OCTOBER 2022

WHITEFISH

Transportation Plan

KLJ

ENGINEERING, REIMAGINED

Prepared For:

CITY OF WHITEFISH
Whitefish, Montana

Adopted By:

WHITEFISH PLANNING BOARD
August 18, 2022

WHITEFISH CITY COUNCIL
October 17, 2022

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Transportation Plan

EXECUTIVE SUMMARY

October 2022

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INTRODUCTION

The Whitefish Transportation Plan update is designed to guide transportation planning activities by setting forth direction and strategies to help shape the City's transportation network through the year 2040. This plan serves as an update to the 2010 Whitefish Transportation Plan. The plan considers all modes of transportation including driving, walking, bicycling and transit to create a consolidated vision for the future. The Whitefish Transportation Plan update was developed through a collaborative approach involving stakeholders, agency partners, and community members, and charts the development of the transportation system using the community's goals and priorities as a foundation.

Chapter 1 of this document presents the plan background, defines the study area, describes recently completed planning studies that informed the plan update, and presents the plan's Vision, Goals, and Strategies.

BACKGROUND

The update of the Whitefish Transportation plan responds to changing conditions within the City of Whitefish. Growth within the study area has been considerable since the last transportation plan was adopted in 2010. This update considers changes in population and economic trends within the larger study area, including the Flathead Valley. Localized conditions, coupled with larger regional trends, have a combined measurable impact on transportation within the City of Whitefish.

The Whitefish Transportation Plan has a 20-year planning horizon and evaluates growth to the year 2040. Future projections point to continued growth and development within Whitefish and throughout Flathead County. The Whitefish Transportation Plan will establish a set of recommended goals, initiatives, and projects to address projected needs facing the City of Whitefish to the year 2040.

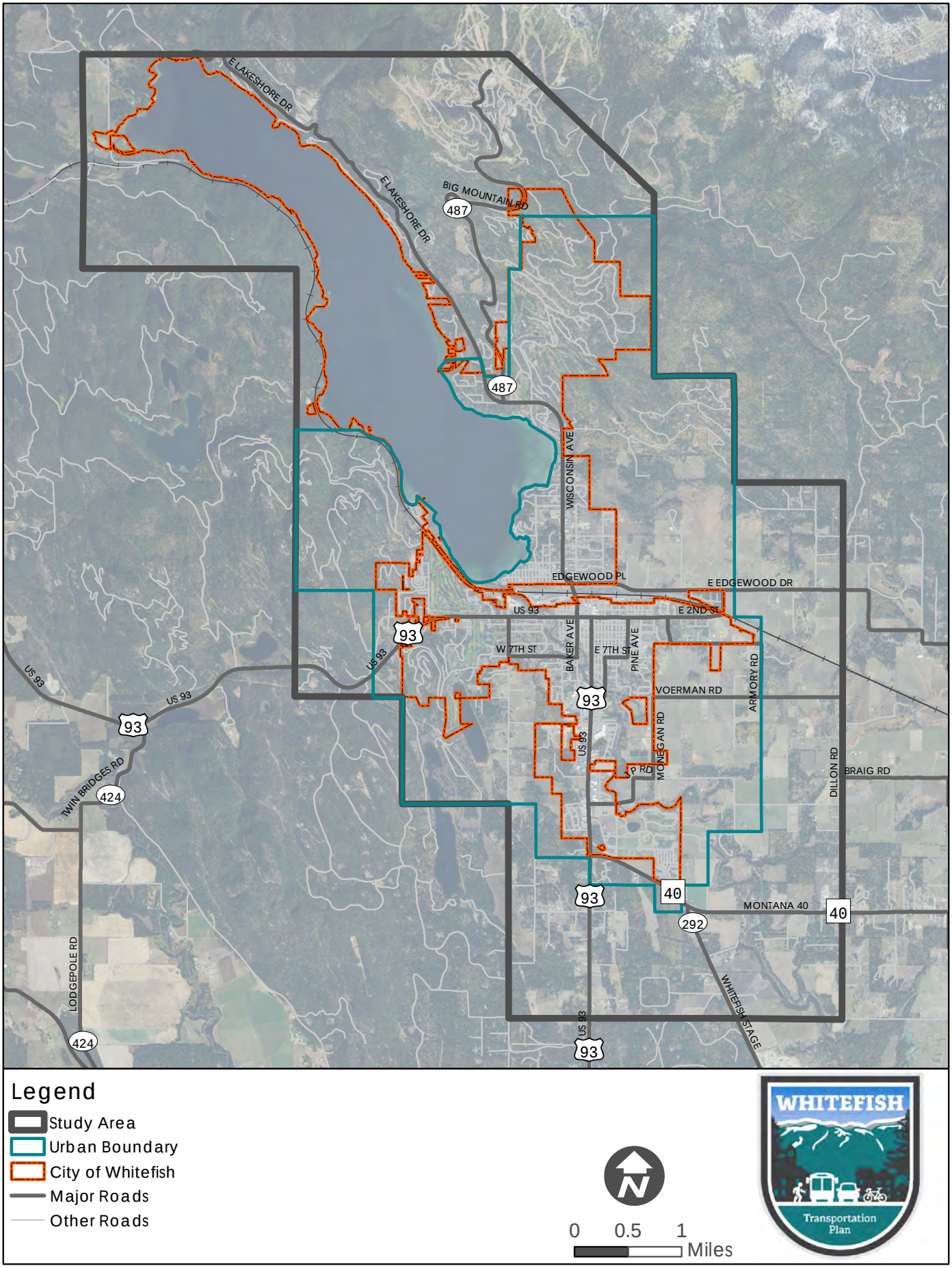
Several relevant and related transportation plans and studies are integrated into the Whitefish Transportation Plan. These plans represent a collection of land use and multimodal transportation planning efforts that affect the City of Whitefish. The Whitefish Transportation Plan is rooted in supporting a diversification of transportation options and choices to balance existing and projected mobility needs for the City of Whitefish. Rather than duplicate past efforts, the Whitefish Transportation Plan pulls forward a coordinated framework of relevant and strategic initiatives from these current plans.

The Whitefish Transportation Plan integrates outcomes from the recently completed Highway 93 South Corridor Study and the Downtown Whitefish Highway Study. The MDT Downtown Whitefish Highway Study explored options for reconstructing both Highway 93 and Baker Avenue. Additionally, the Downtown Whitefish Highway Study is supported through an area wide travel demand model covering the entire study area for the Whitefish Transportation Plan. To match future traffic demands, the Whitefish Transportation Plan is using the same existing and projected conditions to support travel demand for the study area.

STUDY AREA

The study area for the project was established in collaboration with the City of Whitefish and Montana Department of Transportation (MDT). It includes the area within both the urban boundary and the city limits, as well as additional areas outside of those boundaries to account for areas already developing and areas that could see growth over the twenty-year study horizon. This study area allows the planning process to account for the impact of commuter traffic generated from developing areas and outlying residential areas in Flathead County. Understanding the traffic impacts from both within and outside of the city boundary will allow for better planning of the future road network. Figure I.1 shows the study area.

FIGURE I.1: STUDY AREA



TRANSPORTATION VISION, GOALS, AND STRATEGIES

The Whitefish Transportation Plan is guided by the transportation vision, goals, and strategies. While the vision communicates the overarching transportation aspirations and priorities in general terms, the goals and strategies use more precise language to describe how the community will achieve its desired future.

Vision

The Plan vision will serve as an anchor for future development of the Whitefish transportation system. The transportation vision is as follows:

> *The City of Whitefish is a vibrant community that prides itself on livability and prioritizes stewardship of the natural environment. The City will champion multi-modal transportation policy and investment that enhances the City's unique character, preserves its natural resources, promotes walkability, supports economic vitality, and accommodates future growth.*

FIGURE I.2: THE VISION, GOALS AND STRATEGIES REFLECT OTHER CITY PLANS.

The Whitefish Transportation Plan is closely coordinated with other city plans:

City of Whitefish Growth Policy Plan (2007)

City of Whitefish Parks and Recreation Master Plan (2013)

City of Whitefish Downtown Master Plan (2015 – Revised 2018)

Connect Whitefish Bicycle & Pedestrian Master Plan (2017)

Climate Action Plan (2018)

Wisconsin Avenue Corridor Plan (2018)

Parking Management Plan (2019)

Sustainable Tourism Management Plan (2020)

Highway 93 South Corridor Plan (2022)

Goals and Strategies

1 Advance system-wide efficiency, reliability, and integration across modes:

Design, build, operate, and maintain an efficient transportation system that maximizes mobility, minimizes unexpected delays, and provides seamless transfers between all modes. Embrace travel demand management (TDM) strategies that provide convenient, safe, and accessible alternatives to driving. Uphold and enforce the city's policy of concurrency so transportation facilities including streets, public safety and emergency services, pedestrian, bikeway, and trail facilities are made available before the impact of the new development.

2 Improve public health, equity, and quality of life through a connected transportation system to encourage active mobility:

Design, build, operate, and maintain a transportation system that enables people to get where they need to go using a variety of transportation options, gives equal preference to all modes, and combined with supportive land use patterns and site design, facilitates active lifestyles. Provide an equitable level of transportation facilities and services for all regardless of age, ability, race, ethnicity, or income. Emphasize bicycle and pedestrian connectivity as a tool for environmental sustainability.

3 Enhance environmental health and reduce negative transportation impacts:

Reduce the community's greenhouse gas emissions through efficiencies in the transportation system, reduction of vehicle miles traveled, and promotion of alternative transportation modes, and continue to explore ways to reduce air pollution further. Create ample, attractive opportunities for visitors to engage in sustainable tourism through walking, biking, and the use of transit to reach destinations. Assess progress toward transportation sustainability goals by establishing system performance measures and benchmarks. Make Whitefish a model sustainable community through thoughtful planning, education, and public involvement.

4 Create livable neighborhoods that preserve and enhance the unique character, scale, and history of Whitefish:

Create interconnected, livable places linked to jobs, services, schools, and parks through a multimodal transportation system integrated with the built environment. Adopt alternative street standards that preserve and enhance the character of neighborhoods while embracing Complete Streets principles. Consider the implementation of traffic calming measures to increase pedestrian and bike safety within neighborhoods, downtown, and along key corridors. Implement the recommendations of recent corridor studies to enhance the City's key gateways, which serve both a vital mobility role and as a core aspect of the City's identity.

5 Maintain a high-quality, financially viable transportation system that enhances local and regional economic vitality:

Maintain transportation system assets in a state of good repair by understanding the life cycle of infrastructure, monitoring its condition, and anticipating future demand. Invest in cost-effective projects and pursue sustainable, dedicated, and long-term sources of system funding at the state and local levels. Promote investments to enhance the movement of people and goods within the City of Whitefish. Work cooperatively with the Montana Department of Transportation (MDT) to ensure a balance between local economic development and regional and national objectives related to the National Highway System (NHS). Emphasize improvements that support workforce commuter travel and allow multimodal access to local businesses and tourist destinations.

6 Provide a safe and secure transportation system:

Create a transportation system that incorporates safety and security throughout all modes for all users. Leverage crash data to prioritize safety improvement projects to address high-frequency crash locations, with an emphasis on serious injury and fatal crashes. Require sidewalks be included on both sides of new streets in neighborhood and business districts be incorporated into major construction projects for existing streets within these districts.

7 Corridor management and preservation:

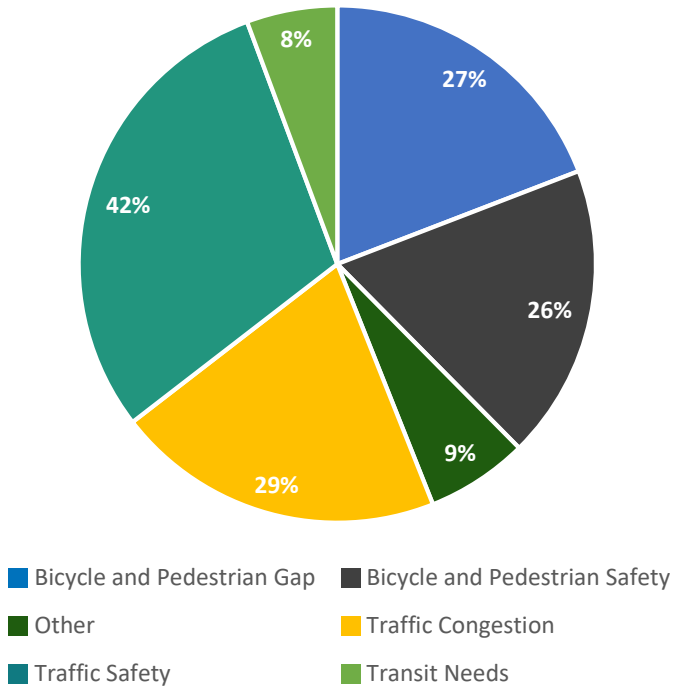
The City of Whitefish will work proactively to preserve and manage major transportation corridors to meet both existing and projected multimodal transportation demands as well as emergency access. Require and adopt city standards for required Traffic Impact Statements (TIS) to include analysis that measures and evaluates the levels of current and future congestion during emergency situations like fire and medical emergencies. Give priority to updating Whitefish's TIS standards as identified within the plan and in more detail "Traffic Impact Study" on page 146.

PUBLIC ENGAGEMENT PROCESS

The public engagement phase for the Whitefish Transportation Plan comprised two parts: virtual listening sessions and a project website with an interactive issues map. Three listening sessions took place on October 14, 2020 and acted both as an opportunity to educate the public on the transportation plan and to gather open ended input on transportation issues in the study area. The meetings were advertised through a variety of channels including the Big Mountain Commercial Association (BMCA), Chamber of Commerce, posts on Facebook, and press releases to local media outlets including the Whitefish Pilot–Daily Inter Lake. Project materials and an interactive issues map were available on the project website, http://whitefish.transportationplan.net. Visitors could review project documents, watch a prerecorded presentation of the project overview, and leave comments on the interactive map.

The project website was used to collect input from the community using an online interactive issues map that was active from early October until November 6th, 2020. Visitors were able to explore the study area and view comments left by others, add their own comments in discussion, and react to comments with an "up vote" or "down vote". In total, 187 comments and 354 reactions were added to the map by 261 unique visitors. Figure I.3 shows the comments by topic, as identified by the commenter.

FIGURE I.3: SOCIAL PINPOINT COMMENT TYPES



The most frequently noted traffic safety concerns were along Whitefish West (Hwy93) Phase 3. MDT completed the design of this project several years ago, but it has been stalled by right-of-way issues. The traffic safety issues of highest concern are on the section of Highway 93 West closest to the city limits.

Many of the comments on the interactive map were related to other comments in content or geographic location. When posting a comment, community members had the option to either choose a location on the map to post a comment or post a response to an existing comment. If a new comment was posted in response to an existing comment, the two comments would share a geographic location. After reviewing the location and content of each comment added to the map, clusters were identified to highlight common concerns among community members. Table I.1 on page viii shows the top clusters by total number of reactions. The total number of up votes and down votes from the comments within each cluster were aggregated.

Table I.1: Top Comment Clusters

COMMENT IDS	CLUSTER NAME PRIMARY CONCERN	UP VOTES	DOWN VOTES
15, 18, 40, 59, 69, 73, 81, 93, 97, 154, 5, 65, 92, 100, 113, 41	**Hwy 93 (Mountainside to Twin Bridges)*** Bike/ped access and safety	62	0
3, 9, 13, 16, 17, 30, 39, 75, 90, 104, 108, 114, 152, 163	**Baker Avenue** Traffic congestion and safety	35	2
6, 70, 71, 98	**Karrow Avenue** Lack of bike/ped facilities	19	3
80, 145, 150, 180	**Viaduct** Path widening	20	0
8, 11, 32, 38, 78, 82, 120, 126	**Wisconsin Avenue** Bike/ped safety and speed limit	15	4
33, 67, 86, 107, 124, 147, 158	**Transit** Need for more service	12	1
12, 109, 169, 176, 177, 185	**Spokane Avenue** Need for additional bike/ped facilities	13	0
41, 83, 88, 146, 174	**2nd Street/Miles Avenue** Pedestrian safety	13	0
57, 96, 129	**Big Mtn Rd and East Lakeshore intersection** Traffic congestion and safety	10	3

**A separated shared use path from Mountainside to Twin Bridges has been designed by MDT. The city is anxious to have the State move forward with this last phase of the Whitefish West project.*

SYSTEM COORDINATION

The Whitefish Transportation Plan was developed in coordination with both the Montana Department of Transportation (MDT) and Flathead County. Partnership with MDT and Flathead County are critical to the advancement of elements included in the Transportation Plan. The Transportation Plan highlights the areas of common ground on the recently developed MDT Downtown Whitefish Highway Study. The City has requested that MDT split the 13th Street and Spokane Avenue intersection improvement from the Spokane section of the Downtown Highway Study. This intersection has existing safety and traffic congestion issues.

PROJECTED CONDITIONS

The Whitefish Transportation Plan projected conditions to the year 2040. A comparison of current and future conditions was necessary to understand the changes in transportation demand that the study area will face over the coming decades. Vehicle miles traveled (VMT) and vehicle hours traveled (VHT) were calculated for both current conditions and 2040. Both factors increased at similar rates, with VMT increasing by 36.8% from 223,143 to 305,242. This growth in VMT suggest the amount of vehicle miles traveled in the study area will modestly increase over the life of the plan. VHT increased by 36.7% from 5,805 to 7,937.

Table I.2: VMT and VHT 2017–2040

	2017	2040	% CHANGE
VMT	223,143	305,242	36.8%
VHT	5,805	7,937	36.7%

Currently, major roadways in Whitefish experience periodic congestion, especially during seasonal peaks. Based on a 2040 forecast of future conditions, portions of MT 40, Highway 93, Baker Avenue and Wisconsin Avenue are projected to be congested or congesting by 2040. This totals over 8 miles of roadway.

Projections for intersection traffic volumes were made for 15 intersections along Highway 93 and Wisconsin Avenue (except those within the MDT Downtown Highway Study). The modeling was done for 2020 and 2040.

The traffic modeling shows that several intersections along Highway 93 South already function poorly. By 2040 there will be several intersections along Highway 93 South functioning very poorly (LOS D or LOS F).

HIGHWAY 93 & WISCONSIN AVENUE CORRIDOR PLANNING

As part of the Whitefish Transportation Plan update, an analysis was conducted for two of the community's key corridors: US-93 (MT-40 Junction to 13th Street) and Wisconsin Ave (Edgewood Place to Big Mountain Road). The goal of the analysis was to explore opportunities to improve safety, level-of-service, connectivity, and access along the corridors and adjacent roadways. This effort was helpful in development of both the Major Street Network (MSN) and Transportation Safety Management (TSM) recommendations for the Whitefish Transportation Plan.

Highway 93

A corridor-level access plan was developed for the US-93 corridor from MT 40 to 13th Street. The intent of the effort was to look at opportunities to improve safety, level-of-service and corridor connectivity. The existing traffic volumes along Highway 93 already exceed the threshold set in the Highway 93 Environmental Impact Statement (EIS) for requiring medians. The Transportation Plans pulls forward and expands recent median concepts developed as part of the Highway 93 South Corridor Study developed by the City of Whitefish. The US-93 Corridor Plan Area is shown in Figure I.4 on page x.

The Transportation Plan develops a logical parallel roadway system to US-93 to support improved traffic circulation adjacent to the corridor, specifically the extension of Baker Avenue, Columbia Avenue and Whitefish Avenue. A most urgent need is the extension of Baker Avenue to the south. The transportation plan includes conceptual plans for medians and intersection signalization along Highway 93. There remains a need for a more significant corridor level study to understand needed access management improvements along this stretch of Highway 93. The city has asked for assistance from MDT in preparing a more detailed access management plan following completion of the Transportation Plan.

Wisconsin Avenue

A corridor level plan was developed for Wisconsin Avenue (Edgewood Place to Big Mountain Road) with the intent to address existing safety, level-of-service, and access challenges along the corridor. The corridor plan builds on work developed through the Wisconsin Avenue Corridor Plan (2018) as well as several recent small improvements and project concepts developed for the corridor. Due to the nature of this corridor, there is the potential for significant right-of-way and utility coordination needs associated with the recommended improvements.

The city has expressed interest in reclassifying Wisconsin Ave/Baker Ave from its current State Highway System designation from Urban to Primary. The Transportation Plan evaluates the potential merits of this desire, and recommends the City continue to coordinate with MDT and Flathead County on needs along Wisconsin Avenue. The Wisconsin Avenue corridor plan area is shown in Figure I.5 on page xi.

FIGURE I.4: US-93 CORRIDOR PLAN AREA

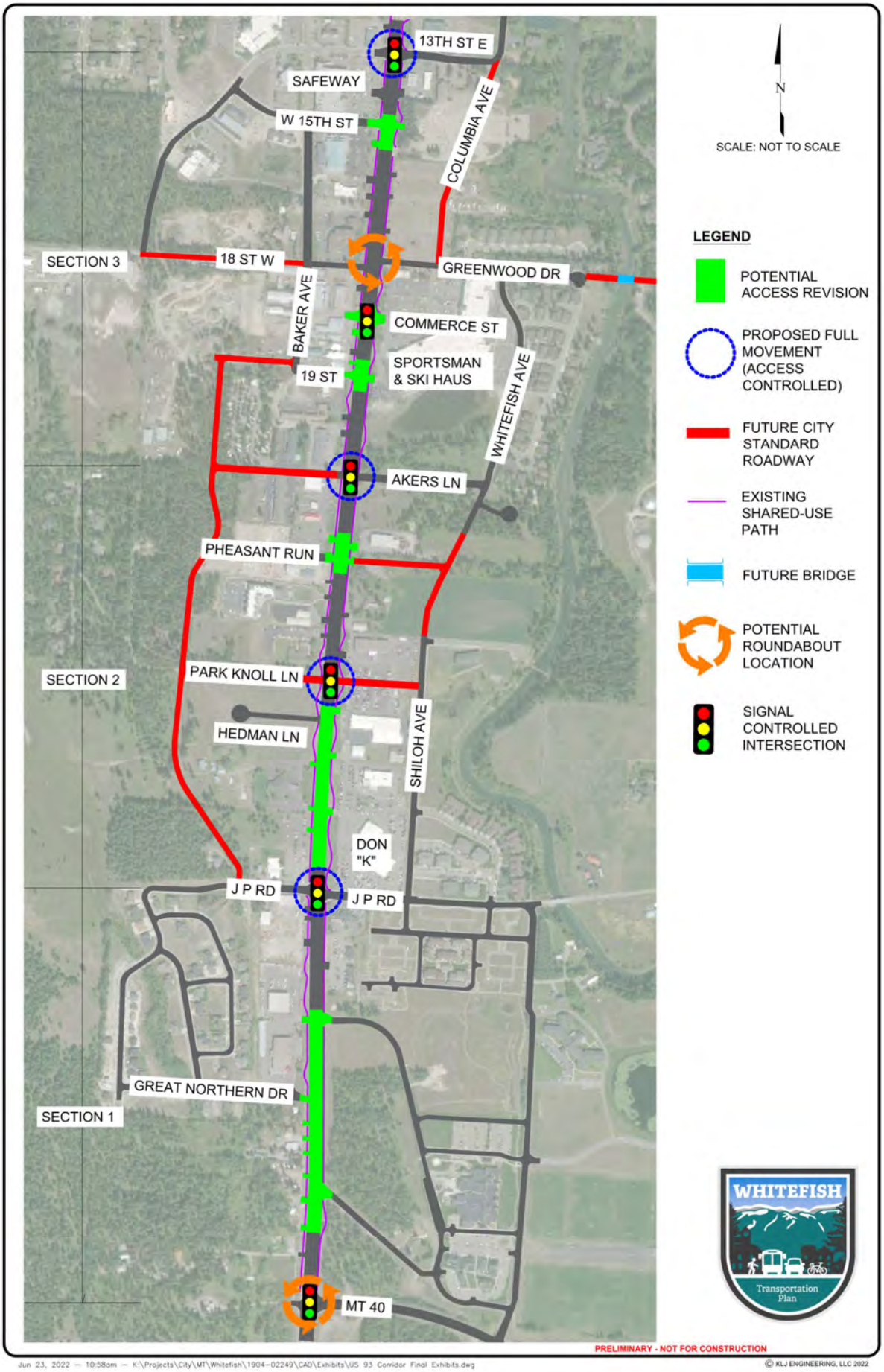
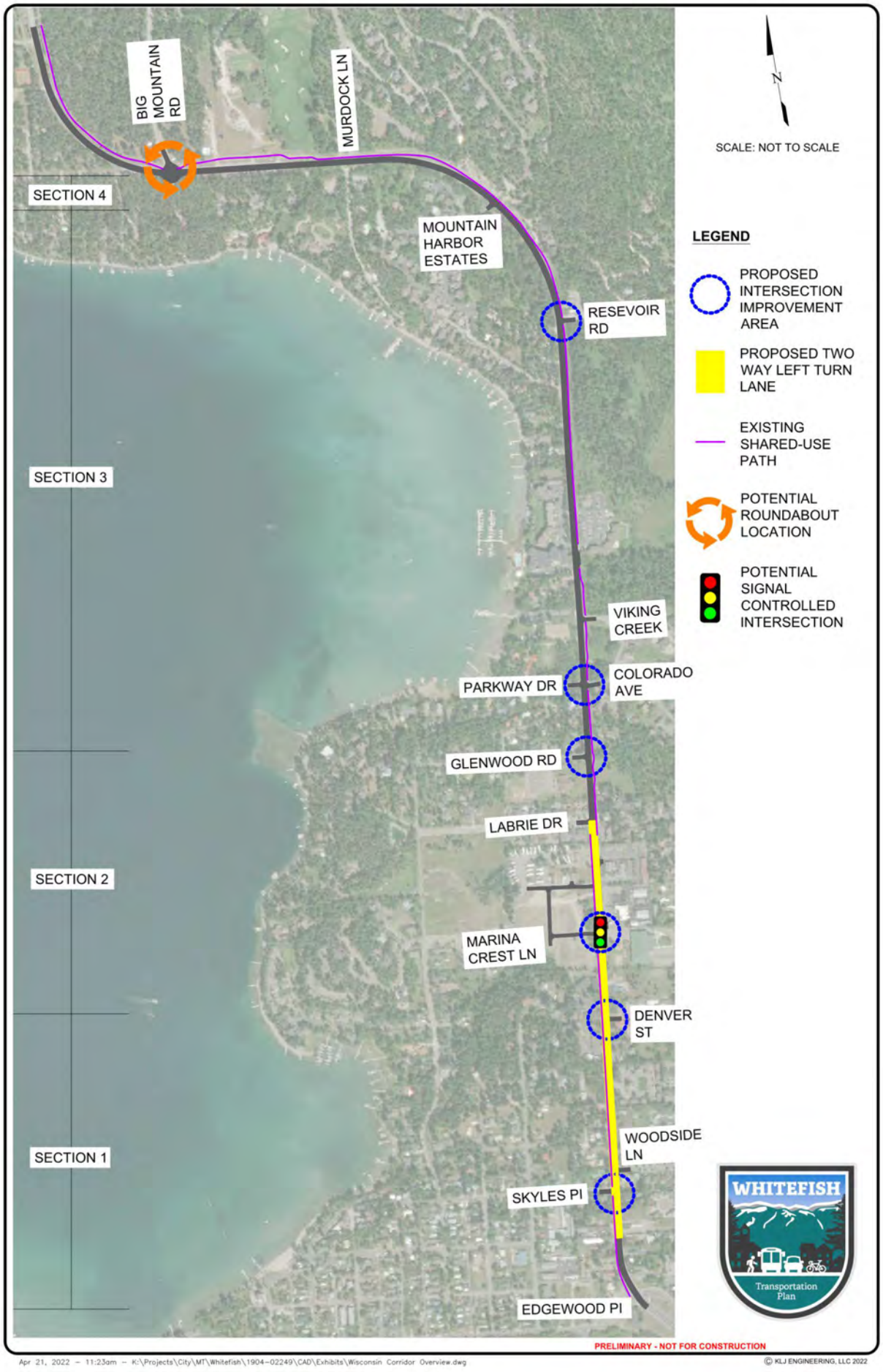


FIGURE I.5: WISCONSIN AVENUE CORRIDOR PLAN AREA



RECOMMENDATIONS & PROJECT IDENTIFICATION

Introduction

A key product of the planning process is the identification of needs and recommendation of transportation investments. The needs evaluation process incorporates a variety of information, including needs identified in previous plans, technical analysis completed throughout the planning process, and input received through community engagement. The identified needs are used to develop project recommendations, which are categorized as either ***Major Street Network (MSN), Transportation System Management (TSM),*** or ***Corridor Preservation*** projects.

Major Street Network

The MSN project recommendations are intended to enhance the use of major corridors by all modes, address imminent infrastructure maintenance needs, and increase the overall efficiency and connectivity of the system. Projects within this category were developed from a variety of sources, including previous planning documents, recent pavement conditions, underground utilities condition data, and identified bicycle and pedestrian gaps and needs. Projects were further refined based on the analysis conducted during the baseline and projected conditions evaluations.

Identified MSN needs are classified as *Reconstruction*, *Mill & Overlay*, and *Roadway Extension* projects. Reconstruction projects were developed for roadway segments with an identified pavement condition need or multimodal need (or both) as well as an underground utility repair or replacement need. Mill & Overlay projects were developed for roadway segments with poor pavement condition. Roadway Extension projects address a systemwide efficiency need by filling network gaps that inhibit travel along desired routes throughout the study area. Previous planning work supported the development of recommendations throughout the process. As shown in Table I.3, Reconstruction projects constitute the largest share of MSN project needs by cost ($144.6 million, 81 percent), followed by Extension projects ($30.7 million, 17 percent), with Mill & Overlay projects representing the smallest portion of identified needs by cost ($3.6 million, 2 percent).

Project cost estimates were developed in coordination with the City of Whitefish. Urban reconstruction projects are based on the City's estimate of $1,200 per linear foot for a 32-foot-wide roadway. This estimate includes a complete street design and includes all engineering and construction phases. Urban extension projects have been inflated by 125 percent of the urban reconstruction estimate.

Table I.3: Percent of Total Project Need Cost by Project Type

PROJECT TYPE	TOTAL COST	PERCENT OF TOTAL
Mill & Overlay	$3,624,000	2.0%
Roadway Extension	$30,689,000	17.2%
Reconstruction	$144,610,000	80.8%
Total	**$178,923,000***	**100%**

**The estimate of total project cost included the most expensive option for those projects where more than one option is presented (MSN #2, MSN #17, and MSN #19). This was done to produce the most conservative total estimate.*

Bridge reconstruction and new construction, roadway overlay, and rural reconstruction costs are based on MDT 2020 Missoula District CN&CE cost estimates. Project costs were determined using treatment type cost-per-mile, and were grown by 10 percent to better represent 2022 construction-only estimates. A 20 percent Contingency, 10 percent Construction Engineering, and 10.99 percent Indirect Cost (IDC) adjustment were added to each construction cost estimate to produce a planning cost estimate. The estimates do not include ROW or utility costs.

The spatial distribution of MSN project needs varies somewhat by type.

- **Reconstruction** projects are distributed throughout the study area, with light concentrations of need located within the downtown area and the residential area to the east of City Beach. This distribution reflects the City's emphasis on underground utility maintenance, safe travel to school, and pavement condition within denser residential and commercial areas.
- **Roadway Extension** projects are located adjacent to Hwy 93, reflecting the need for additional connectivity that supplements the functionality of this and other major corridors.
- **Mill & Overlay** projects are scattered throughout the study area, reflecting the City's efforts to identify and address pavement maintenance needs across all City roadways.

Recommended MSN Improvements

MSN projects are listed in Table I.4 and shown in Figure I.6 on page xvi, Figure I.7 on page xvii, and Figure I.8 on page xviii. Each MSN project listing in the table includes a map ID, a summary of the corridor location and related termini, a short description, and a planning-level cost estimate.

Projects listed with a single asterisk are considered high priority, and are described in further detail in the next section. MSN projects #2 and #3 (Wisconsin Ave) and #17–#19 (Hwy 93) were analyzed in-depth for this plan, and are presented separately in "Chapter 7. Wisconsin Avenue and Highway 93 South Corridor Plans".

Table I.4: MSN Projects

MSN#/ MAP ID	CORRIDOR	TERMINI	TERMINI	DESCRIPTION	COST
1*	Hwy 93 W Phase 3 (MDT)	Mountainside Dr	Twin Bridges	Reconstruction	$29,885,000
2**	Wisconsin Ave (MDT)	Edgewood Place	Glenwood Rd	Add intersection control, operational, and access management improvements	Option 1: $2,335,000 Option 2: $3,181,000 Option 3: see TSM #3
3**	Wisconsin Ave (MDT)	Glenwood Rd	Big Mountain Rd	Add intersection control, operational, and access management improvements	$2,304,000
4*	Columbia Avenue South Extension	13th St	Greenwood	Extend roadway as a major collector	$2,764,000
5*	Whitefish Ave	South of Akers Ln	Shiloh/Lenna Joy Dr.	Extend roadway as a major collector	$1,249,000
6*	Baker Ave	19th St	JP Rd	Extend roadway as a major collector	$5,705,000
7	Akers Ln	Baker Ave Extension	Hwy 93 S	Extend roadway as a local road	$846,000
8	Park Knoll Ln	Baker Ave Extension	Shiloh Ave	Extend roadway as a local road	$1,989,000
9	Pheasant Run	Hwy 93 S	Whitefish Ave Extension	Extend roadway as a local road	$996,000
10*	W 18th St	Karrow Ave	Hwy 93 W	Extend roadway as a major collector	$6,060,000
11*	E 7th St	Spokane Ave	Kalispell Ave	Extend roadway as a major collector	$577,000
12*	E 7th St	E 7th St	Voerman Rd	Extend roadway as a major collector	$4,330,000
13*	New Collector Roadway	Monegan Rd	1/4-Mile West of Monegan Rd	Construct new collector roadway	$1,500,000
14	Monegan Rd	Parks Department building	JP Rd at River Lakes Parkway	Reconstruction	$3,245,000
15	JP Rd	Whitefish River	Monegan Rd	Reconstruction	$3,314,000
16*	Hwy 93 S/Spokane (MDT)	E 13th St	E 2nd St	Reconstruction	$9,894,000
17**	Hwy 93 S (MDT)	MT 40	JP Road	Add intersection control, operational, and access management improvements	Option 1: $2,362,000 Option 2: $5,886,000

MDT: Denotes projects on roadways owned and maintained by MDT.

**Project is described in further detail in the next section.*

***Project is presented in Chapter 7.*

****Committed Resort Tax project.*

MSN#/ MAP ID	CORRIDOR	TERMINI	TERMINI	DESCRIPTION	COST
18**	Hwy 93 S (MDT)	JP Road	Akers Ln	Add intersection control, operational, and access management improvements	$7,253,000
19**	Hwy 93 S (MDT)	Akers Ln	E 13th St	Add intersection control, operational, and access management improvements	Option 1: $8,737,000 Option 2: $11,943,000
20*	Baker Ave	E 13th St	E 2nd St	Reconstruction	$4,758,000
21	W Lakeshore Dr	State Park Rd	Birch Point Dr	Mill & overlay	$843,000
22	E Second St	Spokane Ave	Fir Ave	Mill & overlay	$493,000
23	E 13th St	Spokane Ave	Columbia Ave	Mill & overlay	$134,000
24	Birch Dr/ Wedgewood Ln	E 2nd St	Dodger Ln (including Wedgewood west of Birch Dr to cul de sac)	Mill & overlay; Add bike/ped improvements on existing street profile	$274,000
25	E 4th St	Baker Ave	Pine Ave	Mill & overlay; Add bike/ped improvements on existing street profile	$495,000
26	River Lakes Pkwy	J P Rd	Red Eagle Dr	Mill & overlay; Add bike/ped improvements on existing street profile	$699,000
27	E Second St	Rail line	E Edgewood Dr	Mill & overlay; Add bike/ped improvements on existing street profile	$216,000
28	Spokane Ave	E 1st St	Depot St	Mill & overlay	$127,000
29*	East 6th St	Hwy 93 S	Pine Ave	Reconstruction	$2,160,000
30	Riverside Drive	Hwy 93 S	Columbia Ave	Reconstruction	$952,000
31	Minnesota Ave	Edgewood Pl	End	Reconstruction with bicycle and pedestrian improvements	$1,513,000
32	Dakota Ave	Edgewood Pl	Skyles Pl	Reconstruction with bicycle and pedestrian improvements	$1,225,000
33	Iowa Avenue	Edgewood Pl	End	Reconstruction with bicycle and pedestrian improvements	$3,144,000
34	Lakeside Boulevard	Oregon Ave	Skyles Place	Reconstruction with bicycle and pedestrian improvements	$1,033,000
35*	Park Ave	Voerman Rd	E 7th St	Reconstruction	$3,264,000
36	Park Ave	E 7th St	E Second St	Reconstruction	$2,390,000
37*	Denver St	Wisconsin Ave	Texas Ave	Reconstruction	$3,058,000
38	East 10th St	Columbia Ave	Park Ave	Reconstruction	$684,000

MDT: Denotes projects on roadways owned and maintained by MDT.

**Project is described in further detail in the next section.*

***Project is presented in Chapter 7.*

****Committed Resort Tax project.*

MSN#/ MAP ID	CORRIDOR	TERMINI	TERMINI	DESCRIPTION	COST
39	East 3rd St	O'brien Ave	Spokane Ave	Reconstruction	$1,673,000
40	East 3rd St	Spokane Ave	Pine Ave	Reconstruction	$2,158,000
41	East 8th St	Hwy 93	Alley west of Park Ave	Reconstruction	$1,490,000
42*	Kalispell Ave	Riverside Ave	E 2nd St	Reconstruction	$3,745,000
43*	Pine Ave	E 7th St	E 2nd St	Reconstruction	$2,376,000
44	E 1st St	Miles Ave	Spokane Ave	Mill & overlay	$342,000
45*	E 1st St	Kalispell Ave	Larch Ave	Reconstruction	$2,903,000
46	MT 40 (MDT)	Hwy 93 S	Dillon Rd.	Five-lane facility with two through lanes each direction and a TWLTL	$18,383,000
47	Karrow Ave	W 7th St	W 18th St	Reconstruction	$3,937,000
48*	Karrow Ave***	Hwy 93 W/W 2nd St	W 7th St	Reconstruction	$2,348,000
49*	Armory Rd***	E 2nd St	City limits	Reconstruction	$6,382,000
50*	East 5th St***	Hwy 93 S/Spokane	Pine Ave	Reconstruction	$2,160,000

MDT: Denotes projects on roadways owned and maintained by MDT.

**Project is described in further detail in the next section.*

***Project is presented in Chapter 7.*

****Committed Resort Tax project.*

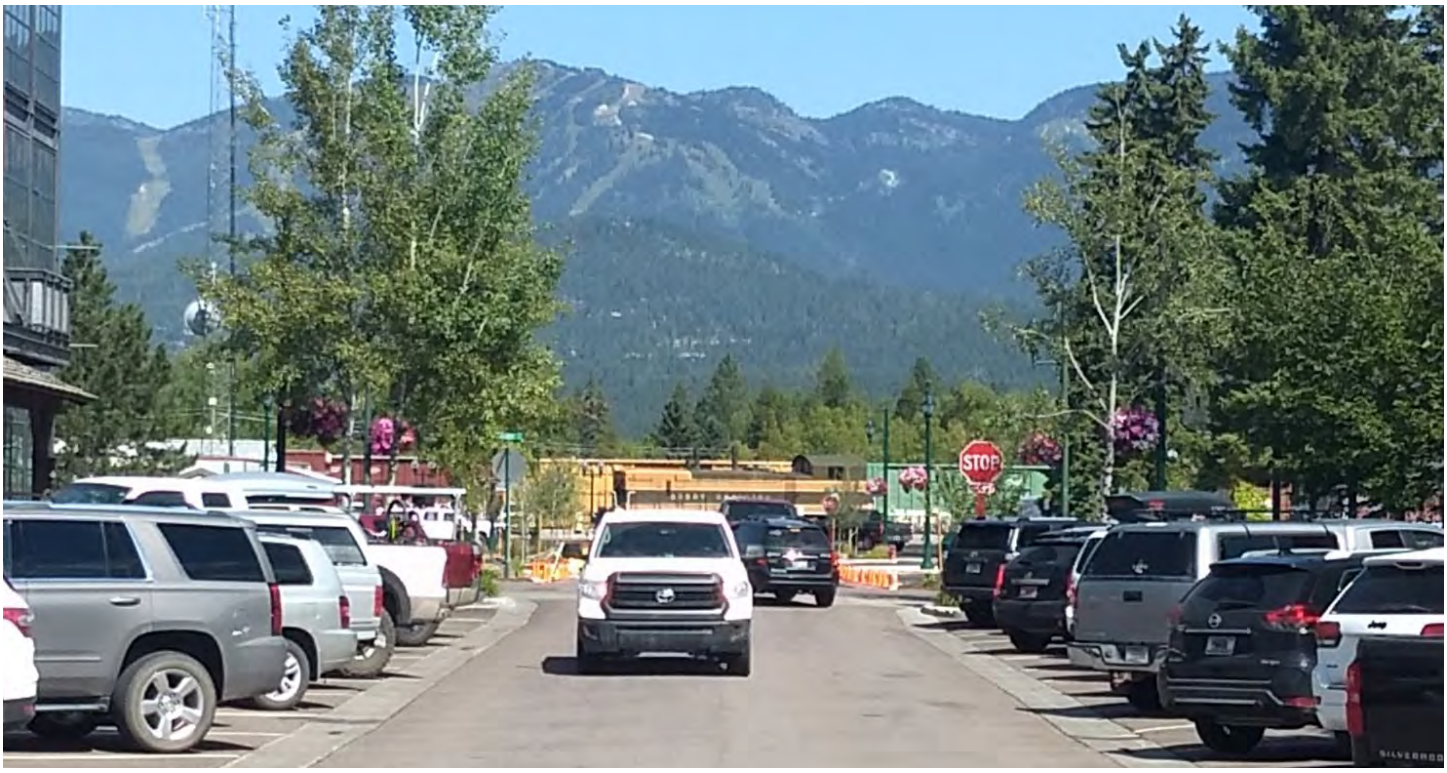


FIGURE I.6: MSN PROJECTS

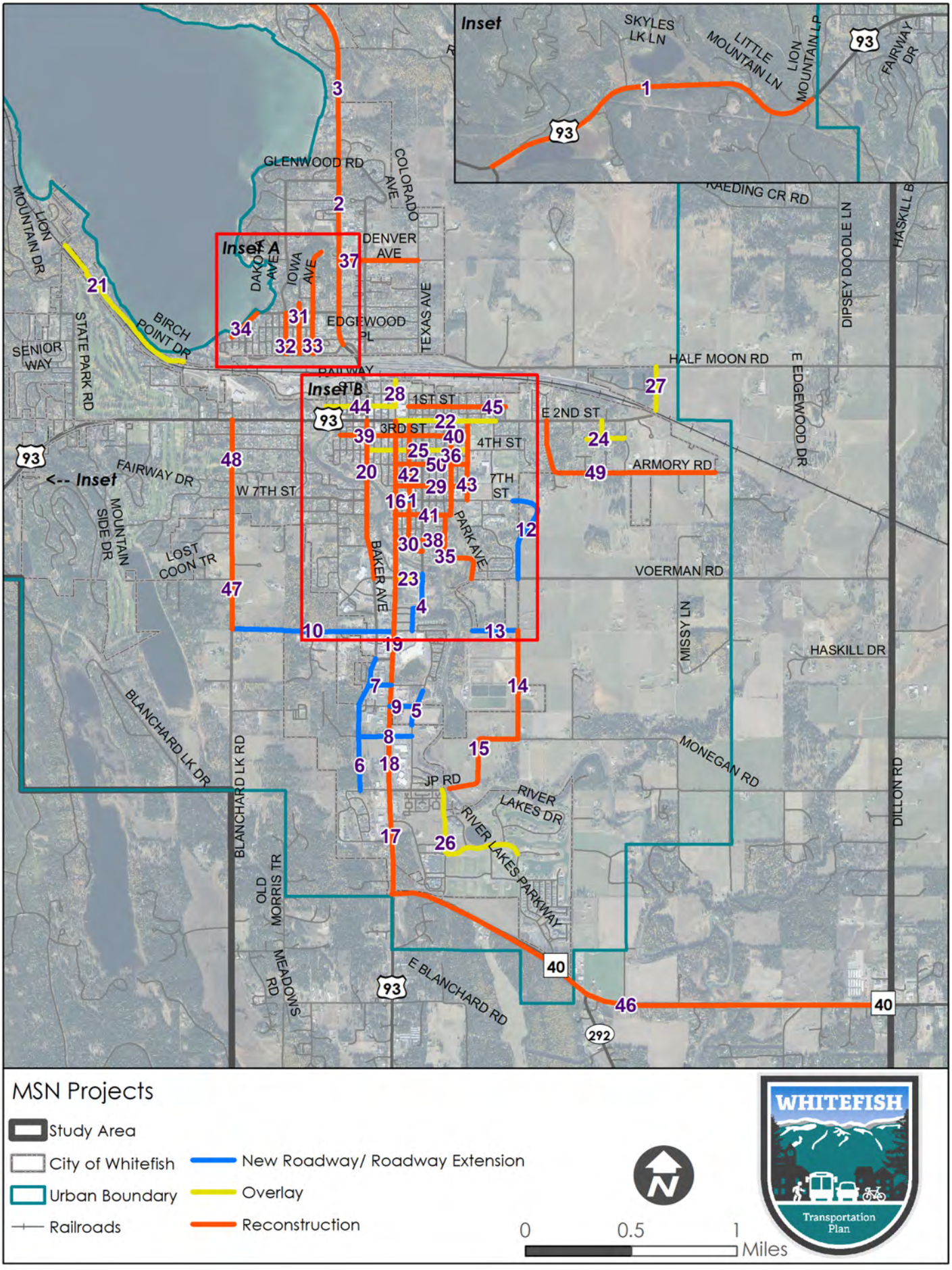


FIGURE I.7: MSN PROJECTS (INSET A)

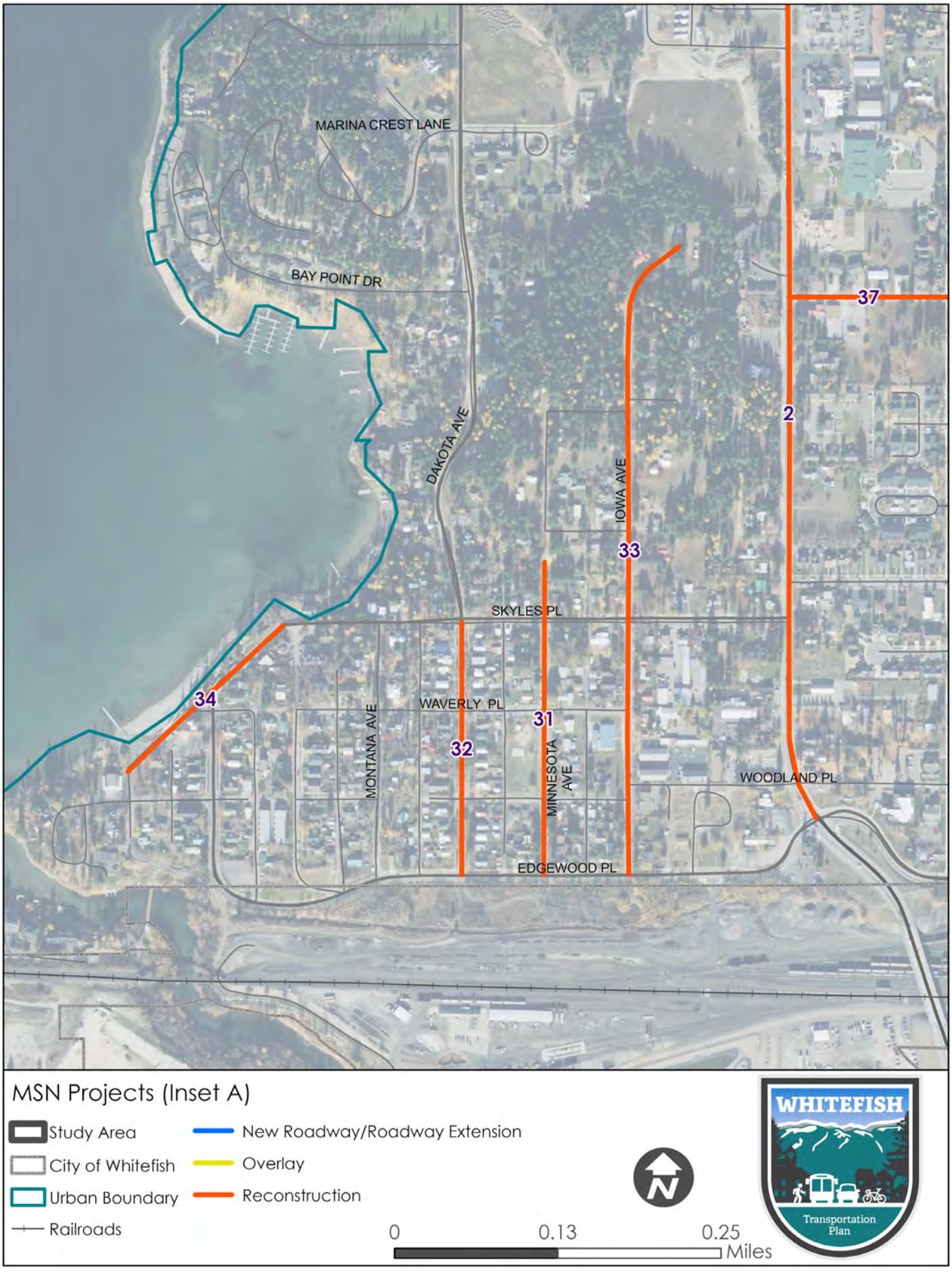
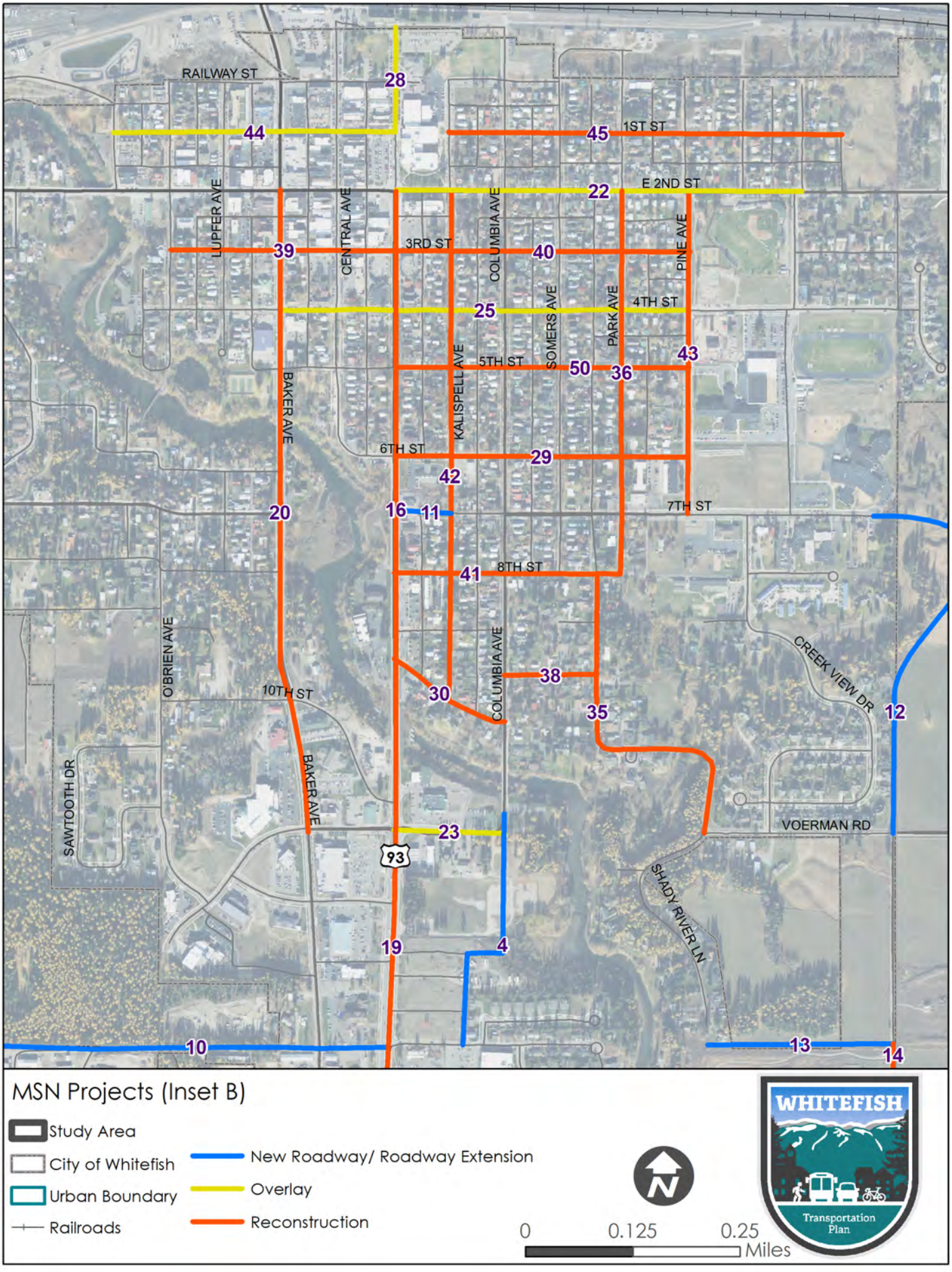


FIGURE I.8: MSN PROJECTS (INSET B)



MSN Priority Project Descriptions

Several projects are considered high priority given their special capacity to increase connectivity, enhance livability and sense of the place, and increase safety for the community. These projects are presented in detail below. The project numbers do not reflect a ranking of priority.

MSN #1: Highway 93 West – Phase 3 Reconstruction (MDT)

- Project Termini: Mountainside Dr to Twin Bridges Rd
- Project Description: This project responds to a previously identified need by MDT to address both vehicular and pedestrian safety issues on the west end of Whitefish. This project was identified by the public and serves as a continuation of the recent Hwy 93W projects through Whitefish.

MSN #4: Columbia Avenue South Extension

- Project Termini: 13th St to Greenwood Dr
- Project Description: This project responds to a previously identified need for a north-south corridor parallel to Highway 93. The project will help alleviate traffic levels on Highway 93 and increase connectivity by proving an alternate north-south route for local trips. The project will improve safety, level-of-service, and mobility through the south end of Whitefish.

MSN #5: Whitefish Ave Extension

- Project Termini: Shiloh/Lenna Joy Dr. to South of Akers Ln
- Project Description: This project responds to a previously identified need for a north-south corridor parallel to Highway 93. The project will help alleviate traffic levels on Highway 93 and increase connectivity by proving an alternate north-south route for local trips. The project will improve safety, level-of-service, and mobility through the south end of Whitefish.

MSN #6: Baker Ave Extension

- Project Termini: 19th St to JP Rd
- Project Description: This project responds to a previously identified need for a north-south corridor parallel to Highway 93. The project will help alleviate traffic levels on Highway 93 and increase connectivity by proving an alternate north-south route for local trips. The project will improve safety, level-of-service, and mobility through the south end of Whitefish.

MSN #10: 18th St West Extension

- Project Termini: Karrow Ave to Hwy 93
- Project Description: This project responds to a previously identified need for increased east-west connectivity within the City of Whitefish. The project will help alleviate traffic on Highway 93 and increase mobility by proving an alternate east-west route. In conjunction with MSN #13, the project will create a connection across the Whitefish River from Karrow Ave to Monegan Rd. These improvements will support access through the south end of Whitefish. 18th St is extremely steep and Lund Ln at the west end is a private road.

MSN #11 & 12: 7th Street Extension

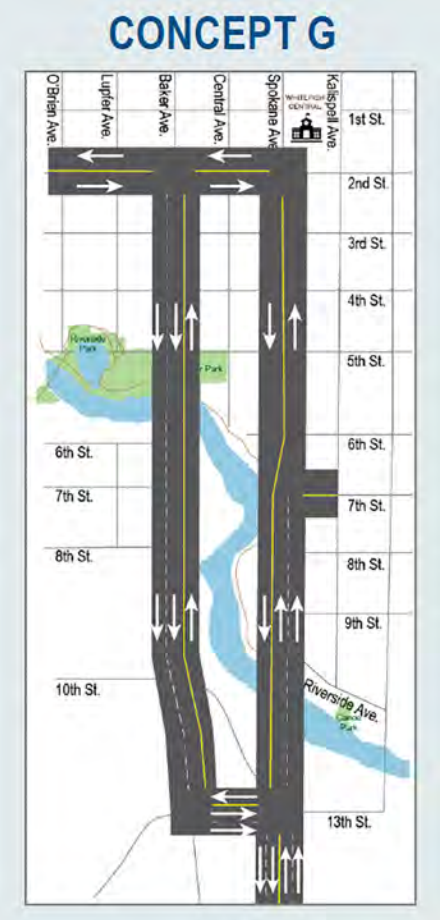
- Project Termini: Voerman Rd to 7th St; Spokane Ave to Kalispell Ave
- Project Description: This project responds to a previously identified need to manage traffic volumes on the southeast side of Whitefish, as well as increase the limited roadway connectivity through this area of the city. This new connection will serve to fill a key gap in the Whitefish street network.

MSN #13: New Collector Roadway

- Project Termini: Monegan Rd to ¼-mile west
- Project Description: Improves and supports mobility east of the Whitefish River by providing a new collector roadway. In conjunction with MSN #10 and Corridor Preservation #10, the project will create a full connection from Karrow Ave to Monegan Rd. These improvements will support systemwide east-west connectivity, reduce traffic demand on Hwy 93, and support improved mobility and access across the Whitefish community.

MSN #16: Hwy 93/ Spokane Reconstruction (MDT)

- Project Termini: 13th St to 2nd St
- Project Description: As both an urban highway and section of the proposed Whitefish Promenade, it is important that Hwy 93/Spokane maintain mobility while supporting the downtown's sense of place. The project will reconstruct this section of Hwy 93/ Spokane to include protected bike lanes, landscaped parkways, and improved intersection crossings for bicycles and pedestrians, among



other improvements. The project incorporates recommendations from the Whitefish-Downtown-Business District Master Plan as well as the Downtown Whitefish Highway Study. While Concept C is the preferred alternative, the City supports Concept G from the Downtown Whitefish Highway Study as the preferred design for this section of Highway 93/Spokane.

MSN #20: Baker Ave Reconstruction

- Project Termini: 13th St to 2nd St
- Project Description: Downtown Whitefish's economy is dependent on creating a pedestrian-oriented setting where visitors feel comfortable shopping and sight-seeing. Baker Ave is important in achieving this sense of place. The project will reconstruct this section of roadway to include sidewalk and intersection improvements that foster pedestrian activity. Improvements may include speed tables, widened sidewalks, landscaped curb extensions, and covered sidewalks along retail frontages. The project incorporates recommendations from the Whitefish-Downtown-Business District Master Plan as well as the Downtown Whitefish Highway Study. Specifically, the City supports Concept G from the Downtown Whitefish Highway Study as the preferred design for this section of Baker Ave..

MSN #29: East 6th St Reconstruction

- Project Termini: Hwy 93 to Pine Ave
- Project Description: Most of E 6th St currently lacks pedestrian and bicycle infrastructure. With the corridor serving as a key access route to the high school and elementary school, this is of special concern for children. The project will reconstruct the roadway with bicycle and pedestrian facilitates, traffic calming measures, and enhanced crosswalk markings to accommodate safe and convenient non-motorized travel. Underground utility needs will also be addressed during the project.

MSN #35: Park Ave Reconstruction

- Project Termini: Voerman Rd to E 7th St
- Project Description: This project will provide an important connection to Whitefish residential and commercial districts from the City's southern end. Enhancement of Park Ave from Voerman Rd to E 7th St is considered a priority due to its potential faster and cheaper implementation compared to other projects that would provide a similar connection, such as a Greenwood Dr extension across the Whitefish River or extension of Monegan Rd north to E 7th St. The construction of workforce housing north of the Whitefish Waste Sewage Plant further highlights the need for an improved north-south route to town and to the schools.

MSN #37: Denver St Reconstruction

- Project Termini: Wisconsin Ave to Texas Ave
- Project Description: This project responds to a previously identified need to reconstruct Denver St east of Wisconsin Ave to Texas Ave. This need has been identified in past planning efforts undertaken by the City, including the Connect Whitefish Bicycle & Pedestrian Master Plan. The project would address pavement condition issues and provide bike and pedestrian facilities along the roadway.

MSN #42: Kalispell Ave Reconstruction

- Project Termini: Riverside Ave to E Second St
- Project Description: This project is located along a key segment of the Whitefish Safe Routes to School route.[1] The project will close gaps in the sidewalk system and add wayfinding signage and pavement markings to create a safe and convenient route to Whitefish Middle School. Underground utility needs will also be addressed during the project.

MSN #43: Pine Ave Reconstruction

- Project Termini: E 7th St to E Second St
- Project Description: Directly adjacent to Whitefish High School and Muldown Elementary School, Pine Ave is one of the most important sections of the Whitefish Safe Routes to School route. At present, sidewalk is only provided on the east side of the street. In addition, crosswalk striping is faded or missing and signage is inadequate. This project will address gaps in the sidewalk system and add safety measures to create a convenient and secure route serving Whitefish High School and Muldown Elementary School. Underground utility needs will also be addressed during the project.

MSN #45: 1st St Reconstruction

- Project Termini: Kalispell Ave to Larch Ave
- Project Description: This section of 1st St is located along a key segment of the Whitefish Safe Routes to School route. Despite its proximity to schools, this section of roadway only has sidewalk on the north from Somers Ave to Park Ave, and no sidewalks from Park Ave to Larch Ave. The project will close gaps in the sidewalk system and add wayfinding signage and pavement markings to create a safe and convenient route serving Whitefish Middle School, High School, and Elementary School.

MSN #48: Karrow Ave Reconstruction

- Project Termini: 7th St to Highway 93
- Project Description: This project responds to a previously identified need for improved north-south connectivity to the west of Highway 93. As traffic volumes increase on

1 Connect Whitefish Bicycle & Pedestrian Master Plan (2017)

US Highway 93 and Karrow Avenue, additional capacity will be needed to accommodate future development patterns within this area of the City. The corridor also lacks bicycle and pedestrian facilities, which will become increasingly important as Karrow Ave experiences more commuter traffic in the future. This project will reconstruct Karrow as three-lane minor arterial with pedestrian and bicyclist facilities.

MSN #49: Armory Rd Reconstruction

- Project Termini: E Second St to the City Limits
- Project Description: This project responds to a previously identified need for enhanced access to downtown Whitefish from the east. The project will enhance capacity and operations along this key route, which will continue to accommodate more commuter traffic to and from downtown as development increases south and east of the City. The project will improve safety, level-of-service, and mobility through the southeastern end of Whitefish.

MSN #50: East 5th St Reconstruction

- Project Termini: Hwy 93 to Pine Ave
- Project Description: This project is located along a key segment of the Whitefish Safe Routes to School route.[2] The project will close gaps in the sidewalk system and add wayfinding signage and pavement markings to create a safe and convenient route to Whitefish High School. East 5th Street has been identified as a priority Safe Routes to school project since 2011. It was chosen in part due to the pedestrian activated signal at Spokane and 5th and its alignment with the Riverside Park and pedestrian bridge.

Transportation System Management

The TSM recommendations reflect intersection-level improvements which respond to both safety- and operations-related issues at an isolated location. The set of TSM project recommendations is based on previous and ongoing planning studies as well as analysis conducted during the baseline conditions, projected conditions, and active transportation evaluations for this plan. The total estimated cost of TSM project needs is $5,675,000.[3]

The distribution of TSM projects throughout the study area reflects a systemwide emphasis on safety, connectivity, and operations. Various projects focus on north-south connectivity across the railway, while others target safety concerns at specific locations, including intersections adjacent to schools.

Recommended TSM Improvements

TSM projects are listed in Table I.5 and shown in Figure I.9 on page xxii. Each TSM project listing in the table includes a map ID, a summary of the project location and related termini, and a short description. TSM project #7 is not reflected in the map as it does not yet have a specific location. All TSM projects are described in further detail in the next section.

Table I.5: TSM Projects

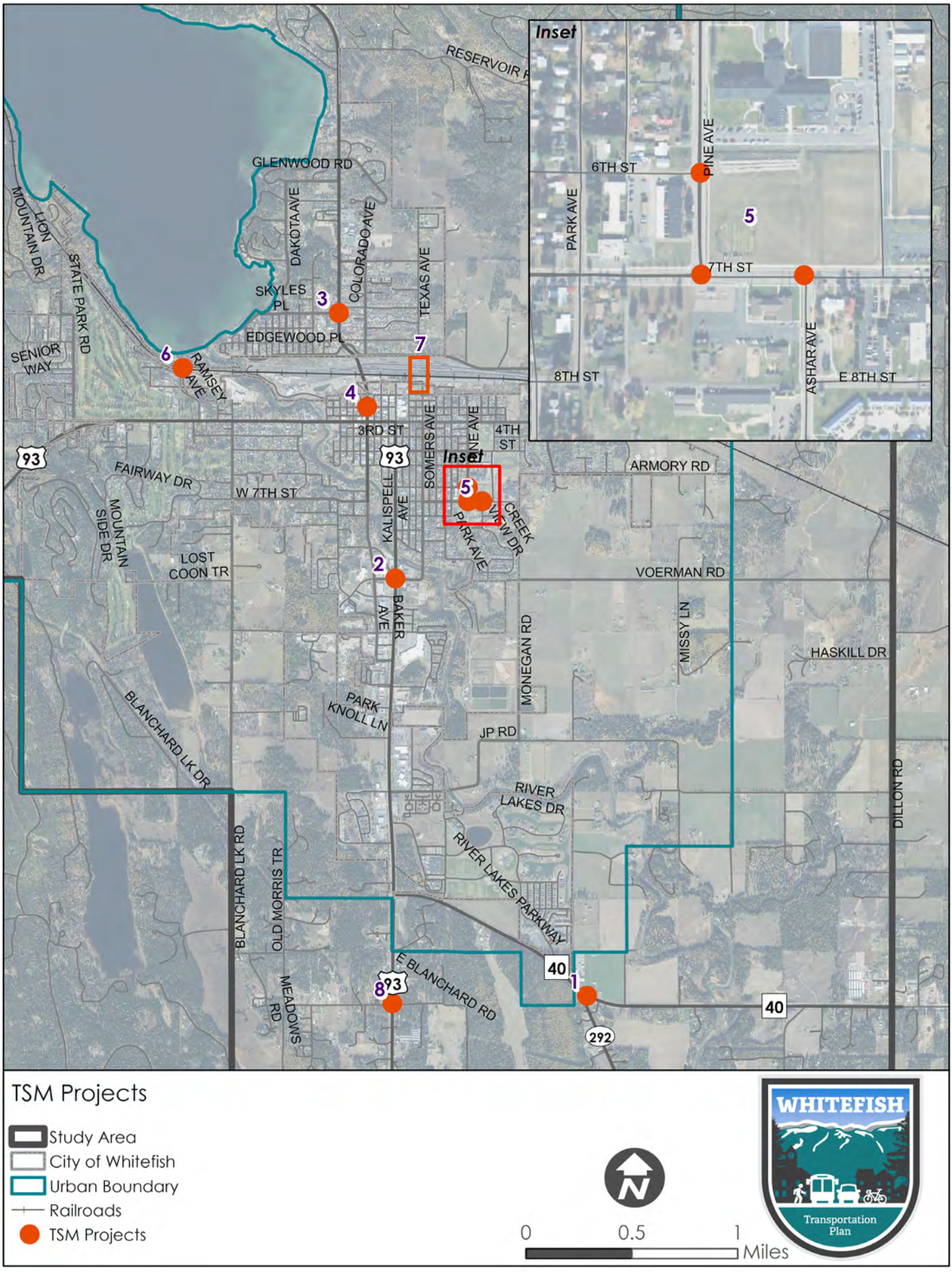
TSM#/ MAP ID	CORRIDOR	TERMINI	TERMINI	DESCRIPTION	COST
1	MT 40 (MDT)	Whitefish Stage Rd	Whitefish Stage Rd	Signalized intersection or a two-lane roundabout	Option 1: $1M; Option 2: $3.5M
2	Spokane Ave (MDT)	13th St	13th St	Intersection improvement	$850,000
3	Wisconsin Ave (MDT)	Skyles Pl	Skyles Pl	Intersection improvement	$510,000
4	Baker Ave	E 1st St	E 1st St	State intersection evaluation	N/A
5	Muldown Elementary School Area Safe Routes to School Improvements	Sixth St @ Pine Ave; Seventh St @ Pine Ave; Seventh St @ Asher Ave		Intersection safety improvements	$250,000
6	Birch Point Dr	BNSF Mainline	BNSF Mainline	Quiet Zone - Supplemental safety measures (SSMs)	$565,000
7	BNSF Mainline between Baker Ave viaduct and E 2nd St			Build grade separated crossing at BNSF railway at E 2nd St; or at E Texas/Columbia	N/A
8	Blanchard Lake Road	Highway 93 South	Highway 93 South	Intersection improvement	N/A

MDT: Denotes projects on roadways owned and maintained by MDT.

2 Connect Whitefish Bicycle & Pedestrian Master Plan (2017)

3 The estimate of total project cost included the most expensive option for TSM #1. This was done to produce the most conservative total estimate.

FIGURE I.9: TSM PROJECTS



TSM Project Descriptions

The TSM projects are presented in detail below.

TSM #1: MT 40 @ Whitefish Stage Rd Intersection Improvements (MDT)

» Project Description: This project responds to a previously identified need to improve LOS, capacity, and safety at this intersection. Recommended improvements include either a two-lane roundabout or a traffic signal. The benefits and impacts of each option are presented in the Jct. US 93 – East (MT 40) Preliminary Traffic Report. This project will improve capacity, mobility and safety for travelers as well as assist in meeting anticipated development-generated traffic and future MT 40 approaches.

TSM #2: Spokane Ave @ 13th St Intersection Improvements (MDT)

» Project Description: This project responds to a previously identified need to improve traffic flows and safety at the intersection. The project will modify the eastbound, westbound, and southbound intersection approaches. The eastbound approach will be modified to have an exclusive left-turn lane and shared through/right-turn lane. The westbound approach will have separate right-turn, through, and left-turn lanes. The southbound approach will have a shared through/right-turn lane, a through lane, and a left-turn lane. No changes will be made to the northbound approach. This project was listed as a priority in the 2010 Transportation Plan. The city has requested that MDT split out this project from the Spokane Avenue section of the Downtown Highway project.

TSM #3: Wisconsin Ave @ Skyles Pl Intersection Improvements (MDT)

» Project Description: This project corresponds to current and previous safety and level-of-service needs at the intersection, including those discussed within the Wisconsin Avenue Corridor Plan (2018). The project may include a raised median beginning just south of Skyles Place, which will transition into a left-turn bay for movements from Wisconsin Ave onto Skyles Pl. The raised median and dedicated left-turn lane will reduce vehicle conflict opportunities and help alleviate queuing issues along Wisconsin Ave.

TSM #4: Baker Ave @ E 1st St Intersection Evaluation

» Project Description: The Baker Ave @ E 1st St intersection is one of the top ten high frequency crash locations identified within this plan. Based on recent crash statistics, the City will work in cooperation with MDT regarding potential safety improvements to be implemented in concert with future possible improvements to Baker Ave. The crash frequency at this location may be related to the location of the pedestrian activated signal base.

TSM #5: Muldown Elementary School Area Safe Routes to School Improvements (Sixth St @ Pine Ave; Seventh St @ Pine Ave; Seventh St @ Asher Ave)

» Project Description: This project responds to safety issues at various crossing locations adjacent to Muldown Elementary School. The city has been meeting with the school district to consider pedestrian safety improvements to these intersections. At present, crosswalk striping is faded or missing and signage is inadequate. The project will install safety improvements including durable and visible crosswalk striping on all legs of intersections, Solar LED Blinker Pedestrian Crossing signs to notify drivers of the presence of pedestrians, highly visible school crossing signage, and student stand-back lines behind curb backs.

TSM #6: Birch Point Dr @ BNSF Mainline Quiet Zone

» Project Description: This project reflects the community's desire to establish a quiet zone at the Birch Point Dr railway crossing. The project will include the safety engineering improvements (Supplementary Safety Measures (SSM)) required by the Federal Railroad Administration for establishment of a quiet zone. Possible SSMs include temporary closure systems, gate systems, and channelization devices, among others.

TSM #7: Build grade separated crossing of BNSF railway

» Project Description: This project supports emergency/evacuation route needs from areas north of the BNSF tracks. Options include E 2nd St or Texas/Columbia, both require further study. This project would create an additional crossing of the BNSF Railway which would improve evacuation from the north in an emergency, improve north-south connectivity and traffic flow, and relieve traffic congestion at the Baker viaduct.

TSM #8: Blanchard Lake Road @ Highway 93 South

» Project Description: It is recommended that an intersection control evaluation be developed for the intersection of Blanchard Lake Road and Highway 93 South. This analysis should be coordinated with MDT. The city should work closely with MDT on an upcoming corridor access management analysis planned on the Highway 93 South corridor south of MT 40 to evaluate needs at this intersection.

SIGNIFICANT MOBILITY IMPROVEMENTS

Several improvements are identified in the Transportation Plan related to improving mobility along and adjacent to Highway 93 through Whitefish. Through development of the Transportation Plan, the following projects are considered of particular importance and priority for the City of Whitefish. The list is in order of prioritization.

1. **Highway 93/13th Street:** Intersection reconstruction **(TSM #2)**
2. **Highway 93 – MT 40 to 13th Street:** Intersection improvements/center medians/access management plan **(MSN #17–20)**
3. **Baker Avenue:** 13th Street to 2nd Street reconstruction **(MSN #20)**
4. **Highway 93:** 7th Street to 13th Street reconstruction **(MSN #16)**
5. **Whitefish Avenue (Shiloh Avenue):** Corridor extension **(MSN #5)**
6. **Baker Avenue:** 19th Street to JP Road extension **(MSN #6)**

TRANSIT SYSTEM FRAMEWORK

A transit system framework was developed as part of the Whitefish Transportation Plan update. The Transit System Framework is structured to provide a set of needed system changes to support a more robust transit system for the City of Whitefish. The Framework is intended to aid regional partners in understanding the steps needed to develop a more comprehensive countywide transit system through opportunities unique to Whitefish which may offer benefits to the entire county.

Regional Coordination Opportunities

Greater coordination is needed both within the City of Whitefish but also across Flathead County to provide a transit system which is more logically structured to existing and potential future transit system demands. It is critical that transit planning and funding be approached jointly by the cites, the County, and the business community to ensure a coordinated, integrated, and sufficiently funded system.

Regional MOU

A recommended first step in formalizing a more coordinated and regionally integrated transit system is the development of a memorandum of understanding (MOU) which outlines the roles and responsibilities of each partner within an eventual regional transit organization, and the process and timeline by which such an organization will be formed. This would be the requisite step to creating a more formalized regional transit system.

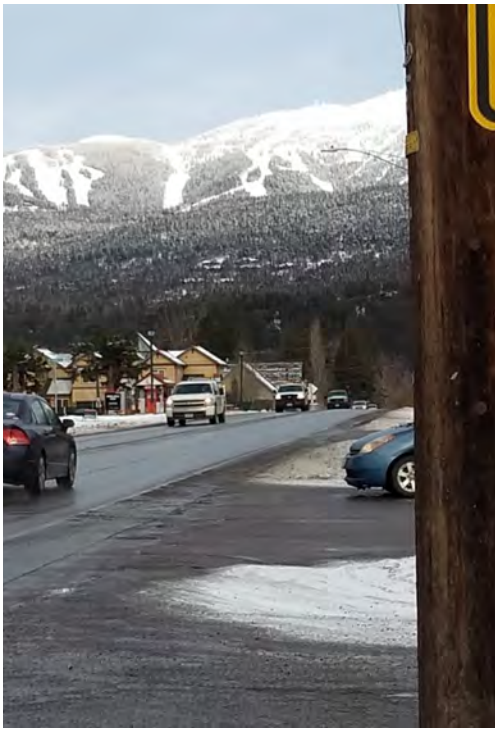
- **Phase 1** – City of Whitefish, Whitefish Public Schools, BMCA, Rocky Mountain Transportation, Mountain Climber and Explore Whitefish
- **Phase 2** – Expand agreement to include the City of Kalispell and City of Columbia Falls.

Transportation Management Organization (TMO)

Execution of a more localized MOU (i.e., Phase 1) could be focused initially on the development and formation of a mobility management organization, such as a transportation management organization (TMO). A TMO is a public-private partnership whose members may include local employers, government agencies, transportation providers and others interested in addressing specific transportation needs within an area. TMOs typically work towards coordinating transportation and mobility options rather than operating core transit services themselves.

Evaluation towards a transit authority

A decision regarding the final, long-term form of a regional transit organization may hinge on several considerations, including the amount of control that communities want to have over the organization and the types of projects and services that the organization will oversee. Creation of a consolidated Transit Authority (TA) may represent the best long-term option for Whitefish and its regional partners. A regional TA is preferrable when it is determined that a single provider can serve the region more efficiently than multiple providers covering the same area. Because they have jurisdictional authority over the operating area and the power to raise revenues, TAs have political and financial independence from their member communities. This autonomy helps authorities sustain cooperative partnerships among communities and maintain a regional approach to service provision which considers the interests of all communities equally.



Active Transportation

The Whitefish Transportation Plan includes a detailed set of network recommendations to enhance and expand active transportation systems within the study area. The City of Whitefish has conducted multimodal planning as part of numerous planning efforts over the last twenty-five years which provide significant insight into the Whitefish Transportation Plan. The Connect Whitefish Bike/Ped Plan, the Downtown Whitefish Master Plan, and the Highway 93 South Corridor Plan served as the backbone for key active transportation inputs into the Whitefish Transportation Plan. Other planning and policy documents including the City of Whitefish Growth Policy were used as guideposts for where future development is anticipated. Active transportation projects are ranked and prioritized within the plan, and recommendations are developed to ensure integration of active transportation improvements with other critical roadway projects within the study area.

FINANCIAL PLAN SUMMARY

Table I.6 demonstrates the financial summary for the Whitefish Transportation Plan. This accounts for projected City of Whitefish revenues as well estimated costs to build out the MSN and TSM recommendations on the local and Urban roadway network. Because MDT revenues were not included in the financial forecasting Table I.6 separates out MDT projects related to the National Highway System (MSN #1, #16–20 and #46; and TSM #1). These MDT projects total $91.5 million over the life of the planning horizon, as shown in Table I.6.

City of Whitefish revenues over the life of the transportation plan which assume projected federal, state, and local sources total $57 million by 2040. The cost of recommended City of Whitefish related TSM and MSN network improvements over the planning period total nearly $90 million. This leaves an unfunded need over the planning period of $32 million, or approximately 35% unfunded needs.

Table I.6: Financial Plan Summary

REVENUE SOURCE DESCRIPTION	ESTIMATED TOTAL REVENUES (2040)
Street Fund	$7,467,000
BaRSAA (Gas Tax)	$4,028,000
Urban Surface Transportation Program	$2,983,000
Resort Tax Fund	$42,332,000
Subtotal	*$56,810,000*
COST DESCRIPTION	**ESTIMATED TOTAL COSTS (2040)**
MSN Needs (City)	$86,222,000
TSM Needs (City)	$2,175,000
Subtotal	*$88,397,000*
Unfunded Needs (City)	**$31,587,000**
MSN Needs (MDT)	$88,029,000
TSM Needs (MDT)	$3,500,000
Unfunded Needs (MDT)	**$91,529,000**

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WHITEFISH

Transportation Plan

CHAPTER 1. INTRODUCTION

October 2022

KLJ

ENGINEERING, REIMAGINED

INTRODUCTION

The Whitefish Transportation Plan update is designed to guide transportation planning activities by setting forth direction and strategies to help shape the City's transportation network through the year 2040. This plan serves as an update to the 2010 Whitefish Transportation Plan. The plan considers all modes of transportation including driving, walking, bicycling and transit to create a consolidated vision for the future. The Whitefish Transportation Plan update was developed through a collaborative approach involving stakeholders, agency partners, and community members, and charts the development of the transportation system using the community's goals and priorities as a foundation.

Chapter 1 of this document presents the plan background, defines the study area, describes recently completed planning studies that informed the plan update, and presents the plan's Vision, Goals, and Strategies.

BACKGROUND

The update of the Whitefish Transportation plan responds to changing conditions within the City of Whitefish. Growth within the study area has been considerable since the last transportation plan was adopted in 2010. This update considers changes in population and economic trends within the larger study area, including the Flathead Valley. Localized conditions, coupled with larger regional trends, have a combined measurable impact on transportation within the City of Whitefish.

The Whitefish Transportation Plan has a 20-year planning horizon and evaluates growth to the year 2040. Future projections point to continued growth and development within Whitefish and throughout Flathead County. The Whitefish Transportation Plan will establish a set of recommended goals, initiatives, and projects to address projected needs facing the City of Whitefish to the year 2040.

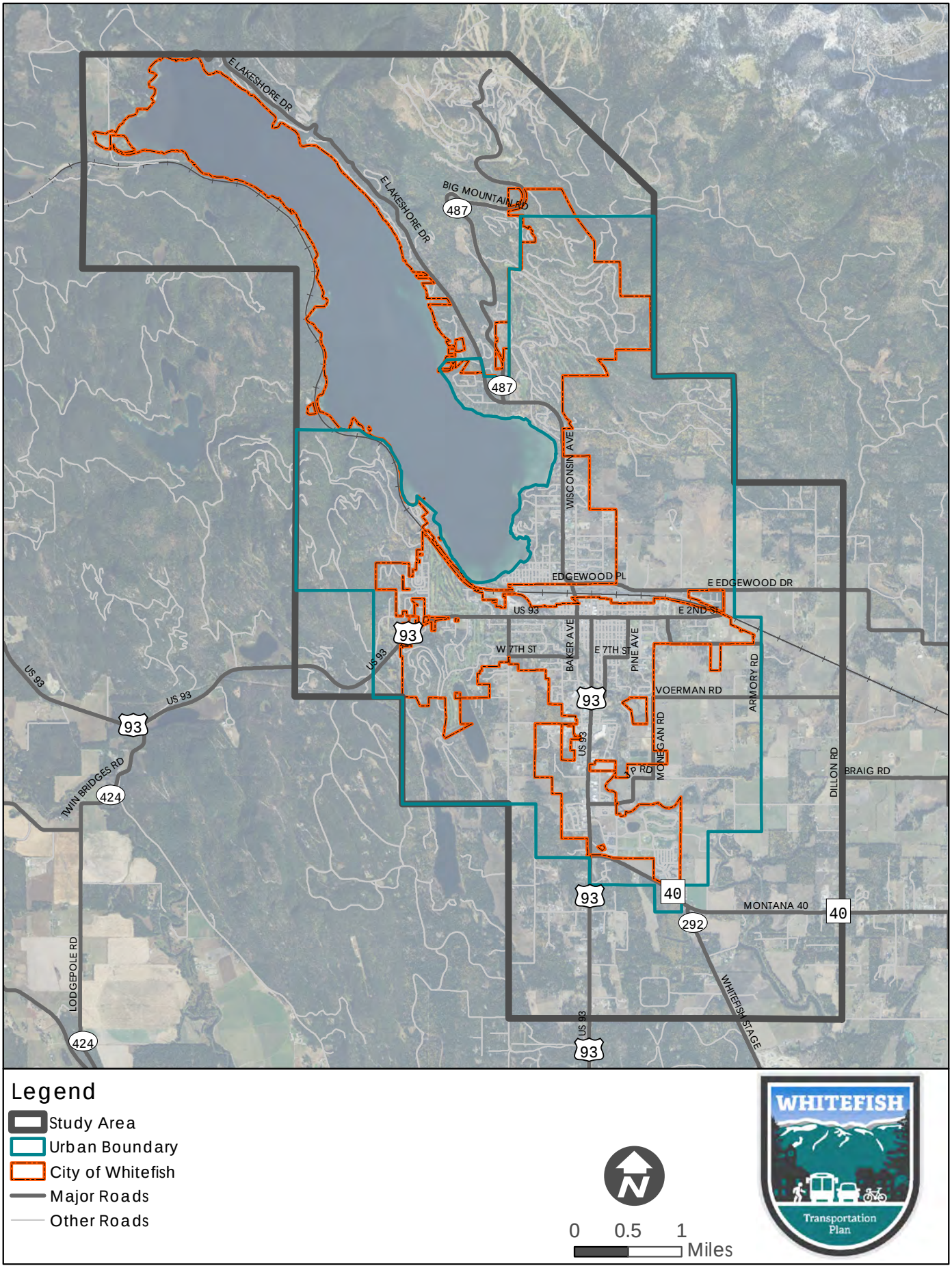
Several relevant and related transportation plans and studies are integrated into the Whitefish Transportation Plan. These plans represent a collection of land use and multimodal transportation planning efforts that affect the City of Whitefish. The Whitefish Transportation Plan is rooted in supporting a diversification of transportation options and choices to balance existing and projected mobility needs for the City of Whitefish. Rather than duplicate past efforts, the Whitefish Transportation Plan pulls forward a coordinated framework of relevant and strategic initiatives from these current plans.

The Whitefish Transportation Plan integrates outcomes from the recently completed Highway 93 South Corridor Study and the Downtown Whitefish Highway Study. The Downtown Whitefish Highway Study explored options for reconstructing both Highway 93 and Baker Avenue. Additionally, the Downtown Whitefish Highway Study is supported through an area wide travel demand model covering the entire study area for the Whitefish Transportation Plan. To match future traffic demands, the Whitefish Transportation Plan is using the same existing and projected conditions to support travel demand for the study area.

STUDY AREA

The study area for the project was established in collaboration with the City of Whitefish and Montana Department of Transportation (MDT). It includes the area within both the urban boundary and the city limits, as well as additional areas outside of those boundaries to account for areas already developing and areas that could see growth over the twenty-year study horizon. This study area allows the planning process to account for the impact of commuter traffic generated from developing areas and outlying residential areas in Flathead County. Understanding the traffic impacts from both within and outside of the city boundary will allow for better planning of the future road network. Figure 1.1 shows the study area.

FIGURE 1.1: STUDY AREA



RECENTLY COMPLETED PLANNING STUDIES

Since completion of the 2010 Whitefish Transportation Plan the City of Whitefish has developed a significant number of additional area wide and corridor level planning studies (Table 1.1). These run the gamut of modal analysis related to parking, transit and active transportation. Additionally, the City of Whitefish has developed more specific policy plans related to sustainability, housing and transportation demand management. To create a robust transportation plan, relevant elements of these plans are synthesized into the updated Whitefish Transportation Plan. The recently completed planning studies, identified and summarized below, provide background information to guide the development of the updated Whitefish Transportation Plan. A review of these plans will ensure that the Whitefish Transportation Plan is consistent with other efforts across the city, county, and region.

2007 City of Whitefish Growth Policy

The Growth Policy plan is the driving force behind several of the plans summarized later in this section. In addition to describing transportation goals, policies, and actions, four specific transportation corridor studies were recommended along Highway 93 South, US 93/North Montana Highway 40, Wisconsin Avenue, and US 93/ Spokane Avenue. The resulting policies, goals, and objectives for land use, development, and growth from each corridor study will ultimately be used to amend the Growth Policy.

Sustainability and livability emerged as the major themes for the future of Whitefish's transportation systems. In addition to five goals and four policies, 12 actions were recommended in the Transportation section of the Growth Policy Plan. The most relevant are listed below.

- Make construction of new sidewalks and pathways a priority in areas where they do not currently exist.
- Plan for through, continuous streets to the extent possible. When cul-de-sacs are appropriate due to ownership, topography, or other constraints, ensure that a future street extension can be made via a right-of-way dedication, or at the very least, a pedestrian connection.
- Through the community-wide transportation plan, explore possibilities for an additional grade separated crossing of the BNSF rail facilities.
- Assess the need and feasibility of a highway bypass to alleviate through traffic in the downtown area. (The 2010 Transportation Plan completed this assessment, and did not recommend a bypass of Highway 93.)
- Explore alternative vehicular routes to the Whitefish Mountain Village.

2010 Whitefish Transportation Plan

The 2010 Whitefish Transportation Plan was prepared in 2009 with the intention of guiding decisions about the future of the Whitefish area transportation system. The plan used the 2007 City of Whitefish Growth Policy plan to model future travel demand based on the development patterns and anticipated land use changes. The study recommends 30 improvements, including a range of low cost "tune-up" type improvements as well as major redesigns, at an

Table 1.1: Recent Planning Studies

PLAN	YEAR	TRANSPORTATION PLAN RELATIONSHIP
Hwy 93 South Corridor Plan	2022	Corridor Management
Downtown Whitefish Study	2022	Corridor Management
Eagle Transit five year CIP Study	2020	Transit Development
2019 Downtown Parking Management Study	2019	Parking Demand Management
2019 City of Whitefish Traffic/Transportation Report (WTI)	2019	Travel Demand Management
Wisconsin Avenue Corridor Plan	2018	Corridor Management
Whitefish Climate Action Plan	2018	Transportation Policy
Whitefish Strategic Housing Plan	2017	Housing Policy
Connect Whitefish Bicycle and Pedestrian Plan	2017	Active Transportation
Highway 93 South Whitefish Corridor Plan and Zoning Amendment*	2017	Corridor Management
Whitefish Downtown Business District Master Plan	2015	Corridor Management
Highway 93 West Corridor Plan	2015	Corridor Management
Safe Routes to School Plan	2011	Safe Routes to School Policy & Infrastructure
Whitefish Transportation Plan (Long Range)	2010	Baseline System-Wide Needs
2007 City of Whitefish Growth Policy	2007	Growth Policy & Community Development

**Study was privately funded*

estimated cost of about $70 million in total. The Whitefish Transportation Plan update will provide a consistency review of remaining incomplete project recommendations included in the 2010 Transportation Plan.

City of Whitefish Safe Routes to School Improvement Plan

This plan aimed to increase the number of students walking and bicycling to school in Whitefish. With the goal of making the non-motorized transportation network accessing Muldown Elementary and Whitefish Middle schools a more viable option for school-aged children, five complementary strategies were developed: engineering, enforcement, education, encouragement, and evaluation. Thirteen engineering projects and ten sidewalk projects are recommended, including the following:

- A drop-off loop at Muldown Elementary School at the intersection of 7th Street and School Drive.
- Dedicated bicycle lanes or paths along Kalispell Avenue and 5th Street.
- A bicycle/pedestrian bridge that would extend 7th Street across the river.
- Fill in gaps in the sidewalk network, prioritizing facilities along 5th Street, Pine Avenue, and 6th Street South.

2016 Connect Whitefish Bicycle and Pedestrian Plan

This plan recommended a network of trails and other improvements to achieve a connected system of bicycle and pedestrian facilities. The City of Whitefish has constructed 13.6 miles of bike/pedestrian paths, two miles of bike lanes on city streets, and three bike/pedestrian bridges. This plan identified the need for an advocacy group to support the education, awareness, and promotion of biking and walking in Whitefish. Additionally, recommendations are provided related to connectivity, safety, wayfinding, maintenance, programming, and funding.

The plan is intended to evolve over time as community needs and design standards change. It was recommended that this plan be reviewed by Whitefish city staff approximately five years after implementation to evaluate its success and assess the need for an update. Since implementation, several miles of shared paths have been constructed as part of street reconstruction projects. Additionally, the Connect Whitefish advocacy group was created as a result of this plan.

2018 Whitefish Climate Action Plan

The City of Whitefish is committed to the goals of the Paris Agreement in reducing its greenhouse gas emissions by 26 percent by 2026. A city council-appointed committee worked with city staff and the school district to create an action plan for Whitefish. Several recommended strategies related to transportation and land use are listed below.

- Develop a transit center near Depot Park, and improve and promote public transit service.
- Make Whitefish more bike and pedestrian friendly.
- Adopt land use and transportation policies to reduce vehicle miles traveled.
- Plan for walkable communities through compact development and investment in pedestrian and bike facilities.
- Develop design standards to accommodate transit, car-sharing, and non-motorized travel.
- Install electric vehicle charging stations.

The Wisconsin Avenue Corridor Plan

This plan was adopted by the City of Whitefish in 2018. Wisconsin Avenue is the primary link between downtown and two major recreational destinations, Whitefish Lake and Whitefish Mountain Resort. Additionally, Wisconsin Avenue is a state-maintained urban route and the only separated grade crossing over the railroad tracks. This plan provides a decision framework for the next 10 to 20 years that will maximize the city's infrastructure investment, protect the environment, help meet the city's housing needs, and maintain community character. According to the 2010 Whitefish Transportation Plan, several segments and intersections along Wisconsin Avenue are expected to have unacceptable levels of congestion and delay by the year 2030. Delays along Wisconsin Avenue will cause traffic to spill over to alternative routes through nearby residential neighborhoods. To address this concern, a set of action items were identified, four of which are particularly relevant to the transportation network:

- Evaluate options for road widening, turn lanes, curbs, parkways and intersection improvements along Wisconsin Avenue.
- Identify options to expand transit and develop park-n-ride lots.
- Identify potential traffic calming solutions for Colorado Avenue.
- Implement Bicycle-Pedestrian Master Plan recommendations and continue exploring options for improving the bicycle and pedestrian network.

Downtown Business District Master Plan

This master plan—adopted in 2006, updated in 2015, and revised in 2018—identifies opportunities to increase the vitality of the downtown business district. Four guiding principles for the transportation network are stated:

- Ensure that Highway 93 roadway and intersection changes enhance and support downtown businesses rather than serving as merely a conduit for regional through-traffic.
- Accommodate increasing traffic volumes without degrading downtown livability and the retail environment.
- Locate new parking facilities to support downtown retail and commercial businesses.
- Accommodate alternative transportation modes (pedestrian, bicycle, and transit) to reduce downtown congestion.

Included in this plan is the proposed design for downtown Whitefish. The plan establishes a comprehensive 'complete street' network of integrated and balanced pedestrian, bicycle and automobile facilities that connect to and within the downtown planning area. While ensuring that essential auto and truck access is maintained, the transportation framework includes pedestrian and bike-friendly streets, intersections, sidewalks, and recreational trails that enhance mobility and the quality of life for those living in, working in, or visiting Downtown Whitefish.

City of Whitefish Traffic/Transportation Report

The report investigates existing transit service, the transportation hub at Depot Park, and parking facilities in Whitefish. They found that 42 percent of survey respondents would consider using a park-and-ride service to get to work in downtown Whitefish. This finding, along with other survey results, motivated several recommendations. First, the city should consider adding park-and-ride service to improve access to downtown. Second, the city should limit the addition of new parking facilities and consider repurposing land where parking lots currently exist. These improvements have the potential to increase the tax base and vitality of downtown.

2019 Whitefish Parking Management Plan

The purpose of this study was to address concerns related to parking availability in Whitefish. Through a review of existing studies, on-site review, stakeholder engagement, and interviews with city staff, several programs were recommended with the intention of reducing single-occupant vehicles. Shuttles and Public Transportation are vital to several of the recommendations. Improvements to SNOW Bus service, the establishment of park-and-ride lots, increased messaging and marketing for transit services, and shuttles for special events could all help reduce the need for parking downtown. Several changes could be made to the physical environment to better manage parking needs. These include reserved parking spaces for carpoolers, dedicated passenger loading areas for ridesharing, shared parking

agreements with downtown businesses, and dynamic meter pricing. In addition to these improvements, engagement and outreach to the community should not be overlooked. Posting "Getting Around" information on the city website and hosting public forums will increase awareness of alternative travel modes and parking options.

Downtown Whitefish Highway Study

Highway 93 runs through the center of downtown Whitefish and serves as a primary travel route for residents, visitors, and through traffic. This study was an effort to identify intersection improvements and roadway reconfigurations that improve traffic flow along the Highway 93 corridor. Seven options were developed to improve mobility and safety along both the Highway 93 and Baker Avenue corridors. Through a two-phased screening process, seven initial options were reduced to three. The City and MDT agreed in principle on providing for two northbound lanes on Highway 93 north of 13th Street. The preferred alternative (Concept C) would maintain the two lanes all the way to 2nd Street. The City would prefer to drop the 2nd northbound lane at 7th Street (Concept G). Both the City and MDT agreed on providing for two southbound lanes on Baker Avenue from 2nd Street to 13th Street (Concept C). The study was completed February 25, 2022 by MDT. As noted in the study, the city council and city staff do not agree with its preferred option.

Sustainable Tourism Plan

This plan was recently completed and approved by the City Council. The plan provides a framework that balances boosting the local economy with tourism, maintaining small-town character, and supporting community efforts to sustain the wellbeing of Whitefish residents. The plan recommends adoption of a Complete Streets program as well as transit improvements. The plan places priority on the transportation recommendations from the Downtown Master Plan.

Highway 93 South Corridor Plan

Highway 93 acts as a gateway to the Whitefish community. This ongoing project evaluates the Highway 93 South corridor from East 6th Street south to about 1.5 miles south of city limits, with a focus on land use, transportation, access management, the environment, and open spaces. The plan identifies heavy traffic, wide roadways, high vehicle speeds, and large parking lots as issues that exist along the corridor. Additionally, the corridor has limited pedestrian, bicycle, and transit facilities. The Highway 93 South corridor presents an opportunity to welcome visitors to Whitefish, improve mobility, and provide housing and jobs within the twenty year planning horizon.

Transportation Vision, Goals, and Strategies

The Whitefish Transportation Plan is guided by the transportation vision, goals and strategies. While the vision communicates the overarching transportation aspirations and priorities in general terms, the goals and strategies use more precise language to describe how the community will achieve its desired future. The vision, goals and strategies are based on the body of recommendations put forth in other Whitefish planning documents (Figure 1.2), and were further refined in collaboration with the Study Review Committee (SRC). The role of the vision, goals and strategies is further described below:

- ***Vision:*** The transportation vision communicates the aspirations and priorities that will guide the City's transportation investments in order to achieve its desired future.
- ***Goals:*** Goals are broad statements that describe a desired end state. The goals represent desired outcomes for the transportation system and for the wellbeing and prosperity of the community. Goals are visionary statements that reflect key priority areas.
- ***Strategies:*** Strategies are specific statements that support the achievement of goals. Strategies "operationalize" the goals: they refine goals into discrete, policy-based actions that are used to guide decision making towards achievement of the vision. The strategies listed in this chapter come from the past city planning documents listed in Figure 1.2.

Vision

The Plan vision will serve as an anchor for future development of the Whitefish transportation system. The transportation vision is as follows:

> *The City of Whitefish is a vibrant community that prides itself on livability and prioritizes stewardship of the natural environment. The City will champion multi-modal transportation policy and investment that enhances the City's unique character, preserves its natural resources, promotes walkability, supports economic vitality, and accommodates future growth.*

FIGURE 1.2: THE VISION, GOALS AND STRATEGIES REFLECT OTHER CITY PLANS

The Whitefish Transportation Plan is closely coordinated with other city plans:

- City of Whitefish Growth Policy Plan (2007)
- City of Whitefish Parks and Recreation Master Plan (2013)
- City of Whitefish Downtown Master Plan (2006, updated 2015, revised 2018)
- Connect Whitefish Bicycle & Pedestrian Master Plan (2017)
- Climate Action Plan (2018)
- Wisconsin Avenue Corridor Plan (2018)
- Parking Management Plan (2019)
- Sustainable Tourism Management Plan (2020)
- Highway 93 South Corridor Plan (2022)

Goals and Strategies

1 Advance system-wide efficiency, reliability, and integration across modes:

Design, build, operate, and maintain an efficient transportation system that maximizes mobility, minimizes unexpected delays, and provides seamless transfers between all modes. Embrace travel demand management (TDM) strategies that provide convenient, safe, and accessible alternatives to driving. Uphold and enforce the city's policy of concurrency so transportation facilities including streets, public safety and emergency services, pedestrian, bikeway, and trail facilities are made available before the impact of the new development.

Strategies

- Uphold and enforce the City's concurrency policy as set forth in the 2007 Whitefish Growth Policy requiring developers to provide off-site transportation improvements "up front" so that facilities are available concurrently with development. These transportation improvements should include roadways, sidewalks, bikeways, transit infrastructure, trail facilities, other related infrastructure.
- Promote alternative transportation modes (pedestrian, bicycle, and transit) within and connecting to downtown to reduce single-occupancy vehicle use.
- Establish a downtown employee parking permit system, parking demand management programs, neighborhood parking permits, and park-n-ride lots located outside of the downtown core.
- Assess wayfinding signage and evolve the program to support traffic circulation and increase awareness of underutilized parking areas.
- Adopt metering and enforcement to align with recommendations in the parking management plan to optimize parking during peak period.
- Create passenger loading zones near restaurants and bars on select side streets such as Central Ave, E 1st St, Railroad St, and E 3rd St.
- Partner with local businesses to provide parking for employees within privately-owned existing facilities. Churches, the VFW, banks, and the school are potential partners.
- Create a rideshare queue zone as a pilot during special events in the Depot area.
- Provide discounted parking permits or reserved parking spaces for carpoolers.
- Establish park-and-ride facilities along Highway 93, Highway 40, and other major commute routes into downtown Whitefish.
- Facilitate transit use by implementing intelligent transportation system (ITS) solutions such as electronic fare payment and automatic vehicle location (AVL) technology to communicate the real-time location of buses. Make these and other ITS solutions available through accessible smartphone applications.
- Improve SNOW Bus service during the summer peak period and facilitate the development of more frequent bus service year-round.
- Improve coordination between SNOW Bus and Mountain Climber to provide improved services to increase transit ridership locally and regionally.
- Explore development of new public transit service from Glacier Park International Airport (GPI) to and from Whitefish.
- Encourage more walkng and biking to downown to reduce vehicle trips.

2 Improve public health, equity, and quality of life through a connected transportation system to encourage active mobility:

Design, build, operate, and maintain a transportation system that enables people to get where they need to go using a variety of transportation options, that gives equal preference to all modes, and that, combined with supportive land use patterns and site design, facilitates active lifestyles. Provide an equitable level of transportation facilities and services for all regardless of age, ability, race, ethnicity, or income. Emphasize bicycle and pedestrian connectivity as a tool for environmental sustainability.

Strategies

- Plan for connected, continuous streets in all new development. When cul-de-sacs are appropriate due to ownership, topography, or other constraints, ensure that a future street extension can be made via a right-of-way dedication, or at the very least, a pedestrian connection.
- Prioritize connections between the Whitefish River Trail and existing pedestrian and bicycle facilities that provide safe access to the downtown area, schools, and parks.
- Prioritize completion of the Whitefish River Trail shared use path with lighting and wayfinding signage.
- Support efforts to fund, construct and maintain a trail system that provides connectivity between city trails, county trails, and recreational trails.
- Require developments to provide pedestrian and bikeway improvements "up front" so that facilities are available to accommodate new demand.
- Work with developers to include trails and greenways to provide connectivity between parks and fill gaps in the trail system.
- Proactively update existing Americans with Disabilities Act (ADA) non-compliant transportation facilities to satisfy ADA standards, and require that all new facilities be built to comply with ADA regulations. Work to provide public transportation services that are convenient and accessible to all users regardless of age and ability.
- Allow for and encourage pedestrian access in winter by improving enforcement of snow removal requirements.
- Strengthen the east-west grid system with proposed future connections/extensions identified within this plan.
- Work cooperatively with Flathead County to place Bicycle Route signage adjacent to county roads outside Whitefish city limits.
- Resort Tax priorities should reflect bicycle and pedestrian projects that satisfy both maintenance, connectivity, and safety needs for nonmotorized travel.

- Road reconstruction projects within city limits should include shared use paths, bicycle lanes and sidewalks where recommended or prioritized by this plan.
- Include sidewalks, pathways, and other nonmotorized transportation facilities in annual capital improvements planning as a placeholder for capital requests in the annual budgeting process.
- Adopt an official complete streets policy which considers and balances the needs of all transportation users, rather than prioritizing a specific mode. Commit to developing transportation projects that address the needs of all transportation users.
- Improve street striping materials and methods to increase durability and safety. Ensure that the Public Works Department has resources to perform necessary re-striping in the spring prior to seasonal bicycle and pedestrian activity.

» For developments providing primarily low income or workforce housing that can clearly demonstrate and document reduced transportation impacts and the ability to meet the transportation needs of its residents through alternative transportation methods, the City motorized transportation concurrency requirements can have more flexible interpretations.

3 Enhance environmental health and reduce negative transportation impacts:

Reduce the community's greenhouse gas emissions through efficiencies in the transportation system, reduction of vehicle miles traveled, and promotion of alternative transportation modes, and continue to explore ways to reduce air pollution further. Create ample, attractive opportunities for visitors to engage in sustainable tourism through walking, biking, and the use of transit to reach destinations. Assess progress toward transportation sustainability goals by establishing system performance measures and benchmarks. Make Whitefish a model sustainable community through thoughtful planning, education, and public involvement.

Strategies

» Incorporate sustainability concepts, principles, and incentives into land development regulations.

» Provide free electric vehicle charging stations.

» Encourage employees to use alternative transportation modes by offering free or reduced-cost parking for carpools and/or subsidizing the cost of a daily transit pass.

» Improve the efficiency of school bus operations through ongoing analysis of factors such as deadhead (miles driven without children), bus driving behavior, and vehicle maintenance schedules.

» Reduce minimum parking requirements for new housing and commercial development.

» Adopt infrastructure design standards that minimize impervious surfaces, preserve and encourage native plant landscaping, and align with stormwater planning.

» Improve equity for underserved populations by enhancing ADA accessible public transit and non-motorized transportation options to improve access to employment, quality of life destinations and affordable housing.

4 Create livable neighborhoods that preserve and enhance the unique character, scale, and history of Whitefish:

Create interconnected, livable places linked to jobs, services, schools, and parks through a multimodal transportation system that is integrated with the built environment. Adopt alternative street standards that preserve and enhance the character of neighborhoods while embracing Complete

Streets principles. Consider the implementation of traffic calming measures to increase pedestrian and bike safety within neighborhoods, downtown, and along key corridors. Implement the recommendations of recent corridor studies to enhance the City's key gateways, which serve both a vital mobility role and as a core aspect of the City's identity.

Strategies

- Protect and preserve the special character and qualities of existing neighborhoods while supporting and encouraging attractive, well-designed, neighborhood-compatible infill development.
- Be receptive to the use of alternative street standards that preserve and enhance the character and qualities of neighborhoods while meeting transportation and public safety needs.
- Adopt standard Definitions and Design Guidelines for common pedestrian and bicycle facilities in order to achieve consistency in facility design and construction.
- Implement traffic calming strategies such as speed humps and speed tables, curb extensions, and traffic circles to reduce speeds on local residential streets, with special emphasis on designated Safe Routes to School (SRTS).
- Strive to provide sidewalks or other bicycle and pedestrian infrastructure along all city streets and marked crosswalks at all intersections.
- Include path lighting in the design of future shared use paths.
- Continue to engage in active planning for all major transportation corridors in the community. Incorporate the community's vision and priorities by coordinating closely with property owners, residents, and businesspersons.
- Invest in streetscape improvements to improve the active transportation experience, establish coherent design themes, and increase the overall value of key corridors.
- Ensure that Highway 93 roadway and intersection changes enhance and support downtown businesses rather than serving as merely a conduit for regional through-traffic.

5 Maintain a high-quality, financially viable transportation system that enhances local and regional economic vitality:

Maintain transportation system assets in a state of good repair by understanding the life cycle of infrastructure, monitoring its condition, and anticipating future demand. Invest in cost-effective projects and pursue sustainable,

dedicated, and long-term sources of system funding at the state and local levels. Promote investments that enhance the movement of people and goods within the City of Whitefish. Work cooperatively with the MDT to ensure a balance between local economic development and regional and national objectives related to the National Highway System (NHS). Emphasize improvements that support workforce commuter travel and allow multimodal access to local businesses and tourist destinations.

Strategies

- Continue to explore the development of impact fees and/or arterial and collector street assessments to offset projected revenue gaps in future Major Street Network (MSN) needs.
- Develop a list of priorities for maintenance that focuses resources on those facilities that create connections to and serve the downtown, schools and parks.
- Continue to pursue grant funding for tourism infrastructure from the Montana Department of Fish, Wildlife and Parks, the Montana Office of Tourism and Business Development, and other state and federal sources.
- Implement a regular crosswalk and bike lane striping schedule.
- Budget a minimum of $2,000 per mile for short-term operations and maintenance of shared use paths.
- Use local funds and alternative funding sources leveraged with federal transportation funds to construct transportation upgrades.
- Assess the condition of subgrade water and sewer utilities in order to package utility improvements with street upgrade projects.
- Develop policies to support consistent application of development-related improvement requirements, thoughtful allocation of Resort Tax funds, and streamlined project development.
- Collaborate with partners throughout Flathead County to achieve an integrated and efficient regional transit system. Leverage transit to connect workers, residents, and visitors to businesses and tourist destinations.
- Develop criteria and require findings within Planning Office Staff Reports that evaluate a proposed development's compliance with the city's concurrency policy and mitigation identified within the required TIS.
- Develop concurrency policies and standards that are part of city annexation agreements.

6 Provide a safe and secure transportation system:

Create a transportation system that incorporates safety and security throughout all modes for all users. Leverage crash data to prioritize safety improvement projects that address high-frequency crash locations, with an emphasis on serious injury and fatal crashes. Require that sidewalks be included on both sides of new streets in neighborhood and business districts, and that they be incorporated into major construction projects for existing streets within these districts.

Strategies

- Implement the recommendations from this plan in support of the Montana State Highway Safety Plan's "Vision Zero", a goal to move toward zero deaths and zero serious injuries on Montana's roadways.
- Reduce the incidence of all motor vehicle and nonmotor vehicle (pedestrian and cyclist) crashes, with an emphasis on serious injury and fatal crashes, by prioritizing safety improvement projects that address high-crash locations, with an emphasis on projects near schools, parks and downtown.
- New bicycle and pedestrian safety improvement projects near schools, parks, and downtown should be assessed and inventoried every 5-years.
- Encourage the safe use of city streets and path facilities by pedestrians and children by improving enforcement of city leash laws.
- Create pedestrian facilities that are safe for users of all abilities by providing ADA-compliant walkways that are clear of obstacles and obstructions (e.g., utility poles).
- Sign roadways that are designated bike routes in coordination with the Safe Routes to School Program.
- Improve education on bike safety and increase the awareness of residents and visitors on bike-related laws, rules, and responsibilities.
- Improve evacuation routes for north Whitefish over the BNSF railroad tracks.

7 Corridor management and preservation:

The City of Whitefish will work proactively to preserve and manage major transportation corridors to meet both existing and projected multimodal transportation demands as well as emergency access. Require and adopt city standards for required Traffic Impact Statements (TIS) to include analysis that measures and evaluates the levels of current and future congestion during emergency situations like fire and medical emergencies. Give priority to updating Whitefish's TIS standards as identified within the plan and in more detail "Traffic Impact Study" on page 146.

Strategies

Highway 93 South

- Facilitate development of frequently spaced bus pull-outs and shelters with hop-on/hop-off bus service, including development of park & ride lots.
- Revise corridor-specific development standards to improve aesthetics and encourage pedestrian activity.
- Consider reducing the speed limit from 45 mph to 35 mph further south than Greenwood Drive, and 25 mph further south than 6th Street.

- Consider speed limit reductions north of Blanchard Lake Road and west of Whitefish Stage Road and petition Flathead County to request a speed study from Montana Department of Transportation.
- Emphasize traffic safety within the south corridor including possible speed reductions and upgrades to intersection control.

- Improve safety and capacity and improve aesthetics of the road right-of-way.
- Work directly with Montana Department of Transportation to consolidate highway accesses where feasible and require new development to share access with adjacent uses.
- Require new development and encourage existing land uses to connect adjacent parking lots so movement from one to another does not involve re-entering the highway.
- Optimize timing and spacing of signals at no less than a quarter mile spacing along the corridor when traffic signal warrants are met at intersections without signals.
- Develop a more detailed approach for implementation of a conceptual median plan to provide access management for the Highway 93 south corridor.
- Continue work with Montana Department of Transportation on Spokane Avenue and Baker Avenue improvements to help mitigate and better accommodate increasing traffic volumes.
- Consider alternatives to signalized control of traffic, such as a roundabout, at the intersection of Highway 93 and Highway 40 to improve future level of service.
- Encourage Montana Department of Transportation to consider addition of right turning/deceleration or acceleration lanes at intersections identified as needing such improvements.
- Facilitate construction of improvements at the intersections of 13th Street at Highway 93 South and 13th Street at Baker Avenue, as shown in the Downtown Whitefish Highway Study.
- Better delineate driving lanes, whether through more frequent maintenance of lane striping or permanent delineation tools such as recessed reflectors.
- Extend the existing sections of multi-use path across the river at Spokane Avenue. Consider either a stand-alone pedestrian/bike bridge or protected pedestrian/bike lanes on the vehicle bridge with a new path under the highway.
- When the Baker Avenue bridge is widened, accommodate a connecting section of the Whitefish River Trail under the bridge. When the Spokane Ave Bridge is completed to replace the existing culverts, extend the Whitefish Trail under the highway to connect existing sections of trail.
- Add a bike/pedestrian path or convert a portion of West 10th Street between Baker Avenue and Spokane Avenue to a bike/pedestrian facility with connection to the future Spokane Avenue bridge underpass.
- Increase opportunities for public access to natural areas and green space mid-corridor.
- Require that multimodal infrastructure be included in all new road construction, and in road reconstruction projects where such facilities are absent.
- Reestablish the “Adopt-a-Trail” program.

- Extend 7th Street east from Spokane Avenue to Kalispell Avenue to improve east-west connectivity.
- Work with Flathead County and Montana Department of Transportation to develop a separated shared-use path within the Highway 93 right of way as far from the road shoulder as is fiscally and physically practical (identify a funding source and develop a joint City/County operations and maintenance agreement with Montana Department of Transportation).
- As corridor development proceeds, ensure the extension of Columbia Avenue south to Greenwood Avenue, Whitefish Avenue south to Shiloh Avenue, and Baker Avenue south to JP Road. Include east-west connectors such as the extension of Greenwood Drive east across Whitefish River to Monegan Road to provide a grid system as development occurs.

Wisconsin Avenue

- Integrate land use and transportation improvements that result in a pedestrian/transit/bike friendly corridor and reduce the need for vehicle trips.
- Address downtown congestion by accommodating alternative transportation modes (pedestrian, bicycle, and transit) on key corridors that connect Wisconsin Ave to the downtown area. Important corridors include E Second St, Railway St, Spokane Ave, and Baker Ave.
- Promote nonmotorized transportation through designs that incorporate walkability, connectivity, accessibility and wayfinding features to accommodate bicyclists and pedestrians.
- Work with the County, the State, and local businesses to expand transit and mobility options within the corridor.

- Identify potential sites for park-n-ride lots and encourage drop-off sites in new developments.
- Design transit stops, drop-off sites and pedestrian/bike crossings to improve safety, accessibility and user experience.
- Accommodate increasing traffic volumes without degrading downtown livability and the retail environment.
- Support pedestrian-scale residential design that encourages walkability, accessibility, and linkages to neighborhood-scale activity nodes.
- Identify potential traffic calming solutions for Colorado Avenue.
- Identify improvements to increase roadway capacity, reduce congestion, meet ADA requirements and improve intersection safety.
- Evaluate options for road widening, turn lanes, curbs, parkways and intersection improvements along Wisconsin Avenue.
- When and if annexation of the Whitefish Mountain Resort is considered, there should be discussion of the potential need for a second access route. Currently Big Mountain Road is the only access road serving the resort area.
- Explore additional grade separated crossings of the BNSF mainline through Whitefish to provide additional parallel roadway capacity to Wisconsin Avenue in the event of an emergency or evacuation of areas north of the railroad.

Traffic Impact Statements

- Develop updated standards and procedures for Traffic Impact Statements (TIS) to better measure and mitigate the impact of new development on existing infrastructure.
- Require Multimodal Transportation Impact Studies/Analyses for development proposals to ensure consideration and appropriate mitigation of impacts on nonmotorized travel as well as promotion of transportation diversity within the City of Whitefish.
- Prepare a fiscal impact assessment and request for commitment of identified additional maintenance funding to accompany approval requests for new transportation.
- Analyze impacts on vehicle miles traveled (VMT) when evaluating any development proposal. Establish and require implementation of specific measures to mitigate impacts attributable to increased VMT.
- Initiate a program to establish reasonable benchmarks for VMT, and to control VMT growth as the City grows.

WHITEFISH

Transportation Plan

CHAPTER 2. PUBLIC ENGAGEMENT

October 2022

KLJ

ENGINEERING, REIMAGINED

INTRODUCTION

The public engagement phase for the Whitefish Transportation Plan comprised of two parts: virtual listening sessions and a project website with an interactive issues map. Three listening sessions took place on October 14, 2020 and acted both as an opportunity to educate the public on the transportation plan and to gather open ended input on transportation issues in the study area. The meetings were advertised through a variety of channels including the Big Mountain Commercial Association (BMCA), Chamber of Commerce, posts on Facebook, and press releases to local media outlets including the Whitefish Pilot Daily Interlake. Project materials and an interactive issues map were available on the project website, whitefish.transportationplan.net. Visitors could review project documents, watch a prerecorded presentation of the project overview, and leave comments on the interactive map. This public engagement summary provides an overview of the Plan's engagement methods and activities.

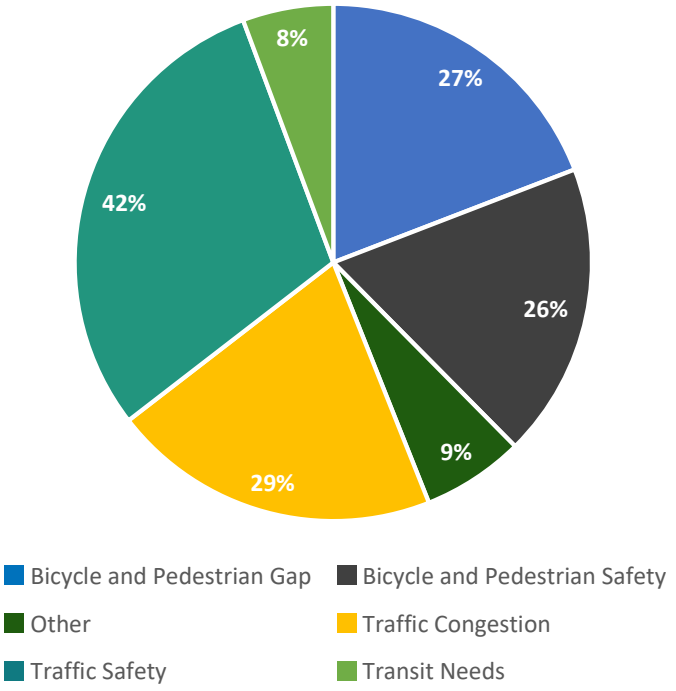
LISTENING SESSIONS

Three listening sessions were held virtually on October 14, 2020. The first session was held from 1 pm to 2:30 pm and had nine participants, the second was held from 3 pm to 4:30 pm and had ten participants, and the third was held from 6 pm to 7:30 pm and had seven participants. These sessions began with a presentation of the project, followed by an interactive survey in which meeting attendees were asked a battery of questions regarding general transportation issues. Full documentation of survey questions and the public input received can be found in Appendix A.

ONLINE INTERACTIVE SURVEY

The project website was used to collect input from the community using an online interactive issues map that was open from early October until November 6th, 2020. Visitors were able to explore the study area and view comments left by others, add their own comments in discussion, and react to comments with an "up vote" or "down vote". In total, 187 comments and 354 reactions were added to the map by 261 unique visitors. Figure 2.1 shows the comments by topic, as identified by the commenter.

FIGURE 2.1: SOCIAL PINPOINT COMMENT TYPES



Across all comments, almost all reactions were positive (329 up votes and 25 down votes). Bicycle and pedestrian related comments accounted for eight of the top ten most up-voted comments, illustrating the strong energy behind reducing gaps in the bicycle and pedestrian network and improving safety for non-motorized traffic. Traffic-related comments are heavily concentrated around US 93, particularly in downtown and near the west edge of the city limits. Some express concerns about the safety of a feature of the road network, such as poor visibility, speed limits that are too high, and difficult left turns. Wisconsin Avenue received many traffic-related comments as well. Bicycle and pedestrian related comments were more widely dispersed than the traffic related comments, but still tended to be concentrated around US 93 in downtown. Safety is a concern in almost all bike and pedestrian comments. Several comments ask for new shared-use paths, including connections to the Lion Mountain Trailhead, Spencer Mountain, and the Reservoir Trailhead. All comments are shown in Appendix A with a unique identifier that corresponds to the numbers shown on the map in Figure 2.2 on page 20 through Figure 2.5 on page 23. In each map, the top ten most reacted-to comments are highlighted.

FIGURE 2.2: BICYCLE/PEDESTRIAN-RELATED COMMENTS

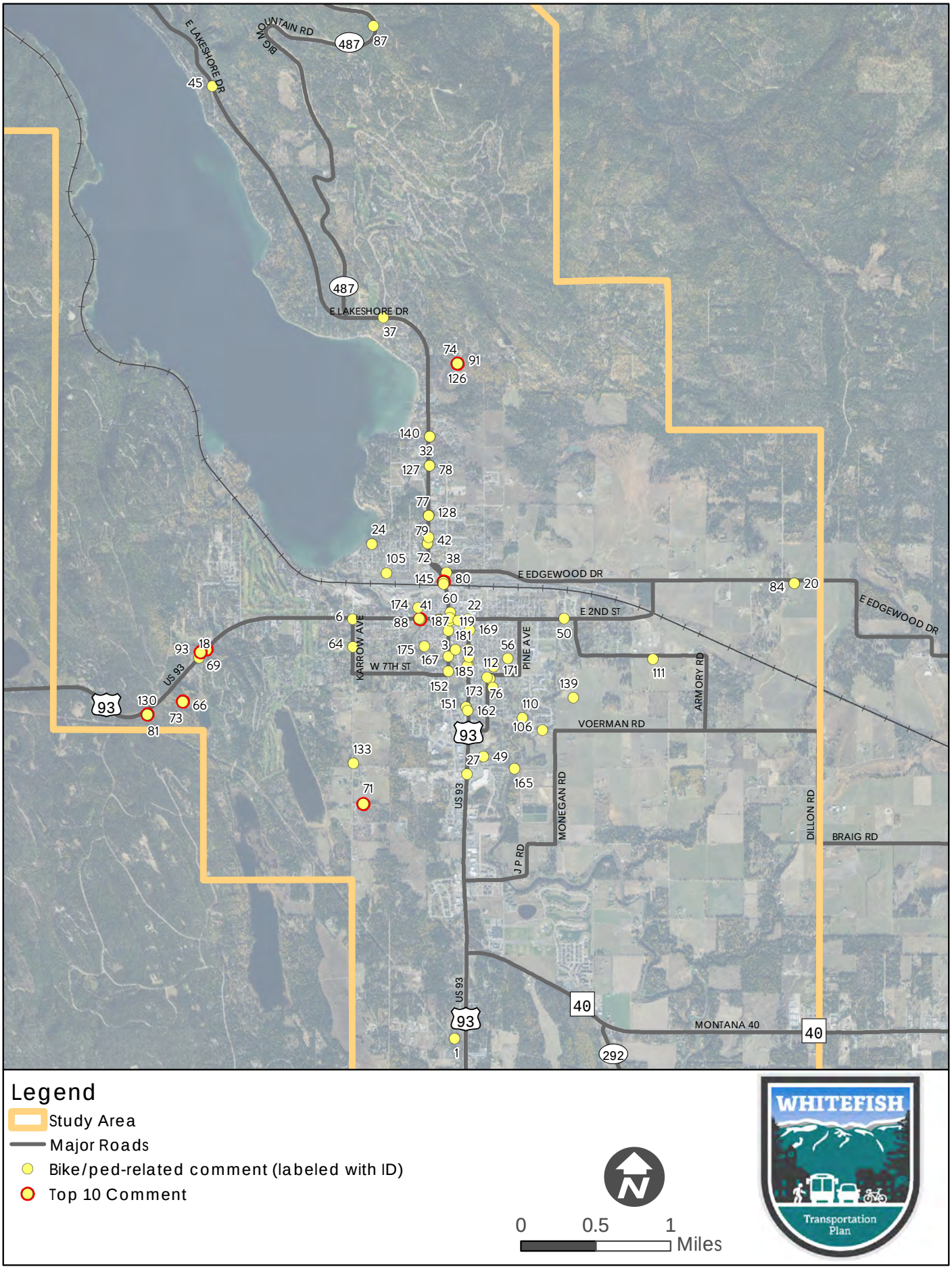


FIGURE 2.3: BICYCLE/PEDESTRIAN-RELATED COMMENTS (INSET)

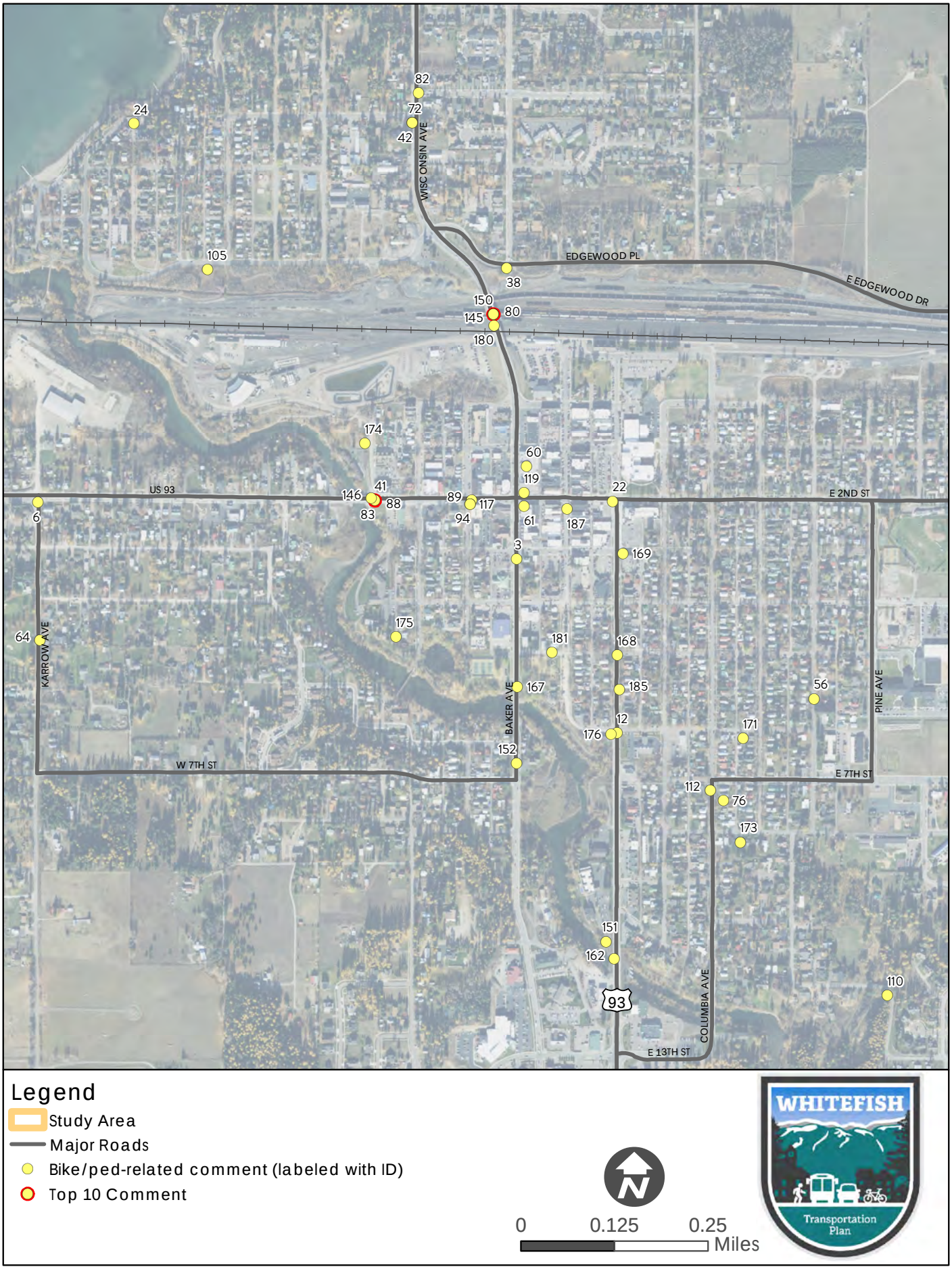
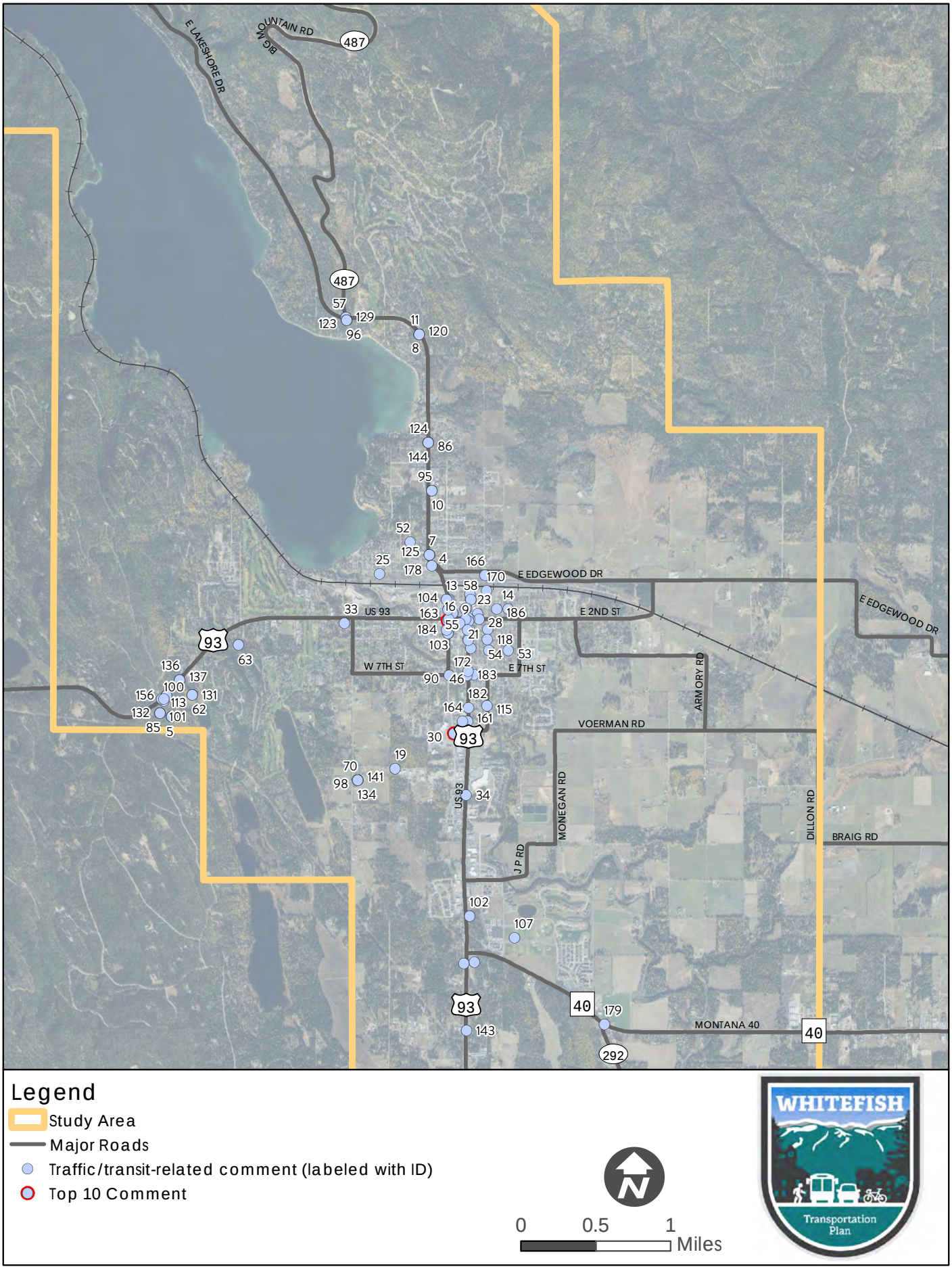


FIGURE 2.4: TRAFFIC/TRANSIT-RELATED COMMENTS

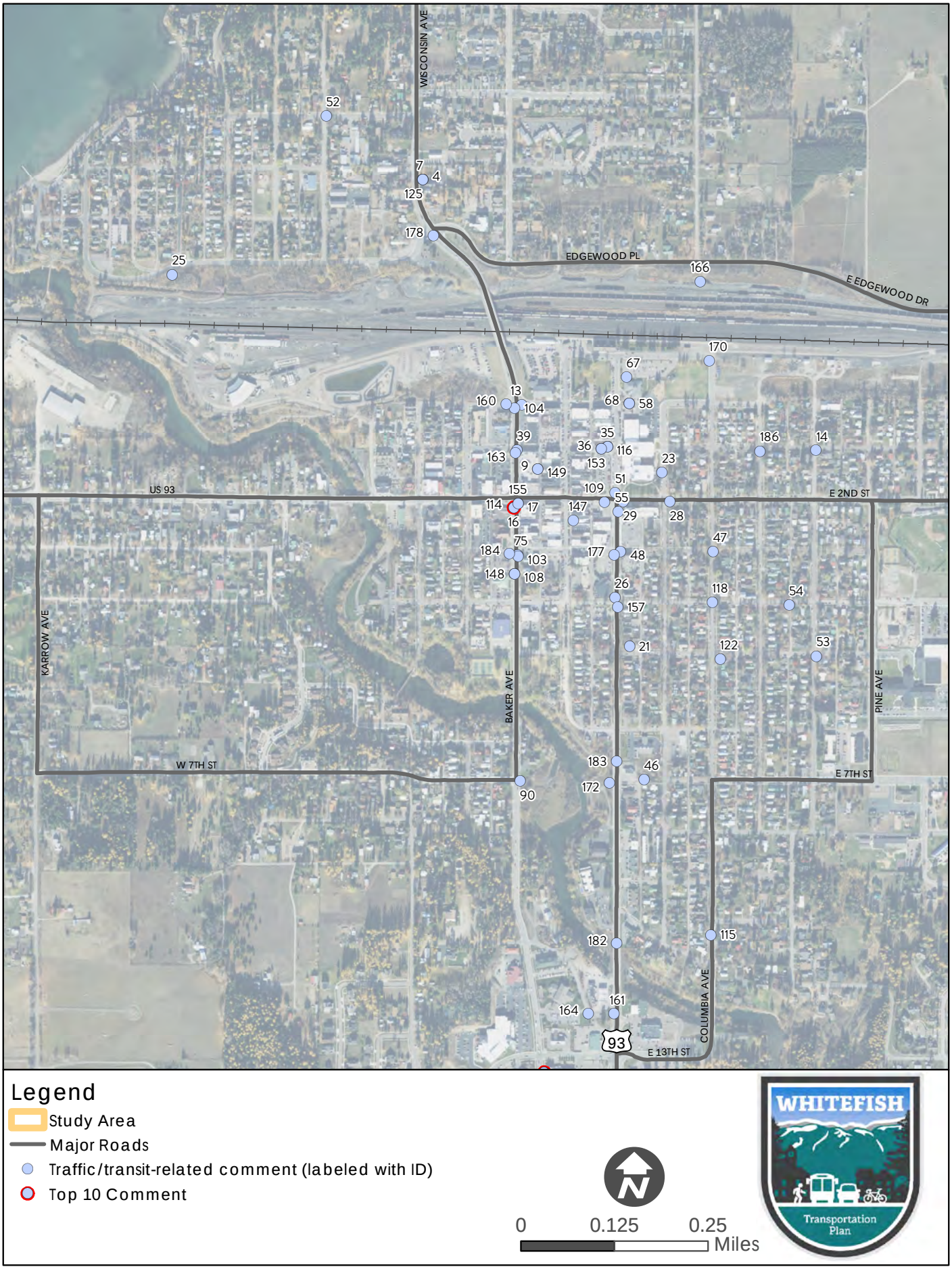


Legend

- Study Area
- Major Roads
- Traffic/transit-related comment (labeled with ID)
- Top 10 Comment

0 0.5 1 Miles

FIGURE 2.5: TRAFFIC/TRANSIT-RELATED COMMENTS (INSET)



COMMENT CLUSTERS

Many of the comments on the interactive map were related to other comments in content or geographic location. When posting a comment, community members had the option to either choose a location on the map to post a comment or post a response to an existing comment. If a new comment was posted in response to an existing comment, the two comments would share a geographic location. After reviewing the location and content of each comment added to the map, clusters were identified to highlight common concerns among community members. Table 2.1 shows the top clusters by total number of reactions. The total number of up votes and down votes from the comments within each cluster were aggregated.

Table 2.1: Top Comment Clusters

COMMENT IDS	CLUSTER NAME PRIMARY CONCERN	UP VOTES	DOWN VOTES
15, 18, 40, 59, 69, 73, 81, 93, 97, 154, 5, 65, 92, 100, 113, 41	**Hwy 93 (Mountainside to Twin Bridges)*** Bike/ped access and safety	62	0
3, 9, 13, 16, 17, 30, 39, 75, 90, 104, 108, 114, 152, 163	**Baker Avenue** Traffic congestion and safety	35	2
6, 70, 71, 98	**Karrow Avenue** Lack of bike/ped facilities	19	3
80, 145, 150, 180	**Viaduct** Path widening	20	0
8, 11, 32, 38, 78, 82, 120, 126	**Wisconsin Avenue** Bike/ped safety and speed limit	15	4
33, 67, 86, 107, 124, 147, 158	**Transit** Need for more service	12	1
12, 109, 169, 176, 177, 185	**Spokane Avenue** Need for additional bike/ped facilities	13	0
41, 83, 88, 146, 174	**2nd Street/Miles Avenue** Pedestrian safety	13	0
57, 96, 129	**Big Mtn Rd and East Lakeshore intersection** Traffic congestion and safety	10	3

WHITEFISH

Transportation Plan

CHAPTER 3. EXISTING CONDITIONS

October 2022

KLJ

ENGINEERING, REIMAGINED

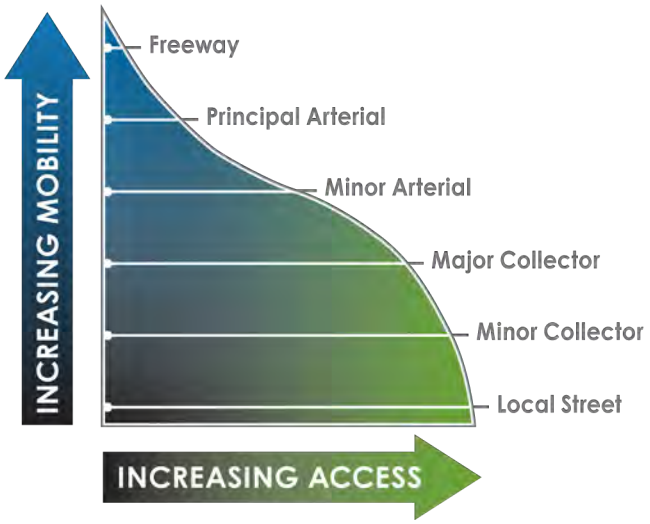
INTRODUCTION

Existing conditions were analyzed within the study area to establish a baseline for evaluation of current and future issues. Data was sourced from MDT, the City of Whitefish, Flathead County, and the U.S. Census Bureau. The existing conditions analysis examines demographic, economic, and transportation conditions. The transportation component of the analysis considers a variety of modes including personal automobile, bicycle, pedestrian, transit, truck freight, rail, and air.

Functional Classification

The operation of a community's road network is defined by functional classification of the roadway system. These classifications define the service each road segment provides in serving the flow of traffic through the street network. By utilizing this classification system, the operation of traffic can be designed to work in a logical and efficient manner. Roadways are grouped into a hierarchy of five general functional classifications within the study area. Figure 3.1 demonstrates the relationship between access and mobility for each functional classification.

FIGURE 3.1: FUNCTIONAL CLASS ACCESS AND MOBILITY



Explanation

Most streets and highways have a predominant function: either to provide the motorist with access to abutting land or to allow movement through an area. Traffic that gains access to abutting land is considered "local" whereas all other traffic is considered "through" traffic, which neither originates nor terminates within a designated area, but simply passes through. In contrast, local traffic has origins or destinations within the designated area.

Functional classification is an important and widely-accepted tool in planning highway system development, especially in fiscal planning.

Urban and rural areas have different characteristics as to density and types of land use, nature of travel patterns, density of street and highway networks, and the way in which all these elements are related to the function of the transportation network. Federal guidelines differentiate between rural and urban characteristics when determining the appropriate functional classification.

Functional Class Definitions

Below is a definition of each of the functional classifications. These summaries are further defined in Table 3.1. Functionally classified roadways in the study area are shown in Figure 3.2 on page 29 and Figure 3.3 on page 30.

Principal Arterials

Arterials provide the means of regional and interstate transportation of people and goods. This is done by having roads which have the highest speed and uninterrupted trips and broken into principal and minor arterial routes. In urban areas they serve as corridors with the highest traffic volume and carry the most trips through urban areas.

Minor Arterials

The minor arterial routes in the street system provide connections and support the principal arterial system. The trips are generally shorter in nature and spread out over a smaller geographic area.

Collectors

Collector streets are typically seperated into both major and minor collectors and are designed for lower speeds and shorter distances that collect and distribute traffic from the arterial streets and local streets. These are designed to provide traffic circulation with residential neighborhoods and commercial and industrial areas. The collectors connect to local streets to deliver the traffic to its destination.

Local Streets

Local streets are all streets not defined above in the hierarchy with the purpose of providing basic access between residential and commercial properties. These streets are generally slower and have the addition of traffic calming measures. These are the largest element in the American public road network in terms of mileage.

Table 3.1: Functional Classification Definitions

CLASSIFICATION	CHARACTERISTICS
Interstate	
Urban and Rural	‣ Primarily through travel routes like I-15, I-90, and I-94 ‣ Longest trip lengths
Urban Areas (Population Greater Than 5,000)	
Principal Arterial	‣ Serves major activity centers ‣ Corridors with highest traffic volumes ‣ Longest trip lengths
Minor Arterial	‣ Connects other Urban principal arterials
Major Collector	‣ Serves both land access and traffic circulation in higher density residential and commercial/industrial areas ‣ Distributes and channels trips between local streets and arterials usually over a distance of greater than ¾-mile ‣ Extends through residential neighborhoods, often for significant distances
Minor Collector	‣ Serves both land access and traffic circulation in lower density residential and commercial/industrial areas ‣ Distributes and channels trips between locals and arterials, usually over a distance of less than ¾-mile ‣ Extends through residential neighborhoods, often only for a short distance
Local	‣ All remaining streets ‣ Direct land access and link to higher classifications
Rural Areas (Population Less Than 5,000)	
Principal Arterial	‣ Predominant route between major activity centers ‣ Interstate or intrastate significance ‣ Long trip lengths ‣ Heavy travel densities ‣ Provides service to most large urban areas
Minor Arterial	‣ Links cities and larger towns (or major resorts) ‣ Spaced at intervals so that all developed areas are within a reasonable distance of an arterial ‣ Interconnects network of principal arterial
Major Collector	‣ Service to travel of primarily intra county importance ‣ Serves important travel generators (i.e. county seats, consolidated schools, mining, or logging areas)
Minor Collector	‣ Land use access and spaced at intervals consistent with population density
Local	‣ Access to adjacent land for short distances ‣ All remaining roads not classified under higher system

FIGURE 3.2: FUNCTIONALLY CLASSIFIED ROADWAYS IN THE STUDY AREA

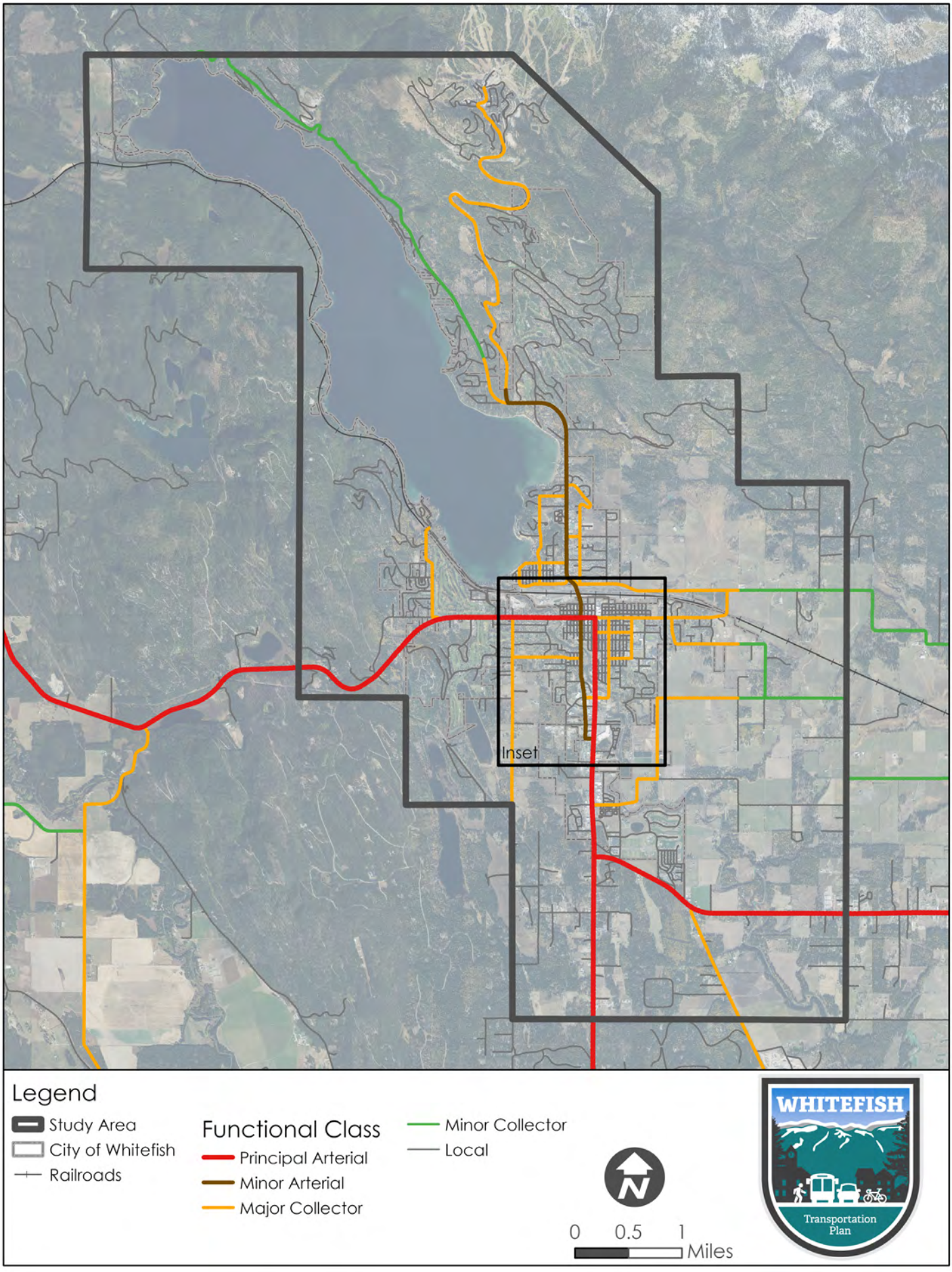
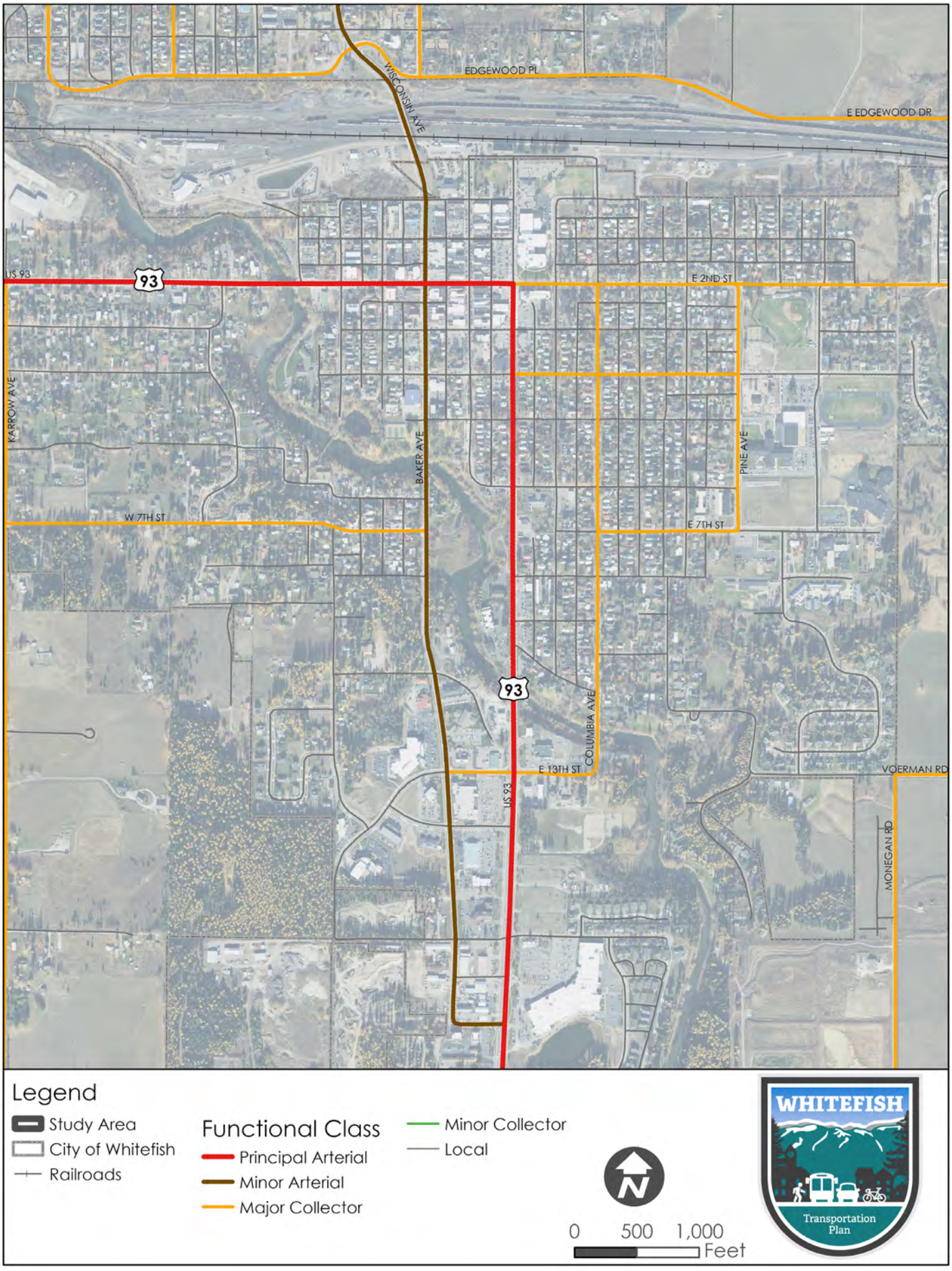


FIGURE 3.3: FUNCTIONALLY CLASSIFIED ROADWAYS IN THE STUDY AREA INSET



HIGHWAY SYSTEM IN MONTANA

Montana's public highways and streets are placed on systems based in part on the functional classification system. It is important to note that "upgrades" in functional classification and highway system designation do not automatically lead to increased funding for improvements. Factors such as funding availability, project eligibility, and project prioritization are equally important considerations. The following system designations are used in Montana to assist with programming and funding of roadways. Specific designations of these roadways within the study area are shown in Figure 3.4.

Federally Designated Highway Systems

National Highway System (NHS)

A federal system of public highways as defined in Title 23, USC and designated by Congress or the Secretary of Transportation that includes the Interstate System as well as other roads important to the nation's economy, defense, and mobility.

Non-Interstate NHS

Principal arterials other than the Interstate that serve major travel destinations and transportation needs, connectors to major transportation terminals, the Strategic Highway Network and connectors, and high priority corridors identified by law.

State Designated Highway Systems

Primary Highway System

Highways that have been functionally classified by MDT as either principal or minor arterials and that have been selected by the Transportation Commission to be placed on the Primary Highway System.

Secondary Highway System

Highways that have been functionally classified by MDT as either minor arterials or major collectors and that have been selected by the Transportation Commission, in cooperation with the boards of county commissioners, to be placed on the Secondary Highway System.

Urban Highway System

Highways and streets in and near incorporated cities with populations of over 5,000 and within urban boundaries established by the Department and based on US Census boundaries, that have been functionally classified as either urban arterials or collectors, and that have been selected by the Transportation Commission, in cooperation with local

government authorities, to be placed on the Urban Highway System. [MCA 60-2-125(6)].

State Highways

State highways are a system of roads that are maintained by MDT, but are not part of the NHS, Primary, Secondary, or Urban Systems.

Maintenance Responsibility

Roadways in the study area are maintained by different agencies. MDT maintains US Highways such as Highway 93 and Highway 40. Flathead County maintains several roads throughout the study area. The remaining roads are maintained by the City of Whitefish.

Figure 3.5 on page 33 demonstrates identified roadway maintenance obligations based on functional classification as Minor Collector or higher. Figure 3.6 on page 34 and Figure 3.7 on page 35 show annual average daily traffic (AADT) for the study area for the year 2018. This data is collected by MDT.

FIGURE 3.4: HIGHWAY SYSTEMS IN THE STUDY AREA

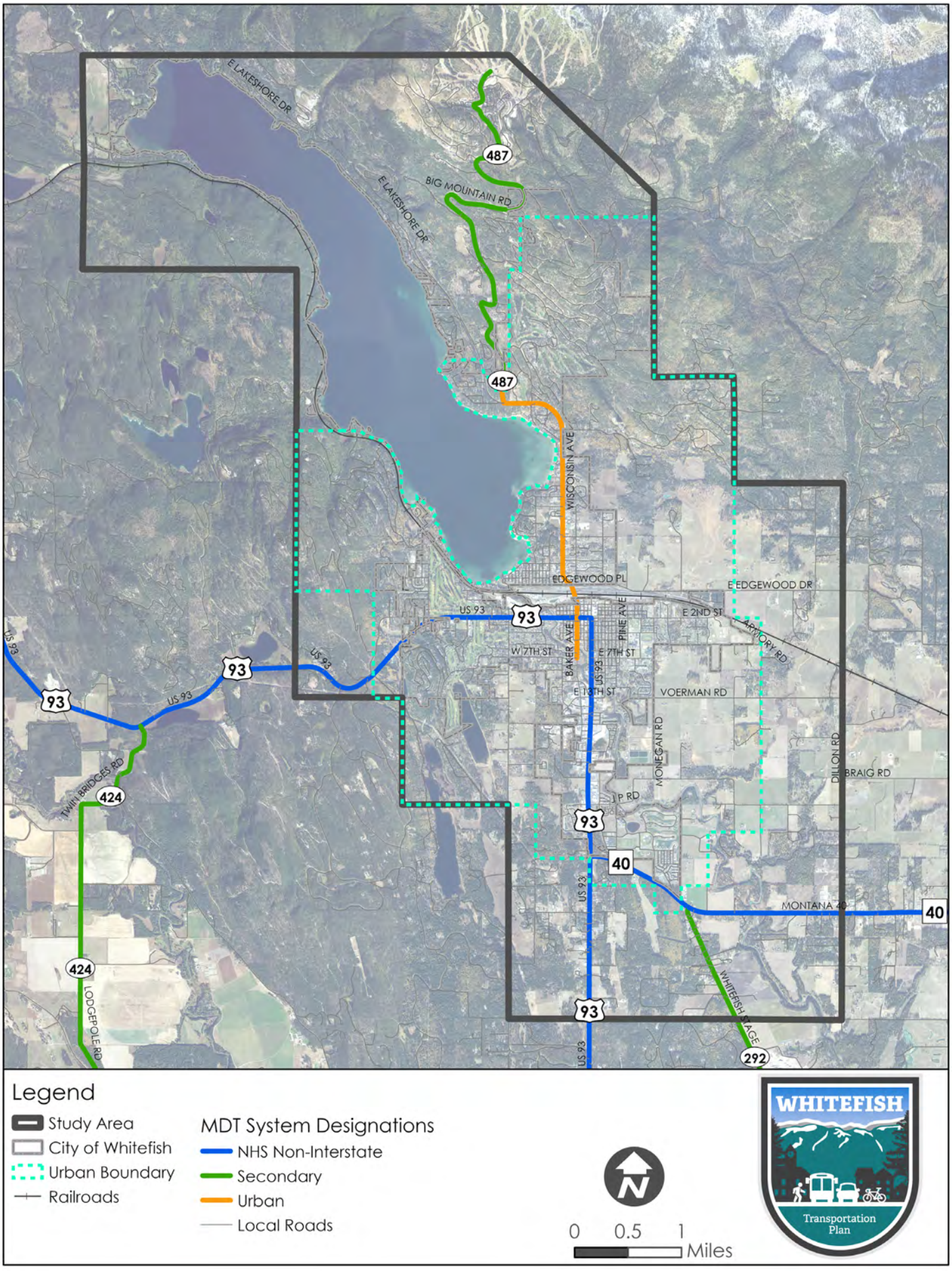


FIGURE 3.5: ROADWAY MAINTENANCE IN THE STUDY AREA

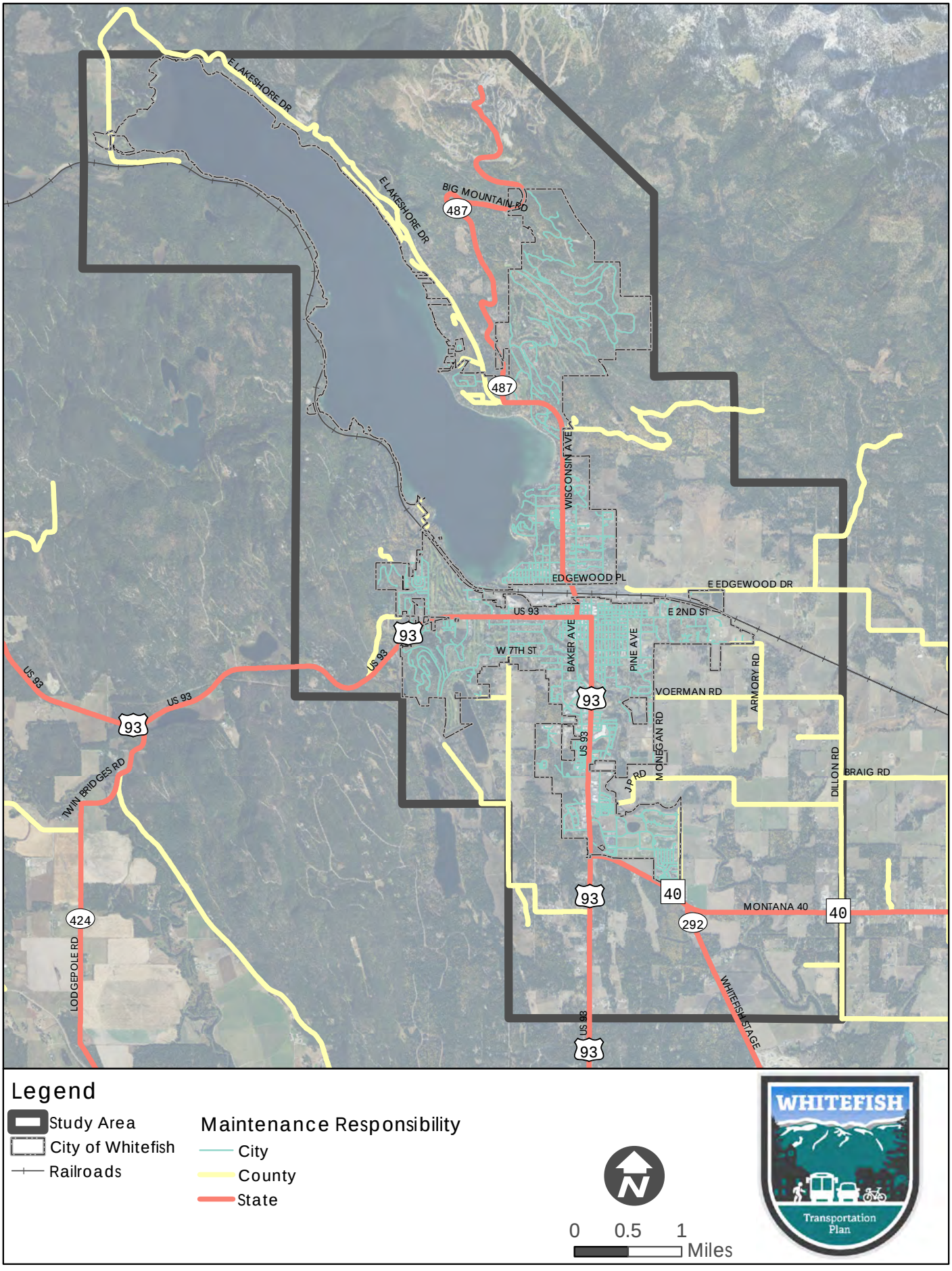


FIGURE 3.6: 2018 TRAFFIC COUNTS

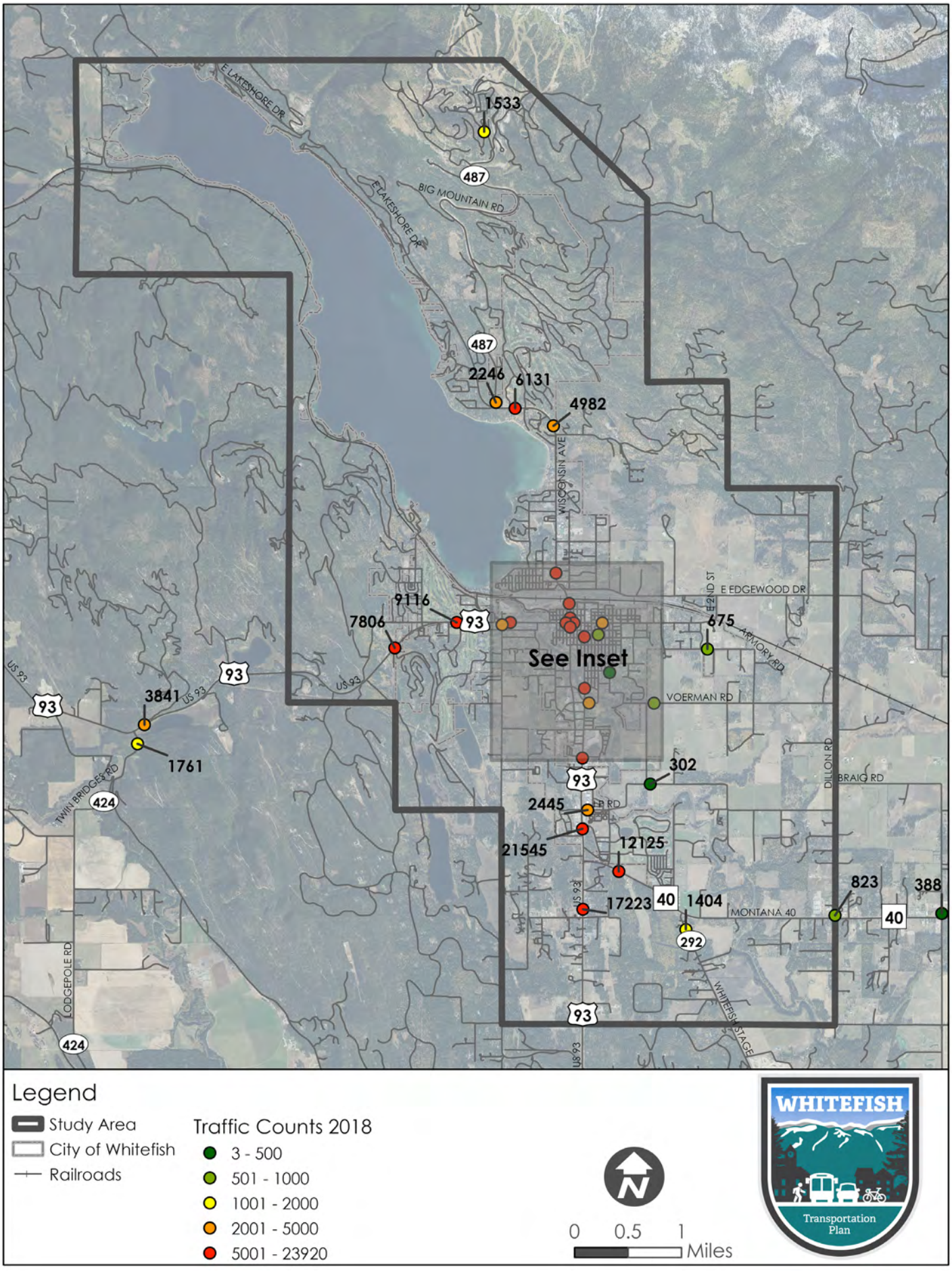
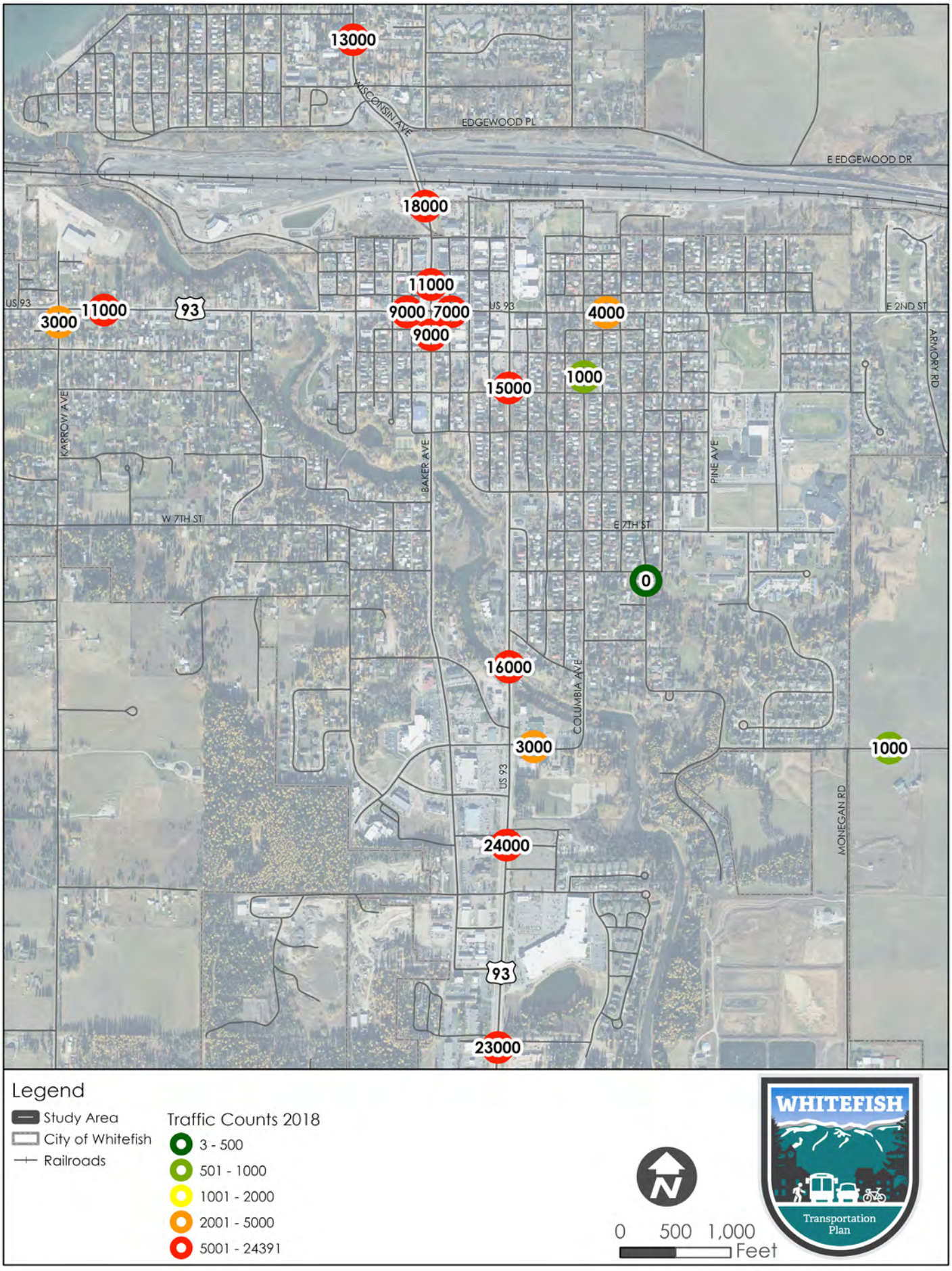


FIGURE 3.7: 2018 TRAFFIC COUNTS INSET



TRAVEL TRENDS

The vast majority of workers in the City of Whitefish, Flathead County, and the State of Montana drive to work alone. In Whitefish, about three in four employed individuals drove to work alone as their primary commute mode in 2017. Table 3.2 shows the mode share for the region, which reveals some differences between the workers living in Whitefish and those in the surrounding region. Most notably, about one in ten workers in Whitefish walk to work, while only one in 30 workers commute on foot in Flathead County.

TRAVEL DEMAND MODELING

Travel demand models are computer models that are often used in area-wide transportation planning. These models use spatially allocated demographic data like the number of households and number of jobs to estimate future traffic volumes and traffic patterns with expected demographic changes. The MDT-maintained model for Flathead County was developed using the TransCAD software.

Base Year Demographic Data

Modeled traffic volumes are a function of the number of households and the number of jobs in specific locations in the Whitefish area. Travel demand models segment the area into geographies called Traffic Analysis Zones (TAZs), with households and jobs being allocated to each TAZ. The 2017 base year household and employment totals by TAZ are shown in Figure 3.8 and Figure 3.9, respectively.

Base Year (2017) Modeling

To best ensure future year (2040) modeled volumes are accurate enough for transportation planning purposes, travel demand models are first developed and applied for existing conditions (commonly referred to as a base year model). Base year modeled volumes are then compared to field-collected traffic counts using FHWA-prescribed statistical analysis. For the 2017 base year, the Flathead County model results are within FHWA-accepted deviations, meaning the model is sufficiently calibrated and validated for use in future forecasts.

Figure 3.10 shows the 2017 base year (2017) daily modeled traffic volumes for the entire study area, with Figure 3.11 showing the base year daily modeled traffic volumes for the urban area. While the base year traffic volumes capture conditions prior to COVID-19, additional consideration will be given to the influence of the pandemic on travel patterns in future projections.

Table 3.2: Commute Mode (ACS 2017)

	CITY OF WHITEFISH	CITY OF COLUMBIA FALLS	CITY OF KALISPELL	FLATHEAD COUNTY	STATE OF MONTANA
Drove Alone	74.9%	88.9%	82.8%	81.4%	75.6%
Carpooled	6.8%	4.3%	6.6%	6.9%	9.7%
Transit	1.1%	0.0%	1.6%	0.8%	0.8%
Walked	9.7%	0.7%	2.4%	3.3%	5.1%
Other	2.9%	3.2%	2.0%	1.9%	2.4%
Worked at Home	4.5%	2.8%	4.6%	5.8%	6.4%
Average Commute Time	16.4 minutes	18.4 minutes	15.4 minutes	19.1 minutes	17.8 minutes

FIGURE 3.8: 2017 HOUSEHOLDS PER ACRE

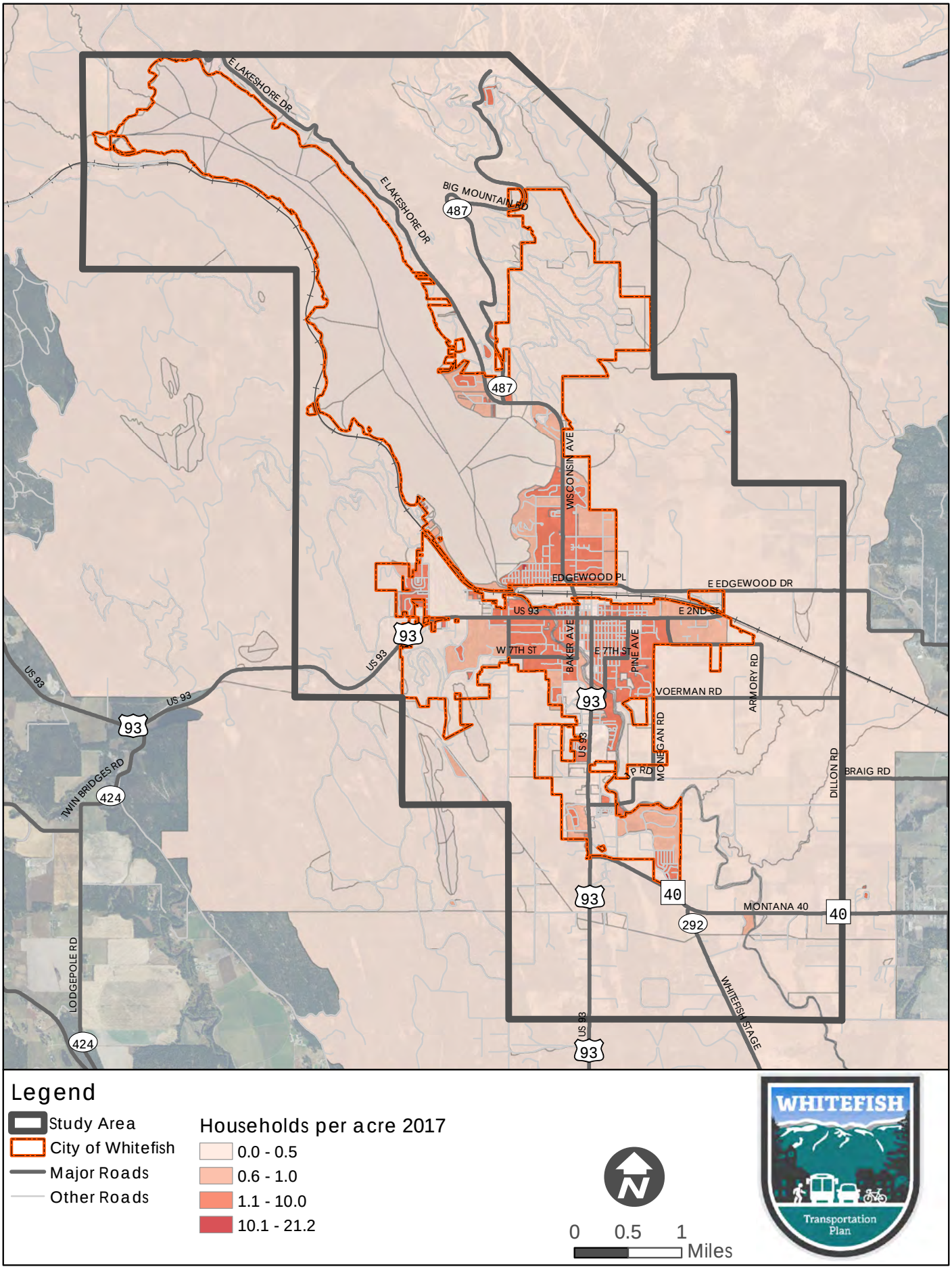


FIGURE 3.9: 2017 JOBS PER ACRE

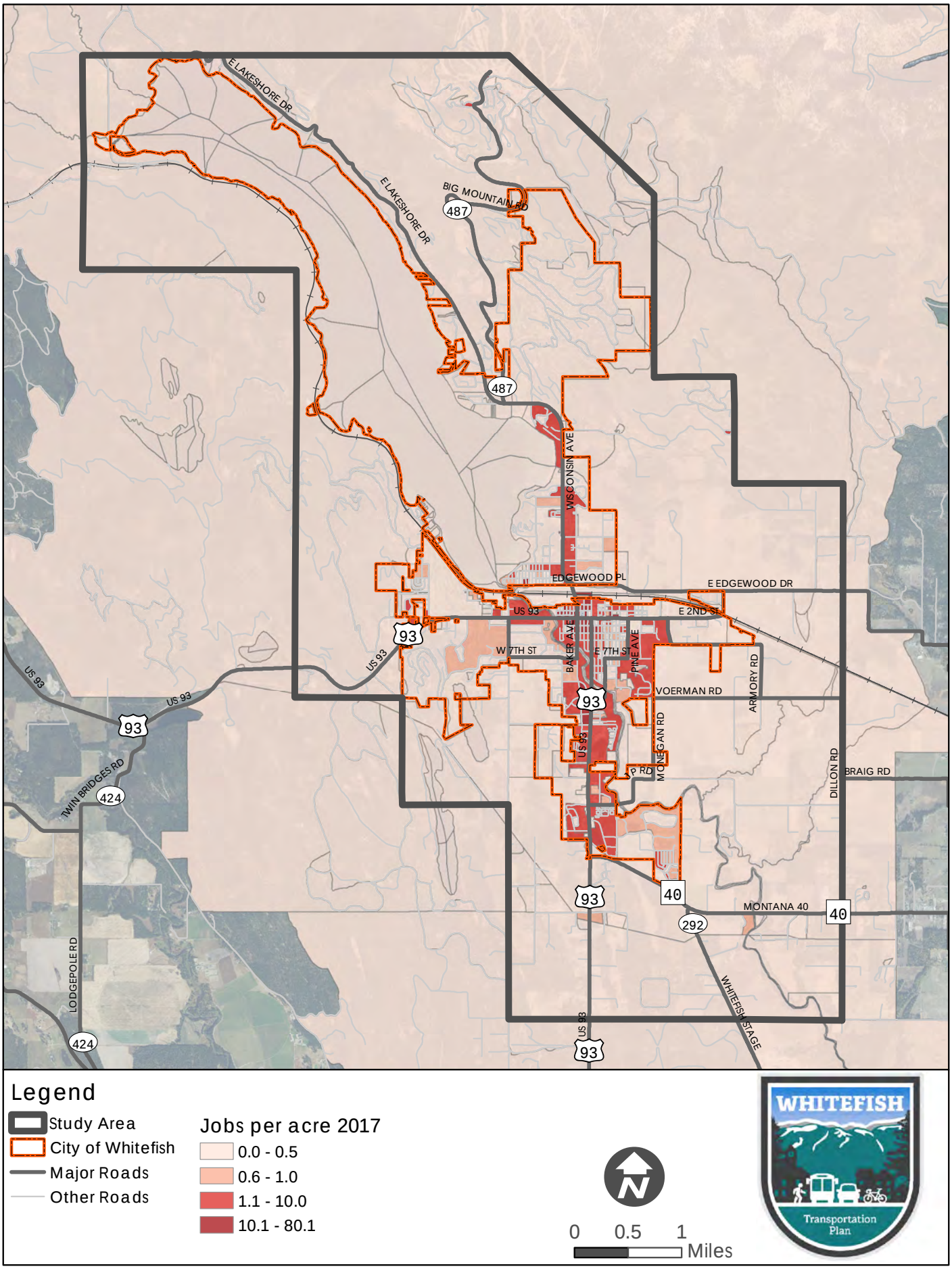


FIGURE 3.10: 2017 MODELED VOLUMES IN STUDY AREA

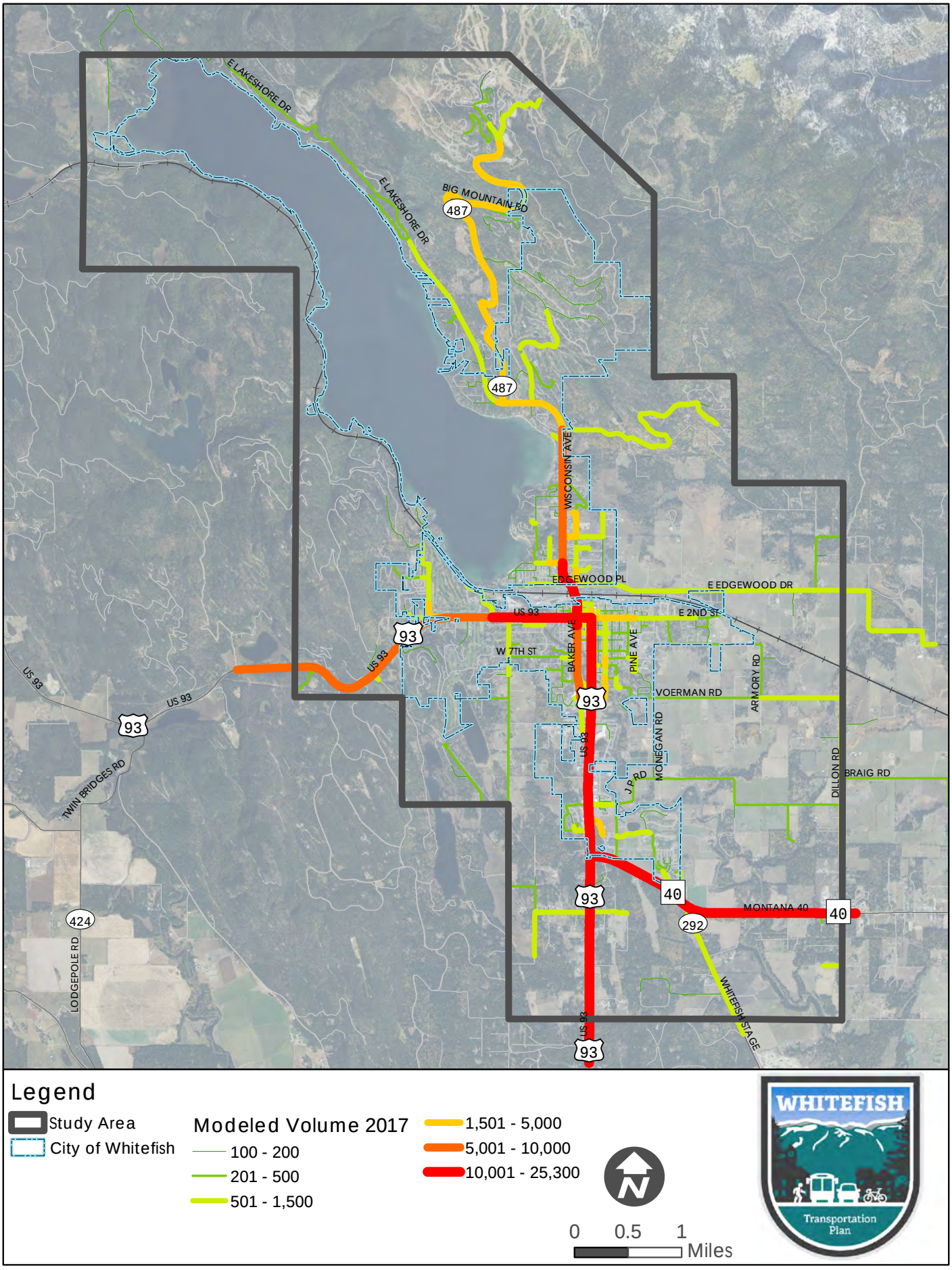
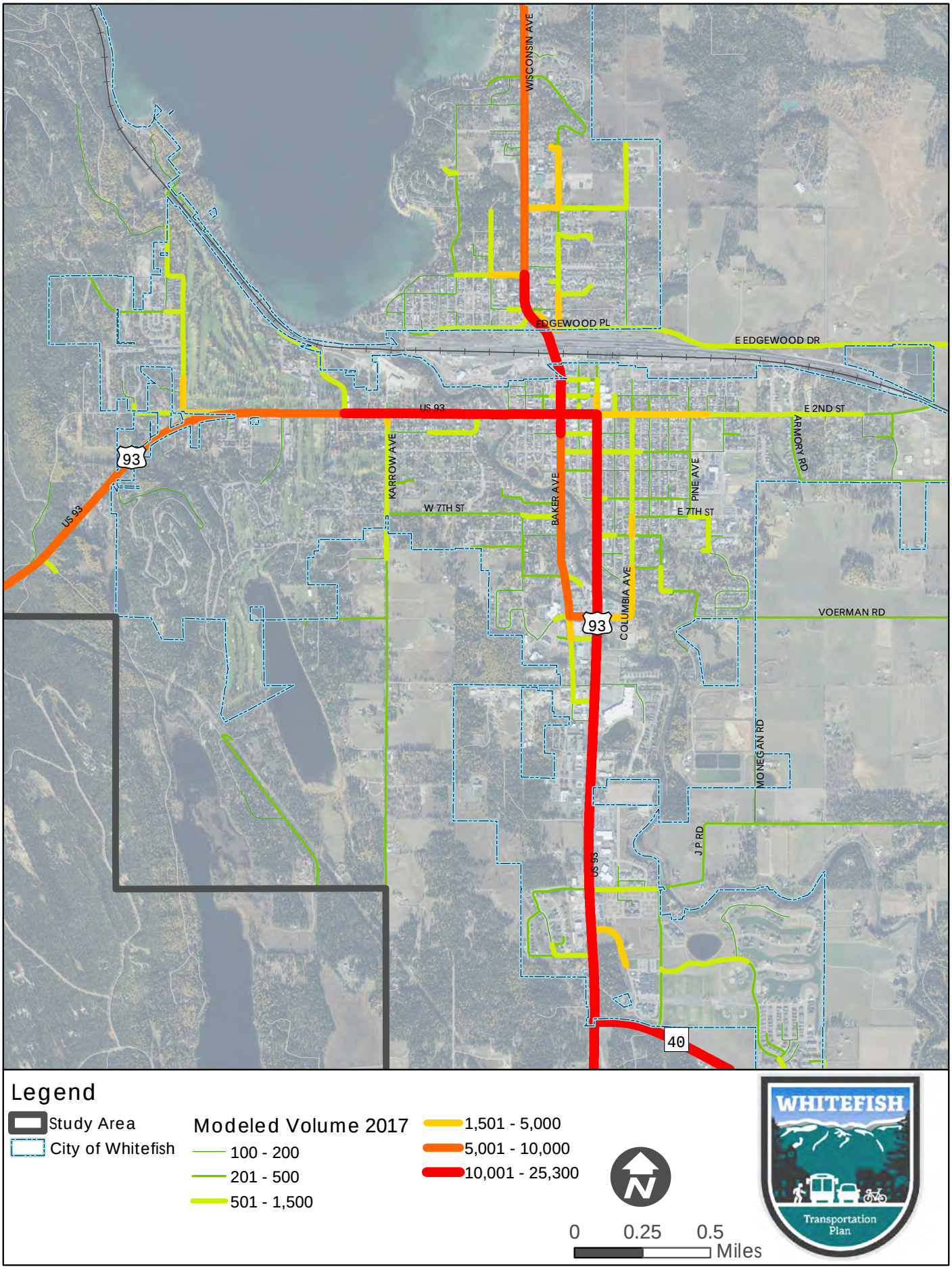


FIGURE 3.11: 2017 MODELED VOLUMES INSET



Base Year Volume-to-Capacity Ratios

Travel demand model results can be used to establish planning-level volume-to-capacity ratios (V/C ratios) for study area roadways. These V/C ratios are generally used to identify locations with the most significant capacity constraints that require more detailed and operations-based traffic analysis.

At a planning-level, roadway capacities are a function of roadway functional classifications, speed limits, and the number of travel lanes. For analysis purposes, V/C ratios have been translated to roadway levels of service (LOS) based on federal research and guidelines. LOS is a letter grade used to describe traffic operations where LOS A provides travel with nearly no delay and LOS F represents gridlocked travel. Generally, LOS D or worse is considered deficient and in need of improvements. Figure 3.12 demonstrates the level of service thresholds and operations, with the level of service thresholds by V/C ratios shown in Table 3.3.

As shown in Figure 3.13 and Figure 3.14 on page 43 some roadways have segments operating at LOS D or worse, however these issues are mainly attributable to intersection operations, which will be evaluated and presented in greater detail in "Chapter 4. Projected Conditions".

FIGURE 3.12: LEVEL OF SERVICE DESCRIPTIONS

Source for example and descriptions: Transportation Research Board's 2000 Highway Capacity Manual; Graphic redesign: KLJ

Table 3.3: Level of Service Thresholds by V/C Ratio

V/C RATIO	LEVEL OF SERVICE	DESCRIPTION
Under 0.6	LOS A	Near free-flow traffic.
0.6 to 0.7	LOS B	Minor delays.
0.7 to 0.8	LOS C	Some delays, but not resulting in significant traffic congestion.
0.8 to 0.9	LOS D	Delays with some traffic congestion.
0.9 to 1.0	LOS E	Significant delays with significant traffic congestion, approaching capacity.
1.0+	LOS F	Breakdown of traffic flow, major traffic congestion.

Source: NCHRP 387 – Planning Techniques to Estimate Speeds and Service Volumes for Planning Applications

FIGURE 3.13: 2017 TRAFFIC VOLUME TO CAPACITY RATIO

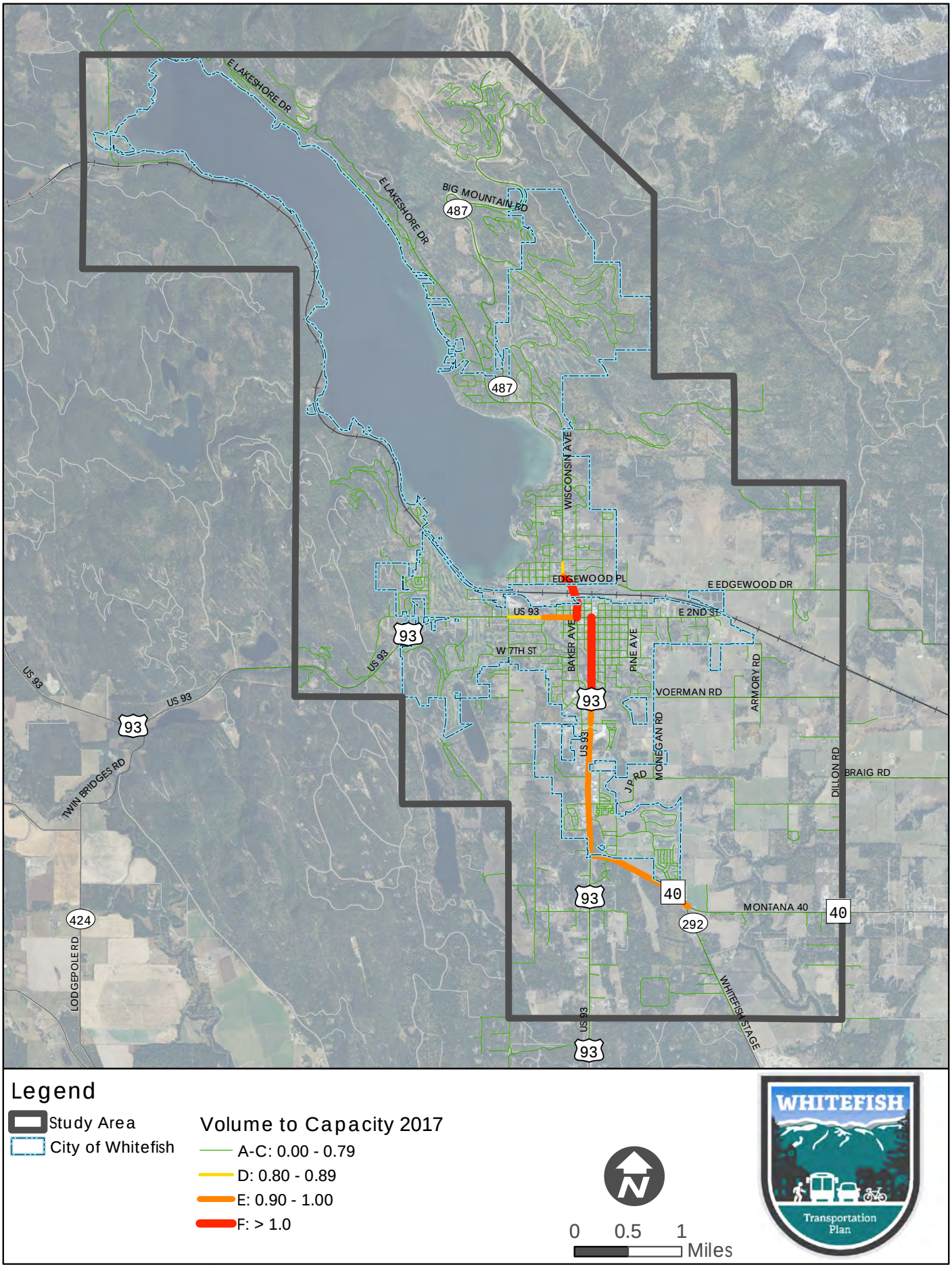
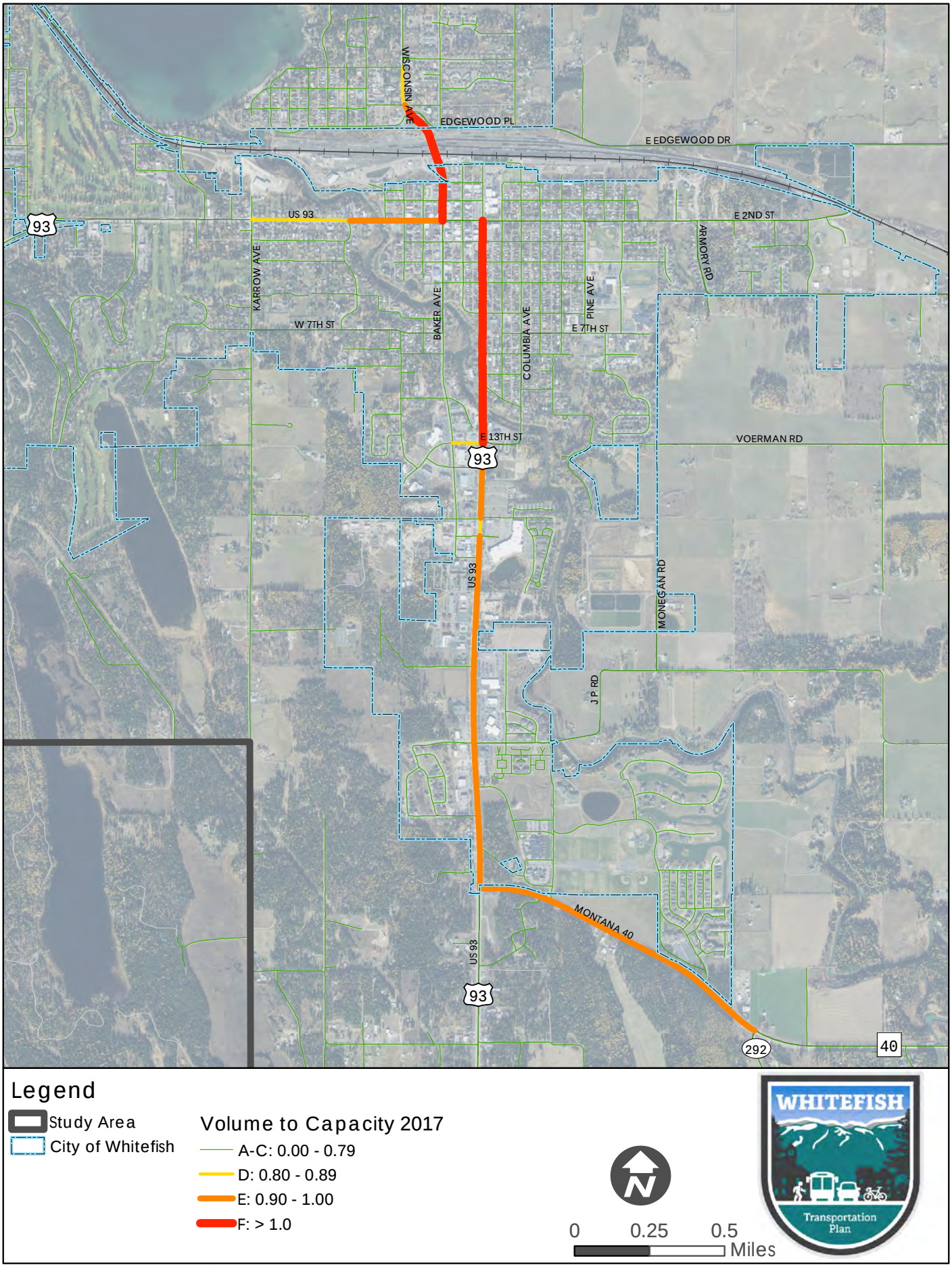


FIGURE 3.14: 2017 TRAFFIC VOLUME TO CAPACITY RATIO INSET



EXISTING COMMUNITY CONDITIONS

An understanding of the existing conditions is required to plan for the long-range future transportation needs of a growing community. The following section describes the demographics, housing, and economic trends of Whitefish, Flathead County, and the State of Montana.

Demographics Overview

The total population of Flathead County grew from 51,966 in 1980 to 104,357 in 2020, for an increase of 52,391 residents or 100 percent. Overall population trends during the last 40 years indicate steady growth in the county, punctuated by short periods of slow or no growth associated with regional and national economic downturns.

Between 2010 and 2020, the county's population (as a whole) increased by 15 percent, while Whitefish's population increased by 22 percent over the same period. Table 3.4 shows a comparison of Whitefish's population growth to the surrounding area over the last 40 years.

Table 3.4: Regional Population Growth

	FLATHEAD COUNTY	CITY OF WHITEFISH	CITY OF KALISPELL	CITY OF COLUMBIA FALLS
1980	51,966	3,703	10,648	3,112
1990	59,518	4,368	11,917	2,942
2000	74,471	5,032	14,223	3,645
2010	90,928	6,352	19,927	4,688
2020	104,357	7,751	24,558	5,308
Annual Avg. Change	2.5%	2.7%	3.3%	1.7%

Population Dynamics

The City of Whitefish population trends older than average when compared to Flathead County and the State of Montana, with a median age of 42.4 in 2019. The city has a similar proportion of residents older than 65 and a lower proportion of residents under 18 than the surrounding area. Table 3.5 shows the population dynamics of the city, county, and state.

Table 3.5: Population Age Cohorts

AREA	2000	2010	2019 ACS
City of Whitefish			
Median Age	37.3	39.8	40.3
Younger than 18	21.6%	13.6%	17.4%
18 to 64	64.0%	71.2%	65.9%
Greater than 64	14.4%	15.2%	16.7%
Flathead County			
Median Age	39	41.2	42.4
Younger than 18	25.9%	23.4%	21.7%
18 to 64	61.1%	62.2%	58.1%
Greater than 64	13.0%	14.4%	20.2%
State of Montana			
Median Age	37.5	39.8	39.9
Younger than 18	25.5%	22.6%	21.7%
18 to 64	61.1%	62.6%	60.1%
Greater than 64	13.4%	14.8%	18.2%

Commute Trends

As the City of Whitefish continues to grow, movement in and out of the city and connections with surrounding communities will determine the future of the transportation system. Understanding the relationship between housing and job locations will be critical to balancing the needs of the community.

Worker Inflow/Outflow

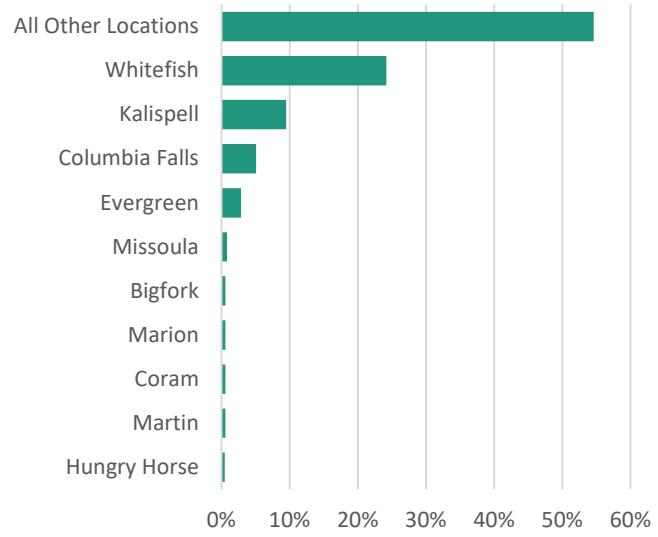
Table 3.6 shows the commute patterns to and from the City of Whitefish. These numbers were determined using the city limits and the total number of jobs recorded in the 2017 American Community Survey. It is likely that many of the workers in the first column live within the study area but outside of the city limits. Among the employed population that lived within the city limits, about 69 percent commuted to a job outside of the city limits. Because an individual can hold multiple jobs, these numbers are meant to approximate commuter behavior.

Table 3.6: Job Inflow/Outflow (2017 ACS)

COMMUTE TO WHITEFISH FOR WORK	LIVE AND WORK IN WHITEFISH	COMMUTE FROM WHITEFISH FOR WORK
2,975 jobs	951 jobs	1,919 jobs

Figure 3.15 shows the work locations of employed individuals that live within the Whitefish city limits. In 2017, 374 workers commuted to Kalispell, 200 commuted to Columbia Falls, and 951 stayed in Whitefish for their work. These numbers likely understate the extent to which Whitefish is an employment hub because the Big Mountain Ski Resort falls outside of the city limits. This means that employees of the resort are categorized in Figure 3.15 as commuting to "All Other Locations".

FIGURE 3.15: COMMUTE DESTINATIONS FROM WHITEFISH



Housing Affordability

Housing is the bedrock of a community and can determine transportation needs and social, political, and economic conditions. Housing type and variety are important considerations in local land-use and transportation decision-making processes. Table 3.7 shows several measures of the existing housing stock and housing affordability in Whitefish. Housing is typically understood as affordable for renters if the rent is less than 30 percent of household income. In both Whitefish and Flathead County, this implies that housing is unaffordable for about 45 percent of the renting population. For homebuyers, the Whitefish real estate market is highly differentiated from the surrounding area, with a median home price about $200,000 higher than that of the county on the whole.

In Whitefish, many middle-income households struggle to afford home prices that are driven up by second home buyers and retirees. The 2017 Whitefish Strategic Housing Plan presents a wide-ranging set of strategies to address the conditions that cause a mismatch between local wages and the housing market. In Whitefish, these conditions include low-density zoning, excessive parking requirements, and restrictive Accessory Dwelling Unit (ADU) policies.

Table 3.7: Housing Stock and Affordability

	CITY OF WHITEFISH	FLATHEAD COUNTY
2000	2,652	34,773
2010	3,857	46,963
2018 ACS	4,652	48,447
Annual Avg. Change	4.2%	2.2%
Persons per Household	2.1	2.0
Owner-occupied	61.5%	72.6%
Renter-occupied	38.5%	27.4%
Median Price	$800,000	$605,000
Median Monthly Rent	$953/month	$822/month
Median Household Income	$51,059	$52,966
Percent of households spending >30% of income on rent	45.8%	45.5%

Economic Trends

Healthcare, retail trade, and accommodation and food services are the three largest industries in Flathead County, employing nearly 20,000 people. The largest private employers in Flathead County are shown in Table 3.8. Table 3.9 shows the largest industries in the county as well as their average employment. Due to the COVID-19 pandemic, there is uncertainty that past trends will continue into the future. This section describes economic conditions prior to the pandemic, and does not examine the long term effects of the economic shutdown.

Table 3.8: Largest Employers in Flathead County

EMPLOYER
More than 1,000 Employees
Kalispell Regional Medical Center
500–999 Employees
Weyerhaeuser
250–499 Employees
AON Service Corporation
Applied Materials Inc.
Glacier Bank
Health Center Northwest
Immanuel Lutheran Home
North Valley Hospital
Super 1 Foods
Teletech
Wal-Mart
Whitefish Mountain Resort
100–249 Employees
A Plus Healthcare
Brendan House
Costco
L C Staffing Service
Lodge at Whitefish Lake
McDonalds
Smith's Food and Drug
Summit Medical Fitness Center

According to the Montana Department of Labor & Industry's Local Area Profile for Flathead County, the county represents a tourism hotspot in Montana due to Glacier National Park, Flathead Lake, the local ski industry at Whitefish Mountain Resort and Blacktail Mountain Ski Area, and the Bob Marshall Wilderness. The tourism economy offers significant employment opportunities, although much of this sector of the county's economy is centered on service industry jobs which typically represent lower wage earners.

The county's labor force was estimated to be 47,793 in 2018, according to local area employment statistics (this number has not been seasonally adjusted). While county unemployment rates have been on a steady decline since the recession, the current unemployment rate sits at 4.8 percent, over a percentage point higher than the state average unemployment rate of 3.7 percent.

According to the 2017 ACS Community Profile narratives for both Whitefish and Flathead County:

- Flathead County's federal, state, and local government sector employment represents 13.4 percent of the workforce in the county. Nearly 80 percent of the workforce is in private industry.
- Key industries in Flathead County are educational services, health care and social assistance (23.5%); retail trade (13.8 percent); arts, entertainment and recreation (10.9%); and professional, scientific and tech services (9.8%).
- Whitefish's federal, state, and local government sector employment is around 19 percent of the workforce in the city. About 76 percent of the workforce is in private industry.
- Key industries in Whitefish are educational services, health care and social assistance (29.5%); Arts, entertainment, and recreation, and accommodation and food services (22.3%); and Finance and insurance, and real estate and rental and leasing (9.5%).

Table 3.9: Largest Industries in Flathead County

INDUSTRY	AVERAGE EMPLOYMENT
Health Care and Social Assistance	7,157
Retail Trade	6,366
Accommodation and food Services	6,130
Government - All Levels	4,976
Food Services and Drinking Places	4,352
Construction	3,296
Manufacturing	2,837
Ambulatory Health Care Services	2,215
Professional and Technical Services	2,042
Specialty Trade Contractors	2,024
Finance and Insurance	1,839

SAFETY ANALYSIS

Transportation safety is an essential component of the transportation planning process supporting the Whitefish Transportation Plan. Improving transportation safety requires more than just fixing a road or increasing police patrols. In order to be most effective, safety improvements need to consider the "four E's" of transportation safety: Education, Enforcement, Engineering, and Emergency Services. The objective of the safety analysis is to improve the safety and well-being of all users of the transportation system and work towards MDT's Vision Zero initiative to achieve zero deaths and zero injuries on Montana roads.

Crash Analysis

Crash data between 2014 and 2018 data was provided by MDT Traffic and Safety Bureau to investigate the traffic crash trends in the study area. Between 2014 and 2018, there were 791 crashes reported in the study area. This corresponds to 159 crashes per year. The high-level trends are discussed below with more detailed information later in this section.

- There were three crashes that resulted in a fatality, and 19 crashes that resulted in serious injury.
- There were seven pedestrian involved crashes, including one crash that resulted in serious injury.
- There were six bicycle involved crashes, including one crash that resulted in fatality.
- About 38 percent of crashes occurred at intersections.
- The largest number of crashes occurred on roads with greatest miles traveled, such as US 93, and MT Hwy 40.
- From 2014 to 2018, the number of crashes increased by 13 percent.
- From 2014 to 2018, the number of injury related crashes reduced by 23 percent.
- 15.5 percent of crashes involved collisions with animals.

The crash data included the spatial records which were analyzed to understand patterns of existing motorized vehicular crashes and identify high-risk areas. This was done through a hot-spot analysis which identifies clusters of dense accident occurrence, as shown in Figure 3.17.

Crash Severity

Crash severity is very important for implementation of safety related counter measures needed to compare and assess the roadway. The crash data categorized the crashes by the following severity levels:

- Fatal Crash
- Suspected Serious Injury Crash
- Suspected Minor Injury Crash
- Possible Injury Crash
- Property Damage Only Crash

Crash severity is categorized based on the most severe injury of the crash. For example, if a crash involved two vehicles that resulted in one serious injury and two possible injury crash, the crash is reported as suspected serious injury crash. A suspected serious injury crash is defined as an injury, other than fatal which prevents the injured individual from walking, driving, or normally continuing the activities they could perform before the injury. There were three crashes reported that resulted in a fatality, 19 crashes that resulted in serious injury, 136 crashes that resulted in non-serious injury, and 633 crashes that resulted in property damage only. Figure 3.16 shows the number of injury and non-injury crashes during the analysis period. Injury crashes have declined since 2014. Figure 3.17 shows the location of fatal and incapacitating injury crashes.

FIGURE 3.16: CRASHES BY SEVERITY (2014–2018)

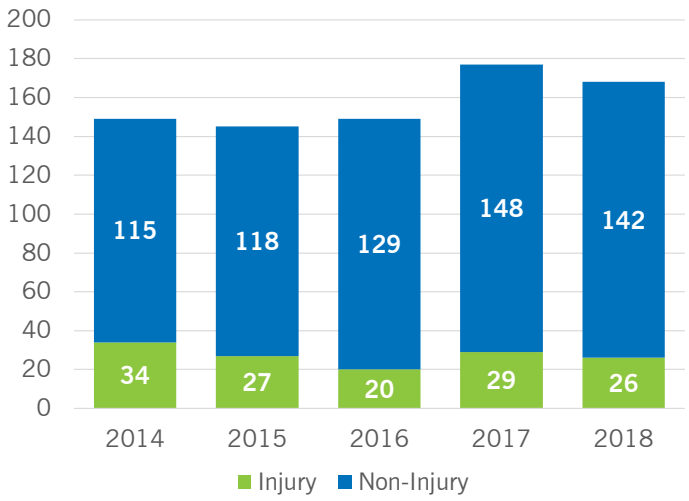
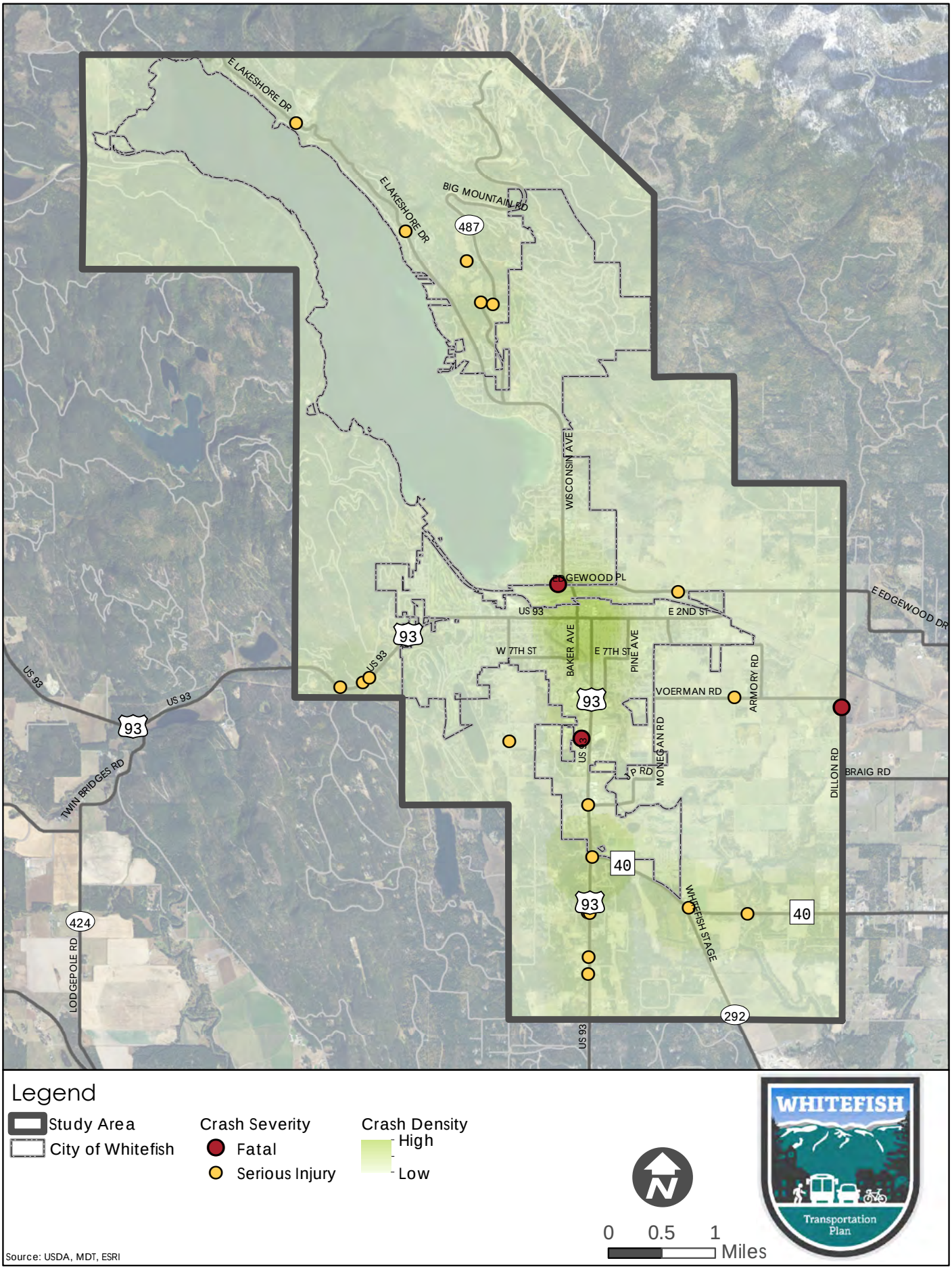


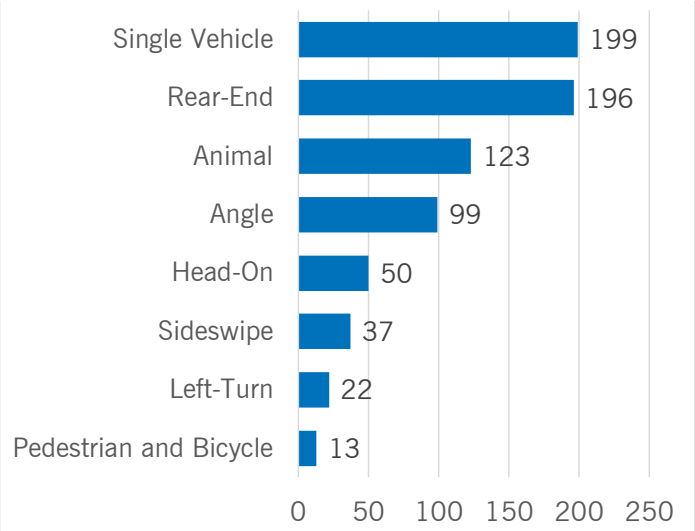
FIGURE 3.17: CRASH DENSITY AND SEVERITY (2014–2018)



Crash Type

Identifying crash type at roadways assists in developing counter measures to mitigate or minimize the crash type. Between 2014 and 2018, single vehicle related (199), rear-end (196), and angle (99) crashes represented the typical crash types in the study area. Aggressive driving, failing to stop, following too closely, and excessive speeding are a few factors in a substantial proportion of rear end crashes. Figure 3.18 shows the most prevalent crash types during the analysis period.

FIGURE 3.18: CRASHES BY TYPE (2014–2018)



Crashes Involving Impaired Drivers

Montana has one of the highest fatality rates in the nation for number of deaths caused by impaired drivers per vehicle mile traveled. The statewide data from 2018 indicates that 64 percent of all fatalities statewide were the result of impaired driving. This is up from 61 percent in 2017. Within the study area, there were 30 crashes (four percent) involving impaired drivers. Of these crashes, 53 percent resulted in injuries.

Crash Occurrence Period

Crash occurrence statistics assist in refining patrol deployment decisions. Typically, traffic varies significantly by time of day and day of the week, particularly during weekday peak hours. Crash data for the study area was evaluated based on the period of occurrence on the crash with respect to time of the day, week, and month.

- The majority of the crashes (129, or 16.5 percent) were reported during the peak congestion period from 8AM to 9AM and 4PM to 5PM
- 74 percent of crashes occurred on weekdays. The fewest crashes occurred on Sundays.

November through January generally experienced more vehicular crashes. December is the peak month for crash frequency. Challenging winter road conditions including snow, sleet, and ice can contribute to the higher number of crashes.

Crashes Involving Animals

From 2014 to 2018, there were 125 reported crashes that involved wild animals, which corresponds to 25 crashes per year. This is likely understated as many animal-vehicle collisions go unreported if the crash does not involve property damage or injury. Of these animal-vehicle collisions, 52 percent occurred on MT Hwy 40, and 25 percent on US 93 south of MT Hwy 40. US 93 and MT Hwy 40 are high-volume, high-speed roadways.

Intersection and Segment Crash Evaluation

To assess the intersections and segments safety performances, two methods were applied: Crash Rate and Severity Rate. These methods apply an easy-to-use statistical test to determine whether the crash rate and severity rate for a location is significantly higher than the average crash rate and severity rate for other locations in the jurisdiction (or region) having similar characteristics.

- The crash rate is calculated as the number of crashes per million entering vehicles for intersections and the number of crashes per million vehicle miles traveled for segments.
- The severity rate applies a weight to crashes based on severity, including 5.0 for fatal crashes, 4.0 for incapacitating injury crashes, 3.0 for non-incapacitating injury crashes, 2.0 for possible injury crashes, and 1.0 for property damage only crashes.

Ten intersections were identified with the highest number of crashes in the area. Table 3.10 on page 51 summarizes the crash rate and severity rates of the intersections. The location of the intersections is shown in Figure 3.19. The larger the circle, the more crashes that occurred at that intersection.

The intersection of US 93 & MT Hwy 40 observed the highest number of crashes in the study area, with 45 crashes reported in the five-year analysis period. The number of crashes observed at US 93 & MT Hwy 40 is three times more than the next highest crash intersection (2nd Street & Baker Avenue).

FIGURE 3.19: HIGH CRASH INTERSECTIONS (2014–2018)

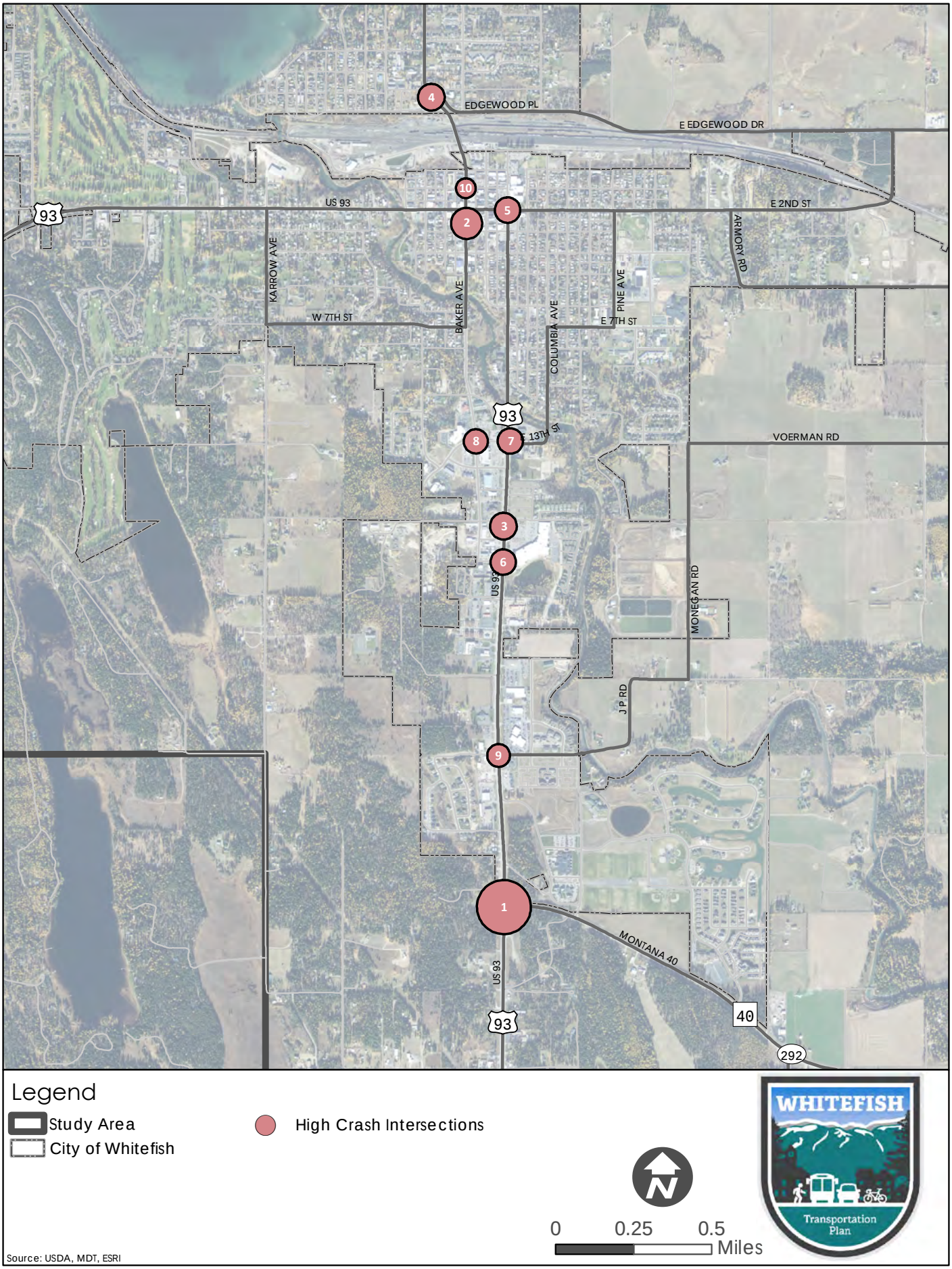


Table 3.10: High Crash Intersections

INTERSECTION (SHOWN IN FIGURE 3.19)		ENTERING VEHICLES (MILLION)	CRASHES			CRASH RATE	SEVERITY RATE
			INJURY	NON-INJURY	TOTAL		
1	Hwy 93 & MT Hwy 40	46.5	12	33	**45**	0.97	1.36
2	Hwy 93 & Baker Ave	34.6	1	14	**15**	0.43	0.46
3	Hwy 93 & Commerce St	39.1	2	9	**11**	0.28	0.33
4	Wisconsin Ave & Edgewood Pl	32.1	1	10	**11**	0.34	0.37
5	Hwy 93 & 2nd St	24.6	2	8	**10**	0.41	0.49
6	Hwy 93 & 19th St	41.9	2	8	**10**	0.24	0.31
7	Hwy 93 & 13th St	37.8	4	6	**10**	0.26	0.40
8	Baker Ave & 13th Street	25.1	1	8	**9**	0.36	0.40
9	Hwy 93 & JP Road	43.8	5	3	**8**	0.18	0.34
10	Baker Ave & 1st St	35.9	2	4	**6**	0.17	0.22

FREIGHT SYSTEMS

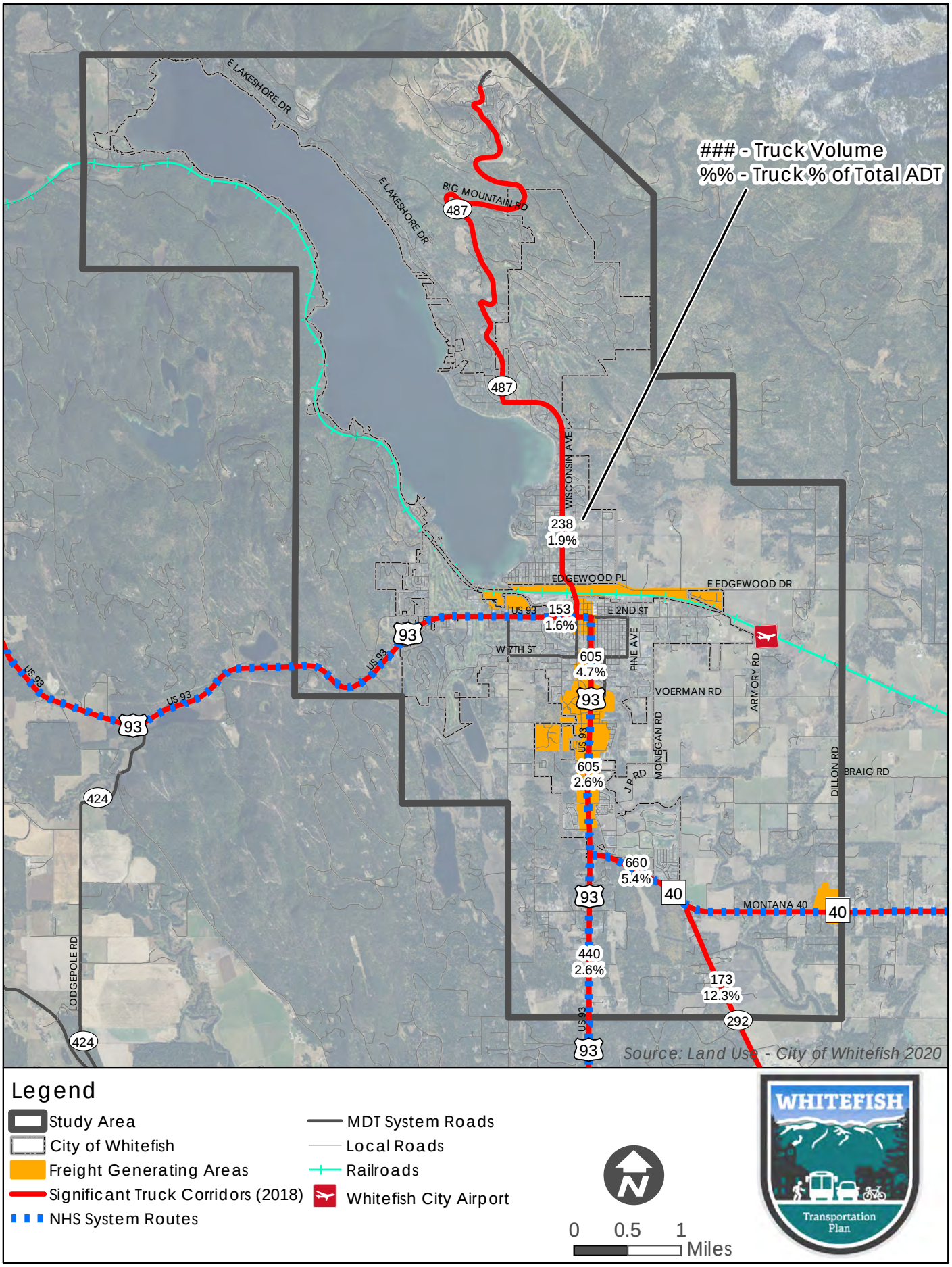
The City of Whitefish is served by US 93 which connects the city to regional and national trade routes. The stretch of highway through downtown presents challenges in balancing freight traffic with local automobile, pedestrian, and bicycle traffic. For example, US 93 remains at or near capacity between 10 AM and 6 PM during the summer months, while downtown intersections such as Central Avenue and 2nd Street see heavy pedestrian traffic during that time period. Because truck activity centers can influence the entire network by slowing down traffic and creating safety hazards, it is important to document high activity centers within the study area. Table 3.11 shows locations of high truck traffic throughout the City of Whitefish. Generally, urban corridors can expect to see heavy truck traffic around two percent or less.

Figure 3.20 shows the primary truck routes and generators in the study area.

Table 3.11: High Truck Traffic Locations

LOCATION	2018 DAILY TRAFFIC	2018 DAILY TRUCK TRAFFIC	PERCENT TRUCK TRAFFIC
Montana Highway 40 (US 93 to Whitefish Stage)	12,125	660	5.4%
US Highway 93 (5th St to 13th St)	12,771	605	4.7%
US Highway 93 (Miles Ave to Baker Ave)	9,456	153	1.6%
US Highway 93 (J P Rd to 18th St)	23,488	605	2.6%
US Highway 93 (MT 40 to Stelle Ln)	17,223	440	2.6%
Wisconsin Avenue (Edgewood Dr to Parkway Dr)	12,778	238	1.9%
Whitefish Stage (MT 40 to Hodgson Rd)	1,404	173	12.3%

FIGURE 3.20: TRUCK TRAFFIC VOLUMES AND MAJOR ROUTES



Legend

- Study Area
- City of Whitefish
- Freight Generating Areas
- Significant Truck Corridors (2018)
- NHS System Routes
- MDT System Roads
- Local Roads
- Railroads
- Whitefish City Airport

0 0.5 1 Miles

RAIL SYSTEMS

The Whitefish Train Depot serves both freight and passenger rail traveling along the privately-owned BNSF railway. Amtrak provides passenger service connecting Whitefish to Seattle to the west and Chicago to the east. In 2019, 55,210 passengers boarded or alighted at the Whitefish train depot, making Whitefish the busiest Amtrak passenger stop in the state of Montana.. Within the study area, grade-separated crossings over the railroad tracks exists on Baker Street, and at-grade crossings exist on 2nd Street, State Park Road, and Birch Point Drive. Figure 3.22 shows the existing rail system within Whitefish.

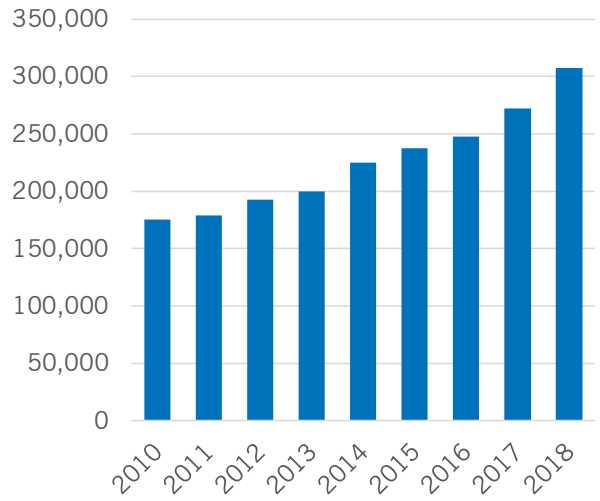
AIR TRANSPORTATION

Whitefish is served by the Glacier Park International Airport (GPI) and the Whitefish Airport. Only GPI provides scheduled commercial service.

Glacier Park International Airport

GPI lies northeast of Kalispell on US 2. Alaska Airlines, Allegiant, American Airlines, Delta, and United provide regular scheduled commercial flights. These airlines provided flights to 306,487 passengers in 2018, the highest passenger volume ever recorded at the airport. Over the past five years the airport has seen a 33 percent increase in passenger volume and a 75 percent increase since 2010 as seen in Figure 3.21. In 2021, the airport initiated an expansion project that will triple its size to keep up with growing passenger volumes.

FIGURE 3.21: PASSENGER VOLUMES AT GPI



The following are the major destinations and air carriers of the airport:

- *Delta:* Salt Lake City, Minneapolis, St. Paul, Atlanta (Seasonal), and Los Angeles (Seasonal)
- *United:* Denver and Chicago (Seasonal)
- *Alaska:* Seattle and Portland (Seasonal)
- *Allegiant Air:* Las Vegas, Phoenix, Oakland (Seasonal), Los Angeles (Seasonal)
- *American Airlines:* Chicago (Seasonal), Dallas (Seasonal), Los Angeles (Seasonal)

Whitefish Airport

The Whitefish Airport is publicly-owned by the by Montana Department of Transportation – Aeronautics Division, and serves on average 23 aircrafts each month, 72 percent of which are local general aviation.

BICYCLE AND PEDESTRIAN SYSTEM

In Whitefish, 7.7 percent of workers walk to work and 2.6 percent bike to work according to 2020 American Community Survey commuting data. Several existing plans, including the 2018 Whitefish Climate Action Plan and the 2016 Connect Whitefish Bicycle and Pedestrian Plan, have recommended improving bicycle and pedestrian connectivity and comfort throughout the city. Table 3.12 summarizes the existing facilities, and Figure 3.23 and Figure 3.24 shows the complete network within the study area. Each facility type is described below.

- Sidewalks are paths typically designated for pedestrians along the side of the roadway.
- Bike lanes are designated lanes within a portion of the roadway typically including striping, signage, and other pavement markings noting the space for cyclists
- Separated shared-use paths are separated recreation routes designated for pedestrians and cyclists.

Table 3.12: Existing Multimodal Facilities

FACILITY TYPE	MILES	PERCENT OF ROADS WITH FACILITY
Existing Shared-Use Recreation Route	13.6	N/A
Existing Bike Lane	2	0.9%
Existing Sidewalks	41	17.4%

FIGURE 3.22: RAILROAD CROSSINGS IN THE STUDY AREA

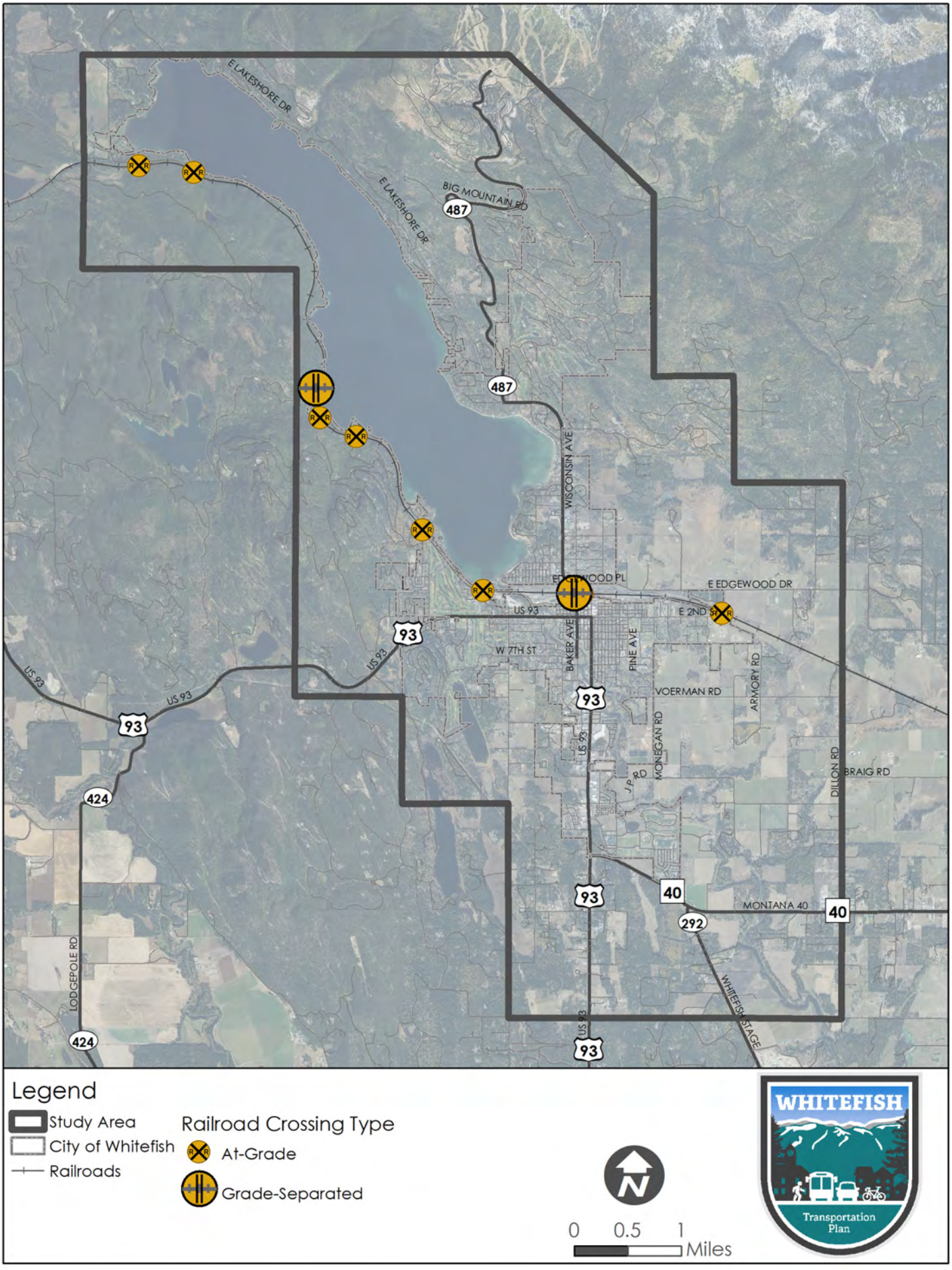


FIGURE 3.23: BICYCLE AND PEDESTRIAN FACILITIES

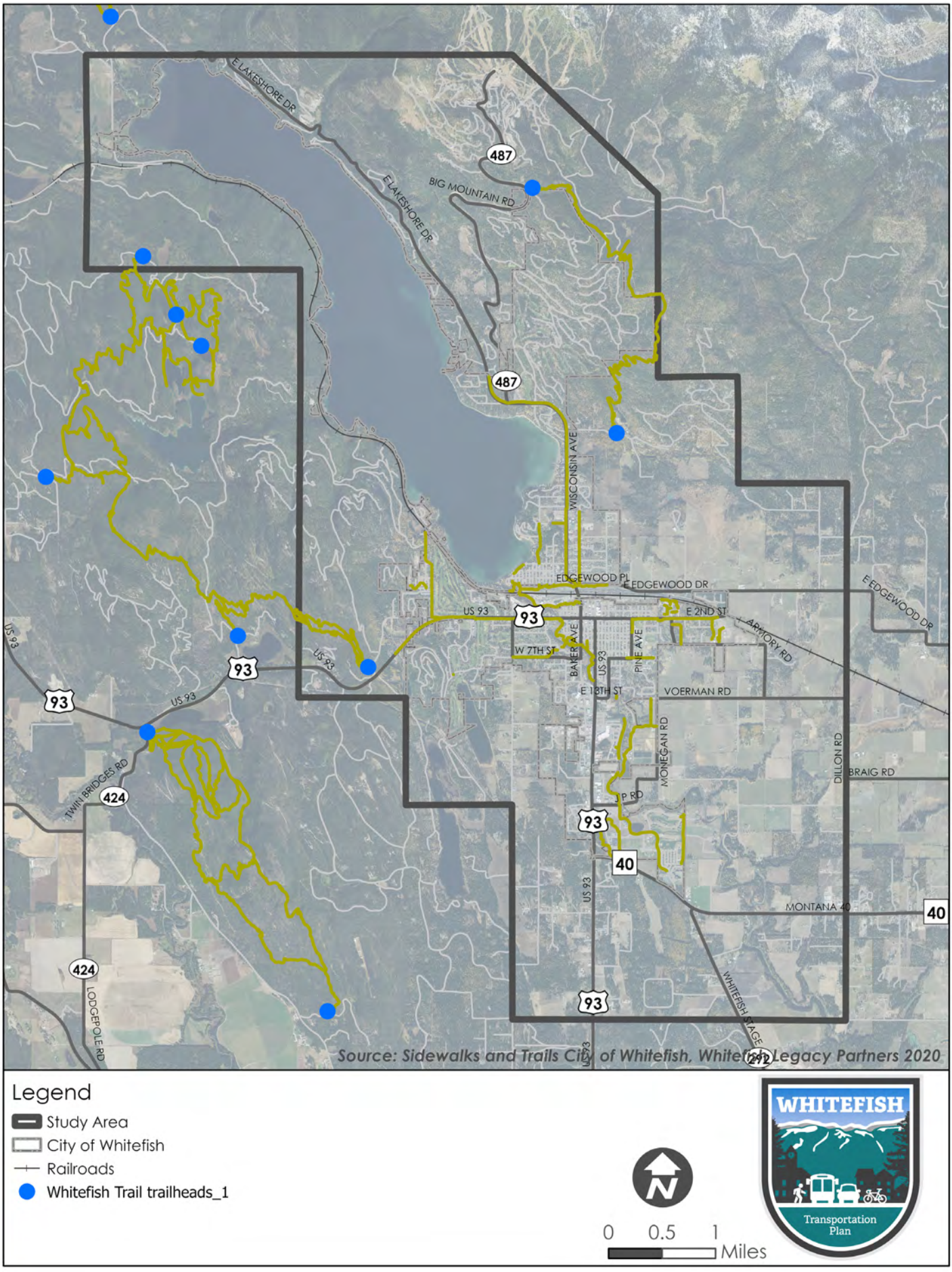


FIGURE 3.24: BICYCLE AND PEDESTRIAN FACILITIES INSET

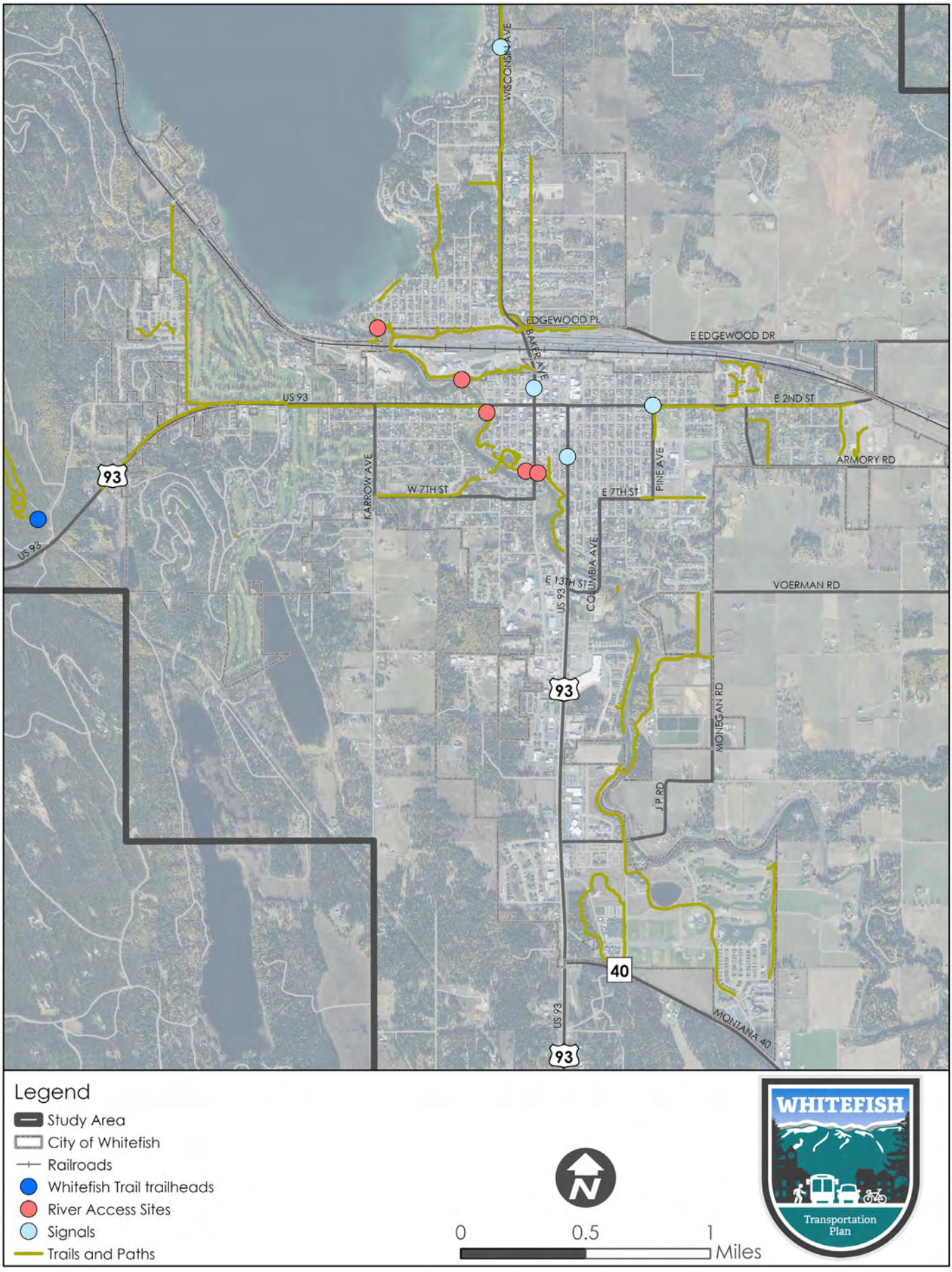


FIGURE 3.25: SHARED-USE PATH IN WHITEFISH

Bicycle and Pedestrian Crashes

Between 2014 to 2018, seven pedestrian and six bicycle crashes were recorded within the study area. Pedestrian and bicycle crashes are often severe and underreported when they do not involve injury or significant property damage. Among the seven pedestrian crashes, one resulted in no injury, five resulted in a possible or minor injury, and one resulted in a serious injury. Among the six bicycle crashes, three resulted in property damage and no injury, two resulted in a possible or minor injury, and one crash was fatal and occurred on a separated path parallel to the road. Across the 13 recorded bicycle and pedestrian crashes, 62 percent occurred in daylight and 70 percent occurred in clear weather conditions. Figure 3.26 shows the locations of these crashes.

Seasonal Trends

According to the Downtown Whitefish Highway Study, pedestrian and bicycle activity is significantly higher during the summer months in downtown Whitefish. In August 2019, 8,471 pedestrians were counted at the intersection of 2nd Street and Central Avenue, compared to just 1,135 at that intersection in November 2019. Across 13 intersections in downtown, average daily bicycle counts ranged from 25 to 88 in August 2019, while those same intersections had an average daily count between 1 and 14 bicycles in November 2019. Snow and ice removal creates additional complications for pedestrians and bicyclists during the winter months.

Safe Routes to School

Safe routes to school is an important component of the bicycle and pedestrian system. The City of Whitefish has completed multiple studies surrounding Muldown Elementary and Whitefish Middle, including the 2011 Safe Routes to School Plan, to ensure school-aged children have safe options to walk and bike to school. Figure 3.27 shows the existing bicycle and pedestrian signage surrounding the three schools in Whitefish. The city has applied for and received several thousand dollars of Safe Routes to School funding for pedestrian safety improvements around the schools.

Current barriers to biking and walking in the Whitefish area follow conditions seen in communities across Montana. Low-density development patterns coupled with the high auto dependency rates have resulted in an environment not conducive to biking and walking. Existing systems developed in Whitefish are developed enough to promote both commuting and recreational travel by bicycle and walking. Current commute trends bare this out when compared to other peer communities in Flathead County. However, gaps remain along major corridors and between transportation generators. This includes the need to provide a coordinated and identifiable system of corridors providing safe access to and from Whitefish area schools.

FIGURE 3.26: BICYCLE AND PEDESTRIAN CRASHES

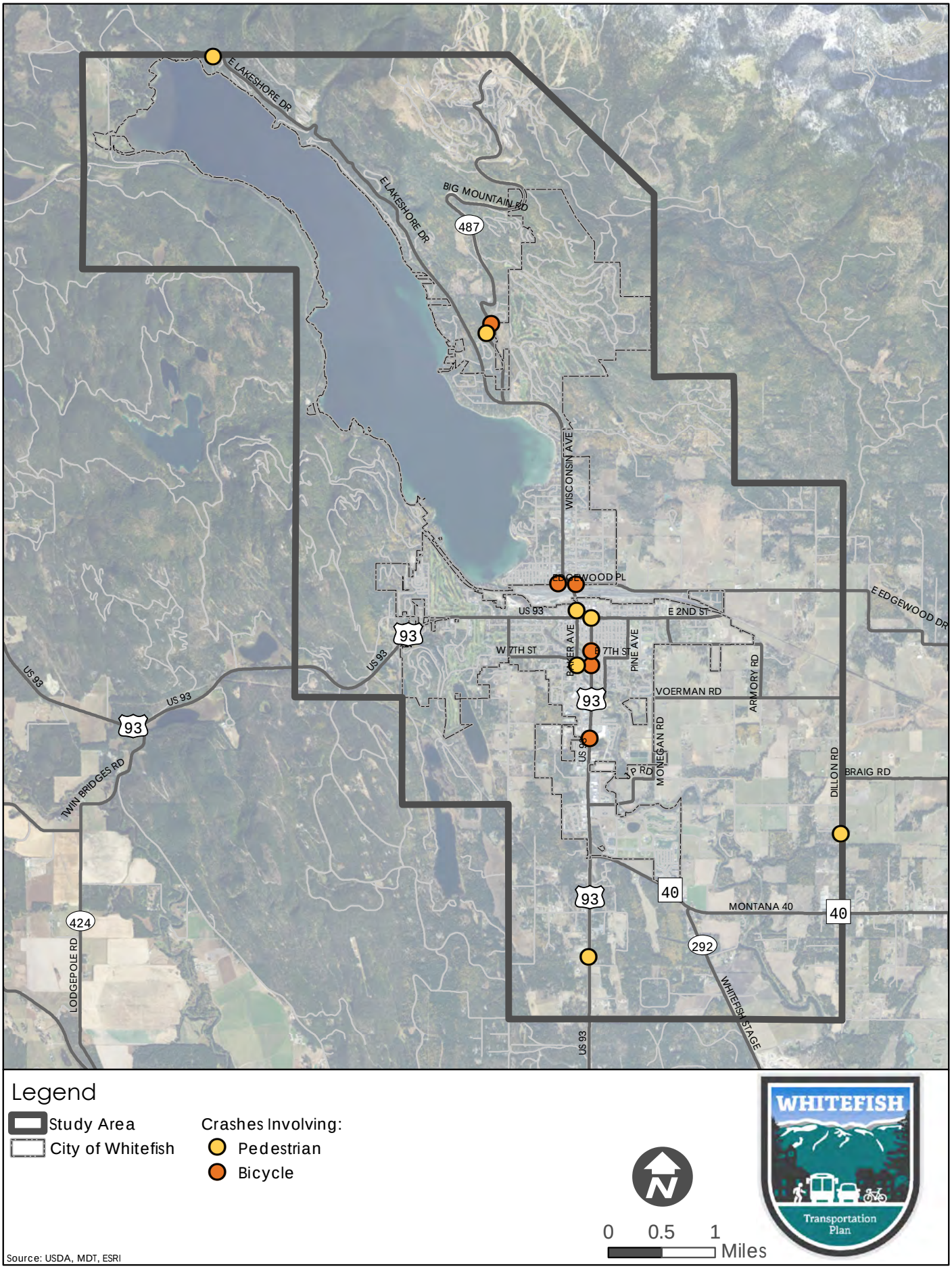
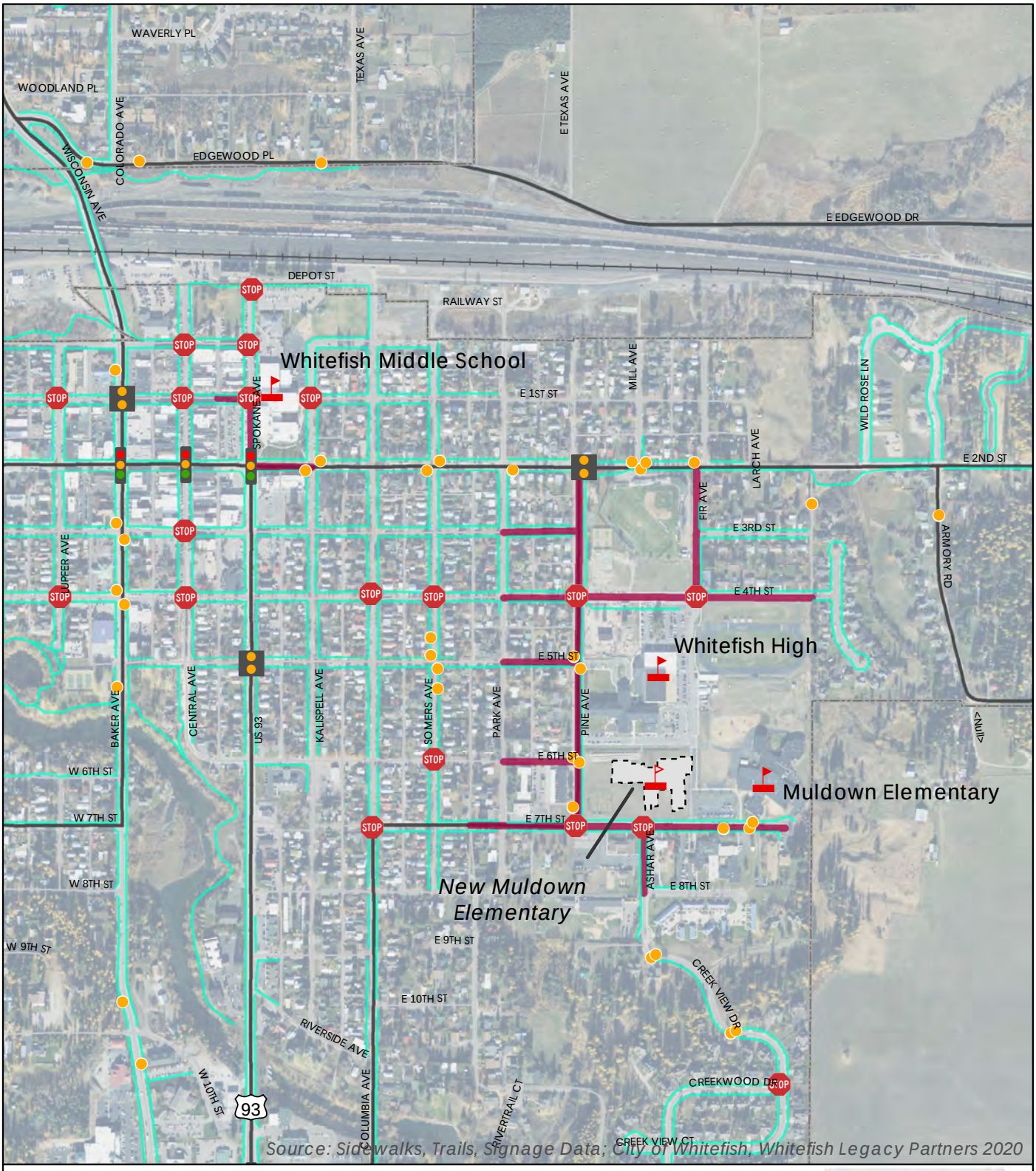


FIGURE 3.27: WHITEFISH SCHOOLS



Shuttle Network of Whitefish (S.N.O.W.) Bus

The S.N.O.W. Bus is a free shuttle service between Whitefish and Whitefish Mountain Resort. The service is operated by the Big Mountain Commercial Association (BMCA). During the summer months, the S.N.O.W. Bus primarily serves morning and afternoon peak periods. Between December and April, the service runs roughly every 30 to 60 minutes between the hours of 7:30 AM and 10:00 PM, with additional hours on select weekends, holidays, and events. Using on-board trackers that were installed on buses in 2018, about 60,000 riders were counted during the 2018–2019 winter period, while 11,800 riders were counted during the following summer.

Existing Service

Flathead County is the current transit provider for the general public, senior citizens, and people with disabilities within Whitefish. The County provides all services directly, rather than subcontract with or purchase services from other entities. Until recently, Flathead County provided service under the name Eagle Transit. As the result of a multi-year planning process, the County has initiated a rebranding effort to reposition the system under the new name "Mountain Climber."

In addition to Whitefish, Mountain Climber provides public transportation for the cities of Kalispell and Columbia Falls. Transit service and investment is guided through the planning efforts outlined in the 2021 Transportation Coordination Plan (TCP), which was adopted in February 2020.

Ridership across all Mountain Climber routes and services increased 36 percent between 2017 and 2019, from 85,305 rides during the 2017 fiscal year to 116,017 rides during the 2019 fiscal year. Ridership is historically highest during the summer months, with disabled and elderly riders making up 72 percent of total ridership year-round.

Table 3.13 shows 2020 cost and ridership indicators for Mountain Climber service within Flathead County. Table 3.14 compares 2018–2022 ridership by for the Whitefish City Bus, the Columbia Falls City Bus, and the Tri-City Commuter.

Table 3.13: Mountain Climber Service Indicators

SERVICE INDICATOR	2020
Passenger Trips	88,395
Operating Costs	$1,307,847
Passengers per Revenue Hour	4.7
Passengers per Revenue Mile	0.4
Cost per Passenger	$14.80
Cost per Revenue Hour	$69.41
Farebox Recovery Ratio	1.9%

Source: National Transit Database (NTD)

Table 3.14: Transit Ridership by Route

ROUTE	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Whitefish City Bus	4,336	6,390	5,792	1,847	4,571
Columbia Falls City Bus	3,185	4,288	3,024	113	964
Tri-City Commuter	9,103	5,771	4,540	637	1,644

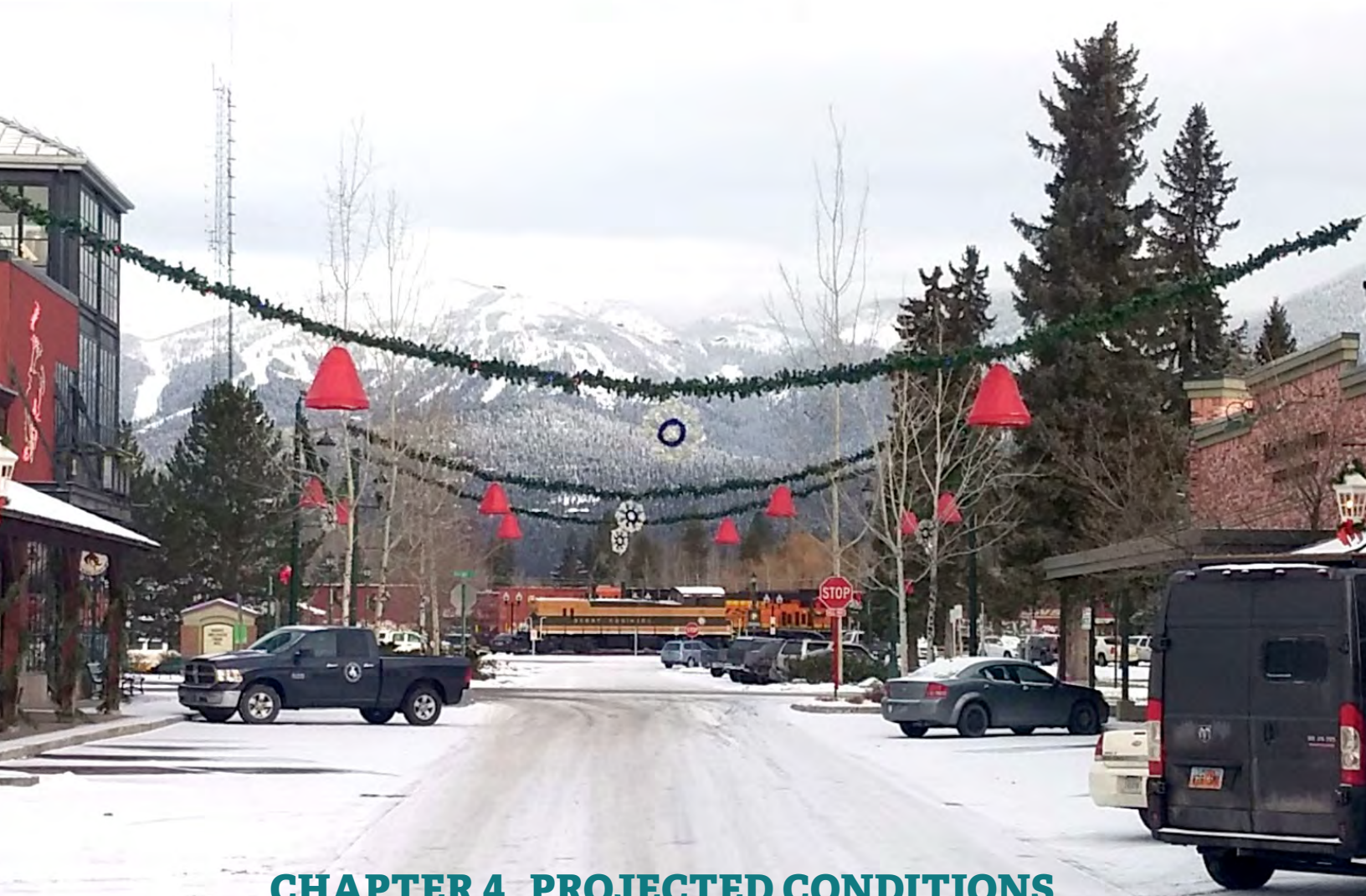
Transit service for Whitefish and throughout the Flathead Valley has been severely impacted by the COVID-19 pandemic, with reductions and modifications of service continuing in early 2022. Nonetheless, Mountain Climber has strived to maintain transit services during this time.

Upon resumption of services following the initial onset of the COVID-19 pandemic, Mountain Climber transitioned to a 100 percent on-demand system. In 2021 Mountain Climber contracted with VIA Transportation for development of a ride hailing application (app). The app is implemented by Mountain Climber and used to schedule rides for the Mountain Climber system. At present, app usage remains low for Whitefish residents, with most rides still being scheduled over the phone.

The Whitefish City Route is a demand response service which runs Monday–Friday from 9:30 am to 4:00 pm within the city. Additionally, there is one commuter bus from Kalispell to Whitefish which leaves at 9:00 am returns at 4:30 pm. There is limited seasonal coordination with the Whitefish S.N.O.W Bus on Saturdays funded by a Whitefish Community Foundation grant. While these services may satisfy core transit needs in the short term, significant transit-related challenges remain.

WHITEFISH

Transportation Plan



CHAPTER 4. PROJECTED CONDITIONS

October 2022

KLJ

ENGINEERING, REIMAGINED

BACKGROUND

The Whitefish Transportation Plan projected conditions analysis was based on outputs from both the 2017 and 2040 E+C (existing plus committed) MDT travel demand models (TDMs). A comparison of baseline and future conditions was necessary to understand the changes in travel demand that the study area will face over the coming decades. Key model outputs used in the analysis include traffic volumes, capacity, and the resulting volume to capacity ratios (V/C) and levels of service (LOS). Both 2017 and 2040 E+C models were developed by MDT.

PROJECTED 2040 GROWTH ALLOCATIONS

The 2040 E+C model used in the Whitefish Transportation Plan was first developed as a part of the Downtown Whitefish Highway Study with the purpose of generating 2040 traffic projections. These traffic projections were determined using projections for the population, number of households, and employment in Flathead County. This section summarizes the data used, existing trends, and projections determined by the 2040 E+C model.

Data Sources

US Census

Data from 1970 to 2010 were used to estimate base year conditions for housing and population growth.

Woods and Poole Forecasts

Professionally-produced data analysis models for use in forecasting from W&P were used as another check on growth assumptions. W&P household projections include household, income, and other demographic data.

Regional Economic Models, Inc. (eREMI)

eREMI produced population projections for each of Montana's 56 counties.

Growth Allocation

The growth allocations process was based on two phases, an initial phase, and a later adjustment to account for seasonal swings in households. The initial allocation is based on:

- Existing land use and zoning
- Freight-intensive land uses
- Resort planning
- Transit use

Growth Policies and Planning Documents

The following documents and sources were used to determine allocation of new residents, housing, and jobs:

- Downtown Whitefish Highway Study
- Mountain Climber ridership data
- New elementary school planning
- Highway 93 West Corridor
- Wisconsin Ave Corridor Plan

Allocation Workshop

Workshop members identified the seasonal nature of Whitefish housing and calculated appropriate percentages to reflect these seasonal differences. This adjustment was only applied to housing and not used for job allocation.

Population and Housing

The population and number of housing units for the 2040 future conditions were calculated by growing the 2017 Flathead County population by 1.5 percent per year and applying the 2017 population distribution and occupancy factors. This calculation results in an increase of 35,277 residents and 16,952 housing units in Flathead County. This growth would represent a 41 percent increase in the county's population and housing stock from 2017 to 2040.

Table 4.1: 2040 Population and Housing Projections

	2017 (CALIBRATED MODEL)	2040 (PROJECTION)	NET CHANGE (2017–2040)
Population	8,690	12,329	3,549
Housing Units	5,173	7,286	2,113
Population per Housing Units			1.68

Jobs

The *Downtown Whitefish Highway Study* used the 2019 Woods & Poole (W&P) projected growth rate of 1.54 percent. Applying this growth rate to the model's calibrated 2017 baseline employment numbers resulted in a total of 2,755 new jobs within the Whitefish forecasting area. Outside of the forecasting area, 16,829 new jobs are projected. The percent distribution of retail, service, and basic job classifications was held constant from the 2017 calibrated model for the 2040 projection. Table 4.2 presents employment projections for the year 2040.

Table 4.2: 2040 Employment Projection

	2017 (CALIBRATED MODEL)	2040 (PROJECTION)	NET CHANGE (2017–2040)
Retail	1,391	1,978	587
Service	3,960	5,632	1,672
Basic	1,176	1,672	496
Total	**6,527**	**9,282**	**2,755**

PROJECTED CONDITIONS – AREAWIDE

Areawide analysis of projected conditions was based on outputs from both the 2017 and 2040 E+C models. Modeled volumes for 2040 are the result of adjusting 2017 AADTs based on modeled growth rates between the 2017 and 2040 E+C models. This approach allows for modeled growth rates to apply specifically to recent field counts in the Whitefish Study Area. For both 2017 and 2040 datasets, road segments were clipped to the study area. A total of approximately 166 miles were analyzed for the 2040 model.

Vehicle miles traveled (VMT) and vehicle hours traveled (VHT) were calculated for both the 2017 and 2040 models. Both factors increased at similar rates, with VMT increasing by 36.8% from 223,143 to 305,242. This growth in VMT suggest the amount of vehicle miles traveled in the study area will modestly increase over the life of the plan. VHT increased by 36.7% from 5,805 to 7,937. In addition to growth in VHT and VMT, miles of congested roadways increase by 87% over the life of the current plan. Comparison between 2017 and 2040 VHT and VMT can be seen in Table 4.3.

Table 4.3: VMT and VHT 2017–2040

	2017	2040	% CHANGE
VMT	223,143	305,242	36.8%
VHT	5,805	7,937	36.7%

Of the 166 miles analyzed, 158 were considered to have a LOS of A-C and 8 miles have an LOS of D, E, or F. For purposes of this evaluation, LOS D–F will be considered congesting/congested. Analysis of both existing and projected systems were based upon system designations of NHS, Secondary, and Urban, thus reflecting all functionally classified roadways in the Study Area. The 2040 E+C performance by system can be seen in Table 4.4.

Between 2017 and 2040, the mileage of roads with LOS D–F is projected to increase from 4.7 miles to 8.8 miles. Below a summary of projected traffic trends by road type.

- **NHS:** 34% of the NHS was congested in 2017 and 51% is expected to be congested in 2040. Across the entire system, 87% of congestion occurred on the NHS in 2017. This is expected to decrease to 69% by 2040.
- **Secondary:** In 2017 there was no congestion on the secondary system, and no congestion is expected by 2040.
- **Urban:** 14% of urban roads were congested in 2017 and 79% are expected to be congested in 2040. Across the entire system, 9% of congestion occurred on urban roads in 2017. This is expected to increase to 27% by 2040.

Existing and future LOS mileage are shown in Table 4.4, Figure 4.1 on page 65, and Figure 4.2 on page 66. Simple volume changes from 2017 to 2040 are shown in Figure 4.3 on page 67.

Table 4.4: 2017 and 2040 LOS Mileage

MODEL YEAR			2017	% TOTAL	2040 E+C	% TOTAL
TOTAL SYSTEM		Miles LOS A–C	162.0	97	158.0	95
		Miles LOS D–F	4.5	3	8.3	5
LOS BY SYSTEM	NHS	Miles LOS A–C	7.9	66	5.8	49
		Miles LOS D–F	4.1	34	6.1	51
		Total	**11.9**	**100**	**11.9**	**100**
	Secondary	Miles LOS A–C	5.9	100	5.9	100
		Miles LOS D–F	0	0	0	0
		Total	**5.9**	**100**	**5.9**	**100**
	Urban	Miles LOS A–C	2.4	86	0.6	21
		Miles LOS D–F	0.4	14	2.2	79
		Total	**2.8**	**100**	**2.8**	**100**

FIGURE 4.1: 2040 LEVEL OF SERVICE

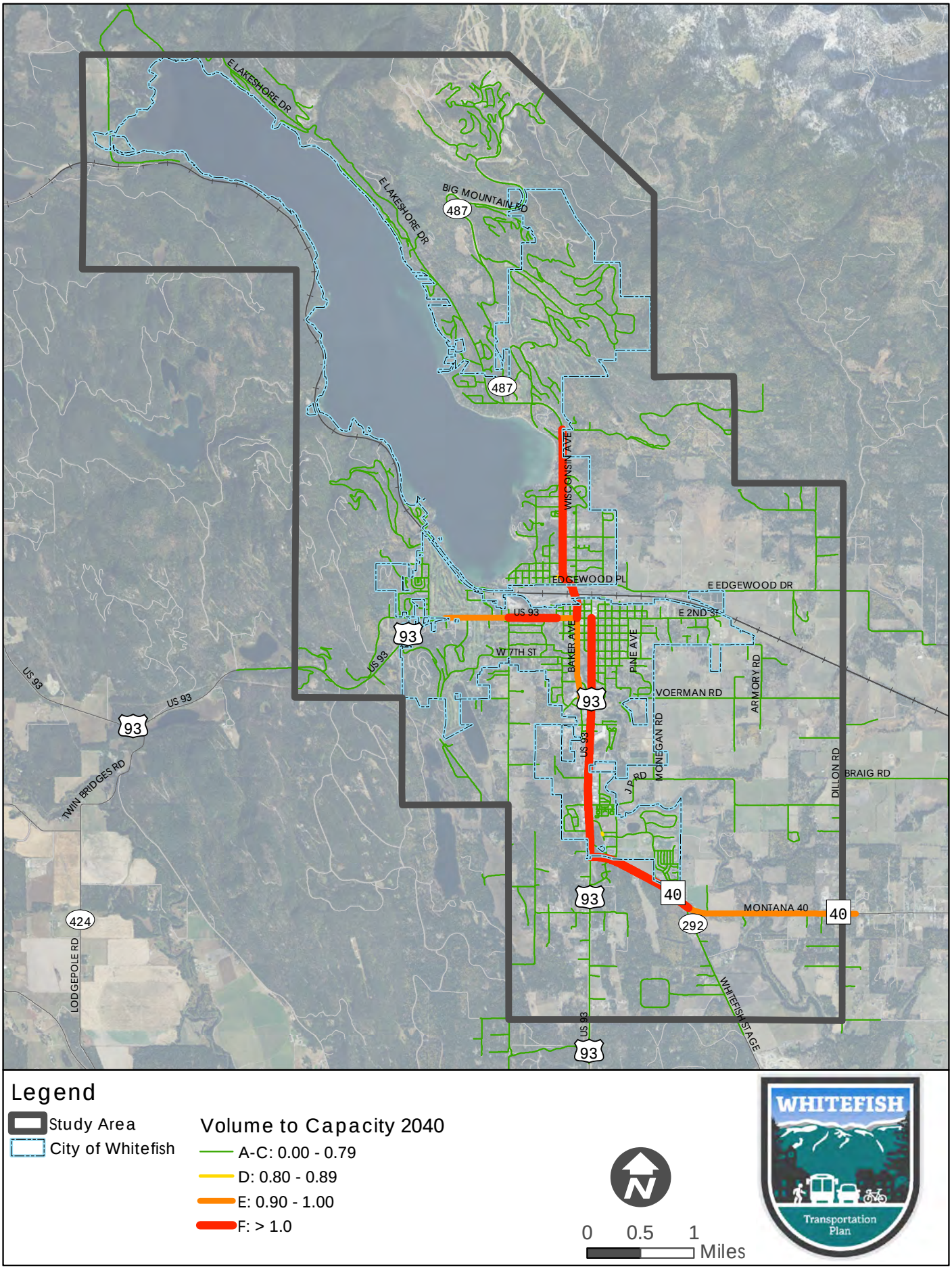


FIGURE 4.2: 2040 LEVEL OF SERVICE (INSET)

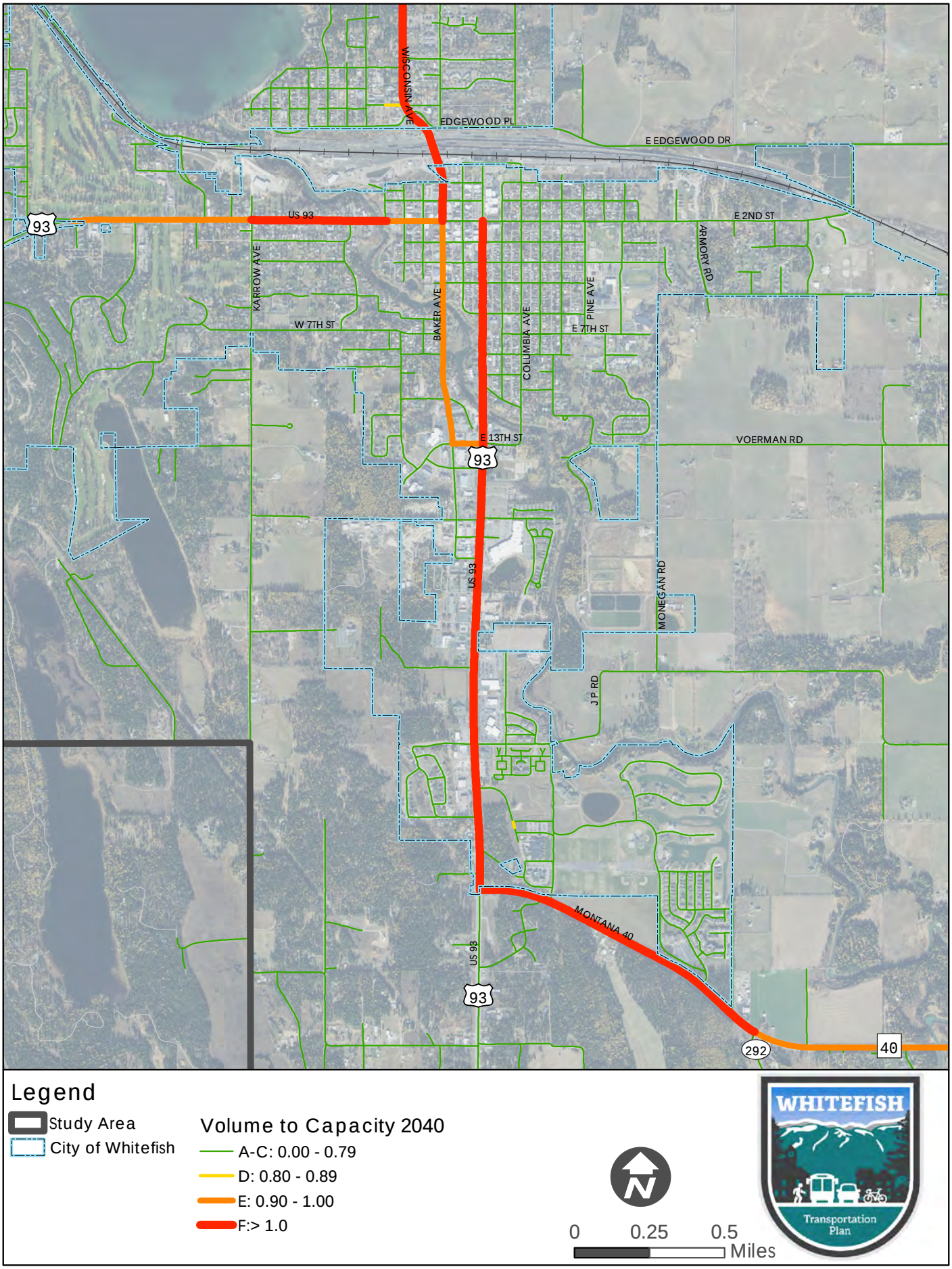
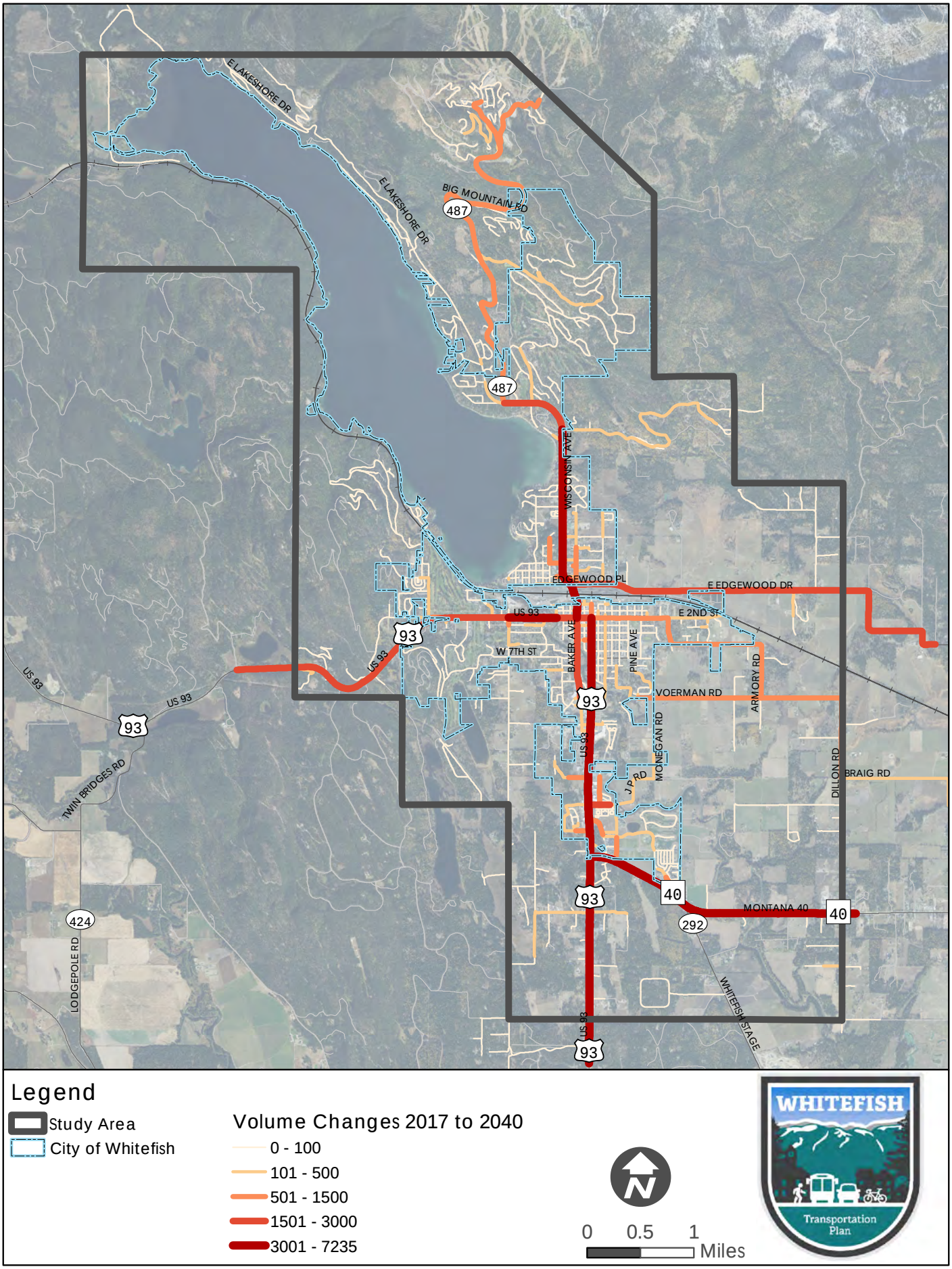


FIGURE 4.3: VOLUME CHANGES 2017–2040



PROJECTED INTERSECTION OPERATIONS

Existing traffic operations were evaluated at 15 study intersections using methodologies from the *Highway Capacity Manual.* The intersections were selected based upon the availability of recent turning movement data. Peak hour turning movement counts were sourced from counts provided by MDT and the City of Whitefish.

Traffic operations are described in terms of level of service (LOS), with levels of service ranging from LOS A to LOS F, as described above. The LOS calculations incorporate traffic volumes, intersection geometry, signal timing, and other parameters to estimate the delay per vehicle at the intersection. LOS A indicates near free-flow traffic conditions with little delay and LOS F indicates breakdown of traffic flow with very high amounts of delay. At oversaturated intersections and approaches, the delay may only reflect the vehicles that can be processed in the analysis period and not the total delay for that intersection, thus underreporting the actual delay experienced by drivers.

LOS C or better is considered acceptable. The LOS thresholds for intersection delay are shown in Table 4.5.

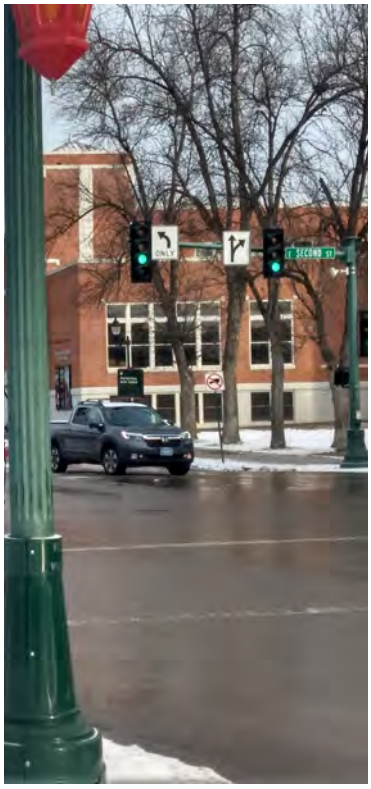
Existing Traffic Operations

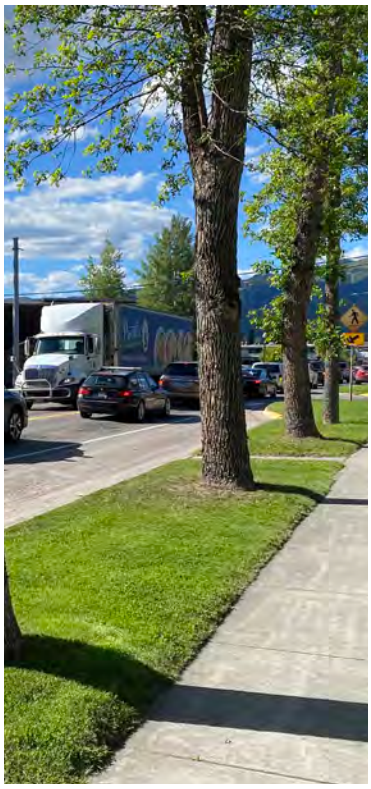
Intersection LOS analysis was performed for 15 intersections within the study area based on existing conditions. To estimate 2020 traffic volumes, a constant annual growth rate was calculated using observed traffic counts from 2017 and MDT projections for the year 2040. Most study intersections operate effectively at LOS C or better during both peak hours, as shown in Table 4.6 and Figure 4.4 on page 71. However, there are multiple locations with deficient operations under 2020 conditions:

- US 93 and Pheasant Run operates deficiently during the PM peak hours at LOS F.
- US 93 and Akers Lane operates deficiently during the AM and PM peak hours. During the AM peak, the intersection operates at LOS D, and during the PM peak, the intersection operates at LOS F.
- E 2nd Street and Baker Avenue operates deficiently during the PM peak hours at LOS D.
- Other locations experience acceptable overall intersection levels of service but deficient approach levels of service during one or both peak hours. These include:
  - The westbound approach of US 93 and MT Hwy 40 intersection operates at LOS D during the PM peak.

Table 4.5: Level of Service Thresholds by Intersection Delay

LEVEL OF SERVICE	AVERAGE DELAY (SECONDS PER VEHICLE)		DESCRIPTION
	UNSIGNALIZED INTERSECTIONS	SIGNALIZED INTERSECTIONS	
A	≤ 10	≤ 10	Near free-flow traffic.
B	> 10 and ≤ 15	> 10 and ≤ 20	Minor delays.
C	> 15 and ≤ 25	> 20 and ≤ 35	Some delays, but not resulting in significant traffic congestion.
D	> 25 and ≤ 35	> 35 and ≤ 55	Delays with some traffic congestion.
E	> 35 and ≤ 50	> 55 and ≤ 80	Significant delays with significant traffic congestion, approaching capacity.
F	> 50	> 80	Breakdown of traffic flow, major traffic congestion.





- The eastbound approach of US 93 and Park Knoll intersection operates at LOS D during the PM peak.
- At the intersection of US 93 and 19th Street intersection, the westbound approach operates at LOS F during the AM and PM peak. The eastbound approach operates at LOS E during the PM peak.

Future Traffic Operations

Projections for intersection traffic volumes were made for the 15 intersections. The 2040 projections were based on the average annual growth ratio of 2040 and 2017 travel demand modeled volumes for all links at the study intersection. The growth rate that was determined for a given intersection as a whole was applied to each individual turning movement to represent the projected conditions. The intersection LOS was calculated using the existing street layout, lane-use configuration, and traffic control devices. The results of this analysis are presented in Table 4.7 on page 72 and Figure 4.5 on page 73 for the intersections, respectively.

Most study intersections and their approaches operate effectively at LOS C or better during the peak hours, except for few. These include:

- US 93 and MT Hwy 40 operates at LOS D during the PM peak.
- US 93 and Park Knoll operates at LOS D during the PM peak
- US 93 and Pheasant Run continue to deteriorate and operate at LOS F during the PM peak hour.
- US 93 and Akers Lane continue to deteriorate and operate at LOS F during the AM and PM peak hours.
- Other locations experience acceptable overall intersection levels of service but deficient approach levels of service during one or both peak hours. These include:
  - The eastbound approach of US 93 and Pheasant Run intersection operates at LOS D during the AM peak.
  - The westbound approach of US 93 and Commerce St intersection operates at LOS D during the PM peak.
  - The westbound approach of US 93 and Greenwood Rd intersection operates at LOS D during the PM peak.

The existing intersection issues along Hwy 93 South indicate the need for a parallel access road (extension of Baker Avenue). The issues also point to the need for an access management plan for Hwy 93 South.

Table 4.6: 2020 AM and PM Peak Hour Intersection Level of Service

ID	INTERSECTION	TRAFFIC CONTROL	PEAK	LEVEL OF SERVICE				
				EB	WB	NB	SB	INT
1	US 93 & MT Hwy 40	Signal	AM	C	C	C	A	B
			PM	C	D	C	B	C
2	US 93 & JP Road	Signal	AM	C	B	A	A	A
			PM	C	C	A	A	A
3	US 93 & Park Knoll	TWSC*	AM	C	-	A	A	C
			PM	D	-	A	A	C
4	US 93 & Pheasant Run	TWSC	AM	C	B	A	A	C
			PM	**F**	A	A	A	**F**
5	US 93 & Akers Lane	TWSC	AM	**E**	A	A	A	D
			PM	**F**	A	A	A	**F**
6	US 93 & 19th St	TWSC	AM	C	**F**	A	A	B
			PM	**E**	**F**	A	A	C
7	US 93 & Commerce St	Signal	AM	B	C	B	A	B
			PM	C	C	B	A	B
8	US 93 & Greenwood	TWSC	AM	-	C	A	A	B
			PM	-	C	A	A	C
9	US 93 & 15th St	TWSC	AM	B	-	A	A	A
			PM	B	-	A	A	B
10	US 93 & 13th St	Signal	This intersection was evaluated as part of the Downtown Whitefish Highway Study.					
11	Spokane Ave & E 2nd St	Signal	This intersection was evaluated as part of the Downtown Whitefish Highway Study.					
12	E 2nd St & Central Ave	Signal	This intersection was evaluated as part of the Downtown Whitefish Highway Study.					
13	E 2nd St & Baker Ave	Signal	This intersection was evaluated as part of the Downtown Whitefish Highway Study.					
14	Wisconsin Ave & Edgewood Pl	Signal	AM	A	C	B	A	B
			PM	B	C	B	B	B
15	13th St & Baker Ave	AWSC**	This intersection was evaluated as part of the Downtown Whitefish Highway Study.					
16	Wisconsin Ave & Skyles Pl	TWSC	AM	B	B	A	A	B
			PM	C	C	A	A	C

**TWSC refers to a Two-Way Stop-Controlled intersection*

***AWSC refers to an All-Way Stop-Controlled intersection*

FIGURE 4.4: 2020 INTERSECTION LEVEL OF SERVICE

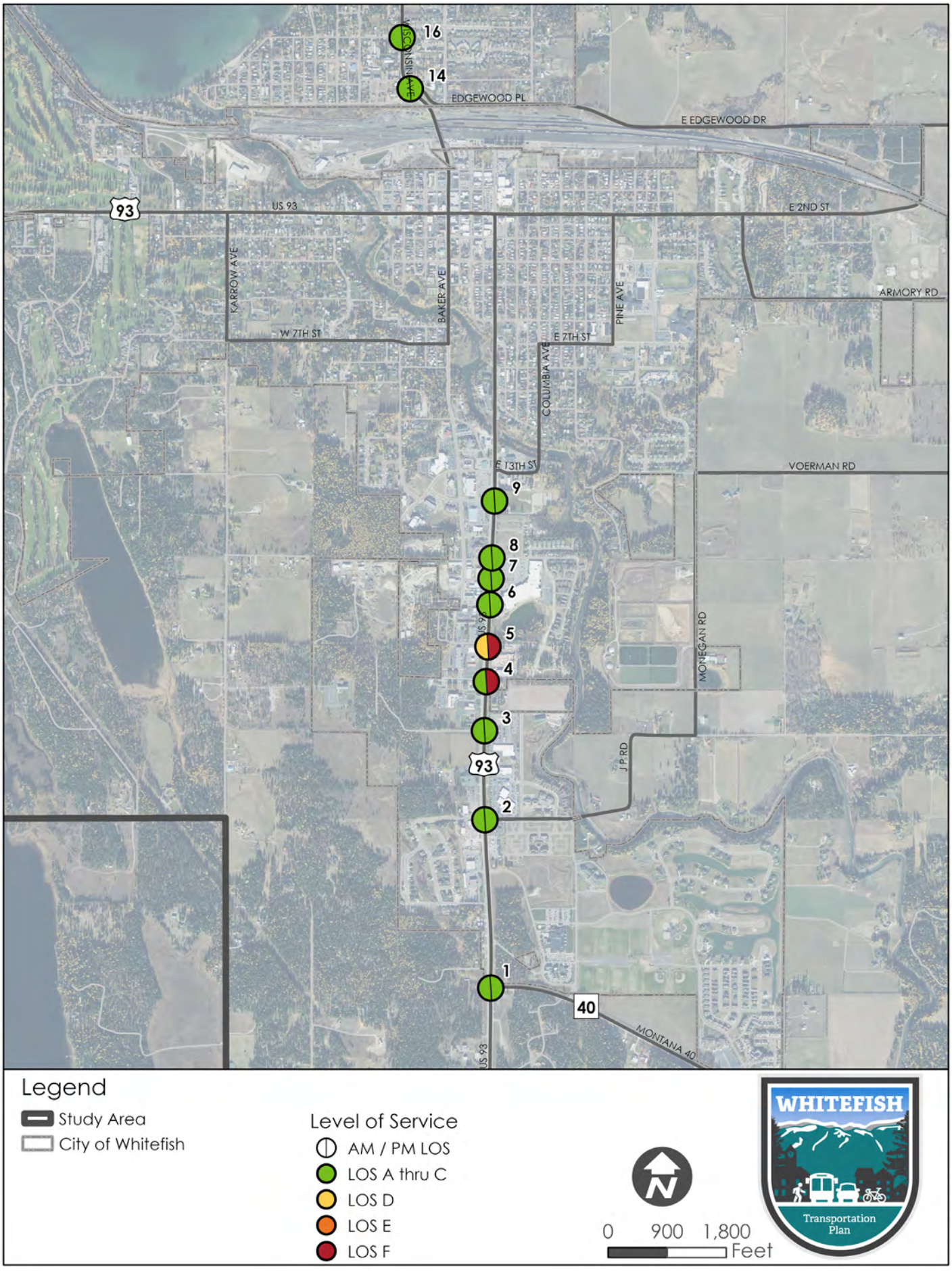
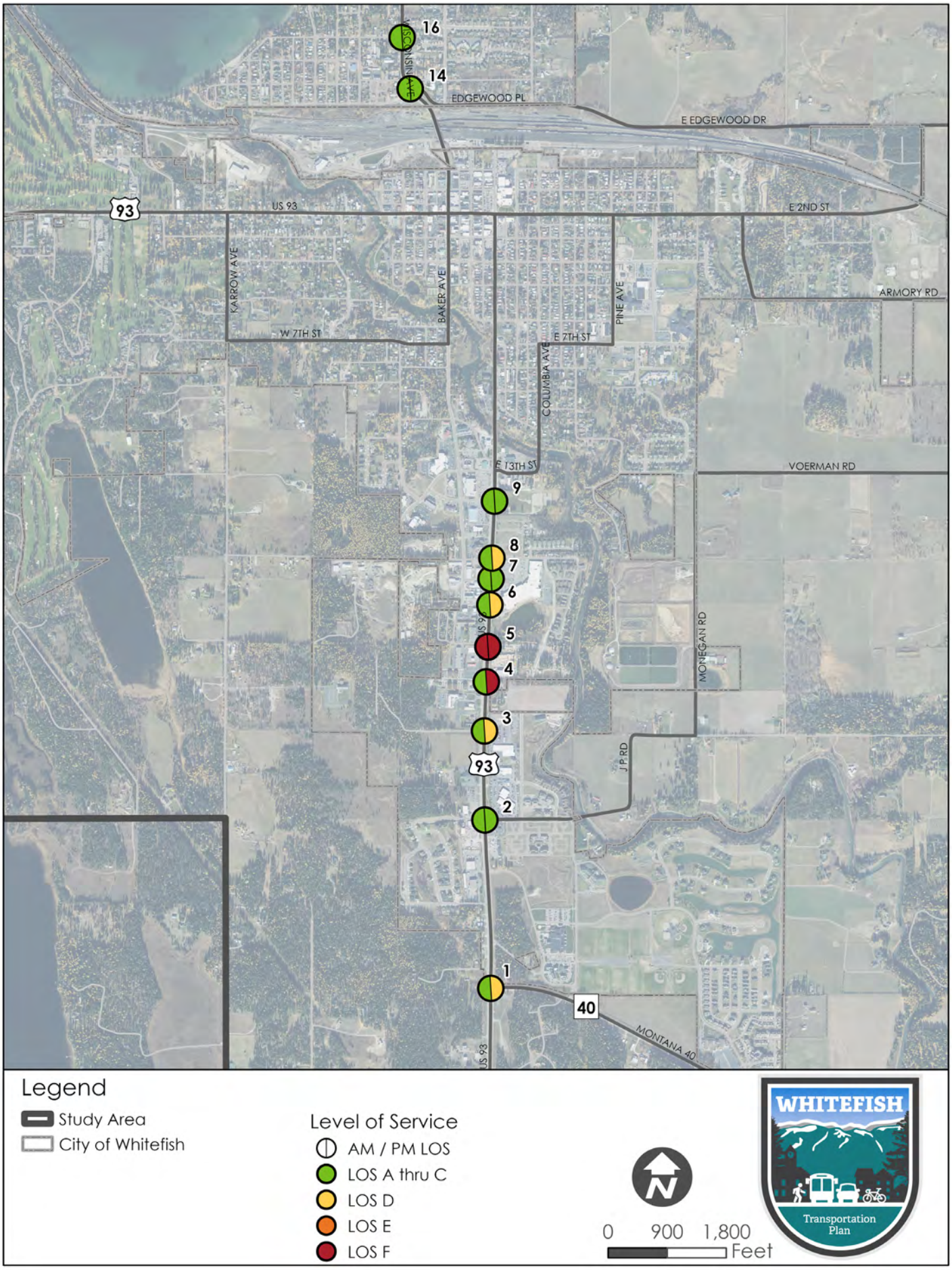


Table 4.7: 2040 AM and PM Peak Hour Intersection Level of Service

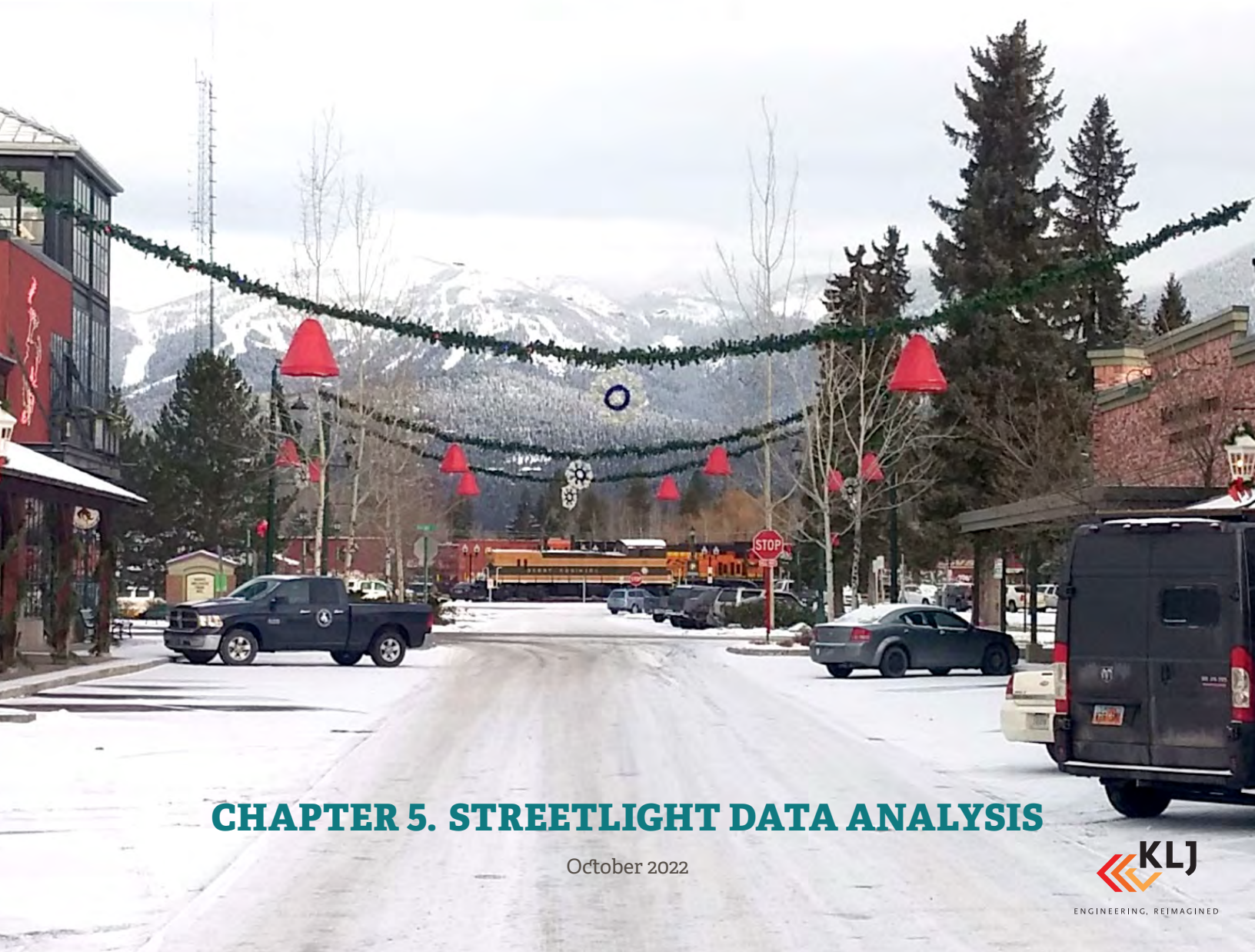
ID	INTERSECTION	TRAFFIC CONTROL	PEAK	LEVEL OF SERVICE				
				EB	WB	NB	SB	INT
1	US 93 & MT Hwy 40	Signal	AM	C	C	C	B	C
			PM	C	D	D	D	D
2	US 93 & JP Road	Signal	AM	C	B	B	A	B
			PM	C	C	C	B	C
3	US 93 & Park Knoll	TWSC	AM	C	-	A	A	B
			PM	E	-	A	A	D
4	US 93 & Pheasant Run	TWSC	AM	D	B	A	A	C
			PM	F	-	A	A	F
5	US 93 & Akers Lan	TWSC	AM	F	F	A	A	F
			PM	F	F	A	A	F
6	US 93 & 19th St	TWSC	AM	C	F	A	A	B
			PM	F	F	A	A	D
7	US 93 & Commerce St	Signal	AM	B	C	C	A	B
			PM	C	D	B	A	B
8	US 93 & Greenwood	TWSC	AM	-	D	A	A	C
			PM	-	F	A	A	D
9	US 93 & 15th St	TWSC	AM	B	-	A	A	B
			PM	C	-	A	A	B
10	US 93 & 13th St	Signal	This intersection was evaluated as part of the Downtown Whitefish Highway Study.					
11	Spokane Ave & E 2nd St	Signal	This intersection was evaluated as part of the Downtown Whitefish Highway Study.					
12	E 2nd St & Central Ave	Signal	This intersection was evaluated as part of the Downtown Whitefish Highway Study.					
13	E 2nd St & Baker Ave	Signal	This intersection was evaluated as part of the Downtown Whitefish Highway Study.					
14	Wisconsin Ave & Edgewood Pl	Signal	AM	A	C	B	B	B
			PM	B	C	B	B	B
15	13th St & Baker Ave	AWSC	This intersection was evaluated as part of the Downtown Whitefish Highway Study.					
16	Wisconsin Ave & Skyles Pl	TWSC	AM	B	B	A	A	B
			PM	C	C	A	A	C

FIGURE 4.5: 2040 INTERSECTION LEVEL OF SERVICE



WHITEFISH

Transportation Plan



CHAPTER 5. STREETLIGHT DATA ANALYSIS

October 2022

KLJ

ENGINEERING, REIMAGINED

INTRODUCTION

StreetLight is an on-demand traffic data collection service that was used to better understand 2019 travel patterns in the Flathead Valley. StreetLight uses anonymized location records from smartphones and navigation devices to infer individual trips that took place within a given geographic boundary and during a given time period. To ensure the data is accurate, Streetlight validates their data against census population estimates and traffic counts from permanent loop counters across the county. For this analysis, the Transportation Analysis Zones (TAZs) shown in Figure 5.2 were used to collect StreetLight data for the entire 2019 calendar year. These TAZs are loosely based on TAZs from the MDT's travel demand model for Flathead County.

Data

StreetLight quantifies travel using several different metrics that are referred to throughout this report. Below is an explanation of each metric used.

- **Trip** – A movement made by a person or vehicle that begins at an origin TAZ and ends at a desination TAZ. In general, a trip is determined to have started or ended after a five minute period without movement.
- **Trip Ends** – The number of trips ending in a given TAZ during a given time period.
- **Trip Starts** – The number of trips beginning in a given TAZ during a given time period.
- **Trip Duration** – the average trip time in seconds among all trips that either start or end in a TAZ during a given time period.
- **Trip Speed** – The average speed of a trip in miles per hour among all trips that either start or end in a TAZ during a given time period.
- **Internal/Local Trip** – A trip that starts and ends within the same TAZ or group of TAZs.
- **External Trip** – A trip that ends within a TAZ or group of TAZs of interest, but originates from outside of that TAZ or group of TAZs.

REGIONAL TRAVEL PATTERNS

Among the trips that started within the Flathead Valley, 85 percent ended within the same city that they began (see Figure 5.3 on page 79). In Table 5.1, these are the trips that have the same origin and destination. There were about four times as many local trips in Kalispell as in Whitefish in 2019, and about twice as many trips in Whitefish as in Columbia Falls. In addition to these differences in magnitude, the three cities showed significantly different travel behavior. In 2019, 91 percent of trips originating in Kalispell ended in Kalispell, 74 percent of trip originating in Whitefish ended in Whitefish, and 67 percent of trips originating in Columbia Falls ended in Columbia Falls. In other words, the vast majority of trips within the Flathead Valley were local. This finding emphasizes the importance of connectivity within each of the three cities.

Table 5.1: Regional Trip Volumes (AADT)

		DESTINATION		
		KALISPELL	WHITEFISH	COLUMBIA FALLS
ORIGIN	KALISPELL	131,421	7,567	4,659
	WHITEFISH	7,589	30,449	3,272
	COLUMBIA FALLS	4,479	3,202	15,419

Seasonal Variation

In 2019, there were 30,449 average daily trips that started and ended within the Whitefish Study Area (see Figure 5.2). Figure 5.1 shows how the average daily trips varied throughout the year. On an average day in July, total traffic in the Whitefish TAZ area was 15 percent higher than the yearly average, while in December the average daily traffic was 16 percent lower than the yearly average.

FIGURE 5.1: AVERAGE DAILY TRIPS BY MONTH (WHITEFISH STUDY AREA)

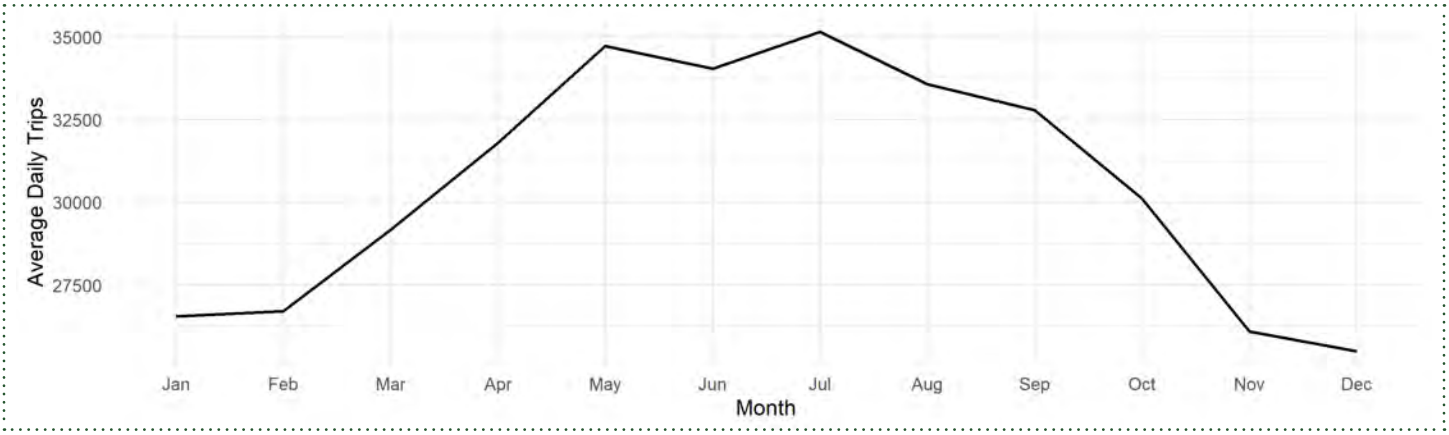


FIGURE 5.2: FLATHEAD VALLEY TRANSPORTATION ANALYSIS ZONES

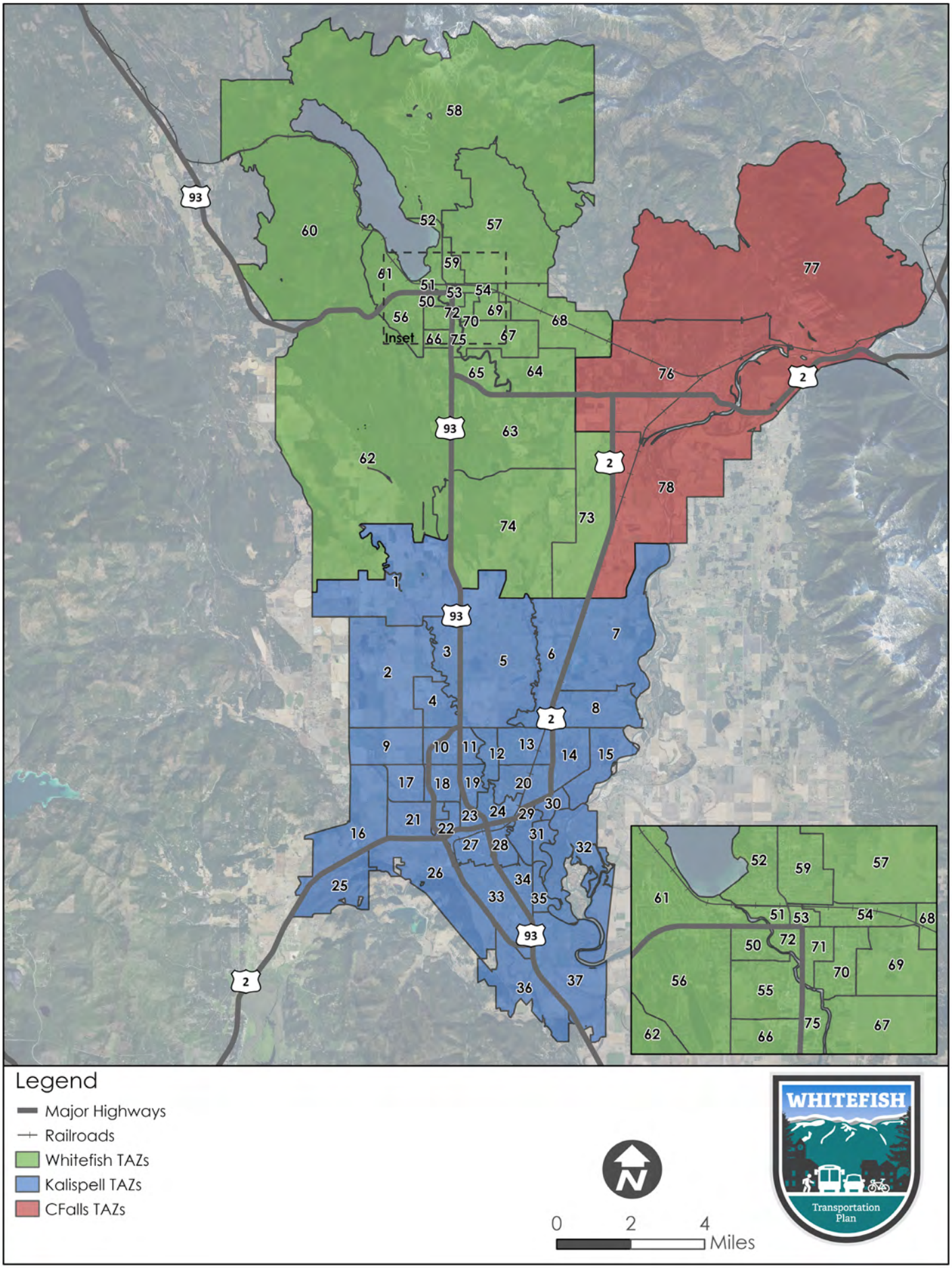
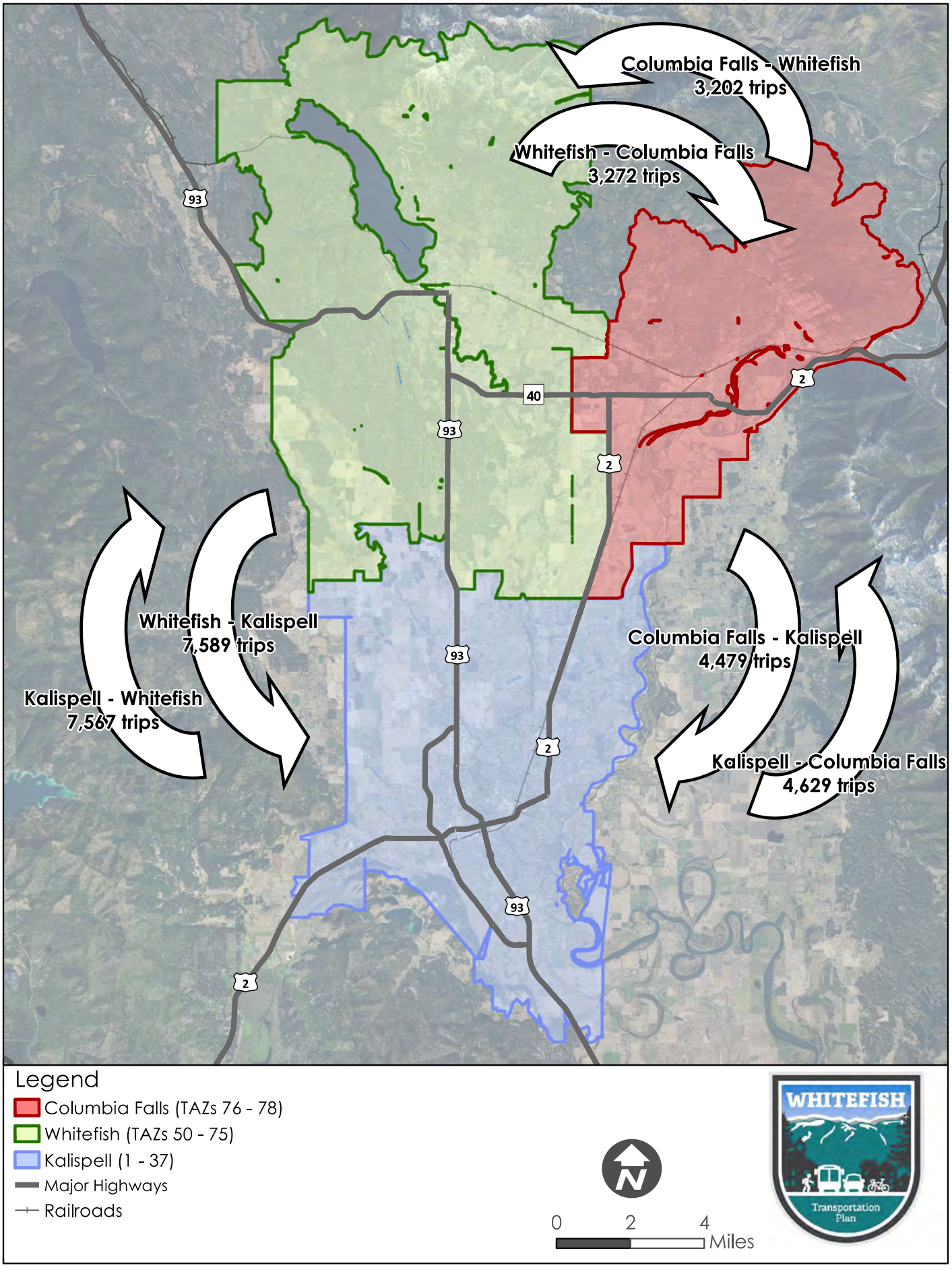


FIGURE 5.3: REGIONAL TRAVEL PATTERNS



WHITEFISH INTERNAL MOVEMENT

Pedestrian Trips

While StreetLight data does not measure the percent of traffic by mode, it is possible to estimate pedestrian volumes by speed of travel. For every TAZ, StreetLight reports the percent of traffic traveling between zero and five miles per hour. There are clear limitations to assigning slow travel speeds to pedestrian traffic. For example, vehicles in heavy congestion may move slower than five miles per hour. Table 5.2 shows the origin-destination pairs with the highest counts of slow-moving traffic. While StreetLight does count trips that begin and end within a single TAZ (internal trips), those trips were excluded from this analysis.

Several key findings are shown in Table 5.2. First, TAZ 53 is in all of the top five TAZ pairs for pedestrian traffic, and seven of the top ten. Among these ten TAZ pairs, pedestrian traffic accounts for 52 percent of total traffic on average. The TAZ pair with the lowest percentage of pedestrian trips is 53-75 with only 34 percent of total trips made on foot. Walking between these TAZs requires using US 93. This findng may support the need for improved north-south pedestrian facilities along the highway. A similar trend exists for TAZs north of the railroad tracks (TAZ 52 and TAZ 59). Trips from these TAZs to TAZ 53 are limited to using Baker Avenue, which may explain the below average percent of pedestrian trips. In contrast, TAZ 50 and TAZ 53 offer several pedestrian routes that are primariliy on residential streets and have the highest percentage of trips to TAZ 53 made on foot.

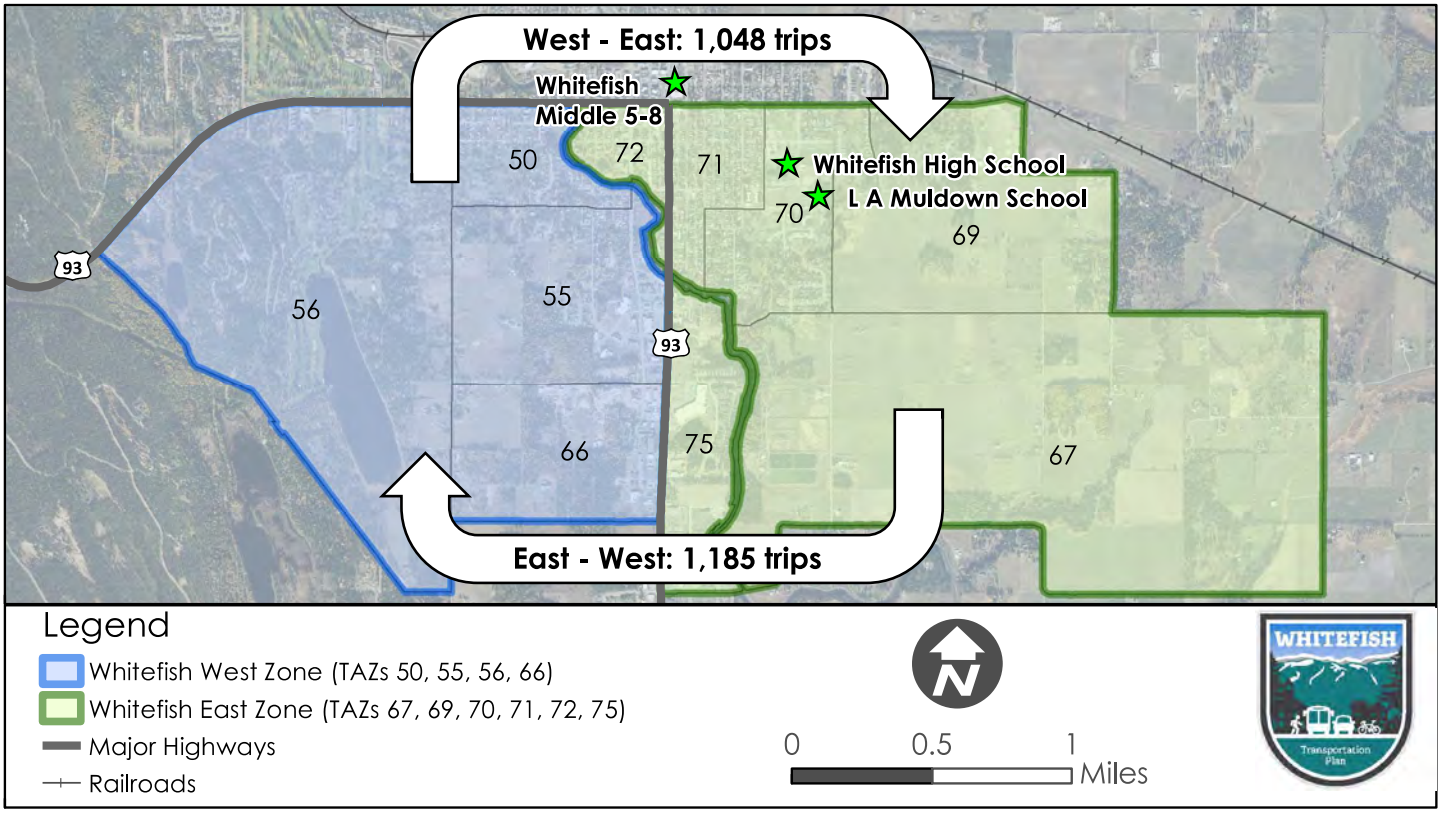
Table 5.2: Pedestrian Trip Patterns

TAZ PAIR	0–5 MPH AVERAGE DAILY TRIPS BETWEEN TAZ PAIR (% OF TOTAL TRIPS)
52-53	213 (42%)
70-53	211 (54%)
59-53	205 (46%)
71-53	184 (70%)
53-55	184 (50%)
72-55	172 (53%)
55-75	152 (58%)
70-55	125 (45%)
53-75	123 (34%)
53-50	114 (66%)

East-West Traffic

The street network in Whitefish is generally oriented towards north-south traffic. Understanding east-west travel patterns, shown in Figure 5.4, will be critical to improving system connectivity. On an average day in 2019, more than 1,000 trips were made between the east and west sides of downtown Whitefish.

FIGURE 5.4: EAST-WEST TRIPS



Business Core

Five TAZs that contain the majority of commercial activity were analyzed to better understand travel patterns related to businesses in Whitefish. Additionally, three pass through-zones were selected to understand traffic flow through downtown: US 93 South, US 93 West, and Wisconsin Avenue. The locations of these pass-through zones are shown on the map in Figure 5.8. Figure 5.5 shows a matrix of trip volumes between the five TAZs and pass-through zones.

Within the business core, the top origin-destination pair was TAZ 53 and TAZ 55 with about 200 daily trips in each direction. TAZ 55 and TAZ 72 were the next most common origin-destination pair with 200 daily trips from TAZ 72 to TAZ 55, and 135 daily trips from TAZ 55 to TAZ 72.The only other origin-destination pair with greater than 200 average daily trips was TAZ 71 and TAZ 53 (265 total daily trips between the two TAZs).

FIGURE 5.5: BUSINESS CORE ORIGIN-DESTINATION TRAFFIC PATTERNS

Average Daily Trips (2019)		Destination Zone							
		51	53	55	71	72	US 93 S	US 93 W	Wisc. Ave
Origin Zone	51	1	6	72	33	10	286	221	158
	53	7	0	207	122	38	960	461	589
	55	61	166	51	87	135	976	323	362
	71	35	143	101	33	73	485	155	143
	72	13	55	200	70	27	876	341	389
	US 93 S	284	1,180	961	427	647	-	1,032	1,452
	US 93 W	184	512	297	130	327	979	-	500
	Wisc. Ave	177	669	331	123	390	1,403	522	-

Pass-Through Zones

In 2019, 12,527 average daily trips entered Whitefish through one of the three pass-through zones, and ended in downtown Whitefish or exited through a pass-through zone. Figure 5.6 shows the percentage of these trips by origin and destination. 28 percent of these trips entered through US 93 South and ended in downtown, while only 12 percent entered through US 93 West and ended in downtown. In total, 53 percent of trips that entered through a pass-through zone ended in downtown. The remaining 47 percent can be characterized as trips that entered and exited downtown Whitefish without stopping.

FIGURE 5.6: PERCENTAGE OF O/D SPLITS ENTERING/EXITING DOWNTOWN WHITEFISH

Average Daily Trips (2019)		Destination			
		US 93 S	US 93 W	Wisc. Ave	Downtown
Origin	US 93 S	-	8%	12%	28%
	US 93 W	8%	-	4%	12%
	Wisc. Ave	11%	4%	-	13%

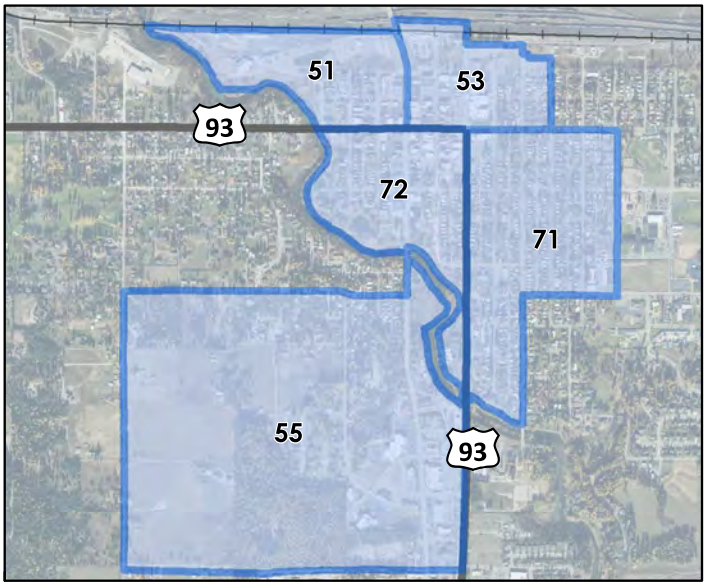
To better understand the composition of traffic at each pass-through zone, Figure 5.7 shows the percentage of trips by destination. US 93 South had about twice as many daily trips as US 93 West (5,983 compared to 2,929). Additionally, 58 percent of trips passing through US 93 South ended in downtown while 50 percent passing through US 93 West ended in downtown. Trips passing through Wisconsin Avenue were slightly more likely to continue to US 93 South or West without stopping than to end in downtown.

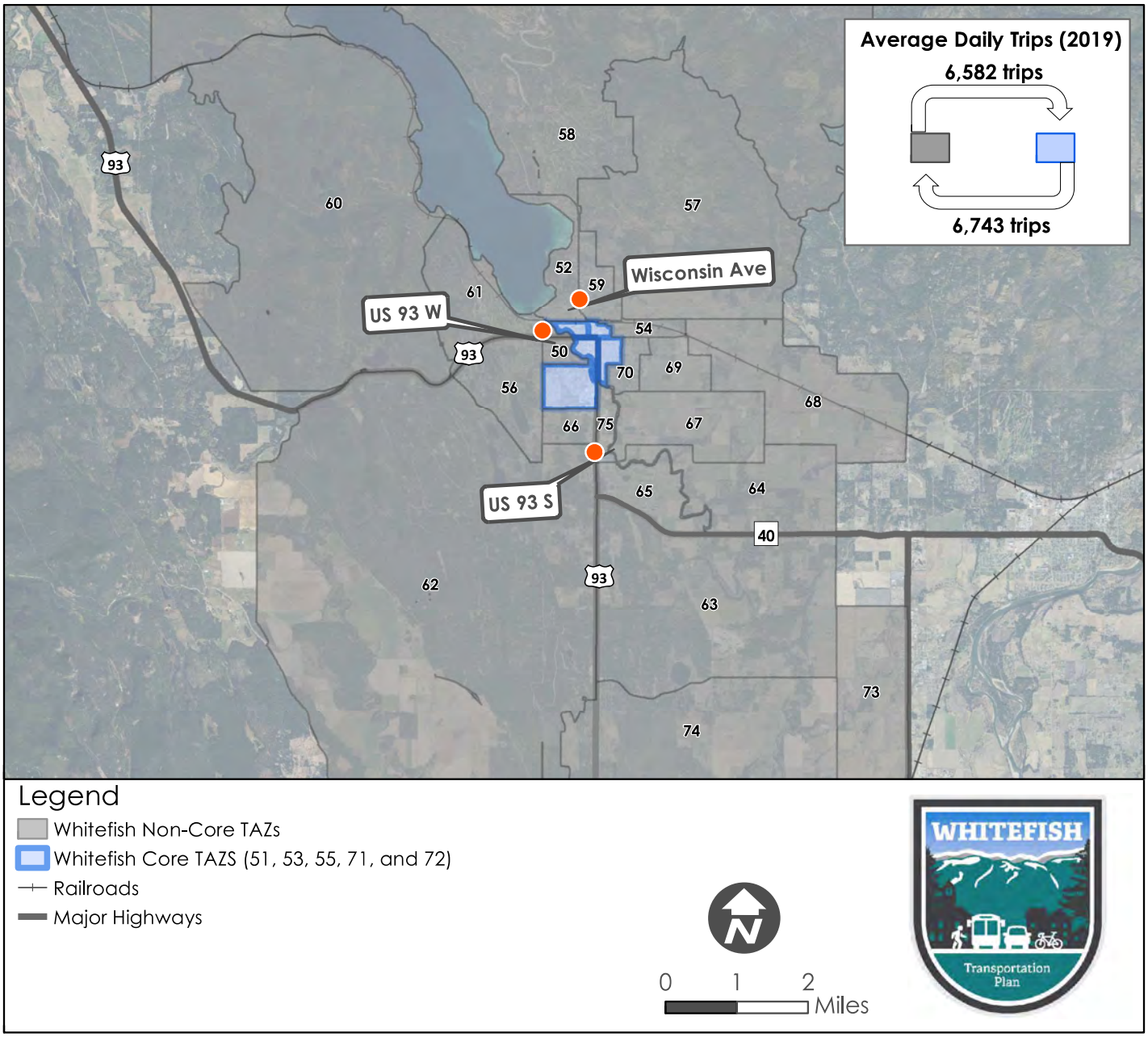
FIGURE 5.7: O/D SPLITS FOR EACH PASS-THROUGH ZONE

Average Daily Trips (2019)		Destination				
		US 93 S	US 93 W	Wisc. Ave	Downtown	Total Trips
Origin	US 93 S	-	17%	24%	58%	**5,983**
	US 93 W	33%	-	17%	50%	**2,929**
	Wisc. Ave	39%	14%	-	47%	**3,615**

FIGURE 5.8:DOWNTOWN WHITEFISH TRAVEL PATTERNS

Average Daily Trips (2019)	Destination Zone: 51	53	55	71	72	US 93 S	US 93 W	Wisc. Ave
Origin Zone: 51	1	6	72	33	10	286	221	158
53	7	0	207	122	38	960	461	589
55	61	166	51	87	135	976	323	362
71	35	143	101	33	73	485	155	143
72	13	55	200	70	27	876	341	389
US 93 S	284	1,180	961	427	647	-	1,032	1,452
US 93 W	184	512	297	130	327	979	-	500
Wisc. Ave	177	669	331	123	390	1,403	522	-



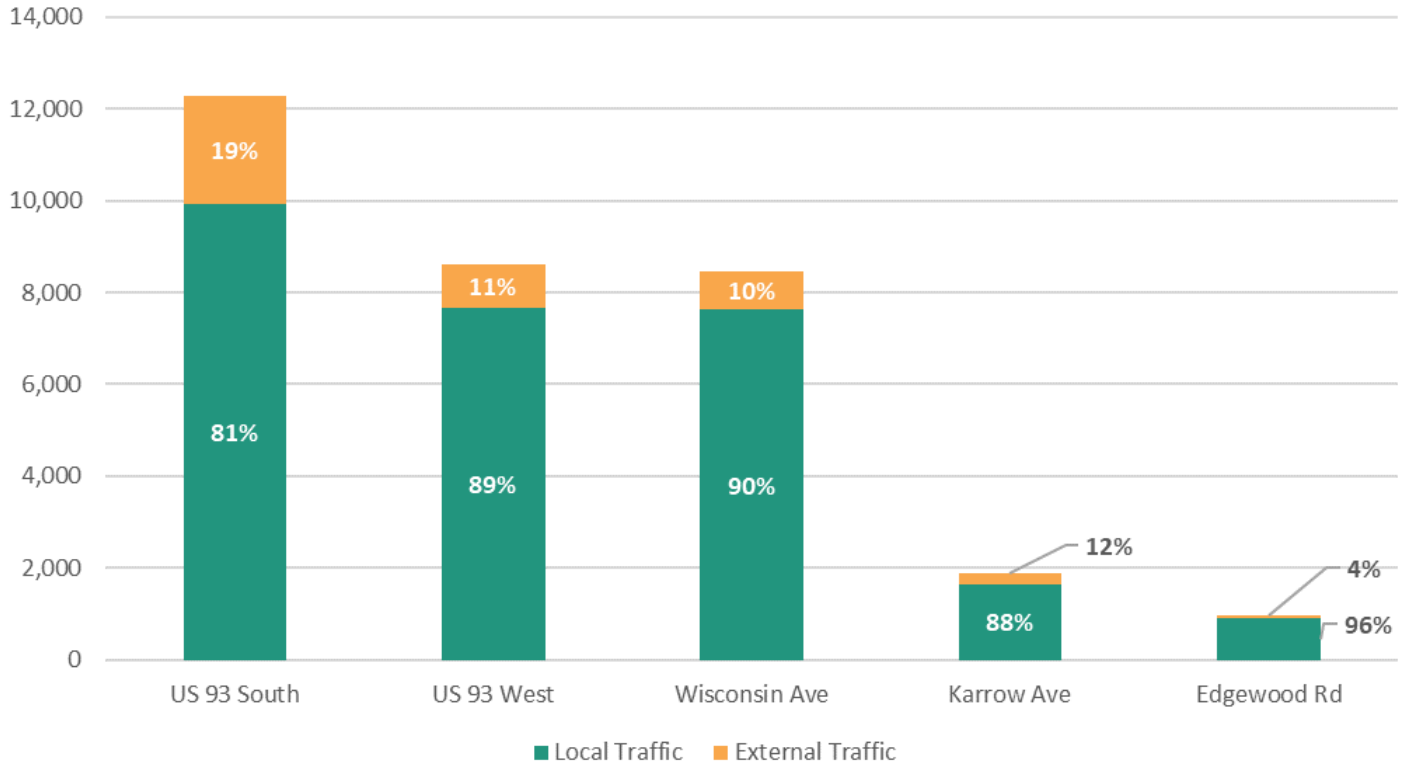


External Traffic Routes

In addition to analyzing pass-through zones within Whitefish, several key routes were analyzed to understand external traffic patterns. Figure 5.9 shows average daily traffic on five segments and the percent of that traffic originating from outside of the Flathead Valley study area. In Figure 5.9, this traffic is shown as external traffic. In contrast, 'Local Traffic' consists of any trips that began in a Flathead Valley TAZ.

The segment with the most total traffic and the most external traffic is US 93 near the 5th Street intersection in downtown Whitefish. In comparison, external traffic on US 93 W near the Karrow Avenue intersection is only 11 percent of total traffic. While Karrow Avenue gives external traffic an opportunity to bypass downtown Whitefish, the percent of external traffic observed on Karrow Avenue is very similar to the comparison segments. Finally, Edgewood Road has a very low percentage of external traffic, indicating that it is primarily used for local trips.

FIGURE 5.9: LOCAL VS. EXTERNAL TRAFFIC (AVERAGE DAILY TRAFFIC)



KEY DESTINATION PROFILES

Whitefish Mountain Resort, TAZ 58

In 2019, March was the busiest month for Whitefish Mountain Resort at Big Mountain, with an estimated 13,555 average daily trips. Figure 5.12 shows the seasonal changes in traffic volumes and Table 5.3 displays other key diagnostics for travel to and from TAZ 58. Because StreetLight uses mobile phone location data to count pedestrian trips, TAZ 58 had a very large number of pedestrian trips that both started and ended within the TAZ, representing the internal pedestrian traffic happening on the ski slopes. To isolate travel patterns up and down the mountain, internal trips were excluded from the dataset to create Figure 5.11. Finally, Figure 5.10 shows the five zones that generate the most traffic ending in TAZ 58.

Table 5.3: TAZ 58 Trip Diagnostics

Average Daily Trips (2019)	9,920
Peak Month	March (13,555 avg. daily trips)
Off-Peak Month	November (5,570 avg. daily trips)
Peak Arrival Hour	9–10 am (183 avg. trips)
Peak Departure Hour	4–5 pm (246 avg. trips)
Average Trip Length	7.7 miles

FIGURE 5.10: TOP ORIGINS OF TRIPS TO TAZ 58

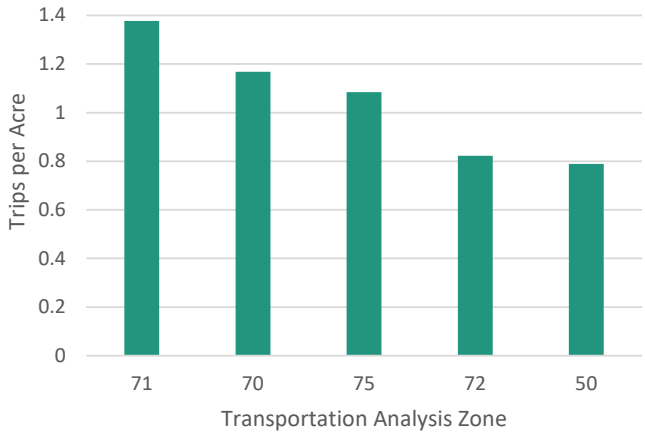


FIGURE 5.11: TYPICAL DAILY TRAFFIC, TAZ 58

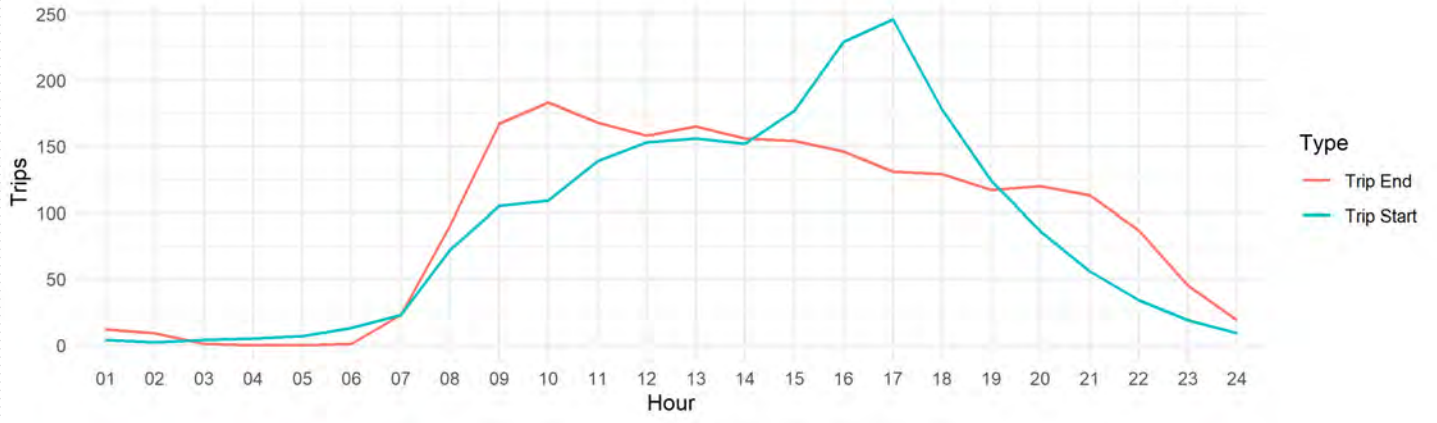
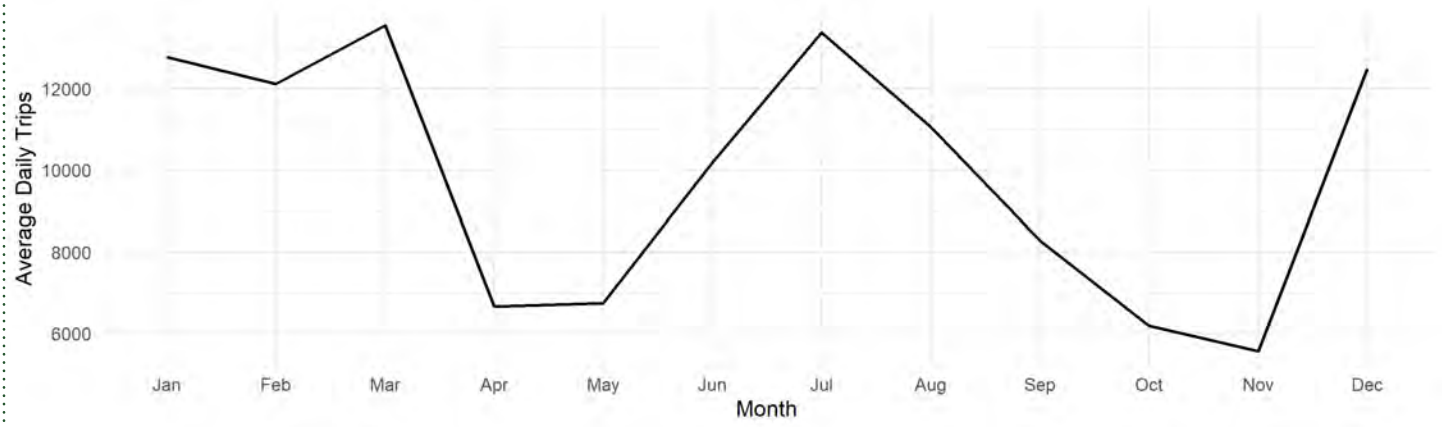


FIGURE 5.12: SEASONAL TRAFFIC CHANGES, TAZ 58



Schools, TAZ 70

TAZ 70 contains both Whitefish High School and Muldown Elementary School. These destinations are responsible for the dramatic swings in traffic to and from the TAZ throughout the year, as shown in Figure 5.15. Table 5.4 displays key travel diagnostics for the TAZ, and Figure 5.13 shows the five TAZs that generate the most traffic ending in TAZ 70. Figure 5.14 shows travel patterns to and from TAZ 70 throughout the day, excluding trips that both started and ended in TAZ 70 (internal trips).

Table 5.4: TAZ 70 Trip Diagnostics

Average Daily Trips (2019)	4,985
Peak Month	April (6,666 avg. daily trips)
Off-Peak Month	July (3,237 avg. daily trips)
Peak Arrival Hour	8–9 am (222 avg. trips)
Peak Departure Hour	3–4 pm (382 avg. trips)
Average Trip Length	6.1 miles

FIGURE 5.13: TOP ORIGINS OF TRIPS TO TAZ 70

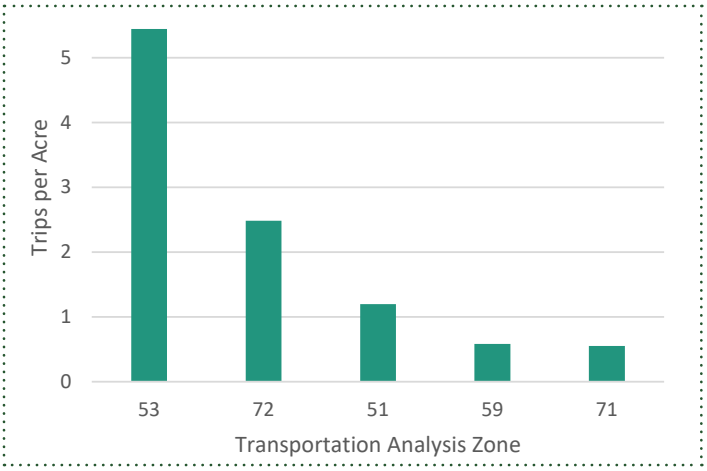
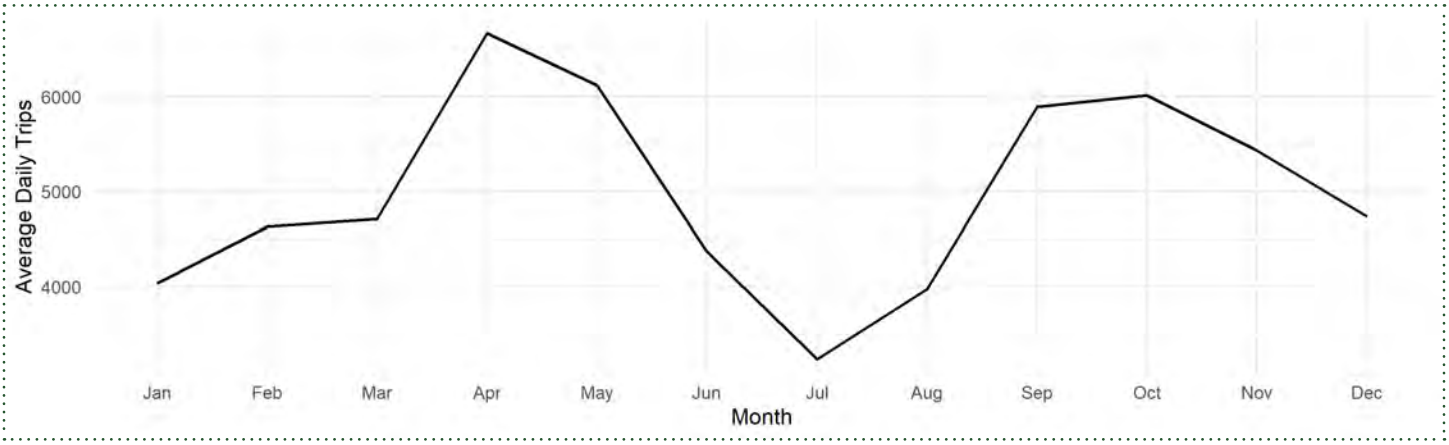


FIGURE 5.14: TYPICAL DAILY TRAFFIC, TAZ 70

FIGURE 5.15: SEASONAL TRAFFIC CHANGES, TAZ 70



City Beach, TAZ 53

TAZ 53 contains the city beach as well as many rental properties. Table 5.5 shows key travel diagnostics for travel to and from TAZ 53. As shown in Figure 5.18, TAZ 53 has a sustained traffic peak between June and October, peaking in July with 11,360 average daily trips. Figure 5.16 shows the five TAZs that generate the most traffic ending in TAZ 53. Figure 5.17 shows travel patterns to and from TAZ 53 throughout the day, excluding trips that both started and ended in TAZ 53 (internal trips).

Table 5.5: TAZ 53 Trip Diagnostics

Average Daily Trips (2019)	9,325
Peak Month	July (11,360 avg. daily trips)
Off-Peak Month	January (7,394 avg. daily trips)
Peak Arrival Hour	5–6 pm (352 avg. trips)
Peak Departure Hour	3–4 pm (334 avg. trips)
Average Trip Length	6.9 miles

FIGURE 5.16: TOP ORIGINS OF TRIPS TO TAZ 53

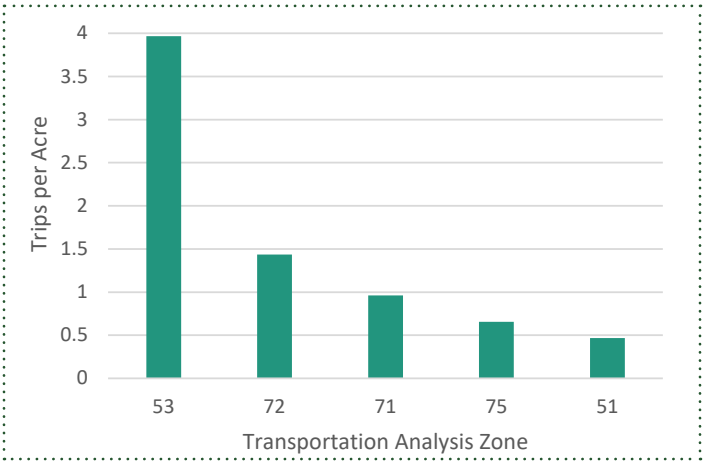
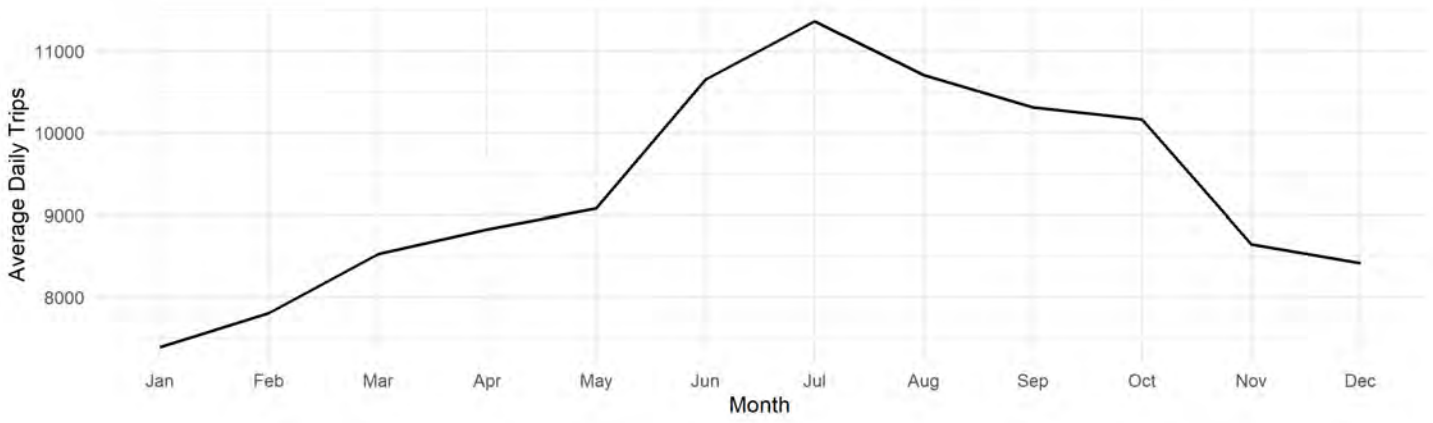


FIGURE 5.17: TYPICAL DAILY TRAFFIC, TAZ 53

FIGURE 5.18: SEASONAL TRAFFIC CHANGES, TAZ 53



Glacier Park International Airport, TAZ 73

Glacier Park International Airport (GPI) sits in TAZ 73, which had 9,909 average daily trips in 2019. Table 5.6 shows the seasonal peak for average daily trips was in July while February saw the lowest average daily trips during the year. To isolate travel patterns to and from the airport, trips that both started and ended in TAZ 73 (internal trips) were excluded from the dataset to create Figure 5.20. Figure 5.19 shows the five zones that generate the most traffic ending in TAZ 73 and Figure 5.21 shows the average traffic volumes throughout the year.

Table 5.6: TAZ 73 Trip Diagnostics

Average Daily Trips (2019)	9,909
Peak Month	July (12,580 avg. daily trips)
Off-Peak Month	February (8,258 avg. daily trips)
Peak Arrival Hour	10–11 am (190 avg. trips)
Peak Departure Hour	12–1 pm (272 avg. trips)
Average Trip Length	11.4 miles

FIGURE 5.19: TOP ORIGINS OF TRIPS TO TAZ 73

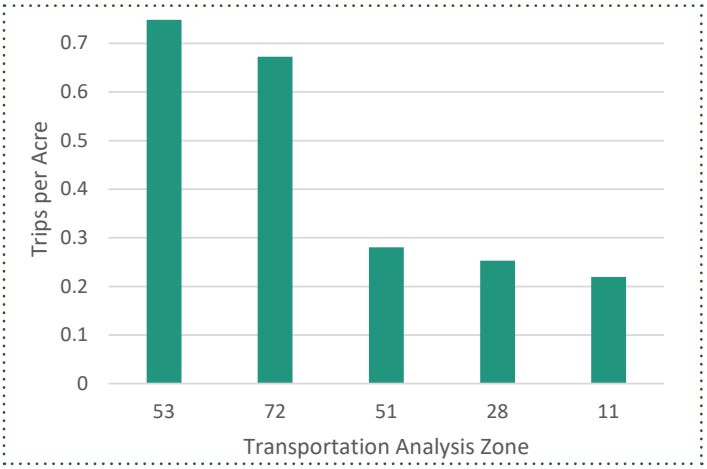
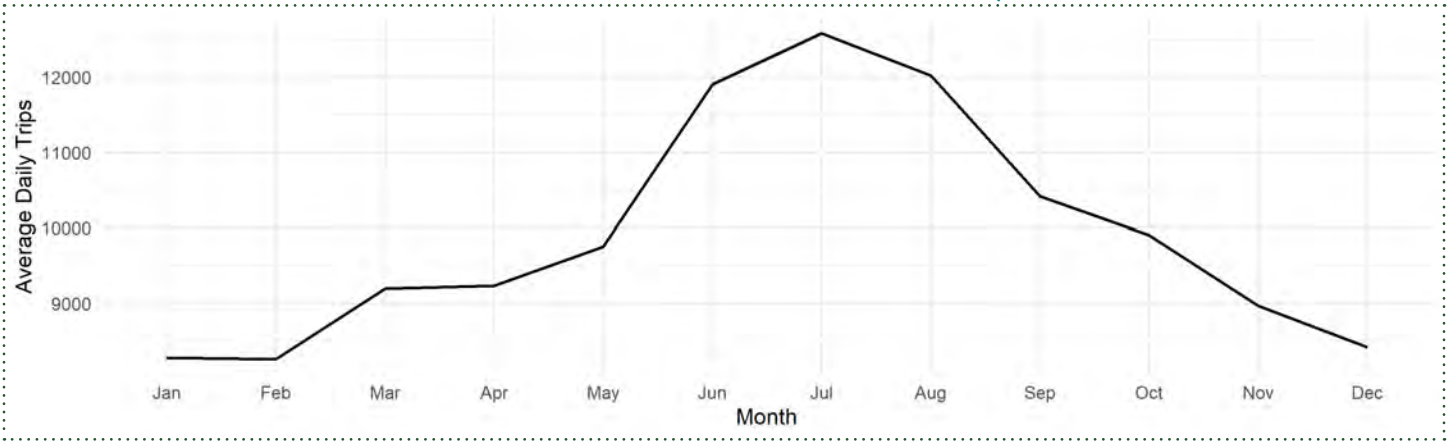


FIGURE 5.20: TYPICAL DAILY TRAFFIC, TAZ 73

FIGURE 5.21: SEASONAL TRAFFIC CHANGES, TAZ 73



CORRIDOR COMPARISONS

In addition to measuring traffic by zone, StreetLight can capture traffic data on road segments. Several key segments were identifed in and around Whitefish to better understand traffic routing in the region. For each segment, StreetLight records the following metrics:

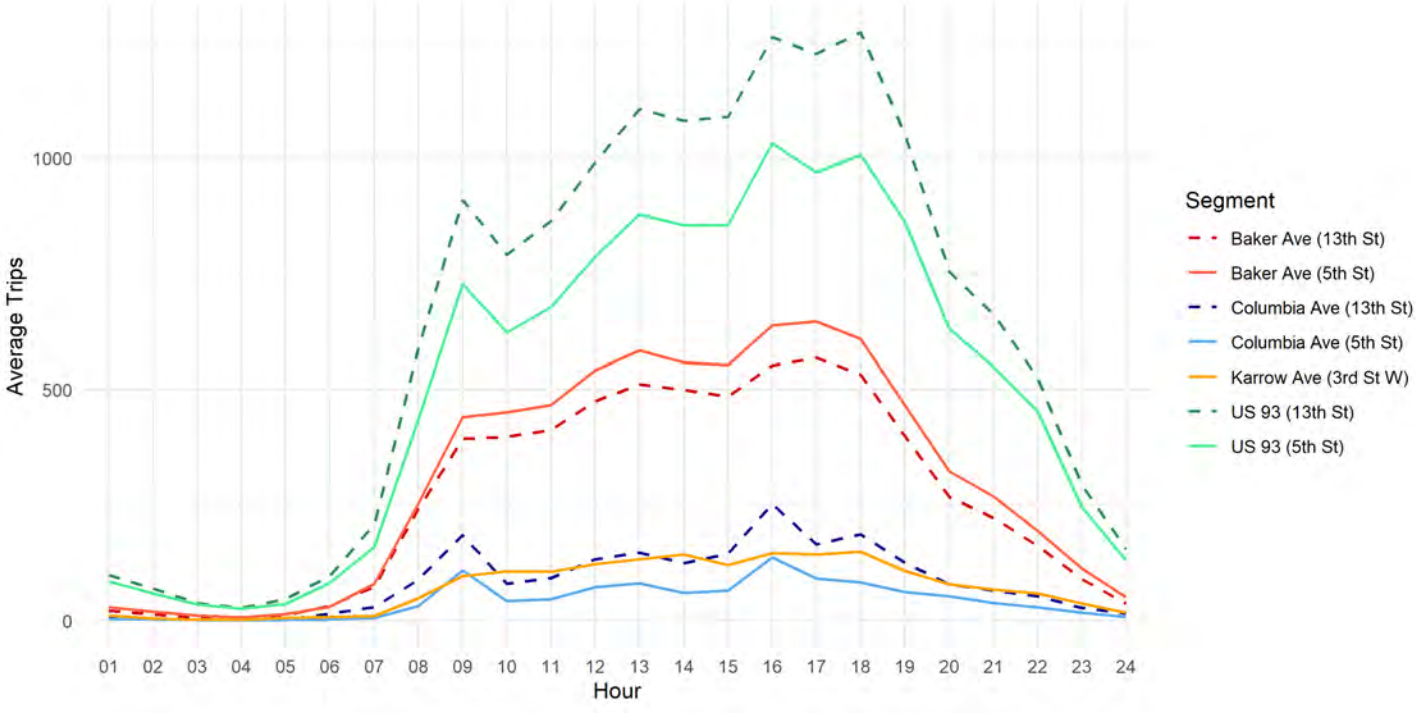
- **Average Speed** – The average travel speed in miles per hour among all traffic on a given road segment.
- **O-D Pair Volume** – The number of trips that passed through a given road segment to travel between a given origin-destination (O-D) pair.

Traffic Through Downtown Whitefish

Four major corridors were chosen to compare routing through downtown Whitefish: US 93, Baker Avenue, Columbia Avenue, and Karrow Avenue. Excluding Karrow Avenue, StreetLight segments were placed on each corridor at 5th Street and 13th Street (shown in Figure 5.23). Figure 5.22 shows the traffic along the major corridors for each hour of the day averaged over every day in 2019. The distribution of north-south traffic through downtown Whitefish is highly unbalanced and heavily concentrated on US 93. For example, US 93 typically has 95 percent more traffic than Baker Avenue between 7 pm and 8 pm. During the peak hours, traffic becomes slightly more balanced between the corridors. Between 8 am and 9 am, US 93 typically carries 65 percent more traffic than Baker Avenue.

FIGURE 5.23: DOWNTOWN STREETLIGHT SEGMENTS

FIGURE 5.22: AVERAGE DAILY TRAFFIC ON MAJOR DOWNTOWN CORRIDORS



The average speed on each of these corridors, both at 5th Street and 13th Street, is shown in Table 5.7. Compared to the average speed across all hours of the day, the average speed at the busiest hour of the day, 3 to 4 pm, is only marginally slower. The most extreme difference occurs on Columbia Avenue at 13th Street, where traffic moves 24 percent slower between 3 and 4 pm compared to the all day average.

There appears to be little correlation between traffic volumes on the study segments and average speed. While traffic volumes change signficantly throughout the day on US 93 and Baker Avenue, travel speeds change minimally. Conversely, Columbia Avenue has relatively consistent traffic volumes throughout the day but exhibits the largest swings in average travel speed among all study segments.

Table 5.7: Average Speed on Major Downtown Corridors

SEGMENT	AVG. SPEED, ALL DAY	AVG. SPEED, 3–4 PM
Baker Avenue (5th St)	21 mph	20 mph (-5%)
Baker Avenue (13th St)	18 mph	17 mph (-6%)
Columbia Ave (5th St)	16 mph	16 mph (0%)
Columbia Ave (13th St)	21 mph	16 mph (-24%)
Karrow Ave (3rd St W)	22 mph	20 mph (-9%)
US 93 (5th St)	32 mph	30 mph (-6%)
US 93 (13th St)	26 mph	23 mph (-12%)

Table 5.8 shows the top five TAZs pairs for each study segment at the 5th Street Crossing. The average daily trips reported includes traffic in both directions between the two TAZs.

Table 5.8: Top Origin-Destination (O-D) Pairs, Downtown Corridors

TAZ PAIR	AVERAGE DAILY TRIPS BETWEEN TAZS
Top 5 O-D Pairs that used Baker Ave (5th St)	
55-59	277
55-58	249
52-55	231
55-72	194
53-55	187
Top 5 O-D Pairs that used Columbia Ave (5th St)	
53-71	53
55-70	47
70-71	31
14-70	30
53-70	30
Top 5 O-D Pairs that used US 93 (5th St)	
53-66	206
53-55	169
53-65	145
53-63	127
10-53	97

PARK-AND-RIDE ANALYSIS

Initial park and ride locations were developed through a transit planning exercise completed in 2019 by the Western Transportation Institute (WTI). These initial locations were reviewed, vetted, chosen for further discussion in the Transportation Plan update. Using StreetLight data, traffic volumes passing through US 93 W near Karrow Avenue and US 93 S near J P Road may shed some light on commuter trends into downtown. Figure 5.24 shows the location of these traffic counting locations as well as the candidate park-and-ride locations. Figure 5.25 shows the average daily volumes on each segment for each hour of the day. Both segments have an AM Peak between 8 and 9 am, and a PM peak between 5 and 6 pm. While the AM peak appears to generally be confined to one hour, the PM peak is sustained between 4 pm and 6 pm. Additionally, US 93 S sees about twice as much traffic during peak hours. Figure 5.26 shows the top destination TAZs for traffic using US 93 W and US 93 S. In all downtown Whitefish TAZs, the vast majority of traffic comes from US 93 S.

Table 5.9 shows the top five origin and destination pairs of vehicles passing through US 93 S between 8 and 9 am. While the origins are dispersed, the destinations are highly concentrated in downtown, particularly TAZ 53 and TAZ 70.

Table 5.9: Top O-D Pairs using US 93 S (near J P Road), Weekday AM Peak

TAZ PAIR	AVERAGE DAILY TRIPS BETWEEN TAZ PAIR (8 AM-9 AM)
62-70	39
72-76	30
63-70	25
53-65	23
55-76	21
Note: TAZ 76 is the City of Columbia Falls	

Table 5.10 shows the top five O-D pairs for vehicles passing through US 93 W between 8 and 9 am. This time, the trend reverses. Only two origin TAZs are represented while the destinations of these trips are more dispersed. Still, the destination TAZs are mostly concentrated in downtown Whitefish.

Table 5.10: Top O-D Pairs using US 93 W (near Karrow Ave), Weekday AM Peak

TAZ PAIR	AVERAGE DAILY TRIPS BETWEEN TAZ PAIR (8 AM-9 AM)
60-70	37
53-61	31
61-65	26
61-72	26
61-65	26

FIGURE 5.24: PARK-AND-RIDE CANDIDATE LOCATIONS

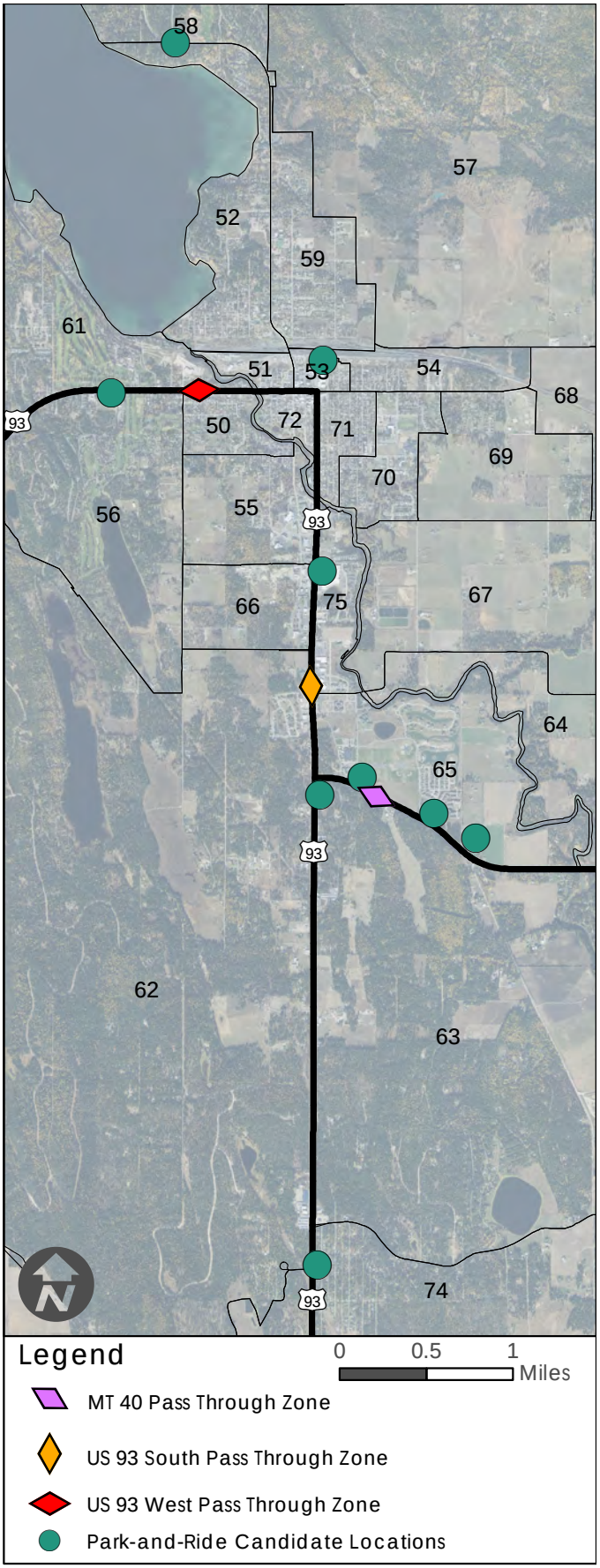
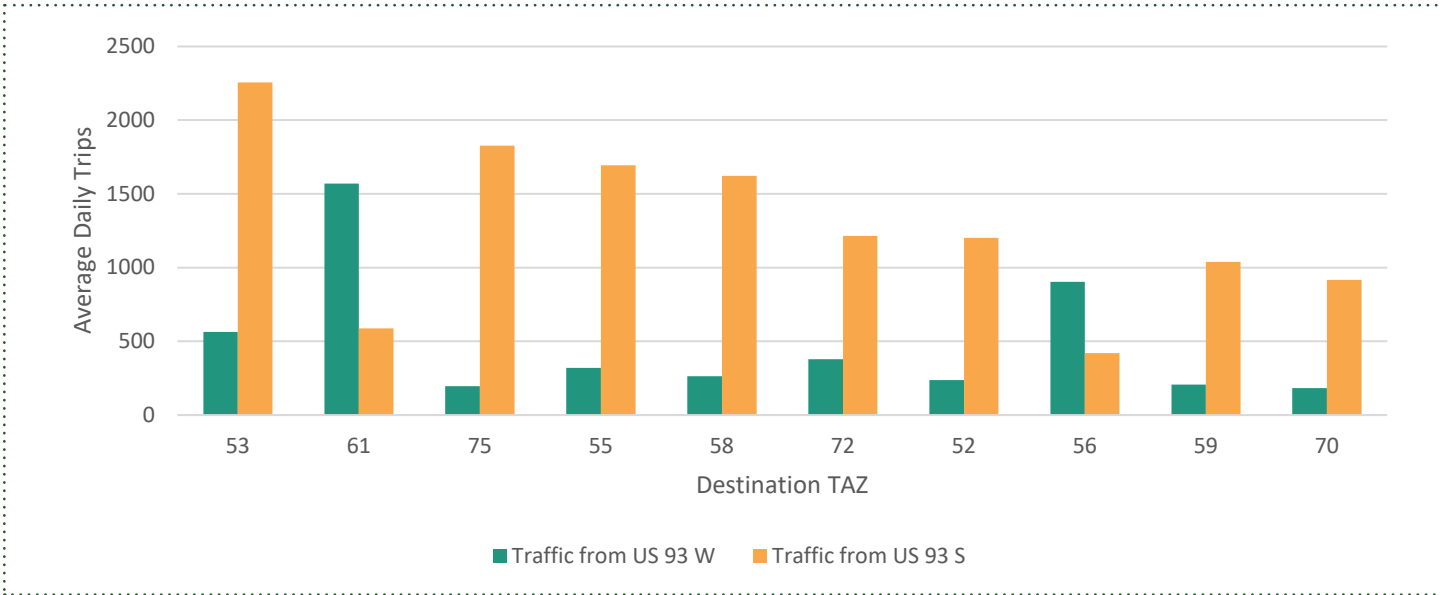


FIGURE 5.25: TYPICAL DAILY TRAFFIC ON PARK-AND-RIDE CORRIDORS

FIGURE 5.26: TOP DESTINATIONS FOR TRAFFIC ON US 93 W AND US 93 S



WHITEFISH

Transportation Plan

CHAPTER 6. PROJECT DEVELOPMENT AND IDENTIFICATION

October 2022

KLJ

ENGINEERING, REIMAGINED

INTRODUCTION

A key product of the planning process was the identification of needs and recommendation of transportation investments. The needs evaluation process incorporated a variety of information, including needs identified in previous plans, technical analysis completed throughout the planning process, and input received through community engagement. The identified needs were used to develop project recommendations, which are categorized as either ***Major Street Network (MSN), Transportation System Management (TSM),*** or ***Corridor Preservation*** projects.

The project recommendations development process is outlined below:

1. A preliminary set of project recommendations was developed in coordination with city staff based on a range of previous planning projects. These preliminary recommendations were based on available data, previous transportation priorities as expressed by the City, and public input received during the planning process.
2. The project team considered additional project recommendations based on technical analysis of current and historical conditions, including roadway safety trends, pavement condition data, and detailed origin-destination analysis using the StreetLight Data platform.
3. Project recommendations were evaluated against projected conditions, including future traffic operations and forecast areas of concentrated employment and population growth.

This process provided a transparent approach to narrow, adjust, and refine the universe of recommendations based on existing and projected needs. It should be noted that future MSN projects developed should include accommodations for bicycle and pedestrian users in coordination with the active transportation component of the plan. A more specific set of projects and recommendations related to active transportation is presented in "Chapter 8. Active Transportation".

The sections below present the final project recommendations for the MSN, TSM, and Corridor Preservation categories. For each category, the following is presented:

- A general description of identified needs
- Tables and maps presenting the final project recommendations
- A detailed description of select projects (only presented for MSN and TSM categories)

MAJOR STREET NETWORK

The MSN project recommendations are intended to enhance the use of major corridors by all modes, address imminent infrastructure maintenance needs, and increase the overall efficiency and connectivity of the system. Projects within this category were developed from a variety of sources, including previous planning documents, recent pavement conditions, underground utilities condition data, and identified bicycle and pedestrian gaps and needs. Projects were further refined based on the analysis conducted during the baseline and projected conditions evaluations.

Identified MSN needs are classified as *Reconstruction*, *Mill & Overlay*, and *Roadway Extension* projects. Reconstruction projects were developed for roadway segments with an identified pavement condition need or multimodal need (or both) as well as an underground utility repair or replacement need. Mill & Overlay projects were developed for roadway segments with poor pavement condition. Roadway Extension projects address a systemwide efficiency need by filling network gaps that inhibit travel along desired routes throughout the study area. Previous planning work supported the development of recommendations throughout the process. As shown in Table 6.1, Reconstruction projects constitute the largest share of MSN project needs by cost ($144.6 million, 81 percent), followed by Extension projects ($30.7 million, 17 percent), with Mill & Overlay projects representing the smallest portion of identified needs by cost ($3.6 million, 2 percent).

Table 6.1: Percent of Total Project Need Cost by Project Type

PROJECT TYPE	TOTAL COST	PERCENT OF TOTAL
Mill & Overlay	$3,624,000	2.0%
Roadway Extension	$30,689,000	17.2%
Reconstruction	$144,610,000	80.8%
Total	**$178,923,000**[1]	**100%**

1 The estimate of total project cost included the most expensive option for those projects where more than one option is presented (MSN #2, MSN #17, and MSN #19). This was done to produce the most conservative total estimate.

Project cost estimates were developed in coordination with the City of Whitefish. Urban reconstruction projects are based on the City's estimate of $1,200 per linear foot for a 32-foot-wide roadway. This estimate includes a complete street design and includes all engineering and construction phases. Urban extension projects have been inflated by 125 percent of the urban reconstruction estimate.

Bridge reconstruction and new construction, roadway overlay, and rural reconstruction costs are based on MDT 2020 Missoula District CN&CE cost estimates. Project costs were determined using treatment type cost-per-mile, and were grown by 10 percent to better represent 2022 construction-only estimates. A 20 percent Contingency, 10 percent Construction Engineering, and 10.99 percent Indirect Cost (IDC) adjustment were added to each construction cost estimate to produce a planning cost estimate. The estimates do not include ROW or utility costs.

The spatial distribution of MSN project needs varies somewhat by type.

- **Reconstruction** projects are distributed throughout the study area, with light concentrations of need located within the downtown area and the residential area to the east of City Beach. This distribution reflects the City's emphasis on underground utility maintenance, safe travel to school, and pavement condition within denser residential and commercial areas.
- **Roadway Extension** projects are located adjacent to Hwy 93, reflecting the need for additional connectivity that supplements the functionality of this and other major corridors.
- **Mill & Overlay** projects are scattered throughout the study area, reflecting the City's efforts to identify and address pavement maintenance needs across all City roadways.

Recommended MSN Improvements

MSN projects are listed in Table 6.2 and shown in Figure 6.1 on page 99, Figure 6.2 on page 100, and Figure 6.3 on page 101. Each MSN project listing in the table includes a map ID, a summary of the corridor location and related termini, a short description, and a planning-level cost estimate.

Projects listed with a single asterisk are considered high priority, and are described in further detail in the next section. MSN projects #2 and #3 (Wisconsin Ave) and #17–#19 (Hwy 93) were analyzed in-depth for this plan, and are presented separately in "Chapter 7. Wisconsin Avenue and Highway 93 South Corridor Plans".

Table 6.2: MSN Projects

MSN#/ MAP ID	CORRIDOR	TERMINI	TERMINI	DESCRIPTION	COST
1*	Hwy 93 W Phase 3 (MDT)	Mountainside Dr	Twin Bridges	Reconstruction	$29,885,000
2**	Wisconsin Ave (MDT)	Edgewood Place	Glenwood Rd	Add intersection control, operational, and access management improvements	Option 1: $2,335,000 Option 2: $3,181,000 Option 3: see TSM #3
3**	Wisconsin Ave (MDT)	Glenwood Rd	Big Mountain Rd	Add intersection control, operational, and access management improvements	$2,304,000
4*	Columbia Avenue South Extension	13th St	Greenwood	Extend roadway as a major collector	$2,764,000
5*	Whitefish Ave	South of Akers Ln	Shiloh/Lenna Joy Dr.	Extend roadway as a major collector	$1,249,000
6*	Baker Ave	19th St	JP Rd	Extend roadway as a major collector	$5,705,000
7	Akers Ln	Baker Ave Extension	Hwy 93 S	Extend roadway as a local road	$846,000
8	Park Knoll Ln	Baker Ave Extension	Shiloh Ave	Extend roadway as a local road	$1,989,000

MDT: Denotes projects on roadways owned and maintained by MDT.

**Project is described in further detail in the next section.*

***Project is presented in Chapter 7.*

****Committed Resort Tax project.*

MSN#/ MAP ID	CORRIDOR	TERMINI	TERMINI	DESCRIPTION	COST
9	Pheasant Run	Hwy 93 S	Whitefish Ave Extension	Extend roadway as a local road	$996,000
10*	W 18th St	Karrow Ave	Hwy 93 W	Extend roadway as a major collector	$6,060,000
11*	E 7th St	Spokane Ave	Kalispell Ave	Extend roadway as a major collector	$577,000
12*	E 7th St	E 7th St	Voerman Rd	Extend roadway as a major collector	$4,330,000
13*	New Collector Roadway	Monegan Rd	1/4-Mile West of Monegan Rd	Construct new collector roadway	$1,500,000
14	Monegan Rd	Parks Department building	JP Rd at River Lakes Parkway	Reconstruction	$3,245,000
15	JP Rd	Whitefish River	Monegan Rd	Reconstruction	$3,314,000
16*	Hwy 93 S/Spokane (MDT)	E 13th St	E 2nd St	Reconstruction	$9,894,000
17**	Hwy 93 S (MDT)	MT 40	JP Road	Add intersection control, operational, and access management improvements	Option 1: $2,362,000 Option 2: $5,886,000
18**	Hwy 93 S (MDT)	JP Road	Akers Ln	Add intersection control, operational, and access management improvements	$7,253,000
19**	Hwy 93 S (MDT)	Akers Ln	E 13th St	Add intersection control, operational, and access management improvements	Option 1: $8,737,000 Option 2: $11,943,000
20*	Baker Ave	E 13th St	E 2nd St	Reconstruction	$4,758,000
21	W Lakeshore Dr	State Park Rd	Birch Point Dr	Mill & overlay	$843,000
22	E Second St	Spokane Ave	Fir Ave	Mill & overlay	$493,000
23	E 13th St	Spokane Ave	Columbia Ave	Mill & overlay	$134,000
24	Birch Dr/ Wedgewood Ln	E 2nd St	Dodger Ln (including Wedgewood west of Birch Dr to cul de sac)	Mill & overlay; Add bike/ped improvements on existing street profile	$274,000
25	E 4th St	Baker Ave	Pine Ave	Mill & overlay; Add bike/ped improvements on existing street profile	$495,000
26	River Lakes Pkwy	J P Rd	Red Eagle Dr	Mill & overlay; Add bike/ped improvements on existing street profile	$699,000
27	E Second St	Rail line	E Edgewood Dr	Mill & overlay; Add bike/ped improvements on existing street profile	$216,000
28	Spokane Ave	E 1st St	Depot St	Mill & overlay	$127,000
29*	East 6th St	Hwy 93 S	Pine Ave	Reconstruction	$2,160,000
30	Riverside Drive	Hwy 93 S	Columbia Ave	Reconstruction	$952,000

MDT: Denotes projects on roadways owned and maintained by MDT.

**Project is described in further detail in the next section.*

***Project is presented in Chapter 7.*

****Committed Resort Tax project.*

MSN#/ MAP ID	CORRIDOR	TERMINI	TERMINI	DESCRIPTION	COST
31	Minnesota Ave	Edgewood Pl	End	Reconstruction with bicycle and pedestrian improvements	$1,513,000
32	Dakota Ave	Edgewood Pl	Skyles Pl	Reconstruction with bicycle and pedestrian improvements	$1,225,000
33	Iowa Avenue	Edgewood Pl	End	Reconstruction with bicycle and pedestrian improvements	$3,144,000
34	Lakeside Boulevard	Oregon Ave	Skyles Place	Reconstruction with bicycle and pedestrian improvements	$1,033,000
35*	Park Ave	Voerman Rd	E 7th St	Reconstruction	$3,264,000
36	Park Ave	E 7th St	E Second St	Reconstruction	$2,390,000
37*	Denver St	Wisconsin Ave	Texas Ave	Reconstruction	$3,058,000
38	East 10th St	Columbia Ave	Park Ave	Reconstruction	$684,000
39	East 3rd St	O'brien Ave	Spokane Ave	Reconstruction	$1,673,000
40	East 3rd St	Spokane Ave	Pine Ave	Reconstruction	$2,158,000
41	East 8th St	Hwy 93	Alley west of Park Ave	Reconstruction	$1,490,000
42*	Kalispell Ave	Riverside Ave	E 2nd St	Reconstruction	$3,745,000
43*	Pine Ave	E 7th St	E 2nd St	Reconstruction	$2,376,000
44	E 1st St	Miles Ave	Spokane Ave	Mill & overlay	$342,000
45*	E 1st St	Kalispell Ave	Larch Ave	Reconstruction	$2,903,000
46	MT 40 (MDT)	Hwy 93 S	Dillon Rd.	Five-lane facility with two through lanes each direction and a TWLTL	$18,383,000
47	Karrow Ave	W 7th St	W 18th St	Reconstruction	$3,937,000
48*	Karrow Ave***	Hwy 93 W/W 2nd St	W 7th St	Reconstruction	$2,348,000
49*	Armory Rd***	E 2nd St	City limits	Reconstruction	$6,382,000
50*	East 5th St***	Hwy 93 S/Spokane	Pine Ave	Reconstruction	$2,160,000

MDT: Denotes projects on roadways owned and maintained by MDT.

**Project is described in further detail in the next section.*

***Project is presented in Chapter 7.*

****Committed Resort Tax project.*

FIGURE 6.1: MSN PROJECTS

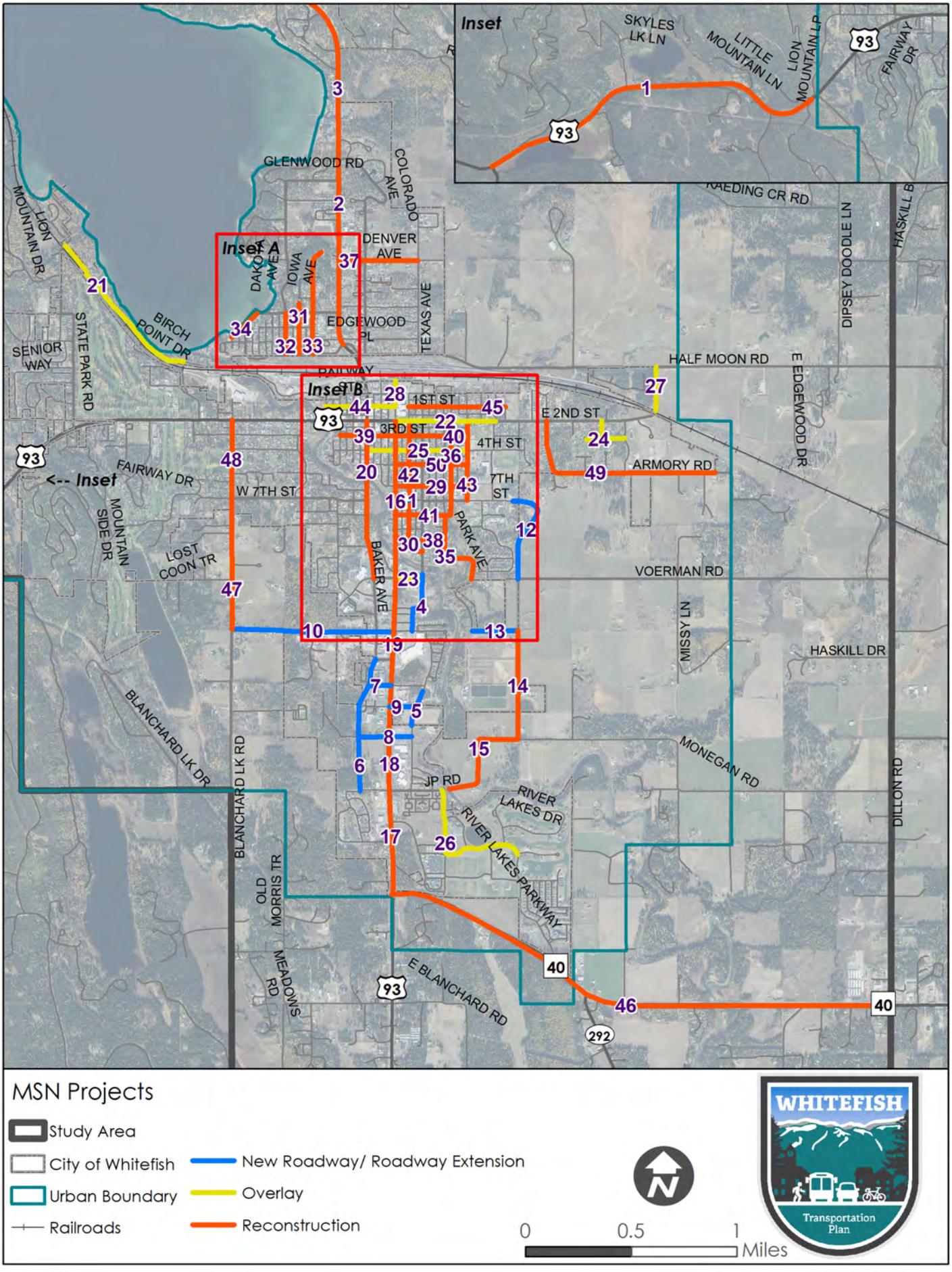


FIGURE 6.2: MSN PROJECTS (INSET A)

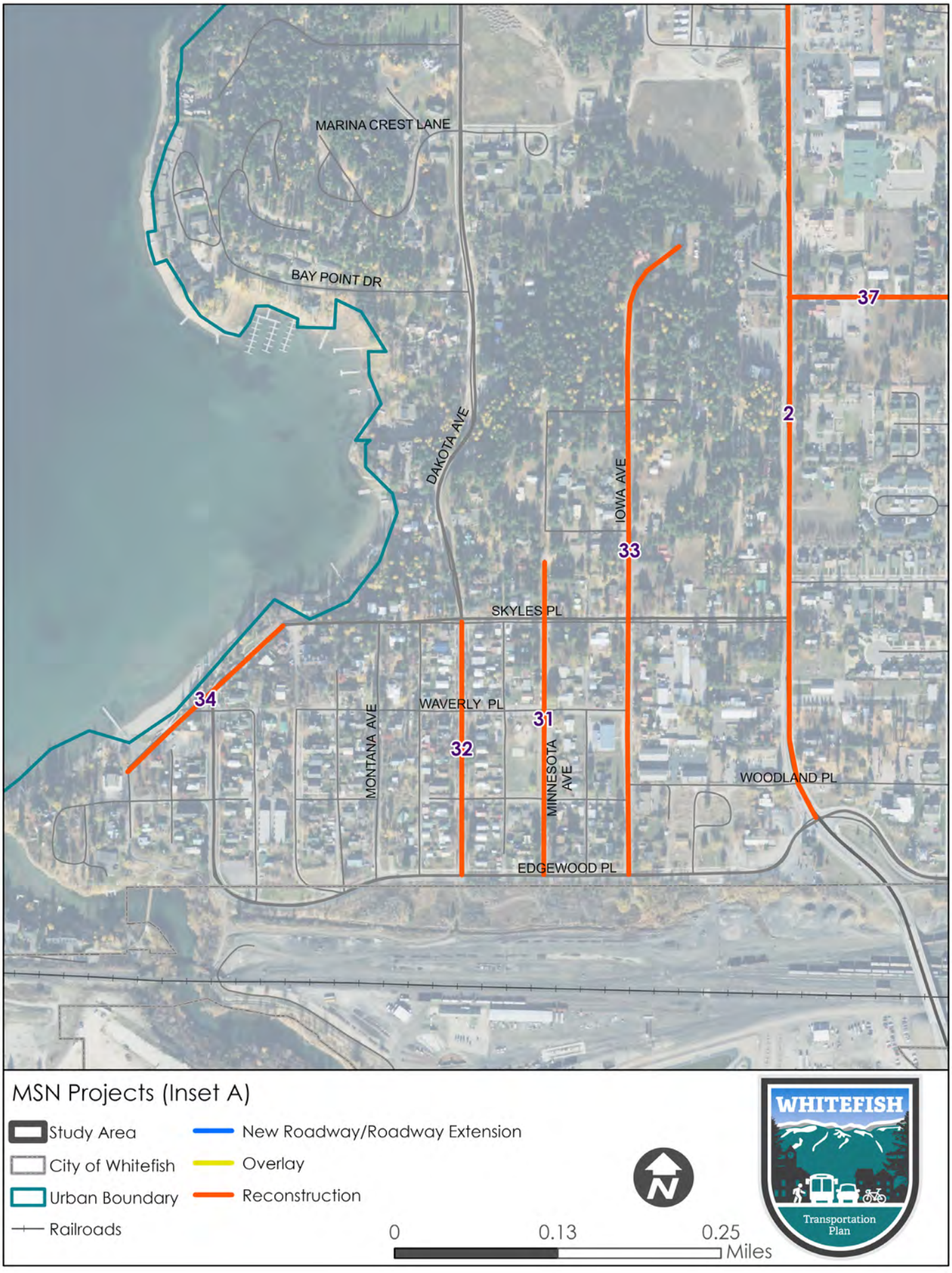
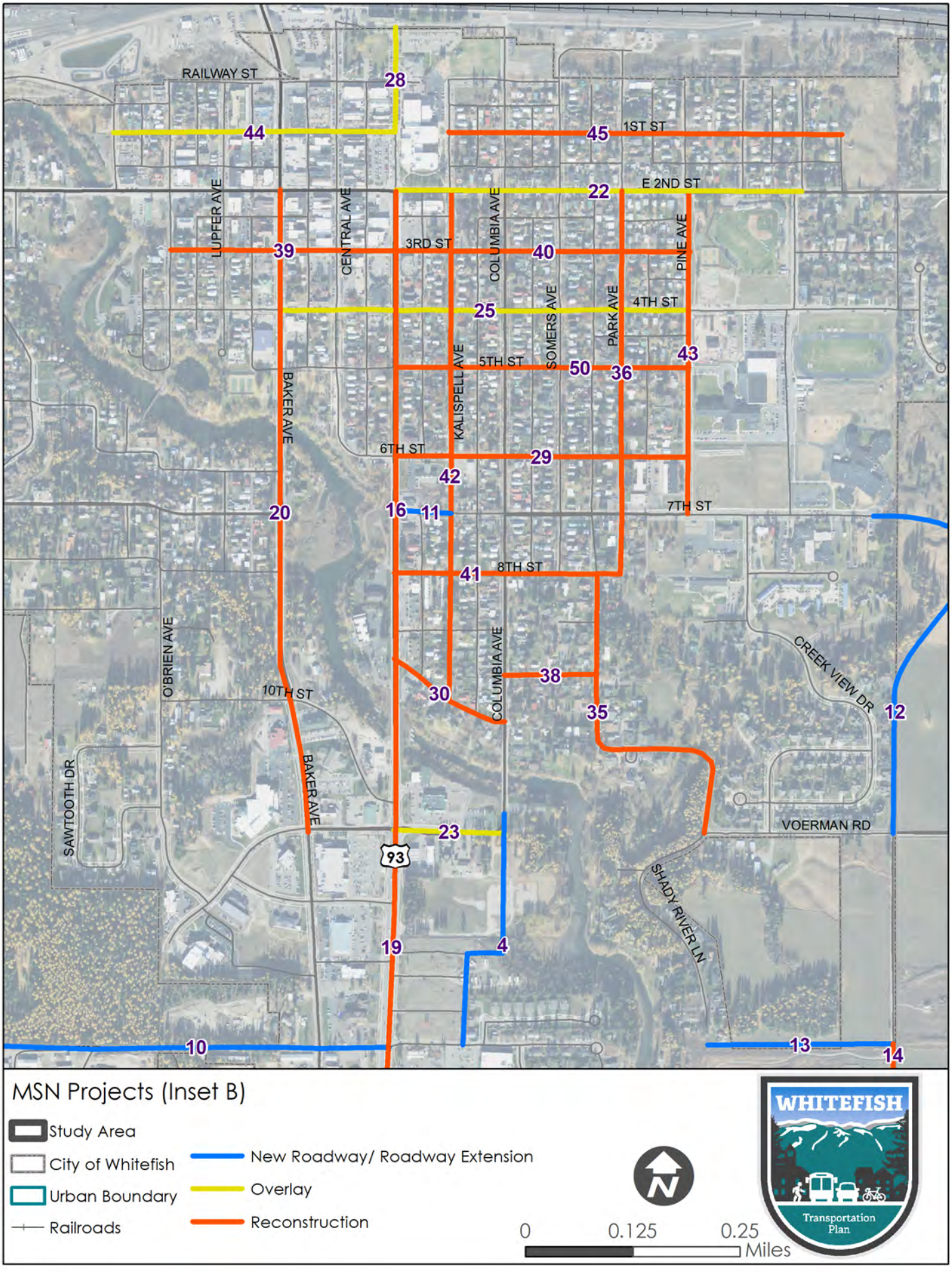


FIGURE 6.3: MSN PROJECTS (INSET B)



MSN Priority Project Descriptions

Several projects are considered high priority given their special capacity to increase connectivity, enhance livability and sense of the place, and increase safety for the community. These projects are presented in detail below. The project numbers do not reflect a ranking of priority.

MSN #1: Highway 93 West – Phase 3 Reconstruction (MDT)

- Project Termini: Mountainside Dr to Twin Bridges Rd
- Project Description: This project responds to a previously identified need by MDT to address both vehicular and pedestrian safety issues on the west end of Whitefish. This project was identified by the public and serves as a continuation of the recent Hwy 93W projects through Whitefish.

MSN #4: Columbia Avenue South Extension

- Project Termini: 13th St to Greenwood Dr
- Project Description: This project responds to a previously identified need for a north-south corridor parallel to Highway 93. The project will help alleviate traffic levels on Highway 93 and increase connectivity by proving an alternate north-south route for local trips. The project will improve safety, level-of-service, and mobility through the south end of Whitefish.

MSN #5: Whitefish Ave Extension

- Project Termini: Shiloh/Lenna Joy Dr. to South of Akers Ln
- Project Description: This project responds to a previously identified need for a north-south corridor parallel to Highway 93. The project will help alleviate traffic levels on Highway 93 and increase connectivity by proving an alternate north-south route for local trips. The project will improve safety, level-of-service, and mobility through the south end of Whitefish.

MSN #6: Baker Ave Extension

- Project Termini: 19th St to JP Rd
- Project Description: This project responds to a previously identified need for a north-south corridor parallel to Highway 93. The project will help alleviate traffic levels on Highway 93 and increase connectivity by providing an alternate north-south route for local trips. The project will improve safety, level-of-service, and mobility through the south end of Whitefish.

MSN #10: 18th St West Extension

- Project Termini: Karrow Ave to Hwy 93
- Project Description: This project responds to a previously identified need for increased east-west connectivity within the City of Whitefish. The project will help alleviate traffic on Highway 93 and increase mobility by proving an alternate east-west route. In conjunction with MSN #13, the project will create a connection across the Whitefish River from Karrow Ave to Monegan Rd. These improvements will support access through the south end of Whitefish. 18th St is extremely steep and Lund Ln at the west end is a private road.

MSN #11 & 12: 7th Street Extension

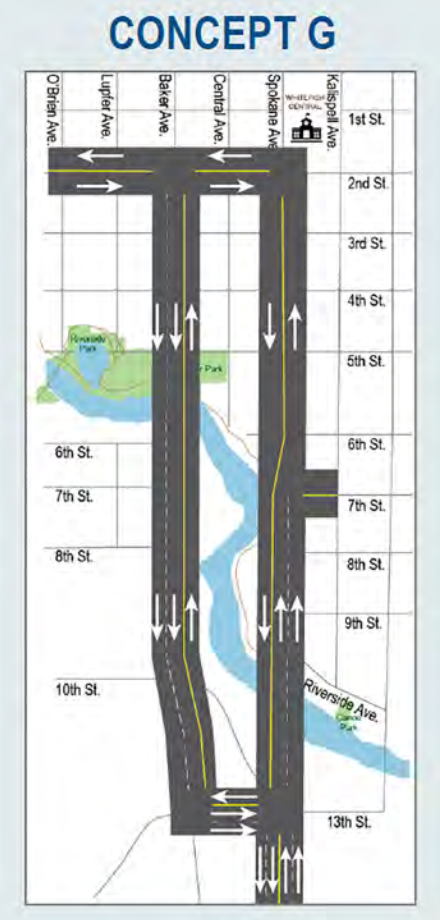
- Project Termini: Voerman Rd to 7th St; Spokane Ave to Kalispell Ave
- Project Description: This project responds to a previously identified need to manage traffic volumes on the southeast side of Whitefish, as well as increase the limited roadway connectivity through this area of the city. This new connection will serve to fill key gaps in the Whitefish street network.

MSN #13: New Collector Roadway

- Project Termini: Monegan Rd to ¼-mile west
- Project Description: Improves and supports mobility east of the Whitefish River by providing a new collector roadway. In conjunction with MSN #10 and Corridor Preservation #10, the project will create a full connection from Karrow Ave to Monegan Rd. These improvements will support systemwide east-west connectivity, reduce traffic demand on Hwy 93, and support improved mobility and access across the Whitefish community.

MSN #16: Hwy 93/ Spokane Reconstruction (MDT)

- Project Termini: 13th St to 2nd St
- Project Description: As both an urban highway and section of the proposed Whitefish Promenade, it is important that Hwy 93/Spokane maintain mobility while supporting the downtown's sense of place. The project will reconstruct this section of Hwy 93/ Spokane to include protected bike lanes, landscaped parkways, and improved intersection crossings for bicycles and pedestrians, among other improvements.



The project incorporates recommendations from the Whitefish-Downtown-Business District Master Plan as well as the Downtown Whitefish Highway Study. While Concept C is the preferred alternative, the City supports Concept G from the Downtown Whitefish Highway Study as the preferred design for this section of Highway 93/ Spokane.

MSN #20: Baker Ave Reconstruction

- Project Termini: 13th St to 2nd St
- Project Description: Downtown Whitefish's economy is dependent on creating a pedestrian-oriented setting where visitors feel comfortable shopping and sight-seeing. Baker Ave is important in achieving this sense of place. The project will reconstruct this section of roadway to include sidewalk and intersection improvements that foster pedestrian activity. Improvements may include speed tables, widened sidewalks, landscaped curb extensions, and covered sidewalks along retail frontages. The project incorporates recommendations from the Whitefish-Downtown-Business District Master Plan as well as the Downtown Whitefish Highway Study. Specifically, the City supports Concept G from the Downtown Whitefish Highway Study as the preferred design for this section of Baker Ave..

MSN #29: East 6th St Reconstruction

- Project Termini: Hwy 93 to Pine Ave
- Project Description: Most of E 6th St currently lacks pedestrian and bicycle infrastructure. With the corridor serving as a key access route to the high school and elementary school, this is of special concern for children. The project will reconstruct the roadway with bicycle and pedestrian facilitates, traffic calming measures, and enhanced crosswalk markings to accommodate safe and convenient non-motorized travel. Underground utility needs will also be addressed during the project.

MSN #35: Park Ave Reconstruction

- Project Termini: Voerman Rd to E 7th St
- Project Description: This project will provide an important connection to Whitefish residential and commercial districts from the City's southern end. Enhancement of Park Ave from Voerman Rd to E 7th St is considered a priority due to its potential faster and cheaper implementation compared to other projects that would provide a similar connection, such as a Greenwood Dr extension across the Whitefish River or extension of Monegan Rd north to E 7th St. The construction of workforce housing north of the Whitefish Waste Sewage Plant further highlights the need for an improved north-south route to town and to the schools.

MSN #37: Denver St Reconstruction

- Project Termini: Wisconsin Ave to Texas Ave
- Project Description: This project responds to a previously identified need to reconstruct Denver St east of Wisconsin Ave to Texas Ave. This need has been identified in past planning efforts undertaken by the City, including the Connect Whitefish Bicycle & Pedestrian Master Plan. The project would address pavement condition issues and provide bike and pedestrian facilities along the roadway.

MSN #42: Kalispell Ave Reconstruction

- Project Termini: Riverside Ave to E Second St
- Project Description: This project is located along a key segment of the Whitefish Safe Routes to School route.[1] The project will close gaps in the sidewalk system and add wayfinding signage and pavement markings to create a safe and convenient route to Whitefish Middle School. Underground utility needs will also be addressed during the project.

MSN #43: Pine Ave Reconstruction

- Project Termini: E 7th St to E Second St
- Project Description: Directly adjacent to Whitefish High School and Muldown Elementary School, Pine Ave is one of the most important sections of the Whitefish Safe Routes to School route. At present, sidewalk is only provided on the east side of the street. In addition, crosswalk striping is faded or missing and signage is inadequate. This project will address gaps in the sidewalk system and add safety measures to create a convenient and secure route serving Whitefish High School and Muldown Elementary School. Underground utility needs will also be addressed during the project.

MSN #45: 1st St Reconstruction

- Project Termini: Kalispell Ave to Larch Ave
- Project Description: This section of 1st St is located along a key segment of the Whitefish Safe Routes to School route. Despite its proximity to schools, this section of roadway only has sidewalk on the north from Somers Ave to Park Ave, and no sidewalks from Park Ave to Larch Ave. The project will close gaps in the sidewalk system and add wayfinding signage and pavement markings to create a safe and convenient route serving Whitefish Middle School, High School, and Elementary School.

MSN #48: Karrow Ave Reconstruction

- Project Termini: 7th St to Highway 93
- Project Description: This project responds to a previously identified need for improved north-south connectivity to the west of Highway 93. As traffic volumes increase on US Highway 93 and Karrow Avenue, additional capacity will be needed to accommodate future development patterns within this area of the City. The corridor also lacks bicycle and pedestrian facilities, which will become

1 Connect Whitefish Bicycle & Pedestrian Master Plan (2017)

increasingly important as Karrow Ave experiences more commuter traffic in the future. This project will reconstruct Karrow as three-lane minor arterial with pedestrian and bicyclist facilities.

MSN #49: Armory Rd Reconstruction

- Project Termini: E Second St to the City Limits
- Project Description: This project responds to a previously identified need for enhanced access to downtown Whitefish from the east. The project will enhance capacity and operations along this key route, which will continue to accommodate more commuter traffic to and from downtown as development increases south and east of the City. The project will improve safety, level-of-service, and mobility through the southeastern end of Whitefish.

MSN #50: East 5th St Reconstruction

- Project Termini: Hwy 93 to Pine Ave
- Project Description: This project is located along a key segment of the Whitefish Safe Routes to School route.[2] The project will close gaps in the sidewalk system and add wayfinding signage and pavement markings to create a safe and convenient route to Whitefish High School. East 5th Street has been identified as a priority Safe Routes to school project since 2011. It was chosen in part due to the pedestrian activated signal at Spokane and 5th and its alignment with the Riverside Park and pedestrian bridge.

TRANSPORTATION SYSTEM MANAGEMENT

The TSM recommendations reflect intersection-level improvements which respond to both safety- and operations-related issues at an isolated location. The set of TSM project recommendations is based on previous and ongoing planning studies as well as analysis conducted during the baseline conditions, projected conditions, and active transportation evaluations for this plan. The total estimated cost of TSM project needs is $5,675,000.[3]

The distribution of TSM projects throughout the study area reflects a systemwide emphasis on safety, connectivity, and operations. Various projects focus on north-south connectivity across the railway, while others target safety concerns at specific locations, including intersections adjacent to schools.

Recommended TSM Improvements

TSM projects are listed in Table 6.3 and shown in Figure 6.4. Each TSM project listing in the table includes a map ID, a summary of the project location and related termini, and a short description. TSM project #7 is not reflected in the map as it does not yet have a specific location. All TSM projects are described in further detail in the next section.

Table 6.3: TSM Projects

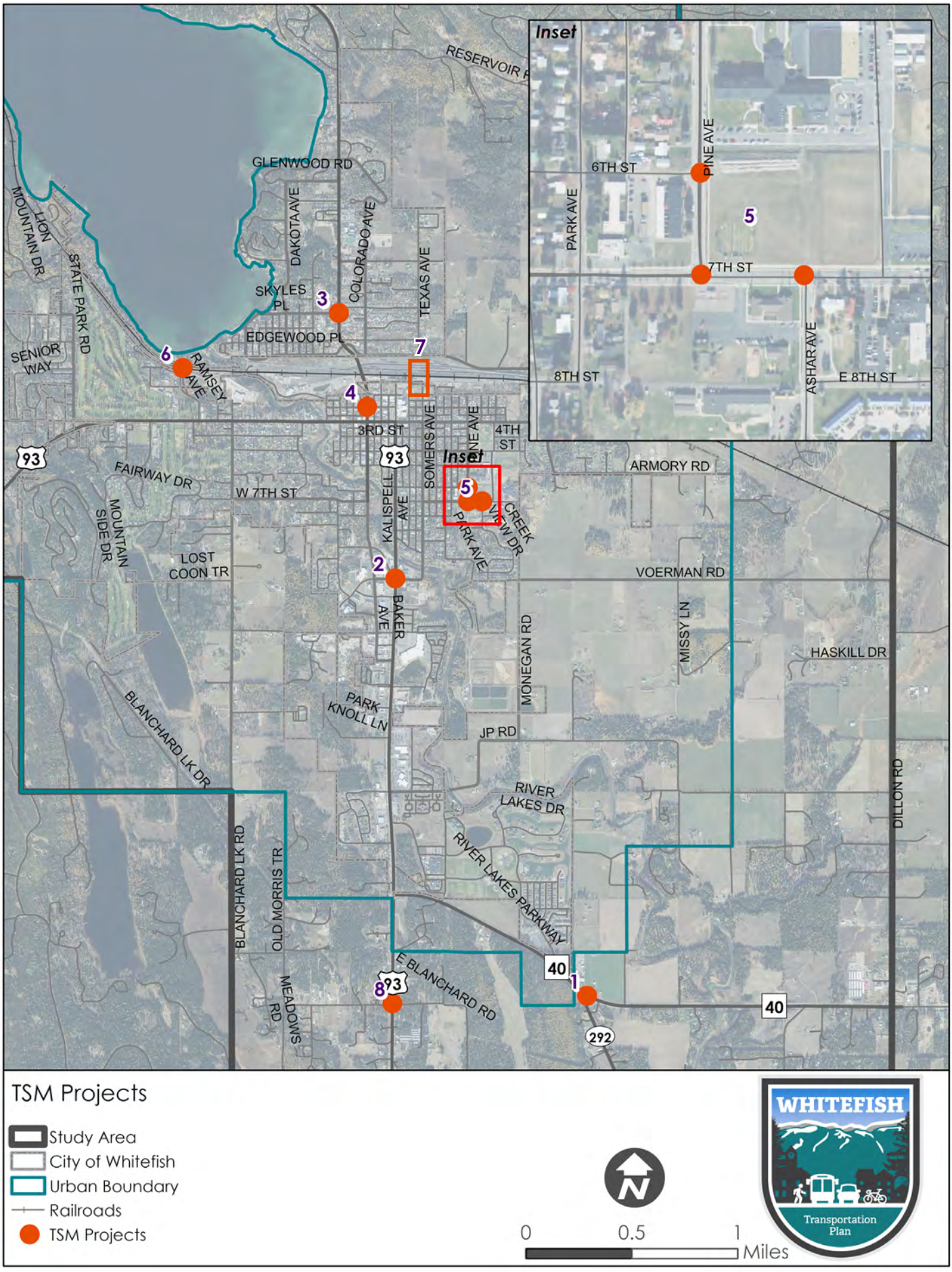
TSM#/ MAP ID	CORRIDOR	TERMINI	TERMINI	DESCRIPTION	COST
1	MT 40 (MDT)	Whitefish Stage Rd	Whitefish Stage Rd	Signalized intersection or a two-lane roundabout	Option 1: $1M; Option 2: $3.5M
2	Spokane Ave (MDT)	13th St	13th St	Intersection improvement	$850,000
3	Wisconsin Ave (MDT)	Skyles Pl	Skyles Pl	Intersection improvement	$510,000
4	Baker Ave	E 1st St	E 1st St	State intersection evaluation	N/A
5	Muldown Elementary School Area Safe Routes to School Improvements	Sixth St @ Pine Ave; Seventh St @ Pine Ave; Seventh St @ Asher Ave		Intersection safety improvements	$250,000
6	Birch Point Dr	BNSF Mainline	BNSF Mainline	Quiet Zone - Supplemental safety measures (SSMs)	$565,000
7	BNSF Mainline between Baker Ave viaduct and E 2nd St			Build grade separated crossing at BNSF railway at E 2nd St; or at E Texas/Columbia	N/A
8	Blanchard Lake Road	Highway 93 South	Highway 93 South	Intersection improvement	N/A

MDT: Denotes projects on roadways owned and maintained by MDT.

2 Connect Whitefish Bicycle & Pedestrian Master Plan (2017)

3 The estimate of total project cost included the most expensive option for TSM #1. This was done to produce the most conservative total estimate.

FIGURE 6.4: TSM PROJECTS



TSM Project Descriptions

The TSM projects are presented in detail below.

TSM #1: MT 40 @ Whitefish Stage Rd Intersection Improvements (MDT)

» Project Description: This project responds to a previously identified need to improve LOS, capacity, and safety at this intersection. Recommended improvements include either a two-lane roundabout or a traffic signal. The benefits and impacts of each option are presented in the Jct. US 93 – East (MT 40) Preliminary Traffic Report. This project will improve capacity, mobility and safety for travelers as well as assist in meeting anticipated development-generated traffic and future MT 40 approaches.

TSM #2: Spokane Ave @ 13th St Intersection Improvements (MDT)

» Project Description: This project responds to a previously identified need to improve traffic flows and safety at the intersection. The project will modify the eastbound, westbound, and southbound intersection approaches. The eastbound approach will be modified to have an exclusive left-turn lane and shared through/right-turn lane. The westbound approach will have separate right-turn, through, and left-turn lanes. The southbound approach will have a shared through/right-turn lane, a through lane, and a left-turn lane. No changes will be made to the northbound approach. This project was listed as a priority in the 2010 Transportation Plan. The city has requested that MDT split out this project from the Spokane Avenue section of the Downtown Highway Study.

TSM #3: Wisconsin Ave @ Skyles Pl Intersection Improvements (MDT)

» Project Description: This project corresponds to current and previous safety and level-of-service needs at the intersection, including those discussed within the Wisconsin Avenue Corridor Plan (2018). The project may include a raised median beginning just south of Skyles Place, which will transition into a left-turn bay for movements from Wisconsin Ave onto Skyles Pl. The raised median and dedicated left-turn lane will reduce vehicle conflict opportunities and help alleviate queuing issues along Wisconsin Ave.

TSM #4: Baker Ave @ E 1st St Intersection Evaluation

» Project Description: The Baker Ave @ E 1st St intersection is one of the top ten high frequency crash locations identified within this plan. Based on recent crash statistics, the City will work in cooperation with MDT regarding potential safety improvements to be implemented in concert with future possible improvements to Baker Ave. The crash frequency at this location may be related to the location of the pedestrian activated signal base.

TSM #5: Muldown Elementary School Area Safe Routes to School Improvements (Sixth St @ Pine Ave; Seventh St @ Pine Ave; Seventh St @ Asher Ave)

» Project Description: This project responds to safety issues at various crossing locations adjacent to Muldown Elementary School. The city has been meeting with the school district to consider pedestrian safety improvements to these intersections. At present, crosswalk striping is faded or missing and signage is inadequate. The project will install safety improvements including durable and visible crosswalk striping on all legs of intersections, Solar LED Blinker Pedestrian Crossing signs to notify drivers of the presence of pedestrians, highly visible school crossing signage, and student stand-back lines behind curb backs.

TSM #6: Birch Point Dr @ BNSF Mainline Quiet Zone

» Project Description: This project reflects the community's desire to establish a quiet zone at the Birch Point Dr railway crossing. The project will include the safety engineering improvements (Supplementary Safety Measures (SSM)) required by the Federal Railroad Administration for establishment of a quiet zone. Possible SSMs include temporary closure systems, gate systems, and channelization devices, among others.

TSM #7: Build grade separated crossing of BNSF railway

» Project Description: This project supports emergency/evacuation route needs from areas north of the BNSF tracks. Options include E 2nd St or Texas/Columbia, both require further study. This project would create an additional crossing of the BNSF Railway which would improve evacuation from the north in an emergency, improve north-south connectivity and traffic flow, and relieve traffic congestion at the Baker viaduct.

TSM #8: Blanchard Lake Road @ Highway 93 South

» Project Description: It is recommended that an intersection control evaluation be developed for the intersection of Blanchard Lake Road and Highway 93 South. This analysis should be coordinated with MDT. The city should work closely with MDT on an upcoming corridor access management analysis planned on the Highway 93 South corridor south of MT 40 to evaluate needs at this intersection.

CORRIDOR PRESERVATION

In addition to the MSN and TSM project needs, this plan identifies several Corridor Preservation needs. The Corridor Preservation recommendations list enables local planning officials to better manage the access and design of roadways. The list reflects identified needs to preserve specific corridors to meet the design standards of their intended future function. Recommendations were completed by evaluating the current transportation system, assessing anticipated changes in land use and development patterns, considering the direction of established guidelines, and emphasizing improvements to overall system efficiency. It is recommended that, over the life of this plan, land use and transportation decision making be based on the proposed function of the corridors indicated here.

Corridor Preservation Needs

Corridor Preservation needs are listed in Table 6.4 and shown in Figure 6.5. Each Corridor Preservation listing in the table includes a map ID, a summary of the corridor location and related termini, and a short description.

SIGNIFICANT MOBILITY IMPROVEMENTS

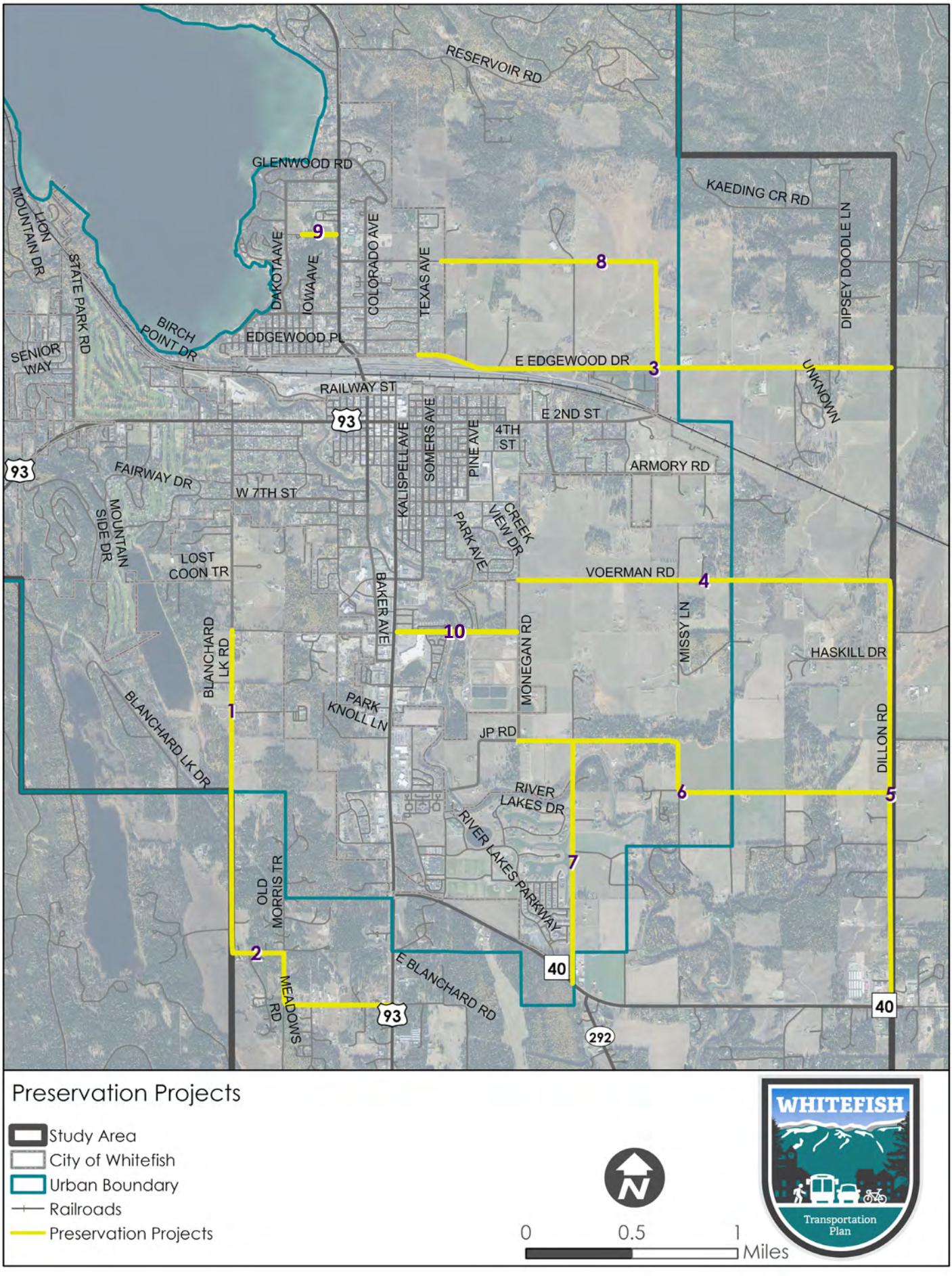
Several improvements are identified in the Transportation Plan related to improving mobility along and adjacent to Highway 93 through Whitefish. Through development of the Transportation Plan, the following projects are considered of particular importance and priority for the City of Whitefish. The list is in order of prioritization.

1. **Highway 93/13th Street:** Intersection reconstruction **(TSM #2)**
2. **Highway 93 – MT 40 to 13th Street:** Intersection improvements/center medians/access management plan **(MSN #17–20)**
3. **Baker Avenue:** 13th Street to 2nd Street reconstruction **(MSN #20)**
4. **Highway 93:** 7th Street to 13th Street reconstruction **(MSN #16)**
5. **Whitefish Avenue (Shiloh Avenue):** Corridor extension **(MSN #5)**
6. **Baker Avenue:** 19th Street to JP Road extension **(MSN #6)**

Table 6.4: Corridor Preservation Needs

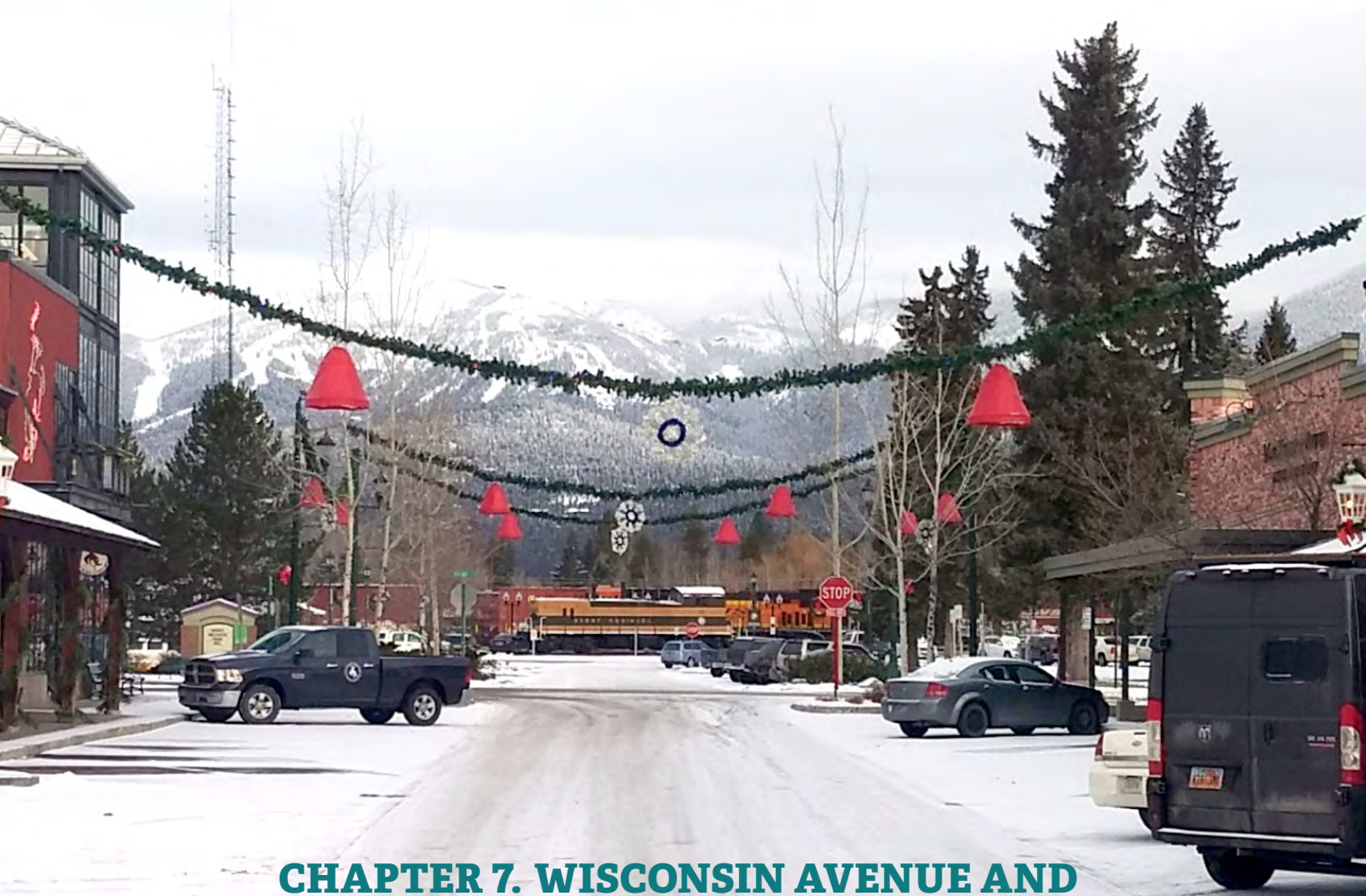
MAP ID	CORRIDOR	TERMINI	TERMINI	DESCRIPTION
1	Karrow Ave	18th St	Blanchard Lake Rd	Corridor Preservation: Preserve as major collector
2	Blanchard Rd	Karrow Ave	Hwy 93	Corridor Preservation: Preserve as major collector
3	Edgewood Pl	Texas Ave	Haskill Cr	Corridor Preservation: Preserve as major collector west of E 2nd St; preserve as minor collector east of E 2nd St
4	Voerman Rd	Dillon Rd	Monegan Rd	Corridor Preservation: Preserve as major collector west of Missy Ln; preserve as minor collector east of Missy Ln
5	Dillon Rd	MT 40	Voerman Rd	Corridor Preservation: Preserve as minor collector
6	Monegan Rd	JP Rd	Dillon Rd	Corridor Preservation: Preserve as major collector
7	Kalner Ln	MT 40	Monegan Rd	Extend and preserve roadway as major collector
8	Denver St	Denver St	E 2nd St	Extend roadway as a minor collector
9	E Marina Crest Dr	Serpentine Cr	E Marina Crest Ln	Preserve roadway as collector
10	Greenwood Dr	Hwy 93	Monegan Rd	Corridor Preservation: Future collector roadway including new crossing of the Whitefish River. Combined with MSN #10 and MSN #13 this corridor supports systemwide east-west connectivity, reduces demand on Hwy 93, and supports improved mobility across the Whitefish community.

FIGURE 6.5: CORRIDOR PRESERVATION NEEDS



WHITEFISH

Transportation Plan



CHAPTER 7. WISCONSIN AVENUE AND HIGHWAY 93 SOUTH CORRIDOR PLANS

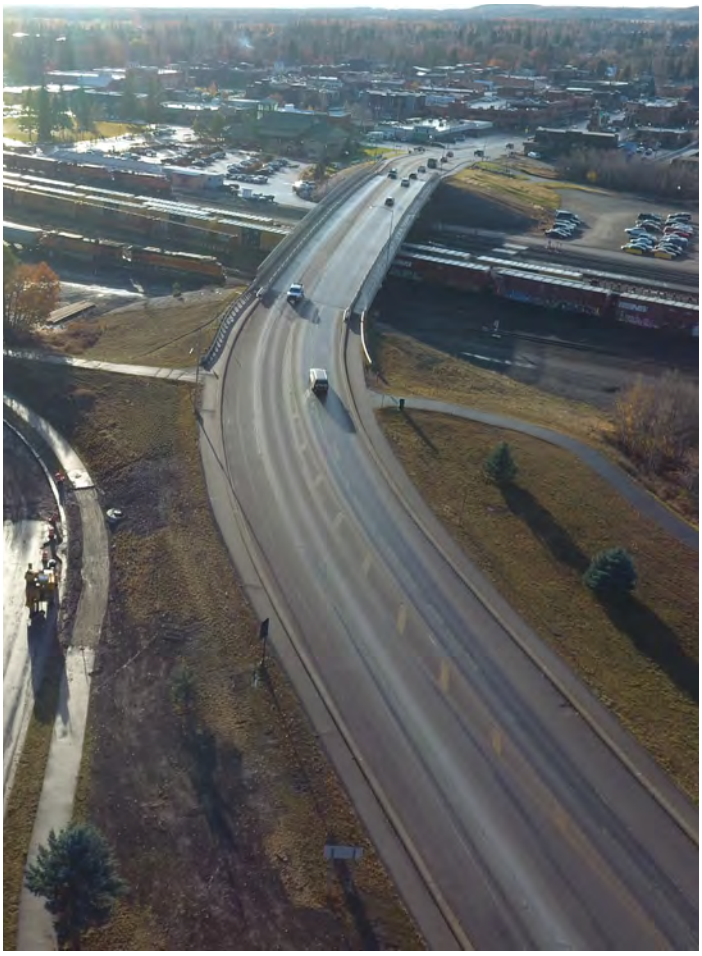
October 2022

KLJ

ENGINEERING, REIMAGINED

INTRODUCTION

As part of the Whitefish Transportation Plan update, an analysis was conducted for two of the community's key corridors: US-93 (MT-40 Junction to 13th Street) and Wisconsin Ave (Edgewood Place to Big Mountain Road). The goal of the analysis was to explore opportunities to improve safety, level-of-service, connectivity, and access along the corridors and adjacent roadways. This effort was helpful in development of both the Major Street Network (MSN) and Transportation Safety Management (TSM) recommendations for the Whitefish Transportation Plan.



HIGHWAY 93 SOUTH CORRIDOR PLAN (HWY 40 TO 13TH ST)

A corridor-level access plan was developed for the US-93 corridor from MT 40 to 13th Street. The intent of the effort was to look at opportunities to improve safety, level-of-service and corridor connectivity. This effort pulls forward recent median concepts developed as part of the Highway 93 South Corridor Study developed by the City of Whitefish.

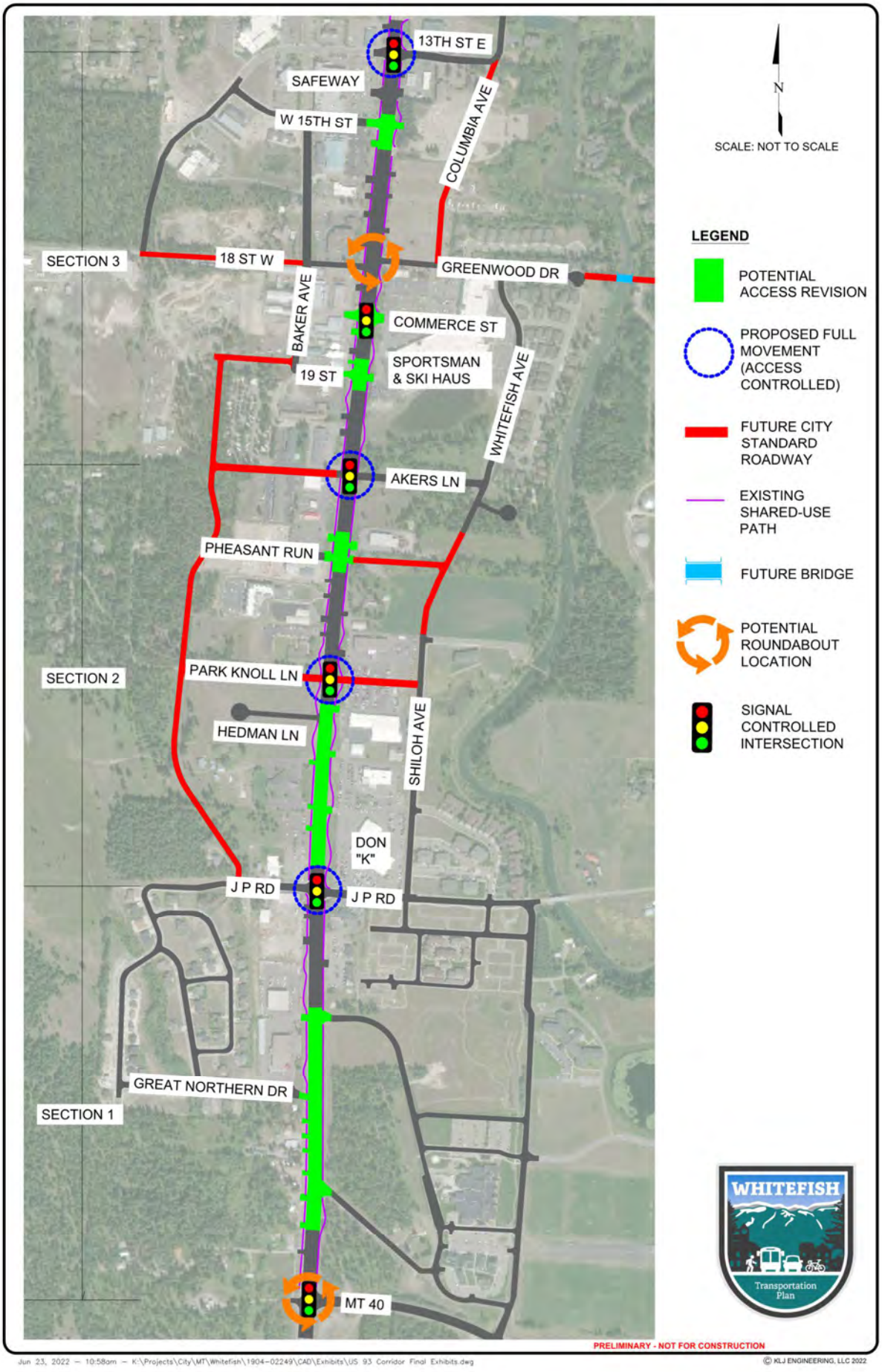
The corridor-level access plan also pulls forward previous planning by the City of Whitefish to develop a logical parallel roadway system to US-93 to support improved traffic circulation adjacent to the corridor, specifically the extension of Baker Avenue, Columbia Avenue and Whitefish Avenue. Using metrics from the 1993 EIS for Highway 93, the corridor traffic volume exceeds the threshold for development of a median section. The US-93 corridor plan area is shown in Figure 7.1.

MDT is working on a separate access management plan for Hwy 93 from Whitefish to Kalispell. The scope of that study has not been determined. This transportation plan includes a high level look at access management north of Highway 40 to 13th. The city has requested that MDT do a more detailed access management study of this area.

For this analysis, the corridor has been broken into three sections for presentation of the proposed roadway improvements:

- Section 1 – MT-40 to JP Road
- Section 2 – JP Road to Akers Lane
- Section 3 – Akers Lane to 13th Street

FIGURE 7.1: US-93 CORRIDOR PLAN AREA



Section 1 – MT-40 to JP Road

Two options were evaluated at the intersection of US-93 and MT-40.

Option 1 perpetuates the existing controlled intersection and lane configuration with the introduction of raised median in the southbound turn-lane.

Option 2 introduces a multi-lane roundabout that allows for through traffic traveling north/south, turning movements from and to MT-40, and turning movements from and to Whitefish Marine. This roundabout will accommodate large truck, (WB-67) movements safely through the roundabout. Option 2 should reduce queuing and platooning issues that occur at peak hours at this intersection; while improving safety by promoting lower speeds, traffic calming, reduced conflict points, and improved operational performance.

Raised median and left-hand turns bays will replace the existing two-way left-turn (TWLT) lane throughout this section. This configuration will restrict left-hand turns and reduce the chance of center lane conflict and centerline crossover collision. Left-turn opportunities will be provided at MT-40 traveling from the north/south, at Great Northern Drive traveling from the south, and at JP Road traveling from north/south while traveling along US-93 for both Options 1 and 2. Future access revision from Iverson Lane to Hospital Way may need to be considered where raised median eliminates left-hand turn movements.

The intersection at US-93 and JP Road will preserve the existing controlled intersection and lane configuration with the introduction of raised median in the left turn-lane on both north and south sides of US-93.

Section 1, Option 1 is shown in Figure 7.2 on page 114; Section 1, Option 2 is shown in Figure 7.3 on page 115.

Section 2 – JP Road to Akers Lane

A Baker Avenue Extension from JP Road to Akers Lane will also have intersections at Park Knoll Lane and Pheasant Run. This connection will be designed and constructed to Whitefish City street design standard and provide an alternative north/south route to US-93 throughout this section of the corridor.

Raised median and left-hand turns bays will replace the existing TWLT lane throughout this section of the corridor. This modification will restrict left-hand turns and reduce the chance of center lane conflict and centerline crossover collision. Left-turn opportunities will be provided at the Don K auto dealership and First Baptist Church of Whitefish, Park Knoll Lane, Pheasant Run, and Akers Lane traveling from the north/south. Future access revision from JP Road to Hedman lane may need to be considered where raised median eliminates left-hand turn movements.

The existing private road Park Knoll will be brought up to the City street design standard from US-93 west to the new North Baker Avenue Extension from JP Road to Akers Lane. Also, a new connection of Park Knoll Lane to Shiloh Avenue to the east will be constructed to promote east/west movement from Shiloh Avenue to the new North-South connection. This connection will provide an alternative for north/south travel along US-93 in this vicinity and reduce US-93 traffic volumes.

Shiloh Avenue will be extended north from Lenna Joy Drive to connect at Whitefish Avenue near Bonita Circle. This connection will provide north/south local route as well as a connection to a Pheasant Run extension from US-93 to the west. The Pheasant Run extension will be constructed to promote east/west movement from Shiloh Avenue to the new North-South connection. This connection will provide an alternative for north/south travel along US-93 in this vicinity and reduce US-93 traffic volumes.

Akers Lane will also be extended from US-93 west to the Baker Avenue Extension from JP Road. Similar to the extensions mentioned at Park Knoll Lane and Pheasant Run, this connection will further provide an alternative for north/south travel along US-93 in this vicinity and reduce US-93 traffic volumes.

Section 2 is shown in Figure 7.4 on page 116.

FIGURE 7.2: SECTION 1 (MT-40 TO JP ROAD), OPTION 1

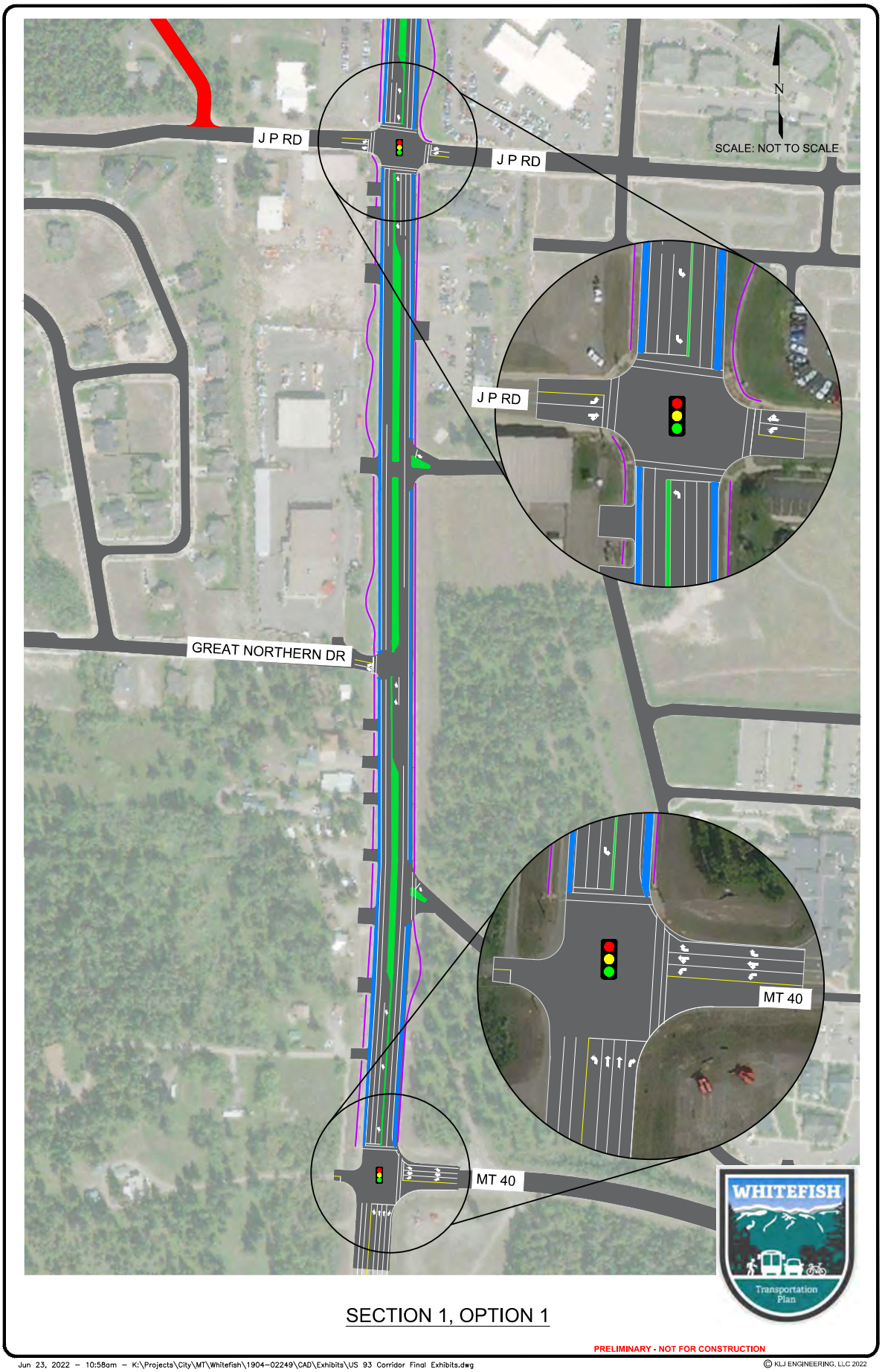


FIGURE 7.3: SECTION 1 (MT-40 TO JP ROAD), OPTION 2

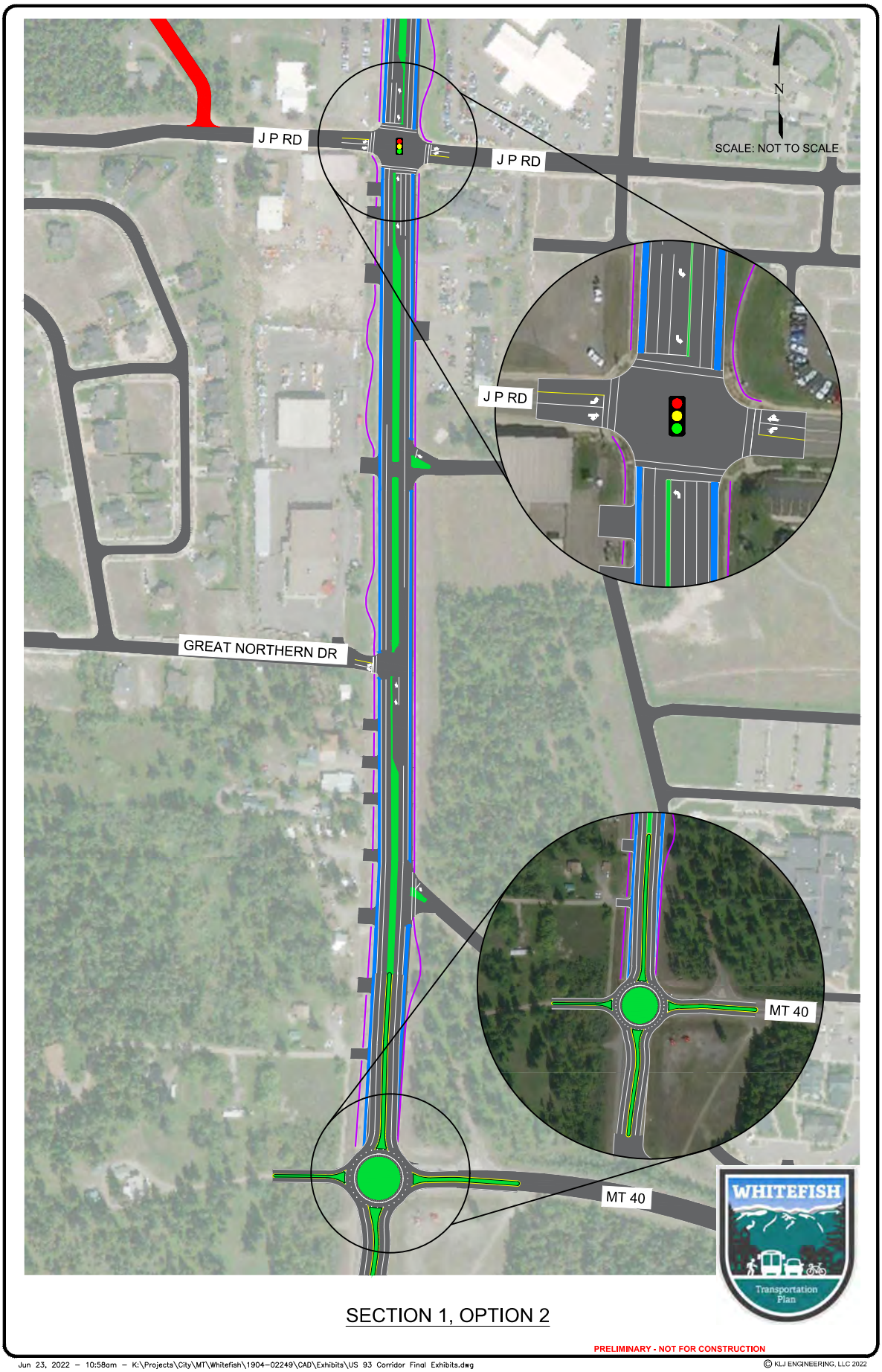
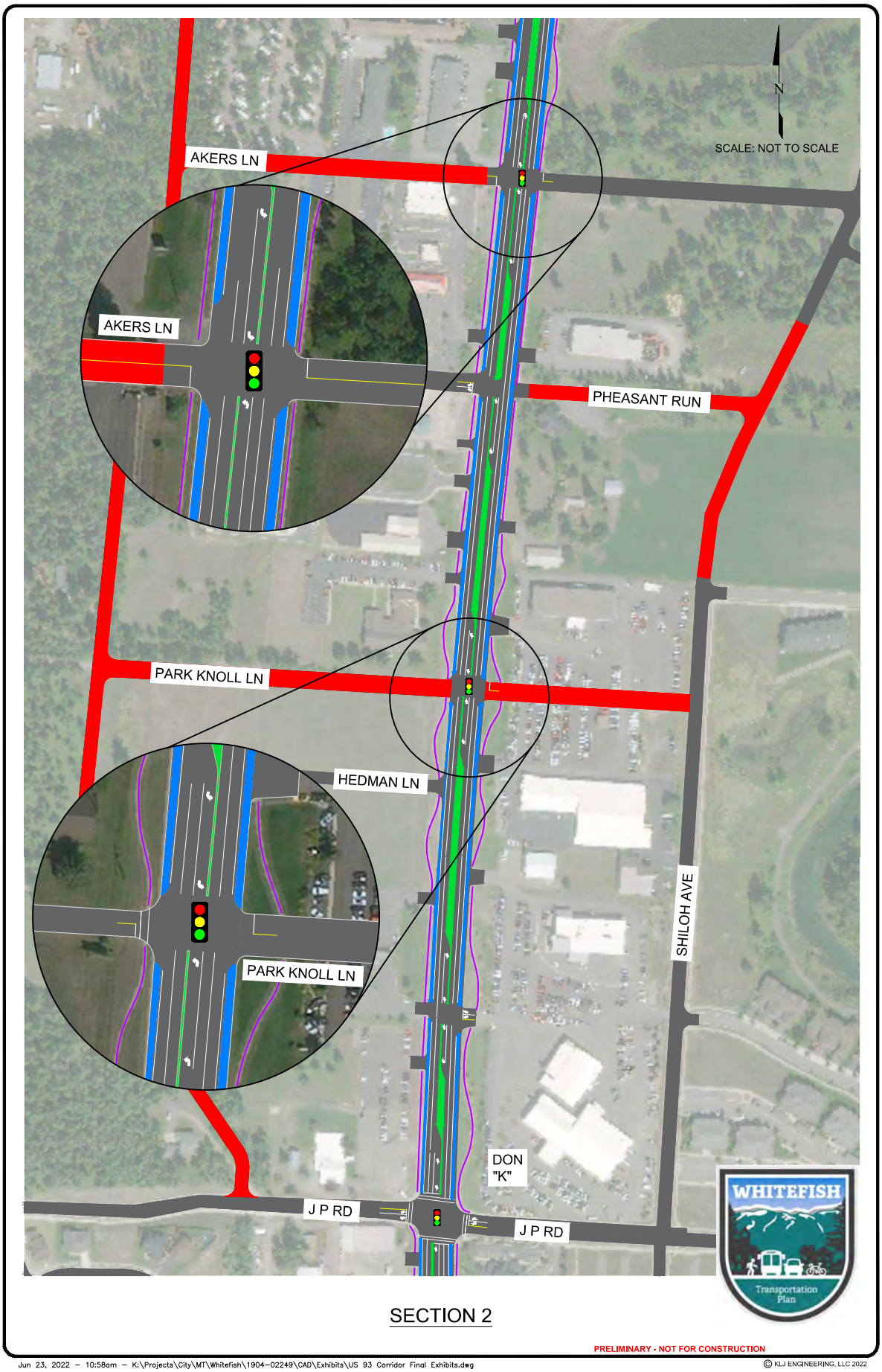


FIGURE 7.4: SECTION 2 (JP ROAD TO AKERS LANE)



Section 3 – Akers Lane to 13th Street

Two options were evaluated for this section of the US-93 corridor at the intersections of Commerce Street, Greenwood Drive, and 18th Street West.

Option 1 introduces a traffic island at the intersection of Greenwood Drive that prevents left-turns onto US-93 and perpetuates the existing controlled intersection and lane configuration at US-93/Commerce Street with the introduction of raised median in the north/southbound turn-lanes.

Option 2 introduces a multi-lane roundabout that allows for US-93 through traffic and turning movements to and from Greenwood Drive and 18th Street West. This roundabout will accommodate large truck, (WB-67) movements safely through the roundabout. Option 2 will resolve safety issues created by the misalignment of Greenwood Drive and 18th Street West, promote traffic calming near the shopping mall, improve operational performance, and provide an east/west connection across US-93.

Raised median and left-hand turns bays will replace the existing TWLT lane throughout this section. This configuration will restrict left-hand turns and reduce the chance of center lane conflict and centerline crossover collision. Left-turn opportunities will be provided at Commerce Street traveling from the north/south, at Greenwood Drive traveling south, at 15th and 13th Streets traveling from north/south while traveling along US-93 for both Option 1. The Option 2 roundabout is similar to Option 1 raised median and left-turn movements; however, eliminates the left-turn movements at Commerce Street. Future access revision near 19th Street, Commerce Street, and 15th Street may need to be considered where raised median eliminates left-hand turn movements.

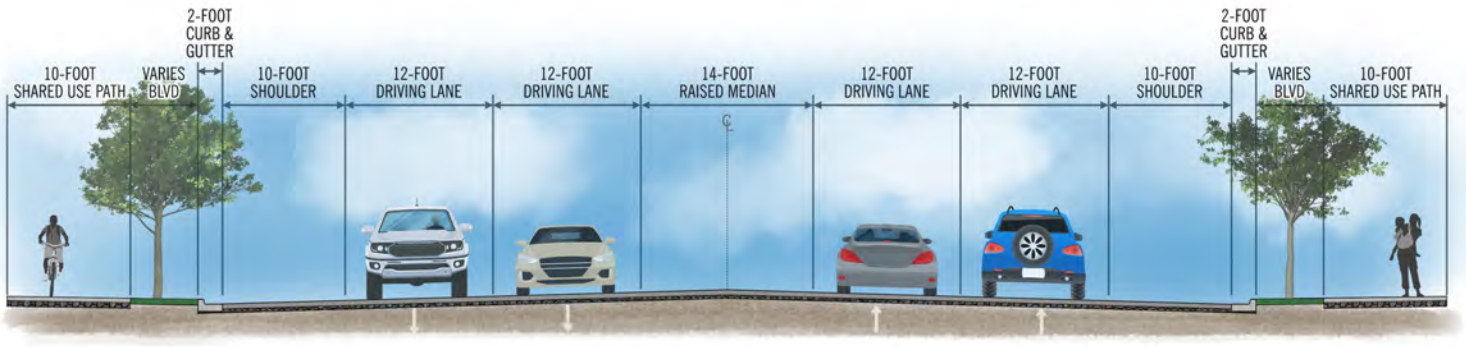
A connection from Akers Lane to 19th Street/Baker Avenue designed and constructed to Whitefish City street design standard will provide additional north/south route connection to the North-South connection outlined in Section 1. Furthermore, improvement of 18th Street West at Baker Avenue to Flathead Avenue will provide additional east/west connection in this corridor.

A north/south connection from Greenwood to 13th Street East will provide residential connection.

An east/west Greenwood Drive extension and bridge over the Whitefish River will connect future east/west travel in this section of the corridor.

A US-93 corridor typical section is shown in Figure 7.5. Section 3, Option 1 is shown in Figure 7.6 on page 118; Section 3, Option 2 is shown in Figure 7.7 on page 119.

FIGURE 7.5: US-93 CORRIDOR TYPICAL SECTION



Evaluation regarding landscaping related features in the medians of Highway 93 would be determined at a later date.

FIGURE 7.6: SECTION 3 (AKERS LANE TO 13TH STREET), OPTION 1

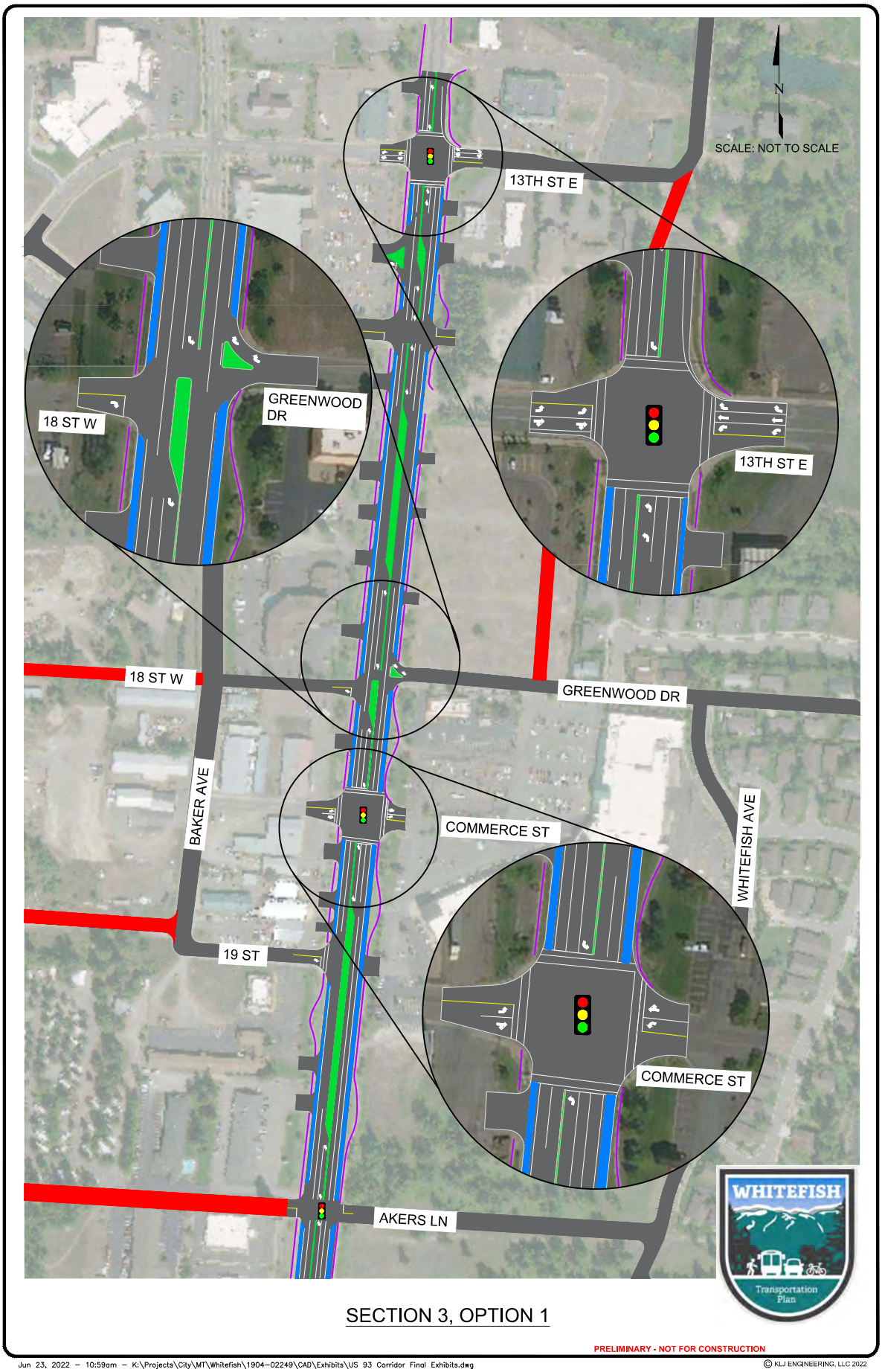
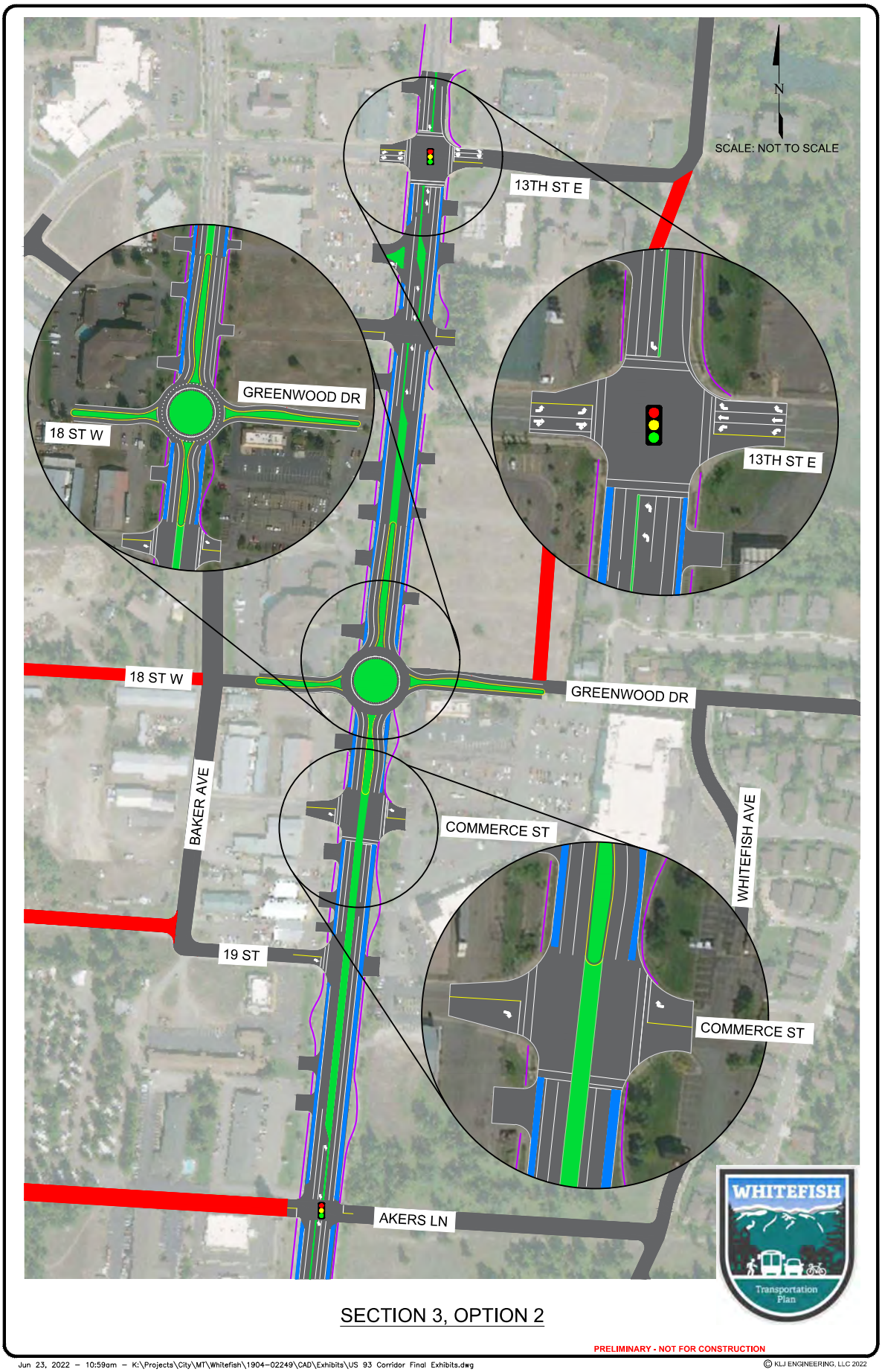


FIGURE 7.7: SECTION 3 (AKERS LANE TO 13TH STREET), OPTION 2



DOWNTOWN WHITEFISH HIGHWAY STUDY (2022)

The northern section of Hwy 93 beginning at 13th St was explored in the 2022 Downtown Whitefish Highway Study. A summary of the Study and its findings is provided as follows.

FIGURE 7.8: DOWNTOWN WHITEFISH HIGHWAY STUDY AREA

The intent of the Downtown Whitefish Highway Study was to analyze past design options for Hwy 93, identify any new ideas, and ultimately identify a solution that best addresses safety and operational concerns for all users now and into the future.

The study area (Figure 7.8) includes the section of Hwy 93 beginning at 13th St and continuing northward along Spokane Ave to 2nd St and westward on 2nd St to Baker Ave. The study area also includes Baker Ave between 2nd St and 13th St, and other existing or new street links between Spokane Avenue and Baker Avenue associated with Highway 93 improvement options proposed in previous studies.

The Seven alternatives were analyzed using a two-step screening process. The first step evaluated the concepts' ability to meet operational, safety, and implementation thresholds, recognizing that a project must meet the basic needs of the NHS highway facility and be feasible to implement to advance for further consideration. The second step considered multimodal accommodations, environment and character, and economic vitality.

Concept C received the highest score through the evaluation process and was identified by the Study as the preferred concept. The City of Whitefish diverges with MDT regarding the Study's final recommendation, and supports Concept G as the preferred design. Concepts C and G are shown in Figure 7.9 and Figure 7.10.

Concept C and Concept G diverge only in the segment of Hwy 93/Spokane Ave from 7th St to 2nd St. The City prefers the treatment of this segment in Concept G due to the superior multimodal accommodations that it provides, including larger buffers for safety, landscaping with trees, and fewer lanes for pedestrians to navigate. The City considers these features necessary to achieve the pedestrian-oriented environment that it envisions for Downtown Whitefish. Regardless of the disagreement between MDT and the City of Whitefish, improvements were agreed to along Baker Avenue and the intersection of 13th Street and Spokane Avenue. Both these improvements are included in the Transportation Plans Major Street Network (MSN) Recommendations and consider high priorities for implementation.

FIGURE 7.9: CONCEPT G

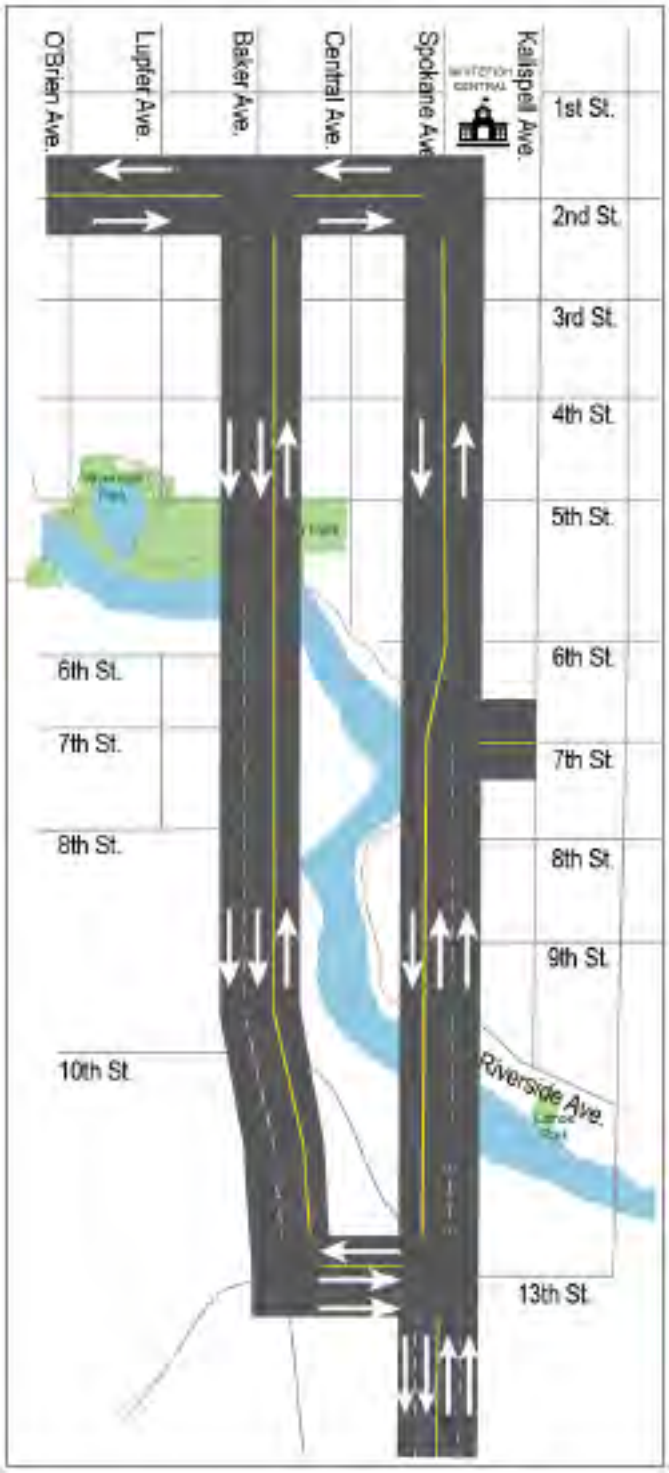
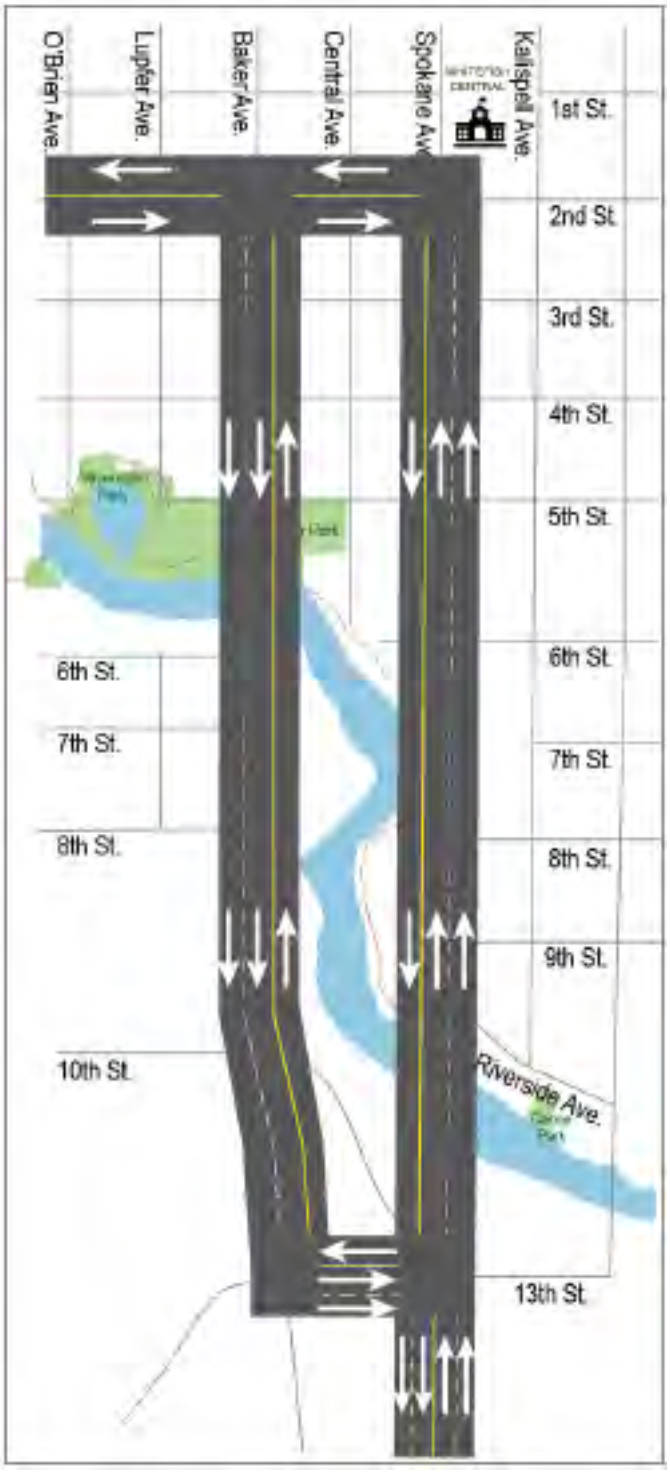


FIGURE 7.10: CONCEPT C



WISCONSIN AVENUE CORRIDOR PLAN (EDGEWOOD PLACE TO BIG MOUNTAIN ROAD)

A corridor level plan was developed for Wisconsin Avenue (Edgewood Place to Big Mountain Road) with the intent to address existing safety, level-of-service, and access challenges along the corridor. The corridor plan builds on work developed through the Wisconsin Avenue Corridor Plan (2018) as well as several recent small improvements and project concepts developed for the corridor. Due to the nature of this corridor, there is the potential for significant right-of-way and utility coordination needs associated with the recommended improvements.

The Wisconsin Avenue corridor plan area is shown in Figure 7.11.

The Wisconsin Avenue corridor has been broken into three sections for presentation of the proposed roadway improvements:

- Section 1 – Edgewood Place to Denver Street
- Section 2 – Denver Street to Glenwood Road
- Section 3 – Glenwood Road to Big Mountain Road

Section 1 – Edgewood Place to Denver Street

Raised median left-turn bays and TWLT lanes are proposed through this section. TSM project recommendation #3 is located at the intersection of Skyles Place and Wisconsin Avenue. This project includes a raised median beginning just south of Skyles Place which transitions into a left-turn bay for movements from Wisconsin Avenue onto Skyles Place. A similar approach will be used for the rest of this section, with a raised median and left-turn lane safely promoting northbound movements onto Woodside Lane and Denver Street.

A TWLT center lane will connect between the raised median left-turn bays from Woodside Lane to Denver Street. The center turn lane will provide ample left-turn movements to the many residential and commercial access points throughout this length of Wisconsin Avenue.

Intersection improvements at Skyles place, Woodside Lane, and Denver Street will include widening and the addition of dedicated left and right-turn lanes to help alleviate queuing issues onto Wisconsin Avenue.

Section 1 is shown in Figure 7.12 on page 124.

FIGURE 7.11: WISCONSIN AVENUE CORRIDOR PLAN AREA

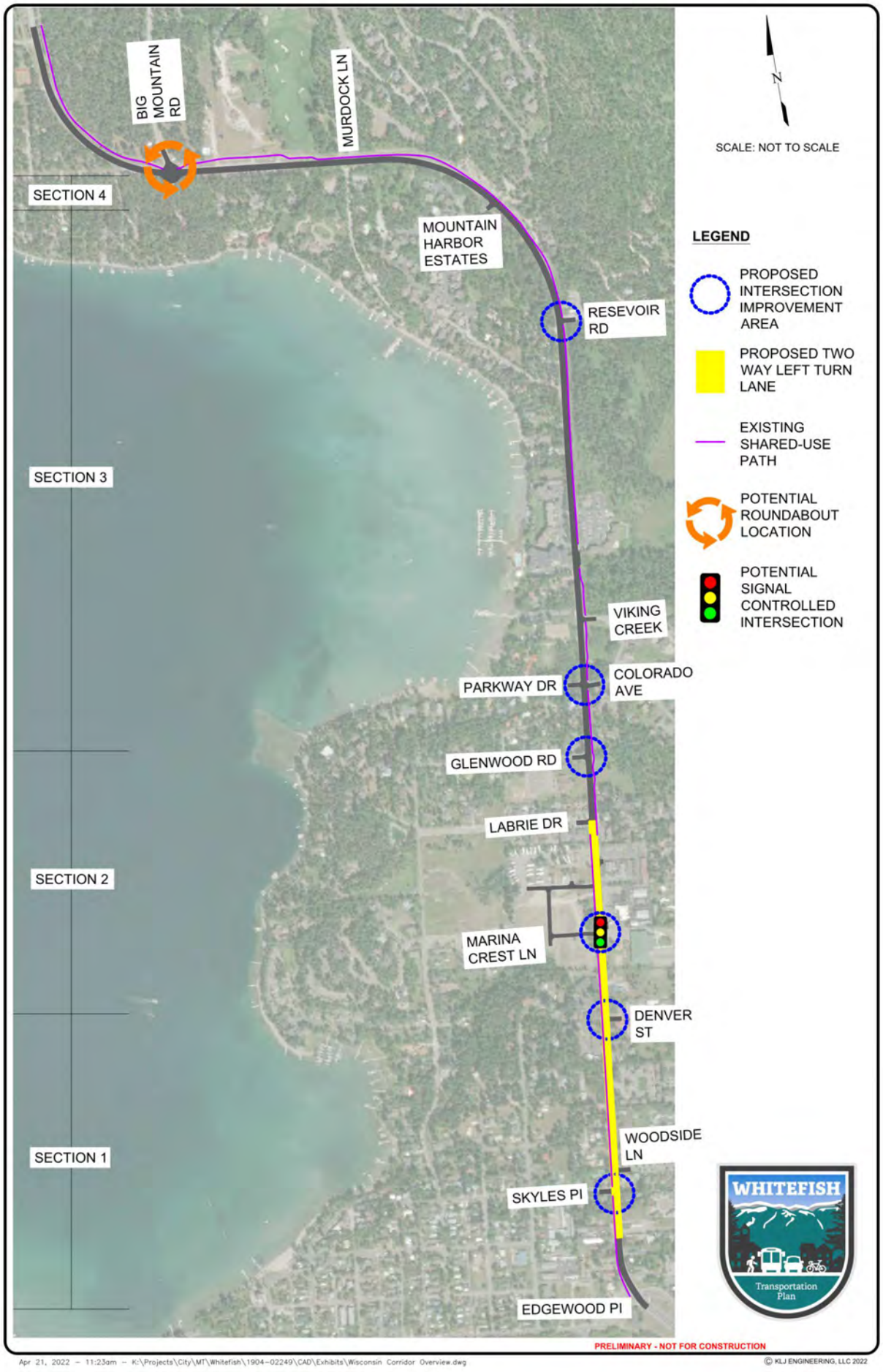
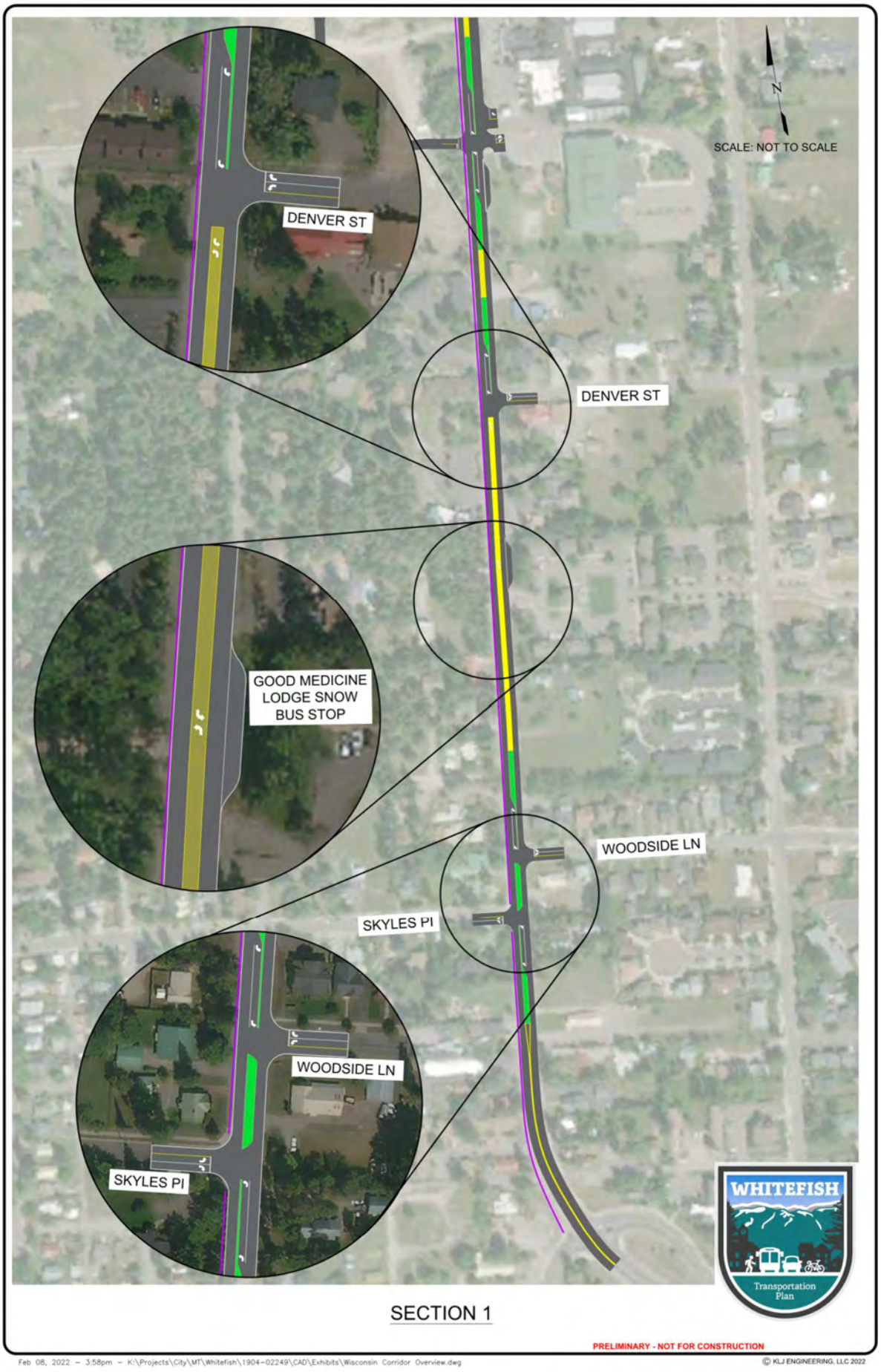


FIGURE 7.12: SECTION 1 (EDGEWOOD PLACE TO DENVER STREET)



Section 2 – Denver Street to Glenwood Road

Two options were evaluated at the intersection of Wisconsin Avenue and Marina Crest Road.

Option 1 continues the addition of the TWLT lane from the raised median turn bay at Denver Street to Labrie Drive. The addition of the TWLT center lane will improve level-of-service throughout this section by eliminating queuing that can occur when attempting a left-turn.

Option 2 introduces a new controlled intersection at Wisconsin Avenue and Marina Crest Road/Stumptown Ice Den access. Option 2 should aid in traffic movements issues that occur at peak hours at the Stumptown Ice Den and neighboring businesses, while improving safety by promoting traffic calming and improved operational performance.

A TWLT center lane will connect between the raised median left-turn bay at Denver Street to Labrie Drive. The center turn lane will provide additional left-turn movements to the many residential and commercial access points throughout this length of Wisconsin Avenue. The Option 2 intersection would use the center turn lane as a left-turn lane in both north/south travel directions.

A final raised median and left-turn lane would be added at Glenwood Drive for left-turns heading north on Wisconsin Avenue.

Section 2, Option 1 is shown in Figure 7.14 on page 126; Section 2, Option 2 is shown in Figure 7.15 on page 127.

Section 3 – Glenwood Road to Big Mountain Road

Intersection improvements at Colorado Avenue will include widening and the addition of dedicated left and right-turn lanes to help alleviate queuing issues onto Wisconsin Avenue.

A raised median and left-turn bay would be added at Mountain Harbor Estates for left-turns heading north on Wisconsin Avenue.

The Mountain Gateway Development has proposed a single-lane roundabout at the intersection of Wisconsin Avenue and Big Mountain Road. The roundabout would allow for through traffic traveling north/south and turning movements from and to Big Mountain Road.

This plan also proposes a single-lane roundabout that will accommodate large truck, (WB-67) movements safely through the roundabout. The roundabout should reduce queuing and platooning issues that occur at peak hours at this intersection; while improving safety by promoting lower speeds, traffic calming, and improved operational performance. However, this improvement is a significant investment and may need to be phased in as funding become available.

A Wisconsin Avenue corridor typical section is shown in Figure 7.13. Section 3 is shown in Figure 7.16 on page 128. Section 4 is shown in Figure 7.17 on page 129.

FIGURE 7.13: WISCONSIN AVENUE CORRIDOR TYPICAL SECTION

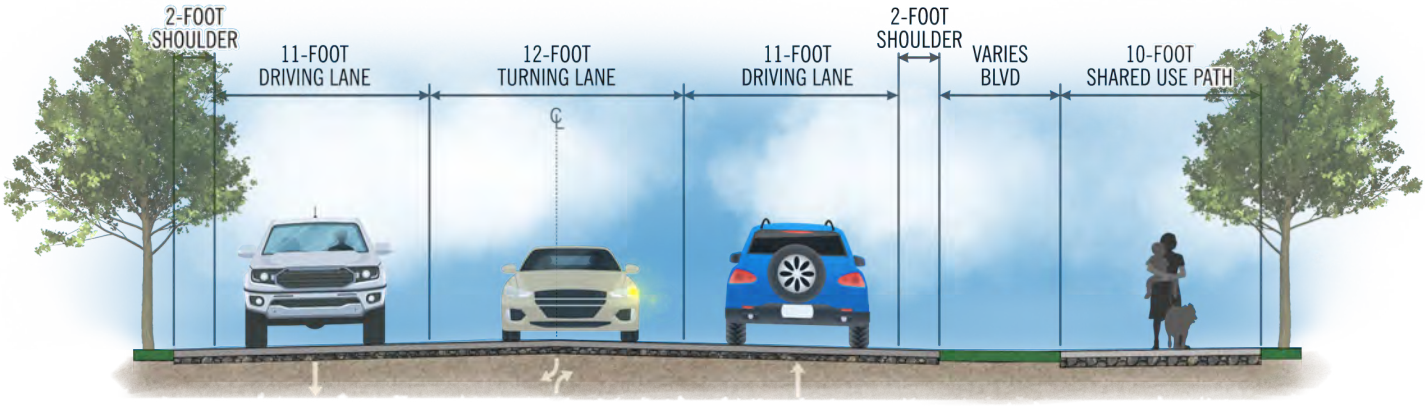


FIGURE 7.14: SECTION 2 (DENVER STREET TO GLENWOOD ROAD), OPTION 1

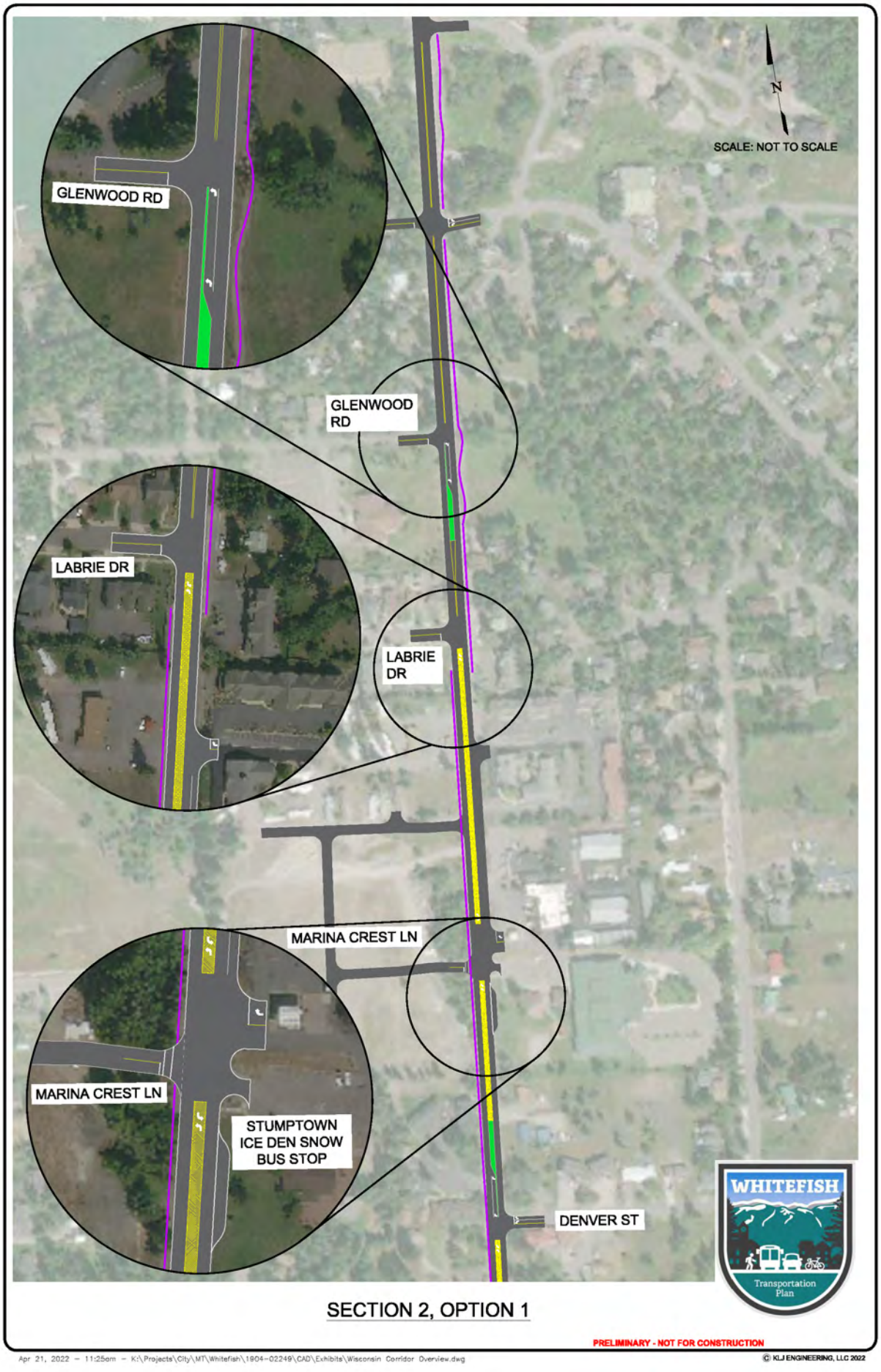


FIGURE 7.15: SECTION 2 (DENVER STREET TO GLENWOOD ROAD), OPTION 2

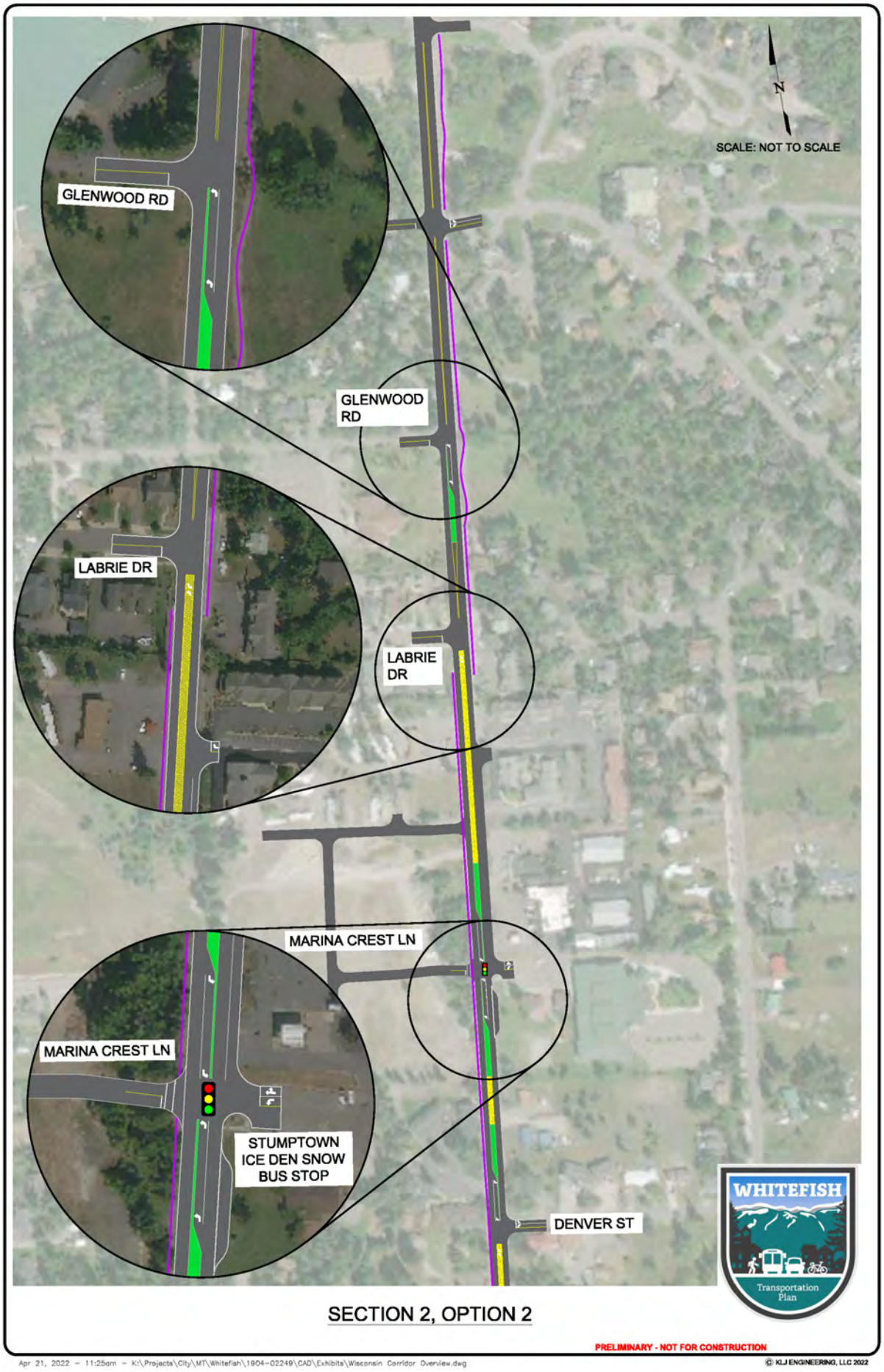


FIGURE 7.16: SECTION 3 (GLENWOOD ROAD TO BIG MOUNTAIN ROAD)

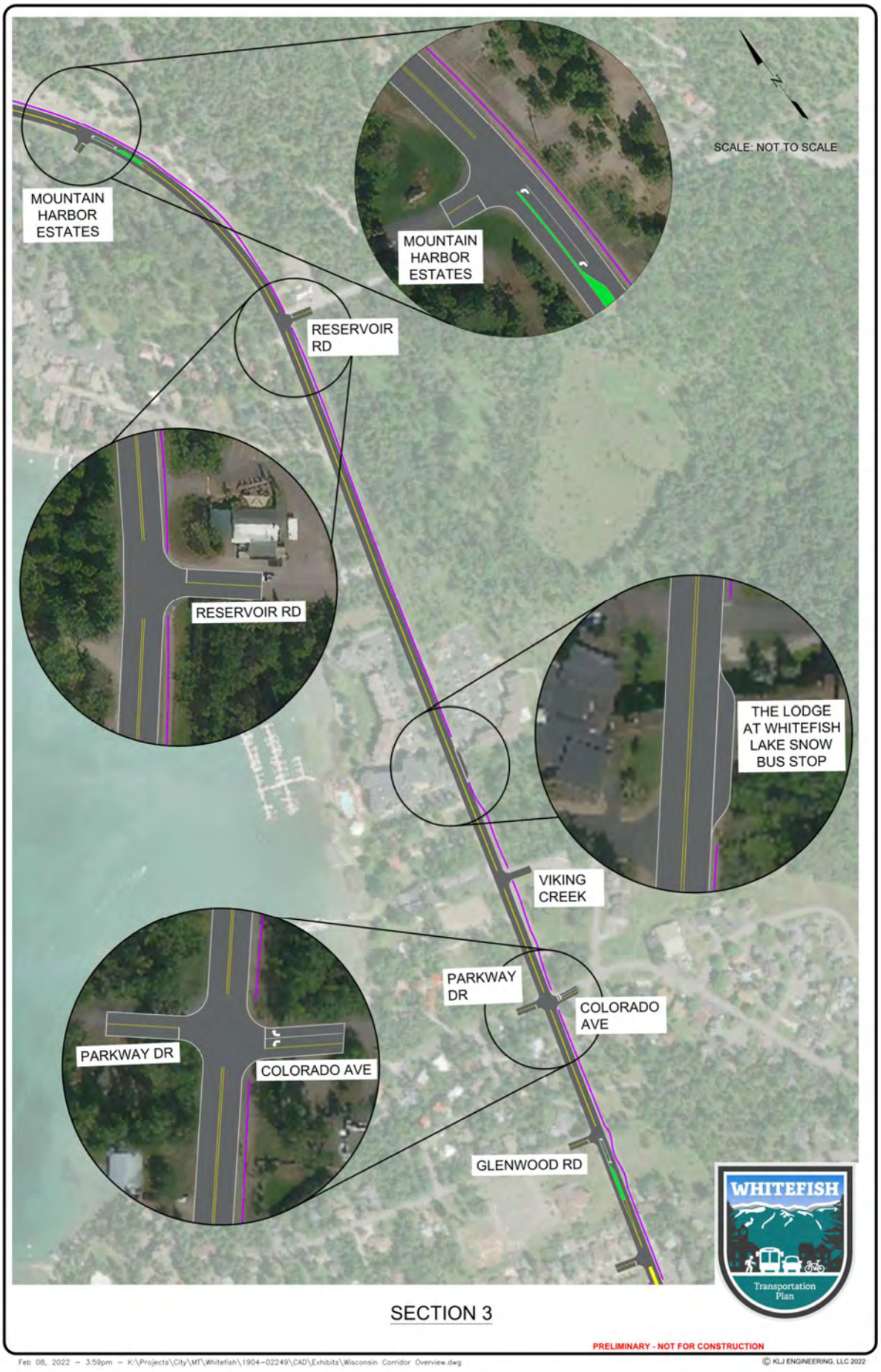
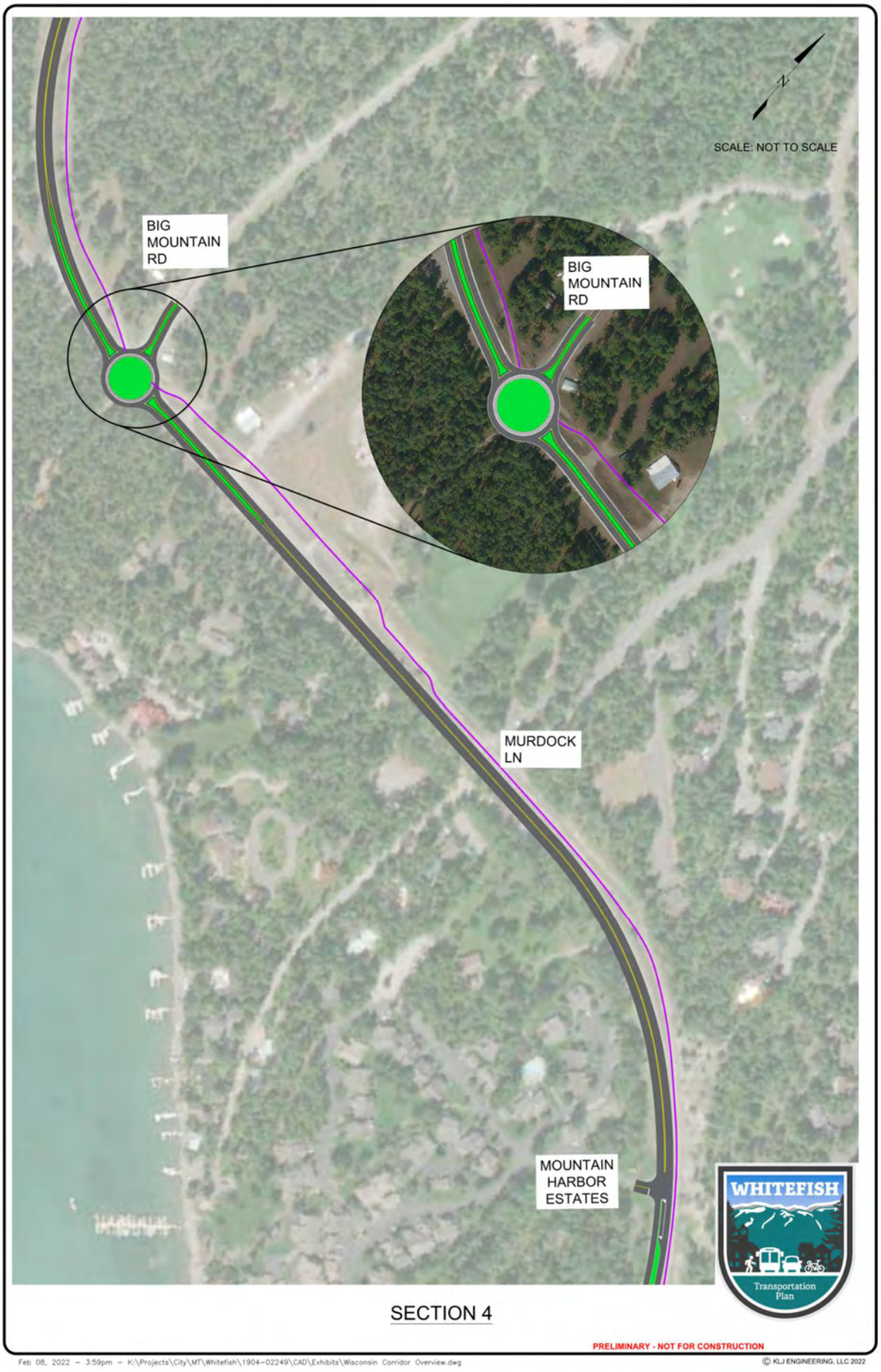
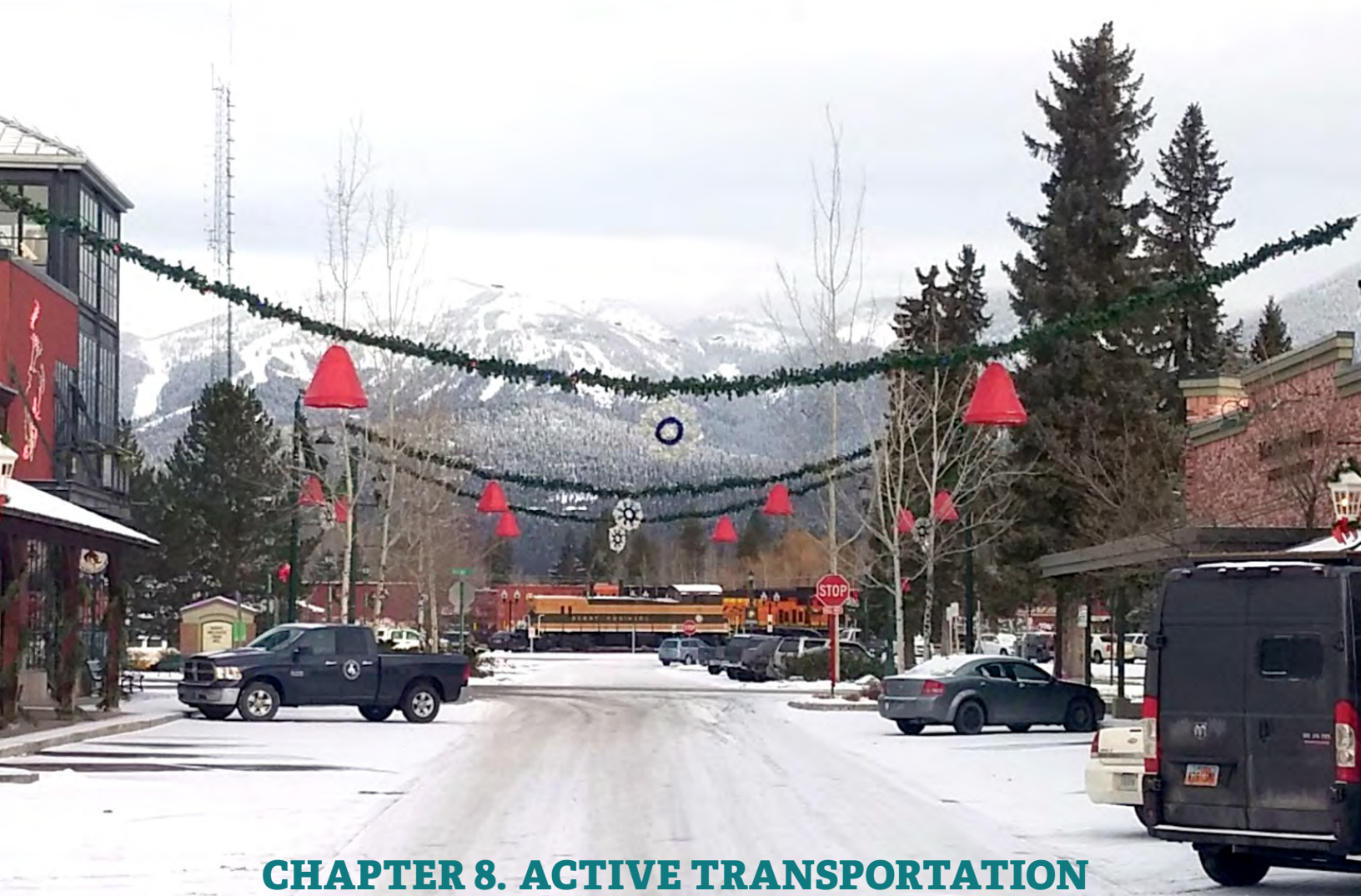


FIGURE 7.17: SECTION 4 (MOUNTAIN HARBOR ESTATES TO BIG MOUNTAIN ROAD)



WHITEFISH

Transportation Plan



CHAPTER 8. ACTIVE TRANSPORTATION

October 2022

KLJ

ENGINEERING, REIMAGINED

INTRODUCTION

A comprehensive transportation plan requires that all modes be considered in prioritizing improvements for people traveling in and through Whitefish. Growth in the Flathead Valley and in and around Whitefish has placed considerable demand on the transportation network, including that which serves the walking and cycling communities. As the population continues to grow, housing costs continue to rise, and development extends further and further from the Whitefish core, offering multiple modes of connectivity through a comprehensive sidewalk network, bike lanes, and protected paths will continue to be a priority in the Whitefish community. Studies have shown that multimodal infrastructure provides a direct economic benefit to communities, in addition to improving public health and wellness. Prioritizing continued maintenance and improvement of these facilities in Whitefish will continue to support public health initiatives for residents and visitors, offset travel costs for commuters, and ensure that the quality of life that has drawn people to Whitefish will remain intact to serve future generations.

Whitefish has a history of planning for bike and pedestrian infrastructure as both a means of travel as well as a recreational amenity. Given the growth projected over the next twenty-year planning horizon, closing gaps, improving access, and creating safe routes to school, work, and play should continue to be a factor when prioritizing holistic transportation improvements. A description of non-motorized facility types and design considerations is shown in Table 8.1.

The City of Whitefish has conducted multimodal planning as part of numerous planning efforts over the last twenty-five years, providing significant insight into where to begin the multimodal analysis for this long-range transportation plan. The comprehensive 2017 Connect Whitefish Bicycle and Pedestrian Plan included extensive public participation.

This chapter of the long-range transportation plan aims to synthesize previous plan recommendations related to bicycle and pedestrian mobility and leverage these recommendations to prioritize projects while evaluating:

- The status of an identified project and whether it has been completed, is underway, has been budgeted for, or remains a longer-term objective;
- The project's alignment with transportation network priorities identified in the MSN and TSM project lists; and
- How the project provides a benefit to the Whitefish community, using an established set of metrics derived by staff and Study Review Committee.

METHODOLOGY

The first step in the evaluation process was to map the existing bicycle and pedestrian network and incorporate past plan recommendations for multimodal network improvements. Understanding the existing conditions for cyclists and pedestrians in light of where the City has grown and will continue to grow was necessary to understand where connections and additional safety measures should be proposed and prioritized. The *Connect Whitefish Bike/Ped Plan*, the *Downtown Whitefish Master Plan*, and the *Highway 93 South Corridor Plan* served as the backbone for this evaluation, though other plan and policy documents including the City of Whitefish Growth Policy were used as guideposts for where future development is anticipated. The map shown in Figure 8.1 on page 135 and the inset map in Figure 8.2 on page 136 reflect the synthesis of these plans and policy documents and include additional suggestions for safety and connectivity that came out of staff, stakeholder, and team discussions. The maps identify the following types of multimodal facilities:

- Existing and proposed sidewalks
- Existing and proposed shared use paths
- Existing and proposed bike lanes
- Existing and proposed cycletracks
- Proposed safe routes to schools
- Proposed bike/ped bridges

Each facility type is represented by a different color, with existing facilities shown by a solid line and proposed facilities shown by a dotted line. The proposed facility types were further segmented into projects, identified alphabetically and numerically using an abbreviation for the facility type (for example, a shared use path is represented by an "SP") and corresponding segment/project number. The color of the letters and numbers corresponds to the color of the representative facility type proposed for additional clarity. The project identifiers on the map correspond to the identifiers in Appendix C.

Table 8.1: Non-motorized Facility Types

FACILITY TYPE	ID	DEFINITION	DESIGN CONSIDERATIONS
Sidewalk	SW	A paved walkway for pedestrians at the side of a street. *(Merriam-Webster)*	Where a sidewalk facility is proposed they shall have a desired minimum through zone (unobstructed pedestrian travelway) of 6 feet and an absolute minimum of 5 feet. Where a sidewalk is directly adjacent to moving traffic, the desired minimum width of the facility is 8 feet, providing a minimum 2-foot buffer for street furniture and utilities. (National Assocation of City Transportation Officials)
Shared Use Path	SP	Also called "mixed-use" or "multi-use" path, a shared use path is separated from motorized vehicle traffic. It may be built within road right-of-way or in an independent right-of-way specific to the path's use. These paths may be used by and must be designed for all users including bicyclists, pedestrians, skaters, wheelchair users, joggers and other non-motorized users. *(FHWA)*	Where a shared path is proposed, the facility shall be designed to support the speed and volume of expected user types as well as the context (urban vs. rural) in which the path sits. Paths should be 10 feet wide whenever possible; whereas paths 12 to 14 feet in width are recommended for areas of heavy use with high concentrations of multiple users.
Bike Lane	BL	A portion of the roadway that has been designated by striping, signage, and pavement markings for the preferential or exclusive use of bicyclists. A bike lane is distinguished from a cycle track in that it has no physical barrier (bollards, medians, raised curbs, etc.) that restricts the encroachment of motorized traffic. *(National Assocation of City Transportation Officials)*	Where a bike lane facility is proposed, it may encompass any of the following elements, dependent on the right-of-way present and the needs to the specific roadway: mixed-traffic sharrow streets, striped bike lanes, and protected bike lanes. When protected, the buffering may be created through the use of expanded striping or the orientation of the bike lane to vehicular parking, using cars as the means of physical seperation from other travel modes.
Cycletracks	CT	A cycle track is an exclusive bike facility that combines the user experience of a separated path with the on-street infrastructure of a conventional bike lane. A cycle track is physically separated from motor traffic and distinct from the sidewalk. *(National Assocation of City Transportation Officials)*	Where a cycletrack facility is proposed it may be either street-level or raised and one-way or two-way, depending on the road right-of-way present and the configuration of travel lanes. Facility protection will either occur through the use of bollards or through vertical seperation and the use of furnishing zones to create added protection for the cyclist.
Safety Improvements	S	Safety improvements identified reference crosswalk markings, wayfinding and traffic signage, and signalization specific to improving and expanding Safe Routes to School routes in the eastside neighborhoods.	

FIGURE 8.1: COMPREHENSIVE BIKE/PED FRAMEWORK MAP

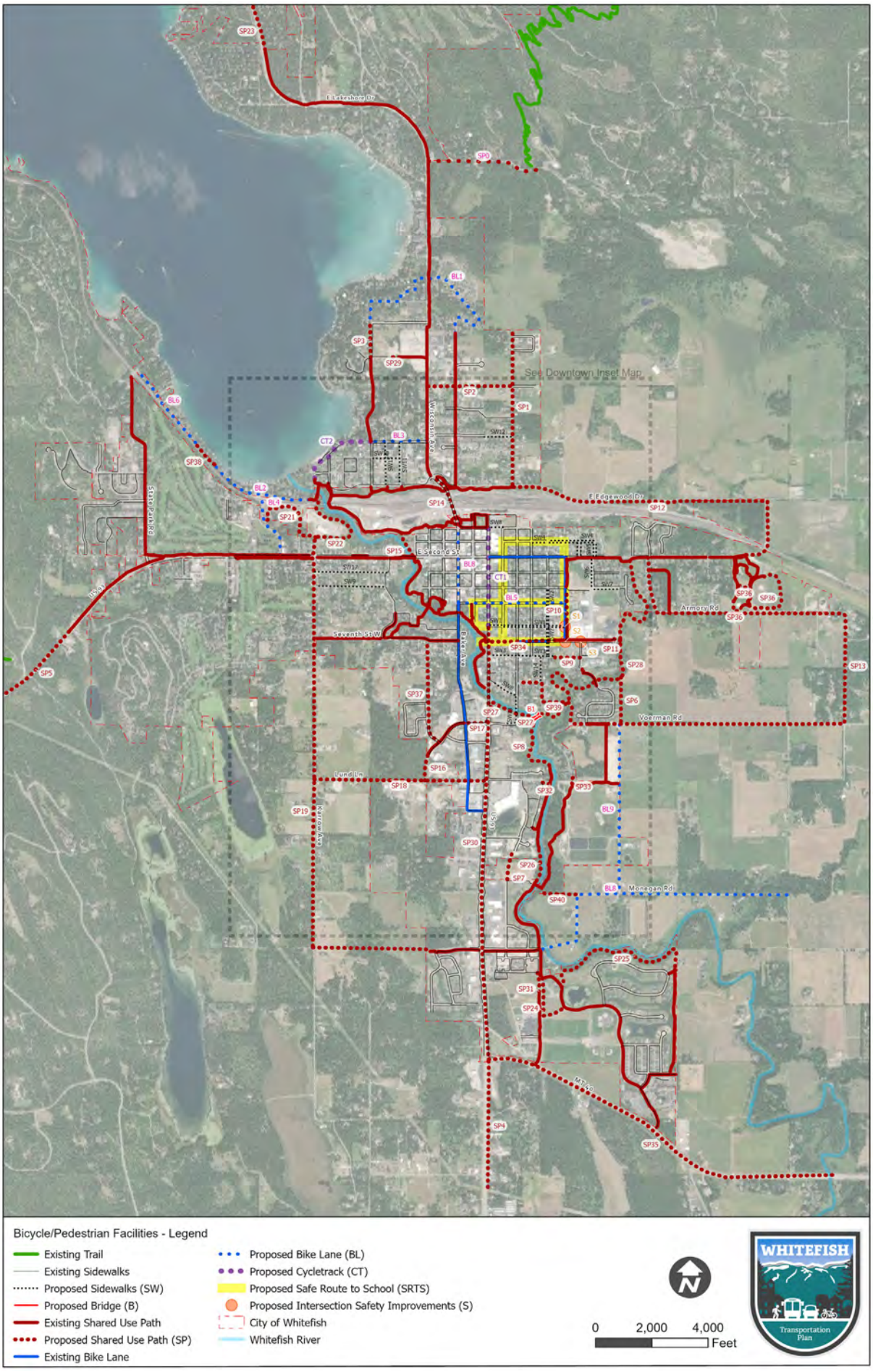
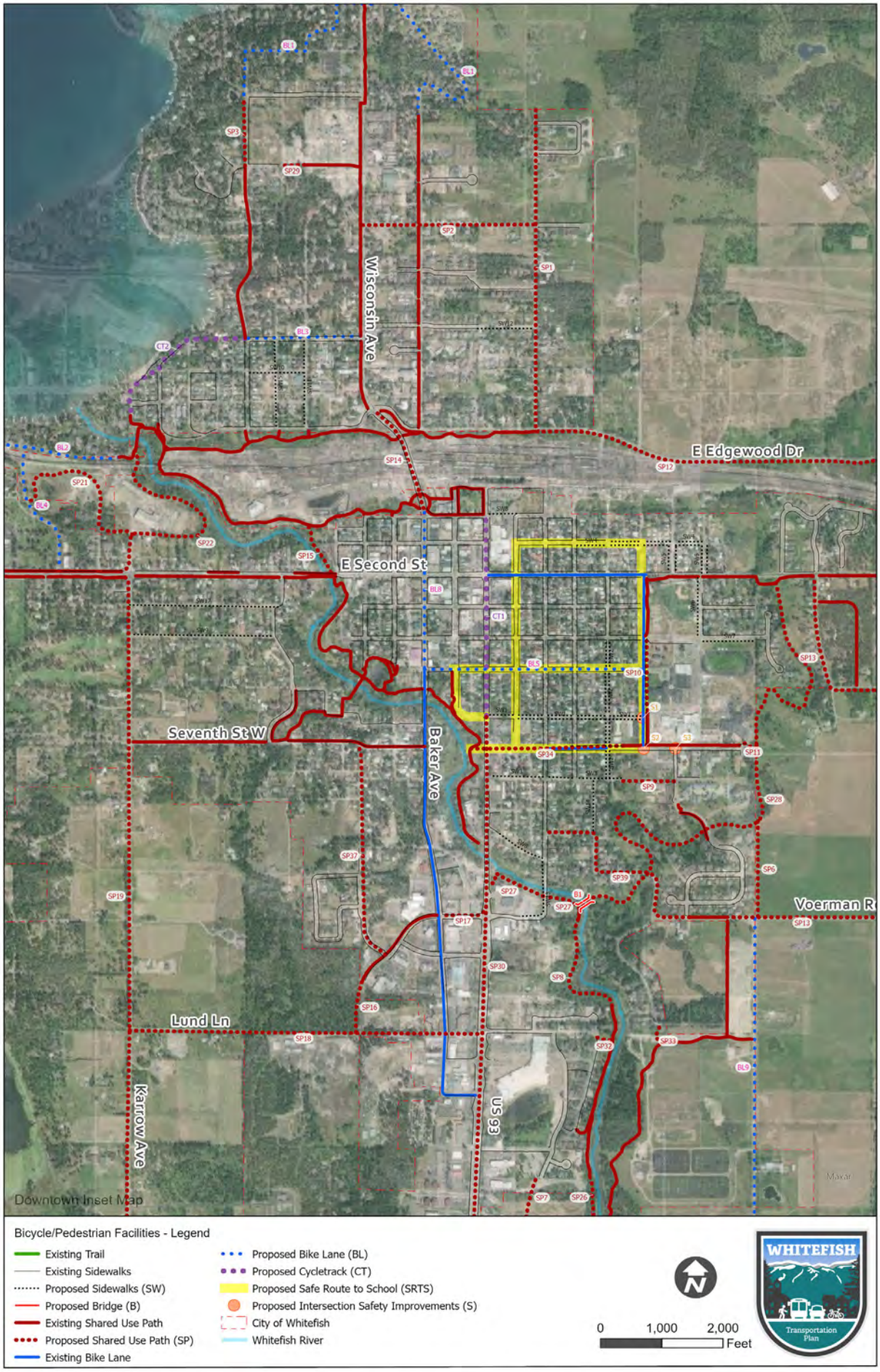


FIGURE 8.2: COMPREHENSIVE BIKE/PED FRAMEWORK MAP (INSET)



Once projects were determined, a set of existing and future conditions were established to evaluate, rank and prioritize each multimodal project proposed. These criteria were organized around four distinct categories: **active transportation**, **safety**, **congestion reduction**, and **connectivity**. The following conditions were determined to be important benchmarks of this prioritization process:

» The facility's contribution to the Whitefish active transportation network and whether or not the facility will:

- Provide residents and visitors with better access to the Whitefish recreational trail system;
- Support the existing urban trail system serving residents and visitors; or,
- Provide a direct link between an existing park or open space.

» Whether a proposed facility will support public safety because it:

- Is located within an established School Zone or is within ¼-mile of a school;
- Supports an existing Safe Route to School or expands the Safe Routes to School network to serve adjacent neighborhoods and students;
- Prevents an at-grade crossing of the railroad tracks; or,
- Responds to a previous bike or pedestrian-related conflict, assessed based on whether a proposed connection is located within ¼ mile of a previous crash involving a bike or pedestrian.

» Whether a proposed facility will reduce traffic congestion to and through Whitefish by:

- Supporting infill development or redevelopment in the community's core (the area generally defined as "downtown" Whitefish);
- Supporting regional connectivity beyond existing City limits;
- Serving areas where multi-family development exists or is proposed in the future, based on the City's future land use map and an evaluation of existing zoning;
- Providing a direct link to a transit stop or hub; or,
- Offering an alternative to vehicle travel in a heavily used area or corridor (Highway 93, Baker and Wisconsin Avenues, generally).

» The proposed facility supports greater connectivity in the Whitefish community because it:

- Joins a larger multimodal network as opposed to being a single, stand-alone facility;
- Bridges a major walking or biking barrier (such as the Highway 93 corridor or the BNSF rail line);
- Provides an east/west link between existing neighborhoods, the downtown core, and/or schools;
- Provides a north/south link between existing neighborhoods, the downtown core, and/or schools;
- Is located within a primary entrance corridor;
- Provides a bicycle or pedestrian facility in an area where none exist;
- Links a missing gap in the Whitefish River Trail; or,
- Directly serves or supports users of Whitefish Mountain.

Each proposed project was evaluated for whether or not it met a condition listed above. If met, the number "1" is shown by a segment in the evaluation matrix provided in Appendix C. The number of conditions each proposed segment met were then totaled, and those totals are represented at the bottom of the spreadsheet. Proposed projects that met more criteria than others effectively ranked higher in terms of priority than those projects meeting only a handful of the established criteria. Because the Whitefish River Trail system is a heavily prioritized recreational amenity in the Whitefish community, proposed project segments that link a missing gap in the river trail system received a score of two points, thereby increasing a project's score and elevating it as a priority in the assessment.

PRIORITY RANKING

Following evaluation, project scores were totaled. For cycletrack, sidewalk, bike lane, and safety projects, those projects that scored seven points or more were considered high priority projects, having met a significant number of criteria across all four categories and thereby demonstrating a clear and comprehensive benefit to the Whitefish community. Due to the number of shared use path projects identified (40 total), priority shared use path projects were identified as those scoring eight or more points, narrowing a much broader field of influential improvements. Projects meeting these priority ranking thresholds are listed by highest to lowest score in Table 8.2.

Table 8.2: Bicycle and Pedestrian Project Priority Rankings

PROJECT IDENTIFIER	PROJECT DESCRIPTION	PROJECT TYPE	SCORE
CT1	Highway 93 – Sixth Street to Railway Street	Cycletrack	13
CT2	Skyles Place Dakota to Lakeside Boulevard (to be constructed in May 2022)	Cycletrack	13
SP14	Baker to Wisconsin – Viaduct Connection, Railway Street to Edgewood Place (*already planned for construction)	Shared Use Path	12
SP15	Whitefish River Trail – Riverbend Condos, Miles Ave	Shared Use Path	11
SP5	Highway 93 – West of Mountainside Drive (design is complete)	Shared Use Path	10
SP27	Whitefish River Trail – Walgreens & Duck Inn	Shared Use Path	10
SP30	Highway 93 South (Hwy 40 to 7th Street East)	Shared Use Path	10
SP8	Whitefish River Trail – Old Hospital	Shared Use Path	9
SW3	Eighth Street East – Highway 93 to Park Avenue	Sidewalk	9
SP26	Whitefish River Trail Connection – Les Schwab and Dalen	Shared Use Path	9
BL5	Fifth Street – Highway 93 to Pine Avenue (may be developed as a shared use path in the future)	Bike Lane	9
BL3	Skyles Place – Wisconsin Ave. to Dakota Avenue	Bike Lane	8
SW1	Sixth Street East – Highway 93 to Pine Avenue	Sidewalk	8
SP2	Denver Street – Wisconsin Avenue to Texas Avenue	Shared Use Path	8
SP34	Seventh Street East (Spokane Avenue to Pine Avenue)	Shared Use Path	8
SP38	W. Lakeshore Drive and Birch Point Drive Connection	Shared Use Path	8
SW4	First Street – Somers Avenue to Fir Avenue	Sidewalk	8
SW6	Fir Avenue – E. Second Street to Fourth Street	Sidewalk	8
SW14	Park Avenue – Eighth Street to Tenth Street (may be developed as a shared use path in the future)	Sidewalk	8
SP39	Park Avenue – Voerman Road Extension to 10th Avenue via Whitefish River Trail	Shared Use Path	8
S1	Sixth Street and Pine Avenue Intersection	Safety Improvement	7
BL1	Colorado Avenue to Wisconsin Avenue Connection	Bike Lane	7

PROJECT INTEGRATION

When planning for a comprehensive transportation network it is important to consider projects that include the construction or expansion of bicycle and pedestrian infrastructure as integral and plan for facility upgrades in concert with transportation safety measures (TSM) and major street network (MSN) improvements. This approach results in cost efficiencies and minimizes unnecessary repairs or reconstruction of recently installed facilities, capitalizing on project overlap that minimizes construction length and leads to better results.

Through extensive analysis this plan identified priority projects overlapping specific MSN infrastructure needs in Whitefish. When compared to the bicycle and pedestrian connections analyzed in this chapter, intersecting priorities and project opportunities began to emerge. The corridor infrastructure projects that correlate with high-scoring bicycle and pedestrian improvements are identified in Table 8.3. Projects on Armory Road and Karrow Avenue are not listed as they have already been programmed as Resort Tax reconstruction projects.

Table 8.3: MSN and Active Transportation Priority Project Correlation

RANK	PROJECT IDENTIFIER	PROJECT DESCRIPTION	MSN PROJECT ALIGNMENT	PRIORITY DESCRIPTION
1	CT1	Highway 93 – Sixth Street to Railway Street	MSN 16	Construct cyclestracks on Highway 93.
2	SP5	Highway 93 – West of Mountainside Drive	MSN 1	Continue the shared use path to the west of Whitefish city-proper along Highway 93, connecting users from downtown to the Lion Mountain trail system and developments west of town to the community.
3	SW3	Eighth Street – Highway 93 to Park Ave.	MSN 41	Complete the sidewalk network (both north and south sides of street) along Eight Street, to serve the proposed SRTS network identified on the east side
4	BL5	Fifth Street – Highway 93 to Pine Ave.	MSN 53	Construct protected bike lane facilities on both sides of Fifth Street (with potential to convert into shared use path), to serve the proposed SRTS network identified on the east side.
5	SW1	Sixth Street – Highway 93 to Pine Ave.	MSN 29	Complete the sidewalk network (both north and south sides of street) along Sixth Street, to serve the proposed SRTS network identified on the east side
6	SP2	Denver Street – Wisconsin Ave. to Texas Ave.	MSN 37	Construct a shared use path along one side of Denver Street, to serve the neighborhoods east of Wisconsin Avenue, providing a direct link to a transit stop as well as connectivity to the Wisconsin Avenue shared use path.
7	SP34	Seventh Street (Spokane to Pine)	MSN11	Construct a shared use path as part of the new road/connection construction extending Seventh Street (Spokane to Kalispell) all the way from Pine to Highway 93 (bike lanes currently exist on Seventh between Columbia and Pine).
8	SW14; SP39	Park Avenue (Voerman to 8th)	MSN 35	Construct a shared use path on one side of Park Avenue to serve the neighborhoods south of the schools. Provides a direct link between workforce housing, schools and town.

Beyond the notable alignment between top scoring bicycle and pedestrian projects and key MSN projects, nearly all of the proposed MSN improvements correspond to a project involving bicycle or pedestrian facilities. This emphasizes the importance of consistent and holistic integration of multi-modal facilities in transportation improvement projects.

FACILITY DESIGN

The successful design of bicycle and pedestrian facilities is critical to the overall safety and usability of the Whitefish multimodal network. Design recommendations are based on industry best practice for facility construction and should be used as a baseline when determining the right treatment for a corridor improvement project, depending on the context surrounding a particular connection. In certain instances, the most desirable design option is not practical or feasible given right-of-way, cost, or other design considerations. The goal of this chapter is to elevate the importance of creating the connection as a first priority, with the understanding that sometimes improvements may be piecemeal and require a minimal approach before the desired design can be completed. In simplest terms, a bike lane is better than nothing if a shared use path is not in the cards in the immediate future. Where sidewalks are recommended in this plan, a bike lane or route is also suggested as a way to reduce potential conflict between cyclists and pedestrians. It should also be noted that if sidewalks are not identified as priority projects, that does not mean they are not recommended as standard policy for development and redevelopment approval in the City.

The following toolbox provides optional treatments the City may consider in all or many of the priority recommendations.

» **Shared Lane Markings (SLMs).** Shared lane markings, often referred to as "sharrows," are defined by the National Association of City Transportation Officials (NACTO) as road markings that indicate a shared lane environment for bicycles and automobiles. Sharrows reinforce the presence of bicycle traffic on the street, dictate proper bicyclist positioning, and may be configured to offer directional and wayfinding guidance. They should not be considered a substitute for bike lanes, shared use paths, or other separation treatments where these types of facilities are otherwise warranted or space permits, nor should they be placed on streets that have relatively high traffic volume or speeds.

» **Buffering.** Buffered bike lanes are conventional bicycle lanes paired with a designated buffer space separating the bicycle lane from the adjacent travel lane and/or parking lane. For a lane to be considered appropriately buffered it must include word or symbol markings to define the bike lane and designate that portion of the street for preferential use by bicyclists and two solid white lines on both edges of the buffer space indicating where crossing is discouraged, though not prohibited. Additionally, where a buffer is three feet or wider, diagonal or cross-hatching shall be used to designate the space. Buffering can also be accomplished using changes in color or texture of pavement; physically protected bike lanes are also considered "buffered" but use physical barriers like concrete, planters, flexible bollards or on-street parking. In many cases, physical buffering is preferred over changes to color and texture, especially when facilities are located near schools, as the perceived level of safety is greater when a physical barrier is present.

When an intersection or mid-block crossing is considered as part of a corridor improvement, the following design elements should be considered to improve bicycle and pedestrian safety:

» **Bike Boxes.** A bike box is a designated area at the head of a traffic lane at a signalized intersection that provides bicyclists with a safe and visible way to get ahead of queuing traffic during the red signal phase, and helps prevent "right-hook" conflicts with right-turning vehicles. This type of facility should be used in areas of high traffic and is typically designated by lines and markings, changes in color and texture, and different paving applications. Where cycle tracks may be present, incorporation of a two-stage turn box should be considered, to assist cyclists in making safe left turns at multi-lane signalized intersections from the right-hand side of the road while allowing for seamless and safe bicycle through-traffic.

» **Crosswalk Treatment.** Improving the crosswalk experience for pedestrians is key to creating a safe

and walkable environment and making successful connections throughout Whitefish's growing multimodal network. Crosswalk treatments may include high-visibility crosswalk markings and elevating the crosswalks to increase prominence and vehicular awareness of pedestrians, which also serves to slow traffic. Other paving treatments, such as rumble strips or raised caps, trigger awareness of pedestrian zones. Curb extensions at corners and pedestrian refuge zones at mid-block crossings should be incorporated wherever possible to reduce the distance a pedestrian must travel to cross the street. Additionally, signage and signaling can be used to further reinforce a crossing in the third dimension.

» **Signaling.** For uncontrolled or mid-block crossings, signaling can be more effective than signage to alert drivers to pedestrians crossing—and can often run by solar power, an added bonus. The following types of signals are recommended as best practices when implementing this plan.

- *Flashing beacons.* Flashing beacons at crosswalks can improve pedestrian safety by alerting motorists of mid-block crossings or establishing visible cues for intersections and crossings that are wide or lack sufficient facilities for pedestrian safety. Beacons can be especially useful in school zones where pedestrians are smaller and lower to the ground, creating situations where driver awareness is critical. Multiple beacon options exist, but the type most often recommended as a best practice (especially in school zones) are the Rectangular Rapid Flash Beacons (RRFBs). These beacons use irregular flash patterns similar to those used by police vehicles, reinforcing a driver's reaction to similar stimuli by encouraging them to slow down or stop when activated. These types of beacons can be successfully installed along any roadway, from local streets to multi-lane collectors and arterials, and have been shown to drastically improve vehicle yielding compliance compared to the standard flashing yellow ball beacons formerly used in such applications.
- *Hybrid Beacons.* This style of beacon, also known as a High-Intensity Activated Crosswalk (HAWK), consists of a signal-head with two red lenses over a single yellow lens on the major street, and pedestrian signal heads for the minor street or trail crossing. There are no signal indications for motor vehicles on any minor street approaches. Hybrid beacons are used to improve non-motorized crossings of major streets at mid-block crossings or in locations where side-street volumes do not support installation of a conventional traffic signal. Hybrid beacons can operate in areas of heavy traffic and multiple travel lanes where a RRFB would not be sufficient.
- *In-Road Warning Lights (IRWL).* In-road treatments alert motorists to pedestrians crossing at uncontrolled locations. Both sides of a crosswalk are lined with encased raised lights installed to be level with the asphalt; these are typically LED strobe lighting and face towards the driver. When a pedestrian enters a crosswalk, the in-road lighting system is activated and research has shown a decline in vehicle speed as a result.

Many of these intersection and mid-block crossing improvements are presently under consideration in the areas demarcated as "safe routes" on the bicycle and pedestrian infrastructure map. The City is currently working in concert with the school district on general improvements along Fifth Street, Seventh Street, and First and Pine Avenues.

TYPICAL SECTIONS

Several of the roadway reconstruction projects recommended in Chapter 6 incorporate active transportation elements. As mentioned above, combining active transportation upgrades with street reconstruction projects has a variety of benefits including cost efficiencies, minimizing the need to alter recently installed facilities to make additional improvements, and shortening construction length. To help demonstrate how the active transportation recommendations can be incorporated into the roadway projects presented in this plan, the project team developed two sample typical sections. The typical sections were created as conceptual alternatives for MSN #45 (reconstruction of Kalispell Ave from Riverside Ave to E Second St) and MSN #53 (reconstruction of East 5th St from Hwy 93 to Pine Ave). Each typical section is presented as an option for both 5th Street and Kalispell Avenue, respectively.

COMPLETE STREETS

Complete streets are streets that are designed, built, and operated to accommodate safe access for all users including pedestrians, bicyclists, transit riders, and motorists. Complete streets standards may vary throughout a city because their design is based on the unique context and needs of street typologies. A complete street within a community's downtown may include bus lanes, wide sidewalks, bike lanes, median islands, and curb extensions, while a complete street in a residential environment may meet user needs with sidewalks, bike lanes, and shared use paths.

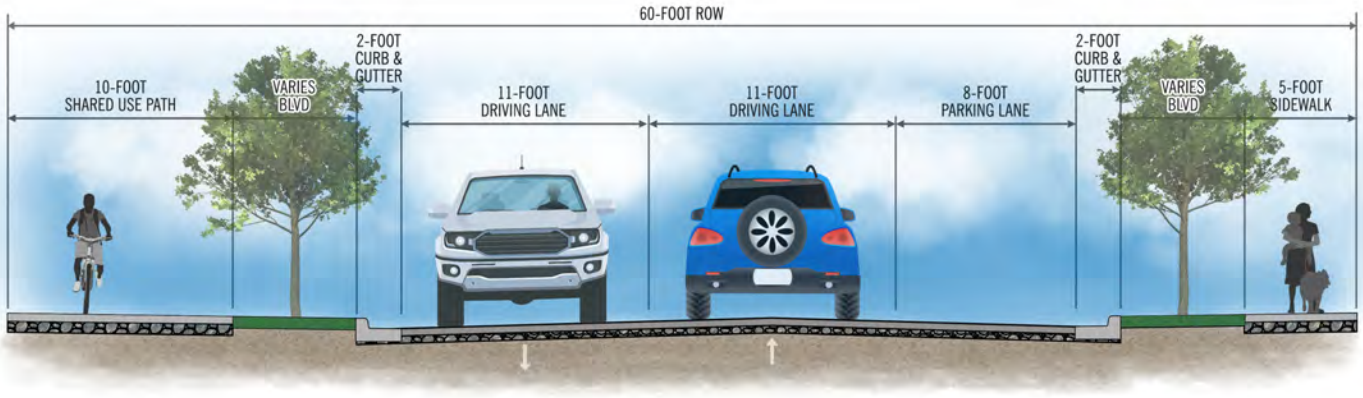
The City of Whitefish strives to design its streets to serve the needs of all users. Nonetheless, a formal complete streets policy does not yet exist. This plan recommends that the City continue to incorporate complete streets concepts into the project planning, programming, and implementation processes. In addition, this plan recommends that the City continue to advance toward the development and adoption of a formal complete streets policy.

SAFE ROUTES TO SCHOOL OPTIONS FOR KALISPELL AVENUE AND 5TH STREET

Typical Section A

Typical Section A is presented with the following characteristics:

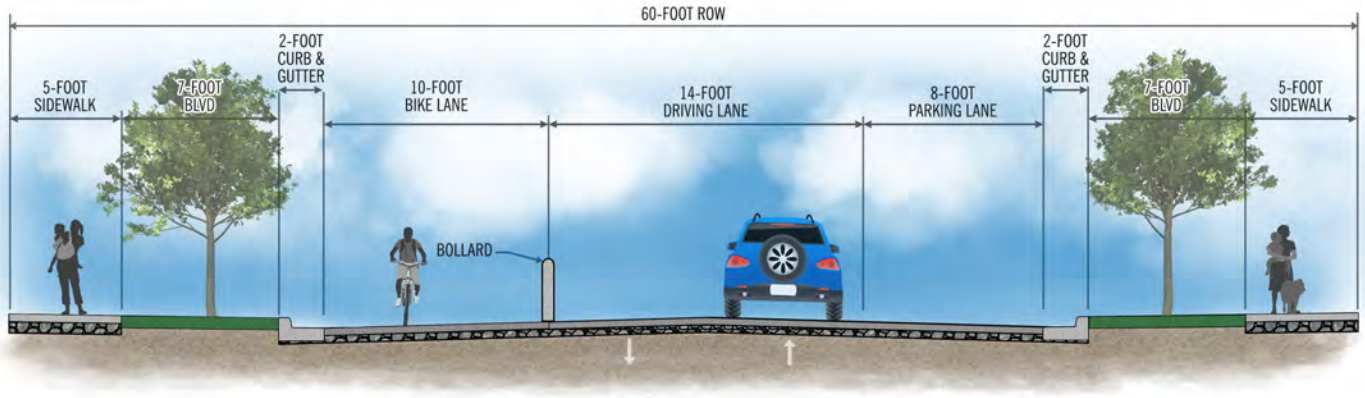
- Right-of-way: 60ft
- Driving lanes: 11ft
- Parking lane: 8ft
- Sidewalk: 5ft
- Shared use path: 10ft



Typical Section B

Typical Section B is presented with the following characteristics:

- Right-of-way: 60ft
- Parking lane: 8ft
- Sidewalks: 5ft
- Bike lane: 10ft



WHITEFISH

Transportation Plan

CHAPTER 9. POLICY PLAN

October 2022

KLJ

ENGINEERING, REIMAGINED

INTRODUCTION

The Policy Plan element of the Whitefish Transportation Plan provides policy guidance to support development of the transportation system. The Plan encompasses the priorities and direction established within other local plans, and leverages collaboration with stakeholders and agency partners to set forth a vision for connectivity, safety, and accessibility.

The Policy Plan element covers several policy areas that will support the development and prosperity of the Whitefish area. The policy areas are summarized below:

- **State Highway System Designations:** Provides an overview of State Highway System designations within the study area and discusses the potential for designation changes along select corridors.
- **Traffic Impact Study (TIS) Guidelines:** Discusses standards for the requirement, format, and content of a TIS.
- **Electronic Vehicle Readiness:** Discusses the benefits of EV readiness, gives an overview of EV readiness in Whitefish, and presents best practices for cities to support EV adoption with their communities.
- **Available Financial Resources for Transportation:** Discusses the funding sources available for transportation capital improvements, including the Street Fund, the Gas Tax, the Resort Tax Fund, and the Urban Surface Transportation Program.
- **Transit System Framework:** Provides an overview of existing transit needs and discusses regional coordination approaches for a more integrated, efficient transit system.

STATE HIGHWAY SYSTEM DESIGNATIONS

Based on input from the public and the project study review committee, this plan explored the appropriateness of re-designation Wisconsin Avenue and Baker Avenue as potential candidates for the State Primary System. The exploration was based on the regional and potential statewide significance of both these two corridors.

The Baker Avenue corridor runs from the south end of Whitefish into downtown (and turns into Wisconsin Avenue at the viaduct). Baker Avenue is currently classified as Urban from 7th Street to the viaduct, and is functionally classified as Minor Arterial.

The Wisconsin Avenue corridor runs north of the viaduct and is the only connection to Whitefish Mountain Resort. The corridor is functionally classified as a Minor Arterial and is designated as an Urban System highway.

The Primary, Secondary, and Urban Highway designation processes are guided by Montana law, Montana Transportation Commission policy, and MDT guidelines.[1] The designation of eligible routes must adhere to the following principles:

- In each system, routes shall be designated on the basis of a planned connected system (MCA 60-1-102(3))
- System mileage should be distributed on a reasonable and fair basis within the geographic area the system is designed to serve.
- All systems should be properly integrated with each on-system route connected to another equal or higher on-system route.

The highway system designation process is summarized below:

Requests for new route designations or changes in existing designations are usually initiated by local governments. Requests must have the support of local elected officials and local transportation committees if applicable.

MDT staff reviews request to determine whether the route meets eligibility requirements. Also reviews project commitments if any.

Local governments must adopt and provide a resolution accepting jurisdiction for routes to be removed from the system. MDT staff are available to assist in developing resolution.

If proposal meets all eligibility requirements and complies with Transportation Commission policy, MDT staff seeks Transportation Commission approval (contingent upon final approval by FHWA for changes to functional classification or changes to the National Highway System).

MDT submits formal request for approval to FHWA when required for FC modifications or NHS mods.

MDT notifies locals of outcome and adjusts maps/data bases if changes are approved.

To evaluate the appropriateness of designating Wisconsin Avenue/Baker Avenue as a Primary highway, it is necessary to assess the corridor against each of the eligibility principles defined by MDT, as shown in Table 9.1.

1 https://www.mdt.mt.gov/publications/docs/manuals/System-Mod.pdf

Table 9.1: Eligibility Principles for Classification as a Primary Route

MDT ELIGIBILITY PRINCIPLE	COMPLIANCE WITH PRINCIPLE	NOTES
In each system, routes shall be designated on the basis of a planned connected system (MCA 60-1-102(3)).	Yes	Baker Avenue: As a major north-south Minor Arterial, Baker Avenue serves a key role in supplementing the function of Hwy 93 by providing capacity and connectivity through the southern and downtown areas of the City. Wisconsin Avenue: The corridor provides the only connection north of the viaduct to major destinations such as Whitefish Lake and Whitefish Mountain. The corridor acts as a gateway to popular local, regional, and statewide destinations.
System mileage should be distributed on a reasonable and fair basis within the geographic area the system is designed to serve.	Unclear	Additional analysis would be required on % of Primary System mileage both within Whitefish and/or Flathead County and comparable to other urban areas/counties in Montana.
All systems should be properly integrated with each on-system route connected to another equal or higher on-system route	Yes: Baker / No: Wisconsin	Baker Avenue: Primary designation would provide a new support connection between Hwy 93 South into downtown and would support efforts to improve both Hwy 93 and Baker Avenue in tandem. Wisconsin: The dead-end nature of Whitefish Mountain Road and its current designation as a State Secondary Route doesn't meet current criteria for Primary System designation. However, given the regional and statewide trip attraction of Whitefish Mountain, consideration should be given to a more detailed evaluation.

Based on this planning level assessment Wisconsin Avenue does not fit all the eligibility criteria. Baker Avenue appears to fit all existing eligibility criteria. At a minimum, the Urban designation on Baker Avenue should be extended south to 13th Street, and 13th Street should be classified as Urban from Baker Avenue to Highway 93/Spokane Avenue.

TRAFFIC IMPACT STUDY

Overview

One of the City's chief responsibilities is to operate and maintain a safe and efficient roadway system. The review and management of development-generated traffic is an integral part of this effort. The sample Traffic Impact Study (TIS) procedures outlined in this section are provided to help guide this process.

A TIS identifies existing traffic volumes and conditions, development traffic volumes and conditions and their combined impacts on the existing and future roadway system. Additionally, a TIS analyzes traffic circulation both on- and off-site. This is a useful tool for early identification of potential traffic problems and can play an important part in the success of a development and functionality of the surrounding transportation system. The need for a TIS should be assessed as early as possible in the development process when there is maximum flexibility to mitigate traffic-related problems.

Prior to obtaining any permits, the developer should have received the City's acceptance of the completed TIS. Typically, the City will provide a summary of any issues regarding the proposed development outlined in the TIS. The developer would need to address the City's issues prior to moving forward with the permitting process.

Traffic Impact Study Categories

A regulating agency's TIS procedures may make use of a variety of approaches. A common aspect of TIS regulations is the use of analysis categories, which increase the content and level of analysis required of the preparer as the potential impact of a development increases. For example, the City of Middleton, WI requires that a TIS include additional elements based on peak-hour trip thresholds. Similarly, the City of Corona, CA requires that developments generating less than 50 peak-hour trips prepare only an abbreviated "Focused Site Traffic Impact Study", with developments generating 50 peak-hour trips or more required to prepare full analysis. It is also common for a city to give the reviewing authority the discretion to waive the requirement for a TIS under certain circumstances. An example of TIS categories from the City of Peoria, AZ is shown in Table 9.2. The City of Kalispell is in the process of adopting similar, though more stringent, TIS categories as an engineering standards update.

Table 9.2: Traffic Impact Study Categories Example (Peoria, Arizona)

TIA CATEGORY	TRIP GENERATION THRESHOLD[1]	HORIZON YEAR(S)[2]	STUDY AREA
Traffic Impact Study	Developments that are estimated to generate less than 100 trips during the highest peak hour.	Opening Year	To be determined by City Traffic Engineer
1	Developments that are estimated to generate greater than 100 but less than 500 vehicle trips during the highest peak hour.	Opening Year and 5 years in the future	1. Site access drives 2. All major signalized and unsignalized intersections within ¼ mile and all major driveways within 500 feet 3. All roadway segments within ¼ mile of the project site boundary
2	Developments that are estimated to generate more than 500 but less than 1,000 vehicle trips during the highest peak hour.	Opening Year plus 5 and 10 years in the future (phasing of the development must also be considered)	1. Site access drives 2. All major signalized and unsignalized intersections and all major driveways within a ½ mile radius of the project site boundary 3. All roadway segments within ½ mile of the project site boundary
3	Developments that are estimated to generate more than 1,000 but less than 1,500 vehicle trips during the highest peak hour.	Opening Year plus 5, 10, 15 years in the future (phasing of the development must also be considered)	1. Site access drives 2. All major signalized and unsignalized intersections and all major driveways within a 1-mile radius of the project site boundary 3. All roadway segments within 1 mile of the project site boundary
4	Regional Development generating 1,500 or greater trips during the highest peak hour.	Opening Year plus 5, 10, 15, and 20 years in the future or as specified in the Phasing Schedule	1. Site access drives 2. All major signalized and unsignalized intersections and all major driveways within an impact area defined during the scoping meeting 3. All roadway segments within an impact area defined during the scoping meeting

1. The trip generation used for determining the TIS category shall not be reduced for internal or pass-by trips unless approved by the City Traffic Engineer. For deveopments with peaks different than the typical adjacent street peak such as churches, schools, shift work, sports complex, movie theater, etc., the peak hour of the generator shall be calculated.

2. The Traffic Impact Study shall consider the phasing of the development and make infrastructure improvement recommendations so an adequate level of services (LOS) is maintained with each phase of development.

Traffic Impact Study Format and Content

As stated previously, there is no single standard for TIS requirements. However, several elements of the content and format of a TIS document are widely incorporated by regulating agencies. The project team considers the 2021 guidelines provided by the Wisconsin Department of Transportation to reflect the prevailing standards and best practices for TIS requirements. Using these guidelines, the project team presents the following annotated outline as a recommended approach to the format and content of a TIS document. Further details regarding specific outline items can be found within the WisDOT Traffic Impact Analysis Guidelines[2].

Chapter 1. Introduction and Executive Summary

Chapter 1 briefly describes the development and provides a summary of its potential traffic impacts. This chapter should identify the purpose of the report and highlight who conducted the analysis and why. There should also be a discussion of the study objectives to provide context for review of the report. The chapter should provide a short synopsis of the important findings and conclusions. It is helpful if the executive summary can be understandable as a stand-alone document.

a. Purpose of Report and Study Objectives
b. Executive Summary
c. Chapter 1 Exhibits

Chapter 2. Proposed Development

Chapter 2 provides the narratives and exhibits necessary so that the reviewer has a complete description of the proposed development. Descriptions should explain the time frame and stages/phases for the development, location of the site, planned land use, and intensity of the development. If the development will not take place all at one time, the site plan should illustrate the development-staging plan to highlight the location where each phase of the development will occur in relationship to the full project buildout.

a. On-Site Development
    i. Development Descriptions and Site Locations
    ii. Land Use and Intensity
    iii. Site Plan
    iv. Development Phasing and Timing
b. Study Area
c. Off-Site Land Use and Development
d. Site Accessibility
e. Chapter 2 Exhibits

Chapter 3. Analysis of Existing Conditions

Chapter 3 presents the analysis of existing conditions for the study area, which serves as the base against which to measure the incremental traffic impacts of the proposed development. Specifically, this chapter should address the physical characteristics of the existing transportation system and any planned improvements, existing traffic volumes in the study area, level of service analysis, and documentation of all data used to complete the analyses.

a. Physical Characteristics
b. Traffic Volumes
c. Capacity/Level of Service Analysis
d. Sources of Data
e. Chapter 3 Exhibits

Chapter 4. Projected Traffic

Chapter 4 presents an analysis of future traffic volumes in the study area, which should consist of background traffic, development traffic, and the additional off-site development traffic. Traffic volumes should be forecast for all horizon years, as determined by the reviewing agency.

Because the quality of the traffic analysis depends upon the accuracy of the traffic projections, it is important that the preparer document all assumptions and methodologies used in the preparation of future traffic volumes so that the reviewing agency can assess the analysis for reasonableness and completeness.

a. Background Traffic Forecasting
b. On-Site and Off-Site Development Traffic Forecasting
    i. Trip Generation
    ii. Mode Split
    iii. Determination of Pass-By + Linked-Trip Traffic
    iv. Trip Distribution
    v. Trip Assignment
c. Build and Total Traffic
d. Chapter 4 Exhibits

Chapter 5. Traffic and Improvement Analysis

Given the total projected traffic for each horizon year, Chapter 5 presents an analysis of the future traffic conditions, identifies needs, and analyzes alternative improvements for the study area.

a. Proposed Site Access
b. Future Capacity/Level of Service Analysis
c. Queuing Analysis
d. Multimodal Considerations
e. Speed Considerations/Sight Distance
f. Traffic Control Needs
g. Traffic Signal Warrant Analysis
h. Chapter 5 Exhibits

Chapter 6. Conclusions and Recommendations

Chapter 6 provides a discussion of conclusions regarding the analysis of existing and future conditions. Based on the conclusions of the analysis, this chapter presents

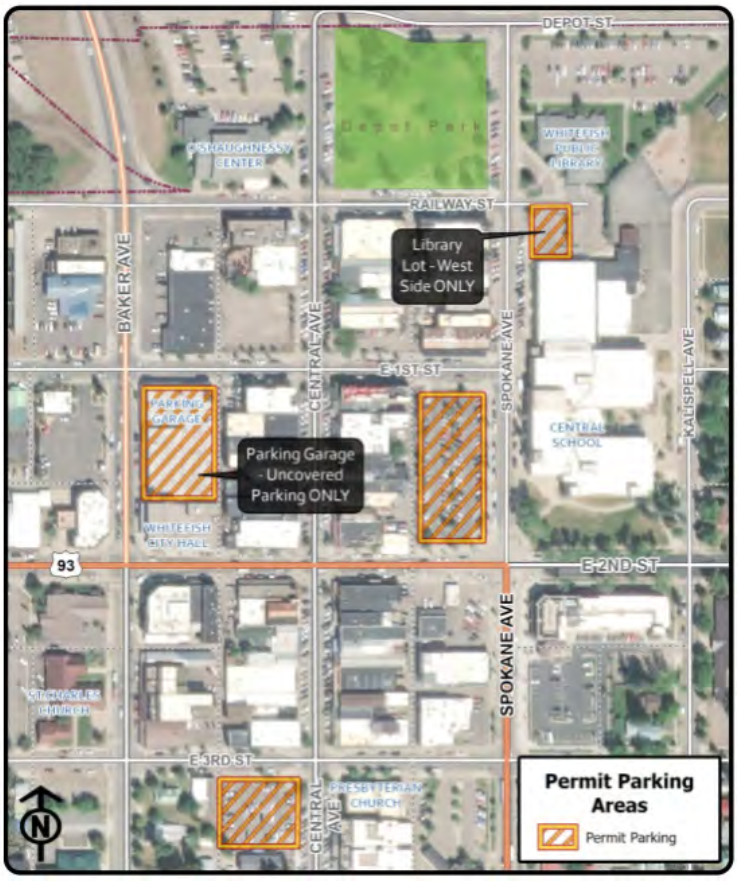
2 https://wisconsindot.gov/dtsdManuals/traffic-ops/manuals-and-standards/tiaguide.pdf

recommendations to mitigate identified operational and safety-related deficiencies.

a. Conclusions
b. Recommendations
c. Chapter 6 Exhibits

PARKING MANAGEMENT

Whitefish currently provides free downtown parking which includes 2-hour on-street parking and three 3-hour surface parking lots, in addition to available spaces in the parking garage. With direction from the 2019 Parking Management Plan, the City currently has a designated staff person and designated vehicle that uses ParkMobile as its parking management citation software to enforce short-term and long-term parking regulations in the downtown area. One of the plan's short-term goals was to also form a parking permit implementation committee, which was formed in 2020 and has guided the creation of an employee all-day parking program in downtown Whitefish. It's currently on the second year of the program which utilizes three surface lots and the uncovered top portion of the parking garage.



Additional goals from the 2019 plan, such as initiating a paid pilot program along busy downtown parking areas and determining the feasibility of a neighborhood parking program, should be considered moving forward. Other action items the City might consider include outreach programming to educate the public on underutilized parking areas and multi-modal transportation options, paid parking and enforced time limits in locations where parking occupancy is greater than 85%, partnering with businesses to provide shared parking and discounted parking permits/reserved spaces for carpoolers, establishing park-n-ride facilities along major commute routes leading to downtown Whitefish from Kalispell and Columbia Falls, improving enforcement of snow removal requirements that make it easier for people to use non-motorized transportation, and implementing additional parking demand management programming with a designated City staff person.

ELECTRONIC VEHICLE READINESS

The benefits of plug-in electronic vehicles (EVs) are becoming increasingly evident for communities nationwide. EVs have low maintenance and fuel costs, are quiet to operate, emit zero tailpipe emissions, decrease exposure to volatile oil and gasoline prices, and provide the ability to "refuel" at home, among other benefits. Due to the increasing popularity of EVs among visitors and residents, communities are taking proactive steps to prepare for higher EV ownership and increased demand for public charging stations. Nonetheless, a range of barriers stands in the way of expanded EV adoption for many communities. Common barriers include lack of information on EV technology for consumers, lack of coordination and agreement on public policy, and most importantly, lack of adequate public charging infrastructure for residents and visitors.

In order to harness the benefits of increased EV use among residents and visitors, it is important that Whitefish continue to take a proactive stance on laying the groundwork for "EV readiness".

EV Readiness in Whitefish

According to the U.S. Department of Energy's Alternative Fuels Data Center, Whitefish currently has 10 public EV chargers. These include six Level 2[3] type chargers and four DC

3 Level 2 charging uses 240V/208V for residential or commercial charging using a J1772 connector. Level 2 chargers provide 10 to 20 miles of range per 1 hour of charging.

Fast[4] type chargers. Chargers are clustered along the US 93 corridor from just south of MT 40 north through downtown. One charger is provided along Wisconsin Ave at The Lodge at Whitefish Lake.

Whitefish is proactive about increasing EV readiness, and has established goals within the Climate Action Plan and Sustainable Tourism Plan to make EV charging readily available throughout the City. With the assistance of Flathead Electric Cooperative, the City has installed four free EV chargers in the Downtown Parking garage. In addition, the City Council has required that the new Town Pump have five EV chargers installed.

Principles of EV Readiness

Cities have wide influence over how and where infrastructure is built within their jurisdictions, and thus play a fundamental role in the speed of EV adoption within their communities. Cities must be "EV-ready" in their policy, regulation, capital improvements, as well as planning for public and private infrastructure. The Great Plains Institute (GPI) identifies five principles[5] for how cities can promote and benefit from EV adoption.

1) Policy: ***Acknowledge EV benefits and support development of charging infrastructure.*** Comprehensive plans, transportation plans, and other core planning documents provide the foundation for development regulations, public infrastructure investments, and economic development policies. Emphasizing EV use and development of EV charging infrastructure in these policy documents enables EV market transformation and promotes city decision-making that supports EV programs and regulations.

2) Regulation: ***Implement development standards and regulations that enable EV use.*** Adopting ordinances that support the use of EVs and incorporate electric vehicle supply equipment (EVSE) in development and redevelopment is a critical step in becoming an EV-ready community. In particular, parking standards provide the opportunity to create EV-ready buildings and commercial facilities. Development regulations can facilitate the transition to EVs by requiring that the necessary electrical capacity be supplied in parking facilities to accommodate future charging stations. Flexible or alternative development pathways, such as planned unit developments, can incorporate EVSE installation requirements. Regulations should facilitate market expansion and transformation, while acknowledging uncertainty about how technology will develop.

3) Administration: ***Create transparent and predictable EV permitting processes.*** Standardized permitting processes that directly address EVSE allow contractors and city staff to know exactly what information and documentation is needed to install EVSE. Having a standardized, consistent permitting process reduces time spent on acquiring permits and conducting inspections for both developers and city staff. Permitting processes may need to be updated to best reflect changing industry best practices.

4) Programs: ***Develop public programs to overcome market barriers.*** Local governments often create programs to remove market barriers that prevent desired private sector development. Similar tools can be applied to encouraging EVSE in development or public spaces where such development would not otherwise occur. The simplest actions are to enable EV use by installing public chargers at public buildings or in public spaces, where the local government has direct authority regarding infrastructure development. More complex tools include economic development programs such as incentives or financing for desired development, providing public infrastructure that supports public goals, and assembling financial or land resources that will achieve desired private sector investment.

5) Leadership: ***Demonstrate EV viability in public fleets and facilities.*** By incorporating more EVs into fleets, cities save money over the life of fleet vehicles, reduce air pollution, and increase energy independence. More importantly, integrating EVs into public fleets demonstrates to the community that a city is ready to make real investments in EV infrastructure. Local governments frequently look to their neighboring cities to assess how to address market trends and new technology, creating opportunities for forward-looking cities to provide leadership in regional EV adoption.

Increased state and federal funding for EV infrastructure has created new opportunities for communities to advance their EV readiness. In December 2021, the Montana Department of Commerce announced grants to increase the number of EV charging stations around the state. The charging stations, made possible by the Montana Department of Environmental Quality's (DEQ) share of the Volkswagen Settlement funds, focus on establishing fast-charging locations for Montana's key travel corridors including Interstate 15, Interstate 90, U.S. Highway 2 and U.S. Highway 93. Additionally, the November 15, 2021 Bipartisan Infrastructure Law (BIL) includes significant funding for EVs and EV infrastructure. An overview of EV funding under the BIL is provided below.

EV Funding in the Bipartisan Infrastructure Law

Adoption of a national electric vehicle charging network was given new emphasis under the BIL. The BIL authorized the National Electric Vehicle Infrastructure (NEVI) Formula

4 There are three types of DC fast charging systems depending on the type of charge port on the vehicle: SAE CCS, CHAdeMO, or Tesla. Provides 60 to 80 miles of range per 20 minutes of charging.

5 https://betterenergy.org/blog/making-your-city-ev-ready/

Program, a $5 billion program that will provide dedicated funding to States to strategically deploy EV charging infrastructure and establish an interconnected network to facilitate data collection, access, and reliability. Funding under this program is directed toward installing DC fast chargers along federally-designated Alternative Fuel Corridors (AFCs), particularly along the Interstate Highway System.

The current federal appropriation for this program in Montana is approximately $43M total over federal fiscal years 2022–2026 and requires a 20% non-federal match. States must submit a compliant Electric Vehicle Infrastructure Deployment Plan to obligate federal NEVI Formula Program funds.[6] DEQ is leading plan development in coordination with MDT.[7]

The BIL requires all projects funded by the NEVI Formula Program to be located along FHWA-designated Alternative Fuel Corridors (AFCs). Hwy 93 is the only AFC within Whitefish, and it is currently designated as a "Corridor Pending". Corridor Pending designation indicates that a highway does not yet have the infrastructure necessary to fully support EV travel. The current AFC network can be viewed on the U.S. Department of Energy website.

Any State or local agency is able to nominate an AFC for designation. Corridors eligible for designation include Interstates or other highways on the National Highway System. In order to take advantage of federal funding opportunities locally, via the discretionary grant program for Charging and Fueling Infrastructure, the City of Whitefish and its partners should coordinate on nomination of corridors for AFC designation. The corridor nomination criteria and process is detailed in the FHWA *Request for Nominations – Alternative Fuel Corridors memorandum (February 10, 2022).*[8]

AVAILABLE FINANCIAL RESOURCES FOR TRANSPORTATION

This section discusses the funding sources available to Whitefish for transportation capital improvements. Funding sources discussed here include the Street Fund, the Gas Tax, the Resort Tax Fund, and the Urban Surface Transportation Program. It should be understood that other funding sources are possible, but those listed here reflect the most probable sources at this time.

A short discussion on the City's current impact fee program is included at the end of the section. A complete overview of state and federal revenue sources with relevance to the study area is provided in Appendix B.

Street Fund

The Street Fund provides budget authority to support the operation, maintenance and improvements of the streets and storm drainage systems of the City of Whitefish. Budgeted expenditures for capital projects in FY2022 are $1.15 million.

Gas Tax (BaRSAA)

The Bridge and Road Safety and Accountability Act (BaRSAA) Program was established by House Bill 473 during the 2017 Montana Legislative Session and is funded by an increase in the gas tax for the State of Montana. The BaRSAA program funds are allocated to each city, town, and county in Montana using the same allocation formula as the original gas tax allocation. The Montana Department of Transportation must allocate funds by March 1st of each year. Local governments must match the program funds requested in a ratio of 20:1 and identify a project to request funds. The City has 5 years from the date of receipt to spend the monies received. The City of Whitefish is projecting $190,000 of BaRSAA revenue in FY2022.

Resort Tax Fund

The resort tax was originally approved by Whitefish voters on November 7, 1995. The resort tax was approved for a 20-year term beginning January 1, 1996; at the November 2, 2004 City election, the voters approved an extension of the resort tax until January 31, 2025.

Whitefish's resort tax is a tax on the sale of lodging, restaurant and prepared food, alcoholic beverages, ski resort goods and services, and the retail sale of defined luxury items. Whitefish voters allocate the 3% resort tax to a variety of uses, including repair and improvement of existing streets and underground utilities, as well as bicycle paths and other park capital improvements. Budgeted expenditures for street improvement and park improvement projects in FY2022 are $2.06 million. In November 2021, Whitefish voters renewed the city's 3% resort tax for an additional 20 years.

Urban Surface Transportation Program

Each year, MDT allocates a portion of the federal-aid highway funds available for construction towards projects located on the urban highway system. Total allocations are based on a per capita distribution and are recalculated each

6 https://www.fhwa.dot.gov/bipartisan-infrastructure-law/nevi_formula_program.cfm

7 https://deq.mt.gov/energy/Programs/fuels

8 https://www.fhwa.dot.gov/environment/alternative_fuel_corridors/nominations/2022_request_for_nominations_r6.pdf

decade following the census. Urban funds are primarily used for resurfacing, rehabilitation or reconstruction of existing facilities; operational improvements; bicycle facilities; pedestrian walkways and carpool projects. Annual allocation for Whitefish is $157,000; total accumulated balance for FFY22 is $1.3 million.

Transportation Funding Summary

The City of Whitefish's estimated annual revenues for transportation are $2.99 million (Table 9.3). Assuming that these revenue sources remain constant over the 20-year plan horizon, the City's total estimated revenues for transportation by 2040 are $56,810,000[9] (2022 dollars).

Table 9.3: Annual Transportation Revenues

REVENUE SOURCE	ESTIMATED ANNUAL REVENUES
Street Fund	$393,000[10]
BaRSAA	$212,000[11]
Urban Surface Transportation Program	$157,000[12]
Resort Tax Fund	$2,228,000[13]
Total	**$2,990,000**

As discussed in Chapter 6, the total estimated cost of MSN and TSM needs is $184,598,000. As such, transportation investment needs will far outweigh available revenues over the 20-year planning horizon. Assuming only federal, state and local funds will be available to the City of Whitefish, more than 69 percent of transportation needs identified in this plan remain unfunded.

Impact Fees

An Impact Fee is a one-time fee imposed on developers to pay for infrastructure improvements that must be built due to new property development. New development brings new residents, which can put strain on a city's infrastructure and services, including municipal buildings, trails, parks, water and sewerage, emergency services, and roads. Impact fees are designed to offset the additional cost of investing in and maintaining these services. Montana Code Annotated 7-6-1602 as well as 7-6-1603 provides specific instructions on the methodology that a municipality must follow in calculating and collecting impact fees. The City of Whitefish's most recent impact fee schedule can be found in the "Impact Fee Update" (dated August 2018).

The City currently collects impact fees for paved trails, park maintenance facilities, emergency services facilities, city hall, water and wastewater, and stormwater. The City does not presently collect impact fees for roadways. Given the substantial funding deficit with regard to the transportation needs identified in this plan, the City should continue to consider roadway impact fees as a potential method for financing transportation infrastructure needs. While this topic may be controversial at times, it is an important consideration in planning for an adequate, effective transportation system over the long-term.

Transit System Framework

Introduction

A transit system framework was developed as part of the Whitefish Transportation Plan update. The Transit System Framework is structured to provide a set of needed system changes to support a more robust transit system for the City of Whitefish. The Framework is intended to aid regional partners in understanding the steps needed to develop a more comprehensive countywide transit system through opportunities unique to Whitefish which may offer benefits to the entire county.

Transit System Needs & Opportunities: A Framework for Growth

A series of transit system needs have been identified by the City of Whitefish and local stakeholders, and transit was identified as a priority in the Climate Action Plan, Growth Policy, and Sustainable Tourism plans. The identified transit needs involve both operational and administrative/political improvements targeted to increase the utility of transit both in the City of Whitefish and across Flathead County. Many of the identified needs have the potential of being addressed through increased regional coordination on transit services.

The sections below summarize the primary transit needs identified by the City of Whitefish and discuss opportunities to address these challenges through development of a more regionalized transit approach. The Whitefish community has a number interested catalysts to improving transit both locally and regionally.

9 Total revenue over the planning period was calculated by multiplying estimated annual revenues by 19 (years 2022–2040).

10 Estimated annual Street Fund revenues calculation: Average of FY19 Actual, FY20 Actual, FY21 Actual, and FY22 Capital expenditures.

11 Estimated annual BaRSAA revenues calculation: Average of FY19 Actual, FY20 Actual, FY21 Actual, and FY22 Budget total revenues.

12 Estimated annual STPU revenues: Most recent (2022) estimated annual allocation.

13 Estimated annual Resort Tax Fund revenues calculation: Average of FY19 Actual, FY20 Actual, FY21 Actual, and FY22 Budget Street Improvements and Park Improvements expenditures.

Transit Service Needs

The primary system needs identified by Whitefish and its partners are summarized as follows:

» **Senior/Human Service Needs:**

- The focus of the County's Mountain Climber has been to serve Senior/Human Service Needs. At present, there is no specialized transit between Whitefish, Columbia Falls, and Kalispell, or in outlying areas. Within the City of Whitefish the predominant user group are seniors and those limited mobility.
- Regional Perspective: Without dependable, dynamic, and accessible regional mobility options, transit-dependent residents are restricted in their ability to travel. A regional transit approach could offer the scalability, fleet optimization, and cost savings benefits to provide paratransit services to underserved areas and between cities.

» **Commuter Service Needs:**

- Commuter service, which was eliminated at the start of the COVID-19 pandemic, is badly needed by the community. Whitefish is struggling to find workers to fill open jobs and has identified a lack of affordable housing as a primary obstacle. Improved commuter-oriented service could support worker recruitment from surrounding communities, which would both increase the pool of potential workers and alleviate demand for local housing. Past improvements to the Mountain Climber summer commuter route to Glacier National Park, including the addition of Whitefish stops, produced an increase in ridership by visitors, locals and workers.
- Regional Perspective: Coordination with regional partners is necessary to help workers access employment centers. Improvement of routes and better integration with local service – for example, shuttles sponsored by employer organizations – could increase utilization of commuter options like the former Tri-City Commuter service operated by Mountain Climber.

» **Tourism Needs (Regional/Local)**

- Stakeholders within Whitefish have expressed the need for affordable, readily available connectivity to the airport, train stations, and Glacier National Park. This would include a more robust coordinated hotel shuttle system to provide service between major destinations in conjunction with existing operators such as Mountain Climber and S.N.O.W. Bus. Options are needed that will support both residents and visitors in traveling more easily about town and to desired destinations. While discussions with Glacier Park International Airport have been ongoing regarding the creation of a transit option, such a service does not yet exist. In general, visitors and residents must use a car to access their destinations.
- Regional Perspective: Obligating tourists to access destinations by car results in a variety of avoidable negative impacts including vehicle emissions, excessive wear on infrastructure, and traffic and parking congestion. Just as the whole region enjoys the economic benefits of tourism, it is jointly responsible for conserving the resources that make Flathead County a great place to live and visit. Coordination with regional partners is necessary to provide a more sustainable tourism experience.

» **Congestion Needs**

- Whitefish stakeholders have expressed the need to alleviate traffic and parking congestion during peak seasons, particularly downtown and at popular tourism destinations. Important sources of congestion include employees driving to and parking at their places of work, as well as tourists traveling to destinations using single occupancy vehicles. In addition to its commuter costs (lost time and wasted fuel), safety impacts, and negative effects on system-wide economic competitiveness, congestion has important environmental and public health costs. Increased vehicle emissions degrade ambient air quality, increase greenhouse gases, and lead to health problems for those living along roadways.
- Regional Perspective: A variety of transit-based solutions could help address traffic and parking congestion within Whitefish and its partner communities. Potential solutions include park & ride routes/stops, employee shuttles, service to the airport, parks, and other tourist destinations, circulator buses, van pools or other shared ride services, and employer-sponsored transit passes for employees. Regional coordination will be essential in the affordability, scalability, and integration of these services for true effectiveness.

The City of Whitefish is interested in being a champion in addressing the identified needs. As an example, The City spearheaded a transportation hub at Depot Park to facilitate transfers between Mountain Climber, Amtrak, the S.N.O.W. Bus, local hotel shuttles, and other intercity service. Additionally, City staff has met regularly with local and regional stakeholders to discuss transit-based solutions to traffic and parking congestion, mobility and affordable housing for workers, and tourism management.

While these efforts represent a starting point for addressing Whitefish transit needs, continued regional collaboration is necessary to achieve an integrated and efficient transit system. The section below discusses various regional coordination opportunities and their benefits.

Regional Coordination Opportunities

Greater coordination is needed both within the City of Whitefish but also across Flathead County to provide a transit system which is more logically structured to existing and potential future transit system demands. It is critical that transit planning and funding be approached jointly by the cites, the County, and the business community to ensure a coordinated, integrated, and sufficiently funded system.

A regional approach to transit coordination and funding begins with reaffirming to stakeholders the shared benefits of public transportation. The City of Whitefish and its partners should continue to actively engage with the public, elected officials and staff from neighboring cities, the County, and the business community regarding the direct and wide-ranging benefits of a transit-connected region.

The City of Whitefish and its partners should leverage the extreme interest present in transit demand programs within the City of Whitefish to formalize an intergovernmental agreement to develop, fund, and implement expanded transit first within the City of Whitefish and secondly with the cities of Kalispell, Columbia Falls, and other primary regional destinations. The current transit operational framework is not well suited to current potential within the City of Whitefish and across the Flathead Valley.

Formation of a regional transit entity is likely fitting for the region, starting first with partners in the City of Whitefish. Potential partners include the cities, Chambers of Commerce, Big Mountain Commercial Association (BMCA) and other business groups and individual businesses, the Flathead Valley Community College, and the Logan Health Care System, as well as Glacier National Park and the National Forest Service. Real commitment, including financial support from partners, will be necessary to achieve the vision for an integrated, regional transit system.

Regional Memorandum of Understanding (MOU)

A recommended first step in formalizing a more coordinated and regionally integrated transit system is the development of a memorandum of understanding (MOU) which outlines the roles and responsibilities of each partner within an eventual regional transit organization, and the process and timeline by which such an organization will be formed. This would be the requisite step to creating a more formalized regional transit system.

Regional agreements are valuable when neighboring jurisdictions face a common need, allowing them to provide a level of service that would be difficult as an individual community. Regional agreements currently in place within Flathead County include public health and solid waste. These agreements result in a variety of benefits including operating cost savings from eliminating duplicative administrative positions and services, reductions in overhead costs, and the ability to cost-effectively scale technology solutions across the entire region. These agreements are currently politically tenable among the public agencies necessary to deliver such an agreement related to public transit.

Development of a regional agreement could unfold in a two-phased process, with Phase 1 focusing on the Whitefish community, and Phase 2 including other regional partners, most importantly Flathead County, the city of Kalispell and the city of Columbia Falls.

- Phase 1 – City of Whitefish, Whitefish Public Schools, BMCA, Rocky Mountain Transportation, Mountain Climber and Explore Whitefish
- Phase 2 – Expand agreement to include the City of Kalispell and City of Columbia Falls.

Transportation Management Organization (TMO)

Execution of a more localized MOU (i.e., Phase 1) could be focused initially on the development and formation of a mobility management organization, such as a transportation management organization (TMO). A TMO is a public-private partnership whose members may include local employers, government agencies, transportation providers and others interested in addressing specific transportation needs within an area. TMOs typically work towards coordinating transportation and mobility options rather than operating core transit services themselves.

A TMO is formed to achieve its member's specific goals. For example, a group of businesses within a geographic area may create an agreement to enhance services along specific travel corridors that provide access to the area. The organization would coordinate with local government transit providers to integrate new and existing services.

An initial TMO for Whitefish would involve several of the major public and private area organizations with interest in improved services. Early champions for the organization might include the City of Whitefish, Explore Whitefish, Big Mountain Commercial Association (BMCA), and the School District. Funding for the TMO might come from a variety of sources including public sector and private business membership dues, government grants, and service fees.

While an initial TMO might be established locally between Whitefish and area businesses, it could grow over time to cover a regional service area and include additional members. As discussed above, it is a regional transit organization that can provide the fullest benefits in terms of operations, cost effectiveness, and user experience.

Potential TMO services include:

- Trip planning programs/apps
- Integration of local and regional (commuter) services
- Shuttle programs
- Carpool/vanpool matching services
- Hourly vehicle rentals
- Guaranteed ride home program
- Subsidized transit passes
- Employee commuter incentive programs
  - Parking cash-out programs
  - Pre-tax benefits for those who use qualified alternative commuting modes
  - Points-based reward programs
- Promotional/marking materials (display centers, brochures, posters, presentations)
- Employee commute survey/program research
- Regional bicycle map

Example TMOs

Missoula In Motion. Missoula In Motion (MIM) is a program of the Transportation Division of the City of Missoula's Development Services. MIM was formed in 1997 to help coordinate sustainable transportation options available to individuals and workplaces through best practice strategies and programs. The central functions of MIM are:

- Develop and implement transportation demand management (TDM) programs and services
- Educate local businesses, institutions, and individuals about transportation options
- Encourage and incentivize sustainable transportation choices
- Coordinate programs with other TDM partners and transportation programs

MIM provides a variety of services to promote and facilitate sustainable transportation, including guaranteed rides home, administration of workplace networks to allow internal reward programs and workplace impact tracking, carpool matching, multimodal trip planning, and local business promotions for users, among others. Many services are accessible through the Way to Go! Missoula (WTG!M) mobile app, which automatically logs trips, offers route and mode information, and keeps track of user rewards. MIM partners include the City of Missoula, Missoula County, Missoula Parking Commission, Missoula Urban Transportation District, and Associated Students of the University of Montana (ASUM) Transportation.

Evolution Towards a Transit Authority

A decision regarding the final, long-term form of a regional transit organization may hinge on several considerations, including the amount of control that communities want to have over the organization and the types of projects and services that the organization will oversee. Creation of a consolidated Transit Authority (TA) may represent the best long-term option for Whitefish and its regional partners. A regional TA is preferrable when it is determined that a single provider can serve the region more efficiently than multiple providers covering the same area. Because they have jurisdictional authority over the operating area and the power to raise revenues, TAs have political and financial independence from their member communities. This autonomy helps authorities sustain cooperative partnerships among communities, and maintain a regional approach to service provision which considers the interests of all communities equally.

To determine whether a TA would be an appropriate long-term option for Whitefish and its partners, it is important to consider the core benefits of this organization type. These are outlined below.

Core Benefits of a Consolidated Transit Authority

- **Transit service expenditure savings** can be generated from the elimination of duplicative administrative positions and services, reduction in overhead costs, use of volume purchasing, standardization of vehicles, inventory, and maintenance tasks, transitioning from third-party services to directly operated services, and service optimization (routes, stops, and schedules). Savings can be expected in both operating and capital costs.
- **Increased transit revenue** resulting from the ability to offer region-wide volume advertising as well as ridership growth from optimization of operations and fare structures.
- **Elimination of transit-related administrative costs for communities.** Administrative functions related to transit currently performed by Whitefish and its neighbors, which may include payroll, human resources, procurement, and maintenance, would no longer be needed. The new regional organization would assume responsibility for these services.

- **Broader in-house resources** for functions such as service planning, marketing, and training. A regional TA would have dedicated staff members to serve these roles for the entire region.
- **Use of local expertise for regional benefits.** A TA can leverage the expertise and best practices of individual communities to apply solutions to the larger regional organization. For example, a successful employee shuttle service could be expanded from one community to others by leveraging the technology, equipment, and expertise already in place.
- **More frequent, consistent implementation of best-in-class technology,** as new solutions would be rolled out to the full region (rather than by individual communities in a piecemeal fashion). For example, the region as a whole would be able to take advantage of software to automate driver scheduling, scheduling of preventive maintenance for fleet vehicles, management of parts inventories, and maintenance productivity. Shared technology would also improve system data collection and monitoring and evaluation of service and performance.
- **Optimization of fleets** by increasing opportunities to right-size service using smaller or larger vehicles where appropriate and, over time, standardizing vehicle types and inventory.
- **Seamless regional operations** including an integrated regional fare structure, integrated schedules, single web-based trip planner and single fare collection system. Regional system planning by a single organization provides a better user experience through the synchronizing of travel modes in terms of location, schedule, and frequency.
- **Streamline funding** by positioning the region to better compete for grants by demonstrating a unified approach to investment and service priorities to federal and state stakeholders. Potential funding is available from a variety of competitive grant programs through the FTA, among other sources.

Conclusion

The Transit System Framework is structured to provide an evaluation of needed system changes to support a more robust transit system for the City of Whitefish. In recent years, Whitefish and its regional partners have identified a variety of transit system needs to increase the effectiveness of service across Flathead County. While no simple, definitive solution exists for existing challenges, the Whitefish Transportation Plan considers a regional transit approach to provide a range of benefits that can be effective in addressing current needs.

The path towards a regional transportation organization often begins with a good-faith agreement (MOU) formalizing the intention, roles, and responsibilities of partners toward the formation of a regional organization. This agreement would lay the groundwork for creation of a formal regional organization, such as a Transportation Management Organization. While a TMO is valuable for coordinating and optimizing transportation services for members, a fully consolidated, autonomous regional organization may present the most beneficial long-term model for Whitefish and its partners. The study team considers the formation of a regional Transit Authority a desirable long-term goal due to such core benefits as regional integration of service and increased service quality, streamlined technology rollouts, and service expenditure savings, among others.

Traffic Calming

Traffic calming supports the livability and vitality of residential and commercial areas through improvements in non-motorist safety, mobility, and comfort. These objectives are achieved by reducing vehicle speeds or volumes on a single street or a street network. Traffic calming approaches use a variety of physical measures and driver-perception techniques to produce desired effects. An effective traffic calming program can help to transform streets and aid in creating a sense of place for communities.

The importance of reducing vehicle speeds in an area where there is potential for conflict between a pedestrian and a motor vehicle is undeniable. Simply stated, the slower the speed of a motor vehicle, the greater the chances are for survival for a pedestrian. Figure 9.1 illustrates the relationship between the speed of a vehicle and the potential for pedestrian injury.

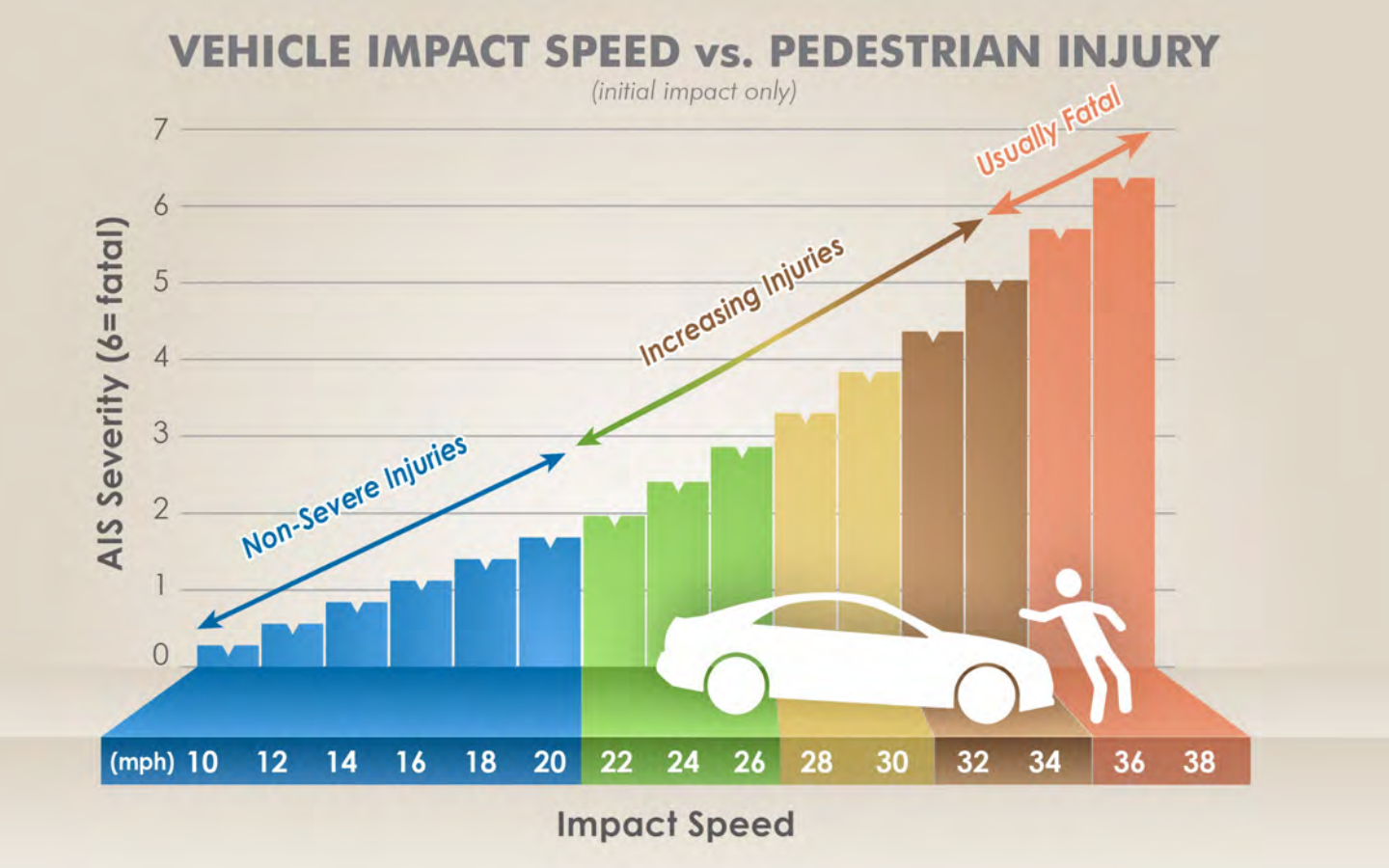
Traffic Calming Toolbox

The study team compiled a sample toolbox of individual traffic calming measures that may be considered in the development of a traffic calming program. It is important to remember that the application of a calming measure must consider the specific problem to be addressed, as even very effective measures will produce little benefit in the wrong context.

Table 9.4 on page 158 presents the toolbox of traffic calming measures, including a description of each measure and an indication of the type of roadway for which the measure may be most appropriate. The toolbox is not comprehensive, but rather provides a sample of effective calming measures. Much of the toolbox content was adapted from the FHWA Traffic Calming ePrimer14. The table separates measures into four general categories:

14 https://safety.fhwa.dot.gov/speedmgt/traffic_calm.cfm

FIGURE 9.1: SPEED/PEDESTRIAN INJURY SEVERITY CORRELATION



- **Horizontal deflection** limits the ability of a motorist to drive in a straight line by creating a horizontal shift in the roadway
- **Vertical deflection** creates a change in the height of the roadway that forces a motorist to slow down in order to maintain an acceptable level of comfort
- **Street width reduction** makes increases driver attentiveness and naturally lowers vehicle speeds
- **Routing restriction** prevents turns or through movements into specific areas to reduce traffic or create pedestrian zones

The appropriateness of a specific measure by road type is indicated with the numbers 3 to 1, with 3 reflecting a high level of potential appropriateness, 2 reflecting a moderate level, and 1 representing a low level.

Conclusion

Traffic calming involves trade-offs between the need to provide an efficient transportation network and maintaining a livable and safe environment for bicyclists, pedestrians, drivers, and adjacent land uses. The challenge of traffic calming is selecting the appropriate measures and locations to reach that balance. The City is encouraged to refer to the FHWA Traffic Calming ePrimer and its recommended resources as it develops and updates its traffic calming plan.

Table 9.4: Traffic Calming Toolbox

MEASURE	DESCRIPTION	APPROPRIATENESS
Horizontal Deflection		
Chicane	A series of alternating curves or lane shifts that force a motorist to steer back and forth out of a straight travel path. The curvilinear path is intended to reduce the speed at which a motorist is comfortable travelling through a facility. Chicane curves can be created with a curb extension that alternates from one side of the street to the other.	Arterials: 1 Collectors: 3 Local Roads: 3
Realigned Intersection	The reconfiguration of an intersection with perpendicular angles to have skewed approaches or travel paths through the intersection. The expectation is that these physical features will discourage fast vehicle movements through the intersection.	Arterials: 1 Collectors: 3 Local Roads: 3
Traffic Circle	A raised island, placed within an unsignalized intersection, around which traffic circulates. A circle forces a motorist to use reduced speed when entering and passing through an intersection, whether the vehicle path is straight through or involves a turn onto an intersecting street.	Arterials: 1 Collectors: 2 Local Roads: 3
Vertical Deflection		
Speed Hump	An elongated mound in the roadway pavement surface extending across the travel way at a right angle to the traffic flow. A speed hump produces sufficient discomfort to a motorist driving above the speed hump design speed to discourage speeding.	Arterials: 1 Collectors: 3 Local Roads: 3
Speed Table	A raised area placed across the roadway designed to limit the speed at which a vehicle can traverse it. Like a speed hump, it extends across the travelway. Unlike a speed hump, a speed table has a long enough flat top (typically 10 feet) to accommodate the entire wheelbase of most passenger cars. This flat top enables comfortable and safe vehicle speeds that are faster than allowed by a speed hump.	Arterials: 2 Collectors: 3 Local Roads: 3
Raised Crosswalk	A variation of a flat-topped speed table, a raised crosswalk is marked and signed as a pedestrian crossing. A raised crosswalk improves pedestrian safety by causing motorist speed to decrease at the crossing. Additionally, the height of the crosswalk increases the visibility of a pedestrian to motorists and improves the line of sight for a pedestrian toward an oncoming vehicle.	Arterials: 2 Collectors: 3 Local Roads: 3
Street Width Reduction		
Curb Extension	A horizontal extension of the sidewalk into the street resulting in a narrower roadway section. This method may be used at either a corner or midblock. A curb extension at an intersection is called a corner extension, while at midblock it is referred to as a choker. A corner extension shortens pedestrian crossing distance, and can be combined with a vertical speed control device (e.g., a raised crosswalk) to achieve a greater reduction in vehicle speed.	Arterials: 3 Collectors: 3 Local Roads: 3
Median Island	A raised island located along the street centerline that narrows the travel lanes at that location, encouraging motorists to slow. A median island can double as a pedestrian refuge island if a cut in the island is provided along a marked crosswalk. When placed at or near the entrance to a neighborhood, a median island provides a visual cue to the motorist about the preferred vehicle speed	Arterials: 3 Collectors: 3 Local Roads: 3
Road Diet	The conversion of an undivided roadway to a cross-section with fewer or narrower through motor vehicle travel lanes. The most common application is the conversion of an undivided four-lane roadway to a three-lane roadway consisting of two through lanes and a center two-way left-turn lane. This lane reduction may also accommodate the inclusion of multimodal elements such as bicycle lanes, sidewalks, pedestrian refuge islands, and transit.	Arterials: 3 Collectors: 3 Local Roads: 2
Routing Restriction		
Diagonal Diverter	A diagonal diverter is a physical barrier placed diagonally across a four-legged intersection. The barrier creates two unconnected intersections. Traffic approaching the intersection is restricted to one receiving leg, rather than three. A strategically placed diagonal diverter can reduce traffic volume by preventing straight-through traffic movements at an intersection.	Arterials: 1 Collectors: 2 Local Roads: 2
Full Closure	A physical barrier placed across a street to close the street completely to through vehicle traffic. Full closure can be done at either an intersection or midblock. A full closure can be designed to allow bicyclists and pedestrians to pass through. It is important to consider where the diverted traffic is likely to shift, in particular the availability, capacity, and appropriateness of the alternative routes.	Arterials: 1 Collectors: 2 Local Roads: 2
Median Barrier	A median barrier is a raised island placed through an intersection, along the centerline of a roadway, preventing a motorist from traveling straight through the intersection on the side street. A median barrier can be designed to allow turns to and from the main street, while preventing through traffic from the side street from crossing the main roadway.	Arterials: 2 Collectors: 3 Local Roads: 3

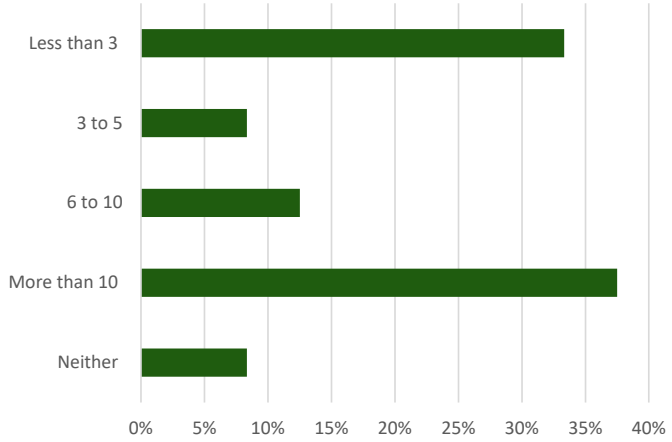
APPENDIX A.
PUBLIC ENGAGEMENT SUMMARY

October 2022

KLJ
ENGINEERING, REIMAGINED

Years living/working in Whitefish

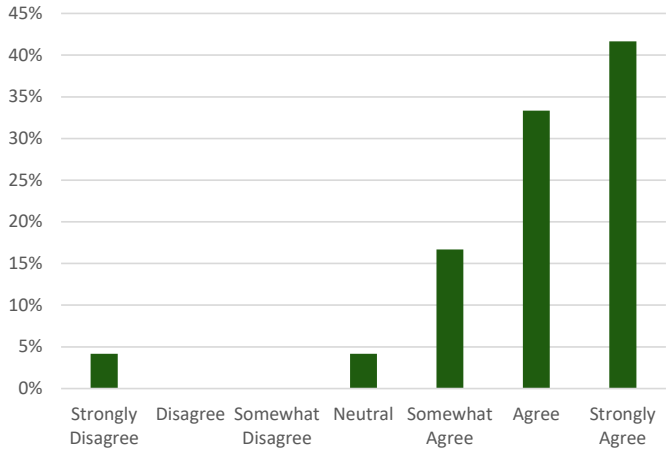
FIGURE A.1: SURVEY QUESTION 1



Long term mobility needs in Whitefish depend heavily on improvements to Highway 93?

Meeting participants agree that long term mobility in the city of Whitefish is dependent on investments in the Highway 93 Corridor. Ongoing work as part of the Downtown Whitefish Highway Study will be integrated into the Whitefish Transportation Plan update.

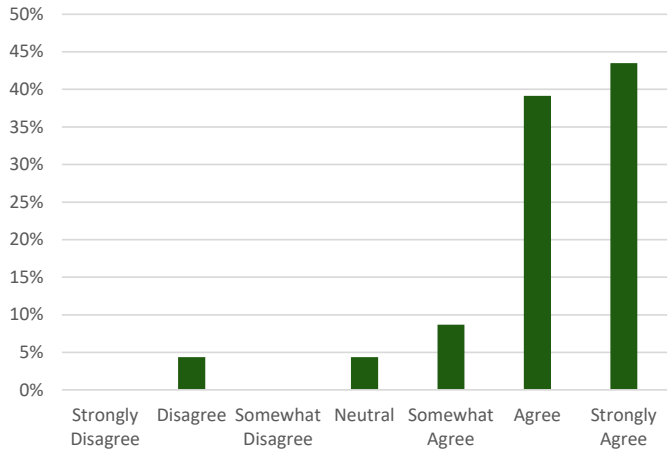
FIGURE A.2: SURVEY QUESTION 2



A collection of roadways (off the state highway system)are critical to the long-term mobility needs of Whitefish?

Meeting participants agree that investment in local roadways is critical to improving long term mobility within the City of Whitefish. The Transportation Plan update will start to develop a series of smaller improvements to local roadways that focus on improved mobility and connectivity.

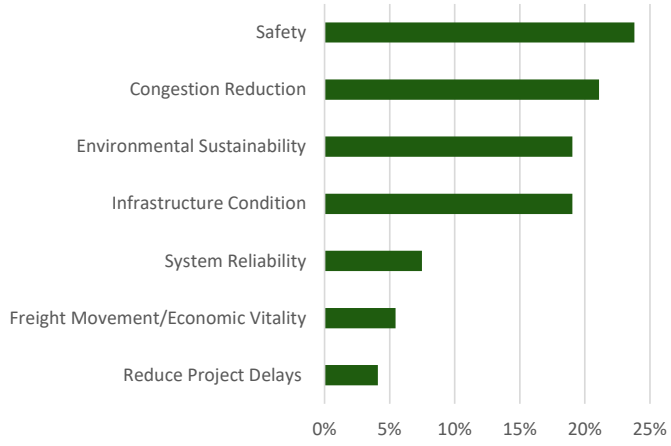
FIGURE A.3: SURVEY QUESTION 3



Prioritized Transportation System Goal Areas

Meeting participants were asked to rank priorities among a battery of potential *Transportation Goal Areas* for the Whitefish Transportation Plan. Transportation Safety and Congestion Reduction rated highest. These were followed closely by Environmental Sustainability and Infrastructure Condition.

FIGURE A.4: SURVEY QUESTION 4

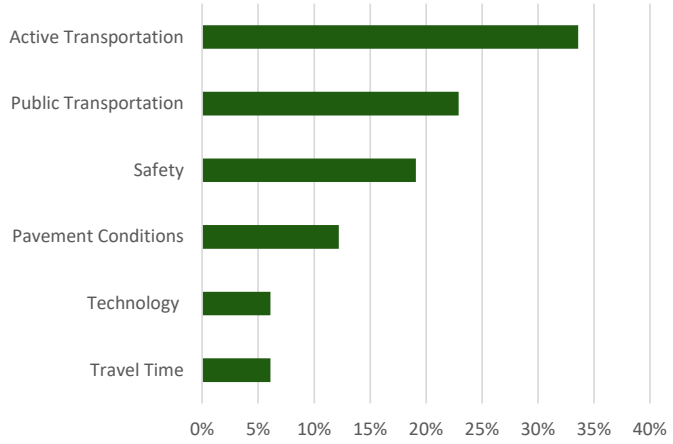


Prioritized Transportation System Performance Areas

Meeting participants were asked to rank System Performance Areas to support development of the Whitefish Transportation

Plan update. Active Transportation was ranked highest, followed by Public Transportation and Safety. Support for both active and public transportation fits the context for making the update Whitefish Transportation Plan a full multimodal transportation plan, focusing a range of modal investments.

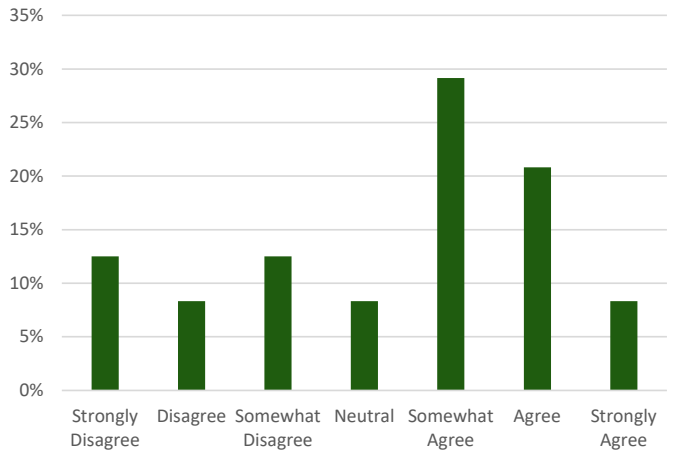
FIGURE A.5: SURVEY QUESTION 5



Traffic congestion during peak seasons is acceptable?

Meeting participants tended to generally agree that peak season congestion in Whitefish was acceptable. This sentiment seems to reflect that Whitefish is dependent on nearly year-round tourism and has a limited ability to expand roadway capacity. These findings may assist in support a more transportation demand management focused transportation plan for City of Whitefish.

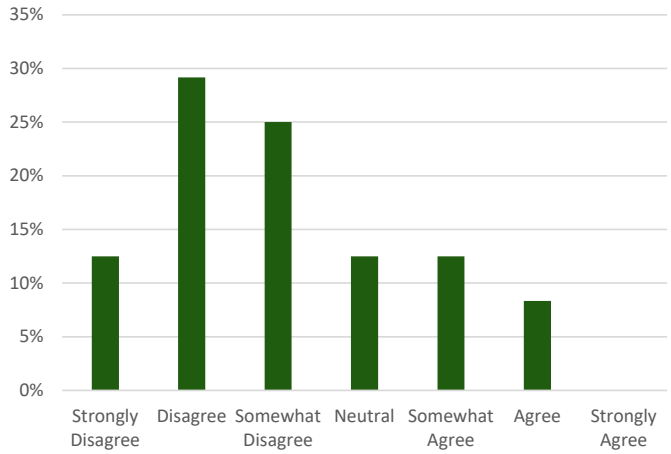
FIGURE A.6: SURVEY QUESTION 6



The roadway network in Whitefish is well connected and does it move traffic efficiently?

Meeting participants tended to express disagreement with the notion that the Whitefish transportation system was either well connected or able to efficiently move traffic given current conditions. This suggests the need to focus the transportation plan update on improving connectivity and mobility.

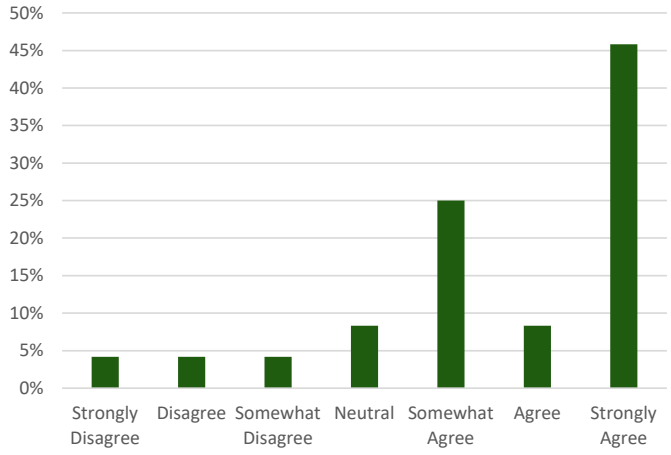
FIGURE A.7: SURVEY QUESTION 7



Better public transit service is critical to improving the Whitefish transportation system

Meeting participants overwhelmingly agreed that public transportation is a critical part of improving the transportation system in Whitefish. This matches with other responses and the sentiment that the transportation plan update will need to focus on demand management strategies that go beyond traditional roadway capacity improvements.

FIGURE A.8: SURVEY QUESTION 8

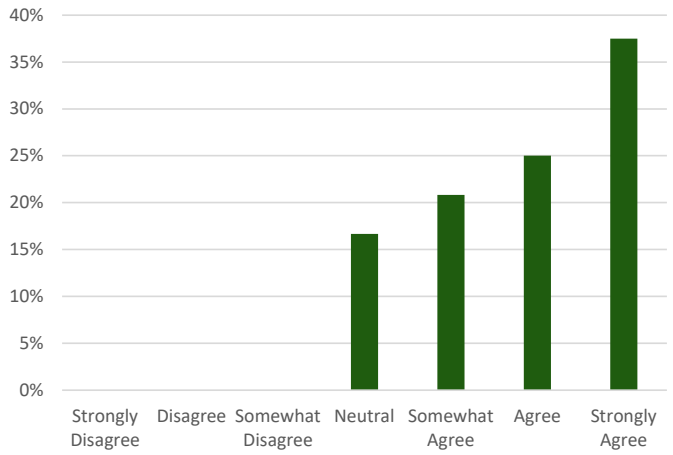


Transit Service to/from Glacier Park International Airport (GPI) is a missing element in the Whitefish transportation system

Much discussion has evolved around the potential need for public transportation to/from GPI. Meeting participants generally agree that public transit service to GPI is a missing element of the local transportation network. The Whitefish

Transportation Plan update will likely focus on opportunities to fill this emerging gap in the transportation system.

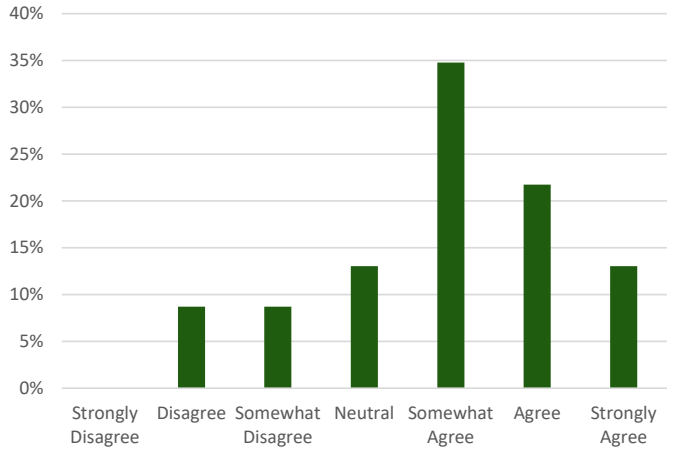
FIGURE A.9: SURVEY QUESTION 9



Park-n-rides are a missing link in the Whitefish transportation system

Recent studies of public transit in Whitefish have identified the need for both formal and informal park and ride facilities. Meeting participants generally agreed that park-n-rides are a missing link in the local transportation system. Whether used for carpooling or in connection with public transit routes, park-n-rides are valuable demand management tools.

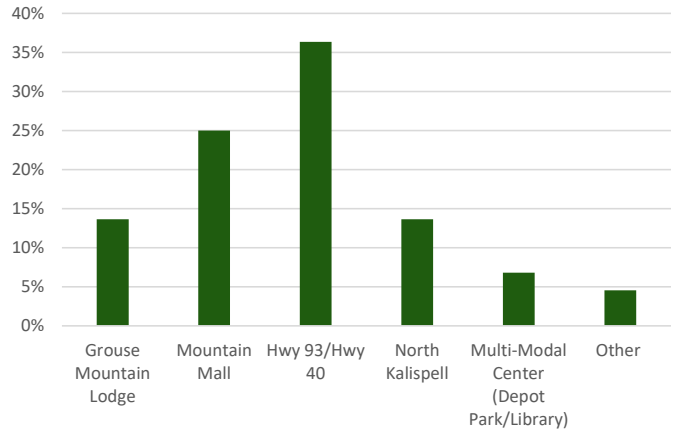
FIGURE A.10: SURVEY QUESTION 10



Select top (2) two locations for a park-n-ride

Meeting participants were asked to prioritize their top two (2) locations for potential park-n-rides. The top two locations (Highway 93/MT 40 and Mountain Mall are located on the south end of Highway 93. More detailed evaluation and analysis of park-n-ride implementation will factor into the Whitefish Transportation Plan update.

FIGURE A.11: SURVEY QUESTION 11



A bike sharing program should be part of the Whitefish transportation system

A bike sharing program has been discussed in the past for the city of Whitefish. Meeting participants generally agree that a bike sharing program should considered as part of the overall transportation system in Whitefish. As a demand management for short trips, a bike share program may well fit within the larger demand management programs evaluated as part of the Whitefish Transportation Plan update.

FIGURE A.12: SURVEY QUESTION 12

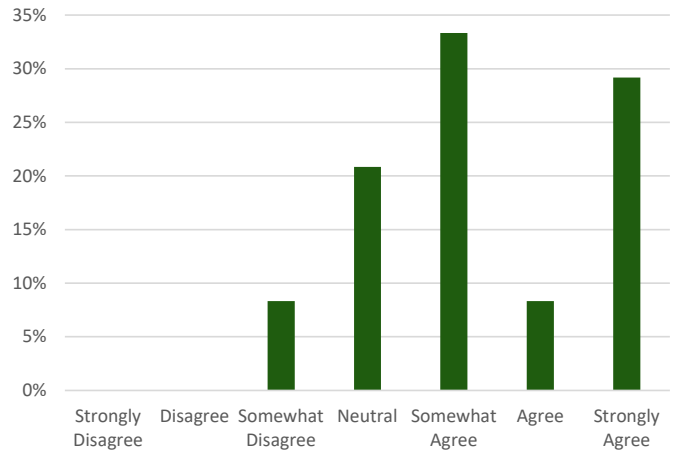


Table A.1: Specific Comment List

COMMENT ID	COMMENT	UP VOTES	DOWN VOTES
1	When will the bypass be done?	1	0
2	Probably a county request, but a wider road corridor with room for cyclists and pedestrians, or the addition of a sidewalk, would be a huge asset to the entire length of Farm to Market Road. Also, make sure to provide connectivity of this path/widened road all the way to Whitefish. Currently there are enough blind corners that cycling and walking are both somewhat dangerous.	0	0
3	pedestrian safety	0	0
4	I completely agree - this is even before we have people living in the TWO new apartment complexes being built in the city beach neighborhood.	0	0
5	We live on Leksand Trail. We have 2 young children and need to take them to and from school everyday. Turning on or off of 93 is often times frightening. It just feels that it is a matter of time before a tragic accident happens at this intersection. On behalf of my family and neighbors please make some modifications to Route 93 so that safety is a priority.	0	0
6	A pedestrian crossing would be worth consideration to safely connect a common route from Karrow to Birch Point/city beach.	4	0
7	summer and winter congestion, left turning vehicles back traffic up	2	0
8	45mph speed limit too fast given hidden driveways and Wildlife crossings	2	1
9	Baker between 2nd and Railway is horrible	3	1
10	If consolidated we would want to consider that folks with trailers/boats/motorized toys frequent Alpine Market for gas because of the ethanol free and we should maintain enough room for them to maneuver.	0	0
11	I agree. Perhaps we should continue the 35 mph speed limit as long as the asphalt pedestrian trail parallels Lakeshore.	1	0
12	Dangerous to cross the street here! Traffic rarely yields to pedestrians. There is river access at 6th and Central, as well as access to the river trail, and the population that is east and south of 6th cross here regularly. The road is horribly rutted. It is a disaster waiting to happen.	6	0
13	Turning left onto Wisconsin from Railway can be dangerous or nearly impossible in the winter with traffic from the mountain.	0	0
14	1st ave gets very heavy traffic with school pickup and drop off times, and there are regularly accidents or near accidents at all the uncontrolled intersections with blind spots caused by on-street parking.	1	0
15	There is a blind corner on Hwy 93 here which makes it very difficult and dangerous to efficiently and quickly turn on to and out of Twin Bridges Rd.	3	0
16	I agree the turn signal needs to allow at least 5 cars thru.	0	0
17	The city made a big mistake when building city hall and not taking into consideration a right hand turn lane on all corners. That lack of turn lanes now causes major congestion. I know nothing can be done now but it is disappointing we have to suffer for years to come.	0	0
18	Work with MDT to extend bike path to Twin Bridges. I know it's an MDT funded project through 2023 (tied up with easements), but the City needs to play a bigger role, especially with maintenance. MDT often builds bike paths, but no one maintains them for snow/ice removal, sweeping, vegetation, etc.	0	0
19	18th St could become a connector between Hwy 93 and Karrow ave, providing a "bypass" for through-traffic. This would eliminate much downtown congestion caused because 2nd street is the only east/west through-street.	1	0
20	a lot of bicyclists on Edgewood between 2 communities, along with speeding vehicles and no shoulders	0	0
21	Traffic on Spokane Avenue and 2nd Street is extremely congested. Intersections are often blocked to oncoming traffic because the lights on Spokane & 2nd, Central and 2nd, and Baker and 2nd are not in sync. This is especially dangerous during school dismissal.	0	0
22	get rid of left turns here before and after school. Sometimes people try and turn left for one or two cycles of the light while people going straight cannot get through.	0	0

...continued on page A-7

COMMENT ID	COMMENT	UP VOTES	DOWN VOTES
23	The library is located on the corner of Spokane Ave and Railway St. There is a 4-way stop at the intersection which very few people observe. It is extremely dangerous during school dismissal and special events taking place in Depot Park. I'm not sure why drivers find it acceptable to simply slow down before proceeding through the intersection, or making a u-turn in the middle of the intersection.	1	0
24	Lakeside Blvd. from Waverly Pl. to Idaho Ave and Skyles Pl. from Idaho to Dakota should be one way traffic only in the summer months, June-August with the traffic going east only. This will allow for more room for bikes and pedestrians on the hill coming up from Dakota and down to the beach. It is narrow, there is no shoulder, and its hard to see pedestrians coming up and over the hill. A designated bike lane could be striped. It is also hard for two boats to pass each other on this narrow road.	0	0
25	Additional signage for boats, trailers, and RVs about speed limit is necessary - Edgewood is very unsafe in the summer and I have seen near accidents.	2	0
26	Hwy 93 coming in to Whitefish from the south is frequently congested. Getting rid of some of the on street parking and the crosswalk bump-outs so that turn lanes could be created would help a lot.	1	2
27	Crossing the road here as a pedestrian is harrowing. The lights are few and far between so you need to walk a great distance to find a place to cross. When you DO cross, the light times are very short. Most of the time I'm afraid I'll be hit by a motorist trying to make a left hand turn that is certainly not looking for pedestrians.	6	0
28	Signage for school zone speed limit should make it clear whether the 15 mph speed limit is in effect all the time, or only when school is in session. It is currently unclear and on weekends and evenings acts as a speed trap for ticketing.	1	0
29	A left turn arrow (for turning south on 93 from 2nd st. east) should be added. Motorists turning left have to yield to traffic heading east on 2nd street, traffic from west 2nd street turning south on 93, and pedestrians crossing 93. When traffic is heavy it can take multiple green lights to get through the intersection.	1	0
30	This would serve the community far better with a round about or light. This gets backed up heavily during high traffic times but also people have a hard time properly following the rules of four way stops. Please address	9	0
31	With all the traffic on hwy 93 now it is next to impossible to get out of our driveway(Iverson Ln) onto the highway. It is already a safety concern and will be even more once Town Pump is up and running.	1	0
32	Traffic speeds too high (by speed limit and street design) for peds & cyclists of all ages & abilities to feel safe and be seen. And, there is a limited shoulder.	1	1
33	Transit needed to provide access to Lion Mountain	2	0
34	Transit needed to provide access to / from Kalispell at more diverse set of times and days. Currently the tricity communter runs only M-F and twice in the morning and evening. It doesn't accomodate the typical set of jobs found in Flathead county, which tend to be odd-houred service jobs or within healthcare.	4	0
35	Cars (presumably picking up pizza) are usually parked in the no-parking area here. Usually partially blocking a lane of traffic. PD and parking enforcement can only do so much. Needs better enforcement or marking.	0	0
36	Have noticed quite often that delivery semi- trucks (Pacific Seafood?) park in eastbound lane and unload their trucks on East 1st St, and not the alley. Traffic waits for the delivery truck and takes turns, but I've witnessed a few close calls where delivery driver doesn't see traffic trying to get around truck and has nearly been struck. Seems bizarre that this is the best place for a truck to unload. This is a weekly occurrence.	0	0
37	With the trees on either side of Murdock it is very difficult for vehicles to see cyclists and pedestrians as they approach E Lakeshore. Trimming of trees to allow greater line of sight would be an easy and economical solution	0	0

...continued on page A-8

COMMENT ID	COMMENT	UP VOTES	DOWN VOTES
38	Vehicles coming from Wisconsin are coming around a corner into a pedestrian crosswalk and often do not see people until the last minute. Most vehicles do not stop for pedestrians, likely because they do not expect them or see them until the last minute. A flashing light to signal people are crossing ahead would be a viable solution for this.	0	0
39	During peak seasons (summer & winter) and peak hours, Baker Street traffic heading south over the viaduct and into town is backed up making it very difficult to turn north from W 1st St and south from E 1st St. This is also an issue when trying to leave Marcus and head south. Having 2 pedestrian crosswalks at this same intersection only slows the flow of traffic.	1	0
40	I agree. This is a way to reduce the number of cars on the road, reduce carbon emissions, promote an active and healthy lifestyle and more than likely save lives! This is an incredibly dangerous stretch of highway to ride to access the WFT at Skyles and Spencer. I truly hope it does not take losing a life to make this happen!	0	0
41	Agreed!!	0	0
42	People trying to merge onto Wisconsin Ave are NOT looking for bicyclists or pedestrians on the shared use path. Conversely, some bike/ped traffic on the pathway are assuming traffic is looking for them. These ares seems per-destined to have a bike/ped - vehicle collision. Need better warnings.	7	0
43	Would be amazing with a roundabout on this location. That would promote so much better traffic flow.	0	0
44	Yes, it is a safety issue to cross 2nd in this area. Cars don't seem to be thinking about pedestrians and bikes	0	0
45	Need "Share the Road" sign here to inform motorists that bikes will be on roadway. This is a very popular biking spot along the lake and there is no shoulder. Some motorists think they have the right of way over bikes and are not driving safely.	2	0
46	Connect 7th all the way to Highway 93 to alleviate all the unnecessary traffic weaving throughout the East Downtown Neighborhood. It may be a good idea to make this a controlled intersection during school drop off and pick up times.	3	0
47	Place on stop sign on Columbia at 3rd Street. A lot of cars are using 3rd Street now and at the intersection with Columbia it is very difficult to see traffic, bikes coming from the right as one treacle's east. Also, traffic is traveling very fast up Columbia.	1	0
48	Post no parking signs on 3rd, close to Spokane. When cars park on both sides of the street near this intersection it becomes very dangerous when cars are turning onto 3rd from Spokane and there is another car on 3rd waiting to turn out. When cars are parked on both sides of the street, the street almost feels like a single lane.	1	0
49	Connect 13th to the mountain mall for bikes and pedestrians east of highway 93, when this property is redeveloped, to give an alternative to highway 93	0	0
50	This intersection needs a cross walk. The cross walk further east is dangerous because cars are approaching from downhill heading west	0	0
51	People often use the left hand turn lane as a straight lane. Have witnessed a few near misses. Locals seem to know the intersection, but visitors often seem confused as to what lane to use...	0	0
52	This is not a 4 way stop. Probably the only local road in the entire Whitefish road network that has a stop signs for one road and not the other. For consistency's sake, seems this should be a 4 way stop to prevent accidents with motorists, bicyclists and pedestrians.	0	0
53	Uncontrolled intersection and lack of sidewalks make pedestrian/vehicle interactions a possibility. Especially at night. Busier than you'd think in this part of town with morning, afternoon, and evening (sporting events.)	0	0
54	Traffic often moves faster here than 25mph. Especially during school commute traffic heavy times. Could use better enforcement.	0	0
55	People often use the left hand turn lane as a straight lane. Have witnessed a few near misses. Locals seem to know the intersection, but visitors often seem confused as to what lane to use...	0	0
56	This part of town has few sidewalks. Pedestrians are forced to take the street. Not so great for children walking and safety issues during snow season and when dark.	0	0

...continued on page A-9

COMMENT ID	COMMENT	UP VOTES	DOWN VOTES
57	Difficult for cars on Big Mt road to see traffic coming from the right when making a left hand turn.	5	1
58	A central location for hotel shuttles to pick up and drop of guests.	0	1
59	There is a blind corner at Twin Bridges Rd/US 93. The speed limit should be significantly decreased somewhere farther North of Twin Bridges Rd. to make it safer for people to pull out of Twin Bridges Rd. onto US 93, and to make it safer for people traveling North on US 93 and turning Left onto Twin Bridges Rd. You feel like a sitting duck here.	5	0
60	With personal car traffic and parking on Central Ave being a nightmare at best, opening up more of the parking garage would lessen traffic and make the downtown area a more pleasant place to be a pedestrian and biker. Minimizing parking for personal cars on Central would allow more pedestrians to safely walk and participate with our local businesses. Currently, the upper floors of the parking garage are minimally used on weekends (5 to 10 cars at a time or potentially 120 parking spots).	0	0
61	Cars are prioritized at stop lights. Pedestrians have to hit the crosswalk button in order to have right of way. If we want to promote pedestrian traffic downtown we need to make walking across 2nd Street easy. People shouldn't have to ask to cross the street on foot.	1	3
62	Engine braking should be prohibited on the hwy 93 hill descending into Whitefish towards the golf course. You can hear truck's jake brakes for miles. That hill isn't that steep, and there's no reason that trucks shouldn't be prohibited from using engine brakes in what is effectively a residential area.	2	0
63	Traffic should slow down sooner headed east into town and stay slowed down past the Golf Course headed East. Was rear-ended by a car coming too fast down the hill/bad tires/couldn't slow and me stopped to turn into State Park. Golf Course/Grouse Mtn intersections sees heavy use and speed limit should be 35.	1	1
64	No path currently connecting 7th to the highway 93 network.	1	0
65	The turn south off Hwy 93 to Sasquatch Hollow/ Leksand Trail is very dangerous. The hill obscures east bound traffic on 93 - requiring making a full stop to allow oncoming traffic to pass. People have to stop to wait for your turn and many aren't paying attention. It is an intersection that needs to be moved to avoid a deadly accident - just a matter of time. We have lived on Leksand Trail for 13 years.	1	0
66	A blinking light for pedestrians, bikers and drivers to turn out of lion mountain onto 93 would make this trail much safer. This would also allow residents of the Leksand Trail neighborhood a way to travel to town much more safely.	0	0
67	A better place for hotel shuttles and transit to drop off than the Library fire lane.	0	0
68	The Library circular drive is NOT the place for drop offs. For one, it is a fire lane. Secondly, the larger buses drop off further north on Spokane by the north parking lot between the Library and the Depot, because they can't fit in the turnaround. Thirdly, parents use that circular to drop off and pick up students. Library staff has had complaints about the congestion of cars and students on that drive. The school has asked parents not to do so, to no avail.	0	0
69	US 93 is unsafe for pedestrians and cyclists where there isn't currently a sidewalk. There should be a sidewalk at least from Whitefish to Twin Bridges Rd.	9	0
70	Due to the high volume of pedestrians utilizing Karrow while walking or biking back and forth from downtown, it would make more sense to complete the proposed pedestrian path along Karrow, and to consider a commercial bypass route through 424/Farm to market, as it has significantly less pedestrian utilization. Also worth consideration would be extending the Karrow path along Highway 93 to connect with the Kalispell path network as well. An eventual commercial bypass does seem to be necessary.	1	0
71	Karrow gets quite a bit of pedestrian traffic, but it's very narrow and has lots of blind rolls. A bike / pedestrian path would make a lot of sense.	9	0
72	Agreed. There are a lot of roads/driveways/intersections where there is a lack of communication between driver and bike/ped. Considering some modifications would be worth considering to help avoid future accidents.	0	0
73	Please add a bike/pedestrian path at least to Lion Mtn. The road shoulder is very narrow and dangerous and lots of out of towners don't know how to bypass/back way to trails. Would love to ride to town from Leksand Trail/Sasquatch Hollow neighborhood but must either ride narrow Hwy shoulder with too fast traffic or do a blind crossing to use Lion Mtn Rd.	8	0

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COMMENT ID	COMMENT	UP VOTES	DOWN VOTES
74	Perhaps adding an extension of our bike/ped path would be a great solution. That would also add continuity to our trail systems!	2	0
75	Unprotected left turns on Baker from 5th north to 93 cause vehicles to illegally pass on the right through intersections. Posses danger to pedestrians and turning traffic. Consider restricting Left turns during high traffic times.	1	1
76	This neighborhood is close to schools, but many streets in this area: examples are 6th, 7th, 8th do not have sidewalks! Kids are forced to walk in the street.	0	0
77	I agree with this comment. Especially with the idea that many crosswalks are difficult to see. Could we paint the crosswalks more frequently? Traffic seems to understand that there is a middle line down the road, even when it is hard to see due to age, but traffic doesn't see a hard to identify crosswalk.	1	0
78	The bike / ped path that switches sides of the street here doesn't work very well. It'd be better if it stayed on one side or the other.	5	2
79	Wisconsin Ave is a really difficult street to navigate as a pedestrian and biker. Fast car traffic and no traffic calming features make crossing the road very difficult, which is necessary to do with a sidewalk on only one side of the street at a time. Walking and biking in the shoulder is extremely intimidating. There is no crosswalk to Colorado Apts or to Denver St and the ones that do exist are really hard to see.	7	0
80	Would it be possible to widen the pedestrian/bicycle pathway on the viaduct? It seems there is an ample shoulder on the road that could perhaps give up a foot or two to the pedestrian / bicycle path?	16	0
81	US 93 North of Whitefish is unsafe for pedestrians and cyclists beyond where the sidewalk ends in Whitefish, due to the high speed limit and extremely narrow road corridor. There should be a sidewalk from Whitefish to at least Twin Bridges Rd. This would allow residents to access the recreational areas of Spencer Mountain and Lion Mountain via bike/walking, thus ameliorating parking issues at both locations.	14	0
82	The current crosswalk is poorly labeled and signage is basically hidden from drivers coming south on Wisconsin.	4	0
83	This is a great safety concern as well for people walking with strollers! We have encountered several dangerous situations trying to cross 2nd Street with baby-stroller. Westbound traffic are often hidden due to traffic standing still awaiting green light by intersection with Baker Street. If possible eliminate and replace the stairs with continuation of the trail. Alternatively modify the stairs with added ramps that allows bikes and strollers to be pushed.	2	0
84	Connect the communities of Columbia Falls and Whitefish with a pedestrian path along Edgewood and Tamarack Ln	7	0
85	it might be better to restrict onto highway from Lion Mtn area to right turns only- you can go out to the newly rebuilt intersection with State Park Road to go left on the highway	1	0
86	Transit line needed running year-round down Wisconsin / Baker	3	1
87	With the development of the Holbrook parcel of USFS land and the Big Mountain Trailhead, a plan for increased pedestrian crossing infrastructure is needed.	2	0
88	We might consider adding an official crosswalk with the illuminating signage here. Our bicyclist's cannot use the trail that goes under the road and up the stairs so this might help add safety and continuity to our trail system. Most other major road crossings have been addressed - such as on Wisconsin & Labrie Drive and of course on Baker Ave just south of the post office but this one seems to stand out as disjointed.	10	0
89	Crosswalk needs better signage. Cars blow through this intersection when pedestrians are trying to cross	4	0
90	A left turn lane onto 7th would help ease traffic on Baker. Especially as traffic downtown gets worse, more people take seventh to avoid the downtown mess. But people waiting to take a left onto 7th frequently backs up traffic on Baker	4	0
91	more and more use of Whitefish Trail - Reservoir Trailhead by bikers, hikers. there is no shoulder on Reservoir Road and people definitely drive faster than the posted 25 mph	8	0
92	I have lived on Leksand Trail accessed via Sasquatch Hollow since 2000. This intersection is a disaster waiting to happen. More traffic, going too fast, people come over the hill going headed East (and West) too fast. I have almost been rear ended numerous times have had to hit the gas and pull right when headed west and turning onto the road. My son's friend taking him home was part of a 3 car pileup. Crossing on foot or bike to get to trails - I have to use my ears as can't see traffic.	6	0

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COMMENT ID	COMMENT	UP VOTES	DOWN VOTES
93	Take this bike path all the way to Spencer Mountain! It's a no brainer!	9	0
94	traffic coming up hill from west & pedestrians trying to cross on corner w/loula's, sushi place & other restaurants.	5	0
95	many conflicting access drives at Ice Den, Alpine Market and gas station, Tap House - would be good to consolidate	7	0
96	On busy days, Traffic gets backed up Big Mtn. Road for miles. It's probably coming on time to put a stop light in.	5	2
97	For sixteen years I have personally made the turn from HWY 93 onto Twin Bridges Road, and every single time I hope I do not die in a head-on collision. A turn lane needs to be added at this location to prevent rear ending, and the road layout needs to be reconfigured to eliminate the blind corner. If this turn is too dangerous for school busses to take, then it should be too dangerous for everyone to make.	2	0
98	Karrow is the defacto Whitefish bypass. Sending all traffic, including commercial heavy truck traffic, through downtown Whitefish doesn't make sense. A better bypass situation needs to be created, either on Karrow or elsewhere.	5	3
99	Traffic congestion is very high in this area. Now with Town Pump going in on the corner of 93 & 40 we believe that it will only get worse. We live on the west side of 93 on Iverson Ln. This is across from where the Town Pump is going in and we have a very hard time getting onto the highway as it is. I can't imagine what it will be like when Town Pump is there.	1	0
100	This corner with Sasquatch Hollow and also the trailhead road just beyond get a lot of traffic and both are real blind spots. I pull into Leksand trail often as my kids live there. Please make 3 lanes there, flashing lights etc!	1	0
101	Leaving Lion Mountain Trailhead and turning east onto Hwy 93 is dangerous because of a lack of visibility combined with high speed limits. One suggestion would be to install a convex visibility mirror so that you can see if there is oncoming traffic.	8	0
102	public comments from Hwy 93 S Plan process indicate this intersection to left turn into the hospital or turn left out of the hospital is dangerous	2	0
103	Really unsafe with pedestrians dodging between cars and waiting for a long time at crosswalks during high traffic periods (all spring/summer/fall now).	1	0
104	This area has been extremely congested for the last five years at most times of day, especially afternoon.	2	0
105	I have also seen near misses with pedestrians and kids on bikes with excessive lake traffic in the entire City Beach area in the summer.	1	0
106	Vorman road needs a sidewalk to connect the new trail at Trailway development to the Creekwood subdivision or pedestrian safety. There is not an adequate shoulder to allow for safety.	1	0
107	We need a public transit that goes from smith fields to the tennis courts at grouse mountain with several stops along the way then loop back through town to smith fields.	1	0
108	This area gets extremely congested from the Post Office/bridge to the stoplight.	3	0
109	During a normal school year, morning traffic with students, parents, workers, and freight in this area can be very wild and unsafe.	2	0
110	*Dangerous Curve at Park Avenue* This stretch of Park Ave is frequented by children, families, exercisers on foot and bicycles. There is no sidewalk or even a walkable shoulder for jumping out of the way of cars. This is a well-used thoroughfare for car traffic and speeding typically occurs northbound from the Shady River Lane intersection to the curve. With the expanded trail to the river now open, bicycles and pedestrians have increased. This curve is an accident waiting to happen.	7	0
111	Bike/ped path should be extended along armory, preferably all the way around and back down Voerman to Park. There is a large amount of bike and pedestrian/runner traffic with no shoulders. Peds and even bikes often walk against traffic, sometimes three and four abreast. With all the new construction along that road, large dump trucks as well as commuter traffic, it gets very dangerous.	2	0

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COMMENT ID	COMMENT	UP VOTES	DOWN VOTES
112	Due to 8am-9am, noon, and 3pm-4pm high school and elementary school traffic down Columbia Ave. to 7th St. E. residents, pets, and pedestrians/bikers are compromised in their safety due to regular ignoring of the speed limit on this section of Columbia Ave. Speed bumps or other ways to truly impact car speed in this area is needed. The temporary flashing speed signs do not work once taken down again. There should also be a crossing guard here for children walking to /from school due to the same.	1	0
113	Intersection of Leksand Trail and 93 is dangerous. People come whizzing down the hill and residents wanting to make a left handed turn are at risk of being t-boned. Flashing light should be added near Whitefish Hills warning motorists to slow down.	2	0
114	Left turn arrow from Baker to 93 North is far too short and causes congestion as only a car or 2 makes it through	10	0
115	People exceed the 25 mile per hour limit on a regular basis. There are kids and pets in this area and it dangerous	1	0
116	Perhaps one or two of the nearby parking spots could be marked as a 5-15 minute parking only to give vehicles a safe and convenient place to park while picking up their pizza? It could be an easy way to reduce the illegal parking and enhance safety for the price of a sign and the 15 minute installation of it. A cheap trial run using a temporary post in a bucket could be used to test it out?	1	0
117	A flashing crosswalk sign like we have on Baker and 1st would be useful here.	1	0
118	The way the road narrows at this intersection, and at others, can sometimes make it difficult to make a right turn when another vehicle is stopped on the road onto which one is trying to turn. When I have to make a turn in such a situation, I either get very close to the other car or end up with my back wheel over the curb. The problem is worse in wintry conditions as the road is even narrower and more slick.	0	0
119	Whitefish has been a local leader in protecting the environment with initiatives such as the Whitefish Climate Action Plan. I think that we have the potential to expand that role by beginning implementation trials of sustainable roadways. This could be roads made using recycled materials, or more advanced technologies that allow for water infiltration.	1	0
120	I would agree that 45 mph is too fast for this section of road. Let's keep it at 35.	1	0
121	I sit like a duck in my car for hours here :(	0	1
122	TONS of traffic on Columbia! We need speed bumps or something to slow, or mitigate traffic issue. It has become a thoroughfare for high schoolers and others to avoid Spokane Avenue traffic.	1	1
123	This is an issue for the entire Wisconsin Avenue corridor on busy winter ski days. Downtown businesses killed the Haskill Basin alternative route years ago and now it is coming back to haunt the community. Whitefish needs more than the one north-south route and a eastern beltway with connections to downtown is the way to go. And yes stoplights will be needed.	0	0
124	A year around transit line without dedicated pullouts will make Wisconsin traffic worse. The lack of a left had turn lane already slows traffic.	0	0
125	Agree, time for a left turn lane now, and then the State should be planning a for the future for additional lane capacity such as a third driving lane which could be a second lane up to the Mountain in the morning and down in the afternoon.	0	0
126	In the 1980's 90's I used to live up Reservoir Rd and mountain biked into Haskill Basin and Big Mtn regularly and definitely the uphill ride from Wisconsin is a hazard and a connecting path is wise. Also a stop light at Wisconsin would be a good idea. Trying to turn left onto Wisconsin on busy ski days is test of patience.	1	0
127	A path on both sides would be ideal. The path is where it is due to the limited right of way when Wisconsin was rebuilt 20 years ago. The City and State need to step up and buy more right of way for Wisconsin.	0	0
128	The City and State need to buy additional right of way and build sidewalks on both sides of Wisconsin. What we have currently is a solution to the problem that existed 20 years ago when Wisconsin was rebuilt. People do not understand that the State does not build for the future, they build for the present and are thus always behind in growing communities. The City needs to push for the future.	0	0
129	It is time for a rebuild of this intersection. Instead of squaring up for better sight distance to the west I suggest a dedicated two lane going east approach where traffic from the Mountain turns left onto a dedicated lane separated from a dedicated lane for eastbound traffic on E. Lakeshore. Then the two lanes merge. This would allow faster movement off the Mountain without a light.	0	0

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COMMENT ID	COMMENT	UP VOTES	DOWN VOTES
130	Rebuild 93 NOW and put in a dedicated separate bike/pedestrian path	0	0
131	Maybe the State took down the sign when they rebuilt the highway. There used to be a no jake brakes sign. Maybe the City council needs to step up the fine and then get the PD to write a few tickets - problem solved.	0	0
132	NO mirrors - rebuild the highway and slow the speed limit.	0	0
133	Need a bikepath for the southwest side of Whitefish from 93 to 93 at Blanchard Lake Road	2	0
134	40 years ago in the 1980's there was a bypass on the plan from Hwy 40 to the Lion Mtn Loop Rd vicinity and downtown businesses killed it - so let them eat trucks. Since then the southwest side of town has significantly developed with larger rural homesites and many people invested in this area. and they will fight a bypass on Karrow tooth and nail. Let the downtown businesses build a tunnel from Hwy 40 to Twin Bridges.	0	0
135	The State MDOT is asleep at the wheel - this stretch of US93 into town may be the worst piece of 93 between Canada and its end near Phoenix	0	0
136	Speeding tickets won't pay for a bike path. The State MDOT is asleep at the wheel and this section of highway should have been rebuild 10 years ago. I agree slower speeds around all of the Whitefish outskirts is needed.	0	0
137	The speed limit on 93 should be 45mph all the way from the golf course to Twin Bridges road. It changes from 45 to 60 right before the crest of the road and then there is a sign that indicates the turn should be taken at 50mph. Whats with that? People take the blind hills and turns on this stretch of the highway going WAY TOO FAST! Let's lower the limit and pinch the speeders and spend the money on the bike path!	2	0
138	Rebuild the highway now. It most definitely needs a left turn lane to Twin Bridges and a slower speed limit 45mph to that point.	0	0
139	City needs to acquire right of way to connect Armory Road to Monegan Road to create alternate pathways for traffic circulation on the east side of Whitefish. Whitefish is a one street city with growing congestion allow the one Hwy 93 route.	1	0
140	With a dedicated path I do not agree. Traffic speed is fine and pedestrians and riders need to understand that you just do not keep your pace when crossing at a crosswalk. It is like a railway crossing stop, look, and listen. Then step into the crosswalk. And take out your earbuds in busy areas.	0	0
141	40 years ago there was a bypass on the southwest side of town from Hwy 40 to the hill crest near Lion Mtn Loop Road. The downtown businesses killed it - so let them eat truck noise and exhaust. Once the bypass was taken off of the plan many people built homes in this area and they will fight a bypass very very hard.	0	0
142	40 years ago there was a bypass on the plan and it was removed in the 90's and downtown businesses did not fight the removal. Let them deal with trucks.	1	0
143	Need a traffic light at Blanchard Lake Road	0	1
144	Let's make dedicated pullouts.	0	0
145	The existing path is not wide enough for bikes riding in opposite directions to safely pass each other. Also, the path gets used frequently by baby strollers and dogs on leashes. It feels very narrow when riding a bike across it.	1	0
146	Bike/walk trail needs continuity here.	1	0
147	A reliable, convenient, and frequent bus service within Whitefish and around the Flathead is extremely necessary in order to reduce the amount of traffic on our roads. It has been crucial in the past few years and only becomes more important with so many people moving to the area in recent months. Our roads are going to be slammed with cars if a transit system isn't established. Widening roads is proven to not reduce traffic congestion. Public transit will.	2	0
148	They have talked about making Baker going South from the center of town Two Lanes/One Way. I have already talked to many people and I SAY NO WAY.!!! Two way traffic from the center just past the Post Office, Yes. Then, Two lanes/One Way from the bridge on.!!! If we can't mail a letter and then can't get back into town - that's BS and I will fight it ALL THE WAY.! Thanks, Tom Gilfillan Whitefish Pottery	0	0

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COMMENT ID	COMMENT	UP VOTES	DOWN VOTES
149	is there anyway we can route some of the traffic crossing the railroad yard east of downtown area?	0	0
150	Need a dedicated bike-ped lane that is seperated from the car lanes.	1	0
151	Please connect west side bike/walk trail to provide safe access to commercial center on 93 and connect to bike-walk trail system on the east side of 93	0	0
152	Bike lane on Baker is dangerous. Too narrow and this is a very busy vehicle lane, which will only get busier. Would love to see a dedicated and safe bike/walk path.	0	0
153	Agreed. Perhaps semi's and construction vehicles need to be better monitored or "policed" so as to be respectful to all road users.	1	0
154	The intersections of 93 with Sasquatch Hollow rd and Mountainside Dr are absolutely unacceptable. This blind hill should have HUGE warning signs, a yellow flashing light, a speed limit that reduces to 35 MPH, and have a turn out for police to set up a speed trap for enforcement.	2	0
155	Bad combination of truck and car congestion, with high & increasing pedestrian and bike usage. Have we considered a bypass to remove through-traffic (especially trucks) from Whitefish center?	2	1
156	This intersection is extremely dangerous, for access to lion mountain trail area.	1	0
157	Cars, bikes, pedestrians, trying to cross Spokane Ave is almost impossible. Lower speed limit (20 mph as recommended in Downtown Masterplan) would help. Also timing of traffic lights at 13th and 2nd cause constant traffic either from one direction or the other.	0	0
158	More public transportation is needed in Whitefish and to nearby towns.	0	0
159	The Spokane bridge needs to be replaced. It would also be great if a ped/bike path is added to cross the Whitefish River at this point - like the one added to the Second Street bridge.	0	0
160	Railway ST. west of Baker should be two-way here, which would help reduce congestion at 1st St and 2nd St.	0	0
161	Add another southbound lane between river and 13th to alleviate traffic back-ups caused by school traffic.	2	0
162	Free the River here, remove culverts and install bridge with generous bike and pedestrian enhancements, connect bike/ped path below bridge along river	0	0
163	Vehicles on 1st St have difficulty crossing or turning left here.	2	0
164	Could 10th St. be rebuilt and extended to Karrow Ave to provide an east/west connector?	0	0
165	A bridge here could perhaps enable an 18th st. from Karrow to Monegan.	0	0
166	Another overpass , connecting with Columbia Ave to the south, would help to alleviate the tremendous congestion caused on Wisconsin/Baker - the result of having only one roadway connecting everything to the north of the rail tracks with everything to the south.	1	0
167	When Baker St. and the Baker bridge are rebuilt, provide an underpass for pedestrians and bicycles here, so they can cross safely.	0	0
168	Signalized crosswalk helps here, would be good to add similar signals at 4th and 3rd.	1	0
169	pedestrian safety	2	0
170	Connect Columbia going north with a new overpass.	0	0
171	Sidewalks are lacking on several blocks in this east side neighborhood, where many children walk to school.	0	0
172	Extending 7th St. across river and completing 7th St. between Spokane Ave and Kalispell Ave would provide a badly needed east-west connector. This would reduce congestion at 2nd St, which is currently the only rout across town east/west.	0	0
173	Sidewalks are badly needed on 8th, 7th, and several blocks of connecting streets in this neighborhood. Kids walking to school are forced to walk in the street. This is especially dangerous because parents are also driving their kids to school, very fast, on these same streets.	0	0
174	Bike/ped path needs continuity here.	1	0
175	Bike/ped path needs continuity here.	1	0
176	Crosswalk here please.	1	0

...continued on page A-15

COMMENT ID	COMMENT	UP VOTES	DOWN VOTES
177	Cars, bikes, pedestrians, trying to cross Spokane Ave is almost impossible. Lower speed limit (20 mph as recommended in Downtown Masterplan) would help. Also timing of traffic lights at 13th and 2nd cause constant traffic either from one direction or the other.	1	0
178	This Traffic light causes congestion snarls on Baker. maybe a roundabout would be better.	0	1
179	We need a light at this corner! Dangerous and difficult to pull out due to all the traffic. Lots of bikers and pedestrians try to cross here as well. There are white crosses all over here. Please consider putting a light at 40 and Whitefish Stage!	3	0
180	The Downtown Masterplan details Bike/Ped improvements to the viaduct which would make it much safer and more pleasant. The improvements would also serve to better connect the business on the north side with the Downtown Business District.	2	0
181	There are no sidewalks on this block. Walking in the street is unsafe. Sidewalk on south side is inside Park, behind tall bushes, making it feel unsafe to walk there when it is dark.	0	0
182	Speed limit should drop down to 25mph here. 20mph would be better, calming traffic and providing opportunities for crossing, and for left turns.	0	0
183	Speed limit is too high here, lower to 25 mph.	0	0
184	Vehicles on 3rd St have difficulty crossing or turning left here.	0	0
185	The protected bikeway from 6th to Railway along Spokane is called for in the Downtown Masterplan. This would provide a much-needed bicycle transportation route, connecting several of the bike lanes and bike paths in the periphery. Without the protected bikeway, it is not practical to use bicycles for transportation, since riding on the street is unsafe.	1	0
186	Before and after school, cars fly through this uncontrolled intersection. A stop sign should be implemented in order to prevent collisions.	1	0
187	This is the busiest pedestrian crossing in the State. Maybe an “all walk” phase on the traffic light, when pedestrians could cross in all directions at once, would shorten the wait time for vehicles on 2nd St. Also, maybe the duration of the Central Ave green light could be shortened a bit. If this worked to help move 2nd St traffic, that would help with the back-up on 2nd. An “all walk” on Baker and 2nd St. intersection might also help.	0	0

APPENDIX B. FUNDING PLAN

October 2022

KLJ
ENGINEERING, REIMAGINED

INTRODUCTION

This appendix provides a general overview of transportation funding relevant to the study area. Most transportation dollars directed to the study area are derived from federal and state sources. MDT administers several programs that are funded from state and federal sources. The City of Whitefish is dependent on a number of these programs to support transportation infrastructure investments. This Plan recommends that the City of Whitefish allocate annual funding to preventative maintenance and "spot" rehabilitation/reconstruction pavement projects (Chapter 6). While this funding has historically come from the Gas Tax, additional local funding may need to be considered in the future to adequately address pavement needs.

Each year, in accordance with Montana Code Annotated (MCA) 60-2-127 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.

On November 15, 2021, President Biden signed the Infrastructure Investment and Jobs Act (IIJA) (Public Law 117-58, also known as the "Bipartisan Infrastructure Law") into law. The Bipartisan Infrastructure Law provides $550 billion over fiscal years 2022 through 2026 in new Federal investment in infrastructure, including in roads, bridges, mass transit, water infrastructure, resilience, and broadband. Funding sources and allocations change with each authorization and may vary following completion of the next federal authorization.

FEDERAL FUNDING SOURCES

The following sections summarize relevant federal transportation funding categories received by the state through US Code (U.S.C.) Title 23 and U.S.C. Title 49, including state developed implementation or sub-programs that may be potential sources for projects. To receive project funding under these programs, projects must be included in the State Transportation Improvement Program (STIP), where relevant.

National Highway Performance Program

The National Highway Performance Program (NHPP) funds are federally apportioned for the NHS roads and bridges, which includes the Interstate and non-Interstate NHS routes. The purpose of the 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 requirements; and serve interstate and interregional travel. The NHS 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 financial districts based on need by the Montana Transportation Commission. Also, consideration is given to balancing needs using the MDT Performance Programming Process. The funds are allocated to three programs:

- Interstate Maintenance
- National Highway System (Non-Interstate)
- NHPP Bridge

Figure 3.4 on page 32 of Chapter 3 shows the roadways eligible for NHPP funds.

Eligibility and Planning Considerations

Activities eligible for NHPP funding include:

- Construction, reconstruction, resurfacing, restoration, and rehabilitation of roadways on the NHS.
- Construction, replacement, rehabilitation, preservation and protection of NHS bridges.
- Projects or part of a program supporting national goals for improving infrastructure condition, safety, mobility, or freight movements on the NHS.
- Operational improvements and highway safety improvements.
- Other miscellaneous activities that may qualify for NHPP 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 NHS.

The Transportation Commission establishes priorities for the use of NHPP funds and projects are let through a competitive bidding process.

Surface Transportation Block Grant Program

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 (RT). The federal share for these projects is 86.58 percent with the state share typically

funded through a Highway State Special Revenue Account (HSSRA).

The Montana Transportation Commission establishes priorities for the use of STBG funds and projects are let through a competitive bidding process.

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 60-2-126(b).

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 percent and the state is responsible for the remaining 13.42 percent. The state share is funded through the HSSRA.

Eligibility and Planning Considerations

STPP funds are eligible for resurfacing, rehabilitating or reconstructing roads and bridges on the Primary System.

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 percent and the state is responsible for the remaining 13.42 percent. Normally, the match on these funds is from the HSSRA.

Eligibility and Planning Considerations

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 percent of the program funds with the remaining 35 percent dedicated to pavement preservation. Priorities are identified in consultation with the appropriate local government and approved by the Montana Transportation Commission.

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 (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 STPU 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 percent and the State is responsible for the remaining 13.42 percent. The state share is funded through the HSSRA.

Table B.1: Montana's Urban Areas

‣ 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

STPU funds are eligible for rehabilitation, resurfacing, reconstruction of existing facilities, operational improvements, vehicle-to-infrastructure communication equipment, bicycle facilities, pedestrian walkways, carpool projects, and traffic operation projects on the state-designated Urban Highway System. Priorities for the use of STPU funds are established at the local level through local planning processes with final approval by the Montana Transportation Commission.

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

1 State funding program developed to distribute federal funding within Montana.

2 State funding program developed to distribute federal funding within Montana.

3 State funding program developed to distribute federal funding within Montana.

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.

UPP[4]

The 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).

Transportation Alternatives (TA)

The Set-Aside Program (TA) requires MDT to obligate 50 percent of the funds within the state based on population, using a competitive process, while the other 50 percent may be obligated in any area of the state.

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.
- 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.
- Education 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.
- 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 near schools, student sessions on bicycle and pedestrian safety, health, and environment, and funding for training.

Competitive Process

The state is required to allocate TA 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.

National Highway Freight Program

The National Highway Freight Program (NHFP) 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 had a freight plan in place beginning fiscal year (FY) 2018 to receive formula funding. Activities eligible for NHFP funding include planning, environmental review, preliminary engineering, design work, construction, reconstruction, rehabilitation work and/or operational improvements that directly result in improved system performance – as well as interchange improvements, truck-only lanes, shoulder widening, traffic signal optimization, highway ramp metering and roadway capacity projects (that address freight bottlenecks). Generally, the federal share for this program is 91.24 percent and the state is responsible for the remaining 8.76 percent. The state share is typically funded through the HSSRA for projects on state highways and local governments provide the match for local projects.

Highway Safety Improvement Program

Highway Safety Improvement Program (HSIP) funds are apportioned to Montana for safety improvement projects approved by the Commission and are consistent with the

4 State funding program developed to distribute federal funding within Montana.

strategic highway safety improvement plan. In Montana, the primary focus of the HSIP program involves identifying locations with crash trends (where feasible countermeasures exist) and prioritizing work according to benefit/cost ratios. However, MDT also advances systemic improvements (such as rumble strip projects, curve signing and wrong-way warnings) to address safety issues at the network level. Additionally, a portion of Highway Safety Improvement Program funds are designated to improve safety at railroad crossings via the installation of protective devices or the elimination of hazards. 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 percent and the State is responsible for the remaining 10 percent. Typically, the state share is funded through the HSSRA.

Congestion Mitigation and Air Quality Improvement Program

Congestion Mitigation and Air Quality Improvement Program (CMAQ) 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 carbon monoxide (CO) and particulate matter 10 (PM_{10}) micrometers or less in diameter.

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" are primarily directed to areas of the state with emerging air quality issues through various state programs. The 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 percent and the state is responsible for the remaining 13.42 percent. 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 pedestrian 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 the program/project. These estimates are reported yearly to the FHWA.

CMAQ (Formula)

Mandatory CMAQ funds that come to Montana based on a federal formula are directed to Missoula, Montana's only classified, moderate CO non-attainment area. Projects are prioritized through the Missoula metropolitan planning process.

Montana Air and Congestion Initiative–Guaranteed Program (Flexible)[5]

The Montana Air and Congestion Initiative (MACI) – Guaranteed Program is a 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. However, these cities 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 and Congestion Initiative– 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.

Federal Lands Access Program

The Federal Lands Access Program (FLAP) was created by the MAP-21 to improve access to federal lands and is continued in the Infrastructure Investment and Jobs 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

5 State funding program developed to distribute federal funding within Montana.

6 State funding program developed to distribute federal funding within Montana.

to federal lands. FLAP 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:

- Preventive maintenance, rehabilitation, restoration, construction, and reconstruction.
- Adjacent vehicular parking areas.
- Acquisition of necessary scenic easements and scenic or historic sites.
- Provisions for pedestrian and bicycles.
- Environmental mitigation in or adjacent to Federal land to improve public safety and reduce vehicle-wildlife mortality while maintaining habitat connectivity.
- Construction and reconstruction of roadside rest areas, including sanitary and water facilities.
- 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.

Allocation and Matching Requirements

The federal share for this program is 86.58 percent 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. The 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. There are also other programs included in Infrastructure Investment and Jobs Act. Page 15 and 16 of the draft STIP provide program detail.[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."

Nationally-Significant Freight and Highway Projects

This program was also established by the FAST Act to create competitive grants or Transportation Infrastructure Finance and Innovation Act (TIFIA) loans for projects greater than $100 million. This is a discretionary freight-focused grant program that allows states, metropolitan planning organizations, local governments, tribal governments, special purpose districts, 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 percent and the state is responsible for the remaining 8.76 percent. The state provides match for projects on state highways that addresses 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.

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").

7 https://www.mdt.mt.gov/publications/docs/plans/stip/2022stip-draft.pdf

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.

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).

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.

Formula Grants for Rural Areas (Section 5311)

This program enhances the access of people in non-urbanized 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.

STATE FUNDING SOURCES

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.

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.

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:

$$\text{LOCAL SUPPORT} = \frac{\text{Expenditures for public transportation operations}}{\text{Mill value of city or urban transportation district}}$$

State Fuel Tax Allocations

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 as shown in Table B.2.

Table B.2: BaRSAA Increases

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 have been able to 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 and November 1 of the calendar year the funds were allocated. Reservation requests can be made between September 1st and November 1st.

INFRASTRUCTURE INVESTMENT AND JOBS ACT (IIJA) – NEW GRANT PROGRAMS

The recent Infrastructure Investment and Jobs Act (IIJA) provides $973 billion over five years from FY2022 through FY2026, including $567 billion for surface transportation, an increase of $41 billion for mass transit, and an increase of $121 billion in highway funding. Administrative rule and guidance for some new programs is still being established. The following grant programs represent new or revised programs relevant to the City of Whitefish.

Rebuilding American Infrastructure with Sustainability and Equity (RAISE)

Program funding increased to $1.5 billion annually. DOT will award at least $75 million for planning, preparation, or design of projects, and will award at least $15 million for projects located in areas of persistent poverty or historically disadvantaged communities.

Infrastructure for Rebuilding America (INFRA)

Program funding increased to $1.45 billion annually. Changes to this program includes new project eligibility s to include a highway, bridge, or freight project on the National Multimodal Freight Network, wildlife crossing projects; and surface transportation projects within the boundaries of or functionally connected to an international border crossing area. There is a 15 percent set aside for small projects and at least 30 percent of the set-aside for projects in rural areas.

National Infrastructure Project Assistance (MEGA)

The National Infrastructure Project Assistance Program will support large, complex projects that are difficult to fund by other means and likely to generate national or regional economic, mobility, or safety benefits. The program will provide competitive grant agreements for surface transportation projects in several modes, including passenger rail, via single-year or multi-year grant agreements (Mega-projects). Must cost at least $500M unless in a rural area.

Rural Surface Transportation Grant Program

A competitive grant program to improve and expand the surface transportation infrastructure in rural areas to increase connectivity, improve the safety and reliability of the movement of people and freight, and generate regional economic growth and improve quality of life.

Bridge Investment Program – $2.44 billion annually

These funds can be used to improve bridge condition, safety, efficiency, and reliability of bridges on the National Bridge Inventory. It can also be used to replace or rehabilitate culverts to improve flood control and improve habitat connectivity for aquatic species.

Planning, Feasibility Analysis, and Revenue Forecasting

This is a set-aside within the Bridge Investment Program to support projects to improve bridge (and culvert) condition, safety, efficiency, and reliability. This can be used for projects to replace, rehabilitate, preserve, or protect one or more bridges on the National Bridge Inventory. Projects may also include replacement or rehabilitation of culverts to improve flood control and improve habitat connectivity for aquatic species.

National Culvert Removal, Replacement, & Restoration Grant

This new program will provide provides supplemental funding for grants to a State, local government, or an Indian Tribe on a competitive basis for the removal, replacement, and restoration of culverts to address flow of water through roads, bridges, railroad tracks, and trails.

Reconnecting Communities Pilot Program

Reconnecting Communities Pilot Program will restore community connectivity by removing, retrofitting, or mitigating highways or other transportation facilities that create barriers to community connectivity, including to mobility, access, or economic development. Grants will include capital construction projects, including the removal and replacement of eligible facilities and planning grants.

Safe Streets and Roads for All

Safe Streets and Roads for All provides supplemental funding to support local initiatives to prevent death and serious injury on roads and streets, commonly referred to as "Vision Zero" or "Toward Zero Deaths" initiatives. The term "eligible project" means a project— (A) to develop a comprehensive safety action plan; (B) to conduct planning, design, and development activities for projects and strategies identified in a comprehensive safety action plan; or (C) to carry out projects and strategies identified in a comprehensive safety action plan.

State Incentives Pilot Program

This is a set-aside within Nationally Significant Freight and Highway Projects (INFRA) to award competitive grants for multimodal freight and highway projects of national or regional significance to improve the safety, efficiency, and reliability of the movement of freight and people. States, MPOs, Tribal governments, special purpose districts and port authorities with a transportation function, and local governments can apply. These projects must improve safety, generate economic benefits, reduce congestion, enhance resiliency, and hold the greatest promise to eliminate freight bottlenecks and improve critical freight movements.

Wildlife Crossings Pilot Program

The Wildlife Crossings Pilot program will support projects that seek to reduce the number of wildlife-vehicle collisions, and in carrying out that purpose, improve habitat connectivity.

Railroad Crossing Elimination Grants

This grant will fund highway-rail or pathway-rail grade crossing improvement projects that focus on improving the safety and mobility of people and goods. The planning, environmental review, and design of projects are also eligible.

APPENDIX C.
BIKE/PED PRIORITY FRAMEWORK

October 2022

KLJ
ENGINEERING, REIMAGINED

Sidewalk Priority Matrix

Evaluation Criteria		Sidewalks																
		SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8	SW9	SW10	SW11	SW12	SW13	SW14	SW15	SW16	SW17
		Sixth Street - Highway 93 to Pine Ave.	Park Avenue - Fourth St. to Eight St.	Eighth Street - Highway 93 to Park Ave.	First Street - Somers Ave. to Fir Ave.	Fir Avenue - First St. to E. Second St.	Fir Avenue - E. Second St. to Fourth St.	Fourth Street - Fir Ave. to Willowbrook Close	Riverside Ave. - Highway 93 to Columbia Ave.	West Fourth Street - Karrow Ave. to Jennings Ave.	Waverly Place - Iowa Ave. to Dakota Ave.	Iowa Avenue - Skyles Place to Edgewood Place	Woodside Lane/Cedar Street - Wisconsin Ave. to Texas Ave.	Columbia Avenue - Riverside Ave. to E. 13th Ave.	Park Avenue - Eighth St. to Tenth St.	Minnesota Avenue - Skyles Place to Edgewood Place	Mill Avenue - First St. to E. Second St.	**West 3rd Street - East of Karrow Ave.**
Active Transportation	The connection will provide residents and visitors with better access to the Whitefish recreational trail system	**1**		**1**			**1**		1		1	1	1		**1**	1	1	
	The connection supports an existing urban trail system	**1**	1	**1**	**1**	1	**1**			1		1		1	**1**	1	1	1
	The connection provides a direct link between existing parks and/or open space						**1**	1			1					1		
Safety	The connection is located within an existing School Zone or within 1/4 miles of a school	**1**	1	**1**			**1**	1										
	The connection will support or expand the Safe Routes to School Network	**1**	1	**1**	**1**	1	**1**	1							**1**		1	
	The connection prevents at grade crossing of railroad tracks																	
	The connection is located within 1/4 mile of where a previous bicycle or pedestrian crash occurred	**1**		**1**					1			1		1				
Congestion Reduction	The connection supports infill development and redevelopment within the City of Whitefish	**1**	1	**1**	**1**	1	**1**	1	1	1	1	1	1	1	**1**	1	1	1
	The connection supports regional connectivity beyond City boundaries																	
	The connection wll serve areas supporting existing or proposed higher-density (multi-family) residential devleopment								1	1		1	1	1	**1**	1		1
	The connection will provide a direct link for users from their home or place of employment to a transit stop or hub				**1**									1				
	The connection would offer an alternative to vehicle travel in a heavily-used area or corridor																	
Connectivity	The connection is not isolated and will join to a larger bike/ped facility network	**1**		**1**	**1**		**1**	1	1	1	1	1	1	1	**1**	1	1	1
	The connection bridges a major walking/biking barrier																	
	The connection provides an east/west link between existing neighborhoods, the downtown core, and/or schools	**1**		**1**	**1**			1		1	1		1				1	
	The connection provides a north/south link between existing neighborhoods, the downtown core, and/or schools		1		**1**	1	**1**					1		1	**1**	1		
	The connection is located within a primary entrance corridor												1					
	The connection provides a bike/ped facility in an area where none exist			**1**	**1**	1			1	1					**1**			1
	The connection links missing gaps in the Whitefish River Trail																	
	The connection directly serves or supports users of Whitefish Mountain																	
	TOTAL SCORE	**8**	**5**	**9**	**8**	**5**	**8**	**6**	**6**	**6**	**5**	**7**	**6**	**7**	**8**	**7**	**6**	**5**

Shared Use Path Priority Matrix

		Shared Use Path									
		SP1	SP2	SP3	SP4	SP5	SP6	SP7	SP8	SP9	SP10
Evaluation Criteria		Texas Avenue - Edgewood Place to Preserve Pkwy	Denver Street - Wisconsin Ave. to Texas Ave.	Dakota Avenue - E. Marina Crest Lane to Labrie Dr.	Highway 93 - East Side, South from MT Hwy 40	Highway 93 - West of Mountainside Drive	Monegan Road to Creekwood Park/Seventh Street Connection	Shilo Avenue to Whitefish Avenue Connection	Whitefish River Trail - Old Hospital	Eight Street - North Side, Creek View Dr. to Park Ave.	Pine Avenue - East Side, Fourth St. to Fifth St.
Active Transportation	The connection will provide residents and visitors with better access to the Whitefish recreational trail system	1	1	1		1	1		1		
	The connection supports an existing urban trail system		1	1		1	1	1	1		1
	The connection provides a direct link between existing parks and/or open space	1				1	1		1		
Safety	The connection is located within an existing School Zone or within 1/4 miles of a school									1	1
	The connection will support or expand the Safe Routes to School Network						1			1	1
	The connection prevents at grade crossing of railroad tracks										
	The connection is located within 1/4 mile of where a previous bicycle or pedestrian crash occurred										
Congestion Reduction	The connection supports infill development and redevelopment within the City of Whitefish	1	1	1			1	1	1	1	
	The connection supports regional connectivity beyond City boundaries				1	1					
	The connection wll serve areas supporting existing or proposed higher-density (multi-family) residential devleopment	1	1					1	1		
	The connection will provide a direct link for users from their home or place of employment to a transit stop or hub		1			1					
	The connection would offer an alternative to vehicle travel in a heavily-used area or corridor				1	1					1
Connectivity	The connection is not isolated and will join to a larger bike/ped facility network	1	1	1		1	1	1	1		1
	The connection bridges a major walking/biking barrier					1					
	The connection provides an east/west link between existing neighborhoods, the downtown core, and/or schools		1							1	
	The connection provides a north/south link between existing neighborhoods, the downtown core, and/or schools	1		1			1	1			1
	The connection is located within a primary entrance corridor				1	1					
	The connection provides a bike/ped facility in an area where none exist	1	1		1	1			1	1	
	The connection links missing gaps in the Whitefish River Trail								2		
	The connection directly serves or supports users of Whitefish Mountain										
	TOTAL SCORE	**7**	**8**	**5**	**4**	**10**	**7**	**5**	**9**	**5**	**6**

...CONTINUED...

Shared Use Path										Shared Use Path							
SP11	SP12	SP13	SP14	SP15	SP16	SP17	SP18	SP19	SP20	SP21	SP22	SP23	SP24	SP25	SP26	SP27
Cow Creek Trail (North)	E. Edgewood Drive to E. Second Street	Voerman Road (East of Monegan)	Baker to Wisconsin - Viaduct Connection, Railway St. to Edgewood Pl.	Whitefish River Trail - Riverbend Condos, Malmquist	Flathead Avenue to 18th Street Connection	West 13th - North Side, Baker Ave. to Hwy 93	West 18th/Lund Lane Connection	JP Road/Karrow Avenue	Reservoir Road - East of Wisconsin Ave.	Karrow Avenue to Ramsey Avenue	95 Karrow Project (Karrow Ave. to Skye Park)	E. Lakeshore Drive - East Side, North of Big Mountain Road	River Lakes Parkway - East Side Connection	Whitefish River Trail - River Lakes Pkwy to Kellner Ln.	Whitefish River Trail Connection - Les Schwab and Dalen	Whitefish River Trail - Walgreens
1		1		1					1			1	1	1	1	1
	1		1	1	1	1	1	1					1	1	1	1
1		1		1					1				1		1	1
			1	1		1										1
			1		1		1			1	1		1	1	1	1
	1	1	1					1	1			1				
			1	1	1		1						1		1	1
			1													
			1	1								1				
1	1	1	1	1	1				1	1	1	1	1	1	1	1
	1		1	1												
							1	1								
1			1					1				1			1	
			1													
1	1	1		1			1	1	1	1	1	1				1
				2							2			2	2	2
			1						1							
5	5	5	12	11	4	2	5	5	6	3	5	6	6	6	9	10

...CONTINUED...

						Shared Use Path				
SP28	SP29	SP30	SP31	SP32	SP33	SP34	SP35	SP36	SP37	SP38
Cow Creek Trail - Creekwood	E. Marina Crest Lane to Wisconsin Avenue Connection	Highway 93 South (Hwy 40 to 7th)	River Lakes Parkway - West Side	Spruce Court to Whitefish River Trail Connection	Shady River Lane Connection to SUP	Seventh Street (Spokane to Pine)	MT Highway 40 East	Armory Park Shared Use Path	O'Brien Avenue, fromt Flathead Ave. to Seventh Ave.	W. Lakeshore Drive and Birch Point Drive Connection
1	1		1	1	1			1		1
	1	1	1	1	1	1	1		1	1
1			1					1		1
						1				
						1				
										1
		1			1	1				
	1	1		1		1			1	
		1					1			
	1	1	1	1	1		1	1	1	
	1	1		1						
		1				1	1			
1	1	1	1	1	1	1	1	1	1	1
										1
						1				1
		1	1							
		1		1						
1							1		1	1
2										
	1									
6	**7**	**10**	**6**	**7**	**5**	**8**	**6**	**4**	**5**	**8**

Bike Lane Priority Matrix

Bike Lanes									
Evaluation Criteria		BL1	BL2	BL3	BL4	BL5	BL6	BL8	BL9
		Colorado Ave. to Wisconsin Ave. Connection	Birch Point Drive - Whitefish River West to SUP	Skyles Place - Wisconsin Ave. to Dakota Ave.	Birch Point Drive - E. Second Ave. to Birch Point Dr.	Fifth Street - Highway 93 to Pine Ave.	West Lake Shore Connection to Birch Point	Monegan Road Connection North	Monegan Road from JP Road East
Active Transportation	The connection will provide residents and visitors with better access to the Whitefish recreational trail system	1	1	1	1		1		
	The connection supports an existing urban trail system	1	1	1	1	1	1		
	The connection provides a direct link between existing parks and/or open space						1		
Safety	The connection is located within an existing School Zone or within 1/4 miles of a school					1			
	The connection will support or expand the Safe Routes to School Network					1			
	The connection prevents at grade crossing of railroad tracks								
	The connection is located within 1/4 mile of where a previous bicycle or pedestrian crash occurred			1		1			
Congestion Reduction	The connection supports infill development and redevelopment within the City of Whitefish	1		1		1			
	The connection supports regional connectivity beyond City boundaries							1	1
	The connection wll serve areas supporting existing or proposed higher-density (multi-family) residential devleopment	1		1					
	The connection will provide a direct link for users from their home or place of employment to a transit stop or hub								
	The connection would offer an alternative to vehicle travel in a heavily-used area or corridor			1					
Connectivity	The connection is not isolated and will join to a larger bike/ped facility network	1	1	1	1	1	1	1	1
	The connection bridges a major walking/biking barrier								
	The connection provides an east/west link between existing neighborhoods, the downtown core, and/or schools		1	1		1	1		
	The connection provides a north/south link between existing neighborhoods, the downtown core, and/or schools								
	The connection is located within a primary entrance corridor								
	The connection provides a bike/ped facility in an area where none exist	1	1		1		1	1	1
	The connection links missing gaps in the Whitefish River Trail								
	The connection directly serves or supports users of Whitefish Mountain	1		1					
TOTAL SCORE		**7**	**5**	**9**	**4**	**7**	**6**	**3**	**3**

Cycletracks Priority Matrix

		Cycletracks	
		CT1	CT2
Evaluation Criteria		Highway 93 - Sixth Street to Railway Street	Skyles Place to Lakeside Blvd. (to be constructed in May 2022
Active Transportation	The connection will provide residents and visitors with better access to the Whitefish recreational trail system		1
	The connection supports an existing urban trail system	1	1
	The connection provides a direct link between existing parks and/or open space		1
Safety*	The connection is located within an existing School Zone or within 1/4 miles of a school	1	1
	The connection will support or expand the Safe Routes to School Network	1	1
	The connection prevents at grade crossing of railroad tracks		
	The connection is located within 1/4 mile of where a previous bicycle or pedestrian crash occurred	1	1
Congestion Reduction	The connection supports infill development and redevelopment within the City of Whitefish	1	1
	The connection supports regional connectivity beyond City boundaries	1	
	The connection wll serve areas supporting existing or proposed higher-density (multi-family) residential devleopment	1	1
	The connection will provide a direct link for users from their home or place of employment to a transit stop or hub	1	
	The connection would offer an alternative to vehicle travel in a heavily-used area or corridor	1	1
Connectivity	The connection is not isolated and will join to a larger bike/ped facility network	1	1
	The connection bridges a major walking/biking barrier	1	1
	The connection provides an east/west link between existing neighborhoods, the downtown core, and/or schools		1
	The connection provides a north/south link between existing neighborhoods, the downtown core, and/or schools	1	
	The connection is located within a primary entrance corridor	1	
	The connection provides a bike/ped facility in an area where none exist		1
	The connection links missing gaps in the Whitefish River Trail		
	The connection directly serves or supports users of Whitefish Mountain		
	TOTAL SCORE	**13**	**13**

Safety Improvements Priority Matrix

Evaluation Criteria		Safety Improvements			Bridges
		S1	S2	S3	B1
		Sixth Street and Pine Ave. Intersection	Seventh Street and Pine Intersection	Seventh Street and Asher Avenue Intersection	East 13th Street/Shady River Court Crossing
Active Transportation	The connection will provide residents and visitors with better access to the Whitefish recreational		1	1	1
	The connection supports an existing urban trail system	**1**		1	1
	The connection provides a direct link between existing parks and/or open space				
Safety	The connection is located within an existing School Zone or within 1/4 miles of a school	**1**	1	1	
	The connection will support or expand the Safe Routes to School Network	**1**	1		
	The connection prevents at grade crossing of railroad tracks				
	The connection is located within 1/4 mile of where a previous bicycle or pedestrian crash occurred				
Congestion Reduction	The connection supports infill development and redevelopment within the City of Whitefish	**1**	1	1	
	The connection supports regional connectivity beyond City boundaries				
	The connection will serve areas supporting existing or proposed higher-density (multi-family) residential devleopment				
	The connection will provide a direct link for users from their home or place of employment to a transit stop or hub				
	The connection would offer an alternative to vehicle travel in a heavily-used area or corridor	**1**	1	1	
Connectivity	The connection is not isolated and will join to a larger bike/ped facility network	**1**	1	1	1
	The connection bridges a major walking/biking barrier				1
	The connection provides an east/west link between existing neighborhoods, the downtown core, and/or schools	**1**			
	The connection provides a north/south link between existing neighborhoods, the downtown core, and/or schools				
	The connection is located within a primary entrance corridor				
	The connection provides a bike/ped facility in an area where none exist				
	The connection links missing gaps in the Whitefish River Trail				1
	The connection directly serves or supports users of Whitefish Mountain				
	TOTAL SCORE	**7**	6	6	5

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