

Banks Bicycle and Pedestrian Plan



Prepared by:



Prepared for:



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Banks Bicycle and Pedestrian Plan



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Acknowledgements

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Adopted XXXX, 2015



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Section 1 Executive Summary



1. Executive Summary

The Banks Bicycle and Pedestrian Plan (BPP) was developed through a collaborative process, involving a team of stakeholders from the community and relying heavily on public input. The plan serves as an amendment to the City's Transportation System Plan (TSP, 2010) and provides further details on the existing condition of bicycle and pedestrian facilities in the City and opportunities for future improvement. The BPP is intended to guide investment in bicycle and pedestrian infrastructure in the future and outline priorities for the City. It includes the following sections:

- **Plan Goals and Objectives:** highlights the purpose of the plan and overarching goals. The plan metrics were developed at the onset of the project to guide the development of the BPP.
- **Background and Related Documents:** provides a summary of related planning documents and their relationship to the BPP.
- **Public Involvement Process:** gives an overview of the tools used throughout the project to gather input from the community, including a project website, online and in-person open house, and interactive maps.
- **Existing Conditions:** provides an assessment of the existing bicycle and pedestrian network, noting pedestrian gaps and deficiencies and key opportunities and constraints throughout the City.
- **Alternatives Evaluation:** outlines the process used to develop and prioritize the plan elements ultimately selected for inclusion in the BPP.
- **Potential Funding Sources:** identifies potential federal, state and local funding sources that could be utilized to implement the BPP.
- **Bicycle and Pedestrian System Plan:** maps high priority crossings, connections and routes and lists the prioritized plan elements. Prospectus sheets are provided for the plan elements, which include basic information like priority, description, location, category, estimated cost, and potential funding sources for each plan element.
- **Recommended Code Revisions:** describes the relationship of the BPP to past planning documents and recommends revisions to City documents to facilitate adoption and implementation of the Banks BPP as an amendment to the City's Transportation System Plan (TSP).



Section 2 Plan Goals and Objectives

2. Plan Goals and Objectives

The purpose of the City of Banks' Bicycle and Pedestrian Master Plan ("BPP") is to plan for a convenient and comfortable active (non-automobile based) transportation system for local trips within the community and connections with regional trail systems. The BPP identifies access points, preferred alignments, key potential road crossing options, trail standards, design elements, regulatory requirements, preliminary cost estimates, and potential sources of funding while ensuring compliance with state and local standards. The BPP builds from relevant planning documents for the City (outlined in Section 2). It responds to the active transportation needs and opportunities discussed in the TSP, including the need for "pedestrian and bicycle linkages both north-south within the existing Banks UGB (on the east side of Main Street) and connections from the UGB to other parts of the city, particularly to the downtown commercial area, the schools complex, and Sunset Park." The BPP also incorporates the findings of previous planning studies, such as the Banks Park and Recreation Plan Updated (2010) and Banks Main Street Revitalization (2014).



The City's BPP offers active transportation options for City residents and tourists. The planned bicycle and pedestrian routes are intended to provide convenient access to attractors within Banks, reduce reliance on the automobile, and improve safety by considering parallel routes to Highways 6 and 47.

Project goals and objectives for the BPP were developed with input from the project Stakeholder Advisory Committee (SAC). **Goals** provide direction for where the City would like to be in the future. A goal is met when outcomes can be cited for that goal. **Objectives** provide a more detailed breakdown of goals with more specific outcomes the City desires to achieve. The goals and objectives for the project are detailed below.

Goals

Project goals provide broad guidance for the BPP that help direct where the City would like to be in the future. The goals were developed with the project purpose in mind and include:

- **Livability:** provide for a high quality of life by providing transportation options and considering community values and interests.
- **Safety and Health:** enable people to safely walk, run or cycle in and through the City.
- **Accessibility:** develop a bicycle and pedestrian system that is accessible for all ages, skill levels, and interests.



- **Financial Responsibility:** use resources efficiently and invest in infrastructure that will serve the City for years to come.
- **Economic Vitality:** encourage visitors and investment in the downtown core.
- **Community:** encourage community interest and participation in walking and biking.

Project Objectives

The following project objectives more specifically describe the project purpose and outcomes the BPP intends to achieve.

- Increase the number of people that walk and bike in Banks.
- Link regional and local trails to key attractors on the main street and downtown area, such as shopping, schools, residential areas, and other community destinations.
- Provide connections to natural areas and resources and enhance appreciation for the City's natural assets.
- Increase transportation choices in the Highway 6 and 47 corridors by adding more bicycle and pedestrian routes and connections to transit.
- Provide well-designed, visible, safe, and convenient access points and street/highway crossings.
- Provide shorter trip lengths between destinations on the bicycle and pedestrian system than on-road networks.
- Identify the community vision for the overall bicycle and pedestrian route design, expressed through different treatments and design themes for distinctive sections.
- Address safety and security of bicycle and pedestrian route users.
- Link the urban growth areas to the downtown core and destinations on Main Street.
- Provide adequate funding to maintain the existing active transportation system while prioritizing investments in future facilities.
- Minimize conflicts between people biking and walking and farm equipment, logging trucks and forestry related trucks.
- Find innovative, efficient, low- or no-cost solutions to providing parking for trail users.

The intent of the BPP is to reach all current and potential users of the pedestrian and bicycle system.



Section 3 Background and Related Documents

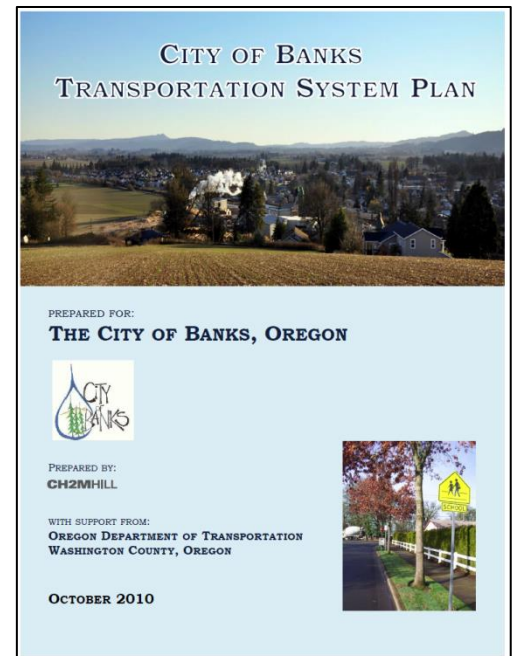
3. Background and Related Documents

Relevant federal, state, and local laws, plans, and policies were reviewed to provide background for the development of the Bicycle and Pedestrian Plan (BPP). The City of Banks has conducted several planning efforts for Main Street and multi-use trails in and around the City. These plans provided valuable information about existing needs and opportunities in the City and included potential projects for consideration in the BPP. A summary of a few key local planning documents is provided below. Table 3-1 follows with a summary of all documents reviewed as part of the development of the BPP.

City Transportation System Plan (TSP) (2010)

The TSP recognizes that Main Street also serves as a state highway and tries to balance the needs of pedestrians, shoppers, employees, business owners, and residents with the needs of through traffic. The plan recognizes the following opportunities for bicycle and pedestrian connections:

- Construct one or more pedestrian/bicycle overcrossings of the railroad to ensure east-west connectivity from the UGB expansion area east of the railroad to center city destinations.
- Better connect bicycle lanes and pedestrian sidewalks within the city. Improvements should focus on connecting the existing system of bike lanes and sidewalks to improve non-motorized mobility. A north-south bike route should be established in the city in the area east of Main Street, with direct connections to the schools complex.
- All new and modernized roadways should include bicycle and pedestrian accommodations.

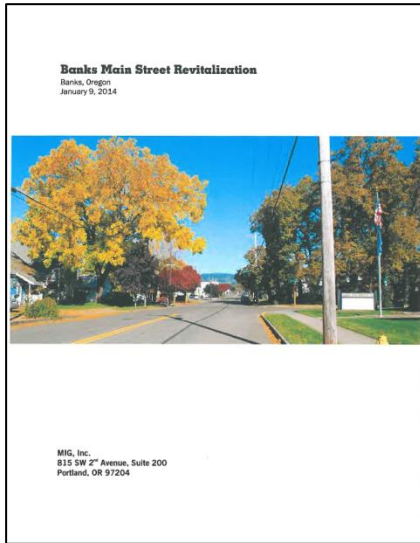


The following concepts were developed to address the needs identified in the TSP analysis:

- Install advanced warning signage at the intersection of Banks Road and Aerts Road to warn motorists of the reduced sight distance on the crest vertical curve, thereby improving safety conditions at the intersection.
- Reconstruct Banks Road to increase the safety for motorists, pedestrians, and cyclists traveling on Banks Road between Main Street (OR 47) and US 26.
- Establish an east/west bicycle and pedestrian circulation system to service the expanded UGB area.
- Install a bicycle/pedestrian overcrossing or undercrossing of the railroad from the area east of the Banks school complex to the eastside of Banks (UGB Expansion Area).

The TSP identifies and addresses key issues relating to transportation within the City. The TSP should be the starting point to identify and validate future bicycle and pedestrian improvements.

Banks Main Street Revitalization Plan (2014)



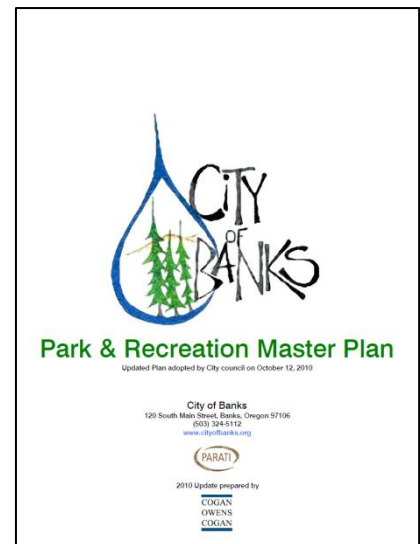
This plan recommends expanding the UGB and constructing a new westside circulator road that parallels Main Street. It also recommends Main Street safety improvements including pedestrian crossings, full curb extensions, and marked crosswalk at Banks Road and OR 47 to improve connections to the Banks-Vernonia Trail. A new sidewalk and curb at the SW corner at the Five Star complex is suggested to better delineate pedestrian and vehicle zones. An improved internal system of trails (as identified in the Banks Parks and Recreation Master Plan), traffic calming at OR 47 and Main Street, and an access management strategy to enhance the pedestrian experience is also recommended.

This plan provides a vision for Main Street and recommendations related to bicycle and pedestrian facilities and amenities in the area.

City Park and Recreation Master Plan (2010)

This plan recommends working with the County and State to explore the possibility of extending the Banks-Vernonia Trail to the south end of town or beyond. A separated walking path is proposed in the Highway 6 right-of-way and walking trails are also proposed to extend from the existing trails west of Arbor Village to the north and south.

This plan identifies specific recommendations for a trail system in Banks. These recommendations should be reviewed and validated as part of the BPP.



Urban Growth Boundary (UGB)

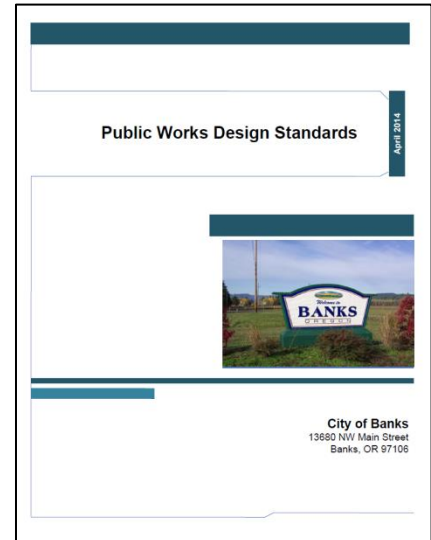
An expansion of Banks' UGB was approved in 2013. The expansion included approximately 400 acres of land that includes the Quail Valley Golf Course.

Housing tracts and other types of urban development are not allowed to occur beyond the UGB. The BPP should focus on improvements within the UGB or within expected amendments.

City of Banks Design Standards (2014)

This document provides local design standards and requirements for street design, bicycle and pedestrian facilities, on-street parking standards, and other related design standards.

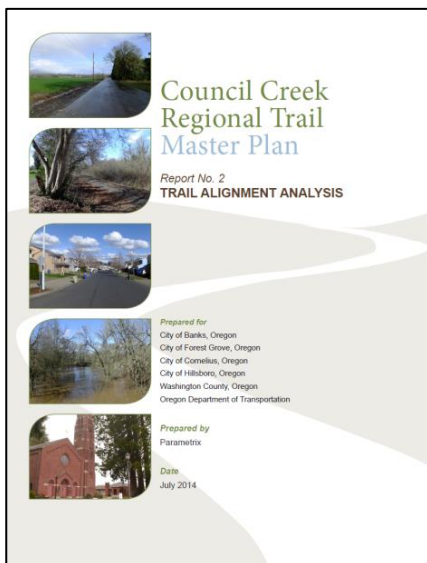
The bicycle and pedestrian facilities proposed in the BPP consider the local design standards to ensure conformity.



Council Creek Regional Trail (CCRT) Master Plan (Hillsboro to Forest Grove to Banks) (2014)

The Implementation Strategy Report recommends a widened sidewalk along the south side of NW Banks Road to better connect the Banks-Vernonia Trailhead to the City's planned Westside Circulator Roadway (WCR). A street-adjacent multiuse trail is recommended to run parallel on the west side of the WCR and connect to Main Street, south of downtown, running parallel with a proposed road connecting the WCR to Main Street. The recommended trail would continue on the west side of Main Street (OR 47) through the Oregon 6 undercrossing.

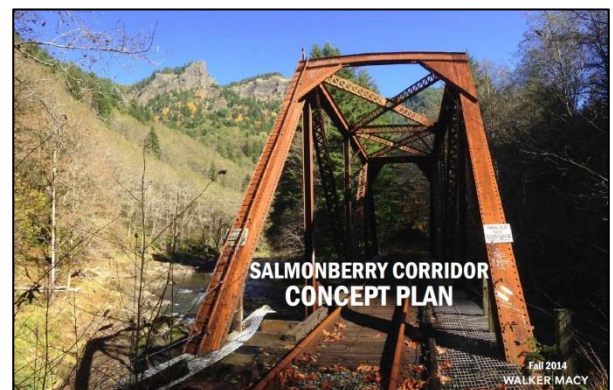
The BPP considers planning efforts, like the CCRT, so that the north-south connections through the City with the Banks-Vernonia Trailhead do not conflict with each other.



Salmonberry Trail (Banks to Tillamook) Concept Plan (2014)

The Salmonberry Corridor offers a potential connective trail link between the Willamette Valley and the Oregon Coast along the 86 miles of the Port of Tillamook Bay railroad. Segment 1 is the twenty-five mile easternmost segment of the corridor that connects Banks to Cochran. It is envisioned to link into the existing Banks-Vernonia Trail.

This trail may connect to the Banks-Vernonia Trail outside of the City limits, but could increase trail traffic and bring more bicyclists and pedestrians into the City of Banks.



Background and Related Documents

Banks Bicycle and Pedestrian Plan



Table 3-1. Relevant Federal, State and Local Documents

Document		Key Application for BPP
Federal	Americans with Disabilities Act (ADA)	Guidance related to designing and planning for pedestrians with disabilities.
	Manual on Uniform Traffic Control Devices (MUTCD)	Guidance on how to properly sign and designate bicycle and pedestrian facilities.
State	Oregon Transportation Plan (OTP) (2006)	Provides high-level guidance on system plans, particularly related to goals and evaluation metrics.
	Bicycle and Pedestrian Plan (1995) (<i>Currently being updated</i>)	Provides general principles and policies for bicycle/pedestrian facilities on state highways.
	Oregon Bicycle and Pedestrian Design Guide (2011)	Designates design standards and recommendations for bicycle and pedestrian facilities on state highways.
	Statewide Planning Goal #12 (Transportation)	Provides high-level guidance for local comprehensive planning as required by state law.
	Transportation Planning Rule	Implements Statewide Planning Goal #12 and provides rulemaking regarding the required Transportation System Plans.
	Statewide Transportation Improvement Program (STIP) (2015-2018)	Identifies funding for, and scheduling of, transportation improvement projects and programs.
Local	Washington County Flood Plain and Drainage Hazard Area Development Standards (2014)	Contains provisions for developing areas in Special Flood Hazard Areas. Recreation and nature trails are permitted uses and activities.
	City Comprehensive Plan (1979, Amended 1989)	Provides the long-term vision for the city and develops policies to help implement that vision.
	City Transportation System Plan (TSP) (2010)	Identifies key issues and makes recommendations relating to transportation within the City.
	City Park and Recreation Master Plan (2010)	Identifies specific recommendations for trail system improvements.
	Banks Main Street Revitalization Plan (2014)	Provides a vision for Main Street and recommendations related to bicycle and pedestrian facilities and amenities.
	Urban Growth Boundary (UGB)	Identifies areas where future growth may occur. Housing tracks and other types of urban development are not allowed to occur outside of the UGB.
	City zoning and related ordinances	Identifies appropriate and desired land use areas within the City.
	City of Banks Design Standards (2014)	Identifies standards and requirements for designing street and bicycle/pedestrian facilities in the City.
	City Capital Improvement Program (CIP)	Identifies capital projects that are planned or scheduled in the near-term and identifies proposed funding.
	Council Creek Regional Trail (CCRT) Master Plan (2014)	A new regional trail that proposes a route through Banks to connect with the Banks-Vernonia Trail.
	Tualatin Valley Scenic Bikeway	An established bikeway that routes through Banks from the Banks-Vernonia Trail to NW Wilkesboro Road via Main Street.
	Banks-Vernonia Trail	An established trail that generates additional bicycle and pedestrian traffic in the City.
	Salmonberry Trail (Banks to Tillamook) Concept Plan (2014)	A proposed regional trail with a possible link to the Banks-Vernonia Trail outside of the City.



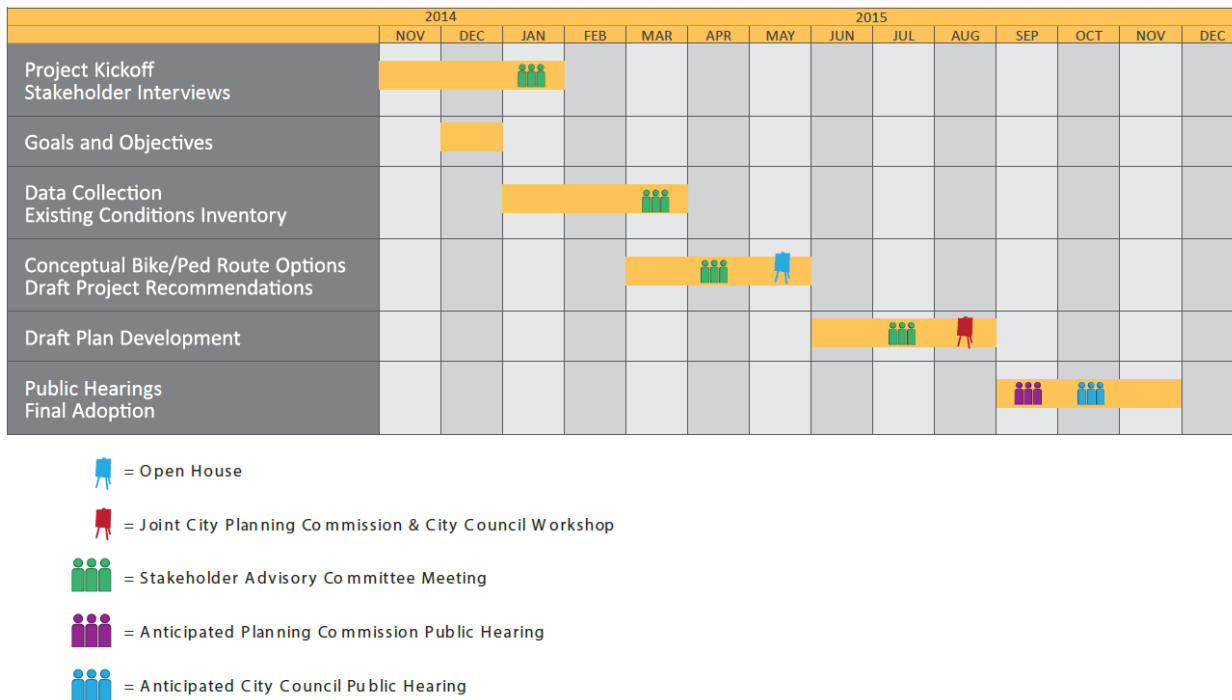
Section 4 Public Involvement Process



4. Public Involvement Process

Engagement with project stakeholders and the public was sought at regular intervals throughout the project. Public involvement was sought via regular meetings with a Stakeholder Advisory Committee (SAC), a website with project materials, an online and in-person open house, and online interactive maps for the public to comment on. In addition, joint pre-adoption work sessions were held with the City of Banks Planning Commission and City Council. Finally, public adoption hearings were held at the City. The project schedule in Exhibit 4-1 illustrates these public involvement activities at key points throughout the project. An overview of the activities is provided in the following sub-sections.

Exhibit 4-1 Project Schedule



Specific steps were taken to provide opportunities for participation by federal Title VI communities. Throughout the project, the City provided information and prepared updates on the BPP via the City’s website, Facebook, announcements sent with the water bill, mailings to residents, and flyers in businesses. Meetings were held at the City Council chambers, which is ADA accessible and a central location for City residents. The sections below provide additional details about the various public involvement activities. The Title VI report prepared by the City for the project is available in *Appendix A*.

Stakeholder Advisory Committee

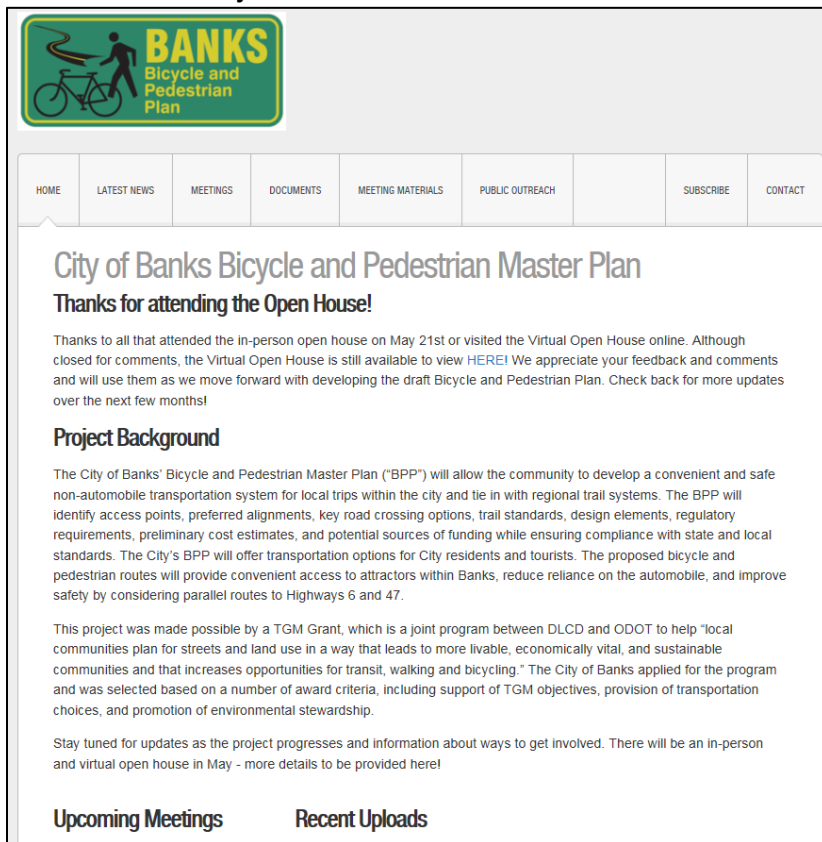
The Stakeholder Advisory Committee (SAC) was formed at the beginning of the project and met regularly throughout the project to review project materials and provide feedback to the project team. The SAC members were selected to provide representation from a variety of local agencies, businesses, property owners, ODOT departments, etc. The SAC helped kick the project off with a walking tour of the City and reviewed and provided comments on all Technical Memorandums prepared during the course of the project (provided in *Appendices B - F*). Key stakeholders were interviewed at the start of the project to provide

background and perspective for the project team. Summaries of the stakeholder interviews are provided in *Appendix G*. The SAC members also provided input on the first draft projects for inclusion in the BPP and the draft BPP document. Meeting notes from the SAC meetings are provided in *Appendix H*.

Website

The website for the Banks BPP (www.banksbpp.com) provided updates throughout the project and housed draft documents for the SAC review, information about meetings and public outreach, and final technical memorandums as well as the draft and final BPP. A screenshot from the website is shown in Exhibit 4-2.

Exhibit 4-2 Project Website



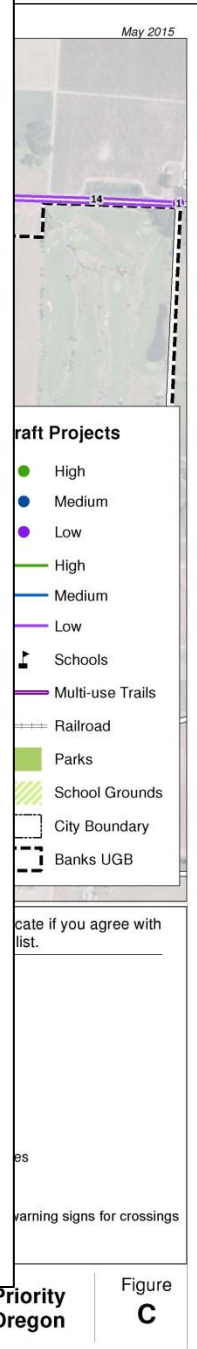
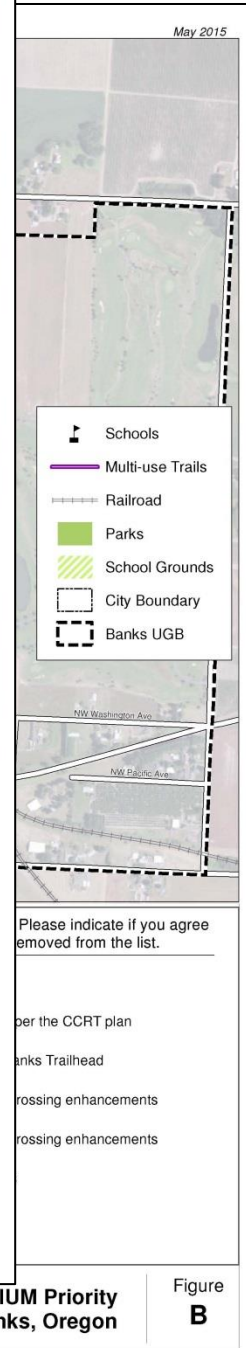
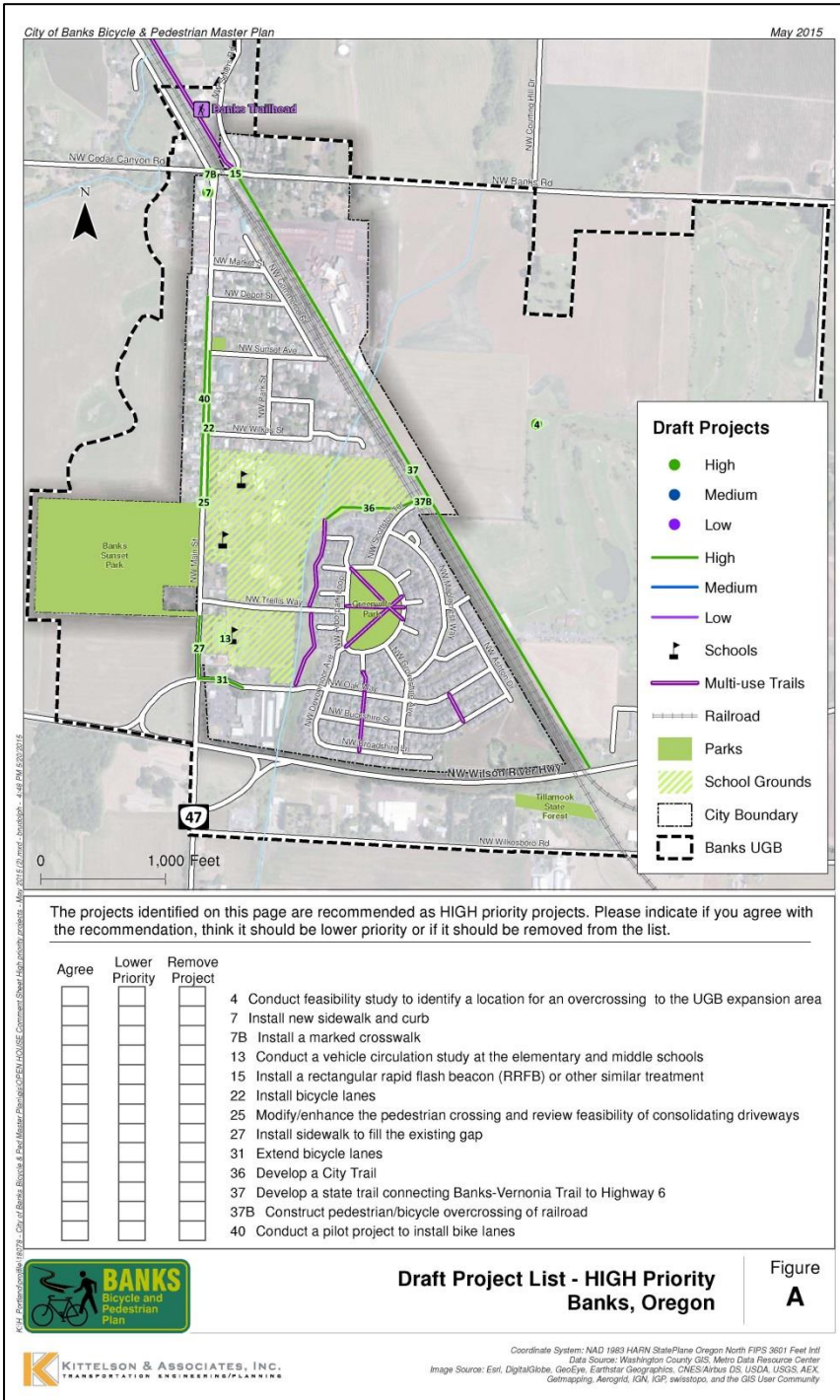
Online and In-person Open House

Online and in-person open houses were held in May to share the project progress with the public and gather input on the draft plan elements. Both open houses featured exhibits with information about the project, goals and objectives, existing plans and previously identified projects, and draft project recommendations categorized into three prioritization groups (high, medium, and low). The worksheets given to open house participants are shown in Exhibit 4-3.





Exhibit 4-3 Open House Participant Worksheets



The Virtual Open House was available online from May 20th through May 31st. A screenshot from the opening page of the Virtual Open House is provided in Exhibit 4-4. The site was organized much like the in-person Open House, with “rooms” (stations) that included information about the project, goals and objectives, existing plans and previously identified projects, and draft project recommendations. The site also featured an interactive map that allowed participants to view the location and priority of recommended projects. A link was provided so users could e-mail comments regarding any other bicycle or pedestrian safety/operational issues not addressed with the proposed projects.

Exhibit 4-4 Virtual Open House



A summary of the open house is provided in *Appendix I*.

Interactive Maps

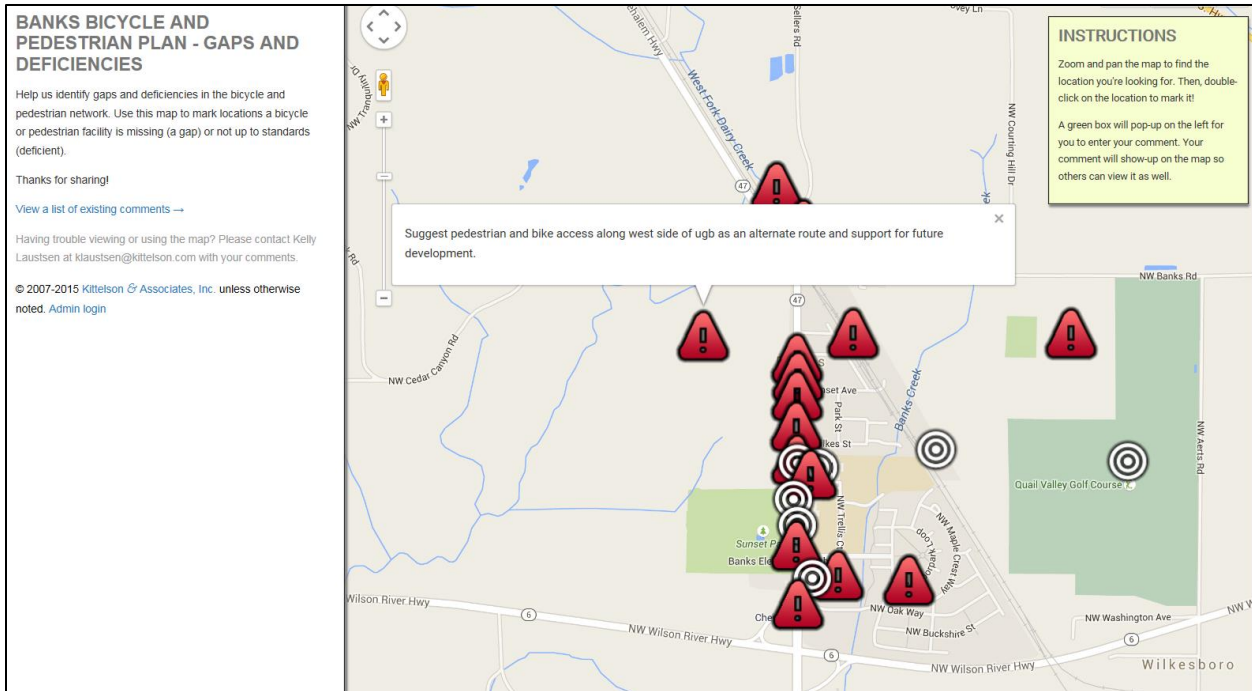
The project utilized two online interactive maps to gather feedback from the SAC and public during the development of the BPP. Each is described below:

- A. **Existing Gaps and Deficiencies** – this map was developed for gathering comments on the existing bicycle and pedestrian system and Banks and identifying locations without a facility (gap) or substandard facility (deficiency). SAC members and the public were invited to add their own comments. In addition, comments from SAC Meeting #1 were added to this map to provide a complete inventory of comments.. A screenshot of the map is shown in Exhibit 4-5.

Public Involvement Process Banks Bicycle and Pedestrian Plan

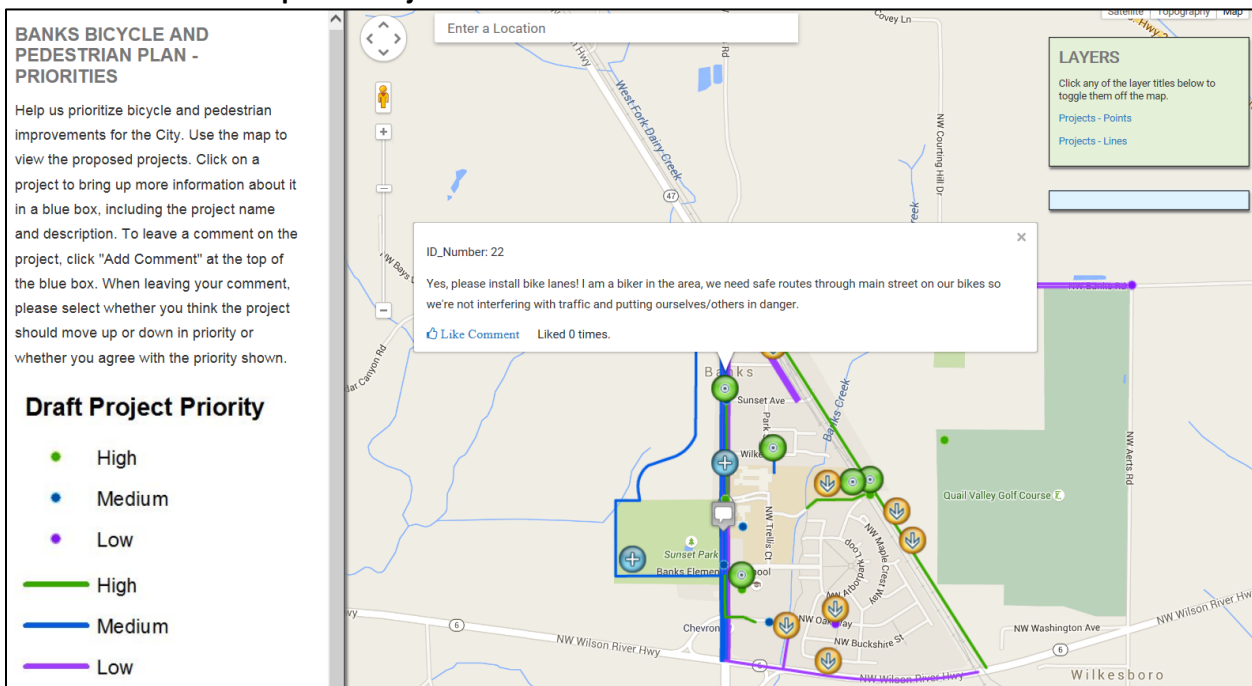


Exhibit 4-5 Interactive Map with Gaps and Deficiencies



B. **Draft Project List** – this interactive map was developed to present the proposed projects for inclusion in the BPP and gather input from the SAC and public. It was available via the website and interactive open house. The projects were presented by priority and users were invited to comment on the projects and indicate if they should move up or down in priority. A screenshot of the map is shown in Exhibit 4-6.

Exhibit 4-6 Interactive Map with Project Priorities





Section 5 Existing Conditions

5. Existing Conditions

This section provides an overview of existing conditions and facilities for bicycling and walking in and around the City of Banks. It largely draws from Technical Memorandum #3: Inventory and Evaluation, provided in *Appendix D*.

Existing Bicycle Network

Figure 5-1 identifies the existing bicycle infrastructure in Banks. Bicycle lanes are installed on Main Street (OR 47) between NW Oak Way and the Banks High School entrance. Bicycle lanes are currently prohibited from advancing north on Main Street (OR47) due to the existing roadway width and on-street parking, as shown in Exhibit 5-1.

Exhibit 5-1 Bicycle Facilities on Main Street

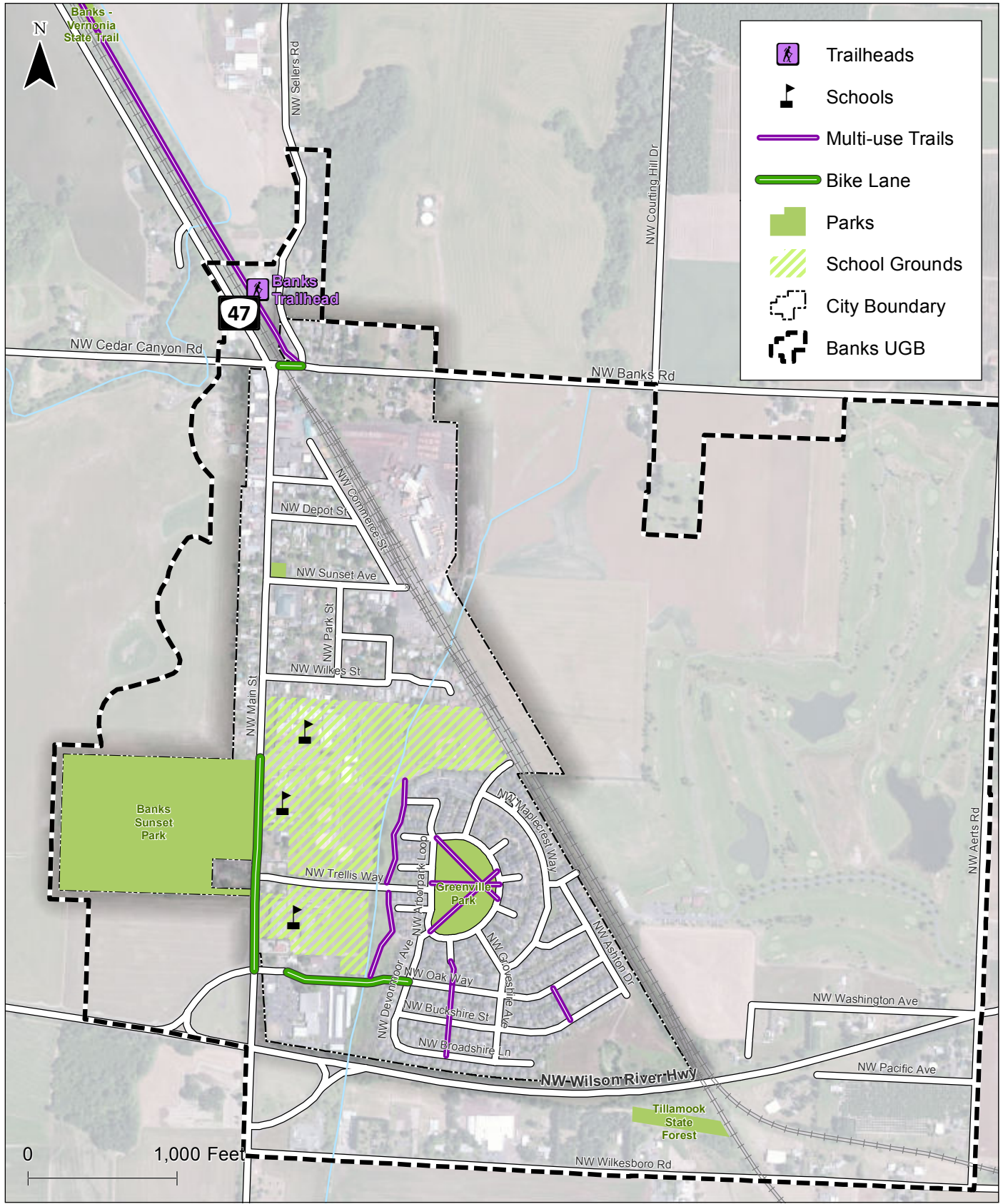


Storm drain grate in the bicycle lane along Main Street (OR47)



Bicycle lane ending at the high school entrance along Main Street (OR47)

Bicycle lanes are also provided on NW Oak Way connecting the residential neighborhood in the southeast part of the city to Main Street, as shown in Exhibit 5-2. The bicycle lanes originate approximately 250 feet east of the signal at Main Street and terminate at NW Devonmoor Avenue.



**Existing Bicycle Facilities
Banks, Oregon**

**Figure
5-1**

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Exhibit 5-2 Bicycle Facilities on NW Oak Way



Start of eastbound bicycle lane on NW Oak Way



Westbound bicycle lane on NW Oak Way, landscape strip, and sidewalk

Bicycle lanes are provided on NW Banks Road starting on NW Main Street and ending just east of the Banks-Vernonia Trailhead where the roadway narrows to provide two travel lanes and a minimal shoulder, as shown in Exhibit 5-3.

Exhibit 5-3 Bicycle Facilities on NW Banks Road



End of eastbound bicycle lane on NW Banks Road



NW Banks Road cross-section after termination of bicycle lanes east of Main Street

Bicycle Parking

Bicycle parking is provided at the locations shown in Exhibit 5-4.

Exhibit 5-4 Bicycle Parking



Trailhead



Banks Café



Sunset Park



Middle School

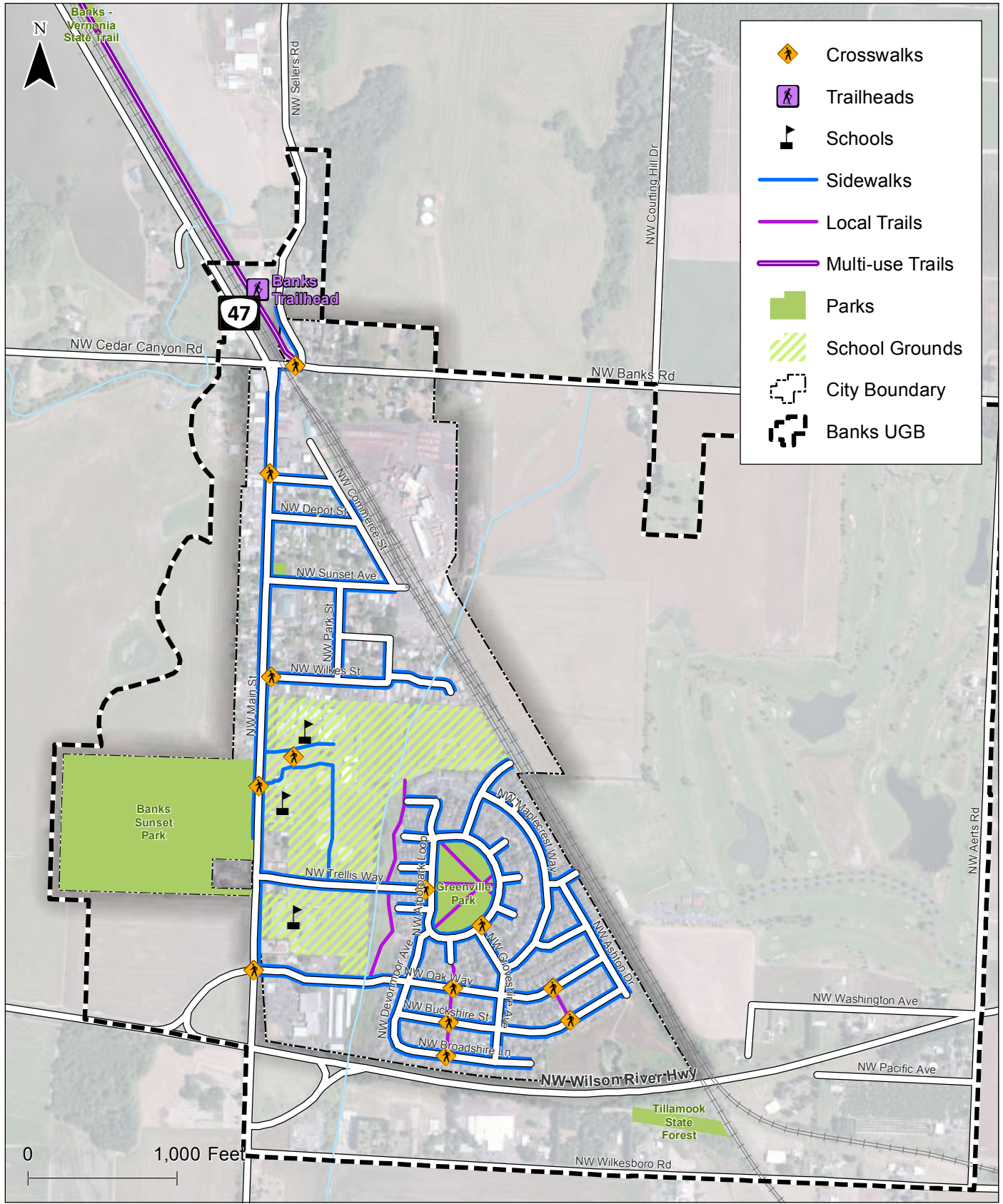
Bicycle Gaps and Deficiencies

There is a lack of bicycle infrastructure connecting the southern part of Banks with the Banks-Vernonia State Trail, as well as a comprehensive connected network within the City itself. Bicycle lanes are prevented from extending north of their current location on Main Street (OR 47) due to the roadway width and on-street parking. There is also a small gap between the Main Street (OR 47)/NW Oak Way intersection and where the bike lanes begin on NW Oak Way. The local neighborhoods have low volume roads and a trail system within them that helps provide connectivity and mode options. The Banks-Vernonia Trail provides an off-street, multi-use path connection between Banks and Vernonia and is a valuable asset to residents and visitors.

The Main Street (OR 47)/NW Banks Road/NW Cedar Canyon Road intersection is an important intersection linking the Banks-Vernonia State Trail with the City. A bicycle lane is installed on a small section of NW Banks Road between Main Street and NW Sellers Road, but no infrastructure in place to help bicyclists navigate the intersection.

Existing Pedestrian Network

Figure 5-2 identifies the existing pedestrian facilities within the City. Sidewalks are available on almost every roadway, with the exception of Woodman Avenue, NW Banks Road, NW Sellers Road and NW Cedar Canyon Road. The sidewalk on the west side of NW Main Street ends south of Sunset Park, as shown in Figure 5-2.



**Existing Pedestrian Facilities
Banks, Oregon**

**Figure
5.2**

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There are several locations within the City where the sidewalks are in poor condition, as shown in Exhibit 5-5. On Main Street, the sidewalk width varies from 9.5' wide to less than 4' wide. As noted in the Main Street Revitalization Plan, "tree root uplift, lack of or undersized planting strip buffers, poor pavement conditions, and the multitude of driveway curb cuts all degrade the pedestrian quality of sidewalks along Main Street." Conditions are similar on other sidewalks throughout Banks, particularly in the northeast residential areas.

Exhibit 5-5 Pedestrian Facilities on NW Main Street



Sidewalk ending at Banks Sunset Park along Main Street (OR47)



Sidewalk on east side of Main Street (OR47) with cracks and buckling

Pedestrian Crossings

There are three marked crosswalks along Main Street (OR 47) shown in Exhibit 5-6, including:

- Crosswalk with a bulbout at Market Street/Main Street
- Crosswalk with an overhead flashing pedestrian sign at the entrance to the High School on Main Street
- Signalized intersection with crosswalks on all four legs at NW Oak Way/Main Street

Exhibit 5-6 Pedestrian Crossings on NW Main Street



Crosswalk with bulbout at Market Street



Overhead flashing pedestrian sign at the High School entrance along Main Street

Arbor Village, the southeast neighborhood, has sidewalks on both sides of every street with multi-use trails connecting throughout the neighborhood. There are marked crosswalks throughout the neighborhood associated with the multi-use trail, some of which are obscured by trees as shown in Exhibit 5-7.

Exhibit 5-7 Pedestrian Crossings in Arbor Village



Multi-use path crossing partially obscured by tree



Multi-use path crossing partially obscured by tree

Pedestrian Gaps and Deficiencies

Sidewalks are in place on at least one side of almost every roadway in the city of Banks. Arbor Village has sidewalks on both sides of every street with trails and marked crosswalks leading to Greenville Park. The most notable gaps in sidewalk appear on the west side of Main Street (OR 47) from where the sidewalk ends next to Banks Sunset Park south to Highway 6 and the lack of designated facilities at the Main Street (OR 47)/NW Banks Road/NW Cedar Canyon Road intersection. Pedestrians have access to a sidewalk on the east side on Main Street and a crosswalk on NW Banks Road, but no facilities exist on the west side of Main Street at that intersection, as shown in Exhibit 5-8. Also, as previously noted, some sidewalks are narrow or in poor condition.

Exhibit 5-8 Main Street/NW Banks Roads/NW Cedar Canyon Road intersection



View from NW Cedar Canyon Road looking east



Sidewalk approaching the Main Street (OR47)/NW Banks Road/NW Cedar Canyon Road intersection.



Safety Assessment

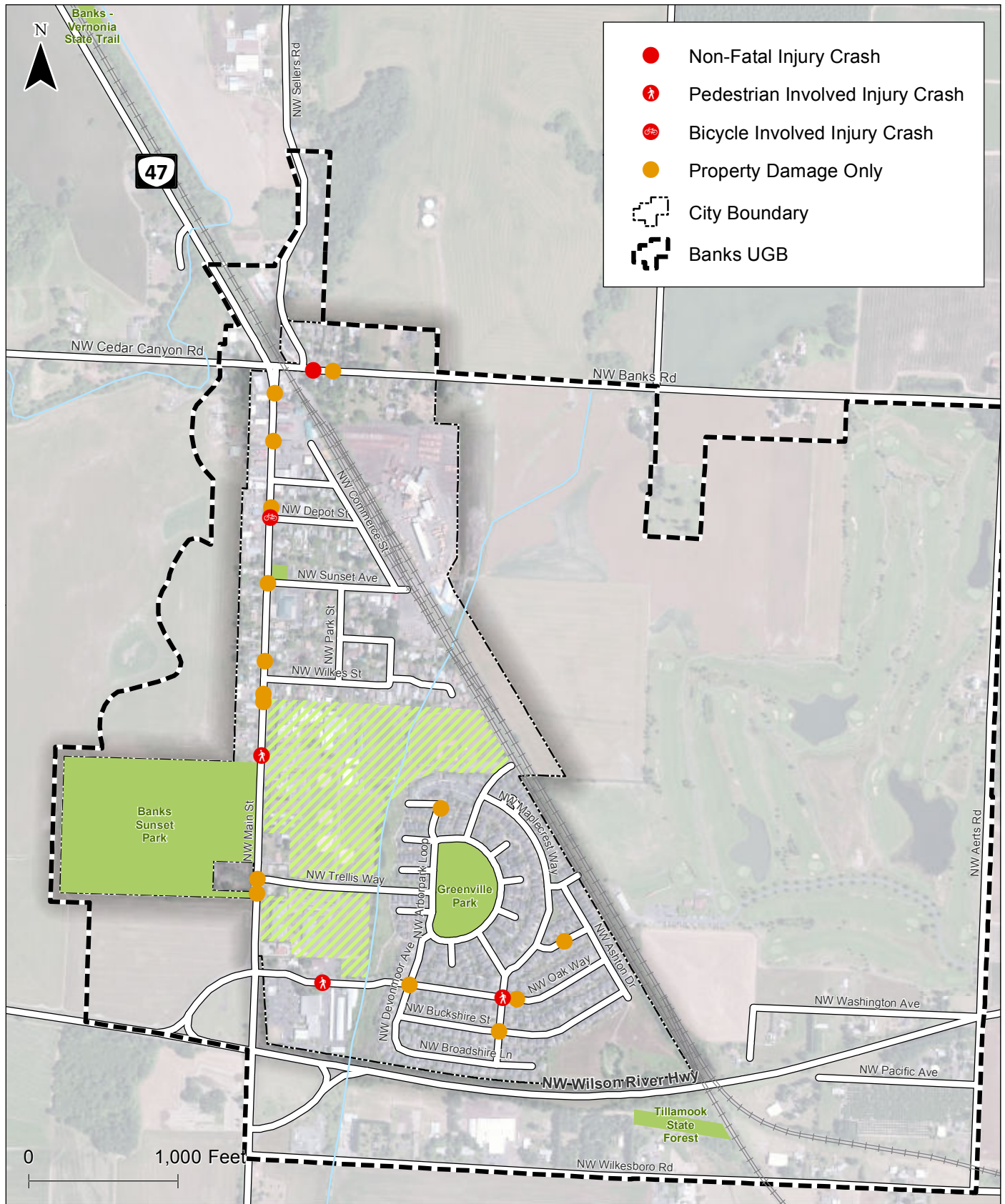
Figure 5-3 maps the reported crashes during the last five years of available data. Between January 1, 2009 and December 31, 2013, twenty reported crashes occurred in Banks. Four of the five non-fatal injury accidents involved bicyclists or pedestrians. The bicycle related crash occurred at the intersection of Main Street (OR47) and NW Depot Street and involved a vehicle turning, not yielding to the right-of-way. Two pedestrians were involved in a crash at or around the high school entrance off main Street (OR47) when a vehicle did not yield to the right of way. Another pedestrian was involved in a vehicle-related crash on NW Oak Way between Main Street (OR47) and NW Devonmoor Avenue. The pedestrian was illegally in the roadway. Three pedestrians were also hit by a vehicle near the intersection of NW Oak Way and NW Groveshire Avenue due to careless driving and the vehicle not yielding to the right of way. Table 5-1 summarizes all the reported crashes by type and severity.

Table 5-1 Crash Summary 2009-2013

Year	Crash Type						Severity	
	Bike/Ped	Backing	Fixed Object	Rear End	Sideswipe	Turning	PDO	Non-Fatal Injury
2009	0	0	1	3	1	0	4	1
2010	0	0	0	0	0	0	0	0
2011	1	1	1	2	1	1	6	1
2012	2	1	0	0	0	2	3	2
2013	1	0	1	0	0	1	2	1

PDO = Property Damage Only

As seen in Table 5-1, rear-end crashes are slightly more prevalent than the other crash types, but turning movement and bicycle and pedestrian related crashes are also predominant crash types. While no specific location was identified as a high crash location, 55% of all crashes occurred along the Main Street (OR47) corridor. Three of the four crash reports that involved bicycles or pedestrians noted the driver's inattention or failure to yield to the right of way.



**Reported Crashes from 1/1/2009 to 12/31/2013
Banks, Oregon**

**Figure
5-3**

H:\projects\16078 - City of Banks Bicycle & Ped Master Plan\GIS\Maps for BPP\5.3 Reported Crashes.mxd - klaussten - 12:06 PM 7/6/2015

Key Opportunities and Constraints

Throughout the development of the BPP, several issues rose to the surface as key opportunities or constraints for the bicycle and pedestrian system and Banks. Each is discussed below.

Main Street

The Banks Main Street Revitalization Plan, dated January 2014, recognizes the opportunities for revitalization on Main Street and assets along the corridor, including several parks, civic buildings, historic homes and commercial buildings, local shops and services, and walkability. However, there are several issues that present challenges for bicyclists and pedestrians on Main Street, including speeding, truck traffic, sidewalk width and condition, insufficient crossings, limited right-of-way, lack of street furnishings and pedestrian-scaled lighting, and disconnect between the north and south commercial areas. Images highlighting these issues are provided in Exhibit 5-9.

Exhibit 5-9 Main Street



Speed feedback sign on north side of Main Street headed southbound



Constrained right-of-way on north side of Main Street

Banks-Vernonia Trailhead

The Banks-Vernonia Trailhead is located on the north side of the City. Parking is provided for the Trailhead, accessible off NW Sellers Road. The parking lot currently provides 27 spaces (including two accessible spaces), restrooms, a water fountain, and a bike repair station, shown in Exhibit 5-10. The parking lot commonly reaches capacity, particularly on weekends in the summer, so vehicles overflow into neighboring lots or businesses along Main Street.

Existing Conditions Banks Bicycle and Pedestrian Plan



Exhibit 5-10 Banks-Vernonia Trailhead



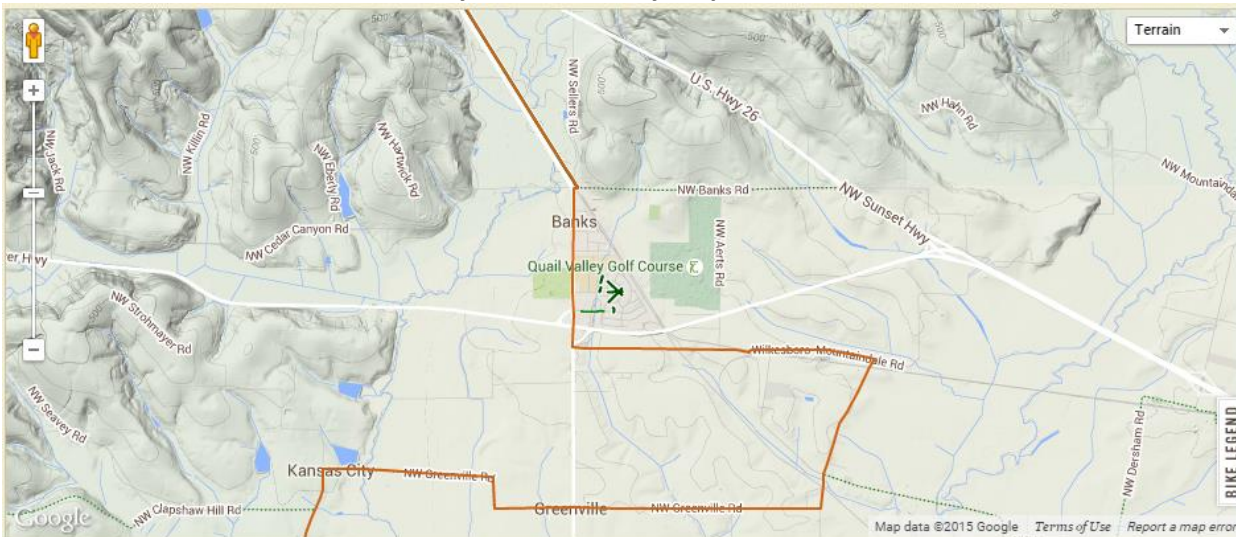
Trailhead parking area and restroom



Bicycle Maintenance Station

The Banks-Vernonia Trail provides a twenty one mile off-street multi-use path connection between Banks and Vernonia. It is part of the Tualatin Valley Scenic Bikeway, which runs between Hillsboro and Vernonia. The Scenic Bikeway program was launched in 2005 as a partnership between Cycle Oregon, Travel Oregon, the Oregon Department of Transportation, and the Oregon Parks and Recreation Department. The Tualatin Valley Scenic Bikeway connects to Banks via NW Wilkesboro Road and OR 47, as shown in Exhibit 5-11.

Exhibit 5-11 Tualatin Valley Scenic Bikeway Map



Source: Ride Oregon

The trail provides a high quality recreational facility that is comfortable for all riders in close proximity to the City. This is an asset for residents and attraction for bicycle tourists. However, the trail also presents some challenges, like providing sufficient parking at the trailhead and developing an attractive bicycle connection to the trailhead.

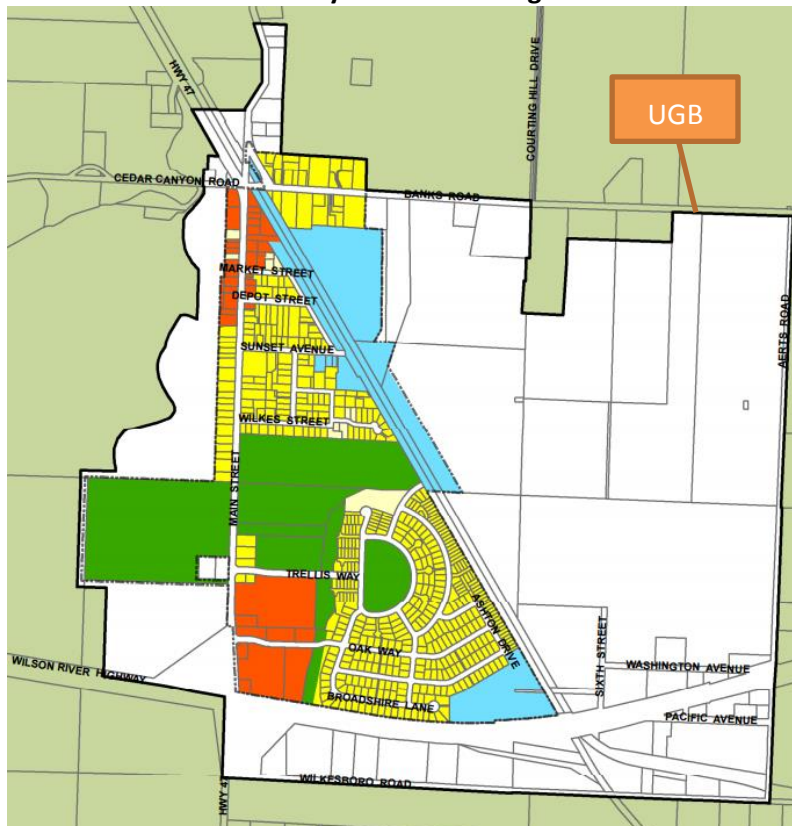
Local Connectivity

There is a need for more local connections by walking and biking throughout the City. Main Street is the only continuous north-south route, with some gaps in pedestrian and bicycle facilities. The railroad limits east-west connectivity. Routes to Banks' elementary, middle and high schools rely on Main Street, with limited other pedestrian and bicycle connections more comfortable for students. Similarly, Arbor Village has no pedestrian or bicycle route to the northern portion of Banks except Main Street. Alternate routes on lower-volume roadways and enhanced facilities would improve options for bicycling and walking within Banks. At the same time, Banks's compact-nature and size creates a great opportunity to develop a bikeable and walkable City.

Future Growth within the Expanded UGB

An expansion of Banks' UGB was approved in 2013, shown in Exhibit 5-12. The expansion included approximately 400 acres of land that includes the Quail Valley Golf Course. This additional land presents an opportunity for expansion and development. However, it also proposes challenges in planning multimodal facilities to connect the UGB expansion area to the rest of the City, namely crossing the railroad. The TSP identified the need to establish an east/west bicycle and pedestrian circulation system to service the expanded UGB area and install a bicycle/pedestrian overcrossing or undercrossing of the railroad to the east side of the City. A study was undertaken in the summer of 2015 to assess potential locations for the railroad crossing, considering current land use impacts, safety concerns, and traffic circulation benefits. The goal of the study is to identify a preferred location and develop a conceptual plan for the crossing.

Exhibit 5-12 City of Banks Zoning and UGB Area



Note: annexed areas shown in white



Section 6 Alternatives Evaluation

6. Alternatives Evaluation

The alternatives development process used a bottom-up approach, with involvement of the Stakeholder Advisory Committee (SAC) and public throughout. The process began with the identification of potential projects to include in the BPP, drawing on existing planning documents, public involvement, and a review of existing gaps and deficiencies in the transportation system. The projects were then evaluated and prioritized by the project team, SAC, and public to develop the final plan elements. This section describes the process that was used to develop alternatives for the BPP, evaluate the alternatives, and develop the final plan elements.

Projects for Evaluation

The first step in the alternatives evaluation was identifying projects to evaluate. A draft project list was developed based on the following:

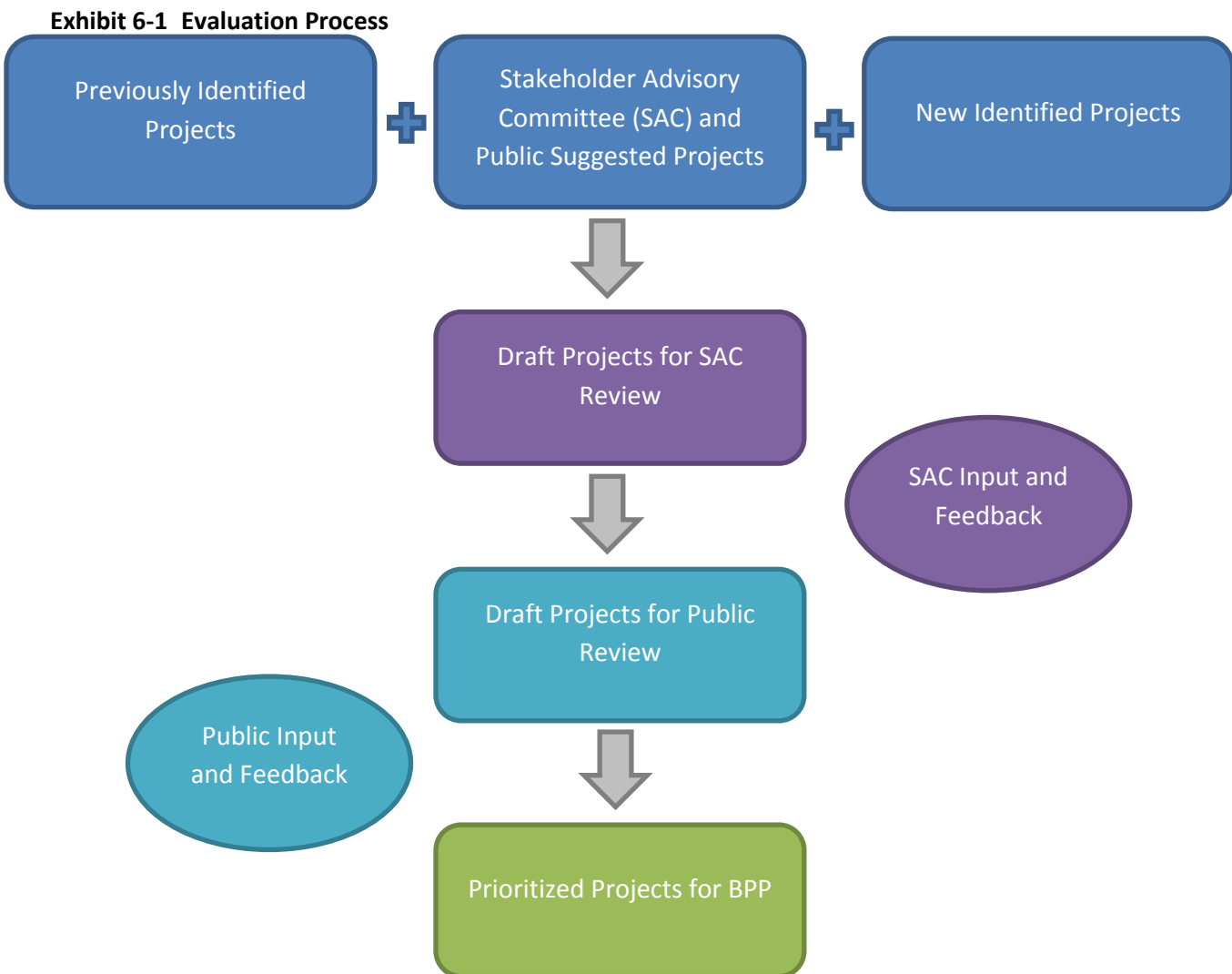
- **Previously Identified Projects:** these projects were identified based on a variety of documents, including the City's Transportation System Plan, Park and Recreation Master Plan, Banks Main Street Revitalization Plan, and Council Creek Regional Trail (CCRT) Master Plan. The documents were reviewed and projects identified and mapped in *Technical Memorandum #2: Baseline Information*.
- **Stakeholder Advisory Committee (SAC) and Public Suggested Projects:** these projects were developed based on input received from the SAC during stakeholder interviews, a kick-off walking tour, and subsequent meetings. Public input was also gathered via the interactive map for the project, described in Section 4: Public Involvement Process.
- **New Identified Projects:** these projects are needed to address gaps or deficiencies in the existing transportation system that were not addressed in either of the project lists described above.

New Identified Projects

As indicated above, additional projects were developed beyond those previously identified or suggested by the SAC or public to address remaining gaps or deficiencies in the existing transportation system. The project team developed these projects based on the assessment of the existing transportation system. Projects to fill gaps in the bicycle and pedestrian system were selected based on high-priority needs, considering the following:

- **Connectivity:** projects that connect existing bicycle facilities or key areas (i.e. residential and commercial areas, existing trail networks);
- **Gaps:** projects that fill gaps in the existing bicycle network (i.e. segment of roadway missing bicycle lanes);
- **Proximity to activity centers and destinations** such as schools, commercial areas, residential areas, parks, natural resources, trails, etc.;
- **Proximity to transit** stops and routes; and
- **Roadway volumes:** as a general rule of thumb, bikeways are recommended on roadways with AADTs over 3,000.

Exhibit 6-1 provides an overview of the evaluation process, with the projects for evaluation listed in the dark blue boxes.



Project Evaluation Methodology

The projects for evaluation were compiled and evaluated based on whether or not it supports the previously identified goals and objectives. Each goal (livability, safety and health, accessibility, financial responsibility and economic vitality) is supported with at least one objective. The objectives provide a more detailed breakdown of goals with more specific outcomes the City desires to achieve. Evaluation criteria were developed for each objective to provide a definable measure of how a proposed project may make progress towards the established objectives. The evaluation criteria are listed below:

- **Cost** – what is the planning-level cost estimate of the element?
- **Potential Funding Mechanisms** – what funding sources are available that could potentially be applied to the element?

Alternatives Evaluation

Banks Bicycle and Pedestrian Plan



- **Feasibility** – are there any significant barriers to the element, such as ownership of the connection, limited right-of-way, the presence of significant natural resources?
- **Connectivity** – does the element fill an existing gap in the bicycle or pedestrian network or create a new connection?
- **Accessibility** – does the element enhance access to the active transportation system for all users, regardless of ability?
- **Destinations served by project** – how many activity centers and/or destinations (i.e. schools, commercial areas, residential areas, parks, natural resources, trails, transit stops, etc.) does the element serve?
- **Expected safety impact** – does the element address an area with a crash history? Is it expected to improve the safety performance of a facility, based on available research on pedestrian/bicyclist safety? Does the element impact an area with a higher volume of trucks or vehicles?
- **Level of traffic stress** – according to the methodology presented in the ODOT *Analysis and Procedures Manual*, what level of traffic stress does the element provide for bicyclists?
- **Population served** – does the element serve people that live in, work in, and/or visit Banks (i.e. is it located in an area with a demand for walking/biking? Does it appeal to a wide level of riders?)?
- **Anticipated economic impact** – does the element increase bicycle or pedestrian activity in the downtown core or other business areas?

The projects were scored based on this criteria and sorted in to high, medium and low priority based on this scoring. The intent of this evaluation was to provide a base for the SAC to review and refine.

As shown in Exhibit 6-1, the projects were then reviewed and refined by the SAC. Each SAC member was asked to review each project and indicate whether they agreed with the project's priority, thought it should move up or down in priority, or should be removed from the project list. The SAC were also asked for any additional projects that should be included on the project list.

The next step in the process was public review, which occurred at the in-person and virtual open house (VOH). Using paper handouts or the online interactive map tool, the public were also asked for feedback on the project priority. Ultimately this feedback was reviewed by the Project Management Team (PMT) and used to develop the plan elements provided in Section 9. The plan elements include the following:

- **Projects** – capital investments made to improve the existing bicycle and pedestrian system. Examples include bike lanes, sidewalk improvements, and benches.
- **Policies** – statements adopted in the BPP that are intended to influence and guide City decisions and actions relating to bicycle and pedestrian planning. As an example, policies could be related to sidewalk design guidelines, bicycle treatment at intersections, or requirements for new development. Ultimately, the BPP will be incorporated in the Transportation System Plan, comprehensive plan and zoning code.
- **Programs** – plans of action aimed at accomplishing an identified county goal(s) and/or objective(s) that commonly include such details on what work is to be done, by whom, when, and the intended outcome of the action. An example is implementing a walking bus program.



- **Pilot Projects** – activities planned as a test or trial of a proposed transportation project or program. An example is temporarily striping a bike lane to test its performance over a 6-month time period.
- **Future Studies** – research and investigation to be completed by the City after the BPP is completed. Such studies will not be done during the BPP process due to lack of available data, a need for guidance and/or analysis from responsible agencies, and/or the need for a focused public involvement and analysis process beyond the BPP scope of work and budget.



Section 7 Potential Funding Sources



7. Potential Funding Sources

Projects identified in the BPP can be funded from a number of federal, state and local sources. Most federal and state funding programs are grant programs, which typically have eligibility requirements and applications required. This plan helps confirm the priority of key improvement projects and document their importance to the City. Tables 7-1 and 7-2 document potential federal/state and local funding sources, respectively.

Table 7-1 Potential Federal and State Grants for BPP Projects

Source	Award Cycle	Intended Use	Applicable Project Types	Administration Agency	Local Match
Rivers, Trails, and Conservation Assistance Program	Annual	Technical assistance for recreation and conservation projects.	Shared-use paths	National Park Service	None
Highway Safety Improvement Program	Annual	Address safety issues on highways and High Risk Rural Roads	All	ODOT	10%
Oregon Parks and Recreation Local Government Grants	Annual	Primary use is recreation; transportation allowed. Construction limited to outside road right-of-way, only in public parks or designated recreation areas	Shared-use paths	OPRD	20%
Recreational Trails Program	Annual	Recreational trail-related projects, such as hiking, running, bicycling, off-road motorcycling, and all-terrain vehicle riding.	Shared-use paths	OPRD	20%
Land and Water Conservation Fund	Annual	Acquire land for public outdoor recreation or develop basic outdoor recreation facilities	Shared-use paths, bikeways, sidewalks	OPRD	50%
Statewide Transportation Improvement Program	Biennial	Multi-year, statewide, intermodal program of transportation projects	Sidewalk, bikeways, crossing improvements	ODOT	Varies
ATV Grant Program	Annual	Operation and maintenance, law enforcement, emergency medical services, land acquisition, leases, planning, development, and safety education in Oregon's OHV (off-highway vehicle) recreation areas	Shared-use paths	OPRD	20%
Immediate Opportunity Funds	Biennial	Support primary economic development through the construction and improvement of street and roads.	All	ODOT	50%

Potential Funding Sources

Banks Bicycle and Pedestrian Plan



Source	Award Cycle	Intended Use	Applicable Project Types	Administration Agency	Local Match
Enhance (STIP)	Biennial	Activities that enhance, expand, or improve the transportation system. Projects that improve or enhance the state's multimodal transportation system.	All	ODOT	10%
ConnectOregon	Biennial	Non-highway transportation projects that promote economic development in Oregon.	Non-highway modes	ODOT	20%

Table 7-2 Potential Local Funding Sources for BPP Projects

Source	Description	Comments
General Fund	Property taxes from the county's permanent tax rate.	Diverting general fund revenue to the Road Fund would have significant consequences for other county services.
Supplemental 5-year Serial Levy	Voter approved property tax levied in addition to the county's permanent tax rate.	A road fund serial levy would have to be approved by voters every five years. A one-time approval would buy time for the county to develop other options. This method could fund operations and capital programs, some of which might reduce future maintenance requirements.
Road Utility Fee	Monthly user fee with revenue dedicated to road operations. May be enacted legislatively but could be challenged and brought to a vote.	This type of fee is becoming more common in cities but would require substantial investment in rate studies, administrative staffing, software and computer systems to enable the county to collect the revenue. This source is generally better suited to funding operations than for capital improvements, but it may free up existing resources for capital projects.
Vehicle Registration Fee	An extra fee on all registered motor vehicles in the county. May be authorized legislatively but could be challenged and brought to a vote.	State must be willing to act as a collection agent for the county, otherwise would be easy to implement. This source could fund operations or capital programs.
Motor Vehicle Title Fee	Require that all motor vehicles registered in the county also have their title recorded as personal property with the City.	This would generate two sources of revenue: from the fee itself and from personal property taxes levied on motor vehicles. This could be problematic for renters and would increase taxable property that the Assessor must account for.
City Gas Tax	May be enacted legislatively but could be challenged and brought to a vote.	A local-option fuel tax would be easy to collect because the infrastructure is already in place. Would generate revenue for the county from motorists passing through the county. This method could fund operations and capital programs.

Additional non-traditional funding sources include:

- **Public/private sponsorships** involve a private entity such as a local business owner working with the public agency to fund a project. In return for their investment in the community, these business owners



often have recognition for their role, providing a marketing venue for the business. In Banks, one potential opportunity for this type of partnership is the bicycle wayfinding signage project. Private organizations that sponsor a sign may have the opportunity to provide their logo on a sign to help direct cyclists to their community and business.

- **Local taxes and user fees** may be collected to finance road construction and operations. On that premise, it is assumed that the City will need to develop local revenue sources to supplement or replace federal resources if it hopes to maintain current levels of service and assuming that changes in state of federal financing, coupled with efficiency measures are not enough to close the funding gap. Table 8-2 lists options that the City may wish to consider for funding local roads. The sources include a mix of fees and taxes, some of which if implemented would have implications for other aspects of the City budget. Some of these fees could also be used to provide a local match to obtain greater federal or state funding, further stretching local dollars.
- **Development code updates** may be beneficial to provide an additional funding source. The development code identifies the requirements that a developer must meet before obtaining permission to build. Banks may choose to require developers to complete sidewalks in locations where they are identified in the BPP and enforce the completion through the development code. The City may also choose to collect a payment in lieu of sidewalk construction from the developers and then use the money to construct complete sections of sidewalk when enough is collected to create efficiencies.

The following section presents specific plan elements, with potential funding sources applicable to each element identified.

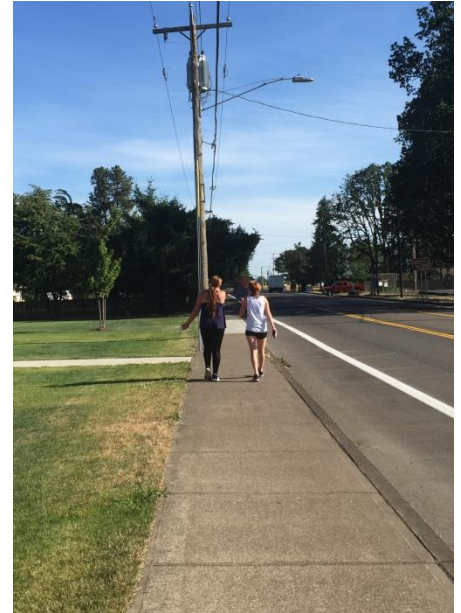


Section 8 Bicycle and Pedestrian System Plan

8. Bicycle and Pedestrian System Plan

This section presents the bicycle and pedestrian system plan for the City of Banks. Its purpose, as stated in Section 2, is to plan for a convenient and comfortable active (non-automobile based) transportation system for local trips within the community and connections with regional trail systems. It considers existing conditions for bicyclists and pedestrians in the City, but also needs to provide for future growth. Public involvement played a critical role in both developing and prioritizing elements of the plan.

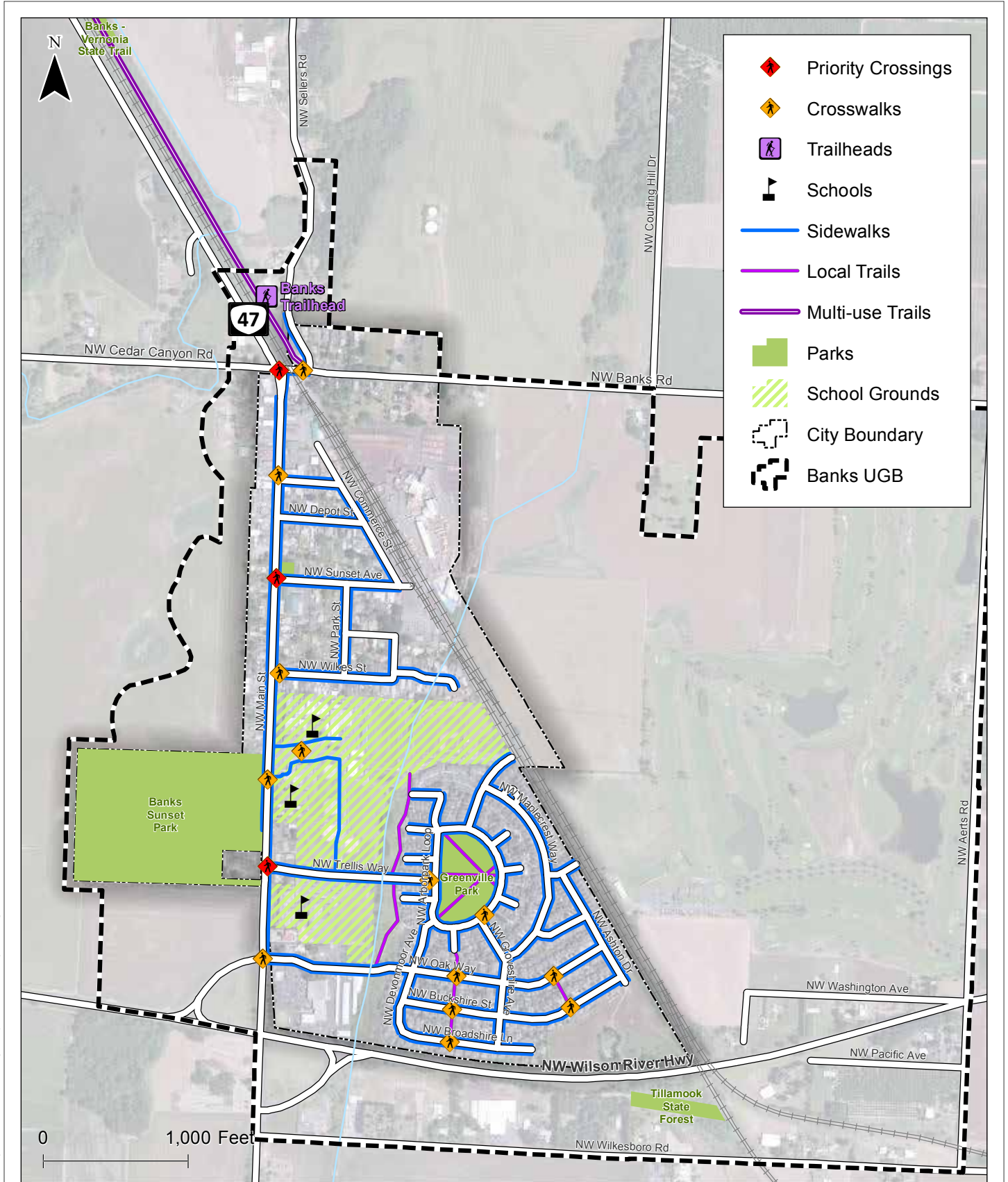
This section includes a review of high priority crossings, connections and routes needed to enhance the existing system and provide for future development. This provides a high-level view of the preferred bicycle and pedestrian system, intended to capture the vision for the future system. The specific plan elements follow, including prospectus sheets for each element that include a project description, cost estimate, and image.



High Priority Crossings

As described in Section 5, there are currently three marked crossings of Main Street. Given the density of destinations along Main Street and desire to make the corridor more walkable, additional crossings are recommended. Crossings are recommended to provide more route options and minimize out of travel required and jaywalking. The location and spacing of crossings should balance pedestrian needs with vehicular mobility on Main Street. The following locations, shown in Figure 8-1, are recommended as high priority crossings:

- **Main Street/Cedar Canyon/NW Banks Road:** there are currently no marked crosswalks at this intersection, which is a critical connection between Main Street and the Banks-Vernonia Trailhead.
- **Main Street/Sunset Avenue:** the closest crossings of Main Street in this area are Market Street 700 feet to the north and at the high school 1200 feet to the south. A crossing at this location would serve Sunset Park on the west side and residential and commercial uses in the vicinity.
- **Main Street/Trellis Way:** this location services Sunset Park on the west side and Arbor Village on the east side. The west side of the sidewalk on Main Street ends just south of this location, so a crossing would provide pedestrians the option to cross to the east side of Main Street where sidewalks continue south.



**High Priority Crossing Locations
Banks, Oregon**

**Figure
8.1**

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High Priority Connections

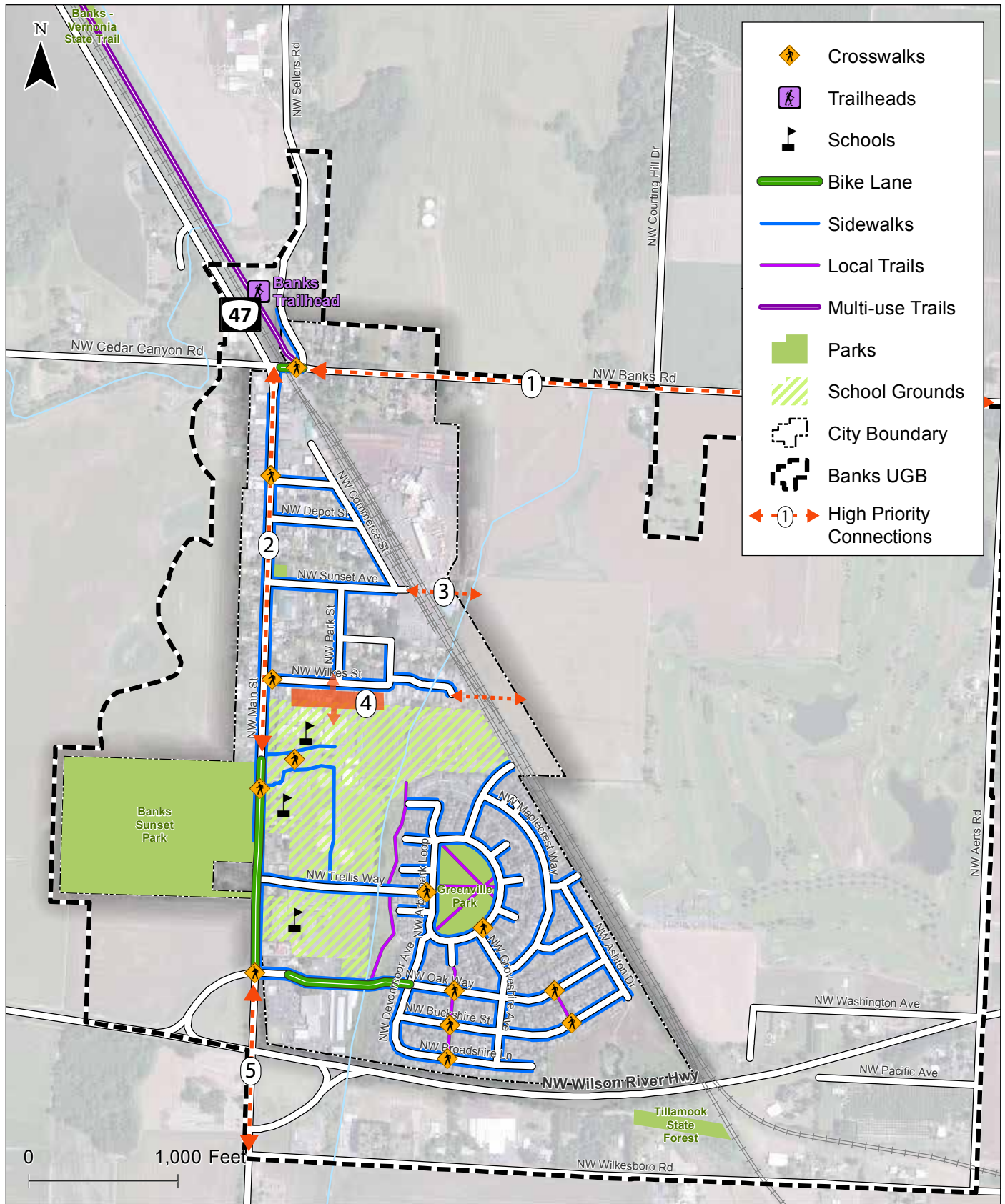
Locations were identified where a new or improved bicycle/pedestrian connection is needed in Figure 8-2. Primarily these connections are needed to serve existing or future activity centers and key destinations, or to connect to regional trail systems, including the future Council Creek Regional Trail and Salmonberry Trail. The recommended time-frame for each connection is noted.

1. **NW Banks Road to the East:** NW Banks Road currently does not have pedestrian or facilities further east of NW Sellers Road, with the exception of a side path north of the roadway for a small section. As the east side of Banks develops in the future, this connection is important for linking the east side to the trailhead and Main Street. *Long-term need.*
2. **Main Street to Banks Vernonia Trailhead:** bicycle lanes on Main Street currently end at the high school entrance, with no direction provided for bicyclists continuing north to the trailhead. This connection could be enhanced to provide a more comfortable, safe connection from Main Street to the trailhead. This route is currently included in the Tualatin Valley Scenic Bikeway. *Near-term need.*
3. **West side of railroad – East side of railroad:** with the annexation of the land to the east of the railroad in to the UGB, multimodal connections are needed to connect the east and west sides of the City. The TSP proposed a connection north of Arbor Village. Studies are currently underway to identify the preferred crossing location, with NW Sunset Avenue and NW Wilkes Street potential locations. *Long-term need.*
4. **Wilkes Street to middle and high school:** there is no bicycle or pedestrian connection between the residential areas on and north of Wilkes and the middle or high school that avoids Main Street. This connection would provide a safer, more comfortable route by foot or bike for students living in the northern residential areas of Banks. *Near-term need.*
5. **OR 47 south of OR 6 to Main Street:** Bicycle and pedestrian facilities on Main Street do not extend south of NW Oak Way. While development on the south side of OR 6 is limited, OR 47 connects Banks to regional destinations and trails, such as the Tualatin Scenic Valley Bikeway. OR 47 is narrow with limited to no shoulders. *Mid-term need.*

High Priority Routes

Based on the review of background and related documents, existing conditions review, and public outreach, Main Street is clearly a high priority route for both bicyclists and pedestrians. It connects town with the Banks-Vernonia Trailhead and is part of the Tualatin-Valley Scenic Bikeway. The City's schools are located along Main Street, as are numerous commercial destinations and attractions. Much work has already been done to identify key recommendations for this corridor, namely the Banks Main Street Revitalization Plan. The BPP seeks to support this plan's recommendations, specifically those related to conditions for bicycling and walking, including:

- **Beautification Plan** – develop a Beautification Plan with a focus on pedestrian-friendly design and amenities.



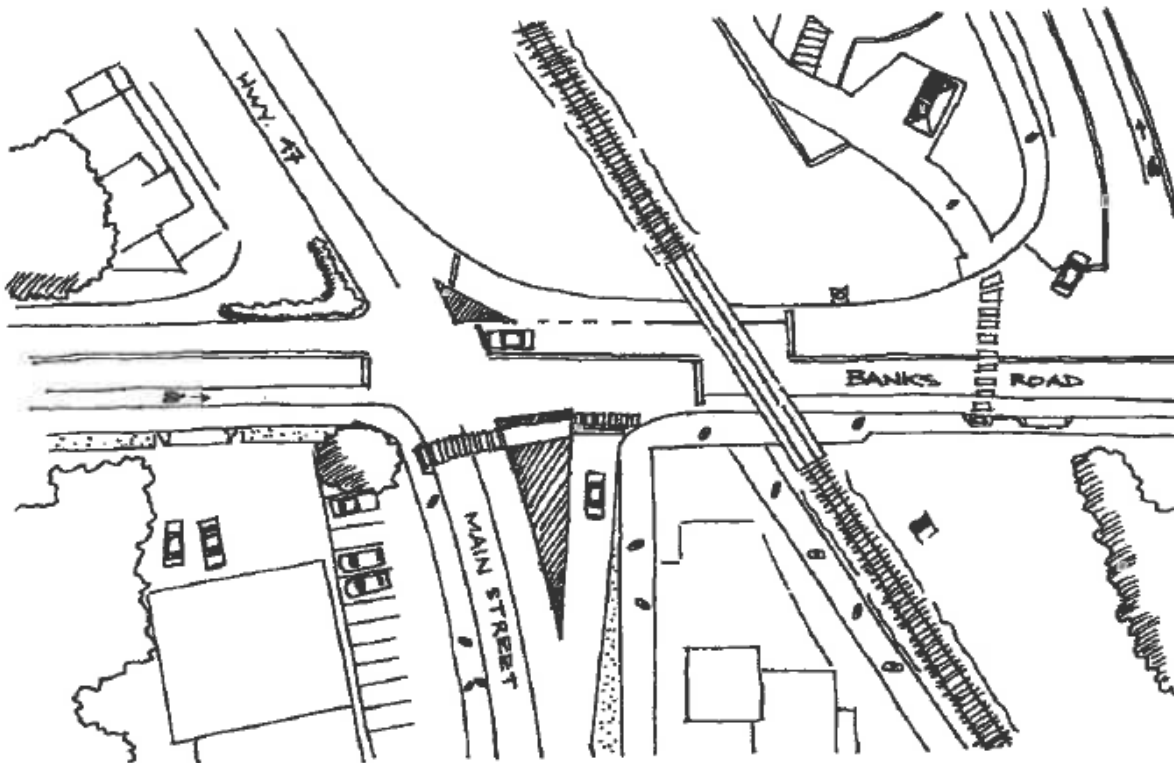
**High Priority Connections
Banks, Oregon**

**Figure
8.2**

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- **Design Standards and Guidelines** – develop standards and guidelines specific to Main Street in collaboration with ODOT.
- **Site Furnishing** – including pedestrian-scaled street lighting, gateway signage, benches, trash and recycling receptacles, banners, and bike parking on the corridor.
- **Main Street Safety Improvements** – including a crosswalk at the Main Street/Banks Road intersection and a new sidewalk and curb on the southwest corner of the intersection along the Five Star complex, shown in Exhibit 8-1.

Exhibit 8-1 Main Street Safety Improvements from Main Street Revitalization Plan



Above: Banks Main Street safety improvements at Highway 47 should include a new sidewalk at the Five Star complex, gateway treatment and crosswalks.

- **Traffic calming along Highway 47/Main Street** – review opportunities with ODOT to identify methods for reducing speeds along Highway 47.
- **Access management study** – conduct a study to identify opportunities to consolidate the numerous curb cuts and driveways along Main Street.
- **Comprehensive signage program** – develop a sign program that includes pedestrian and bicycle wayfinding signage.
- **Banks plaza** – create a destination on the north end of town in the form of a plaza that can host events and create a pedestrian space.
- **Historical walking tours** – host tours or use signage to highlight significant architecture and history on Main Street.

Other priority routes to provide for current and future bicycle and pedestrian demand include:

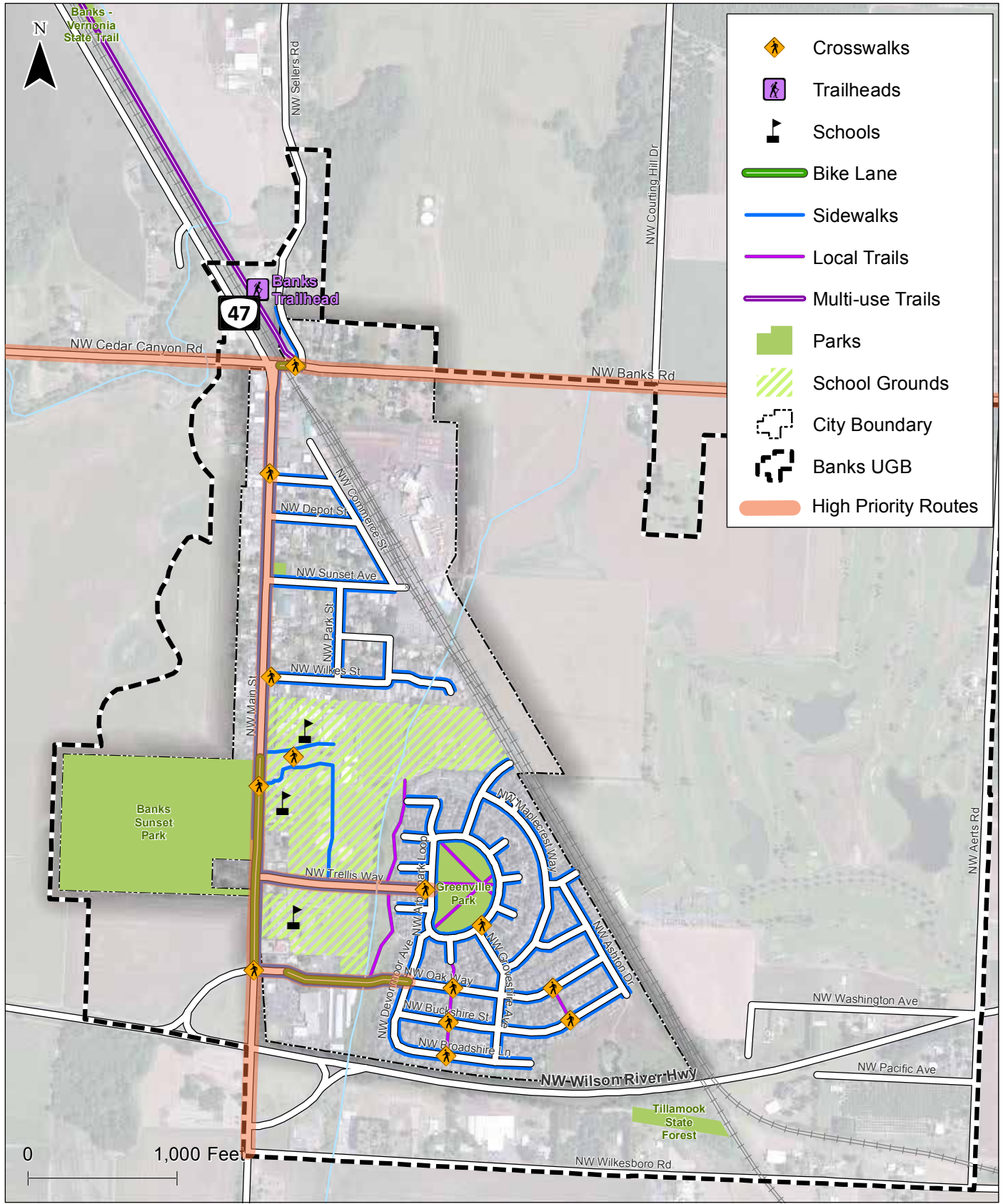
- **NW Banks Road:** this route is a future priority to provide a connection between downtown and the Banks-Vernonia Trailhead and future growth to the east. *Long-term need.*
- **NW Cedar Canyon Road:** this route is a future priority to provide a connection between Banks and future development to the west, include anticipated future attractions like the Killin Wetlands. *Long-term need.*
- **NW Oaks Way:** this route provides access to the commercial development on the south east side of Main Street/NW Oaks Way and access to the Arbor Village Neighborhood. It currently provides sidewalks and bike lanes on a portion of the segment. There is a pedestrian crossing just east of the turn in to the Thriftway with a sign on either side alerting drivers, as shown in Exhibit 8-2. *Near-term need.*

Exhibit 8-2 NW Oaks Way looking West



- **NW Trellis Way:** this route provides access to Banks Elementary School and the Arbor Village Neighborhood. It currently provides sidewalks but no marked bicycle facilities. *Near-term need.*

The priority routes discussed above are illustrated on Figure 8-3.



**High Priority Routes
Banks, Oregon**

**Figure
8.3**

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Banks Bicycle and Pedestrian Plan



Plan Elements

Based on the evaluation process described in Section 6, specific plan elements were identified for the City needed to address gaps and deficiencies in the existing system and provide for future growth. These plan elements build off the priority crossings, connections, and routes described above and consider the City's design standards. The plan elements are prioritized based on the magnitude of benefit they provide, per review by the project team, SAC, and public. Table 8-1 lists the plan elements. Prospectus sheets are provided following the table that offer more detailed information on each project.

Table 8-1 BPP Plan Elements

ID	Name	Description	Priority
1	Main Street Sidewalk Infill	Install sidewalk to fill the gap on the west side of Main Street between Sunset Park and the Main Street/NW Oak Way intersection, using the guidance in the City's Public Works Design Standards.	High
2	Main Street Bicycle Lanes	Install bicycle lanes on Main Street between Banks High School and Sunset Avenue per City standards and conduct a pilot project to install bicycle lanes between Sunset Avenue and NW Banks Road.	High
3	Sidewalk and Curb at Five Star Complex	Install a new sidewalk and curb on the west side of Main Street along Five Star complex, using the guidance in the City's Public Works Design Standards.	High
4	NW Banks Road/Main Street Crosswalk	Install a marked crosswalk at the south leg of the NW Banks Road/Main Street intersection.	High
5	Enhanced NW Banks Road Trailhead Crossing	Install a rectangular rapid flashing beacon (RRFB) or other enhanced treatment at the pedestrian crossing on NW Banks Road accessing the Banks Trailhead.	High
6	Parking Management Study	Conduct a Parking Management Study for the Banks-Vernonia Trailhead.	High
7	UGB Expansion Area	Conduct access to UGB expansion area feasibility study to identify the preferred location for a pedestrian/bicycle overcrossing of the railroad	High
8	Railroad Trail	Develop a trail connecting the Banks Trailhead and Highway 6 on the west side of the railroad, using the guidance in the City's Public Works Design Standards.	High
9	West Side Multi-Use Connection	Install bicycle and pedestrian facilities on the west side of Banks per the Council Creek Regional Trail Master Plan along the planned westside circulator roadway (WCR) connecting NW Banks Road with planned trails to the south using the guidance in the City's Public Works Design Standards	High

Banks Bicycle and Pedestrian Plan



ID	Name	Description	Priority
10	School Circulation Study	Conduct a vehicle circulation study at the elementary and middle schools	High
11	Main Street Crosswalk at Banks High School	Modify/enhance the pedestrian crossing and review feasibility of consolidating driveways	High
12	NW Oak Way Bicycle Lane	Extend bicycle lanes on NW Oak Way between the intersection of Main Street and existing bicycle lanes, using the guidance in the City's Public Works Design Standards	High
13	Way-Finding Signs	Install way-finding kiosks at three locations: Main St/Hwy 6, Log Cabin Park, and Banks-Vernonia Trailhead	Medium
14	Main Street Crosswalk at Sunset Avenue	Install a crosswalk across Main Street at Sunset Avenue and review opportunities for crossing enhancements, such as a bulbouts, overhead flashers or traffic control	Medium
15	Main Street Crosswalk at NW Trellis Way	Install a crosswalk across Main Street at NW Trellis Way and review opportunities for crossing enhancements, such as a bulbouts, overhead flashers or traffic control.	Medium
16	Dynamic Radar-Activated Speed Limit Sign2	Install two dynamic radar-activated speed limit signs along the Main Street corridor and implement targeted enforcement to address speeding on Main Street.	Medium
17	Bicycle Parking along Main Street	Review opportunities to install bicycle parking along the Main Street corridor, particularly in the commercial areas and destinations.	Medium
18	Pedestrian/Bicycle Access between Wilkes St and the Schools	Provide north/south pedestrian/bicycle access between Wilkes Street and the schools to the south.	Medium
19	School Bicycle Parking	Install bicycle parking at Banks elementary and high schools. The parking should be located in a convenient, accessible location and designed according to best practices.	Medium
20	Sight Distance and Lighting on NW Oak Way	Review sight distance and lighting on NW Oak Way at the post office entrance and address deficiencies.	Medium
21	Pedestrian-Scale Lighting on Main Street	Install pedestrian-scale lighting on Main Street	Low
22	Pedestrian Amenities on Main Street	Review opportunities to install street furniture (benches, water fountains, trash cans, etc.) and create pedestrian gathering locations.	Low
23	NW Banks Road Multimodal Improvements	Reconstruct NW Banks Road between Main Street and US 26 with bicycle lanes and sidewalks or a multi-use path, using the guidance in the City's Public Works Design Standards.	Low

Banks Bicycle and Pedestrian Plan



ID	Name	Description	Priority
24	NW Banks Road and NW Aerts Road Warning Signage	Install advance warning signage at the intersection of NW Banks Road and NW Aerts Road.	Low
25	Resurface Commerce Street	Resurface NE Commerce Street between Sunset Avenue and Market Street.	Low
26	Commerce Street Safety Improvements	Review sight distance on NE Commerce Street between Sunset Avenue and Market Street and address deficiencies.	Low
27	Commerce Street Sidewalk Fill	Install sidewalk on the east side of NE Commerce Street between Sunset Avenue and Market Street and fill any gaps, using the guidance in the City's Public Works Design Standards.	Low
28	Arbor Village Sight Distance Improvements	Scale back / trim / remove landscaping and trees causing sight distance issues; install advance warning signs for crossings at various locations; evaluate parking restrictions near crossings within Arbor Village neighborhood.	Low
29	Trail to Highway 6	Extend the existing private trail from the west side of Arbor Village from Oak to Highway 6, using the guidance in the City's Public Works Design Standards.	Low
30	Separated Trail on Main Street	Install a separated trail along Main Street, south of downtown, to the OR 6 undercrossing, using the guidance in the City's Public Works Design Standards.	Low
31	Highway 6 Multiuse Use Path	Install a separated multi-use path parallel to Highway 6 between NW Main Street and railroad, using the guidance in the City's Public Works Design Standards.	Low

ID: 1

Main Street Sidewalk Infill

Description:

Install sidewalk to fill the gap on the west side of Main Street between Sunset Park and the Main Street/NW Oak Way intersection, using the guidance in the City's *Public Works Design Standards*.

Purpose:

Provide pedestrian facilities on both sides of the Main Street corridor

Category: Pedestrian



Grouping: Main Street

Priority: High



Cost: \$50,000

Potential Funding Sources: Land and Water Conservation Fund; STIP; ConnectOregon; General Fund; Serial Levy; Banks Street & Road

Project Partners: City of Banks; ODOT; Property Owners

Project Goals:

Livability



Safety & Health



Accessibility



Financial Responsibility



Economic Vitality



Project Location/Images:



Existing Sidewalk Termination on west side of Main Street

ID: 2

Main Street Bicycle Lanes

Description: Install bicycle lanes on Main Street between Banks High School and Sunset Avenue per City standards and conduct a pilot project to install bicycle lanes between Sunset Avenue and NW Banks Road. The pilot project should be coordinated with the provision of off-street, branded parking locations (per the Banks Project Summary and Recommendations for Parking Management, 2015) and appropriate studies should be done to ensure parking demand is served.

Purpose: Extend existing bicycle lanes north to enhance safety and comfort for bicyclists and test the feasibility and impact of providing bike lanes north of Sunset Avenue.

Category: Bicycle



Grouping: Main Street, Trailhead Access

Priority: High



Cost: \$15,000

Potential Funding Sources: STIP; Immediate Opportunity Funds; ConnectOregon; Serial Levy; Banks Street & Road

Project Partners: City of Banks; ODOT; Downtown Business Owners

Project Goals:

Livability



Safety & Health



Accessibility



Financial Responsibility



Economic Vitality



Project Location/Images:



Existing bicycle lane on NW Main Street south of high school



ID: 3

Sidewalk and Curb at Five Star Complex

Description:

Install a new sidewalk and curb on the west side of Main Street along Five Star complex, using the guidance in the City's *Public Works Design Standards*.

Purpose:

Improve safety at the NW Banks Road/Main Street /NW Cedar Canyon Road/ Highway 47 intersection

Category: Pedestrian ,Safety



Grouping: Main Street

Priority: High



Cost: \$30,000

Potential Funding Sources: Highway Safety Improvement Program; STIP; Immediate Opportunity Funds; ConnectOregon; Banks Street & Road

Project Partners: City of Banks; ODOT; Business Owners

Project Goals:

Livability



Safety & Health



Accessibility



Financial Responsibility

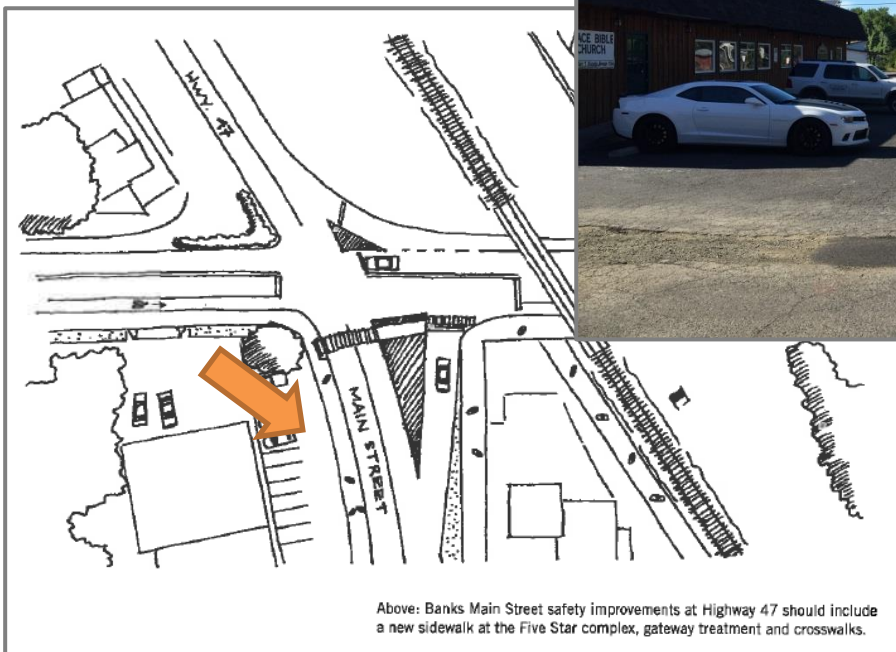


Economic Vitality



Project Location/Images:

Sketch from Main Street Revitalization Plan



Above: Banks Main Street safety improvements at Highway 47 should include a new sidewalk at the Five Star complex, gateway treatment and crosswalks.



ID: 4

NW Banks Road/Main Street Crosswalk

Description: Install a marked crosswalk at the south leg of the NW Banks Road/Main Street intersection.

Purpose: Improve safety at the NW Banks Road/Main Street /NW Cedar Canyon Road/ Highway 47 intersection

Category: Pedestrian, Safety   **Grouping:** Trailhead access, Main Street **Priority:** High 

Cost: \$5,000 **Potential Funding Sources:** Highway Safety Improvement Program; STIP; Immediate Opportunity Funds; Banks Street & Road; Washington Co.

Project Partners: City of Banks; ODOT; Washington County

Project Goals:

Livability



Safety & Health



Accessibility



Financial Responsibility



Economic Vitality



Project Location/Images:

Sketch from Main Street Revitalization Plan



Above: Banks Main Street safety improvements at Highway 47 should include a new sidewalk at the Five Star complex, gateway treatment and crosswalks.



ID: 5

Enhanced NW Banks Road Trailhead Crossing

Description:

Install a rectangular rapid flashing beacon (RRFB) or other enhanced treatment at the pedestrian crossing on NW Banks Road accessing the Banks Trailhead.

Purpose:

Provide increased safety at pedestrian crossings accessing the Banks-Vernonia trailhead

Category: Pedestrian, Safety



Grouping: Trailhead access

Priority: High



Cost: \$35,000

Potential Funding Sources: Highway Safety Improvement Program; STIP; Immediate Opportunity Funds; ConnectOregon; Banks Street & Road; Washington Co.

Project Partners: City of Banks; ODOT; Washington County

Project Goals:

Livability



Safety & Health



Accessibility



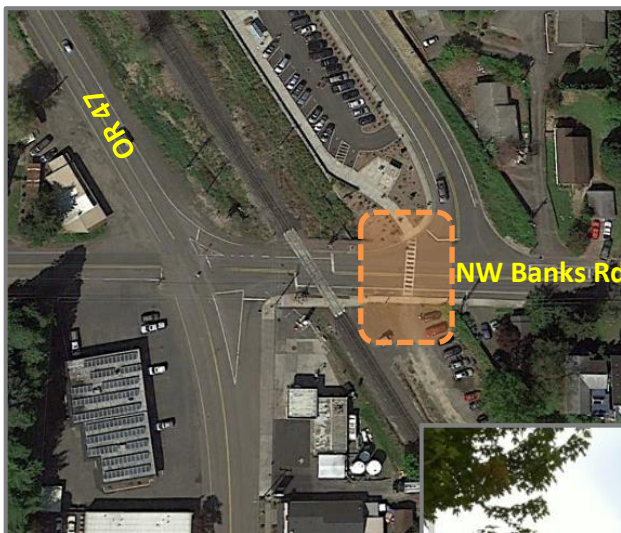
Financial Responsibility



Economic Vitality



Project Location/Images:



Existing Crossing





Example RRFB in Beaverton, OR

ID: 6

Parking Management Study

Description: Conduct a Parking Management Study for the Banks-Vernonia Trailhead.

Purpose: Further study the issue of crowded parking at the Banks-Vernonia trailhead and consider alternatives, such as additional parking areas or shared parking with businesses in town

Category: Parking  **Grouping:** Trailhead Access **Priority:** High 

Cost: \$75,000 **Potential Funding Sources:** Immediate Opportunity Funds; ConnectOregon; General Fund

Project Partners: City of Banks; Oregon State Parks

Project Goals:

Livability



Safety & Health



Accessibility



Financial Responsibility



Economic Vitality



Project Location/Images:



ID: 7

UGB Expansion Area

Description:

Conduct access to UGB expansion area feasibility study to identify the preferred location for a pedestrian/bicycle overcrossing of the railroad.

Purpose:

Identify potential access points where bicycle and pedestrian facilities could be installed to connect the existing network to the expanded UGB area and eliminate the railroad as a barrier.

Category: Access



Grouping: UGB Access

Priority: High



Cost: \$75,000

Potential Funding Sources: Rivers, Trails, and Conservation Assistance Program; Oregon Parks & Rec Local Government Grant; Recreational Trails Program; Land and Water Conservation Fund; STIP; ConnectOregon; General Fund

Project Partners: City of Banks; Washington County; Railroad

Project Goals:

Livability



Safety & Health



Accessibility



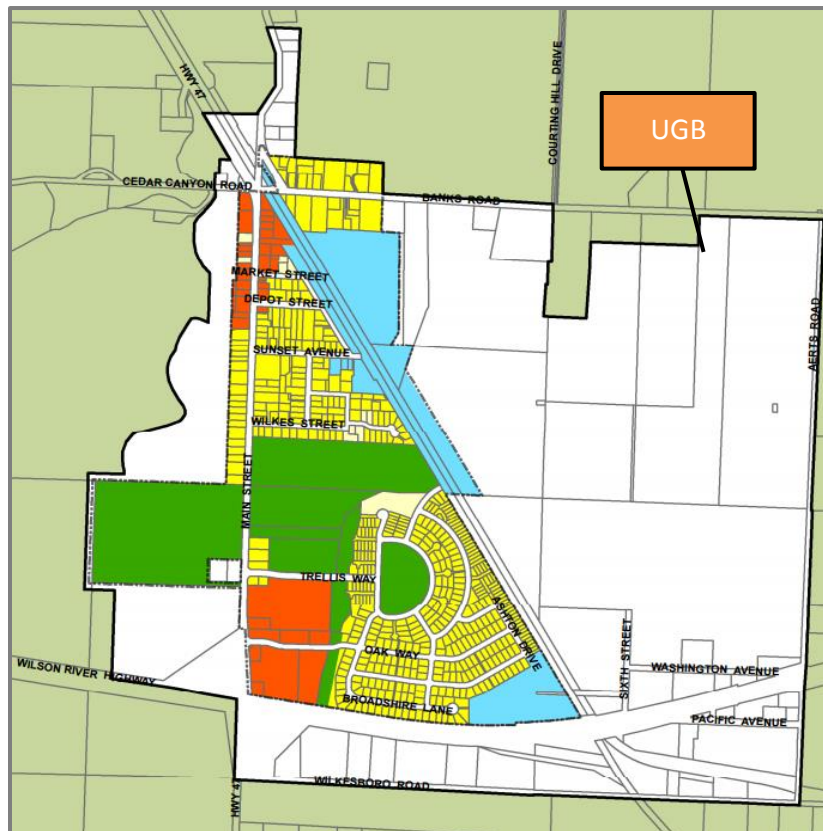
Financial Responsibility



Economic Vitality



Project Location/Images:



ID: 8

Railroad Trail

Description: Develop a trail connecting the Banks Trailhead and Highway 6 along the railroad corridor, using the guidance in the City's *Public Works Design Standards*. The preferred alignment will need further study.

Purpose: Provide a protected bicycle and pedestrian connection to the Banks Trailhead from Highway 6

Category: Pedestrian, Bicycle   **Grouping:** Trailhead Access, UGB Access **Priority:** High 

Cost: \$825,000 **Potential Funding Sources:** Rivers, Trails, and Conservation Assistance Program; Oregon Parks & Rec Local Government Grant; Recreational Trails Program; Land and Water Conservation Fund; ATV Grant Program; ConnectOregon; Banks Park Fund

Project Partners: City of Banks; Railroad; Banks Lumber; Property Owners; Arbor Village Homeowners Association

Project Goals:

Livability



Safety & Health



Accessibility



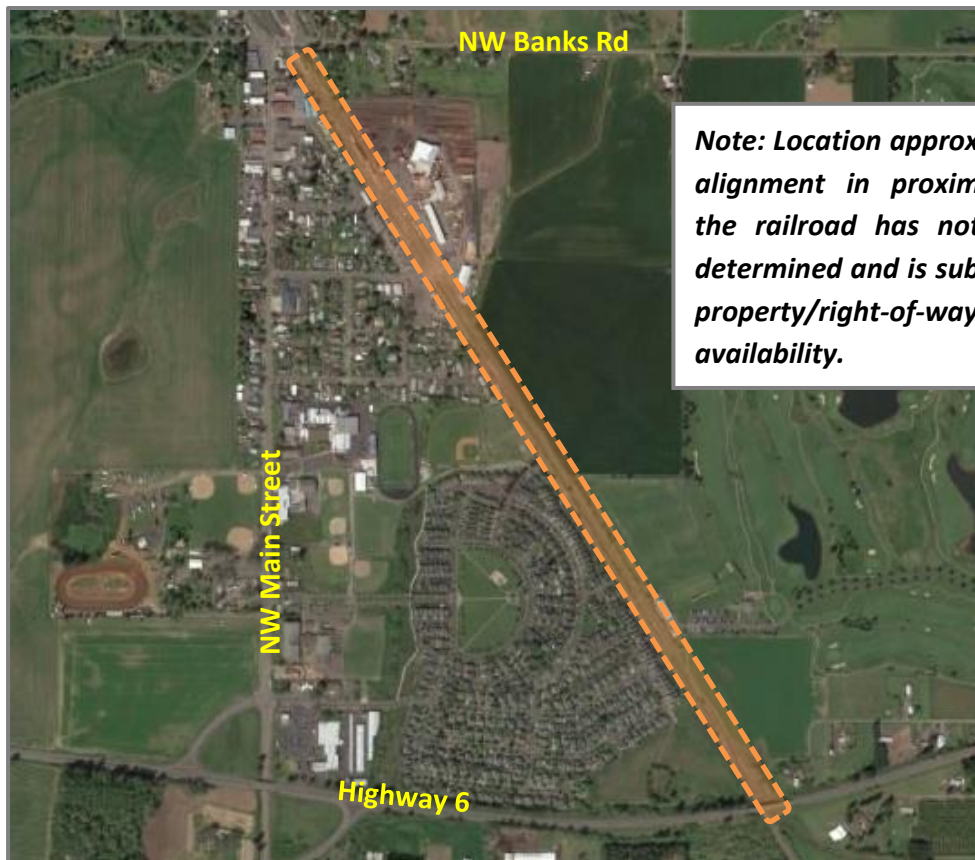
Financial Responsibility



Economic Vitality



Project Location/Images:



ID: 9

West Side Multi-Use Connection

Description: Install a street-adjacent multi-use facility on the west side of Banks per the Council Creek Regional Trail Master Plan along the planned westside circulator roadway (WCR) connecting NW Banks Road with planned trails to the south. Guidance in the City's *Public Works Design Standards* and further assessment should be done to identify the preferred facility type.






Purpose: Provide an alternative to Main Street, access future growth to the west, and align with future regional trail plans

Category: Pedestrian, Bicycle  **Grouping:** Regional Plans **Priority:** High 

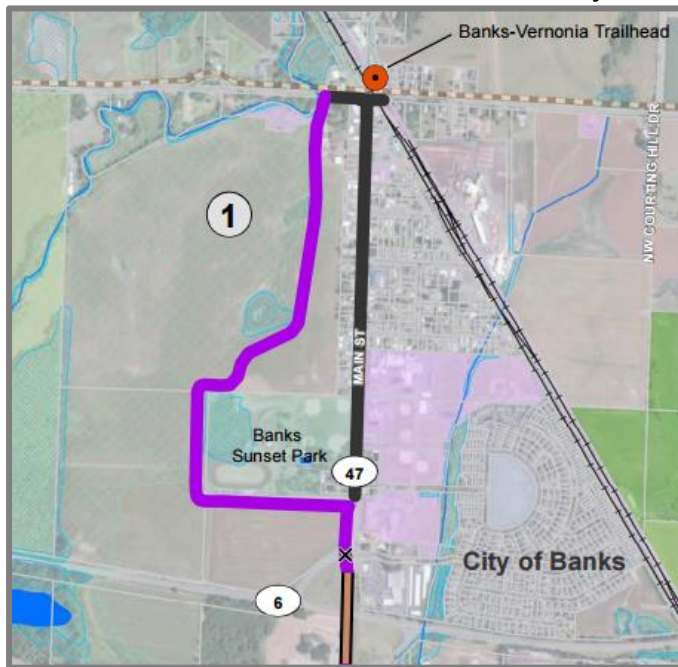
Cost: \$600,000 **Potential Funding Sources:** Rivers, Trails, and Conservation Assistance Program; Recreational Trails Program; Land and Water Conservation Fund; STIP; ConnectOregon; General Fund; Serial Levy

Project Partners: City of Banks; Property Owners

Project Goals:

Livability	Safety & Health	Accessibility	Financial Responsibility	Economic Vitality
				

Project Location/Images:



Map from Council Creek Regional Trail Master Plan



ID: 10

School Circulation Study

Description: Conduct a vehicle circulation study at the elementary and middle schools

Purpose: Further study the issue of back-ups from school pick-up on to Main Street, look for opportunities to improve circulation at schools

Category: Access, Parking   **Grouping:** School Related **Priority:** High 

Cost: \$75,000 **Potential Funding Sources:** General Fund; School District

Project Partners: City of Banks; School District

Project Goals:

Livability



Safety & Health



Accessibility



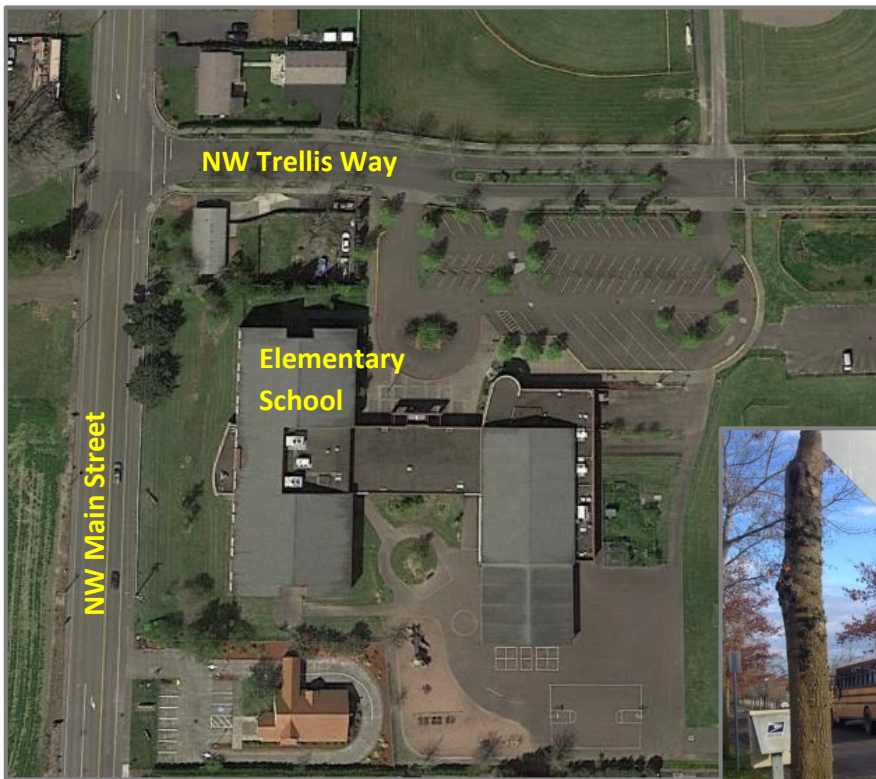
Financial Responsibility



Economic Vitality



Project Location/Images:



Queueing on NW Trellis Way associated with school pick-up

ID: 11

Main Street Crosswalk at Banks High School

Description: Modify/enhance the pedestrian crossing and review feasibility of consolidating driveways

Purpose: Improve safety and visibility of the pedestrian crosswalk across Main Street at high school between two driveways

Category: Pedestrian, Safety



Grouping: School-Related

Priority: High



Cost: TBD

Potential Funding Sources: Highway Safety Improvement Program; STIP; Banks Street & Road

Project Partners: City of Banks; School District; ODOT

Project Goals:

Livability



Safety & Health



Accessibility



Financial Responsibility



Economic Vitality



Project Location/Images:



ID: 12

NW Oak Way Bicycle Lane

Description:

Extend bicycle lanes on NW Oak Way between the intersection of Main Street and existing bicycle lanes, using the guidance in the City's *Public Works Design Standards*.

Purpose:

Eliminate the gap in bike lanes along NW Oak Way.

Category: Bicycle



Grouping: Other

Priority: High



Cost: \$3,000

Potential Funding Sources: ConnectOregon; Serial Levy; Banks Street & Road

Project Partners: City of Banks; Arbor Village Homeowners Association

Project Goals:

Livability



Safety & Health



Accessibility



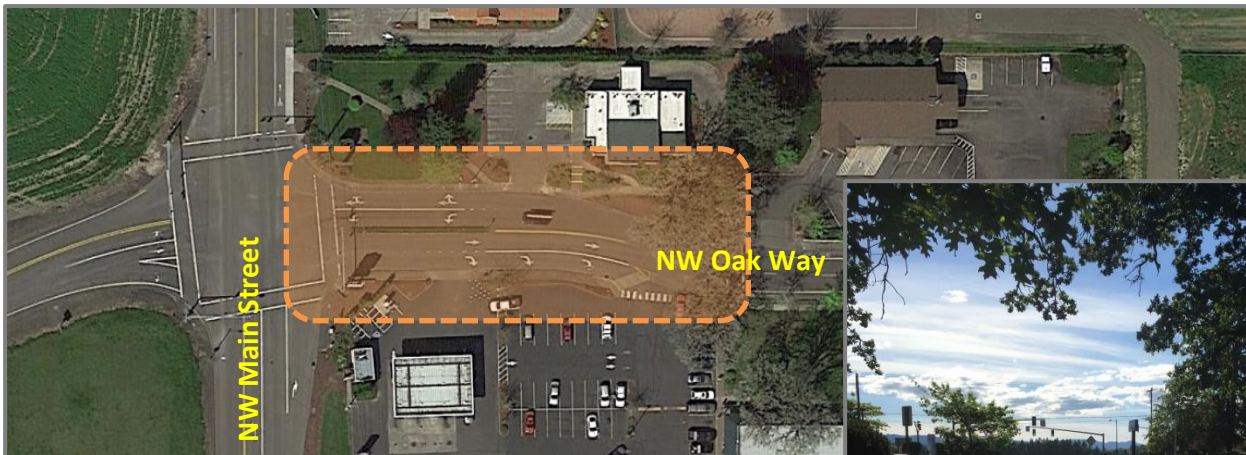
Financial Responsibility



Economic Vitality



Project Location/Images:



NW Oak Way looking west, start of eastbound bicycle lane

ID: 13

Way-Finding Signs

Description:

Install way-finding kiosks at three locations: Main St/Hwy 6, Log Cabin Park, and Banks-Vernonia Trailhead.

Purpose:

Give bicyclists and pedestrians direction to area amenities, tourist locations, the Banks Trailhead, and economic centers.

Category: Bicycle



Grouping: Main Street, Trailhead Access

Priority: Medium



Cost: \$12,000

Potential Funding Sources: ; Immediate Opportunity Funds; ConnectOregon; General Fund

Project Partners: City of Banks; Oregon State Parks; ODOT

Project Goals:

Livability



Safety & Health



Accessibility



Financial Responsibility



Economic Vitality



Project Location/Images:



ID: 14

Main Street Crosswalk at Sunset Avenue

Description:

Install a crosswalk across Main Street at Sunset Avenue and review opportunities for crossing enhancements, such as a bulbouts, overhead flashers or traffic control.

Purpose:

Improve safety at the Sunset Avenue / Main Street intersection.

Category: Pedestrian, Safety



Grouping: Main Street

Priority: Medium



Cost: \$25,000
(+\$30,000 RRFB)

Potential Funding Sources: Highway Safety Improvement Program; STIP; Banks Street & Road

Project Partners: City of Banks; ODOT

Project Goals:

Livability



Safety & Health



Accessibility



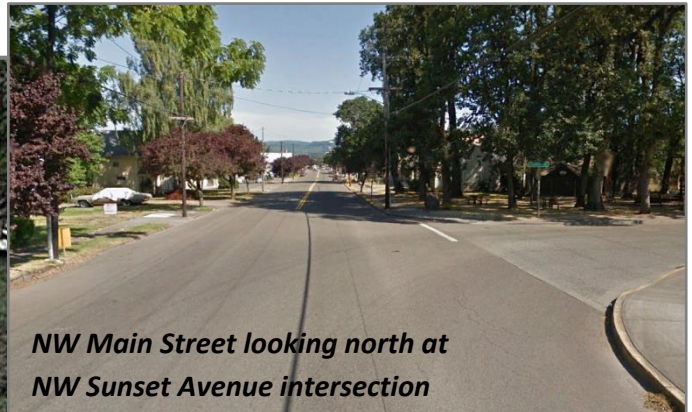
Financial Responsibility



Economic Vitality



Project Location/Images:



ID: 15

Main Street Crosswalk at NW Trellis Way

Description:

Install a crosswalk across Main Street at NW Trellis Way and review opportunities for crossing enhancements, such as a bulbouts, overhead flashers or traffic control.

Purpose:

Provide pedestrian access across Main Street at NW Trellis Way.

Category: Pedestrian, Safety



Grouping: Main Street

Priority: Medium



Cost: \$25,000
(+\$30,000 RRFB)

Potential Funding Sources: Highway Safety Improvement Program; STIP; Banks Street & Road

Project Partners: City of Banks; ODOT; Arbor Village Homeowners Association

Project Goals:

Livability



Safety & Health



Accessibility



Financial Responsibility



Economic Vitality



Project Location/Images:



ID: 16

Dynamic Radar-Activated Speed Limit Signs

Description: Install two dynamic radar-activated speed limit signs along the Main Street corridor and implement targeted enforcement to address speeding on Main Street.

Purpose: Provide speed control along Main Street

Category: Safety  **Grouping:** Main Street **Priority:** Medium 

Cost: \$60,000 **Potential Funding Sources:** Highway Safety Improvement Program; STIP; Banks Street & Road

Project Partners: City of Banks; ODOT

Project Goals:

Livability



Safety & Health



Accessibility



Financial Responsibility



Economic Vitality



Project Location/Images:



Existing dynamic speed sign on NW Main Street southbound, just south of NW Banks Road



Highway 6

ID: 17

Bicycle Parking along Main Street

Description:

Review opportunities to install bicycle parking along the Main Street corridor, particularly in the commercial areas and destinations.

Purpose:

Provide bicycle parking in five high-demand locations to provide for bicyclists and increase the visibility of bicyclists on Main Street

Category: Bicycle



Grouping: Main Street

Priority: Medium



Cost: \$3,250

Potential Funding Sources: STIP; ConnectOregon; Banks Street & Road

Project Partners: City of Banks; ODOT; Business Owners

Project Goals:

Livability



Safety & Health



Accessibility



Financial Responsibility



Economic Vitality



Project Location/Images:



Example from Portland, OR



Existing bicycle parking at Sunset Park



ID: 18

Pedestrian/Bicycle Access between Wilkes St and the Schools

Description: Provide north/south pedestrian/bicycle access between Wilkes Street and the schools to the south.

Purpose: Provide a direct connection between the schools and residential areas to the north

Category: Pedestrian, Bicycle  **Grouping:** School Related **Priority:** Medium 

Cost: \$20,000 **Potential Funding Sources:** Banks Street & Road

Project Partners: City of Banks; Property Owners; School District

Project Goals:

Livability



Safety & Health



Accessibility



Financial Responsibility



Economic Vitality



Project Location/Images:



Note: Location approximate, crossing could be provided anywhere along Wilkes Street where property/right-of-way becomes available

ID: 19

School Bicycle Parking

Description:

Install bicycle parking at Banks elementary and high schools. The parking should be located in a convenient, accessible location and designed according to best practices.

Purpose:

Addresses the lack of bicycle parking at the schools

Category: Bicycle



Grouping: School Related

Priority: Medium



Cost: \$2,000

Potential Funding Sources: School District

Project Partners: City of Banks; School District

Project Goals:

Livability



Safety & Health



Accessibility



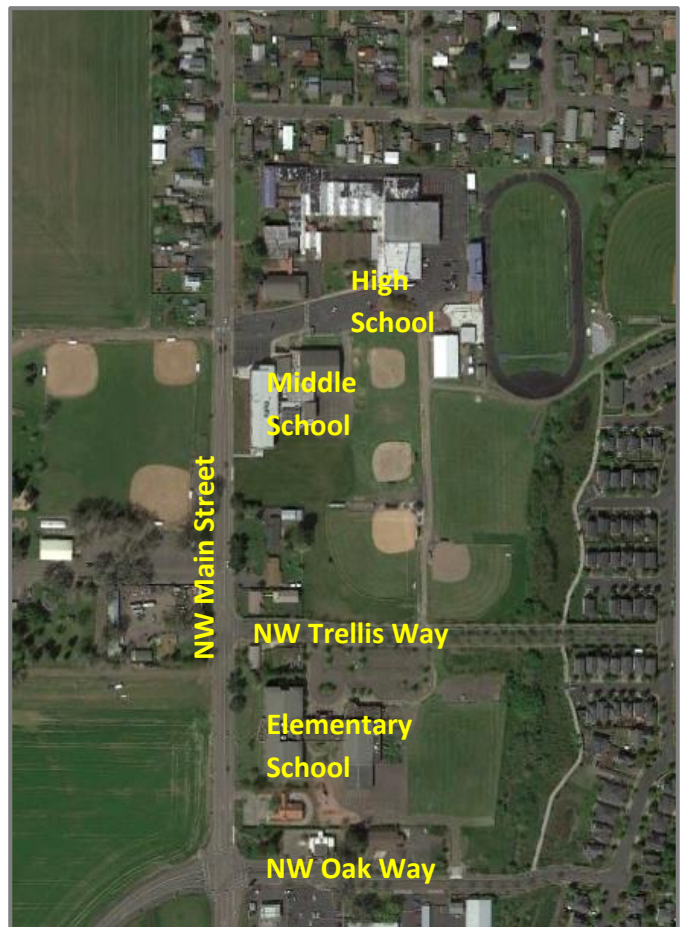
Financial Responsibility



Economic Vitality



Project Location/Images:





ID: 20

Sight Distance and Lighting on NW Oak Way

Description: Review sight distance and lighting on NW Oak Way at the post office entrance and address deficiencies.

Purpose: Improve safety and visibility at the crosswalk accessing the post office

Category: Safety  **Grouping:** Other **Priority:** Medium 

Cost: \$14,000 **Potential Funding Sources:** Banks Street & Road

Project Partners: City of Banks

Project Goals:

Livability



Safety & Health



Accessibility



Financial Responsibility



Economic Vitality



Project Location/Images:



ID: 21

Pedestrian-Scale Lighting on Main Street

Description: Install pedestrian-scale lighting on Main Street.

Purpose: Improve lighting along Main Street, particularly to provide greater comfort and safety for pedestrians

Category: Pedestrian , Safety



Grouping: Main Street

Priority: Low



Cost: \$165,000

Potential Funding Sources: ConnectOregon; Banks Street & Road

Project Partners: City of Banks; ODOT

Project Goals:

Livability



Safety & Health



Accessibility



Financial Responsibility



Economic Vitality



Project Location/Images:



Example from Ft Lauderdale, FL



ID: 22

Pedestrian Amenities on Main Street

Description: Review opportunities to install street furniture (benches, water fountains, trash cans, etc.) and create pedestrian gathering locations.

Purpose: Improve pedestrian environment and aesthetics on Main Street Corridor

Category: Pedestrian



Grouping: Main Street

Priority: Low



Cost: \$17,000

Potential Funding Sources: ConnectOregon; Banks Street & Road

Project Partners: City of Banks; ODOT

Project Goals:

Livability



Safety & Health



Accessibility



Financial Responsibility



Economic Vitality



Project Location/Images:



ID: 23

NW Banks Road Multimodal Improvements

Description:

Reconstruct NW Banks Road between Main Street and US 26 with bicycle lanes and sidewalks or a multi-use path, using the guidance in the City's *Public Works Design Standards*.

Purpose:

Provide dedicated pedestrian and bicycle facilities on NW Banks Road

Category: Pedestrian, Bicycle



Grouping: UGB Access

Priority: Low



Cost: \$1.4M - \$5.4M

Potential Funding Sources: Land and Water Conservation Fund; STIP; ATV Grant Program; ConnectOregon; Serial Levy; Banks Street & Road; Transportation Development Tax

Project Partners: City of Banks; Washington County

Project Goals:

Livability



Safety & Health



Accessibility



Financial Responsibility



Economic Vitality



Project Location/Images:



Existing cross-section looking west from just past trailhead entrance

ID: 24

NW Banks Road and NW Aerts Road Warning Signage

Description: Install advance warning signage at the intersection of NW Banks Road and NW Aerts Road.

Purpose: Improve safety at the NW Banks Road and NW Aerts Road intersection

Category: Safety



Grouping: Other

Priority: Low



Cost: \$5,000

Potential Funding Sources: Highway Safety Improvement Program; STIP; Banks Street & Road; Transportation Development Tax

Project Partners: City of Banks; Washington County

Project Goals:

Livability



Safety & Health



Accessibility



Financial Responsibility



Economic Vitality



Project Location/Images:



ID: 25

Resurface Commerce Street

Description: Resurface NE Commerce Street between Sunset Avenue and Market Street.

Purpose: Eliminate potholes on Commerce Street

Category: Safety



Grouping: Other

Priority: Low



Cost: \$100,000

Potential Funding Sources: General Fund; Serial Levy; Banks Street & Road

Project Partners: City of Banks

Project Goals:

Livability



Safety & Health



Accessibility



Financial Responsibility



Economic Vitality



Project Location/Images:



ID: 26

Commerce Street Safety Improvements

Description:

Review sight distance on NE Commerce Street between Sunset Avenue and Market Street and address deficiencies.

Purpose:

Eliminate sight distance issues along Commerce Street

Category: Safety



Grouping: Other

Priority: Low



Cost: TBD

Potential Funding Sources: Banks Street & Road

Project Partners: City of Banks

Project Goals:

Livability



Safety & Health



Accessibility



Financial Responsibility



Economic Vitality



Project Location/Images:



ID: 27

Commerce Street Sidewalk Infill

Description:

Install sidewalk on the east side of NE Commerce Street between Sunset Avenue and Market Street and fill any gaps, using the guidance in the City's *Public Works Design Standards*.

Purpose:

Provide pedestrian facilities on both sides of Commerce Street

Category: Pedestrian



Grouping: Other

Priority: Low



Cost: \$80,000

Potential Funding Sources: Land and Water Conservation Fund; ConnectOregon; Serial Levy; Banks Street & Road

Project Partners: City of Banks

Project Goals:

Livability



Safety & Health



Accessibility



Financial Responsibility



Economic Vitality



Project Location/Images:



ID: 28

Arbor Village Sight Distance Improvements

Description: Scale back / trim / remove landscaping and trees causing sight distance issues; install advance warning signs for crossings at various locations; evaluate parking restrictions near crossings within Arbor Village neighborhood.

Purpose: Increase sight distance at crosswalks within Arbor Village neighborhood

Category: Pedestrian, Safety	 	Grouping: Other	Priority: Low 
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Cost: \$20,000 **Potential Funding Sources:** Banks Street & Road

Project Partners: City of Banks; Arbor Village Homeowners Association

Project Goals:

Livability



Safety & Health



Accessibility



Financial Responsibility



Economic Vitality



Project Location/Images:



Multi-use path crossing partially obscured by tree

ID: 29

Trail to Highway 6

Description:

Extend the existing private trail from the west side of Arbor Village from Oak to Highway 6, using the guidance in the City's *Public Works Design Standards*.

Purpose:

Connect Arbor Village to Highway 6

Category: Pedestrian, Bicycle



Grouping: Regional Plans

Priority: Low



Cost: \$90,000

Potential Funding Sources: Rivers, Trails, and Conservation Assistance Program; Oregon Parks & Rec Local Government Grant; Recreational Trails Program; Land and Water Conservation Fund; ConnectOregon; Banks Park Fund

Project Partners: City of Banks; Arbor Village Homeowners Association

Project Goals:

Livability



Safety & Health



Accessibility



Financial Responsibility

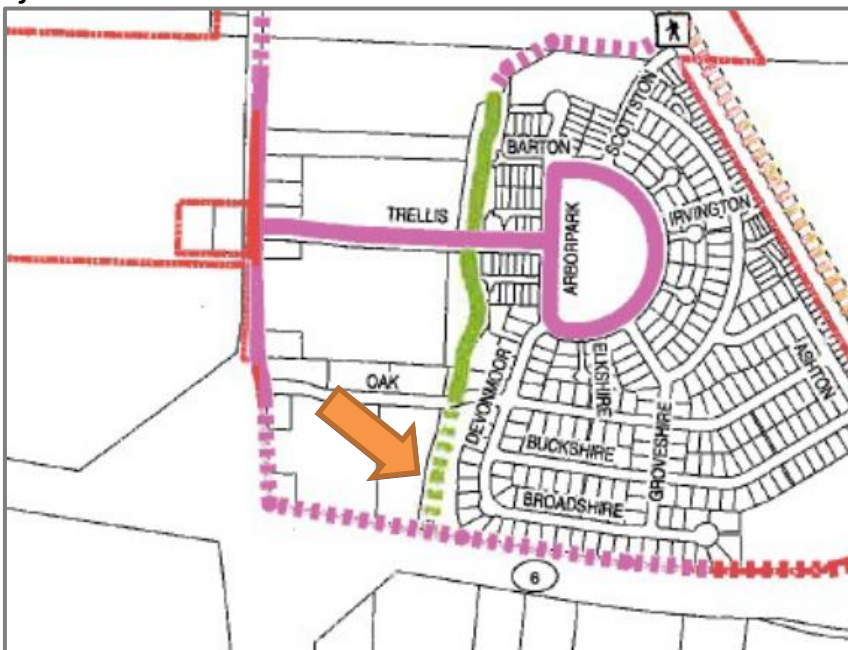


Economic Vitality



Project Location/Images:

Existing and recommended multi-use routes from Banks Parks and Recreation Plan



ID: 30

Separated Trail on Main Street

Description:

Install a separated trail along Main Street, south of downtown, to the OR 6 undercrossing, using the guidance in the City's *Public Works Design Standards*.

Purpose:

Eliminate conflicts between bicycles and vehicle traffic and align with future regional trail plans

Category: Pedestrian, Bicycle



Grouping: Regional Plans

Priority: Low



Cost: \$375,000

Potential Funding Sources: Rivers, Trails, and Conservation Assistance Program; Recreational Trails Program; Land and Water Conservation Fund; STIP; ATV Grant Program; ConnectOregon; Serial Levy; Banks Park Fund

Project Partners: City of Banks; ODOT

Project Goals:

Livability



Safety & Health



Accessibility



Financial Responsibility



Economic Vitality



Project Location/Images:

Existing and recommended multi-use routes from Banks Parks and Recreation Plan



Map from Council Creek Regional Trail Master Plan

ID: 31

Highway 6 Multi-Use Path

Description:

Install a separated multi-use path parallel to Highway 6 between NW Main Street and railroad, using the guidance in the City's *Public Works Design Standards*.

Purpose:

Provide dedicated pedestrian and bicycle facilities along Highway 6

Category: Pedestrian, Bicycle



Grouping: Regional Plans

Priority: Low



Cost: \$450,000

Potential Funding Sources: Rivers, Trails, and Conservation Assistance Program; Recreational Trails Program; Land and Water Conservation Fund; STIP; ATV Grant Program; ConnectOregon; Serial Levy; Banks Park Fund

Project Partners: City of Banks; ODOT; Arbor Village Homeowners Association

Project Goals:

Livability



Safety & Health



Accessibility



Financial Responsibility



Economic Vitality



Project Location/Images:



Example from Orlando, FL

Existing and recommended multi-use routes from Banks Parks and Recreation Plan



Recommendations to Other Agencies

Several project recommendations were developed throughout the course of the alternatives evaluation that are relevant to other agencies. These recommendations are provided below to be provided to the appropriate agency:

- Resurface Main Street and eliminate the crack running parallel to Main Street (ODOT)
- Provide pedestrian and bicycle facilities or a multi-use path on NW Cedar Canyon Road to provide a connection between Banks and the Killin Wetlands to the west (Washington County)



Section 9

Recommended Code Revisions



9. Recommended Code Revisions

This section recommends revisions to City documents to facilitate adoption and implementation of the Banks BPP as an amendment to the City's Transportation System Plan (TSP). Revisions are presented in strikethrough/underline format; ~~strikethrough~~ text indicates text to be removed, while underlined text indicates text to be inserted. For brevity, only altered sections of text are shown; sections of text not repeated below should remain unchanged. The Banks BPP builds from prior planning documents and studies and in cases of conflict supersedes other plans or programs adopted prior to its adoption.

City of Banks Municipal Code (2014)

Chapter 70 and chapter 152 of the City of Banks Municipal Code provide bicycle operating rules, design standards and bicycle parking requirements. The following revisions are recommended to encourage bicycle and pedestrian activity and specify efficient and useable design of bicycle parking facilities.

§ 70.29 BICYCLE OPERATING RULES.

(A) A person shall not leave a bicycle so as to obstruct any roadway, sidewalk, driveway or building entrance; and

(B) A person shall not ride on a sidewalk that is bordered by a bike path.

§ 152.052 STREETS.

(A) *Generally.* All streets shall be dedicated to the public and shall be constructed in accordance with the design standards of this chapter, unless otherwise approved. The location, width, and grade of streets shall be considered in their relation to existing and planned streets, to topographical conditions, to public convenience and safety, and to the proposed use of land to be served by the streets. The street system shall assure an adequate traffic circulation system with intersection angles, grades, tangents and curves appropriate for the traffic to be carried considering the terrain. Street layout shall optimize solar access. Where location is not shown in a development plan, the arrangement of streets shall either:

(1) Provide for the continuation or appropriate projection of existing principal streets in surrounding areas; or

(2) Conform to a plan for the neighborhood approved or adopted by the Planning Commission to meet a particular situation where topographical or other conditions make continuance or conformance to existing streets impractical.

(3) Provide adequate pedestrian and bicycle access and circulation for all neighborhood activity centers, including existing and planned schools, parks, shopping areas, transit stops and employment centers.

(4) Sidewalks, planter strips, and bicycle lanes shall be installed in conformance with the street standards of this section and the Comprehensive Plan. Maintenance of sidewalks and planter strips in the

Recommended Code Revisions Banks Bicycle and Pedestrian Plan



right-of-way is the continuing obligation of the adjacent property owner. Bikeways or bicycle lanes shall be required along arterials and major collectors. Sidewalks shall be required along arterials and collectors.

(P) *Functional classification.* Development should reflect functional classification of roadways as identified in the Banks Transportation ~~Network~~ System Plan, including any bicycle, pedestrian or frontage requirements. There are no rural lands in Banks.

(Q) *Off-site road improvements.* Where off-site road improvements are otherwise required as a condition of development approval, they shall include facilities accommodating convenient pedestrian and bicycle travel, including bicycle ways along arterials and major collectors and projects identified in the Banks Bicycle and Pedestrian Plan.

§ 152.062 BICYCLE PARKING.

All uses that are subject to site design review shall provide bicycle parking, in conformance with the standards in the table below, and following subsections.

(A) *Minimum required bicycle parking spaces.* Uses shall provide long- and short-term bicycle parking spaces, as designated in Table 3. Where 2 options are provided (e.g., 2 spaces, or 1 per 8 bedrooms), the option resulting in more bicycle parking is used.

Table 5-1. Minimum Required Bicycle Parking Spaces

Use Categories	Specific Uses	Long-term spaces (Covered or enclosed)	Short-term spaces (near building entry)
Residential Categories			
Household Living	Multifamily	1 per 4 units	2, or 1 per 20 units
Group Living		2, or 1 per 20 bedrooms	None
	Dormitory	1 per 8 bedrooms	None
Commercial Categories			
Retail Sales and Service		2, or 1 per 12,000 sq. ft. of floor area	2, or 1 per 5,000 sq. ft. of floor area
	Lodging	2, or 1 per 20 rentable rooms	2, or 1 per 20 rentable rooms
Office		2, or 1 per 10,000 sq. ft. of floor area	2, or 1 per 40,000 sq. ft. of floor area
Commercial Outdoor Recreation		8, or 1 per 20 auto spaces	None
Major Event Entertainment		8, or 1 per 40 seats or per CU review	None
Industrial Categories			
Manufacturing and Production		2, or 1 per 15,000 sq. ft. of floor area	None
Warehouse and Freight Movement		2, or 1 per 40,000 sq. ft. of floor area	None
Institutional Categories			
Basic Utilities	Bus transit center	8	None
	Park and ride	8, or 5 per acre	None
Community Service		2, or 1 per 10,000 sq. ft. of floor area	2, or 1 per 10,000 sq. ft. of floor area

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Use Categories	Specific Uses	Long-term spaces (Covered or enclosed)	Short-term spaces (near building entry)
Parks (active recreation areas only)		None	8, or per CU review
Schools	Grades 2-5	1 per classroom, or per CU review	1 per classroom, or per CU review
	Grades 6-12	2 per classroom, or per CU review	4 per school, or per CU review
Colleges	Excluding dormitories (see Group Living, above)	2, or 1 per 20,000 sq. ft. of net building area, or per CU review	2, or 1 per 10,000 sq. ft. of net building area, or per CE review
Medical Centers		2, or 1 per 70,000 sq. ft. of net building area, or per CU review	2, or 1 per 40,000 sq. ft. of net building area, or per CU review
Religious Institutions and Places of Worship		2, or 1 per 4,000 sq. ft. of net building area	2, or 1 per 2,000 sq. ft. of net building area
Daycare		2, or 1 per 10,000 sq. ft. of net building area	None
Other Categories			
Other Categories	Determined through Land Use Review, Site Design Review, or CU Review, as applicable		

(B) *Exemptions.* This section does not apply to single-family and two-family housing (attached, detached, or manufactured housing), home occupations, agriculture and livestock uses.

(C) *Location and design.* Bicycle parking should be no farther from the main building entrance than the distance to the closest vehicle space, or 50 feet, whichever is less. Long-term (i.e., covered) bicycle parking should be incorporated whenever possible into building design. Short-term bicycle parking, when allowed within a public right-of-way, should be coordinated with the design of street furniture, as applicable.

(D) Design. “Inverted U” or “staple” style racks should be considered. Bicycle racks shall provide a secure point of contact so that both the frame and wheel of a bicycle may be locked to the rack using a standard U lock. Bicycle racks are recommended to provide two points of contact between the rack and the bicycle in order to hold the bicycle securely and prevent pivoting or tipping. Individual “inverted U” or “staple” style racks shall be placed to encourage bicycles to be parked parallel to the rack and achieve maximum capacity. Where multiple racks are placed together, racks shall be placed parallel to each other spaced on four foot centers to allow access to both sides of each rack. Racks shall be placed so that a six foot bicycle may be parked without interference from nearby walls or fixed objects.

~~(D)~~ (E) *Visibility and security.* Bicycle parking for customers and visitors of a use shall be visible from street sidewalks or building entrances, so that it provides sufficient security from theft and damage.

~~(E)~~ (F) *Options for storage.* Long-term bicycle parking requirements for multiple family uses and employee parking can be met by providing a bicycle storage room, bicycle lockers, racks, or other secure storage space inside or outside of the building.

~~(F)~~ (G) *Lighting.* For security, bicycle parking shall be at least as well lit as vehicle parking.

Recommended Code Revisions Banks Bicycle and Pedestrian Plan



~~(G)~~ (H) *Reserved areas.* Areas set aside for bicycle parking shall be clearly marked and reserved for bicycle parking only.

~~(H)~~ (I) *Hazards.* Bicycle parking shall not impede or create a hazard to pedestrians. Parking areas shall be located so as to not conflict with vision clearance standards.

City of Banks Design Standards (2014)

The City of Banks Design Standards provide local design standards and requirements for street design, bicycle and pedestrian facilities, on-street parking standards, and other related design standards. The following revisions are recommended to Chapter 2 to help clarify the difference between a bike lane and shoulder bikeway as described in the TSP and to acknowledge the adoption of this plan.

2.20.1 Street Sections – City Streets

Table 5-2. Bicycle, Pedestrian, and On-Street Parking Standards*

Street Classification	Planting Strip Minimum	Sidewalk Width Minimum	Bicycle Facilities Minimum	On-Street Parking Minimum
Arterial*	5'	6'	6' shoulder bikeways <u>or</u> 5' bicycle lanes	none
Arterial - Main	0' (street trees in sidewalk tree wells)	6' walkways 4' furnishing zone 2' bldg zone	6' shoulder bikeways <u>or</u> 5' bicycle lanes	8' lanes
Residential Collector	5'	5'	Shared roadway	8' lane on one side
Residential Street	5'	5'	Shared roadway	8' lanes
Multi-Use Trail (no autos)	Optional (edging)	10' – 12' trail with 2' shoulders, and 8' minimum vertical clearance		None
Marginal Access	5'	None	None	None
Alleys	0'	None	None	None

*Unless otherwise specified, all standards apply to two sides of street.

2.20.12 Bikeways

a. General - The City has adopted a Transportation System Plan, ~~which includes a Bicycle/Pedestrian Plan and a Bicycle and Pedestrian Plan. This plan summarizes~~ These plans summarize the City's policy and implementation strategies for bikeways within the City. The City will use both AASHTO and ODOT standards and criteria as the minimum guidelines for bikeway design, construction, and control.

City Transportation System Plan (TSP) (2010)

The TSP identifies and addresses key issues relating to transportation within the City. The TSP recognizes that Main Street also serves as a state highway and tries to balance the needs of pedestrians, shoppers, employees, business owners, and residents with the needs of through traffic. The plan includes sections on Bicycle and Pedestrian Facilities, which discuss types of facilities and existing facilities in the City. While the Plan includes a vehicular

operational analysis and safety assessment, it does not provide a thorough assessment of bicycle and pedestrian facilities (which is provided in the BPP). The Plan recognizes the following opportunities for bicycle and pedestrian connections:

- Construct one or more pedestrian/bicycle overcrossings of the railroad to ensure east-west pedestrian/bicycle connectivity from the UGB expansion area east of the railroad to center city destinations, including the residential areas to schools, the library, and town hall.
- Currently bicycle lanes and pedestrian sidewalks are not connected well within the city. Improvements should focus on connecting the existing system of bike lanes and sidewalks to improve non-motorized mobility. A north-south bike route should be established in the existing city in the area east of Main Street, with direct connections to the schools complex.
- All new and modernized roadways should include bicycle and pedestrian accommodations.

The following plan elements are recommended in the BPP to address the needs identified in the TSP analysis and listed above:

- Install advanced warning signage at the intersection of Banks Road and Aerts Road to warn motorists of the reduced sight distance on the crest vertical curve, thereby improving safety conditions at the intersection (ID #24).
- Reconstruct Banks Road to increase the safety for motorists, pedestrians, and cyclists traveling on Banks Road between Main Street (OR 47) and US 26 (ID #23).
- Conduct access to UGB expansion area feasibility study to identify the preferred location for a pedestrian/bicycle overcrossing of the railroad (ID #7).
- Construct a new north-south road on the west side of the existing City of Banks with termini intersections at Cedar Canyon Road in the north and Main Street in the south (ID #9).

The differences between the project recommendations identified in the Banks BPP and the concept alternatives identified in the TSP are outlined below. The assessment and recommendations in the BPP related to bicycle and pedestrian facilities supersede the TSP.

TSP Concept #8: New north-south circulator road in west side Banks area between Cedar Canyon Road and area south of Sunset Park

The TSP presents an alternative to develop a new north-south circulator road on the west side of Banks. The concept states that roadway would be a 40-foot wide paved roadway with sidewalks, illumination, landscaping and drainage, occupying a right-of-way footprint of 64 feet, and meeting City of Banks Collector standards. The alignment shown in the TSP is conceptual and would be defined through the land development process as it is funded, designed, and built.

Project #9 in the Banks BPP is to install a street-adjacent multi-use facility on the west side of Banks per the Council Creek Regional Trail (CCRT) Master Plan along the planned westside circulator roadway (WCR) connecting Cedar Canyon Road with planned trails to the south. The alignment shown in the Banks BPP is the alignment from the CCRT Master Plan. The Banks BPP recommends a street-adjacent multi-use facility as part of the ROW per the CCRT



Master Plan and notes that the preferred facility type would be defined through further assessment when the project is built.

TSP Concept #11: Install bicycle/pedestrian crossing of railroad from west to east side of banks

The TSP concept #11 entails constructing a pedestrian/bicycle overcrossing or undercrossing of the railroad tracks from the area east of the Banks school complex to the eastside of Banks. The concept is intended to provide an east-west bicycle/pedestrian circulation system and to connect the UGB expansion area east of the tracks to the west side of Banks. The concept includes a connecting path on the eastside to the circulator road. The Plan recommends the undercrossing in Table 12, which features *Recommendations to Service Expanded UGB Areas*. The Plan does note the City should also “consider conducting a concept plan for the Eastside UGB expansion area – this would be a comprehensive focused plan to define preferred specific locations for the transportation facility project concepts recommended in this TSP.” This is supported in the Banks BPP, which recommends that a feasibility study occur first to identify the preferred location for a pedestrian/bicycle crossing of the railroad. It is recommended that reference to TSP Concept #11 be struck through with reference to the UGB Expansion Area Study recommended as BPP element #7.

City Comprehensive Plan (1979, Amended 1989)

The comprehensive plan provides a long-term vision for the city and develops policies to help implement that vision. Objectives in the transportation section (pages 45 – 49) state that development should occur in such a manner as to encourage and facilitate pedestrian movements and alternative modes of transportation, such as public transit and bicycling, should be encouraged and promoted. Specific policies state that in evaluating the transportation system, the City will support proposals that protect the quality of neighborhoods and the community. Also, a policy states that the City will promote the development of a bicycle and pedestrian system to link residential areas to other land uses, especially parks, open spaces, schools, the downtown core and commercial areas. The transportation section of the plan was updated in 1988 to include discussion of north-south connections, mill truck traffic, and access to large blocks for redevelopment/infill in the north end of the City. The Banks BPP provides additional analysis and specific recommendations for the City’s bicycle and pedestrian system. It is consistent with the objectives in the comprehensive plan and there are no discrepancies between the comprehensive plan and the Banks BPP.

Banks Main Street Revitalization Plan (2014)

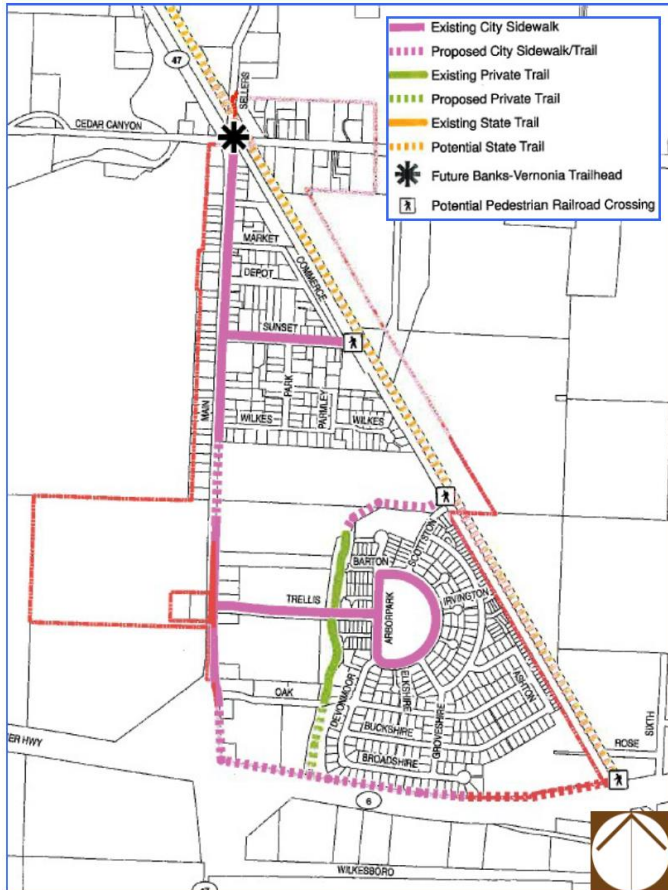
The Banks Main Street Revitalization Plan provides a vision for Main Street and recommendations related to bicycle and pedestrian facilities and amenities in the area. The plan served as a basis for the development of the Banks BPP, providing valuable information on issues, constraints, and opportunities on Main Street. The Banks BPP echoes some of the recommendations from the Main Street Revitalization Plan and includes plan elements to support them, such as the project to install sidewalk and curb at the Five Star Complex (ID #3), proposed crosswalks on Main Street at Sunset Avenue and NW Trellis Way (ID #14 and #15), and pedestrian-scale lighting on Main Street (ID #21).

Park and Recreation Master Plan (2010)

The Park and Recreation Master Plan “develops a 20-year Parks Plan for the two existing parks, future additions to the park system as well as briefly noting existing Banks public school facilities, Sunset Park facilities and the Banks-Vernonia State Trail Trailhead.” The plan was updated and adopted in 2010. The City Park and Recreation Master Plan recommends a comprehensive trail system (shown in Exhibit 9-1) that is consistent with the Banks BPP with the exception of the following:

- The Banks BPP includes a project to install a multi-use trail on the west side of Banks per the Council Creek Regional Trail Master Plan (ID #9). This project supersedes the project in Figure 13 from the Park and Recreation Master Plan.
- The Banks BPP includes a project to install bicycle lanes and sidewalks or a multi-use path on NW Banks Road between Main Street and US 26 (ID #23). This project supersedes the project in Figure 13 from the Park and Recreation Master Plan.
- The Banks BPP recommends a feasibility study to identify the preferred location for a pedestrian/bicycle overcrossing of the railroad (ID #7). This project supersedes and is intended to be completed before the project in Figure 13 from the Park and Recreation Master Plan that includes a proposed city trail between the existing private trail on the west side of Arbor Village to the proposed railroad crossing and potential pedestrian railroad crossing at Sunset.

Exhibit 9-1 Conceptual Plan Comprehensive Trail System (Figure 13 from Park and Recreation Master Plan)



Appendices

- A. Title VI Report
- B. Technical Memorandum #1 – Refined Goals, Objectives, and Evaluation Criteria
- C. Technical Memorandum #2 – Baseline Information
- D. Technical Memorandum #3 – Inventory and Evaluation
- E. Technical Memorandum #4 – Crossing Options
- F. Technical Memorandum #5 – Conceptual Bicycle and Pedestrian Route Options
- G. SAC Meeting Summaries
- H. Key Stakeholder Interviews
- I. Open House Summary