# ST. GEORGE RAINWAY Design details Public Art Concept

# **Engineering Artist-in-Residence (2020-2023)**

Holly Schmidt is a visual artist known for artworks that explore the diversity of human relationships with the natural world.

Schmidt's exhibitions, public works and residencies include Vegetal Encounters with the UBC Outdoor Art Program, Tillwith the Santa Fe Art Institute, and Quiescence with the Burrard Art Foundation.



Scan here for more information on the Engineering Artist in Residence program

Schmidt is grateful to live and work in Vancouver, Canada, the unceded territories of the x<sup>w</sup>məək<sup>w</sup>əýəm (Musqueam), Skwxwú7mesh (Squamish) and səlilwətał (Tsleil-Waututh) Nations.

## St. George Rainway public art

Schmidt draws upon the historical ecology of the coastal western hemlock forest as inspiration for the creation of integrated elements of public art throughout the Rainway, including:

- Feature walls and retaining walls
- Nurse logs
- Gathering spaces and ground planes



### **Feature Walls and Retaining Walls**

Inset patterns based on coastal plants and mosses will appear on the concrete feature walls and retaining walls. These patterns based on plants such as bracken, salal and trailing blackberry appear like shadows from the past while pointing to the future ecological resurgence of the rainway. Over time, mosses and algae will grow in the crevices of the patterns indicating the health of this ecosystem.

#### Nurse Log

Two nurse logs will be placed in the Rainway. These fallen trees decay slowly overtime creating an ecological niche for mosses, plants, trees, insects and animals. As a nursery for the growth and regeneration of forests they represent care and interconnection in community.

#### **Gathering Spaces & Ground Planes**

A series of gathering spaces is visually connected through water patterns that reference the historic creek and the choreography of water as it moves down the hill. There are moments of pooling, swirling, rushing and splashing represented through lines that flow around the seating.







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# ST GEORGE RAINWAY **Design Details Tree Planting**

## **Trees for Green Rainwater Infrastructure**

The City's tree canopy is a critical part of the urban infrastructure. Trees absorb carbon dioxide, mitigate the urban heat island effect, provide air filtration, support urban biodiversity and provide urban rainwater management.

St. George Rainway provides the opportunity to add many trees with increased soil volume to St. George Street. Additional soil volume will help support a healthy tree canopy. To achieve these outcomes, trees planted within bioretention practices should tolerate a high pollutant load and a variety of soil moisture conditions.





## **Trees selection for the** Rainway

To ensure a healthy urban forest and the safety of There are currently 54 trees along St. George Street, in the street-right of way. residents, the following are requirements for trees planted in Vancouver's right-of-way.

- tolerant of local growing conditions
- maintain sightlines for vehicular and cyclist traffic
- have adequate soil space to reach its natural form at maturity
- are not prone to branch failure or tree fall
- are not susceptible to pests
- are not possessing significant nuisance problems (large nuts, allergenic properties)



### **Tree replacement and** retention

10 trees are located within the traffic circles and proposed Rainway footprint. Of these, 9 smaller trees have been identified for removal and will be replaced with similar sized trees with a larger soil volume and 1 notable tree will be retained.

> 19 new trees are proposed for the Rainway on the east side of the street. No new trees will be added to the west side of the street, due to water main set back requirements.

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# ST. GEORGE RAINWAY **Design Details** Vehicle Access and Parking

# Parking supply

Space for car parking and car movement ranked as Currently, there are high volumes of motor vehicle the lowest priorities in both Phase 1 and 2 surveys. traffic on this stretch of St. George Street, reducing Parking spaces on St. George Street have the safety and accessibility for cyclists of All Ages and Abilities (AAA). High volumes of vehicular traffic are lowest occupancy rate when compared to adjoining particularly concerning since a majority of the local streets. Currently, the majority of on-street parking spaces in this area are unregulated, allowing any students from Mount Pleasant Elementary walk to/ car to park on most streets for extended periods from school (only 30% of them are driven). of time. This can cause issues for neighbourhood residents who cannot find parking close to home.

Parking will be retained on 6<sup>th</sup> Ave and 5<sup>th</sup> Ave on the west side of the street only. The Rainway will re-allocate space previously used for parking towards rainwater management and sustainable transportation.





# **Motor vehicle volumes**



Vehicle volumes based on 24-hour average mid-week day (Tues, Wed, or Thurs) CoV portable hose counts, from which bikes are filtered out.



Existing Bike Routes Average Daily Vehicles Volumes

## **Access and circulation**

lanes, including the lane south of 6<sup>th</sup> Ave.



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# ST. GEORGE RAINWAY **Design Details** | **Planting & Biodiversity**

## **Plant communities**

The plant community design approach seeks to leverage the framework of natural plant communities, a group of plants that occur together and share similarities in growing conditions. By emulating the structural elements and growing conditions of natural plant communities, we can design dynamic landscapes that include natural processes, like plant succession and competition, which are more resilient in the face of climate change.

There are two primary green rainwater infrastructure (GRI) plant communities that we can leverage for the St. George Rainway planting concept:

# Woodland Canopy contributes to urban cooling Distinct separation between canopy and understory preserves sightlines Understory increases absorbency and aesthetic quality







# **Planting strategies**

Informed by our engagement work, we've developed a list of planting strategies to inform our planting design concept. These include:



Prioritize **native plants** that are part of the historical ecology



Select plants for **all** seasons



Maximize **tree canopy** 



Use an **informal** planting design strategy



Use adaptive plants to extend the bloom season



to handle a high pollutant load

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