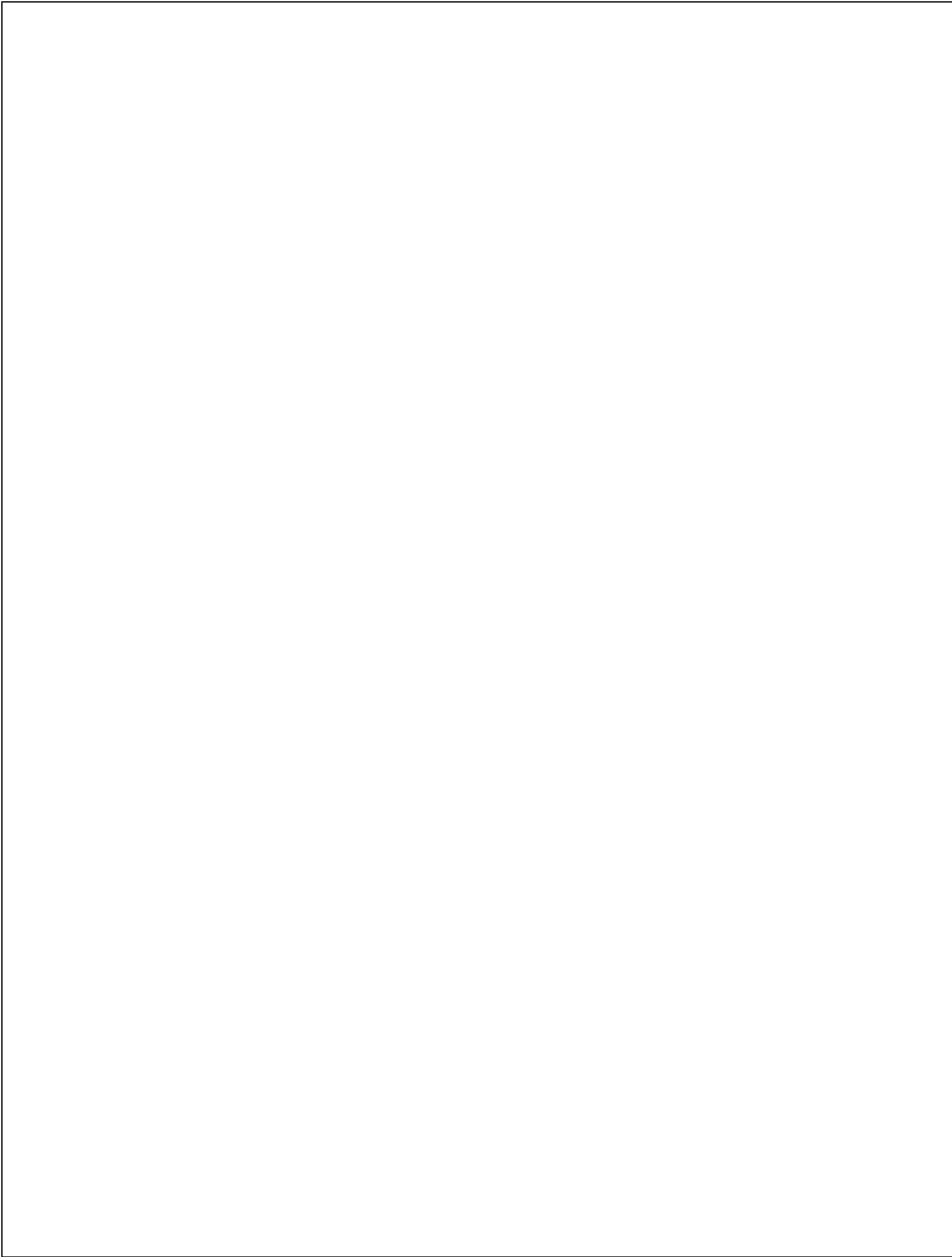


CHAPTER 3 NETWORK RECOMMENDATIONS



3 Pedestrian Network Recommendations

This chapter first describes the process and methodology used to assess the pedestrian infrastructure needs and demand. The methodology is followed by recommendations for the overall pedestrian network and specific projects that are needed to complete and improve the network.

3.1 Pedestrian Network Development

3.1.1 Needs Analysis

The Bellingham Pedestrian Master Plan recommends a robust network of on-street routes to connect people with the places they live, work, play, and learn. In order to understand which routes would provide the greatest connectivity, safety, and pedestrian comfort, a GIS-based approach was undertaken to evaluate current and future potential for walking.

The analysis performed the following tasks:

- Quantified factors that impact pedestrian activity
- Located pedestrian network gaps as potential projects
- Identified key pedestrian corridors



The market downtown is a community gathering place that attracts pedestrians from surrounding neighborhoods.

The measures quantified in the analysis were organized into four descriptive categories: live, work, play, and transit/roadway quality. Table 3-1 describes the measures used in this analysis, and Appendix B provides a more detailed description of the methodology. The results of the analysis provide a mechanism for selecting priority project corridors for developing a well-connected primary pedestrian network, as described in the next section.

Table 3-1: Needs Analysis Measure Descriptions

Category	Measure
Live	Population density, vehicle ownership inventory, journey to work mode
Work	Employment density by job sector, college enrollment density
Play	Proximity to points of interest and schools
Transportation and Roadway Quality	Proximity to regionally significant public transportation, roadway characteristics

3.2 Primary Pedestrian Network

While all roadways and paths/trails are part of the pedestrian network, there are corridors that serve as critical connections between destinations. These critical corridors act as pedestrian ‘highways’ within the system. These corridors were selected as the Primary Pedestrian Network, shown in Figure 3-1 through 3-4. The Primary Pedestrian Network for Bellingham is based on the potential to serve greater numbers of recreational and essential pedestrian trips (e.g., trips to schools, work, and grocery stores) while providing connectivity to all parts of the city. While shared-use trails are managed by the Parks and Recreation Department, rather than as a part of the street network, major trail corridors were considered as critical points of connection to the network. The Primary Pedestrian Network provides the framework for a truly connected system of infrastructure that will serve to provide access to services and recreation for all residents in the city.

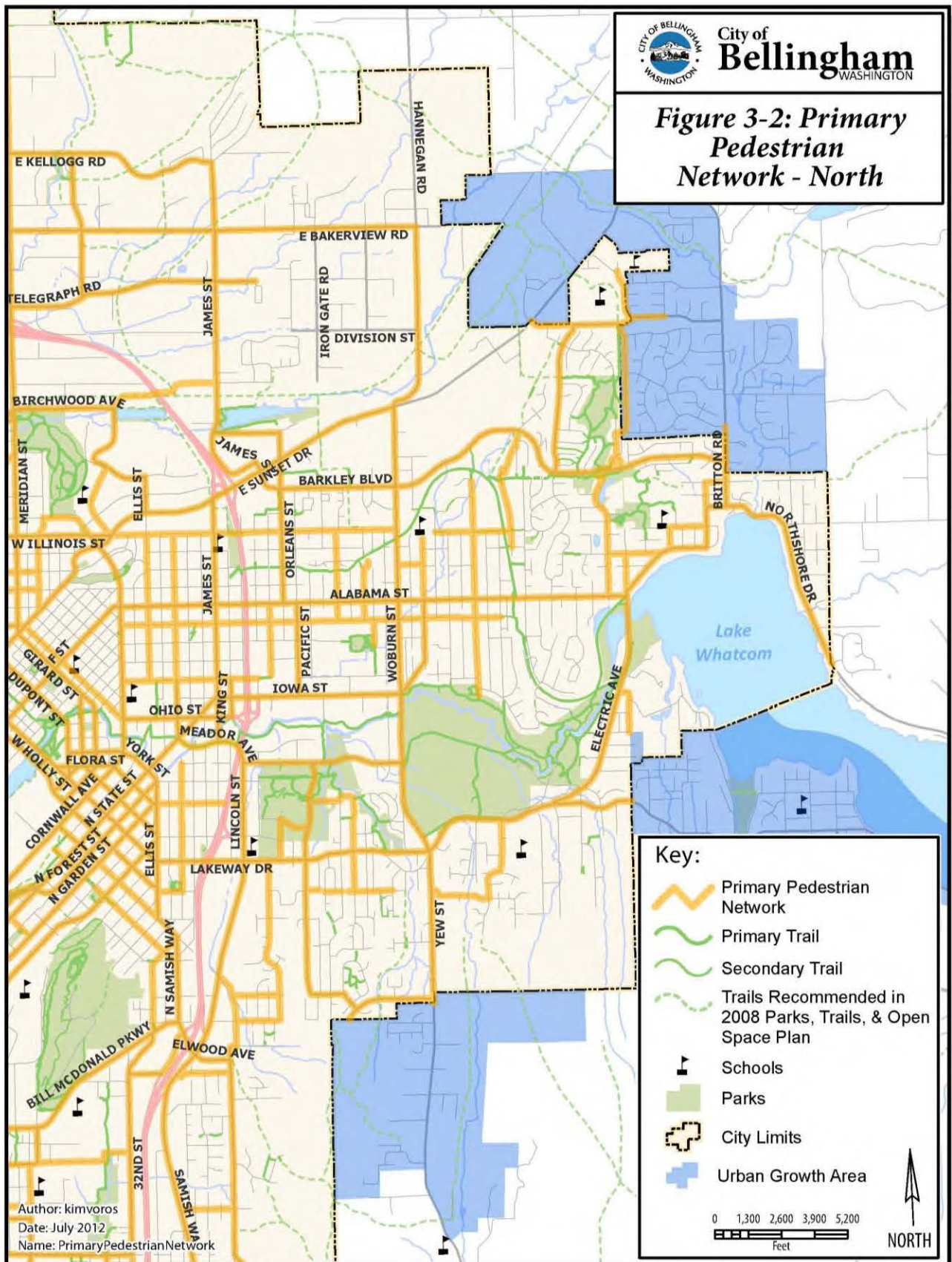
"A truly walkable community has far-reaching health benefits for all residents. Safe, well-connected pedestrian facilities that encourage and support walking make the healthy choice the easy choice. This plan will get us there, and most importantly, it prioritizes equity in our pedestrian infrastructure to better serve all members of our community who rely on safe streets, especially children."

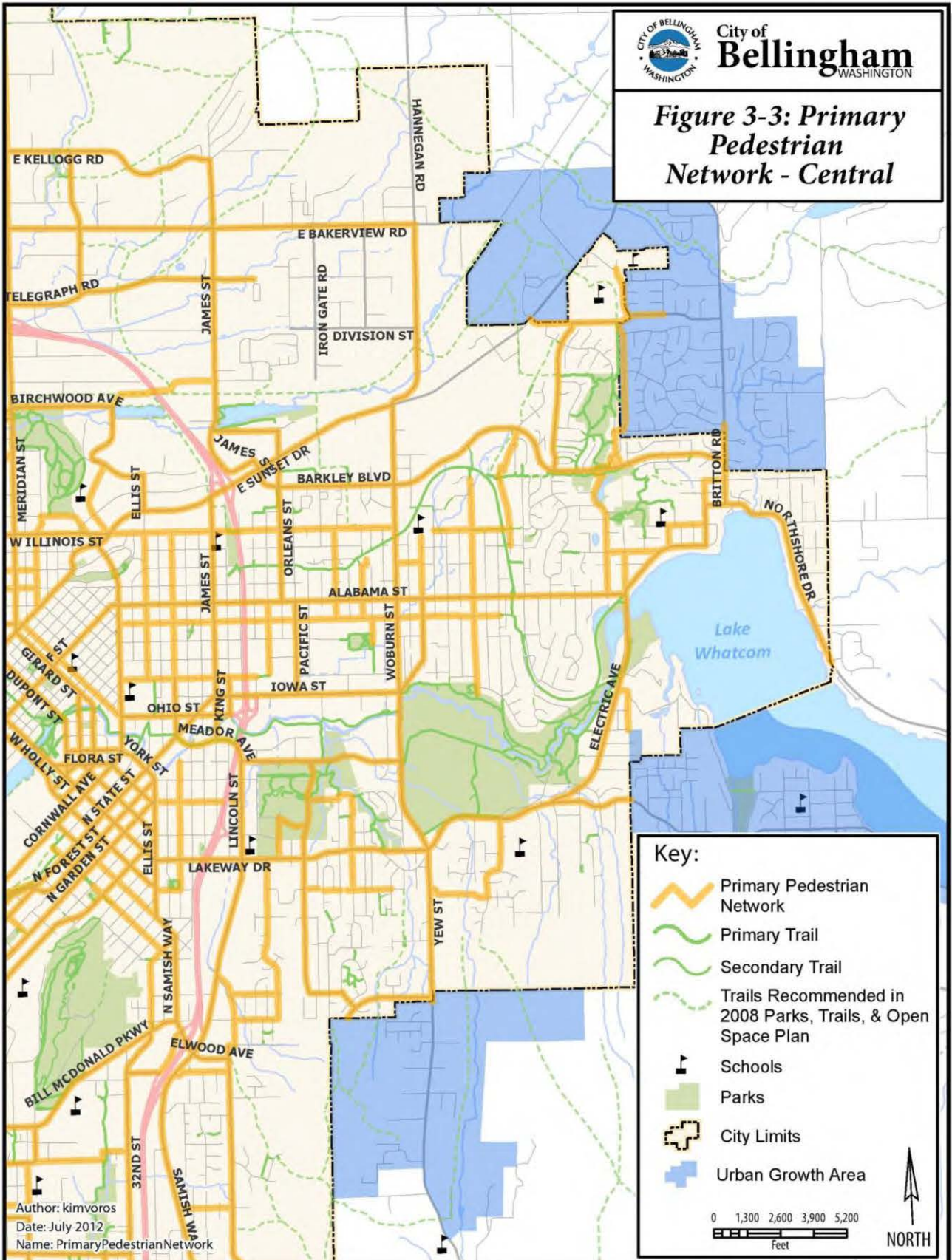
Nicole Willis, Steering Committee Member, Whatcom County Health Department

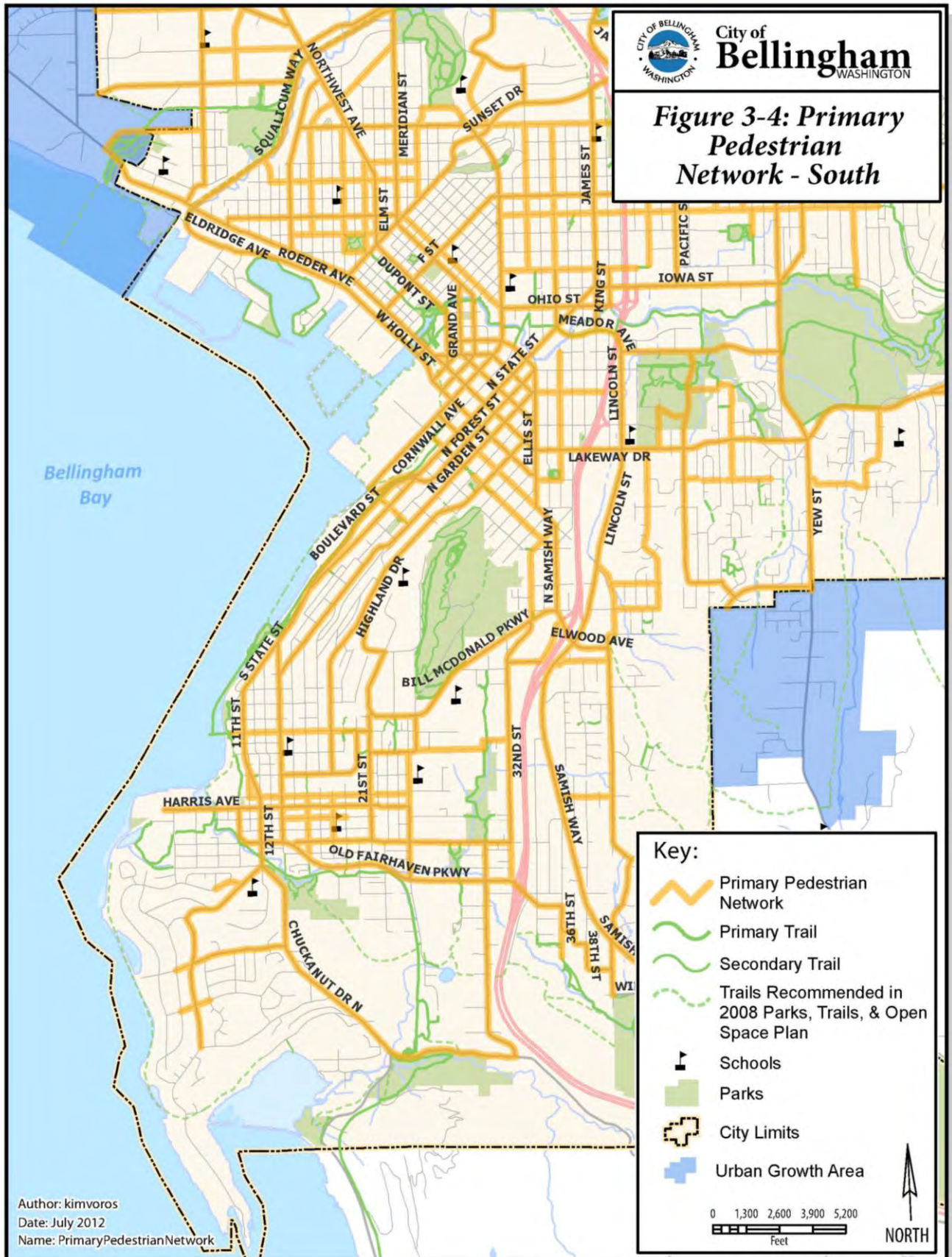


The Primary Pedestrian Network will provide access to services, gathering places, employment, and recreation.









3.3 Project Development Framework

The recommended network builds upon previous and on-going local and regional planning efforts and reflects input offered by City staff, the project steering committee, the Transportation Commission, and Bellingham residents. Goals that framed the development of the Bellingham Pedestrian Master Plan project list include the following:

- Provide a consistent and connected network for walking for transportation and recreation in the City of Bellingham.
- Provide a list of projects that will result in contiguous routes with dedicated pedestrian facilities.
- Identify opportunities to overcome barriers to walking.
- Identify needs for future study needed to improve safety and design.

With these goals in mind, conditions along the Primary Pedestrian Network identified in the needs analysis were reviewed to develop a list of proposed projects. The primary network was evaluated through both a quantitative and qualitative process that considered the needs on these corridors based on the following information:

- Streets where the sidewalk width is less than the ADA minimum requirement of five feet.
- Streets where sidewalk is missing on one or both sides.
- Signalized intersections of the primary pedestrian network where pedestrian crossing issues have been identified
- Intersections of arterial and residential roadways included in the primary network that have no current crossing improvements. Each intersection should be evaluated using the City's crosswalk installation guidelines.
- Areas along the corridors where pedestrian involved crashes are located and safety improvements and further study may be necessary
- Specific pedestrian-supportive capital improvement projects identified in Urban Village Plans

Any location along the Primary Pedestrian Network that included one or more of the preceding conditions was identified as a future project for the proposed network.

In addition, projects identified in the Comprehensive Plan and Urban Village, Neighborhood, and Institutional Master Plans; by the Transportation Commission, neighborhood associations, and former Bicycle and Pedestrian Advisory Committee; and through the Bellingham Pedestrian Master Plan community survey were considered in the development of the project list.

Pedestrian projects that were identified through this process, but were already funded for the 2012 fiscal year were removed from the project list. All locations identified as future projects require evaluation to determine project feasibility and appropriate treatment.

3.4 Pedestrian Network Projects

Recommended projects to complete the primary pedestrian network include location specific infrastructure projects as well as citywide studies and projects to support and improve usability and safety for pedestrians. Recommended programs to support walking in Bellingham are detailed in Chapter 5.

The recommended projects include the following:

- Sidewalk infill and widening (approximately 77 linear miles – 343 projects)
*Note that some segments of sidewalk are existing but below the standard 5 foot minimum. These projects are combined in the project list due to similar implementation costs.
- New off-street connections (.2 linear miles – 3 projects)
- Intersections and crossings (50 arterial roadway, 1 local roadway, 3 trail/shared use path, and 3 grade-separated crossings)
- Intersection and feasibility studies (4 total)
- Citywide projects (4 total)

Figures 3.5 through 3.8 show the locations of recommended projects throughout the city. Note again, the city was divided into three sections for readability of maps. There is significant overlap in each map and the geographic area does not represent any separation in network characteristics.

Full tables providing detail about individual project locations are included in Appendix C.



Public works completing sidewalk infill projects in 2011 and 2012









3.5 Feasibility and Safety Studies

3.5.1 Single Intersection Studies

There are a number of high-crash locations in the city that warrant further study to determine the best methods to improve pedestrian safety. Funding for the following intersection studies should be identified within two years:

- Lincoln Street at Lakeway Drive
- Meridian Street at Westerly Road
- Samish Way at Bill McDonald Parkway (Note: This intersection was previously the subject of analysis by TranspoGroup, Inc. in 2008-2009 for the Samish Way Urban Village Sub-area Plan.)
- James Street/Ohio Street at N State Street



Lincoln Street and Lakeway Drive

3.5.2 Downtown Intersection Study

The downtown is a multi-modal destination with residents and visitors traveling in and through by various methods. Eight downtown intersections had more than two pedestrian involved collisions from 2006 to 2010. Many more intersections had at least one. In order to determine the best methods for improving safety and reducing collisions in downtown Bellingham, which is one of the primary pedestrian districts in the community, a study that reviews the crash data and traveler behavior at key intersections should be conducted within two years. Information contained in the City Center Master Plan can help inform the analysis.



Forest Street in Downtown Bellingham

Key intersections that should be included in the downtown Bellingham study are as follows:

- E Chestnut Street at N Forest Street
- E Holly Street at N State Street
- E Holly Street at Railroad Avenue
- Chestnut Street at Cornwall Avenue
- E Magnolia Street at N State Street

3.5.3 Alabama Corridor – Feasibility Study for Road Diet and Pedestrian Safety Improvements

The Alabama Street corridor is a heavily traveled four-lane east-west secondary arterial that bisects the Lettered Streets, Sunnyland, Roosevelt, and Alabama Hill neighborhoods. Current traffic volumes exceed 20,000 vehicles per day in places with recorded speeds averaging 33.3 mph; 85th percentile speeds are 38.5 mph. According to WSDOT collision data for years 2004 to 2010, there have been 93 collisions with known or possible injuries along the Alabama Street corridor.

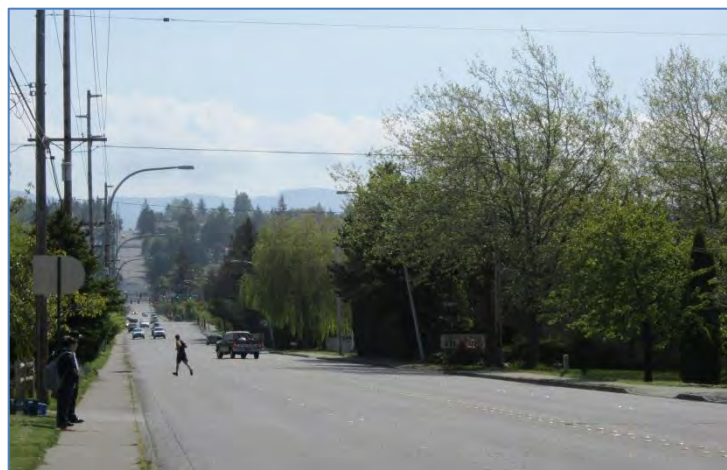
Whatcom Transportation Authority (WTA) provides high-frequency (15-minute) transit bus service on Alabama between Cornwall and Woburn on the Gold GO Line. The Gold GO Line is the most productive WTA transit route in Bellingham and connects downtown Bellingham to important retail shopping centers and the northern WTA transit hub at Cordata Station.

Neighborhood residents served by the Alabama Street corridor have overwhelmingly identified traffic volumes, vehicles speeds, and lack of dedicated pedestrian crosswalks as a barrier to north-south mobility for pedestrians, bicyclists, and transit riders needing to access transit stops and cross between neighborhood destinations.

Sidewalks along the corridor are a width of five feet with no buffer in most areas. Current travel lane widths will not allow significant modifications to increase separation along the corridor or provide for improvements at intersections to reduce crossing distance across four lanes.

A “road diet,” or the removal of one travel lane in each direction, with the addition of a two-way center left-turn lane, has the potential to provide the space necessary to improve the pedestrian, bicycle, and multi-modal environment and to improve safety along the Alabama corridor.

Prior to any proposal for a “road diet” on the Alabama corridor, however, an in-depth feasibility study must be completed to fully understand the potential impacts on all travel modes. Critical elements include possible impacts to transit service and traffic function on connecting corridors and at intersections. The study should include an evaluation of multiple alternative pedestrian safety improvements that could be implemented if the feasibility study concludes that a road diet is not the best solution to solve pedestrian safety issues on the Alabama corridor.



Pedestrian running across Alabama

3.5.4 Interstate 5 Pedestrian and Bicycle Safety and Connectivity Study

As noted earlier in the Plan, Interstate 5 bisects the city and is a significant physical barrier to pedestrian travel. The existing I-5 interchanges in Bellingham are designed primarily for motorized travel, present safety and crosswalk challenges, and are uncomfortable for pedestrians. The interstate and the interchanges are federal highway facilities, but are managed and operated by WSDOT. In addition to design challenges, the spacing of crossings and access points are designed to primarily facilitate auto travel. The existing design of crossing opportunities often presents a psychological barrier in addition to the physical challenges.

While some of the I-5 interchanges in Bellingham do not meet the federal minimum spacing requirements for automobiles, several of the current crossings are too far apart to adequately accommodate pedestrian travel and connectivity through the city.

WSDOT published the “Fairhaven to Slater Interstate 5 Master Plan” in November 2008 (<http://www.wsdot.wa.gov/projects/i5/fairhaventoslater/>), which acknowledges some of the challenges for non-motorized users trying to cross I-5, but this issue merits further study. In coordination with WSDOT, the City should develop a comprehensive study that documents the existing conditions for pedestrians and provides specific recommendations to address I-5 as a barrier to walking and bicycling.



Curb tight sidewalks along Lakeway Drive and Meridian at I-5 interchange

3.6 Proposed Citywide Projects

3.6.1 Accessibility Planning and Upgrades

The City should continue upgrading pedestrian facilities to ADA standards and complete its ADA Transition Plan to better identify existing transportation facility deficiencies and develop a phased plan to eliminate these deficiencies.

3.6.2 Pedestrian Wayfinding

The City currently installs wayfinding signs on trails and in the downtown core. The City should continue and enhance this effort. Wayfinding signs can be placed along a route to guide people to destinations, reinforce to users that they are heading in the right direction, and can provide directions at decision points. A comprehensive plan for wayfinding to commercial and recreation destinations should be developed and should be coordinated with existing wayfinding for trails, managed by the City's Parks and Recreation Department.

3.6.3 Lighting Study and Improvements

Lighting is a primary concern of many residents on shared-use paths, trails, and other routes throughout the city. In order to improve both real safety and the perception of safety, lighting should be improved on key routes. A citywide study utilizing the framework of the primary pedestrian network and other measures should be completed in the future to develop a strategy for improving lighting on key pedestrian routes over time.

3.6.4 Trail Safety and Maintenance

Many residents noted concerns about personal safety on greenways and trails due to perceived risk of crime. Key concerns noted by residents include a lack of lighting, maintenance issues, and loitering. An extensive trail network is a great asset to the community, but can also be a financial burden for a community trying to maintain it over the long term. The City along with community volunteers should explore additional opportunities to expand programs to involve residents in trail patrols and maintenance.

3.6.5 Trail and Road Network Connectivity

Residents, as well as, City of Bellingham Staff from Public Works and Parks and Recreation Departments noted that there are opportunities throughout the city to improve pedestrian connectivity by creating short off road connections where the street does not connect. As a joint effort Public Works and Parks and Recreation should develop a joint inventory of opportunities to increase connectivity in the primary pedestrian network through off street connections and establish a protocol for management of these facilities.