

SUBJECT: AN ORDINANCE OF THE MATANUSKA-SUSITNA BOROUGH ASSEMBLY ADOPTING MSB 15.24.030(B) (12) (a) MATANUSKA-SUSITNA BOROUGH BICYCLE AND PEDESTRIAN PLAN.

AGENDA OF: September 5, 2023

ASSEMBLY ACTION:

AGENDA ACTION REQUESTED: Introduce and set for public hearing.

Route To	Signatures
Originator	<div>8 / 23 / 2023</div> <div>X k e l s e y a n d e r s o n</div> <div>Signed by: K e l s e y A n d e r s o n</div>
Department Director	<div>8 / 23 / 2023</div> <div>X A l e x S t r a w n</div> <div>Signed by: A l e x</div>
Finance Director	<div>8 / 24 / 2023</div> <div>X C h e y e n n e H e i n d e l</div> <div>Signed by: C h e y e n n e H e i n d e l</div>
Borough Attorney	<div>8 / 24 / 2023</div> <div>X N i c h o l a s S p i r o p o u l o s</div> <div>Signed by: N i c h o l a s S p i r o p o u l o s</div>
Borough Manager	<div>8 / 24 / 2023</div> <div>X M i c h a e l B r o w n</div> <div>Signed by: M i c h a e l B r o w n</div>
Borough Clerk	<div>8 / 24 / 2023</div> <div>X L o n n i e M c K e c h n i e</div> <div>Signed by: L o n n i e M c K e c h n i e</div>

ATTACHMENT (S) : Local Road Service Area Advisory Board Resolution NO. 23-03 (2 pp)
 Transportation Advisory Board Resolution 23-06 (2 pp)
 Parks, Recreation, and Trails Advisory Board Resolution 23-03 (2 pp)
 Planning Commission Resolution No. 23-30 (3 pp)
 Matanuska-Susitna Borough Bicycle and Pedestrian Plan Executive Summary (2 pp)
 Matanuska-Susitna Borough Bicycle and Pedestrian Plan (98 pp)
 Ordinance Serial No. 23-068 (1 pp)

SUMMARY STATEMENT:

In 2017, the Matanuska-Susitna Borough Assembly adopted the Long-Range Transportation Plan (LRTP). The LRTP consists of goals and strategies to build out a better-connected and safer transportation network and includes goals to increase mobility and transportation choices, to name a few. One of the strategies in the LRTP is to develop an active transportation master plan that creates a vision for the bicycle and pedestrian system and identifies recommendations to implement that vision. The Planning Department has developed the Borough's first Bicycle and Pedestrian Plan (BPP) to implement the strategies and goals pertaining to nonmotorized transportation borough-wide.

Staff worked with a local consulting company, RESPEC, to develop an Existing Conditions Report and an Initial Recommendations Report. RESPEC also subcontracted McKinley Group to provide an Economic Analysis Report, which showed that investing in nonmotorized infrastructure increases public health. It also showed that homes that are in proximity to a connected nonmotorized network can have a realized value increase of 3%-5%.

The team also conducted extensive outreach to identify where new or improved facilities are needed, according to MSB residents using stakeholder interviews and a public comment map. The BPP gathered feedback from community councils, MSB advisory boards, transportation planners and engineers, local governments, bike & pedestrian advocate groups, developers and real estate agents, and the general public through steering committee meetings, public meetings and events, and a 45-day public comment period.

Public engagement highlights:

- 30 new projects added to the Implementation Plan.
- 72 comments received.
- Overwhelming support for the plan from the public and three resolutions of support from MSB advisory boards.

The BPP was developed by understanding the existing system of sidewalks, pathways, roads, and development and incorporated an economic analysis showing that increased transportation choices positively impact the social, physical, economic, and environmental qualities of life that MSB residents enjoy. The BPP provides a clear path forward for the Matanuska-Susitna Borough to begin implementing the recommended policies, infrastructure, and programs outlined in the BPP.

RECOMMENDATION OF ADMINISTRATION: Staff recommends the Assembly adopt the Matanuska-Susitna Borough Bicycle and Pedestrian Plan.

Executive Summary

The Matanuska-Susitna Borough (MSB) Bicycle and Pedestrian Plan (BPP) was developed to improve the nonmotorized transportation network in the borough. RESPEC, a firm contracted by the MSB, performed an existing conditions analysis, sought input from the public, and worked with the steering committee to develop the project recommendations in this plan.

The Process

- 1 The project team reviewed existing planning documents, analyzed bicycle and pedestrian crash data, and conducted interviews with stakeholders and user groups to develop an Existing Conditions & Issues report. Outreach and research showed that there is a strong desire for a robust bike and pedestrian network in the MSB and a clear need to make nonmotorized transportation safer for all users. Two key challenges with developing a borough-wide transportation network were identified: population centers are widely dispersed and several entities are responsible for constructing and maintaining nonmotorized facilities.
- 2 The team conducted extensive outreach to identify where new or improved facilities are needed according to the folks who know the area best – MSB residents. In addition to interviews and an interactive comment map, MSB staff attended several community events to share information and gather public input.
- 3 The BPP steering committee has provided guidance and feedback throughout the entire process. The committee has 10 members, each of whom has familiarity and expertise with the bike and pedestrian network in the MSB. The members of the committee provided recommendations, identified important user groups, and reviewed multiple drafts of the BPP.

Implementation Plan

The BPP contains 111 policy, infrastructure, and program recommendations. The infrastructure recommendations are listed as near-term, mid-term, or

long-term projects, though the timeframes for individual projects may vary based on future studies or the need to obtain right-of-way.

➤ Policy:

- ❖ Facility design standards
- ❖ Complete Streets policy
- ❖ Snow clearing policy
- ❖ Maintenance policy
- ❖ Subdivision regulations
- ❖ Vision Zero program
- ❖ Bike and pedestrian projects in the TIP

➤ Infrastructure:

- ❖ Separated, shared-use paths
- ❖ Sidewalks
- ❖ Roadway crossing treatments
- ❖ Connections between or extensions of existing pathways

➤ Programs:

- ❖ Nonmotorized taskforce
- ❖ Annual bicycle/pedestrian counts
- ❖ Level of service assessment
- ❖ Bicycle and pedestrian map
- ❖ ADA assessment
- ❖ User conflict guide
- ❖ Wayfinding plan
- ❖ Greenbelt pathway reconnaissance and engineering study
- ❖ Interpretive bicycle and pedestrian path

The BPP also outlines what funding sources are available based on what entity or entities will be taking ownership of the project and provides a list of potential grant funding opportunities.

Recreation connections and resources

Another goal of the BPP is to connect the nonmotorized transportation network to recreational trail networks and parks. To accomplish this, many of the recommended infrastructure projects link these two networks. The plan also contains a map of trailheads and public parks that shows existing or planned network connections and compiled resources for residents and visitors to learn more about recreational trails in the MSB!

By: K. Anderson
Action: Adopted

**MATANUSKA-SUSITNA BOROUGH
PLANNING COMMISSION RESOLUTION NO. 23-30**

A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH PLANNING COMMISSION
RECOMMENDING THE APPROVAL OF AN ORDINANCE ADOPTING THE BICYCLE AND
PEDESTRIAN PLAN.

WHEREAS, the Assembly adopted the Long-Range Transportation
Plan (LRTP) in 2017; and

WHEREAS, the LRTP consists of goals and strategies to build
out a better-connected and safer transportation network, including
goals to increase mobility and transportation choices; and

WHEREAS, one of the strategies in the LRTP is to develop an
active transportation master plan that creates a vision for the
bicycle and pedestrian system and identifies recommendations to
implement that vision; and

WHEREAS, the Matanuska-Susitna Borough Planning Department
has developed the Borough's first Bike and Pedestrian Plan to
implement LRTP strategies and goals pertaining to nonmotorized
transportation; and

WHEREAS, the Bike and Pedestrian Plan (BPP) was developed by
understanding the existing system of sidewalks, pathways, roads,
and development, and incorporates an economic analysis that shows
increased transportation choices have positive impacts on the
social, physical, economic, and environmental qualities of life
that MSB residents enjoy; and

WHEREAS, the BPP gathered feedback from community councils, MSB advisory boards, transportation planners and engineers, local governments, bike & pedestrian advocate groups, developers and real estate agents, and the general public through steering committee meetings, public meetings and events, and a 45-day public comment period; and

WHEREAS, the public process allowed for timely comment and discussion on possible routes, neighborhood concerns, increasing safe routes to school, development standards, and other pertinent information; and

WHEREAS, there were seventy-two public comments received and those comments were incorporated into the BPP where appropriate; and

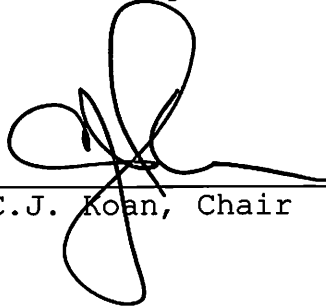
WHEREAS, the Transportation Advisory Board, the Parks, Recreation, and Trails Advisory Board, and the Local Road Service Area Advisory Board adopted resolutions of support for the Bicycle and Pedestrian Plan; and

WHEREAS, the BPP provides a clear path forward for the Matanuska-Susitna Borough to begin implementing the recommended policies, infrastructure, and programs outlined in the BPP.

NOW, THEREFORE, BE IT RESOLVED, that the Matanuska-Susitna Borough Planning Commission hereby recommends approval of an ordinance adopting the Bicycle and Pedestrian Plan.


NOW, THEREFORE, BE IT FURTHER RESOLVED, that the Matanuska-Susitna Borough Planning Commission recommends the Matanuska-Susitna Borough Assembly dedicate funding and resources to support the implementation of the Bicycle and Pedestrian Plan.

ADOPTED by the Matanuska-Susitna Borough Planning Commission this 7th day of August, 2023.



C.J. Roan, Chair

ATTEST



KAROL RIESE, Planning Clerk

(SEAL)

YES: 5 Allen, Glenn, Esggen, McCabe, Kern

NO: 0

**MATANUSKA-SUSITNA BOROUGH
PARKS, RECREATION, AND TRAILS ADVISORY BOARD
RESOLUTION SERIAL NO. 23-03**

A RESOLUTION OF THE MATANSUKA-SUSITNA BOROUGH PARKS, RECREATION, AND TRAILS ADVISORY BOARD RECOMMENDING THE ASSEMBLY APPROVAL OF THE MATANSUSKA-SUSITNA BOROUGH'S BIKE AND PEDESTRIAN PLAN.

WHEREAS, the Assembly adopted the Long-Range Transportation Plan (LRTP) in 2017; and

WHEREAS, the LRTP consists of goals and strategies to build out a better-connected and safer transportation network, including goals to increase mobility and transportation choices; and

WHEREAS, one of the strategies in the LRTP is to develop an active transportation master plan that creates a vision for the bicycle and pedestrian system and identifies recommendations to implement that vision; and

WHEREAS, the Matanuska-Susitna Borough Planning Department has developed the Borough's first Bike and Pedestrian Plan to implement LRTP strategies and goals pertaining to nonmotorized transportation; and

WHEREAS, the Bike and Pedestrian Plan (BPP) was developed by understanding the existing system of sidewalks, pathways, roads, and development, and incorporates an economic analysis that shows increased transportation choices have positive impacts on the social, physical, economic, and environmental qualities of life that MSB residents enjoy; and

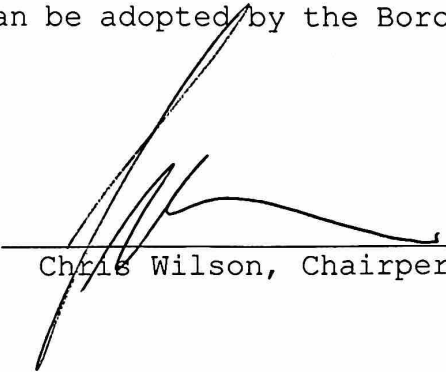
WHEREAS, the BPP gathered feedback from community councils, MSB advisory boards, transportation planners and engineers, local governments, bike & pedestrian advocate groups, developers and real estate agents, and the general public through steering committee meetings, public meetings and events, and a 45-day public comment period; and

WHEREAS, the public process allowed for timely comment and discussion on possible routes, neighborhood concerns, increasing safe routes to school, development standards, and other pertinent information; and

WHEREAS, public comments were incorporated into the BPP where appropriate; and

WHEREAS, the BPP provides a clear path forward for the Matanuska-Susitna Borough to begin implementing the recommended policies, infrastructure, and programs outlined in the BPP.

NOW, THEREFORE, BE IT RESOLVED,
The Matanuska-Susitna Borough Parks, Recreation, and Trails Advisory Board recommends that this plan be adopted by the Borough Assembly, this 26th day of June, 2023.


Chris Wilson, Chairperson

ATTEST: _____
Alyssia Jones, Rec. Admin. Specialist

**MATANUSKA-SUSITNA BOROUGH
LOCAL ROAD SERVICE AREA ADVISORY BOARD
RESOLUTION SERIAL NO. 23-03**

A RESOLUTION OF THE MATANSUKA-SUSITNA BOROUGH LOCAL ROAD SERVICE AREA ADVISORY BOARD RECOMMENDING THE ASSEMBLY APPROVAL OF THE MATANSUSKA-SUSITNA BOROUGH'S BICYCLE AND PEDESTRIAN PLAN.

WHEREAS, the Assembly adopted the Long-Range Transportation Plan (LRTP) in 2017; and

WHEREAS, the LRTP consists of goals and strategies to build out a better-connected and safer transportation network, including goals to increase mobility and transportation choices; and

WHEREAS, one of the strategies in the LRTP is to develop an active transportation master plan that creates a vision for the bicycle and pedestrian system and identifies recommendations to implement that vision; and

WHEREAS, the Matanuska-Susitna Borough Planning Department has developed the Borough's first Bike and Pedestrian Plan to implement LRTP strategies and goals pertaining to nonmotorized transportation; and

WHEREAS, the Bike and Pedestrian Plan (BPP) was developed by understanding the existing system of sidewalks, pathways, roads, and development, and incorporates an economic analysis that shows increased transportation choices have positive impacts on the social, physical, economic, and environmental qualities of life that MSB residents enjoy; and

WHEREAS, the BPP gathered feedback from community councils, MSB advisory boards, transportation planners and engineers, local governments, bike & pedestrian advocate groups, developers and real estate agents, and the general public through steering committee meetings, public meetings and events, and a 45-day public comment period; and

WHEREAS, the public process allowed for timely comment and discussion on possible routes, neighborhood concerns, increasing safe routes to school, development standards, and other pertinent information; and

WHEREAS, public comments were incorporated into the BPP where appropriate; and

WHEREAS, the BPP provides a clear path forward for the Matanuska-Susitna Borough to begin implementing the recommended policies, infrastructure, and programs outlined in the BPP.

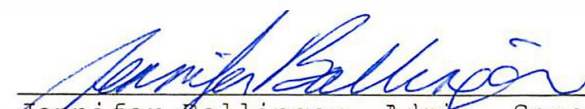
NOW, THEREFORE, BE IT RESOLVED,

ADOPTED by the Matanuska-Susitna Borough Local Road Service Area Advisory Board this - day of -, 2023.


Stephen Edwards, Chairperson

ATTEST:

Approved Unanimously 5/18/23


Jennifer Ballinger, Admin. Specialist

**MATANUSKA-SUSITNA BOROUGH
TRANSPORTATION ADVISORY BOARD
RESOLUTION SERIAL NO. 23-06**

A RESOLUTION OF THE MATANSUKA-SUSITNA BOROUGH TRANSPORTATION ADVISORY BOARD RECOMMENDING THE ASSEMBLY APPROVAL OF THE MATANSUSKA-SUSITNA BOROUGH BICYCLE AND PEDESTRIAN PLAN.

WHEREAS, the Assembly adopted the Long-Range Transportation Plan (LRTP) in 2017; and

WHEREAS, the LRTP consists of goals and strategies to build out a better-connected and safer transportation network, including goals to increase mobility, transportation choices, and safety of non-motorized users; and

WHEREAS, one of the strategies in the LRTP is to develop an active transportation master plan that creates a vision for the bicycle and pedestrian system and identifies recommendations to implement that vision; and

WHEREAS, the Matanuska-Susitna Borough Planning Department has developed the Borough's first Bike and Pedestrian Plan to implement LRTP strategies and goals pertaining to nonmotorized transportation; and

WHEREAS, the Bike and Pedestrian Plan (BPP) was developed by understanding the existing system of sidewalks, pathways, roads, and development, and incorporates an economic analysis that shows increased transportation choices have positive impacts on the social, physical, economic, and environmental qualities of life

that MSB residents enjoy; and

WHEREAS, the BPP gathered feedback from community councils, MSB advisory boards, transportation planners and engineers, local governments, bike & pedestrian advocate groups, developers and real estate agents, and the general public through steering committee meetings, public meetings and events, and a 45-day public comment period; and

WHEREAS, the public process allowed for timely comment and discussion on possible routes, neighborhood concerns, increasing safe routes to school, development standards, and other pertinent information; and

WHEREAS, public comments were incorporated into the BPP where appropriate; and

WHEREAS, the BPP provides a clear path forward for the Matanuska-Susitna Borough to begin implementing the recommended policies, infrastructure, and programs outlined in the BPP.

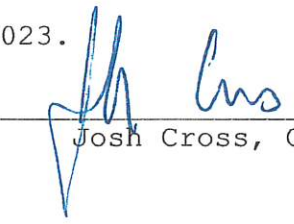
NOW, THEREFORE, BE IT RESOLVED, the Matanuska-Susitna Borough Transportation Advisory Board recommends the Assembly adopt the Matanuska-Susitna Borough Bicycle and Pedestrian Plan.

ADOPTED by the Matanuska-Susitna Borough Transportation Advisory Board this 23rd day of June 2023.

ATTEST:



Kim Sollien, Planning Staff



Josh Cross, Chairperson

Matanuska-Susitna Borough **Bicycle and Pedestrian Plan**

June 19, 2023



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Letter from the Mayor

The Mat-Su Borough's vision statement is to be 'The greatest community in Alaska to live, work and play'; a vital part of our mission statement is 'To efficiently and effectively deliver responsive services to the public'. These two statements are more than just words, they are action statements. It is our goal here at the Borough to not only provide a great place to live, work and raise families, but also provide the essential services that will ensure a safe community to live, work and play.



The Mat-Su Borough's Bike and Pedestrian Plan (BPP) plan is one of the ways that we are working to provide a safe and effective way for residents to safely enjoy our beautiful Valley. The implementation of the BPP includes programs, policies, and infrastructure that will improve our public health by making it easier to ride a bike, or walk the pathways; strengthen our public safety by reducing the number of cyclist and pedestrian injuries and fatalities; increase home values by building up the trails and pathway networks around neighborhoods; and add to the local economy by developing connections that bring people into business districts and provide for tourism opportunities.

The BPP is a chapter of the Borough's Long-Range Transportation Plan and will help us reach our goal of increasing transportation choices, improving connectivity, and supporting economic vitality here in the Mat-Su Valley. Tourism and recreation opportunities are some of the Mat-Su Valley's greatest strengths; a safe and functional road, pathway, and trail system will improve the quality of life for residents and visitors alike.

We appreciate your input and participation in the planning process, because working together we can make even better decisions.

Mayor Edna DeVries

Acknowledgments

MSB Planning Commission

Doug Glenn *District 1*

Rick Allen *District 2*

CJ Koan *District 3*

Michael Rubeo *District 4*

William Kendig *District 5*

Wilfred Fernandez *District 6*

Curt Scoggin *District 7*

MSB Assembly

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Stephanie Nowers *District 2*

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Jim Beck *Mat-Su Health Foundation*

Joe Metzger *MSB Land Management*

Joshua Shaver *Alaska Pioneer Homes*

Julius Adolfsson *DOT&PF Statewide Bike and Pedestrian Coordinator, Rural Transit Planner*

Mike Campfield *MSB Public Works*

Patricia Owens *Parks Rec, and Trails Advisory Board*

Tracy Kalytiak *Mat-Su Health Foundation*

Wes Hoskins *Mat-Su Trails and Parks Foundation*

And everyone who participated in our public outreach activities!

—Executive Summary—

The Matanuska-Susitna Borough (MSB) Bicycle and Pedestrian Plan (BPP) was developed to improve the nonmotorized transportation network in the borough. RESPEC, a firm contracted by the MSB, performed an existing conditions analysis, sought input from the public, and worked with the steering committee to develop the project recommendations in this plan.

1

The Process

The project team reviewed existing planning documents, analyzed bicycle and pedestrian crash data, and conducted interviews with stakeholders and user groups to develop an Existing Conditions & Issues report. Outreach and research showed that there is a strong desire for a robust bike and pedestrian network in the MSB and a clear need to make nonmotorized transportation safer for all users. Two key challenges with developing a borough-wide transportation network were identified: population centers are widely dispersed and several entities are responsible for constructing and maintaining nonmotorized facilities.

2

The team conducted extensive outreach to identify where new or improved facilities are needed according to the folks who know the area best – MSB residents. In addition to interviews and an interactive comment map, MSB staff attended several community events to share information and gather public input.

3

The BPP steering committee has provided guidance and feedback throughout the entire process. The committee has 10 members, each of whom has familiarity and expertise with the bike and pedestrian network in the MSB. The members of the committee provided recommendations, identified important user groups, and reviewed multiple drafts of the BPP.

Implementation Plan

The BPP contains 111 policy, infrastructure, and program recommendations. The infrastructure recommendations are listed as near-term, mid-term, or long-term projects, though the timeframes for individual projects may vary based on future studies or the need to obtain right-of-way.

Funding sources are identified based on which entity will be taking ownership of the project. A list of potential grant opportunities is also provided in Appendix F.

Policy

- » Facility design standards
- » Complete Streets
- » Snow clearing
- » Maintenance
- » Subdivision regulations
- » Vision Zero
- » Bike and pedestrian projects in the TIP

Infrastructure

- » Separated, shared-use paths
- » Sidewalks
- » Roadway crossing treatments



Programs

- » Nonmotorized taskforce
- » Annual bike/pedestrian counts
- » Level of service assessment
- » Bike and pedestrian map
- » ADA assessment
- » User conflict guide
- » Wayfinding plan
- » Greenbelt pathway reconnaissance and engineering study

Recreation

Another goal of the BPP is to connect the nonmotorized transportation network to recreational trail networks and parks. To accomplish this, many of the recommended infrastructure projects link these two networks.

The plan also contains a map of trailheads and public parks that shows existing or planned network connections and compiled resources for residents and visitors to learn more about recreational trails in the MSB!

Acronyms and Abbreviations

ADA Americans with Disabilities Act

BIL Bipartisan Infrastructure Law

BPP Bicycle and Pedestrian Plan

CIP Capital Improvement Plan

Comp Plan Matanuska-Susitna Borough Comprehensive Development Plan — 2005 Update

DOT&PF Alaska Department of Transportation & Public Facilities

EPA U.S. Environmental Protection Agency

ESRI Environmental Systems Research Institute

FAO Food and Agriculture Organization

FHWA Federal Highway Administration

GIS Geographic Information System

GPRA Government Peak Recreation Area

HERE Here Technologies

IJA Infrastructure Investment and Jobs Act

LRTP Long-Range Transportation Plan

Mat-Su Matanuska-Susitna

METI/NASA Ministry of Economic, Trade, and Industry/ National Aeronautics and Space Administration

MPO Metropolitan Planning Organization

MSB Matanuska-Susitna Borough

MVP Matanuska-Susitna Valley Planning for Transportation

RSA Road Service Area

SRTS Safe Routes to School

STBG Surface Transportation Block Grant

STIP Statewide Transportation Improvement Program

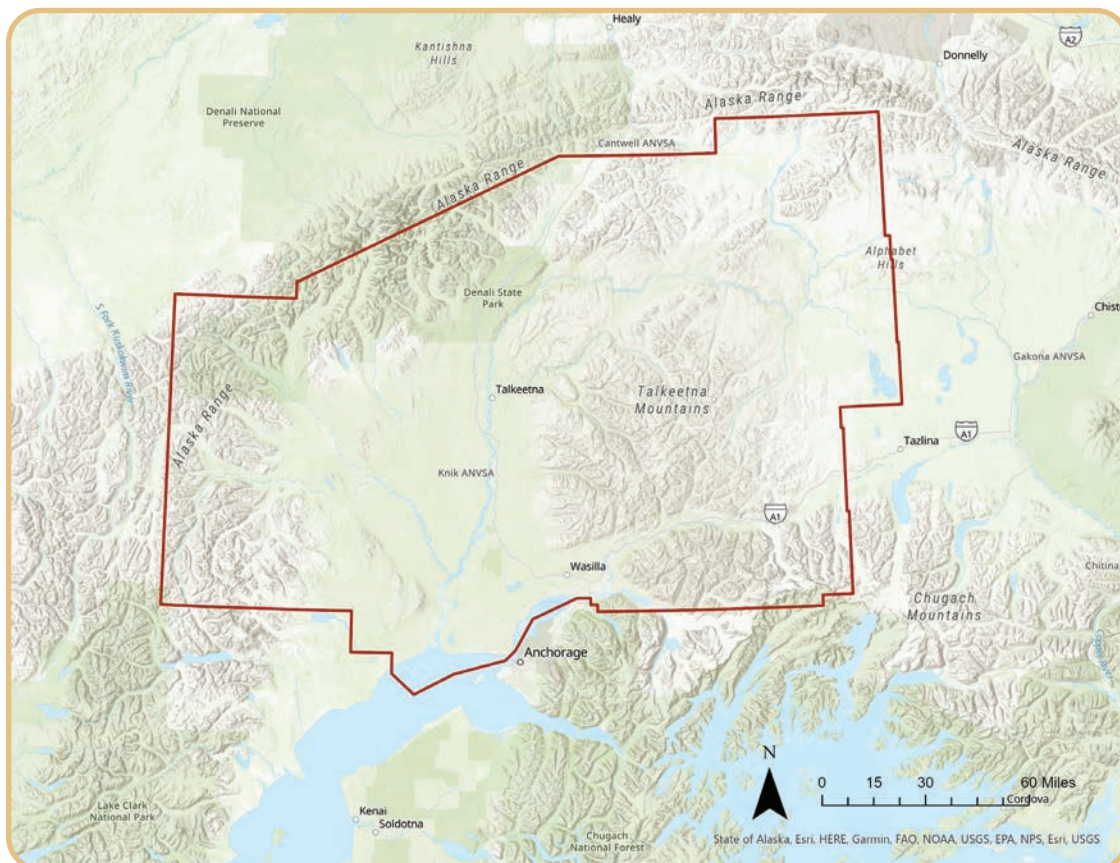
TIP Transportation Improvement Program

USGS United States Geological Survey

- Introduction -

The Matanuska-Susitna (Mat-Su) geographical area includes approximately 25,000 square miles of land and approximately 2,000 miles of trails (MSB, 2022). The Mat-Su has been inhabited for millennia, beginning with the Dena'ina and Ahtna Athabascans, and expanding to settlers throughout the 19th and 20th centuries. Transportation routes were developed and built upon by each group for subsistence, trade, and commerce. The Mat-Su encompasses glaciers, rivers, wetlands, hills, mountains, lakes, farmland, and forests, and hosts a vast array of natural resources that continue to bring people to the region to live, work, and play.

The Mat-Su Borough (MSB) consists of 25 communities, including three cities—Houston (second-class city), Palmer (home-rule city), and Wasilla (first-class city). The remaining 22 communities are classified as Census Designated Places. The MSB is a second-class borough with a seven-member Assembly and Mayor. The MSB also includes two tribal governments: Chickaloon Native Village and Knik Tribe.



Why does the MSB need a bicycle and pedestrian plan?

The MSB's vision is to be the greatest community in Alaska to live, work, and play. This vision means something different to every resident, but for the borough, it means protecting and enhancing those qualities of life that residents value most. The Mat-Su continues to be the fastest-growing community in the state and vehicle travel will remain the dominant and, in many areas, only option for transportation. As a result, bike and pedestrian planning has been an afterthought in planning for how people move throughout the region. The MSB has a lot of work to do to make up for gaps in the existing network, while looking forward

to meet the future needs of its dynamic and ever-changing population. The Bicycle and Pedestrian Plan (BPP) was developed to help launch programs, start infrastructure projects, and put policies in place. The plan supports a nonmotorized transportation network that is safe, connected, and easy to use for residents and visitors of all ages and abilities.



The MSB's population has **grown by 20%** in the last decade (Census, 2020) and is expected to reach **130,000 by 2027** (MSB, 2022).

According to an MSB Smart Growth survey from January 2022, borough residents agree that improving and expanding transportation infrastructure and widening shoulders on existing roads should be top priorities of the MSB government. Residents also agreed that the top three measures of good quality of life in the Mat-Su are (1) access to public lands and recreation areas, (2) a great place to raise children, and (3) access to grocery stores and local food options. The BPP makes the connection between how MSB residents measure quality of life through the lens of transportation choices. It is a policy document that will help MSB staff and elected officials consider how an expanded and safer nonmotorized network can support economic diversity and growth through tourism and transportation infrastructure, decrease serious injuries and fatal crashes, and increase Safe Routes to School (SRTS) connections, to name a few.

The BPP's priority is the safety of all travelers within the MSB. Data show that the more local governments plan for compatible uses and shared

spaces in transportation, the safer drivers, bikers, and pedestrians are. Incorporating bike and pedestrian facilities throughout the MSB does not have to be limited to separated pathways along the road system. The MSB has many existing urban and rural trails, separated pathways, sidewalks, and backcountry trails that could become part of an all-encompassing bike and pedestrian system. By improving existing facilities and adding new connections, the MSB can support the health and safety of all its residents and visitors.

103

reported
bicycle and
pedestrian
incidents

33%

resulted in
a serious
injury or
fatality

(DOT&PF, 2010-2019)

7

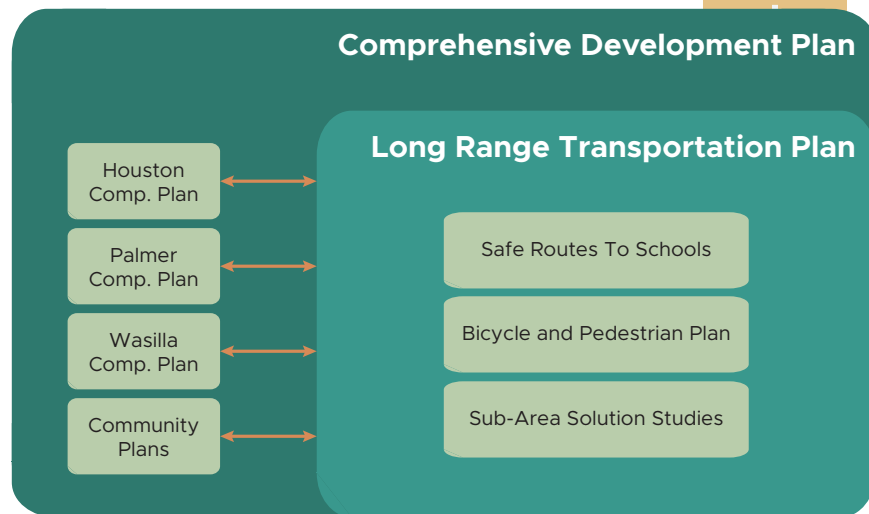
fatalities
occurred
and all were
pedestrians

What is a bicycle and pedestrian plan?

A BPP is a comprehensive strategy that evaluates the current bike and pedestrian network, examines gaps and hazard areas, and provides solutions to develop an all-encompassing nonmotorized transportation network that creates additional connections outside the road system and is safe for all user types.

Comprehensive Development Plan

The MSB Comprehensive Development Plan – 2005 Update (Comp Plan), originally adopted in 1970, offers goals and policy recommendations for future development for a 20-year period. Within the Comp Plan are transportation goals that include supporting a multi-modal transportation plan that encourages street and trail connectivity at a regional and local level. The BPP is taking these goals and turning them into a list of implementable projects.



Long Range Transportation Plan

The 2035 Long Range Transportation Plan (LRTP) provided a road map of planned future infrastructure that the BPP used to identify locations where more safety and connectivity could be provided. In turn, the development of this plan contributes to many of the active transportation goals and strategies within the LRTP.

- » Goal Two: Provide Transportation Choices
 - » The BPP satisfies the strategy “Development of an Active Transportation Plan” and will be adopted as a chapter of the LRTP.
- » Goal Three: Improve Connectivity
- » Goal Four: Improve Mobility
- » Goal Five: Safety — Make Transportation Safer

Benefits of Nonmotorized Transportation

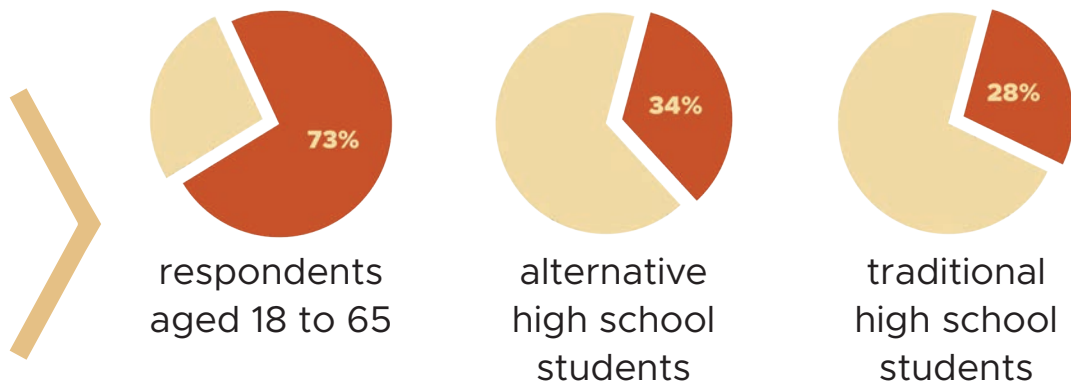


“The economic impact from trails is highest when a trail is connected to local businesses that cater to trail user needs, including restaurants, grocery stores, camping, and hotels, guiding services, and gear stores.”
(*Economic Impact Report*)

A well-connected and well-maintained bicycle and pedestrian network does more than just provide alternative transportation opportunities. It creates a greater sense of belonging and community among residents and entices visitors to stay in the area longer. The alternative modes of transportation that require bike and pedestrian trails improve both physical and mental health and can help prevent long-term health concerns such as heart disease, strokes, and diabetes. By

creating a safe and complete bicycle and pedestrian transportation network, we can uplift the whole MSB. Read the full *Economic Impact Report* in Appendix A.

**Self-reported
as overweight
or obese**



(Mat-Su Health Foundation, 2019)



Vision

The Matanuska-Susitna Borough envisions equitable access to a safe bike and pedestrian transportation network where residents and visitors of all ages and abilities enjoy an improved quality of life through **healthier, better-connected communities.**

Goals

- » Inventory and document the bike and pedestrian network to identify gaps and deficiencies.
- » Review MSB Code, the MSB Subdivision Construction Manual, and MSB Policy to identify potential changes that will help implement the plan's recommendations.
- » Create a prioritized list of projects to start building out the bike and pedestrian network.
- » Educate the public on the vision and goals of the BPP.
- » Solicit public input on the BPP's gap analysis and other findings.
- » Identify funding mechanisms to help implement the BPP's recommendations.

How was the BPP developed?

Outreach

Due to the nature of the BPP, much of its development was generated through community outreach and feedback. It was important that users of the network provide their experiences while using current plans to create a more robust system that allows for more connections, recreational opportunities, and safe routes.

Steering Committee

The Steering Committee was created in the first quarter of 2022 and held its first meeting in March. The committee consisted of the following 10 community members, who represent a wide range of backgrounds and familiarity with the bike and pedestrian network:

Adam Bradway *MSB Planner*

Jenny Willardson *Elevate Alaska Realty, Commercial Sales & Leasing*

Jim Beck *Mat-Su Health Foundation*

Joe Metzger *MSB Land Management*

Joshua Shaver *Alaska Pioneer Homes*

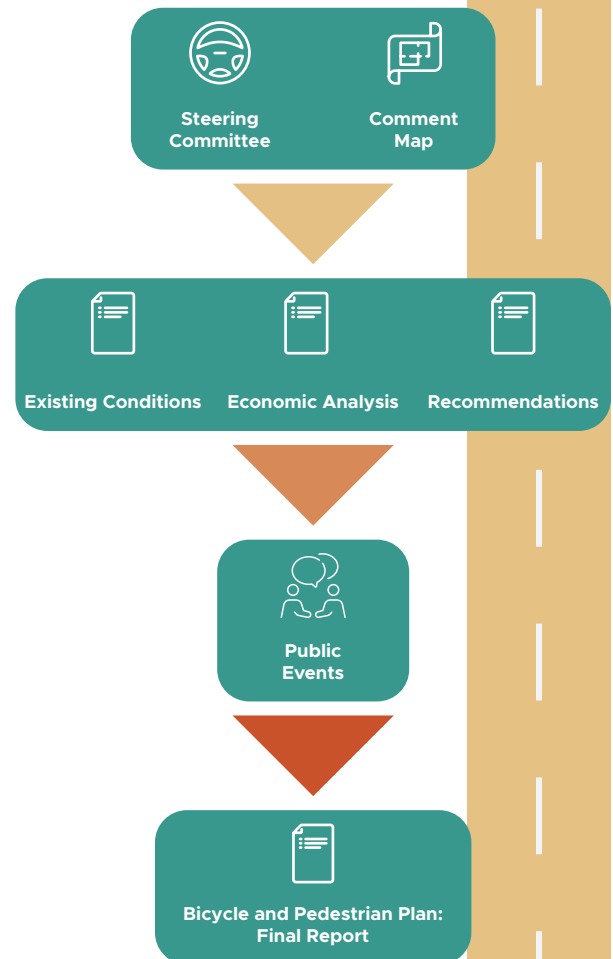
Julius Adolfsson *DOT&PF Statewide Bike and Pedestrian Coordinator, Rural Transit Planner*

Mike Campfield *MSB Public Works*

Patricia Owens *Parks, Recreation, and Trails Advisory Board*

Tracy Kalytiak *Mat-Su Health Foundation*

Wes Hoskins *Mat-Su Trails and Parks Foundation*



The Steering Committee met on a semi-monthly basis, with a long holiday break. The following highlights are from the Steering Committee meetings:

- » Assistance in providing information on problem areas
- » Recommendations of events to spread the word of the BPP
- » Feedback and edits on reports generated through the project

Comment Map

The comment map was made available to the public in May 2022. The map was an online interactive outlet for participants to comment on specific areas that needed the attention of the BPP. The comments were viewable by others that used the map and users were able to “like” or “dislike” the comments, which made the feedback more compelling. In total, the comment map acquired 137 unique comments, 1204 likes, and 10 dislikes before it was closed in September 2022.



Comments per Community

Big Lake	1
Butte	15
Farm Loop	5
Fishhook	3
Gateway	5
Greater Palmer	13
Houston	0
Knik-Fairview	11
Lazy Mountain	1
Meadow Lakes	3
North Lake	16
Palmer	20
South Lake	6
Sutton	5
Talkeetna	2
Tanaina	10
Trapper Creek	1
Wasilla	19
Willow	1

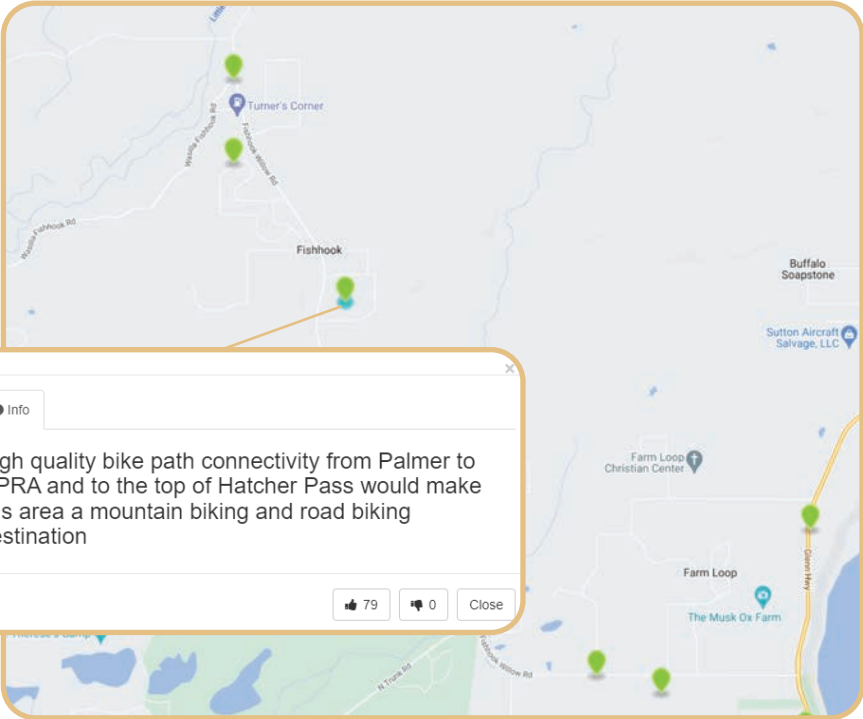




Photo credit: MSB Public Affairs Office

Public Engagement

Because of the size and varying terrain of the Mat-Su, residents use the bike and pedestrian network in many different ways, including for recreating, exercising, and commuting. The strategy behind the public outreach process for the BPP was aimed at capturing the full picture of where, when, and how users are on the roads, pathways, and trails. The lived experience is the driving force for this plan, and the recommendations are connected to real-life comments and known safety issues. For example, residents of Talkeetna frequently use the separated pathway along Talkeetna Spur Road, but they cannot cross the road safely to get to their public library from the pathway. The BPP is meant to provide recommended projects that bring value to communities, and

the public outreach process is focused on finding out what residents envision for the future of their bike and pedestrian system.

The BPP public outreach consisted of small group presentations, community council workshops, an interactive web map, a project website, frequent posts to the Planning Department's Facebook page, three interviews with Big Cabbage



Staff were present or provided information materials at the following community

events: State of Alaska Transportation Fair, Valley Mountain Bikers and Hikers Spring Bike and Gear Swap, Colony Days, Skeetawk Blueberry Ball, and the Palmer Spring Classic bike race.

Radio, several features in the Planning Department’s newsletter (the Planner Platform), and stakeholder interviews. Planning staff reached out to 51 stakeholder groups, including all active community councils in the MSB, local businesses and chamber groups, tribal councils, and advisory boards.

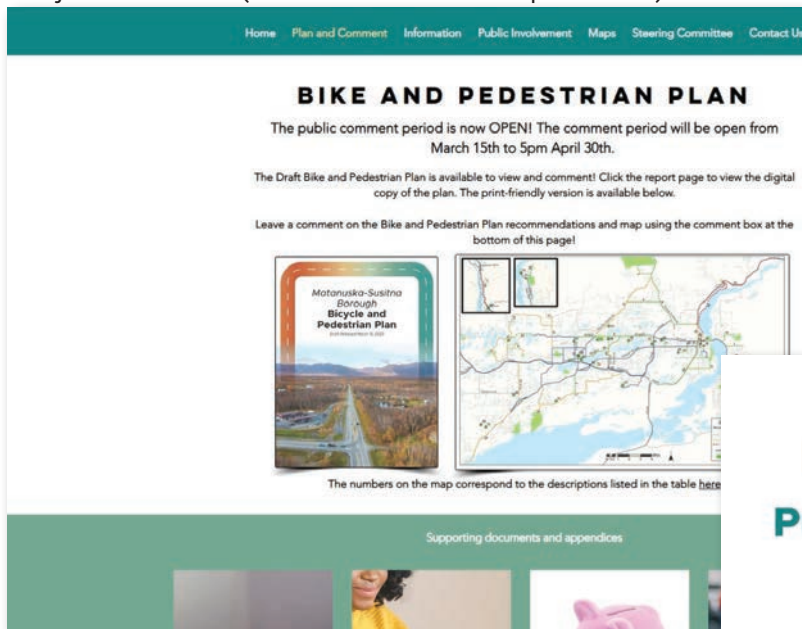
The following groups requested and received a presentation or written update on the BPP (see Appendix B for a full list of stakeholders who were contacted for comment):

- » Chickaloon Village Traditional Council
- » Knik Tribe
- » Talkeetna Community Council
- » Tanaina Community Council
- » Lazy Mountain Community Council
- » South Knik Community Council
- » North Lakes Community Council
- » Sutton Community Council
- » City of Wasilla
- » Backcountry Bike and Ski
- » Mat-Su Valley Board of Realtors
- » All About Herbs
- » Valley Mayors’ & Managers’ Meeting
- » Greater Wasilla Chamber of Commerce
- » MSB Parks, Recreation, & Trails Advisory Board
- » MSB Transportation Advisory Board
- » MSB Safe Routes to School Committee
- » MSB Health and Human Services Board
- » Valley Transit
- » Sunshine Transit
- » Chickaloon Area Transit Systems
- » Mat-Su Coalition on Housing and Homelessness
- » Alaska Climate Action Network
- » Valley Interfaith Action Group

Public Comment Period

The draft Bike and Pedestrian Plan was available for public comment between March 15 and April 30, 2023. Information about the public comment period was shared via Facebook, emails to community councils and key stakeholders, an email to the MSB School District mailing list, physical flyers in libraries, an announcement on Big Cabbage Radio, and an article in the Frontiersman. Backcountry Bike and Ski also included the link to the comment page on their Palmer Spring Classic entry form!

Project website (www.matsubikeandped.com)



Very excited to see this! Some sections are ones I use frequently as I [use] my bicycles as forms of transportation.

Public comment period flyer



As a regular user of some of the new and also long-existing cycle paths around the Palmer area, I plan to use the paths in the plans for both recreation and as able, as an alternative to driving for work commutes and running errands.

A total of 72 comments were received through the project website, Facebook, and emails to the BPP project team. The team was also forwarded a letter to the Alaska Department of Transportation & Public Facilities (DOT&PF) regarding the crosswalk near the Talkeetna Library.

Comments were reviewed to identify suggested routes for new facilities and alterations to projects already listed in the Implementation Plan. The list of new recommendations was evaluated by the Steering Committee to determine which suggestions would be incorporated into the final BPP.

30

new projects in the
Implementation
Plan

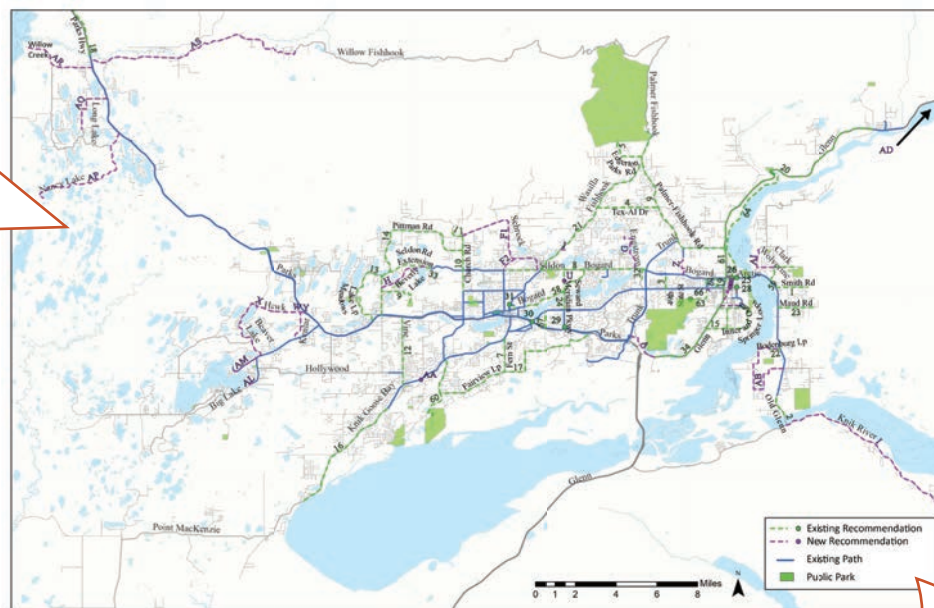
12

comments supporting
the crosswalk near the
Talkeetna Library - the
most received for any
one project

28

comments
expressing
support for
the BPP as a
whole

I am mainly
concerned
about kids'
safety.



I also fully support an ADA sidewalk assessment. When my children were in a stroller, I often found it difficult to navigate steep or nonexistent curb cutdowns across Palmer. Even now, it can be especially challenging with young kids to navigate soft shoulders and nonexistent sidewalks.

How do I use the BPP?



As a resident

- » Advocate for the bike and pedestrian facilities you want to see and the programs you want to make happen.
- » Leverage the BPP for grant applications and community funding opportunities.
- » Nominate projects from the BPP to the Transportation Improvement Program (TIP) and the Capital Improvement Program (CIP).



As an MSB employee

- » Evaluate and include bike and pedestrian infrastructure in transportation bond packages.
- » Set department, organization, and legislative priorities.
- » Advocate for local, state, and federal funds.
- » Implement the policies, programs, and infrastructure projects outlined on pages 36 to 48.



As a private sector developer or investor

- » Learn more about community-supported network connections and bike and pedestrian infrastructure design and standards.
- » Leverage the *Economic Impact Report* (Appendix A) and *Existing Conditions and Issues Report* (Appendix C) to inform your development decisions.



A house in the MSB valued at \$285,000 could have a realized value **increase of \$8,550 to \$14,250** if it were located near a trail (*Economic Impact Report*, Appendix A).



As a business owner

- » Advocate for changes and improvements that will make nonmotorized access to your local business easier and safer.



As a City or MSB official

- » Inform your policy decisions regarding transportation and land-use issues within the borough. The BPP reflects community priorities that were built on extensive public outreach and expert analyses of the borough-wide transportation network, so it provides useful insights for policy makers.

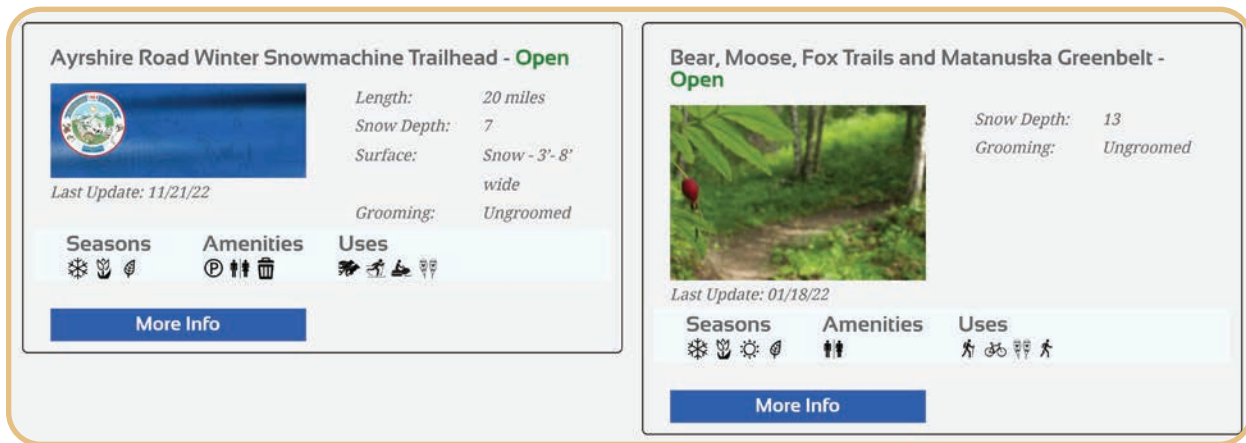
Recreation Trails

One of the goals of the BPP is to connect people to recreation opportunities throughout the MSB. The BPP does not contain recommendations for creating new recreation trails, but the resources below provide information about existing trails throughout the borough.

MSB Trails Page

See which trails are open, what amenities they have, and more!

<https://matsugov.us/trails>



Mat-Su Trails and Parks Foundation Winter Trails and Parks Guide

This guide includes a map of parks and recreation areas, sledding adventures, and “can’t miss” winter trails! This guide also provides links to more resources.

<https://matsutrails.org/>

Matanuska-Susitna Borough Recreation Trails Plan

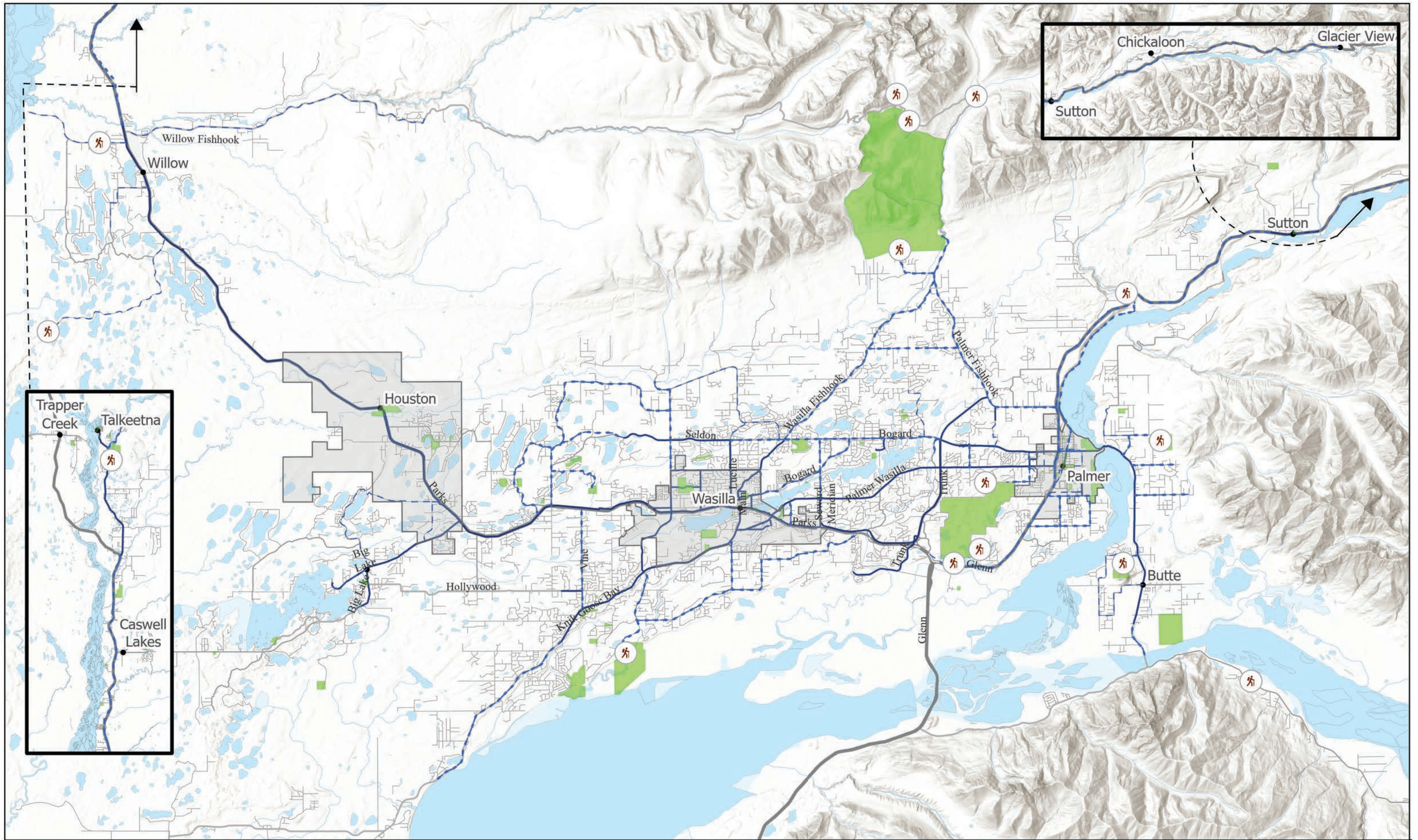
This plan is the official guiding document for recreation trails owned by the MSB.

<https://matsugov.us/plans>

Trails and Parks Master Plan for the Mat-Su Area

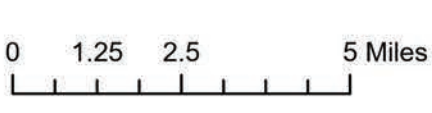
Learn more about recreation trails and parks planning in the region from the Mat-Su Trails and Parks Foundation.

<https://matsutrails.org/master-plan-trail-building-resources/>



Trailheads and Parks
in the MSB

- | | | |
|---|--|---|
|  Existing Separated Path |  Local Park |  City Boundary |
|  Recommended Path |  Trailhead | |



-Existing Conditions and Issues-

The following is a summary of the 2022 *Existing Conditions and Issues Report* (Appendix C).

Bike and Pedestrian Facilities

The nonmotorized transportation network in the MSB contains the following types of bike and pedestrian facilities:

Separated Pathways: Separated pathways are made of asphalt and connect larger populated areas that run parallel to high-volume roadways.

Bike Lane: Bike lanes are intended to be exclusively for bicycle traffic. The City of Palmer has bike lanes.

Paved Shoulder: Paved shoulders can function similarly to bike lanes. They are shared use and can include rumble strips.

Sidewalk: Sidewalks are typically used for pedestrian traffic in urban areas. The Cities of Palmer and Wasilla have sidewalks in parts of their respective city centers. Typically, bicycles are not allowed on sidewalks. MSB subdivision code does not require the construction of sidewalks when a residential subdivision is developed.

Shared Roadways: Shared roadways have no delineation between vehicle, bike, and pedestrian use and are common throughout the MSB.

Transit: The majority of transit services in the MSB are currently provided through a demand-response model instead of the fixed-route services typical of many transit systems. Bike and pedestrian facilities are frequently used to create connectivity within transit networks. However, with the gaps created by a demand-response service, developing a route-based, scheduled service is needed to fully support the community's needs. The MSB is in the beginning stages of developing a Transit Development Plan

that will address the issue of connectivity on a broader scale throughout the borough.

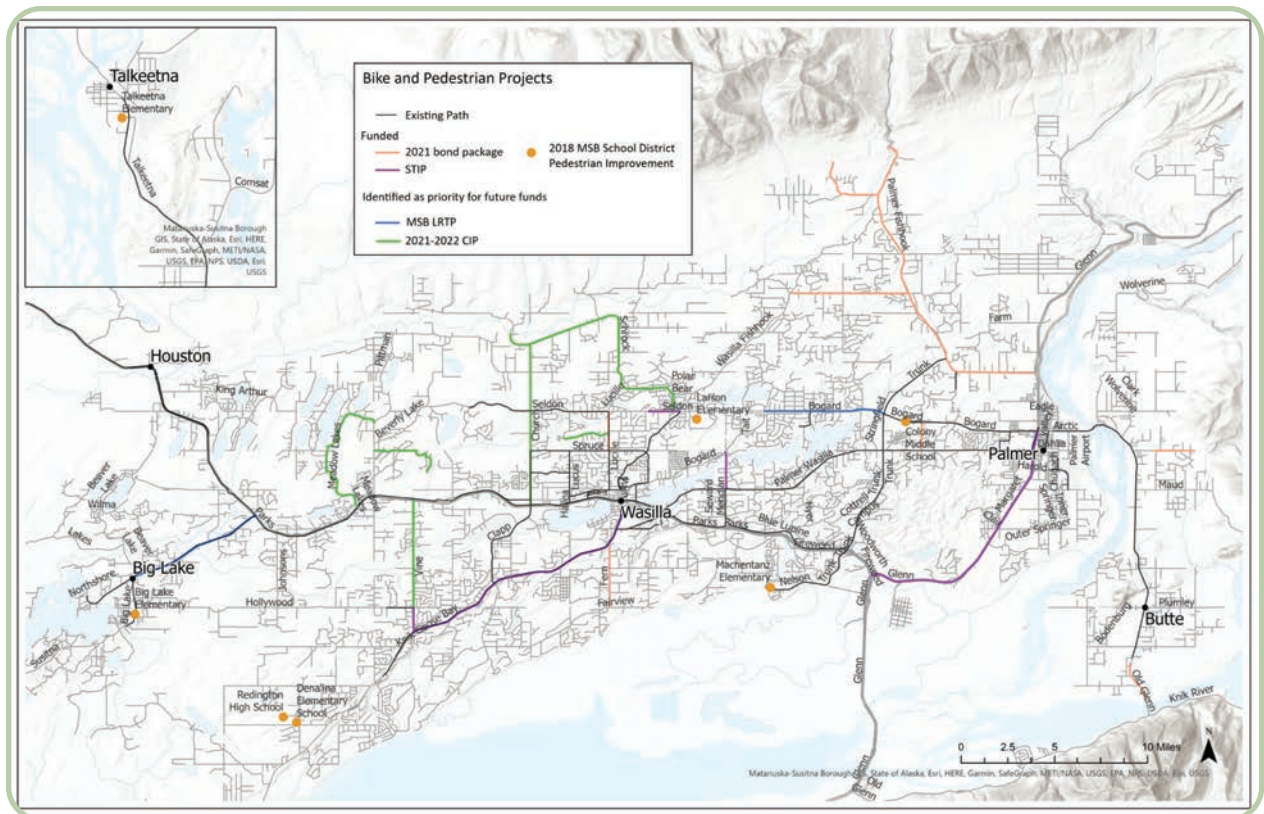
Related Plans, Projects, and Policies

Several plans at the state, borough, and community levels were reviewed in the development of this plan. The goals and strategies of each plan were evaluated to determine how they relate to one another and how they could be used to support the BPP. Key plans included the MSB Official Streets and Highways Plan, the MSB LRTP, the MSB Trails Plan, and Safe Routes to School Plan.

For the full list of plans, please see *Section 3.1 Plans* in the 2022 *Existing Conditions and Issues Report* (Appendix C).

Current and Planned Projects

Through cooperative efforts between communities, cities, MSB, and the state, several projects are planned and several projects that are included in the BPP are already designed and funded. See Appendix E for a full-page version of the map below.

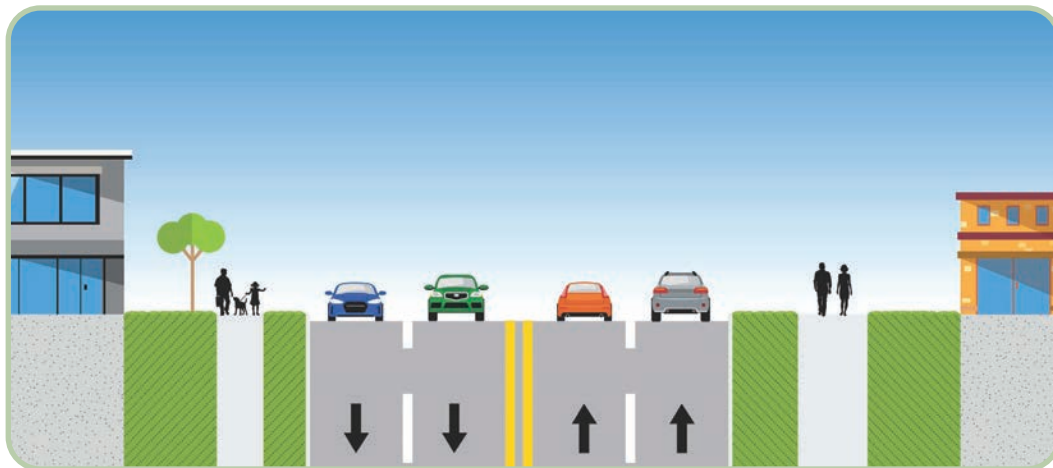


Policies and Regulations

In addition to federal regulations that guide state and federal construction of roads, some cities in the borough have design standards for bike and pedestrian facilities (see figure below). The MSB does not have requirements for developers to construct bike and pedestrian facilities.

Corridor	Min. distance from back of curb (BOC)	Paved furniture zone at BOC	Sidewalk req. both sides	Min. width of sidewalk
Avenues	2'	NA	Y	6'
Parkways	2'	NA	Y	5'
Boulevards	4.5'	NA	Y	5'
Main Streets	4'	4'	Y	8'
Urban Streets	4'	4'	Y	6'
Local Streets	3'	NA	Y	5'
Alleys	NA	NA	NA	NA

On a local level, Complete Streets policies are enacted for the safety of all users. The Federal Highway Administration (FHWA) and National Complete Streets Coalition support community development of the Complete Streets policy. The conceptual street cross-section below is an example of an urban arterial road provided in an FHWA guidance document; Complete Streets designs are tailored to a specific area and are not one-size-fits-all.



For a full list and summaries of all policies and regulations please see *Section 3.3 Policies and Regulations* of the 2022 *Existing Conditions and Issues Report* (Appendix C).

Issues and Needs

Crash Data

DOT&PF collects data regarding crashes involving bicycle and pedestrian injuries or fatalities. From 2010 to 2019, there were 103 incidents within the MSB, 33% of which resulted in a serious injury or fatality (DOT&PF, 2019). The incidents were distributed nearly evenly between cyclists and pedestrians. Due to higher populations and traffic volume in the areas, more incidents were reported in Wasilla and Palmer than in surrounding areas. Crashes tended to occur during daylight hours, with July having the highest frequency of incidents. The figure below shows locations of crashes throughout the borough. See Appendix D for a full-page view of the map.



Connectivity

Throughout the bike and pedestrian network, gaps were identified through analysis, a comment map, stakeholder interviews, and planned projects.

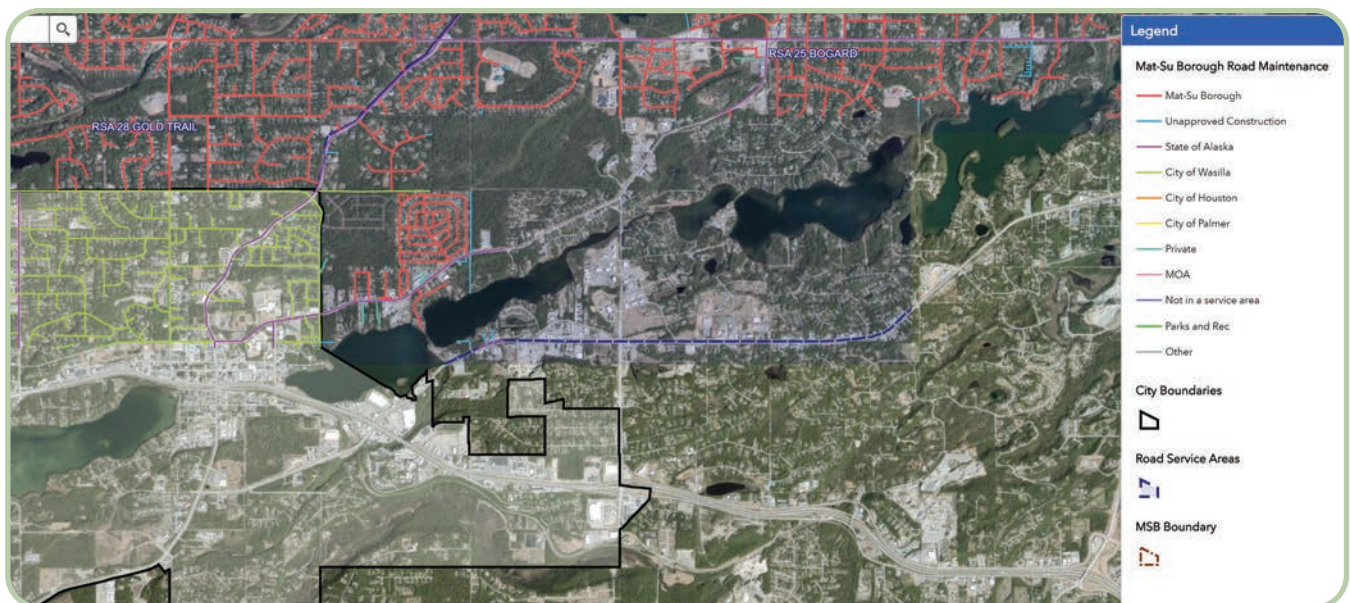
Maintenance

Throughout the development of the BPP, concerns about maintenance were raised repeatedly. Maintenance is an issue no matter the season,

whether it be snow-burdened pathways and narrowed roadways from snow plowing, gravel from winter on pathways during the summer, or year-round cracks and frost heaves.

DOT&PF prioritizes road maintenance based on the functional class of the roadway—the higher the classification, the higher the priority. Pathways along the roadway are given the same priority as the roadway itself, but the rate of maintenance is not always equal.

The MSB contracts its road maintenance to private parties through the Road Service Area (RSA) system. The borough oversees the maintenance of roughly 1,100 miles of roadways and prioritizes based on roadway classification (see map below), with subdivision roads having the lowest priority. Plowing is required after 4 or more inches of snowfall and must occur within 12 hours on school bus routes and main roadways. The projects recommended later in this plan would add a total of 134 miles of pathways for winter maintenance.



MSB Road Maintenance Map via MSB Interactive Maps & Apps

Wasilla and Houston prioritize their main city roads, and Palmer prioritizes its arterial roads and school routes. Neither Wasilla nor Houston have written regulations for snow removal from sidewalks. Palmer requires building owners or occupants to remove snow from their sidewalks, while the city removes snow from sidewalks surrounding city buildings.

User Conflicts

Comments from the public indicate that the most common user conflicts on bike and pedestrian paths in the Mat-Su are between vehicles (including ATVs) and bicycles. This is due to the absence or poor maintenance of pathways for cyclists, which causes cyclists to ride on roads, as well as the use of ATVs on paths intended for nonmotorized use. Paths and trails throughout the MSB are also used by horseback riders and sled dog teams.

All users should verify what activities are allowed on paths and trails by checking local ordinances and trail information. Generally, *paths* are for bicycle and pedestrian use and *trails* may have additional permitted uses.

For more information, see:

- » Recreation trails resources, page 21
- » Wasilla Municipal Code 10.12.020
- » Palmer Municipal Code 10.05.020
- » MSB Code 24.07.050

Photo credit: MSB Public Affairs Office



Funding

Funding for the BPP can come from several sources and be distributed to multiple entities. The BPP implementation plan may be able to receive funding for standalone projects or may be included in larger projects to be eligible for a wider range of funding opportunities. Examples of funding sources for which BPP projects are potentially eligible are listed below; these are not guaranteed sources of funding. See Appendix F for a list of grant opportunities for which BPP projects may be eligible.

Federal

There are many funding opportunities for bike and pedestrian infrastructure from federal sources. The Bipartisan Infrastructure Law (BIL, also known as the Infrastructure Investment and Jobs Act or IIJA) renewed funding for several federal programs. The following federal sources are most relevant to the BPP: the **Surface Transportation Block Grant (STBG)**, **Safe Streets and Roads for All**, and the **Carbon Reduction Program**.

Tribal

As federally recognized tribes, the Chickaloon Native Village and Knik Tribe are eligible to apply for funds from the **Tribal Transportation Program** and the **Tribal Transportation Program Safety Fund**, among other programs dedicated to Tribal transportation. Federally recognized tribes are also eligible to apply for other state and federal transportation programs.

State

DOT&PF provides state funding for transportation projects and administers and manages federal funds for individual projects. The state-funded **Community Transportation Program** is a competitive surface transportation program that runs in 3-year cycles. DOT&PF also provides funding for selected projects through the federal **STBG Transportation**

Alternatives Set-Aside, using funds that are not otherwise suballocated to Metropolitan Planning Organizations (MPOs).

Borough

Funding opportunities for projects throughout the MSB are available through Alaska **Statewide Transportation Improvement Program** (STIP), RSAs, **voter-approved transportation packages** (including bond packages), and **grants**. The MSB does not currently have road powers; therefore, funding for road projects is largely facilitated through community-driven bond requests. Bond packages must be approved by voters as the funding will be provided by the taxpayers.

Cities

Although the cities of Palmer, Wasilla, and Houston can seek **state, bond, and grant** funding similarly to the MSB, each city has its own respective CIP to use for improvements within city limits. The CIP nomination is simple—the city opens the nomination to the public and members of the public can provide their reason that the nomination is beneficial to the city.

Metropolitan Planning Organization

Mat-Su Valley Planning for Transportation (MVP) is in the process of forming an MPO that will be responsible for short- and long-term transportation planning for a defined area within the MSB. The MPO boundary will be finalized in Summer 2023 and the organization is scheduled to be fully formed in Fall 2023. Once it is fully formed, the MPO will be eligible to receive funds and engage in transportation planning (note: the MPO will not have ownership of any infrastructure, but MPO funding can be used on bike and pedestrian facilities as well as equipment to maintain new infrastructure). Learn more about the MPO and its formation at www.mvpmpo.com.



Implementation

The core of the BPP is the implementation plan for the nonmotorized transportation network of the MSB. The implementation plan was created by evaluating the existing conditions and issues in the MSB, public input, and existing plans and projects. The plan is divided into the categories of Policy, Infrastructure, and Programs and Planning; details about each project can be found on pages 36 through 48. Pages 32-35 show the locations of the infrastructure projects.

Who implements the BPP?

Many projects will likely have multiple partners responsible for implementing them, including the MSB, cities, the MVP MPO, and DOT&PF. The Projects to Implement tables on pages 36-48 identify the parties that will likely be responsible for each project.

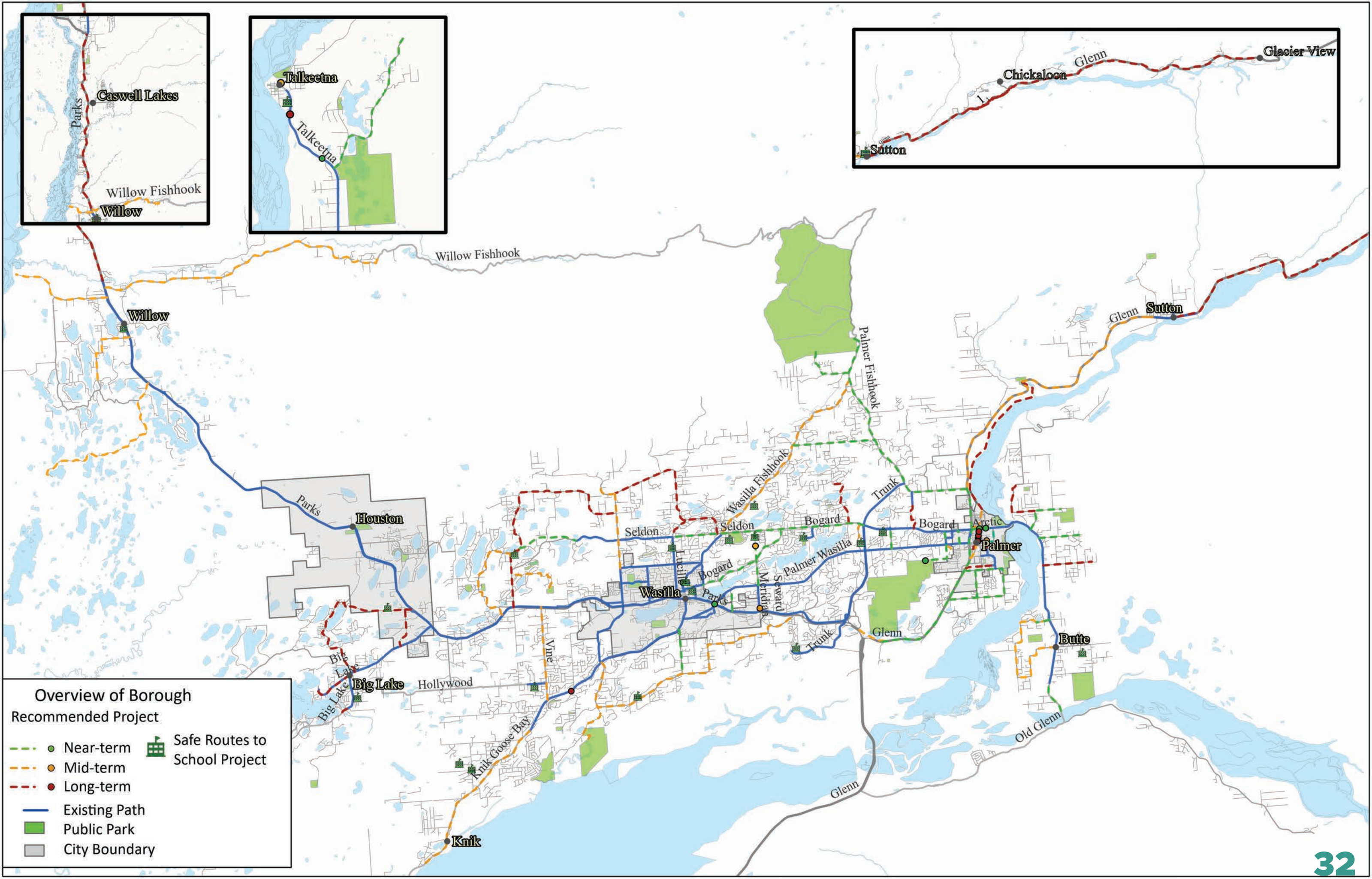
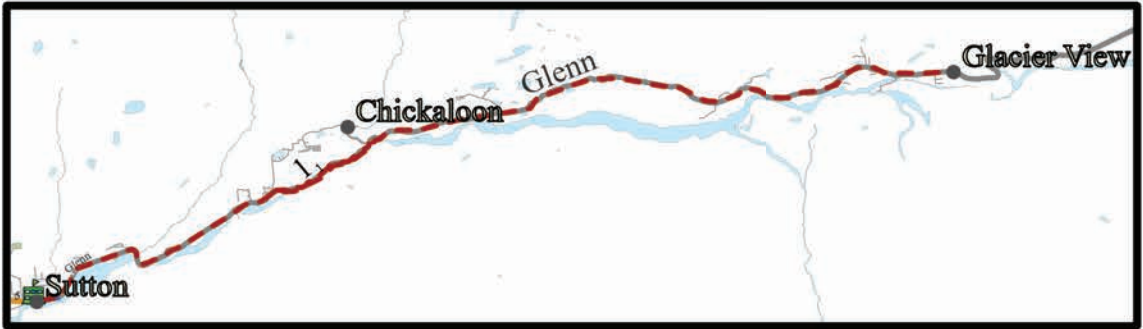
When are the recommendations implemented?

Each recommendation has a suggested timeframe for implementation based on safety considerations such as crash data and proximity to schools, review of existing plans and funding strategies, direction from the Steering Committee, and public comments. Projects that were already designed, under construction, or included in a funding plan were included as “near-term” to show ongoing support for their prioritization. Some projects may require additional studies or analyses prior to implementation. “Mid-term” projects will need additional support or study before being added to an infrastructure list. “Long-term” are typically larger and will require environmental engineering studies or involve difficult right-of-way acquisition challenges. The recommendations in the BPP assume that right-of-way has been or is easily obtained for facilities projects; if right-of-way is difficult to obtain, project timelines may shift. The recommendations are not a guarantee that the project will be completed within that timeframe.

Near-term within 0-5 years
47 projects

Mid-term within 6-10 years
27 projects

Long-term more than 10 years
21 projects



Overview of Borough
Recommended Project

Near-term

Mid-term

Long-term

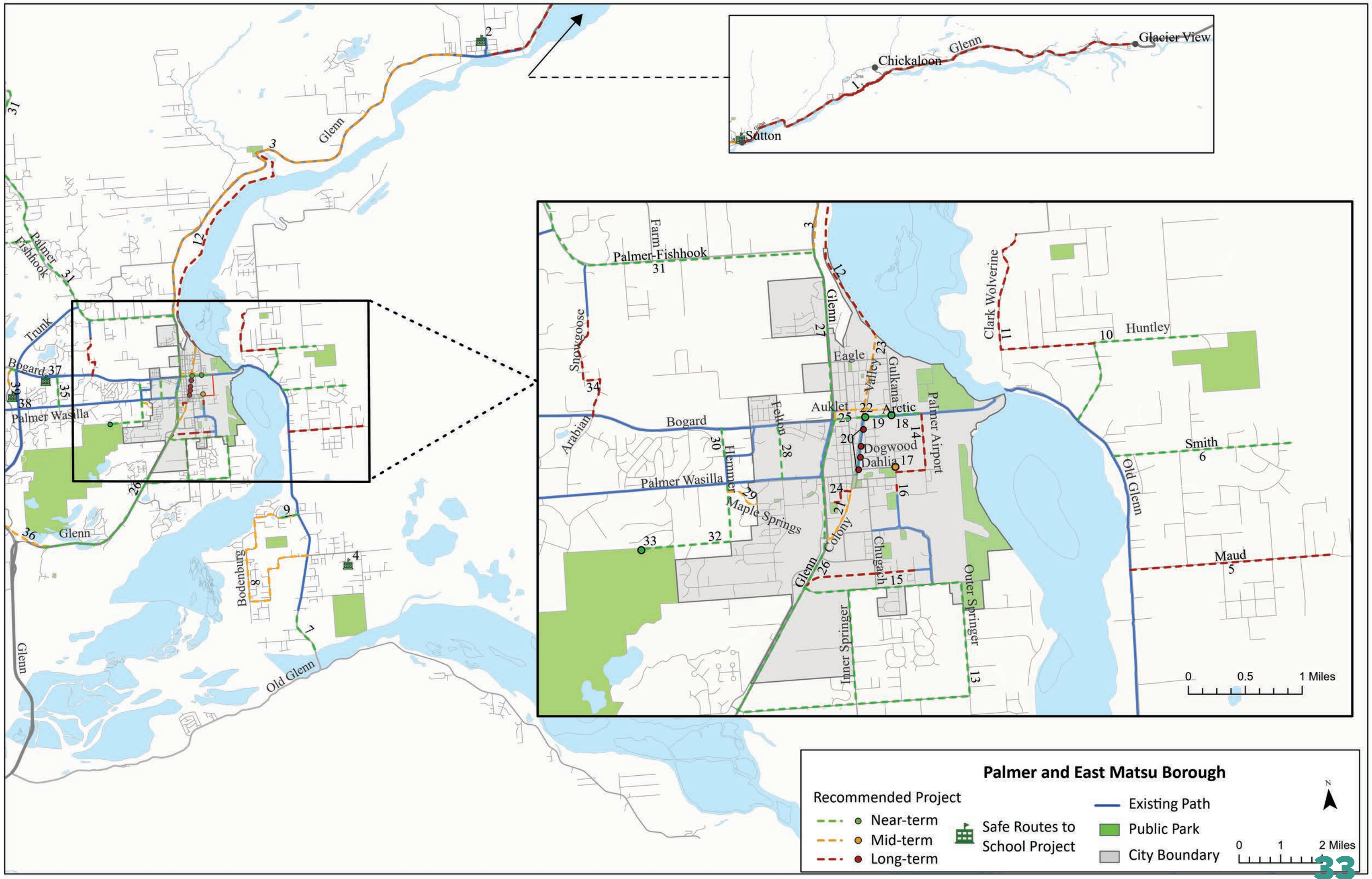
Existing Path

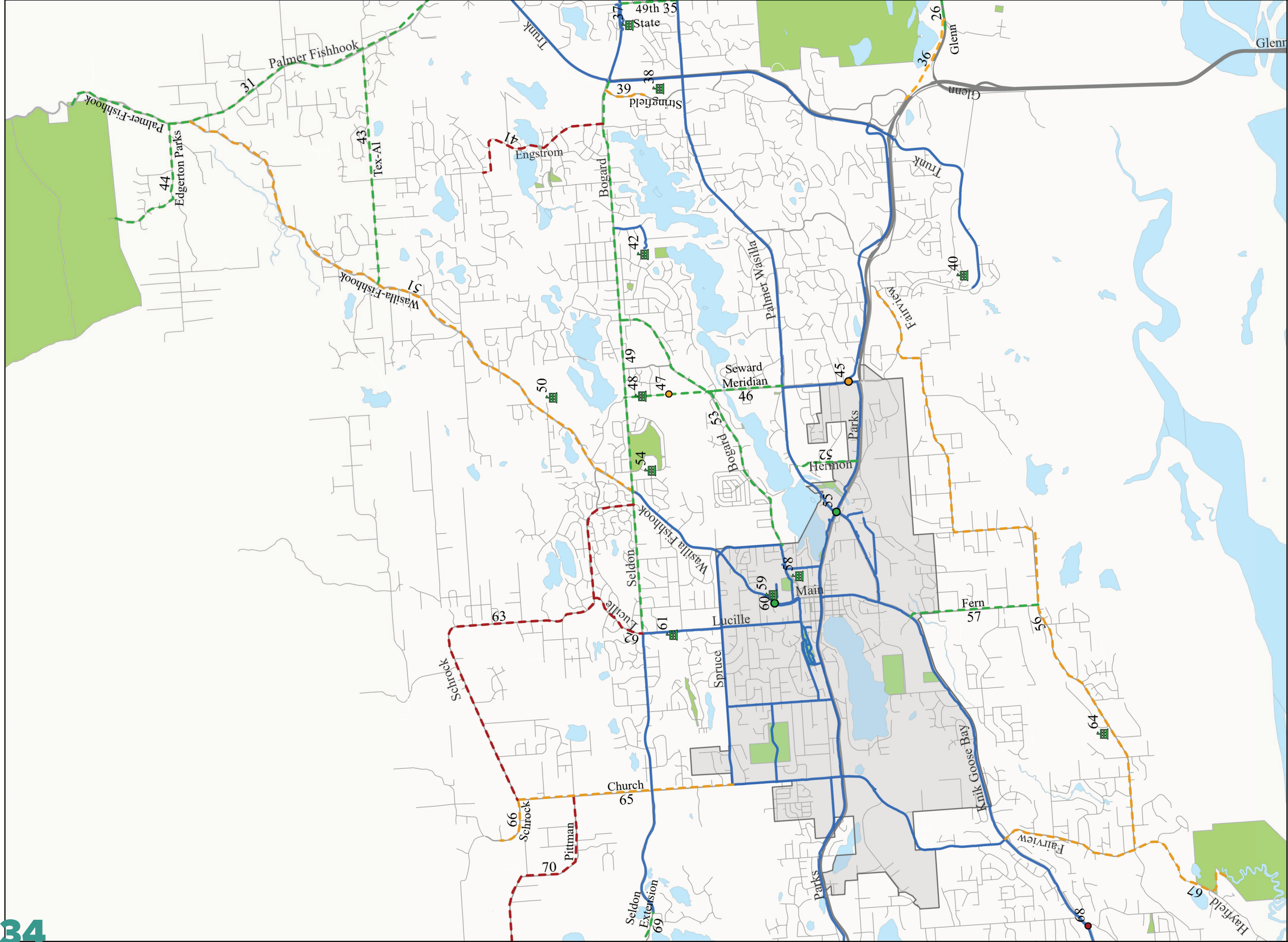
Public Park

City Boundary

Safe Routes to
School Project

32





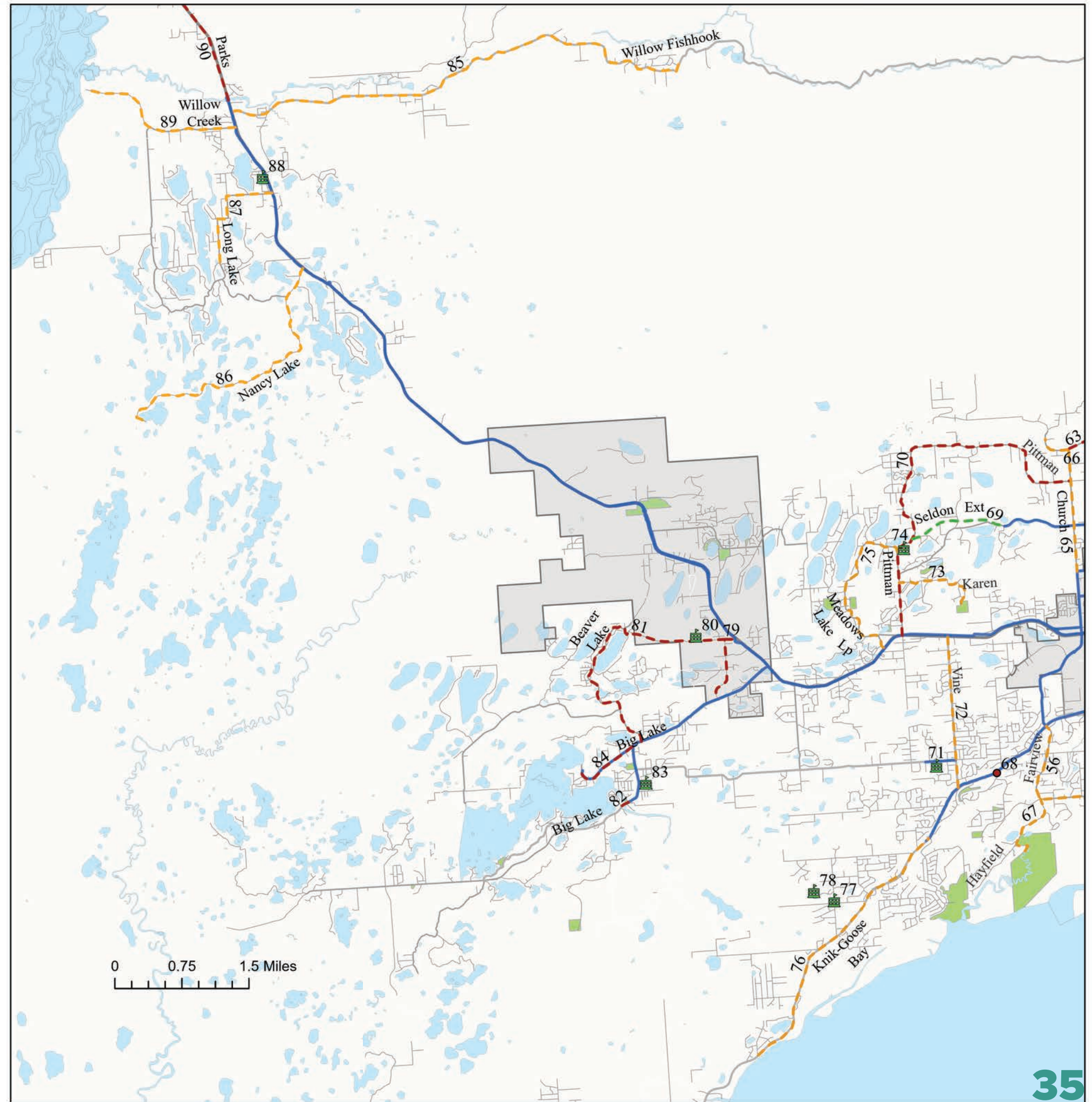
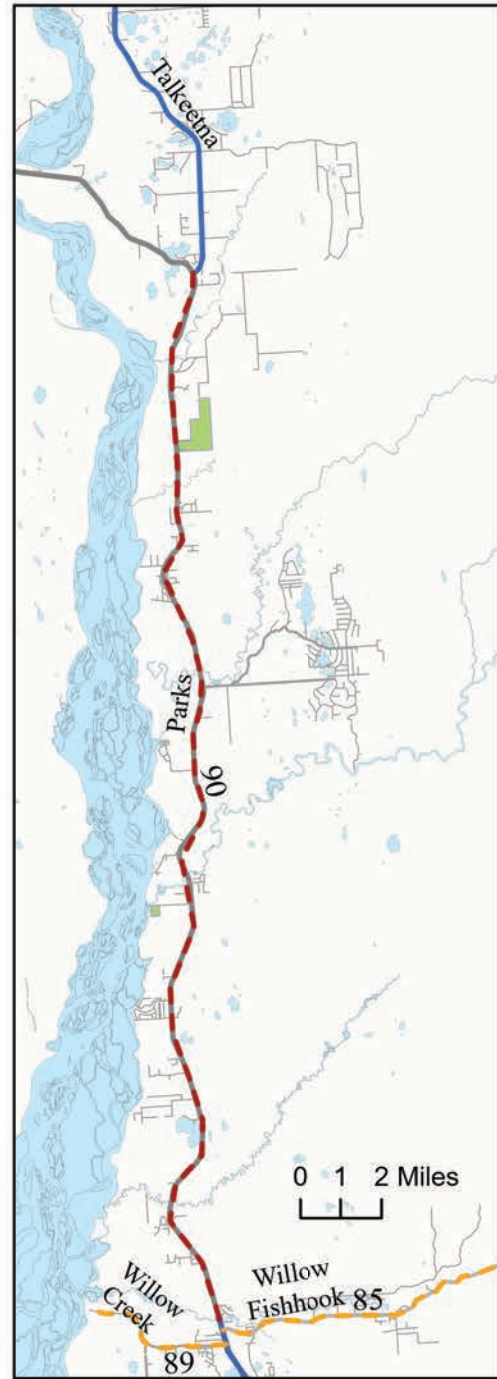
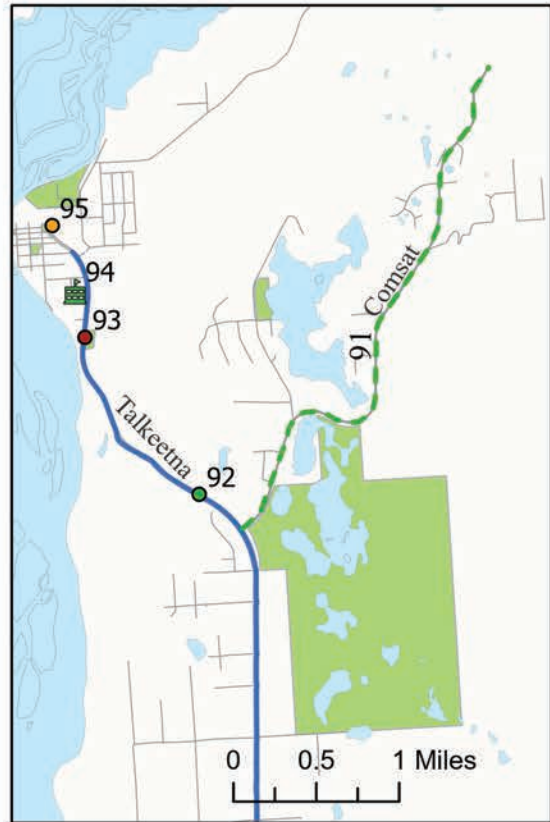
Recommended Project

- Near-term
 - Mid-term
 - Long-term
- Safe Routes to School Project

Wasilla and Central Matsu Borough

- Existing Path
- Public Park
- City Boundary





Western Matsu Borough: Meadow Lakes to Talkeetna

Recommended Project

- ● Near-term
- ● Mid-term
- ● Long-term

- Existing Path
- Public Park
- City Boundary

■ Safe Routes to School Project



Projects to Implement

Policy

Policies to facilitate bicycle or pedestrian infrastructure and maintenance provide accountability and ensure that all user groups are accommodated in the transportation system. Policies can also improve the planning process by prescribing preferred facilities through design standards.

Recommendation	Description	Rationale	Authority
Near-term			
Facility design standards	Develop standard drawings and specifications for bicycle and pedestrian facilities. Write legislation for adoption by Assembly defining guidelines for pedestrian facilities based on road classification.	A standard design gives engineers and platting staff a basis for nonmotorized facility design. A standard design also helps with cost estimating and ensuring consistent infrastructure across the borough, which provides users a consistent experience that translates to fewer crashes. These standards should take into consideration environmental factors and surrounding infrastructure, such as culverts or wetlands.	MSB
Complete Streets policy	Craft a Complete Streets policy that includes all users.	A Complete Streets policy establishes an approach to planning, platting, designing, operating, and maintaining streets that enable safe access for all people who need to use them.	MSB/MPO/Cities
Snow-clearing policy	Adopt a snow-removal policy for nonmotorized infrastructure across the borough and across jurisdictions.	Removing snow from paths, sidewalks, and road shoulders provides year-round use for all users.	MSB/MPO/Cities
Maintenance policy	Adopt a general maintenance policy for nonmotorized infrastructure across the borough and across jurisdictions for debris removal, sweeping, and pavement patching.	Gravel and other debris on sidewalks and pathways can impede many nonmotorized users, including wheelchairs or other assistive devices, narrow-tired bicycles, and rollerblades and skateboards.	MSB/Cities/ DOT&PF
Subdivision regulations	Revise MSB Code to include pedestrian infrastructure when subdivisions are created; require safe route to school when building or subdividing within 1/2 mile from a school; distinguish between urban and rural contexts.	Current MSB subdivision code (Title 43) requires consideration of 'walkways' but does not require their dedication or construction. Code language that is more stringent would require pedestrian facilities be included in the subdivision and thus help eliminate the creation of new gaps in the nonmotorized network every time a new subdivision is created.	MSB
Vision Zero program	Coordinate the adoption of the international Vision Zero program.	Vision Zero seeks to reduce fatalities and serious injuries while ensuring mobility for all.	All Organizations

Recommendation	Description	Rationale	Authority
Include bike and pedestrian plans in the TIP	At least 20% of the MSB TIP and MVP TIP should be bike and pedestrian projects.	Both the Anchorage and Fairbanks MPOs require 20% of their TIP projects to be bike and pedestrian projects.	MPO/MSB

Infrastructure

All recommendations assume that right-of-way is available or easily obtainable for the proposed facility. Authorities have varying responsibilities for construction, maintenance, and/or funding. The project numbers correspond to the implementation map and do not indicate priority.

Recommendation	Description	Rationale	Authority	Timeframe
1. Widen Shoulder of Glenn Highway from Sutton to Glacier View	Create a path along Glenn Highway from Fish Lake Road to Chickaloon Branch Road	Proposed by public comment and approved by Steering Committee	DOT	Long-term
2. Sutton Elementary	See SRTS Plan	2014 Walk zone Inventory and Recommendations SRTS Plan	DOT/MSB	Near-term
3. Glenn Highway path	Develop a separated path along Glenn Highway between Palmer Fishhook Road and Jonesville Road	Connecting Palmer-Fishhook Road to the separated path at Callison Road in Sutton would provide connectivity between Sutton and Palmer. This facility is also proposed in the Palmer Comprehensive Plan	DOT	Mid-term
4. Butte Elementary	See SRTS Plan	2014 Walk zone Inventory and Recommendations SRTS Plan	DOT/MSB	Near-term
5. Maud Road path	Construct a separated pathway along Maud Road from Old Glenn Highway to the end of the paved portion of Maud Road.	Development in the area has increased traffic on Maud Road. The road is narrow with narrow shoulders. A separated non-motorized path would connect residential areas to the Old Glenn Highway path.	DOT	Mid-term
6. Smith Road Extension pathway	Provide a pathway connection between the Old Glenn Highway and the recreational trailhead access	This project is part of the 2021 Transportation System Package	DOT/MSB	Near-term
7. Fill the gap in the Old Glenn Highway path between Sodak Circle and Knik River	Connect the separated pathway on Old Glenn Highway between Sodak Circle and Knik River	This project is part of the 2021 Transportation System Package	DOT	Near-term

Recommendation	Description	Rationale	Authority	Timeframe
8. Bodenbug Loop shoulder widening - Entire Loop	Widen the shoulder on the entire Bodenbug Loop Rd	The Butte Trail is a signification recreational destination. Connecting the trailhead to the Old Glenn Highway path would fill the gap along Bodenbug Loop.	DOT	Mid-term
9. Bodenbug Loop shoulder widening - To trailhead	Widen the shoulder on the north side of Bodenbug Loop Road between Old Glenn Highway and the Butte trailhead to six feet to accommodate cyclists and pedestrians	The Butte Trail is a signification recreational destination. Connecting the trailhead to the Old Glenn Highway path would fill the gap along Bodenbug Loop.	DOT	Near-term
10. Lazy Mountain trail connection	Connect E Huntley Road to Lazy Mountain Trail Head.	Provide connection from pedestrian pathway to recreational trail.	MSB	Long-term
11. Clark Wolverine Pathway	Create a path along Clark-Wolverine Rd from the Old Glenn Hwy	Proposed by public comment and approved by Steering Committee	DOT	Long-term
12. Palmer to Sutton pathway along the Matanuska River	Reconstruct the existing railroad bed into a pathway. Stabilize slopes that are subject to erosion.	This pathway follows an old railway and is very popular but is often muddy and difficult to use.	MSB/City of Palmer/ARRC	Long-term
13. Inner and Outer Springer Loops shoulder widening	Widen the shoulders on both sides of these roads to 5'.	This area is projected to grow significantly over the next 20 years. There are no dedicated bicycle or pedestrian facilities along these roads. A dedicated facility would provide connections between residential areas and the core Palmer commercial area (via Chugach Street sidewalks).	City of Palmer/ DOT	Near-term
14. Evergreen Ave/ Airport Road pathway	Construct a pathway along Evergreen Avenue and Palmer Airport Road, creating a connection from Gulkana Street to Arctic Avenue	Already designed and planned to be constructed	City of Palmer	Near-Term
15. Palmer East/West Abandoned rail line pathway	Turn the abandoned railroad between Thuma St and Inner Springer Loop into a bike/ pedestrian trail	Proposed by public comment and approved by Steering Committee	City of Palmer/ ARRC	Long-term
16. S Gulkana Pathway extension north	Create a path along S Gulkana St from E Fireweed Ave to the existing path near the Dr. Myron F. Babb Arboretum	Proposed by public comment and approved by Steering Committee	City of Palmer	Long-term

Recommendation	Description	Rationale	Authority	Timeframe
17. South Gulkana Street crossings	Provide pedestrian crossing facilities at South Gulkana Street intersections with East Dahlia Avenue and East Elmwood Avenue.	The large recreational fields between Elmwood and Dahlia are a destination for pedestrians and cyclists coming from neighborhoods east of South Gulkana Ave. Gulkana Ave traffic does not have to stop at these intersections and bushes/shrubbery make it difficult for motorists to see pedestrians.	City of Palmer	Mid-term
18. Arctic Avenue at Gulkana Street crossing	Provide a pedestrian crossing at this unsignalized intersection	Pedestrians and cyclists heading south on Gulkana Street must cross Arctic Avenue to reach the separated path on the south side of Arctic. Traffic on Arctic does not have to stop at the intersection with Gulkana Street.	City of Palmer/ DOT	Near-term
19. Arctic Avenue bike lanes	Provide bike lanes on both sides of Arctic Avenue between Glenn Highway and South Airport Road.	There are no dedicated bike facilities on the west end of East Arctic Avenue. Existing sidewalks should be used by pedestrians only. The shoulder is very narrow and doesn't not accommodate safe bicycle travel.	City of Palmer/ DOT	Mid-term
20. Valley Way Intersection Crosswalks	Create crosswalks/connections between the pathway along S. Valley Way and the other side of the road at Cottonwood Ave, Dogwood Ave, Blueberry Ave, and Dahlia Ave	Proposed by public comment and approved by Steering Committee	City of Palmer	Long-term
21. S Colony Way Pathway	Add a path along S Colony Way connecting the path at the intersection of the Glenn Highway/ East Harold Street (where E Harold St turns into S Colony Way) to the Palmer Visitor Information Center	Proposed by public comment and approved by Steering Committee	City of Palmer	Mid-term
22. Arctic Avenue at Valley Way crossing	Provide a pedestrian crossing of Arctic Avenue at the intersection with Valley Way.	There are no crossing facilities at this busy intersection that is not signalized. South Valley Way is a destination for walkers, bikers, and skateboarders, as it has a separated path and skate park.	City of Palmer/ DOT	Near-term
23. North Valley Way pathway	Pave and maintain the pathway within the Alaska Railroad right-of-way along North Valley Way to the Matanuska River.	This pathway follows an old railway and is very popular but is often muddy and difficult to use.	City of Palmer/ ARRC	Mid-term

Recommendation	Description	Rationale	Authority	Timeframe
24. Colony Way to Amoosement Park Pathway	Create a sidewalk along W Fireweed Ave, Cobb St, and W Fern Ave to connect S Colony Way to the Amoosement Park	Proposed by public comment and approved by Steering Committee	City of Palmer	Long-term
25. Arctic Avenue to Auklet pathway connection	Create a Path connection from Arctic Avenue to Auklet along the Glenn Highway Construct a new sidewalk on the south side of Auklet Avenue that crosses the railroad corridor and Valley Way, and continues to Gulkana Street	Proposed by public comment and approved by Steering Committee	City of Palmer/ARRC	Mid-term
26. Glenn Highway Pathway South of Palmer	Add a separated path along the Glenn Highway from South Inner Springer Loop to the Matanuska Lake State Rec Area	Project is already funded and designed	DOT	Near-term
27. Glenn Highway path	Provide a separated path along Glenn Highway from the northwest corner of Bogard & Glenn Highway to Palmer-Fishhook Road.	Extending the separated path north from Scott Road to Palmer-Fishhook Road would connect neighborhoods to schools and the commercial center of Palmer. This would complete a loop if a Palmer-Fishhook Road path is constructed. This need is also identified in the Palmer Comprehensive Plan	DOT	Mid-term
28. Felton Street pathway	Develop a pathway along Felton Street north of the Palmer-Wasilla Highway to Bogard Road.	This project is nearly completed.	City of Palmer	Near-term
29. Maple Springs Pathway	Create a sidewalk on Maple Springs Way	Proposed by public comment and approved by Steering Committee	MSB	Mid-term
30. North Hemmer Road pathway	Develop a pathway along Hemmer Road north of the Palmer-Wasilla Highway to Bogard Road.	This project is already in the design phase as part of the extension/repaving of North Hemmer Road.	MSB/DOT	Near-term
31. Palmer-Fishhook Road Separated Path	Provide a separated pathway from the Glenn Highway to Little Susitna River Bridge linking to the heavily used Trunk Road pathway.	This fast-growing area of the borough needs a connection between the Trunk Road pathway, the Glenn Highway, and the Little Susitna Bridge. This is a project in the 2021 Transportation System Package. The Fishhook Comprehensive Plan also identifies this need.	DOT/MSB	Near-term

Recommendation	Description	Rationale	Authority	Timeframe
32. South Hemmer Road pathway	Develop a pathway along Hemmer Road south of the Palmer-Wasilla Highway to the Valley Pathways School.	This project is already in the design phase as part of the extension of South Hemmer Road.	MSB	Near-term
33. South Hemmer Road extension	Construct a parking lot on the borough-owned parcel west of the Valley Pathways School and extend South Hemmer Road to provide access to the Crevasse Moraine trail system.	Additional trail access and parking in a non-residential area will alleviate parking challenges at the Loma Prieta Drive parking lot.	MSB	Near-term
34. Snowgoose pathway extension South	Create a pathway from E Bogard Rd to N Palmer-Fishhook Rd following N Arabian Ln, E Scott Rd, and N Snowgoose Rd	Proposed by public comment and approved by Steering Committee	MSB	Long-term
35. 49th State Street separated path	Construct a separated pathway along 49th State Street between Bogard Road and Palmer-Wasilla Highway to connect with separated paths on both of those roadways	No dedicated bicycle/pedestrian facility between two major corridors.	DOT	Near-term
36. Future Hospital Access Road Pathway	Construct a path along future road that will provide alternative access to Matsu Regional Hospital, near the Glenn Highway Park Highway Interchange	Proposed by public comment and supported by the OSHP	DOT/MSB	Mid-term
37. Colony Middle School	See SRTS Plan, MSB Transportation Bond, and DOT audit report	2021 MSB Transportation Bond, and 2014 Walkzone Inventory and Recommendations SRTS Plan	MSB	Near-term
38. Pioneer Peak Elementary	See SRTS Plan	2014 Walk zone Inventory and Recommendations SRTS Plan	DOT/MSB	Near-term
39. Stringfield Road pathway	Convert Old Trunk Road/Stringfield Road to a pathway along Wasilla Creek from Katherine Road to Bogard Road	This connection provides a north-south pathway between residential areas and existing pathways.	MSB	Mid-term
40. Machetanz Elementary	See SRTS Plan, MSB Transportation Bond, and DOT audit report	2021 MSB Transportation Bond, and 2017 Walk zone Inventory and Recommendations SRTS Addendum, and DOT SRTS Audit	MSB	Near-term
41. Engstrom Road Pathway	Widen shoulders on Engstrom from Bogard to Hart Lake Loop	Proposed by public comment and approved by Steering Committee	MSB	Long-term

Recommendation	Description	Rationale	Authority	Timeframe
42. Finger Lake Elementary	See SRTS Plan	2014 Walk zone Inventory and Recommendations SRTS Plan	DOT/MSB	Near-term
43. Tex-Al Drive path	Add a separated pathway the length of Tex-Al Drive, including the new connecting segment proposed in the 2021 Transportation System Package	The connection between the east and west segments of Tex-Al Drive would provide a major east-west corridor in this area of the borough. This is project is part of the 2021 Transportation System Package	MSB	Near-term
44. Edgerton Parks Road and Mountain Trails Drive path	Extend a separated pathway from Palmer-Fishhook Road to the Government Peak Recreation Area trailhead along Edgerton Parks Road and Mountain Trails Drive	A pedestrian/bicycle facility would connect the Palmer-Fishhook Road to the Government Peak Recreational Area. This is project is part of the 2021 Transportation System Package	MSB	Near-term
45. Seward Meridian Parkway crossing treatment	Provide a pedestrian crossing at the intersection with East Blue Lupine Drive to connect the separated path on Blue Lupine to the Seward Meridian pathway.	Seward Meridian is a high-volume roadway with no traffic control at the East Blue Lupine intersection. Pedestrians and cyclists using the separated path on Blue Lupine must cross 6 lanes of traffic to reach the separated path on Seward Meridian.	MSB/DOT	Mid-term
46. Seward Meridian Road path	Provide a separated path along Seward Meridian between Palmer-Wasilla Highway and Seldon Road.	The already funded and designed Seward Meridian Parkway Road Improvement Project will upgrade Seward Meridian to a four-lane roadway, extend the Seward Meridian Parkway one mile from Bogard Road to Seldon Road, and construct a multi-use separated pathway	MSB/DOT	Near-term
47. Crosswalk for access to Fronteras Spanish Immersion Charter School	Provide bike and pedestrian access to the Fronteras Spanish Immersion Charter School on the east side of Seward Meridian as part of the planned Seward Meridian upgrade	Proposed by public comment and approved by Steering Committee	DOT	Mid-term
48. Teeland Middle School	See SRTS Plan	2014 Walk zone Inventory and Recommendations SRTS Plan and DOT SRTS Audit	MSB	Near-term
49. Bogard Road separated path	Provide a dedicated pathway on this busy road between Trunk Road and Lucille	2017 MSB Long-range Transportation Plan	DOT	Near-term
50. Shaw Elementary	See audit report	DOT SRTS Audit	DOT/MSB	Near-term

Recommendation	Description	Rationale	Authority	Timeframe
51. Wasilla-Fishhook Road	Provide a separated pathway along Wasilla-Fishhook Road from Seldon Road to Palmer-Fishhook Road	There is no constructed bicycle/pedestrian facility north of Seldon Road. A dedicated non-motorized facility extending to Palmer-Fishhook Road would create a loop that connects dozens of subdivisions throughout this fast-growing area. Additionally, this connection was identified in the Fishhook Comprehensive Plan.	DOT	Mid-term
52. Hermon Road Upgrade	Pathway along Herman Road	Planned and in design with DOT - includes pedestrian/bicycle amenities	City of Wasilla/ DOT	Near-Term
53. Bogard Road separated path	Provide a separated pathway on this busy road between the Bogard Road roundabout to Peck Street.	This is a high-traffic road and supports several densely populated areas. No pedestrian connections exist between the residential areas to the Wasilla High/Middle Schools.	DOT&PF	Near-term
54. Larson Elementary	See SRTS Plan, MSB Transportation Bond, and DOT audit report	2021 MSB Transportation Bond, and 2014 Walk zone Inventory and Recommendations SRTS Plan, and DOT SRTS Audit	DOT/MSB	Near-term
55. Crossing improvements at Parks Highway and Palmer-Wasilla Highway	Improve the pedestrian crossing facilities at this intersection.	This intersection is one of the busiest in the MSB. Currently, pedestrians must cross seven lanes of traffic in either direction to move between the busy retail/commercial areas. Additional study is needed, but potential solutions may include pedestrian refuge islands or leading signal intervals.	DOT	Near-term
56. Fairview Loop path	Extend the separated pathway along Fairview Loop from S Knik-Goose Bay Road to South Abby Boulevard.	This fast-growing region of the borough would benefit from a non-motorized facility that connects the separated path at Top of the World Circle to South Abby Boulevard. The facility would service residential areas, an elementary school, and a recreational area.	DOT	Mid-term
57. Fern Street path	Provide a connection between KGB Road and Fairview Loop in this fast-growing portion of the borough	This is a project in the 2021 Transportation System Package	MSB	Near-term
58. Wasilla Middle School	See SRTS Plan	2014 Walk zone Inventory and Recommendations SRTS Plan	DOT/City of Wasilla	Near-term

Recommendation	Description	Rationale	Authority	Timeframe
59. Iditarod Elementary	See SRTS Plan	2017 Walk zone Inventory and Recommendations SRTS Plan Addendum	DOT/City of Wasilla	Near-term
60. Crossing treatment at Wasilla-Fishhook, Kalli Circle, and Carpenter Circle	Provide an enhanced pedestrian crossing treatment at this busy intersection.	Iditarod Elementary school is on the east side of Wasilla-Fishhook Road and there are no pedestrian crossing facilities between the school and neighborhoods and after-school programs on the west side. Wasilla-Fishhook Road traffic does not have to stop at this intersection although there are school zone flashers and reduced speed limits.	City of Wasilla/ DOT	Near-term
61. Tanaina Elementary	See SRTS Plan	2014 Walk zone Inventory and Recommendations SRTS Plan	MSB	Near-term
62. Lucille Street north extension	Add a path to along Lucille Road to connect Schrock Road and Seldon Road	Proposed by public comment and approved by Steering Committee	MSB	Long-term
63. Shock Road pathway	Create a path on Shrock Rd from Seldon Rd to Church Rd	Proposed by public comment and approved by Steering Committee	DOT	Long-term
64. Snow Shoe Elementary	See SRTS Plan	2014 Walk zone Inventory and Recommendations SRTS Plan	DOT/MSB	Near-term
65. Church Road separated path	Provide a connection north from the Church Road separated path that ends at Spruce Avenue to Schrock Road	This project is part of the 2021-22 MSB Capital Improvement Plan	DOT	Mid-term
66. Schrock Road path	Provide a connection from Church Road to the Little Susitna River to connect the Pittman Road, Church Road, and Parks Highway Master Circle trail system	This project was identified in the 2021-22 MSB Capital Improvement Plan	DOT	Mid-term
67. Settlers Bay area trail connections	Connect Hayfield Road Scout Ridge Loop Trail and Cottonwood Creek Wetlands Trail.	Provide connection from pedestrian pathway to recreational trail.	MSB	Long-term
68. S Knik-Goose Bay Rd Crossing	Create a bike and pedestrian crossing on S Knik-Goose Bay Rd at Pinnacle Peak Dr to connect the south side of the street to the path on the north side	Proposed by public comment and approved by Steering Committee	DOT	Long-term

Recommendation	Description	Rationale	Authority	Timeframe
69. Seldon Road Extension Separated Path	Extend Sheldon Road from Windy Bottom Road to Pittman Road and add a separated pathway along the new roadway.	Project is already funded and designed	DOT	Near-term
70. Pittman Road path	Provide a dedicated space for bikes and pedestrians between the separated path on Parks Highway all the way to Church Road	This busy road does not have any dedicated pedestrian facilities.	DOT	Long-term
71. Knik Elementary	See audit report	DOT SRTS Audit	DOT	Near-term
72. Vine Road separated path	Construct a separated path along the full length of Vine Road from KGB Road to Parks Highway	This project is part of the 2021-22 MSB Capital Improvement Plan	DOT	Mid-term
73. West Karen Street separated path	Provide a separated pathway along this busy corridor to connect the Meadow Lakes Community Center with Pittman Road	The Meadow Lakes area is a fast-growing area of the borough. This project is in the 2021-22 MSB Capital Improvement Plan	MSB	Mid-term
74. Meadow Lakes Elementary	See audit report	DOT SRTS Audit	DOT/MSB	Near-term
75. Meadow Lakes Loop Road path	Connect Parks Highway separated path to the intersection of Pittman Road to accommodate bicycles and pedestrians along this significant corridor in a fast-growing area of the borough	This fast-growing area of the borough does not have a bicycle/pedestrian connection between Parks Highway, Hollywood Road, and KGB Road. This would also connect to the separated path on West Hollywood Road that extends to Goose Bay Elementary School. There were three serious bike/pedestrian crashes on this segment between 2015 and 2019. This project is in the 2021-22 MSB Capital Improvement Plan.	MSB	Mid-term
76. Knik-Goose Bay Road separated path	Construct a separated path along KGB Road from South Settlers Bay Road to Malemute Run.	Extending the separated path from South Settlers Bay Road to Malemute Run would provide a safe facility for pedestrians and cyclists along this high-volume, high-speed road in a fast-growing area of the borough.	DOT	Mid-term
77. Dena'ina Elementary	See SRTS Plan, MSB Transportation Bond, and DOT audit report	2021 MSB Transportation Bond, and 2017 Walk zone Inventory and Recommendations SRTS Addendum, and DOT SRTS Audit	MSB	Near-term

Recommendation	Description	Rationale	Authority	Timeframe
78. Reddington Jr/Sr High School	See SRTS Plan, MSB Transportation Bond, and DOT audit report	2021 MSB Transportation Bond, and 2014 Walk zone Inventory and Recommendations SRTS Plan, and DOT SRTS Audit	MSB	Near-term
79. Hawk Lane east pathway extension to Parks Hwy	Create a path along Hawk Ln from Kenlar Rd to the Parks Hwy	Proposed by public comment and approved by Steering Committee	MSB	Long-term
80. Houston Middle School	See SRTS Plan	2014 Walk zone Inventory and Recommendations SRTS Plan	MSB	Near-term
81. Beaver Lake Road/ Hawk Lane/Kenlar Road Pathway loop	Create a path along Beaver Lake Rd starting at Big Lake Rd, continuing along Hawk Ln and Kenlar Rd and returning to Big Lake Rd	Proposed by public comment and approved by Steering Committee	MSB	Long-term
82. South Big Lake bike trail extension	Extend the South Big Lake bike trail across Fish Creek to the Big Lake South State Recreation Site	Proposed by public comment and approved by Steering Committee	DOT	Long-term
83. Big Lake Elementary	See SRTS Plan, MSB Transportation Bond, and DOT audit report	2021 MSB Transportation Bond, and 2014 Walk zone Inventory and Recommendations SRTS Plan, and DOT SRTS Audit	DOT	Near-term
84. Northshore pathway west rehabilitation	Reconstruct the bike path on Northshore Dr to the North Shore Campground	Proposed by public comment and approved by Steering Committee	DOT	Long-term
85. Willow Fishhook Road Pathway	Create bike path along bike path along the paved portion of Willow Fishhook Rd, from the Parks Highway to intersection with Locke Lane	recommended in the Willow Summer Trails Plan. This path would improve bike access to Hatchers Pass.	DOT	Mid-term
86. Nancy Lake Parkway Path	Create an approximately 6.5 mile pathway that would connect Parks Highway Trail to the Nancy Lakes Rec Area/Red Shirt Trailhead.	Recommended in the Willow Summer Trails Plan.	DOT	Mid-term
87. Long Lake Road Path	Create pathway along Long Lake Road	Provides access from Parks Highway/Willow Core Area to residential areas	DOT	Mid-term
88. Willow Elementary	See SRTS Plan	2014 Walk zone Inventory and Recommendations SRTS Plan	DOT/MSB	Near-term

Recommendation	Description	Rationale	Authority	Timeframe
89. Willow Creek Road Path	Create an approximately 4 mile long pathway that connects Parks Highway pathway to campground/river access at end of Willow Creek Road.	This pathway is recommended in the Willow Summer Trails Plan	DOT	Mid-term
90. Parks Highway separated path	Continue the separated pathway from Willow Creek Road to Talkeetna Spur	There is no dedicated facility north of Willow that connects to the separated path along Talkeetna Spur Road.	DOT	Long-term
91. Comsat Road Path	Add a separated path along Comsat Road	Talkeetna Community Council sent letter to ADOT&PF highlighting the dangerous bike and pedestrian conditions on this road	DOT	Near-term
92. Crossing Near Talkeetna Library	Add a crosswalk or crossing signal between separated path and Talkeetna Library	Proposed by public comment and approved by Steering Committee	DOT	Near-term
93. Wild Woods Park Pathway	Create a sidewalk at Wild Woods Park	Proposed by public comment and approved by Steering Committee	DOT/MSB	Long-term
94. Talkeetna Elementary	See SRTS Plan, MSB Transportation Bond, and DOT audit report	2021 MSB Transportation Bond, and 2014 Walkzone Inventory and Recommendations SRTS Plan, and DOT SRTS Audit	DOT/MSB	Near-term
95. Bear Trail Railroad Crossing	Pedestrian underpass from "Bear Trail" to downtown Talkeetna	Proposed by public comment and approved by ARRC	ARRC/MSB	Mid-term

Programs

Recommendation	Description	Rationale	Authority	Cost
Convene a nonmotorized task force.	Form a task force of mobility advocates that represent walking, biking, transit, the mobility impaired, seniors, and other groups to advise local agencies on mobility issues.	A task force of volunteers will give additional public opportunities for input on the nonmotorized system and bring issues to the forefront.	MSB	N/A
Conduct annual bicycle/pedestrian counts at key locations across the MSB.	Using a network of volunteers, conduct annual counts at major intersections and along significant transportation corridors.	Baseline data are required to monitor use of the network.	MSB/DOT&PF	N/A

Recommendation	Description	Rationale	Authority	Cost
Conduct a level of service assessment for bicyclists and pedestrians.	Using the Highway Capacity Manual's methods, determine the level of service for major transportation corridors for both pedestrians and cyclists.	A level of service assessment will help identify issues along the bicycle and pedestrian network that can be addressed in future plans.	All Organizations	\$25K
Publish a bicycle and pedestrian map.	Develop and publish a simple, fold-out map that depicts bicycle and pedestrian facilities.	A regularly updated map can promote cycling and walking. Additionally, it can be an educational tool for informing the public on rules of the road.	All Organizations	\$7.5K
Conduct an ADA assessment in core areas.	Perform a reconnaissance study of curb ramps, curb slopes, detectable warnings, clear spaces, and other operable parts to determine compliance with ADA requirements in the core areas of the MSB.	An ADA assessment will help identify issues that need to be addressed.	All Organizations	\$25K
Conduct a user conflict study	Evaluate user conflicts on bike and pedestrian paths and develop a guide for minimizing user conflict on bike and pedestrian paths.	Conflicts between users were mentioned repeatedly throughout this project, but addressing these conflicts is not within the scope of the current plan.	MSB	N/A
Develop a wayfinding plan.	Prepare a comprehensive wayfinding plan for core areas of the MSB that includes look and feel standards, pedestrian- and vehicle-scale signage, standard specifications, and locations for wayfinding elements.	A strong wayfinding plan will help promote walking and cycling for both residents and visitors, as well as help walkers and cyclists find their destinations.	All Organizations	\$75K
Conduct a greenbelt pathway reconnaissance and feasibility study.	Assess the feasibility of creating a greenbelt pathway in the core urban areas of the borough to identify locations, costs, environmental issues, and property ownership.	A greenbelt pathway network would provide opportunities for locals and visitors to travel across the core urban area in a separated, natural setting.	MSB	\$100K
Develop an interpretive bicycle and pedestrian path.	Create a pathway connecting historic transportation routes. Include interpretive and wayfinding signs.	Tribal partners have expressed interest in developing an interpretive trail.	MSB, Knik Tribe, Chickaloon Native Village	N/A

TIP and CIP Nominations

Projects from the BPP can be nominated to the MSB TIP or the CIP to become eligible for funding.

TIP Scoring Criteria

The MSB is currently testing a newly-developed, borough-wide TIP. The TIP will be a tool that is used by the MSB Planning and Public Works Departments for evaluating and prioritizing publicly-nominated and MSB-nominated transportation projects. Once fully developed, MSB residents will be able to submit nominations throughout the year that will be evaluated when the MSB is developing lists for transportation packages for Assembly and voter approval. A nomination for the TIP will not be a guarantee for project funding. The TIP will also be used for MSB nominations to the MVP Transportation TIP, and the Statewide TIP. MSB Planning and Public Works will use the TIP as an implementation tool for the BPP and the LRTP. This section will be updated as the Program is developing.

CIP Scoring Criteria

The purpose of the MSB's CIP is to give residents a way to nominate community-supported projects for the MSB Capital Budget. Every year, the MSB CIP Scoring Committee reviews public nominations for capital projects, scores and prioritizes them, and brings them to the Assembly for adoption. Once the CIP is adopted, staff nominate the projects to the capital budget. *A nomination for the CIP is not a guarantee for project funding.* Many BPP projects meet the criteria of a valid CIP project; staff and residents may use the BPP to nominate projects to be considered in the annual budget discussions. This is just one way the BPP can be implemented; Assembly approval is required before any funds could be allocated for a project. All BPP projects will be scored alongside community nominations and other MSB priorities for possible inclusion in the CIP.

To be accepted as a valid nomination, the project must:

- » Support a goal or objective of a state- or Assembly-adopted plan
- » Fall within borough powers (MSB 1.10) to execute
- » Cost more than \$20,000
- » Have a useful life of more than 5 years
- » Not be considered routine maintenance or equipment replacement.

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Appendix A: Economic Impact Report

Economic Impact of Bicycle and Pedestrian Paths

Active transportation, such as bicycle and pedestrian paths, offer communities many positive impacts in areas such as health, connectivity, and economic benefits. This section provides a brief overview of these benefits and the potential impacts of improved and new access to bicycle and pedestrian paths in the Mat-Su Borough.

Health Benefits

Active transportation networks are critical to public health as they facilitate physical activity and positive connections between people of all ages and their community. Additionally, communal infrastructure, such as bike and pedestrian paths, helps to foster a community spirit, cultivate a sense of place and feeling of unity, and creates a network connectivity to everyday destinations. The closeness of ties to neighbors, the strength of our personal relationships and the resources present in our communities are also all related to health and wellbeing.

Active transportation investments are a cost-effective method to reduce the prevalence of highly preventable risk factors (i.e., obesity, diabetes, limited physical activity) and health concerns and help to meet the Healthy Alaskans 2035 goals.¹

The *2016 Matanuska-Susitna Borough Recreational Trails Plan* emphasized Borough residents' desire for healthy recreation and its expected benefits of increased alertness, decreased levels of heart disease, and other ailments.²

Additionally, one of the purposes in the *Alaska Statewide Active Transportation Master Plan (ASATP) 2019*, is to promote healthy lifestyles. Health was identified as one of the goal areas stating "Active transportation opportunities are an important factor in maintaining a healthy population. They also support DOT&PF's mission of *keeping Alaska moving through service and infrastructure*, while providing a transportation system that supports Alaska's ability to thrive." The ASATP set a walking and bicycling commute mode goal for the Mat-Su Borough. An

¹ Healthy Alaskans, Alaska's Health Improvement Plan, <https://www.healthyalaskans.org/data/data-sources/> (Accessed April 22, 2022).

² MSB Recreational Trails Plan 2016 Update, https://matsugov.us/docs/general/14086/trailplanupdate2016_final.pdf (Accessed April 22, 2022).

estimated 1.9% of Mat-Su's population commuted by walking; the plan's goal for the Mat-Su Borough is 3.8%. For bicycling, 0.2% of Mat-Su's population commuted by biking; the plan's goal for Mat-Su Borough is 0.4%. The ASATP also estimated \$1.89 million annually in economic benefits of complete walking networks in the Mat-Su Borough, including \$164,000 in health benefits, \$1.7 million in transportation benefits, and \$43,000 in environmental benefits. For complete biking networks in the Mat-Su, the economic benefits were an estimated \$309,000, including \$21,000 in health benefits, \$280,000 in transportation benefits, and \$8,000 in environmental benefits.³

Opportunities for Improved Health

The connection between physical activity and health is well-established. According to the Centers for Disease Control and Prevention (CDC), studies show that physical activity reduces the risk of major health concerns, including strokes, type 2 diabetes, and some forms of cancer.⁴ Physical activity is also known to promote positive mental health and can offer meaningful social connections. Studies have also shown the health benefits from active transportation result in savings on health care costs, showing that trails can serve as a cost-effective health intervention tool.⁵ These cost savings accrue to health insurers, providers, and participants.

PHYSICAL ACTIVITY

According to the American Journal of Public Health, people who live near safe, high-quality active transportation infrastructure tend to get more exercise than people who don't.⁶

Measures of physical activity vary slightly by population. The following presents the most recently available estimates of physical activity for adults, seniors, high school students, and middle school students in the Mat-Su Borough.

Adults and Seniors

In 2017, just over half of Mat-Su adults (55%) and seniors (54%) met the national recommendations for weekly physical activity of 2.5 hours of moderate exercise or 1.25 hours of vigorous exercise.

³ Alaska Statewide Active Transportation Master Plan 2019
https://dot.alaska.gov/stwdp/areaplans/modal_system/docs/AK-Statewide-Active-Transportation-Plan.pdf
(Accessed April 22, 2022).

⁴ <https://www.cdc.gov/physicalactivity/index.html> (Accessed April 18, 2022).

⁵ Wang, G., Macera, C. A., Scudder-Soucie, B., Schmid, T., Pratt, M., Buchner, D. (2005). A cost-benefit analysis of physical activity using bike/pedestrian trails. *Health Promotion Practice* 6, 2, 174-79., <https://pubmed.ncbi.nlm.nih.gov/15855287/> (Accessed July 8, 2022).

⁶ Anna Goodman, Shannon Sahlqvist, David Ogilvie, and on behalf of the iConnect Consortium, 2014: [New Walking and Cycling Routes and Increased Physical Activity: One- and 2-Year Findings From the UK iConnect Study](#), *American Journal of Public Health* 104, e38_e46, <https://doi.org/10.2105/AJPH.2014.302059> (Accessed April 18, 2022).

High School Students

In 2019, 12% of traditional high school students and 11% of alternative high school students reported they walked or rode their bike either to school or home from school three or more days in an average week, when the weather allows them to do so.

Middle School Students

In 2019, almost all middle school students (94%) reported being physically active for at least 60 minutes during one or more days of the last seven days.

Table 1. Physical Activity Level – Mat-Su Borough

Population Group and Year	Mat-Su Borough % (95% Confidence Interval)	Alaska % (95% Confidence Interval)
Adults – Engaged in 2.5 hours of moderate exercise or 1.25 hours of vigorous exercise weekly		
18+ Years (2017)	54.9% (48.8-60.9)	57.5% (51.2-63.6)
65+ Years (2017)	54.2% (42.9-65.2)	56.2% (51.1-61.3)
High School Students – Physically active at least 60 minutes per day on all seven days of the week		
Traditional High School (2019)	19.8% (17.0-23.0)	17.9% (15.3-20.9)
Alternative High School (2019)	9.9 (6.1-15.6)	11.7% (9.2-14.8)
Middle School Students – Physically active for at least 60 minutes during one or more days of the last seven days		
Middle School (2019)	93.6% (93.0-94.2)	NA

Sources: Mat-Su Health Foundation, 2019. *Hearing Every Voice: 2019 Mat-Su Community Health Needs Assessment*; Alaska Department of Health and Social Services, 2019. *Alaska Youth Risk Behavior Surveillance System*.
Note: Data are compiled from multiple sources and surveys. Indicators are defined in table subheadings.

WALK OR BIKE TO SCHOOL

In 2019, 12% of traditional high school students and 11% of alternative high school students reported they walked or rode their bike either to school or home from school three or more days in an average week, when the weather allows them to do so. Mat-Su Borough high school students attending both traditional and alternative schools report walking or biking to or from school at a lower rate than their peers statewide.

Table 2. Walked or Biked to or From School – High School Students, 2019

	Mat-Su Borough % (95% Confidence Interval)	Alaska % (95% Confidence Interval)
Traditional High School	12.0% (10.2-14.1)	20.9% (17.9-24.2)

Alternative High School	11.1% (7.0-17.3)	23.7% (20.1-27.7)
-------------------------	---------------------	----------------------

Source: Alaska Department of Health and Social Services, 2019. *Alaska Youth Risk Behavior Surveillance System*.

WEIGHT STATUS

Overweight and obese people are at increased risk for certain chronic diseases and health conditions.⁷ In 2018, an estimated 73% of adults and 68% of seniors in the Mat-Su were overweight or obese. Self-reported data reveals that 28% of traditional high school students and 34% of alternative high school students were overweight or obese in 2019. The CDC recommends community efforts to address overweight and obesity should focus on supporting accessible, and affordable active living opportunities.⁸

Table 3. Overweight and Obesity

Overweight and Obesity	Mat-Su Borough % (95% Confidence Interval)	Alaska % (95% Confidence Interval)
Adults		
18+ Years (2018)	73.2% (68.1-77.7)	65.9% (63.7-68.0)
65+ Years (2018)	67.6% (58.3-75.7)	N/A
High School Students		
Traditional High School (2019)	28.3% (25.8-31.0)	29.8% (26.5-33.3)
Alternative High School (2019)	33.8% (26.5-41.9)	35.8% (31.6-40.3)

Sources: Mat-Su Health Foundation, 2019. *Hearing Every Voice: 2019 Mat-Su Community Health Needs Assessment*; Alaska Department of Health and Social Services, 2019. *Alaska Youth Risk Behavior Surveillance System*.

CHRONIC DISEASE

Chronic diseases, such as diabetes, hypertension, and cancer, are associated with substantial health and economic costs.⁹ The table below highlights the rates of incidence for a number of chronic diseases for residents in the Mat-Su Borough and Alaska.

Table 4. Chronic Disease

Chronic Disease	Mat-Su Borough	Alaska
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⁷ Centers for Disease Control and Prevention, 2022. Health Effects of Overweight and Obesity. <https://www.cdc.gov/healthyweight/effects/index.html> (Accessed April 19, 2022).

⁸ Center for Disease Control and Prevention, 2022. Strategies to Prevent and Manage Obesity. <https://www.cdc.gov/obesity/strategies/index.html> (Accessed April 19, 2022).

⁹ Centers for Disease Control and Prevention, 2022. Health and Economic Costs of Chronic Diseases. <https://www.cdc.gov/chronicdisease/about/costs/index.htm> (Accessed April 19, 2022).

Heart Disease and Stroke		
Coronary heart disease death rate per 100,000 people	112.0 (2017)	133.4 (2017)
Stroke disease death rate per 100,000	25.6 (2017)*	34.8 (2017)
Diabetes		
Diabetes – Adults (%)	7.9 (2018)	8.4 (2018)
Diabetes – Adults 65+ Years (%)	19.5 (2018)	17.6 (2018)
Cancer		
Cancer death rate per 100,000 people	173.5 (2016)	157.8 (2016)
Colorectal cancer death rate per 100,000	15.4 (2016)	14.7 (2016)
Lung cancer death rate per 100,000 people	69.0 (2016)	38.9 (2016)

Source: Mat-Su Health Foundation, 2019. *Hearing Every Voice: 2019 Mat-Su Community Health Needs Assessment*.

*Data may be statistically unreliable and should be interpreted with caution.

Economic Benefits

Increased Property Values

Greenways and multi-use trails are seen by property owners and real estate professionals to create an amenity that commands higher prices from surrounding homes. When trails increase property value, local governments receive more property tax revenue.

According to research, homes in rural communities experienced between a 3% to 5% increase in value within half a mile of a trail.¹⁰ Individual homes within half a mile of trails sometimes experienced differences in appreciation, with the highest appreciation related to views of the green space or proximity to trail access points.¹¹ The largest value increases were associated with well-known and high-profile trails.^{12,13} Using this research as a basis, a house valued at \$285,000 in the Mat-Su Borough could have a realized value increase between \$8,550 to \$14,250 if located near a trail.¹⁴

¹⁰ Crompton, John L. 2020. The Impact of Trails and Greenways on Property Values. Parks and Recreation Magazine, <https://www.nrpa.org/parks-recreation-magazine/2020/may/the-impact-of-trails-and-greenways-on-property-values/> (Accessed April 18, 2022).

¹¹ Crompton, J., and S. Nicholls. 2006. "An Assessment of Tax Revenues Generated by Homes Proximate to a Greenway." *Journal of Park and Recreation Administration* 24(3): 103-108.

¹² Resource Dimensions. 2005. Economic Impacts of MVSTA Trails and Land Resources in the Methow Valley. Methow Valley Sport Trails Association.

¹³ Lindsey, G., Man, J., Payton, S., and K. Dickson. 2004. "Property values, recreation values, and urban greenways." *Journal of Park and Recreation Administration*, 22 (3): 69-90.

¹⁴ U. S. Census Bureau. *American Community Survey*. B25075; Value, Owner Occupied Housing Units. 2020.

Enhanced Visitor Experience

A 2020 study conducted for the Mat-Su Convention and Visitors Bureau found that hiking was the tenth-most desired experience among prospective visitors to the region, at 36%.¹⁵ The top desired Mat-Su activity was experiencing the outdoors (46.2%).

In the summer of 2016 (most current survey data available), the number two activity among out-of-state visitors to the Mat-Su was hiking/nature walk, with 17% of visitors participating; 1% of visitors participated in biking. Hiking/nature walk was much more popular among visitors who had traveled to/from Alaska by air (23%) when compared to those who traveled by cruise ship (8%) or highway/ferry (4%).¹⁶ Visitors to Mat-Su were slightly more likely than visitors to Anchorage to report hiking/nature walk participation at 17% versus 12%.¹⁷

Table 5. Hiking and Biking Activities in Mat-Su, Summer 2016 (%)

	ALL VISITORS	TRANSPORTATION MODE			DESTINATION	
		Air	Cruise	Highway/ Ferry	Talkeetna	Palmer/ Wasilla
Hiking/nature walk	17%	23%	8%	4%	17%	19%
Biking	1%	1%	-	1%	1%	1

Source: *Mat-Su Visitor Profile, Summer 2016*, conducted by McDowell Group for Mat-Su Convention and Visitors Bureau.

EXTENDING VISITOR STAY AND SPENDING

Trails can generate business impacts and create new jobs by attracting visitors, especially overnight visitors. Destination trails attract visitors from outside the local area who travel specifically for recreational opportunities. The benefits from destination trails include economic development, business revenue, employment, and employee earnings. In addition to its direct effect on businesses, visitor spending also has a ripple effect in the community as employees and business owners spend their earnings, and local and state governments receive more tax revenue. The economic impact of trails is highest when a trail is connected to local businesses that cater to trail user needs such as restaurants, grocery stores, camping, hotels, guiding services, and gear stores. This connection can occur directly through trail spurs that link to commercial centers, as well as through signs at trailheads or shuttles between a town and the trailhead. Because lodging often accounts for the biggest proportion of trip expenses, a trail's economic impact is greatly increased when it attracts more overnight users.¹⁸

¹⁵ 2020 Mat-Su Valley Visitor Research, conducted by Destination Analysts for Mat-Su Convention and Visitors Bureau.

¹⁶ *Mat-Su Visitor Profile, Summer 2016*, conducted by McDowell Group for Mat-Su Convention and Visitors Bureau.

¹⁷ *Alaska Visitors Statistics Program 7*, prepared by McDowell Group for Alaska Travel Industry Association.

¹⁸ <https://headwaterseconomics.org/wp-content/uploads/trails-library-business-impacts-overview.pdf> (Accessed April 13, 2022).

According to recent research that measured the economic impacts of trails:

- Overnight stays are the biggest contributor to total spending. At a mountain bike race in North Carolina, each additional night adds \$101 to a visitor's total spending.¹⁹ Along the Great Allegheny Passage, overnight users spend seven times more than day users.²⁰ Bikers along the Columbia Gorge had day spending averaging \$43 per party and \$600 for overnight costs.²¹
- The quality of trails and amenities that support trail users have the largest effect on the total number of visitors.^{22,23}
- Although biking/walking events are short-lived, participants often return to the community after the event.²⁴
- After visiting an area, some tourists become residents or second homeowners, bringing their businesses, supporting the local economy, and paying taxes.^{25,26}

BUSINESS DEVELOPMENT

Businesses that benefit from trail recreation and trail development include outdoor sporting goods stores (i.e., bicycle shops, outdoor clothing stores, and footwear shops), guiding services (hiking and bicycling tour guides), transportation services (i.e., backpacking shuttle services), accommodations, and eating establishments.²⁷

¹⁹ Schiller, A., and J. Whitehead. 2013. Economic Impact of the 2012 '6 Hours of Warrior Creek' Mountain Bike Race. Boone, NC: Center for Economic Research and Policy Analysis at Appalachian State University.

²⁰ Campos, Inc. 2009. The Great Allegheny Passage (GAP) Economic Impact Study (2007-08). The Progress Fund.

²¹ Dean Runyan Associates. 2014. Columbia River Gorge Bicycle Recreation: Economic Impact Forecast for the Communities Along the Historic Columbia River Highway. Prepared for the Friends of the Historic Columbia River Highway, Oregon Tourism Commission, Port of Cascade Locks, Port of Hood River, Port of The Dalles.

²² Berard, D., S. Chapin, A. Hoogasian, T. Kane, D. Marcouiller, and T. Wojciechowski. 2014. The Economic Impacts of Active Silent Sports Enthusiasts. Madison, WI: University of Wisconsin Department of Urban and Regional Planning, Extension Report 14.1.

²³ Tourism British Columbia. 2013. Rossland Mountain Bike Visitor Study 2011 Results. Research, Planning & Evaluation, Tourism British Columbia Ministry of Jobs, Tourism, and Skills Training.

²⁴ Western Canada Mountain Bike Tourism Association. 2007. Sea to Sky Mountain Biking Economic Impact Study.

²⁵ Meltzer, N. 2014. "Adapting To the New Economy: The Impacts of Mountain Bike Tourism in Oakridge, Oregon" [Master's Thesis]. Eugene, OR: University of Oregon Department of Planning, Public Policy and Management.

²⁶ Resource Dimensions. 2005. Economic Impacts of MVSTA Trails and Land Resources in the Methow Valley. Methow Valley Sport Trails Association.

²⁷ https://matsugov.us/docs/general/14086/trailplanupdate2016_final.pdf (Accessed April 22, 2022).

Appendix B: Full Stakeholder Contact List

MSB Departments:

- » MSB Land Management
- » MSB Public Works
- » MSB Planning

Advisory Boards and Committees:

- » Safe Routes to School Committee
- » Health and Human Services Board
- » Transportation Advisory Board
- » Parks, Recreation & Trails Advisory Board
- » Mat-Su Coalition on Housing and Homelessness
- » Alaska Climate Action Network

State of Alaska:

- » Alaska Department of Transportation & Public Facilities
- » Alaska Veterans & Pioneer Home

Non Profit/Community Organizations and Partners:

- » Mat-Su Health Foundation
- » Mat-Su Trails and Parks Foundation
- » Valley Mountain Bikers and Hikers
- » American Lung Association
- » American Association of Retired Persons
- » My House
- » Identity Inc
- » United Way
- » Mat-Su Ski Club
- » Valley Interfaith Action Group
- » Palmer Chamber of Commerce
- » Greater Wasilla Chamber of Commerce
- » Mat-Su Valley Board of Realtors
- » Mat-Su Convention and Visitor Bureau

Tribal Councils:

- » Chickaloon Native Village
- » Knik Tribe

Transit:

- » Valley Transit
- » Sunshine Transit
- » Chickaloon Area Transit Systems

Cities:

- » City of Palmer
- » City of Wasilla
- » City of Houston

Community Councils:

- » Big Lake Community Council
- » Buffalo Mine/Soapstone Community Council
- » Butte Community Council
- » Chase Community Council
- » Chickaloon Community Council
- » Fishhook Community Council
- » Gateway Community Council
- » Glacier View Community Council
- » Greater Farm Loop Community Council
- » Knik-Fairview Community Council
- » Lazy Mountain Community Council
- » Louise, Susitna, Tyone Community Association
- » Meadow Lakes Community Council
- » North Lakes Community Council
- » Petersville Community Council
- » Point MacKenzie Community Council
- » Swentna Community Council
- » South Knik River Community Council
- » South Lakes Community Council
- » Susitna Community Council
- » Sutton Community Council
- » Talkeetna Community Council
- » Tanaina Community Council
- » Trapper Creek Community Council
- » Willow Area Community Organization

Local Businesses:

- » All About Herbs
- » Backcountry Bike and Ski
- » AKtive Body
- » Alaska Bicycle Center



MAT-SU BOROUGH BICYCLE AND PEDESTRIAN PLAN

DRAFT EXISTING CONDITIONS & ISSUES



PREPARED FOR
Mat-Su Borough
350 E. Dahlia Ave.
Palmer, AK 99645

SEPTEMBER 2022





MAT-SU BOROUGH BICYCLE AND PEDESTRIAN PLAN

DRAFT EXISTING CONDITIONS & ISSUES



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SEPTEMBER 2022

Project Number I0946.22001



EXECUTIVE SUMMARY

This report documents the state of the bicycle and pedestrian network across the Mat-Su Borough (MSB) by identifying issues, evaluating connectivity, and analyzing pedestrian and bicycle crash data. The inventory is based on data collected from the MSB, State of Alaska, and Mat-Su Trails and Parks Foundation. Data are supplemented with interviews with stakeholders and user groups to determine where the issues are and what are the greatest needs. The information in this document will be used to help identify potential recommendations and strategies for improving the bicycle and pedestrian network across the Borough.

The MSB covers a large geographic area. Lower population densities and dispersed population centers make it challenging to provide bicycle and pedestrian connectivity across the entire borough. Likewise, different jurisdictions (borough, state, cities) have different standards and funds for constructing and maintaining non-motorized facilities. These challenges will require coordination and thoughtful planning to overcome.

However, there is a robust bicycle and pedestrian network and considerable enthusiasm for cycling, running, hiking, and walking in the borough. Advocates for non-motorized recreation and commuting can help communities identify new connections and facilities, as well as connect resources between partner organizations.

There are many opportunities to connect neighborhoods, parks, trails, and businesses with bicycle and pedestrian infrastructure such as sidewalks, separated paths, and wide shoulders. In addition to providing more opportunities for walking and biking, these connections may improve property values, promote healthy lifestyles, provide mobility options for residents without vehicles, and open opportunities for tourism. See the attached memo *Economic Impact of Bicycle and Pedestrian Paths* for more information.

Continued population growth of the region means the time to plan for the bicycle and pedestrian network is now. Conflicts between motor vehicles and bikers/walkers may increase if adequate facilities are not present. An equitable and safe network of bicycle and pedestrian infrastructure will ensure residents and visitors of all abilities and ages benefit from an improved quality of life through healthier, better-connected communities.

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1.0 STUDY AREA

The Matanuska-Susitna Borough geographical area includes approximately 25,000 square miles of land and approximately 600 square miles of water (ADOLWD, 2020). The Matanuska-Susitna Valley (Mat-Su) is traditionally land of the Dena'ina and Ahtna Athabaskans and encompasses rivers, wetlands, hills, mountains, lakes, farmland, and forest. The MSB is in a transitional climate zone, which is characterized by long, cold winters and mild summers.

There are 25 communities within the MSB, including three cities – Houston (second class city), Palmer (home rule city), and Wasilla (first class city). The remaining 22 communities are classified as Census Designated Places. The borough is a second-class borough with a 7-member Assembly and Mayor.

1.1 POPULATION

According to the Alaska Department of Labor and Workforce Development, the 2020 MSB population is 107,081. The region continues to be the fastest growing part of the state due to its proximity to Anchorage, availability of land for development, and lower housing costs than Anchorage. Easy access to outdoor recreation is also a draw for new residents.

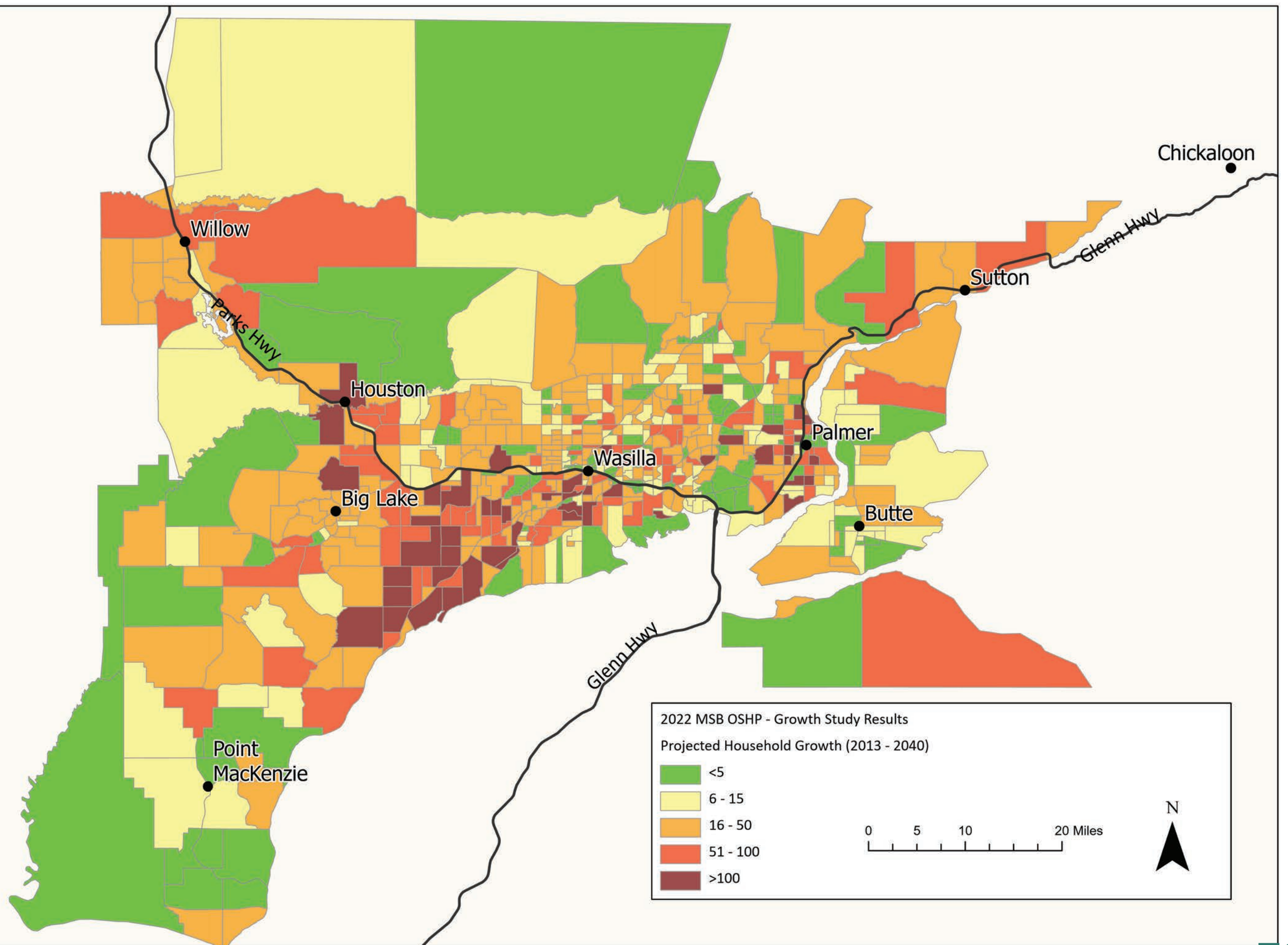
1.1.1 GROWTH

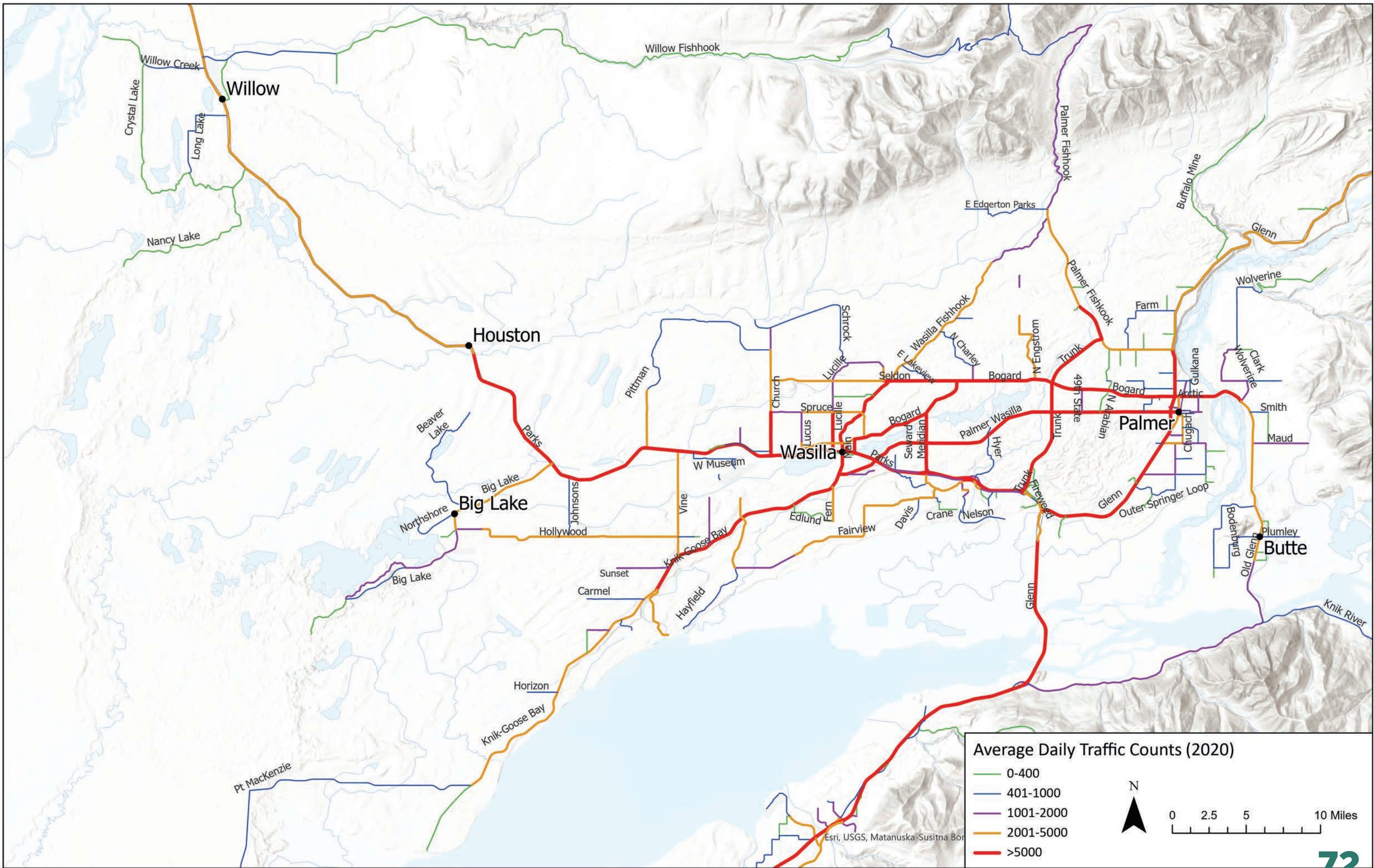
Figure 1 shows projected growth in the borough. The areas with the highest growth potential are southwest of Wasilla along Knik-Goose Bay (KGB) Road to Knik, and south of Meadow Lakes. Additional pockets of high growth projections include Houston, areas around Palmer, and the Willow area.

1.1.2 TRAFFIC VOLUMES

Traffic volumes play a significant role in determining the type of bicycle or pedestrian facility to include along a roadway. Higher volume roads benefit from separated facilities while low-volume roads may sufficiently accommodate bikes and pedestrians with a wide shoulder.

In the MSB, arterial roads carry more than 5,000 vehicles per day on average (Figure 2). These routes include the Parks and Glenn Highways, KGB Road, Seldon Road, Bogard Road, the Palmer-Wasilla Highway, Trunk Road, Seward-Meridian Parkway, and portions of Lucille, Arctic, and Wasilla-Fishhook Road. As the borough's population grows, traffic will continue to increase.









2.0 BICYCLE AND PEDESTRIAN FACILITIES

The bicycle and pedestrian network consists of separated paths, paved shoulders, sidewalks, bike lanes, and shared roadways. Descriptions of each of these facility types are in Table 1.

Table 1 - Bicycle and pedestrian facility types found in the MSB

Infrastructure type	Intended use	Description
<p>Separated Path</p> 	Mixed	The separated path network in the MSB connects Houston, Big Lake, Wasilla, Palmer, and Butte. Paths are generally paved with asphalt and run parallel to high-volume roadways.
<p>Paved Shoulder</p> 	Mixed	<p>Paved shoulders can function the same as bike lanes. A major factor in the safety of shoulders for bicyclists is the presence and design of rumble strips that alert drivers when they leave the travel lane.</p> <p>In rural areas where sidewalks are not feasible, a paved shoulder can also accommodate pedestrians.</p>
<p>Sidewalk</p> 	Pedestrian	Sidewalks are commonly used for pedestrian travel in urban areas. The MSB subdivision code does not have a sidewalk requirement, making sidewalks sporadic. Sidewalks are typically found in the original Palmer townsite area and the historic, commercial part of downtown Wasilla (MSB Long Range Transportation Plan).
<p>Bike lane</p> 	Bicycle	<p>Bike lanes are a designated, exclusive space for bicyclists to operate one-way on the roadway using pavement markings and signs.</p> <p>In the MSB, there are several miles of bike lane located in Palmer.</p>

Infrastructure type	Intended use	Description
<p>Shared Roadway</p> 	Bicycle	<p>In shared lanes, bicyclists ride in mixed traffic, therefore their comfort and safety varies widely based on traffic operating speeds and volumes.</p> <p>Roads with low traffic volumes can provide bike friendly routes in the MSB.</p>

2.1 PEDESTRIAN

Walkers use a variety of facilities to get between destinations in the borough. In urban areas, sidewalks provide walkways between homes, businesses, and schools. Several major roadways have separated paths that run greater distances than the sidewalk network. Pedestrians also use the paved shoulder of many roadways when no other facility exists.

2.2 BICYCLE

Cyclists have several options for riding around the borough. Using roadways shared with motor vehicles is the most common facility. Likewise, paved shoulders are found on most paved roads and provide some level of separation from motor vehicle traffic, although that is dependent on the width of the shoulder. There are a few designated bike lanes in the borough, all within the City of Palmer. Multi-use separated paths are common on busier roads. Riding bicycles on sidewalks is generally permitted in Alaska except in business districts or where a regulatory traffic control device prohibits it. Sidewalk riding is discouraged by most best practices due to potential conflicts with pedestrians.

2.3 CONNECTIONS TO TRANSIT

Before hopping on a bus, the rider must walk or bike to the bus stop. Public transit services allow residents to make longer trips than would be possible solely on foot or bicycle.

The MSB has limited scheduled, route-based transit services. Additionally, local transit is provided on-demand. Therefore, there are very few designated bus stops or shelters across the borough. Without widespread, scheduled transit service, the connectivity of the bicycle and pedestrian network is more important for ensuring that residents without a motor vehicle can get safely to their destination. If route-based transit is developed in the future, it will be important to ensure that there are connections to non-motorized facilities.

3.0 RELATED PLANS, PROJECTS, AND POLICIES

3.1 PLANS

3.1.1 2019 ALASKA STATEWIDE ACTIVE TRANSPORTATION PLAN

The Alaska Statewide Active Transportation Plan (ASATP) seeks to improve safety, increase accountability, and promote healthy lifestyles in Alaskan communities and to develop a safer and more efficient active transportation network and infrastructure to encourage walking and bicycling. The Plan sets a framework for how to plan for and measure progress toward a vision for increased and safer active transportation opportunities across the state. The performance measures identified in the Plan may be useful for formulating local performance measures in the BPP.

3.1.2 2016 MSB TRAILS PLAN

The MSB Trails Plan was initially adopted in 2000 and updated several times over the years. The most recent update was completed in 2016 and then adopted in June 2017. This plan focuses on the backcountry and underfunded trails through the MSB, unlike the separated trails that run parallel to the road system. The BPP will evaluate links between the recreational trail network and the paved non-motorized system to ensure connections between the two.

3.1.3 MSB OFFICIAL STREETS AND HIGHWAYS MAP (IN PROGRESS)

The purpose of the Official Streets and Highways Plan is to have a logical road network with relevant classifications based on use and volume that also addresses safety concerns. The map depicts corridors for future road projects based on development and build-out estimates that gauge where the MSB population is going to work and live in the next two decades. The estimated completion date for the plan is the summer of 2022. The BPP will utilize the OSHP map to complement the forecasted development and road construction in the MSB.

3.1.4 2035 MSB LONG RANGE TRANSPORTATION PLAN

The Bike and Pedestrian Plan is seen as a supplemental chapter to the 2035 MSB Long Range Transportation Plan (LRTP) that was adopted in 2017. The LRTP assessed growth within the MSB over the next 20 years and provides overarching transportation goals for the MSB.

As the MSB is the fastest growing region in Alaska and has been for the last 20 years, key elements from the 2035 LRTP can be incorporated into the Bike and Pedestrian Plan. This will ensure that the Bike and Pedestrian Plan will not interfere with the current transportation system goals of the MSB and will complement the LRTP with longevity and resiliency in mind.

Policy strategies and actions suggested in the LRTP that are relevant to Bike and Pedestrian Planning:

- Develop an Active Transportation Master Plan
- Improve connectivity
- Adopt a Policy Requiring Bike/Pedestrian Improvements near/along Transit Corridors
- Improve Awareness of Transportation Choices
- Continue Coordination with MSB School District Regarding Safe Routes to Schools (SRTS)
- Proactively Support Active Transportation Provisions with Highway Facility Improvements
- Prepare a Regional Trail Map Reflecting Trail Systems

The LRTP developed a prioritized, fiscally constrained list of roadway improvements to be completed through 2035, which includes several projects that involve pedestrian or bicycle infrastructure. Several of these projects are already adapted into the Statewide Transportation Improvement Program, while others are suggested at a later timeframe (see Figure 3).

- Big Lake Road Reconstruction with appropriate pedestrian amenities
- Seldon Rd Upgrade and pedestrian facilities
- Seward Meridian Parkway with pedestrian path
- Vine Road Improvements with included pedestrian facilities
- Knik Goose Bay Road improvements with appropriate pedestrian amenities
- Bogard Road Improvements with appropriate pedestrian facilities

3.1.5 SAFE ROUTES TO SCHOOL PLAN

The 2014 Safe Routes to School (SRTS) plan assessed the walking/biking infrastructure around 17 schools throughout the MSB, provided general bike and pedestrian recommendations, and school-specific recommendations for improving the walking/biking conditions. The plan's study and recommendations focused on a half-mile radius around schools. Goals in the bike and ped plan will align with the SRTS plan, while covering a much broader geographic extent and demographic of users. The bike and ped plan can potentially build on the SRTS plan with the potential for connections to pedestrian and bike infrastructure near schools outside of the immediate half-mile radius.

3.1.6 2011 MSB ECONOMIC DEVELOPMENT STRATEGIC PLAN

Although developed in 2010 and adopted in 2011, there are still several strategies to be utilized from the MSB Economic Development Strategic Plan. As part of the MSB BPP, an updated economic analysis will be developed. A prioritized list of projects will be incorporated into the BPP meant to increase tourism, recreation, and hospitality spending. This will be done using the 2011 MSB Economic Development Strategic Plan, a current economic analysis, and input from stakeholders. The updated bike and pedestrian network will promote connectivity to areas that will benefit from better infrastructure and facilities.

3.1.7 COMPREHENSIVE PLANS

Borough Comprehensive Development Plan (2005; update in progress)

The Matsu Borough Comprehensive Plan was developed in 2005 with an update currently in progress. It's intended use is to develop general goals and policy recommendations to help guide future development and identify infrastructure needs at the borough-wide level. In addition to the borough-wide plan, community based comprehensive plans provide residents with the opportunity to guide development within their specific community. The BPP will be guided by the borough and community comprehensive plans and can be used to guide future comprehensive plan updates.

The borough-wide comprehensive plan includes a parks and open space goal to acquire, develop, and redevelop a system of parks, recreation facilities, community centers, and open spaces that are accessible to the entire community. The plan promotes the development of pedestrian and bicycle linkages between schools, public facilities, neighborhoods, parks and open spaces, and population centers where feasible.

A borough-wide transportation goal is to develop an integrated surface transportation network that facilitates the efficient movement of people, goods, and services. This constitutes policy recommendations that encourage a multi-modal system, street and trail connectivity, and the delegation to local community plans to address specific community level needs.

Borough Core Area Comprehensive Plan (2007 update)

The core area plan reiterates much of the needed transportation infrastructure identified in the old Long Range Transportation Plan. The plan does identify a goal of providing safe and efficient vehicular and non-motorized travel within the core area and between the core area and other destinations. Additionally, the plan supports a policy of increasing local transit services.

Wasilla (2011)

The City of Wasilla Comprehensive Plan includes a goal to maintain and improve City sidewalks and non-motorized pathways to increase walkability. It identified concerns of limited connectivity, maintenance costs, and multi-modal sharing issues that the city needs to address. The plan specifically looked at the core downtown area and strategies to revitalize it, and improving the pedestrian environment in this area with sidewalks and crosswalks was identified as an important aspect of the communities' future downtown vision.

The plan suggested improving pedestrian access around parks and schools, enhancing connectivity between commercial establishments, improving safety using signs and designated road crossings, and improving walkways using strategies such as a year-round maintenance plan, enhancing ADA accessibility, and encouraging low-impact lighting.

Houston (2016)

An overall transportation objective in the Houston Comprehensive plan is to improve and expand non-motorized transportation facilities where possible. Specific strategies include expanding multi-use pathways and lighting improvements, designing safe crossings of the Parks Highway to connect residential and commercial areas, and to support the development of a Hawk Lane bike path.

Palmer (2006)

The Palmer Comprehensive Plan also recognized the need for improved pedestrian and bike infrastructure. Two priorities identified in the plan are to upgrade and better maintain downtown sidewalks, and to develop a trail along the railroad right-of-way from the State Fairgrounds through the City and north to Sutton. The plan identifies the area bounded by the Glenn Highway to the west, Eagle Avenue to the north, South Airport to the east and E. Commercial Drive to the south – as an area that should have sidewalks extended as the area grows.

The plan recommends policy that all subdivisions make adequate provisions for safe, functional pedestrian circulation. And it identifies the need for better winter maintenance and snow removal, suggesting a partnership with the planned Business Improvement District to achieve this.

Big Lake (2009)

The development of a pedestrian and bicyclist friendly street network is identified as a strategy aligned with the community's transportation goals. Desired land use patterns specify a "town center" use area.

Improving the pedestrian environment of the central town area is important for the town center vision. The plan recommends better access to Jordan Lake Park and to Big Lake itself, including adding a walking trail to the lake. To meet recreational goals, the plan recognizes that conflicts between motorized and non-motorized users on bike paths is a concern.

Chase (2017)

The only formally developed surface access into Chase is via railroad, boat, or fly-in. Current access into and through the Chase area relies on a system of trails. A primary conflict is pedestrian use of railroad right-of-way and even the tracks themselves for transportation, which is an illegal and dangerous practice. The plan also identifies the need to improve the trail system to expand legal access to parcels within the planning area.

Chickaloon (2008)

A transportation recommendation in this plan is to build a separated path on the Glenn Highway, between Fish Land Road (MP 73) and Chickaloon River Road (MP 78). The plan also recommends supporting development of trails that connect open areas and parks to residential and commercial areas in the community.

Lazy Mountain (2008)

This plan advocates for several non-motorized policies and goals, including encouraging street and trail connectivity, improving roadside trails, and constructing roadside trails with future road projects. The plan also identifies the Clark-Wolverine Road corridor as a priority location for a pathway, as well as a connection between the Old Glenn Highway and the George W. Palmer Bridge.

Fishhook Comprehensive Plan (2017)

A strategy to meet recreational goals in this plan is to develop additional pedestrian and bike trails and linkages between parks, open spaces, water bodies, and neighborhoods. Acquiring additional public greenbelts to enhance these links through collaboration with foundations, non-profits, and government sources will help to meet this objective.

The plan advocates for the design and construction of recognized bike lanes and off-road vehicle (ORV) access along the Palmer and Wasilla Fishhook Roads by maintaining a working relationship with the State of Alaska Department of Transportation and Public Facilities (DOT&PF), and state and local elected officials to ensure awareness of the need for these infrastructure upgrades.

Meadow Lakes (2005)

The Meadow Lakes comp plan suggested creating a pedestrian-oriented, mixed-use town center along the south side of the Parks Highway near the Pittman Road intersection. This town center concept includes development standards to promote walking, such as requiring sidewalks, planting vegetation between streets and buildings, screening parking areas, and encouraging denser development.

Willow (2013)

This plan includes a community goal of creating a walkable community and a pedestrian-oriented town center. Goal 3 in the plan is to "Establish, improve, and maintain appropriate roadside trails and pedestrian paths."

3.2 CURRENT AND PLANNED PROJECTS

Across the borough, infrastructure projects are developed by several entities. Figure 3 depicts bicycle and pedestrian infrastructure projects that are either funded or needed based on other planning efforts.

State of Alaska Department of Transportation & Public Facilities – The DOT&PF is responsible for the state highway network, which includes separated pathways, sidewalks, and bike lanes. State transportation infrastructure projects are funded by a combination of federal, state, tribal, and local money.

Mat-Su Borough – The borough develops roads through the subdivision process. Developers construct roads at the time of subdivision before selling any subdivided parcels. Additionally, the borough can design and construct infrastructure through voter-approved bond packages. The Capital Improvement Plan (CIP) can be used to prioritize bike and pedestrian facilities, but it does not have fiscal backing. Projects can be nominated by MSB staff or other stakeholders to be put on the CIP.

City of Wasilla – The City of Wasilla maintains a CIP that identifies new infrastructure such as roads, paths, and sidewalks. The CIP is a 5-year plan for implementation and is funded through tax revenues and grants.

City of Palmer – The City of Palmer maintains a Capital Improvement Plan (CIP) that identifies new infrastructure such as roads, paths, and sidewalks. The CIP is a 5-year plan for implementation and is funded through tax revenues and grants.

City of Houston – The City of Houston maintains a Capital Improvement Plan (CIP) that identifies new infrastructure such as roads, paths, and sidewalks. The CIP is a 5-year plan for implementation and is funded through tax revenues and grants.

The Mat-Su region is also in the process of establishing a **Metropolitan Planning Organization (MPO)**. The newly formed MPO will coordinate transportation projects within the designated urbanized area, including non-motorized infrastructure projects. The MPO is expected to be in place in late 2023, pending designation as an urbanized area per the 2020 US census results.

3.2.1 PLANNED PROJECTS

MSB Long Range Transportation Plan (LRTP) – The LRTP makes specific transportation improvement recommendations that will guide transportation investment through 2035. These projects can be adapted into the Alaska Statewide Transportation Improvement Program or funded with an MSB bond package. Projects listed in the LRTP are not necessarily funded, but they do represent the transportation priorities of the MSB. The LRTP is considered fiscally constrained because each project within the plan will be constructed within the planning horizon.

MSB Capital Improvement Program (CIP): The CIP is a nomination-based program that provides a list of projects with community support for possible funding. Once the Bike and Pedestrian Plan is adopted, many of the projected additions or changes to the network will qualify as valid CIP projects.

3.2.2 FUNDED PROJECTS

Alaska Statewide Transportation Improvement Program (STIP): The STIP covers all surface (non-aviation) transportation improvement projects for which partial or full federal funding is approved and that are expected to take place within a four-year period.

2021 MSB Transportation System Package: A list of transportation projects, potentially funded with general obligation bonds that was approved by voters in 2021. The MSB has not sought bonds for these projects yet.

2018 MSB School District Pedestrian Improvements:

Projects identified through the borough's Safe Routes to School program. This on-going effort is based on the 2014 Safe Routes to Schools assessment.

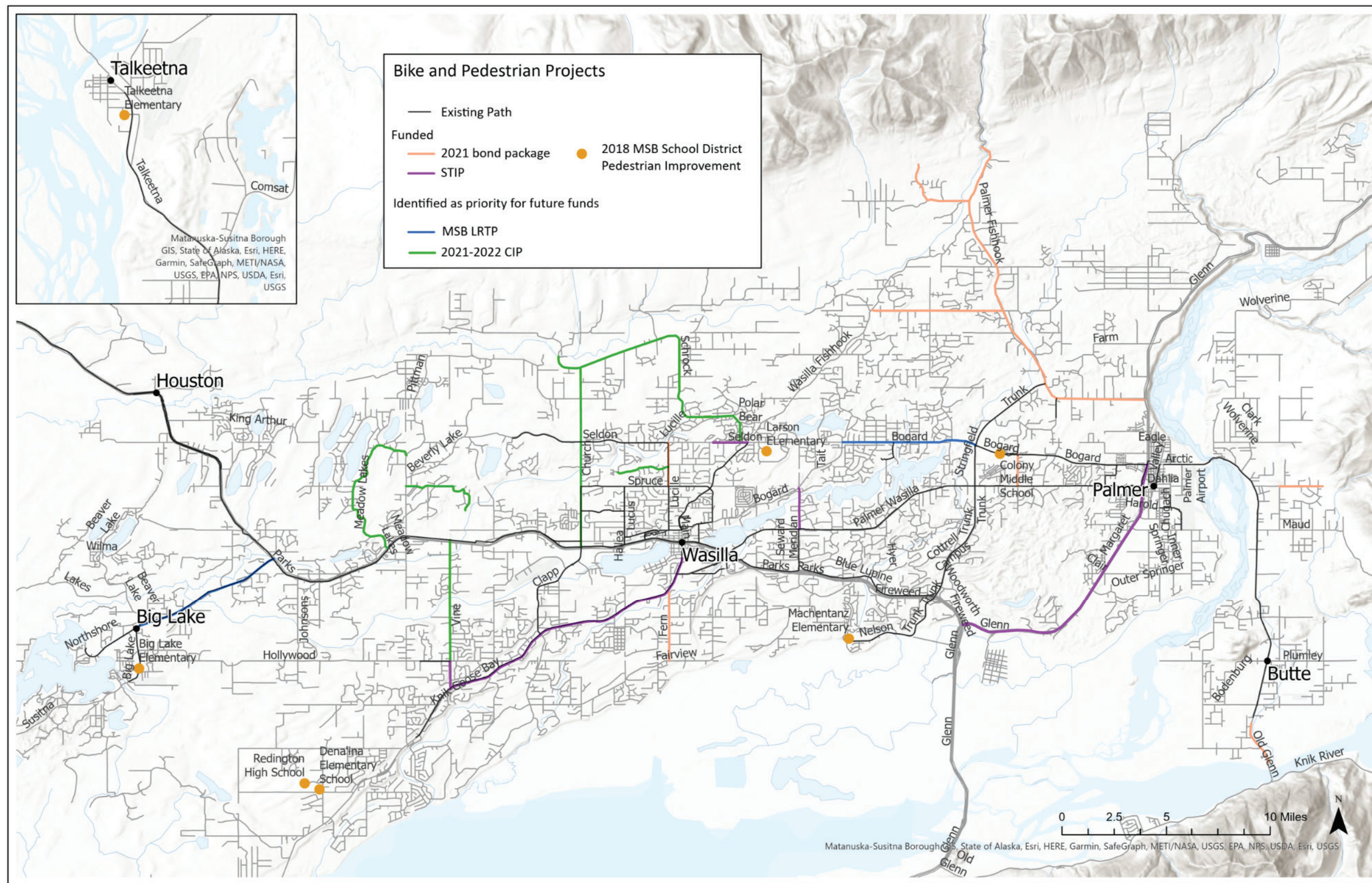


Figure 3 - Bicycle and pedestrian projects identified in other plans

3.3 POLICIES AND REGULATIONS

Implementation of planned bicycle and pedestrian infrastructure is guided by local, state, and federal policies and regulations. These include design standards, engineering best practices, and local code.

3.3.1 NATIONAL

3.3.1.1 2010 AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS FOR ACCESSIBLE DESIGN

The “2010 Standards” set minimum requirements, both scoping and technical, for newly designed and constructed or altered state and local government facilities, public accommodations, and commercial facilities to be readily accessible to and usable by individuals with disabilities.

3.3.1.2 PUBLIC RIGHTS OF WAY ACCESSIBILITY GUIDELINES (PROWAG)

Beginning in 1992, specific guidelines were proposed to regulate accessibility on public streets, within public rights-of-way. These guidelines became known as PROWAG. These guidelines remain in development, but are the recommended best practices when planning, designing, and constructing pedestrian features within public rights-of-way.

3.3.1.3 GUIDE FOR THE DEVELOPMENT OF BICYCLE FACILITIES, 2012 FOURTH EDITION, AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)

A comprehensive design guide on how to incorporate bicycle travel into roadway design. This guide is the primary reference used by engineering professionals in designing infrastructure for bicycles.

3.3.1.4 COMPLETE STREETS

Complete Streets policies are enacted at the local level to ensure all streets are safe and feel safe for all users. The Federal Highway Administration (FHWA) and the National Complete Streets Coalition support communities in developing a context sensitive Complete Streets policy.

3.3.2 DOT&PF

3.3.2.1 ALASKA TRAFFIC MANUAL

The Alaska Traffic Manual is Alaska’s standard traffic control device manual for public roads. It consists of the Manual on Uniform Traffic Control Devices (MUTCD) and the Alaska Traffic Manual Supplement. It references the Alaska Sign Design Specifications, which is the sign layout standard for Alaska public roads. For non-motorized transportation, the ATM includes sections on traffic control for school areas and traffic control for bicycle facilities.

3.3.2.2 ALASKA HIGHWAY PRECONSTRUCTION MANUAL 2020

The DOT&PF’s preconstruction manual covers all aspects of highway project development – from preliminary engineering and environmental through final Plans, Specifications, and Estimates (PS&E). The manual does not prescribe design standards directly. However, it does outline the steps in the process and potential studies and analyses that may be needed when developing new or improved roadway infrastructure. The Design Study Report is a key step of the development process and is the step in which pedestrian and bicycle accommodations are identified.

3.3.3 MAT-SU BOROUGH

3.3.3.1 MSB CODE

Borough code does not contain design standards for roadways, bicycle facilities, or pedestrian facilities. Title 11 directs the Public Works Department to establish standards for the design and construction of roads in the borough. Title 43 covers borough subdivisions. It does not prescribe the construction of sidewalks or pathways.

3.3.3.2 MSB SUBDIVISION CONSTRUCTION MANUAL 2020

This document provides established standards for the design of roads. Road standards are prescribed based on the roadway's functional classification. There are no provisions for mandatory bicycle or pedestrian facilities along subdivision roads. The manual indicates that bicycle and pedestrian pathway design shall follow the current edition of the Guide for the Development of Bicycle Facilities (AASHTO).

3.3.3.3 MSB DESIGN CRITERIA MANUAL

The MSB is in the process of creating a design criteria manual that will include sections on non-motorized facilities.

3.3.4 CITY OF WASILLA

The City's *Downtown overlay district design standards* sets requirements for sidewalks (Table 2) and identifies sidewalk clear zone standards. This document contains design standards that apply to the development of public and private areas and for the creation of systems and amenities that are beneficial to the public, in the Downtown Overlay District and all of its sub-districts. The design standards contained in this article are mandatory. The instructions for application, enforcement, and interpretation of these standards are further discussed in Title 16 of the City of Wasilla Municipal Code. Title 16 contains detailed definitions of as well as the description of the downtown overlay district and its boundaries. Within the downtown overlay district, the regulations set forth in this article shall be the minimum requirements and shall apply uniformly to each class or kind of building, structure, or land.

Table 2 - City of Wasilla downtown overlay district sidewalk requirements

Corridor	Min. distance from back of curb (BOC)	Paved furniture zone at BOC	Sidewalk req. both sides	Min. width of sidewalk
Avenues	2'	NA	Y	6'
Parkways	2'	NA	Y	5'
Boulevards	4.5'	NA	Y	5'
Main Streets	4'	4'	Y	8'
Urban Streets	4'	4'	Y	6'
Local Streets	3'	NA	Y	5'
Alleys	NA	NA	NA	NA

4.0 ISSUES AND NEEDS

4.1 CRASH ANALYSIS

Crash data for the period 2010-2019 were collected and analyzed to determine if there were any hotspots of crash activity and to get a general sense of the severity and quantity of crashes involving bicycles and pedestrians. DOT&PF provided raw tabular data that included the crash location, type and severity of the crash, time of day, day of week, year, and weather conditions. The locations were mapped using ArcGIS Pro software.

The number of bicycle and pedestrian crashes was relatively low with only 103 reported incidents over ten years (Figure 4). However, approximately 33% of all crashes resulted in either serious injury or a fatality. All seven fatalities were pedestrians. Crashes were nearly even between cyclists and pedestrians, with 52 cyclist crashes and 51 pedestrian crashes.

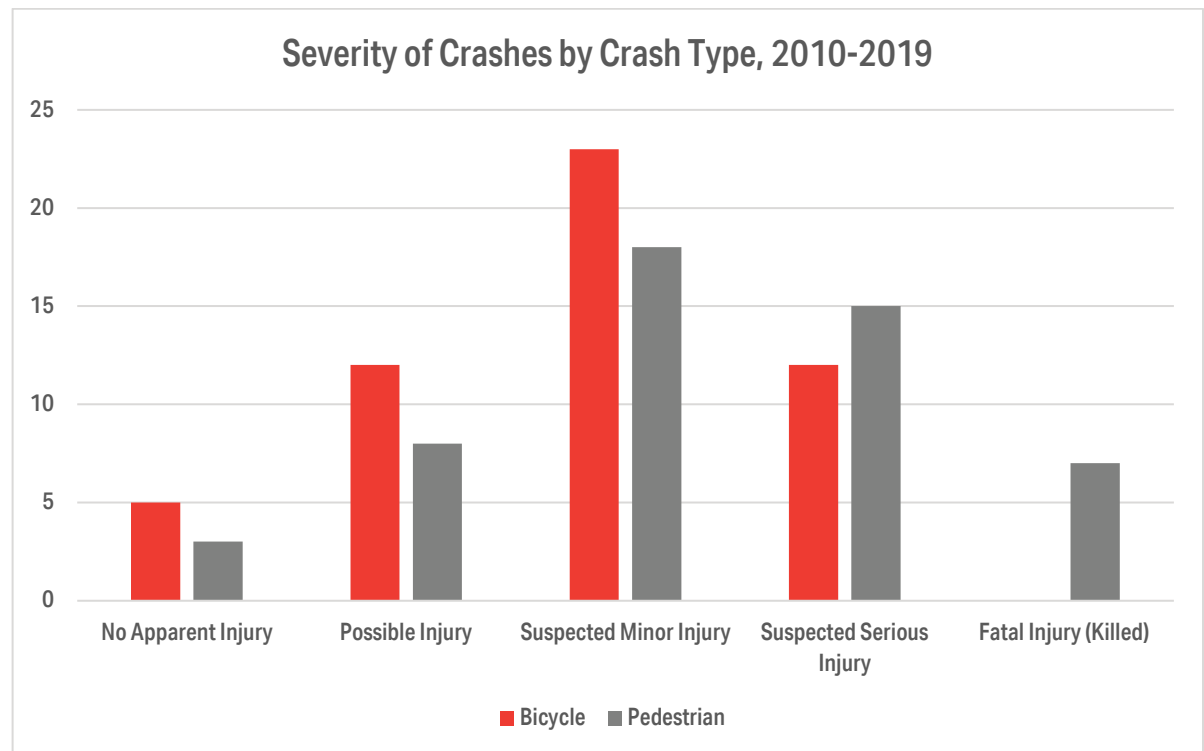


Figure 4 - Crash Severity by Crash Type, 2010-2019

Crashes occurred throughout the borough, with slightly more incidents in Wasilla and Palmer than surrounding areas (Figure 5 and Figure 6). This is likely due to the higher density of residents and higher traffic volumes in these areas.

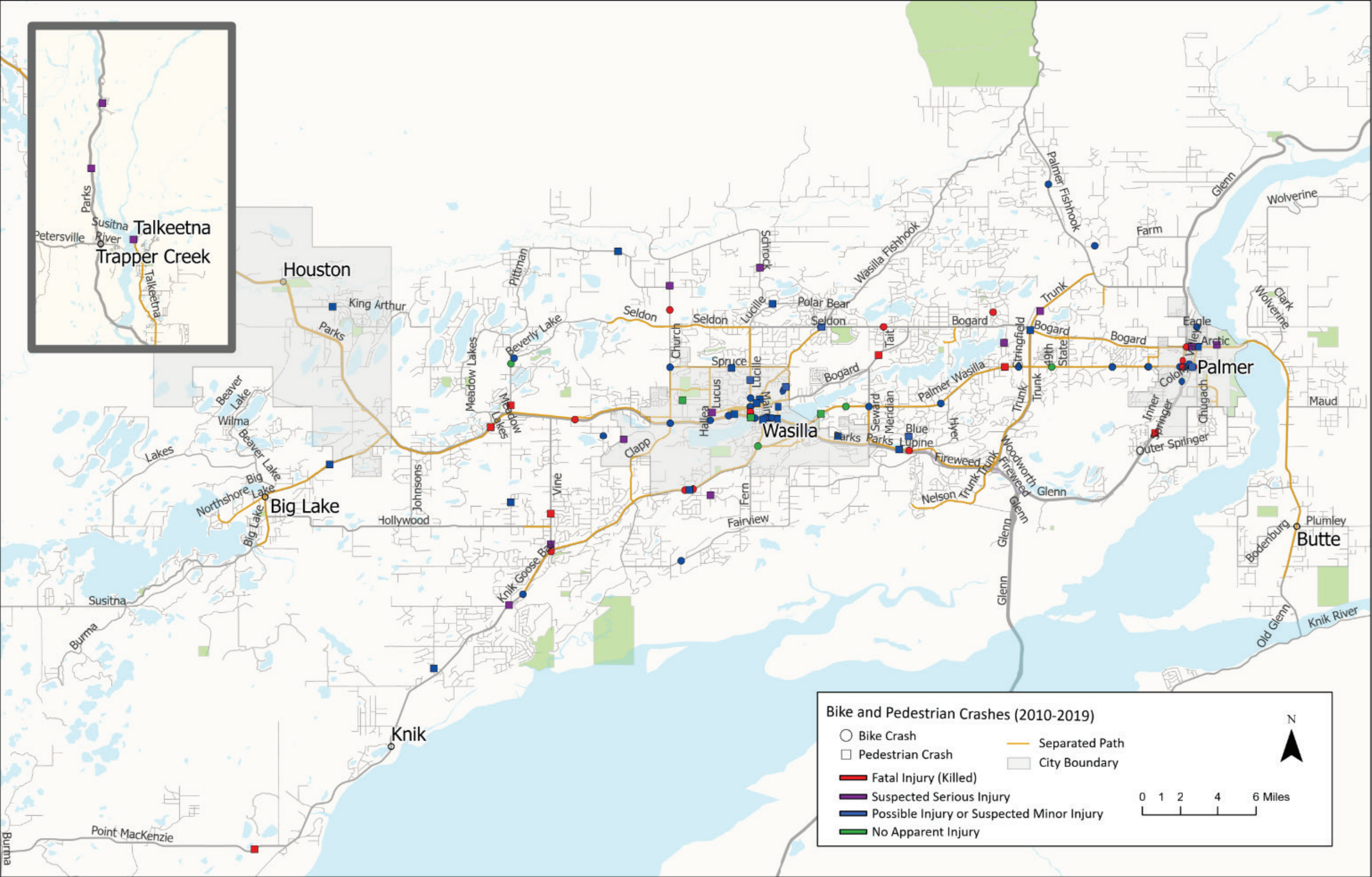


Figure 5 - Bicycle and pedestrian crash locations, 2010-2019

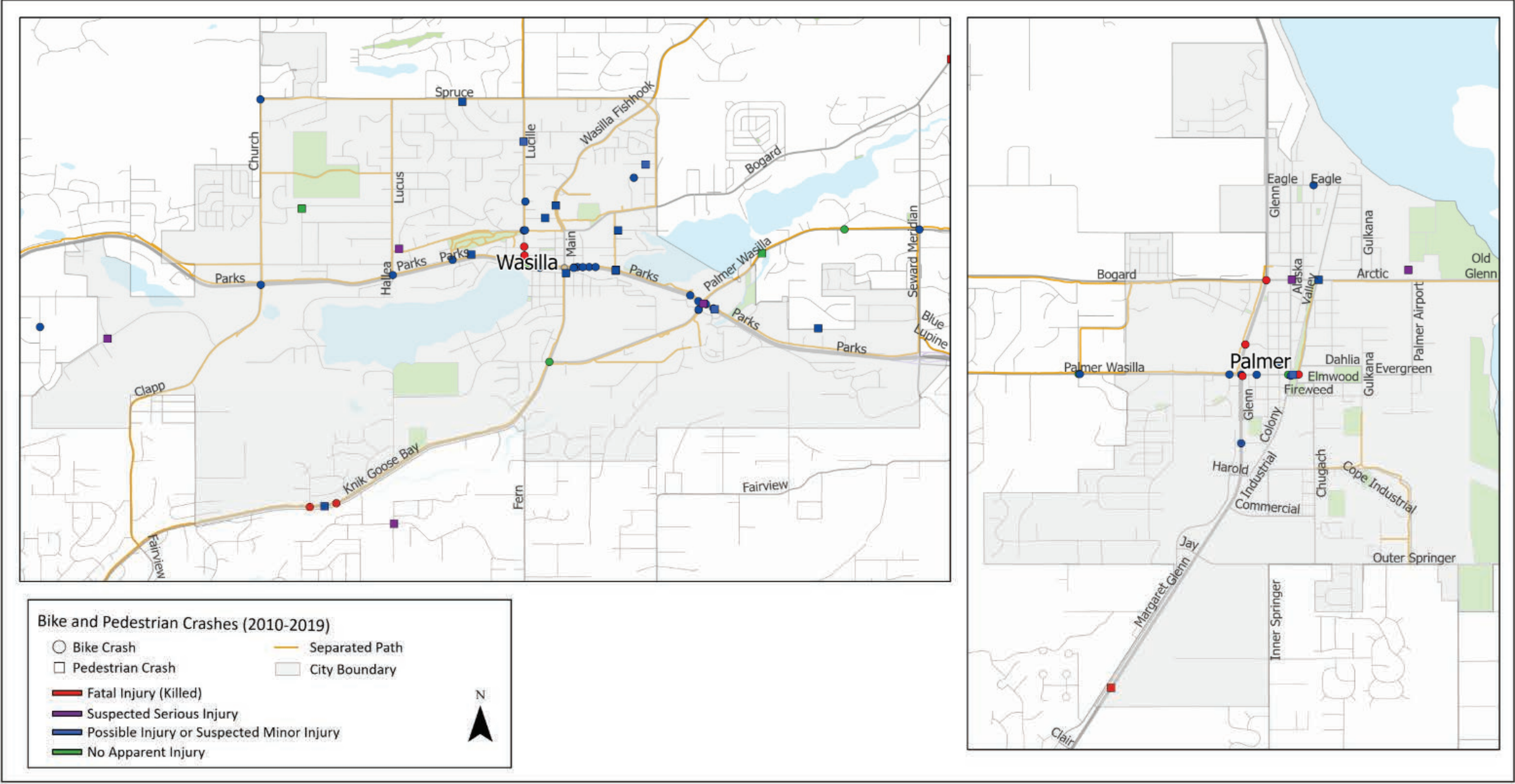


Figure 6 - Bicycle and pedestrian crash hotspots

For the period analyzed, the number of crashes has declined for both bicycles and pedestrians (see Figure 7). In 2013, there was a higher number of bicycle crashes (17) than in subsequent years. The cause of this spike in bicycle crashes is not clear from the data.

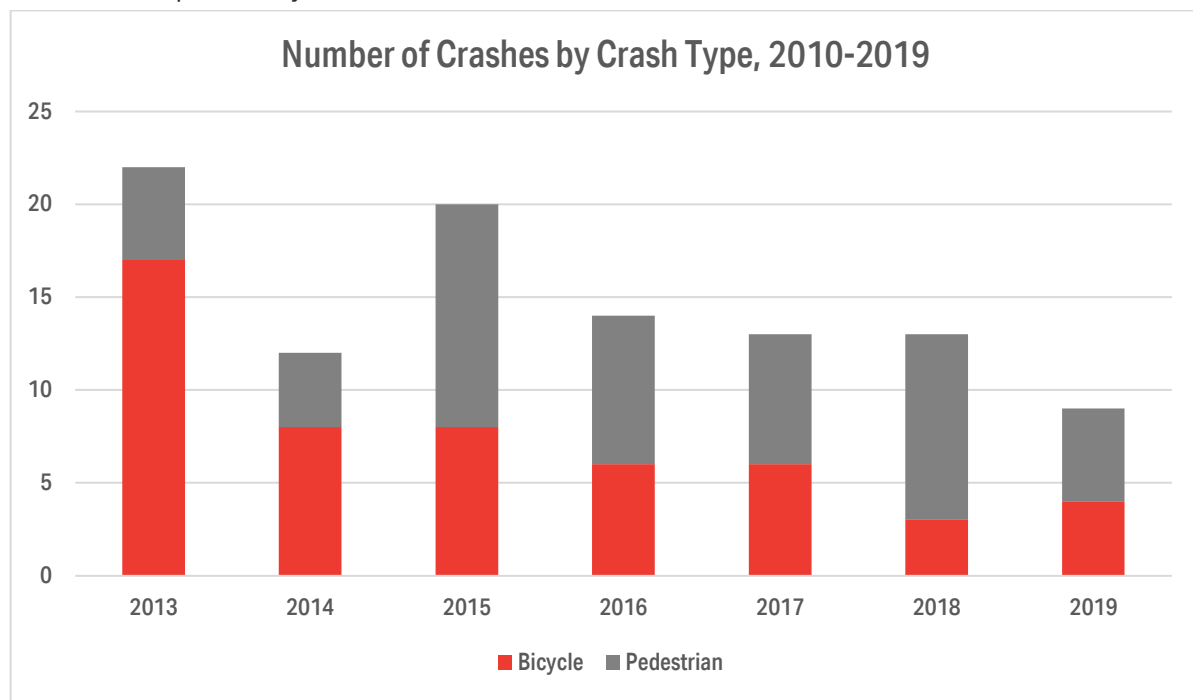


Figure 7 - Crashes by Crash Type, 2010-2019

Most crashes involving a pedestrian or cyclist happened at intersections (see Table 3). Intersections are locations where pedestrians or cyclists are crossing the path of motor vehicles, which introduces potential conflicts between modes.

Table 3 - Summary of crashes at intersections

Summary of Bike and Pedestrian Crashes		
Total Bike and Pedestrian Crashes		103
Percent Bike Crashes		50%
	At an Intersection	82%
	On a Dark, Not Lighted Street	<1%
Percent Pedestrian Crashes		50%
	At an Intersection	67%
	On a Dark, Not Lighted Street	18%

73% of crashes occurred during daylight (see Figure 8). This is likely because there is more bicycle and pedestrian activity during the summer, when available daylight is at its peak.

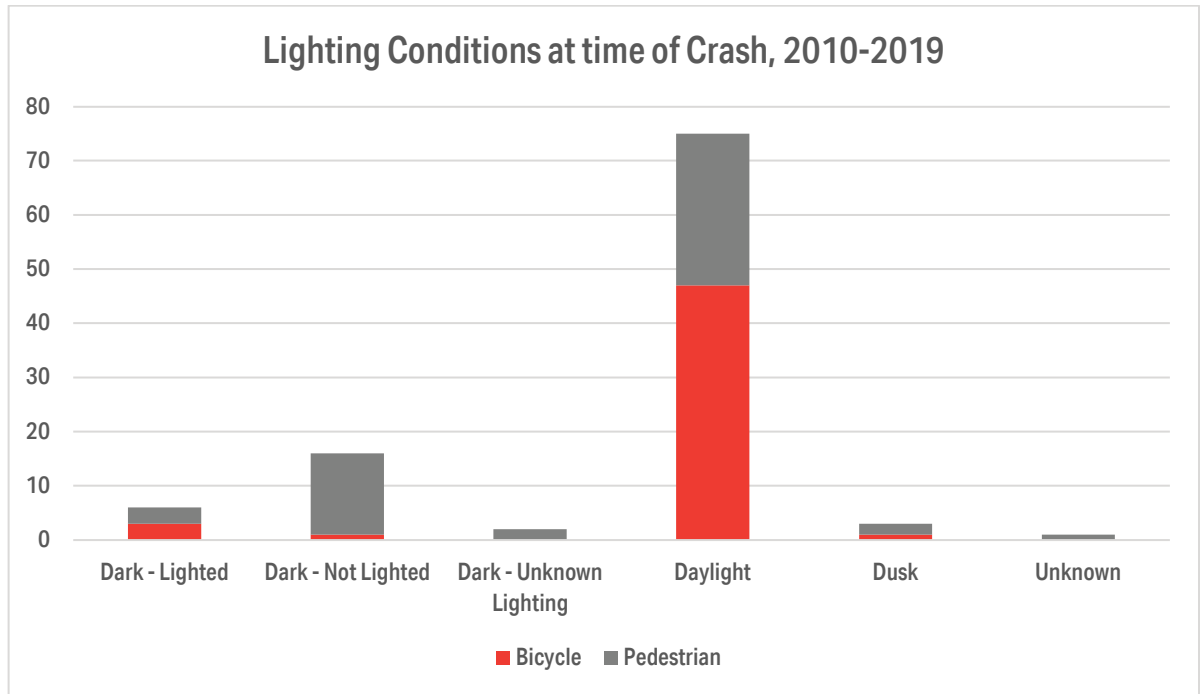


Figure 8 - Lighting conditions at the time of crash, 2010-2019

Crashes show a seasonal pattern with crashes peaking in July (Figure 9). September and October are the second highest months for crashes, likely due to the beginning of school when students are walking or biking to school before cold weather. January and November did not experience any bicycle crashes, and there was only one each for February, March, and December. This is presumably due to the reduction in the number of cyclists during the winter.

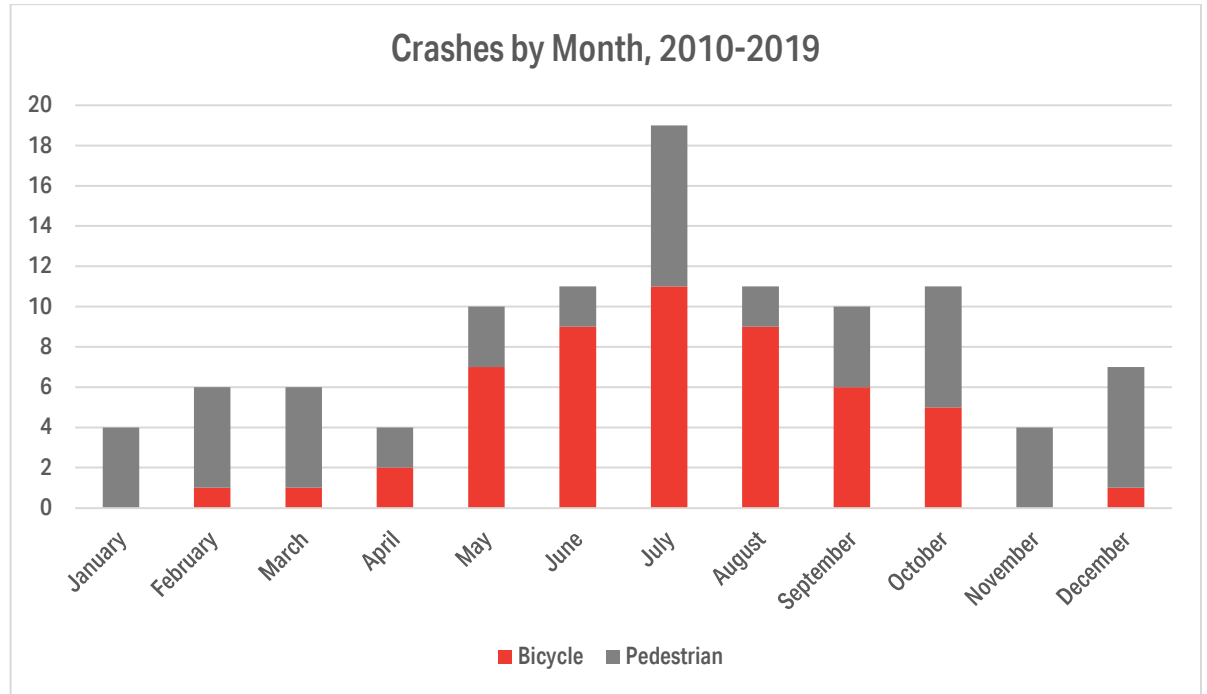


Figure 9 - Crashes by month

Figure 10 shows the number of crashes by time of day. Bicycle and pedestrian crashes peak in early afternoon and early evening. There is also a spike in crashes for both pedestrians and cyclists between midnight and 1am. Very few crashes occurred between 1am and 8am.

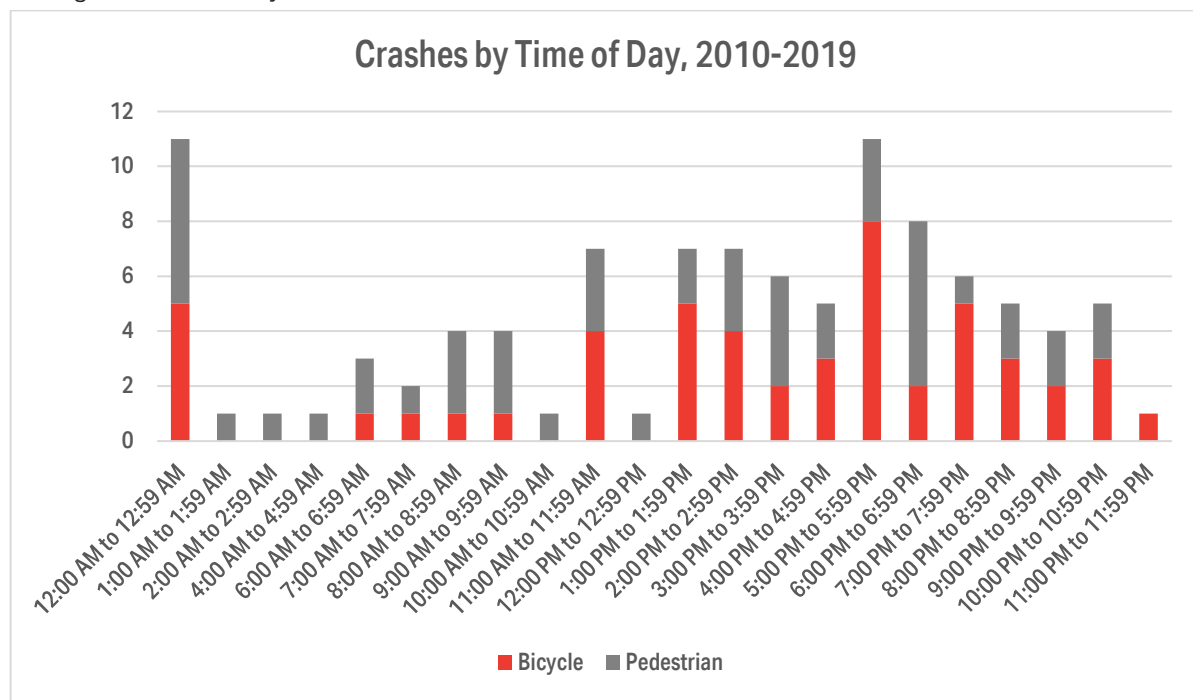


Figure 10 - Crashes by time of day

4.2 NETWORK GAPS & CONNECTIVITY

A combination of analysis, review of planned projects, one-on-one stakeholder interviews, and public comments have been used to develop a preliminary list of network gaps and connectivity issues. Public comments were obtained via an online comment map and individual emails to the project team or MSB staff.

Table 4 – Significant gaps in the bicycle and pedestrian network

What is the gap?	Description	What is the source of this need?
Smith Road Extension pathway	Provide a pathway connection between the Old Glenn Highway and the recreational trailhead access	2021 Transportation System Package
Old Glenn Highway pathway between Sodak Circle and Knik River	There is a gap in the pathway	2021 Transportation System Package
49 th State Street pathway between Bogard Road and Palmer-Wasilla Highway	No dedicated bicycle/pedestrian facility between two major corridors	2021 Transportation System Package
Lucille Street pathway from Spruce Street to Seldon Road	No dedicated bicycle/pedestrian facility along this busy corridor that includes access to an elementary school. The crash analysis showed several bike/pedestrian crashes on this segment during 2010-2019.	2021 Transportation System Package
Tex-Al Drive pathway	The connection between the east and west segments of Tex-Al Drive would provide a major east-west corridor in this area of the borough	2021 Transportation System Package
Edgerton Parks Road and Mountain Trails Drive pathway	A pedestrian/bicycle facility would connect the Palmer-Fishhook Road to the Government Peak Recreational Area	2021 Transportation System Package
Palmer-Fishhook Road pathway	This fast-growing area of the borough needs a connection between the Trunk Road pathway, the Glenn Highway, and the Little Susitna Bridge	2021 Transportation System Package; Fishhook Comprehensive Plan; public input
Fern Street pathway	Provide a connection between KGB Road and Fairview Loop in this fast-growing portion of the borough	2021 Transportation System Package; public input
Bogard Road pathway	Provide a dedicated pathway on this busy road between Trunk Road and Seldon Road	2017 MSB Long-range Transportation Plan
West Karen Street pathway	Provide a separated pathway along this busy corridor to connect the Meadow Lakes Community Center with Pittman Road	2021-22 MSB Capital Improvement Plan
Church Road pathway	Provide a connection north from the Church Road separated path that ends at Spruce Avenue to Schrock Road	2021-22 MSB Capital Improvement Plan
Schrock Road pathway or widened shoulders	Provide a connection from Church Road to the Little Susitna River to connect the Pittman Road, Church Road, and Parks Highway Master Circle trail system	2021-22 MSB Capital Improvement Plan

What is the gap?	Description	What is the source of this need?
Vine Road pathway	This fast-growing area of the borough does not have a bicycle/pedestrian connection between Parks Highway, Hollywood Road, and KGB Road. This would also connect to the separated path on West Hollywood Road that extends to Goose Bay Elementary School. There were three serious bike/pedestrian crashes on this segment between 2015 and 2019.	2021-22 MSB Capital Improvement Plan
Meadow Lakes Loop Road pathway	Connect Parks Highway separated path to the intersection of Pittman Road to accommodate bicycles and pedestrians along this significant corridor in a fast-growing area of the borough	2021-22 MSB Capital Improvement Plan
Pittman Road pathway or widened shoulders	Provide a dedicated space for bikes and pedestrians along this busy road between the separated path on Parks Highway all the way to Church Road	Analysis; public input
Inner and Outer Springer Loops sidewalks, pathway, or widened shoulders	This area is projected to grow significantly over the next 20 years. There are no dedicated bicycle or pedestrian facilities along these roads. A dedicated facility would provide connections between residential areas and the core Palmer commercial area (via Chugach Street sidewalks)	Analysis; public input
Knik-Goose Bay Road pathway	Extending the separated path from South Settlers Bay Road to Malemute Run would provide a safe facility for pedestrians and cyclists along this high-volume, high-speed road in a fast-growing area of the borough.	Analysis; public input
Fairview Loop pathway	This fast-growing region of the borough would benefit from a non-motorized facility that connects the separated path at Top of the World Circle to South Abby Boulevard. The facility would service residential areas, an elementary school, and a recreational area.	Analysis; public input
Parks Highway pathway	There is no dedicated facility north of Willow that connects to the separated path along Talkeetna Spur Road.	Public input
Glenn Highway pathway	Extending the separated path north from Scott Road to Palmer-Fishhook Road would connect neighbors to schools and the commercial center of Palmer. This would complete a loop if a Palmer-Fishhook Road path is constructed.	Analysis; public input; Palmer Comprehensive Plan
Glenn Highway pathway	Connecting Palmer-Fishhook Road to the separated path at Jonesville Road in Sutton would provide connectivity between the Sutton and Palmer.	Public input; Palmer Comprehensive Plan

What is the gap?	Description	What is the source of this need?
Wasilla-Fishhook Road pathway	There is no constructed bicycle/pedestrian facility north of Seldon Road. A dedicated non-motorized facility extending to Palmer-Fishhook Road would create a loop that connects dozens of subdivisions throughout this fast-growing area.	Fishhook Comprehensive Plan; analysis; public input
Bodenburg Loop pathway	The Butte Trail is a significant recreational destination. Connecting the trailhead to the Old Glenn Highway path would fill the gap along Bodenburg Loop.	Analysis; public input
Maud Road pathway	Development in the area has increased traffic on Maud Road. The road is narrow with narrow shoulders. A separated non-motorized path would connect residential areas to the Old Glenn Highway path.	Analysis; public input
Seward Meridian Road pathway	Healthcare facilities along Seward Meridian generate considerable vehicular traffic. There is no dedicated bike/pedestrian facility north of Palmer-Wasilla Highway. A separated path would connect to the path along Seward Meridian south of Palmer-Wasilla Highway and provide connections to an elementary school, businesses, and healthcare facilities.	Public input

4.3 MAINTENANCE

Maintaining bicycle and pedestrian infrastructure throughout the year is important to ensure year-round use by the residents that rely on walking or biking for their everyday needs. Winter maintenance includes removal of snow and ice from walkways and paths, as well as providing sand or gravel for traction. Summer maintenance entails sweeping up gravel and brushing back vegetation.

Snow removal from sidewalks and shared-use paths is a concern. Icy sidewalks or sidewalks full of snow make it difficult or dangerous to walk, particularly for the elderly and individuals with mobility impairments. Inconsistent snow removal is also a concern as it makes it difficult for a pedestrian or cyclist when they encounter differing levels of snow removal along their route.

Once the snow and ice melts, there can be a significant amount of gravel left behind on roadway shoulders. This is also a problem on shared-use paths where all-terrain vehicles (ATVs) ride adjacent to or cross the path and kick gravel onto the path. Gravel is particularly problematic for road bikes with narrow tires. Increased sweeping efforts would address this need.

Each facility owner employs different maintenance policies for maintaining their infrastructure.

4.3.1 DOT&PF

The DOT&PF removes snow from roadways and pathways according to their assigned priority. Priority is generally based on the functional classification of the roadway. Thus, higher functioning roads receive higher priority snow removal. Sidewalks and pathways share the same priority level as the adjacent roadway. However, in practice, snow is not removed from paths and sidewalks as quickly as it is removed from roads. Often this is due to the need for specialty equipment or manual labor to remove snow from pedestrian paths.

4.3.2 MSB

Most road maintenance on borough roads is contracted out to private parties. After a snowfall of four inches or more, plows must plow main roads and school bus routes within 12 hours. Snow removal priority, in descending order, is primary collectors, secondary roads, and then subdivision roads. In addition to snow plowing, the borough oversees sanding, grading of gravel roads, drainage control, minor road repairs, and pavement patching. The borough maintains more than 1,100 miles of road.

4.3.3 CITY OF WASILLA

The City of Wasilla snow removal plan includes continuous plowing of a primary 'snow route' on main city roads, with the next priority being downtown streets, and then subdivision streets. Sidewalk plowing and sanding is not specified in the snow removal plan, and there are no sidewalk maintenance provisions in the city municipal code.

4.3.4 CITY OF PALMER

Snow removal and sanding are performed on city streets and roads in the following order of priority:

1. Main arterial and business district streets, school routes, etc.
2. Main feeder or collector streets leading to arterial streets and highways, and Palmer Municipal Airport.
3. Neighborhood residential streets and subdivisions.
4. All other low-density streets

Municipal code specifies those owners or occupants of premises bordered by a paved sidewalk are responsible for removal of snow and ice from sidewalks. The City of Palmer Department of Public Works' *Snow Removal Information* states that the city will remove snow and ice from sidewalks around city buildings and will attempt to clear snow along school routes, bike paths, and a single lane along core downtown area sidewalks, as time allows.

4.3.5 CITY OF HOUSTON

The City of Houston prioritizes school routes for snow removal, followed by main roads, then side streets. Houston municipal code does not include provisions on sidewalk maintenance, and sidewalks are not explicitly included in the city snow removal plan

4.4 USER CONFLICTS

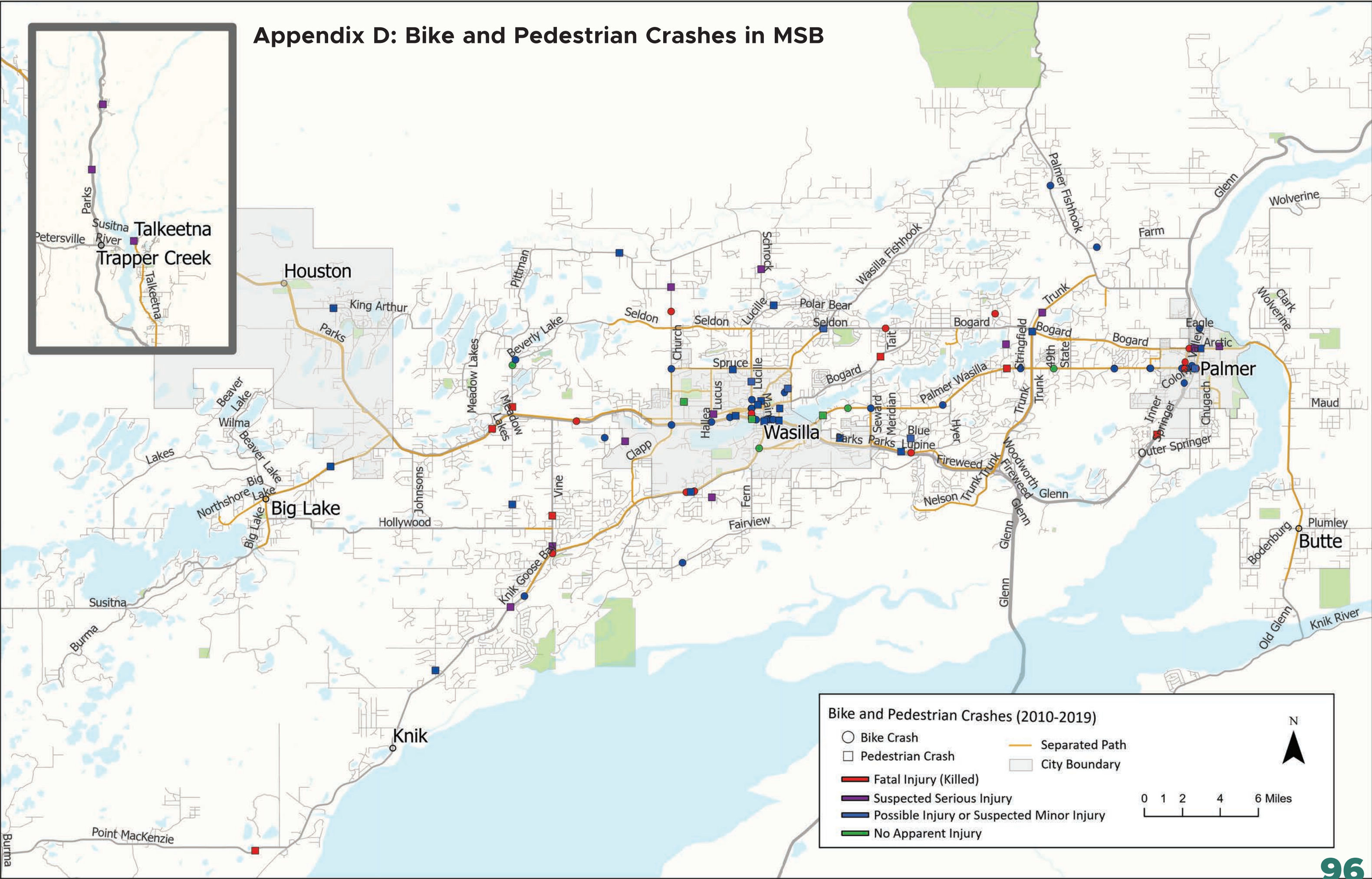
Conflicts between non-motorized users and motorized users are common across Alaska. Issues in the MSB include motorized use of non-motorized facilities, motorized users riding adjacent to non-motorized facilities and causing damage to pathways, and motorized users kicking gravel and debris onto non-motorized facilities.

Additionally, there have been reported conflicts between non-motorized users and motor vehicles in the borough. This is generally between motorists and cyclists that are riding on the roadway. Cyclists on road bikes with narrow tires often cannot ride on separated pathways due to gravel or poor-quality asphalt and thus ride in the road or on the shoulder.

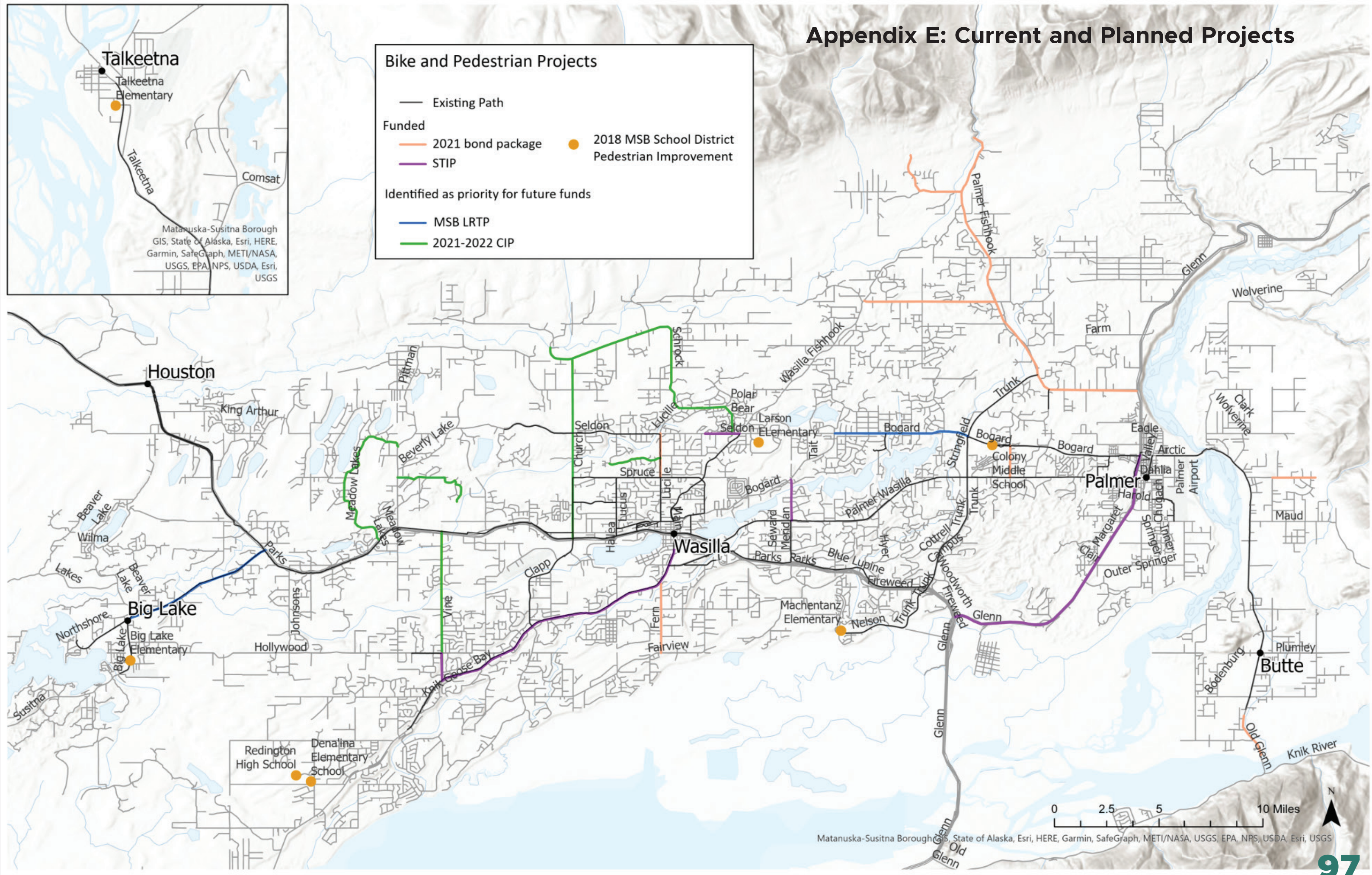
5.0 SUMMARY

The bicycle and pedestrian network in the Mat-Su Borough provides key connections to destinations across the borough. The infrastructure projects currently in development will provide additional connections and ensure safe travel for walkers and cyclists. However, there are still several significant gaps in the non-motorized network. As the borough continues to grow and traffic volumes increase, it is important to fill these gaps and enable mobility for everyone in the borough.

Appendix D: Bike and Pedestrian Crashes in MSB



Appendix E: Current and Planned Projects



Appendix F: Potential Grant Opportunities

Grant	Provider	Link
Community Transportation Program	DOT&PF	https://dot.alaska.gov/stwdplng/cip/stip/projects/CTP.shtml
Transportation Alternative Program	DOT&PF	https://dot.alaska.gov/stwdplng/cip/stip/projects/TAP.shtml
Complete Streets	FHWA	https://highways.dot.gov/complete-streets/make-complete-streets-default-approach
Tribal Transportation Program Safety Fund	BIL	https://highways.dot.gov/federal-lands/programs-tribal/safety/funds
Railway Highway Crossing Program	BIL	https://highways.dot.gov/safety/hsip/xings/railway-highway-crossing-program-overview
Transportation Funding Opportunities for Tribal Nations		https://highways.dot.gov/sites/fhwa.dot.gov/files/docs/federal-lands/programs-tribal/36311/transportation_funding_opportunities_for_tribal_nations.pdf
Guide for Maintaining Pedestrian Facilities for Enhanced Safety Research Report	FHWA	https://safety.fhwa.dot.gov/ped_bike/tools_solve/fhwasa13037/research_report/chap2f.cfm
Congestion Mitigation and Air Quality Improvement Program	BIL	https://www.fhwa.dot.gov/bipartisan-infrastructure-law/cmaq.cfm
Carbon Reduction Program	BIL	https://www.fhwa.dot.gov/bipartisan-infrastructure-law/crp_fact_sheet.cfm
Metropolitan Planning Program	BIL	https://www.fhwa.dot.gov/bipartisan-infrastructure-law/metro_planning.cfm
STBG Transportation Alternatives set-aside	BIL	https://www.fhwa.dot.gov/bipartisan-infrastructure-law/ta.cfm
Pedestrian and Bicycle Funding Opportunities: U.S. Department of Transportation Transit, Safety, and Highway Funds	USDOT	https://www.fhwa.dot.gov/environment/bicycle_pedestrian/funding/funding_opportunities.pdf?u=092922
Bicycle and Pedestrian Funding, Design, and Environmental Review: Addressing Common Misconceptions	FHWA	https://www.fhwa.dot.gov/environment/bicycle_pedestrian/guidance/misconceptions.cfm
Surface Transportation Block Grant Program	BIL	https://www.fhwa.dot.gov/specialfunding/stp/bil_stbg_implementation_guidance-05_25_22.pdf
Community Placemaking Grants	Project for Public Spaces	https://www.pps.org/community-placemaking-grants
Urbanized Area Formula Grants - 5307	FTA	https://www.transit.dot.gov/funding/grants/urbanized-area-formula-grants-5307
Pilot Program for Transit-Oriented Development Planning - Section 20005(b)	FTA	https://www.transit.dot.gov/TODPilot
Safe Streets and Roads for All	BIL	https://www.transportation.gov/sites/dot.gov/files/2022-03/Safe-Streets-and-Roads-for-All-Fact-Sheet_March-2022.pdf