

LCVMPO Bicycle Master Plan



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Introduction



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Plan Overview

The Lewis-Clark Valley Metropolitan Planning Organization (LCVMPO) was established in 2003 in order to provide a regional approach to transportation planning. Prior to its formation, local transportation planning efforts were handled individually by the cities and counties that make up the current LCVMPO:

- Asotin County
 - Nez Perce County
 - City of Asotin
- City of Clarkston
 - City of Lewiston

As the region has expanded over the past century, the growth has been driven at times by opportunity rather than strategic vision, resulting in a precarious mixture of vehicles, bicyclists, and pedestrians along important roadways and pathways within the region. The LCVMPO and its members sought to complete a comprehensive study to enhance bicycle safety and circulation within the valley, with the ultimate goal of making the Valley a place where roadways comfortably accommodate all modes of transportation and opportunities exist for residents and visitors of all ages and abilities to safely and efficiently bicycle for both transportation and recreation.

The LCVMPO Bicycle Master Plan (BMP) provides a blueprint to make it easier to decide to ride through a focus on:

- Enjoyable and safe places to ride – whether on a residential street, multi-use trail or protected bicycle lane
- Connected and well-maintained bicycle facilities that link the places people want to go – shops, schools, jobs, services, and parks, as well as to transit for access to further destinations
- A traveling public that is educated on how to safely, respectfully and predictably share the road
- Community support for bicycling, including from businesses, schools and government
- Places to securely park bicycles at destinations
- Increased access to bicycles
- People of all ages and abilities riding bicycles – young and old, beginners and confident riders

Vision / Goals & Objectives

The Lewis Clark Valley is a place where roadways comfortably accommodate all modes of transportation. Opportunities exist for residents and visitors of all ages and abilities to safely and efficiently bicycle for both transportation and recreation. Cycling is a common, fun, and practical means of transportation, recreation, and healthy living that provides economic benefits and enhances the quality of life in the Lewis Clark Valley.

The goals and objectives are organized by the essential elements identified by the League of American Bicyclists across five categories — known as the Five E’s — that are consistent in making great places for bicycling: Engineering, Education, Encouragement, Enforcement, and Evaluation.

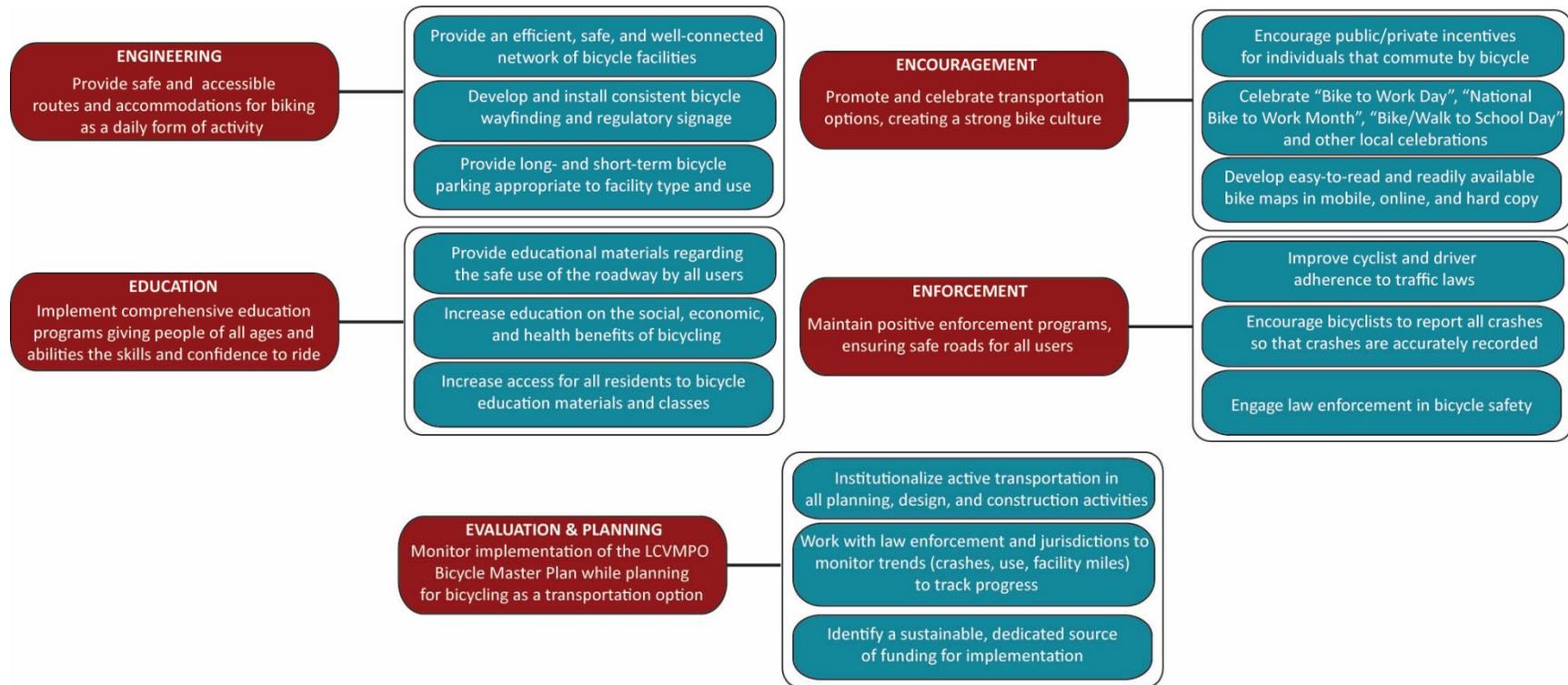


Figure 1. LCVMPO Bicycle Master Plan Goals & Objectives

Plan Purpose

The purpose of the LCVMPPO BMP is to provide a framework for improving the bicycling environment throughout the region. The actions and investments identified in the plan will advance the vision through new bicycle infrastructure (off-street trails and on-street bicycle facilities); maintenance; bicycle parking spaces and other end-of-trip facilities; and programs to enhance safety for all roadway users and encourage more people to ride bicycles. The BMP also responds to the call to action recently issued by the US Department of Transportation Secretary, Anthony Foxx.

Mayors Challenge for Safer People and Safer Streets

Secretary Foxx is challenging mayors and local elected officials to take significant action to improve safety for bicyclists and pedestrians of all ages and abilities over the next year. Mayors' Challenge participant cities will spend a year helping their communities undertake seven activities to improve safety. Top elected local officials are challenged to:

- Issue a public statement about the importance of bicycle and pedestrian safety
- Form a local action team to advance safety and accessibility goals
- Take local action on seven Challenge activities

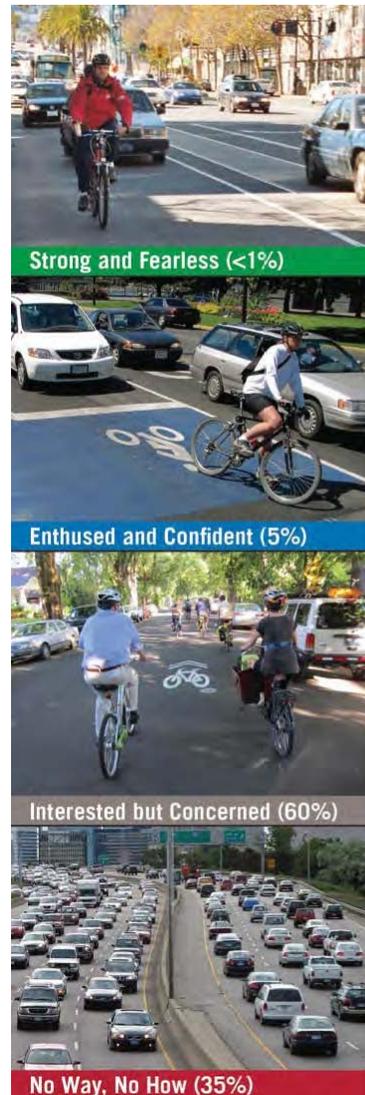
The seven challenge activities are:

- Take a Complete Streets approach
- Identify and address barriers to make streets safe and convenient for all road users, including people of all ages and abilities and those using assistive mobility devices
- Gather and track bicycling and walking data
- Use designs that are appropriate to the context of the street and its uses
- Take advantage of opportunities to create and complete pedestrian and bicycle networks through maintenance
- Improve walking and bicycling safety laws and regulations
- Educate and enforce proper road use behavior by all

Challenge cities win by improving walking and bicycling that contributes to the health, safety, environmental, transportation, and quality of life for its community members.

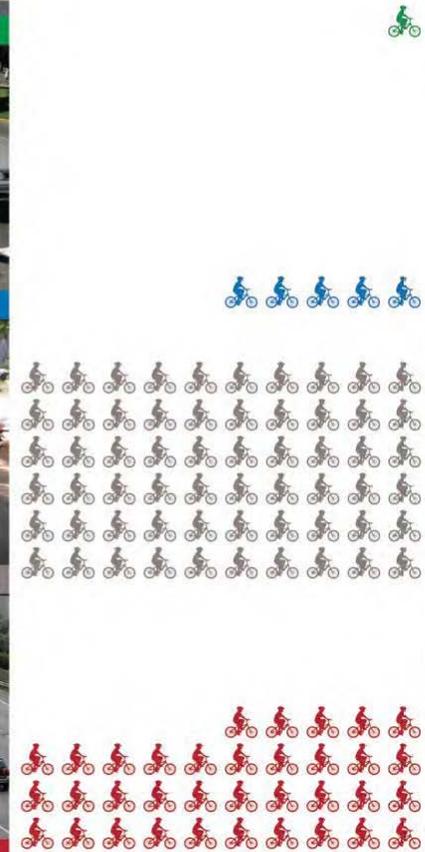
A central focus of this plan is to design and implement bicycle facilities that are safe and appropriate for riders of all ages and abilities. New bicycle facility types are introduced, including protected bicycle lanes, to physically separate people riding bicycles from motor vehicle traffic on arterials, and bicycle boulevards, in which low volume and low speed streets are optimized for walking and bicycling. While the bicycle network will be designed for all, riders should always use their own judgment in selecting routes that suit their experience and comfort level.

Who Rides (or Doesn't) and Why?



Four General Categories of Cyclists (percent of population)

SOURCE: www.portlandoregon.gov/transportation/article/264746



There are a variety of bicyclists of all skill levels in the Lewis Clark Valley. This plan seeks to meet the needs of the “Strong and Fearless,” “Enthusied and Confident,” and “Interested but Concerned.” Bicycle infrastructure should accommodate as many user types as possible, with the goal of creating safe bicycling environments to encourage more ridership. A framework for understanding the characteristics, attitudes, and infrastructure preferences of different bicyclists in the US population as a whole is illustrated below.

Strong and fearless bicyclists (approx. 1% of population) will typically ride anywhere regardless of road or weather conditions, ride faster than other user types, prefer direct routes, and will typically choose to ride on the road, even if shared with vehicles, over separate bikeways like shared use paths.

Enthusied and confident bicyclists (approx. 5-10% of population) are fairly comfortable riding in dedicated bikeways but usually choose low traffic streets or shared use paths when available. This group can include many kinds, including commuter and recreational bicyclists.

Interested but concerned bicyclists (approx. 60% of population) comprise the majority of the population and are typically those who only ride on low traffic streets or shared use paths in fair weather. These people perceive traffic, safety, and other issues as significant barriers to bicycling.

No way, no how encompasses approximately 30% of population. These are not bicyclists and will not ride a bicycle under any circumstances. Some may eventually try bicycling with time, education, and training.

Addressing the reasons willing and able people choose not to ride is a focus of this plan. Admittedly, some conditions cannot be mitigated by public intervention: the weather of the Pacific Northwest, the hills throughout the region, and early winter darkness. While the cities cannot change these conditions, individuals can address many of them with different types of bicycles (e-bicycles), appropriate bicycle clothing, and lights.

The region, however, can create an inviting environment, a sense of safety, thoughtful accommodation, and the reward of convenience for people who travel by bicycle. This plan proposes a network of bicycle facilities throughout the region that provides a way for people of all ages and abilities to travel by bicycle within their neighborhoods, from one neighborhood to the next, and across the Valley. This plan also includes recommendations for programs to enable all roadway users to understand the rules of the road and how to travel safely and predictably within the city, and to encourage people to ride a bicycle more often.

Making the Case for Investing in Bicycling

The case for improving the bicycling environment for people of all ages and abilities is growing. Academic and popular literature is expanding America’s understanding of the relationships between bicycling and health, economic, and environmental benefits, safety, time competitiveness, space efficiency, and equity. There is evidence that bicycling is good for individuals, businesses, cities, and society as a whole.

Safe Streets for All Users

Safety concerns are another reason to improve bicycling conditions. Although the incidence of crashes involving bicycles may be low, concerns about safety have historically been the single greatest reason people do not commute by bicycle, as

Figure 2. Four General Types of Bicyclists

captured in polls as early as 1991.¹ A Safe Routes to School survey in 2004 found that 30 percent of parents consider traffic-related danger to be a barrier to allowing their children to walk or bicycle to school.² This plan addresses safety concerns through physical and programmatic improvements.

Planning for safety requires accommodating pedestrians, bicyclists, and motorists as they share space on the street. Studies have shown slower motor vehicle speeds exponentially increase survival rates for both pedestrians and people riding bicycles involved in collisions with motorists. At 20 mph, a pedestrian or bicyclist has a 98% survival rate, compared with survival rates of 80% and 30% at 30 mph and 40 mph respectively.³

Studies from across the world also suggest that the risk of injury or death in a collision with motor vehicles declines as more people walk or bicycle. Policies that increase the numbers of people walking and bicycling appear to be an effective route to improving the safety for all roadway users.⁴ A study of improved safety records in bicycle-friendly cities concludes that while bicycle infrastructure, the design of the street, and the street network help slow traffic, it may be the presence of large numbers of bicyclists that changes the dynamics of the street enough to lower vehicle speeds. Safety for all road users may result from reaching a threshold of bicyclist volumes that compels motorists to drive more carefully. Strategies that attract bicycle riders are the same ones that improve safety for all road users. Cities should strive for “safety in numbers” but before they can get to that point, they need to create bicycle friendly streets that will make it comfortable for the average person to ride a bicycle.⁵

Affordability

Bicycling is one of the most affordable means of transportation available to Valley residents. Nationally, the average annual operating cost of a bicycle is \$308, compared to \$8,220 for the average car.⁶ The cost of gasoline alone places a growing burden on household budgets. Gasoline expenditures as a portion of the average household budget are increasing, going from 3.4% in 1996 to 5.3% in 2011.⁷ Replacing vehicle trips with bicycling offers immediate financial benefit for households, and providing bicycle facilities appropriate for people of all ages and abilities can help make that choice a reality.

Health Benefits

¹ Lou Harris Poll. 1991.

² U.S. Centers for Disease Control and Prevention. Barriers to Children Walking to or from School United States 2004. 2005.

³ Petro, J. Ganson, L. Vision Zero: How Safer Streets in New York City Can Save more than 100 Lives a Year. 2011.

⁴ Jacobsen PL. Safety in numbers: more walkers and bicyclists, safer walking and bicycling. 2003.

⁵ Marshall and Garrick. Evidence on Why Bike-Friendly Cities Are Safer for All Road Users. 2011.

⁶ Bureau of Transportation Statistics. Pocket Guide to Transportation. 2009.

⁷ Bureau of Labor Statistics. Consumer Expenditure Survey. 2012.

Physical activity is indisputably effective in the primary and secondary prevention of cardiovascular disease, diabetes, cancer, and other related chronic diseases. Public health professionals support active transportation as a means of improving these and other health outcomes related to the obesity epidemic. The rapid rise in childhood obesity is particularly alarming and correlates with the nationwide drop in bicycling and walking to school over the last half century. Creating a bicycle network appropriate for all ages and abilities and a built environment that encourages bicycling will support efforts to improve healthy lifestyles.

Mental health and academic achievement are also improved by bicycling and walking. Children who walk or bicycle to school learn better as they are more attentive and better able to concentrate. A study of more than 20,000 school-aged children found that by walking or bicycling to school, children's mental alertness was advanced by half a school year. Walking and riding a bicycle to school has more benefit for mental development than eating breakfast or lunch. This plan supports safe routes to school and training students, parents and school administrators to understand traffic laws for safe walking and bicycling as a means of supporting students' learning.

Environmental Benefits

Transportation is a significant source of air, water, and carbon pollution. Reducing vehicle miles travelled (VMT) in fossil fuel burning vehicles and reducing greenhouse gas (GHG) emissions intensity per mile travelled, will improve and protect the Lewis Clark Valley natural environment while reducing carbon emissions.

Economic Benefits

There are many ways to consider the economic benefits of increased levels of bicycling. Nationally, bicycling makes up \$133 billion of the US economy, funding 1.1 million jobs, and bicycle-related trips generate \$47 billion nationally in tourism activity.⁸ In a number of cities, realtors report that good walking and bicycling access to neighborhood destinations and good bicycling facilities in general are important home selection criteria.⁹ Major employers—and young, talented employees—seek communities with good opportunities for active lifestyles and attractive urban amenities.¹⁰ Intercept surveys in Portland, OR found that people arriving to retail stores on foot or by bicycle visit more frequently than those who drive, and spend more money over the course of a month.

⁸ Flusche, Darren, for the League of American Bicyclists. *The Economic Benefits of Bicycle Infrastructure Investments*. 2009.

⁹ Cortright, Joe, for CEOs for Cities. *Walking the Walk: How Walkability Raises Home Values in U.S. Cities*. 2009.

¹⁰ Cortright, Joe, for CEOs for Cities. *Portland's Green Dividend*. 2007.

Regionally, the Hells Gate State Park serves as a strong attractor for bicyclists of all ages, styles, and abilities while also serving as a consistent destination for ride-in bicycling campers. Thousands travel annually to this destination, and hundreds of those travelers are active cyclists for whom Hells Gate State Park and the Lewis-Clark Valley are their destination for bicycle recreation. In Washington State alone, bicycle riders spend over \$3.1 billion annually. As compared to many activities where equipment purchases provide the significant economic impact to their activity, bicycle riders' trip-related expenditures account for a whopping 96% of the economic impact of bicycling. This means that bicyclists like to contribute to local economies via shopping, lodgings, and eating. It underscores that bicyclists are “wallets on wheels.”¹¹

Changes in Transportation Behavior

Auto ownership and use is dropping in the United States, particularly among young people who are becoming drivers later in life and owning fewer vehicles per household. This seems to be in part due to costs of ownership and operation, trip convenience, concern for the environment, personal health concerns, or for the pure joy and fun that it is to ride a bicycle. This is often a lifestyle choice, made possible by home and employment location decisions. Existing and future active and shared travel options, such as transit, car sharing, walking, and bicycling, provide viable travel alternatives to the car.

Planning Process

The 2015 Bicycle Master Plan (BMP) was a public and technical endeavor. The process included extensive public input through a series of Listening Stations and coordination with city staff and other local and regional agencies. Data relating to past bicycle planning efforts, the Valley's land use pattern, topography, traffic speeds and volumes, and a number of other factors were reviewed. Both geographic information systems (GIS) and field analysis of the Valley's transportation network were extensively used to determine locations where bicycle facilities can be integrated into the existing street network. Staff also reviewed documents adopted over the last several years. The BMP uses a multimodal approach to consider appropriate locations for bicycle facilities, based in large part on these earlier plans, recognizing that in some cases there will be arterial streets that will accommodate bicycles, transit, and/or freight within the same right-of-way. In other cases, parallel routes can be developed to provide better service for all modes in a particular corridor.

Public Engagement Process

Public engagement is an important element of any successful planning process. To be considered successful, the BMP planning process needed to reach beyond the current bicycling community, encouraging infrequent bicyclists or potential new users of the bicycle network to provide their input on what it would take to make the bicycling environment in the Lewis Clark Valley work better for them. The purpose of the strategy was to broaden the conversation about how people riding bicycles can help build and create vibrant, livable communities and produce safer streets. To that end, the

¹¹ <http://wabikes.org/2015/01/08/bicycling-means-business-in-wa/>

consultant team hosted eight listening stations (see Table 1), where maps for marking up with comments, paper copies of a BMP survey, and a voting board with a photo toolbox with various bicycle facilities were available to solicit input and take comments.

Table 1. Listening Station Dates & Locations

Date(s) (2014)	Location	Description
9/18 – 9/21	Nez Perce County Fair (Lewiston)	County Fair
9/27	Riverfest @ Granite Lake Park (Clarkston)	Festival and bicycle ride
10/12	Mountain Dew Park (Lewiston)	Skate park
10/17	Postal & Copy (Clarkston)	Local business
10/24	Clarkston High School (Clarkston)	Local high school government classes
10/25	Pumpkin Palooza (Lewiston)	Halloween festival in Lewiston
10/31	Lewiston High School (Lewiston)	Local high school government classes
11/11	LCSC (Lewiston)	Local college class on transportation

Plan Updates

This plan is, by its nature, a work in progress. Updates to the full BMP should occur every five to seven years. These future updates will be necessary to assess progress, take advantage of emerging opportunities, and re-evaluate priorities. As new sections of the bicycle facility network are developed and new technologies are adopted, bicycling mode share will likely increase and travel patterns will change. Priorities will shift and new opportunities will become apparent. These changes will be reflected in regular updates to the implementation plan.

Current Conditions

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Overview

The purpose of this chapter is to identify on-the-ground conditions of the bicycle network. Functional attributes of these networks are categorized, mapped and catalogued, and paired with an assessment and analysis of the implications of these existing conditions. Deficiencies identified here will form the foundation of the recommendations.

This chapter also provides a summary of plans and policies relevant to bicycling within the Lewis-Clark Valley MPO's jurisdiction. Most of the plans were prepared by or for the Lewis Clark Valley MPO. Additionally, the statewide bicycle and pedestrian plans for Idaho and Washington are included in this review.

Setting

The setting of any community has a large impact on how people travel in and through that community, and ultimately affects the type of recommendations that will be effective in improving the bicycling and walking environment. For this study, the setting is viewed through the following lenses:

- Study Area
- Topography
- Demographics

Setting: Study Area

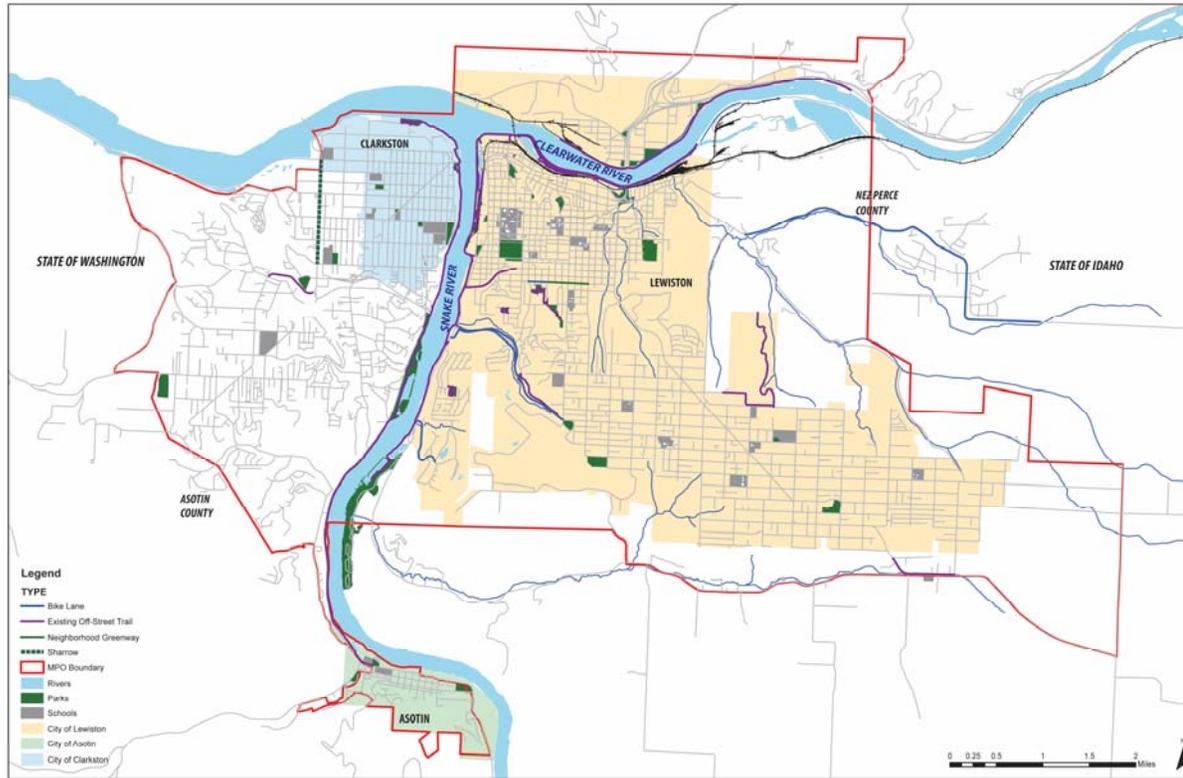


Figure 3: The Lewis Clark Valley

The Lewis Clark Valley

The Lewis-Clark Valley Metropolitan Planning Area is a unique area that spans two states, two counties and three cities. In the State of Washington, jurisdictions include the City of Clarkston, the City of Asotin and urban portions of Asotin County. In the State of Idaho, the City of Lewiston and urban portions of Nez Perce County are included.

The Lewis-Clark Valley sits at the confluence of two major rivers; the Snake and Clearwater. The north flowing Snake River forms the boundary between the two states. Located 465 miles from the Pacific Ocean, the City of Lewiston is the most inland seaport on the West Coast.

This region boasts a moderate, semi-arid climate with four distinct seasons. Summers are hot and dry, while winters are cold but short, with an average of 14 freezing days per year. There is an average of 169 days of sunshine per year.

Setting: Topography

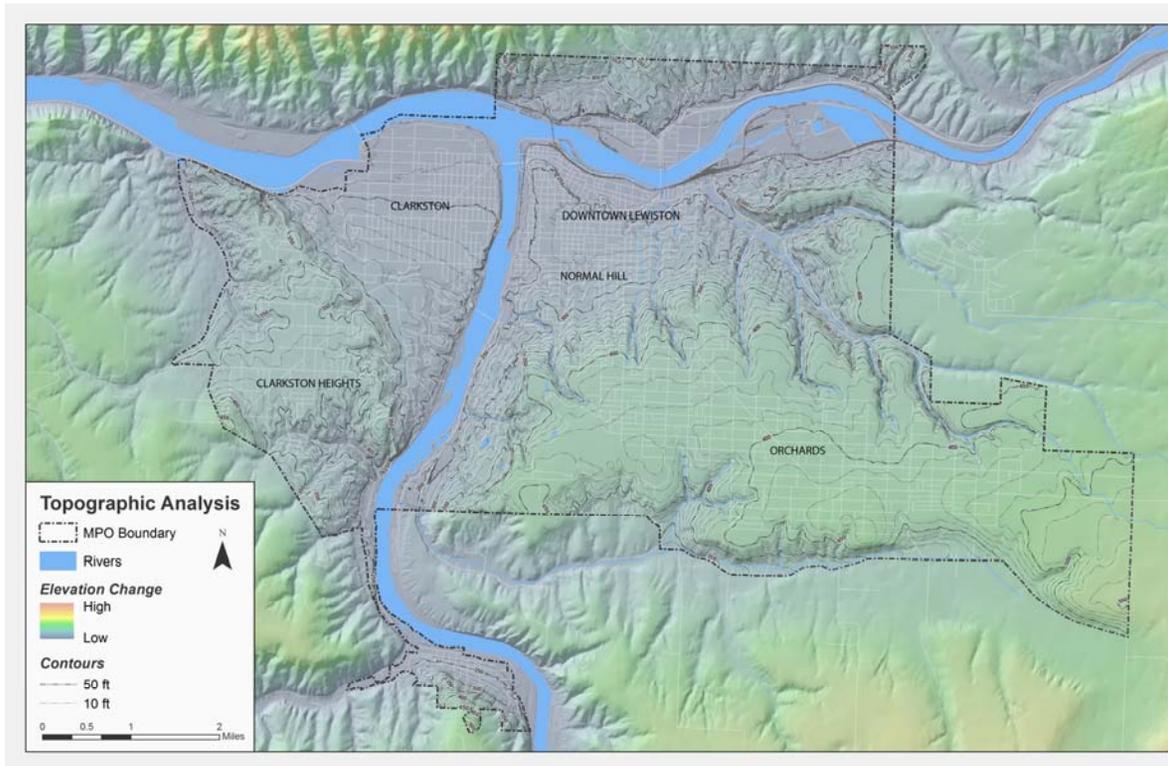


Figure 4: Elevation change in the Lewis Clark Valley

The Lewis Clark Valley

The Lewis-Clark Valley is situated within a valley formed by the two rivers. Both rivers are located at 730 feet above sea level, with downtown Lewiston between 730 and 780 feet. Radiating out from both downtown Lewiston and Clarkston, the elevation increases to just over 1500 feet above sea level at the urban fringe.

In both Lewiston and Clarkston, the identified areas of town are related to the topography. Downtown Lewiston and Normal Hill are close to the river or slightly higher. Away from downtown the terrain gains elevation quickly. The heavily residential southern half of the city is referred to as "The Orchards".

Clarkston has downtown (near river level) and the Clarkston Heights, which is mostly residential.

The Lewiston Hill, rises nearly 2900 feet above sea level to the north of the MPO.

Setting: Demographics - Population

	Population 2000	Population 2010	% Change
Lewiston, ID	30,904	31,894	3.20
Clarkston, WA	7,337	7,229	-1.47
Asotin, WA	1,095	1,251	14.25
Asotin County, WA (urban MPO areas only) (inclusive of city)	19,466	20,676	6.22
Nez Perce County (urban MPO areas only) (inclusive of city)	31,454	32,597	3.63

Table 2: Population change in the Lewis Clark Valley
 Source: US Census Bureau –American FactFinder
 (http://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml)

Stats and Demographics

According to the US Census Bureau, over 53,000 people live in the urban areas of Asotin and Nez Perce Counties, and overall the area has seen an increase in population over the last decade of 4.6%.

The median age for the Lewis-Clark Valley is 40.5 years, and a majority (93%) of the population identifies as white, while 2% are American Indian and 3% are Hispanic/Latino.

Driving alone is the most common commuting characteristic, with 79% of commuters. Nearly 8% of commuters carpool, with the highest percentage found in Lewiston and Clarkston. Public transit is used, on average, by 2.3% of commuters in this area. Walking is a more common commute choice than bicycling, with 4.5% of the population walking to work and only 0.1% of the population bicycling – although that rate is higher for Lewiston (0.5%).

Setting: Demographics – Bicycle Demand Analysis (BDA)

Bicycle Demand Analysis (BDA) provides a general understanding of expected activity in the bicycling environment by combining categories representative of where people live, work, play, access public transit and go to school into a composite sketch of demand. The analytical methods that follow provide an objective, data-driven process of identifying areas of high existing or potential bicycle activity. The composite demand analysis is shown in Figure 5, the individual analysis maps can be found in Appendix A.

Generally speaking, the scoring method is a function of density and proximity. Scores reflect relative impact on bicycling to and from census block corners that are located adjacent to the features (where people live, work, play, access public transit and go to school) used in the analysis. As such, scores are represented as density patterns of census block corners within a ¼ mile of each other. Subsequently, the scores are effectively a result of two complementing forces: distance decay – the effect of distance on spatial interactions yields lower scores for features over ¼ mile away from other features; and spatial density – the effect of closely clustered features yields higher scores. Scores will increase in high feature density areas and if those features are close together. Scores will decrease in low feature density areas and if features are further apart. In essence, the score is the intersection of distance and density.

Categories are scored on a scale of 1 – 5, using natural breaks as defined by Jenks¹² to display the data, meaning the values are relative rather than absolute. The scores are based on density and proximity and then assigned weighted multipliers to reflect the relative influence categories have on bicycle activity.

¹²The Jenks optimization method, also called the Jenks natural breaks classification method, is a data clustering method designed to determine the best arrangement of values into different classes. This is done by seeking to minimize each class's average deviation from the class mean, while maximizing each class's deviation from the means of the other groups. In other words, the method seeks to reduce the variance within classes and maximize the variance between classes

Setting: Demographics - BDA – Composite

The composite demand analysis for the Lewis Clark Valley was developed by overlaying the factor maps.

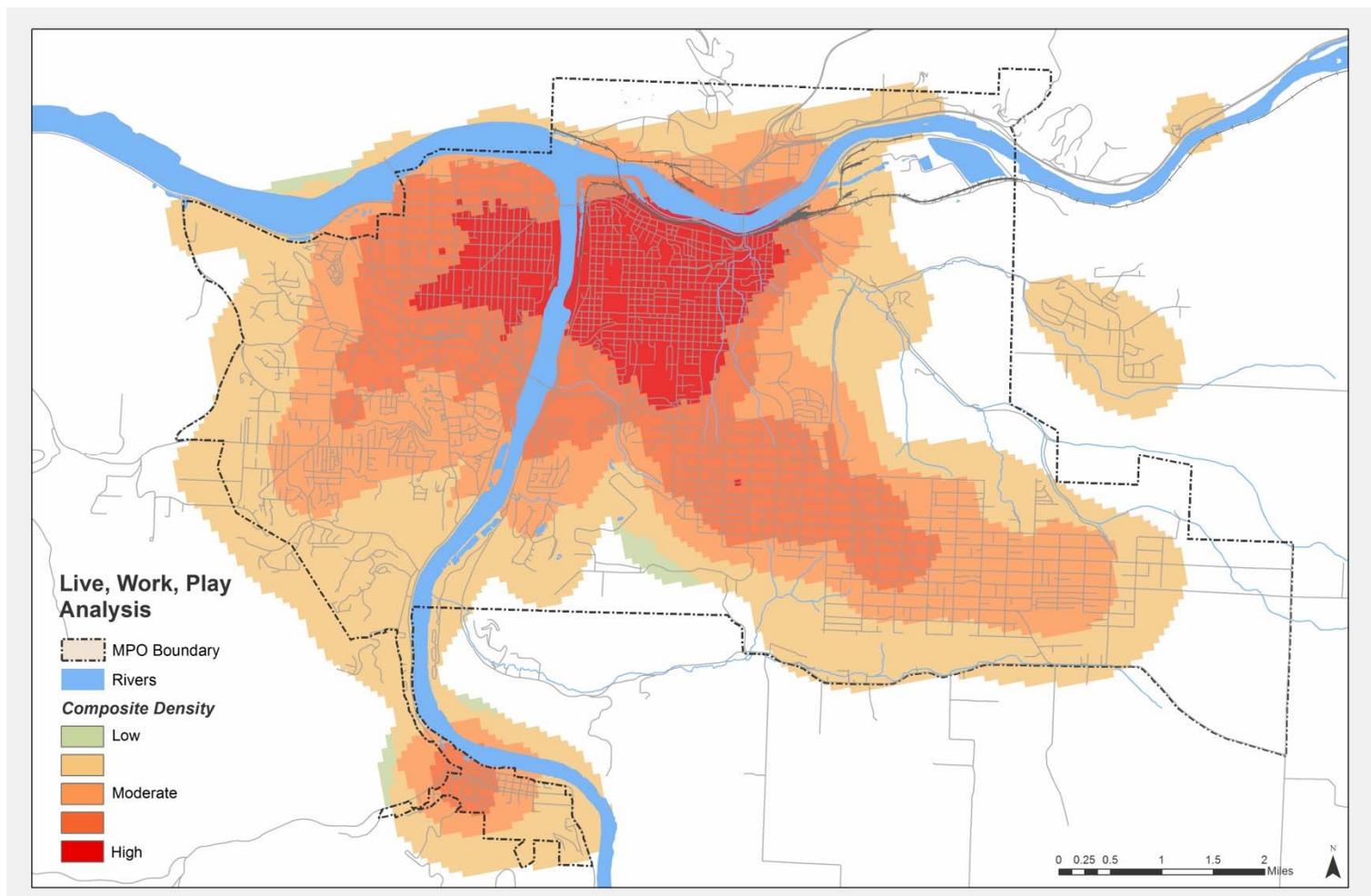


Figure 5: Composite Bicycle Demand Analysis

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Existing Conditions

The 5 Es of Bicycle Planning

The League of American Bicyclists (LAB) uses the 5E's – Engineering, Education, Encouragement, Enforcement, and Evaluation – as an organizing principle for assessing a jurisdiction's achievements and for identifying a Bicycle Friendly Community (BFC). This section utilizes the same organizing principle to examine the existing conditions in the Lewis Clark Valley. Table 3 below explains the 5E's in more detail.

Table 3. The 5E's

Category	Questions considered for each category
Engineering	What facilities exist?
Education	What education programs/opportunities are there for bicyclists, pedestrians, and motorists?
Encouragement	How do the member agencies of the LCVMPPO and other interested groups promote and encourage bicycling and walking?
Enforcement	What connections exist between law enforcement and bicycling and walking groups? How does the enforcement of existing policies and law occur?
Evaluation	Do any interested parties measure bicycling and walking rates and crash rates?

Engineering: Existing Bikeway Network

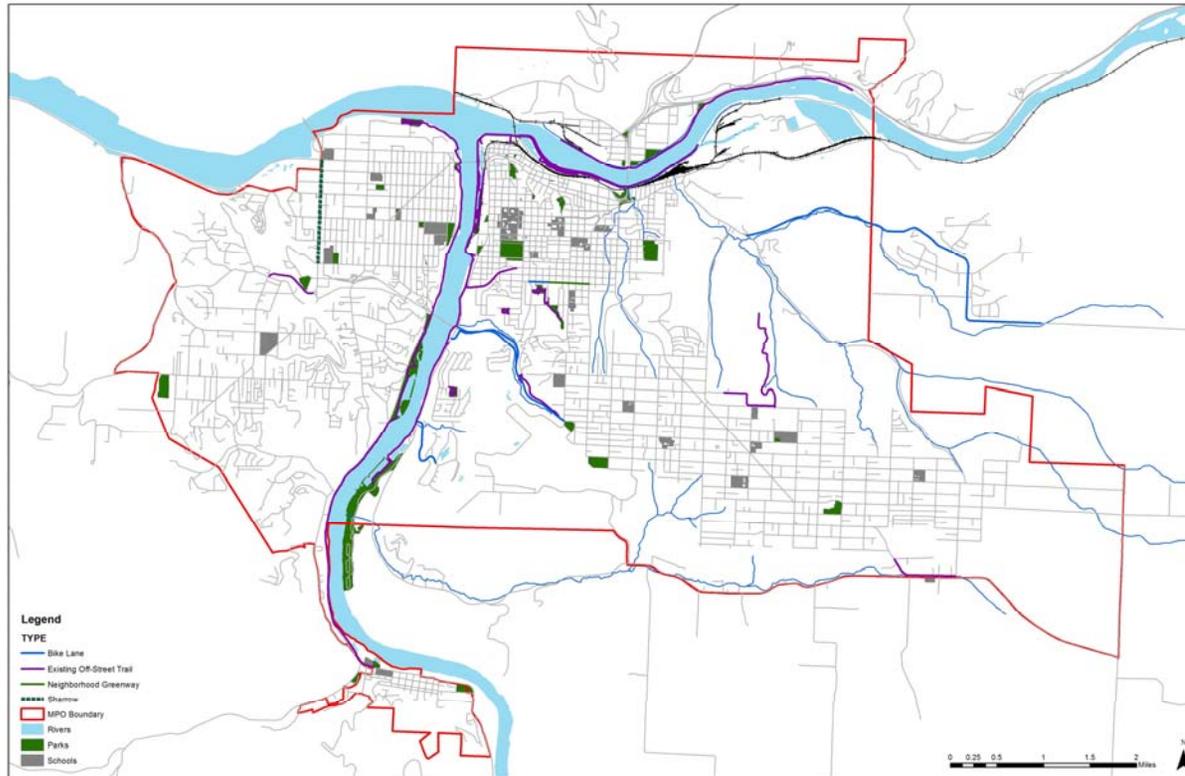


Figure 6: Existing Bikeway Network in the Lewis Clark Valley

Existing Conditions

The bikeway network is largely made up of the levee trail system, with some short sections of bike lanes and shared lane markings (sharrows). There is very little connectivity within the existing bikeway network.

The levee trail system is an excellent resource and provides a flat riding spot for riders of all ages. It can be difficult to access though from many parts of the region.

Table 4. Existing Bikeways

Facility Type	Mileage
Off-Street	27.8
Bike Lane	7.6
Sharrow	1.1
Neighborhood Greenway	0.4

Engineering: Existing Bicycle Level of Travel Stress (LTS)

The methods used for the Level of Traffic Stress Analysis were adapted from the 2012 Mineta Transportation Institute (MTI) Report 11-19: Low-Stress Bicycling and Network Connectivity, the most current report available on low-stress bicycle networks. The innovative approach outlined in the MTI report uses roadway network data, including posted speed limit, the number of travel lanes, and the presence and character of bicycle lanes, as a proxy for bicyclist comfort level. Road segments are classified into one of four levels of traffic stress (LTS) based on these factors. The lowest level of traffic stress, LTS 1, is assigned to roads that would be tolerable for most children to ride, and could also be applied to multi-use paths that are separated from motorized traffic (not shown in this analysis); LTS 2 roads are those that could be comfortably ridden by the mainstream adult population; LTS 3 is the level assigned to roads that would be acceptable to current “enthused and confident” cyclists; and LTS 4 is assigned to segments that are only acceptable to “strong and fearless” bicyclists, who will tolerate riding on roadways with higher motorized traffic volumes and speeds. The definitions for each level of traffic stress are shown Table 5.

A bicycle network is likely to attract a large portion of the population if its fundamental attribute is low stress connectivity. In other words, a network should provide direct routes between origins and destinations that do not include links that exceed one’s tolerance for traffic stress. The Bicycle Suitability Index is an objective, data-driven evaluation model which identifies high LTS links, bicycle network gaps and gaps between “low LTS” links, and a score assessing the relative user comfort or level of stress a user may experience on each link is mapped. Each user is different and will tolerate different levels of stress in their journey so these maps should be used as a general guide rather than an absolute truth.

LTS 1	Presenting little traffic stress and demanding little attention from cyclists, and attractive enough for a relaxing bike ride. Suitable for almost all cyclists, including children trained to safely cross intersections. On links, cyclists are either physically separated from traffic, or are in an exclusive bicycling zone next to a slow traffic stream with no more than one lane per direction, or are on a shared road where they interact with only occasional motor vehicles (as opposed to a stream of traffic) with a low speed differential. Where cyclists ride alongside a parking lane, they have ample operating space outside the zone into which car doors are opened. Intersections are easy to approach and cross.
LTS 2	Presenting little traffic stress and therefore suitable to most adult cyclists but demanding more attention than might be expected from children. On links, cyclists are either physically separated from traffic, or are in an exclusive bicycling zone next to a well-confined traffic stream with adequate clearance from a parking lane, or are on a shared road where they interact with only occasional motor vehicles (as opposed to a stream of traffic) with a low speed differential. Where a bike lane lies between a through lane and a right-turn lane, it is configured to give cyclists unambiguous 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.
LTS 3	More traffic stress than LTS 2, yet markedly less than the stress of integrating with multilane traffic, and therefore welcome to many people currently riding bikes in American cities. Offering cyclists either an exclusive riding zone (lane) next to moderate-speed traffic or shared lanes on streets that are not multilane and have moderately low speed. Crossings may be longer or across higher-speed roads than allowed by LTS 2, but are still considered acceptably safe to most adult pedestrians.
LTS 4	A level of stress beyond LTS3.

Table 5. Levels of Traffic Stress (LTS) Definitions. Source: Mineta Transportation Institute Report 11-19

Engineering: Existing Bicycle Travel Stress - *LTS Analysis*

Segment Analysis

The results of the segment-based LTS are shown in Figure 7. Much of the network consists of disconnected clusters of low-stress (LTS 1 to 2) streets, shown in green and yellow. Individually, these islands of low-stress streets are comfortable to ride for most adults, but they are isolated from one another by larger roads with higher traffic speeds that disrupt bicycle mobility.

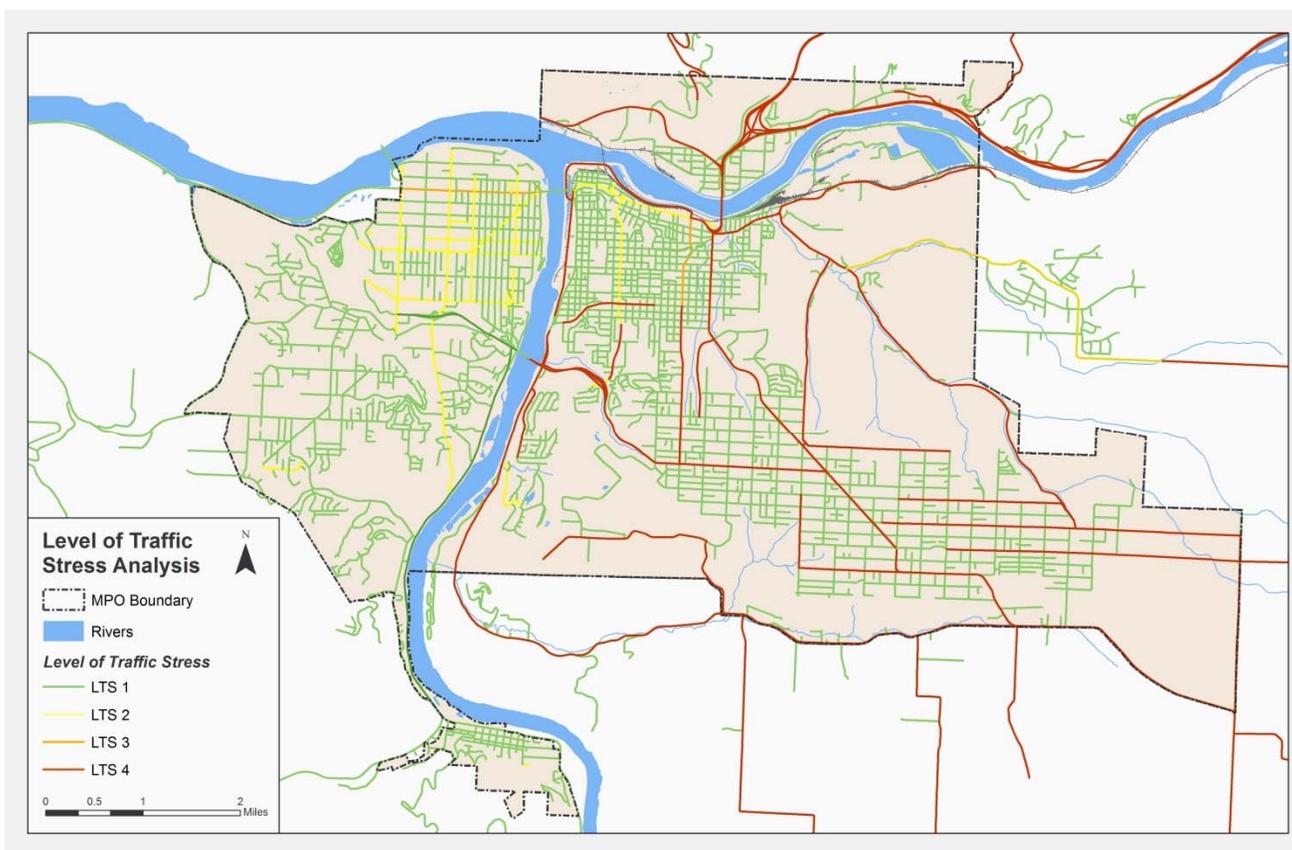


Figure 7: LTS Analysis

Engineering: Existing Bikeway Network – Needs, Gaps, & Barriers

As in any region, the Lewis Clark Valley has many gaps and barriers in the bicycle network that make bicycling more difficult. Gaps and barriers are analyzed in order to begin to develop a set of locations to address in the recommendations phase of the plan.

Barriers & Needs

Several corridors are identified as barriers to bicycle travel in the region. The identified barriers describe a physical impediment to travel where crossings can only occur at major interchanges or intersections. The rivers and highways are such barriers.

Other corridors in the roadways have been identified as either difficult to travel along due to lack of bicycle facilities or not meeting the needs of users despite having existing bicycle facilities. In instances where a specific need has been identified on one of these corridors, this type of facility is described as a corridor need.

Facility Gaps

Gaps in continuous bicycle facilities exist as significant constraints, while simultaneously presenting opportunities. Gaps typically exist where physical or other constraints impede bicycle network development. Typical constraints include narrow bridges on existing roadways, narrow right-of-way, and topographic challenges. Traffic mobility standards, economic development strategies, and other policy decisions may also lead to gaps in the non-motorized network. Bicycle gaps exist in various forms, ranging from short “missing links” on a specific street or path corridor, to larger geographic areas with few or no non-motorized facilities at all. Gaps can then be organized based on length and other characteristics.

- Spot gaps: Spot gaps refer to point-specific locations lacking dedicated bicycle facilities or other treatments to accommodate safe and comfortable non-motorized travel. Spot gaps primarily include intersections and other vehicle/bicycle conflict areas posing challenges for riders. These may also be opportunities to easily

clarify vehicle and/or bicycle movements through signage and paint

- Lineal gaps: Similar to connection gaps, lineal gaps are ½- to one-mile long missing link segments on a clearly defined and otherwise well-connected bikeway or trail.
- Area gaps: Larger geographic areas (e.g., a neighborhood or business district) where few or no bikeways exist would be identified as an area gap.

Maintenance

One final type of deterrent to bicycling in that has been identified through survey responses and public input is maintenance concerns. The primary maintenance concerns discussed by residents are listed below:

- Bike lanes or bike facilities with sand, gravel, or glass in them
- Bike facilities with poor pavement quality

Engineering: Existing Bikeway Network – Needs, Gaps & Barriers

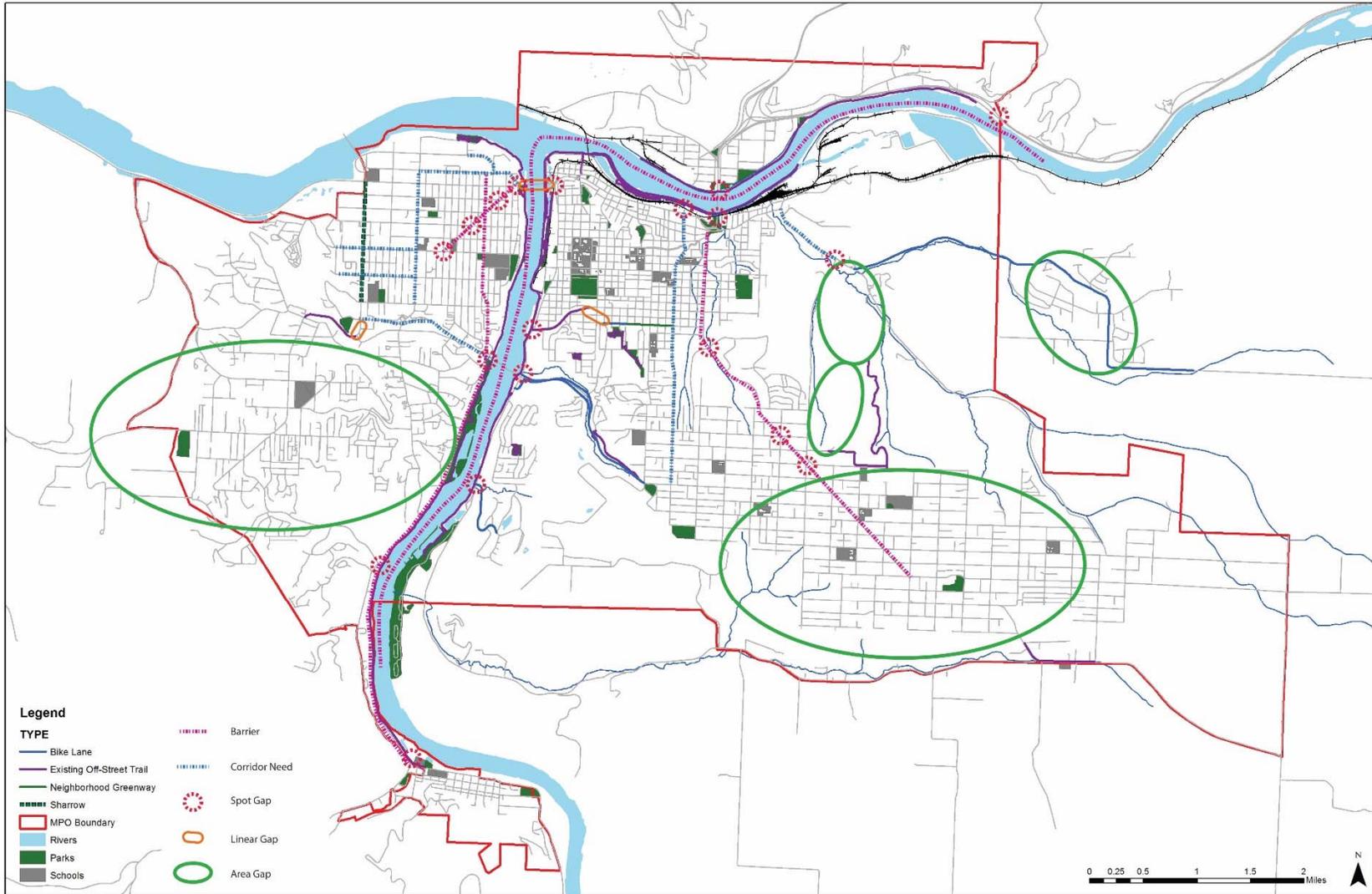


Figure 8: Identified Needs, Gaps, & Barriers

Engineering: Existing Multimodal Connections

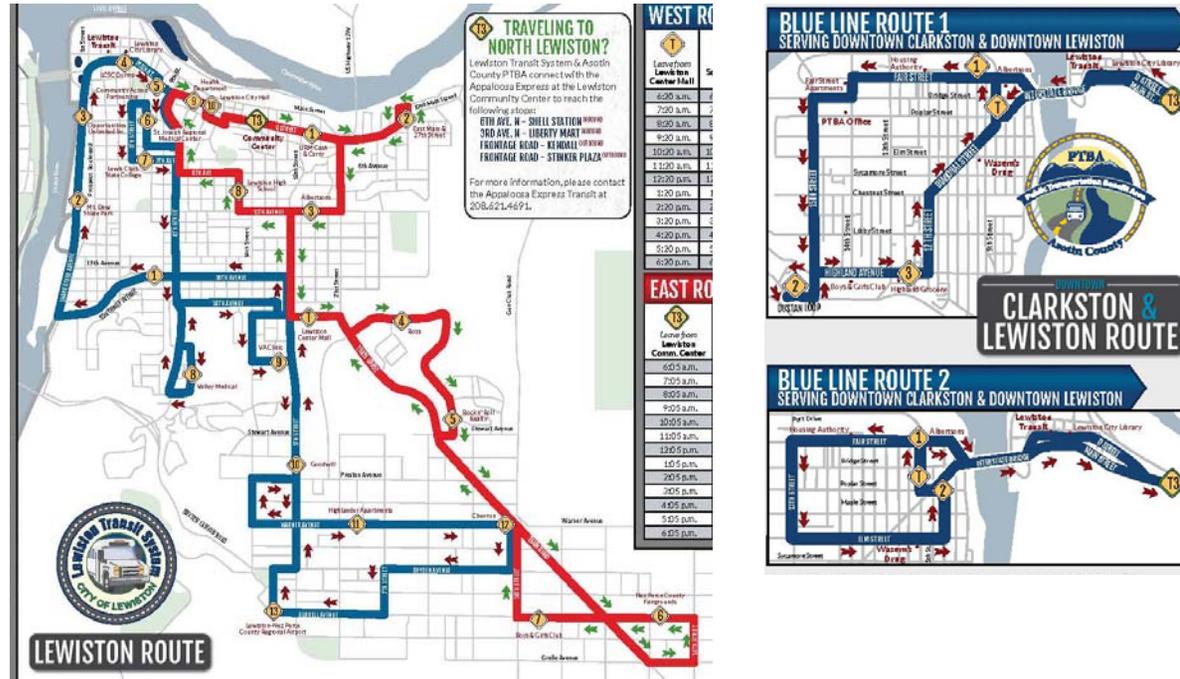


Figure 9: Existing multimodal connections in Clarkston and Lewiston

Existing Conditions

Ride the Valley

A collaboration between Asotin County Public Transportation Benefit Area and Lewiston Transit System, this multi-state transit system called “Ride the Valley” connects the multiple cities and counties together through a combined bus, paratransit and vanpool system. This system serves Asotin, Clarkston and Lewiston. All buses have front bike racks that accommodate two bicycles.

The vanpool system serves various employment centers, including Washington State University and the Lower Granite Dam.

Appaloosa Express

Appaloosa Express Transit offers service to Lenore, Greer, Orofino, Kamiah, Kooskia, Peck, Culdesac, Lapwai and Lewiston with stops at the Clearwater River and Itse’ Ye Ye casinos. Appaloosa Express Transit connects with Lewiston Transit at the Lewiston Community Center.

Engineering: Existing Wayfinding and Signs



Typical MUTCD compliant Bike Route sign



Custom wayfinding sign in downtown Lewiston



MUTCD-compliant signage used to direct users to the appropriate side of the path



MUTCD-compliant sign indicating an active transportation crossing ahead

Existing Conditions

Location

Wayfinding signs are found in downtown Lewiston and along the levee trail. However, the locations chosen for the signage do not always allow for the best decision-making by system users. Most of the wayfinding in downtown is pretty consistent, but not geared towards cyclists.

Variety

There are a variety of signage styles found throughout the community. Lewiston has developed pedestrian-scale signage for downtown. For the on-street system, the city follows state and federal guidelines with regard to color, size, and design.

Engineering: Existing Bike Parking



Good bike parking location with non-recommended rack style



Poor rack style and placement means a bike rack will see very little utilization



Good rack design located near the building entrance, but access can be difficult



Art racks can be difficult to identify as bike racks for some users

Existing Conditions

Bike parking is not consistently provided throughout the Lewis Clark Valley, and its absence is noted in downtown Lewiston and outside popular destinations throughout the Valley.

As the images to the left show, available rack types throughout the Valley vary greatly.

The LCBA completed a bike rack survey of downtown Lewiston in the Spring of 2014. Downtown is defined as Memorial Bridge to Interstate Bridge and bottom of the Normal Hill bluff to the rivers. The information collected is included in Appendix A.

Education: Current Education Practices

Existing Conditions

There are no existing programs dedicated to bicycle education in the Lewis Clark Valley.

The Lewis Clark Bicycling Alliance (LCBA) has its own website and is continuing to grow its activities around bicycle encouragement and education in the Valley.

The Twin Rivers Cyclists have a variety of educational videos posted at their website, including tips for beginner cyclists and children's cycling safety.

The Lewiston Police Department has, in past years, conducted an annual bicycle rodeo. At a bicycle rodeo, children learn basic bicycle safety skills through classroom instruction and practical application. The program is also a component of Safe Routes to Schools program.

Washington's Safe Routes to School program provides technical assistance and resources to cities, counties, schools, school districts and state agencies for improvements that get more children walking and bicycling to school safely, reduce congestion around schools, and improve air quality

What Works Elsewhere

Walk & Bike Education Programs

The Bicycle Transportation Alliance in Portland, Oregon runs a youth education program that educates students, trains teachers and encourages families to walk and bike to school. Customizable programs create a model that works for any school or district.

Safety Media Campaigns

A high-profile marketing campaign that highlights bicyclist safety is an important part of helping all road users – including both motorists and bicyclists – understand their roles and responsibilities on the road. This type of high-profile campaign is an effective way to raise the profile of bicycling and improve safety for bicyclists, pedestrians, and motorists

Encouragement: Current Encouragement Practices

Existing Conditions

Twin Rivers Cyclists

The Twin Rivers Cyclists is organized to provide non-competitive cyclists with a chance to ride together over a variety of distances and participate in cycling events throughout the region and beyond.

Lewis Clark Bicycling Alliance (LCBA)

The members of the Lewis Clark Bicycling Alliance (LCBA) seek to bring the health, economic, and recreational benefits of bicycling and walking to the Lewis Clark Valley. They encourage input from the broader community as the primary advocacy organization for bicycling as a safe, legitimate, and equal mode of transportation in the valley.

Bicycling Resources

The statewide bicycle advocacy organizations – Washington Bikes and the Idaho Bike Walk Alliance – both provide resources for education and encouragement activities.

What Works Elsewhere

Celebrate Bike to Work Week/Month

A Bicycle Commuter Campaign encourages people to commute by bicycle and to make the general public aware that bicycling is a practical mode of transportation. Events (such as a free breakfast or coffee) can encourage new riders and celebrate existing riders continuing to commute by bicycle.

Commuter Benefit Program.

A rewards program for commuters who regularly commute via alternative transportation can contribute to consistent commuting by bicycling and walking. Commuters can log their trips year-round to receive benefits for walking or bicycling to school/work, such as gift certificates, cash payouts, or free bicycling and walking accessories.

Information Clearinghouse

Many people do not know where to find information about walking and cycling, including laws, events, maps, tips, and bicycling groups. An information clearing house, a “one stop shopping” website aimed at

bicyclists and pedestrians can be invaluable. The site should include maps, legal information, local resources, links to club websites, an event calendar and other relevant information.

Bike Valet for Events

Providing convenient, secure bike parking at large events can make bicycling to an event more attractive and highlight bicycling as a safe and convenient transportation option. Temporary facilities, such as corrals or mobile racks, can be brought on site to meet the demand. This type of service can also prevent damage to non-parking facilities, such as trees and hand rails that bicyclists use when appropriate facilities are lacking.

Celebrate Unique Topography

In San Francisco, CA, a one-mile, zig-zagging bicycle route from Market Street to Golden Gate Park has become popularly known as “The Wiggle.” The route minimizes climbing grade for bicycle riders; even among the region’s famous hills, the Wiggle inclines average 3% and never exceeds 6%. There are now wayfinding signs and maps that show the route, and it has become a source of city pride along with the city’s iconic topography

Enforcement: Current Enforcement Practices

Current Practice

The Lewiston and Clarkston Police Departments are dedicated to community participation in reducing crime. They work in close partnership with neighborhood associations, community agencies, businesses, and other City departments.

The Lewiston Police Department conducts regular patrols of the Levee Trail, with patrols occurring by vehicle, foot, and bicycle.

The Lewiston Police Department also utilizes bike teams for patrolling downtown Lewiston occasionally during the summer months, as well as during summer events (i.e. Hot August Nights)

What Works Elsewhere

Bike Safety & Bike Citation Diversion Class

Many communities provide the opportunity for ticketed offenders to attend a class on bike safety in lieu of paying a fine for certain citations. This is available to motorists, bicyclists, and pedestrians.

Enforcement, Education & Training

Particularly effective at the start of the school year and summer, stepped-up enforcement allows the police the opportunity to remind everyone about the safe use of the roadways and crossings.

Evaluation: Track Implementation Progress

Best Practices

It is a useful benchmarking activity to publish an annual report measuring accomplishments and performance against goals.

An annual report should include relevant bicycling and pedestrian metrics (count results, new bikeway/greenway facility miles, major completed projects, pedestrian- and bicycle-involved crashes, bike share, number of organized events, innovative solutions, new policies) and may also include information on user satisfaction, public perception of safety, or other qualitative data that has been collected related to cycling. Cumulative bikeway and trail mileage should be shown to demonstrate long-term progress in improving infrastructure.

Currently some data is collected for updated planning or design projects, but this is not done consistently by project or at a regular interval.

ITD receives all crash data (for Lewiston at least) including bike data. This is compiled and put into GIS format and returned/available for City use. Crash data lags by one year.

Bicycle counts could be counted when the LCVMPPO does traffic counts (but probably not annually). Other count efforts could be undertaken by volunteers on a more regular basis. Some example reports are included in Appendix B.

Plan and Policy Review

Many plans exist to guide future land use and transportation investments in the Lewis Clark Valle. Existing plans and policies from Washington State, Idaho, the LCVMPO, Asotin County, Nez Perce County, and the city of Lewiston that are relevant to the LCVMPO Bicycle Master Plan were examined to inform the recommendations in this plan. Table 6 identifies the relevant planning documents reviewed. The full summary is available in Appendix C: Plan and Policy Review.

Table 6. Plan and Policy Review

Plan	Agency	Year
Idaho Statewide Bicycle and Pedestrian Plan (Draft)	ITD	2014
Northport Transportation Study (Draft)	LCVMPO	2014
Valley Destination 2040 – The Long Range Transportation Plan	LCVMPO	2013
Bryden Avenue Corridor Study	LCVMPO	2012
Asotin County Regional Bicycle/Pedestrian Plan	LCVMPO	2011
Lewiston-Clarkston Downtown Circulation Plan	LCVMPO	2011
Lewiston-Clarkston Wayfinding Plan (Draft)	LCVMPO	2010
Lewiston Central Orchards: Transportation and Circulation Study	LCVMPO/Lewiston	2010
Washington State Bicycle Facilities and Pedestrian Walkways Plan	WSDOT	2008
Nez Perce County Transportation Master Plan	ID	2004

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Recommendations

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Overview

This chapter recommends a complete network of bicycle facilities for the Lewis Clark Valley region that will link neighborhoods, schools, businesses, and communities. The network consists of existing and proposed on-road and off-road facilities such as bicycle lanes, signed routes, bicycle boulevards and pathways. It also includes ancillary facilities like bike parking and intersection improvements. This chapter covers the inputs for developing the bicycle network, descriptions of the facility types that make it up, and network maps by community.

Inputs

The recommended network was developed using many inputs, which are summarized below.

Public Input Bicycle use trends, ideas, concerns, and preferences for future bicycle facilities were identified through Listening Stations and surveys at 8 different events/locations in the Valley (See Appendix D for more details), and individual comments via the project website. Over 400 people from the general public contributed.

Steering Committee Input The recommended network has been vetted with staff representing Lewiston, Clarkston, WSDOT, ITD, Asotin County, Nez Perce County and the MPO.

Field Analysis of Existing Conditions Fieldwork throughout the Lewis Clark Valley area was conducted to analyze ‘on-the-ground’ site conditions for opportunities and constraints for recommended bicycling improvements.

Existing Facilities and Current Recommendations Locations of existing facilities were identified in the field by project consultants and by existing collected data by the MPO and member jurisdictions; current recommendations were also analyzed from existing planning efforts.

Connectivity/Gap Analysis /Bicycle Demand Analysis Gaps in existing facilities were identified through a spatial mapping analysis; recommendations were then made to connect those gaps.

Key Destinations Destinations which are likely to attract people, such as the Clearwater and Snake River National Recreation Trail (hereafter referred to as the Levee Trail) and Downtown Lewiston were considered in network design and trail routing. Other examples include schools, parks, shopping centers, etc.

Conclusion Together, these factors not only influenced specific recommendations connections, but also the overall design of the bicycle network.



Figure 10. Inputs to LCV MPO Recommended Network

Recommended Bicycle Facilities

Facility Definitions

Bicyclists have the same rights and responsibilities as motorists and are allowed to ride on all roads in the Lewis Clark Valley. Modifications to roadways in the region, as well as the addition of off-street pathways, will make bicycling a safer and more viable form of transportation. Below are brief descriptions of five types of bicycle improvements recommended for the Valley.

Pathways/Multi-use Trails Pathways are completely separated from motorized vehicular traffic and are constructed in their own corridor, often within parks, open spaces, or alongside utility corridors. Multi-use paths include bicycle paths, rail-trails or other facilities built for bicycle and pedestrian traffic.



Marked Bicycle Routes A marked bicycle route is indicated by “Bicycle Route” signs and may be accompanied by shared-lane markings (sharrows). Sharrows make motorists more aware of the potential presence of cyclists; direct cyclists to ride in the proper direction; and remind cyclists to ride further from parked cars to avoid ‘dooring’ collisions. Signed Bicycle routes are designed for the Strong & Fearless and Enthused & Confident bicyclist.



Bicycle Boulevard Low-volume and low-speed streets that have been optimized for bicycle travel. Bicycle Boulevard treatments can be applied at several different intensities, which should be identified in detail during project design. Wayfinding signs, pavement markings, traffic calming and intersection treatments are potential elements of these facilities. Bicycle boulevards are designed to attract bicyclists of all ages and abilities, especially those in the Interested but Concerned category.



Bicycle Lanes / Protected Bicycle Lane A bicycle lane is a portion of the roadway that has been designated by striping, signing, and pavement markings for the preferential and exclusive use of bicyclists. The minimum width for a bicycle lane is four feet; five- and six-foot bicycle lanes are typical for collector and arterial roads. Bicycle lanes can be striped on existing roadways, sometimes with modifications to travel lane widths and configuration. As a general practice, any local arterial or collector that is widened should incorporate bicycle lanes with speed limit reduction considerations. In some instances, protected bicycle lanes will be appropriate. A protected bicycle lane has additional buffer space between the edge of the bicycle lane and the auto lane. Protected bicycle lanes increase separation and comfort on high volume or high-speed roads, especially those with large-vehicle traffic.



Spot Improvements Spot improvements refer to point-specific locations lacking dedicated bicycle facilities or other treatments to accommodate safe and comfortable non-motorized travel. Spot improvements primarily include intersections and other vehicle/bicycle conflict areas posing challenges for riders. These may also be opportunities to easily clarify vehicle and/or bicycle movements through signage and paint

Contextual Guidance

Considering the bicycle facilities identified above, Figure 11 below provides additional contextual guidance for the desired and acceptable circumstances for various bicycle facilities based on traffic volumes and speeds.

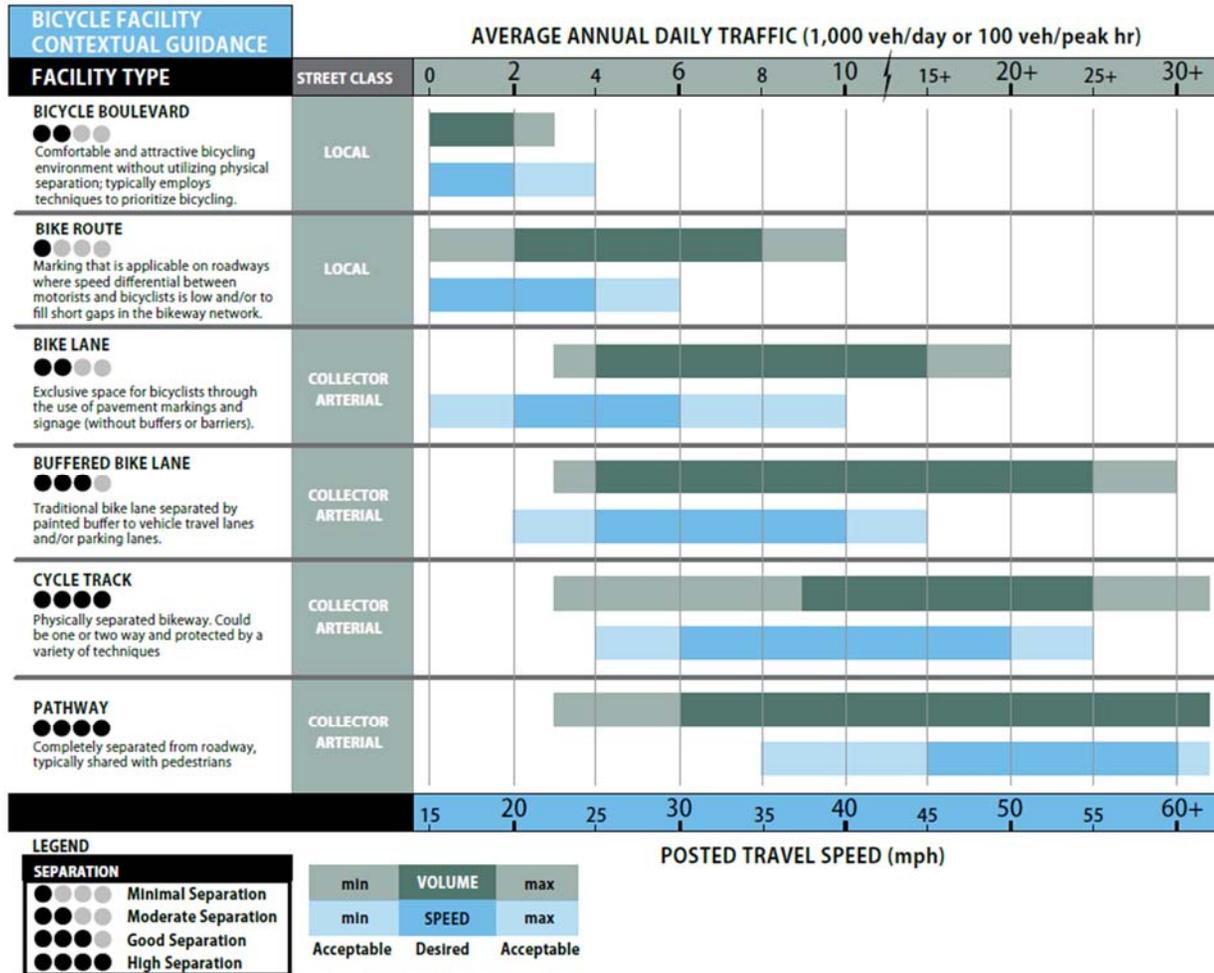


Figure 11. Bicycle Facility Contextual Guidance

Summary of Recommendations

Facility recommendations within the MPO boundary are shown on the following pages:

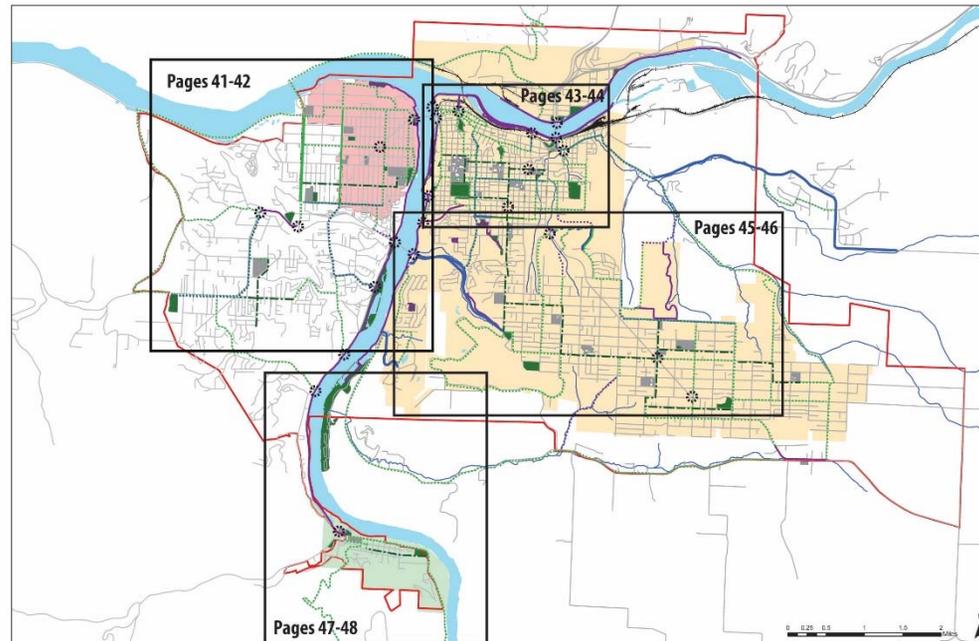


Figure 12. LCV MPO Bicycle Master Plan sub-area maps

- Lewis Clark Valley Metropolitan Planning Organization (MPO): Pages 39-40
- Clarkston: Pages 41-42
- Downtown Lewiston: Pages 43-44
- Lewiston – Orchards: Pages 45-46
- Asotin: Pages 47-48

In addition, larger, more complex projects that will require significant planning, coordination and funding among a number of jurisdictions are identified as **Future Desired Projects** and listed on page 49.

Lewis Clark Valley Metropolitan Planning Organization (LCVMPO) Proposed Network

The recommendations proposed in the following maps are intended to encourage active living by residents and visitors alike and to accommodate a variety of ability levels and interests with particular emphasis on bicyclists within the ‘interested but concerned’ category discussed earlier.

Figure 14 provides an overview of the Valley-wide recommended bicycle facilities. Figure 13 provides the legend for the existing and proposed facilities.

Key features include:

- Identifying routes to connect residents in the Orchards (Lewiston) and Clarkston Heights to downtowns and the Levee Trail system
- Identifying bicycle boulevards as strong connections to the schools and parks
- Identifying recreational routes for more confident bicyclists to create loops within the Valley
- Some locations have a bike route parallel or close by a bicycle boulevard. This is because these two facility types appeal to different bicyclists.

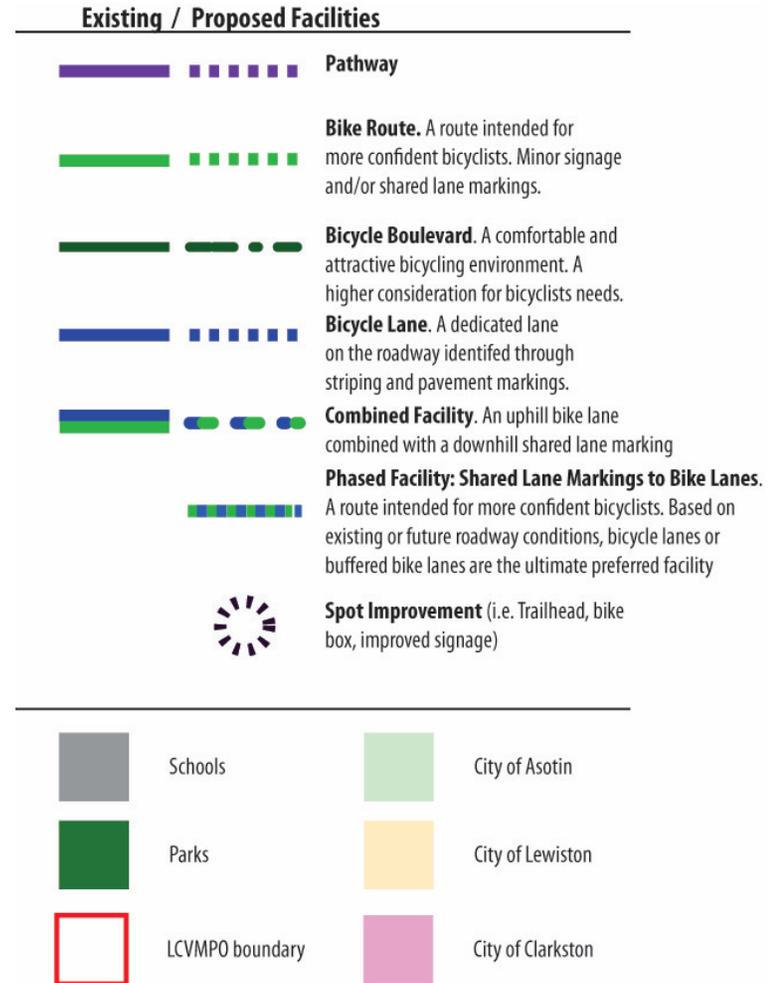


Figure 13. Map Legend

LCVMPO Proposed Network

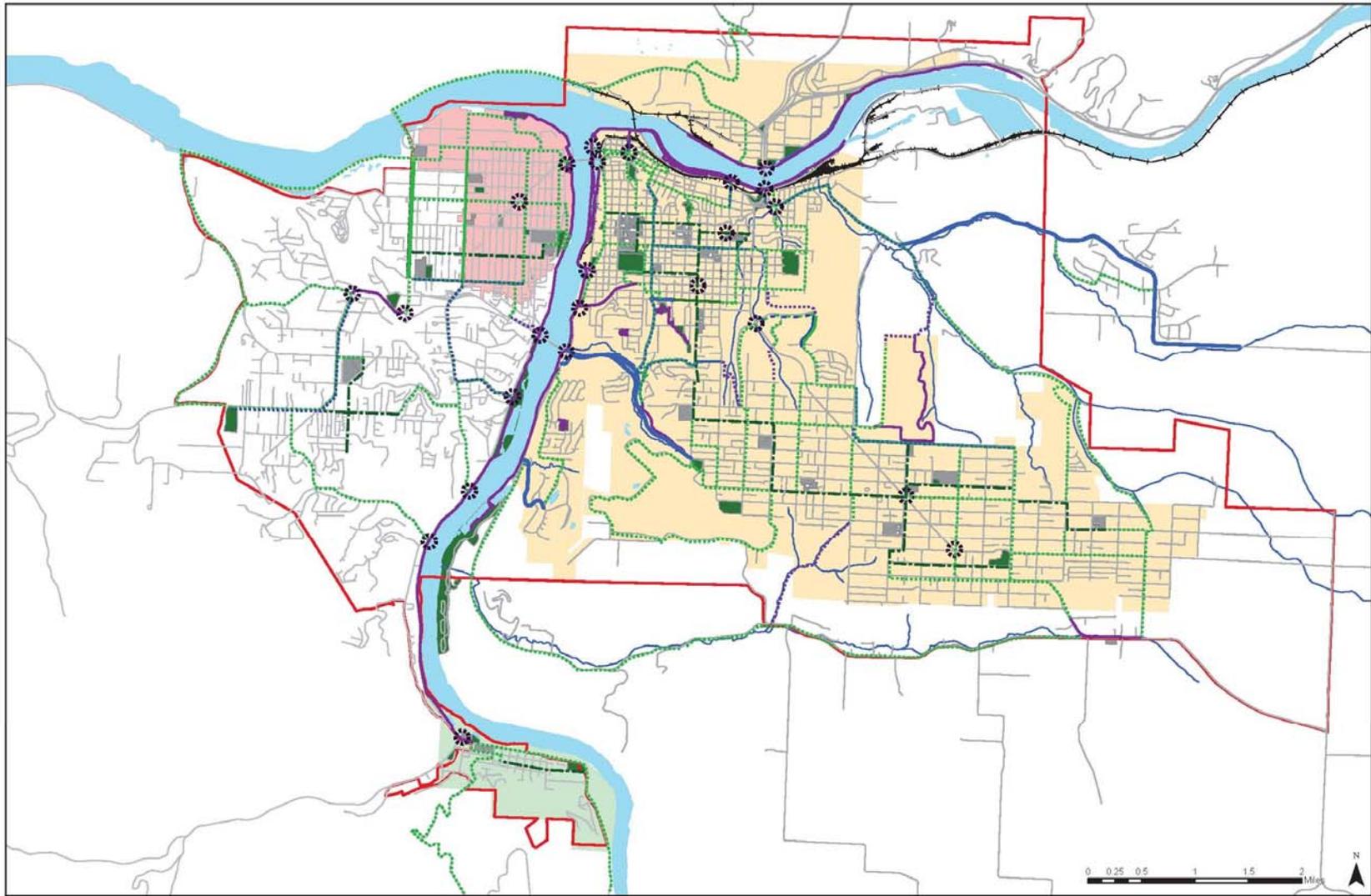


Figure 14. LCVMPD Proposed Network

Clarkston (WA) Proposed Network

The recommendations proposed in the following maps are intended to encourage active living by residents and visitors alike and to accommodate a variety of ability levels and interests with particular emphasis on bicyclists within the ‘interested but concerned’ category discussed earlier.

Figure 16 provides an overview of the Clarkston (WA) recommended bicycle facilities. Figure 15 provides the legend for the existing and proposed facilities.

Key features include:

- Identifying bicycle routes East/West and North/South through downtown Clarkston utilizing lower traffic volume/speed roadways while still providing access to important destinations
- Identifying Libby Street as a bicycle boulevard, as it is a narrower, low traffic, low speed roadway compared with nearby Chestnut Street and Highland Avenue
- Identifying access in/out/across the Clarkston Heights
- Identifying spot improvement needs at key intersections
- Improving access to the Levee Trail

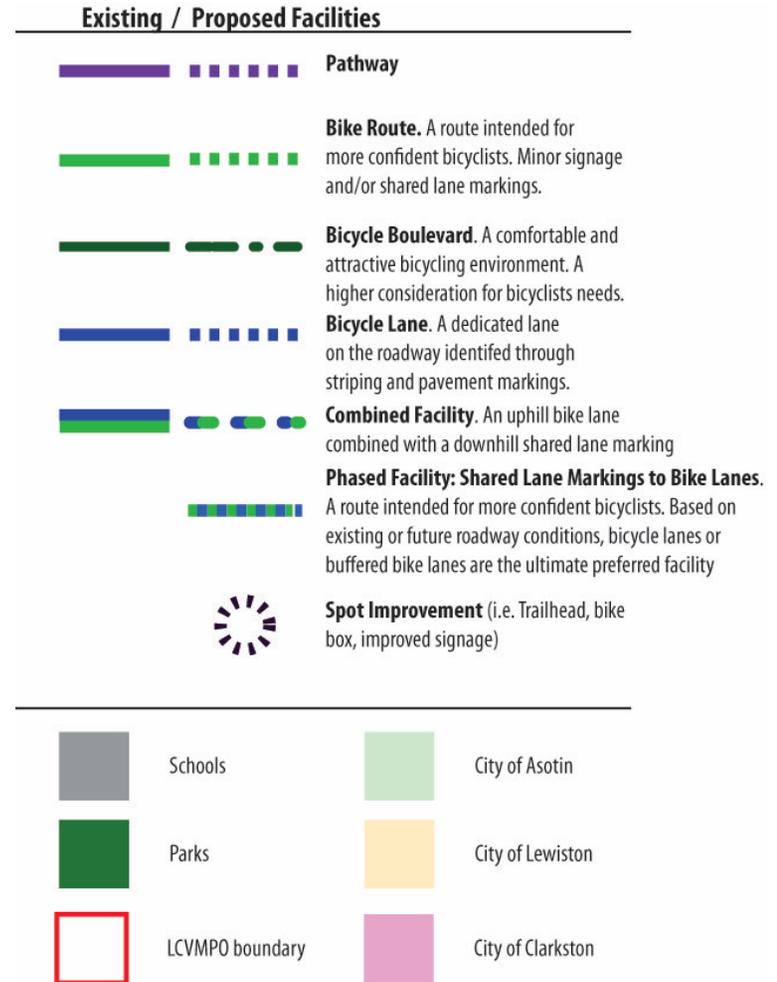


Figure 15. Map Legend

Lewiston (ID) – Downtown / Normal Hill Proposed Network

The recommendations proposed in the following maps are intended to encourage active living by residents and visitors alike and to accommodate a variety of ability levels and interests with particular emphasis on bicyclists within the ‘interested but concerned’ category discussed earlier.

Figure 18 provides an overview of the Lewiston (ID) Downtown / Normal Hill recommended bicycle facilities. Figure 17 provides the legend for the existing and proposed facilities.

Key features include:

- Identifying bicycle routes (and future bicycle lanes) that provide routes up the hill from downtown with the least amount of grade
- Identifying key North-South (14th Street) and East-West (8th/9th Avenue) routes as bicycle boulevards, providing low-stress bicycle facilities for bicyclists of all ages and abilities that connect the schools in the Normal Hill area
- Identifying spot improvement needs at key intersections
- Improving access to the Levee Trail and downtown Lewiston

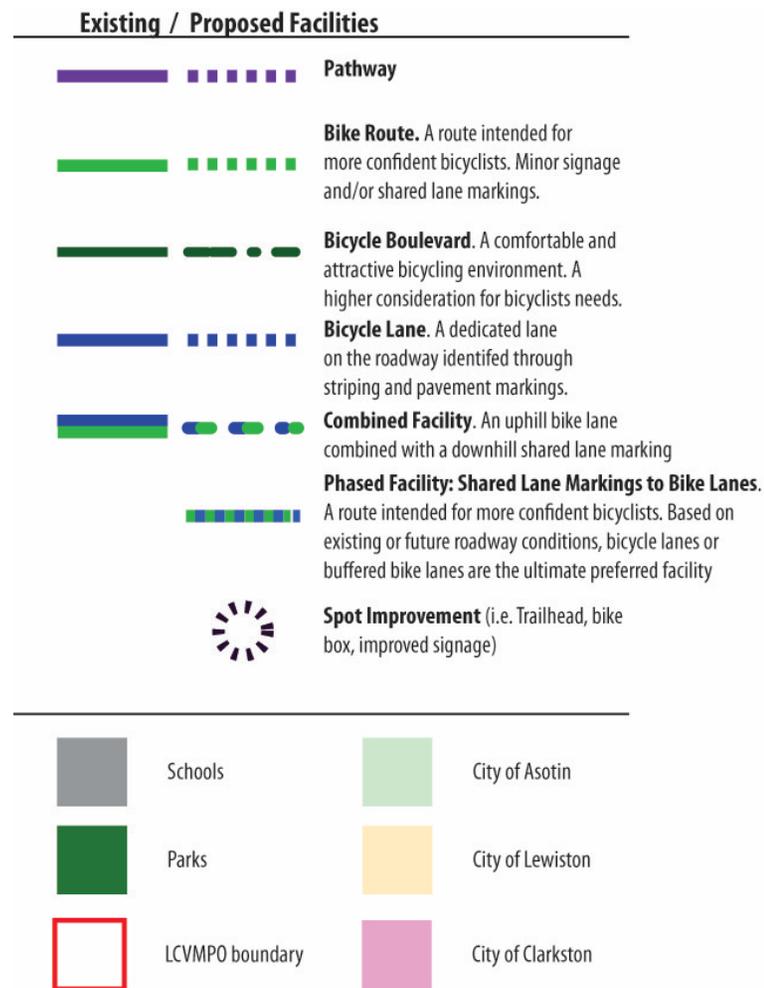


Figure 17. Map Legend

Lewiston (ID) – Downtown / Normal Hill Proposed Network

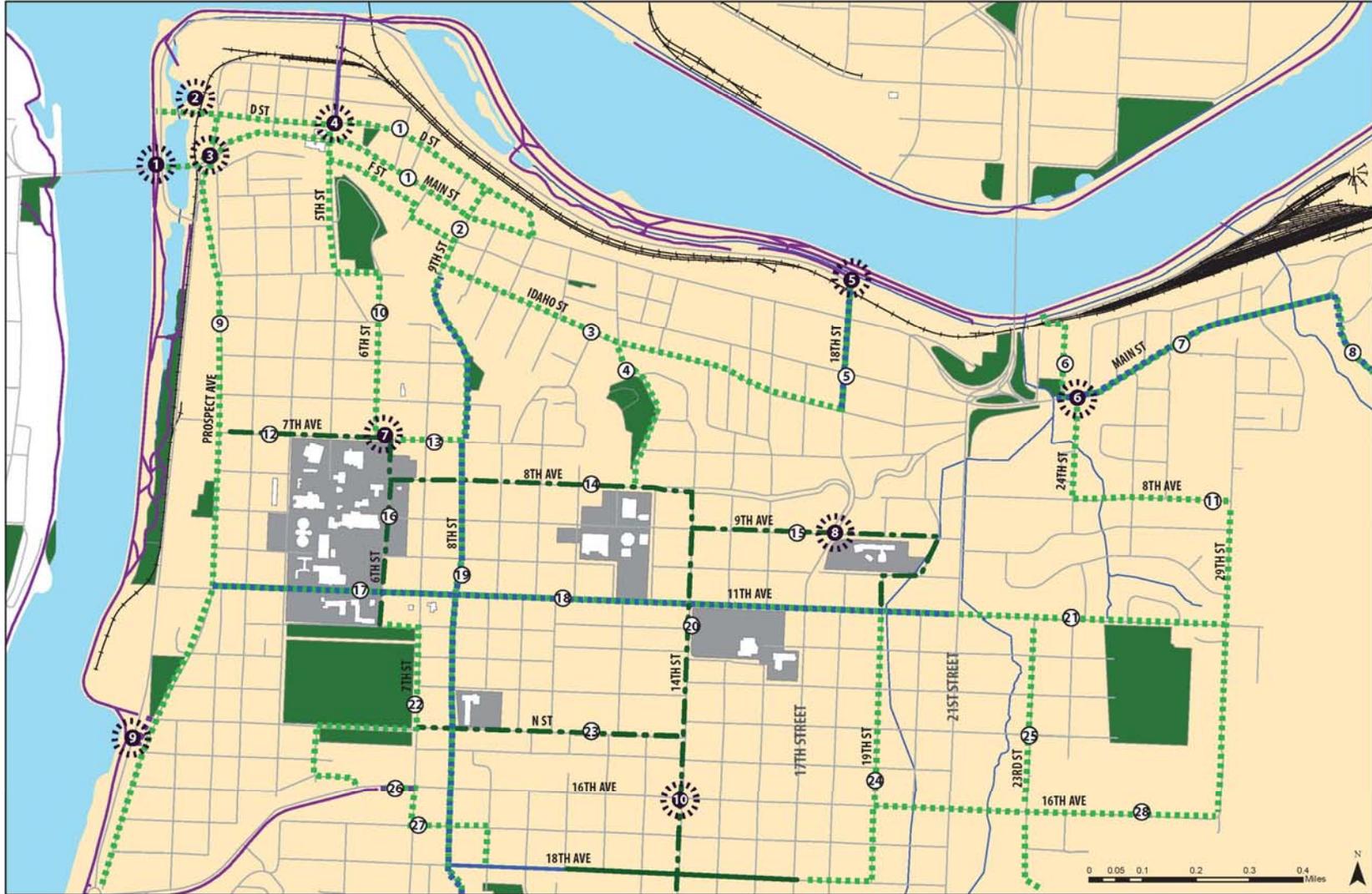


Figure 18. Lewiston (ID) Downtown / Normal Hill Proposed Network

Lewiston (ID) – Orchards Proposed Network

The recommendations proposed in the following maps are intended to encourage active living by residents and visitors alike and to accommodate a variety of ability levels and interests with particular emphasis on bicyclists within the ‘interested but concerned’ category discussed earlier.

Figure 20 provides an overview of the Lewiston (ID) Orchards recommended bicycle facilities. Figure 19 provides the legend for the existing and proposed facilities.

Key features include:

- Identifying bicycle routes and bicycle boulevards that provide connections to downtown and the Levee Trail
- Identifying key North-South (12th Street) and East-West (Park/7th/Burrell/Airway) routes as bicycle boulevards, providing low-stress bicycle facilities for bicyclists of all ages and abilities that connect the schools in the Orchards
- Identifying spot improvement needs at key intersections

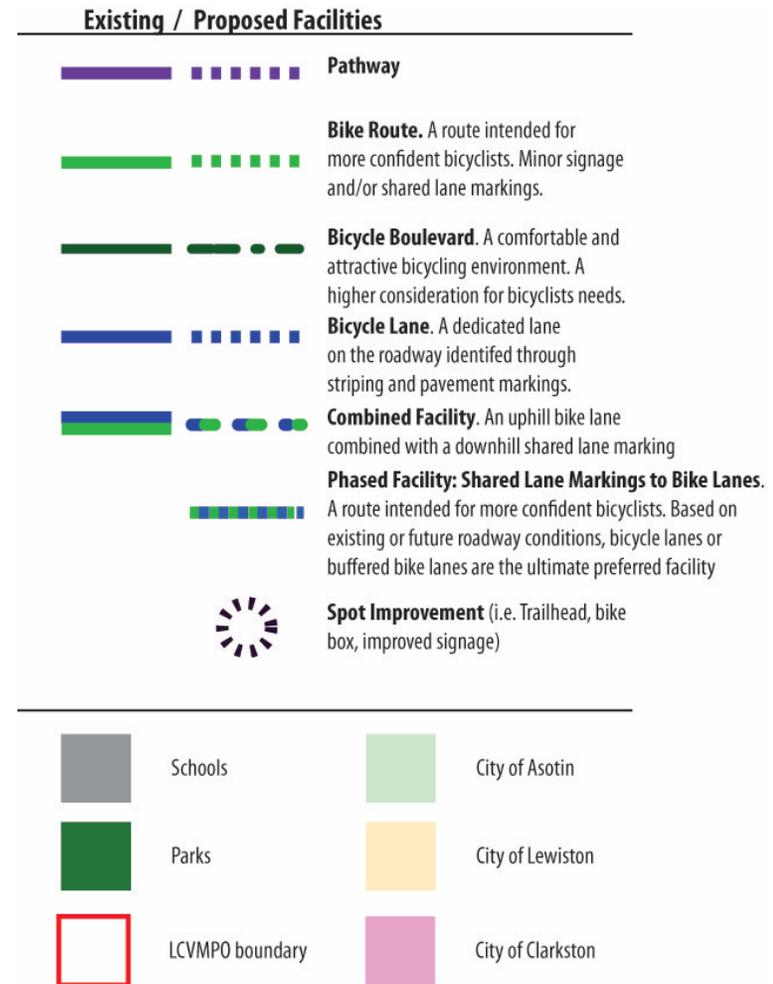


Figure 19. Map Legend

Lewiston (ID) – Orchards Proposed Network

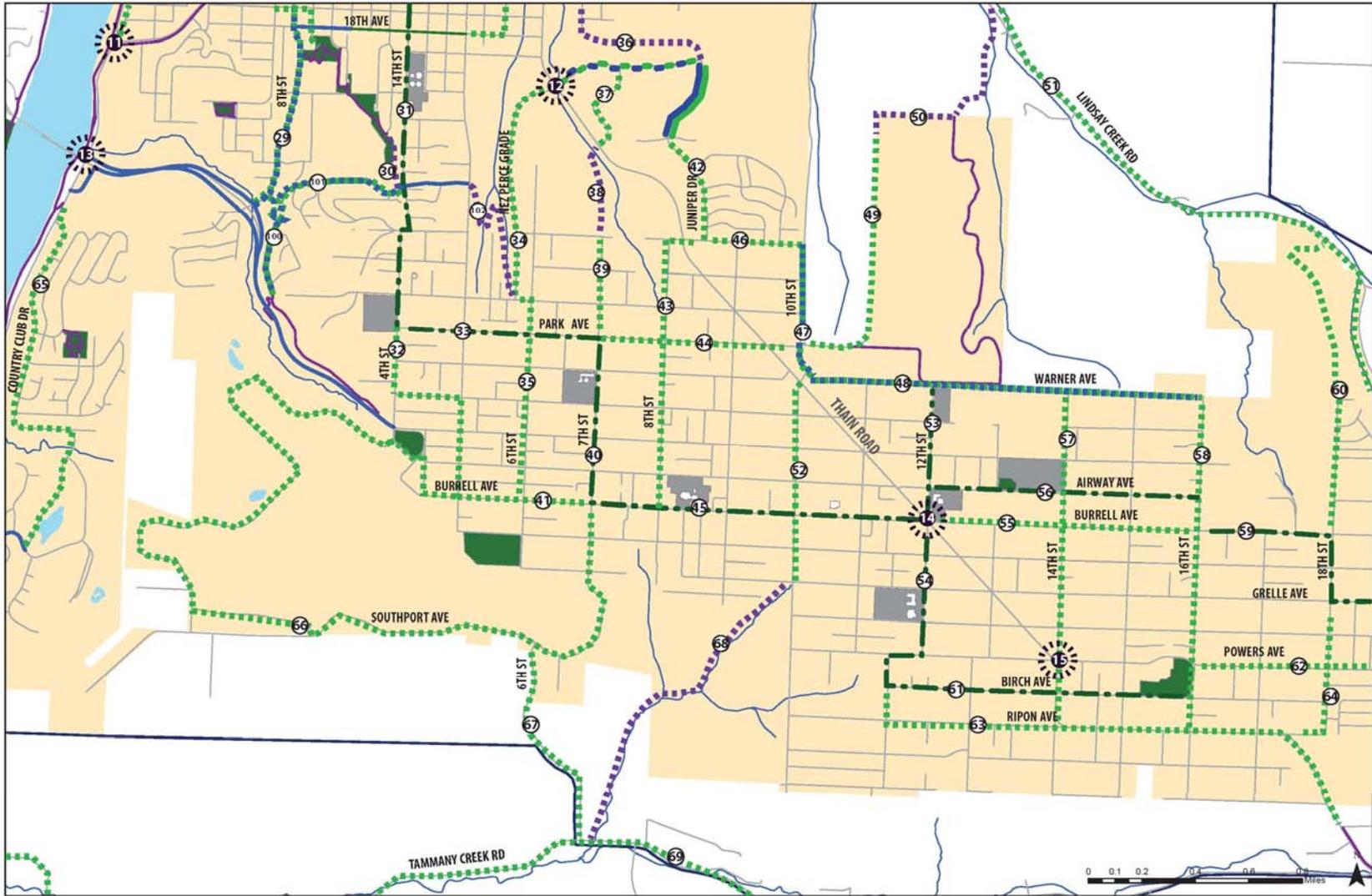


Figure 20. Lewiston (ID) Orchards Proposed Network

Asotin (WA) Proposed Network

The recommendations proposed in the following maps are intended to encourage active living by residents and visitors alike and to accommodate a variety of ability levels and interests with particular emphasis on bicyclists within the ‘interested but concerned’ category discussed earlier.

Figure 22 provides an overview of the Asotin (WA) recommended bicycle facilities. Figure 21 provides the legend for the existing and proposed facilities.

Key features include:

- A spot improvement at the bridge over Asotin Creek in making the transition from the pathway to the street system
- Identifying a key East-West (3rd Street) route as a bicycle boulevard, providing low-stress bicycle facilities for bicyclists of all ages and abilities
- Identifying recreational routes through and out of town

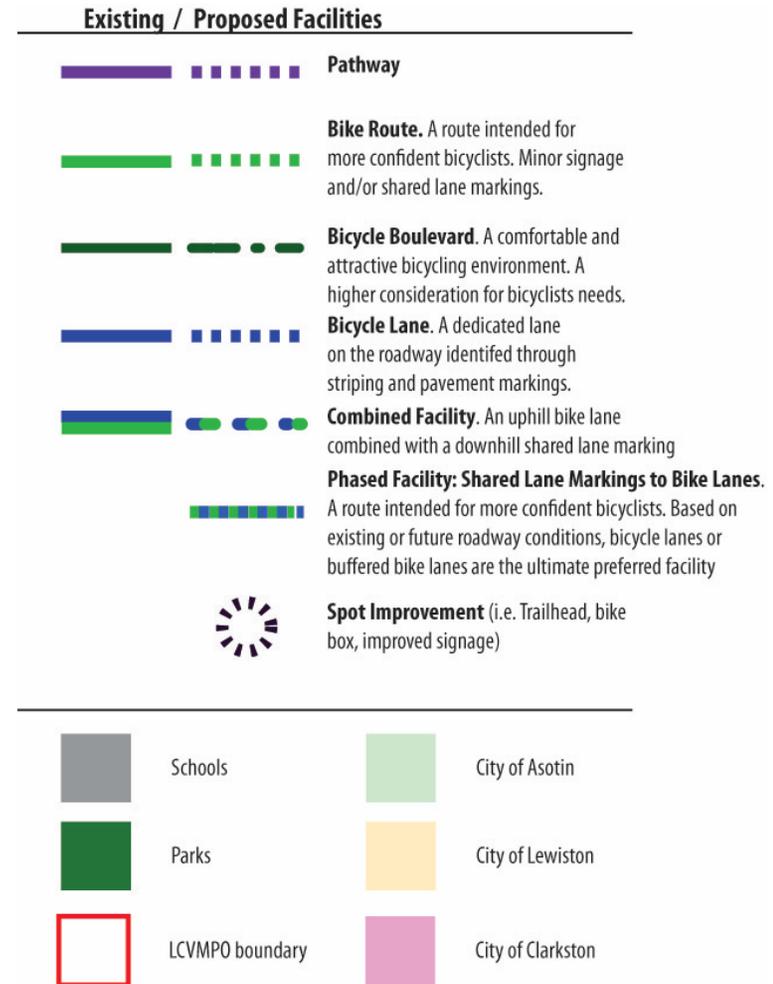


Figure 21. Map Legend

Asotin (WA) Proposed Network

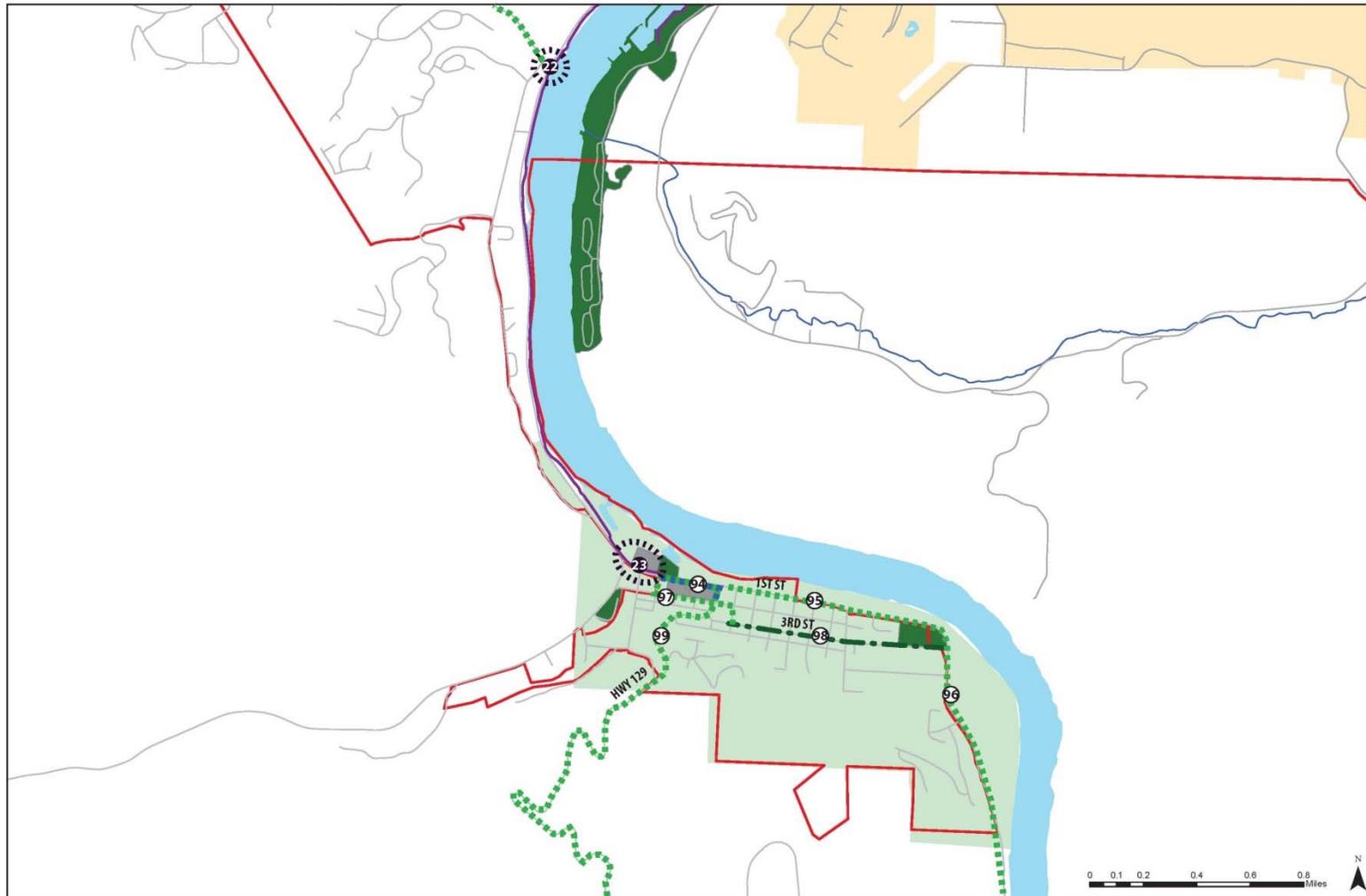


Figure 22. Asotin (WA) Proposed Network

Future Desired Projects

As noted earlier, there is a collection of projects that would have a strong positive impact on bicycling in the Lewis Clark Valley, but are not feasible at this time due to planning and implementation costs, or other unknowns in the development process. However, as the valley changes and funding and community support and interest change and grow, there may be greater need and support for facilities in these locations, and we want to acknowledge that long-term desire. Projects in this category are:

- Bicycle Lanes / Protected bicycle lanes on Thain Road, Diagonal Street, and Bridge Street
- Separated bicycle facilities with safe logical connections on the Southway Bridge, Interstate (Blue) Bridge, and Clearwater Bridge
- A connection from Mill Road to Railroad Avenue near or over the railroad yard
- The design and implementation of single-track routes (or a single-track park) for mountain bicyclists, along with associated trailheads. One potential location is near the proposed community park and high school location off of Warner Avenue.

Recommended Bicycle Programs

Engaging the Community on Bicycling

Dynamic bicycling programs build upon the existing bicycle network and infrastructure investments by encouraging new riders and supporting a vibrant bicycle culture. Bicycling programs target everyone: committed bicyclists, occasional bicyclists, potential bicyclists, children, senior citizens, pedestrians, and motorists. Programs stimulate creativity and awareness of bicycling and encourage people to use the streets in a new way. They engage community groups and institutions that share an interest in active transportation.

This chapter includes recommendations for programs to educate the public about bicycling, encourage ridership, enforce existing transportation laws, and provide a framework to evaluate the state of bicycling in the Lewis Clark Valley. The chapter also includes information on sample programs and resources from other communities, potential partners to for programming efforts, and time frame information.

Bicycle Rodeos (education / encouragement)

Bike rodeos are cycling education events targeted toward children that feature bicycle safety checks, safety sessions that address the rules of the road, the importance of wearing a helmet, and the interactive learning experience of riding through a practice street course. Bike rodeos usually focus on children ages 5 through 14. Rodeos give young people on bikes the chance to learn and practice skills needed for competent bicycling in a protected environment, while also easing parental concerns about bike safety.

Sample Programs/Resources:

- Safe Routes to Schools in Marin County, California:
<http://www.saferoutestoschools.org/pdfs/lessonplans/RodeoManualJune2006.pdf>
- Bicycling Life Bicycle Rodeo Guide:
<http://www.bicyclinglife.com/SafetySkills/BicycleRodeo.htm>
- An Organizer's Guide to Bicycle Rodeos:
http://www.bike.cornell.edu/pdfs/Bike_Rodeo_404.2.pdf

Potential Partners: Police and fire departments, Lewis Clark Bicycling Alliance, local bicycle shops, health district, school district

Time Frame: Fall and Spring, annually

Cost: \$

Figure 23: Santa Clarita, CA Bike Rodeo (image: Alta)



Bicycle User Maps (encouragement)

Up-to-date bicycling maps support current and potential bicyclists by showing designated bike trails, paths, lanes, and routes; local bike shops; bike rental locations; large bike parking facilities; and storage facilities. Additionally, bicycling maps can indicate the steepness of various routes, allowing users to plan for a more comfortable ride. Bicycling maps are essential in facilitating route planning, getting ideas about where to ride, and planning how to reach destinations. Bicycling maps can be made available online for home printing, at bike shops, rental locations, grocery stores, libraries, and other major destinations. Maps can also be developed as applications for smartphones and other technologies to be readily available to bicyclists.

Sample Programs/Resources:

- City of Sister Bike Map:
http://www.sisterstrails.com/Newspaper_CITY_0215WEB.pdf
- Des Moines Bicycle Collective Trail Maps:
<http://dsmbikecollective.org/resources/regional-trail-maps/>
- City of Boulder Bike and Pedestrian Routes:
<https://www-static.bouldercolorado.gov/docs/map-bike-pedestrian-routes-1-201407111617.pdf>

Potential Partners: Parks and recreation departments, transportation departments, Lewis Clark Bicycling Alliance, chamber of commerce

Time Frame: Bicycling and Walking Maps should be updated every three to five years, depending on what projects are completed in the interim.

Cost: \$ - \$\$ (depending on distribution method)

Bicycling Website (education / encouragement)

Lewis Clark Valley residents will benefit from a “one-stop-shopping” location for bicycling and trails information. The website should be posted on City websites and/or the LCVMPPO website. The website should include:

- A list of all local bicycling groups
- Information about current projects and how to get involved (public meetings, comment periods)
- Maps and brochures (links to online maps and brochures, where to find maps in person, and how to request materials by mail)
- Links to laws and statues relating to bicycling
- Information about cycling events (rides, classes, volunteer opportunities)
- A list of local bike shops, including phone numbers and addresses

- Information on how to request bike parking facilities
- Visitors Center

Sample Programs/Resources:

- Bike Long Beach:
<http://www.bikelongbeach.org/>
- Eugene Bike:
<https://www.eugene-or.gov/index.aspx?NID=489>

Potential Partners: Parks and recreation departments, transportation departments, Lewis Clark Bicycling Alliance, local bike shops.

Time Frame: The Bicycling Website should be updated regularly to ensure that information is current and accurate.

Cost: \$\$

Bike Legal Guides and Clinics (education)

Laws governing bicycling are often contained in statutes addressing motor vehicles and other topics, making them difficult to find for the general public. Legal guides provide a single source of information about bicyclist rights and responsibilities on the road and can serve as a valuable resource if bicyclists become involved in a crash or receive a traffic ticket. Legal clinics led by qualified attorneys are also a valuable source of information about bicycle laws and bicyclist rights and responsibilities.

Sample Programs/Resources:

- Bicycle Transportation Alliance Legal Resources: <https://btaoregon.org/resources/>
- Los Angeles County Bicycle Coalition California Bicycle Laws: <http://la-bike.org/resources/california-bicycle-laws>

Potential Partners: Lewis Clark Bicycling Alliance, police departments, attorneys who represent bicyclists

Cost: \$-\$\$

Manual Bicycle and Pedestrian Counts (evaluation / encouragement)

An evaluation program for non-motorized transportation is essential to determine the success of investments in bicycling and walking facilities. Bicyclists and pedestrians should be counted at key locations (pinch points, downtowns, near schools, before/after new the development of new facilities and on trails). The same locations should be counted in the same manner annually. It is recommended that the data collection program use the methodology developed by the National Bicycle and Pedestrian Documentation Project (NBPDP). User surveys can also be included in the data collection effort to learn more about walking and bicycling demographics, trip origin/destinations, preferences, etc. If major infrastructure projects are planned, baseline and post-construction user counts can be performed through this coordinated annual count process to provide information about changes in walking and bicycling.

Sample Programs/Resources:

- National Bicycle and Pedestrian Documentation Project: <http://bikepeddocumentation.org/>
- Counting Bikes to Plan for Bikes: <http://www.bikearlington.com/pages/biking-in-arlington/counting-bikes-to-plan-for-bikes/>

Potential Partners: Parks and recreation departments, transportation departments, Lewis Clark Bicycling Alliance, LCSC, school district

Time Frame: The NBPDP recommends that counts be performed in the second week of September; one weekday count (from 5-7PM on a Tuesday, Wednesday, or Thursday) and one Saturday count (noon – 2PM) should be completed. Secondary count times are weekday mornings from 7AM to 7PM and Saturday from 7AM to 7PM/ Additional optional counts can be carried out in the second weeks of January, May, and July.

Cost: \$\$

Automated Bicycle and Pedestrian Counts (evaluation / encouragement)

The principal advantage of automated counters (relative to manual counts) is the ability to affordably capture statistically valid sample sizes at low cost. They are useful in conducting studies before and after interventions. With a lower cost per site-hour of data, automated counters can be used for short-term counts to help gauge the impact of street improvements or permanently installed to help establish daily, weekly, or monthly variation factors for extrapolation of short term counts to average annual daily traffic (AADT) values suitable for comparison between sites. In the rural environment, automated counters may be more practical for ongoing counts than organizing volunteers or spending funds on staff time. The most common technologies used for bicycle and pedestrian counters are:

- Pneumatic tubes (senses air pressure change as bicycle tire passes over)
- Passive infrared (detects change in thermal contrast)
- Active infrared (detects an obstruction in the beam)
- Ultrasonic (emits ultrasonic wave and listens for an echo)
- Doppler radar (emits radio wave and listens for a change in frequency)

- Video Imaging (either analyzes pixel changes or data are played back in high speed and analyzed manually)
- Piezometric (senses pressure on a material; either a tube or underground sensor)
- In-pavement magnetic loop (senses change in magnetic field as metal passes over)

Figure 14: Infrared counters can be innocuous or conspicuous – make sure that they are well marked to avoid the possibility that the bomb squad is called out! (image: Alta)



counts and is not recommended for bicyclist counts. In-pavement magnetic loops are best for detecting bicyclists traveling along bike lanes or pathways. Video playback can provide information concerning user type, behavior, and demographics, in addition to count data. Pneumatic tubes are useful for short duration (2 to 14 day) counts as part of rotating (“mobile”) count programs or before and after studies.

Figure 25: Pneumatic tubes must be positioned to maximize the likelihood a bicyclist will not “miss” passing over them (image: Alta)



Most automated technologies work well for counting users that pass a specific point but most, with few exceptions such as video, cannot distinguish between bicyclists and pedestrians. The Eco-Counter MULTI combines passive infrared and inductive loop technologies to distinguish between types of users.

The most appropriate count technology is dependent on the count location and purpose. Infrared is best suited for screenline pathway or sidewalk

Another consideration is the physical installation of the counting device. Some infrared technology requires sensors to be installed on both sides of the pathway, while other devices can be effectively installed in locations with poles/street lights on just one side of the pathway or sidewalk, such as in an urban setting. Pneumatic tubes are the most flexible bicycle count technology, with thinner shared path tubes to minimize pedestrian trip hazards and roadway tubes that can differentiate (and separately count) motor vehicles from bicyclists. However, installation of tubes may require temporary traffic management and is more difficult in concrete road surfaces.

Bike Barometers (or “totems”) post count numbers in real time, raising awareness about the number of bicyclists and pedestrians in certain areas. The results of automated count devices can also be made public on the internet.

Figure 26: Market Street Bike Barometer, San Francisco (image: People for Bikes)



In addition to daily totals and year-to-date totals, barometers can also provide weather, time, date, and wayfinding information. Bike barometers are can be found in many communities:

- Market Street, San Francisco, CA:
<http://totem-eb-market.sanfrancisco.visio-tools.com/>
- Hawthorne Bridge, Portland, OR:
<http://portland-hawthorne-bridge.visio-tools.com/>
- Fremont Bridge, Seattle, WA
- 13th Street Protected Bike Lane, Boulder, CO

A count program should be carefully designed to maximize the site-hours of data obtained for a given investment.

Sample Programs/Resources:

- NCHRP Report 797: Guidebook on Pedestrian and Bicycle Volume Data Collection (TRB, 2015):
http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_797.pdf
- Traffic Monitoring Guide (FHWA, 2013):
<http://www.fhwa.dot.gov/policyinformation/tmguide/>
- Guide to Bicycle & Pedestrian Count Programs:
<http://www.pdx.edu/ibpi/count>
- Eco-Counter:
<http://www.eco-compteur.com/>
- About Arlington’s Automatic Counters:
<http://www.bikearlington.com/pages/biking-in-arlington/counting-bikes-to-plan-for-bikes/about-the-counters/>

Potential Partners: Parks and recreation departments; commercial real estate brokers or organizations (for downtown pedestrian counts)

Time Frame: Once installed, automatic counters can provide continuous daily, weekly, monthly or annual data, excluding downtime due to damage, malfunction, or routine maintenance.

Cost: \$\$-\$\$\$\$

Bicycle Report Card (evaluation)

A Lewis Clark Valley Bicycle Report Card is a useful tool to track and communicate changes in bicycle infrastructure, programs, attitudes, and safety as a result of Bicycle Master Plan Adoption. A bicycle report card can include the following areas of analyses:

- A map and description showing changes in bikeways and programs implemented
- Bicyclist counts to measure changes in ridership valley-wide and analyze before and after results of new infrastructure

- Bicyclist surveys to measure changes in residents thoughts about new bicycle projects and programs and the bicycling environment in the Lewis Clark Valley.
- Collision analyses to highlight changes in bicycle crashes and determine where improvements should be prioritized
- Sales tax evaluations to determine economic impacts of increased bicycle projects and programs

Sample Programs/Resources:

- Cincinnati’s Bicycle Report Card: <http://www.cincinnati-oh.gov/bikes/news/bike-report-card-shows-progress/>
- League of American Bicyclists’ state report cards: <http://bikeleague.org/content/report-cards>

Potential Partners: Lewis Clark Bicycling Alliance, local bike shops, school districts, public health organizations.

Figure 27: Drive With Care Campaign (image: Bike PGH)



Time Frame: A bicycle report card can be published annually after either the end of the calendar year or the fiscal year.

Cost: \$\$-\$\$\$\$

Positive Media Campaigns (encouragement)

A media campaign that shows a wide range of ordinary residents using their bicycles for a variety of purposes will help break down any negative stereotypes of bicyclists and raise awareness of bicycling and goodwill towards people who ride bikes.

One excellent example is the Drive With Care campaign by Bike Pittsburgh. The campaign features well-photographed posters showing people in a wide variety of ages, occupations, ethnicities, body types, and with a wide variety of bicycle types. The campaign seeks to humanize bicycling; create a more positive relationship between people driving and people bicycling; and to encourage the general public to see every person on a bike as a neighbor, friend, or family member.

Another good example of a Positive Media Campaign is the “I brake for people” campaign, promoted by the Portland Department of Transportation. The campaign features a simple graphic illustrating different types of pedestrians along with the phrase “I brake for people.” The graphic was posted on buses and bus stops along with drive-time radio blurbs. The campaign also featured a bumper sticker of the graphic that was distributed at events and various locations.

Figure 28: “I brake for people” campaign (image: Portland DOT)



Sample Programs/Resources:

- Drive with Care by BikePGH:
<http://www.communitycyclingcenter.org/index.php/introducing-the-i-ride-bicycling-campaign/>
- PDOT's "I brake for people" campaign off and running:
<http://bikeportland.org/2007/11/26/pdots-i-brake-for-people-campaign-off-and-running-6031>

Potential Partners: Parks and recreation departments, health partners, transit agencies.

Cost: \$\$-\$\$\$

Time Frame: National Bike Month (May) is an excellent time to capitalize on the increased attention to bicycling to launch positive media campaigns.

Safe Routes to School (education / encouragement)

Safe Routes to School (SRTS) programs are sustained efforts by parents, schools, community leaders and local, state, and federal governments to improve the health and well-being of children by enabling and encouraging them to walk and bicycle to school. SRTS programs examine conditions around schools and conduct projects and activities that work to improve safety and accessibility, and reduce traffic and air pollution near schools. These programs help make bicycling and walking to school safer and more appealing transportation choices thus encouraging a healthy and active lifestyle from an early age.

There are many ways to begin a Safe Routes to School effort, but the most common is to convene a Safe Routes to School Task Force to define goals and problems, decide on an action plan, designate roles and responsibilities, and develop a funding plan. The Task Force should include representatives from the city, the school district, the police department, school administration, parents, and interested community

members. It is recommended that the Task Force begin with a Safe Routes to School training to ensure that all parties have the same basic understanding of the Safe Routes to School field.

Sample Programs/Resources:

- Steps to Creating a Safe Routes to Schools Program:
<http://guide.saferoutesinfo.org/steps/index.cfm>
- SRTS Webinars:
<http://saferoutesinfo.org/events-and-training/SRTS-webinars>
- SRTS Web-Based Training:
http://apps.saferoutesinfo.org/training/local_program_skills/index.cfm
- Safe Routes to School National Partnership:
<http://saferoutespartnership.org/>
- Safe Routes to Schools Marin County:
<http://www.saferoutestoschools.org/index.html>

Potential Partners: School districts, parent-teacher-student associations, public health organizations, police departments

Cost: \$-\$\$\$

Time Frame: The start of the school year can be a good time to mobilize SRTS programming efforts.

National Bike Month/Bike to Work Day (encouragement / education)

National Bike Month occurs every May and it is the perfect opportunity for media attention to bicycling. LCVMPPO should coordinate multiple partners, including bike shops and the Lewis Clark Bicycling Alliance in creating a month-long series of events promoting bicycling, including Bike To Work Day (or Week) and Bike to School Day. The League of American Bicyclists hosts a National Bike Month website for commuters and event

organizers. The website contains information on nationwide and local events, an organizing handbook, and tips for commuters. Common elements include:

- Commute 101 workshops in advance of Bike to Work Day
- Guided commutes or group rides to increase comfort and familiarity with bicycling routes
- “Energizer Stations” to reward commuters with treats and incentives
- Workplace/team bicycling challenges for most miles, highest percentage of days ridden, etc.
- Celebrity events (e.g., mayor bikes to work with news team)
- A breakfast event for bike commuters
- Bike-to-school events
- Bike rodeos
- Mayoral proclamations

Figure 29: Bike Month encourages bicycle commuting through incentives and support activities such as commuter breakfasts (image: Alta)



Sample Programs/Resources:

- Bike Month Dates and Events: <http://bikeleague.org/content/bike-month-dates-events-0>
- National Bike Month Guide: [http://bikeleague.org/sites/default/files/Bike Month Guide.pdf](http://bikeleague.org/sites/default/files/Bike%20Month%20Guide.pdf)
- About Bike to School Day: <http://walkbiketoschool.org/ready/about-the-events/bike-to-school-day>
- May is PDX Bike Month (Portland Bureau of Transportation): <https://www.portlandoregon.gov/transportation/article/394915>

Potential Partners: Lewis Clark Bicycling Alliance, local bike shops, school districts, public health organizations

Time Frame: The League of American Bicyclists recommends that planning for National Bike Month begin in February with the initiating of fundraising and partnership building. Public promotion should begin in April. Evaluation of the success of National Bike Month events should follow in June.

Cost: \$\$-\$\$\$

Diversion Classes (enforcement / education)

A diversion class is offered to first-time offenders of certain community-related traffic violations, such as motorists speeding, pedestrians jaywalking, or bicyclists riding the wrong way on a one-way street. It can be aimed at pedestrians, bicyclists, and motorists. In lieu of receiving a citation and/or fine, individuals can take a one-time, free or inexpensive class instead. In Marin County, interested citizens can take the class even if they did not receive a ticket. This program is a good way to educate road users about road user rights and responsibilities.

Sample Programs / Resources:

- Portland, OR: <http://www.legacyhealth.org/health-services-and-information/health-services/for-adults-a-z/trauma/trauma-nurses-talk-tough/court-ordered-classes/share-the-road-safety-class.aspx>
- Marin County, CA: <http://www.marinbike.org/Campaigns/ShareTheRoad/Index.shtml#StreetSkills>

Potential Partners: police departments, insurance companies, hospitals / health systems, Lewis Clark Bicycling Alliance

Cost: \$\$-\$\$\$

Car-Free Events (encouragement)

Car-free events involve the temporary closure of a major street (often in a downtown or along a waterfront) for physical activity to promote community, activity, and health. They allow participants to enjoy a large, temporary public space where they can bike, walk, run, skate, or engage in other active transportation and physical activity to encourage an active lifestyle. Car-free events often feature spaces for group exercise classes such as dance, aerobics, martial arts or yoga. Often, non-profit, health, and bicycle organizations offer free activities and information about their services.

Sample Programs/Resources:

- Summer Parkways Spokane: <http://summerparkways.com/>
- Sunday Streets Missoula: <http://www.missoulainmotion.com/Events>

- Open Streets Project: <http://openstreetsproject.org/>

Figure 30: Sunday Parkways, Portland, OR (image: Alta)



Potential Partners: Lewis Clark Bicycling Alliance, school districts, health care providers, public health agencies, local businesses.

Time Frame: Car-free events are often held during warmer periods of the year. Some communities have started off with a one-time trial event, followed by holding events monthly or bi-monthly.

Cost: \$\$

Helmet Giveaways (education / enforcement)

Helmet giveaways (or provision at low cost), either targeting children or the public at large, can encourage bicycling and bike safety. Simple but safe helmets can be purchased very inexpensively in bulk (generally for less than ten dollars each). It may be possible to partner with local hospitals, health care providers, or public health agencies to fund and promote this program.

Sample Programs/Resources:

- Kohl's Helmet Safety Program at Seattle Children's: <http://www.seattlechildrens.org/classes-community/community-programs/kohls-helmet-safety/>
- Toolkit for Helmet Promotion Programs: <http://www.helmets.org/toolkit.htm>

Potential Partners: Lewis Clark Bicycling Alliance, local bike shops, school districts, local hospitals, health care providers, public health agencies.

Time Frame: National Bike Month (May) is an excellent time to capitalize on the increased attention to bicycling to host helmet giveaways.

Cost: \$\$

Bike Light Campaigns (education / encouragement / enforcement)

Research shows that people on bikes who do not use lights at night are at much greater risk of bike-car crashes. Increasing bike light usage should be a top priority and increasing bike light usage will reduce crash risks for bicyclists. A campaign to increase bike light usage can feature multiple elements:

- Well-designed graphic ads, to be placed on transit benches, transit vehicles, and in local newspapers.
- Partnership with local cycling groups to spread the word to their members and partners. These groups can be counted as campaign partners, enhancing the campaign's credibility and community exposure. Cycling groups should be supplied with key campaign

messages to distribute to their constituents along with coupons for free or discounted bike lights.

- Discounts on bike lights and reflective gear at local bike shops during the campaign (publicized through the media campaign).
- In school presentations about bike lights, including reflective material and/or bike light giveaways.

- Bike light

Figure 31: This poster from Marin County, CA uses simple graphics to communicate the importance of using bicycle lights (image: Alta)



giveaway stations located at key bicycle intersections during the evening commute.

Sample Program/Resource:

- Don't Forget to Light Up the Night (San Francisco Bicycle Coalition): <http://www.sfbike.org/news/dont-forget-to-light-up-the-night/>

Potential Partners: Lewis Clark Bicycling Alliance, local bike shops, school districts, police departments

Time Frame: A bike light campaign is most effective in fall, either timed with the start of the school year or the end of daylight savings time.

Cost: \$\$

Figure 32: Every fall Dutch cyclists find these bike hangers on their bikes to remind them to use lights (image: Alta)



Implementation

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Overview

The projects and programs recommended in the previous chapter represent a visionary plan for the Lewis Clark Valley MPO and its member communities. All of these improvements cannot be made quickly; moreover, it will take many years of steady incremental progress to achieve this vision. This implementation plan provides the MPO, the cities of Lewiston, Clarkston, and Asotin, and Asotin and Nez Perce Counties with strategies, costs, and priorities to assist them in achieving the vision of the LCVMPPO Bicycle Master Plan.

Implementation Strategies

Implementation of the LCVMPPO Bicycle Master Plan will take place in small steps over many years. The following strategies and action items can guide the MPO toward developing the projects identified in the Plan.

- Complete inexpensive “low-hanging fruit” projects first to gain a more connected network. Such projects could include:
 - Bike routes and bike boulevards
 - Bike lanes that require striping only to complete
 - Crossing improvements to join pathway/ trail segments
- Take a Complete Streets approach to all roadway projects
- Opportunistically pursue projects such as bike lanes or shoulder bikeways in conjunction with roadway resurfacing projects as they occur
- Strategically pursue high-priority projects with local or grant funding, including ITD’s and WSDOT’s Transportation Alternatives Program (TAP)
- Incrementally pursue projects based on available resources with the goal of eventually completing the project in full
- Incrementally pursue projects based on opportunities associated with new development
- Identify and address barriers to bicycling
- Regularly revisit the LCVMPPO Bicycle Master Plan every five years to evaluate progress on project implementation.
- Elevate implementation priority for projects that significantly will enhance the non-motorized network as it grows.

Project Prioritization

One of the implementation strategies that the LCVMPPO community can use to focus resources is to strategically pursue high-priority projects. High priority projects are those that have a significant value to the community and will have a larger impact to the overall network than simply developing an isolated bike lane or pathway.

The recommended corridor projects were scored by the criteria in Table 7 using a weighting system approved by the project Steering Committee (see Appendices E and F for more project prioritization information).

Table 7. Corridor Project Criteria

Criteria	Description	Possible Score	Multiplier
Improvements that serve an immediate safety need	The project addresses an actual or perceived safety need	2,1,0	5
Current availability and/or suitability of right-of-way	The jurisdiction currently has available right-of-way to implement the project	1,0	5
Enhances system connectivity	The project will ultimately impact and connect to the overall network	2,1,0	3
Closure of critical gap	The project fills in an existing gap in the network	2,1,0	5
Provides a connection to destination or destination clusters	The project provides direct connection to desirable destinations such as the levee, downtown, schools and parks	2,1,0	5
Local political and community support	The project is/can be supported by the local community	1,0	5

Based on the scoring identified for the criteria above in Table 7, projects were assigned to one of 5 tiers, as shown below in Table 8. The full table is available in Appendix F.

Table 8. Corridor Weighted Score and Tier

Tier	Weighted Score	Total Corridor Projects (by Tier)	Total Spot Improvement Projects
1	> 40	6	12
2	35 – 39	30	11
3	30-34	25	
4	20-29	48	
5	< 20	10	

Table 9. Corridor Project List by Tiers

Tier 1 Projects			
Project ID # and Name	Facility Type	Length (mi)	Primary Jurisdiction
#1. Main Street / D Street	Bicycle Route	1.30	Lewiston
#3. Idaho Street / 9th Street / F Street	Bicycle Route	1.10	Lewiston
#10. 6th Street / 5th Street	Bicycle Route	0.65	Lewiston
#27. 7th Street / 17th Avenue / 9th Street	Bicycle Route	0.28	Lewiston
#70. Fair Street	Bicycle Route	1.59	Clarkston
#75. Libby Street	Bicycle Boulevard	1.35	Clarkston
Tier 2 Projects			
#5b. 18th Street	Bicycle Lanes	0.25	Lewiston
#12. 7th Avenue	Bicycle Boulevard	0.32	Lewiston
#14. 8th Avenue	Bicycle Boulevard	0.57	Lewiston
#15. 9th Avenue / 20th Street / 10th Avenue	Bicycle Boulevard	0.61	Lewiston
#16. 6th Street	Bicycle Boulevard	0.35	Lewiston
#17b. 11th Avenue (Prospect – 8th Street)	Bicycle Lanes	0.45	Lewiston
#18b. 11th Avenue (8th Street – 21st Street)	Bicycle Lanes	0.94	Lewiston
#19b. 8th Street / 9th Street (Idaho Street – 18th Avenue)	Bicycle Lanes	1.10	Lewiston
#20. 14th Street	Bicycle Boulevard	0.71	Lewiston
#26. 16th Avenue / Southway Pathway	Protected Bicycle Lanes	0.07	Lewiston
#31. 14th Street / 4th Street (18th Avenue – Park Avenue)	Bicycle Boulevard	1.10	Lewiston

Project ID # and Name	Facility Type	Length (mi)	Primary Jurisdiction
#33. Park Avenue	Bicycle Boulevard	0.75	Lewiston
#40. 7th Street	Bicycle Boulevard	0.62	Lewiston
#42. Juniper Drive	Bicycle Route	0.42	Lewiston
#45. Burrell Avenue (7th Street – 12th Street)	Bicycle Boulevard	1.25	Lewiston
#53. 12th Street	Bicycle Boulevard	0.50	Lewiston
#54. 12th Street	Bicycle Boulevard	0.75	Lewiston
#57. 14th Street	Bicycle Route	1.25	Lewiston
#59. Burrell Avenue / 18th Street / Grelle Avenue	Bicycle Boulevard	1.25	Lewiston
#71. 5th Street / Port Drive / Port Way / 13th Street	Bicycle Route	1.21	Clarkston
#73. 7th Street	Bicycle Route	1.25	Clarkston
#74. Elm Street	Bicycle Route	1.44	Clarkston
#79. Fleshman Way	Pathway	0.20	Asotin County
#82. 15th Street	Bicycle Route	0.32	Asotin County
#84b. Appleside Boulevard	Bicycle Lanes	1.15	Asotin County
#88. 19th Street / Reservoir Road / 20th Street	Bicycle Boulevard	0.93	Asotin County
#89. 6th Avenue	Bicycle Boulevard	0.72	Asotin County
#94a. SR 129 (1st Street / Washington Street)	Bicycle Route	0.28	WSDOT
#97. 2nd Street	Bicycle Route	0.42	Asotin
#98. 3rd Street	Bicycle Boulevard	0.81	Asotin

Tier 3 Projects			
#5a. 18th Street	Bicycle Route	0.25	Lewiston
#17a. 11th Avenue (Prospect – 8th Street)	Bicycle Route	0.45	Lewiston
#18a. 11th Avenue (8th Street – 21st Street)	Bicycle Route	0.94	Lewiston
#19a. 8th Street / 9th Street (Idaho Street – 18th Avenue)	Bicycle Route	1.10	Lewiston
#23. N Street	Bicycle Boulevard	0.50	Lewiston
#76. Chestnut Street / Beachview Blvd / Riverview Blvd	Bicycle Route	0.59	Clarkston
#9. Snake River Avenue / Snake River Grade / Prospect Avenue	Bicycle Route	1.38	Lewiston
#11. 24th Street / 8th Avenue / 29th Street	Bicycle Route	1.10	Lewiston
#22. 7th Street	Bicycle Route	0.62	Lewiston
#43. 8th Street	Bicycle Route	1.14	Lewiston
#44. Park Avenue (7th Street – 10th Street)	Bicycle Route	0.75	Lewiston
#47b. 10th Street	Bicycle Lanes	0.48	Lewiston
#48a. Warner Avenue	Bicycle Route	1.49	Lewiston
#48b. Warner Avenue	Bicycle Lanes	1.49	Lewiston
#55. Burrell Avenue	Bicycle Route	1.00	Lewiston
#56. Airway Avenue	Bicycle Boulevard	1.00	Lewiston
#58. 16th Street	Bicycle Route	1.25	Lewiston
#63. Ripon Avenue	Bicycle Route	2.03	Lewiston
#65. Country Club Drive	Bicycle Route	1.51	Lewiston
#72. 2nd Street	Bicycle Route	0.90	Clarkston
#77b. Highland Avenue	Bicycle Lanes	1.05	Clarkston
#78. 16th Avenue / 8th Street	Bicycle Route	0.33	Clarkston
#84a. Appleside Boulevard	Bicycle Route	1.15	Asotin County

Project ID # and Name	Facility Type	Length (mi)	Primary Jurisdiction
#85a. 6th Avenue	Bicycle Route	1.07	Clarkston
#94b. SR 129 (1st Street / Washington Street)	Bicycle Lanes	0.28	WSDOT
Tier 4 Projects			
#7b. Main Street	Protected Bicycle Lanes	0.55	Lewiston
#30. Pathway	Pathway	0.21	Lewiston
#37. Pride Rock	Bicycle Route	0.41	Lewiston
#47a. 10th Street	Bicycle Route	0.48	Lewiston
#50. Pathway	Pathway	0.65	Nez Perce County
#61. Birch Avenue	Bicycle Boulevard	1.13	Lewiston
#62. Powers Avenue	Bicycle Route	1.25	Lewiston
#77a. Highland Avenue	Bicycle Route	1.05	Lewiston
#86a. 21st Avenue	Bicycle Route	0.57	Asotin County
#87. 4 th Avenue	Bicycle Route	0.25	Asotin County
#91. Critchfield Road	Bicycle Route	2.07	Asotin County
#95. 1st Street	Bicycle Route	0.92	Asotin
#99. Highway 129	Bicycle Route	2.38	WSDOT
#6. 23rd Street	Bicycle Route	0.17	Lewiston
#29a. 8th Street (18th Avenue – Bryden Canyon Road)	Bicycle Route	0.72	Lewiston
#29b. 8th Street (18th Avenue – Bryden Canyon Road)	Bicycle Lanes	0.72	Lewiston
#32. 4th Street	Bicycle Route	0.74	Lewiston
#36. Juniper Drive extension	Pathway	0.46	Lewiston
#41. Burrell Avenue (4th Street – 7th Street)	Bicycle Route	0.63	Lewiston
#85b. 6th Avenue	Bicycle Lanes	1.07	Asotin County

Project ID # and Name	Facility Type	Length (mi)	Primary Jurisdiction
#100a. Mayfair Drive	Bicycle Route	0.46	Lewiston
#100b. Mayfair Drive	Bicycle Boulevard	0.46	Lewiston
#101a. Vineyard Drive	Bicycle Route	0.56	Lewiston
#101b. Vineyard Drive	Bicycle Boulevard	0.56	Lewiston
#102 17 th Street Creek Pathway	Pathway	0.60	Lewiston
#2. 9th Street	Bicycle Route	0.11	Lewiston
#7a. Main Street	Bicycle Route	0.55	Lewiston
#13. 7th Avenue	Bicycle Route	0.14	Lewiston
#21. 11th Avenue (21st Street – 29th Street)	Bicycle Route	0.50	Lewiston
#24. 19th Street	Bicycle Route	0.48	Lewiston
#25. 23rd Street	Bicycle Route	0.63	Lewiston
#34. Nez Perce Grade	Bicycle Route	1.06	Lewiston
#35. 6th Street	Bicycle Route	0.63	Lewiston
#38. Pathway	Pathway	0.32	Lewiston
#46. Stewart Avenue	Bicycle Route	0.36	Lewiston
#51. Lindsay Creek Road	Bicycle Route	3.84	Nez Perce County
#52. 10th Street	Bicycle Route	0.79	Lewiston
#64. 18th Street	Bicycle Route	0.64	Lewiston
#66. Southport Avenue	Bicycle Route	4.22	Lewiston
#67. 6th Street	Bicycle Route	0.83	Nez Perce County
#68. Pathway	Pathway	1.26	Nez Perce County
#69. Tammany Creek Road	Bicycle Route	7.64	Nez Perce County
#80a. 13th Street (Belmont Way to 21st Avenue)	Bicycle Route	0.95	Asotin County

Project ID # and Name	Facility Type	Length (mi)	Primary Jurisdiction
#80b. 13th Street (Belmont Way to 21st Avenue)	Bicycle Lanes	0.95	Asotin County
#83. Johnson Road	Bicycle Route	1.09	Asotin County
#86b. 21st Avenue	Bicycle Lanes	0.57	Asotin County
#93. SR 12 / Elm Street	Bicycle Route	2.25	WSDOT / Clarkston
#96. Wilson Street	Bicycle Route	0.77	Asotin
Tier 5 Projects			
#4. 13th Street	Bicycle Route	0.30	Lewiston
#8a. Lapwai Road / Lindsay Creek Road	Bicycle Route	1.55	Lewiston
#8b. Lapwai Road / Lindsay Creek Road	Bicycle Lanes	1.55	Lewiston
#39. 7th Street	Bicycle Route	0.37	Lewiston
#49. Park Avenue	Bicycle Route	1.08	Lewiston
#81. 13th Street (21st Avenue to Riverside Drive)	Bicycle Route	1.05	Asotin County
#90. 6th Avenue	Bicycle Route	0.77	Asotin County
#92. Evans Road	Bicycle Route	2.80	Asotin County
#28. 16th Avenue	Bicycle Route	0.64	Lewiston
#60. 18th Street	Bicycle Route	1.37	Lewiston

The 23 spot improvement projects were evaluated on their location at an existing facility or a recommended facility. Spot Improvement projects located on or near existing facilities were identified as Tier 1 priorities, all other spot improvement projects are recommended to occur at the time of development of the connecting projects.

Table 10. Tier 1 Spot Improvement Projects

Tier 1 Projects
Project ID # and Name
#1. Levee Trail & Interstate (Blue) Bridge
#3. D Street / 1st Street (SR12)
#4. 5th Street & D Street
#5. 18th Street / Dike Bypass (SR12) / Levee Trail
#11. Southway Avenue (and Pathway) & Snake River Avenue
#13. Bryden Canyon Road ramp & Snake River Avenue
#16. 1st Street & Bridge Street
#18. West end of Southway Bridge
#19. Scenic Way and SR 129 (15th Street)
#20. Appleside Boulevard & Valleyview Drive/Andreasen Drive
#21. 22nd Avenue & Riverside Drive
#22. Critchfield Road & Riverside Drive
#23. Asotin Creek Bridge

Project Description Sheets

The project evaluation and prioritization matrix and the programmatic strategies will provide clear direction on where to allocate resources first. To better assist the local jurisdictions in securing grants or other funding, these strategies are accompanied by project description sheets for the identified projects. Project description sheets can serve as an excellent tool for future implementation funding applications. The project sheets describe key characteristics of each proposed route or route segment including:

- Need/purpose
- Relevant background data
- Short description of improvement
- Small project area map
- Photo or cross-section (as needed)
- Planning-level cost-estimate
- Priority

The project sheets are organized by jurisdiction within the MPO boundary. The project sheets can be found in Appendix E.

Project Funding

Valley Destination 2040: The Long-Range Transportation Plan Update provides a good overview of potential funding sources for roadway projects (including active transportation projects) at the federal, state, regional, and local level in the Lewis Clark Valley. Please refer to Chapter 6 in that document for additional information on those sources, as well as the estimated dollar amounts available to the region through 2040. Table 11 below provides a good overview of the active transportation uses for federal funding sources.

Table 11. Summary of Federal Funding Sources

		Planning, Design and/or Construction				
		On-street Pedestrian Facilities	On-street Bicycle Facilities	Off-Street Multi-Use Paths	Non-Infrastructure Programs	
Federal Sources	MAP-21	Funding Program				
		Transportation Alternatives (TAP)	✓	✓	✓	✓
		Recreational Trails Program (RTP)			✓	
		Safe Routes to School (SRTS)	✓	✓	✓	✓
		Surface Transportation Program (STP)	✓	✓	✓	
		Highway Safety Improvement Program (HSIP)	✓	✓	✓	✓
		Congestion Mitigation/Air Quality (CMAQ)	✓	✓	✓	✓
		New Freedom Initiative	✓		✓	✓
		Pilot Transit-Oriented Development (TOD)	✓	✓	✓	
		Partnership for Sustainable Communities	✓	✓	✓	
		Community Development Block Grants (CDBG)	✓			✓
		Community Transformation Grants (CTG)	✓	✓	✓	✓
		Land and Water Conservation Fund (LWCF)			✓	✓
Rivers, Trails, and Conservation Assistance (RTCA)			✓			
Federal Lands Access Program (FLAP)	✓	✓	✓			

Corporate and Private Foundations

Corporate and private foundations provide important funding opportunities that complement the region's efforts for expanded bicycle infrastructure and more effective program delivery. There are a host of organizations that enable Complete Street, neighborhood, bicycle infrastructure projects, and program delivery possible. The following is short list of private funding sources and the types of projects or programs that are eligible for funding:

- Bikes Belong (<http://www.bikesbelong.org/grants/>): Bikes Belong awards grants of up to \$10,000 for facility and advocacy projects, for up to 50% of the total project cost. Bikes Belong has also administered SRTS mini-grants which could be a simple way to provide bike parking to satisfy the school district's growing bike storage needs. Using this funding for program support may benefit educational programs and better involve the public in securing funding.
- Robert Wood Johnson Foundation (<http://www.rwjf.org/>): RWJF provides grants for programs that promote active and healthy living through its Call for Proposals process. Public agencies may apply for these funds and many bicycle and pedestrian improvement programs may be eligible.
- Bullitt Foundation (<http://bullitt.org/>): The program believes that in the resource-constrained world of the future, communities that are built and managed on ecological principles will have important advantages over traditional cities constructed around cheap fossil fuels. Program Objective: To advance policies and practices to create vibrant, affordable, diverse, healthy, and environmentally beneficial communities. The urban ecology program will expand upon the existing leadership that several Northwest cities have displayed in such fields as transit-oriented development, smart growth, green architecture & urban design.
- The ORAM Fund for the Environment and Urban Life (<http://enviro-urban.org/>): The ORAM Fund mission is to "support projects and programs with promise of significant local or broader-reaching impacts on environmental quality and urban life." In pursuit of this mission the Fund's strategy is to support groups that "implement and/or promote innovative activities that will benefit the environment and urban life." The organization's current focus is on urban development.

There are a number of other private funding opportunities for bicycle transportation funding. Organizations include the SRAM Cycling Fund, Microsoft Corporate Citizen Washington State program, Boeing Washington State Grantmaking Program, the Walmart Foundation, Clif Bar Family Foundation, and REI grants. To win competitive grants from foundations it is necessary to have excellent and fastidious grant writers to position SDOT for maximum grant support. There are a number of limitations that grant funding imparts on a project including additional analysis time, report writing, and surveys to determine the effectiveness of the investments. Grants are not guaranteed sources of revenue and should never be counted on to solely or consistently fund projects.

Appendices

Appendix A. Existing Bicycle Conditions Review and Analysis

Appendix B. Sample Evaluation Reports

Appendix C. Plan & Policy Review

Appendix D. Public Involvement Summary and Analysis

Appendix E. Project Implementation Strategies and Project Sheets

Appendix F. Project Prioritization Spreadsheets

Appendix G: Bicycle Facility Design Guidelines