



What is the Elliott Bay Seawall Project?

The Seattle Department of Transportation, working with the U.S. Army Corps of Engineers, has begun the environmental review to address the Elliott Bay seawall along our waterfront. The Seawall Project will replace the failing seawall from S. Washington Street to Broad Street, providing the foundation and structural support for a new waterfront. In addition to protecting the waterfront, replacing the seawall provides opportunities to restore fish habitat and reconnect people to the water. This project is a priority because:

- The Elliott Bay seawall was built between 1916 and 1934 and has deteriorated significantly since it was constructed.
- The seawall was not designed for earthquakes and could fail in a moderate to large earthquake.
- Failure of the seawall could be caused by wind-driven storm waves or the erosive tidal forces of Elliott Bay.
- The seawall supports major utilities, Alaskan Way and SR 99, the ferry terminal, and rail lines.

Elliott Bay



Seawall
Project

Spring/Summer
2011

What's happening now?

The City of Seattle has embarked on a multi-year effort to improve the Seattle waterfront through two distinct but related projects: the Elliott Bay Seawall Project and Waterfront Seattle. Together, these projects have the potential to define a new civic heart for Seattle and to reconnect the city to Elliott Bay.

In coordination with Mayor McGinn, the Seattle City Council, Waterfront Seattle, and the public, the project team developed two “bookended” alternatives for the seawall in April 2011. The City of Seattle hopes to publish a Draft Environmental Impact Statement in early 2012. Meanwhile, the City continues to work collaboratively across projects to take advantage of this once-in-a-lifetime opportunity to shape Seattle's waterfront.



What is Waterfront Seattle?

Waterfront Seattle will capitalize on the removal of the Alaskan Way Viaduct to provide a new surface Alaskan Way, improve connections to the waterfront, replace utility infrastructure, and develop a series of new public spaces that will serve the entire city and region.

Waterfront
Seattle.org

The seawall is our waterfront's foundation

The seawall runs from S. Washington Street to Broad Street along Elliott Bay and under Alaskan Way. There are three different types of seawalls along the central waterfront today. These include two kinds of timber structures and a gravity concrete wall.

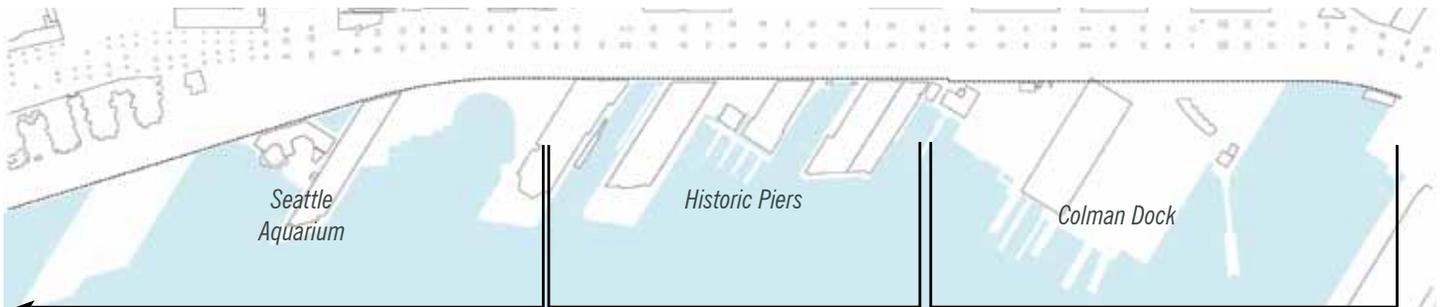
Did you know? An estimated 20,000 old growth timbers were used to build the original seawall, driven into the mud some 70 years ago.



Near the Seattle Aquarium, the seawall is 40 feet wide (shown in blue)



Photos courtesy Seattle Municipal Archives



Existing Type A Wall
40'

Location: Aquarium and northward

- Built in 1934
- Timber structure with concrete face
- ~40 feet wide

Existing Type B Wall
60'

Location: Central Pier Zone, Madison St to Union St

- Built in 1934
- Timber structure with steel master pile and concrete face
- ~60 feet wide

Existing Gravity Wall
15'

Location: Pioneer Square/Ferry Terminal, S. Washington St to Madison St

- Built in 1916
- Concrete structure supported by timber piles
- ~15 feet wide



Learn more about gribbles at www.seattle.gov/transportation/seawall.htm

Gribble kibble

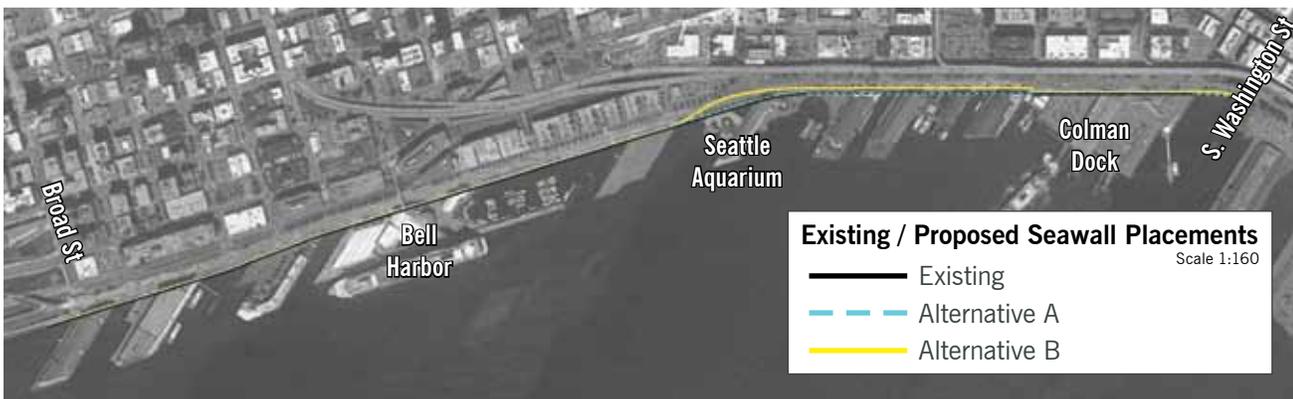
The seawall has protected Seattle's waterfront for more than 70 years. But time and gribbles have taken their toll. Major pieces of the seawall have been eaten away by salt water and marine borers, such as gribbles, making the structure vulnerable.

What's at risk if the seawall fails?

The seawall is one of the most significant pieces of infrastructure in the city of Seattle, and it is vulnerable to earthquakes. The wall could be severely damaged, or possibly collapse, in an earthquake that has a one in ten chance of occurring in the next ten years. Failing to replace the seawall puts the city and Seattle's economy at risk of major disruptions. Utilities supported by the seawall provide power both to our region and to the entire West coast, as far south as California. Major transportation facilities—ferries, railways, and roadways—provide commuters access to work, freight access to markets, and visitors access to the waterfront. Our city's front porch, which includes historic piers, tourist activities, passenger cruise lines, office buildings, and residential buildings, is supported by this important structure.



Seawall repairs in 1986 showed where gribbles had eaten away timbers.



What will we construct?

The seawall will be built to current seismic standards. As we begin design of the new seawall, our alternatives include the following elements: the location of the seawall, a structural solution, habitat enhancement measures, a restored roadway and pedestrian/bicycle facilities, opportunities for early wins, and flexibility for Waterfront Seattle. The new seawall alignment will vary along the waterfront depending on the existing wall type, shown on the left. The U.S. Army Corps of Engineers is currently reviewing alternatives to determine the potential for federal funding of the project.

Public input is part of the design process for both the Elliott Bay Seawall Project and Waterfront Seattle. In coordination with federal and local partners, the projects are committed to keeping the community informed as the designs progress and will continue to provide notification of opportunities for public input.

See inside for more details about potential wall locations →

This is a once-in-a-lifetime opportunity to shape Seattle's waterfront.

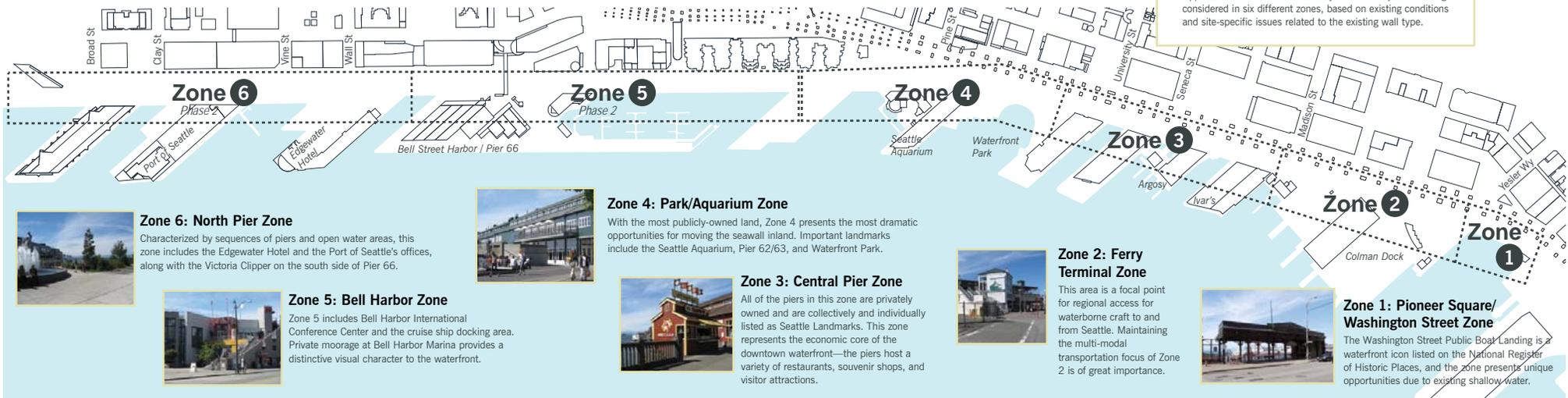
Together, Waterfront Seattle and the Elliott Bay Seawall Project will re-imagine 26 blocks of Seattle's downtown. To support the long-term vision for the waterfront, the Seawall Project has developed two "bookend" (or bracketed) alternatives for the seawall location that will be evaluated in the environmental analysis. A final alternative will be developed within these two "bookends"

through a coordinated design process between the two teams, expected to be completed in mid-2012. By bracketing these potential options, we are maintaining flexibility for the design process and ongoing collaboration; a final alternative will likely include elements of both alternatives shown below.

Will I see the seawall?

For the most part, the new seawall structure will be largely unseen. You can see the two types of structures we are evaluating in the drawings below. Drilled shafts or jet grouting can both be used in either alternative.

What are the waterfront zones?
Opportunities within the Elliott Bay Seawall Project are being considered in six different zones, based on existing conditions and site-specific issues related to the existing wall type.



Zone 6: North Pier Zone

Characterized by sequences of piers and open water areas, this zone includes the Edgewater Hotel and the Port of Seattle's offices, along with the Victoria Clipper on the south side of Pier 66.



Zone 5: Bell Harbor Zone

Zone 5 includes Bell Harbor International Conference Center and the cruise ship docking area. Private moorage at Bell Harbor Marina provides a distinctive visual character to the waterfront.



Zone 4: Park/Aquarium Zone

With the most publicly-owned land, Zone 4 presents the most dramatic opportunities for moving the seawall inland. Important landmarks include the Seattle Aquarium, Pier 62/63, and Waterfront Park.



Zone 3: Central Pier Zone

All of the piers in this zone are privately owned and are collectively and individually listed as Seattle Landmarks. This zone represents the economic core of the downtown waterfront—the piers host a variety of restaurants, souvenir shops, and visitor attractions.



Zone 2: Ferry Terminal Zone

This area is a focal point for regional access for waterborne craft to and from Seattle. Maintaining the multi-modal transportation focus of Zone 2 is of great importance.

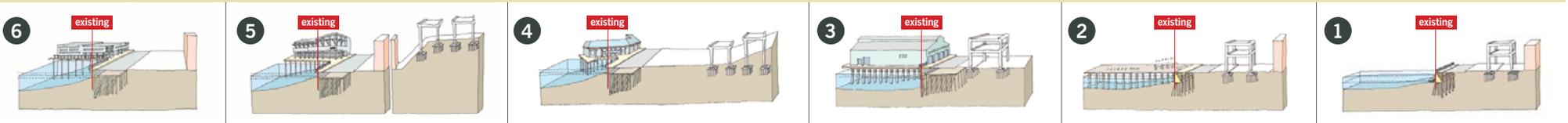


Zone 1: Pioneer Square/Washington Street Zone

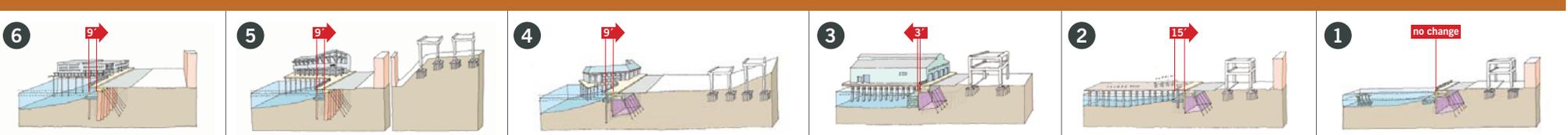
The Washington Street Public Boat Landing is a waterfront icon listed on the National Register of Historic Places, and the zone presents unique opportunities due to existing shallow water.



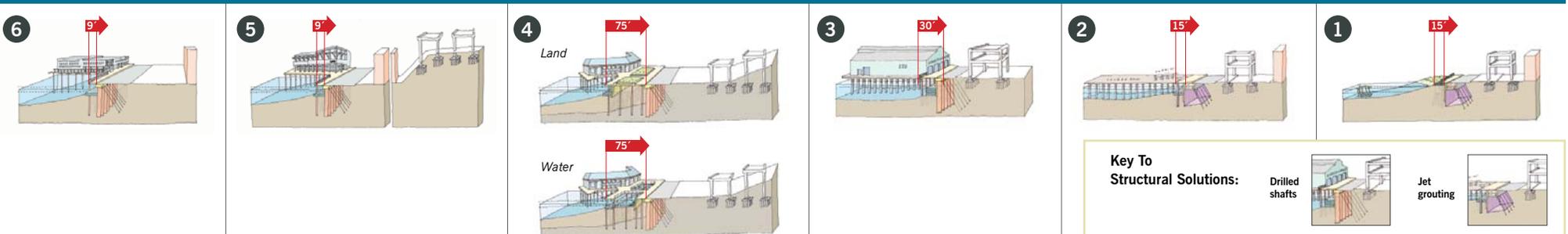
Existing Existing seawall locations.



Alt A Alternative A keeps the seawall face close to its current location, while adding habitat improvements along the waterfront.



Alt B Alternative B offers the potential for a dramatic change from today's seawall. The face of the new wall is pulled eastward up to 75 feet near the Seattle Aquarium. Pulling the wall inland presents opportunities for additional habitat enhancements and different possibilities for design.



Habitat



We're improving the waterfront for fish, too.

Seattle's deep water piers that welcome ferries and cruise ships were no accident—over time, the city built westward into the water. Today, 60 percent of Seattle's waterfront is covered by piers and other over-water structures, resulting in stark contrasts between light and dark areas. The naturally lighted areas along the central waterfront show a diversity of habitat, from rockweed and sea lettuce to numerous perch species and salmon, while the dark areas (under piers) do not support plant growth or other significant habitat life.

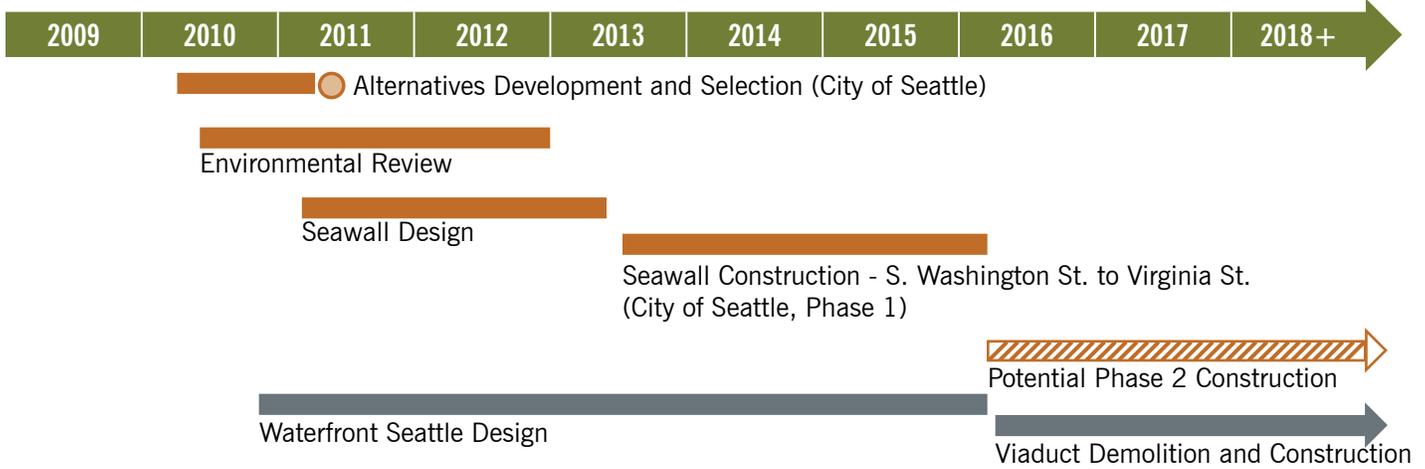
Juvenile salmonids journey from the mouth of the Duwamish River along the central waterfront. Migrating salmon are less susceptible to predators in locations with better habitat conditions, including lighted waters, substrate for plant life, and shallower water. Restoring the salmon migration corridor and improving ecosystem productivity are important objectives of the Elliott Bay Seawall Project. The City and the U.S. Army Corps of Engineers view this project as an opportunity to showcase habitat restoration along Seattle's urbanized downtown waterfront. Options to improve habitat are being studied and include light penetrating surfaces, habitat benches, textured seawall faces, and plantings.

Top: Piers along waterfront create overwater coverage

Center: Light areas (between piers) have rich habitat

Bottom: Dark areas (under piers) support little habitat

Moving ahead



For more information

Visit our website, provide your input, or contact us to hear about our latest activities.

Web: www.seattle.gov/transportation/seawall.htm

Email: seawall@seattle.gov

Project Hotline: 206-618-8584

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