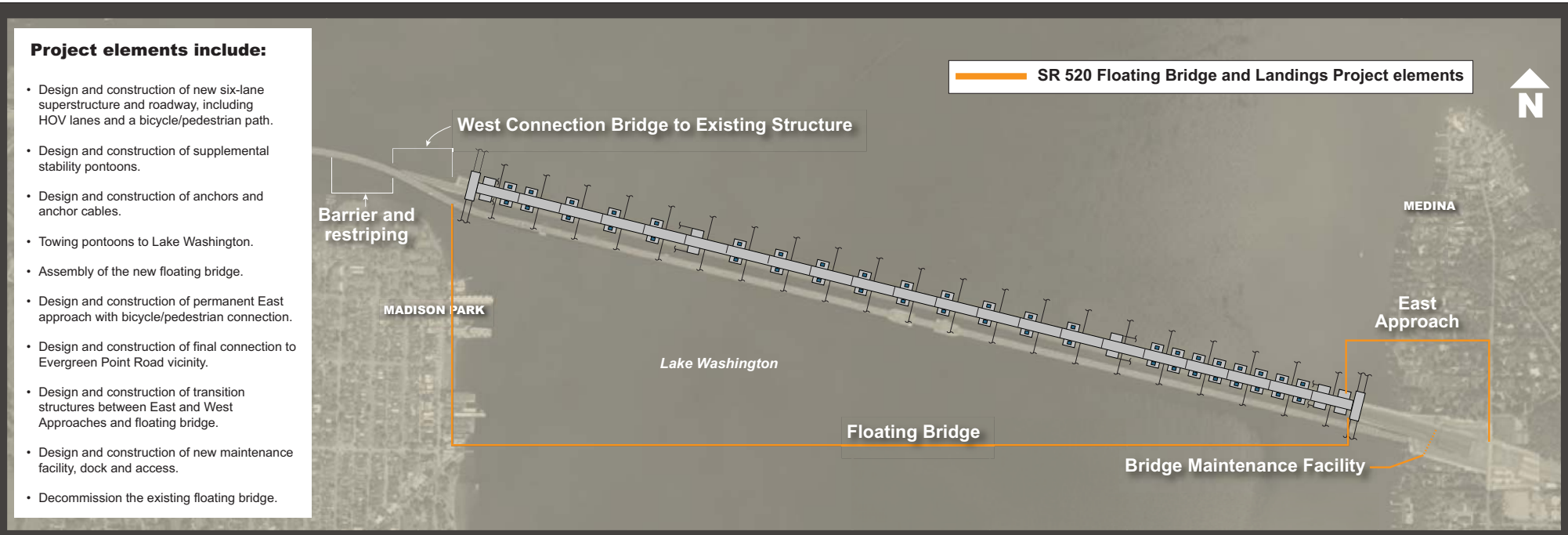
SR 520 Floating Bridge and Landings Project overview

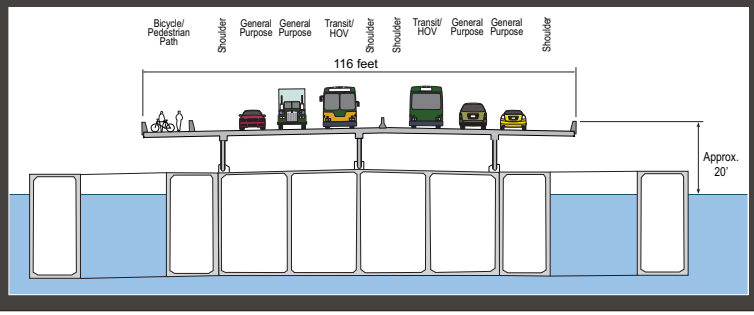
Project elements include:

- Design and construction of new six-lane superstructure and roadway, including HOV lanes and a bicycle/pedestrian path.
- Design and construction of supplemental stability pontoons.
- Design and construction of anchors and anchor cables.
- Towing pontoons to Lake Washington.
- Assembly of the new floating bridge.
- Design and construction of permanent East approach with bicycle/pedestrian connection.
- Design and construction of final connection to Evergreen Point Road vicinity.
- Design and construction of transition structures between East and West Approaches and floating bridge.
- Design and construction of new maintenance facility, dock and access.
- Decommission the existing floating bridge.



Construction of a new floating bridge

Floating bridge typical cross section



Towing pontoons

SR 520 floating bridge construction around the state

Construction activities are planned at multiple locations in Washington state. Pontoons and other bridge components will be towed to Lake Washington for assembly.

A. Grays Harbor
(March 2011 – 2014)
- Pontoon construction
- Pontoon moorage

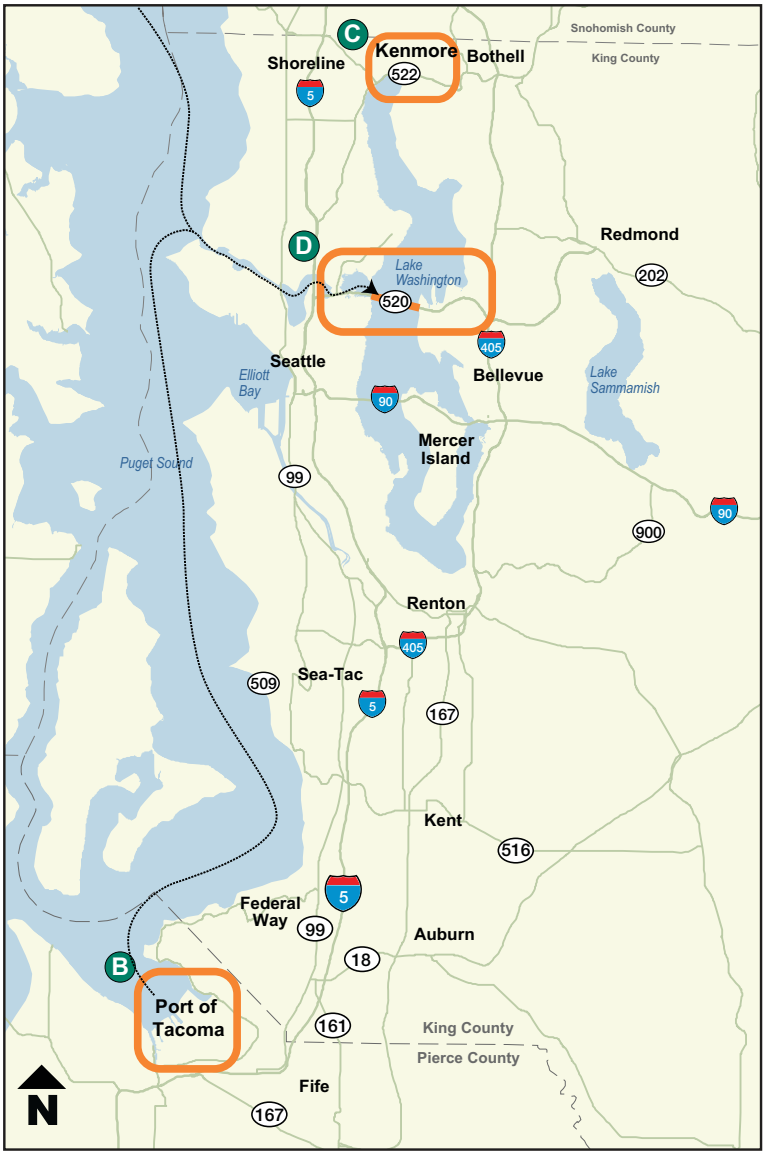
B. Port of Tacoma
(Nov. 2011 – mid 2014)
- Pontoon construction
- Pre-cast concrete elements
- Pontoon moorage and outfitting

C. Kenmore
(Feb. 2012 – early 2014)
- Anchors
- Deck sections

D. Lake Washington
(spring 2012 – 2016)
- Pontoon outfitting
- Eastside staging area
- Bridge assembly
- East Approach construction
- Bridge Maintenance Facility
- East and West Approach connections
- Decommission existing bridge

Crews on site in Kenmore.

Pontoon progress in Tacoma.



All towing will occur in designated shipping lanes.

SR 520 floating bridge pontoons

The new SR 520 floating bridge will be supported by three types of concrete pontoons:

Longitudinal pontoons (21) – These are the largest pontoons at approximately 360 feet long. They form the backbone of the bridge and support the roadway superstructure.

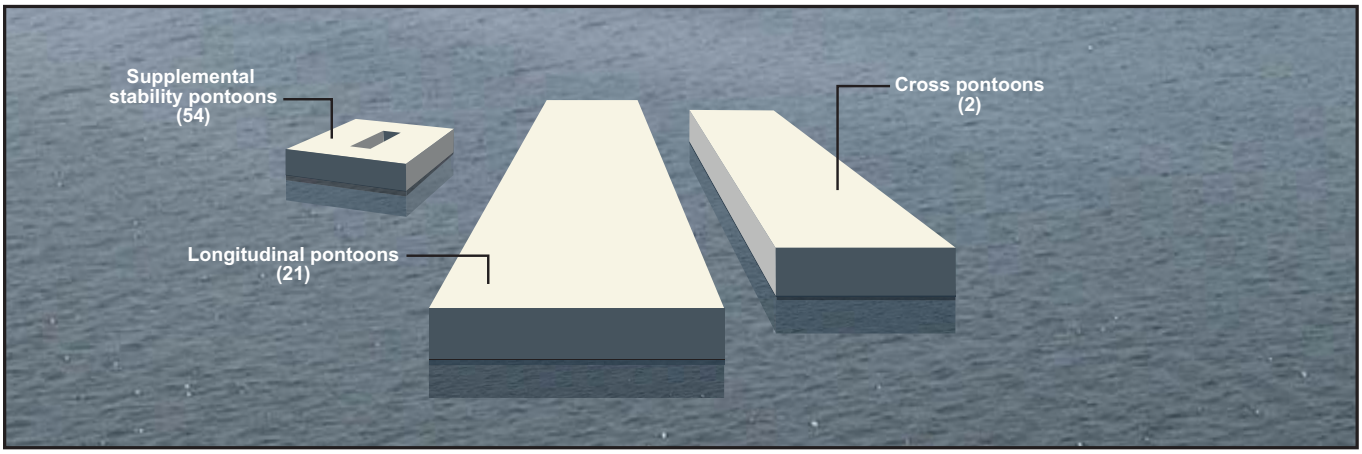
- Constructed in Aberdeen facility

Cross pontoons (2) – These mark the ends of the floating bridge section and the transition to the East and West Approach structures.

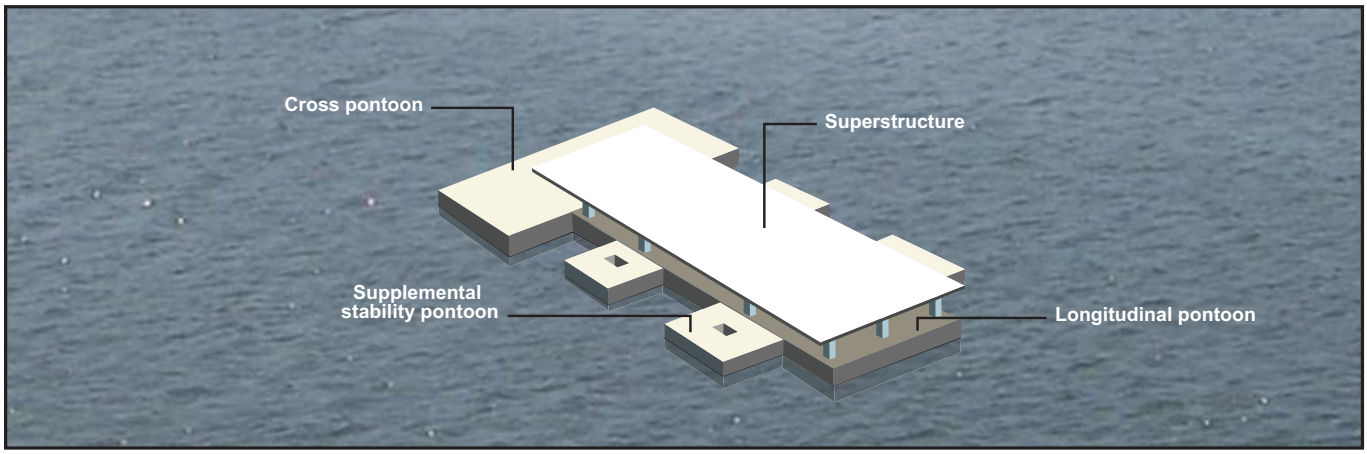
- Constructed in Aberdeen facility

Supplemental stability pontoons (54) – These smaller pontoons help stabilize and support the weight of the new floating bridge.

- Constructed in Aberdeen facility (10) and Tacoma facility (44)



The three types of pontoons that will support the new SR 520 floating brige.



A representation of pontoons being assembled on Lake Washington.

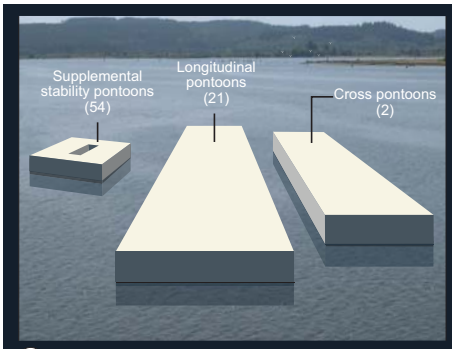
Washington State Department of Transportation

SR 520 Bridge Replacement and HOV Program

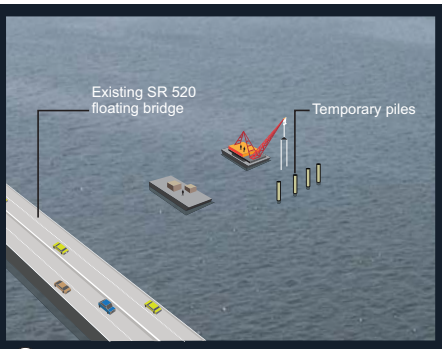
STATE ROUTE 520

I-5 to Medina: Bridge Replacement and HOV Project

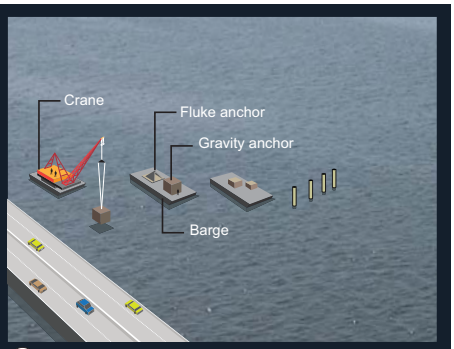
How will WSDOT build the new SR 520 floating bridge?



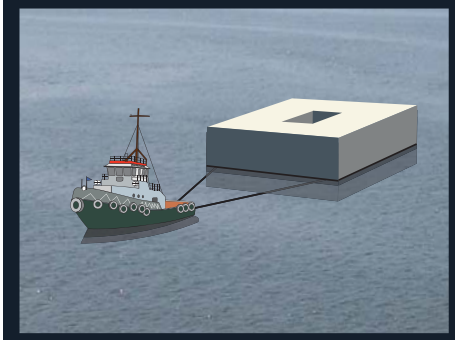
1 Build the necessary pontoons, anchors and roadway sections in Aberdeen, Tacoma and Kenmore.



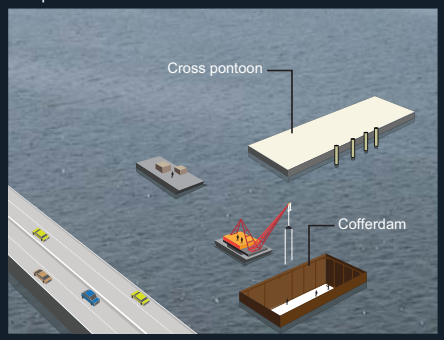
2 Begin constructing staging area near Medina with construction barges and cranes. Drive temporary piles.



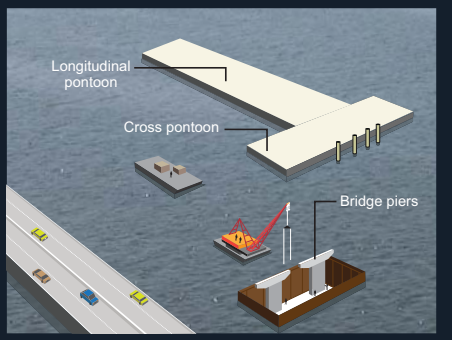
3 Install anchors for the floating bridge.



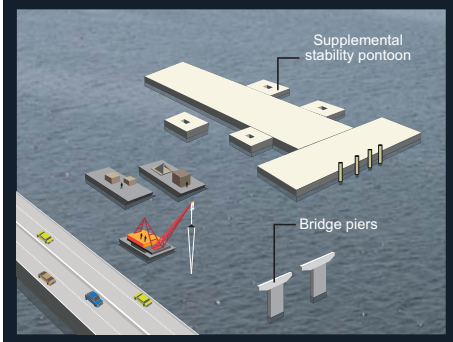
4 Tow pontoons to Lake Washington.



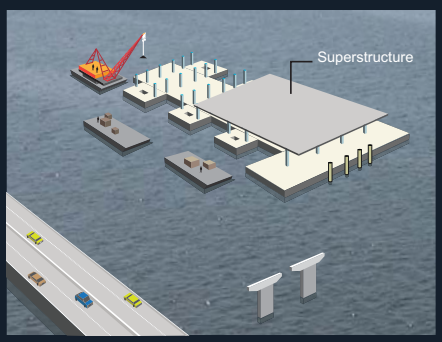
5 Install cofferdams to build bridge piers for East Approach structure. Move cross pontoon into staging area.



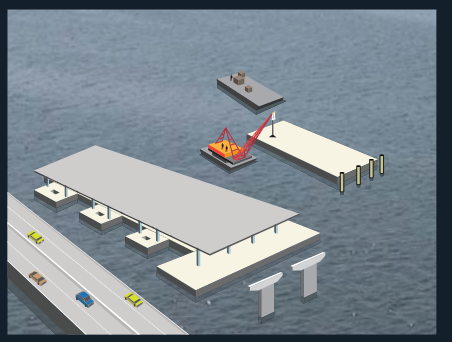
6 Build bridge piers in cofferdams and begin pontoon assembly in staging area.



7 Join supplemental pontoons to longitudinal pontoons at staging area.



8 Begin installation of superstructure on pontoons at staging area.



9 Move completed pontoons into position on Lake Washington. Continue assembling pontoons in staging area.

10 Move completed pontoons into position on Lake Washington and complete roadway superstructure.

11 Connect new floating bridge to completed East Approach and west transition span.

12 Shift traffic to new floating bridge. Decommission the existing bridge and remove from Lake Washington.

Note: Images for illustration purpose and are not to scale

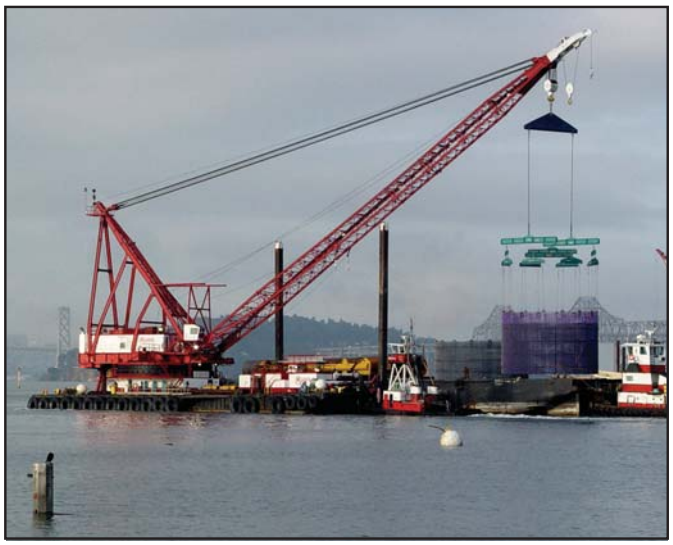
Upcoming SR 520 floating bridge construction activities

Planned construction activities for April through June 2012

Lake Washington	Tacoma	Kenmore
• Tree clearing at the site of the bridge maintenance facility • Installation of shaft anchors for eastern cross-pontoon • Cofferdam construction • Installation of the infrastructure for the in-water staging area • Installation of anchors for eastern longitudinal pontoons • Site prep in the cofferdam • Begin construction of pier footings at East Approach in Medina • Planned towing of pontoons from Aberdeen and Tacoma	• Continue pontoon construction • First float-out of cycle 1 pontoons • Prepare cycle 1 pontoons for towing • Begin second cycle of pontoon construction	• Continue gravity anchor construction • Begin fluke anchor construction • Begin construction of casting area for roadway deck sections

Construction equipment

Example of a cofferdam.



Example of a crane on a construction barge.

SR 520 corridor design and public process

We designed the new SR 520 floating bridge to have a clear and cohesive identity that fits with other planned SR 520 corridor projects from I-5 to I-405.

The architectural design concepts presented today are the result of years of consultation with local communities in Seattle and on the Eastside:

2005-2006: **Citizens Design Advisory Group**

- Developed the Corridor Aesthetics Handbook, which included consensus on "corridor unity… recognizable look and distinctive character…visually unobtrusive and elegant…corridor theme of naturalistic-contemporary."

2007-2008: **Mediation process with Seattle neighborhoods**

2007-2008: **Collaboration with Eastside jurisdictions**

2009: **Eastside Community Design Collaboration**

2010: **ESSB 6392 Workgroup**

2010: **Development of Urban Design Criteria in Eastside Project RFP**

2011: **Development of Urban Design Criteria in Floating Bridge and Landings RFP**

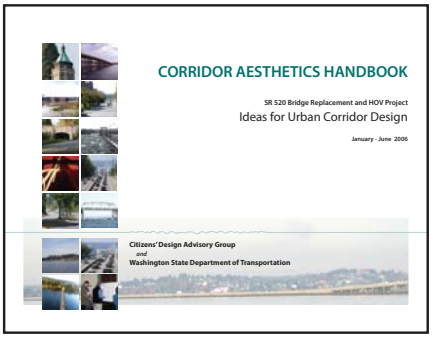
- Includes participation from City of Medina and Seattle Design Commission to develop criteria.
- Technical credits received for design elements.

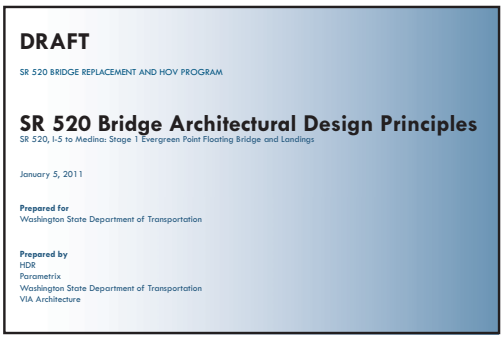
2011: **Floating Bridge and Landings RFP requires that designs for architectural features will be reviewed at Urban Design Task Forces**

- Participation from City of Medina and Seattle Design Commission, WSDOT, and Kiewit/General/Manson, A Joint Venture

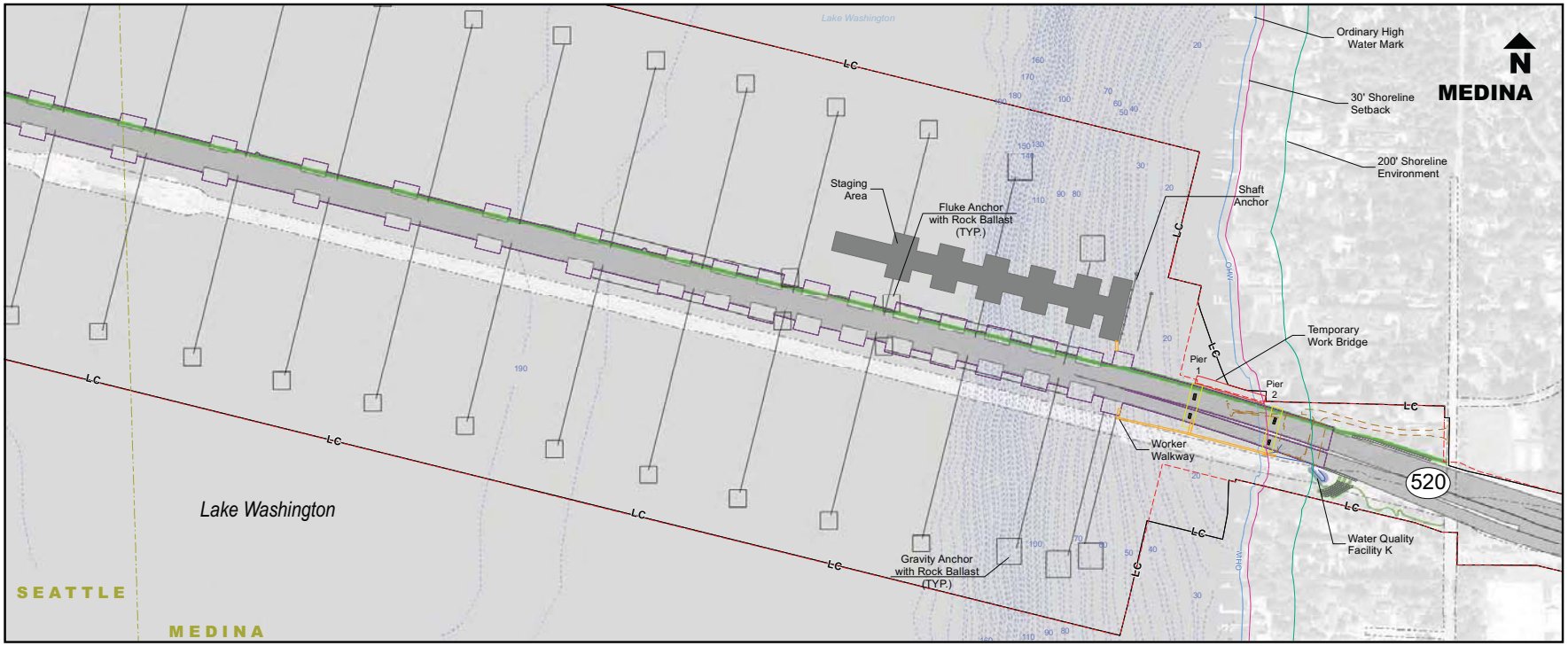
2011-Ongoing: **Seattle Community Design Process**

2011-Ongoing: **Consultation with the Seattle Design Commission and City of Medina to review architectural features**



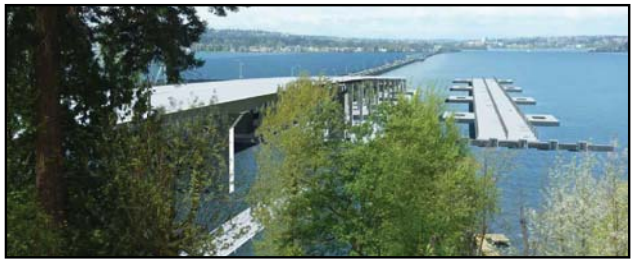


Floating bridge staging area and East Approach



LEGEND

- Proposed Edge of Pavement
- Bridge Pier
- Eastside Staging Area and Mooring Dolphins
- Bike/Pedestrian Path
- Water Quality Facility
- Spread Footing
- Outfall
- Right-of-Way
- Drainage Pipe
- Retaining Wall
- Anchor and Cable
- LC Limits of Construction
- OHW Ordinary High Water Mark (18.57')
- 5-ft Bathymetry
- Existing Edge of Pavement
- Elevated Structure
- Shoreline Setback
- Shoreline Environment
- Maintenance Facility Element
- Worker Walkway
- Temporary Work Bridge



Rendering of staging area looking west.

Community Construction Management Plan

What is the Community Construction Management Plan?

The Community Construction Management Plan (CCMP) is a set of tools and commitments to help minimize the effects of construction on the public by providing timely and responsive information, as well as implementing standard specifications and best practices.

The CCMP guides the actions of construction contractors and provides opportunities for WSDOT and its contractors to:

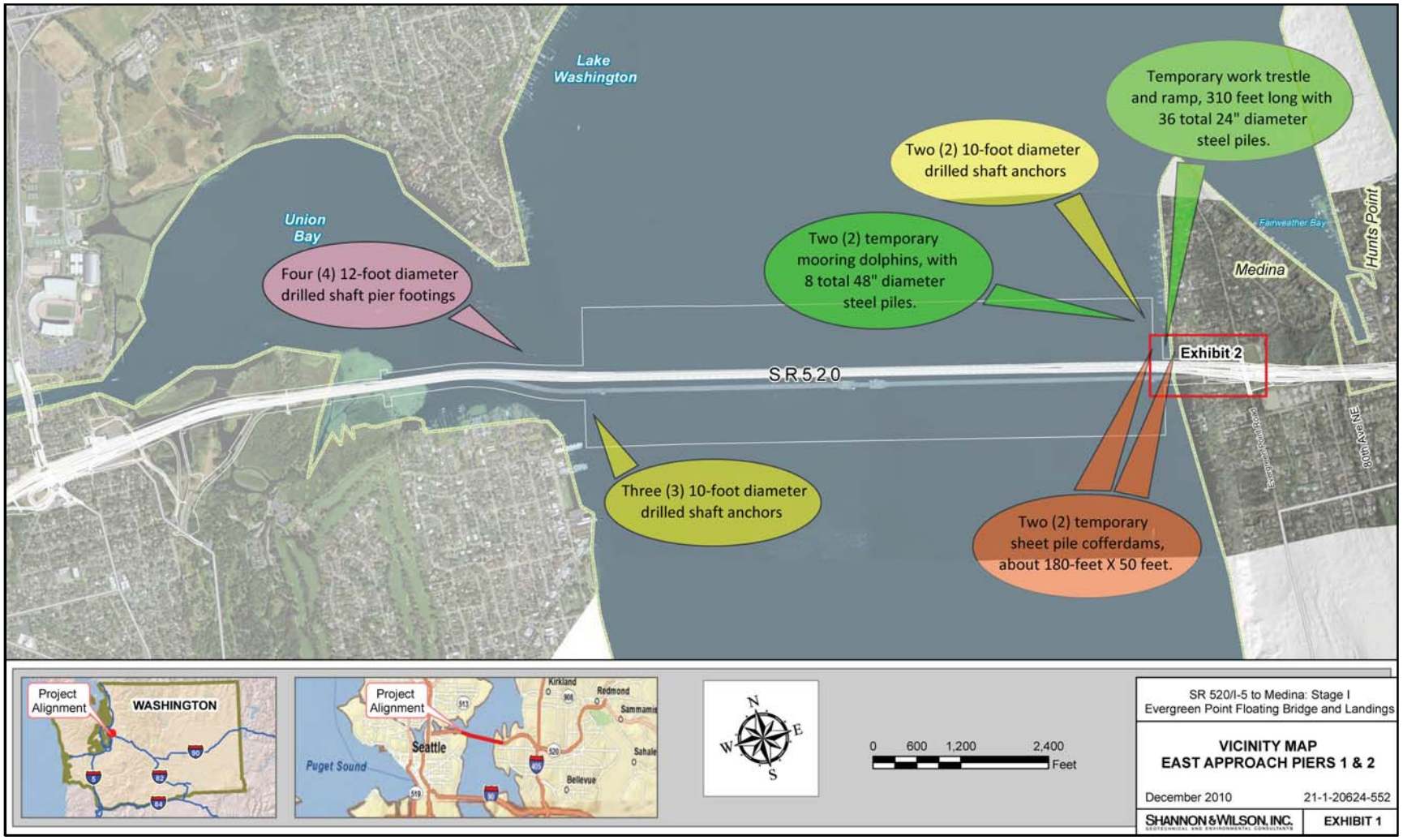
- Keep the general public informed.
- Gather input from the public to improve and modify the construction practices.

WSDOT is working with Kiewit/General/Manson, A Joint Venture, the Floating Bridge and Landings Project design-build contractor, to develop the Floating Bridge and Landings Project chapter for the CCMP. As additional phases of the I-5 to Medina project receive funding for construction, additional chapters will be developed with public input and added to the SR 520 CCMP.

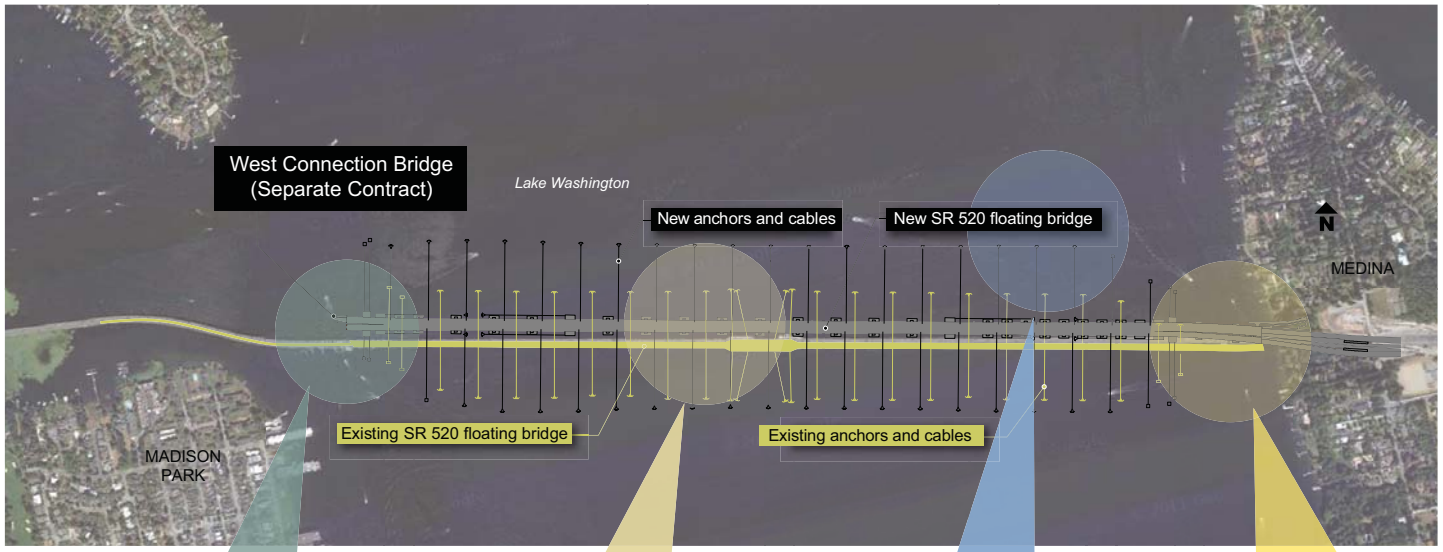
Best practices could include:

- Preserving historic properties.
- Installing construction screening, limiting construction lighting, and shielding residences and other sensitive areas from construction lighting as much as possible.
- Maintaining access for emergency service providers.
- Providing advance notification of traffic detours.
- Protecting trees and providing erosion control.

Locations of pile driving and drill shafts



Floating bridge construction activities overview



West Approach

Activities
Drill shafts, set anchors, build concrete columns, set girders at highrise/ transition span, balance/level pontoons, and remove existing bridge

Duration
July 2012 – June 2015 (intermittent)

Intensity
Low to moderate

In-Water Work

Activities
Set anchors, join/balance/level pontoons, build high-rise columns, install and join pre-cast road panels, set girders, and remove existing bridge

Duration
March 2013 – June 2015

Intensity
Low to moderate

Staging Area

Activities
Join/balance/level pontoons, build concrete columns, and install pre-cast deck panels

Duration
April 2012 – June 2015

Intensity
Moderate

East Aproach and Bridge Maintence Facility

Activities
Excavation, construct the Bridge Maintenance Facility building and retaining walls, build cofferdams, pile driving, and road construction

Duration
April 2012 – June 2015

Intensity
Moderate

SR 520 Floating Bridge and Landings sustainability framework

This diagram illustrates the relationship between the sustainability outcomes for the SR 520 Floating Bridge and Landings Project, the performance areas used to evaluate them and the associated primary and secondary benefit categories.