APPENDIX 2 TO THE MINISTER'S ORDER
AMENDMENT TO THE
LAND USE, BUILDING AND COMMUNITY ADMINISTRATION BYLAW

1.0 TABLE OF CONTENTS

a) The Table of Contents of “Land Use, Building and Community Administration Bylaw” is deleted in its entirety and replaced with the following:

TABLE OF CONTENTS

SCHEDULES

6. Noise Control
7. Fire Safety
8. Building and Plumbing Inspections
9. Pool Design and Installation Requirements
10. Cross Connection Control
11. Application Procedures
12. Standards of Maintenance
13. Schedule Restricting Smoking
14. Schedule to Provide for the Control of Animals
15. Sprinkling Regulations
16. Strata Title and Cooperative Conversion
17. Adaptable Housing Standards
18. CD-2: Comprehensive District Zoning Lots

APPENDICES
1. Design Guidelines for University Hill Village Commercial Area
2. Design Guidelines for University Hill Single Detached Dwellings
3. Design Guidelines for University Hill Multi-Family Residential Development
4. Design Guidelines for University Hill Comprehensive District
5. Design Guidelines for CD-2: Comprehensive District

1.0 INTRODUCTION

Section 1.2 is deleted and the following substituted therefor:

"The Schedules and Appendices to this Bylaw form part of the Bylaw."

2.0 DEFINITIONS

Section 4 of the Bylaw is amended by adding the following definitions:

I. "adaptable dwelling unit" means a dwelling unit that is constructed to comply with the standards specified in Schedule 17.

II. "affordable housing" means, for the purposes of the CD-2: Comprehensive District, a mixed use development in which the ground floor is commercial and Floors 2,3,4 and 5 are residential rental units constructed by the Owner pursuant to a Housing Agreement entered into by the Owner and the Crown pursuant to Section 12 (2) of the University Endowment Land Act RSBC 1996 c.469 ensuring that all of the said residential rental units will be provided to moderate income working households applying BC Housing's (British Columbia Housing Management Commission's) Housing Income Limits for the planning area of Vancouver.

III. "anchor tenant" means, for the purposes of the CD-2: Comprehensive District, a commercial tenant that occupies a minimum of 929 square metres of gross floor space.

IV. “Block F Lands” means the lot of land located in the University Endowment Lands, British Columbia, legally described as: PID 013-769-938 Block F, District Lot 140, Group 1, New Westminster District, and all lots into which Block F may be subdivided.

V. “Bicycle Parking, Class A” means long-term parking and storage space for bicycles that is provided for building residents or employees in a secured location.

VI. “Bicycle Parking, Class B” means short-term parking space for bicycles provided on a rack.

VII. “farmers market” means an outdoor use by vendors for the display and retail sale of primarily locally grown or prepared foods and products.

VIII. “food truck” means the use of a vehicle with a self-contained kitchen for the preparation and serving of food to the public from a temporary location, and includes a mobile food cart capable of dispensing food, and requires a University Endowment Lands business license.

IX. “lock-off unit” means an accessory dwelling unit that forms part of the principal townhouse dwelling unit that has direct exterior access through a lockable door, and which shall contain a bathroom and a kitchen facility.

X. “marihuana production and dispensary” means the use of land, buildings or structures for any of the following: the growing, cultivation, drying, testing, packaging, storage, distribution or sale of marihuana.

XI. “office” means the use of a building or portion of a building for the carrying on of a business, the practice of a profession, or the administration of an industry and includes financial institutions, real-estate offices, medical and dental clinics, but excludes the sale, rental, servicing and repair of goods, the manufacturing or processing of a product or any principal service related to drug or alcohol detoxification or rehabilitation.

XII. “personal service” means the use of a building or portion of a building for the provision of personal services to an individual that are related to the care and appearance of the body, or the cleaning and repair of personal effects and includes barbershops, hairdressers, beauty salons, tailors, shoe repair shops, and dry cleaners, but does not include massage parlours, laundromats or marihuana production and dispensary.

XIII. “purpose-built rental” means a residential building that is not subdivided by strata plan, and in which all of the dwelling units have been purposely built to be rented or leased under a tenancy agreement for either periodic or fixed-term tenancies as defined under the Residential Tenancy Act.

XIV. “restaurant” means, for the purposes of the CD-2: Comprehensive District, an establishment primarily engaged in providing, preparing and selling food to the public.

XV. “retail” means the use of a building or portion of a building for the sale or rental of goods, and for the servicing and repair of goods that are sold, but excludes the sale or rental of motor vehicles, marihuana production and dispensary, liquor stores and convenience stores.

XVI. “social service centre” means the following uses of premises by a non-profit society:

a) providing drop-in or activity space; or

b) dispensing aid in the nature of food or clothing; or

c) providing information, referral, counselling, advocacy or health care services; but does not include premises used for residential, or drug and alcohol detoxification or rehabilitation purposes.

XVII. “substantial completion” means, for the purposes of the CD-2: Comprehensive District, that point in time of development where construction of any building or structure has reached the stage at which the architect will certify that a building or structure is sufficiently complete for occupation and use for its intended use after written concurrence of the University Endowment Lands Manager and Fire Chief;

XVIII. “temporary sales office” means the use of a building or part of a building for a period of up to three years, with an option to extend the period for up to an additional three-years, subject to the approval of the Manager, for the sole purpose of marketing, selling or leasing dwelling units or commercial retail units associated with a residential or mixed use development and may include related administrative purposes and temporary surface parking.

XIX. “townhouse dwelling” means, for the purposes of the CD-2: Comprehensive District, a multiple dwelling containing more than two dwelling units where each dwelling unit shares at least one party wall and has a separate exterior entrance either at or near Finished Grade or to the roof deck of an Underground Parking structure, and may include an accessory lock-off unit.

XX. “underground parking” means, for the purposes of the CD-2: Comprehensive District, the provision of off-street parking spaces that are wholly contained in an underground structure, no part of which shall project greater than 1.0 metre above the finished grade of the lot.

XXI. “wetlands” means any area of land, which is used or intended to be used for stormwater management and for educational purposes relating to the environment, habitats, plants, wildlife, and/or species at risk and which may support structures such as boardwalks, fencing, trails and trail signage.

3.0 DEVELOPMENT PERMITS

a) Section 10 (1) of the Bylaw is amended by adding the following subsection (o) immediately following subsection (n):

"(o) erect, demolish or replace a building in the CD-2: Comprehensive District"

b) Section 10 (12) of the Bylaw is amended by deleting the first sentence and replacing it with the following:

"If the Development Permit application is for any of the purposes described in Section 10 (1) (b) through 10 (1) (o), the Manager shall:"

c) Section 10 (12)(d) of the Bylaw is amended by adding "the applicable design guidelines", immediately following "Advisory Design Panel".

4.0 LAND USE DISTRICTS

a) Section 45 (1) of the Bylaw is amended by adding the following subsection (h) immediately following subsection (g):

"(h) CD-2: Comprehensive District."

b) The Bylaw is amended by adding the following "CD-2: Comprehensive District", including Sections 157 through Section 240 and all schedules referred to therein, in the place described in the amended Table of Contents.

CD-2: COMPREHENSIVE DISTRICT

157. This CD-2: Comprehensive District regulates the Block F Lands, as shown on Schedule A, and the development of residential, commercial, parks and open space, community facilities, and accessory uses on the zoning Lots A, B, C1, C2, D, E, F, G, H, I, J, K, L and M. For the purposes of subdivision the lots shall conform with Schedule 18: CD-2: Comprehensive District Zoning Lots and have the minimum lot area indicated on Table 1 and for the purposes of development, the floor space ratio on each lot shall conform to the floor space ratios indicated on Table 1.

Table 1: Minimum Lot Area and Lot FSR

LOT	MINIMUM LOT AREA (SQUARE METRES)	FLOOR SPACE RATIO (FSR)
A	8,261	1.09
B	3,261	2.48
C1	2,179	-
C2	1,846	-
D	4,725	2.89

LOT	MINIMUM LOT AREA (SQUARE METRES)	FLOOR SPACE RATIO (FSR)
E	5,214	2.71
F	4,654	2.87
G	4,624	2.11
H	5,330	1.75
I	3,358	2.50
J	3,398	1.75
K	4,676	1.25
L	4,390	1.25
M	4,287	3.00
P1	12,158	-
WL1	3,317	-
CG1	2,296	-

GREEN BUILDING PERFORMANCE

158. All applications for development permits and building permits for parcels within Block F must include a summary of how each and every building will achieve LEED® Gold certification. At the time of substantial completion all buildings within Block F will be required to have made an application to achieve LEED® Gold certification.

MAXIMUM FLOOR AREA

159. (1) The maximum floor area of all residential and commercial uses resulting from the application of the Floor Area Ratio permitted on all of Lots A, B, D, E, F, G, H, I, J, K, L and M of the Block F Lands shall not exceed 115,821 square metres, of which 2,787 square metres shall be commercial uses on lots A and B.

(2) The total floor area of all accessory buildings on a Lot, measured at the extreme outer limits of such accessory buildings, shall not be greater than 10% of the maximum floor area permitted on the lot on which they are located.

FLOOR SPACE RATIO CALCULATION

160. (1) For the purposes of the CD-2: Comprehensive District, floor space ratio shall be determined based on the gross parcel area determined at the time of subdivision prior to any dedication requirements of the approving authority.

(2) For the purposes of the CD-2: Comprehensive District, the following shall be included in the computation of floor space ratio:

a) all storeys having a minimum ceiling height of 1.2 metres, including earthen floor, both above and below ground level, to be measured to the extreme outer limits of the building;

b) stairways, fire escapes, elevator shafts and other features which the Manager considers similar, to be measured by their gross cross-sectional areas and included in the measurement for each storey at which they are located.

(3) For the purposes of the CD-2: Comprehensive District, the following shall be excluded in the computation of floor space ratio:

a) open residential balconies or sundecks, and any appurtenances thereto which, in the opinion of the Manager, are similar to the foregoing, except that:

i) the total area of all such exclusions must not exceed 12% of the maximum permitted residential floor area for that Lot, and

ii) no enclosure of balconies is permissible.

b) uncovered patios, roof gardens and decks;

c) floor area used for the purpose of off-street loading, bicycle storage, heating, cooling and mechanical equipment, electrical rooms, recycling facilities, garbage holding areas or uses which in the opinion of the Manager are similar to the foregoing, provided that the finished floor of those areas or portions thereof so used, is at or below grade;

d) floor area used for the purpose of off-street parking, elevator shafts, elevator lobbies, residential storage space or uses which in the opinion of the Manager are similar to the foregoing, provided that the finished floor of those areas or portions thereof so used, is below grade;

e) floor area used for the purpose of a community centre or child day care facility;

f) floor area for each adaptable dwelling unit provided, according to the following:

i) 1.9 square metres per one bedroom adaptable dwelling unit provided; and

ii) 2.8 square metres per two-plus bedroom adaptable dwelling unit provided.

g) floor area used for residential amenity space except that the total area excluded must not exceed 5% of the total building floor area; and

h) areas of undeveloped storeys which are located:

i) above the highest storey or half storey, including roof top heating, cooling, mechanical, electrical rooms; or

ii) adjacent to a storey with a ceiling height of less than 1.2 metres.

MINIMUM DWELLING UNIT FLOOR SPACE

161. (1) No dwelling unit shall have a floor area less than 50 square metres.

(2) Despite Section 161(1) above, no lock-off unit shall have a floor area less than 26 square metres and shall not exceed 35% of the floor area of the principal townhouse dwelling of which it is part.

HEIGHT EXEMPTIONS

162. (1) The Manager may, at his discretion, permit a greater height than otherwise permitted for the following items if they do not in total exceed one-half of the width of the building or buildings as measured on any elevation drawings and do not in total cover more than 20% of the roof area on which they are located as viewed from directly above:

a) architectural appurtenances such as turrets and cupolas, provided that no additional floor area is created and no protrusion extends more than 1.2 metres above the height limitation;

b) mechanical appurtenances such as elevator machine rooms, rooms containing heating, cooling and electrical equipment;

c) access and infrastructure required to maintain green roofs, urban agriculture or roof-mounted energy technologies including solar panels and other such renewable energy devices, provided that the Manager considers their siting and sizing in relation to views, overlook, shadowing and noise impacts;

d) venting skylights, opening clerestory windows designed to reduce energy consumption or improve natural light and ventilation; and

e) items similar to any of the above.

(2) Where buildings have sloped roofs greater than 4-to-12, the highest point is the mean height level between the bottom of the uppermost eave and the uppermost ridge of a

gable, hip, or gambrel roof, provided that the ridge of the roof is not more than 1.5 metres above the mean height.

(3) The Manager may, for any building higher than 30 metres, permit a decorative roof, which may include items referred to in Section 162(1) to exceed the maximum height otherwise specified in the Bylaw, provided that:

a) the Manager is satisfied that the roof enhances the overall appearance of the building and appropriately integrates mechanical appurtenances;

b) the roof does not add to the floor area otherwise permitted; and

c) the Manager refers the matter to the Advisory Design Panel for comment.

(4) No accessory building shall exceed 3.7 metres in height as measured to the highest point of the roof if a flat roof, to the deckline of a mansard roof or to the mean height level between the eaves and the ridge of a gable, hip or gambrel roof provided that the upper most ridge of a sloped roof shall not exceed 4.6 metres in height as measured from the average grade.

SITE COVERAGE

163. (1) For the purposes of the CD-2: Comprehensive District, the following shall be excluded from site coverage:

a) open balconies;

b) covered entrances not exceeding 23 square metres in area;

c) commercial canopies not exceeding a projection of 2.4 metres from the building face;

d) covered patios not exceeding 14 square metres in area;

e) pergolas and trellises; and

f) underground parking structures.

NOISE

164. (1) Lots A and B within the Block F Lands as shown on Schedule 18 to this bylaw are within the Block F Activity Area, and the design and siting of all multiple dwellings, townhouse dwellings and community facilities therein shall be subject to the Design Guideline requirements of Appendix 5.

(2) Lots C1, C2 and D within the Block F Lands as shown on Schedule 18 to this bylaw are within the Block F Intermediate Area, and the design and siting of all multiple dwellings, townhouse dwellings and community facilities therein shall be subject to the Design Guideline requirements of Appendix 5.

(3) Lots F, G, H, I, J, K, L and M within the Block F Lands as shown on Schedule 18 to this bylaw are within the Block F Quiet Zone, and the design and siting of all multiple dwellings and townhouse dwellings therein shall be subject to the Design Guideline requirements of Appendix 5.

(4) No construction of any building or structure may be commenced on Block F until the Owner at the Owner's cost has provided to the Manager as part of a Development Permit application an acoustic report prepared by a qualified acoustic professional recommending site specific noise mitigation measures in respect of both living and amenity spaces in the building as well as existing and future adjacent buildings including, as appropriate, both active and passive measures.

(5) No construction of any building or structure may be commenced on Block F unless a qualified acoustic professional certifies that the plans submitted as part of a building permit application include the site-specific noise mitigation measures recommended in the acoustic report provided to the Manager pursuant to Section 164(4) hereof.

(6) Substantial Completion of any building or structure must not be determined until a qualified acoustic professional acceptable to the Manager acting reasonably delivers to the Manager a written report including results of the following noise monitoring procedures taking into account all cumulative effects of the then existing development on Block F, with the location and number of measurement sites to be determined to the satisfaction of the Manager:

a) pre-construction baseline noise monitoring on Block F of the existing environment along the boundaries of Block F with Acadia Road, Toronto Road, along and immediately inside the southwest corner of Block F;

b) post-construction noise monitoring upon completion of construction activity on the building for which "Substantial Completion" approval is sought;

and until all such noise monitoring results in subsection b) hereof satisfy the acceptable continuous noise limits set out for each of the adjacent receiver location areas identified in Appendix 5 of the University Endowment Lands Land Use, Building and Community Administration Bylaw.

ADAPTABLE DWELLING UNITS

165. At least 25% of all single-storey multiple dwelling units, affordable housing units and purpose built rental units, but not including townhouse dwellings, which employ public interior corridors or direct at-grade exterior access to the dwelling unit, shall be constructed as adaptable dwelling units.

ACCESSORY BUILDINGS

166. The use of an accessory building must be ancillary to that of the principal building to which it relates, and it may not include a dwelling unit.

MIXED COMMERCIAL AND RESIDENTIAL USE BUILDINGS

167. (1) A multiple dwelling building, an affordable housing building or a purpose-built residential rental building which includes a commercial use, shall:

a) have all the multiple dwelling units, affordable housing units and purpose built rental units, not including townhouse dwellings, located above the commercial use; and

b) have a separate direct at-grade residential entrance and exit to the exterior of the building.

COMMERCIAL USES

168. (1) All commercial uses not including a farmers market shall be carried on wholly within a completely enclosed building, except for the following:

a) outdoor restaurant and retail seating;

b) seasonal display of items such as flowers, plants, fruits, vegetables, arts and crafts or similar items approved by the Manager;

c) occasional special events and celebrations.

LOT A – COMMERCIAL VILLAGE

INTENT

169. It is the intent on Lot A to create, in conjunction with Lots B, a mixed-use sub-area, through the provision of commercial uses intended to meet the needs of local area residents and market and non-market residential uses. Lot A is within the Block F Activity Area.

OUTRIGHT APPROVAL USES

170. (1) The following uses and no others shall be permitted on Lot A:

a) Affordable Housing

b) Purpose-Built Rental

c) Artist Gallery

d) Child Day Care Facility

e) Restaurant

f) Grocery Market

g) Liquor Store

h) Multiple Dwelling

i) Office

j) Farmers Market

k) Food Truck

l) Outdoor Plaza and Courtyard

m) Park and Playground

n) Parking area

o) Personal Service

p) Public Authority Building or Use

q) Public Utility

r) Residential Amenity Space

s) Retail

t) School or Academy for the teaching of drama, music, art, dance, meditation, yoga, self-defence, language, self-improvement and similar arts and skills

u) Accessory Buildings customarily ancillary to any of the uses listed in this Section

v) Accessory Uses customarily ancillary to any of the uses listed in this Section

CONDITIONAL APPROVAL USES

171. (1) Subject to all other provisions of this Bylaw and all the other applicable regulations, the Manager may approve any of the uses listed below on lot A, subject to such conditions or additional regulations the Manager may decide, provided that before making a decision the Manager considers the intent of the Bylaw, the Design Guidelines in Appendix 5, the recommendations of the Advisory Design Panel, and has notified such adjacent property owners and residents that the Manager deems may be affected:

a) Animal Hospital or Daycare

b) Home Occupation

c) Institution of a religious, philanthropic, cultural or charitable character

d) Laundromat

e) School (professional, vocational, or trade)

f) Social Service Centre

g) Special Needs Residential Facility

MAXIMUM NUMBER OF BUILDINGS

172. The maximum number of principal buildings permitted on Lot A shall not exceed 2.

MAXIMUM FLOOR SPACE RATIO

173. The maximum floor space ratio of Lot A shall not exceed 1.09.

FLOOR AREA

174. (1) The maximum floor area of the commercial uses on Lot A shall not exceed 2,700 square metres; and

(2) The minimum floor area of the affordable housing building shall be at least 4,065 square metres.

(3) No single commercial use shall exceed 1,860 square metres in floor area.

MAXIMUM HEIGHT

175. (1) One principal building shall not exceed the lesser of five storeys or 19 metres; and

(2) A second principal building shall not exceed the lesser of four storeys or 14 metres.

(3) Despite subsection (1), the maximum height of the first principal building may increase to 20 metres if the subject principal building contains a grocery market with total floor space not less than 929 square metres.

MAXIMUM SITE COVERAGE

176. The maximum site coverage shall not exceed 45% of the area of Lot A.

MINIMUM SITING REQUIREMENTS

177. (1) No part of any building or structure shall project beyond the building lines shown on Schedule 5 of the University Endowment Lands Land Use, Building and Community Administration Bylaw, excepting covered entrances to affordable housing, purpose-built rental and multiple dwelling buildings, which may project into the required setbacks at the discretion of the Manager; and

(2) Despite subsection (1) underground parking structures may project beyond the building lines shown on Schedule 5 if expressly permitted in a specific instance to do so by a provision in this Bylaw.

LOT B – COMMERCIAL VILLAGE

INTENT

178. It is the intent on Lot B to create, in conjunction with Lot A, a mixed-use sub-area, through the provision of commercial uses intended to meet the needs of local area residents, and purpose-built rental residential uses. Lot B is within the Block F Activity Area.

OUTRIGHT APPROVAL USES

179. (1) The following uses and no others shall be permitted on Lot B:

a) Purpose-Built Rental

b) Artist Gallery

c) Child Day Care Facility

d) Restaurant

e) Food Truck

f) Office

g) Outdoor Plaza and Courtyard

h) Residential Amenity Space

i) Retail

j) Townhouse Dwelling

k) Accessory Buildings customarily ancillary to any of the uses listed in this Section

l) Accessory Uses customarily ancillary to any of the uses listed in this Section

CONDITIONAL APPROVAL USES

180. (1) Subject to all other provisions of this Bylaw and all the other applicable regulations, the Manager may approve any of the uses listed below on Lot B, subject to such conditions or additional regulations the Manager may decide, provided that before making a decision the Manager considers the intent of the Bylaw, the Design Guidelines in Appendix 5, the recommendations of the Advisory Design Panel, and has notified such adjacent property owners and residents that the Manager deems may be affected:

a) Animal Hospital or Daycare

b) Home Occupation

c) Institution of a religious, philanthropic, cultural or charitable character

d) Personal Service

e) Public Authority Building or Use

f) Public Utility

g) School or Academy for the teaching of drama, music, art, dance, meditation, yoga, self-defence, language, self-improvement and similar arts and skills

h) School (professional, vocational, or trade)

i) Social Service Centre

j) Special Needs Residential Facility

MAXIMUM NUMBER OF BUILDINGS

181. The maximum number of principal buildings permitted on Lot B shall not exceed 1.

MAXIMUM FLOOR SPACE RATIO

182. The maximum floor space ratio of Lot B shall not exceed 2.48, of which townhouse dwellings shall have a floor space ratio of at least 0.15.

FLOOR AREA

183. (1) The minimum floor area for commercial uses on Lot B shall be 87 square metres and the maximum area for commercial uses shall not exceed 300 square metres, provided that the combined maximum floor area for the commercial uses on Lots A and B shall not exceed 2,787 square metres;

(2) The maximum floor area for the purpose-built rental building shall not exceed 7,897 square metres.

(3) No storey in a purpose-built rental building above the third storey shall exceed a floor area of 706 square metres.

MAXIMUM HEIGHT

184. No principal building shall exceed the lesser of twelve storeys or 40 metres.

MAXIMUM SITE COVERAGE

185. The maximum site coverage shall not exceed 50% of the area of lot B.

SITING REQUIREMENTS

186. (1) No part of any building or structure shall project beyond the building lines shown on Schedule 5 of the University Endowment Lands Land Use, Building and Community Administration Bylaw, excepting covered entrances to affordable housing, purpose-built rental and multiple dwelling buildings, which may project into the required setbacks at the discretion of the Manager;

(2) For the purposes of this CD-2: Comprehensive District, unless expressly provided for, underground parking shall be subject to the setbacks shown in Schedule 5 of the University Endowment Lands Land Use, Building and Community Administration Bylaw for buildings and structures; and

(3) The purpose-built rental building shall be separated from any adjacent buildings exceeding 6 storeys in height, whether or not such buildings are located on separate lots, by a distance of not less than 30 metres, as measured between the facing exterior walls of the buildings above the 6th storey.

LOTS C1 AND C2 – COMMUNITY FACILITIES

INTENT

187. It is the intent on Lots C1 and C2 in conjunction with Lot D, to create a transition sub-area between the Block F Activity Area and the Block F Quiet Area, through the provision of community facilities and community gathering spaces. Lots C1 and C2 are within a Block F Intermediate Area.

OUTRIGHT APPROVAL USES

188. (1) The following uses and no others shall be permitted on Lots C1 and C2:

a) Community Centre, subject to being located on Lot C1 only

b) Child Day Care Facility

c) Park or Playground

d) Public Authority Building or Use

e) Public Utility

f) Temporary Sales Office, subject to being located on Lot C2 only

g) Accessory Buildings customarily ancillary to any of the uses listed in this Section

h) Accessory Uses customarily ancillary to any of the uses listed in this Section

CONDITIONAL APPROVAL USES

189. (1) Subject to all other provisions of this Bylaw and all the other applicable regulations, the Manager may approve any of the uses listed below on Lots C1 and C2, subject to such conditions or additional regulations the Manager may decide, provided that before making a decision the Manager considers the intent of the Bylaw, the Design Guidelines in Appendix 5, the recommendations of the Advisory Design Panel, and has notified such adjacent property owners and residents that the Manager deems may be affected:

a) Social Service Centre

b) Temporary Parking, subject to being located on Lot C2 only

MAXIMUM NUMBER OF BUILDINGS

190. The maximum number of principal buildings on Lots C1 and C2 shall not exceed 1 per lot.

FLOOR AREA

191. (1) The minimum floor area of a community centre use shall be at least 1,394 square metres; and

(2) The maximum floor area of a child day care facility use shall not exceed 465 square metres.

MAXIMUM HEIGHT

192. The maximum height of a building containing a child day care facility use shall not exceed 8.0 metres.

MINIMUM SITING REQUIREMENTS

193. (1) No part of any building or structure shall project beyond the building lines shown on Schedule 5 of the University Endowment Lands Land Use, Building and Community Administration Bylaw;

(2) For the purposes of this CD-2 Comprehensive District, unless expressly provided for, underground parking shall be subject to the setbacks shown in Schedule 5 of the University Endowment Lands Land Use, Building and Community Administration Bylaw for buildings and structures.

LOT D – MULTIPLE DWELLING AND TOWNHOUSE RESIDENTIAL

INTENT

194. It is the intent on Lot D to create, in conjunction with Lots C1 and C2, a transition sub-area between the Block F Activity Area and the Block F Quiet Area, through the provision of multiple dwelling and townhouse dwelling residential uses. Lot D is within a Block F Intermediate Area.

OUTRIGHT APPROVAL USES

195. (1) The following uses and no others shall be permitted on Lot D:

a) Multiple Dwelling

b) Townhouse Dwelling

c) Purpose Built Rental

d) Park and Playground

e) Public Authority Building or Use

f) Public Utility

g) Residential Amenity Space

h) Accessory Buildings customarily ancillary to any of the uses listed in this Section

i) Accessory Uses customarily ancillary to any of the uses listed in this Section

CONDITIONAL APPROVAL USES

196. (1) Subject to all other provisions of this Bylaw and all the other applicable regulations, the Manager may approve any of the uses listed below on Lot D, subject to such conditions or additional regulations the Manager may decide, provided that before making a decision the Manager considers the intent of the Bylaw, the Design Guidelines in Appendix 5, the recommendations of the Advisory Design Panel, and has notified such adjacent property owners and residents that the Manager deems may be affected:

a) Home Occupation

b) Special Needs Residential Facility

MAXIMUM NUMBER OF BUILDINGS

197. The maximum number of principal buildings permitted on Lot D shall not exceed 3.

MAXIMUM FLOOR SPACE RATIO

198. The maximum floor space ratio of all buildings on Lot D shall not exceed 2.89, of which townhouse dwellings shall have a floor space ratio of at least 0.47.

FLOOR AREA

199. No storey in a multiple dwelling above the third storey shall exceed a floor area of 706 square metres.

MAXIMUM HEIGHT

200. (1) No multiple dwelling shall exceed the lesser of eighteen storeys or 54.25 metres; and

(2) No townhouse dwelling shall exceed the lesser of three storeys or 11 metres.

MAXIMUM SITE COVERAGE

201. The maximum site coverage shall not exceed 40% of the area of Lot D.

MINIMUM SITING REQUIREMENTS

202. (1) No part of any building or structure shall project beyond the building lines shown on Schedule 5 of the University Endowment Lands Land Use, Building and Community Administration Bylaw, excepting covered entrances to purpose-built rental and multiple dwelling buildings, which may project into the required setbacks at the discretion of the Manager;

(2) For the purposes of this CD-2: Comprehensive District, unless expressly provided for, underground parking shall be subject to the setbacks shown in Schedule 5 of the University Endowment Lands Land Use, Building and Community Administration Bylaw for buildings and structures; and

(3) A multiple dwelling shall be separated from any adjacent buildings exceeding 6 storeys in height, whether or not such buildings are located on separate lots, by a distance of not less than 30 metres, as measured between the facing exterior walls of the buildings above the 6th storey.

LOT P1 – COMMUNITY PARK

INTENT

203. It is the intent of this lot to provide for the location and preservation of public park and open space to accommodate the active and passive recreational needs of the community.

OUTRIGHT APPROVAL USES

204. (1) The following uses and no others shall be permitted on Lot P1:

a) Public Park

b) Public Trails

c) Public Authority Building or Use

d) Public Utility

PERMITTED STRUCTURES

205. (1) The following structures shall be permitted on Lot P1:

a) Fencing

b) Playground

LOT WL1 – WETLANDS

INTENT

206. It is the intent on Lot WL1 to provide for the construction of the Block F Wetlands.

OUTRIGHT APPROVAL USES

207. (1) The following uses and no others shall be permitted on Lot WL1:

a) Wetlands

b) Public Trails

c) Public Authority Building or Use

d) Public Utility

PERMITTED STRUCTURES

208. (1) The following structures shall be permitted on Lot WL1:

a) Boardwalks

b) Foot Bridges

c) Informational displays

d) Viewing Platform

LOT CG1 - COMMUNITY GREEN

INTENT

209. It is the intent of Lot CG1 to provide for a community open space and trails to accommodate the passive recreational and connectivity needs of the community.

OUTRIGHT APPROVAL USES

210. (1) The following uses and no others shall be permitted on Lot CG1:

a) Park

b) Public trails

c) Public Authority Building or Use

d) Public Utility

e) Temporary Sales Centre

PERMITTED STRUCTURES

211. (1) The following structures shall be permitted on Lot CG1

a) Fencing

b) Playground

c) Street Furniture

LOTS E, F, G AND M - MULTIPLE DWELLING AND TOWNHOUSE RESIDENTIAL

INTENT

212. It is the intent to create, on Lots E, F, G and M, a residential area, through the provision of multiple dwelling and townhouse dwelling residential uses. Lots E, F, G and M are within the Block F Quiet Area.

OUTRIGHT APPROVAL USES

213. (1) The following uses and no others shall be permitted on Lots E, F, G and M:

a) Multiple Dwelling

b) Townhouse Dwelling

c) Purpose Built Rental

d) Residential Amenity Space

e) Park and Playground

f) Public Authority Building or Use

g) Public Utility

h) Accessory Buildings customarily ancillary to any of the uses listed in this Section

i) Accessory Uses customarily ancillary to any of the uses listed in this Section

CONDITIONAL APPROVAL USES

214. (1) Subject to all other provisions of this Bylaw and all the other applicable regulations, the Manager may approve any of the uses listed below on Lots E, F, G and M, subject to such conditions or additional regulations the Manager may decide, provided that before making a decision the Manager considers the intent of the Bylaw, the Design Guidelines in Appendix 5, the recommendations of the Advisory Design Panel, and has notified such adjacent property owners and residents that the Manager deems may be affected:

a) Home Occupation

b) Special Needs Residential Facility

MAXIMUM NUMBER OF BUILDINGS

215. The maximum number of principal buildings on Lots E, F, G and M shall not exceed 3 on each lot.

MAXIMUM FLOOR SPACE RATIO

216. (1) The maximum floor space ratio of Lot E shall not exceed 2.71, of which townhouse dwellings shall have a floor space ratio of at least 0.46;

(2) The maximum floor space ratio of Lot F shall not exceed 2.87, of which townhouse dwellings shall have a floor space ratio of at least 0.48;

(3) The maximum floor space ratio of Lot G shall not exceed 2.11, of which townhouse dwellings shall have a floor space ratio of at least 0.49; and

(4) The maximum floor space ratio of Lot M shall not exceed 3.0, of which townhouse dwellings shall have a floor space ratio of at least 0.52.

FLOOR AREA

217. No storey in a multiple dwelling above the third storey, on Lots E, F and M, shall exceed a floor area of 706 square metres.

MAXIMUM HEIGHT

218. (1) No multiple dwelling on Lots E, F and M shall exceed the lesser of eighteen storeys or 54.25 metres;

(2) No multiple dwelling on Lot G shall exceed the lesser of six storeys or 21 metres; and

(3) No townhouse dwelling shall exceed the lesser of three storeys or 11 metres.

MAXIMUM SITE COVERAGE

219. (1) The maximum site coverage on Lots E, F and M shall not exceed 40% of the area of each lot; and

(2) The maximum site coverage on Lot G shall not exceed 45% of the area of the lot.

MINIMUM SITING REQUIREMENTS

220. (1) No part of any building or structure shall project beyond the building lines shown on Schedule 5 of the University Endowment Lands Land Use, Building and Community Administration Bylaw, excepting covered entrances to purpose-built rental and multiple dwelling buildings, which may project into the required setbacks at the discretion of the Manager;

(2) For the purposes of this CD-2: Comprehensive District, unless expressly provided for, underground parking shall be subject to the setbacks shown in Schedule 5 of the University Endowment Lands Land Use, Building and Community Administration Bylaw for buildings and structures; and

(3) A multiple dwelling shall be separated from any adjacent buildings exceeding 6 storeys in height, whether or not such buildings are located on separate lots, by a distance of not less than 30 metres, as measured between the facing exterior walls of the buildings above the 6th storey.

LOTS H, I AND J - MULTIPLE DWELLING RESIDENTIAL

INTENT

221. It is the intent to create, on Lots H, I and J, a residential area, through the provision of multiple dwelling residential uses. Lots H, I and J are within the Block F Quiet Area.

OUTRIGHT APPROVAL USES

222. (1) The following uses and no others shall be permitted on Lots H, I and J:

a) Multiple Dwelling

b) Purpose Built Rental

c) Residential Amenity Space

d) Park and Playground

e) Public Authority Building or Use

f) Public Utility

g) Accessory Buildings customarily ancillary to any of the uses listed in this Section

h) Accessory Uses customarily ancillary to any of the uses listed in this Section

CONDITIONAL APPROVAL USES

223. (1) Subject to all other provisions of this Bylaw and all the other applicable regulations, the Manager may approve any of the uses listed below on Lots H, I and J, subject to such conditions or additional regulations the Manager may decide, provided that before making a decision the Manager considers the intent of the Bylaw, the Design Guidelines in Appendix 5, the recommendations of the Advisory Design Panel, and has notified such adjacent property owners and residents that the Manager deems may be affected:

a) Home Occupation

b) Special Needs Residential Facility

MAXIMUM NUMBER OF BUILDINGS

224. The maximum number of principal buildings on Lots H, I and J shall not exceed 2 on each lot.

MAXIMUM FLOOR SPACE RATIO

225. (1) The maximum floor space ratio on Lot H and J shall not exceed 1.75 on each lot; and

(2) The maximum floor space ratio of Lot I shall not exceed 2.50.

MAXIMUM HEIGHT

226. No multiple dwelling on Lots H, I and J shall exceed the lesser of six storeys or 21 metres.

MAXIMUM SITE COVERAGE

227. (1) The maximum site coverage on Lot H shall not exceed 40% of the area of the lot; and

(2) The maximum site coverage on Lots I and J, shall not exceed 50% of the area of each lot.

MINIMUM SITING REQUIREMENTS

228. (1) No part of any building or structure shall project beyond the building lines shown on Schedule 5 of the University Endowment Lands Land Use, Building and Community Administration Bylaw, excepting covered entrances to purpose-built rental and multiple dwelling buildings, which may project into the required setbacks at the discretion of the Manager;

(2) For the purposes of this CD-2: Comprehensive District, unless expressly provided for, underground parking shall be subject to the setbacks shown in Schedule 5 of the University Endowment Lands Land Use, Building and Community Administration Bylaw for buildings and structures.

LOTS K AND L - TOWNHOUSE RESIDENTIAL

INTENT

229. It is the intent to create, on Lots K and L, a residential area, through the provision of townhouse dwelling residential uses. Lots K and L are within the Block F Quiet Area.

OUTRIGHT APPROVAL USES

230. (1) The following uses and no others shall be permitted on Lots K and L:

a) Townhouse Dwelling

b) Purpose Built Rental

c) Residential Amenity Space

d) Park and Playground

e) Public Authority Building or Use

f) Public Utility

g) Accessory Buildings customarily ancillary to any of the uses listed in this Section

h) Accessory Uses customarily ancillary to any of the uses listed in this Section

CONDITIONAL APPROVAL USES

231. (1) Subject to all other provisions of this Bylaw and all the other applicable regulations, the Manager may approve any of the uses listed below on Lots K and L, subject to such conditions or additional regulations the Manager may decide, provided that before making a decision the Manager considers the intent of the Bylaw, the Design Guidelines in Appendix 5, the recommendations of the Advisory Design Panel, and has notified such adjacent property owners and residents that the Manager deems may be affected:

a) Home Occupation

b) Special Needs Residential Facility

MAXIMUM NUMBER OF BUILDINGS

232. (1) The maximum number of principal buildings on Lot K shall not exceed 5; and

(2) The maximum number of principal buildings on Lot L shall not exceed 4.

MAXIMUM FLOOR SPACE RATIO

233. The maximum floor space ratio on Lot K and L shall not exceed 1.25 on each lot.

MAXIMUM HEIGHT

234. No townhouse unit on Lots K and L shall exceed the lesser of three storeys or 11 metres.

MAXIMUM SITE COVERAGE

235. The maximum site coverage on Lots K and L shall not exceed 50% of the area of each lot.

MINIMUM SITING REQUIREMENTS

236. (1) No part of any building or structure shall project beyond the building lines shown on Schedule 5 of the University Endowment Lands Land Use, Building and Community Administration Bylaw;

(2) For the purposes of this CD-2: Comprehensive District, unless expressly provided for, underground parking shall be subject to the setbacks shown in Schedule 5 of the University Endowment Lands Land Use, Building and Community Administration Bylaw for buildings and structures; and

(3) Townhouse dwellings that have front entrances facing another townhouse dwelling frontage shall be separated between the building frontages by a distance of not less than 10 metres.

GENERAL REGULATIONS

PARKING AND LOADING REQUIREMENTS

237. (1) Unless otherwise expressly provided for, Schedule 3 of the Bylaw is applicable in the CD-2: Comprehensive District.

(2) Despite the table identifying the required parking spaces by use in Schedule 3 of the bylaw, for the purposes of the CD-2: Comprehensive District, the minimum number of off-street vehicle parking spaces required for all buildings and uses shall be provided in accordance with the following table:

Table 3: Off-Street Vehicle Parking Requirements

USE	MINIMUM VEHICLE PARKING REQUIREMENT
Multiple Dwelling exceeding six storeys in height	1.0 per dwelling unit, plus 0.1 per unit for visitors
Multiple Dwelling, six storeys or less in height	1.1 per dwelling unit, plus 0.1 per unit for visitors
Townhouse Dwelling	1.4 per dwelling unit, plus 0.1 per unit for visitors
Commercial Use – Office	1.5 per 93 square metres
Commercial Use – Retail	2.5 per 93 square metres
Commercial Use – Grocery Market	2.5 per 93 square metres
Commercial Use – Restaurant	6 per 93 square metres
Child Day Care Facility	1.0 per 15 children
Community Centre	30 parking stalls, 7 of which shall be at surface and 23 in underground parking on lot A
Purpose-Built Rental Units	0.75 per unit for residents, plus 0.1 per unit for visitors
Affordable Housing Dwelling Units	0.5 per unit for residents, plus 0.05 per unit for visitors

(3) Parking requirements for a lot within the Block F Lands (a “Sending Lot”) may be satisfied by dedicated parking spaces on another receiving lot within the Block F Lands (a “Receiving Lot”) provided that:

a) the total parking requirements for all uses on all involved lots are satisfied;

b) the lots are adjacent or are not separated by a distance of more than 50 metres, where the use is residential;

c) the parking requirement for Lots A and B, where the use is commercial, institutional or a mix of commercial and residential, are located in the underground parking on lots A and B;

d) the parking requirement for Lot C1, where the use is institutional, is located in the underground parking on Lot A.

e) the obligation to provide such dedicated parking spaces is recorded on title of the Receiving Lot by an easement registered as a charge in favour of the Sending Lot and at the discretion of the Manager a statutory right of in favour of the Crown on terms satisfactory to the Manager.

(4) Visitor Parking Spaces shall be clearly designated and marked as “Visitor Parking”.

(5) The number of off-street parking spaces for small cars on a lot shall not exceed 25% of the total parking spaces required for the site for all uses combined, designed as follows:

a) All off-street parking spaces for small cars shall be a minimum of 4.6 metres in length and 2.3 metres in width and shall have a minimum vertical clearance of 2.0 metres, except that where one side of any space abuts any portion of a fence or structure, the minimum width shall be 2.6 metres or where both sides abut any portion of a fence or structure the minimum width shall be 2.7 metres.

(6) Loading

a) Despite the table identifying the required loading spaces by use in Schedule 3 of the bylaw, for the purposes of the CD-2: Comprehensive District, the minimum number of loading spaces required for all commercial uses shall be one loading space per 4,645 square metres of floor area.

b) Despite Schedule 3 of the Bylaw, the minimum number of loading spaces required for a residential use shall be one space for every 100 dwelling units, based on the total number of dwelling units in all buildings on a lot.

(7) Electric Vehicle Parking and Charging Stations

a) For all multiple dwelling buildings or mixed-use commercial and residential buildings, parking spaces shall accommodate electric vehicles in accordance with the following conditions:

i) A minimum of 5% of all required off-street parking spaces shall be designed with an AC Level 2 charging station at 240 V or higher;

ii) The electrical system shall be designed to accommodate the required number of electric vehicle parking spaces.

BICYCLE PARKING

238. (1) The minimum number of off-street bicycle parking spaces required for all buildings and uses shall be provided in accordance with the following table:

Table 4: Off-Street Bicycle Parking Requirements

USE	MINIMUM BICYCLE PARKING REQUIREMENTS
Multiple Dwelling and Townhouse Dwelling	1.5 Bicycle Parking Class A spaces per dwelling unit. Plus a minimum of 6 Bicycle Parking Class B spaces for any building with 3 or more dwelling units.
All non-residential uses	1.5 Bicycle Parking Class A space per 500 m^2 Floor Area. Plus a minimum of 6 Bicycle Parking Class B spaces for any building with a floor area of 1,000 m^2 or greater.

(2) Bicycle Parking Class A spaces shall be provided in the form of a secured waterproof bicycle locker, secured bicycle room, or other secured area within a building, complete with bicycle racks, and shall meet the following design standards:

a) be sheltered from the elements;

b) be enclosed, at a minimum, by chain-link walls, and be constructed of a theft resistant material;

c) bicycle room entry doors shall have a minimum width of 75 centimetres, and be hinged from the inside, unless the hinges are tamper-proof, have a separate entry lock and key or a programmed entry system, and their function shall not obstruct or interfere with the use of designated bicycle parking spaces;

d) bicycle rooms shall be equipped with one electrical outlet for the first 10 bicycles required and one additional outlet for every 20 bicycles thereafter, to permit charging of electric bicycles;

e) Bicycle lockers doors shall be lockable, and open to the full height and width of each locker, and be grouped together; and

f) Up to 50% of all required Class A bicycle spaces per building may be vertical.

(3) Class B bicycle spaces shall be provided in a convenient, secure, well-lit location at the same grade as the sidewalk or motor vehicle parking area, or on the top level of an underground parking structure, providing visual surveillance by occupants of the building the racks are intended to serve.

(4) Class B bicycle racks shall support the bicycle frame above the centre of gravity and shall enable the bicycle frame and front wheel to be locked to the rack with a U-style lock.

SIGN CONTROL

239. (1) Schedule 4 Sign Control is not applicable in the CD-2: Comprehensive District.

(2) The following sign types shall be permitted on the Block F Lands:

a) Projecting or hanging signs, where the sign is typically supported from an awning or canopy;

b) Awning signs, with painted on vinyl lettering or incised lettering with applied backing where the maximum awning drop/skirt is 40 cm in depth;

c) Fascia or wall-mounted signs, where the sign is mounted on the frontage of the premises, to which the sign applies;

d) Window signs that are not constructed of paper, cardboard, or fabrics, with the exception of cut out vinyl surface applied to the inside glazing;

e) Building directories, where the directory is located at the front entrance of a building;

f) Wayfinding and banner signs, the primary purpose of which is to provide direction and orientation to the public rather than advertisement for a particular premises;

g) Real estate signs, the purpose of which is to advertise properties for sale or lease, that do not exceed 1 square metre in size;

h) Residential building signs; the primary purpose of which is to provide building identification;

i) Temporary on-site development or construction signs, the primary purpose of which is to market a development project and which is located on Block F, the design, size and duration of which will be at the discretion of the Manager; and

j) All other forms of signs are prohibited, including but not limited to billboards, revolving signs, roof signs, balloons or other gas-filled inflatable devices, changeable copy signs, back-lit signs, and other forms of temporary signs.

(3) Number of Signs

a) The maximum number of permanent signs permitted per business frontage, with the exception of projecting or hanging signs, shall not exceed 2, except in the case

of an Anchor Tenant, in which case the maximum number of permanent signs, with the exception of projecting or hanging signs, shall not exceed 3 per business frontage.

b) For clarity, where a premises has more than one frontage, each frontage may have the maximum number of signs permitted.

c) The maximum number of projecting or hanging signs permitted per business frontage shall not exceed 1, except for anchor tenants where one additional perpendicular blade sign may be permitted per entrance.

d) The maximum number of residential building signs permitted per residential building shall be 1.

(4) Size and Placement

a) The maximum permitted sign size, not including awning signs, is 2.0 square metres per sign except in the case of an anchor tenant, in which case the maximum permitted sign size is 3.0 square metres;

b) The maximum permitted lettering size on any sign is 45 cm, except in the case of an anchor tenant, in which case the maximum permitted lettering size on any sign is 60 cm;

c) Projecting or hanging signs shall not project more than 1.2 metres from the building face and be mounted in the middle one-third of the frontage of the premises;

d) Residential building signs shall have a maximum sign size of 0.9 square metres.

e) Signs attached to a building shall be located no higher than the finished third storey level, except for residential building signs which shall be located no higher than the finished first storey level;

f) Signs located over pedestrian areas or sidewalks shall have a minimum clearance of 2.4 metres above finished grade.

(5) Visibility

a) Visibility into shops from the street shall be maintained;

b) Any solid signage, advertising or blackout panels placed against the inside surfaces of storefront glazing are prohibited;

c) Clear glass should be used for retail storefronts.

(6) Materials, Colour, and Symbols

a) Exposed surfaces of signs may be constructed of any material with the exception of fiberglass, plywood or particle board either painted or unfinished;

b) Colour of signage must be coordinated with the building façade with which it is associated;

c) No back-lit signs, advertising displays, or product machines that would limit visibility into any commercial use may obscure any windows;

d) Symbols are encouraged, depicting the nature of the business occupation.

(7) Lighting

a) Signs may incorporate front-lighting for their illumination;

b) Limited use of rear (unenclosed) lighting is permitted, provided it is restricted to:

i) Individually incised plastic or glass letters or symbols mounted in a solid, opaque sign face; or

ii) Individual halo-lit lettering or symbols mounted on a solid, opaque background;

c) No rear (unenclosed) lighting may be installed under awnings;

d) Enclosed backlit signs are prohibited.

(8) Comprehensive Sign Plan

a) A comprehensive sign plan showing the size, type, location and number of signs for Lots A and B combined, and Lots C1 and C2, which may be combined. The design, placement and colour of the signs shall be coordinated with the architectural elements of the building and take into consideration the intent of the Design Guidelines for each lot;

b) No permanent sign shall be placed on a lot until a Comprehensive Sign Plan has been submitted and approved by the Manager;

c) Prior to approving a Comprehensive Sign Plan, the Manager shall consider:

i) Conformance of the proposed signs with the Bylaw, CD-2: Comprehensive District and the Design Guidelines for each lot;

ii) The consistency of the plan with signs on adjoining lots; and

iii) The recommendation of the University Endowment Lands Advisory Design Panel.

d) When a Comprehensive Sign Plan is approved, all signs placed on a lot must be in compliance with the Comprehensive Sign Plan for that lot.

(9) Application for Sign Permit

a) Before any person places, erects or alters a sign, that person shall make application in writing to the Manager and shall obtain a sign permit.

b) An application shall be on a form prescribed by the Manager and shall include:

i) A statement by the owner confirming that they approve the application and that the proposed sign conforms with the Comprehensive Sign Plan;

ii) Drawings to scale for each side of the sign, giving all pertinent dimensions as well as the colour scheme, materials, copy and type face and details; and

iii) Drawings to scale showing the position of the sign painted on or attached to the building or structure together with the location of any existing signs.

FLOOR AND SUITE NUMBERING

240. (1) All buildings will be required to use a consecutive increasing numbering system for storey and suite numbering.

(2) Numbering shall not skip numbers between adjacent floor levels.

5.0 LAND USE DISTRICT MAP

a) Schedule 1: the University Endowment Lands Land Use Designations map is deleted and replaced with the University Endowment Lands Land Use District Map attached as Schedule A to this Appendix 2.

b) Schedule 5: the University Endowment Lands Building Lines maps are amended by adding the Block F Lands Building Lines attached as Schedule B to this Appendix 2.

6.0 ADAPTABLE HOUSING STANDARDS

a) The University Endowment Lands Land Use, Building and Community Administration Bylaw is amended by adding “Schedule 17: Adaptable Housing Standards,” attached as Schedule C to this Appendix 2, immediately following Schedule 16.

7.0 DEVELOPMENT PERMIT GUIDELINES

a) The University Endowment Lands Land Use, Building and Community Administration Bylaw is amended by adding “Appendix 5: Design Guidelines for CD-2: Comprehensive District,” attached as Schedule D to this Appendix 2.

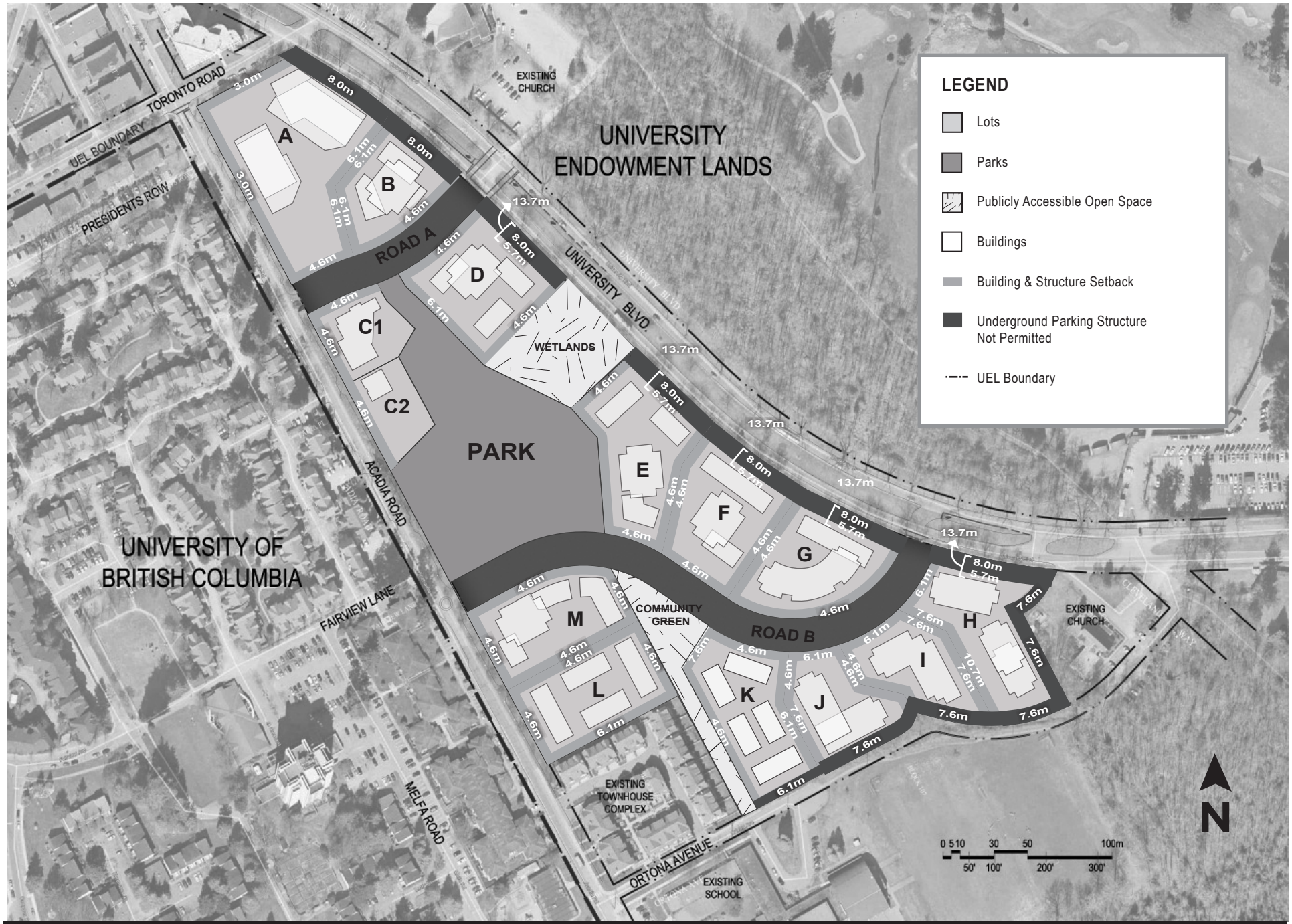
8.0 CD-2: COMPREHENSIVE DISTRICT ZONING LOTS

a) The University Endowment Lands Land Use, Building and Community Administration Bylaw is amended by adding “Schedule 18: CD-2: Comprehensive District Zoning Lots” attached as Schedule E to this Appendix 2, immediately following Schedule 17.

SCHEDULE A TO APPENDIX 2 OF THE MINISTER'S ORDER
UNIVERSITY ENDOWMENT LANDS LAND USE, BUILDING AND COMMUNITY ADMINISTRATION BYLAW
LAND USE DISTRICT MAP

LAND USE DISTRICT MAP | UNIVERSITY ENDOWMENT LANDS

SCHEDULE B TO APPENDIX 2 OF THE MINISTER'S ORDER
BLOCK F LANDS BUILDING LINES



SCHEDULE B | BLOCK F LANDS BUILDING LINES

SCHEDULE C TO APPENDIX 2 OF THE MINISTER'S ORDER
UNIVERSITY ENDOWMENT LANDS LAND USE, BUILDING AND COMMUNITY ADMINISTRATION BYLAW
SCHEDULE 17
ADAPTABLE HOUSING STANDARDS

1. Adaptable dwelling units shall be built in accordance with the following standards:

AREA	MINIMUM DESIGN STANDARD
Building Access	• Outside stairs have maximum contrast on nosing of each stair • Curb cuts have tactile and visual cues • Unobstructed access to main entrance • Unobstructed internal access from parking levels with accessible parking spaces (610 mm clear wall space adjacent to door latch) and unobstructed access garbage and recycling receptacles • No stairs within building circulation including corridors on residential levels • Accessible storage lockers for each unit • Canopy over main building entrances (915 mm) and enter-phone • Automatic door opener for at least one entry door and doors from each parking level with disability parking • Accessible building enter-phone, call buttons and, where provided, suite door bells • Corridors minimum 1,220 mm wide (except for service access areas) • 1,520 mm turning radius inside and outside entry corridor of each unit and in front of accessible mailboxes • Easy to read building address numbers (min. 100 mm high in contrasting colours) • Lighting levels to a minimum of 100 lux outside and inside main building entries and suite entries • No polished finish on building entry flooring, slip resistant floors and colour contrasting at exits • Excepting pocket doors, sliding doors, and doors with openers, lever door handles are required • Signage in common areas have well contrasting colours • Elevator buttons have strong contrast

Doorways	• 915 mm building and suite entry doors • Flush thresholds throughout the building (max 13 mm height) • Provide wiring for automatic door opener for suite entry doors • 610 mm clear wall space adjacent to door latches where door swings towards user (pocket doors acceptable for bathrooms and bedrooms) • Minimum one bathroom, one bedroom, and storage room doors 860 mm opening • Adjustable door closers to reduce force to open door to maximum 22N (5 lbs) • Door handle at 1000 mm above the floor with deadbolts placed immediately above or below
Bathroom	• Toilet located adjacent to wall (min. 915 mm length) • Provide turning radius within bathroom • 915 mm clearance along full length of tub • Tub control valve placed at outer edge of tub with tub spout remaining in central position • Accessible storage • Solid blocking provided in walls of tub/shower/toilet areas and behind towel bars • Pressure balanced tub/shower valves • Water supply and drain to allow for 100 mm drop in vanity height • Provision for vanity sink removal • Adjustable shower head height or hand held shower head on adjustable bracket
Kitchen	• Continuous counter between sink and stove • Task lighting of at least 100 lux level at sink, stove and work areas • Pull out work boards at 810 mm height • Lever handle faucets and cabinet handles which can be easily used with an open hand • Adjustable shelves in all cabinets
Electrical	• Electrical, cable, telephone outlets not lower than 450 mm above floor • Switches, controls, thermostats and the highest breaker in the suite panel, to be installed no higher than 1170 mm above floor

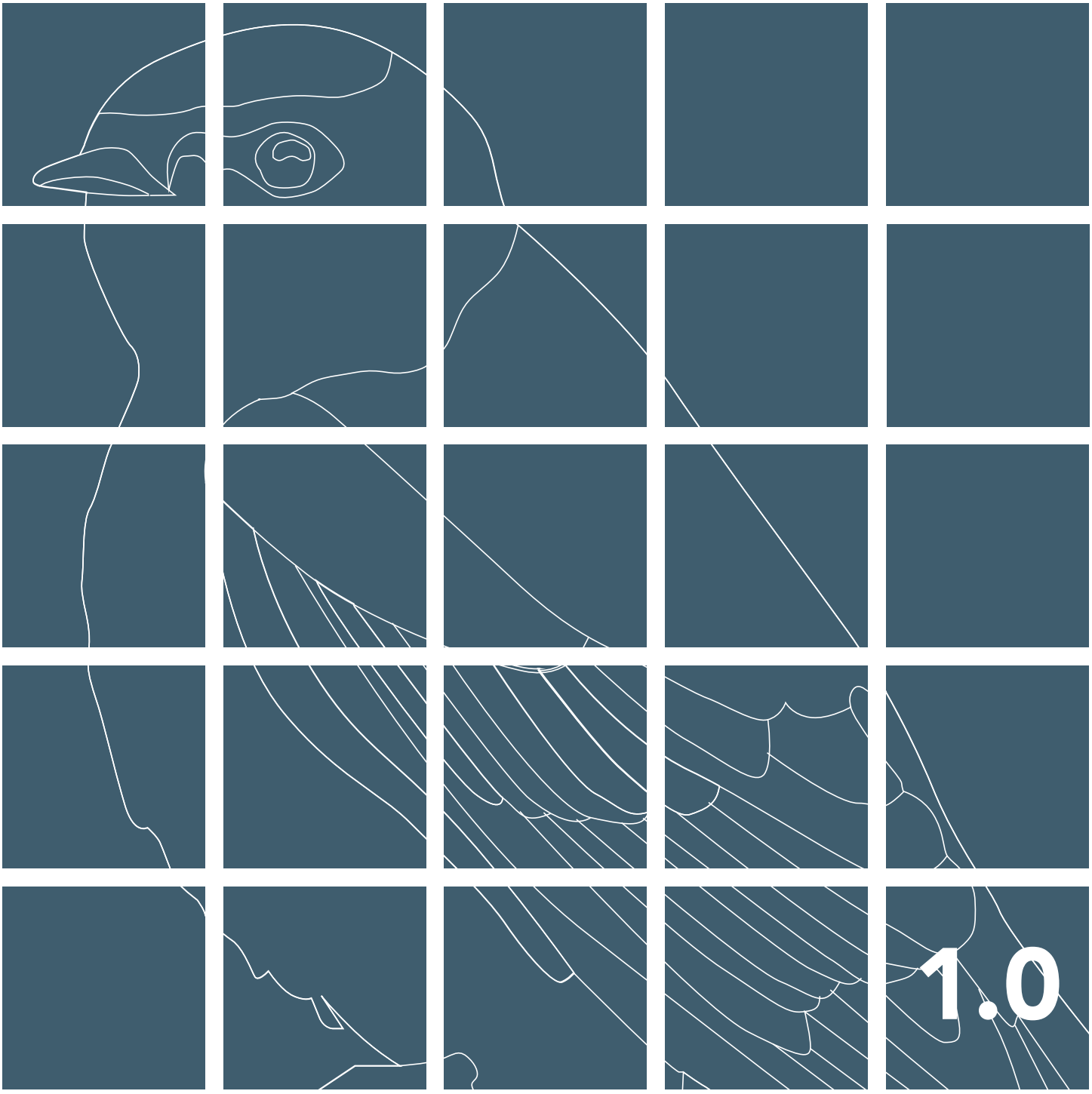
	• A duplex outlet is required within 200 mm of telephone jack • Wiring for visual alarm system in living room and minimum one bedroom • Rocker switches • Living room - one switched electrical outlet • Bedrooms - three way switched outlet at bed area and doorway, light fixture in or adjacent to closet, telephone jack • Lighting in all storage areas
Patios and Balconies	• Minimum one door 860 mm opening • Minimum one doorsill with maximum 13 mm threshold • Minimum 1520 mm turning radius on patio • Outdoor light fixture and electrical outlet provided
Windows	• Opening mechanism maximum 1168 mm above floor and is easily grasped and operated for opening and locking • Provide minimum 1800 mm horizontal windows in living room, dining room and minimum one bedroom where sills are not more than 750 mm above the floor
Amenity Rooms	• Carpet and drapes provided to absorb sound and decrease echoes
Unit Flooring	• Non slip flooring in kitchen and minimum of one bathroom • High density low level loop carpet and underlay maximum 13 mm height

SCHEDULE D TO APPENDIX 2 OF THE MINISTER'S ORDER
APPENDIX 5: DESIGN GUIDELINES FOR
CD-2: COMPREHENSIVE DISTRICT

JULY 2016

UEL BLOCK F
Design Guidelines

CONTENTS



1.0

INTRODUCTION

View West Through Wetlands

1.0 INTRODUCTION

1.1 THE MUSQUEAM NATION

Musqueam culture today is a blend of the traditional and the modern. We are not people living out of time, nor a relic of the past encapsulated in history. Like any other Nation, we are living, breathing people whose culture continues to adapt and grow; we bring forth a proud heritage as we navigate the changes to our surroundings. The values of our ancestors are still our values today. We are keepers of the river, keepers of the lands, and waters that continue to sustain us. We intend to care for our territory so that our future generations can enjoy the abundance of our predecessors. Perhaps more than ever, we value community.

The rich and dynamic culture of the Musqueam people is seen both in early history and in more recent times as Musqueam adapted to and adopted outside influences. Integrating aesthetic, practical, and essential elements of Musqueam culture into modern building design and construction should contribute to an impressive and dramatic facility that reflects the complexity and sophistication of the Musqueam people.

Musqueam people traditionally lived in harmony with their natural surroundings and all living creatures. The site should facilitate a living environment - one that acts as habitat for birds, small mammals, insects, and marine life indigenous to the region. The western red cedar is integral to both the landscape of the Musqueam people and their culture. A landscape design that includes large trees should greatly contribute to the overall aesthetic and authenticity of the site.

(Extract from *Musqueam - A Living Culture,* 2006 by Musqueam Indian Band)

1.2 MUSQUEAM LEGACY AND VALUES

Musqueam has been widely recognized nationally and provincially for their leading edge community planning and development projects. The same commitment is brought to the development of Block F. The design on Block F is to be guided by the following principles and objectives.

1. Protect and enhance open space and community connections
2. Live sustainably
3. Encourage community integration and respect
4. Provide a diversity of housing for a mixed community
5. Provide a range of amenities
6. Engage in responsible development – economically progressive and socially respectful
7. Build a community heart and neighbourhood focus for future residents of Block F and all of the UEL community

1.3 THE VISION

The vision for Block F is to create a mixed-use sustainable community that is integrated into the University Endowment Lands (UEL) and University of British Columbia Lands seamlessly. The project is intended to be a showcase of sustainable development that the Musqueam Nation can refer to that demonstrates respect for the land, the waters, and the community.

Block F will provide a variety of housing types for a wide variety of future residents. The character of the community is residential housing, village retail, and community amenities focused around a beautiful mature forest, wetlands, and greenway trail system.

The overall development will have a Contemporary West Coast look that demonstrates green building and green infrastructure in an innovative and integrated way.

UniverCity: A Mixed-use Sustainable Master Planned Community at Simon Fraser University

1.4 PLANNING PRINCIPLES

The following Planning Principles reflect the Musqueam values and their approach to community building:

- Protect and enhance open spaces and community connections to Pacific Spirit Park
- Live sustainably; Musqueam's cultural values are founded on stewardship of the natural world; we have walked the talk of sustainability for a long, long time
- Community integration and respect; encourage good relationships and strive to be good neighbours
- Provide a diversity of housing for a mixed community and a variety of housing types for a variety of needs including rental and non-market housing
- Provide a range of amenities and services within the community
- Engage in responsible development that is economically sound, environmentally progressive, and socially respectful
- Build a community heart for UEL
- Create a neighbourhood focus and a centre of activity and services for both future residents of Block F and the existing UEL community

1.5 OVERVIEW

Block F is a special place because of the site's natural features and the area that surrounds it; its history; its future uses and the contribution it will make to the larger community. The design of the architecture and landscape architecture will honour these special qualities and build upon them.

This is an urban development, but the presence of the adjacent University Endowment Lands, the surrounding Pacific Spirit Park and University Golf Course, the integration of the mature evergreen trees and a constructed wetland give it a bucolic nature. The architecture and landscape should reflect these features through the selection of good and honest materials, the creation of a human scale, the integration of people with the natural and built environment, and the design of buildings that open up to the sun and shelter from the rain.

The site plan and new CD Zoning have been developed in parallel. The plan embodies features and attributes that are important for the success of the overall development. The expectation is for designers to follow these attributes as closely as possible. Where a new approach is taken in the design, it must be clearly shown how that new approach meets or exceeds that shown in the design guidelines.

While the design guidelines are, in fact, guidelines, they will be heavily relied on by the approving authorities in assessing whether or not to approve development permit applications. The site planning and Design Guidelines have been shared with the community who will have an expectation that future applications will generally comply with these documents.

The design guidelines are intended to be a framework for future development providing sufficient direction but still allowing for some creativity in keeping with the development vision of this document.

1.6 LEGAL LIMITATION

Section 1 of these Block F Design Guidelines is a cultural and conceptual introduction to the Guidelines themselves which are found in Sections 2 though 9 of the Design Guidelines. The statement in Section 1 address the cultural past as a formative element of the general design principles that will instruct owners, developers, architects, landscape architects, engineers and builders who will design and build the future community on Block F.

Only Sections 2 through 9 provide the legally applicable form and character guidelines to be taken into account by the University Endowment Lands staff and its Manager when evaluating and exercising development approval discretion in respect of specific development proposals.

Aerial View of Existing Site

Existing Wetland on Site is the Inspiration for the Constructed Wetland

2.0

GOALS AND OBJECTIVES

LIVING IN CLOSE PROXIMITY BETWEEN NATURE AND PEOPLE

2.0 GOALS AND OBJECTIVES

2.1 DESIGN OBJECTIVES

Following from the Planning Principles, the Design Objectives guided the creation of the site plan and the resultant components of the rezoning documents.

Preservation of Natural and Existing Features

- Further preserve the mature evergreen tree forest area
- Retain/enhance the site's hydrological systems
- Maintain/reinstate the trail networks originally on site

Integrated Sustainability

- Use rainwater Best Management Practices to reduce off-site impacts
- Utilize green infrastructure throughout the development
- Include sustainable design initiatives within the public realm and private development areas
- Explore options to maintain or enhance habitat such as for song birds

Community Integration + Respect

- Provide neighbourhood amenities geared towards UEL residents of all ages and abilities
- Ensure amenities are physically accessible for all ability levels
- Explore options that provide and enhance connections with existing and planned cycling, walking and transit routes and facilities
- Ensure the scale and type of development respects the adjacent neighbours
- Use open space and greenways as guiding features in the design of the community

Housing Diversity

- Provide a variety of housing types to address a variety of needs including rental, non-market, and lock-off suites.
- Include workforce housing and include seniors with 25% adaptable units
- Consider providing larger residential units to accommodate families or existing residents looking to downsize

Responsible Development

- Locate the commercial uses to benefit the local surrounding community
- Ensure businesses support local needs
- Support a mix of land uses
- Ensure economically sound, environmentally progressive, and socially responsible
- Ensure development respects frontages on University Blvd, Toronto and Acadia Roads

Build a Community Heart

- Create a focus that becomes the heart for the wider UEL community
- Ensure access to new community services for wider UEL community
- Create a central open space/park related to the commercial and amenity areas as a gathering spot for the local community
- Provide opportunities for formal and informal gathering places

2.2 NEIGHBOURHOOD SUSTAINABILITY

In keeping with the Musqueam commitment to respecting the land, Block F will be developed to a high level of sustainability.

2.2.1 LEED®

- The project reflects a number of LEED® neighbourhood planning principles and individual buildings will be designed and certified to a LEED® Gold standard

2.2.2 Neighbourhood Patterns + Design

- Site plan design focuses on public open space and respects natural features such as the forest
  - Minimize site area dedicated to vehicular traffic in order to maximize open space and green space
  - Organize buildings and density to maximize available site area for public open space
- Site design respects and connects to surrounding neighbourhood
  - Provide a strong connection to neighbourhood school/childcare facility/Community Centre
  - Respect existing pedestrian, cycling and vehicular, networks
  - Encourage Future Transit Station at Commercial Village
- Provide two primary trail routes through the site; one north-south route and one east-west route
- Site design provides a mixed use compact community
  - Design provides a variety of housing types and opportunities for local serving businesses

Southeast False Creek Green Street

Southeast False Creek Hinge Park

Sage at the University of British Columbia

- A central commercial area within walking distance for neighbourhood residents
- Accessible and integrated open space areas meeting the residents' needs

» Site design preserves connections to Pacific Spirit Park

- Maintain on-site trail heads in close proximity to original locations and existing off-site trails
- Maintain trail routes through the community retaining broader off-site routes/connections
- Explore options for new/enhanced routes

» Site design encourages walkable streets and pedestrian network

- Create "green streets" with continuous sidewalks, treed boulevards, landscape bump-outs and a high quality pedestrian experience
- Connect to new and existing trail network

» Site Design creates an accessible open space approach to meet the diverse needs of the present and future community

SFU UniverCity Rain Garden

Rain Garden Collecting Run Off from Road and Sidewalk

2.2.3 Green Infrastructure

» Create a site wide and holistic green infrastructure rainwater management system

- Build a constructed wetland in the vicinity of the original culvert on University Boulevard to treat on-site rainwater, maintain pre-development off-site flow rates, create habitat and be a showcase gateway feature for the new community
- Create a bioswale along University Boulevard connecting the individual parcels and the roadway drainage facilities to the constructed wetland

» Rain water management will be embedded in the site design

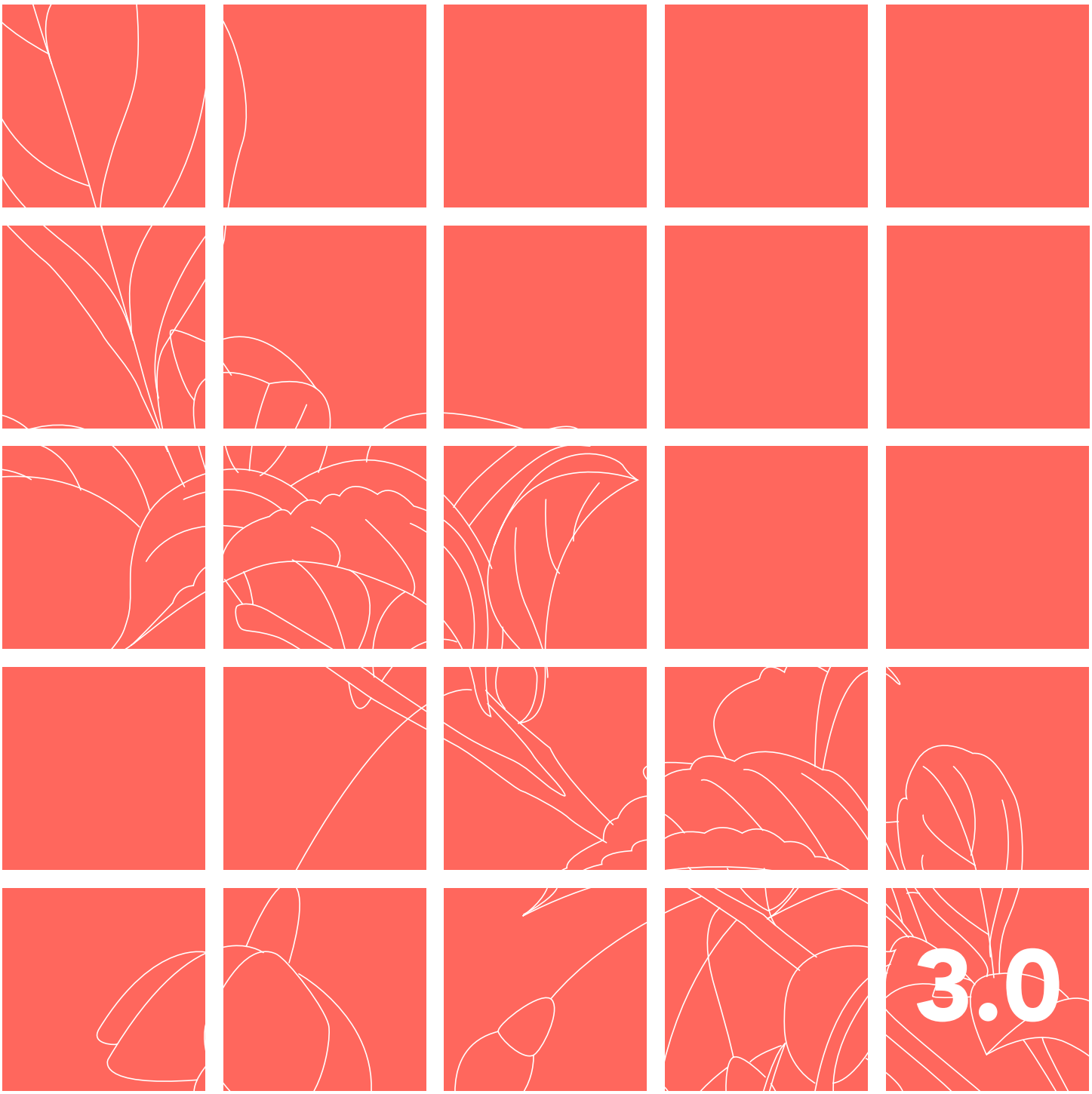
- Include rain water management facilities in the open space areas, roadway design and on development parcels where appropriate

» Maintain, to the degree possible, the mature stand of evergreen trees on the site

» Minimize impervious surfaces

- Explore the use of pervious paving within on-street parking to minimize surface runoff and sediment transport

» Maximize absorbent landscape areas in the public realm and private landscape areas



PUBLIC REALM

VIEW NORTH THROUGH VILLAGE SQUARE FROM SWORD FERN / IVA MAN TRAIL

3.0 PUBLIC REALM

3.1 PUBLIC REALM CHARACTER: WEST COAST RAIN FOREST

The project has been designed around the strong and unique character of the mature west coast rain forest that exists, and will be preserved, on the project site. Public realm features and elements will work with the character and nature of the forest in both a contemporary and natural manner. The west coast rain forest character will be most prominent in the dedicated Forest Park however; opportunities to use and create this character in the general public realm are to be explored.

3.2 PUBLIC REALM ELEMENTS

The public realm of Block F is made of several distinct typologies that together will help create the physical fabric that will bind this development together as a whole community. These areas are generally focused on the existing natural amenities of the site but also include urban areas and edges. The public realm elements are:

- The Village Heart
- Natural park space
- Urban plaza space
- Open space
- Trails and walkways
- Wetlands

Interacting with Rainwater Management Features

3.3 PARKS + OPEN SPACE DESIGN PRINCIPLES

Create a true village heart for the community by concentrating a variety of community amenities around adjacent land uses that support a wide range of inclusive activities.

The parks and open spaces shall serve the residents' need for active and passive recreational amenities, providing opportunities for social engagement, promote healthy living and encourage connection with the natural environment.

The parks and open spaces shall be safe, welcoming and functional at all times of day and throughout all seasons of the year.

The design of the public realm will be founded on sustainable best management practices and industry leading environmental design.

The spaces shall respond to a wide variety of users from the new resident population, the existing UEL residents and visitors to the area.

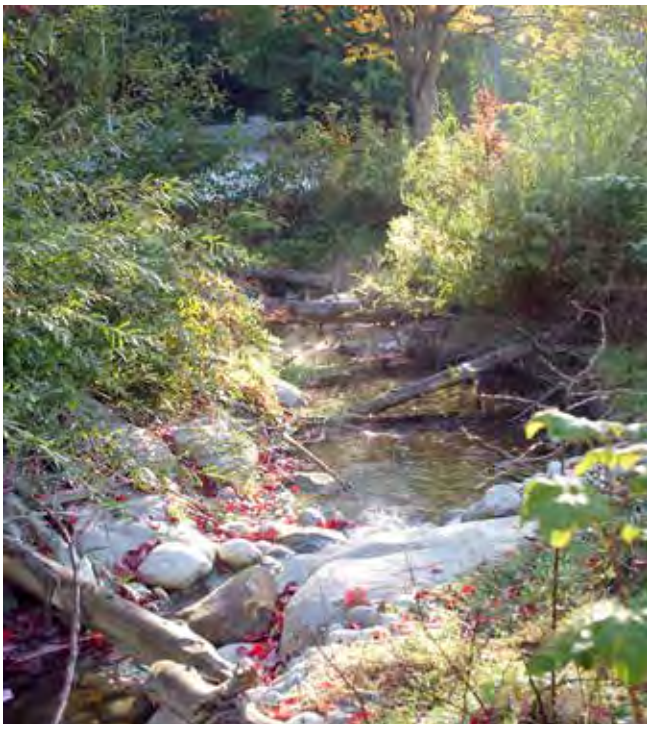
These principles can be achieved through the following objectives:

- Organize the community around the park and open space areas
- Create a variety of flexible open spaces that support active and passive recreation

LEGEND

1. Village square / public plaza
2. Community Amenity Building
3. Forest park
4. Wetland
5. Community green
6. University boulevard linear park
7. Greenways & public access routes
8. Ortona trail (off site)
9. All weather sport fields
   (available after school hours on VSB property)

- Provide a diversity of social places in varying scale, character and locations related to adjacent land uses
- Create flexible urban open space accessible to all residents of Block F and the surrounding community that can support a variety of activities
- Weave the "forest" throughout the entire development
- Focus the park and open spaces around, and integrate with, the existing natural features, topography and vegetation
- Enhance wildlife habitat and plant ecology connectivity throughout the site and to Pacific Spirit Park where possible
- Provide all-weather and all-season uses and places
- Provide opportunities for educational elements related to the site and natural ecology
- Ensure the principles of Crime Prevention Through Environmental Design (CPTED) are met



Naturalized Stream

Naturalized Landscape and Habitat Area

PUBLIC REALM OPPORTUNITIES

1 VILLAGE SQUARE / PUBLIC PLAZA

- Urban plaza character
- Sword Fern Trail crossing
- Cafe seating and retail spill out areas
- Farmer's Markets
- Community celebrations
- Public art
- Art walk

2 COMMUNITY CENTRE AND DAY CARE PARCELS

- Outdoor covered areas
- Outdoor day care area
- Informal gathering
- Young children's playground

3 FOREST PARK

- Integrated adventure / nature play areas for a variety of age groups
- Flexible open free play areas and play fields
- Multi-use trails
- Fitness circuit
- Seasonal outdoor movie night
- Public art
- Dog walking
- Trail hiking
- Outdoor community gathering space / Outdoor education
- Bird watching
- Sword Fern Trail with lighting
- Community celebration
- Open flexible green space
- Picnic areas

4 WETLAND

- Viewing platforms
- Boardwalk
- Educational signage
- Public art
- Outdoor education
- Casual cycling
- Trail hiking
- Bird watching
- Seating

5 COMMUNITY GREEN

- Flexible open space / lawn
- Outdoor tai chi or yoga space
- Outdoor frisbee or catch
- Seating around the perimeter with associated planting areas
- Lighting
- Public art
- Trail connections

6 GREENWAYS & EASEMENT

- Walking and running
- Casual cycling
- Dog walking
- Trail hiking
- Seating

7 UNIVERSITY BOULEVARD LINEAR PARK

- Multiuse trails: walking, running, cycling
- Flexible ope spaces/lawns
- Bridges over bioswale
- Birdwatching at wetland
- Seating and lighting

8 ORTONA TRAIL (OFF SITE)

- Sword Fern Trail connection to Pacific Spirit Park
- Lighted walkway
- Seating
- Cut Throat Creek viewing

3 FOREST PARK

4 WETLAND

2 COMMUNITY CENTRE AND DAY CARE PARCELS

1 VILLAGE SQUARE / PUBLIC PLAZA

5 COMMUNITY GREEN

7 UNIVERSITY BOULEVARD LINEAR PARK

3.4 VILLAGE HEART

The Village Heart shall be comprised of a series of public open spaces and amenities organized around key neighbourhood facilities that promote social interaction and create a sense of community. The Forest Park is located in the centre of the site at the stand of existing evergreen forest. It is adjacent to the Community Centre and the village retail area. Together, these places connected by walking trails and open space, framed by building edges and containing animated and programmed public spaces will create the Village Heart for this new community. The design of the Village Heart shall be inclusive of all residents, abilities, interests and ages by providing a wide range of fixed elements and flexible open spaces.

The Village Heart will be a destination for UEL residents promoting a larger sense of community beyond the limits of this project area. To do so, the Village Heart is in a visible location and will be easily accessible by multi-modal transportation including walking, cycling, public transit as well as personal vehicles. It shall include services and amenities appealing to the whole of the UEL population.

VILLAGE HEART

3.5 PARK AREAS

The park areas in Block F include the Forest Park (dedicated) and the Community Green. Together they will provide the open space for passive and active recreation in the new neighbourhood and for the broader UEL community. They will be designed around the natural amenities of the site and the west coast forest theme. The Forest Park and Community Green are located adjacent to each other but separated by Road B where an enhanced pedestrian crossing bridges this physical gap to create a sense of continuity and overall integration with the neighbourhood. All three will be connected to each other by the Block F trail system. These parks are different in size, location, and adjacent to different land uses and development forms. They will be different in character and function in order to meet the varying needs of the community.

All park and open space areas will have the full range of site furniture including dog waste bags, wayfinding and interpretive signage, pedestrian scale lighting, and play features. These areas will be capable of supporting a wide range of active and passive activities. Numerous social hubs will be created throughout the park system at places where people are most likely to congregate. The hubs will be of varying scales, ranging from whole community gatherings to quiet places to read a book or watch the birds, and the associated site furniture will be relative to the intensity of use.

3.5.1 The Forest Park

The Forest Park includes a large stand of mature, wind firm, evergreen trees in the centre of the site at the headwaters to the Salish Creek. The design will create places capable of supporting a wide range of community activities while maintaining functional ecological and habitat areas. These areas will include:

- Open forest meadow areas with turf grass mixed with groupings of retained trees at the north side of the forest stand for flexible open space play and active uses
- Forest stand with carefully cleared understory forest floor to support constructed amenities
- Forest stand with managed understory vegetation to create open site lines to allow for comfortable and safe travel though the park

UBC East Neighbourhood Park as an Example of a Naturalized Park Area with a Retained Forest Stand

- Forest stand with retained and enhanced understory vegetation to preserve the ecological services and habitat area

Wind firm trees are required at the perimeter of the retained forest stand to ensure a stable forest condition protected from storms and winds. The project arborist has identified the wind firm tree perimeter, individual and groups of high value and wind firm trees not specifically required for forest protection. These trees must be protected during adjacent parcel construction and park development.

Prior to development, Sword Fern and Fairview, crossed through the forest connecting to the Pacific Spirit Park and the community beyond. These two main trails shall be re-established and form part of the new Block F trail system. A hierarchy of trails will be provided to facilitate pedestrian and cyclist connections through and around the park in both east-west and north-south directions. Creating trail loops has been given a high priority. Paving surfaces shall reflect the level of use ranging from resilient hard surfacing for high use to crushed stone in low use areas. A variety of seating options will be provided along the trails. Lighting will be provided on the two main trails in order to facilitate safe evening use.

Distinct areas shall be created to support a range of active recreational uses for a variety of age groups including adults. The natural topography and stands of trees have

been used to identify areas of opportunity as well as constraints to re-grading and clearing. The types of activities will be reflective of the site and natural conditions so as to support the west coast rain forest theme. These activities and amenities will include:

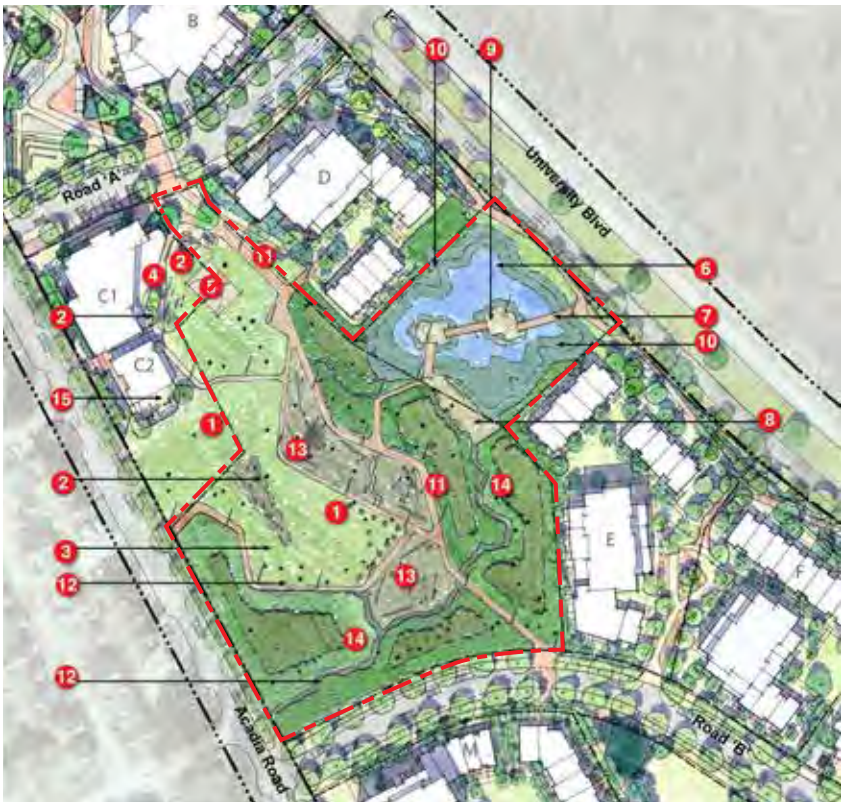
- Natural adventure play, or Nature Play, areas for children
- Natural adventure play areas for teens and adults such as slack lines and parkour
- Fitness loops utilizing natural materials to create stations
- Hard surfaced trails to assist people with mobility issues, learning to ride a bike, pushing a stroller etc.
- Open forest meadow areas for yoga and tai-chi
- Open flat turf grass area for sport activities such as playing ball, frisbee, or an informal game of soccer
- A hard court area for basketball
- Water fountain and bottle filling station

FOREST PARK

LEGEND

1. Community lawn / flexible open space / play fields
2. Playground
3. Picnic area
4. Community building outdoor amenity area + great lawn
5. Hard Court
6. Constructed wetland
7. Bridge / boardwalk
8. Observation area
9. Wetland island
10. Riparian buffer
11. Sword Fern / Iva Mann Trail
12. Nature / tertiary Trail
13. Nature play
14. Habitat and nature trail area
15. Outdoor day care play area

Tall shrub
Medium shrub
Meadow
Wetland planting
Mulch



The Forest Park will also include areas created to support passive activities some of which should be distant, or thoughtfully screened from the active uses. Again the design theme, the natural topography and stands of trees shall be used to identify areas of opportunity. These activities and amenities will include:

- Picnic areas including tables and seating
- Quiet nature trails for bird watching and experiencing the forest character
- Smaller trail loops for shorter contemplative walks
- Open flat turf grass areas for passive activities such as reading and sitting in the sun
- Quiet seating areas

The Forest Park has a significant interface with the constructed wetland, Community Centre and the Village Heart. This interface shall be designed with a seamless visual and physical connection between the areas creating a large unified open space.

With frontage on both Roads A and B as well as Acadia Road, the Forest Park connects the new neighbourhood from north to south and west to the UBC neighbourhood. The perimeter of the park shall be designed to be welcoming and inviting to passersby through controlled views into the park and signage at the Community Trail Heads. The frontage on Road A is of particular importance to emphasize the connection between the park and the plaza at the retail area. The character of these two areas shall be carefully designed to ensure a sense of continuity of the public realm and open space.

3.5.2 Community Green

The Community Green on the south side of Road B is a complement to the activities and amenities of the Forest Park. It will include perimeter trees with planting around an open lawn area offering a different scale than the Forest Park. Framed on the west and southeast by residential development parcels, a buffer between the garden gates to the individual units and the open lawn area will be

An example of Adventure/Nature Play

Seating and Tables by Open Lawn Area

Open Lawn Area with Planted Edges

Furnishing Catering to a Wide Range of Ages

provided. As an integral part of the Block F trail system, the Sword Fern trail connects with the Forest Park to the north, crosses the park on the west providing direct residential unit access to the trail network and connects with the Ortona Trail and the school to the south.

Also supporting active and passive activities for a range of ages, the park will include:

- Flexible use open lawn area
- Seating and tables
- A small walking loop connected with the overall trail network and the sidewalk on Road B

The design will be based on the west coast rain forest theme and shall ensure tree growth doesn't create extensive shade on the open lawn area. Through species selection, plant density and contiguousness the planting will provide a habitat corridor from the Forest Park to the Ortona Trail and Cut Throat Creek riparian area.

3.6 OPEN SPACE AREAS

The open space areas are to complement the defined park spaces of the community that reinforce overall connectivity through, and unity of, the new neighbourhood. In some cases they provide unique and different uses than the park spaces offer. They should be connected to each other through the Block F trail system. There are four main open space areas:

- Village Square
- University Boulevard Linear Park
- Public access easements over development parcels
- Enhanced road boulevards

3.6.1 Village Square

The Village Square is located at the north end of Block F by the retail and residential buildings of lots A and B. It will be a publicly accessible plaza for the residents of the new neighbourhood and the greater UEL community. It will support the local businesses though provision of flexible open space for spill out, café seating, and connections to the larger public realm; thereby allowing people to arrive there by foot, bicycle, or transit in addition to personal vehicle use.

The design of the plaza shall be in the character, forms, and theme of the other public realm areas to create a unified neighbourhood. Defined by hard surfacing and punctuated with large planters with "Forest Remnant" character it will be a flexible space capable of supporting a wide range of community oriented programming. The design will provide a variety of edges in order to facilitate activation of the space through daily use; and provide an unobstructed southerly exposure to allow for sun on outdoor seating and dining areas.

LEGEND

Public Access

- Dedicated Park *(Public Land)*
- Open Space *(Private Land Subject to Lease or Easement)*
- Public Access *(Private Land Subject to Lease or Easement)*

VILLAGE SQUARE

LEGEND

1. Public plaza
2. Seating and raised planters
3. Event lawn
4. Cafe seating
5. Surface parking
6. Proposed bus stop
7. Parallel street parking
8. Perpendicular parking
9. Raised cross walk
10. Enhanced width sidewalk
11. Parkade driveway

A short-term surface parking lot to support the retail uses will be provided at the intersection of Toronto and Acadia and utilized for loading access to the proposed grocery store. Its paving should reference the overall paving pattern to reduce the visual impact of the parking lot. Robust screening of the parking lot and loading area from the roadways though the combination of vegetation, walls, and signage will be provided.

Farmer's Market

Portland's Director Park Operable Water Feature

Dockside Green Development Residential Frontage on Stormwater Management System

The Village Square has an important visual and physical relationship with the Community Centre and the Forest Park to the south. This shall be reinforced though paving, planting character, and pedestrian connections. The Sword Fern Trail will connect from the park through the site to the proposed bus stop on University Boulevard. An enhanced raised pedestrian crossing on Road A will provide a pedestrian first hierarchy and strong visual connection between these spaces.

Features that will be provided in the plaza are:

- Large built in seating elements
- Rain shelter/canopy
- Amphitheatre like berm with seating facing into the plaza
- An operable water feature that when turned off provides functional hard surface space
- A paving pattern that identifies the Sword Fern Trail
- Large planters with forest character planting and trees

3.6.2 University Boulevard Linear Park

A Statutory Right of Way (SRW) for public access on the University Boulevard frontage will increase the width of the available space for a new multi use trail and allow for the creation of a robust west coast rain forest themed park between the street and the fronting townhouse residential units. Transitioning from a highly naturalized character at the edge of the Pacific Spirit Park on the south, to a more refined character at the Village Square and retail area to the north, the park will welcome people to this new development and be a gateway to the UEL. The adjacent lots located between Road A and Road B will all have fronting townhouse units with private patios and gated entries to the front doors accessible from the trails.

A bioswale with several naturalized pond/wetlands collecting water from development sites, and both roads A and B, will be a defining feature of the corridor. Meandering from the north and south towards the constructed wetland it will convey significant volumes of water creating animation and connections to the natural systems of the environment. Providing both visual and ecosystem services the bioswale will reinforce the connection between water and the site as the headwaters to the Salish and Cut Throat Creeks. Naturalized water features at key locations will be provided to emphasize this design theme and create additional visual interest. They shall be designed with naturalized forms, include native planting and have connections with the bioswale system.

A hierarchy of trails will be provided to create a varied experience for pedestrians and cyclists, and alternate routes to the adjacent residences. The primary trail will provide a direct route along the street and link to adjacent east-west trails. The secondary trails shall branch off to provide discrete walkways to adjacent residential units where the meandering primary trail is closer to the curb line.

The design will seek opportunities for the trails to cross over the bioswale at points through the use of bridges to provide visual and physical connections to the water.

The planting design shall reflect a west coast forest character and be an extension of existing forest of the site and Pacific Spirit Park. Existing street trees will be retained and protected. A mix of deciduous and evergreen trees will be placed in a naturalized layout and avoid regular spacing. A low planted boulevard shall be created between the curb and main trail to provide a visual and physical buffer between traffic and pedestrians on the trails. Pockets of lawn area will be provided where sunny exposures can be achieved as areas for active play and activity by the adjacent residents and park users.

Social hubs will be created at primary intersections of the trails, public access points from adjacent development parcels, and at the constructed wetland and in many other locations. The full range of site furniture including pedestrian scale lighting, a variety of benches, picnic tables, and both recycling and waste receptacles will be provided. Bike racks will be located adjacent to public open space areas. Similar to the road design, social hubs will be created in areas of trail intersection, adjacent to open area and at road intersections. Wayfinding and interpretive signage will be provided to orient people to the Block F amenities, as well as Pacific Spirit Park beyond. As a result of the length of the linear park there will be many locations of benches and other amenities.

Zoom In Plans of University Boulevard Linear Park

3.6.3 Public Access Easements

To improve overall walkability and neighbourhood permeability, public access easements will be provided on several parcels including A, B, D, E, F, G, H, and I as well as the Wetlands and the Community Green. These connections will be designed in the character and finishes of the Block F trail system, in order to convey visual unity and the clear sense of public access. This will include paving treatments matching the trail widths, forms and materiality, moderate planting, and site furniture where applicable.

3.6.4 Enhanced Road Boulevards

The boulevards within the road rights-of-way for Road A and B will be enhanced in several ways. These shall include:

- A widened sidewalk on one side of each street. Refer to the plans and sections in Chapter 4 for further information
- Landscape bump outs with naturalized plantings at crossings, driveways, and ends of on-street parking bays
- Landscape bump outs as rain gardens where grading permits. Refer to Section 7.16 for further information.
- Significant street tree plantings
- On-street parking laybys with permeable pavers

These areas will include widened areas of paving with benches, lighting, and bike parking associated with areas of planting. The purpose of the social hubs is to create opportunities for neighbours to meet and help grow the sense of their community. In other areas recycling and waste receptacles will be provided to help keep the neighbourhood clean. Pedestrian scale lighting will be provided for the sidewalk and social hubs illumination separately from the street lighting.

City of Tacoma's Rain Garden Bump Out

Permeable Pavers

Southeast False Creek Green Street

3.7 TRAILS + WALKWAYS

The proposed Block F trail system will provide a variety of trails and experiences linking the new neighbourhood internally and to the surrounding areas. Of particular importance is maintaining the trail connections with Pacific Spirit Park that existed prior to development. The trails will cross the site in urban areas, through park and open space areas, the mature forest, over wetlands, and development parcels. In all cases they should reflect the character of the setting and the over arching design theme. The trails will serve the wider resident population and provide safe pedestrian and cyclist connections through the new community.

The trail system will have a variety of trails that support a variety of uses and experiences. The primary trails will include Sword Fern and Fairview, routing through the neighbourhood in north-south and east-west directions, respectively, and connect to their original trail heads. The secondary trails shall branch off of the two main routes and connect to the various areas of the neighbourhood, including development parcels and areas of the parks and open space system. A tertiary level of trails shall be provided in the Forest Park for a closer connection to the habitat areas.

All trails shall be universally accessible with adequate path width and avoid the use of stairs. This will allow trail access for all age groups and mobility users.

Measures will be taken to ensure that protected trees are not damaged in the construction of adjacent walkways and trails. Work in the area will be monitored by an arborist and landscape architect through the following measures:

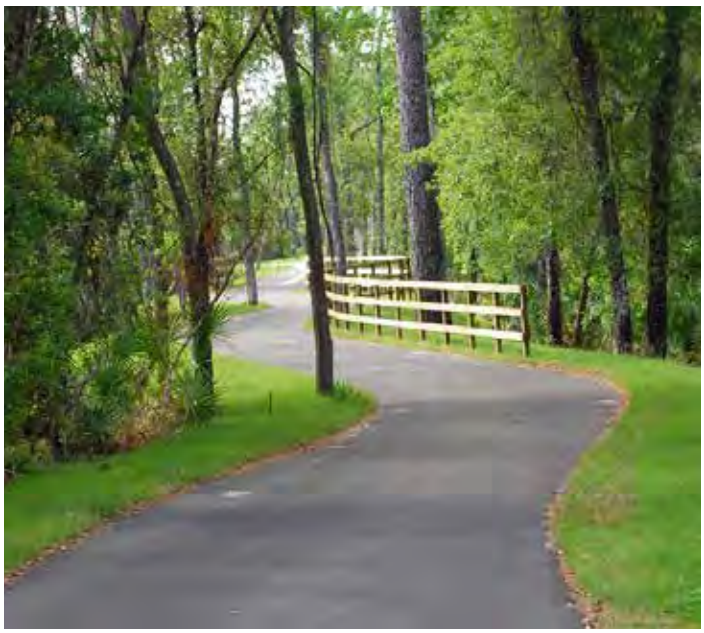
- Any work in critical root zone to be as per arborist's directions and under supervision
- No excavation zone
- Hoarding specifications

Any work done to construct the trails needs to refer to the Arborist Report, see Section 3.14. The trail system is largely located within the Forest Park area and therefore frequently within the critical root zone of protected trees to be retained. Work within this area needs to conform to the recommendations and comments in the Arborist Report prepared by Diamond Head Consulting, dated April 8, 2015.

SFU UniverCity Urban Trail with Townhouse Frontage

Primary Trail Through Forest Park

Nature Walk Through Forest Character Area



Trail Through UBC South Campus Parks

3.7.1 Primary Trails

The primary trail requirements are:

- Have a unified character through the whole length of the trail
- Should be less than 5% slope and universally accessible
- Must be lit with pedestrian scale lighting providing minimum light levels for safety as well as for character and experience
- The trail will vary in width with a minimum width of 2.5m up to 4.0m
- Be paved with resilient surfacing along its total length ensuring ease of use for all mobility levels
- Will include benches, recycling and waste receptacles, wayfinding signage, bike racks, water fountains near active play areas, and interpretive material at strategic points (e.g. trail heads on site and site furniture nodes). See trails plan
- Bike parking at community amenity destinations
- Should have a planted landscape treatment that ensures a unity of character

3.7.1.1 Sword Fern Trail

The Sword Fern Trail will start at its original trail-head at the intersection of Toronto Road and University Boulevard and is the most important trail of the community. Its route, generally a north to south direction, will link all of the important community amenities: the new bus stop on University Boulevard (west of Road A), the Village Square and retail services, the Community Centre, Forest Park, and the Community Green. It will end at the Ortona Trail trail-head and the Norma Rose Point School. Moving through urban and natural conditions the trail will be a unique experience for residents and visitors of Pacific Spirit Park, contributing to the identity of the new neighbourhood.

Where the Sword Fern trail crosses the Village Square, it will be protected through the public access easement and have a more urban expression reflective of the overarching Square design. Its route will be identified through unique paving reflective of the other portions of the trail. The trail will be expressed through paving patterns in the Village Square. It will return to a more typical trail expression in the Forest Park.

Forest Trail Adjacent to Residential Buildings

Forest Trail with Elevated Boardwalk

Primary Trail Adjacent to Residential Buildings

3.7.1.2 Fairview Trail

The Fairview Trail aligns generally in an east to west direction. Its eastern trail-head is in the University Boulevard Linear Park and links the wetland, Forest Park, and the UBC community to the west on Acadia Road. It intersects with Sword Fern in the middle of the park. The experience will be of a natural landscape, as the trail moves through the wetland, over the bridges and islands, and in the mature forest stand. In the wetland area opportunities for overlook and small gatherings shall be provided to view the wetland habitat. It is envisioned that the future development of the Acadia lands (UBC) to the west will provide a trail extension directly across from the Acadia trail-head.

This trail has some additional requirements over and above the typical primary trail standard:

- Where the trail crosses the constructed wetlands an elevated boardwalk and bridge system with guardrails will be provided
- The elevated boardwalk and bridge system should utilize built in lighting fixtures rather than pole mounted pedestrian lights to minimize the impact on the wetland habitat

3.7.1.3 University Boulevard Trail (primary)

The existing (pre-development) University Boulevard sidewalk was located at a uniform distance back of the curb and offered a typical sidewalk experience with pedestrians close to the traffic on the street and no vegetation buffer. The proposed University Boulevard Trail will meander through the new evergreen and deciduous trees in the linear park, providing a greater separation from traffic, an improved pedestrian experience, and the opportunity for cyclists to come off of the street and into a protected path system. The northern portion of this trail will include the Sword Fern Trail; it will connect with the Fairview Trail at the constructed wetland; and it will return to the typical sidewalk condition at the church site on the south. This trail will also intersect in several locations with the secondary University Boulevard Trails that connect with the adjacent residences.

This trail has some additional requirements over and above the typical primary trail standard:

- Where the trail crosses over the bioswale a bridge structure will be provided
- The trail should vary in width with a minimum width of 3.5m up to 5.0m

3.7.1.4 Ortona Trail

The Ortona Trail will be located within the closed portion of the Ortona Road right-of-way. Its route, in a generally east-west direction, will connect on the east to the University Boulevard trail, Cleveland and Heron trails at Pacific Spirit Park, the proposed public access route over Lots H and I, and on the west to Sword Fern Trail, Norma Rose Point Elementary School, and Ortona Road. It will parallel and cross over the headwaters of Cut Throat Creek offering a close experience with the riparian environment. Fencing to protect the sensitive natural environment and signage to educate trail users of the unique headwater location will be provided. Signage shall be designed in conjunction with the Pacific Spirit Park Society. Site furniture elements and lighting will be provided along the Block F property frontage.

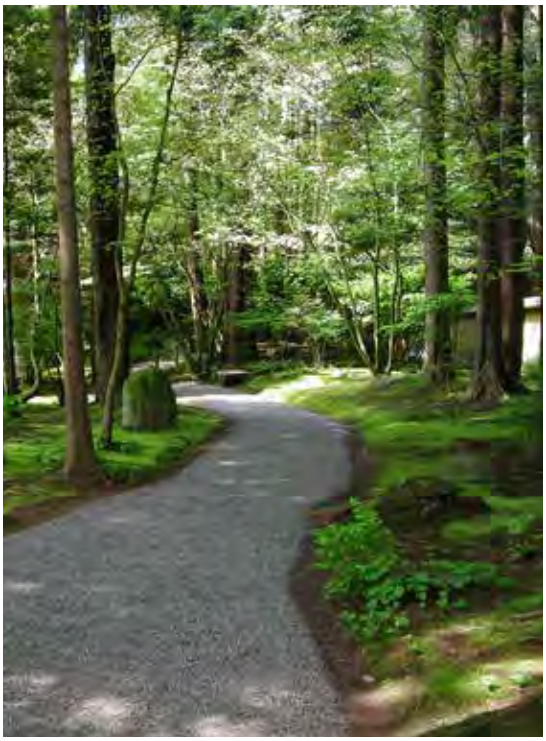
3.7.2 Secondary Trails

The secondary trail requirements are:

- Have a unified character through the whole length of the trail
- Should be less than 5% slope and universally accessible
- May be lit with pedestrian scale lighting providing minimum light levels for safety, as well as for character and experience if connecting important community facilities; the final plan will indicate lighting
- The trail should vary in width with a minimum width of 1.5m to 2.5m
- Be surfaced with an identical resilient surfacing along its total length ensuring unity of character and ease of use for all mobility levels
- Will include benches, recycling and waste receptacles, wayfinding signage, bike racks, and interpretive material at strategic points
- Bike parking at community amenity destinations
- Will have a planted landscape treatment that ensures a unity of character depending on location

3.7.2.1 University Boulevard Trail (secondary)

The secondary trails in the University Boulevard Linear Park will primarily serve the adjacent residences, but will also provide an alternate route and experience. They will branch off of and loop back to the primary trail in locations where the primary trail is closer to the curb line and distant from the adjacent residences.



Secondary Trail Through Forest Park

SFU UniverCity Urban Trail Adjacent to Residential Buildings

These trails have some additional requirements over and above the typical secondary trails:

- Where the trail crosses over the bioswale a bridge structure will be provided
- The bridge system should utilize built in lighting fixtures rather than pole mounted pedestrian lights
- Will be lit with pedestrian scale lighting providing minimum light levels for safety, as well as for character where there are connections to adjacent residences

3.7.2.2 Secondary Forest Park + Community Green Trails

The secondary trails in the Forest Park and the Community Green (refer to Trail Hierarchy Diagram 3.7.5 for locations) should provide intermediate connections to various amenities and roadway sidewalks to expand the network of pedestrian and cycling routes improving the walkability of the community.

3.7.2.3 Public Rights of Ways over Development Parcels

The trails through public rights of ways over development parcels should match the character and theme of the public realm trails with regards to site furniture and lighting. They should feel public and not private in character in order to convey the sense of public access and remain open and unfenced. Connections to main lobbies and individual front doors of adjacent residential units are strongly encouraged. The trails will connect across the development parcel, linking sidewalks and trails on opposite sides of the parcel and shortening pedestrian travel distances through the neighbourhood. The surface paving shall be unit pavers to facilitate long term building envelope repairs.

3.7.3 Tertiary Trails

The only location of the tertiary trails is in the Forest Park. Intended for low use, these trails shall be nature trails through the enhanced and protected understory areas. The tertiary trail requirements are:

Tertiary Trail Through Protected Understory

- Be of a highly naturalized character
- Can include varied slopes based on the location relative to trees and existing grades that may not be adjusted
- Should not be lit
- The trail shall vary in width with a minimum width of 900mm to 1.2m
- Be surfaced with an aggregate (crushed rock) including an organic binder
- Shall not include any site furniture
- Will not have an associated planted landscape treatment due to its location within the retained forest area
- Utilized boardwalk trail over topography and sensitive areas

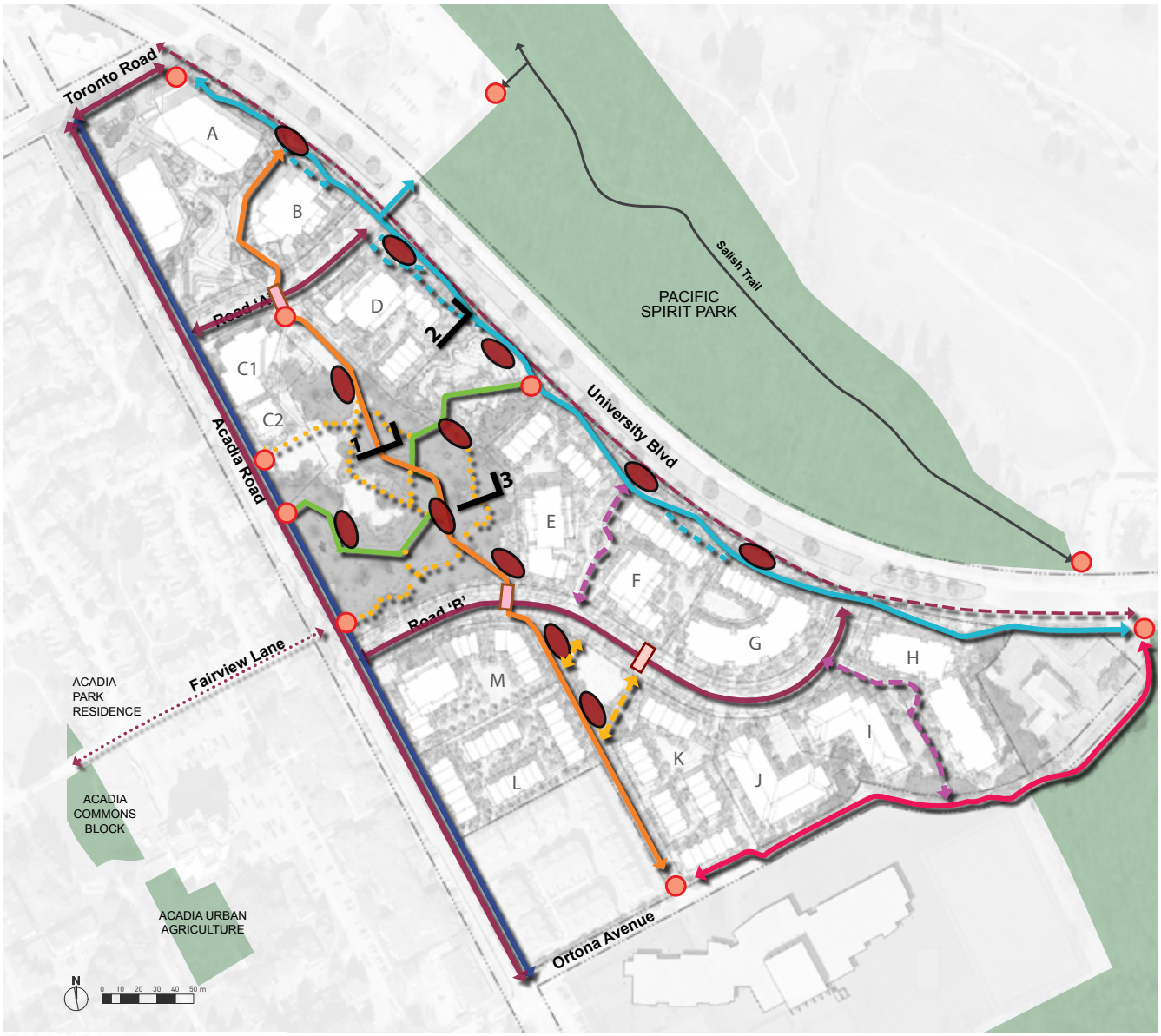
3.7.4 Trail Heads

Trail heads shall be strategically placed and designed in conjunction with the Pacific Spirit Park Society. Key locations will include intersections with on-site trails as well as the pre-development locations at the perimeter of the site. Trail heads may include the following based on its location and adjacent public amenity areas: wayfinding signage, recycling and waste receptacles, map holders, benches, interpretation materials, and other trail amenities such as dog waste bag posts.

Harbour Green Park, Coal Harbour, Wide Walkway Through Planted Area

3.7.5 Trail Hierarchy

TRAIL HIERARCHY



LEGEND

Primary Trails
- Sword Fern Trail
- Fairview Trail
- University Boulevard Trail
- Ortona Trail
- Acadia Multiuse Trail

Secondary Trails
- University Boulevard Trail (Secondary)
- Public right of way over development parcel
- On site trail

Tertiary Trails
- Tertiary nature trail

- On street shared bicycle route (Toronto Rd, Acadia Rd, Road A & B)
- On street designated bicycle route (University Blvd)
- Informal bicycle route
- Raised crosswalk
- Trail heads
- Site furniture node

PEDESTRIAN BRIDGE CROSSING

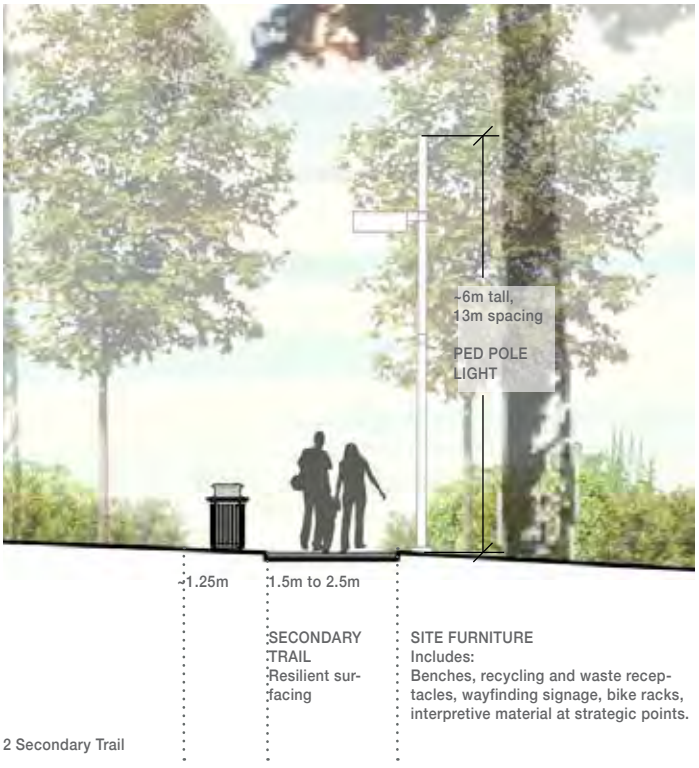
Pedestrian Bridge Crossings

LEGEND

- Trail System
- Tertiary nature trail
- On Street Shared Bicycle Route
- Raised crosswalk
- Bridge

3.7.6 Trail Sections by Type

1 Primary Trail: Forest Condition



2 Secondary Trail

3 Tertiary Trail

For detailed additional sections, refer to Chapter 4.3

3.8 WETLANDS

In the pre-development conditions the project site was the headwaters to two creeks; the Salish to the northeast and Cut Throat to the south. Most water flowed to the east over the natural site topography to a swale on the south side of University Boulevard, created by the road construction, and directed water to a lowlands portion of the site. There, a culvert drained to the northeast and eventually to Burrard Inlet. Predominantly the result of an undersized culvert and beaver activity, the natural lowland area of the site became saturated and held water for parts of the year effectively becoming a wetland. The proposed plan intends to maintain and enhance the original watershed systems, match pre-development run-off rates, and manage water quality on-site prior to release to the Salish and Cut Throat Creeks. The southern portion of the site drains towards the east and eventually becomes Cut Throat Creek.

There are three main rainwater management facility typologies. All are tied to existing drainage patterns, are intended to manage collected rainwater and are connected through surface flow to off-site creeks. As such they require a high degree of ecological integration through materiality and planting. The recommended plant list for the proposed native riparian restoration areas are presented in Appendix A. The typologies are:

- Constructed wetland
- Bioswales
- Rain gardens

The rainwater management facility requirements are:

- West coast rain forest character
- Native wetland planting with emergent and upper riparian planting including appropriate trees
- Naturalized organic forms, including islands, reflective of similar natural systems
- Include natural rock of varying sizes and woody material, such as decomposing stumps and logs
- Be visually integrated into the adjacent development parcels
- Be physically and visually integrated into public realm areas to celebrate and raise awareness of rainwater management and the site's deep connection to the local area hydrological system
- Shall not be fenced off or otherwise restricted to wildlife access

Block F, Existing Wetland

3.8.1 Constructed Wetland

The constructed wetland will be a visual center point to the community along University Boulevard. It is a re-establishment of the emerging wetland existing on site prior to development. With improved ecological function and ability to retain and detain on-site rainwater runoff, it will have a naturalized character with a broad diversity of native wetland plants. The constructed wetland will have important interfaces with the University Boulevard Linear Park, the Forest Park, and the adjacent development parcels. The natural character of the wetland shall extend into these areas to create a seamless natural landscape from the riparian area to the upper and non-riparian areas. A split rail fence will be located just above the high water line in order to prevent human and dog access to the sensitive ecosystem, but not inhibit wildlife access into the water. Open viewing areas to the north and south of the wetland will be provided to promote engagement with the wetland, wildlife viewing, and outdoor education. The east area shall be lawn and similar in character to the University Boulevard Linear Park, while the west one shall be an aggregate (crushed stone) "beach" integrated into the Forest Park character. These viewing areas will be connected to the new trail system.

The constructed wetland will include a proposed average riparian setback width of 10m to protect aquatic habitat, as required under the Department of Fisheries and Oceans' Land Development Guidelines. The following measures are to be met for the setback:

- Mature trees in the riparian zone are required to provide an ongoing source of large organic debris that provides instream stability, and cover for amphibians. The tree/shrub riparian setback zone proposed will provide adequate stability. Cover and habitat for juvenile fish are not relevant as a result of there being no fish present at the site.
- The vegetation of the riparian corridor will be habitat for terrestrial insects that, in turn, are a major food source for rearing juvenile fish downstream off site. Leaves and other organic matter falling from proposed native riparian vegetation is to be planted at the site providing an important food source for aquatic insects.
- Summer water temperatures cannot exceed approximately 20 degrees celsius without causing stress and eventually mortality in downstream salmonids. Riparian shrubs/trees will be included to provide adequate shade.
- There will be no direct runoff of dirty stormwater from future site development to the constructed wetland through the use of vegetated riparian buffer planting.

The constructed wetland will include a pond liner on a portion of the wetland. This liner will ensure that there should always be some water in a portion of the wetland area. The constructed wetland plan with proposed riparian setbacks are shown on the following page.

Hinge Park Creekside Wetland

New York Hunter's Point Bioswale

Curbside Raingardens

3.8.2 University Boulevard Bioswale

The University Boulevard bioswale will flow from the north by the Village Square and the south by Lot H towards the constructed wetland. Because of the high visibility of this feature, careful attention to its visual character will be important. It will meander through the University Boulevard Linear Park and be crossed by the primary and secondary trails. Its character shall be reflective of a natural intermittent stream, including a range of exposed rocks and woody debris and native riparian plants. Natural materials should be used to construct check dams and weirs. The bioswale will be linked to the naturalized water feature ponds/wetlands to create an enhanced visual amenity at gateway locations.

3.8.3 Raingardens

Raingardens will be located in many locations throughout the neighbourhood to manage point source rainwater collection and treatment. Most commonly located at landscape bump outs in the street rights-of-way, the design will take into account roadway pollution and sediment while utilizing native riparian plants for treatment and creating a natural aesthetic. Rocks and woody material will be used to form the swale. Future phases of work shall utilize the first built examples of work to ensure each street has a unified character.

PROPOSED RIPARIAN SETBACKS

LEGEND

Area 1890 sq. m.
Perimeter 182 m

= Average Setback 10.4m

The second common location of raingardens is on lots H, I and J. Here they will collect and treat water prior to release into the Cut Throat Creek system. The design of these raingardens shall express the west coast rain forest theme and extend the natural character and habitat areas into the development parcels. The planting design will weave the development parcel planting into the riparian plants of the raingarden. Careful consideration of the physical constraints due to the proximity to underground parking will ensure the success of these features. Direct as much as feasibly possible of the roof water and site drainage into this system.

3.9 SIGNAGE + WAYFINDING

Block F is closely integrated with the trails of the Pacific Spirit Park (PSP) and as such, wayfinding signage at the trail heads, trail intersections, and in the park and open space shall include PSP park signage including tail name and statistics. At select areas Block F scale maps will be provided. The mapping will include key public amenities such as the Village Square, Community Centre, Forest Park, constructed wetland, Community Green, Norma Rose Point Elementary School, and public transit routes. A notice community board element will be included at the Village Square and Community Green. It is envisioned that the Community Association would manage the community board. The signs shall be designed in keeping with the overall design theme of the west coast rainforest.

Opportunities to include Musqueam, ecological and sustainability content shall be included wherever possible.

3.10 LANDSCAPE MATERIALS

A select list of materials will be developed for use in all of the public realm areas in order to create unity among these spaces and a sense of the Block F neighbourhood. These materials shall fit into the West Coast Rainforest/ Natural design theme. Durable, sustainable, and locally sourced materials shall be the preferred choices.

Various landscape materials will be used to create a sense of unity within the public realm, applying the same materials throughout the trail networks and public open spaces. For instance, open areas of lawn will define flexible open spaces, sport courts will be identified through asphalt surfacing and line paving, trail networks will have paving treatments based on the level of trail definition, and a family of site furnishings will be used across the site to provide a unique and cohesive walking experience. Robust materials will be used in more prominent public

Cast-in-place concrete and permeable unit pavers

Unit pavers and aggregate

Chugach National Forest Boardwalk, Alaska

Village Square Formal and Informal Seating

Bike Parking in Parks and Open Spaces

Bollards for Pedestrian Paths

realm locations, such as the Village Heart, retail services, and the Community Centre surroundings to announce the significance of these places within the community.

Permeable paving will be used where drainage to adjacent soft landscape cannot be achieved. Metalwork where it is used, its assembly methods and end of functional lifecycle finishing should allow for deconstruction and recycling/upcycling.

A hierarchy of varying scales will be used to define areas of prominence within the community. The material choices will be appropriate for type of use and level use, as well as visual importance within the community.

Higher levels of finish will be provided in key areas such as the Village Heart and community centre. Typical materials in these areas will include:

- Sand blasted cast-in-place concrete
- Pre-cast concrete unit pavers with frames and more elaborate paving patterns reflective of the design intent and metaphor
- Decorative stone inlays will also be considered to define entryways and other points of interest
- Wood decking for boardwalks. Sustainable composite wood
- Heavy timber frames for outdoor structures
- Woody material such as logs, preferably sourced from site, for use in soft landscape areas
- De-barked logs
- Cast-in-place concrete walls with pre-cast or stone caps
- Stone-faced retaining walls
- Locally appropriate stone and boulders
- Custom metal fencing and barriers
- Permeable unit pavers

Other areas will utilize more cost effective materials primarily due to increased areas of coverage requirements and varying levels of durability and activity:

- Broom finished cast-in-place concrete
- Pre-cast concrete unit pavers with simple patterns
- Aggregate paving with organic binder (crushed granite etc)
- Wood mulch (within the Forest Park area)
- Modular concrete block walls
- Wood cribbing
- Woody material such as logs, preferably sourced from site, for use in soft landscape areas
- Logs
- Locally appropriate stone and boulders
- Prefabricated metal fencing and barriers
- Permeable unit pavers
- Asphalt

3.11 SITE FURNISHINGS

A kit of site furnishings will be selected at time of development permit and will ensure that it is in keeping with the overall design theme and will be applied throughout the Block F public realm. Preference will be given to products that are manufactured from sustainably sourced and/or with recycled content, are recyclable/upcyclable at the end of their functional lifecycle, and are durable in the west coast environment. This kit of site furniture shall include:

- A variety of seating options including formal and informal elements
- Bike racks (single and multiple)
- Bollards (light and security)
- Recycling and waste containers
- Dog waste bags

Detailed area development at time of development permit will determine which of the kit of parts from the site furniture selection will be provided in each location. Proximity to amenities, open space, and building programing will inform the necessary site furniture.

Stone wall with cap

Sawcut concrete

Stone paving by aggregate paving

Stone paving

BENCH TYPE 1

Description: Durable wood and metal. Bench with back, with option for arms to support a wide variety of ages and mobility levels
Location: Public open spaces of the Village Heart and Community Green
Colour: Black

BENCH TYPE 2

Description: Durable wood with metal. Playful bench within Forest Park meant to support larger groups with a variety of seating arrangement options. Curves are able to respond to existing tree locations and path directions.
Location: Forest Park and University Boulevard Linear Park
Colour: Black

TABLE TYPE 1

Description: Durable wood with metal. Picnic table with extension for universal access. Fixed locations to prevent theft and relocation.
Location: Public open spaces of the Village Heart, Community Green, Forest Park
Colour: Black

WASTE RECEPTACLE TYPE 1

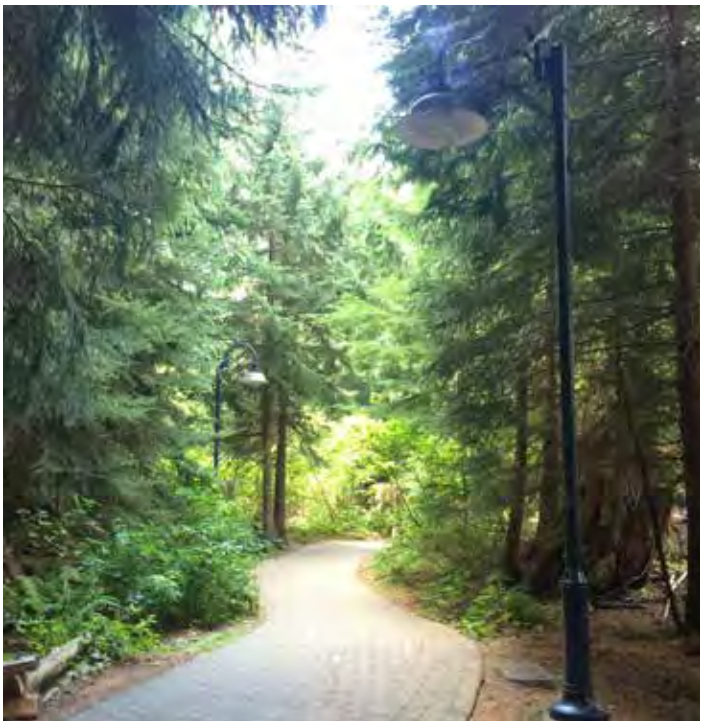
Description: Durable wood with metal. Fits within family of site furniture. Options for waste and recycling and rainproof cover.
Location: Public open spaces of the Village Heart
Colour: Black

WASTE RECEPTACLE TYPE 2

Description: Metal. Fits within family of site furniture. Options for waste and recycling and rainproof cover.
Uses: Public open spaces of the Forest Park, University Blvd. Linear Park, and Village Green
Colour: Gun metal grey and black

BIKE RACK TYPE 1

Description: Metal.
Uses: All areas. Functional 2 bike stall rack. Flexible spacing facilitates location throughout the community rather than multi-bike racks.
Colour: Gun metal grey



Pedestrian Lighting Along Forest Trail

FOREST PARK TRAIL LIGHTING

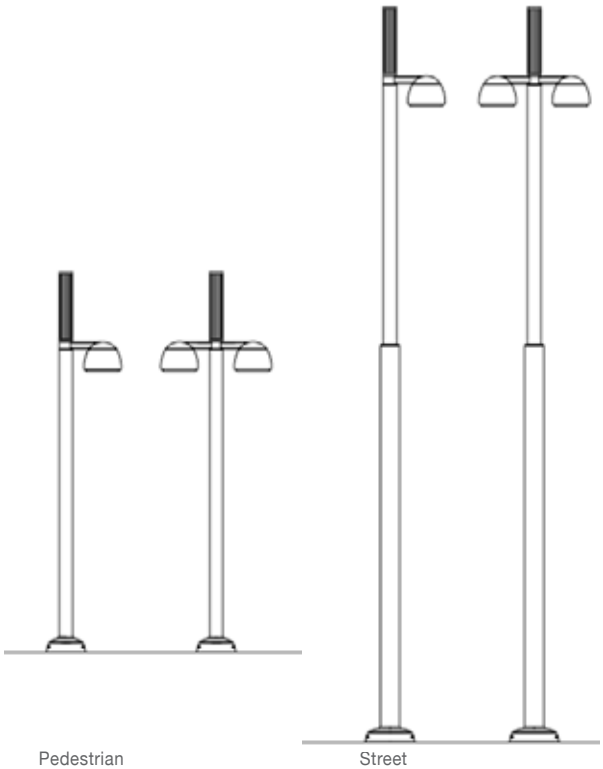
Description: Column style luminaire
Use: The light column is selected to recede from view during the day and blend with the forest. The light acts as a beacon through the forest. Without armatures or independent fixture, there is reduced opportunity for bird perching, reducing maintenance.
Size: Based on use and spacing
Luminaire: LED/Dark Sky Compliant
Colour: Black

PLACES OF INTEREST

Description: Oval style luminaire with short armature and light tube
Use: Placed as beacon for trail heads, important special nodes, amenity areas or places of interest
Size: Based on use and spacing
Luminaire: LED/Dark Sky Compliant
Colour: Black

PEDESTRIAN AND STREET

Description: Single and double fixture poles with oval style luminaire on short armature
Uses: For roadway, pedestrian and residential pole lighting, creating a strong unity within the community
Size: based on use and spacing
Luminaire: LED/Dark Sky Compliant
Colour: Black



Pedestrian Street

3.12 LIGHTING

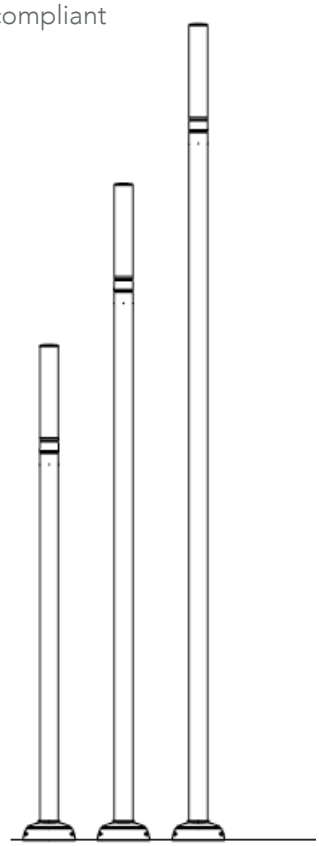
As with the other public realm elements, the lighting fixtures will create a unity throughout the Block F neighbourhood. The light fixtures selected will be unified across Block F through a family of parts, identical in colour and finish with uniform lighting temperatures and a similar character style.

There will be a distinct hierarchy of lighting ranging from street lighting to neighbourhood scale pedestrian lighting and lower level pedestrian lighting in smaller scale spaces, such as around the Community Centre and Day Care. A unique lighting concept will be provided throughout the Forest Park, ensuring a safe and comfortable, well lit route through the park. All key pedestrian routes will be lit in order to ensure walkability, neighbourhood permeability, and safety at all times of the day and seasons of the year.

Refer to the following lighting diagram for locations and hierarchy.

Lighting requirements are:

- LED high efficiency lights
- High cut off rates to reduce light trespass
- Dark sky compliant



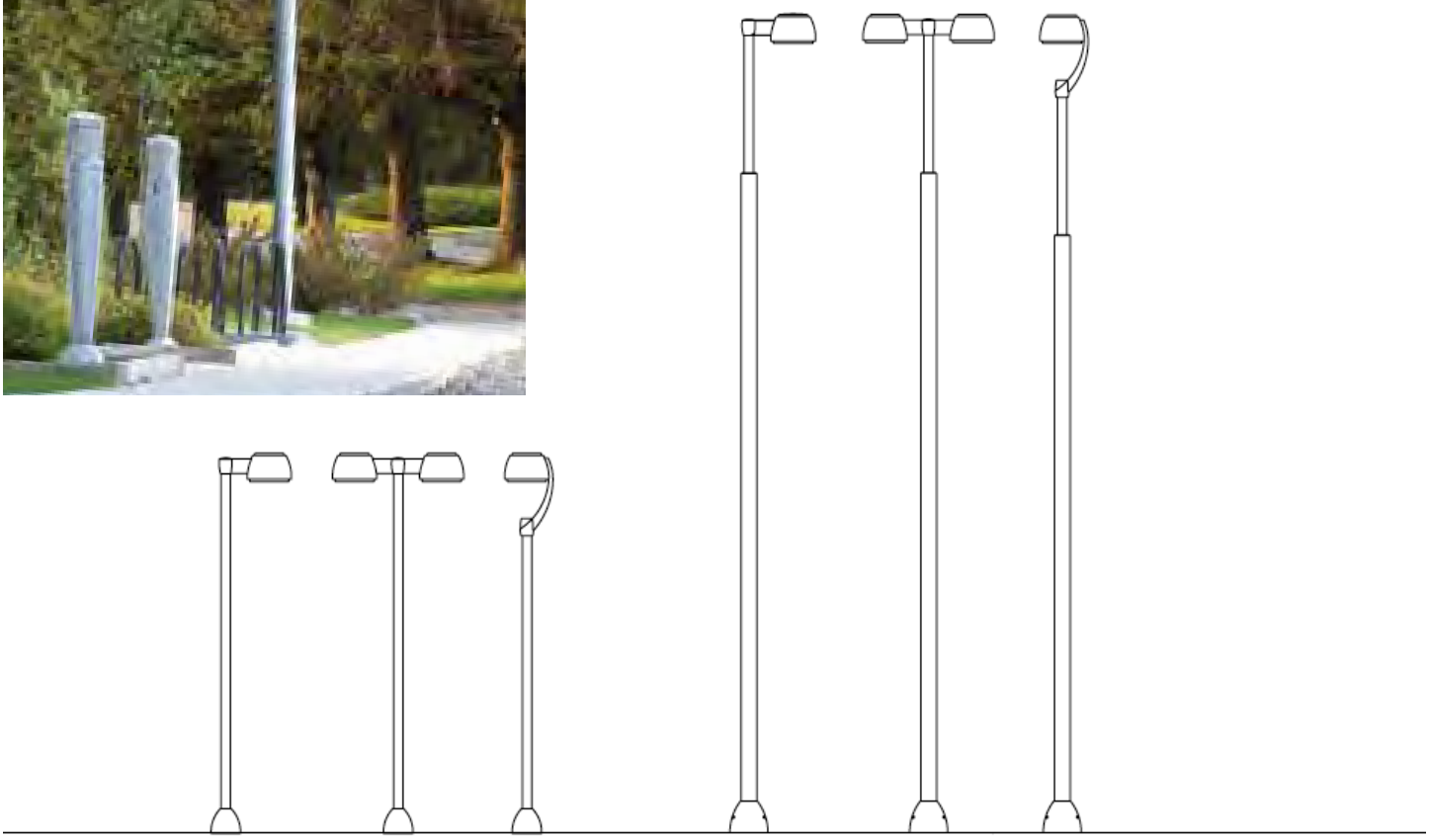
3.13 PLANTING

The planting in the public realm will be a critical element in achieving the design intent of a native West Coast landscape. The soft landscape areas will predominantly be large informal groups with naturalistic arrangements. Flowering plants will be used to compliment the typically evergreen native plant palette. Understory vegetation within the Forest Park will be preserved and enhanced as per the diagrams provided where there is no impact to public safety. The recommended plant list for the proposed native riparian restoration areas are presented in Appendix A.

The use of native trees, shrubs, and perennials shall be maximized. The tree plantings will be focused on the use of evergreens to be in character with and expand the existing forest stand; however, deciduous trees will also be used in the streetscape and other areas of the site where appropriate.

Plantings shall be appropriate to the micro-climatic conditions such as forest understory, forest edge condition, and wetland. The tree plantings shall also be indigenous to the area.

The overarching planting concept is to create a contiguous landscape, blurring the lines between development parcels and the public realm. As such this allows for a visual continuity, as well as extended habitat opportunities throughout the development. The planting design will be cohesively applied throughout the public realm including the Village Heart, retail services area, and Village Green. The plant palette for the development parcels will include more showy plantings than the public realm, being richer in colour yet both the public and private realm will consist of the same plant species.



PEDESTRIAN TRAIL LIGHTING PLAN

LEGEND

- Primary Trails
- Secondary Trails
- Tertiary Trails - No Lights
- Pedestrian Pole Lights
- Residential Pole Lights
- Beacons
- Public Open Space Lighting
- Active Play / Sports Lighting
- Raised Crosswalk

Sword fern

Salal

Natural plant colonies

3.14 TREE MANAGEMENT

The most significant stand and stable group of trees are the mature conifers. The stand includes large healthy and structurally sound Douglas-fir trees that are considered trees of significance in the region. A proposed windfirm boundary has been laid out to retain most of this stand. All trees on the perimeter of the stand have been inventoried as well as the interior edge of trees to allow for a central meadow area. The required root protection zones for all edge trees have been recommended to retain them safely and in good health. Significant and healthy individual trees have been identified for retention in the clearing area north-west of the stand. These trees as well as some of the new edge trees along the north-west edge of the stand will require some windfirming treatments. These treatments include thinning and spiral pruning to reduce the risk of them failing in high wind storms. Following tree clearing, it is recommended that the new edges be assessed for hazard trees and to prescribe pruning. It is anticipated that additional field work will be required to verify current conditions at the time of development for each parcel.

Tree retention area and removal of deciduous and evergreen trees and understory are shown in the Tree Management Plan provided below.

3.15 WILDLIFE CORRIDORS

Wildlife habitat will be integrated into the community, to ultimately achieve a stronger sense of land stewardship for residents, through daily exposure and strengthened connections with nature.

Wildlife corridors remaining in the central portion of the site in Forest Park and the Community Green will be augmented by the rebuilding of the University Boulevard frontage with native plantings which will provide habitat and a corridor for species looking to move through the Block F site to the Pacific Spirit Park to the southeast of the site.
Plant species that enhance the bird habitat will also be proposed in the Parks and Open Spaces. Habitat areas including mature trees and understory planting areas will be provided.

Improvements to the Ortona Road ROW/Trail will allow for wildlife to access the Block F site and leave via the improved Ortona Rd Trail. The retention and enhancement of the trail system on the Block F site will also provide a wildlife corridor allowing easy passage for wildlife through the site.

3.15.1 Wetland Habitat

The constructed wetlands and bioswales will provide wetland habitat within the open space systems of the site. The goal is to improve the habitat value through a diversity of plants suited to the riparian conditions and through the design of the ponds.

These will be located throughout the community and may also be provided on the development sites.

An enhancement area adjacent to the Cut Throat Creek at the Ortona Avenue Right-of-Way will improve the habitat areas on site as well as off-site.

Consideration of the specific and desirable species of amphibians and other riparian creatures and off-site fish habitat will inform the design of the wetlands.

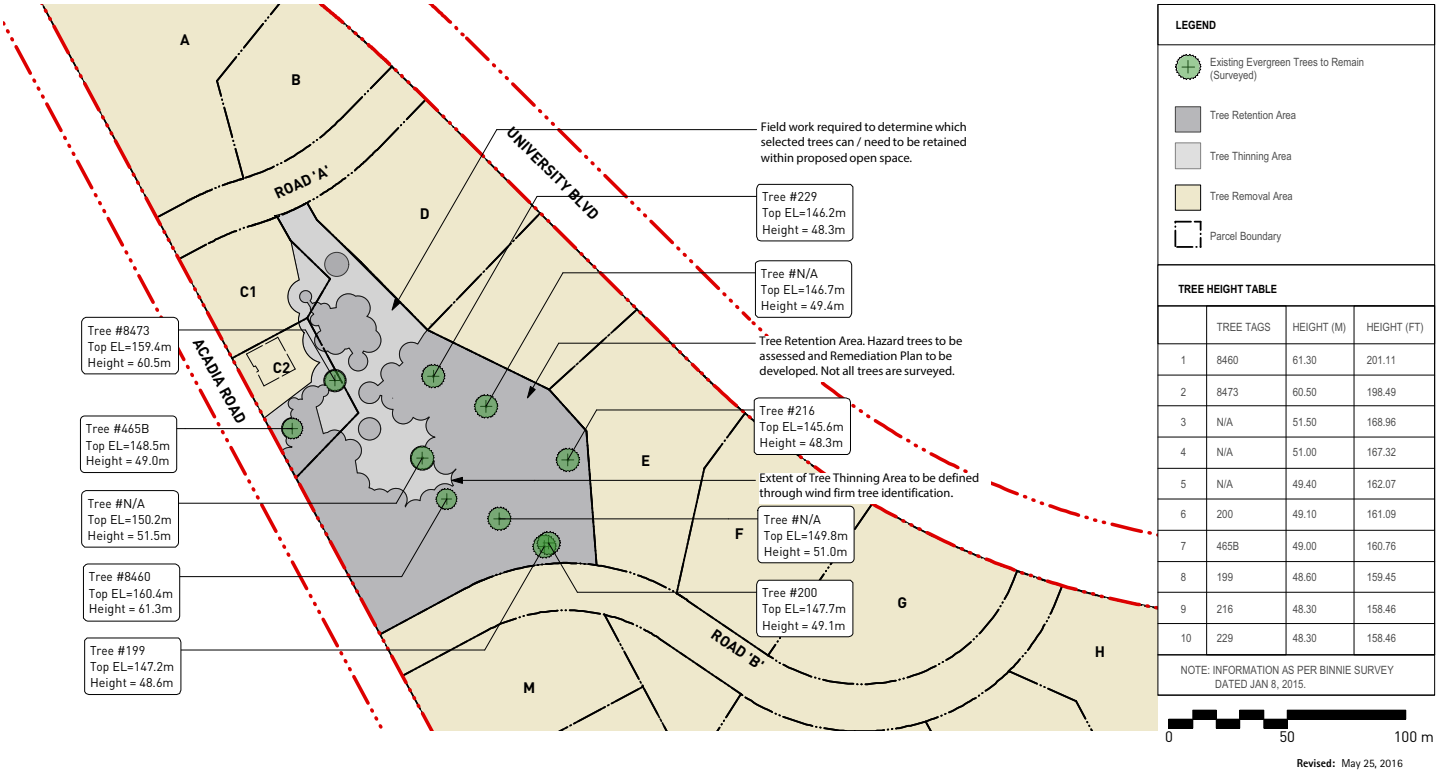
3.15.2 Forest Habitat

The forest stand provides habitat for a variety of species within the large mature evergreen trees, snags standing in the forest, as well as in the forest litter, fallen trees and the understory plants.

The retained forest stand is adjacent to a proposed wetland. It helps to buffer and support the adjacent wetland and working together they form a significant and valuable habitat area.

The retained forest and the proposed vegetation buffers will function as a movement corridor for wildlife ensuring habitat connectivity with the off-site habitat areas.

TREE MANAGEMENT PLAN



	TREE TAGS	HEIGHT (M)	HEIGHT (FT)
1	8460	61.30	201.11
2	8473	60.50	198.49
3	N/A	51.50	168.96
4	N/A	51.00	167.32
5	N/A	49.40	162.07
6	200	49.10	161.09
7	465B	49.00	160.76
8	199	48.60	159.45
9	216	48.30	158.46
10	229	48.30	158.46

Red Winged Blackbird

BC Coastal Forest

Salish Creek

3.15.3 Bird Habitat

The site will continue to offer high value habitat to the many species of birds that are known to be in the area. Plant species that enhance the bird habitat will be proposed in the Parks and Open Spaces and a bird nesting survey will be conducted prior to development permit or building permit issuance.

Habitat areas including mature trees and understory planting areas will be provided.

Potential impacts to environmental values, including SAR (species at risk), largely depend on the timing of construction (e.g., clearing within the breeding bird window could impact potentially occurring bird SAR), therefore effective mitigation of potential impacts to environmental values will be closely linked to construction timing. For instance, if clearing occurs within the breeding bird window, a nest survey shall be completed prior to clearing activities.

In addition, all site works will be monitored by a qualified environmental professional who will have the ability to halt construction and implement additional situation or species-specific mitigation measures should the need arise (i.e., if a species is in immediate danger of injury or mortality. This pertains to all wildlife protected under the Wildlife Act).

SITE PLAN: HABITAT TYPES

1 WETLAND HABITAT

2 FOREST HABITAT

3 BIRD HABITAT

Eight Spotted Skimmer Dragonfly

Banana Slug

Tree Swallow

Red Breasted Sapsucker

Barred Owl

Forest Undergrowth

Oregon Spotted Frog

Hummingbird Nest

Yellow-rumped Warbler

Northern Flicker

Golden Crowned Kinglet

Cooper's Hawk

HABITAT AREAS AND CORRIDORS

LEGEND

AREAS
- Forest
- Riparian

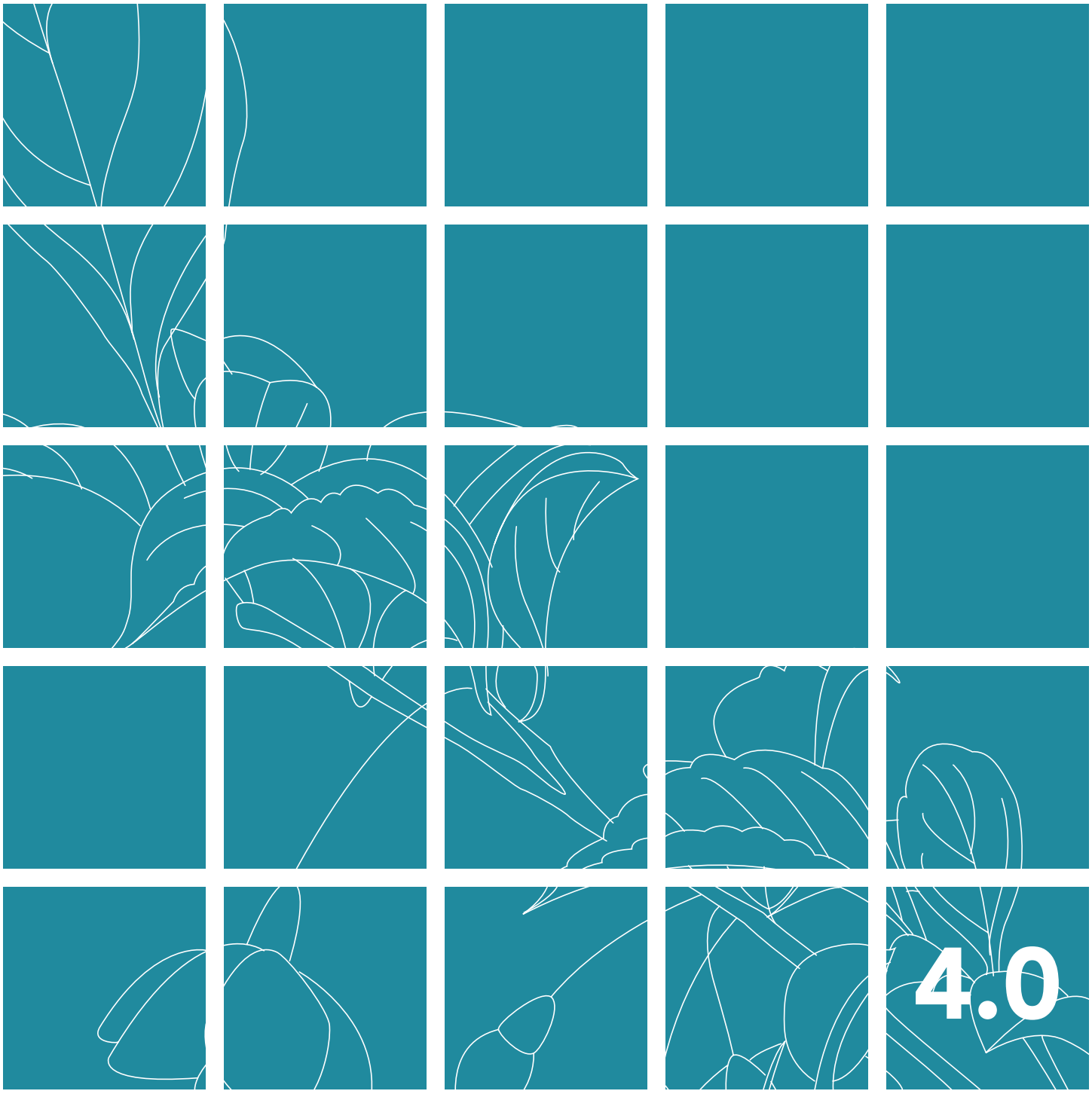
CORRIDORS
- Habitat Corridor
- Terrestrial and Avian
- Avian
- Riparian (culvert)

3.15.4 Species at Risk

Potential impacts on environmental values, including species at risk (SAR), will be partially mitigated through site design, including the preservation of high-value forest habitat and proposed construction of functional wetland habitat. Pre-construction surveys will also be completed to identify plant species at risk, raptor nests, amphibians and other nesting birds potentially occurring on the property. Further mitigation includes implementation of Best Management Practices (BMPs) in accordance with the Wildlife Act and Migratory Bird Act. Similarly, if construction occurs when there is potential for amphibians to be inhabiting the existing wetland, then an amphibian salvage and relocation plan shall be implemented. These measures take a precautionary approach to development to mitigate potential impacts to all environmental values that occur, or could potentially occur onsite, including impacts to SAR. Furthermore, project development will take a phased approach which will allow BMPs to be implemented and monitored more effectively on smaller portions of the site. Environmental monitoring shall be carried out on each parcel as it's developed.

Based on the above rationale provided, satisfactory implementation of any recommendations from either the Provincial or Federal Government related to the riparian area regulations (RAR), habitat preservation, and species at risk protection shall be demonstrated prior to development permit or building permit issuance.

WETLAND AND FOREST HABITAT



4.0

CONCEPT PLANS

MASTER PLAN


Toronto Road
A
B
Road 'A'
D
University Blvd
C1
C2
Acadia Road
E
F
Road 'B'
G
H
M
I
K
J
L
Orfona Avenue
N

4.0 CONCEPT PLANS, SECTIONS, AND 3D MODELS

4.1 PUBLIC INTERFACE WITH DEVELOPED PARCEL

In addition to the site planning incorporated into the CD-2 Comprehensive District, Concept Plans for each site have been included in these guidelines to further explain the intent of the plans. They offer guidance about:

- The siting and massing of buildings
- Features that will benefit the overall community and ensure that a proposed development is sensitive to future adjacent developments
- Requirements on how buildings define and address streets
- Recommended locations of lobby entrances and parking accesses
- Locations of open spaces and connections among open spaces
- And other issues to be addressed and features to incorporate

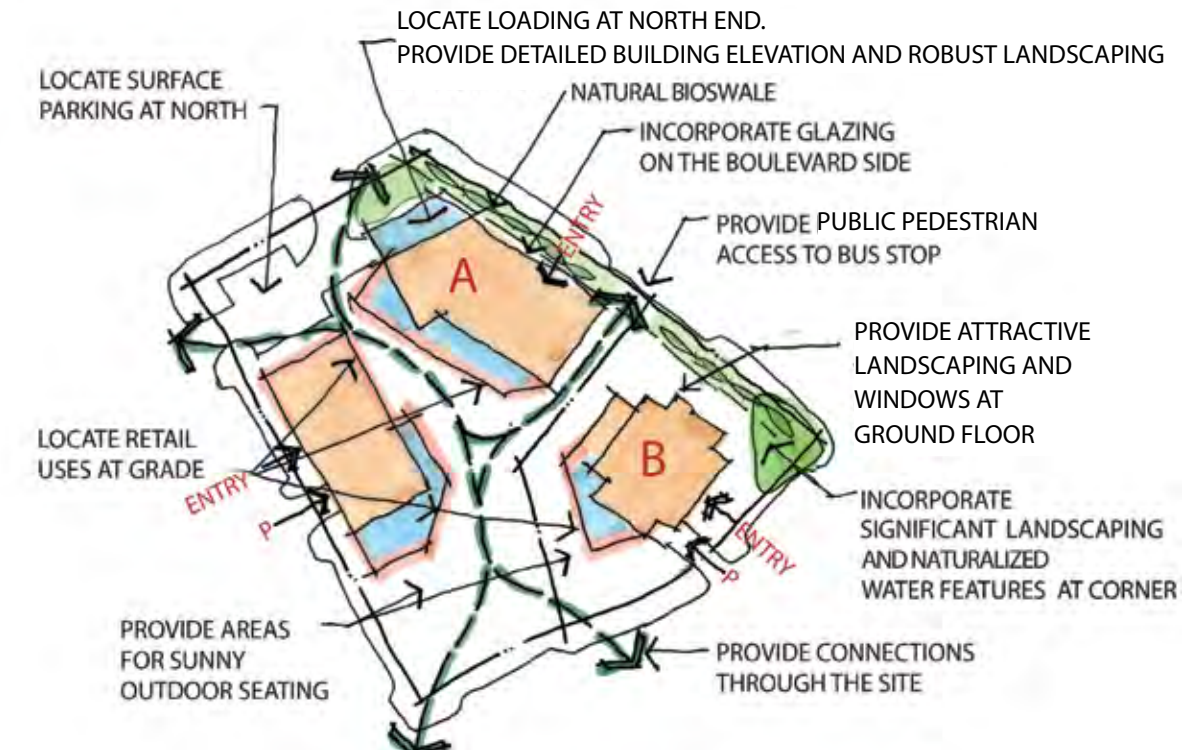
Where any discrepancy between the CD-2 Comprehensive District and this Section 4 is found, the CD-2 Comprehensive District shall take precedent in the evaluation of any development permit application.

Refer to Section 6.0 for additional development parcel information.

4.1.1 Parcel A and B

See Sections 6.4 and 6.5 for additional information.

Key Plan



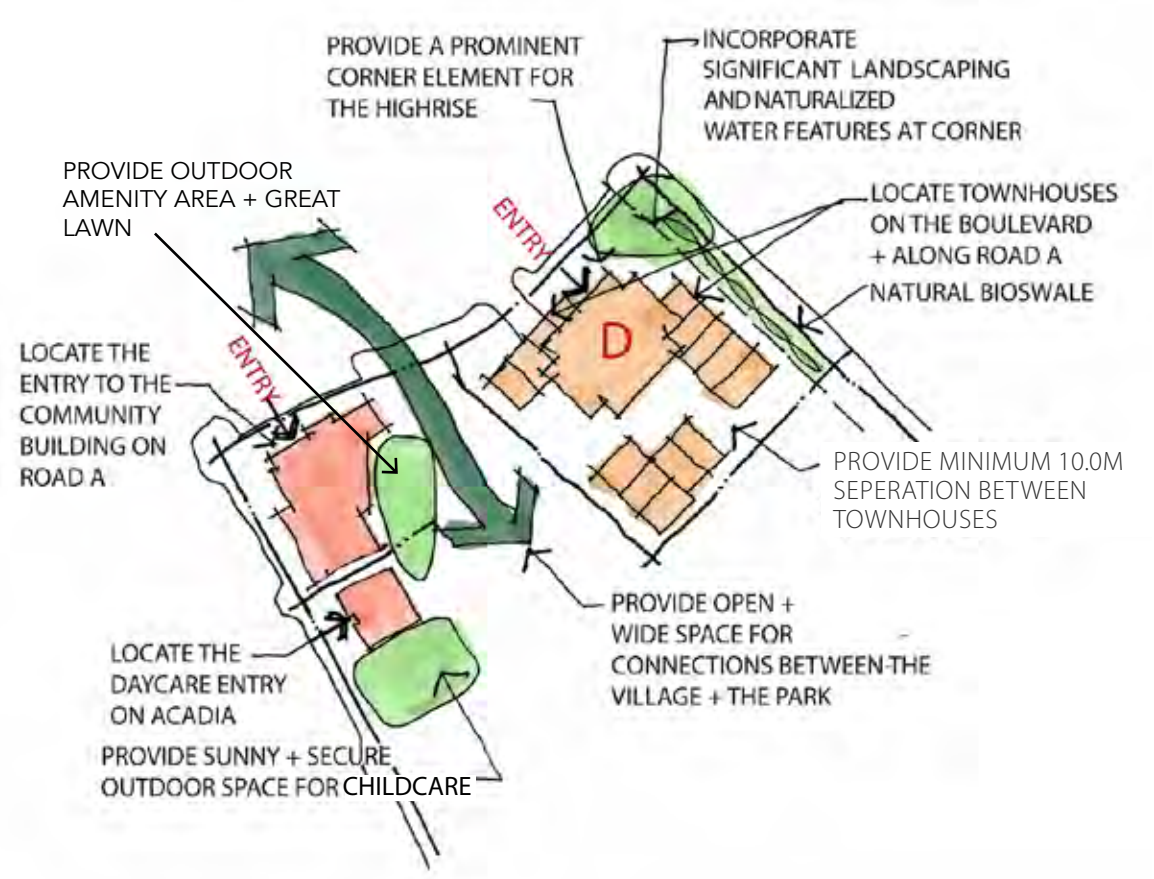
NORTH PARCELS - COMMUNITY HEART

LEGEND

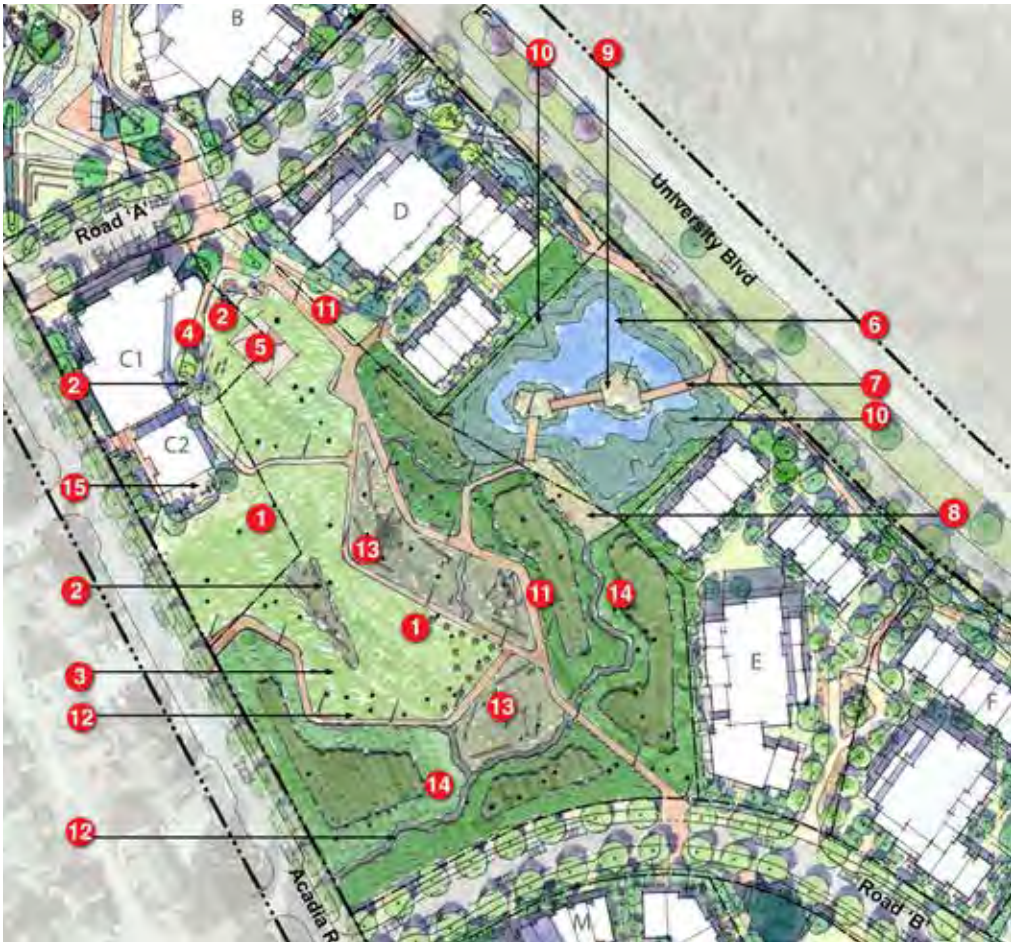
1. Public plaza
2. Seating and raised planters
3. Event Lawn
4. Cafe seating
5. Surface parking
6. Proposed bus stop
7. Parallel street parking
8. Angled parking
9. Raised cross walk
10. Enhanced width sidewalk
11. Parkade driveway

4.1.2 Parcel C1, C2 and D

See Sections 6.5 and 6.6 for additional information.



CENTRAL PARCELS

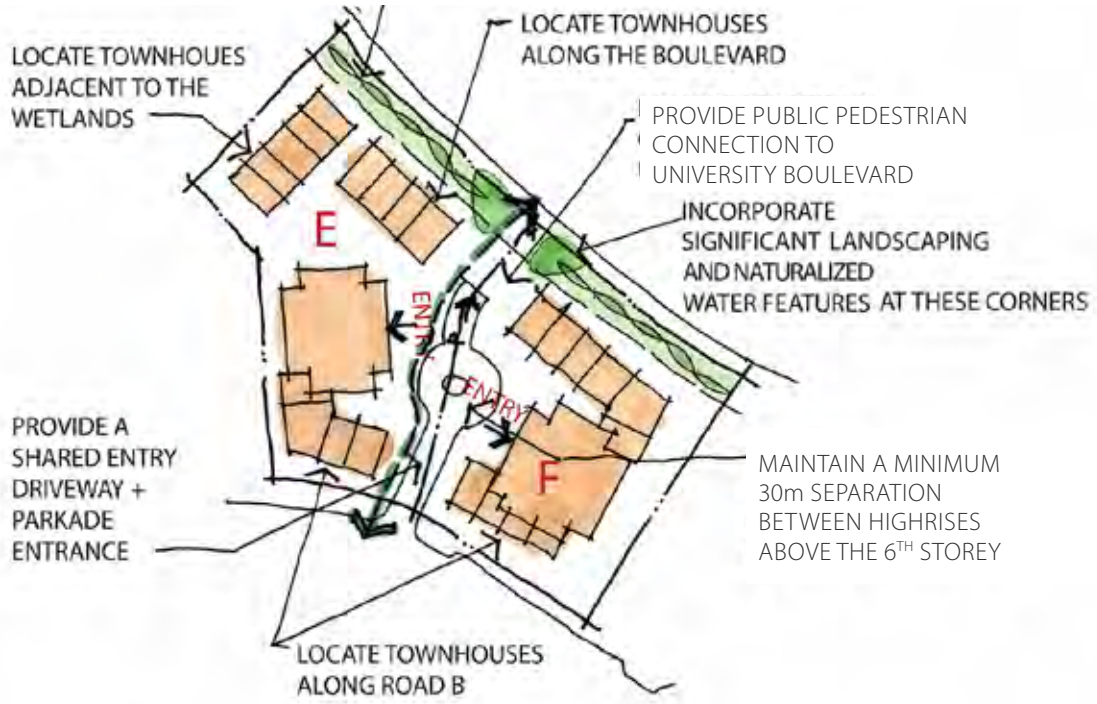


LEGEND

1. Community lawn / flexible open space / play fields
2. Playground
3. Picnic area
4. Community building outdoor amenity area + great lawn
5. Hard Court
6. Constructed wetland
7. Bridge / boardwalk
8. Observation area
9. Wetland island
10. Riparian buffer
11. Sword Fern / Iva Mann Trail
12. Nature / tertiary Trail
13. Nature play
14. Habitat and nature trail area
15. Outdoor day care play area

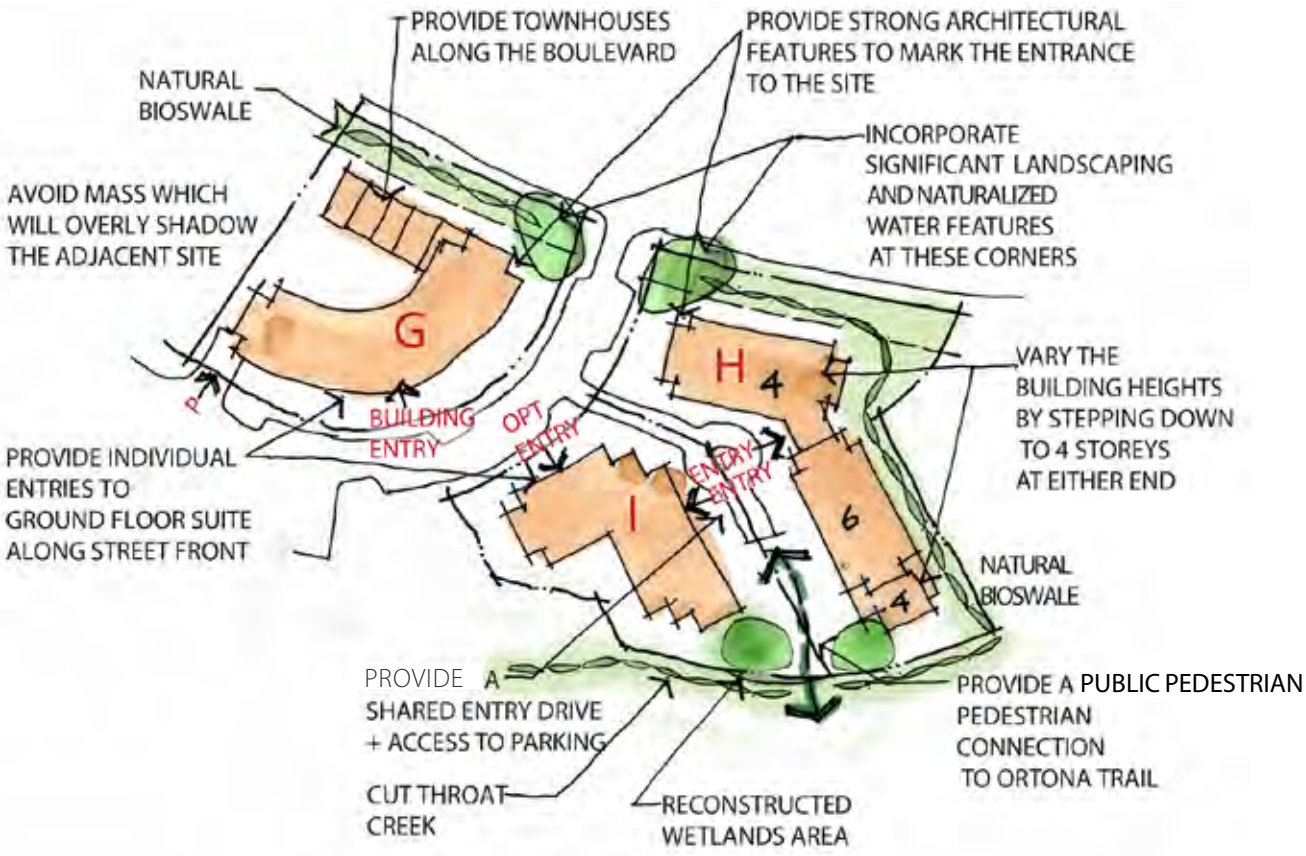
4.1.3 Parcel E and F

See Section 6.5 for additional information.



4.1.4 Parcel G, H, and I

See Section 6.5 for additional information.

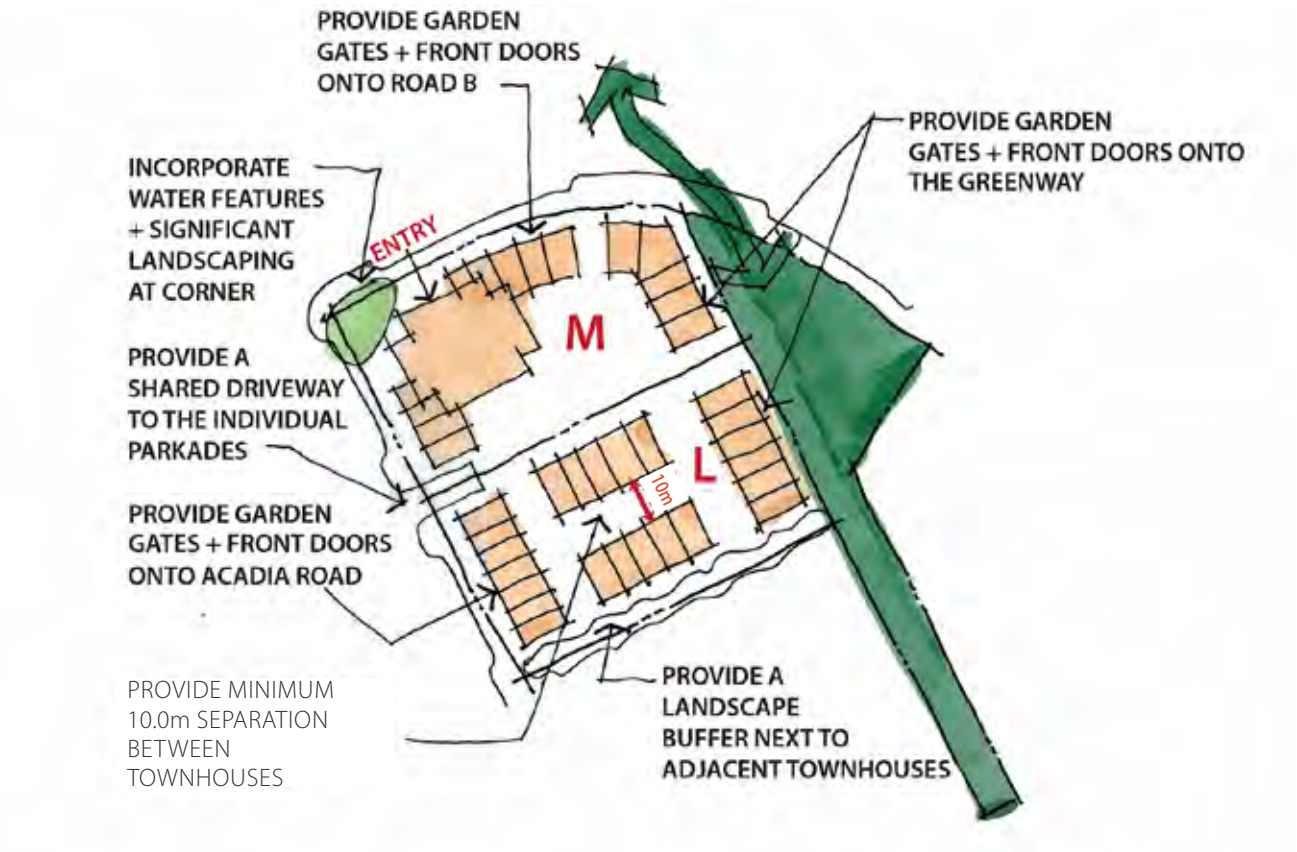


4.1.5 Parcel J and K

See Section 6.5 for additional information.

4.1.6 Parcel M and L

See Section 6.5 for additional information.



4.1.7 Parcels E-L Site Plan

LEGEND

1. Lawn /flexible Space
2. Seating
3. All weather sport fields (on VSB grounds)
4. Continuous sidewalk at driveways
5. Parallel on-street parking
6. Raised pedestrian trail crossing
7. Sword Fern / Iva Mann Trail
8. Ortona Trail
9. Multi-use trail
10. Community connection / public access
11. Riparian buffer and Cut Throat Park
12. University Boulevard Linear Park

4.1.8 Parks and Open Space Character Program Plan

ETAIL PLAN 1

DETAIL PLAN 2

LEGEND

1. Primary trail
2. Secondary trail
3. Rainwater swale
4. Seating area
5. Bus stop
6. Retail patios
7. Lawn
8. Bridge / Boardwalk
9. Bike lane
10. Pedestrian access to Village Square from bus stop
11. Connections into Block F from University Boulevard
12. Naturalized water feature
13. Private patios with gates
14. Tower Entry Plaza

Dockside Green Development

Boardwalk Crossing Over Bioswale

4.2 VIEWS


Toronto Road
University Blvd
Acadia Road
Road 'B'
Ottona Avenue
A
B
C1
C2
D
E
F
G
H
I
J
K
L
M
1
2
3
4
5
6
N

1 View North through Village Square

2 View South through Community Green along Road B

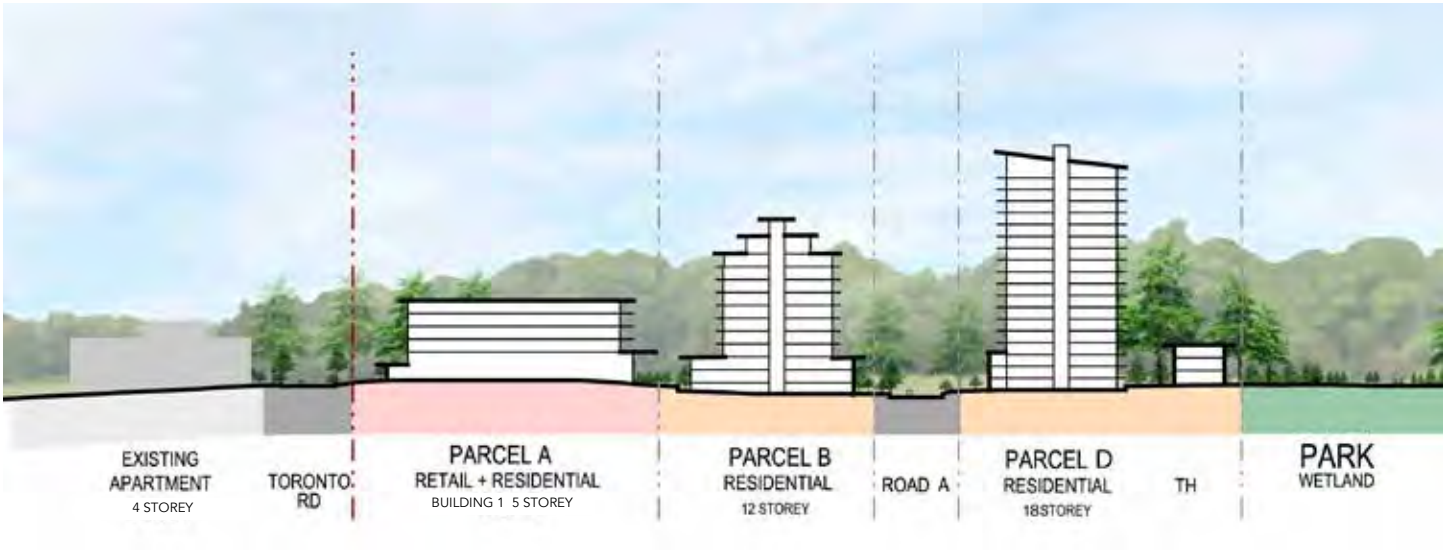
3 View Northwest along University Blvd

4 View North along Acadia Road

5 View North through Park towards Community Centre

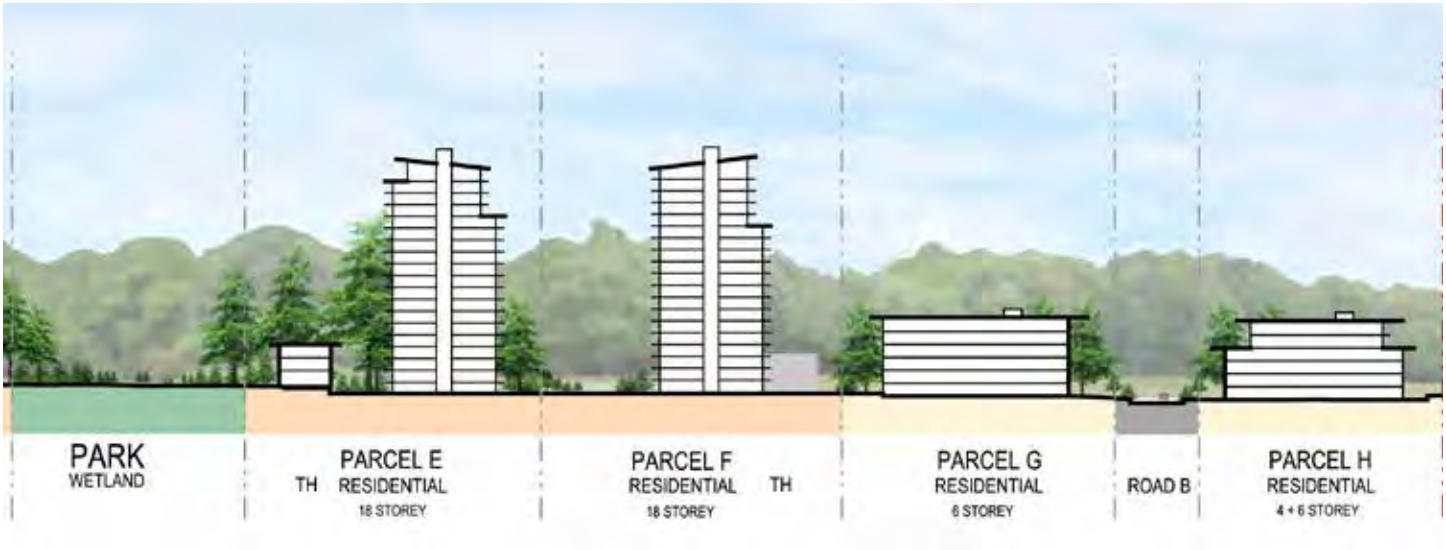
6 View West through Wetlands

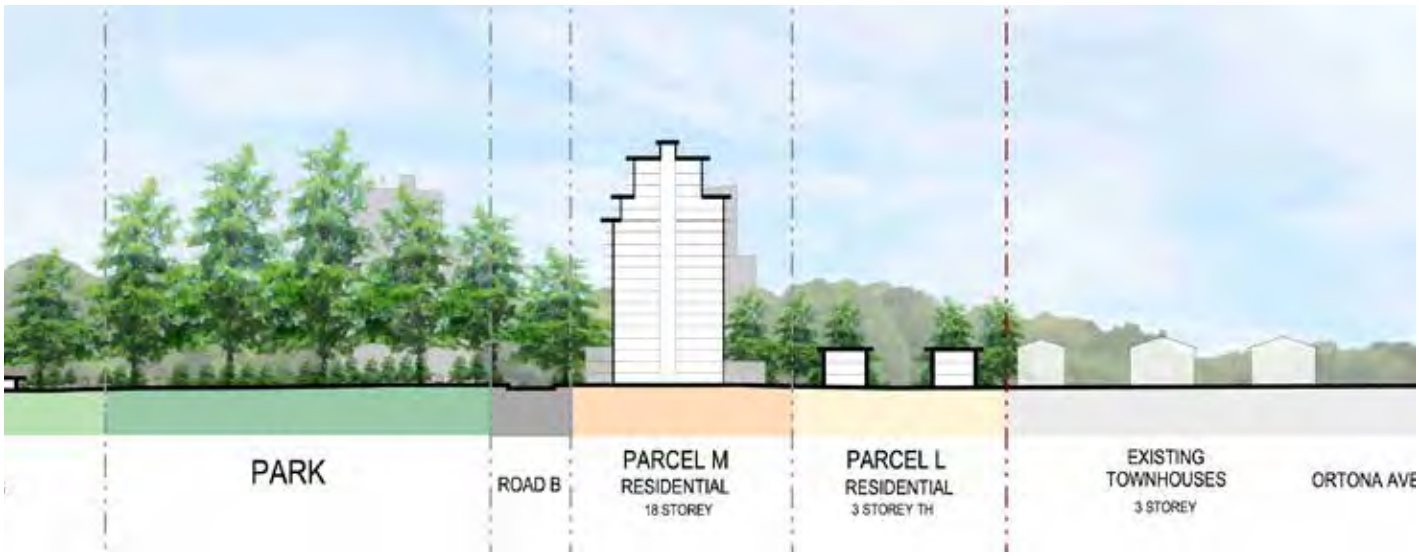
4.3 CROSS-SECTIONS



Section A, looking northeast

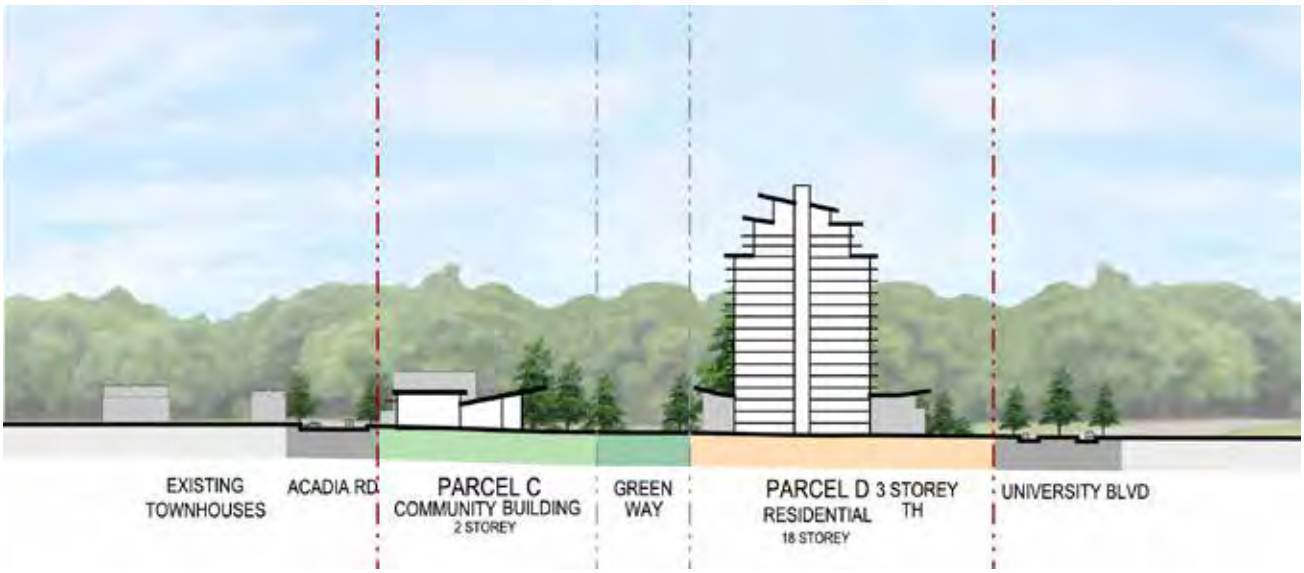
Section B, looking northeast


PARK
WETLAND
PARCEL E
TH RESIDENTIAL
18 STOREY
PARCEL F
RESIDENTIAL TH
18 STOREY
PARCEL G
RESIDENTIAL
6 STOREY
ROAD B
PARCEL H
RESIDENTIAL
4 + 6 STOREY


PARK
ROAD B
PARCEL M
RESIDENTIAL
18 STOREY
PARCEL L
RESIDENTIAL
3 STOREY TH
EXISTING
TOWNHOUSES
3 STOREY
ORTONA AVE

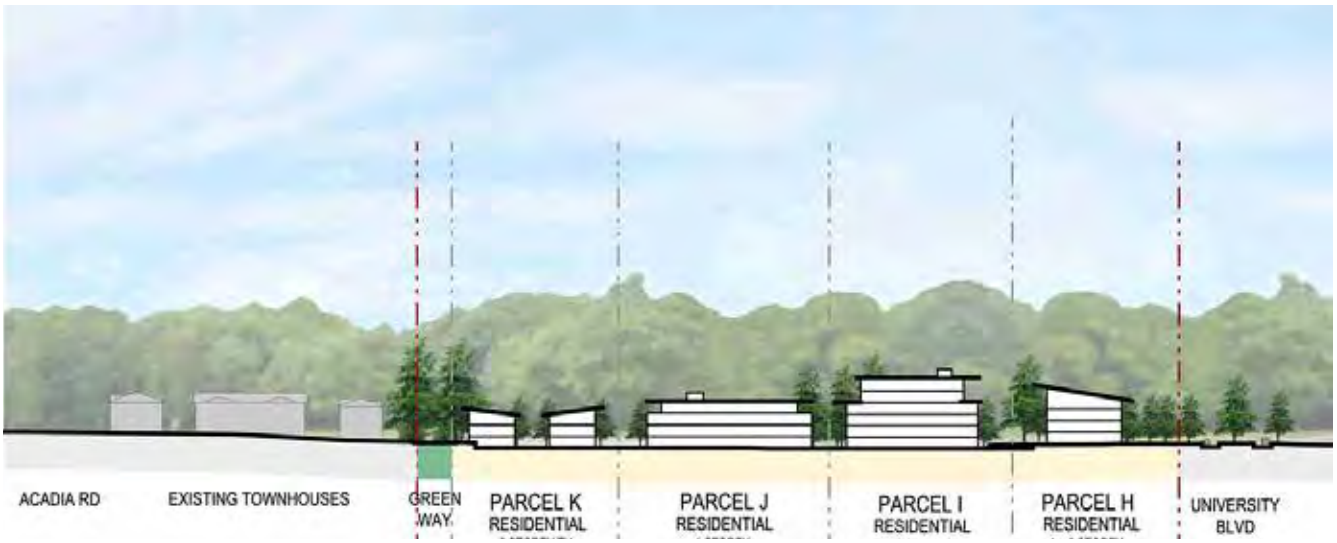
KEY PLAN


B
A
UNIVERSITY
ENDOWMENT LANDS
WETLANDS
PARK
UNIVERSITY OF
BRITISH COLUMBIA
A
B



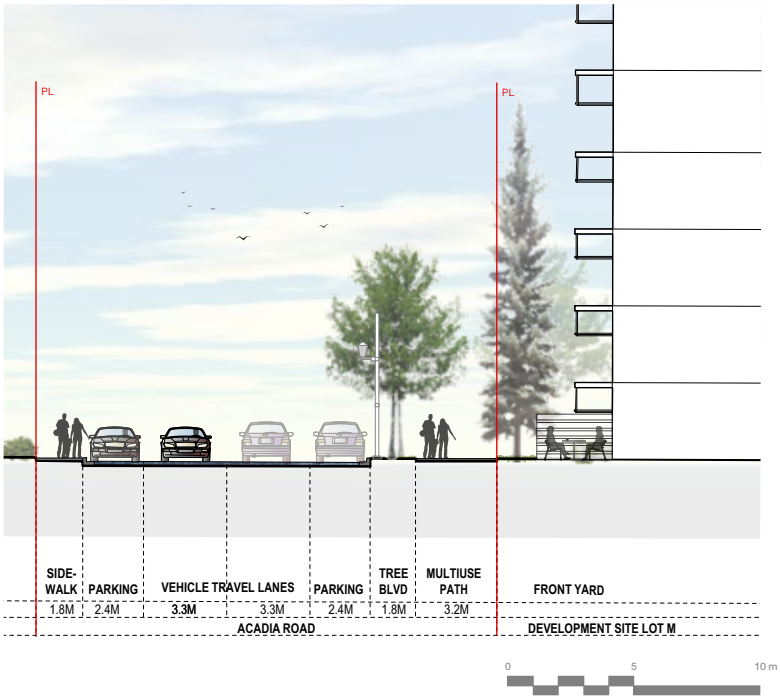
Section C, looking northwest

Section D, looking northwest

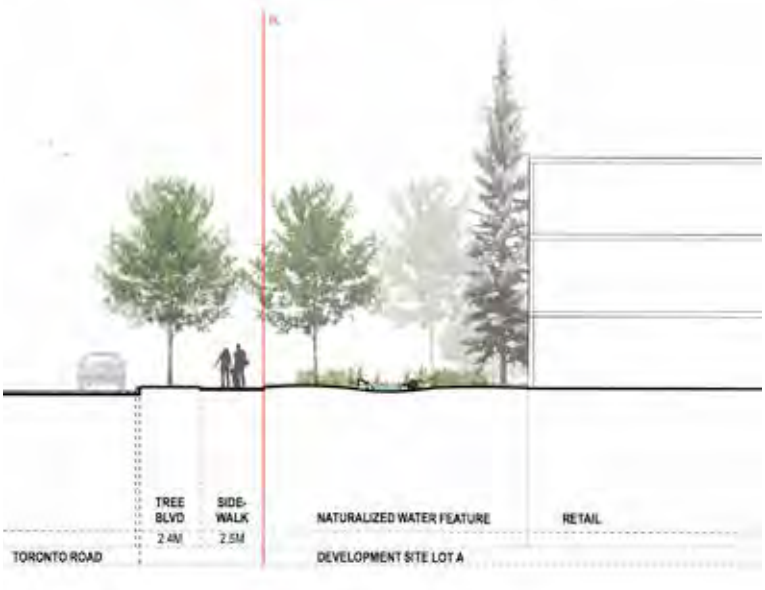


Section E, looking northwest

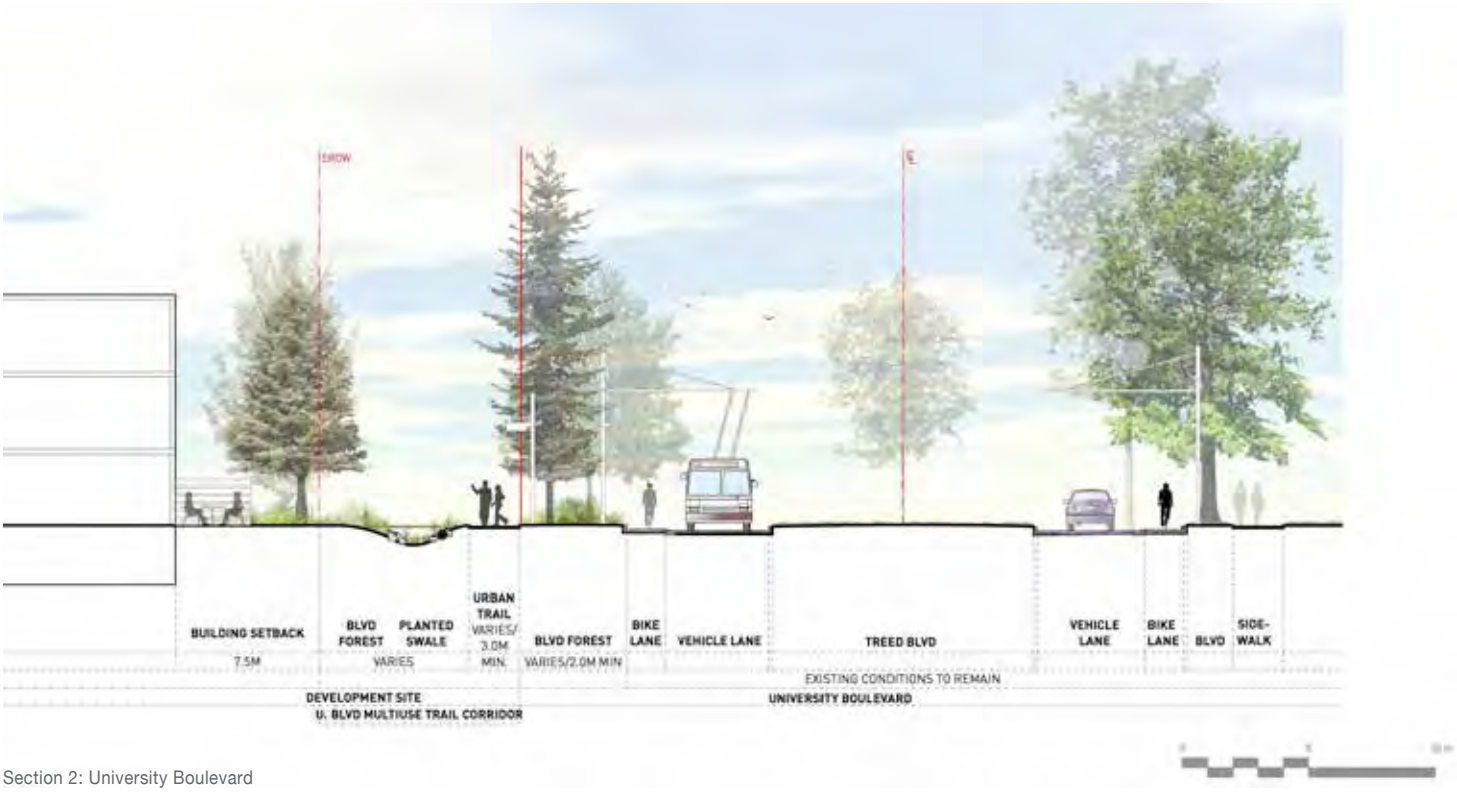
4.3 Cross-sections



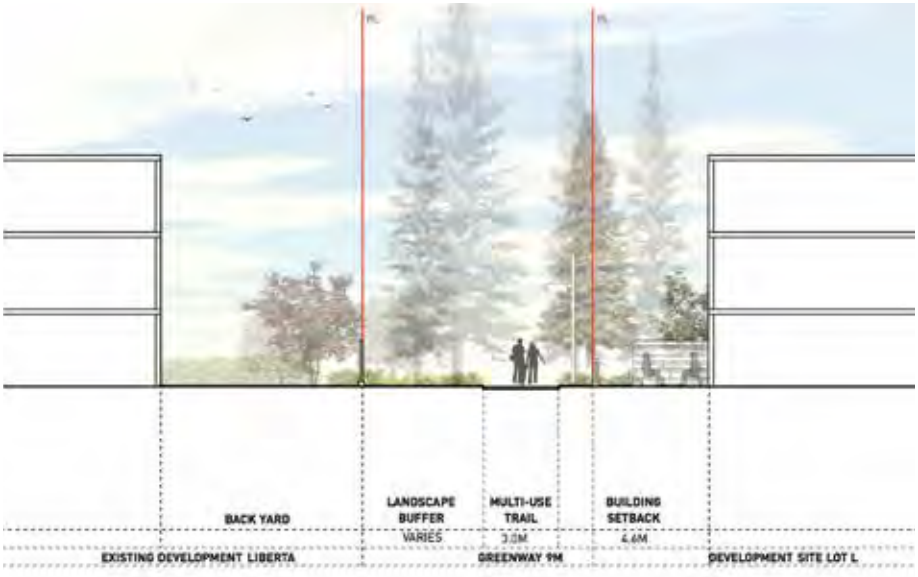
Section 1: Acadia Road



Section 3: Toronto Road

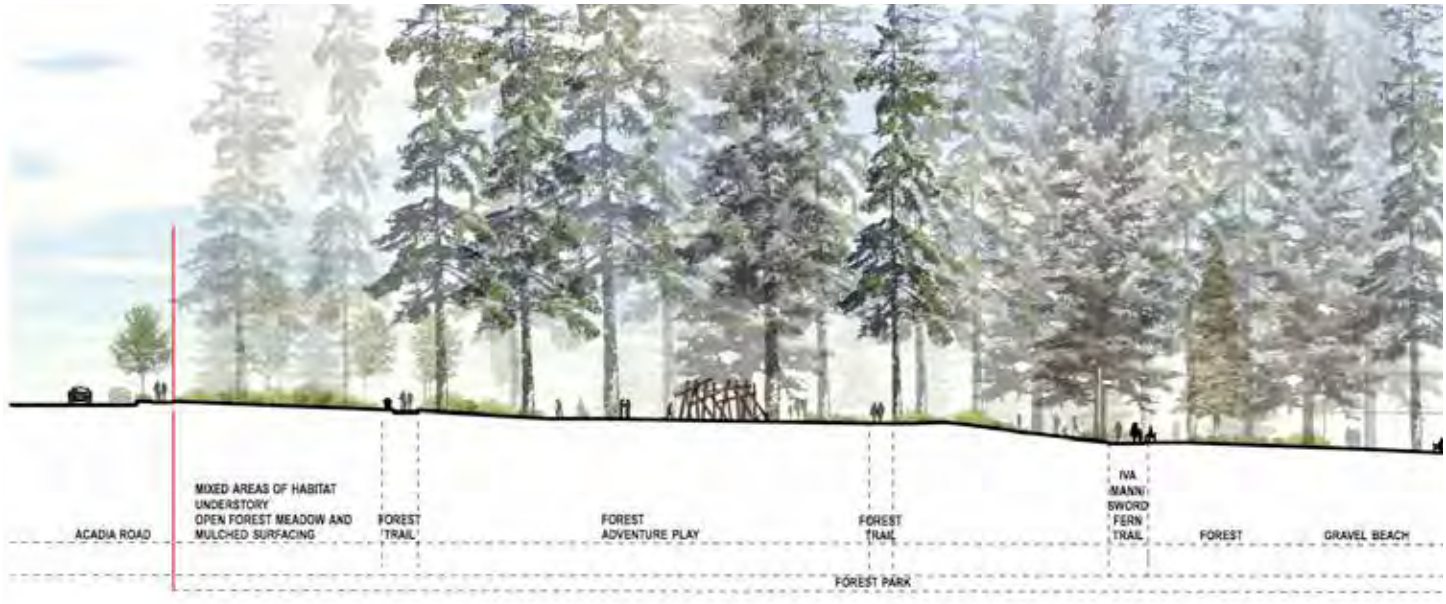


Section 2: University Boulevard

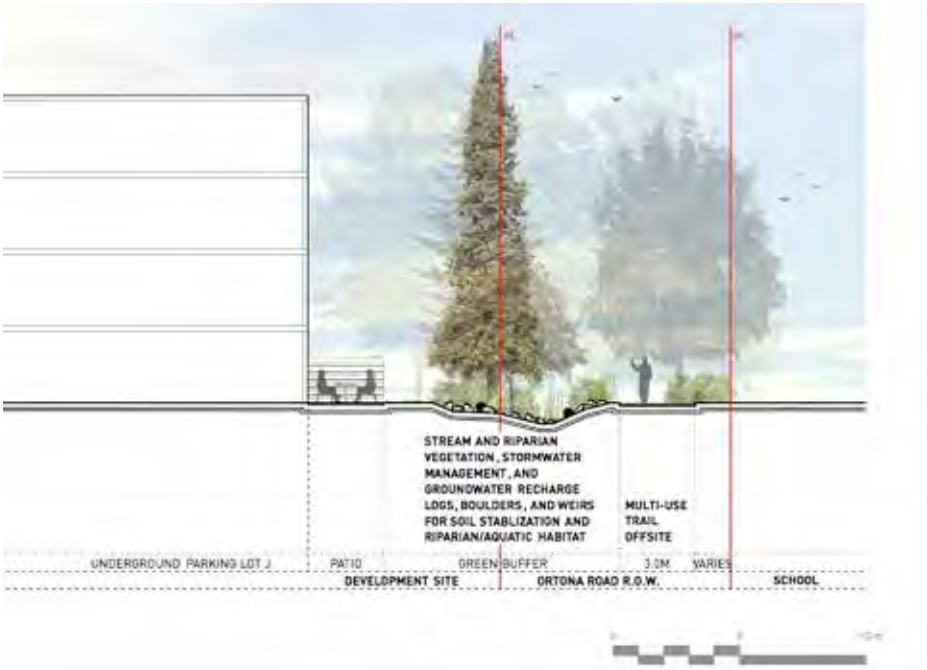


Section 4: Greenway North of Existing Townhouses

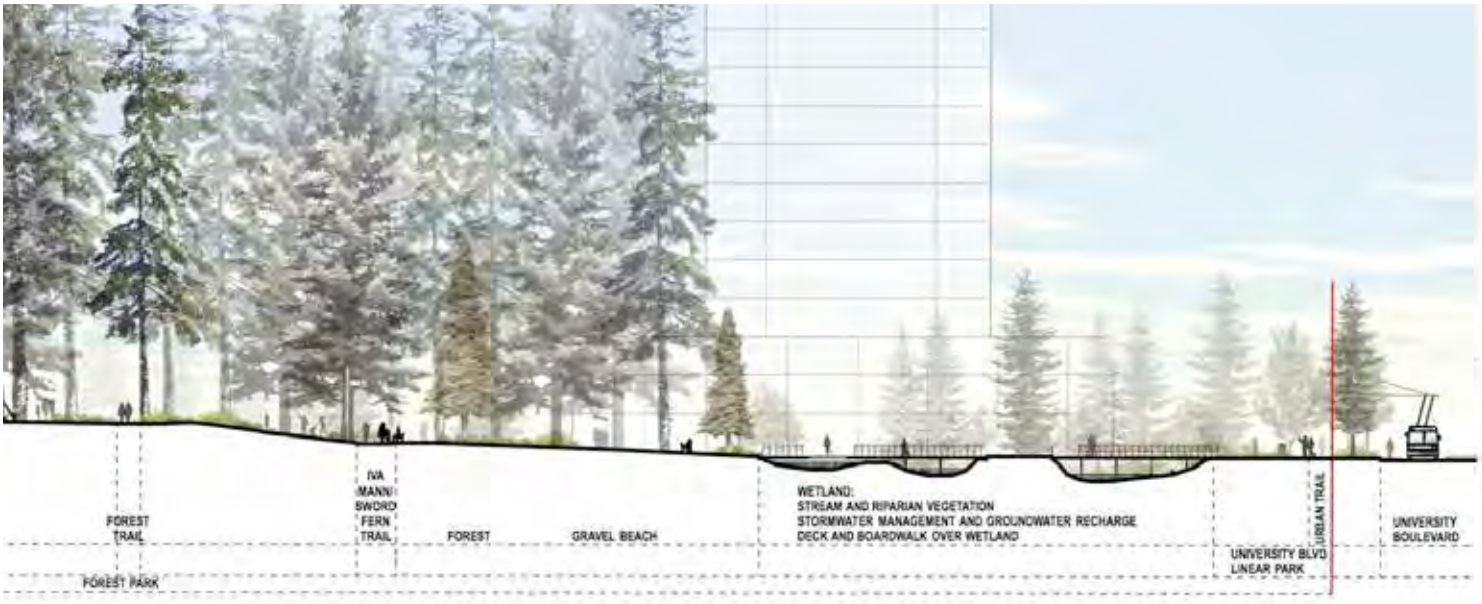
4.3 Cross-sections



Section 6: Forest Park

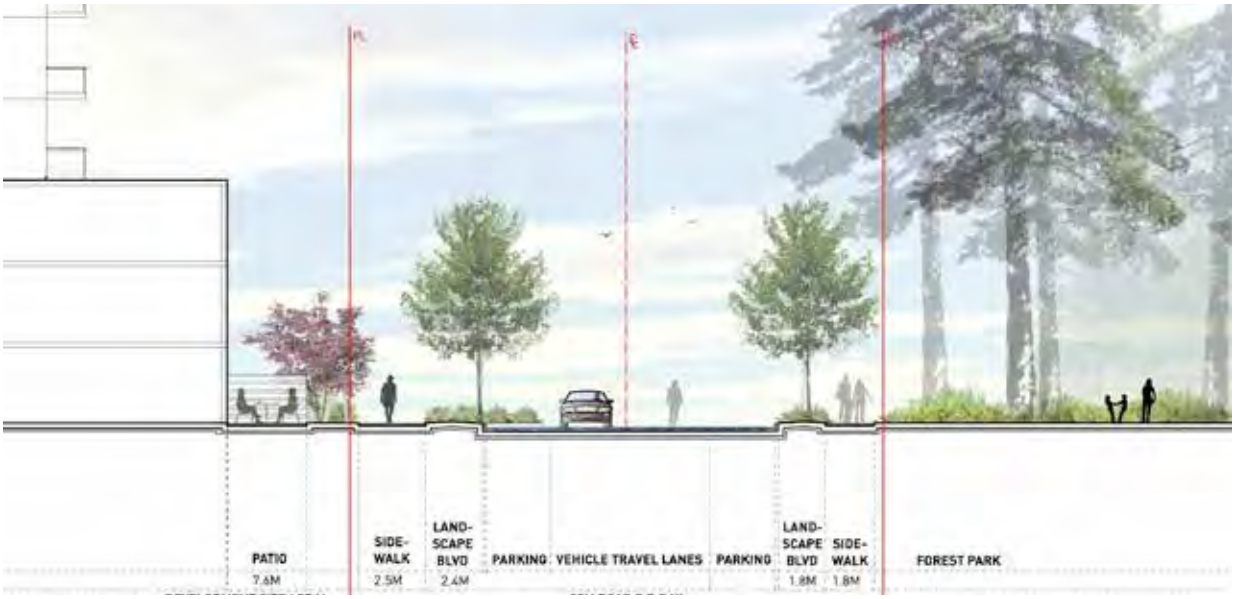


Section 5: Ortano Road

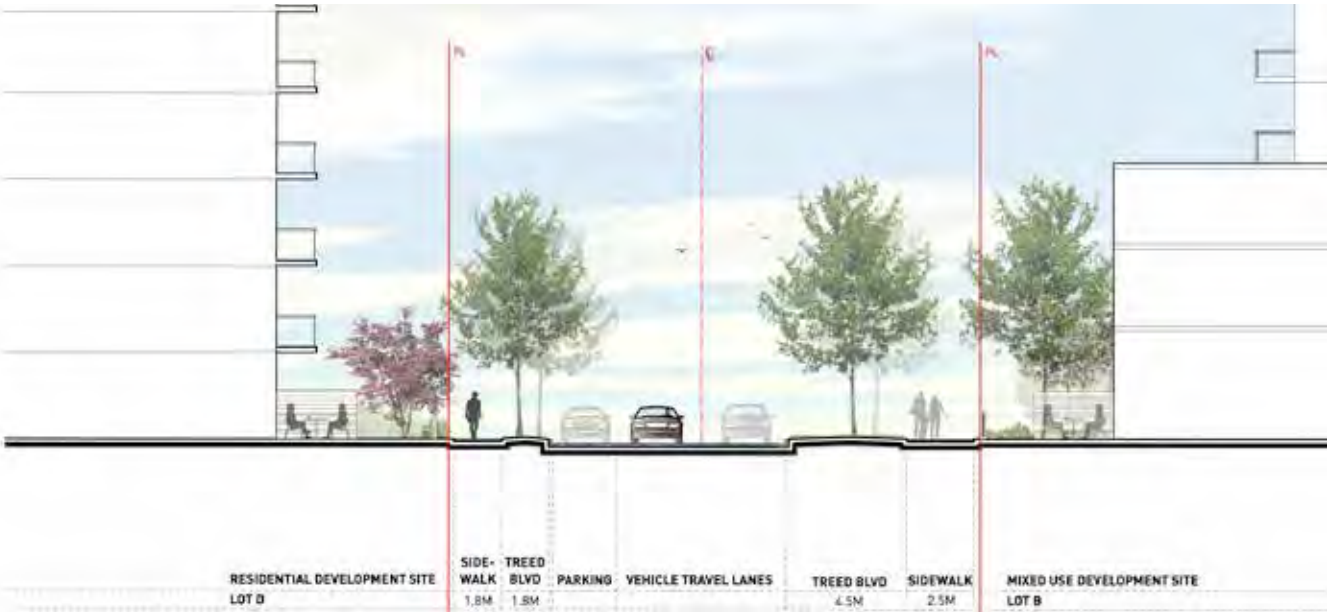


Section 6: Forest Park

4.3 Cross-sections



Section 7: Road B



Section 8: Road A

4.4 THREE-DIMENSIONAL MODELS

VIEW LOOKING NORTH

VIEW LOOKING SOUTHEAST ALONG UNIVERSITY BLVD AND ACADIA RD

VIEW LOOKING WEST TOWARDS UBC

VIEW LOOKING SOUTHEAST TOWARDS TORONTO RD AND ACADIA RD

4.5 DEVELOPMENT STATISTICS

TOTAL COMMERCIAL (Parcel A + B)	2,787 Sq. m
TOTAL RENTAL RESIDENTIAL (Parcel B)	7,897 Sq. m
TOTAL BELOW-MARKET RESIDENTIAL (Parcel A)	4,065 Sq. m
TOTAL RESIDENTIAL FLOOR AREA (Parcels A + Parcels D-M)	101,072 Sq. m
TOTAL DEVELOPMENT AREA (Parcels A - M)	**115,821 Sq. m**

Commercial Village Parcels

		USE	No. of Levels	Floor Area (Sq. m)
A	**Building 1 - Level 1**	Commercial	1	1,858
	Level 2-5	Below-Market Residential	4	4,065
	TOTAL		**5**	**5,923**
		USE	**No. of Levels**	**Floor Area** (Sq. m)
	Building 2 - Level 1	Commercial	1	629 - 842
	Levels 2 - 4	Market Residential	3	2,322
	TOTAL		**4**	**2,972 - 3,164**
	TOTAL DEVELOPMENT AREA			**8,895 - 9,087**
	MAX. HEIGHT	**Up to 20m**	**5**	
	PARCEL AREA			**8,261**
	MAX. SITE COVERAGE	**45%**		
	MAX. ALLOWABLE FSR	**1.09 FSR**		

		USE	No. of Levels	Floor Area (Sq. m)
B	**Level 1** (partial)	Accessory Commercial		87 - 300
	Level 1 - 12	Rental Residential	12	7,897
	DEVELOPMENT AREA			**7,984 - 8,197**
	MAX. HEIGHT	**40m**	**12**	
	PARCEL AREA			**3,261**
	MAX. SITE COVERAGE	**50%**		
	MAX. ALLOWABLE FSR	**2.48 FSR**		

Residential Parcels

D	**HIGHRISE**	**No. of Levels**	**Floor Area** (Sq. m)
	Levels 1 - 18	18	11,401.5
	TOWNHOUSES	**No. of Levels**	**Floor Area** (Sq. m)
	Levels 1 - 3	3	2,230
	DEVELOPMENT AREA		**13,631.5**
	MAX. HEIGHT	**54.25m**	
	PARCEL AREA		**4,725**
	MAX. SITE COVERAGE	**40%**	
	MAX. ALLOWABLE FSR	**2.89**	

E	**HIGHRISE**	**No. of Levels**	**Floor Area** (Sq. m)
	Levels 1 - 18	18	11,728
	TOWNHOUSES	**No. of Levels**	**Area** (Sq. m)
	Levels 1 - 3	3	2,415
	DEVELOPMENT AREA		**14,143**
	MAX. HEIGHT	**54.25m**	
	PARCEL AREA		**5,214**
	MAX. SITE COVERAGE	**40%**	
	MAX. ALLOWABLE FSR	**2.71**	

F	**HIGHRISE**	**No. of Levels**	**Floor Area** (Sq. m)
	Levels 1 - 18	18	11,127
	TOWNHOUSES	**No. of Levels**	**Area** (Sq. m)
	Levels 1 - 3	3	2,230
	DEVELOPMENT AREA		**13,357**
	MAX. HEIGHT	**54.25m**	
	PARCEL AREA		**4,654**
	MAX. SITE COVERAGE	**40%**	
	MAX. ALLOWABLE FSR	**2.87**	

G	**LOWRISE + TOWNHOUSES**	**No. of Levels**	**Floor Area** (Sq. m)
	Levels 1 - 6	6	9,767
	DEVELOPMENT AREA		**9,767**
	MAX. HEIGHT	**21m**	
	PARCEL AREA		**4,624**
	MAX. SITE COVERAGE	**45%**	
	MAX. ALLOWABLE FSR	**2.11**	

H	**LOWRISE**	**No. of Levels**	**Floor Area** (Sq. m)
	Levels 1 - 6	4 + 6	9,334
	DEVELOPMENT AREA		**9,334**
	MAX. HEIGHT	**21m**	
	PARCEL AREA		**5,330**
	MAX. SITE COVERAGE	**40%**	
	MAX. ALLOWABLE FSR	**1.75**	

	LOWRISE	No. of Levels	Floor Area (Sq. m)
I	Levels 1 - 6	6	8,394
	DEVELOPMENT AREA		8,394
	MAX. HEIGHT	21m	
	PARCEL AREA		3,358
	MAX. SITE COVERAGE	50%	
	MAX. ALLOWABLE FSR	2.50	

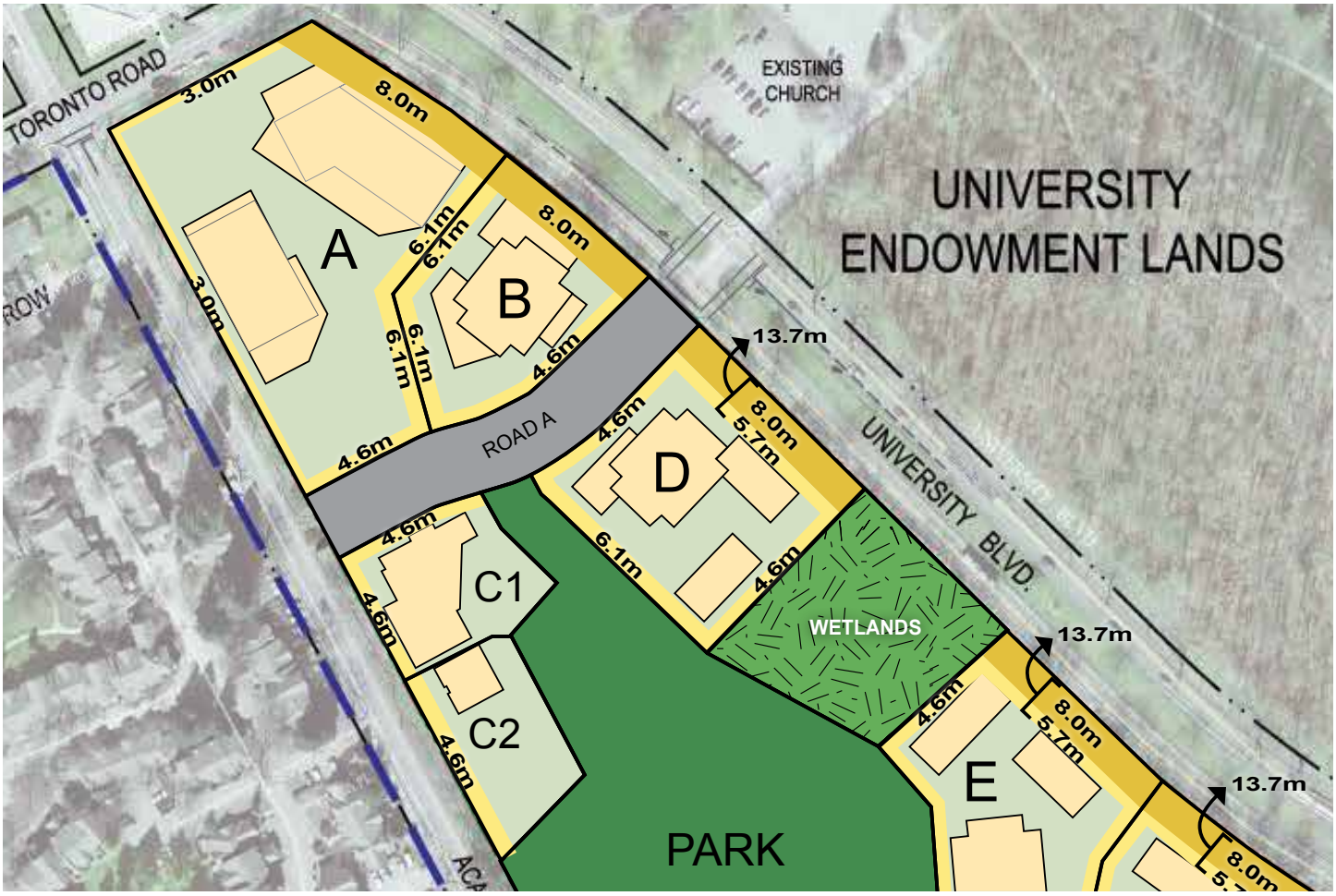
	LOWRISE	No. of Levels	Floor Area (Sq. m)
J	Levels 1 - 4	4	5,946
	DEVELOPMENT AREA		5,946
	MAX. HEIGHT	15m	
	PARCEL AREA		3,398
	MAX. SITE COVERAGE	50%	
	MAX. ALLOWABLE FSR	1.75	

	TOWNHOUSES	No. of Levels	Floor Area (Sq. m)
K	Levels 1 - 3	3	5,822
	DEVELOPMENT AREA		5,822
	MAX. HEIGHT	11m	
	PARCEL AREA		4,676
	MAX. SITE COVERAGE	50%	
	MAX. ALLOWABLE FSR	1.25	

	TOWNHOUSES	No. of Levels	Floor Area (Sq. m)
L	Levels 1 - 3	3	5,493
	DEVELOPMENT AREA		5,493
	MAX. HEIGHT	11m	
	PARCEL AREA		4,390
	MAX. SITE COVERAGE	50%	
	MAX. ALLOWABLE FSR	1.25	

	HIGHRISE	No. of Levels	Floor Area (Sq. m)
M	Levels 1 - 18	18	10,633
	TOWNHOUSES	No. of Levels	Area (Sq. m)
	Levels 1 - 3	3	2,230
	DEVELOPMENT AREA		12,863
	MAX. HEIGHT	54.25m	
	PARCEL AREA		4,287
	MAX. SITE COVERAGE	40%	
	MAX. ALLOWABLE FSR	3.00	

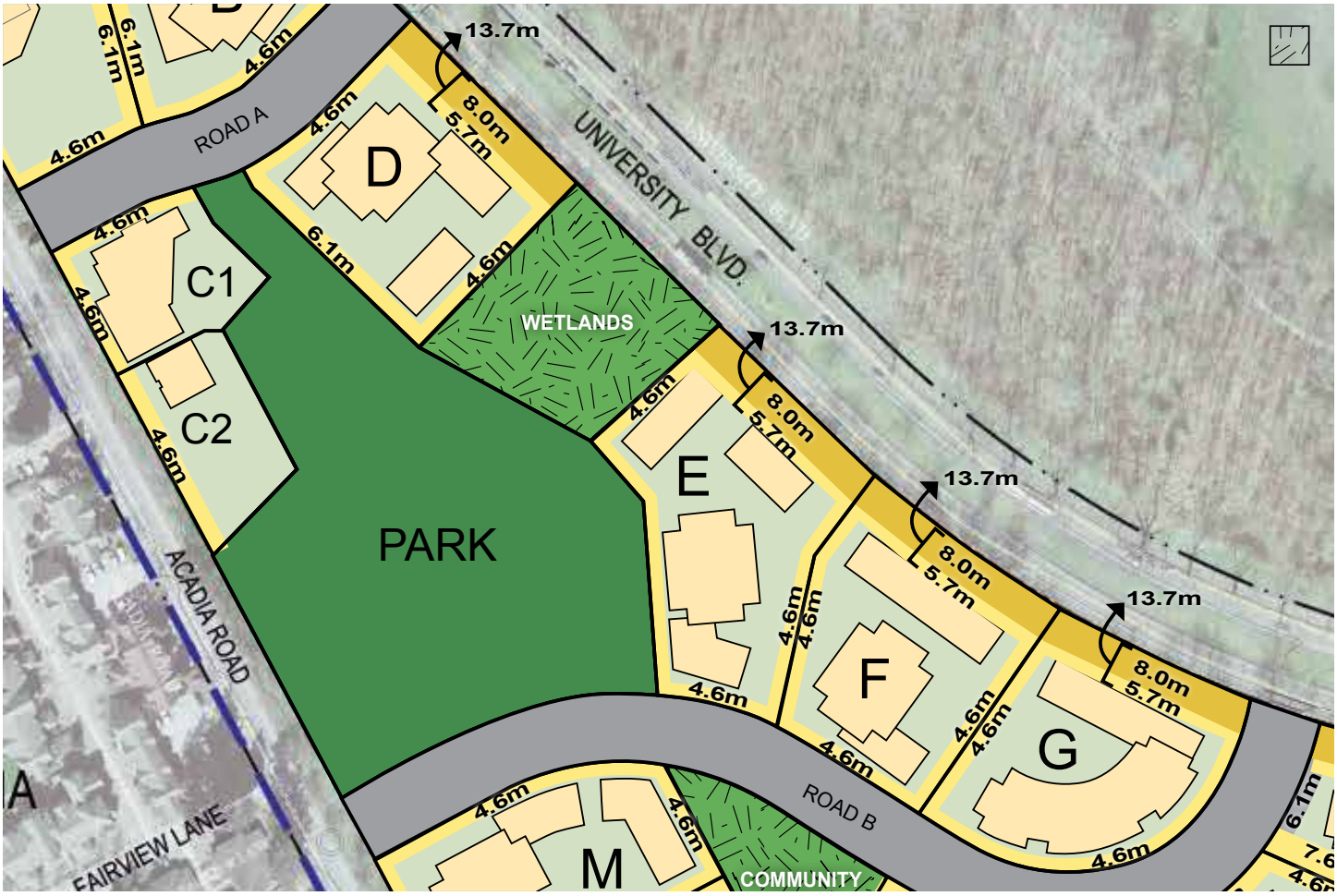
RESIDENTIAL FLOOR AREA (Parcel A)	2,322 Sq. m
RESIDENTIAL FLOOR AREA (Parcels D-M)	98,750 Sq. m
TOTAL RESIDENTIAL FLOOR AREA (Parcel A + Parcels D-M)	**101,072 Sq. m**



LEGEND

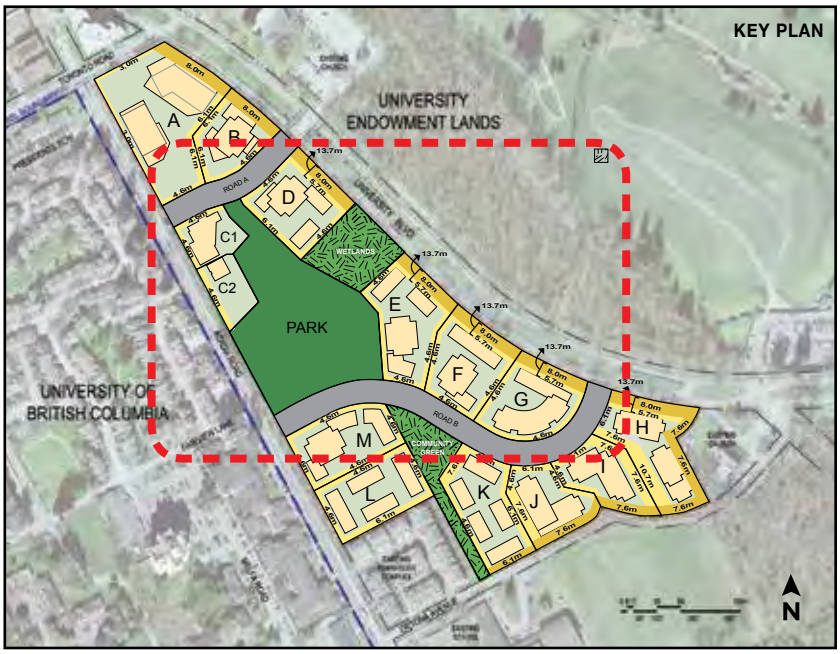
- Lots
- Parks
- Publicly Accessible Open Space
- Buildings
- Building & Structure Setback
- Underground Parking Structure Not Permitted
- UEL Boundary

SETBACK PLAN

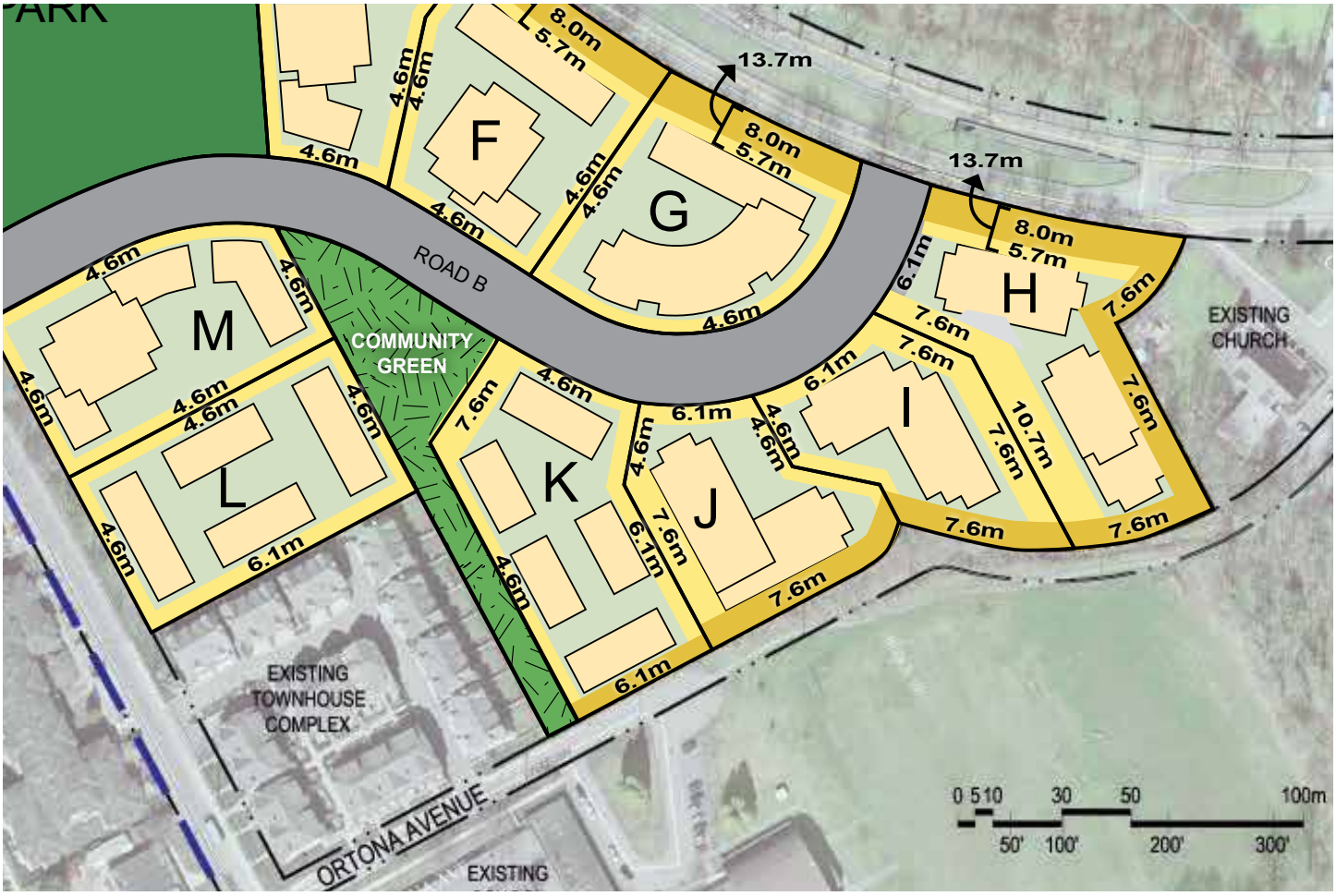


LEGEND

- Lots
- Parks
- Publicly Accessible Open Space
- Buildings
- Building & Structure Setback
- Underground Parking Structure Not Permitted
- UEL Boundary

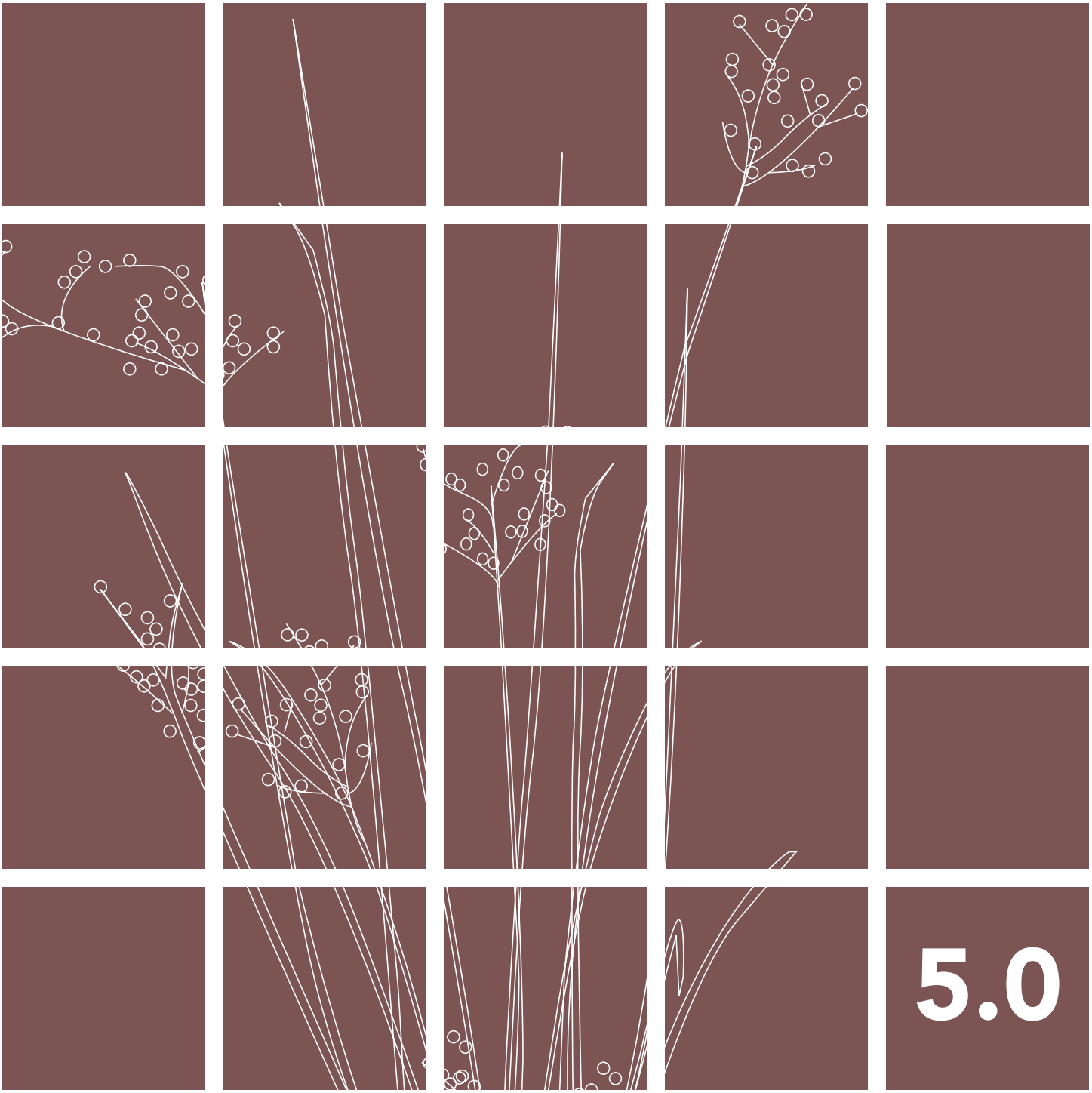


SETBACK PLAN



LEGEND

- Lots
- Parks
- Publicly Accessible Open Space
- Buildings
- Building & Structure Setback
- Underground Parking Structure Not Permitted
- UEL Boundary



5.0

ROADS

View North Along Acadia Road

5.0 ROADS AND TRANSPORTATION

5.1 STREET CHARACTER

The character of each street is dictated by a combination of factors such as scale and proportion, character of adjoining buildings, layout and organization, adjacency to open space, and finally, materials, furnishings, trees and other soft landscaping. However, an overall unity within Block F will be achieved through the use of a project wide kit of parts. The overall character will be an extension of the existing forest to maximize the visual and functional connections with the park and open spaces, the forest, and the Pacific Spirit Park.

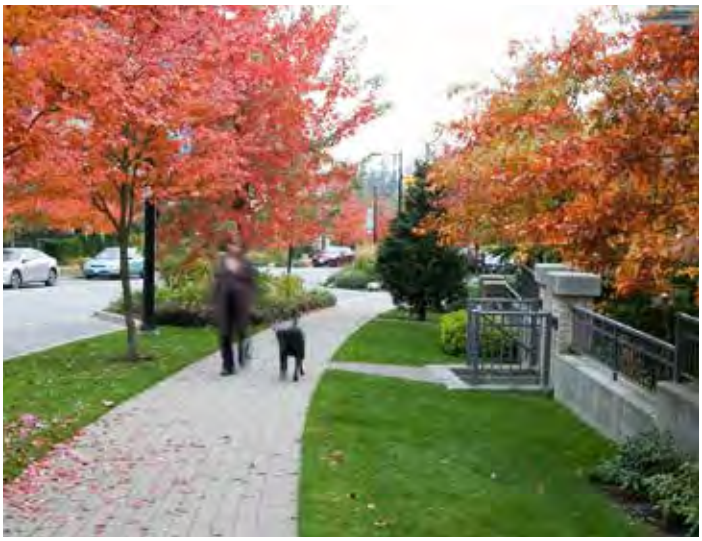
The surrounding and internal roads will include a sustainability component. This will be integral to the forest character through the inclusion of raingardens and connections to bioswales to detain and treat the runoff, the use of ecologically functional planting to support the rainwater management intent, the use of permeable paving in parking laybys and an extensive tree canopy over the roadways to minimize the heat island effect of the paving. Refer to Section 7.16 for information on the integration of rain gardens and permeable pavers.

5.2 SURROUNDING ROADS

Block F is surrounded on three sides by existing roads, University Boulevard, Toronto Road, and Acadia Road. In addition, Ortona Avenue and its partially undeveloped right-of-way bound the south property line of the site. Each road frontage will see significant improvements.

5.2.1 University Boulevard

The original character of University Boulevard at the forest edge will be recreated and improved with the development of Block F. A right-of-way will be taken along this property line to allow for a 12m wide vegetated buffer to the street. It will be planted with a mix of primarily evergreen with some deciduous trees to create a more diverse and native condition than originally existed. The narrow sidewalk that parallels the curb line will be replaced with a widened walkway that flows through the new forest edge planting. Bicycle lanes along University Boulevard will be retained as part of the development. Refer to Section 3.6.2 for more information.



SFU UniverCity Green Streets

Meandering Path with Evergreen and Deciduous Trees

On Street Parking Separated by Treed Boulevard

Example of Traffic Circle

Social Hubs Within the Road Right of Way

5.2.2 Toronto Road

Primarily the south side of Toronto Road will be redeveloped by this project. The curb will stay in the current location. Block F will provide a wide boulevard (2.0m) with new regularly spaced street trees and a 2.5m concrete sidewalk at the property line. This enhanced sidewalk treatment will also include robust plantings and signage. Combination street and pedestrian lighting will be provided. Due to the proximity with the Village Square and the short length of the block, social hubs will not be provided in the street right-of-way. Some new parking stalls will be provided on the north side of Toronto Road.

5.2.3 Acadia Road

Acadia Road will be redeveloped by this project. Block F will organize the on-street parking on both sides to provide parallel new on street parking laybys divided by landscaped bump outs and driveways from adjacent development parcels, new regularly spaced street trees, 1.8m sidewalk on the west side and a 3.2m multiuse trail on the east side. A traffic circle for traffic calming and ease of parking search at the intersection of Road B will also be added. As per the other road designs the east side of Acadia will have a range of site furniture including street and pedestrian scale lighting, multiple benches concentrated at social hubs, recycling and waste receptacles, and bike parking adjacent to open space areas such as the Forest Park and the Village Square.

5.3 INTERNAL ROADS

There are two internal roads proposed in Block F. Both bisect the site from University Boulevard to Acadia Road. Road A is north of the Forest Park and Road B is south of the park. Both streets have an enhanced public realm including site furniture, landscaped bump outs and a widened sidewalk on one side of the street. Raised and widened pedestrian crossings will be provided where the Sword Fern / Ivan Mann trail crosses both Road A and B and where other important pedestrian crossing occur (refer to Trail Hierarchy 3.7.5 for locations). These crossings will help reinforce the pedestrian priority and maintain the continuity of the trail across Block F.

At key places, such as the trail crossing, public access easements over development parcels and street intersections where people are likely to bump into each other social nodes or hubs will be provided. These areas

will include widened areas of paving with benches, lighting, bike parking and be associated with areas of planting. The purpose of the social hubs is to create opportunities for neighbours to meet and help grow the sense of their community. In other areas recycling and waste receptacles will be provided to help keep the neighbourhood clean. Pedestrian scale lighting will be provided for the sidewalk and social hubs illumination separately from the street lighting.

The streets will also include sustainable initiatives such as rain gardens, permeable paving in the on-street parking laybys and the lighting will be high efficiency lighting with cut offs to minimize light pollution. These will not only contribute to the environmental benefits of the development but will also provide high value aesthetic improvements over a typical street.

5.3.1 Village Road / Road A

Road A will have a traffic signal-controlled intersection at University Boulevard. A widened sidewalk on the north side will accommodate additional pedestrian traffic for the commercial/retail land uses. The adjacent development parcels will have driveway accesses marked by landscaped bump outs.

Road A is adjacent to the Village Square, Community Centre and the Forest Park. Reflecting this high prominence within the neighbourhood it will receive higher-level finishes and treatments than Road B. This will include additional site furniture, improved paving materials such as discreet areas of unit paving and directional signage for the public realm areas. As part of the traffic calming measures for Road A, backed in angled parking in front of the Community Centre will be provided. As with all other on-street parking within the Block F development it will be surfaced in permeable unit pavers.

Based on the traffic volumes that are expected on Road A, it is concluded that marked bike lanes would not be warranted on Road A. As a general rule, marked bike lanes are only useful if daily vehicle volumes are >3,000 vehicles per day, which is not case for Road A.

Instead of installing marked bike lanes on Road A, bike stencils (sharrows) will be installed on Road A to alert drivers of the presence of bicycles. In addition, near the intersection of Road A & University Blvd, a short-section of marked bike lanes will be provided between the westbound right-turn and the left-turn lanes, along with a bike box at the front of the right-turn lane to provide preferential treatment for cyclists.

5.3.2 Forest Park Road / Road B

Road B, south of the Forest Park will not be signalized at University Boulevard. A widened sidewalk on the north side will facilitate connections to the park. The adjacent development parcels will have driveway accesses marked by landscaped bump outs. Similar to Road A, the daily vehicle volumes expected on Road B does not warrant the need to install marked bike lanes. To alert drivers of the presence of bicycles, bike stencils (sharrows) will also be installed on Road B.

5.3.3 Sword Fern Trail Crossing at Road A + B

A raised and widened pedestrian crossing will be provided where the Sword Fern / Ivan Mann trail crosses both Road A and B. Enhanced paving materials to demarcate the space and reduce vehicle speeds will be used. These crossings will help reinforce the pedestrian priority and maintain the continuity of the trail across Block F. As key social hubs, these crossings will have a range of site furniture including benches, widened paving, lighting, and recycling and waste receptacles.

5.4 SUSTAINABLE TRANSPORTATION FEATURES

The Block F development will promote non-auto travel through the introduction of a number of sustainable transportation features.

Cycling Integrated Within the Community

5.4.1 Proposed Parking Supply

Parking requirements for the proposed Block F development have been carefully planned, taking into consideration relevant planning policies, current trends on vehicle ownership levels, as well as anticipated built-form and expected parking demand for the proposed Master Plan.

Excessive provision of parking would undermine the urban design and promote unnecessary vehicle trips. It is imperative that parking be provided at a level that meets the broad sustainability objectives, while ensuring the development is commercially viable. Parking is to be provided as per the CD-2 Comprehensive District.

It is also proposed that there will be additional on-street parking spaces created along Acadia Rd, Road A and Road B which will add short term spaces in close proximity to the community and commercial uses providing opportunities for short term visits to the Block F community.

The proposed Block F development aims to promote non-auto travel through the introduction of a number of sustainable transportation features such as Bicycle Parking and End-of-Trip Facilities, Car-Share Vehicles, Ride-Share Programs, and Multi-Modal Access Guide.

5.4.1.1 Accessible Parking

A minimum of one accessible parking stall will be provided in the surface parking lot on Parcel A. In addition, 2 accessible parking stalls will be provided in the angled parking in front of the Community Centre.

For underground parking, 2% of all parking stalls shall be designated as accessible stalls.

5.4.1.2 Electric Charge Stations

A minimum of 5% of the underground parking stalls shall have access to electric charging.

5.4.1.3 Bicycle Parking and End-of-Trip Facilities

Bicycle parking is planned for residents and employees in secure locations, while short-term visitor bicycle parking will be provided at building entrances or in the public realm.

In addition to bicycle parking, end-of-trip facilities such as showers and lockers will be incorporated into the community building for use by Block F commercial tenants and employees.

5.4.1.4 Car-Share Vehicles

Car-sharing clubs have developed significantly in the last 10-15 years in the Lower Mainland and allow people to have access to a car in their area without having to buy or maintain their own vehicle. Members are usually charged on a "pay-as- you-go" basis. Car share programs are encouraged for the Block F development as are car plug-in stations for electric vehicles.

5.4.1.5 Multi-Modal Access Guide

A Multi-Modal Access Guide (also called a Transportation Access Guide) is a document or set of documents that provide concise, customized information on how to access a particular destination by various travel modes, with special consideration of sustainable modes such as walking, cycling and public transport.

This guide will be disseminated to all residents at Block F, and could be posted to the residents' website(s), or be made available at a kiosk or bulletin board in the proposed community facility.

5.4.2 Roads and Pathways

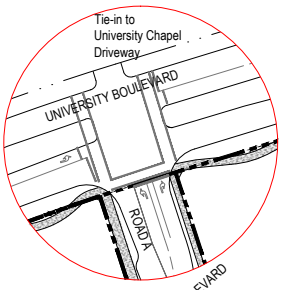
Two new road connections (Road A and Road B) are proposed between University Boulevard and Acadia Road through the site. These roads will be aligned in a dedicated road right-of-way to be ultimately owned by UEL. They will be designed to UEL standards, incorporating Canadian TAC standards and good engineering practices. The northern connection, Road A, will be built to a commercial standard with two 3.3 m travel lanes plus a separate right-turn lane at University Boulevard. On-street parking and new sidewalks with boulevards will also be provided. The southern connection, Road B, will be built to a residential standard with two 3.0 m travel lanes, on-street parking and new sidewalks with boulevards. Both roads will have 1.8 m and 2.3 m wide separated sidewalks, as well as connection pathways, and will enable pedestrian movement throughout the site. Signalized crosswalks will be included as part of the new fully-signalized intersection at University Boulevard and Road A and will allow pedestrians to safely cross for access to transit and facilities east of the site. The roads will have streetlights and native trees within the large landscaped boulevards. Curb articulations along Road A and Road B will act as traffic calming measures.

Many of the roads adjacent to the project site are proposed to be upgraded as part of this development. Full road construction is proposed for Acadia Road including road widening and a new sidewalk on the east side, upgrades to the curb and sidewalk on the west side to allow a multiuse trail, and street-lighting and on-street parking on both sides.

Half-road construction including a new curb, sidewalk and front and rear boulevards is proposed for the Toronto Road frontage, as well as a driveway access to the commercial area of the site. Upgrades to University Boulevard include left turn bays at Road A, Road B and Toronto Road for access into the site and removal of the existing left turn bay at the south end of the site. The intersection of University Boulevard and Road A will include a fully-signalized intersection complete with pedestrian crosswalks. The University Boulevard frontage will be upgraded to include a meandering pedestrian path and a landscaped boulevard with a rain garden. Geotechnical review of the existing road structures has been undertaken and will be relied upon during detailed design to determine the extent of road upgrades required to support the proposed increase in volume and usages. It is anticipated that the existing pavement structure of Toronto Road will be replaced as per the geotechnical report.

Vehicular access within the individual building parcels will be designed to the British Columbia Building Code standards and good engineering practices. The roads will allow for fire access and safe vehicular and pedestrian movements. The detailed design will be carried out as part of the Development Permit / Building Permit process.

PROPOSED STREET NETWORK AND INTERSECTION IMPROVEMENTS



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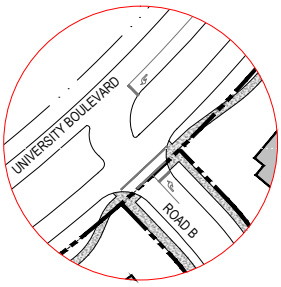

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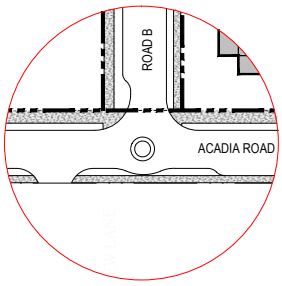

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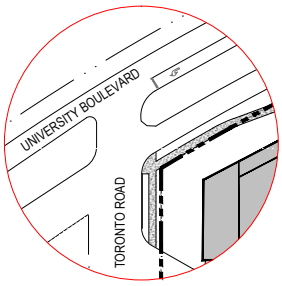

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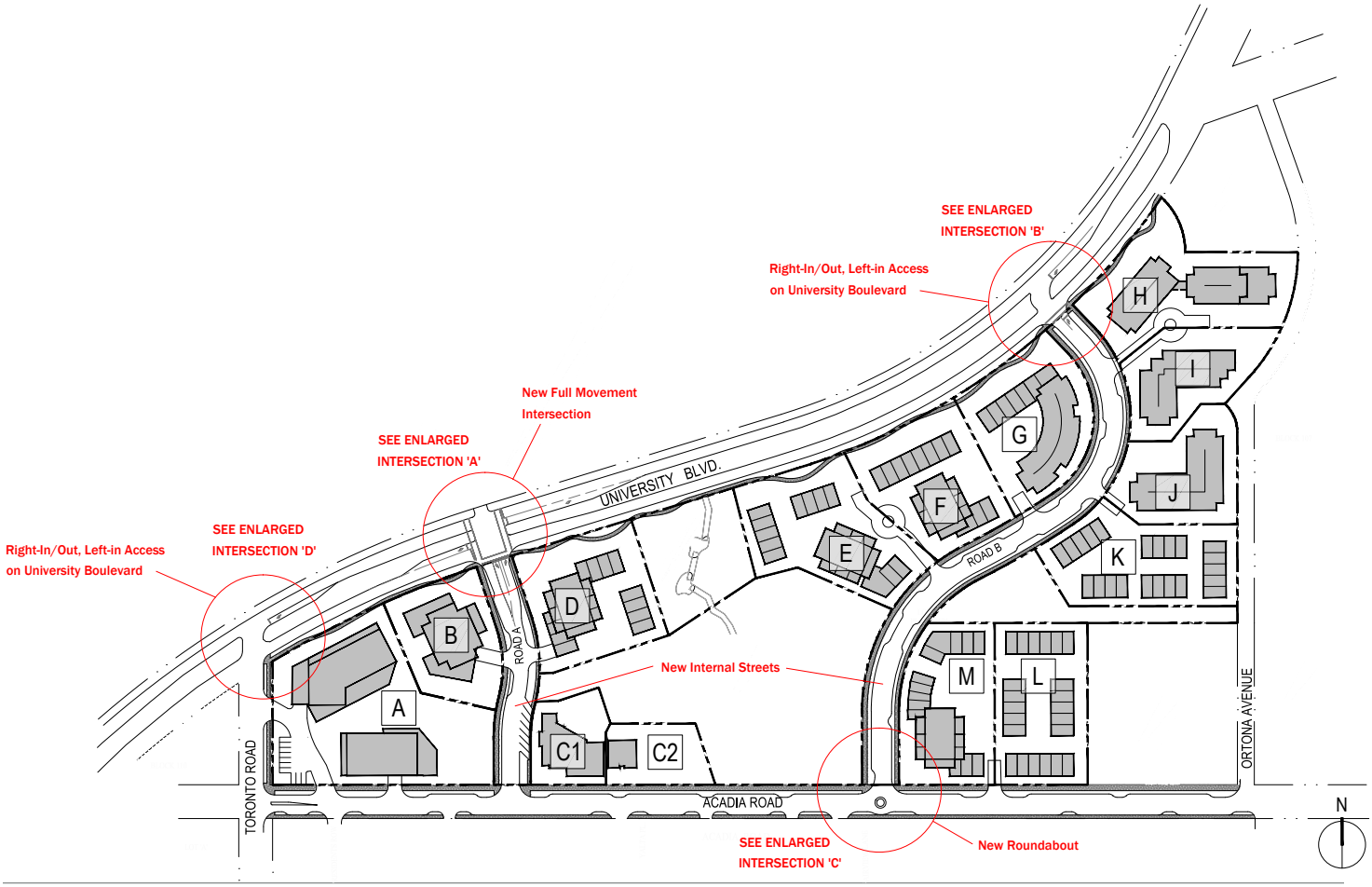
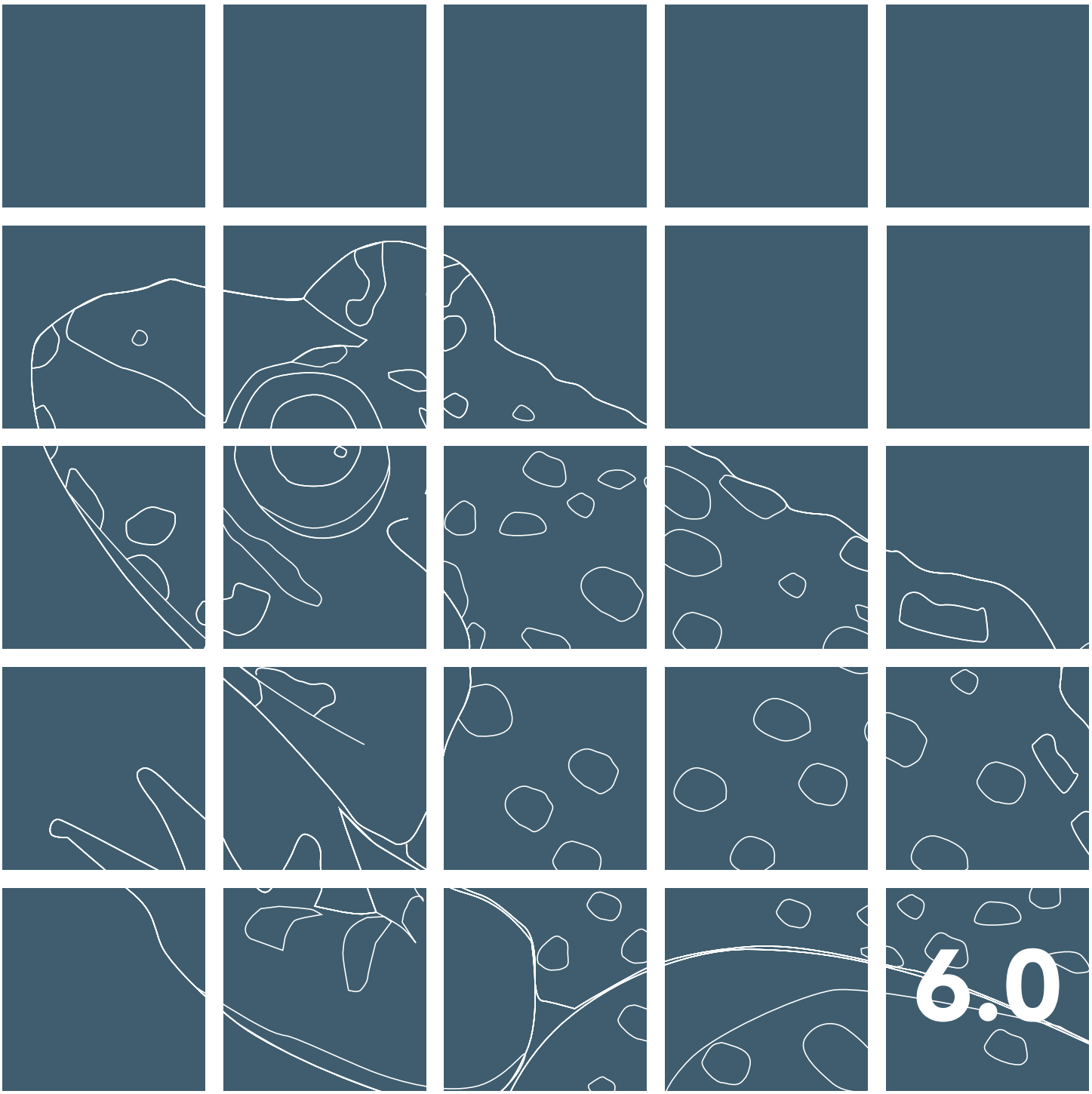




6.0

ARCHITECTURE

BUILDING AND LANDSCAPE WALL DEFINING A STREET EDGE

6.0 ARCHITECTURE

6.1 DESIGN PRINCIPLES

Principles which will guide the design of buildings are:

- Be responsible - to your neighbour and to those who pass by on the street
- Be inclusive – design to invite people in visually or actively
- Be respectful – of the history of the land and of the legacy that will be left behind

View Northwest Along University Boulevard

Private Outdoor Areas Opening onto Public Space

Public Seating on Private Land

6.2 SITE PLANNING/SITING OF BUILDINGS

The master plan of Block F works as a whole. Potential building shapes and locations are illustrated to support the success of the whole: framing open spaces, encouraging connections, providing street energy, respecting views from within and without, and moderating the massing and shadowing of buildings.

The site planning and siting of buildings and open space shown in the zoning document have been carefully considered to ensure the greatest success of the overall community.

- The commercial development and village plaza are located at the north end to provide easy accessibility to both the existing community and the new community which will come. Buildings are placed to create an open, vibrant public plaza
- Highrise sites are located closer to the tall stand of mature trees that will remain and to minimize shadowing onto adjacent developments. Townhouses are incorporated at the bases of the highrises and are located along streets and greenways to provide a more intimate scale and sense of neighbourliness
- The mid-rise and low-rise developments are located further to the south where they will offer a suitable transition to the adjacent community
- Provide a minimum 30m separation between highrises above the 6th storey
- Within sites, provide a minimum 10m separation between townhouse rows that face each other; provide a minimum 2.5m between ends of rows

Buildings Form a Courtyard

6.2.1 Setbacks

The zoning document dictates minimum setbacks from property lines. Note that some properties have more than one setback requirement: one is for the building setback, the other is for the underground parking setback to allow for larger planting to mature over time. These dimensions are set to establish the overall open space for the community and to allow for the necessary amount of landscaping in relation to the built form. They help to moderate between an intimate street presence and a healthy separation between public and semi-private uses. And they allow for important features such as the expanded boulevard and storm management along University Boulevard.

- » Place buildings so that they honor the open space and orientation of other, adjacent buildings and provide opportunities for buildings that will follow
- » Place buildings so that they define the street edge and frame the public realm and open space

Buildings and Landscape Walls Define a Street Edge

6.3 ARCHITECTURAL FORM AND CHARACTER

The general approach to the design of buildings and the landscape is to be warmly contemporary, appropriate to its West Coast setting. There should be an integration of natural materials and colours to respond to the forested context in the adjacent area. It should be of its time and have a lasting quality.

The scale of buildings should be responsive to the generally smaller-scaled and more intimately-textured architecture found in the University Endowment Lands.

View from Building Entry into a Courtyard

Buildings Define Greenbelt Edges

Buildings Define the Edges of Lawn and Walkways

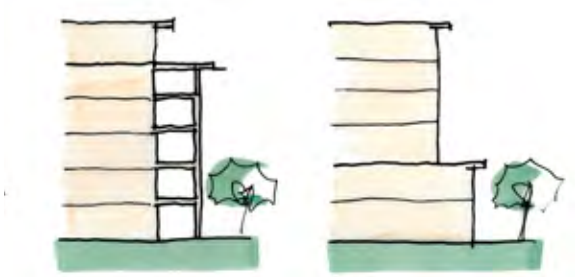
Upper Storey Set Back to Reduce the Building's Impact

More Intimately Scaled Building Works Well Next to Public Greenway

Change in Materials to Reduce the Scale of a Building

Strong Vertical and Horizontal Elements Break up a Building's Mass

- Create buildings and landscaping that are at a pedestrian scale and that offer delight to passers-by
- Modulate buildings to reduce the impact of their mass by incorporating changes in facades, setting back of upper levels, incorporating significant vertical and horizontal elements, or introducing mid-level parapets to reduce the overall scale



Significant parapet at 5th floor

1st and 2nd floors accentuated

- Block F is located in a rain forest. Ensure that the design of buildings recognizes this feature
- Provide designs that protect the building from rain and rain's weathering aspects by incorporating generous roof overhangs and other architectural elements
- Design buildings that provide rain protection for front door and lobby entrances, bicycle parking and some outdoor gathering places
- Integrate elements in the design of buildings and landscaping that create a strong sense of arrival at street corners and at principal entrances to the community

Generous Roof Overhangs Incorporate

6.3.1 Building Materials

The palette of building materials used on building should be honest and appropriate to this setting. There is no prescribed architectural style and it is hoped that each building will feel like part of an overall whole while adding its own personality.

- All buildings should include the use of real brick or natural real stone
- All buildings should incorporate real wood – glulams and cedar are recommended for their local nature, appearance and longevity – in areas where the wood will be protected and will provide a warmth and richness suitable to the West Coast setting
- Cementitious siding, engineered stone and metal or glass panels are all exterior materials that are acceptable
- Textured or painted concrete is acceptable if they are restricted to a minor portion of the building and will add to the warmth and character of the building
- Avoid mirrored and highly reflective finishes on solid surfaces
- Limit the palette of materials – avoid using too many different materials in order to provide a calm, cohesive appearance
- Ensure that buildings have a richness of appearance and offer delight and charm
- Detail buildings to provide longevity, recognizing impacts from weather and usage

Cedar Soffits Protected from Weather

Detail Buildings for Longevity

Use of Real Stone

Avoid Large Blank Expanses of Wall

Landscaping Used to Create Privacy

Separation of Public and Semi-private Spaces

6.3.2 Integration of Architecture with Landscape

Design buildings to integrate the hard and soft landscaping with the building. Blend public-to-private so that each component benefits from the other. In a number of locations, easements have been established on private property for public pedestrian access.

- Provide clear lines of demarcation between the publicly-accessible areas and private areas
- Allow for visibility from the semi-private areas to the publicly-accessible spaces for security and neighbourliness. Follow good CPTED (Crime Prevention Through Environmental Design) principles
- Design buildings so that they frame outdoor spaces on the site
- Use buildings to create smaller and larger outdoor spaces and courtyards that are seen as outdoor rooms, and use buildings to modulate between various sizes and types of outdoor spaces
- Provide opportunities for sitting, including benches and sit-height walls, on private property where they are at corners, near entries and adjacent to greenways
- Create "parkettes" and other features at exposed corners of sites that, while they are on private land and will be maintained by the building owners, can be used by the general public

Building Well Integrated with the Landscape

Soft Transition Between Public and Private

Successful Integration Public Access Through Private

Successful Integration of Landscaping and Public Art

Layered Landscaping Between Parking and Building

Outdoor Terraces Raised Above Street Grade

6.3.3 Integration of Water Features

Sustainable water features are encouraged, not required, and should consider the use of captured rainwater for supply and aesthetics, or flow through, to fit with the overall design intent. Explore opportunities to visually or functionally connect to the overall rainwater management system. Ensure there are no impacts to downstream water quality and temperature if a connection is provided.

The creative use of stormwater to be captured, cleaned and used for down-stream benefits is one of the defining features of this development.

- Direct the incorporation of water into the landscaping of private developments, especially at prominent corners and adjacent to public greenways
- Find ways to utilize water in building design and landscaping; a range of approaches into the way in which water is utilized – formal or informal, still or moving – is encouraged
- Attractive, soft lighting of water features is encouraged, both for after-sunset enjoyment and for safety. Ensure that water features are safe for all ages

Successful Integration of Hard and Soft Landscaping on Retail Street

Outdoor Restaurant Seating

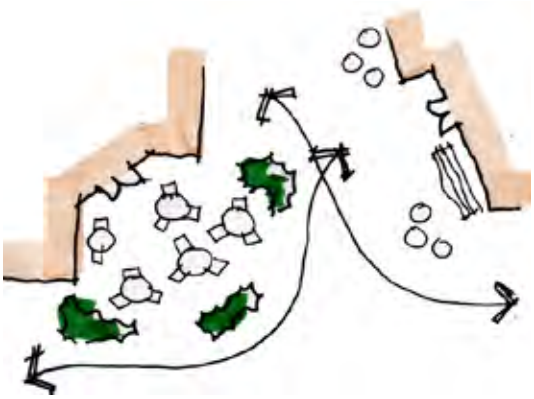
6.4 VILLAGE CENTRE

The Village Centre, along with the Community Building, will provide a heart and focus to the community. The design of buildings, open space, plazas, parking and landscaping should support the community benefit of these features. There is a strong expectation that the final design of the Village Centre incorporates the elements shown in the zoning document.

View North through Village Square

Landscaping Used to Define Smaller Outdoor Areas in Larger Settings

Outdoor Plaza Areas with Seamless Public Access



Integration of Outdoor Commercial with Public Access

The Village Centre is both an entrance to the overall site and the location of a continuation of pathways and trails on the site. Right-of-ways are registered to ensure that public access is maintained through the Village.

The locations of the buildings and uses in the Village, as shown in the zoning document, have been established to allow for the optimal utilization of the plaza space.

The Village is intended to be integrated with and an extension of the Community Building. Design the plaza, the roadway of Road A and the front of the Community Building so that activities in each can fluidly mix. It is understood that there may be events which will benefit from a temporary closure of Road A between the Village Square and the Community Building.

Provide clear and easily seen connections between surface parking and plazas, between open spaces and the bus stop, between various uses within the Village.

Surface parking is to be located at the north end of the Village. A maximum of 20 surface stalls is permitted. Access to the loading bay is to be incorporated into the drive aisle of the surface parking.

6.4.1 Village Square

The Concept Plans show the preferred locations for open and outdoor spaces, pedestrian access routes, surface parking, locations of entrances to underground parking, and locations of lobbies for residential uses above the commercial. It should be recognized that users of the Sword Fern Trail will often continue through the plaza. Allow for this seamless use.

Landscaping Incorporated into Retail Plaza

Outdoor Courtyard Adjacent to Public Plaza

- Design the plaza areas to allow for a variety of uses and sizes of space, abundant flexibility and a welcoming nature
- Provide opportunities for outdoor seating that capture the sunshine and which will provide animation in the plaza
- Some portions of the plaza will allow for retailers to open their storefronts, display goods in the plaza, and have tables and chairs for outdoor food and beverage service; these are encouraged. Ensure that furnishing and displays do not disrupt pedestrian routes
- Allow for the integration of outdoor commercial uses with open public access
- Incorporate landscape beds and planters into courtyard and plaza areas
- Use a variety of hard and soft landscape elements to define smaller outdoor areas within the larger plaza
- Provide a variety of seating options – fixed and movable – for patrons and the general public to use

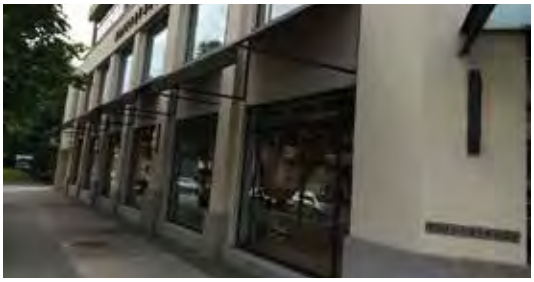
Weather Protection in Retail Area

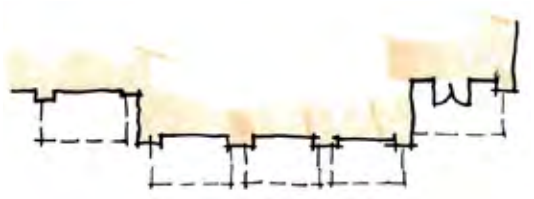

Outdoor Covered Areas

6.4.2 Commercial/Retail

Design buildings so that they form a variety of outdoor spaces that can be more intimate and that can allow for a more expansive use. Ensure that outdoor spaces benefit from sun exposure. Use scale, rhythm and materials that support a comfortable pedestrian scale.

- The retail buildings have no back sides that is, they are exposed on all four sides. The architecture must respect the aspect of this exposure; all sides should be designed to address the street and should not look like the back of the building


Avoid Long Runs of Retail Storefronts


Provide Smaller Scale Texture to Retail Storefronts


Landscaping Well Integrated into the Retail Plaza


Avoid Long Retail Facades Without Landscaping and Weather protection


Back of Building Provides Frontage on the Street


Retail Storefronts Integrated with Awnings and Signage

Successful Lobby to Residential Above Commercial

- Notwithstanding, the main entrances to the retail uses should be located on the plaza. Secondary access can be provided from the surrounding streets
- Find ways to reduce the bulk of larger commercial spaces though the use of variations along the length of a storefront. Provide a smaller scale texture to the storefronts of the retail. Avoid long, unbroken expanses of storefront glazing
- Incorporate canopies and other weather projection for retail spaces. Explore opportunities for weather-dependent umbrellas and displays to liven up the plaza space
- Provide courtyard areas and opportunities for outdoor display and outdoor furniture. In situations where outdoor patio and table spaces are proposed, provide designs that can allow for the use of outdoor heaters in a way that integrates with the design of the building
- Consider, where appropriate, the design of buildings that allow their storefronts to open onto courtyard and plaza spaces, to encourage the integration of indoor and outdoor uses

Residential Set Back from Commercial with Usable Outdoor Private Space

Residential Set Back from Commercial Edge

Residential Over Commercial

6.4.3 Residential above Commercial

Residential uses are permitted above the commercial buildings on Parcel A. Residential is the principal use on Parcel B, with a small retail component at grade level on the side of the building that faces the Village Square.

- Locate lobbies to the residential development in clearly identifiable locations that provide easy addressing on adjacent streets. Avoid residential lobbies that break up the retail storefront continuity
- Set back the upper residential storeys from the line of retail on the plaza sides of buildings. The use of landscaped patio areas in those locations where the residential sets back from the retail is encouraged
- Consider providing duct and ventilation provisions in the residential portion of the building for possible future uses of the retail spaces below

Loading Bay with Doors

6.4.4 Loading/Garbage

- Garbage collection and recycling areas are to be contained within a building or in the parkade
- A loading bay for a larger format retailer must be incorporated within one of the two buildings
- A surface loading bay with landscape screening for smaller vehicles can be included in the open retail parking area
- Provide robust landscape, design treatments and attractive doors to screen the loading bays and garbage rooms when not in use, on this prominent frontage
- Provide adequate ventilation of garbage rooms that will not negatively impact adjacent uses and users
- Waste storage space minimums will be based on Metro Vancouver's Multi-Family Residential and Commercial Recycling and Garbage Storage Space and Access Specifications

Garbage and Recycling Enclosed within a Building

6.4.5 Signage

Signage regulations will be included within the Land Use, Building and Community Administration Bylaws. A development permit for an integrated and comprehensive signage plan will be required as part of the development permit application for the buildings. The signage is to be integrated with the building design.

- Prepare an overall signage package that coordinates the design of individual tenants into an overall signage design
- Signage which reflects the individual character of the retailer is encouraged

Retail Hanging Signage

Building and Landscape Lighting

- Wall mounted and hanging signage is encouraged. Provide front or ambient lighting for the signage. Adhering signs and posters to the inside of the glazing of commercial units will not be permitted.
- Pylon and internally lit 'box' signage will not be permitted
- Signage prohibiting surface visitor parking should be provided for residential buildings
- Signage will be provided for accessible parking spaces, bicycle parking/end of trip facilities, electric charging stations, and car-share spaces

6.4.6 Building Lighting

Incorporate warm lighting – wall mounted and recessed – on the commercial buildings to provide low levels of general lighting to support the safe use of the plaza spaces after dark.

- Provide building lighting that provides sufficient ambient lighting but that is not over-lit, harsh or glaring. Incorporate good CPTED principles in the design of lighting
- Avoid harsh lighting from within retail spaces
- Provide lighting that accentuates the landscaping and water features. Use landscape lighting to supplement the building lighting and provide the safe use of publicly-accessible spaces after dark
- Lighting should incorporate shrouds to restrict spill over. Avoid lighting which shines up

6.4.7 Parking Garages

The locations of entrances/exits from the underground parking are shown on the Concept Plans.

- » Design these entrances so that they are clearly seen and easy to find
- » Treat any portion of the walls and ceiling of the parkade entrances that are visible from the street as a continuation of the exterior finishes of the building
- » Ensure that there are no recesses or obscure areas that cannot be readily seen from other parts of the plaza
- » Locate exit stairwells from the parkade to provide quick and easy access to the retail stores and to the Community Building across the street
- » Design the pedestrian accesses to the parkade so that they can be secured when public access to the parkade is closed

Ground Oriented Townhouses

6.5 MULTI-FAMILY RESIDENTIAL BUILDINGS

The zoning document indicates the size, height, use, setbacks and site coverage for each parcel. The Concept Plans in these Design Guidelines indicate preferred locations of building entries, townhouses, open spaces and other features. Refer to each of the above in addition to the guidelines below.

The siting of buildings on each parcel has been developed to create a unified and successful overall development. Any changes to this must be carefully considered and supported to show that the intent of the master plan and the guidelines are being upheld or enhanced.

Ground Floor Apartment with Garden Gate onto the Street

Individual Gates for Ground Floor Apartments

Individual Entry on a Street

Dramatic and Clear Building Entry

6.5.1 Ground Orientation

Note in the Concept Plans requirements for street-facing doors to townhouses and apartments.

- Individual doors leading to streets and greenways from first-floor units are strongly encouraged. Include individual garden gates to each home, with direct access to streets and greenways
- Provide usable outdoor area for the use of each unit and in a way that facilitates social interaction
- Setting the elevation of outdoor, private patios higher than the adjacent sidewalk is encouraged. The maximum grade difference between sidewalk and outdoor patios should be 0.9m or less unless it is modulated with landscaping and/or stepped planters
- The schematic plans show locations in which townhouses should be located. These are typically along streets and adjacent to greenways
- Townhouses are permitted and encouraged to be located closer to the street than buildings of four and more storeys

Avoid Wide Expanses of Hard Surfaces in Front of Buildings

Highly Visible Lobby Entry

Building Entrance Visible from Street

6.5.2 Building Entries

Enhance the transition from public spaces to front doors with attractive hard and soft landscaping, water features and similar. (Refer as well to Section 6.)

- The front doors to lobbies of buildings should be readily visible from the street or internal access road. Provide generous covered areas at building entries.
- Provide individual townhouse and ground floor apartment entries directly from streets and public greenways where indicated on the Concept Plans
- Use gates, landscaping and fencing to define the separation between public and private
- Avoid large areas of hard surfaces in front of buildings

Highrise with High Volume Entrance

6.5.3 Highrises/Highrise Sites

Townhouses are to be located at the ground level of all highrise parcels. The locations of these townhouses are indicated on the Concept Plans and are intended to provide a finely-textured pedestrian scale for the community, along with private outdoor spaces that provide animation and overview onto the street.

- A slender profile of highrises is encouraged. The maximum floor plate size of any highrise should be 706 square metres or less
- Stepping and/or other architectural initiatives to reduce the overall mass of the highrise are encouraged
- Provide clear and open views from public street or interior lane to the lobby and front door of the highrise
- Integrate entry lobbies with views through to forest/water/courtyards
- Taller lobby spaces that permit a blending of outdoor to indoor are encouraged
- The tops of highrises should be part of the design of the building and not merely a mechanical appendage at the top
- Screening and other architectural elements above the habitable area of the building are not included in the height restrictions noted in the bylaws

Highrise with Strong Entry Utilizing Water and Real Wood

Rooftop Gardens Set Back from Building Edge

Landscaping Between Street and Building

Successful Division of Private Outdoor Space from Public Walkway

Successful Transition between Public and Private

6.5.4 Roofs

For buildings up to 6 storeys, generous roof overhangs are encouraged.

- Flat roofs are preferred but not mandated
- While not required, rooftop patios and gardens and other architectural treatments are encouraged, especially on those roofs that will be seen from higher buildings
- When rooftop patios and gardens are incorporated, set them and their railings back from the edge of the building so that they are not too apparent
- All roof-top mechanical equipment must be screened on all building types. Design the mechanical equipment and its placement to minimize noise. An acoustical engineer will be engaged at the Development Permit stage to decide use on noise impacts and noise mitigation strategies

6.5.5 Outdoor Private Spaces

- Large terraces, balconies and rooftop patios are encouraged. Provide usable ground floor terraces along streets and greenways
- Incorporate gates for individual access to the individual terraces
- Create some aspect of privacy through landscaping rather than solid walls
- Designing street-facing patios to be elevated above sidewalk grade to provide some separation between public and private uses is encouraged. Where an elevation difference is not possible, provide attractive gates, fences and landscaping to provide a separation
- Maximize outdoor patio and balcony spaces through the use of transparent or translucent materials for balustrades
- Animate interior private and semi-private courtyard spaces by incorporating landscaping and seating elements, including children's play equipment

6.5.6 Parking Garages

The master plan indicates those sites that are to have shared parkade ramps with an adjacent development. The ramp will be constructed by the first development and will utilized by both sites.

- Provide some cover or trellises for and enhance the parkade entries
- Treat them as front doors and make them attractive to those looking down or passing by
- Special design features for the side walls of parking ramps are strongly encouraged
- Where the tops of parking garages are above the finished grade of its surrounding, provide finishes to the exposed edge of the parkade and/or provide landscaping to soften the visual impact

» Visitor parking spaces are to be incorporated in the underground parkades of each building. Only short term drop of spaces will be permitted at grade

» Beyond the bylaw requirements for bicycle parking, provide opportunities for end-of-trip facilities, car-share vehicles, ride-share programs.

6.5.7 Residential Garbage

All garbage and recycling for residential buildings must be accommodated within the building, typically in the parkade. Waste storage space minimums will be based on Metro Vancouver's Multi-Family Residential and Commercial Recycling and Garbage Storage Space and Access Specifications.

» Provide a marshalling area adjacent to the top of the parking ramp to place garbage containers for a short term while they await the garbage truck

» Integrate the marshalling areas into the hard landscaping so that they work even if not be used for temporary placement of garbage containers

6.5.8 Building Signage

» Integrate building signage with the entries closer to the street to aid in way-finding

» Integrate the signage with landscaping

» Generally only one sign with the building name and civic address will be permitted at each building entrance

» All property addresses and unit numbers are to be visible day and night for emergency response personnel

Parkade Ramp with Special Approach to Design

Shared Parking Garage Entry

Building Signage Close to Street

Signage at the Street

Trellis Over Parkade Entrance

6.6 COMMUNITY CENTRE AND DAY CARE

6.6.1 Community Centre

A Community Centre will be provided as part of the rezoning of the site. The Community Centre building will be the subject of a programming, planning and design process, which will involve a qualified professional programmer to undertake an architectural programming phase and an Architect with experience designing community centres. The Community Advisory Council will be invited to establish an advisory building committee to consult with the UEL Administration and the Block F Owner on the programming, planning and design of the Community Centre building.

The building will be primarily one storey with a smaller second storey portion. It is to be approximately 1,394 square metres of gross area. Without limiting the programming, planning and design process, the Community Centre building may include:

- Main entry/reception/informal lounge
- Administration offices
- Gymnasium, including dedicated storage
- Multi-purpose space
- Kitchen/catering space
- Medium meeting/activity room
- Small meeting/activity room
- Fitness centre
- Washrooms/showers/change rooms
- Janitorial space

The building design should be flexible to accommodate a variety of different uses and occupants at the same time. Spaces that open up to each other permanently or temporarily are encouraged for the multi-purpose uses. Provide a logical sequence of spaces that allow for easy orientation by users.

The building should reflect a west coast contemporary feeling and be designed to be welcoming to the community. The use of large timbers and stone on the exterior, along with water elements, is encouraged. Interior materials should be durable and low maintenance.

Provide windows that open for natural ventilation. Design the building to protect interior spaces from excessive sun gain. Where large wall elements, such as for the gymnasium, are exposed to view, create interesting facades that incorporate interesting materials, green walls, art glass or other elements that are attractive to viewers. The kitchen/catering space should be positioned to provide easy access to outdoor users and gatherings.

The building will be LEED® Gold certified. The roof of the building should be designed to capture rain water and direct it to holding tanks for use in irrigation. The materials in the building are to be of high quality and durable.

Dedicated parking for the Community Centre will not be required on this site. Provide seven parking spaces on the street directly in front of the building, a minimum of two of which shall be provided as parking spaces for persons with disabilities. Twenty three stalls of parking for Community Centre visitors and staff is to be provided in the underground parkade on Lot A. At the southwest corner of the parkade, provide easy and visible access from the underground parking stalls to the Community Centre. No dedicated loading bay is required on this site.

6.6.2 Child Day Care

The child day care building is located adjacent to and will be independent from the Community Centre. It is to be a single or two storey building of not less than 372 square metres of gross area and be able to accommodate not less than 40 young children. The intent of the child day care building is to address the day care needs of the residents of UEL. The design of the building should incorporate the following:

Community Centre Concept - View of Great Porch Looking South

Community Centre Concept - View of Great Porch Looking East

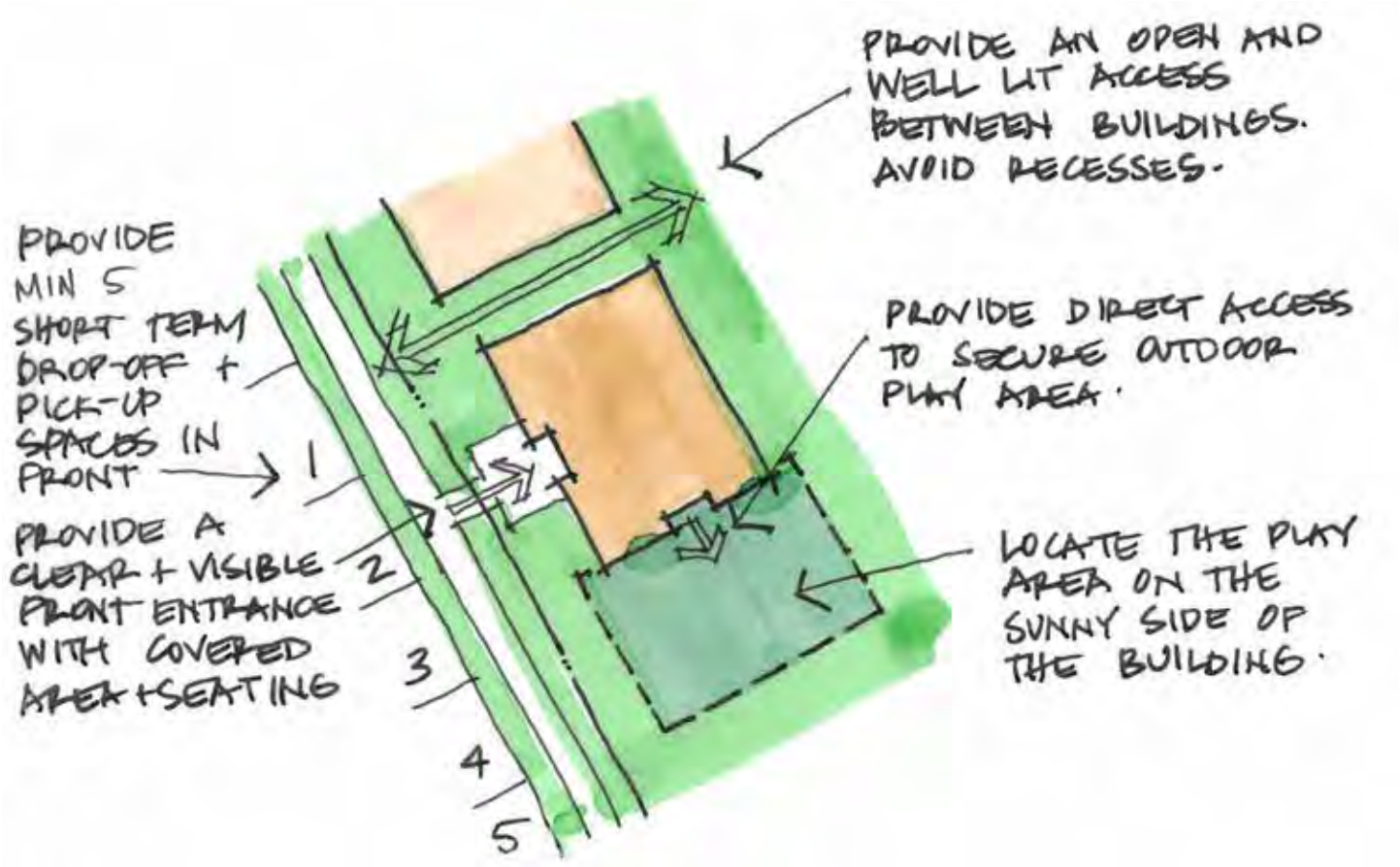
SITING

- The building must have its own private entrance close to and easily visible from the street. Five or six short term, street side drop-off parking sports are to be provided directly in front of the main entrance
- Locate a secured outdoor area to the south of and with direct access from the indoor portion of the childcare. Provide fencing around the outdoor area which restricts direct access from the street to the outdoor area. Ensure that the outdoor area will have lots of sunlight during daytime use
- No additional parking spaces for staff or users are needed on site. Curbside parking along Acadia Road will provide parking for visitors. Parking for staff will be accommodate in the underground parking beneath the commercial village

BUILDING DESIGN

The building should relate architecturally to the design of the Community Building. While independent, the pair of buildings should be designed in a similar architectural style and using similar exterior building materials. The building will be required to meet LEED® Gold standards.

- Provide a generous covered area and a convenient seating area outside the main entrance
- Provide windows in the building which will allow for easy visual surveillance to the short term parking and entrance area
- Provide a flat roof to the building (there may be more than one level of roof) to allow for the greatest amount of sun to shine onto the outdoor areas to the east of the building
- Provide windows on the east, south and west facades of the building to allow for views into and out of the building. Provide openable windows for natural cross ventilation



- » Incorporate building and landscape lighting that will support clear and safe access to and around the building.
- » No dedicated loading bay is required on this site.
- » Garbage and recycling areas must be incorporated within the building.

6.7 PRODUCT/UNIT MIX

At the present time no decisions with respect to unit mix have been made given the fact that in due course, future detailed planning, construction and marketing of individual residential projects will be completed. As such, these future decisions will be influenced in part by the future owner, the real estate dynamics at the time of future marketing efforts, and the work done to plan the Block F site to allow for a wide range of residents.

The proposed unit mix of each building will vary based on the market dynamics and demand exhibited for earlier phases. A variety in unit sizes will ensure the individual buildings and the larger Block F development will appeal to a wide range of residents.

Smaller units may be located in the retail village including the below market and market rental housing components of the development.

Townhouse offerings in locations such as this remain popular and contribute to the supply of larger units appropriate for families. It is believed there is sufficient demand to support the proposed number of townhouses and possibly more in this geographic location. Lock-off suites will also be encouraged throughout and where practical.

The intent is to develop housing choices suitable for families of all types, ages and incomes. Where possible, the number of ground oriented units will be maximized and overall the residential units will define, animate and overlook streets and public spaces. As well, residential units for seniors, singles, and renters are encouraged.

6.8 ADAPTABLE UNITS

Residential units with the exceptions of townhomes will require a commitment to design certain units to a minimum adaptable dwelling standard. Adaptable units will facilitate seniors with future mobility requirements.

6.9 NOISE GUIDELINES

The main objective of this section of the Design Guidelines is to provide the UEL Administration with confidence that appropriate consideration will be given to potential environmental noise impacts on the surrounding community and on residents of new development during the development of each of the proposed parcels in Block F. These guidelines set out high-level requirements that each owner must follow, grounded in data measured on site as part of the Building Permit process.

Some of the noise sources that are covered by these Design Guidelines include:

- » Building equipment
- » Emergency generator testing
- » Garbage collection
- » Restaurants, clubs, pubs, extended hours liquor establishments

The provisions of the guidelines are weighted for nighttime or weekend noise generation when the ambient noise levels are quieter and the receivers are more sensitive. Maximum noise levels are limited or prohibited for nighttime period and the allowable hours are reduced on weekends.

6.9.1 Noise Impact Considerations

There are three major directions of noise concern with any proposed new development:

- » Impact on existing constructions due to new development
- » Impact on the new development due to new development (stages)
- » Impact on the new development due to the existing ambient noise environment

The sequencing of road improvements and infrastructure will be coordinated with UEL so as these construction-related items coincide with development of specific parcels.

6.9.2 New Building Equipment

New buildings will have mechanical and electrical equipment that may generate noise which could impact the existing neighbourhood. Some of the typical equipment for residential construction includes:

- Heating Ventilating and Air-Conditioning (HVAC) equipment such as:
  - Chillers
  - Air-Handling Units
  - Rooftop Units
  - Exhaust Fans
  - Cooling Towers
  - Condensing Units
- Emergency Generators

Some of the typical equipment or other sources of noise for commercial construction includes:

- Heating Ventilating and Air-Conditioning (HVAC) equipment such as:
  - Chillers
  - Air-Handling Units
  - Rooftop Units
  - Exhaust Fans
  - Dry Coolers
  - Cooling Towers
  - Condensing Units
  - Refrigeration Equipment
- Emergency Generators
- Garbage/Refusal Collection

All rooftop mechanical equipment must be enclosed (e.g. with barricades or walls) to control noise.

6.9.3 Noise Areas And Equipment Impacts

Within Block F, Lots A and B are within the Block F Activity Area. For Lots C1, C2 and D, these shall be considered within the Block F Intermediate Area, while all other Lots shall be considered in the Block F Quiet Area, as indicated by the Noise Areas map. All development within these areas shall be subject to the requirements of this Section. In addition, subject to certain conditions and subsequent approvals, temporary event areas may also be created.

As part of an application for a Development Permit, owner of new building lots shall, at their own cost, provide evidence in the form of a report and recommendations prepared by a qualified professional trained in acoustics and current techniques of noise measurements recommending site specific noise mitigation measures applying to living and amenity spaces in the building, as well as to adjacent buildings including, as appropriate, both active and passive measures. As well, at the time of building permit applications, the owner shall, at its own cost, have the qualified acoustic professional certify that the plans submitted include such site specific noise mitigation measures referenced in the earlier report. In particular it shall be demonstrated that sufficient mitigation in the design of the building and its equipment will ensure that no equipment or other noise source shall make, cause or permit to be made or caused, continuous sound:

Summary of Acceptable Continuous Noise Limits (Decibels) in Block F

Source Location Area	Receiver Location Area					
	Quiet		Intermediate		Activity	
	L_{eq}, Day	L_{eq}, Night	L_{eq}, Day	L_{eq}, Night	L_{eq}, Day	L_{eq}, Night
Quiet	55	45	60	55	60	55
Intermediate	55	45	60	55	60	55
Activity	55	45	60	55	65	55

In order to ensure that the Acceptable Continuous Noise Limits identified above are satisfied for both the existing residences and new development, taking into account all cumulative effects of the proposed developments, the qualified acoustic professional shall prior to Substantial Completion complete the following noise monitoring procedures:

- Pre-construction baseline noise monitoring of the existing noise environment along Acadia Road, Toronto Road and the southwest corner of the Block F Lands.
- Upon commissioning of each building, follow-up noise monitoring which will be repeated at the adjacent receiver location areas.

The location and number of each measurement site for both noise monitoring procedures will be determined by the qualified acoustic professional, to the satisfaction of the Manager. The results of the follow-up noise monitoring procedure shall satisfy the Acceptable Continuous Noise Limits for the Source Location Area in which the building is located, otherwise the owner shall take corrective actions and additional follow-up noise monitoring by the qualified acoustic professional until compliance is demonstrated, to the satisfaction of the Manager.

For the purposes of this Section, any noise levels listed as L_{eq}, Day and L_{eq}, Night will be defined simply as noise level in decibels. Day shall be considered that time between 7:00 am (0700 hours) to 10:00 pm (2200 hours) on any weekday or Saturday, and from 10:00 am (1000 hours) to 10:00 pm (2200 hours) on any Sunday or holiday. Night shall be considered any time not included within the above definition of 'Day'.

Further, any reference to "point of reception" means a point on a Block F parcel occupied by the recipient of the noise or sound, that represents the shortest distance between that parcel and the source of the noise. In all cases, the point of reception shall be measured at least 1.2 m above the surface of the ground. All properties surrounding the Block F site are to be considered as quiet areas for receiver decibel limits.

6.9.4 Emergency Generator Impacts

For the emergency generators and their operation, the noise mitigation report prepared by the qualified professional should further outline design and operational recommendations to ensure that the building design and any enclosures for emergency generators, along with testing procedures for emergency generators, include appropriate sound mitigation measures to ensure that its continuous sound level does not exceed a rating of 80 decibels on an approved sound meter when measured at the point of reception or at least 6.1 metres from its source, whichever is the greater.

6.9.5 Garbage And Refusal Impacts

For garbage/refusal areas, the noise mitigation report prepared by the qualified professional should also outline design and operational recommendations related to its storage and collection. In addition, no person involved in the collection of garbage/refuse shall make or cause or permit to be made or caused any noise to emanate from a motor vehicle while the vehicle is being used to collect refuse by means of a mechanical or hydraulic lift from a bulk refuse container in or adjacent to a residential premises.

6.9.6 Mitigation

Mitigation for both residential and commercial equipment, or other sources of noise, could include: noise barriers, duct silencers, acoustic louvers, insulating blankets, acoustic enclosures, selection of quieter equipment, adequate use of vibration isolation, strategic location of louvers and grilles away from noise sensitive areas, etc.

The mitigation measures shall be detailed as part of the Development Permit and Building Permit. submissions, through the provision of a report prepared by a qualified professional trained in acoustics and current techniques of noise measurements and mitigation.

6.9.7 New Building Impacts And Events

Activity could potentially have an impact at the north end of the site, on Lots A, B, C1, C2 and D. In addition, temporary events could occur and include amplified sound reproduction (movie night, concerts, etc.).

» Subject to the satisfaction of the Manager of the University Endowment Lands, and on a case by case basis, temporary events which generate noise may be approved as a temporary event area

Another potentially disturbing noise source could be from the activity at the loading dock at the new food store.

» Detailed noise propagation modelling will be required as part of the design process. Noise barriers, sound absorptive finishes, etc. may be required to adequately control noise emissions towards the residential building across Toronto Street

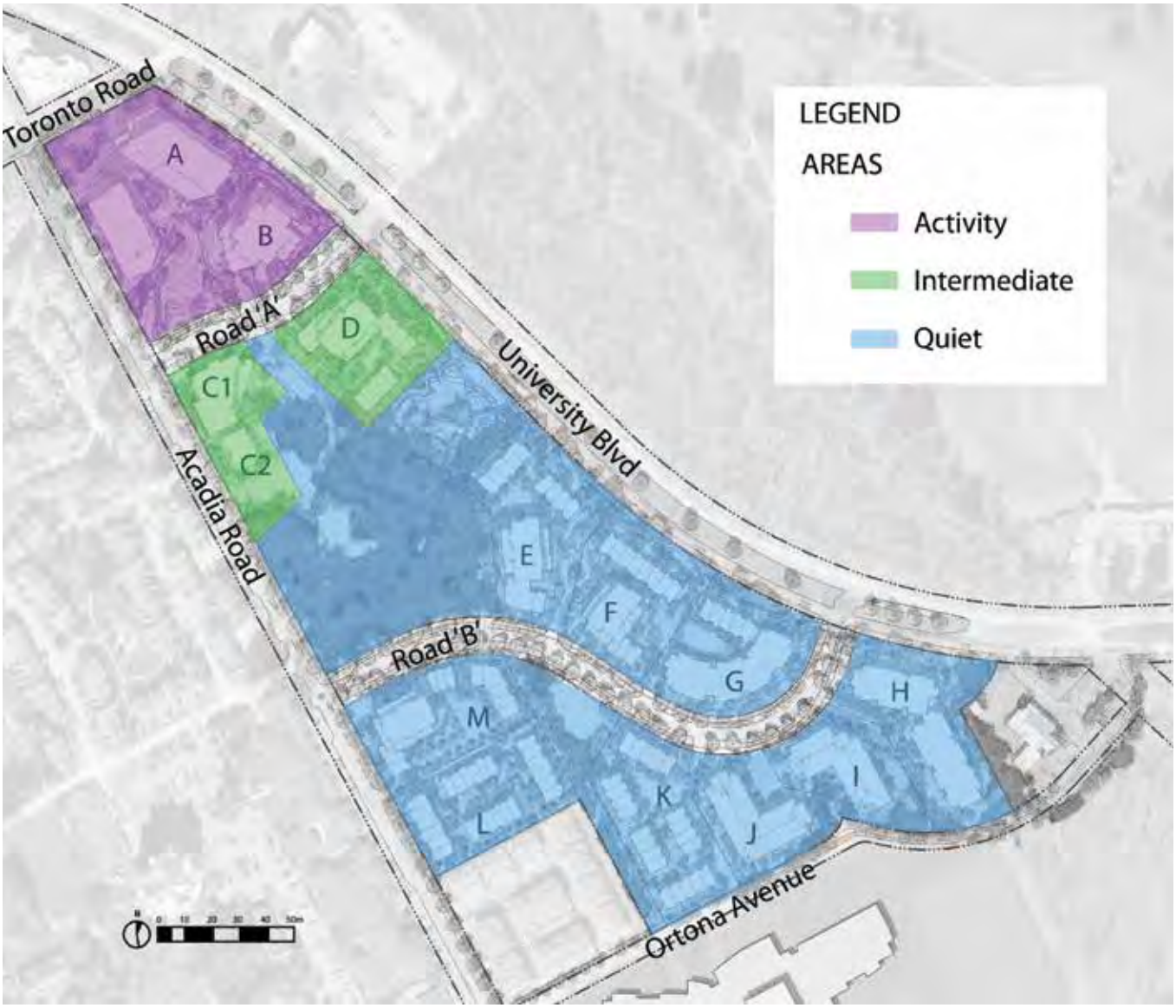
Potential noise from commercial activities is also possible source of noise. The detailed design of the venue should take into account the noise limits outlined in these Design Guidelines.

6.9.8 Impacts On New Building Interiors

A development permit application for dwelling uses shall require evidence in the form of a report and recommendations prepared by persons trained in acoustics and current techniques of noise measurements demonstrating that the noise levels inside those portions of the dwelling units listed below shall not exceed the noise levels expressed in decibels set opposite such portions for the dwelling units. The noise level is the A-weighted 24-hour equivalent (L_{eq}) sound level and will be defined simply as noise level in decibels.

Portions of Dwelling Unit	Noise Level (Decibels)
Bedrooms	35
Living, dining, recreation rooms	40
Kitchen, bathrooms, hallways	45

BLOCK F NOISE AREAS



For many new buildings this condition will be more restrictive than the impact on the existing buildings due to their closer proximity.

- The design process should also confirm that the minimum sound isolation requirements of the Vancouver Coastal Health Authority are met in Lot A and B between the commercial premises and the residential units above
- This will require the submission of a letter from an acoustical consultant confirming that the development permit drawings show a minimum STC 55 construction between the commercial and residential components of the building, or a minimum 0.15 metre solid concrete slab shall be specified on the drawings. Where music, recorded or live, may be a major activity in the commercial premises, submit a report from an acoustical consultant recommending minimum STC 60 construction between the commercial and residential components and advising the required control of music levels to satisfy the noise area requirements outlined in these guidelines

6.10 BIRD FRIENDLY DESIGN

These guidelines are intended to support the design and implementation of a bird friendly environment throughout the Block F development. By enhancing bird habitat on public and private lands, the Block F development can continue to be a safe place for birds while a greener, more livable city is created for people. The focus of the guidelines is on the newly created landscape spaces, recognizing that the development retains a significant area of mature habitat that will be augmented with additional landscaping including street trees along the streets and along with wildlife corridors.

General principles for landscaping include:

- Establish habitat features like mature trees, native fruit bearing shrubs and freshwater ponds and wetlands throughout the urban landscape
- Use street and park trees to create a continuous forest canopy for birds
- Prioritize greening along quiet streets with low traffic volumes and speeds, and avoid planting shrubs adjacent to highways and other high volume thoroughfares, due to the risk of increasing bird mortality resulting from vehicle collisions
- Incorporate a mix of habitat types including: coniferous forest, deciduous/mixed forest, shrubland, meadow and freshwater wetland
- Increase vertical vegetation structure by creating layers: ground cover, shrub, understorey and canopy layers. Tall shrubs and sub canopy trees are particularly important
- Conserve large trees and shrubs where space permits
- Plant shade-tolerant native ground cover and shrub plants within forest fragments to increase foraging and nesting opportunities for birds
- Plant native ground cover and shrub plants at the base of isolated trees to create islands of layered vegetation
- Plant vegetation in a stepped pattern, with large trees in the back, shrubs in the middle, and ground cover plants in the front
- Use a diversity of native plants that are appropriate for the soil and site-specific conditions
- Select a mix of native plants that provide a variety of foraging options for birds including: seeds, fruit, nuts and nectar
- Incorporate plants with persistent fruits, plants that hold their fruit into the winter, for example, Pacific Crabapple, Evergreen Huckleberry and Highbush Cranberry
- Incorporate plants that attract insects for birds to feed on, for example, Red Alder, Pacific Willow and Scouler's Willow
- Incorporate plants with early flowering to ensure a reliable supply of nectar when migratory hummingbirds arrive in spring, for example, Salmonberry, Flowering Currant and Oregon Grape
- Provide sidewalks, boardwalks or trails to direct human circulation through or around sensitive habitat areas
- Where areas adjacent to sensitive habitat areas are designated for passive human recreation, such as birdwatching, or enjoying nature, ensure they are designed to limit access into or disturbance of the habitat areas
- Reduce light pollution. Install outdoor lighting only where it is necessary, for example along trails and streets
- Use International Dark-Sky Association Approved lighting fixtures for outdoor applications
- Interior Lobby greenery should be located well away from exterior windows

» New landscaping that may be attractive to birds should be located far enough from the building to reduce reflections in its glazed surfaces. Alternately, trees and shrubs can be planted close to a building façade if they are sufficiently close to the building—within a metre—that their reflections will be obscured, and the velocity of departing birds will be slow enough to limit the fatality of any strikes

Following bird-friendly design principles for new buildings can help reduce the risk of collisions. The use of reflective glass surfaces should be minimized which will assist in reducing bird strikes. The emphasis is focused on the lower floors of buildings as this represents the zone where the newly created landscape interfaces with the buildings which defines the likeliest zone of potential bird strikes. As well, individual owners will employ the use of blinds or curtains which further reduce direct views through the building, reduce the extent of reflection and reduce solar gain.

General principles for buildings include:

» Discourage free–standing clear glass walls (landscape elements), glass corners, greenhouses, balconies or patios with unbroken glazed segments, and bus shelters made of clear glass

» Interrupt any reflective glass by increasing the density of external visual markers including spandrel panels and mullions. Strategies can include adapted fenestration patterns, external or internal blinds, shutters, sunshades, grilles, louvers, embedded glass, or artwork

» Design corner windows, glass railings, and other similar features to reduce the appearance of clear passage to sky or vegetation. These areas should have clearly defined edges, in either opaque materials or non-reflective glass. Use patterns, screens, drapes, sunshades or blinds to increase the opacity of clear glass and dampen reflections

» Avoid interior landscaping near windows

» Down lighting should be selected over up lighting and floodlighting should be avoided

» Ventilation grates and drains should have openings no larger than 2 by 2 cm or 1 by 4 cm to ensure that birds cannot be trapped within

» Cap or screen the ends of all open pipes, large and small, so that birds do not become entrapped when investigating these openings for nesting opportunities

7.0

PRIVATE REALM LANDSCAPES

LAYERED TRANSITION BETWEEN PUBLIC AND PRIVATE REALMS

7.0 PRIVATE REALM LANDSCAPES

7.1 PRIVATE REALM CHARACTER: WEST COAST NATURAL

The design of the private realm landscape should respect and complement the site context within the Pacific Spirit Park forest and be a reflection of the overall landscape approach for the development site. The landscape expression should be one of West Coast Natural. Each parcel should have an individual landscape expression that integrates and is seamless with the building architecture and seeks to blend the edges between the public and private realm and between adjacent development parcels.

7.2 LANDSCAPE DESIGN PRINCIPLES

The landscape design should follow the essence of the planning principles for the project.

- Sustainability: match or exceed the project's stated sustainability targets
- Landscape expression and character shall have a strong relationship with interior spaces and should act as room extensions in the landscape
- Private outdoor space should be designed so that it is a functional space suitable to the associated residential unit
- Semi-private open space should be designed so that it serves all residents of the building
- Private parcel landscapes shall be well integrated with the public realm and should have a seamless expression
- Front yards should engage with the street to facilitate "eyes on the street" and activity at street level
- Explore opportunities for roof top living including amenity and landscape areas
- The collection of rainwater shall be celebrated and visible within the development parcels

7.3 LEED® / SUSTAINABILITY

The overall project that will be developed is inspired by the LEED® Principles and Requirements. This places an emphasis on the individual development parcels to achieve this level of overarching sustainability and possible certification.

- All aspects of the landscape design should incorporate principles of sustainability and LEED® requirements
- The collection of rainwater should be incorporated into environmental and landscape features
- Where possible rainwater should be collected from rooftops
- Where possible rainwater should be collected from paving areas, roadways, and landscape areas
- Rainwater collected from road and building areas should treat the runoff for water quality

7.4 PUBLIC FRONT ENTRY COURTS

The public entry courts should seek to minimize vehicle use, maximize visibility of the front doors, and promote pedestrian and cycling connections with the community. Large purely aesthetic elements are discouraged in favor of functional landscape areas to promote a sense of community. The development parcel design should utilize these trails as a primary means of access through the site for residents to be individual townhouses and the tower lobbies.

7.5 PRIVATE OUTDOOR SPACES

- All private outdoor spaces should be designed to be functional in size and located adjacent to appropriate residential rooms and maximize solar aspect
- All patios at grade along a street frontage should have a good relationship and access to the street

Good Relationship of Indoor to Outdoor

Interior Courtyard Patio Entry with Address

Private Yard Separated with Short Fences and Thick Planting

» Private patios should have a sense of privacy from adjacent patios. Solid fences and / or screens between patios is acceptable. Materials should be durable and attention to detail should match the building architecture. They should be part of the building architecture and integrated with the building design. Side screens max. height is 2m (6'-0")

7.5.1 Street facing private outdoor patios + entry courts

» All at grade outdoor patios and private entry courts that face Acadia, Road A and Road B should have access to the roads with a walkway. Units facing University Boulevard should have bridges over the bioswale with walkways connecting to the sidewalk

» Unit addresses should be visible on the patio enclosure, gate, and / or plinth

» Ideally these patios and terraces would have a minor raised grade separation from the street frontage

» Private patios and terraces should have a sense of transparency and connection to the street frontage. They should not be walled off with high hedges and / or fences. Max. Height of fence, hedge, rail, and planter wall from base of patio / terrace finish grade is 1200mm (4'-0")

7.6 SIDE YARD PRIVACY

» Buildings should be separated by landscaping elements such as natural forest along property lines or robust soft landscape areas

7.8 SITE GRADING

Where a development parcel abuts a tree retention area the grading of the site must protect the grades within the critical root zone of the tree and should not significantly alter the watershed from what the existing trees currently experience.

Where an exposed parkade wall is over the permitted height (refer to section 5.4.6) adjust the landscape grades to slope up to the permitted height or use landscape feature walls and/or planters to conceal the parkade wall.

7.9 LANDSCAPE MATERIALS

The landscape materials selected should seek to reinforce the overall project approach to landscape and the design theme of West Coast Natural. Durable, sustainable and locally sourced materials should be the preferred choices.

» Landscape materials shall be durable, regional, and be used to create a strong design sense for the space

» Landscape materials were possible should be reflective of the Musqueam nation and culture

» Landscape materials shall be high quality with a more finely grained pedestrian detailed scale

7.9.1 Paving

» Various paving materials should be used to create a hierarchy of use

» Impervious pavements that cannot be drained to an adjacent soft landscape rainwater management feature should be minimized

» Opportunities to utilize permeable paving should be explored. The use of asphalt should be minimized

7.9.2 Walls

» Landscape walls should be utilized along street frontages for residential signage and addressing

» Landscape walls should be designed in scale, proportion and materiality to complement the design theme of West Coast Natural, including natural stone

» Retaining walls should be designed such that they are integrated into the overall landscape and not negatively impact the sight lines from adjacent development parcels

» Timber retaining walls should not be used

» Retaining walls should be under 1.2m in height

7.10 PLANTING

» Plant materials shall influence and contribute to the various habitats including forest, wetland, and adaptive Landscape

» Plant material selection shall be richly varied, celebrate all the seasons, be sensory, drought tolerant, and have an ecological and design purpose

» A 50MM depth of composted bark mulch should be applied to all planting beds to minimize water loss due to evaporation

7.10.1 Urban Ecology

» Landscape design and plant material selection shall encourage and create opportunities for urban wildlife to co-exist with humans and the urban landscape

» Native plants shall be used to enhance the urban ecology of the community and support the various native habitats and bird strategies

7.10.2 Turf Grass

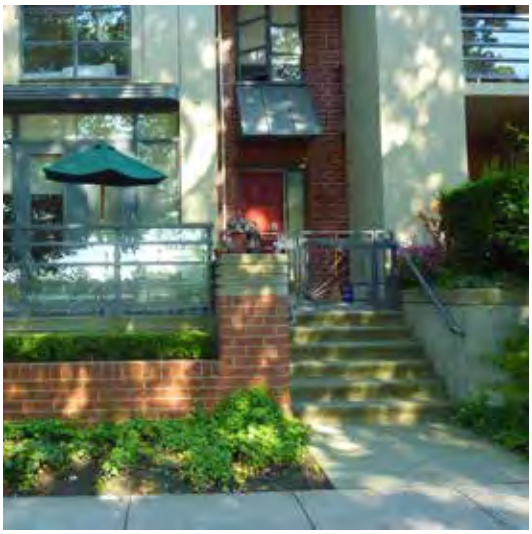
Minimize the use of high maintenance turf grass areas to a maximum of 40% of the total soft landscape area within the development parcel

7.10.3 Urban Agriculture

Where appropriate, urban agriculture shall be incorporated into all landscaped areas of the development parcel including roofs, private patios, amenity roof gardens, amenity courtyards, mews and laneways.

Urban Agriculture Planters

Use of Low Maintenance Turf Grass



Front Entry Patio, Arbutus Walk, Good Relationship to Sidewalk

Green Amenity Roof Deck, Arbutus Walk

7.11 PUBLIC-PRIVATE INTERFACE

The private landscape design is to integrate, to the degree possible, with the adjacent natural landscapes and public realm including street and park frontages in order to emphasize the sense of space and contiguous landscape.

- Match planting design species and layout to hide property lines
- Observe all easement restrictions that may be in place
- Blend the off-site topography into the existing surrounding off-site grades for a uniform and contiguous surface
- Minimize the use of fencing and walls along property lines between natural open spaces and open areas of development sites to minimize visual and physical barriers
- Use planting at the base of the building to minimize the visual impact of any exposed parkade structure

7.12 IRRIGATION

To accommodate the changing climate of the Vancouver area and the extended periods of drought, and to ensure a living functional landscape, a permanent irrigation system is required in the private landscape areas.

- All landscape areas over structures shall be irrigated with a high efficiency automatic irrigation system
- All irrigation for non-lawn areas to be drip systems
- All irrigation systems shall have automatic moisture sensors
- Areas not over structures are highly recommended to be irrigated with a high efficiency automatic irrigation system
- The irrigation system is to include the landscape portion of the off-site road right of way in front of the development parcel

7.13 LANDSCAPE FEATURES

Landscape features within the private landscape should:

- Seek to be functional elements
- Reinforce the West Coast design theme
- Avoid large visual interest elements with low functional or sustainable use
- Integrate with adjacent off site landscape features such as wetlands or forest areas
- Provide unique identity to the development parcel within the overall context of the project

7.14 GROWING MEDIUM DEPTH + MATERIALS

All planting areas over structure shall have adequate growing medium depth to promote healthy plant material. Minimum required depths are:

- Grass 450mm (18″)
- Groundcover and Shrubs 450mm (18″)
- Trees 900mm (36″)

Where urban agriculture is proposed or integrated within the soft landscape avoid the use of growing mediums that contain bio-solids from municipal wastewater facilities.

Rainwater Management on Private Parcel

7.15 WATER FEATURES

Sustainable water features are encouraged, not required, and should consider the use of captured rainwater for supply and aesthetics, or flow through, to fit with the overall design intent. Explore opportunities to visually or functionally connect to the overall rainwater management system. Ensure there are no impacts to downstream water quality and temperature if a connection is provided.

The creative use of stormwater to be captured, cleaned and used for down-stream benefits is one of the defining features of this development.

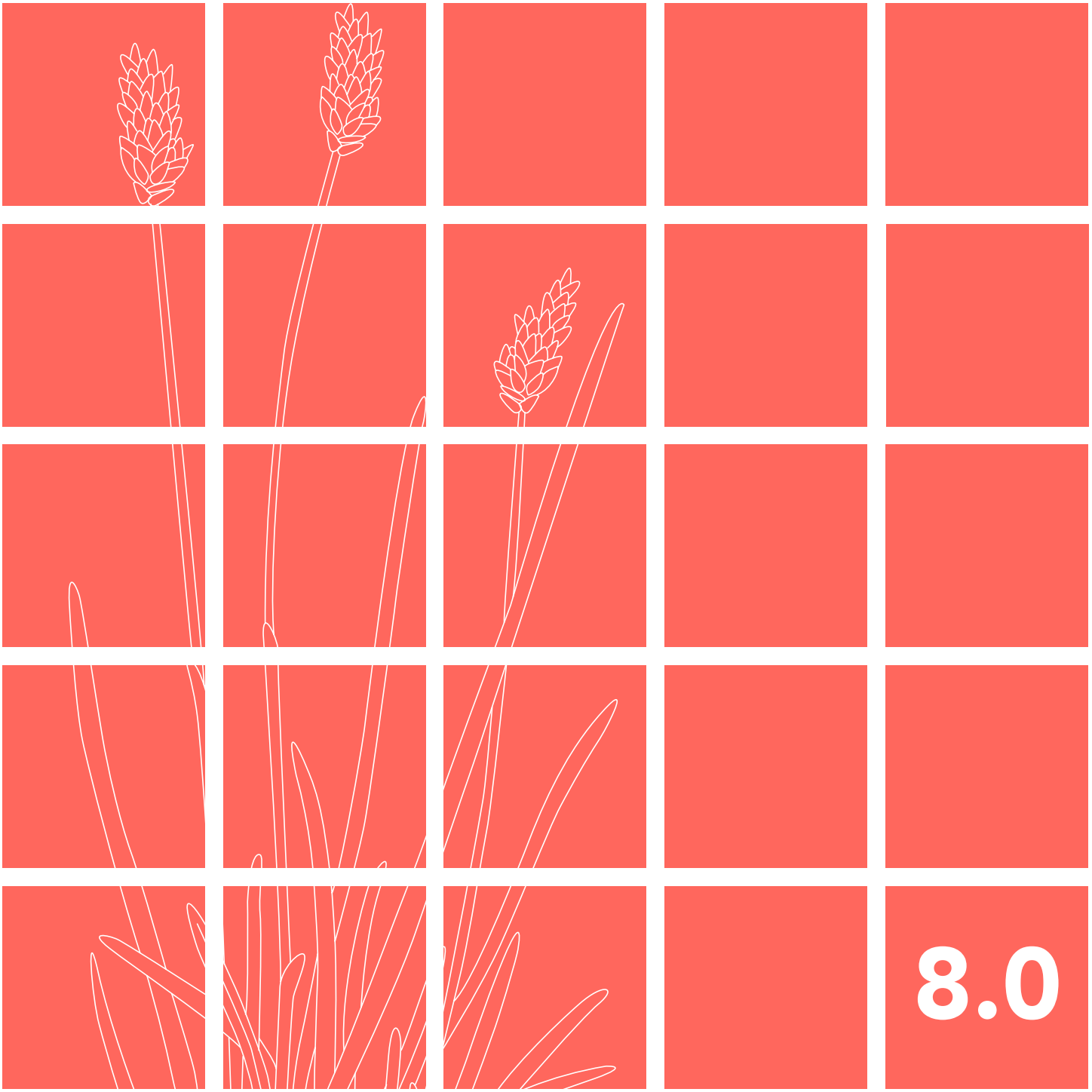
- Direct the incorporation of water into the landscaping of private developments, especially at prominent corners and adjacent to public greenways
- Find ways to utilize water in building design and landscaping; a range of approaches into the way in which water is utilized – formal or informal, still or moving – is encouraged
- Attractive, soft lighting of water features is encouraged, both for after-sunset enjoyment and for safety. Ensure that water features are safe

Landscape Spaces on Slab Condition

7.16 RAIN GARDENS AND BIOSWALES

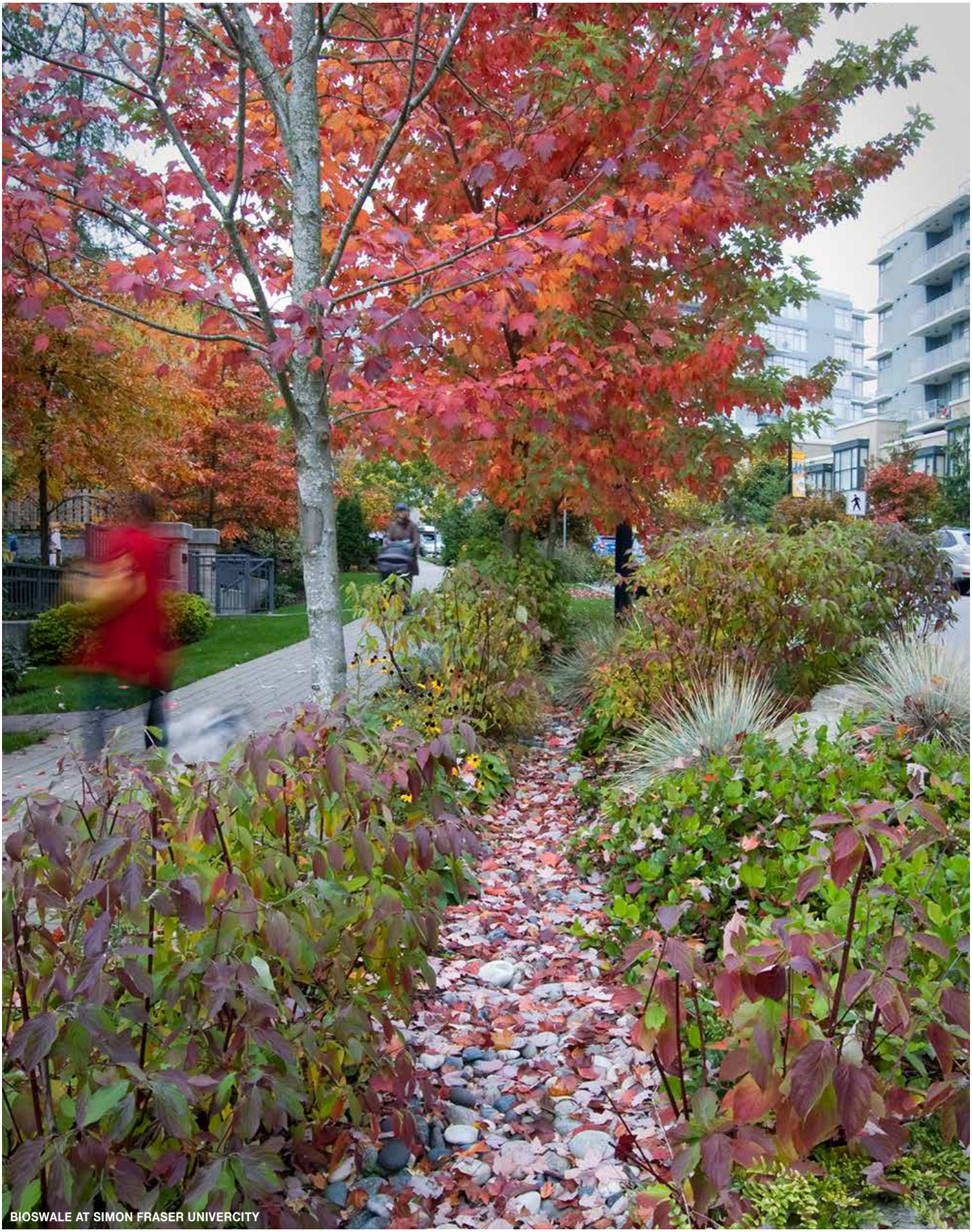
Rain gardens are effective landscaping features used to collect, detain, filter, and release stormwater. Bioswales achieve the same goals as rain gardens for slowing and filtering stormwater, but are typically designed to manage runoff from large impervious areas, often requiring engineered soils and rain gardens with greater soil depths. In the detailed design, where grading permits and landscape bump outs can be included, the use of rain gardens will be explored as the preferred option for rainwater management and improving rainwater quality from roadways and parking. Slopes that do not facilitate the use of rain gardens, or in circumstances where rain gardens are spread apart at great distances, the use of permeable pavers as part of the overall rainwater management system will also be explored. [Refer to the civil stormwater plans for the required rain gardens on the development parcels. Rain gardens will be designed to:

- Encourage the use of absorbent landscapes to maximize on site rainwater management
- Integrate with the surrounding landscapes of the development parcel and adjacent public realm
- Encourage collection of roof rainwater and pass it through on grade surface features such as rain gardens and bioswales
- Utilize native riparian plants as noted in the Appendix
- Refer to the civil stormwater plans for the required rain gardens on the development parcels



8.0

STORM WATER MANAGEMENT



BIOSWALE AT SIMON FRASER UNIVERCITY

8.0 STORM WATER MANAGEMENT

8.1 PUBLIC REALM

The stormwater management plan is designed to meet/exceed the Department of Fisheries and Oceans (DFO) Stormwater Management Guidelines for Volume Reduction, Water Quality, and Detention in the public realm.

Volume reduction and water quality will be addressed by the implementation of Best Management Practices (BMPs) such as rain garden infiltration systems and bioswales. These facilities absorb stormwater runoff while removing contaminants that are transported from roadways and other impervious areas. Rain gardens and bioswales also promote groundwater recharge through infiltration and can be tastefully integrated into community green space as functional and interesting features. The thickness of growing medium in the rain gardens and the boulevard areas will be increased to promote infiltration and retention of stormwater runoff, as well as to improve water quality.

Detention will be addressed by the proposed detention ponds within the development site. The ponds are to have infiltrative bottoms and be sized to reduce post-development stormwater flow rates. Minimizing post-development stormwater flow rates protects downstream wetlands and habitat from increased flows and damaging erosion. In summary, development shall demonstrate it will meet or exceed DFO criteria and UEL Stormwater design criteria.

8.2 PRIVATE REALM

The stormwater management approach within the parcels should be designed to create integrated rainwater management facilities that address the sustainability design requirements of LEED®.

Best Management Practices (BMPs) to be incorporated include designing the storm conveyance system to handle the peak flows for the 1:10 year and 1:100 year design storm events, to meet or exceed the DFO Stormwater Management Guidelines, to protect life and property, and use BMPs that meet environmental guidelines to minimize the effects of development on the natural environment.

BMPs to be used in the detailed design of this development include:

- An erosion control plan to manage the quality and quantity of stormwater runoff from the site during construction
- Reduce impervious areas and maximize pervious areas
- Source control absorbent landscaping where possible
- Minimum growing medium depths as noted in Section 7 are to be provided
- Source control trapping hoods in all catch basins for environmental control. The hydrocarbons transported in surface water are captured within the catch basin, as they float on top of the water and rise above the trapping hood
- Pervious pavements can be porous asphalt or concrete, concrete or plastic grid pavers, and permeable unit pavers. They allow water to drain through them to an underlying rock reservoir. On this site pervious pavement would be adequate to capture the 6-month / 24-hour rainfall. Pervious pavements are recommended for low volume traffic and pedestrian routes
- Rain gardens consisting of a growing medium over a rock reservoir that exfiltrates stormwater to the surrounding soil
- Oil and Grit separators placed on outlet pipes, sized to meet environmental water quality guidelines to treat 90% of runoff from the impervious areas

Bioswale

Bioswale detail

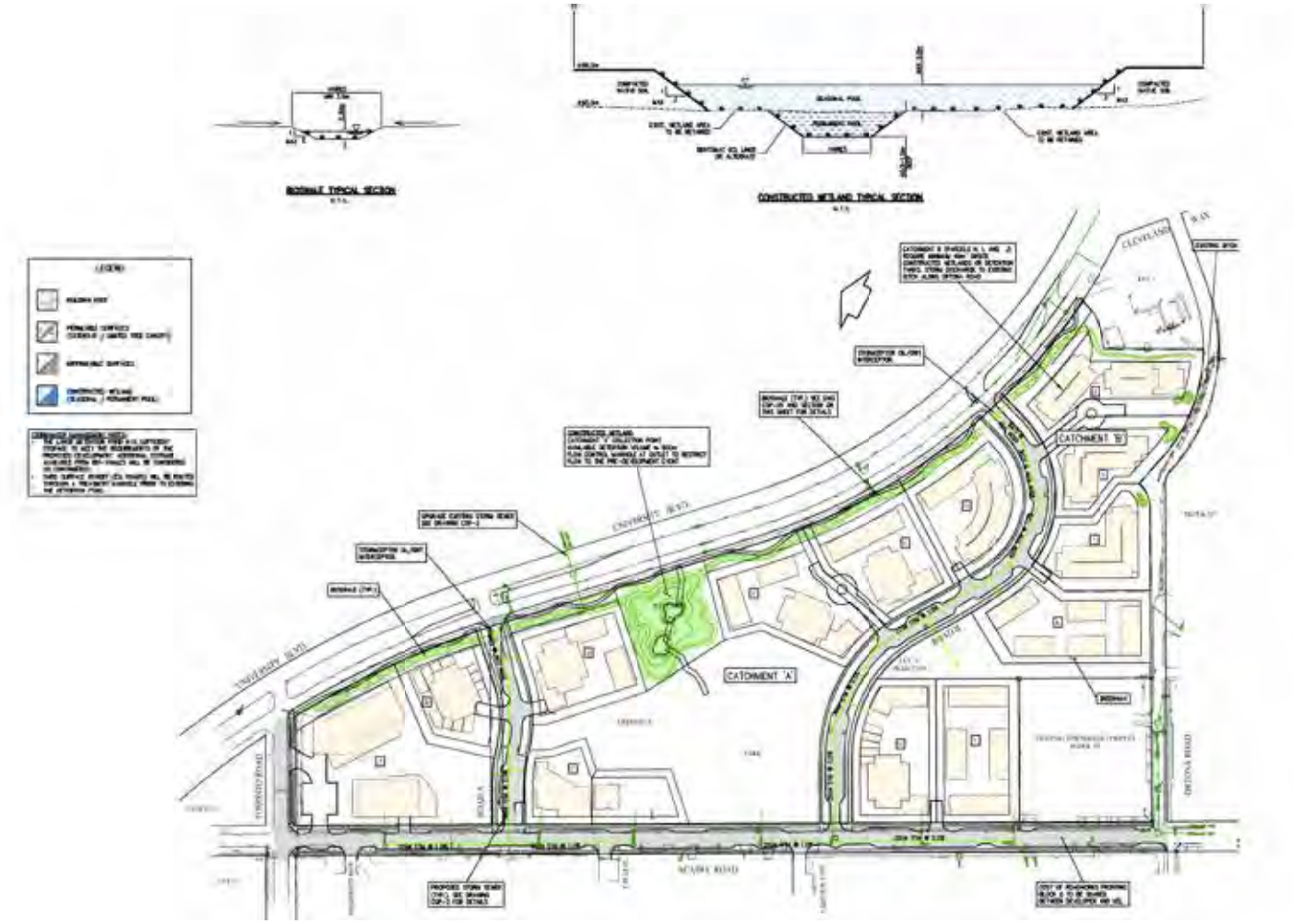
Bioswale planting

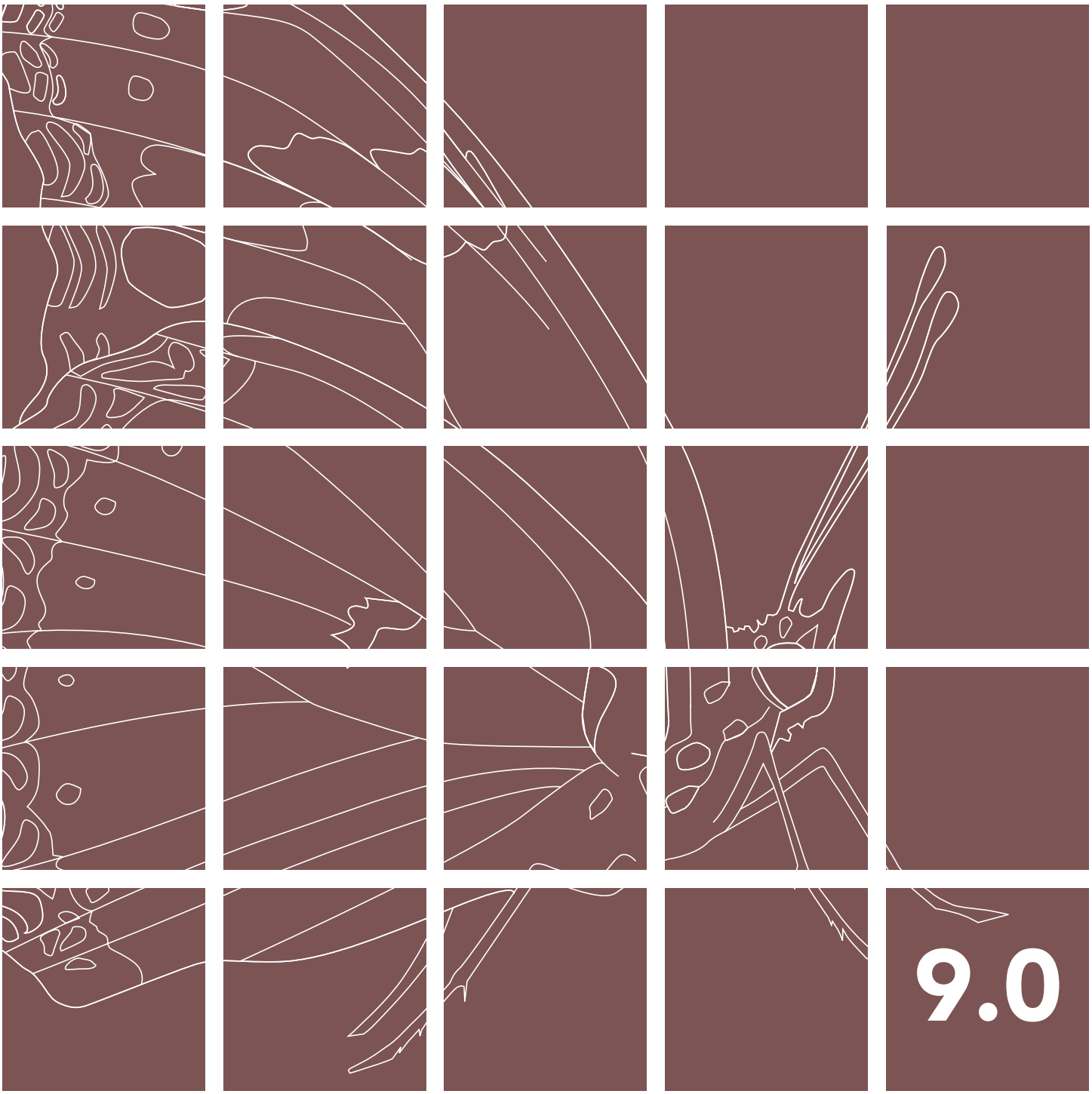
Bioswale planting

8.3 RAIN GARDENS AND BIOSWALES

Rain gardens and bioswales in the public realm are located throughout the community. The most significant is within the University Boulevard Linear Park that conveys water collected from adjacent development parcels and roadways, and directs it to the constructed wetland. Through detailed design and grading of the roadways, rain gardens within the road right-of-way will be provided at landscaped bump outs. Rain gardens and bioswales will be explored within the Forest Park where their inclusion does not affect the hydrology, near retained trees.

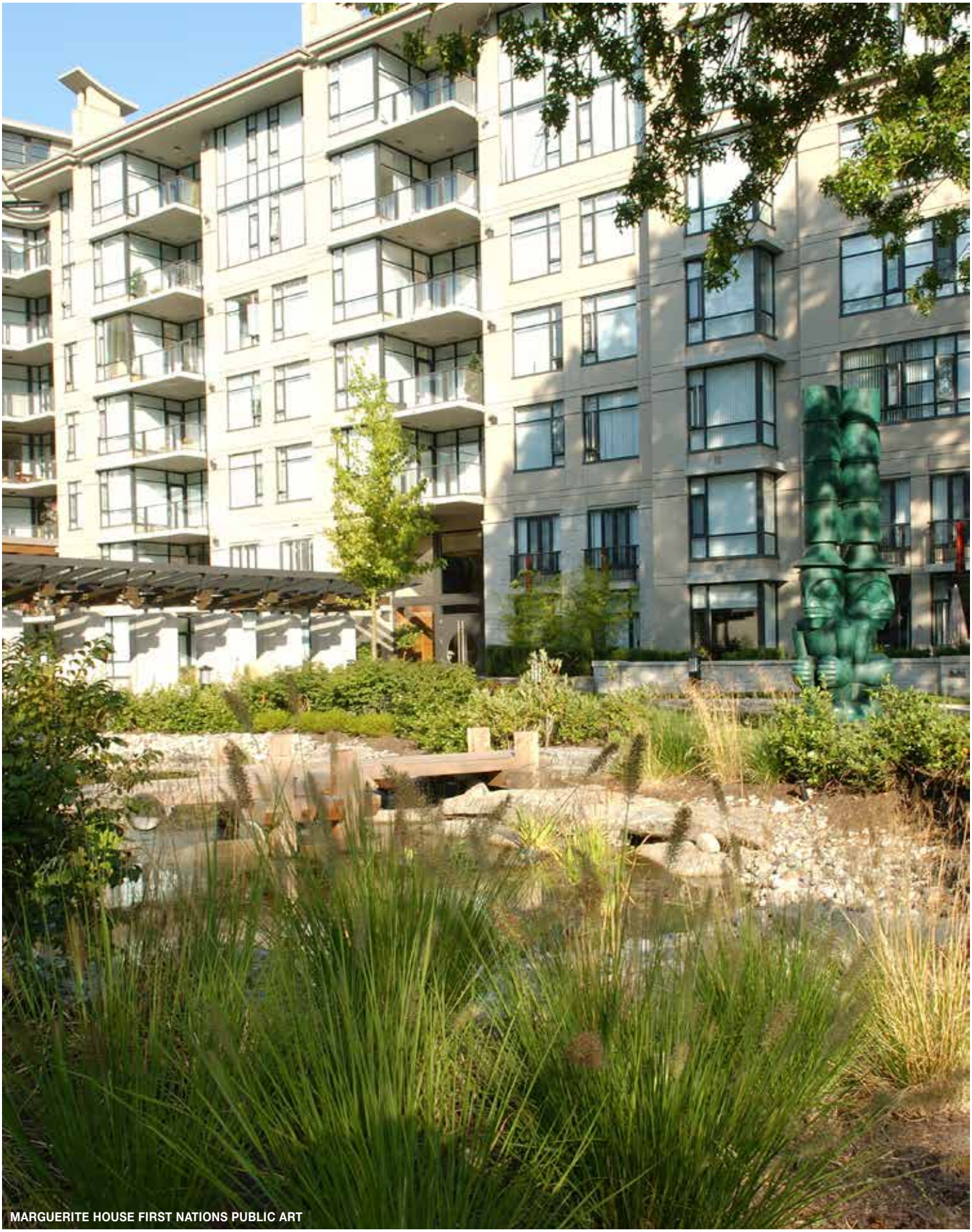
Rain gardens are required on a few development parcels as noted on the civil engineering stormwater management plan. These will be connected to the public realm rain water management facilities. Refer to the current engineering plan for details.





9.0

PUBLIC ART



MARGUERITE HOUSE FIRST NATIONS PUBLIC ART

9.0 PUBLIC ART

Public art shall be introduced throughout the Block F site in an effort to strengthen the urban fabric and to contribute to the identity and character of the Block F neighbourhood.

Every development parcel will provide a public art contribution to the overall Block F development. Public art shall be integrated into the overall design of the development and embedded in aspects of parks, open space, and public realm, with focus on Musqueam people, the forest, the streams, sustainability, and community. A separate Development Permit and/or Building Permit may be required where the public art is not included in overall development designs.

9.1 IMPLEMENTATION

The Musqueam Capital Corporation will administer the public art program on behalf of the Musqueam community, with input, and where required, approval, from the University Endowment Lands Manager.

The public art program will be funded through an allocation of the construction cost of each development parcel, which will be collected independently by by Musqueam Capital Corporation as part of the business terms with future selected development partners.

qiyəplenəxʷ house post at Allard Hall, UBC. Carver: Brent Sparrow Jr.

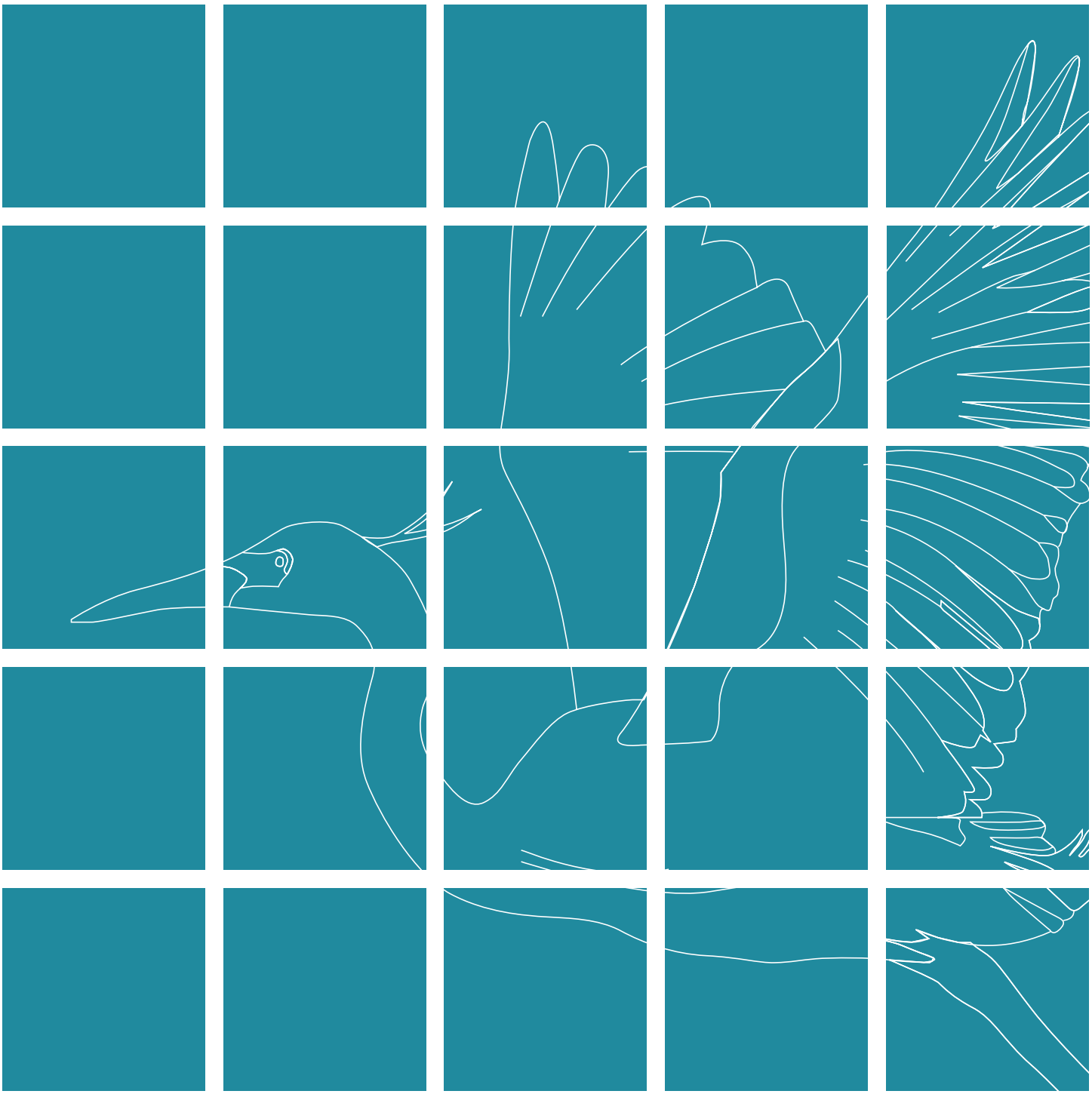
Public art opportunities may include the following features:

- Welcome: Creation of an entry experience(s) to the Block F neighbourhood would serve to welcome all individuals coming to visit or live in the Block F neighbourhood and make all residents and visitors feel comfortable. Introducing a sense of arrival will create an atmosphere whereby visitors may respond with respect and intrigue
- Inform: Opportunities exist to inform visitors, residents and neighbours of the history of the land and the importance of it to the Musqueam people. This may be told through interpretive signage/ storyboards in an effort to share the cultural heritage and archaeological history of the site
- Engage: The existing open space features retained, enhanced, and newly created on the site will provide opportunities for all individuals to engage with the natural features and history of the site

Public art can be implemented in a variety of ways:

- "On site" contributions where the art is commissioned and installed on the subject property
- "On public lands" contributions are pooled to a fund which allocates public art pieces on publicly owned lands
- "On-site/On public lands" contributions whereby there is a combination of art commissioned and installed on the subject property with the balance of funds collected pooled to a reserve fund which may be used for art pieces on publicly owned lands

Where public art is proposed on any public lands, prior approval from the Manager of the University Endowment Lands will be required. In addition, the drafting of an agreement will form part of the approval process, ensuring that the installation and ongoing maintenace costs associated with the public art are not passed to the University Endowment Lands.



APPENDICES

APPENDIX A - RECOMMENDED PLANT LIST FOR PUBLIC AND PRIVATE REALM


Armstrong Red Maple


Vine Maple


Western Red Cedar


Saskatoon


Douglas Fir


Kousa Dogwood

Recommended Street Trees

Botanical Name	Common Name
VILLAGE RETAIL FRONTAGE (TORONTO, ACADIA, ROAD A, U BLVD)	
Acer rubrum 'Armstrong'	Armstrong Red Maple
Quercus palustris 'Green Pillar'	Green Pillar Pin Oak
Carpinus betulus Fastigiata	European Hornbeam
ROAD A RESIDENTIAL	
Quercus palustris 'Green Pillar'	Pin Oak
Tilia tomentosa' 'Sterling'	Sterling Silver Linden
ROAD A COMMUNITY CENTRE	
Acer rubrum 'Armstrong'	Armstrong Red Maple
Quercus palustris 'Green Pillar'	Green Pillar Pin Oak
ROAD B	
Acer x freemanii 'Jeffsred'	Autumn Blaze Maple
Zelkova serrata 'Green Vase'	Green Vase Zelkova
Fraxinus latifolia	Oregon Ash
ACADIA	
Acer cappadocicum 'Rubrum'	Coliseum Maple
Tilia tomentosa 'Green Mountain'	Green Mountain Linden
Quercus Coccinea	Scarlet Oak
UNIVERSITY BOULEVARD	
University Boulevard trees are to be selected from the Parks and Open Space recommended species list.	

Recommended Parks and Open Space Trees

Botanical Name	Common Name
Acer circinatum	Vine Maple
Acer douglasi	Douglas Maple
Acer macrophllyum	Big Leaf Maple
Acer rubrum 'Armstrong'	Armstrong Red Maple
Alnus rubra	Red Alder
Amelanchier alnifolia	Saskatoon
Cornus controversa	Giant Dogwood
Cornus kousa	Kousa Dogwood Varieties
Cornus 'Eddie's White Wonder'	White Flowering Dogwood
Picea sitchensis	Sitka Spruce var.
Pinus contorta 'Contorta'	Shore Pine
Pseudotsuga menziesii	Douglas Fir
Rhamnus purshiana	Cascara
Thuja plicata	Western Red Cedar
Malus fusca	Pacific Crabapple
Prunus emarginata	Bitter Cherry
Sorbus var.	Mountain Ash

Recommended Private Realm / On slab Trees

Amelanchier alnifolia	Saskatoon
Acer circinatum	Vine Maple
Acer rubrum 'Armstrong'	Armstrong Red Maple
Cornus kousa '	Kousa Dogwood Varieties

Recommended Shrub and Groundcover (Public and Private Realm)

Botanical Name	Common Name	Sun/Shade Conditions
EMEREGENT PLANTS		
Carex aquatilis var dives (sitchensis)	Sitka Sedge	Full Sun/Part Shade
Carex obnupta	Slough Sedge	Full Sun/Part Shade
Carex rostrata	Beaked Sedge	Full Sun
Carex stipata	Sawbeak Sedge	Full Sun
Carex tumulicola	Berkeley Sedge	Full Sun/Part Shade
Deschampsia cespitosa	Tufted Hair Grass	Full Sun/Part Shade

Tufted Hair Grass

Recommended Rain Garden, Riparian Corridor, and Riparian Area

Botanical Name	Common Name	Sun/Shade Conditions
BOTTOM CHANNEL EXPOSURE SIZE		
EMERGENT PLANTS		
Carex aquatilis var dives (sitchensis)	Sitka Sedge	Full Sun/Part Shade
Carex obnupta	Slough Sedge	Full Sun/Part Shade
Carex rostrata	Beaked Sedge	Full Sun
Carex stipata	Sawbeak Sedge	Full Sun
Carex tumulicola	Berkeley Sedge	Full Sun/Part Shade
Deschampsia cespitosa	Tufted Hair Grass	Full Sun/Part Shade
Eleocharis palustris	Creeping spikerush	Full Sun/Part Shade
Iris douglasiana	Douglas Iris	Full Sun
Iris missouriensis	Western Blue Iris	Full Sun
Juncus acuminatus	Tapered Rush	Full Sun/Part Shade
Juncus effusus	Common Rush	Full Sun
Juncus tenuis	Slender Rush	Full Sun
Scirpus lacustris	Hard Stemmed Bullrush	Full Sun
Scirpus microcarpus	Small Fruited Bullrush	Full Sun/Part Shade
SHRUBS		
Blechnum spicant	Deer fern Part	Sun/Shade
Ledum groenlandicum	Labrador Tea	Full Sun
Myrica gale	Sweetgale	Full Sun/Part Shade
Polystichum munitum	Western Swordfern	Partial Sun/Shade

Common Rush

Hard Stemmed Bullrush

Sweetgale

Recommended Constructed Wetland

Botanical Name	Common Name	Sun/Shade Conditions
TREES		
Alnus rubra	Red Alder	Full Sun
Picea sitchensis	Sitka Spruce	Full Sun/Part Shade
Populus balsamifera	Black Cottonwood	Full Sun/Part Shade
Pseudotsuga menziesii	Douglas Fir	Full Sun/Part Shade
Thuja plicata	Western Red Cedar	Full Sun/Part Shade
Tsuga heterophylla	Western Hemlock	Partial to Full Shade
Salix sp.	Willow	Full Sun/Part Shade
SHRUBS		
Cornus stolonifera	Red-osier Dogwood	Full Sun/Part Shade
Pteridium aquilinum	Bracken Fern	Full Sun/Part Shade

Douglas Iris

Sword Fern

APPENDIX B : MAPS

PUBLIC ACCESS EASEMENTS

To improve overall walkability and neighbourhood permeability, public access easements will be provided on several parcels including A & B, E & F, and H & I. These connections will be designed in the character and finishes of the Block F trail system, in order to convey visual unity and the clear sense of public access. This will include paving

PEDESTRIAN LIGHTING PLAN

LEGEND

- Primary Trails
- Secondary Trails
- Tertiary Trails - No Lights
- Pedestrian Pole Lights
- Residential Pole Lights
- Public Open Space Lighting
- Active Play / Sports Lighting
- Beacons
- Raised Crosswalk

LIGHTING

As with the other public realm elements, the lighting fixtures will create a unity throughout the Block F neighbourhood. The light fixtures selected will be unified across Block F through a family of parts, identical in colour and finish with uniform lighting temperatures and a similar character style.

There will be a distinct hierarchy of lighting ranging from street lighting to neighbourhood scale pedestrian lighting and lower level pedestrian lighting in smaller scale spaces, such as around the Community Centre. A unique lighting concept will be provided throughout the Forest Park, ensuring a safe and comfortable, well lit route through the park. All key pedestrian routes will be lit in order to ensure walkability, neighbourhood permeability, and safety at all times of the day and seasons of the year.

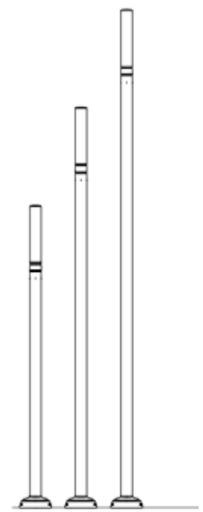
Refer to the following Pedestrian Lighting Plan for locations and hierarchy.

Lighting requirements are:

- LED high efficiency lights
- High cut off rates to reduce light trespass
- Dark sky compliant

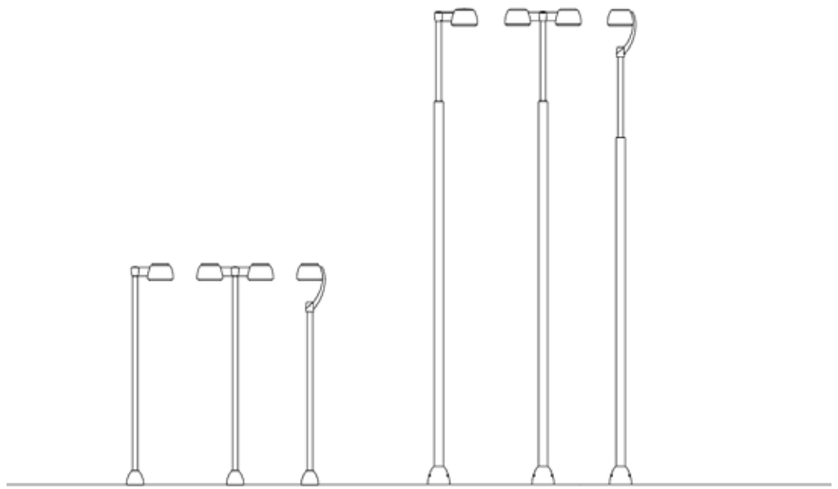
FOREST PARK TRAIL LIGHTING

Description: Column style luminaire
Use: The light column is selected to recede from view during the day and blend with the forest. The light acts as a beacon through the forest. Without armatures or independent fixture, there is reduced opportunity for bird perching, reducing maintenance.
Size: Based on use and spacing
Luminaire: LED/Dark Sky Compliant
Colour: Black



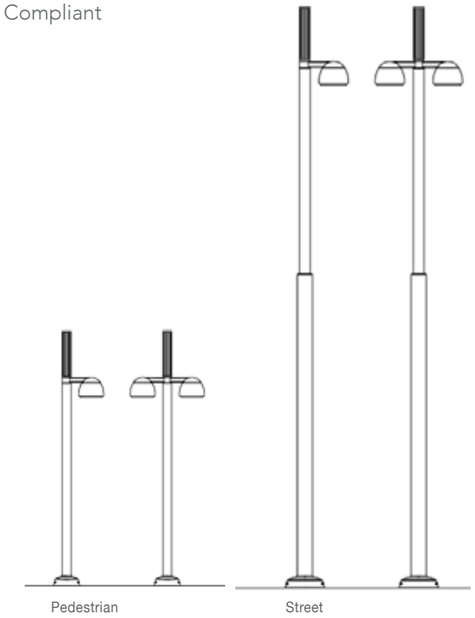
PEDESTRIAN AND STREET

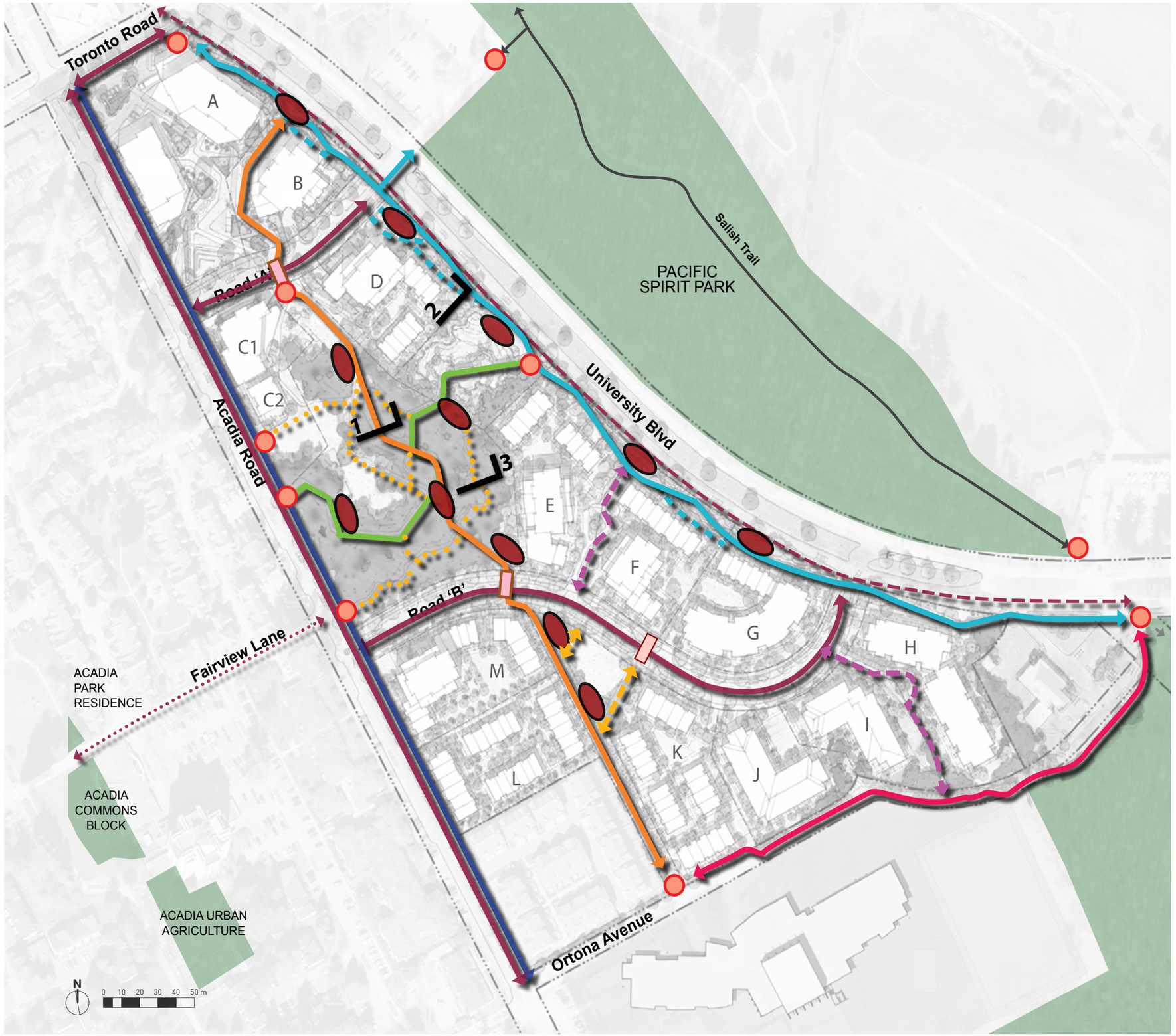
Description: Single and double fixture poles with oval style luminaire on short armature
Uses: For roadway, pedestrian and residential pole lighting, creating a strong unity within the community
Size: based on use and spacing
Luminaire: LED/Dark Sky Compliant
Colour: Black



PLACES OF INTEREST

Description: Oval style luminaire with short armature and light tube
Use: Placed as beacon for trail heads, important special nodes, amenity areas or places of interest
Size: Based on use and spacing
Luminaire: LED/Dark Sky Compliant
Colour: Black





TRAIL HIERARCHY

LEGEND

Primary Trails

- Sword Fern Trail
- Fairview Trail
- University Boulevard Trail
- Ortona Trail
- Acadia Multiuse Trail

Secondary Trails

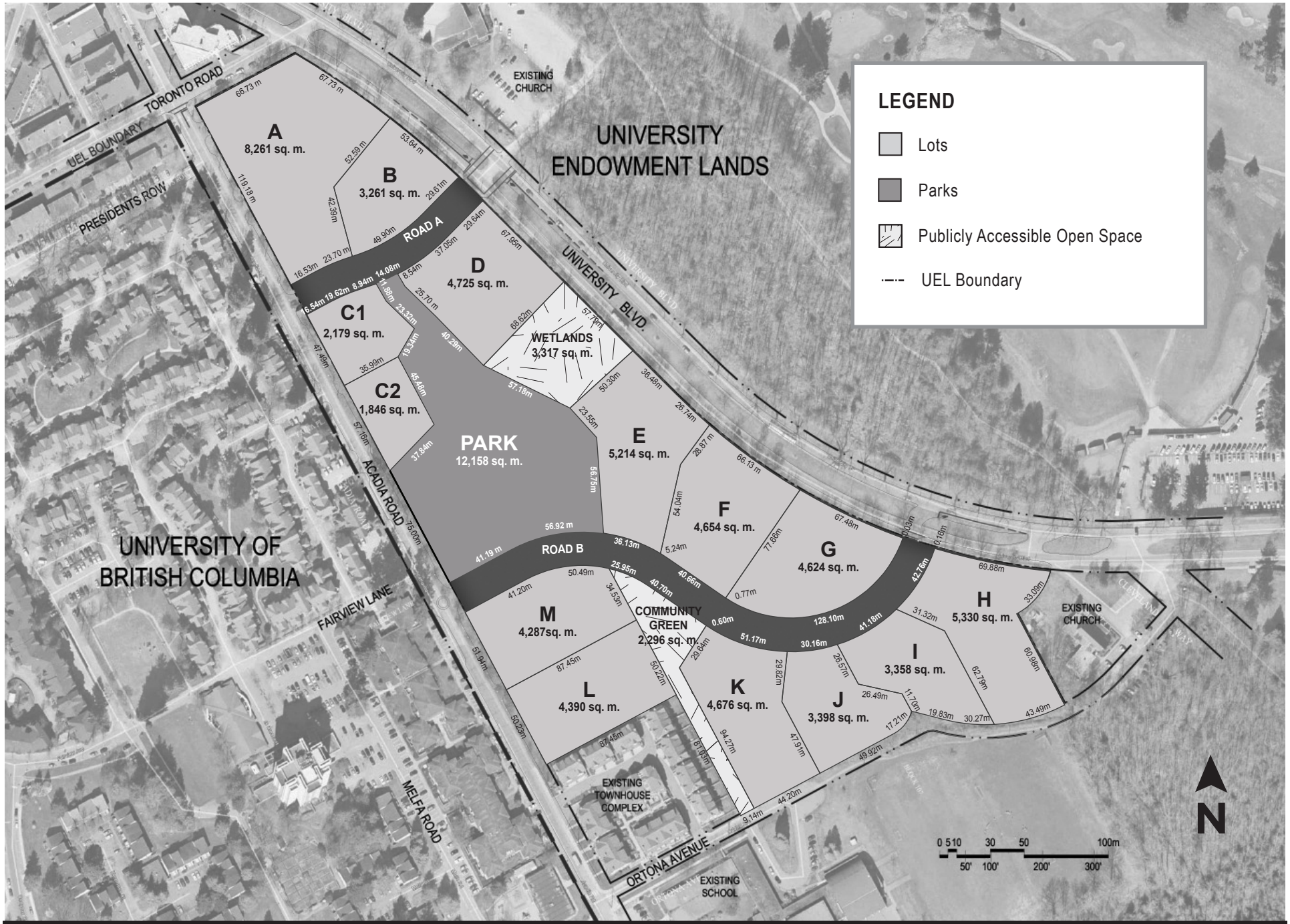
- University Boulevard Trail (Secondary)
- Public right of way over development parcel
- On site trail

Tertiary Trails

- Tertiary nature trail

- On street shared bicycle route (Toronto Rd, Acadia Rd, Road A & B)
- On street designated bicycle route (University Blvd)
- Informal bicycle route
- Raised crosswalk
- Trail heads
- Site furniture node

SCHEDULE E TO APPENDIX 2 OF THE MINISTER'S ORDER
SCHEDULE 18: CD-2: COMPREHENSIVE DISTRICT ZONING LOTS



SCHEDULE E | SCHEDULE 18: CD-2: COMPREHENSIVE DISTRICT ZONING LOTS