



LIVABLE CITY YEAR 2017–2018  
IN PARTNERSHIP WITH  
CITY OF TACOMA



## CITY OF TACOMA

FOUR GULCHES: RESTORING HUMAN  
AND ECOLOGICAL CONNECTIONS  
TO TACOMA'S RUSTON WAY AND  
WATERFRONT

UNIVERSITY OF WASHINGTON  
LANDSCAPE ARCHITECTURE

LARCH 402/503  
NEIGHBORHOOD DESIGN STUDIO

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WINTER 2017





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ACKNOWLEDGMENTS

We would like to thank the City of Tacoma and Metro Parks for providing the opportunity for our landscape architecture design studio to explore the needs and possibilities of the four remarkable gulches that connect Tacoma’s neighborhoods with Ruston Way and the Commencement Bay waterfront. Andrew Austin from Metro Parks and Stephen Atkinson in Tacoma’s Planning and Development Services Department introduced us to the four gulches, made an extensive body of foundational studies and maps available, and kept us connected with staff in their agencies. They also provided enthusiastic responses to the students’ evolving designs in our mid-term and final reviews. Landscape architect Marty Stump and Greenbelt Manager Mary Anderson helped us see future possibilities as we toured the four gulches, and provided invaluable review feedback to the students as they developed their proposals. Mike Carey, Desiree Radice, Shannon Brenner, and Rebecca Solverson from the City of Tacoma and Gulch Steward Rob Girvan all made invaluable contributions to our learning through their field introductions and design advice in our mid-term and final reviews. Thank you all!

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## ABOUT LIVABLE CITY YEAR

The University of Washington's Livable City Year (LCY) initiative enables local governments to engage UW faculty and students for one academic year to work on city-defined projects that promote local sustainability and livability goals. The program engages hundreds of students each year in high-priority projects, creating momentum on real-world challenges while enabling the students to serve and learn from communities. Partner cities benefit directly from bold and applied ideas that propel fresh thinking, improve livability for residents and invigorate city staff. Focus areas include environmental sustainability; economic viability; population health; and social equity, inclusion, and access. The program's 2017–2018 partner is the City of Tacoma; this follows a partnership with the City of Auburn in 2016–2017.

The LCY program is led by faculty directors Branden Born (Department of Urban Design and Planning), Jennifer Otten (School of Public Health) and Anne Taufen (Urban Studies Program, UW Tacoma), with support from Program Manager Teri Thomson Randall. The program was launched in 2016 in collaboration with UW Sustainability and Urban@UW, with foundational support from the Association of Washington Cities, the College of Built Environments, the Department of Urban Design and Planning, and Undergraduate Academic Affairs.

LCY is modeled after the University of Oregon's Sustainable City Year Program, and is a member of the Educational Partnerships for Innovation in Communities Network (EPIC-N), the collection of institutions that have successfully adopted this new model for community innovation and change.

For more information, contact the program at [uwlcy@uw.edu](mailto:uwlcy@uw.edu).



## ABOUT TACOMA

The third largest city in the state of Washington, Tacoma is a diverse, progressive, international gateway to the Pacific Rim. The port city of nearly 210,000 people has evolved considerably over the last two decades, propelled by significant development including the University of Washington Tacoma, the Tacoma Link light rail system, the restored urban waterfront of the Thea Foss Waterway, the expansions of both the MultiCare and CHI Franciscan health systems, and a significant influx of foreign direct investment in its downtown core.

Washington State's highest density of art and history museums are found in Tacoma, which is home to a flourishing creative community of writers, artists, musicians, photographers, filmmakers, chefs, entrepreneurs, and business owners who each add their unique flair to the city's vibrant commercial landscape. The iconic Tacoma Dome has endured as a high-demand venue for some of the largest names in the entertainment industry.


A magnet for families looking for affordable single-family homes in the Puget Sound area, Tacoma also draws those seeking a more urban downtown setting with competitively priced condos and apartments that feature panoramic mountain and water views. The city's natural beauty and proximity to the Puget Sound and Mount Rainier draws hikers, runners, bicyclists, and maritime enthusiasts to the area, while its lively social scene is infused with energy by thousands of students attending the University of Washington Tacoma and other academic institutions.


The City of Tacoma's strategic plan, Tacoma 2025, was adopted in January 2015 following unprecedented public participation and contribution. The plan articulates the City's core values of opportunity, equity, partnerships, and accountability, and expresses the City's deep commitment to apply these values in all of its decisions and programming. Each Livable City Year project ties into the principles and focus areas of this strategic plan. The City of Tacoma is proud of its 2017–2018 Livable City Year partnership with the University of Washington and of the opportunity this brings to its residents.





# TACOMA 2025 STRATEGIC PLAN


The *Four Gulches: Restoring Human and Ecological Connections to Tacoma's Ruston Way and Waterfront* project supports the Livability and Equity and Accessibility goals of the Tacoma 2025 Strategic Plan and was sponsored by the City's Planning and Development Services Department and Metro Parks Tacoma.

- 

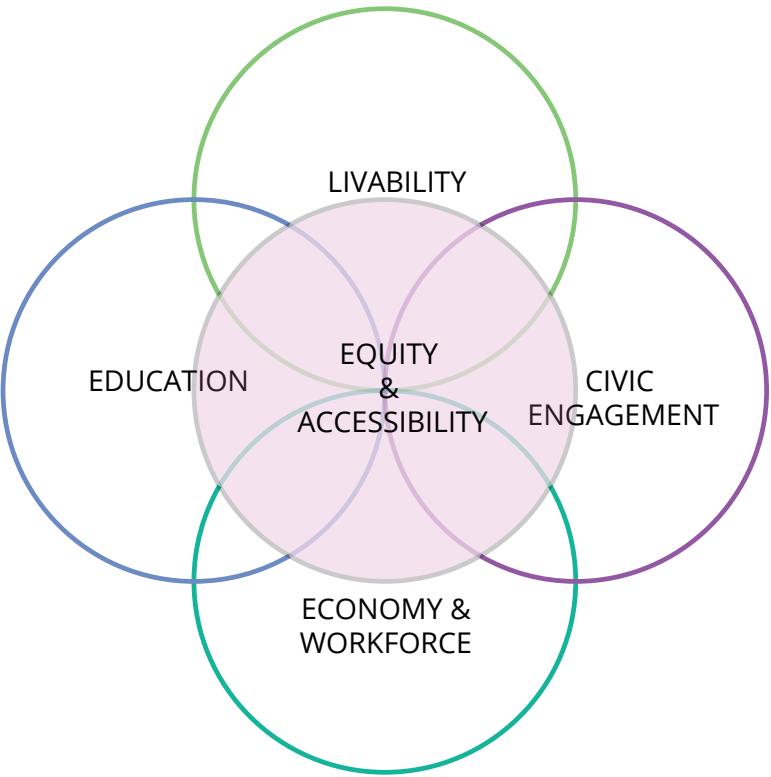
**Goal #1 Livability**  
The City of Tacoma will be a city of choice in the region known for connected neighborhoods, accessible and efficient transportation transit options, and vibrant arts and culture. Residents will be healthy and have access to services and community amenities while maintaining affordability.
- 

**Goal #2 Economy and Workforce**  
By 2025, Tacoma will be a growing economy where Tacoma residents can find livable wage jobs in key industry areas. Tacoma will be a place of choice for employers, professionals, and new graduates.
- 

**Goal #3 Education**  
Tacoma will lead the region in educational attainment amongst youth and adults. In addition to producing more graduates from high school and college, more college graduates will find employment in the region. Lifelong learning and access to education will be prioritized and valued.
- 

**Goal #4 Civic Engagement**  
Tacoma residents will be engaged participants in making Tacoma a well-run city. The leadership of the city, both elected and volunteer, will reflect the diversity of the city and residents and will fully participate in community decision-making.
- 

**Goal #5 Equity and Accessibility**  
Tacoma will ensure that all residents are treated equitably and have access to services, facilities, and financial stability. Disaggregated data will be used to make decisions, direct funding, and develop strategies to address disparate outcomes.



## RESOURCES

- Tacoma 2025 Strategic Plan:** [https://www.cityoftacoma.org/tacoma\\_2025](https://www.cityoftacoma.org/tacoma_2025)
- Planning and Development Services Department:**  
[http://www.cityoftacoma.org/government/city\\_departments/planning\\_and\\_development\\_services](http://www.cityoftacoma.org/government/city_departments/planning_and_development_services)
- Metro Parks Tacoma:** <https://www.metroparkstacoma.org/>
- Livable City Year:** <https://www.washington.edu/livable-city-year/>
- University of Washington Landscape Architecture:** <http://larch.be.uw.edu/>



In the Winter 2018 academic quarter, the students of LARC 402/503: Neighborhood Design Studio and studio instructor Professor Nancy Rottle partnered with the City of Tacoma and Metro Parks Tacoma to design for the potential restoration and development of the four gulches that extend inland from Tacoma’s Ruston Way waterfront: Garfield Gulch, Buckley Gulch, Puget Gulch, and Mason Gulch. As Tacoma grows and residents seek a more accessible network of green spaces within the city, these gulches are green space assets that have great potential to connect the area’s neighborhoods to Ruston Way’s waterfront parks. The student teams, the City, and Metro Parks are hopeful that residents from across the Tacoma region would enthusiastically use the four gulches for recreational and educational purposes if goals of safe access, educational facilities, and ecological restoration are accomplished.

The 12 students in the class began their studio course with site analyses, which included site visits with collaborators, including Andrew Austin, Marty Stump, and Mary Anderson of Metro Parks and Environmental Specialist Desiree Radice. Students also conducted research on the history, background, and current conditions of the area. Based on area and gulch-specific findings, students embarked on their designs, beginning with conceptual designs, and then moved on to “schematic” designs, which included detailed plan renderings and proposed site programs. These early design processes culminated in a mid-term review at the Point Defiance Park Pagoda, where collaborators had the opportunity to provide feedback to each student group. Each team refined their designs based on this feedback, culminating in a final review, which was attended by representatives from the City of Tacoma, Metro Parks Tacoma, and staff from the architecture and landscape architecture firm Mithun.

Accessibility to the gulches was a key priority for the studio design teams. Accordingly, a group of students that included members from all four gulch teams proposed alternative routes for cyclists and pedestrians that would allow for a more seamless experience of all four gulches and the Ruston Way waterfront as a whole. In the future, students hope that the residents will be able to move easily between the gulches and from each gulch to the waterfront, such that they might be viewed as a unified regional asset.

What follows are descriptions of the existing conditions and proposed design interventions for each of the four gulches:

**Garfield Gulch** is home to ongoing restoration projects involving planting and control of invasives, and has two formerly used trails that are no longer accessible. With Garfield Gulch located near several schools, the student team focused their design on ecological functions and educational purposes. They proposed new trails, an elevated pavilion that can function as an outdoor classroom and a viewing platform, and frog habitat to support ecological goals and environmental education. The team also proposed a pedestrian crossing to link the gulch to adjacent Commencement Bay parks.

Half of **Buckley Gulch** is owned by residents of homes surrounding the gulch, and City purchase of these lands would not be easily negotiated. Litter has also become an issue within this gulch. Students on this team therefore focused on connecting the gulch to the Old Town district and the Ruston Way waterfront. They developed two alternative ADA-accessible bridge designs for pedestrians to pass safely over the train tracks and road that lie between the area and the waterfront, taking into consideration historic bridge and waterfront precedents and the possibility for public-private partnerships.

**Puget Gulch** already has accessible, mature trails and a history of community-led stewardship, including restoration projects. The student team proposals focused on improving ecological function of existing Puget Creek, including water quality treatment, creek daylighting to increase its existing small salmon population, and modification of its mouth on the Ruston Way waterfront.

**Mason Gulch** is the largest of the four gulches, has generous stream flow year-round, and is home to a sewage treatment plant at its base. With large, mature trees, the terrestrial ecology of the gulch is largely intact. The team proposed steps to further develop the forest canopy to provide better bird habitat, to restructure the gulch’s steep slope from eroding, and to daylight the lower end of Mason Creek. They also proposed a catwalk crossing and viewpoint for visual access at the top of the gulch and an enhanced trail and crossing to the waterfront. Finally, they proposed that Cummings Park be reconfigured to provide better aquatic shoreline habitat and benefit from stream deposition to form an archipelago of islands, in conjunction with anticipated sea level rise.

Tacoma is a city with many public green spaces in which its residents can and should take pride. One corridor with a particularly notable network of green spaces is Ruston Way, which runs along the western edge of Commencement Bay. At its northwestern terminus is Point Defiance Park, a 760-acre gem that features beaches, old-growth forest, and gardens. Continuing southeast along the waterfront, residents can continue to enjoy well-maintained public green spaces: Cummings Park, Dickman Mill Park, Jack Hyde Park, and Chinese Reconciliation Park.

Ruston Way is also home to four large gulches that are distributed almost equidistantly along the waterfront. Despite their significance as regional ecological assets, these gulches have been largely neglected for years. At present, only one of the four has a well-developed trail system. Given their rich vegetation, creeks, and ecological connections to Commencement Bay and the other parks of Ruston Way, they are ideally positioned to be developed into well-used public green spaces. With their steeply sloped walls, the gulches also provide a sense of enclosure that is unique among North Tacoma's parks.

In the Winter 2018 academic quarter, the twelve students of Landscape Architecture 402/503: Neighborhood Design Studio, under the guidance of Professor Nancy Rattle, partnered with the City of Tacoma and Metro Parks Tacoma to develop designs for Ruston Way's gulches. The City's goals for these spaces center on providing opportunities for recreation and education, enhancing habitat for wildlife, and connecting neighborhood residents to the waterfront. By providing access to these open space resources, the City of Tacoma and Metro Parks Tacoma can provide broader environmental equity within the city. As part of that, the City has an opportunity to improve transit connections between these regionally significant assets and neighborhoods that have fewer green spaces. As the student teams developed their designs, they sought to achieve these goals, while also taking into the account existing conditions unique to each gulch.

By providing access to these open space resources, the City of Tacoma and Metro Parks Tacoma can provide broader environmental equity within the city.



From south to north, and terminating at Point Defiance Park, the four gulches Garfield, Buckley, Puget, and Mason offer significant opportunities for green space development along Ruston Way. LCY STUDENT TEAM

At the outset of the project, Stephen Atkinson, Principal Planner with the City of Tacoma, and Andrew Austin, Government Affairs Manager with Metro Parks Tacoma, visited the class to introduce the four gulches and the aforementioned project goals. From there, site visits and outside research allowed students to thoroughly analyze their sites, and, based on their understandings, to define the scope of their designs. This included an early field trip with Andrew Austin (City of Tacoma), landscape architect Marty Stump, Greenbelt Manager Mary Anderson, and City of Tacoma Senior Environmental Specialist Desiree Radice, during which students had the opportunity to explore the gulches and ask questions. In their site analyses that followed, students addressed the history, ecological characteristics, topography and hydrology, circulation and access, demographics, land uses, existing plans, and experiential qualities for the city and district.

After sharing their findings of those larger site analyses with each other, the twelve students divided into teams by individual gulch, and performed site-specific analyses by similar categories to assess the needs and opportunities they might address in their designs. This included use of model making, whereby each team created scaled contour models to better understand site hydrology, waterfront connections, and design challenges related to the complex topography of the steeply-walled gulches. Following these analyses, students researched relevant factors related to neighborhood context and remaining aspects of site ecology, such as wildlife and tree canopy composition. Each gulch has its unique opportunities and challenges that students felt would be most important to address in their designs. The following descriptions include the most relevant information that emerged from those analyses.



*Final presentations in Architecture Hall, March 7, 2018. TERI THOMSON RANDALL*

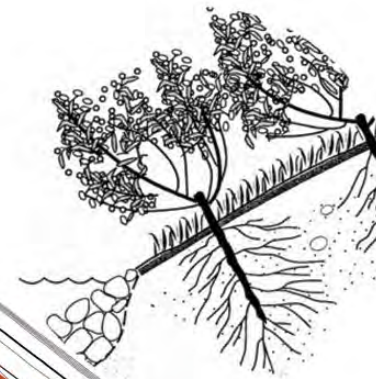
## Wildlife Corridors



## Environmental Learning



## Slope Stabilization with Soft Engineering



## Historical Reveal



## GARFIELD GULCH

Garfield Gulch is located opposite the Chinese Reconciliation Park, across Ruston Way/Schuster Parkway and the railroad tracks, which are still operational. In recent years, a group of dedicated citizens have stewarded the gulch by planting trees and removing invasive plants, but these exotic plants have aggressively and extensively invaded the ravine. In response, the City has provided funding for as-of-yet undefined improvements. There are four trail entrances to the gulch: one on the east side of the gulch on North Borough Road that accesses a pathway that dead ends on the gulch hillside, two on the west side that are connected by a second trail that runs along the top of the hillside, and a fourth on Ruston Way that is mostly used by gulch maintenance staff and does not access a trail.

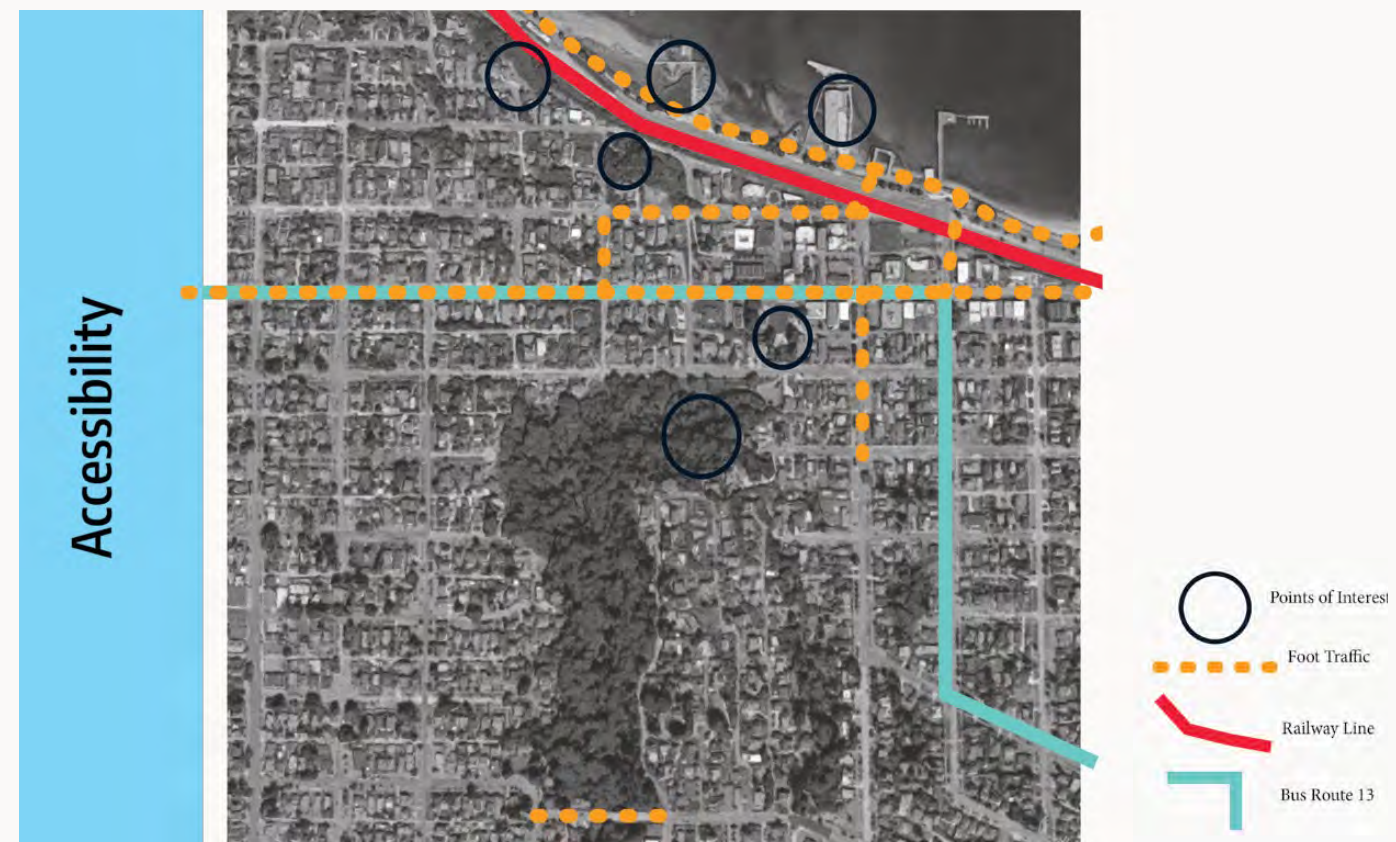
*Garfield Gulch has great potential for ecological restoration but currently faces accessibility issues. In their analyses, students focused on opportunities and constraints related to these issues.*  
LCY STUDENT TEAM

## BUCKLEY GULCH

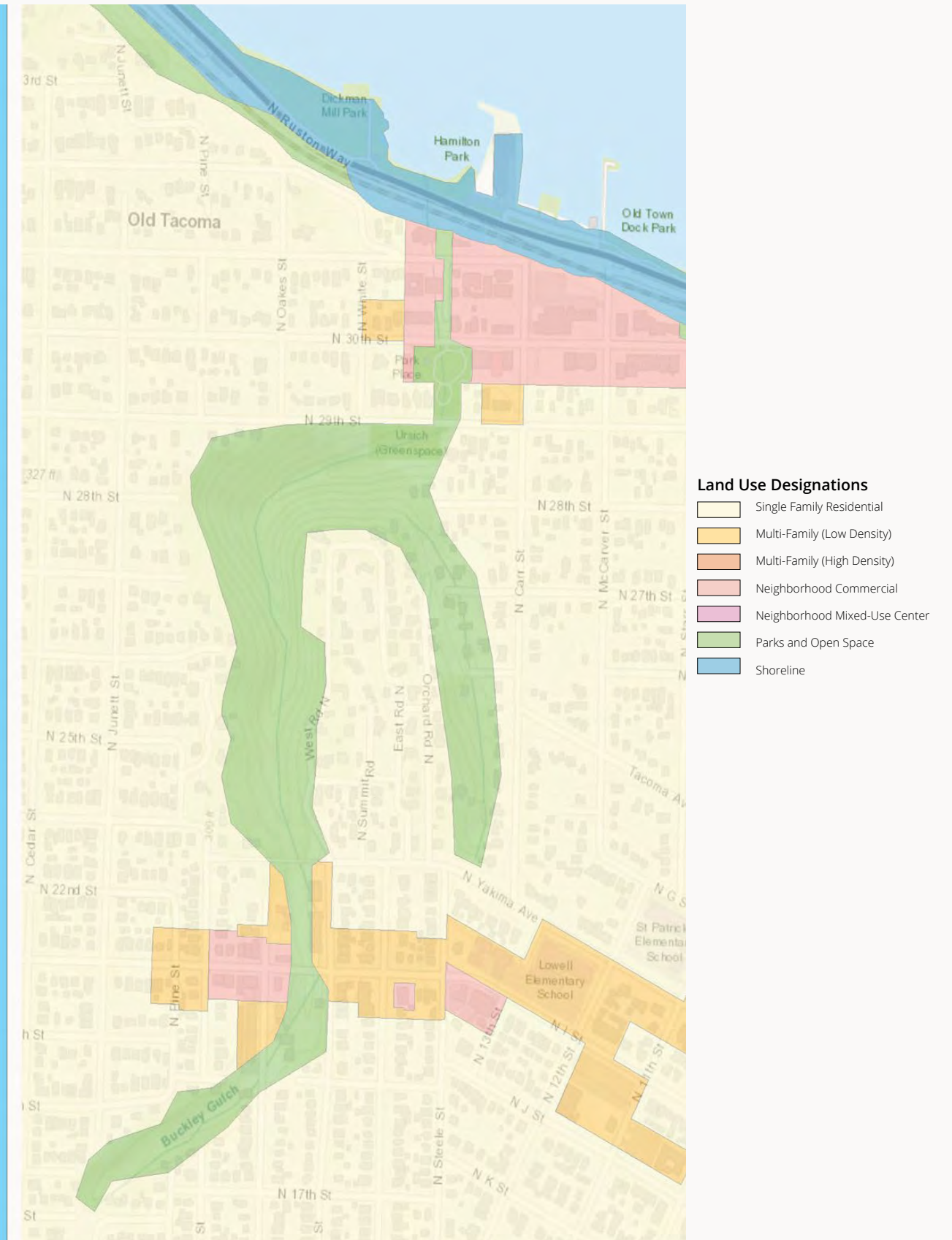
Buckley Gulch's most significant challenges relate to land ownership: about half of the gulch is privately-owned residences, and City purchase of these properties would not be a simple process. "Private Property" signs are visible from several locations within the bottom of the gulch. The upper area of the gulch is littered with a large quantity of trash, but students observed wildlife, including deer. Given the limited potential to develop the gulch itself, students focused on connectivity between the public park at the lower end of the site and the water's edge. This passage requires traversing several blocks of Old Tacoma, railroad tracks, and Ruston Way.

*Designing for future development of the Buckley Gulch requires understanding of land ownership issues and careful consideration of where to connect the gulch to Ruston Way.*

LCY STUDENT TEAM



# Land Use Designation



**PUGET GULCH**

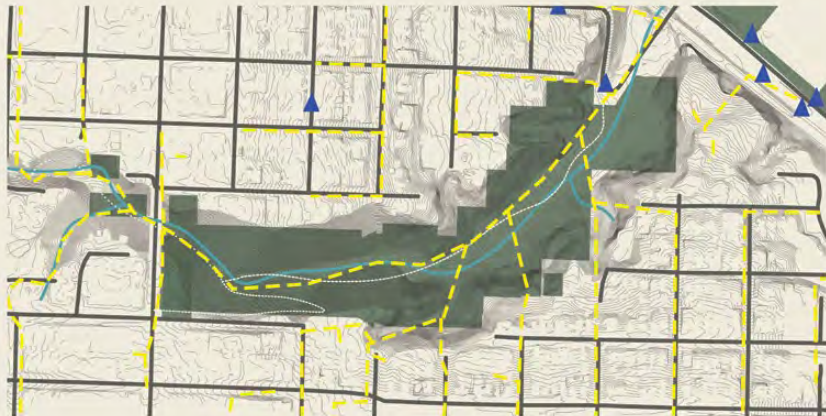
Puget Gulch is by far the most developed of the four gulches and, as such, is currently the most highly used. It has mature trails and has ongoing restoration projects, many of which were led by a volunteer-led stewardship organization, Puget Creek Restoration Society. The group had been active in recent years but stopped due to funding issues. Trails are concentrated in the lower half of the gulch. Salmon have been observed in Puget Creek, and a salmon ladder has been installed, though observed numbers remain low.

*Students studied site hydrology, soils, and topography to determine ways to support the Puget Gulch's ecology.*  
 LCY STUDENT TEAM

Puget Gulch Water and Site Characterstics

STORMWATER SEWER & OUTFALLS

- STORMWATER SEWER
- STREAM
- STORMWATER OUTFALLS



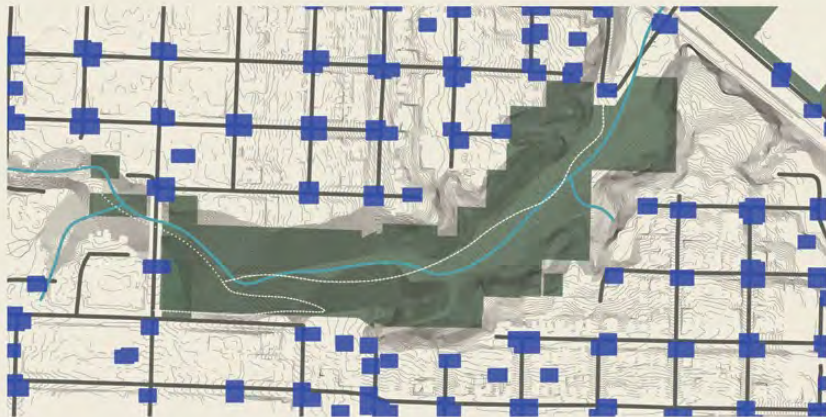
AQUIFER RECHARGE

- AQUIFER RECHARGE



STORMWATER CATCH BASINS

- STORMWATER CATCH BASINS



SLOPES (STABILITY)

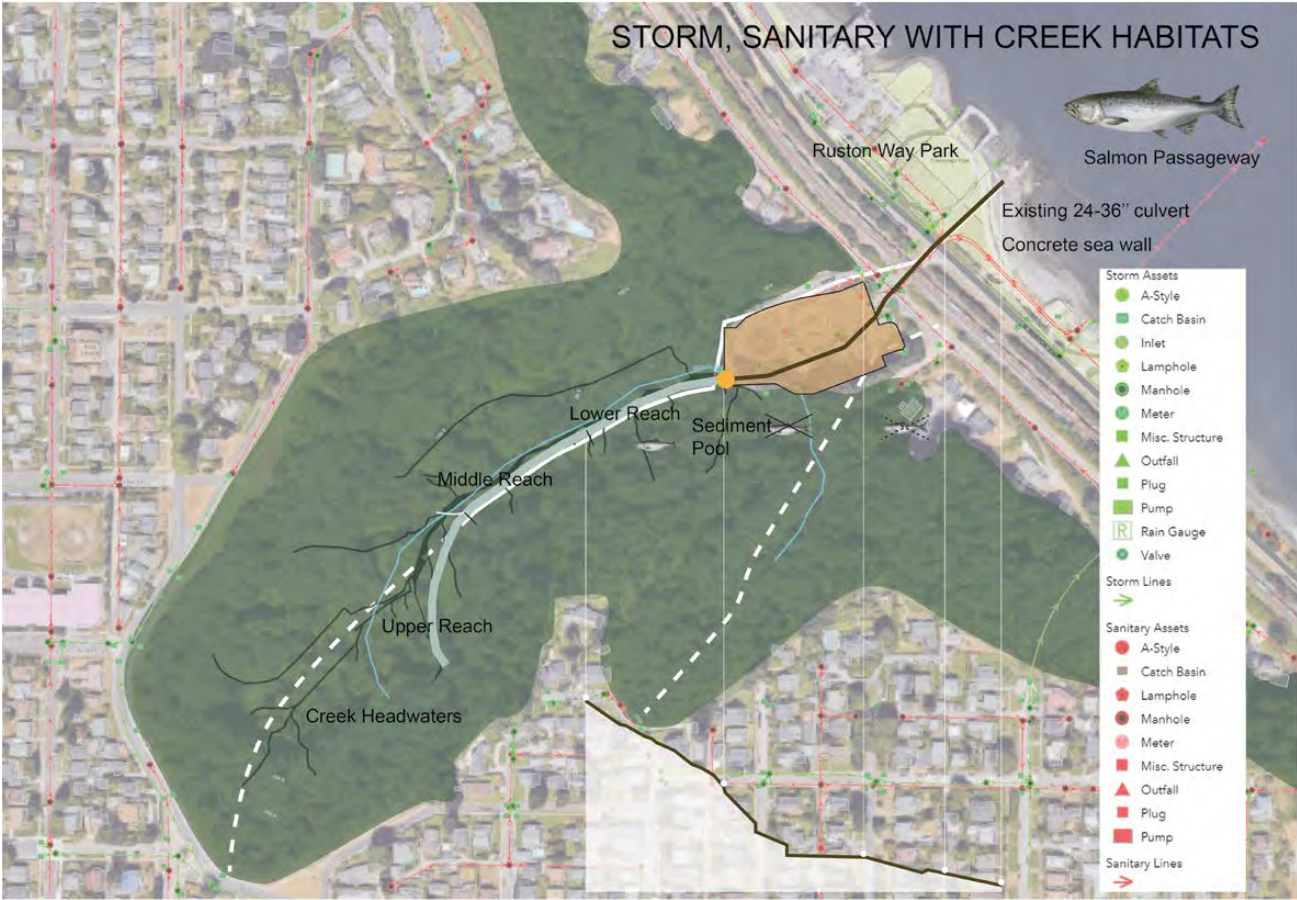
- UNSTABLE SLOPE
- UNSTABLE - RECENT SLIDE
- MODIFIED



MASON GULCH

Mason Gulch is the largest of the four gulches. It is home to a large variety of tree species and some individual trees that are quite mature. With its plant ecology largely intact, this forest provide habitat to many birds. Mason Creek has steady, year-round stream flow, though it is contained in a pipe for much of its lower end. A sewage treatment plant lies at the base of the gulch. Unpublicized trails lead from Ruston Way around the treatment plant and into Mason Gulch, though they terminate at the base of the exceptionally steep slopes surrounding Mason Creek's source. Several park spaces at the top of the gulch afford views of Commencement Bay.

For the Mason Gulch, students considered neighborhood stakeholders and connectivity, as well as ecological composition. Their design interventions for this site focus on education and habitat enhancement. LCY STUDENT TEAM



Following site analyses, which were printed on posters that were available for continual reference, students moved into the design phases of their projects. This began with precedent studies of green spaces in the Seattle-Tacoma region where designers tackled relevant challenges, such as ravine restoration, stream daylighting, and sensitive trail and bridge siting and design. These examples helped students to develop site “programs,” including desired activities and facilities that the teams envisioned for each gulch. Students then developed designs from an early conceptual stage to a more detailed, “schematic” stage, which included detailed plan renderings and proposed site programs. These early design processes culminated in a mid-term review at the Point Defiance Park Pagoda, where Metro Parks and City representatives had the opportunity to provide feedback to each student group.

Attendees provided a great deal of helpful feedback to students, which varied by gulch. Questions related to many topics, including compliance with city guidelines and protocols, whether bridge connections to the waterfront were appropriately located, if renderings captured the diversity of Tacoma residents, and whether the history of the surrounding Old Town neighborhood was being considered and reflected in the designs. They also made suggestions for directions of further design exploration. After the mid-review, students tried to address these ideas so that their designs would respond to the knowledge and visions of the community. For example, in response to the aforementioned feedback about consideration of the Old Town neighborhood characteristics, the Buckley Gulch group made sure to include materials and colors representative of that neighborhood’s aesthetic and history.

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**The teams sought to accomplish the goals of: enhancing ecological function, improving accessibility, providing programs and facilities for human activity, and creating safe and interesting connections between each gulch and the waterfront.**

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## **A proposed network to connect the four gulches includes bike lanes, sidewalks, and street plantings.**

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Another issue that came to the fore during the mid-review was that the designs for the four different gulches lacked unity. Furthermore, students noted that users would have a difficult time navigating between gulches, given the heavy traffic of Ruston Way and lack of connective pedestrian and cycling infrastructure. To address concerns about connections between gulches, a working group consisting of representatives from each gulch group met to focus on this issue. They also took this as an opportunity to tell a consistent story about the four gulches, highlighting their distinctiveness while uniting them conceptually and physically. The following pages represent the culmination of this design process. The teams each sought to accomplish the goals of enhancing ecological function, improving accessibility, programming for human activities, and providing safe and compelling connections between each gulch and to the waterfront. Finally, a proposed network connecting the four gulches includes bike lanes, pedestrian-friendly sidewalks, and street plantings.

At the conclusion of the project, the student teams presented this work to representatives of the City of Tacoma and Metro Parks, and to the newly-hired design team led by the architecture/landscape architecture firm Mithun. As this firm develops proposals for the four gulches, they will continue working with Tacoma’s residents and will consider this Livable City Year studio’s proposals. This work can be an important part of Tacoma’s long-term efforts to build a city that is healthier, greener, and more equitable.

## GARFIELD GULCH INTRODUCTION

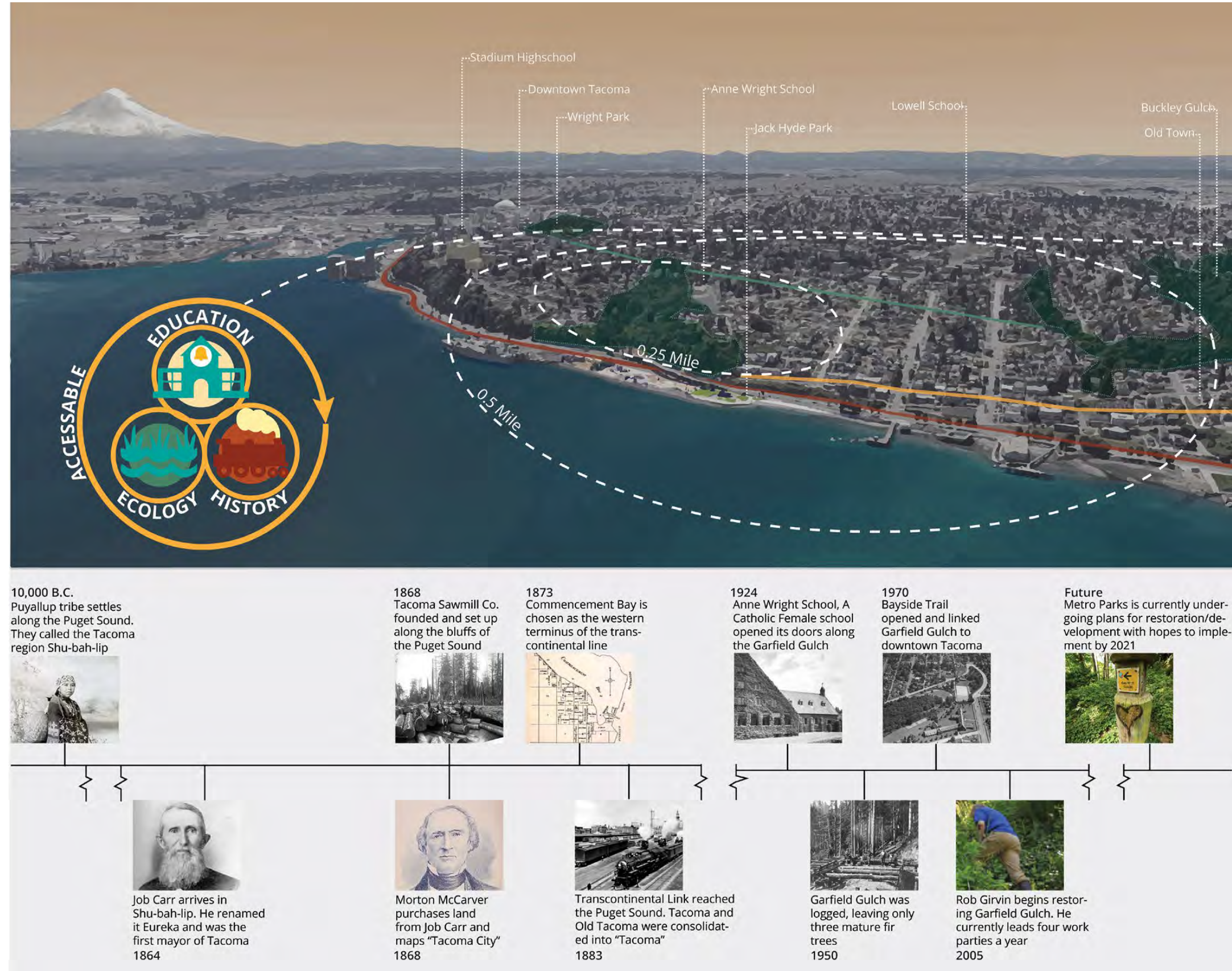
On Tacoma's peninsula along Ruston way, hidden between the Stadium District and historical Old Town, Garfield Gulch lies waiting to be rediscovered. For 70 years, the gulch has been largely ignored, abandoned after being filled and scoured for resources. Development crowds the edges of the cliffs that characterize this deep ravine.

"What's left is the deepest, steepest part — and that's both the beauty and the problem." - Rosemary Ponnekanti, Tacoma News Tribune Writer

Tacoma was once home to the biggest sawmill company in the world. In the mid-twentieth century, Garfield was clear-cut and replanted with a monoculture of Black Cottonwoods. Now these trees are nearing the end of their lifespans, and the presence of non-native species is speeding up the process. Harmful vines such as ivy and clematis weigh trees down and scar their inner cambium layer. As the trees fall, sunlight that enters through new openings in the tree canopy reaches Himalayan Blackberry, providing perfect growing conditions. This invasive species is difficult to eradicate and highly ecologically destructive.

We envision a new life for Garfield that begins with environmental mitigation. For our design, we aim to foster a love for environmental stewardship through outdoor learning and connection to the wild.

Through conceptual and iterative design phases, we have attempted to identify the historical character of Garfield Gulch and capture its persona through cohesive form.





### CIRCULATION

- TRAILS
- MULTI USE PATHS
- SHARE/BIKE LANE
- BIKE BLVDS.
- RAILROAD
- GULCHES



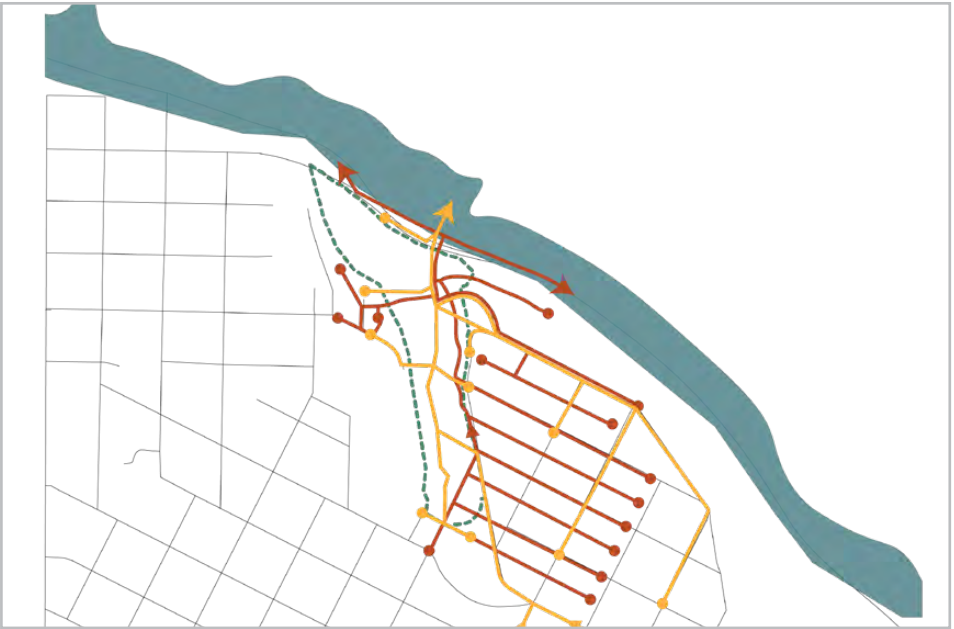
### TRANSIT

- RAILROAD
- HIGH PRIORITY TRANSIT
- MEDIUM PRIORITY TRANSIT
- GULCHES



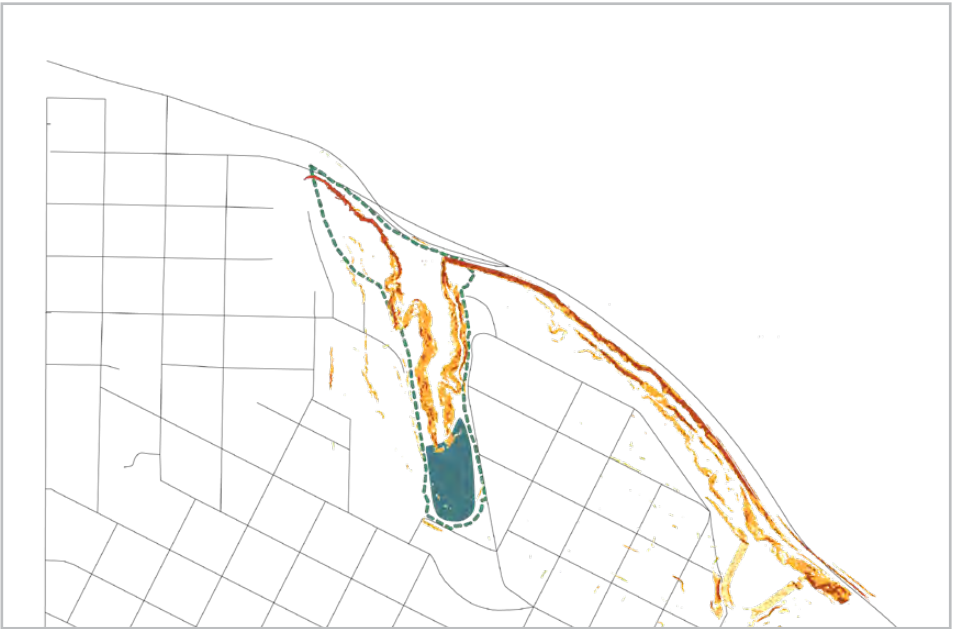
### HYDROLOGY

- STREAM CENTERLINE
- WETLAND
- AQUIFER RECHARGE
- SHORELINE
- GARFIELD GULCH



### SEWAGE AND STORMWATER LINES

- STORMWATER LINES
- SEWAGE LINES
- SHORELINE
- GARFIELD GULCH



### SLOPE

- 81-100% SLOPE
- 60-80% SLOPE
- 50-59% SLOPE
- FILL MATERIAL
- GARFIELD GULCH



### EXPERIENTIAL QUALITY

- SIGNIFICANT VIEWS
- TOUGH & RISKY PATH
- SMOOTH & FAST PATH
- MEANDERING & WET PATH
- GATHERING & OPEN SPACE
- GARFIELD GULCH

# MASTER PLAN



# DETAIL PLAN



- |                             |                                       |                               |
|-----------------------------|---------------------------------------|-------------------------------|
| ① Garfield Park             | ⑧ Entrance Plaza                      | ⑮ Woodland Pond               |
| ② Bio-Swale                 | ⑨ Skyward Bridge                      | ⑯ Wet Forest Walk   Boardwalk |
| ③ Adventure Path            | ⑩ Greenhouse   Restroom   Maintenance | ⑰ Canopy Walk                 |
| ④ Outdoor Classroom         | ⑪ Vernal Pools Observation area       | Ⓟ Parking                     |
| ⑤ Cedar Stump               | ⑫ Vernal Pools                        | ♿ Restroom                    |
| ⑥ Service   Recreation Path | ⑬ Canopy Tower                        | ⬇ Entrance                    |
| ⑦ Observation Platform      | ⑭ Woodland Pond Observation Platform  |                               |

ACCESSIBILITY



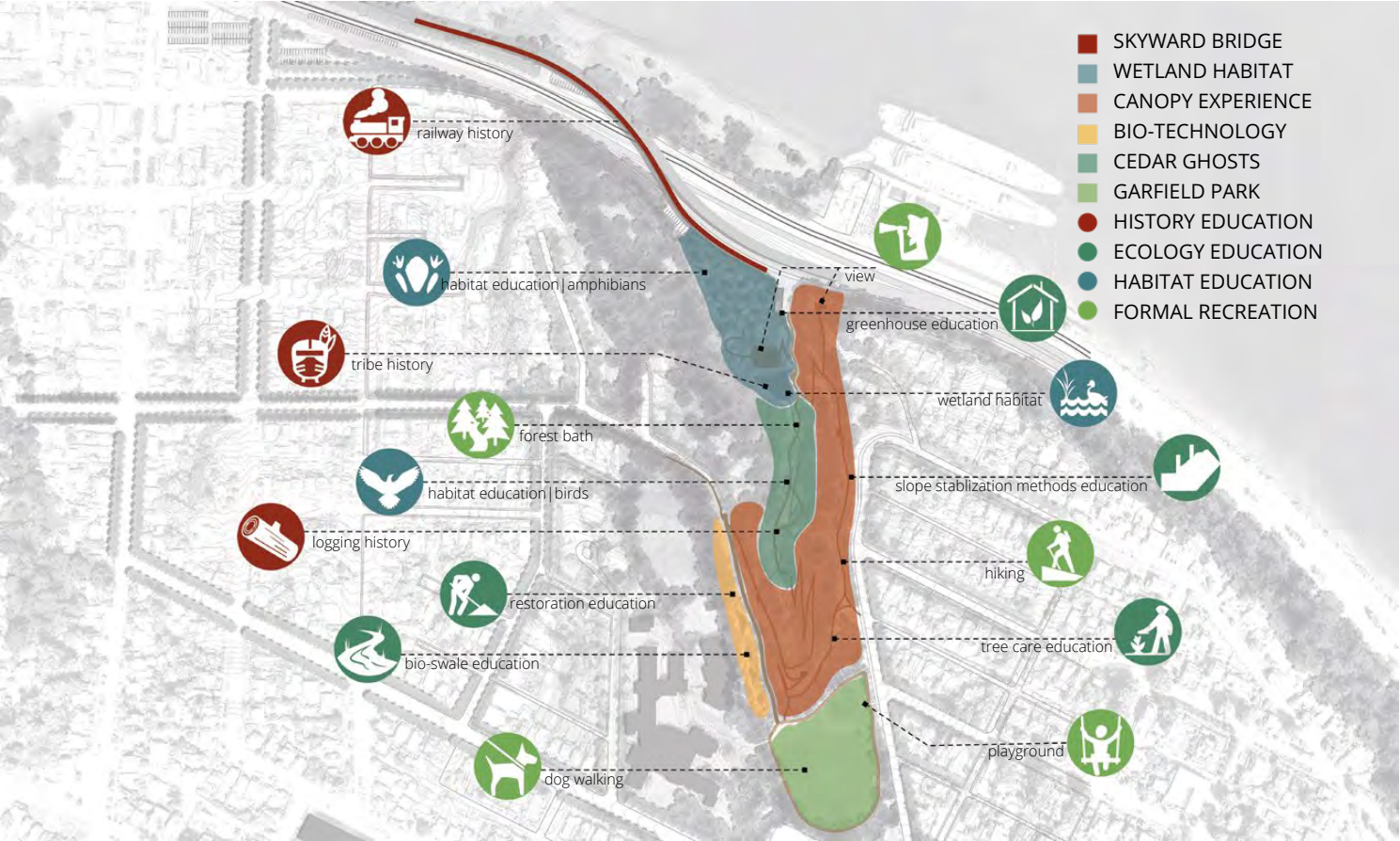
PATH TYPE EXPERIENCE



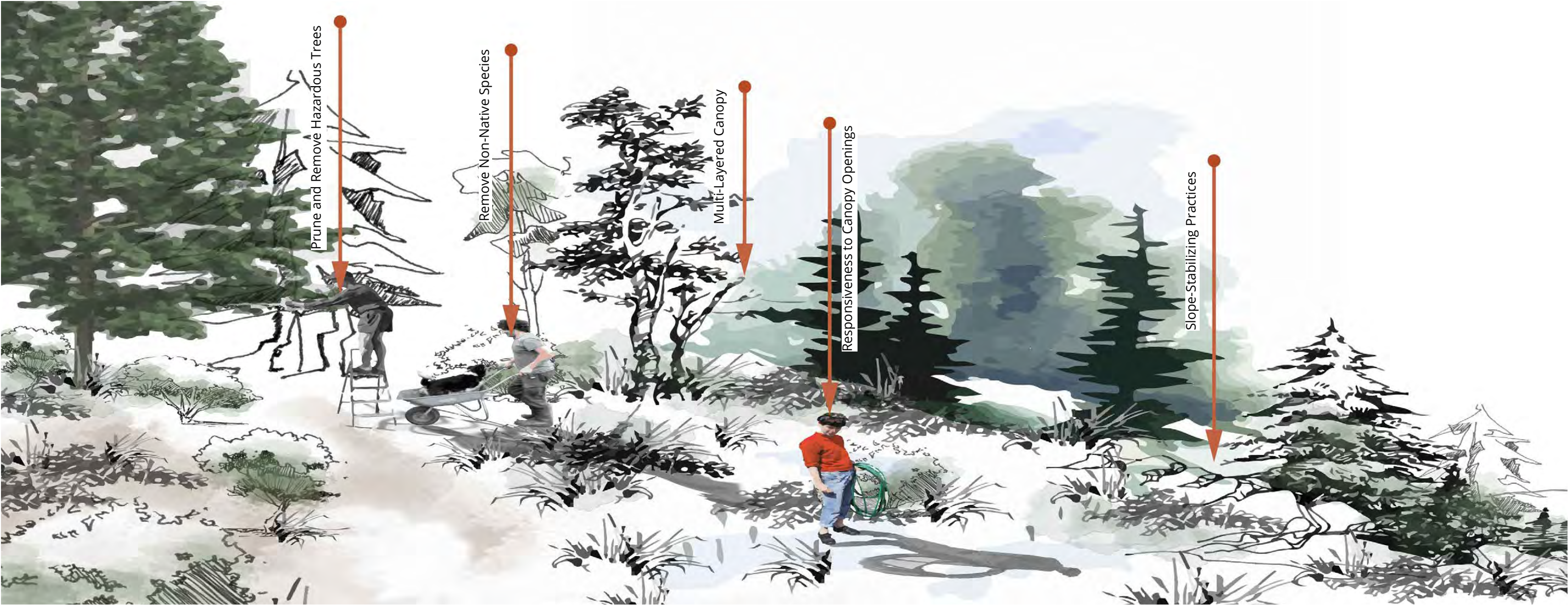
ECOLOGY CONNECTION



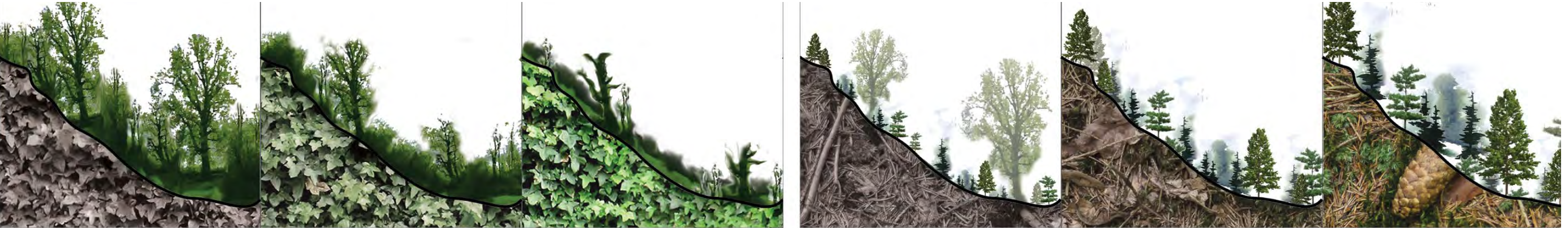
EDUCATION AND RECREATION OPPORTUNITY



RESTORATION PLAN



Elimination vs Restoration



**YEAR 0**  
Areas are dominated by Black Cottonwood trees nearing the end of their lives. Harmful, non-native vines climb these trees, hastening their downfall.

**YEAR 25**  
As more trees fall, new openings in the canopy allow for further establishment and growth of invasives.

**YEAR 50**  
Soon the system is overwhelmed and overtaken by invasives.

**YEAR 0**  
Non-native plants are removed. Native groundcover, shrubs, and trees are planted in shortly thereafter.

**YEAR 25**  
With maintenance and monitoring, the planted trees can establish and eventually become part of a self-sustaining system.

**YEAR 50**  
As stewardship stays strong, the forest matures. This helps Tacoma to reduce its ecological footprint and improve the livelihood of its residents.

PLANTING DESIGN



PLANT SCHEDULE

	Pollinator Pathway	Native Buffer	Pond Habitat	Open-Canopy Ground Cover	Shore Oriented Slope	Wetland	Inner-Forest Slope
Native Grasses							
Sword Fern							
<i>Polystichum munitum</i>							
Kinnikinnick							
<i>Arctostaphylos uva-ursi</i>							
Thimbleberry							
<i>Rubus parviflorus</i>							
Salmonberry							
<i>Rubus spectabilis</i>							
Nootka Rose							
<i>Rosa nutkana</i>							
Snowberry							
<i>Symphoricarpos albus</i>							
Huckleberry							
<i>Vaccinium ovatum</i>							
Salal							
<i>Gaultheria shallon</i>							
Oregon Grape							
<i>Mahonia repens</i>							
Tall Oregon Grape							
<i>Mahonia nervosa</i>							
Red Flowering Currant							
<i>Ribes sanguineum</i>							
Serviceberry							
<i>Physocarpus capitatus</i>							
Elderberry							
<i>Sambucus callicarpa</i>							
Red Twig Dogwood							
<i>Cornus sericea</i>							
Vine Maple							
<i>Acer circinatum</i>							
Hooker's Willow							
<i>Salix hookeriana</i>							
Sitka Willow							
<i>Salix sitchensis</i>							
Madrona							
<i>Arbutus menziesii</i>							
Shore Pine							
<i>Pinus contorta</i>							
Western Red Cedar							
<i>Thuja plicata</i>							
Mountain Hemlock							
<i>Tsuga mertensiana</i>							
Douglas Fir							
<i>Pseudotsuga menziesii</i>							
Cattail							
<i>Typha L.</i>							
Wapato							
<i>Sagittaria latifolia</i>							
Skunk Cabbage							
<i>Symplocarpus foetidus</i>							



*Vernal Pools / Skyward Bridge / Education Greenhouse*  
This vignette illustrates the Skyward Bridge connecting to the waterfront. Additionally, the vernal pools and education greenhouse double as canopy observation decks.



**Canopy Observation Deck**  
 This vignette illustrates the canopy observation deck. The levels of the deck allow visitors to view the emergent layer, the canopy layer, and the understory layer of Garfield Gulch.



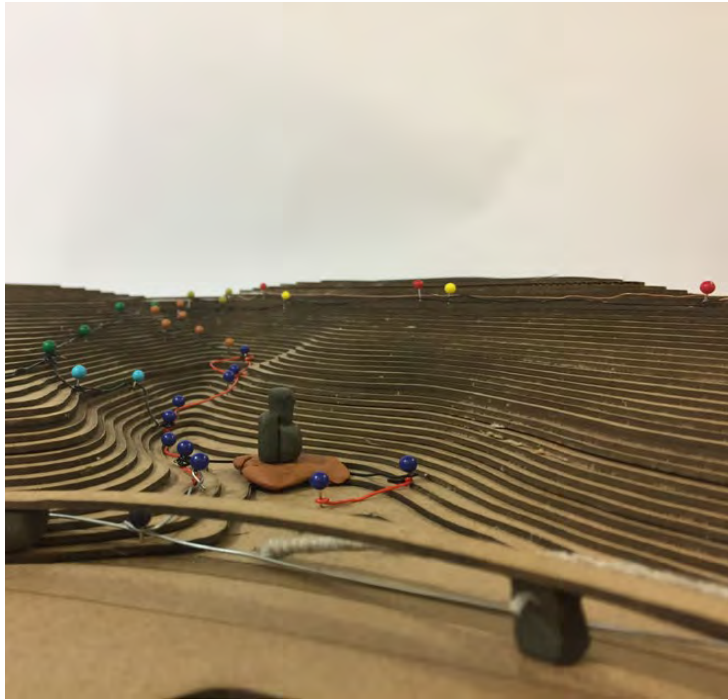
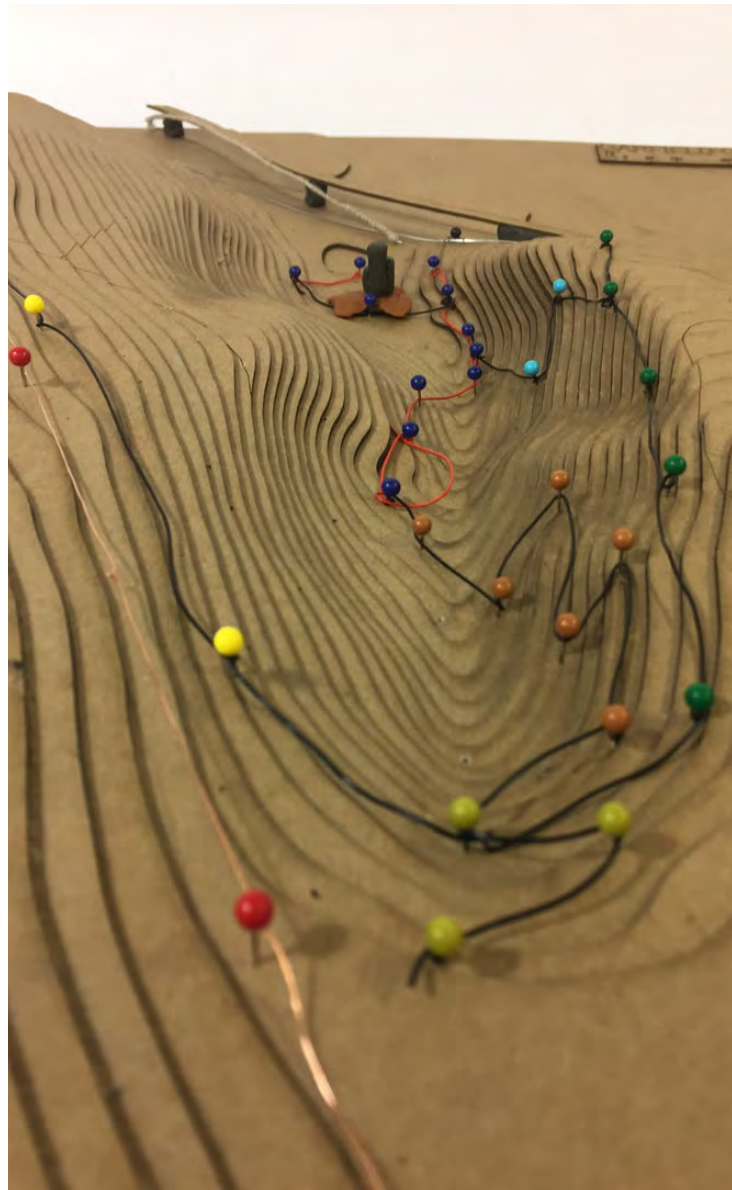
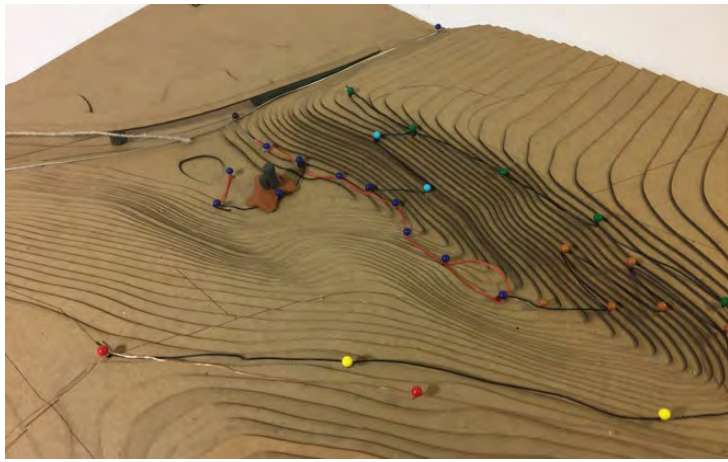
**Education Circle / Elevated Boardwalk**  
 This perspective illustrates the education circle and the Cedar Ghost Stump, a critical stopping point that references the history of logging within Garfield Gulch.



**Vernal Pools Observation Deck / Skyward Bridge**  
 This vignette shows families using the Vernal Pool Observation Deck. The Skyward Bridge and Chinese Reconciliation Park are also visible from this vantage point.



**Sculptural Entrance**  
 This image depicts the well-lit sculptural entrance to Garfield Gulch. Corten steel reed sculptures welcome visitors into the park and education center.



## GARFIELD GULCH CONCLUSION

First and foremost, we want Garfield to be an area of active stewardship and upkeep. We recommend that Garfield Gulch be recognized as a future sanctuary so that its immense potential can be realized.

In our design iterations we saw that Garfield could become a major asset to youth. Stadium High School and two elementary schools sit within half a mile of the gulch, making Garfield an excellent location to implement outdoor learning. With partnerships to schools we hope that Garfield can host a variety of activities, such as restoration and horticulture classes for high school students, and tadpole releasing for children.

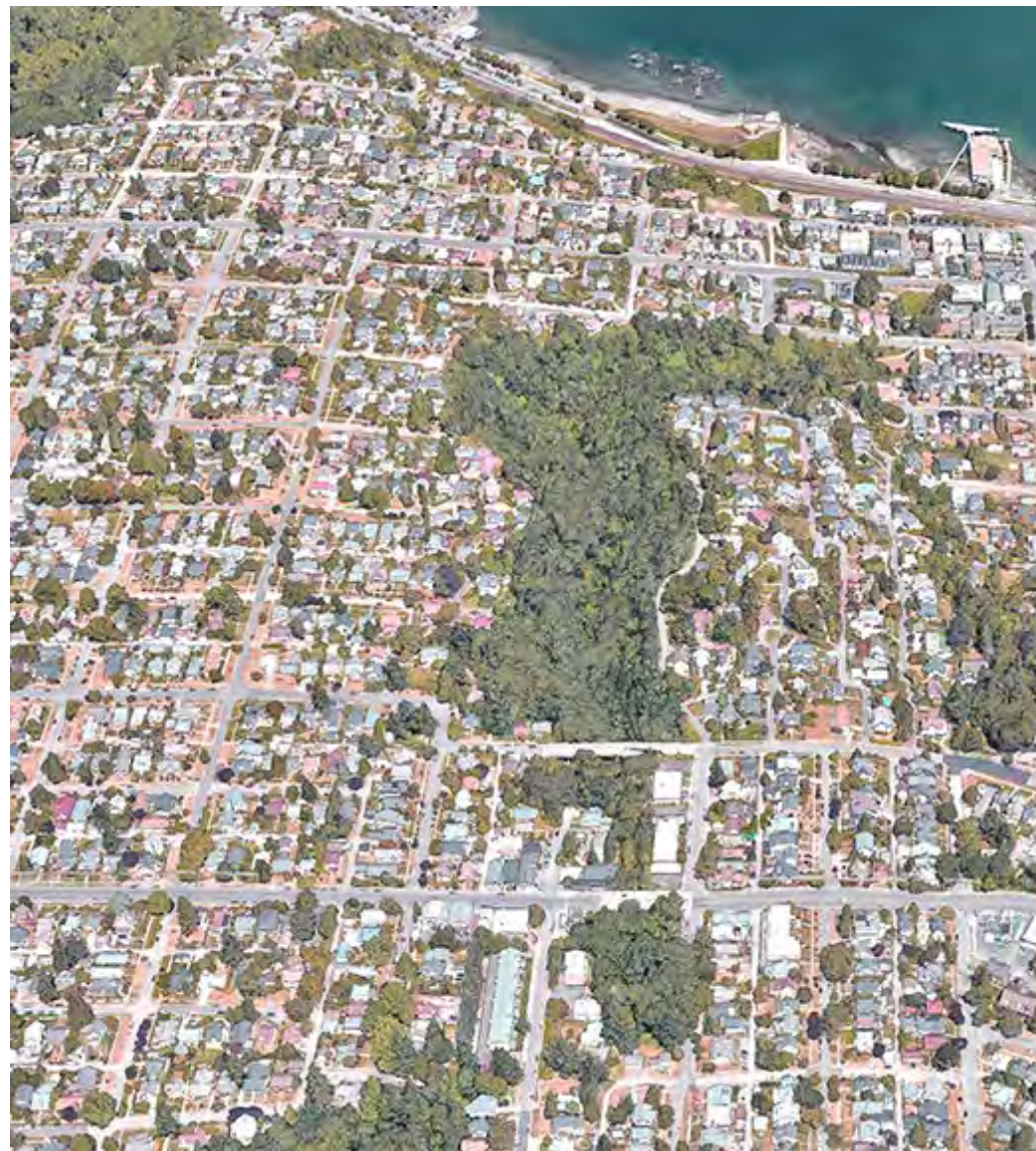
Through these educational programs, we hope to instill a passion for stewardship and a connection to the earth in future generations. We believe such teachings are essential to ensure the enduring ecological well-being within Garfield and beyond. We derived these programs from historical and ecological contexts. Through details, forms, and color, we hope to emphasize Garfield's past character as well as its future ecological possibilities. Furthermore, we have attempted to merge these artistic qualities with functionality, creating a seamless, cohesive syllabus.

Establishing Garfield as an educational resource is not enough. Connectivity is the key, and it starts in the neighborhood. Entrances with sculptural reed leaves and improved facilities will lead community members to our ADA accessible path circulation. This system would deliver people to either Old Town or the Skyward Bridge that connects to the Chinese Reconciliation Park.

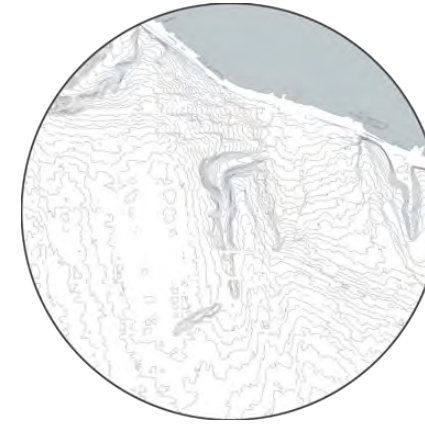
With these implementations, we hope that the people of Tacoma would be better able to experience the enchantment and charm of Garfield Gulch.

## BUCKLEY GULCH INTRODUCTION

Located in the heart of Old Town, Buckley Gulch offers the perfect opportunity to reconnect Tacoma to the waterfront. Though an active railway currently cuts off the Old Town neighborhood from Ruston Way, the addition of bike paths and pedestrian bridges would provide safe access over that railway and to the waterfront. There are multiple design opportunities for these two alternative connections, as we will demonstrate in the following pages.



*Aerial view for Buckley Gulch*



Contours Basis



Buildings and Block Size



Street Context



Storm Lines



Historic Place Register

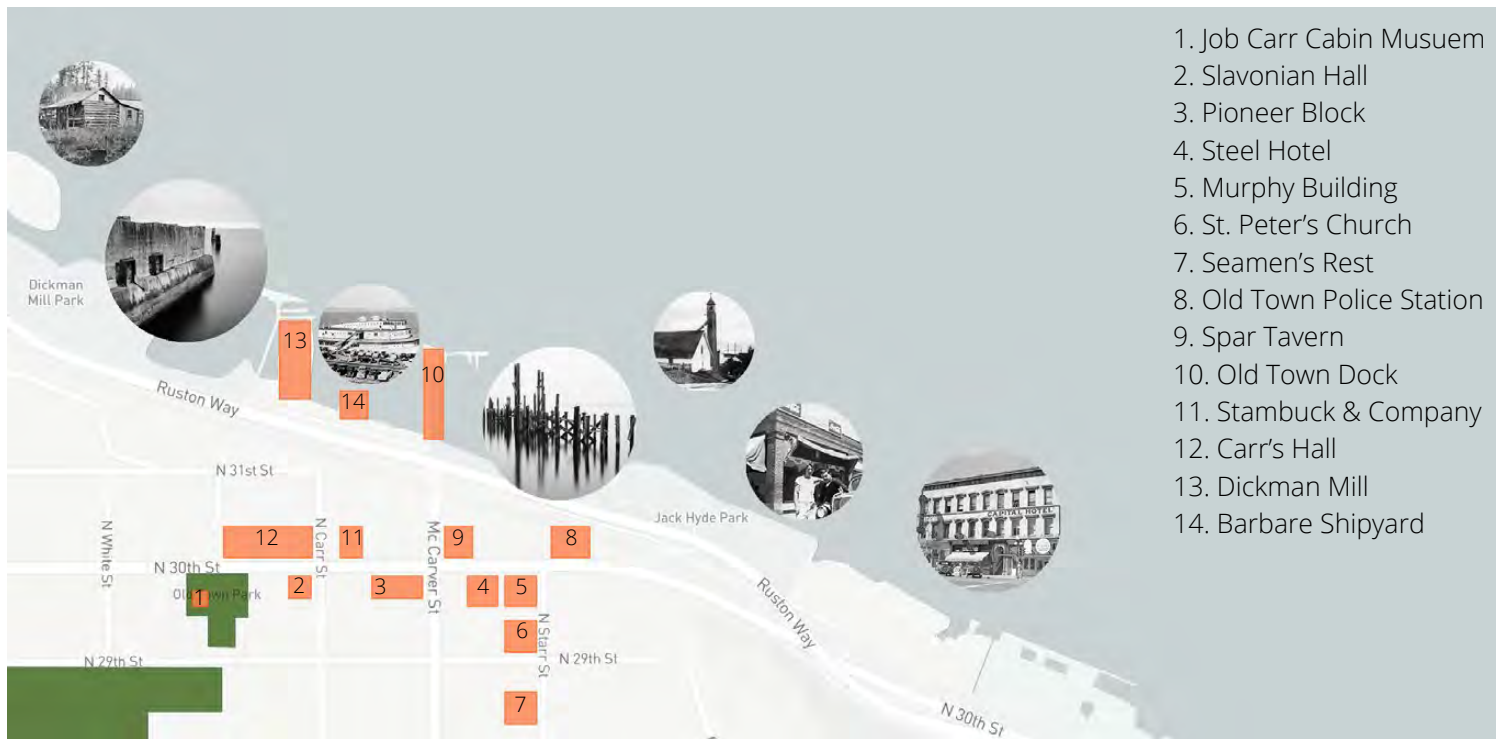


Zoning

*Analysis diagrams*



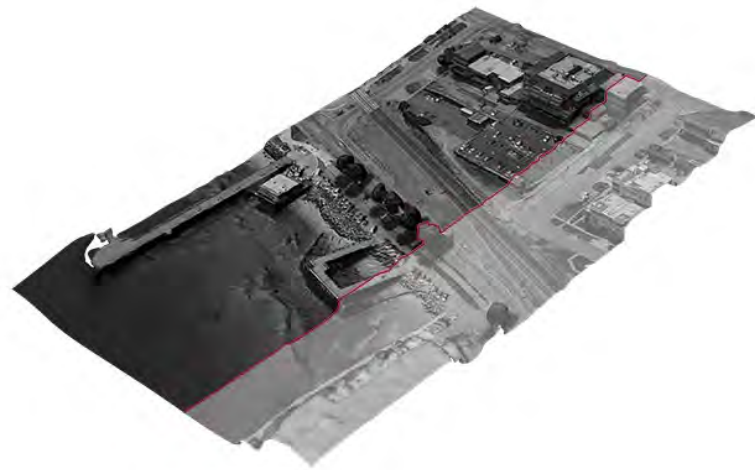
*Old Town historical reminding elements*



Old Town historical walking tour



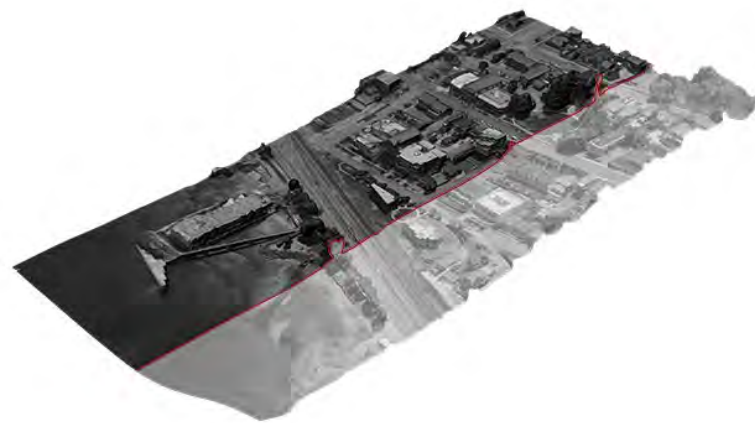
Aerial view of five potential areas



### OPTION ONE AREA ANALYSIS

**Pros:**  
 Higher elevation change across railway,  
 generally low elevation overall  
 Use of parking spaces  
 still in Old Town  
 Local businesses supported

**Cons:**  
 Property not owned by the City  
 View is sensitive



### OPTION TWO AREA ANALYSIS

**Pros:**  
 Direct gulch-waterfront connections  
 Old Town viewscape  
 Project area owned by the City of Tacoma  
 Direct historical connections

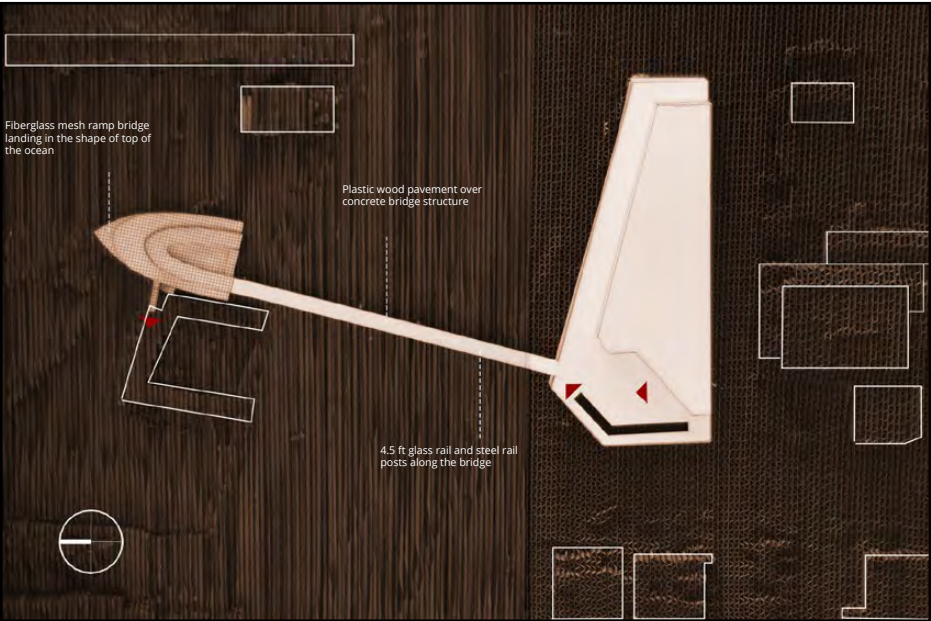
**Cons:**  
 Higher elevation change across the  
 landscape but low elevation change  
 across railway

Two locations analysis

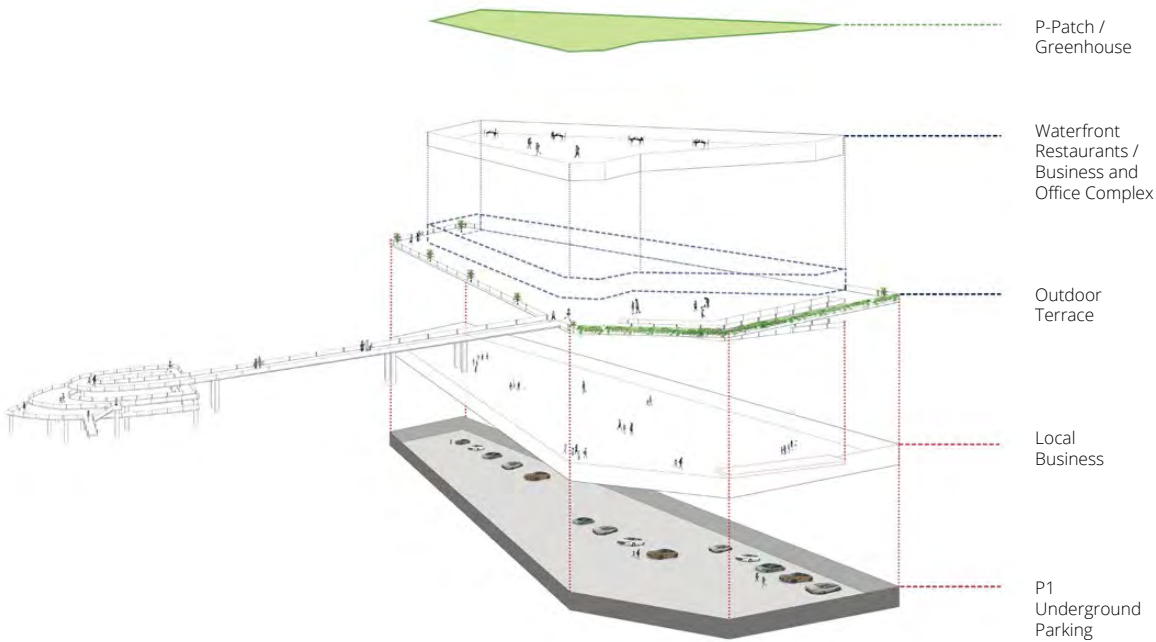
OPTION ONE - HISTORY IN TODAY



BIRDS-EYE VIEW FOR OPTION ONE - HISTORY IN TODAY



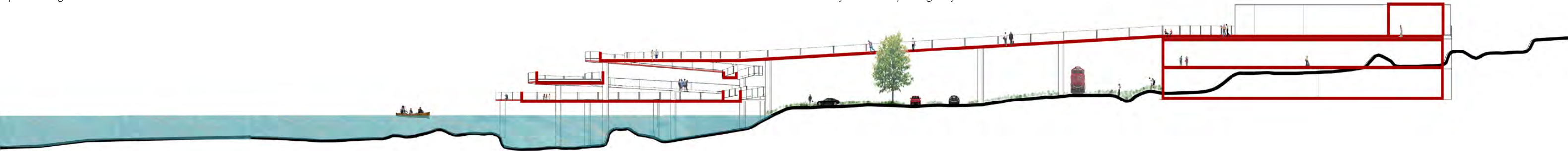
Plan for Option One



Explosion diagram



Physical model photo gallery



Site section for Option One



Commencement Bay view



Rooftop deck



Ruston Way underpass

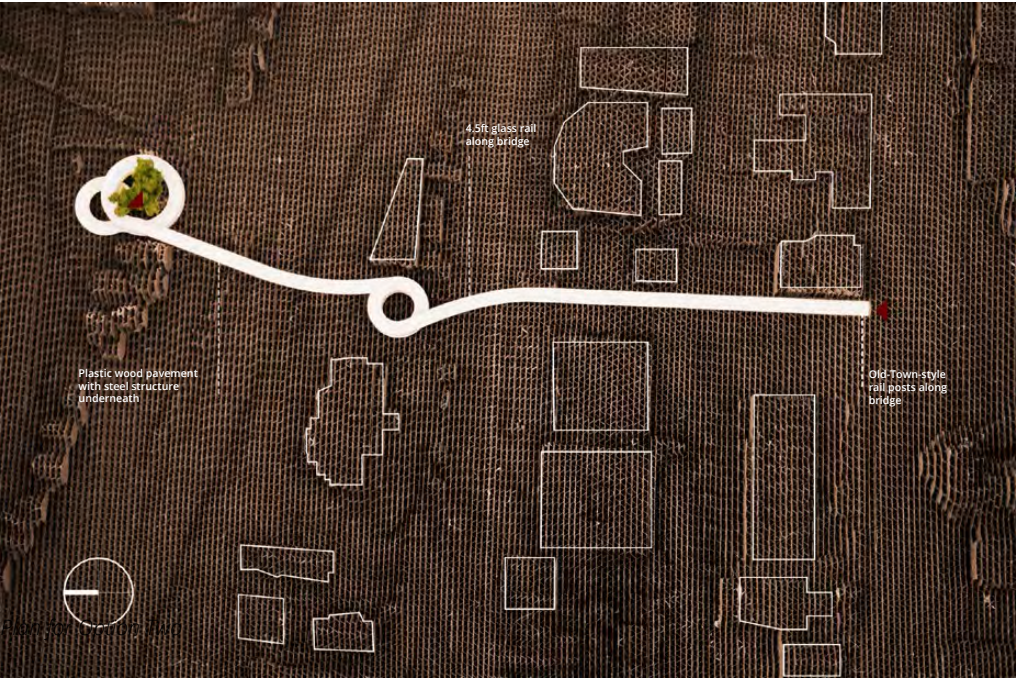


Commercial side entrance

OPTION TWO - Gulch to the Bay



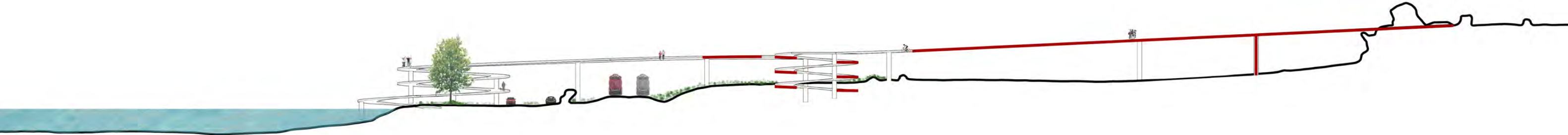
OPTION TWO - GULCH TO THE BAY



Steel structures reference



Physical model photo gallery



Site section for Option Two



Park view



Underbridge view



Spiral view



Ruston Way aerial view



Wayfinding map

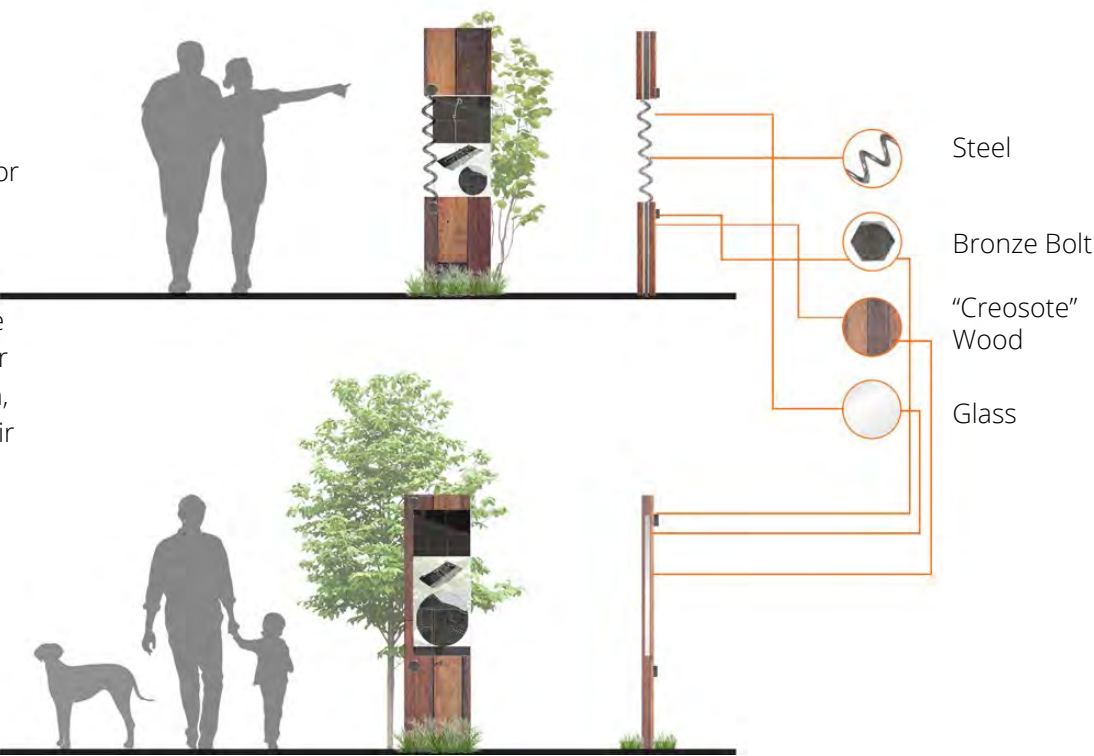
- A Bus Route 13
- B Lowell Elementary School
- C Neighborhood Gulch Bridge
- D N Junett Street St & 26th Street
- E Puget Connection/Bike Path
- F Puget Connection/Bike Path (cont.)
- G Old Town Park Connection

- Pedestrian/Bike Route
- Alternative Path Two

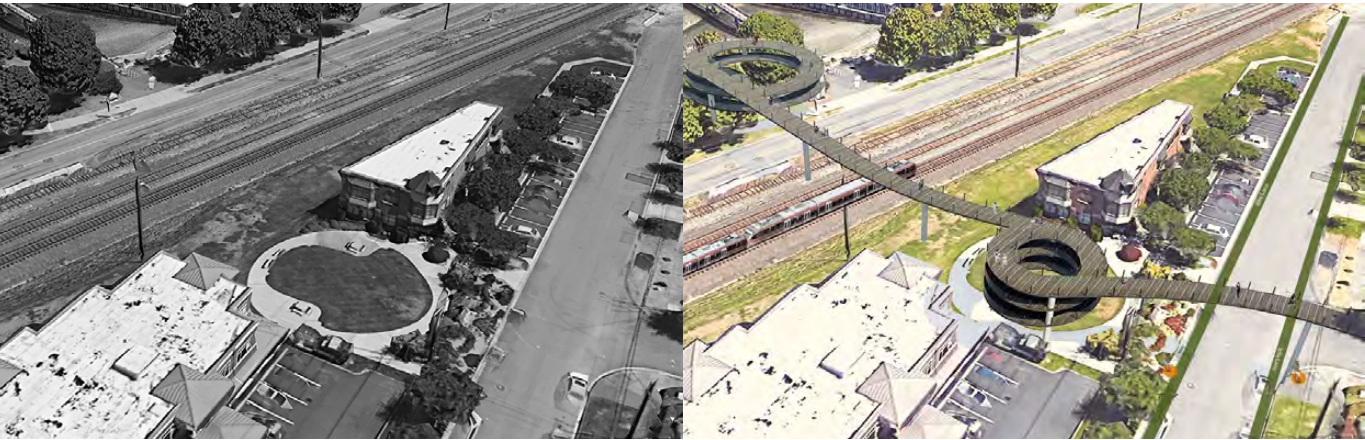
### WAYFINDING DESIGN ELEMENTS

Signage will engage and enliven the average morning or afternoon stroll.

Signage also helps visitors identify where they are on the map, how they can reach their closest or farthest destination, and what they can see on their way.



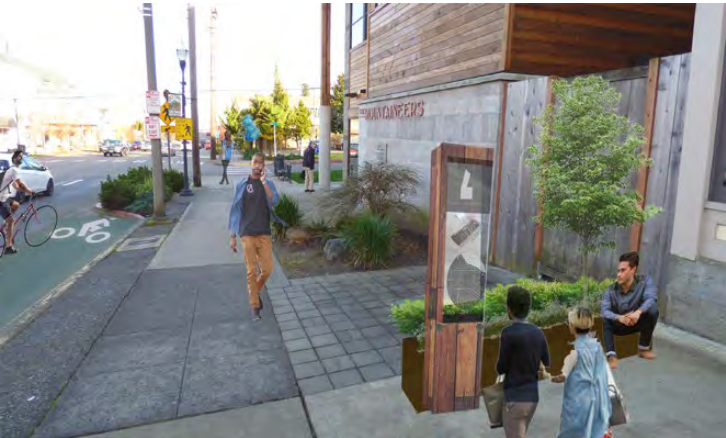
Wayfinding design elements



Before and after Alternative One



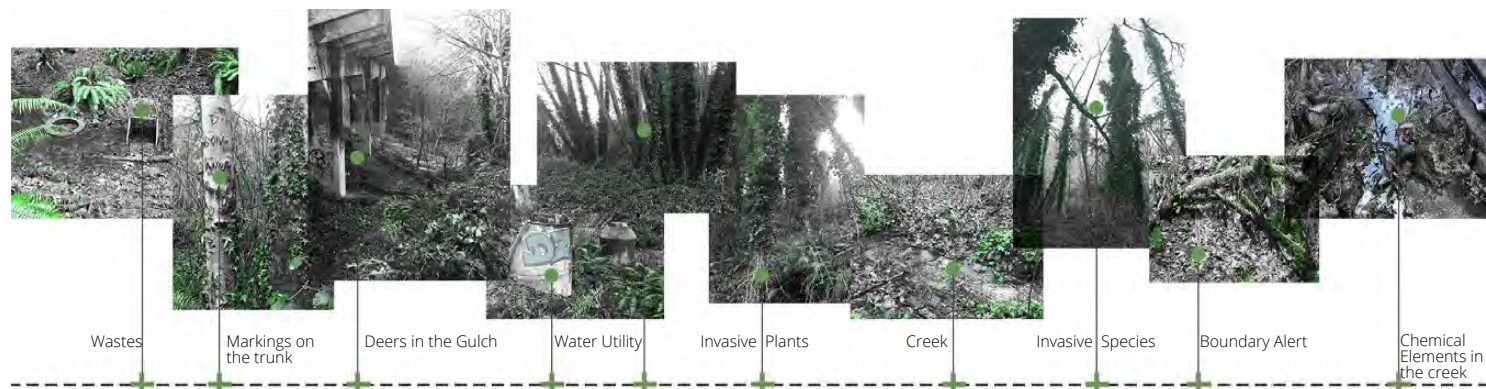
Catherine Ursich Park transition



Streetscape



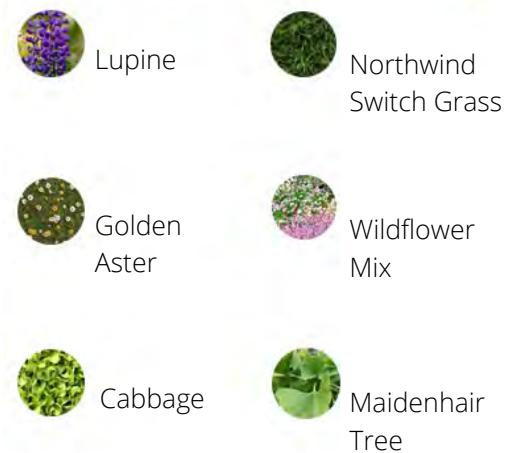
Before and after Alternative Two



### Buckley Gulch Future:

- Playground
- School Bus Route
- Lights
- Pedestrian Trails
- Parking
- Educational Site
- Ecological Restoration
- Treetop Canopy Bridge
- Ground Level Accessibility

- Residences/Apartments
- Community Invasive Control
- Formal Habitat
- Gulch Accessibility
- Bridge Management
- Sport Courts
- Pavilion
- Housing for the Unsheltered
- Dog Park







## FASHION DESIGN COMPETITION

### ANTHROPOMORPHISM ON TACOMA FOUR GULCHES

Imagine if the Tacoma four gulches are four distinct characteristics, design an outfit for one or more gulches of your choice.

**Application Deliverables:**

- one or more sketches of your imagined character
- a written description with photos of your gulch about where your inspiration comes from
- an actual made outfit (only required for the second round of selection)

All work will be displayed as a show in Old Town Outdoor Plaza, winners will be determined by the public votes and local fashion designers.

For more information:  
[www.tacomafourgulches.com](http://www.tacomafourgulches.com)

BUCKLEY GULCH CONCLUSION

The Old Town neighborhood highlights the beauty of Tacoma’s history. We attempted to consider Old Town’s character in our designs for these connecting bridges, from Buckley Gulch through Old Town and to the waterfront.



Mid-term reviews and final presentations  
TERI THOMSON RANDALL



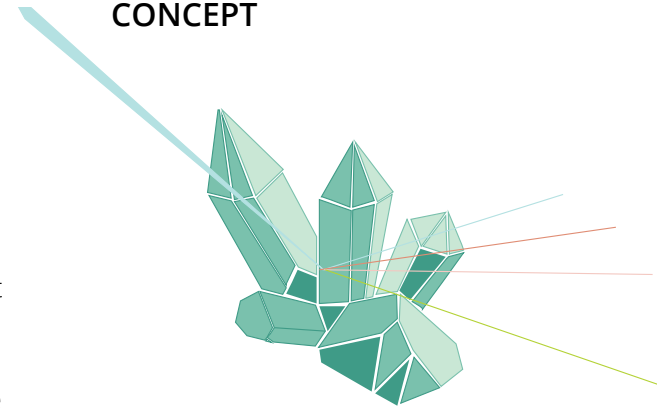
# PUGET GULCH THE LIFE OF A STREAM

DESIGNED BY: JULIE YUAN, ELIJAH VANTRESE, JESSICA CHANDLER

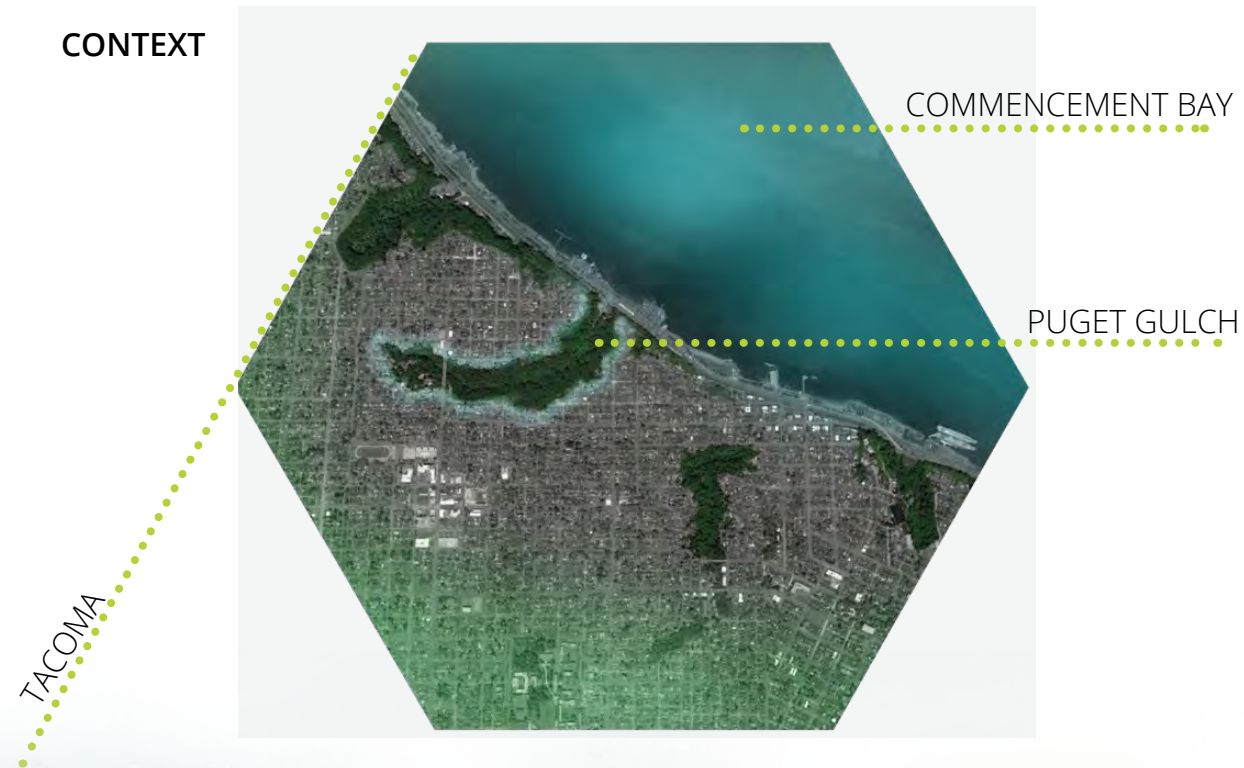
The Ruston way corridor of Tacoma Washington is adorned with four gulches, Each distinct in chracter and ecology. The Puget Gulch is essential in ecological function as it hosts salmon an doffers reprieve from the urban context.

The design attempts to reestablish a healthy ecology and mitigate induslral practices that harmed the gulch. Salmon and people are the key focus of this design which aims to connect people to this amazing green space and the ecology that could thrive there.

## CONCEPT



## CONTEXT



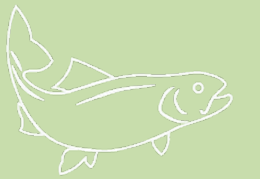
## GOALS



EQUITABLE ACCESS

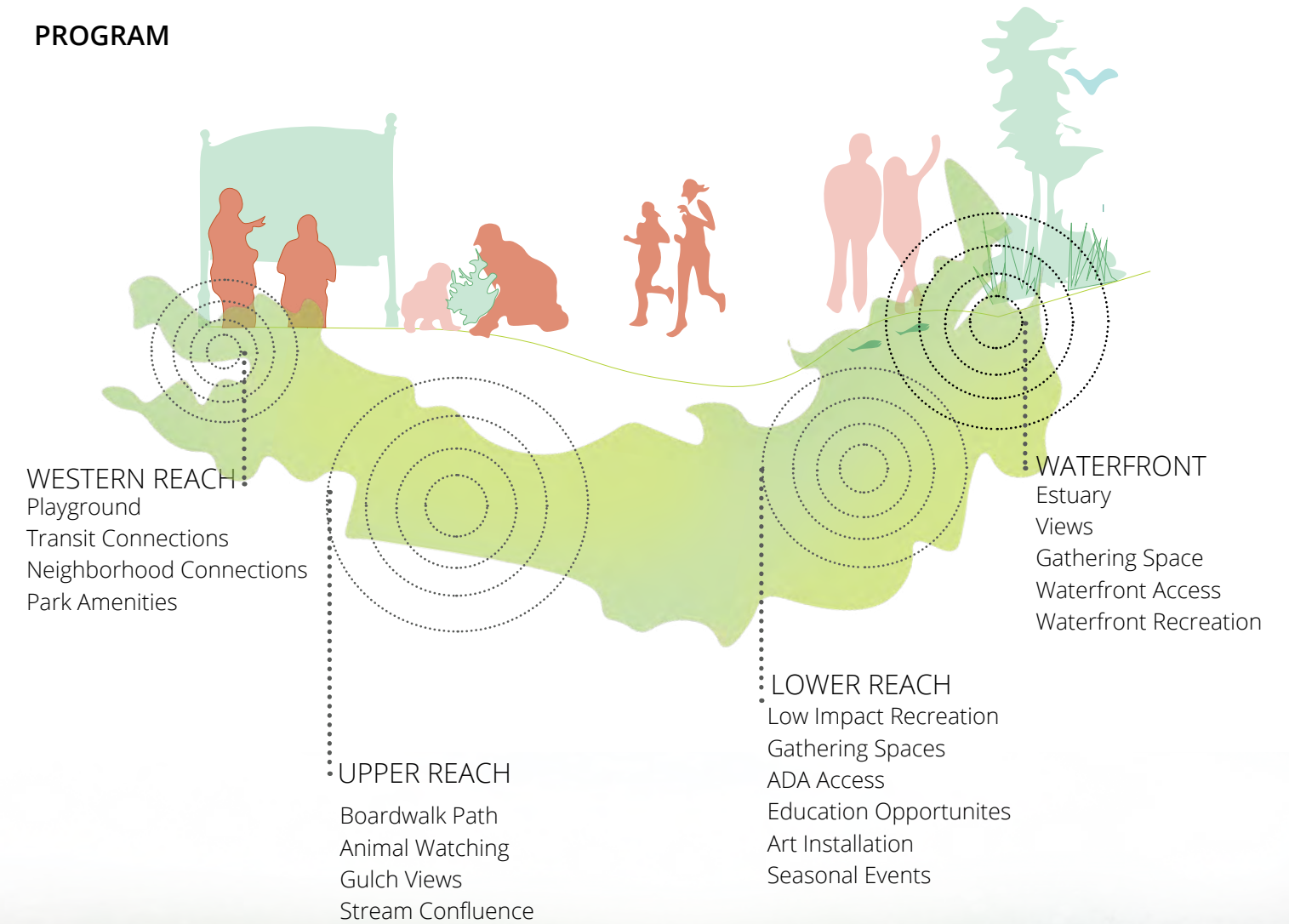


COMMUNITY ENGAGEMENT



THRIVING ECOLOGY

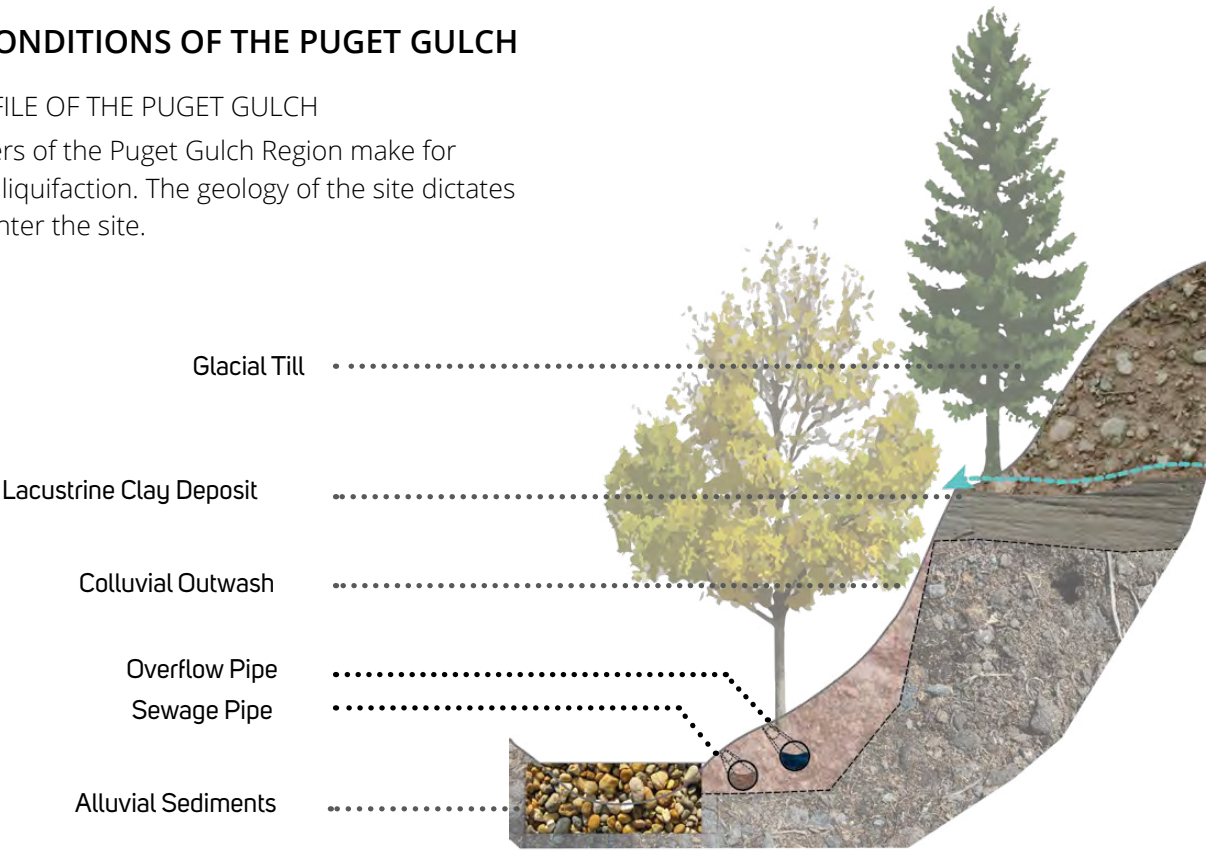
## PROGRAM



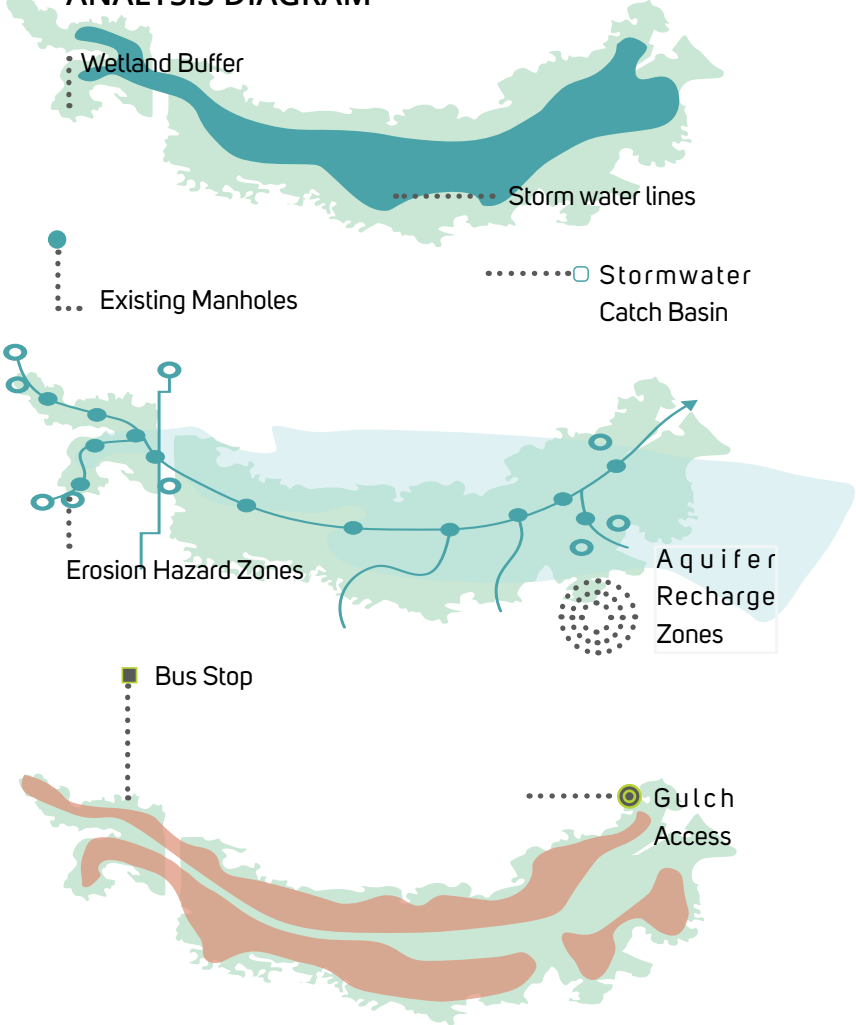
ECOLOGIC CONDITIONS OF THE PUGET GULCH

GEOLOGIC PROFILE OF THE PUGET GULCH

The geologic layers of the Puget Gulch Region make for increased risk of liquifaction. The geology of the site dictates how water can enter the site.

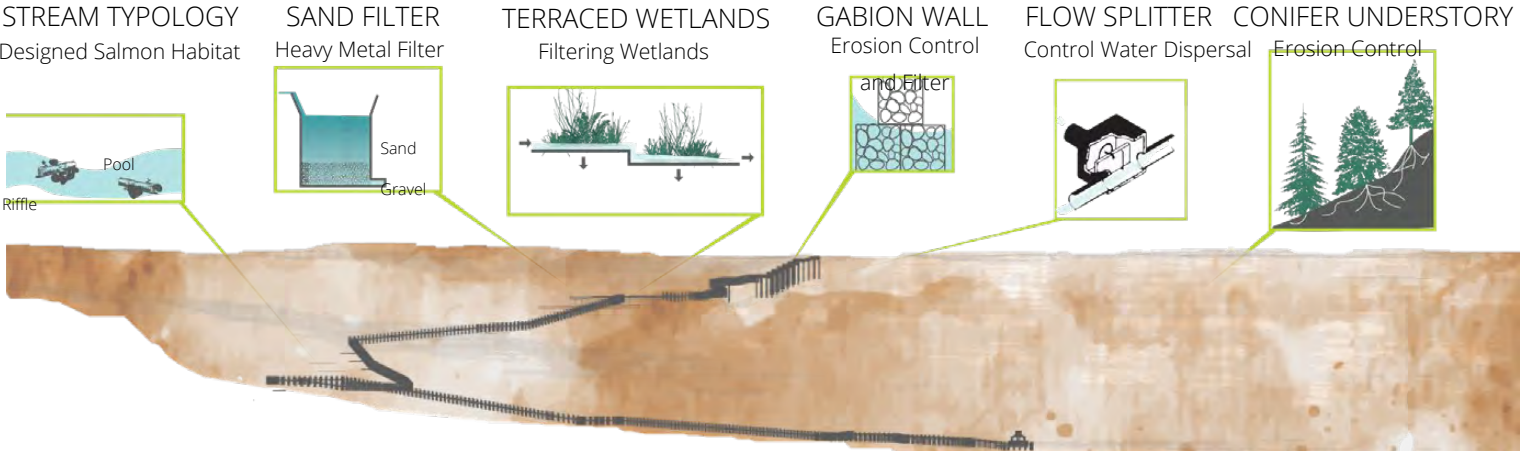


ANALYSIS DIAGRAM



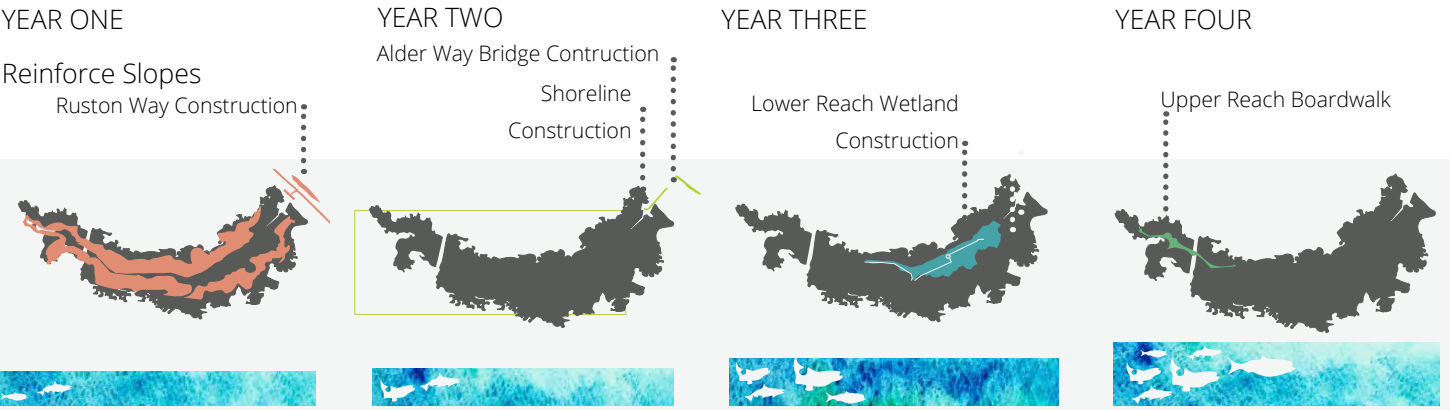
EXISTING ECOLOGIC CONDITIONS  
The existing hydrological infrastructure, wetland perimeter, and erosion risk zones help us to understand what can be built on the site.

METHODS OF RESTORATION



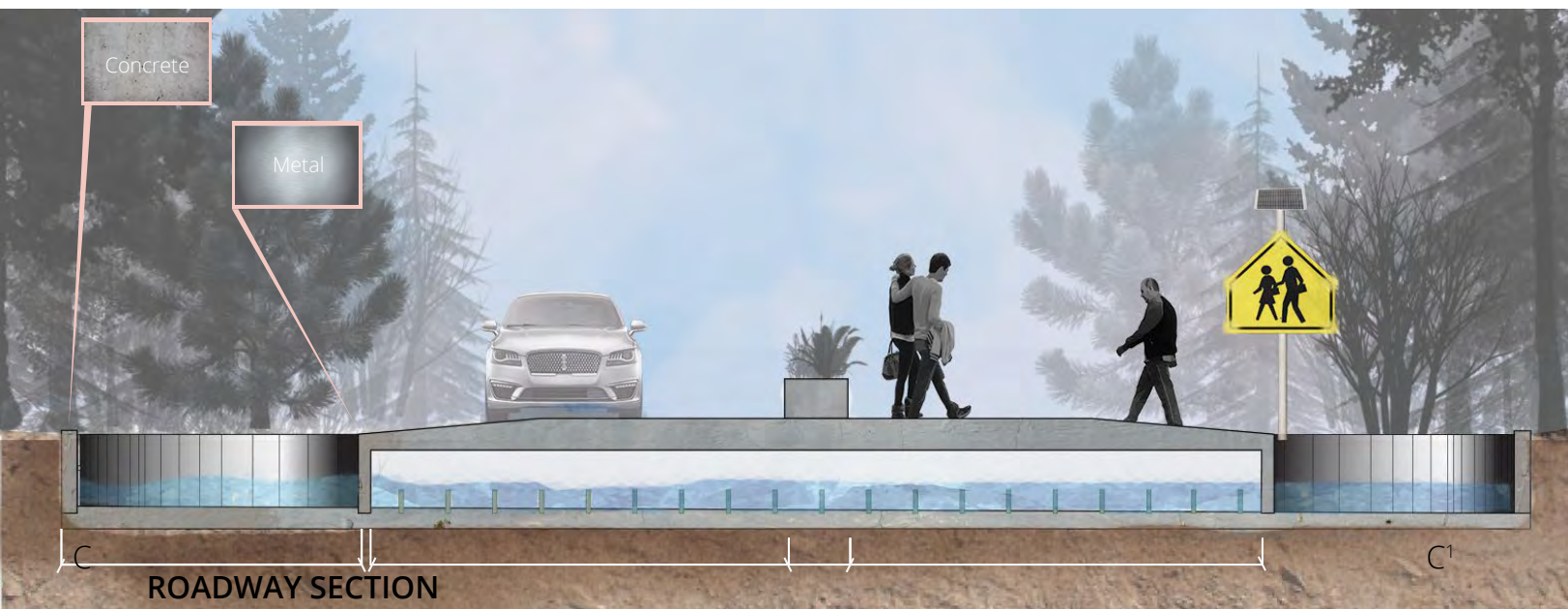
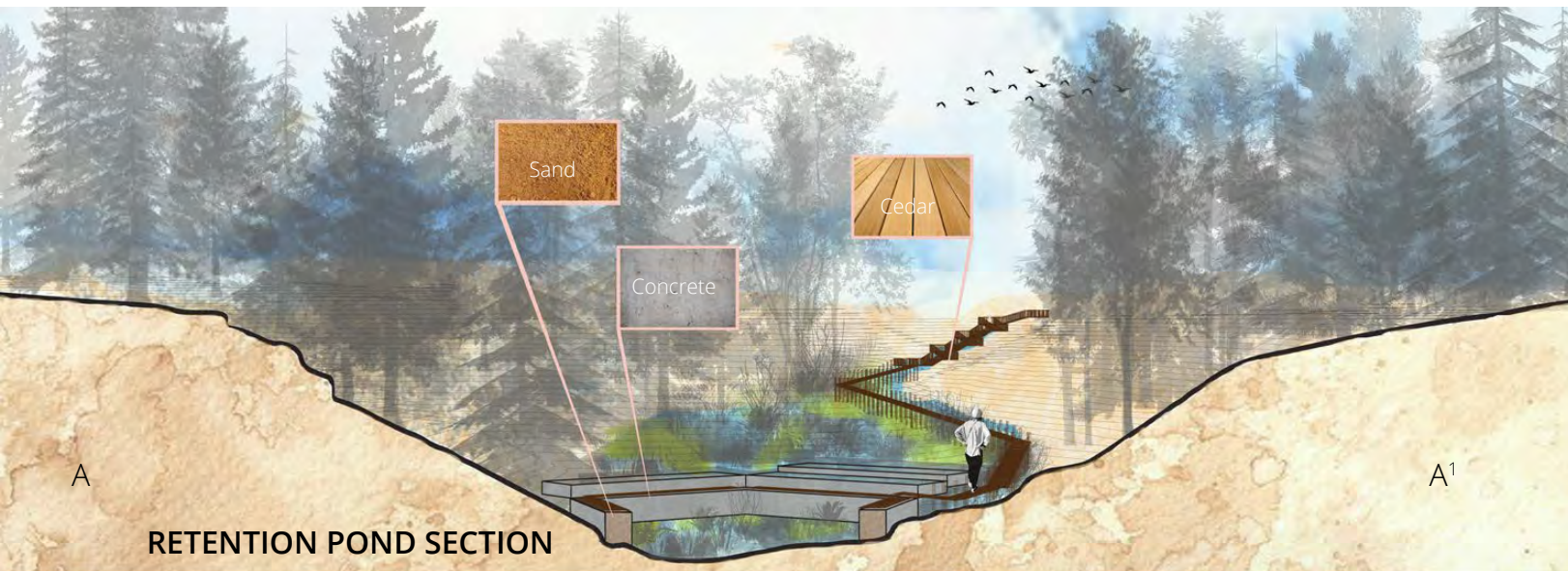
IMPLEMENTATION TIMELINE

Projection for the construction of the project.

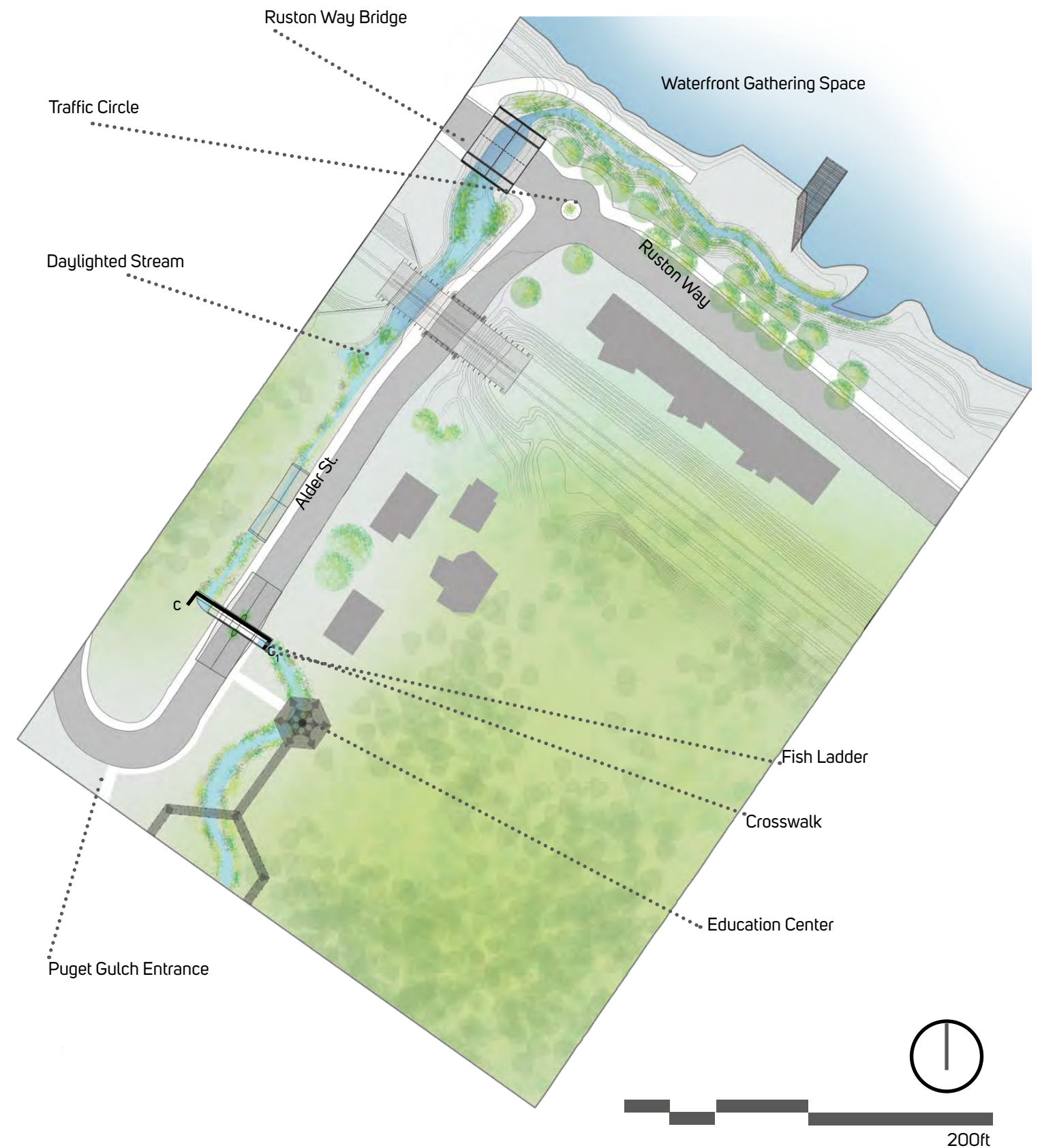


SITE PLAN

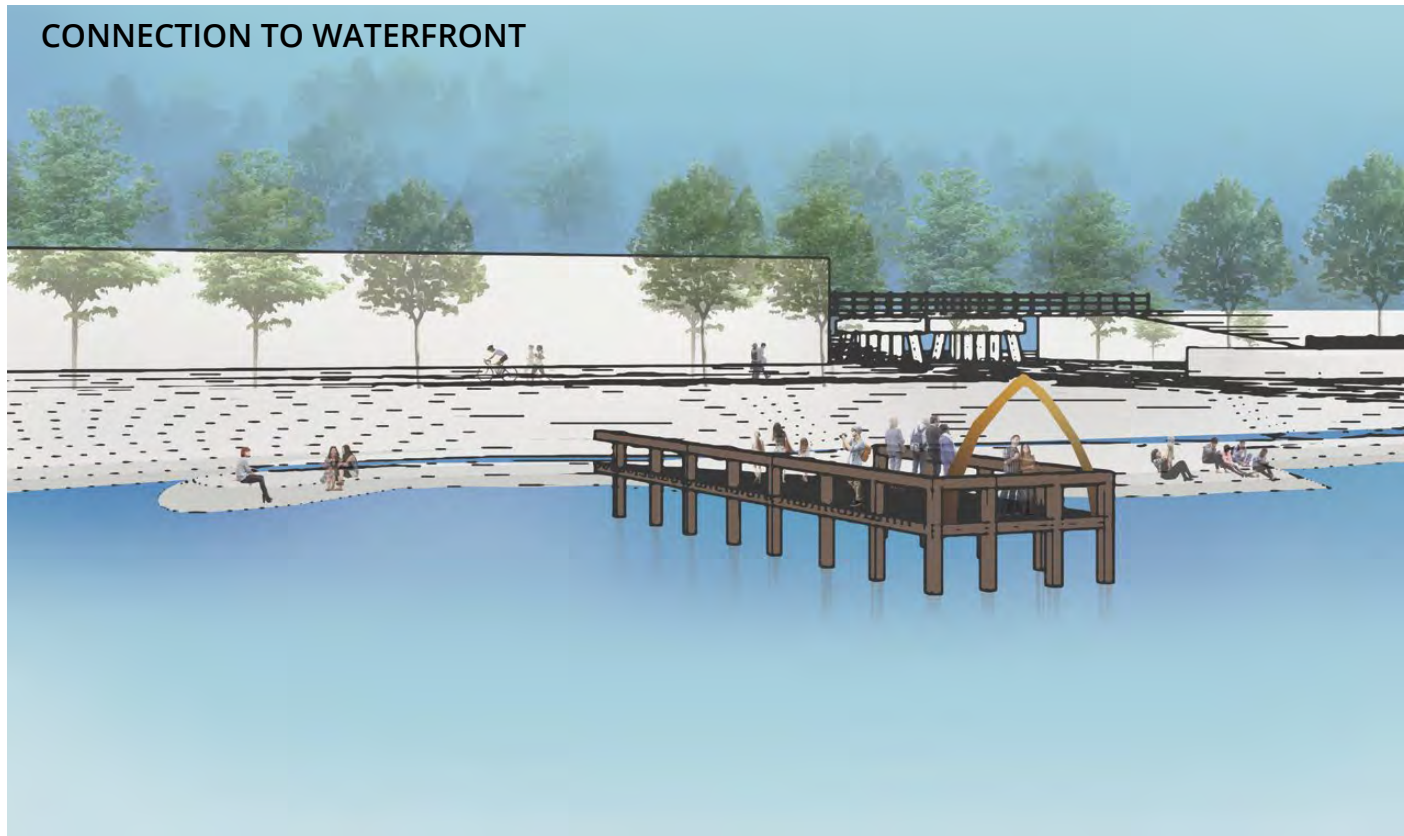




## WATERFRONT SITE PLAN



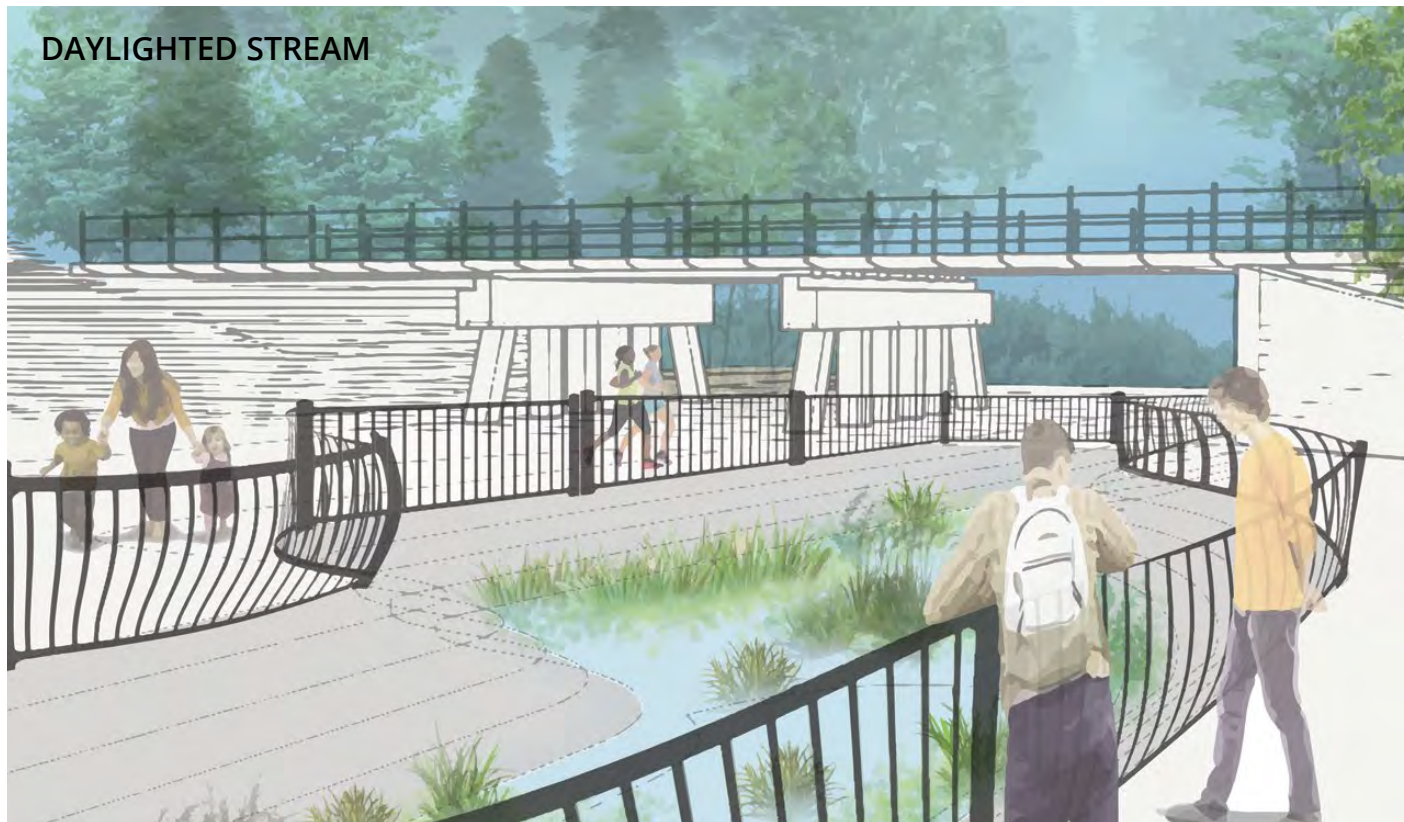
CONNECTION TO WATERFRONT



EDUCATION CENTER AND GATHERING SPACE

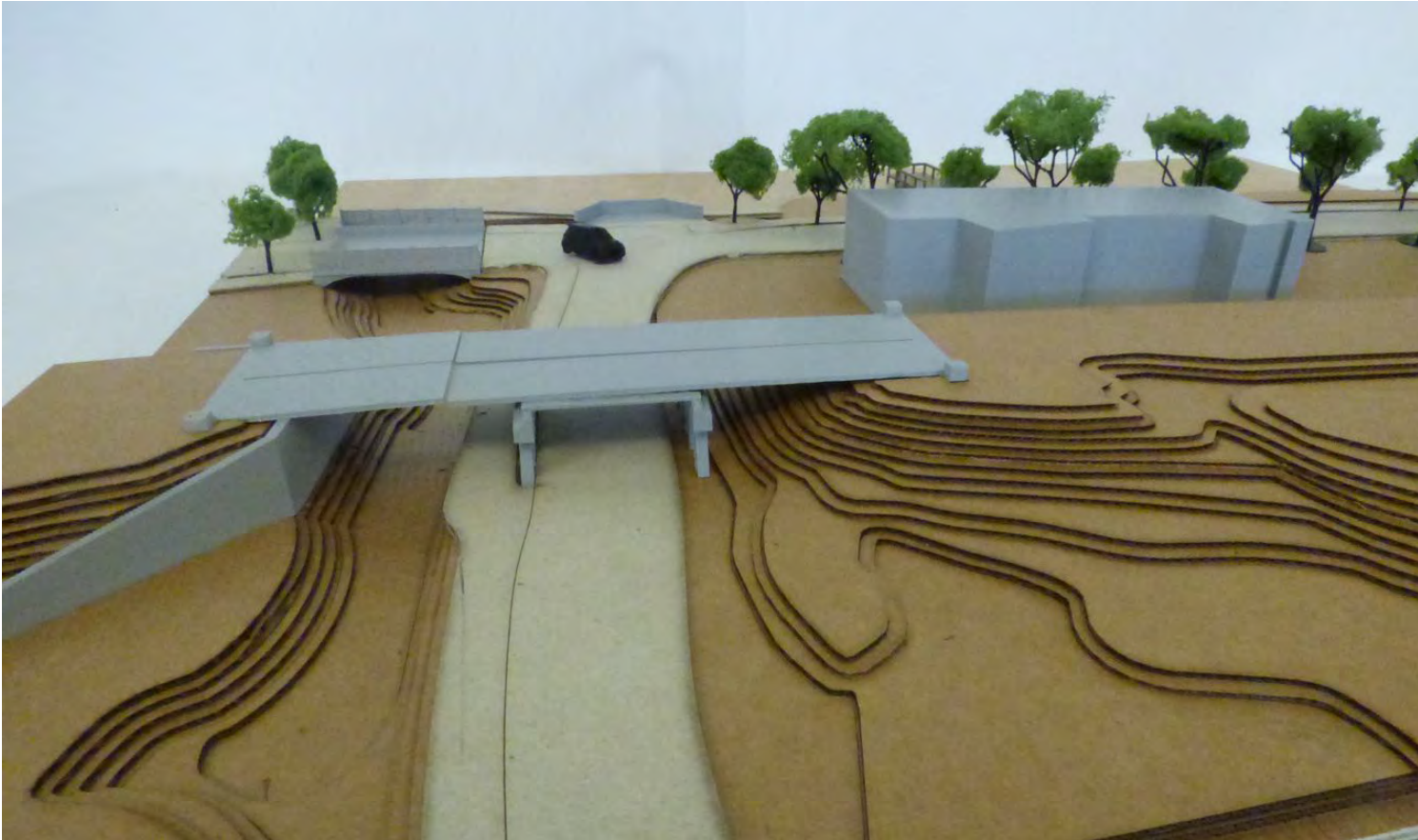


DAYLIGHTED STREAM



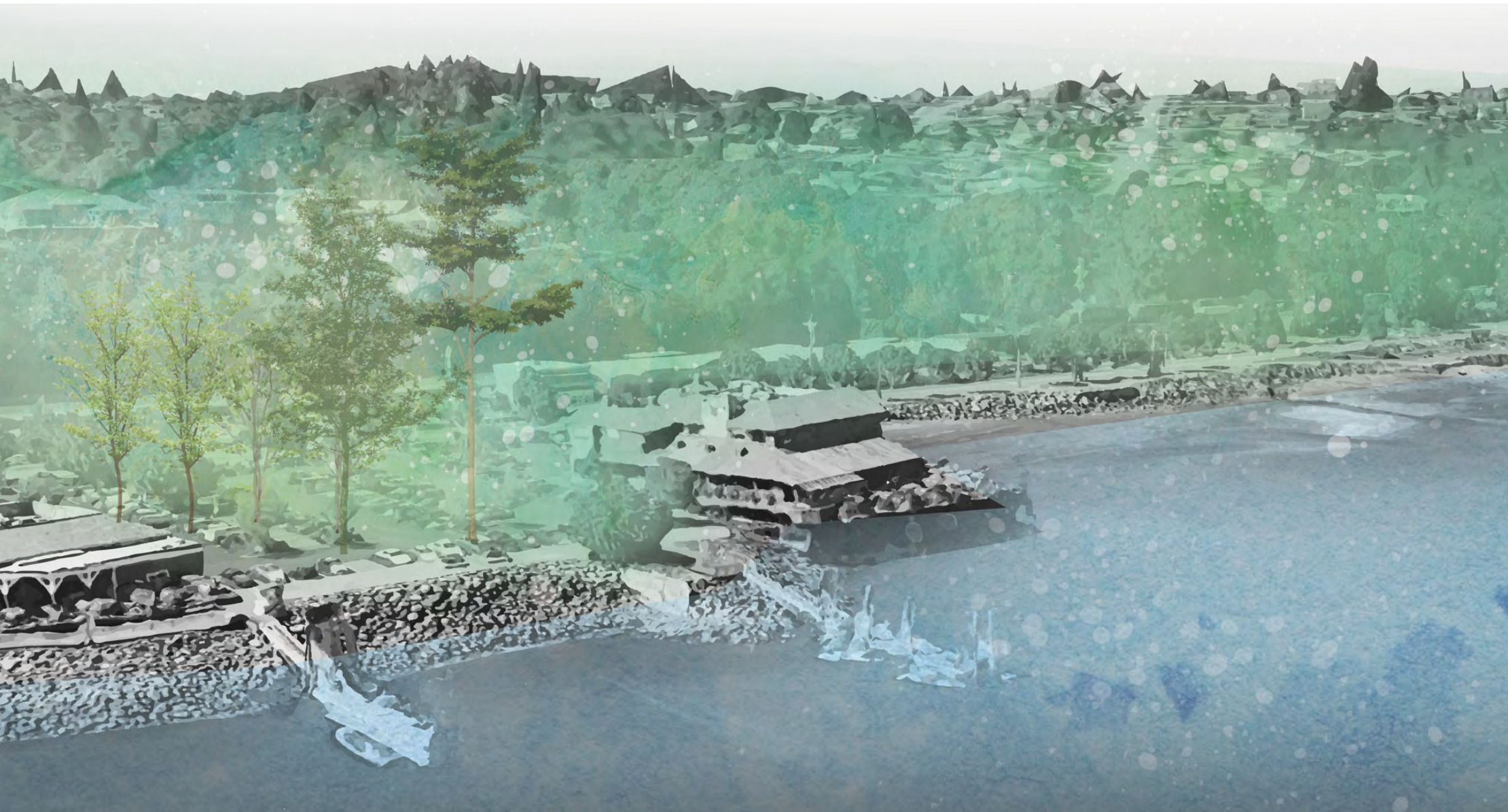
Salmon and people are the key focus of this design, which aims to connect people to their environment, including the diverse flora and fauna meant to thrive here.

MODEL PHOTOS



## PUGET GULCH PROJECT CONCLUSION

Puget Gulch is well-loved by the Tacoma community. We are confident that people truly want to see the gulch shine and thrive. As the only gulch with a salmon spawning stream, Puget has the potential to connect residents, communities, and tourists to salmon, the shoreline, and the natural environment. Our proposal to daylight the stream so that it flows visibly into the shoreline stems from our belief in the value of environmental stewardship, place-making, and connecting people to the ecology of Tacoma.



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The design strives to reestablish a healthy ecosystem and to mitigate industrial practices that harm the gulch.

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Hydrology People Ecology

### Mason Gulch Introduction

Mason Gulch is the largest and most westerly of the gulches. The neighborhood above is disconnected from the waterfront by steep slopes, the Burlington North Santa Fe (BNSF) railroad, and the North End Sewer Treatment Plant. Between these edges lies pristine, undisturbed forest. In the basin, one can find red alders, bigleaf maples, and western redcedars, while ferns cover the surrounding slopes. Meanwhile, Mason Creek seeps out of the hillside.

Our design seeks to preserve the sacredness of the space and to improve ecological function through reinforcement of the steep slopes and enhancement of the forest canopy. We began our project imagining the water, ecology, and humans as fibers woven into a fabric that is strongest when interwoven.

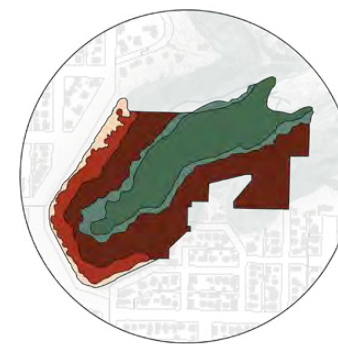
Our vision for Mason was to facilitate its transformation from a hidden gulch into a conservation space that would be known as Mason Natural Area. Our main objectives would be to preserve and amplify the existing ecological and hydrological features, and to invite the people of Tacoma to engage with nature. Our design welcomes community members from the neighborhoods about the ravine to explore the tree canopy and views of Commencement Bay. An elevated bridge allows visitors to birdwatch or take in views of the canopy.

To reconnect visitors with the natural history of the gulch, we propose daylighting Mason Creek, increasing habitat for native species, and improving shoreline conditions for salmon. An expansive boardwalk bridges the conservation area to the waterfront, creating access to a new perspective of an expanding city shoreline.

Concept



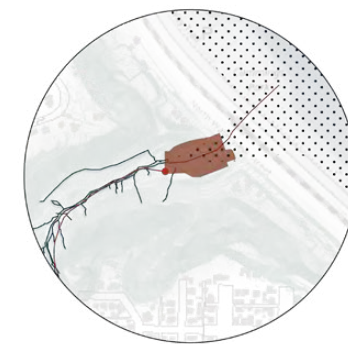
Aerial view of Mason Gulch. IMAGE ©2018 GOOGLE



Unstable Slope



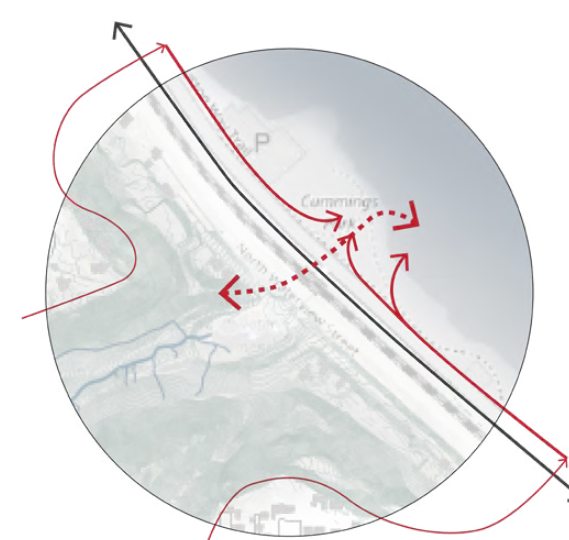
Ecological Buffer



Creek and Salmon Habitat

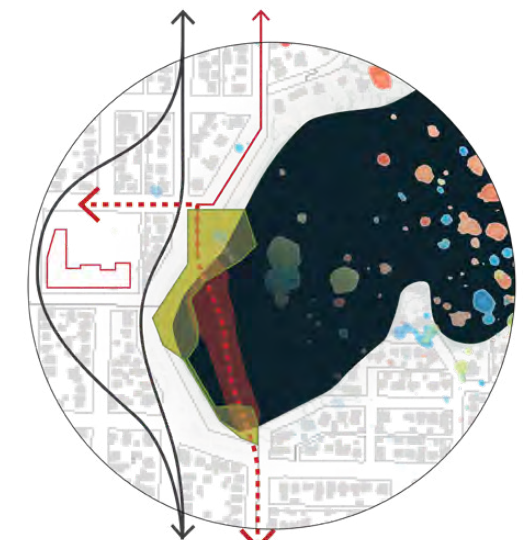


Property Ownership

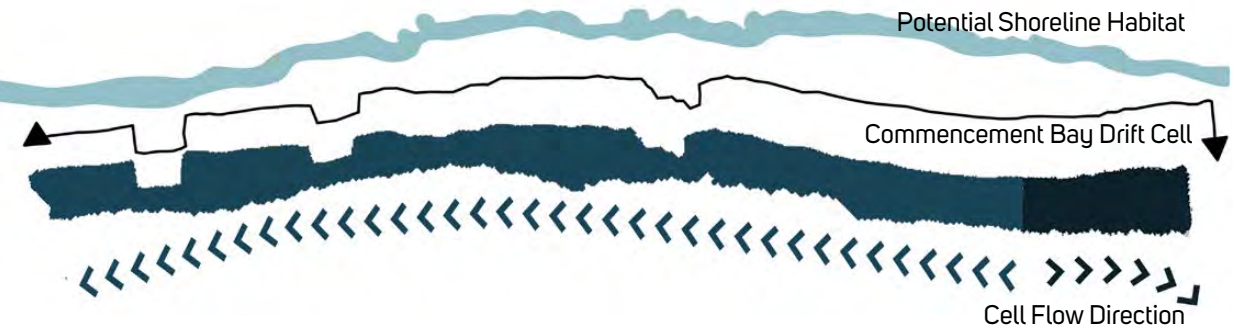
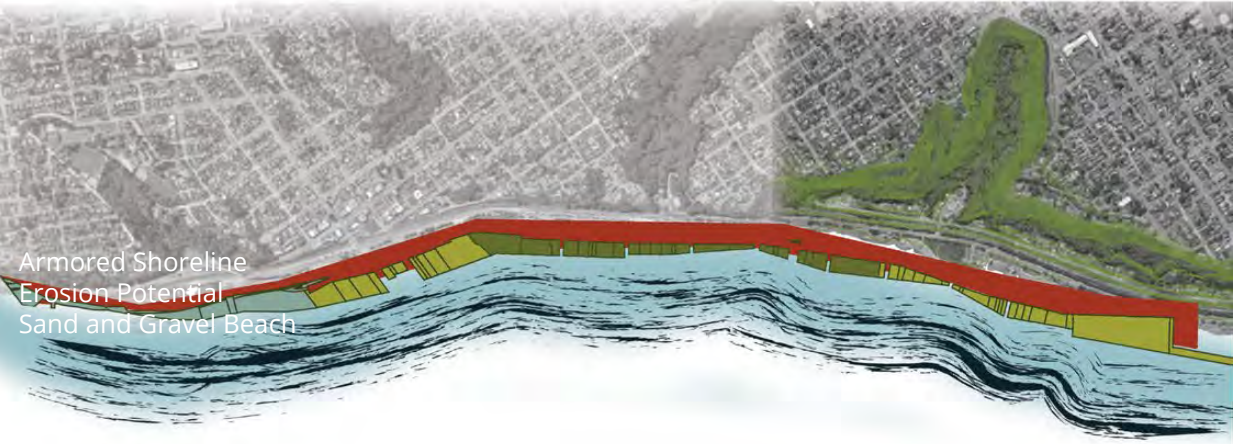
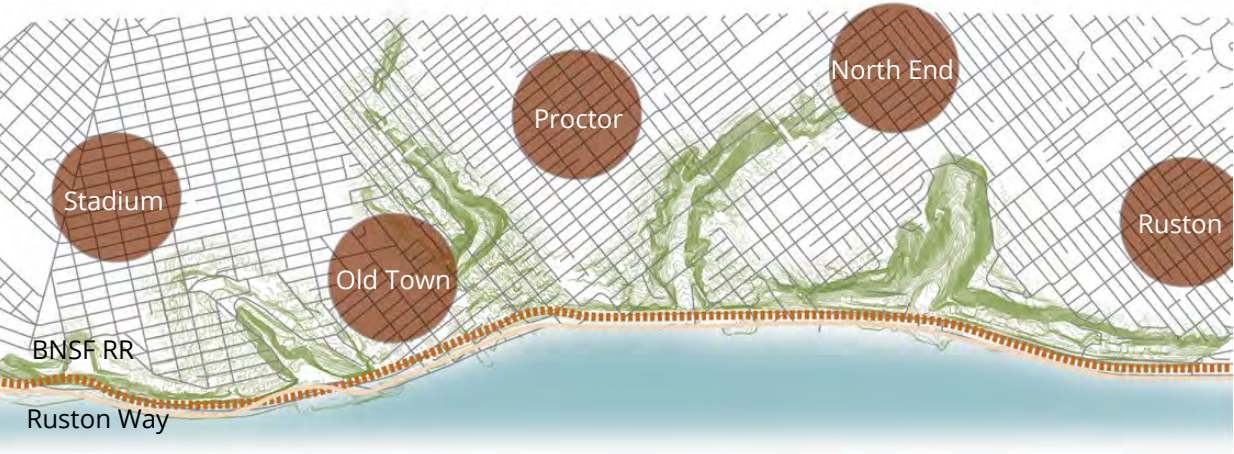


Lower Connection

Site analysis



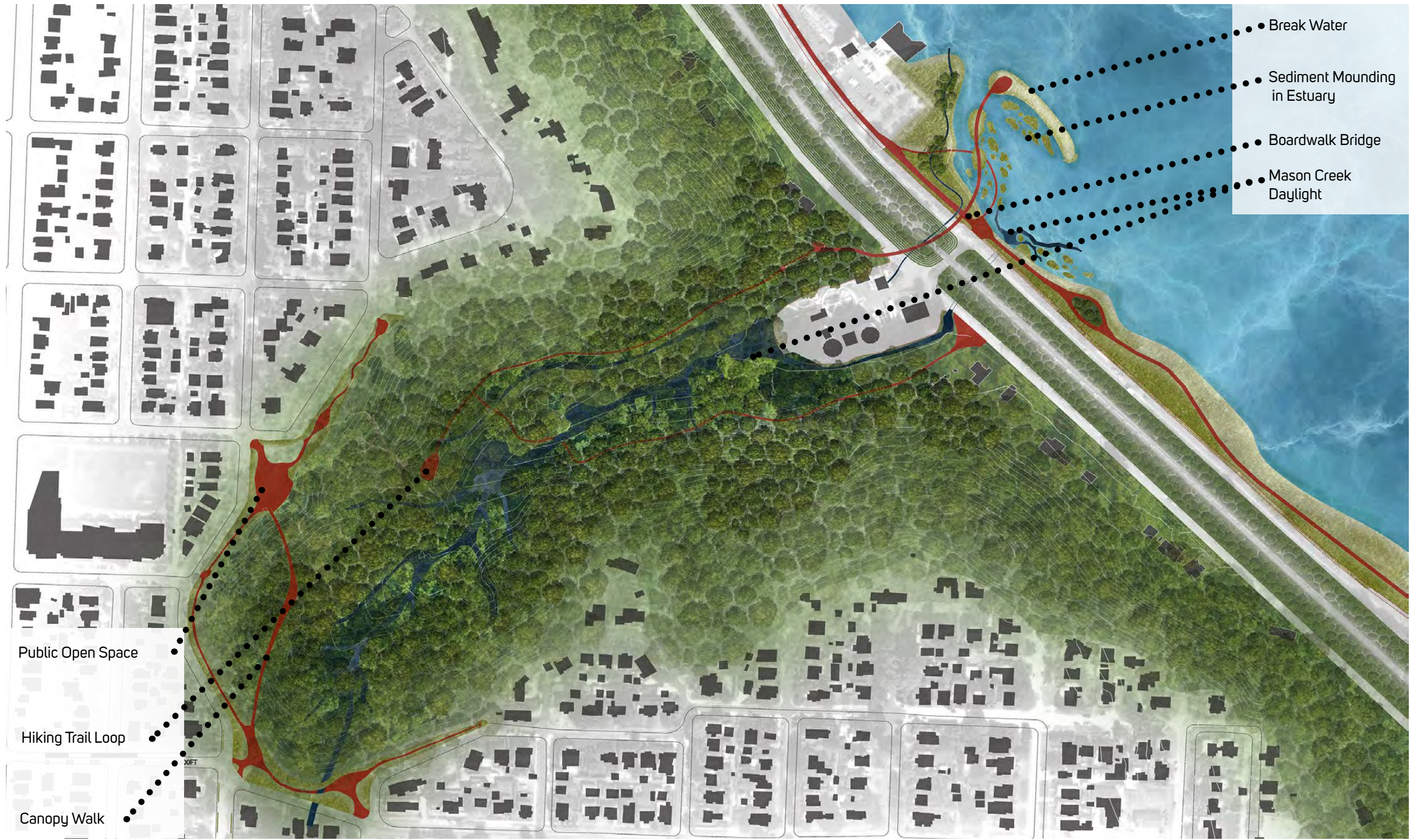
Upper Connection



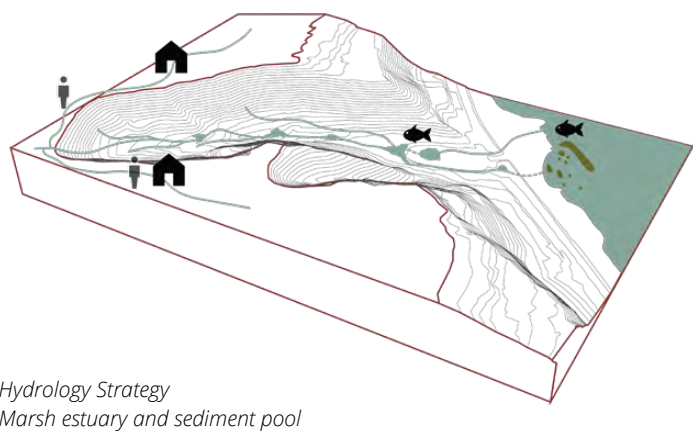
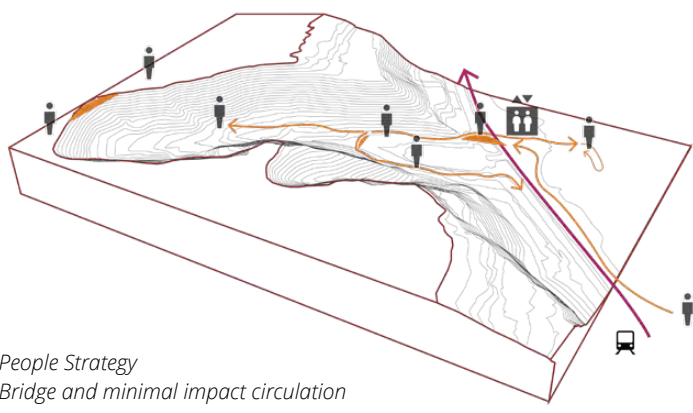
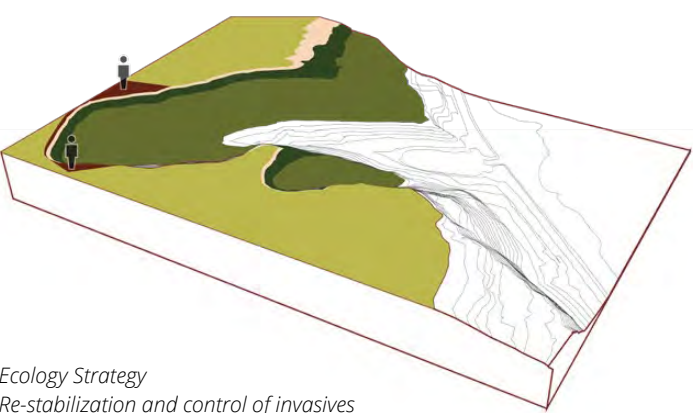
Shoreline behavior

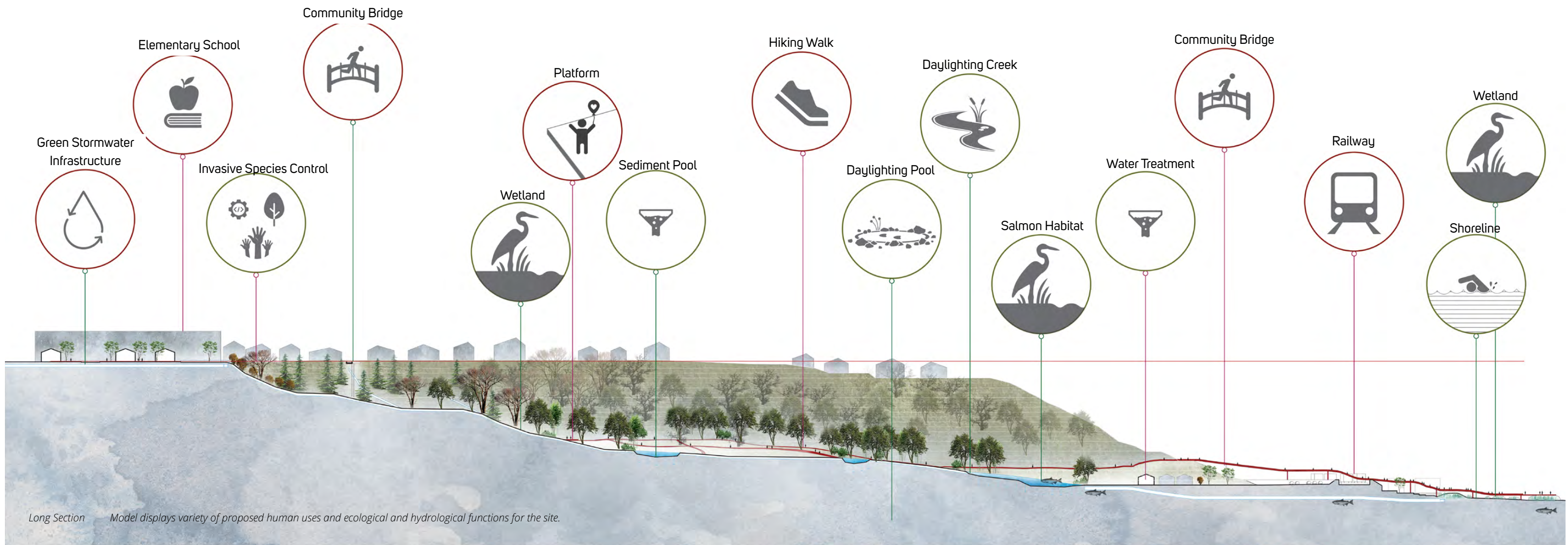


Shoreline in 100 years after projected sea level rise



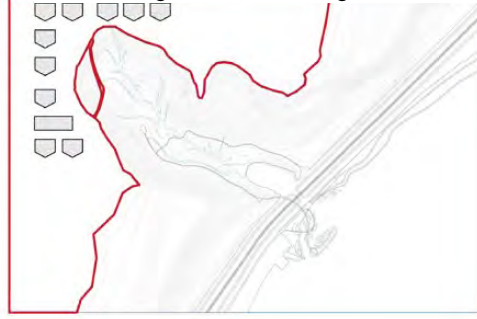
Master Plan





	Play park for Sherman Elementary students and local community		Amphitheater-inspired seating for viewpoint of Puget Sound		Canopy boardwalk precedent: Kirstenbosch Centenary Tree Canopy Walkway		Boardwalk through natural area displaying wetland and forest		Elevated Bridge considering sea level rise and viewpoints to observe trains		Natural beach for play and exploration
	Native flowering plants for pollinators and aesthetic purposes		Evergreen canopy providing habitat for birds		Healthy native forest floor providing habitat for larger animals		Restorative wetlands to treat stormwater for fresh water habitat		Native mudflats		Protected shoreline creates habitat for salmon and other aquatic species
	Protected seeps		Stream restoration		Stream daylighting		Wetland creation for sediment deposit		Natural waterfront and natural sediments		Breakwater to protect shoreline

300' - Bridge the community



250' - Control the invasive species



190' - Stabilize the slope



150' - Minimal impact circulation



30' - Daylight Mason Creek



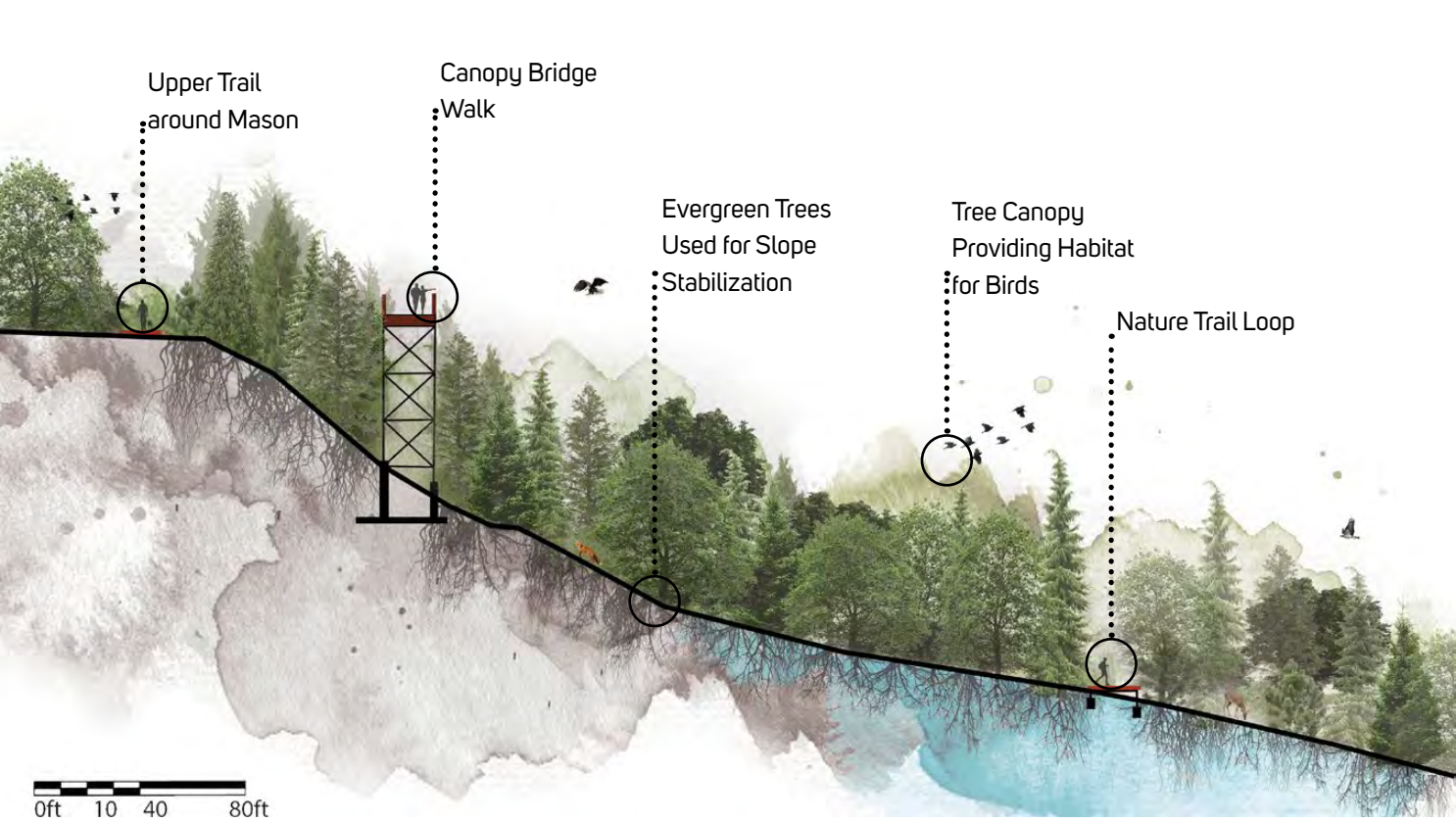
Design at elevation



Design vision: Bird's-eye-view looking west



Upper plan



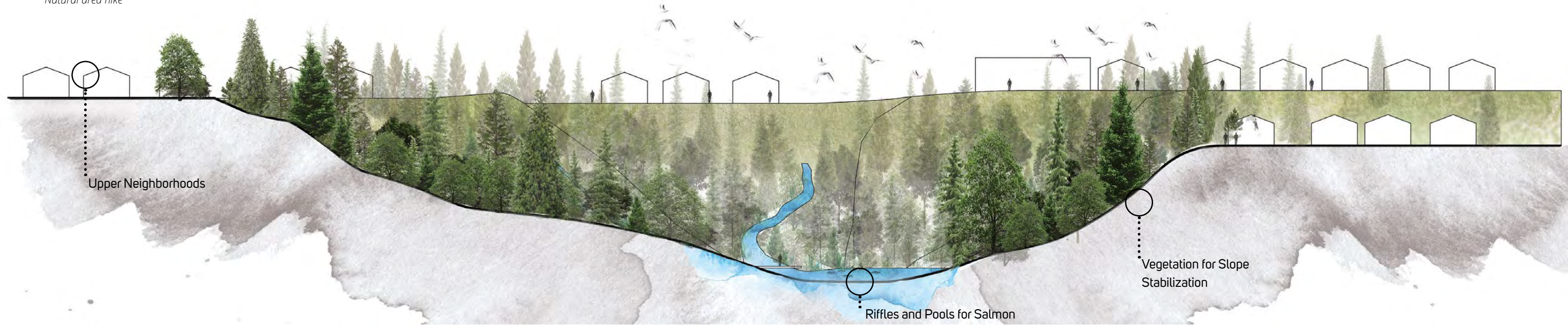
Upper section



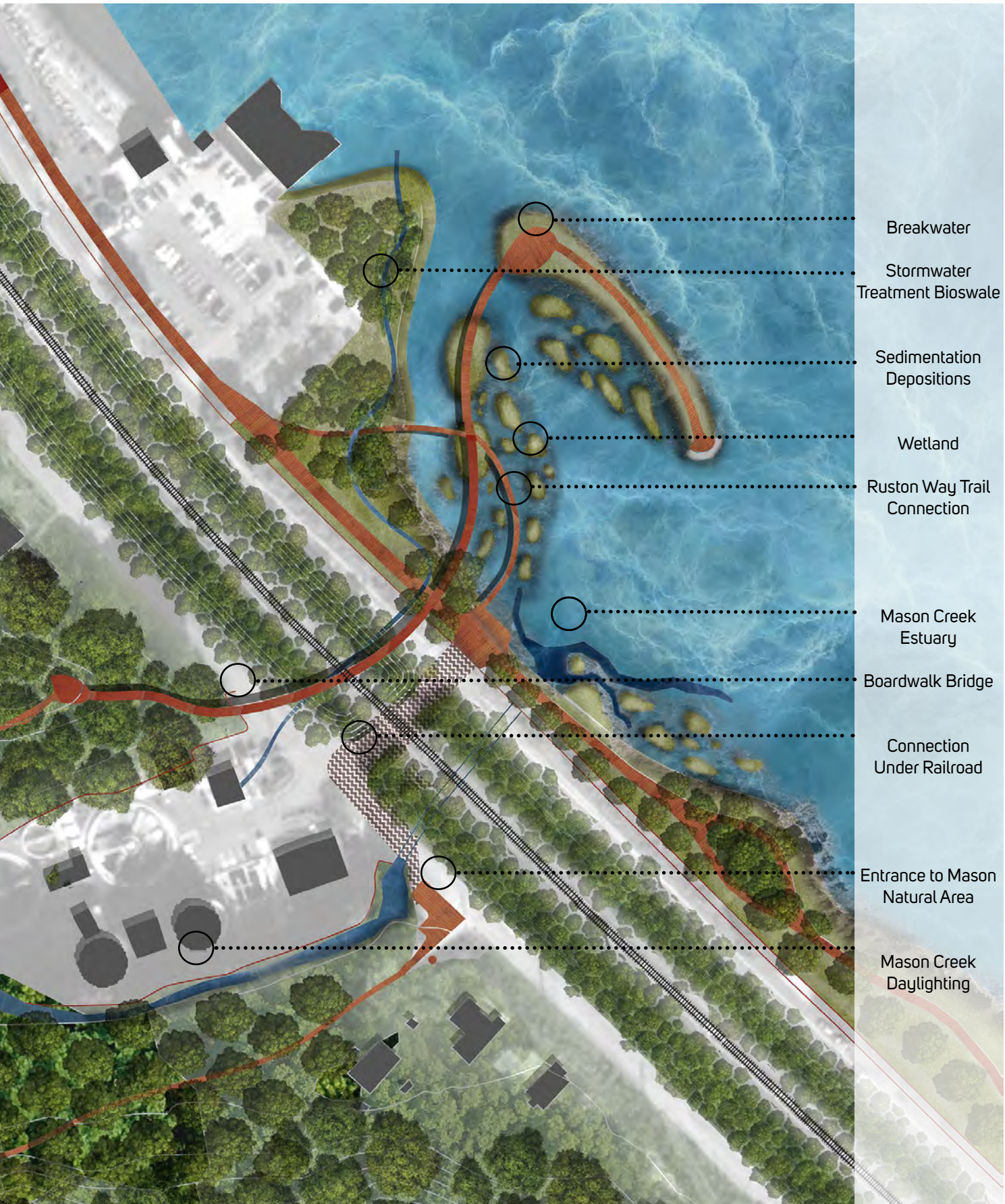
Canopy walk with views of Commencement Bay



Natural area hike



Middle section



- Breakwater
- Stormwater Treatment Bioswale
- Sedimentation Depositions
- Wetland
- Ruston Way Trail Connection
- Mason Creek Estuary
- Boardwalk Bridge
- Connection Under Railroad
- Entrance to Mason Natural Area
- Mason Creek Daylighting

Lower plan



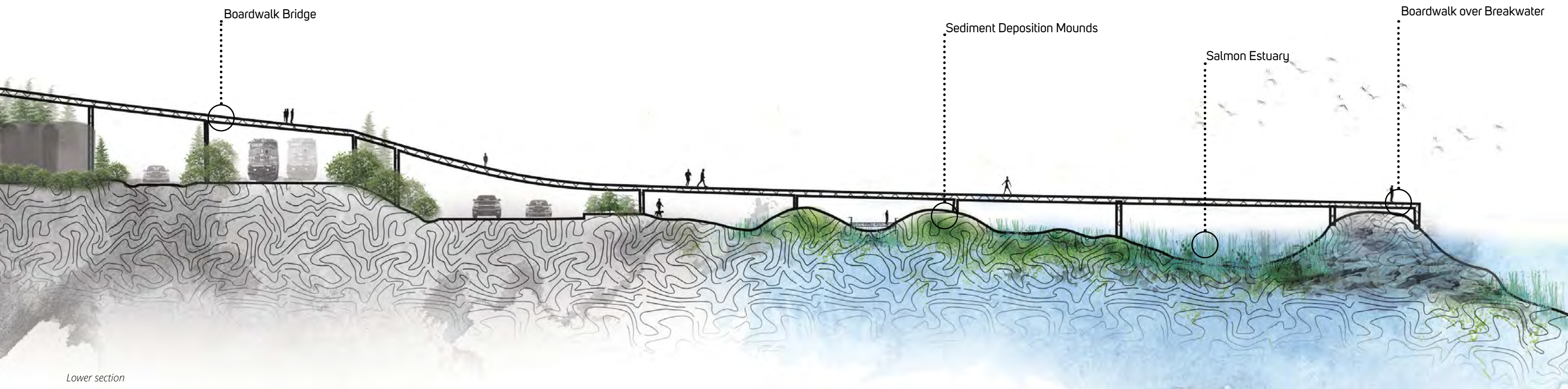
Waterfront entrance under railroad into the Mason Natural Area



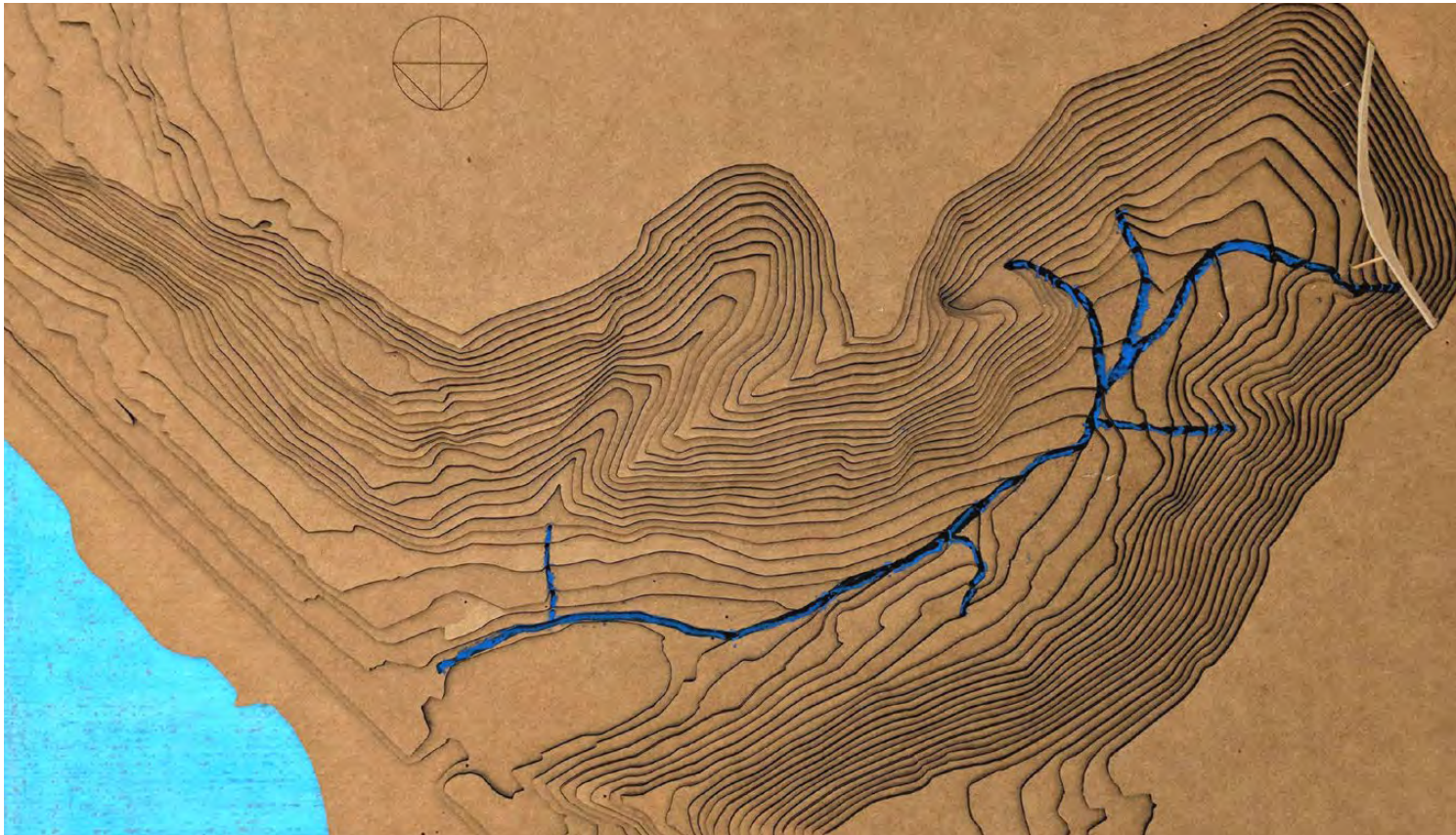
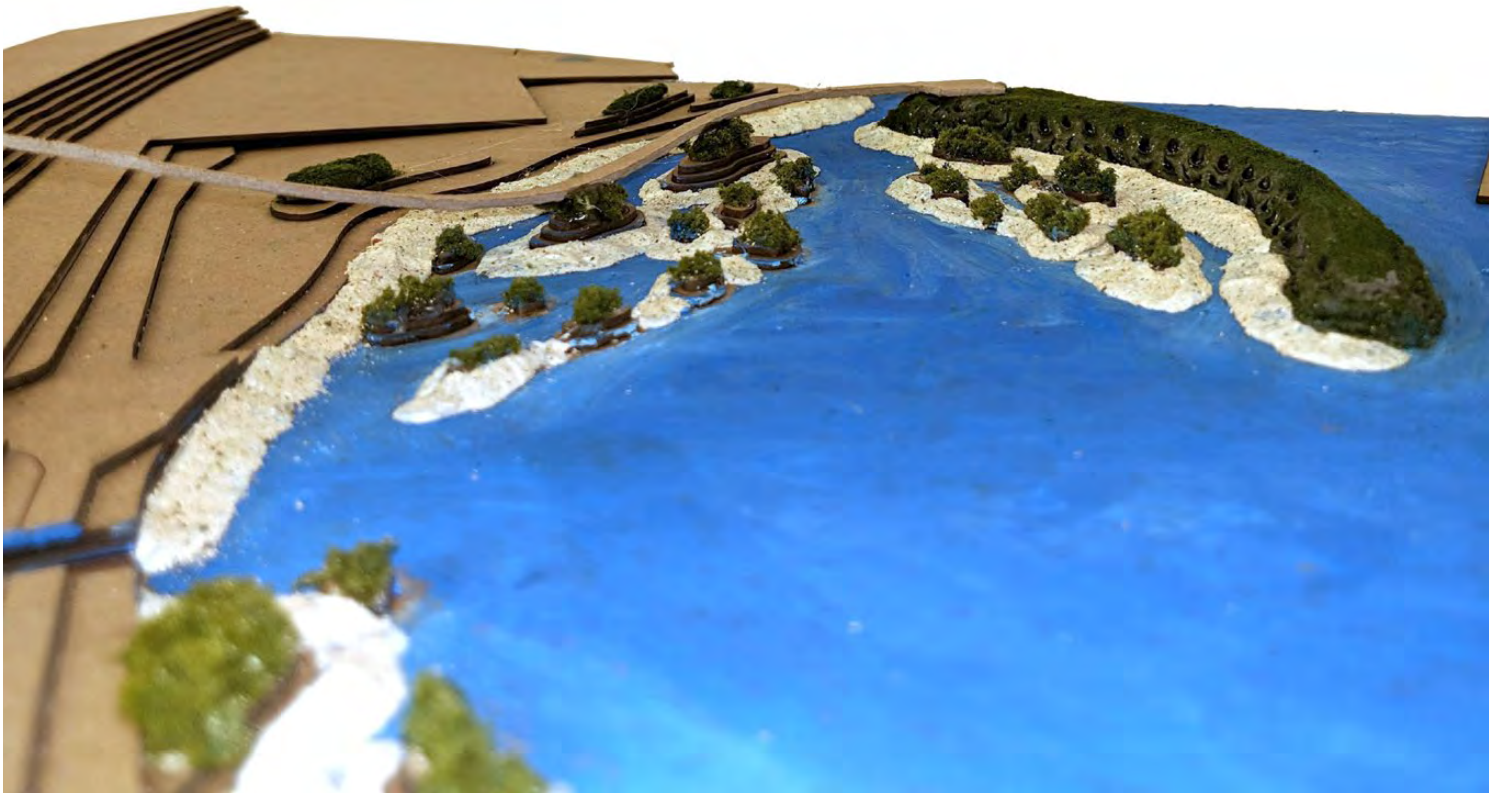
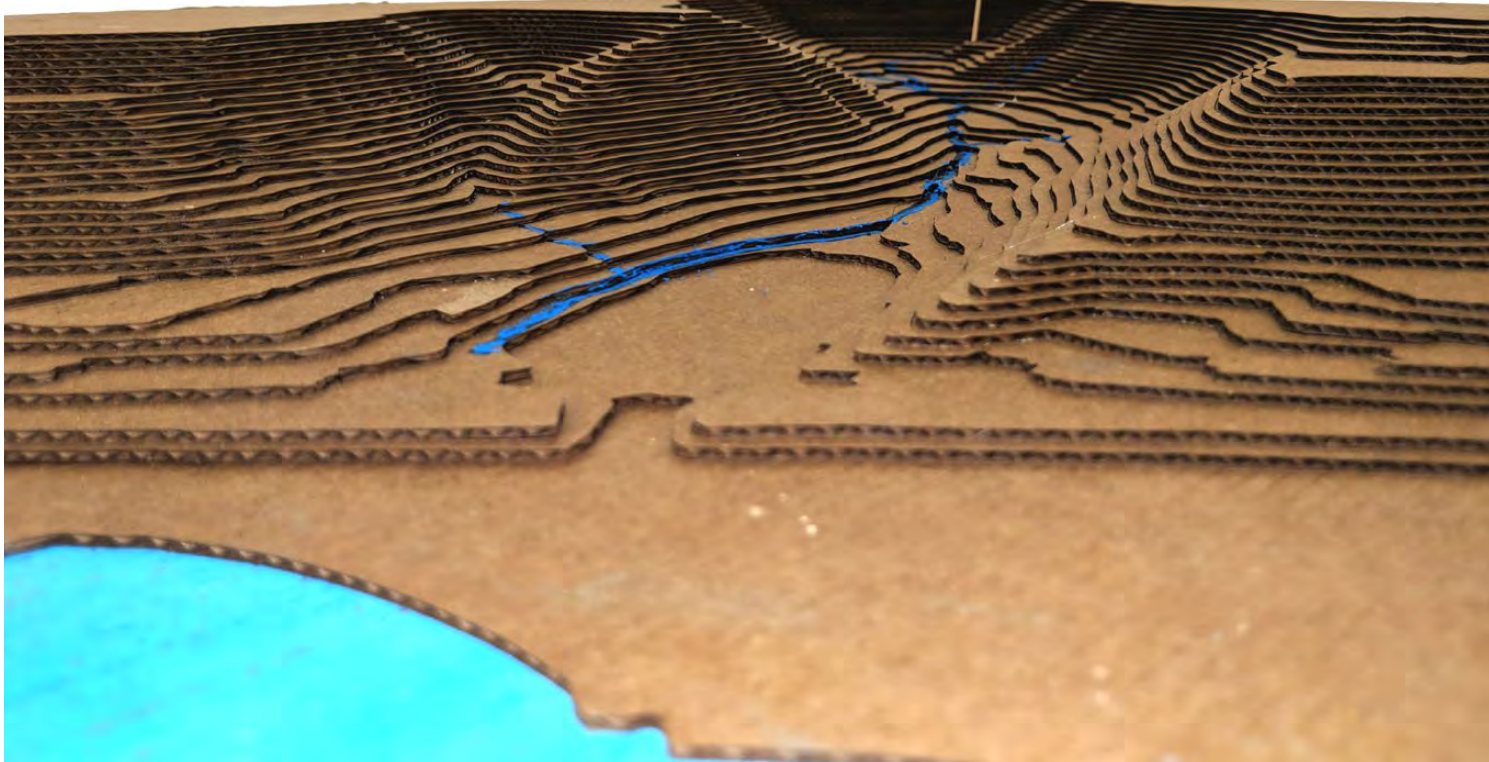
Breakwater experience



Waterfront view of marsh estuary, pedestrians, and biking pathways



Lower section



Physical model

## Mason Gulch Conclusion

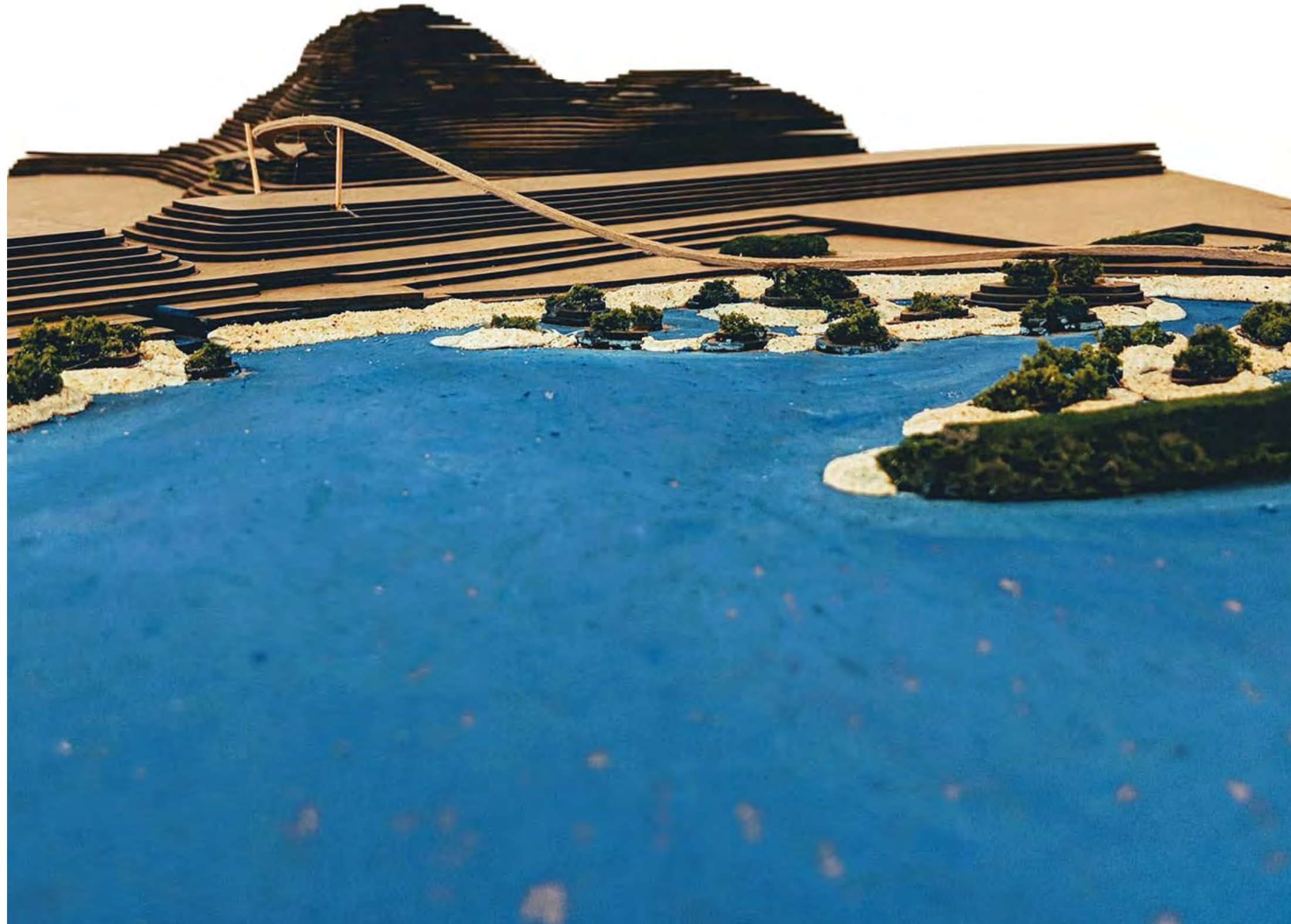
Mason Gulch is a hidden beauty that deserves to thrive, and to be used and appreciated by the people of Tacoma. By encouraging and showcasing its diverse ecosystems and hydrological processes, it can become a lush retreat. The canopy bridge connecting the neighborhood invites people to experience a thriving forest ecosystem and to look down into the verdant ravine where Mason Creek flows into the Puget Sound. The upper park and bridge provide a framed view of Commencement Bay to enjoy on clear days or to watch fireworks on the 4th of July.

The trail loop within the Mason Natural Area allows people to experience the sacredness of the wildlife thriving around Mason creek. It allows visitors to stop for a moment and enjoy the quiet sounds of the stream, leaves rustling in the breeze, and birds nesting up above.

Both the naturalization of the waterfront into a marsh estuary and the daylighting of Mason creek create a healthy habitat for salmon to return for spawning, rearing, and migration. In consideration of rising sea levels, a break water system will allow for the natural deposition of sediment and embankment creation from the creek's sediment outwash over time, protecting the aquatic ecosystems in the process. This creates a lasting and dynamic habitat for aquatic species and birds.

The pedestrian bridge linking the Mason Natural Area, the Ruston Way Bike and Pedestrian Trail, and the naturalized waterfront provides expansive views of the healthy ecosystems and the magnificent surrounding scenery. The bridge is a lasting connection through which people can experience the scenic natural waterfront for generations to come.

We see the Mason Natural Area as a crucial asset to the future of Tacoma. Weaving the ecological, hydrological, and human use opportunities into an integrated design for Mason Gulch and the waterfront will contribute to building a more resilient Tacoma.



At the conclusion of the 2018 winter academic quarter, the student teams felt that this project provided a valuable window into both practical and farsighted considerations of urban ecological design. In particular, they found it helpful that collaborators from the City of Tacoma and Metro Parks Tacoma provided feedback, not just regarding the students' visionary aspirations for Tacoma's future, but in relation to important practical considerations. The students hope that, moving forward, their final designs have addressed this feedback, such that their ideas are not only multi-functional and beautiful, but also implementable in both short and long terms.

As they approached the project, the students focused on designing the Ruston Way gulches for the people of Tacoma in regard to both human experience and ecological integrity of the urban landscape. The students therefore sought to set the stage for residents to recreate and to learn about water movement, wildlife habitats, and other ecological processes within the gulches. To this end, the students provided points of interest, pathways, viewpoints, crossings, and habitat designs that would bring people close to the water, trees, and other natural elements of the sites.

#### **GARFIELD GULCH**

At Garfield Gulch, students proposed improved trails and habitat restoration designs, with a focus on the educational opportunities for students from local schools. A pavilion at the base of the gulch can serve as an outdoor classroom and a deck overlook provides views up-gulch and out to Commencement Bay. The team also designed innovative habitat ponds fed by the stream to support tadpoles and frogs, serving ecological, educational and recreational goals. Finally, they proposed a safe pedestrian connection to Ruston Way's waterfront parks, aligned with the Schuster Parkway overpass.

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The students hope that their design plans are not only multi-functional and beautiful, but also implementable in both short and long term trajectories.

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The students provided points of interest, pathways, viewpoints, crossings, and habitat designs that would bring people close to the water, trees, and other natural elements of the sites.

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#### **BUCKLEY GULCH**




Buckley Gulch provided unique design challenges given that its land is largely owned by the community members whose homes surround the gulch. The primary focus revolved around providing safe passage from the gulch to the waterfront via a bridge going over the railroad tracks and Ruston Way. The students ultimately proposed two options for ADA-accessible pedestrian bridge locations and configurations that responded to public and private development opportunities, as well as the historic character of Tacoma's Old Town neighborhood. The students believe that providing safe and convenient passage between the Old Town neighborhood and the waterfront would provide a foundation from which to pursue further development of Buckley Gulch as a public green space.

#### **PUGET GULCH**

At Puget Gulch, which is already accessible and has well-developed trails, the team proposed to increase water flow, treat storm water, and daylight the stream to provide better habitat for salmon. They also suggested expansion of the trail system and development of an educational meeting space.

#### **MASON GULCH**

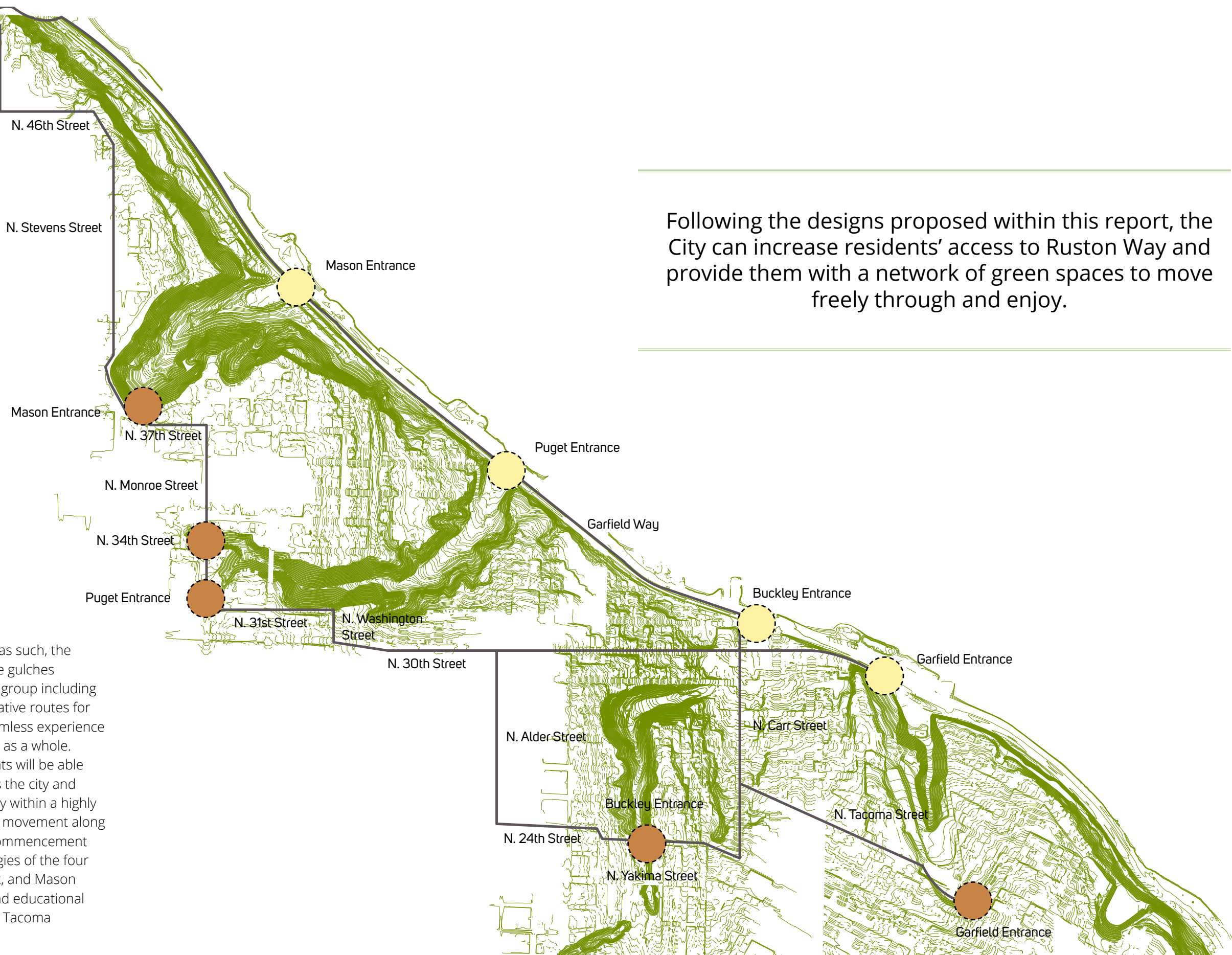
At Mason Gulch, the student team was particularly interested in stream daylighting, for which this gulch is well suited given its year-round creek flow. Proposed ecological design strategies also aim to foster a wide diversity of bird species through further development of the forest canopy, and to revegetate the gulch's slopes to prevent erosion. Students also designed compelling overlooks and a catwalk road crossing to facilitate views of the gulch's biodiversity and, beyond the gulch, the Commencement Bay waterfront. Their design included modification of the mouth of Mason Creek and the shoreline at Cummings Park to provide better habitat, taking into account opportunities provided by sediment deposition and future sea level rise.

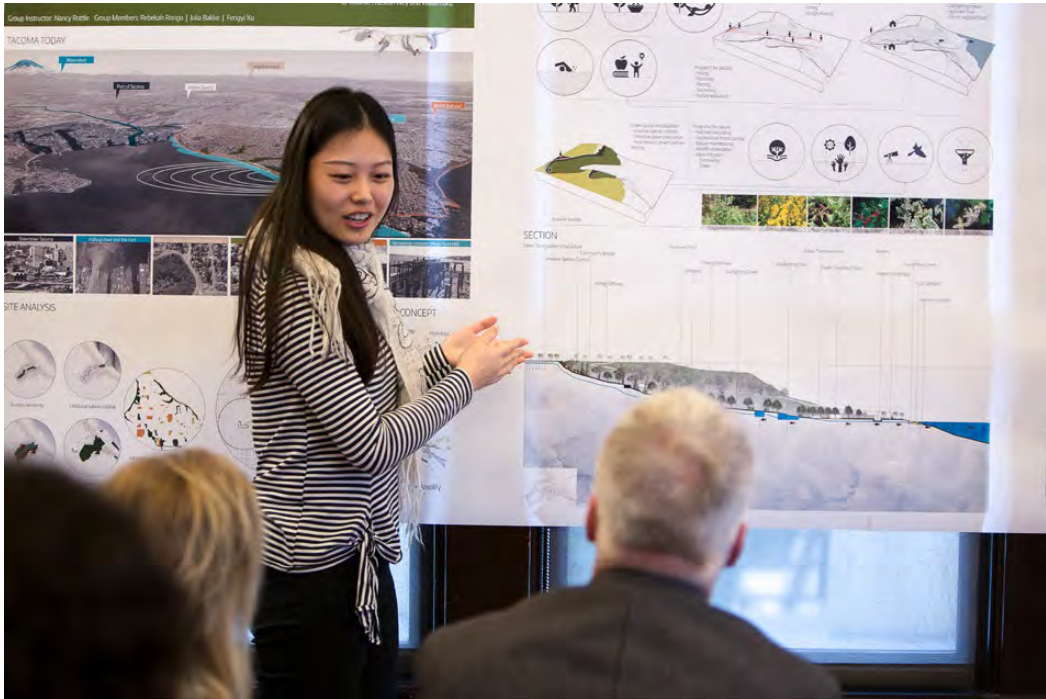
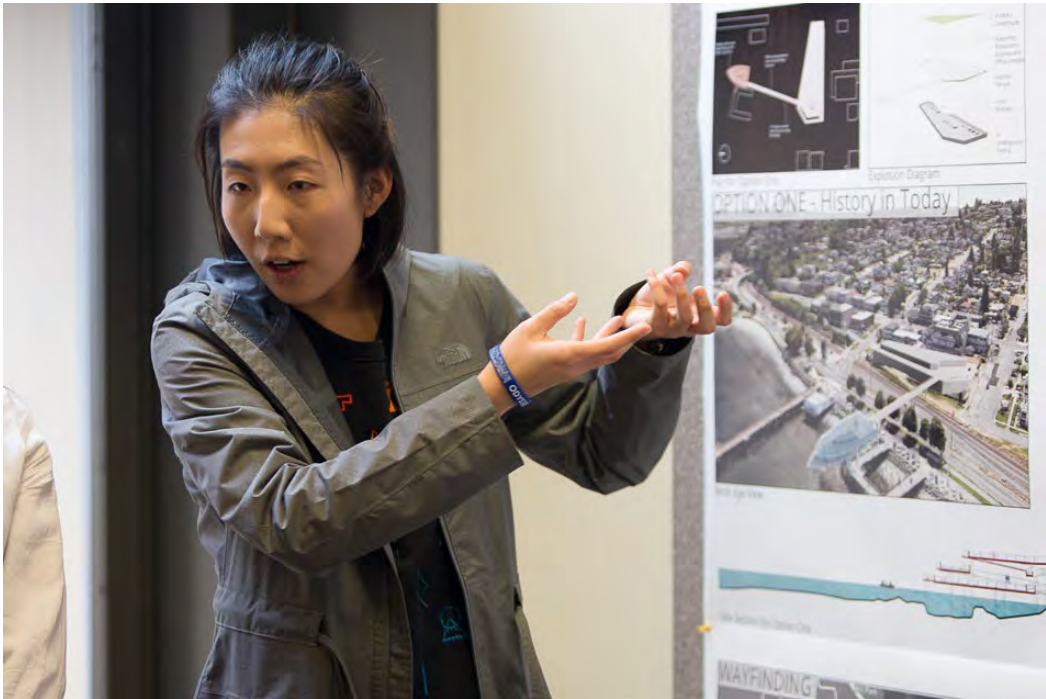
-  Ruston Way Connection
-  Neighborhood Connection
-  Pedestrian and Bicycle Connections

Following the designs proposed within this report, the City can increase residents' access to Ruston Way and provide them with a network of green spaces to move freely through and enjoy.

## ACCESS AND CONNECTIVITY

Accessibility was a key priority for the studio, and as such, the students placed an emphasis on ensuring that the gulches connected to each other and to the waterfront. A group including members of all four gulch teams proposed alternative routes for cyclists and pedestrians that allow for a more seamless experience of all four gulches and the Ruston Way waterfront as a whole. Students hope that, in the future, Tacoma residents will be able to better access the Ruston Way area from across the city and that, when they arrive, they are able to move freely within a highly accessible network of green spaces. This includes movement along the waterfront to enjoy its spectacular views of Commencement Bay, and inland for enclosure in the unique ecologies of the four gulches. These gulches — Garfield, Buckley, Puget, and Mason — have great potential to become recreational and educational treasures that are experienced and stewarded by Tacoma residents, now and for generations to come.





Mid-term review (upper left) and final presentations  
TERI THOMSON RANDALL



Back row

**ROB GIRVIN**  
Garfield Gulch Steward  
First from left

**MARTY STUMP**  
Metro Parks Landscape  
Architect  
Second from left

**ANDREW AUSTIN**  
Metro Parks Project  
Manager  
Third from left

**MIKE CAREY**  
City of Tacoma Urban  
Forest Program Manager  
Third from right

Front row

**REBECCA SOLVERSON**  
City of Tacoma Public  
Arts Specialist  
Second from left

**NANCY ROTTLE**  
Professor  
Fourth from left

**MARY ANDERSON**  
Metro Parks Greenbelt  
Manager  
Fifth from left

**DESIREE RADICE**  
City of Tacoma  
Environmental Specialist  
Sixth from left

**SHANNON BRENNER**  
City of Tacoma  
Environmental  
Specialist - Biologist  
Far right

Students of Nancy Rottle's Landscape Architecture 402/503 class with City of Tacoma partners and Garfield Gulch Steward Rob Girvin.  
TERI THOMSON RANDALL