

Washington State University Bicycle and Pedestrian Plan

Working Paper #5: Existing Conditions Analysis



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FROM: Alta Planning + Design

DATE: November 2013

Introduction

Project Overview

For over 120 years, Washington State University (WSU) has held a strong presence in the Pullman community providing quality education and experiences for people from all over the world. As the campus 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 within the campus setting.

WSU, in coordination with the City of Pullman, seeks to complete a comprehensive study to enhance bicycle and pedestrian circulation within the campus while creating seamless links with the surrounding Pullman community, with the ultimate goal of increasing walking and bicycling as everyday travel modes.

This document is one step in completing that study of non-motorized circulation and developing recommendations to enhance bicycle and pedestrian travel on campus and throughout the City of Pullman. The purpose of this document is to document on-the-ground conditions of the bicycle and pedestrian network at Washington State University and the city of Pullman. 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 future recommendations for both facility improvements and policy or operational changes.

Part I: 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
- Development Patterns
- Trip Generators
- Enrollment / Employment
- Campus Master Planning

Setting: Study Area

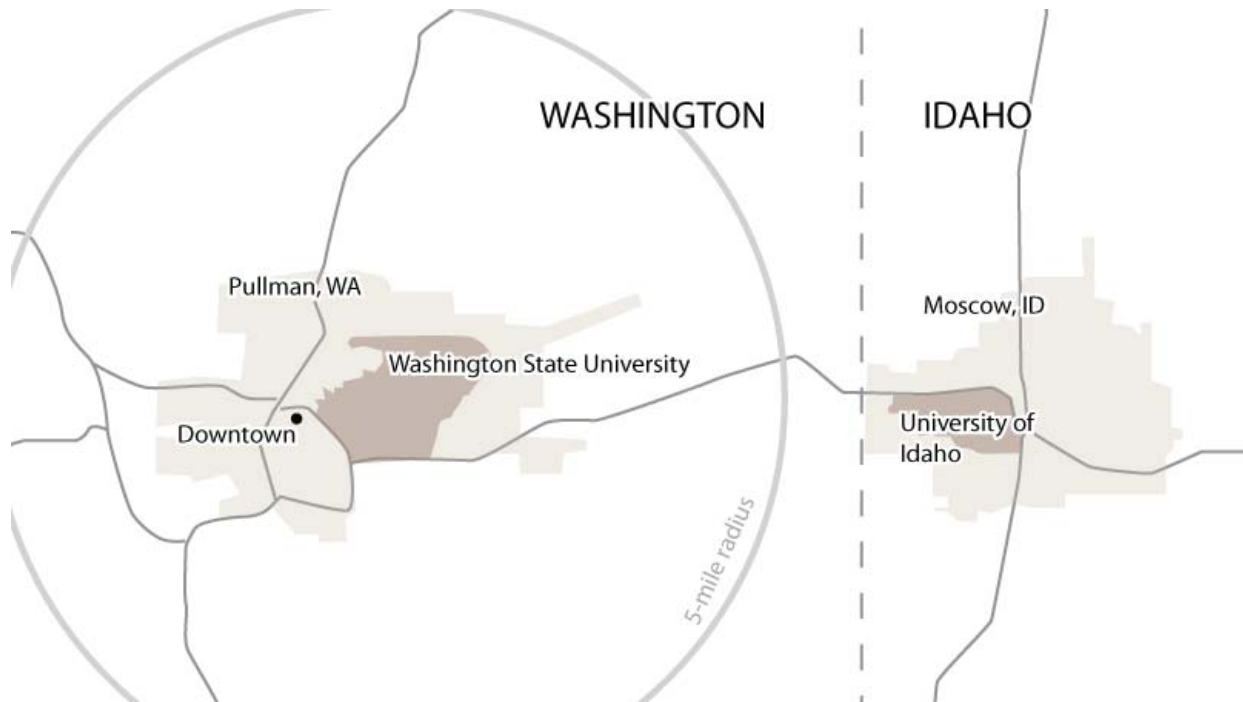


Figure 1: WSU Campus and the City of Pullman in Relation to Moscow ID



The Palouse

Pullman is located in the heart of the agricultural region known as the Palouse. It is the home of Washington State University (WSU), a land grant institution founded in 1890.

The estimated 2011 population of Pullman was 29,913. The 2011 enrollment of WSU was 19,211.

Several types of land uses, varying in intensity from open space to industrial, are found in Pullman. WSU owns or controls nearly 50 percent of the land in the city. The remainder of the city is occupied primarily by residential uses in a relatively compact development pattern.

The Pullman area climate is semi-arid, features dry and clear weather for much of the year, with hot, dry summers and cold, wet winters.

Setting: Topography

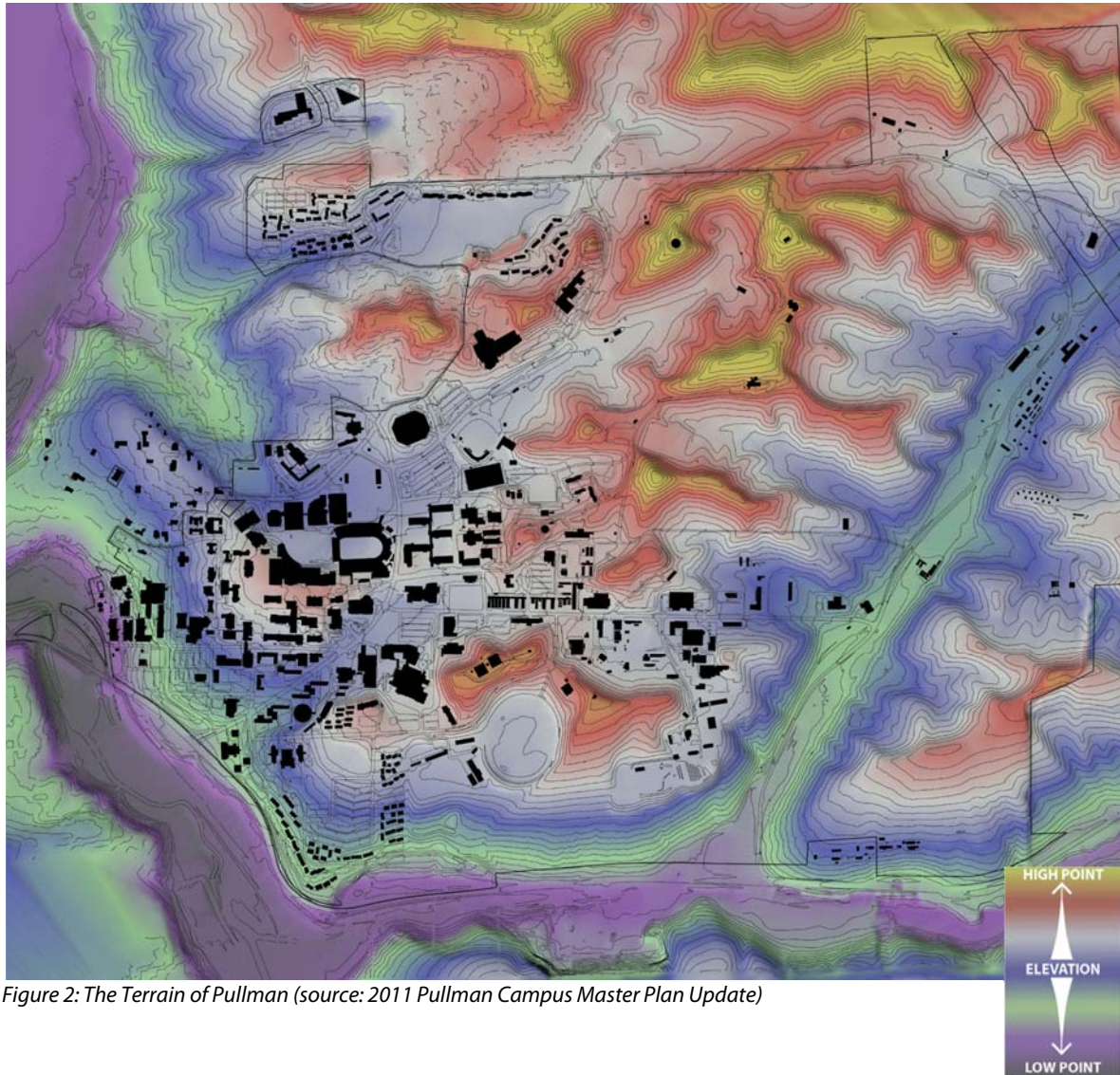


Figure 2: The Terrain of Pullman (source: 2011 Pullman Campus Master Plan Update)

The 4 Hills

Pullman sits on four major hills that divide the city into nearly equal quarters. The four hills are:

- Military Hill
- Pioneer Hill
- Sunnyside Hill; and
- College Hill

The WSU campus is located on College Hill.

WSU Pullman has been described as a “campus of stairs, bridges, stairs leading to bridges, and bridges leading to stairs,” and this verticality is the campus’ most striking aspect. A 10-minute walk can entail a 200-foot rise in elevation. This topography creates a campus that is both scenic and physically demanding.

- WSU Master Plan, Chapter 2, Existing Conditions

Setting: Development Patterns

WSU Campus



The campus currently is organized by land assignment to colleges and departments. Historically, campus growth began in the west adjacent to the City of Pullman but has migrated always eastward.

Downtown Main Street



The historic downtown of the City of Pullman offers a dense, walkable main street feel.

While E Main St and SE Paradise St are configured as a couplet to encourage fast circulation, signalization on every block downtown helps pedestrians cross the street easily.

Auto-Oriented Commercial



Modern commercial development is characterized by wide, multi-lane streets, with distantly spaced land uses and auto-oriented building designs.

Sidewalks are available along these areas, but marked or enhanced pedestrian crossings are rare.

Despite the preference for automobile circulation, pedestrians are commonly present.

Residential Neighborhoods



The city's residential areas have developed in a compact development pattern of single-family and mixed density areas. Pullman has a greater percentage of high density, multi-family residences, primarily in response to the market demands presented by students, faculty, and staff at WSU.

Residential Apartment Neighborhoods



Designed to serve WSU students, entire neighborhoods of apartment buildings have developed north of the WSU campus.

These areas are built with 2-3 story buildings, surrounded by parking lots and shared open space.

Streets and pathways connect these areas to the campus and many students can be seen walking south to class every morning when school is in session.

Setting: Development Patterns

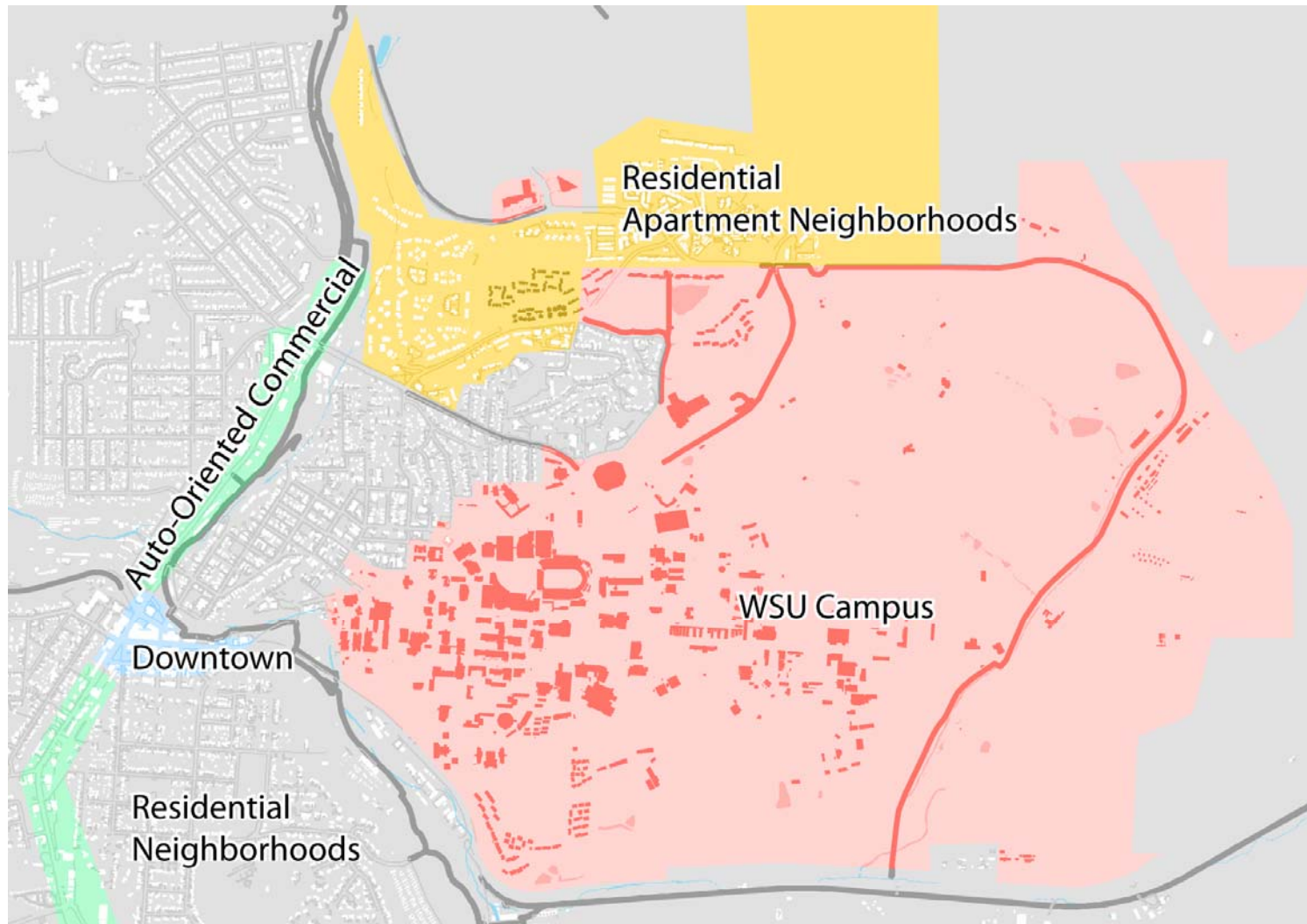


Figure 3: Development Pattern Types

Setting: Enrollment/Employment Numbers

| Student Enrollment (Current & Projected) | |
|--|--------|
| 2012 | 19,243 |
| 2020 | 21,150 |
| 2030 | 26,000 |

Source: Campus Master Plan Update 2011

| Non-Student Workforce (2010) | |
|-------------------------------|--------------|
| Administrative / Professional | 1,084 |
| Classified Staff | 1,477 |
| Faculty | 1,498 |
| Total | 4,059 |

Source: Office of Institutional Research

Stats and Demographics

With nearly 20,000 students and over 4,000 staff and faculty, transportation to the WSU campus is important. And as the campus grows and adds additional students, how everyone travels to and around campus becomes a more important question.



Students walking along Library Rd between classes



WSU Staff attended the Plan Open House events

Setting: Campus Master Planning



Figure 4: WSU Campus Master Plan Map (Source: Pullman Campus Master Plan Update 2012)

A Vision of the Future

The 2012 Campus Master Plan Update establishes a vision for campus growth to 2030 and beyond.

One of the key recommendations to come out of the campus master planning effort was the closure of NE Stadium Way between Grimes Way and NE North Fairway Road to through motor vehicle traffic.

This Bicycle and Pedestrian Plan will recognize this vision for growth that was inspired by the campus, its students, faculty and staff and the result of months of work spanning June 2010 to October 2011.

Following this Bicycle and Pedestrian Plan, the University will develop a comprehensive transportation plan, focusing on vehicular and transit circulation.

Part II: Existing Conditions

The 5 Es of Bicycle and Pedestrian Planning

The League of American Bicyclists (LAB) uses the 5E's – Engineering, Education, Encouragement, Enforcement, and Evaluation – as an organizing principle for assessing a community's achievements and for identifying a Bicycle Friendly Community (BFC). Section II utilizes the same organizing principle to examine the existing conditions on the Washington State University campus and city of Pullman. Table 1 below explains the 5E's in more detail.

Table 1. The 5E's

| Category | Factor(s) |
|---------------|---|
| Engineering | What facilities exist? |
| Education | What education programs/opportunities are there for bicyclists, pedestrians, and motorists? |
| Encouragement | How do WSU, Pullman, and other interested groups promote and encourage biking and walking? |
| Enforcement | What connections exist between law enforcement (city and campus) and biking and walking groups? |
| Evaluation | Do WSU and Pullman measure biking and walking rates and crash rates? |

Each of the following sections has both an Existing Conditions (What is) segment and an Assessment (what it means) segment that complement one another.

Engineering: Existing Bikeway Network

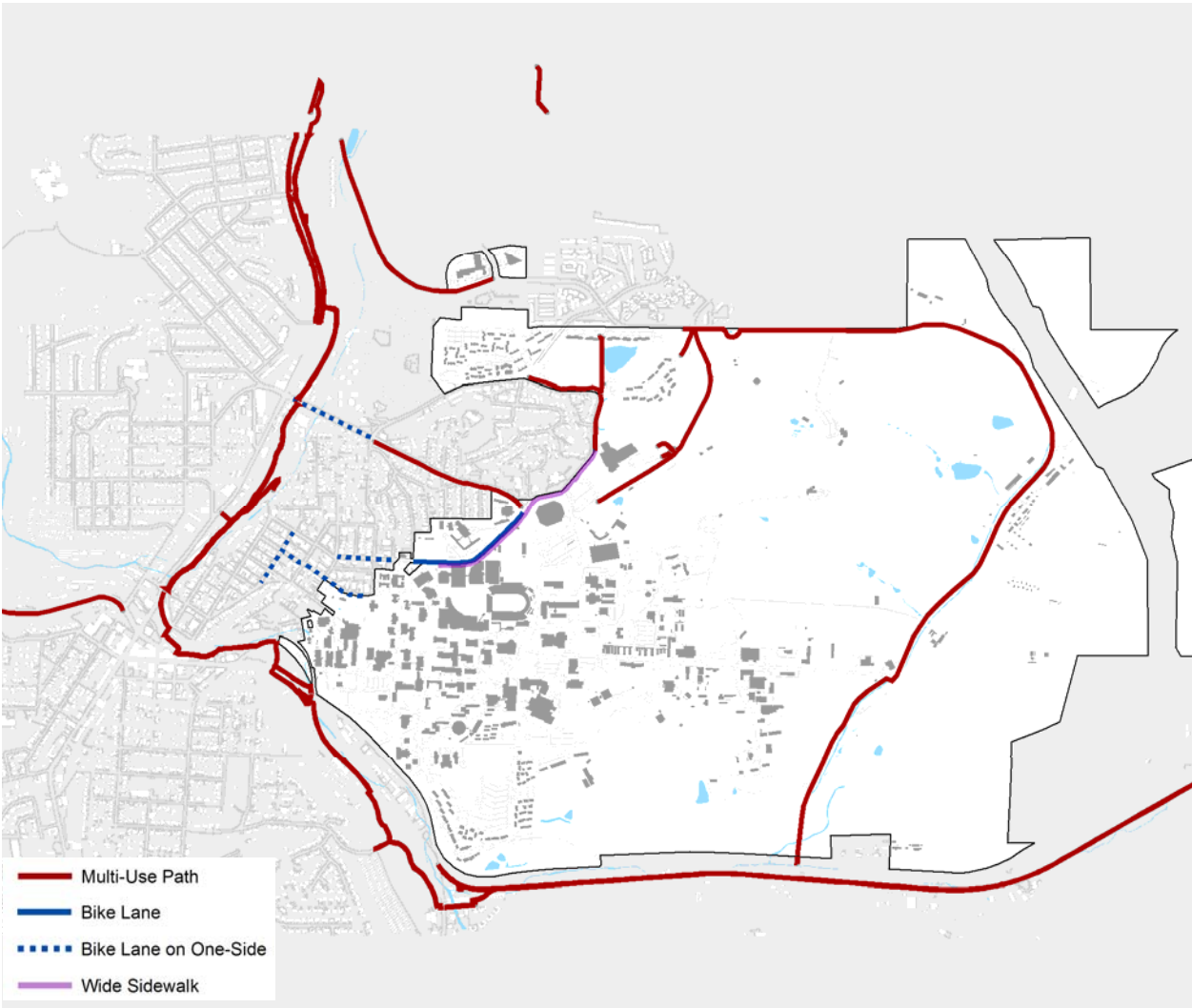


Figure 5: Existing Bikeway Network of WSU Campus and the City of Pullman

Existing Conditions

The Bikeway network of WSU and the City of Pullman is largely made up of a network of multi-use paths. Some on-street bike-lanes are provided.

The golf course in the northeast of campus contain a system of loops, designed for golf course use, but potentially compatible and appropriate for bicycling.

Table 1. Existing Bikeways

| Type ¹ | Length |
|---|---------|
| Pullman Multi-Use Paths | 10.3 mi |
| Regional Multi-Use Path (Chipman Trail) | 7.0 mi |
| Bike Lane (both sides) | 0.34 mi |
| Bike Lane (one side) | 0.79 mi |
| Wide Sidewalks | 0.54 mi |

Pedestrian malls and paths through campus are used by bicyclists, but are not included here as designated bikeways.

Engineering: Bikeway Network Assessment

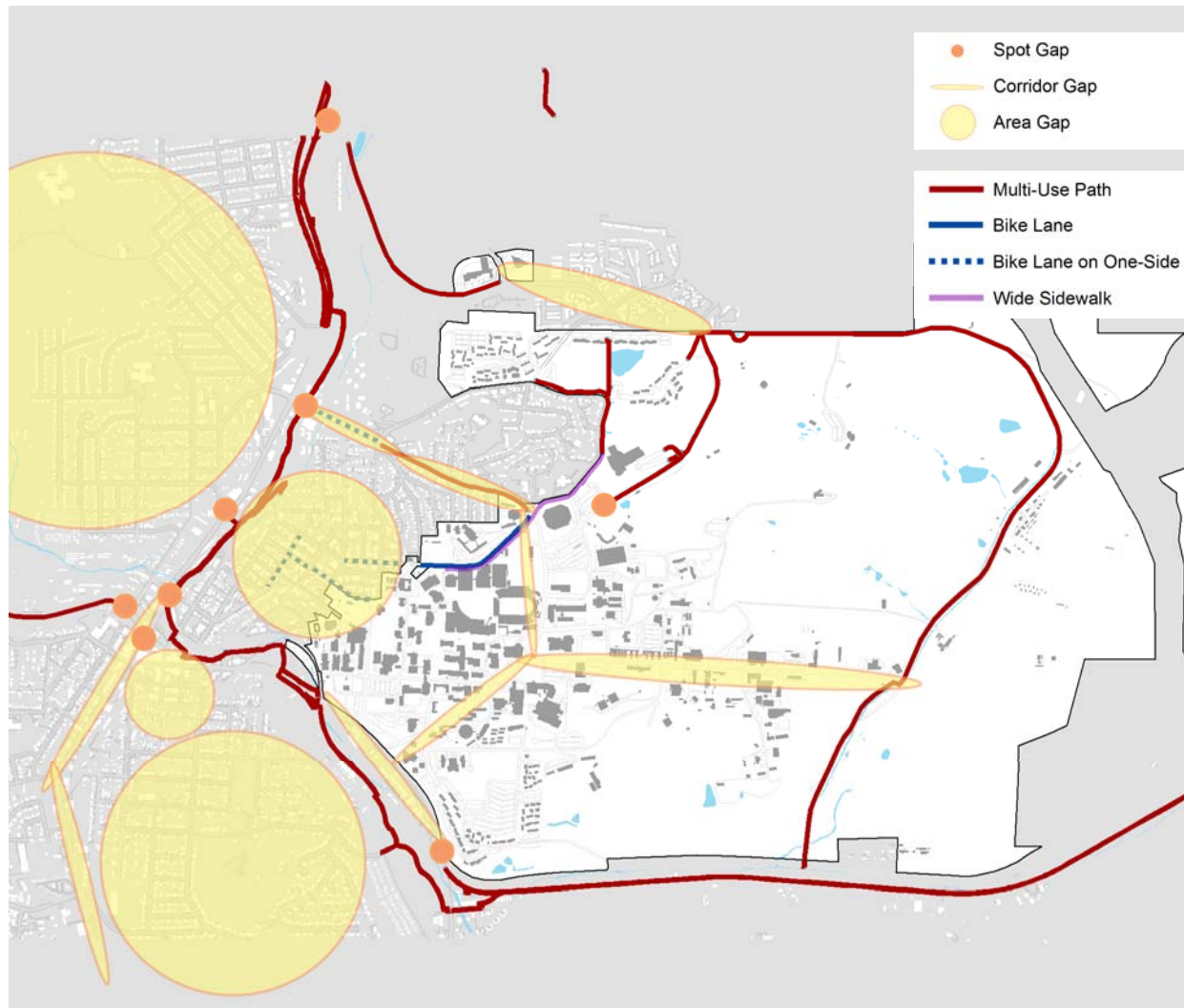


Figure 6: Gaps in the WSU and City of Pullman Bikeway Network

Gap Analysis

Spot gaps refer to point-specific locations lacking dedicated facilities or other treatments to accommodate safe and comfortable bicycle travel.

Linear gaps are missing link segments on a clearly defined and otherwise well-connected bikeway. These gaps will sometimes encompass entire street corridors.

Area gaps are larger geographic areas (e.g., a neighborhood or business district) where few or no bikeways exist.

Detailed comments from open house attendees identify additional issues not included here. (Public Outreach Summary)

Engineering: Existing Bikeway Maintenance



Gravel accumulation on NE Valley Rd forces this bicyclist into the travel lane.



Poor pavement quality makes for a bumpy ride.



Deep Construction Joints on the Stadium Way path may pose a risk to bicyclists.



Sidewalk style ramps on N Fairway Rd are inconvenient for bicyclists and increase conflicts with pedestrians.

Existing Conditions

The Plant Services Division functions to offer services and essential infrastructure support for Washington State University. Among those duties are road and parking lot maintenance/repairs and snow removal. Current guidelines and maps for snow removal can be found online at: facops.wsu.edu/plantservices.

Engineering: Bikeway Maintenance Best Practices



Pullman currently uses small vehicles to plow snow off of sidewalks and paths.



Salt Lake City takes care to plow bikeways free of snow, including this parking-protected cycle track.

What Works Elsewhere?

Facility Design

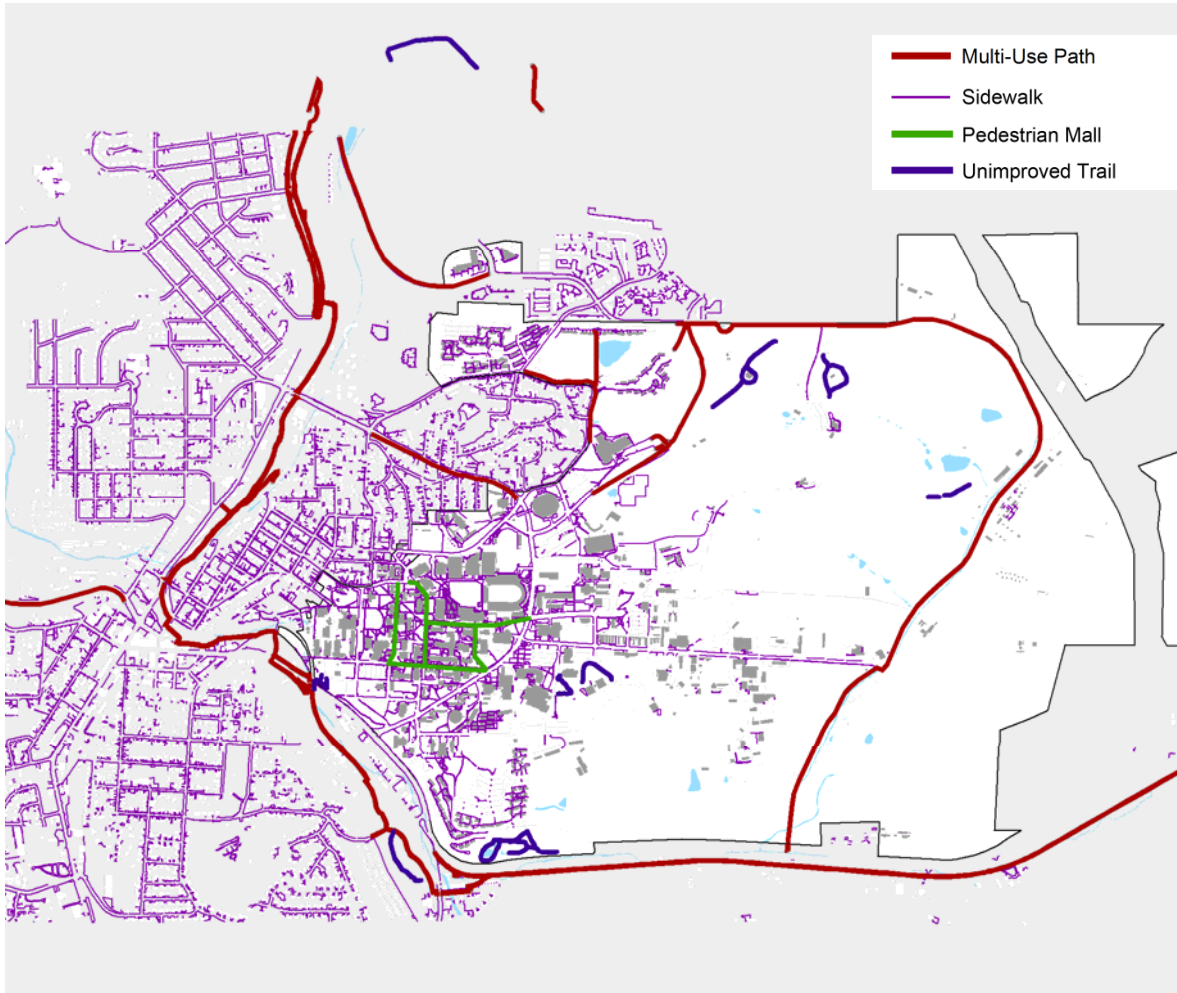
One of the best ways to facilitate the removal of snow from bikeways is thoughtful roadway design.

- Plan roadways with sufficient ROW
- Provide a wide bike lane buffer
- Restrict on-street parking
- Provide off-street or parallel facilities that are maintained
- Provide enough width for small truck snow plows
- Explore alternative options to gravel for providing traction

Prioritization

Prioritization and scheduling is a key component of a successful winter bikeway program. Primary bikeways should be cleared first, providing the best access to the greatest number of people possible following a heavy storm event.

Engineering: Existing Pedestrian Network



Existing Conditions

| Type | Length |
|---|---------|
| Pullman Multi-Use Paths | 10.3 mi |
| Regional Multi-Use Path (Chipman Trail) | 7.0 mi |
| Unimproved Trails ¹ | 2.0 mi |
| WSU campus Sidewalks ¹ | 30.2 mi |
| Pedestrian Malls | 1.1 mi |

Figure 1: Existing Pedestrian Network on WSU Campus and the City of Pullman

¹ Unimproved trails were identified by community members, field visits and observation of aerial photography. Unidentified existing unimproved trails are not included in this summary.

¹ Length of WSU Campus sidewalks was estimated by dividing lengths of edgeline dataset by two to calculate linear distance.

Engineering: Pedestrian Network Assessment

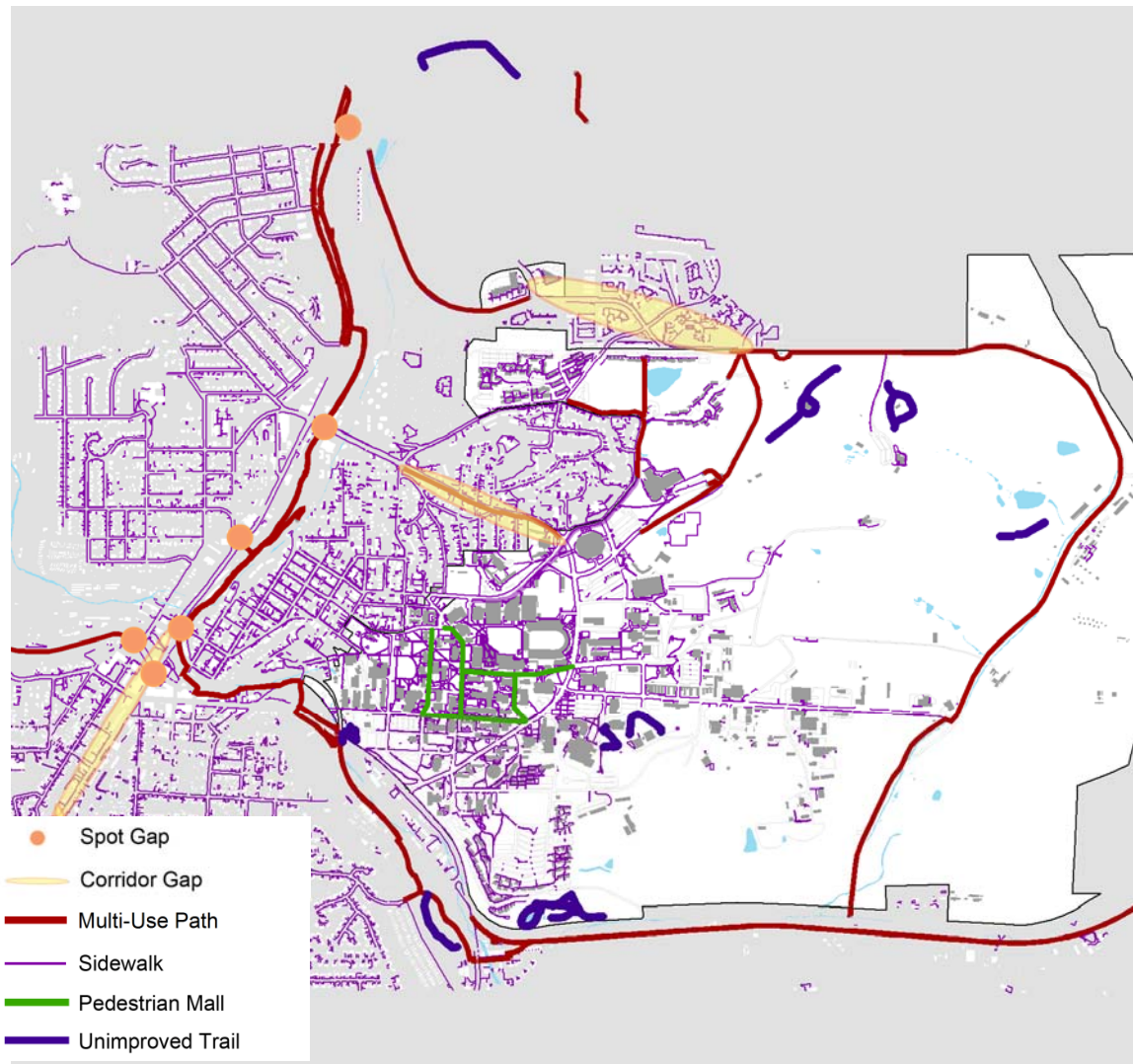


Figure 2: Gap Analysis of the WSU and City of Pullman Pedestrian Network

Gap Analysis

The pedestrian gap analysis shares some of the same results as the bikeway gap analysis, primarily along the multi-use path network.

Spot gaps refer to point-specific locations lacking dedicated facilities or other treatments to accommodate safe and comfortable walking.

Linear gaps are missing link segments on a clearly defined and otherwise well-connected walkway. These gaps will sometimes encompass entire street corridors.

Detailed comments from open house attendees identify additional issues not included here. (Public Outreach Summary)

Engineering: Existing Pedestrian Crossings

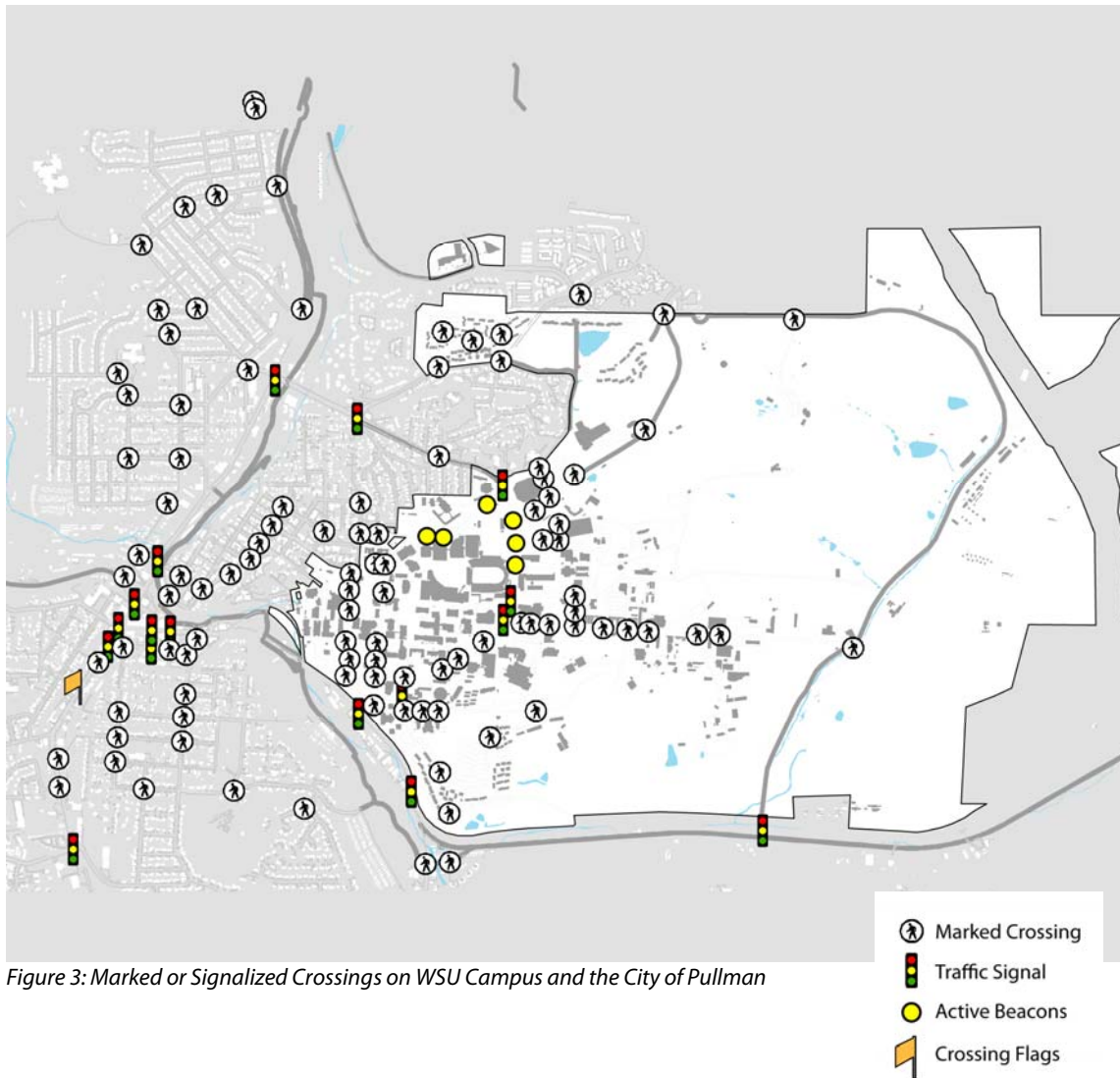


Figure 3: Marked or Signalized Crossings on WSU Campus and the City of Pullman

Existing Conditions

Marked or signalized crossings are shown to the left.

There are four generalized types of improved crossings in the City of Pullman and on the WSU campus.

Marked Crossings use crosswalk markings to identify common or preferred crossing locations.

Traffic Signals control crossing traffic through signals for vehicles and for pedestrians.

Active Beacons are marked crosswalks enhanced with a user activated warning light. These are seen on campus.

Crossing Flags are a low-cost enhancement to marked crossings, designed to increase visibility of pedestrians.

Engineering: Pedestrian Crossing Assessment

Key concerns and areas for improvements identified during community meetings and field visits include:

Automatic Pedestrian Phase



At many signals through the City of Pullman and WSU Campus, traffic signals must be actuated by pedestrians in order to activate the WALK signal on the pedestrian signal head, or to recall the signal phase necessary to cross the street.

In busy pedestrian areas such as on campus or downtown, the pedestrian signal indication should be built into each signal phase, eliminating the requirement for a pedestrian to actuate the signal by pushing a button.

Countdown Pedestrian Signals



Older pedestrian signal heads offer only two messages: WALK or DON'T WALK. Modern installations use a countdown feature to display the number of seconds remaining on the signal phase.

Countdown pedestrian signals are particularly valuable for pedestrians, as they indicate whether a pedestrian has time to cross the street before the signal phase ends. Countdown signals should be used at all signalized intersections.

Active Beacon Improvements



While people like the active beacons used at some crosswalk locations on WSU Campus, there is room for improvement.

Modern active beacon technology uses brighter LED lights and rapid flashing patterns to draw increase attention to the crossing. WSU may be able to take advantage of these modern improvements

Missing Curb Ramps



The city of Pullman and WSU campus walkway network is largely complete, but full access via ADA compliant curb ramps is still limited.

Some older sidewalks and walkways lack curb ramps at all, requiring users in wheelchairs to navigate in the roadway or to utilize driveway curb cuts for sidewalk access. Neither behavior is recommended.

Engineering: Existing Pedestrian Lighting



Existing Conditions

WSU campus offers a variety of lighting conditions.

Some streets, such as North Fairway Rd, use tall, roadway-style lighting to fill large areas of road and parking lots with light.

Other Streets use smaller, pedestrian-oriented lighting on both sides of the roadway, such as NE Wilson St near Stadium Way.

Terrell Mall uses frequently spaced mid-height lighting, designed to fill the pedestrian mall with light, without the same feeling of conventional roadway lighting.

Engineering: Pedestrian Lighting Best Practices

Pedestrian Scale Lighting



Many streets on WSU Campus apply pedestrian scale lighting to good effect today. This can be seen on Wilson, and the Terrell Pedestrian Mall.

On key activity corridors, pedestrian scale lighting has aesthetic and safety benefits, and may encourage more walking across campus.

Pedestrian scale light poles are lower height, from 3 to 6 meters, instead of the typical roadway pole lighting heights of 10 to 15 meters.

Light Spacing and Intensity



Because of the shorter height of pedestrian scale lights, more frequent spacing is required to achieve the same area of illumination when compared to taller lights.

For most streets, spacing of pedestrian oriented lights every 50 feet is adequate.

To serve all users, pedestrian scale lighting may be provided in addition to conventional roadway lighting.

Light Pollution



For many reasons, lighting should be oriented and designed to reduce the amount of light cast upward.

Light hoods should be used to block excess light, and new light designs should be “Dark Sky” compliant.

Crosswalk Visibility



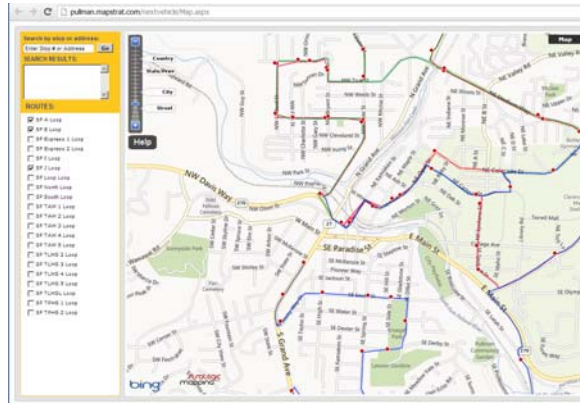
Crosswalks, particularly mid-block, require extra consideration when designing street lighting.

For mid-block crossings, light posts should be placed just beyond the crosswalk on both sides of the street. In most cases, this will produce a relatively high luminance level. The luminance level at these locations should be at least as high as two intersecting streets.

Education: Current Education Practices



Green Bike Information Kiosk



Pullman Transit



Active Transportations Options Website



ZipCar

Existing Conditions

•All new students (transfer and freshman) are required to attend an orientation/registration program - Alive! - in order to enroll for the fall semester.

The Parking and Transportation Services offers a website with extensive information on Mobility Options at WSU, including information on the following:

- Pullman Transit
- Park & Ride options
- Emergency Ride Home
- Zipcar
- Active Transportation Options
- Campus Trails and paths map
- Green Bike
- WSU Zimride

Education: Education Best Practices



Bicycle/Pedestrian orientation events teach you tips and tricks to keep you moving.



Safety media campaigns can draw attention to safety strategies and considerations.

What Works Elsewhere

Bike Safety Skills Course

Work with Green Bike to publicize and encourage students to enroll in the bike skills safety course. Course should include how to combine bicycle trip with transit.

Alive! Bicycle/Pedestrian Orientation

Identify opportunities to expand bicycle/pedestrian orientation at both Alive! events.

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 campus roads. 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

WSU Cycling Club

The WSU Cycling Club is organized to provide competitive and non-competitive WSU cyclists with a chance to ride and race together as a team.

WSU Bike Polo

WSU Bike Polo is an organized group that gets together weekly to play and hosts international competitions.

Biking Maps

The Pullman (WA) and Moscow (ID) Chambers of Commerce produce a “Pedaling the Palouse” biking map.

The Pullman Civic Trust has worked extensively on the Pullman Loop Trail, providing signage and creating trail maps.

Transit, car-sharing efforts, and the Green Bike program are discussed later in this section.

Encouragement: Encouragement Best Practices

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 biking and walking. Commuters can log their trips year-round to receive benefits for walking or biking to school/work, such as gift certificates, cash payouts, or free biking and walking accessories.

Information Clearinghouse



Many people do not know where to find information about walking and cycling, including laws, events, maps, tips, and biking 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.

Encouragement: Green Bike Program

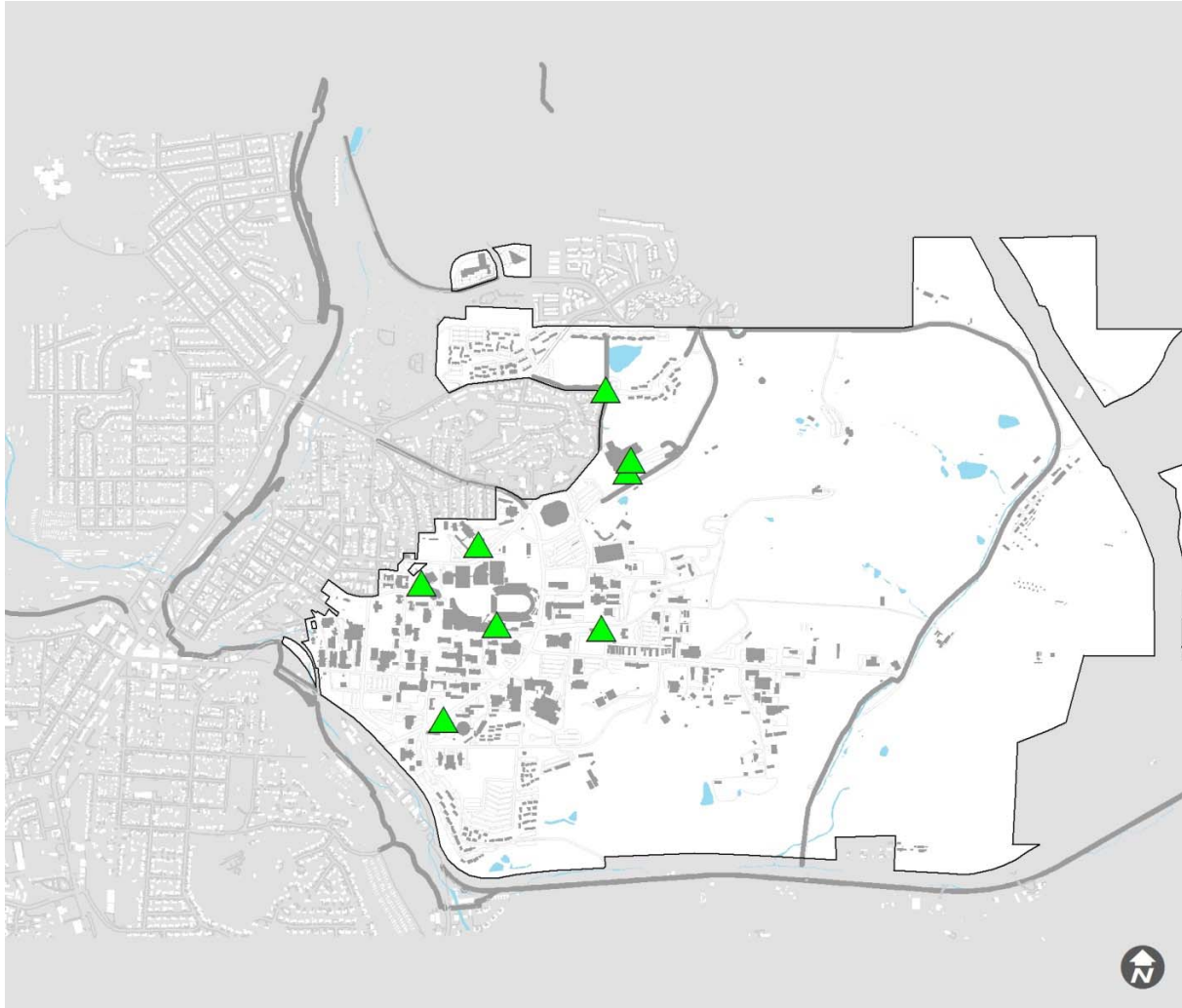


Figure 4: Existing Green Bike Locations

Existing Conditions

At WSU, the Green Bike Program is dedicated to increasing the availability of bikes for students and to further encourage a bike friendly culture.

Green Bike offers the following programs:

- Bike maintenance clinic – free 1 hour general maintenance class – host about 12 per year.
- DIY Series – small fee, 6 session series of 2 hour in-depth classes on different aspects of bicycle repair, with the idea that a participant could do a complete build by end of series. 1 series each semester.
- Bike safety clinic – free class on how to bike safely on and around campus, including where to ride and rules of the road – 1 each year during the week of welcome.
- Green Bike campus tour – a free guided ride around campus using our green bikes – 1 each year during the week of welcome.

Encouragement: Green Bike Program Assessment

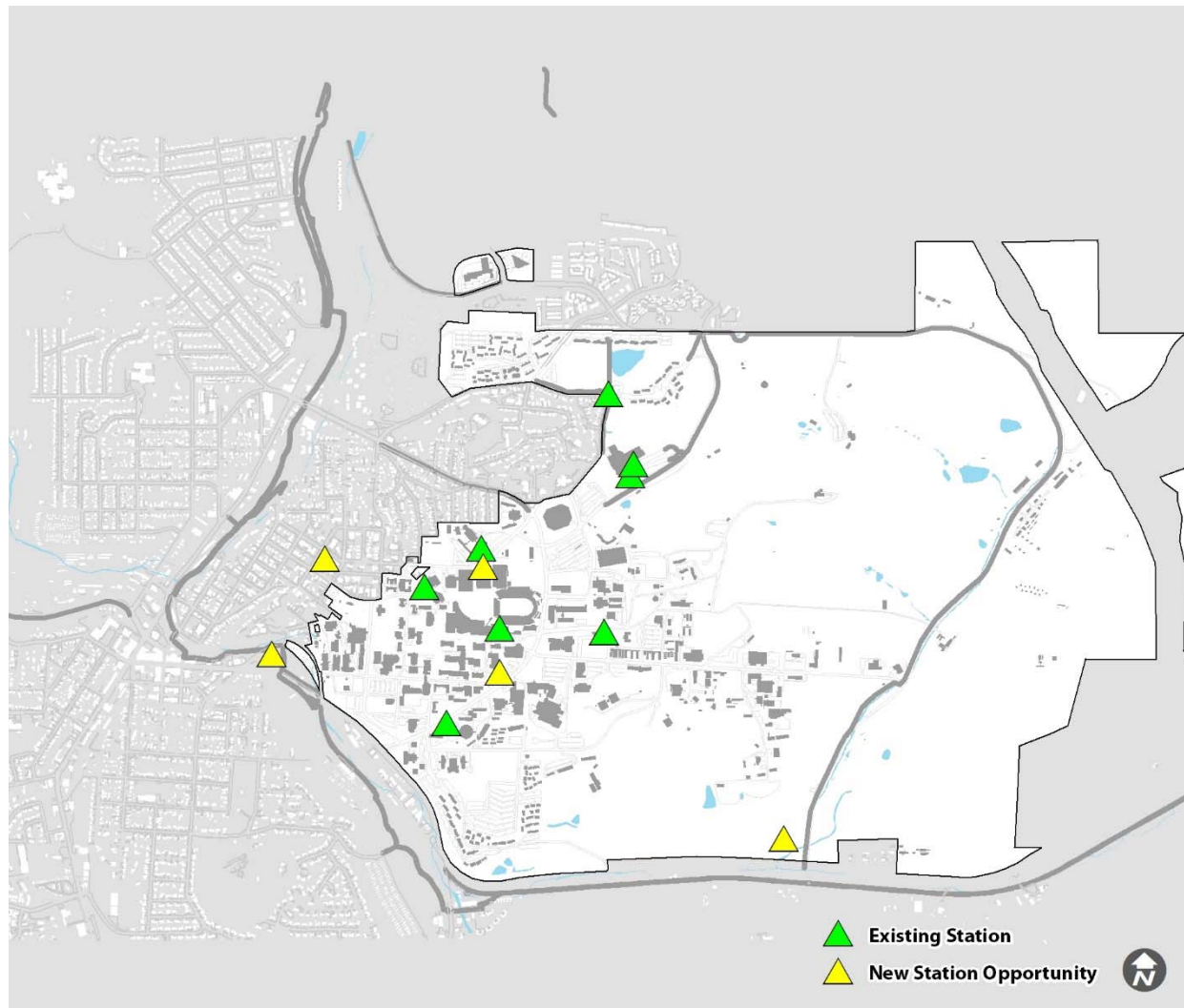
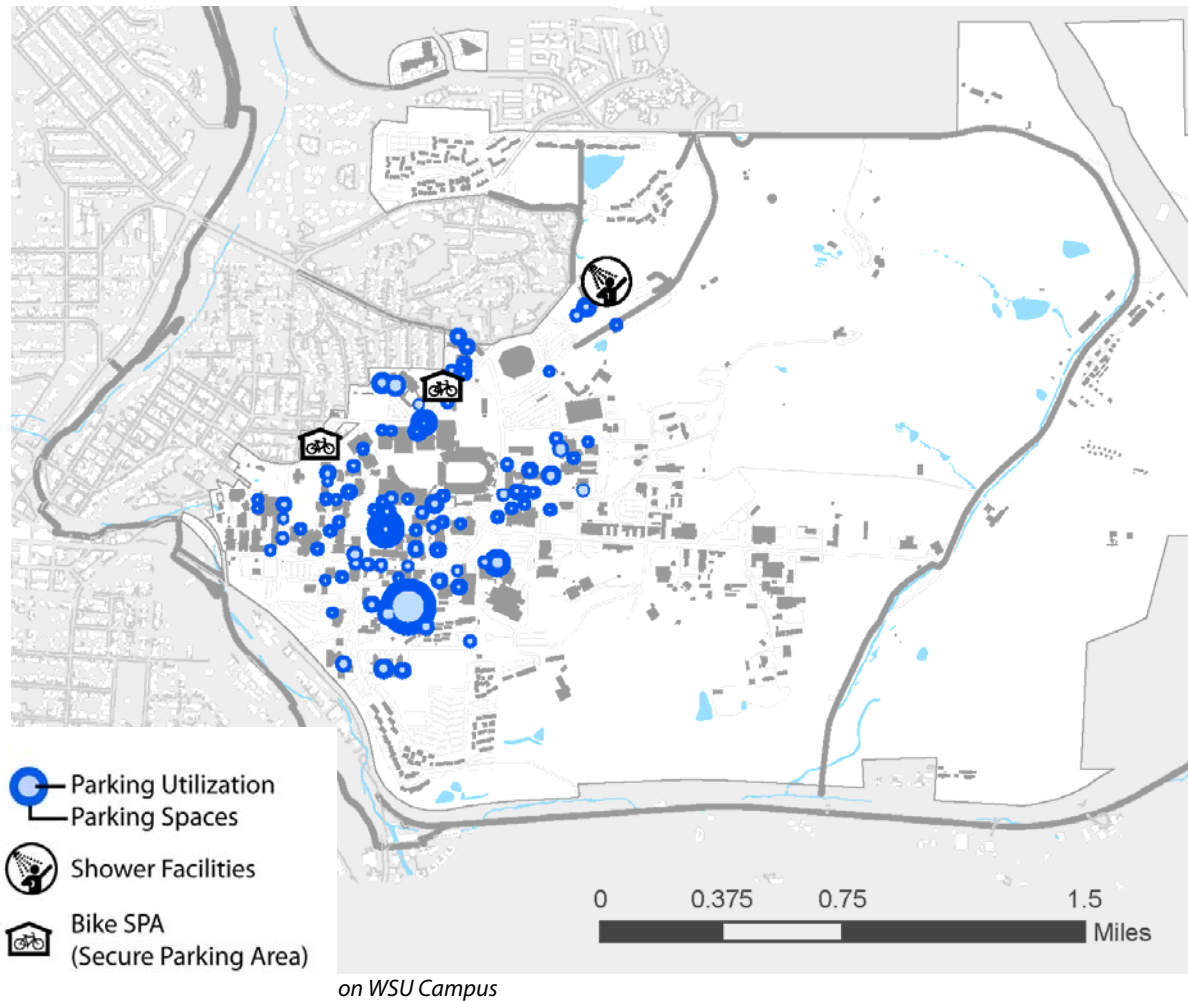


Figure 5: Existing and New Station Opportunities for Green Bike Program

Opportunities and Constraints

- Make sure you have a plan for employees and growth.
- Hire a full-time manager to run the program efficiently.
- Hire a half-time maintenance manager.
- Revisit the allowed check-out time. Currently, allow 24 hours because had only two locations and 32 bikes at the beginning. Now that more bikes and more stations are available, consider decrease the amount of time bikes can be out to put more bikes into circulation.

Encouragement: Existing End of Trip Facilities



Existing Conditions

Bike parking is provided in the western half of campus area. Utilization levels were calculated though manual counts conducted from 10-11 each day for one week in April.

One Bike SPA (Secure Parking Area) is provided in an alley off of NE Linden St, another at the Northside Residence Hall.

Shower facilities are available in the Student Recreation Center.

Encouragement: End-of-Trip Facilities Assessment

Missing Bike Parking



Bicyclists require parking at the end of their bicycle trip. While some parts of campus are well served by bike parking, the campus area to the east lacks convenient secure options.

The use of more standard style “Staple” rack is preferred over potentially awkward custom designs.

WSU has many installations of skinny racks, which may not be immediately recognized as bicycle parking.

Covered Bike Parking



Poor weather is an important reason why people don’t ride their bicycles more often.

Coverd bike parking helps make a trip more comfortable by offering a dry, protected space out of the elements to lock up or load up a bicycle.

Bicycle racks may be covered by a stand-alone structure, or located underneath awnings or overhangs of existing buildings.

Lack of Showers



Shower Facilities are an important end of trip facility for people riding their bikes from long distances or up hills. A more central option for students to clean up after bicycling, such as the old bookstore location, may help remove a barrier to bicycling.

Secure Parking Areas (SPAs)



Long-term, secure bike parking is important for bicyclists that want to lock up their bikes for the day while they walk around campus. One BikeSPA currently exists, although may not be well known by the student population. Locating a bike SPA in a central, secure area, such as the Library parking garage.

Encouragement: Existing Wayfinding and Signs



Existing WSU Campus Wayfinding



Signs direct users through a gap in the trail network



Path Branding and Identification in Downtown Pullman



An older design of "Bike Lane Ends" sign

Existing Conditions

Location

Wayfinding signs are found throughout the campus and the City of Pullman. However, the locations chosen for the signage do not always allow for the best decision-making by system users.

Variety

There are a variety of signage styles found throughout campus and the surrounding community. WSU typically uses crimson blades with gray lettering to indicate the direction of major destinations. The city, meanwhile, has branded various sections of the trail system, as shown in the figure in the upper right. For the on-street system, the city follows state and federal guidelines with regard to color, size, and design.

Encouragement: Wayfinding and Signs Assessment



WSU Campus Active Warning Beacon and Crossing Sign



BIKE ROUTE sign used to indicate use of the path.



Federal Standard Active Warning Beacon and Crossing Sign



BIKE ROUTE sign on a shared roadway

Opportunities and Constraints

Non-standard designs

Federally-compliant traffic control devices have a standard color, shape and image designed to mean the same thing to all road users.

Varying from this standard may lead to user confusion and lack of compliance. This may be a particularly important issue for pedestrian crossings, where predictability is important for safety.

Inconsistent application

BIKE ROUTE signs are used through the city of Pullman in an inconsistent manner. Some locations, such as along Stadium Way, the sign is used to indicate the presence of a bike path. In other locations, no path is available and the sign apparently indicates an on-street route. Lack of consistency leads to a lack of clarity for all users.

Encouragement: Existing Multimodal Connections

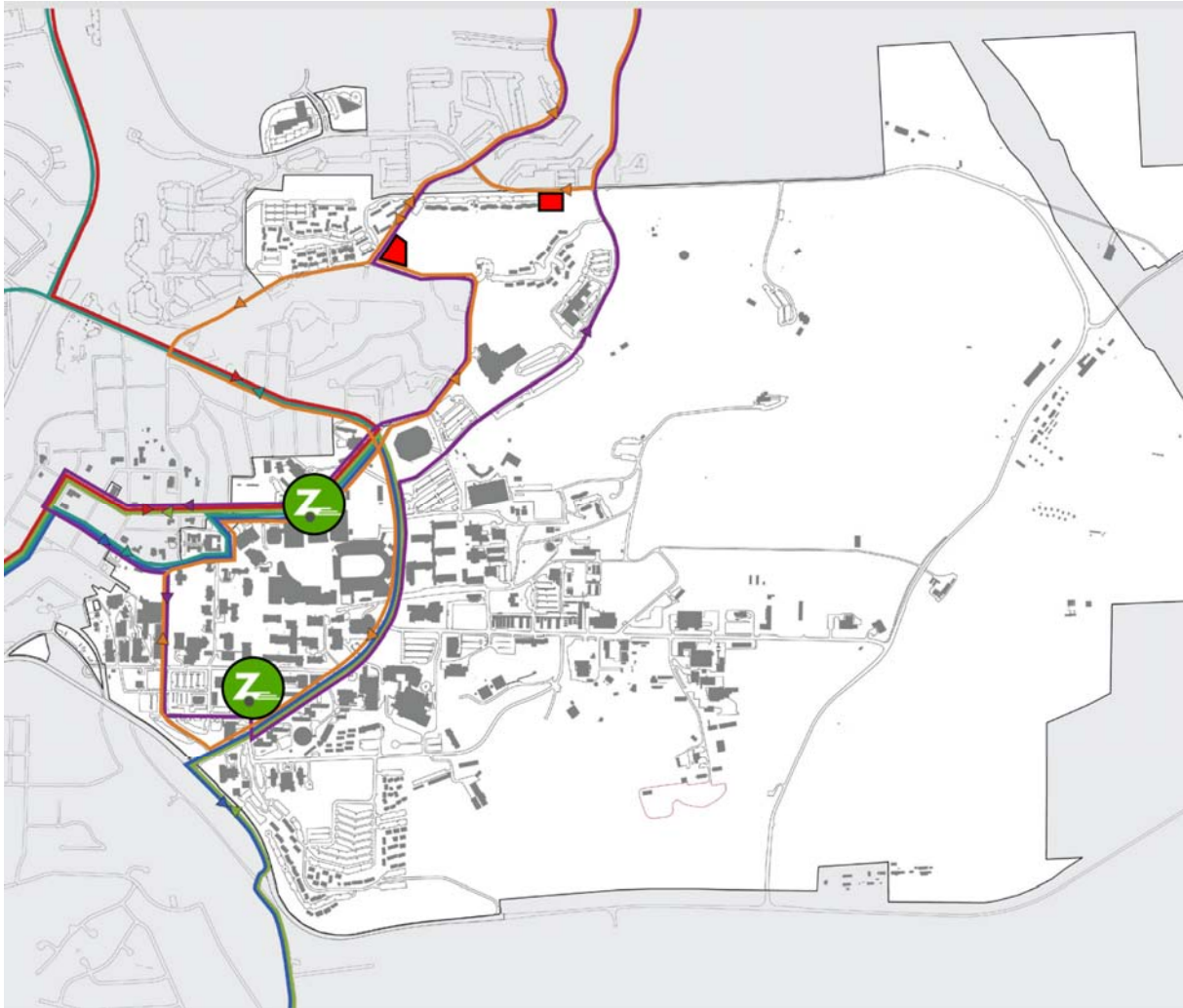


Figure 7: Pullman Transit Routes and Stops

Existing Conditions

Pullman Transit

Pullman Transit provides over 1.4 million rides per year. Pullman Transit operates Monday through Saturday during the academic year. Funded in part by a student-initiated transit fee, Pullman Transit offers Express Routes, transit access to and from the Student Recreation Center, and other on-campus destinations.

Park and Ride

Commuter travel can be accommodated with Park and Ride options. Permits are not required in Park and Ride lots during the day.

Zipcar

Washington State University students, faculty, and staff can join Zipcar. They also get \$35 in free driving to use the first month. They have 24/7 access to Zipcars parked on campus.

Encouragement: Multimodal Assessment

Pullman Transit



Pullman Transit provides convenient, high-frequency transit service to users accessing or leaving the WSU campus. Even with the frequent service, vehicles can reach maximum occupancy on the primary campus routes.

Improved Bus Stops



Some Pullman bus stops are simple posts, without a concrete pad, shelter or nearby ADA compliant curb ramps.

Zipcar



With an ever increasing number of students coming to campus without a motor vehicle, access to a shared vehicle is an excellent opportunity. WSU should explore the options for securing additional locations on campus to better serve the campus community.

Enforcement: Current WSU Enforcement Practices

Current Practice

The Mission of the Washington State University Police Department, in partnership with the campus community, is to cultivate an atmosphere which supports the educational process and promotes academic and personal achievement, and community prosperity

The WSU Police Department patrols campus 24 hours a day, documenting an average of .500 incidents per month.

WSU Police respond to crashes and enforce the speed limit on roads through campus, among other responsibilities.

Enforcement: Best Practice Review

What Works Elsewhere

Bike Safety & Bike Citation Diversion Class

Many campus communities provide the opportunity for members of the campus community to attend a class on bike safety in lieu of paying a fine for certain citations.

Bicycle / Pedestrian Safety Stations

A bicycle/pedestrian safety station set up regularly (weekly/monthly) provides the opportunity for education related to safe and legal biking, walking, and driving on campus.

Enforcement Stings

Particularly effective at the start of the school year or after winter break, enforcement stings allow the campus police the opportunity to remind everyone about the safe use of the roadways and crossings.

Evaluation: Collision and Safety History

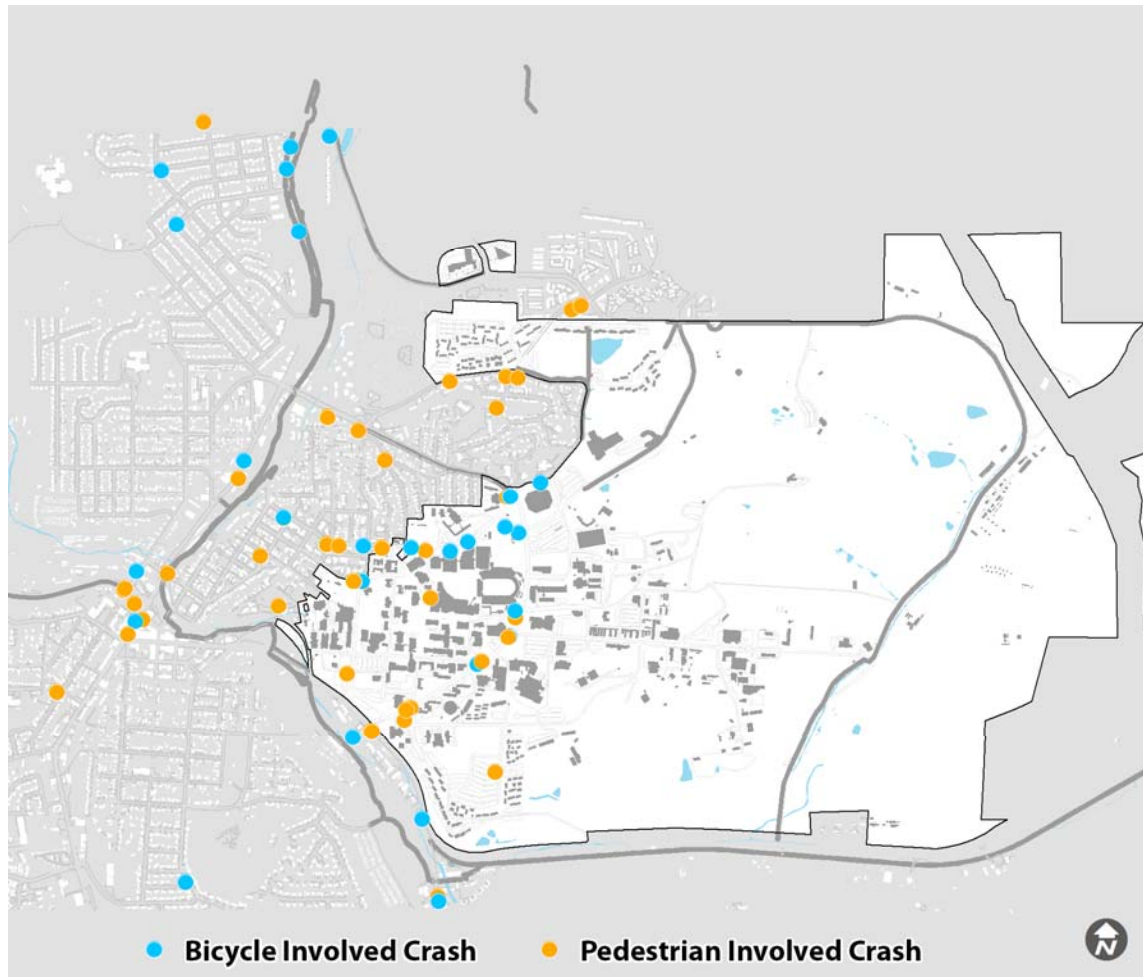


Figure 8: WSU Campus and the City of Pullman Reported Crashes 2006 - 2012

Collisions

Reported crashes occurring in Pullman between 2006 and 2012 were analyzed to understand potential safety impacts. Bicycle and pedestrian crashes are typically underreported and near misses are not tracked so the trends should be reviewed with caution.

People on Bikes

- 38 bicycle collisions
- 8 reported collisions identified as evident injury, 12 as possible injury, 18 as serious injury
- Most crashes occurred on clear or partly cloudy days with dry pavement, during daylight hours

People on Foot

- 58 pedestrian collisions
- 1 reported collision reported no injury, 34 as evident injury, 22 possible injury and 1 serious injury
- Most crashes occurred on clear or partly cloudy days with dry pavement, during daylight hours

Evaluation: Collision and Safety Assessment

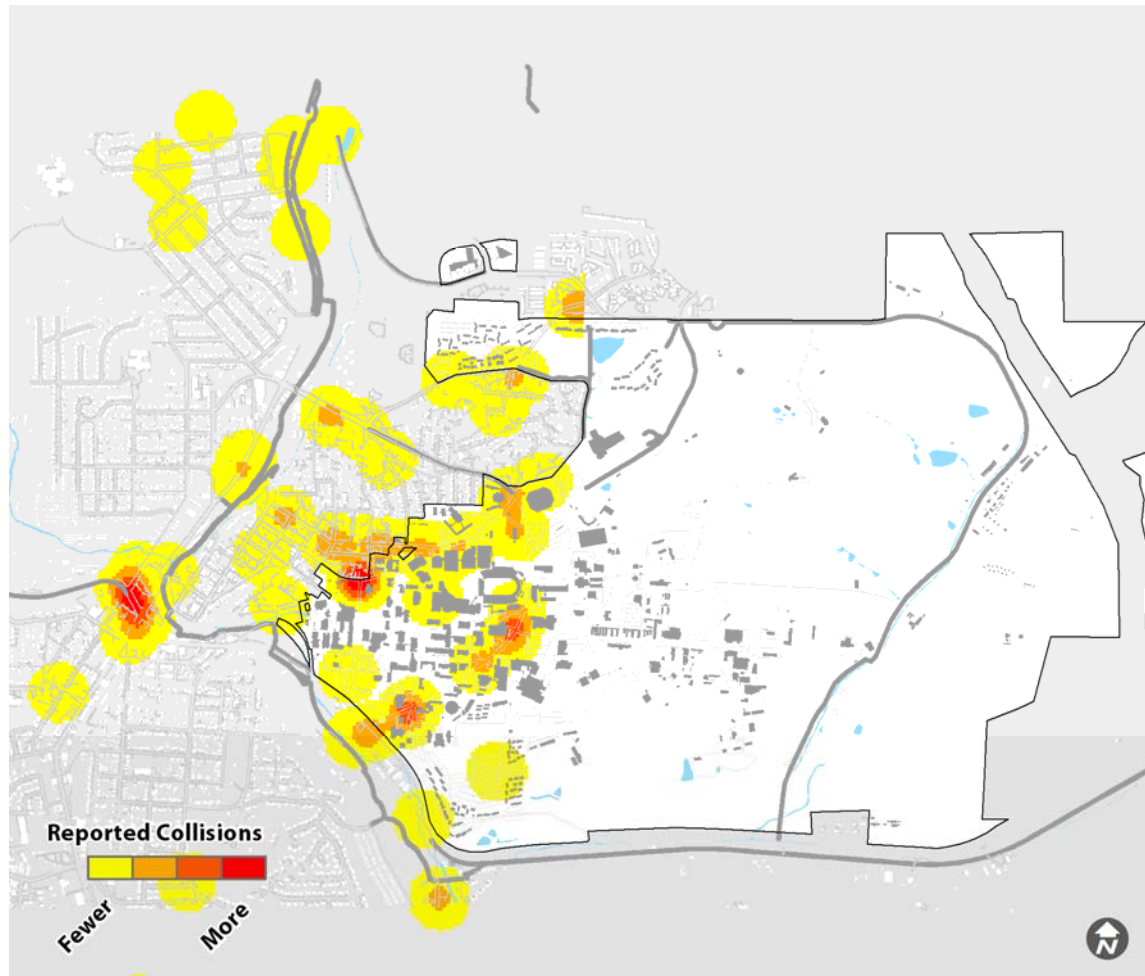


Figure 9: Reported Bicycle and Pedestrian Crashes 2006 - 2012 Hot Spot Analysis

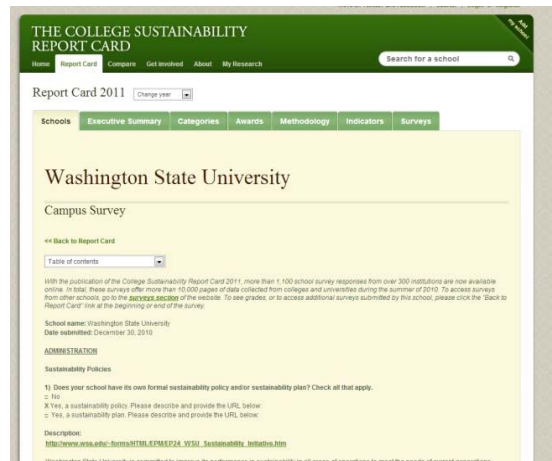
Opportunities and Constraints

Identified hot spots include:

- NE Campus Street near NE B Street
- NE Stadium Way near NE Grimes Way
- NW State Street near NW Davis Way

These locations would benefit from infrastructure improvements that enhance bicycle and pedestrian visibility at intersections and complete the pedestrian network. The greatest number of these crashes occurred when a motor vehicle made a left turn.

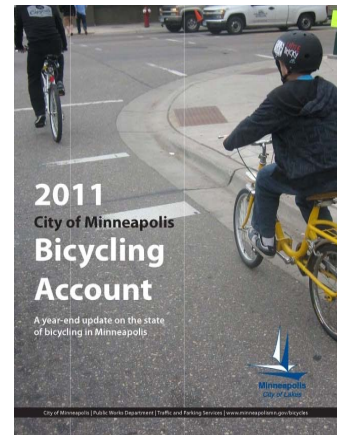
Evaluation: Track Implementation Progress



WSU Sustainability Report Card



San Francisco Bike Report Card



Minneapolis Bicycling Account



State of Seattle Bicycling Report

Figure 10: Bicycle Report Cards Help Track Plan Implementation

Opportunities and Constraints

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. The WSU Sustainability Report Card could be used as a starting point.

Evaluation: Existing Bicycle/Pedestrian Count Volumes

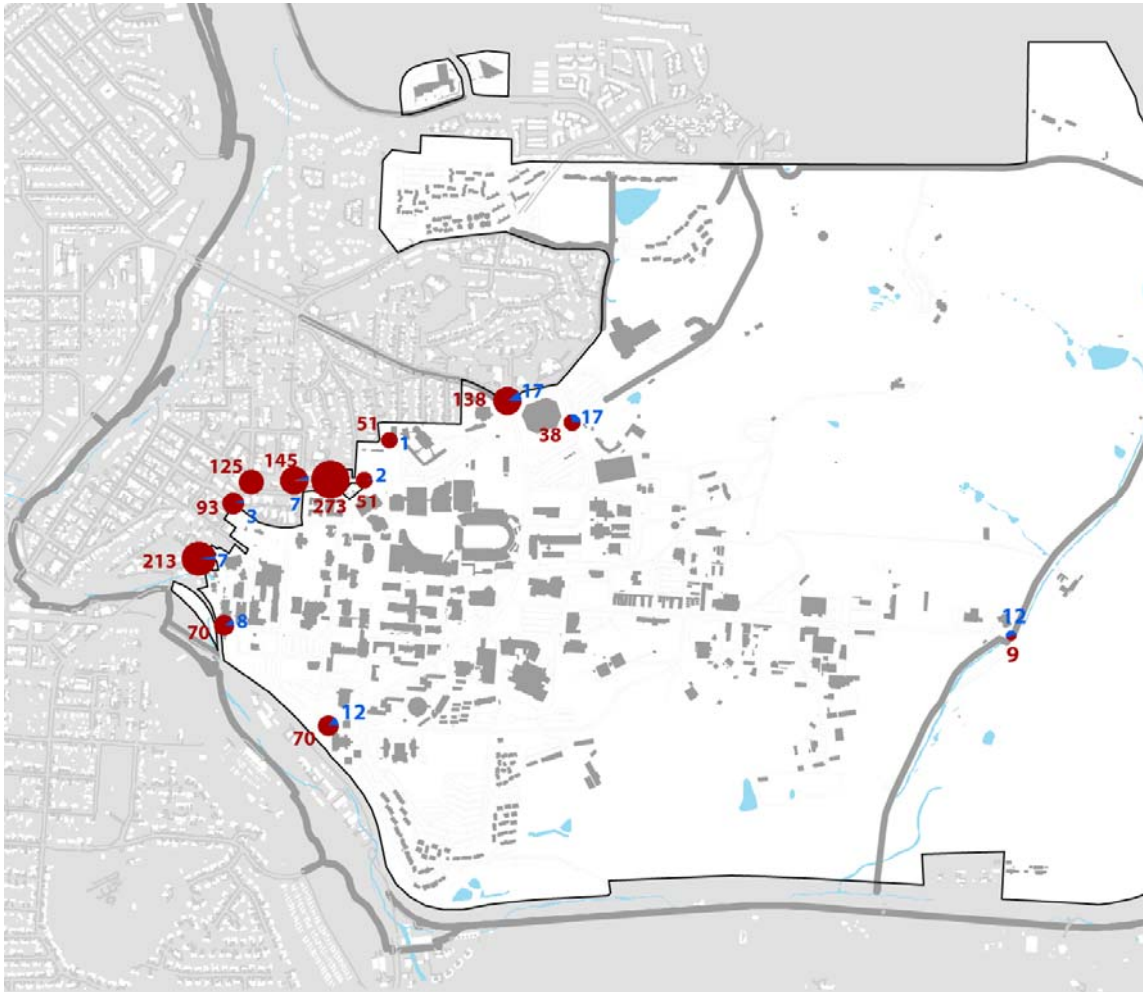


Figure 11: Pedestrian and Bicyclist Count Volumes entering WSU Campus (Users per hour in the AM peak hour)

Current Counts

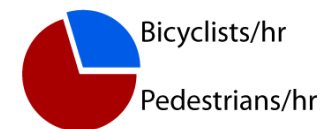
Bicyclist, Pedestrian and Longboard rider counts were conducted in spring of 2012 at twelve locations on the WSU campus.

Locations were identified as key entrance gateways to campus.

The five locations with the highest combined volumes include:

1. Colorado at C St
2. Reaney Way at Gray Ln
3. Stadium Way at Orchard
4. B St at Colorado Ave
5. Linden Ave at Monroe St

Longboard riders were counted at low levels and are not included on this map. At all count locations, longboard rider counts averaged to less than one per hour.



Evaluation: Count Volume Assessment

Conclusions



WSU Campus today is very pedestrian oriented, and this shows in the results of the count effort. All count locations except for one show significantly higher pedestrian volumes than bicyclist volumes.

Grimes Way is the only spot with a majority of bicyclists. This is likely due to its distance from the core of WSU, and because it is well served by the multi-use path network.

Trends over time



Limited information can be learned with only one year of count data. Multiple years of counts can show trends, and allow WSU to track progress on encouraging active transportation modes.

Count program expansion



The current count locations are good for understanding access into campus, but are not as useful for understanding access through campus. Additional locations within the WSU Campus can provide a more solid understanding of activity levels.

The National Bicycle and Pedestrian Documentation Project provides methodology for bicyclist and pedestrian counts and surveys. Applying the full methodology would provide additional insight into why people walk and bike in addition to how many.