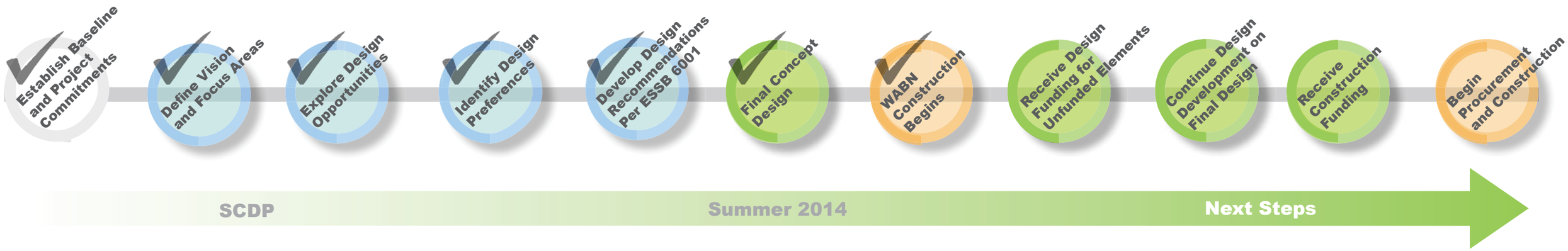
# 02 DESIGN PROGRESSION OVERVIEW

**“The Washington State Department of Transportation’s vision is to be the best in providing a sustainable and integrated multimodal transportation system.”**

**Results WSDOT: Moving Washington Forward**

**WSDOT Strategic Plan, 2014 - 2017**

# DESIGN PROGRESSION




## Design progression overview

The recommendations in this report, when endorsed by key decision-makers, will complete final conceptual design for the entire SR 520 corridor in Seattle. This chapter provides an overview of how the SR 520 project corridor design has evolved in Seattle over time. Additional detail is provided about:

- **Project context and history:** What is the purpose and need for the project, and what is the current status of program delivery?
- **WSDOT/city of Seattle collaboration:** How have WSDOT and the city worked together to advance corridor design and support project delivery?
- **Preliminary design:** How did WSDOT analyze alternatives, develop preliminary designs, select a preferred option, and move forward with a conceptual design?
- **Conceptual design refinements:** How has the Preferred Alternative been refined in Seattle? How have the public and key stakeholders been involved?
- **Final design and beyond:** With the Final Concept Design likely identified by the end of 2014, what are the next steps for the SR 520 project in Seattle?
- **Public involvement:** How has public input influenced the SR 520 corridor design in Seattle?

## Project context and history

SR 520 is a critical transportation link in Central Puget Sound, connecting major employment and population centers on both sides of Lake Washington via the world's longest floating bridge. In 2013, an average of 70,000 vehicles crossed the SR 520 bridge on weekdays. (This volume meets projections for the corridor after tolling was implemented and aligns with the project's finance plan.) WSDOT is now building a safer, higher-capacity highway. Work underway includes:

- Building a six-lane corridor from Medina to I-405, with transit/HOV lanes in both directions, a regional bicycle and pedestrian path, and new lids at Evergreen Point Road, 84th Avenue Northeast and 92nd Avenue Northeast, two of which have median transit stops; **opens late 2014.**
- Replacing the half-century-old, structurally vulnerable floating bridge with a stronger, safer, six-lane bridge; **opens spring 2016.**
- Constructing a stronger, safer West Approach Bridge for westbound traffic and providing a six-lane corridor to Montlake, including transit and HOV from Redmond to Montlake; **north half opens summer 2017.**
- Improving transportation options for transit riders, bicyclists and pedestrians, including a regional, cross-lake bicycle and pedestrian path on the north side of the bridge; **opens summer 2017.**

**However, improvements to a major portion of SR 520 – its western segment in Seattle – remain unfunded.**

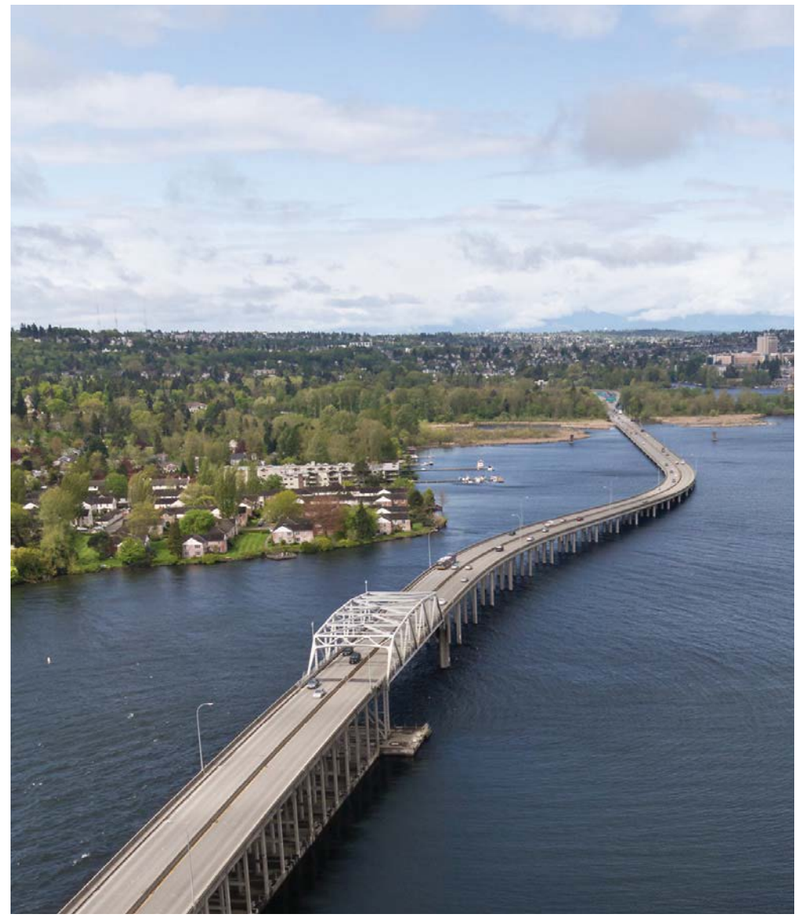
## WSDOT/city of Seattle collaboration

The city of Seattle has always been an important and active partner in the SR 520 Program, participating in regulatory coordination efforts, executive oversight groups, mediation processes, and working groups. Seattle neighborhood and resident feedback has also been crucial to shaping the project's current design by sharing community preferences, providing comments on analysis and interim designs, and otherwise engaging in project activities.

In 2011, the relationship between WSDOT and the city was formalized in a Memorandum of Understanding (MOU). The ultimate purpose of the MOU was to acknowledge the Preferred Alternative and expedite project delivery in Seattle while clarifying agency roles and responsibilities, mitigation commitments, and establishing a structure for addressing remaining project questions. Through this formalized commitment to work together, the city and WSDOT agreed to collaborate to fund, refine the design of, and construct the "Rest of the West."

## Seattle/SR 520 project 2011 MOU purposes:

- ☑ **Confirm the Preferred Alternative and seek full funding:** Acknowledge the Preferred Alternative, for which WSDOT is seeking full funding from the State Legislature and other funding sources to build all program elements.
- ☑ **Commit to key design elements and their delivery:** Secure WSDOT's commitment on key design elements and intent to build them.
- ☑ **Clarify decision-making regarding a second bascule bridge:** Establish an understanding related to the decision and timing to construct a second bascule bridge crossing the Montlake Cut.
- ☑ **Clarify mitigation commitments:** Clarify mitigation commitments WSDOT has agreed to implement to meet the city's goals and objectives for the project.
- ☑ **Maintain a meaningful city role throughout design:** Ensure the city maintains a meaningful role throughout the project design process.
- ☑ **Ensure city involvement for the project's duration:** Ensure the city's continued involvement for the duration of the project.
- ☑ **Mutually commit to meet timelines for project delivery:** Establish the city's and WSDOT's intent to endeavor to meet SR 520 timelines for project completion.



*View of SR 520, looking west. The bridge transitions from a floating structure to a fixed structure on the west side of Lake Washington as it approaches Seattle.*

## Recent design history overview:

***October 2011***
***WSDOT/city of Seattle Memorandum of Understanding***
WSDOT and city of Seattle's commitment to work together to identify funding, refine the design and construct the Preferred Alternative.

***Fall 2011 – Fall 2012***
***Seattle Community Design Process (SCDP)***
Public process to refine the Seattle side of the SR 520 corridor.

***February 2013***
***Seattle Resolution 31427***
Council resolution regarding design preferences identified during the SCDP.

***April 2014***
***ESSB 6001***
Directs WSDOT to continue working with the city of Seattle on the design of key elements of the Seattle corridor.

***2014***
***Where we are today***
WSDOT, city of Seattle and design professionals further refine key elements of the Seattle side of the corridor.

See pp. 12-15 and Appendix C for further detail on each of these project milestones.

## Preliminary design: Selecting the Preferred Alternative

For many years, WSDOT has been analyzing alternatives for the SR 520 corridor and working with agency partners and public stakeholders to select and refine a preliminary design.

- **Identifying a Preferred Alternative:** WSDOT analyzed more than a dozen alignment alternatives as the agency developed the project's environmental impact statement (EIS). Based on analysis and feedback received through the Draft EIS (2006), community mediation process (2008), Supplemental Draft EIS (2010), and Final EIS (2011), WSDOT defined a Preferred Alternative for the corridor from Medina to I-5.
- **Refining the Preferred Alternative:** WSDOT worked to refine components of the Preferred Alternative - including design refinements, transit connections, planning and financing - through a legislative workgroup (2009). The process helped WSDOT ensure that the Preferred Alternative reflected the requirements and preferences of key constituents.
- **Approving the Preferred Alternative:** The Federal Highway Administration approved the Preferred Alternative with a Record of Decision published in August 2011.

See Appendix C for more details on how WSDOT narrowed to a Preferred Alternative, and how it was further refined through agency and stakeholder processes.

## Conceptual design refinements: Refining SR 520 in Seattle

After approval of the Preferred Alternative, WSDOT engaged in two major processes, the 2011-2012 SCDP and the 2014 West Side Design Refinements, to further refine the conceptual design of Seattle-area SR 520 elements.

**2011 - 2012 Seattle Community Design Process.** In 2011, WSDOT launched the Seattle Community Design Process (SCDP), a robust public and stakeholder process to refine the corridor vision and conceptual design for the unfunded portions of the SR 520 project in Seattle. Through this effort, WSDOT and the city of Seattle identified many well-supported design preferences that were endorsed by Seattle City Council as well as areas requiring further exploration. The city of Seattle formalized their guidance in Resolution 31427 in early 2013, and WSDOT incorporated those endorsed design elements into the SR 520 conceptual design. See pp. 14-15 for more information on the SCDP.

*Approximately 344 people attended a September 2014 project open house in Seattle.*

*WSDOT staff answer questions at the September 2014 open house.*

## WE ARE HERE!

**2014 West Side Design Refinements.** In April 2014, state lawmakers directed WSDOT (via Engrossed Substitute Senate Bill 6001) to continue working with the city of Seattle to build from the results of the SCDP. WSDOT and the city were charged with making design recommendations for the Seattle-area elements that were not resolved during the SCDP and seeking public comment on resulting recommendations.

A team of design professionals, in consultation with the Seattle Design Commission and supported by city and WSDOT staff, explored design solutions for the following areas:

- Portage Bay Bridge, including:
  - Inclusion of a bicycle and pedestrian path
  - Box girder and cable stay bridge types
- Montlake lid area, including:
  - Better connections
  - Quality open space
  - Sustainability
- Transit and non-motorized connections, including:
  - Bicycle and pedestrian connections to existing and planned city networks
  - Multimodal connections across the Montlake Cut
  - Implementation and next steps for connections

The design vision and goals for each of these areas, concepts explored, and design recommendations are further explained throughout this report.

*Final Concept Design: Land bridge pedestrian and bicycle route over SR 520.*

*Final Concept Design: Landscape elements, grading, and landforms that respond to the historic context of the neighborhood provide both visual and physical buffers of the SR 520 roadway along East Lake Washington Boulevard.*

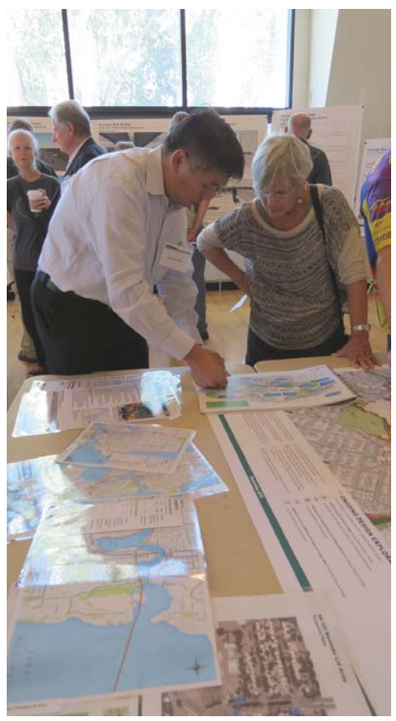
## Final design and beyond

WSDOT and city staff have continued to work in partnership on the remaining project elements, resulting in the Final Concept Design recommendations illustrated in this report. The Final Concept Design recommendations and updated project cost estimates will be presented to the Seattle City Council in early 2015 to inform their guidance and potential endorsement. The Seattle City Council may choose to formalize this guidance in a resolution.

In early 2015, WSDOT will present the results of this process, revised design plans, and updated cost estimates for the Final Concept Design to the State Legislature for funding consideration. When additional project funding is obtained, WSDOT will work with the city and other partners to finalize design, prepare for construction, and complete project delivery.

# How has public input influenced the SR 520 corridor design in Seattle?

Public engagement and feedback have been an ongoing priority over the life of the SR 520 project and a key factor considered in design decisions. As described in Appendix C, many regulatory and legislative processes led to the selection of the current Preferred Alternative, and each step included public involvement and commenting opportunities to inform decision-making. The public has also played an important role in developing the Final Concept Design for project elements in Seattle.



*Community members had the opportunity to learn more and comment on the design during the Summer and Fall of 2014.*

*The design preferences captured during the 2012 SCDP were published in a final design report. An appendix to the report summarized public comment received during the process.*

*To view these documents or for more information on the SCDP, see:*

*http://www.wsdot.wa.gov/Projects/SR520Bridge/I5ToMedina/scdp.htm*

## What was the Seattle Community Design Process?

Following federal approval of the Preferred Alternative in 2011, WSDOT launched the Seattle Community Design Process (SCDP), a robust and collaborative effort with the city of Seattle, design professionals, and the broader public to refine the corridor vision and conceptual design for the unfunded portions of the SR 520 project in Seattle. WSDOT convened the SCDP in 2011 to meet its commitment to work collaboratively with the city of Seattle and Seattle neighborhood stakeholders to refine the SR 520 corridor between I-5 and the West Approach Bridge. This commitment emerged from the 2010 multi-agency workgroup process (ESSB 6392) and the 2011 Seattle/SR 520 project Memorandum of Understanding.

The SCDP was an iterative process that:

- Informed the public about the SR 520 corridor in Seattle.
- Listened to community and stakeholder feedback regarding the project design.
- Explored design refinements and collected additional public feedback.
- Integrated best practices for urban and sustainable design into the project based on feedback received.
- Continued to collect input from agency partners and community stakeholders as the process moved forward.

## What were the results of the process?

The SCDP included seven public workshops and generated thousands of public comments. Through this effort, WSDOT and the city of Seattle:

- Identified many well-supported design preferences that were endorsed by Seattle City Council.
- Identified areas requiring further design work before a Final Concept Design could be confirmed.

The city of Seattle formalized their guidance in Resolution 31427 in 2013, and WSDOT incorporated endorsed design elements in the SR 520 Preliminary Concept Design. Areas requiring further design exploration to reach a recommendation – the Portage Bay Bridge, the Montlake lid area, and non-motorized connectivity – were the focus of additional design work described in this report.

## What did we hear from the public during the SCDP that informed the design recommendations in this report?

WSDOT heard several key themes from the public during the SCDP, which served as a foundation for additional design work in 2014. The design team began their work by reviewing the SCDP "Public Comment Summary" to ensure that recommendations reflected community preferences heard to date.

## Common themes of public feedback during SCDP by area:

***Portage Bay Bridge***

- Continue to analyze and refine the box girder and cable stay bridge concepts (no clear public consensus for either type).
- Explore ways to integrate the bridge structure with the surrounding neighborhoods.
- Continue exploring the overall footprint, visual aesthetics above and below the bridge deck, and costs.
- Include a 14-foot-wide regional shared-use path.

***Montlake area***

- Explore ways to improve bicycle, pedestrian, and transit connections on the east and west sides of Montlake Boulevard East.
- Prioritize safe and efficient bicycle and pedestrian connections to other networks and transit areas.
- Buffer neighbors from both visual and noise effects of SR 520 traffic.
- Integrate with the Washington Park Arboretum by increasing the planted buffer between SR 520 and East Lake Washington Boulevard homes.
- Consider community concerns about increased traffic congestion and the need for traffic calming.

***Montlake lid***

- Re-examine the overall lid design and configuration to provide improved bicycle and pedestrian connectivity in key areas and in all directions.
- Further develop the western half of the lid as a mobility hub supporting safe connections to transit, bicycle, and pedestrian facilities.
- Provide and enhance space for active uses on the western end, and create usable green space that relates to the Arboretum further east.
- East of 24th Avenue East, explore ways to enhance north/south connectivity for pedestrians, bicyclists, and transit users.

## 2014 Public engagement by the numbers

**350** ***Approximately 350 people attended the September open house (a project record)!***

**150** ***More than 150 individual written comment cards were received at the open house.***

**25** ***Project staff held more than 25 community organization and stakeholder briefings.***

***Non-motorized connectivity***

- Create quality non-motorized connections for users of all ages and abilities.
- Create safe, direct, continuous, and convenient access and connections with clear wayfinding.
- New trails should seamlessly connect to existing trails, transit facilities, neighborhoods, and other activity centers.
- Extend the regional shared-use path across Portage Bay Bridge, with good connections to neighborhoods and activity centers.
- Implement separated bicycle and pedestrian facilities wherever possible.
- Improve the experience and safety of connections under bridge structures.

## How did work in 2014 build from the SCDP?

While the SCDP was an iterative public process, the 2014 design work was focused on decision-making related to remaining conceptual design issues. Therefore, public feedback was received primarily in existing forums at Seattle City Council and Seattle Design Commission briefings. WSDOT and the city of Seattle also briefed community organizations throughout the process and hosted an open house in the Montlake community to present the refined design concepts and hear public feedback. A summary of public feedback received at the September 2014 open house is provided in Appendix D. A summary of letters from community organizations providing feedback on the 2014 design work is included in Appendix H.

## Stakeholders engaged in the 2014 SR 520 West Side Design Refinements process

***Jurisdictions/Agencies***

- King County
- NOAA – Northwest Fisheries Science Center
- Seattle Mayor's Office
- Seattle City Council
- Sound Transit
- University of Washington
- 43rd, 46th, and 48th District State Legislators

***Community Stakeholders***

- Arboretum and Botanical Garden Committee
- Arboretum Foundation
- Cascade Bicycle Club Board
- Local community councils
- Eastside Transportation Partnership
- Friends of Olmsted Parks
- Lake Washington Boulevard neighbors
- Microsoft
- Montlake area businesses
- National Historic Preservation Act Section 106 Concurring Parties
- Canal Reserve neighbors
- Queen City Yacht Club
- Seattle Bicycle Advisory Board
- Seattle Design Commission
- Seattle Greenways
- Seattle Pedestrian Advisory Board
- Seattle Yacht Club

*See Appendix H to view a summary of letters received from community organizations.*

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