JOHNSON STREET BRIDGE REPLACEMENT PROJECT

PDR - PUBLIC REALM / LANDSCAPE DESIGN STRATEGY

PREPARED BY

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PRODUCED FOR
City of Victoria

PROJECT CONSULTANTS
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Section 1: Overview

1.1 Project
The design team for the Johnson Street Bridge Replacement Project is led by the engineering firm MMM Group Limited. The bridge designer is Wilkinson Eyre Architects. Sharp and Diamond Landscape Architecture Inc. will be responsible for public realm and landscape design improvements.

The new bridge creates the opportunity to reconsider the design of both east and west landside approaches, streetscape, open spaces, and to create accessible connections with the multiuse Galloping Goose, E&N Trail, and pedestrian walkways.

The Johnson Street Bridge Public Realm and Landscape Design Strategy is the result of collaboration and coordination. Collectively, the design team has worked closely with the City of Victoria and the Johnson Street Bridge Citizen Advisory Panel (CAP) in selection of the conceptual locations, alignment, and orientation of the multi-use paths, bike lanes, pedestrian routes, civic urban spaces, green spaces, and possible future rail.

1.2 Document
This document focuses on the objectives, strategy, preliminary design, and the potential components of the public realm within the project scope. It offers a glimpse into the design rationale behind the landscape concept plan: the scale of spaces; the connections between these spaces; how these spaces might be used; and what combinations of materials could be considered.

The current design has only recently been presented to the public (October 15 and 25, 2011). It is anticipated that further public consultation along with dialogue with City Parks and Engineering, will be required with a clearly defined process to work within overall bridge and street infrastructure schedules and project budget. In short, this document is intended to provide a framework for future discussions with City staff, stakeholder groups, and the public, prior to developing detailed design drawings.
1.3 Vision

The public realm is defined by the places we meet, socialize, recreate and spaces we move through. It is experienced close-up, at an intimate scale, and includes the streets, sidewalks, building frontages, boulevards, parks, trails, courtyards, plazas, waterfronts - and all the routes between them. In essence, the public realm provides the ‘breathing space’ within the structure of a city. The public realm and immediate areas surrounding the new Johnson Street bridge will become a catalyst for future public and private development opportunities. As Victoria grows, we will need ever expanding opportunities and public spaces to connect people with landscape. Our vision is to connect people to landscape, create arrival and gateway, and to create an event - a new story for Victoria for the 21st Century.

The people of Victoria have always taken a profound appreciation and connection to the harbour - the historical ribbon, natural greenway, and birthplace of the city. Our role as a design team is to bring the program and design concept to life.

1.4 Design Principles

Seven (7) design principles for the public realm were adopted by Council on October 6, 2011 to help guide the planning and design:

1. Context and Reference to Place
   Acknowledge the site's natural and cultural character, capture imagination, and identify a recognizable regional design expression belonging to the City of Victoria and its established urban precincts.

2. Accessibility and Connectivity
   Routes and connections between public spaces and built edges should be clear, inviting, seamless, and effortless for all users.

3. Meaningful Public Space
   Provide meaningful routes, places of destination, delight, and overlook for people: pedestrians, cyclists, and motorists (in that order).

4. Timeless
   The public realm should be considered a long-term legacy. A simple hierarchy of materials, scale, and proportion will establish a coherent and memorable place.

5. Arrivals and Gateway
   The Johnson Street Bridge will create an iconic landmark and gateway to downtown Victoria and to Victoria West. The public realm will knit together east, west, north and south to enhance the arrivals and gateway to Victoria's harbour and downtown.
6. **Site Adjacency**
Consider adjacent properties, heritage sites, future pathway connections, and rail corridor in the design of public spaces.

7. **Sustainability**
Provide a balance of aesthetics, urban improvements, and ecological design. Consider an integrated design acknowledging site character, public amenity, choice of materials, energy and water efficiency together with long term maintenance, project schedule, and budget.

### 1.5 Public Realm Precedent

The Johnson street Bridge Public Realm is comprised primarily of a pedestrian and cyclist-friendly street network, plazas, and a series of public open spaces all connected to the larger system of waterfront walks and parks. The places immediately surrounding the new Johnson Street Bridge will be an important destination serving the City, region, and international visitors. Design precedent of similar types of places were shown to CAP, Council, and the public for discussion and inspiration purposes. They included:

1. **STREETS**
2. **PLAZAS**
3. **PARKS + OPEN SPACES**
4. **GREENWAYS + MULTI-USE PATHS**

1. **STREETS**
   - Public Safety
   - Wayfinding
   - Boulevards
   - Sidewalks
   - Canopy Trees
   - Seating
   - Accessibility
2. **PLAZAS**
   - Destination
   - Sense of Place
   - Connect to Urban Fabric
   - Celebrate History and Culture
   - Public Art

3. **OPEN SPACES**
   - Native Plantings
   - Program for Events
   - Prospect and Refuge
   - Promenade
   - Viewpoints

4. **GREENWAYS + MULTI-USE PATHS**
   - Galloping Goose, Vancouver Island
   - Coal Harbour Seawalk, Vancouver
   - Southeast False Creek, Vancouver
   - Highline, New York
   - Spadina Wave Deck, Toronto
   - Promenade Samuel de Champlain, Quebec
Section 2: Analysis

2.1 Background Policy Documents

The Johnson Street Bridge and Public Realm Design has been influenced by City planning policy and guiding documents. These documents provided critical insight into character, urban design guidelines, special places, views, and long term connectivity for pedestrians and cyclists. Together with input from City staff, CAP, site reconnaissance, and public input, they have guided our approach and thinking. The City documents include:

- Official Community Plan
- Downtown Plan / Downtown Core Area Plan
- Old Town Design Guidelines
- Victoria Harbour Plan
- Harbour Pathway Plan
- Greenways Plan
- Victoria West Plan
- Pedestrian Master Plan
- Victoria West Transportation Plan

2.2 History and Context

The City of Victoria is western Canada’s oldest City and began in 1843 as a Hudson’s Bay Company trading post, named in honour of Queen Victoria. It’s history, natural beauty, fine-grained neighbourhoods, downtown formal parks and gardens, and spectacular Inner Harbour’s vistas all combine to create a high quality of life and a memorable ‘sense of place’. The street place names, history of Songhees, fur trade, rail, ship industry, and replacement of the 1924 original blue bridge provide inspiration for the design of streetscapes, civic spaces, boulevards, open green spaces, and gathering spaces.

The new Johnson Street Bridge is at the centre of Victoria’s Inner and Upper Harbour and the transition to Victoria’s urban precincts. The major site circulation routes - Pandora Avenue, Johnson Street, Wharf Street, Store Street, and Esquimalt Road will extend and continue the tradition of vibrant and active street life. Essentially, the iconic bridge and revitalized public spaces will be designed for people first and foremost, with cars and the roadway infrastructure fitting into this public experience-based approach.

The Johnson Street Bridge Replacement Project presents a unique public realm opportunity for Victoria. The bridge project will create two (2) distinctive approaches to the new bridge: the Downtown Approach and Victoria West Approach. We have heard stories and legends from people at public events. There is a personal attachment to the original ‘blue bridge’ and has been referred to as the ‘Singing Bridge’ due to the sound it makes as vehicles pass over the steel decking. Together, these new spaces will improve the physical and symbolic connections and new opportunities for public spaces and amenities. Ultimately, the new bridge will become a catalyst for future stories.

The surrounding site context, the local and regional landmarks, and key movement patterns are summarized in the following pages.
HISTORY and CONTEXT

SITE BOUNDARY and AERIAL PHOTO
REGIONAL LANDSCAPES

1. Gorge
2. Beacon Hill Park

LANDMARKS

1. Galloping Goose
2. Johnson Street Bridge
3. Swans
4. Empress
5. Parliament
PATHWAYS

1. Galloping Goose
2. E&N Rail Trail
3. Westsong Walk
4. Pandora Avenue
5. Wharf Street

WALKING DISTANCES
WATER ACTIVITY

URBAN PRECINCTS

Dockside Green
Upper Harbour
Downtown
Sooke
Inner Harbour
Chinatown
2.3 Downtown Character

The downtown area is a diverse historic and cultural assembly of distinct walkable urban precincts. The new bridge and public infrastructure will unite pedestrians, cyclists, rail, and vehicles to the urban fabric with meaningful universally accessible civic spaces.

Summary

- The original City settlement
- Connects a diversity of cultures, history, and urban expression
- A meeting of streets, intersections, spaces, and sightlines
- Catalyst to connect modern expression of new bridge with historic town fabric
- Future Development Sites: Northern Junk and Janion sites to complement urban

2.4 Victoria West Character

Victoria West is a symbol of merging culture, landscape, technology and industry. It represents the remnants of numerous landscapes: the gorge with its rocky outcrops and fragile Garry Oak ecosystem, the working harbour, and the Songhees people. The neighbouring Dockside Green Development is an internationally recognized sustainable community.

Summary

- Regionally significant natural landscape - endangered Garry Oak Ecosystem
- Juxtaposition of old and new – Dockside Green and Industrial Waterfront
- Remnants of original shoreline - rock bluffs and vegetation
- Merging point of both multi-use pathways of Galloping Goose and E&N Rail Trail
- Connection to West Song Walk and the culturally significant Songhees Point
- Future open space potential of S-Curve Lands as significant community open space
Section 3: Concepts

3.1 Master Plan Concept

APPROXIMATE SITE AREA: 18,000M² (4.45 Acres)

DESCRIPTION
The design objective assembles pedestrian oriented streets and multi-use pathways with meaningful civic spaces, universally accessible connections, and the vibrant downtown urban fabric.

The Johnson Street Bridge Public Realm Plan and components draw inspiration from the local context, site character, and the modern forms of the proposed bridge. Key design influences include:

- The natural landscapes including the Garry Oak meadows of the Saanich Peninsula and bedrock character of Esquimalt / Victoria West
- Diverse and vibrant urban character areas of the downtown and Victoria West
- Strengthening connections and interactions between people and the public realm
- Sustainability (social, ecological, economical)

Preliminary concepts including location, scale, general program and character have been discussed with City staff, CAP, and the public. Specifics including a refined program, details, materials, budgets, and potential long term phasing have not yet been addressed and will evolve over the next year. As part of early works, roadworks, and fill plans, we anticipate involvement in the design refinement process. This will include key input from City staff to coordinate road edges, sidewalks, crossings, boulevards, retaining wall materials and slope design. Additionally, the affected site edges of Northern Junk site, the Janion site, Working Harbourlands, and S-Curve Lands will require further clarification and input from City.

LEGEND
The primary defined public spaces within the scope of this project include:

Downtown
1. Galloping Goose Multi-Use Trail and Pandora Plaza
2. Johnson/Pandora Green
3. Wharf Street Boulevard
4. Johnson Street Plaza

Victoria West
5. Esquimalt Harbour Road Intersection
6. Galloping Goose Multi-Use Trail and Flyover Multi-Use Bridge
7. Southside Pedestrian Promenade
8. S-Curve Lands
3.2 Downtown Concept Plan Enlargement

APPROXIMATE SITE AREA: 5,250M2 (1.3 ACRES)

1. GALLOPING GOOSE TRAIL HEAD AND PANDORA PLAZA
This junction of the regional multi-use path system pulls together urban precincts within the city’s historic fabric to provide a symbolic termination and trail head in addition to a civic gathering space.

Program
- 5M wide multi-use trail with flexible civic urban gathering/social area.
- Opportunity for ground level uses in association with Janion Building/site (outdoor cafe and seating, small events, public art).

Significance
- Visual street end with southern exposure, symbolic trailhead, and civic urban space
- Interpretive opportunity to tell story of Janion Hotel, Swans roundhouse, E&N Rail, Canoe Club, underground stream etc. together with regional trail network map.
- Future connection to Harbour Pathway.

2. JOHNSON / PANDORA GREEN
A central welcoming civic green presence to re-establish the bridge connection to the city

Program
- Civic green space, widened sidewalk with seating to be used as gateway to downtown

Significance
- Gateway landscape retaining existing Oak trees improves downtown pedestrian connections

3. WHARF STREET BOULEVARD
Existing green space with sidewalk, seating, existing trees, and historic marker. Street edge boulevard will be narrowed to accommodate on street bike lanes.

Program retained as is

Significance
- Green space with symbolic tribute to rail line/industrial heritage.
- Long term recommendation to develop adjacent parking as flexible hard surface court for combined outdoor use/parking.

4. JOHNSON STREET PLAZA
Civic plaza and urban green space terminus for southside pedestrian bridge path with access to downtown.

Program
- Public space with direct links to bridge pathway, downtown, and adjacent future development

Significance
- Grade accessible connection and spectacular viewpoint to the Inner Harbour and Bridge
- Retains existing large Oak trees and maintains future rail corridor.
- Opportunity for ground level uses in association with development site (outdoor cafe and seating, small events, music, public art).
DOWNTOWN CONCEPT PLAN ENLARGEMENT

DOWNTOWN ISSUES FOR FUTURE DISCUSSION

- Future use of Janion Site/Building to be determined
- Merging the Galloping Goose into downtown street network
- Future connections to long term Harbour Pathway
- Adjacent Northern Junk Development Site and connection to bridge plaza
- Improve pedestrian crossings distances
- Detailed Design and Materials - program, type, and finishing of spaces and roadscape
3.3 Victoria West Concept Plan Enlargement → →

APPROXIMATE SITE AREA: 12,750M² (3.15 ACRES)

1. ESQUIMALT / HARBOUR ROAD STREETSCAPE
Representing the gateway to Victoria West connecting culture, landscape, and technology.

Program
• Signalized intersection with improved sidewalk crossings, boulevard improvements, rock landscape walls, street edge and informal park-like plantings.
• Opportunity for public art, cultural marker, and gateway.

Significance
• Boulevard improvements and formalized intersection will slow down traffic speed, and provide visual interest and symbolic tribute to community and safe access to Delta Hotel.

2. GALLOPING GOOSE MULTI-USE TRAIL AND FLYOVER MULTI-USE BRIDGE
Junction of the regional multi-use E&N Rail Trail with spectacular views to Upper Harbour and south to Inner Harbour.

Program
• 5M wide multi-use trail with viewpoint/seating.

Significance
• Universally accessible and improved integration of multi-use trail.
• Opportunity for public art and informative signage program together with regional trail network map.

3. SOUTHSIDE PEDESTRIAN PROMENADE
Grade accessible pedestrian promenade following original alignment of Delta Hotel access road.

Program
• 5-7M wide pathway with seating and spectacular viewpoints south to Inner Harbour.

Significance
• Universally accessible path
• Alignment of pathway protects future rail corridor.

4. S-CURVE LANDS
The decommissioning of the existing S-Curve roadway provides an opportunity for future City green space.

Program
• Regrade and seed this area with site overburden fills to a 3:1 maximum grade. Future park design by others.

Significance
• Significant public open space with spectacular views to Inner Harbour, southern exposure and location for potential event programming.
VICTORIA WEST ISSUES FOR FUTURE DISCUSSION

- Retaining walls heights, locations, materials
- Future public process and design input required
- S-Curve Lands design process
- Detailed Design Materials - type and finishing of spaces and roadscape
SECTION 01: GALLOPING GOOSE MULTI-USE TRAIL

SECTION 02: ESQUIMALT ROAD AT PEDESTRIAN FLY-OVER BRIDGE

SECTION 03: SOUTH SIDE PEDESTRIAN PATH
Section 4: Components of Public Realm

Key design influences that will provide the foundation for the selection of type and location of surfacing materials, site furnishings, plant materials and architectural elements include, but are not limited to:

- The City Design Guidelines
- Site Context including diverse and vibrant character areas of the Downtown and Victoria West
- Local materials, availability, and inspiration of natural landscape
- Modern contemporary design of Johnson Street Bridge
- City Engineering, Operations, and Maintenance
- Sustainability (social, ecological, economical)
- Design Principles

The following proposed components of the public realm are recommendations for discussion only, and have not been formally reviewed. Final selection, design, and locations of materials is to be coordinated with City staff and operations, with input from the public, and within the overall project budget.

4.1 Surfacing

1. PLAZAS
Plazas are the gathering spaces, places where people socialize, and nodes for pause and movement. As such, these spaces accommodate flexible programmatic uses, with emphasis on scale and simple materials palette.

**Scored Concrete**
- Easy to work with, can adhere to any shape, size of unit, orientation
- Flexibility allows to work joint pattern around utility boxes, trees, curbs, and adjacent paving materials
- Variation in finishing provides cost-effective textures and patterning

**Stone**
- Durable
- Variety of sizes, thicknesses and finishes, and local suppliers
- Suitable for a range of uses: ie. aesthetic accent, safety strip, orientation band, help direct movement, detailed paving field.

**Modular Unit Paving**
- A nod to industrial heritage of the working Victorian harbour - recycled brick...
- Variety of sizes, thicknesses and finishes, and local suppliers
- Suitable for a range of uses: ie. aesthetic accent, safety strip, orientation band, help direct movement, detailed paving field.
- Linear patterns and shapes emphasize direction and movement
PLAZA SURFACING PLAN

SCORED CONCRETE / MODULAR GRID PATTERNS

LINEA PAVING INTEGRATED WITH PLANTING

STONE ACCENTS: A FAMILY OF FINISHING & SIZES

STONE PAVING DIRECTING MOVEMENT

TEXTURE VARIATION

MATERIAL CHANGES
2. MULTI-USE PATH
The surface treatment should be durable, functional, and respond to the needs of all trail users. Contrasting or textured materials can be used to delineate path intersections and help direct traffic flow. Special attention will be made to safety markings, areas to pause and view, beginning and ends, and visual and functional edging materials.

CIP Concrete With Banding
- Clean, simple finish with an urban appeal
- Flexible patterns / score lines
- Cost effective material

Unit Paving
- A finer, more intimate finish for the Dwntown streetscape and Galloping Goose trailhead
- Options for permeable pavers in situations focusing on stormwater treatment / increasing permeability
- Possible accent for CIP concrete paving

Asphalt
- Most cost-effective material and smooth surfacing
- Preferred surface for commuters using regional trail network
- Edge with stone is recommended to match City Harbour Pathway design and to upscale material
JOHNSON STREET BRIDGE - PDR: PUBLIC REALM/LANDSCAPE DESIGN STRATEGY

MULTI-USE PATH SURFACING PLAN

EDGE TREATMENT TO DEFINE MOVEMENT

CONCRETE WITH JOINT PATTERN

UNIT PAVING WITH SEATING AREAS

BANDING: CREATES RHYTHM AND TEXTURE

ASPHALT WITH STONE EDGING

PAVEMENT MARKINGS
3. SIDEWALKS and PROMENADES
The sidewalk system should be designed for movement (simple surfacing for multiple uses), safety (clear boulevard edging or to buffer roadway traffic), and to integrate the new circulation routes with both the regional trail system and the downtown street grid.

Providing places to rest, pause, or just enjoy the internal/external views of the site are also important components of a sidewalk system. Crosswalk texturing, design of curb drops, curb edge types, integration of utilities, street trees, and proportion of gridlines should also be considered.

**Cast Concrete With Bands**
- Clean, simple finish with an urban appeal
- Flexible patterns / score lines
- Integrate with public art / signage to mark points of interest

**Modular Unit Paving**
- Variety of type, pattern, texture, and size
- Clean urban appeal
- Integrate with corners, crosswalks, seating areas
- Public art / signage to mark points of interest

**Stone Tactile Strip & Bollards**
- Provide visual cue and safety buffer to roadway traffic
- Provide a consistent corridor ROW for utilities, lights and street trees
- Options for permeable pavers in situations focusing on stormwater treatment / increasing permeability

**Street Trees / Planting Strip**
- Trees provide proper scale to the site, a reprieve from the sun, and seasonal color and interest
- Street trees emphasize the travel routes and would help frame the new bridge approach
- Species type, size, spacing to be coordinated with City of Victoria standards
- Plantings to be used where trees are not an option; can be low maintenance and incorporated into stormwater swale
JOHNSON STREET BRIDGE - PDR: PUBLIC REALM/LANDSCAPE DESIGN STRATEGY

SIDEWALKS & PROMENADES SURFACING PLAN

SCORED-CONCRETE WITH BAND

TACTILE SEATING ZONE

MODULAR TACTILE STRIP EDGING

BOLLARDS AND TACTILE STRIP AT ROAD EDGE

TREES AND SHADE

BLANSHARD STREET RAIN GARDEN
4.2 Walls

Wall types and forms are inspired by historic remnant stone walls throughout the downtown, inner harbour and old town, the elegant shape of new Johnson Street Bridge, and of the dramatic and symbolic natural rock outcroppings throughout the peninsula.

Mechanically stabilized walls may be required as part of civil roadworks and bridge construction package. However, smaller scale landscape walls will stabilize slope, shape and define entry, provide texture and interest to roadscape, ramps, and sitting edges. A higher level of detailing and finish are proposed in the more urban downtown setting with possible integration with lighting, public art, signage, and furnishing elements. The Victoria west side is envisioned to be rockstack, or gabion style design. Note: final wall type, design, and locations to be coordinated with project budget, and City approvals.

Stone / Facing Wall
- Fine texture or rough texture stone with clean linear horizontal proportions to reflect City character
- Incorporate with lighting and seating

Finished Concrete Walls
- Board form finish symbolizes sedimentary layers of rock and a historic/modern look
- Concrete can be formed and finished in almost any shape and orientation
- Incorporate with signage, lighting, and or public art
- Use of recycled brick can add visual interest and historical references

Rock Stack And Or Boulder Outcroppings
- Stacked local large basalt/sandstone shape boulders in groupings to grade slope, provide interest, and incorporate natural plantings

Gabion Walls
- Modern architectural modular proportions utilizing local rock supply into wire baskets
- Large range of unit sizes, wall heights, finishing, materials and texture
- Incorporate with lighting, railing and other hardscape materials
WALL PLAN

INSPIRATION: LOCAL ROCK OUTCROPS

GABION WALLS: USE LOCAL ROCK

STACKED ROCK INTEGRATED WITH PLANTING

STACKED OR MORTARED STONE

BOARDFORM CONCRETE WITH SIGNAGE

STONE EDGE (RAMP AND SEATING)
4.3 Furnishings

The furniture should be of modern industrial aesthetic, balancing contemporary materials with local designs, long term maintenance and operations. Placement and orientation determined by pedestrian nodes, views, areas for interaction and with input from City staff. Seating can be incorporated with lighting applications to welcome nighttime use.

**Seating**
- Provide abundant seating opportunities for people watching, meeting, sun spots and viewpoints
- Incorporate seating materials into overall design aesthetic (contemporary materials)
- Wide seating surfacing to allow for multiple uses (group seating, lying, reading etc.)
- Possible moveable seating for outdoor spaces (cafe, urban parks) in association with building edges
- Provide seating with and without backing
- Incorporate seating materials into overall design and proposed architectural walls or steps

**Bike Racks**
- Recommend stainless steel for long term durability and to avoid chipping and rust
- Type, form and/or placement to mimic arcing curves of bridge
- Provide in safe, well lit locations to encourage night time use

**Bollards**
- Incorporate with lighting in specific areas
- Consider stainless or silver grey colour
- Space to provide safety barrier for roadways and to direct pedestrian / bike movement

**Railings**
- Consider ramp slope to less than 5% to avoid excessive ramps and railings in landscape
- Use in high traffic areas, intersections, and adjacent to steep grade changes or hazard
- Incorporate bridge forms and materials
- Incorporate signage where applicable to expand on site heritage and existing views
SEATING WITH LIGHTING AND BACK SUPPORT
MODERN WOOD BENCHES
PLAZA SEATING: WIDE AND BACKLESS
BOLLARDS TO DEFINE EDGES
BIKE RACKS: INSPIRED BY BRIDGE FORMS
RAILING: CONTEMPORARY FORMS AND MATERIALS
4.4 Lighting

Nighttime use of the pathways, plazas and places in between should be promoted. Lighting also provides opportunity for public interaction, symbolic reference, and to accentuate built form and plantings.

Lighting design delineate spaces, direct night time traffic flow, and accentuate surfaces and create shadows to give depth to each space. Although dialogue has not occurred for type of fixtures in the public realm, they should reflect sustainability, energy efficiency, and complement the architectural bridge lighting. Final selection to be determined with City staff, design team, City Maintenance and Operations.

**Lighting Opportunities**

- Delinate pathways, road edges, and line of movement
- Inset into walls, steps, and railings, and furnishings for ambient light
- To act has markers for distances or to announce intersections
- Imbed into ground plane to highlight paving pattern and orientation
- Uplight street trees to accentuate tree forms at night
- Sustainable and contemporary light fixtures
LUMINAIRES: DARK SKIES
LIGHT BOLLARDS
DELINEATING SPACES
GROUND OR SEAT INSETS
PLAZA POLE LUMINAIRE
INSET INTO RAILINGS
4.5 Planting

Plant materials and palette should respond to unique site location, program and use, orientation, and climate while considering traffic and people movement, sitelines, safety, and maintenance. Final planting to be approved by City Parks and operations.

1. Urban Areas And Plazas
   • Canopy trees to provide shade, for movement and sitting under, maintaining visibility and sitelines
   • Foundation plantings to provide scale and to provide a year round plant presence
   • Perennials and flowering shrubs to provide seasonal color and interest
   • Retain existing large trees where possible

2. Streetscapes And Sidewalks
   • High canopy hardy street trees that comply with City standards, are pollutant tolerant, have great seasonal color, and year round form
   • Use of tree trenches / structural soil underneath sidewalks to promote healthy and robust rooting systems
   • Low maintenance and water efficient planting strips where space for trees are unavailable, or to retain storm water runoff from roadways

3. Natural Slopes And Multi-Use Pathways
   • Emphasize native Garry Oak meadow ecosystem with tree groupings and pockets of native bulbs, grasses, and wild flowers
   • Native trees, shrubs, and grasses for foundation planting / steep slopes
   • Perennial flowering at nodes and viewpoints
SCULPTURAL GARRY OAKS

URBAN AREAS: SEASONAL PLAZA PLANTING

WEST BANK SLOPES: WILD FLOWERS AND BULBS

NATURAL SLOPES: TREE CLUSTERS AND GRASSES

STREET TREES

SIDEWALK / MEDIAN PLANTING
4.6 Sustainability

The Johnson Street Bridge Public Realm promotes sustainable initiatives through celebrating pedestrian and energy efficient multi-use pathways, increasing surface permeability, water efficient landscapes, and maximizing tree canopy for shade and habitat. The conveyance and movement of stormwater can allow for interactive and educational opportunities for the public.

Although an integrated stormwater and street drainage plan has not been formally discussed with City Engineering for this study site, it may be possible to incorporate a demonstration rain garden or to integrate urban infiltration swales as recently installed at BC Ferry Building on Blanshard Street.

Permeability And Stormwater
- Use permeable surfaces where possible to maximize infiltration and reduce runoff
- Consider raingardens, infiltration swales in the design of stormwater system

Urban Heat Island
- Increase tree canopy for shade and reduce urban heat island and improve urban forest
- Employ current installation technologies to improve longevity and health of urban trees (i.e., structural soils, soil trenches, permeable paving, infiltration cells)

Water Efficiency
- Emphasize water wise and locally adapted plant species and improve biodiversity and regenerative landscapes

Energy Efficiency
- Seamless and intuitive pedestrian and multi-use pathways encourage reducing reliance on cars
- Use of local products and distributors within 500km radius
- Efficient lighting

Public Interaction and Education
- Make infiltration channels and devices visible
- Locate innovative stormwater retention devices in highly visible areas
- Use techniques as education tool; support with interpretive signage
- Accentuate seasonal nature of hydrological cycle, and allow for public - water interaction (i.e., playfullness in summer, ebb and flood in winter etc.)
4.7 Public Art

Public art strengthens the place identity of the site, and can be successful interpretations of the site’s history and use. At large or small scales, expressions of art can be found in furnishing, lighting, signage or other details, adding an intimacy and originality that animate public spaces.

Key placeholders for potential public art locations have been identified. The next steps are to work with City and stakeholders to identify current and future opportunities. The City will be required to outline a process for public art design, procurement, funding, and installation outside of this scope.

Opportunities
- To act has markers for walking distances or wayfinding (series of installations)
- Inset into paving / curbs, railings, signage, walls, plazas, landscape
- Materials: wood, bronze, corten steel, acrylic, digital, LED
- Historical/Modern/Cultural interpretation
- Moveable pieces to celebrate the rotation of bridge
4.8 Signage ➔ ➔

Although a comprehensive signage program is not specifically defined in the scope of works, it is important to acknowledge and consider for future planning.

A signage program will tell the story of the site, explaining to users where they are, direct them where they’re going, and highlight what makes this place unique. There are (3) primary types of signs:

**Wayfinding**
- Consider along the Multi-use Galloping Goose and E&N Rail Trail to assist in direction and identifying the route.

**Interpretive Signage**
- Consider a historical, research, and informative program to identify the chronology of the project, evolution of area, important people, and events
- Locations in viewpoints, adjacent to gathering areas, along railings

**Place Names**
- Identity signs in high traffic areas, intersections, gateway areas, heritage sites, and viewpoints
SIGNAGE PLAN

WAYFINDING: INFO KIOSKS

WAYFINDING: PEDESTRIAN AND BICYCLE

INTERPRETIVE SIGNAGE: AFFIX TO RAILING

PLACE NAME: IN PAVEMENT

PLACE MOUNTED TO WALLS

INTERPRETIVE SIGNAGE: HISTORICAL
Section 5: Costing

The attached cost estimate is loosely based on November 2011 Concept Plans. Detailed design will also provide further accuracy. Due to the preliminary nature of the Drawings, we have allocated general unit prices per area with a contingency of 20% to cover unknowns. Prices do not include:

- Site demolition, cut and fill, removals
- Servicing for lighting, water (irrigation)
- Engineered retaining walls over 6 feet height for slope stability
- Multi-use overpass, streets, crosswalks, bike markings
- Public art
- Taxes, consultant fees, and price volatility of construction market
- Cost Escalation

Refer to attached preliminary cost spreadsheets of Downtown and Victoria West.
### Victoria West - Total Area: 12,750M2 (3.15 AC)

<table>
<thead>
<tr>
<th>ITEM DESCRIPTION</th>
<th>UNIT</th>
<th>QTY.</th>
<th>$ / UNIT</th>
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<tr>
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<td>4 FURNISHINGS</td>
<td>LS</td>
<td></td>
<td></td>
<td>$150,000</td>
</tr>
<tr>
<td>1 BENCHES, BOLLARDS, TRASH, BIKE RACKS</td>
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</tr>
<tr>
<td>2 SIGNAGE: INTERPRETIVE, WAYFINDING, DIRECTIONAL, BANNER ARMS, FLAG POLE, DONOR RECOGNITION ALLOW</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>3 TRAIL LIGHTING / ACCENT LIGHTING</td>
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<tr>
<td>Sub Total Hardscape</td>
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<td>$648,000</td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<tr>
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</tr>
<tr>
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</table>

Notes:
1) Costs are preliminary "supply and installation" for discussion based on SDLA Concept Plan November 2011.
2) Costs do not include site demolition / removal; tree protection fencing; rough grading and preparation of subgrade; site drainage.
3) Costs do not include conduits / core drill for electrical / irrigation.
4) Costs do not include retaining walls, geotech / structural engineering for walls.
5) Costs do not include paving treatment for pedestrian crosswalks, bike markings etc.
6) Costs do not include electrical servicing for lighting, and street lighting.
7) Costs do not include public art.
8) Costs do not include taxes, consultant fees, and price volatility of construction industry.
9) Contingency allowances are applied to cover potential field variations.

### Downtown East - Total Area: 5,250M2 (1.30 AC)

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Section 6: Next Steps

The next steps to advance the public planning and design is:

1. **ESTABLISH AND CONFIRM SCOPE OF SITE WORKS**
   Together with City staff and design team confirm extent of site works

2. **DEVELOP DESIGN**
   Together with City staff and design team develop concepts options to a 50% level for review

3. **REFINE BUDGETING**
   Together with City staff and design team refine design options to suit project timing and budgets. Some items may require phasing.

4. **PUBLIC CONSULTATION**
   Review options with public

5. **CONSTRUCTION DRAWINGS**
   Together with City staff and design team develop concepts options to a Tender and Construction level

6. **APPROVALS + IMPLEMENTATION**
   Upon approval, field services to oversee implementation