



## Portland-Milwaukie Light Rail Bridge to bring new options for transit, cyclists and pedestrians



*The Portland-Milwaukie Light Rail Bridge will carry light rail, buses, cyclists, pedestrians and eventually streetcars, but no private vehicles.*

A vital element of the Portland-Milwaukie Light Rail Project is a new bridge across the Willamette River. In Portland, the city of bridges, this will be the first span built over the river since the addition of the Fremont Bridge in 1973.

The Portland-Milwaukie Light Rail Bridge will be distinctive in the United States, carrying light rail trains, buses, cyclists and pedestrians and, in the future, streetcars. The bridge will not accommodate private vehicles, although the structure will be designed to allow emergency responders to drive on to it if necessary. Importantly, this bridge will also add capacity to the region's overall transportation system by:

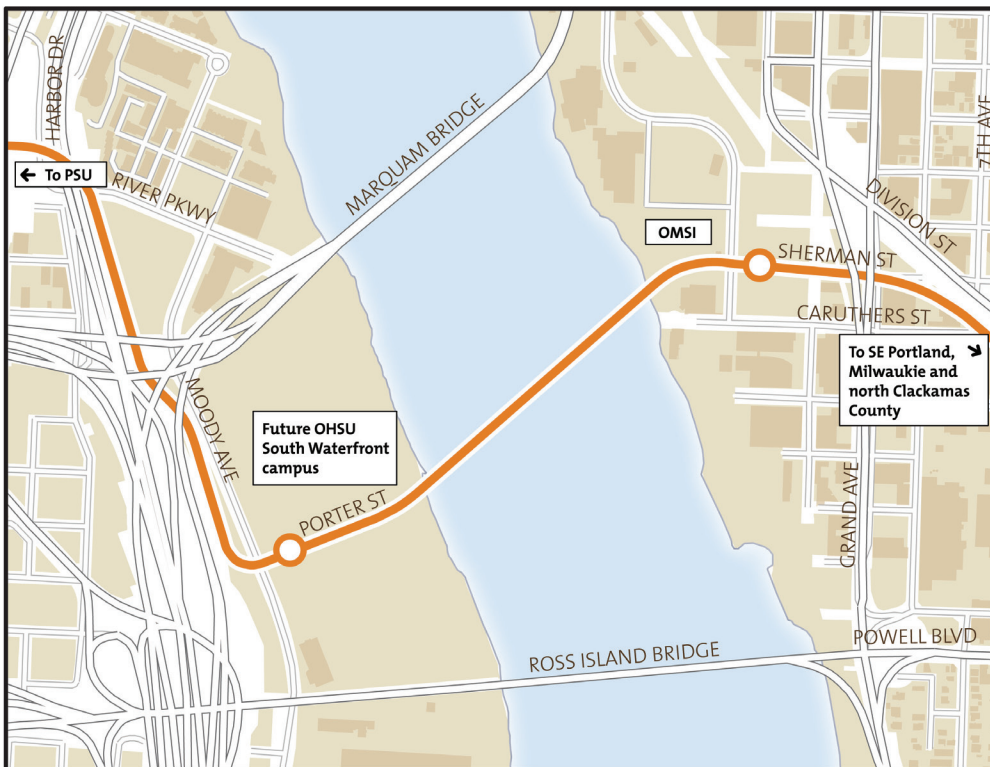
- Adding a second light rail connection between the eastside and downtown Portland
- Creating new access points to important destinations such as Portland State University,

Oregon Health & Science University (OHSU), the Central Eastside and OMSI

- Reducing commute pressure on other bridges by offering efficient alternatives
- Potentially moving bus lines 9-Powell/Broadway, 17-Holgate/NW 21st and 19-Woodstock/Glisan that now use the Ross Island Bridge to the new bridge, thus reducing their travel time and operating costs
- Providing bike and pedestrian access to existing and planned greenways and bike routes on either side of the Willamette River

### **The right bridge in the right place**

Many community members have come together to recommend both the best bridge alignment and most appropriate bridge type for this critical component of the light rail project. The Willamette



*The Willamette River Crossing Partnership selected the bridge's alignment during public meetings held in 2008.*

River Crossing Partnership Committee, led by former Portland Mayor Vera Katz and consisting of project partners and institutions, businesses and neighborhood representatives from either bank of the Willamette, met to study alternatives for where the bridge would cross the river. In May 2008, the committee recommended the Porter-Sherman alignment.

On the river's west bank, this alignment begins at the property line between OHSU's future South Waterfront campus and Zidell Marine Corp. property, and then crosses the river to land on the east bank at the former SE Sherman Street right-of-way just north of Portland Opera. This recommended alignment was adopted in the project Locally Preferred Alternative (LPA) in July 2008.

With the alignment selected, a new committee began work on choosing a bridge type. The Willamette River Bridge Advisory Committee (WRBAC), also led by Mayor Katz, spent eight months studying different bridge types and

narrowing down the possibilities to one that embodies the Portland aesthetic while being functional and affordable.

Working closely with bridge engineers and designers, the WRBAC ultimately recommended a cable-stayed bridge type. This recommendation was adopted by the project Steering Committee in February 2009, allowing design of the bridge to begin. The selected cable-stayed bridge will have two towers with two in-water piers and two landside piers. To learn more about the bridge selection process, visit [trimet.org/pm/planninganddesign/bridge.htm](http://trimet.org/pm/planninganddesign/bridge.htm).

## A bridge for transit, a bridge for people

Project partners have made the integration of bike and pedestrian facilities, and ADA access, a project priority. The original bridge plans called for two 12-foot bike and pedestrian paths, one on each side of the bridge deck. Discussions with the cyclist and pedestrian communities led to an



*The Portland-Milwaukie Light Rail Bridge will have 14-foot bike-pedestrian paths on each side of the bridge, as well as extra width at the towers.*

increase in path width to 14 feet, providing 28 feet of pedestrian and bike facilities, more than on any current bridge over the Willamette River.

At either end of the bridge, the paths will connect to the future light rail stations. Connections to existing and future greenways on each riverbank are envisioned to occur with future adjacent development—the East Bank Esplanade as it passes OMSI and Portland Opera and a planned future greenway along South Waterfront.

Additionally, cyclists will be able to connect to the bridge from Southeast Portland via planned bike routing and paths, including the Springwater Corridor.

The bridge will also have additional width on the outside of the two towers to allow people to stop and enjoy the panoramic views.

### Careful, efficient construction

Construction of the new bridge requires careful planning and execution to minimize impacts to river users and to ensure the least possible amount of disturbance to habitat and wildlife, particularly

protected fish species, and to keep the project on time and on budget.

In-water construction can only take place during a four-month window, from July 1 through October 31, in order to minimize interference with the ecology of protected fish. Two temporary work bridges and two cofferdams are being placed in the river during the 2011 in-water window. The work bridges will provide access to construction sites above the river; cofferdams allow work to continue outside of the in-water window by creating a barrier between the river and pier construction sites.

With the cofferdams in place, construction of the two in-water piers and the towers can begin. After these are completed, creation of the bridge deck begins using a balanced-cantilevered method. The bridge deck is constructed from each tower outward. An equal section of bridge deck is constructed on each side of each tower, followed by installation of its cable supports. The cable that holds the deck in place is threaded from the towers to the deck sections as each section



Cofferdams will be used to construct in-water piers.

is created. As it lengthens, the bridge span will connect above the middle of the river with a center closure pour and then to the landside span portion on either bank.

While bridge construction is scheduled for completion in 2014, signal and power systems for light rail and the bridge lighting systems must be installed and connected. The bridge will open when light rail service begins in 2015.

### Bridge construction timeline

Preliminary Engineering .....	2009–2010
Selection of contractor team .....	Fall 2010
Final Design .....	2011–2012
Overall construction.....	2011–2014
In-water construction .....	July–Oct. 2011
Bridge opens/service begins .....	2015

### Bridge details

- Year-of-expenditure budget: \$134.6 million
- Height of towers, from pier cap to top: 180 feet
- Total length: 1,720 feet (.326 miles) between landside abutments
- Length of midspan between towers: 780 feet
- Typical width of span: 72.5 feet
- Maximum width at towers: 110.5 feet
- Width of bike/pedestrian paths: 14 feet each side
- Clearance height at 150-foot-wide center section between towers: 77.52 feet
- Maximum speed of buses or rail vehicles on bridge: 25 mph
- Design/Build Contractor: Kiewit Infrastructure West Co./T.Y. Lin

### Stay involved

Bridge construction can be viewed live via project BridgeCams at [trimet.org/pmbridgecams](http://trimet.org/pmbridgecams). Sign up for project email updates at [trimet.org/pm](http://trimet.org/pm). For more information, please call TriMet Community Affairs at 503-962-2150.

**Available in other formats:**  
[trimet.org](http://trimet.org)  
 503-238-7433  
 TTY 503-238-5811

**Favor de llamar al 503-238-7433 si necesita ésta información en español.**

Portland-Milwaukie Light Rail Project is a partnership among:

