


# 2014 Bellingham Bicycle Master Plan

Toole Design Group

CITY OF BELLINGHAM WASHINGTON

transpoGROUP

# Acknowledgements

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# Executive Summary

Bellingham is a very livable City and enjoys a non-motorized transportation mode share that is one of the highest in the State of Washington. Bellingham has implemented a multimodal approach to transportation planning for many years, which ensures that pedestrian and bicycle facilities are included in all City transportation projects. The Bellingham Bicycle Master Plan (the Plan) provides a comprehensive roadmap for increasing bicycle mode share while helping meet Bellingham's goals of reduced traffic congestion, improved air and water quality, enhanced public health and quality of life.

The Plan is ambitious, calling for development of over 134 miles of bicycle facilities, which when combined with existing facilities will result in an on-street, comprehensive citywide network of approximately 170 miles. It also calls for education, enforcement and encouragement programs that are important for developing a culture that supports bicycling.

The Plan vision and goals form the basis for the recommended network, infrastructure improvements, program and policy recommendations; and the implementation strategies. Ultimately, the Plan is structured around creating actions to implement the vision and goals.

## Plan Vision

*Bicyclists of all ages and abilities have access to a safe, well-connected network linking all areas of Bellingham.*

## Plan Goals

***Safety:*** Improve safety of bicyclists by promoting safe bicycling, driving, and walking behaviors and building appropriate, well-designed facilities.

***Connectivity:*** Complete a connected network of bikeways linking and providing access to all neighborhoods and key destinations.

***Equity:*** Provide bicycling access for all through equity in public engagement, service delivery and capital investment.

***Livability:*** Build a vibrant and healthy community by creating a welcoming environment for bicycle riding.

***Public and Environmental Health:*** Develop a bicycle network that enables active, healthy lifestyles and sustains a healthy environment.

***Choice:*** Develop infrastructure that creates viable transportation choices, and accommodates multimodal trips.

***Education:*** Provide education on the rights and responsibilities of the users of all transportation modes.

***Mode shift:*** Increase the number and percent of bicycle trips citywide.

***Economy:*** Enhance economic vibrancy by creating a bicycle friendly community that is an attractive place to live and work.

## Target Audience

According to the 2012 American Association of State Highway and Transportation Officials (AASHTO) Bike Guide, "skill level" is one of the most important factors to consider when developing a bicycle network. The AASHTO Bike Guide categorizes bicyclists as "experienced and confident" and "casual and less confident," with the majority of the population (estimated at 60 percent) falling into the latter category, including children, recreational riders and individuals who prefer off-street facilities or those on low-traffic streets. In keeping with the vision to provide a network that serves bicyclists of all ages and abilities, the Plan focuses on providing a positive riding environment for the "casual and less confident" riders, recommending over 50 miles of bicycle boulevards on non-arterial streets along with 45 miles of bicycle lanes.

## Public Involvement

The public was involved in all phases of Plan development. The public engagement process was structured to involve novice and more experienced bicyclists from all areas of the City. A range of strategies were employed in order to maximize outreach efforts, including two open houses, an online survey and interactive map; and seven focus groups. The cumulative outcome of the public involvement is reflected in the Plan vision, goals and recommendations.

A Steering Committee was formed to provide guidance on plan development and to ensure that the Plan content reflected the values, needs and goals of the Bellingham community. The 8-member committee represented constituents from the following sectors: public health, major employers, schools, bicycle advocacy, homeless advocacy, and the City Transportation Commission. The committee met six times throughout the planning process, providing input and direction on all aspects of the Plan including vision, goals, facility recommendations and priorities.

## Planning Process

The Plan was developed over a two-year period in 2013-2014. Initial steps included understanding the current state of bicycling in Bellingham, examining safety and access concerns, and identifying ideas for creating a more bikeable Bellingham. This understanding was established through focus groups, a public open house, interactive online tools, and a review of pertinent background documents. Information gathered was used to create a new, draft bicycle network using Geographic Information Systems (GIS) technology. The resulting study network was analyzed to assess connectivity and address any missing links. The project team conducted extensive field work to refine the study network and identify facility recommendations for each street segment identified as needing improvement. Bicycle destinations across the City were identified and scoring criteria were established and weighted according to relative importance to achieving the stated vision and goals. Projects were then scored and prioritized using a GIS-based, data-driven methodology.

## Bicycle Network Recommendations

The recommended network is comprehensive, safety focused, convenient, and comfortable, and is designed to accommodate both experienced and less experienced bicyclists while promoting bicycling as a practical form of transportation throughout the City.

The network connects all neighborhoods and provides access to key destinations throughout the City using a variety of bicycle lanes, bicycle boulevards, shared lane markings and cycle tracks. The lower-stress bicycle boulevards use local streets that are already conducive to casual, lower speed bicycling. Arterial streets provide more direct routes, improving the connectivity of the overall network. They provide a convenient connection between destinations for many types of bicyclists, including commuters, recreational and casual/occasional riders. Additionally, as bicycling continues to increase in Bellingham, a growing number of novice riders will gain enough confidence to feel comfortable riding in bike lanes on busy, arterial streets.

The Interstate 5 (I-5) corridor is a significant physical and psychological barrier to intracity bicycle travel, literally dividing the City of Bellingham in half. Creating better crossing conditions along this nine mile segment of freeway is essential to implementing a complete and connected bicycle network. The BMP reviews existing I-5 crossing conditions, and recommends short-term and long-term improvements, including potential new crossing locations.

## Prioritized Recommendations

The Plan utilized a data-driven methodology to evaluate and produce a prioritization score for each recommended project. Variables considered in the prioritization methodology are known to influence bicycling rates and included stress (speed, traffic volume, and grade), safety, connectivity, demand and equity, along with policy-based variables that emphasize network access for low-income and vulnerable populations. The analysis went through several iterations allowing opportunities for staff to calibrate individual data layers and metric weights as needed.

The prioritized list of projects will be used by the City to help determine where to target investments and should be reevaluated over time. Although this prioritization method provides a useful framework for implementation, the City should also look for opportunities to fund and implement all the projects in the recommended network, regardless of their priority level, if they can be accomplished as part of a larger road redesign, repaving, development project, or grant funding opportunity.

### Short-Term Projects

Approximately 20 miles of short-term projects have been identified as the highest priority projects for the citywide network. They provide critical access to key destinations and improve the continuity of the existing network. Short-term projects are expected to provide a high return on investment in terms of ridership.

### Medium- and Long-Term Projects

Approximately 33 miles of medium-term projects have been identified. These projects will help link key facilities identified as short-term projects and begin to complete a comprehensive network of bicycle

facilities that serve all ages and abilities. Current long-term projects envision an additional 75 miles of bicycle facilities being constructed. Long-term projects will fill remaining gaps and expand Bellingham's bicycle network into new development areas (particularly to the north and east of I-5).

## Design Guidance

Street design in Bellingham is guided by the Public Works Development Guidelines and Improvements Standards, which were adopted in 2001. However, there are instances where additional guidance will be useful in implementing the Plan. The guidance in the Plan is presented for consideration and possible integration into the Bellingham Public Works Development Guidelines and Improvements Standards. Specific guidance is provided for facility types and intersection treatments that are new or uncommon in Bellingham such as bicycle boulevards, buffered bike lanes, climbing lanes, and cycle tracks.

## Program Recommendations

Program recommendations (strategies) are intended to support the Plan vision and goals. They are important for developing a community culture that is supportive of bicycling as a safe, viable and comfortable mode of transportation. Recommendations are organized around four categories: education, enforcement, engineering, and encouragement. Examples include: education for motorists and bicyclists, increasing Bellingham Police Bicycle Patrol efforts, training for City staff on best practices in bicycle facility design, and encouraging bicycling through partnerships with local businesses, colleges and bicycle organizations.

## Implementation

The final chapter of the Plan provides a framework for implementation of the recommended bicycle facilities and programs. It discusses the level of investment required to complete the recommended network and identifies funding opportunities. Implementation strategies are presented and include: dedicating funding for facilities, studies and programs; routinely incorporating projects as part of roadway resurfacing or reconstruction; integrating plan recommendations into existing City policies, plans, and procedures; and identifying measures to track performance over time.

## Performance Measures

Performance measures are activities and measurements used to track the Plan implementation progress. They are a means of gauging progress on implementation of the Plan and the effectiveness of the facilities and programs on achieving Plan goals. Performance measures must use data that can be collected with available resources and allow year-to-year comparisons. Examples of recommended performance measures include monitoring completion of the recommended bicycle network and bicycle mode share changes, and tracking education campaign offerings and Bicycle Friendly Community achievement level status.