

CITY OF
LANGLEY



City of Langley

Subdivision and Development Servicing Bylaw

Bylaw 2021, No. 3126

A bylaw to regulate the subdivision and development of land

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INTRODUCTION

The Council of the City of Langley, in open meeting assembled, ENACTS AS FOLLOWS:

1. Purpose

This Bylaw may be cited for all purposes as "City of Langley Subdivision and Development Servicing Bylaw 2021, No. 3126", and establishes the standard of *Works and Services* to be provided for the *Subdivision/Development* of lands including *Works and Services* related to *Subdivision, Building* and other *Subdivision/Development* of lands to ensure any and all required *City* infrastructure meets these standards at a minimum.

2. Definitions

The following definitions apply in this Bylaw. Unless otherwise defined in this Bylaw, all words or expressions in this Bylaw shall have the same meaning assigned to them as the same words or expressions contained in the "Land Title Act", the "Local Government Act" and the "Community Charter".

Words throughout the document that are italicized imply that word is defined in this section.

Amended Soil

means as outlined in Section 5.3 of the *City's Design Criteria Manual*.

Approving Officer

means the person(s) appointed to that position for the *City* under the "Land Title Act".

Arterial Road

see *Roads*

Boulevard

means the portion of a *Highway* not occupied by the *Roadway* or *Sidewalk* and includes *Plantings*, surface finishing or treatment.

Building

means a structure used or intended for supporting or sheltering any use or occupancy.

Building Official

means the Chief Building Official of the *City* or their deputy or such other person appointed by the *Director* of Development Services to the position of Building Official for the *City*.

Cash in Lieu

means the payment of funds equivalent to the value of the work needed that the *City* would otherwise have been entitled to require to be conveyed as part of a *Subdivision/Development*.

City

means the City of Langley.

City Engineer

means the *Director* of Engineering, Parks & Environment or designate.

Community Charter

means the *Community Charter SBC 2003 C.26*.

Collector Road

see *Roads*

Commercial

means a category of land use as designated by the Official Community Plan and/or *Zoning Bylaw* in which the predominant use of the land is for Commercial.

Consulting Engineer

means a Professional Engineer registered with the regulatory body under the “Professional Governance Act”, SBC2018, C47.

Contractor

means the person, including a corporation, that will construct the *Works and Services* to the requirements, standards and specifications of this Bylaw.

Design Criteria Manual

means a document that outlines the *City's* design standards, material specifications, and installation requirements for *Works and Services* in the *City*.

Developer

means the *Owner* or *Owners* of land undertaking the *Subdivision/Development* of such land, and shall include their duly authorized agent.

Development

means the improvement of, or the carrying out of *Works and Services* on land, including but not limited to building, grading, tree removal and demolition and, for certainty, includes the *Re-Development*, and/or the improvement of land requiring the issuance of a permit.

Discharge

means the rate of flow of water flowing in a *Stream*, usually expressed in cubic metres per second.

Drainage System

means any system designed, constructed or installed for the express purpose of collecting, disposing, containing or conveying drainage whether such system is located on public lands, protected by registered statutory rights-of-way, in place historically, or previously approved by the *City* and includes, without limitation, storm sewer mains, ditches, *Swales*, creeks, ravines conveying or capable of conveying drainage or *runoff*, watercourses, detention and *Infiltration* systems, and *Roads*.

Dripline

means the area directly under the circumference of a tree's branches at their widest point.

EDU

means Equivalent *Development* Units. In respect of single or multi-family family *Development*, one self-contained dwelling unit and, in respect of non-residential *Development*, a unit of *Development* that the *City* considers will result in use of the excess or extended services that is equivalent to the use of such services by one self-contained dwelling unit.

Final Acceptance

means the acceptance of the construction and installation of the required *Works and Services* completed to the standards and specifications set out in this Bylaw, as evidenced by the issuance of a Certificate of Acceptance signed by the *City Engineer* and is issued at the time the *Maintenance Period* expires.

Final Approval

means approval of a *Subdivision* plan by the *Approving Officer* when all applicable requirements of this Bylaw, the “Local Government Act”, the “Community Charter”, the “Land Title Act”, the “Strata Property Act” and all other relevant statutes, regulations and bylaws have been fulfilled and when applicable, all conditions of *Subdivision Preliminary Layout Approval* have been fulfilled.

Floodplain

means the relatively flat or lowland area adjoining a river, *Stream*, ocean, lake or other body of standing water which has been or may be covered temporarily with floodwater. For administrative purposes, the *Floodplain* is defined as per the *City’s Floodplain Elevation Bylaw*, as amended.

Highway

means a public street, *Road*, recreational *Trail*, *Lane*, bridge, trestle, tunnel, ferry landing, ferry approach, and any other public way.

Highway Use Permit

means a permit issued by the *City Engineer* permitting *Works and Services* construction, installation or repair on any *City Highway* or *Walkway*.

Industrial

means a category of land use designated by the *OCP* and or *Zoning Bylaw* in which the predominant use of the land is for *Industrial* purposes.

Infiltration

means:

- (a) The entering of water through the pores of a soil or other porous medium.
- (b) The entrance of water from the ground into a sewer or drain through porous walls, breaks, or defective joints.
- (c) The absorption of water by the soil either as it falls as *precipitation*, or from a *Stream* flowing over the surface.

Land Title Act

means “Land Title Act” RSBC 1996 C.250, as amended.

Landscape Architect

means a person, including a corporation, registered as a member of the British Columbia Society of *Landscape Architects* under the provisions of the “Architects (Landscape) Act”, *RSBC 1996 C.18* or Certified Landscape Designer registered by the BC Landscape Nurseries Association or other landscape professional as approved by the *City Engineer*.

Landscaping

means *Plantings* and landscape screening located on *Highways*, *Boulevards*, medians, and private properties.

Lane

means a *Highway* that provides primary vehicular access to any abutting *Parcel*.

Local Government Act

means the “Local Government Act”, RSBC 2015 C.1.

Maintenance Period

means a period as set out in the *City’s* Subdivision and Development Servicing Bylaw - Schedule B, as amended.

Major Drainage System

means a rainwater collection system that consists of surface flood paths, *Roadways*, *Roadway* culverts, watercourses and stormwater best management practices (BMPs) designed to capture, convey, treat or modify larger flows up to a 100-year or possibly 200-year return period (where within the *City Floodplain* areas).

Municipal Works and Services

means and includes *Highways*, *Storm Sewer System*, *Sanitary Sewer System*, and *Water Distribution System* thereto owned and maintained by the *City*.

Minimum Building Elevation (MBE)

means the elevation of the lowest underside floor slab in a *Building* or the underside of the skim coat in the crawl space.

The *MBE* is to be at least 0.6 m above the storm sewer service connection invert and 0.3 m above the *Major Drainage System* Hydraulic Grade line (HGL), whichever governs.

In areas with no *Storm Sewer Systems* and/or information on *Major Drainage System* HGL, the *MBE* is to be at least 0.3 m above the crown of the road.

The *MBE* at the designated *Floodplain* areas within the *City* shall be based on the Flood Construction Level (FCL), as defined in the *City’s* Floodplain Elevation Bylaw, as amended.

Noxious Weed

means a weed designated as an invasive plant by the Weed Control Regulation under the provincial “Weed Control Act”.

OCP

means the Official Community Plan for the *City*, as amended from time to time.

Owner

in respect of real property, has the same meaning as in the *Community Charter*.

Panhandle

means a relatively long and slim portion of a *Parcel* designed to provide reasonable access to a *Highway* from the portion of the *Parcel* on which the *Building* area is located.

Parcel

means any lot, block or other area in which land is held or developed or into which land is subdivided, but does not include a *Highway*.

Plantings

means any *Landscaping* improvement including, but not limited to, topsoil, seed, sod, shrubs and trees.

Preliminary Layout Approval (PLA)

means the written conditional approval by the *Approving Officer* of a proposed *Subdivision* plan.

Protected Natural Assets (PNA)

means *Parcels* of land or portions thereof that have or could achieve attributes conducive to the retention or creation of terrestrial or aquatic wildlife habitat, including Critical Habitat; wetlands, headwaters, water retention or recharge areas; and other ecological or connectivity functions.

PNAs include environmentally sensitive areas (ESAs) that are identified in the *OCP* as being natural areas to be preserved including steep slopes, sensitive habitat, and riparian corridors, but may physically extend beyond the boundaries of these areas. PNAs may be assessed for suitable, low-impact uses, such as walking *Trails* and recreation, solely at the *City Engineer's* discretion.

Re-Development

means a proposed *Subdivision/Development* in areas that have existing *Development*, but which are being re-developed or changed to a new or higher density form of *Development*.

Retaining Wall

means a structure, constructed for the retention of soils, or an overall slope greater than two horizontal to one vertical.

Road(s)

(a) Arterial

means a *Highway* whose primary function is to carry through traffic from one area to another with as little interference as possible from adjacent land uses, but which may provide direct access to property as a secondary function, particularly for large traffic generators;

(b) Collector

means a *Highway* whose primary function is to distribute traffic between *Arterial*, other *Collector*, or *Local Roads*, within an area but which also usually provides full direct access to properties;

(c) Local Road/Local Residential Road

means a *Highway* whose primary function is to serve vehicle trip ends by providing direct access to properties, and which usually connects to other *Local Roads* or to *Collector Roads*;

(d) Cul-de-sac

means a dead-end urban *Local/Residential Road* with one access point and no potential for future extension;

Roadway

means the paved, constructed, or traveled portion of a *Highway* that is used for vehicular movement.

SRW

means Statutory Right of Way.

Sanitary Sewer System

means a system designed and constructed for the collection, treatment and disposal of sanitary sewage.

Security Deposit

means cash, debit, a certified cheque or an irrevocable automatically renewing Letter of Credit from a Canadian Financial Institution, deposited with the *City* by the *Developer* in accordance with the requirements of this Bylaw, to secure the design, construction and installation of the required *Works and Services* and *Landscaping* in accordance with the requirements, standards and specifications of this Bylaw.

Servicing Agreement

means an agreement between the *City* and an *Owner* or their authorized *Developer*, for the design, construction and installation of *Works and Services* in accordance with the specifications and standards of this Bylaw and the *City's Design Criteria Manual*, that are required prior to use of lands to be developed.

Sidewalk

means the improved area of a *Highway* adjacent to the *Roadway* or *Boulevard* which is intended for the use of pedestrian traffic.

Storm Sewer System (see Drainage System)

means a system designed and constructed for the collection, conveyance, *Discharge* of stormwater runoff.

Strata Property Act

means the “Strata Property Act”, SBC 1998 C.43.

Stream

means a watercourse which has a flow of water for all or part of the year and has a defined channel showing signs of scouring and washing.

Subdivision

means:

- (a) A *subdivision* as defined in the “Land Title Act”; and
- (b) A *subdivision* under the “Strata Property Act”.

Subdivision Application

means a proposal submitted to the *Approving Officer* for consideration of *Preliminary Layout Approval* and *Final Approval*.

Substantial Completion

means, except for minor deficiencies, the completion of works required under the *Subdivision/Development* bylaw except for minor deficiencies, a Certificate of *Substantial Completion* is issued by the *City Engineer*.

Surveyor

means a land *Surveyor* currently licensed and registered in the Province of British Columbia under the “Land Surveyors Act” (RSBC 1996).

Swale

means a broad and shallow earthen ditch that might be vegetated with erosion resistant and flood tolerant grasses. *Swales* are used to carry water as drainage.

Trail

means an improved area of a *Highway* where the proposed *Trail* as inferred in the *OCP*, Master Transportation Plan, or Trail Master Plan.

Urban Area

means, those lands in the *OCP* designated as urban residential, compact/multiple family/apartment, townhouse, etc. (may also include *Commercial*, *Industrial*, or Institutional).

Walkway

means a public right-of-way, with or without improvements for the predominant use of pedestrians, but does not include a *Sidewalk* on a *Highway*.

Warranty Deposit

means the reduced value of the *Security Deposit* or a separate irrevocable, automatically renewing Letter of Credit to be deposited with the *City* for the duration of the *Maintenance Period*, as required in this Bylaw,

as a guarantee for the stability and sufficiency of the *Works and Services* completed by the *Developer*.

Water Distribution System

means a system of waterworks to provide potable water for human consumption and fire protection.

Works and Services

means any public service, facility or utility which is required by or described in this Bylaw, as amended, plus what is described in the *City's Design Criteria Manual*, including, without limitation services, facilities, systems or utilities: the supply and distribution of water for domestic use and fire protection; collection and disposal of sanitary sewage; collection and disposal of surface drainage and other waters; grading, erosion and sediment control; streetlighting; *Highways; Roadways*; curbs; gutters; *Sidewalks; Trails*; traffic control signs and devices; *Roadway* markings; *Landscaping*; supply and installation of electrical power plant and communications plant; and all incidental associated works

Zoning Bylaw

means the bylaw adopted under the "Local Government Act" that applies to any lot, *Parcel, Subdivision/Development* regulated under the Zoning Bylaw for the *City*, as amended from time to time.

3. Basic Provisions

- 3.1 This Bylaw, including its Schedules, shall apply to all *Subdivisions* and *Developments* on *Parcels* within the geographic boundaries of the *City* unless specifically excluded by this Bylaw or other applicable legislation.
- 3.2 The requirements in this Bylaw are to be read in conjunction with the *City's Design Criteria Manual*. That is, all *Subdivision/Development* related *Works and Services* shall follow the design standards outlined in the *City's Design Criteria Manual*, as amended from time to time by the *City Engineer*.
- 3.3 Council hereby authorizes the *City Engineer* to prepare and amend from time to time a Design Criteria Manual for the purpose of providing design requirements, material specifications and installation requirements for the *Works and Services* required under this Bylaw.
- 3.4 While the use of the singular is usually preferred, this Bylaw uses plural to avoid a gender-specific pronoun when its use does not create ambiguity.
- 3.5 If any part, section, subsection, clause, sub-clause, or phrase of this Bylaw is, for any reason, held to be invalid by the decision of any Court of competent jurisdiction, the invalid portion shall be severed without affecting the remainder of the bylaw.
- 3.6 Should any conflict exist or arise between this Bylaw and any other *City's* Bylaw, the requirements set in this Bylaw shall take precedence over those Bylaw requirements.
- 3.7 Nothing in this Bylaw shall relieve a *Developer* of a *Subdivision* or *Development* from the responsibility to seek out and comply with any other applicable legislation associated with the *Subdivision* or *Development* of their property.
- 3.8 All measurements and standards referred to in this Bylaw are expressed in metric units.
- 3.9 The approval of an application for *Subdivision/Development* does not in any way constitute a representation or assurance that the *City* will expend public funds on *Works and Services* in support of such application.

4. Subdivision/Development Approvals

- 4.1 Every *Developer* applying for approval of a *Subdivision/Development* shall apply in the manner and on the form(s) prescribed by the *City* for that purpose and in respect of that application, shall comply with all applicable requirements of this Bylaw and all other *City* bylaws, Federal and Provincial statutes, regulations, and rules and obtain all necessary approvals of government ministries and agencies having jurisdiction.
- 4.2 The receipt of any design drawings for a proposed *Subdivision* shall not be construed as *Preliminary Layout Approval* or *Final Approval* of a *Subdivision* for "Land Title Act" purposes.

5. Submission of Application

In addition to the application submission requirements detailed in other *City* policies & bylaws, the applicant shall provide the minimum following items at the time an application is made for a proposed *Subdivision/Development*:

- 5.1 Survey plans of the proposed *Subdivision/Development*;
- 5.2 Proof that the applicant for *Subdivision/Development* is the *Owner* of the land or their duly authorized agent;
- 5.3 The *Subdivision/Development* application fee as specified in the Fees and Charges Bylaw, as amended;
- 5.4 Completed *City* "Site Information and Assessment" Forms prescribed in Schedule D attached hereto and forming part of this Bylaw;
- 5.5 *Development/Subdivision* Application and Building Division's other related forms that can be

downloaded at [the City website – Applications, Form & Permit](#);

5.6 A Draft Plan of *Subdivision/Development*;

The draft plan shall be clearly entitled "Draft Plan" and shall show the following information:

- 5.5.1 Legal description of the property to be subdivided/developed (property shall be outlined in red);
- 5.5.2 Layout and alignment of all *Highways* and *Parcels* to be created by the proposed *Subdivision/Development*, together with their dimensions;
- 5.5.3 Widths of all dedicated *Roads* continuous to or within the proposed *Subdivision/Development*;
- 5.5.4 Elevation contours based on 0.25 metre intervals, or such other intervals as may be requested by the *Approving Officer*, over the whole of the property to be subdivided;
- 5.5.5 An indication of the extent and boundaries of any adjacent lands owned by the same *Owner(s)* as the land being proposed for *Subdivision/Development*;
- 5.5.6 Location, dimensions and uses of any *Buildings* or structures existing on the land being proposed for *Subdivision/Development*, together with locations of existing wells, septic disposal fields and utility services; and
- 5.5.7 Location of the boundaries of any existing natural *Streams* on the land being proposed for *Subdivision/Development*.

6. Suitability

- 6.1 No application for a *Subdivision/Development* shall be approved by the *Approving Officer*, where such proposed *Subdivision/Development*:
 - 6.1.1 Is in the opinion of the *Approving Officer* contrary to the public interest;
 - 6.1.2 Is not suited to the configuration of the land being subdivided;
 - 6.1.3 Is not suited to the use to which it is intended;
 - 6.1.4 Makes impracticable the future *Subdivision/Development* of the land within the proposed *Subdivision/Development* or of any adjacent land;
 - 6.1.5 Does not meet all *Zoning Bylaw* requirements and conform to the Official Community Plan; or
 - 6.1.6 Is contrary to applicable provisions in the "Land Title Act".

7. Preliminary Layout Approval (PLA)

- 7.1 Subject to the acceptance by the *Approving Officer* and upon receiving recommendations from all agencies having jurisdiction, *Preliminary Layout Approval* of the proposed *Subdivision* may be granted, at which time the *Owner* shall be advised in writing of all required *Works and Services*, Development Cost Charges (DCC), fees and other requirements in connection with the proposed *Subdivision*.
- 7.2 *PLA* may be revoked by the *Approving Officer* at any time in the event that new information becomes available subsequent to review by the *Approving Officer* or in the event that any change in legislation, regulations or bylaws, which would render the proposed *Subdivision* unlawful, takes effect prior to the granting of *Final Approval*.
- 7.3 Additional requirements or conditions may be identified by the *Approving Officer* or other authorities having jurisdiction, prior to approval of the *Subdivision*.

- 7.4 Survey plans, from a qualified accredited *Surveyor*, showing the lot sizes, shape, layout and legal description of the proposed *Subdivision* must accompany the proposed application before *PLA* is granted.
- 7.5 If a *Subdivision* application is not completed within the time specified in the *PLA* letter issued by the *Approving Officer*, such *PLA* shall be deemed to be void and of no further force and effect, and, unless an extension is granted by the *Approving Officer*, the application for this *Subdivision* shall be deemed to have been withdrawn and of no further force and effect.

8. Works and Services - General Requirements

- 8.1 *Works and Services* must be provided, designed, located and constructed in accordance with this Bylaw and with design drawings and specifications approved by the *City Engineer*.
- 8.2 Every *Owner* of lands to be subdivided must, at the *Owner's* own cost, provide *Works and Services* to serve every parcel within the *Subdivision*.
- 8.3 Section 8.2 does not apply in respect of a *Subdivision* under the "Strata Property Act".
- 8.4 Every *Owner* required to provide *Works and Services* under this Bylaw or as a condition of the approval of a *Development*, shall:
 - 8.4.1 Provide such *Works and Services* in accordance with the provisions of this Bylaw and to the standards of *Works and Services* prescribed in the *City's Design Criteria Manual*, that are applicable to the proposed *Subdivision/Development*; and
 - 8.4.2 Design, construct and install such applicable *Works and Services* as a minimum requirement, standard and specification for such *Works and Services* prescribed in the *City's Design Criteria Manual*.
- 8.5 Every *Owner* must, as a condition of the approval of a *Subdivision* or the issue of a *Building* permit, construct *Works and Services* on those portions of highway immediately adjacent to the site being subdivided or developed up to the centreline, and such *Works and Services* shall be provided in accordance with the provisions of this Bylaw and to the standards of *Works and Services* prescribed in the *City's Design Criteria Manual*.
- 8.6 Every *Owner* must provide, as a condition of the issue of a building permit, *Works and Services* on the site being developed and the *Owner* shall design, construct and install such *Works and Services* at the *Owner's* own expense meeting the minimum requirements, standards and specifications contained in the *City's Design Criteria Manual* and this Bylaw.
- 8.7 Should any *Works and Services* to be provided under sections 8.5 and 8.6 be included in the schedule of works in a Development Cost Charge (DCC) Bylaw, the *Approving Officer* may provide the *Developer* with credits against DCC charges in accordance with the "Local Government Act" to a maximum of the DCC charges assessed for the specified *Works and Services*.
- 8.8 In constructing *Works and Services* required under this bylaw, the *Owner* shall ensure that excavated material shall not be placed on private property that is within the 200-year *Floodplains* or Agricultural Land Reserve unless the property *Owner* has obtained a permit issued by the *City* as required under the "Soil Conservation Act". Such permit will only be issued upon the BC Agricultural Land Commission approval of such deposition.
- 8.9 The *City* shall have the right to take possession of and use any completed or partially completed portion of the work, but such possession and use shall not be deemed an acceptance of such work. If such prior use increases the cost of uncompleted work or causes refinishing of completed *Works and Services* beyond normal wear and tear, the *Developer* shall be entitled to such compensation as the *City Engineer* may determine.
- 8.10 Where the *Owner* of any lands being subdivided/developed is required to provide within a *Subdivision/Development* a *Water Distribution System*, a *Sanitary Sewer System*, or a *Storm Sewer System*, the *City* may require the *Owner* to provide extended and/or excess services per section 507 of the "Local Government Act" (LGA), as *amended*. For example, a portion of the trunk water,

sewage, or *Drainage System* may be required to be extended and/or provided with a capacity in excess of that required to service the proposed *Development*. The cost of the extended/excess services will be paid either by:

8.10.1 The *City*; or

8.10.2 The *Owner* of the land being subdivided or developed, subject to the *Owner's* right to potentially recover costs paid through latecomer charges under section 508 of the "Local Government Act".

8.11 The interest rate to be included in latecomer charges shall be a rate of interest equal to the [Municipal Finance Authority of BC](#) lending rate for 15 years plus 2%.

8.12 Council hereby delegates to the *City Engineer* the power under section 507 and 508 of the "Local Government Act" to:

- Require extended or excess services in accordance with section 507 of the "Local Government Act";
- Determine whether the cost to the *City* of extended or excess services is excessive such that the *Owner* of the lands subject to the *Subdivision/Development* must pay such costs;
- Determine the proportion of the cost of providing the *Works and Services* that constitute extended or excess services;
- Identify the *Parcels* that will be served by the extended or excess services;
- Determine which part of the extended or excess services will benefit each of the *Parcels* that will be served; and
- Enter into an agreement with the *Owner* of the lands subject to the *Subdivision/Development*.

9. **Public Convenience, Access, and Clean-up**

In carrying out the work, the convenience of the public must always be considered and provided for, which convenience is protected by statute, the common law and the *City's* bylaws. A *Developer* must obtain all permits or permissions necessary to obstruct a street, thoroughfare or *Sidewalk*. In no case shall any street, *Roadway* or place be obstructed more than is ordered or approved by the *City Engineer* in writing.

Developers must ensure that the public continues to have safe access to driveways, *Buildings* and property, both for vehicles and pedestrians. Suitable and convenient platforms, approaches, structures, bridges, crossings or other works shall be constructed and maintained in good order and serviceable condition as required by the *City Engineer*.

No material shall be deposited upon any street, *Sidewalk*, *Boulevard*, grass plot, or other public property without due consultation with and approval of the *City Engineer*, so that the least damage will be incurred. Material shall not be allowed to remain thereon longer than necessary.

During all phases of the operations, precautions shall be taken to abate nuisance caused by mud or dust by clean-up, sweeping, sprinkling with water, or other means as necessary to accomplish results acceptable to the *City Engineer*.

10. **Works and Services - Specific Requirements**

10.1 Drainage Collection and Disposal

10.1.1 Every *Owner* of land to be developed shall provide each *Parcel* within the proposed *Subdivision/Development* with a *Drainage System*, including standard service connection designed, constructed and installed in accordance with the minimum requirements,

standards and specifications contained in this Bylaw, and shall provide for connection of the proposed *Drainage System* on the parcel to an existing adequate *Drainage System*.

10.1.2 Every *Owner* of lands to be developed shall incorporate best management practices for rainwater management during the design, construction and installation in accordance with the minimum requirements, standards and specifications contained in the *City's Design Criteria Manual* and this Bylaw.

10.1.3 Where the *Parcel* is accessed by a *Panhandle*, the storm sewer service must be extended the full length of the *Panhandle*.

10.1.4 Infiltration Facilities may be allowed only in areas where a Professional Geotechnical Engineer's report states that the existing soil conditions are permeable or porous and where the property is not already connected to the *City Drainage Systems*. Infiltration Facility design shall follow the criteria set in the *City's Design Criteria Manual* and are subject to review and approval by the *City Engineer*.

- As a part of the *Subdivision* approval process, the *Owner* at their cost shall prepare and register a Restrictive Covenant on Title that shall require the property *Owner* of the land, with an Infiltration-based integrated rainwater management system, to:

- Periodically at all reasonable times; and
- Without notice during the times the onsite Infiltration Gallery is overflowing.

grant property access to the *City* to inspect their onsite Infiltration Facility to verify it is functioning as designed.

- Shall not add impervious materials to the subdivided lot by paving, adding onsite sheds, or any other similar impervious infrastructures without the *City's* explicitly written permission in advance.
- Require the *Owner* to maintain their onsite Infiltration Facility clean and as per the requirements outlined in the *City's Design Criteria Manual*.
- Require the *Owner* to maintain their porous asphalt driveway by "vacuum sweeping" it annually for prevention and rehabilitation of permeable surfaces of the porous driveway.
 - When the ability to infiltrate *Runoff* diminishes as more sediment is captured and retained, regular maintenance in the form of cleaning becomes increasingly important to maximize performance and extend the life of permeable pavement.
- Require the *Owner* to inform the *City Engineer* and acknowledge in writing within two working days, when they find out (through their observation, and/or an inspection by a professional or *City* staff) their onsite Infiltration Gallery is not functioning as designed and accept taking responsibility to rectify the problem at their cost within 4 weeks of the time the problem was made known to the *Owner*.
- Agree that if the *Owner* fails to fix the malfunctioning Infiltration Facility within the aforementioned time frame, the *City* at the *Owner's* expense, has the right to hire a Contractor to fix the operational problems of these infrastructures at the *Owner's* cost. The total expense for the *Owner* to pay shall include the cost of rectifying the operational problems and the *City's* related administration cost (i.e., 5% of the cost of rectifying the problems).

10.1.5 Every *Owner* of lands to be developed shall be responsible for the maintenance of their on-site detention facility. As such, the *Owner* at their cost shall prepare and register a Restrictive Covenant on Title which shall indemnify the *City* from any future damage claims to the property and/or other neighbouring properties due to the storage/detention facility system malfunctioning and obligates the *Owner* to inspect and maintain their onsite detention facility regularly and as per the detention facility's O&M Manual.

- In the case of the on-site detention malfunctioning, the *Owner* is responsible to rectify the problem. If the *Owner* fails to demonstrate to the *City Engineer* that necessary steps are taken to fix the problem, the *City* at the *Owner's* expense, shall hire a *Contractor* to fix the operational problem of the on-site detention facility.
- 10.1.6 All portions of the site shall be kept properly and efficiently drained during construction and until *Final Acceptance* by the *City Engineer*. The *Developer* shall be held responsible for all damages which may be caused or result from water backing up or flowing over, through, from, or along any part of the work, or which any of their operations may cause to flow elsewhere.
- 10.1.7 At all times during the course of construction and to the end of the *Maintenance Period*, there shall be no *Discharge* of any silt, dirt or debris into any existing *Drainage System* or watercourse, as referred in the *City's Watercourse Protection Bylaw*. Streets, catch basins, manhole sumps and siltation controls shall be cleaned and maintained to the satisfaction of the *City Engineer*.
- 10.2 Water Distribution – Domestic
- 10.2.1 Every *Owner* of lands to be developed shall provide each *Parcel*, within the proposed *Subdivision/Development*, with a *Water Distribution System*, including standard service connections that is designed, constructed and installed in accordance with the minimum requirements, standards and specifications contained in the *City's Design Criteria Manual* and this Bylaw, and shall provide for connection of the proposed *Water Distribution System* on the parcel to an existing adequate *Water Distribution System*.
- 10.2.2 Where the *Parcel* is accessed by a *Panhandle*, the watermain service must be extended the full length of the *Panhandle*.
- 10.2.3 When the *City's* watermain is within an *SRW* on private property, the *City Engineer* may require a signed and sealed geotechnical report to investigate the soil condition and its effect on any construction activities at the vicinity of the *City's* watermain. The *City Engineer* shall use the outcome of the investigation in this report to decide whether a Restrictive Covenant on Title is required to restrict the depth and location of any proposed footings, *Buildings*, overhangs etc. in the vicinity of the watermain.
- 10.3 Sewage Collection and Disposal
- 10.3.1 Every *Owner* of lands to be developed shall provide each *Parcel* of land, within the proposed *Subdivision/Development*, with a *Sanitary Sewer System*, including standard service connections that is designed, constructed and installed in accordance with the minimum requirements, standards and specifications contained in the *City's Design Criteria Manual* and this Bylaw, and shall provide for the connection of the proposed *Sanitary Sewer System* to an existing adequate *Sanitary Sewer System*.
- 10.3.2 Where the *Parcel* is accessed by a *Panhandle*, the sanitary sewer service must be extended the full length of the *Panhandle*.
- 10.3.3 The use of onsite sanitary pump stations is discouraged. Where the only feasible alternative is the use of pump stations, the *Consulting Engineer* must receive prior approval from the *City Engineer*.
- On-site/private pump stations shall be designed in accordance with the BC Plumbing Code, BC Building Code, BC Electrical Code, and other relevant standards.
 - When under special circumstances, as outlined in the *City's Design Criteria Manual*, a private sanitary pump system is approved, the *Owner* at their cost shall prepare and register a Restrictive Covenant on Title before the *Servicing Agreement* between the *City* and the *Owner* is signed, that shall indemnify the *City* from any future damage claims originated from the property *Owner* and/or third parties, due to the pump system malfunctioning.

- When the *City's Sanitary Sewer System* is within an *SRW* on private property, the *City Engineer* may require a signed and sealed geotechnical report to investigate the soil condition and its effect on any construction activities at the vicinity of the *City's Sanitary Sewer System*. The *City Engineer* shall use the outcome of the investigation in this report to decide whether a Restrictive Covenant on Title is required to restrict the depth and location of any proposed footings, *Buildings*, overhangs etc. in the vicinity of the *Sanitary Sewer System*.

10.4 Power and Telecommunications Distribution

Unless otherwise approved by the *City Engineer*:

- 10.4.1 Every *Owner* of lands to be developed within the *City*, shall provide each *Parcel* with connection to the nearest existing underground or overhead power and telecommunications distribution system fronting the lands via an underground connection as defined in hydro and telephone manuals. For certainty, no aerial/overhead extensions to existing overhead systems or new poles are permitted.
- 10.4.2 Where there is an existing service to a structure to be retained within the *City*, the service must be replaced by an underground service. Overhead utility services to existing structures may be retained at the discretion of the *City Engineer*.
- 10.4.3 Where the *Parcel* is accessed by a *Panhandle*, the service must be extended the full length of the *Panhandle*.
- 10.4.4 Where undergrounding hydro and telecommunications is deemed by the *City Engineer* to be infeasible at the time of the *Subdivision/Development* application, the *Developer* shall install conduit and vaults along the frontage of the *Subdivision/Development Parcel* based on a BC Hydro approved plan and pay the *City* a *Cash in Lieu* amount for the remaining *Works and Services* plus 5% engineering fees to have the undergrounding work be completed in the future, when The *City Engineer* deems this feasible.

10.5 Provision of Access

Except as otherwise provided in this Bylaw, the *Owner* shall provide *Highway* access systems within a *Subdivision/Development* so that each such system:

- 10.5.1 Serves and can be connected to all *Parcels* created by the *Subdivision/Development*;
- 10.5.2 Extends along all *Parcels* within the *Subdivision/Development* to provide access to all *Buildings* within the *Subdivision/Development*;
- 10.5.3 Provides the standard of *Subdivision/Development* as set out in this Bylaw; and
- 10.5.4 Provides for extension and connection of the system to lands and systems beyond the *Subdivision/Development*.

Without limiting the generality of the foregoing, the *Owner* shall not be required to provide vehicular or pedestrian access systems where or to the extent that:

- Systems or parts thereof already exists which provide the standards required in the *City's Design Criteria Manual* and this Bylaw for both the existing *Parcels* and those created by the *Subdivision/Development*; and
- The *Parcels* being created will have access appropriate to their intended use.

10.6 Highways

- 10.6.1 Every *Owner* of lands to be developed shall provide each *Parcel* of land within the proposed *Subdivision/Development* with access to a *Highway* that at a minimum must include a *Roadway*.

- 10.6.2 Every *Owner* of lands to be developed shall submit a Traffic Impact Assessment (TIA) study, with the scope of work as outlined in the *City's Design Criteria Manual*, to assess the impact of their proposed *Subdivision/Development* on pedestrian, cyclist, transit, and automotive infrastructure.
- A TIA is not required for a single family, duplex, triplex, and fourplex *Subdivision/Development* application.
 - The *Developer* shall implement TIA recommended improvements at their cost as part of the *Servicing Agreement*.
- 10.6.3 Every *Highway*, required or provided in respect to a proposed *Subdivision/Development*, shall be dedicated, designed, constructed and installed in accordance with the minimum requirements, standards and specifications contained in this Bylaw, the *City's Design Criteria Manual*, and the "Land Title Act", as amended from time to time.
- 10.6.4 Where the *City Engineer* believes that due to terrain and soil conditions, the proposed *Works and Services* cannot be adequately constructed in accordance with the minimum requirements, standards and specifications of this Bylaw and the *City's Design Criteria Manual*, they may require that the *Owner* provide, without compensation, SRW of a width or dimension that, in the *City Engineer's* opinion, would permit the *Works and Services* to be adequately and appropriately designed, constructed and installed for the purpose intended.

10.7 *Highway* Dedication

The required *Highway* dedications for various classifications of *Highways* in a *Subdivision/Development* shall be specified by the *City Engineer* to meet *City's Design Criteria Manual*, as amended. The *City* shall advise the *Owner* of the classification of each *Highway* in a proposed *Subdivision/Development* and the required *Highway* dedication.

Notwithstanding any other provision hereof:

- 10.7.1 Dedications by the *Developer* shall be dependent on the ultimate design of the *Roadway* within each *Roadway* classification and the ability to provide *Works and Service* as defined by the *City Engineer*, and the *City's Design Criteria Manual*.
- 10.7.2 Additional *Highway* dedication may be required in order to provide traffic turn-lane channelization or minimum curb return radius at intersections with *Arterial, Collector, or Local Roads* or to accommodate utility transformer pads; and
- 10.7.3 Additional *Highway* dedication may be required at intersections between lanes or at right angle turns in any *Highway*; and
- 10.7.4 A *Highway* dedication of a triangular shaped corner truncation, as set by the *City's Design Criteria Manual*, along each of the front and exterior lot lines of all corner lots will be required.
- 10.7.5 Where a *Subdivision/Development* borders on a natural body of water, access to the body of water shall be given by *Highways* in accordance with the requirements of the "Land Title Act", Chapter 245, Part 5, Section 58.
- 10.7.6 Half *Roads* may be required only when the land *Parcel* opposite or adjacent to the *Development* is not participating in the *Development*. The travel portion of half *Roads* will have sufficient dedication to include all the required services, including *Sidewalks*, utilities and streetlights.
- Where applicable, the half *Road* shall accommodate minimum *Road* width of 8.0 m for fire truck access.
- 10.7.7 When a recreational *Trail* is proposed on the subject property or the adjacent property, the *Developer* shall confirm with the *City Engineer*, the actual location of the *Trail*, the appropriate *Trail* classification in order to determine the area to be dedicated and the design of the *Trail*, including whether there is a need for a trailhead facility.

- In some cases, the dedicated land for the recreational *Trail* may be fenced but not constructed. In these cases, the *City Engineer* shall take *Cash in Lieu* contributions for the development of the *Trail* in the future. The cash payment will be taken in the event that the *Trail* section has no logical continuation beyond the area being developed.

10.8 Sidewalks, Bike Lanes, MUPs, Walkways and Emergency Access

10.8.1 The *Owner* shall provide *sidewalks* on *Highways* within the lands being subdivided/developed in accordance with the requirements specified in this Bylaw;

10.8.2 Without limiting the generality of Subsection 10.8.1, the *City Engineer* may require:

10.8.2.1 *Sidewalks*, buffered bike lanes and/or *MUPs* along any *Highway* within a *Subdivision/Development* on which substantial pedestrian traffic is expected to be generated;

10.8.2.2 *Sidewalks*, buffered bike lanes and/or *MUPs* along the side of a *Highway* within a *Subdivision/Development* which fronts on or abuts a school, park, recreation facility, public *Building*, shopping area or *Commercial Subdivision/Development*;

10.8.2.3 *Sidewalks*, buffered bike lanes and/or *MUPs* on both sides of an *Arterial, Collector, or Local Road* within a *Subdivision/Development*;

- a. One-side *Sidewalks* may be approved in predominantly single family residential areas, where in the *City Engineer's* opinion, available lands to accommodate *Sidewalks* on both sides are infeasible.

10.8.2.4 *Walkways* within a *Subdivision/Development*, connecting points between which pedestrian movement will be generated; and

10.8.2.5 Emergency access within a *Subdivision/Development* from the turnaround of a cul-de-sac to the nearest *Highway* other than the *Highway* providing access to the cul-de-sac.

10.9 Construction Standards

All *Highways* within or required in connection with a *Subdivision/Development* shall be cleared to the full width and shall be graded, drained, surfaced and constructed in accordance with the *City's Design Criteria Manual*, as amended from time to time.

Boulevard trees shall be planted where noted as a requirement in the *City's Design Criteria Manual*, as amended.

10.10 Parkland Conveyance

Pursuant to Section 510 of the "Local Government Act", a *Developer* is required to convey 5% of residential lands included in the Plan of *Subdivision/Development* to the *City* for parkland purposes. Alternatively, the *Approving Officer* may require *Cash-in-Lieu* for all or a portion of the 5% parkland conveyance. Lands to be conveyed to the *City* for park shall be subject to the following conditions:

10.10.1 The *Approving Officer* may require that lands be handed over in a natural state as a *Protected Natural Asset*. In this case, all existing vegetation is to remain within the limits of the parkland, including any significant trees at the property line. Existing grades/elevations are to be maintained at the property lines and within the park itself unless approval for site alterations is received in writing from both the *Approving Officer* and the *City Engineer*. The lands will be inspected prior to acceptance and any identified hazards, including soil stability concerns in steep slope areas, shall be rectified by the *Developer* at their cost.

10.10.2 Prior to commencement of any clearing, grubbing or construction within 10 metres of the parkland and when at the discretion of the *Approving Officer* the parkland shall be undisturbed, the parkland must be fenced with signage installed on fencing that identifies the bounds of the parkland, and indicating:

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- 10.10.2.1 The future use of the land as a park.
- 10.10.2.2 That no construction storage shall occur on this *Parcel* of land nor shall any construction debris be dumped on this site, and
- 10.10.2.3 That all trees and other vegetation must be left undisturbed.
- 10.10.3 Prior to commencement of any clearing, grubbing or construction in a *Development* site, the *Developer* shall retain a certified arborist to conduct a tree assessment and provide a report, including a map showing all significant trees on parklands and *Protected Natural Assets*, and specifying trees to be retained and trees to be removed, as applicable. Lands to be used as an active park and when requiring some degree of clearing, are to be cleared at the *Developer's* cost in accordance with an approved grading and tree maintenance plan. Trees that are to be retained are to be protected during all clearing and grading activities undertaken by the *Developer*. Protection shall extend to the *Dripline* of trees. Trees damaged due to these activities, or as a result of failure to adequately protect them, may result in the need for the removal and replacement of the damaged trees at the *Developer's* sole expense. The replacement trees will be based on the diameter at breast height of the trees removed and shall include 1 cm of replacement tree caliper for each 1 cm of diameter of the removed trees. If there is insufficient room to plant these trees on the development site, the funds will be provided to the *City* and placed in the General Reserve fund for future use in the community.
- 10.10.4 Dedicated lands that are conveyed for active park use must be clear of any and all hazards, either natural or man-made. Any costs associated with the clean-up are to be borne by the *Developer*.
- 10.10.5 Dedicated lands shall also be free of common noxious weeds, including weeds designated as an invasive plant, by the Weed Control Regulation under the "Weed Control Act", and their seeds. The following *Noxious Weeds* will require control:
- Knotweeds (Japanese, Bohemian, Giant, or Himalayan)
 - Giant Hogweed (Toxic - Do not touch)
 - English and Irish Ivies
 - English holly
 - Yellow Archangel
 - Common Periwinkle
 - Yellow Flag Iris
 - Daphne/Spurge Laurel (Toxic - Do not touch)
 - Cherry Laurel
 - Butterfly Bush
 - Bamboo
 - Scotch Broom
 - Purple Loosestrife
 - Himalayan Balsam
 - Himalayan Blackberry
- 10.10.6 Lands conveyed for active park use shall be graded, covered with a minimum of 100 mm of topsoil and seeded prior to being turned over to the *City*. The *City Engineer* may require the *Developer* to install all the required services at the property line for use in the park.
- 10.10.7 Parklands will not be formally accepted until they have been inspected by the *City's* Arborist and accepted by the *Approving Officer* in writing. Prior to assumption of the park or *Protected Natural Asset*, a site inspection will be undertaken ensuring that there are no hazards and that the lands are in an acceptable state prior to the land being transferred to the *City*. The hazard assessment will include all trees along the property lines that could be affected by work of the *Developer* on the adjacent lands not being dedicated to the *City*.
- 10.10.8 Parklands for active use shall remain the responsibility of the *Developer* until dedication to

the *City*. This may include initial grass cutting, litter pick-up, etc.

10.11 A proposal to construct below the *MBE* at properties that are not serviced by the *City's Storm Sewer System* must include the following:

10.11.1 Letter of Assurance, Schedule B from a Professional Geotechnical Engineer (the disciplines to be included, but not limited to, are 4.2, 4.3, and 8.1).

10.11.2 Sealed drawings showing the design in accordance with this Bylaw and the *City's Design Criteria manual*, a site cross section of the *Building* and complete *Drainage System* with elevations and the location of the proposed rainwater management system (e.g., Infiltration Gallery), as required in the *City's Design Criteria Manual*.

10.11.3 A sealed report from the Professional Geotechnical Engineer including but not limited to the following items:

- Soil texture,
- Seasonal high groundwater table elevations,
- The proposed *MBE*,
- A statement confirming the *Building* may be used safely for the use intended.
- The conditions of use and construction methods which may be applicable.

Once the above report has been accepted by the *City*, a draft Restrictive Covenant is to be submitted by the *Owner* with the above report attached as "Schedule A". The *Owner* will be notified if the draft document requires corrections or amendments. Once the draft Restrictive Covenant has been accepted, the *Owner* shall provide two signed copies of the document, and the letter of undertaking from the *Owner's* lawyer or notary to the *City* for final signature.

10.12 Protection of Offsite Trees during Construction Requirements

Maintenance, growth, and enhancement of the offsite trees (at the neighbouring and *City* owned properties) are important goals of the *City* through its strategic plan. Preserving and protecting healthy trees can help the *City* achieve these goals. Considering offsite tree protection in the initial stages of *Subdivision/Development* or construction planning may mean the difference between preserving a healthy tree and having to remove it. Plans shall be created with the offsite tree protection in mind.

There are a number of steps that need to be taken to protect offsite trees prior to, during and after any construction project, the following are the requirements for tree protection on any new *Development* projects, or *City* infrastructure construction projects;

10.12.1 Submission of Offsite Tree Survey

With an application for issuance of a *Development* permit or *Building* permit, or civic construction project, the *Owner* or the *Developer* on behalf of the *Owner*, must submit to the *City Engineer* a tree survey, certified correct by a BC Land *Surveyor* who is a member of the association of British Columbia *Surveyors* that shows:

- a. All off-site trees on adjacent properties to the site and/or on *City Boulevards* that their driplines are at or within the property line and/or their trunks at breast are within 2 meters of any boundary of the site.
- b. The tree grade or tree elevation for each tree referred to in subsection (a);
- c. The drip line for each such tree

10.12.2 Submission of Arborist's Report

With an application for issuance of a *Subdivision/Development* permit, *Building* permit or civic construction project the *Owner* or the *Developer* on behalf of the *Owner* must also submit a report certified correct by an arborist that sets out

- a. The condition, size, and species of trees listed in the offsite tree survey, as per item 10.12.1;
- b. The impact of the proposed development and construction on the health of the trees and potential hazards to them during or after construction
- c. Development or construction limitations
- d. Recommended construction practices to protect the trees during and after construction; and
- e. An undertaking from the *Owner's* arborist and the *Owner* to the *City* that the arborist will perform or supervise performance of:
 - i. Pre-construction treatment of trees including root and branch pruning
 - ii. Regular site inspection during construction, and will report any offence against these requirements on the site to the *City Engineer* or on any street adjacent to the site.
 - iii. Restorative landscape treatment including soil renovation
 - iv. Selection and planting of any replacement trees required to be removed during construction
 - v. A post construction inspection of the site, and will prepare a report, certified correct by the arborist, for submission in a timely manner, to the *City Engineer*.

10.12.3 Exception for interior alterations

If a *Development* permit or *Building* permit is for alterations only to the interior of a *Building* and, in the opinion of the *Approving Officer*, none of the work, or storage, transport, or removal of materials, will affect any offsite trees, section 10.12.1 and 10.12.2 do not apply.

10.12.4 Demolition, excavation, or construction

A person must not commence or carry on demolition, excavation, or construction on a site, except in accordance with the requirements set in the *City's Design Criteria Manual* and this Bylaw.

10.12.5 The *Owner* shall:

- a. Install a protection barrier for each retention tree, as defined in subsection 10.12.1, before demolition, excavation or construction begins on the site;
- b. Ensure that the protection barrier meets the requirements for a protection barrier listed in this Bylaw, throughout the course of demolition, excavation and construction on the site and
- c. Maintain the protection barrier in good repair continuously throughout the course of demolition, excavation and construction on the site.

10.12.6 No construction without protection barrier

No person shall carry out demolition, excavation or construction on a site unless there are offsite trees protection barriers in place as required in this Bylaw.

10.12.7 Location of protection barrier

Each protection barrier referred to in section 10.12.5 must extend into the site from the nearest boundary of the adjacent site by the greater of two meters or such other distance determined by the *Owner's* arborist and approved by the *City Engineer* to be necessary to protect the tree and the adjacent property.

10.12.8 Additional requirements for trees on *Boulevards*

In addition to the requirements of sections 10.12.5 and 10.12.6, before and during demolition, excavation, or construction on a site, the *Owner* of the site must:

- a. Comply with the requirements of the *City* arborist with respect to any tree on a *Boulevard* or adjacent to the site.
- b. Not prune, move, or otherwise disturb such tree unless the *City* arborist has given their prior written permission.
- c. Ensure that each protection barrier:
 - i. Allows for free and clear passage of pedestrians on the surrounding portion of the *Boulevard* and on the *Sidewalk* adjacent to the *Boulevard*.
 - ii. Allows for clear visibility of fire hydrants, driveway accesses and crosswalks.

10.12.9 Condition of protection barriers and retention trees

A person who installs a protection barrier under this section must:

- a. Care for the retention tree within the tree protection area, during the construction process, including sufficient watering, particularly if excavation has disturbed the tree root system.
- b. Attend to proper root pruning and care for the remaining root system under the *City* arborist's supervision.
- c. Minimize root damage, soil erosion and tree disturbance wrap a temporary root curtain around the root zone to retain and protect the exposed area, which root curtain is to consist of heavy wire mesh or similar material lined with burlap and supported by posts.
- d. Use backfill to ensure that none of the roots remain exposed.
- e. If required by the *City Engineer*, tunnel rather than trench when installing underground utilities and drainage lines, which techniques includes boring a hole under or through the root system with minimal disturbance, and carry out any excavation within the tree protection area to accommodate underground installations, including footings, by hand and
- f. Maintain such protection barrier, repair any damage to it, and not alter or remove it until construction is complete.

10.12.10 No encroachment

A person must not encroach into a tree protection area, with or without vehicles and must not store anything in such area until construction is complete.

10.12.11 Tree Protection barriers

A typical tree protection detail drawing is shown in the *City's Design Criteria Manual* that identifies the varying Tree Protection Zone (TPZ) based on tree size measured as Diameter at Breast Height (DBH).

In some cases, disturbances in the TPZ may be unavoidable, in which case, the TPZ must be adjusted in consultation with the arborist and with approval of the *City Engineer*. In these situations, it may be necessary to implement other tree protection measures such as horizontal root protection.

10.13 *Protected Natural Assets (PNA)*

*PNA*s are intended to remain in a natural or naturalized condition for the purposes of providing fish and wildlife habitat and opportunities for passive recreation. *PNA*s may be subject to flooding and/or erosion from time to time. Maintenance activities on such lands shall be limited to risk mitigation and habitat enhancement, as required by the *City*.

11. **Subdivision/Development Approval**

11.1 Prior to commencement of construction to install *Works and Services*, a *Servicing Agreement* is required. The purpose of the *Servicing Agreement* is to ensure offsite infrastructures are built to the standards outlined in the *City's Design Criteria Manual* and protect the *City* against claims (including liability) for matters arising from the construction, installation, and inspection of the *Works and Services*.

It also allows for provisions which enable:

- The *Approving Officer* to consider signing of the *Subdivision* plans prior to the start and/or completion of the *Works and Services*, except in the case of *Subdivisions* for single family residential lots where all *Works and Services* shall be completed in accordance with Section 12 prior to *Final Approval* of the *Subdivision*; and
- *Building Officials* to consider issuing *Building* permits prior to the start and/or completion of the *Works and Services*, if and when the land is serviced.

11.2 The *Owner* of the lands being developed shall:

Deposit with the *City* an irrevocable Letter of Credit in a form acceptable to the *City*, a certified cheque, debit, or cash in the amount outlined in Schedule B of this Bylaw for constructing and installing all *Works and Services* required to serve the proposed *Subdivision/Development*, including *Boulevard* and street tree planting.

The *City Engineer* may use the deposits to:

- Remedy/complete:
 - Any deficient *Works and Services*
 - Any defects in the *Works and Services* appearing within one year from the date of completion of the *Works and Services*.
 - Any damages to other infrastructures or property resulting from the *Works and Services* done.
- Cover the cost for possible need of engaging third-party Engineering works, including environmental assessment, testing and sub-consultant services.

12. **Supervision of Construction**

The *Owner* shall, through a *Consulting Engineer* engaged by the *Owner*, provide general supervision and sufficient resident supervision of the construction of the *Works and Services* to certify that such *Works and Services* are constructed and installed in accordance with the drawings approved by the *City Engineer* and all requirements herein contained.

The *Owner* shall cause their *Consulting Engineer* to prepare and submit for approval of the *City Engineer* the "Record Drawings" (i.e., as constructed drawings) of the *Works and Services*.

13. Property Taxes and Utility Fees

The *Owner* shall, prior to *Final Approval* of a proposed *Subdivision/Development*, pay all property taxes, utility fees, rates, applicable Local Improvements and charges assessed and levied against the lands to be developed/subdivided. Where such taxes, fees, rates, applicable Local Improvements, and charges for the then current year have not been assessed, levied and imposed on the said lands at the date on which the approval of the *Subdivision/Development* is signed by the *Approving Officer*, the *Owner* shall pay the amount estimated by the *City's* Corporate Services Department to be the total of said taxes, fees, rates, applicable Local Improvements, and charges to be assessed, levied, and imposed on the said lands for the then current year.

For *Subdivisions/Developments* approved in November and December of any year, in addition to all property taxes, utility fees, rates, applicable Local Improvements and charges assessed and levied against the lands to be developed/subdivided for the current year, the *Owner* shall, prior to *Final Approval* of a proposed *Subdivision/Development*, also pay an estimate of all property taxes, utility fees, rates, applicable Local Improvements, and charges assessed and levied against the lands to be developed/subdivided for the following year. These payments will be credited towards the property tax and utility billing that occurs in May of the following year.

The *Owner* shall submit their property tax certificate issued by the *City's* Corporate Services Department confirming that all property taxes, utility fees, rates, applicable Local Improvements and charges assessed and levied against the lands as described in this section of the Bylaw have been paid.

14. Fees

The *Owner* shall pay all applicable fees payable under this Bylaw as set out in the *City's* Fees and Charges Bylaw, as amended, prior to receiving *Final Approval* of a *Subdivision/Development* by the *Approving Officer* and prior to *Building* permit issuance.

15. Development Cost Charges

The *Owner* shall pay to the *City* all applicable Development Cost Charges (DCC's) in connection with a *Subdivision/Development* prior to receiving *Final Approval* of the *Subdivision/Development* by the *Approving Officer* and prior to *Building* permit issuance.

16. Municipal Works and Services

The *Owner* shall pay to the *City* all applicable charges for connecting the *Works and Services* required to service a *Subdivision/Development*, prior to receiving *Final Approval* of the *Subdivision/Development* by the *Approving Officer*.

17. Schedules

Schedules A through F, are attached to, and form part of, this Bylaw.

18. Repeal of Bylaw

Bylaw, 2008, No. 2744, cited as "Subdivision and Development Servicing Bylaw", and all amendments are repealed.

SCHEDULE A – TYPICAL ENGINEERING SERVICE REQUIREMENTS

The minimum service requirements for lands under every *OCP* designations shall be as follows. The *City Engineer* may set additional requirements to ensure the proposed *Subdivision/Development* complies with the *City's* minimum engineering standards and/or bylaws.

- Asphalt surface for *Roads* and *Lanes*
- Curb/gutter, *Sidewalk*, and/or *MUPs (Multi Use Path)*
- *Drainage System* (stormwater management plan may be required)
- Sediment control plan
- *Water Distribution System*
- *Sanitary Sewer System*
- Underground electrical, natural gas distribution, and telecommunication systems
- Ornamental street lighting
- *Sanitary Sewer System* capacity and *Water Distribution System* analyses (hydraulic modeling may be required)
- Offsite tree protection plan
- *Boulevard* tree planting
- Traffic Impact Assessment (may be required)

The final stage of the engineering review process involves preparation of the *Servicing Agreement* which is a contract between the *City* and the *Developer* defining and committing to the *Works and Services* required for the project. This *Servicing Agreement* includes legal and financial obligations associated with the project.

The following outlines *Servicing Agreement* timing:

- 1- *Subdivision Application*: After the time *Preliminary Layout Approval (PLA)* is issued.
- 2- *Development* and rezoning applications: When Council issues the third bylaw reading, and prior to bylaw adoption and *Development* permit issuance.

Prior to preparing the *Servicing Agreement*, and once 4 copies of the final set of engineering drawings are submitted, the *City Engineer* will require the *Consulting Engineer* to provide a Class A cost estimate (i.e., a detailed cost estimate for the breakdown of the construction cost) of the offsite *Works and Services*. This cost estimate will be used by the *City* staff to estimate *Security Deposit* and administration fees to be included in the *Servicing Agreement*.

Once the *Servicing Agreement* is signed and all securities are submitted by the *Developer* and acceptable to the *City*, then the *City Engineer* will advise the Development Services Department that the Engineering requirements have been satisfied and the *Developer* can proceed with the construction.

Certificate of *Substantial Completion* will be issued when all the offsite construction *Works and Services* have passed the final site inspection by the *City* inspector. Then, when appropriate:

- Final *Subdivision* approval will be issued by the *Approving Officer*; and/or
- For Rezoning and *Development* application, Final Adoption (fourth reading) will be issued by *Council*.

SCHEDULE B – GENERAL REQUIREMENTS

1. Introduction

- 1.1. The intent of the regulation listed in this schedule is to ensure that every *Subdivision/Development* in the *City* is developed with an adequate standard or level of servicing and facilities such as *Road* and *Sidewalk*, street lighting, traffic signals, power and telecommunications wiring, offsite *Landscaping*, *sanitary sewer system*, rainwater/storm collection system, and *Water Distribution System*.

2. Scope and Use of this Schedule

- 2.1 This schedule shall be applicable to *Subdivisions*, *Developments*, and *City* properties or rights-of-way in the *City*.

3. Construction Specifications

- 3.1 All construction within the scope of this schedule (*Road*, sanitary sewer, storm sewer, watermain, etc.) shall conform to the latest edition of the Master Municipal Construction Documents (MMCD) and the requirements, standards and specifications prescribed in the *City's Design Criteria Manual*, as amended from time to time.
- 3.1.1 Should any conflict exist or arise between these documents, the *City's Design Criteria Manual* shall take precedence over the MMCD.

4. Agreements, Bonding, Insurance, Permits

- 4.1 *Servicing Agreements* Contents, Provisions and Procedure
- 4.1.1 The *Approving Officer* may approve a *Subdivision/Development* Plan prior to the construction and installation of the works required to service the proposed *Subdivision/Development*, where the *Owner* of the lands being developed executes a *Servicing Agreement* with the *City*. The *City Engineer* and *Approving Officer* are hereby authorized to execute a *Servicing Agreement* with the *Owner* to construct and install the *Works and Services*.
- 4.1.2 The *Servicing Agreement* makes provision for, among other matters:
- 4.1.2.1 *Security Deposit*;
 - 4.1.2.2 Indemnity clause;
 - 4.1.2.3 Insurance requirements;
 - 4.1.2.4 *Maintenance Period*;
 - 4.1.2.5 *Warranty Deposit*;
 - 4.1.2.6 Progress draws; and
 - 4.1.2.7 Administration fees.
- 4.1.3 When entering into a *Servicing Agreement* the following procedure shall be followed:
- 4.1.3.1 Two copies of the *Servicing Agreement* shall be obtained from the Engineering Services. Both copies of the Agreement shall be signed and executed by *Owner's* authorized signatory plus their initial on every page, and returned to the *City Engineer* along with the following:
 - 4.1.3.2 *Security Deposit* in the amount and form specified;
 - 4.1.3.3 A non-refundable Administration and Inspection fee in the amount calculated in accordance with subsection 4.1.4 and specified in the *Servicing Agreement*; and

4.1.3.4 Any other connection fees, *Cash in Lieu of Works and Services*, latecomer fees, or similar charges levied by the *City* and required in the *Servicing Agreement*.

4.1.4 Administration and Inspection Fee

4.1.4.1 An Inspection and Administration fee is required based on the estimated cost of the off-site construction. The fee will be:

Estimated Construction Costs	Fees Payable
< \$100,000	6.0%
\$100,000 to \$250,000	5.5%
250,001 to \$500,000	5.0%
≥ \$500,000	4.5%

4.1.5 Security Deposit

4.1.5.1 The *Security Deposit* deposited by the *Developer* is to ensure the required design, construction, installation and maintenance of the appropriate, legislated *Works and Services* and offsite *Landscaping*. The *Security Deposit* shall be based on:

4.1.5.1.1 The estimated cost of construction as provided by the *Developer's Consulting Engineer* and *Landscape Architect* and accepted by the *City Engineer* (excluding works done by the *City*);

4.1.5.1.2 Plus (+) 10% contingency to cover possible rising costs and unforeseen situations during the life of the project.

4.1.5.1.3 Plus (+) 10% to cover the cost for possible need of engaging third-party Engineering works, including environmental assessment, testing and sub-consultant services; and

4.1.5.1.4 Plus (+) applicable taxes, as a separate cost item in the *Consulting Engineer's* cost estimate.

4.1.5.2 The *Security Deposit* shall be in the form of cash, debit, certified cheques, or an automatically renewing and irrevocable Letter of Credit which shall refer to the Municipal Project number and the *Developer's* name or company that is noted on the *Servicing Agreement*.

4.1.5.3 Upon the *City Engineer's* approval, the *Security Deposit* may be subject to drawdowns if the work has been constructed in accordance with the *City's Design Criteria Manual* and the Bylaw herein.

4.2 Indemnity Clause

4.2.1 The *Developer* shall indemnify and hold the *City*, its officers, employees, elected officials, agents and *Contractors* harmless from and against all actions and proceedings, costs, damages, expenses, claims, and demands whatsoever and by whomsoever, brought by reason of or arising in any way from the design, construction, installation or performance of the required *Works and Services*.

4.2.2 If as a result of any willful or negligent act or omission of the *Developer* in fulfilling its obligations under this Bylaw, the *City* becomes obligated to pay any money to any person, the *Developer* shall reimburse the *City* for all such monies and reasonable expenses.

4.3 Public Liability and Property Damage

4.3.1 Prior to the commencement of any *Works and Services*, the *Developer* shall obtain and maintain a policy or policies of insurance acceptable to the *City* and in accordance with the requirements of Sections 4.4 to 4.6. In all policies:

4.3.1.1 Each *Contractor* engaged in the work and the *City* shall be named as an additional insured;

4.3.1.2 Each policy shall contain a provision that the insurance shall apply as though a separate policy has been issued to each named insured; and

4.3.1.3 Each policy shall provide that no expiry, cancellation or material change in the policy shall become effective until after 30 days' notice of such cancellation or change. Notice of change shall be given to the *City* by registered mail.

4.3.2 The *Developer* shall maintain in good standing the insurance policy or policies until issuance of a Certificate of *Final Acceptance* by the *City Engineer*.

4.4 Insurance Policy Limits

4.4.1 The following are limits to be included:

4.4.1.1 Comprehensive Public Liability Insurance and Property Damage Insurance providing coverage of at least \$5,000,000 inclusive against liability for bodily injury or death and/or damage to property on an all risk occurrence basis;

4.4.1.2 Motor Vehicle Insurance for public liability and property damage providing coverage of at least \$5,000,000 inclusive on owned, non-owned or hired vehicles; and

4.4.1.3 Completed operations coverage on an all-risk occurrence basis of at least \$5,000,000 inclusive against liability for bodily injury, death and/or damage to property of others arising out of the existence of any condition in the work when completed or any installation or repair operations during the period of 12 calendar months next ensuing after the issuance of a Certificate of *Substantial Completion* by the *City*.

4.5 Insurance Policy Submission

4.5.1 At the pre-construction meeting the *Developer* shall deliver to the *City*, a copy of the policy or policies of insurance certificate signed by a licensed insurance agent, certifying as follows:

4.5.1.1 "I hereby certify that the attached insurance policy provides insurance coverage as required by *Servicing Agreement* number _____ between the City of Langley and (the *Developer*), and that the attached Insurance Policy No. _____ is valid for the period of the *Servicing Agreement*."

4.5.2 No construction may commence if this provision has not been satisfied.

4.6 Patents and Copyrights

4.6.1 The *Developer* shall pay all royalties, patent and license fees, and hold and save the *City*, its officers, agents, servants and employees, harmless from liability of any nature or kind, including costs and expenses, for or on account of any copyrighted or un-copyrighted composition, secret process, patented or un-patented invention, articles, or appliances manufactured or used in the execution of the *Works and Services*, including their use by the *City*.

4.7 Permits

4.7.1 Where any work is undertaken on a *Highway* within the *City*, where full or partial *Highway* closures are necessary or contemplated, the *Developer* shall obtain a "*Highway Use Permit*" from the *City Engineer*.

5. Conduct of Work

5.1 Responsibility

- 5.1.1 The *Developer* shall be held fully responsible to the *City* for the acts and omission of their agents and of all persons directly or indirectly employed by him. The *Developer* agrees to bind all agents or employees to the requirements, standards and specifications of the *City's Design Criteria Manual*.

5.2 Survey Monuments and Legal Postings

- 5.2.1 All legal posts, stakes, and integrated survey monuments within the area of the *Work and Services*, and all construction stakes and marks on adjoining works, shall be preserved undisturbed and visible. In the event that any of the above are disturbed, lost or destroyed, they shall be replaced to the satisfaction of the *City Engineer*. All costs for replacement or re-integration shall be borne by the *Owner/Contractor*.

- 5.2.1.1 An Integrated Survey Area (ISA) monument shall be considered disturbed or destroyed if the construction for the project:

- Lowers the grade of the *Road* at the location of the ISA monument(s);
- Raises the grade of the *Road* at the location of the ISA monument(s) by more than 0.3 meters; or
- Installs any underground utilities (including FortisBC, BC Hydro, Telus, Metro Vancouver Regional District, water, sewer, drainage, etc.) within a 1.5 m radius of the ISA monument(s).

- 5.2.2 The establishment of all legal surveys will be undertaken by a BC Land *Surveyor* (BCLS) and in coordination with the *City Engineer*. All costs for replacement of any legal work shall be borne by the *Developer* and/or their *Contractor*.

- 5.2.3 The *City* has adopted Metro Vancouver's High Precision Network (HPN) of monuments. Any legal survey related work in the *City* shall be based on the HPN monuments.

- 5.2.3.1 When using HPN monuments is infeasible, the *City Engineer* may approve using Global Positioning System Network (GPS) and the existing Integrated Survey Area (ISA) monument system for legal surveys.

Prior to starting the work, the *Developer* shall confirm with the *City Engineer* whether their survey works can be based on GPS and ISA monuments.

- 5.2.4 A *Security Deposit* of \$15,000, for the replacement of destroyed/disturbed HPN survey monuments, shall be paid by the *Owner* if working within the 5.0 m radius of an HPN monument. The *Owner* shall contact the *City Engineer* for information on the *City's* HPN whereabouts before starting the *Works and Services*.

- 5.2.5 The *Surveyor* shall complete their field work in conjunction with their final posting of the *Subdivision*.

5.3 Work of Others

- 5.3.1 The *City*, its officers, employees, agents and *Contractors* shall be at liberty to enter upon the site of the work with its workmen and materials to do other work, and the *Developer* shall afford any such workmen all reasonable access and facilities.

- 5.3.2 The *Developer* shall arrange their work and dispose of their materials in such a manner as will not interfere with the work or storage of materials or others upon the site of the work. The *Developer* shall join their work to that of others, and perform their work in proper sequence in relation to that of others to the acceptance of the *City Engineer*.

5.4 Drainage

- 5.4.1 The *City* utilizes natural *Streams* as part of the *Drainage System*. Accordingly, the *Developer* shall be responsible for complying with all Federal, Provincial and Municipal legislations with respect to protection of fish, fish habitat, wildlife, wildlife habitat, species at risk, and watercourses.
- 5.4.2 The *Developer* shall keep all portions of the site efficiently drained during construction and until acceptance by the *City*. The *Developer* shall be responsible for all damages which may be caused from water backing up, flowing over, through, from or along any part of the work, or elsewhere.
- 5.4.3 Existing culverts, drains, ditches and water courses affected by the work shall be kept clear of excavated material at all times. When it is necessary to relocate, remove or alter an existing drainage structure, the *Developer* shall provide suitable alternative measures for handling the drainage.
- 5.4.4 The *Developer* shall clean streets, catch basins, manhole sumps, detention tanks, and maintain erosion and sediment controls as often as the *City Engineer* deems necessary, or as deemed necessary by other *City* permits or legislation enacted for such purposes, until the *Works and Services* are accepted by the *City*.

5.5 Work to Fit with Others

- 5.5.1 The *Developer* shall do all cutting, fitting or patching of their work that may be required to properly fit or receive existing structures and utilities.
- 5.5.2 The *Developer* shall not connect their *Works and Services* to existing *Works and Services* without the prior written consent of the *City Engineer*.

5.6 Damage to Work

- 5.6.1 The *Developer* shall bear the risk and all loss or damage which may occur on or to the *Works and Services* until accepted by the *City Engineer*.
- 5.6.2 All repair, restoration or re-execution of the *Works and Services* shall be carried out to the satisfaction of the *City Engineer* and at no cost to the *City*.

5.7 Use of Completed Portions

- 5.7.1 The *City* shall have the right to take possession of any completed, or partially completed, portion of the *Works and Services* when considered necessary by the *City Engineer*. Such possession shall not be deemed an acceptance of *Works and Services*. If prior use increases the cost of constructing uncompleted *Works and Services*, or causes refinishing of completed work beyond normal wear and tear, the *Developer* shall be entitled to such compensation as the *City Engineer* may determine.

5.8 *City's* Right to Repair, Restore or Re-Execute the *Works and Services*

- 5.8.1 Should the *Developer*, within 14 days of the *City's* written notice to do so, fail to perform the design, construction and installation of *Works and Services*, or fail to begin, repair, restore, or re-execute the *Works and Services*, all to the satisfaction of the *City Engineer*, or fail to comply with the requirements, standards and specifications of the *City's Design Criteria Manual*, the *City* shall be hereby empowered to repair, restore or re-execute the *Works and Services* at the cost of the *Developer*.
- 5.8.2 Despite any other provisions of this Bylaw and the *City's Design Criteria Manual*, the *City* reserves the right to repair, restore or re-execute the *Works and Services* on an emergency basis without written notice.
- 5.8.3 The work performed by the *City* shall not relieve the *Developer* from the performance and fulfillment of any of their obligations and duties under *City's* Subdivision and Development Servicing Bylaw, as amended, and/or *City's Design Criteria Manual*.

5.9 Payment of Accounts

- 5.9.1 The *Developer* shall pay all accounts for labour, services and materials, incurred by the *City* as a result of the *City* performing any repair, restoration or re-execution of the *Works and Services* whether during the design, construction and installation of the *Works and Services* or during any *Maintenance Period* as established herein. Should payment not be made upon invoice, the *City* shall deduct the payment from the *Security Deposit* or *Warranty Deposit*, as the case may be.
- 5.9.2 If the amount is greater than the *Security Deposit* or *Warranty Deposit*, as the case may be, the *Developer* shall pay the difference when invoiced.

5.10 Arbitration

- 5.10.1 In the case of any dispute between the *City* and the *Developer* during the progress or afterwards of the design, construction or installation of the *Works and Services*, as to any matter arising there under, either party may at their option give to the other, notice of such dispute and demand arbitration thereof and the parties may, with respect to the particular matters then in dispute, agree to submit the same to arbitration in accordance with the laws of the Province of British Columbia; provided, however, that if arbitration has not been agreed upon, either party may elect to have such dispute determined by a Court of competent jurisdiction. Arbitration shall not be a cause for the stoppage of work.

5.11 Public Convenience, Access and Clean-Up

- 5.11.1 In carrying out the work, the *Developer* shall always consider the convenience and safety of the public.
- 5.11.2 The *Developer* shall not obstruct any *Roadway* or *Sidewalk* longer than is necessary.
- 5.11.3 The *Developer* shall provide for safe access to *Sidewalks*, driveways, *Buildings* and private property for vehicles and pedestrians at all times.
- 5.11.4 The *Developer* shall allow for passing along and crossing of all *Roadways* and *Sidewalks*, where practical, during the execution of the construction and installation of the *Works and Services*.
- 5.11.5 The *Developer* shall construct and maintain in good order suitable platforms, approaches, structures, bridges, crossings, signage or other *Works and Services* as required by the *City Engineer*.
- 5.11.6 The *Developer* shall not deposit material upon a *Roadway* or other public or private property without the consent of the *City Engineer* or private property *Owner*.
- 5.11.7 During all phases of the construction and installation of *Works and Services*, including the *Maintenance Period*, the *Developer* shall take precautions to abate nuisance caused by mud, dust or erosion by clean-up, sweeping, sprinkling with water or other means, as necessary to accomplish results acceptable to the *City Engineer*.
- 5.11.8 At the discretion of the *City Engineer* and at the cost of *Developer*, all abandoned pipes shall be either removed or filled.
- 5.11.9 The *Developer* shall obtain written consent from the *City Engineer* prior to any closure of a *Roadway*, access way or *SRW*.

5.12 Traffic Control Barriers, Lights

- 5.12.1 The *Developer* must, at their own expense, provide, erect, and maintain all required barriers, fences or other proper protection, and must provide, keep and maintain operating lights with amber globes or provide watchmen/security as may be necessary, in order to insure safety to the public as well as to those engaged about the premises or works.
- 5.12.2 Where it is practicable in the *City Engineer's* opinion, The *Developer* must keep any *Roadway* open for travel for the use of the public for such width as the *City Engineer* may direct. The

Developer must also provide a sufficient number of "NO THOROUGH FARE", "DETOUR", or other signs or notices, as determined by the *City Engineer*, to be placed at distance from the obstruction to serve sufficient warning to the travelling public and maintain such signs in good order in conspicuous places wherever any *Roadway*, *Sidewalk* or thoroughfare is torn up or dangerous, and so long as it remains unsafe or unfinished.

5.12.3 All vehicular or pedestrian traffic warning, control or barrier devices shall be provided in accordance with the Traffic Control Manual for Work on *Roadways* as published by the BC Ministry of Transportation & Infrastructure's Traffic Management Manual for Works on *Roadways* and Uniform Traffic Control Devices Manual and shall be subject to the acceptance of, or conditions of, the *City Engineer*.

5.13 Releases at Completion of *Works and Services*

5.13.1 The *City Engineer* may require that, upon completion of construction and installation of any portion of the *Works and Services* on private property, the *Developer* obtains from each affected property *Owner*, a formal release, in writing, verifying that the property has been restored by the *Developer* to the same condition it was in as before such construction or installation.

5.13.2 In the case of a dispute, the *City Engineer's* decision shall be final.

5.14 Utility Services

5.14.1 Engineering drawings submitted to the *City* for review are to identify all existing water, storm and sanitary services greater than 30 years old and at the discretion of the *City Engineer*, their abandonment may be incorporated into a *Servicing Agreement*.

5.14.2 The *Developers* and their *Consulting Engineers* shall follow all other requirements set in Section 1.0 of the *City's Design Criteria Manual*, as amended.

5.15 Deep Excavation/Shoring Plan Requirements

The *City's* requirements with respect to shotcrete removal and soil anchors on public property is outlined in the following notes, which shall be shown on the Excavation/Shoring Plan:

Shotcrete placed on *City* property within 1.5 meters of the finished ground surface must be removed;

5.15.1 Where in the opinion of the *City Engineer*, the proposed excavation poses a risk to public property, a *Security Deposit* shall be required. The *Security Deposit* shall be issued in the form of cash, a certified cheque or an irrevocable automatically renewing Letter of Credit prior to an excavation permit.

The *Security Deposit* will be held until all of the following has occurred:

- Structure is to grade;
- Backfill has been completed;
- A Professional Geotechnical Engineer has provided a letter of certification stating the site and adjacent properties (private and public) are stable; and
- video inspections of all nearby sewers before and after the excavation/shoring works to ensure there is no damage.

Once the *City* receives confirmation of the aforementioned requirements and the video comparison confirms there is no damage to adjacent utilities, the *Security Deposit* can be released.

The *Developer* will be responsible for all costs associated with the repair of damage to *City* infrastructure. If there is evidence of damage to *City* infrastructure, the *City* will proceed with the repairs and costs will be charged back to the *Developer*. The *Security Deposit* will be returned, less the amount incurred for repairs.

- 5.15.1 Depth of shotcrete removal may increase depending on the amount of shotcrete encroachment into *City* property. This will help to eliminate possible conflicts with future utility and service installations within lane and *Road* allowances;
- 5.15.1 Removal operation must be completed in stages and in such a manner that damage to adjacent utilities does not occur. Depth of shotcrete removal may be relaxed at the discretion of the *City* should conflict with adjacent utilities compromise their integrity;
- 5.15.1 Depth of shotcrete removal will increase to accommodate installation of services to the Building. Block outs may be incorporated in the placement of shotcrete to accommodate installation of these services;
- 5.15.1 All anchors installed on *City* property within 1.5 meters of finished ground surface must be removed. All anchors below 1.5 meters of finished ground surface must be de-tensioned or fully grouted for its entire length after the lock-off load has been applied.
- 5.15.1 De-tensioning and removal of anchors shall be completed concurrently with backfill placement in the presence of the *City's* Inspector. Any de-tensioning works in the absence of the *City's* Inspector shall be verified by the *City* at the *Developer's* cost.
- 5.15.1 A Letter of Assurance must be submitted to the *City Engineer*, ensuring the above issues are addressed.

6. **Inspection and Security Deposit Reduction**

6.1 Inspections - General

- 6.1.1 The *City Engineer* shall be granted access to the site for the purposes of inspecting the construction of the *Works and Services* to ensure that such *Works and Services* are constructed and installed in accordance with the drawings approved by the *City Engineer* and all requirements herein contained.

When required to do so by the *City Engineer*, every *Owner* shall uncover and replace at their own expense any construction that has been covered contrary to this Bylaw.

The *City Engineer* may put a "Stop Work Order" on construction that is proceeding in contravention of this Bylaw. No person shall commence or continue any construction while this order is in place.

- 6.1.2 The *Consulting Engineer* shall supply representative samples of materials as requested by the *City Engineer*. The *Consulting Engineer* shall provide on-site survey, measurements, inspection and testing of the *Works and Services*. The testing and geotechnical firm(s) shall immediately forward results, reports or recommendations to the *Consulting Engineer* and the *City Engineer*.
- 6.1.3 Inspections by the *City Engineer* shall not constitute supervision or co-ordination of the *Works and Services*, and neither are they intended to serve in place of proper Engineering supervision of the *Works and Services* by the *Developer's Consulting Engineer*.

6.2 Field Reviews by the *Consulting Engineer*

- 6.2.1 The *Consulting Engineer* shall be responsible for:

- 6.2.1.1 Carrying out periodic "Field Reviews" (i.e., inspection) of the *Works and Services* at the construction site, as per Engineers and Geoscientists BC's regulations and requirements, to confirm that the construction and installation of the *Works and Services*:

- Conforms to the intent of the accepted designs; and
- Complies with the requirements, standards, and specifications of this Bylaw.

A signed and sealed copy of each and every Field Review assessment report shall be sent to the *City Engineer* within 5 working days;

- 6.2.1.2 Engaging the services of qualified testing and geotechnical firms to provide quality assurance inspections, recommendations and testing of the *Works and Services*, as required by the *City Engineer*, and
- 6.2.1.3 Ensuring that all other requirements of the *City* are performed and completed to a satisfactory conclusion.

6.3 Testing or Confirmation of Completed *Works and Services*

- 6.3.1 The *City Engineer* may conduct independent testing of any or all *Works and Services*. Typically, these tests will be conducted on a random basis and are for the purpose of ensuring that the *Works and Services* being accepted by the *City Engineer* meet the minimum requirements, standards and specifications of this Bylaw.
- 6.3.2 In addition to ensuring that the *City Engineer* has proper and accurate records of the *Works and Services* constructed by the *Developer*, survey spot checks may be conducted from time to time to verify authenticity of the as constructed information.
- 6.3.3 The costs for this random testing or surveying shall be borne by the *City*. If the *Works and Services* do not comply with this Schedule, the *Developer* shall bear such costs plus all costs for repairs, replacement, reconstruction and re-certification of any *Works and Services* disturbed, exposed, removed or affected by the random checks.

6.4 *Security Deposit* Reductions

- 6.4.1 As the *Works and Services* progress, the *Consulting Engineer* may prepare and submit to the *City Engineer* a *Security Deposit*/Letter of Credit (LOC) reduction request setting forth an estimate of the quantity, value and percentage of the work completed.
- 6.4.2 Upon verification of the estimate the *City Engineer* may release *Security Deposit* held by the *City* to a maximum of 75% of the value of the works completed. The *City Engineer* may deny reductions where, in their opinion, the amount of *Security Deposit* remaining is required to cover the remainder of the work. No *Security Deposit* reduction request shall be for a period of less than one month. *Security Deposit* reductions are for the convenience of the *Developer* and, in no case, shall be taken as acceptance of the material plant or workmanship of stipulated *Works and Services*.
- 6.4.3 Following issuance of the *Substantial Completion* Certificate, the *City Engineer* may reduce the *Security Deposit* to the *Warranty Deposit*.

7. **Certificate of Substantial Completion**

7.1 For *Works and Services* Except Street Tree and Boulevard Plantings:

- 7.1.1 Upon completion of the *Works and Services*, the *Developer* or their *Consulting Engineer* shall notify the *City Engineer*, who shall issue a letter of *Substantial Completion* upon satisfactory inspection of the *Works & Services* to determine conformance to the approved drawings and specifications.
 - The *City Engineer* shall, if necessary, issue a list of deficiencies that must be corrected prior to issuance of a Certificate of *Substantial Completion*.
- 7.1.2 The *City Engineer* shall not issue a Certificate of *Substantial Completion* of the *Works and Services* until the works have been certified by the *Developer's Consulting Engineer* as complete and constructed in accordance with the specifications and requirements contained herein:
 - 7.1.5.1 All deficiencies are rectified, with the exception of minor deficiencies;

- 7.1.5.2 Record drawings (i.e., As-Builts) of the required *Works and Services* (one set of paper prints, an electronic copy in DWG format, and one copy in PDF of the drawings showing the works as actually constructed, certified correct by the *Owner's Consulting Engineer*) have been accepted by the *City Engineer*;
- 7.1.5.3 Service Record Cards, supplied by the *City* and completed by the *Owner's Consulting Engineer* showing for each Parcel in the *Subdivision/Development*, the location of the sewerage, drainage and water service connections, have been accepted by the *City Engineer*.
- Services Record Cards for each *Parcel* shall show:
- *SRW* and easements as they pertain to the *Parcel*;
 - location, inverts and depth of water, storm and sanitary connections; and
 - *MBE*.
- 7.1.5.4 All legal encumbrances have been registered or released accordingly;
- 7.1.5.5 A written declaration from the *Consulting Engineer* has been received stating that all *Works and Services* have been supplied, designed, constructed and installed in substantial conformance with the accepted design drawings and the requirements, standards and specifications of the *City's Design Criteria Manual* (as amended), this Bylaw, and all other applicable *City* bylaws;
- 7.1.5.6 The *City Engineer* has inspected the *Works and Services* and is satisfied with them in accordance with the specifications and requirements of the *City's Design Criteria Manual* (as amended) and this Bylaw; and
- 7.1.5.7 Final grade at the time of completion shall be prepared by the builder and shall be 450 mm below finished grade within the boundaries of the lot or pursuant to a phased lot grading plan accepted by the *City Engineer*. A 450 mm of *Amended Soil* shall be placed by the builder or the *Developer* prior to the final inspection of the *Building* permit, as per requirements set in the *City's Design Criteria Manual*.

7.2 For Offsite *Landscaping* (Street Tree and Boulevard Plantings):

- 7.2.1 Upon completion of *Landscaping* as required under the *City's Design Criteria Manual*, the *Developer's Landscape Architect* shall inspect the work, and if necessary, issue to the *Contractor* a list of deficiencies that shall be corrected.
- 7.2.2 Upon adequate completion of all deficiencies the *Developer's Landscape Architect* shall submit British Columbia Society of Landscape Architects (BCSLA) L3 Schedule to the *City Engineer*.
- 7.2.3 The *City Engineer* shall issue a Landscape Certificate of *Substantial Completion* upon satisfactory inspection of the work to determine conformance with the requirements, standards and specifications of the *City's Design Criteria Manual* and the approved drawings and specifications.

8. **Building Permit Issuance**

- 8.1 No *Building* permit for any *Building* will be issued without the *Developer* providing proof acceptable to the *City's Building Division*, in writing or on plans, that the *Parcel* of land is serviced in accordance with BC Building Code, and to the standards and specifications outlined in this Bylaw and the *City's Design Criteria Manual*.
- 8.2 No single-family *Building* permit application will be received until a Certificate of *Substantial Completion* for the required *Works and Services* under the *Servicing Agreement* has been issued by the *City Engineer*.

9. Inspection of Offsite Landscaping

- 9.1 The *Developer* shall, at their sole cost and expense, supply representative samples of materials and plants as requested by the *City Engineer*. No payment, reimbursement or remuneration shall be made to the *Developer* for the cost of labour, plant, material, work or any delay occasioned by this requirement.
- 9.2 Inspections by the *Landscape Architect* are limited to ensuring that the *Landscaping* is in compliance with the requirements, standards and specifications of the *City's Design Criteria Manual* and this Bylaw and are in general conformance with the intent of the accepted plans and are in a condition acceptable to the *City*.

10. Warranty Deposit

- 10.1 Upon issuance of the Certificate of *Substantial Completion*, the *City Engineer* may release the *Security Deposit* less a *Warranty Deposit* of 15% of the estimated cost of the *Works and Services* plus an amount determined to be equal to that of any deficiencies, to a minimum of \$5,000 to secure the maintenance or repair to the *Works and Services* during the *Maintenance Period*.

11. Maintenance Period

- 11.1 For *Works and Services* Except Street Tree and *Boulevard Plantings*
 - 11.1.1. The *Maintenance Period* for *Works and Services* designed, constructed and installed under this Bylaw, shall be for a minimum of one year following the date of issuance of the *City Engineer's* Certificate of *Substantial Completion* and shall expire upon issuance of the *Final Acceptance Certificate*.
 - 11.1.2. During the *Maintenance Period*, the *Developer* shall guarantee the stability and sufficiency of the materials and workmanship of the *Works and Services* and shall make good, correct and repair all defects, imperfections, damage, and settlements which may arise or occur in relation to the *Works and Services*.
 - 11.1.3. The *Developer* shall ensure that the *Roads* and *Sidewalks* are kept clean and free of dirt and debris during the *Maintenance Period*.
 - 11.1.4. Should the *Developer* fail to perform the *Works and Services* to the acceptance of the *City Engineer* by failing to begin work or to repair, restore, re-execute or in any manner fails to comply with the specified standards as it applies to any part of the *Works and Services* as requested by the *City Engineer* within a period of 14 days from sending of such notice in writing to do so, the *City* shall become empowered to do the *Works and Services* itself or to employ such person or persons to repair, restore or re-execute the works provided that the entire expense of repair restoration or re-execution shall be charged to the *Developer*.
 - 11.1.5. The *Developer* shall pay all accounts for labour, services and materials incurred by the *City* as a result of executing any Sections of this Schedule during the execution of the Work, as and when they become due and payable. Should payment of such accounts not be made when they become due, the *City* shall deduct the payment from the *Security Deposit*. In the event that the amount is greater than that owing to the *Developer*, the *City* shall charge the *Developer* the difference.
 - 11.1.6. All such repair, restoration or re-execution of the *Works and Services* shall be carried out and completed to the acceptance of the *City Engineer*.
 - 11.1.7. The fact of the *City* not having disapproved of or rejected any part of the Work or any of the materials supplied in connection at the time of the *City Engineer* making an estimate or at any other time during the execution of the Work shall not be deemed or be construed to be an acceptance of any such part of the Work or any such materials.
 - 11.1.8. The provisions of this Section shall remain in full force and effect and be applicable for the period of the execution of the *Works and Services* and for the *Maintenance Period*.

11.2 For Offsite *Landscaping* (Street Tree and *Boulevard Plantings*):

11.2.1 The *Maintenance Period* shall be one year for *Boulevard Plantings* and two years for street trees from the date shown on the *City Engineer's* letter of *Substantial Completion*.

11.2.2 During the *Maintenance Period* for *Landscaping*, the *Developer* shall replace any plant material that dies, is damaged or that fails to grow satisfactorily as determined by the *City Engineer*. All replacements shall be with plant material of the same kind and size as the original *Plantings*. The *Maintenance Period* on replacement plant material shall extend for another period of one year for *Boulevard* planting and two years for street trees.

11.2.3 Should the *Developer* fail to make good any defects, imperfections, vandalism acts, settlements or clean-up after being given at least seven days' notice in writing during the *Maintenance Period* for *Landscaping*, the *City* shall be entitled to make alternative arrangements for the execution of the repairs and to recover the costs from the *Developer*.

11.2.4 The *City Engineer* reserves the right to extend the *Developer's Maintenance Period* for an additional year if, at the end of the initial *Maintenance Period*, leaf development, growth or overall vigour is not sufficient to ensure future survival.

12. Testing or Confirmation of Works Completed

12.1 The *City* reserves the right to conduct independent testing of any works constructed or being constructed. Generally, these tests will be conducted on a random basis and are for the expressed purpose of ensuring that the *Works and Services* being accepted by the *City* meet the minimum acceptable standards.

In addition, to ensure the *City* has proper and accurate records of the works constructed, survey spot-checks may be conducted from time to time to verify the project is being built as designed and/or to authenticate the As-Built information.

The costs for testing or surveying shall be borne by the *Contractor* and/or *Developer*.

13. Final Acceptance Certificate

13.1 A *Final Acceptance Certificate* will be issued by the *City Engineer* upon expiration of the *Maintenance Period* for required *Works and Services* provided all deficiencies have been corrected.

The *City Engineer* will release the *Warranty Deposit* (Maintenance Holdback), less double the anticipated cost of any outstanding repairs chargeable to the *Developer*.

14. Equivalent Development Units (EDUs) by Official Community Designations

OCP Land-use Designations	EDU per Hectare	PE per EDU¹
Agriculture	-	
Civic Centre	21	2.14
Ground Oriented	27	2.11
Historic Downtown Core	38	3.43
Industrial	6	2.41
Low Rise Residential	86	1.75
Mid Rise Residential	124	1.24
Mixed Employment	5	3.52
Mixed Use	61	1.76
Parks and Open Space	2	1.20
Service Commercial	13	1.76
Suburban	14	2.68
Transit-Oriented Core	62	3.58
Transit-Oriented Residential	115	1.82
University District	15	8.79
Urban Residential	14	3.05

Notes: (1) Population Equivalents (PE) that includes residential population plus employment population, where applicable.

SCHEDULE C – STANDARDS FOR DESIGNING AND PREPARING LOT GRADING

1. Intent

This section outlines the requirements to provide consistent guidelines, standards, specifications and ideas for *Subdivision/Development* of steeper sloping areas within the *City*.

Matching terrain, slope stability, structural integrity and reducing impact on neighbouring lands are important aspects in developing consistent guidelines.

Attention must be focused on how *Subdivision/Development* takes place on complex slopes. Developing consistent guidelines, that are easy to read, understand and implement, will help provide a responsible, consistent approach to the scope and form of land *Subdivision/Development* on sloping terrain.

Multiple changes in grade have an impact on *Building* and land *Subdivision/Development*. *Developers, Consulting Engineers*, designers and builders need to recognize this and develop land with an emphasis on reducing this impact.

Lot grading control is necessary to ensure that inherent problems of steep slope *Subdivision/Development* are considered and addressed by the *Development* industry

The *City* supports the responsible *Development* of land in our community. *Developers, Consulting Engineers*, builders and designers are still able to present and apply new and innovative lot grading schemes, ideas and proposals for their *Subdivisions/Developments*. These ideas, carefully considered and administered with a basic set of guidelines, standards, theories and concerns will benefit our community, its existing and future residents.

2. Objectives

2.1 Our goal is to:

- 2.1.1 Be sure that *Developers, Consulting Engineers*, designers and builders utilize existing topography without creating negative impacts on surrounding or adjacent lands;
- 2.1.2 Reduce the use of *Retaining Walls* where long term maintenance is a potential hazard or difficulty and where the visual and physical impact on neighboring lands is a potential problem or conflict;
- 2.1.3 Keep and maintain the natural vegetation on slopes;
- 2.1.4 Reduce impact of grade differences on adjacent properties;
- 2.1.5 Enhance environmental protection by reducing erosion and siltation;
- 2.1.6 Maintain the integrity of ecologically sensitive areas; and
- 2.1.7 Create visually attractive *Subdivisions/Developments*.

3. Implementation

3.1 Lot grading design will affect all proposed *Subdivisions/Developments* as follows.

3.1.1 *Development* Permit Applications

- 3.1.1.1 *Development* Permit is required in *Commercial, Industrial*, or Multi-family Residential prior to any *Subdivision/Development* occurring on the site including clearing, preliminary site grading (bulk grading), re-contouring and *Subdivision*. It is our intention that any grading shall be compatible with the proposed final lot grading of the *Development* as approved by the *Development Permit*. The *Developer* and their *Consulting Engineer* shall review aspects of lot grading control and submit plans accordingly.

3.1.2 *Subdivisions*

- 3.1.2.1 The *Preliminary Layout Approval (PLA)* shall require lot grading as a condition of *Subdivision* approval.
- 3.1.2.2 The first design submission package from the consultant shall include lot grading designs.
- 3.1.2.3 A *Subdivision* shall not reach “*Substantial Completion*” until lot grading is accepted as substantially complete.

3.1.3 *Building Permit Applications*

- 3.1.3.1 All *Building* permit applications shall be reviewed in conjunction with these lot grading controls. Final lot grading by the builder, shall be submitted and accepted by the *City Engineer* and *Approving Officer* prior to issuance of a *Building* permit.
- 3.1.3.1 Where no lot grading design plans exist, the *Developer*/builder shall submit lot grading design in conjunction with the application.
- 3.1.3.2 Final inspection shall not be approved until lot grading as accepted is completed.

4. **Design Guidelines**

4.1 Lot grading designs shall:

- 4.1.1 Show that proposed grading meets and utilizes existing or proposed slopes within *Subdivision/Development* boundaries with no impacts on neighboring lands;
- 4.1.2 Retain existing vegetation wherever possible or use vegetation to enhance grading and slopes within *Subdivision/Development* boundaries;
- 4.1.3 Demonstrate effective protection of environmentally and ecologically sensitive areas while adhering to guidelines and recommendations of governing agencies, Provincial and Federal Acts and Legislation;
- 4.1.4 Consider all aspects of construction techniques, ideas, suggestions and applications that will control or prevent erosion and sedimentation;
- 4.1.5 Minimize grade changes or differences between existing neighboring lands and the proposed *Subdivision/Development*;
- 4.1.6 Minimize the use of *Retaining Walls* where other more innovative forms of grading will work. When the use of *Retaining Walls* is the only alternative, aspects of design shall include:
 - 4.1.6.1 Maximum height;
 - 4.1.6.2 Maximum length;
 - 4.1.6.3 Drainage;
 - 4.1.6.4 Geotechnical and Structural Professional Engineers sealed drawings;
 - 4.1.6.5 Conform to standards and specification of the *City’s* *Subdivision and Development Servicing Bylaw*, *Building and Plumbing Bylaw*, and the *Zoning Bylaw*, as amended.

5. Considerations

- 5.1 The *City* reserves the right to request further information or review if it is determined that the submission is not specific enough. The *City* also supports opportunities for the *Developer* to design outside the parameters of this Bylaw. If a *Developer* or their *Consulting Engineer* feels that they can offer practical alternatives acceptable to the *Approving Officer* and the *City Engineer*, the *City* will review them upon the *Consulting Engineer's* written request and may accept those alternative solutions.
- 5.2 Grading designs shall meet the natural or pre-development grade at the boundaries of the lands being developed. The width, depth and number of lots may be affected in order to meet this requirement. Where these requirements cannot be met then working easements shall be required with the adjacent properties prior to construction.
- 5.3 To achieve the standards and specification listed in Section 4, a series of *Retaining Walls*, like steps, may be necessary. The minimum horizontal length of the step (tread) shall be 1 meter to allow for maintenance and vegetation. If the walls traverse over lot lines, convenient access to each step, on each lot, plus easement agreements with neighbouring properties shall be required.
- 5.4 All slopes, existing or proposed, shall be accessible for maintenance. Access and maintenance shall include gardening, lawn care, tree planting and care, fence construction and maintenance, etc.
- 5.5 Drainage, both surface and from above or behind the wall shall be a prime consideration.

6. Design Drawing Submission

- 6.1 Plans and details shall conform to specifications and standards of the *City's* Subdivision and Development Servicing Bylaw, as amended, and *Design Criteria Manual*.
- 6.2 Plans shall be to scale and include:
 - 6.2.1 The existing and proposed finished grade at all corners of the foundation wall of the proposed *Building(s)*;
 - 6.2.2 The existing and proposed finished grade at all lot corners. Existing topographic information shall extend a minimum of 1.0 m outside the *Development* boundary;
 - 6.2.3 The proposed slope of the driveway;
 - 6.2.4 Existing *Retaining Walls*;
 - 6.2.5 Proposed *Retaining Walls* with the elevation of the proposed finished ground at the top and bottom face of the wall;
 - 6.2.6 *MBE* and the elevation of the garage floor of any *Building* (GPE);
 - 6.2.7 Legal description, addresses, benchmark; and
 - 6.2.8 Geotechnical reports for cuts and fills greater than 1.5 metres in depth and slopes greater than 30%.

7. Certifications and Declarations

- 7.1. The *City* requires the submission of the pre-approved residential site plans from the *Developer*. *Developers* shall declare their intent to use the pre-approved plans when their *Consulting Engineer* submits *Development/Subdivision* design drawings of *Works and Services*.
- 7.2. Final lot grading by the builder, *Developer* or their designate after placement of *Amended Soil*, shall be performed in substantial conformance with the approved residential site plans prior to Final Inspection of the *Building* permit.
 - 7.2.1 The placement of the *Amended Soil* shall be performed under the direct supervision of a *Consulting Engineer* with expertise in Geotechnical Engineering.

7.2.2 The *Consulting Engineer* with expertise in Geotechnical Engineering shall sign and seal a letter to the *City Engineer* declaring that the *Amended Soil* was placed in accordance with the lot grading plan and the requirements set in the *City's Design Criteria Manual*, as amended

7.3. Following Final Inspection, the *Owner* may want to adjust the grades or construct *Retaining Walls*.

7.3.1. An "Impact Assessment Report" prepared by a *Consulting Engineer* is required that, at the minimum, addresses concerns related to soil stability, utility service connections and accessibilities, and all other possible constraints/concerns related to adjacent properties.

7.3.2. A written agreement to the changes in designs from the original *Consulting Engineer*, who designed the lot grading on the lot, may be required. The proof of agreement shall be submitted to the *City* by the *Developer*;

7.3.3. Approvals from the *Building Official* and the *City Engineer* are required prior to construction.

8. Legal Documentation

8.1. Covenants shall be required to be registered against the Titles of the lands where:

8.1.1 The final slopes are greater than 30%; or

8.1.2 *Retaining walls* are to be constructed.

8.2. The covenant shall prevent further re-grading, re-contouring, *Retaining Wall* construction, installation or alteration without the approval of the *City Engineer*.

SITE ASSESSMENT For Rezoning, Development Permit, and Subdivision Applications

INTRODUCTION

The purpose of this Site Assessment is to identify and evaluate attributes of a property prior to development activities. The City of Langley uses the Site Assessment to determine the potential land use impacts of your proposal by recognizing physical opportunities and constraints. The Site Assessment consolidates information early in the development process and will assist the developer by clearly identifying the magnitude of development potential prior to creating a development plan.

As part of this Site Assessment, you are required to submit a Site Assessment Plan (SAP) prepared by a British Columbia Land *Surveyor* that details the property in its current state prior to any proposed development activity. Please refer to the example provided at the end of this handout to better understand the SAP requirements.

BACKGROUND

Name of Developer(s): _____

Name of Property *Owner*(s): _____

Name of Agent(s) (if applicable): _____

Civic Address of *Development* Property(s): _____

Phone: _____

Email Address: _____

Mailing Address: _____

For Office Use Only

Date Site Assessment Submitted: _____

Legal Description of *Development* Property: _____

Parcel Identifier: _____

File Number: _____

1. TOPOGRAPHICAL AND SOIL CONDITION ELEMENTS

a. General topography description of the site (Check multiple boxes if site is complex):

- Flat
- Sloping less than 15%
- Sloping greater than 15%
- Sloping greater than 30%
- Other: _____

b. What general types of soils are found on the site?

- Clay
- Sand
- Peaty/Organic
- Bedrock (within 1 metre of surface)
- Other: _____

c. Are there surface indications of erosion or slippage anywhere on the site?

- Yes
- No

If yes, describe and identify slippage areas on SAP:

2. WATER

Watercourses

a. Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal *Streams*, ditches, depressions, ponds and/or wetlands)?

- Yes
- No

If yes, describe and indicate 'top of bank' of all watercourses on SAP:

b. Will *Subdivision/Development* of the property require any work over, in or adjacent to (within 30 m) of the described waters?

- Yes (If yes, specify locations of the SAP)
- No

c. Does the property lie within the *City's Floodplain*? (Ask *City's Development Services* staff).

- Yes (If yes, indicate on the SAP)
- No

Groundwater Recharge and Aquifers

d. Is there any existing or decommissioned water well(s) on the property?

- Yes (If yes, specify location of well site(s) on SAP)
- No

- e. Is there any decommissioned septic disposal system(s) on the property?
 - Yes (If yes, specify location of septic disposal systems(s) on SAP)
 - No
- f. Is there any man-made ditching or ponds present on the site?
 - Yes (If yes, specify location of ditching on SAP)
 - No

3. VEGETATION

- a. Are there any significant trees on the subject property (greater than 15 cm in diameter)?
 - Yes (If yes, specify location of significant trees on SAP)
 - No
- b. Are there any tree or vegetation clusters that can be maintained as part of the *Subdivision/Development* proposal?
 - Yes (if yes, specify location of trees and vegetation clusters to remain on SAP)
 - No
- c. Are there any tree or vegetation clusters slated for removal as part of the *Subdivision/Development* proposal?
 - Yes (if yes, specify location of trees and vegetation clusters slated for removal on SAP)
 - No
- d. Is there knotweed on the subject property, notably Japanese knotweed, Giant knotweed, Bohemian knotweed or Himalayan knotweed?
 - Yes (if yes, specify location of vegetation clusters and do not disturb or remove them)
 - No
- e. Is there Giant Hogweed, English and/or Irish Ivies, English holly, Yellow Archangel, Common Periwinkle, Yellow Flag Iris, Daphne/Spurge Laurel, Cherry Laurel, Butterfly Bush, Bamboo, Scotch Broom, Purple Loosestrife, Himalayan Balsam, Himalayan Blackberry on the subject property?
 - Yes (if yes, specify location of vegetation clusters and do not come in contact with Daphne/Spurge Laurel and Gant Hogweed plants)
 - No

4. ANIMALS

- a. If applicable, have any nests, dens, burrows or shelters been located on or near the property or have animals been observed to frequent the subject property? (Check multiple boxes if applicable and if any boxes are checked, specify location on SAP)
 - Birds: hawk, heron, eagle, owls, songbird, other;
 - Mammals: deer, beaver, raccoon, other;
 - Amphibians: frogs, salamanders, tadpoles, other;
 - Fish: salmon, trout, other
 - Other

5. LAND USE

- a. Please describe the current use of the site and adjacent properties.

- b.** Will any structures remain as part of the *Subdivision/Development* proposal?
 - Yes (if yes, specify location or remaining structures on SAP)
 - No
- c.** Will any structures be demolished as part of the *Subdivision/Development* proposal?
 - Yes (if yes, specify location of structures slated for demolition on SAP)
 - No
- d.** Will the views of any adjacent property(s) likely be affected, whether positively or negatively, by your *Subdivision/Development* proposal?
 - Yes (If yes, indicate affected view corridors on SAP)
 - No

6. RECREATION

- a.** Are there any designated or informal recreational opportunities in the immediate vicinity? (i.e., local walking or mountain bike *Trails* etc.)
 - Yes (If yes, indicate location on SAP)
 - No

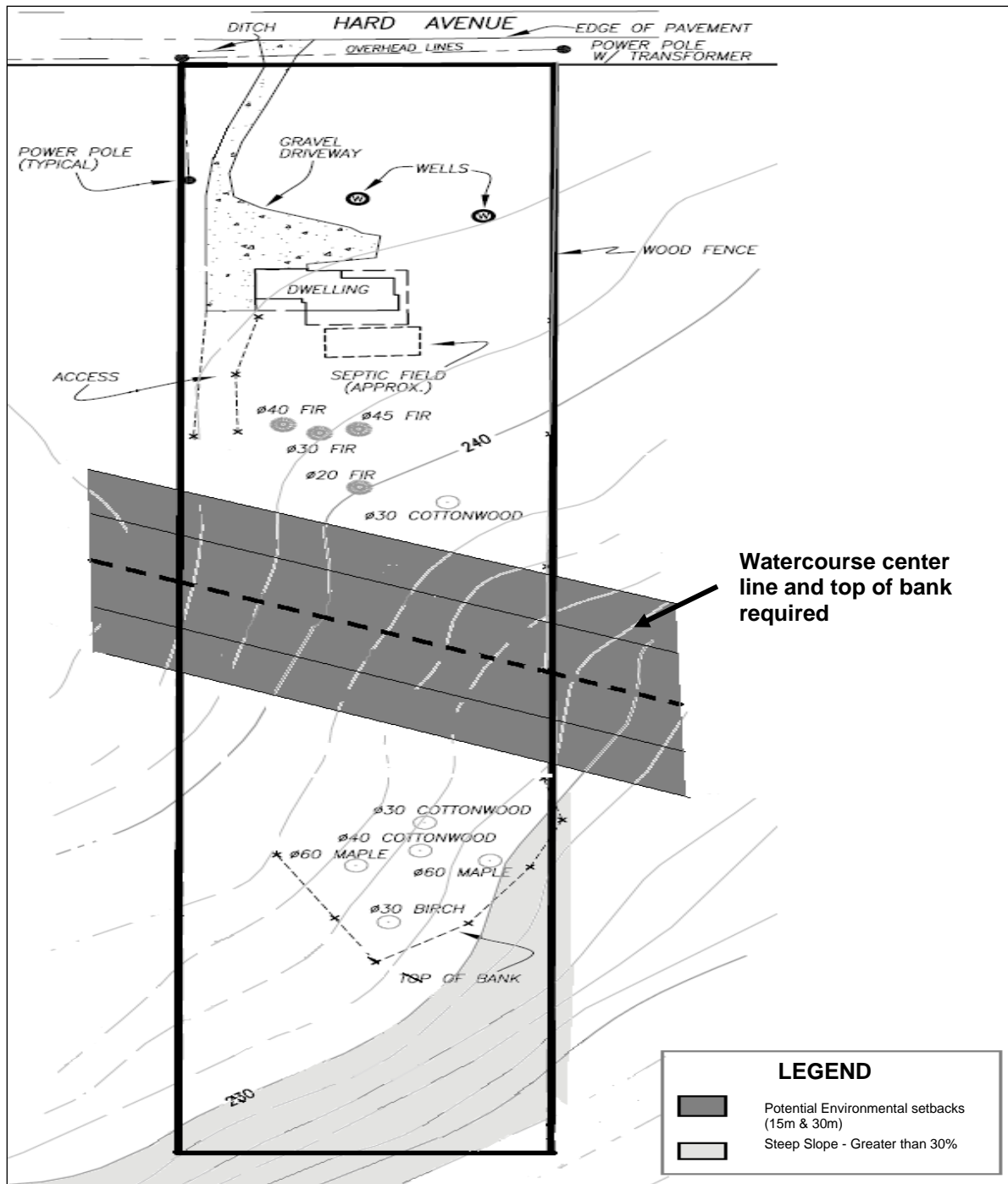
7. HISTORIC AND CULTURAL PRESERVATION

- a.** If applicable, generally describe any landmarks or evidence of historic, archaeological, or cultural importance known to be on or next to the property.

End of Site Assessment Questions - See Next Page for Site Assessment Plan (SAP) Requirements

Site Assessment Plan (SAP) (SAMPLE)

To be completed by a B.C. Land Surveyor; All watercourses, vegetation clusters, existing structures, access, Trails, slope changes, slope direction, localized depressions, SRWs and significant physical features shall be indicated on the site description plan. Please attach the SAP as part of your Subdivision/Development proposal.



SCHEDULE E – RECYCLING AND WASTE MANAGEMENT REQUIREMENTS

FOR MULTI FAMILY, INSTITUTIONAL, COMMERCIAL AND INDUSTRIAL DEVELOPMENTS

Development permit applications for multi-family, Institutional, *Commercial* and *Industrial* (ICI) developments must specify locations and sizes for recycling and waste enclosures or compounds to accommodate all recycling and waste *Streams* generated.

The goals of effective recycling and garbage arrangements for these types of developments are to provide efficient recycling and garbage services and to achieve targeted waste diversion while minimizing contamination in recycling. The following objectives support these goals:

- Develop *Building* design to support convenient access to full range of recycling and garbage services;
- Develop *Building* design to ensure sufficient space is allocated for collection of materials, including turn radius and height, length and width clearance for collection vehicles;
- Create efficient centralized collection areas with sufficient space for recycling and garbage containers or other materials that are generated by the business operation (e.g., tires, wood pallets) to help avoid unsightly premises caused by overflowing containers; and
- Minimize contamination of recycling by designing areas to accommodate convenient grouping of recycling types and space for instructional materials (e.g., signage).

1.0 Developers' Responsibilities:

- 1.1. Providing adequate storage for garbage and recycling;
- 1.2. Store waste in such a way as to not provide shelter, refuge or food for rodents
- 1.3. Ensure recycling and garbage containers are not placed on *Roadways*.
- 1.4. Manage oil and grease from a food sector establishment to ensure no oil or grease is discharged into a sanitary sewer or *Drainage System* within the *City*.
- 1.5. Ensure property does not become unsightly. This includes preventing garbage from accumulating and removing any accumulations.
- 1.6. Comply with disposal bans

Consulting Engineers shall design their systems so occupants can comply with Metro Vancouver's enhanced disposal bans. The following materials are banned from being disposed of in the garbage and must be recycled instead:

- Corrugated cardboard;
- Recyclable paper;
- Food scraps and yard trimmings;
- Containers made of glass, metal, or recyclable plastic;
- Beverage containers (all except milk cartons);
- Clean wood, and
- All product stewardship items.

This is a representative list only. Please refer to <http://www.metrovancouver.org/services/solid-waste/recycling-programs/disposal-ban/Pages/default.aspx> for more information on bans, alternative disposal options and fines.

1.7. Meet other related regulations related to waste management

1.7.1 **BC Public Health, Section 5.2**

- Ensure there is no accumulation of materials which could constitute a public health hazard.

1.7.2 **BC Building Code**

- Ensure rooms for temporary storage of combustible refuse such as garbage or wastepaper are separated from the remainder of the *Building* by a fire separation with a fire-resistance rating, as required by the BC Building Code.

1.7.3. **Metro Vancouver Tipping Fee Bylaw and Disposal Bans**

- Listing of banned materials that Metro Vancouver disposal facilities do not accept, either because there are already disposal programs set up for these items, or because they are hazardous to waste collection workers, the public and environment.
- At disposal sites, garbage loads are inspected for banned and prohibited materials. Loads that arrive at the disposal sites containing prohibited materials are assessed a minimum surcharge, plus the cost of removal, clean-up or remediation. Loads containing banned materials are assessed a 50% tipping fee surcharge.

2.0 Waste Management Overlay Plan:

Consulting Engineers shall provide drawings, showing the locations, access, dimensions and design of recycling, compost, and waste enclosures or compounds. The following eight steps are intended to assist *Consulting Engineers* with planning for multi-family, institutional, *Commercial* and *Industrial* (ICI) *Buildings*. Following these steps will help to expedite design approval processing time.

The following required steps are to ensure that there is adequate, accessible space for recycling and waste separation, storage and collection that minimizes animal attraction as part of the design layout.

2.1. Determine type and volume of recycling and garbage that will be generated onsite:

This includes garbage, food scraps & yard trimmings, cardboard, mixed containers, mixed paper, and Glass jars and bottles.

2.2 Determine recycling, compost, and garbage collection service provider:

Garbage and recycling services for single family residential dwellings are provided by the *City* and "Recycle BC" respectively.

All multi-family, *Commercial*, mixed-use *Developments*, *Industrial* and institutional complexes are responsible to contract their own collection services for garbage, recyclables and compost (kitchen organic waste). The private service provider will usually use overhead bins (also known as front-end bins). Alternatively, townhouses and strata subdivisions can be serviced via large (typically 360-litre), wheeled toters or via curbside, door to door collection if offered by the *Contractor*.

2.3 Calculate the number and type of containers required:

The quantity of containers required depends on the type of collection service the *Building* is designed for. Most multi-family *Buildings* will have centralized collection areas, where occupants bring their garbage and recycling to the designated area. It's important for *Consulting Engineers* to determine the type of collection that will be used when calculating container requirements.

2.4. Calculate the storage space required:

- Centralized Collection; or
- Curbside (door to door) collection.

2.5. Design the storage/collection area:

A storage facility is designed to allow containers to be easily accessed and moved. Ideally, there is a separate room designated; however, if a separate room is not feasible, a shed or enclosure is a viable option. In all cases:

- The area must be large enough to store all recycling and garbage between designated collection days and permit movement of the containers. Designated areas must also meet fire safety requirements; and
- If the area is located outside of the *Building*, it shall be enclosed and secured to prevent “dumpster diving” and illegal dumping.

2.6 Determine access route for collection vehicles and turning radius.

2.7. Designate collection/loading area:

With automated collection and the mix of containers used for garbage and recycling services, loading and collection areas must be able to accommodate a mix of truck sizes and design. Trucks must have plenty of height clearance and room for their turn radius. The *Consulting Engineer* shall be held responsible for meeting the minimum dimensions required for the designated/private contracted trucks.

2.8. Develop and submit a Waste Management Overlay Plan:

A Waste Management Overlay Plan shall address all of the requirements outlined in this *Design Criteria Manual* and the required technical specifications for recycling and garbage amenities that are outlined at the Metro Vancouver’s website and available at the following link:

<http://www.metrovancouver.org/services/solid-waste/SolidWastePublications/TechnicalSpecsStorageSpaceAccessRecyclingMulti-FamilyCommercialDevelopments.pdf>

The plan shall show where the garbage, compost, and recycling room(s) and collection/loading area(s) will be located, including truck ingress and egress. This plan shall also show the functional design of garbage and recycling services (mixed paper, mixed containers, glass jars and bottles, and food scraps) including the following:

- Location of doorway access to the storage areas (permanent and temporary);
- Size, capacity and function of the various types of garbage and recycling storage rooms (permanent and temporary);
- Location and dimensions (including height) of the waste and recycling pick up areas; and
- Location, dimensions, door sizes, maneuvering and turning radii of the access routes to the waste and recycling pick up areas.

The overlay plan shall demonstrate that the *Consulting Engineer* has addressed all regulations and design requirements, shall provide a clear overview of how the design provides for effective garbage and recycling services and addresses the *City’s* goals and objectives for waste management in multi-family, Institutional, *Commercial* and *Industrial* (ICI) *Buildings*.

