



Bicycle & Pedestrian Plan

For the greater Albany area
April 2023



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CH 1: INTRODUCTION

Purpose

The purpose of the Bicycle and Pedestrian Plan is to identify projects and suggests policies and programs that will improve the walking and biking experience for people in the Albany Area Metropolitan Planning Organization (AAMPO) planning area.

Because of AAMPO's position as a regional transportation planning entity encompassing four cities and portions of three counties, AAMPO's Bicycle and Pedestrian Plan (BPP) intends to address both local and regional connectivity. By providing suggested facility design guidelines, AAMPO's BPP will further align and set high standards for bicycle and pedestrian projects carried out by AAMPO's member jurisdictions.

Background

Who is AAMPO?

The Albany Area Metropolitan Planning Organization, or AAMPO, is the designated metropolitan planning organization (MPO) for the greater Albany area. The federal government requires urbanized areas with more than 50,000 residents to form MPOs.

AAMPO was formed in 2013 after the 2010 census revealed the area had surpassed the 50,000 resident threshold. The AAMPO planning area includes the cities of Jefferson, Millersburg, Albany and Tangent, as well as portions of Benton, Linn, and Marion counties.

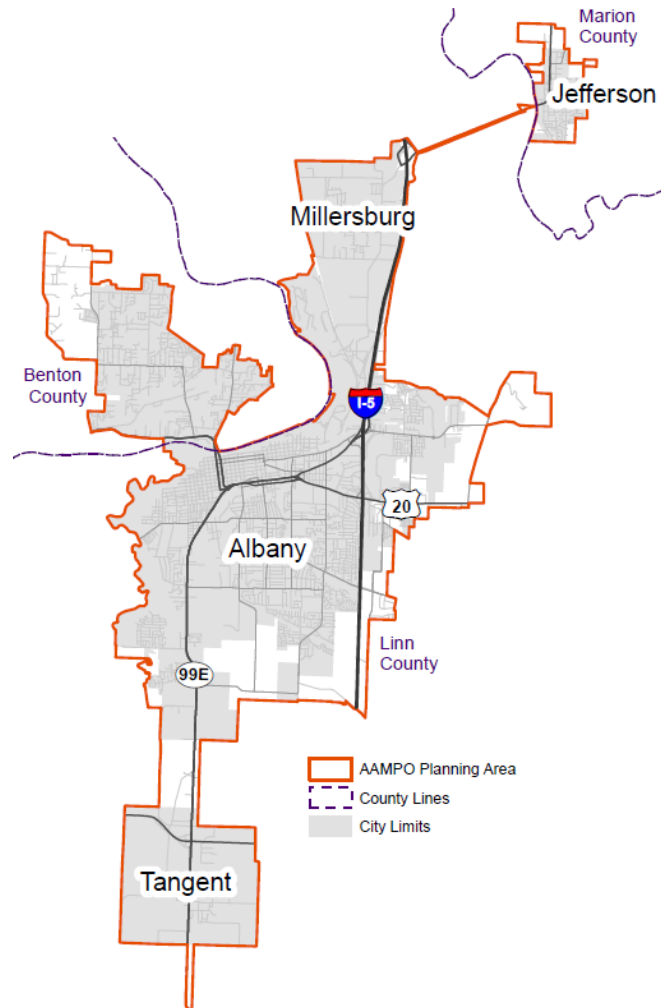


Figure 1.1: Map of the AAMPO Planning Area

What is a MPO?

A metropolitan planning organization (MPO) is a federally required planning body that performs regional planning studies and coordinates with member cities and counties to improve all modes of transportation.

What does AAMPO do?

As a metropolitan planning organization (MPO), AAMPO performs regional planning studies and coordinates with member cities and counties to improve all modes of transportation, whether that's movement of cars, people on foot, trains, or bicycles, it's all transportation!

AAMPO is also responsible for administrating federal funding for transportation projects throughout its planning area.

What is this plan about?

AAMPO's Bicycle and Pedestrian Plan is a plan to improve conditions for people biking and walking throughout the AAMPO area. The plan includes a list of physical infrastructure improvements, like adding sidewalks and creating shared use paths, as well as program and policy recommendations that complement infrastructure recommendations, such as hosting bike riding lessons at local schools and extending the time allotted to pedestrians to walk across intersections.



What is this plan about?

This plan is all about ways to improve conditions for people biking, walking, and rolling throughout the AAMPO area. It includes infrastructure recommendation as well as program and policy recommendations.

Why is AAMPO making this plan?

AAMPO recognizes the importance of biking and walking to the AAMPO area's overall transportation system, as well as the need to make biking and walking safer and more convenient.

As a regional planning organization, AAMPO is uniquely positioned to address biking and walking both across and within member jurisdictions, creating a regionally connected network. AAMPO's member jurisdictions supported this plan as many of them haven't had the opportunity to update their Transportation System Plans (TSPs) in recent years to reflect increased demand for bicycle and pedestrian infrastructure. Since projects must be included in local plans in order to access grant funding, this plan allows local jurisdictions to make desired improvements prior to their next major TSP update.

Why should we invest in biking and walking?

Biking and walking, as well as other forms of active transportation are a crucial part of AAMPO's transportation system. Improving and investing in active transportation has the following benefits.

Improve Safety

Adding protected bike lanes, improving roadway crossings, and providing education opportunities for pedestrians, bicyclists, and drivers can decrease the number of traffic related deaths and injuries in the AAMPO planning area.

Adding sidewalks can reduce crashes involving pedestrians walking along roadways by 65-89%

Florida DOT, 2005 Update of Florida Crash Reduction Factors and Countermeasures to Improve the Development of District Safety Improvement Projects

Pedestrians and bicyclists are among the most vulnerable roadway users, as such, we should strive to provide them with the safest infrastructure and supporting policies available.

Reduce Pollution

Improving biking and walking facilities increases opportunities to travel without a vehicle. Substituting a car trip with a walking or biking trip reduces greenhouse gas emission, improving local air quality.

Increase Transportation Options & Opportunities

Not everyone has access to a personal vehicle or the ability to drive. That often leaves our younger, older, and lower-income populations reliant on public transit and active transportation to get around.

Creating better biking and walking conditions can improve access to recreation, healthcare, and shopping for those who can't drive as well as those who choose not to drive. Improving access to these key destinations not only fulfills basic needs, it also opens up education and employment opportunities that individuals may otherwise not be able to reach.

Approximately 5% of households in the AAMPO area do not have a vehicle available while 32% of households have 1 vehicle available, meaning that all members of the household must share a single vehicle or rely on other ways to get around when that vehicle is in use.

6% of households in the greater Albany do not have a vehicle available, that's over 2,500 households.

Source: 2019 5 year ACS, Table DP04

Active transportation improvements can also increase the usefulness of public transit by providing crucial links between transit stops and initial and final destinations. Providing access to public transit can further open up education and employment opportunities for those without personal vehicles

Active transportation infrastructure operates 24/7, serving individuals whose schedules do not align with traditional transit operating times.

Improve Community Health

A safe and connected biking and walking network increases opportunities for exercise. Community members can incorporate exercise into their normal routine by using sidewalks, bike ways, and trails to access destinations such as the bank, a coffee shop, or a friend's house.

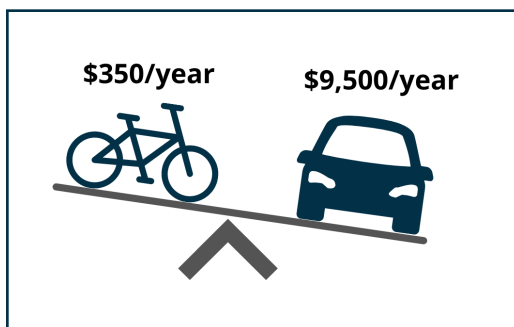
46% off all driving trips are 3 miles or LESS

2017 National Household Travel Survey

Improved biking and walking facilities also provide more recreation and exercise opportunities for individuals who are not destination focused, such as recreational walkers and bicyclists. Increasing physical activity can help reduce the rate of diabetes and obesity, and has positive mental health impacts.

Personal Cost Savings

Accessing destinations using active transportation can save households thousands of dollars a year compared to car ownership. The annual cost of maintaining a bicycle is approximately \$350 a year, compared to \$9,561 a year for a car. The savings from reducing the number of vehicles in a household can be put towards education, home ownership, or retirement.



Sources: AAA, Your Driving Costs, 2020, and Treehugger, How Much Does it Cost to Commute by Bike, 2020.

Benefits the Economy

Improving biking and walking facilities benefits the local economy in numerous ways.

- Trails and multi-use paths can increase nearby property values
- Tourists enjoy visiting walkable and bikable areas and are more likely to stay and spend money in such places
- Businesses and families often consider quality of life factors such as walkability and bikability, when deciding where to locate
- Biking and walking improvements are much less expensive than vehicle roadway improvements, allowing tax dollars to be used in other ways
- Trails, walking, and biking projects employ more people on a per cost basis than other transportation projects

A study in Austin, Texas found that neighborhoods with access to and views of a greenbelt trail command higher property values, and that these higher property values generate additional tax revenue for municipal and county governments.

Source: Crompton and Nicholls, An Assessment of Tax Revenues Generated by Homes Proximate to a Greenway, 2005, and Crompton and Nicholls, The Impact of Greenways on Property Values: Evidence from Austin, Texas, 2006. Retrieved from Headwaters Economics.

Vision Statement & Goals

The following vision statement and goals for the Bicycle and Pedestrian Plan were crafted by AAMPO staff with input from the Project Advisory Committee and AAMPO's Policy Board. The vision reflects the AAMPO area's ideal bicycle and pedestrian system and helps guide the development of this plan. The seven goals listed on the right side of this page further refine the vision and are intended to reflect community values and priorities.

PLAN VISION

“The AAMPO Bicycle and Pedestrian Plan strives to create and support a bicycle and pedestrian network that is regionally and locally connected, safe, and functional for people of all ages, abilities, and backgrounds”

PLAN GOALS

Goal 1: Create a network that is safe, comfortable, and intuitive for all users

Goal 2: Create a network that connects Jefferson, Millersburg, Albany, and Tangent

Goal 3: Create a network that is locally connected and provides access to key destinations

Goal 4: Create a network that prioritizes equity

Goal 5: Create a network that builds on existing infrastructure and is expandable in the future

Goal 6: Support economic development by including recommendations that encourage walking and biking to businesses

Goal 7: Support plan adoption and local implementation through feasible infrastructure, policy, and programing recommendations



Planning Team & Process

The Bicycle and Pedestrian Plan was developed by AAMPO staff with support from the University of Oregon's Institute of Policy Research and Engagement (IPRE). Plan guidance and input was provided by the Project Advisory Committee. AAMPO's Policy Board provided additional input and final approval on specific items, such as the Plan vision and project prioritization criteria. Note that chapter 3 of this plan provides additional information about public and stakeholder outreach and feedback.



Fall 2020: Kickoff & Existing Conditions

The Bicycle and Pedestrian Plan kicked off in September of 2020. The planning process began with an existing conditions analysis, mapping existing bicycling and walking conditions and reviewing current planning documents.



Winter 2020: Stakeholder Engagement

In winter 2020 AAMPO and IPRE staff conducted with interviews with Project Advisory Committee members as well as identified community stakeholders. These interviews helped shape the plan's vision and goals.



Spring 2021: Community Survey #1

In March of 2021, AAMPO and IPRE staff surveyed the community regarding feelings towards bicycle and pedestrian improvements and transportation habits. The written survey was complemented by a mapping survey where community members were able to pinpoint barriers to walking and biking as well as routes and destinations.



Summer 2021: Project Recommendations

In summer of 2021, AAMPO staff began developing project recommendations using survey input and information from the existing conditions analysis. IPRE, at this time, worked to develop project and program recommendations.



Fall & Winter 2021: Community Survey #2 & Plan Writing

In September 2021, AAMPO and IPRE staff developed a second survey asking community members which of the identified projects are their favorite. Throughout the rest of fall and winter of AAMPO staff worked to draft the final plan document.

Fall & Winter 2022: Plan Adoption

In September 2022, a draft plan was presented to the AAMPO Technical Advisory Committee (TAC) for comment. Following edits, the plan was adopted by the policy board in the winter of 2022.

CH 2: EXISTING CONDITIONS

Overview

This chapter describes and maps existing conditions in the AAMPO planning area, it also discusses how existing conditions relate to the plan.

Existing conditions include present day infrastructure, destinations, and demographic characteristics of the area, among other topics. Understanding existing conditions related to walking and bicycling helps us better plan for the future by providing us a baseline of what's there today.

Destinations & Transit

To encourage more walking and bicycling, jurisdictions should create safe, comfortable sidewalks, bike facilities, and crossings that allow people to get where they desire to go.

Destinations include schools, grocery stores, parks, and post offices, among others places that people visit to satisfy normal, everyday needs. Transit stops can be connection points to further destinations and should be

integrated with the bicycle and pedestrian network. The first step in ensuring pedestrian and bicyclist have access to destinations is to identifying where those destinations are!

Destinations

Understanding where destinations are located within the AAMPO planning area is important because it allows us to target bicycle and pedestrian improvement projects to areas where they will be the most useful to people.

While having a separated bike lane or wide sidewalk is nice anywhere, improvements like these are most useful when they connect people to the places they need and want to get to, like grocery stores and parks.

Figure 2.1, on the following page, shows the distribution and type of destinations within the AAMPO planning area. Not unexpectedly, the majority of destinations are within the Albany area. Many of the destination within Albany are located downtown, between 1st and 9th Avenues, and in the area south of US20, east of 99E and north of 34th Avenue.

Albany parks and schools are more spread out than other destinations in Albany, with the new Oak Grove Elementary even lying slightly outside of AAMPO planning area, just west of North Albany.

Jefferson, physically the smallest sub-area within AAMPO, contains more destinations than either Tangent or Millersburg. However, Jefferson is also the community within the AAMPO planning area that is furthest away from services and destinations in Albany.



Key Destinations

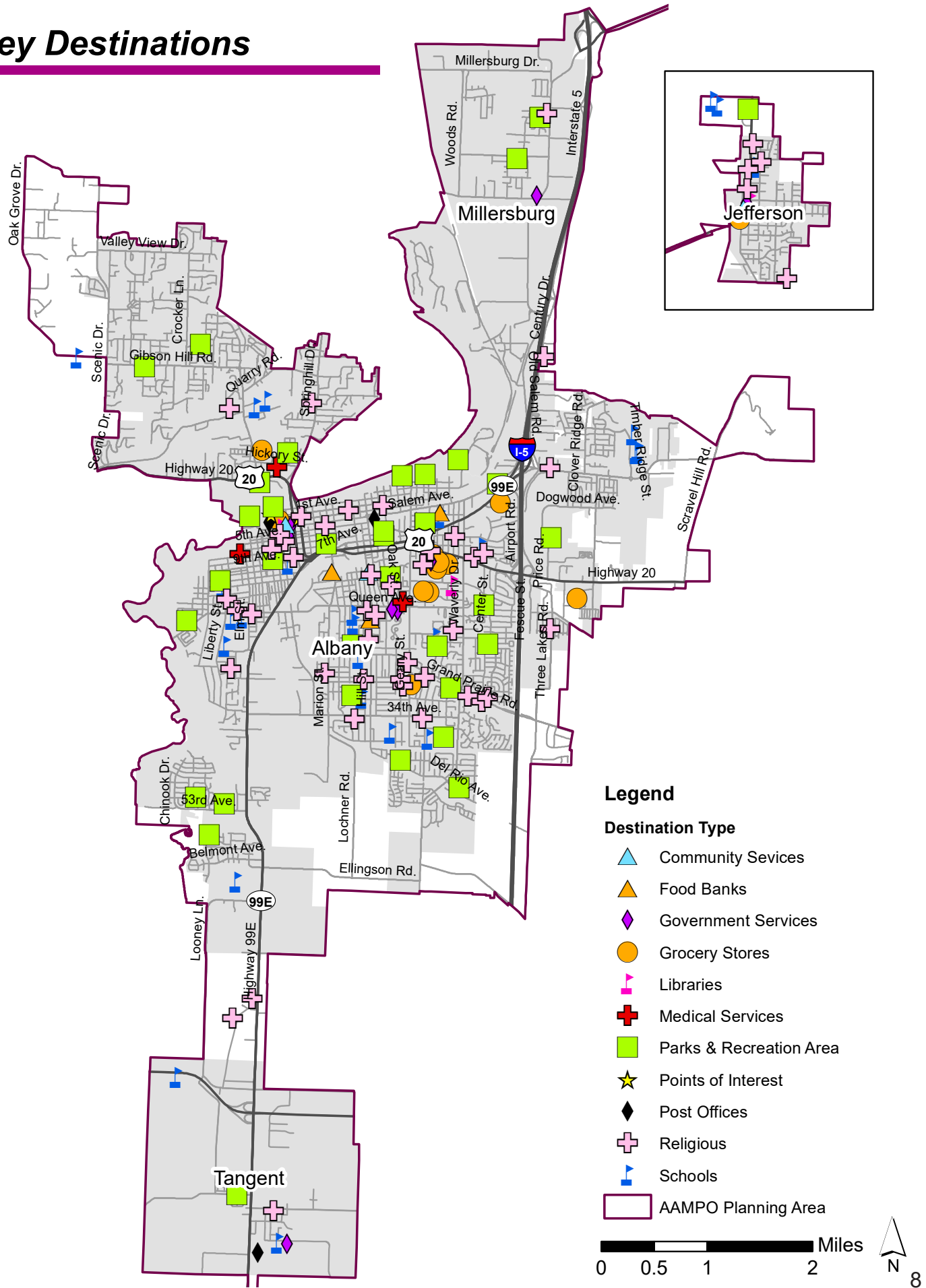


Figure 2.1: Map of Key Destinations

Transit Stops

Understanding where transit stops are located is important because even small bicycle and pedestrian improvements that help people reach transit stops can majorly increase access for populations that would use transit but currently don't have a safe way to reach stops.

In transportation planning, the problem of small but often insurmountable physical distance between a person and a transit stop is called the "first mile, last mile problem".

For example, there may be a bus stop two blocks away and across the street from someone's home, but if the street is busy, has no sidewalks, and has no crosswalk, it is unlikely that the person will even use the bus stop, even though it is physically very close to them. Thus, small "first and last mile" improvements provide an out sized increase in access relative to their size.

Albany Transit System (ATS), the Linn-Benton Loop, and the Linn Shuttle serve transit stops in Albany. The Linn-Benton Loop also includes one stop in Tangent. Transit agencies do not currently serve Millersburg or Jefferson.

Most of the ATS stops are located along highly trafficked roads, such as 34th Avenue, Waverly Drive, and Queen Avenue. There is a single Amtrak station within the AAMPO planning area, located at the southern end of SE Lyons Street.

Why does the Bicycle and Pedestrian Plan Care about Transit?

Understanding where transit stops are located is important because even small bicycle and pedestrian improvements that help people reach transit stops can majorly increase access for populations that would use transit but currently don't have a safe way to reach stops.



Equity Analysis

Goal four of the Bicycle and Pedestrian Plan is to, “create a network that prioritizes equity”. To help achieve this goal, it’s important to first understand where populations most likely to experience disparities in transportation access are located.

Three data sets associated with lower transportation access are mapped to help prioritize neighborhoods that could benefit most from improved walking and biking conditions. Data sets include low income households, non-white populations, and seniors and youth. The three mapped data sets are then layered on top of one another to create a single composite equity map. Each data set and the composite equity map are expanded upon below.

Low Income Population: Identifying areas with high concentrations of low income households is important within our equity analysis because these populations often have less access to private vehicles, less access to quality jobs and education, and less access to services. Improving bicycle and pedestrian infrastructure in these areas provides additional low-cost ways for households to access their destinations.

Figure 2.2, on the following page, shows the percent of households that are low income in the AAMPO planning area by census block group. Low income is defined as living at or below 200% of the federal poverty line. In 2019 the federal poverty line for a family of four was \$25,750. To be considered low income a family of four would have to make \$51,500 or less (200% of \$25,750).

Two areas of Figure 2.2 stand out as having the greatest percentage of low income households, central Albany, where US20 and 99E run parallel, and the western portion of Jefferson. Between 40% and 63% of households in these areas are considered low income.

The rest of the AAMPO planning area contains more moderate, though still high, percentages of low income households. The areas with the lowest percentage of low income households are Millersburg, north Albany, the portion of Albany directly west of 99E and north of 53rd Avenue, and a small neighborhood in Albany directly west of I-5 and south of Grand Prairie Road.



Low Income Population

Data from 2014-2019 American Community Survey, 5 year estimates.

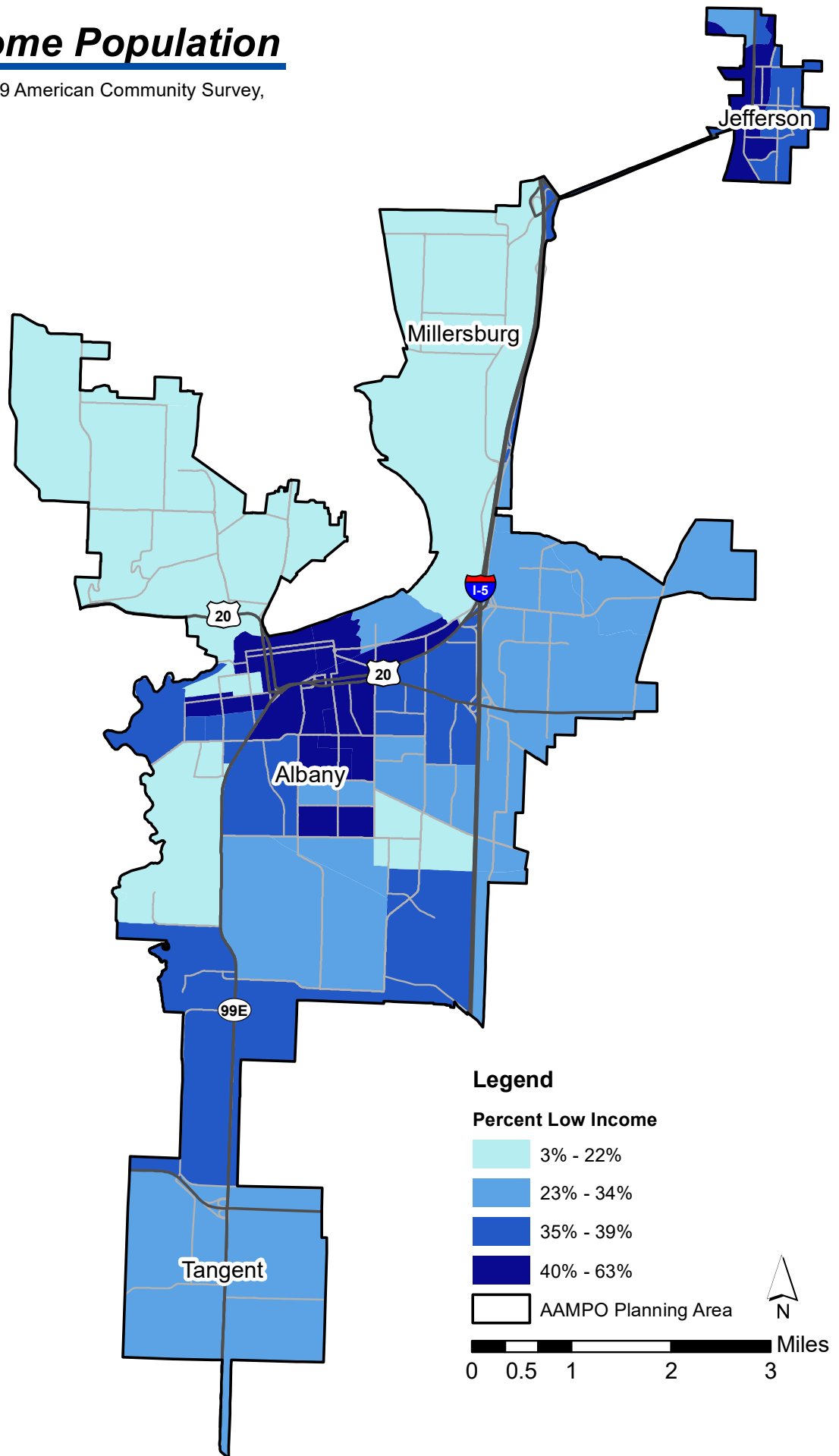


Figure 2.2: Map of Low Income Households

Non-white Population: Identifying areas with high concentrations of non-white populations is important within our equity analysis because these populations have historically been under-served or repressed by the transportation system. As a consequence, these populations have less access to work, education, recreation, and shopping opportunities as compared to white populations.

Figure 2.3 on the following page shows the percent of the population that is non-white in the AAMPO planning area by census block group. A handful of areas stand out as having the highest percentage of non-white populations: Albany directly east of I-5, select portions of central Albany, and the eastern portion of Jefferson.

Areas with the lowest percentage of non-white populations include Tangent, the portion of Albany directly west of 99E and north of 53rd Avenue, northern north Albany, and select areas within central and eastern Albany.

Why does the Bicycle and Pedestrian plan Care about non-white Populations?

Non-white populations have historically been under-served or repressed by the transportation system. As a consequence, these populations have less access to work, education, recreation, and shopping opportunities as compared to white populations. The two studies below highlight the connection between minority status and transportation investments.

*In Pontiac, Michigan researchers from Rochester’s Oakland University found that **degraded sidewalk quality was associated with lower neighborhood socioeconomic status and a higher proportion of Black and Latin-X residents.** Researches noted that equity-centered pedestrian infrastructure improvement plans can address these disparities by increasing accessible, safe active transport options that promote physical activity and reduce health disparities.*

*In New Orleans, Louisiana researchers from University of Chicago Illinois analyzed sidewalks around transit stations and found that **minority populations and, to some extent, populations living in poverty are significantly associated with worse sidewalk connectivity.***

Source: Rajae, M., Echeverri, B., Zuchowicz, Z., Wiltfang, K., & Lucarelli, J. F. (2021). Socioeconomic and racial disparities of sidewalk quality in a traditional Rust Belt City. *SSM - Population Health*, 16. <https://doi.org/10.1016/j.ssmph.2021.100975>

Source: Lowe, K. (2016). *Environmental Justice and Pedestrianism: Sidewalk Continuity, Race, and Poverty in New Orleans, Louisiana.* *Transportation Research Record*, 2598(1), 119–123. <https://doi.org/10.3141/2598-14>

Non-white Population

Data from 2014-2019 American Community Survey, 5 year estimates.

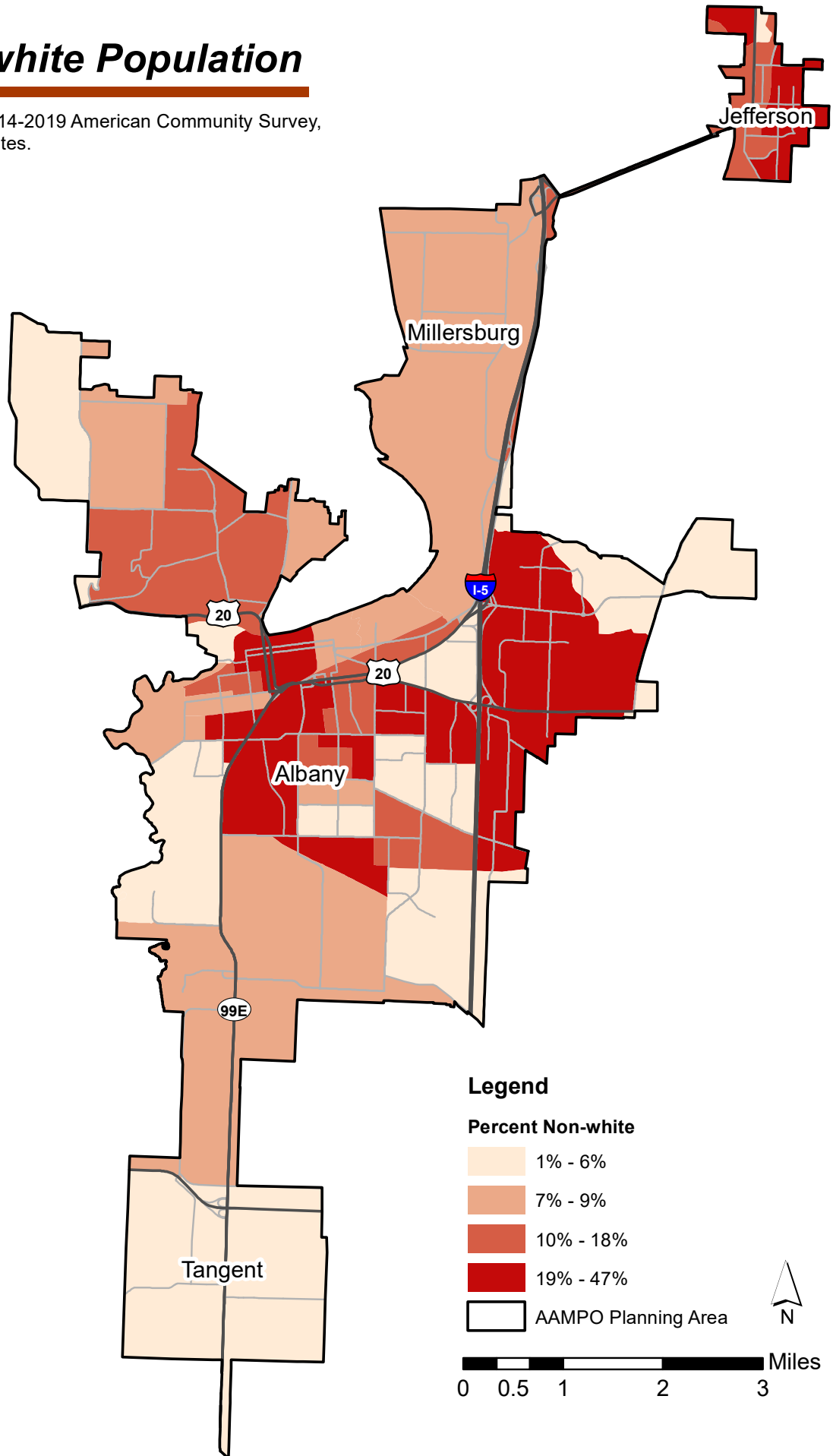


Figure 2.3: Map of non-white Households

Seniors & Youth

Identifying areas with high concentrations of seniors and youth is important within our equity analysis because these populations often have limited transportation options associated with their age. Much of the population 18 years and under does not drive because they are either under the legal age limit, cannot afford a personal vehicle, or choose not to drive.

Driving among the over age 65 population is limited by physical and mental ability, and may be further restricted by small post-retirement incomes. Limited access to cars make these populations more reliant on public transportation, walking, and bicycling to access everyday needs.

Figure 2.4, on the following page shows the percent of the population that is considered a senior (over 65) or youth (under 18) in the AAMPO planning area by census block group. The areas with the highest percentage of seniors and youth include the portion of Albany directly west of 99E and north of 53rd Avenue, northern North Albany, and select portions of Albany abutting the west side of I-5.

Tangent, North Albany, Millersburg and Jefferson also contain a considerable percentage of seniors and youth. The areas with the lowest percentage of seniors and youth include the area east of I-5 in Albany, Albany's historic district (where US20 and 99E run parallel and westward), and the area between southern Albany and Tangent.

Think bicycling is only for kids? Think again!

Some people associate bicycling with children, but many older people bike too! Bicycling helps seniors stay fit and mobile, especially those who can no longer drive a car. Bicycling is easier on the joints than walking and there are now more bike options than ever - meaning seniors can choose the bike that's right for them, whether that's an electric bike that makes it easier to go across town, a recumbent bike that's easier on the back, or a three wheeled trike that's easier to balance on.



This electric bike (e-bike) makes hills and cross town trips a breeze. It has a comfortable seat, upright handlebars, step through frame, integrated front and back bike lights, and a basket!

Senior and Youth Population

Data from 2014-2019 American Community Survey, 5 year estimates.

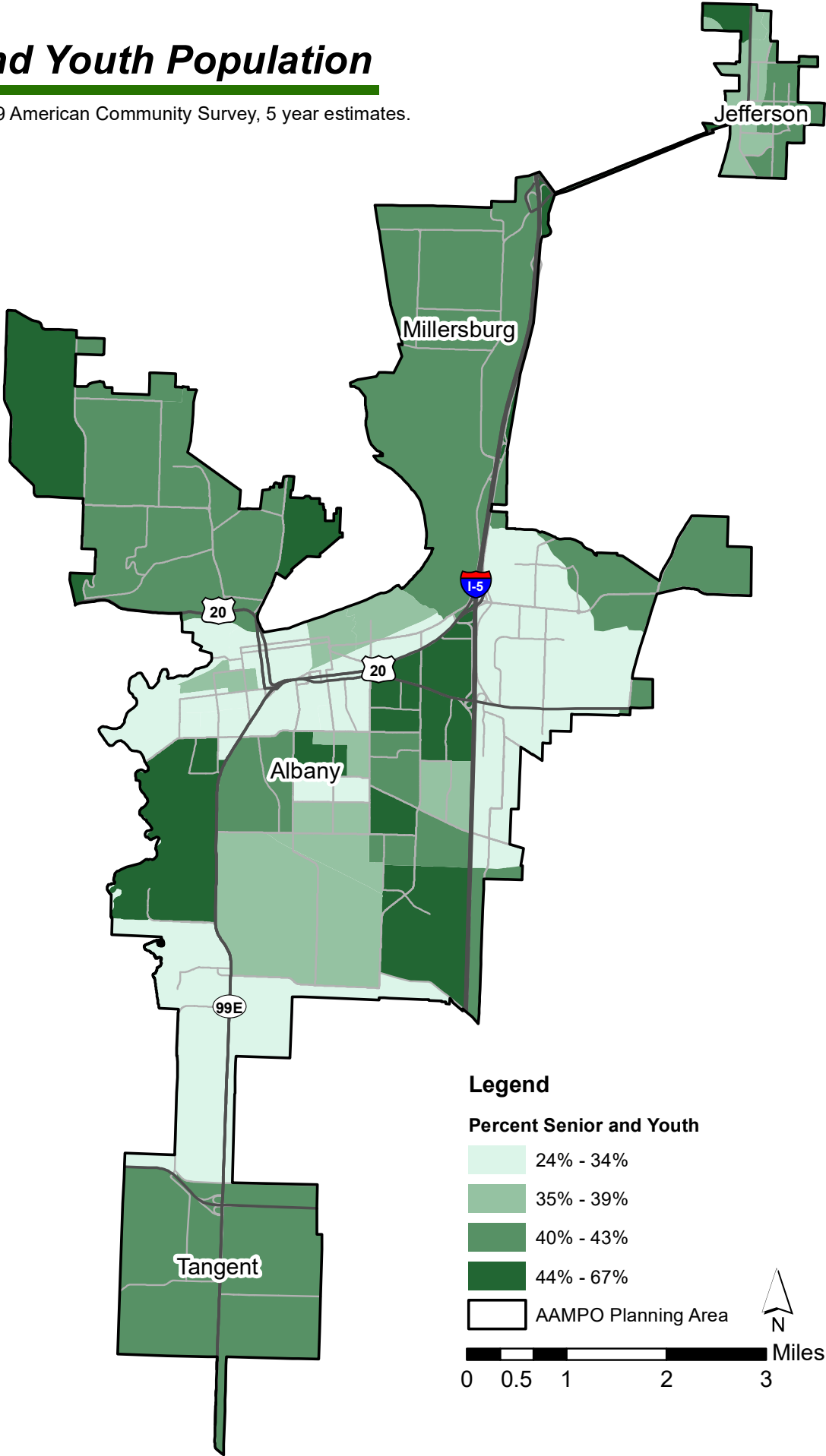


Figure 2.4: Map of Senior and Youth Population

Composite Equity Map

Figures 2.5 and 2.6 on the following pages show a composite equity map that combines information from all three data sets: low income populations, non-white populations, and senior and youth populations. Each of the three data sets used in the composite equity maps are equally weighted. The warmer (yellow, orange, and red) colors on the map indicate areas that have higher levels of inequity in the population, that is, they have higher percentages of low income, non-white, and senior and youth populations.

Why are there two maps with the same data?

Figure 2.5 and 2.6 contain the same data, they only differ in the number of divisions they use to divide the data. Figure 2.5 uses eight divisions, while Figure 2.6 uses four divisions. Each of the four divisions in Figure 2.6 represents a quartile, meaning that each division contains 25% of all the equity data points. The Bicycle and Pedestrian Plan divides data by quartiles to make the project prioritization process (discussed in chapter 4) more straightforward.

Where is are the highest levels of inequities?

The composite equity map identify areas that can most benefit from improved transportation access. As seen in Figure 2.5, the areas within the AAMPO planning area that experience the highest inequities include the portions of Albany south of US 20 and west of I-5, as well as one central Albany Neighborhood. Other areas with higher levels of inequality include Jefferson and the Albany area east of 99E and north of 34th Avenue.

How was Figure 2.6 made? To create the composite equity map in Figure 2.6, information from each contributing data set was divided into quartiles (four divisions, each containing 25% of all the data points).

Block groups were assigned a number, one through four, based on the quartile they fall into. Block groups in the highest quartile, number four, are those with highest percentages of the data being examined (either block groups with the highest percentage of low income populations, non-white populations, or senior and youth populations).

Once all block groups were assigned a quartile for each data set, a block group's total quartile score across all data sets is summed. The lowest score possible for a single block group is three (the block group being in the first quartile for all three data sets), the highest possible score for a block group is 12 (the block group being in the fourth quartile for all three data sets). The higher a block group's score the greater inequity the block group experiences.

Composite Equity (high-low)

This map combines three data sets: low income populations, senior and youth populations, and non-white populations. All data is from the 2014-2019 American Community Survey, 5 year estimates.

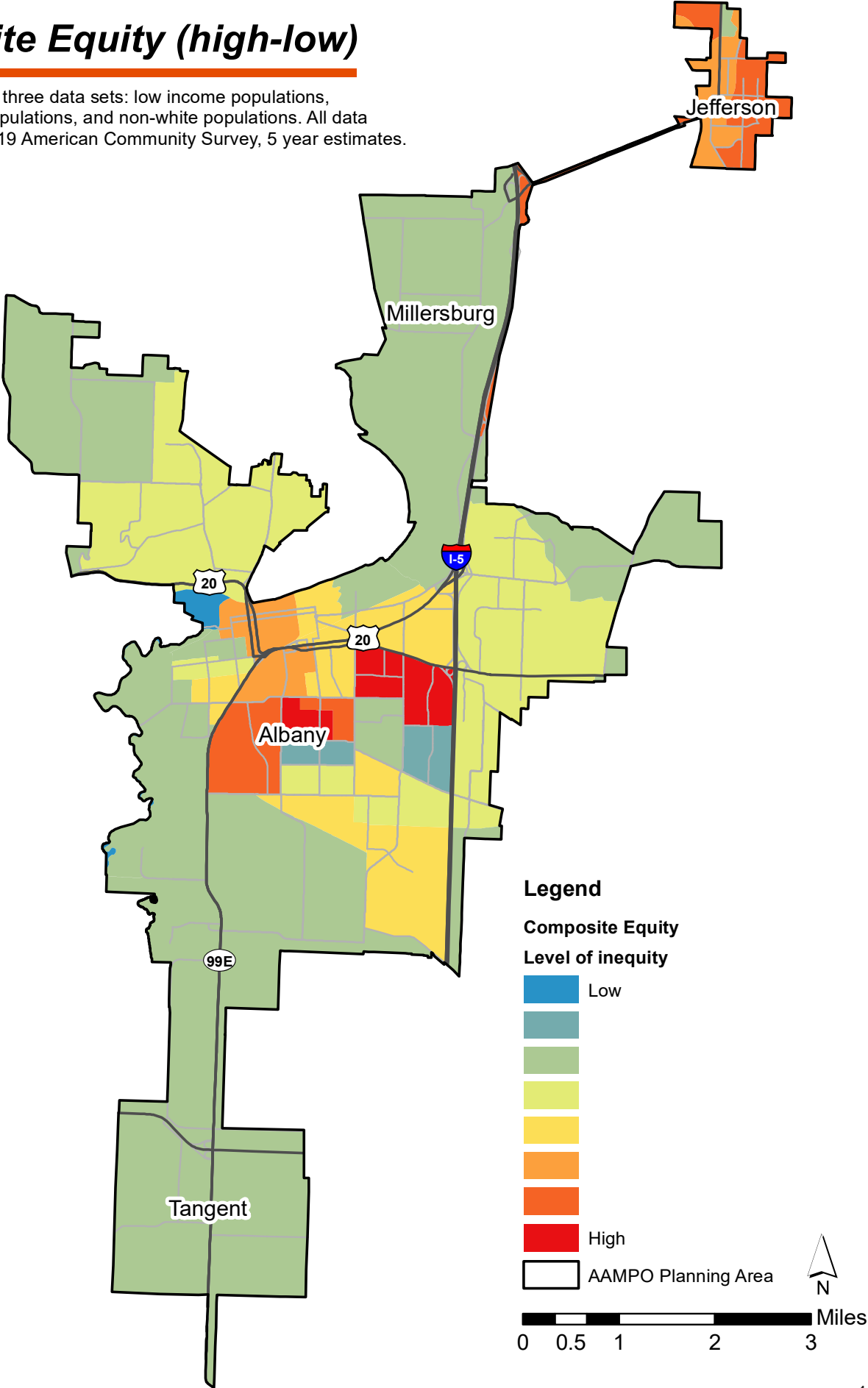


Figure 2.5 Map of Composite Equity (high-low)

Composite Equity (quartiles)

This map combines three data sets: low income populations, senior and youth populations, and non-white populations. All data is from the 2014-2019 American Community Survey, 5 year estimates. Data is divided into quartiles, each quartile contains approximately 25% of the total data points.

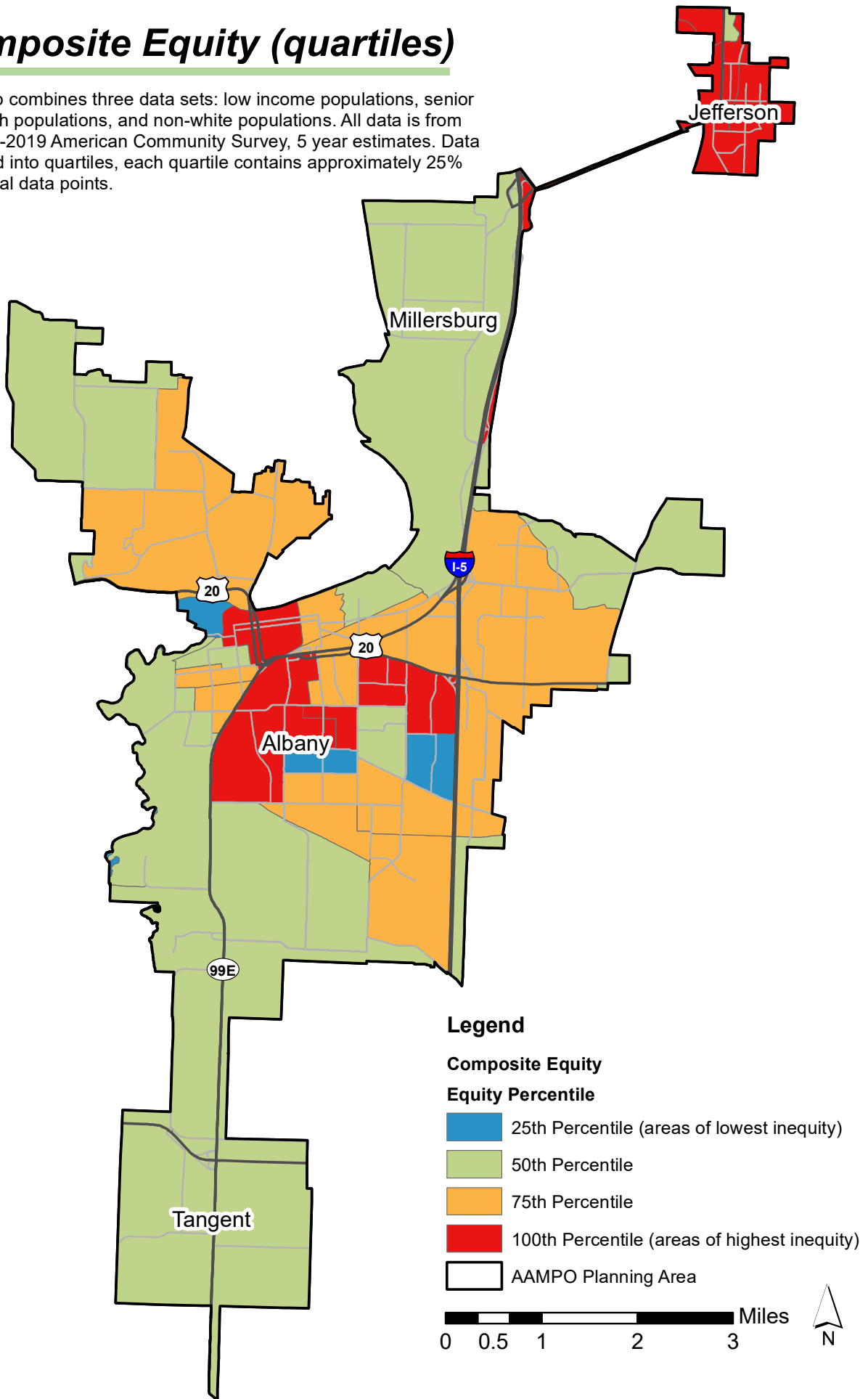


Figure 2.6 Map of Composite Equity (quartiles)

Existing Bicycle Conditions

This section describes existing bicycle conditions in the AAMPO planning area. It provides an introduction to bicycle infrastructure, talks about existing bicycle infrastructure, explores types of bicycle riders and bicycle level of stress, and concludes with a discussion about barriers to biking.

Introduction to Bicycle Infrastructure

There are many different types of bicycle infrastructure. AAMPO community members are likely familiar with shared lanes and bike lanes. Shared lanes are denoted with a “sharrow” marking, indicating that cars and bicyclist should share the lane space.

Bike lanes are smaller, typically four to six foot wide, lanes adjacent to vehicle travel lanes that are only used by bicyclist. Bike lanes typically have a painted bicyclist and arrow on the lane, indicating its use and direction of bicycle travel.

Bike lanes and shared lanes (aka “sharrows”) are commonly seen in the United States, but many other forms of bicycle infrastructure exist. These include buffered bike lanes, two way separated bike lanes, shoulder bike lanes and shared use paths. There are also smaller examples of bicycle infrastructure, such as bike racks and bicycle activated traffic signals.

Existing Bicycle Infrastructure

Bicycle infrastructure in the AAMPO planning area currently includes shared lanes, shoulders, bike lanes, and multi-use paths. In general, **bike lanes** exist along busier roads, while shared lanes are marked on some neighborhood streets. Albany and Tangent also have **shared use paths** that both bicyclists and pedestrian can use, primarily through city parks and recreational areas.



Shared lane with sharrow marking



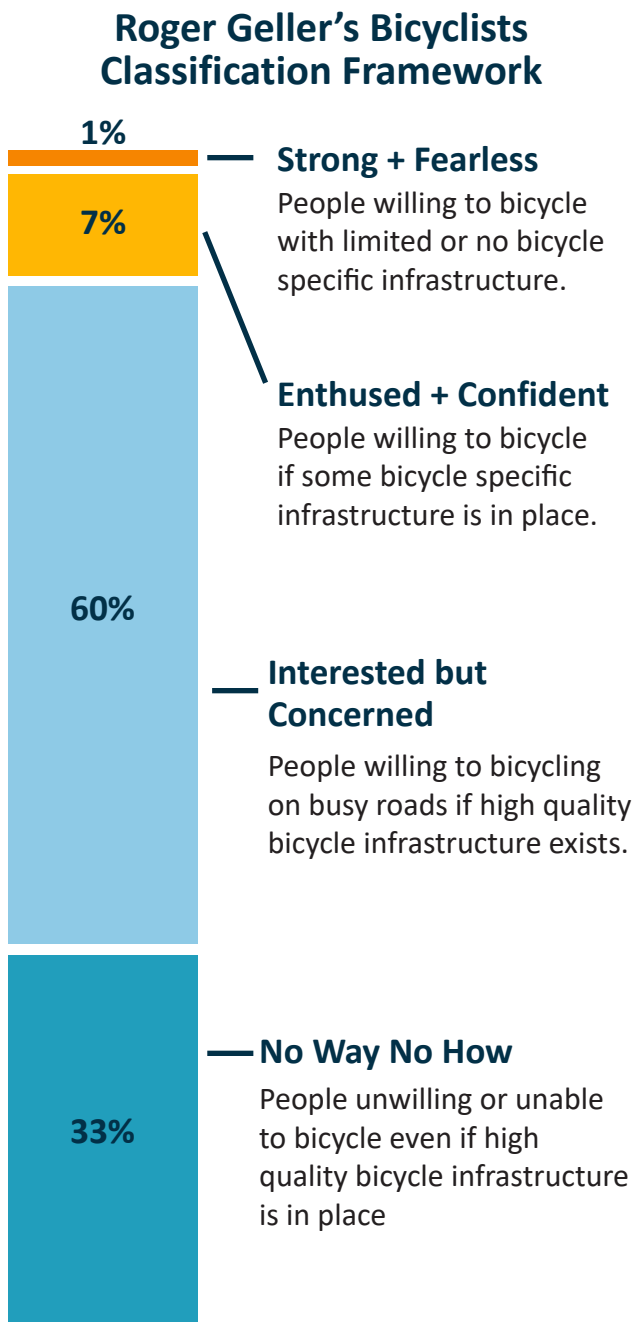
Bike lane



Two way separated bike lane, bicyclists and vehicles are separated by a curbed median

Types of Bicycle Riders

Understanding the different types of bicycle infrastructure available, from shared lanes with vehicles to separated multi-use paths, is important because **not all people are comfortable bicycling on all infrastructure types**. Roger Geller, Portland, Oregon’s former bicycle coordinator, created the **bicyclist classification framework**, shown below, to categorize bicyclists based their disposition towards biking and preferred bicycle infrastructure types.



According to Geller, the majority of the population, 60% of people, are **“Interested but Concerned”** bicyclists, meaning they are willing to bicycle on busy roads only if high quality bicycle infrastructure, like separated bike lanes, exists. Interested but concerned bicyclists are generally comfortable bicycling on low traffic, low speed neighborhood roads as well.

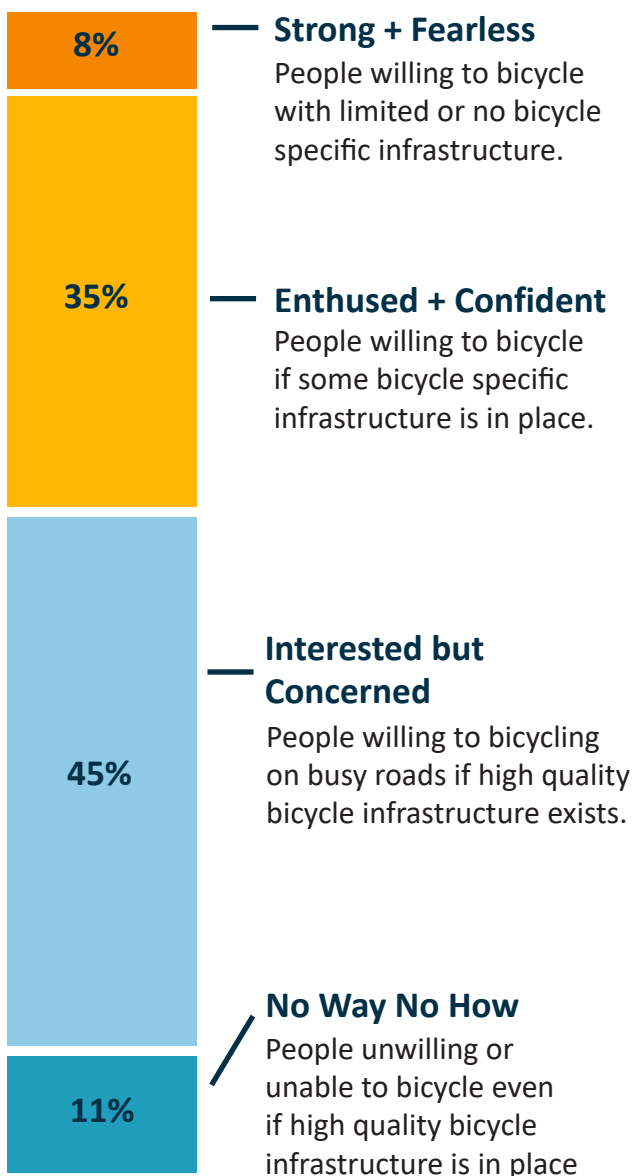
The second largest group of rider (33%) are the **“No Way No How”** riders, these are people who are completely unwilling or unable to ride a bicycle. They will not bike under any conditions.

Geller estimates about 7% of the population are **“Enthused and Confident”** bicyclists. These are people who are generally comfortable bicycling along busier roads if there is some kind of bicycle specific infrastructure, like a bike lane, available.

“Strong and Fearless” bicyclists make up the smallest portion of the population, an estimated 1%. These are people who are willing to bike in heavy and/or fast moving traffic with no bike lanes or limited road shoulders. If you ever see a group of bike riders in brightly colored, tight spandex clothing traveling down a major road, they likely fall into the **“Strong and Fearless”** category of riders.

When surveyed, AAMPO community members displayed a greater propensity for biking than that proposed by Geller, as seen below. A full 45% of survey respondents identify as “Interested but Concerned”, 35% identify as “Enthused and Confident”, and 8% identify as “Strong and Fearless” bicyclists. Only 11% of survey respondents identify as “No Way No How” bicyclists.

AAMPO’s Bicyclists Classification Framework



Overall, survey respondents’ greater propensity for biking and the high percentage of “Interested but Concerned” respondents **is a good indicator that improving bicycle infrastructure will result in more bicycle trips.**

Providing bicycle infrastructure catered to “Interested but Concerned” bicyclists, such as separated bike lanes, has the added benefit of also increasing safety and comfort for the ‘Enthused and Confident” group and the “Strong and Fearless” group. These two groups will likely bike without high quality bike infrastructure, but it doesn’t mean they won’t use and appreciate high quality bike infrastructure when it is made available.

By catering to the “Interested but Concerned” bicyclists, we are catering to lowest common denominator of rider (since we know people in the “Now Way No How” group are unlikely to ever ride a bike). Friends and family members who may have previously not ridden bikes together because of their different infrastructure needs may now be able to bike together to a park, school, or other destination.

Total responses to survey question: 253. Total does not add to 100% because of rounding.

Bicycle Level of Traffic Stress

Another way to think about bicycle infrastructure is to use Bicycle Level of Traffic Stress. Bicycle Level of Traffic Stress (BLTS) is a measure developed by Peter Furth that indicates how comfortable or uncomfortable a bicyclists would feel when riding along a particular road segment.

Roads are assigned a BLTS level between one and four. A road's BLTS is determined by the **road's speed limit, number of vehicle lanes, number of vehicles that use the road, availability of bicycle infrastructure, and position of bicycle lane relative to parking lanes**. The lower a road's BLTS level the more comfortable it is for bicyclist to use.

As seen in Figure 2.8, below, BLTS decreases with increased separation from vehicles and reduced vehicle traffic. Decreasing BLTS increases comfort, safety, and interest in bicycling for transportation. BLTS levels are described in more detail on the following page .

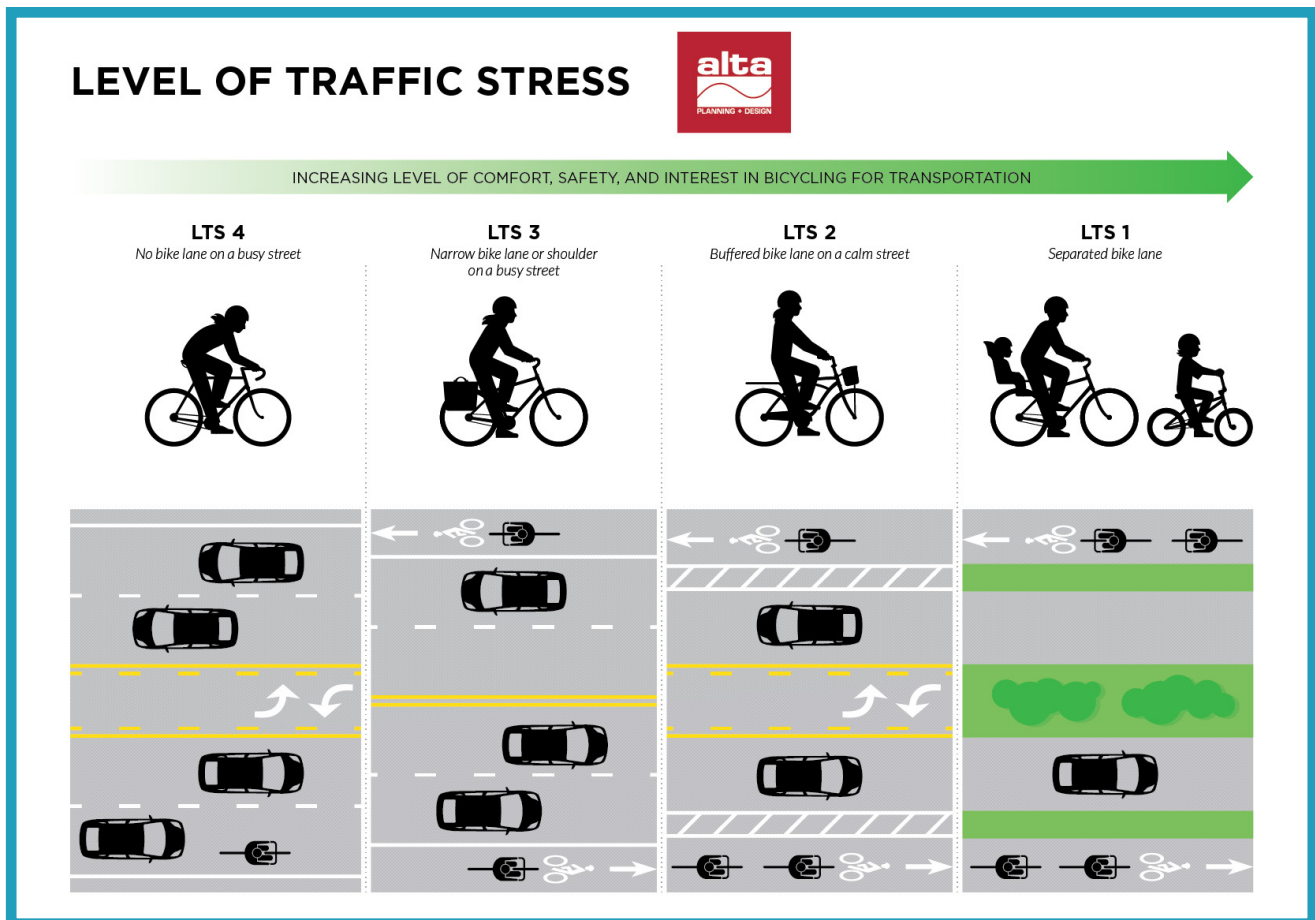


Figure 2.8: Level of Traffic Stress diagram created by Alta Planning. Traffic stress for bicyclists decreases with increased separation from vehicles and reduced vehicle traffic.

BLTS 1

BLTS 1: Little traffic stress, suitable for almost all bicyclists, attractive enough for a relaxing bike ride. OK for “Interested but Concerned” bicyclists and above.

Suitable for almost all bicyclists, including children trained to safely cross intersections that are easy to approach and cross.

Bicyclists are either physically separated from traffic, or are in an exclusive bicycling zone next to a slow traffic with no more than one lane per direction, or are on a shared road where they interact with only occasional vehicles traveling at low speeds (25 mph and below).

Waterford Street SE in Albany is an example of a street with a BLTS of 1.



Periwinkle Path in Albany
Photo by Nick Meltzer

BLTS 2

BLTS 2: Little traffic stress, suitable for most adults but demanding more attention than might be expected from children. Generally OK for “Interested but Concerned” bicyclists and above.

Bicyclists are either physically separated from traffic, or are in an exclusive bicycling zone next to well-confined traffic, or are on a shared road where they interact with only occasional vehicles traveling at low speeds.

Where a bike lane lies between a through lane and a right-turn lane, it is configured to give bicyclists priority where cars cross the bike lane and to keep car speed in the right-turn lane comparable to bicycling speeds. Crossings are not difficult for most adults.

Marion Street SE in Albany is an example of a street with a BLTS of 2.



Marion Street SE in Albany
Photo from Google Maps Street View

BLTS 3

BLTS 3: More traffic stress than BLTS 2, yet markedly less than the stress of integrating with multilane traffic. OK for “Enthusied and Confident” bicyclists and above.

Offering bicyclists either an exclusive riding zone (lane) next to moderate-speed traffic (25-35 mph) or shared lanes on streets that are not multi lane and have moderately low speed. Crossings may be longer or cross higher-speed roads than allowed by BLTS 2, but are still considered acceptably safe to most adult pedestrians.

Queen Avenue SE in Albany is an example of a street with a BLTS of 3.



Queen Avenue SE near Oak Street in Albany
Photo by Nick Meltzer

BLTS 4

BLTS 4: A level of stress beyond BLTS3. OK for “Strong and Fearless” bicyclists.

Only acceptable to “strong and fearless” bicyclists, who will tolerate riding on roadways with higher motorized traffic volumes and speeds (over 35 mph).

Oregon 99E in Albany is an example of a street with a BLTS of 4.



OR 99E in Albany, near the entrance to LBCC

Photo from Google Maps Street View

Multimodal Connectivity Study

In 2019 AAMPO conducted a Multimodal Connectivity Study. The study included mapping bicycle level of traffic stress (BLTS) throughout the AAMPO planning area. Figure 2.7, on the following page, is a map of BLTS from the multimodal connectivity study.

Red and yellow lines represent roads with higher levels of BLTS, areas where many people would not feel comfortable enough to bike. Not surprisingly many of the red and yellow roads have lots of vehicle traffic and relatively high speed limits.

Green and blue lines represent roads with lower levels of BLTS, where it's more comfortable to bike. Many of these roads are local streets with fewer vehicles and lower speed limits. Note that the Multimodal Connectivity Study did not collect data for neighborhood streets, the study assumed all neighborhood streets to have a BLTS of 1 (blue).

While there are a considerable number of green and blue low-stress roadways, they are not very well connected. Getting across town or moving between communities often requires using or crossing more high stress, yellow and red, roads. This lack of connectivity limits the usefulness of the bike network, especially for "Interested but Concerned" bicyclist.

Roads with a BLTS of 3 or 4 that connect communities include OR 164, Old Salem Road, Knox Butte Road, North Albany Road, Waverly Drive, Queen Avenue, 34th Avenue, and 99E. Many of the roads with BLTS of 3 or 4 are also the roads that people use to access community destinations, such as grocery stores and bus stops.

Bicyclists use these roads to access destinations just like cars do, so making bicyclist trips as safe and comfortable as possible along these roads is key, especially since these routes tend to have heavier and faster car traffic as compared to neighborhood streets.

Why is that person riding on the sidewalk?

Have you ever seen a bicyclist riding on the sidewalk in your community – even when there is a bike lane? This is often a sign that the person doesn't feel safe or comfortable enough to use the existing bicycle facilities, the Bicycle Level of Traffic Stress (BLTS) is too great for them.

This is a good indication that improved bicycle facilities are needed. You wouldn't build a road that people don't feel safe enough to drive on, the same logic applies to bicycle facilities too!



Photo of Highway 99E in Albany from Google Maps Street View

Bicycle Level of Traffic Stress

Bicycle facilities were evaluated using Peter G. Furth's criteria for bicycle levels of traffic stress (LTS). Data to calculate bicycle level of traffic stress (LTS) was compiled from local jurisdiction transportation system plans. Neighborhood streets are assumed to have an LTS of 1.

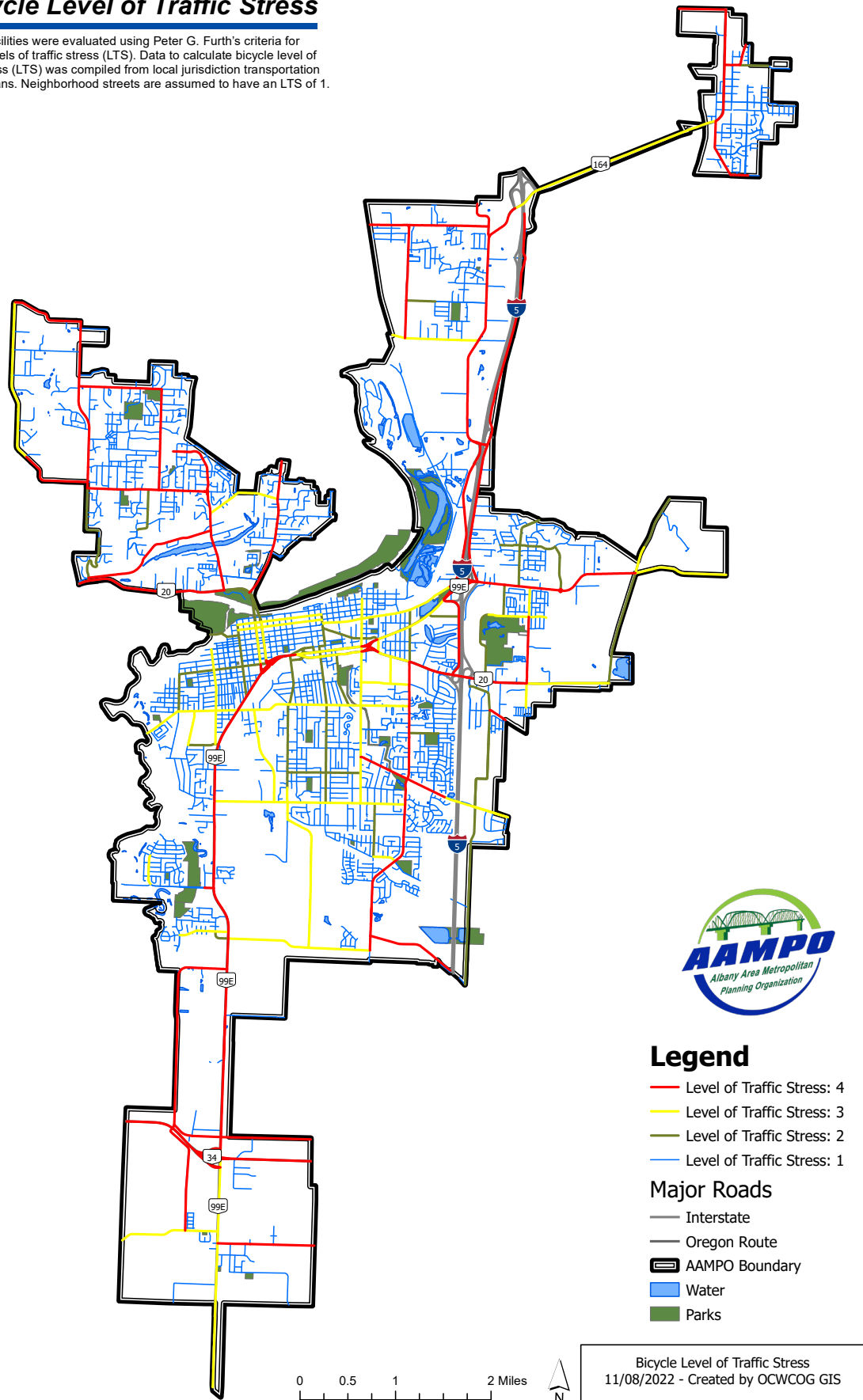


Figure 2.7: Map of Bicycle Level of Traffic Stress from Multimodal Connectivity Study

Barriers to Biking

In addition to mapping bicycle level of traffic stress, we also asked community members about barriers to biking. Barriers to biking are things that keeps people from biking or from biking more often.

Barriers include a wide range of items, from poor weather, worries about personal safety while biking, long distances between origins and final destinations, and not owning or knowing how to ride a bicycle, to name just a few.

Question 18 of the written survey about active transportation asked the following question, “If

driving is your primary mode of transportation, what keeps you from bicycling more often?”

Respondents were asked to choose from 12 possible barriers and had the option to write in other barriers as well. Respondents were asked to select as many of the barriers as they felt applied to them. Figure 2.8, below, shows responses to the question

The following two pages discuss the most selected barriers in more detail and highlight some of the open ended responses we heard when we asked community members to provide additional detail about what keeps them from walking more often.

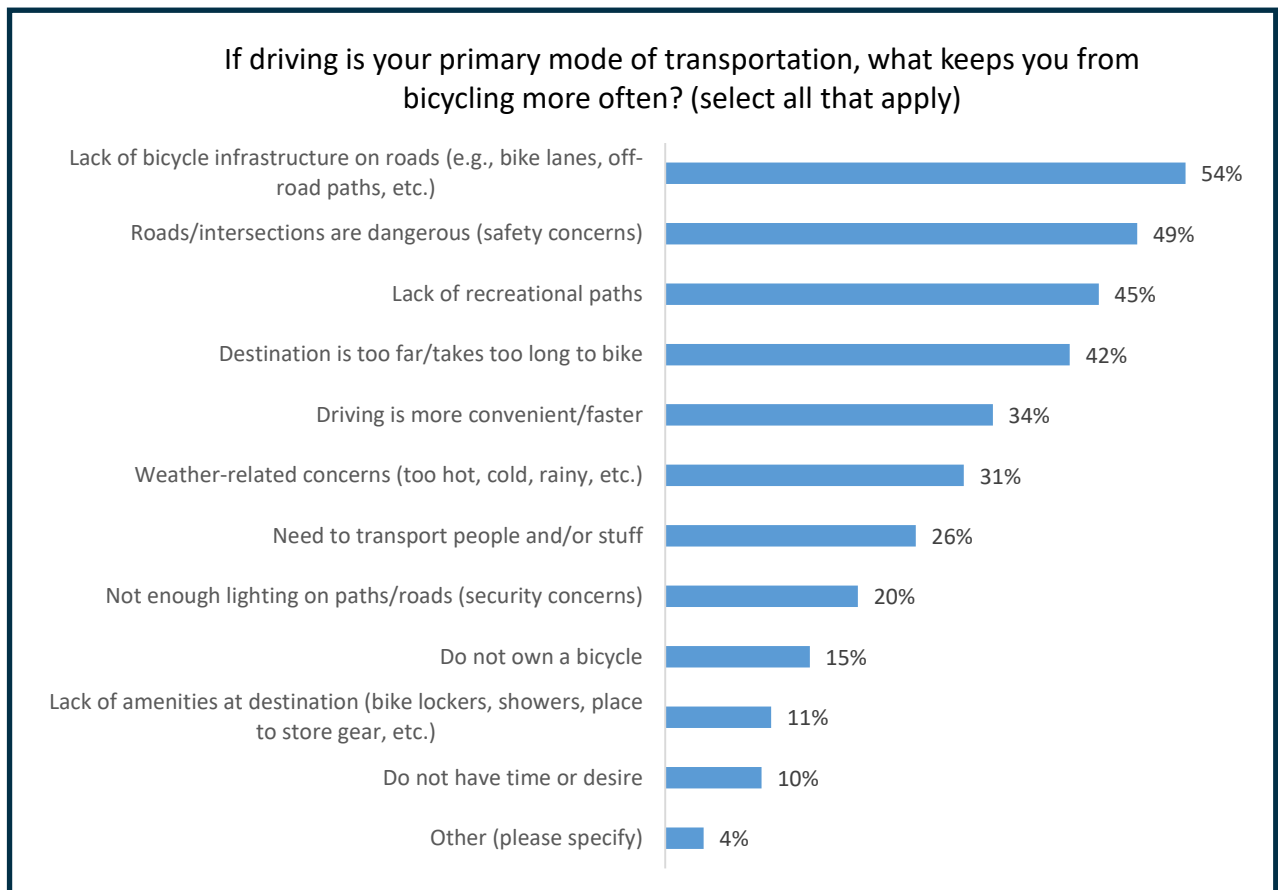


Figure 2.8: Survey responses to barriers to bicycling question. Total number of people who answered barriers to biking question: 246. Total selected barriers: 840. Respondents were able to select all barriers they feel apply to them.

As seen in Figure 2.8 on the previous page, the **top four barriers to bicycling respondent chose were;**

1. Lack of bicycle infrastructure on roads (54%)
2. Roads/intersections are dangerous (49%)
3. Lack of recreational paths (45%),
4. Destination is too far/takes too long to bike (42%)

Of the top four barriers, the top three are related to the availability of infrastructure, both on and off road. This is plan directly addresses those barriers by suggesting locations for

new bicycle infrastructure and identifying the recommended type of infrastructure for those locations.

Other barriers, such as destinations being too far away and driving being more convenient can be addressed by increasing the allowed mix of uses in neighborhoods – essentially bringing destinations such as corner grocery stores, coffee shops, and daycares closer to community members!

Mixed use zoning and other policies and programs that support more walking and bicycling are expanded upon in Chapter 5, Policy and Program Recommendations.

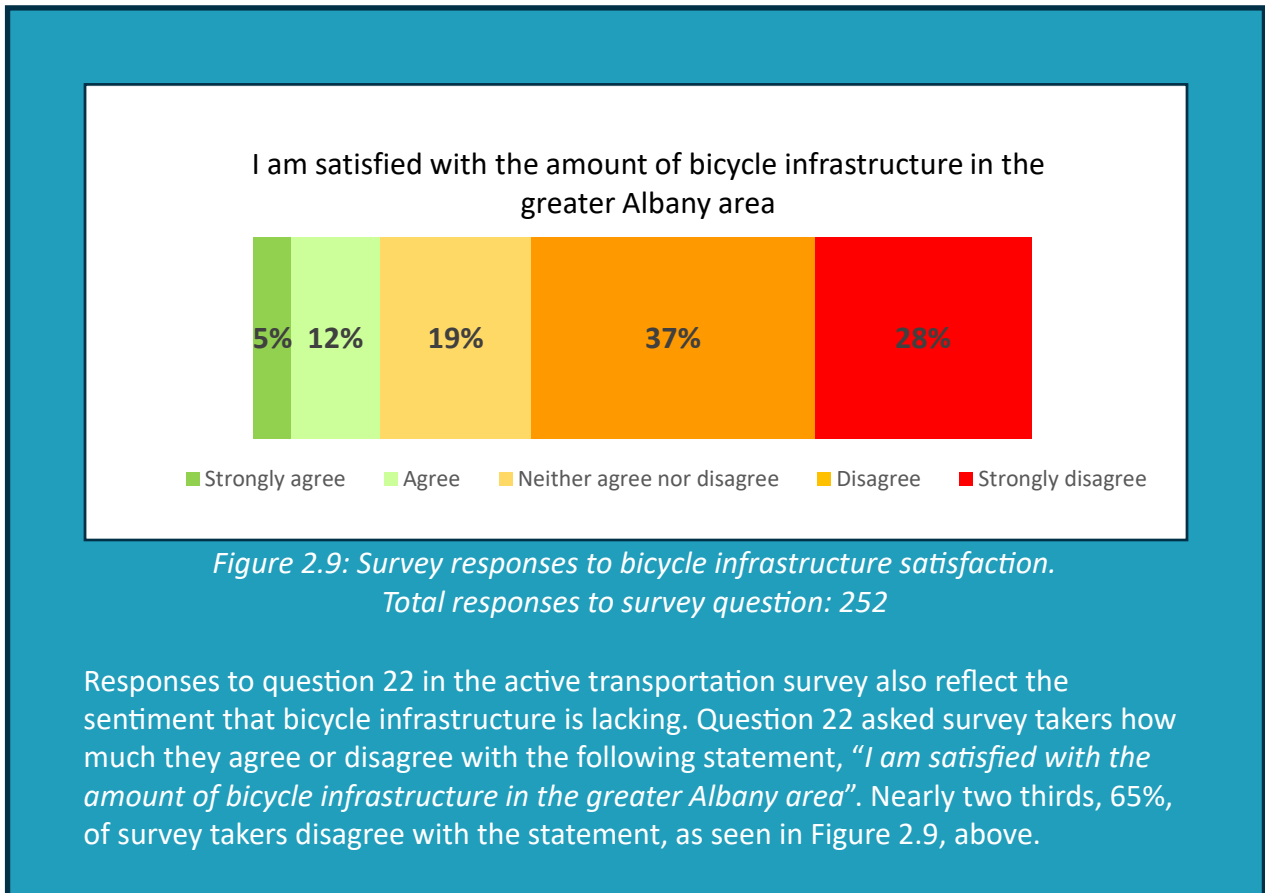


Figure 2.9: Survey responses to bicycle infrastructure satisfaction. Total responses to survey question: 252

Responses to question 22 in the active transportation survey also reflect the sentiment that bicycle infrastructure is lacking. Question 22 asked survey takers how much they agree or disagree with the following statement, “I am satisfied with the amount of bicycle infrastructure in the greater Albany area”. Nearly two thirds, 65%, of survey takers disagree with the statement, as seen in Figure 2.9, above.

What we heard about what keeps people from bicycling more

“ I am 80 years old but I still have my bike and I am healthy. Would love to bike more often but I do not feel safe out there on the road (traffic and bad people). ”

“ Driving is more convenient for me. ”

“ Concerns about my safety. ”

“ Similar reason as to not being able to walk safely on the road. The road can feel like it’s too busy even for biking. ”

“ I would love to be able to secure my bike knowing that someone will not walk away with my bike or a part from my bike while shopping in a store or visiting a business. ”

“ Albany has some good bike paths but you still have to leave them and cross major and dangerous intersections. I’d ride more if I could be on a bikes only path the whole way. ”

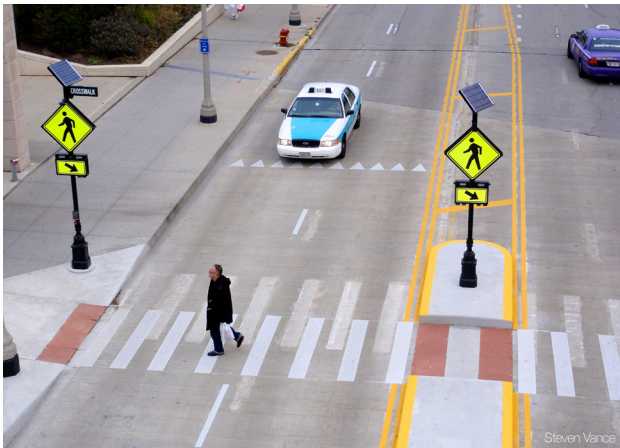
“ Albany’s drivers do not seem to pay attention to bikers. I have had instances where I have almost been hit. And I have seen too many bikers be hit by unaware drivers. Even with bike lanes on the road, I often do not feel comfortable in Albany riding my bike. ”

Existing Pedestrian Conditions

This section describes existing pedestrian conditions in the AAMPO planning area. It provides a brief introduction to pedestrian infrastructure, talks about barriers to walking, and concludes with a map and discussion of pedestrian facilities in the AAMPO planning area.

Introduction to Sidewalks and Pedestrian Infrastructure

There are many different types of pedestrian infrastructure within the AAMPO planning area. Pedestrian infrastructure include sidewalks, trails, shared use paths, crosswalks and any other kind of infrastructure that helps people on foot get around. Curb ramps, walk signs at intersections, and rapid flashing beacons are less obvious examples of pedestrian infrastructure. While called “pedestrian infrastructure”, this kind of infrastructure also helps people who are not on foot, such as people in wheelchairs and children in strollers. Below are photos of common pedestrian infrastructure.



Pedestrian infrastructure can include crosswalks and rapid flashing beacons, curb ramps, walk signs at intersections, and sidewalks separated from the roadway with landscaping.

Barriers to Walking

While there are plenty of examples of pedestrian infrastructure through the AAMPO planning area, many people still face barriers when it comes to accessing destinations by walking. Barriers to walking are things that keeps people from walking or from walking more often.

Barriers can include lack of sidewalks or large curbs and no curb ramps, and uncomfortable street crossings. Additional barriers may be unique to an individual, such as limited mobility due to injury or aging, and to weather conditions, such as extreme hot or cold.

Question 10 of the active transportation survey asked “If driving is your primary mode of transportation, what keeps you from walking more often?”

Respondents were asked to choose from 11 possible barriers and had the option to write in other barriers as well. Respondents were asked to select as many of the barriers as they felt applied to them. Figure 2.10, below, shows responses to the question.

The following two pages discuss the most selected barriers in more detail and highlight some of the open ended responses we heard when we asked community members to provide additional detail about what keeps them from walking more often.

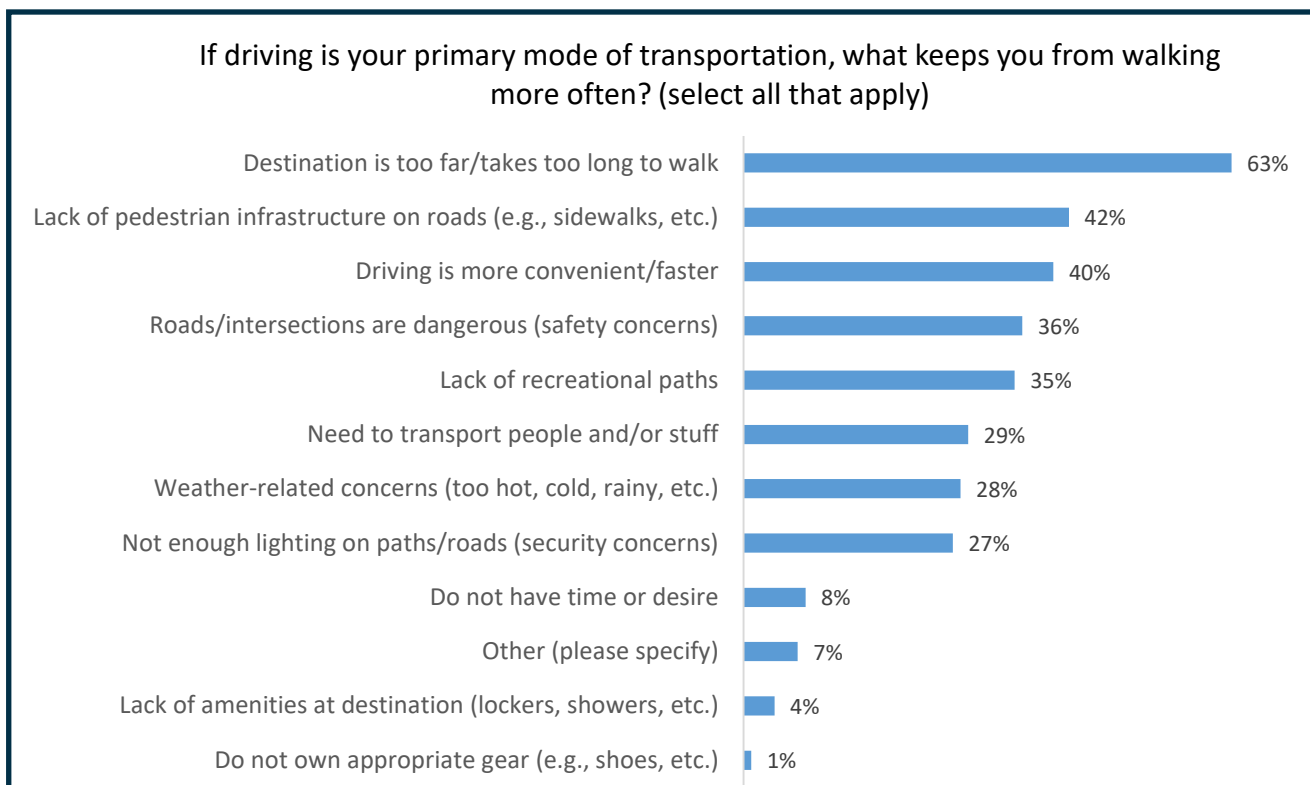


Figure 2.10: Survey responses to barriers to walking question. Total number of people who answered barriers to walking question: 259. Total selected barriers: 826. Respondents were able to select all barriers they feel apply to them.

As seen in Figure 2.10, the **top four barriers to walking** respondents chose were;

1. Destination is too far/takes too long to walk (63%)
2. Lack of pedestrian infrastructure on roads (e.g., sidewalks, etc.) (42%)
3. Driving is more convenient/fast (40%)
4. Roads/intersections are dangerous (safety concerns) (36%)

While not all of the barriers listed in the survey above can be removed (after all, we can't control the weather), we can implement infrastructure and policies to reduce many peoples' top barriers to walking.

The most common barrier to walking selected by respondents is destinations being too far away/taking too long to walk to. This barrier may at first seem insurmountable – after all, building a sidewalk to a grocery store doesn't change the distance between your house and

the grocery store - but we can put policies in place to encourage a greater mix of uses, such as corner grocery stores, daycares and coffee shops, in neighborhoods.

When we allow a mix of uses in neighborhoods we are essentially bringing destinations closer to community members! A greater mix of uses should be complemented with safe and comfortable walking routes, including intersections, to ensure pedestrians can reach their new destinations.

Increasing nearby destinations by allowing a mix of uses and providing safe and comfortable ways to walk to those destinations can make picking up a cup of coffee on foot just as convenient as getting in a car to drive to your coffee.

Improved street crossings, mixed-use zoning, and other policies and programs that support more walking and bicycling are expanded upon in Chapter 5, Policy and Program Recommendations.

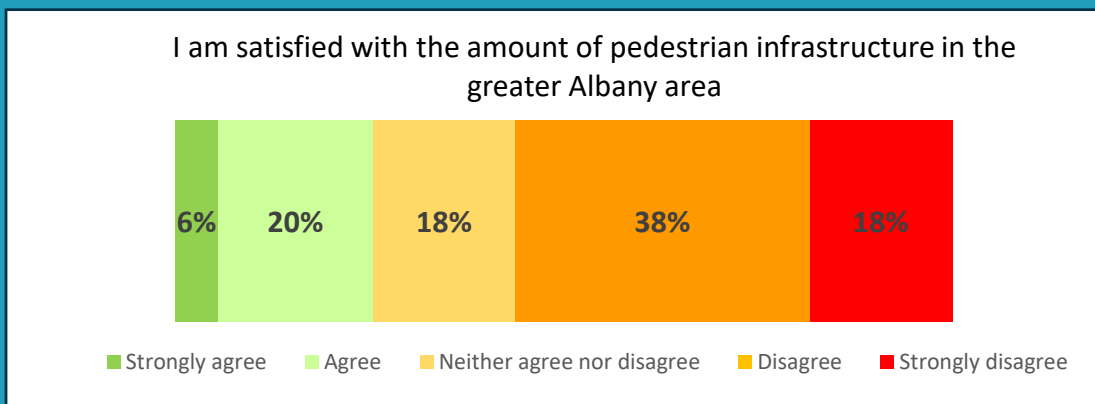


Figure 2.11: Survey responses to pedestrian infrastructure satisfaction. Total responses to survey question: 251

Responses to question 20 in the active transportation survey also reflect the sentiment that pedestrian infrastructure is lacking. Question 20 asked survey takers how much they agree or disagree with the following statement, "I am satisfied with the amount of pedestrian infrastructure in the greater Albany area". Nearly half, 56%, of survey takers disagree with the statement, as seen in Figure 2.11, above.

What we heard about what keeps people from walking more

“Some of my destinations are too far (Salem) but many I could walk if the sidewalks were better or there were trails/paths that cut across areas. The other issue is there is no grocery store that is close. I do walk to the Darimart but it is not good enough for most stuff.”

“It is 1.5 miles to the nearest shopping center. That’s a 3 mile round trip and an hour of walking. There is no businesses at all any closer. That hour round trip puts a big hole in my day.”

“Intersections that are dangerous.”

“Absence of sidewalks on my street, keeps me from feeling comfortable taking my kids out for walks or bike rides.”

“Sidewalks in my neighborhood do not have complete connectivity.”

“Where I live in Jefferson, Main St lacks sidewalks and so it’s sometimes dangerous to walk on the road or sides when traffic is really busy.”

“It isn’t safe, cars are impatient. Fumes, no shade trees, no easy way to cross large intersections.”

“Cars drive super fast and there isn’t any walking paths for my son to walk to and from the middle/high school area. If there was I would feel better about letting him do that. Which he wants to do.”

Sidewalk Infrastructure

In 2020 AAMPO conducted a multimodal connectivity study. The study included mapping and evaluating sidewalks throughout the AAMPO planning area.

Sidewalks were evaluated using Oregon Department of Transportation's Multimodal Analysis Methodology. The Multimodal Analysis Methodology is based on the presence of a sidewalk and the presence and type of buffer zone between pedestrians and vehicles, such as a bike lane, landscape/planter, and on-street parking. Sidewalks are described as either excellent, good, fair, or poor depending on their characteristics.

- **Excellent:** substantial separation between the sidewalk and roadway, or multi-use path
- **Good:** sidewalks on both sides of the roadway
- **Fair:** sidewalk is curb tight which can be uncomfortable for pedestrians
- **Poor:** no sidewalks

Figure 2.12, on the next page, shows the final sidewalk evaluation. As can be seen in Figure 2.12, downtown Albany has a fairly dense network of good sidewalks. Neighborhoods just west of I-5 in Albany also have a sizable number of good sidewalks, though they are not as well connected as the sidewalks in downtown Albany.

Remaining good sidewalks exist as small islands (not connected to other good sidewalks) in north Albany, southwest Albany and east Albany.

Both Millersburg and Jefferson contain a few good sidewalks, though they connect fewer than three or four streets. At the time this map was assembled Tangent did not contain any good sidewalks.



Sidewalk Rating

Sidewalks were evaluated using Oregon Department of Transportation's Multimodal Analysis Methodology. Data for evaluation came from local jurisdiction transportation system plans.

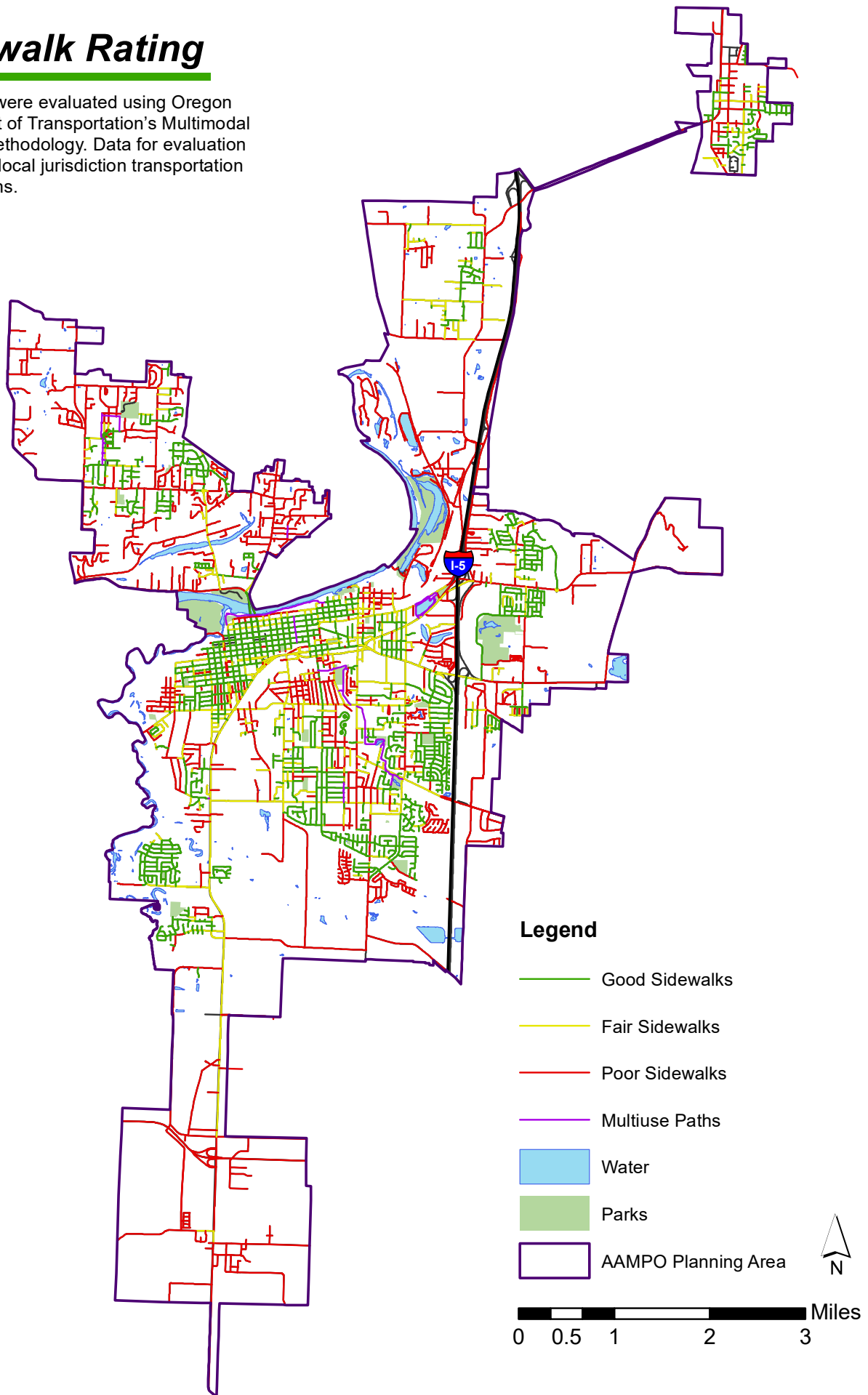


Figure 2.12: Map of pedestrian infrastructure rating

Select neighborhoods in Albany lack sidewalks completely (have “poor sidewalks”), as do areas of Jefferson, Millersburg, and Tangent. A lack of sidewalks along slow neighborhood streets may not impede peoples’ ability to walk within their neighborhood, but lack of sidewalks along busier roads that connect neighborhoods and other destinations may seriously diminish access.

Just as sidewalks may not be as critical along neighborhood streets, sidewalks are not always appropriate along other roads. Roads that carry lots of fast moving traffic, such as I-5, or rural roads that have limited use and few destinations are not always ideal for sidewalks.

All of the cities within the AAMPO planning area contain sidewalks rated as “fair”. A fair rating means that a sidewalk is present, but that it’s “curb tight”. A curb tight sidewalk does not have any kind of buffer, like a grassy strip or bike lane, between the sidewalk and the roadway.

On curb tight sidewalks pedestrians are walking next to vehicle traffic, separated from drivers by just a curb, this situation is often uncomfortable



A curb tight sidewalk along Waverly Drive in Albany. Photo from Google Maps Street View.

and unpleasant for pedestrians walking along roads with lots of fast moving vehicles.

Roads on which good sidewalks and other pedestrian facilities are most important are roads that connect neighborhoods to community destinations, such as schools, grocery stores, and retail areas. These roads are often called “collectors” by transportation professionals because they “collect” local neighborhood traffic and direct it towards community destinations outside of the neighborhood.

Destinations are also often located along “arterial” roads, which are larger than collectors and commonly contain bus routes. Pedestrians use these routes to access destinations just like cars do, so making pedestrians’ trips as safe and comfortable as possible along these routes is key, especially since these routes tend to have heavier and faster car traffic as compared to neighborhood streets.

Collectors and arterials in the AAMPO planning area include North Albany Road, Crocker Lane, Knox Butte Road, Queen Avenue, 34th Avenue, OR-99E, US-20, and others.



Queen Avenue is an example of an arterial street in Albany. Photo from Google Maps Street View.

Bicycle and Pedestrian Crash Conditions

Understanding where crashes involving people walking or using mobility devices, such as bikes, have occurred throughout the AAMPO planning area is important because it provides insight into locations and conditions that may need to be addressed to improve safety and comfort.

Data for bicycle and pedestrian crashes in the AAMPO planning area was collected from ODOT's Oregon Transportation Safety Data Explorer program. The data includes all reported bicycle and pedestrian involved crashes that occurred between January 2014 and December 2018.

It is important to note that only reported crashes are included, we do not know the true number of bicycle and pedestrian crashes or near misses that occurred in the AAMPO planning area between 2014 and 2018.

Pedestrian Involved Crashes

Between January 2014 and December 2018 there were a total of 73 pedestrian crashes within the AAMPO planning area, seven of which were fatal. Figure 2.13, on the following page, shows where each crash occurred.

All crashes occurred in Albany, with the exception of one crash in Tangent. Within Albany, most crashes are centered west of I-5 and north 34th Avenue, only a single crash occurred in North Albany. Streets with a notable number of crashes include the following:

- Ellsworth Street
- Queen Avenue
- 34th Avenue
- Waverly Drive
- Geary Street
- OR99E
- US20

Many of the streets with high numbers of crashes have higher motor vehicle volumes and speed limits than the surrounding street. Many of the crash locations also coincide with areas of higher inequity; where there are larger percentages of people of color, lower-income residents, and younger and older residents.



Photo by Dan Burden / www.pedbikeimages.org

Safer Infrastructure

Infrastructure features such as pedestrian refuge islands, pictured to the left, can make street crossings safer for pedestrians by allowing them to cross one direction of traffic at a time.

Pedestrian Crashes: 2014-2018

Data from Oregon Department of Transportation's Oregon Transportation Safety Data Explorer program. Data includes crashes reported between January 2014 and December 2018.

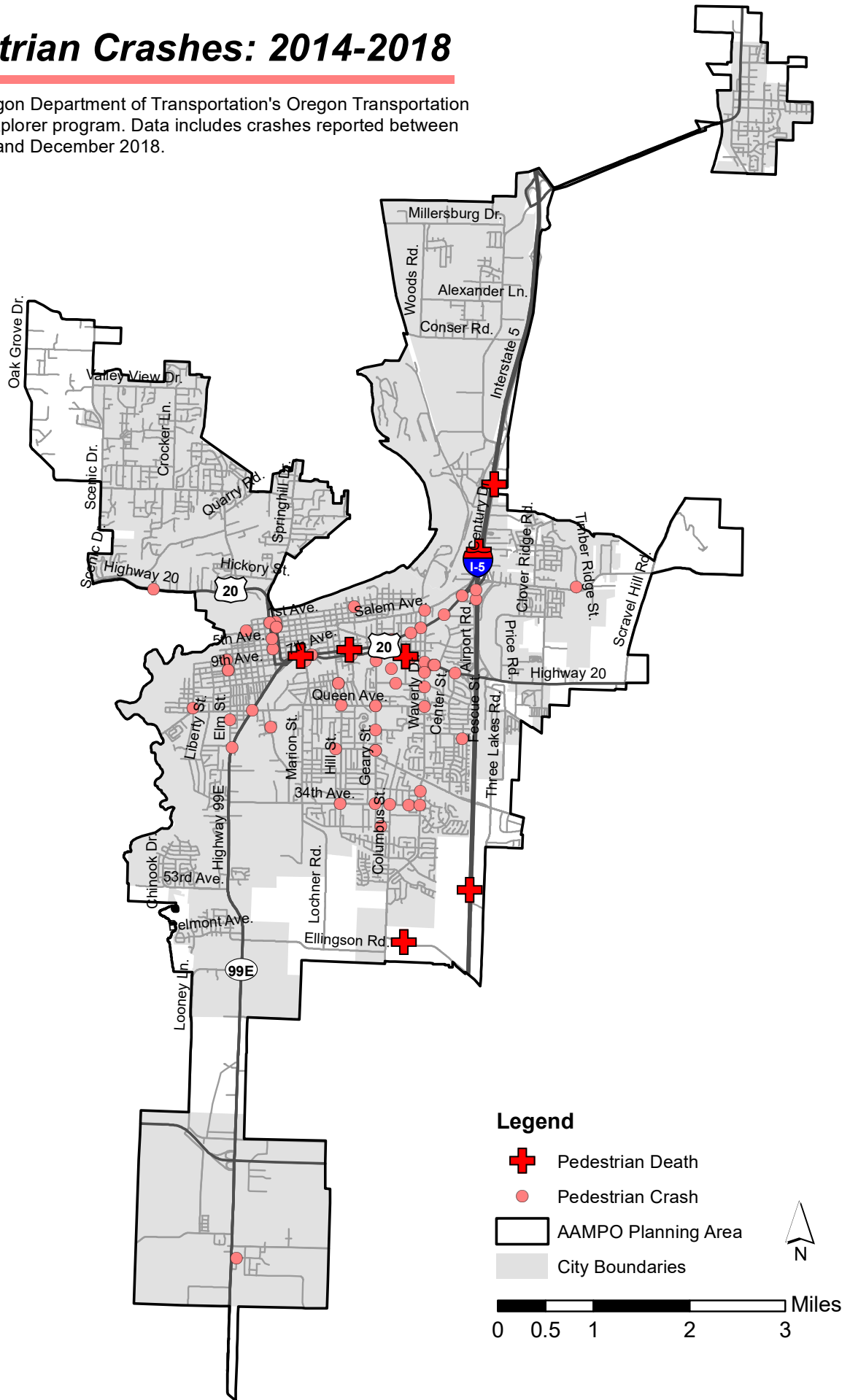


Figure 2.13: Map of pedestrian involved crashes

Pedestrian Crash Conditions

Understanding more nuanced information about pedestrian crashes, such as the lighting and the type of roadway a crash occurred on, can help us focus pedestrian improvements to areas where they are most needed. For example, if lots of pedestrian crashes occurred at intersections, we could devote resources to making crossings safer.

Figure 2.14 shows pedestrian crashes by roadway type. A full 63% of all 73 pedestrian involved crashes occurred at an intersection, 32% occurred on a straight roadway, and 5% occurred elsewhere (such as in parking lots).

These numbers suggest that intersections, where pedestrians are crossing in front of motorists, are the most hazardous types of roadways for people on foot.

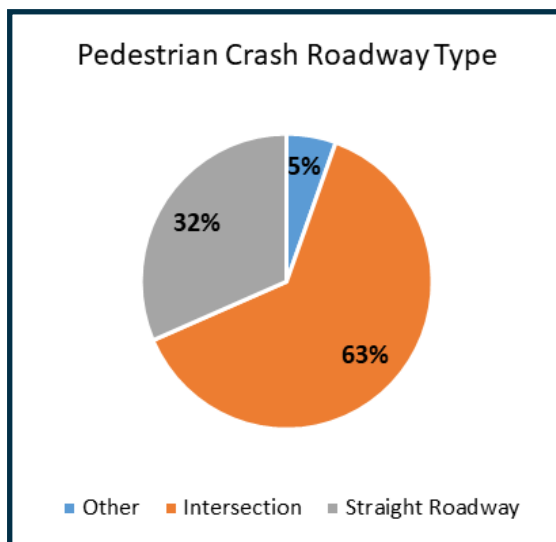


Figure 2.14: Pedestrian crashes by road type

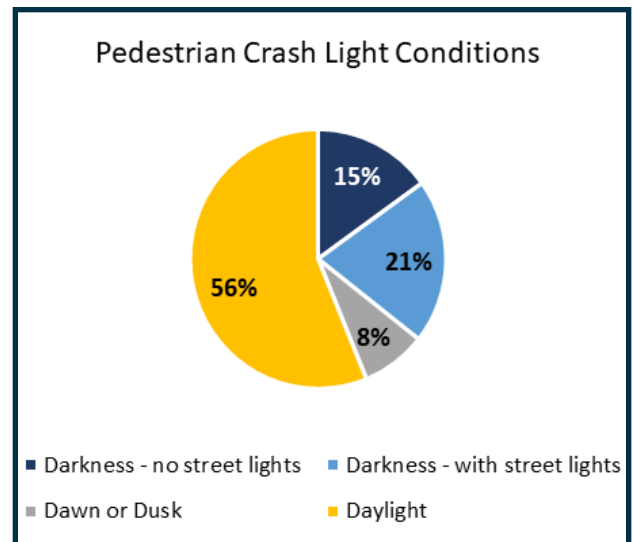


Figure 2.15: Pedestrian crashes by light condition

Figure 2.15, above, shows the light conditions at the time of the crash. Of 73 total pedestrian crashes, 56% occurred in daylight, 8% occurred at dawn or dusk, 21% occurred in darkness with street lights, and 15% occurred in darkness without street lights.

The higher percentage of daylight crashes likely indicates two things, 1) most pedestrians are out walking when it is light out and 2) that while pedestrians are visible in the daylight motorists are not seeing them in time to prevent a crash.

A fair percentage of pedestrian crashes, 36%, also occur when it is dark out, indicating that peoples' need to reach destinations is not limited to the daylight hours.

Bicycle Involved Crashes

Between January 2014 and December 2018 there were a total of 91 bicycle crashes within the AAMPO planning area, one of which was fatal. All crashes occurred in Albany, with the exception of three crashes in Jefferson. Figure 2.16, on the following page shows where each crash occurred.

Within Albany, most crashes are centered west of I-5 and north of 34th Avenue. Three crashes occurred in North Albany. Streets with a notable number of crashes include the following:

- Ellsworth Street
- Queen Avenue (especially from Waverly Drive to Marion Street)
- Waverly Drive
- Geary Street
- 99E
- US20

All of the streets notable for high numbers of bicycle crashes are also noted as streets with lots of pedestrian crashes. Again, these streets have higher motor vehicle volumes and speed limits than surrounding streets, and also coincide with areas of higher inequity.



Photo of Chicago, IL, from Maricopa Association of Governments

Safer Infrastructure

Infrastructure features such as protected intersections (also called Dutch Style Intersections), pictured to the left, can make large intersections safer for bicyclists by increasing separation between vehicles and bicyclists and minimizing the amount of area where the two may mix.

Bike Crashes: 2014-2018

Data from Oregon Department of Transportation's Oregon Transportation Safety Data Explorer program. Data includes crashes reported between January 2014 and December 2018.

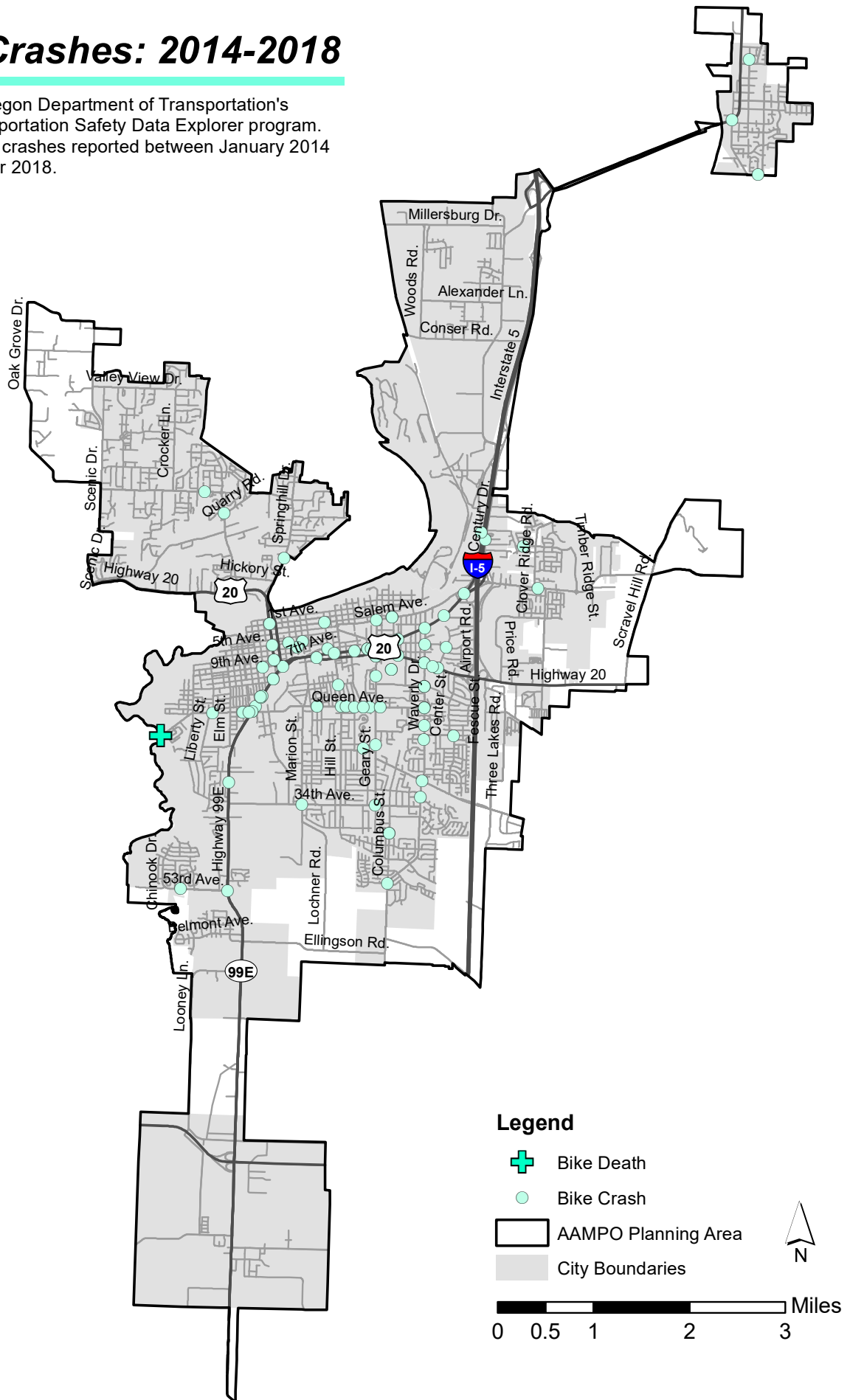


Figure 2.16: Map of bicycle involved crashes

Bicycle Crash Conditions

Understanding more nuanced information about bicycle crashes, such as the lighting and the type of roadway a crash occurred on, can help us focus bicycle improvements to areas where they are most needed. For example, if lots of bicycle crashes occurred at night in areas without street lights, we could devote resources to installing more lighting.

Figure 2.17 shows bicycle crashes by roadway type. A full 60% of all bicycle involved crashes occurred at an intersection, 14% at a driveway or alley, 22% on a straight roadway, and 3% occurred elsewhere.

These numbers suggest that intersections, where bikes and cars are turning and navigating traffic coming from other directions, are the most hazardous types of roadways for bicyclists.

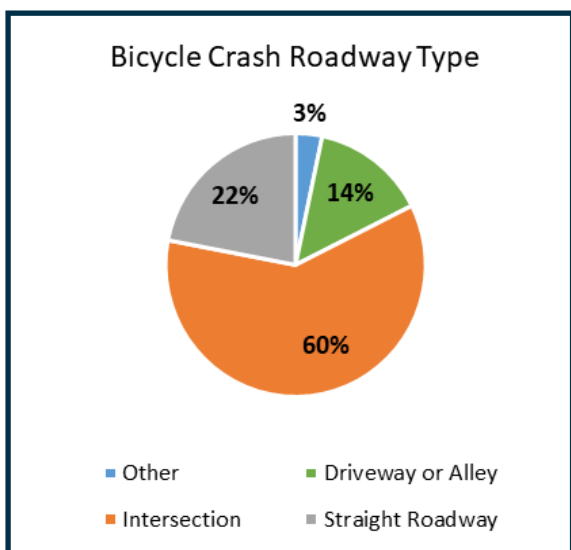


Figure 2.17: Bicycle crashes by road type

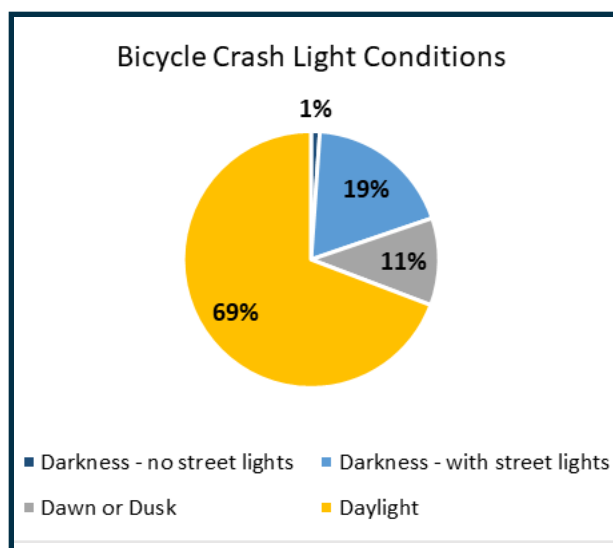


Figure 2.18: Bicycle crashes by light condition

Figure 2.18, above, shows the light conditions at the time of the crash. Of 91 total bicycle crashes, 69% occurred in daylight, 11% occurred at either dawn or dusk, 18% occurred in darkness with street lights, and only 1%, occurred in darkness without street lights.

The higher percentage of daylight crashes likely indicates two things; 1) that most bicyclists are riding when it is light out, and 2) that while bicyclists are visible in the daylight motorists are not seeing them in time to prevent a crash.

Existing Plans, Programs, and Policies

Each city and county that is part of the AAMPO planning area has their own planning documents and policies that help to guide bicycle and pedestrian investments. This section summarizes the content of these documents that is relevant to the development of the Bicycle and Pedestrian Plan.

[Benton County Transportation System Plan \(2019\)](#)

Benton County's Transportation System Plan (TSP) was formally adopted in 2019 and is intended to guide transportation investments in the county through 2040. Most of Benton County lies outside of the AAMPO area, with the exception of North Albany, which is located in the county's northeastern corner. The TSP has seven overarching goals, each with their own objectives. The goals that are most pertinent to the bicycle and pedestrian plan include safety, equity, and health.

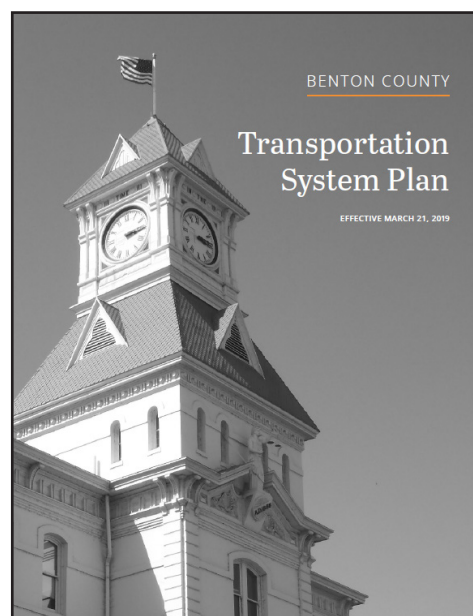
The Benton County TSP identifies five active transportation projects in the North Albany, though only four are within the AAMPO planning area. The TSP also identified a handful of modernization projects, in which streets are brought up to more urban standards by adding gutters, curbs, sidewalks and bike lanes. A selection of projects related to bicycles and pedestrians are listed below and classified by priority.

High priority

- US 20 Bike lanes (North Albany) - project may convert shoulders to bike lanes on US 20 in North Albany from Willamette River (including the Lyon Street bridge which has an existing shoulder)
- Crocker Lane Modernization - project may upgrade to cross-section standard with standard side sidewalk and bike lanes per Albany Development Code

Medium Priority

- Corvallis to Albany Shared-Use Path - project may construct off highway shared-use path off of US 20 within the City of Albany limits
- Albany to Corvallis Shared-Use Path River Crossing - project may construct bike/pedestrian bridge over the Willamette River and extending to Springhill Drive using the existing US 20 (Lyon Street) bridge
- Gibson Hill Road Modernization - project may upgrade to cross-section standard with bike lanes and additional sidewalk on the north side per Albany Development Code
- US 20 Widening (North Albany) - project may include widening US 20 to four lanes and adding sidewalk, curb, and gutter from North Albany Road west to the Albany urban growth boundary.



[Linn County Transportation System Plan, Volumes 1 and 2 \(2018\)](#)

The Linn County Transportation System Plan (TSP) was adopted in 2018 and will guide transportation investments in the county through 2038. Most of the AAMPO planning area is in northwest Linn County, including Millersburg, Albany east of the Willamette River, and Tangent.

The Linn County TSP lays out eight goals, each with its own list of objectives. The goals and objectives most pertinent to the Bicycle and Pedestrian plan include improving safety for all modes of transportation, especially called out is the need to improved safety for bicyclists and pedestrians at road crossings, increasing the convenience and availability of pedestrian and bicycle modes by improving connection and identifying improvements, and providing an equitable, balanced, multimodal system that provides access to under served and vulnerable populations (e.g. those who cannot obtain their own transportation due to a disability, age, or income).

In total, the Linn County TSP identifies 65 pedestrian and bicycle projects that, as originally proposed, would cost an estimated \$196.8 million to complete. Of those 65 projects, three are included in the fiscally constrained plan (Package 1).

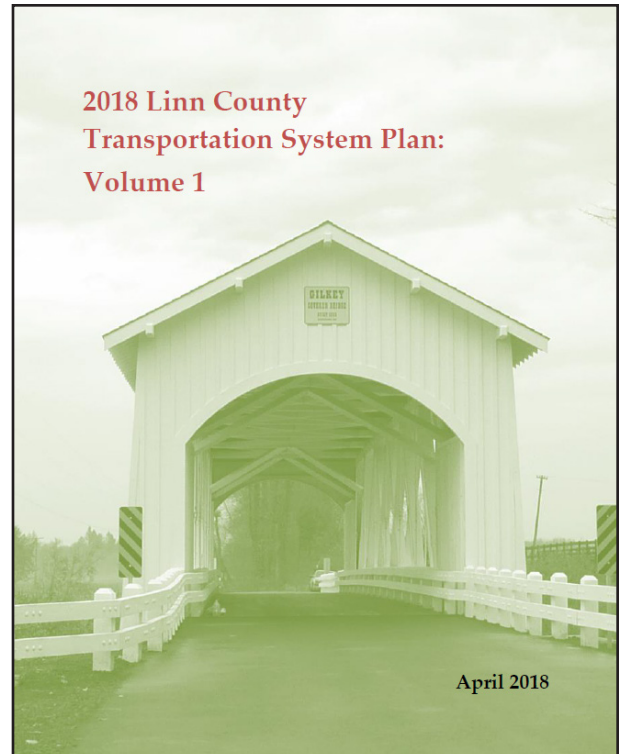
All three projects in the fiscally constrained plan (Package 1) lie outside of the AAMPO planning area. Packages 2, 3, and 4 include bicycle and pedestrian projects in the AAMPO area, though projects in these packages are unlikely to be implemented without additional funding, particularly the many projects in Package 4, the “Aspirational Plan”. Notable bicycle and pedestrian projects within the AAMPO planning area in Packages 2 and 3 are listed below.

Package 2

- Widen and replace Clover Ridge Road Bridge over Traux Creek to include sidewalks and bike lanes and storm water treatment

Package 3

- OR 99E / South Tangent Dr. - Improve Pedestrian Access (Tangent) on OR 99E
- Urban upgrade of US 20 East of I-5, to be coordinated with the City of Albany



Jefferson Transportation System Plan (2022)

Jefferson updated their Transportation System Plan (TSP) while the AAMPO Bicycle and Pedestrian Plan was being developed. Jefferson's new TSP guides transportation investments through 2041. Goals and objectives related to active transportation described in the TSP include providing safe routes for all modes of transportation, encouraging active transportation through policy and engineering, and making it more convenient for people to walk, bicycle, use transit, and drive less to meet their daily needs.

High priority bicycle and pedestrian related projects in the TSP include the following.

- Modernizing OR 164 from the southwest urban growth boundary to North Avenue, will include sidewalks and bicycle infrastructure (MM-03)
- Modernizing Main Street/ Jefferson Scio Drive, will include sidewalks and bicycle infrastructure (MM-11)
- Install an enhanced pedestrian crossing across OR 164 on either Hazel Street or Union Street (PB-02)
- Construct a safe and accessible pedestrian crossing over the railroad at the intersection of 3rd Street and Union Street. Add a pedestrian path connecting Union Street and 3rd Street southeast of the railroad tracks (PB-04)
- Provide a safe route to school by evaluating the two school crossings on OR 164 across from Jefferson Evangelical Church and on University Street (SS-02)

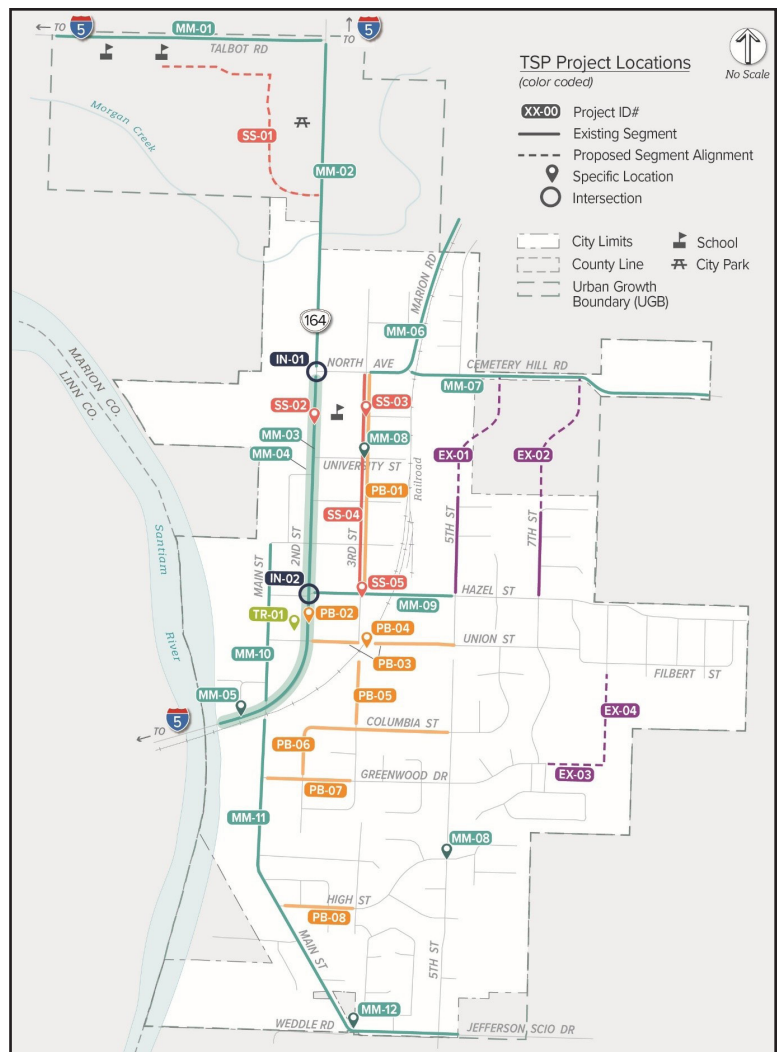


Figure 2.20: Map of projects identified in Jefferson's Transportation System Plan

Millersburg Transportation System Plan Volume 1 & Volume 2 (2016)

The Millersburg Transportation System Plan (TSP) was adopted in 2016 and details projects and policies that address transportation facilities in the City of Millersburg over a 20 year planning horizon (until 2036). The TSP is driven by nine goals, each with their own policies and objectives.

All but one of these goals relates to pedestrian and bicycle transportation. Goals, policies, and objectives most relevant to the AAMPO ATP include increasing safety and connectivity for all modes of travel, developing a balanced, multimodal transportation system, supporting physical activity and active transportation options, and providing transportation options for those who are transportation-disadvantaged.

The TSP contains two lists of projects, a fiscally constrained list with nine projects, and an aspirational list with 17 projects. Six of the nine projects on the fiscally constrained list are pedestrian and bicycle facility improvements, the remaining three projects are road modernization projects which benefit pedestrians and bicyclists as well as motorists by including sidewalks and bike facilities.

Select projects from the fiscally constrained list are listed below.

- Construct continuous bicycle access on Old Salem Rd from north to south city limits by widening shoulder at locations where shoulder is less than 2 feet
- Construct shared-use path between Millersburg Park and City Hall, providing important inter-neighborhood connectivity
- Construct new sidewalks along west side of Old Salem Rd, north of Nygren Road

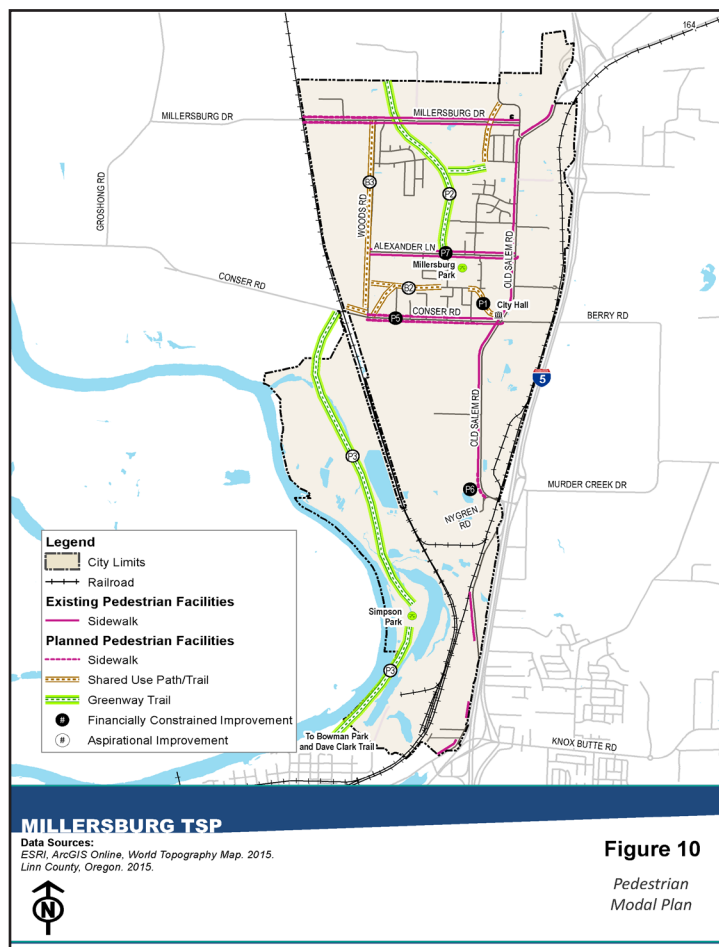


Figure 2.21: Map of pedestrian projects identified in Millersburg's Transportation System Plan

Millersburg Parks Master Plan (2020)

The Millersburg Park Master Plan was published in 2020 as a strategic plan to enhance park and recreation amenities for the next ten years. Though the plan is park-centric, there are elements of the plan which directly relate to active transportation, specifically objective 5 – Trails & Connections: Develop a network of shared-use trails for recreational, pedestrian and bicycle users, to connect parks, neighborhoods, schools and public amenities. Figure 2.22 shows proposed and existing recreational trails identified in the Parks Master Plan.

Specific actions cited in the plan to increase walking and biking trails include improving Woods Road to accommodate a shared-use trail and adding a bike route along Conser Road and Old Salem Road. The plan also identifies the future development of the property adjacent to City Hall as an opportunity to create trails and enhance connectivity to City Park.

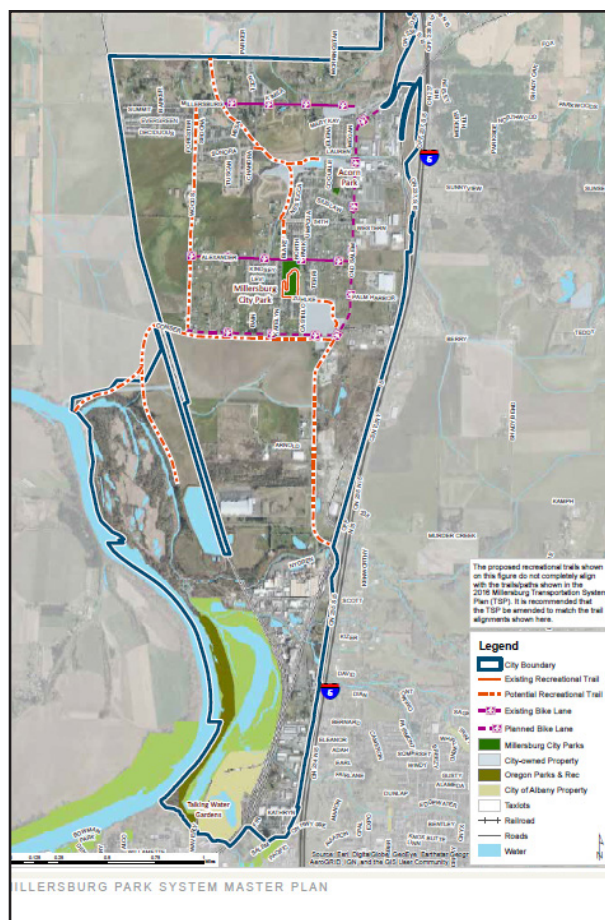
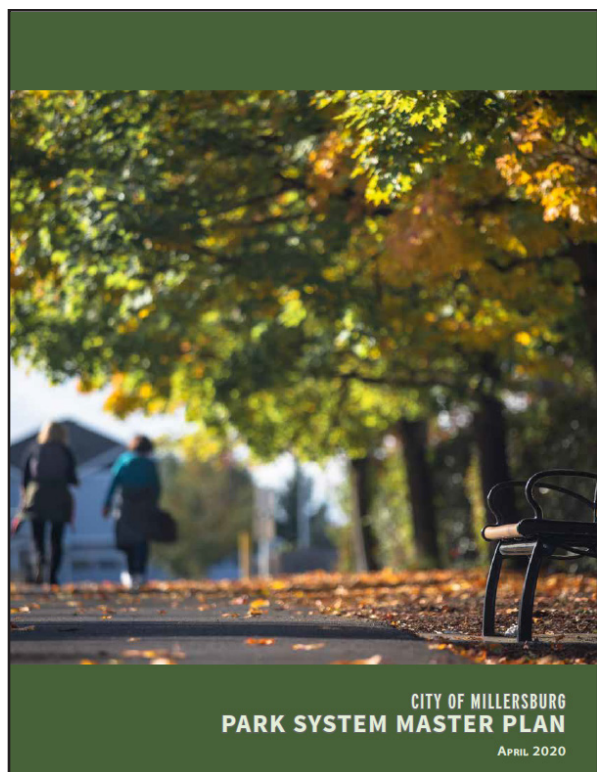


Figure 2.22: Map of proposed and existing recreational trails identified in Millersburg's Parks Master Plan

[Albany Transportation System Plan \(2010\)](#)

The Albany Transportation System Plan (TSP) was adopted in 2010 and is intended to guide transportation investments in Albany through 2030.

The TSP has four broad goals, two of which contain objectives that are connected to pedestrian and bicycle planning – Goal 2, provide a safe transportation system and Goal 3, provide a diversified transportation system that ensures mobility for all members of the community and provides alternatives to automobile travel.

The Albany TSP recognizes that safe, comfortable, and convenient pedestrian facilities are needed to encourage walking as a viable mode of transportation. The plan identifies the need for increased frequency of pedestrian crossings on high-volume roadways and crossing enhancements where multi-use paths cross high-volume roadways.

The TSP also highlights the connection between transit stops and pedestrian facilities, calling for pedestrian crossing improvements at 28 transit stop locations.

Like pedestrian facilities, the Albany TSP focuses on providing bicycle facilities that are safe, comfortable and convenient, noting also that destinations in Albany are within an easy biking distance to one another.

Specifically, the TSP states that future investment in the bicycle network should focus on improving the performance and safety of existing bicycle routes, in addition to creating new routes such as off-street paths and/or bicycle boulevards.

The Albany TSP includes many urban upgrades, which will benefit all modes of transportation, as well as bicycle and pedestrian specific projects. Bicycle and pedestrian projects of note are listed below and categorized as either short term, medium term, or long term projects.

Short term (0-5 years)

- Queen/Geary Periwinkle Path - crossing improvement

Medium term (6-10 years)

- Springhill Drive - sidewalks
- West Timber-Linn Trail - shared use path
- Albany-Corvallis Shared use Path (Scenic Drive to Springhill Drive) - shared use path

Long term (11 to 20 years)

- Geary Street - sidewalk
- Waverly Drive - sidewalk
- US 20, North Albany - shoulder to bike lanes
- Albany-Corvallis Shared use Path (Springhill Drive to South Albany) - shared use path
- East Timber Linn Trail - shared use path
- Periwinkle Trail Extension - shared use path
- US 20/99E Undercrossing - crossing improvement

[City of Albany Parks Master Plan \(2021\)](#)

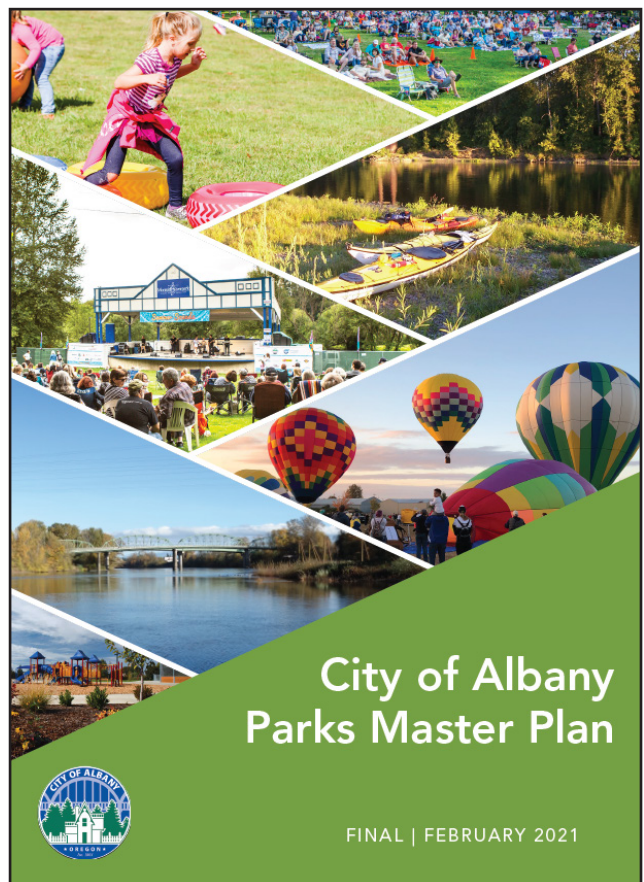
The City of Albany Parks Master Plan provides direction and recommendations for enhancing Albany's system of parks, recreation facilities, trails, and open space, focusing on actions to be taken in the short term (next 5 years), medium term (5-10 years), and the long term (11+ years). The portions of the Parks Master Plan most related to the Bicycle and Pedestrian Plan include the Plan's recommended trail projects. The Parks Master Plan makes recommendations for both enhanced sidewalk connections and off street shared use paths.

Notable bicycle and pedestrian projects in the Parks Master Plan include the following.

- Montieth Riverpark to Takena Landing Bike/ Pedestrian Bridge
- Oak Creek Loop Trail
- Bowman Park to Kinder Park sidewalk enhancement
- Waverly to Timber Linn to Timber Ridge shared use path
- Waverly to Timber Ridge sidewalk enhancement
- Timber Linn to Grand Prairie sidewalk enhancement

The Parks Master Plan also recognizes a broader concept that Albany's trails should enhance overall pedestrian and bicycle connectivity and function as part of a citywide non-motorized transportation system.

Importantly, the Parks Master Plan notes that implementation of trails will require coordination with the City's Transportation System Plan (TSP), especially for those trail projects that propose different alignments of trails than are currently in the TSP and for trails that fall outside of park properties.



From the Parks Plan: Walking/biking is the top activity people would like to see more of. Building more trails and paths was ranked as the second most important funding priority in both the online questionnaire and pop-up activities.

[Albany Downtown Parking Study \(2019/2021\)](#)

The Albany Downtown Parking Study worked to assess parking in the downtown area and develop a long-term strategy to accommodate growth and new development. The Study found that both on-street and off-street parking in downtown Albany is underutilized. On-street parking occupancy peaked at 43%, while off-street parking occupancy peaked at 48%, both falling well below the industry standard of an 85% occupancy rate.

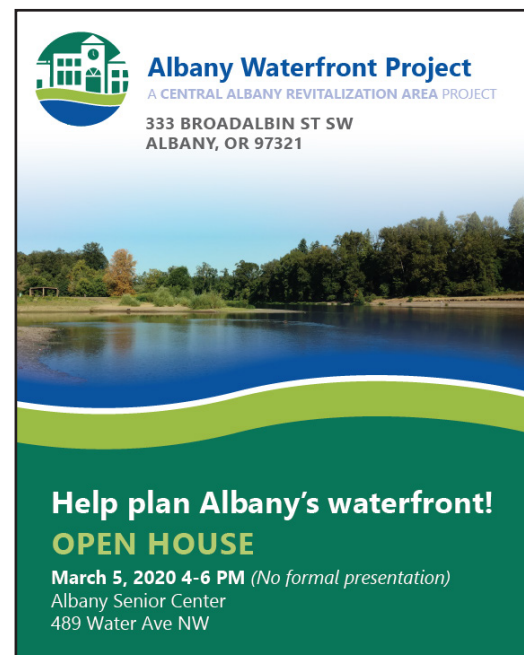
The draft parking strategy, pulling from the study, makes recommendations regarding vehicle parking as well as recommendations to improve access and integration with other modes of transportation. Related to bicycles and pedestrians, the draft strategy suggests partnering with the business community to expand incentives that encourage use of alternative modes, initiating a pilot program to test feasibility/viability of an e-bikeshare or e-scooter program, and turning some of the underutilized parking spaces into bike corrals (larger bicycle parking spaces).

While not explicitly called out in the draft strategy, underutilized on-street parking could also be used to create urban planting areas, buffered bike lanes, parklets (small park areas), or café dining, all of which can help improve the pedestrian and bicyclists experience.

[Albany Waterfront Project \(2021\)](#)

The Albany Waterfront Project seeks to improve the connection between downtown Albany and its waterfront by creating buildable plans focused on Water Avenue, Monteith Riverpark, and the Dave Clark Trail.

The Albany Waterfront Project overlaps with the Bicycle and Pedestrian Plan in its redesign of Water Avenue to a pedestrian friendly street through more generous sidewalks, addition of street trees, and traffic calming features. Improvements to the Dave Clark Trail, including improving safety and visibility, will also positively impact pedestrians and bicyclists.

A poster for the Albany Waterfront Project. At the top left is a circular logo featuring a stylized building and a green landscape. To the right of the logo, the text reads "Albany Waterfront Project" in a bold blue font, followed by "A CENTRAL ALBANY REVITALIZATION AREA PROJECT" in a smaller blue font. Below this, the address "333 BROADALBIN ST SW ALBANY, OR 97321" is listed. The middle section of the poster shows a photograph of a river with trees on the banks under a clear sky. At the bottom, there is a green wavy graphic element. Below this graphic, the text "Help plan Albany's waterfront!" is written in white, followed by "OPEN HOUSE" in a bold yellow font. The final line of text, in white, provides the date and time: "March 5, 2020 4-6 PM (No formal presentation)", and the location: "Albany Senior Center 489 Water Ave NW".

Albany Waterfront Project
A CENTRAL ALBANY REVITALIZATION AREA PROJECT
333 BROADALBIN ST SW
ALBANY, OR 97321

Help plan Albany's waterfront!
OPEN HOUSE
March 5, 2020 4-6 PM (No formal presentation)
Albany Senior Center
489 Water Ave NW

Tangent Transportation System Plan (2010)

Tangent's Transportation System Plan (TSP) was adopted in 2010 (before the creation of AAMPO in 2013) and is intended to guide transportation investments through 2030. Tangent's TSP contains numerous goals and polices related to pedestrian and bicycle transportation, including Goal 4 - To encourage the use of alternatives to the private automobile.

Tangent's TSP lists numerous policies to help the city archive this goal, including encouraging creation of separated bike and pedestrian ways along Old Highways 34 and 99E, working collaboratively with other stakeholders to identify and eliminate hazards to pedestrians and non-motorized traffic, and encouraging greater use of bicycles by developing, designating and posting bikeways throughout the city.

Tangent's TSP recognizes that active transportation is more viable in the southern parts of Tangent, where community destinations such as the Post Office, City Hall, parks, schools, and some shopping are easily accessible by walking or biking. Land uses in the northern part of Tangent are more auto-oriented and are not as readily accessible by walking or bicycling.

Most of the existing bicycle infrastructure in Tangent consists of shared roadways, though OR 34 and most of OR 99E have paved shoulders bicyclist can use. Pedestrian infrastructure in Tangent is similarly limited. Eleven of the 13 projects proposed by the TSP are related to bicycle and pedestrian facilities.

The TSP recommends various projects to improve active transportation facilities in Tangent, including creating bikeways adjacent to OR 99E and adding bicycle lanes to streets that serve the local elementary school. Pedestrian recommendations include adding sidewalks along streets that lead to major destinations and creating safe crossings across OR 99E to connect residential and civic/downtown areas.

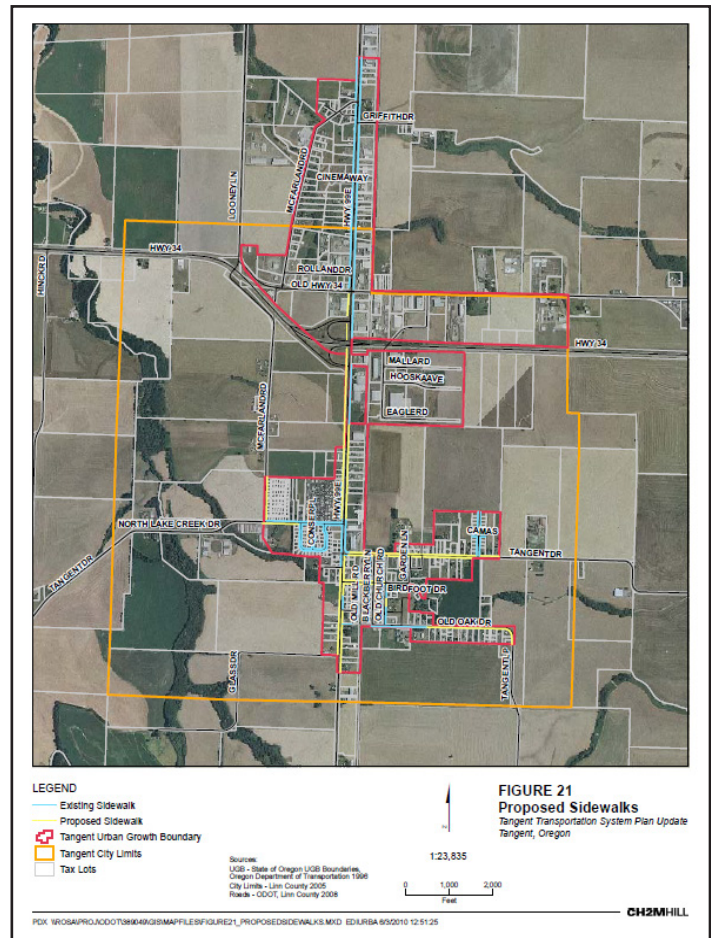


Figure 2.23: Map of proposed sidewalks from Tangent's Transportation System Plan

[AAMPO Regional Transportation Plan \(2018\)](#)

The AAMPO Regional Transportation Plan (RTP) was adopted in 2018 and is intended to guide transportation investments in the AAMPO region until 2040. The RTP builds upon policy direction and priorities identified in local planning documents to guide the development and management of the regional transportation system. Hence, the AAMPO RTP includes many of the projects listed in member city and county transportation system plans (TSPs), as well as projects of more regional significance.

Chapter 3 of the RTP lays out the goals, policies, potential actions, and objectives for the AAMPO area. Chapter 3 stresses the need for a balanced and multimodal regional transportation system to increase active transportation and transit mode share and increase transportation options to community destinations. Also included are increasing safety for all modes of travel and providing greater transportation options for those who are transportation disadvantaged.

The RTP evaluated sidewalks, shared use paths, trails, bike lanes, and crosswalks along regionally significant roadway corridors (arterials and collectors). The RTP did not evaluate local, neighborhood level streets. Local streets are evaluated in city transportation system plans.

Related to pedestrian facilities, the RTP found that there are considerable pedestrian facility gaps along regional roadways outside of central Albany, including those within and connecting to Millersburg, Jefferson and Tangent. The RTP identified two locations, both in Albany, that are especially unsafe for pedestrians - the Ellsworth and Lyons couplet (US 20) in downtown Albany and the Heritage Plaza Shopping Center.

Similar to the pedestrian findings, the RTP found that bicycle facilities within central Albany have the lowest levels of stress (are comfortable for most bicyclists), and those in outlying areas have higher levels of stress (are comfortable for only experienced bicyclists). Regional corridors in Tangent, North Albany and Millersburg are characterized by high levels of stress.

In Jefferson, there is little bicycle traffic stress within residential areas, but OR 164 demonstrates a high level of bicycle traffic stress due to frequent driveways and higher speeds. In Albany, two of the three areas identified as high vehicle-bicycle crash areas are the same as those identified as high vehicle pedestrian crash areas, the Lyons-Ellsworth Couplet and the Heritage Plaza Shopping Center. In addition, another high vehicle-bicycle crash area identified in the RTP is Queen Avenue.



The RTP contains two project lists, one fiscally constrained list and one aspirational list. The fiscally constrained project list contains 119 projects. Of those projects, 47 are directly related to bicycle and pedestrian facilities. Other listed project, such as road modernization projects, also provide improvements for bicycles, pedestrians, and vehicles. Bicycle and pedestrian projects of note include the following.

- Corvallis to Albany Trail - Construct off highway shared use path
- Queen/Geary Periwinkle Path - Construct multi-use path improvement by widening the sidewalk to connect the Periwinkle Trail through the Queen Avenue/Geary Street intersection
- West Timber-Linn Trail - Construct multi-use path to connect Timber-Linn Park to South Shore Drive
- US 20 Bike Lanes - Convert shoulders to bike lanes on US 20 in North Albany from Willamette River (including the Lyon Street bridge which has an existing shoulder) to urban growth boundary
- Geary St Sidewalks - Eliminate the sidewalk gaps on Geary Street between Santiam Road and 34th Avenue
- OR 164 Sidewalk - New sidewalks on east side, Santiam River Bridge to north of Union St
- Hwy 99E Sidewalks - Install sidewalks from Old Hwy 34 to south City Limits
- Old Salem Rd Sidewalk Improvements - Construct new sidewalks along west side of Old Salem Road, north of Nygren Road



[Albany Transit Development Plan \(2018\)](#)

The Albany Transit Development Plan is a guide for regional investment in public transportation in the AAMPO area. The Plan focuses on public transportation services operated by the City of Albany: Albany Transit System, Albany Call-A-Ride, and the Linn-Benton Loop. The Plan provides short (1-5 years), medium (5-10 years), and long term (10-25 years) recommendations that will guide future transit investments. Recommendations include more frequent service, service at later times in the evenings, weekend service, and better on-time performance.

Related to the Bicycle and Pedestrian Plan, community input on the Albany Transit Development Plan identifies pedestrian safety and access as important factors that need to be addressed to ensure adequate access to transit and improve the overall transportation network. Specifically, stakeholders indicate a need for improved crosswalks and sidewalk connectivity.

[Linn-Benton Loop Development Plan \(2019\)](#)

The Linn-Benton Loop, “The Loop”, is a bus transit service operated by Albany Transit System that runs between Albany and Corvallis. The Loop largely caters to college students, serving Oregon State University in Corvallis and Linn-Benton Community College in southern Albany, in addition to other riders. The Loop’s 2019 development plan makes numerous service reconditions, priority recommendations include increasing bus frequency and extending service later into the evening.

While the Development Plan does not mention active transportation, improvements in bicycle and pedestrian facilities can complement and bolster investments in better bus service. Improving walking and bicycling conditions around bus stops makes transit easier and more comfortable to access, particularly for transit users who do not own a vehicle. Including bicycle and pedestrian amenities at bus stops, such as bike racks and area maps, can further improve integration of services and encourage both transit and active transportation.

[Jefferson Safe Routes to School Action Plan \(2018\)](#)

In 2018 Jefferson Elementary School, with assistance from AAMPO, created a Safe Routes to School Action Plan. The plan identifies routes students take to school, difficult street crossings, and areas where heavy traffic makes it hazardous for students to walk and bike. Specifically, the plan takes note of the high traffic volume and speeds along the school’s frontage road, OR 164, which are impediments to walking and biking.

The action plan recommends four physical improvements to encourage more walking and biking to school; repainting crosswalks, adding bicycle sharrows, upgrading bicycle racks, and positioning a speed trailer along OR 164 in front of the school. Other, non-physical, recommendations include safety presentations at the school, bike and walk events, and GIS mapping.

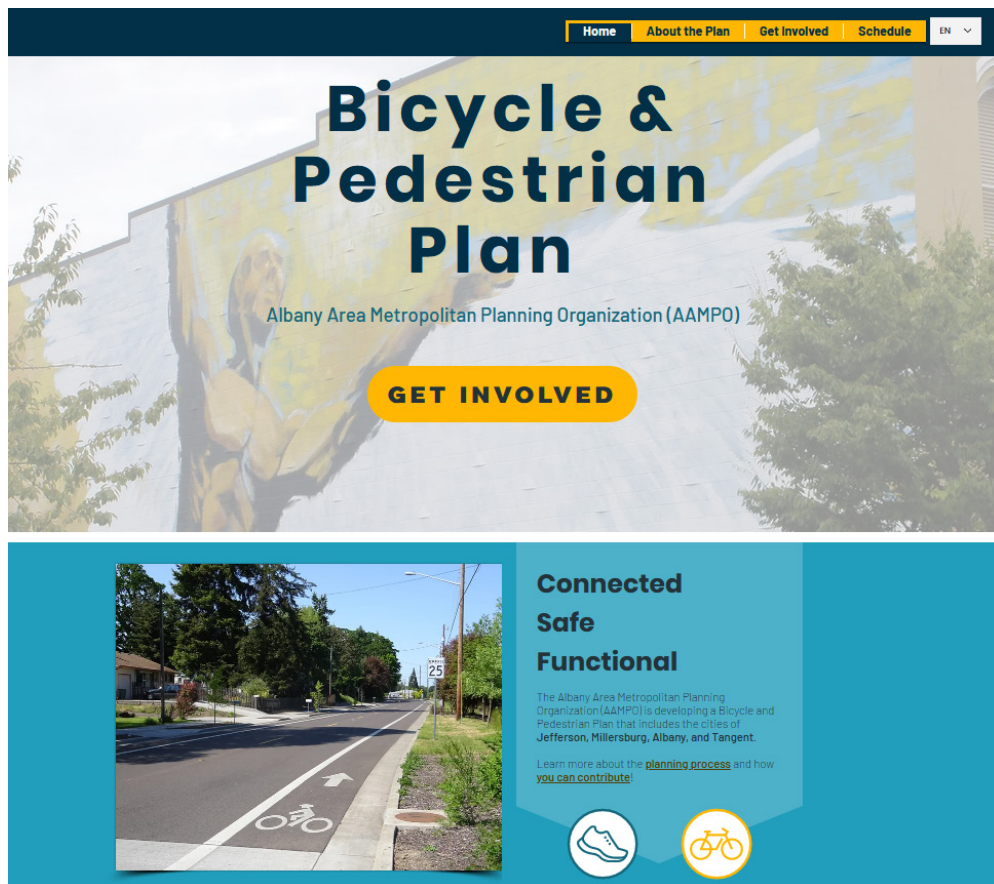
CH 3: PUBLIC & STAKEHOLDER OUTREACH & ENGAGEMENT

Overview

This chapter summarizes public and stakeholder outreach and engagement for the Bicycle and Pedestrian Plan. Outreach and engagement efforts were supported by a team from the University of Oregon’s Institute of Policy, Research, and Engagement (IPRE). Outreach and engagement were largely structured into three phases, early, mid, and late planning, though some related activities, such as updating the project website were continuous. All outreach and engagement was conducted virtually due to COVID 19 health concerns.

Continuous Outreach & Engagement

The plan website was a key part of outreach and engagement for the Bicycle and Pedestrian Plan. The project website served as an information hub, hosting information such as the plan vision and goals, opportunities for engagement, and the plan schedule. Community members were able to access surveys, watch recordings of the open house, and find contact information on the website. The website was available in English and Spanish and updated at important junctures in the planning process.



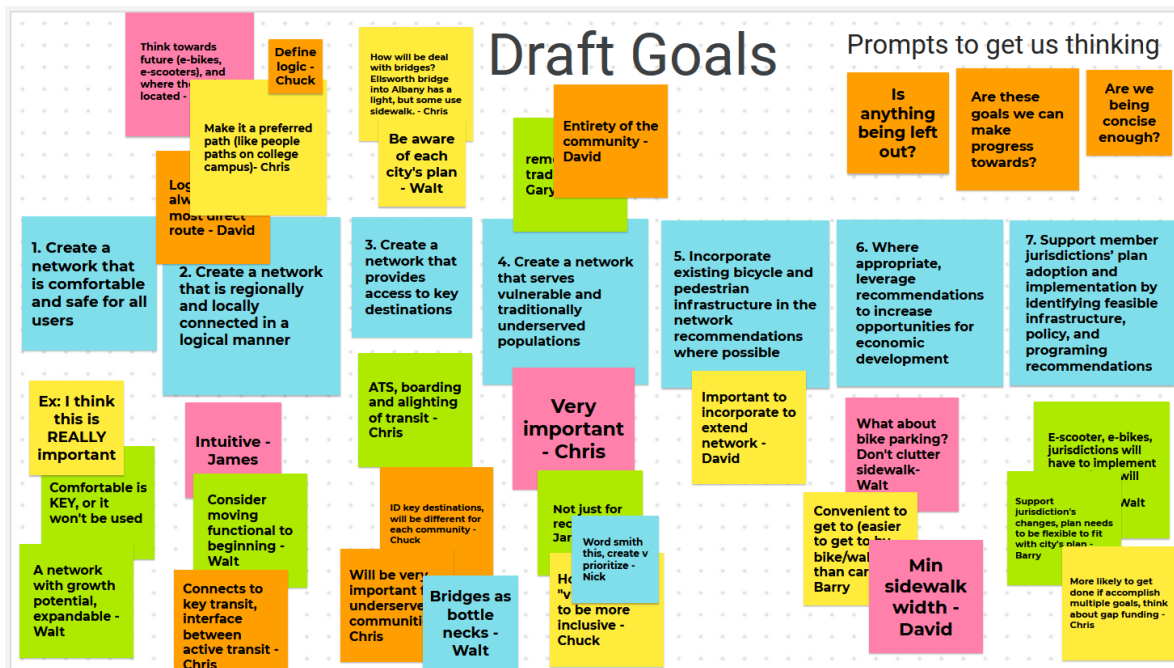
Homepage of the Bicycle and Pedestrian Plan website

Early-plan Outreach & Engagement

The planning process kicked off in September 2020 with a brainstorm session with the project advisory committee. The session helped form the vision for the Bicycle and Pedestrian Plan by asking committee members what a “successful” Bicycle and Pedestrian Plan would accomplish. Later meetings expanded on the initial brainstorming session and helped solidify the plan vision and goals.

Plan Vision

“The AAMPO Bicycle and Pedestrian Plan strives to create and support a bicycle and pedestrian network that is regionally and locally connected, safe, and functional for people of all ages, abilities, and backgrounds”



Notes from a project advisory committee meeting about draft plan goals

Early plan outreach continued in October of 2020 with identification of and interviews with community partners. Community partners include organizations such libraries, schools, nonprofits, and other organizations with close, local ties to community members.

Understanding that the COVID 19 pandemic shifted communication methods, community partner were asked how they had been communicated with their network of members and if they would be willing to help us engage their members in plan outreach efforts.

Community partners included the following organizations, along others.

- Greater Albany Public Schools
- Jefferson School District 14J
- Albany YMCA
- Albany Library
- Linn-Benton Hispanic Advisory Committee
- Jefferson Community Center

IPRE and AAMPO launched the **first plan survey** in March 2021. The survey was open from March 18th to April 21st and asked community members about their transportation habits, feelings about active transportation, and their level of satisfaction and desires related to active transportation infrastructure.

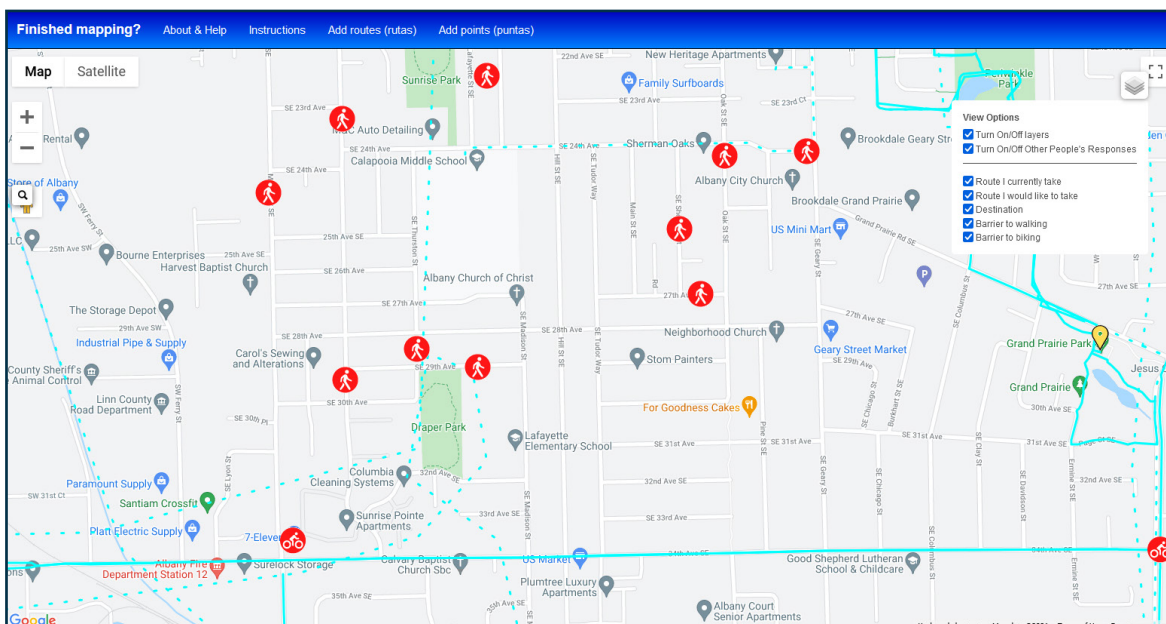
The written survey was complemented with a **mapping survey** asking respondents to pinpoint community destinations, barriers to walking and biking, routes they either would like to walk, and routes they currently walk or bike.

286

Number of written survey responses

186

Number of mapped barriers to walking and biking



Screen shot of online mapping survey showing barriers to walking and biking (red circles) and destinations (yellow pins).

The written and mapping surveys were promoted through location targeted social media posts, digital and physical flyers, and AAMPO's interested parties lists. Information was also shared with a larger list of community partners, many of whom were able to re-share social media posts and include information about the surveys in their existing newsletters and other communications.

To further spread the word about the Bicycle and Pedestrian Plan, AAMPO hosted two virtual open houses that each included a half hour of question and answer time.

Responses from the written and mapping surveys were used to gauge level of support for walking and bicycling improvements, identify barriers related to bicycling and walking, and identify bicycle and pedestrian projects. Responses to the survey are discussed in more detail in Chapter 2, Existing Conditions.



Social media post promoting the Bicycle and Pedestrian Plan

How was community input used in this plan?

Responses from the written and mapping surveys were used in the following ways.

- *Gauge level of interest in walking and bicycling*
- *Gauge level of satisfaction related to current walking and bicycling infrastructure*
- *Gauge level of community support for walking and bicycling improvements*
- *Identify walking and biking projects*
- *Identify barriers to walking and bicycling. Barriers can be infrastructure related, such as lack of sidewalks, or program and policy related, such as needing to regularly pick up debris in bike lanes*

Mid-plan Outreach & Engagement

In September 2021 a **second written survey** was launched asking community members to identify their favorite bicycle and pedestrian projects from a master list. **The top 50% of projects identified in the survey received an extra point under the public priority criterion in the project prioritization framework.** Like the earlier survey, the project survey was promoted through location targeted social media posts, digital flyers, AAMPO's interested parties lists, and community partners.

The survey was open from September 7th to September 29th, a total of 256 community members responded to the survey. Trends from the survey include a focus on projects along larger roads and shared use path projects. Responses to the survey are discussed in more detail in the Chapter 4, Bicycle and Pedestrian Network Infrastructure Recommendations.

Late-plan Outreach & Engagement

The last phase of outreach and engagement occurred in December 2021, when a draft plan was posted to the project website for review and comment by the public. Notification about the opportunity to comment on the draft plan was shared via social media, digital flyers, AAMPO's interested parties lists, and community partners.

The comment period ran for approximately three weeks in December 2021. The draft plan was also discussed at regularly scheduled AAMPO TAC and Policy Board meetings, which are open to the public

Bicycle & Pedestrian Plan
for the greater Albany area

The Albany Area Metropolitan Planning Organization is creating a plan to make biking and walking easier and safer in **Jefferson, Millersburg, Albany, and Tangent.** And we want your input!

- Which projects are your favorite?
- Take a **SURVEY** to let us know!
- Visit walkbikeplan2021.com to take the survey and learn about the plan
survey closes 9/29
- We'll use your input to help prioritize projects

For additional information contact Catherine Rohan at crohan@ocwcog.org or (541) 924-4548. Para información en Español, contacte echavez@ocwcog.org o llame al (541) 924-8405

Flyer promoting the second Bicycle and Pedestrian Plan survey

CH 4: BICYCLE & PEDESTRIAN NETWORK INFRASTRUCTURE RECOMMENDATIONS

Overview

This chapter describes how bicycle and pedestrian projects were identified and prioritized. Project identification involved mapping of an ideal bicycle and pedestrian network, input from community surveys, and use of resources such as the Federal Highway Administration’s Bikeway Selection Guide to determine the appropriate type of infrastructure for project need.

Planning the Bicycle Network

The first step in planning the bicycle network involved looking at maps of existing roads and trails to determine the ideal bicycle network. The ideal bicycle network consists of key streets and shared use paths that allow bicyclist to access all destinations in the AAMPO area, including traveling between communities.

An ideal network minimizes out of direction travel and circuitous, confusing routes. Aggregated bicycle route data from Strava was also used to determine where bicyclists already prefer to bike – a sign that streets and routes may already be bike friendly and need minimal upgrades to bicycle infrastructure.

Input from the written and mapping surveys identifying barrier to biking and routes that community members take and wish to take was then incorporated into the ideal bicycle network map. Special attention was paid to help ensure the ideal network minimized barriers to biking by either providing alternative routes or proposing projects to improve bicycle infrastructure along the route.

Once the ideal bicycle network was identified, the Federal Highway Administration’s Bikeway Selection Guide was used to determine the type of bicycle infrastructure needed to make a street or route comfortable enough for most bicyclists to use. The Bikeway Selection Guide uses a combination of vehicle speeds and volumes to determine the appropriate infrastructure type.

While the speed limits on streets in the AAMPO planning area are known, vehicle volumes are not as easily found. A combination of sources was used to estimate current vehicle volume along streets in the idea bicycle network, including Oregon Department of Transportation (ODOT) traffic counts from 2019, averages of 2012 traffic volumes with estimated 2030 traffic volumes from Albany’s TSP, and conservative estimates.

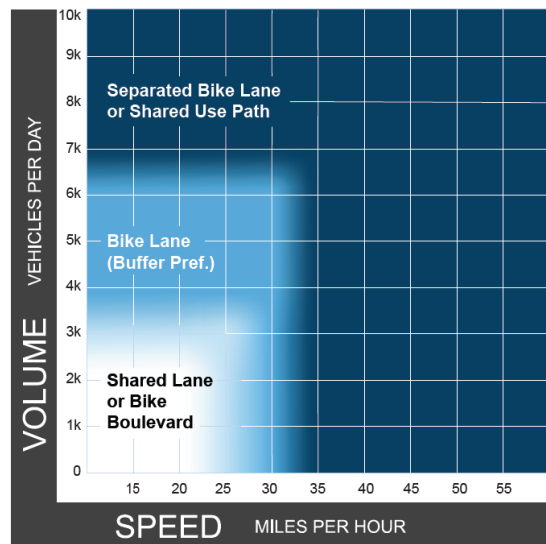


Table from The Federal Highway Administration’s Bikeway Selection Guide relating vehicle speed and volume to appropriate bicycle facility type.

Existing bicycle infrastructure for each street in the ideal bicycle network was then compared to the infrastructure type recommended for each street by the Bikeway Selection Guide. If the existing infrastructure matched or exceeded the infrastructure recommended by the Bikeway Selection Guide, the street was removed from the project list. Those streets for which the Bikeway Selection Guide recommended bicycle infrastructure beyond what is currently in place remained on the project list.

Planning the Pedestrian Network

Much like planning the bicycle network, the first step in planning the pedestrian network involved looking at maps of the AAMPO planning area and identifying a network of **key streets**, often major roadways, and paths that allow pedestrians to access destinations in the AAMPO area, including traveling between communities.

The availability of sidewalks along key streets and paths was then investigated using Google Street View; areas that are lacking sidewalks or pathways were included in the plan as projects. Additional pedestrian projects were identified through the written and mapping survey, including difficult street crossings and intersections.

“Why only key streets?”

Focus was limited to key streets and paths in recognition that while it would be desirable to have sidewalks along every street in the AAMPO planning area, the cost of installing and maintaining that many sidewalks is prohibitive.

Focusing on key streets helps ensure that as many people as possible benefit from sidewalk projects. Additionally, the majority of residential streets are relatively safe for pedestrians because they tend to have lower traffic speeds and volumes



99E through parts of Tangent is an example of a key street that has limited pedestrian facilities. Photo from Google Maps Street View.

Prioritization

This plan uses a combination of public input, technical data, and professional opinions to identify projects that will make the AAMPO area safer and easier to walk and bike in. Because it is unlikely that all projects will be funded, AAMPO developed a set of prioritization criteria to help jurisdictions select the projects that best meet plan goals.

While project ranking can help decisions makers choose which projects to pursue first, it's important to note that a project's score is not necessarily the only metric by which to judge a project. Some projects may score poorly but have some other benefits not reflected in their score, such as having recreational potential. Having a scoring method, however, is still a beneficial, quantifiable method by which to compare projects to one another.

AAMPO created the first draft of the prioritization criteria in October 2020 by researching other active transportation plans. AAMPO staff focused on criteria that served the AAMPO Bicycle and Pedestrian Plan goals. The prioritization criteria were then revised over multiple discussions with the project advisory committee, revision included adding extra weight to the Safety, Connectedness, Schools, and Transit criteria in recognition of their importance.

Specific focus was placed on making the criteria simple, easy to understand, and useful to the cities and counties who will decide which projects to build. Ultimately, AAMPO choose the eight criteria listed in the table on the next page.

Bike Lane Terminology

Different styles of bike lanes can be considered “low-stress infrastructure.” This report utilizes “separated bike lane” to refer to any bike lane with some level of separation from traffic, whether it be a painted buffer, a physical barrier, or a landscape strip. During implementation, jurisdictions can select the type of infrastructure that best fits the available space and street context.

Project Prioritization Table

#	Criteria	Response	Points awarded for "Yes" response	Goal Alignment
1	Safety – Is the project located along a segment or intersection at which a crash was reported in the last five years? OR Does the project provide a comparable, alternative route that avoids a crash location?	Yes/No	2	1
2	Connectedness – Does the project fill an identified gap in the existing pedestrian or bicycle network? Can be accomplished by infilling the existing route or by providing a comparable, alternative route. If the project is part of an important route an additional point is awarded.*	Yes/No	1 or 2	2, 3, 5
3	Key Destinations (community destinations) – Does the project provide access to a community destination?***	Yes/No	1	2, 3
4	Key Destinations (schools) – Does the project provide access to a school?	Yes/No	2	2, 3
5	Key Destinations (transit) – Does the project provide access to a transit stop?	Yes/No	2	2, 3
6	Equity – Is the project located within or directly adjacent to an under served census block group as identified by the composite equity index map (4th quartile)?	Yes/No	1	4
7	Adoption & Implementation – Is the project identified in a local Transportation System Plan?	Yes/No	1	7
8	Public Priority – Has the project received significant support from the public?***	Yes/No	1	N/A

* Important routes are those that connect large portions of a city or cities to one another. These routes are typically along larger streets and form the "backbone" of the pedestrian and bicycle network, though they can also include off-street multi-use paths that provide similar connectivity.

** Community destinations include but are not limited to libraries, hospitals, grocery stores, parks and recreation centers, government and community services, and points of interest. *

***The 50% of projects with the most public support will receive a point under this criterion.

Criteria

The majority of the criteria from the Project Prioritization Table, such as Key Destinations and Equity, are discussed and mapped in Chapter 2, Existing Conditions. Two criteria that are not included in the Existing Conditions chapter are Adoption & Implementation and Public Priority. Both of these criteria are discussed in more detail below.

Adoption & Implementation Criteria

A project receives a point under the Adoption & Implementation criteria if the proposed bicycle or pedestrian project, or a similar project, is identified in a city or county Transportation System Plan. Transportation System Plans (TSPs) are long range transportation planning documents that include a list of projects the jurisdiction plans to build, as well as an aspirational list of projects the jurisdiction would like to build if new funds become available.

The idea behind the Adoption & Implementation criteria is that projects identified in a TSP have already been vetted and agreed upon by the local jurisdiction. Highlighting these project again, via the Bicycle and Pedestrian Plan, can further inform and justify a jurisdiction's choice to move forward with a project, perhaps even moving it up the TSP priority list.

Project lists in each AAMPO member jurisdiction's TSP were searched to see if any projects identified in the Bicycle and Pedestrian Plan were also identified in the TSP. Projects identified by both the Bicycle and Pedestrian Plan and the TSP receive a point under the Adoption & Implementation criteria.

In cases where goals of a project in a TSP align with a project in the Bicycle and Pedestrian Plan, a point was also awarded. For example, Jefferson's TSP has a project to widen the roadway shoulders along South Main Street, the Bicycle and Pedestrian Plan has a project to create a shared use path along South Main Street. The two projects are not exactly the same, but both aim to increase safety and accessibility for pedestrians, thus the project receives a point under the Adoption & Implementation criteria.



Improving pedestrian facilities along South Main Street (OR 164) in Jefferson is an identified project in the Bicycle and Pedestrian Plan and Jefferson's Transportation System Plan. Photo from Google Maps Street View.

Public Priority Criteria

A project receives a point under the Public Priority criteria if it receives a substantial number of votes from community members. Using an online survey, community members were asked to choose their favorite projects from a master list of 145 total projects. The top 50% of projects, both region wide and locally, receive a point under this criteria.

The survey included nine larger projects that stretch across and between communities (extended projects), as well as more local project. Local projects were broken down by location to make the survey easier to complete.

A total of 256 community members responded to the survey. Community members could provide input on projects across the entire AAMPO planning area, as seen in Table 4.1. Key takeaways and favorite projects from each community are described in the following pages.

256

Number of community member who selected their favorite projects

327

Number of responses received for favorite projects (community members could provide input across multiple cities)

Jurisdiction you would like to provide input on (select as many as you wish)	Count	Percent
Albany	204	62%
Tangent	55	17%
Millersburg	38	12%
Jefferson	30	9%
Total	327	100%

Table 4.1: Breakdown of responses by jurisdiction

Regional Projects

Regional projects are those that connect cities and projects that span larger portions of the City of Albany. Community members were asked to rank regional projects before selecting specific cities, containing local projects, they wanted to provide input on. Survey respondents ranked regional projects in the order seen below.

1. Waverly Dr (Survey Project 8): Add separated bike lanes, 8 foot shoulders and buffered bike lanes to segments (121 responses)
2. Old Salem Rd & Salem Ave (Survey Project 2): Add separated bike lanes (110 responses)
3. Jefferson and Millersburg (Survey Project 1): Shared use path between Jefferson and Millersburg (103 responses)
4. Queen Ave (Survey Project 6): Add separated bike lanes (102 responses)
5. Geary St (Survey Project 4): Add separated bike lanes and buffered bike lanes to segments (100 responses)
6. South Albany and Tangent (Survey Project 9): Shared use path along McFarland Rd and Looney Ln (91 responses)
7. 34th Ave (Survey Project 7): Add separated bike lanes (64 responses)
8. Century Dr (Survey Project 3): Add 5 foot shoulders (60 responses)
9. Hill St (Survey Project 5): Add buffered bike lanes (49 responses)

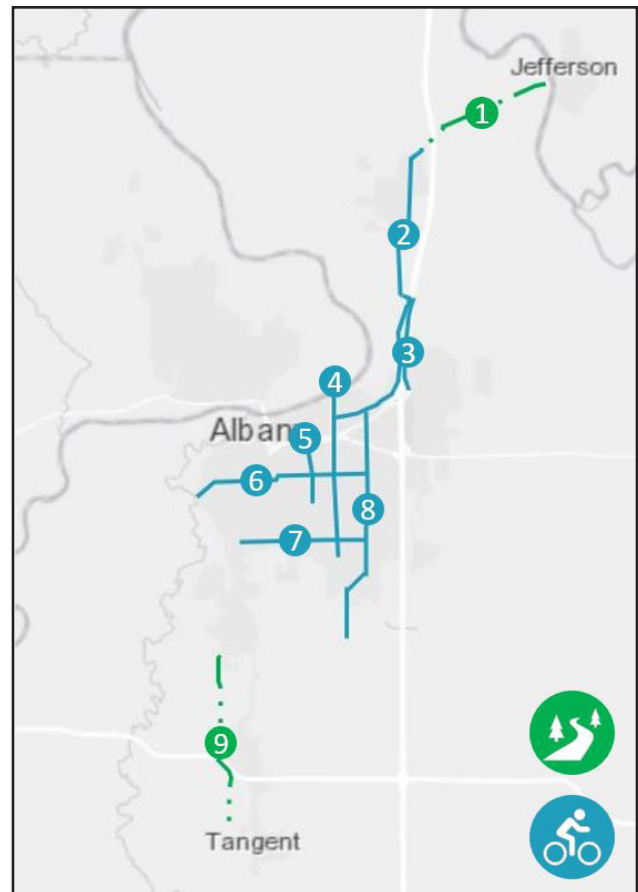


Figure 4.1: Map from public survey showing regional projects. Survey respondents were asked to choose their top five.

Albany Projects

Due to the large number of projects in Albany, projects were broken down by project type (bicycle projects, pedestrian projects, shared use path projects, and intersection/spot fix projects), as well as by location (North Albany, Southeast Albany, Southwest Albany, etc.).

More people wanted to provide input on shared use paths (69%) and bicycle facilities (58%) than sidewalks (43%) and intersection/spot improvements (31%). The majority of respondents provided input in North Albany (87 responses) and northwest Albany (80 responses) than other areas of the city. Southeast Albany was the area with the lowest number of responses (50 responses).

Ninety-two (92) projects were located in Albany . The highest rated projects in Albany were all shared use path projects, which mirrors both the high percentage of people who wanted to provide input on shared use paths as well as the finding from the first survey that trails and paths are the number one improvement that would lead community members to walk or bike more often.

1. Shared use path from entrance to Tadena Landing Park at 23rd St & bicycle and pedestrian bridge over the Willamette River to Monteith Park (85 responses)
2. North Albany: Shared use path along railroad from Scenic Dr to Springhill Dr (74 responses)
3. West Albany: Shared use path from 27th Ave to LBCC (55 responses)
4. South Albany: Shared use path from 34th Ave to LBCC along railroad (55 responses)

Millersburg Projects

Outside of regional projects, Millersburg also has nine local projects, the most highly rated of which are listed below. Generally, respondents were more interested in shared use path projects to benefit both pedestrian and bicyclists. This is reflected in one of the open ended comments from the survey, "Concentrate on sidewalk projects. Most citizens don't ride bikes, especially in the winter."

1. Shared use path along Woods Road (28 responses)
2. Shared use path along Conser Road (22 responses)
3. Shared use path along greenway through central Millersburg (17 responses)
4. Intersections upgrades at Old Salem Rd & Morningstar Rd (14 responses)

Note that one project, sidewalk infill along Old Salem Road near Georgia Pacific, was accidentally left off of the survey. Given the high number of responses related to the bicycle project along Old Salem Road, the Old Salem road sidewalk infill project was also deemed a local priority project.

Tangent Projects

The most highly ranked project involving Tangent is one of the nine extended projects, the South Albany and Tangent shared use path along McFarland Rd and Looney Ln. During review of projects with the City of Tangent, they requested the shared use path alignment shift from McFarland Rd to Highway 99E, with the understanding this alignment would be easier to implement, compared with a crossing of Highway 34 between McFarland Road and Looney Ln. The Tangent projects are thus reflective of this change. The projects listed here are the most highly ranked of the 13 local Tangent projects. Open ended comments like the one below provide additional context to the most highly ranked local project.

1. Tangent Dr: Shared use path (34 responses)
2. 99E: Add separated bike lanes (25 responses)
3. 99E: Fill in missing sidewalk (20 responses)

“Tangent Dr just east of Hwy 99 is a dangerous place to walk and bike. Cars have a difficult time seeing pedestrians because of the raised railroad tracks and there is no shoulder.”

Jefferson Projects

The most highly ranked project involving Jefferson is one of the nine regional projects, the shared use path between Jefferson and Millersburg. The projects listed below are the most highly ranked of the 19 local Jefferson projects. In general, respondents were more interested in projects along major roadways, like OR 164 and Jefferson Scio Drive, than they were in projects along neighborhood streets, such as 3rd Street and Greenwood Drive. This is reflected in some of the open ended comments.

1. Main St and Jefferson Scio Dr: Shared use path (22 responses)
2. Jefferson Elementary and Talbot Rd: Shared use path (21 responses)
3. OR 164 bridge into Jefferson: Add bicycle and pedestrian improvements (20 responses)
4. OR 164: Add separated bike lanes (15 responses)
5. OR 164: Fill in missing sidewalk (14 responses)
6. OR 164 at Jefferson Elementary School:
Upgrade existing crosswalk (13 responses)

“Definitely need sidewalks though city limits on Jefferson/Scio Road”

AAMPO Region Prioritized Projects Maps

The eight project prioritization criteria were applied to each project, the maps and project list below show the 25% top scoring projects within the region.

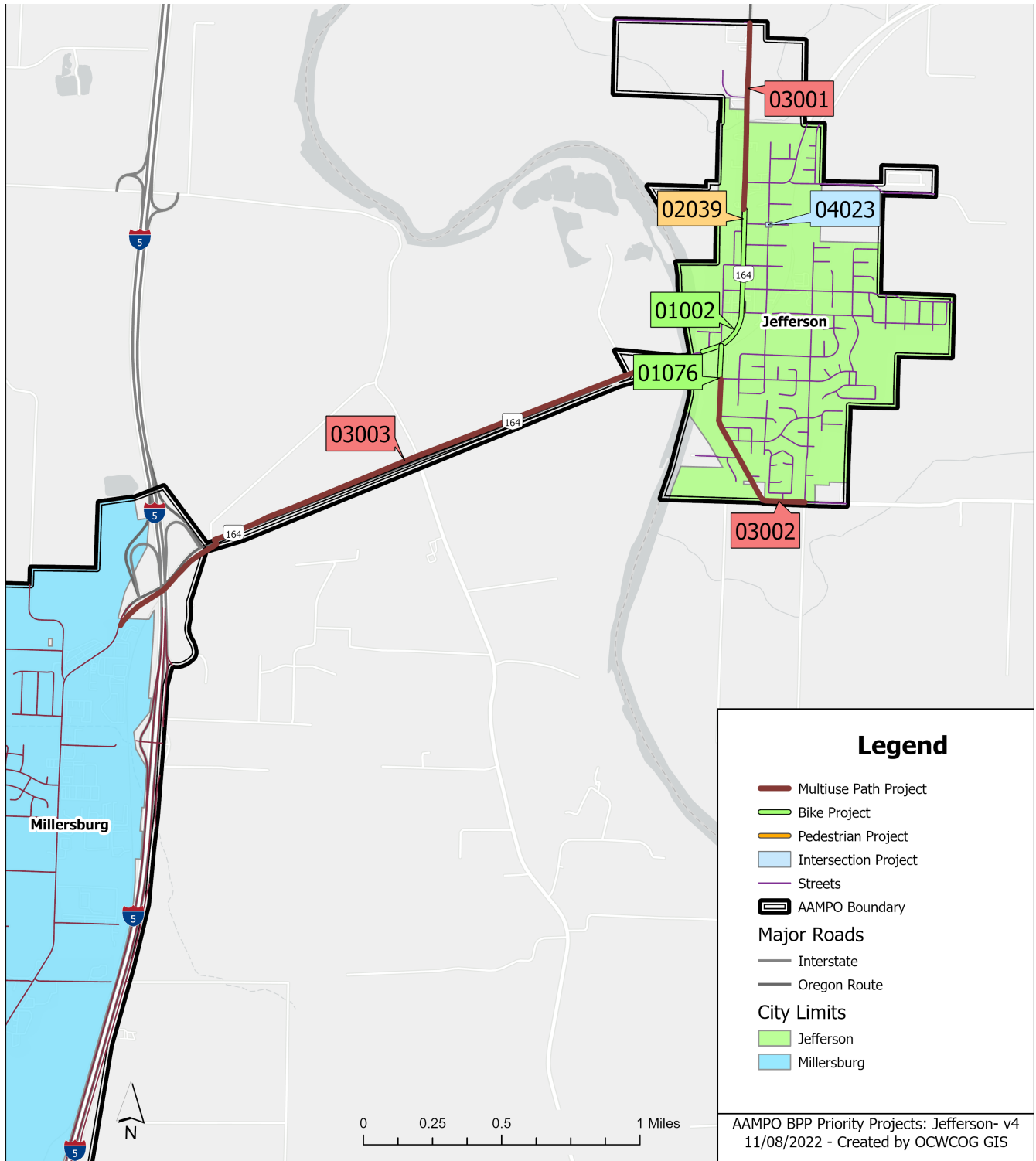


Figure 4.4: Map of Priority Projects, Jefferson

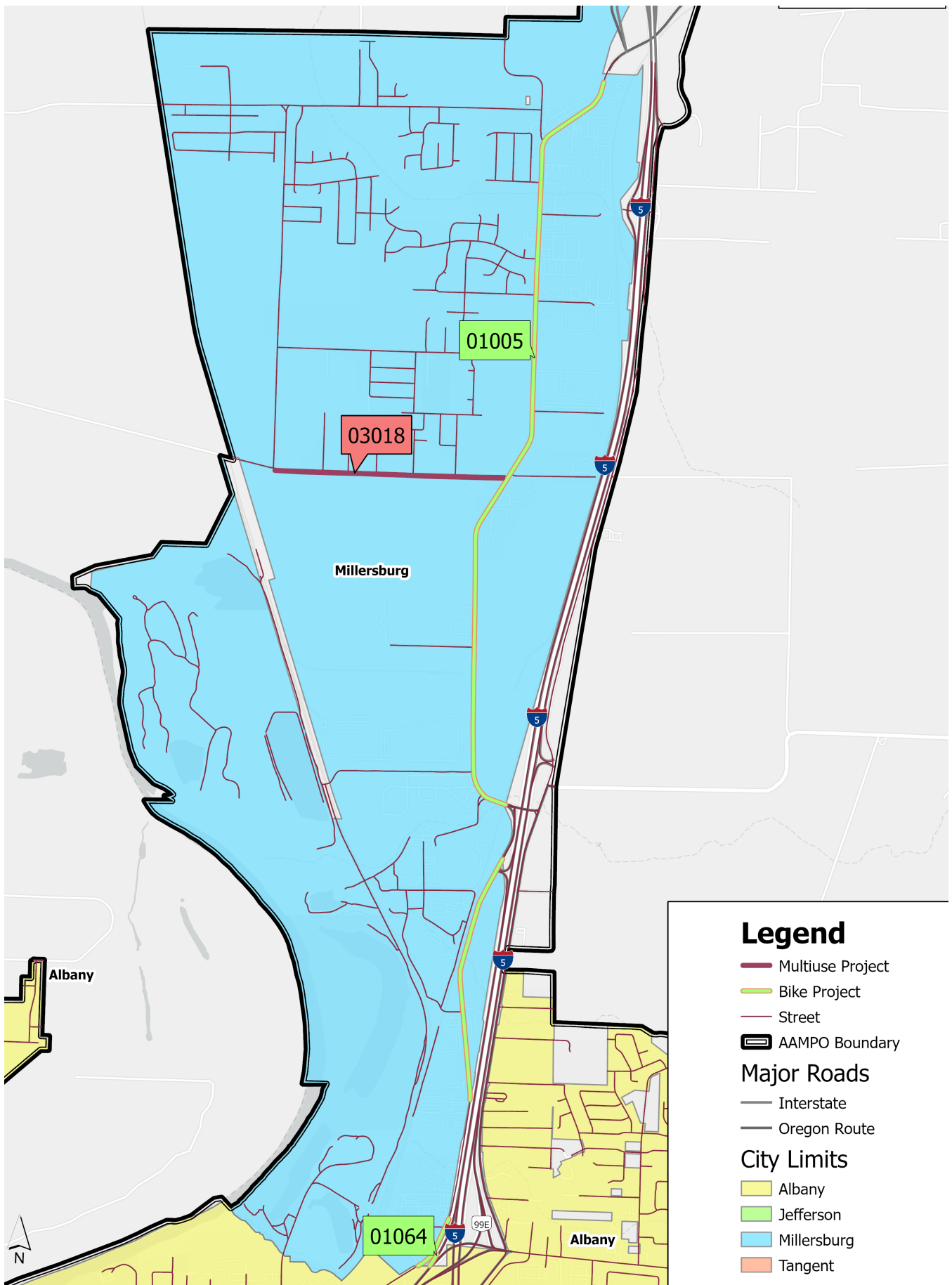


Figure 4.5: Map of Priority Projects, Millersburg

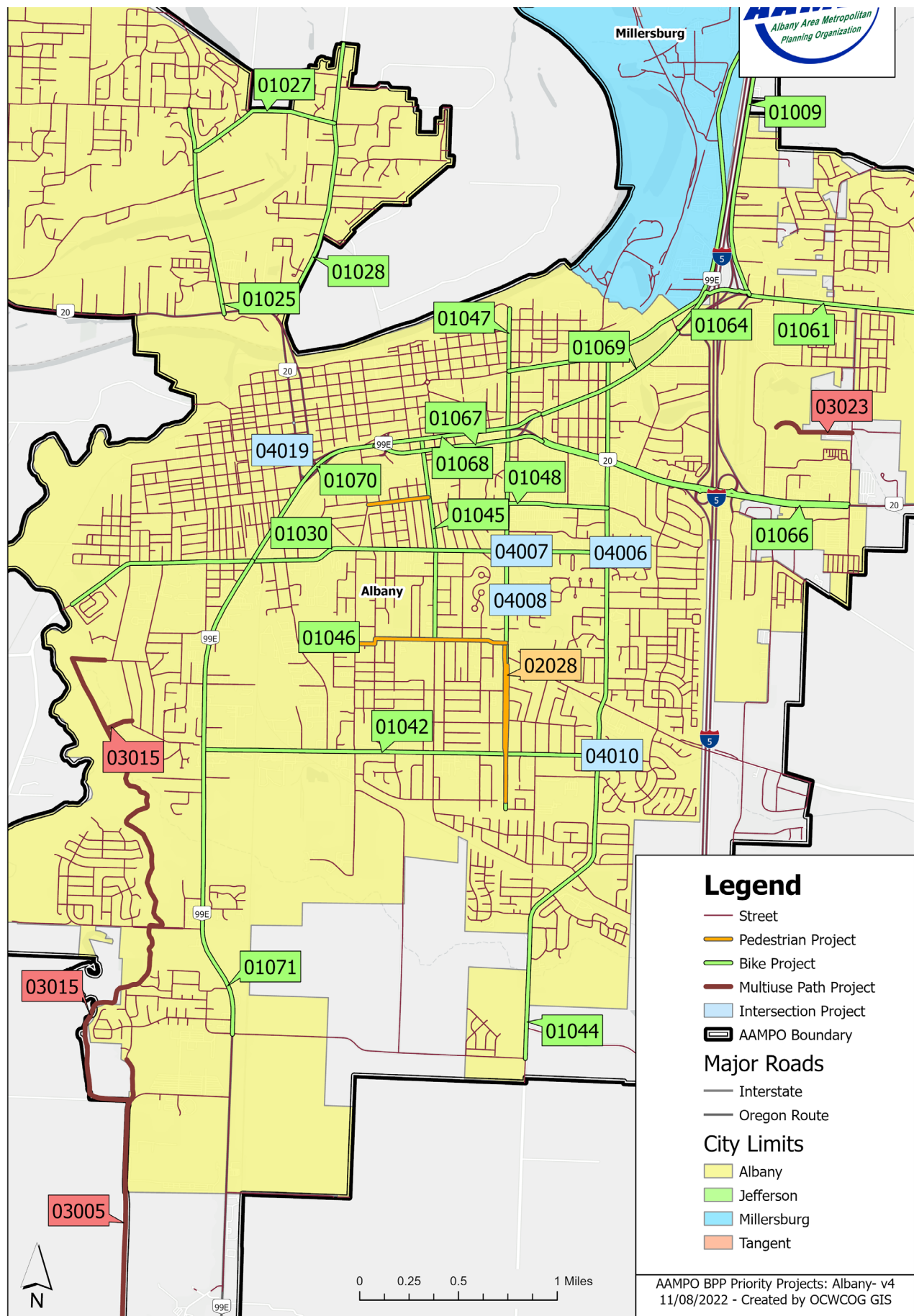


Figure 4.6: Map of Priority Projects, Albany

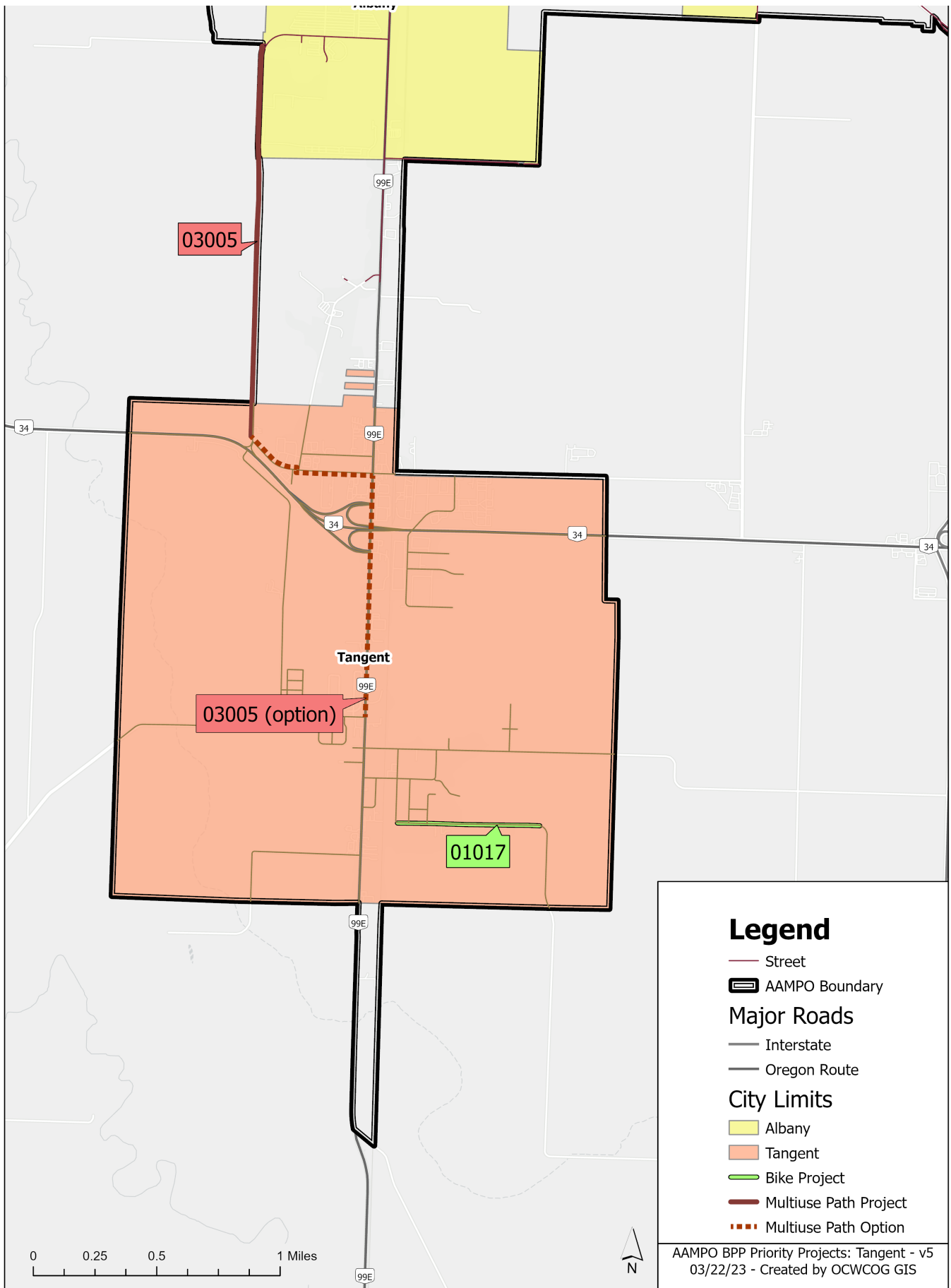


Figure 4.7: Map of Priority Projects, Tangent

Prioritized Projects List

The table below describes the prioritized projects from Figures 4.4 - 4.7.

Project #	Location	Jurisdiction	Project Description
01030	Albany	Albany	Queen Ave: Add separated bike lanes
01042	Albany	Albany	34th Ave: Add separated bike lanes
01045	Albany	Albany	Hill St: Add separated bike lanes
01071	Albany	ODOT	OR 99E between Queen Ave and Ellingson Rd: Add separated bike lanes
01070	Albany	ODOT	OR 99E between Queen Ave and eastern edge of Pacific Blvd bridge: Add separated bike lanes
01066	Albany	ODOT	US 20 between Burkhardt St and Goldfish Farm Rd: Add separated bike lanes
02028	Albany	Albany	Geary St: Fill in missing sidewalk
01044	Albany	Albany	Waverly Dr: Add separated bike lanes, 8 ft shoulders, and separated bike lanes to segments
01047	Albany	Albany	Geary St: Add separated bike lanes and buffered bike lanes to segments
01069	Albany	ODOT	OR 99E between Burkhardt St and Airport Rd: Add separated bike lanes
04007	Albany	Albany	Queen Ave & Geary St: Intersection upgrades
04010	Albany	Albany	34th Ave & Waverly Dr: Intersection upgrades
01005	Millersburg	Linn	Old Salem Rd & Salem Ave: Add low stress bike facilities and fill in sidewalk gaps
01009	Albany	ODOT	Century Dr: Add 5 ft shoulders
01068	Albany	ODOT	99E west bound through central Albany: Add separated bike lanes
01067	Albany	ODOT	99E east bound through central Albany: Add separated bike lanes
01028	Albany	Benton	Springhill Dr: Add separated bike lanes
01025	Albany	Albany	North Albany Rd: Add separated bike lanes
01046	Albany	Albany	SE 24th Ave: Add bike lanes
04006	Albany	Albany	Queen Ave & Waverly Dr: Intersection upgrades
01002	Jefferson	ODOT	OR 164: Add separated bike lanes
03005	Tangent	ODOT/Linn	South Albany and Tangent: Shared use path along Highway 99E and Looney Lane, alternate route along McFarland Rd South of OR-34
03015	Albany	N/A	West Albany: Shared use path from 27th Ave to LBCC
01064	Albany	ODOT	Knox Butte Rd under I-5, west bound portion: Add separated bike lanes
04019	Albany	ODOT/Albany	Ellsworth St & 5th Ave: Intersection upgrades
01061	Albany	Albany/Linn	Knox Butte Rd east of I-5: Add separated bike lanes
01027	Albany	Benton	Quarry Rd: Add separated bike lanes
04008	Albany	Albany	Geary St & 21st Ave: Intersection upgrades
03002	Jefferson	Marion	Jefferson: Shared use path along Main St and Jefferson Scio Dr
03001	Jefferson	ODOT	Jefferson: OR 164, shared use path between Jefferson Elementary and Talbot Rd
01048	Albany	Albany	14th Ave: Add separated bike lanes
02039	Jefferson	ODOT	OR 164: Fill in missing sidewalk

Project #	Location	Jurisdiction	Project Description
01076	Jefferson	Marion	Main St: Add separated bike lanes
04023	Jefferson	Jefferson	University St & 3rd St: Intersection upgrades
01017	Tangent	Linn	Old Oak Dr & Old Oak Rd: Add bike lanes
03023	Albany	N/A	East Albany: Add shared use path from Goldfish Farm Rd into Timber Linn Park
03003	Linn County	ODOT/Linn	Shared use path between Jefferson and Millersburg
03018	Millersburg	Millersburg	Shared use path along Conser Rd

Bike Lane Terminology

Different styles of bike lanes can be considered “low-stress infrastructure.” This report utilizes “separated bike lane” to refer to any bike lane with some level of separation from traffic, whether it be a painted buffer, a physical barrier, or a landscape strip. During implementation, jurisdictions can select the type of infrastructure that best fits the available space and street context.

Intersection Upgrades

The projects prioritized by this plan are purposefully vague, so that jurisdictions have flexibility in their implementation. Intersection upgrade projects are one example, where a specific solution is not identified. Improvements that can increase the safety and comfort of bicyclists and pedestrians include green bike lane paint, bike boxes, curb extensions, center medians, and longer crossing signal times.

CH 5: POLICY & PROGRAM RECOMMENDATIONS

Overview

This chapter provides policy and program recommendations for AAMPO member communities to consider adopting and implementing. While adding new bicycle facilities and sidewalks go a long way towards increasing walking and bicycling, good policies and programs that support and supplement investments in infrastructure can make take a good project and make it great! Think about it - a shared use path isn't any fun to walk or ride along if its overgrown with black berry bushes, and a new safe route to school project may not feel very safe early in the morning if it's not well lit.

Recommendations range from broad topics, like rezoning to allow a mix of land uses, to instituting neighborhood walking school buses. Benefits of adoption, draft code language, potential partners and links to more information are provided for each individual policy and program recommendation. It's not expected that every policy and program recommendation will be appropriate for each community in the AAMPO planning area, instead communities can elect to adopt and try out the policy and program recommendations that most resonate with them.

Policy recommendations include the following topics

- Bike parking
- Bicycle and pedestrian route signage
- Lighting
- Trees and vegetation
- Transit connections
- Updated bicycle facility design standards
- Maintenance of active transportation investments
- Rezoning commercial and residential areas to be mixed-use
- Sidewalk development requirements
- Adjusting traffic signal timing to accommodate slower walking speeds

Program recommendations include the following topics

- Walk & Roll to School Day
- Bike/Walk to Work Day/Week
- Walking School Buses & Bicycle Trains
- Safe Routes to School bike rodeos and education curricula
- Annual school count of walking and biking
- Vision Zero
- Walk & Bike Tours for Elected Officials & Community Engagement
- Bike Route Maps
- Bike Classes for Adults
- Bike-Friendly Businesses
- Annual Slow/Open Streets Event(s)
- Walking Groups

Policy Recommendations

Topic	Benefits of Adoption	BPP Goals Supported	Opportunities for Adoption
Bike Parking	Providing sufficient and well-located bike parking indicates to bicyclists and would-be bicyclists that they are wanted and welcome patrons. Bicyclists may avoid traveling to locations with poor or no bike parking for fear of bike theft and personal harm.	Goal 1: Safe, comfortable, intuitive Goal 3: Access to key destinations Goal 6: Encourage biking to businesses	Transportation System Plan updates Development code updates
<p>Draft Policy</p> <p>Ensure adequate bicycle parking at all commercial and multifamily residential developments, employment hubs, schools, transit facilities, and city and county properties.</p>			
<p>Example Code Language (from Rogue Valley MPO Active Transportation Plan, for example only)</p> <ol style="list-style-type: none"> 1. Standards. Bicycle parking spaces shall be provided with new development and where a change of use occurs, at a minimum, based on the standards in [local jurisdiction’s code section regarding number of spaces]. Where an application is subject to Conditional Use Permit approval or the applicant has requested a reduction to a vehicle parking standard, the [local jurisdiction] may require bicycle parking spaces in addition to those in [local jurisdiction’s code section regarding number of spaces]. 2. Design and Location <ol style="list-style-type: none"> a. All bicycle parking shall be securely anchored to the ground or to a structure. b. All bicycle parking shall be well-lighted [to specified lighting level per local jurisdiction standards]. c. All bicycle parking shall be designed so that bicycles may be secured to them without undue inconvenience, including being accessible without removing another bicycle. Bicycle parking spaces shall be at least six (6) feet long and two-and-one-half (2 ½) feet wide, and overhead clearance in covered spaces should be a minimum of seven (7) feet. A three (3) foot aisle for bicycle maneuvering should be provided and maintained beside or between each bicycle parking space. d. Bicycle parking racks shall accommodate locking the frame and both wheels using either a cable or U-shaped lock. e. Direct access from the bicycle parking area to the public right-of-way shall be provided at-grade or by ramp access, and pedestrian access shall be provided from the bicycle parking area to the building entrance. f. All bicycle parking should be integrated with other elements in the planter strip when in the public right-of-way (if allowed by agency). 			

Bike Parking - Continued

Example Code Language - Continued (from Rogue Valley MPO Active Transportation Plan, for example only)

2. Design and Location
 - g. Short-term bicycle parking.
 - i. Short-term bicycle parking shall consist of a stationary rack or other approved structure to which the bicycle can be locked securely.
 - ii. Short-term bicycle parking shall be located within 50 feet of the main building entrance or one of several main entrances, and no further from an entrance than the closest automobile parking space.
 - h. Long-term bicycle parking. Long-term bicycle parking shall consist of a lockable enclosure, a secure room in a building on-site, monitored parking, or another form of sheltered and secure parking.
3. Exemptions. This Section does not apply to single-family and duplex housing, home occupations, and agricultural uses. The [City decision-making body] may exempt other uses upon finding that, due to the nature of the use or its location, it is unlikely to have any patrons or employees arriving by bicycle.
4. Hazards. Bicycle parking shall not impede or create a hazard to pedestrians or vehicles and shall be located so as to not conflict with the vision clearance standards of [local jurisdiction code section on vision clearance].

Jurisdiction inventory of bike parking policy and code language (none, minimal, partial, significant)

Jefferson	Millersburg	Albany	Tangent
Significant	Partial/Significant	Significant	Partial/Significant

For More Information:

[APBP's Bicycle Parking Guidelines](#)

[Northwest Arkansas' Bike Ped Plan Appendix \(pg 273\)](#)

[Rogue Valley MPO Active Transportation Plan](#)

Topic	Benefits of Adoption	BPP Goals Supported	Opportunities for Adoption
Bicycle and pedestrian route signage	<p>Signage that is clear, comprehensive, and intuitive facilitates safe and comfortable navigation for bicyclists and pedestrians, increasing visibility of these users and promoting active transportation.</p> <p>Bicycle wayfinding signs also visually cue motorists that they are driving along a bicycle route and should use caution. Pedestrian-friendly signage in downtowns, business districts, mixed-use areas, and other locations with high potential pedestrian use can also attract visitors and increase economic activity.</p>	Goal 1: Safe, comfortable, intuitive	<p>Transportation System Plan updates</p> <p>Development code updates</p>
<p>Draft Policy</p> <p>Ensure adequate signage along all pedestrian and bicycle routes, paths, trails, and greenways to facilitate safe and comfortable wayfinding and navigation.</p>			
<p>Example Code Language (from Northwest Arkansas’ Bike Ped Plan Appendix, for example only)</p> <p>Signs throughout the city should indicate to bicyclists:</p> <ul style="list-style-type: none"> • Direction of travel • Location of destinations • Travel time/distance to destinations <p>A community-wide bicycle wayfinding signage plan would identify:</p> <ul style="list-style-type: none"> • Sign locations • Sign type – what information should be included and design features • Destinations to be highlighted on each sign – key destinations for bicyclists • Approximate distance and travel time to each destination <p>Signs should be placed at key locations leading to and along bicycle routes, including the intersection of multiple routes. Too many road signs can clutter the right-of-way, so these signs should be posted at a level most visible to bicyclists rather than per vehicle signage standards.</p>			
<p>Jurisdiction inventory of bicycle route signage policy and code language (none, minimal, partial, significant)</p>			
Jefferson	Millersburg	Albany	Tangent
None	Minimal	Minimal	None
<p>For More Information:</p> <p>See Northwest Arkansas’ Bike Ped Plan Appendix (A-79)</p>			

Topic	Benefits of Adoption	BPP Goals Supported	Opportunities for Adoption
Lighting	Consistent lighting along pedestrian and bike paths creates a safe and comfortable environment for those using active transportation, expanding hours of use and encouraging higher utilization of those paths. Additionally, lighting near businesses encourages walking and biking to said businesses.	Goal 1: Safe, comfortable, intuitive Goal 6: Encourage walking and biking to businesses	Transportation System Plan updates Development code updates
<p>Draft Policy</p> <p>Ensure adequate lighting along all bike paths and major pedestrian routes, specifically near commercial developments.</p>			
<p>Example Code Language (from Northwest Arkansas’ Bike Ped Plan Appendix, Rogue Valley MPO’s Active Transportation Plan and Portsmouth New Hampshire’s Active Transportation Plan, for example only)</p> <ol style="list-style-type: none"> 1. Standards: <ol style="list-style-type: none"> a. The intent of required lighting is to improve safety and comfort for pedestrians and bicyclists. Street and path lighting may be required on public rights-of-way within [City] limits for facilities subject to the provisions of this section. Outside of [City] limits, lighting may only be needed at select intersections or locations, as determined by [agency]. b. Lighting [should/shall] be provided for crossings, areas with high pedestrian volumes, sidewalks or pathways not already illuminated by roadway lighting, sidewalks under bridges or vegetation where lighting is not present, and transit stops. c. Lighting levels and design should provide illumination no greater than necessary to provide for pedestrian safety, property or business identification, and crime prevention and should consider and minimize impacts on wildlife and adjacent neighborhoods. 2. Design: <ol style="list-style-type: none"> a. Lighting design is subject to the standards of [local code section xxx]. b. Pedestrian-scale lighting: <ol style="list-style-type: none"> i. Light fixtures closer to the ground and placed closer together than roadway lighting: Typical Dimensions: 11-16 ft. pole height, 50- 80 ft. spacing. 			
<p>Jurisdiction inventory of lighting policy and code language (none, minimal, partial, significant)</p>			
Jefferson	Millersburg	Albany	Tangent
Partial	Partial	Minimal	None
<p>For More Information:</p> <p>See Northwest Arkansas’ Bike Ped Plan Appendix (A-39)</p>			

Topic	Benefits of Adoption	BPP Goals Supported	Opportunities for Adoption
Trees and vegetation	<p>Trees, shrubs, and other landscape features along sidewalks and paths can enhance the visual environment, provide shade, and shelter pedestrians and bicyclists from rain. Vegetation can reduce the urban heat island effect, improve stormwater drainage, offset greenhouse gas emissions, and increase pedestrian and bicyclist safety and comfort by slowing vehicles.</p> <p>Vegetative buffers can create a natural privacy screen, provide wildlife habitat, and stabilize erodible soils. Some landscaping material (e.g. vegetation with thorns) can deter unwanted access or exit points, entrapment areas, and undesired off-path routes.</p>	Goal 1: Safe, comfortable, intuitive	<p>Transportation System Plan updates</p> <p>Development code updates</p>
<p>Draft Policy</p> <p>Promote adequate vegetation along all bike paths and major pedestrian routes, especially near commercial developments.</p>			
<p>Example Code Language (from Greenville Area MPO’s Active Transportation Plan,for example only)</p> <p>1. Standards:</p> <ul style="list-style-type: none"> a. Street and path vegetation may be required on public rights-of-way within city limits for facilities subject to the provisions of this section. b. When possible, landscaping is the first choice for creating separation between land uses. c. Vegetation should be subject to [annual/seasonal] inspection for overgrowth and general health and incorporated into maintenance plans. 			

Trees and vegetation - Continued

Example Code Language - Continued (from Greenville Area MPO’s Active Transportation Plan, for example only)

2. Design

- a. Vegetation design is subject to the standards of [local code section xxx].
- b. Use native plant species and plants appropriate to the region that are already adapted to the local soil and climate and contribute positively to wildlife habitat, biodiversity, and local ecology needs.
- c. Keep vegetation maintained so that it does not impede views or interfere with desired access.
- d. Select and place vegetation to provide seasonal comfort: shade in warmer months and sunlight in colder months.
- e. Trees should be trimmed to provide a minimum of 8 feet of vertical clearance and to avoid obstruction of pathway lighting. Trees should be pruned to maintain structural integrity and reduce branch and trunk failure incidents.
- f. The City should use all methods of communication to regularly remind property owners of their responsibilities for maintaining City trees on their property and the process for requesting City assistance with pruning services

Jurisdiction inventory of vegetation policy and code language (none, minimal, partial, significant)

Jefferson	Millersburg	Albany	Tangent
Partial	Significant	Significant	Partial/Significant

For More Information:

[Greenville Area MPO Active Transportation Plan](#)

Topic	Benefits of Adoption	BPP Goals Supported	Opportunities for Adoption
Transit connections	Connecting transit to active transportation investments provides a usable transportation system for people who cannot or choose not to drive. All transit riders start and end their trip as pedestrians or bicyclists, so connecting transit stops with sidewalks, paths, and trails improves the accessibility of the transit system.	Goal 1: Safe, comfortable, intuitive Goal 2: Locally connected Goal 3: Access to key destinations Goal 4: Prioritize equity	Land-use and zoning code updates

Draft Policy

Ensure adequate infrastructure and amenities for pedestrians and bicyclists at all transit facilities and connections. Provide safe and direct pedestrian and bicycle crossings at transit stops, particularly on collector or arterial streets with existing enhanced crossing spacing of greater than 1,000 feet.

Example Code Language (from Southeast [Missouri] MPO Regional Bicycle & Pedestrian Plan and Rogue Valley MPO Active Transportation Plan, for example only)

Crossings

- Safe and Direct Crossings. Roadway crossings shall be considered at mid-block locations consistent with [the local jurisdiction’s] bicycle and pedestrian access spacing standards and at locations identified in the Albany Area MPO Bicycle and Pedestrian Plan or local transportation plans.
- Mid-block crossings should be placed along arterial roadways and collector streets in locations where the distance between signalized intersections is greater than 1/2 mile. They should also be provided on any roadway where demand for crossing is increased by pedestrian “desire lines,” often found adjacent to schools, churches, parks, community centers, transit stops, shopping areas, or any other land use that may increase pedestrian demand.
- Safe pedestrian crossings are particularly important in the vicinity of schools and other areas with high concentrations of children.
- Mid-block crossings should provide some sort of pedestrian signal on roadways with a speed limit greater than 30 mph. The use of new and enhanced crosswalk treatments are encouraged and can be incorporated into branding for the trail and bike system in the region, including:
 - a. Raised crosswalks
 - b. Raised intersections
 - c. Pedestrian Hybrid Beacon (HAWK Signals)
 - d. Pedestrian signals
 - e. Pedestrian refuges
 - f. High-visibility and textured crosswalks

Transit connections - Continued

Example Code Language (from Southeast [Missouri] MPO Regional Bicycle & Pedestrian Plan and Rogue Valley MPO Active Transportation Plan, for example only)

Bicycle parking

- Bicycle parking infrastructure should be prioritized at bus stops and other transit facilities.

Shelters, lighting, and other amenities:

- All bus and other transit stops should feature shelters with benches or other seating to create safe, accessible, and functional pedestrian spaces. Shelters should be at least 5 feet wide to allow pedestrians to pass each other. Trash receptacles should be within or adjacent to transit shelters.
- All bus and other transit stops should be adequately lit. Direct glare or excessive illumination on adjacent properties, streets, or sidewalks should be avoided.
- Public art should be encouraged at transit shelters.

Jurisdiction inventory of transit connection policy and code language (none, minimal, partial, significant)

Jefferson	Millersburg	Albany	Tangent
None	None	Partial	None/Minimal

For More Information:

[Southeast Metropolitan Planning Organization's \(SEMPO\) Regional Bicycle & Pedestrian Plan](#)

[Rogue Valley MPO Active Transportation Plan](#)

Topic	Benefits of Adoption	BPP Goals Supported	Opportunities for Adoption
Updated bicycle facility design standards	Updating bicycle facility design standards such that the preferred bicycle facility type is based on roadway speed and number of vehicles can help create a safer and more comfortable bicycling environment.	Goal 1: Safe, comfortable, intuitive Goal 3: Access to key destinations Goal 6: Encourage walking and biking to businesses	Engineering Design Standards updates (often updated in conjunction with Transportation System Plans)
<p>Draft Policy</p> <p>Help promote increased bicycle travel by providing bicycle facilities that reflect bicyclists’ safety and comfort needs as dictated by roadway speeds and number of vehicles (i.e. increase physical separation between bicyclist and vehicle as road speeds and vehicle counts increase). Reference Federal Highway Administration’s 2019 Bikeway Selection Guide to determine ideal bicycle facilities given local context that will appeal to a broad range of bicyclists.</p>			
<p>Example Code Language</p> <p>Limited example code language is available at this time. Code language development could take multiple forms, such as codifying Federal Highway Administration’s 2019 Bikeway Selection Guide or a more local bicycle plan, or updating design standards and development code to reflect more context sensitive design. Any effort to update bicycle facility design standards would likely be a collaborative effort between ODOT, local jurisdictions, and potentially federal partners and area experts.</p>			
<p>Jurisdiction inventory of active transportation infrastructure maintenance policy and code (none, minimal, partial, significant)</p>			
<p>Note: City jurisdictions generally allow for shared roadways along low speed, low vehicle traffic neighborhood streets. For busier and higher speed streets, jurisdictions generally require bike lanes. Current requirements don’t account for road context and the increased need for physical separation as road speeds and traffic volumes increase.</p>			
Jefferson	Millersburg	Albany	Tangent
Partial	Minimal	Minimal	Minimal
<p>For More Information:</p> <p>Federal Highway Administration Bikeway Selection Guide (note that this is not a design guide, but instead helps practitioners make informed decisions for selecting bikeway types)</p> <p>NACTO Urban Bikeway Design Guide (second addition) contains detailed design guidance including required features, recommended features, and options features for each bicycle facility type</p> <p>Federal Highway Administration Separated Bike Lane Planning and Design Guide</p>			

Updated Bicycle Facility design Standards - Continued

Examples of plans and design manuals that incorporate context sensitive bicycle facility selection:

[Seattle, WA's Bicycle Master Plan 2021-2024 Implementation Plan](#)

[Austin, TX's All Ages and Abilities Bicycle Network](#)

Vancouver, Canada [Engineering Design Manual](#) and [Design guidelines for All Ages and Abilities \(AAA\) cycling routes](#)

Cambridge, MA's [Cycling Safety Ordinance](#), codified in [Chapter 12.22 of the Cambridge Municipal Code](#). The Code requires that permanent separated bicycle lane with adequate directionality be installed if improvements are made to a segment of the Separated Network as identified in the Cambridge Bicycle Plan (or any superseding plan).

Topic	Benefits of Adoption	BPP Goals Supported	Opportunities for Adoption
Maintenance of active transportation investments	Maintaining existing and new active transportation infrastructure is essential to ensure the continued utility and safety of these paths.	Goal 1: Safe, comfortable, intuitive Goal 5: Builds on existing infrastructure	Transportation System Plan updates Inclusion of active transportation repairs and inspections in current transportation infrastructure repairs and inspections

Draft Policy

Allocate adequate funding and resources to ensure the maintenance of existing and new active transportation investments including but not limited to sweeping, maintaining a smooth roadway, replacing pavement markings and signage, and tending to major damages.

Example Code Language (taken directly from Portsmouth, NH Active Transportation Plan, for example only)

- Bicycle and pedestrian facilities and pavement markings should be added to inspection schedules and maintenance budgets.
- Inspect bicycle and pedestrian facilities annually. Pavement markings generally require restriping every 3-5 years to maintain visibility. Incorporate pedestrian and bicycle infrastructure data points into regular maintenance assessments. Data collected in GIS compatible formats can be cross-checked with the Active Transportation Plan.
- Restoration of all pedestrian and bicycle pavement markings is required after street utility repairs. Supply pavement marking plans with street opening permits and include pavement markings as part of inspection list for utility repairs.
- Include on- and off-road bicycle facilities in maintenance programs. Bike lanes and off-road paths should be cleared of debris and snow, year-round. Bicycle facilities should be added to street sweeping and snow clearance programs.
- Organize volunteer path maintenance events. The City or other organization should organize volunteers to conduct seasonal maintenance on off-road paths. Maintenance may include trash pickup, sweeping, and cleaning of vandalism.
- The City or other organization should provide a system or platform (e.g., webpage, phone number) for residents to report areas in need of more serious maintenance or sites of frequent problems.

Jurisdiction inventory of active transportation infrastructure maintenance policy and code (none, minimal, partial, significant)

Jefferson	Millersburg	Albany	Tangent
Minimal	Minimal	Minimal	Minimal

For More Information:

[See Northwest Arkansas’ Regional Bicycle and Pedestrian Master Plan Appendix A \(pg 88\)](#)

[Federal Highway Administration Pedestrian and Bicycle Funding Opportunities](#)

Topic	Benefits of Adoption	BPP Goals Supported	Opportunities for Adoption
Rezoning commercial and residential areas to be mixed-use	Mixed-used areas allow people who walk and bike to reach more destinations within a smaller distance. Residents find walking and biking more convenient and enjoyable when key destinations are within 0-3 miles of each other, mixed-use zoning is one way to promote this development pattern. This pattern also can increase economic development and property values.	Goal 1: Safe, comfortable, intuitive Goal 2: Locally connected Goal 6: Encourage walking and biking to businesses	Land-use and zoning code updates
Draft Policy			
Rezone districts to allow for mixed-use developments where appropriate. Locate commercial zones close to higher density zones. Work closely with developers of new economic development to provide multimodal transportation access for residents and visitors.			
Example Code Language (taken directly from Northwest Arkansas’ Regional Bicycle and Pedestrian Master Plan, for example only)			
<ul style="list-style-type: none"> • Mixed uses with residential [shall be] permitted and encouraged in [X, Y, Z zones], urban thoroughfares, Downtown, and Main Street. • In Downtown Core and [key neighborhood]; expand pedestrian-oriented character town square; uses that promote retail and entertainment venues with upper-story residential uses permitted. Mixed use is commercial and retail on the first floor and office and residential on the upper floors. Buildings [should be] spaced closely or attached. 			
Jurisdiction inventory of mixed-use zoning policy and code language (none, minimal, partial, significant)			
Jefferson	Millersburg	Albany	Tangent
Minimal	Minimal	Partial	None/Minimal
For More Information: Sustainable Development Code’s section on Mixed-Use Zoning (contains additional examples of code from other cities) University of Delaware Complete Communities Toolbox			

Topic	Benefits of Adoption	BPP Goals Supported	Opportunities for Adoption
Sidewalk development requirements	Requiring new development or substantial redevelopment to install sidewalks or contribute to a sidewalk development funds helps insure consistent provision of pedestrian facilities as communities grow and redevelop. Note that this policy will likely not apply to areas outside of city limits, as it is often impractical to provide pedestrian facilities in these areas.	Goal 1: Safe, comfortable, intuitive Goal 2: Locally connected Goal 5: Builds on existing infrastructure Goal 6: Encourage walking and biking to businesses	Development code updates
<p>Draft Policy</p> <p>All new development and substantial redevelopment is required to provide pedestrian facilities. Developer will work with the city to provide facilities that meet or exceed the city’s pedestrian facilities requirements. Developers may have the option to pay into a sidewalk development fund instead of installing physical sidewalks.</p>			
<p>Example Code Language (adapted from Albany Development Code, Article 12)</p> <p>All development for which land use applications are required must include sidewalks adjacent to public streets. This requirement also applies to new single-family houses and duplexes if they are located on arterial or collector streets or on curbed local streets, if there is an existing sidewalk within 500 feet on the same side of the street.</p> <p>Sidewalks shall be built when arterial and collector streets are constructed and significantly reconstructed or improved. This provision shall also apply to local streets that serve commercial and multi-family development. Sidewalks are required on both sides of all streets. If an interim street standard is being constructed which does not include bike lanes or sidewalks, interim bikeways or walkways for pedestrians shall be provided by paved roadway shoulders at least 8 feet wide on arterials and 6 feet on other streets. Provision of sidewalks may be waived when the street serves a use or combination of uses that generate fewer than 50 trips a day (based on ITE standards) and cannot be continued or extended to other properties.</p>			
<p>Jurisdiction inventory of sidewalk development requirements policy and code language (none, minimal, partial, significant)</p>			
Jefferson	Millersburg	Albany	Tangent
Partial	Significant	Significant	Significant

Sidewalk Development Requirements - Continued

For More Information:

All cities in the AAMPO area have sidewalk development requirements. Given this, the resources below focus on interim, or temporary, options for pedestrian facilities – acknowledging that lack of development or piecemeal development does not mean pedestrian facilities should not be provided.

Seattle's [Cost-Effective Walkways Fact Sheet](#) provides information about alternatives to traditional curb-and-gutter sidewalks. Such walkways can be good interim steps before full sidewalks are installed.

Alta Planning's [Small Town and Rural Design Guide](#) contains information on pedestrian lanes, sidepaths, and other alternatives to traditional curb-and-gutter sidewalks.

Portland's Draft [Pedestrian Design Guide](#) (2021) contains lots of information on sidewalks, corners, and crossings, including a section on alternative pedestrian walkways. The city has [piloted](#) an alternative walkway as well.

Topic	Benefits of Adoption	BPP Goals Supported	Opportunities for Adoption
Adjusting traffic signal timing to accommodate slower walking speeds	Adjusting traffic signal timing to extend the pedestrian walking interval increases safety by reducing the chance that pedestrians are caught mid-crossing when oncoming traffic lights turn green. Traffic signals are generally timed for a 3.5ft/sec walking speed, the walking speed of a relatively fit man. Many people, including the elderly, young, disabled, and people carrying or pushing items, do not walk at this speed.	Goal 1: Safe, comfortable, intuitive Goal 4: Prioritize equity	Transportation System Plan updates City Engineering Standards updates
<p>Draft Policy</p> <p>Inventory pedestrian walking speed for all traffic signals. Adjust traffic signals to a lower pedestrian walking speed in areas with concentrated older populations (such as near senior centers), disabled populations, and younger populations. Signals at locations where it is apparent the pedestrians have a difficult time crossing should also be adjusted. Signals should be timed for a maximum walking speed of 3.5ft/sec (2009 MUTCD recommended speed).</p>			
<p>Example Code Language (adapted from Millersburg’s current City Engineering Standards)</p> <p>A licensed traffic engineer registered in the State of Oregon shall design traffic signals. All documentation of traffic studies, field data, and recommendations will be coordinated with the City Engineer. All plans and specifications shall be in accordance with Oregon Department of Transportation (ODOT) and MUTCD requirements or as modified by the City Engineer.</p> <p>Special consideration for pedestrians will be given in areas with known concentrations of older populations (such as near senior centers), disabled populations, and younger populations. Signals at locations where it is apparent the pedestrians have a difficult time crossing will also be given special consideration. Special consideration may include extending the pedestrian walking interval to accommodate slower walking speeds, leading pedestrian phases, and audible walk cues, among other pedestrian safety best practices. The final design of the traffic signal must be approved and accepted by the City Engineer.</p>			
<p>Jurisdiction inventory of traffic signal timing policy and code language (none, minimal, partial, significant)</p>			
Jefferson	Millersburg	Albany	Tangent
Minimal	Minimal	Minimal	None
<p>For More Information:</p> <p>NYSAMPO Timing Traffic Signals to Accommodate Pedestrians Fact Sheet</p> <p>AAA’s Pedestrian Signal Safety for Older Persons Study</p>			

Program Recommendations

Program	Description	BPP Goals Supported
Walk & Roll to School Day	A global event that involves communities from all 50 states and more than 40 countries walking and rolling to school on the same day. Partners promote the event and provide small incentives (e.g. stickers, games) to encourage students/families to walk or roll to school.	<ul style="list-style-type: none"> • Goal 1: Safe, comfortable, intuitive • Goal 3: Access to key destinations • Goal 4: Prioritize equity
<p>Potential Partners</p> <ul style="list-style-type: none"> • OCWCOG • Schools • Bike shops • Local businesses along routes • Local government: Public health, transportation/public works, planning, environment, law enforcement • Safe Routes to School, other active transportation advocacy organizations • Faith-based organizations • ODOT 		
<p>For More Information:</p> <p>Oregon Safe Routes to School, Organize a Walk + Roll Day</p>		

Program	Description	BPP Goals Supported
Bike/Walk to Work Day/Week	Partners promote the active transportation day/week event and provide incentives (e.g. stickers, bingo game, free coffee/breakfast, helmets, bike tune-ups) to encourage workers to bike or walk to work.	<ul style="list-style-type: none"> • Goal 1: Safe, comfortable, intuitive • Goal 3: Access to key destinations • Goal 6: Encourage biking to businesses
Potential Partners <ul style="list-style-type: none"> • Large employers, local businesses, Chamber of Commerce • Bike shops • Local government: Public health, transportation/public works, planning, environment, law enforcement • Get There Oregon and other active transportation advocacy organizations 		
For More Information: Summit County, Colorado example League of American Bicyclists Bike Month		

Program	Description	BPP Goals Supported
Walking School Bus/ Bicycle Train	A walking school bus is a group of children walking to school with one or more adults. It can be as informal as two families taking turns walking their children to school to as structured as a route with meeting points, a timetable and a regularly rotated schedule of trained volunteers. A variation is the bicycle train, in which adults supervise children riding their bikes to school.	<ul style="list-style-type: none"> • Goal 1: Safe, comfortable, intuitive • Goal 3: Access to key destinations • Goal 4: Prioritize equity
Potential Partners <ul style="list-style-type: none"> • AAMPO • Bike shops • Schools • Local government: Public health, transportation, planning, environment • Environmental advocacy nonprofits, bike advocacy organizations • Faith-based organizations 		
For More Information: Safe Routes to School Walking School Bus and Bicycle Trains Step by Step: How to Start a Walking School Bus Portland, Oregon Walking School Bus Guide Eastern Oregon Commute Options Walking School Bus		

Program	Description	BPP Goals Supported
Safe Routes to School bike rodeos and education curricula	Local children are offered bike activities and education about walking and biking safety. These activities can be incorporated into PE and health classes. Classes can include how to ride a bicycle, safe riding skills, bicycle safety checks, basic bike maintenance, rules of the road, and bicycle facilities and infrastructure.	<ul style="list-style-type: none"> • Goal 1: Safe, comfortable, intuitive • Goal 3: Access to key destinations • Goal 4: Prioritize equity
Potential Partners <ul style="list-style-type: none"> • AAMPO/OCWCOG • Schools • School liaison (formalized volunteer position for a parent/guardian, retired neighbor, older student, etc. for each school) • Local government: Public health, transportation, planning, environment • Environmental advocacy nonprofits, bike advocacy organizations • Faith-based organizations • Bike shops • Bike-friendly businesses 		
For More Information: OCWCOG Safe Routes to School Oregon Safe Routes to School ODOT Safe Routes to School		

Program	Description	BPP Goals Supported
Annual school count of walking and biking	Schools conduct a week long annual count to measure walking and bicycling among students and staff. Can be performed before, during, and after events such as Walk & Roll to School Day to gauge changes in active transportation habits.	<ul style="list-style-type: none"> • Goal 1: Safe, comfortable, intuitive • Goal 3: Access to key destinations • Goal 4: Prioritize equity
<p>Potential Partners</p> <ul style="list-style-type: none"> • AAMPO • Schools • Local government: Public health, transportation, planning, environment 		
<p>For More Information:</p> <p>Eugene 4J School District Annual Transportation Counts, contact Sarah Mazze for additional information</p> <p>Safe Route to School Student Travel Tally</p> <p>Norte (northern Michigan bike advocacy group) Safe Route to School Student Travel Tally</p>		

Program	Description	BPP Goals Supported
Vision Zero	Vision Zero is broad based, multidisciplinary approach to traffic safety that works towards eliminating all traffic related deaths and severe injuries. Vision Zero is distinct from more traditional views on traffic safety in that it recognizes traffic deaths are preventable and human error is to be expected (and can be planned for).	<ul style="list-style-type: none"> • Goal 1: Safe, comfortable, intuitive • Goal 4: Prioritize equity
Potential Partners <ul style="list-style-type: none"> • AAMPO • Local government: Planning, transportation, public health • Local hospitals and medical providers • Non-profits and advocacy organizations (biking, environment, YMCA) 		
For More Information: Vision Zero Network Vision Zero Challenge City of Eugene, Oregon's Vision Zero webpage Portland Bureau of Transportation's Vision Zero webpage and Vision Zero Action Plan		

Program	Description	BPP Goals Supported
Walk & Bike Tours for Elected Officials & Community Engagement	Newly elected officials receive walking and/or biking tours of their community. Government agencies use walking/biking tours to meet people in the locations of proposed changes, see different types of infrastructure, collect community input, and engage with community members.	<ul style="list-style-type: none"> • Goal 4: Prioritize equity
Potential Partners <ul style="list-style-type: none"> • AAMPO • Local government: Planning, transportation, public health, environment, economic development • Advocacy groups: Citizen engagement, neighborhood associations, environmental advocacy, bike advocacy, etc. • Chamber of Commerce • Developers • Realtors, real estate companies • Bike-friendly businesses 		
For More Information: Strong Towns article describing public engagement walking/biking tours in South Omaha, Nebraska		

Program	Description	BPP Goals Supported
Bike Route Maps	Partners collaborate to provide online and physical maps of the community's bike network including different kinds of routes and infrastructure. Maps can include info on bicycling (and/or pedestrian) rules and responsibilities.	<ul style="list-style-type: none"> • Goal 1: Safe, comfortable, intuitive • Goal 3: Access to key destinations • Goal 4: Prioritize equity • Goal 6: Encourage biking to businesses
<p>Potential Partners</p> <ul style="list-style-type: none"> • AAMPO • Local government: Planning, transportation • Bike shops • Advocacy organizations (biking, environment) 		
<p>For More Information:</p> <p>Eugene-Springfield online bike maps in English and Spanish. Includes locations that provide physical maps</p>		

Program	Description	BPP Goals Supported
Bike Classes for Adults	Local residents are offered bike classes. These activities can be expanded from OCWCOG's bus rider education programs. Classes can include how to ride a bicycle, safe riding skills, bicycle safety checks, basic bike maintenance, and rules of the road.	<ul style="list-style-type: none"> • Goal 1: Safe, comfortable, intuitive • Goal 3: Access to key destinations • Goal 4: Prioritize equity
Potential Partners <ul style="list-style-type: none"> • AAMPO/OCWCOG • Bike shops • Schools • Local government: Public health, planning, transportation, environment • Environmental advocacy nonprofits, bike advocacy organizations • Faith-based organizations • Bike-friendly businesses 		
For More Information: <p>Walk Bike KC, out of Kansas City, is a non-profit advocacy and education organization offering adult bicycling classes, including women-focused sessions.</p> <p>Go Redmond, a transportation options organization in the Redmond, Washington area, offers three levels of adult bicycle classes, beginning with Level 1: Start Cycling.</p> <p>San Francisco Bicycle Coalition, in partnership with San Francisco Municipal Transportation Agency's Bicycle Safety Education Program, hosts both in person and webinar style bicycle education classes.</p>		

Program	Description	BPP Goals Supported
Bike-Friendly Businesses	Businesses and employers are recognized for their efforts to encourage a more welcoming atmosphere for bicycling employees, customers, and the community such as by providing employee and/or customer incentives, installing bicycle racks, incorporating walking/biking/transit directions on their websites and informational materials, etc.	<ul style="list-style-type: none"> • Goal 1: Safe, comfortable, intuitive • Goal 3: Access to key destinations • Goal 4: Prioritize equity • Goal 6: Encourage biking to businesses
Potential Partners <ul style="list-style-type: none"> • AAMPO • Local government: Planning, transportation • Local businesses • Advocacy organizations (biking, environment) • Existing/new/potential bike-friendly businesses 		
For More Information: League of American Bicyclists' Bicycle Friendly Business Program		

Program	Description	BPP Goals Supported
Annual Slow/Open Streets Event(s)	<p>Specific streets are temporarily closed to vehicles to promote pedestrian and bicycling use for exercise, recreation, shopping, community events, and general enjoyment. These events are opportunities to include walking and bicycling education and build visibility for walking and bicycling programs. Events may be organized by community members and/or local jurisdictions with OCWCOG and/or local planning departments serving as liaison to other city departments. Instead of eliminating vehicle access, vehicle volume and/or speeds may be reduced.</p>	<ul style="list-style-type: none"> • Goal 1: Safe, comfortable, intuitive • Goal 3: Access to key destinations • Goal 4: Prioritize equity • Goal 6: Encourage biking to businesses
<p>Potential Partners</p> <ul style="list-style-type: none"> • AAMPO/OCWCOG • Local government: Planning, transportation, environment, public health • Local businesses • Advocacy organizations (biking, environment) • Existing/new/potential bike-friendly businesses • Neighborhood Associations 		
<p>For More Information:</p> <p>National Association of City Transportation Officials (NACTO) Slow Streets</p> <p>Eugene Sunday Streets</p> <p>Corvallis Open Streets</p>		

Program	Description	BPP Goals Supported
Walking Groups	Walking groups are both formal and informal groups of people who walk together for fitness, socializing, and other benefits. Local government and other organizations can expand or promote walking groups for specific demographics, geographic locations, or interests (e.g. seniors, mom & baby, worker lunchtime walks, recreation area weekly walks, seniors walk with kids to school).	<ul style="list-style-type: none"> • Goal 1: Safe, comfortable, intuitive • Goal 3: Access to key destinations • Goal 4: Prioritize equity
<p>Potential Partners</p> <ul style="list-style-type: none"> • AAMPO • Local government: Planning, transportation, environment, public health, senior centers • Local businesses • Non-profits and advocacy organizations (biking, environment, YMCA) • Albany Fitwalkers (existing walking group) • Neighborhood Associations 		
<p>For More Information:</p> <p>Albany Fitwalkers, the Pacific Northwest Chapter of the American Volkssport Association</p> <p>How to Start a Walking Club</p>		

Monitoring & Evaluation

The Bicycle and Pedestrian Plan presents lots of projects, program, and policy recommendations to make walking and bicycling in the greater Albany area easier and safer for everyone. Monitoring and evaluating new projects, programs, and policies can help ensure we're making progress on plan goals.

Examples of monitoring and evaluation criteria related to the Bicycle and Pedestrian Plan are listed below. Note that jurisdictions will have differing abilities and appetites for monitoring and evaluation. Jurisdictions should elect to monitor and evaluate those items that will be the most useful for them, ensuring that data is available, meaningful, and can be collected repeatably.

Item/Objective	Potential Measurement/Indicator
Engender excitement and encouragement around walking and bicycling	Number of city wide walking and bicycling events
Increase student knowledge about safe walking and bicycling practices, encourage walking and bicycling to school	Percent of students receiving safe routes to school curricula, percent of students participating in Walk & Roll to School Day
Increase awareness of pedestrian and bicyclist barriers and opportunities	Percent of elected representatives who received walking and bicycling tours
Improve pedestrian and bicyclist experience	Number of street trees planted along sidewalks /bikeways
Increase cohesion with transit	Percent of transit stops with bicycle and pedestrian amenities
Improve infrastructure maintenance	Number of complaints related to bicycle and pedestrian infrastructure maintenance (debris on paths, vegetation overhangs, etc.)
Increase bicycle/pedestrian infrastructure	Miles of bicycle facilities/pedestrian facilities added or significantly improved
Infrastructure use	Number of people using infrastructure (would require bicycle and pedestrian counters, initial baseline count suggested prior to new infrastructure)

CH 6: PROJECT IMPLEMENTATION & MONITORING

Overview

Implementing the Bicycle and Pedestrian Plan requires infrastructure projects, policies, and programs. Policies and programs can help support more bicycling and walking, while improved infrastructure can make bicycling and walking trips safer and more comfortable.

This chapter outlines strategies to leverage limited dollars and identifies funding sources and opportunities for bicycle and pedestrian projects. This chapter closes with suggestions for monitoring and evaluating progress towards the Bicycle and Pedestrian Plan goals.

New Statewide Planning Rule Context

While the Bicycle and Pedestrian Plan was being created, the Department of Land Conservation and Development adopted new rulemaking that applies to metropolitan areas, including AAMPO. The Climate Friendly and Equitable Communities rule requires cities within metro areas to designate “climate friendly and equitable areas” of certain sizes based on the city’s population. Climate friendly and equitable areas must meet requirements for density, parking, and zoning. All cities within the AAMPO region will be selecting these areas within the coming years, and may want to consider how these areas intersect with the priority bicycle and pedestrian improvements described in the AAMPO Bicycle and Pedestrian Plan.

Implementation Strategies

Building out the projects identified in the Bicycle and Pedestrian Plan will be costly, in both staff time and energy as well as monetarily. Three strategies to leverage limited resources include project phasing, project bundling, and demonstration projects

Project Phasing

A number of projects identified in the Bicycle and Pedestrian Plan span a considerable distance. Such larger scale projects can be implemented in phases by focusing on one section of the path or corridor at a time as funding becomes available.

The South Albany-Tangent shared use path is a good example of a project that can be phased. One phase can include the area along McFarland Road from Lake Creek Drive to Highway 34 and another phase can include the area along Looney Lane from Highway 34 to Allen Lane.

Project Bundling

Project bundling involves incorporating projects, or even portions of projects, from the Bicycle and Pedestrian Plan into other planned transportation projects, such as street resurfacing, intersection upgrades, urban upgrades, safety projects, and utility projects. Incorporating Bicycle and Pedestrian Plan projects into other transportation projects can help reduce project overhead costs.

A classic example includes striping bicycle lanes or buffered bicycle lanes anytime a street is repaved. The repaved street will require restriping for vehicles, so striping bicycle lane at the same time can save time and money. Intersection upgrades are another good example of a project bundling opportunity, they provide a chance to consider signal timing for pedestrians crossing the street, ADA ramps, bike boxes, and ensure loop detectors are sensitive enough to detect bicyclists waiting for green lights.

Project bundling can also be a good strategy when applying for grants. Bundling a handful of small projects into a larger project can result in a more compelling story that makes the grant application more competitive. Bundling for grants can be based around themes such as safe routes to school, access to transit stops, or connecting divided neighborhoods.



*Photo by Marc Caswell, San Francisco
Bicycle Coalition*

Bike Box

A bike box is a designated area at the head of a traffic lane at a signalized intersection that gives bicyclists a safe and visible way to get ahead of queuing traffic at a red light. Bike boxes can also help prevent 'right-hook' conflicts at the start of a green light - when a bicyclist wants to go straight and a vehicle wants to turn right.



*Photo from official website of Longbeach,
California*

Loop Detectors

Many traffic signals use loop detectors to sense when a vehicle is waiting at a traffic signal. Loop detectors are embedded in the ground and tripped by the amount of metal in the vehicle. Loop detectors can be adjusted so that they can be tripped by bicycles. A small pavement marking lets bicyclists know where to stop to trip

Demonstration Projects

Demonstration projects, also called pilot projects, are temporary prototypes of future infrastructure. Demonstration projects have a lower budget than permanent infrastructure and allow design edits. Community members get a chance to become familiar with new street designs and determine if they are a good fit for their community. Demonstration projects commonly employ material like temporary paint and delineators, traffic barrels, and straw bales. A city's willingness to test out a project in this way can also improve chances of grant funding – particularly if metrics from before and during the demonstration point to latent community need.



Painted curb extension in Honolulu, Hawaii. Image from Ulupono Initiative.



Temporary protected bike lane in Guelph, Ontario. Image from Aman Khan.



Temporary protected bike lane. Image from Alta Planning.



Temporary crossing island. Image from Seattle Right-of-Way Improvements Manual.

Funding Sources & Opportunities

Funding sources and opportunities include traditional funding sources, such as state gas tax revenues and system development charges, as well as competitive grants like those offered through the Oregon Community Paths Program.

State Gas Tax Revenues

All communities within the AAMPO planning area receive state gas tax revenues. The state requires that at least 1% of this revenue be used for bicycle and pedestrian projects. In FY19/20 Albany received \$3,672,501 in state gas tax revenue, 1% of which would be \$36,725. In the same time period, Jefferson received \$230,597 in state gas tax revenue, 1% of which would be \$2,306. While this is a consistent source of funding, it is well below the amount needed to construct impactful infrastructure, particularly for smaller communities.

Note that dedicating 1% of state gas tax revenues to bicycle and pedestrian projects is a minimum, communities can elect to contribute more state gas tax revenue should they wish. Dedicating more state gas tax revenues to bicycle and pedestrian projects would mean putting less funds towards road maintenance, which is where most state gas tax revenues are used.

Systems Development Charges

System Development Charges (SDCs) are one time fees charged to new development to help pay for the costs of expanding public facilities to meet demands of new developments. SDCs commonly fund water, sewer, transportation, flood control, and park capital improvements. All of the cities in the AAMPO planning area have established SDCs in their municipal codes. SDC funds can be used as local match for grant programs and are especially appropriate for projects that are not good candidates for other funding sources.

Transportation Utility Fees

Transportation Utility Fees (TUFs), also known as street utility, road user, or street maintenance fees, are monthly fees collected from residences and businesses through their water/sewer bills. Fees are generally assessed based on the expected number of trips for each land use. Funds are usually used primarily for road maintenance and sidewalks, but can also cover capital improvements. At least nineteen Oregon cities have TUFs. The [Corvallis sidewalk maintenance fund](#) is funded through fees on utility account holders (80 cents/month for most residential users). These funds can add up; roughly half of Medford's Public Works operations budget comes from a street utility fee.

Oregon Community Paths Program

The Oregon Community Paths (OCP) Program is a competitive grant program that funds the development, construction, reconstruction, resurfacing, and other capital improvement projects related to shared use paths, bicycle paths, and footpaths. The OCP program aims to complement existing active transportation programs in communities and improve access and safety for people walking and biking. The first round of funds were disbursed in 2021, funding is expected to grow in the future.

Safe Routes to School

Safe Routes to School (SRTS) is a federally funded program that promotes walking and bicycling to school through infrastructure improvements, enforcement, safety education, and incentives. Federal transportation bills designate money for SRTS programming, which is then disbursed to individual state departments of transportation (DOTs). In Oregon, additional state funding has been allocated to the SRTS program. ODOT manages competitive funding for SRTS infrastructure (\$10 million/year) and non-infrastructure (\$300,000/year). Infrastructure projects focus on making sure safe walking and biking routes exist through investments in crossings, sidewalks and bike lanes, flashing beacons, and similar items within one mile of a school on public right of ways. Non-infrastructure programs focus on education and outreach to assure awareness and safe use of walking and biking routes.

ODOT divides SRTS funding into three different programs, each with their own eligibility requirements, application guidelines, and timelines.

Competitive Construction Grant Program: The majority of the funds, 87.5% or greater, are used for a competitive grant program to build street safety projects to reduce barriers and hazards for children walking or bicycling to or from schools. The grant program operates on a biennial cycle (opens every two years).

Rapid Response Construction Grant Program: Up to 10% of funds are used for urgent needs or systemic safety issues in between competitive program grant cycles.

Project Identification Grant Program: Up to 2.5% of funds are used by ODOT to help communities identify projects to reduce barriers and hazards for children walking or bicycling to and from school.



Safe Routes to School promotional material produced by ODOT.

Sidewalk Improvement & Quick Fix Programs

ODOT’s Sidewalk Improvement Program (SWIP) and Quick Fix Program help build bicycle and pedestrian improvements on or along state highways. Both programs operate on a rolling basis and are particularly good for filling in missing pieces of sidewalk.

ODOT maintains a [manual](#) with more details on eligibility for SWIP and Quick Fix funds.

Other Grant Opportunities

The table below includes other grant opportunities not discussed in detail above. It’s important for staff to keep abreast of new and changing grant opportunities. Staying current with grant opportunities also allows staff to match projects with the grant opportunities they will be most competitive for, as different grants have different eligibility requirements. It’s also important to note that grants rarely cover the full cost of a project and often require matching funds from a city, county or state. Smaller communities may be eligible for reduced match percentages under some scenarios.

Other Funding Resources

- ODOT maintains a fairly exhaustive [list](#) of funding for bicycle and pedestrian projects online
- Rouge Valley MPO has a good list of funding sources in their [Active Transportation Plan](#) (Appendix G)

	Grant/Program Name	Grant/Program Information	Focus
Mid-Large Capital Projects	State Transportation Improvement Program (STIP)	<ul style="list-style-type: none"> • ODOT’s capital improvement program for federal and state money • Projects must be in a local adopted Transportation System Plan • Non-highway program funds bike and pedestrian projects, projects from other programs may include bike and pedestrian elements 	Oregon transportation infrastructure
	Community Development Block Grant (CDBG)	<ul style="list-style-type: none"> • U.S. Department of Housing and Urban Development program • Funds community development activities directed toward neighborhood revitalization, economic development, and improved community facilities & services 	Varies, recent years have focused on housing projects

	Grant/Program Name	Grant/Program Information	Program Focus
Mid-Large Capital Projects	Metropolitan Transportation Improvement Program (MTIP)/ Regional Flexible Funds	<ul style="list-style-type: none"> • A MPO’s capital improvement program for federal funding, via Surface Transportation Block Grants • Funds active transportation projects that make it easier and safer for people to walk and bike 	Road, pedestrian, and bicycle projects
	Rebuilding American Infrastructure with Sustainability and Equity (RAISE)	<ul style="list-style-type: none"> • U.S. Department of Transportation program • Supports transportation projects that promise to achieve national objectives (previously called BUILD and TIGER grants) 	Very large, multimodal, multi-jurisdictional
	All Roads Transportation Safety Program (ARTS)	<ul style="list-style-type: none"> • ODOT program designed to address safety needs on all public roads in Oregon • Funding is data-driven with a focus on locations with fatal and severe injury crashes 	Safety projects on all public roads
Non-Road Projects	Transportation Options Program (TO)	<ul style="list-style-type: none"> • Federally funded ODOT program • Supports programs that increase walking, biking, ride sharing, telecommuting, and public transit use 	Active transportation projects Education and encouragement programs
	People For Bikes Community Grants	<ul style="list-style-type: none"> • Private grant program that awards funds to non-profits and local government (up to \$10,000). People For Bikes is an industry coalition focused on promoting the use of bikes for recreation, fitness and transportation • Supports bicycle infrastructure projects and targeted advocacy initiatives that make it easier and safer for people of all ages and abilities to ride 	Bicycling, active transportation, and community development
Planning	Transportation Growth Management (TGM)	<ul style="list-style-type: none"> • ODOT administered grant program • Supports planning for transportation and land use in a way that increases opportunities for transit, walking, and bicycling 	Planning projects