



TECHNICAL MEMORANDUM #5

Date: June 5, 2015

Project #: 18078

To: Stakeholder Advisory Committee

Cc: Project Management Team

From: Kelly Laustsen, Bart Rudolph and Marc Butorac, P.E., PTOE

Project: City of Banks Bicycle and Pedestrian Master Plan

Subject: Alternatives Development

This memorandum provides an assessment of potential bicycle and pedestrian projects, policies, program, pilot projects and study alternatives to be included in the Bicycle and Pedestrian Plan (BPP). It also provides an overview of the plan elements, evaluation methodology, and proposed project list.

BACKGROUND

A bicycle and pedestrian master plan is needed to identify, coordinate, and leverage current and upcoming efforts, investment, and opportunities to create a safe and seamless biking and walking environment in the City. The plan will prioritize the expansion and enhancement of the existing system to create an integrated bikeway and pedestrian network to encourage people to bike and walk in, around, and through the City. It will include preferred bicycle and pedestrian projects, policies, programs, pilot projects, studies, cost estimates and potential funding sources.

The intent of the BPP is to provide a bicycle and pedestrian system that is accessible for all types of users, regardless of age or ability. Bicyclists are commonly split up in to four groups based on their interest and confidence, from “strong and fearless” riders to “no way no how” riders. The BPP will target riders in between these extremes that are “enthused and confident” or “interested but concerned.” The creation of a BPP will ensure the community is designed so people can stroll, exercise, shop and bike in a safe and friendly environment. Improvement of the bike and pedestrian system will aid the City in pursuing high levels of livability with distinctive and memorable streets and pathways that are enjoyable, safe and friendly places to live, work, and visit.

PLAN ELEMENTS

The final BPP will include the following elements, which will be assessed using the evaluation metrics as referenced above:

- **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 BBP policies would 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.

Note that the term “project” is used throughout this memorandum to refer to the plan elements for ease and brevity. For example, the “projects” for evaluation described in the next section include all elements of the plan, including capital projects, policies, programs, pilot projects, and future studies.

PROJECTS FOR EVALUATION

This memorandum provides a preliminary list of potential projects for inclusion in the BPP and initial evaluation of each project. The 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, available on the project website www.banksbpp.com.
- **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 gaps or deficiencies in the existing transportation system. The project team developed these projects based on the assessment of the transportation system in *Technical Memorandum #3: Systems Inventory and Evaluation*. 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 bus stops and routes; and
- Roadway volumes: as a general rule of thumb, bikeways are recommended on roadways with AADTs over 3,000.

PROJECT EVALUATION METHODOLOGY

The preliminary project list has been developed based on the vision, goals and objectives developed in *Technical Memorandum #1*. The intent of this initial evaluation is to identify:

- Which projects should be included into the BPP;
- Which projects need refinement; and
- Which projects should not be carried forward for additional evaluation.

Each project has been 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 ends the City desires to achieve. Evaluation criteria have been developed for each objective to provide a definable measure of how a proposed project may make progress towards the established objectives.

The projects have been scored based on the framework identified in Table 1. As seen in the table, the goal assessment helps evaluate each evaluation criteria, objective, and ultimately project goal. The assessment relies heavily on the data generated and reviewed as part of the previous technical memorandums.

Table 1 Evaluation Criteria Matrix

Goal	Objective	Evaluation Criterion	Goal Assessment
(1) Livability: provide for a high quality of life by providing transportation options and considering community values and interests.	Increase transportation choices in the Highway 6 and 47 corridors by adding more bicycle and pedestrian routes and connections to transit.	Does the project... (1) Improve or provide additional bicycle or pedestrian facilities within the Highway 6 and/or Highway 47 corridor(s)? - or - (2) Improve or provide an alternate route to the Highway 6 and/or Highway 47 corridors (s)?	0 - Does not improve 1 - Expands/improves existing facility or creates a new partial corridor improvement 2 - Improves entire corridor or creates new alternate route
	Provide shorter trip lengths between destinations on the bicycle and pedestrian system than on-road networks.	Does the project... (1) Increase connectivity by eliminating an existing gap/barrier in infrastructure? - or - (2) Provide a new connection between facilities? - or - (3) Provide new bicycle/pedestrian facilities that result in a shorter or more direct trip than the road system provides?	0 - Does not eliminate a gap/barrier or provide a shorter trip length 1 - Provides a moderate reduction in overall trip length or addresses a gap/barrier 2 - Provides a significant reduction in overall trip length or eliminates a gap/barrier
(2) Safety and Health: enable people to safely walk, run or cycle in and through the City.	Increase the safety of bicycle and pedestrian route users.	Does the project... Address a location with a proven crash history?	0 - Improvement is not within an identified crash history location 1 - Improves existing facilities or provides new facilities at crash history location 2 - Implements safety related improvement based on data specific to the crash history location
		Does the project... Implement a safety related solution or improves the safety performance of a facility based on available research and/or best management practices (BMP) regarding bicycle/pedestrian safety?	0 - Improvement is not safety related or creates a potential safety concern 1 - Moderately helps to improve safety 2 - Implements a BMP aimed at improving safety at a specific location or corridor
	Minimize conflicts between people biking and walking and farm equipment, logging trucks and forestry related trucks.	Does the project... Eliminate or reduce conflicts between large scale vehicles and bicycles/pedestrians?	0 - Does not address a known conflict 1 - Moderately helps to reduce conflict 2 - Reduces conflict by providing buffer or other known safety related measure
(3) Accessibility: develop a bicycle and pedestrian system that is accessible for all ages, skill levels, and interests.	Provide well-designed, visible, safe, and convenient access points and street/highway crossings.	Does the project... Provide new or modify existing crossing(s)/access point(s) with enhanced safety measures?	0 - Does not improve a crossing or access point 1 - Improves or provides a new crossing or access point on a local road 2 - Improves or provides a new crossing or access point on a collector or higher classified road
	Implement the community vision for the overall bicycle and pedestrian route design, expressed through different treatments and design themes for distinctive sections.	Does the project... (1) Enhance access to system for all users? - or - (2) Improve the level of traffic stress?	0 - Does not improve the system for all users 1 - Moderate improvements for all users 2 - Significant improvements for all users or improves overall level of traffic stress
(4) Financial Responsibility: use resources efficiently and invest in infrastructure that will serve the City for years to come.	Provide adequate funding to maintain the existing active transportation system while prioritizing investments in future facilities.	Does the project... Extend the life of an existing facility or provide a new facility with additional maintenance costs?	0 - Provides a new facility with projected high maintenance costs 1 - Provides a new facility with projected low maintenance costs 2 - Extends the life of an existing facility or replaces eliminates the need for an existing facility
		What is the feasibility of the project? Do barriers exist, such as land ownership, limited right-of-way, presence of significant natural resources, or regulation/zoning restrictions?	0 - Significant barriers appear difficult or impossible to overcome 1 - Barriers exist, but improvement seems achievable 2 - No known barriers exist
(5) Economic Vitality: encourage tourism and investment in the downtown core.	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.	Does the project... Provide access to key attractors or destinations? - or - Provide access to undeveloped land (expanded UGB)?	0 - Does not access an attractor/destination 1 - Improves existing access to one or more attractor(s)/destination(s) 2 - Provides new access to one or more attractor(s)/destination(S)
		Does the project... Provide access or link to an existing or proposed regional trail network?	0 - Provides an internal link within a neighborhood 1 - Improves system wide network connectivity within the City of Banks 2 - Connects to an existing regional trail or planned trail identified in a regional plan

PROPOSED PROJECT LIST

This project list provided in *Attachment A* contains information about each project and the results of the evaluation process detailed in Table 1. The columns are described below:

- **ID:** unique identifying number randomly assigned to each proposed project.
- **Project Name/Description:** general description of the proposed project with the key elements identified.
- **Location:** location of the project, if applicable. The projects are also mapped on Figure A in *Attachment A*.
- **Purpose:** what the proposed project is intended to accomplish. Identifies if the proposed project addresses an identified gap in the existing bicycle or pedestrian infrastructure or incorporates an element that would improve or eliminate a known deficiency.
- **Category:** projects are classified in to general categories, including safety, access, pedestrian, crossing, education, etc.
- **Source:** identifies whether the project came from a previous plan, SAC, public, or project management team (PMT).
- **Cost estimate:** planning-level cost estimate, intended to provide a sense of magnitude.
- **Goal assessment:** the results of the evaluation process in Table 1 are shown for each goal, using the ratings 0, 1, and 2.
- **Total Goal Score:** the sum of the five goal scores.
- **Evaluation Priority:** the initial suggested priority for the project, based on the total goal score. Note that these are initial ratings and intended to provide a basis for further discussion. There are three possible priorities:
 - **High Priority:** if the total goal score is over 7.5, the project is categorized as a high priority and recommended to be included in the next stage of the BPP.
 - **Medium Priority:** if the total goal score is between 5 and 7.5, the project is categorized as a medium priority and recommended to be reevaluated for inclusion in the next stage of the BPP with possible revisions.
 - **Low Priority:** if the total goal score is under 5, the project is categorized as a low priority and recommended it be further assessed for potential removal from the BPP.
- **Notes:** this column includes any notes about the project, total goal score, or evaluation priority.

Table 2 on page 7 provides an example project from the list in *Attachment A*, showing the project information and indicating the degree to which the project supports each of the goals identified in the BPP.

NEXT STEPS

This memorandum was reviewed by the Stakeholder Advisory Committee (SAC) during SAC Meeting #2 on April 16th, 2015. SAC members were invited to comment on the methodology for evaluating the project list, suggest any additional projects that should be included on the list, and propose any changes to the priorities reflected in the project list. The project team reviewed the SAC's feedback and produced this updated memorandum and the updated project list shown in *Attachment B*. This updated project list was presented to the public during the May Open House for comment as well.

Table 2 Proposed Project List Example

BBPP ID	Project Name/Description	Location	Purpose	Category	Source	Cost Estimate	Goal Assessment					Total Goal Score	Evaluation Priority	Notes
							Goal 1	Goal 2	Goal 3	Goal 4	Goal 5			
1	Install advanced warning signage	Intersection of NW Banks Road and NW Aerts Road	Improve safety at the NW Banks Road and NW Aerts Road	Safety	Transportation System Plan	\$14,000	0.0	0.7	1.5	1.5	1.0	4.7	Low	-

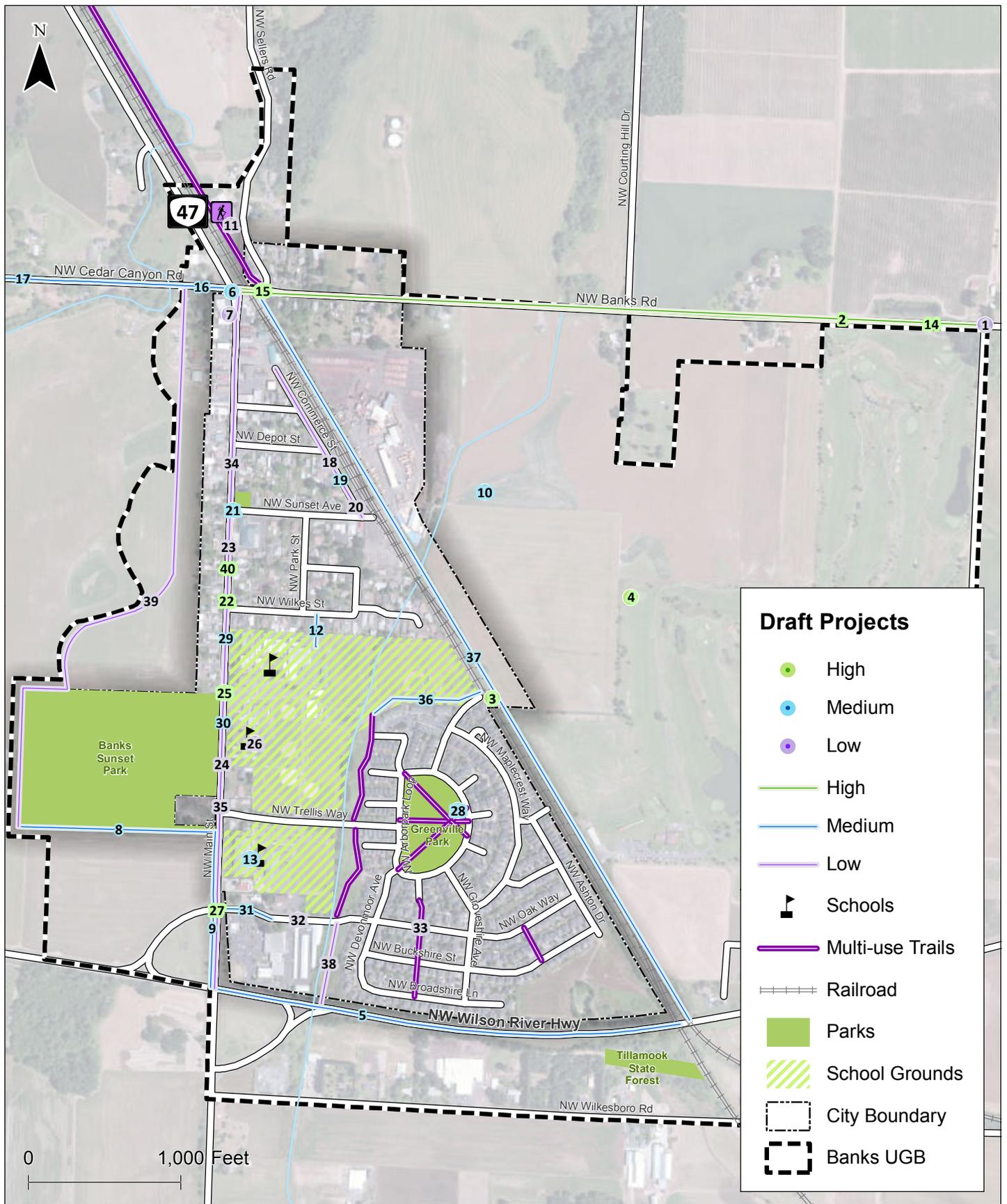
Goal 1 = Livability, Goal 2 = Safety and Health, Goal 3 = Accessibility, Goal 4 = Financial Responsibility, Goal 5 = Economic Vitality

Attachment A: Draft Project List 4.7.15

ID	Project Name/Description	Location	Purpose	Category	Source	Cost Estimate	Goal Assessment					Total Goal Score	Evaluation Priority	Notes
							1.Livability	2.Safety & Health	3.Accessibility	4.Financial Responsibility	5.Economic Vitality			
15	Install a rectangular rapid flash beacon (RRFB) or other similar treatment at pedestrian crossing on NW Banks Road	Pedestrian crossing on NW Banks Road accessing the Banks Trailhead	To provide increased safety at pedestrian crossings accessing the Banks-Vernonia trailhead parking	Safety	Tech Memo #3	\$25,000 - \$50,000	1.5	1.7	2.0	1.5	2.0	8.7	High	
2	Reconstruct with widened sidewalks	NW Banks Road between Main Street to US 26	Provide dedicated pedestrian facilities on NW Banks Road	Pedestrian	TSP	> \$1,000,000	2.0	2.0	1.0	1.5	2.0	8.5	High	Recommend making low priority due to buildout
14	Install bicycle lanes, shoulders, or an off-street multi-use path	NW Banks Road between Main Street to US 26	Provide dedicated bicycle facilities on NW Banks Road	Bicycle	SAC #1	\$100,000 - \$500,000	2.0	2.0	1.0	1.0	2.0	8.0	High	Recommend making low priority due to buildout
22	Install bicycle lanes	Main Street between the high school and Sunset Avenue	Extend existing bicycle lanes north to enhance safety and comfort for bicyclists	Bicycle	Walking Tour / Tech Memo #3	< \$25,000	2.0	2.0	1.0	1.0	2.0	8.0	High	
40	Conduct a pilot project to install bike lanes	Main Street between Banks HS and Depot Street	Test the feasibility and impact of providing bike lanes north of Sunset Park to the start of the downtown commercial area	Bicycle	Tech Memo #3	< \$25,000	2.0	2.0	1.0	1.0	2.0	8.0	High	
6	Install a marked crosswalk	NW Banks Road/Main Street /NW Cedar Canyon Road/ Highway 47 intersection	Improve safety at the NW Banks Road/Main Street /NW Cedar Canyon Road/ Highway 47 intersection	Safety, crossing	Main Street Plan	< \$25,000	1.0	1.3	1.5	2.0	2.0	7.8	High	
25	Relocate the pedestrian crosswalk and overhead beacon to the north or south of the high school driveways	Main Street, north or south of the two school driveways	Improve safety and visibility of the pedestrian crosswalk across Main Street at high school between two driveways	Pedestrian	Walking Tour	\$25,000 - \$50,000	1.0	1.7	2.0	2.0	1.0	7.7	High	
3	Construct pedestrian/bicycle overcrossing of railroad	At railroad, just north of Arbor Village neighborhood	Construct pedestrian/bicycle overcrossing of railroad to connect existing development to UGB expansion area	Crossing	TSP	\$500,000 - \$1,000,000	2.0	0.7	2.0	1.0	2.0	7.7	High	
4	Conduct Access to UGB Expansion Area feasibility study	TBD	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	Access	SAC #1 / Public /TSP	\$50,000 - \$100,000	2.0	0.7	2.0	1.5	1.5	7.7	High	
27	Install sidewalk to fill the existing gap	West side of Main Street between Sunset Park and the Highway 6 / Main Street intersection	Provide pedestrian facilities on both sides of the Main Street corridor	Pedestrian	Tech Memo #3	\$50,000 - \$100,000	1.5	2.0	1.0	1.0	2.0	7.5	High	
28	Install a crosswalk and review opportunities for crossing enhancement, such as a raised speed table, overhead flashers, or traffic control	Across Main Street at the NW Trellis Court/Main Street intersection	Provide safe pedestrian access to Sunset Park	Pedestrian	Walking Tour	\$25,000 - \$50,000	1.5	1.3	2.0	1.5	1.0	7.3	Medium	
21	Install pedestrian crossing and review opportunities for crossing enhancement, such as raised speed tables or overhead flashers	Sunset Avenue / Main Street intersection	Improve safety at the Sunset Avenue / Main Street intersection	Crossing, Safety	Walking Tour	\$25,000 - \$50,000	1.0	1.7	2.0	1.5	1.0	7.2	Medium	

ID	Project Name/Description	Location	Purpose	Category	Source	Cost Estimate	Goal Assessment					Total Goal Score	Evaluation Priority	Notes
							1.Livability	2.Safety & Health	3.Accessibility	4.Financial Responsibility	5.Economic Vitality			
37	Develop a state trail connecting Banks-Vernonia Trail to Highway 6	Along railroad track between the Banks Trailhead and Highway 6	Provide a protected bicycle and pedestrian connection to the Banks Trailhead from Highway 6	Pedestrian, Bicycle	Park & Rec Plan	\$100,000 - \$500,000	2.0	1.7	1.0	0.5	2.0	7.2	Medium	
8	Install a separated trail	along the westside circulator road and connect to Main Street (OR47) paralleling a new proposed road	Provide an alternative to Main Street, access future growth to the west, and align with future regional trail plans	Pedestrian, Bicycle	CCRT / Public	\$100,000 - \$500,000	2.0	1.7	1.0	0.5	1.5	6.7	Medium	
12	Provide north/south pedestrian/bicycle access between Wilkes Street and the high school/middle school	Connect Wilkes Street with the schools to the south	Provide a direct connection between the schools and residential areas to the north	Pedestrian, Bicycle	SAC #1	< \$25,000	2.0	0.7	2.0	1.0	1.0	6.7	Medium	
5	Install a separated walking path	Parallel to Highway 6 between NW Main Street and railroad	Provide dedicated pedestrian facilities along Highway 6	Pedestrian	Park & Rec Plan	\$100,000 - \$500,000	2.0	1.0	1.0	0.5	1.5	6.0	Medium	
9	Install a separated trail	Along Main Street, south of downtown, to the OR 6 undercrossing	Eliminate conflicts between bicycles and vehicle traffic and align with future regional trail plans	Pedestrian, Bicycle	CCRT	\$100,000 - \$500,000	2.0	1.3	1.0	0.0	1.5	5.8	Medium	
13	Conduct a vehicle circulation study at the elementary and middle schools	Banks Elementary School, Banks Middle School	Further study the issue of back-ups from school pick-up on to Main Street, look for opportunities to improve circulation at schools	Access, Parking		\$50,000 - \$100,000	0.0	1.7	2.0	2.0	0.0	5.7	Medium	
31	Extend bicycle lanes on NW Oak Way to the NW Oak Way/Main Street intersection	NW Oak Way	Eliminate the bicycle lane gap along NW Oak Way	Bicycle	Tech Memo #3	< \$25,000	1.0	2.0	1.5	1.0	0.0	5.5	Medium	
10	Install bicycle way-finding signs	Way-finding kiosks installed 3 locations: Main St/Hwy 6, Log Cabin Park, and Banks-Vernonia Trailhead	Give bicyclists and pedestrians direction to area amenities, tourist locations, the Banks Trailhead, and economic centers	Education	SAC #1	\$25,000 - \$50,000	1.0	0.3	0.5	1.5	2.0	5.3	Medium	Recommend high priority due to low cost and high value
29	Install curb extensions at select intersections	Main Street corridor	Provide speed control along Main Street	Safety	SAC #1	\$25,000 - \$50,000	1.0	1.7	1.0	1.5	0.0	5.2	Medium	
30	Install dynamic radar-activated speed limit signs	Main Street corridor	Provide speed control along Main Street	Safety	SAC #1	\$25,000 - \$50,000	1.0	1.7	1.0	1.5	0.0	5.2	Medium	
16	Install bicycle lanes, shoulders, or an off-street multi-use path	NW Cedar Canyon Road between Main Street and the future White Barn/Killin Wetlands parking area	Provide bicycle facilities accessing the potential future parking lot at the White Barn and Killin Wetlands	Bicycle	SAC #1	\$50,000 - \$500,000	1.0	0.7	1.0	1.0	1.5	5.2	Medium	
17	Install sidewalk or an off-street multi-use path	NW Cedar Canyon Road between Main Street and the future White Barn/Killin Wetlands parking area	Provide pedestrian facilities accessing the potential future parking lot at the White Barn and Killin Wetlands	Pedestrian	SAC #1	\$50,000 - \$500,000	1.0	0.7	1.0	1.0	1.5	5.2	Medium	
36	Develop a City Trail	Between the existing private trail on the west side of Arbor Village to the proposed railroad crossing	Connect Arbor Village to the proposed bicycle/pedestrian railroad crossing	Pedestrian, Bicycle	Park & Rec Plan	\$100,000 - \$500,000	1.5	0.7	1.0	0.5	1.5	5.2	Medium	

ID	Project Name/Description	Location	Purpose	Category	Source	Cost Estimate	Goal Assessment					Total Goal Score	Evaluation Priority	Notes
							1.Livability	2.Safety & Health	3.Accessibility	4.Financial Responsibility	5.Economic Vitality			
19	Install sidewalk	NE Commerce Street between Sunset Avenue and Market Street	Provide pedestrian facilities on Commerce Street	Pedestrian	SAC #1	\$50,000 - \$100,000	1.5	1.0	1.0	1.0	0.5	5.0	Medium	
24	Install pedestrian-scale lighting	Main Street corridor	Improve lighting along Main Street, particularly for pedestrians	Pedestrian, Safety	SAC #1	\$50,000 - \$100,000	0.5	1.3	1.5	0.5	1.0	4.8	Low	
1	Install advanced warning signage	Intersection of NW Banks Road and NW Aerts Road	Improve safety at the NW Banks Road and NW Aerts Road	Safety	TSP	< \$25,000	0.0	0.7	1.5	1.5	1.0	4.7	Low	
23	Resurface Main Street	Main Street between Wilkes Street and Sunset Avenue	Eliminate cracks running parallel along Main Street	Safety	Walking Tour	\$100,000 - \$500,000	0.5	0.7	0.5	2.0	1.0	4.7	Low	
38	Extend the existing private trail	On the west side of Arbor Village from Oak to Highway 6	Connect Arbor Village to Highway 6	Pedestrian, Bicycle	Park & Rec Plan	\$50,000 - \$100,000	1.5	0.7	1.0	0.5	1.0	4.7	Low	
7	Install new sidewalk and curb	SW corner of Five Star complex	Improve safety at the NW Banks Road/Main Street /NW Cedar Canyon Road/ Highway 47 intersection	Safety, Pedestrian	Main Street Plan	< \$25,000	0.5	1.3	0.5	1.0	1.0	4.3	Low	
20	Review sight distance on Commerce Street and address deficiencies	NE Commerce Street between Sunset Avenue and Market Street	Eliminate sight distance issues along Commerce Street	Safety	SAC #1	\$50,000 - \$100,000	0.5	1.0	1.0	1.5	0.0	4.0	Low	
35	Review opportunities to install bicycle parking	Main Street corridor	Provide bicycle parking, particularly near businesses and other destinations	Bicycle	Main Street Plan	< \$25,000	0.5	0.0	0.5	2.0	1.0	4.0	Low	
32	Improve sight distance and lighting	NW Oak Way at post office entrance	To replace the missing light and shrub at crosswalk accessing the post office	Safety	SAC #1	< \$25,000	0.0	1.3	1.0	1.5	0.0	3.8	Low	
33	Scale back / trim / remove landscaping and trees causing sight distance issues; install advance warn ing signs for crossings	Various locations within Arbor Village neighborhood	Increase sight distance at crosswalks within Arbor Village neighborhood	Safety	SAC #1	< \$25,000	0.0	0.7	1.0	2.0	0.0	3.7	Low	
18	Resurface Commerce Street	NE Commerce Street between Sunset Avenue and Market Street	Eliminate potholes on Commerce Street	Safety	SAC #1	< \$25,000	0.5	0.3	0.5	2.0	0.0	3.3	Low	
34	Review opportunities to install street furniture (benches, water fountains, trash cans, etc.) and create pedestrian gathering locations	Main Street corridor	Improve pedestrian environment and aesthetics on Main Street Corridor	Pedestrian	Main Street Plan	\$25,000 - \$50,000	0.5	0.0	0.5	1.0	1.0	3.0	Low	
11	Conduct a Parking Management Study for the Banks Trailhead	Banks-Vernonia Trailhead	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	Parking	SAC #1	\$50,000 - \$100,000	0.0	0.0	0.5	1.0	1.0	2.5	Low	
26	Install bicycle parking at schools	Area schools	Addresses the lack of bicycle parking at the schools	Other	SAC #1	< \$25,000	0.0	0.0	0.5	2.0	0.0	2.5	Low	



H:\profile\18078 - City of Banks Bicycle & Ped Master Plan\gis\Draft Projects April 2015.mxd - Klausen - 8:37 AM 4/10/2015



**Draft Project List
Banks, Oregon**

**Figure
A**

Attachment B: Draft Project List post SAC Meeting

ID	Project Name/Description	Location	Purpose	Category	Grouping	Source	Cost Estimate	Total Goal Score	Initial Evaluation Priority	Pre-SAC Meeting PMT Notes	SAC Notes	SAC Recommendations	Updated Evaluation Priority	Reasoning
15	Install a rectangular rapid flash beacon (RRFB) or other similar treatment	Pedestrian crossing on NW Banks Road accessing the Banks Trailhead	Provide increased safety at pedestrian crossings accessing the Banks-Vernonia	Safety	Trailhead access	Tech Memo #3	\$25,000 - \$50,000	8.7	High			Medium(1)	High	
2	Reconstruct with widened sidewalks	NW Banks Road between Main Street and US 26	Provide dedicated pedestrian facilities on NW Banks Road	Pedestrian	UGB Access	TSP	> \$1,000,000	8.5	High	Recommend making low priority due to build out	agree with note	Low (3)	Low	
14	Install bicycle lanes, shoulders, or an off-street multi-use path	NW Banks Road between Main Street and US 26	Provide dedicated bicycle facilities on NW Banks Road	Bicycle	UGB Access	SAC #1	\$100,000 - \$500,000	8.0	High	Recommend making low priority due to build out	agree with note	Low (3)	Low	
22	Install bicycle lanes	Main Street between Banks High School and Sunset Avenue	Extend existing bicycle lanes north to enhance safety and comfort for bicyclists	Bicycle	Trailhead access/ Main Street	Walking Tour / Tech Memo #3	< \$25,000	8.0	High		doesn't make the connection complete	Low (2) Medium (1)	Medium	
40	Conduct a pilot project to install bike lanes	Main Street between Banks High School and Depot Street	Test the feasibility and impact of providing bike lanes north of Sunset Park to the start of the downtown commercial area	Bicycle	Trailhead access/ Main Street	Tech Memo #3	< \$25,000	8.0	High		doesn't make the connection complete Passing law If bike lane does not go all the way to the trailhead then not worth it	Low (2) Medium (1)	Medium	
78 (6)	Install a marked crosswalk	Across the south leg of the NW Banks Road/Main Street intersection	Improve safety at the NW Banks Road/Main Street /NW Cedar Canyon Road/ Highway 47 intersection	Safety, crossing	Trailhead access/ Main Street	Main Street Plan	< \$25,000	7.8	High		depends on where it is. Low if project 7 is low. Review #7 with this must match to project 7	Low (1)	High	
25	Modify/enhance the pedestrian crossing and review feasibility of consolidating driveways	Main Street crossing at Banks High School	Improve safety and visibility of the pedestrian crosswalk across Main Street at high school between two driveways	Pedestrian	School related	Walking Tour	\$25,000 - \$50,000	7.7	High			-	High	
4	Conduct access to UGB expansion area feasibility study to identify the preferred location for a pedestrian/bicycle overcrossing of the	UGB expansion area	Identify potential access points where bicycle and pedestrian facilities could be installed to connect the existing network to the expanded UGB area and eliminate	Access	UGB Access	SAC #1 / Public /TSP	\$50,000 - \$100,000	7.7	High		can wait till later Low for now Consider UGB	Low (3)	High	Study is necessary to inform railroad crossings
37B (3)	Construct pedestrian/bicycle overcrossing of railroad	At railroad, just north of Arbor Village neighborhood	Construct pedestrian/bicycle overcrossing of railroad to connect existing development to UGB expansion area	Crossing	UGB Access	TSP	\$500,000 - \$1,000,000	7.7	High		research at grade, attach to 37 Low for now unless it connects to Banks Rd at grade high priority, tied to project 37 Consider UGB Connect to project 37. Consider at-grade option.	Low (3)	High	Project 37 given high priority
27	Install sidewalk to fill the existing gap	West side of Main Street between Sunset Park and the Main Street/NW Oak Way intersection	Provide pedestrian facilities on both sides of the Main Street corridor	Pedestrian	Trailhead access/ Main Street	Tech Memo #3	\$50,000 - \$100,000	7.5	High		Oakway to Sunset Park Sidewalk will eventually be constructed with development (could be paid for)	-	High	
28	Install a crosswalk and review opportunities for crossing enhancements, such as a bulbouts, overhead flashers or traffic control.	Across Main Street at NW Trellis Court	Provide safe pedestrian access to Sunset Park	Pedestrian	Main Street	Walking Tour	\$25,000 - \$50,000	7.3	Medium			-	Medium	
21	Install a crosswalk and review opportunities for crossing	Across Main Street at Sunset Avenue	Improve safety at the Sunset Avenue / Main Street intersection	Crossing, Safety	Main Street	Walking Tour	\$25,000 - \$50,000	7.2	Medium		it is already one of the better crossings, others need help more	Low (1)	Medium	
37	Develop a state trail connecting Banks-Vernonia Trail to Highway 6	On the east side of the railroad track between the Banks Trailhead and Highway 6	Provide a protected bicycle and pedestrian connection to the Banks Trailhead from Highway 6	Pedestrian, Bicycle	Trailhead access	Park & Rec Plan	\$100,000 - \$500,000	7.2	Medium		This is the highest priority project for connectivity, attach to project 3 Tied to project 3, which side of tracks? When position on the draft project list is corrected Project located on west side of tracks	High (3)	High	There is insufficient ROW on the west side of the RR (25 feet between rail and path required). The path on the east side will be constructed with future development.
8	Install a multi-use trail 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	Provide an alternative to Main Street, access future growth to the west, and align with future regional trail plans	Pedestrian, Bicycle	Regional plans	CCRT	\$100,000 - \$500,000	6.7	Medium			Low (1)	Medium	
12	Provide north/south pedestrian/bicycle access	Between Wilkes Street and the schools to the south	Provide a direct connection between the schools and residential areas to the north	Pedestrian, Bicycle	School related	PMT	< \$25,000	6.7	Medium		School dsitric may be invovled in property purchase	Low (2)	Medium	Connection important for school access and potentially for access to future RR crossing
5	Install a separated walking path	Parallel to Highway 6 between NW Main Street and railroad	Provide dedicated pedestrian facilities along Highway 6	Pedestrian	Other	Park & Rec Plan	\$100,000 - \$500,000	6.0	Medium		Low or not at all To nowhere right now	Low (4)	Low	
9	Install a separated trail	Along Main Street, south of downtown, to the OR 6 undercrossing	Eliminate conflicts between bicycles and vehicle traffic and align with future	Pedestrian, Bicycle		CCRT	\$100,000 - \$500,000	5.8	Medium		Land owners impacted	Low (3)	Low	
13	Conduct a vehicle circulation study at the elementary and middle schools	Banks Elementary School, Banks Middle School	Further study the issue of back-ups from school pick-up on to Main Street, look for opportunities to improve circulation at schools	Access, Parking	School related	SAC #1	\$50,000 - \$100,000	5.7	Medium		School is too close to Hwy 47 School has looked at options for a long time, but solutions are cost prohibitive. The school is located too close to the highway.	Low (2) High (1)	High	
31	Extend bicycle lanes	On NW Oak Way between the intersection of Main Street and existing bike lanes	Eliminate the bicycle lane gap along NW Oak Way	Bicycle	Other	Tech Memo #3	< \$25,000	5.5	Medium		doesn't seem realistic High priority	Low (1) High (2)	High	
10	Install bicycle way-finding signs	Way-finding kiosks installed 3 locations: Main St/Hwy 6, Log Cabin Park, and Banks-Vernonia Trailhead	Give bicyclists and pedestrians direction to area amenities, tourist locations, the Banks Trailhead, and economic centers	Education	Trailhead access	SAC #1	\$25,000 - \$50,000	5.3	Medium	Recommend high priority due to low cost and high value	Signs would likely be state signs.	Low (2) High (1)	Medium	
29	Install curb extensions at select intersections	Main Street corridor	Provide speed control along Main Street	Safety	Main Street	SAC #1	\$25,000 - \$50,000	5.2	Medium		Low priority. Farm equipment uses roadway. Curb extensions could be disadvantage for cyclists.	Low (2)	Medium
30	Install dynamic radar-activated speed limit signs	Main Street corridor	Provide speed control along Main Street	Safety	Main Street	SAC #1	\$25,000 - \$50,000	5.2	Medium		Maybe Issue is enforcement. Consider radar enforcement	Low (2) High (1)	Medium	
16	Install bicycle lanes, shoulders, or an off-street multi-use path	NW Cedar Canyon Road between Main Street and the future White Barn/Killin Wetlands parking area	Provide bicycle facilities accessing the potential future parking lot at the White Barn and Killin Wetlands	Bicycle	Other	SAC #1	\$50,000 - \$500,000	5.2	Medium		Not in city	Low (3)	Low (Suggest project to County)	
17	Install sidewalk or an off-street multi-use path	NW Cedar Canyon Road between Main Street and the future White Barn/Killin	Provide pedestrian facilities accessing the potential future parking lot at the	Pedestrian	Other	SAC #1	\$50,000 - \$500,000	5.2	Medium		Not in city	Low (2)	Low (Suggest project to County)	
36	Develop a City Trail	Between the existing private trail on the west side of Arbor Village to the proposed railroad crossing	Connect Arbor Village to the proposed bicycle/pedestrian railroad crossing	Pedestrian, Bicycle	UGB Access	Park & Rec Plan	\$100,000 - \$500,000	5.2	Medium		attach to project 37 High if project 37 is high Partner with project 37.	High (3)	High	

ID	Project Name/Description	Location	Purpose	Category	Grouping	Source	Cost Estimate	Total Goal Score	Initial Evaluation Priority	Pre-SAC Meeting PMT Notes	SAC Notes	SAC Recommendations	Updated Evaluation Priority	Reasoning
19	Install sidewalk on the east side of the street and fill any gaps	NE Commerce Street between Sunset Avenue and Market Street	Provide pedestrian facilities on both sides of Commerce Street	Pedestrian	Other	SAC #1	\$50,000 - \$100,000	5.0	Medium		Project fills gaps.	-	Low	
24	Install pedestrian-scale lighting	Main Street corridor	Improve lighting along Main Street, particularly for pedestrians	Pedestrian, Safety	Main Street	SAC #1	\$50,000 - \$100,000	4.8	Low			-	Low	
1	Install advanced warning signage	Intersection of NW Banks Road and NW Aerts Road	Improve safety at the NW Banks Road and NW Aerts Road intersection	Safety	Other	TSP	< \$25,000	4.7	Low			-	Low	
23	Resurface Main Street	Main Street between Wilkes Street and Sunset Avenue	Eliminate cracks running parallel along Main Street	Safety	Main Street	Walking Tour	\$100,000 - \$500,000	4.7	Low		let ODOT do it some day ODOT	Remove (1)	Low (Suggest project to ODOT)	
38	Extend the existing private trail	On the west side of Arbor Village from Oak to Highway 6	Connect Arbor Village to Highway 6	Pedestrian, Bicycle	Other	Park & Rec Plan	\$50,000 - \$100,000	4.7	Low			Remove (1) Low (1)	Low	Consider option to go under Hwy 6
7	Install new sidewalk and curb	West side of Main Street along Five Star complex	Improve safety at the NW Banks Road/Main Street /NW Cedar Canyon Road/ Highway 47 intersection	Safety, Pedestrian	Trailhead access/ Main Street	Main Street Plan	< \$25,000	4.3	Low		connect to project 6 With project 6 High priority - match with project #6.	High (1)	High	
20	Review sight distance on Commerce Street and address deficiencies	NE Commerce Street between Sunset Avenue and Market Street	Eliminate sight distance issues along Commerce Street	Safety	Other	SAC #1	\$50,000 - \$100,000	4.0	Low			-	Low	
35	Review opportunities to install bicycle parking	Main Street corridor	Provide bicycle parking, particularly near businesses and other destinations	Bicycle	Main Street	Main Street Plan	< \$25,000	4.0	Low		Explore using vehicle parking space for bicycle parking.	Medium (1)	Medium	
32	Improve sight distance and lighting	NW Oak Way at post office entrance	Improve safety and visibility at the crosswalk accessing the post office	Safety	Other	SAC #1	< \$25,000	3.8	Low	High		High (1)	Medium	
33	Scale back / trim / remove landscaping and trees causing sight distance issues; install advance warning signs for crossings	Various locations within Arbor Village neighborhood	Increase sight distance at crosswalks within Arbor Village neighborhood	Safety	Other	SAC #1	< \$25,000	3.7	Low		too vague	-	Low	
18	Resurface Commerce Street	NE Commerce Street between Sunset Avenue and Market Street	Eliminate potholes on Commerce Street	Safety	Other	SAC #1	< \$25,000	3.3	Low			-	Low	
34	Review opportunities to install street furniture (benches, water fountains, trash cans, etc.) and create pedestrian gathering locations	Main Street corridor	Improve pedestrian environment and aesthetics on Main Street Corridor	Pedestrian	Main Street	Main Street Plan	\$25,000 - \$50,000	3.0	Low		wait on Main Street Plan	Low (1)	Low	
11	Conduct a Parking Management Study for the Banks Trailhead	Banks-Vernonia Trailhead	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	Parking	Trailhead access	SAC #1	\$50,000 - \$100,000	2.5	Low		Workshop	Medium (1)	Medium	
26	Install bicycle parking at schools	Area schools	Addresses the lack of bicycle parking at the schools	Other	School related	SAC #1	< \$25,000	2.5	Low		Just installed at Middle School Middle schools just added bike parking.	High (1)	Medium	