

Bicycle and Pedestrian Connections and Amenities

Introduction

This white paper presents the recommendations for bicycle and pedestrian connections and improvements associated with the SR 520 project within the City of Seattle. These recommendations include opportunities to enhance connections from the new SR 520 regional bike and pedestrian path (SR 520 path) to ensure its integration with other regional facilities as well as with the existing and planned City of Seattle bicycle and pedestrian networks.

Bicycle and pedestrian mobility was considered in both the Montlake and the Capitol Hill/Roanoke Park areas. The Montlake neighborhood is the intersection of the proposed SR 520 path, City of Seattle designated routes, and the Burke Gilman Trail. The Technical Coordination Team (TCT) studied options for connecting these systems through both on-street and off-street facilities for bikes and pedestrians. The TCT also examined opportunities to improve existing bicycle and pedestrian connections at the E Roanoke Street/I-5 overcrossing and across the lid at 10th Avenue. Several recommendations were identified, and these should be considered by WSDOT and the City of Seattle as the Historic District negotiations (Section 106 process) proceeds.

How were bicycle and pedestrian connections and amenities addressed in the preferred alternative?

The preferred alternative design connects the new SR 520 path to existing bicycle and pedestrian facilities in the Montlake area and enhances bicycle and pedestrian connections in the Roanoke/North Capitol Hill area.

The preferred alternative includes the following elements:

- New regional path along the north side of the floating bridge.
- Grade-separated connection under Montlake Boulevard to the Bill Dawson Trail.
- Reconstruction of the Bill Dawson trail within the SR 520 right-of-way.
- Path along Lake Washington under SR 520 connecting to the Arboretum.
- Improved connection along 24th Avenue East between Shelby Street and Lake Washington Boulevard.
- Widened sidewalk across the second bascule bridge for use as a shared use path.
- Grade-separated crossing of Montlake Boulevard in the vicinity of Husky Stadium.
- Path on the Delmar lid over SR 520.
- Path on the south side of the Roanoke Street bridge over I-5, accompanied by either a new bridge or widening of the existing bridge.

What comments were received?

Comments received during the SDEIS comment period included requests to design bicycle and pedestrian facilities to promote pedestrian, bicycle, and transit use with safe connections for local users.

Suggestions were also made to promote connections to the designated bike routes near the SR 520 corridor.

What issues are we trying to resolve?

Refinements made to the bicycle and pedestrian facilities identified in the preferred alternative were intended to:

- Enhance regional and local connections and corridors in the project area.
- Increase mobility and safety for bicycles and pedestrians.
- Propose improvements to pedestrian and bicycle facilities and amenities, where possible.

Design considerations include the following:

- The Shelby-Hamlin neighborhood with the Canal Reserve and the Roanoke neighborhood are potential historic districts that are covered under Section 106 regulations. Any modifications to streets or landscapes in these districts must address Section 106 constraints.
- The Arboretum and East Montlake Park are parks that are covered by Sections 6(f) and 4(f). Any modifications to these parks beyond those already proposed by the preferred alternative must address Sections 4(f) and 6(f) constraints.
- Lake Washington Boulevard is eligible for listing in the National Register of Historic Places, and Section 4(f) applies to the boulevard as a component of the Montlake Historic District.
- Non-motorized crossings may impact the effectiveness of traffic operations in some locations. Additionally, pedestrian and bicycle crossings must be designed and located with full accessibility in mind.

Addressing the problem

How did we identify possible solutions?

A bicycle/pedestrian subgroup identified bicycle and pedestrian “desire lines,” mapped bicycle/pedestrian route options, evaluated the advantages and disadvantages of each route, and established an objective process for selecting the preferred routes. The subgroup was composed of representatives from the Seattle Bicycle Advisory Board, Seattle Pedestrian Advisory Board, Seattle Design Commission, SDOT planners, and urban designers from the SR 520 project team. Route options proposed by the subgroup were presented to the TCT, who endorsed the subgroup’s recommendations.

As part of the process, the subgroup developed evaluation criteria to qualitatively assess route characteristics before identifying the preferred routes. The highest priority criteria were safety, connectivity, and capacity.

Safety. All routes have clear signage for wayfinding, indicating decision and/or hazard points; good visibility ahead and outwards from the path; good path conditions; and the absence of

impediments or sudden changes. Points of potential bicycle, pedestrian, and vehicle conflict are eliminated or mitigated with safety features such as signalization and appropriate facilities.

Connectivity. Path users have more than one choice for reaching their destination, each route is without obstacles and barriers, and other bike-pedestrian trails and paths in the system can be reached. The goal of high connectivity is that a cyclist or pedestrian can reach any destination seamlessly without confusion, dismounting or excessive travel in a non-direct route.

Capacity. The network of bicycle and pedestrian paths can accommodate current and future non-motorized traffic volumes. This network comprises a variety of routes that distributes users over a wide area rather than compressing a mixture of user types into a confined area, ensuring that the needs and abilities of all user groups (experienced cyclists, casual cyclists, children, seniors, walkers, and runners, for example) have been addressed. A high capacity network includes efficient multimodal exchange and provisions for future growth.

Recommendations

What did we consider?

The subgroup began with the SR 520 I-5 to Medina preferred alternative as the starting point for their discussion, with the assumption that the preferred alternative would connect to designated primary bike routes in the city. Other assumptions were that the direct route from the second bascule bridge to the Burke Gilman Trail and the point of connection in the Arboretum would be resolved through separate design processes. These assumptions about points of connection established the study area boundary.

The primary goals of the subgroup were to:

- Make a regional connection between the new SR 520 path, across the Montlake Cut, and to the Burke Gilman Trail and the UW campus.
- Retain the local connection between the SR 520 path and Montlake Playfield via the Bill Dawson Trail.
- Create a new connection between the Waterfront Trail and the Arboretum as designated in the Arboretum Master Plan.
- Enhance connections to the north and south through on-street and off-street routes.

The subgroup did not discuss the I-5 crossing at Roanoke Street in great detail, as the design of the intersection is still under development. The City of Seattle will work with the consulting parties through the Section 106 process to identify issues and options for the 10th Avenue East/Roanoke Street channelization, which will influence the layout of an integrated path network in this area.

What are the options presented for TCT consideration?

The subgroup developed a network of primary and secondary bike-pedestrian routes that met the goals listed above (see exhibit 1). A primary route connects to a major destination, such as the University of Washington or the Burke Gilman Trail, or to a major city route. A secondary route is an important link between two primary routes. The options presented to the TCT are briefly described below.

Route 1, Regional Connection. Connects the Seattle terminus of the SR 520 path to the University of Washington and the Burke Gilman Trail. At 24th Avenue where the proposed SR 520 path connects with Seattle streets, two options are recommended for further evaluation:

1. Connect 24th Avenue East on the north side of 520 to a two-way bike boulevard on Shelby Street that would connect to Montlake Boulevard, and/or
2. Widen the sidewalks along Montlake Boulevard between Shelby and Hamlin Streets to at least 10-feet wide. This option could connect the SR 520 path to the second bascule bridge using either the SR 520 corridor and Montlake Boulevard or 24th Avenue and the Shelby/Hamlin one-way couplets.

For either option, an 18' wide path on the east side of the second bascule bridge is recommended. Connections to the Burke Gilman Trail would be provided by wide sidewalks, a bridge over Montlake Boulevard, and a bridge over Pacific Place. These improvements are described in detail in the Montlake Triangle Charrette white paper. Signage and wayfinding should be included to promote the use of this route for the majority of cyclists.

Route 2, Dawson to Downtown. Connects the SR 520 regional path to the Bill Dawson Trail via a tunnel under Montlake Boulevard. Route 2 completes a local connection to Seattle-designated bike routes to Downtown Seattle and Eastlake. The proposal includes ramps on both sides of Montlake Boulevard for bike and pedestrian access between Montlake Boulevard and the Bill Dawson Trail as well as a connection to the SR 520 regional path.

Route 3, Arboretum. A new path that connects the Waterfront Trail along the south side of the Montlake Cut to the Arboretum. The connection (Arboretum Loop Trail Extension) between East Montlake Park and the Arboretum would pass under SR 520 along the shoreline. Currently, no existing path network in the Arboretum—other than Lake Washington Boulevard—would connect to this trail extension, though a separate process is underway that will identify potential opportunities for trail connections.

Route 4, Montlake Boulevard. Improvements to on-street and off-street routes along the west side of Montlake Boulevard. Sidewalk widening between the existing bascule bridge and Roanoke Street would improve the bike and pedestrian access on this side of the roadway. In-street bike use remains challenging due to the turning movements and drop lanes associated with the interchange, but on-street improvements will be evaluated for inclusion in the final design.

Route 5, Transit Link. A suite of recommendations for improving crosswalks in the Montlake Boulevard and Lake Washington Boulevard East intersection. These improvements will enhance the safety of the bicycle/pedestrian crossings between the transit stops and the surrounding neighborhoods, the University of Washington, and recreational facilities on and near the Montlake lid.

Route 6, Montlake Bypass. A cyclist route on 24th Avenue East that connects the University of Washington and Montlake neighborhoods. It is designated as a bike boulevard in the Seattle Bicycle Master Plan. The 24th Avenue East route allows cyclists to avoid 23rd Avenue East and facilitates north-south travel through the Montlake neighborhood.

Route 7, Roanoke Park/North Capitol Hill. A suite of improvements near the 10th and Delmar lid and Roanoke Street. Improvements may include a bike-pedestrian path on the new 10th and Delmar lid, a path connecting the lid to Harvard Avenue and Broadway Street East, the addition of bicycle and pedestrian facilities (either via a separate bridge or widening of the existing bridge) to the south side of the Roanoke Street bridge over I-5, on-street bike lanes on Delmar Drive East, and pedestrian crossings at the intersections in the neighborhood. The City of Seattle will lead the outreach process for bicycle and pedestrian enhancements near I-5 and non-motorized paths on and to/from the 10th and Delmar lid.

Final TCT recommendation

The TCT recommended implementing components of the Montlake bicycle-pedestrian network included in the preferred alternative. They also supported the City of Seattle's anticipated process to identify additional components that may be added to the network in the future.

SR 520 project elements

The preferred alternative includes several components of the recommended Montlake bike-pedestrian network. These include:

Route 1. A minimum 14-foot wide shared use path between SR 520 and the Burke Gilman Trail, including an 18-foot path on the second bascule bridge. The project is assuming the implementation of the Rainier Vista Land Bridge project and a bicycle and pedestrian overcrossing of Montlake Boulevard to provide a connections between the east side of Montlake Boulevard and the Burke Gilman Trail.

Route 2. Connection to an enhanced Bill Dawson Trail via a bicycle/pedestrian-only tunnel under Montlake Boulevard.

Route 3. Arboretum Loop Trail Extension: a new recreational path under SR 520 connecting the Waterfront Trail to the Arboretum.

Route 5. Montlake Boulevard and Lake Washington Boulevard East intersection crossing improvements, jointly developed with City of Seattle.

Route 6. 24th Avenue East across the Montlake lid.

Recommendations to City of Seattle

Several of the recommendations should include input from the City of Seattle and could include community outreach in order to reach decisions for the bike-pedestrian network. These include:

Route 1. Recommend either the Shelby Street two-way bike lanes or Montlake Boulevard sidewalk widening to connect the SR 520 path to the Burke Gilman Trail.

Route 4. Recommend whether sidewalk widening or on-street improvements should be included on the east and west sides of Montlake Boulevard.

Route 7. Conduct further study evaluating additional pedestrian and bicycle crossings and pathways (including in-street bike lanes) as well as traffic operations in the Roanoke Park/North Capitol Hill area.

Moving the recommendations forward

WSDOT is currently working with the Arboretum and Botanical Garden Committee (ABGC) to address a number of bike-pedestrian concerns, including continuation of the Arboretum trail system.

WSDOT will continue to include the Seattle Bicycle Advisory Board and Seattle Pedestrian Advisory Board in decision-informing discussions about bicycle and pedestrian designs and inclusion of amenities. As the SR 520 project moves toward construction, WSDOT will develop a process to work with the boards to identify and refine construction routing options.

WSDOT will also work with the boards and the Seattle Design Commission (SDC) to develop an aesthetic vision and goals for Seattle urban design and streetscapes within the project area. This collaboration will be accompanied by a public process, and WSDOT would document the results of both as a set of urban design guidelines that would inform and direct the final design details for the bike and pedestrian routes.

City of Seattle will inform WSDOT of the results of conversations with the Montlake, Roanoke/Portage Bay, and North Capitol Hill neighborhoods regarding path design and connectivity. The project would take no actions that would preclude future City of Seattle actions.

