

# Bridges

*supporting mobility and connectivity  
through three east King County interchanges*



## **BUILD Application**

DUNS Number: 120806745

Cage Number: 5P3X3



# BUILD Grant Application

## *Better Utilizing Investments to Leverage Development Transportation Discretionary Grants Program*

<b>Project Name</b>	<i>Bridges Supporting Mobility and Connectivity Through Three East King County Interchanges</i>
<b>Co-Applicants</b>	<ul style="list-style-type: none"><li>· King County</li><li>· City of Kirkland</li></ul>
<b>Project Partners</b>	<ul style="list-style-type: none"><li>· City of Bellevue</li><li>· Regional Advisory Council (Management): Cities of Bellevue, Kirkland, Redmond, Renton, and Woodinville, Puget Sound Energy, Sound Transit, Eastside Greenway Alliance, and King and Snohomish counties</li></ul>
<b>Contact Information</b>	Susan Oxholm, Grants Administrator, King County Department of Transportation 201 South Jackson Street, Seattle, WA 98104 206-477-3629, susan.oxholm@kingcounty.gov
<b>Project Type</b>	Urban
<b>Project Description</b>	King County and the City of Kirkland submit this request for \$24 million in 2018 BUILD funding to support the Bridges Supporting Mobility and Connectivity Through Three East King County Interchanges. This innovative, multi-modal transportation investment would eliminate three critical gaps along the Eastside Rail Corridor (ERC) trail: the Totem Lake Connector; NE 8th Street Crossing; and the Wilburton Trestle at SE 8th St. The ERC trail is a long-planned, regional trail stretching for more than 15 miles on the eastern edge of Lake Washington. When complete, the trail will provide non-motorized access to booming job centers, transit connections, and recreational destinations to rural and urban communities throughout King County.
<b>Project Cost</b>	\$57 million
<b>BUILD Funds Requested</b>	\$24 million
<b>Local Match</b>	\$33 million Total Local Match, 58% Local and 42% BUILD Funds Requested
<b>NEPA Status</b>	NEPA review for the NE 8th Street Crossing is anticipated in Spring of 2019, and for the Wilburton Trestle at SE 8th St in Fall 2019. There are no known impacts for the NE 8th Street Crossing and the project is anticipated to qualify for a Categorical Exclusion (CE). NEPA review for the Totem Lake Connector is anticipated to begin in the Fall of 2018.
<b>Construction Schedule</b>	Preliminary design and engineering will be complete by end of 2019. Construction activities will commence in mid-2019 and conclude in late 2021.
<b>Project Benefits</b>	The Project will increase safety for all trail and roadway users, restore infrastructure to a state-of-good-repair, create economic opportunities by increasing transportation choice and access to employment opportunities through multi-modal connections, and enhance quality of life for residents throughout King County and surrounding areas.
<b>Benefit-Cost Analysis Results</b>	7% discount rate: 1.03; 3% discount rate: 1.56



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Note: Hyperlinks to online resources are shown [in underlined green text](#).





## COVER LETTER

Dear Secretary Chao,

It is with great pleasure that King County and the City of Kirkland, Washington submit this request for \$24 million in Better Utilizing Infrastructure to Leverage Development (BUILD) funding to support the *Bridges Supporting Mobility and Connectivity Through Three East King County Interchanges (Bridges)* project. This innovative, multi-modal transportation investment would eliminate three critical gaps along the Eastside Rail Corridor (ERC). The ERC is a long-planned, regional trail stretching for more than 15 miles along the eastern edge of Lake Washington. When complete, the trail will provide non-motorized access to booming job centers, transit connections, and recreational destinations for rural and urban communities throughout King County. By building these bridge connections, other modes of travel through the interchange areas will benefit from reduced or eliminated inter-modal conflicts, enhancing the safety of all users.

Specifically, the *Bridges* BUILD project would leverage substantial state, local, and private sector funding to construct the following three project elements:

- **Totem Lake Connector** – a pedestrian and bicycle bridge in the City of Kirkland that will span two major arterials that carry more than 50,000 vehicles per day;
- **NE 8th Street Crossing** – a bridge for non-motorized trail users over NE 8th Street, one of the City of Bellevue’s busiest and most congested arteries with 45,000 vehicles per day, and adjacent to a major redevelopment zone; and
- **Wilburton Trestle at SE 8th St** – restoration and rehabilitation of an historic landmark of the former freight rail corridor, the centerpiece of the ERC trail towering alongside I-405 that will provide a route to bypass busy street crossings, including a highway interchange and major park-and-ride facility, and improve safety for non-motorized travelers.

This BUILD application represents the culmination of years of careful planning. Although segments of the ERC have recently opened, the potential of this transformative regional transportation link cannot be realized until the three bridges are completed, creating a continuous, connected corridor. Once constructed, residents throughout the region will benefit from having a safe and efficient trail, providing them access to some of the region’s largest employment centers, as well as new transit connections currently under development.

As described in this application, the *Bridges* BUILD project aligns with the goals of the BUILD program. It enhances safety, provides access to economic opportunities, incorporates innovative project elements, and capitalizes on significant non-federal revenues for transportation. It will serve residents of both rural and urban areas, creating a central spine of a regional trail network that will serve generations of residents across the Pacific Northwest.

King County, the City of Kirkland, and key partners who have written to you of their support strongly believe that the *Bridges* BUILD project would be an ideal BUILD investment. We thank you for your consideration.

Sincerely,



**Kevin Brown**, Director,  
King County Parks and Recreation Division



**Kathy Brown**, Director,  
City of Kirkland Public Works



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# 1. PROJECT DESCRIPTION

A hallmark of the Puget Sound region is its stunning natural topography, where winding lakes and coastlines meet steep mountains, and dense forests. While this beautiful landscape enhances the quality of life of the region's residents, and has shaped the economic forces that have made the region thrive, these natural features also serve as barriers for connectivity, creating bottlenecks and choke points in the roadway network that have only worsened as the population of the Seattle-Bellevue metro area has grown.

In the face of these natural constraints, the Puget Sound region is a pioneer in developing innovative mobility strategies to help move the residents of their communities. From the nation's largest ferry system to its more recent, ambitious transit expansions and managed lanes network, the region has demonstrated a commitment to innovative transportation strategies to manage its growth and ensure access to expanding opportunities.

The [Eastside Rail Corridor](#) (ERC) is a standout example of an innovative mobility solution to address some of the region's most difficult transportation challenges. The corridor—a railbanked freight rail alignment except for several interim trail segments—will serve as a multi-modal central spine of a vast trail network, linking rural and urban communities to the booming job centers up and down East Lake Washington. The ERC benefits from a strong multi-jurisdictional partnership that has supported the development of the project for more than a decade, coordinated planning efforts, and guided the development of transportation and other infrastructure in ways that will ultimately best serve the ERC and its users.

Despite this cooperative regional effort, however, completion of the trail has been stymied due to a lack of funding for three critical connection points that would allow a central, core segment to open to users and catalyze the development of the trail's outlying connections.

To bring this long-standing vision to reality, King County and the City of Kirkland request \$24 million in 2018 BUILD grant funding for the *Bridges Supporting Mobility and Connectivity Through Three East King County Interchanges* (Bridges) project. The project will complete three key bridges within the Eastside Rail Corridor, allowing for the completion of the entire trail to follow.

As this application will describe, the ERC represents a transformative transportation infrastructure project for the communities along the corridor, as well as the entire region. As Figure 1-1 shows, the *Bridges* BUILD project's benefits make it an ideal fit for the BUILD program, without which the project will not be realized. The trail will bolster the economic competitiveness of the region by providing non-motorized connections to established and emerging employment centers, relieving pressures

## SUMMARY OF PROJECT BENEFITS

- ✓ Completes **missing links in the non-motorized trail network**, enhancing the multi-modal transportation options in the region
- ✓ Allows access for **rural communities** and other outlying areas to booming **job centers**
- ✓ Makes **transit connections** easier by connecting new light rail stations to the trail network
- ✓ **Preserves capacity on the existing roadway network** by providing grade-separated crossings for bikes and pedestrians
- ✓ Leverages **private sector contributions** to realize the potential of the completed trail network

Figure 1-1: Summary of Project Benefits



on the roadway networks of the area. It will provide for the safety of bicyclists, pedestrians, and motorists by establishing safe, grade-separated crossings, and it will connect to innovative transportation and utility management projects that are being developed concurrently.

## PROJECT BACKGROUND

Currently a railbanked freight railroad corridor for 26 its 42 miles, the ERC makes its way from rural Snohomish County, south through Woodinville, Kirkland, and Bellevue, and onward to Renton, at the base of Lake Washington (Figure 1-2). The corridor was sold by the Burlington Northern Santa Fe (BNSF) Railroad Company in 2009 to the Port of Seattle, and between 2010 and 2013 ownership interests were purchased from the Port by the City of Redmond, the City of Kirkland, Puget Sound Energy, Sound Transit, and King County. These five owners of the ERC established a [Regional Advisory Council](#) (RAC), with the goal of establishing a common vision for the corridor, gathering public input, identifying stakeholders and funding, and coordinating planning and development activities to complete the multiple uses of the corridor including trail, transit, and utilities. The RAC was recently expanded to include a broader set of partners, including the cities of Woodinville, Bellevue, and Renton, Snohomish County, as well as a representative of the NGO groups supporting the project.



Figure1-2: Map of Eastside Rail Corridor

The RAC embraces a series of guiding principles for the communities involved with realizing the vision of the ERC. The six principles have helped to focus and prioritize the efforts involved in realizing the potential of the ERC over the past five years. The principles are:

- Partnership – *Grow the partnership between owners, stakeholders, the private sector, and establish new federal and state partners*
- Collaboration – *Continue the collaborative process and engage the public's imagination*
- Connectivity and Mobility – *Develop regional connections to the north and south, and strengthen east-west connections*
- Continuity – *Establish a common identity while also building upon the unique attributes along the corridor*
- Economic Opportunity – *Maximize economic development opportunities*
- Heritage – *Maximize natural features, scenic vistas, and historic locations*



Planning for the trail has continued in recent years, with King County, City of Kirkland, and the City of Redmond completing trail Master Plans for their segments of the ERC. Each of these Master Plans, including King County's Master Plan and Environmental Impact Statement selected a preferred alternative along the corridor, identified design and implementation strategies, evaluated any environmental impacts, and engaged the public throughout the process. The RAC principles set the stage for corridor development that would be guided by strong interjurisdictional and interagency cooperation, and deliver exceptional coordination between non-motorized transportation and high-capacity transit in the corridor.

Key segments of the ERC trail are currently open, although most of the trail miles are developed as interim gravel trails rather than with full asphalt pavement. Full trail development, which will provide the most benefit as a commute corridor, is dependent on construction of the three bridge structures included in this grant that will provide safe crossings over major obstacles in the corridor.

The City of Kirkland opened a 5.75-mile trail segment in 2015 (the Cross Kirkland Corridor) that links the Bellevue segment to the Totem Lake Business District in north-central Kirkland. This segment is also an interim trail, composed of crushed gravel (Figure 1-3). Most recently, King County and their partners have begun the work to remove old rail and open segments of the ERC, a one-mile segment in north Bellevue opened as an interim, gravel trail in June 2018 and a four-mile segment in the far south of the corridor, from Renton to Newcastle Beach in Bellevue, will open in summer 2018. The nearby City of Redmond also recently completed 2.5 miles of regional trail along the Redmond Spur, with connections to the ERC.



*Figure 1-3: Interim Kirkland segment of the ERC*

While these improvements have been useful, the trail's full potential remains to be realized. In recent years, as economic development and job centers continue to increase and expand, and transit and mobility options emerge in communities from Renton to Kirkland, connecting the ERC's missing links becomes increasingly important.

## REGIONAL CONTEXT

Ever since the multiple-purpose ERC was first conceptualized more than ten years ago, its role as a central spine for non-motorized connectivity, linking urban and rural communities to job centers and transit points has become more crucial as development opportunities expand across King County. Centered in vibrant east King County cities, the entire ERC flows through job centers where some of the nation's largest employers either have corporate headquarters or major operations, including e-Bay, Microsoft, Hewlett Packard, Oracle, Expedia, and T-Mobile. New development shows no sign of slowing down—in fact, the ERC has become the centerpiece of major redevelopment plans in the cities of Bellevue and Kirkland, bringing tens of millions of square feet of office and retail uses, together with more than ten thousand residential units.





Existing regional transportation networks are becoming strained in King County. Traffic volumes have grown dramatically, bringing highways and arterials to a standstill at times and threatening the economic competitiveness and quality of life of the region.<sup>1</sup> Fortunately King County, its cities, and their partners have planned for this growth for decades, and invested substantial local funding to enhance transit and mobility options throughout the county. Today, Sound Transit is constructing – in part within the ERC – a major transit expansion project that will bring light rail service to communities on the eastern banks of Lake Washington. I-405, together with other highways in the county, have been upgraded with high-occupancy/toll (HOT) lanes and other innovative features that are making transportation more reliable for everyone, while generating local revenues for important improvements along the corridor.

## CONNECTIONS TO REGIONAL TRANSIT

SoundTransit is the regional transit program created in 1993 by King, Pierce, and Snohomish Counties to manage and operate a light rail service in Seattle and Tacoma, regional commuter rail and express bus services.

Sound Transit is not associated with any single jurisdiction, and instead is an independent transit authority guided by a board of officials appointed by local jurisdictions.

Non-motorized transportation is a key component of the region's strategy for improving mobility. The ERC and *Bridges BUILD* project will provide direct connections between homes and jobs, and improve access to transit. By constructing three missing links and advancing the full ERC, this project will provide residents and workers from throughout the region a truly multi-modal, integrated transportation network that will sustain economic growth and provide access to opportunities for years to come.

## PROJECT SCOPE

The *Bridges BUILD* grant would eliminate three key gaps that are preventing the ERC from completely connecting communities and reaching its full potential. These three project elements are described as follows:

### Totem Lake Connector

The [Cross Kirkland Corridor](#) is the interim trail segment of the ERC that currently runs for 5.75 miles from the Bellevue / Kirkland city line in the south, to the [Totem Lake Business district](#) to the north. The [Totem Lake Connector](#) would eliminate a critical gap in this segment of the ERC, spanning two major arterials—NE 124th Street and Totem Lake Blvd NE. These corridors together carry more than 50,000 vehicles per day, through a total of nine lanes of traffic. Currently, users of the trail at this location must travel along a five-foot sidewalk and use two signalized crossings with substantial wait times. As subsequent sections of this application will demonstrate, safety concerns are significant at this location. In addition to completing a critical

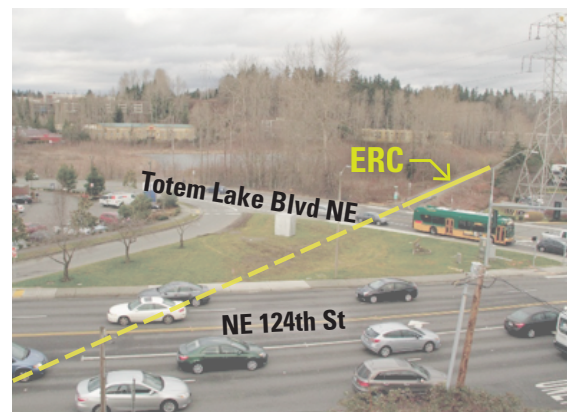


Figure1-4: Location of the ERC at the NE 124th Street and Totem Lake Blvd intersection

<sup>1</sup> The INRIX 2017 Global Traffic Scorecard ranked the Seattle metro area as having the 9th worst traffic congestion in the US, and 26th worst in the world.



link of the ERC, the Totem Lake Connector will offer non-motorized users an efficient and safe connection to the [Totem Lake Urban Center](#), the area of Kirkland zoned for its most intensive land use, where development initiatives are underway that will bring nearly one million square feet of new commercial space to the area as well as thousands of housing units, within the next few years. (See *Section 4.3 – Economic Competitiveness* for more information on the economic opportunities that will be made available as a result of the Totem Lake Connector and the other elements of the *Bridges BUILD* project.)

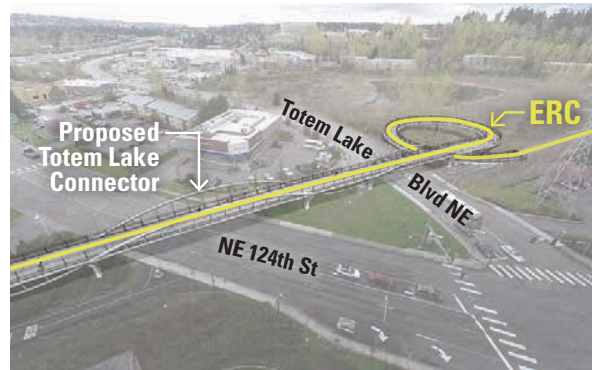


Figure1-5: Rendering of the proposed Totem Lake Connector

The CKC is heavily used with an average of 560 bicyclist and pedestrian users per day in 2017. Completion of the connected ERC, including the gaps detailed in this application, and paving of the trail is anticipated to increase usage from 560/day to over 2,000 bicyclist and pedestrian users per day.<sup>2</sup>

### NE 8th Street Crossing

This project element will construct a non-motorized bridge over NE 8th Street in central Bellevue, one of the city's highest-volume arterials that serves as a central east-west spine for the city, carrying over 45,000 vehicles per day. An at-grade crossing would not be feasible in this location due to the high volumes of both trail users and motorists on NE 8th Street. As with the other project locations, commercial and residential development is booming near NE 8th Street, contributing to the thousands of daily users who will rely on the ERC in the future. As discussed in greater detail in subsequent sections, Bellevue's Spring District, just north of the NE 8th Street crossing, is the site of a new Sound Transit light rail station, as well as a major redevelopment that will include the new corporate headquarters of REI, thousands of additional residential units, and a multi-modal link to downtown Bellevue.



Figure1-6: NE 8th Street near the ERC

### Wilburton Trestle at SE 8th Street

The most dramatic and picturesque section of the Eastside Rail Corridor is the Wilburton Trestle at SE 8th St, rising 102 feet above the ground and extending nearly 1,000 feet long. Built in 1904, it is the longest wooden trestle in the Pacific Northwest. It is also a significant missing link in the completion of the ERC.

The *Bridges BUILD* project would rehabilitate and restore the trestle to serve as the marquee link of the entire ERC. When complete, it is expected to serve between 2,000 and 3,000 users per day—a figure that exceeds the number of users of the busiest segments of other nearby regional trails.

<sup>2</sup> Per the City of Kirkland's Transportation Division CKC user counts.



In addition to providing a defining experience of the trail corridor, the trestle also allows trail users to bypass busy intersections associated with the SE 8th interchange of I-405, an area with high traffic volumes and no on-street bicycle facilities.

As described in *Section 4.6 – Innovation*, the Wilburton Trestle at SE 8th St element of the project will allow enhanced technology deployments such as fiber conduit that will make it a state-of-the-art centerpiece of the ERC. This project element benefits from substantial local and private funding commitments that will ensure a swift project development timeline, as discussed in more detail in *Section 4.8 – Non-Federal Revenue for Transportation Infrastructure Investment*.

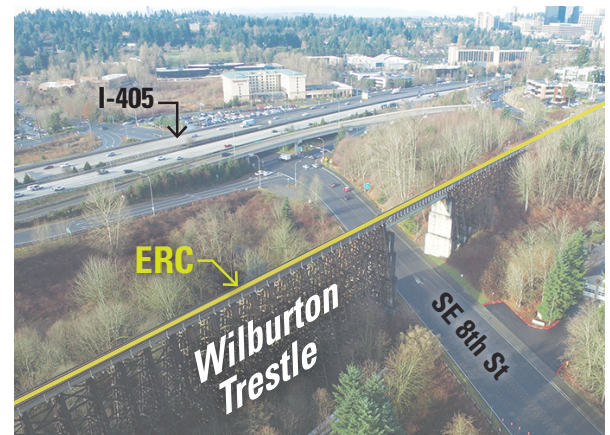


Figure1-7: Wilburton Trestle adjacent to I-405

The following sections of this application will discuss in more detail the catalytic benefits that will be achieved with completion of these three project elements.

## 2. PROJECT LOCATION

Located in western Washington State, east of Seattle and Lake Washington, this project constructs three interconnected components of the ERC. Three trail bridges will close three critical gaps in the continuous corridor, allowing for a connected trail and protecting the function of the roadways they cross over. The project offers new connections to the technology innovation centers located along the ERC, a regional, rails-to-trails right-of-way that crosses two counties and six cities in eastern King and southeastern Snohomish counties.

The ERC trail connects the cities of Renton, Bellevue, Kirkland, Woodinville and Redmond. These suburbs of Seattle are fast-growing employment and residential centers with historically-underdeveloped, non-motorized transportation facilities. Together, they include a population of almost 400,000 residents. These cities are home to major manufacturing facilities, including Boeing aircraft and Kenworth truck factories; a vibrant technology sector, including Microsoft and Google; and three major medical clusters located in Renton, Bellevue, and Kirkland's Totem Lake neighborhood.

The three bridge crossings included in the grant application are located in the heart of the corridor, where major roadways create impassable gaps in the trail. In each case, at-grade crossings would place trail users at risk and create unacceptable traffic impacts to critical regional arterials.

The *Bridges BUILD* project will catalyze greater trail use, reduce pedestrian and bicycle collisions and provide utility to otherwise orphaned segments of this regional trail by connecting people with vibrant and growing commercial and light manufacturing areas. It will also facilitate a more seamless connection from rural Snohomish County to jobs and commerce.

The Wilburton Trestle at SE 8th St and the NE 8th Street Crossing are in the City of Bellevue and the Totem Lake Connector is in the City of Kirkland. The Project is within the Seattle urbanized area.





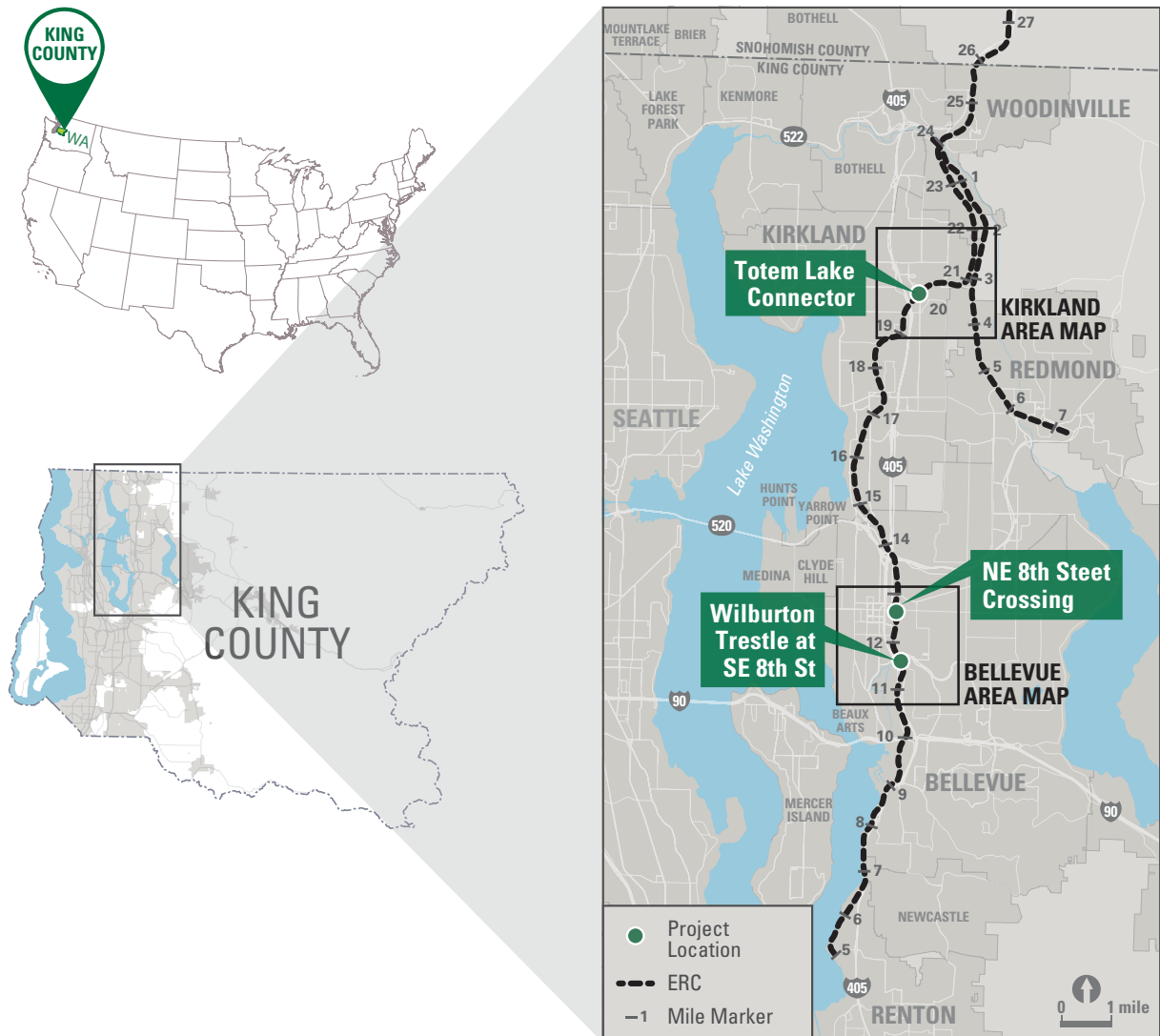


Figure 2-1: ERC Context Map

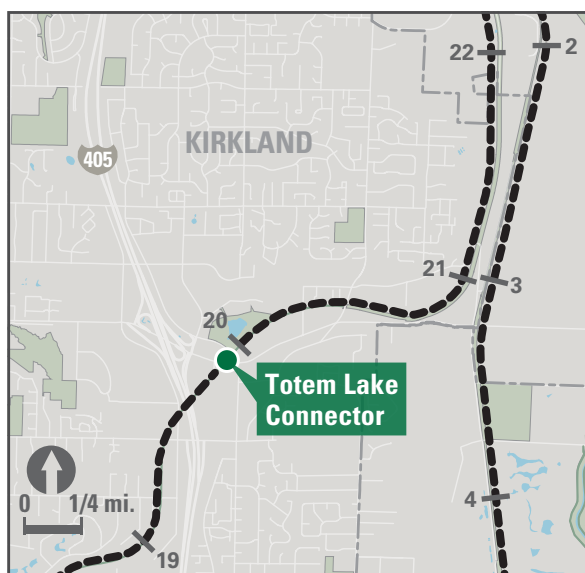


Figure 2-2: Kirkland Area Map



Figure 2-3: Bellevue Area Map



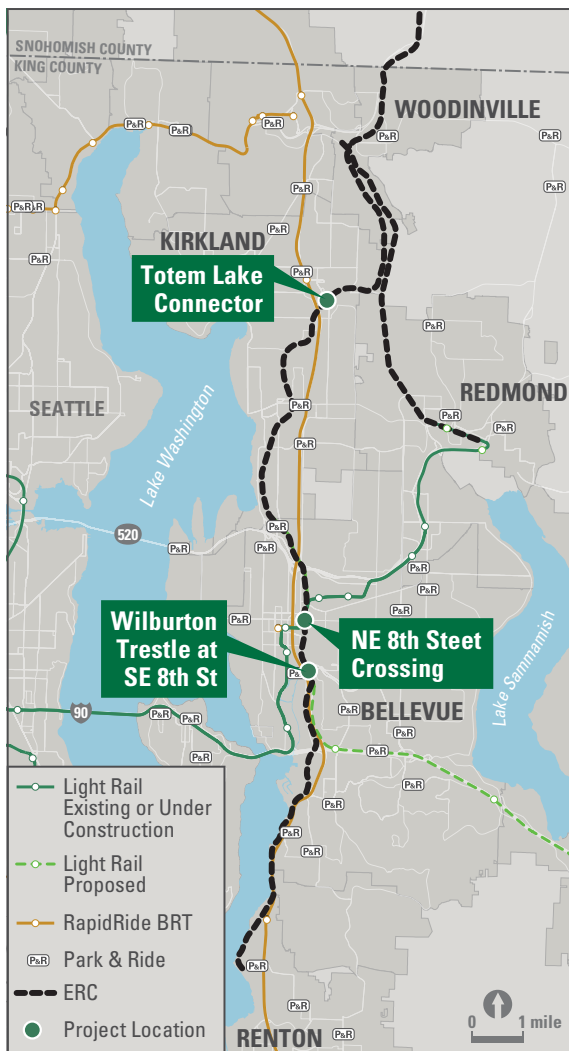


Figure 2-4: Transit Connections to the ERC

## CONNECTIONS TO TRANSIT

The project will increase access to transit by improving non-motorized access to major transit facilities. At the NE 8th Street project location, the proposed bridge directly links to a new light rail station opening in 2023 and provides access to King County’s RapidRide BRT system. The Cross-Kirkland Corridor, a segment of the ERC trail, is directly adjacent to the major South Kirkland park-and-ride serving eight bus routes with regional destinations. The Project will significantly expand first and last mile connectivity for these transit routes, making the transit system more effective and accessible.

## ECONOMIC CONNECTIONS

The employment centers located along the central segment of the ERC are driving growth for the entire Puget Sound region. These major residential, retail, and commercial districts adjacent to the trail, in cities such as Redmond, Kirkland, and Bellevue, represent the hub of an economic network that stretches from the wineries and distilleries of Woodinville in the north to Boeing engineers in Renton to the south. In addition to being home to the campuses of technology giants like Microsoft, Tableau, Salesforce, and Expedia, the region hosts vibrant industry clusters in the fields of health and medical science, tourism, financial and business services, and outdoor recreation apparel. Major companies like Google and REI are already establishing large campuses along sections of the ERC trail corridor specifically to take advantage of the improved accessibility to nearby residential and retail areas and transit connections.

More economically disadvantaged and rural residents live at the ends of the corridor, and the strongest employment centers are located at the center of the corridor. The three projects included in the *Bridges BUILD* request are necessary to connect these populations to employment opportunities. For more information on the economic connections the *Bridges BUILD* project will assist, see section 4.3 Economic Competitiveness.



Figure 2-5: Boeing Factory in Renton, at the Southern End of the ERC

### Totem Lake Connector

The Totem Lake Connector will connect the two ends of the 5.75-mile Cross Kirkland Corridor (CKC) currently severed by one of Kirkland’s busiest and most complicated intersections: NE 124th St and 124th



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project location



Ave NE / Totem Lake Blvd. This intersection is one of Kirkland's busiest with traffic volumes exceeding 50,000 vehicles per day. The bridge structure will pass over NE 124th Street onto supports located in the traffic island between NE 124th St and Totem Lake Blvd. The bridge will then pass over Totem Lake Blvd and land on supports just north of Totem Lake Blvd. The bridge will then descend around the loop ramp, to accommodate ADA requirements, and eventually join back with the interim CKC trail on the north side of the intersection. GIS coordinates for the Totem Lake Connector are 47.70905 latitude and -122.176 longitude, and is located in Washington's 1st Congressional District.

### NE 8th Street Crossing

Located at NE 8th Street in Bellevue, the NE 8th Street Crossing spans from approximately 500 feet on the south side of the intersection to about 500 feet on the north side of the intersection. This allows for sufficient distance on either side to ramp from at-grade elevation up to the grade-separated bridge crossing over the roadway. The Crossing is within ¼ mile of I-405 and is located along a 45,000 ADT arterial. NE 8th Street Crossing will connect to a Sound Transit light-rail station now under construction and expected to open in 2023. GIS coordinates for the NE 8th Street Crossing are 47.6173 Latitude and -122.184 longitude, and it is located in the State of Washington's 9th Congressional District.

### Wilburton Trestle at SE 8th Street

The Wilburton Trestle at SE 8th St is located in the City of Bellevue and King County and bypasses the I-405 highway interchange at SE 8th Street. The Trestle is located in a geographically constrained area, with steep hillsides and a salmon-bearing stream that precludes other non-motorized solutions. The Trestle passes over a 46,000 ADT roadway, SE 8th Street, as well as the nearby 19,000 ADT Lake Hills Connector roadway. Structural repair of the trestle will stabilize a national register-eligible historic resource, maintaining key character elements of the Trestle while rehabilitating it for long-term use. GIS coordinates for the Wilburton Trestle at SE 8th St are 47.60293 latitude and -122.181 longitude, and it is located in Washington's 9th Congressional District.

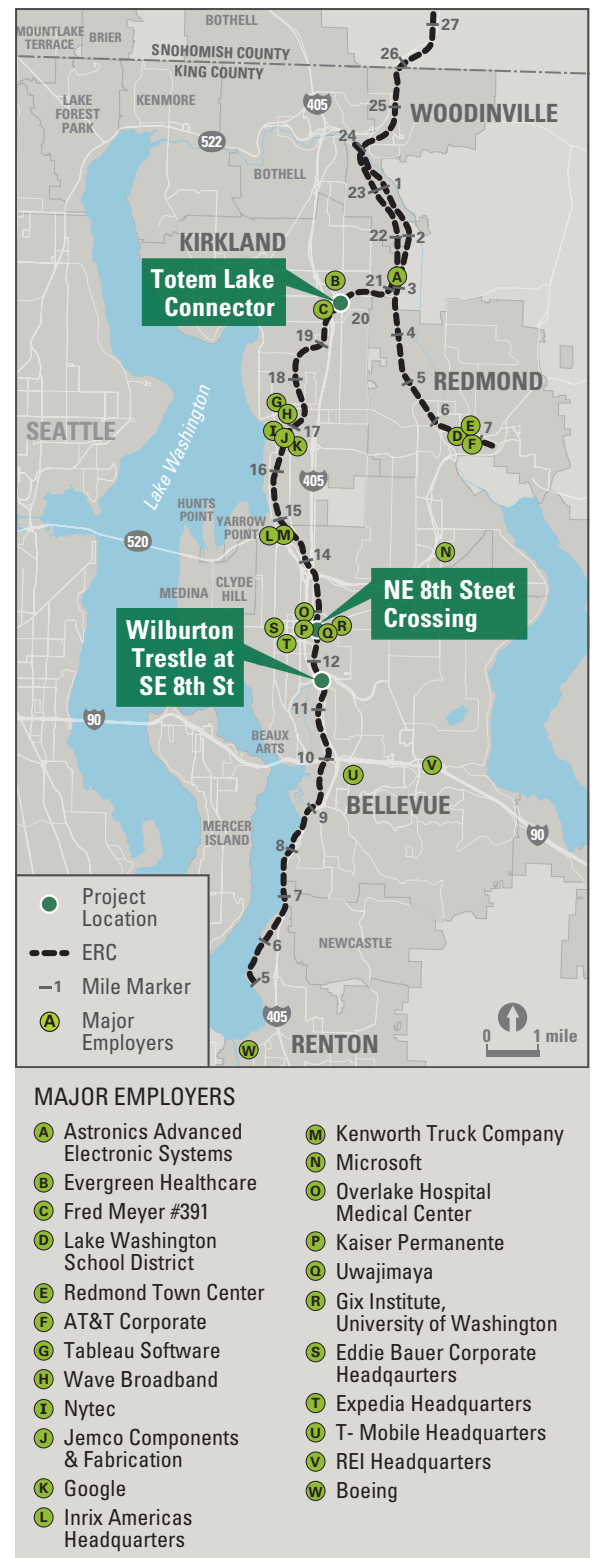


Figure 2-6: Major Employers near the ERC





### 3. GRANT FUNDS AND SOURCES/USES OF PROJECT FUNDS

The co-applicants, King County and the City of Kirkland, are requesting \$24 million of 2018 BUILD discretionary funds for the *Bridges* BUILD project, as detailed in this application. This award is the final amount needed for the construction of the Wilburton Trestle at SE 8th St, NE 8th Street Crossing, and the Totem Lake Connector.

All funding identified in the table/chart are considered committed and letters attesting to this commitment is found in the Appendix. Specifically for the Totem Lake Connector, the new [2019-24 Capital Improvement Plan](#), which is currently under development, shows the committed funds available for that portion of the *Bridges* BUILD project.

#### CAPITAL SOURCES OF FUNDS

The total capital cost of the *Bridges* BUILD project is \$57,328,545 million. King County and City of Kirkland, as well as their funding partners, have committed a combined total of \$33 million, or 58 percent, of the project capital costs.

As shown in Figure 3-1, King County and City of Kirkland are requesting \$24 million in BUILD funds to fund the remaining 42 percent of the project capital cost. The *Bridges* BUILD project would be challenging to fund under other federal grant programs. Please see the *Section 5: Project Readiness* for more information on level of design completed and cost estimates.

#### CAPITAL USES OF FUNDS

Figure 3-2 presents a summary of the project capital cost by project element. Detailed cost estimates are included in the Appendix.

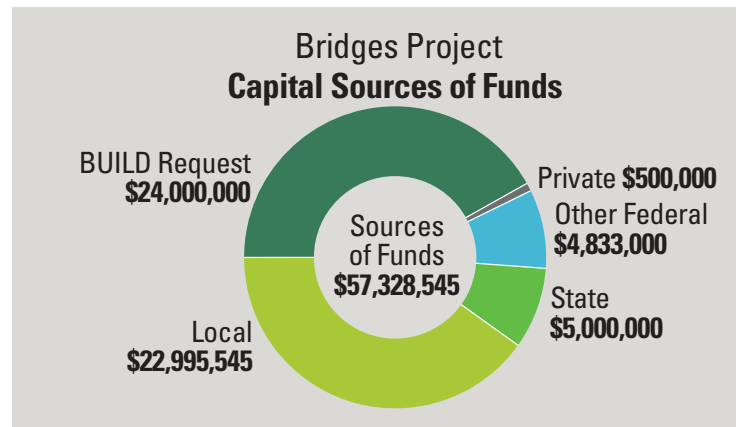


Figure 3-1: Sources of Funds Breakdown

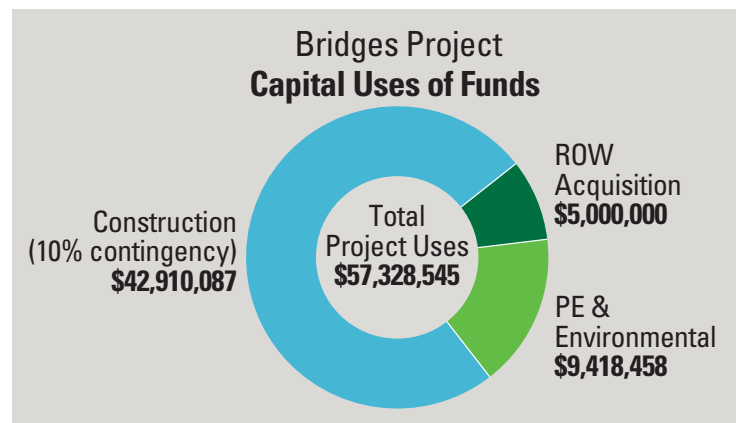


Figure 3-2: Use of Funds Breakdown



Table 3-1: Specific Component Sources and Uses

Totem Lake Connector		
PE and Environmental	Local	\$1,631,000
	Other Federal	\$923,000
Construction	Local	\$5,246,000
BUILD grant		\$10,200,000
<b>Total</b>		<b>\$18,000,000</b>

NE 8th Street Crossing		
PE and Environmental	Other Federal	\$350,000
	Local	\$1,188,459
ROW Acquisition	Local	\$5,000,000
Construction	Local	\$2,204,087
	Other Federal	\$1,960,000
BUILD grant		\$10,835,913
<b>Total</b>		<b>\$21,538,459</b>

Wilburton Trestle at SE 8th Street		
PE and Environmental	Other Federal	\$1,600,000
	Local	\$3,725,999
Construction	State	\$5,000,000
	Local	\$2,000,000
	Local	\$2,000,000
	Private	\$500,000
BUILD grant		\$2,964,087
<b>Total</b>		<b>\$17,790,086</b>
<b>GRAND TOTAL</b>		<b>\$57,328,545</b>

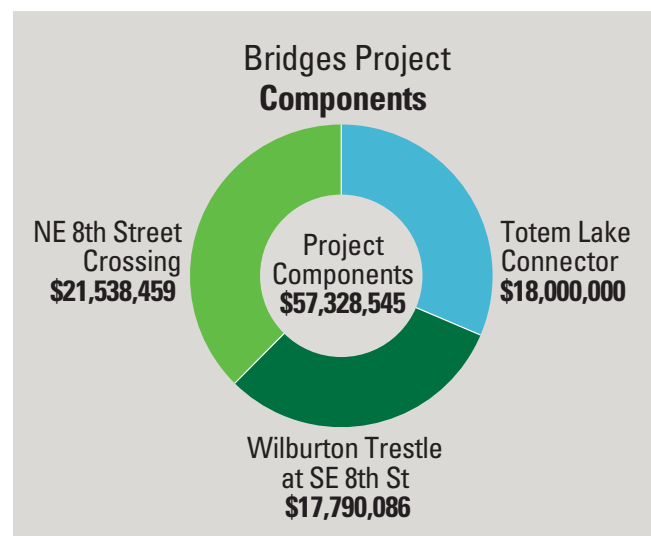


Figure 3-3: Breakdown between Components

### Summary of Operating Sources and Uses

For details on the operating sources and uses of funds, please see *Section 4.2 State of Good Repair*.



Figure 3-4: Existing crossing condition for Totem Lake Connector



## 4. MERIT CRITERIA

The following presents the benefits of the *Bridges BUILD* project as they align with each of the BUILD program's merit criteria.

### 4.1 SAFETY

The *Bridges BUILD* project improves bicycle and pedestrian safety along the entire ERC by providing a dedicated shared use path separated from vehicular traffic through the arterials and interstate exchanges in Renton, Bellevue, and Kirkland, and creates a new north-south spine for non-motorized transportation and recreation in an area where none has existed before.

Currently, pedestrians and bicyclists must navigate an intermittently connected on-street bike lane and sidewalk network, often navigating through streets and intersections that do not have safe bicycle or pedestrian facilities. According to the benefit-cost analysis, the project will prevent an estimated 24 bicycle and pedestrian incidents resulting in minor to critical injuries over the 20-year analysis period; due to chronic underreporting of bike and pedestrian incidents, the actual number is likely to be higher.

Specifically, the NE 8th Street Crossing component will increase pedestrian and bicycle safety by providing a separated crossing over one of the Eastside's busiest arterials. In addition to adversely impacting traffic operations, an alternative at-grade crossing would expose non-motorized travelers to a very challenging crossing. The nearest location for a signalized crossing is at the intersection of NE 8th St. with 116th Ave. NE. A crossing at that location requires non-motorized travelers to traverse eight lanes of traffic. The out-of-direction travel required to reach that location, along with the wait times associated with complex signal phasing at the intersection, would also likely lead to pedestrians crossing at unsafe mid-block locations, rather than using the signalized intersection, making a separated crossing paramount to user safety.

The NE 8th Street crossing also incorporates Crime Prevention through Environmental Design (CPTED) principles for user security, an innovative technique to include safety directly into infrastructure design. The proposed elevator includes glass sides for good visibility, and the bridge structure is anticipated to be open for visibility from below. Additionally, the stairway that is included at the elevator location also provide options for escape if users feel unsafe.

The Totem Lake Connector component of the project provides a dedicated, grade-separated pedestrian and bicycle bridge serving the CKC and the ERC regional trail. The Totem Lake Connector crossing will replace the need for most CKC users to cross at the existing crosswalks, where two surface level crossings are currently required to continue along the CKC. The Totem Lake bridge will cross over a T-2 freight route with 8.8% heavy truck traffic and an intersection that handles over 50,000 vehicles per day. The bridge's reduction in the opportunity for modal conflicts will be greatly beneficial to the Totem Lake Urban Center, where the current



*Figure 4-1: Crossing at existing location for non-motorized route across NE 8th Street*





redevelopment of the Village at Totem Lake will add nearly one million square feet of retail, housing, and office space, including approximately 3,500 residential units. The urban center is on pace to meet goals for 2035 well ahead of schedule with planned employment densities of 87 to 170 jobs/acre and residential densities of 50 units/acre.

## 4.2 STATE OF GOOD REPAIR

King County will own and maintain the Wilburton Trestle at SE 8th St and the NE 8th Street Crossing portion of the *Bridges BUILD* project, and the City of Kirkland will own and maintain the Totem Lake Connector.

### King County Asset Maintenance Plan and Funding

King County has been developing, operating, and maintaining trails for more than 40 years, managing an inventory of over 50 miles of paved shared use paths and regional trails. As part of the trail system, King County also owns and maintains over 85 dedicated trail bridges, with over 50 of these bridges being retrofitted railroad trestles. Trail facilities are provided for both active transportation and recreational purposes, planned well into the future, undergo extensive design and public involvement, and are developed to the highest standards for user convenience and safety.

In 2007 and 2013, King County voters approved and renewed a countywide levy to generate funds for parks and trails. This assessment is based on property taxes and generates revenue for operations, maintenance, and capital project improvements on trails, parks and open space in King County Parks' inventory.

In 2017, King County Parks had a council-approved budget of \$7.3 million dedicated for trail maintenance activities. Upon completion, the Wilburton Trestle at SE 8th St and the NE 8th Street Bridge will be incorporated in King County Park's trail network for regular and preventative maintenance to enable regular and active use of this transportation asset for the duration of its engineered lifecycle.

The trail will be designed and constructed to the King County *Regional Trail System Development Guidelines* and the American Association of State Highway and Transportation Officials' [Guide for the Development of Bicycle Facilities](#) (4th Edition, 2012), thus ensuring design is consistent with relevant plans and standards.

In King County, trail maintenance activities are tracked based on visual inspection during weekly maintenance activities, citizen action requests, and use of ratings in a pavement management system. Trail surfaces are replaced according to standard maintenance schedules. Inspection of trail surfaces and conditions occurs regularly using equipment outfitted with information-gathering tools to generate data for Parks' Maintenance staff concerning obstacles in the clear zone, deteriorating pavement conditions, fallen trees, boulders, or encroachments in the trail right-of-way that would hinder the regular use of the transportation corridor. In this way, using state-of-the-art techniques and equipment, King County optimizes the best management options for its trail assets. Once constructed, the Wilburton Trestle at SE 8th St and the NE 8th Street Bridge will be included for regular preservation, assessment and maintenance activities.



King County’s demonstrated experience in constructing and maintaining its regional trail and parks network accompanied by strong public support for the use of trail infrastructure will ensure that the Wilburton Trestle at SE 8th St and the NE 8th Street Bridge will remain in good repair throughout their planned 50+ year lifespan, serving generations to come.

### **City of Kirkland Asset Maintenance Plan and Funding**

The City of Kirkland owns and manages the Totem Lake Connector and its right-of-way. Kirkland has developed a long-standing standard practice of estimating and formalizing ongoing maintenance costs for new facilities and assets. Operating and maintenance rates are established for new buildings, vehicles, and computer systems that are charged to users and built into ongoing budgets. A city-wide asset management was recently completed and is currently being used to estimate and manage operating and maintenance costs.

In 2012, after a robust community outreach program to demonstrate the need and importance of sustainable roadway maintenance, Kirkland residents approved a permanent \$3 million property levy specifically for maintenance of Kirkland’s 250-mile network of roads and bicycle lanes. In 2015, the City Council formalized ongoing and increasing maintenance and replacement costs associated with transportation facilities by approving additional maintenance funding from the general fund. This funding was established as a key component toward fulfilling the city’s long-range [Transportation Master Plan](#).

The Kirkland City Council modifies the operating budget on an annual basis to address the needs of new infrastructure. An example of this occurred in 2016 when the City Council increased maintenance funding from \$100,000 per year to approximately \$170,000 per year for the CKC. In this way, Kirkland has proven its high level of support for sustaining maintenance funding of its assets.

The Totem Lake Connector will have maintenance needs beyond what is currently required at the intersection. City maintenance staff will perform graffiti removal, sweeping and inclement weather preparation for ice/snow, landscape maintenance to include mowing, trimming, and herbicide treatment, lighting and electrical control repair, signage, handrail and safety inspections, general cleaning, and when needed, deck treatments, painting, and system upgrades for the new pedestrian bridge. Review of industry standards and maintenance crew experience will allow staff to develop a work program and recommended funding levels to the City Council. The maintenance repair work plan will be modified to accommodate final design, finishes, permit conditions, and completed elements to maintain the desired level of service on the Totem Lake Connector.

## **4.3 ECONOMIC COMPETITIVENESS**

Providing access to economic opportunity is a core benefit of the *Bridges BUILD* project. This section describes the three project elements within the context of the economic developments and opportunities taking shape along East Lake Washington.

### **Regional Economy**

In addition to attracting major companies to the region (as introduced in *Section 2. Project Location*), the cities of Bellevue and Kirkland are driving a number of neighborhood-level



developments to attract new employers, expand residential housing and improve the quality of life for current residents.

Kirkland's Totem Lake neighborhood is home to the Evergreen Medical Center, the city's largest employer, and the Totem Lake Mall, currently undergoing Phase II in the development of over 230,000 square feet of retail space and about 850 residential units as part of the [Totem Lake Neighborhood Plan](#). As one of 18 Urban Centers designated by the Puget Sound Regional Council, the Totem Lake Urban Center is expected to incorporate mixed-use, high-density housing and retail and generate 15,000 jobs within a half-mile of the Totem Lake Transit Center. The Totem Lake Connector provides safe access for pedestrian and bicycle traffic to these housing and job centers, while reducing traffic delays on a major thoroughfare. Overall, the City of Kirkland is expected to add 26,000 jobs with 3,500 new housing units by 2035.<sup>3</sup>

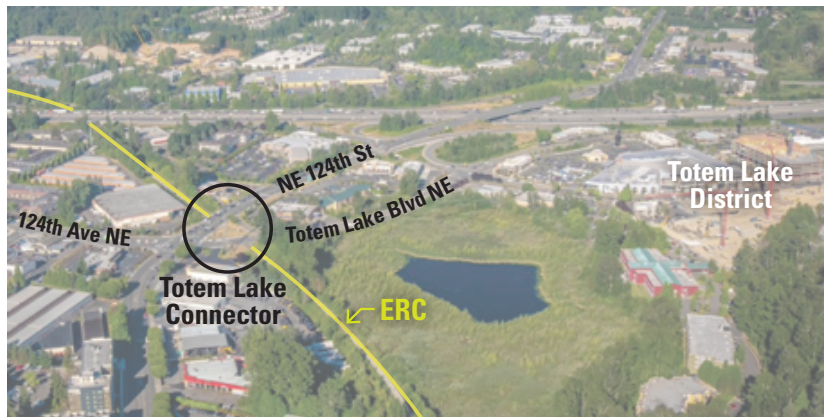


Figure 4-2: The Kirkland Totem Lake District with Nearby Development

To the south in the City of Bellevue, the ERC forms the western edge of the Spring District and then runs through the Wilburton Commercial Area development projects, two complementary neighborhood planning initiatives in the rapidly growing city of Bellevue along the trail corridor. A 36-acre transit-oriented mixed-use development centered on the future 120th Street Light Rail Station, the Spring District will include 3.7 million square feet of office space, 1.2 million square

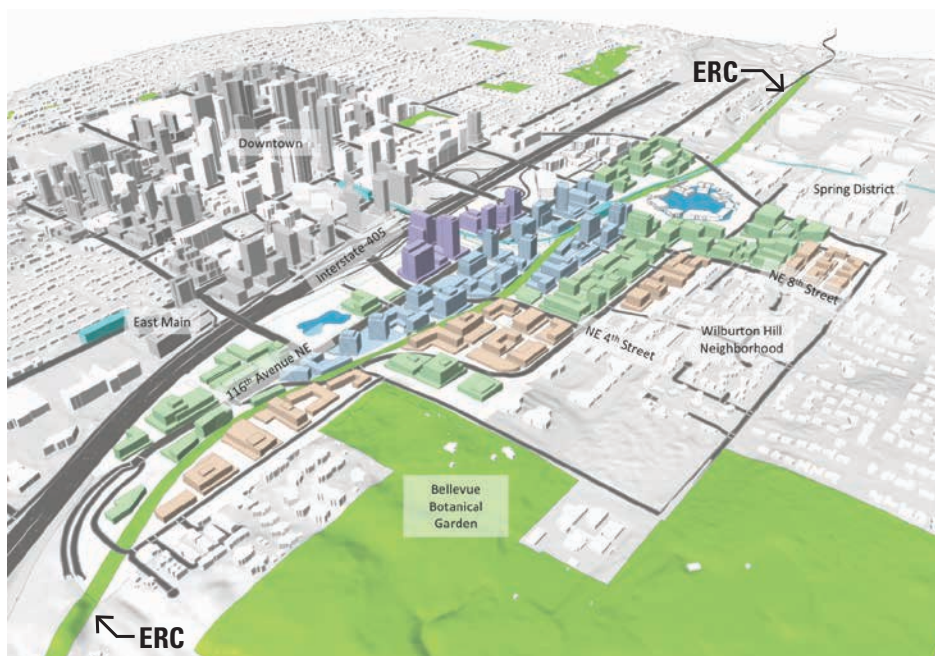


Figure 4-3: Rendering of Future Development in Wilburton

<sup>3</sup> Per the City of Kirkland Planning & Building Department's development activity report.



feet of residential space for over 800 multi-family residential units, a 200,000 square foot hotel and 158,000 square feet of retail space. Located near the south-west corner of the Spring District, the 8th Street Bridge provides a crucial connection over major thoroughfares to conveniently connect trail users to nearby employment, retail and entertainment opportunities and access to transit. The district is also home to the new Global Innovation Exchange (GIX), a 3,000-student graduate institute in technology innovation formed by a partnership between the University of Washington, the Tsinghua University of Beijing, and Microsoft.

The Wilburton Commercial Area development aims to convert a low-density neighborhood into a high-density employment, residential and retail center along the trail corridor. Projections for the development foresee the total development of 13 to over 16 million square feet, including 3,946 to 5,246 housing units, and the creation of 17,541 to 23,726 new jobs by 2035<sup>4</sup>. In addition to retail, office and residential space, the Wilburton Commercial Area is home to the Overlake Hospital Medical Center and the Kaiser Permanente Bellevue Medical Center.

Recognizing the benefits of reliability and convenience the ERC provides commuters, tech giant Google and outdoor sports retailer REI identified locations along the ERC to locate major offices and headquarters, respectively. The world's most innovative educational and industry campuses calling Bellevue, Kirkland and Redmond home amidst their continuous growth, they recognize the value of the trail corridor as a major connector between home, work and play for their employees. By facilitating the growth of networks driving the region's global competitiveness across several business sectors along a central north-south corridor, the *Bridges BUILD* project connects neighborhoods providing the housing, retail and social infrastructure needed to support innovative workers. This promises to benefit residents and businesses alike. The reputation of local companies and quality of life in the region attracts talent and companies from across the globe, driving innovation and growth supported by the connectivity of the *Bridges BUILD* project and the Eastside Rail Corridor.

### User Time Savings

By constructing three bridges along the ERC, the project provides increased connectivity to transit and amenities along its route while reducing delays for trail users and road traffic from at-grade crossings at intersections. NE 8th Street and the five-way Totem Lake Boulevard intersection, major thoroughfares crossing the trail at the proposed project sites, carry an estimated 75,000 vehicle trips daily<sup>5</sup>. With the completion of the trail corridor with above-grade crossings, the time savings for pedestrians, bicyclists and vehicles are estimated to be over 28,100 person-hours traveled per year. For pedestrian and bike commuters, the expanded trail network and access to rapid transit modes will enable mobility benefits of approximately 382,000 person-miles traveled and 56,000 person-hours traveled per year, respectively. The reduction of traffic congestion due to more efficient utilization of the roadway and delays of pedestrian and bicyclists is estimated to result in total time savings worth approximately \$6.66 million over the 30-year lifespan of the project.

<sup>4</sup> City of Bellevue. (2018). "[Wilburton Commercial Area Land Use and Transportation Project: Draft Environmental Impact Statement](#)".

<sup>5</sup> City of Bellevue (2016). 2015 Annual Average Weekday Traffic. [http://apps.bellevuewa.gov/gisdownload/PDF/Transportation/AAWT2015\\_11x17.pdf](http://apps.bellevuewa.gov/gisdownload/PDF/Transportation/AAWT2015_11x17.pdf).





The completion of the trail corridor realizes network benefits for commuters and recreational users by connecting them to regional transit centers in Totem Lake and Bellevue, the Wilburton Light Rail station, seven Park & Ride facilities totaling over 2,600 parking spaces, and major east-west roadway, transit and trail connections to Seattle and other surrounding municipalities. These interwoven transit connections are estimated to reduce vehicle travel by approximately 297,000 VMT annually with cost savings from deferred road and vehicle maintenance and fuel savings equal to over \$1.55 million over the course of project operations. These expanded connections between various modes of local and regional transit and access to a major central north-south corridor provides profound mobility benefits to trail users, resulting in an estimated value of \$34.7 million over the life of the project. With an asset life far beyond the scope of the project, the improvements will continue providing benefits to residents along the trail corridor into the future.

### Equitable Opportunities

The improved connectivity between job centers, residential areas and the public transit network provided by the project enables greater economic opportunities and social integration for households along the ERC. Amidst the continuous growth and development happening throughout King County, increases in the cost of living and housing hinder the ability for low-income residents to take advantage of expanded work and recreation opportunities. As east King County has seen increased diversity through an influx of low- and middle-income individuals and families of various ethnic minorities, supporting access to professional, educational and recreational opportunities fosters social integration.

Low-income commuters disproportionately rely on walking, biking and public transit to get to work due the high cost of car ownership; transportation



Figure 4-4: Bellevue Transit Center, Downtown Bellevue.

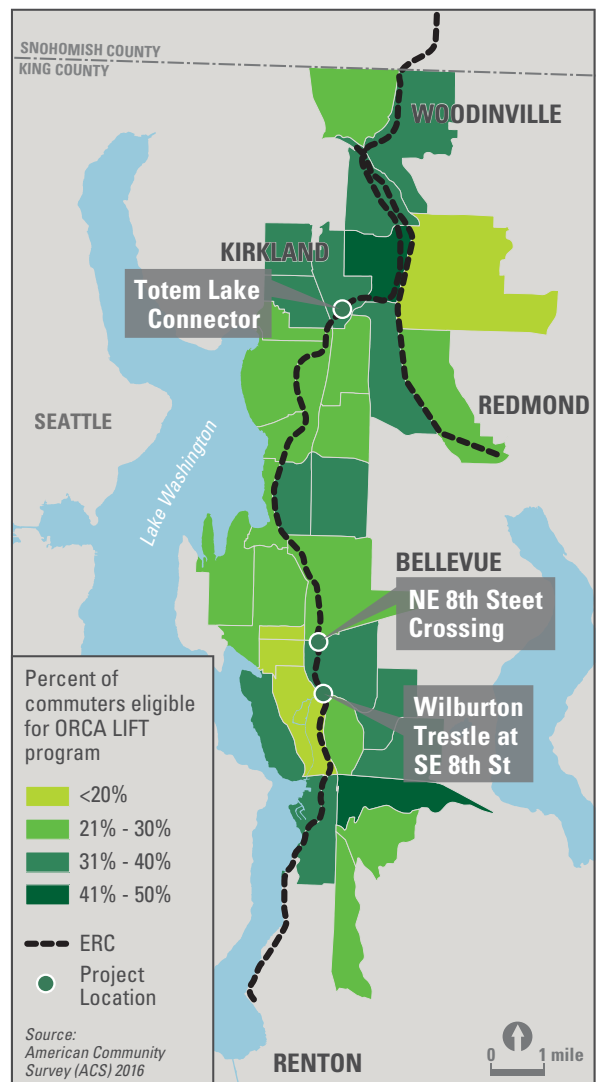


Figure 4-5: Low Income Communities



costs compete against food and housing expenses in tight domestic budgets<sup>6</sup>. The average cost of ownership for a new car is about \$8,469 per year<sup>7</sup>, yet an adult enrolled in the regional ORCA LIFT low-income fare program can receive unlimited transit ridership for only \$648 per year, if their income is below 200% of the federal poverty line. Within a mile radius of the proposed corridor trail, 25,766 low-income commuters, or just under one in three commuters, would be eligible for the program, yet only 8% of all Bellevue commuters and only 3% of national average commuters utilize public transit to get to work, while only 2% of the national average workers walk to work<sup>8,9</sup>. Additionally, over 2,550 households within a mile of the proposed trail do not own a vehicle, indicating the need for a safe, non-motorized connection to preferred destinations<sup>10</sup>. The completion of the trail facilitates unhindered access to nearby job opportunities, transit services and other active uses for about a third of households along the ERC, reducing the threat of displacement due to high transportation and living costs.

In a time of rising living and housing costs, minority and immigrant communities are generally more vulnerable to loss of employment and displacement due to lack of access to affordable transportation and stable housing. Of the minority commuters living near the project, 12% travel to work by foot or public transit while about two-thirds commute by car; these values are above and below the population average, respectively<sup>11</sup>. Their relatively high utilization rate of those modes of transit indicates the pronounced benefit of a regional non-motorized trail connecting job centers, residential areas and transit connections. Affordable housing initiatives by the ARCH Housing Trust Fund, a regional partnership of cities along the ERC, enable vulnerable populations to stay in their homes and take advantage of the expanded infrastructure, reducing their reliance on costly personal cars to find and retain work.

## 4.4 ENVIRONMENTAL PROTECTION

As a trail network including several natural segments through urban areas and amidst bridges connecting growing communities, the ERC provides a getaway into the natural world while conveniently connecting users with their destinations. This section explains how the project improves the efficiency of the regional trail network while preserving the surrounding natural ecosystem, expands transit connections for users and reduces emissions from vehicles.

### Air Quality (Mode Shift)

King County regional trails, such as the Burke-Gilman Trail and Sammamish River Trail, are popular for a variety of nonmotorized trip purposes, including substantial commuter-related trips. Use surveys from the 1980s to the present show routine daily trail use during peak periods

<sup>6</sup> Zhao, Fang & Gustafson, Thomas. (2013). "Transportation Needs of Disadvantaged Populations: Where, When, and How?" FTA Report No. 0300. Federal Transit Administration. [https://www.transit.dot.gov/sites/fta.dot.gov/files/FTA\\_Report\\_No.\\_0030.pdf](https://www.transit.dot.gov/sites/fta.dot.gov/files/FTA_Report_No._0030.pdf)

<sup>7</sup> American Automobile Association. (2017). "Your Driving Costs". Available at <https://publicaffairsresources.aaa.biz/YDC/>.

<sup>8</sup> Bellevue analysis of 2012-2016 American Community Survey 5-year average.

<sup>9</sup> United States Census Bureau/American Factfinder. "B08119: Means of Transportation To Work By Worker's Earnings in the Past 12 Months". *2012-2016 American Community Survey*. U.S. Census Bureau's American Community Survey Office, 2016.

<sup>10</sup> United States Census Bureau/American Factfinder. "B08141: Means of Transportation To Work By Vehicles Available". *2008-2012 American Community Survey*. U.S. Census Bureau's American Community Survey Office, 2012.

<sup>11</sup> United States Census Bureau/American Factfinder. "B08301: Means of Transportation To Work". *2008-2012 American Community Survey*. U.S. Census Bureau's American Community Survey Office, 2012.



of 2,000 to more than 4,000 trips per day. King County has estimated that these trails facilitate millions of user trips annually, based on surveys from the Washington State Bicycle and Pedestrian Documentation Project.

The ERC trail is anticipated to be the most heavily used nonmotorized facility on the Eastside with connections across Lake Washington to the Mountains to Sound Greenway (I-90) Trail and the SR520 Trail. It is also anticipated to be one of the most heavily used regional trails in the Regional Trails System due to its central location in Bellevue surrounded by populous eastside cities.

The location, relatively convenient access, and scope of the ERC are expected to promote a mode shift to active transportation surrounding the corridor. Modeling by the Trust for Public Land in 2015 estimated that the entire ERC will reduce vehicle travel by 297,000 vehicle miles traveled (VMT) annually. The reduction in VMT equates to the prevented release of 3,600 metric tons of CO<sub>2</sub>, or removing 783 cars from the road, over the 20-year operational period of the facility<sup>12</sup>.

## WETLANDS & STREAMS IN THE CORRIDOR

- 79 Wetlands
- 41 Streams
- 28 Regulated Ditches
- 30% of the Corridor Length Includes Wetlands
- 17% of the Corridor Includes Streams and Ditches

### Stormwater Management

King County implements low impact development (LID) practices, such as the use of landscaping to replicate the water retention characteristics of the natural environment, for the management of stormwater and hydrologic features, which limit the pollution and disruption of public waterways. These innovative techniques, substantially exceeding the capacity and utility of traditional stormwater management practices, have been adopted into land use regulations by the cities of Bellevue, Kirkland, Redmond, Renton and Woodinville.

## 4.5 QUALITY OF LIFE

The *Bridges BUILD* project and the expanded transportation options it offers help improve the quality of life of users on the trail and residents within the region by securing additional affordable housing, ease of travel for commuters and recreational users, increased access to retail areas and cultural events, and expanded transportation choices.

### Active Transportation Options

The Seattle Metropolitan Area, which includes Bellevue and Kirkland, experiences among the highest share of bicycle commuters in the United States. A strong network of bicycle facilities is essential to the region's economic viability and affords residents greater freedom and flexibility in transportation choices for work and recreation. *King County's Eastside Rail Corridor Master Plan* projects that the Wilburton Center trail segment and the CKC will see some of the highest usage with estimates as high as 2,000 to 3,000 users per day, connecting to job centers, businesses, and destinations like the wineries of Woodinville, the beachfronts of Lakes Washington and Sammamish, and outdoor sports and sightseeing opportunities in the rural communities of Snohomish and East King County.

<sup>12</sup> US Environmental Protection Agency. (2018). "Greenhouse Gas Emissions from a Typical Passenger Vehicle". EPA-420-F-18-008. Available at <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100U8YT.pdf>.







Figure 4-6: Construction of the East Link Light Rail Line in the Wilburton area of Bellevue

### Transit Connections Now and in the Future

The expansion in transportation choices along the ERC trail include local, commuter and rapid transit bus services connecting numerous new light rail service stations in Bellevue and Redmond, and the anticipated non-motorized Grand Connection between downtown Bellevue and the Wilburton Commercial Area. The Grand Connection is discussed in more detail in *Section 4.6 Innovation*. The Totem Lake and Bellevue transit centers serve as regional transportation hubs enabling convenient access for pedestrians to Seattle and many other municipalities in King, Snohomish and Pierce Counties. Many Bellevue and Kirkland employers

participate in well-funded commute reduction efforts, including paying for or providing discounts on METRO or Sound Transit bus, and soon, for light rail trips. While the under-construction Wilburton station will serve as the primary access to the Sound Transit light rail network along the trail corridor, the downtown Bellevue and Spring District/120th Street stations serve as nearby options to access the Overlake Transit Center in Redmond or the central hub of the regional light rail network in downtown Seattle. These opportunities allow residents of King County to enjoy the cultural, entertainment and retail activities in their neighborhood and in vibrant metropolitan areas throughout the region.

With the expansion of the transit network, Sound Transit and its regional partners follow a policy of transit-oriented development around new light rail stations to ensure more equitable access to social and economic opportunities. As the region struggles with providing affordable housing options, Sound Transit policy requires that at least 80% of properties sold near new stations to housing developers provide housing for populations earning less than 80% of the area's median income. Additionally, the East King County municipal partners of the ARCH housing alliance continue to support the identification and development of affordable rental and owned housing throughout neighborhoods surrounding the ERC. These initiatives ensure at-risk populations can take advantage of the improved and expanded transit connections, rather than being displaced to outlying areas due to rising housing and transportation costs resulting from the development.

## 4.6 INNOVATION

The *Bridges BUILD* project includes multiple innovative factors, from program delivery to specific engineering components of the structures themselves. Innovative project elements, including forward-thinking stormwater management techniques and user-safety components, were already described in other sections of this application. This section describes in detail additional innovative elements of the *Bridges BUILD* project.

### Innovative Management Structure – Regional Advisory Council

The railbanked ERC property is owned and managed by King County, the cities of Kirkland and Redmond, Sound Transit, and Puget Sound Energy. These owners and representatives of the underlying jurisdictions of Bellevue, Renton, and Woodinville, as well as the non-governmental



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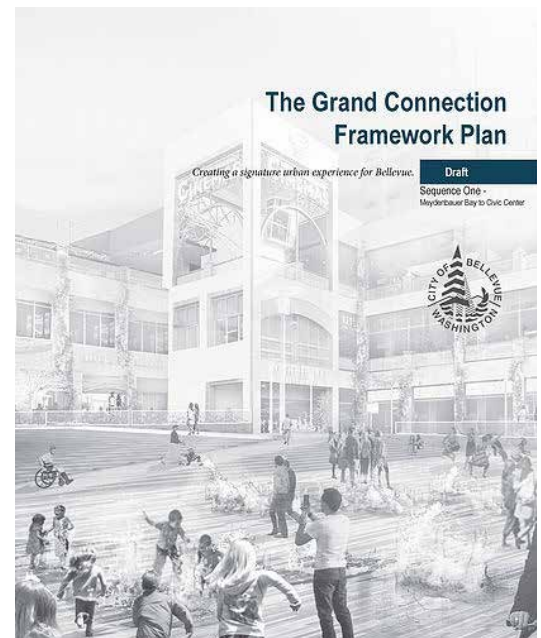
Eastside Greenway Alliance, work together through the Regional Advisory Council (RAC) to maintain a collaborative, regional planning process for the ERC. The owners' goal is to achieve connectivity and multiple uses, maximizing public benefit and enjoyment throughout the corridor both directly and indirectly.

The work on the RAC is based on the 2013 [Creating Connections](#) report, a shared assessment and policy statement that recognizes the unique opportunity that the ERC provides to both urban and rural areas of the Puget Sound region. Besides the mobility options inherent in active transportation facilities, the corridor can offer additional recreational opportunities, transit and utility infrastructure, all while maintaining the potential for future freight reactivation, under the federal Rails to Trails Act.

The RAC members, together with representatives from adjacent jurisdictions and stakeholder groups, are coordinating for capital development in the corridor, and have also moved forward with several initiatives to increase public-private partnerships as part of the corridor program. Current RAC initiatives include a branding program intended to raise awareness of the corridor and attract increased private support, and a Funding Commission that has convened over 20 regional business leaders to develop a strategy for increased private sector support for the corridor.

### **Grand Connection Plan Framework Plan – Connectivity and Mobility**

This project will provide a key connection between the ERC and urban areas and neighborhoods to the west. On December 11th 2017, the Bellevue City Council adopted the Grand Connection Framework Plan. The plan establishes the high level foundational concepts for the Grand Connection non-motorized link between Meydenbauer Bay Park (100th Avenue NE and Main Street), Downtown Bellevue, and the Wilburton Commercial Area. These concepts include route identity, cohesive design strategies, connectivity and mobility, and improvements to public space. Adoption of the plan now follows with updates to the Comprehensive Plan, Land Use Code, and the development of Design Guidelines. In the spring of 2018, the City of Bellevue released the second volume of the plan which addresses the Interstate 405 crossing and its interface with the Wilburton Commercial Area and ERC, connecting to the *Bridges BUILD* project.



Improving connectivity and mobility is an essential goal of the Grand Connection. Envisioned primarily as an active transportation corridor, Bellevue identified a number of opportunities to improve the range, safety, and overall experience of users. In addition to the improved experience and safety that raised intersections offer, a series of small-scale, low-cost improvements were proposed to achieve these goals.

The city produced recommendations that pursued innovative and creative solutions that embrace the latest in transportation technology, and small-scale adjustments that offer significant



improvements to range and experience. These changes are intended to work within the existing infrastructure as well as address challenges related to Bellevue's topography and superblock configuration.

Many of the recommended improvements are best practices to improve the safety and experience for pedestrians and cyclists, including improved and priority signal timing at intersections along the Grand Connection, as well as physical improvements such as enhanced bicycle lanes. Embracing Bellevue's high-tech community, the city has also made recommendations that improves first/last mile connectivity through autonomous rapid transit.

### **NE 8th Street Crossing – Mixing Zone**

The NE 8th Street Crossing component of the *Bridges BUILD* project will include innovative “mixing zones” for bicycles and pedestrians. These high-density mixing zone will serve as east-west connector pathways that have direct access to the light rail station, where they will cross directly through the ERC trail. The two pathways come together at the north entrance to the light rail station. This will be an unprecedented design feature in the King County Regional Trail system and a hub of bicycle/pedestrian traffic in the heart of the Wilburton Commercial Area, providing direct access from converging non-motorized active transportation pathways to high-capacity transit.

### **Totem Lake Connector – Design**

The TLC design is unique and iconic to create a “sense of place” at the busiest intersection in the Totem Lake Urban Center. Design elements are rooted in the bridge's environment, with the steel supports resembling the path of a “skipping stone” as it goes across the water. To control costs while still achieving an iconic structure, the design has been focused on creating repeating components to minimize fabrication costs.

## **4.7 PARTNERSHIP**

The Eastside Rail Corridor enjoys support at all levels of government and the private sector since its purchase and conversion from a nationally-connected railroad, to a multi-purpose trail corridor. This is evidenced by the robust number of funding partners and support letters in favor of this application. Four counties and 82 cities participate in the region's municipal planning organization, the Puget Sound Regional Council where ERC projects have successfully competed and received federal awards for acquisition and preliminary engineering. These investments combined with state, local, and private contributions demonstrate broad regional support.

The Washington State Legislature supports the project in several ways with a direct appropriation in [Connecting Washington](#) – the state's \$16 billion, 2016 transportation funding bill, discussed in Section 4.8 Non-Federal Revenue for Transportation Infrastructure Investment. Connecting Washington included funding for multiple ERC connections, including \$5 million for construction of the Wilburton Trestle at SE 8th St.

Numerous corporations have shown support through direct contributions or by voicing commitments to locate or expand offices. Health care company Kaiser-Permanente has provided a \$500,000 contribution to the project. Google has expanded their campus across the CKC, making significant investments (totaling \$3.2 million) in public amenities along the corridor.



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In addition to moving a flagship store to the Wilburton Center Segment in Bellevue, REI is constructing their new corporate headquarters close to the trail to offer employees an enhanced quality of life with active transportation commuting and places for walks during the lunch hour, as well as provided small grants for work along the ERC.

Numerous letters of support have been submitted by local, state, and federal elected officials. In addition, a diverse collection of non-profit organizations strongly support the components of the ERC rails-to-trails project. All letters of support are included in the Appendix to this document and online.

### Relevant Regional Plans

The *Bridges BUILD* project is consistent with multiple regional and local plans that deal with the development of additional transportation options for the area. The PSRC's [Regional Active Transportation Plan](#) identifies the ERC as regional corridor and development of the ERC is included in the PSRC Transportation 2040. The 3 distinct projects provide a direct connection to the ERC. The ERC and the specific connections discussed in this application are identified in many of the region's planning documents; including the following:

- [King County ERC Regional Trail Final Master Plan and Environmental Impact Statement](#)
- [Puget Sound Regional Council's Transportation 2040 Project List](#)
- [2016 King County Comprehensive Plan Update](#)
- [King County Capital Improvement Plan](#)
- [City of Kirkland's Comprehensive Plan](#)
- [City of Kirkland's Parks Recreation and Open Space Plan](#)
- [City of Kirkland's Active Transportation Plan](#)
- [Totem Lake Park Master Plan](#)
- [City of Kirkland's 2017 Transportation Master Policy](#)
- [Cross Kirkland Corridor Master Plan](#)
- [City of Bellevue Comprehensive Plan](#)

## 4.8 NON-FEDERAL REVENUE FOR TRANSPORTATION INFRASTRUCTURE INVESTMENT

King County and Washington State include multiple innovative and new non-federal revenue sources to support the growing transportation needs of the region, some of which are sources of funding for the ERC and the *Bridges BUILD* project.

Primary funding for the King County portion of the ERC has been through the King County Parks Levy, a voter-approved funding source that provides the majority of King County Parks operating and capital funds. Some ERC acquisition has been funded through the County's Conservation Futures Fund, a dedicated funding source for open space acquisition. Other local funding includes the City of Bellevue's dedication of \$2 million towards the Wilburton Trestle at SE 8th St from their general fund. An additional \$5 million towards the Wilburton Trestle at SE 8th St has been funded by the State of Washington through the 2016 Connecting



Washington transportation funding package. Connecting Washington is primarily funded through a gas tax increase beginning in 2016. Private funding has also been secured for the Wilburton Trestle at SE 8th St (\$.5 million) from Kaiser Permanente in the last two years.

### Connecting Washington

Connecting Washington is a 16-year program, funded primarily by an 11.9-cent statewide gas tax increase that was fully phased-in on July 1, 2016. The 2015 Connecting Washington funding package enhances the statewide transportation system and maintains critical infrastructure. Specifically, in relation to the *Bridges BUILD* project, \$1.3 billion in spending has been set aside for non-highway projects like bike paths, walkways, rail, and transit.

### Sound Transit 3 (ST3)

ST3 is a voter approved package that funds the next round of Sound Transit light rail and bus/BRT investments. ST3 projects are located in the ERC, including an extension of light rail service from the Wilburton Station to the South Kirkland Park and Ride. Additionally, Sound Transit's System Access Fund may provide additional funding opportunities for ERC trail connections to new light-rail facilities.

"With the adoption of Sound Transit 3, the people of the Central Puget Sound region have taken a historic action to continue building the true mass transit system that has been talked about for decades."

– Sound Transit

<https://www.soundtransit.org/About-Sound-Transit/News-and-events/News-releases/voters-approve-historic-sound-transit-3-measure>

### Toll revenues from I-405 HOT lanes

In 2009, the Washington State Legislature directed WSDOT to study the merits of express toll lanes on I-405 and re-engage the I-405/SR 167 Executive Advisory Group. This work resulted in the [2009 Eastside Corridor Tolling Study](#) which evaluated five options to implement express toll lanes on I-405.

In 2010, the Washington State Secretary of Transportation directed WSDOT to convene a National Expert Review Panel to evaluate the findings of the 2009 Eastside Corridor Tolling Study. The Expert Review Panel reported out their findings to the I-405/SR 167 Executive Advisory Group, resulting in the publishing of the [I-405/SR 167 Expert Review Panel Report](#). The report concluded that the proposed express toll lane concept was a viable and appropriate strategy for improving mobility on the I-405/ SR 167 Corridor. In 2011, the Washington State Legislature authorized express toll lanes on I-405 between Bellevue and Lynnwood. WSDOT launched 15 miles of express toll lanes on Interstate 405 between the cities of Bellevue and Lynnwood on Sept. 27, 2015.



## 5. PROJECT READINESS

### TECHNICAL FEASIBILITY

The three connections detailed in this application were selected because they will:

- Connect to Sound Transit, light rail and rapid ride bus lines currently under construction and scheduled to open in 2023;
- Leverage significant economic re-development efforts funded by the Cities of Kirkland and Bellevue in the Totem Lake Urban Center, Yarrow Bay, Wilburton and Spring Business Districts;
- Complement freeway expansion projects recently completed and underway on Interstate-405;
- Provide significant safety and mobility benefits for the traveling public;
- Eliminate pedestrian delays and a barrier at a high traffic volume intersection; and,
- Construct the most heavily urbanized, highest-projected use, and historically iconic portions of the trail.

### DESIGN AND ENGINEERING PROGRESS

The following section details the design and engineering activities to date for the three projects included in this request.

#### **Wilburton Trestle at SE 8th Street and NE 8th Street Crossing**

Federal funding has already been awarded for the right-of-way acquisition, and preliminary engineering phases. Master planning is complete for both the Wilburton Trestle at SE 8th St and NE 8th Street Crossing, including preparation of a Washington State SEPA EIS. For the NE 8th Street crossing, conceptual design is complete (design including alignment, ROW, coordination with Sound Transit, preliminary cost estimate). For the Wilburton Trestle at SE 8th St, 30% design will be complete as of August 2018 and the estimate included in this application reflects the 30% design estimate. Final design for the NE 8th Street Crossing is under contract and in process.

If BUILD funds are awarded, construction funding can be obligated to begin work in early 2019 and expended well before the 2025 deadline.

#### **Totem Lake Connector**

The City of Kirkland has performed an RFQ/RFP process to engage potential design firms and through this process chose COWI for engineering/design services. COWI completed 100% design in July 2018, which included:

- Survey
- Public outreach/preferred design selection
- Design and detail development
- Planning, specifications and estimate of construction cost





Bid-Ready documents will be developed as permitting progresses and any modifications are incorporated. The project will be “shovel-ready” in the coming months.

### ERC Activities

Right of way for the entire ERC has been reviewed by the Washington State Department of Transportation (WSDOT), awaiting obligation of construction funds. The WSDOT letter that verifies this is available to review.

### Similar Project Experience

King County delivers over \$15 million of Regional Trail capital projects every year. As described above, the King County Regional Trail System includes over 85 bridges, and over 50 of those are retrofitted railroad trestles. For projects with federal funding King County Parks partners closely with King County Roads department to provide a strong project delivery team that has successfully managed projects of similar size and scope to the *Bridges BUILD* project.

## PROJECT SCHEDULE

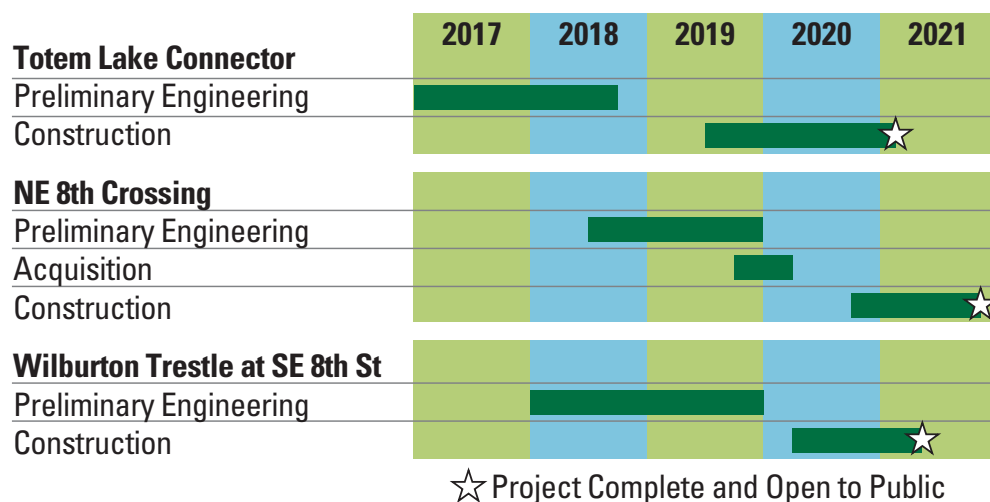


Figure 5-1:  
Project schedule

## APPROVALS

### Environmental

NEPA review for the NE 8th Street Bridge is anticipated in Spring of 2019, and for the Wilburton Trestle at SE 8th St in Fall 2019. There are no known impacts for the NE 8th Street Crossing and the project is anticipated to qualify for a Categorical Exclusion (CE). The Wilburton Trestle at SE 8th St will require Section 106 review for potential impacts to the historic structure. The Wilburton Trestle at SE 8th St will require an EA due to a “possible, but not likely to affect” determination for salmon in Kelsey Creek, which runs under the Trestle. NEPA review for the Totem Lake Connector is anticipated to begin in the Fall of 2018 and it is anticipated to qualify for a CE. All three connections expect to undergo approvals from the US Army Corps of Engineers, HPA, SEPA, etc.

### Legislative

No additional legislative action is required to implement the project. The local funds for the project are available and fully committed and the project has the full support and backing of the state and local electorate.



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## State and Local

The *Bridges BUILD* project has emerged from decades of planning efforts and is consistent with several regionally significant plans and policies noted in the Partnerships section of this application. No additional state or local planning actions are required for project implementation.

## ASSESSMENT OF RISKS AND MITIGATION STRATEGIES

King County and City of Kirkland understand that all major transportation capital projects include a level of risk and takes pride in fully assessing and addressing any potential risks associated with their respective projects before they begin. The project co-applicants do not take the opportunity to receive and manage federal dollars lightly and understand the reporting requirements and financial best practices associated with responsibility as a federal funding recipient. The project co-applicants have identified the following project risks, and considered the most feasible mitigation strategies for each.

### NE 8th Street Crossing

- *Risk & Mitigation 1: Acquisition.* Acquisition is required for some key project elements. Negotiations may be complicated by dynamic market changes resulting from anticipated upzones and rising market demand. Current schedule allows for some delay in acquisition. Acquisition consultant has been hired to complete negotiations and assure compliance with federal requirements.
- *Risk & Mitigation 2: Sound Transit Construction Schedule.* This project has an optimal construction window timed to coincide with appropriate phases in the construction of the adjacent light rail elevated guideway system. Delays in Sound Transit construction could modify the NE 8th street construction schedule. King County project team is in regular and close communication with Sound Transit to monitor construction progress and identify potential coordination issues. Sound Transit light rail construction has passed through the construction phase most likely to result in delays (excavation and utility preparation) and is currently on schedule

### Wilburton Trestle at SE 8th Street

- *Risk & Mitigation 1: Structure.* The Trestle was constructed in 1904, and there is a high likelihood that repair work will result in discovery of hidden structural defects. Structural evaluations have been completed for the trestle, and previous King County experience has provided insight into the locations where timber trestles are most likely to have hidden rot or other wood quality issues. The project budget has incorporated higher contingencies for unanticipated discovery.
- *Risk and Mitigation 2: NEPA.* NEPA consultation for Endangered Species Act issues (i.e. listed salmon species impacts) could result in project delays. Consultation is scheduled early to allow adequate time to resolve potential issues. The team's experience with similar projects has also allowed us to anticipate likely concerns and mitigate them prior to consultation, including incorporating techniques to encapsulate wood members that could potentially leak treatment chemicals into stream and riparian areas, and techniques for in-water work that will result in minimal disturbance to streambeds.



## NE 8th Street Crossing and Wilburton Trestle at SE 8th Street

- **Risk & Mitigation 1:** Construction Price Escalation. If the overall economy continues its current growth construction prices are anticipated to escalate more rapidly than the general inflation rate. Escalation and contingency costs are being incorporated into the planned levy proposal going to King County voters in 2019. Assuming a successful levy vote funds should be available to mitigate unexpected cost increases.

## Totem Lake Crossing

- **Risk and Mitigation 1:** Cost Escalation and Commodity Prices. Commodity prices, especially steel prices are the largest risk driver for the Totem Lake Crossing, as identified by a third-party firm that performed the value engineering analysis. Mitigation strategies includes timing bid right, packaging of projects, and clear plans and specifications.
- **Risk and Mitigation 2:** Permitting. Receiving all required permits is always a risk for infrastructure project. To mitigate, the City of Kirkland has started the permitting process early and is currently working with permit agencies with 100% design documentation that is being used in applications.

## 6. BCA RESULTS

A benefit-cost analysis (BCA) was conducted for the *Bridges BUILD* project as a requirement for application to the BUILD grant program. This analysis was conducted in accordance with the benefit-cost methodology as recommended by the U.S. DOT in its 2018 BUILD guidance. The period of analysis corresponds to 23 years, which includes approximately three years of construction and 20 years of benefits. The table below illustrates the costs related to capital development (pre-engineering, construction, right of way acquisition), operations and maintenance (O&M), and rehabilitation and repair (R&R), as well as the residual value of the bridges at the end of the analysis period.

Table 6-1: Project Cost Values

Cost Category	Costs (2017 \$)	Present Value Costs (discounted at 7% to 2018)	Present Value Costs (discounted at 3% to 2018)
Capital Costs	\$57,328,545	\$50,473,771	\$54,201,639
Incremental R&R Costs	\$7,335,609	\$2,950,839	\$4,844,033
<b>TOTAL</b>	<b>\$64,664,154</b>	<b>\$53,424,610</b>	<b>\$59,045,672</b>

The *Bridges BUILD* project produces monetized benefits in the following categories: safety benefits related to a reduction of collisions between auto vehicles and pedestrians and bicyclists; health cost savings as a result of induced exercise outdoors by pedestrians and bicyclists; time savings for pedestrian, bicyclists and auto commuters as a result of reduced delays from at-grade crossings; commuter-mobility and recreation benefits for pedestrians and bicyclists due to enhanced access to public transit and trail paths; and savings from prevented emissions, vehicle O&M costs, fuel use and road damage due to reduced auto use. The quantified benefits for those categories are listed below.



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Table 6-2: Project Benefit Values

<b>Economic Benefit</b>	<b>Benefits (2017 \$)</b>	<b>Present Value Benefits (discounted at 7% to 2018)</b>	<b>Present Value Benefits (discounted at 3% to 2018)</b>
Safety Benefits	\$18,834,604	\$8,708,435	\$13,202,881
Health Cost Savings	\$2,113,769	\$950,290	\$1,463,644
Travel Time Savings	\$10,195,113	\$4,275,272	\$6,861,704
Commuter Mobility	\$23,930,972	\$10,503,570	\$16,395,473
Recreation	\$43,061,146	\$19,453,472	\$29,875,584
Lower Emissions, Road and Vehicle Costs	\$2,612,190	\$1,185,190	\$1,815,860
<b>Category Benefits SUBTOTAL</b>	<b>\$100,747,794</b>	<b>\$45,076,229</b>	<b>\$69,615,146</b>
Residual Value	\$43,262,836	\$9,764,992	\$22,578,550
Incremental O&M Costs	(\$100,000)	(\$46,226)	(\$70,117)
<b>All Benefits TOTAL</b>	<b>\$143,910,630</b>	<b>\$54,794,995</b>	<b>\$92,123,579</b>

The BCA results in monetized total benefits of \$54,794,995 (2018\$) using a 7% discount rate and \$92,193,696 (2018\$) using a 3% discount rate cumulative through 2040. Comparing the total project costs of \$53,424,610 (2018\$ at 7% discount) and \$59,045,672 (2018\$ at 3% discount) with the total benefits above, results in a benefit-cost ratio (BCR) of 1.03 (at 7% discount) and 1.56 (at 3% discount). The complete BCA and technical writeup is provided as an Appendix.

Table 6-3: Benefit-Cost Analysis Results

<b>Total Values</b>	<b>Results Summary (discounted at 7% to 2018)</b>	<b>Results Summary (discounted at 3% to 2018)</b>
Cumulative Project Benefits	\$54,794,995	\$92,123,579
Cumulative Project Costs	\$53,424,610	\$59,045,672
Net Present Value	\$1,370,344	\$33,077,907
<b>Benefit-Cost Ratio</b>	<b>1.03</b>	<b>1.56</b>





## APPENDICES

All appendices are hosted on the following King County website with links provided within the body of BUILD Application or below.

- [Benefit-Cost Analyses Technical Document](#)
- [Letters of Support](#)
- [Planning/design documents and studies](#)
- [Other application materials](#)

