INTRODUCTION

ANALYSIS + FRAMEWORK

DESIGN

City Quilt: 
Weave, Discover, Connect, Adapt

Tides and Pools: 
Enhancing Activity Flows and Concentrations

POD: 
People-Oriented Design

Seaweed: 
Where the City Takes Root

Acknowledgements

Scan I Design by Inger & Jens Bruun Foundation
Gehl Architects
Seattle Department of Planning and Development
Seattle Department of Parks and Recreation
J.A. Brennan Associates, PLLC
Seattle Aquarium

Cover images by Nancy Rottle
Foreword

The City of Seattle's public waterfront will experience dramatic transformations in the next several years as the city invests in creating a “new waterfront for all.” In response to this exciting prospect, our 24 graduate students in landscape architecture, planning and architecture tackled the portion of the waterfront that stretches between Waterfront Park and Pier 63/63, and extends from the Aquarium at the water’s edge uphill to the Pike Place Market. With the imminent removal of the Alaskan Way Viaduct and replacement of the aging Elliot Bay Seawall, Seattle has the extraordinary opportunity to reconnect the city to the bay, restore ecological systems for Puget Sound, and create lively public waterfront space. With these goals in mind, the studio focus was to envision an active, vibrant and multi-dimensional public realm that serves a multicultural, intergenerational population and reclaims the waterfront as an ecological space, both aquatic and terrestrial. Applying their unique skillsets, students worked in interdisciplinary teams to create conceptual plans for the district. Within these teams, students then each designed a piece of the site in detail, and worked together to weave a complete and compelling overall team proposal.

Through the generous sponsorship of the Scan|Design Foundation, our students were able to experience contemporary waterfronts and sustainable urban design in Denmark and Sweden, and then apply lessons and inspiration to their Waterfront design work in Seattle. During the two-week September tour in Copenhagen, students had the opportunity to study with the internationally renowned Danish firm of Gehl Architects, and practice their methods for assessing and creating quality public space. As a class we walked both Copenhagen and Malmo’s public spaces, sketching their design qualities and analyzing how they performed. The group bicycled around these exemplary cities to experience their renewed neighborhoods, innovative architecture, and repurposed waterfronts. The staff of Gehl Architects, Copenhagen’s bicycle planners, Malmo’s Western Harbor designers, COBE Architects and others were our guides, providing insight into the cities’ historical development and contemporary planning issues, elucidating design approaches to successful projects, and sharing personal perspectives. Back in the studio in Seattle, students applied the lessons learned to our waterfront project, aided by the expert guidance of Blanca Hermansen of Gehl architects, who travelled to Seattle on two separate occasions to assist in teaching. In addition, professionals and stakeholders working on various aspects of the Central Waterfront shared critical information, and many design and planning practitioners came to both the midreview and the final review. Their help and insight were an invaluable contribution to the studio experience.

We have many people to thank for this remarkable opportunity in teaching and learning. Without the support of the Scan|Design Foundation, we could not have applied the rich set of images and experiences from Scandinavia or so deeply integrated Gehl’s approach in our design work. We are sincerely grateful for Blanca Hermansen’s generous, clear and insightful teaching and critique, and to her, Louise, Lars, and Rasmus at Gehl architects for the fantastic lectures and tours in Copenhagen. Marshall Foster both lectured and led us through the Seattle Central Waterfront and gave as an appreciation and understanding of the site from the City’s perspective. David Graves from Seattle Parks assisted with the tour and was our prime facilitator in mounting our “Playing on the Pier” temporary interactive exhibit on Pier 62/63. Architect Paul Olson co-led the Copenhagen tour, inspiring the students’ sketching and deepening their understanding of the built environment, and provided invaluable guidance in the form of desk crits and reviews throughout the quarter. And finally, we couldn’t have done it without our able and talented teaching assistant, Britt Bandel Jeske, who has kept us organized for months, provided so much assistance from running errands, to budgets to graphics, and compiled this book with the student work, working closely with the students.

We thank you all, and hope that this work will make a difference not only in the education of our diverse and enthusiastic students, but also will suggest exciting, thought-provoking and ecological designs for a new, vibrant public waterfront.

Nancy Rottle, Associate Professor, Landscape Architecture
Kathryn Rogers Merlino, Assistant Professor, Architecture, Adjunct Assistant Professor, Landscape Architecture
In September 2011, 21 graduate students from the University of Washington’s College of Built Environments studied exemplary urban and regional planning strategies in Copenhagen, Denmark. Students were immersed for two weeks in the famous Danish networks of public space and the culture’s emphasis on bicycle and pedestrian planning.

Students came from three disciplines in the College of the Built Environment: Architecture, Landscape Architecture, and Urban Planning & Design. In Copenhagen, these students were led by the renowned urban planning consultants Gehl Architects, who introduced the group to their working methods. Other highlights included tours of redeveloped neighborhoods, the waterfront, plazas, and parks. The trip to Copenhagen was generously supported by the Scan|Design Foundation.

After returning from the trip, the group continued working in our Scan|Design Master Studio course to study and design public spaces in Seattle’s Central Waterfront, with the goal of creating a socially vibrant, ecologically healthy public realm.
Lessons from the Scan|Design Travel Study

CONNECTIVITY:
Surface treatments and delineated linkages improve place to place connectivity. Small carved out spaces with interesting edges and active spaces provide person to person connectivity. Direct access to waterfront initiates a connection between person and place.

ELEMENTS OF DELIGHT:
Mundane elements of daily life can be transformed into fine grain details of comfort and delight using color, warmth, and humor.

TEXTURE:
Bold use of color, pattern and dimension create more interesting and memorable streetscapes.

MEANDERING PATHS:
Subtle curves into hidden destinations inscribe a human scale and encourage human powered modes of transportation.

UNEXPECTED VIEWS:
Framed views create a sense of protection and element of surprise for site users.
In the studio, we began by collecting and sharing the significant amount of research and previous planning conducted for the waterfront. We also invited expertise from local planners, designers, and stakeholders, who gave us a detailed waterfront tour, presented significant issues in an expert panel, and provided as-needed advising and information. We augmented our knowledge of global waterfront designs by investigating precedents of significant contemporary projects, for which students developed and presented case studies. Our initial planning exercise was then to quickly incorporate this information into a temporary, “pop-up” exhibit for Pier 62/63. Five teams designed and built exhibits for an event titled “Playing on the Pier,” which brought Seattle natives and visitors to the pier for an exploration in how the waterfront could be experienced and enjoyed.

This initial exploration provided the structure and background for four teams to approach site planning and urban design work. These teams focused on the northern, Aquarium/Pike Place Market, waterfront district, and suggested strategies for strengthening the district and connections to the rest of the city. Students developed solutions for waterfront-wide connective tissue including new road and seawall alignment, stormwater integration, design guidelines, and unifying design elements.

Design students worked individually or in pairs to develop detailed proposals for specific sites according to their particular interests. They developed and re-examined their work through several cycles over the course of ten weeks, interacting with Bianca Hermansen of Gehl Architects, studio professors Nancy Rottle and Kathryn Merlino, and outside professional and faculty reviewers as well as through peer review. Our aim has been to integrate Gehl Architects’ theory and methodology for successful public space, Seattle’s aspirations for a “waterfront for all,” and our region’s ecological knowledge, goals and ethics. Our working process is outlined in the following Analysis and Framework section, and the students’ more detailed district and design proposals are represented in the final Design sections of this document.
Scan|Design Travel Study + Studio

Summer Travel Study to Denmark + Sweden

Scan|Design Master Studio

Precedent Studies
- Barcelona Waterfront
- Coal Harbour and the Vancouver Convention Center
- Chicago Waterfront
- East River Park, NYC
- Eastbank Esplanade, Portland
- Hudson River Park, NYC
- Minneapolis Central Waterfront
- SE False Creek Waterfront
- Wellington Waterfront

Site + Context Analysis
- History + Site Use
- Land Use + Built Environment
- Circulation + Pedestrian Environment
- Ecological Environment
- Economical Environment
- Lessons from the Travel Study

Playing on the Pier Site Expressions
- Caught in the Current
- Home Sweet Waterfront
- re:connect
- re:PORT
- Submerge

Team Master Plans
- City Quilt
- POD [People-Oriented Design]
- Seaweed
- Tides and Pools

Individual Projects

Gehl Architects:
- Theory + Methodology

INTRODUCTION
15 Quality Criteria

During site analysis, students used Gehl Architects’ 15 Quality Criteria approach for observing and assessing sites for their pedestrian quality. This approach complemented the project area’s quantitative pedestrian analysis, allowing students to understand how people might experience the neighborhood. The students also used these 15 Quality Criteria to evaluate their finished design proposals.

Life | Space | Buildings

In addition to using the 15 Quality Criteria, in one exercise called “Life|Space|Buildings” students took on different roles: student, artist, business woman, club goer, etc. to establish the required program elements needed to create vital public space that is inviting to all.

**Design Methodology**

<table>
<thead>
<tr>
<th>LIFE</th>
<th>SPACE</th>
<th>BUILDINGS</th>
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<tbody>
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<td>Space</td>
<td>Buildings</td>
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</table>

**15 Quality Criteria**

**PROTECTION AGAINST VEHICULAR TRAFFIC**
- Traffic accidents
- Pollution, fumes, noise
- Visibility

**PROTECTION AGAINST CRIME & VIOLENCE**
- Well lit
- Allow for passive surveillance
- Overlap functions in space and time

**PROTECTION AGAINST UNPLEASANT SENSORY EXPERIENCES**
- Wind / Draft
- Rain / Snow
- Cold / Heat
- Pollution
- Dust, Glare, Noise

**INVITATIONS FOR WALKING**
- Room for walking
- Accessibility to key areas
- Attractive and functional edges
- Defined spots for staying
- Overlap functions in space and time
- Objects to lean against or stand next to

**INVITATIONS FOR STANDING AND STAYING**
- Attractive and functional edges
- Defined spots for staying
- Overlap functions in space and time
- Resting opportunities

**INVITATIONS FOR SITTING**
- Defined zones for sitting
- Maximize advantages
- Pleasant views, people watching
- Good mix of public and café seating
- Resting opportunities

**INVITATIONS FOR VISUAL CONTACT**
- Coherent way-finding
- Unhindered views
- Interesting views
- Lighting (when dark)
- Low ambient noise level
- Public seating arrangements conducive to communicating

**PLAY, RECREATION & INTERACTION**
- Allow for physical activity, play, interaction and entertainment
- Temporary activities (markets, festivals, exhibitions etc.)
- Optional activities (resting, meeting, social interaction)
- Create opportunities for people to interact in the public realm

**DAY / EVENING / NIGHT ACTIVITY**
- 24 hour city
- Variety of functions throughout the day
- Light in the windows
- Mixed-use
- Lighting in human scale

**VARYING SEASONAL ACTIVITY**
- Seasonal activities. (Skating, Christmas markets.)
- Extra protection from unpleasant climatic conditions
- Lighting

**DIMENSIONED AT HUMAN SCALE**
- Dimensions of buildings & spaces in observance of the important human dimensions in relation to senses, movements, size & behavior

**POSITIVE ASPECTS OF CLIMATE**
- Sun / shade
- Warmth / coolness
- Breeze / ventilation

**AESTHETIC & SENSORY**
- Quality design, fine detailing, robust materials
- Views / vistas
- Rich sensory experiences

**source: Gehl Architects**
Studio Team and Group Work
Throughout the quarter the students had the chance to work in various groups to take advantage of the interdisciplinary studio format. The students were divided into pairs for precedent studies and small groups for site analysis and the Playing on the Pier exhibit. For the final design project, the studio was divided into four teams to develop a master plan, in which their individual or pairs project was located. Over the course of the term, students continually refined their design proposals, working between districts and site scales and responding to feedback from guests, peers, faculty, and Bianca Hermansen of Gehl Architects.

Gehl Architects Master Instructors
Students were first introduced to Gehl Architects’ working methods while in Copenhagen, through lectures and exercises. Students benefitted from an additional two and a half weeks working with Bianca Hermansen in Seattle, during the middle point of the studio and at the end of the term. Bianca provided valuable feedback to guide the development of students’ designs for an inviting waterfront.
Precedent Studies

During the initial stage of site analysis, students researched relevant precedents from around the world with a focus on waterfronts. The full case studies, and case studies from previous studios, can be found on the Master Studio course website (http://courses.washington.edu/gehlstud).

Barcelona Waterfront
Barcelona, Spain
source: dirklie65, www.flickr.com

East River Park and Esplanade
New York, New York
source: www.nycgovparks.org/parks/eastriverpark

Vancouver Convention Center/Coal Harbour
Vancouver, Canada
source: www.lmnarchitects.com

Wellington Waterfront
Wellington, New Zealand
source: http://www.flickr.com/photos/jackor/518092798/

Chicago Waterfront
Chicago, IL
source: JJR and Studio Gang
www.worldlandscapearchitect.com

SE False Creek Waterfront
Vancouver, Canada
source: www.vancouversun.com
INTRODUCTION

Hudson River Park
New York City, New York
source: www.hudson-river-park.com

Eastbank Esplanade
Portland, Oregon
source: www.southwaterfront.com

RIVERFIRST
Minneapolis, Minnesota
source: Tom Leader Studio and Kennedy and Violich Architecture

Public Spaces | Public Life for Seattle's Central Waterfront
History

1990s: implementation of ongoing planning

1982: waterfront streetcar links waterfront activity
1970s: concerted effort for recreational development
1950s: Freeway built

1939-1945: World War II

1930s: Railroad Avenue is rebuilt as Alaskan Way/Seawall
1920s: World War I & the Great Depression retards growth

1911: Port of Seattle formed

1900s: transportation industry dictates development
1889: Great fire destroys much of downtown

1895: Klondike Gold Rush

1893: Great Northern Railroad is completed, ending in Seattle
1873: Seattle loses bid for Northern Pacific Railroad (N-S) terminus

1852: Henry Yesler develops Yesler steam mill

1900: large reclamation projects reshape the waterfront - monopolies

prior to 1792: Salish uses included hunting, fishing, gathering

SOURCES
www.seattle.gov/dpd/Planning/Central_Waterfront/Archive/Background/default.asp
"East-West and Physical Connections" graphic
www.seattle.gov/dpd/Planning/Central_Waterfront/PartnershipsCommittee/BriefingBook/index.htm
"Council Legislation Related to the Central Waterfront"
"Center City Public Realm Guide"
"County Legislation Related to the Central Waterfront"
"2006 Central Waterfront Concept Plan Summary"
www.historylink.org/index.cfm?DisplayPage=output.cfm&file_id=7072
"Seattle Central Waterfront Tour, Part I: Overview" (information and photos)
www.historylink.org/index.cfm?DisplayPage=pf_output.cfm&file_id=7056
"Port of Seattle Central Waterfront Cybertour" (photos)
Temporal Environment

**Pedestrian Counts**

The research team evaluated the number of pedestrians moving along the Central Waterfront between 1st Avenue and the waterfront on weekdays and weekends. Data was collected in 2008 and supplemented with pedestrian counts at additional locations using the same methodology in 2010. The map relays the numbers of people traveling to and from 1st Avenue and people traveling along Alaskan Way along the Central Waterfront.

**Timed Walks**

This map relays data on the average amount of time it takes to walk at a typical speed from a location in downtown Seattle to the waterfront, based on test walks taken on weekdays.
Ecological Environment: stormwater

Visualize Climate Change:

Consequences of a 20’ rise in sea level

Stormwater Basins:

Combined Stormwater System:

Several separated stormwater “pipesheds” (lavender) discharge polluted water directly into Elliott Bay. Pink areas are drained into combined sewers.

Typical Waterfront Habitat Conditions:

Toxins leached via ground seepage, stormwater runoff, and submerged debris
Ecological Environment: habitat

Waterfront Bathymetry:

Three areas have been identified as potential shallow water and beach to improve aquatic habitat conditions.

Wildlife: Life Over Water

Birds: Birds are among the species most adaptable to living in the highly urbanized environment of downtown Seattle. For further information, a complete bird species list can be found in the DEIS (wsdot.wa.gov).

Terrestrial wildlife: Terrestrial animal species range from domestic dogs, cats and rabbits to bats, ermine and mink. The highly urbanized environment only allows for species that are highly adaptable to the intense urban setting.

Vegetation: The only notable vegetation along the waterfront are mature street trees planted along the length of the project area.

Special Status Species:
- Bald eagle (Haliaeetus leucocephalus) – protected under the Bald and Golden Eagle Protection Act of 1940 (16 USC 668-668c).
- Southern resident killer whale (Orcinus orca): Federally and State listed as endangered.
- Marbled murrelet (Brachyramphus marmoratus): Federally and State listed as threatened.

Puget Sound/Outer Elliott Bay - Pelagic Waters: Orcas, gray whales, and Dall’s porpoise occasionally pass through this area. Seals and sea lions are more frequently seen here.

Salmon: Life Under Water

Nearshore Marine Environment

While shady areas are critical for salmon spawning habitat, it is believed to be a less desirable condition during the juvenile and adult life stages.

“Like the habitat use patterns observed in Lake Washington, juvenile Chinook salmon in the marine nearshore and estuary areas of central Puget Sound tend to be closely associated with shallow habitats located close to shore (KCDNR 2001).”

“Because Puget Sound Chinook out migrate as younger and smaller juveniles, they are more dependent on forage in the estuaries and near-shore systems to increase their body weight and condition before moving into more pelagic environments (i.e., deeper Puget Sound waters or the Pacific Ocean) (Levy and Northcote, 1982; Pearce et al., 1982).”

“Marine nearshore areas and estuaries may be particularly important for juvenile Chinook salmon for migration, feeding, and rearing within the central Puget Sound (KCDNR 2001). Moreover, some of these areas are used by juveniles for the physiological transition from freshwater to saltwater (especially mouthes of creeks and Duwamish River).”

Essential Fish Habitat

Essential Fish Habitat (EFH) is “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity” (16 U.S.C. 1802(10)).
Waterfront Framework Connections

Ecological Networks
The North Pacific to Central Waterfront
The Central Waterfront belongs to a larger geographical and ecological region, one that can be defined by the range of salmon spawning habitats across the North Pacific.
Regional Networks

Open Space Systems

Seattle’s Blue Ring project proposes an addition to the historic Green Ring plan developed by the Olmsteds in 1903. The Blue Ring strategy aims to implement a similar network of open spaces within the city center. The Elliott Bay Bicycle Trail system is one thread that connects the Blue Ring with the Green Ring. Central Waterfront Park is a crucial element in all of these networks.
Site Expressions: Playing on the Pier

For the first studio design exercise students were asked to construct an exhibit or piece for Pier 62/63 that would engage the public in some way. Five teams each created a pop-up art installation and executed their designs in less than one week, proving that simple and inexpensive designs can activate and enliven the waterfront. The results were an outdoor living room, a seaweed forest with facts about the waterfront, shipping container boxes, mirrors that juxtaposed city and sound views, and an interactive sound sculpture. Tourists, city officials, and students alike came to the pier to play, interact, and enjoy the waterfront.

Erika Harris, Hilary McDonald, Laura Poulin, Karin Strellof, Yingju Yeh
Home Sweet Waterfront
Ximena Bustamante, Jenny Ngo, Manami Iwamiya, Erin Feeney, Orona Hai

Caught in the Current
Peter Cromwell, Andreas Piller, Roma Shah, Andrew Williamson

rePORT
Taj Hanson, Katie Hunt, Audrey Maloney, Haruna Nemoto, Michael Ward

re:connect
Susan Costa Paschke, Davis Hammer, Jessica Michalak, Lauren Rock, Virginia Werner
1 INTRODUCTION

10 ANALYSIS + FRAMEWORK

18 DESIGN

City Quilt: Weave, Discover, Connect, Adapt
Tides and Pools: Enhancing Activity Flows and Concentrations
POD: People-Oriented Design
Seaweed: Where the City Takes Root

XIMENA BUSTAMANTE MLA
DAVIS HAMMER MArch
TAJ HANSON MLA
LAUREN ROCK MArch
KARIN STRELIOFF MLA
VIRGINIA WERNER MLA
city quilt

Yardstick Park  Split Connections  Eco-arium  Eco[logical] Infrastructure  Strolling Seattle’s Edge  Wave Pier
CHALLENGES & OPPORTUNITIES

- Fast-moving traffic along Alaskan Way creates poor walking + cycling conditions.
- Dangerous spaces exist underneath viaduct.
- Pier 62/63 is under-utilized.
- Access to the water is physically cut off from downtown Seattle by the Viaduct.
- Landscape is dominated by parking lots and contains little to no vegetation.
- Aquarium prevents public access to end of pier and blocks views across Elliott Bay.
- There are no opportunities for the public to directly touch the water.

VISION

- Create a diverse system of public spaces, human scale buildings, pedestrian corridors, and ecological infrastructure that reconnects the waterfront to the city center.
- Focus on pedestrian prioritization and human scale design strategies.
- Allow Elliot Bay’s edge to become part of the public space experience.
- Respond to the Seattle Aquarium’s expansion goals without creating additional over-water coverage.
- Generate a district system of ecological infrastructure to improve ecological performance of the waterfront.
- Weave together a diverse palette of public spaces to form a fluid, dynamic, and adaptable waterfront district.

DESIGN INTERVENTIONS

- Move Alaskan Way Boulevard from the water’s edge into the former Viaduct path, creating a green street with commuter bike lanes, stormwater swales and active shop fronts.
- Provide a hierarchy of pedestrian connections to the waterfront, including a funicular and public transit (with additional bus stops and a new street car route along Alaskan Way Blvd.)
- Establish a mix of shops and residential units near the waterfront to activate the site night and day.
- Create a promenade that connects users to lively new public spaces.
- Establish a community garden to support the local food bank while providing a critical pedestrian connection between Victor Steinbrueck Park and the waterfront.

CITY CONNECTIONS

EXISTING USERS

<table>
<thead>
<tr>
<th>Points of Interest</th>
<th>Transit Hubs</th>
<th>Vehicular Circulation</th>
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CITYQUILT USERS

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SECTION A-A THROUGH AQUARIUM & MIXED USE HEART ALLEY
Public Spaces | Public Life for Seattle’s Central Waterfront

Ximena Bustamante, Davis Hammer, Taj Hanson, Lauren Rock, Karin Strellof, Virginia Werner

City Quilt

AQUARIUM EXPANSION
PROMENADE
YARDSTICK PARK
ECO-ARIUM
WAVE PIER
STORMWATER BEACH

SITE PLAN

0' 100' 200' N

SECTION B-B THROUGH NEW ALASKAN WAY & FUNICULAR

SECTION C-C THROUGH PIER 62/63, & THE PROMENADE
The Seattle Aquarium is an essential component of the waterfront. Yet it turns its back on the water. My proposal redefines the image of the aquarium, maintaining its waterfront presence but pushing the program, both formally and programmatically, into the city. The aquarium is a new public connection to the waterfront.

The visitors move along an elevated path from the dead end of Union St. onto the roof of the aquarium addition. They are presented with the view over the rooftop of the existing aquarium. They then slip through the volume and descend to the plaza below, underneath the hovering fish tank.

The experience of the tank changes from every perspective. It is seen from above, straight on, and from below. The diamond plan causes the tank to almost disappear from a certain perspective.
Section Dilemma
The problem of section with the site was the fragmentation of public space that resulted from an addition. As a response, I chose to split the volume and push half of the aquarium underneath the public realm. This provides a continuous open space framed by the exposed structure at the end of the aquarium cantilever.
Eco[logical] Infrastructure: Reinterpreting ecological design at the Seattle Central Waterfront

Aesthetics and ecological infrastructure...

“Aesthetic appearance can awaken a sense of values and needs in people, a willingness to care and to adopt a feature or a public space as their own. Thus the synthesis between the restoration of environmentally sensitive functions and the highest possible level of design and appealing aesthetics is crucial.” - Herbert Dreiseitl

Restore ecological function and highlight native landscapes
Introduce aesthetic interventions that reveal the sites’ ecological processes and engage the public
Reuse viaduct materials for waste reduction, historical reference, and embrace of the urban experience
This is a *constructed wetland*...

Stormwater is infiltrated and cleansed before release to Elliot Bay.

‘Core samples’ are pulled from the ground to elucidate this dynamic system.

Water from the elevated aquarium is filtered through the ‘core sample’ and released below.

Sub-surface drainage is exposed.

This is an *introduced forest corridor*...

Trees are planted on the distinct angular plane of the waterfront piers.

Woven rebar and wire mesh become extensions of the trees, providing a scaffold for canopy litter to adhere. As birds inhabit the trees and nesting materials are removed from these structures, a seasonal fluctuation in their form is exhibited.

This is a *restored shoreline*...

Hollow cores are created in salvaged concrete blocks from the viaduct.

The blocks collect substrate, enhancing juvenile salmon habitat over time.

Beach visitors are able to interact with tide pools during low tide periods.
The Seattle Eco-arium

The Seattle Eco-arium incorporates the theme of discovery to create an interactive educational experience for people to learn about Seattle’s ecological processes, waterfront logging history, and stormwater management. Two curvilinear paths, reminiscent of the natural shape of a river, weave through the landscape connecting nodes of discovery and exploration where people can learn about ecological processes through experiential learning and observation.

Site Connectivity
The Eco-arium Park acts as an important connection between the existing aquarium, promenade, water’s edge, new Alaskan Way and the mixed use heat.

Stormwater Management
The Eco-arium Park educates the public about stormwater management by exposing the entire cycle. The bioswale collects stormwater runoff from the roads and buildings and treats it before returning it to Elliott Bay.

Existing Site Challenges:
- Car-dominated space
- Little interior/exterior interaction with Aquarium
- Views to Elliott Bay blocked by mammal exhibit house

New Opportunities Created:
- Pedestrian-focused promenade
- Transparency of Ecoarium facade establishes interior/exterior relationships
- Views establish connection with the ocean and mountains
- Free and available to a diversity of users, park is accessible at all hours of the day
Path of Discovery
- Made from reused wood planks and rail ties to act as a continuation of the promenade
- Features educational nodes of discovery

Path of Exploration
- Made from reused crushed concrete from the viaduct
- Provides interactive nodes of exploration
A truly civic waterfront becomes possible when Alaskan Way Boulevard no longer follows the water’s edge. In place of a four-lane road, imagine a winding promenade with intimate plazas and benches perfect for people watching. Take in panoramic views of Seattle’s working ports and the Olympic Peninsula beyond. Discover playgrounds, grassy hills and steps down to the water’s edge that invite visitors to touch the water. At low tide, rocky beaches offer tidepools to explore. Under the water, reconstructed beaches offer new habitat for marine life. Connect with Puget Sound’s ecologically rich edge from the center of a densely urban city. Imagine a true Seattle waterfront.

**Site Challenges & Opportunities**

- A waterfront designed for cars
- Nowhere to go, no reason to stay...
- Minimal ecological function
- Untreated stormwater runoff
- Scattered Destinations
- Climate: 158 rainy days; 226 cloudy days

**Mixed use Buildings + Plaza**

**Playing Courts**

**Children’s Playground**

**Gassy Overlook**

**Reconstructed marine habitat (Tidepools + gravel beaches)**

**Sea Steps**

**Floating Promenade**

**Wave Plaza**

**Playing Courts**

**Seattle Promenade**

**Promenade Program:**

Civic life at the water’s edge
Section A: Summer at the Floating Promenade and Playing Courts

Section B: Autumn dusk at the Wave Plaza

Section C: Exploring tide pools by the Sea Steps

Discovering Puget Sound ecosystems

Shallow subtidal zone (slopes at 12:1)

Rocky intertidal beach & habitat bench (slopes average 8:1)

Pervious Paving System on Woonerf roadway

Colored concrete mimics receding tides

Recycled wood planks from Renovated Piers

MHHW

MSL

MLLW

Public Spaces | Public Life for Seattle's Central Waterfront
Reworking Pier 62/63

The existing Pier 62/63 is dilapidated and empty. The space is under-utilized and the decking is rotting away. Once there were concerts on the pier, but no events occur anymore.

The Wave Pier will revitalize the pier, creating new forms and functions while echoing the form and materiality of the old pier. The iconic quality of the pier will help create a new identity for this part of the Seattle waterfront. Event programming and lighting will reactivate the pier night and day, year-round. The new form takes advantage of the ideal location for viewpoints out across Elliott Bay to the Olympic Mountains.

Wave Pier Elements

- The cafe tucked under the northeast portion of the Wave Pier invites people onto the pier from the promenade.
- The undulations make natural south-facing sitting places, make the space human scale, and act as seating for performances.
- The southwestern portion of the Wave Pier acts as a performance space for day and night events.
- The wave bridge to the aquarium pier draws people out to walk around both piers, and provides excellent viewpoints.
- Kayak storage is tucked under the south edge of the pier, and a kayak launch drops into the protected space encircled by the pier and wave bridge.
- Light-permeable metal decking enhances the salmon migration corridor.
- The abandoned pilings of the former Pier 62/63 speak to the history and form of the site, and provide an ideal opportunity for thematic night lighting.
- The entire pier is lit at night, acting as an icon for the waterfront re-development, and with event programming, draw people down to the waterfront.
- The use of native plants, such as beach strawberry, speaks to the regional history and reduces plant maintenance.
CityQuilt
Virginia Werner

Night view of Wave Pier lighting

North side of the Wave Pier, showing the cafe

Night view of cafe and kayak launch

View of seating and out to Olympics

South Elevation of Wave Pier
YARDSTICK PARK: an urban alley space allowing the visitor to activate & create the program

CONTEXT: yardstick park at waterfront’s edge

pier 62-63

EXPERIENTIAL SITE GATHERING
ANALYSIS

BEFORE

AFTER

SITE PLAN

EXPERIENTIAL WAY-FINDING
SITE ANALYSIS

site plan legend

1. allee of quaking aspens
2. new access thru condos
3. storm water ribbons along paths
4. staying/seating spaces
5. climbing wall
6. eco habitat post
7. walking paths
8. flexible spaces for skateboarding, roller blading
9. sheltered open space (under new vehicle road)
10. viewing balcony
11. green condo roof
12. archway entry
13. new crosswalk
14. elevated-slow down vehicular surface
15. future urban agricultural terraces

DIAGRAMATIC LONGITUDINAL SECTION:
looking from West to East along Yardstick Park to the City
URBAN PLAY

creative play

musical play

athletic play

potential play along the urban water’s edge
1 INTRODUCTION

10 ANALYSIS + FRAMEWORK

18 DESIGN

City Quilt:
*Weave, Discover, Connect, Adapt*

**Tides and Pools:**
*Enhancing Activity Flows and Concentrations*

**POD:**
*People-Oriented Design*

**Seaweed:**
*Where the City Takes Root*

**Authors:**

- Peter Cromwell: MLA
- Erin Feeney: MArch
- Erika Harris: MUP
- Michael Ward: MUP
- Andrew Williamson: MArch
- Yingju Yeh: MLA
Tides & Pools

- Completing the Connection
- Pike Street Hillclimb
- Islands and Tidepools
- Hostel Park Connector
- Crossing Tides
- PC1 Farm and City Living
Tides & Pools Concept

Tides and pools describes a human scale approach to enhancing the concentration and flow of life throughout the waterfront’s Aquarium/Pike Place Market District. The overarching goal of the design concept is to increase the social, ecological, and economic vitality in the District through:

- Improving legibility of paths to promote connectivity.
- Increasing mobility of diverse users throughout the district, in particular the steep Pine, Pike, and Union Street corridors.
- Improving the quality and quantity of public, semi-public, and semi-private spaces throughout the district.
- Enhancing ecological function through stormwater management and intertidal and upland habitat creation.
- Identifying opportunities for residential and commercial development to increase density and economic activity.
Islands and Tidepools

Design Inspiration

Tide Pools teem with life
Source: naturevalleyeast.com

Beaches attract activity
Source: Flickr.com

Nature Breaks through the urban fabric

Riparian corridors provide overflow for storm events
Source: nisqually-sequalitchew.com

Design Concepts

Opening

Morphing

Forming

Protection

Wonder

Experiential Qualities

Looking at the fountain

On the boardwalk

Looking over stream toward the cafe at night

1. Invitations for standing and sitting
   - Attractive and functional design
   - Defined spots for viewing
   - Opportunity to lie down or stand next to

2. Invitations for visual contact
   - Colorful wayfinding
   - Unobstructed views
   - Interesting views
   - Lighting (in the dark)

3. Invitations for interaction
   - Interactive design
   - Opportunities for interaction

Scan | Design Master Studio 2011
A section cut of the island and tidepool illustrating a variety of aquatic activity.
A Civic Addition to the Seattle Aquarium

The goal of this project is to enhance the civic presence of the Seattle Aquarium while creating active spaces and clear pathways along the waterfront. Three interventions are proposed along a new boardwalk that weaves along the site: a new public entry to the Aquarium, an underwater addition that creates a shallow water beach for human access and restored habitat, and a commercial boardwalk that replaces the old Pier 62/63. Through these interventions, the Aquarium buildings frame and enhance public spaces.
Design for the future that respects the past

BOARDWALK 62/63

Repurposed pier pilings
Preserved pilings from Pier 62/63
Reclaimed wood bench set in steel frame

Plan 62/63 Boardwalk
Scale 1"=120'

Site Plan
Scale 1"=200'

Existing Aquarium entry

Aquarium store
Cafe
Boat Rental
Loading

(E) Pier 62/63
(P) Boardwalk 62/63
(P) Aquarium addition
(E) Aquarium

Preserved pilings from Pier 62/63
Tides & Pools Throughout the Market District

Goals: To improve mobility, ecological function, and public spaces around Seattle’s waterfront.
Pike Street Hill Climb: Where the City meets the Water

Existing Conditions

Difficult to find way down from the market to the waterfront.

Hill Climb is dark day and night.

Base of the Hill Climb is not attractive.

Many unattractive Hill Climb facades.

Hill Climb goals: To improve the experience of traveling between the market and waterfront, add spaces for people to gather, and optimize stormwater management.

Proposed Plan for Hill Climb

- Restaurant
- Coffee Shop
- Gelato

Proposed Elements

- Retrofit with stormwater treatment and storage
- Add gondola lift
- Add plazas and seating
- Retrofit lights for efficiency
- Move trees to side to improve safety and visual connection
- Screen/reface parking garage wall
- Add raised crosswalk across Alaskan Way

Proposed Plan for Hill Climb

Stormwater Treatment

Gondola

Plazas and Seating

Efficient Lighting

Raised Crosswalk

Hill Climb Alternatives Analysis (5 best, 1 worst)

<table>
<thead>
<tr>
<th></th>
<th>Stairs</th>
<th>Gondola</th>
<th>Funicular</th>
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<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>23</strong></td>
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Completing the Connection
Program Proposal for Western Avenue

Complete Streets

Green Streets

Existing Conditions along Western

at Pike St. Hill Climb

at Union St.

Intervention Strategy

Prioritize Pedestrian Movement

Lighting Study – Union and Western

Mid-Morning Sun
Afternoon Sun
Evening Lighting Pockets
Night Lighting Scene

Pike St. Hillclimb – Afternoon

Pike St. Hillclimb – Night Dance Party

Complete streets are for all people and all modes of movement. Pedestrians, bicyclists, motorists, & public transportation users of all ages & abilities are able to safely move along & across a complete street. When combined with natural systems in mind, a complete street also becomes a green street that serves both society and the natural environment.
Making connections, both physically as well as visually are important for the new Seattle Waterfront. The PC1 site utilizes connections in order to provide human scaled housing that relates to its urban context as well as provide a passage-way from the Pike Place Market down to the shores of Elliot Bay.

The site also provides space for urban agriculture drawing upon the connection to the adjacent market. This provides the opportunity for an urban housing complex that is continually changing with the seasons and has the activity of residents planting, caring, and harvesting their crops to be consumed at home or sold in the market. There is ample community space to create a lively and welcoming urban development.
Hostel Park Connector

Site Map

Context Plan

Spatial and Program Concepts

- A lawn and a hill for people to enjoy the sun in the park
- The quality of paving: from edge to edge & façade to façade
- Enrich the interactions between people in the public space

Perspective of Union Street Entrance

Analysis Diagrams: Before and After

- Open view potential
- Connecting the city and the waterfront
- Vacant lots into green spaces

Building Diagrams

1st Story

2nd Story

Perspective of Union Street Entrance

- A corridor and several glass boxes create different ways to explore
- Green walls, to break wind and increasing green façade
- The roof park and a stretch of table attract people to enjoy the great view of Seattle waterfront

Spatial and Program Concepts

- Activate the site during night time

Analysis Diagrams: Before and After

- Open view potential
- Vacant lots into green spaces
- Connecting the city and the waterfront

Building Diagrams

1st Story

2nd Story

Inspiration

- http://www.lyring.com/outdoor-lighting-design-ideas


- https://picasaweb.google.com/lh/photo/RdYVOaIfyYcnwHlYHHangg?feat=embedded
INTRODUCTION

ANALYSIS + FRAMEWORK

DESIGN

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POD [people-oriented design]
The POD district is a collection of spaces and activities accessible to all, designed for people, and richly experienced at the human scale. Fluent connections integrate public/private, local/tourist, urban/nature life to support diverse and vibrant public spaces.

Challenge:
Commerce and infrastructure obstruct individual access to Puget Sound from downtown impeding people's activities and personal relationships with the water's edge.

Challenge:
Heavy traffic, unwelcoming edges, and expansive empty space make confusing and unpleasant pedestrian experiences through the topography and public/private space.

Challenge:
Limited types of waterfront activities restricts lively pedestrian patterns to daytime and weekend hours. People perceive empty public space as off-limits and unsafe.

Challenge:
The coverage of hard surfaces sends polluted stormwater directly into the sound and is visually stagnant, affecting the health of Seattle's citizens, ecology and economy.
Section A

Proposed section at Pine Street, through Waterfront Way, and Play Pier scale: 1”=120’

Existing section at Pine Street to Pier 62/63 scale: 1”=120’

Section B

Proposed section from new aquarium entrance through alley scale: 1”=120’

Existing section from aquarium through alley scale: 1”=120’

Section C

Proposed section from restored beach to Union Street Entrance scale: 1”=120’

Existing section from seawall to Union Street Entrance scale: 1”=120’

Waterfront Way integrates public space and multi-modal transportation

Urban Agriculture cultivates local community at the Pike Street Farmer’s Market

The Play Pier activates space for people of all ages and abilities

The expanded Aquarium also increases public access to the water

The Union Street Connection opens access to the water’s edge with a restored beach.

Section A

Public Spaces for Seattle’s Central Waterfront

Sue Costa Paschke, Chen Hai, Katie Hunt, Manami Iwamaya, Andreas Piller, Laura Poulin
Pedestrian Counts in winter
Winter 2,856 all day
Summer 14,418 all day

Pedestrian counts show union street has second highest level of activity for connector streets. 

The stormwater canopy walk begins at western avenue and union street, connecting pedestrians to the tip of the forested pier. Channeling stormwater along the canopy walk's edge creates an environment and education feature.

Storm water from roads, roofs, and other impermeable surface directly enter Puget Sound and is the prime pollution contributor.

Existing gateways to the waterfront are indifferent, confusing, unwelcoming afterthoughts.

The current condition along union street at the waterfront is very poor, yet it has the second highest pedestrian traffic, making it an essential space to rehabilitate so that its character speaks to what the waterfront should be.
The **stormwater canopy walk** connects western avenue (30’ above grade) to the new forested pier while providing a visible stormwater channel. The channel outlets over a constructed wetland on the pier that filters the water before it enters the sound.

**Benefits:**
- provides elevated views
- creates a connection between western avenue and the waterfront
- channels stormwater to bio-filtrations system
- integrated lighting accommodates day and night time use
- the structure supports recreational activities below

The canopy walk lights the path above and the space below, illuminating the forest pier and making it safe at all hours.

The new forested pier supports animal habitat along the waterfront and provides spaces for social interaction. The canopy walk provides a structure for elevated views, swings and night lighting of the pier.
The new beach area with tide pools provides a habitat channel along the edge. A bioswale divides the boardwalk from the mixed-use buildings, treating runoff from roofs and the pavement.

Stormwater cascades down the new western alaskan stair connector into a constructed wetland in the retrofitted antiques shop space that hosts other small shops.
A city as a meeting and sharing place

Concept
Sharing
This is my story....

Educating

Mixed use

Strategies
Open the edge: rise the site to the same level with surrounding park and road.

Make agriculture terrace form down to the waterfront with varied activities.

Design

A. Back side of Pike Place Market
B. Facade of shopping path facing main plaza
C. View from ten feet path along the western site edge
D. On the ground building and front gathering space
E. Five sense garden

- Routes of Automobile
- Routes of Pedestrian
- Pedestrian: walking and staying

- With Pike Place Market
- With Victor Steinbruech Park
- With road
- With building

- With Pike Place Market
- Topography Change
- With Roads
- Commercial Area

- Rain garden
- Water plant
- Waterscape/water playground
- Green roof garden
- Grassland
- Grass under trees
- Agriculture Field
- Agriculture Field
- Garden
- Main plaza
- Road
- Pathway
- Fruit trees

- Main entrance
- Experience
- Rapid passing

Western Ave.
Section A-A'

Paving area - Underground building - Permeating paving area - Stairs - Agriculture - Reservoir wetland - Agriculture - Fruit tree - Waving grass - Water playground - Reservoir wetland - Rain garden - Road

Section B-B'

Paving area - Underground building - Paving area - Stairs - Agriculture - Underground building - Paving area - Agriculture - Paving area - Grass - Fruit trees - Paving area - Reservoir wetland - Agriculture - Fruit trees - Bush myth - Garden - Water playground - Reservoir wetland - Rain garden - Road

Section C-C'

Paving area - Underground building - Paving area - Stairs - Agriculture - Reservoir wetland - Agriculture - Wetland - Paving area - Agriculture - Stairs - Paving area - Water’scape - Waving grass - Water playground - Waving grass - Water playground - Reservoir wetland - Rain garden - Road

F. Fruit tree forest path

G. Water flow diagram

H. The facade of parking lot building, shopping path

I. Myth garden having gathering space in between
Aquarium Pier

The existing relationship between the aquarium and the waterfront is boring and unengaging.

With the addition of a public pier and a series of aquarium additions, the relationship is mutually beneficial to all users.

overlap of public and private functions

connection to the downtown street grid

aquarium expansion as marine habitat

evening on aquarium pier

existing aquarium on pier 59
1" = 400'

Site Plan
1" = 120'
Planted steps encourage biodiversity and fence off the habitat exhibit for the aquarium sea mammals.

An octopus tank opens up onto the pier level as well as being viewed from inside the aquarium.

Rooftop tide pools are accessible during low tide and provide hands-on experience to both the aquarium and public.

The folded building exterior acts as a habitat bench for marine growth.
Absent the traffic typical of Alaskan Way today, the re-imagined waterfront street applies the principles of ‘living streets’ and ‘shared space’ to create a comfortable social space that enhances the public realm while accommodating the needs of local residents. The reinterpreted street suggests a new paradigm-place and movement at the human scale, where all modes enjoy equal priority, space is negotiated naturally at low speeds, and users are encouraged to be in the street as much as move through it.

**Circulation Concepts**

**Systems for Movement | At Human Scale**

Every component of the transportation system is designed to move at a pace more hospitable to people than the motor-vehicle-dominated Alaskan Way. Motorized traffic on the street is slowed significantly through the use of traffic calming measures typical of shared-space streets; an abundance of space is available for walking or bicycling, and the reintroduced Waterfront Streetcar offers to do the leg-work for those needing to travel a greater distance along the waterfront—and for those simply interested in a relaxing ride.

**Improvements for Bicycling | Elliott Bay Trail**

Elliott Bay Trail has been re-aligned to follow the west side of Waterfront Way, providing a path uninterrupted by crosstown streets for the entire length of the central waterfront. The path has also been widened to 10 feet, and bicycle racks abound to ensure that riders can stop riding and start resting whenever they may desire.

**Historical Ties to Rails**

**Railroad Avenue**

Known as Railroad Avenue before 1936, the street was originally characterized by industry and its associated web of rail lines, which wove across wooden trestles suspended above the rocky shores of Elliott Bay. The design of Waterfront Way draws inspiration from the street’s past, including a reinterpretation of the boardwalk and old freight rails.

**George Benson Waterfront Streetcar**

In operation from 1982 through 2005, the ‘Benson Line’ was an iconic vintage streetcar that connected Broad Street to Pioneer Square and the International District via Alaskan Way. One of the classic cars will stand as a monument along the Olympic Sculpture Walk, while the Waterfront service will be reinstated on a newly constructed track.

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**Source:** University of Washington Libraries Digital Collection, City of Seattle Municipal Archives.
Places for Relaxing | Indulge the Senses
Nature or nurture—or perhaps both at once. Cafe tables provide the perfect place to enjoy coffee, cake, and breathtaking views of the Olympic Peninsula across Elliott Bay.

Places for Eating | Wine & Dine Waterside
Mobile vendors of all sorts flock to the boardwalk, congregating near popular social spaces to serve everything from coffee on the go to gourmet street fare—a great spot for families and business lunches alike.

Places for Seating | Spaces for Meeting
Variegated steps line the boardwalk, inviting passers-by down to the water to stop and stay in one of the many gathering spaces created by undulating steps. Benches opposite the steps slide along rails, encouraging users to pull up a seat wherever their favorite spot or friendly gathering finds itself.

A Place for Ecology | Low-Impact Design
The entire project seeks to promote low-impact, ecologically sound design principles, especially with regards to water. While the most visible element of the site’s stormwater systems is certainly the bioswale corridor running beneath the new Waterfront Streetcar alignment, this is but one piece of the significant sub-surface natural filtration system. The expansive boardwalk introduces additional pervious surface to the formerly primarily concrete scene, and boards ‘split open’ intermittently to allow the plant-life beneath to peak through.

Olympic View Boardwalk
The Olympic View Boardwalk is divided into three distinct spaces according to the character of each one’s respective waterside steps. Each set of steps exhibits some form of horizontal and/or vertical undulating pattern, thereby influencing how individuals might flow through or stay in the unique resulting spaces. The rise and fall of the tide introduces a natural element of fluctuation—alternately engulfing or uncovering the concrete seating spaces—while further variety is introduced through sliding wooden steps and benches that allow users to customize their experience.
Concept is play on Seattle map!

They have two layers of pier. There are small Lake Union and Elliott Bay on the lower pier, which are flooded with seawater at the high tide. At the low tide, seawater disappears, but small water pockets on the lower pier collect seawater.

Section @high tide  1"=50'  

Tide system

Floating system

Water pocket

Floating bridge

Floating kayak slope
At the tip of this pier, there is a play slope and the pier goes up. People can enjoy great views at the highest point of this pier. Under this slope, there is a sauna. The wall of the sauna is made of glass, so that people can enjoy sauna with nice views. If they want to get cooler, they can jump into the sea!

Paths and bridges are along "I-5" and "I-90." Bridges are so narrow that people can be thrilled.

At the tip of this pier, there is a play slope and the pier goes up. People can enjoy great views at the highest point of this pier. Under this slope, there is a sauna. The wall of the sauna is made of glass, so that people can enjoy sauna with nice views. If they want to get cooler, they can jump into the sea!

At the location of "Seward Park," there are restroom. They have several flower gardens at the location of parks/gardens in Seattle.

At southwest part of Seattle, there is a play meadow. They have just two soccer goals. People can enjoy whatever they want!

At the location of "Alki Beach," there is an artificial beach. During summer, people can enjoy sea bathing. And if they want to take a shower, they can use sauna.

On "Elliott Bay," the play ship is floating! Actually, it exists on the pier and doesn’t float. During high tide, it looks floating and kids can play on the water.

In front of the play slope, there are food wagons, so that people who are waiting for their family or friends from sauna won’t be bored.

Cafe in DownTown
At the location of "DownTown," there is a cafe. The path of this park passes through the cafe, which engage people to the cafe. People can buy some coffee for their picnics, or take a rest inside of it. Its wall is made of glass, so that people can see the ocean even if they are inside.

Flower gardens
They have several flower gardens at the location of parks/gardens in Seattle.

At the location of "DownTown," there is a cafe. The path of this park passes through the cafe, which engage people to the cafe. People can buy some coffee for their picnics, or take a rest inside of it. Its wall is made of glass, so that people can see the ocean even if they are inside.

They have restroom at the location of "Seward Park."
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JENNY NGO  MUP
ROMA SHAH  MArch, MLA
Seaweed

This district plan for the Seattle Central Waterfront takes inspiration from the native seaweeds found in the Puget Sound waters. Seaweed requires 3 things to survive: sunlight, saltwater and a strong anchor point, analogous to Seattle’s historical dependence on its port and waterfront. The goal was to create a pedestrian priority district that would provide attractions, amenities and resources to the waterfront promoting year-round day and night use. The Seaweed master plan establishes a new district at the water’s edge where the city can take root. The Sea Path is the spatial anchor/stem for the district, while the east-west stormwater function, ecological details, and pedestrian connections and ecological details form tendrils connecting the city to Elliot Bay.

The green streets which run along the PC1 Hillclimb, the Pike Street Hillclimb, and the Union Street Hillclimb serve as the primary routes for pedestrian circulation, stormwater treatment, and increased vegetation.

The new waterfront district requires clear circulation intertwined with activities and ecology. First, a pedestrian promenade, ‘Sea Path,’ runs the north-south length of the waterfront. To better connect the site to the existing Seattle street grid, three specific east-west connections are extended to the Sea Path: Union Street, Pike Street, and a new connection from the PC-1 site (Pike Place Market). Each connection is developed in a character that reflects the needs of its vicinity. Additionally, due to the extreme grade of the site, each of these pedestrian corridors serves stormwater functions via rain gardens and biofiltration.

The Seaweed plan proposes an urban beach, waterfront plaza, extended space for the Seattle Aquarium, a new vision for pier 62/63 and new pedestrian experience from the PC-1 site. The following pages will explain these specific sites in further detail. Each design addresses the city to the east and bay to the west by weaving ecological considerations into the design proposals with rain gardens, green roofs, reduced near shore coverage, lightwells for salmon runs and native planting palettes.
STARFISH

With all of the assets present at the Seattle waterfront - stunning views, proximity to lively neighborhoods, nature visible at a distance - how can the area overcome its current limitations to achieve a balance all the different needs and desire projected on to it? How should issues of transportation, topographical barriers, and pedestrian-unfriendly urban hardscape be addressed and integrated into such a visible space with so much potential for cultural, social, and ecological activity?

Activity Program:
- Water + Steps for Seating & Play

Activity Program:
- Small scale commercial + residential mixed-use brings visitors & residents, and activity

Proximity Program:
- Add seating, food, greenery, and elements of play to make distances more comfortable.

Identity Program:
- Structures + water create a variety of spatial shapes, with a hierarchy of big/small & social/private areas
Athyrium filix-femina

Rosa nutkana

Holodiscus discolor

Stone pavers

Granite benches

Red cedar decking

Embedded LED lights

Polystichum munitum

Cornus sericea

Acer circinatum

Elymus glauca

Shallow inlet

Terraced seating & viewing

Play pond

Stormwater collector

Biofiltration stream

Seaweed

Audrey Maloney
Pocket Piers: the Urban Beach

One of the major focal points of the Seaweed master plan is the new urban beach which is located on the site directly south of the Seattle Aquarium, where Waterfront Park is today. The vast extents of the site, which measure nearly 500 feet north to south, pose a major challenge to activating and restoring a sense of human scale to the beach. The Pocket Piers concept draws upon the “pocket park” spatial strategy which breaks down the scale and localizes the activity of the adjacent green street on Union. Pockets which delineate the edges of three piers are stacked to create a dynamic composition of pockets which define the space and the activities which take place throughout the site. The stacked piers explore the various sectional relationships between people and the water, even allowing the public to touch the water, particularly at the lowest level of Intertidal Pockets. The Intertidal Pockets, like the Pier Pockets, are composed of three levels of pockets which are revealed and hidden with the changing tides. Over time, the concrete surface will allow for algae and vegetation to grow, highlighting the changing form that the beach can take over time.
Urban Beach

Convergence Space

The Central Waterfront is situated in Seattle with the potential to become a unique convergence space for many user groups; Seattleites and tourists, neighborhood residents and daily commuters, and extended families with children and young couples.

When is a Beach more than just a beach?
The Urban Beach is a portion of the Central Waterfront uniquely capable of encouraging this mixing of user groups. The creation of a protective arm pier encourages swimming, protects the shallow beach, intertidal zone, and tide pools, and encourages jumping from the pier as it sweeps around at grade from the Sea Path. A Waterfront Activities center is located to the North with Scuba functions underwater, changing spaces, and fireplaces on the roof. The beach is comprised of three zones divided by the stormwater running channels running through it; The traditional ‘soft’ sand beach to the North, a transitional beach in the center dispersing users entering from Union St., and a rocky beach to the South as users progress towards the Tidal Pools. The Tidal Pools will function as active ecological spaces that allow users to interface with the enhanced ecological systems occurring on site. The visible transportation of remediated stormwater from uphill to Elliott Bay will increase user awareness, enhance the quality of the brackish water nearshore, and deleniate spaces within the design.

Proposal

Pulled Back Seawall and Urban Beach Proposal
Section B: Pike Place Market to Urban Beach

Tidal Change Study: MLW, MHW, MHWH, MHHW, to MRT

Beach and Pier Proposal

Night Performance Proposal

Renderings
1: Overview of pier, fireplaces, tidal pools and beach
2: Tidal Pools and discovery opportunities
3: Night uses and gathering around fireplaces
4: 'Island Living' showing use of central hot tub for gathering
New Pier 62/63

Plan

Section

Analysis:

Circulation

Concept diagram

New plan to pier 62 63

Design:

View

Enjoy the view

Event

Cafe

Inside

Social

Buy a drink

Chat

Rest

Washington bay

Identity of bay

Entrance of bay

Easily accessible

Proposed Circulation
Market Commons

**Description**

The Market Commons is an effort to reintegrate the existing PC-1 Site into its surrounding neighbors, the Pike Place Market, Victor Steinbrueck Park, Western Avenue and the redeveloping waterfront. The goal of this proposal is to bring the energy and vibrancy of the Market to the Market Commons. By creating at-grade connections at the Market, Western Avenue and the proposed Alaskan Way, this site uses the complex grade to connect users to a larger neighborhood fabric.

**Design Concepts**

- **topography:** utilizing grade
- **opportunities for views**
- **opportunities for stacking uses**
- **opportunities for stormwater filtration**
- **movement:** accessibility and connections
- **multiple ways to travel, regardless of capacity**
- **hierarchy of destinations, with an end in sight**
- **overlapping uses and activities**
- **activity:** comfort and liveliness
- **transparency through buildings**
- **ground-floor activity**
- **protection from the elements**

---

**Western Avenue**

Create a new street front to reintegrate the site back into the city and to reconnect businesses and activity from north and south ends of Western Avenue.

**Down from the Park**

Improve the connection between Victor Steinbreuck Park and the waterfront. Users can now see the water as well as get down to it.
Site Connections
Create a pedestrian connection from Downtown to the Waterfront that supports life and activity 24/7.

Extending the Market
Provide at-grade connection from the main floor of the Market, in order to expand areas for vendor stalls and to bring users to the site.
Puget Sound Diving Center and Waterfront Commons

This scheme explores how an introduction of a building with a diving related program and new waterfront plaza could redefine the existing site near the Seattle Aquarium. Based on the strong geometry of the Aquarium and the desire to emphasize one of the only pedestrian connections to the site—Pike Street Hill Climb—the ‘fan’ became the site strategy. The form of the fan allows for transitions from sea to land, public to private, nature to urban.

The plaza, “Waterfront Commons” is proposed as a central meeting space on the waterfront. Upon entry into the plaza from the hill climb, with the building’s overhang a collect space is created. As the visitor moves north through the plaza, next is the drift space, where people can linger and decide their plans, finally the space is to settle, here sun and views reveal themselves, inviting visitors to stay.
Inviting cities must have carefully designed public space to support the processes that reinforce city life. . . . At eye level the good city provides opportunities for walking, staying, meeting and expression, and that means it must provide good scale and good climate.

- Jan Gehl, Cities for People