

**DATE:** July 5, 2019

**FILE:** 3060-20 / DP 5A 19

**TO:** Chair and Directors  
Electoral Areas Services Committee

**FROM:** Russell Dyson  
Chief Administrative Officer

Supported by Russell Dyson  
Chief Administrative Officer

*R. Dyson*

**RE: Kensington Comprehensive Development Permit  
Lot 3, Plan EPP15507, Island Highway (34083 Yukon Inc)  
Electoral Area A (Baynes Sounds – Denman/Hornby Islands)  
Lot 3, District Lot 154, Nanaimo District, Section 32, Township 1 and District  
Lot 28, Nelson District Plan EPP15507, PID 028-731-531**

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### **Purpose**

To consider a Kensington Comprehensive Development Permit (DP) for the construction of two buildings connected by a trellised walkway, parking area, drainage infrastructure, landscaping and related site works (Appendix A).

### **Recommendation from the Chief Administrative Officer:**

THAT the board approve the Development Permit DP 5A 19 (34083 Yukon Inc) on the property described as Lot 3, District Lot 154, Nanaimo District, Section 32, Township 1 and District Lot 28, Nelson District Plan EPP15507, PID 028-731-531 (Lot 3, Plan EPP15507, Island Highway) for the construction of two buildings connected by a trellised walkway, parking area, drainage infrastructure, landscaping and related site works;

AND FURTHER THAT the Corporate Legislative Officer be authorized to execute the permit.

### **Executive Summary**

- The 7.0 hectare property is located in Electoral Area A in the Union Bay Settlement Node.
- The proposal is to construct two buildings connected by a trellised walkway (floor area of 725 square metres) to be used as a real estate sales centre and for food service/retail. The proposal includes a parking area, landscaping, drainage infrastructure and other related site works.
- The construction of commercial building triggers a Kensington Comprehensive DP. The Comox Valley Regional District (CVRD) Board has limited discretion when reviewing DP applications. Provided the proposal meets the Kensington Comprehensive DP guidelines, the DP must be issued. The discretion lies in whether or not a particular guideline is met.
- The development activities are within a proposed 0.3 hectare lot, which requires subdivision approval from the Ministry of Transportation and Infrastructure (MoTI) and triggers a new DP.
- A Design Proposal, Architectural Renderings and Architectural Drawings detail the general form and character of the development. The form and character of the building references the historic Union Bay Pier with large angled wood columns supporting a large overhang. Additionally, a mural of the historical pier (or other image related to the history of Union Bay) will be displayed on the building face. The design also represents 'natural coastal amenities' through use of glass, wood, concrete, cedar and metal (including green and blue colour accents).

- The proposal demonstrates adequate parking and opportunity for future connectivity (pedestrian, cycling and vehicular) to roads, sidewalks and trails. The main floor of the buildings, walkways and parking area will be barrier free for people with disabilities.
- Proposed signage (freestanding, fascia and hanging) and ‘Dark Sky’ compliant lighting are all consistent with the guidelines.
- The Landscape Plan meets the guidelines by detailing landscaping, including drought resistant and native species where possible, along the road frontages, around buildings and throughout the parking area.
- To address rainwater, green and gray infrastructure are proposed including rain gardens, landscape ponds, underground cistern (to supply water for irrigation) and underground infiltration galleries. Subsurface infiltration galleries/storage will have the ability to connect to a larger stormwater system in the future. The rainwater management plans meet the guidelines.
- To achieve guidelines pertaining to energy conservation, water conservation and reduction in greenhouse gas emissions the buildings have solar panels, are designed to be net zero (using only as much or less energy than it produces) and conserve water through rainwater capture for irrigation and use of xeriscaping.
- The site has contamination issues due to its previous industrial use. The Provincial government issued a release letter to allow this DP to proceed while the proponent continues to work with the Province on a remediation plan.
- The proposal meets the policies of the Regional Growth Strategy (RGS) and Official Community Plan (OCP), as well as, the requirements of the Zoning Bylaw.
- The Advisory Planning Commission (APC) A reviewed the proposal on June 11, 2019. They supported the proposal.
- Based on a detailed staff review of the guidelines (Appendix C), staff conclude that the guidelines have been adequately addressed, therefore, the issuance of the DP is supportable (Appendix A).

Prepared by:

***B. Labute***

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Brianne Labute, MCIP, RPP  
Planner

Concurrence:

***T. Trieu***

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Ton Trieu, MCIP, RPP  
Manager of Planning Services

Concurrence:

***S. Smith***

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Scott Smith, MCIP, RPP  
General Manager of Planning  
and Development Services  
Branch

**Stakeholder Distribution (Upon Agenda Publication)**

Owner	✓
Agent	✓

**Background/Current Situation**

An application has been received for a Kensington Comprehensive DP to construct two buildings connected by a trellised walkway. One half of the building will be used as a real estate sales centre and offices. The other half is expected to be a café/deli or another food service or retail use. Collectively the buildings are referred to as the “Discovery Centre”. The subject property is 7.0 hectares in size and is located in Comprehensive Development Area 3 (CDA-3). The property is surrounded by the Island Highway No. 19A (Island Highway) to the west, vacant lands to the north and east, and the sea to the south (Figures 1 and 2). The Discovery Centre will be 1.5 storeys with a total floor area of 725 square metres (Figures 3 and 4). Once real estate sales are completed, the real

estate centre must be converted to another permitted use in the Mixed-Use Commercial-Residential (MUCR) zone.

All submission documents show a proposed 0.3 hectare lot and associated internal roads within the existing 7.0 hectare lot (Figure 5). This layout has not been approved by MoTI who has jurisdiction over subdivision approvals. If the subdivision layout changes after the DP is issued, an amendment may be required.

## **Planning Analysis**

### Official Community Plan Analysis

The subject property is designated Settlement Node in the Official Community Plan being the “Rural Comox Valley Official Community Plan No. 337, 2014”. Settlement Nodes are intended to be the primary growth areas within the electoral areas. Section 88 of the OCP requires the applicant to obtain a Kensington Comprehensive DP prior to the construction of a building or structure. The Discovery Centre and associated parking area is outside of the Aquatic and Riparian Habitat Development Permit Area (DPA).

### Kensington Comprehensive Development Permit Area

The CVRD Board has limited discretion when reviewing DP applications. Provided the proposal meets the Kensington Comprehensive DP guidelines (Appendix B), the DP must be issued. The discretion lies in whether or not a particular guideline is met. Other planning approvals, such as a Development Variance Permit or a Zoning Bylaw amendment, are discretionary and site specific. Many of the guidelines are not applicable at this stage, but will be at time of subdivision. A subdivision application to MoTI will trigger a new Kensington Comprehensive DP.

An analysis of how the proposal meets the DP guidelines is summarized below. For a more detailed review of the guidelines, please see Appendix C.

### *General Form and Character*

The guidelines note the character of the building should reflect the rich heritage values of Union Bay and the natural coastal amenities of Vancouver Island utilizing a “west coast” style comprised of stone, wood and other natural building materials. The following documents (Appendix A) detail the design of the development:

1. Design Rationale, dated June 26, 2019, prepared by Kim Smith, Architect AIBC, FRAIC, LEED A.P of Helliwell + Smith Blue Sky Architecture Inc.
2. Architectural Renderings, dated June 26, 2019, prepared by Kim Smith, Architect AIBC, FRAIC, LEED A.P of Helliwell + Smith Blue Sky Architecture Inc.
3. Architectural Drawings, dated June 26, 2019, prepared by Kim Smith, Architect AIBC, FRAIC, LEED A.P of Helliwell + Smith Blue Sky Architecture Inc.

The Discovery Centre is intended to be designed to net zero standards, utilizing only as much or less energy than it produces. A low sloped folded metal roof peaks near the northwest corner signifying the gateway into the first phase of the development. The proposed height is 10.6 metres, although this may vary when the flood construction level is finalized at the building permit stage (maximum height permitted is 13.7 metres). The form and character references the Union Bay Historical Pier with large angled wood columns supporting a large overhang. Additionally, a mural of the historical pier (or other image related to the history of Union Bay) will be featured on the north side of the building. The design represents a “west coast style” through the use of cedar siding, metal siding and architectural concrete with large windows framed in natural aluminum. The architect describes the building design as a mix of traditional island and contemporary architecture (Figure 3).

*Access, Connectivity and Parking*

Twenty two parking spaces (including two reserved for people with disabilities) and ten bicycle spaces are proposed (Figure 4). The main floor of the buildings, sidewalks around buildings and parking lot are designed to be barrier free for people with disabilities. The site accommodates pedestrians and cyclists with two access points separate from the parking lot and sidewalks around the buildings. The sidewalks have a different landscape treatment to differentiate them from the parking area. The guidelines encourage “public gathering spaces” within the overall development. The site plan shows outdoor benches and an outdoor seating area associated with the café/deli to encourage public use; however, the property is privately owned, not public lands, and the owner ultimately controls public access. The siting of the buildings does not impede future public access to the foreshore. Public access to the foreshore and other locations will be established at time of building permit or subdivision when the parks and trails commitments in the Master Development Agreement (MDA) are triggered.

The guidelines speak to pedestrian, cycling and vehicular connectivity, which will be mainly addressed at time of subdivision. For the purpose of this DP, the site plan adequately demonstrates opportunity for two pedestrian access points from Russell Street and vehicle access from Strata Road with different landscaping treatments to avoid conflicts. Should the roads shown on the site plan not be approved by MoTI at time of subdivision, an amendment to the DP may be required.

*Signage*

The guidelines allow a freestanding sign, fascia signs and encourage smaller hanging signs for visual variety. In accordance with the guidelines, the freestanding sign will be visible from the Island Highway, 3 square metres in size, 1.2 metres in height and within a landscaped area. Fascia signs will have a maximum area of 4 square metres with a cumulative maximum of 9 square metres. Signs may be illuminated and should be integrated into the design of the building. The guidelines do not support backlit signs. Staff interpret this guideline to mean signs that are completely illuminated with vinyl graphics. Concealed backlit letters on signage are acceptable as they do not represent the sign type the guidelines are discouraging. The following sign types are proposed:

1. Freestanding sign with stainless steel 3D lettering pin-mounted on a metal panel, then pin-mounted on a concrete form. The sign will incorporate concealed backlighting.
2. Type A is “Union Bay Estates” in stainless steel 3D lettering pin mounted on the wall with concealed backlighting. Type A signs are featured in three locations on the building.
3. Type B is “Discovery Centre” in stainless steel 3D lettering flush mounted on the wall and is featured in two locations.
4. Type C is “Café” and “Deli” (exact words, to be determined) in stainless steel 3D lettering on metal backboard suspended from soffit and is featured in two locations.

The proposed signage is consistent with the guidelines.

*Landscaping and Screening*

The natural vegetation on site has been heavily modified due to the former industrial use. The proposed building site has been cleared of sparse vegetation. The Landscape Plan, dated June 26, 2019, prepared by Michael Patterson, BCSLA, CSLA of Perry + Associates Inc. (Appendix A) details landscaping along the frontage of existing and future roads and throughout parking areas in accordance with the DP guidelines. The parking lot is to be shielded from the highway and adjacent properties. As such, a bulk of the landscaping is proposed adjacent to the Island Highway. The landscape plan is limited to the proposed 0.3 hectare lot (subject to MoTI approval). As future commercial buildings will trigger new DPs, it is reasonable to review the landscaping in relation to the proposed 0.3 hectare lot rather than the entire lot. Future DPs can ensure the landscaping along the remaining frontage is adequate for the type and scale of the development. The landscape plan



incorporates many native and drought resistant species that will not require pesticide use meeting several DP guidelines promoting xeriscaping. An irrigation system will be installed, which will be supplemented by rainwater capture stored in an underground cistern. A security deposit will be collected for 125 per cent of the estimated cost of the landscaping works.

Service elements should be screened from the public. The waste disposal/recycling bins are fully screened by a metal enclosure and the small loading area for the café is not screened; however, the loading door is designed with a metal door that is cohesive with the rest of the development.

### *Lighting*

The proposed lighting is consistent with the CVRD's DarkSky Policy. The lights, which are urban post mount luminaire with powder coated black finishes, are fully shielded so they do not shine into adjacent properties and use LED technology for energy efficiency. Exact location and number of light fixtures in the parking area to be determined when a full light level analysis is completed by an electrical consultant at time of building. Additional lights may be added, but not reduced, provided they are DarkSky Compliant.

### *Siting and other design considerations*

The design of the buildings and open spaces takes crime prevention through environmental design into consideration in the following ways: clear indication of where pedestrians are welcome through use of distinct walkway surfacing; clear indication of property boundaries through landscaping, walkway surfacing and parking surfacing; and, appropriate lighting at pedestrian entrances and throughout proposed lot.

Buildings shall be designed and situated to maximum view corridors. The outdoor seating area for the café is orientated towards the ocean to maximize views. The low profile of the building is not expected to impede ocean views of future buildings and is consistent with the guideline to promote a sense of a small scale village town centre.

The guidelines encourage pedestrian oriented, continuous street fronting development with buildings that line the street with minimum front setbacks or with setbacks to encourage outdoor retail and service use. Staff interpret this guideline to be relevant to internal roadways, not the Island Highway. The Zoning Bylaw requires a minimum building setback of 19.5 metres from the centre line of Island Highway. Reducing the building setback may impact future expansion ability. MoTI will determine the location of any new highway accesses. In order to keep vehicles moving safely and not impact traffic flow, accesses off the Island Highway are generally kept to a minimum. As such, it is appropriate to have a landscaped berm between the Island highway and buildings rather than street fronting development. Setbacks from proposed internal roads (subject to MoTI approval) are appropriate because they create space for sidewalks around the building encouraging outdoor use, which is consistent with the guidelines.

### *Rainwater*

Rainwater will be addressed through a combination of green and gray infrastructure. Roof drainage will be collected in three large roof scuppers. The scupper on the east side of the roof will drain into a rain garden. The two scuppers on the north and south side of the roof will drain into rainwater collection ponds under the trellised walkway. These ponds will both retain water and be connected to an underground cistern. Water from the cistern will be used to supplement landscape irrigation and also be recirculated back to the two ponds. Between the two rainwater collection ponds, a second rain garden will absorb any overflow from the ponds during storm events. Runoff from the rain gardens and overflow from cistern (in a storm event) will be routed into subsurface infiltration galleries.

A Rainwater Management Plan, dated June 26, 2019, prepared by Adam Cooper, Eng. L. and Bob Hudson, P. Eng of McElhanney Consulting Services provides further detail on drainage infrastructure. Surface runoff from the parking lot and walkways will be collected in catch basins equipped with grit sumps, upstream of proposed infiltration galleries, to remove settleable solids and debris. Runoff from rain gardens/cistern and parking lot areas should be routed into a series of on-site subsurface storage/infiltration facilities. Exact locations and configuration will be defined during detailed servicing design. As there is no stormwater system for the broader development at this time, on-site storage should accommodate a 1 in 10 year, 24 hour storm event. The report notes that a control manhole should be installed at the point of connection to a future off-site stormwater system. The use of rain gardens, ponds and cistern for rainwater capture and re-use was not accounted for in the modelling for the subsurface storage/infiltration facilities and will provide an increased factor of safety by serving to further reduce peak runoff rates and total volumes.

#### *Energy Conservation, Water Conservation and Reduction of Greenhouse Gas Emissions*

The guidelines require the applicant to contemplate how the proposed development will incorporate energy efficient systems or features. The building is designed to a net zero standard, uses solar panels, includes native plant species to reduce irrigation requirements, reuses roof water for irrigation and utilizes LED lights in all light fixtures. Whether the owner will pursue the net zero certification is unknown and is encouraged, but not required by the guidelines. The orientation, species and size of trees has been considered so as not to interfere with sunlight access to solar panels, and to utilize deciduous species to maximize winter sunlight exposure and to shade the building during summer sunlight exposure.

#### Contaminated Site

SLR Consulting is working with the Ministry of Environment and Climate Change Strategy (MoECCS) Environmental Emergencies and Land Remediation Branch to address contamination issues associated with the former industrial use of the lands. As per Section 557 (2) of the *Local Government Act* (RSBC, 2015, c. 1) (LGA), a DP cannot be issued until the owner receives a release letter, approved remediation plan or certificate of compliance from the Director under the *Environmental Management Act*. On May 16, 2019, the MoECCS issued a letter stating the CVRD could proceed with the issuance of this specific DP.

#### Master Development Agreement

Union Bay Estates is governed by an MDA that was approved by the CVRD Board in 2010 and amended in December 2017. The agreement details community amenities that the developer will provide as well as the installation of infrastructure to ensure road, water, and sewer servicing are available to the lands. The DP application does not trigger any commitments outlined in the MDA. However, prior to the issuance of a building permit, a number of substantial commitments need to be fulfilled such as donation of affordable housing lots, site servicing, and initial parks and trail dedication. The developer's agent is aware that the building permit represents a substantial trigger point.

#### Zoning Bylaw Analysis

The subject property is zoned Kensington Comprehensive Development Zone (K-CD) and sub-zoned MUCR in Bylaw 2781, being the "Comox Valley Zoning Bylaw, 2005". The MUCR zone permits a real estate sales centre and commercial uses. As the proposed lot, shown on Figure 5, does not currently exist, the zoning provisions were reviewed in relation to the current lot. At time of subdivision, if the buildings are completed, the zoning would be reviewed to address any non-conforming siting issues. The proposal has endeavored to meet setbacks for the proposed lot, but there is no guarantee this exact configuration will be approved by MoTI. Off-street parking requirements are twenty parking spaces (accounts for future conversion of real estate centre to

offices) and two bicycle parking spaces. Twenty two spaces are proposed, two which are reserved for people with disabilities, and ten bicycle parking spaces. The proposal is consistent with the Zoning Bylaw.

### Floodplain Considerations

The property is subject to Bylaw No. 2782, being the “Floodplain Management Bylaw, 2005” and provincial *Flood Hazard Area Land Use Management Guidelines* “provincial guidelines”, whichever is more restrictive. The architectural drawings reference a flood construction level of 5.0 metres with the notation that the exact flood construction level will be determined at the building permit stage (not a requirement of the DP) when adherence with Bylaw No. 2782 and the provincial guidelines is confirmed.

### **Policy Analysis**

Sections 488(1) and 490 of the LGA allow a local government to designate DPAs and establish guidelines within the OCP for numerous purposes, including the establishment of objectives for the form and character of commercial and industrial development. Section 491(7) specifies that a DP relating to commercial form and character may include requirements respecting the character of the development, including landscaping, and the siting, form, exterior design and finish of buildings and other structures.

Pursuant to Bylaw No. 337, development within the Kensington Comprehensive DPA as identified on map 5 of the OCP requires a DP prior to the commencement of construction, addition to or alteration of a building or other structure.

### **Options**

The CVRD board could approve or deny the DP. Due to limited discretionary authority, the application must only be denied if the board feels it does not meet the DPA guidelines. Given the above analysis and staffs opinion that the application meets the guidelines, planning staff recommends approval of the DP.

### **Financial Factors**

Applicable fees have been collected for this application under the Bylaw No. 328, being the “Comox Valley Regional District Planning Procedures and Fees Bylaw, 2014.” Pursuant to Bylaw No. 328, a financial performance bond of \$132,796.74 (125 per cent of \$106,237.39) is required to ensure the landscaping is completed in accordance with the Landscape Plan. The Performance Bond will be released in accordance with Bylaw No. 328.

### **Legal Factors**

This report and the recommendations contained herein are in compliance with the LGA and CVRD bylaws. DPs are permitted in certain circumstances under Sections 488, 489 and 491(7) of the LGA.

### **Regional Growth Strategy Implications**

The Comox Valley Regional Growth Strategy, Bylaw No. 120, being the “Comox Valley Regional District Regional Growth Strategy Bylaw No. 120, 2010”, designates the subject property within the Settlement Node. Settlement Nodes have been identified to accommodate compact forms of development. The RGS acknowledges that the Union Bay Settlement Node will see considerable growth with the development and build out of Union Bay Estates.

### **Intergovernmental Factors**

On May 16, 2019, the CVRD received a letter from MoECCS stating the CVRD could proceed with the issuance of this specific DP. Approval of any future applications continues to be suspend until

the applicant receives a release letter, approved remediation plan or certificate of compliance from the Director under the *Environmental Management Act*.

**Interdepartmental Involvement**

This application was circulated to the following CVRD departments: engineering services, transit and sustainability, bylaw compliance, community parks and building services. CVRD staff have no outstanding concerns with the application.

**Citizen/Public Relations**

The APC for Electoral Area A reviewed the application at their June 11, 2019 meeting. The minutes from the meeting will be forwarded to the Electoral Areas Services Committee. The APC supported the proposal for the following reasons: adheres to the OCP, building designed to net zero standards, rainwater control, speaks to the history of Union Bay and focus on pedestrian-friendly layout.

The LGA does not require public notification or consultation for DPs. Staff maintain a Union Bay Estates page on the CVRD website to keep the public informed about active planning applications: [www.comoxvalleyrd.ca/unionbayestates](http://www.comoxvalleyrd.ca/unionbayestates).

Attachments: Appendix A – “Kensington Comprehensive Development Permit – DP 5A 19”  
Appendix B – “Kensington Comprehensive Development Permit Guidelines”  
Appendix C – “Detailed staff review of Development Permit Guidelines”

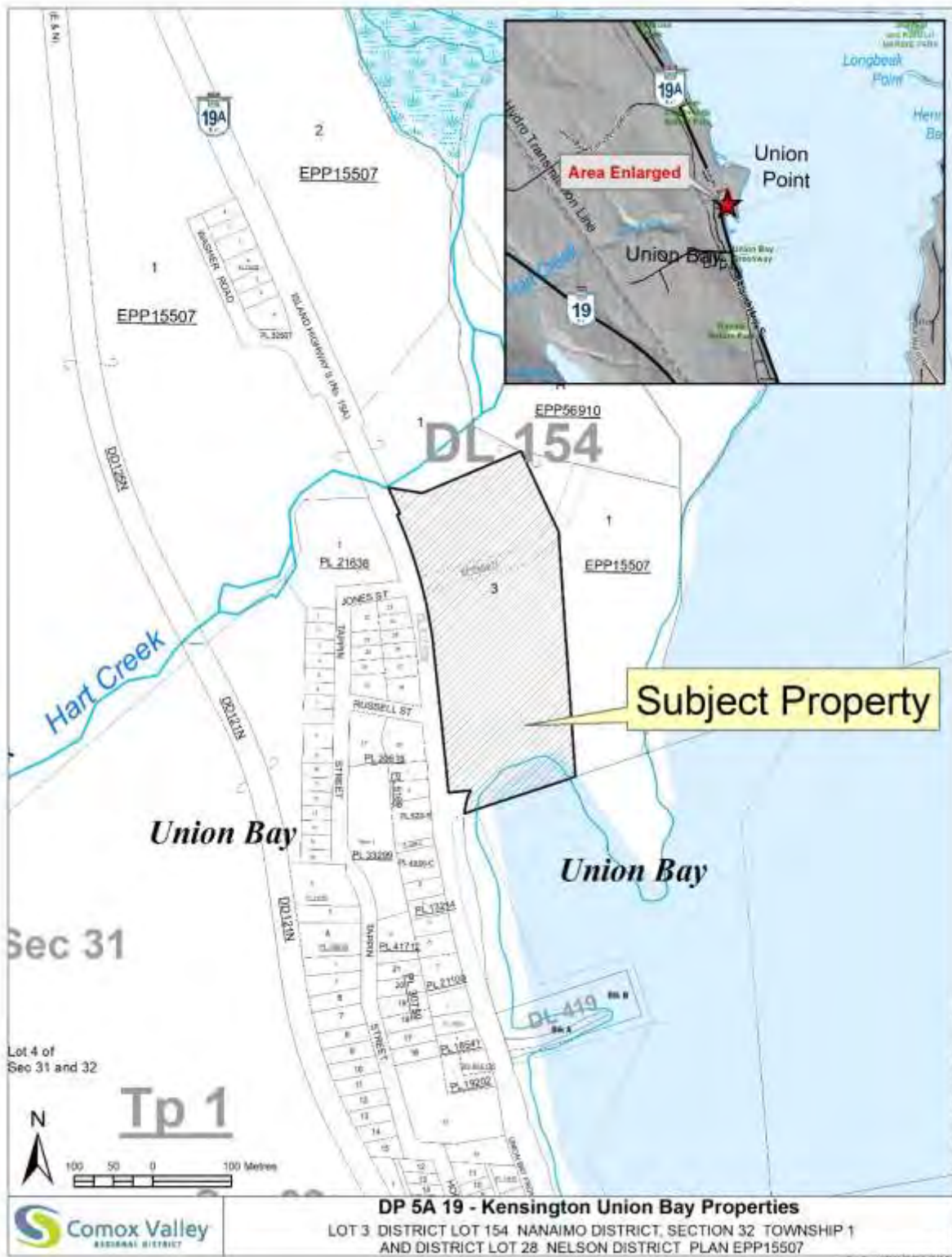


Figure 1: Subject Property Map



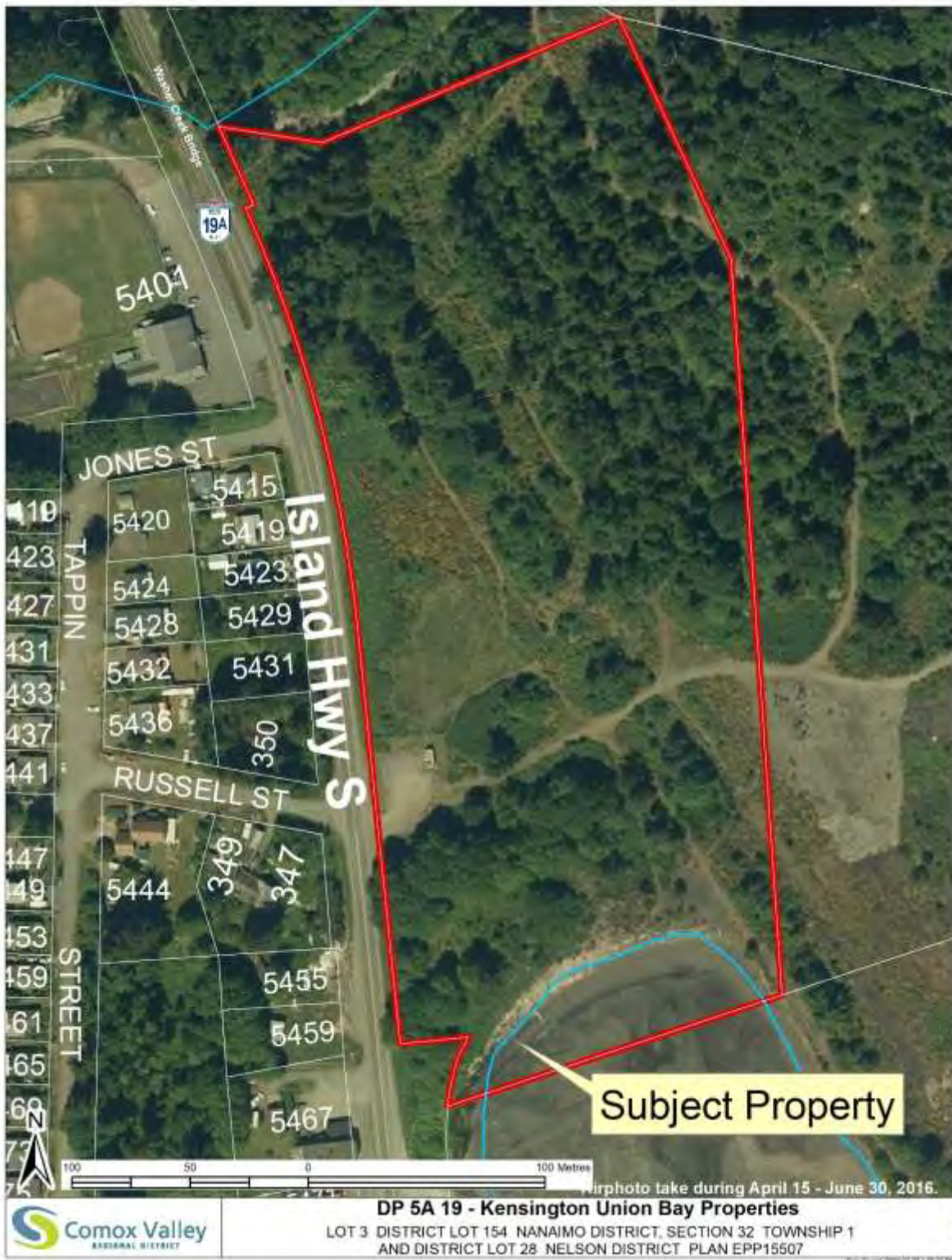


Figure 2: Aerial Photo





Figure 3: Architectural Renderings

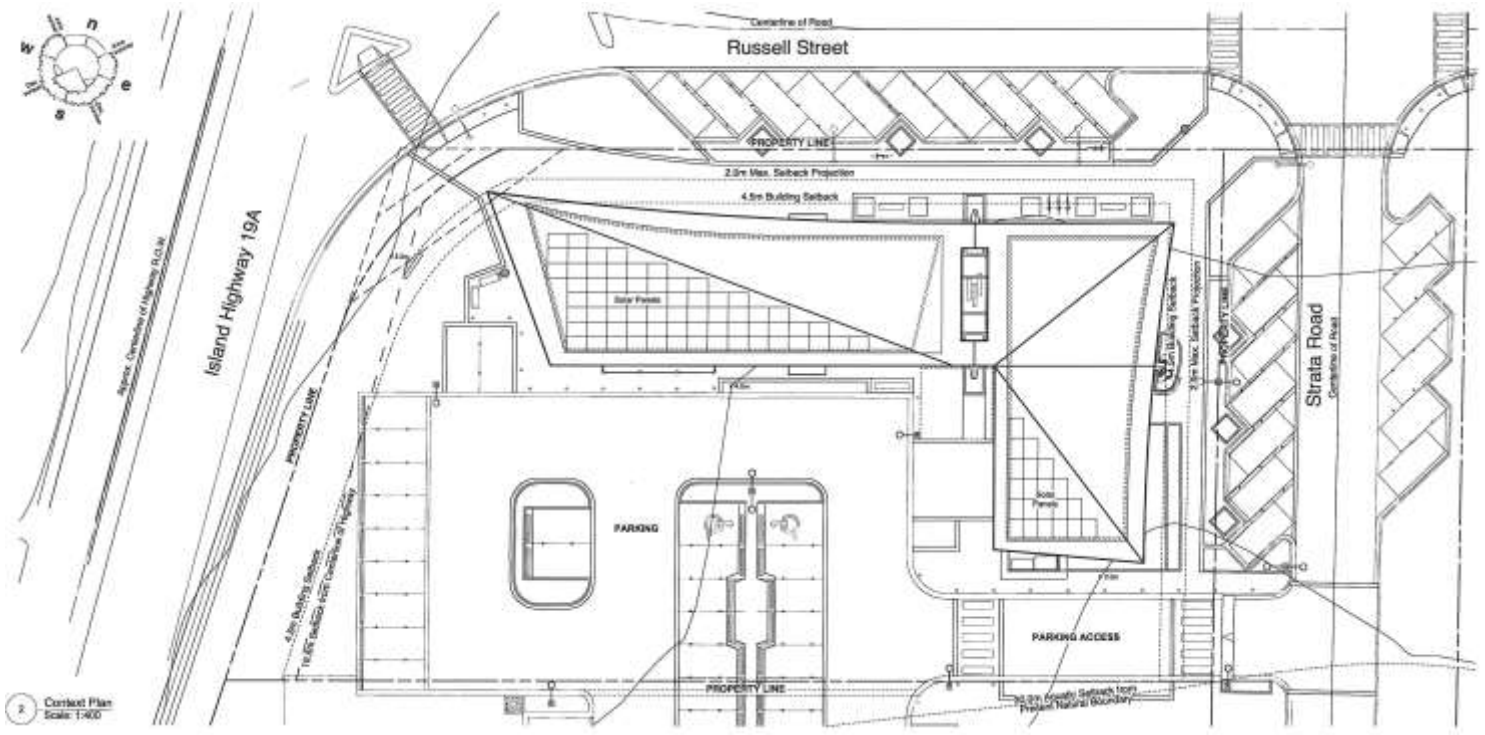


Figure 4: Site Plan





Figure 5: Proposed 0.3 Hectare Lot (subject to MoTI approval)

**DP 5A 19**

**TO: 34083 Yukon Inc., Inc. No. A-56440**

1. This Development Permit (DP 5A 19) is issued subject to compliance with all of the bylaws of the Comox Valley Regional District applicable thereto, except as specifically varied or supplemented by this permit for the **purpose of constructing two commercial buildings connected by a trellised walkway, parking area, drainage infrastructure, landscaping and related site works.**

2. This Development Permit applies to, and only to, those lands within the Comox Valley Regional District described below:

**Legal Description: Lot 3, District Lot 154, Nanaimo District, Section 32, Township 1 and District Lot 28, Nelson District Plan EPP15507**

**Parcel Identifier (PID): 028-731-531 Folio: 771 10821.060**

**Civic Address: Lot 3, Plan EPP15507, Island Highway**

3. The land described herein (Schedule A) shall be developed strictly in accordance with the following terms and conditions and provisions of this permit:

**Construction and Development Activities:**

- i. THAT the construction and development activities shall be in accordance with the following:
  - a. Design Rationale, dated June 26, 2019, prepared by Kim Smith, Architect AIBC, FRAIC, LEED A.P of Helliwell + Smith Blue Sky Architecture Inc and attached as Schedule B;
  - b. Architectural Renderings, dated June 26, 2019, prepared by Kim Smith, Architect AIBC, FRAIC, LEED A.P of Helliwell + Smith Blue Sky Architecture Inc and attached as Schedule C; and
  - c. Architectural Drawings, dated June 26, 2019, prepared by Kim Smith, Architect AIBC, FRAIC, LEED A.P of Helliwell + Smith Blue Sky Architecture Inc and attached as Schedule D;
- ii. THAT no construction material or debris be dumped on Island Highway No. 19A, during or after site development and that such material be disposed of offsite at an approved location;

**Landscaping:**

- iii. THAT the proposed landscaping is completed and maintained in accordance with the Landscape Plan, dated June 26, 2019, prepared by Michael Patterson, BCSLA, CSLA of Perry + Associates Inc. and attached as Schedule E;
- iv. THAT landscaping must be completed within 12 months of an occupancy permit

being issued;

- v. THAT all landscaping shall be irrigated and maintained by the property owner;
- vi. THAT the applicant provide a security deposit in the form of an Irrevocable Letter of Credit or a Security Bond in the amount of (125 per cent of \$106,237.39) for the implementation of Landscape Plan (Schedule E). The security deposit will be released in accordance with Bylaw 328 being the “Comox Valley Regional District Planning Procedures and Fees Bylaw No. 328, 2014”;

**Drainage:**

- vii. THAT the rainwater management infrastructure is completed and maintained in accordance with the following:
  - a. the Rainwater Management Plan, dated June 26, 2019, prepared by Adam Cooper, Eng. L. and Bob Hudson, P. Eng of McElhanney Consulting Services and attached as Schedule F;
  - b. Architectural Renderings, dated June 26, 2019, prepared by Kim Smith, Architect AIBC, FRAIC, LEED A.P of Helliwell + Smith Blue Sky Architecture Inc and attached as Schedule C; and
  - c. Architectural Drawings, dated June 26, 2019, prepared by Kim Smith, Architect AIBC, FRAIC, LEED A.P of Helliwell + Smith Blue Sky Architecture Inc and attached as Schedule D;

**Signage and Lighting:**

- viii. THAT all lighting must be in compliance with the Comox Valley Regional District’s DarkSky policy hereto attached as Schedule G;
  - ix. THAT the signage and lighting shall be in accordance with the following:
    - a. Architectural Drawings, dated June 26, 2019, prepared by Kim Smith, Architect AIBC, FRAIC, LEED A.P of Helliwell + Smith Blue Sky Architecture Inc and attached as Schedule D; and
    - b. Landscape Plan, dated June 26, 2019, prepared by Michael Patterson, BCSLA, CSLA of Perry + Associates Inc. and attached as Schedule E;
  - x. THAT exact location and quantity of light fixtures in the parking area may modified as per the recommendations of an electrical consultant provided the total number of light fixtures shown on Schedule E is not reduced;
  - xi. THAT neither signs nor any external building surfaces shall be equipped with flashing, oscillating or moving lights or beacons.
4. This Development Permit is issued following the receipt of an appropriate site declaration from the Property Owner.
  5. This Development Permit (DP 5A 19) shall lapse if construction is not substantially commenced within two (2) years of the Comox Valley Regional District Board’s resolution regarding issuance of the development permit (see below). Lapsed permits cannot be renewed; however, a new application for a second development permit can be applied for in order to complete the remainder of the work.

6. This Development Permit is *not* a Building Permit.

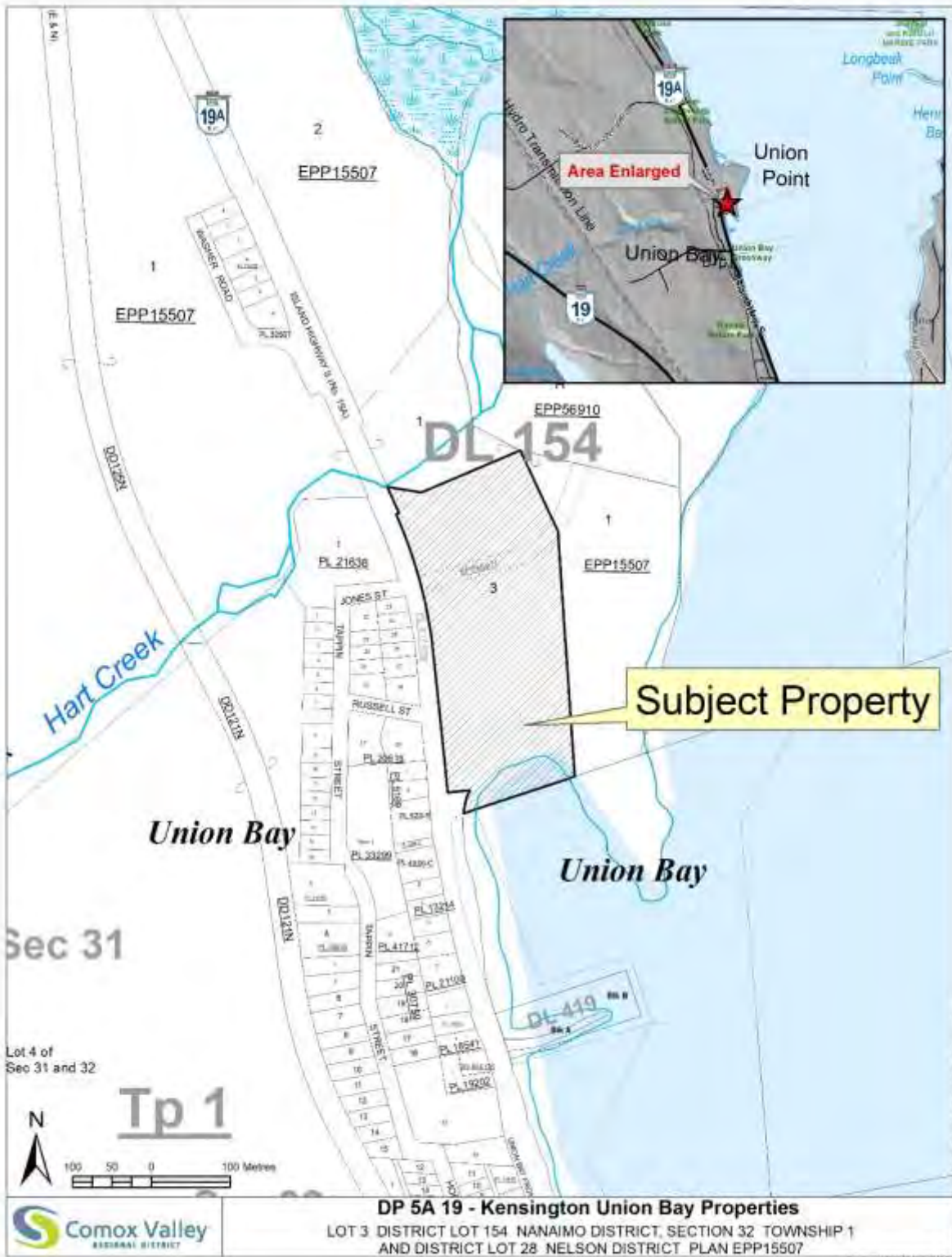
CERTIFIED as the **DEVELOPMENT PERMIT** issued by resolution of the board of the Comox Valley Regional District on \_\_\_\_\_.

\_\_\_\_\_  
James Warren  
Corporate Legislative Officer

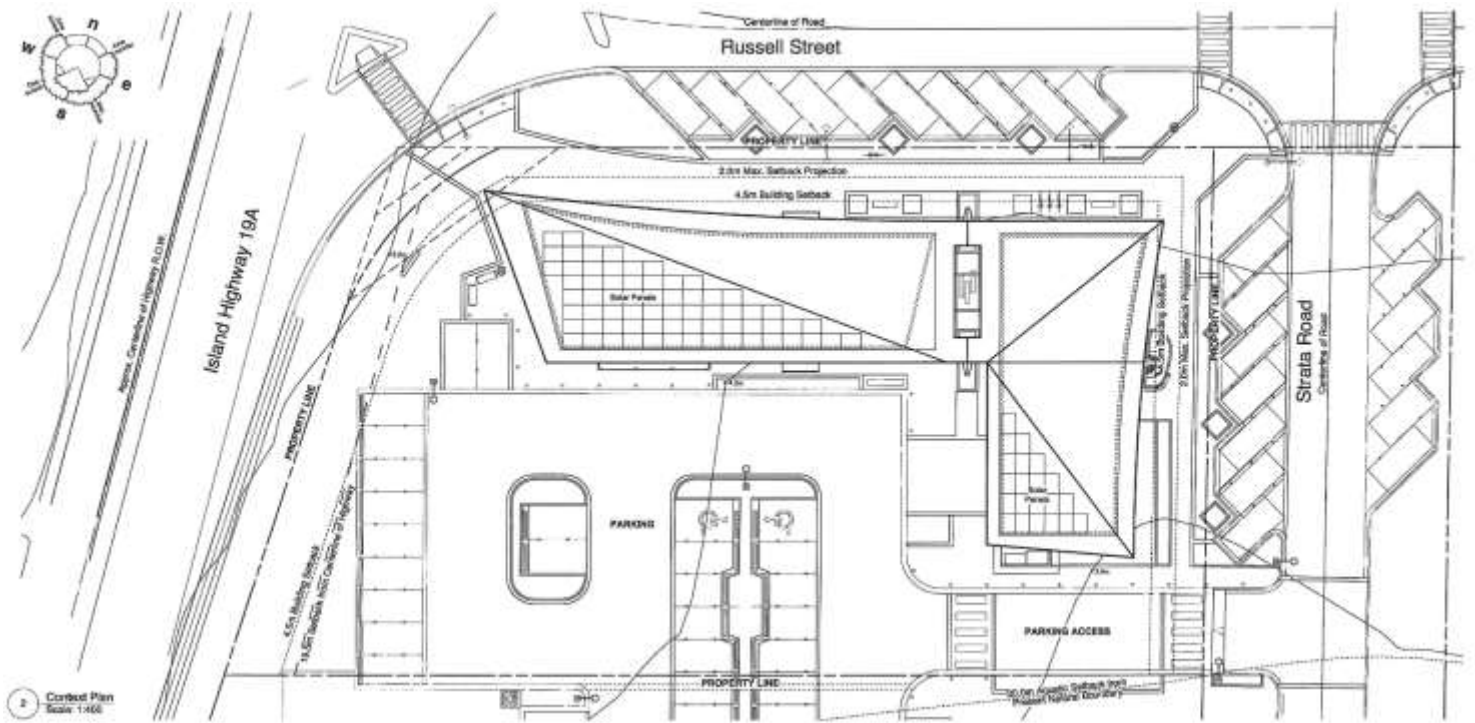
Certified on \_\_\_\_\_

- Attachments:
- Schedule A – “Subject Property and Site Plan”
  - Schedule B – “Design Rationale, dated June 26, 2019”
  - Schedule C – “Architectural Renderings, dated June 26, 2019”
  - Schedule D – “Architectural Drawings, dated June 26, 2019”
  - Schedule E – “Landscape Plan, dated June 26, 2019”
  - Schedule F – “Rainwater Management Plan, dated June 26, 2019”
  - Schedule G – “DarkSky Policy”

### Schedule A Subject Property Map



### Site Plan





## **UNION BAY DISCOVERY CENTRE** **Island Highway S, Union Bay, BC**

### **Design Rationale**

The Union Bay Discovery Centre is the first building proposed for Union Bay Estates. The building conforms to the Union Bay Design Guidelines.

The building will initially be comprised of a sales centre, offices, a trellised walkway connecting to a deli/ convenience store and café. Conforming to the CDA-3, the Sales Centre will be converted to other professional service and office uses after the real estate sales are finished. The café/ deli will continue with a flexible use of food services and retail.

The building is intended to be designed to net zero energy standards, utilizing only as much or less energy than it produces.

The building has a low sloped folded metal roof with solar panels on the southern exposure. The ridge rises to a peak at the northwest corner of the property, acting as a gateway to the first phase of Union Bay Estates.

The Island Highway façade references the past Union Bay wooden pier with large angled wood columns supporting the generous roof overhang, in front of a modern curtain wall, wood and concrete clad facade. An exposed timber frame structure behind the curtain wall facade blends old and new, with a mix of traditional island and contemporary architecture.

The proposal has 22 parking spaces on site for office, sales centre and restaurant/ deli including 2 accessible parking spaces. There are 10 secure bicycle parking spaces.

### **Public Realm + Landscape**

The principal planning concept for The Union Bay Discovery Centre is to create a vibrant social beginning to the Union Bay Estates development with an iconic building. A new commercial storefront will add life to the entrance to the development on Russell Street.

We are envisioning a neighbourhood café in the eastern wing of the building, with indoor and outdoor seating, and perhaps a deli/ convenience store. This will service the local Union Bay neighbourhood as well as those locally employed in the area.

## **Architectural Response**

The building is a one and a half story wood frame building that wraps around the north and east part of the site, defining the street edges and sidewalks.

The cladding is a mix of cedar siding, metal siding, and architectural concrete with a contemporary curtain wall of energy-efficient smart glass. Windows will be framed with natural aluminum. The roof is galvalume standing seam metal with photovoltaic solar panels. A south facing second story balcony attached to the offices will have glass balcony guards with wood rails.

The low slope, folded rooflines rise from east to west and north to south. The roof form creates a recognizable iconic profile for the building. The roof sweeps out to create a wide covered outdoor area in front of the café on the east side of the building.

Roof drainage will be collected in three large roof scuppers. The scupper on the east side of the building will drain into a landscape rain garden with runoff routed into the infiltration galleries. The two scuppers on the north and south sides of the building will drain into rainwater collection ponds that will retain water and be routed into an underground cistern (located on the Architectural Site Plan). Water from the cistern will be used to supplement landscape irrigation and also be recirculated back to the landscape ponds. Between the two landscape ponds, a second rain garden will absorb any overflow from the ponds during storm events. Overflow scuppers at the end of each pond will direct overflow into the rain garden which will be routed into the infiltration galleries. Any overflow from the cistern will be routed into the infiltration galleries.

Surface runoff from the parking lot and walkways will be collected in catch basins. Both surface and any roof runoff, unless captured, will be routed into a series of infiltration galleries proposed within the parking lot area (per the Drainage Plan). Exact locations and configuration of the underground cistern, catch basins, and infiltration galleries will be defined during detailed servicing design.

## **Project Components**

### ***Access, Parking, Loading***

Access for parking, loading, garbage and recycling will be from the laneway on the southeast side of the property. Garbage and recycling bins will be screened with metal clad fencing. Garbage and recycling bins will be bear proof roll down bins.

Loading for the commercial component will be from the loading bay provided on the site. Required parking for the building is 14 spaces and we are providing 22 spaces, including 2 accessible parking spaces. Required secure bicycle parking spaces are 2 and we are providing 10 spaces.

The building is designed to provide barrier-free access throughout the main floor level with circulation, servicing and other provisions as per Section 3.8 of the BCBC. Barrier-free access is also provided from the parking areas to all principle entrances of the building (all located at sidewalk level), incorporating flush curbs, curb cuts, and sidewalks around the perimeter of the building and Café patio.

### ***Density***

Allowable Floor Area Ratio on this site is 2,787 sq.m. and we are proposing 724.6 sq.m. Allowable Site Coverage is 90% and we are proposing 21.4% site coverage.



***Landscaping***

The landscaping plan, where possible, incorporates native and drought-resistant plants that are considered to be pesticide-free, and includes an irrigation system supplemented by rainwater capture.

The orientation, species and sizes of trees has been considered so as not to interfere with sunlight access to solar panels, and to utilize deciduous species to maximize winter sunlight exposure and to shade the building against summer sunlight exposure.

Illumination of the parking areas has been designed according to a preliminary analysis of lighting levels. The location and number of Dark Sky compliant fixtures will be subject to confirmation by an electrical consultant.

***Site Servicing***

The building will be tied into a waste water treatment facility developed for Union Bay, which will be complete before occupancy of this building.

Potable water will be provided from the Union Bay water system. This service can provide irrigation supply to landscaped areas. Landscape irrigation will also be supplemented by rainwater captured in the underground cistern by way of roof drainage and rainwater collection ponds.

***Conclusion***

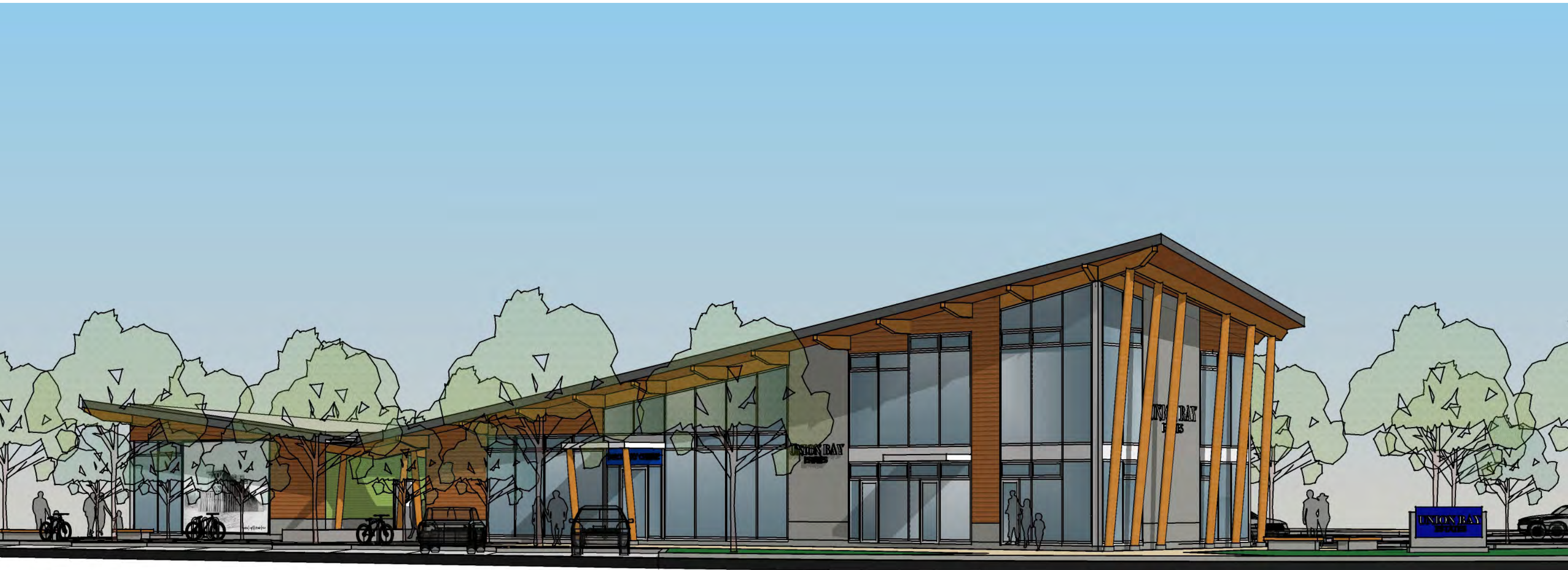
The Union Bay Discovery Centre will provide a mixed-use building with offices and a sales centre on Russell Street, and deli/ café on Strata Street. As a gateway to this new sustainable community and village, the building will set a high-quality precedent for Union Bay Estates.





**Union Bay Estates • Discovery Centre**  
View of North-West Corner from Island Highway at Russell Street



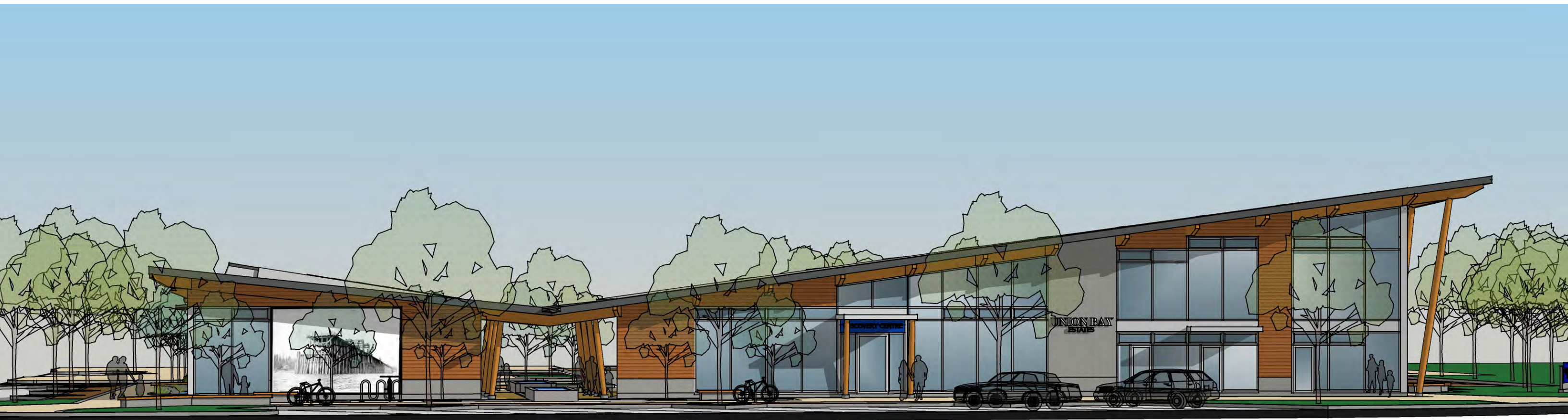


**Union Bay Estates • Discovery Centre**

**View from corner of Island Highway and Russell Street, approaching from the North**

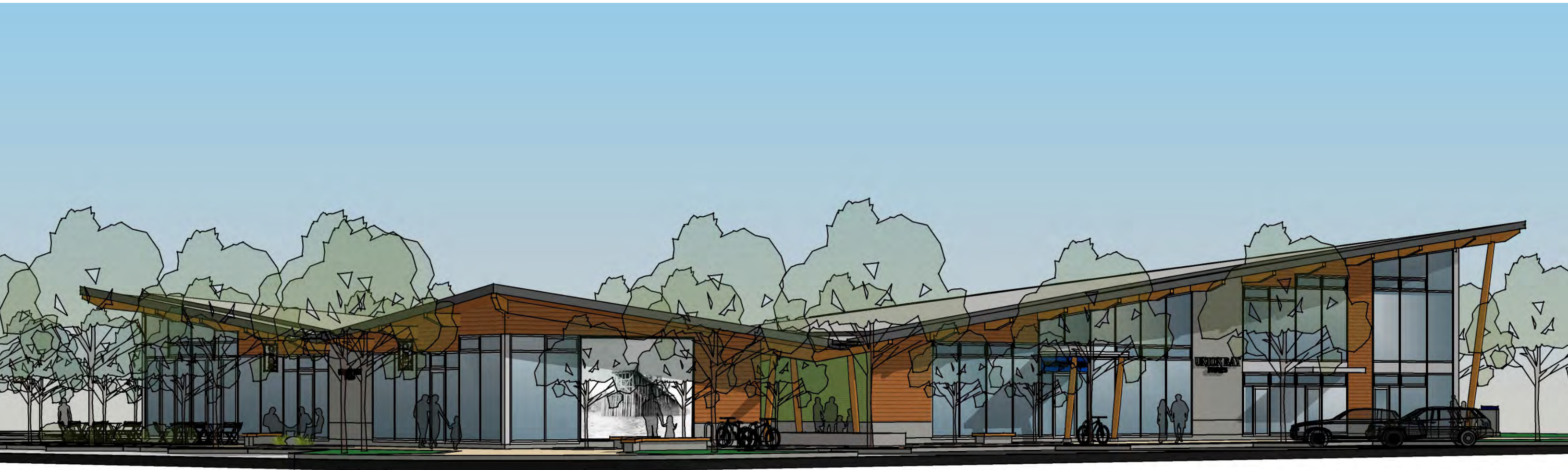
2019-06-26





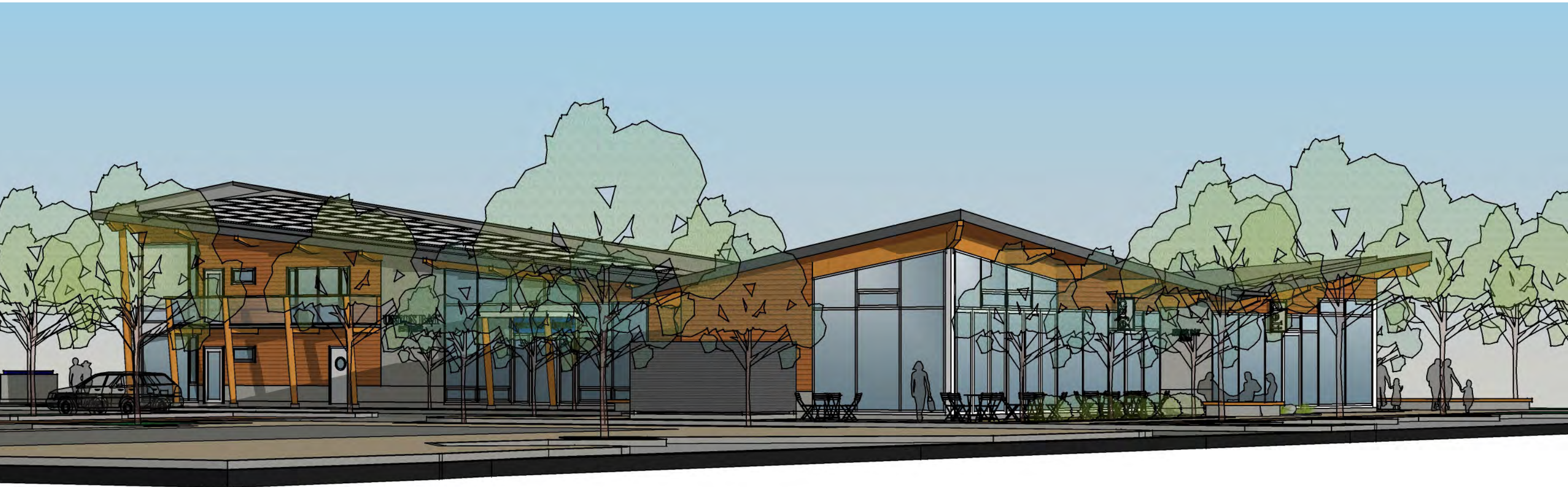
**Union Bay Estates • Discovery Centre**  
**View of North Facade from Russell Street**





**Union Bay Estates • Discovery Centre**  
**Corner of Russell Street and Strata Road, viewed from the North-East**





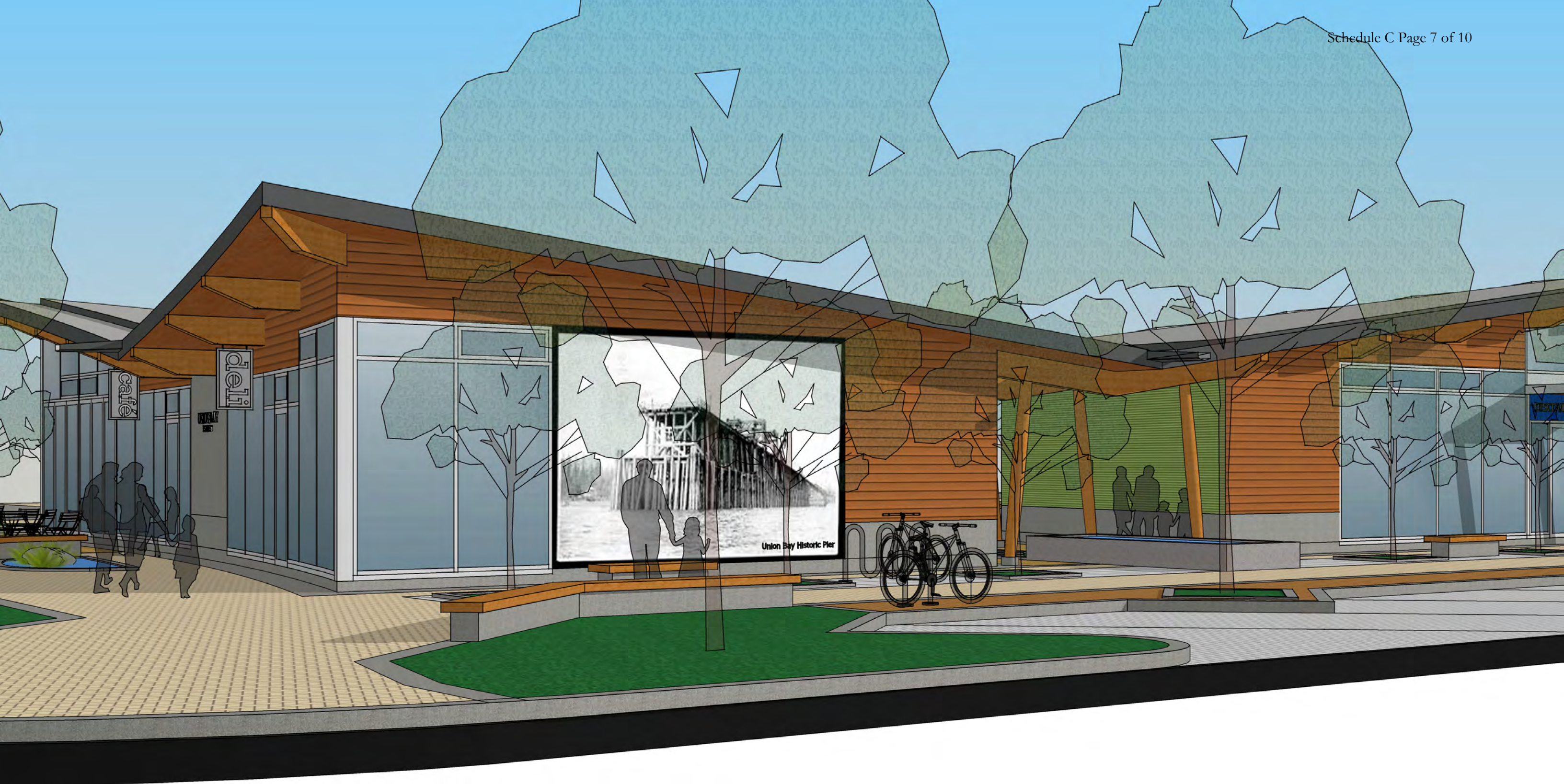
**Union Bay Estates • Discovery Centre**  
View from Strata Road, approaching from the South-East





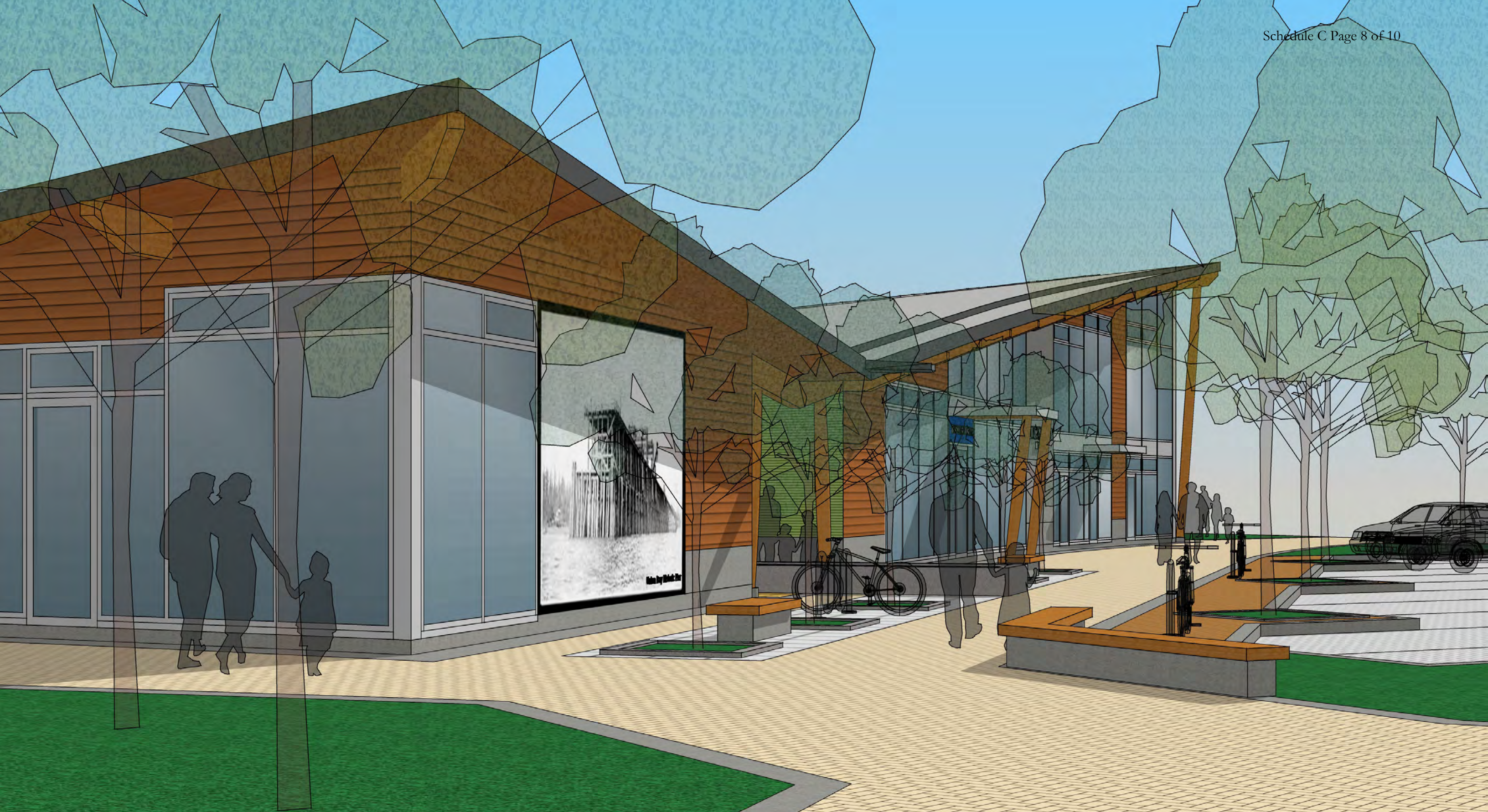
**Union Bay Estates • Discovery Centre**  
**Bird's Eye View, from South-West**





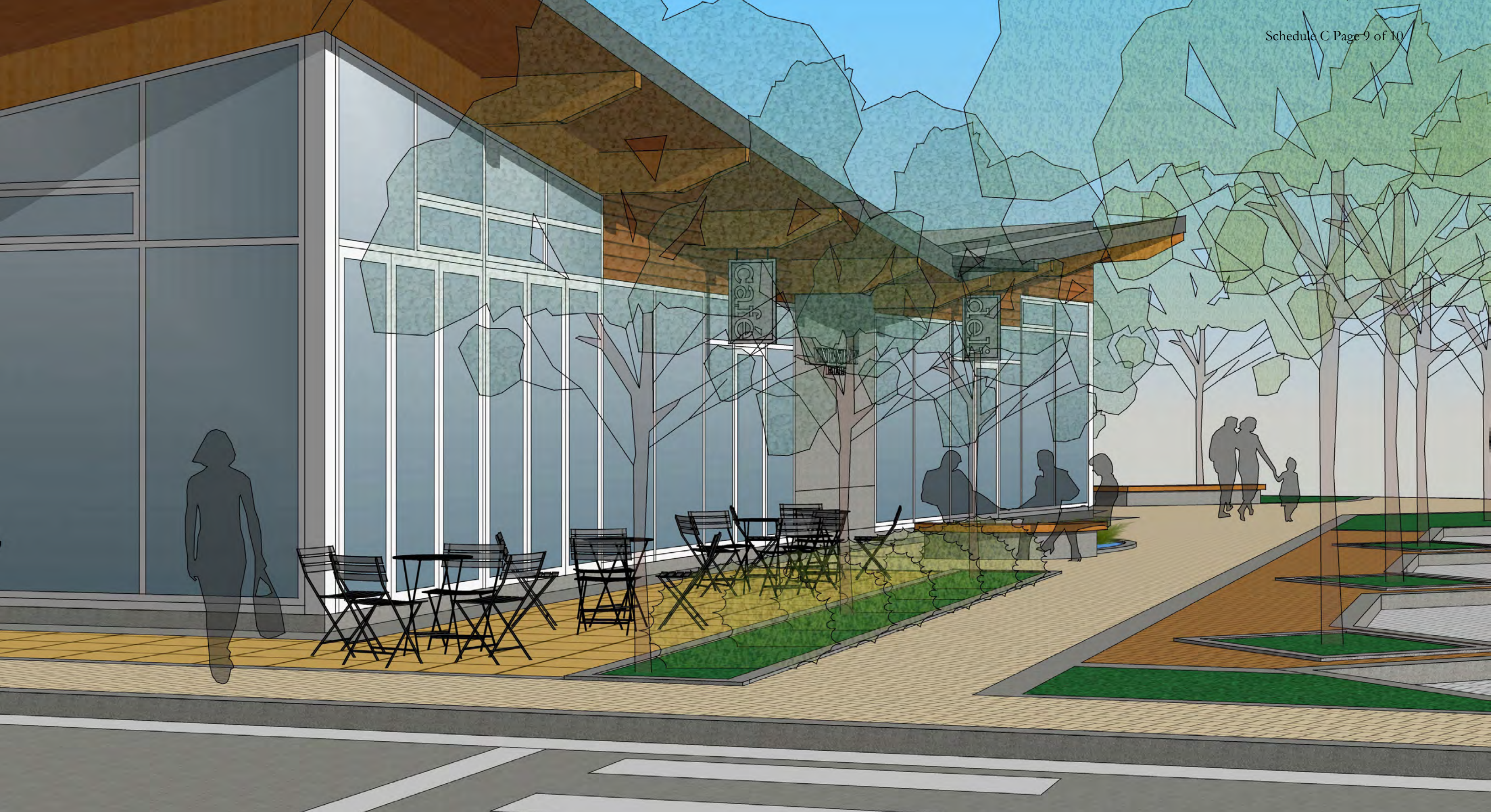
**Union Bay Estates • Discovery Centre**  
**Detailed View of North-East Plaza and Proposed Mural from Russell Street**





**Union Bay Estates • Discovery Centre**  
**Detailed View of North-East Corner from Russell Street at Strata Road**



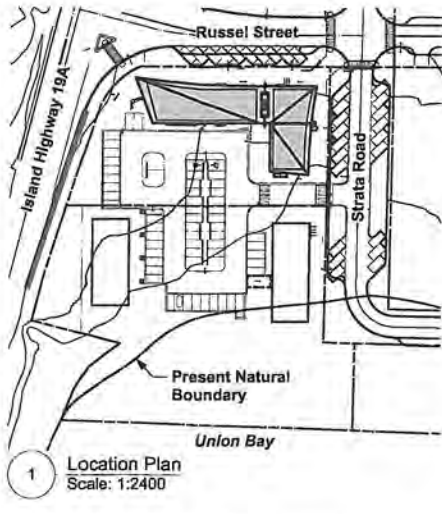






**Union Bay Estates • Discovery Centre**  
**View of South Plaza and Parking from Island Highway**





**PROJECT INFORMATION:**

**Civic Address:**  
Island Highway S, Union Bay, BC

**Legal Description:**  
Lot 3, Plan EPP15507 District Lot 154  
Section 31 TP 1 Land District 32 & DL 28  
Nelson District  
P.I.D. 028-731-531

**Project Description:**  
Real Estate Sales Centre and Café

**Lot Size:**  
3,311 sq.m. (35,640 sq.ft.)

**Acting Authority:**  
Comox Valley Regional District  
Planning + Development Services  
600 Comox Road, Courtenay, BC V9N 3P6  
t (250) 334.6006

**ZONING RESTRICTIONS:**

**ZONE:** K-CD Kensington Comprehensive Development Zone  
CDA-3 Mixed-Use Commercial-Residential (MUCR)

**SETBACKS:**

Front Yard	4.5m (14.8 ft.)
Rear Yard	0.0m (0.0 ft.)
Side Yard	0.0m (0.0 ft.)
Side Yard Abutting Road	4.5m (14.8 ft.)
Island Highway (centerline)	19.5m (63.9 ft.)

\*Survey information taken from topographical survey plan prepared by Bazett Land Surveying, File No. C768, dated June 7, 2018.

\*Where eaves and sunlight controls project beyond the face of a building, the minimum distance to an abutting front, rear and side lot line may be reduced by not more than 50% of such distance up to a maximum of 2.0m (6.6 ft.).

**FLOOD CONSTRUCTION LEVEL:**  
4.6m (15.1 ft.) F.C.L. set for master development.  
5.0m (16.4 ft.) proposed top of concrete slab.

\*F.C.L. for Discovery Centre may vary with master development site grading. To be finalized at Building Permit application.

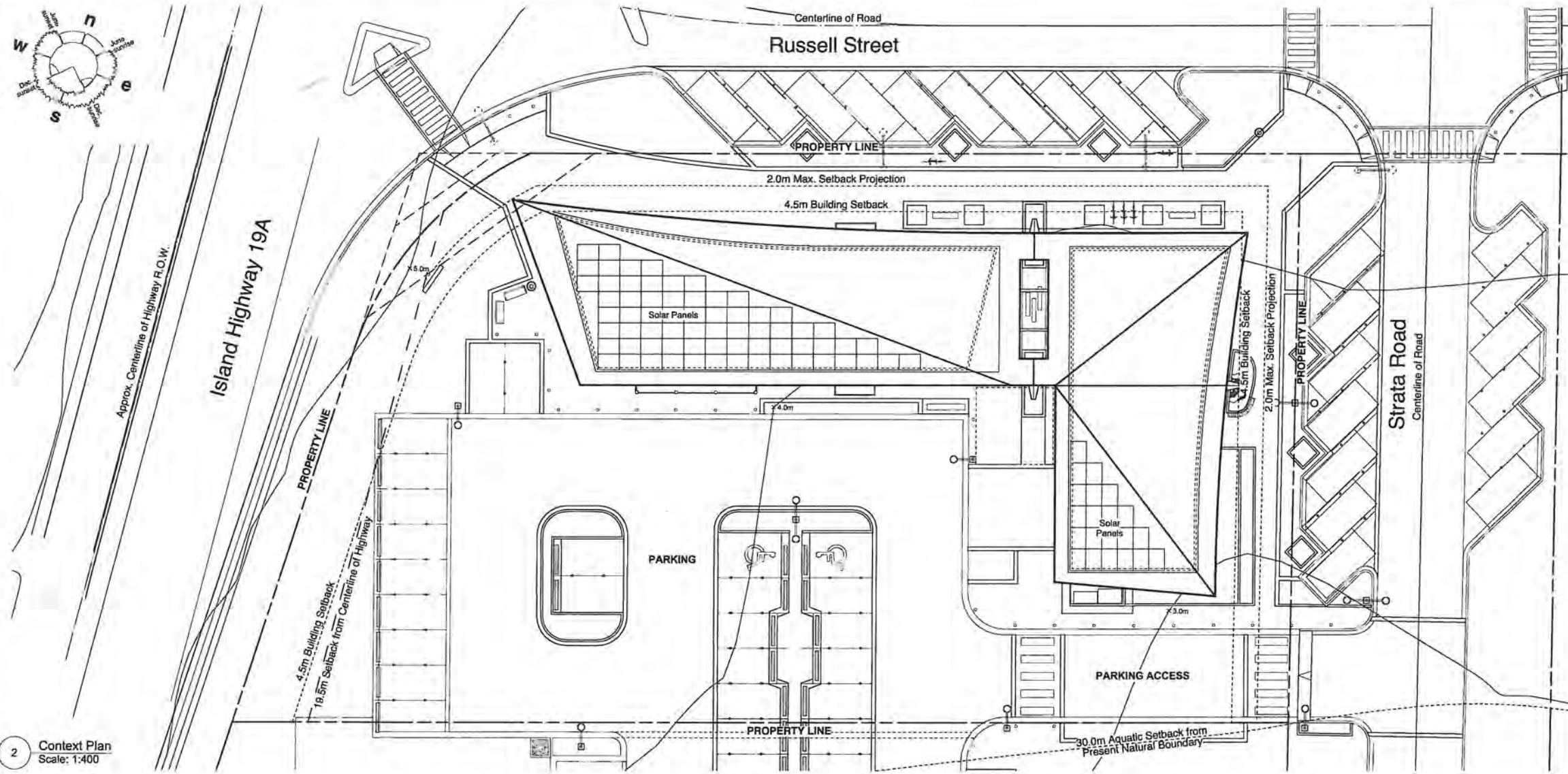
**BUILDING HEIGHT:**

**Allowable Building Height:**  
13.7m (45.0 ft.) or 4 storeys Maximum

**Proposed Building Height:**  
10.6m (34.67 ft) - 1 1/2 Storeys

**Average Natural Grade at Building:**

A+B / 2	= 4.79m + 4.03m / 2 = 4.41m (14.47 ft.)
B+C / 2	= 4.03m + 3.97m / 2 = 3.99m (13.12 ft.)
C+D / 2	= 3.97m + 4.03m / 2 = 4.00m (13.13 ft.)
D+E / 2	= 4.03m + 3.04m / 2 = 3.54m (11.60 ft.)
E+F / 2	= 3.04m + 3.31m / 2 = 3.18m (10.42 ft.)
F+G / 2	= 3.31m + 3.76m / 2 = 3.53m (11.59 ft.)
G+H / 2	= 3.76m + 3.81m / 2 = 3.78m (12.41 ft.)
H+J / 2	= 3.81m + 4.47m / 2 = 4.14m (13.59 ft.)
J+A / 2	= 4.47m + 4.79m / 2 = 4.63m (15.19 ft.)
<b>Average Natural Grade</b>	<b>= 3.91m (12.84 ft.)</b>



2 Context Plan  
Scale: 1:400

**LOT COVERAGE:**

**Allowable Lot Coverage:**  
90% of lot area = 3,311 sq.m. (35,640 sq.ft.)

**Proposed Lot Coverage:**  
21.4% of lot area = 708.7 sq.m. (7,628 sq.ft.)

**FLOOR AREA:**

**Allowable Floor Area:**  
Total commercial floor area within any single building in the MUCR zone shall not exceed 2,787 sq.m. (30,000 sq.ft.).

**Proposed Floor Area:**

Sales Centre:	
Main Floor	315.4 sq.m. (3,395 sq.ft.)
Upper Floor	147.3 sq.m. (1,585 sq.ft.)
Total Sales Centre	462.7 sq.m. (4,980 sq.ft.)

**Café + Deli:**

Deli	90.1 sq.m. (970 sq.ft.)
Café	171.9 sq.m. (1,850 sq.ft.)
Total Café & Deli	261.9 sq.m. (2,820 sq.ft.)

**Total Floor Area** 724.6 sq.m. (7,800 sq.ft.)

**Café Terrace:** 55.3 sq.m. (595 sq.ft.)

**PARKING (Sales):**

**Real Estate Sales Centre:**  
2 spaces + 1 per employee  
2 employees expected

Required	4	Proposed	-
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**Mercantile (Deli):**  
1 space per 50 sq.m. GFA  
90.1 sq.m. / 50 sq.m. = 1.8

Required	2	Proposed	-
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**Restaurant (Café + Terrace):**  
Greater of 1 space per 6 seats  
OR 1 space per 30 sq.m. GFA  
227.2 sq.m. / 30 sq.m. = 7.57

Required	8	Proposed	-
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**Total Parking Spaces** 14 22  
**Accessible Parking Spaces** 2

**Total Bicycle Spaces** 2 10  
1 bicycle for every 10 parking spaces

**PARKING (Future):**

**Office/ Mercantile:**  
1 space per 50 sq.m. GFA  
462.7 sq.m. / 50 sq.m. = 9.3

Required	10	Proposed	-
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**Mercantile (Deli):**  
1 space per 50 sq.m. GFA  
90.1 sq.m. / 50 sq.m. = 1.8

Required	2	Proposed	-
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**Restaurant (Café + Terrace):**  
Greater of 1 space per 6 seats  
OR 1 space per 30 sq.m. GFA  
227.2 sq.m. / 30 sq.m. = 7.57

Required	8	Proposed	-
----------	---	----------	---

**Total Parking Spaces** 20 22  
**Accessible Parking Spaces** 2

**Total Bicycle Spaces** 2 10  
1 bicycle for every 10 parking spaces

**OWNER REPRESENTATIVE:**

Brian McMahon  
34083 Yukon Inc. No. A-56440  
c/o 201-1830 Riverside Lane, Courtney, BC V9N 8C7  
t (250) 703.6337

**CONSULTANTS:**

**Architect:**  
Helliwell + Smith + Blue Sky Architecture  
4090 Bayridge Ave., West Vancouver, BC V7V 3K1  
t (604) 921.8646

**Structural Engineer:**  
Chiu Hippmann Engineering  
1030 W 6th Ave., Vancouver, BC V6H 1A3  
t (604) 797.9830

**Landscape Architect:**  
Perry + Associates  
200-1558 W 6th Ave., Vancouver, BC V6J 1R2  
t (604) 738.4118

**Civil Engineer:**  
McElhanney Consulting Services  
495 Sixth Street, Courtenay, BC V9N 6V4  
t (250) 338.5495

**DRAWING INDEX:**

**Architectural:**  
A101 Context Plan + General Notes  
A102 Site Plan  
A201 Main Floor Plan  
A202 Upper Floor Plan  
A203 Roof Plan  
A301 Exterior Elevations  
A302 Exterior Elevations

**Landscape:**  
L1.0 Landscape Plan (Interim Condition)  
L2.0 Site Lighting Plan  
L3.0 Planting Plan  
L4.0 Landscape Details  
L4.1 Landscape Details  
L4.2 Landscape Details  
L5.0 Landscape Precedent Images

**Civil:**  
Drainage Plan



NO.	REVISION	DATE
1	Coordination	2018-12-07
2	Development Permit	2019-02-01
3	Development Permit	2019-05-31
4	Development Permit	2019-06-26

**NOTE:**  
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Contractor shall be responsible for all conditions on the job and shall notify this office of any variations of the conditions immediately. All work completed on site to conform to the British Columbia Building Code 2018.

**PROJECT**  
**UNION BAY DISCOVERY CENTRE**  
Union Bay  
British Columbia

**SHEET TITLE**  
**Context Plan + General Notes**

**DRAWN BY** ks/ sg  
**SCALE** 1:400  
(Scales on Tabloid)

**FIRST ISSUED** 2019-02-01

**CHECKED BY** ks/ bh

**HELLIWELL + SMITH BLUE SKY ARCHITECTURE INC.**

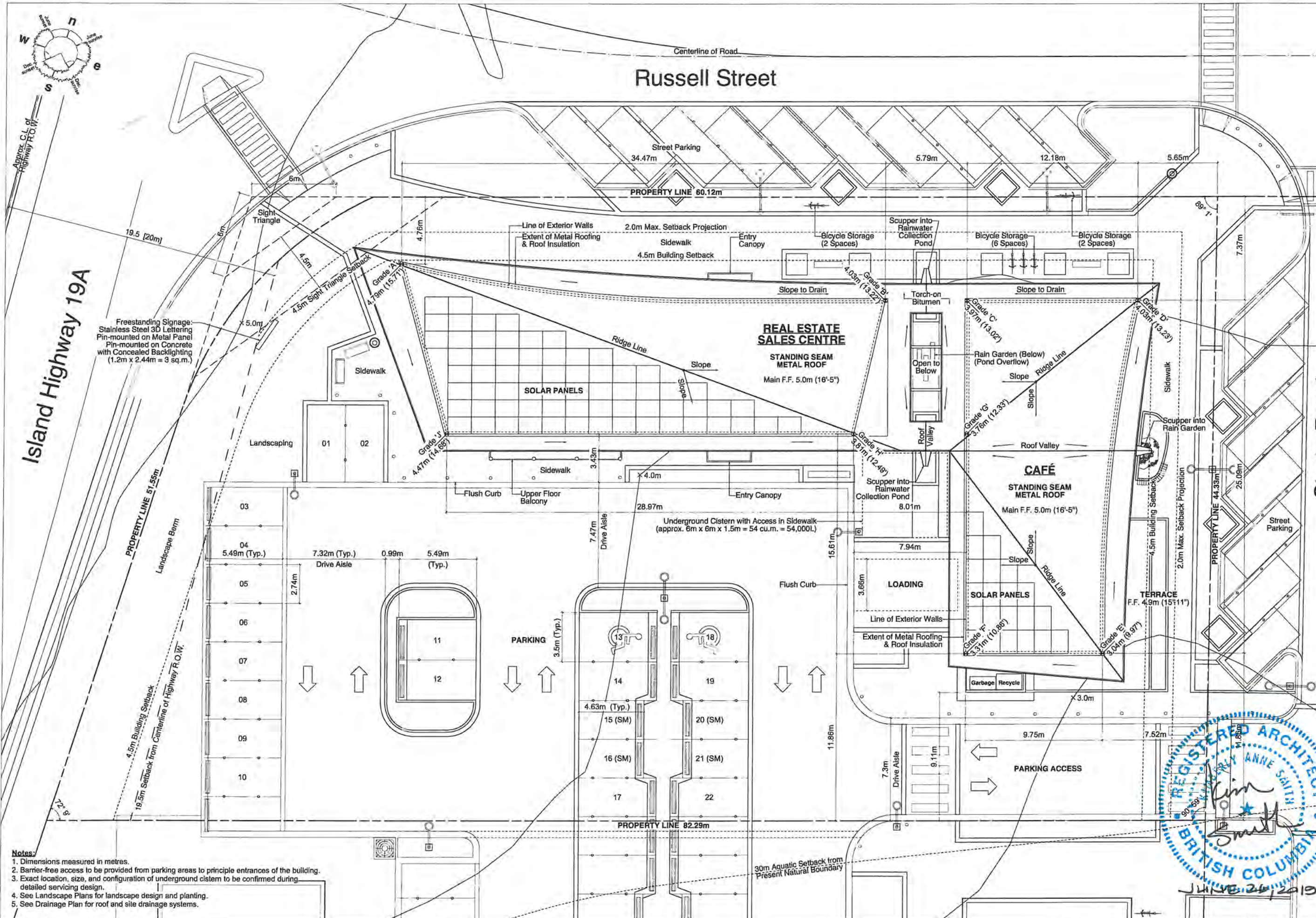
4090 BAYRIDGE AVE.  
WEST VANCOUVER  
BRITISH COLUMBIA  
CANADA, V7V 3K1

PHONE (604) 921-8646  
FAX (604) 921-0755

**SHEET NO.**

**A101**





NO.	REVISION	DATE
1	Coordination	2018-12-07
2	Development Permit	2019-02-01
3	Development Permit	2019-05-31
4	Development Permit	2019-06-26

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PROJECT  
**UNION BAY DISCOVERY CENTRE**  
 Union Bay  
 British Columbia

SHEET TITLE  
**Site Plan**

DRAWN BY  
 ks/ sg

SCALE  
 1:250  
 (Scales on Tabloid)

FIRST ISSUED  
 2018-12-07

CHECKED BY  
 ks/ bh

**HELLIWELL + SMITH BLUE SKY ARCHITECTURE INC.**

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 WEST VANCOUVER  
 BRITISH COLUMBIA  
 CANADA, V7V 3K1  
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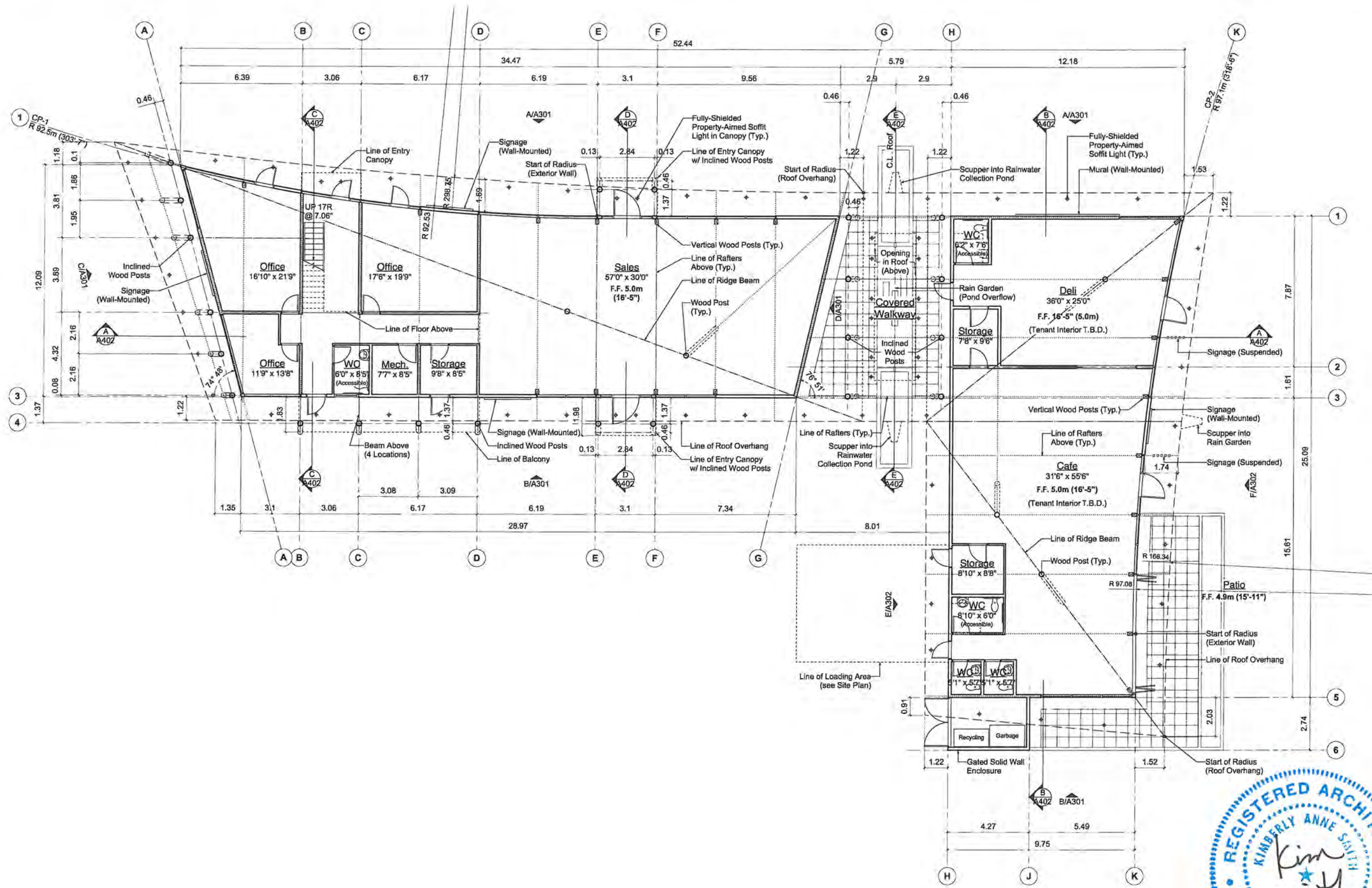
SHEET NO.  
**A102**

- Notes:**
1. Dimensions measured in metres.
  2. Barrier-free access to be provided from parking areas to principle entrances of the building.
  3. Exact location, size, and configuration of underground cistern to be confirmed during detailed servicing design.
  4. See Landscape Plans for landscape design and planting.
  5. See Drainage Plan for roof and site drainage systems.





NO.	REVISION	DATE
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2	Development Permit	2019-02-01
3	Development Permit	2019-05-31
4	Development Permit	2019-06-26



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**PROJECT**  
**UNION BAY DISCOVERY CENTRE**  
 Union Bay  
 British Columbia

**SHEET TITLE**  
**Main Floor Plan**

**DRAWN BY**  
 ks/ sg

**SCALE**  
 1:200  
 (Scales on Tabloid)

**FIRST ISSUED**  
 2018-12-07

**CHECKED BY**  
 ks/ bh

**HELLIWELL + SMITH BLUE SKY ARCHITECTURE INC.**

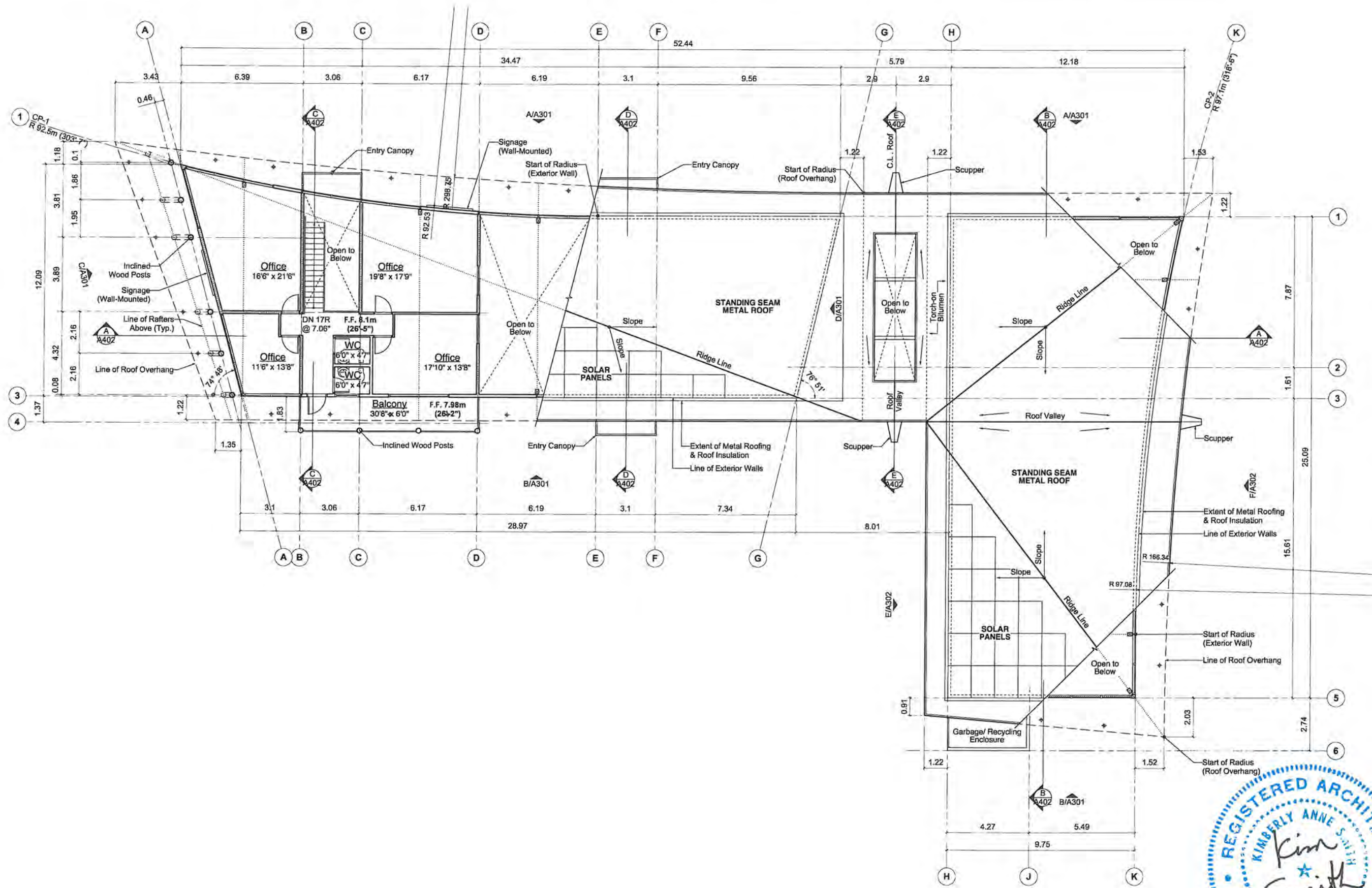
4090 BAYRIDGE AVE.  
 WEST VANCOUVER  
 BRITISH COLUMBIA  
 CANADA, V7V 3K1  
 PHONE (604) 921-8646  
 FAX (604) 921-0755

**SHEET NO.**  
**A201**



**Notes:**  
 1. Dimensions measured in metres.  
 2. Barrier-free access to be provided throughout the main floor level.





NO.	REVISION	DATE
1	Coordination	2018-12-07
2	Development Permit	2019-02-01
3	Development Permit	2019-05-31
4	Development Permit	2019-06-26

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**PROJECT**  
**UNION BAY DISCOVERY CENTRE**  
 Union Bay  
 British Columbia

**SHEET TITLE**  
**Upper Floor Plan**

**DRAWN BY**  
 ks/ sg

**SCALE**  
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 (Scales on Tabloid)

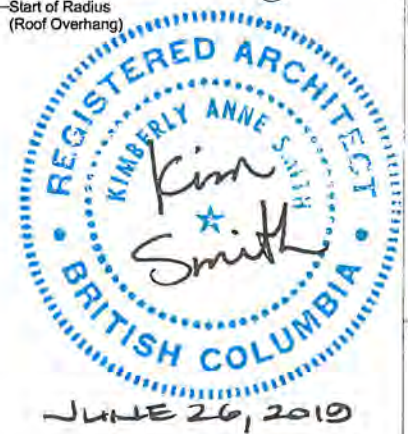
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**CHECKED BY**  
 ks/ bh

**HELLIWELL + SMITH BLUE SKY ARCHITECTURE INC.**

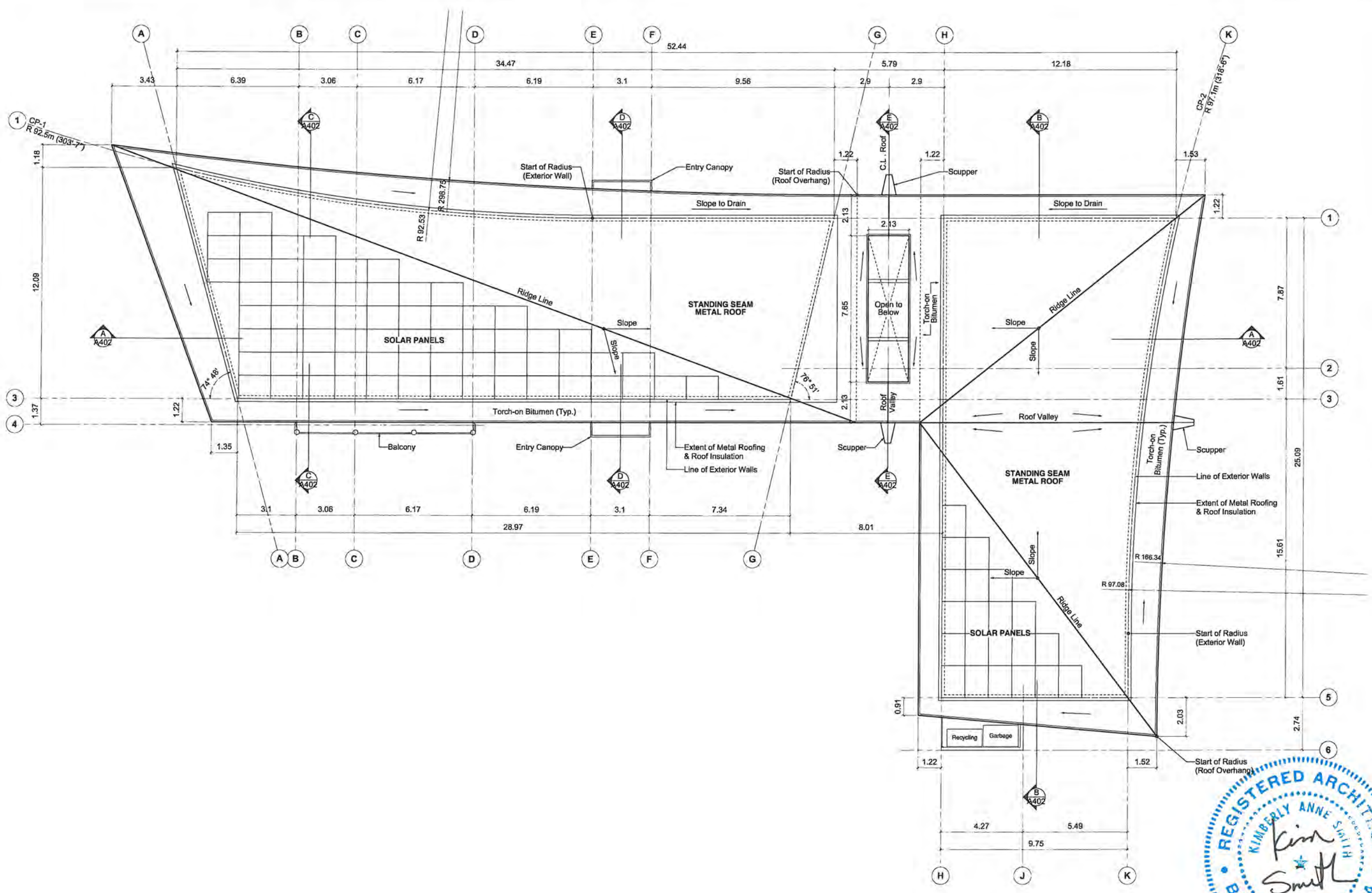
4090 BAYRIDGE AVE.  
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 BRITISH COLUMBIA  
 CANADA, V7V 3K1  
 PHONE (604) 921-8646  
 FAX (604) 921-0755

**SHEET NO.**  
**A202**



**Notes:**  
 1. Dimensions measured in metres.





NO.	REVISION	DATE
1	Coordination	2018-12-07
2	Development Permit	2019-02-01
3	Development Permit	2019-05-31
4	Development Permit	2019-06-26

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**PROJECT**  
**UNION BAY DISCOVERY CENTRE**  
 Union Bay  
 British Columbia

**SHEET TITLE**  
**Roof Plan**

**DRAWN BY**  
 ks/ sg

**SCALE**  
 1:200  
 (Scales on Tabloid)

**FIRST ISSUED**  
 2018-12-07

**CHECKED BY**  
 ks/ bh

**HELLIWELL + SMITH BLUE SKY ARCHITECTURE INC.**

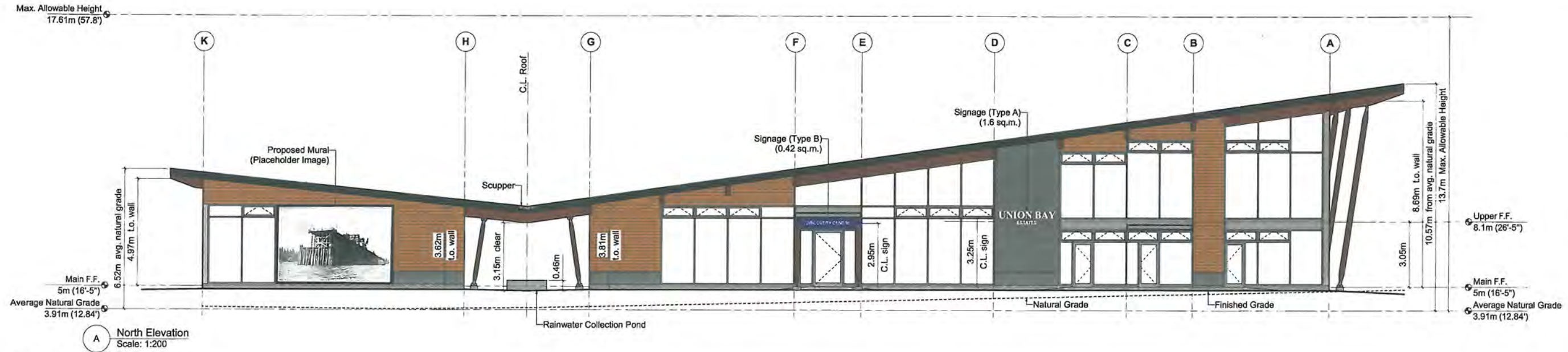
4090 BAYRIDGE AVE.  
 WEST VANCOUVER  
 BRITISH COLUMBIA  
 CANADA, V7V 3K1  
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 FAX (604) 921-0755

**SHEET NO.**  
**A203**

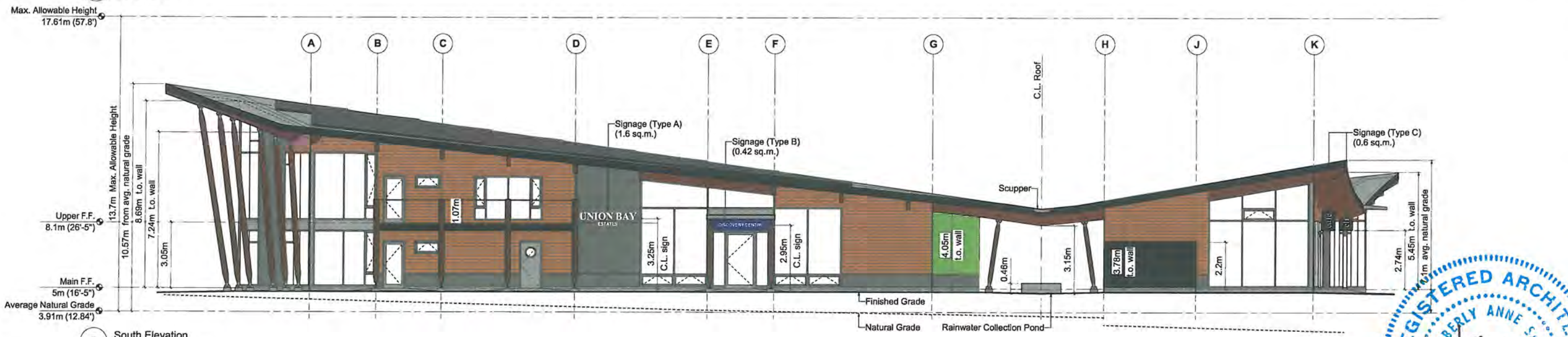


**Notes:**  
 1. Dimensions measured in metres.





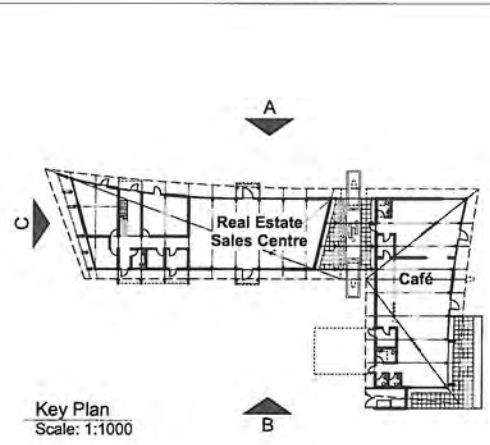
**A North Elevation**  
Scale: 1:200



**B South Elevation**  
Scale: 1:200



**C West Elevation Gridline A**  
Scale: 1:200



**Key Plan**  
Scale: 1:1000

**FINISH SCHEDULE - EXTERIOR:**

1. Wood Fascia, Painted (Charcoal)
2. Dowel-Laminated Panel Wood Soffit (Natural)
3. Glulam Rafters (Natural)
4. Glulam Posts (Natural)
5. Cedar Siding (Natural)
6. Wood Trim Board (Natural)
7. Metal Wall Panel (Charcoal + Green + Blue)
8. Architectural Concrete
9. Aluminum Window Frame (Natural Aluminum)
10. Tintable Smart Glass (View Dynamic Glass)
11. Aluminum Spandrel Panel (Natural Aluminum)
12. Aluminum Trim/ Corner Panel (Natural Aluminum)
13. Aluminum Mandoor w/ Glass Panel or Portal (Natural Aluminum)
14. Aluminum Accordion Door w/ Glass Panel (Natural Aluminum)
15. Tempered Glass Guard w/ Wood Rails (Natural)
16. Signage: **Type A** - Stainless Steel 3D Lettering Pin Mounted on Wall with Concealed Backlighting  
1.6 sq.m. X 2 Locations = 3.2 sq.m.  
3.9 sq.m. X 1 Location = 3.8 sq.m.
- Type B** - Stainless Steel 3D Lettering Flush Mounted on Wall  
0.42 sq.m. X 2 Locations = 0.84 sq.m.
- Type C** - Stainless Steel 3D Lettering on Metal Backboard Suspended from Soffit  
0.60 sq.m. X 2 Locations = 1.2 sq.m.
- Total Signage Area = 9.04 sq.m.**
17. Standing Seam Metal Roof (Galvalume)
18. Aluminum Scupper (Galvalume)
19. Photovoltaic Panels
20. Fully-Shielded Property-Aimed Soffit Light (per Dark Sky Policy) (see Main Floor Plan for locations)



JUNE 26, 2019

NO.	REVISION	DATE
1	Coordination	2018-12-07
2	Development Permit	2019-02-01
3	Development Permit	2019-05-31
4	Development Permit	2019-06-26

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**PROJECT**  
**UNION BAY**  
**DISCOVERY CENTRE**  
Union Bay  
British Columbia

**SHEET TITLE**  
**Exterior Elevations**

**DRAWN BY**  
ks/ sg

**SCALE**  
1:200  
(Scales on Tabloid)

**FIRST ISSUED**  
2019-02-01

**CHECKED BY**  
ks/ bh

**HELLIWELL + SMITH**  
**BLUE SKY**  
**ARCHITECTURE**  
**INC.**

4090 BAYRIDGE AVE.  
WEST VANCOUVER  
BRITISH COLUMBIA  
CANADA, V7V 3K1

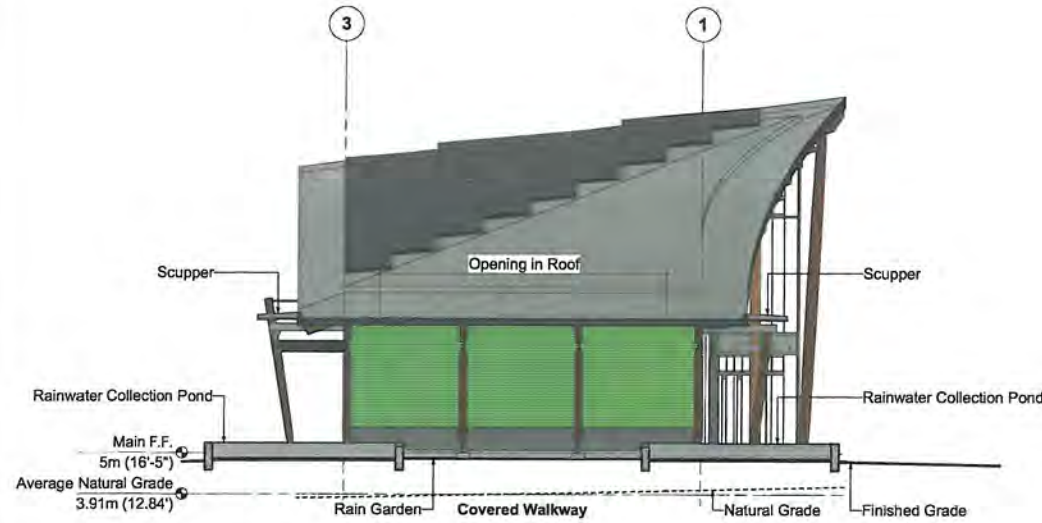
PHONE (604) 921-8646  
FAX (604) 921-0755

**SHEET NO.**  
**A301**

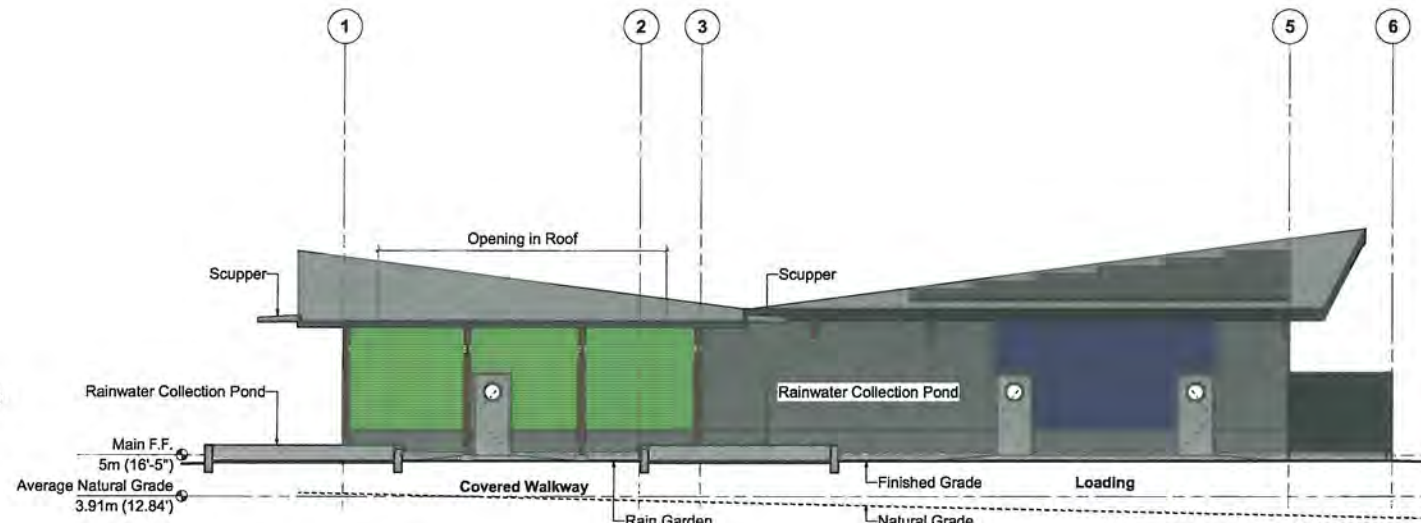


NO.	REVISION	DATE
1	Coordination	2018-12-07
2	Development Permit	2019-02-01
3	Development Permit	2019-05-31
4	Development Permit	2019-06-26

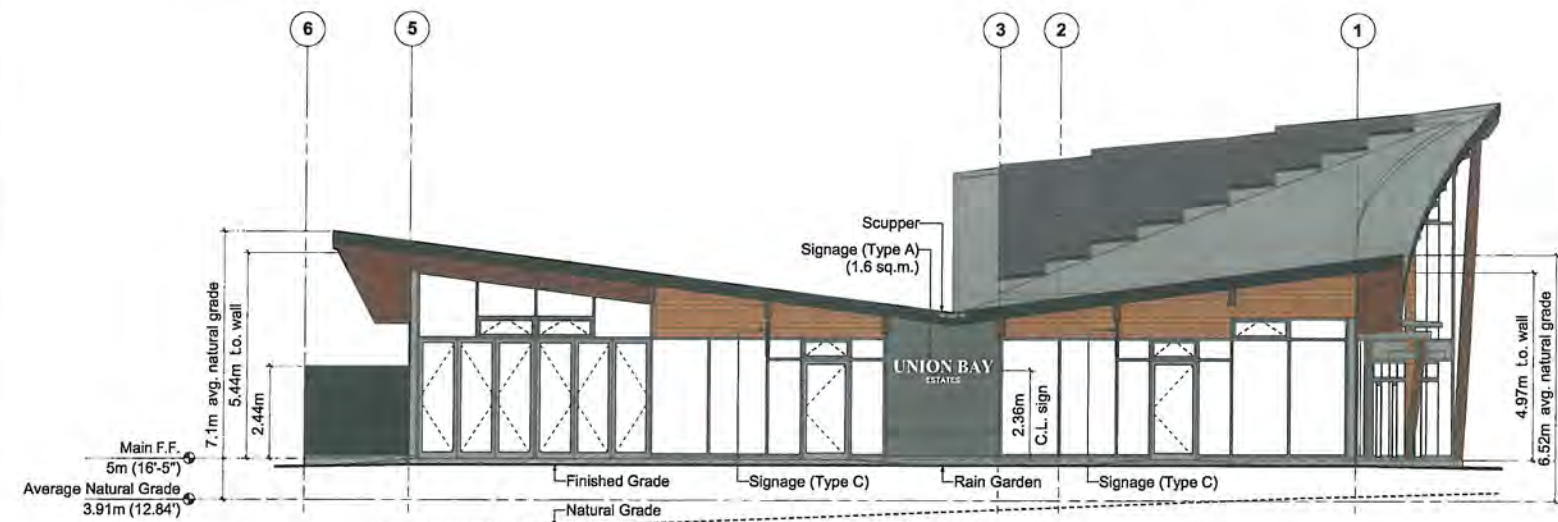
**NOTE:**  
This set of drawings and the design as shown remain the property of Helliwell + Smith Blue Sky Architecture Inc.. Contractor and all sub-trades shall verify all dimensions on site. Do not scale these drawings. Report any discrepancies to Helliwell + Smith Blue Sky Architecture Inc.  
Contractor shall be responsible for all conditions on the job and shall notify this office of any variations of the conditions immediately. All work completed on site to conform to the British Columbia Building Code 2018.



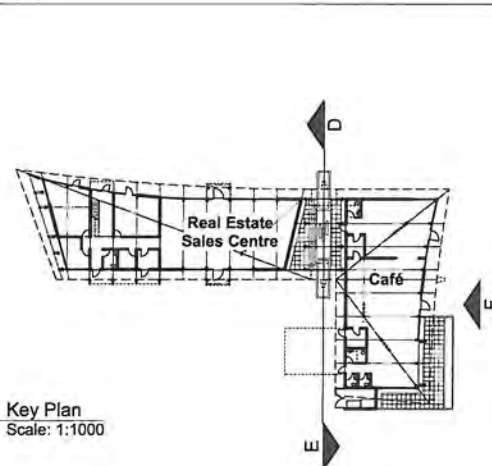
**D West Walkway Elevation Gridline G**  
Scale: 1:200



**E East Walkway Elevation Gridline H**  
Scale: 1:200



**F East Elevation**  
Scale: 1:200



**Key Plan**  
Scale: 1:1000

**FINISH SCHEDULE – EXTERIOR:**

- 1. Wood Fascia, Painted (Charcoal)
- 2. Dowel-Laminated Panel Wood Soffit (Natural)
- 3. Glulam Rafters (Natural)
- 4. Glulam Posts (Natural)
- 5. Cedar Siding (Natural)
- 6. Wood Trim Board (Natural)
- 7. Metal Wall Panel (Charcoal + Green + Blue)
- 8. Architectural Concrete
- 9. Aluminum Window Frame (Natural Aluminum)
- 10. Tintable Smart Glass (View Dynamic Glass)
- 11. Aluminum Spandrel Panel (Natural Aluminum)
- 12. Aluminum Trim/ Corner Panel (Natural Aluminum)
- 13. Aluminum Mandoor w/ Glass Panel or Portal (Natural Aluminum)
- 14. Aluminum Accordion Door w/ Glass Panel (Natural Aluminum)
- 15. Tempered Glass Guard w/ Wood Rails (Natural)
- 16. Signage: **Type A** – Stainless Steel 3D Lettering Pin Mounted on Wall with Concealed Backlighting  
 1.6 sq.m. X 2 Locations = 3.2 sq.m.  
 3.9 sq.m. X 1 Location = 3.8 sq.m.
- Type B** – Stainless Steel 3D Lettering Flush Mounted on Wall  
 0.42 sq.m. X 2 Locations = 0.84 sq.m.
- Type C** – Stainless Steel 3D Lettering on Metal Backboard Suspended from Soffit  
 0.60 sq.m. X 2 Locations = 1.2 sq.m.
- Total Signage Area = 9.04 sq.m.**
- 17. Standing Seam Metal Roof (Galvalume)
- 18. Aluminum Scupper (Galvalume)
- 19. Photovoltaic Panels
- 20. Fully-Shielded Property-Aimed Soffit Light (per Dark Sky Policy) (see Main Floor Plan for locations)



JUNE 26, 2019

**PROJECT**  
**UNION BAY DISCOVERY CENTRE**  
Union Bay  
British Columbia

**SHEET TITLE**  
**Exterior Elevations**

**DRAWN BY**  
ks/ sg

**SCALE**  
1:200  
(Scales on Tabloid)

**FIRST ISSUED**  
2019-02-01

**CHECKED BY**  
ks/ bh

**HELLIWELL + SMITH BLUE SKY ARCHITECTURE INC.**  
4090 BAYRIDGE AVE.  
WEST VANCOUVER  
BRITISH COLUMBIA  
CANADA, V7V 3K1  
PHONE (604) 921-8646  
FAX (604) 921-0755

**SHEET NO.**  
**A302**





**2** Revised for Planning Comments 2019/06/26  
 1 Issued for DP 2019/02/01  
 Revision No. Date  
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 Client:

Project Title: **Union Bay Discovery Centre**

Drawing Title: **Landscape Plan (Interim Condition)**

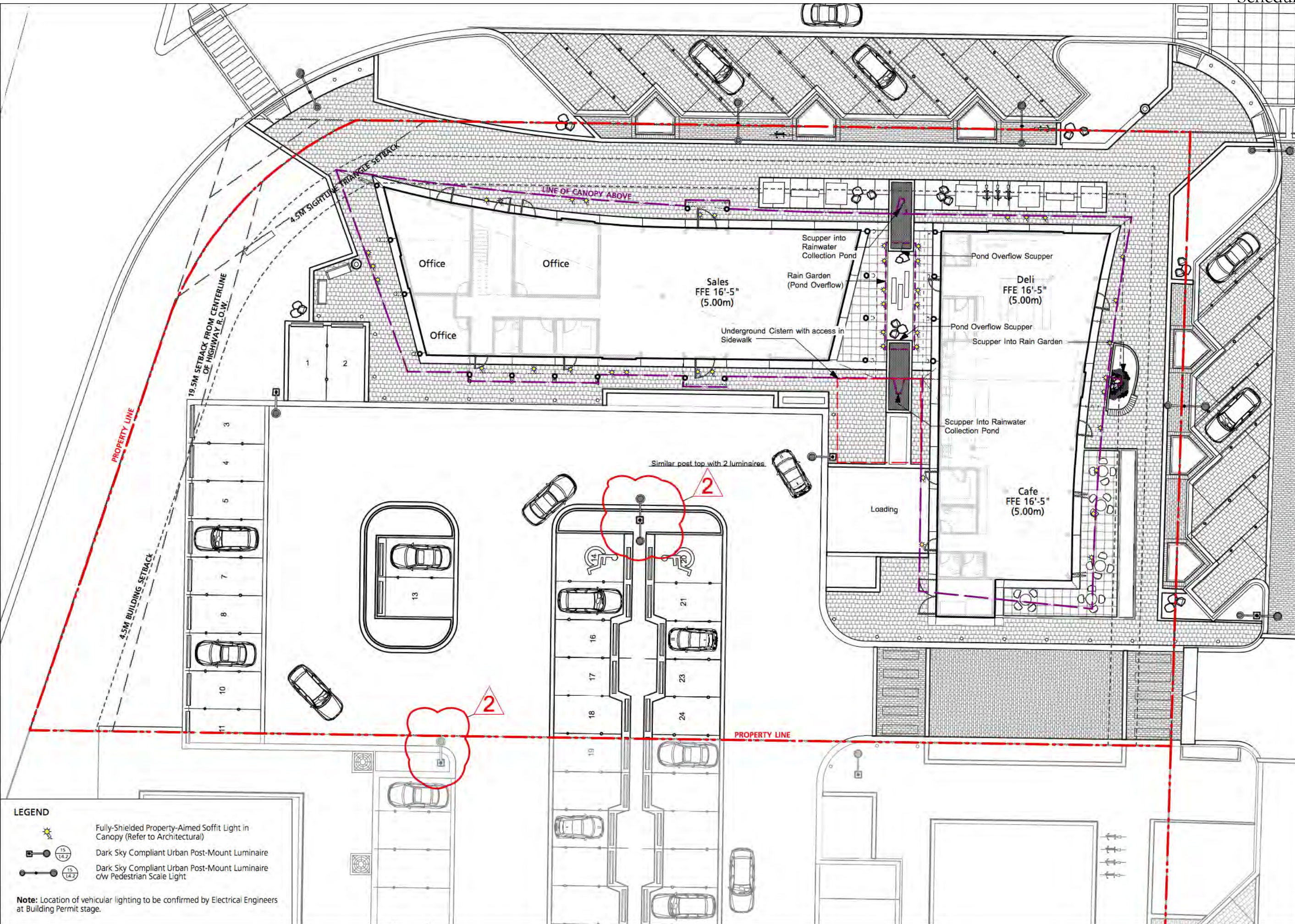
Project North: Drawn By: KS  
 Checked By: MP  
 Scale: 1:250 Job No.: 17-089  
 Sheet No.:

**LEGEND**

Pedestrian - 12x12" Abbotsford Nevada Paving	Concrete Banding	Ring Bike Rack
Pedestrian - 24x24" Hydrapressed Slab Paving	Custom Curved Bench	Receptacle
Vehicular - VS-5 Pavers	Backed Bench	Tree Cut Out and Soil Trench
Vehicular - Abbotsford Standard Pavers	Custom Wood Backless Bench	Parking Trench
Flush Curb	Curb Stop	Rain Garden
Barrier Curb	Custom Bollard	Dark Sky Compliant Urban Post-Mount Luminaire

**L1.0**






Revised for City Comments	2019/08/26
1 Issued for DP	2019/02/01
Revision No.	Date

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Project Title: **Union Bay Discovery Centre**

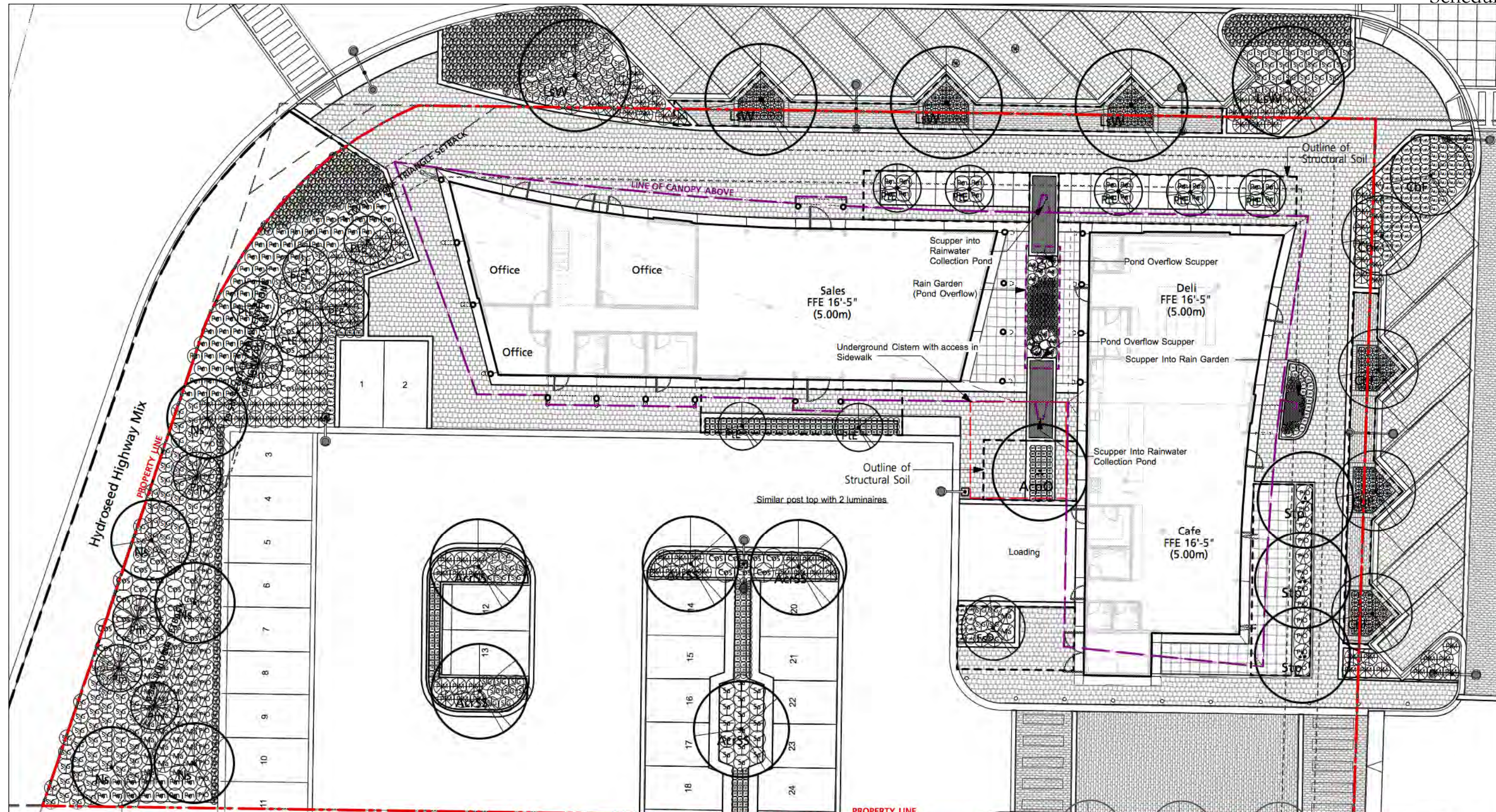
Drawing Title: **Site Lighting Plan**

Project North:  Drawn By: JS  
Checked By: MP  
Scale: 1:250 Job No.: 17-089  
Sheet No.:

- LEGEND**
-  Fully-Shielded Property-Aimed Soffit Light in Canopy (Refer to Architectural)
  -  Dark Sky Compliant Urban Post-Mount Luminaire
  -  Dark Sky Compliant Urban Post-Mount Luminaire c/w Pedestrian Scale Light

**Note:** Location of vehicular lighting to be confirmed by Electrical Engineers at Building Permit stage.





Symbol	Qty.	Botanical Name	Common Name	Scheduled Size	Remarks
<b>Trees</b>					
AcpO	1	Acer palmatum 'Osakazuki'	Osakazuki Japanese Maple	6cm cal., 2.5m ht., WB	
AcrSS	5	Acer rubrum 'Scarlet Sentinel'	Scarlet Sentinel Red Maple	6cm cal., WB	Drought Tolerant
Cbf	5	Carpinus betulus 'Fastigiata'	Pyramidal European Hornbeam	6cm cal., WB	
EdD	1	Faxcus sylvatica 'Dawyckii'	Dawyck European Beech	6cm cal., WB	Drought Tolerant
LsW	5	Liquidambar styraciflua 'Worplesdon'	Worplesdon Sweet Gum	6cm cal., WB	Drought Tolerant
Ns	5	Nyssa sylvatica	Black Gum	6cm cal., WB	
PIE	12	Populus tremula 'Erecta'	Columnar European Aspen	6cm cal., WB	Drought Tolerant
Pm	5	Pseudotsuga menziesii	Douglas Fir	2.5m ht. B&B	Drought Tolerant
Stp	3	Stewartia pseudocamellia	Japanese Stewartia	6cm cal., WB	
<b>Shrubs</b>					
BmW	146	Buxus microphylla 'Winter Gem'	Winter Gem Boxwood	#2 pot	
CoS	46	Cornus stolonifera	Red Osier Dogwood	#3 pot	Drought Tolerant
Ma	34	Mahonia aquifolium	Oregon Grape	#2 pot	Drought Tolerant
Mn	437	Mahonia nervosa	Longleaf Mahonia	#2 pot	Drought Tolerant
Pm	122	Pinus mugo	Mountain Pine	#2 pot	
PIO	36	Prunus laurocerasus 'Otto Luyken'	Otto Luyken Laurel	#3 pot	
SiG	182	Spiraea japonica 'Goldmound'	Goldmound Spirea	#3 pot	Drought Tolerant
Sa	16	Symphoricarpos albus	Snowberry	#2 pot	Drought Tolerant
<b>Groundcovers, Vines, Ferns, Perennials and Grasses</b>					
Aal	11	Adiantum aleuticum	Western Maidenhair Fern	#2 pot	
Au	62	Arctostaphylos uva-ursi	Kinnikinnick	#2 pot	Drought Tolerant
CoE	262	Carex oshimensis 'Evergold'	Sedge	#1 pot	
Em	17	Elymus magellanicus	Blue Clumping Wheatgrass	#1 pot	
Op	209	Ophiopogon planiscapus 'Nigrescens'	Black Mondo Grass	#1 pot	
PaM	57	Pennisetum alopecuroides 'Moudry'	Black Flowering Fountain Grass	#1 pot	
Pm	100	Polystichum munitum	Western Sword Fern	#1 pot	
Total	1808				

- PLANTING NOTES**
- Contractor is responsible to obtain and be familiar with the relevant project specifications.
  - All planting and landscape installation to meet or exceed the BCSLA/BCCLNA landscape standards.
  - As a minimal acceptable standard:
    - Sizes on the plant list shall be considered minimum sizes.
    - Root balls to be free of pernicious weeds.
  - Arborist to review in field all planting within existing tree driplines.
  - Contractor to ensure all plant material delivered to site is from nurseries certified to be free from the phytophthora ramorum virus (sudden oak death); removal and replacement of plant material found to contain the virus to be at the contractor's expense.
  - All plant material shall be approved at the nursery by the project Landscape Architect.
  - The contractor shall supply all plant materials shown on all drawings.
  - No container grown stock will be accepted if it is root bound. All root wrapping material made of synthetics or plastics shall be removed at time of planting.
  - Container grown stock, shall have the container removed and the rootball be cleanly scored in two vertical locations.
  - Contractor to submit a representative sample of the proposed topsoil for testing to Pacific Soil Analysis. Contractor is responsible for arranging and payment of soil analysis and amendments to growing medium as determined. Contractor shall instruct soil testing lab to submit results directly to the consultant for approval prior to commencement of work. Generic Analysis is not acceptable.
  - Soil depths to be as follows:
    - Lawn: 300mm
    - Shrub beds: 450mm
    - Trees planting hole to be 600mm larger than rootball diameter, backfilled with approved soil, minimum 900mm depth.
  - The contractor shall locate and verify the existence of all utilities prior to starting work.
  - All planting beds to have min. 50 mm depth of 25mm minus screened composted bark mulch (not on groundcover areas).
  - All plants shall be watered thoroughly twice during the first 24-hour period after planting. All plants shall then be watered as necessary.
  - All plantings will be provided a high efficiency automatic irrigation system.

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Project Title: **Union Bay Discovery Centre**

Drawing Title: **Planting Plan**

Project North	Drawn By: JS
Scale: 1:250	Job No.: 17-089
Sheet No.:	Checked By: MP

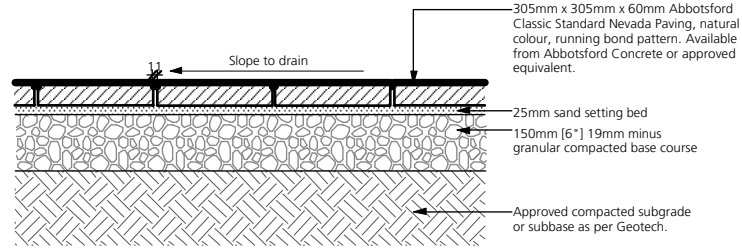
**L3.0**



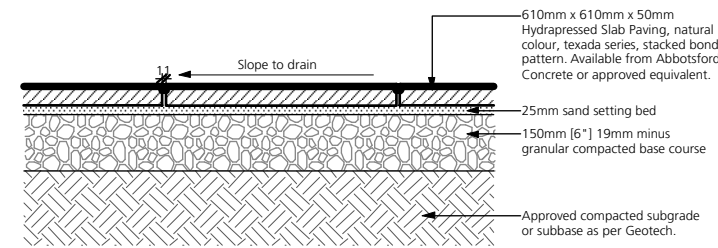
**Abbotsford Classic Standard Nevada Paving**  
305mm x 305mm x 60mm [12" x 12" x 2-3/8"]  
Natural colour, running bond pattern.  
Available at **Abbotsford Concrete Products**  
Address: 3422 McCallum Rd, Abbotsford, BC V2S 7W6  
Tel: (604) 852-4967  
https://www.pavingstones.com/

**Hydrapressed Slab Paving**  
610mm x 610mm x 50mm [24" x 24" x 2"]  
Natural colour, texada series, stacked bond pattern.  
Available at **Abbotsford Concrete Products**  
Address: 3422 McCallum Rd, Abbotsford, BC V2S 7W6  
Tel: (604) 852-4967  
https://www.pavingstones.com/

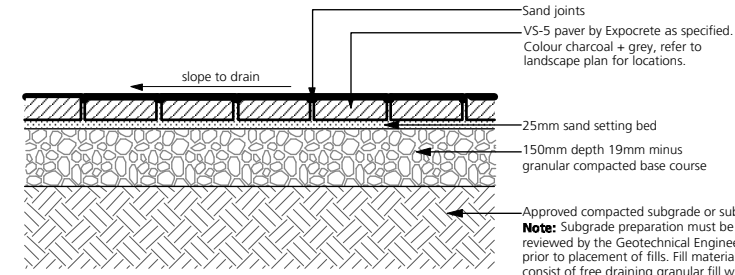
**VS-5 Pavers**  
Parking Bays: 305mm x 305mm x 108mm [12" x 12" x 2"]  
Charcoal, grey colour, running bond, refer to landscape plan for locations.  
Roadways: 305mm x 152mm x 108mm [12" x 6" x 2"]  
Charcoal, grey colour, running bond, refer to landscape plan for locations.  
Available at **Lafarge Plant Site**  
Address: PO Box 94580, Richmond, BC V6Y 2V6  
Tel: 1800 556-9733  
http://www.exprocrete.com/



A. 12" x 12" Abbotsford Classic Standard Nevada Paving



B. 24" x 24" Hydrapressed Slab Paving

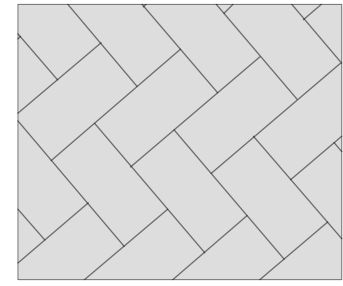
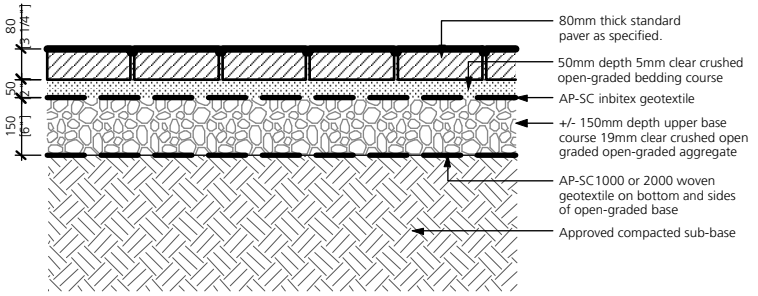


A. VS-5 Pavers

**Note:** Subgrade preparation must be reviewed by the Geotechnical Engineer prior to placement of fills. Fill material to consist of free draining granular fill with less than 5% fines content compacted to a minimum 95%mpd.

1 Pedestrian Paving  
L-4.0 Scale: 1:20

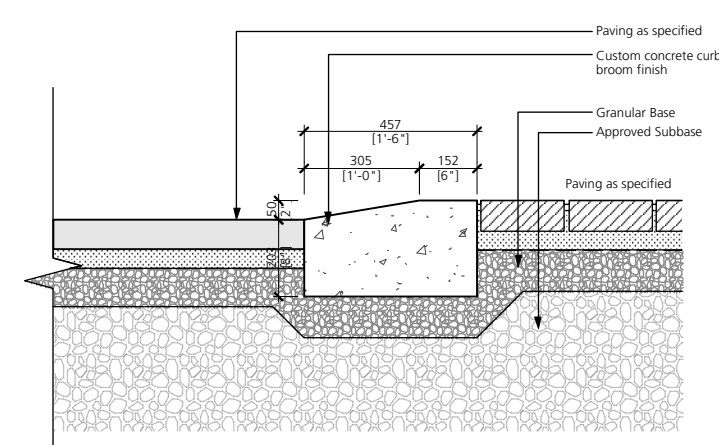
**Abbotsford Standard Series**  
Size: Standard length: 8-3/4" (221.5 mm) x 4-5/16" (110mm) x 3-1/8" (80mm)  
Colour: Shadow  
Pattern: Herringbone  
Available at **Abbotsford Concrete Products**  
Address: 3422 McCallum Rd, Abbotsford, BC V2S 7W6  
Tel: (604) 852-4967  
https://www.pavingstones.com/



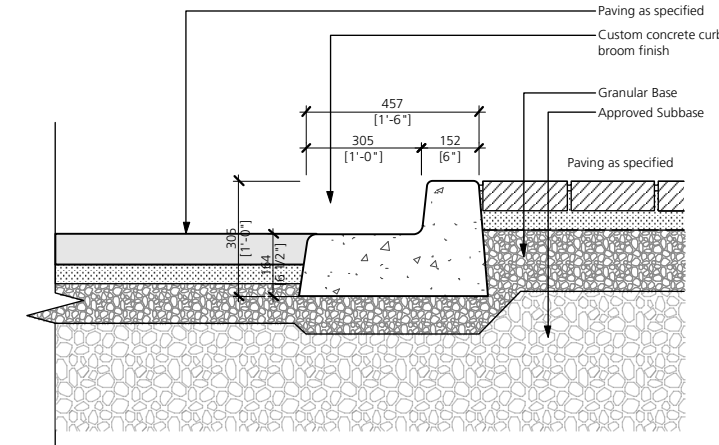
Plan View

B. Permeable Pavers (in Parking Stalls in Parking Lots)

2 Vehicular Paving  
L-4.0 Scale: 1:20



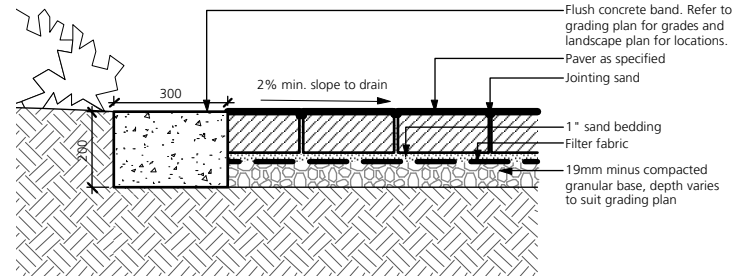
A. Flush Curb



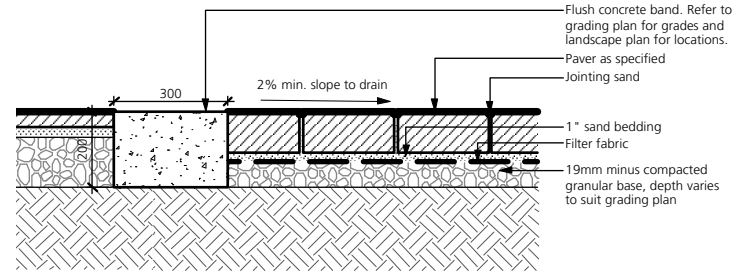
B. Barrier Curb

2 Vehicular Paving  
L-4.0 Scale: 1:20

3 Curb  
L-4.0 Scale: 1:20



A. Banding between Pavers and Planting



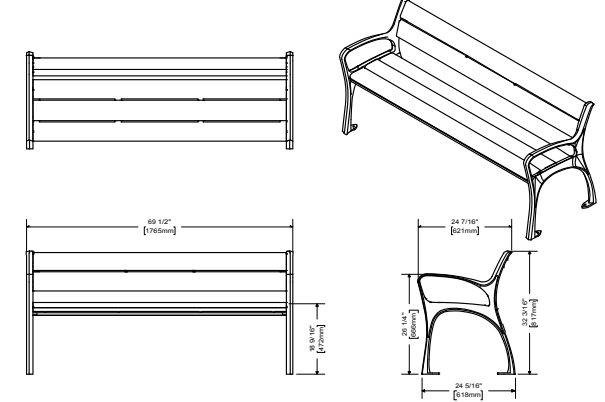
B. Banding between Pavers and Pavers

4 Concrete Banding  
L-4.0 Scale: 1:20



5 Custom Curved Bench  
L-4.0 Scale: NTS

**Model:** MB870 Series  
**Manufacturer:** Maglin  
**Colour:** IPE + Powercoat Black-Gloss  
**Contact:** www.maglin.com  
**Installation:** Mount as per manufacturer's specifications  
**Quantity:** TBD



6 Backed Bench  
L-4.0 Scale: 1:50



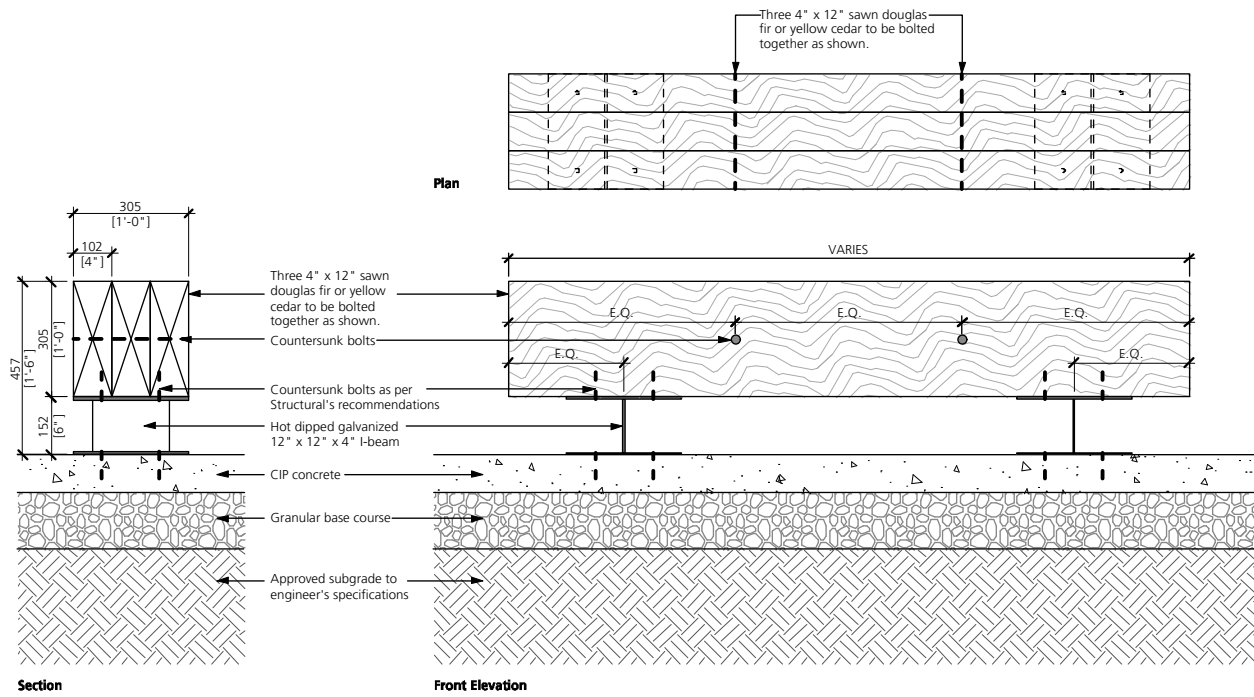
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Client:

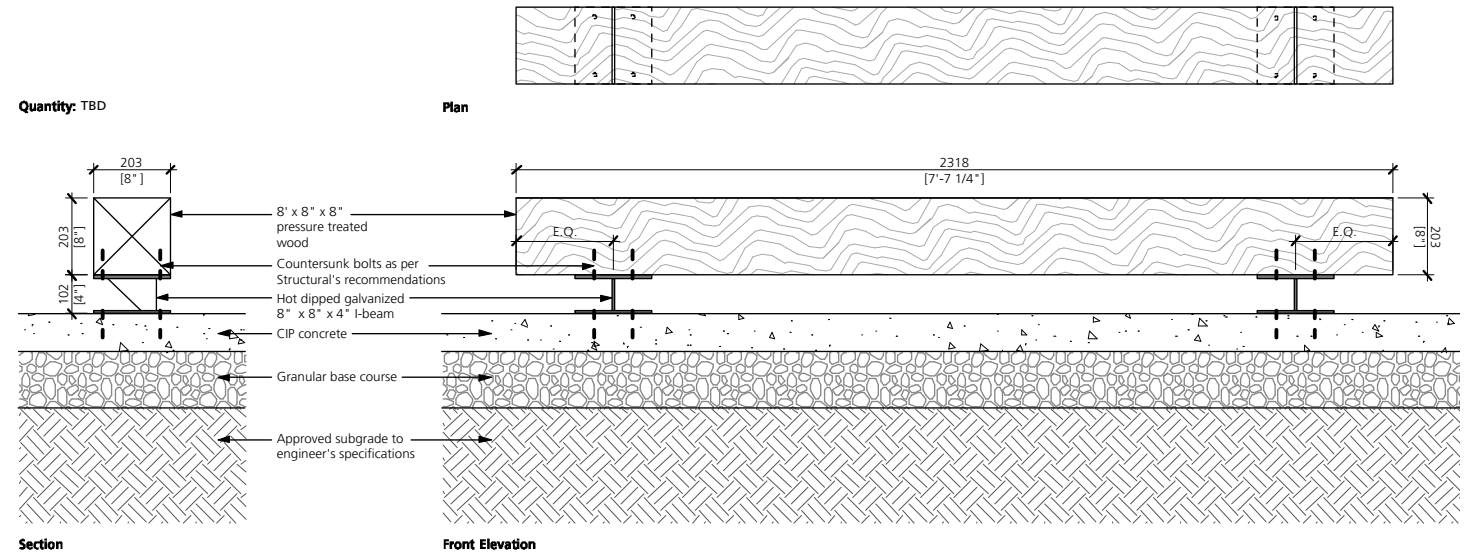
Project Title:  
**Union Bay Discovery Centre**

Drawing Title:  
**Landscape Details**

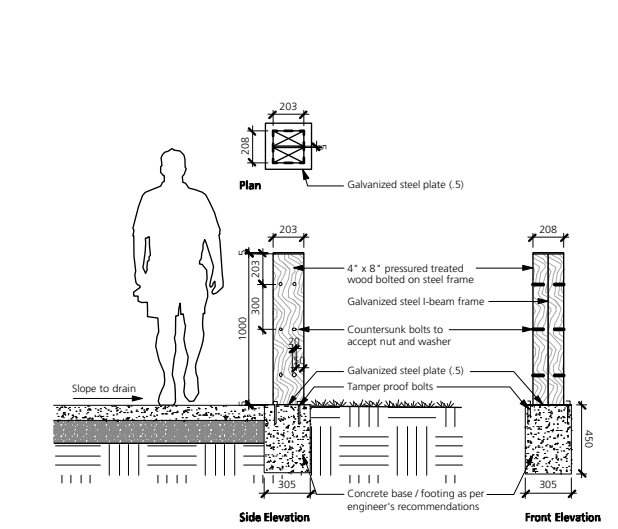
Project North: Drawn By: JS  
Checked By: MP  
Scale: As Shown Job No.: 17-089  
Sheet No.:



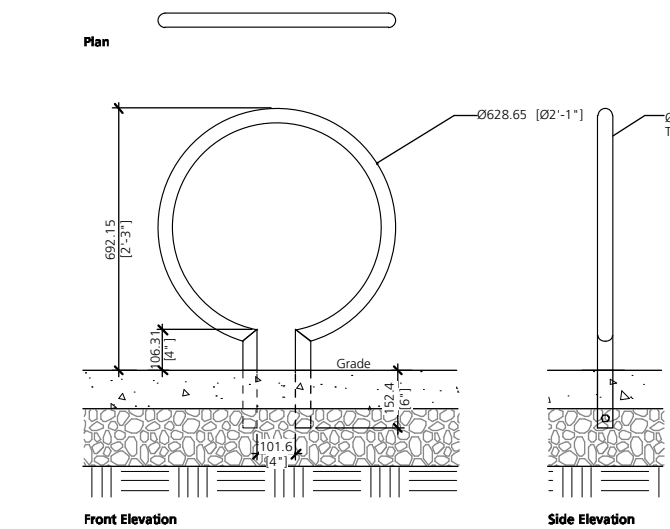
7 Custom Wood Backless Bench  
L-4.1 Scale: 1:20



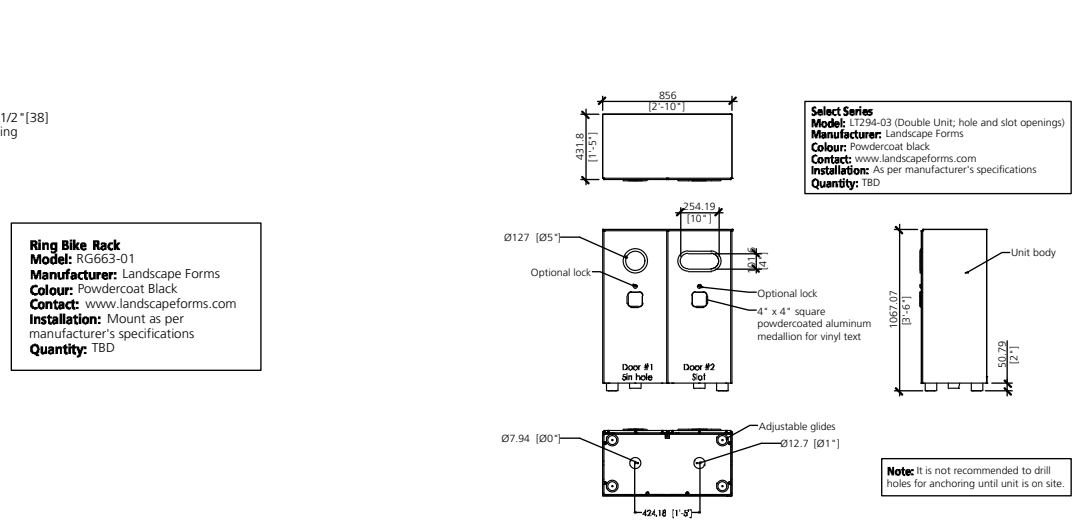
8 Curb Stop  
L-4.1 Scale: 1:20



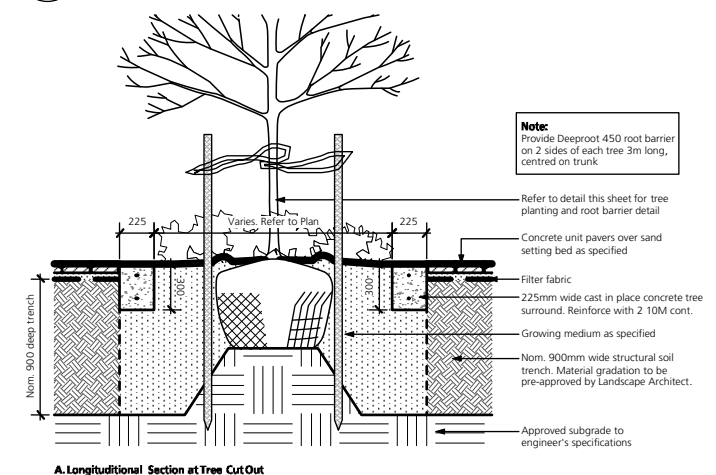
9 Custom Bollard  
L-4.1 Scale: 1:50



10 Ring Bike Rack  
L-4.1 Scale: 1:20



11 Receptacle  
L-4.1 Scale: 1:50



12 Tree Cut Out and Soil Trench  
L-4.1 Scale: 1:50

Select Series  
Model: 1254-03 (Double Unit; hole and slot openings)  
Manufacturer: Landscape Forms  
Colour: Powdercoat black  
Contact: www.landscapeforms.com  
Installation: As per manufacturer's specifications  
Quantity: TBD

Ring Bike Rack  
Model: RIG653-01  
Manufacturer: Landscape Forms  
Colour: Powdercoat Black  
Contact: www.landscapeforms.com  
Installation: Mount as per manufacturer's specifications  
Quantity: TBD

Note: It is not recommended to drill holes for anchoring until unit is on site.



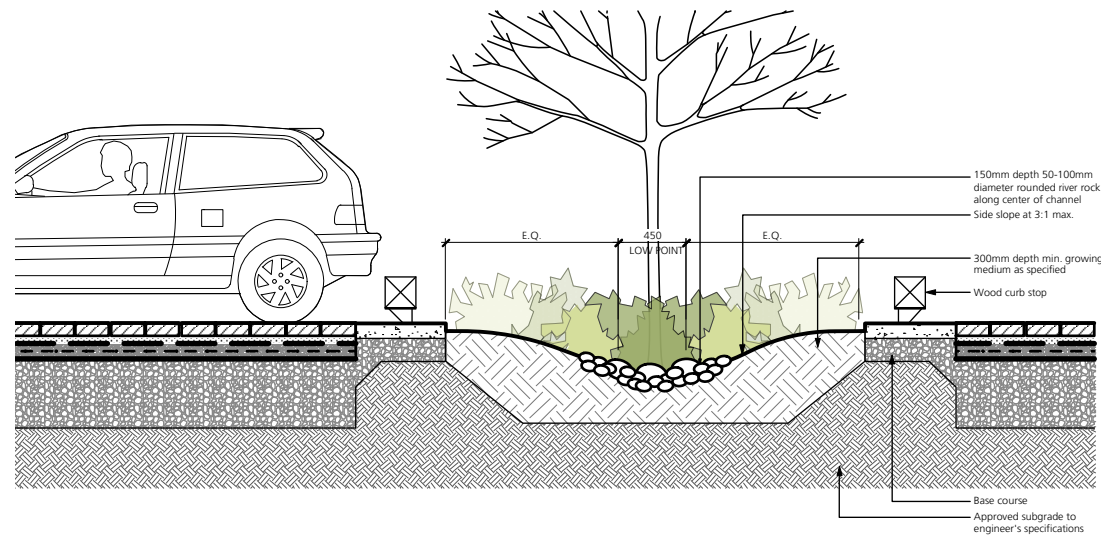
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Client:

Project Title:  
**Union Bay  
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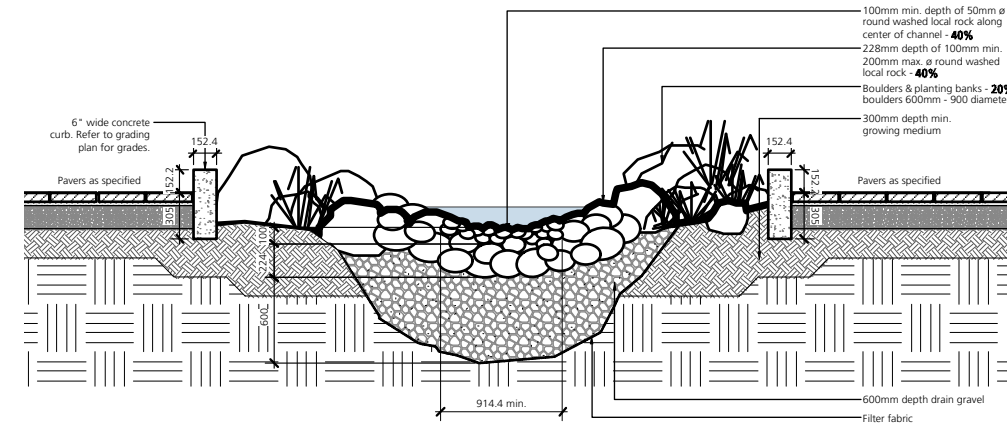
Drawing Title:  
**Landscape Details**

Project North: Drawn By: JS  
Checked By: MP  
Scale: As Shown Job No.: 17-089  
Sheet No.:

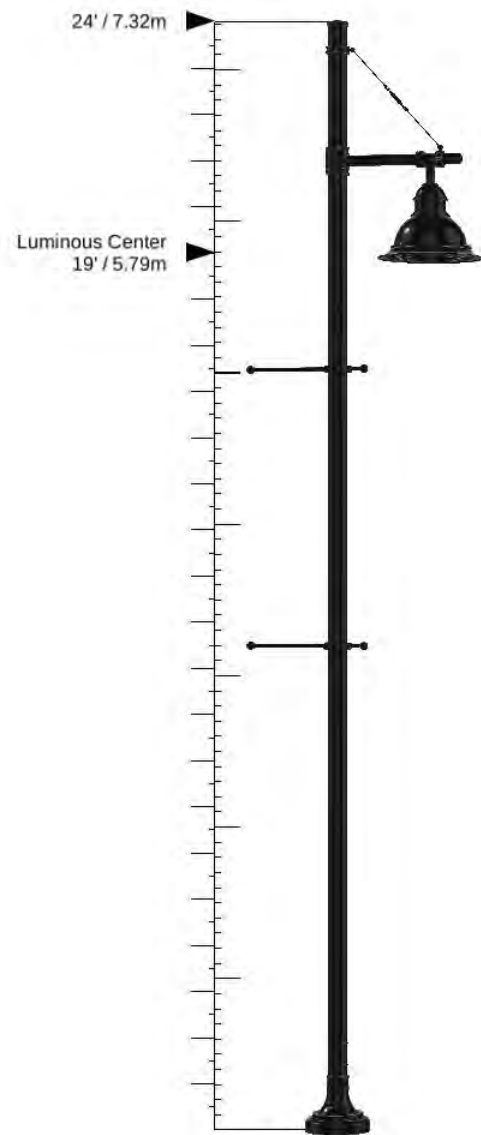




13 Parking Trench  
 I-4.2 Scale: 1:20



14 Rain Garden  
 I-4.2 Scale: 1:20



**Note:**  
 Urban Post-Mount Luminaire to be c/w LED light source compliant w/ Dark Sky requirement, decorative banners and powdercoated black finishes.

15 Dark Sky Compliant Urban Post-Mount Luminaire  
 I-4.2 Scale: 1:50



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 Revision No. Date

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 Client:

Project Title:  
**Union Bay  
 Discovery Centre**

Drawing Title:  
**Landscape Details**

Project North: Drawn By: JS  
 Checked By: MP  
 Scale: As Shown Job No.: 17-089  
 Sheet No.:





2 RAIN GARDEN AT STREET



BACKED BENCH



BACKLESS BENCHES



2 RAIN GARDEN AT BREEZEWAY



BIKE RACKS



PARKING LOT AND PLANTED TRENCH



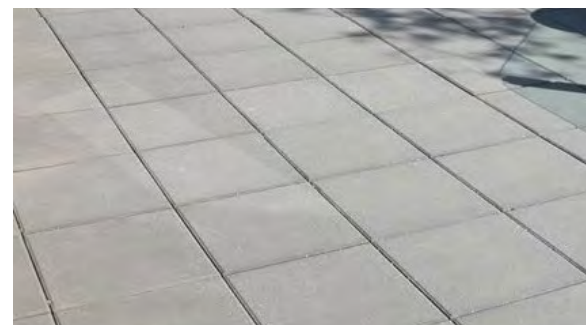
BOLLARD



VS-5 VEHICULAR PAVING



ABBOTSFORD STANDARD PAVERS - PARKING SPACES



HYDRAPRESSED SLAB PAVING



WORPLESTONE SWEET GUM



MUGHO PINE



COMMON SNOWBERRY



KINNICKINICK



JAPANESE MAPLE



GOLDMOUND SPIREA



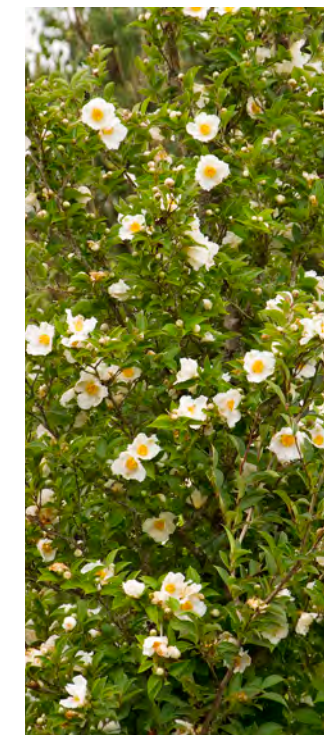
TREMBLING ASPEN



TALL OREGON GRAPE



LOW OREGON GRAPE



JAPANESE STEWARTIA

LANDSCAPE ELEMENTS



STREETScape CHARACTER

PLANT PALATE



Revised for City Comments 2019/08/26  
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 Client:

Project Title: **Union Bay Discovery Centre**

Drawing Title: **Landscape Precedent Images**

Project North: Drawn By: JS  
 Checked By: MP  
 Scale: Job No: NTS 17-089  
 Sheet No:

L5.0



**Project: Union Bay - Discovery Centre**  
**On-Site Landscape Cost Estimate**



Job No.: 17-089  
 Date: March 28, 2019  
 Prepared by: Kara Singbeil  
 R. KIM PERRY & ASSOCIATES INC.

Perry and Associates  
 Landscape Architecture  
 Site Planning

ITEM		MATERIALS AND INSTALLATION			
No.	Description	No.	Unit	Unit Price	Cost
<b>1</b>	<b>Soft Landscape:</b>				
1.0	Top Soil materials supplied	393	m3	\$30.00	\$11,781.66
2.0	Hydroseed supplied	187	m2	\$4.00	\$749.48
3.0	Irrigation, Supplied	811	m2	\$14.00	\$11,350.36
4.0	Site Boulders	21	ea	\$4.00	\$84.00
5.0	Rain Garden Materials	7	m2	\$50.00	\$345.50
<b>2</b>	<b>Plant Materials (Supplied):</b>				
1.0	Deciduous Trees - 6cm cal.	37	ea	\$334.00	\$12,358.00
2.0	Coniferous Trees - 2.5m ht.	5	ea	\$234.00	\$1,170.00
3.0	Shrubs, Groundovers, Vines - #3 Pot	264	ea	\$24.00	\$6,336.00
4.0	Shrubs, Groundovers, Vines - #2 Pot	821	ea	\$17.00	\$13,957.00
5.0	Shrubs, Groundovers, Vines - #1 Pot	645	ea	\$10.00	\$6,450.00
<b>Subtotal Supplied Cost</b>					<b>\$64,582.00</b>
<b>Subtotal on Cost of Labour</b>					<b>\$32,291.00</b>

SUBTOTAL (Supplied Cost)	<b>\$64,582.00</b>
12% Tax (GST+PST)	\$7,749.84
<b>Subtotal Supplied Cost</b>	<b>\$72,331.84</b>

SUBTOTAL (Installed Cost)	<b>\$32,291.00</b>
5% Tax (GST)	\$1,614.55
<b>Subtotal Labour Cost</b>	<b>\$33,905.55</b>

25% CONTINGENCY (Supplied+Installed Cost)	\$26,559.35
<b>TOTAL ON SUPPLIED &amp; INSTALLED COST</b>	<b>\$132,796.74</b>

**Notes:**

- 1.0 This estimate is for on-site soft landscape work including to back of curb along road frontages. Refer to attached L1.0 Landscape Plan for the scope of landscape work for this cost estimate.
- 2.0 This cost estimate does not include tax
- 3.0 All unit costs are for supply of materials
- 4.0 Refer to Civil for paving, site utilities and stormwater management.
- 5.0 Refer to Architect for Architectural elements and lighting.





## D R A I N A G E P L A N

	<b>Kensington Union Bay Properties Discovery Centre Drainage Plan Rev.3</b>
<b>Date:</b>	<b>June 26, 2019</b>
<b>Our Reference:</b>	<b>2211-47390-00</b>

**To:** Comox Valley Regional District

**Attn:** Brianne LaBute, MCIP, RPP, Planner

**Prepared By:** Adam Cooper, Eng.L.

**Reviewed By:** Bob Hudson, P.Eng.

### 1 INTRODUCTION

This Drainage Plan has been prepared on behalf of the owner Kensington Union Bay Properties Ltd. in support of a Development Permit application for the construction of the proposed “Discovery Centre” building on Lot 3, DL 154 Nanaimo District, Section 32 Twp. 1 and DL 28 Nelson District Plan EPP15507. In the absence of formal stormwater management guidelines, we have followed the principles identified in the *British Columbia Stormwater Planning Guidebook (BCSWPG)*, and the requirements of the *Kensington Comprehensive Development Permit Area* guidelines. This Drainage Plan describes the current site drainage, sets a baseline for existing runoff, and outlines stormwater management and erosion and sediment control targets for the proposed development.

### 2 SITE DESCRIPTION

The subject property lies east of Hwy 19A in Union Bay, BC. **Figure 1** overleaf indicates the location of the Discovery Centre, within the overall Kensington Union Bay Properties lands. The development site is contained entirely within the CD Zone 3 portion of the Union Bay Estates (formerly Kensington Island Properties) master planned development. It is understood that the parcel of land that the Discovery Centre is sited on will be subdivided from Lot 3 as part of the development process.

Portions of CD Zones 2 and 3 are currently being cleared. Historic tree cover in the area of the Discovery Centre was sparse, as this land was previously used as part of a coal shipping facility.

The (proposed) subject property is 0.3 ha, with the land generally sloping from the north west to south east. Physical parameters used in system modelling are described in later sections.



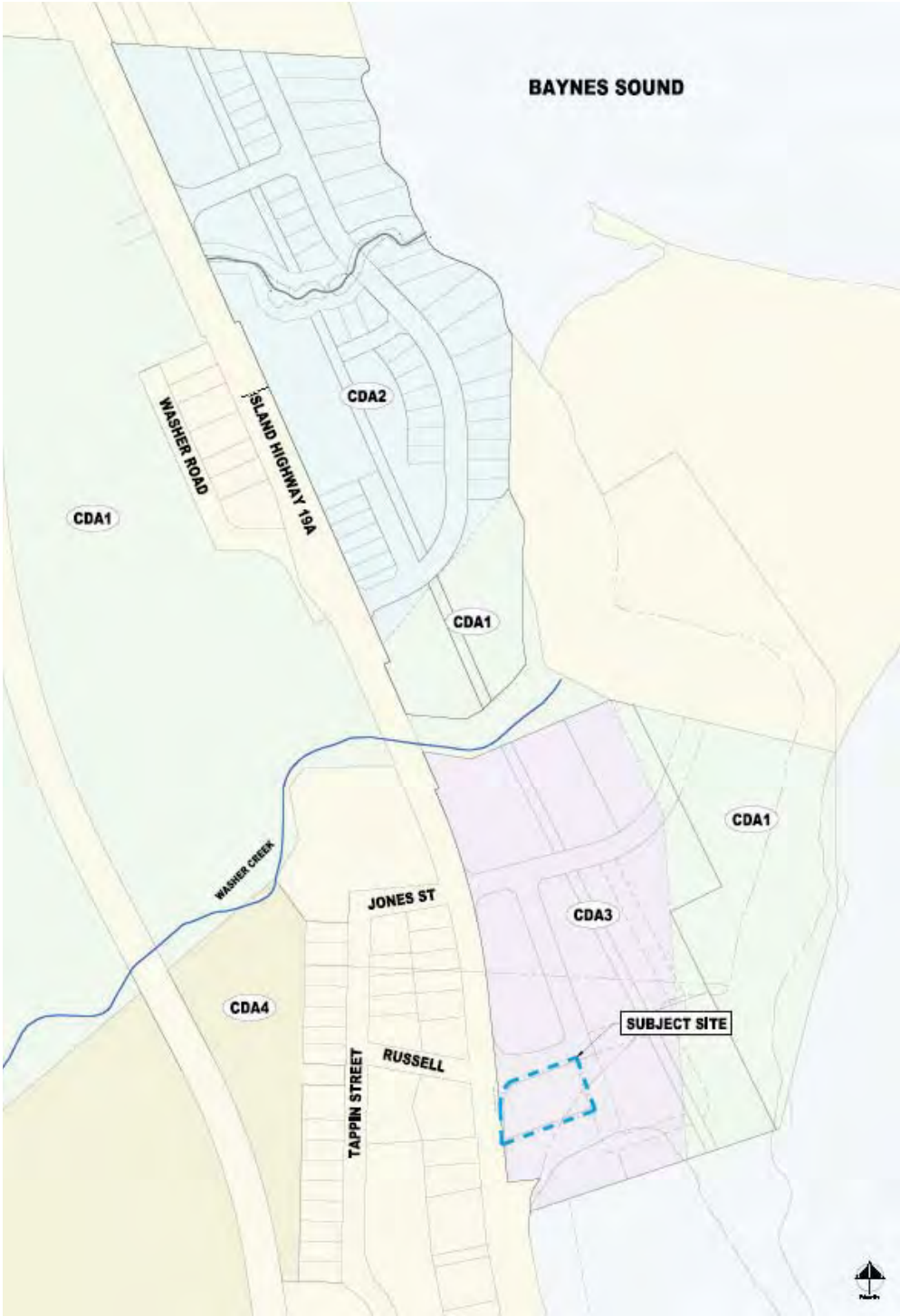


Figure 1 – Site Location Plan



## 2.1 Existing Conditions and Building Site Preparation

Soil conditions onsite generally consist of varying depths of topsoil/organics, over sandy gravel. Small amounts of random fill material may be present, but will be removed during construction.

Imported structural fill will be placed to raise and level interior portions of the site to achieve design main floor elevations. We understand that the ultimate lot grading of CD Zone 3 (beyond the limits of the Discovery Centre parcel) will also include placement of varying depths of structural fill to level the site and meet minimum main floor elevation requirements. This fill material will be Pit Run Gravel conforming to MMCD specifications, placed and compacted to a minimum of 95% modified proctor density, and suitable for use as road and building subgrade material.

Conservative estimates of the saturated permeability of MMCD pit run gravel, when in a compacted state, range from 70 – 350mm/hr. In the absence of in-situ infiltration test results, we have elected to model the site using the lowest accepted permeability values cited.

## 3 PROPOSED DEVELOPMENT

The owner of the property intends to construct two new commercial facilities, as shown conceptually in **Figure 2** below. The proposed buildings are expected to total 709 sq.m. (7,628 sq.ft.) of lot coverage, within a development site of 3,311 sq.m. (35,640 sq.ft.).

We gather that drive aisles and parking areas within the site will be paved with a combination of asphalt and paving stone. Based on long term site coverage (percent impervious) indicated on the Perry and Associates Site Plan, we have modeled the development with a probable (post-development) impervious area of 85% of the total site. (See Perry + Associates plan for more detail).



**Figure 2 – Concept Building Layout**



#### 4 HYDRAULIC MODELING, RUNOFF AND PERFORMANCE TARGETS

A hydraulic model was developed using PCSWMM 2017 Professional 2D software, enabling analysis of existing runoff and post-development site response to a variety of design rainfall events. Simulations were completed for the SCS Type 1A distribution for Mean Annual Rainfall (MAR), 1 in 2, 1 in 5, 1 in 10, and 1 in 100-year, 24-hour rainfall events derived from Environment Canada's Comox A rain gauge (1021830).

Site modeling input variables are summarized in **Table 1** below. The existing (pre-development) model characterizes the runoff generated on site based on historic, treed ground cover. Post-development site characteristics and model parameters have all been derived from the Perry and Associates concept site plan, previously introduced.

Parameter	Pre-Development	Post-Development
Area (ha)	0.3	0.3
Width (m)	44	44
Slope (%)	3.6	3.0
% Impervious	5	85
N Impervious	0.01	0.01
N Pervious	0.2	0.2
Dstore Impervious (mm)	2	2
Dstore Pervious (mm)	7	5
Zero % impervious	25	25
Curve #	55	92
Outlet Routing	Pervious	Outlet

The resulting site response to the MAR, 1 in 2, 1 in 5, 1 in 10, and 1 in 100-year year rainfall events under pre-development, post-development unmitigated, and post-development mitigated scenarios are summarized in **Table 2**.

24 Hour SCS Type 1A	Total Precipitation (mm)	Pre-Development Runoff		Post-Development Unmitigated Runoff		Post-Development Mitigated Runoff	
		Peak Flow (L/s)	Total Volume (m <sup>3</sup> )	Peak Flow (L/s)	Total Volume (m <sup>3</sup> )	Peak Flow (L/s)	Total Volume (m <sup>3</sup> )
MAR	48	0.4	11.5	6.6	145	0	0
1 in 2-Year	59	0.6	25.3	8.2	180	0	0
1 in 5-Year	74	1.1	48.1	10.4	231	0	0
1 in 10-Year	85	1.6	64.7	11.9	264	1.6	3
1 in 100-Year	117	4.3	124.2	16.6	370	12.4	54



## 5 DESIGN ELEMENTS

The recommended Best Management Practices (BMPs) to be implemented for this project have been developed to reduce post-development peak runoff rates and provide qualitative treatment of runoff. The following BMPs are proposed for the site:

- Retain/re-establish native vegetation or plant low maintenance vegetation beyond the developed (hardscaped) area.
- Place a minimum 300 mm of amended topsoil in any new landscaped (pervious) areas.
- Grade the finished area around new building to provide positive drainage away from the buildings.
- Direct runoff from impervious surfaces to landscaping and permeable areas where possible.
- Limit the total amount of impervious area to the maximum indicated herein.
- Surface drainage from impervious ground areas shall be collected in catch basins with minimum 450mm deep sumps and trapping hoods to collect grit and oil.

Additional BMP's to be implemented include:

- Directing drainage from building roofs to either rainwater collection ponds and into an underground cistern to be used to supplement on-site irrigation, or into a rain garden.
- Routing overflow from rainwater collection ponds into a rain garden.

Additional BMP's have not been accounted for in the modelling. If implemented, these BMP's will provide an increased factor of safety by serving to further reduce peak runoff rates and total volumes.

### 5.1 Rock Trench Infiltration / Storage Gallery and Control Manhole

Runoff from rain gardens and parking lot areas should be routed to a series of subsurface storage / infiltration facilities located on site. Typical galleries will include 25mm diameter washed drain rock and 200mm diameter perforated pipe wrapped in a non-woven geotextile fabric. Solid wall pipe will be used to connect galleries, catch basins, manholes, service connections, etc. Where practical, multiple smaller, decentralized, infiltration galleries should be utilized to allow for re-introduction of rainfall over a broader portion of the site. As there is no formal stormwater collection system within the area, onsite storage of rainwater should accommodate rainfall events up to the 1 in 10-year, 24-hour event modeled in this report. In the interim, a control manhole should be installed at the point of connection to the future offsite system.

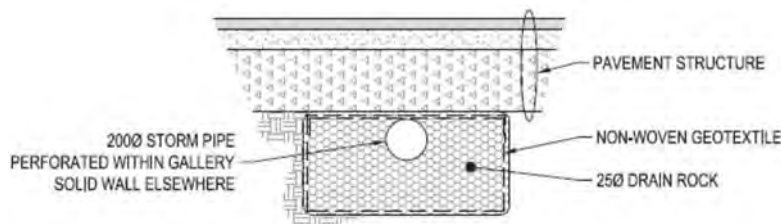


Figure 3 - Typical Infiltration Gallery

Infiltration galleries have been modeled in PCSWMM software with a hydraulic conductivity of 50mm/hr and drain rock porosity 0.4. A longevity factor of 0.75 was used in this analysis to account for plugging of pore



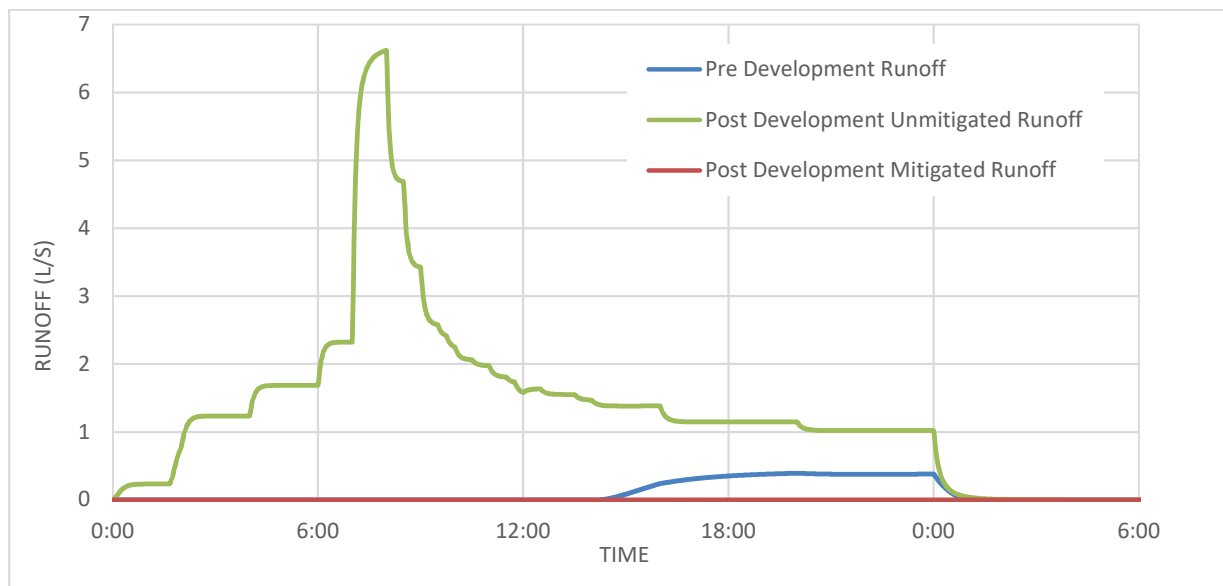


spaces and degradation over time. For this site, a total excavated gallery footprint 170 sq.m at a depth of 1m is required to create an effective storage volume of 51 cu.m.

The property owner shall arrange with McElhanney for an inspection of the constructed rock trench infiltration gallery before backfill is placed over the gallery. The owner shall also notify McElhanney if the in-situ soil conditions assumed in this report vary.

## 6 SYSTEM PERFORMANCE

The analysis shows that with the use of BMPs as proposed herein, runoff can be retained onsite and infiltrated up to the 1 in 10-year, 24-hour design storm. This is further demonstrated in **Figures 4 through 8**.



**Figure 4 - BMP Performance: MAR event**



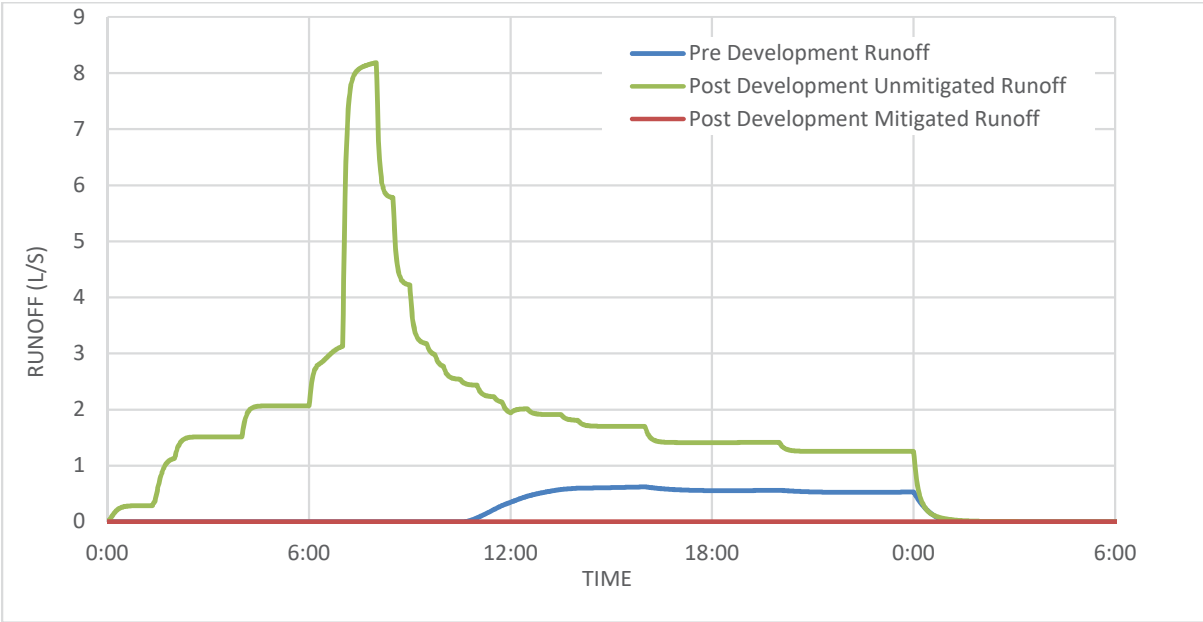


Figure 5 - BMP Performance: 1 in 2-year event

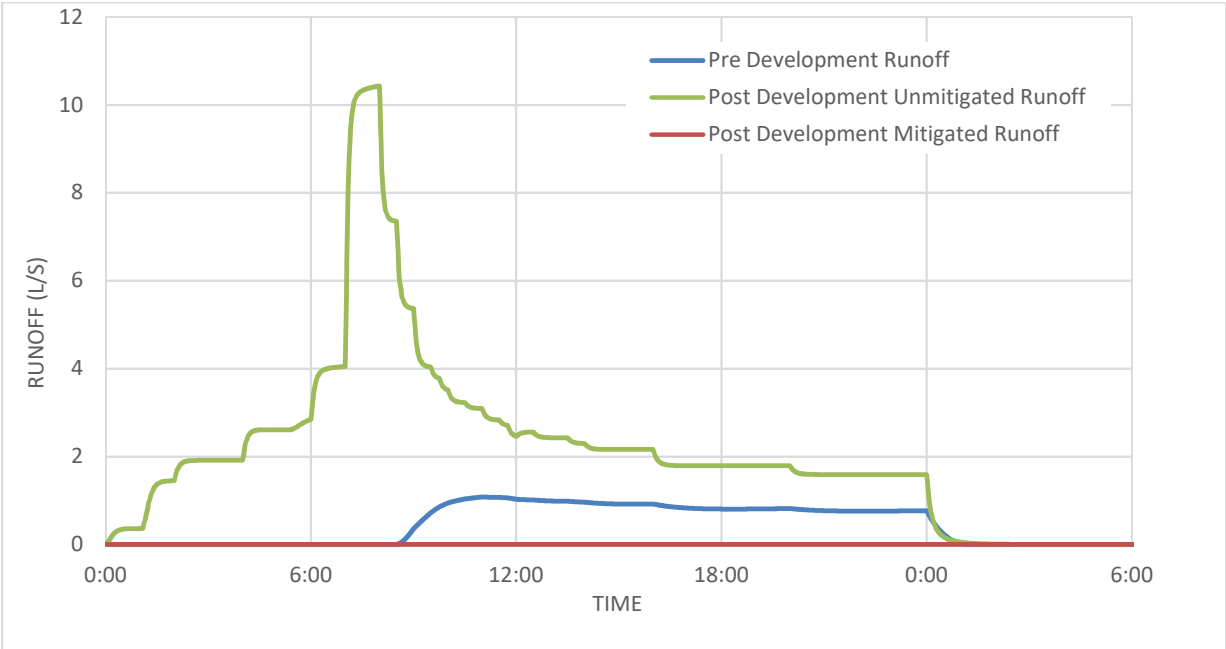


Figure 6 - BMP Performance: 1 in 5-year event



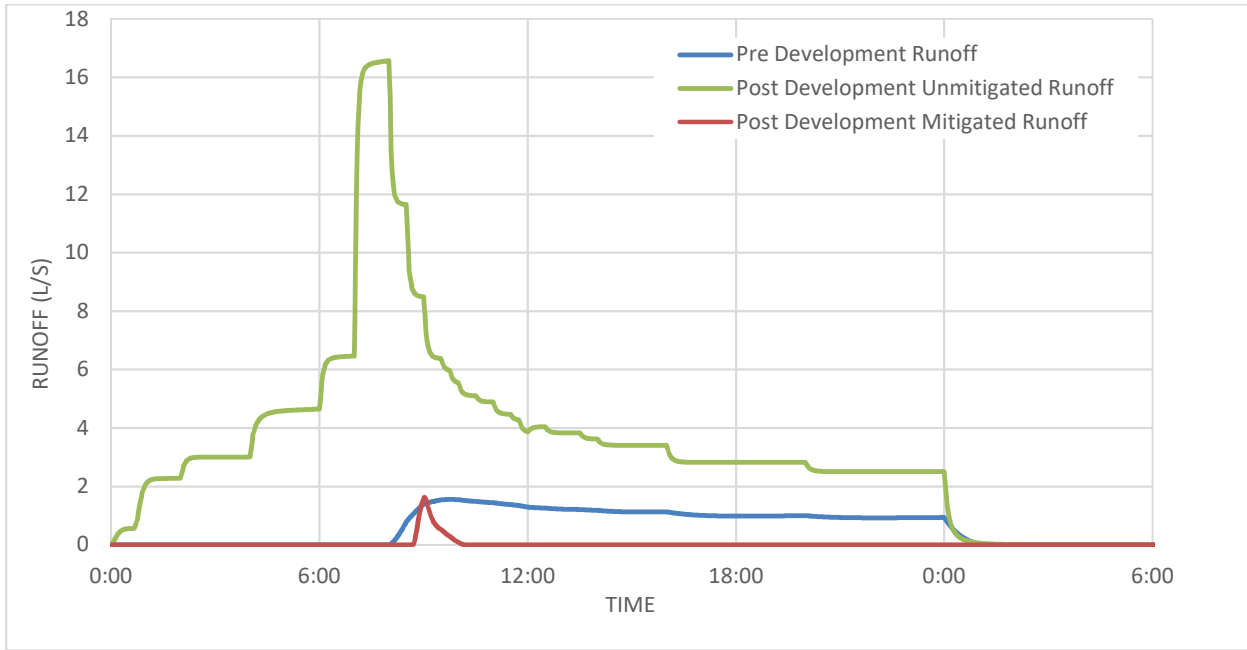


Figure 7 - BMP Performance: 1 in 10-year event

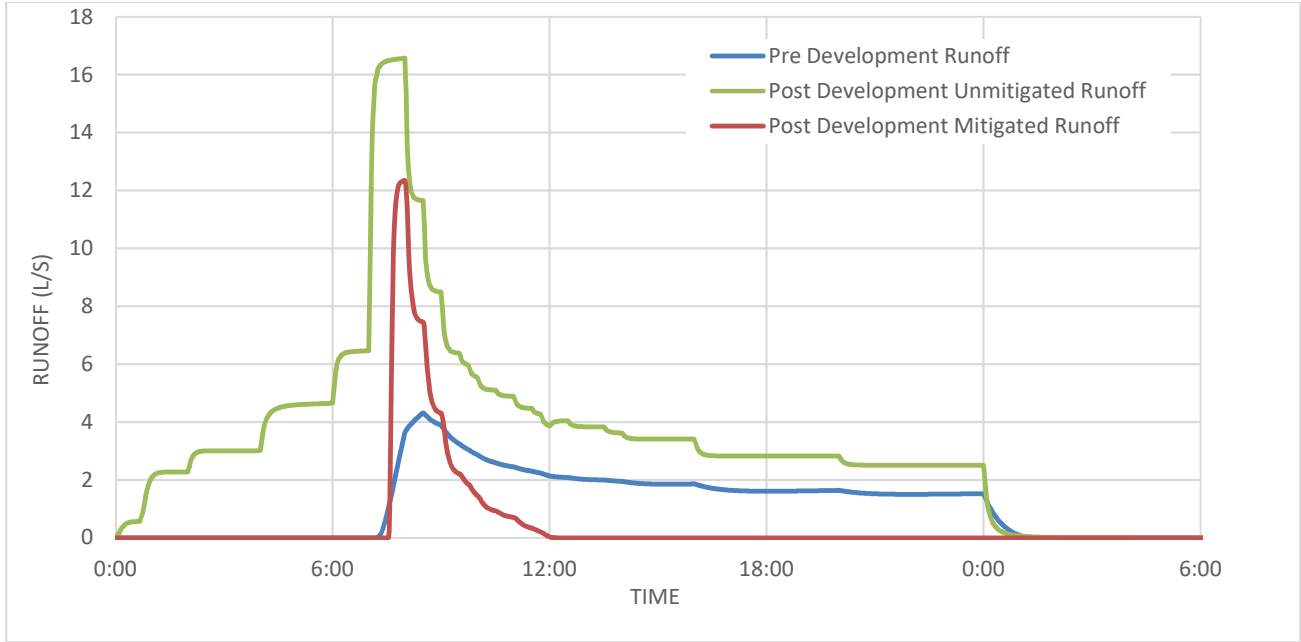


Figure 8 - BMP Performance: 1 in 100-year event



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## 7 QUALITY

With the exception of roof water, all runoff will be routed through catch basins equipped with grit sumps, upstream of proposed infiltration galleries, to remove settleable solids and debris. Groundwater recharge through infiltration will serve to further improve the quality of this surface runoff. The BMPs noted herein, and the use of sediment and erosion control measures provided in **Section 9** will assist the developer and contractor in meeting Fisheries & Oceans Canada and Ministry of Environment & Climate Change Strategy water quality targets for discharge into aquatic environments.

## 8 MAINTENANCE

The infiltration system will require occasional maintenance. Catch basin sumps, perforated pipes and control manholes should be checked annually for sediment and debris build-up, and cleaned accordingly. It is recommended to schedule this maintenance just before the rainy season (i.e. September). Additionally, to avoid premature failure, all runoff should be directed away from the infiltration gallery during construction to avoid clogging the gallery with silt laden runoff.

## 9 EROSION AND SEDIMENT CONTROL

Prior to (or in conjunction with) any land clearing, grading or construction, erosion and sediment control measures should be implemented to prevent conveyance and discharge of fine silts and clay particles into the receiving environment. Construction should be scheduled for the drier summer months, which will reduce the chance of rain and erosion. As rain is always a possibility, an erosion and sediment control plan should be in place prior to construction.

As a minimum, erosion and sediment control measures should be implemented based on the requirements of the provincial document entitled "*Develop with Care 2012: Environmental Guidelines for Urban and Rural Land Development in British Columbia*", and in compliance with the Ministry of Water Land and Air Protection's "*Environmental Objectives, Best Management Practices and Requirements for Land Developments Guide*", February 2000.

During construction, a containment system should be employed. The containment system should utilize perimeter silt fencing and cut-off ditches with check dams, which should be installed as per "*Develop with Care 2012*" guidelines. In general, the following guidelines should be used:

- A containment system should be employed which will eliminate the conveyance and discharge of fine silts and clay particles into the receiving environment.
- Construction activity is to be curtailed or postponed completely during periods of wetter weather.
- Stripping of existing organic topsoil should be undertaken during periods of dry weather only.
- No accumulations of sediment/mud should be tracked onto the public road.
- In the event of heavy precipitation, the contractor should ensure a cessation of all works on the site.



## 10 CONCLUSION

Hydraulic modeling of system performance indicates that the installation and routine maintenance of the Best Management Practices described herein will maintain pre-development discharge rates up to and including the 1 in 10-year, 24-hour rainfall event.

Yours truly,

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Cc: Kensington Union Bay Properties Ltd, Brian McMahon  
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### REVISION HISTORY

Date	Status	Revision	Author
June 26, 2019	Final	3	AC
May 29, 2019	Final	2	AC
January 31, 2019	Final	1	AC
January 28, 2019	Final	0	AC

### LIMITATION

This report has been prepared for the exclusive use of the Comox Valley Regional District. The material in it reflects the best judgement of the Consultant in light of the information available to the Consultant at the time of preparation. As such, McElhanney, its employees, sub-consultants and agents will not be liable for any losses or other consequences resulting from the use or reliance on the report by any third party.



<b>Subject:</b> DarkSky	
<b>Category:</b> Community Planning Services	<b>Policy Reference:</b> 3010-00

**Purpose**

1. To include a set of guidelines to be considered regarding exterior lighting for commercial, industrial, and multi-family residential unit development. These regulations include an interpretation section to define the various terms, standardize how light systems are designed, constructed and installed, and to reduce glare, light trespass and obtrusive light while conserving energy and resources. Safety, security and productivity shall be maintained and encouraged while reducing the degradation of the nighttime visual environment.

**Scope**

2. The scope of this policy includes the various electoral area official community plans that have a form and character development permit area for commercial, industrial or multi-unit family residential development.

**Guiding Principle**

3. To guide commercial, industrial and multi-family residential development to have exterior lighting that does not negatively impact the quality of life for adjacent neighbours nor create any light pollution.

**Interpretation**

4. The following are definitions relating to this DarkSky policy:
  - a) **Abandonment:** The relinquishment of a property, or the cessation of a use or activity by the owner or tenant for a period of six months, excluding temporary or short term interruptions for the purpose of remodeling, maintaining, or otherwise improving or rearranging a facility. A use shall be deemed abandoned when such use is suspended as evidenced by the cessation of activities or conditions that constitute the principle use of the property.
  - b) **Development project:** Any multi-family residential, commercial, industrial or mixed use subdivision plan or development plan which is submitted to the regional district for approval.
  - c) **Direct illumination:** Illumination resulting from light emitted directly from a lamp or luminaire, not light diffused through translucent signs or reflected/bounced from other surfaces such as the ground or building faces.
  - d) **Filtered light:** Light from a light source that is covered by a glass, acrylic or other cover that restricts the amount of non-visible radiation (infrared, ultraviolet) emitted by the light fixture.
  - e) **Fully shielded fixture:** An outdoor light fixture shielded in such a manner that all light emitted by the fixture, either directly from the lamp or indirectly from the fixture, is projected below the horizontal as certified by the manufacturer.



- f) Glare: Harsh, uncomfortable bright light emitting from a luminaire causing reduced vision or momentary blindness when shining into one's cone of vision.
- g) Installed lighting: Attached, or fixed in place, whether or not connected to a power source.
- h) Light trespass: Exterior light fixtures shining light beyond one's property line.
- i) Multi-unit family residential: properties zoned and utilized for multi-unit family residential use.
- j) Outdoor light fixture: Outdoor electricity powered illuminating devices, outdoor lighting or reflective surfaces, lamps and similar devices, either permanently installed or portable, which are used for illumination or advertisement. Such devices shall include, but are not limited to, search, spot and flood lights for: buildings and structures; recreational areas; parking lot lighting; landscaping and architectural lighting; billboards and other signs (advertising or other); street lighting; product display area lighting.
- k) Outdoor recreation facility: A facility used and equipped for the conduct of sports, leisure and/or entertainment.
- l) Partially shielded light fixture: An outdoor light fixture shielded in such a manner that more than zero but less than ten percent of the light emitted directly from the lamp or indirectly from the fixture is projected at angles above the horizontal, as certified by the manufacturer.
- m) Sign: Any object, device, display, structure, or part thereof, which is used to advertise, identify, display, direct or attract attention to any object, service, event or location by any means including words, letters, figures, design, symbols, fixtures, colours, illumination or projected image.
- n) Sign, indirectly lit: Any sign facing that reflects light from a source intentionally directed upon it.
- o) Sign, internally lit: Any sign that has the source of light entirely enclosed within the sign and not directly visible to the eye.
- p) Temporary lighting: Lighting which does not conform to the provisions of the DarkSky policy and will not be used for more than one thirty day period within a calendar year may be permitted, subject to approval from the regional district, with a possible one, thirty day extension. Temporary lighting is intended for uses that by their nature are limited in duration; example: holiday decorations, civic events or construction projects.
- q) Up light: Any light from a luminaire that shines above the horizontal plane causing illumination of the sky.



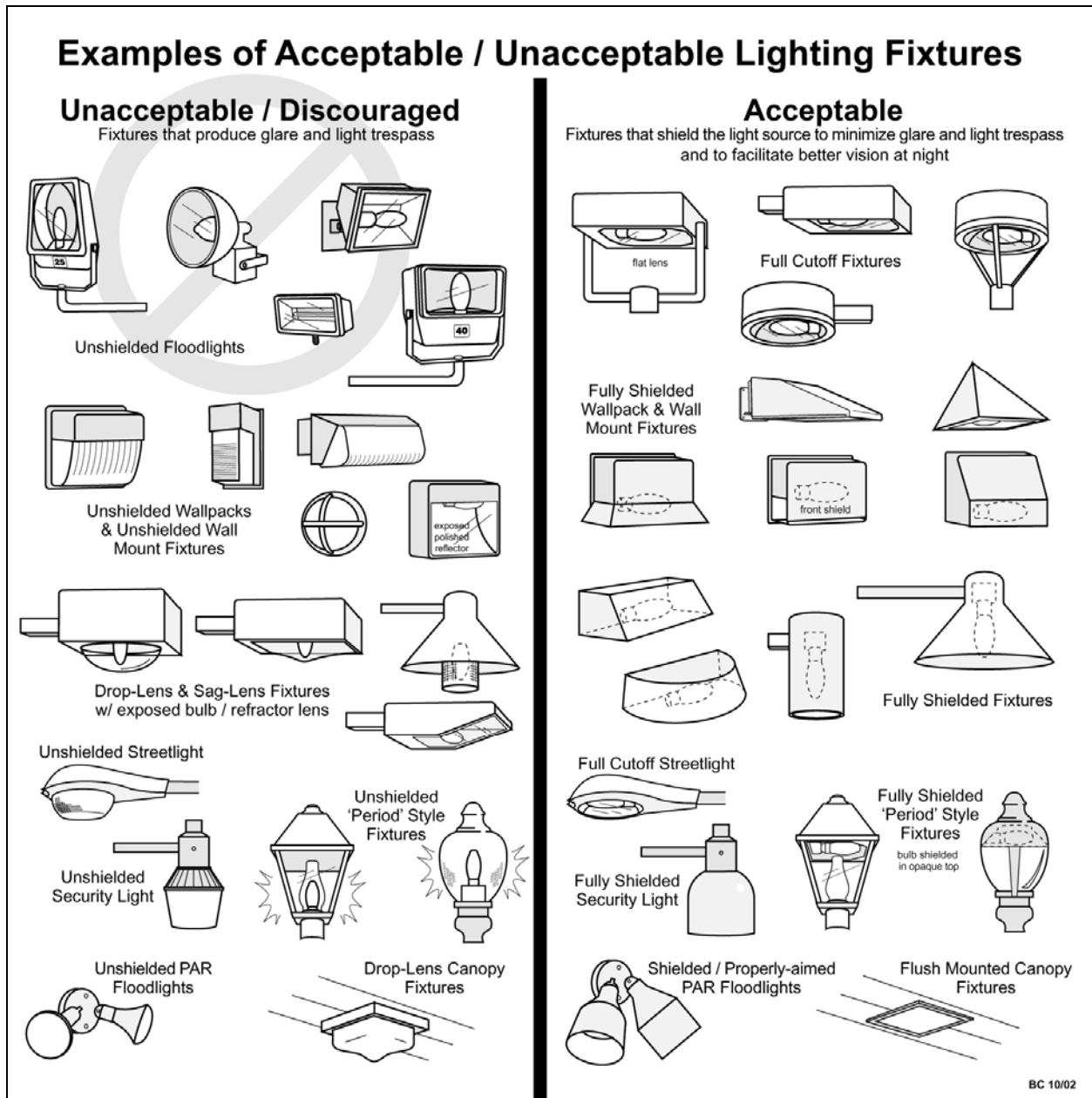


Figure One: Sample of light fixtures that are discouraged and recommended as part of the DarkSky policy.

**Policy Statements**

5. Shielding of outdoor light fixtures
  - a) All outdoor lighting fixtures shall be shielded to minimize up-light. Mounted incandescent type fixtures shall be shielded. Lighting is encouraged to be activated by motion sensors versus being on all the time.
  - b) Outdoor floodlighting shall be shielded in such a manner that the lighting system will not produce light trespass.



6. Limiting trespassing of light beyond property lines
  - a) All light fixtures shall be located, aimed and or shielded so as no direct light trespasses beyond the property line on which the light is mounted.
  
7. Non-conforming light fixtures
  - a) In addition to other exemptions provided in the regional district DarkSky policy, an outdoor lighting fixture not meeting these provisions shall be allowed if the fixture is extinguished by an automatic shutoff device between sundown and sunrise.
  - b) No outdoor recreational facility, whether public or private, shall be illuminated after sundown except when the facility is in use. Outdoor lighting is encouraged to be on only when the field is in use, such as by a user pass activation system.
  - c) The use of searchlight, laser light, or any similar high intensity light for outdoor advertising or entertainment, except in emergencies by police and fire personnel is prohibited. Temporary exemption to this may be granted if approved by the General Manager of Community Planning Services.
  
8. Effective Date
  - a) The development permit must conform to the DarkSky policy that exists at the time of application. When existing lighting fixtures are considered inoperable, all replacements are subject to all the provisions of the DarkSky policy. The light will be considered inoperable when the housing of the fixture requires replacement or when the lens, lamp, and ballast need to be replaced.
  
9. New Construction
  - a) All exterior lighting installed shall be approved by the International DarkSky Association (IDA) and must be installed correctly.
  
10. Exemptions
  - a) The following are exempt from the requirements of the DarkSky policy:
    - i. Single-family development (less than or equal to three dwelling units on one property and zoned residential). Note: the regional district does encourage single-family development to seriously consider the installation of IDA approved lighting.
    - ii. Outdoor lighting fixtures existing and legally installed prior to the implementation of the DarkSky policy.
    - iii. Outdoor advertising signs of the type constructed of translucent materials and wholly illuminated from within do not require shielding. Dark backgrounds with lighter coloured lettering or symbols are preferred to minimize detrimental effects.
    - iv. Navigational and general life safety lighting systems required at airports and other transportation installations.

**Approval History**

Policy adopted:	December 13, 2007
Policy amended:	

Section 87 removed for ease of readability and understanding.

### ***Kensington comprehensive development permit area***

#### 88. *Justification*

The proposed Kensington development permit area is located north of and adjacent to the Union Bay community, which is renowned for past successes and future goals to preserve the rich heritage of the area. Development within sensitive areas will be subject to environmental sensitive areas development permits and the development conditions of these permits. Portions of the proposed development area are impacted by the coal residue inherited from a previous industrial era. The “waste coal hills,” as commonly known, are subject to be remediated in accordance with a remediation plan approved by the Ministry of Environment.

One of the objectives of the Kensington development permit area is to protect the historic character of the Kensington and Union Bay communities. This will be accomplished by creating compatible buildings that complement Union Bay’s historic character by utilizing a “west coast” style comprised of stone, wood and other natural building materials.

Where applicable, the regional district will in addition to the above, apply the aquatic habitat development permit and the Ministry of Environment’s riparian areas regulation.

#### *Area*

The Kensington comprehensive development permit area is shown on map 5.



*Information requirements*

All development within the Kensington development permit area indicated on map 5 shall be required to obtain a development permit unless otherwise exempted. An application for a development permit for the Kensington development permit for commercial, multi-family, non-residential and intensive residential development permit applications shall include the following information:

- (1) Location and dimensions of all driveway crossings, parking areas, loading areas, vehicular circulation areas, pedestrian areas and connections to other walkways, proposed landscaping areas, outside storage areas and outside display areas;
- (2) Location and dimensions of all proposed improvements including expansion of proposed and existing improvements;
- (3) Location and dimensions of all property lines, easements and statutory rights-of-way, siting of parking areas, driveways, storage areas and loading docks;
- (4) Proposed surface treatment of all yard areas, showing the extent and nature of landscaping, including details of vegetation cover (trees) to be maintained, or proposed to be planted;
- (5) Dimensioned elevations of all improvements including elevations, noting building materials and finishes;
- (6) Proposed methods of management and control of all on-site drainage (i.e., rainwater management plan);
- (7) Location, height, and construction of all proposed signage, lighting, fencing and screening; and
- (8) Such further information or materials as the regional district may reasonably require.

*Exemptions*

The following conditions are exempt from development permit requirements of all categories:

- (1) for single family residences;
- (2) for interior renovations;
- (3) for minor alterations to the exterior of a building or structure that do not change the form or character of the development;
- (4) for minor changes to design, finish or landscaping;
- (5) for accessory buildings;
- (6) for subdivisions which are lot line adjustments, subdivision for park purposes or for consolidation; and
- (7) for trail projects approved by the regional district.

*Guidelines*

*General form and character guidelines:*

- (1) All buildings and structures shall give consideration to the general architectural style, detailing scale, materials, character of fenestration, character and material of roofs, treatment of entrances, gradations of heights, relationship of indoor and outdoor spaces, design and placement of amenity areas, access, parking arrangement and circulation, and landscape character and design.
- (2) The character and style of buildings, neighbourhoods and communities should provide a sense of place, one that reflects the rich heritage values of Union Bay and coastal natural amenities of Vancouver Island.
- (3) The design of all buildings, open spaces and their relationships should embody crime prevention through environmental design, an established multi-disciplinary approach to deterring criminal behavior through environmental design. Proper design and effective use of the built environment can reduce crime, reduce the fear of crime, and improve the quality of life.
- (4) The design of all buildings and open spaces (e.g., sidewalks, trails, parking lots and public areas) should consider easy and friendly access by people with disabilities and special needs.
- (5) Varied rooflines, including pitched roofs, are encouraged to provide for view corridors and to reflect heritage elements.
- (6) The design and introduction of a new building type to, or adjacent to, a residential neighbourhood should provide harmony and lend continuity to the neighbourhood and should not create excessive disruption of the visual character of the neighbourhood.
- (7) All roof top, mechanical equipment should be screened from view and incorporated with the overall architectural treatment of buildings.
- (8) Any end wall of a building that is visible from the street should be finished to the same standard as the front of the building to provide an attractive appearance. Blank unarticulated walls are not permitted.
- (9) The roof slope and siting of any buildings shall be such as to minimize any obstruction of direct sunlight falling onto adjacent properties and residences.
- (10) Buildings and structures shall be designed and situated to maximize view corridors where appropriate.
- (11) Buildings and structures shall be designed and situated to minimize the disturbance of significant natural vegetation.
- (12) Buildings and structures shall be designed to complement unique topographical features.
- (13) Security and other lighting shall not be placed so as to shine directly into residential properties, as per the dark sky policy of the regional district or to reduce the separation effectiveness of any landscaped buffer.
- (14) Compliance with the regional districts dark sky policy is a mandatory requirement.
- (15) Exterior lighting fixtures should be architecturally integrated with the design of the buildings.
- (16) Site planning details shall demonstrate inclusion of the following pedestrian circulation considerations:
  - i. Development of a walkway network that provides access to important site and off-site destinations.
  - ii. Building and site designs should include “public gathering places,” such as open-air market areas which help to encourage pedestrian traffic.



- iii. The use of small seating areas, entry areas, plazas and other meeting places in conjunction with pedestrian areas should be incorporated into development plans.
- iv. Site design should minimize vehicle and pedestrian conflicts.
- v. Pedestrian access to the site and to buildings should be inviting and well marked.
- vi. Encourage maximum accessibility and usage of the foreshore for the public in all land uses.
- vii. Ensure neighbourhood parks in all zones are connected by greenways or trail system to other land uses (e.g., to neighbourhood commercial or to trail systems).
- viii. Pathway design and construction to meet proposed use criteria:

Pathway	Location	Width & surface
Greenway trail	Golf course, riparian areas, waterfront, buffers	2.0 metres (6.6 feet) pervious surface (e.g., gravel)
Sidewalk	Commercial, hotel, retail	2.0 metres – 3.0 metres (6.6 feet – 9.8 feet) hard surfaced (e.g., unit pavers, exposed aggregate concrete, permeable pavers)
Neighbourhood connector	Residential neighbourhood	1.5 metres (4.9 feet) pervious surface (e.g., gravel)
Bicycle commuter trail	Shoulder of major transportation routes / E &N Rail Corridor	Minimum 2.0 metres (6.6 feet) impervious surface (e.g., asphalt)

- ix. Sidewalks may not be required in residential areas or in sectors where alternate pathways are available (refer to paragraph viii above). All pathways shall have the greatest permeability practical for the intended use.
- x. Pathways may be developed in riparian corridors provided that requirements of the riparian area regulations are followed and that porous, non-polluting trail/tread surfaces are used.
- xi. A pedestrian and cycle-friendly access shall be built as part of roadway crossings of Hart Creek.
- xii. All paths are to be connected to form a continuous pedestrian route.
- xiii. Paths shall be established within the dedicated old rail right-of-way as documented in the greenway plan, if feasible.
- xiv. Sidewalks are required on both sides of streets in the Village Centre commercial area.
- xv. Trails, paths and sidewalks should link to those of adjacent communities.

- xvi. Trails, paths and sidewalks should be accessible to people with disabilities.
- (17) Site planning details shall demonstrate inclusion of the following cycling circulation considerations:
- i. Site vehicle circulation should provide for safe bicycle routes across the site to building entrances.
  - ii. Bicycle parking should be provided in a sheltered location convenient to building entrances and provide for secure storage.
- (18) Site planning details shall demonstrate inclusion of the following automobile / transportation infrastructure considerations:
- i. Lanes servicing the rear of residential units shall be surfaced to increase infiltration of rainwater.
  - ii. Alternates to curb and gutter construction are encouraged for interior roadways in the single-family residential areas.
  - iii. Parking areas should clearly identify pedestrian circulation areas, preferably with different paving and landscaping treatment.
  - iv. Parking areas are to be designed with minimum visual impact from the highway and from the retail pedestrian streets.
  - v. Developers are encouraged to incorporate site parking requirements within the principal structures of their development.
  - vi. On commercial sites the following additional considerations are noted:
    - a) Co-ordination and connection of parking lots with adjacent properties is encouraged to ensure street efficiency. Rear loading of commercial buildings is also encouraged.
    - b) Parking areas in commercial zones are to be integrated with the sidewalks adjoining the retail shops.
    - c) On street parking shall be encouraged in commercial areas.
    - d) Parking for people with disabilities and special needs shall be close to buildings.
  - vii. In order to facilitate pedestrian circulation with options for travel routes, a pedestrian walkway from the end of the cul-de-sac to adjacent roadway or trail shall be provided.
  - viii. To create more pedestrian-friendly streets, paved street widths should be reduced wherever possible. The rights-of-way should provide ample room to incorporate walking/cycling paths, services, landscape areas, parking and safe travel lanes. Reduced pavement results in slower vehicle speeds in residential areas, which results in a safer environment for pedestrians and wildlife.
  - ix. Recommended rights of way and paved travel lane widths; should comply with the Ministry of Transportation and Infrastructure’s Chapter 14 Subdivision Road Standards.
  - x. Large surface parking areas are to be discouraged and should be broken down into smaller parking lots dispersed throughout the development and integrated with planted landscaped areas or designed with permeable



- surfaces. Visitor parking spaces should be clearly identified and provided within the development.
- xi. Tree planting is encouraged in parking areas with the provision of adequate space to ensure the success and vigour of the plantings.
  - xii. Traffic calming measures are to be encouraged in all roadway design.
  - xiii. Roads should be connected to the road networks of adjacent communities.
  - xiv. Cul-de-sacs and dead ends should be minimized; they should only be used for the protection of environmentally sensitive areas or for topographic reasons.
  - xv. Where public access to a body of water is required or warranted, identification signs should clearly mark these public corridors.

*Additional form & character guidelines - commercial*

- (1) All buildings and structures in comprehensive development area 3 (CDA-3) shall be a maximum of four stories in order to promote an appropriate sense of small scale village town centre and ensure surrounding views, including those from the marine environment, are respected.
- (2) Neighbourhood commercial development should blend in character with the surrounding single family homes.
- (3) Special care is required for the design and construction of buildings that will become landmarks, included but not limited to the proposed civic or institutional buildings and the marina public facilities building; to ensure that these buildings complement the form and character of the surrounding area.
- (4) For pedestrian oriented, continuous street fronting development, buildings should line the street with minimum front setbacks or with setbacks to encourage outdoor retail and service use.
- (5) Buildings containing commercial uses shall be sited so as to ensure that any adjacent residential properties have visual privacy, as well as protection from site illumination.
- (6) Articulation of the face of the building to express a variety of three-dimensional forms is encouraged to provide visual interest and varied outdoor space, and prevent the construction of expansive blank walls.
- (7) Street furniture such as benches, lamps and refuse containers shall be incorporated in the landscape design.
- (8) All garages and carports are encouraged to be located at the rear of the lot and accessed from rear lanes or shared driveways.

*Additional form & character guidelines - multi-family residential*

- (1) All multi-family developments are encouraged to front or appear to front onto adjacent roadways. This may be achieved through appropriate treatment of the building exteriors and through the provision of pedestrian entranceways and walkways to the street.
- (2) No more than five townhouse units should be linked as one building and façades are encouraged to be articulated.
- (3) Pedestrian connections among buildings are encouraged.
- (4) Where multi-family units have vehicular access via a public street, combined driveways are encouraged to minimize breaks in the landscaping along the boulevard.

- (5) Recreation, play and/or garden areas should be provided within each project and should be sensitive to the needs of all age groups likely to reside within the development.
- (6) Buildings should be designed and sited so as to minimize opportunities for residents to overlook each other’s private spaces.
- (7) The design and siting of buildings and individual units should take advantage of views, natural amenities and adjacent open spaces, and should provide the maximum of units with good sun exposure to enhance the livability of units.
- (8) All garages and carports are encouraged to be located at the rear of the lot and accessed from rear lanes or shared driveways.

*Additional form & character guidelines – intensive residential*

- (1) Building façade plans of single family homes in intensive residential areas shall only be repeated every five houses along the same side of the street and are not to be finished, either by colour or materials exactly the same as the adjacent house.
- (2) The design and siting of buildings and individual units should take advantage of views, natural amenities and adjacent open spaces, and should provide the maximum of units with appropriate sun exposure to enhance liveability.
- (3) All garages and carports are encouraged to be located at the rear of the lot and accessed from rear lanes or shared driveways.
- (4) Road layouts are encouraged to take advantage of the topography and natural features to provide for varied street patterns.

*Additional form & character guidelines- marina*

- (1) Marina security gates and ramps should be located and designed so that public and emergency access to the water is maximized and view blockage from the shore (Highway 19A) is minimized.
- (2) Ramp locations should be in close proximity to marina parking.
- (3) The service facilities, restaurant, boatsheds and marine buildings should each have glazing opening onto the main public walkway portion of the pier, sufficient to enable passersby to overview activities occurring within.
- (4) Common area floats and pilings are for access only and should not be used for personal property storage.

*Landscaping, screening, outdoor storage and signage guidelines*

- (1) The character of commercial, non-residential and multifamily developments shall be enhanced by landscaping along property lines adjacent to single family residential developments.
- (2) A landscape plan shall be required for any commercial, multi-family or non-residential development within all comprehensive development areas. A preliminary site plan shall be provided with the required development permit application and a detailed landscape plan provided prior to the issuance of a development permit. The landscape plan shall be professionally prepared and shall include supporting documentary evidence pertaining to landscape specifications, detailed planting lists, cost estimates and the total value of the work. The landscape plan shall provide for the landscape treatment of the entire frontage of the building site abutting onto



existing or future public roads. Street specimen tree and boulevard landscape provisions are to be identified to soften the character and scale of the area. All proposed plant materials shall be suitable for local environmental conditions. All landscaping and screening shall be installed within 12 months of an occupancy permit being issued and shall meet or exceed the British Columbia Society of Landscape Architects and British Columbia Landscape & Nursery Association standards.

- (3) Use native west coast plant material and xeriscaping wherever possible in all landscape areas especially in screening, buffer, trails, greenways and park areas.
- (4) Where hard surface areas such as parking lots are planned, adequate pockets of landscaping should be included to soften the effect, provide shade and encourage ground water infiltration.
- (5) Service elements such as shipping and loading areas, transformers and meters shall be screened from public view as effectively as possible through the use of evergreen landscaping materials, solid fencing and appropriate siting.
- (6) All waste disposal bins shall be completely screened within a solid walled enclosure.
- (7) All recycling centers are to be appropriately located to provide easy access for users and ease of management by the service providers. Partial screening (i.e., landscaping or structures) is encouraged where conflicts between residential land use and the recycling centre may arise.
- (8) All residential development adjacent to existing Highway 19A will be buffered from the highway by existing native vegetation, enhanced with additional west coast native plant material in order to provide an effective vegetative screen.
- (9) No outdoor storage shall occur in the front yard.
- (10) Any portion of a building site which may be used as an outside storage area shall only be used as such if:
  - i. The area is enclosed within a two metre (6.6 feet) high solid fence having a suitable security gate;
  - ii. None of the goods or materials stored therein exceed the height of the two metre (6.6 feet) high fence; and
  - iii. In cases where the area lies between a structure and any public road, it is screened by an adequately landscaped buffer strip so that such storage areas are not readily visible from such public road.

Exemptions: tourist and marina related activities, such as, but not limited to kayak, canoe, bicycle and boat rental.

- (11) Billboards and roof signs are not permitted.
- (12) No signs shall be equipped with flashing, oscillating, moving lights or beacons, or be backlit, as per CVRD dark sky policy.
- (13) Illuminated signage should be located in a manner that minimizes disruption to any adjoining residential uses as per the CVRD dark sky policy.
- (14) Each development within the development permit area shall be allowed one freestanding sign for each street frontage of the development. Freestanding signs shall be permitted in landscaped areas only, on the same parcel as the development. Unless otherwise noted, the height of any sign including support structures shall not exceed 1.2 metres (4.0 feet) and the area of any one face shall not exceed three square metres (32.3 square feet). A freestanding sign may be illuminated.

- (15) All green and public open spaces in the development permit area, which include but are not limited to the following, shall be pesticide free zones and shall be established and maintained in accordance with recognized best management practices: golf course and adjacent areas forming part of the golf courses; public open spaces; walking trails; parks; and outdoor recreation facilities.
- (16) In addition to the above, the development and maintenance of all areas associated with the golf course development in the development permit area, shall adhere to a stringent program utilizing recognized environmental best management practices, including but not limited to the following guide:

*Greening your BC Golf Course: A Guide to Environmental Management* (Fisheries and Oceans Canada and Environment Canada; 1996.)

Although minimizing water use forms part of the implementation of best management practices, this item is included to ensure that the developer will minimize the use of water during the construction and maintenance stage of golf courses.

*Additional landscaping, screening, outdoor storage and signage guidelines - commercial*

- (1) Landscaping should be provided with the objective of:
- Providing screening for privacy and security; and
  - Providing an effective screen at the time of planting.
- (2) The use of plant species which may be considered drought resistant is encouraged in all landscaping.
- (3) All landscaping shall be irrigated and maintained by the property owner(s).
- (4) Installation of interim landscaping (e.g., reclamation seed mixture, wildflower/ fescue mix, and clover/fescue mix), which is appropriate to the soil, water regime and microclimate, should be encouraged to the satisfaction of regional district planning staff, on every part of a commercial development site that is not immediately developed according to the ultimate landscape plan include with a development permit.
- (5) Fascia signs shall be permitted for each exterior wall of a commercial building. The maximum area of each fascia sign shall not exceed four square metres (43.0 square feet). The maximum area of all fascia signs combined shall not exceed 12.0 square metres (129.0 square feet). Fascia signs may be illuminated and should be integrated into the design of the building. Fascia signs may not extend above the roofline of a building.
- (6) In comprehensive development areas 1 and 3 (CDA-1 and CDA-3), in order to promote pedestrian interest and visual variety, small retail units at grade level are encouraged to display a variety of sign designs, such as hanging perpendicular from an awning or perpendicular from the building.

*Additional landscaping, screening, outdoor storage and signage guidelines - multifamily residential*

- (1) All portions of a multi-family dwelling lot not occupied by buildings, parking areas, driveways or sidewalks shall be landscaped.
- (2) A screen of hedging at least two metres (6.6 feet) or trees should be placed and maintained among multi-family buildings and adjacent commercial buildings.



- (3) Orientation signage for larger developments should be provided. All signs should be architecturally compatible with the overall design of the buildings.
- (4) Maximum area of each orientation signage shall be three square metres (32.0 square feet).

*Additional landscaping, screening, outdoor storage and signage guidelines - general*

- (1) Street trees should be planted after construction of house and driveway.
- (2) Small lot developments should, where practical, provide a common green space.

*Environmental guidelines*

For additional environmental requirements, please refer to the following regulations:

Aquatic habitat development permit area eagle nest trees development permit area; heron nest sites development permit area; and bylaw no. 2782, being the “floodplain management bylaw, 2005.”

In addition to the above, the following guidelines are provided:

*Rainwater*

It is recognized that the clearing, grading and servicing of sites alters the natural hydrology patterns. In recognition of this fact each development proposal should be accompanied by a rainwater management plan that has as its goal the prevention of any rainwater runoff to enter the ocean; and the maintenance of post-development flows to those of pre-development flow patterns and volumes over the entire winter season. Preparation, adoption and implementation of a rain water management plan, based on “best management practices,” for the development permit area, may include some or all of the following practices:

- (1) use sediment control ponds;
- (2) use rain gardens;
- (3) encourage the installation of green roofs;
- (4) incorporate the use of oil/water separators or an equivalent technology to remove oil wastes from rainwater;
- (5) the use of grass swales and other alternates (e.g., infiltration trenches, rain gardens) as alternatives to curb and gutter approach should be encouraged wherever they can provide aesthetically-pleasing, practical and cost-effective alternatives to “hard” piped rainwater management solutions;
- (6) pervious and permeable surface should be used wherever possible in order to allow infiltration of precipitation; and
- (7) on-site rainwater detention.

All drainage works that affect roadway ditches or culverts, will require Ministry of Transportation and Infrastructure approval.

*Hazardous slopes*

- (1) Wherever development is proposed along Hart Creek or adjacent to slopes with 30% or greater, detailed studies of specific sites will be required for development setback recommendations. The following guidelines are conditions of a development permit in hazardous areas:

- i) The sequence and timing of construction or land alteration shall be coordinated to minimize potential erosion;
- ii) Exposed soil on steep slopes subject to erosion shall be immediately re-vegetated or otherwise protected from run-off; and
- iii) Geotechnical report shall be required and the recommendations in the report will form the conditions of the development permit.

*Energy conservation, water conservation and reduction of greenhouse gas emissions*

Human activities that contribute to climate change include in particular the burning of fossil fuels, agriculture and land-use changes like deforestation. These cause emissions of carbon dioxide (CO<sub>2</sub>), the main gas responsible for climate change, as well as of other 'greenhouse' gases. To bring climate change to a halt, every effort should be made to reduce global greenhouse gas emissions. In 2008, the Province mandated local government to establish targets to reduce greenhouse gas emission and include policies and actions indicating how they will achieve the targets. These guidelines are based on the aforementioned mandate.

- (2) Pursuant to Bill 27 *Local Government (Green Communities) Statutes Amendment Act, 2008*, the following areas of development should be considered with respect to their impacts on energy conservation, water conservation and reduction of greenhouse gas emissions:
  - i. landscaping;
  - ii. siting of buildings and other structures;
  - iii. form and exterior design of buildings and other structures;
  - iv. specific features in the development; and
  - v. machinery, equipment and systems external to buildings and other structures.
- (3) The development should incorporate energy efficiency systems or features, such as ground-field loops for ground-source heat pump systems, solar thermal collectors, a district energy system. For example, using “waste” heat from one business as an input to a neighbouring business.
- (4) In order to meet the new legislated requirements for targets and reductions, all buildings and structures should strive to get the highest level of certification by known, leading rating system for all buildings and developments. For example, all new houses should achieve the highest feasible rating of EnerGuide for new houses. Another example is all new commercial and institutional buildings should strive to achieve the highest certification level of the LEED Canada for new construction.
- (5) The use of solar energy is encouraged and therefore clotheslines will be supported.
- (6) In all of the comprehensive development areas, geothermal energy should strive to capture wherever possible and be used efficiently. In comprehensive development area 3, where the village core will be located, the developer is encouraged to plan for and make use of geothermal technology or other green technologies that minimize the consumption of fossil fuels and electricity for heating and cooling purposes. For all residential and other uses outside of the village core, the developer will encourage the use on a precinct basis of geothermal technology or other green technologies that minimize the consumption of fossil fuel and electricity for heating and cooling purposes.



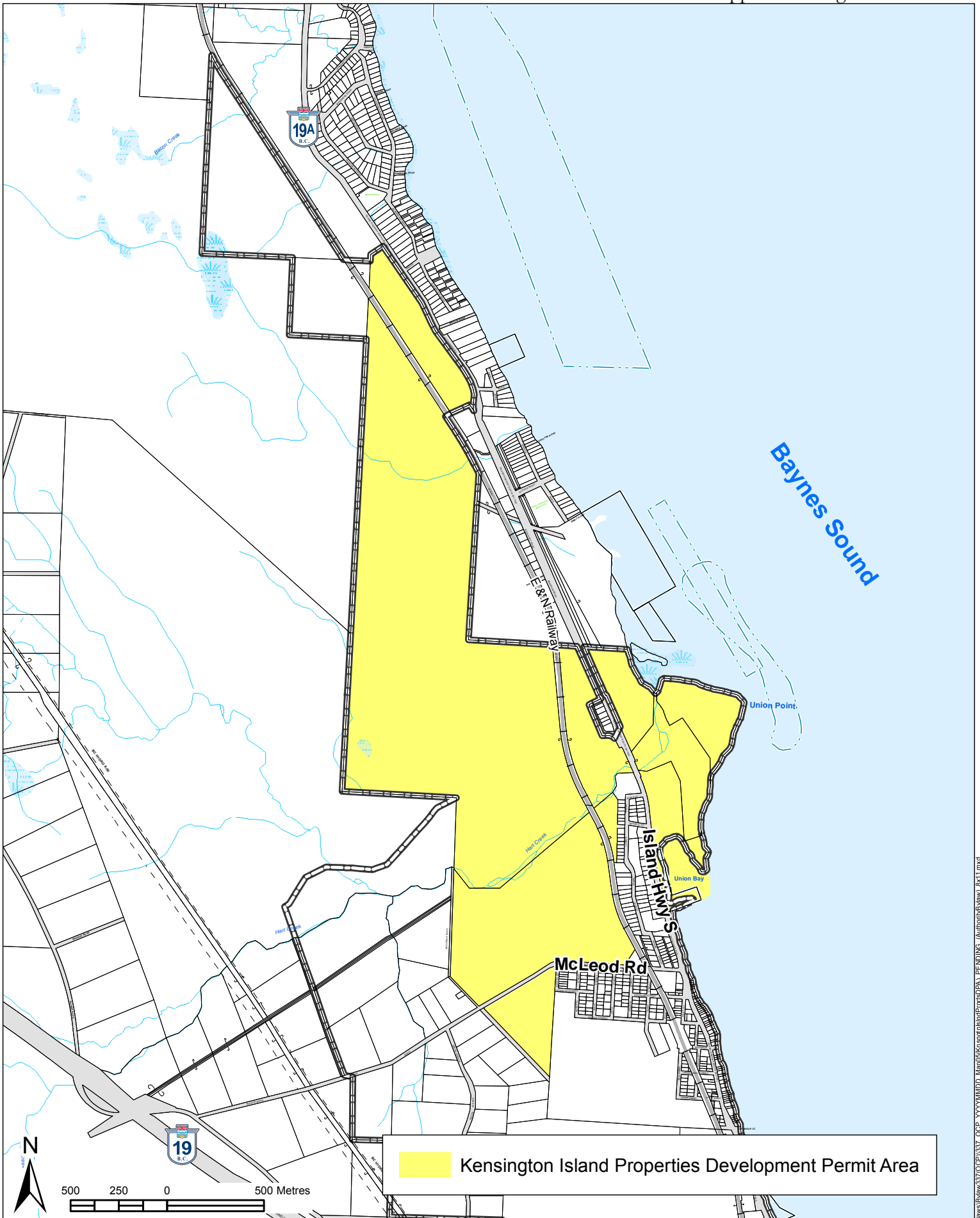
- (7) Placement and type of trees and other vegetation should not interfere with sunlight access to solar panels.
- (8) The location of all buildings in relations to trees and vegetation should allow each building to maximize their exposures to winter sunlight and to be shaded from the summer sunlight.
- (9) All outdoor lighting and electrical systems should be energy efficient.
- (10) All street furniture should be made in an environmentally responsible manner.
- (11) To reduce water consumption for landscaping, all landscaping should be xeriscape, which reduces or eliminates the need for supplemental irrigation. Native, west coast plants that are appropriate to the local climate should be used and care should be taken to avoid losing water to evaporation and run-off.
- (12) In order to minimize water use the water systems used in the development area will, where appropriate, utilize recognized water conservation techniques, including low water use and flush appliances, cisterns for storm drain collection, water meters and other similar techniques, to the satisfaction of the regional district.

*Gravel and sand crushing*

- (1) No portion of the lands included in the Kensington comprehensive development permit area is shown as on map 5, may be used for the crushing or processing of sand, gravel or other aggregate material, except as needed for the development of such lands.
- (2) None of the above-mentioned material may be removed from the subject lands other than for use in the Kensington development permit area as shown on map 5 with the exception of removing excess material.
- (3) Approval for the crushing or processing of sand, gravel, or other aggregate materials must be done in accordance to the provisions outlined in the *Mines Act*.

*Neighbourhood public open spaces and parks*

The development needs to incorporate the provision of neighbourhood public open spaces and parks; the number and size of which shall be identified in future subdivision process.



 Kensington Island Properties Development Permit Area



## Detailed review of Kensington Comprehensive Development Permit Guidelines

Staff comments are provided under each guideline in *italics*.

### General form and character guidelines:

- (1) All buildings and structures shall give consideration to the general architectural style, detailing scale, materials, character of fenestration, character and material of roofs, treatment of entrances, gradations of heights, relationship of indoor and outdoor spaces, design and placement of amenity areas, access, parking arrangement and circulation, and landscape character and design.

*The Discovery Centre was designed by an Architectural firm, which has taken into consideration general architectural style by detailing scale (larger buildings intended to be the gateway to the larger development), materials (natural materials – wood, architectural concrete, etc.), character of fenestration (floor to ceiling windows), character and material of roofs (standing seam metal roof, varied roof line for visual interest), treatment of entrances (well signed and marked by overhang), gradations of heights (varied roof height), relationship of indoor and outdoor spaces (café has indoor and outdoor spaces, outdoor seating around buildings), design and placement of amenity areas (open spaces around buildings, outdoor patio associated with café), access (two pedestrian entrance points to the buildings, vehicular entrance off strata road), parking arrangement and circulation (parking area clearly distinct from pedestrian areas and interspersed with landscaping), and landscape character and design (landscaping designed by landscape architect and includes a variety of suitable species).*

*All these elements will be discussed in further detail throughout the guidelines.*

- (2) The character and style of buildings, neighbourhoods and communities should provide a sense of place, one that reflects the rich heritage values of Union Bay and coastal natural amenities of Vancouver Island.

*The design reflects the heritage values of Union Bay and natural coastal amenities. The Island Highway façade references the Union Bay historical pier with large angled wood columns and a large roof overhang. Provided the proposed extension of Russell Street is approved by the Ministry of Transportation and Infrastructure (MoTI), a mural of the Union Bay Historical Pier (or other image related to the history of Union Bay) will be visible from Russell Street. The buildings incorporate natural building materials and colours (green, blue, glass, wood, concrete and metal). The end result is a mix of traditional island and modern architecture.*

- (3) The design of all buildings, open spaces and their relationships should embody crime prevention through environmental design, an established multi-disciplinary approach to deterring criminal behavior through environmental design. Proper design and effective use of the built environment can reduce crime, reduce the fear of crime, and improve the quality of life.

*The development achieves crime prevention through environmental design in the following ways:*

- *Clear indication of where pedestrians are welcome through use of distinct walkway surfacing.*
- *Clear indication of property boundaries through landscaping, walkway surfacing and parking surfacing.*
- *Appropriate lighting at pedestrian entrances (Dark Sky Compliant Urban Post-Mount Luminaire Pedestrian Scale Light) and throughout proposed lot.*

- (4) The design of all buildings and open spaces (e.g., sidewalks, trails, parking lots and public areas) should consider easy and friendly access by people with disabilities and special needs.

*Two of the 22 parking spaces are reserved for people with disabilities. The main floor of the buildings, sidewalks around buildings and parking lot are designed to be barrier free.*

- (5) Varied rooflines, including pitched roofs, are encouraged to provide for view corridors and to reflect heritage elements.

*The roofline is varied with the roof ridge rising to a peak at the northwest corner of the property acting as a gateway marker to the first phase of Union Bay Estates.*

- (6) The design and introduction of a new building type to, or adjacent to, a residential neighbourhood should provide harmony and lend continuity to the neighbourhood and should not create excessive disruption of the visual character of the neighbourhood.

*The closest residential neighbourhood is west of the Island Highway. The architectural style of the buildings combined with the landscape berm mitigate any potential excessive disruption to the visual character of existing neighbourhood.*

- (7) All roof top, mechanical equipment should be screened from view and incorporated with the overall architectural treatment of buildings.

*No roof top mechanical equipment is visible with the exception of solar panels, which meet the sustainability related guidelines.*

- (8) Any end wall of a building that is visible from the street should be finished to the same standard as the front of the building to provide an attractive appearance. Blank unarticulated walls are not permitted.

*There are no blank unarticulated walls.*

- (9) The roof slope and siting of any buildings shall be such as to minimize any obstruction of direct sunlight falling onto adjacent properties and residences.

*This is the first building in the development and it is not directly abutting another developed property (only the sea and lands owned by the developer). Development to the west of the Island Highway is more than 20 metres from the subject property and is unlikely to experience obstruction of direct sunlight.*

- (10) Buildings and structures shall be designed and situated to maximize view corridors where appropriate.

*The outdoor seating area for the café is orientated towards the ocean to maximize views. The low profile of the building is not expected to impede ocean views of future buildings.*

- (11) Buildings and structures shall be designed and situated to minimize the disturbance of significant natural vegetation.

*Building envelope has been historically modified during its industrial era (coal processing), therefore, there is no significant natural vegetation (e.g. old growth trees) at the building site to be retained.*



- (12) Buildings and structures shall be designed to complement unique topographical features.

*The building site is relatively flat with no unique topographical features.*

- (13) Security and other lighting shall not be placed so as to shine directly into residential properties, as per the dark sky policy of the regional district or to reduce the separation effectiveness of any landscaped buffer.

*Lighting is fully-shielded and Dark Sky compliant to avoid impacting existing or future residential development.*

- (14) Compliance with the regional districts dark sky policy is a mandatory requirement.

*Complies with Dark Sky (lights shielded, not directly aiming at other properties, energy efficient LED).*

- (15) Exterior lighting fixtures should be architecturally integrated with the design of the buildings.

*The style of light fixtures (Urban Post-Mount Luminaire with powder coated black finishes) is architecturally compatible with the traditional island and modern architecture style.*

- (16) Site planning details shall demonstrate inclusion of the following pedestrian circulation considerations:

- i. Development of a walkway network that provides access to important site and off-site destinations.

*The sidewalks allow for circulation around the buildings. There are two pedestrian access points proposed on the site plan. Connectivity to off-site destinations such as the existing commercial area of Union Bay will be addressed at time of subdivision when the internal road network is established. Connectivity via parklands/ trails to be in accordance with the Master Development Agreement (MDA).*

- ii. Building and site designs should include “public gathering places,” such as open-air market areas which help to encourage pedestrian traffic.

*Plenty of gathering spaces including outdoor seating for café and backless and backed benches around the buildings. The property is privately owned and the owner ultimately controls public access. This guideline will be more relevant at time of subdivision when public lands (ie. parks and trails) are established.*

- iii. The use of small seating areas, entry areas, plazas and other meeting places in conjunction with pedestrian areas should be incorporated into development plans.

*See 16ii.*

- iv. Site design should minimize vehicle and pedestrian conflicts.

*Proposed vehicle access to the east of the building site, pedestrian accesses to the north to avoid conflicts (roads shown on site plan subject to MoTI approval). Should the roads not be approved by MoTI, the applicant may need to apply to amend the DP to address site access. Staff has not been provided with a copy of a road network plan for the broader development.*

- v. Pedestrian access to the site and to buildings should be inviting and well marked.

*The two pedestrian accesses are well marked with different landscaping treatment (Abbotsford Nevada Paving) than the vehicular area. Should the roads shown on the site plan not be approved by MoTI, the applicant may need to apply to amend the DP to address the location of pedestrian site access.*

- vi. Encourage maximum accessibility and usage of the foreshore for the public in all land uses.

*Buildings and associated parking area is setback more than 30 metres from the sea. Siting of buildings does not impede public access to the foreshore, which will be established when park and trail commitments in the MDA are triggered (at time of subdivision or building permit).*

- vii. Ensure neighbourhood parks in all zones are connected by greenways or trail system to other land uses (e.g., to neighbourhood commercial or to trail systems).

*Park and trails to be provided by the developer (as per the MDA) are not triggered by the DP, rather at time of subdivision or building permit.*

- viii. Pathway design and construction to meet proposed use criteria:

Pathway	Location	Width & surface
Greenway trail	Golf course, riparian areas, waterfront, buffers	2.0 metres pervious surface (e.g., gravel)
Sidewalk	Commercial, hotel, retail	2.0 metres – 3.0 metres hard surfaced (e.g., unit pavers, exposed aggregate concrete, permeable pavers)
Neighbourhood connector	Residential neighbourhood	1.5 metres pervious surface (e.g., gravel)
Bicycle commuter trail	Shoulder of major transportation routes / E & N Rail corridor	Minimum 2.0 metres impervious surface (e.g., asphalt)

*Sidewalks around buildings are sufficient width and hard surfaced (Abbotsford Nevada Paving) for accessibility. No other pathways proposed at this time.*

- ix. Sidewalks may not be required in residential areas or in sectors where alternate pathways are available (refer to paragraph viii above). All pathways shall have the greatest permeability practical for the intended use.

*No residential development proposed as part of this DP.*

- x. Pathways may be developed in riparian corridors provided that requirements of the riparian area regulations are followed and that porous, non-polluting trail/tread surfaces are used.



*No pathways proposed in riparian areas at this time. This DP will be triggered again at time of subdivision.*

- xi. A pedestrian and cycle-friendly access shall be built as part of roadway crossings of Hart Creek.

*Not applicable. No crossing over Hart Creek proposed at this time.*

- xii. All paths are to be connected to form a continuous pedestrian route.

*The site plan demonstrates opportunity for two pedestrian access points from the building entrances to the proposed roads. How the entrances on the private property will interact with proposed roads (e.g. crosswalks, sidewalks, etc) will be addressed by the DP triggered at time the subdivision (subject to MoTI approval).*

- xiii. Paths shall be established within the dedicated old rail right-of-way as documented in the greenway plan, if feasible.

*Not applicable as the old rail right-of-way does not abut the property subject to the DP.*

- xiv. Sidewalks are required on both sides of streets in the Village Centre commercial area.

*Internal roads and associated sidewalks to be established at time of subdivision, which will trigger a new Kensington Comprehensive DP.*

- xv. Trails, paths and sidewalks should link to those of adjacent communities

*Trails are determined by the MDA. Connectivity between the sidewalks/paths and adjacent communities will be addressed at time of subdivision, which will trigger a new Kensington Comprehensive DP.*

- xvi. Trails, paths and sidewalks should be accessible to people with disabilities.

*Sidewalks around buildings are constructed with hard surfacing and accessible for people with disabilities.*

- (17) Site planning details shall demonstrate inclusion of the following cycling circulation considerations:

- i. Site vehicle circulation should provide for safe bicycle routes across the site to building entrances.

*Sidewalks around buildings are a sufficient width to accommodate both bicycles and pedestrians and connect to the building entrances. Cycling circulation will be further addressed at time of subdivision, which will trigger a new Kensington Comprehensive DP.*

- ii. Bicycle parking should be provided in a sheltered location convenient to building entrances and provide for secure storage.

*10 bicycle parking spaces are available on site, 8 spaces beyond what the zoning requires. The bicycle parking is near the building entrances and sheltered by trees.*

- (18) Site planning details shall demonstrate inclusion of the following automobile / transportation infrastructure considerations:

- i. Lanes servicing the rear of residential units shall be surfaced to increase infiltration of rainwater.

*Not applicable. No residential development proposed at this time.*

- ii. Alternates to curb and gutter construction are encouraged for interior roadways in the single-family residential areas.

*Not applicable. Establishment of road network will occur at time of subdivision, which will trigger a new Kensington Comprehensive DP.*

- iii. Parking areas should clearly identify pedestrian circulation areas, preferably with different paving and landscaping treatment.

*Different landscaping treatment for pedestrian area (Abbotsford Nevada paving vs. regular pavement).*

- iv. Parking areas are to be designed with minimum visual impact from the highway and from the retail pedestrian streets.

*Parking area will be well buffered from highway with landscaped berm as shown on Landscape Plan.*

- v. Developers are encouraged to incorporate site parking requirements within the principal structures of their development.

*Low profile buildings are not designed for parking within the principal structure. Large amounts of parking not expected to be associated with the use. When the use changes from real estate centre to offices, the parking will be sufficient. Underground parking may not be feasible due to site contamination and remediation approach (to be determined).*

- vi. On commercial sites the following additional considerations are noted:

- a) Co-ordination and connection of parking lots with adjacent properties is encouraged to ensure street efficiency. Rear loading of commercial buildings is also encouraged.

*The Discovery Centre is the first building in the development. Connection between parking lot and adjacent properties will be addressed when additional buildings are proposed. Loading area for the café faces parking lot to avoid obstructing views of the ocean.*

- b) Parking areas in commercial zones are to be integrated with the sidewalks adjoining the retail shops.

*Sidewalks along internal roads to be established at time of subdivision, connectivity with the parking lot shown on the site plan will be confirmed at that time. Parking area for Discovery Centre connects with sidewalks around buildings.*

- c) On street parking shall be encouraged in commercial areas.

*Plans show on street parking along roads not yet established through subdivision (Russell Road and Strata Road). Street parking to be addressed at time of subdivision, which will trigger a new Kensington Comprehensive DP.*

- d) Parking for people with disabilities and special needs shall be close to buildings.



*Two spaces reserved for people with disabilities near entrance.*

- vii. In order to facilitate pedestrian circulation with options for travel routes, a pedestrian walkway from the end of the cul-de-sac to adjacent roadway or trail shall be provided.

*Not applicable.*

- viii. To create more pedestrian-friendly streets, paved street widths should be reduced wherever possible. The rights-of-way should provide ample room to incorporate walking/cycling paths, services, landscape areas, parking and safe travel lanes. Reduced pavement results in slower vehicle speeds in residential areas, which results in a safer environment for pedestrians and wildlife.

*Not applicable. The road network will be addressed at time of subdivision, which will trigger a new Kensington Comprehensive DP.*

- ix. Recommended rights of way and paved travel lane widths; should comply with the Ministry of Transportation and Infrastructure's Chapter 14 Subdivision Road Standards.

*See 18 viii.*

- x. Large surface parking areas are to be discouraged and should be broken down into smaller parking lots dispersed throughout the development and integrated with planted landscaped areas or designed with permeable surfaces. Visitor parking spaces should be clearly identified and provided within the development.

*Parking lot is broken up into smaller parking areas and interspersed with landscaping. As it is a commercial building, sufficient visitor parking is proposed.*

- xi. Tree planting is encouraged in parking areas with the provision of adequate space to ensure the success and vigour of the plantings.

*Landscape plan provided for the parking area, includes adequate space and appropriate species (e.g. columnar trees) to ensure success and vigour of plantings.*

- xii. Traffic calming measures are to be encouraged in all roadway design

*Not applicable. The road network will be addressed at time of subdivision, which will trigger a new Kensington Comprehensive DP.*

- xiii. Roads should be connected to the road networks of adjacent communities.

*See 18 xii.*

- xiv. Cul-de-sacs and dead ends should be minimized; they should only be used for the protection of environmentally sensitive areas or for topographic reasons.

*See 18 xii.*

- xv. Where public access to a body of water is required or warranted, identification signs should clearly mark these public corridors.

*Public access to a body of water via trails is detailed in the MDA. The above guideline is not applicable at this time because the parks and trails commitments, as outlined in the MDA, are not triggered by this DP.*

### **Additional form & character guidelines - commercial**

- (1) All buildings and structures in comprehensive development area 3 (CDA-3) shall be a maximum of four stories in order to promote an appropriate sense of small scale village town centre and ensure surrounding viewscales, including those from the marine environment, are respected.

*Impacts on the ocean viewscales of future development are not anticipated with a low profile building (1.5 storeys).*

- (2) Neighbourhood commercial development should blend in character with the surrounding single family homes.

*Existing residential lots to the west of the Island Highway will be partially shielded from the proposed buildings as a result of landscaping along highway frontage. Traditional island and modern architecture style expected to be compatible with existing neighbourhood.*

- (3) Special care is required for the design and construction of buildings that will become landmarks, included but not limited to the proposed civic or institutional buildings and the marina public facilities building; to ensure that these buildings complement the form and character of the surrounding area.

*The buildings are designed to easily convert from a real estate sales centre to offices without the need for substantial exterior changes.*

- (4) For pedestrian oriented, continuous street fronting development, buildings should line the street with minimum front setbacks or with setbacks to encourage outdoor retail and service use.

*Staff interpret this guideline to be relevant to internal roadways, not the Island Highway. MoTI and the Zoning Bylaw require a minimum building setback of 19.5 metres from the centre line of Island Highway. Reducing the building setback may impact future expansion ability. To move vehicles safely and not impact traffic flow, accesses off the Island Highway should be kept to a minimum. As such, it is appropriate to have a landscaped berm between the Island highway and buildings rather than street fronting development. Setbacks from Russell Street and Strata Road are appropriate because they create space for sidewalks around the building encouraging outdoor use, which is consistent with the guidelines.*

- (5) Buildings containing commercial uses shall be sited so as to ensure that any adjacent residential properties have visual privacy, as well as protection from site illumination.

*Existing residential properties to the west of the Island Highway are shielded by the landscaping berm adjacent to the highway and through the use a Dark Sky compliant lights.*

- (6) Articulation of the face of the building to express a variety of three-dimensional forms is encouraged to provide visual interest and varied outdoor space, and prevent the construction of expansive blank walls.



*There are no blank unarticulated walls.*

- (7) Street furniture such as benches, lamps and refuse containers shall be incorporated in the landscape design.

*Refuse container shielded from public, street furniture proposed (benches with and without backs).*

- (8) All garages and carports are encouraged to be located at the rear of the lot and accessed from rear lanes or shared driveways.

*No residential development proposed.*

#### **Additional form & character guidelines - multi-family residential**

*Guidelines omitted, not relevant to proposal.*

#### **Additional form & character guidelines - multi-family residential**

*Guidelines omitted, not relevant to proposal.*

#### **Additional form & character guidelines – intensive residential**

*Guidelines omitted, not relevant to proposal.*

#### **Additional form & character guidelines- marina**

*Guidelines omitted, not relevant to proposal.*

#### **Landscaping, screening, outdoor storage and signage guidelines**

- (1) The character of commercial, non-residential and multifamily developments shall be enhanced by landscaping along property lines adjacent to single family residential developments.

*The character of the commercial development is enhanced by the proposed landscape plan.*

- (2) A landscape plan shall be required for any commercial, multi-family or non-residential development within all comprehensive development areas. A preliminary site plan shall be provided with the required development permit application and a detailed landscape plan provided prior to the issuance of a development permit. The landscape plan shall be professionally prepared and shall include supporting documentary evidence pertaining to landscape specifications, detailed planting lists, cost estimates and the total value of the work. The landscape plan shall provide for the landscape treatment of the entire frontage of the building site abutting onto existing or future public roads. Street specimen tree and boulevard landscape provisions are to be identified to soften the character and scale of the area. All proposed plant materials shall be suitable for local environmental conditions. All landscaping and screening shall be installed within 12 months of an occupancy permit being issued and shall meet or exceed the British Columbia Society of Landscape Architects and British Columbia Landscape & Nursery Association standards.

*Landscape plan provides details of landscaping along the frontage of existing and future roads and throughout parking areas. A bulk of the landscaping is proposed adjacent to the Island Highway. The landscape plan is limited to the proposed 0.3 hectare lot (subject to MoTI approval). As future commercial buildings will trigger*

*new DPs, it is reasonable to review the landscaping in relation to the proposed 0.3 hectare lot rather than the entire lot. Future DPs can ensure the landscaping along the remaining frontage is adequate for the type and scale of the development. The landscape plan incorporates many native and drought resistant species that will not require pesticide use meeting several DP guidelines promoting xeriscaping. An irrigation system will be installed, which will be supplemented by rainwater storage in an underground cistern. A security deposit will be collected for 125 per cent of the estimated cost of the landscaping works. The permit contains a condition that the landscaping must be completed within 12 months of an occupancy permit being issued.*

- (3) Use native west coast plant material and xeriscaping wherever possible in all landscape areas especially in screening, buffer, trails, greenways and park areas.

*Many native species proposed (Douglas fir, snowberry, Oregon grape, Western Sword fern, etc.), which require less irrigation.*

- (4) Where hard surface areas such as parking lots are planned, adequate pockets of landscaping should be included to soften the effect, provide shade and encourage ground water infiltration.

*Landscaped areas throughout parking lot.*

- (5) Service elements such as shipping and loading areas, transformers and meters shall be screened from public view as effectively as possible through the use of evergreen landscaping materials, solid fencing and appropriate siting.

*Small, discreet loading area for café/deli (or other future food service/retail use).*

- (6) All waste disposal bins shall be completely screened within a solid walled enclosure.

*Bins are fully screened within a metal enclosure.*

- (7) All recycling centers are to be appropriately located to provide easy access for users and ease of management by the service providers. Partial screening (i.e., landscaping or structures) is encouraged where conflicts between residential land use and the recycling centre may arise.

*Not applicable, no recycling centre proposed.*

- (8) All residential development adjacent to existing Highway 19A will be buffered from the highway by existing native vegetation, enhanced with additional west coast native plant material in order to provide an effective vegetative screen.

*Not applicable, no residential development proposed.*

- (9) No outdoor storage shall occur in the front yard.

*None proposed.*

- (10) Any portion of a building site which may be used as an outside storage area shall only be used as such if:
- i. The area is enclosed within a two metre high solid fence having a suitable security gate;
  - ii. None of the goods or materials stored therein exceed the height of the two metre high fence; and



- iii. In cases where the area lies between a structure and any public road, it is screened by an adequately landscaped buffer strip so that such storage areas are not readily visible from such public road.

*No outdoor storage proposed.*

- (11) Billboards and roof signs are not permitted.

*None proposed.*

- (12) No signs shall be equipped with flashing, oscillating, moving lights or beacons, or be backlit, as per CVRD dark sky policy.

*Signage will utilize concealed backlighting to illuminate each letter. The guidelines does not support backlit signs, however, staff interpret this guideline to mean signs that are completely illuminated with vinyl graphics. Concealed backlit letters are acceptable as they do not represent the sign type the guidelines are discouraging.*

- (13) Illuminated signage should be located in a manner that minimizes disruption to any adjoining residential uses as per the CVRD dark sky policy.

*Dark sky compliant.*

- (14) Each development within the development permit area shall be allowed one freestanding sign for each street frontage of the development. Freestanding signs shall be permitted in landscaped areas only, on the same parcel as the development. Unless otherwise noted, the height of any sign including support structures shall not exceed 1.2 metres and the area of any one face shall not exceed three square metres. A freestanding sign may be illuminated.

*Only one freestanding sign near northwest corner within the parameters above. The signage will be constructed of stainless steel 3D lettering pin-mounted on a metal panel, then pin-mounted on a concrete form. The sign will incorporate concealed backlighting.*

- (15) All green and public open spaces in the development permit area, which include but are not limited to the following, shall be pesticide free zones and shall be established and maintained in accordance with recognized best management practices: golf course and adjacent areas forming part of the golf courses; public open spaces; walking trails; parks; and outdoor recreation facilities.

*No pesticide use proposed, species chosen are not reliant on pesticide use.*

- (16) In addition to the above, the development and maintenance of all areas associated with the golf course development in the development permit area, shall adhere to a stringent program utilizing recognized environmental best management practices, including but not limited to the following guide:

Greening your BC Golf Course: A Guide to Environmental Management (Fisheries and Oceans Canada and Environment Canada; 1996.)

Although minimizing water use forms part of the implementation of best management practices, this item is included to ensure that the developer will minimize the use of water during the construction and maintenance stage of golf courses.

*Not applicable, no golf course proposed.*

### **Additional landscaping, screening, outdoor storage and signage guidelines - commercial**

- (1) Landscaping should be provided with the objective of:

- Providing screening for privacy and security; and
- Providing an effective screen at the time of planting.

*Detailed landscape plan provided by a Landscape Architect. Plan includes trees, shrubs and ground cover, which will provide privacy and security especially from the Island Highway. Minimum sizing identified on landscape plan.*

- (2) The use of plant species which may be considered drought resistant is encouraged in all landscaping.

*Landscape plan identifies eleven different drought resistant species.*

- (3) All landscaping shall be irrigated and maintained by the property owner(s).

*An irrigation system will be installed and supplemented with rainwater capture. Maintenance of the landscaping is included as a permit condition.*

- (4) Installation of interim landscaping (e.g., reclamation seed mixture, wildflower/ fescue mix, and clover/fescue mix), which is appropriate to the soil, water regime and microclimate, should be encouraged to the satisfaction of regional district planning staff, on every part of a commercial development site that is not immediately developed according to the ultimate landscape plan include with a development permit.

*Prescribed landscaping will be completed after the construction of the two buildings. No interim landscaping is recommended on the remaining portion of the site because contaminated soils will need to be addressed (Ministry of Environment has the authority to approve the remediation plan), and soil disturbance is expected.*

- (5) Fascia signs shall be permitted for each exterior wall of a commercial building. The maximum area of each fascia sign shall not exceed four square metres. The maximum area of all fascia signs combined shall not exceed 12.0 square metres. Fascia signs may be illuminated and should be integrated into the design of the building. Fascia signs may not extend above the roofline of a building.

*All proposed fascia signs (5 in total) have an area less than 4 square metres. Total area for all fascia signs is 9 square metres.*

- (6) In comprehensive development areas 1 and 3 (CDA-1 and CDA-3), in order to promote pedestrian interest and visual variety, small retail units at grade level are encouraged to display a variety of sign designs, such as hanging perpendicular from an awning or perpendicular from the building.



*Stainless steel 3D lettering on metal backboard suspended from soffit is proposed at the café/deli for visual variety.*

**Additional landscaping, screening, outdoor storage and signage guidelines - multifamily residential**

*Guidelines omitted, not relevant to proposal.*

**Additional landscaping, screening, outdoor storage and signage guidelines - general**

- (1) Street trees should be planted after construction of house and driveway.

*Not applicable, no residential development proposed.*

- (2) Small lot developments should, where practical, provide a common green space.

*Not applicable, no subdivision proposed.*

**Environmental guidelines**

For additional environmental requirements, please refer to the following regulations:

Aquatic Habitat Development Permit Area; Eagle Nest Trees Development Permit Area; Heron Nest Sites Development Permit Area; and Bylaw No. 2782, being the “Floodplain Management Bylaw 2005.”

*Proposed buildings and parking area are outside of the Aquatic and Riparian Habitat Development Permit Area as shown on site plan. No other environmental development permits are triggered by this proposal.*

In addition to the above, the following guidelines are provided:

**Rainwater**

It is recognized that the clearing, grading and servicing of sites alters the natural hydrology patterns. In recognition of this fact each development proposal should be accompanied by a rainwater management plan that has as its goal the prevention of any rainwater runoff to enter the ocean; and the maintenance of post-development flows to those of predevelopment flow patterns and volumes over the entire winter season. Preparation, adoption and implementation of a rain water management plan, based on “best management practices,” for the development permit area, may include some or all of the following practices:

- (1) Use sediment control ponds
- (2) Use rain gardens
- (3) Encourage the installation of green roofs
- (4) Incorporate the use of oil/water separators or an equivalent technology to remove oil wastes from rainwater
- (5) The use of grass swales and other alternates (e.g., infiltration trenches, rain gardens) as alternatives to curb and gutter approach should be encouraged wherever they can provide aesthetically-pleasing, practical and cost-effective alternatives to “hard” piped rainwater management solutions

- (6) Pervious and permeable surface should be used wherever possible in order to allow infiltration of precipitation
- (7) On-site rainwater detention

All drainage works that affect roadway ditches or culverts, will require Ministry of Transportation and Infrastructure approval.

*Rainwater will be addressed through green and gray infrastructure. Roof drainage will be collected in three large roof scuppers. The scupper on the east side of the roof will drain into a rain garden. The two scuppers on the north and south side of the roof will drain into rainwater collection ponds under the trellised walkway. These ponds will both retain water and be connected to an underground cistern. Water from the cistern will be used to supplement landscape irrigation and also be recirculated back to the two ponds. Between the two ponds, a second rain garden will absorb any overflow from the ponds during storm events. Runoff from the rain gardens and overflow from cistern (in a storm event) will be routed into subsurface infiltration galleries. Surface runoff from the parking lot and walkways will be collected in catch basins equipped with grit sumps, upstream of proposed infiltration galleries, to remove settleable solids and debris. Runoff from rain gardens/ cistern and parking lot areas should be routed into a series of on-site subsurface storage/infiltration facilities. Exact locations and configuration will be defined during detailed servicing design. As there is no stormwater system for the broader development at this time, on-site storage should accommodate a 1 in 10 year, 24 hour storm event. A control manhole should be installed at the point of connection to a future off-site stormwater system. The use of rain gardens, ponds and cistern for rainwater capture and re-use was not accounted for in the modelling for the subsurface storage/infiltration facilities and will provide an increased factor of safety by serving to further reduce peak runoff rates and total volumes.*

### **Hazardous slopes**

- (1) Wherever development is proposed along Hart Creek or adjacent to slopes with 30 per cent or greater, detailed studies of specific sites will be required for development setback recommendations. The following guidelines are conditions of a development permit in hazardous areas:
  - i) The sequence and timing of construction or land alteration shall be coordinated to minimize potential erosion
  - ii) Exposed soil on steep slopes subject to erosion shall be immediately revegetated or otherwise protected from run-off
  - iii) Geotechnical report shall be required and the recommendations in the report will form the conditions of the development permit.

*Building site is relatively flat, no hazardous slopes.*

### **Energy conservation, water conservation and reduction of greenhouse gas emissions**

Human activities that contribute to climate change include in particular the burning of fossil fuels, agriculture and land-use changes like deforestation. These cause emissions of carbon dioxide (CO<sub>2</sub>), the main gas responsible for climate change, as well as of other 'greenhouse' gases. To bring climate change to a halt, every effort should be made to reduce global greenhouse gas emissions. In 2008, the Province mandated local government to establish targets to reduce greenhouse gas emission and include policies and actions indicating how they will achieve the targets. These guidelines are based on the aforementioned mandate.



- (2) Pursuant to Bill 27 *Local Government (Green Communities) Statutes Amendment Act, 2008*, the following areas of development should be considered with respect to their impacts on energy conservation, water conservation and reduction of greenhouse gas emissions:

- i. Landscaping
- ii. Siting of buildings and other structures
- iii. Form and exterior design of buildings and other structures
- iv. Specific features in the development
- v. Machinery, equipment and systems external to buildings and other structures

*The development has considered energy conservation, water conservation and reduction of greenhouse gas emissions through use of LED lighting, solar power, net zero design (only using as much or less energy than it produces) and rainwater capture for irrigation use.*

- (3) The development should incorporate energy efficiency systems or features, such as ground-field loops for ground-source heat pump systems, solar thermal collectors, a district energy system. For example, using “waste” heat from one business as an input to a neighbouring business.

*Buildings will use solar power and are designed to net zero standard for energy efficiency.*

- (4) In order to meet the new legislated requirements for targets and reductions, all buildings and structures should strive to get the highest level of certification by known, leading rating system for all buildings and developments. For example, all new houses should achieve the highest feasible rating of EnerGuide for new houses.

Another example is all new commercial and institutional buildings should strive to achieve the highest certification level of the LEED Canada for new construction.

*Proposing use of solar power and designing to net zero standard, whether owner will pursue net zero certification is unknown and not required by the guidelines (only encouraged).*

- (5) The use of solar energy is encouraged and therefore clotheslines will be supported.

*Solar panels proposed.*

- (6) In all of the comprehensive development areas, geothermal energy should strive to capture wherever possible and be used efficiently. In comprehensive development area 3, where the village core will be located, the developer is encouraged to plan for and make use of geothermal technology or other green technologies that minimize the consumption of fossil fuels and electricity for heating and cooling purposes. For all residential and other uses outside of the village core, the developer will encourage the use on a precinct basis of geothermal technology or other green technologies that minimize the consumption of fossil fuel and electricity for heating and cooling purposes.

*The use of geothermal or other green technologies is encouraged by the guidelines, but not required. Green technologies proposed are discussed in previous guidelines.*

- (7) Placement and type of trees and other vegetation should not interfere with sunlight access to solar panels.

*The orientation, species and size of trees has been considered so as not to interfere with sunlight access to solar panels.*

- (8) The location of all buildings in relations to trees and vegetation should allow each building to maximize their exposures to winter sunlight and to be shaded from the summer sunlight.

*The landscape plan utilizes many deciduous species to maximize winter sunlight exposure and to shade the building during summer sunlight exposure.*

- (9) All outdoor lighting and electrical systems should be energy efficient.

*Lights will use LED.*

- (10) All street furniture should be made in an environmentally responsible manner.

*Freestanding benches will be made of wood, which, to an extent, is a renewable resource. The guideline encourages furniture to be made in an environmentally sustainable matter, but does not require it to be.*

- (11) To reduce water consumption for landscaping, all landscaping should be xeriscape, which reduces or eliminates the need for supplemental irrigation. Native, west coast plants that are appropriate to the local climate should be used and care should be taken to avoid losing water to evaporation and run-off.

*Many native species proposed, which generally require less irrigation and are more drought resistant than non-native species.*

- (12) In order to minimize water use the water systems used in the development area will, where appropriate, utilize recognized water conservation techniques, including low water use and flush appliances, cisterns for storm drain collection, water meters and other similar techniques, to the satisfaction of the regional district.

*A cistern is proposed to capture rainwater runoff from landscaping ponds/ rain garden to be re-used for irrigation.*

### **Gravel and sand crushing**

- (1) No portion of the lands included in the Kensington comprehensive development permit area is shown as on map 5, may be used for the crushing or processing of sand, gravel or other aggregate material, except as needed for the development of such lands.
- (2) None of the above-mentioned material may be removed from the subject lands other than for use in the Kensington development permit area as shown on map 5 with the exception of removing excess material.
- (3) Approval for the crushing or processing of sand, gravel, or other aggregate materials must be done in accordance to the provisions outlined in the Mines Act.

*Not applicable, no gravel or sand crushing proposed at this time.*



**Neighbourhood public open spaces and parks**

The development needs to incorporate the provision of neighbourhood public open spaces and parks; the number and size of which shall be identified in future subdivision process.

*Not applicable, will be addressed at time of subdivision.*