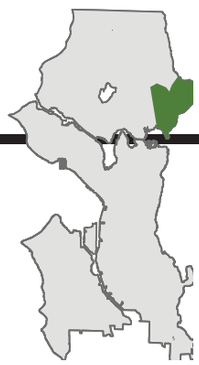
SANDPOINT/LAURELHURST



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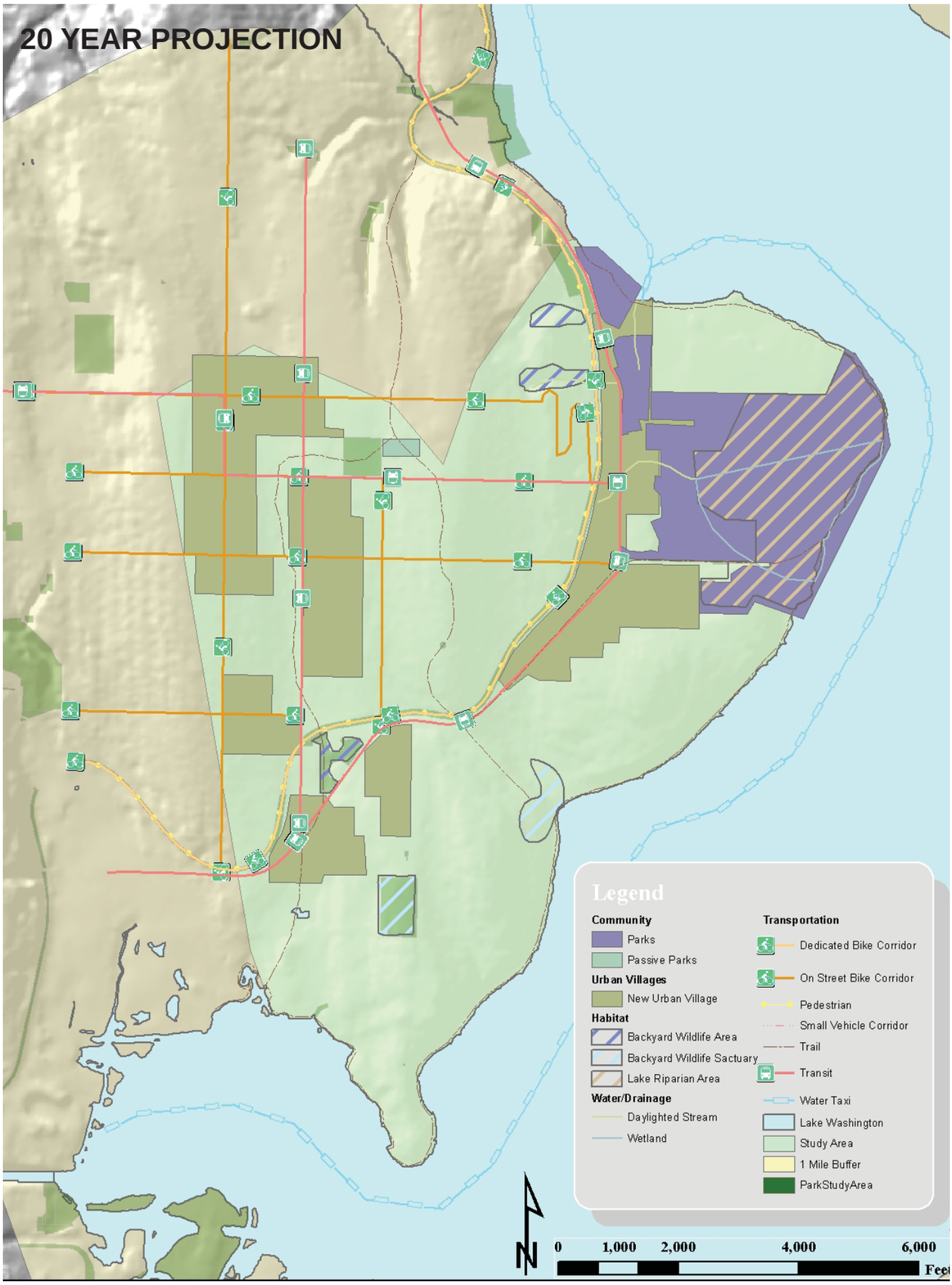
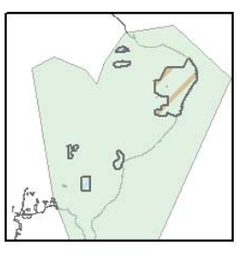
Student Team Leaders: Tim Shuck, Terry Shaver.
Team Members: Lynda Betts, Thomas Hargrave, Lolly Kunkler, Diana Kincaid, Edith Sze Savadove, Bonnie Miller, Darby Ringer, Lynn Ferguson, Elizabeth Pachaud



By 2020 specific zoning ordinances have already been revised in order to create new urban villages. Having higher density in these areas will reduce the need for single family dwellings and allow for the newly zoned Yesler greenway. This swath of park follows the existing Yesler Creek. Portions of this creek are in the process of being daylighted with a complete restoration by 2100.

Habitat

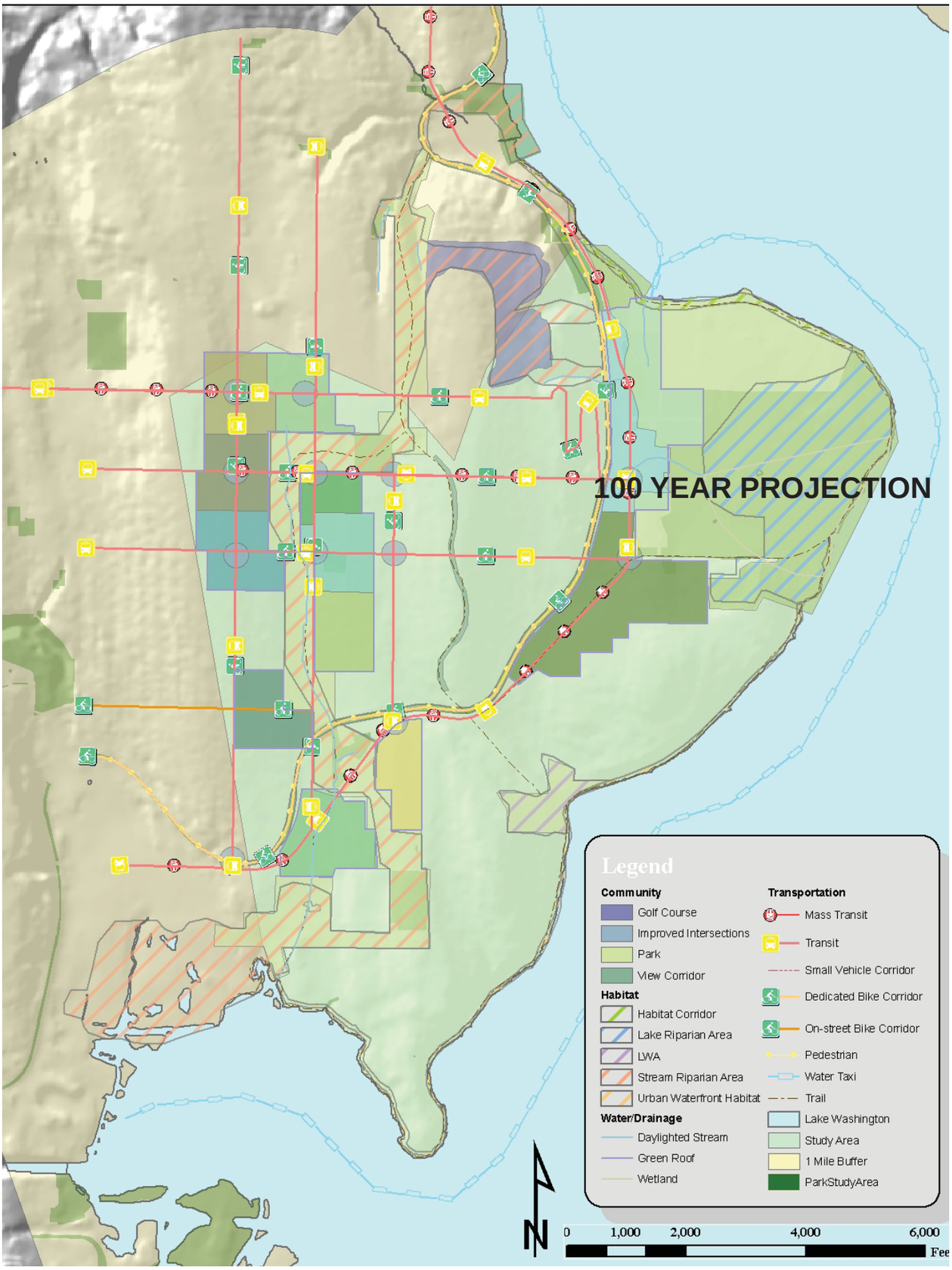


Transportation

Community Features

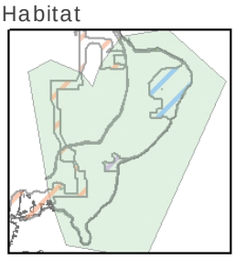
Water/Drainage

Urban Villages

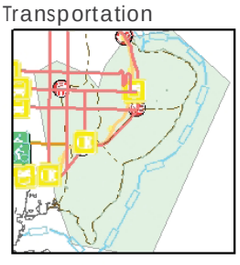


In the year 2100 the neighborhoods of Sandpoint and Laurelhurst will be bustling new urban villages with linked mass transit. The transit system will improve east to west connections and expand on existing routes. The Yesler Greenway spans from Matthews Beach to the terminus of Yesler Creek near the present Union Bay Natural Area. This serves as habitat, passive and active recreation, stormwater treatment and a connective tissue between Urban Villages. Residents are connected by various new trail systems that link to trails such as the waterfront trail, the View Ridge Trail and the existing Burke Gilman Trail.

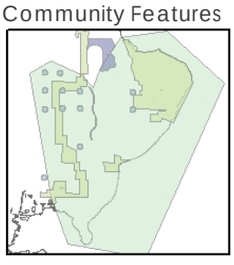
Habitat



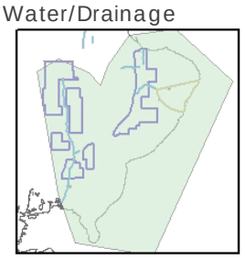
Transportation



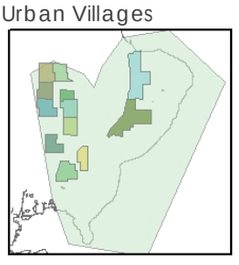
Community Features



Water/Drainage



Urban Villages



RETHINKING STORMWATER

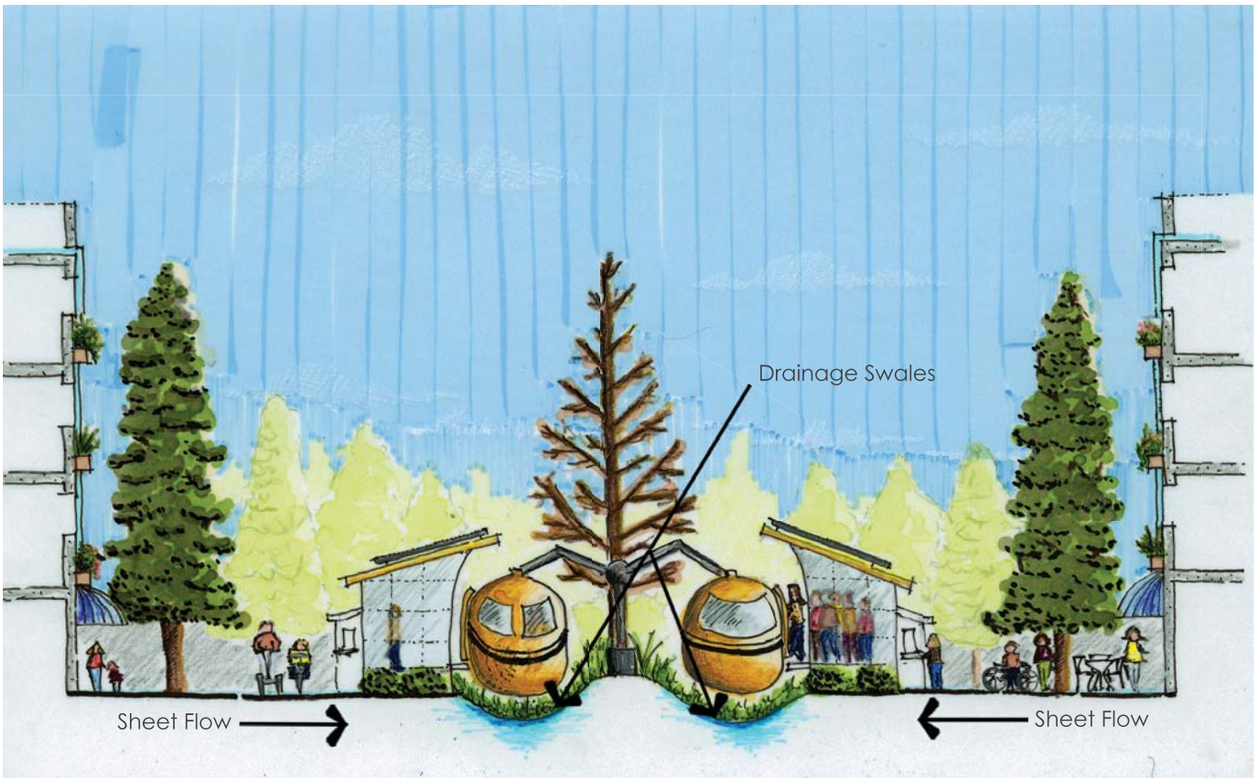
All images illustrated by Tim Shuck

Functional Diagram

This diagram explores the story of a drop of water over the next hundred years. Once a drop of water hits the roof of a building, it begins its journey to Lake Washington. This system utilizes green roofs, wall plantings, drainage swales, infiltration swales, the Yesler stream system, and storm wetlands before flowing into the lake.

Waterwise Buildings

New Urban Villages will promote sustainability and green infrastructure. One main aspect is the buildings. Shown here as a traditional brick building, this new four story mixed use building has the latest in green technologies. The roof of this building serves as the first step in the filtration of storm water. The building's green roof reduces the impact of impervious surfaces because it intercepts and delays rainwater run-off. This allows the majority of water the ability to infiltrate into the surfaces of the roof. Any excess water is directed into a vertical wall planting on the sides of the building. This series of plant boxes allows the water a prolonged course down to the street level. Delaying the water in these areas is essential to minimizing affects of storm water.



b

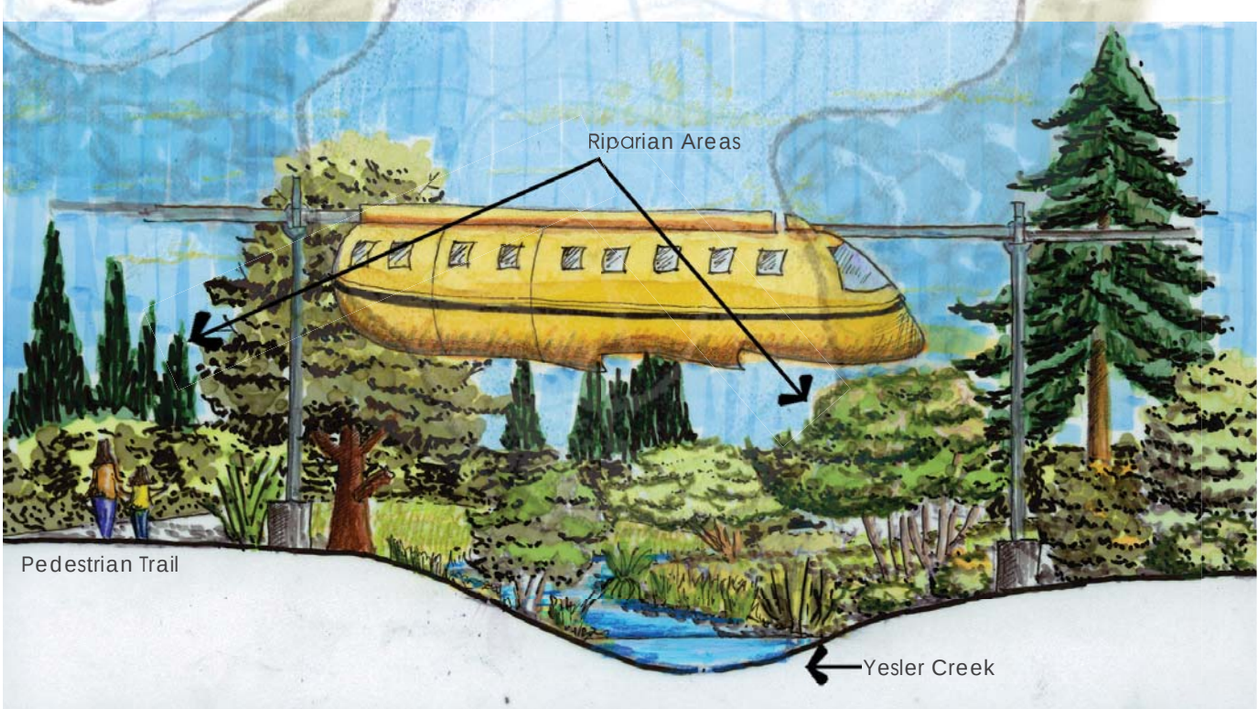
A Swale Place to Be

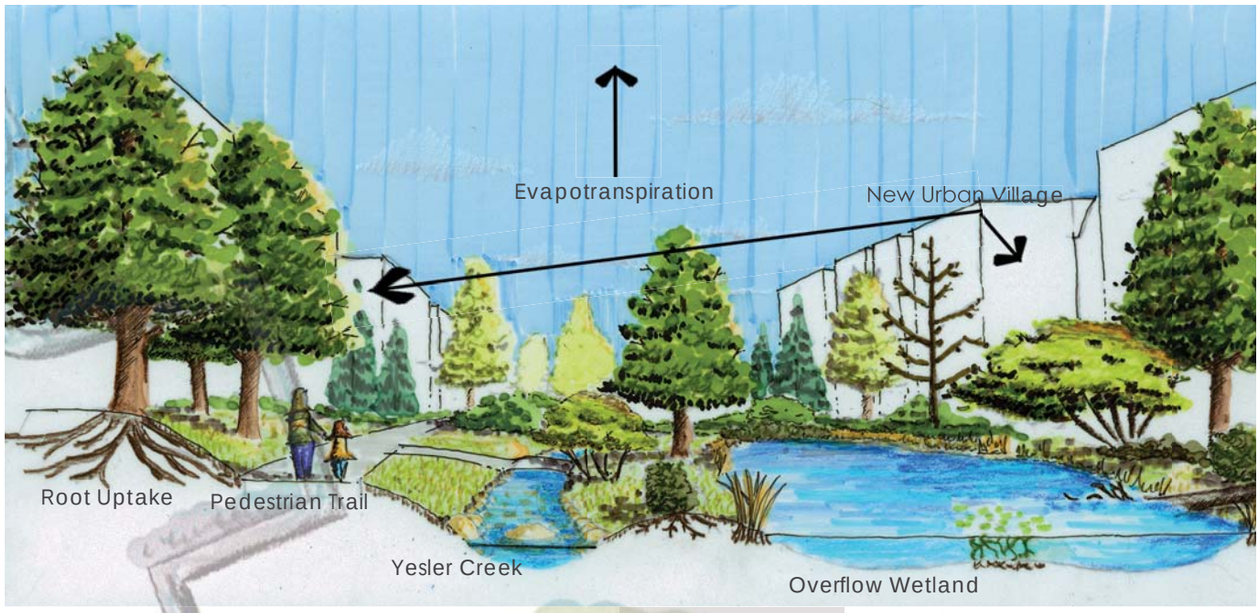
New Urban Villages are organized to be wonderful civic spaces. They are pedestrian friendly and organized at a human scale. Sidewalks are wide and are activated by ground level shops and outdoor cafes. Mass transit stops are present at urban center cores for transportation for leisure or work. These public corridors treat water through the grading of the spaces and drainage swales located below mass transit lines. The sidewalk/plaza areas are graded to direct runoff to these swales as sheet flow. Excess water from the rooftop and vertical garden system is also connected to these swales. Once water reaches these swales it begins to infiltrate and dissipate. Any water overflow will be slowly directed to the daylighted Yesler Stream system.

c

Streaming Water

The historical Yesler stream, now daylighted, serves as the primary transport for stormwater runoff to its terminus. This system is effective partly because of it has minimal human infrastructure affecting it. The mass transit monorail system allows vehicles to fly above the ground level reducing the need for bridges and other troublesome transportation structures. Riparian areas along the stream capture rain water, which allows them to recharge the ground water system. Excess water will enter the stream. The public will be invited to participate through a trail system that travels the length of the stream. They will be encouraged to stay on the trail so as not to negatively impact this essential living system.



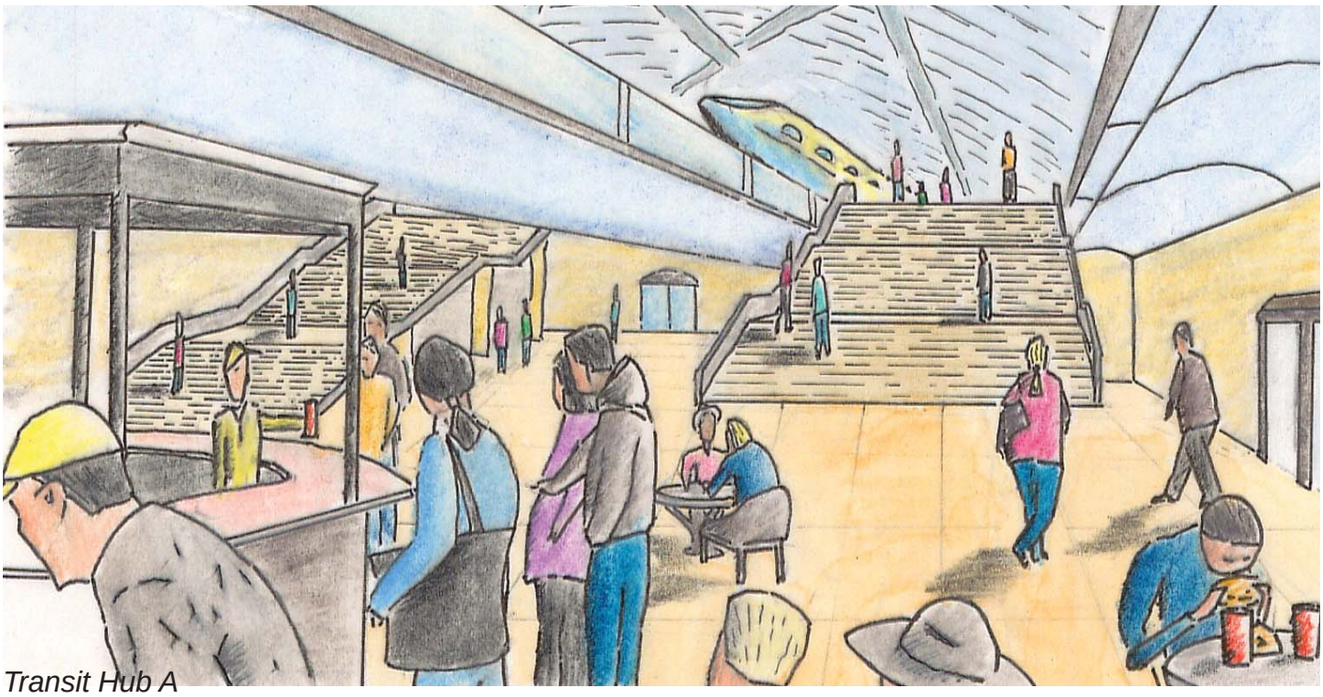


Overflow Wetlands

In large storm events where all aspects of the system are producing excess water and the stream capacity is high, a series of wetlands will be utilized to capture the water slow it down which will allow tiny polluted particles to settle out of the water. Once traveling through this wetland system the water will be transported back to the stream system pollutant free.

The Flow to the Lake

Now that the all storm water runoff has been transferred between different aspects of this system it is ready for its arrival at Lake Washington. The amount of water that reaches the lake is greatly reduced compared to a piped system. This is because the water travels to the lake so much slower. The surrounding landscape and riparian areas allow much of the rainwater to soak into the ground, green roofs and swales allow water to infiltrate and recharge natural ground water storage areas. Wetlands allow any other pollutants and toxins a final opportunity to release before flowing into the lake. This water has a much smaller volume, speed and is very clean.



Transit Hub A

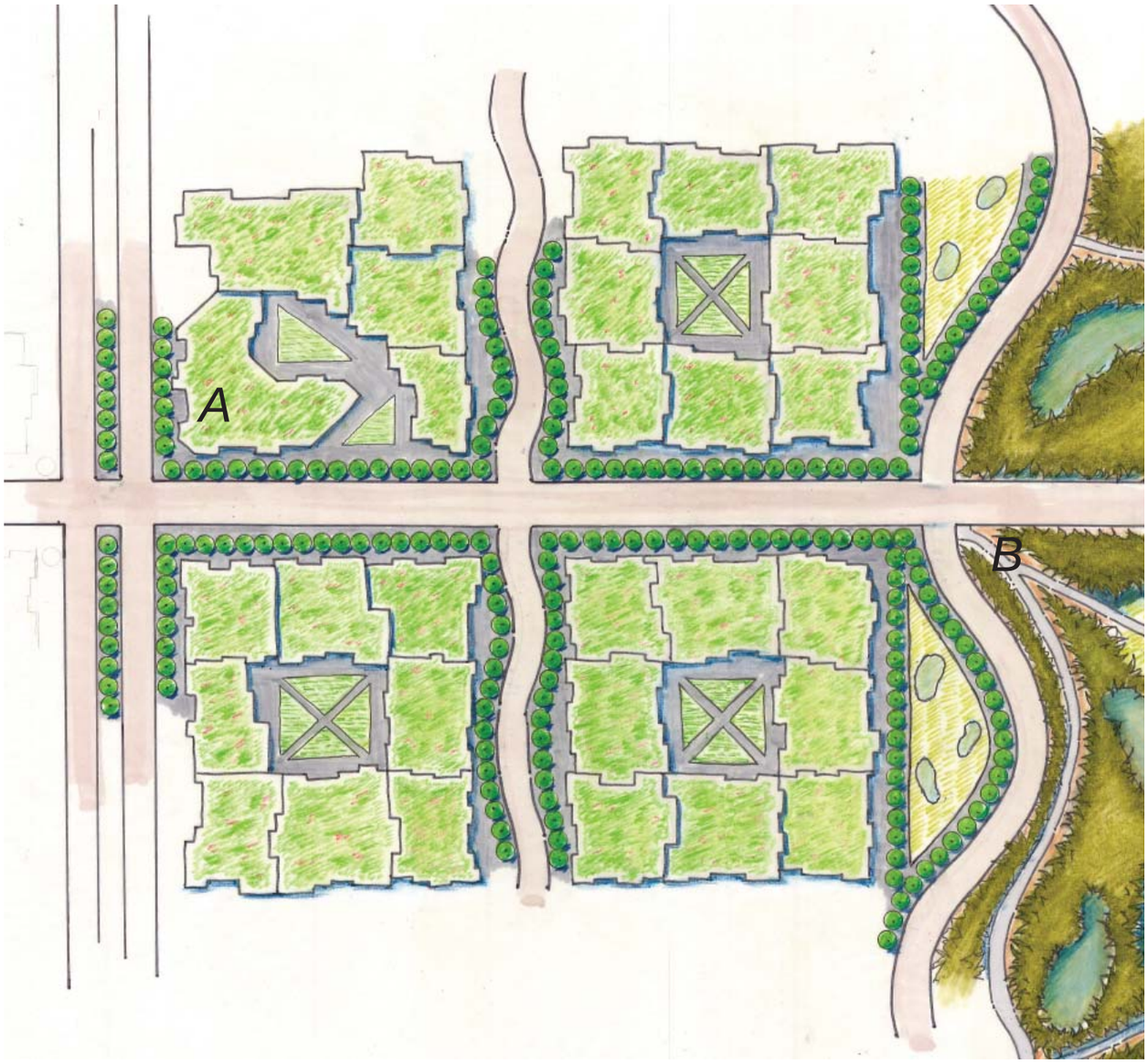
The intersection of 40th Avenue and 70th Street serves as a mass transit hub for east/west connections. This node not only provides the community with transportation benefits but supplies them with everything necessary for daily life. Here they can find places to live, shop, and eat. This further reduces the need for excess travel thus eliminating the use of already dwindling fossil fuels. Members in this community are being introduced to a new way of living and a more sustainable lifestyle.

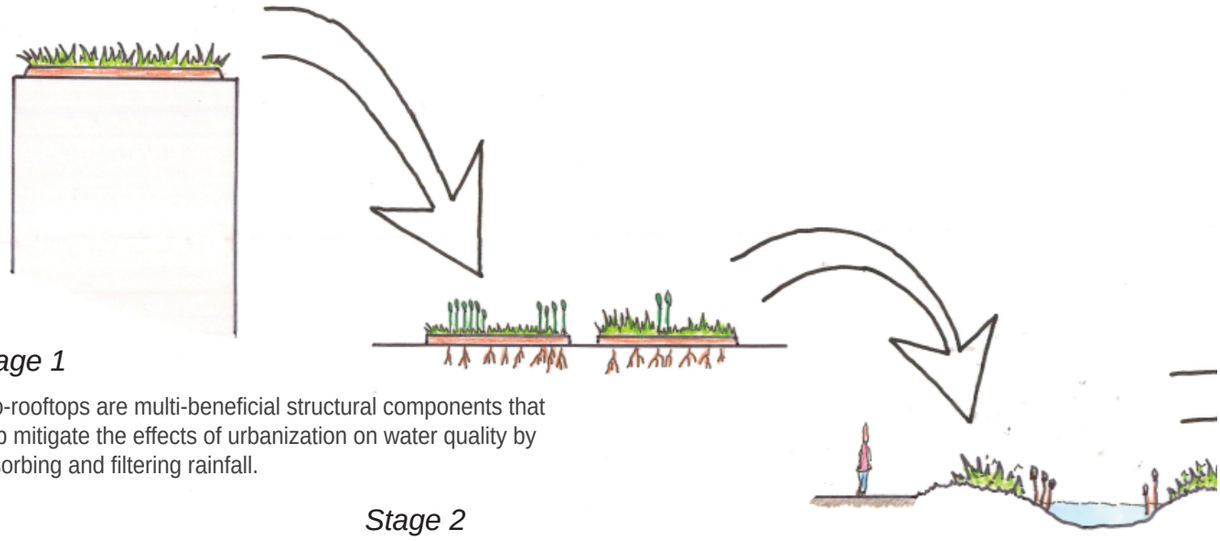
Yesler Trail System B

The Yesler greenway provides those members within the urban environment places to recreate, both active and passively. This space provides areas to inform the users about the critical processes that nature acts out. This knowledge instills a passion for the environment that creates a better sense of stewardship over the environment found in their backyard.

Stream Crossing C

The trail system is designed to separate the human users from the most vulnerable points within the corridor system, such as the stream. At critical points where the two system overlap the land mass is built allowing the users to experience the space visually rather than physically. This ensures it remains a revered natural space.





Stage 1

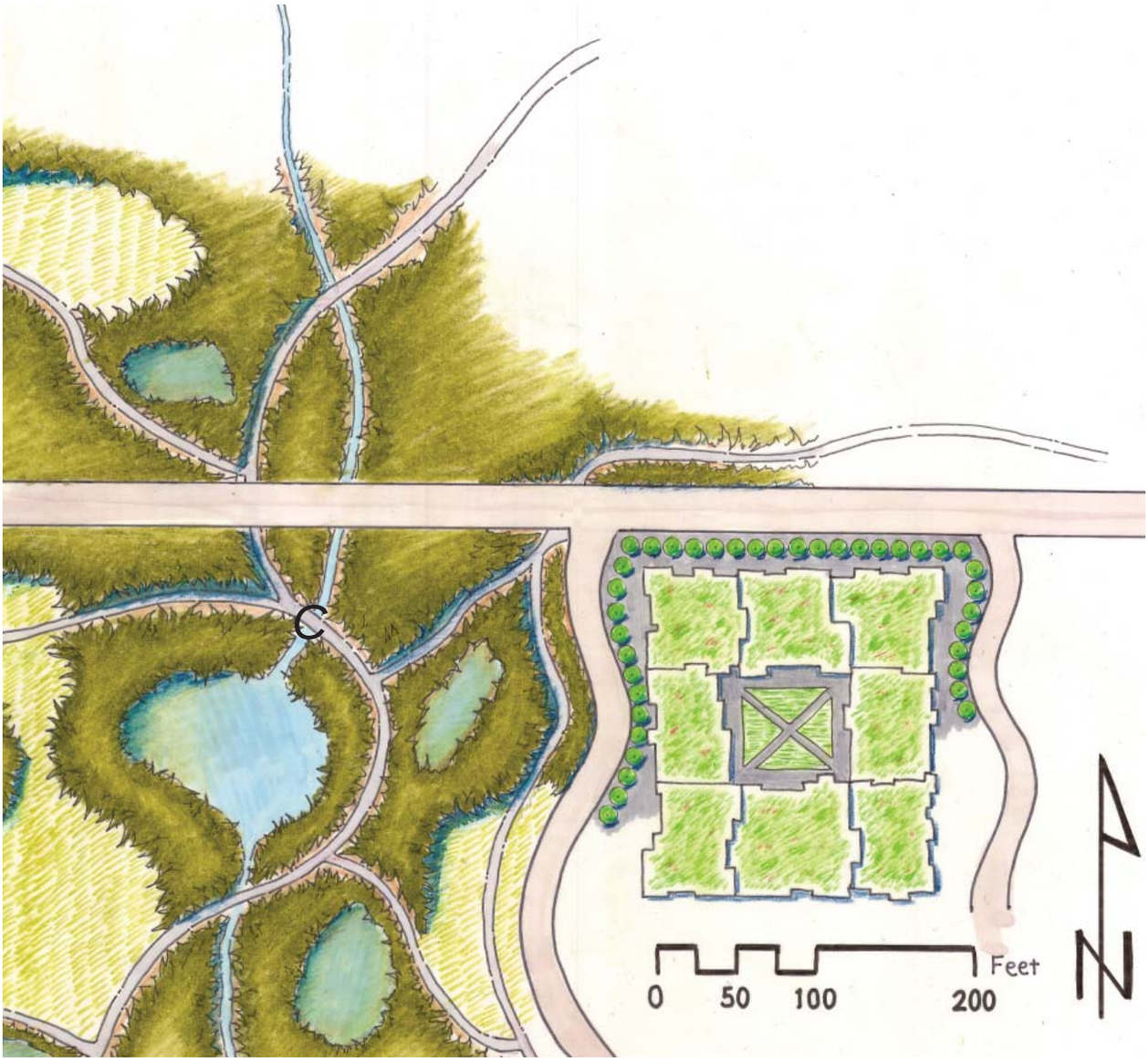
Eco-rooftops are multi-beneficial structural components that help mitigate the effects of urbanization on water quality by absorbing and filtering rainfall.

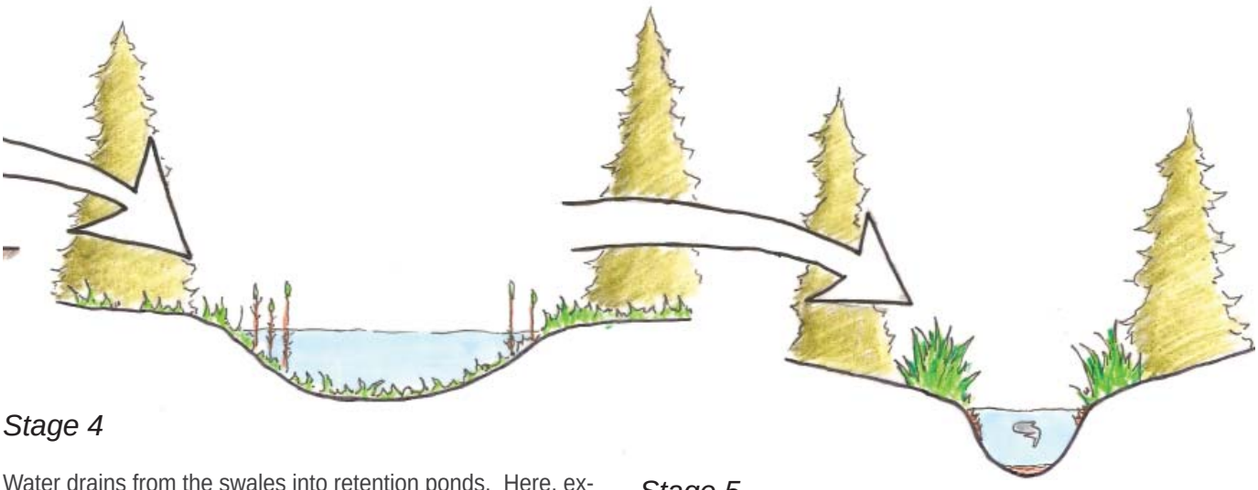
Stage 2

The filtered water combined with grey water from the buildings is then used in the courtyard community gardens.

Stage 3

Street side swales take the place of typical buried storm sewers. The decreased flow rates and on-site water storage aids in maximizing percolation and ground water recharge.



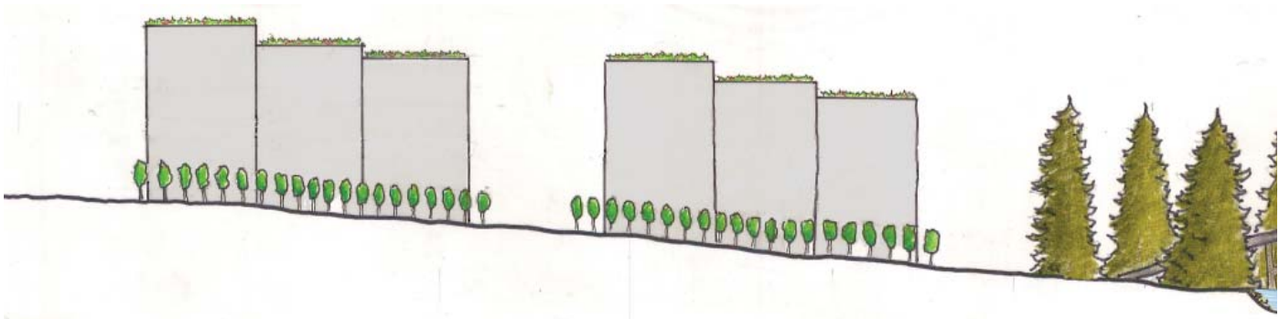


Stage 4

Water drains from the swales into retention ponds. Here, excess runoff is held to gradually percolate back into the soil and recharges the groundwater system.

Stage 5

The water reaches the stream system cleansed for the natural environment and is then transported to Lake Washington.



The Urban Environment

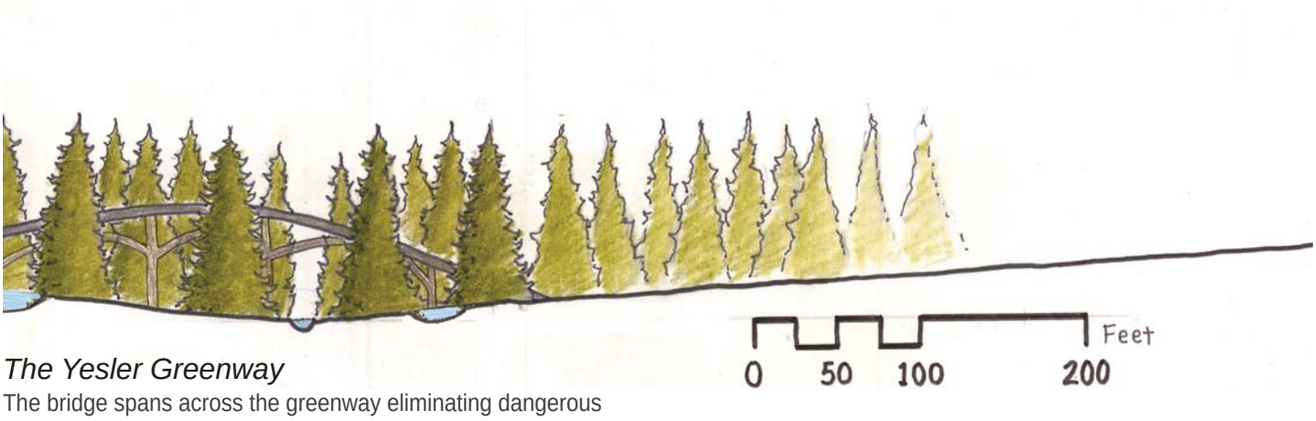
Trees line all streets adding life and vibrancy to the urban environment. The structures within the urban village will all feature greenroofs minimizing the effects of impervious surfaces.

Street Life

The street walks are widened offering spaces for covered street spaces for vendors and outdoor cafes. These spaces create a walkable community and betters relations with the members. Amenities along the street surface further reduce the need for vehicular travel thus forfeiting the secondary streets to bicyclists and pedestrians. A gentle meander creates a more scenic experience through the space. Street trees offer protection from the sun in the summer, rain in the winter as well as offer color to the urban environment and mask the face of structures.

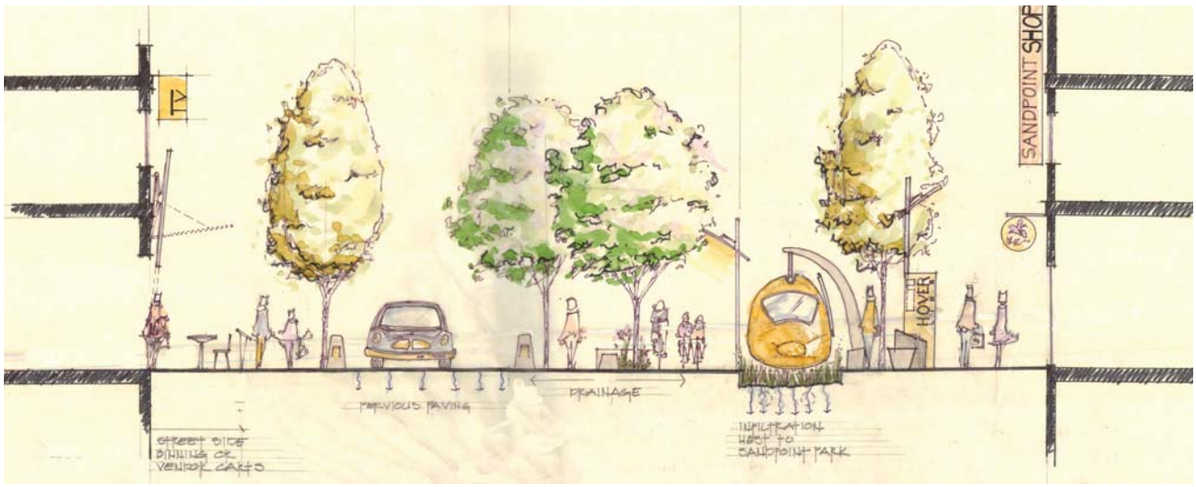
Integrating Man And Nature

To minimize the effects of vehicular traffic through the greenway, a bridge crosses above the system. The runoff from the bridge is diverted towards the base where it enters the filtration system purifying it before it enters the stream. As the need for cars decreases, the bridge will be dismantled and only the mass transit line will be left. The tall trees not only mask the appearance of the bridge from within the greenway but offer a scenic journey through the canopy for those users on the bridge. The trail system is set apart from the stream, ensuring it remains untouched by the hand of man.



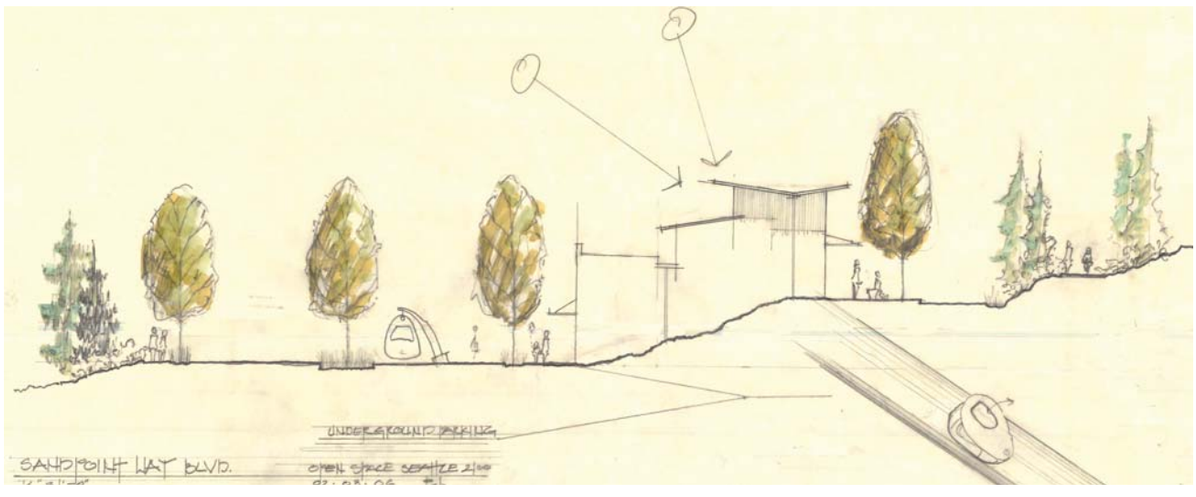
The Yesler Greenway

The bridge spans across the greenway eliminating dangerous conflicts between nature and vehicles.



A potential section exploring possibilities for Sandpoint Boulevard. Hanging mass transit, walkable streets, bike lanes, shops and multi-purpose buildings

This vignette illustrates the possibilities for the creation of a waterfront trail that connects Magnuson park to the Union Bay Natural Area. A water taxi is shown in the mid-ground.



This section relates built structures to the street. This relationship allows parking to be moved underground eliminating the need for expansive street and lot parking areas, thus, reducing the amount of impervious surfaces