaining 45.89, 20, and 20 percent respectively must come from the local recipient. Applicants are also eligible to use this funding as match for the federal transit grant programs.

Eligibility and Planning Considerations

Eligible recipients of this funding are counties, incorporated cities and towns, transportation districts, or non-profit organizations. Applications are due to the MDT Transit Section by the first working day of March each year. To receive this funding the applicant is required by state law (MCA 7-14-112) to develop a strong, coordinated system in their community and/or service area.

2.3 State Funds for Transit Subsidies

The 46th Montana Legislature amended Section 7-14-102 MCA providing funds to offset up to 50 percent of the expenditures of a municipality or urban transportation district for public transportation. The allocation to operators of transit systems is based on the ratio of its local support for public transportation to the total financial support for all general purpose transportation systems in the State. Local support is defined as:

$$\text{Local Support} = \frac{\text{Expenditure for public transportation operations}}{\text{Mill value of City or urban transportation district}}$$

2.4 State Fuel Tax – Allocations to Locals

The State of Montana assesses a tax on each gallon of gasoline and clear diesel fuel sold in the state and used for transportation purposes. According to State law, each incorporated city and town within the State receives an allocation of the total tax funds based upon:

- 1) the ratio of the population within each city and town to the total population in all cities and towns in the State, and
- 2) the ratio of the street mileage within each city and town to the total street mileage in all incorporated cities and towns in the State. (The street mileage is exclusive of the Federal-Aid Interstate and Primary Systems.)

State law also establishes that each county be allocated a percentage of the total tax funds based upon:

- 1) the ratio of the rural population of each county to the total rural population in the state, excluding the population of all incorporated cities or towns within the county and State;
- 2) the ratio of the rural road mileage in each county to the total rural road mileage in the State, less the certified mileage of all cities or towns within the county and State; and
- 3) the ratio of the land area in each county to the total land area of the State.

Effective July 1, 2017, HB473, the Bridge and Road Safety and Accountability Act (BaRSAA) incrementally increases Montana’s fuel tax rate for gasoline and for special fuel. HB473 directs the fuel tax rate increase each biennium, until 2023, at the following increments:

DATE	STATE GAS RATE	STATE DIESEL RATE
July 1, 2017	0.315	0.2925
July 1, 2019	0.32	0.2945
July 1, 2021	0.325	0.2955
July 1, 2023	0.33	0.2975

A portion of the revenue generated by the increase will be allocated to local governments in addition to the existing fuel tax distributions provided for in MCA 15-70-101 and 7-14-102(2). BaRSAA funds are allocated in the same proportion and using the same ratios provided for in MCA 15-70-101(2)(b), (2)(c), and (3). Allocations are calculated based upon the statutory formula.

Local governments can use BaRSAA funds for the construction, reconstruction, maintenance, and repair of rural roads or city streets and alleys the local government has the responsibility to maintain which does not include the purchase of capital equipment. Funds may also be used to match federal funds used for the construction of roads and streets that are part of the national, primary, secondary or urban highway systems; or road and streets a local government has the responsibility to maintain.

Beginning March 1, 2018, local governments may request distribution of their allocation from MDT. Local governments must match each \$20 requested for distribution with at least \$1 of local government budgeted matching funds. Local governments can request distributions of allocated funds between March 1 – November 1 of the calendar year the funds were allocated. Reservation requests can be made between September 1st and November 1st.

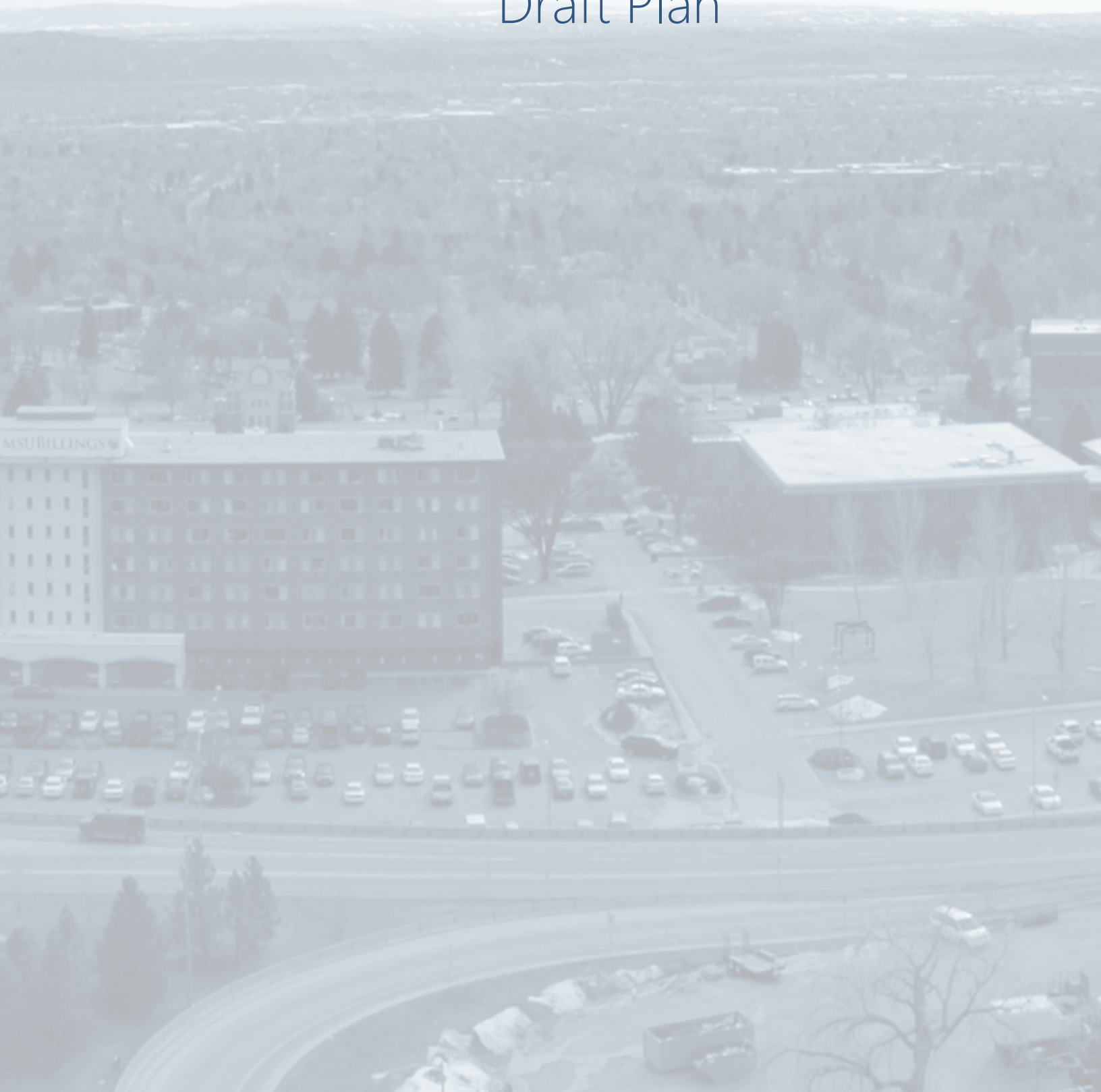
For State Fiscal Year 2018, the City of Billings will receive \$1,762,188.88, and Yellowstone County will receive \$301,921.41 from MCA 15-70-101 and \$3,590.88 from MCA 7-14-102(2) for a total of \$305,512.29 in State fuel tax funds. The amount varies annually. For calendar year 2018, the City of Billings will be allocated \$655,684.20 and Yellowstone County will be allocated \$112,344.92 in BaRSAA funds.

Priorities for the use of these funds are established by each jurisdiction.



Appendix X

Comment Summary Response Matrix on Draft Plan



Comments Received on the DRAFT Billings Urban Area Long Range Transportation Plan from October 3, 2018 to December 12, 2018

We sent out the DRAFT Plan to the stakeholders and agencies on September 13, 2018. A revised Draft Plan was posted to the public project website on October 3, 2018 after the public meeting on September 25, 2018. We addressed the comments and sent out a Final Draft Plan to the stakeholders and agencies and posted to the public project website on December 3, 2018. This table summarizes the comments submitted on the Draft and Final Draft LRTPs and how these were addressed in the plan or via a response.

No.	Date Received	Organization / Agency / Public	Comment	Response
1	September 21, 2018	City/County Planning & Community Services Department	<p>Page 93 - Maybe add that these are goals from the LRTP that relate to improving conditions for active transportation?</p> <p>Page 93 - The City does not promote Ales for Trails, that is a Billings TrailNet event.</p> <p>Page 93 – text edits</p> <p>Page 94 – text edits</p> <p>Page 95 – Change City to RiverStone Health</p> <p>Page 100 – Update trail counter numbers</p> <p>Page 101 – Will this table be added? Is it possible to make this map clearer? It is a little hard to read.</p>	Responses provided to questions and changes made in plan.
2	September 21, 2018	City of Billings Engineering	<ul style="list-style-type: none"> • Are the project numbers listed as a priority list (i.e. is R1 the most critical project?)? • R1: This project was in our CIP for a while, and then removed because it was determined to be infeasible. Should it be listed as the #1 project? • R4: Currently under construction • R11: I believe the bike plan removed this project as too much traffic is being carried on Central. • R17: To be constructed next year. • R24: This project was completed a few years back. • R29 & R30: These projects were constructed this summer. • R51-R55: These seem to be projects worthy of higher rankings (if the list is in fact a ranking). These corridors are going to be difficult to ever build due to County/City jurisdictional issues. They seem like a prime candidate for federally funded projects – after the Bypass is built. • I23: This project was completed a couple of years ago. • I26 & I28: Currently under construction • I31: Currently being contracted with design team • I50: Currently under construction • I54: Same as I31?? • CM1: 7 of the 10 signals have been updated. • CM12: This project is underway, and will be completed this fall. • CM21: These signals have been updated. • CM26: This project was completed last year. • P3: The pedestrian path over the Holling Drain is under construction. • P4: Sidewalks have been constructed along Poly Drive. 	Responses provided to questions and changes made in plan.

			<ul style="list-style-type: none"> • P7: Sidewalks have been constructed along Calhoun Lane. • P9: Trail connection and ditch crossing has been constructed. • P10: Crosswalks on Nutter Boulevard have been consolidated. • P12: The intersection of Monad & 36th is no longer a school crossing due to the realignment of the school attendance boundaries. • P17: All curb extensions have been constructed. • P20: Sidewalk along Parkhill Drive has been constructed. • P33: Wasn't this project eliminated after CTEP ended? • P50: There is a mid-block crossing with RRFBs at Mont Vista entrance. Is this identifying the same crossing? • P51: This project is currently under construction. • BL2: What are the limits of this project? Poly does not intersect Rimrock. • BL5: To be determined with MDT project. • BL9 & BL11: What are the limits of these projects? • BL36 & BL38: Same project, but different lengths and costs? • BL46: 19th St W does not intersect with Rimrock. • BL48 & BL49: Same project? • BL27 & BL62: Same project? • BL65: Bench was just rebuilt, and it was decided to not include bike lanes on the project as there was a parallel trail. • BL71: What are the limits of this project? • BB5: The lists show this project as a bike lane project as well. Which should be shown? • BB11: The lists show this project as a bike lane project as well. Which should be shown? • BBL1: Project has been completed. • BBL3: Project has been partially completed. • MT19: Project has been partially completed. • MT35: I believe an estimate was recently put together for this trail that was substantially higher. • MT38: The lists show this project as a bike lane project as well. Design for the trail has started. • MT48: I believe this project is currently under construction. I'm not sure on the limits listed. • MT53: Similar project as MT48? This project is currently under construction for a portion of the limits. • MT59: Is this the same project as MT38? • MT62: Is this the same project as MT26? • MT87: Same project as MT35. • MT108: Is this same project as MT59 and MT38?? • MT109: Underpass across Zimmerman is currently under construction. 	
3	September	Montana Department	Page 7 – text edits	Changes made to plan.

	21, 2018	of Transportation	Page 8 – text edits	Changes made to plan.
			Page 9 – text edits	Changes made to plan.
			Page 11 – Add 2018 for clarification	Changes made to plan.
			Page 21 – format edit	Changes made to plan.
			Page 24 – change year	Changes made to plan.
			Page 25 – Is this the system performance report?	Yes. Additionally, a safety performance report is included in the Appendix.
			Page 27 – text edits	Changes made to plan.
			Page 27 - Do you intend to include the calibration/validation memo as an appendix or will you be integrating some of the relevant details into the plan itself? We have learned it is important to understand and be able to reference what the model outputs are for the base year, the E+C and the planning projects, and that the planned projects are still addressing an identified need.	A validation memo was provided as part of the travel demand model development and presented at the December 12, 2018 SC meeting.
			Page 37 - We presume the model is using federal functional class. Can you confirm?	The model includes the federal and MPO functional classifications.
			Page 42 – text edits	Changes made to plan.
			Page 48 – text edits	Changes made to plan.
			Page 51 – text edits	Changes made to plan.
			Page 54 - Do these projects have a committed funding source? If not, and they are recommended, why are they included in the 2040 model? It seems only the committed projects should be included and the recommended projects would be the 'scenario analysis' we discussed at the Sept. SC meeting.	Only committed projects were included in the model. This table has been updated for the Final Plan.
			Page 57 – format edit	Changes made to plan.
Page 58 - Were cost estimates from past plans/studies updated or gut checked at all? Do the cost estimates include inflation to the year of expenditure?	Yes.			
Page 77 - Can you clarify the source of this data? If this is coming from MDT, we don't distinguish commercial vehicles from large vehicles and the terminology should change.	A response was provided to MDT on this item. The text was changed from commercial vehicle to heavy vehicle.			
Page 81 - update to \$166 million, this includes all phases going back to the feasibility study. Construction estimate is \$136 million	Changes made to plan.			
4	September 25, 2018	MET Transit	Update the breakdown of transit ridership	Changes made to plan.
5	October 19, 2018	Montana Department of Transportation	Can you elaborate the system performance report that is called for in the regs? Its 23 CFR 450.324(f)(4) so you don't have to dig. Per the regs, the LRTP is required to include a system performance report to evaluate the condition and performance of the system with respect to performance targets. At a minimum the report must include, progress achieved by the MPO in meeting the performance targets in comparison with system performance recorded in previous reports, including baseline data. The performance report for Safety is all that is required at this point. Adding this to Chapter 3 makes sense to me and we need	Yes. A safety performance report is included in the Appendix.

		to use state data to establish our baseline since the MPO adopted state targets. I think a couple tables showing the data will suffice and the next LRTP update we will need to show our progress from the baseline.	
		TDM functional class, can you confirm the federally approved functional class is being used in the model?	The model includes the federal and MPO functional classifications.
		Table 12.1 includes a heading of 'eligible funding sources' for both committed and recommended. If we keep the heading the same, will need to include all eligible funding sources (which I've identified below for the recommended list) and split the table at the committed projects level using 'funding source' for the committed table heading	Changes made to plan.
		Specifically for the Bypass – the funding splits for the Bypass are a moving target that is being balanced with other needs in the District/MPO area. To provide as much flexibility as possible, please include STPU and CMAQ as funding sources for all phases of CN.	Changes made to plan.
		<p>Table 12.1 - Committed projects are missing funding sources and the recommended projects don't include all eligible funding sources. I went through each, checked against the system each roadway is on and added sources as needed. If you had rational for not including all potential funding sources for the recommended (not committed, just recommended) projects, you can disregard this bullet, except for where I note the incorrect funding source is listed. Note about HSIP funds – the roadway needs to show a history of crashes through MDT data and the identified improvement must meet C/B criteria before safety funds can be programmed for the project. In the Bike/Ped committed project list TA funds are identified for 5 projects (MT13, MT31, MT34, MT37, MT83) but Billings hasn't been awarded TA funds for anything beyond what is in the TIP, if there isn't secured funding for these projects they should be moved to the recommended list.</p> <ul style="list-style-type: none"> o Missing project UPN 9198 Mossmain Intch – West Blgs Intch. \$11,675,000 IM o Project I24 – increase cost to \$7,150,000 o Project R4 – missing Bridge and NHFP o Project R11 – as noted above, include CMAQ and STPU for all segments o Project R14 – missing MACI o Project R22 – Billings NW – remove, project was let o Project R23 – Airport Road/Zimmerman Trail – remove, project was let o Project R33 – remove NH, add UPP o Project I7 – add MACI o Project I25 – increase cost to \$1,200,000 o Project I1 – add NH and STPU o Project I6 – add STPU o Project I8 – add STPU and NH o Project I9 – add STPU o Project I10 – add STPU o Project I11 – add NH and STPU, I believe it is Broadwater Ave, not Broadway o Project I13 – add STPU o Project I51 – add Secondary o Project I54 – add NH 	Changes made to plan.

		<ul style="list-style-type: none"> o Project I61 – remove UPP, add HSIP and STPU o Project I62 – add NH and STPU o Project CM1 – add STPU, CMAQ and MACI o Project CM2 – add STPU, CMAQ, and MACI o Project CM3 – add STPU, CMAQ, and MACI o Project CM6 – add NH o Project CM7 – add STPU o Project CM8 – add STPU o Project CM9 – add STPU o Project CM11 – add STPU o Project CM13 – add STPU o Project CM15 – add STPU o Project R8 – add STPU o Project R12 – 21st is a local road, federal funds are not eligible o Projects R40, R41, R42, R43, – Hwy 312 is on the primary system, not NH – NH is not an eligible funding source, the correct source is STP and HSIP o Project I43 – no funding sources included, add NH and HSIP 	
		Funding tables (13.4), we need to be clear that Billings doesn't receive an allocation of NH, HSIP, IM, Secondary, Bridge, etc – these funds are distributed as needed to the area by the Program Managers and District. A footnote needs to be included or the heading needs to be adjusted.	Changes made to plan to include a reference/footnote.
		Funding tables (13.4), in your third column, projected annual allocation per year, why is this amount greater than the current? For example, we have no indication the STPU or CMAQ allocation would increase so why are you showing a larger allocation? Is this column really needed if you are showing the projected revenue 5, 10, and 22 years out?	Changes made to plan to include a reference/footnote.
		Funding tables, there shouldn't be an excess of NH, Bridge, IM, UPP, TA, MACI funds shown in the plan. If there aren't needs there the District will spend the funding somewhere else in the District. The purpose of the ability to inflate in the future is to cover the projects in the plan that address identified needs. The funding should zero out (or be a negative) but not a positive balance, or a reference should be included that addresses this.	Changes made to plan to include a reference/footnote.
		Planning level cost estimates from previous plans – were these updated/gut checked for accuracy? I did see that inflation was included (at 4%), calculated to the year of expenditure.	Yes. These were reviewed again with the Final Plan.
		Safety data relating to heavy vehicle vs. commercial trucks	A response was provided to MDT on this item. The text was changed from commercial vehicle to heavy vehicle.
		Table 5.6 System column – this doesn't align with the highway systems, what systems are being referred?	This column was removed from the table.
		Chapter 13 funding source write up – did you have any question about my comments from before?	We followed up with MDT on this item.

6	December 11, 2018	Montana Department of Transportation	<p>Page 20, Federal & State Targets, 1st paragraph, last sentence is incorrect. Planning factors have been around for some time and have evolved over the various transportation bills. TEA-21 consolidated the previous sixteen planning factors into seven broad area, SAFETEA-LU made safety and security their own planning factors, FAST Act added two to the list. Suggest just keeping the text that the FAST Act expanded upon previous planning factors.</p>	Changes made to plan.
			<p>I don't see the performance report in the plan, can you point me in the right direction? Per the regs, the LRTP is required to include a system performance report to evaluate the condition and performance of the system with respect to performance targets. At a minimum the report must include, progress achieved by the MPO in meeting the performance targets in comparison with system performance recorded in previous reports, including baseline data.</p> <p>o The performance report for Safety is all that is required at this point. Adding this to Chapter 3 makes sense to me and we need to use state data to establish our baseline since the MPO adopted state targets. I think a couple tables showing the data will suffice and the next LRTP update we will need to show our progress from the baseline.</p>	Yes. A safety performance report is included in the Appendix.
			<p>Page 33, Exhibit 4.2 – The 'drive alone' percentage was 80% in the previous draft (and is 80% in Exhibit 4.1), looks like a typo.</p>	Changes made to plan.
			<p>Page 34, Table 4.3 – based on the first paragraph of the Forecast Demographics section the Source for the information in the table is the MPO and SC not the Travel Demand Model</p>	Changes made to plan.
			<p>Page 36, Table 4.4 – see previous comment</p>	Changes made to plan.
			<p>Page 36, third paragraph, second sentence - Make this a definitive statement. The MPO either has or has not. If you don't know, then don't put it in the plan.</p>	Changes made to plan.
			<p>Page 39, first paragraph, last sentence - This chapter doesn't seem like the appropriate place to include recommendations. We are capturing the existing and projected conditions in this chapter. The recommendation chapter is more appropriate</p>	A response was provided to MDT. The chapters for streets and highways, pedestrians and bicyclists, transit, truck, and rail all identify projects to address deficiencies and summarize the projects in tables and supportive figures. The projects are than discussed further and recommended in the recommendation chapter. We do not plan to make any changes to the text or chapters at this time.
			<p>Page 41, first paragraph, third sentence - The way it is written implies the FC as shown in Figure 5-1 is pending FHWA approval – which is not the case. Maybe remove the 3rd sentence and add "A map of the federally approved system can be accessed through the MDT website." after the 5th sentence.</p>	Changes made to plan.
<p>Page 82, Table 7.2 – MDT crash data doesn't differentiate between heavy and commercial vehicles. We are curious if this analysis is using MDT or data or a different source.</p>	A response was provided to MDT on this item. The text was changed from commercial vehicle to heavy			

				vehicle.
			Page 141, intro sentence – this is a typo and carryover from the Security chapter.	Changes made to plan.
			<p>Page 165, Table 13.1 –</p> <ul style="list-style-type: none"> -Remove the hyphen in Montana in the NHPP description box; -Surface Transportation Program Bridge program should be STPB; -The team left out National Highway Freight Program (NHFP); -The National Highway Freight Program was created by the FAST Act to invest in freight projects on the National Highway Freight Network. This program is apportioned to States by formula and a State must have a freight plan in place beginning FY 2018 in order to receive formula funding. This program provides funding for construction, operational improvements, freight planning, and performance measures. Up to 10% of these funds may be used for intermodal projects. Generally, the Federal share for this program is 91.24% and the State is responsible for the remaining 8.76%. The State share is typically funded through the HSSRA for projects on state highways and local governments provide the match for local projects. This program is funding a substantial portion of the I-90 Bridges project and needs to be included in the plan. -State Fuel Tax isn't addressing BaRSSA funds and still shows the old rate of gas tax. I provided a funding write up in Feb. 2018 that includes the new language for Fuel Tax – none of this was included in the plan. 	Changes made to plan.
7	December 12, 2018	Montana Department of Transportation	Remove TA funding from the pedestrian and bicycle committed projects as these projects are not receiving TA funding	Change made to plan.

