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The District of North Vancouver
REPORT TO COUNCIL

June 3, 2021
File: 08.3060.20/051.18

AUTHOR: Andrew Norton, Development Planner

SUBJECT: Bylaws 8492, 8493, and 8494: OCP Amendment, Rezoning, and Housing Agreement for a Townhouse Development at 3155-75 Canfield Crescent

RECOMMENDATION:

THAT “District of North Vancouver Official Community Plan Bylaw 7900, 2011, Amendment Bylaw 8492, 2021 (Amendment 44)” is given FIRST reading;

AND THAT “District of North Vancouver Rezoning Bylaw 1408 (Bylaw 8493)” is given FIRST reading;

AND THAT “Housing Agreement Bylaw 8494, 2021 (3155-75 Canfield Crescent)” is given FIRST reading;

AND THAT pursuant to Section 475 and Section 476 of the Local Government Act, additional consultation is not required beyond that already undertaken with respect to Bylaw 8492;

AND THAT in accordance with Section 477 of the Local Government Act, Council has considered Bylaw 8492 in conjunction with its Financial Plan and applicable Waste Management Plans;

AND THAT Bylaw 8492 and Bylaw 8493 be referred to a Public Hearing.
SUBJECT: Bylaws 8492, 8493, and 8494: OCP Amendment, Rezoning, and Housing Agreement for a Townhouse Development at 3155-75 Canfield Crescent
June 3, 2021

Page 2

REASON FOR REPORT:

Implementation of the proposal requires Council’s consideration of:

- Bylaw 8492 to amend the Official Community Plan (OCP) designation for the subject properties (Attachment 1);
- Bylaw 8493 to rezone the subject properties (Attachment 2); and
- Bylaw 8494 to authorize a housing agreement prohibiting any strata bylaw or regulation establishing rental restrictions on the units (Attachment 3).

The OCP Amendment Bylaw, Rezoning Bylaw, and Housing Agreement Bylaw are recommended for introduction, and the OCP Amendment Bylaw and Rezoning Bylaw are recommended for referral to a Public Hearing. A Development Permit will be forwarded to Council for consideration if the OCP amendment and rezoning proceed.

BACKGROUND:

The development application for 3155-75 Canfield Crescent was advanced to Council for early input on December 2, 2019. At that meeting, Council resolved to defer consideration of the proposed OCP amendment and rezoning until after the targeted review of the Official Community Plan (OCP).

At the time of the Council resolution, it was anticipated that the targeted review of the OCP would be completed in 2020. However, the ongoing COVID-19 pandemic caused delays to the targeted OCP review timeline. To mitigate further delays caused by COVID-19, Council passed a motion on January 25, 2021 to direct staff to prepare bylaws for Council’s consideration of this project prior to the completion of the targeted review of the OCP.

SUMMARY:

Mr. Thomas Grimwood of Grimwood Architecture, has applied on behalf of the owners of the property to redevelop the two existing single-family lots to create eight three-bedroom strata townhouse units. These eight units are configured in four duplex buildings. The proposal includes a single-level underground parking garage with 16 parking spaces, accessed from Canfield Crescent (see Attachment 4 for drawing package).
ANALYSIS:

Site and Surrounding Area

The site is located in the east portion of the Edgemont Village Centre. It is 1,331 m² (14,326 sq. ft.) in area and comprises two single-family lots currently zoned “Single-Family Residential Edgemont Zone” (RSE). The site is located at the south-east corner of Highland Boulevard and Woodbine Drive and is bordered by Canfield Crescent to the east (see adjacent air photo).

Single-family homes are located to the east of the site, Amica Edgemont Village (seniors’ independent living and care facility) is to the northwest on Highland Boulevard, and commercial and mixed-use properties are to the south-west along Woodbine Drive.

EXISTING POLICY:

Official Community Plan

The Official Community Plan (OCP) designates the site as “Residential Level 2: Detached Residential” (RES2) which envisions detached housing at a density of up to approximately 0.55 floor space ratio (FSR).

In 2014, after extensive community consultation, Council adopted the “Edgemont Village Centre: Plan and Design Guidelines.” The purpose of the plan is to help guide development and regulate the design of buildings and public realm improvements in and around Edgemont Village Centre.

The site is located within the residential periphery area of Edgemont Village Centre (see map on following page) which contemplates ground-oriented multi-family housing. The site is designated for multiplex housing up to 2.5 storeys in height with a density of 0.6 to 0.8 FSR. The proposed townhouse units at 0.8 FSR are consistent with the “Edgemont Village Centre: Plan and Design Guidelines.”
The “Edgemont Village Centre: Plan and Design Guidelines” envisioned that OCP amendments would be undertaken with each rezoning application to amend a site’s OCP designation. Bylaw 8492 proposes to change the site’s OCP designation to “Residential Level 3: Attached Residential” (RES3), which permits a density up to approximately 0.8 FSR, and to designate the site as a Development Permit Area for Form and Character of Commercial, Industrial, and Multifamily Development, and Energy and Water Conservation and Greenhouse Gas Emission Reduction.

The proposal addresses a number of OCP goals and policies including:

- **Goal 2**: “encourage and enable a diverse mix of housing types...to accommodate the lifestyles and needs of people at all stages of life”.
- **Goal 5**: “Provide a safe, efficient and accessible network of pedestrian, bike and roadways”.
- **Goal 7**: “Develop an energy-efficient community that reduces its greenhouse gas emissions and dependency on non-renewable fuels while adapting to climate change”.
- **Policy 2.2.3**: “Accommodate a range of multifamily, commercial and institutional uses in the Village Centres”.
- **Policy 5.1.5**: “Encourage new developments to provide high quality pedestrian facilities and improve the public realm”.
- **Policy 7.1.4**: “Encourage and facilitate a wide range of multifamily housing sizes, including units suitable for families with an appropriate number of bedrooms”.
- **Policy 7.1.5**: “Require accessibility features in new multifamily developments where feasible and appropriate”.
- **Policy 10.1.1**: “Promote the development of green/energy-efficient buildings for new multifamily, residential, commercial, industrial and institutional buildings”.

**Edgemont Village Centre: Plan and Design Guidelines**

The proposal has been reviewed against the “Edgemont Village Centre: Plan and Design Guidelines” which anticipates residential development in the form of multiplexes (e.g. triplexes, fourplexes or small rowhouses) on the site, with building heights up to 2.5 storeys.
The proposal addresses the following objectives of the “Edgemont Village Centre: Plan and Design Guidelines”:

- The two-storey townhouse development is consistent with the use, density and height anticipated for the site.
- The proposal reflects contemporary architectural design and construction, and urban design best practices to promote the concept of eclectic architecture in the Edgemont Village Centre.
- The proposed off-site upgrades including new sidewalks, on-street parking spaces or loading spaces, and bicycle and bus infrastructure, have been designed to improve accessibility and multi-modal connectivity within the village centre.

Zoning

The subject properties are currently zoned “Single-Family Residential Edgemont Zone” (RSE). Bylaw 8493 proposes to create a new “Comprehensive Development Zone 134” (CD134) for the site, which prescribes permitted uses and zoning provisions such as a maximum density, building heights, setbacks, and parking requirements.

PROPOSAL:

Project Description

The proposal is for eight strata townhouse units in four two storey buildings. The buildings are located over a single-level underground parking garage that provides a total of 16 parking spaces. The parking garage is accessed via Canfield Crescent.

All units are three bedroom layouts that range in size from 129.6 m² (1,395 sq. ft.) to 136.3 m² (1,467 sq. ft.). The units are sited around a central exterior courtyard which includes communal amenity space adjacent to Canfield Crescent as well as private patios. Each unit has a private roof deck and basement level mudrooms with direct access to the parking garage.

The central courtyard provides access to all three fronting streets, with an accessible entrance provided from Canfield Crescent.
The site slopes approximately 0.9 m (3 ft.) from north-west to south-east. The proposed building design and layout responds to the site's topography and triangular shape.

All unit entrances front onto a street, which along with landscaped front yards provide a residential presence on all site frontages. The buildings have a contemporary form and include the extensive use of wood cladding, a material commonly used within the Edgemont Village Centre. The use of local materials within a contemporary building form responds to the design objectives of the Edgemont Village Centre Design Guidelines.

Rental and Affordable Housing

The District's "Rental and Affordable Housing Strategy" (RAHS) states that "Increased supply of housing in centres will add diverse multi-family housing choices (type, tenue, unit sizes etc.) for District residents, and encourage competitive pricing for homes".

The proposal will provide eight townhouse units adding to the diverse mix of housing forms within the Edgemont Village Centre. All of the proposed units are three-bedrooms in size and provide suitable family accommodation within the village centre.

The applicant will also be providing a Community Amenity Contribution (CAC) which could be used towards affordable housing objectives in accordance with the RAHS.

Strata Rental Protection Policy

The District's "Strata Rental Protection Policy" applies to this proposal as it involves development of more than five residential units. The policy requires a Housing Agreement to ensure that future strata bylaws do not prevent owners from renting their units. Bylaw 8494 authorizes a Housing Agreement to implement this policy.

Residential Tenant Relocation Assistance

The District's "Residential Tenant Relocation Assistance Policy" would not apply to this proposal as the proposed rezoning does not require the demolition of more than four existing rental dwelling units.
The single-family homes on-site are currently rented. The developer has agreed to provide tenants with a notice period of six months which is in excess of the requirements outlined in the "Residential Tenancy Act", and one month of free rent. The notice period will be secured within the Development Covenant.

Development Permit Areas

If the OCP amendment is approved, the site would be designated as being within the Development Permit Areas (DPAs) for:

- Form and Character of Commercial, Industrial, and Multi-family Development; and
- Energy and Water Conservation and Greenhouse Gas Emission Reduction

a) Form and Character of Commercial, Industrial, and Multifamily Development

The proposal is consistent with the OCP Design Guidelines for Ground-Oriented Housing. Examples of conformity include:

- C1.1: Height and Massing: The proposed buildings are less than the typical townhouse building height of 12 m, thereby ensuring a building scale that is appropriate and consistent with the surrounding low-density residential character.
- C1.3: Street Orientation: The proposal provides active residential frontages on Highland Boulevard, Woodbine Drive and Canfield Crescent.
- C2.5 and 2.6: Shared and Private Outdoor Space: The proposal includes shared open space which is accessible, landscaped and protected from the street. Private amenity space is also provided for all units in excess of 9 m² (96.9 sq. ft.).
- C2.11: Parking: All on-site parking is provided underground and not visible from adjacent streets.
- C3.2: Variations in Design: Through considered design variations, the proposal provides an appropriate visual transition in form and scale from the mixed-use character in the Edgemont Village core to the south-west of the site, to the residential character to the east.
Further details outlining the proposal's compliance with the Form and Character Design Guidelines will be provided for Council’s consideration at the Development Permit stage should the OCP amendment and rezoning proceed.

Advisory Design Panel

The proposal was considered by the Advisory Design Panel (ADP) on September 13, 2018 with the Panel recommending approval of the proposal subject to resolution of the Panel's comments.

The applicant has addressed the Panel's comments by reconfiguring the site's interior landscaping which has resulted in a more functional inner courtyard design, with more well-defined courtyard entrances, and an expanded communal amenity area. External cladding has also been modified to increase the use of vertical wood siding.

b) Energy and Water Conservation and Greenhouse Gas Emission Reduction

As designed, the proposal is consistent with the OCP Guidelines for Energy and Water Conservation and Greenhouse Gas Emission Reduction.

On December 7, 2020, Council approved a low carbon approach with the District of North Vancouver’s implementation of the BC Energy Step Code. The new approach includes a two-tiered system that requires all new Part 9 Residential development to meet either Step 5, or Step 3 with a Low Carbon Energy System (LCES). A LCES uses low carbon energy sources to provide heating, cooling, and hot water for a building, and has a total modelled greenhouse gas intensity of no more than 3kg CO2e/m²/yr. The new requirements apply to any building permit submitted on or after July 1, 2021.

The applicant has considered the District’s new low carbon approach to Step Code implementation, the District’s Community Energy and Emissions Plan (CEEP), and Council’s recent declaration of a climate emergency. In response the applicant has provided a commitment letter to certify the project “NetZero” as an alternative compliance path to the BC Energy Step Code. This is comparable to Step 5 of the Step Code for Part 9 buildings. This approach includes committing to a fully electric building for space heating, domestic hot water heating, and cooking.

For “NetZero” compliance, the proposal will implement the following energy efficiency measures:

- Triple paneled windows;
- Increased exterior insulation;
- Exterior Air Barrier;
- Heat Recovery Ventilation (HRV) with enhanced efficiency;
- Insulation in flat roof;
- Full under-slab insulation; and
- Solar Panel Ready Design.
Other sustainable components of the proposal include:

- Enhancements to pedestrian, bicycle and transit infrastructure including:
  - New sidewalks on Woodbine Drive and Canfield Crescent;
  - Shared travel lane on Woodbine Drive and bike lane on Highland Boulevard;
  - 16 Electric Vehicle (EV) Level 2 (240v) charging points (one per car space) and 16 EV bike storage spaces (two per unit); and
  - Wheelchair let down on Woodbine Drive, Highland Boulevard and Canfield Crescent to improve public realm accessibility.

- Comprehensive site landscaping proposal including new street trees.

Further details outlining the proposal's compliance with the Energy and Water Conservation and Greenhouse Gas Emission Reduction DPA will be provided for Council’s consideration at the Development Permit stage should the OCP amendment and rezoning proceed.

**Accessibility**

The District’s “Accessible Design Policy for Multifamily Housing” states that 15% of units proposed within a ground-orientated multi-family housing development should meet the ‘Basic Accessible Design’ criteria where feasible, and that the provision of enhanced design features should be explored to allow for future adaptability.

The proposal will provide two units (25%) that meet the ‘Basic Accessible Design’ criteria and one unit (12.5%) that meets the ‘Enhanced Accessibility Design’ criteria, and will therefore exceed the minimum requirements of the District policy. All units have been designed to allow for future accessible design additions including an adaptable stair lift and wheelchair-accessible bathrooms.

**Vehicle Parking**

Vehicle parking is proposed in a single-level underground garage accessed via Canfield Crescent. The ramp to the parking garage will be screened by a single-family style garage door, complimentary in design to neighbouring homes on Canfield Crescent.

A total of 16 parking spaces (2 spaces per unit) are proposed in accordance with Part 10 of the District’s Zoning Bylaw. The parking rate is supported by the conclusions of the traffic study completed by Creative Transportation Solutions Ltd, and responds to community concerns regarding parking availability in Edgemont Village Centre.

The parking garage has been designed to address the site’s spatial constraints and the need to accommodate third party utilities, street tree planting, and landscaping within the Woodbine Drive boulevard. Consequently, eight of the 16 parking spaces proposed
are small car spaces (50% of the total of on-site parking) which is in excess of the 35% permitted within Part 10 of the District’s Zoning Bylaw. The increase in small car spaces as proposed, enables the realization of the highlighted public benefits along Woodbine Drive, including space for street tree planting, while ensuring all units are provided with one standard sized parking space. The requirement that one standard sized parking space is provided for each unit will be secured within the Development Covenant.

While no designated visitor parking spaces are proposed within the parking garage, the proposal includes the addition of two parking pockets on Canfield Crescent that will provide seven new on-street parking spaces for use by visitors or the public. These spaces will also assist with deliveries or moving vehicles. Canfield Crescent currently has no formal on-street parking.

One wheelchair-accessible parking space is proposed in accordance with Part 10 of the Zoning Bylaw. The accessible space is located adjacent to access for the enhanced accessible unit.

The proposal complies with the “Electric Vehicle Charging Infrastructure Policy” which requires that 100% of the resident parking spaces proposed feature energized outlets capable of providing “Level 2” charging or higher.

**Bicycle Parking and Storage**

A total of 20 bicycle parking spaces are proposed (2.5 spaces per unit including visitor parking). A total of 16 secure Class 1 bicycle parking spaces are located in the underground parking garage (two spaces per unit), each with an electric bicycle charging point in accordance with the District’s “Bicycle Parking and End-of-Trip Facilities” Policy. A total of four Class 2 bicycle parking spaces (0.5 spaces per unit) are proposed and are located adjacent to the site’s entrance on Highland Boulevard. The 20 bicycle parking spaces proposed comply with the District’s “Bicycle Parking and End-of-Trip Facilities” Policy, with 2.5 spaces provided per unit including visitor parking.

The proposal includes construction of a dedicated bike lane on Highland Boulevard and a shared travel lane on Woodbine Drive. This along with the proposed bicycle parking and supporting electric charging infrastructure, advance the OCP’s objectives of promoting alternative modes of transportation for residents.

**Landscaping**

A landscaping plan (see image on following page) has been submitted which shows extensive planting proposed on all street frontages and within the site. Landscaping has been used on the edges of the site to reinforce the site’s residential character, to complement and add texture to the proposed buildings, and to provide a green buffer to soften the interface between the development and the public realm. New street tree planting and grassed boulevards are proposed on all frontages.
Landscaping has been used throughout the site to soften and delineate space. The communal amenity area includes a heavily-planted edge facing Canfield Crescent, planter boxes, and a green wall. Landscaping is also provided around both private patios and roof decks. This serves to provide increased privacy for residents while also reinforcing the site’s residential character.

Should the OCP amendment and rezoning proposal proceed, a more detailed review of landscape issues will be included in the development permit report.

**Off-site Improvements**

The proposal includes the following off-site improvements:

- Street frontage enhancements including street lighting, street tree planting, and curb, gutter and paving improvements;
- Hydro lines along Woodbine Drive will be undergrounded;
- The existing storm main on Highland Boulevard will be relocated to allow for street tree planting;
- Reconstruction and widening of Canfield Crescent to provide a one-way southbound vehicle travel lane, and seven on-street parking spaces;
A new sidewalk and planted boulevard along Woodbine Drive and Canfield Crescent;
- A wider sidewalk and planted boulevard along Highland Boulevard;
- Accessible wheelchair let-downs at each corner of the site;
- Public seating areas at the corner of Highland Boulevard and Woodbine Drive, Highland Boulevard and Canfield Crescent, and on Woodbine Drive;
- Upgrades to the existing transit stop on Highland Boulevard adjacent to the site, including a wheelchair pad, bus shelter, and bench in accordance with Translink's "Universally Accessible Bus Stop Design Guidelines"; and
- A dedicated northbound bicycle lane on Highland Boulevard and a shared west-bound bicycle/vehicle travel lane on Woodbine Drive in accordance with the Edgemont Village Centre Plan.

The proposal includes the following land dedications:

- Corner cuts at each corner of the site; and
- An approximately 0.40 m (1.3 ft.) wide dedication along Canfield Crescent to allow for a new 1.8 m (5.9 ft.) wide sidewalk.

The estimated total value of off-site works (engineering and landscaping) is $758,077. The full scope and value of required off-site works will be determined through detailed design work.

Should the OCP amendment and rezoning be approved, the proposal will be required to pay Development Cost Charges (DCCs) at the applicable rate at the date of building permit submission. DCCs are estimated at $103,360 based on 2021 rates.

Community Amenity Contribution (CAC)

The District's "Community Amenity Contribution Policy" outlines contribution expectations for rezoning applications which result in an increase in density. A CAC of $176,338 is included in the proposed CD134 Zone. It is anticipated that the CACs from this development will be directed toward the affordable housing fund, park and trail improvements, public art, or other public realm infrastructure improvements.

Construction Traffic Management Plan

To reduce the construction impacts of the proposal on pedestrian and vehicular movements in the area, the applicant has submitted a draft Construction Traffic Management Plan (CTMP).

Should the OCP amendment and rezoning proceed, a final CTMP will be required as a condition of a Development Permit and must outline how the applicant will coordinate with other projects in the area to minimize construction impacts on pedestrian and vehicle movement. This requires District approval prior to building permit issuance.
The map below shows the site in relation to other approved and potential construction projects in the Edgemont Village Centre.

The final CTMP must:

1. Provide safe passage for pedestrians, cyclists, and vehicle traffic;
2. Outline roadway efficiencies (i.e. siting of traffic management signs and flaggers);
3. Make provisions for trade vehicle parking which is acceptable to the District and minimizes impacts to neighbourhoods;
4. Provide a point of contact for all calls and concerns;
5. Provide a sequence and schedule of construction activities;
6. Identify methods of sharing construction schedules with nearby developments;
7. Ascertain a location for truck marshalling;
8. Address silt/dust control and cleaning up from adjacent streets;
9. Provide a plan for litter clean-up and street sweeping adjacent to site; and
10. Include a communication plan to notify surrounding businesses and residents.

Concurrence

The proposal has been reviewed by staff from the following departments: Building and Permits, Community Planning, Engineering, Environment, Fire, Legal, Parks, Public Arts, Transportation, and Urban Design.
SUBJECT: Bylaws 8492, 8493, and 8494: OCP Amendment, Rezoning, and Housing Agreement for a Townhouse Development at 3155-75 Canfield Crescent

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Ministry of Transportation and Infrastructure

Rezoning Bylaw 8493 affects land lying within 800 m of a controlled access intersection. Therefore, approval by the Provincial Ministry of Transportation and Infrastructure will be required following third reading of the rezoning bylaw and prior to bylaw adoption.

School District 44 (SD44)

School District 44 was provided a copy of the application materials to ensure they were aware of the proposed development. No concerns were expressed.

Public Input

A facilitated Public Information Meeting on September 26, 2018 and was attended by 31 members of the public. Notices were distributed to neighbours in accordance with the District’s “Non-Statutory Public Consultation Policy for Development Applications”. Two signs were placed on the property, and advertisements were placed in the North Shore News. A webpage was established for this project on the District’s website.

Community members generally expressed support for the proposal, with many recognizing the demand for townhouses suitable for families as a more attainable alternative to single-family houses within the area. Questions arose around the proposal’s green building approach, parking demand, and construction impacts. Other comments received related to the desire for tree retention, and to convert Canfield Crescent into a one-way street to reduce cut-through traffic. In response, Canfield Crescent has been converted into a one-way southbound street, the proposed landscaping plan has been amended to enhance street tree planting, and the proposed buildings will be fully electric. The retention of existing angled parking on Woodbine Drive was also raised. The proposal will have no impact these parking spaces. The facilitator’s report of the Public Information Meeting is attached as Attachment 5.

Implementation

Implementation of this project will require an OCP amendment, rezoning, a Housing Agreement, the issuance of a development permit, and registration of legal agreements.

Bylaw 8492 (Attachment 1) amends the subject site from “Residential Level 2: Detached Residential” (RES2) to “Residential Level 3: Attached Residential” (RES3).

Bylaw 8493 (Attachment 2) rezones the subject site from “Single-Family Residential Edgemont Zone” (RSE) to a new “Comprehensive Development Zone 134” (CD134) which:

- Establishes the permitted residential uses;
- Allows home occupations as an accessory use;
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June 3, 2021

- Establishes the maximum permitted floor area on site;
- Establishes setback and building height regulations;
- Establishes parking regulations specific to this project; and
- Secures the applicable Community Amenity Contribution (CAC).

Bylaw 8494, (Attachment 3) authorizes the District to enter into a Housing Agreement prohibiting any strata bylaw or regulation which disallows long term (i.e. month to month) rentals. A strata can still prohibit short term rentals.

A legal framework will be required to support the proposal and a Development Covenant will be used to secure items such as the details of off-site servicing, accessible design features, and electric vehicle charging. Additional legal documents required for the proposal will include:

- Subdivision plan showing land dedications;
- Statutory right of way to secure public access to sidewalk and bench areas on Woodbine Drive;
- Stormwater management covenant; and
- Registration of housing agreement prohibiting any strata bylaw or regulation establishing rental restrictions on the units.

CONCLUSION:

The proposal assists in implementing the objectives of the District's Official Community Plan, the Edgemont Village Centre: Plan and Design Guidelines, and the Community Energy and Emissions Plan (CEEP). The OCP amendment and rezoning are ready for Council's consideration.

OPTIONS:

The following options are available for Council's consideration:

1. Introduce Bylaws 8492, 8493, and 8494, and refer Bylaws 8492 and 8493 to a Public Hearing (staff recommendation); or,
2. Give the bylaws no readings; or
3. Return the bylaws to staff.

Andrew Norton
Development Planner

Attachments:

1. Bylaw 8492 – OCP Amendment
2. Bylaw 8493 – Rezoning
4. Architectural and Landscape Plans
5. Facilitator Report from Public Information Meeting
SUBJECT: Bylaws 8492, 8493, and 8494: OCP Amendment, Rezoning, and Housing Agreement for a Townhouse Development at 3155-75 Canfield Crescent

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<td>☐ Fire Services</td>
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<td>☐ ITS</td>
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<td>☐ Solicitor</td>
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<td>☐ GIS</td>
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<td>☐ Real Estate</td>
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<tr>
<td>☐ Bylaw Services</td>
<td></td>
</tr>
<tr>
<td>☐ Planning</td>
<td></td>
</tr>
</tbody>
</table>
The Corporation of the District of North Vancouver

Bylaw 8492

A bylaw to amend District of North Vancouver
Official Community Plan Bylaw 7900, 2011

The Council for The Corporation of the District of North Vancouver enacts as follows:

Citation

1. This bylaw may be cited as “District of North Vancouver Official Community Plan
   Bylaw 7900, 2011, Amendment Bylaw 8492, 2021 (Amendment 44)”.

Amendments

2. District of North Vancouver Official Community Plan Bylaw 7900, 2011 is amended as
   follows:

   a) Map 2 Land Use: as illustrated on Schedule A, by changing the land use
designation of the properties on Map 2 from “Residential Level 2: Detached Residential” (RES2) to “Residential Level 3: Attached Residential” (RES3);

   b) Map 3.1 Form and Character Development Permit Area: as illustrated on
      Schedule B, by adding the properties to Map 3.1, designating them as a
      Development Permit Area for Form and Character of Commercial, Industrial and Multifamily Development; and

   c) Map 4.1 Energy and Water Conservation and Greenhouse Gas Emission
      Reduction Development Permit Area: as illustrated on Schedule B, by
      adding the properties to Map 4.1, designating them as a Development
      Permit Area for Energy and Water Conservation and Greenhouse Gas
      Emission Reduction.

READ a first time by a majority of all Council members

PUBLIC HEARING held

READ a second time by a majority of all Council members

READ a third time by a majority of all Council members

ADOPTED by a majority of all Council members
Mayor

Certified a true copy

Municipal Clerk

Municipal Clerk
Schedule A to Bylaw 8492

District of North Vancouver Official Community Plan Amendment (Bylaw 8492)

Map 2: Land Use: as illustrated on Schedule A, by changing the land use designation of the hatched land on Map 2 from "Residential Level 2: Detached Residential" (RES2) to "Residential Level 3: Attached Residential" (RES3)
Schedule B to Bylaw 8492

District of North Vancouver Official Community Plan Amendment (Bylaw 8492)

Map 3.1 Form and Character Development Permit Area: as illustrated on Schedule B, by adding the properties to Map 3.1, designating them as a Development Permit Area for Form and Character of Commercial, Industrial and Multi-family Development; and,

The Corporation of the District of North Vancouver

Bylaw 8493

A bylaw to amend District of North Vancouver Bylaw 3210, 1965

The Council for The Corporation of the District of North Vancouver enacts as follows:

Citation

1. This bylaw may be cited as "District of North Vancouver Rezoning Bylaw 1408 (Bylaw 8493)".

Amendments

2.1 District of North Vancouver Zoning Bylaw 3210, 1965 is amended as follows:

(a) Part 2A, Definitions is amended by adding CD134 to the list of zones that Part 2A applies to.

(b) Section 301 (2) by inserting the following zoning designation:

"Comprehensive Development Zone 134 CD134"

(c) Part 4B Comprehensive Development Zone Regulations by inserting the following, inclusive of Schedule B:

"4B CD134 Comprehensive Development Zone 134 CD134"

The CD134 zone is applied to:

i) Lot 1 Block 44 District Lots 598 To 601 Plan 7812 (PID: 007-805-616); and
ii) Lot 2 Block 44 District Lots 598 To 601 Plan 7812 (PID: 010-531-602).

4B 134 – 1 Intent

The purpose of the CD134 Zone is to permit a ground-oriented multi-family residential development.

4B 134 – 2 Permitted Uses

The following principal uses shall be permitted in the CD134 Zone:
a) Uses Permitted Without Conditions:

Not applicable

b) Conditional Uses:

Residential Use

4B 134 – 3 Conditions of Use

a) Residential: Residential uses are only permitted when the following conditions are met:

i) Each dwelling unit has access to private or semi-private outdoor space; and

ii) Balcony, patio and deck enclosures, and rooftop trellises are not permitted.

4B 134 – 4 Accessory Use

a) Accessory uses customarily ancillary to the principal uses are permitted.

b) Home occupations are permitted in residential units.

4B 134 – 5 Density

a) The maximum permitted density in the CD134 Zone is limited to a floor space ratio (FSR) of 0.45 and 2 residential units.

b) For the purpose of calculating gross floor area, the following are exempted:

i) Any floor area below finished grade;
ii) Rooftop storage to a total maximum of 20 m² (215.3 sq. ft.);
iii) Private rooftop terraces; and
iv) Areas of underground parkade, including access ramp.

c) For the purposes of calculating FSR, the lot area is deemed to be 1,330.9 m² (14,326 sq. ft.) being the site size at the time of rezoning.

4B 134 – 6 Amenities

a) Despite Subsection 4B134 – 6, permitted density in the CD134 Zone may be increased to a maximum of 1,064.7 m² (11,460.8 sq. ft.) gross floor area and a maximum of 8 residential units, if the owner:
i) Contributes $176,338 to the municipality to be used for any or all of the following amenities (with allocation and timing of expenditure to be determined by the municipality in its sole discretion):

   a. The Affordable Housing Fund;
   b. Park, trail, environmental, plaza, or other public realm improvements;
   c. Municipal or recreational service facility, or facility improvements; and/or
   d. Public art and other beautification projects.

ii) Enters into a Housing Agreement prohibiting any strata bylaw or regulation establishing rental restriction on the units.

4B 134 – 7 Setbacks

a) Buildings shall be set back from property lines to the closest building face, excluding any underground or partially-exposed parking structure, and window wells, balcony columns, roof eaves, alcove projections, or projecting balconies, all to a maximum depth of 2.0 m (6.5 ft.), as established by the development permit and in accordance with the following regulations:

<table>
<thead>
<tr>
<th>Setback</th>
<th>Buildings (Minimum Setback)</th>
</tr>
</thead>
<tbody>
<tr>
<td>East (Canfield Crescent)</td>
<td>2.74 m (9 ft.)</td>
</tr>
<tr>
<td>South (Woodbine Drive)</td>
<td>3.1 m (10.2 ft.)</td>
</tr>
<tr>
<td>West (Highland Boulevard)</td>
<td>3.1 m (10.2 ft.)</td>
</tr>
</tbody>
</table>

b) Decks and patios are excluded from the setback requirements.

4B 134 – 8 Height

The maximum permitted height is:

a) Townhouse building: 10.0 m (32.8 ft.)

4B 134 – 9 Coverage

a) Building Coverage: The maximum building coverage is 45%; and

b) Site Coverage: The maximum site coverage is 50%

4B 134 – 10 Landscaping and Storm Water Management

a) All land areas not occupied by buildings and patios shall be landscaped in accordance with a landscape plan approved by the District of North Vancouver.

b) All utility boxes, vents or pumps, or any solid waste facility (with the exception of temporary at-grade staging areas) or loading areas that are not located
underground and / or within a building, shall be screened with landscaping or fencing, or a combination thereof, in accordance with a landscape plan approved by the District of North Vancouver.

4B 134 – 11 Parking, Loading and Servicing Regulations

a) Parking is required as follows:

<table>
<thead>
<tr>
<th>Use</th>
<th>Parking Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident</td>
<td>Minimum of 2 spaces per unit</td>
</tr>
<tr>
<td>Visitor</td>
<td>Minimum of 0 spaces per unit</td>
</tr>
<tr>
<td>Universal</td>
<td>Minimum of 1 space</td>
</tr>
</tbody>
</table>

b) The height of parking spaces shall be in accordance with the dimensions indicated in Section 1005.1 of this Bylaw and maintained over the entire area of the space, except for underground parking spaces adjacent to Woodbine Drive which are permitted to have a reduced minimum clear height of 1.22 m (4 ft.) for a maximum depth of 1.22 m (4 ft.) of the parking space.

c) The minimum width of the drive aisle at the entrance to the underground parkade shall be 6 m (19.7 ft.) for a minimum depth of 8 m (26.3 ft.), and thereafter the minimum drive aisle width shall be 3.65 m (12 ft.) until egress into the underground parkade.

d) Small car parking spaces are permitted under the following conditions:

i) The ratio of small car parking spaces in the CD134 Zone shall not exceed 50% of the total vehicle parking requirement.

e) Bicycle parking is required as follows:

<table>
<thead>
<tr>
<th>Use</th>
<th>Bicycle Parking Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident</td>
<td>Minimum of 2 spaces per unit</td>
</tr>
<tr>
<td>Visitor</td>
<td>Minimum of 0.5 spaces per unit</td>
</tr>
</tbody>
</table>

f) Except as specifically provided in 4B134 – 11 a), b), c), d) and e), parking shall be provided in accordance with Part 10 of this Bylaw.”

(d) The Zoning Map is amended in the case of the lands illustrated on the attached map (Schedule A) by rezoning the land from Single-Family Residential Edgemont Zone (RSE) to Comprehensive Development Zone 134 (CD134).
READ a second time

READ a third time

Certified a true copy of “Bylaw 8493” as at Third Reading

______________________________
Municipal Clerk

APPROVED by the Ministry of Transportation and Infrastructure on

ADOPTED

______________________________
Mayor

______________________________
Municipal Clerk

Certified a true copy

______________________________
Municipal Clerk
Schedule A to Bylaw 8493

BYLAW 8493
District of North Vancouver Rezoning Bylaw 8493

Single-Family Residential Edgemont Zone (RSE) to Comprehensive Development Zone 134 (CD134)
The Corporation of the District of North Vancouver

Bylaw 8494

A bylaw to enter into a Housing Agreement

The Council for The Corporation of the District of North Vancouver enacts as follows:

Citation

1. This bylaw may be cited as "Housing Agreement Bylaw 8494, 2021 (3155-3175 Canfield Crescent)".

Authorization to Enter into Agreement

2. The Council hereby authorizes a housing agreement between The Corporation of the District of North Vancouver and Canfield Crescent Development Inc. substantially in the form attached to this Bylaw as Schedule "A" with respect to the following lands:
   a) Lot 2 Block 44 District Lots 598 to 601 Plan 7812 (PID 010-531-602); and
   b) Lot 1 Block 44 District Lots 598 to 601 Plan 7812 (PID 007-805-616).

Execution of Documents

3. The Mayor and Municipal Clerk are authorized to execute any documents required to give effect to the Housing Agreement.

READ a first time

READ a second time

READ a third time

ADOPTED

Mayor

Municipal Clerk

Certified a true copy

Municipal Clerk
Schedule A to Bylaw 8494

SECTION 219 COVENANT – HOUSING AGREEMENT

THIS AGREEMENT is dated for reference the ___ day of ____________, 20___

BETWEEN:

CANFIELD CRESCENT DEVELOPMENT INC. (Inc. No. BC1104155) a company incorporated under the laws of the Province of British Columbia having an office at 420 – 1112 West Pender Street, Vancouver, BC V6E 2S1

(the “Developer”)

AND:

THE CORPORATION OF THE DISTRICT OF NORTH VANCOUVER, a municipality incorporated under the Local Government Act, RSBC 2015, c.1 and having its office at 355 West Queens Road, North Vancouver, BC V7N 4N5

(the “District”)

WHEREAS:

1. The Developer is the registered owner of the Lands (as hereinafter defined);

2. The Developer wishes to obtain development permissions with respect to the Lands and wishes to create a condominium development which will contain residential strata units on the Lands;

3. Section 483 of the Local Government Act authorises the District, by bylaw, to enter into a housing agreement to provide for the prevention of rental restrictions on housing, and provides for the contents of the agreement; and

4. Section 219 of the Land Title Act (British Columbia) permits the registration in favour of the District of a covenant of a negative or positive nature relating to the use of land or a building thereon, or providing that land is to be built on in accordance with the covenant, or providing that land is not to be built on except in accordance with the covenant, or providing that land is not to be subdivided except in accordance with the covenant;

NOW THEREFORE in consideration of the mutual promises contained in it, and in consideration of the payment of $1.00 by the District to the Developer (the receipt and sufficiency of which are hereby acknowledged by the Developer), the parties covenant and agree with each other as follows, as a housing agreement under Section 483 of the Local Government Act, as a contract and a deed under seal between the parties, and as a covenant under Section 219 of the Land Title Act, and the Developer hereby further covenants and agrees that neither the Lands nor any building constructed thereon shall be used or built on except in accordance with this Agreement:
1. **DEFINITIONS**

1.01 Definitions

In this agreement:

(a) "Development Permit" means development permit No. _____ issued by the District;

(b) "Lands" means land described in item 2 of the Land Title Act Form C to which this agreement is attached;

(c) "Owner" means the Developer and any other person or persons registered in the Lower Mainland Land Title Office as owner of the Lands from time to time, or of any parcel into which the Lands are consolidated or subdivided, whether in that person's own right or in a representative capacity or otherwise;

(d) "Proposed Development" means the proposed development containing not more than 15 units to be constructed on the Lands in accordance with the Development Permit;

(e) "Short Term Rentals" means any rental of a Unit for any period less than 30 days;

(f) "Strata Corporation" means the strata corporation formed upon the deposit of a plan to strata subordinate the Proposed Development pursuant to the Strata Property Act;

(g) "Unit" means a residential dwelling strata unit in the Proposed Development; and

(h) "Unit Owner" means the registered owner of a Dwelling Unit in the Proposed Development.

2. **TERM**

This Agreement will commence upon adoption by District Council of Bylaw 8297 and remain in effect until terminated by the District as set out in this Agreement.

3. **RENTAL ACCOMMODATION**

3.01 Rental Disclosure Statement

No Unit in the Proposed Development may be occupied unless the Owner has:

(a) before the first Unit is offered for sale, or conveyed to a purchaser without being offered for sale, filed with the Superintendent of Real Estate a rental disclosure statement in the prescribed form (the "Rental Disclosure Statement") designating all of the Units as rental strata lots and imposing at least a 99 year rental period in relation to all of the Units pursuant to the Strata Property Act (or any successor or replacement legislation), except in relation to Short Term Rentals and, for greater certainty, stipulating specifically that the 99 year rental restriction does not apply to a Strata Corporation bylaw prohibiting or restricting Short Term Rentals; and
(b) given a copy of the Rental Disclosure Statement to each prospective purchaser of any Unit before the prospective purchaser enters into an agreement to purchase in respect of the Unit. For the purposes of this paragraph 3.01(b), the Owner is deemed to have given a copy of the Rental Disclosure Statement to each prospective purchaser of any Unit in the building if the Owner has included the Rental Disclosure Statement as an exhibit to the disclosure statement for the Proposed Development prepared by the Owner pursuant to the Real Estate Development Marketing Act.

3.02 Rental Accommodation

The Units constructed on the Lands from time to time may always be used to provide rental accommodation as the Owner or a Unit Owner may choose from time to time, except that this section 3.02 does not apply to Short Term Rentals which may be restricted by the Strata Corporation to the full extent permitted by law.

3.03 Binding on Strata Corporation

This agreement shall be binding upon all Strata Corporations created by the subdivision of the Lands or any part thereof (including the Units) pursuant to the Strata Property Act, and upon all Unit Owners.

3.04 Strata Bylaw Invalid

Any Strata Corporation bylaw which prevents, restricts or abridges the right to use any of the Units as rental accommodations (other than Short Term Rentals) shall have no force or effect.

3.05 No Bylaw

The Strata Corporation shall not pass any bylaws preventing, restricting or abridging the use of the Lands, the Proposed Development or the Units contained therein from time to time as rental accommodation (other than Short Term Rentals).

3.06 Vote

No Unit Owner, nor any tenant or mortgagee thereof, shall vote for any Strata Corporation bylaw purporting to prevent, restrict or abridge the use of the Lands, the Proposed Development or the Units contained therein from time to time as rental accommodation (other than Short Term Rentals).

3.07 Notice

The Owner will provide notice of this Agreement to any person or persons intending to purchase a Unit prior to any such person entering into an agreement of purchase and sale, agreement for sale, or option or similar right to purchase as part of the disclosure statement for any part of the Proposed Development prepared by the Owner pursuant to the Real Estate Development Marketing Act.
3.08 Release of Covenant

The District agrees that if the District of North Vancouver Rezoning Bylaw 1371 (Bylaw 8296), is not adopted by the District’s Council before March 4, 2022 the Owner is entitled to require the District to execute and deliver to the Owner a discharge, in registrable form, of this Agreement from title to the Land. The Owner is responsible for the preparation of the discharge under this section and for the cost of registration at the Land Title Office.

4. DEFAULT AND REMEDIES

4.01 Notice of Default

The District may, acting reasonably, give to the Owner written notice to cure a default under this Agreement within 30 days of delivery of the notice. The notice must specify the nature of the default. The Owner must act with diligence to correct the default within the time specified.

4.02 Costs

The Owner will pay to the District upon demand all the District’s costs of exercising its rights or remedies under this Agreement, on a full indemnity basis.

4.03 Damages an Inadequate Remedy

The Owner acknowledges and agrees that in the case of a breach of this Agreement which is not fully remediable by the mere payment of money and promptly so remedied, the harm sustained by the District and to the public interest will be irreparable and not susceptible of adequate monetary compensation.

4.04 Equitable Remedies

Each party to this Agreement, in addition to its rights under this Agreement or at law, will be entitled to all equitable remedies including specific performance, injunction and declaratory relief, or any of them, to enforce its rights under this Agreement.

4.05 No Penalty or Forfeiture

The Owner acknowledges and agrees that it is entering into this Agreement to benefit the public interest in providing rental accommodation, and that the District’s rights and remedies under this Agreement are necessary to ensure that this purpose is carried out, and the District’s rights and remedies under this Agreement are fair and reasonable and ought not to be construed as a penalty or forfeiture.

4.06 Cumulative Remedies

No reference to nor exercise of any specific right or remedy under this Agreement or at law or at equity by any party will prejudice, limit or preclude that party from exercising any other right or remedy. No right or remedy will be exclusive or dependent upon any other right to remedy, but any party, from time to time, may exercise any one or more of such rights or remedies independently, successively, or in combination. The Owner acknowledges that specific
performance, injunctive relief (mandatory or otherwise) or other equitable relief may be the only adequate remedy for a default by the Owner under this Agreement.

5. **LIABILITY**

5.01 **Indemnity**

Except if arising directly from the negligence of the District or its employees, agents or contractors, the Owner will indemnify and save harmless each of the District and its board members, officers, directors, employees, agents, and elected or appointed officials, and their heirs, executors, administrators, personal representatives, successors and assigns, from and against all claims, demands, actions, loss, damage, costs and liabilities that all or any of them will or may be liable for or suffer or incur or be put to any act or omission by the Owner or its officers, directors, employees, agents, contractors, or other persons for whom the Owner is at law responsible, or by reason of or arising out of the Owner’s ownership, operation, management or financing of the Proposed Development or any part thereof.

5.02 **Release**

The Owner hereby releases and forever discharges the District, its elected officials, board members, officers, directors, employees and agents, and its and their heirs, executors, administrators, personal representatives, successors and assigns from and against all claims, demands, damages, actions or causes of action by reason of or arising out of advice or direction respecting the ownership, operation or management of the Proposed Development or any part thereof which has been or hereafter may be given to the Owner by all or any of them.

5.03 **Survival**

The covenants of the Owner set out in Sections 5.01 and 5.02 will survive termination of this Agreement and continue to apply to any breach of the Agreement or claim arising under this Agreement during the ownership by the Owner of the Lands or any Unit therein, as applicable.

6. **GENERAL PROVISIONS**

6.01 **District’s Power Unaffected**

Nothing in this Agreement:

(a) affects or limits any discretion, rights, powers, duties or obligations of the District under any enactment or at common law, including in relation to the use or subdivision of land;

(b) affects or limits any enactment relating to the use of the Lands or any condition contained in any approval including any development permit concerning the development of the Lands; or

(c) relieves the Owner from complying with any enactment, including the District’s bylaws in relation to the use of the Lands.
6.02 Agreement for Benefit of District Only

The Owner and District agree that:

(a) this Agreement is entered into only for the benefit of the District:

(b) this Agreement is not intended to protect the interests of the Owner, any Unit Owner, any occupant of any Unit or any future owner, occupier or user of any part of the Proposed Development, including any Unit, or the interests of any third party, and the District has no obligation to anyone to enforce the terms of this Agreement; and

(c) The District may at any time terminate this Agreement, in whole or in part, and execute a release and discharge of this Agreement in respect of the Proposed Development or any Unit therein, without liability to anyone for doing so.

6.03 Agreement Runs With the Lands

This Agreement burdens and runs with the Lands and any part into which any of them may be subdivided or consolidated, by strata plan or otherwise. All of the covenants and agreements contained in this Agreement are made by the Owner for itself, its successors and assigns, and all persons who acquire an interest in the Lands or in any Unit after the date of this Agreement.

6.04 Release

The covenants and agreements on the part of the Owner and any Unit Owner and herein set forth in this Agreement have been made by the Owner and any Unit Owner as contractual obligations as well as being made pursuant to Section 483 of the Local Government Act (British Columbia) and as such will be binding on the Owner and any Unit Owner, except that neither the Owner nor any Unit Owner shall be liable for any default in the performance or observance of this Agreement occurring after such party ceases to own the Lands or a Unit as the case may be.

6.05 Priority of This Agreement

The Owner will, at its expense, do or cause to be done all acts reasonably necessary to ensure this Agreement is registered against the title to each Unit in the Proposed Development, including any amendments to this Agreement as may be required by the Land Title Office or the District to effect such registration.

6.06 Agreement to Have Effect as Deed

The District and the Owner each intend by execution and delivery of this Agreement to create both a contract and a deed under seal.

6.07 Waiver

An alleged waiver by a party of any breach by another party of its obligations under this Agreement will be effective only if it is an express waiver of the breach in writing. No waiver of a breach of this Agreement is deemed or construed to be a consent or waiver of any other breach of this Agreement.
6.08 Time

Time is of the essence in this Agreement. If any party waives this requirement, that party may reinstate it by delivering notice to another party.

6.09 Validity of Provisions

If a Court of competent jurisdiction finds that any part of this Agreement is invalid, illegal, or unenforceable, that part is to be considered to have been severed from the rest of this Agreement and the rest of this Agreement remains in force unaffected by that holding or by the severance of that part.

6.10 Extent of Obligations and Costs

Every obligation of a party which is set out in this Agreement will extend throughout the Term and, to the extent that any obligation ought to have been observed or performed prior to or upon the expiry or earlier termination of the Term, such obligation will survive the expiry or earlier termination of the Term until it has been observed or performed.

6.11 Notices

All notices, demands, or requests of any kind, which a party may be required or permitted to serve on another in connection with this Agreement, must be in writing and may be served on the other parties by registered mail or by personal service, to the following address for each party:

If to the District:

District Municipal Hall
355 West Queens Road
North Vancouver, BC V7N 4N5

Attention: Planning Department

If to the Owner:

If to the Unit Owner:

The address of the registered owner which appears on title to the Unit at the time of notice.

Service of any such notice, demand, or request will be deemed complete, if made by registered mail, 72 hours after the date and hour of mailing, except where there is a postal service disruption during such period, in which case service will be deemed to be complete only upon actual delivery of the notice, demand or request and if made by personal service, upon personal service being effected. Any party, from time to time, by notice in writing served upon the other parties, may
designate a different address or different or additional persons to which all notices, demands, or requests are to be addressed.

6.12 Further Assurances

Upon request by the District, the Owner will promptly do such acts and execute such documents as may be reasonably necessary, in the opinion of the District, to give effect to this Agreement.

6.13 Enuring Effect

This Agreement will enure to the benefit of and be binding upon each of the parties and their successors and permitted assigns.

7. INTERPRETATION

7.01 References

Gender specific terms include both genders and include corporations. Words in the singular include the plural, and words in the plural include the singular.

7.02 Construction

The division of this Agreement into sections and the use of headings are for convenience of reference only and are not intended to govern, limit or aid in the construction of any provision. In all cases, the language in this Agreement is to be construed simply according to its fair meaning, and not strictly for or against either party.

7.03 No Limitation

The word “including” when following any general statement or term is not to be construed to limit the general statement or term to the specific items which immediately follow the general statement or term similar items whether or not words such as “without limitation” or “but not limited to” are used, but rather the general statement or term is to be construed to refer to all other items that could reasonably fall within the broadest possible scope of the general statement or term.

7.04 Terms Mandatory

The words “must” and “will” and “shall” are to be construed as imperative.

7.05 Statutes

Any reference in this Agreement to any statute or bylaw includes any subsequent amendment, re-enactment, or replacement of that statute or bylaw.

7.06 Entire Agreement

(d) This is the entire agreement between the District and the Owner concerning its subject, and there are no warranties, representations, conditions or collateral agreements relating to this Agreement, except as included in this Agreement.
(e) This Agreement may be amended only by a document executed by the parties to this Agreement and by bylaw, such amendment to be effective only upon adoption by District Council of a bylaw to amend Bylaw 8297

7.07 **Governing Law**

This Agreement is to be governed by and construed and enforced in accordance with the laws of British Columbia.

As evidence of their agreement to be bound by the terms of this instrument, the parties hereto have executed the *Land Title Act* Form C that is attached hereto and forms part of this Agreement.
GRANT OF PRIORITY

WHEREAS ________________ (the "Chargeholder") is the holder of the following charge which is registered in the Land Title Office:

(a) ________________ (the "Charge");

AND WHEREAS the Chargeholder agrees to allow the Section 219 Covenant herein to have priority over the Charge;

THIS PRIORITY AGREEMENT is evidence that in consideration of the sum of $1.00 paid by THE CORPORATION OF THE DISTRICT OF NORTH VANCOUVER (the "District") to the Chargeholder, the receipt and sufficiency of which are hereby acknowledged, the Chargeholder covenants and agrees to subordinate and postpone all its rights, title and interest in and to the lands described in the Form C to which this Agreement is attached (the "Lands") with the intent and with the effect that the interests of the District rank ahead of the Charge as though the Section 219 Covenant herein had been executed, delivered and registered against title to the Lands before registration of the Charge.

As evidence of its Agreement to be bound by the above terms, as a contract and as a deed executed and delivered under seal, the Chargeholder has executed the Form C to which this Agreement is attached and which forms part of this Agreement.
THIS PAGE LEFT BLANK INTENTIONALLY
WOODBINE DR. & COURTYARD ELEVATIONS

GRIMWOOD
DP.16
3155-3175 Canfield Crescent Rezoning Application

Public Information Meeting Summary Report

Event Date: September 26, 2018
Time: 6:30pm – 8:30pm
Location: Café Artigiano Edgemont, 3154 Highland Blvd, North Vancouver
Attendance: 31 members of the public signed in.
Comments: 6 comment sheets and 11 e-mails were submitted.

Meeting Purpose:
1) To present development proposal materials to neighbours
2) To provide an opportunity for the public to ask questions about the proposal
3) To provide an opportunity for neighbours to comment on the proposal

Notification:
In accordance with District of North Vancouver policies:

Invitation Brochures
Invitations and informational packages were delivered to 18 addresses within a 100m radius from the site, meeting District requirements. Appendix A includes a copy of this package and a map of the distribution area.

Newspaper Ads
Newspaper ads were placed in the North Shore News on Wednesday, September 19, 2018 and Friday, September 21, 2018. A copy of the ads is included in Appendix A.

Notification Signs
Two signs were installed on the property on September 11, 2018, providing two weeks’ notice to neighbours of the meeting. Photographs of the installed signs are provided in Appendix A.

Project Presentation
A full copy of the applicant’s presentation is provided in Appendix D.

Attendance:
31 members of the public signed in for the meeting. A copy of the redacted sign-in sheet is included in Appendix B.

The following City staff and project team members were in attendance:

District of North Vancouver:
- Carly Rosenblatt, Planner
Project Team:
- Joelle Calof, Vice-President, I4 Property Group
- Myron Calof, President, I4 Property Group
- Michael Oord, Project Partner
- April Green, Project Partner
- Thomas Grimwood, Architect
- Caelan Griffiths, Landscape Architect
- Brent Dozzi, Traffic Engineer
- Donato Battista, Project Manager
- Jake Howe, Director Pre-Construction

Facilitators:
- Steven Petersson, Petersson Planning Consulting
- Katrina May, Petersson Planning Consulting

Overview:
The meeting was held in a Public Information Meeting format. The meeting began with an Open House, where participants could browse the display boards and engage with the project team directly. The Open House was followed by a presentation and facilitated question-and-answer period. A facilitator noted questions and comments on a flip chart for all to see.

The participants were invited to submit written comments to the facilitator or to the municipal planner. The comment period remained open from the night of the meeting, September 26, 2018, to October 10, 2018. Six comment sheets and 11 emails were submitted within the comment period.

The general tone of the evening was support for this development proposal, both for the applicant and for the design. Most participants were acquainted with the I4 team due to their extensive neighbourhood outreach prior to the public information meeting. Participants noted that the proposal conformed to the Edgemont Local Plan. Community members also recognized the demand for townhomes in the neighbourhood as a more attainable alternative to single-family houses. Questions arose around traffic circulation, with the suggestion made to the DNV by several attendees to consider making Canfield a one-way street. There were questions about whether there was enough parking for visitors, and generally the attendees agreed there would be enough angled public parking, outside of business hours, for guests to share.

The overall development proposal was supported by most participants.

Public Dialogue:
(Q = Question, A = Answer, C = Comment, and the number is to track the dialogue)

Q1 Will this be a "green" project?
A1 The DNV recently increased the minimum standard for green building. This project will comply with Step Code 3. An energy advisor has been retained to ensure the project
meets Step Code 3. All parking stalls are set up for EV charging. Charging stations are also available for electric bicycles.

Q2 I think the plan looks great, but the merchants are tired of the construction in the neighbourhood. We are concerned about all of the development.
   A2 We will do our best to mitigate impact of construction and keep it on site. Our construction contractors are here tonight to listen to your concerns.

C3 I am in favour of this proposal. It conforms to the Edgemont Local Plan. Besides, if two single-family homes were proposed instead, construction would take longer, and the community would have no say in the matter. I support housing that is attainable for our "missing middle" demographic.

Q4 I really like the concept here. I am feeling development fatigue. I am concerned about the removal of trees. Are the new parking stalls for residents only? What about visitors?
   A4 One tree will be removed. Guests will share the off-site public parking.

Q5 What is happening with the proposed bicycle lane and existing angled parking on Woodbine? While bike lanes are great, I am concerned about the loss of on-street parking if the angled parking changes to parallel parking to accommodate the bike lane.
   A5 DNV staff are still working out the details.

Q6 16 parking stalls are not adequate: more space is required for EV charging, because EV stations are not parking stalls. This situation is even more challenging once you factor in visitor parking.
   A6 Thank you – we will follow up with our transportation engineer.

C7 This is close to a frequent transit route. Many households who live in townhouses in the centre of the neighbourhood will not own two cars.

C8 There is not enough parking on the street today. Traffic will be worse with more development. Please introduce a traffic calming measure on Canfield. The DNV should restrict Canfield to one-way traffic to reduce rat-running through the neighbourhood.

C9 I also support a one-way street on Canfield.

C10 I also support one-way traffic on Canfield. The DNV should retain the angled parking on Woodbine.

C11 I am a realtor. Families need townhouses like these!

Q12 Where will builders get access to the site for construction?
   A12 The main staging area is proposed on the corner of Woodbine and Canfield, which would be closed off for the duration of the construction.

C13 Parking is only an issue during business hours. After hours, there is plenty of on-street parking nearby.
C14  It is refreshing that the developer has spoken directly with neighbours!

C15  Love it! I think the merchants will come to love it.

C16  This open dialogue is great! This is a relatively small project: construction will be OK.

Comment Sheet and Email Summary
Participants were invited to submit comments for a two-week response period after the meeting. Six comment sheets and 11 emails were submitted. The main themes from the comments received included:

- Ensuring that neighbours and merchants are notified about road closures and construction
- Many respondents expressed wanting to keep angled parking on Woodbine and suggested that Canfield to be converted to a one-way street to reduce cut-through traffic
- Many respondents voiced support for the project. Reasons for support included the proposed design, underground parking, housing for the “missing middle” and down-sizers, and the project team’s proactive consultation with neighbours
- Limiting street lighting to two lights only on Highland Blvd and Woodbine Drive so the lights do not inappropriately shine into homes at night
- Maintaining as many native trees as possible on the site
- One respondent opined that 16 parking stalls are not sufficient for 8 units with visitors.

Conclusion
The purpose of this public information meeting was to present to neighbours the proposed rezoning application, and to provide them with an opportunity to ask clarifying questions and comment on the proposal. 18 invitations were distributed by hand to the surrounding community, and 31 community members signed in. Two newspaper ads notified the community of the meeting, and a sign was posted on the property. Five comment forms and 11 emails were submitted to the municipal planner.

The public could participate in this process in several ways:
- browsing boards
- talking to the project team and DNV Planner
- watching a presentation
- participating in a facilitated question and answer period
- submitting written comments.

The meeting length and format was sufficient to provide all participants an opportunity to learn more, ask questions, and make the comments they wished to provide that evening. Participants asked the development team and District planner a variety of specific questions, mostly related to traffic circulation, impacts of construction activity, and general development fatigue. Most of the community members that spoke at the meeting expressed explicit support for this project. Participants noted that families and younger people are looking for townhomes in the area as an alternative to an expensive single-family house. They expressed satisfaction that the developer spoke directly to neighbours in
advance of the meeting. The community was given ample opportunity to express their views of the proposal.
Record falls at Grouse Grind Mountain Run

A record fell on Sunday when an athlete completed the Grouse Grind Mountain Run held Sunday up the popular North Vancouver hiking trail.

Amanda Nauds of White Rock set a new official record for the women’s race, clocking a time of 33:26 and two seconds for the grueling 8.5-km course with an elevation gain of 800 metres up the side of Grouse Mountain.

The previous record of 33:28 was set by Felicia Stevens-Reid. Nauds, a member of Black’s Racing, finished second on Saturday with a time of 33:57.

Public Information Meeting

The property group is hosting a Public Information Meeting to present the rezoning development proposal for 3155-3175 Canfield Crescent. The proposal is for 12 townhouse units (located in 4 buildings) with 10 underground parking stalls.

Please join us on Wednesday, September 26 from 6:30 to 8:30 pm at Cafe Artigiano to learn about the proposal, view proposed designs, meet the project team, and provide your feedback.

Public Information Meeting Details

Date: Wednesday, September 26, 2018
Time: 6:30 - 8:30 pm
Location: Café Artigiano (1134 Highland Road, North Vancouver)

Optional parking pass provided at registry office.

Information on register with resident within 100 days of the proposal being on file at site. If you are not the property owner, please contact the project site office in 416-242-3444 or Carlyle Road at the property office at 416-242-3444 to receive your qualifications and comments in the meeting.

Capilano Rugby Club kicks off 50th season in style

Capilano Rugby Club celebrated the start of its 50th season with their bronze opener against their Burgess rivals, Vancouver’s Mendocino Rugby Club.

Several key members of the club were in attendance to kick off the new season. The club is made up of players from across the province, representing the unique cultural diversity of BC.

On Saturday, Capilano won a non-official game by a score of 20-0 over Mendocino. The club’s goal for the season is to play well and enjoy the game.

In other action across the Capilano premier men got their season started with a 25-19 win over Mendocino. Mendocino got back to back to the team’s reserve team, scoring a 25-19 win. Mendocino also scored a win in the 3rd action, topping Capilano 18-15.

The Capilano premier men will be at home again this Saturday for a 2:30 pm kickoff against B.C. Rugby League.
Newspaper Advertisement: North Shore News, Friday, September 21, 2018

BRAD WAIT MEMORIAL GOLF TOURNAMENT
"Golfing for Giving"

The Brad Wait Foundation was founded in August 2017 in memory of Bradley Bryan Wait who lost his 31 month battle with brain cancer on July 15, 2017 at the age of 42. Brad was an avid and passionate golfer.

Proceeds from this year’s Memorial Golf Tournament will go to North Shore Camp Kerry – bereavement counselling for children/teens who have lost a parent or sibling.

Golfers, Hole Sponsors, and Silent Auction donors are needed to support this event.

For details and to donate: www.bradwaitfoundation.ca
or email helena@bradwaitfoundation.ca

FRIDAY SEPTEMBER 28 – 12:30 START
SEYMOUR GOLF & COUNTRY CLUB
3723 MT SEYMOUR PARKWAY

Enjoy the exceptional comfort of radiant heat in every Valor™ fireplace

JAPANESE BREAKFAST American indie musician, Japanese Breakfast, returns to Vancouver in support of her latest release, Soft Sounds From Another Planet, for a show at The Imperial on Sept. 20, with tickets on sale now. Tickets available at ReCell Malo, ReCell Hatings St and Zula and online at brownpapertickets.com. PHOTO SUPPLIED BY BUIKING

Public Information Meeting
H Property Group is hosting a Public Information Meeting to present the rezoning development proposal for 3155-3175 Canfield Crescent. The proposal is for 8 townhouse units located in 4 buildings with 16 underground parking stalls.

Please join us on Wednesday, September 26 from 6:30 to 8:30pm at Café Artigiano to learn about the proposal, view proposed designs, meet the project team, and provide your feedback.

Public Information Meeting Details
Date: Wednesday, September 26, 2018
Time: 6:30 – 8:30pm, Presentation at 7:30pm
Location: Café Artigiano (1514 Hastings St, North Vancouver)

Information packages are being distributed to residents within approximately 300 metres of the proposed development site. If you would like more information please contact publicinfo@hpropertygroup.com or call 604-950-9277 or bring your questions and concerns to the meeting.

Please note this is not a public hearing. Members of North Vancouver Council will receive a report from staff on their review of the meeting and will formally consider the proposal at a later date.

Petersson Planning Consulting
Notification Signs: Installed September 11, 2018
Please Join us at our Public Information Meeting

14 Property Group is hosting a Public Information Meeting to present the development proposal for 8 townhouse units at 3155-3175 Canfield Crescent with a proposed density of 0.8 FSR.

Each unit contains three-bedrooms and is located in four buildings. A common courtyard amenity includes private patio space for each unit and a shared seating area with a fire pit. There are 16 underground vehicle parking spaces proposed for the development, which will be accessed off of Canfield Crescent.

DETAILS

Date: Wednesday, September 26, 2018
Time: 6:30 - 8:30 pm
  6:30 - 7:15 pm - Open House
  7:15 - 7:45 pm - Presentation by Project Team
  7:45 - 8:30 pm - Facilitated Question and Answer Session
Location: Cafe Artigiano Edgemont (3154 Highland Blvd, North Vancouver)

MEETING LOCATION: CAFE ARTIGIANO

Please Note: Information packages are being distributed to residents within approximately 100 metres of the proposed development site in accordance with the District of North Vancouver policy.
The Public Information Meeting will provide:

- An overview of the proposed design and land use;
- Information about project details and proposed timeline; and
- An opportunity to ask questions and provide your input.

**SITE CONTEXT**

**DESIGN CONCEPT**

**QUESTIONS?**

Joelle Calof  
Vice President, 14 Property Group  
t: 604-688-4155 Ext 304  e: joelle.calof@14pg.com

Carly Rosenblat  
Planner, District of North Vancouver  
t: 604-990-3717  e: RosenblatC@dnv.org
**PROCESS FOR APPLICATIONS REQUIRING REZONING**

**THE DISTRICT OF NORTH VANCOUVER**

1. Proponent submits Preliminary Application which includes opportunity for feedback from the community

2. Proponent submits Detailed Rezoning Application

3. Planning co-ordinates review by staff and advisory bodies

4. Information Report to Council
   
   Planning informs Council on the applicant’s intention to hold a Public Information Meeting in the neighbourhood

5. Public Information Meeting
   
   Meeting is organized and held by the applicant in the neighbourhood

6. Detailed Staff Report
   
   Detailed report to Council on the project including a summary on the outcome of the Public Information Meeting. Report recommends Council introduce rezoning bylaw and set a Public Hearing date or reject the application.

    - Council requests Revisions
    - Rejection

7. Public Hearing Held

8. Bylaw Returned to Council
   
   Council may request clarification on issues raised at the Public Hearing, defeat the Bylaw, or give 2nd and 3rd reading

9. Council adopts Bylaw or defeats Bylaw

*Time requirements can vary due to the specifics of individual projects.*
Notification Area Map

3155 Canfield Cres
100m BUFFER MAP

Published: July 25, 2018
### 3155-3175 Canfield Crescent PIM Sign in Sheet

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3155-3175 Canfield Crescent
PIM Sign in Sheet

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Appendix C – Public Comments: Written Submissions:

COMMENT SHEET
The District of North Vancouver

PROPOSAL: Applicant: Canfield Crescent Limited Partnership.
Address: 3155 & 3175 Canfield Cres.

Development application for 8 townhouse units in four buildings

To help us determine neighbourhood opinions, please provide us with any input you have on this project (feel free to attach additional sheets):

I will support your development.

[Signature]

Your Name: [Redacted]
Street Address: [Redacted]

Please check this box if you desire your contact information to be available to the applicant: ☐

The personal information collected on this form is done so pursuant to the Community Charter and/or the Local Government Act and in accordance with the Freedom of Information and Protection of Privacy Act. The personal information collected herein will be used only for the purpose of this public consultation process unless its release is authorized by its owner or is compelled by a Court or an agent duly authorized under another Act. Further information may be obtained by speaking with The District of North Vancouver’s Manager of Administrative Services at 604-990-2307.

Please return, by mail or email by October 16th, 2018 to:
District Planner: Carly Rosenblat
Tel: 604-990-3717
District of North Vancouver – Community Planning Department
355 West Queens Road, North Vancouver, BC V7N 4N5
Email: rosenblatc@dnv.org

Document 3663763
**COMMENT SHEET**
The District of North Vancouver

**PROPOSAL:** Applicant: Canfield Crescent Limited Partnership.
Address: 3155 & 3175 Canfield Cres.

Development application for 8 townhouse units in four buildings

To help us determine neighbourhood opinions, please provide us with any input you have on this project (feel free to attach additional sheets):

---

Your Name: [redacted]
Street Address: [redacted]

Please check this box if you desire your contact information to be available to the applicant:

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The personal information collected on this form is done so pursuant to the Community Charter and/or the Local Government Act and in accordance with the Freedom of Information and Protection of Privacy Act. The personal information collected herein will be used only for the purpose of this public consultation process unless its release is authorized by its owner or is compelled by a Court or an agent duly authorized under another Act. Further information may be obtained by speaking with The District of North Vancouver's Manager of Administrative Services at 604-960-2207.

Please return, by mail or email by October 16th, 2018 to:

District Planner: Carly Rosenblat
Tel: 604-990-3717
District of North Vancouver - Community Planning Department
355 West Queens Road, North Vancouver, BC V7N 4N5
Email: rosenblatc@dnv.org

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Document: 3463703

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Petersson Planning Consulting

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COMMENT SHEET
The District of North Vancouver

PROPOSAL: Applicant: Canfield Crescent Limited Partnership.
Address: 3155 & 3175 Canfield Cres.

Development application for 8 townhouse units in four buildings

To help us determine neighbourhood opinions, please provide us with any input you have on this project (feel free to attach additional sheets):

Your Name: ____________________________ Street Address: ____________________________

Please check this box if you desire your contact information to be available to the applicant: [ ]

The personal information collected on this form is done so pursuant to the Community Charter and/or the Local Government Act and in accordance with the Freedom of Information and Protection of Privacy Act. The personal information collected herein will be used only for the purpose of this public consultation process unless its release is authorized by its owner or is compelled by a Court or an agent duly authorized under another Act. Further information may be obtained by speaking with The District of North Vancouver's Manager of Administrative Services at 604-990-2207.

Please return, by mail or email by October 16th, 2018 to:
District Planner: Carly Rosenblat
Tel: 604-990-3717
District of North Vancouver - Community Planning Department
355 West Queens Road, North Vancouver, BC V7N 4N5
Email: rosenblatc@dnv.org

Document: 3683763
COMMENT SHEET
The District of North Vancouver

PROPOSAL: Applicant: Canfield Crescent Limited Partnership.
Address: 3165 & 3175 Canfield Cres.

Development application for 8 townhouse units in four buildings

To help us determine neighbourhood opinions, please provide us with any input you
have on this project (feel free to attach additional sheets):

Your Name: [Redacted]
Street Address: [Redacted]

Please check this box if you desire your contact information to be available to the applicant: [ ]

The personal information collected on this form is done so pursuant to the Community Charter and/or the Local Government Act and
in accordance with the Freedom of Information and Protection of Privacy Act. The personal information collected herein will be used
only for the purpose of this public consultation process unless its release is authorized by its owner or is compelled by a Court or an
agent duly authorized under another Act. Further information may be obtained by speaking with The District of North Vancouver’s
Manager of Administrative Services at 604-990-3297.

Please return, by mail or email by October 16th, 2018 to:
District Planner: Carly Rosenblat
Tel: 604-990-3717
District of North Vancouver - Community Planning Department
355 West Queens Road, North Vancouver, BC V7N 4N5
Email: rosenblatc@dnv.org

Document: 3683783

Petersson Planning Consulting
COMMENT SHEET
The District of North Vancouver

PROPOSAL: Applicant: Canfield Crescent Limited Partnership.
Address: 3155 & 3175 Canfield Cres.
Development application for 8 townhouse units in four buildings

To help us determine neighbourhood opinions, please provide us with any input you have on this project (feel free to attach additional sheets):

I am a teacher in the area and I believe any kind of housing tailored to young families is fantastic.

Your Name ____________________________ Street Address ____________________________

Please check this box if you desire your contact information to be available to the applicant: ☐

The personal information collected on this form is done so pursuant to the Community Charter and/or the Local Government Act and in accordance with the Freedom of Information and Protection of Privacy Act. The personal information collected herein will be used only for the purpose of this public consultation process unless its release is authorized by its owner or is compelled by a Court or an agent duly authorized under another Act. Further information may be obtained by speaking with The District of North Vancouver's Manager of Administrative Services at 604-980-2201.

Please return, by mail or email by October 16th, 2018 to:
District Planner: Carly Rosenblat
Tel: 604-980-3717
District of North Vancouver - Community Planning Department
355 West Queens Road, North Vancouver, BC V7N 4N5
Email: rosenblatc@dnv.org

Document: 3583783
Carly Rosenblat

From: September 26, 2018 7:30 PM
To: Carly Rosenblat
Subject: 3155 & 3175 Canfield Cres

Dear Carly,

And I attended the open house tonight and it was very well done, we appreciated the efforts the developers have gone through to make this a boutique development in an ever changing area. It appears that this project will fit in nicely with the area and we look forward to utilizing the amenities it will provide.

I spend a lot of time in Edgemont with business meetings and friends that live very close to the development.

Looking forward to seeing the finished product.

North Vancouver Resident
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<th>Carly Rosenblat</th>
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<td>Carly Rosenblat</td>
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<td>Subject:</td>
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As attached.

Regards,
COMMENT SHEET
The District of North Vancouver

PROPOSAL: Applicant: Canfield Crescent Limited Partnership.
Address: 3155 & 3175 Canfield Cres.

Development application for 8 townhouse units in four buildings

To help us determine neighbourhood opinions, please provide us with any input you have on this project (feel free to attach additional sheets):

This project has obviously been very well designed with a lot of thought having gone into the surrounding neighbourhood, and it makes excellent use of a difficult space. It will undoubtedly bring much needed slightly higher density to an area historically starved of multi family housing, hopefully at a price that is affordable to new residents.
The developer appears to be engaged in the community and is trying to work with them to reduce construction stress.
I like the idea of making Canfield Cres a one way street going south as I believe that it will stop cut through traffic.
All in all a very thoughtfully designed project that will undoubtedly enhance the area.

Very nicely designed and I am definitely for the development.

______________________________
______________________________

Your Name: __________________________ Street Address: __________________________

Please check this box if you desire your contact information to be available to the applicant: X

The personal information collected on this form is done so pursuant to the Community Charter and/or the Local Government Act and in accordance with the Freedom of Information and Protection of Privacy Act. The personal information collected herein will be used only for the purpose of this public consultation process unless its release is authorized by its owner or is compelled by a Court or an agent duly authorized under another Act. Further information may be obtained by speaking with The District of North Vancouver’s Manager of Administrative Services at 604-980-2267.

Please return, by mail or email by October 16th, 2016 to:
District Planner: Carly Rosenblat
Tel: 604-990-3717
District of North Vancouver - Community Planning Department
355 West Queens Road, North Vancouver, BC V7N 4N5
Email: rosenblatc@dnv.org

Document: 5683763
**COMMENT SHEET**

The District of North Vancouver

**PROPOSAL:**

Applicant: Canfield Crescent Limited Partnership.
Address: 3155 & 3175 Canfield Cres.

Development application for 8 townhouse units in four buildings

To help us determine neighbourhood opinions, please provide us with any input you have on this project (feel free to attach additional sheets):

- Excellent Presentation
- Project appears well conceived physically and low density
- Much thought given by the developer to impact on surrounding land uses, commercial & residential
- Access and parking an issue
- Uplighting of sidewalks, bus stop, bike lanes a big plus for the neighbourhood

Your Name

Street Address

Please check this box if you desire your contact information to be available to the applicant: [ ]

The personal information collected on this form is done so pursuant to the Community Charter under the Local Government Act and in accordance with the Freedom of Information and Protection of Privacy Act. The personal information collected herein will be used only for the purpose of this public consultation process unless its release is authorized by its owner or is compelled by a Court or an agent duly authorized under another Act. Further information may be obtained by speaking with The District of North Vancouver’s Manager of Administrative Services at 604-980-3000.

Please return, by mail or email by **October 16th, 2018** to:

District Planner: Carly Rosenblat
Tel: 904-980-3717
District of North Vancouver - Community Planning Department
355 West Queens Road, North Vancouver, BC V7N 4N5
Email: rosenblatc@dnv.org

Development application for 8 townhouse units in four buildings

To help us determine neighbourhood opinions, please provide us with any input you have on this project (feel free to attach additional sheets):

I attended the meeting on September 26, 2018.

I liked the developer’s design of the buildings, landscape plan, and entrance off of Canfield for the townhouse parking.

My comments refer to the traffic flow on Canfield Cres. and the angle parking on Woodbine Drive.

The residences that live on Canfield Cres. stated that night that Canfield should be a ONE-WAY Cres. and I fully agree; entering off of Highlands and exit onto Woodbine Drive. I live on Beverley Cres., the next Crescent to Canfield and people cut through Beverley constantly, I can only image with Canfield being closer to the village it is more often. Usually these people are in a hurry, only interested in getting from A to B, fastest route possible, distracted and no attention paid to the neighbourhood around them.

Secondly, ANGLE PARKING on Woodbine should remain angled parking! It would be a huge mistake to take the angled parking away from Woodbine, or any angled parking in the village. It provides more parking, and easier parking. I would suggest one or two stalls of 15 minute parking for quick pick-up or drop off, (as at the library in the village).

The personal information collected on this form is done to pursuant to the Community Crime and the Local Government Act and in accordance with the Freedom of Information and Protection of Privacy Act. This personal information collected herein will be used only for the purpose of this public consultation process unless its release is authorized by its owner or is compelled by a Court or an agent duly authorized under another Act. Further information may be obtained by speaking with The District of North Vancouver’s Manager of Administrative Services at 604-980-3277.

Please return, by mail or email by October 16th, 2018 to:

District Planner: Carly Rosenblat
Tel: 604-980-3717
District of North Vancouver - Community Planning Department
355 West Queens Road, North Vancouver, BC V7N 4N5
Email: rosenblatc@dvn.org

Peterson Planning Consulting
Feedback for the development proposal for 8 townhomes at 3155-3175 Canfield Crescent.

Good afternoon Carly,

I was happy to attend the Public information meeting on Wednesday September 26, 2018. This development as you know encompasses the entire south side of our small neighbourhood Crescent and as such is very important to both my lifestyle and my investment. I have owned this home and actively invested in many ways in our community for over 20 years now. I grew up in Upper Capilano, moving away and then returning when it came time to have children and settle.

While I support the development and have been most happy with the developer’s transparency and efforts in meeting with the local residents directly affected by the potential changes, I do have concerns over some of the requests of DNV Engineering.

If I understand correctly it is DNV and not the developer requiring the entrance to the complex to be off Canfield rather than Woodbine. I still have concerns around that. A suggestion that has been put forward by all residents of our tiny block to mitigate potential traffic and entrance/exit problems to the new strata, street parking safety, pedestrian safety, right hand turn across bike lane onto Canfield should it remain 2 way and to impose traffic calming, is the implementation of a one way street, flowing north to south, on Canfield Crescent. Both North and South Connaught Crescents are one way, yet Canfield is not. As supported by the findings of the developer I4PG’s Traffic Study, Canfield already has community traffic zipping through our short crescent to avoid the 4 way stop right hand turn. It would be timely to change Canfield Crescent to one way at the time of I4PG’s construction. Such an innovative move, as suggested again at the Public Information Meeting, would provide traffic calming. Canfield Crescent currently has children living on it and we are hoping the new development will be also designed in such a way as to encourage families to our neighbourhood and thus children to our road. I strongly request that the development go through, Canfield Crescent be made into a one way street at the time of development.

I also would like to reiterate that mid rescent street lighting is overkill on our tiny Crescent. Street lights at both ends of the Crescent in conjunction with entrance lighting at the sidewalk juncture with front entrances of the new townhome (mimicking the lighting at the ends of the driveways of the two new homes on our short road) should be designed in such a way as to provide adequate lighting for the Crescent and not bothersome over lighting that will be the result of any addition of mid crescent street LED lights. Added mid street lighting will shine too brightly into bedrooms and homes presently on Canfield, Beverly and Highland and the new homes proposed Canfield by I4PG. I do not see over lighting the
street as a selling feature for the developer or a good expenditure of their monies and I would prefer the developer use that money for high quality, visually appealing, west coast style exteriors. Full size LED street lighting at each end of Canfield on Highland Blvd and on Woodbine Avenue are sufficient for this development. Please do not add street lighting mid Canfield Crescent.

The discussion of the removal of angled parking on Woodbine came up among neighbours again at 14PG’s information meeting as it did at Omicron’s recent information meeting. I think it is important to remind that when this was discussed at the March 2014, Edgemont Village Centre Plan and Design Guidelines, angled parking on Woodbine was seen by the community as an important way to preserve parking for shoppers who make Edgemont a destination. Edgemont merchants are very important to our community and we must continue to attract unique small businesses to the village and keep their businesses afloat despite high lease costs. Anything we can do to attract destination customers to augment our local neighbourhood customers must be pursued, or in this case maintained. I remain of the opinion that adding new underground parking is great, however there are seniors and others who do not like to and will not park in undergrounds. Parking is a problem for customers in Edgemont Village as it is, please do not reduce the number of above ground parking spots, please do not remove angled parking from Woodbine.

One last consideration and this is personal to our home and lot angle. If the large tree north need be removed for road improvement, please consider if there is any way to replace it with a small tree. This tree softens the view we have of the busier Highland Blvd, the new 246 bus stop and the many homes at Amica whose residents look over our driveway (as well as Amica’s employees who smoke, coffee break and pick up at the north west end of our Crescent). I can assure you this is true as the Amica residents enjoy tell me all the time of what is happening in my driveway ø. As our kitchen is on the north west corner of my home and I spend a lot of time there, any ideas to keep my view soft and not completely wide open to Highland and Amica would be appreciated.

Thank you for your serious consideration.

Regards,
Carly Rosenblat

From: [Redacted]
Sent: October 04, 2018 1:43 PM
To: Carly Rosenblat
Subject: Fwd: Proposed Development - 3155/3175 Canfield Crescent

Forwarding some notes regarding the Canfield Crescent proposal. Not sure if these go to yourself or the facilitator, would you forward if necessary please.

Subject: Proposed Development - 3155/3175 Canfield Crescent

Some follow up notes to the Sept 26 public information meeting.
I support the proposed development based on the following observations:
- the proposed project complies with previously approved Edgemont Village Centre Plan and Design Guidelines.
- the proposal reflects the anticipated transition between the commercial core and the adjacent residential area,
- the proposal provides additional housing with the size of units suited for families and 'downsizers'
- the proposal is close to existing good public transit service. Route 146 between downtown Vancouver and Lonsdale Quay. Route 232 between Phibbs Exchange and Grouse Mountain.
These routes include service to primary schools (Cleveland, Canyon Heights) and secondary schools (Handsworth, Carson) (inرام)

Sent from my iPad
Hi Carly

Please see the attached comment sheet regarding the above-noted proposed development.

Kind regards

Sent from Mail for Windows 10
we are very concerned about increased number of vehicles, especially in regards to the safety of our young children and other road users. We understand that the District wishes to widen Canfield Crescent so it has two 3 metre lanes as well as a parking lane. We already see significant numbers of speeding vehicles that use the very short Canfield Crescent as a cut-through from Woodbine to Highlands in order to avoid the 4 way stop. Canfield is such a short Crescent that there is very little time to react when vehicles come barreling around the corner using Canfield as a shortcut.

Widening Canfield Crescent to 2 lanes will exacerbate this safety problem considerably as many more cars will use our residential street as a way to avoid the traffic calming of the 4 way stop at Woodbine and Highlands.

We request that, if the District widens Canfield Crescent as we believe they intend to do, that they also designate Canfield Crescent as a one-way street with traffic direction southbound from Highlands to Woodbine which would limit its use as a shortcut. Connaught Crescent (currently seeing significant construction) is also a one-way street and there are many examples of other one-way streets in North Vancouver.
Hi Carly,

As a resident of 3155-3175 Canfield Crescent, I would like to provide my feedback for the development proposal for 8 townhomes at 3155-3175 Canfield Crescent.

While I support the proposal, it is my understanding that DNV Engineering is requiring the developer to include street lights on Canfield Crescent as part of the improved streetscape plans. Modern LED street lights are very bright and in my view are inappropriate for what is a short, narrow "Local Road" (as designated in the street classification) such as Canfield Crescent. My concern is that any street lights installed mid-block on Canfield Crescent will present an intrusive glare through the bedroom windows at 3155-3175 Canfield Crescent. Please keep the street lights on Highland Blvd. and Woodbine Drive. They are not needed on Canfield Crescent.

Your Truly,
Carly Rosenblat

From: October 06, 2018 6:10 PM
To: Carly Rosenblat
Subject: I4PG Proposal 3155-3175 Canfield Crescent feedback

October 2018

Attn: Carly Rosenblat

Feedback Public Information Meeting 8 townhomes 3155-3175 Canfield

1. At the time of construction, should this development proceed, please designate Canfield Crescent one way, north to south in order to mitigate potential safety issues regarding:
   • Entrance and exit safety for the new development and the present homes on Canfield
   • Traffic safety and speeding on Canfield
   • Pedestrian safety on Canfield
   • Traffic and bicycle safety at right hand turn onto Canfield across the new proposed bike lane on Woodbine
   • Traffic calming
   • Of note Canfield is the only short crescent in Edgemont that is not one way

2. Reduce impact to front yard landscaping of present owners homes on the Canfield as much as possible; the large tree at the presently provides a barrier to our privacy, view, noise etc.

3. Please limit street lighting to Highland Blvd. and Woodbine Drive. Additional street lighting is not needed on Canfield Crescent and additional LED's will impose on current residences, neighbouring residences on Beverly, Highland Blvd, and Woodbine and the new homes built by I4PG.

Contact information may be made available to developer

Sincerely

[Redacted]
Carly Rosenblat

From: Carly Rosenblat
Sent: October 11, 2018 4:41 PM
To: Carly Rosenblat
Subject: Canfield proposal
Attachments: SKMBT_C65018101107110.pdf

Please see my comments about Parking on Woodbine and the Canfield project, attached.

Happy to discuss further and would appreciate hearing about any information going on about traffic flow in the village area, i.e. meetings etc that are upcoming.
COMMENTS SHEET
The District of North Vancouver


Development application for 8 townhouse units in four buildings

To help us determine neighbourhood opinions, please provide us with any input you have on this project (feel free to attach additional sheets):

Great use of property - design is great.

Canfield should be a way only.

Arrange parking on Woodlake should be kept short (road with bike) - Don’t change to parallel parking or bike lane, as a right parking is more efficient for quick visits that are needed in the village.

Please return, by mail or email by October 15th, 2018 to:
District Planner: Carly Rosenblat
Tel: 604-990-3717
District of North Vancouver - Community Planning Department
355 West Queens Rd, North Vancouver, BC V7N 4N5
Email: rosenblatc@dnv.org
Carly Rosenblat

From: [Redacted]
Sent: October 16, 2018 1:36 PM
To: Carly Rosenblat
Subject: Canfield Crescent 3155 & 3175 Development Application

Attention: Carly Rosenblat

Dear Carly,

In response to the application for a development of 8 townhomes on Canfield Crescent made by Canfield Crescent Limited Partnership, I wish to provide the following input:

While the townhome design appears relatively attractive and the architect has used the space very effectively, I have several concerns about this development.

1. Provision for resident parking totals only 16 underground spaces. At street level there will be space for 6 vehicles; however, these will not be dedicated “Canfield Crescent residents’ parking only” but will be available to anyone wishing to park in the vicinity of the village. Given that the townhouses are 3 bedroom units, realistically the residents will most likely have at minimum 2 vehicles per household. Yet there could be a family with additional members who own a vehicle - think grown children who are residing at home or at least are of driving age and therefore may also own a vehicle. It would also be fair to assume that the townhouse residents as well as other residents on the other side of Canfield Crescent will have guests, visitors staying, who need to park vehicles. Where are all these people to park? As it is right now, parking in the village is a nightmare and even with Grosvenor soon to be having approximately 370 spaces for customers and residents, street parking will be at a premium. Therefore, it would be better to designate the street spaces on Canfield Crescent as Residents ONLY. I also suspect that residents of the townhouses facing Highland or Woodbine will have deliveries or will be inclined to stop “Briefly, just for a few minutes” and temporarily block the road, although that would pose a problem on Highland where there will be a bus-stop. Again, another reason to make the spaces at street level on Canfield as Residents Only.

2. All of the trees currently on this property will be felled. Yes, certainly the developer will be required to plant new non-indigenous species of trees, but we are losing an alarming number of indigenous cedars and firs that are a central aspect of the North Shore landscape and character. (The disgrace on Crescentview and Connaught on the [Redacted] property is a prime example of complete disregard for our trees!) We cannot afford to remove so much of our green canopy. These trees as well are home to native wildlife and birds and a crucial part of the ecology of our community. In this development proposal, in addition to removing ALL the trees on the site, additional trees on the single home properties on the other side of Canfield Crescent are slated to be removed in order to widen the street. I strongly object to this occurring. Surely these trees can be preserved and the street reconstruction can be adjusted to accommodate the.

3. Above all, I have a concern with the scope and timeline of this development. While construction at the Grosvenor site and Boffo I site is nearing completion, it cannot be overstated that the merchants of Edgemont Village are being gravely affected by the duration and scale of redevelopment already underway within the Edgemont Village community: they are suffering loss of business and re-development fatigue. Similarly, as a resident living in close proximity to the village and simultaneously enduring perennial residential home development in my own neighbourhood, I, like many of my neighbours, am totally fed up with the noise, disruption and major inconvenience of all this construction. Soon work on Boffo II and the

Petersson Planning Consulting
property on Connaught, both substantial developments, is supposedly going to begin and then there are the other applications including most particularly the Omicron commercial/residential development on Woodbine. It would be insane to have Omicron’s development under construction and this one on Canfield anywhere near being within the same time frame! This one should be delayed until the others have been entirely completed and a demolition permit must not be issued until immediately before construction/development is to begin (we do not need another utterly unsightly clearcut lot remaining fallow for half a year!!)

I am supportive of a variety of housing options and these townhouses appear to be offering a good alternative to single family dwellings, and appealing to those wishing to downsize. I have no illusions, however, that these will be an affordable housing alternative. Certainly it is a far better choice than yet another condo development. As remarked, at least with this development there is public input that would not be offered if the existing homes were re-developed by a private residential developer.

I respectfully submit by comments and concerns and agree to having my contact information available to the applicant.

Yours sincerely,
Carly Rosenblat

From: [Redacted]
Sent: October 16, 2018 11:39 PM
To: Carly Rosenblat
Subject: Comment on Canfield Cres Development Application

To Carly Rosenblat,
District Planner
District of North Vancouver.

I attended the Open House for this development and liked the proposal.

I just wanted to make 3 comments:
1) Street tree plantings around this development. I remember the ornamental cherry trees in the village, which dropped fruit which then stained the sidewalks. These trees had to be replaced. Please avoid a similar choice. The maple trees in the village core are beautiful for many months of the year and perhaps could be replicated here.
2) Please do not take away the angled parking on Woodbine.
3) Please avoid too much or any brick facing on this building. This was mentioned at the meeting, but is not a common building material in this area.

Thank you.
Appendix D: Project Presentation

WELCOME TO
3155-3175 CANFIELD CRESCENT
OUR PROJECT TEAM

ETRO CONSTRUCTION LIMITED

I4 PROPERTY GROUP

CREUS Engineering

GRIMWOOD

pmg LANDSCAPE ARCHITECTS

BROOK POONI

CTS CREATIVE TRANSPORTATION SOLUTIONS LTD.
OUR HISTORY

• Myron Calof founded I4PG in 2002 and brings 38 years experience in Real Estate Development, Land Acquisitions, and Financing

• Joelle Calof joined in 2010 and brings 23 years experience in Sales, Design, and Project Management

• I4PG has completed Over 1 million SF of Residential, Commercial, Mixed-Use projects across B.C and Alberta
OUR CORE VALUES

INSPIRED
INFORMED
INNOVATIVE
INVESTED
OUR LOCAL PROJECTS

700 Marine Drive
North Vancouver

Galleries
Squamish

Studio SQ
Squamish

Premiere
New Westminster

Siena
Burnaby
EDGEMONT VILLAGE POLICY CONTEXT

LEGEND
- DEVELOPMENT SITE (DESIGNATED FOR MULTIPLEX - OR FSR)
- SCHOOL LIVING RESIDENCE
- INSTITUTIONAL
- COMMERCIAL / RESIDENTIAL MIXED USE LEVEL 1
- DESIGNATED FOR duplex 20 FSR
+ 200 sf
- FUTURE DEVELOPMENTS

LAND USE DESIGNATION
Property located in ‘Residential Periphery’, designated for Multiplex development, transitioning between the Village core and surrounding residences.

MULTIPLEX DEFINITION
The Edgemont Village Centre: Plan and Design Guidelines defines Multiplexes as triplexes, fourplexes, and small rowhouses, up to 2.5 storeys with density from 0.6 FSR to 0.8 FSR.
OUR APPROACH

- Study the Edgemont Village Centre: Plan and Design Guidelines (2014 Village Refresh)

- Engage an Experienced Townhome Architect

- Consult with DNV Planning & Engineering Department

- Hire Expert Consultants: CREUS, HWM, CTS, ETRO, PMG, ICS

- Seek Guidance from the EUCCA Executive (2014 Village Refresh Co-Authors)

- Work with our Canfield Crescent Neighbors
OUR PROJECT VISION

To build homes we want to live in that appeal to people of all ages and stages of life.

To show the neighborhood how density can be sensitively achieved through design and detail.

To help Edgemont Village welcome a new generation of homeowners and residents.
SITE PLANNING

SITE + PLANNING CONTEXT  URBAN EDGE/INTERNAL MEWS  TRANSITION/CONNECTIONS
ADDRESS STREET FRONTAGE  LANDSCAPE + OPEN SPACE  DETAIL + MATERIALITY
SITE MASSING PLAN

Scale the density transition from 2 to 4 buildings

Address each street frontage around the Site

Recreate a landscaped corner public realm

Maintain an open and welcoming presence to the Secondary Gateway

Anchor the Residential Periphery with similar complimentary materials
HIGHLAND/WOODBINE RENDERING
CANFIELD CRESCENT PERSPECTIVE
COURTYARD PERSPECTIVE
LOCAL TRAFFIC IMPROVEMENTS

LEGEND
1. Parking Access
2. Site Access
3. Traffic Calming Bumpouts
4. New Covered Bus Shelter with Bench
5. Accessible Pedestrian Path
6. Concealed Garbage + Recycling Area
7. New Public Seating
8. New Bike Lanes
9. Canfield Crescent Road Expansion
10. Additional Street Parking Stalls
11. New Sidewalk + Boulevard
12. New Sidewalk
--- Property Line
CONSTRUCTION MANAGEMENT

- An off-site location will be determined for trades parking
- Work hours and noise to comply with DNV Bylaw
- Advance notifications of truck routes to be posted on site
- Canfield Crescent residents to have access via Highland Boulevard at all times

ESTIMATED TIMELINE - 16 MONTHS

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEMO</td>
<td>2 WEEKS</td>
</tr>
<tr>
<td>EXCAVATION</td>
<td>1 MONTH</td>
</tr>
<tr>
<td>PARKADE</td>
<td>2 MONTHS</td>
</tr>
<tr>
<td>STRUCTURE</td>
<td>4 MONTHS</td>
</tr>
<tr>
<td>EXTERIORS</td>
<td>4 MONTHS</td>
</tr>
<tr>
<td>INTERIORS</td>
<td>5 MONTHS</td>
</tr>
</tbody>
</table>
COMMUNITY BENEFITS

- 8 townhomes with 3 bedrooms and 2 bathrooms, below-grade storage, roof/terrace decks, courtyard patio space
- Step Code Energy Compliance Level 3 for Port 9 Buildings to support District’s Energy and Water Conservation/GHG Emission Reduction Objectives
- Integrated public seating on Woodbine Avenue
- 7 new street parking stalls on Canfield Crescent
- EV Charging Stations in parkade for residents
- Secure bike storage for 2 bikes per unit
- Controlled irrigation strategies for landscaping
- Road improvements on Highland Boulevard, Woodbine Avenue, and Canfield Crescent
- New sidewalk on Woodbine Avenue (primary school rental and Canfield Crescent)
- New shared bike lane on Woodbine Avenue, new designated bike lane on Highland Boulevard
- New bus shelter with bench and accessibility pod
- Community safety measures include pedestrian-level down lighting, secure courtyard access, illuminated entries
OUR LOCAL PERSPECTIVE

EVBA
“WE SHARE YOUR CONCERN ABOUT MAINTAINING THE VILLAGE CORE SHOPPING EXPERIENCE.”

EUCCA
“WE VALUE YOUR COMMITMENT TO UPHOLD THE EDGEMONT VILLAGE CENTRE: PLAN AND DESIGN GUIDELINES.”

COMMUNITY
“WE RESPECT YOUR NEED FOR A SAFE AND LIVEABLE NEIGHBOURHOOD DURING CONSTRUCTION.”
FROM MYRON & JOELLE

"Real Estate Development requires creativity, commitment, and teamwork. We are nothing without our architects, designers, and consultants. Above all, we love what we do and we are proud to be builders."

4 PROPERTY GROUP
THANK YOU FOR COMING
The Corporation of the District of North Vancouver

Bylaw 8492

A bylaw to amend District of North Vancouver
Official Community Plan Bylaw 7900, 2011

The Council for The Corporation of the District of North Vancouver enacts as follows:

Citation

1. This bylaw may be cited as “District of North Vancouver Official Community Plan Bylaw 7900, 2011, Amendment Bylaw 8492, 2021 (Amendment 44)”.

Amendments

2. District of North Vancouver Official Community Plan Bylaw 7900, 2011 is amended as follows:
   
   a) Map 2 Land Use: as illustrated on Schedule A, by changing the land use designation of the properties on Map 2 from “Residential Level 2: Detached Residential” (RES2) to “Residential Level 3: Attached Residential” (RES3);

   b) Map 3.1 Form and Character Development Permit Area: as illustrated on Schedule B, by adding the properties to Map 3.1, designating them as a Development Permit Area for Form and Character of Commercial, Industrial and Multifamily Development; and


READ a first time June 21st, 2021 by a majority of all Council members

PUBLIC HEARING held

READ a second time by a majority of all Council members

READ a third time by a majority of all Council members

ADOPTED by a majority of all Council members
Mayor  

Certified a true copy  

Municipal Clerk
Schedule A to Bylaw 8492

District of North Vancouver Official Community Plan Amendment (Bylaw 8492)

Map 2  Land Use: as illustrated on Schedule A, by changing the land use designation of the hatched land on Map 2 from "Residential Level 2: Detached Residential" (RES2) to "Residential Level 3: Attached Residential" (RES3)
Schedule B to Bylaw 8492

District of North Vancouver Official Community Plan Amendment (Bylaw 8492)

Map 3.1 Form and Character Development Permit Area: as illustrated on Schedule B, by adding the properties to Map 3.1, designating them as a Development Permit Area for Form and Character of Commercial, Industrial and Multifamily Development; and,

The Council for The Corporation of the District of North Vancouver enacts as follows:

Citation

1. This bylaw may be cited as “District of North Vancouver Rezoning Bylaw 1408 (Bylaw 8493)”.

Amendments

2.1 District of North Vancouver Zoning Bylaw 3210, 1965 is amended as follows:

(a) Part 2A, Definitions is amended by adding CD134 to the list of zones that Part 2A applies to.

(b) Section 301 (2) by inserting the following zoning designation:

“Comprehensive Development Zone 134 CD134”

(c) Part 4B Comprehensive Development Zone Regulations by inserting the following, inclusive of Schedule B:

“4B134 Comprehensive Development Zone 134 CD134

The CD134 zone is applied to:

i) Lot 1 Block 44 District Lots 598 To 601 Plan 7812 (PID: 007-805-616); and
ii) Lot 2 Block 44 District Lots 598 To 601 Plan 7812 (PID: 010-531-602).

4B 134 – 1 Intent

The purpose of the CD134 Zone is to permit a ground-oriented multi-family residential development.

4B 134 – 2 Permitted Uses

The following principal uses shall be permitted in the CD134 Zone:
a) Uses Permitted Without Conditions:

Not applicable

b) Conditional Uses:

Residential Use

4B 134 – 3 Conditions of Use

a) **Residential**: Residential uses are only permitted when the following conditions are met:

i) Each dwelling unit has access to private or semi-private outdoor space; and

ii) Balcony, patio and deck enclosures, and rooftop trellises are not permitted.

4B 134 – 4 Accessory Use

a) **Accessory uses** customarily ancillary to the principal uses are permitted.

b) **Home occupations** are permitted in residential units.

4B 134 – 5 Density

a) The maximum permitted density in the CD134 Zone is limited to a floor space ratio (FSR) of 0.45 and 2 residential units.

b) For the purpose of calculating **gross floor area**, the following are exempted:

i) Any floor area below finished grade;

ii) Rooftop storage to a total maximum of 20 m² (215.3 sq. ft.);

iii) Private rooftop terraces; and

iv) Areas of underground parkade, including access ramp.

c) For the purposes of calculating FSR, the lot area is deemed to be 1,330.9 m² (14,326 sq. ft.) being the site size at the time of rezoning.

4B 134 – 6 Amenities

a) Despite Subsection 4B134 – 5, permitted density in the CD134 Zone may be increased to a maximum of 1,064.7 m² (11,460.8 sq. ft.) **gross floor area** and a maximum of 8 residential units, if the owner:
i) Contributes $176,338 to the municipality to be used for any or all of the following amenities (with allocation and timing of expenditure to be determined by the municipality in its sole discretion):

a. The Affordable Housing Fund;

b. Park, trail, environmental, plaza, or other public realm improvements;

c. Municipal or recreational service facility, or facility improvements; and/or

d. Public art and other beautification projects.

ii) Enters into a Housing Agreement prohibiting any strata bylaw or regulation establishing rental restriction on the units.

**4B 134 – 7 Setbacks**

a) Buildings shall be set back from property lines to the closest building face, excluding any underground or partially-exposed parking structure, and window wells, balcony columns, roof eaves, alcove projections, or projecting balconies, all to a maximum depth of 2.0 m (6.5 ft.), as established by the development permit and in accordance with the following regulations:

<table>
<thead>
<tr>
<th>Setback</th>
<th>Buildings (Minimum Setback)</th>
</tr>
</thead>
<tbody>
<tr>
<td>East (Canfield Crescent)</td>
<td>2.74 m (9 ft.)</td>
</tr>
<tr>
<td>South (Woodbine Drive)</td>
<td>3.1 m (10.2 ft.)</td>
</tr>
<tr>
<td>West (Highland Boulevard)</td>
<td>3.1 m (10.2 ft.)</td>
</tr>
</tbody>
</table>

b) Decks and patios are excluded from the setback requirements.

**4B 134 – 8 Height**

The maximum permitted height is:

a) Townhouse building: 10.0 m (32.8 ft.)

**4B 134 – 9 Coverage**

a) Building Coverage: The maximum building coverage is 45%; and

b) Site Coverage: The maximum site coverage is 50%

**4B 134 – 10 Landscaping and Storm Water Management**

a) All land areas not occupied by buildings and patios shall be landscaped in accordance with a landscape plan approved by the District of North Vancouver.

b) All utility boxes, vents or pumps, or any solid waste facility (with the exception of temporary at-grade staging areas) or loading areas that are not located
underground and / or within a building, shall be screened with landscaping or fencing, or a combination thereof, in accordance with a landscape plan approved by the District of North Vancouver.

4B 134 – 11 Parking, Loading and Servicing Regulations

a) Parking is required as follows:

<table>
<thead>
<tr>
<th>Use</th>
<th>Parking Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident</td>
<td>Minimum of 2 spaces per unit</td>
</tr>
<tr>
<td>Visitor</td>
<td>Minimum of 0 spaces per unit</td>
</tr>
<tr>
<td>Universal</td>
<td>Minimum of 1 space</td>
</tr>
</tbody>
</table>

b) The height of parking spaces shall be in accordance with the dimensions indicated in Section 1005.1 of this Bylaw and maintained over the entire area of the space, except for underground parking spaces adjacent to Woodbine Drive which are permitted to have a reduced minimum clear height of 1.22 m (4 ft.) for a maximum depth of 1.22 m (4 ft.) of the parking space.

c) The minimum width of the drive aisle at the entrance to the underground parkade shall be 6 m (19.7 ft.) for a minimum depth of 8 m (26.3 ft.), and thereafter the minimum drive aisle width shall be 3.65 m (12 ft.) until egress into the underground parkade.

d) Small car parking spaces are permitted under the following conditions:

i) The ratio of small car parking spaces in the CD134 Zone shall not exceed 50% of the total vehicle parking requirement.

e) Bicycle parking is required as follows:

<table>
<thead>
<tr>
<th>Use</th>
<th>Bicycle Parking Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident</td>
<td>Minimum of 2 spaces per unit</td>
</tr>
<tr>
<td>Visitor</td>
<td>Minimum of 0.5 spaces per unit</td>
</tr>
</tbody>
</table>

f) Except as specifically provided in 4B134 – 11 a), b), c), d) and e), parking shall be provided in accordance with Part 10 of this Bylaw.”

d) The Zoning Map is amended in the case of the lands illustrated on the attached map (Schedule A) by rezoning the land from Single-Family Residential Edgemont Zone (RSE) to Comprehensive Development Zone 134 (CD134).

READ a first time June 21st, 2021

PUBLIC HEARING held
Read a second time

Read a third time

Certified a true copy of “Bylaw 8493” as at Third Reading

________________________________________
Municipal Clerk

Approved by the Ministry of Transportation and Infrastructure on

Adopted

________________________________________
Mayor
________________________________________
Municipal Clerk

Certified a true copy

________________________________________
Municipal Clerk
Schedule A to Bylaw 8493

BYLAW 8493
District of North Vancouver Rezoning Bylaw 8493

Single-Family Residential Edgemont Zone (RSE) to Comprehensive Development Zone 134 (CD134)
The Corporation of the District of North Vancouver

Bylaw 8494

A bylaw to enter into a Housing Agreement

The Council for The Corporation of the District of North Vancouver enacts as follows:

Citation

1. This bylaw may be cited as “Housing Agreement Bylaw 8494, 2021 (3155-3175 Canfield Crescent)".

Authorization to Enter into Agreement

2. The Council hereby authorizes a housing agreement between The Corporation of the District of North Vancouver and Canfield Crescent Development Inc. substantially in the form attached to this Bylaw as Schedule “A" with respect to the following lands:
   
   a) Lot 2 Block 44 District Lots 598 to 601 Plan 7812 (PID 010-531-602); and
   b) Lot 1 Block 44 District Lots 598 to 601 Plan 7812 (PID 007-805-616).

Execution of Documents

3. The Mayor and Municipal Clerk are authorized to execute any documents required to give effect to the Housing Agreement.

READ a first time June 21st, 2021

READ a second time

READ a third time

ADOPTED

Mayor
Municipal Clerk

Certified a true copy

Municipal Clerk
Schedule A to Bylaw 8494

SECTION 219 COVENANT – HOUSING AGREEMENT

THIS AGREEMENT is dated for reference the ____ day of ____________, 20____

BETWEEN:

CANFIELD CRESCENT DEVELOPMENT INC. (Inc. No. BC1104155) a company incorporated under the laws of the Province of British Columbia having an office at 420 – 1112 West Pender Street, Vancouver, BC V6E 2S1

(the “Developer”)

AND:

THE CORPORATION OF THE DISTRICT OF NORTH VANCOUVER, a municipality incorporated under the Local Government Act, RSBC 2015, c.1 and having its office at 355 West Queens Road, North Vancouver, BC V7N 4N5

(the “District”)

WHEREAS:

1. The Developer is the registered owner of the Lands (as hereinafter defined);

2. The Developer wishes to obtain development permissions with respect to the Lands and wishes to create a condominium development which will contain residential strata units on the Lands;

3. Section 483 of the Local Government Act authorises the District, by bylaw, to enter into a housing agreement to provide for the prevention of rental restrictions on housing, and provides for the contents of the agreement; and

4. Section 219 of the Land Title Act (British Columbia) permits the registration in favour of the District of a covenant of a negative or positive nature relating to the use of land or a building thereon, or providing that land is to be built on in accordance with the covenant, or providing that land is not to be built on except in accordance with the covenant, or providing that land is not to be subdivided except in accordance with the covenant;

NOW THEREFORE in consideration of the mutual promises contained in it, and in consideration of the payment of $1.00 by the District to the Developer (the receipt and sufficiency of which are hereby acknowledged by the Developer), the parties covenant and agree with each other as follows, as a housing agreement under Section 483 of the Local Government Act, as a contract and a deed under seal between the parties, and as a covenant under Section 219 of the Land Title Act, and the Developer hereby further covenants and agrees that neither the Lands nor any building constructed thereon shall be used or built on except in accordance with this Agreement:
1. DEFINITIONS

1.01 Definitions

In this agreement:

(a) “Development Permit” means development permit No. _____ issued by the District;

(b) “Lands” means land described in Item 2 of the Land Title Act Form C to which this agreement is attached;

(c) “Owner” means the Developer and any other person or persons registered in the Lower Mainland Land Title Office as owner of the Lands from time to time, or of any parcel into which the Lands are consolidated or subdivided, whether in that person’s own right or in a representative capacity or otherwise;

(d) “Proposed Development” means the proposed development containing not more than 15 units to be constructed on the Lands in accordance with the Development Permit;

(e) “Short Term Rentals” means any rental of a Unit for any period less than 30 days;

(f) “Strata Corporation” means the strata corporation formed upon the deposit of a plan to strata subdivide the Proposed Development pursuant to the Strata Property Act;

(g) “Unit” means a residential dwelling strata unit in the Proposed Development; and

(h) “Unit Owner” means the registered owner of a Dwelling Unit in the Proposed Development.

2. TERM

This Agreement will commence upon adoption by District Council of Bylaw 8297 and remain in effect until terminated by the District as set out in this Agreement.

3. RENTAL ACCOMODATION

3.01 Rental Disclosure Statement

No Unit in the Proposed Development may be occupied unless the Owner has:

(a) before the first Unit is offered for sale, or conveyed to a purchaser without being offered for sale, filed with the Superintendent of Real Estate a rental disclosure statement in the prescribed form (the “Rental Disclosure Statement”) designating all of the Units as rental strata lots and imposing at least a 99 year rental period in relation to all of the Units pursuant to the Strata Property Act (or any successor or replacement legislation), except in relation to Short Term Rentals and, for greater certainty, stipulating specifically that the 99 year rental restriction does not apply to a Strata Corporation bylaw prohibiting or restricting Short Term Rentals; and
(b) given a copy of the Rental Disclosure Statement to each prospective purchaser of any Unit before the prospective purchaser enters into an agreement to purchase in respect of the Unit. For the purposes of this paragraph 3.01(b), the Owner is deemed to have given a copy of the Rental Disclosure Statement to each prospective purchaser of any Unit in the building if the Owner has included the Rental Disclosure Statement as an exhibit to the disclosure statement for the Proposed Development prepared by the Owner pursuant to the Real Estate Development Marketing Act.

3.02 Rental Accommodation

The Units constructed on the Lands from time to time may always be used to provide rental accommodation as the Owner or a Unit Owner may choose from time to time, except that this section 3.02 does not apply to Short Term Rentals which may be restricted by the Strata Corporation to the full extent permitted by law.

3.03 Binding on Strata Corporation

This agreement shall be binding upon all Strata Corporations created by the subdivision of the Lands or any part thereof (including the Units) pursuant to the Strata Property Act, and upon all Unit Owners.

3.04 Strata Bylaw Invalid

Any Strata Corporation bylaw which prevents, restricts or abridges the right to use any of the Units as rental accommodations (other than Short Term Rentals) shall have no force or effect.

3.05 No Bylaw

The Strata Corporation shall not pass any bylaws preventing, restricting or abridging the use of the Lands, the Proposed Development or the Units contained therein from time to time as rental accommodation (other than Short Term Rentals).

3.06 Vote

No Unit Owner, nor any tenant or mortgagee thereof, shall vote for any Strata Corporation bylaw purporting to prevent, restrict or abridge the use of the Lands, the Proposed Development or the Units contained therein from time to time as rental accommodation (other than Short Term Rentals).

3.07 Notice

The Owner will provide notice of this Agreement to any person or persons intending to purchase a Unit prior to any such person entering into an agreement of purchase and sale, agreement for sale, or option or similar right to purchase as part of the disclosure statement for any part of the Proposed Development prepared by the Owner pursuant to the Real Estate Development Marketing Act.
3.08 Release of Covenant

The District agrees that if the District of North Vancouver Rezoning Bylaw 1371 (Bylaw 8296), is not adopted by the District’s Council before March 4, 2022 the Owner is entitled to require the District to execute and deliver to the Owner a discharge, in registrable form, of this Agreement from title to the Land. The Owner is responsible for the preparation of the discharge under this section and for the cost of registration at the Land Title Office.

4. DEFAULT AND REMEDIES

4.01 Notice of Default

The District may, acting reasonably, give to the Owner written notice to cure a default under this Agreement within 30 days of delivery of the notice. The notice must specify the nature of the default. The Owner must act with diligence to correct the default within the time specified.

4.02 Costs

The Owner will pay to the District upon demand all the District’s costs of exercising its rights or remedies under this Agreement, on a full indemnity basis.

4.03 Damages an Inadequate Remedy

The Owner acknowledges and agrees that in the case of a breach of this Agreement which is not fully remediable by the mere payment of money and promptly so remedied, the harm sustained by the District and to the public interest will be irreparable and not susceptible of adequate monetary compensation.

4.04 Equitable Remedies

Each party to this Agreement, in addition to its rights under this Agreement or at law, will be entitled to all equitable remedies including specific performance, injunction and declaratory relief, or any of them, to enforce its rights under this Agreement.

4.05 No Penalty or Forfeiture

The Owner acknowledges and agrees that it is entering into this Agreement to benefit the public interest in providing rental accommodation, and that the District’s rights and remedies under this Agreement are necessary to ensure that this purpose is carried out, and the District’s rights and remedies under this Agreement are fair and reasonable and ought not to be construed as a penalty or forfeiture.

4.06 Cumulative Remedies

No reference to nor exercise of any specific right or remedy under this Agreement or at law or at equity by any party will prejudice, limit or preclude that party from exercising any other right or remedy. No right or remedy will be exclusive or dependent upon any other right to remedy, but any party, from time to time, may exercise any one or more of such rights or remedies independently, successively, or in combination. The Owner acknowledges that specific
performance, injunctive relief (mandatory or otherwise) or other equitable relief may be the only adequate remedy for a default by the Owner under this Agreement.

5. **LIABILITY**

5.01 **Indemnity**

Except if arising directly from the negligence of the District or its employees, agents or contractors, the Owner will indemnify and save harmless each of the District and its board members, officers, directors, employees, agents, and elected or appointed officials, and their heirs, executors, administrators, personal representatives, successors and assigns, from and against all claims, demands, actions, loss, damage, costs and liabilities that all or any of them will or may be liable for or suffer or incur or be put to any act or omission by the Owner or its officers, directors, employees, agents, contractors, or other persons for whom the Owner is at law responsible, or by reason of or arising out of the Owner’s ownership, operation, management or financing of the Proposed Development or any part thereof.

5.02 **Release**

The Owner hereby releases and forever discharges the District, its elected officials, board members, officers, directors, employees and agents, and its and their heirs, executors, administrators, personal representatives, successors and assigns from and against all claims, demands, damages, actions or causes of action by reason of or arising out of advice or direction respecting the ownership, operation or management of the Proposed Development or any part thereof which has been or hereafter may be given to the Owner by all or any of them.

5.03 **Survival**

The covenants of the Owner set out in Sections 5.01 and 5.02 will survive termination of this Agreement and continue to apply to any breach of the Agreement or claim arising under this Agreement during the ownership by the Owner of the Lands or any Unit therein, as applicable.

6. **GENERAL PROVISIONS**

6.01 **District’s Power Unaffected**

Nothing in this Agreement:

(a) affects or limits any discretion, rights, powers, duties or obligations of the District under any enactment or at common law, including in relation to the use or subdivision of land;

(b) affects or limits any enactment relating to the use of the Lands or any condition contained in any approval including any development permit concerning the development of the Lands; or

(c) relieves the Owner from complying with any enactment, including the District’s bylaws in relation to the use of the Lands.
6.02 Agreement for Benefit of District Only

The Owner and District agree that:

(a) this Agreement is entered into only for the benefit of the District:

(b) this Agreement is not intended to protect the interests of the Owner, any Unit Owner, any occupant of any Unit or any future owner, occupier or user of any part of the Proposed Development, including any Unit, or the interests of any third party, and the District has no obligation to anyone to enforce the terms of this Agreement; and

(c) The District may at any time terminate this Agreement, in whole or in part, and execute a release and discharge of this Agreement in respect of the Proposed Development or any Unit therein, without liability to anyone for doing so.

6.03 Agreement Runs With the Lands

This Agreement burdens and runs with the Lands and any part into which any of them may be subdivided or consolidated, by strata plan or otherwise. All of the covenants and agreements contained in this Agreement are made by the Owner for itself, its successors and assigns, and all persons who acquire an interest in the Lands or in any Unit after the date of this Agreement.

6.04 Release

The covenants and agreements on the part of the Owner and any Unit Owner and herein set forth in this Agreement have been made by the Owner and any Unit Owner as contractual obligations as well as being made pursuant to Section 483 of the Local Government Act (British Columbia) and as such will be binding on the Owner and any Unit Owner, except that neither the Owner nor any Unit Owner shall be liable for any default in the performance or observance of this Agreement occurring after such party ceases to own the Lands or a Unit as the case may be.

6.05 Priority of This Agreement

The Owner will, at its expense, do or cause to be done all acts reasonably necessary to ensure this Agreement is registered against the title to each Unit in the Proposed Development, including any amendments to this Agreement as may be required by the Land Title Office or the District to effect such registration.

6.06 Agreement to Have Effect as Deed

The District and the Owner each intend by execution and delivery of this Agreement to create both a contract and a deed under seal.

6.07 Waiver

An alleged waiver by a party of any breach by another party of its obligations under this Agreement will be effective only if it is an express waiver of the breach in writing. No waiver of a breach of this Agreement is deemed or construed to be a consent or waiver of any other breach of this Agreement.
6.08 **Time**

Time is of the essence in this Agreement. If any party waives this requirement, that party may reinstate it by delivering notice to another party.

6.09 **Validity of Provisions**

If a Court of competent jurisdiction finds that any part of this Agreement is invalid, illegal, or unenforceable, that part is to be considered to have been severed from the rest of this Agreement and the rest of this Agreement remains in force unaffected by that holding or by the severance of that part.

6.10 **Extent of Obligations and Costs**

Every obligation of a party which is set out in this Agreement will extend throughout the Term and, to the extent that any obligation ought to have been observed or performed prior to or upon the expiry or earlier termination of the Term, such obligation will survive the expiry or earlier termination of the Term until it has been observed or performed.

6.11 **Notices**

All notices, demands, or requests of any kind, which a party may be required or permitted to serve on another in connection with this Agreement, must be in writing and may be served on the other parties by registered mail or by personal service, to the following address for each party:

If to the District:

District Municipal Hall  
355 West Queens Road  
North Vancouver, BC V7N 4N5  

Attention: Planning Department

If to the Owner:

If to the Unit Owner:

The address of the registered owner which appears on title to the Unit at the time of notice.

Service of any such notice, demand, or request will be deemed complete, if made by registered mail, 72 hours after the date and hour of mailing, except where there is a postal service disruption during such period, in which case service will be deemed to be complete only upon actual delivery of the notice, demand or request and if made by personal service, upon personal service being effected. Any party, from time to time, by notice in writing served upon the other parties, may
designate a different address or different or additional persons to which all notices, demands, or requests are to be addressed.

6.12 Further Assurances

Upon request by the District, the Owner will promptly do such acts and execute such documents as may be reasonably necessary, in the opinion of the District, to give effect to this Agreement.

6.13 Enuring Effect

This Agreement will enure to the benefit of and be binding upon each of the parties and their successors and permitted assigns.

7. INTERpretation

7.01 References

Gender specific terms include both genders and include corporations. Words in the singular include the plural, and words in the plural include the singular.

7.02 Construction

The division of this Agreement into sections and the use of headings are for convenience of reference only and are not intended to govern, limit or aid in the construction of any provision. In all cases, the language in this Agreement is to be construed simply according to its fair meaning, and not strictly for or against either party.

7.03 No Limitation

The word “including” when following any general statement or term is not to be construed to limit the general statement or term to the specific items which immediately follow the general statement or term similar items whether or not words such as “without limitation” or “but not limited to” are used, but rather the general statement or term is to be construed to refer to all other items that could reasonably fall within the broadest possible scope of the general statement or term.

7.04 Terms Mandatory

The words “must” and “will” and “shall” are to be construed as imperative.

7.05 Statutes

Any reference in this Agreement to any statute or bylaw includes any subsequent amendment, re-enactment, or replacement of that statute or bylaw.

7.06 Entire Agreement

(d) This is the entire agreement between the District and the Owner concerning its subject, and there are no warranties, representations, conditions or collateral agreements relating to this Agreement, except as included in this Agreement.
(e) This Agreement may be amended only by a document executed by the parties to this Agreement and by bylaw, such amendment to be effective only upon adoption by District Council of a bylaw to amend Bylaw 8297

7.07 Governing Law

This Agreement is to be governed by and construed and enforced in accordance with the laws of British Columbia.

As evidence of their agreement to be bound by the terms of this instrument, the parties hereto have executed the Land Title Act Form C that is attached hereto and forms part of this Agreement.
GRANT OF PRIORITY

WHEREAS ________________ (the “Chargeholder”) is the holder of the following charge which is registered in the Land Title Office:

   (a) ______________________(the “Charge”);

AND WHEREAS the Chargeholder agrees to allow the Section 219 Covenant herein to have priority over the Charge;

THIS PRIORITY AGREEMENT is evidence that in consideration of the sum of $1.00 paid by THE CORPORATION OF THE DISTRICT OF NORTH VANCOUVER (the “District”) to the Chargeholder, the receipt and sufficiency of which are hereby acknowledged, the Chargeholder covenants and agrees to subordinate and postpone all its rights, title and interest in and to the lands described in the Form C to which this Agreement is attached (the “Lands”) with the intent and with the effect that the interests of the District rank ahead of the Charge as though the Section 219 Covenant herein had been executed, delivered and registered against title to the Lands before registration of the Charge.

As evidence of its Agreement to be bound by the above terms, as a contract and as a deed executed and delivered under seal, the Chargeholder has executed the Form C to which this Agreement is attached and which forms part of this Agreement.
Key Issues to Address in Planning for the Future

Initial plan development began with an inventory of existing conditions in the District and an analysis of the challenges facing us. Over the course of the public engagement process, certain issues and trends emerged. Policy statements contained in this Plan are designed to address those issues and their implications by proactively managing change in a way that enables us to preserve and enhance what is loved most about the District. Some of the key issues that this plan seeks to address are outlined below.

**CHALLENGING DEMOGRAPHIC PROFILE**

Over the past 30 years the number of seniors (65+) residing in the District has increased fourfold. One in four residents are now over 55. At the same time, a “missing generation” or low number of young adults aged 20-40 means there are fewer residents to drive the economy and start families. The number of jobs in the District has been declining and school closures are ongoing.

**LACK OF HOUSING DIVERSITY AND AFFORDABILITY**

As much as 70% of housing in the District is in the form of detached homes. As the population ages and household sizes decrease, more than 10% of our detached homes now have only one person living in them. This form of housing is the most expensive and presents a barrier to first-time buyers and to seniors wishing to downsize. With an effective 0% vacancy rate and a dwindling and aging rental housing stock, there are few options for renters.

**LOSS OF ECONOMIC VIBRANCY**

The District lost about 1,000 jobs between 1996 and 2006 at a time when the Metro Vancouver region gained around 150,000 jobs. Fewer local jobs mean fewer options for District residents to work close to home and more transportation-related greenhouse gas emissions. With businesses contributing 30% of the District’s property tax revenue, their success is vital for all of the community.
LARGE ENVIRONMENTAL FOOTPRINT

Our spread out land use pattern of predominantly detached homes is costly and inefficient to serve with transit and often means residents are unable to walk to the shops and services they need. Our high reliance on the automobile (85% of the commute, 79% of all trips) is a significant contributor to our substantial community greenhouse gas emissions (412,000 tonnes annually).

SOCIAL ISSUES

The District’s changing demographic profile places different demands on our services and programs. Walkable neighbourhoods and active transportation are important determinants of mental and physical health. We have a range of social issues to address and vulnerable populations to support. Examples include an increasing gap between the rich and poor, with over 10,000 of our residents (about 12% of the population) living in low income households. Our homeless population has also seen a dramatic increase, tripling from 44 in 2002 to 127 in 2008.

AGING MUNICIPAL INFRASTRUCTURE AND FINANCIAL CHALLENGES

Most of the District’s infrastructure was built in the 1950s, 1960s and 1970s, which means rising maintenance and replacement costs. Regional infrastructure is in a similar state and these costs are passed on to our residents and businesses through rising utility fees. Our low population growth limits the ability of the District to leverage funding through development cost charges and community amenity contributions, creating a reliance on property taxes and utility fees to fund infrastructure, facilities and improvements. If the District continues to lose businesses, this burden will increasingly be borne by the residential sector. Continuing on the current path of minimal growth and a predominately single family land use pattern may be costly.
GOALS

Together with the Vision and Principles, these Goals inform the policies, strategies and targets developed for the District of North Vancouver Official Community Plan.

1. Create a network of vibrant, mixed-use centres while enhancing the character of our neighbourhoods and protecting natural areas

2. Encourage and enable a diverse mix of housing type, tenure and affordability to accommodate the lifestyles and needs of people at all stages of life

3. Foster a safe, socially inclusive and supportive community that enhances the health and well-being of all residents

4. Support a diverse and resilient local economy that provides quality employment opportunities

5. Provide a safe, efficient and accessible network of pedestrian, bike and road ways and enable viable alternatives to the car through effective and coordinated land use and transportation planning

6. Conserve the ecological integrity of our natural environment, while providing for diverse park and outdoor recreational opportunities

7. Develop an energy-efficient community that reduces its greenhouse gas emissions and dependency on non-renewable fuels while adapting to climate change

8. Provide infrastructure to support community health, safety and economic prosperity, and facilities that enhance recreational opportunities, cultural activity and artistic expression
2.2 Village Centres

The Village Centres provide a focus for their surrounding neighbourhoods. They have a range of shops and services to meet most daily needs, but do not generally include major “destination” retail establishments such as department stores. Mixed-use development, such as apartments situated over shops, is a typical building form within the commercial core, with lower density multifamily housing (such as duplexes or townhouses) forming a peripheral area adjacent to the core. **The District’s objective for the Village Centres is to build on their own unique characteristics to create distinct urban village environments.** More detailed planning for the Village Centres where growth is anticipated - Maplewood and Capilano - Marine - is provided for in this OCP in Schedule A. Significant changes to other Village Centres are not proposed in this plan and pre-existing Local Area Plan land uses have been integrated. The OCP provides for the opportunity for more detailed Village Centre Implementation Plans to be prepared or reviewed where appropriate in the future (Chapter 12).

**POLICIES**

1. Designate Lower Capilano-Marine, Edgemont, Queensdale, Maplewood, Parkgate and Deep Cove as the District’s Village Centres

2. Prepare detailed Village Centre Implementation Plans for Maplewood and Lower Capilano-Marine as these are areas for revitalization and growth

3. Accommodate a range of multifamily, commercial and institutional uses in the Village Centres

4. Encourage the inclusion of upper floor residential units in new commercial development in core or high street areas

5. Concentrate development in the Village core and transition sensitively outwards with appropriate ground-oriented housing forms (such as duplex and townhouse) to adjacent residential neighbourhoods

6. Establish Development Permit Areas and Design Guidelines regulating the form and character of development to promote design excellence and reflect the unique qualities of each Village Centre

7. Ensure Village Centre Implementation Plans and their peripheral areas are consistent with the objectives and policies of the OCP and prepare or review Plans as necessary

8. Work with Capilano University to integrate residential, institutional or economic development within the university precinct into the District’s urban structure
5.1 Transportation and the Network of Centres

The District’s objective is to strategically integrate transportation and land use planning. The more nodal, concentrated development pattern promoted by this plan will facilitate a move away from the high reliance on the car that our existing dispersed land use pattern imposes. Locating housing, jobs, shops and services in closer proximity makes walking and cycling more viable and transit more efficient. This plan provides land use directions for four centres: Lynn Valley, Lower Lynn, Lower Capilano - Marine and Maplewood. Policies below apply principally to these locations. While significant growth is not directed to other locations on the network of centres, it is recognized that any future development elsewhere on the network should be guided by the policies provided here.

POLICIES

1. Plan for an appropriate density and mix of uses to support the provision of frequent transit service
2. Work with the regional transportation authority to provide appropriate transit infrastructure and facilities
3. Encourage the integration of transit access in the design of new developments
4. Encourage and facilitate access for people of all abilities in the design of centres and transit corridors
5. Encourage new developments to provide high quality pedestrian facilities and improve the public realm
6. Support pedestrian connectivity within and to centres by providing a continuous pedestrian network
7. Provide a range of on-street and off-street cycling infrastructure within centres and routes into centres
8. Consider, where appropriate, reducing vehicle parking requirements for new developments in centres and corridors well served by transit to encourage alternate modes of transportation and increase housing affordability
The network of centres concept provides important opportunities for increasing housing diversity and approximately 75 - 90% of future development will be directed to the four planned centres (Chapter 2). While growth will be restricted in detached residential areas, opportunities will exist to sensitively introduce appropriate housing choices such as coach houses, duplexes and small lot infill that respect and enhance neighbourhood character. Some flexibility is encouraged to enable residents to better age in place, live closer to schools, or have a mortgage helper. The District’s objective is to provide more options to suit different residents’ ages, needs and incomes.

POLICIES

1. Encourage and facilitate a broad range of market, non-market and supportive housing

2. Undertake Neighbourhood Infill plans and/or Housing Action Plans (described in Chapter 12) where appropriate to:
   a) identify potential townhouse, row house, triplex and duplex areas near designated Town and Village Centres, neighbourhood commercial uses and public schools
   b) designate additional Small Lot Infill Areas
   c) develop criteria and identify suitable areas to support detached accessory dwellings (such as coach houses, backyard cottages and laneway housing)

3. Develop design guidelines to assist in ensuring the form and character of new multifamily development contributes to the character of existing neighbourhoods and to ensure a high standard of design in the new Town and Village Centres

4. Encourage and facilitate a wide range of multifamily housing sizes, including units suitable for families with an appropriate number of bedrooms, and smaller apartment units

5. Require accessibility features in new multifamily developments where feasible and appropriate
10.1 Energy-Efficient Buildings

Buildings in the District contribute around 50% of our community’s greenhouse gas emissions. The District’s objective is to improve the energy efficiency of new and existing buildings. As well as supporting other climate change initiatives, efficient buildings are resilient to higher energy prices and reduce the load on infrastructure. The District has developed a green building strategy and development permit guidelines for the conservation of energy and water for new multifamily residential, commercial and industrial buildings (See Schedule B).

POLICIES

1. Promote the development of green/energy-efficient buildings for new multifamily, residential, commercial, industrial and institutional buildings
2. Encourage residential energy conservation and building retrofits and promote access to senior government grants and incentives to achieve this
3. Advocate for energy efficiency ratings to be established in all homes for sale/resale
4. Work with other levels of government, energy providers and the business community to facilitate emissions assessments and to develop energy and greenhouse gas reduction strategies

10.2 Alternative Energy Supply Options

In addition to reducing energy consumption, it is important that we explore renewable energy sources and systems to reduce greenhouse gas emissions and that we reduce our dependency on fossil fuels. The District’s objective is to encourage alternative energy sources and systems that lower greenhouse gas emissions.

POLICIES

1. Undertake feasibility assessments of district energy systems and advance these, where appropriate, through partnerships and the planning and redevelopment process
2. Encourage and facilitate new development to be district energy ready with hydronic systems where appropriate
3. Explore opportunities for a heat recovery system from the proposed sewage treatment plant
4. For large developments undergoing rezoning require developers to conduct energy efficiency and alternative energy assessments
5. Investigate potential renewable energy resources and applications including geoechange, solar and biomass-based technologies, and consider use of incentives for homeowners undertaking green energy improvements
6. Work with North Shore municipalities, Metro Vancouver, First Nations governments and other partners to advance opportunities for integrated, alternative energy systems such as Integrated Resource Recovery and carbon offset opportunities such as aorestation
The built-form of ground-oriented multi-family development should be integrated with existing neighbourhoods.

1. Public Realm, Streetscape Elements and Neighbourhood Fit

Discussion:

The built-form of ground-oriented multi-family development should be integrated with existing neighbourhoods, while enhancing architectural variety. Development should reflect the streetscape character of the neighbourhood in which it is located, or in the case of larger developments, it should create its own successful streetscape character.

Ground-oriented housing should be designed so that it complements the neighbourhood character, with minimum impact on adjacent properties. Development will often occur incrementally as pre-existing lots on record are assembled and consolidated. Accordingly, the design must carefully consider both the existing and future relationships to surrounding properties.
C1.1: Height and Massing: The height and massing of buildings should be in keeping with a single family dwelling or townhouse height, which is typically less than 12 metres. Architectural treatments that reduce apparent building height such as the use of trim, colour accents, secondary roof elements, building recesses and stepped building forms are encouraged (see Figure 81).

C1.2: Roof Treatment: The gable orientation and roof pitch should be sympathetic to the design of neighbouring buildings and help to maximize the space and light between buildings (see Figure 81).

C1.3: Street Orientation: Units are encouraged to be oriented towards, and have a visual connection to the street (see Figure 82).

C1.4: Corner Lots: Buildings on corner lots should “wrap the corner” providing an opportunity to have units facing both streets (see Figures 83).

C1.5: Minimum Frontage: Generally, development parcels should have a minimum frontage of 20 metres.

C1.6: Setbacks: The front yard setback should relate to, or appropriately transition from, the established pattern in the area.
2. Site Planning and Landscaping

Discussion:

Good site planning and landscaping contribute to neighbourhood character and aesthetics, resident livability and environmental sustainability. In principle, site planning should strive to minimize building coverage, preserve natural features and minimize rainwater run-off. Mature trees shade and cool homes in the summer and absorb carbon dioxide and trap dust particles. Trees and other landscaping provide habitat, aid with energy conservation and absorb rain water, reducing stormwater run-off into creeks. Landscape plans should complement the building design and harmonize with the local setting and be prepared by a BC Registered Landscape Architect.

C2.1: Tree Retention: Healthy mature trees and natural features should be retained where possible.

C2.2: Sustainable Landscape Design: Sustainable landscape design should incorporate best practices for tree planting, rainwater management, accessibility and feature native and drought tolerant species. Sustainable landscape design should also be coordinated with building design, site servicing and utility placement.

C2.3: Street Interface: Landscaping and fencing should be kept low and open in the front yard to foster a strong relationship to the street and maintain visibility through to the front of the building (see Figure 84).

C2.4: Privacy: Incorporate planting and fencing to maximize privacy between dwelling units and neighbouring sites (see Figure 85).

C2.5: Shared Outdoor Space: Units should be clustered to create interesting shared outdoor spaces as well as usable and accessible private outdoor spaces. Encourage/integrate informal gathering, play and urban gardening opportunities (see Figure 86).

C2.6: Private Outdoor Space: At least 9 square metres of usable private outdoor space should be provided for all units (see Figure 87).

C2.7: Outward Facing Aspect: Units should be oriented such that windows from the principle living space of each unit are separated by a minimum of 9 metres from those of any other unit (see Figure 88)
C2.8: Rear Yard Setbacks: Rear yard setbacks should be at least 6 metres, with some variation so that a visual wall is not created along the rear property line.

C2.9: Side Yard Setbacks: Side yard setbacks should be a minimum of 1.2 metres, and up to 3 metres when facing a side street or a single family home.

C2.10: Pedestrian Access: The main pedestrian access route should be from the street rather than the lane or parking area.

C2.11: Parking: Parking spaces should be located off a private driveway, and should not be visible from the street (see Figure 89).

C2.12: Parking access: When parking is accessed from the front street the number of driveways should be kept to a minimum (see Figure 89).

C2.13: Shared Driveways: Where adjacent to another potential redevelopment site, the driveway should be designed so that it could in future be shared with the adjacent property (see Figure 89).

C2.14: Oil and Grit Separators: Oil and grit separators are required in all parking areas.
3. Architectural Character

Discussion:

The built form and character of new ground-oriented multi-family development should be consistent with and in harmony with the general rhythm, scale, and height of the existing buildings in the neighbourhood. Ground-oriented housing is usually located in or adjacent to single family neighbourhoods. Building design therefore should generally have a single family character and incorporate west coast references while responding to local conditions such as topography, vegetation and heritage resources.

Consideration should be given to unit identity, rooffscape, and other architectural elements, including fenestration, materials, and colour. Dormers and similar roof projections should read as subordinate or secondary architectural elements.

Ground-oriented housing should be designed in consideration of the needs of all residents regardless of their state of health, mobility or disabilities. Units should incorporate basic features that allow the units to be adapted to accommodate special needs without expensive retrofitting.

C3.1: Massing: The front façade of buildings should be broken up and portions stepped back to reduce the impression of bulk (see Figure 90).

C3.2: Variations in Design: Subtle design variations should be incorporated between neighbouring buildings to avoid a repetitive appearance.

C3.3: Cladding: Buildings should be clad primarily in natural materials although stucco accents may be used as a subordinate finish.

C3.4: Varied Rooflines: Varied roof lines with overhangs are encouraged.

C3.5: Roofing Materials: Laminated asphalt shingles or fire retardant treated cedar shakes are recommended as roofing materials. Tile roofing is discouraged.

Figure 90
C3.6: **Noise Levels:** Designs should demonstrate that the noise levels (A-weighted 24-hour equivalent LEQ sound level (the average sound level over the period of the measurement)) in those portions of the dwelling listed below should not exceed the noise levels expressed in decibels set opposite such portions of the dwelling units. Examples include use of triple glazing, improved insulation etc.

<table>
<thead>
<tr>
<th>PORTION OF DWELLING UNIT</th>
<th>NOISE LEVEL (DECIBELS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>bedrooms</td>
<td>35</td>
</tr>
<tr>
<td>living, dining, recreation rooms</td>
<td>40</td>
</tr>
<tr>
<td>kitchen, bathrooms, hallways</td>
<td>45</td>
</tr>
</tbody>
</table>

C3.7: **Heating and Ventilation Systems:** Ventilation, heating and cooling systems should be designed and insulated to minimize noise and located to be visually unobtrusive to neighbouring developments.

C3.8: **Accessible Entrance:** A level, no step entrance should be provided to each dwelling. If not possible, then platform areas should be provided at the top and bottom of ramps to facilitate the turning of wheelchairs, strollers and other mobility devices (see Figure 91).

C3.9: **Weather Protection:** A canopy should be provided over the front entrance.

C3.10: **Front Door Width:** The front door opening should be no less than 0.9 metre in width.

C3.11: **Accessible Doorbell:** The front doorbell should be no higher than 1 metre above the entry way

C3.12: **Legible Address:** The address should be indicated in easy-to-read, 10 centimetre or taller numbers, shown in a clearly contrasting colour.

Figure 91
PART 6 | Energy and Water Conservation and Greenhouse Gas Emission Reduction Development Permit Area
Context

The purpose of this development permit area is to complement Council’s Green Building Strategy as it applies to new buildings, including private sector and Municipal building projects and, to foster the conservation and efficient use of energy and water to reduce building-generated greenhouse gas emissions.

The construction, operation and maintenance of buildings takes a toll on the natural environment and represent a significant contributor to the creation of greenhouse gas emissions. In 2007, buildings in the District were estimated to contribute approximately 50% of the community’s greenhouse gas emissions.

The District is seeking to reduce community GHG emissions by 8% from the 2007 levels by 2020, 13% by 2030 and 21% by 2050, through initiatives under its own influence, including: land use and transportation planning, development/building guidelines and waste reduction strategies. The District also supports community wide efforts to reduce GHG emissions by 33% by 2030.

Encouraging developers and builders to incorporate a wide range of measures, designed to work together to reduce a building’s impact on the environment, is critical to reducing that portion of the District’s greenhouse gas emissions attributable to the construction, operation and maintenance of buildings.

Objectives For Energy And Water Conservation And Greenhouse Gas Emission Reduction

The Energy and Water Conservation and GHG Emissions Reduction DPA and corresponding Development Approval Information Area are established to address the following objectives:

1. reduce consumption in new buildings;
2. create a positive impact on the natural environment and natural earth systems;
3. make the best possible use of existing infrastructure systems and minimize the need for system capacity expansion and extensions;
4. reduce the costs associated with the on-going operation and maintenance of buildings;
5. encourage occupant comfort and health and the efficient use of materials and resources in new buildings; and
6. encourage and support innovation in building design and development.
Exemptions

All development is exempt other than:

1. any development for which an amendment of the Zoning Bylaw or the District’s Official Community Plan is required; and

2. the construction and installation of a new ICI building or structure for which a building permit is required pursuant to the District’s Building Regulation Bylaw.

Despite the foregoing, owners, developers and designers are encouraged to consider these guidelines in site development, building, landscaping and engineering decisions relating to all developments within the Energy and Water Conservation and GHG Emission Reduction DPA, whether or not an energy and water conservation development permit is required.

Guidelines

The following guidelines apply within the Energy and Water Conservation and GHG Emission Reduction DPA. These guidelines are not intended to be a definitive listing. Rather, they suggest issues to be considered and designers may respond to these guidelines in a variety of different ways. Creativity is encouraged.

Except where specific standards are referenced, these guidelines are not prescriptive. Designers are directed to consider a variety of synergistic approaches, particularly, passive design strategies, rather than active mechanical systems, to reduce a building’s energy and water consumption and greenhouse gas emissions and improve occupant thermal comfort.

While these guidelines relate specifically to energy and water conservation and ghg emission reductions, it is important to consider other measures which reduce a building’s overall carbon footprint by incorporating a variety of strategies to make the best use of the site, improve indoor air quality and utilize materials which can be sourced locally or regionally and reused/recycled at the time of construction and upon demolition.

A qualified professional retained by the applicant is required to provide a written report summarizing the proposed measures to be incorporated in the proposed development.

Development should be designed and constructed so that the energy budget for proposed buildings and structures, once complete, will be at least 33% better than the applicable standard in the Model National Energy Code for Buildings or at least 24% better than the applicable standard in ASHRAE 90.1 - 2007.
For Energy Conservation the following guidelines apply:

1. an integrated design process should be utilized to identify opportunities to reduce a building’s energy consumption;

2. the effectiveness of the building envelope, including glazing, to reduce heat loss should be maximized;

3. overall building energy performance and interior thermal comfort should be maximized through a combination of passive design strategies, including, but not limited to:
   - the sizing and placement of windows and the incorporation of operable windows to increase opportunities for natural ventilation, reducing the reliance on mechanical HVAC systems;
   - the orientation of buildings to take maximum advantage of site specific climatic conditions especially in terms of solar access and wind flow, when possible;
   - the use of thermally broken window frames and high performance glazing;
   - the incorporation of roof overhangs, fixed fins or other solar shading devices to ensure that south facing windows are shaded from peak summer sun but enable sunlight penetration during winter months;
   - design building massing and solar orientation to improve the passive performance of the structure

4. various measures should be utilized to reduce the heat island effect of a building’s roof and heat transfer into the building, including: green roofs; Energy Star-rated or high albedo roofing material; or, other appropriate measures;
5. opportunities for the distribution of natural daylight into a building’s interior spaces to reduce the energy consumption of electric lighting should be maximized. Avoid the use of heavily tinted or reflective glazing that reduces solar heat gain but also reduces the penetration of daylight and increases glare;

6. solar thermal or solar electric technologies should be incorporated, but, where it is not possible to incorporate solar technologies during initial construction of a building, the building should be designed to be solar ready;

7. on-site renewable energy systems should be pursued where feasible;

8. mechanical systems should be designed to enable interconnection to future district energy systems in those areas identified by the District as having potential for such systems;

9. on-site landscaping should be designed to promote opportunities for passive heating/cooling without negatively affecting the potential for solar thermal or solar electric systems on the site and on surrounding properties;

10. the planting of appropriate trees within parking lots should be maximized to provide shade, store carbon and reduce heat build-up; and

11. daylight-responsive controls should be incorporated in all regularly occupied spaces sited adjacent to windows/skylights.

For Water Conservation the following guidelines apply:

1. an integrated design process should be utilized to identify opportunities to reduce a building’s water consumption and incorporate strategies for the capture and use of stormwater for landscaping purposes;

2. the stormwater and building water discharge should be managed on site to the extent possible. Measures could include:
   » maximizing pervious surfaces to enhance stormwater infiltration opportunities
   » incorporating bioswales and rain gardens for infiltration
   » using drought-tolerant and native plants and other xeriscaping techniques to minimize the need for landscape irrigation;
   » maximizing the use of topsoil or composted waste for finish grading to assist in infiltration and increase the water holding capacity of landscaped areas;

3. where a site is adjacent to open space or a watercourse, infiltrated stormwater should be directed to that receiving environment if appropriate; and

4. automated control systems should be utilized where temporary or permanent mechanical irrigation systems are required.
For Greenhouse Gas Emission Reductions the following guidelines apply:

1. building materials which are durable for the use intended should be selected;

2. locally or regionally sourced building materials should be used to reduce transportation energy costs;

3. existing building materials should be reused where practical;

4. building materials which may be reused or recycled upon building demolition should be selected;

5. a construction waste management plan should be developed and areas for the collection of recyclable materials during construction should be provided on site; and

6. building products which have low, or no-VOC off-gassing potential should be selected.

Development Approval Information Area

Land within the Energy and Water Conservation and GHG Emission Reduction DPA is also designated as a Development Approval Information Area in accordance with Section 920.01 of the Local Government Act. Applicants for energy and water conservation development permits may be required by the District to provide, at the applicant’s expense, information in order to demonstrate compliance with the energy and water conservation guidelines.

Any such information deemed by the District to be necessary for the purposes of determining requirements to be addressed in a development permit shall be identified and conveyed to the applicant during the preliminary development application process.
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1.0 Introduction

1.1 Introduction

In 2011, District of North Vancouver Council adopted a new Official Community Plan (OCP). This OCP established a ‘network of centres’ to manage growth within a defined urban structure over the next 20 years. More detailed centres plans, including design guidelines, are being prepared to guide development in each designated centre. The Edgemont Village ‘refresh’ is part of this process, and has led to the preparation of this policy document.

The intent of the collaborative review of the Village plan has been to refresh a previous plan that is now 15 years old. Conditions in the community have changed since that time and the Village is experiencing ongoing development pressures. A refreshed plan enables the community to identify opportunities to enhance the Village environment, and to ensure development occurs in a coordinated way so that Edgemont continues to meet the needs of the community today and into the future.

Community consultation began with three “Ideas Forums” in February 2013, where the public were invited to identify issues and opportunities for the future of the Village as Phase 1 of the Edgemont ‘refresh’. Based on feedback collected at these events, a “Foundation Report” was prepared outlining 15 planning and design principles to guide preparation of a new plan. These 15 principles were used to invite further feedback at three “Directions Forums” and through an online survey as Phase 2 in June 2013. Following general support for the 15 foundational principles, draft planning policies and design guidelines were prepared and presented to the public at two Open Houses in Phase 3 of the process in November 2013. Feedback on Phase 3 was generally very supportive and has been used in the preparation of the proposed Edgemont Village Centre Plan and Design Guidelines provided here. Phase 4 of this collaborative planning process included final public review and the presentation of this document for Council’s consideration in early 2014.

Full documentation of every stage of the engagement process can be found online at: www.identity.dnv.org
1.2 Purpose, Application and Intent

The purpose of this document is to guide development and regulate the design of buildings and public realm improvements in and around Edgemont Village Centre, in support of the vision, goals, objectives and principles outlined in the District’s Official Community Plan.

Policies and guidelines contained in this document provide both qualitative and quantitative recommendations for future development in and around the Village. These policies and guidelines should be applied and referred to in designing, reviewing and approving new building developments (built form), and new public realm improvements (streetscape, public open space, etc.).

**The overall intent of this document is to direct development in a way that strengthens the character of Edgemont Village by enhancing its urban design and public realm, while respecting its unique attributes and low-rise scale.**

1.3 Users

This document is intended to be used by the community to understand the likely forms and locations of new development and public realm improvements that may occur over the following 10 to 20 years. Policies and guidelines are intended to be used by landowners, developers and their design consultants in submitting development applications, and District staff and Council in reviewing these applications. They are also intended to be referred to by the District itself when designing civic and public realm improvements, in particular all future streetscape enhancements in the Village. Importantly, this document is to be used to guide decisions. It does not represent final decisions in themselves. Decisions on specific development applications and civic improvements will be made by Council, with full public input, on a case-by-case basis. This guiding document is neither prescriptive nor exhaustive, but rather illustrates the anticipated key directions for the Village.

As part of the implementation of the 2011 OCP, this document should be used in conjunction with OCP (Bylaw 7900, as amended), including the Development Permit Areas as described in Schedule B.
1.4 Organization and Scope

This document is organized as follows:

2.0 General Planning and Design Considerations
   This section refers to the overall context and identity of the Village.

3.0 Land Use
   This section refers to land use policies and their associated densities.

4.0 Built Form Guidelines
   This section refers to the form and character of new buildings.

5.0 Public Realm and Streetscape Guidelines
   This section refers to new public realm projects for streetscapes and open spaces.

6.0 Transportation and Parking
   This section refers to transportation policies and parking strategies.

7.0 Achieving the Vision
   This section summarizes the general vision for the Village.

The scope of the policies and guidelines contained in this document is indicated on Map 1 below.
2.0 General Planning and Design Considerations

2.1 Sense of Place

Edgemont Village is a distinctive commercial precinct serving the Upper Capilano neighbourhoods of North Vancouver. It has a unique sense of place with many characteristics that should be maintained and enhanced as it evolves over time. Some of the characteristics that help define Edgemont Village’s identity relate to its physical context, such as:

- the Village’s mountain setting and views
- its unique crescent-grid street pattern

Other characteristics relate to the Village’s existing built environment, such as:

- the eclectic diversity of its low-rise buildings
- the distinctive streetscape treatments (e.g. light standards, diagonal parking, etc.) that knit the Village together

In addition to these physical elements, a significant part of Edgemont’s identity stems from less easily quantifiable social characteristics:

- the sense of neighbourliness and community between residents and store owners
- the presence of unique, locally owned/managed stores and services
- the feeling that the Village is an environment where all age groups are welcome and can thrive

Respecting these attributes that contribute to Edgemont’s sense of place and community should be considered through careful land use planning and through the thoughtful design of any new buildings and public realm improvements. A diversity of housing types that respond to the needs of different demographics, and a diversity of commercial uses that maintain a distinctive mix of shops and services, should be encouraged. The design of public realm improvements should increase opportunities for community interaction and enhance the pedestrian-friendly character and walkability of the Village. New development should respond to the diversity of architectural styles with variation in built form, height and massing.
These two sketches illustrate conceptually one of the defining elements of Edgemont’s physical character. On the one hand, a diverse mix of building styles, which house an equally diverse and vibrant range of stores and services. On the other, distinct public realm elements (such as the ‘candy cane’ light standards, or diagonal parking, or symmetrical corner bulges) that provide the unifying elements that bring the Village together into a cohesive whole.

### 2.2 Village Structure

Edgemont Village has a unique urban structure that responds to its physical location, topography and views. It was originally laid out as a unified plan, with a symmetrical street grid that includes a number of crescents. The street grid is oriented diagonally northwest-southeast, which optimizes views towards the North Shore mountains to the northwest and northeast.

The Village centre is defined by the intersection of its two main streets: Edgemont Boulevard and Highland Boulevard, which cross each other at the ‘heart’ of the Village.

Two transitional streets parallel Edgemont Boulevard, on each side (Woodbine Drive and Newmarket Drive), and a further two midblock lanes parallel these streets. The resulting blocks are relatively long and narrow, with double frontages on both a street and a lane. The diagonal street orientation presents an interesting geometry with oblique and acute angles at the northern and southern edges of the Village (West Queens Road and Ridgewood Drive).
This elegant plan, with its crescents, unique geometry, major intersecting streets, and supporting side streets and lanes, has resulted in a strong sense of place for the Village. These design guidelines respond to the Village’s unique layout and urban structure.

2.3 Village Character and Scale

Edgemont Village has a low-rise built form character and scale, with buildings ranging from one to three storeys.

Commercial buildings are typically built out to the property line along Edgemont Boulevard, with no side yards, helping to create a well-defined traditional commercial ‘Main Street’ or ‘High Street’, with a largely continuous ‘streetwall’ of buildings that contain the street.

The fine-grained rhythm of narrow storefronts reflects the small size of individual properties, and also contributes to the strong sense of place and identity of the Village.

There is no one single dominant architectural character. Rather the Village reflects an eclectic range of architectural eras and styles. Varying building heights, rooflines and materials are typical, and contribute to the Village’s unique character.
2.4 General Design Considerations

These design guidelines respond to the Village’s sense of place, urban structure, character and sense of scale:

• New development should be sympathetic to the existing building scale, character and diversity.
• New buildings should not attempt to create a unified architectural design language, rather developments should promote the concept of eclectic diversity in the built environment.
• All new developments should take into account their immediate built form contexts and respond to this in a complementary way, in terms of building massing, height, build-to lines, setbacks, proportions, materials, colours, etc.
• New development should not seek to create a replication of older ‘traditional’ building styles and design. Rather the design of new developments should reflect contemporary architectural design and construction, and current urban design best practices in the context of the unique character of Edgemont Village.

2.5 Orientation and Siting Considerations

• Buildings should be oriented to the street grid, which is oriented diagonally northwest-southeast and optimizes views towards the North Shore mountains to the northwest and northeast.
• Buildings should be sited to optimize both public and private views of the mountains, and to optimize sunlight penetration into the public realm. This means that in general, buildings should be oriented with the longer dimension northwest-southeast (not northeast-southwest) parallel to the adjacent streets, to maintain northward views and maximize openings between adjacent buildings.
• New development fronting crescent streets should seek to respond to this unique geometry, where appropriate.

This corner building optimizes both its street orientation as well as its views, with a traditional mountain village design
2.6 Views Considerations

- Views towards the North Shore mountains are an important part of the Village's sense of place. New development and public realm design should take this into account.
- All public street-end views should be protected.
- Buildings should be designed and shaped to protect and optimize public views towards the mountains to the north, where practical. This means employing building setbacks, sloped rooflines, smaller upper level floor plates, stepped terracing, and other massing devices to maintain existing views from adjacent streets.

This photo shows building terracing with many windows, which optimize views as well as sunlight.

Map 2: Planning and Design Considerations
2.7 Sunlight Considerations

- Sunlight penetration onto sidewalks and other public open spaces is an important attribute of the Village’s amenity and comfort for pedestrians. New development should take this into account.
- Buildings should be designed to optimize sunlight penetration onto adjacent and opposite sidewalks and open spaces. This means employing building setbacks, sloped rooflines, smaller upper level floor plates, stepped terracing and other massing devices.
- This is especially important for buildings located on the southwestern side of the northwest-southeast streets, in terms of maintaining sunlight penetration onto the opposite (northeast) side of such streets.

This photo illustrates the importance of sunlight penetration onto sidewalks and public spaces to optimize enjoyment by users.
2.8 Safety and Accessibility Considerations

Public safety and accessibility for people of all ages and abilities are important attributes of the Village’s amenity and comfort for residents and visitors:

- All changes and improvements to the public realm and transportation networks (e.g. sidewalks, crossings, intersections) should be designed with the safety and accessibility of all users (pedestrian, cyclists, motorists) and all ages and abilities in mind.
- New development should adhere to the District’s policy requirements for Adaptable Design provisions, with an appropriate number of universal/accessible residential units. New commercial spaces at street level should ensure accessible entrances and layouts for all users (e.g. those with mobility devices).
- New development should take safety into account, employing accepted best practices in Crime Prevention through Environmental Design (CPTED).
- New buildings should be designed to minimize dead-end areas or recesses that are not visible from the street, and which could provide places for unmonitored anti-social or illegal activities.
- New buildings should be well lit, and offer bright, accessible, and inviting public spaces. Residential entrances should be clearly visible from the adjacent street. Underground parking areas in new buildings should be well lit and designed to optimize openness and visibility.
2.9 Sustainability Considerations

Sustainability (environmental, social, cultural, and economic) is an overarching value of the District’s new OCP as expressed in the following Principle:

“The District balances the environmental, social, cultural and economic needs of the community and is committed to its role in the stewardship of all that is valued for future generations.”

Numerous OCP objectives and policies reinforce this commitment to sustainability by:

- Protecting and improving the ecological health of our natural systems
- Fostering a safe, socially inclusive and supportive community
- Becoming an increasingly successful, economically viable and dynamic community

All new development in Edgemont Village, both public and private, should take into account these overarching objectives for sustainability, by encouraging projects that:

- Support more environmentally-friendly buildings and landscapes
- Enhance the social health and inclusivity of the community
- Contribute to the economic viability and vitality of the Village

An example of a living wall.
3.0 Land Use

3.1 Village Core

The following map illustrates approved land uses for the core of Edgemont Village from the District’s Official Community Plan (OCP). The core is being defined as properties with an existing commercial, institutional, or multifamily residential land use designation. No land use changes or increases to designated densities are suggested for this area. High quality urban design and significant public realm improvements are expected to accompany redevelopment within the core, as directed in Sections 4 and 5.
3.1.1 Village Core Land Use Designations and Densities

Land use designations and associated densities in the Village core are as per the District’s OCP and are cited below:

**Commercial Residential Mixed-Use Level 1**
Areas designated for commercial residential mixed-use level 1 are intended predominantly for general commercial purposes, such as retail, service and offices throughout the District. Residential uses above commercial uses at street level are generally encouraged. Development in this designation is permitted up to approximately 1.75 FSR.

**Institutional**
Areas designated for institutional are intended predominantly for a range of public assembly uses, such as schools, churches, recreation centres, and public buildings. Some commercial and accessory residential uses may be permitted.

**Residential Level 5: Low Density Apartment**
Areas designated for low density apartment are intended predominantly for multifamily housing in centres and corridors up to approximately 1.75 FSR. Development in this designation will typically be expressed in low rise apartments, but may include some townhouses. Some commercial use may be permitted at grade.
3.1.2 Village Core Land Use Policies

- the boundaries of the existing commercial core should be maintained to strengthen the commercial precinct
- existing institutional uses (Capilano Library, Highlands Church) and existing residential apartment sites should be included within the core boundary to ensure consistent streetscape and public realm treatments integrate these sites with the Village
- a diversity of retail and commercial uses should be encouraged to serve the Upper Capilano community
- commercial/mixed use developments should have active ground floor retail use frontages (stores, restaurants, coffee shops, etc.) which contribute towards pedestrian amenity and Village ambiance
- non-retail service commercial uses (such as professional services, offices, etc.) should typically be located on upper floors
- local, small scale, and one-of-a-kind retail stores and businesses should be encouraged
- the provision of a supermarket should be encouraged, but other larger format retail should be restricted through floorplate or maximum retail unit size
- specific services, such as a hardware store, full-service pharmacy, dental/medical services, Village pub and/or restaurant, should be encouraged in new developments
- active retail frontages onto lanes may be enabled to diversify commercial activity as described in Section 5.2.4
- apartment units above retail should be encouraged in mixed-use developments in the commercial core

Active commercial uses animate the street-level.

An existing successful mixed-use building.
Existing Building Types in the Village Core

**Commercial-Residential Mixed-Use Level 1**
FSR: ~1.75
Height: 2.5 - 3.5 storeys

**Residential Level 5: Low Density Apartment**
FSR: 1.50 - 1.75 (Less density than Village Core Mixed-Use)
Height: 3.0 storeys
3.2 Residential Periphery

The following map illustrates locations for potential low density multifamily residential uses around the Village where more diverse housing options that transition outwards from the Village core could be sensitively introduced. Ground-oriented forms like duplexes and multiplexes (e.g. triplexes, fourplexes, small rowhouses, and townhouses) whose scale and design should respect existing neighbourhood character are envisioned.

3.2.1 Residential Periphery Land Use Policies, Descriptions and Densities

- a more diverse range of housing types and unit sizes should be sensitively introduced to provide wider options for different life stages and needs within the community
- the scale and design of housing projects should provide effective transitions between different adjacent uses and/or densities and respond to the built form design guidelines provided in Section 4
- consider Adaptable Design provisions for potential low density ground-oriented housing forms
- anticipated building forms and densities to accompany Map 4: Land Use - Residential Periphery are as illustrated on the next page:
Duplexes should be permitted on designated sites up to 2 storeys in height at the same density permitted for single family houses (i.e. 0.35 FSR + 350 square feet). Basement suites would not be permitted.

Multiplexes (e.g. triplexes, fourplexes or small rowhouses) should be permitted on designated sites up to 2.5 storeys in height at a density ranging from 0.6 FSR to 0.8 FSR.

Townhouses should be permitted on designated sites up to 3 storeys in height at a density ranging from 1.0 FSR to 1.2 FSR.
4.0 Built Form Guidelines

4.1 Building Heights

- Edgemont should remain a low-rise built environment, with heights generally restricted to a mix of 2 and 3 storey buildings as illustrated on Map 5: Building Heights in Storeys
- the top floor of buildings should typically be set back and/or integrated into rooflines as described in Section 4.2 of this document
- applications for additional height to a maximum of a partial 4th storey may be considered within the Village core on a case-by-case basis, where improved building design and provision of greater public amenity may be achieved, taking into account the following criteria:
  - public support for the proposed development
  - site conditions (such as size, topography, slope, etc.)
  - sensitivity to surrounding built context
  - economic viability of the project
  - the provision of public benefits such as (but not limited to):
    - view preservation/enhancement
    - sunlight preservation/enhancement
    - provision of public open space and/or pedestrian pathways and/or other amenities
    - enhanced lane treatment and active lane uses
    - provision of strategies/subsidies to retain local, small scale businesses/stores
    - exemplary design, subject to District staff and peer review
Schematic illustration of the principle of transitioning outwards from the Village core to the periphery. Exact heights and uses would vary and be subject to case-by-case approval.
4.2 Building Massing

- massing should generally be oriented to the major frontage street
- massing should support a generally consistent streetwall in terms of height and build-to lines, with variation in step-backs or terraces on upper floors
- upper floors should be set back or integrated into sloped or angled rooflines to optimize views and sunlight penetration, accommodate residential balconies, and reduce massing impacts
- massing on long frontages should be broken up with the use of courtyards, recesses, midblock connections, varied rooflines, etc.
- new commercial buildings should generally be built to the property line at grade or set back to increase sidewalk width in accordance with the right-of-way conditions described in Section 5.2
- new development in residential neighbourhoods should generally relate to or transition from established setbacks
- massing of duplexes should be compatible with adjacent or nearby single family homes
4.3 Built Form Transitions

- developments should be carefully massed to form a sensitive transition to neighbouring land uses
- developments along frontages adjacent to detached residential areas should present a ‘soft edge’ to neighbouring uses
- open space, building setbacks, stepping back of upper storeys (etc.) may be used to aid transitions between different development intensities
4.4 Site Planning

- site planning for new projects should take into consideration, and respond to, the following criteria:
  - immediate surrounding built form context
  - adjacent build-to lines
  - adjacent building heights
  - view protection/enhancement
  - sunlight orientation
  - streetwall contribution (on Edgemont Boulevard)
  - orientation of front and rear façades
- access, services and parking should generally be located from a side street or rear lane, where feasible
4.5 Architectural Character

- new developments should preserve the eclectic character and mix of existing building styles
- variety of architectural form should provide visual interest and individuality
- the scale and character of shopfronts in the commercial core should retain a sense of small, local proprietorship
- new residential developments should be sympathetic and complementary in character to the existing neighbourhood
- new residential development should reference the design heritage of existing neighbourhoods (west coast modernism, ‘post and beam’, etc.)
- materials should be selected, used and detailed in a way that reflects quality-built features and elements
- the use of traditional materials (wood, stone, brick, etc.) should be encouraged, and materials such as vinyl siding, large areas of stucco, asphalt shingles, artificial stone (etc.) not allowed
- colours should be selected to integrate with or complement the surrounding built context, with brighter colours reserved for special accents or features within the commercial core
4.6 Views and Sunlight

- street-end views (primarily to the north, northwest and northeast) should be protected and enhanced
- focal points and the termination of visual axes should be celebrated (e.g. with public art and/or special architectural features)
- buildings should be oriented and massed to optimize sunlight penetration onto sidewalks and open spaces

![Diagram showing views and sunlight considerations in Edgemont Village Centre]
4.7 Commercial Precinct

In addition to Section 4.1 to 4.6, the following guidelines apply specifically to properties in the commercial core that are developed as commercial and/or mixed-use commercial/residential. Policies regarding the nature and type of commercial uses are provided in Section 3.0 of this document.

4.7.1 Streetwall

- a pedestrian-scaled streetwall building height should be achieved with a 1 or 2-storey streetwall on commercial streets
- breaks in the streetwall and build-to lines should be encouraged only where desirable (e.g. pedestrian pass-throughs, view corridors, public plazas, entry forecourts, etc.)
- consistent build-to lines should generally be encouraged in redevelopment, particularly on Edgemont Boulevard, in accordance with the right-of-way conditions described in Section 5.2
- transitional build-to lines may be appropriate where adjacent buildings have different setbacks, in which case the setback should be the same or similar
4.7.2 Commercial Façades and Frontage Widths

- retail façades should be highly transparent with the interiors largely visible from the street
- ground level commercial façades should be articulated with individual storefronts, and animated with signs, display windows, display lighting, etc.
- blank façades should be strongly discouraged, and in any event should be generally limited to a maximum of 10% of the building frontage width facing the shopping street
- commercial building façades should be designed with variations in materials, colour, fenestration and roof forms to express individual storefront identity
- larger stores with wider frontages should be lined at the sidewalk by smaller retail stores with their own entries and identity
- a rhythm of individual storefront widths of 5–10m (16–32 ft.) should be generally maintained
4.7.3 Commercial Signage and Lighting

- flexibility should be allowed in commercial signage, to allow signs to respond to the eclectic character of Village buildings
- signage and lighting should be carefully considered and integrated with the building so that it forms a unified design
- commercial signage should generally be limited to the main floor of buildings and not overwhelm the façade
- bright neon signs, backlit signs, and electronic moving signs are strongly discouraged

Example of Successful Commercial Signal

4.7.4 Weather Protection

- commercial and mixed-use buildings should provide weather protection along the entire street frontage
- the use of transparent, structural canopies or three or four-point fabric awnings is encouraged
- canopies and awnings should have a minimum horizontal projection of 2.0m from the building façade, and a vertical clearance over the sidewalk not exceeding 3.0m
- awning design (e.g. colours, materials) should be unique to each retail space

Example of Weather Protection
4.7.5 Commercial Sidewalk Use

- active commercial use of sidewalks should be encouraged, provided such uses do not create obstacles to safe pedestrian movement, and maintain adequate sidewalk width consistent with section 5.3.2 and 5.3.3
- commercial displays, sandwich boards and signs on the first portion of the sidewalk immediately adjacent the building should be permitted, provided such uses do not create obstacles to safe pedestrian movement
- commercial developments may consider the use of arcades or the provision of additional sidewalk space on private property beyond the right-of-way conditions described in Section 5.2, to widen the space available for commercial uses (e.g. tables and chairs that animate the commercial precinct)

Example of Commercial Use of Sidewalk

4.7.6 Building Corners

- on corner sites, commercial storefronts should turn the corner to address the adjacent street in a pedestrian-friendly way, with both frontages designed as building fronts
- buildings on corner sites are encouraged to ‘celebrate’ the corner with architectural massing and features, or alternatively a corner setback where a public open space is desired, without impeding vehicular intersection sightlines

Example of a commercial storefront turning the corner
4.7.7 Building Entrances

- building entrances should be designed to be universally accessible for wheelchairs, mobility devices, strollers (etc.)
- individual commercial store entrances should be recessed from the principal façade, to provide weather protection and space for orientation, preparing to enter/leave the store, and for shoppers to pass each other
- residential lobby entrances in mixed-use buildings should be clearly separated from commercial entrances and ideally be set back from adjacent retail façades, with a generous and visible entrance court area
- on sites fronting two streets, residential lobby entrances should preferably be located on the flanking street, away from the principal commercial entrances

4.7.8 Parking, Loading, Services

- all on-site parking, loading and service entries should be accessed from the rear lane where feasible, or from a flanking street where there is no rear lane access
- access to parking, loading and service entries should not typically be permitted directly from the principal shopping street
- parking, loading and service entries should be maintained in a way that supports the visual quality of the Village
5.0 Public Realm and Streetscape Guidelines

5.1 Urban Structure: Village Gateways and Heart

5.1.1 Village Gateways

- Edgemont and Ridgewood, and Edgemont and Queens, should be considered primary gateways, with Highland and Woodbine, and Woodbine and Queens, considered secondary gateways (Map 2)
- as and when development at these intersections occurs, visual appeal and special character (a ‘sense of arrival’) should be emphasized through building massing and detailing, open space, plantings, larger scale trees, signage, and/or public art
- gateway features should be well integrated with improvements to pedestrian movement and comfort, and vehicular safety

5.1.2 Village Heart

- the intersection of Highland and Edgemont Boulevards, and Highland Boulevard extending from Newmarket to Woodbine Drive, should be considered the Village Heart
- as and when development in the Heart occurs, this area should receive special treatment through site furnishings, paving materials/treatments, and consideration of public realm at building façades
- as and when development occurs, new open space should be achieved through the reorganization of the public realm outlined in Section 5.2.2 and 5.2.3, enabling the creation of a multipurpose ‘Highland Plaza’

Example of animated plaza or courtyard space
Conceptual Illustration of the Village Heart
5.2 Rights-of-Way

5.2.1 General

• opportunities to improve street environments throughout the Village should be taken as and when development occurs, by reconfiguring elements within the street rights-of-way, and through requirements on abutting private property
• objectives for improvements should include increased sidewalk widths for circulation, gathering, site furnishings, and temporary commercial display or signage, as well as enhanced landscaping opportunity
• existing large trees should generally be retained in right-of-way improvements
• legibility, views, sightlines, safety, user appeal, clear path of travel (at least 2m), and CPTED (Crime Prevention through Environmental Design) principles should be considered in all improvements

Example of angled parking adjacent to a wide sidewalk with landscaped boulevard

Example of special or textured paving to enhance the public realm
5.2.2 Edgemont Boulevard

- narrow condition: where the right-of-way is narrow, existing on-street parking is parallel, and there is no room available for changes to parking and traffic lanes, new private development should typically be set back to allow for additional sidewalk and boulevard width
- wide condition: where right-of-way is wider and existing parking is diagonal, consideration should be given to reallocate centre median in order to widen sidewalk, retain diagonal parking, and reduce traffic lane width (this is a long term consideration as and when development of adjacent blocks occur and will require further analysis and consultation)
- with adjusted boulevard, parking and sidewalk conditions, curb bulges at the intersection of Edgemont and Highland should be reconfigured to increase areas for gathering and landscape, and to shorten crossing distance for pedestrians

* Conceptual illustration of anticipated typical condition. Exact section and right-of-way configuration will vary and be subject to detailed design as/when redevelopment occurs.
5.2.3 Highland Boulevard: Library/Highland Plaza

- Highland Boulevard between Newmarket and Woodbine should receive special treatment (e.g. stamping, paving), which is drivable but fine-grained for pedestrian appeal as slower traffic makes a comfortable pedestrian environment.

- Highland Boulevard between Newmarket and Edgemont should be enhanced to provide a square which can be closed to traffic for special events, through measures that may include raising the street to sidewalk level, replacing barrier curbs with bollards, use of special paving, lighting and site furnishings.

- As and when redevelopment of the northwest corner of Edgemont and Highland occurs, development should be set back to the same extent as the adjacent library, to provide additional year-round multipurpose open space, site furnishings and feature paving that enhance the Village heart.

- Redevelopment of landscape between the road right-of-way and the library should be planned for better pedestrian access, use and connection to the street, particularly for special events.

* Conceptual illustration of anticipated typical condition. Exact section and right-of-way configuration will vary and be subject to detailed design as/when redevelopment occurs.
5.2.4 Highland Boulevard: North

- narrow condition: where the right-of-way is narrow, existing on-street parallel parking and bus-stop should be retained, sidewalk enhanced, and travel lanes reconfigured to provide dedicated on-street cycling in both directions
- wide condition: where the right-of-way is wide, existing on-street right-angle parking should be retained, sidewalk enhanced, and travel lanes reconfigured to provide dedicated on-street cycling facility in both directions

* Conceptual illustration of anticipated typical condition. Exact section and right-of-way configuration will vary and be subject to detailed design as/when redevelopment occurs.
5.2.5 *Woodbine Drive*

- diagonal parking should be retained, the west-side sidewalk enhanced, and travel lanes reconfigured to provide a cycling facility in both directions
- properties on the east side of Woodbine Drive should be set back where feasible as and when development to multifamily housing occurs to achieve a 1.8 metre sidewalk

* Conceptual illustration of anticipated typical condition. Exact section and right-of-way configuration will vary and be subject to detailed design as/when redevelopment occurs.
5.2.6 Lanes

- as and when redevelopment occurs, sites may be encouraged to provide active retail frontages onto lanes, increasing the diversity of commercial opportunities in the Village and enhancing the public realm
- lanes should receive special treatments (e.g. paving), which is textured to calm traffic and fine-grained for pedestrian appeal
- traffic may be moderated with measures such as speed humps, bollards and curb bulges and safety improved at the interface between lane and sidewalk through measures such as signage
- lane right-of-way space should be organized to include two opposing lanes of traffic and one lane parallel parking, to increase Village parking capacity
- private developments that do not feature zero-lot line buildings should be encouraged to mix perpendicular parking and loading/servicing areas with features such as small plaza spaces or small outdoor market spaces
Example of an Enhanced Lane

* Conceptual illustration of anticipated typical condition. Exact section and right-of-way configuration will vary and be subject to detailed design as/when redevelopment occurs.
5.3 Open Spaces, Sidewalks, and Crosswalks

5.3.1 Open Spaces

• public realm areas should be designed to encourage interaction, gathering and ease of pedestrian access and circulation
• open space and public realm improvements should contribute to the commercial success and visitor enjoyment of the Village, with the inclusion of site furnishings, special paving or treatments, informal play areas, public art, and landscaped areas as appropriate
• new open spaces should be well integrated with the street environment in new developments, both in the public realm and on private property as illustrated on Map 6
• the refreshing of existing open space may be required as a condition of new development
• the creation of multipurpose plazas at the southeast corner of Edgemont and Crescentview, and the northwest corner of Edgemont and Highland, should be encouraged when redevelopment occurs, as both these locations provide opportunities for sun exposure, enjoyment of views, and enhancement of Village ambience
• the creation of a mid-block connection to the laneway along Woodbine (south of Highland) should be encouraged through redevelopment as feasible

Map 6: Open Space Network
5.3.2 Edgemont Boulevard and Highland Boulevard Sidewalk Standards

- at least 2m clear width, free of any obstructions, for pedestrian traffic should typically be established on both sides of the street
- a 1.2m zone between the clear zone and building façade should typically be established for seating, tables, signage, retail displays, and other commercial “spill-out” uses
- a 1.5m zone between the clear zone and the curb should typically be established where boulevard landscaping, site furnishings and utilities are located
- a suite of high-quality paving materials, including stone, concrete unit paving, or sandblasted, sawcut cast-in-place concrete paving should be provided throughout

* Conceptual illustration of anticipated typical condition. Exact section and right-of-way configuration will vary and be subject to detailed design as/when redevelopment occurs.
5.3.3 Other Street Sidewalks Standards

- a minimum 1.8m width clear sidewalk should typically be implemented on all other streets within the Village, where space allows
- a minimum 1.5m landscaped boulevard with street trees should typically be implemented on all other streets within the Village, where space allows

5.3.4 Crosswalks

- crosswalk crossing distances should be shortened through changes to right-of-way configurations in accordance with Section 5.2
- durable, high-visibility crosswalk markings should be installed at crosswalks across Edgemont, Highland, Woodbine, Queens, and Ridgewood in consideration with Section 6.1
- consideration should be given to integrating public art or other beautification opportunities with crosswalk markings

Example of public art integrated into a crosswalk
Photo: Graham Corell-Allan
5.4 Street Furnishings

- individual site furnishings should be placed at strategic locations relating to building use and high-use outdoor areas
- the signature red 'candy-cane' light standards should be retained as a key component of Edgemont’s sense of place
- new furnishings, while refreshing the Village, should be sympathetic to the existing red 'candy-cane' light standards and should belong to a family of complementary forms, colours and materials
- a diversity of seating opportunities for all age groups should be arranged linearly along streetscape and in groupings at important areas and placed to take advantage of views, sun, and provide shelter from wind and rain
- power and telecommunications utilities should be undergrounded as redevelopment occurs
- utilities such as hydrants, kiosks, roadway and pedestrian lights, and roadway and pedestrian signage, should be located in boulevards
- functional furnishings, such as bollards and waste receptacles, should be within the same "family" and made of high-quality, powder-coated or stainless steel
- trench drains, catch basin covers, gutter drains, manhole covers and miscellaneous utility covers should be weathered steel, with a consistent visual and aesthetic appearance wherever possible
5.5 Public Art

- public art should celebrate the unique cultural and natural features of the Village and the District
- the design of Village gateway and other open space treatments and elements should take public art into consideration
- opportunities to integrate specific community-based public art interests, such as murals and sundials, should be considered and implemented where feasible
- art should be designed with durability, longevity, safety, interaction and whimsy in mind
- art terms of reference should stress integration with the streetscape, buildings and public realm

Examples of Public Art Integrated into the Streetscape
5.6 Soft Landscape and Environmental Sustainability

- as and when redevelopment occurs, the Village should be refreshed along sustainable principles through discrete green urban design and landscape changes to the public realm
- improvements should highlight and celebrate the alpine natural environment of the Village and North Shore
- street trees should be planted at regular intervals along Edgemont and Highland Boulevards, and other streets where feasible, with spacing (approx. 8-10m on centre) depending on tree species, without impeding vehicular sightlines

- planted areas should be concentrated in boulevards on each sides of a street, close to pedestrian areas, where they can offer environmental benefits such as shade, wind protection, as well as visual appeal
- attention should be paid in tree spacing and plant material selection to not over-tree the Village to the detriment of public views and sunlight exposure
- a native and near-native plant palette with North Shore character should be used for low maintenance, long plant life and habitat enhancement
- best practices for street tree plantings should be implemented, which may include continuous tree trenches in boulevards, minimum recommended soil volumes, and soil cells and/or structural soil
- planters should be appropriately scaled to their surroundings and use durable, permanent materials such as stone, smooth-finished concrete and metal, and avoid ceramic, plastic, wood and exposed aggregate concrete
- best practices for street, curb and gutter design should be implemented to integrate stormwater management, including water quality and quantity considerations, into landscape design

Example of Integrated Soft Landscape and Stormwater Treatment
6.0 Transportation and Parking

As part of updating the Edgemont Village Centre Plan and Design Guidelines, a high level transportation analysis and strategy was prepared and discussed with the community.

According to the District’s Road Network Study (available at www.dnv.org), roads in Edgemont Village such as Highland Boulevard have excess vehicle capacity. In fact, the study’s travel forecast of future travel demand expects 3 to 4 percent traffic growth on roads north of Highway 1 (the lowest in the District) from 2006 to 2021.

6.1 Streets and Intersections

- the continued integration and management of traffic circulation and access in the urban realm should be achieved through any redevelopment in the Village
- as/when development occurs, opportunities for transportation improvements (e.g. traffic operations, circulation, etc.) should be reviewed and more detailed planning and design undertaken to address transportation network improvements
- all street and intersection improvements should be designed with the safety and accessibility of all users (pedestrians, cyclists, motorists) and all ages in mind
- accessible pedestrian signals should be encouraged at busy/primary intersections
- driving lanes should be no larger than the standard width required for through traffic and street parking access, so that space within the street rights-of-way may be deployed for public realm improvements in accordance with Section 5
- building siting, street furnishings and plantings should accommodate sightlines for drivers
- intersection improvements should be implemented to support operational efficiency and safety, subject to detailed design, as described below and illustrated on Map 7

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Potential Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colwood Drive at West Queens</td>
<td>Introduce pedestrian signal to address crossing safety for children accessing Highlands Elementary school.</td>
</tr>
<tr>
<td>Road</td>
<td>Restrict right-turn-on-red for traffic traveling from Queens Road onto Colwood Drive northbound to address cycling safety and reduce use of this road as a short-cut.</td>
</tr>
</tbody>
</table>
### Intersection Potential Improvement

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Potential Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edgemont Boulevard at Ridgewood Drive</td>
<td>Address operational efficiency and safety with traffic control change (i.e. traffic signal or roundabout). Make this intersection more accessible for all pedestrians with curb let-downs and sidewalk improvements.</td>
</tr>
<tr>
<td>Edgemont Boulevard at Highland Boulevard</td>
<td>Address operational efficiency and safety with traffic control change (i.e. traffic signal or four-way stop). Mark the pedestrian heart of the Village using special intersection treatments, such as raised intersection, reducing the crossing distance with median removal, and/or special pavement colour or texture.</td>
</tr>
<tr>
<td>Edgemont Boulevard at West Queens Road</td>
<td>Address sight lines, turning paths, and alignment of southbound through lanes to improve safety. Implement markings through the intersection to identify the road turning path for eastbound to northbound vehicles.</td>
</tr>
<tr>
<td>Highland Boulevard at Belmont Avenue</td>
<td>Review crossing control for opportunities to improve safety for people of all ages and abilities.</td>
</tr>
<tr>
<td>Ridgewood Drive at Highland Boulevard</td>
<td>Review crossing control for opportunities to improve safety for people of all ages and abilities.</td>
</tr>
<tr>
<td>Other area improvements</td>
<td>Woodbine Drive at West Queens Road – Improve sightlines by trimming shrubbery. Ridgewood Drive at Paisley Road/Sunset Boulevard - Improve pedestrian comfort and safety by extending the concrete pad and adding curb let-down at the northwest corner of the intersection. Capilano Road at Paisley Road - Review crossing control for opportunities to improve safety for people of all ages and abilities.</td>
</tr>
</tbody>
</table>
6.2 Walking and Safe Routes to School

- the environment for walking should be made more comfortable, safe and attractive for pedestrians of all ages and levels of ability with improved streetscape and public realm treatments as described in Section 5 and intersection improvements as described in Section 6.1
- safe and active routes to school should be enhanced, in conjunction with North Vancouver School District 44, school administration and parents
- measures to increase pedestrian safety at crosswalks and support safe vehicle speeds should be employed where feasible and necessary
- the pedestrian network should be integrated with parks and urban trails where feasible to improve access and connections between neighbourhoods
6.3 Cycling

- cyclists of all skill levels should be accommodated with on and off-street cycling routes
- improvements to the cycling network in and around the Village should include enhanced connections and way-finding to local and regional destinations, the wider bicycle network, schools, and transit services
- ample and accessible bicycle racks should be located at prominent well-lit locations near doors, entries and public realm areas, but without being the primary visual feature
- major developments should include quality cycling support facilities, including on-street bicycle racks, accessible on-site secure bicycle storage, and other amenities as appropriate (e.g. electric bicycle charging, bicycle maintenance stations, etc.)
- bicycle routes should be provided through Edgemont Village, including improved connections to local trails with new curb letdowns and bike troughs, as described below

### Potential Improvements to Cycling Network

<table>
<thead>
<tr>
<th>On-Street Bicycle Routes</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Colwood Drive (urban shared travel lanes)</td>
<td></td>
</tr>
<tr>
<td>Edgemont Boulevard (urban shared travel lanes)</td>
<td></td>
</tr>
<tr>
<td>Highland Boulevard (dedicated bike lanes)</td>
<td></td>
</tr>
<tr>
<td>Paisley Road (urban shared travel lanes)</td>
<td></td>
</tr>
<tr>
<td>Ridgewood Drive (dedicated bike lanes)</td>
<td></td>
</tr>
<tr>
<td>West Queens Road (dedicated bike lanes)</td>
<td></td>
</tr>
<tr>
<td>Woodbine Drive (urban shared travel lanes)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Curb letdowns</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Edgemont Boulevard southeast of Hwy 1</td>
<td></td>
</tr>
<tr>
<td>Forest Hills Drive cul-de-sac near Fairmont Road</td>
<td></td>
</tr>
<tr>
<td>Forest Hills Drive at Kennedy Avenue</td>
<td></td>
</tr>
<tr>
<td>Trail ending on Fairmont Road across from Fairmont Park</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bike Troughs (to bypass stairs)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridge over Mosquito Creek (near Evergreen Place at Glenview Crescent)</td>
<td></td>
</tr>
<tr>
<td>Murdo Frazer Park stairs (near Crescentview Drive)</td>
<td></td>
</tr>
</tbody>
</table>
Map 8: On-Street Cycling Network Vision

Cars and Bicycles Share Village Streets

Example of Bicycle Racks Integrated into a Streetscape
6.4 Transit

- Public realm around bus stops should be of a high quality, including well-lit covered waiting space, feature paving, seating and waste receptacles.
- Transit riders should be supported with infrastructure such as weather protection, lighting, wheelchair pads, sidewalks, and curb ramps around bus stops, and include features contained in TransLink’s Universal Accessible Bus Stop Design Guidelines.
- Walking and cycling connections to transit should be improved to provide a more integrated multi-modal network for people of all ages and abilities.
- Quality transit service to and from Edgemont Village, including future frequent transit service, should be maintained and enhanced in conjunction with TransLink as illustrated on Map 9.
6.5 Parking

- adequate and accessible parking should be recognized as necessary for ensuring the Village's continued viability as a commercial and social hub: access is critical for retail success
- diagonal parking should generally be retained, to maintain existing parking availability, slow vehicular through-traffic, support local businesses and preserve Village character
- remnant space in street parking layouts should be re-purposed for public realm enhancements or alternative vehicle parking (e.g. bicycle racks, scooters, motorcycles, etc.)
- the provision of surface parking on private property within lanes should be designed in a manner that does not compromise loading, delivery, circulation and retail uses
- shared parking should be encouraged in commercial areas and where parking is shared by complementary land uses (i.e. parking spaces are shared by more than one business) to allow parking facilities to be used more efficiently
- best practices for underground parkade design should be achieved in new developments in the commercial core, summarized in the following box:

**Principles for Underground Parkade Design**

- parking should be shared between complimentary land uses, with careful design of features such as the location of security gates
- locations of parkade entries should have clear signs
- natural lighting, openness, and visual permeability should be introduced as much as possible
- art, colour, music, or other elements should be used to enhance user experience
- lighting should be uniformly distributed to avoid dark areas, with sufficient overlap of light distribution
- advanced technologies to provide information on availability of parking spaces should be considered
- exit routes should be well-marked
- the design of parking facility driveways should promote internal circulation and safety on the surrounding street network
- where possible, parking aisles should be oriented parallel to pedestrian desire lines, so that pedestrians of all ages and abilities are comfortable moving between their vehicle and the destination
- sight lines should provide a clear view of surroundings
- the availability of help should be clearly marked with signage
- security monitoring should be enhanced with active security measures, such as alarm buttons, video cameras and security patrols
• reductions to commercial parking requirements should not be considered
• reduced residential parking requirements may be considered for multifamily residential
developments (to a minimum 1.5 stalls per unit) only when the District is satisfied there is ample
evidence to support parking reduction
• new developments should include and/or allow for the future implementation of electric vehicle
charging parking infrastructure
• on-street and off-street parking should be treated as a system, with consideration of the
following:
  - provide information about on- and off-street parking availability
  - design the street network such that some on-street parking is available for retailers and traffic
can easily circulate around the block
  - avoid resident-only on-street parking, instead use time-restrictions to encourage more efficient
turnover in parking stalls
  - identify measures to address impacts of visitor and employee parking in adjacent residential
  streets where necessary
• shorter parking time limits in the heart of the Village should be considered to encourage higher
turnover and availability of spaces in highest demand areas (>80% occupancy), while still
providing parking opportunities for visitors who wish to stay longer, as illustrated on Map 10
• business to be consulted about revisions to parking restrictions

Map 10: Village Parking Strategy
7.0 Achieving the Vision

As stated in the Introduction, the overall intent of this document is to direct development in a way that strengthens the character of Edgemont Village by enhancing its urban design and public realm, while respecting its unique attributes and low-rise scale. Guidance is provided for both the kinds of development that are consistent with this objective, and the associated public realm improvements that are anticipated to accompany development. Improvements are expected to be paid for by development, through the implementation of off-site construction policies, Development Cost Charges, and potential Community Amenity Contributions. The degree of development will therefore relate to the degree of public realm improvements, and prioritization of public realm improvements may arise as and when development applications are received. Detailed design of both buildings and public realm improvements, including any enhancements to the transportation network, will occur at this stage.

Developments over 2-storeys in the core of the Village, as well as any multifamily development in the residential periphery, will require a rezoning process with public input opportunities, including a public hearing requirement. Consistent with District policy, development applicants are expected to engage the community with early and ongoing input opportunities and are encouraged to engage various stakeholder groups (such as the Edgemont and Upper Capilano Community Association, the Edgemont Village Business Association, Highlands Elementary Parent Advisory Committees, etc.) as part of their outreach to the local community. Information on the District’s development application procedures, including rezoning and associated public input processes is available on the District’s website www.dnv.org.
7.1 Illustrative Plan

The following annotated plan illustrates the general vision for Edgemont Village. It provides an overview illustration of the principal directions and enhancements described previously in this document.

This Illustrative Plan provides a visual 'snapshot' of what the Village might look like at some point in the future, should it be developed generally in line with the policies and guidelines articulated in Sections 2 to 6. In other words, it is not prescriptive, exhaustive or definitive, but rather is intended to illustrate and summarize some of the key directions outlined in this document. Project specifics, such as exact building footprints, tree planting locations (etc.) will be determined through detailed design. Not everything illustrated will necessarily be developed exactly as shown.
Edgemont Village Centre: Plan and Design Guidelines - March 24, 2014

Edgemont Village Illustrative Plan

1. Enhanced road & pedestrian safety
2. More street trees on all streets
3. Active streetfront retail with some residential or offices above
4. Potential plazas
5. "Heart of the Village" - enhanced public realm along Highland Blvd.
6. Edgemont Blvd:
   - widen sidewalks
   - remove median
   - reduce travel lane-width
   - enhance streetscape, lighting, signage, street furniture, etc.
7. Gateway feature
8. New supermarket
9. Increase & regularize lane parking
10. Mid-block pedestrian route
11. Active lane frontages
12. Courtyard to break up longer frontages
13. Opportunities for low density/low rise multifamily housing
CANFIELD TOWNHOMES
WOODBINE DR. & COURTYARD ELEVATIONS
MAY 27, 2021
3155 / 3175 CANFIELD CRESCENT

MATERIAL LEGEND
1. CAST-IN-PLACE CONCRETE
2. BRICK - DARK GRAY
3. WOOD VERTICAL SIDING - TREATED
4. GREEN SCREEN - WALL MOUNTED - REFER TO LANDSCAPE DRAWINGS
5. WOOD ENTRY DOOR W/ TEMPERED GLASS SIDELIGHT - CEDAR LIGHT STAIN
6. ALUMINIUM / GLASS GARAGE DOOR - PRE-FINISHED - COLOUR BLACK
7. METAL WINDOWS - PRE-FINISHED - COLOUR BLACK
8. CAST-IN-PLACE CONCRETE STAIRS
9. ALUMINUM & GLASS GUARDRAIL - PAINTED - COLOUR BLACK
10. PRE-FINISHED METAL WALL SHELF - PAINTED - COLOUR BLACK
11. PRE-FINISHED METAL CAP FLASHING - COLOUR BLACK
12. CAST-IN-PLACE CONCRETE PLANTER - FINISH TBD
13. ALUMINUM PLANTERS - REFER TO LANDSCAPE PLANS
14. ROOF DECK PLANTERS - PAINTED - BLACK
15. 36" HIGH ALUMINUM / CLEAR TEMPERED GLASS GATE - COLOUR BLACK
16. 60" HIGH ALUMINUM / FROSTED TEMPERED GLASS PRIVACY PARTITION - BLACK
17. ALUMINUM & GLASS JULIETTE GUARDRAIL - COLOUR BLACK
18. WOOD BENCH - REFER TO LANDSCAPE PLANS
19. RWL - COLOUR BLACK
20. METAL SCREEN - COLOUR BLACK
21. HARDIEPANEL VERTICAL SIDING - SMOOTH FINISH - COLOUR IRON GREY
22. STANDING SEAM METAL ROOF - COLOR TO MATCH HARDIEPANEL SIDING
23. HOLLOW METAL DOORS W/ INSULATION - COLOR TO MATCH HARDIEPANEL SIDING
24. STONE CLAD CONCRETE PEDESTAL - REFER TO LANDSCAPE DWGS.
25. WOOD TRELLIS - STAIN FINISH CHARCOAL
26. WINDOW SPANDREL PANEL - COLOUR TO MATCH WINDOW FRAME
27. METAL SLIDING DOORS - PRE-FINISHED - COLOUR BLACK
28. FIRE PIT 36" DIAM. - CONCRETE CINDER
29. INSULATED METAL DOOR W/ TEMPERED GLASS - COLOUR TO MATCH HARDIEPANEL SIDING

( 3/16" = 1'-0" )

( 3/16" = 1'-0" )

( 3/16" = 1'-0" )

( 3/16" = 1'-0" )
MAY 27, 2021
3155 / 3175 CANFIELD CRESCENT
PROJECT:

3155-3175 CANFIELD CRESCENT
NORTH VANCOUVER, BC

CLIENT:

CANFIELD CRESCENT
LIMITED PARTNERSHIP

420-1112 WEST PENDER ST.
P: 604-688-4155
F: 604-688-4115
E: joelle.calof@i4pg.com

2020-10-28
DETAILED APPLICATION - SUBMISSION 2 FOR DNV REVIEW
STORMWATER MANAGEMENT

SMP Calculations

<table>
<thead>
<tr>
<th>Item</th>
<th>Calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMP Area</td>
<td>5,600 m²</td>
</tr>
<tr>
<td>SMP Area (portion on SMP)</td>
<td>4,500 m²</td>
</tr>
<tr>
<td>SMP Area (portion not on SMP)</td>
<td>1,100 m²</td>
</tr>
<tr>
<td>SMP Area (portion on SMP)</td>
<td>2,000 m²</td>
</tr>
<tr>
<td>SMP Area (portion not on SMP)</td>
<td>3,500 m²</td>
</tr>
<tr>
<td>SMP Area (portion on SMP)</td>
<td>1,500 m²</td>
</tr>
<tr>
<td>SMP Area (portion not on SMP)</td>
<td>2,500 m²</td>
</tr>
<tr>
<td>SMP Area (portion on SMP)</td>
<td>1,000 m²</td>
</tr>
<tr>
<td>SMP Area (portion not on SMP)</td>
<td>3,000 m²</td>
</tr>
<tr>
<td>SMP Area (portion on SMP)</td>
<td>700 m²</td>
</tr>
<tr>
<td>SMP Area (portion not on SMP)</td>
<td>1,300 m²</td>
</tr>
<tr>
<td>SMP Area (portion on SMP)</td>
<td>500 m²</td>
</tr>
<tr>
<td>SMP Area (portion not on SMP)</td>
<td>1,000 m²</td>
</tr>
<tr>
<td>SMP Area (portion on SMP)</td>
<td>300 m²</td>
</tr>
<tr>
<td>SMP Area (portion not on SMP)</td>
<td>700 m²</td>
</tr>
<tr>
<td>SMP Area (portion on SMP)</td>
<td>100 m²</td>
</tr>
<tr>
<td>SMP Area (portion not on SMP)</td>
<td>200 m²</td>
</tr>
<tr>
<td>SMP Area (portion on SMP)</td>
<td>50 m²</td>
</tr>
<tr>
<td>SMP Area (portion not on SMP)</td>
<td>100 m²</td>
</tr>
</tbody>
</table>

Note: All areas are calculated in meters squared (m²)
DETAILED APPLICATION - SUBMISSION 1 FOR
E M E T
I N R 2016  CREUS ENGINEERING LTD.

STORM SERVICING
PLAN & PROFILE

CRESCENTVIEW DR.
TIMES

EDGEMONT BLVD

NEWMARKET DR

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The Corporation of the District of North Vancouver

COUNCIL

POLICY

Title

Accessible Design Policy for Multi-Family Housing

Section

Development and Social Planning

POLICY

It is the policy of Council that new multi-family residential developments include basic design features to facilitate building access and usability for people of all ages and abilities, and enhanced design features, where appropriate, to facilitate aging in place and to support people with mobility and/or sensory impairments.

Policy approved on: February 16, 2015

PROCEDURE

The following procedure is used to implement this policy, but does not form part of the policy.

DEFINITIONS

"Seniors": People over the age of 65.

"Multi-family Apartments": Single level multi-family dwelling units. Where multi-family apartments are co-located with other uses, such as commercial in a mixed-use development, (including stacked townhouses) each with an exterior primary entrance to grade.

"Ground-oriented Multi-family": multi-family dwelling units of one or more stories installation.

"Enhanced Design Features": Features that facilitate building access and usability by people with mobility and sensory impairments. May also include infrastructure for future installations.

"Basic Design Features": Features that facilitate building access and usability by all people, regardless of age and abilities.

"Multi-family Apartments": Single level multi-family dwelling units. Where multi-family apartments are co-located with other uses, such as commercial in a mixed-use development, this policy provides direction for the residential component of the development only.

"Seniors": People over the age of 65.

Adminstrative Officer

This procedure is used to implement this policy, but does not form part of the policy.

Policy approved on: February 16, 2015

1. Amendment Date: December 6, 2017

Cheric Administrative Officer

"Enhanced Design Features": Features that facilitate building access and usability by people with mobility and sensory impairments. May also include infrastructure for future installations.

"Basic Design Features": Features that facilitate building access and usability by all people, regardless of age and abilities.

It is the policy of Council that new multi-family residential developments include basic design features to facilitate building access and usability for people of all ages and abilities, and enhanced design features, where appropriate, to facilitate aging in place and to support people with mobility and sensory impairments.

Policy

<table>
<thead>
<tr>
<th>Development and Social Planning</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessible Design Policy for Multi-Family Housing</td>
<td>Title</td>
</tr>
</tbody>
</table>

The Corporation of the District of North Vancouver
APPLICATION

1. This policy applies to multi-family rezoning applications and form and character for multi-family development permit applications proposing 4 or more new multi-family apartments units or 4 or more new ground-oriented multi-family units.

2. All units designed as enhanced accessible units must also include basic accessible design elements.

3. Accessible Design Features (outlined in Attachment 1) are to be provided as follows:

<table>
<thead>
<tr>
<th>TYPE OF DEVELOPMENT</th>
<th>BASIC ACCESSIBLE DESIGN FEATURES TARGETS</th>
<th>ENHANCED ACCESSIBLE DESIGN FEATURES TARGETS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground-Oriented Multi-family</td>
<td>Approximately 15% of the total number of units (where feasible)</td>
<td>Explore provision of enhanced accessible design features including infrastructure to allow for future adaptability</td>
</tr>
<tr>
<td>Multi-family apartments</td>
<td>100% of units</td>
<td>Minimum of 5% of units</td>
</tr>
<tr>
<td>Multi-family apartments intended for seniors (S)</td>
<td>100% of units</td>
<td>Minimum of 50% of units</td>
</tr>
<tr>
<td>Multi-family apartments intended for people with sensory and/or mobility impairments (S)</td>
<td>100% of units</td>
<td>100% of units</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Additional enhanced accessible design features, where specified (S), apply to units:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- in buildings intended for seniors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- in any building specifically intended for people with disabilities.</td>
</tr>
</tbody>
</table>

4. Where required accessible design features apply to only one bathroom or one only bedroom within a unit, these elements are to be applied to the same bathroom and the same bedroom selected in all cases.

5. Where site specific conditions present unique challenges, alternate solutions can be considered which achieve purpose/ intent of this policy.
6. At the Preliminary Planning Application, Detailed Planning Application and the Building Permit stages, applicants are to provide the District with confirmation that the project fulfills the objectives of the District’s Accessible Design Policy for Multi-family Housing. At the Detailed Application, the applicant is expected to provide the Accessible Design Checklist (Attachment 2). At the Building Permit stage they are expected to provide floor plans for the accessible units.

7. Property managers and strata corporations are encouraged to take measures to ensure that, to the greatest extent possible, units with enhanced accessible design features and accessible parking spaces are reserved for people with sensory and/or mobility impairments.

8. Off street accessible parking spaces are to be provided for any developments that include enhanced accessible units as follows:

<table>
<thead>
<tr>
<th>Total number required parking spaces:</th>
<th>Total number of accessible parking spaces to be provided, inclusive of spaces required by the Zoning Bylaw:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 25</td>
<td>2</td>
</tr>
<tr>
<td>26 - 50</td>
<td>4</td>
</tr>
<tr>
<td>52 - 100</td>
<td>6</td>
</tr>
<tr>
<td>101 - 150</td>
<td>8</td>
</tr>
<tr>
<td>151 - 200</td>
<td>10</td>
</tr>
<tr>
<td>201 - 250</td>
<td>12</td>
</tr>
<tr>
<td>251 - 300</td>
<td>14</td>
</tr>
<tr>
<td>301 - 350</td>
<td>16</td>
</tr>
<tr>
<td>351 - 400</td>
<td>18</td>
</tr>
<tr>
<td>401 - 450</td>
<td>20</td>
</tr>
<tr>
<td>450+</td>
<td>4.5% of all parking provided</td>
</tr>
</tbody>
</table>

**NOTE:** This policy should not be used as a substitute for existing applicable building codes and other regulations. The development applicant is responsible for compliance with all codes, bylaws, and other regulations whether described in this policy or not.
AUTHORITY TO ACT

Delegated to Staff

Attachments: 1. Basic and Enhanced Accessible Design Features
               2. Accessible Design Checklist
### Building Access and Main Entrances

<table>
<thead>
<tr>
<th>Item</th>
<th>Basic (B) Accessible Design Features</th>
<th>Enhanced (E) Accessible Design Features</th>
<th>Applicability of Accessible Design to Ground-Oriented Multi-Family</th>
<th>Purpose/ Intent</th>
<th>Compliance (Y/N)</th>
</tr>
</thead>
</table>
| 1-B  | Unobstructed access to main building entrances | An accessible path of travel is to be provided:  
- from the street and private parking area to at least one main entrance  
- from the main entrance to all suite entry doors (unless prohibited by the terrain or unusual site conditions)  
- from the main entrance to the elevator  
- from the main entrance to each common amenity area (e.g. recreational, storage and laundry facilities, mailbox areas, garbage/recycling areas) | Yes – The accessible path applies to the building main entrance, if units are accessed via a corridor or passageway, and/or to a unit entrance of those identified ground floor level entrance ground-oriented m/f's that can be easily accessed without the use of stairs. | To enable a person using a stroller, cane, walker, wheelchair, or trolley to readily access a building | YES |
| 2-B  | Accessible path of travel | The accessible path of travel is to be:  
- continuous with no steps  
- have a permanent, firm, non-slip finish  
- an uninterrupted clear width of 152cm (5ft)  
- a gradient not more than 1:20  
- a different/distinctive texture to adjacent paved surfaces  
- be free of obstructions lower than 196cm (77in)  
- be designed as a ramp where gradient exceeds 1:20 (5%) (excludes vehicular underground parking ramp)  
- have no grating openings that will allow the passage of a sphere more than 13mm (0.5in) in diameter. | Yes – The accessible path to unit entrance applies to those identified ground floor level entrance ground-oriented m/f's that can be easily accessed without the use of stairs. | To enable a person using a stroller, cane, walker, wheelchair, or trolley to readily access a building | YES |
| 3-B/E| Lighting, weather protection, intercom, address numbering | Building entrances in accessible paths of travel are to:  
- provide weather protection with a min. 152cm x152cm (60in x 60in) canopy over the main entrance and door-phone.  
- have an intercom system installed with user functions located no more than 1375mm (54in) above paved area.  
- have good lighting outside & inside building entrance - 100 lux  
- have mailbox units installed no more than 1375 mm (54 in) above the finished paved area.  
- have address numbering that is glare free, approx. 60 in above finished floor, highly contrasting (color) and sized as follows depending on distance from the street: At 0-15 m from road, numbering are to be 10cm (4 in). At 15-20 m numbering are to be 15cm (6 in) and at >20m from road, numbering are to be 20cm (8 in). | Yes – Basic accessible design applies to identified ground-oriented m/f unit entrances and main building entrance if included in the project design. May have door-bell instead of intercom system. | Provide shelter to any person while unlocking the front door, and easy entry to assist the frail, or persons with stroller, trolley, wheelchair, and visually impaired | YES |
<table>
<thead>
<tr>
<th>Item</th>
<th>Basic (B) Accessible Design Features</th>
<th>Enhanced (E) Accessible Design Features</th>
<th>Applicability to Ground-Oriented Multi-Family</th>
<th>Purpose/ Intent</th>
<th>Compliance (Y/N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>and mailbox</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| 4-B Entrance door assembly and operation | Door assemblies in the accessible path of travel are to:  
• provide a clear opening width of no less than 850mm (34in) if there is only 1 door leaf  
• have the active leaf providing a clear opening of no less than 850 mm (34in) (in a doorway with multiple leaves)  
• have power-operated doors, functioning for passage in both directions  
• be operable by devices that do not require tight grasping or twisting  
• have a push plate or latch releasing device. | Yes – Applies to identified ground-oriented m/f unit entrances and main building entrance if included in the project design. | To permit easier entry by a person in wheelchair, stroller, trolley (for moving furniture into/out of building). | Y | YES - THE PATH OF TRAVEL LEADS TO THE BACK PATIOS OF THE UNITS WHICH WILL BE GRASPABLE BUT NOT POWERED |

Building Access and Main Entrances – Continued

<table>
<thead>
<tr>
<th>Item</th>
<th>Basic (B) Accessible Design Features</th>
<th>Enhanced (E) Accessible Design Features</th>
<th>Applicability to Ground-Oriented Multi-Family</th>
<th>Purpose/ Intent</th>
<th>Compliance (Y/N)</th>
</tr>
</thead>
</table>
| 5-B Entry door clearance | Doorways in accessible paths of travel are to have a clear and level area on either side of the door.  
• Doorway thresholds in accessible paths of travel are to be no more than 13 mm (0.5in) above the floor and bevelled.  
• The entry foyer shall have a non-slip surface. | Yes – Applies to identified ground-oriented m/f unit entrances and main building entrance if included in the project design. | To permit easier entry by person in wheelchair, stroller, trolley (for moving furniture etc). | Y | YES |
| 6-B Tactile warning strip on stairs | Provide tactile warning strips at the top of stairways, on all emergency stairs, and at landings intercepted by other paths of travel. | Yes | To assist visually impaired with way-finding | Y | YES |
| 7-B Colour contrast | Provide contrasting colours on signs, address numbers, corridor walls and unit entries. | Yes | To assist visually impaired with way-finding | Y | YES |

Corridors and Circulation

<table>
<thead>
<tr>
<th>Item</th>
<th>Basic (B) Accessible Design Features</th>
<th>Enhanced (E) Accessible Design Features</th>
<th>Applicability to Ground-Oriented Multi-Family</th>
<th>Purpose/ Intent</th>
<th>Compliance (Y/N)</th>
</tr>
</thead>
</table>
| 8-B Corridor and passageway width | Corridors and passageways providing access to unit entrances and common facilities should:  
• be no less than 1220mm (48in) in width and | | | Permit mobility of those with walkers and wheelchairs, | | YES |
### Item Basic (B) Accessible Design Features Enhanced (E) Accessible Design Features Applicability to Ground-Oriented Multi-Family Purpose/ Intent Compliance (Y/N)

<table>
<thead>
<tr>
<th>Item</th>
<th>9-E</th>
<th>Access to upper levels – Applies to identified ground-oriented m/f units only</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>- provide a clear area no less than 1500mm x 1500mm (60 in) adjacent to the elevator entrance at intervals no more than 10m (394in). Corridor doors installed in series are to be separated by a space no less than 1220mm (48 in) plus the width of any door swinging into the separating space. See also 4-B and 5-B above for door assembly and clearance in accessible paths of travel.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Explore opportunities to facilitate future adaptation for a personal elevator or stair lift.</td>
</tr>
<tr>
<td></td>
<td>Yes – Applies to identified ground-oriented m/f units only</td>
<td>To facilitate access by a person in a wheelchair to upper floors in a town house unit</td>
</tr>
<tr>
<td></td>
<td>N/A</td>
<td>BECAUSE WE HAVE NO STRAIGHT RUNS IN THE STAIRS THIS WILL BE DIFFICULT TO ACHIEVE.</td>
</tr>
</tbody>
</table>

### Residential Unit – Entry Door

<table>
<thead>
<tr>
<th>Item</th>
<th>10-B</th>
<th>Unit entry door assembly</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unit entry doors should:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- have a clear opening width of no less than 850mm (34in)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- be operable by devices, such as lever door handles, that do not require tight grasping or twisting of the wrist</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- operate when a force of not more than 22 N is applied at the handle, push plate or latch releasing device</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Where the threshold is not flush with the floor, the difference in level is to be no more than 13 mm and shall be bevelled.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes – Also refer to item 4 and 5 above.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To permit easier entry by a person in wheelchair, walker or with a stroller or trolley into the unit.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>YES - ON THE REAR PATIO DOORS. (ENTRY DOORS REQUIRE ACCESS BY STEPS)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>11-B</th>
<th>Unit entry door clearance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Door assemblies for unit entry are to have a clear and level area¹:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- when the door swing is away from this area, not less than 1220 mm (48 in) long by a width equal to the door assembly width plus not less than 300 mm (12 in) of clear space beside the latching jamb of the door</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- when the door swing is toward this area, not less than 1500 mm (60 in) long by a width equal to the door assembly width plus not less than 600 mm (24 in) clear space beside the latching jamb of the door</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes – Also refer to item 4 and 5 above.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To permit easier entry by a person in wheelchair, walker or with a stroller or trolley into the unit.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>YES - ON THE REAR PATIO DOORS.</td>
<td></td>
</tr>
</tbody>
</table>
### Residential Unit – Bathroom

<table>
<thead>
<tr>
<th>Item</th>
<th>Basic (B) Accessible Design Features</th>
<th>Enhanced (E) Accessible Design Features</th>
<th>Applicability to Ground-Oriented Multi-Family</th>
<th>Purpose/ Intent</th>
<th>Compliance (Y/N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-B</td>
<td>Bathroom entry door assembly</td>
<td>At least one bathroom is to:</td>
<td></td>
<td>Yes – Applies to at least one bathroom on the ground floor level of the identified ground-oriented m/f units.</td>
<td>To enable a person in a wheelchair to gain access to and from the bathroom</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• provide a clear opening width of no less than 800mm (32in)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• be operable by devices, such as lever door handles, that do not require tight grasping or twisting of the wrist</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Where the threshold is not flush with the floor, the difference in level is to be 13mm (0.5in) in height or less and bevelled.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13-B</td>
<td>Bathroom door clearance</td>
<td>Door assemblies for the above bathroom shall:</td>
<td></td>
<td>Yes – Applies to at least one bathroom on the ground floor level of the identified ground-oriented m/f units.</td>
<td>To enable a person in a wheelchair to gain access to and from the bathroom</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• open away from (or outside) the bathroom area</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• have a clear and level area of*: not less than 1220 mm (48 in) long by a width equal to the door assembly width plus not less than 300 mm (12 in) clear space beside the latching jamb of the door. *Except where a pocket door is provided as an alternative to a swing door. The space under the sink (see 24-E) may be used towards meeting clearance requirements.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14-E</td>
<td>Pocket doors</td>
<td>• A minimum of one bathroom is to provide a pocket door.</td>
<td></td>
<td>Yes – Applies to at least one bathroom on the ground floor level of the identified ground-oriented m/f units.</td>
<td>To facilitate wheelchair access to small bathroom spaces</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Doors providing access are to have heavy duty hardware and D-shaped handles.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Residential Unit – Bathroom Continued

<table>
<thead>
<tr>
<th>Item</th>
<th>Basic (B) Accessible Design Features</th>
<th>Enhanced (E) Accessible Design Features</th>
<th>Applicability to Ground-Oriented Multi-Family</th>
<th>Purpose/ Intent</th>
<th>Compliance (Y/N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-B</td>
<td>Bathroom space</td>
<td>At least one bathroom is to have enough floor space to be ‘minimally accessible’ per the following:</td>
<td></td>
<td>Yes – Applies to at least one bathroom on the ground floor level of the identified ground-oriented m/f units.</td>
<td>To enable a person in a wheelchair to use the toilet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• A clear dimension from the front edge of the toilet to the facing wall is to be a min. of 800mm (32in).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Space from the front edge of the bathtub to the centre of the toilet is to be a min. of 508mm (20in).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Clear floor area in front of the sink/ lavatory is to be a minimum of 760mm (30in) wide by 1220mm (48in) deep centred on the sink/ lavatory.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16-B</td>
<td>Bathroom flooring</td>
<td>Slip resistant flooring – material as recommended by the applicant’s architect.</td>
<td></td>
<td>Yes – Applies to at least one bathroom of the identified ground-oriented m/f units.</td>
<td>To reduce risk of slipping</td>
</tr>
<tr>
<td>17-B</td>
<td>Bathroom wall reinforcement</td>
<td>Reinforcement provided in wall assemblies adjacent to a toilet and bathtub or shower are to accommodate the future installation of vertical, horizontal or diagonal grab</td>
<td></td>
<td>To permit installation of grab bars</td>
<td>YES</td>
</tr>
<tr>
<td>Item</td>
<td>Basic (B) Accessible Design Features</td>
<td>Enhanced (E) Accessible Design Features</td>
<td>Applicability to Ground-Oriented Multi-Family</td>
<td>Purpose/ Intent</td>
<td>Compliance (Y/N)</td>
</tr>
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</tr>
<tr>
<td>18-B</td>
<td>Adjustable height shower</td>
<td>At least one bathroom can accommodate an adjustable height shower head or hand held shower head on adjustable bracket.</td>
<td>Yes – Applies to at least one bathroom on the ground floor level of the identified ground-oriented m/f units.</td>
<td>To enable sit down bathing</td>
<td>YES</td>
</tr>
<tr>
<td>19-E</td>
<td>Pressure and temperature control valves</td>
<td>• Pressure balanced tub and shower valves should minimize risk of scalding (maximum water temperature of approximately 49° C is suggested).</td>
<td>Yes – Applies to at least one bathroom on the ground floor level of the identified ground-oriented m/f units.</td>
<td>To prevent scalding</td>
<td>YES</td>
</tr>
<tr>
<td>20-E</td>
<td>Tub control valve position (S)</td>
<td>• Tub control valve is to be provided at the outer edge of tub with spout in middle.</td>
<td>N/A</td>
<td>To permit filling tub without bending or reaching</td>
<td>NO</td>
</tr>
<tr>
<td>21-B</td>
<td>Bathroom Faucet levers</td>
<td>At least one bathroom is to have lever faucet handles that do not require tight grasping or twisting.</td>
<td>N/A</td>
<td>To enable installation of a future wheel-in shower</td>
<td>NO</td>
</tr>
<tr>
<td>22-E</td>
<td>Accessible shower (S)</td>
<td>• A min. of one bathroom is to be adaptable to facilitate future installation of a wheelchair accessible shower.</td>
<td>N/A</td>
<td>To allow a wheelchair to slide under the sink</td>
<td>NO</td>
</tr>
<tr>
<td>23-E</td>
<td>Space under sink</td>
<td>• A min. of one bathroom is to provide space under sink no less than 81 cm (32 in) wide. This space can also be achieved by providing a removable vanity cabinet.</td>
<td>N/A</td>
<td>To allow a wheelchair to slide under the sink</td>
<td>NO</td>
</tr>
</tbody>
</table>

(S) = Applies only enhanced accessible design units in senior’s buildings and units in other buildings that are intended specifically for people with disabilities.
<table>
<thead>
<tr>
<th>Item</th>
<th>Basic (B) Accessible Design Features</th>
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<th>Compliance (Y/N)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Space next to bed</td>
<td>• A min. of one bedroom to provide no less than 152cm (60 in) of manoeuvring space between closet &amp; double bed.</td>
<td>Yes – Applies to at least 1 bedroom on the ground floor level of identified ground-oriented m/f units</td>
<td>To enable a person in a wheelchair to access the bed</td>
<td>NO - THE FLOORPLANS ARE TOO CONSTRAINED DUE TO THE SHAPE OF THE SITE</td>
</tr>
<tr>
<td>24-E</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Residential Unit – Bedroom**

<table>
<thead>
<tr>
<th>Item</th>
<th>Turning radius</th>
<th>Provide 152cm (60 in) turning radius in the kitchen (centre islands may not work).</th>
<th>Yes – Applies to the kitchen of identified ground-oriented m/f units</th>
<th>To enable sufficient space for wheelchair movements</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-E</td>
<td>Kitchen flooring</td>
<td>• Slip resistant flooring – material as recommended by the applicant’s architect.</td>
<td>Yes – Applies to the kitchen of identified ground-oriented m/f units</td>
<td>To reduce risk of slipping</td>
<td>NO</td>
</tr>
<tr>
<td>26-B</td>
<td>Adjustable shelves</td>
<td>• Kitchen cabinets are to include adjustable shelves</td>
<td>Yes – Applies to the kitchen of identified ground-oriented m/f units</td>
<td>Ergonomic, easier to reach shelves</td>
<td>NO</td>
</tr>
<tr>
<td>27-B</td>
<td>Cupboards – Lowest Shelf (S)</td>
<td>• Design cupboards above countertops so that the lowest shelf is no more than 137cm (54 in) above the finished floor.</td>
<td>Yes – Applies to the kitchen of identified ground-oriented m/f units</td>
<td>To enable easy reach by a person with frailties and/or in a wheelchair</td>
<td>NO</td>
</tr>
<tr>
<td>28-E</td>
<td>Cabinet Handles</td>
<td>• Provide D-shaped cabinet handles for all kitchen cupboards that are intended to be accessible.</td>
<td>Yes – Applies to the kitchen of identified ground-oriented m/f units</td>
<td>Permit use by persons with disabilities and/ or frailties</td>
<td>NO</td>
</tr>
<tr>
<td>29-E</td>
<td>Faucet handles</td>
<td>• All kitchen faucets within units and common amenity areas are to be operable by devices (e.g. ‘lever’ handles) that do not require tight grasping or twisting.</td>
<td>Yes – Applies to the kitchen of identified ground-oriented m/f units</td>
<td>Ergonomic and easier to use by a person with mobility impairments or frailties</td>
<td>NO</td>
</tr>
<tr>
<td>30-B</td>
<td>Future modification (appliances)</td>
<td>• Provide sufficient space for future installation of cook top, wall oven and side-by-side fridge/freezer or bottom mounted freezer.</td>
<td>Yes – Applies to the kitchen of identified ground-oriented m/f units</td>
<td>To facilitate future use of appliances by a person in a wheelchair</td>
<td>NO</td>
</tr>
<tr>
<td>31-E</td>
<td>Sink adjacent to stove</td>
<td>• Kitchen to be designed so that the range and sink are adjacent or can have a continuous counter space between them.</td>
<td>Yes – Applies to the kitchen of identified ground-oriented m/f units</td>
<td>To enable a person in a wheelchair to move heavy pots between sink &amp; stove</td>
<td>NO</td>
</tr>
<tr>
<td>32-E</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item</td>
<td>Basic (B) Accessible Design Features</td>
<td>Enhanced (E) Accessible Design Features</td>
<td>Applicability to Ground-Oriented Multi-Family</td>
<td>Purpose/ Intent</td>
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</tr>
<tr>
<td>------</td>
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</tr>
<tr>
<td>33-E (S)</td>
<td>Countertop &amp; sink height</td>
<td>Facilitate future ability to remove the sink cabinet and lower the countertop height.</td>
<td>Yes – Applies to the kitchen of identified ground-oriented m/f units</td>
<td>To enable full use of the sink by a person in a wheelchair</td>
<td>NO</td>
</tr>
<tr>
<td>34-E (S)</td>
<td>Workspace area</td>
<td>Provide an adjustable height workspace min. 81cm (32 in) between sink and stove.</td>
<td>Yes – Applies to the kitchen of identified ground-oriented m/f units</td>
<td>To enable a person in a wheelchair to prepare meals</td>
<td>NO</td>
</tr>
</tbody>
</table>

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Residential Unit – Electrical

<table>
<thead>
<tr>
<th>Item</th>
<th>Basic (B) Accessible Design Features</th>
<th>Enhanced (E) Accessible Design Features</th>
<th>Applicability to Ground-Oriented Multi-Family</th>
<th>Purpose/ Intent</th>
<th>Compliance (Y/N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>35-E</td>
<td>Kitchen - electrical outlet</td>
<td>Ensure ready and safe access to at least one electrical outlet units.</td>
<td>Yes – Applies to the kitchen of identified ground-oriented m/f units</td>
<td>To enable a person in a wheelchair to reach plugs for kettle, toaster etc.</td>
<td>YES</td>
</tr>
<tr>
<td>36-B</td>
<td>Rocker switches</td>
<td>All switch types shall be operable with a closed fist (such as rocker switches)</td>
<td>Yes – Applies to identified ground-oriented m/f units</td>
<td>Ergonomic design</td>
<td>YES</td>
</tr>
<tr>
<td>37-B</td>
<td>Telephone jacks</td>
<td>Include a telephone jack in at least one bedroom. Telephone jacks are to be approx. 200 mm or less from an electrical outlet.</td>
<td>Yes – Applies to identified ground-oriented m/f units</td>
<td>To enable telephone use from bed</td>
<td>YES</td>
</tr>
<tr>
<td>38-B</td>
<td>Bedroom – 3-way switch</td>
<td>Three way switched outlet near bed and doorway</td>
<td>Yes – Applies to identified ground-oriented m/f units</td>
<td>Allows a person in bed to control lights and/or fan.</td>
<td>YES</td>
</tr>
<tr>
<td>39-E</td>
<td>Electrical switches and outlets</td>
<td>Controls for the operation of building services or safety devices, including electrical switches, thermostats and intercom switches are to be accessible to a person in a wheelchair, operable with one hand, and be located between 900 mm (35 in) and 1200 mm (47 in) above the floor. Electrical, telephone, cable and data outlets for occupant use are to be located between 455 mm (18 in) and 1200 mm (47 in) above the floor.</td>
<td>Yes – Applies to identified ground-oriented m/f units</td>
<td>To allow wheelchair users to easily reach</td>
<td>YES</td>
</tr>
<tr>
<td>40-B</td>
<td>Visual alarm installation</td>
<td>Install visual alarm system in all common areas of the building. Wiring for a visual alarm is to be tied into the fire alarm system.</td>
<td>Yes</td>
<td>To alert a person with hearing disabilities of an emergency</td>
<td>NO</td>
</tr>
<tr>
<td>Item</td>
<td>Basic (B) Accessible Design Features</td>
<td>Enhanced (E) Accessible Design Features</td>
<td>Applicability to Ground-Oriented Multi-Family</td>
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<tr>
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<td>----------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>41-E</td>
<td>Visual alarm - wiring</td>
<td>• Install wiring for visual alarm system in living room and at least one bedroom. Wiring to be connected to the building’s fire alarm system.</td>
<td>Yes – Applies to identified ground-oriented m/f units</td>
<td>To enable future installation of a warning alarm for hearing impaired</td>
<td>NO</td>
</tr>
<tr>
<td>42-E (S)</td>
<td>Visual alarm-installation</td>
<td>• Connection for visual alarm signals to be installed in each suite of a building intended for seniors and be appropriately labelled. • Visual alarm signals are required for suites intended for use by people with a hearing impairment. • A visual alarm system is to be installed in the living room and the accessible bedroom. Wiring for a visual alarm is to be tied into the fire alarm system. When visual signals are required a Strobe light must be installed beside every smoke Alarm. Strobe must have the word “smoke” visible on the lens.</td>
<td>Strobe or other device for the hearing impaired</td>
<td>NO</td>
<td></td>
</tr>
</tbody>
</table>

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**Residential Unit – Laundry**

| 43-E (S) | Laundry facilities | Provide front loading side-by-side washer/dryer in the unit or in the accessible common area with 122 cm (48 in) for manoeuvring space in front of washer/dryer. | Yes – If laundry facilities are located on the accessible ground floor | To facilitate use by a person in a wheelchair | OUR WASHER DRYER WILL HAVE TO BE STACKED DUE TO SPACE CONSTRAINTS IN THE PLAN |

**Residential Unit – Windows, Patios and Balconies**

<p>| 44-E | Balconies and patios – threshold | Decks, balconies or patios provided for use by occupants of a dwelling unit are to • be accessible to persons using wheelchairs by a design that does not compromise the water resistance of the building envelope. • have a minimum 86 cm ( 34 in) clear opening door width. • be no less than 152 cm (60 in) deep from the outside face of the exterior wall to the inside edge of the balcony, deck or patio. | Yes – Applies to ground floor patio | To enable balcony use by a person in a wheelchair, and also to provide temporary refuge in case of building fire | YES |</p>
<table>
<thead>
<tr>
<th>Item</th>
<th>Basic (B) Accessible Design Features</th>
<th>Enhanced (E) Accessible Design Features</th>
<th>Applicability to Ground-Oriented Multi-Family</th>
<th>Purpose/ Intent</th>
<th>Compliance (Y/N)</th>
</tr>
</thead>
</table>
| **45-E**  | Window openings and window sill height | • Windows are to have an opening mechanism no more than 117 cm (46 in) above the floor and be operable by devices (such as “levers”) that do not require tight grasping or twisting.  
• Window sills are to be located no more than 76 cm (30 in) above the floor. | Yes — Applies to ground floor level of identified ground-oriented m/f units | To enable operation and use by a person in a wheelchair | YES             |

(S) = Applies only enhanced accessible design units in senior’s buildings and units in other buildings that are intended specifically for people with disabilities.
Proposed Development: CANFIELD TOWNHOMES
Address: 3155-3175 CANFIELD CRESCENT
Date: 09.06.2019

Type of Residential: multi-family apartment [ ] mixed use building [ ] ground-oriented multi-family
Total number of residential units __________________

Packing
Total number of parking stalls 16 (residential component only)
Total number of accessible parking stalls 1 (residential component only)

A. Basic Accessible Design

Total apartment units designed as basic accessible units ______________ Unit numbers (if applicable)____________
Building number/address (if applicable)_________________________ Unit sizes__________________

B. Enhanced Accessible Design

Total apartment units designed as enhanced accessible units____________ Unit numbers (if applicable)____________
Building number/address (if applicable)_________________________ Unit sizes__________________

C. Ground-oriented Multi-Family Units

Total ground-oriented m/f units designed as basic accessible units 2 Unit numbers (if applicable)____________
Building number/address (if applicable)_________________________ Unit sizes 1400 SF

Total ground-oriented m/f units designed as enhanced accessible units 1 Unit numbers (if applicable)____________
Building number/address (if applicable) 2 Unit sizes 1400 SF

I, the Registered Professional of Record for the project confirm that the above development will comply with the standards outlined in this policy.

_______________________ (signature) THOMAS GRIMWOOD
ARCHITECT AIBC

09.06.2019 (date)

_______________________ (stamp)
b.) 3155 – 3175 Canfield Crescent – Detailed Planning Application – Rezoning with Development Permit for an 8-unit Townhouse Development

Ms. Carly Rosenblat, Development Planner, introduced the project and explained the context.

The Chair welcomed the applicant team and Mr. Thomas Grimwood from Grimwood Architecture and Urban Design and Marlene Messer from PMG Landscape Architects introduced the project.

The Chair thanked the applicant team for their presentation and asked if there were any questions of clarification from the Panel:

Questions were asked and answered on the following topics:

- What does the double rectangle represent that is shown in the parkade plan south of the stairs next to Unit 1? These represent bicycle storage.
- What materials are used for the detailing around the windows? A painter metal frame built from metal flashing, and a folded sheet metal that creates a shadow look.
- Can you explain the access to the patios from Canfield, there seem to be two pedestrian doors that go up to patio level, are they secured? These doors are an accessible at-grade connection to the courtyard, however, they are potentially gated. The intent was that the site looks inviting, but also creates a degree of territoriality and security.
- What is the addressing on Canfield? We have 4 separate entrances and addresses on Canfield, units 4-7.

Mr. Alfonso Tejada, Urban Design Planner, provided a brief presentation and provided the following comments for consideration:

- The site is unique as it is a confined space to create a little community and at the same time respond to larger single family homes to the east, and different uses to the north and west.
- The compact design is appreciated.
- The courtyard space may have too many angular edges, make sure that the planters are not more obtrusive than they are useful.
- Rooftops and access should better reflect the detailing and quality of the overall architecture.

The Chair invited comments from the Panel members, and the following comments and items for consideration were provided:

- This is a challenging site with 3 different sides and 3 different neighbours.
- Agree that the level of detail is much better in the building frontages, and that everything below the roof is of high quality, and that this quality should be carried through to the rooftop access structures.
The planning is well thought out and the material choice is good. The lighter coloured panelling is appreciated, the materials board shows slightly darker greys than the renderings.

- The brick is quite dark and could be more refined.
- The wood in the rendering seems to show better detail than the wood used in the material board.
- The design, materials, and planning seem well thought-out.
- The concept is contemporary and refreshing for Edgemont, rather than pretentious. The sidewalk will be a valuable addition.
- If done well, this development could compliment the coffee shop across the street and create a kind of social hub.
- Consider expanding the roof decks and rooftop walkways for better mobility and use.
- Consider the level of access through the site from a security standpoint.
- The transparency through this development will be an improvement to the existing block.
- The project seem to reflect the single family character across the streets.
- Courtyard is well lit and seem nice to walk and sit in.
- Consider increasing the size of the smaller planters as plants often suffer in the summer from the limited room. Ensure good irrigation installed to adequately feed the smaller planters.
- Consider either expanding the potential public gateways/doorways or closing them off, the current design seems ambiguous.
- The setback is appreciated and no overlook concerns are anticipated.
- It is an attractive project and is presented well.
- The hardy board seems like a disappointment amongst the other high quality materials.
- Consider thinking about downspouts and water drainage on the site.
- Consider a more functional layout for the electrical and mechanical rooms from a building standpoint.
- Consider how materials will weather, which types of wood would be most appropriate, and possibly upgrading from hardy panel to a higher quality product.
- The project may be worthy of a nomination if detailing and finishing is correct.
- The scale of the project is nice for the context.
- Public access through the site may not be necessary to provide.
- The success of this project may live or die with the details, consider how best to express the fine lines off of the facades and other detailing.
- The typology of the corner unit on Highland Blvd. and Woodbine Drive could be slightly different to better respond to the different buildings across both streets. There seems to be an opportunity to integrate some interesting design elements for that corner, potentially a live-work unit.

The Applicant team thanked the Panel members for the comments and guidance and look forward to improving upon the proposal.
The Chair invited the Panel to compose a motion:

MOVED by Ms. Diana Zoe Coop and SECONDED by Mr. Darren Burns

That the ADP has reviewed the proposal and commends the applicant for the quality of the proposal and recommends APPROVAL of the project SUBJECT to addressing to the satisfaction of staff the items noted by the Panel in its review of the project.

CARRIED
Canfield Crescent LP
Suite 420, 1112 West Pender Street
Vancouver, BC
V6E 2S1
c/o
Joelle Calof

Dear Ms. Calof:

Re: 3155-3175 Canfield Crescent, North Vancouver District – FINAL Transportation Assessment

Creative Transportation Solutions Ltd. (CTS) is pleased to submit this FINAL Transportation Assessment for a proposed residential development site located at 3155-3175 Canfield Crescent, North Vancouver District. Specifically, CTS assessed the following with reference to the North Vancouver District Transportation Study Requirements:

1. Site traffic volumes;
2. Potential for improving the site to the benefit of residents, pedestrians, cyclists and motorists;
3. Potential for improving the adjacent street to the benefit of residents, pedestrians, cyclists and motorists;
4. Parking space demand and supply;
5. Parkade and ramp design;
6. Sight lines to/from the underground parkade ramp; and
7. Travel Demand Management Plan.
1.0 BACKGROUND

The proposed residential development site is located at 3155-3175 Canfield Crescent, North Vancouver District. See FIGURE 1 – Site. The legal description is Lots 1 and 2, Block 44, District Lots 598 to 621, Plan 7812. The current zoning is RSE – Single Family Residential Edgemont Zone, NB. The proposed rezoning is Comprehensive Development (CD) and the proposed OCP amendment is Residential Level 3 (RES3).

The proposed residential development site is to comprise eight (8) townhouse units with a single driveway access off of Canfield Crescent. Copies of the related architectural drawings are included as APPENDIX A.
FIGURE 1
Site
2.0 THE SITE

2.1 Streets

A site visit to 3155-3175 Canfield Crescent was undertaken on Thursday, December 7th, 2017 to document street and traffic conditions adjacent to the proposed residential development site.

The site fronts onto Highland Boulevard to the northwest, Woodbine Street to the southwest and Canfield Crescent to the east. Highland Boulevard is classified as a minor arterial street, Woodbine Drive as a collector street and Canfield Crescent as a local street. All three streets are posted at 50 km/h.

Highland Boulevard

Highland Boulevard is approximately 10 meters in width with two through lanes and parking lanes, though the parking lane adjacent to the site is signed NO STOPPING. There are sidewalks along both boulevards. The street is illuminated.

There is a transit stop on the southwest corner of the intersection with Canfield Crescent.

Photo 1 - Highland Crescent Looking Northeast
**Woodbine Drive**

Woodbine Drive Boulevard is approximately 13 meters in width with two through lanes. There is 2 HOUR and 30 MINUTE angle parking along the southwest boulevard and sidewalk. The street is illuminated.

![Photo 2 - Woodbine Drive Looking Southeast](image)

**Canfield Crescent**

Canfield Crescent is approximately 5 meters in width with no definitive edge of street or formal parking along either boulevard.

![Photo 3 – Canfield Crescent Looking South](image)
Canfield Crescent essentially operates as single lane street. An opposing vehicle must stop allowing for an approaching vehicle to pass.

Vehicles park along the west boulevard, further impeding the flow of through traffic.

There are no sidewalks either side of Canfield Crescent and the street is not illuminated.

There are five single family homes with driveway access along the east boulevard.

2.2 Transportation Modes

The proposed residential development site at 3155-3175 Canfield Crescent is situated within Edgemont Village with its many amenities. See FIGURE 2 – Local Amenities. The neighbourhood is very walkable so most trips can be performed on foot.

Currently there are no designated cycling facilities in the neighbourhood though Highland Boulevard is proposed to have on-street cycling lanes as per the North Vancouver District Bicycle Master Plan.

The proposed residential development site is serviced by transit as mentioned.

- #246 - Highland. Service is every 15 minutes Monday to Friday during peak periods and every 30 minutes Saturdays, Sundays and Holidays during peak periods.

The #246 - Highland connects to Downtown Vancouver via the Lonsdale Quay Sea Bus and the Lions Gate Bridge. The route map is included as APPENDIX B.
FIGURE 2
Local Amenities
2.3 Parking

*On-Street Parking*

As noted, there is no on-street parking on Highland Boulevard and Woodbine Drive, adjacent to the proposed residential development site. There is no formal on-street parking on Canfield Crescent adjacent to the site.

*On-Site Parking*

On-site there is secured underground parking proposed for 16 vehicles, 16 bicycles (Class 1) and 4 bicycles (Class 2).
3.0 TRIP GENERATION

As per the North Vancouver District Engineering Development Servicing Review, vehicle trips generated by the existing and proposed use for the development site were determined with reference to the Institute of Transportation Engineers, Trip Generation Manual, 10th Edition. The Trip Generation Manual documents trip generation rates for various scenarios, measured at similar sites.

The site at 3155-3175 Canfield Crescent is currently occupied by two (2) single family residences which generate two (2) vehicle trips during the AM and PM peak hours of the adjacent street traffic, as per the Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, Land Use 210.

The proposed residential development site at 3155-3175 Canfield Crescent is to comprise eight (8) townhouse units which will generate four (4) vehicle trips during the AM and PM peak hours of the adjacent street traffic, as per the Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, Land Use 220.

The net increase in vehicle trips therefore, is two (2) vehicle trips in the AM and PM peak hours of the adjacent street traffic.

Over the period of a typical day, the proposed residential development site is expected to generate approximately forty two-way vehicle trips. Peak hour traffic volume is typically ten percent (10%) of the of the daily traffic volume.
4.0 PARKING ASSESSMENT

4.1 Parking Requirement

The proposed residential development site parking space requirement is summarized by TABLE 1 with reference to the North Vancouver District Zoning Bylaw No. 5114.

As per the Part 10 Off-Street Parking Space and Loading Space Regulations, “one space per unit plus one space per 100 m² of gross residential floor area (to a maximum of 2 spaces per unit inclusive of 0.25 per dwelling unit designated for visitor parking),” is required.

<table>
<thead>
<tr>
<th>Use</th>
<th>Units/Area</th>
<th>Rate</th>
<th>Required</th>
<th>Provided</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Unit Residential</td>
<td>8 units</td>
<td>1.0 per unit</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple Unit Residential</td>
<td>1048 m²</td>
<td>1.0 per 100 m² inclusive of visitor parking</td>
<td>10</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td><strong>Total Required/Provided</strong></td>
<td></td>
<td></td>
<td><strong>16</strong></td>
<td><strong>16</strong></td>
<td></td>
</tr>
<tr>
<td>Accessible Parking</td>
<td>16 parking spaces</td>
<td>1.0 per 22 to 100 parking spaces</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Total Required/Provided</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>1</strong></td>
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<td>Small Vehicle Parking</td>
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<td><strong>6</strong></td>
<td><strong>4</strong></td>
<td>-2</td>
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<td>Multiple Unit Residential Bicycle Class 1</td>
<td>8 units</td>
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<td><strong>12</strong></td>
<td><strong>20</strong></td>
<td>+8</td>
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*Maximum of 2 parking spaces per unit inclusive of visitor parking as per Zoning Bylaw No. 5411.

Based on TABLE 1, the proposed vehicle parking space supply meets the North Vancouver District Zoning Bylaw No. 5114 vehicle parking space requirement for residential, visitor and accessible parking.

Based on TABLE 1, the proposed bicycle Class 1 and Class 2 parking space supply exceeds the North Vancouver District Zoning Bylaw No. 5114 requirement by eight (8) bicycle parking spaces.

4.2 Parkade Design and Operation

With reference to the architectural drawings included as APPENDIX A, the design of the parkade meets the dimensional and layout requirements as per the North Vancouver District Zoning Bylaw No. 5114.
Swept path analysis for the underground parkade was undertaken for several passenger car manoeuvres using AutoTURN 10.1. The analyses have been illustrated and are included as APPENDIX C.

4.3 Ramp Design and Operation

With reference to the architectural drawings included as APPENDIX A, the design of the ramp to/from the underground parkade meets the dimensional and layout requirements for a one-way ramp as per the North Vancouver District Zoning Bylaw No. 5114.

A one-way ramp is appropriate for development sites with a low vehicle trip generation rate. With reference to Section 3.0 – Trip Generation, it is expected that just four vehicle trips i.e. two outbound and two inbound, will be generated in the peak hour. That is one trip every fifteen minutes. The probability therefore, of an outbound vehicle and an inbound vehicle simultaneously arriving at the ramp is equally low.

The ramp and the approaches to the ramp have been designed to maximize the sight line between an outbound vehicle and an inbound vehicle. The ramp is linear and graded at ten percent (10%) as per the Zoning Bylaw No. 5114. At the driveway crossing i.e. where the ramp intersects Canfield Crescent, the ramp is linear and graded at two percent (2%). A curb bulge is also proposed for the intersection. The proposed curb bulge serves two functions:

- It allows the outbound vehicle to stop on the flat or down grade at a point beyond which vehicles may be parked in proximity to the driveway crossing; and
- It forces vehicles to park away from the driveway crossing at a minimum distance i.e. typically fifteen meters.

Note – Municipalities typically require a 3.0m to 5.0m parking setback from a driveway crossing. The provision of a curb bulge ensures an acceptable sight line for a local road.

A plan illustrating sight lines to/from a vehicle stopped on the driveway crossing is included as APPENDIX D.

In the rare event an outbound vehicle and an inbound vehicle simultaneously arrive at the ramp, the inbound vehicle would stop on-street thereby allowing the outbound vehicle to clear the ramp. As stated, the probability of an outbound vehicle and an inbound vehicle simultaneously arriving at the ramp is low and any delay incurred by the stopped vehicle would be in the order of seconds.

CTS also undertook an analysis of the headlight profile for an outbound vehicle on the ramp to/from the underground parkade for a time of day/day of year scenario where vehicle headlights could have an impact on the adjacent homes. Again, given the trip generation for the proposed residential site is low, the frequency of the headlight profile for an outbound vehicle having an impact on the adjacent homes is equally low.
The headlight profile of an outbound vehicle is included as **APPENDIX D**. The profile illustrates the area illuminated by the headlights for an outbound vehicle on the ramp at three positions along the ramp.

- The headlights of a vehicle on the fifteen percent (15%) segment of the ramp are shown to illuminate second floor windows of the homes at 3152 and 3164 Canfield Crescent. Based on a vehicle traveling at 10 km/h the second floor widows would be illuminated for less than three seconds.
- The headlights of a vehicle on the ten percent (10%) segment of the ramp are shown to marginally illuminate second floor windows of the homes at 3152 and 3164 Canfield Crescent. Based on a vehicle traveling at 10 km/h the second floor widows would be illuminated for less than two seconds.
- The headlights of a vehicle on the two percent (2%) segment of the ramp do not illuminate second floor windows of the homes at 3152 and 3164 Canfield Crescent.

### 4.4 Access

Generally, access for any development is taken from the lower street classification with the intention of maintaining network operation and reliability. As per the North Vancouver District *Development Serving Bylaw 8145, Section 5.14 – Driveways*, “driveway access must be provided from abutting Highways with the lower classification.” Highland Boulevard is classified as a minor arterial street, Woodbine Drive as a collector street and Canfield Crescent as a local street.

*Note - Canfield Crescent is the lower street classification.*
5.0 STREET DESIGN

As per the North Vancouver District Engineering Development Servicing Review, the adjacent streets are proposed to be designed to meet current North Vancouver District standards.

Highland Boulevard

- Minor arterial street classification;
- 3.3 m through lane;
- 1.9 m bicycle lane;
- 0.55 m concrete curb and gutter;
- 1.5 m boulevard;
- 2.0 m concrete sidewalk; and
- Accessible bus stop with landing pads, shelter and bench.

Woodbine Drive

- Collector street classification;
- 4.0 m through lane with sharrows;
- 0.55 m concrete curb and gutter;
- 1.5 m boulevard; and
- 1.8 m concrete sidewalk.

Canfield Crescent

- Local street classification;
- 0.55 m concrete curb and gutter;
- 2 x 3.0 m through lanes;
- 2.2 m parking lane;
- 0.55 m concrete curb and gutter; and
- 1.8 m sidewalk.

Concerning Canfield Crescent, in addition to the preceding street improvements the following street operational and safety improvements are proposed:

- Curb bulges on Canfield Crescent at Highland Boulevard and at Woodbine Drive. The curb bulges are intended as a safety improvements by:
  - Slowing vehicles on the approach to Canfield Crescent;
  - Providing a larger landing area for pedestrians and for the development of curb ramps;
- Shortening the street crossing distance for pedestrians; and
- Forcing parked vehicles back from the pedestrian crossing thereby improving the sight distance between a pedestrian and a motorist.

- Curb bulge on Canfield Crescent at the proposed development site driveway crossing. The curb bulge is intended as a safety improvement by:
  - Forcing parked vehicles back from the driveway crossing thereby improving the sight distance between a motorist on the driveway crossing and a motorist on Canfield Crescent.

- On-street parking along the west side of Canfield Crescent. The North Vancouver District Zoning Bylaw No. 5114 vehicle parking space requirement is being met on-site and includes the provision of visitor parking. In addition, seven (7) on-street parking spaces are being provided for the benefit of the neighbourhood.

- Street lighting at the intersections of Highland Boulevard and Canfield Crescent and Woodbine Drive and Canfield Crescent.

The improvements noted are consistent with municipal standards and have been successfully implemented at many locations throughout the North Vancouver District.
6.0 TRAVEL DEMAND MANAGEMENT

The residential development site proposes the following on-site and off-site Travel Demand Management measures intended to promote the use of alternate modes of transportation i.e. walking, cycling and transit:

- Sidewalk along Canfield Crescent;
- Curb bulges and marked Crosswalk at the intersection of Highland and Canfield Crescent;
- Curb bulges and marked Crosswalk at the intersection of Highland and Canfield Crescent;
- Electrical charging stations for vehicles;
- Secured bicycle parking for sixteen (16) bicycles;
- Public bicycle parking for four (4) bicycles;
- Electrical charging stations for bicycles;
- Bicycle repair shop;
- On-street bicycle lane on Highland between and Canfield Crescent;
- Accessible transit stop on ; and
- Transit shelter and bench.
7.0 TRANSPORTATION MODE OPERATION AND SAFETY

Given the proximity of the proposed residential development site at 3155-3175 Canfield Crescent to Edgemont Village, CTS considered the following issues:

- That Canfield Crescent is intended to be residential;
- That non-residents are using Canfield Crescent for vehicle parking, circulation and short-cutting; and
- That enhancements to modal operation and safety for pedestrians, cyclists and transit users are a requirement of the North Vancouver District.

In response to the preceding issues, CTS investigated the potential for Canfield Crescent to be ONE WAY southbound between Highland Boulevard and Woodbine Drive as the configuration of the district block and adjacent street network would allow the following to be addressed:

- The detour for residents of Canfield Crescent via Woodbine Drive and Highland Boulevard would be minimal given the relative size of the district block;
- No vehicle short-cutting between Woodbine Drive and Highland Boulevard;
- Overall decrease in vehicle volume on Canfield Crescent;
- Opportunities for other street features to be considered i.e. treed boulevard;
- Enhanced street safety along Canfield Crescent given the ONE WAY street operation i.e. no passing and fewer turning conflicts;
- Enhanced crossing safety of Canfield Crescent at Woodbine Drive and Highland Boulevard given the ONE WAY street operation i.e. fewer pedestrian/cyclist/vehicle conflicts;
- Singular sight line to/from the underground parking ramp and to/from residential driveway crossings;
- Potential for dedicated on-street parking along the west boulevard.

CTS also considered the following on and off-site improvements intended to increase modal operation and safety:

- Perimeter sidewalk connections to transit and Edgemont Village;
- Curb bulges and ramps as required;
- Transit accessible landing and shelter on Highland Boulevard;
- On-street cycle lane on Highland Boulevard as per the North Vancouver District Bicycle Master Plan; and
- Street lighting.
8.0 SUMMARY AND CONCLUSIONS

CTS undertook a transportation assessment for a proposed residential development site located at 3155-3175 Canfield Crescent in the North Vancouver District.

CTS assessed:

- Site traffic volumes;
- Potential for improving the site to the benefit of residents, pedestrians, cyclists and motorists;
- Potential for improving the adjacent street to the benefit of residents, pedestrians, cyclists and motorists;
- Parking space demand and supply;
- Parkade and ramp design;
- Sight lines to/from the underground parkade ramp; and
- Travel Demand Management.

Specifically, CTS:

- Noted the walkability, bikeability and access to transit for the proposed residential development site at 3155-3175 Canfield Crescent. Local amenities including schools, recreation and shopping are within a short walk or bike ride. There is also regular transit connecting to North Vancouver, Lonsdale Quay and Downtown Vancouver;
- Confirmed that the net increase in vehicle trips for the proposed residential development site is just two (2) vehicle trips in the AM and PM peak hours of the adjacent street traffic;
- Confirmed that the parking requirement and design for vehicles and bicycles is met as per the North Vancouver District Zoning Bylaw No. 5114;
- Analysed the operation of the ramp to/from the underground parkade;
- Noted that the street improvements for Canfield Crescent are consistent with those for a local street;
- Noted street improvements in addition to those required. The street improvements are intended to enhance the operation and safety of Canfield Crescent. The street improvements are consistent with municipal standards and have been successfully implemented at many locations throughout the North Vancouver District;
- Summarised on-site and off-site Travel Demand Management measures intended to promote the use of alternate modes of transportation; and
- Investigated the potential for Canfield Crescent to be ONE WAY southbound between Highland Boulevard and Woodbine Drive given issues with non-resident
traffic and a North Vancouver District requirement for enhancements to modal operation and safety for pedestrians, cyclists and transit users.
9.0 RECOMMENDATIONS

Based on the findings within this Transportation Assessment, CTS recommends the following:

1. That consideration be given to the following infrastructure to the benefit of pedestrians, cyclists and transit users:
   - Perimeter sidewalk connections to transit and Edgemont Village;
   - Curb bulges and ramps as noted;
   - Transit accessible landing and shelter on Highland Boulevard;
   - On-street parking on Canfield Crescent; and
   - On-street cycle lane on Highland Boulevard as per the North Vancouver District Bicycle Master Plan.

2. That a 5.0 meter x 5.0 meter sight triangle be maintained at the top of the underground parkade ramp and in back of the sidewalk.

3. That Canfield Crescent be made ONE WAY southbound between Highland Boulevard and Woodbine Drive with consideration for the following:
   - Narrowed pedestrian crossing at Highland Boulevard and Woodbine Drive;
   - Singular through lane;
   - Dedicated parking lane along the west boulevard;
   - West boulevard; and
   - Street Lighting.
In closing, CTS would like to thank you for the opportunity to contribute towards achieving your objective of a residential development at 3155-3175 Canfield Crescent in the North Vancouver District.

Should you have any questions and/or comments concerning this FINAL Transportation Assessment or its contents, please contact the undersigned.

Yours truly,

CREATIVE TRANSPORTATION SOLUTIONS LTD.

Brent A. Dozzi, P.Eng.
Senior Traffic Engineer

Phone: (604) 936-6190 x227
Email: bdozzi@cts-bc.com

Appendices
APPENDIX A

Architectural Drawings
APPENDIX B
Transit Route Maps
APPENDIX C

Swept Path Analysis
APPENDIX D

Vehicle Headlight Profile
Vehicle Sight Line Plan
<table>
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Highland Blvd & Canfield Cres
Wednesday, April 17, 2019

Morning Peak Period

Project: #5771: Canfield Crescent Traffic Engineering Advice
Municipality: North Vancouver
Weather: Cloudy
Vehicle Class: All Motorized Vehicles

Peak Hour Traffic by Movement

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<th>SOUTH Approach</th>
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### Highland Blvd & Canfield Cres

**Project:** #5771: Canfield Crescent Traffic Engineering Advice  
**Municipality:** North Vancouver  
**Weather:** Cloudy  
**Vehicle Class:** Passenger Cars

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**Morning Peak Period**

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#### Peak Hour Traffic by Movement

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<th>Time</th>
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<th>SOUTH Approach</th>
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*Intersection Peak Hour is Highlighted in YELLOW*
Highland Blvd & Canfield Cres

Project: #5771: Canfield Crescent Traffic Engineering Advice
Municipality: North Vancouver
Weather: Cloudy
Vehicle Class: Heavy Vehicles (3 or more axles)

### Morning Peak Period

#### Peak Hour Traffic by Movement

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Highland Blvd & Canfield Cres

Wednesday, April 17, 2019

Morning Peak Period

**Project:** #5771: Canfield Crescent Traffic Engineering Advice  
**Municipality:** North Vancouver  
**Weather:** Cloudy  
**Vehicle Class:** Bicycles  

*Note:* Crosswalk bike volumes shown are cyclists who rode their bike across the crosswalk and are not included in the pedestrian volume totals.

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### Peak Hour Traffic by Movement

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### Project:
#5771: Canfield Crescent Traffic Engineering Advice

### Midday Peak Period

#### Highland Blvd & Canfield Cres

**Wednesday, April 17, 2019**

**Municipality:** North Vancouver  
**Weather:** Cloudy  
**Vehicle Class:** All Motorized Vehicles

#### Peak Hour Traffic by Movement

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<tr>
<th>Time</th>
<th>NORTH Approach</th>
<th>SOUTH Approach</th>
<th>WEST Approach</th>
<th>EAST Approach</th>
<th>PEDESTRIANS</th>
<th>Total Volumes</th>
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### Intersection Peak Hour

**Intersection Peak Hour is Highlighted in YELLOW**

- **11:15 AM to 12:15 PM**

- **11:00 AM to 12:45 PM**

- **Highland Blvd**

- **Canfield Cres**

- **n/a**

#### Additional Notes:
- **Time** column indicates the specific times of the day for which traffic volumes are recorded.
- **NORTH Approach**, **SOUTH Approach**, **WEST Approach**, and **EAST Approach** columns detail the traffic volumes for each direction.
- **PEDESTRIANS** column details pedestrian traffic volumes.
- **Total Volumes** column sums up all traffic volumes for each time segment.

The detailed traffic data provides insights into the traffic patterns during the midday peak period, helping in traffic engineering planning and infrastructure improvement.
Midday Peak Period

Peak Hour Traffic by Movement

<table>
<thead>
<tr>
<th>Time</th>
<th>NORTH Approach</th>
<th>SOUTH Approach</th>
<th>WEST Approach</th>
<th>EAST Approach</th>
<th>PEDESTRIANS</th>
<th>Total Volumes</th>
</tr>
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</table>
#5771: Canfield Crescent Traffic Engineering Advice

**Municipality:** North Vancouver  
**Weather:** Cloudy  
**Vehicle Class:** Heavy Vehicles (3 or more axles)

## Midday Peak Period

### Highland Blvd & Canfield Cres

**Project:**

Wednesday, April 17, 2019

### Peak Hour Traffic by Movement

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<tr>
<th>Time</th>
<th>NORTH Approach</th>
<th>SOUTH Approach</th>
<th>WEST Approach</th>
<th>EAST Approach</th>
<th>PEDESTRIANS</th>
<th>Total Volumes</th>
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**Intersection Peak Hour is Highlighted in YELLOW**
Highland Blvd & Canfield Cres
Wednesday, April 17, 2019

Project: #5771: Canfield Crescent Traffic Engineering Advice
Municipality: North Vancouver
Weather: Cloudy
Vehicle Class: Bicycles

Note: Crosswalk bike volumes shown are cyclists who rode their bike across the crosswalk and are not included in the pedestrian volume totals

Peak Hour Traffic by Movement

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<th>EAST Approach</th>
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Intersection Peak Hour is Highlighted in YELLOW
Afternoon Peak Period

Peak Hour Traffic by Movement

Project: #5771: Canfield Crescent Traffic Engineering Advice
Municipality: North Vancouver
Weather: Cloudy
Vehicle Class: All Motorized Vehicles

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<th>Time</th>
<th>NORTH Approach</th>
<th>SOUTH Approach</th>
<th>WEST Approach</th>
<th>EAST Approach</th>
<th>PEDESTRIANS</th>
<th>Total Volumes</th>
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Wednesday, April 17, 2019

Intersection Peak Hour is Highlighted in YELLOW
### Highland Blvd & Canfield Cres
#### Project: #5771: Canfield Crescent Traffic Engineering Advice
- **Municipality:** North Vancouver
- **Weather:** Cloudy
- **Vehicle Class:** Passenger Cars

#### Afternoon Peak Period

**Peak Hour Traffic by Movement**

<table>
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<tr>
<th>Time</th>
<th>NORTH Approach</th>
<th>SOUTH Approach</th>
<th>WEST Approach</th>
<th>EAST Approach</th>
<th>PEDESTRIANS</th>
<th>Total Volumes</th>
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**Intersection Peak Hour** is Highlighted in **YELLOW**

---

Wednesday, April 17, 2019
**Highland Blvd & Canfield Cres**  
**Wednesday, April 17, 2019**  
**Afternoon Peak Period**

Project: #5771: Canfield Crescent Traffic Engineering Advice  
Municipality: North Vancouver  
Weather: Cloudy  
Vehicle Class: Heavy Vehicles (3 or more axles)

### Peak Hour Traffic by Movement

<table>
<thead>
<tr>
<th>Time</th>
<th>NORTH Approach</th>
<th>SOUTH Approach</th>
<th>WEST Approach</th>
<th>EAST Approach</th>
<th>PEDESTRIANS</th>
<th>Total Volumes</th>
</tr>
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**Highland Blvd & Canfield Cres**

**Project:** #5771: Canfield Crescent Traffic Engineering Advice

**Municipality:** North Vancouver

**Weather:** Cloudy

**Vehicle Class:** Bicycles

**Note:** Crosswalk bike volumes shown are cyclists who rode their bike across the crosswalk and are not included in the pedestrian volume totals.

---

### Afternoon Peak Period

#### Peak Hour Traffic by Movement

<table>
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<tr>
<th>Time</th>
<th>NORTH Approach</th>
<th>SOUTH Approach</th>
<th>WEST Approach</th>
<th>EAST Approach</th>
<th>BIKES in X-WALKS</th>
<th>Total Volumes</th>
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# #5771: Canfield Crescent Traffic Engineering Advice

## North Vancouver

### Cloudy

### Vehicle Classification Summary

<table>
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<tr>
<th>Time Period</th>
<th>Entering Intersection</th>
<th>Passenger Cars</th>
<th>Heavy Vehicles (3 or more axles)</th>
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Canfield Cres & Woodbine Dr
Wednesday, April 17, 2019

Morning Peak Period

Project: #5771: Canfield Crescent Traffic Engineering Advice
Municipality: North Vancouver
Weather: Cloudy
Vehicle Class: All Motorized Vehicles

Peak Hour Traffic by Movement

<table>
<thead>
<tr>
<th>Time</th>
<th>NORTH Approach</th>
<th>SOUTH Approach</th>
<th>WEST Approach</th>
<th>EAST Approach</th>
<th>PEDESTRIANS</th>
<th>Total Volumes</th>
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<th>EAST Approach</th>
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**Project:** #5771: Canfield Crescent Traffic Engineering Advice  
**Municipality:** North Vancouver  
**Weather:** Cloudy  
**Vehicle Class:** Passenger Cars

### Morning Peak Period

#### Peak Hour Traffic by Movement

<table>
<thead>
<tr>
<th>Time</th>
<th>NORTH Approach</th>
<th>SOUTH Approach</th>
<th>WEST Approach</th>
<th>EAST Approach</th>
<th>PEDESTRIANS</th>
<th>Total Volumes</th>
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Project: #5771: Canfield Crescent Traffic Engineering Advice
Municipality: North Vancouver
Weather: Cloudy
Vehicle Class: Heavy Vehicles (3 or more axles)

**Morning Peak Period**

**Peak Hour Traffic by Movement**

<table>
<thead>
<tr>
<th>Time</th>
<th>NORTH Approach</th>
<th>SOUTH Approach</th>
<th>WEST Approach</th>
<th>EAST Approach</th>
<th>PEDESTRIANS</th>
<th>Total Volumes</th>
</tr>
</thead>
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**Project:** #5771: Canfield Crescent Traffic Engineering Advice

**Municipality:** North Vancouver

**Weather:** Cloudy

**Vehicle Class:** Bicycles

**Note:** Crosswalk bike volumes shown are cyclists who rode their bike across the crosswalk and are not included in the pedestrian volume totals

---

### Morning Peak Period

#### Peak Hour Traffic by Movement

<table>
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<tr>
<th>Time</th>
<th>NORTH Approach</th>
<th>SOUTH Approach</th>
<th>WEST Approach</th>
<th>EAST Approach</th>
<th>BIKES in X-WALKS</th>
<th>Total Volumes</th>
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**Note:** Intersection Peak Hour is Highlighted in **YELLOW**

---

**Wednesday, April 17, 2019**

**7:00 AM to 8:00 AM**

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**Canfield Cres & Woodbine Dr**

---

**Crosswalk bike volumes shown are cyclists who rode their bike across the crosswalk and are not included in the pedestrian volume totals**
Peak Hour Traffic by Movement

<table>
<thead>
<tr>
<th>Time</th>
<th>NORTH Approach</th>
<th>SOUTH Approach</th>
<th>WEST Approach</th>
<th>EAST Approach</th>
<th>PEDESTRIANS</th>
<th>Total Volumes</th>
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<td></td>
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| Time   | left | thru | right | left | thru | right | left | thru | right | left | thru | right | left | thru | right | N | S | W | E |                |
|--------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|---|---|---|---|                |
| 11:00  | 0    | 0    | 0     | 0    | 36   | 24    | 0    | 20   | 1    | 2    | 60    |
| 11:15  | 1    | 0    | 2     | 4    | 40   | 26    | 1    | 34   | 1    | 0    | 69    |
| 11:30  | 2    | 2    | 4     | 40   | 26   | 1     | 0    | 34   | 1    | 0    | 75    |
| 11:45  | 1    | 0    | 3     | 42   | 30   | 1     | 0    | 8    | 0    | 0    | 77    |
| 12:00  | 0    | 2    | 0     | 33   | 20   | 0     | 0    | 15   | 0    | 0    | 55    |
| 12:15  | 0    | 0    | 0     | 37   | 25   | 0     | 0    | 10   | 0    | 0    | 62    |
| 12:30  | 3    | 0    | 0     | 37   | 21   | 0     | 0    | 9    | 1    | 0    | 61    |
| 12:45  | 0    | 0    | 2     | 45   | 27   | 0     | 0    | 5    | 0    | 0    | 74    |
**Project:** #5771: Canfield Crescent Traffic Engineering Advice  
**Municipality:** North Vancouver  
**Weather:** Cloudy  
**Vehicle Class:** Heavy Vehicles (3 or more axles)

**Midday Peak Period**

### Peak Hour Traffic by Movement

**12:00 PM to 1:00 PM**

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**Survey Total**

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Midday Peak Period

Project: #5771: Canfield Crescent Traffic Engineering Advice
Municipality: North Vancouver
Weather: Cloudy
Vehicle Class: Bicycles

Note: Crosswalk bike volumes shown are cyclists who rode their bike across the crosswalk and are not included in the pedestrian volume totals

Peak Hour Traffic by Movement

11:00 AM to 12:00 PM

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<th>EAST Approach</th>
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**Canfield Cres & Woodbine Dr**
**Wednesday, April 17, 2019**

**Project:** #5771: Canfield Crescent Traffic Engineering Advice

**Municipality:** North Vancouver

**Weather:** Cloudy

**Vehicle Class:** All Motorized Vehicles

### Afternoon Peak Period

#### Peak Hour Traffic by Movement

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<tr>
<th>Time</th>
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<th>SOUTH Approach</th>
<th>WEST Approach</th>
<th>EAST Approach</th>
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### Intersection Peak Hour is Highlighted in YELLOW
### Project: #5771: Canfield Crescent Traffic Engineering Advice
- **Location:** Canfield Cres & Woodbine Dr
- **Municipality:** North Vancouver
- **Weather:** Cloudy
- **Vehicle Class:** Passenger Cars

#### Afternoon Peak Period

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<th>SOUTH Approach</th>
<th>WEST Approach</th>
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Canfield Cres & Woodbine Dr

Wednesday, April 17, 2019

Afternoon Peak Period

Peek Hour Traffic by Movement

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Intersection Peak Hour is Highlighted in YELLOW
Project: #5771: Canfield Crescent Traffic Engineering Advice
Municipality: North Vancouver
Weather: Cloudy
Vehicle Class: Bicycles

Note: Crosswalk bike volumes shown are cyclists who rode their bike across the crosswalk and are not included in the pedestrian volume totals.
### Vehicle Classification Summary

**Project:** #5771: Canfield Crescent Traffic Engineering Advice  
**Municipality:** North Vancouver  
**Weather:** Cloudy

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### Morning Peak Period

#### Peak Hour Traffic by Movement

8:00 AM to 9:00 AM

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**Highland Blvd & Woodbine Dr**

*Project: #5771: Canfield Crescent Traffic Engineering Advice*

*Municipality: North Vancouver*

*Weather: Cloudy*

*Vehicle Class: All Motorized Vehicles*

---

**Intersection Peak Hour is Highlighted in YELLOW**

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<tr>
<th>Time</th>
<th>NORTH Approach</th>
<th>SOUTH Approach</th>
<th>WEST Approach</th>
<th>EAST Approach</th>
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- **Time**: 7:00, 7:15, 7:30, 7:45, 8:00, 8:15, 8:30, 8:45

---

*Wednesday, April 17, 2019*
## Highland Blvd & Woodbine Dr

**Morning Peak Period**

### Project: #5771: Canfield Crescent Traffic Engineering Advice
- **Municipality:** North Vancouver
- **Weather:** Cloudy
- **Vehicle Class:** Passenger Cars

### Peak Hour Traffic by Movement

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<tr>
<th>Time</th>
<th>NORTH Approach</th>
<th>SOUTH Approach</th>
<th>WEST Approach</th>
<th>EAST Approach</th>
<th>PEDESTRIANS</th>
<th>Total Volumes</th>
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Intersection Peak Hour is Highlighted in **YELLOW**

Wednesday, April 17, 2019

8:00 AM to 9:00 AM
Highland Blvd & Woodbine Dr
Wednesday, April 17, 2019

Morning Peak Period

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Vehicle Class: Heavy Vehicles (3 or more axles)

Intersection Peak Hour is Highlighted in **YELLOW**
#5771: Canfield Crescent Traffic Engineering Advice

## Morning Peak Period

### Project:
Highland Blvd & Woodbine Dr

### Municipality:
North Vancouver

### Weather:
Cloudy

### Vehicle Class:
Bicycles

### Note:
Crosswalk bike volumes shown are cyclists who rode their bike across the crosswalk and are not included in the pedestrian volume totals

#### Peak Hour Traffic by Movement

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<th>SOUTH Approach</th>
<th>WEST Approach</th>
<th>EAST Approach</th>
<th>BIKES in X-WALKS</th>
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**Project:** #5771: Canfield Crescent Traffic Engineering Advice

**Municipality:** North Vancouver

**Weather:** Cloudy

**Vehicle Class:** All Motorized Vehicles

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### Peak Hour Traffic by Movement

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<th>Time</th>
<th>NORTH Approach</th>
<th>SOUTH Approach</th>
<th>WEST Approach</th>
<th>EAST Approach</th>
<th>PEDESTRIANS</th>
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**Intersection Peak Hour is Highlighted in YELLOW**
### Midday Peak Period

#### Project:
#5771: Canfield Crescent Traffic Engineering Advice

#### Municipality:
North Vancouver

#### Weather:
Cloudy

#### Vehicle Class:
Passenger Cars

#### Peak Hour Traffic by Movement

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<th>SOUTH Approach</th>
<th>WEST Approach</th>
<th>EAST Approach</th>
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**Intersection Peak Hour is Highlighted in YELLOW**
### Project: #5771: Canfield Crescent Traffic Engineering Advice

#### Midday Peak Period

**Highland Blvd & Woodbine Dr**

**Wednesday, April 17, 2019**

**Municipality:** North Vancouver  
**Weather:** Cloudy  
**Vehicle Class:** Heavy Vehicles (3 or more axles)

#### Peak Hour Traffic by Movement

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<th>SOUTH Approach</th>
<th>WEST Approach</th>
<th>EAST Approach</th>
<th>PEDESTRIANS</th>
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*Intersection Peak Hour is Highlighted in YELLOW*
**Highland Blvd & Woodbine Dr**

**Afternoon Peak Period**

**Project:** #5771: Canfield Crescent Traffic Engineering Advice

**Municipality:** North Vancouver

**Weather:** Cloudy

**Vehicle Class:** All Motorized Vehicles

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**Peak Hour Traffic by Movement**

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<th>EAST Approach</th>
<th>PEDESTRIANS</th>
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**Intersection Peak Hour is Highlighted in YELLOW**
Highland Blvd & Woodbine Dr
Wednesday, April 17, 2019
Afternoon Peak Period

Project: #5771: Canfield Crescent Traffic Engineering Advice
Municipality: North Vancouver
Weather: Cloudy
Vehicle Class: Passenger Cars

Peak Hour Traffic by Movement

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<th>Time</th>
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Total Volumes

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Intersection Peak Hour is Highlighted in YELLOW
Project: #5771: Canfield Crescent Traffic Engineering Advice
Municipality: North Vancouver
Weather: Cloudy
Vehicle Class: Heavy Vehicles (3 or more axles)

Afternoon Peak Period

Peak Hour Traffic by Movement

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<tr>
<th>Time</th>
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Intersection Peak Hour is Highlighted in YELLOW
### Peak Hour Traffic by Movement

**Highland Blvd & Woodbine Dr**

**Project:** #5771: Canfield Crescent Traffic Engineering Advice

**Municipality:** North Vancouver

**Weather:** Cloudy

**Vehicle Class:** Bicycles

**Note:** Crosswalk bike volumes shown are cyclists who rode their bike across the crosswalk and are not included in the pedestrian volume totals

#### Highland Blvd & Woodbine Dr

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3155 / 3175 Canfield Crescent, North Vancouver

Construction Traffic Management Plan (CTMP)

Revision 2 – October 4th, 2019
(all information subject to change per Development Permit Requirements)

Project Developer

Canfield Crescent L.P.

Architect/Agent

Grimwood Architecture + Interior Design

Construction Consultant

ETRO Construction
PART A – PROJECT DETAILS

PROJECT DESCRIPTION
The proposed Development consists of four two-story wood-frame duplexes over a common underground concrete parkade. The lot is 14,178 sf. and is bordered by Highland Boulevard to the northwest, Woodbine Drive to the southwest and Canfield Crescent to the east.

CONTACT INFORMATION
During the pre-construction phase, a single point of contact will be designated to handle all construction related communications for the duration of the project. This information will also be posted on site as well as distributed as part of the project notifications.

SCHEMATIC SITE PLAN
Refer to attached Appendix A1.

WORK TO BE PERFORMED
The following is a high level list of construction activities (in sequence):
- Demolition of existing structures & site clearing
- Excavation & shoring
- Below grade structure (concrete)
- Above grade structure (wood-frame)
- Building envelope & finishes
- Landscaping
- Off-site civil

As the site is relatively small, the new townhomes will be built simultaneously.

CIVIL WORKS
New civil works are currently being discussed and finalize with the DNV.

The site civil work will take approximately 6 – 8 weeks to complete. Dates and durations will be confirmed once final design is complete.

ON-STREET BUILDING ZONE, DELIVERIES & PARKING
The intent is to keep all construction related activities confined to within the site with the exception of concrete pumps & trucks and major material deliveries. See attached Appendix A1 for concrete pump & delivery locations. Access to all driveways along Canfield Cr. will be maintained at all times during construction. Two-way traffic control will be in-place during all concrete pours, excavation removals and major material deliveries.
There is currently no on-street parking along this block of Highland Blvd or Woodbine Dr. Canfield Cr has a gravel shoulder along the site side of the street (no meters or marked stalls), some of which is being used as parking. The site fence and construction activities will require that no cars park along the west side of Canfield Crescent. The Boulevard and parking area along Canfield Cr. will be within the site fencing and will be rented from the DNV for a fee of $0.25/m²/day, along with any other temporary street use areas such as the concrete delivery zone.

No on-street building zones are anticipated to be required. The activities noted above will make use of on-site staging & delivery areas and occasional use of curb lanes. All curb lane activities will be coordinated with nearby construction sites to avoid major activities taking place on the same day.

Pending final design, it is anticipated that some onsite parking will be available for employee/trade use. Possible locations for trades parking have been identified at 3105-3115 Crescentview Drive, 3260 Edgmont Blvd, and 3015-3059 Woodbine Dr. Due to the small scope of the project, the Site will have 1-15 trades/day during the 14 month build. The Developer will provide proof of parking stalls rentals for each trade vehicle throughout the build schedule.

**PART B – SCHEDULE**

Pending final design confirmation, construction is anticipated to take approximately 14 months to complete. Refer to attached Appendix B1 – CTMP Construction Schedule for durations of specific activities.

**HOURS OF WORK**

Construction activities will conform to the District of North Vancouver Noise Regulation Bylaw hours (07:00 – 20:00 Monday – Friday and 09:00 – 17:00 Saturdays).

Should it be required to work outside of these times for concrete pours or school drop-off/pick-up an application for bylaw variance will be made. Notification signage will be provided in advance.

**PART C – MOBILITY IMPACT**

The vast majority of work will be contained within the site fencing with very little impact to the surrounding sidewalks and roadways.

**USER IMPACT & MITIGATION**

Impact to the following groups have been considered while developing the construction plan:

- **Pedestrians & Disabled Persons:** the existing sidewalk along Highland Blvd will remain open during construction. This sidewalk will need to be closed for a short
duration near the end of the project to complete the re-work required in this area. During this time, pedestrian traffic will be directed to use the sidewalk on the other side of Highland Blvd. There are no sidewalks adjacent to the site along Woodbine Dr or Canfield Cr. Foot traffic access to all residences of Canfield Cr will be maintained for the duration of the project in its current form.

- **Cyclists:** no impact to cyclist traffic is anticipated.
- **Transit Service:** To improve pedestrian access to local bus service during construction it is recommended that Translink move the #246 Highland bustop 60ft North to the next block. #246 Highland, #249 Delbrook, #230 Upper Lonsdale, #232 Grouse routes and schedules will not be affected or close during construction.
- **Emergency Vehicles:** unimpeded access to all roads and residences throughout construction.
- **Trucks & General Traffic:** very minimal affect is anticipated during general construction activities along all three adjacent roadways. Access to driveways along Canfield Cr will be maintained at all times. Activities that impact any of the roadways will be coordinated and maintained by traffic control personnel with sufficient notice posted and distributed to all affected parties.

Deliveries will be made to the on-site delivery zone with no impact to surrounding roadways as indicated on Appendix A1-Site Plan. Vehicular and pedestrian access to Canfield Crescent residences will be maintained via the north end of Canfield Cr, off Highland Blvd at all times. Concrete pours and major deliveries may occasionally reduce traffic along Woodbine Dr to single lane alternating, implemented and monitored by traffic control personnel. Concrete pours will only take place during the first 3 months of construction. **Highland and Woodbine will never be closed off to vehicles, cyclists or pedestrians during constrution.**

Every effort will be made to minimize impact to the adjacent roadways. All traffic delays will meet the DNV’s guidelines for traffic stoppage during construction.

**TRUCK TRIPS & STAGING**

During excavation & concrete pours (approximately three months), it is anticipated that there will be up to 20 trucks/day up to 4 trucks/hour 1-2 times per week. During these times, the onsite delivery zone along Canfield Cr can be extended to accommodate the staging of two additional trucks. **The highest volume of trucking will be scheduled during non-peak hours and not conflict with highland School drop-off/pick-up. (10:00 – 14:00). Notification signage will be updated.** All trucking will adhere to the DNV noise bylaws or a variance permit will be obtained.

**TRUCK ROUTING & COMMUNICATION**

The trucking route will be along Woodbine Dr to Queens Rd to Westview Dr and onto Highway 1 (see attached Appendix C1). A copy of this CTMP along with all of its requirements will be included in all subcontracts which will be enforced for the duration of the project.
OVERSIZED EQUIPMENT
The largest equipment that will be required for this project is a concrete pump truck which measures approximately 40ft (12m) in length. This will be setup at the corner of Woodbine Dr and Canfield Cr as indicated on the site plan. *It will not require any road closure and will be monitored to maintain one-lane traffic control.*

PART D – COMMUNITY IMPACT

PARKING
Refer to Appendix D1 for a detailed breakdown of anticipated parking requirements for each phase of construction. Off-street parking will be secured as necessary to accommodate all Site workers at all times. *Proof of parking will be provided at every stage. Trades vehicles will not impede Canfield resident vehicles at any time.*

CONSTRUCTION CONTROL MEASURES
Construction impact to the surrounding community will be reviewed during the orientation of each new worker onsite and will include the following topics:

- **Noise:** all construction related noise will adhere to the DNV Noise Regulation Bylaw. If noisy work is required to take place outside of these standards, a variance will be applied for a minimum of 10 days prior to the work taking place.

- **Dust:** an Erosion and Sediment Control (ESC) Program will be used on this site. The requirements of this system will be dictated by the recommendations of the geotechnical and civil consultants and may include silt fencing, sediment traps, storm drain inlet protection, wheel wash station, etc. If required, regular street sweeping can take place during the excavation and removal phases.

- **Litter:** general waste and recycling disposal bins will be provided onsite for the duration of construction. Trash cans will also be placed at the site entrance/exit and site trailer for personal garbage / food waste and will be regularly emptied to avoid any rodent issues. Each subcontract will include a clause noting that all subcontractors are responsible for their own daily clean-up which will be strictly enforced. *This will include cigarette butts and it will be monitored daily.*

- **Other Nuisances:** will be addressed in a timely matter as situations arise. A 24 hour contact number will be provided prior to the construction start date and posted on the Project Information Board at the site entrance.

HOURS OF WORK
Construction activities will conform to the District of North Vancouver Noise Regulation Bylaw hours (07:00 – 20:00 Monday – Friday and 09:00 – 17:00 Saturdays). No work is expected to be so disruptive to local traffic that it is necessary to schedule it outside of the permitted working hours. Should this be required, a variance will be applied for and *notification by signage will be provided to the community.*
PART E – COMMUNICATION

NOTIFICATION TO STAKEHOLDERS
A notification of the upcoming project will be distributed to local residents and businesses that may be affected by construction activities. Refer to attached Appendix E1 – Project Notification Area which outlines the stakeholders that will be contacted prior to construction commencement. A sample letter will be provided closer to construction commencement once all contact(s) have been established.

In addition, the following agencies will be notified of traffic disruptions or other activities that may affect the community:
- Coast Mountain Bus Company (Translink)
- Emergency Services
- District of North Vancouver (Transportation, Planning/Permitting, other departments as required)
- Ministry of Transportation and Infrastructure

PROJECT SIGNAGE
Traveler information signage will be provided as necessary at locations sufficiently in advance of construction to allow travelers to choose alternative routes to avoid construction activity. The Developer will provide ongoing project activity information via site notification signage.

A Project Information Board will be posted in a conspicuous location near the site entrance. This will include the Contractor’s contact information, a phone number for public enquiries as well as any ongoing project notifications that have been issued.

PART F – MONITORING

STRATEGY
A Consultant has been engaged to complete a traffic study and will be available to monitor the plan and ensure that all traffic impacts to district roadways are being minimized throughout construction.

CTMP UPDATES
ETRO Construction will provide updates to the CTMP throughout the project to address any deficiencies or additional needs that arise.
PTZ CAMERAS
ETRO Construction will commit to providing Axis Q6055 PTZ camera(s) in Dotworkz enclosures to meet DNV requirements. Quantity and locations TBC.

PART G – COORDINATION

A single point of contact will be assigned to oversee the coordination of this project as it relates to surrounding businesses, residences, roadways and other construction projects in the area. The coordinator will be assigned during pre-construction and remain consistent throughout the project until the point of total completion. Contact information will be posted on the Project Information Board at the site entrance, clearly noted on the project website and be included on all notices, bulletins and communications circulated before, during and after construction. The coordinator will be responsible for working closely with the DNV CTMP Department, public, nearby construction projects and other stakeholders to ensure there is minimal impact to the community for the duration of the project.

Once an approximate construction start date has been established, this section will be expanded to include a map indicating all projects in the area along with details about existing and proposed impacts to the community.

PART H – HIGHWAY USE PERMITS

Although minimal roadway use is anticipated for this project, Highway Use Permits (HUP) and the associated Traffic Management Plans (TMP) will be provided for each phase as per DNV requirements.

PART I – TRAFFIC MANAGEMENT PLANS & WORKS SCHEDULE

TRAFFIC MANAGEMENT PLANS
The CTMP Coordinator will be responsible for providing TMPs for each phase of the project and for each activity that will require a highway to be occupied or disrupted by construction activities. TMPs will be submitted no earlier than ten (10) working days prior to the proposed commencement date and follow all requirements laid out in the DNV CTMP Guidelines.

For full road closures that require transit and/or emergency vehicles re-routes, written approval will be obtained from the appropriate agencies.
WORKS SCHEDULE
A Works Schedule of activities expected to affect the public realm will be provided prior to construction commencement and will be updated every two weeks or more frequently as necessary.

LIST OF APPENDICIES

A1 – Site Plan
A1.1 – Site Features & Dimensions
B1 – Schedule
C1 – Trucking Route
D1 – Project Summary & Site Generated Traffic
E1 – Project Notification Area
APPENDIX A1

- SOUTH END OF CANFIELD CR @ WOODBINE DR WILL BE CLOSED DURING CONCRETE POOLS. ACCESS TO ALL CANFIELD CR RESIDENCES TO BE MAINTAINED AT ALL TIMES VIA NORTH ENTRANCE OFF HIGHLAND BLVD.

- CONCRETE TRUCK DELIVERY, WAITING & LOADING ZONE (POUR DAYS ONLY) CW TWO WAY TRAFFIC CONTROL

- Dimensions must be verified on site. Do not scale off drawings.

- Plans take precedents over elevations. In the absence of relevant Authorities.

- All materials and workmanship must comply with the AUTHORITIES' REQUIREMENTS AND APPROVALS.

- Submit shop drawings to the Architect and Engineer for approval.

- Minimum dimensions are to comply with the BCBC 2012.

- All dimensions must be verified on site.

- It is the Builder's responsibility to notify Grimwood Architecture and to seek prior written approval for materials and workmanship which deviates from instructions provided by the Engineer.

- It is the Builder's responsibility to notify Grimwood Architecture and to seek prior written approval for materials and workmanship which deviates from instructions provided by the Architect.

- All materials and workmanship must comply with the ENGINEER'S REQUIREMENTS AND APPROVALS and the ARCHITECT'S REQUIREMENTS AND APPROVALS.

- The use of this drawing shall be governed by standard copyright law as generally accepted in architectural practice.
<table>
<thead>
<tr>
<th>ID</th>
<th>Task Name</th>
<th>Duration</th>
<th>Start</th>
<th>Finish</th>
<th>Predecessors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Canfield Boutique Homes Construction</td>
<td>56 wks</td>
<td>Mon 7/1/19</td>
<td>Fri 7/24/20</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Demolition &amp; Clearing</td>
<td>4 wks</td>
<td>Mon 7/1/19</td>
<td>Fri 7/26/19</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Tree Removal</td>
<td>2 wks</td>
<td>Mon 7/1/19</td>
<td>Fri 7/12/19</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Existing Structure Abatement</td>
<td>2 wks</td>
<td>Mon 7/1/19</td>
<td>Fri 7/12/19</td>
<td>3,5</td>
</tr>
<tr>
<td>5</td>
<td>Existing Structure Demolition</td>
<td>2 wks</td>
<td>Mon 7/15/19</td>
<td>Fri 7/26/19</td>
<td>3,4</td>
</tr>
<tr>
<td>6</td>
<td>Excavation &amp; Shoring</td>
<td>8 wks</td>
<td>Mon 7/29/19</td>
<td>Fri 9/20/19</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>Below Grade Structure (Concrete)</td>
<td>4 wks</td>
<td>Mon 9/23/19</td>
<td>Fri 10/18/19</td>
<td>6</td>
</tr>
<tr>
<td>8</td>
<td>Above Grade Structure (Wood Frame)</td>
<td>12 wks</td>
<td>Mon 10/21/19</td>
<td>Fri 1/10/20</td>
<td>7</td>
</tr>
<tr>
<td>9</td>
<td>Envelope</td>
<td>12 wks</td>
<td>Mon 1/13/20</td>
<td>Fri 4/3/20</td>
<td>8</td>
</tr>
<tr>
<td>10</td>
<td>Finishes</td>
<td>20 wks</td>
<td>Mon 3/9/20</td>
<td>Fri 7/24/20</td>
<td>9,5</td>
</tr>
<tr>
<td>11</td>
<td>Landscape</td>
<td>10 wks</td>
<td>Mon 4/6/20</td>
<td>Fri 6/12/20</td>
<td>9</td>
</tr>
<tr>
<td>12</td>
<td>Off-Site Civil</td>
<td>6 wks</td>
<td>Mon 2/10/20</td>
<td>Fri 3/20/20</td>
<td>8,6</td>
</tr>
</tbody>
</table>
### Project Summary Sheet:

<table>
<thead>
<tr>
<th>Building site address</th>
<th>3155 / 3175 Canfield Crescent, North Vancouver, BC</th>
</tr>
</thead>
<tbody>
<tr>
<td># of storeys below grade</td>
<td>1</td>
</tr>
<tr>
<td># of storeys above grade</td>
<td>2</td>
</tr>
<tr>
<td>Type of construction (i.e. concrete/woodframe)</td>
<td>Concrete parkade (below ground) with 2 story wood frame structures above</td>
</tr>
<tr>
<td>Total number of months to complete</td>
<td>~14 months</td>
</tr>
<tr>
<td>Contractor</td>
<td>Etro Construction Limited</td>
</tr>
<tr>
<td>Project Manager</td>
<td>Name: Donato Battista</td>
</tr>
<tr>
<td></td>
<td>E-mail: <a href="mailto:donato.battista@etroconstruction.com">donato.battista@etroconstruction.com</a></td>
</tr>
<tr>
<td></td>
<td>Phone: 604-868-8855</td>
</tr>
<tr>
<td>On-site contact</td>
<td>Name: TBD</td>
</tr>
<tr>
<td></td>
<td>Cell: TBD</td>
</tr>
<tr>
<td></td>
<td>E-mail: TBD</td>
</tr>
</tbody>
</table>

### Site Generated Traffic

<table>
<thead>
<tr>
<th>Phase</th>
<th>Dates/ Duration in months</th>
<th># of Trucks/ day</th>
<th># of Workers</th>
<th># of off-street parking stalls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demolition</td>
<td>1 month</td>
<td>1</td>
<td>8</td>
<td>TBC</td>
</tr>
<tr>
<td>Excavation</td>
<td>2 months</td>
<td>m³ removed: 3700</td>
<td>15 per day, once per week</td>
<td>10</td>
</tr>
<tr>
<td>Foundation/ Parkade</td>
<td>1 month</td>
<td>m³ concrete: 700</td>
<td>Slab day: 15 Wall day: 2</td>
<td>20</td>
</tr>
<tr>
<td>Above Grade (Wood Frame)</td>
<td>2.5 months</td>
<td>m³ concrete: 0</td>
<td>1 per week</td>
<td>20</td>
</tr>
<tr>
<td>Finishes</td>
<td>7 months</td>
<td>2 per week</td>
<td>36</td>
<td>TBC</td>
</tr>
<tr>
<td>Landscape</td>
<td>2.5 months</td>
<td>5 per day for 2 weeks</td>
<td>8</td>
<td>TBC</td>
</tr>
<tr>
<td>Off-site Civil</td>
<td>1.5 months</td>
<td>2 per week</td>
<td>8</td>
<td>TBC</td>
</tr>
</tbody>
</table>
Recommended to move existing #246 Highland bus stop 60' North to the next block.
CONSTRUCTION/TRAFFIC MANAGEMENT PLAN

TRADES MANAGEMENT
- Average number of trades on site per day: 5-10
- Trades parking to be located off-site (developer to secure trades parking in advance of construction)
- Trades drop-off point to be confirmed before construction begins
- Work hours and noise levels to comply with DNV Bylaw

SITE MANAGEMENT
- Advance notifications of truck routes to be posted on site
- Main truck delivery point located at corner of Woodbine Avenue + Canfield Crescent (Woodbine down to one lane, not closed)
- Site flaggers on site during deliveries, hauls, pours, and other related construction activity
- Highland/Woodbine intersection to remain open during construction
- Bus stop to be re-located south of Woodbine during construction
- Best practices for sediment control per DNV Bylaw
- Deliveries scheduled within allowable work hours
- Canfield Crescent residents to have access via Highland Boulevard at all times (flagged as required)

TIMELINE (approximately 16 months)

**Demo**
- 2 weeks
- 2 trades
- 2 truck load removal per day
- Noise level 3/5

**Excavation**
- 1 month
- 5 trades
- 2 truck removal per hour
- Noise level 3/5

**Parkade**
- 2 months
- 10 trades
- 2 concrete pours per week
- 5 deliveries per day
- Noise level 2/5

**Framing**
- 4 months
- 10 trades
- 5 deliveries per day
- Noise level 2/5

**Façade**
- 4 months
- 10 trades
- 5 deliveries per day
- Noise level 2/5

**Interiors**
- 5 months
- 15 trades per day
- 5 deliveries per day
- Noise level 1/5
Re: 3155 & 3175 Canfield Crescent, North Vancouver, BC

For: I4 Property Group

** Report revised to inventory tree species on east side of Canfield Crescent, in reaction to city request for civil works on this side of the street. Works include, road expansion, curb, gutter.

1.0 Introduction:

A site visit was requested by the agent to review the quality of existing significant and bylaw protected trees at the site associated with a proposed development. We were provided with a copy of the topographical survey plan, the proposed form of development, and site specific comments from the district of North Vancouver. Only the trees detailed in this report were assessed. The purpose of this review is to determine the existing conditions of the subject trees, including health and structure, and to determine the trees viability based on the proposed form of development. This report will be submitted to meet municipal permitting requirements.

We note that the site specific comments provided by the District of North Vancouver have several requirements that M2 is unable to provide in this preliminary report, due to the absence of finalized civil and landscape plans. This includes:

- A tree/hedge impact assessment of the final project design including any offsite infrastructure improvements. *Awaiting finalized civil plans for undergrounding hydro and installation of a sidewalk along Woodbine Drive.*
- A detailed sustainable landscape plan. *Coordination will be required in the future for creating a tree replacement plan.*

Tree inspection and analysis used the standardized VTA (Visual Tree Assessment) to identify species, size, condition, outward signs of structural defect(s), health deficiencies, and environmental conditions potentially impacting the health or structural integrity of the tree(s). Trees have been tagged showing numbers for inventory and reference purposes and photos have been taken for file and report reference purposes. A detailed inspection including aerial inspection, decay mapping, excavation explorations and root mapping was not performed.
2.0 Scope of Work:

Our scope of work is defined by the owner as follows:
   a) Assess bylaw size trees within the site and 5m of property line and of neighbouring properties’
   b) Assess the feasibility of retaining trees on the site, on neighboring properties and on city property in association with the form of development proposed.
   c) Provide mitigation/protection comments.

3.0 Observation:

The image above is taken from Google maps and the subject site is shown outlined in red.

The property is located in the Edgemont village area of North Vancouver, east of the Trans-Canada Highway, and between Capilano River, and Mosquito Creek. The property is bordered with commercial businesses to the west, a senior’s facility to the north, and single family residences to the east and south.

Street/City Trees

Several city trees exist along the northern property line, on the boulevard between the 3175’s northern fence line, and the sidewalk. In addition to one shared tree (tree 1826), there are 10 bylaw sized bitter cherry trees, and one holly tree.
Environmental, Drainage and Wildlife Comments

There are no observed birds’ nests and no significant wildlife values noted of the site. The Site slopes gently to the southwest, and no significant drainage issues were notes on site.

Existing Trees / Vegetation

The existing trees on site consist mainly of native evergreen conifers: hemlock, Douglas fir and western red cedar in the setback areas of the subject properties. There is also a prevalence of invasive English holly trees on site, much of which have reached bylaw size. Other trees on site include one spruce tree, a sawara cypress, and a shared Lawson cypress. Additionally, there are several clumps of vine maple throughout the property, none of which have reached bylaw size.

The trees that border Woodbine Drive are in close proximity to an overhead powerline, and most of these trees have either been topped or pruned back from the line. The health of these trees is further compromised by the prevalence of girdling ivy, and signs of stress are evident. Additionally, there is a large diameter fallen nurse log, on which several trees are growing. The nurse log is rotting quite noticeably, raising structural concerns for some of the trees. Furthermore, there are 10 bylaw sized western red cedar trees in a hedgerow bordering the northern extent of Woodbine drive. Girdling ivy is less of a factor for these trees; however, they have all been topped for the hydro lines, and have been hedged in a rectangular form. These 10 trees are known as HR1 for the purpose of this report.

While English ivy is prevalent throughout the entire site, it has been cut back, at least partially from most of the trees that are not along Woodbine Drive. English ivy is the dominant ground cover, intermixed with sword fern and Himalayan blackberry.

There are 10 offsite bitter cherry trees outside of the fence line along Highland Boulevard. They are all between 10 and 15 cm, and for the purpose of this report, are known as hedgerows to denote the separate cohorts. As such these trees are known as HR2, and HR3, which comprise 4 and 6 bitter cherry trees respectively. There is additionally one offsite holly tree in this general area on city property.

We note that several bylaw sized trees between 10 and 20 cm were not located on the survey provided to M2, and that their location is approximate on the plans. The trees include: 1858, 1859, 1860, 1861, 1862, 1867, HR1, HR2, and HR3. We note that although the approximate location of tree 1862 is shown inside the property line on the plans, it may in fact be on City property.

** Additional inventory has been included for 4 lots on east side of Canfield Crescent and 1 lot on Highland Drive. These have been inventoried by request from the developer, in response to the request from the District that road/civil works be proposed on east side of Canfield Crescent. Proposed civil drawings have been received and reviewed in relation to existing vegetation, and this inventory provides comment on amount of anticipated disturbance to existing condition by the proposed civil works.

5 Lots potentially may be impacted, of these lots, 4 have installed landscape outside their property lines, with vegetation on city boulevard. M2 has inventoried tree species only; both by-law size and undersize trees to provide information for developer. The five lots in question are: 3230 Highland Drive, and 3178, 3164, 3152, 3130 Canfield Crescent. We note 3164 Canfield does not have any planting beyond lawn that is in the proposed area of disturbance.
We understand that 3230 Highland Drive also has development plans proposed to the District; as these plans are not available, we are unable to comment on the potential disturbance the works associated with this development may do.

For information on individual trees mentioned below, please refer to attached tree inventory. Tree Numbers are referenced (OS-A through to OS-I).

In review of the proposed civil works, please see the following per lot information:

<table>
<thead>
<tr>
<th>Lot</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>3230 Highland</td>
<td>2 trees noted; both trees appear to be severely impacted by proposed works and are not easily relocatable. Note this lot appears to be under separate development proposal.</td>
</tr>
<tr>
<td>3178 Canfield</td>
<td>1 tree noted; set back well within residential yard, retain and protect per inventory and plan.</td>
</tr>
<tr>
<td>3164 Canfield</td>
<td>No offsite plantings, any on-site plant material appears to be set back well enough that no disturbance is anticipated.</td>
</tr>
<tr>
<td>3152 Canfield</td>
<td>3 trees either shared or on city boulevard; relatively newly installed, easily relocated to on-site conditions.</td>
</tr>
<tr>
<td>3130 Canfield</td>
<td>3 trees either shared or on city boulevard; associated vegetation does not appear to be impacted. We have provided distances for tree fencing to be installed on plan and the tree inventory.</td>
</tr>
</tbody>
</table>

 Attached Photos:

Photo 1: View looking west toward woodbine drive

Photo 2: Tree 1809 with sweep at base, suppressed by 1810
<table>
<thead>
<tr>
<th>Photo 3: Ivy at base of 1810, rapid grade change due to nurse log</th>
<th>Photo 4: Rake in foreground to provide reference of height of nurse log</th>
</tr>
</thead>
<tbody>
<tr>
<td>Photo 5: Rot pocket at base of 1810</td>
<td>Photo 6: Codominant stems of 1810, with typical ivy condition of trees along Woodbine Drive</td>
</tr>
<tr>
<td>Photo 7: View looking north west, nurse log extends down property tree 1814 in background</td>
<td>Photo 8: Tree 1814 on nurse log, severely rotting condition of nurse log</td>
</tr>
</tbody>
</table>
Photo 9: Condition along Woodbine Drive

Photo 10: Tree 1816, two large diameter Douglas fir with codominant hemlock combined ~183 cm DBH

Photo 11: Tree 1816 large structural root growing East towards house

Photo 12: 1816 codominant condition of hemlock to large ~100 cm Douglas fir stem

Photo 13: Birch tree between houses

Photo 14: Sawara cypress 1821 and holly 1822
<table>
<thead>
<tr>
<th>Photo 15: Rot and Ivy at base of 1823</th>
<th>Photo 16: Shared Lawson cypress with large fork</th>
</tr>
</thead>
<tbody>
<tr>
<td>Photo 17: Canopy condition of Lawson cypress</td>
<td>Photo 18: City holly tree, pruned for bus stop</td>
</tr>
<tr>
<td>Photo 19: Hedgerow 1 (HR1)</td>
<td>Photo 16: HR2 and HR3 bitter cherry trees on Highland boulevard</td>
</tr>
</tbody>
</table>
3.1 Recommendation:

The mandate from the client to the Arborist was to review the existing trees on site and within 5m of the property line for their overall health and quality and to provide comments to their ongoing viability.

The preliminary recommendations of this report have been made in the absence of a landscape plan, and finalized civil and services plans. As such a tree/hedge impact assessment of the final project design including offsite infrastructure improvements, as well as a tree replacement plan will be provided at a later date.

Due to the significant excavation and regrading requirements for the proposed underground parking area, all on-site trees and all off-site trees within 5 meters of the property line are recommended for removal. The subject site is focal within the existing tree scene, and special measure will need to be undertaken to restore a reasonable amount of canopy cover, which includes but is not limited to: undergrounding the hydro lines along Woodbine Drive to allow for planting of larger tree species, and a carefully designed landscape plan that takes into account the soil volume requirements of the District of North Vancouver tree bylaw.
While the tree/hedge impact assessment will further elaborate on this topic, we do not anticipate that the removal of these trees will severely impact the surrounding trees and hedges on neighbouring properties. While the subject site provides wind sheltering for the trees on the neighbouring properties, we would not consider them to be stand condition with one another. Additionally, the trees located within the perpendicular openings to the prevailing winds are all fairly open grown, and we anticipate that these trees have developed an acceptable degree of wind firmness independent of the subject site trees.

3.2 Replacement trees:

In accordance with the District of North Vancouver’s tree protection bylaw 7671, large diameter trees >75 cm have a 3:1 replacement tree requirement as the site is greater than 420 square meters (~2110 square meters). There are 4 large diameter trees on site. There are an additional 38 bylaw sized trees on site as well as 11 off site bylaw sized trees that require 1:1 replacement value. Accordingly, a total of 61 replacement trees are required for this site. As suitable planting locations on this site are anticipated to be fairly limited due to the underground parking, a fee-in-lieu option may need to be considered in the instance that 61 trees cannot be planted. The fee in lieu option is outlined under additional environmental compensation permit fees, which is specified in Schedule B to the Fees and Charges Bylaw.

4.0 Limitations

We attach the following clauses to this document to ensure you are fully aware of what is technically and professionally realistic in the assessment and preservation of trees.

This Arboricultural field review report is based only on site observations on the date noted. Effort has been made to ensure that the opinions expressed are a reasonable and accurate representation of the condition of all trees reviewed. The assessment was completed based on visual review only. None of the trees were dissected, cored, probed or climbed. All trees or groups of trees have the potential to fail. No guarantees are offered or implied by M2 Landscape Architecture or their employees that the trees are safe given all conditions. Trees can be managed, but they cannot be controlled. To live, work or play near trees is to accept some degree of risk.

The assessment provided was based on preliminary information only. The opinions expressed in this report are valid for a period of one year only. Any trees retained should be reviewed on a regular basis to ensure reasonable safety.

The information provided in this report is for the exclusive use of our client and may not be reproduced or distributed without permission of M2 Landscape Architecture.

Please contact the undersigned if you have any questions or concerns regarding this matter.

Yours Truly,

Meredith Mitchell
ISA Certified Arborist PN6089A
M2 Landscape Architecture
<table>
<thead>
<tr>
<th>Tree Number</th>
<th>Species</th>
<th>DBH cm</th>
<th>Height ~m</th>
<th>Protected tree size</th>
<th>Health</th>
<th>ON SITE</th>
<th>Location</th>
<th>Description</th>
<th>Comments</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1809</td>
<td>Western red cedar, Thuja plicata</td>
<td>81</td>
<td>25</td>
<td>Y</td>
<td>M-G</td>
<td>Y</td>
<td>S</td>
<td>Ivy covered, suppressed by 1810 from the East giving flagged form, slight sweep at base, otherwise good form</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>1810</td>
<td>Hemlock, Tsuga heterophylla</td>
<td>87</td>
<td>30</td>
<td>Y</td>
<td>M</td>
<td>Y</td>
<td>S</td>
<td>Codominant stems at 8 feet, nurse log grown, nurse log is severely decomposing, covered in substantial ivy likely impacting health</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>1811</td>
<td>Western red cedar, Thuja plicata</td>
<td>47</td>
<td>22</td>
<td>Y</td>
<td>M-P</td>
<td>Y</td>
<td>S</td>
<td>Suppressed by 1810, growing on same nurse log, branching mainly on east side overhanging structure</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>1812</td>
<td>Western red cedar, Thuja plicata</td>
<td>27</td>
<td>5</td>
<td>Y</td>
<td>P</td>
<td>Y</td>
<td>S</td>
<td>Severely covered in Ivy, topped for hydro at approximately 15 feet</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>1813</td>
<td>Western red cedar, Thuja plicata</td>
<td>31</td>
<td>18</td>
<td>Y</td>
<td>P</td>
<td>Y</td>
<td>S</td>
<td>Girdled by Ivy, Ivy goes all the way to the top of the crown, extremely thin crown,</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>1814</td>
<td>Western red cedar, Thuja plicata</td>
<td>27.5</td>
<td>5.0</td>
<td>Y</td>
<td>M</td>
<td>Y</td>
<td>S</td>
<td>Nurse log grown, nurse log is rotted severely underneath. Fairly substantial sweep at base, self correcting with rapid taper</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>1815</td>
<td>Western red cedar, Thuja plicata</td>
<td>31.0</td>
<td>15.0</td>
<td>Y</td>
<td>M-P</td>
<td>Y</td>
<td>SW</td>
<td>Sweep at base, self corrected, hydropurned on W side. Main top is thinning and has lost apical dominance, transferred to a branch that sweeps out from tree approximately 5 feet at a height of approx 30 feet. Poor structure</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>1816</td>
<td>Douglas fir, Pseudotsuga menziesii (2 stems) codominant with hemlock, Tsuga heterophylla</td>
<td>Fir: 58, 100 Hemlock:35</td>
<td>35</td>
<td>Y</td>
<td>M-G</td>
<td>Y</td>
<td>SW</td>
<td>Two large Douglas fir main stems with substantial root flare and evidence of structural roots growing towards house, codominant hemlock tree growing from root ball of Douglas firs, codominantly attached until approximately 10 feet</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
</tbody>
</table>

p=poor; m=moderate; g=good;
OS=Off Site; TPF=tree protection fencing HR= Hedgerow

2018-05-18
<table>
<thead>
<tr>
<th>Tree Number</th>
<th>Species</th>
<th>DBH cm</th>
<th>Height ~m</th>
<th>Protected tree size</th>
<th>Health</th>
<th>ON SITE</th>
<th>Location</th>
<th>Description</th>
<th>Comments</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1817</td>
<td>Western red cedar, Thuja plicata</td>
<td>55</td>
<td>30</td>
<td>Y</td>
<td>G</td>
<td>Y</td>
<td>W</td>
<td>Healthy tree, large ivy has been severed from trunk but remains in place, 2 tops at approximately 50 feet, slightly suppressed by tree 1816</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>1818</td>
<td>Douglas fir, Pseudotsuga menziesii</td>
<td>95</td>
<td>35</td>
<td>Y</td>
<td>G</td>
<td>Y</td>
<td>W</td>
<td>Evidence of wound at approximately 50 feet, with three main tops resulting, otherwise healthy tree</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>1819</td>
<td>Western red cedar, Thuja plicata</td>
<td>60</td>
<td>30</td>
<td>Y</td>
<td>G</td>
<td>N</td>
<td>Center</td>
<td>Large ivy partially cut, good flare, very close to house and cuts through fence</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>1820</td>
<td>Birch, Betula spp.</td>
<td>39</td>
<td>10</td>
<td>Y</td>
<td>M-G</td>
<td>Y</td>
<td>Center</td>
<td>Phototropic lean, does not self correct. Canopy flagged over house, moss covered, good bud set</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>1821</td>
<td>Sawara Cypress, Chamaecyparis pisifera</td>
<td>37</td>
<td>10</td>
<td>Y</td>
<td>G</td>
<td>Y</td>
<td>E</td>
<td>Splits to two stem at approximately 8 feet, aggressive ivy growing up back side, canopy slightly suppressed to the East by 1822</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>1822</td>
<td>Holly</td>
<td>Multi: 17, 15, 14, 13</td>
<td>4</td>
<td>Y</td>
<td>G</td>
<td>Y</td>
<td>E</td>
<td>4 stems good form, growing onto road, ivy beginning to grow up stems</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>1823</td>
<td>Hemlock, Tsuga heterophylla</td>
<td>61</td>
<td>30</td>
<td>Y</td>
<td>M-P</td>
<td>Y</td>
<td>W</td>
<td>Nurse log grown, significant lean towards Highland boulevard, evidence of root infection at bole, bole split with black rot</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>1824</td>
<td>Hemlock, Tsuga heterophylla</td>
<td>54</td>
<td>30</td>
<td>Y</td>
<td>M</td>
<td>Y</td>
<td>W</td>
<td>Mechanical damage to bole with good compartmentalization, good crown form with branches right down to the ground, Tree sounds hollow</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>Tree Number</td>
<td>Species</td>
<td>DBH cm</td>
<td>Height ~m</td>
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</tr>
<tr>
<td>1825</td>
<td>Western red cedar, <em>Thuja plicata</em></td>
<td>48.5</td>
<td>25.0</td>
<td>Y</td>
<td>M-G</td>
<td>Y</td>
<td>W</td>
<td>Ivy to top of canopy, good form doesn't seem stressed, good flare</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>1826</td>
<td>Lawson cypress, <em>Chamaecyparis lawsoniana</em></td>
<td>Multi: 36, 46</td>
<td>10</td>
<td>Y</td>
<td>G</td>
<td>Shared</td>
<td>N</td>
<td>Splits to two stems at approximately 1 meter, union is quite wide allowing for rot to infiltrate. Larger stem has quite significant lean to the East, otherwise full crown form and appears in good health</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>1827</td>
<td>Holly</td>
<td>26.0</td>
<td>6.0</td>
<td>Y</td>
<td>G</td>
<td>N</td>
<td>N</td>
<td>Good form, appears in good health, has been pruned on North side for bus stop clearance</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>1828</td>
<td>Red Alder, <em>Alnus rubra</em></td>
<td>10</td>
<td>5</td>
<td>Y</td>
<td>M-P</td>
<td>Y</td>
<td>S</td>
<td>Small tree, suppressed, phototropic lean, poor health, not survey located, location is approximate on plan</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>1830</td>
<td>Western red cedar, <em>Thuja plicata</em></td>
<td>11</td>
<td>5</td>
<td>Y</td>
<td>M-P</td>
<td>Y</td>
<td>S</td>
<td>small suppressed tree with rapid taper, branches extend to boulevard, not survey located, location is approximate on plan</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>1831</td>
<td>Western red cedar, <em>Thuja plicata</em></td>
<td>19</td>
<td>5</td>
<td>Y</td>
<td>M-P</td>
<td>Y</td>
<td>S</td>
<td>girdling ivy up to top of canopy, small suppressed tree, not survey located, location is approximate on plan</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>1832</td>
<td>Western red cedar, <em>Thuja plicata</em></td>
<td>12</td>
<td>5</td>
<td>Y</td>
<td>M-P</td>
<td>Y</td>
<td>S</td>
<td>Edge of property line close to road, hydro pruned, girdling ivy, not survey located, location is approximate on plan</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>1833</td>
<td>Spruce spp., <em>Picea spp.</em></td>
<td>19</td>
<td>10</td>
<td>Y</td>
<td>M</td>
<td>Y</td>
<td>S</td>
<td>Decent health, girdling ivy to top of crown, fair amount of live crown area, good bud set</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>Tree Number</td>
<td>Species</td>
<td>DBH cm</td>
<td>Height ~m</td>
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<td>-----------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>1864</td>
<td>Holly</td>
<td>13</td>
<td>6</td>
<td>Y</td>
<td>G</td>
<td>Y</td>
<td>E</td>
<td>Typical form, good health on fence line</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>1865</td>
<td>Holly</td>
<td>11</td>
<td>6</td>
<td>Y</td>
<td>G</td>
<td>Y</td>
<td>E</td>
<td>Typical form, good health on fence line</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>1866</td>
<td>Oak spp. Quercus spp.</td>
<td>Multi: 10, 9</td>
<td>6</td>
<td>Y</td>
<td>G</td>
<td>Y</td>
<td>E</td>
<td>2 stems, juvenile tree, good health, good bud set, not survey located location is approximate on plan</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>1867</td>
<td>Holly</td>
<td>13</td>
<td>6</td>
<td>Y</td>
<td>G</td>
<td>Y</td>
<td>W</td>
<td>Shade grown, dense canopy structure, good health, not survey located location is approximate on plan</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>1868</td>
<td>Holly</td>
<td>11</td>
<td>6</td>
<td>Y</td>
<td>G</td>
<td>Y</td>
<td>N</td>
<td>open grown good structure, typical of species</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>1869</td>
<td>Western red cedar, Thuja plicata</td>
<td>15</td>
<td>10</td>
<td>Y</td>
<td>M</td>
<td>Y</td>
<td>W</td>
<td>suppressed tree, rapid taper, thin crown</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>HR1</td>
<td>Western red cedar, Thuja plicata</td>
<td>10 stems between 10-15 cm</td>
<td>5</td>
<td>Y</td>
<td>M</td>
<td>Y</td>
<td>W</td>
<td>Hedgerow of 10-15cm DBH sized western red cedar, hydroptopped, canopy shaped into square hedge shape on west side, not survey located, location is approximate on plan</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>HR2</td>
<td>Bitter cherry, Prunus emarginata</td>
<td>4 stems between 10-15 cm</td>
<td>10</td>
<td>Y</td>
<td>M</td>
<td>N</td>
<td>W</td>
<td>4 bitter cherry stems between 10 and 15 cm DBH, good form and structure, growing straight up. Fairly substantial brown rot at base of one tree appears to have originated from a mechanical wound, not survey located location is approximate on plan</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
</tbody>
</table>

p=poor; m=moderate; g=good; OS=Off Site; TPF=tree protection fencing HR=Hedgerow 2018-05-18
<table>
<thead>
<tr>
<th>Tree Number</th>
<th>Species</th>
<th>DBH cm</th>
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<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR3</td>
<td>Bitter cherry, <em>Prunus emarginata</em></td>
<td>6 stems between 10-15cm</td>
<td>6</td>
<td>Y</td>
<td>M-P</td>
<td>N</td>
<td>W</td>
<td>6 bitter cherry stems between 10 and 15 cm DBH, poor form with substantial phototropic lean over Highland Blvd, some appear to be dying with lots of dead branches, not survey located location is approximate on plan</td>
<td>Conflicts with excavation and grading requirements for underground parkade</td>
<td>Remove</td>
</tr>
<tr>
<td>OS-A</td>
<td>Japanese Maple, <em>Acer palmatum</em></td>
<td>2 stems, 30,30cm</td>
<td>5</td>
<td>Y</td>
<td>G</td>
<td>Y</td>
<td>Lot 14 (3230 Highland)</td>
<td>good quality japanese maple, 2 stem trunk at 60cm ht, two stems 30cm dia each, canopy 4m from face of trunk, Hydrant approx. 2.5m from north side of trunk. No apparent defects. Currently in area with no conflicts, based on information from civil of proposed civil works, potential conflict with proposed relocation of street light may impact tree</td>
<td>Conflicts with excavation and grading requirements for proposed servicing/lights</td>
<td>TBD</td>
</tr>
<tr>
<td>OS-B</td>
<td>Western Red Cedar, <em>Thuja plicata</em></td>
<td>Cluster; 5 main trunks, approx. 60, 51, 58, 66, 60; total trunk approx. 1.8m dia.</td>
<td>12</td>
<td>Y</td>
<td>M-P</td>
<td>N</td>
<td>Lot 14 (3230 Highland)</td>
<td>Cluster Western Red Cedar, approx. 5 main trunks with additional minor leaders, trunks fused at base indicating potential separate trees. Trunk flare large, base of tree within 1m of top of bank of ditch to west of tree. Major roots visible on surface within yard. Co-dominant growth pattern with trunks, foliage moderate condition with some browning of canopy visible; each major trunk accounts for approx. 20% of canopy; LCR of total tree approx. 80%, large hollow visible in central core of tree; not noted as hollow but additional investigation may be warranted as visible growth of weeds in hollow apparent. Lateral limbs appear healthy, minor limb dieback with some general stress of tree in canopy and minor limb death. Critical root zone based on canopy approx. 4m from base of tree. Proposed civil works within trunk of tree (approx. 1'-10&quot; inside tree to back of curb. Works will require removal of tree.</td>
<td>Conflicts with excavation and grading requirements for proposed servicing/civil works/municipal curb, gutter</td>
<td>Remove</td>
</tr>
<tr>
<td>OS-C</td>
<td>Red Maple cultivar, <em>Acer rubrum</em></td>
<td>69 dia</td>
<td>12m</td>
<td>Y</td>
<td>M-P</td>
<td>N</td>
<td>Lot 13 (3178 Canfield Crescent)</td>
<td>Mature red maple; under stress; large root mass close to surface; previous interference to root zone by new allan block wall installed within 60&quot; base of tree southwest side (in association with new residence assumed). Minor limb dieback, 2 secondary limbs dead and evidence of historic large limb failures. Sapsucker boring evident on south side at 1.2m ht. Crotch with sucker branches at 2m ht. 4 main lateral limbs, ants in tree, historic wood planter wall surrounding base of tree with some discoloration of bark at base. Surface roots mechanically damaged in a few areas (likely lawn mower). Canopy width 6m; pruned on south side.</td>
<td>Critical root zone equivalent to canopy; 6m dia.</td>
<td>Minor impact by development; retain and protect</td>
</tr>
<tr>
<td>OS-D</td>
<td>Bloodgood Japanese Maple, <em>Acer palmatum &quot;Bloodgood&quot;</em></td>
<td>8, 6 dia</td>
<td>3m</td>
<td>N</td>
<td>G</td>
<td>N</td>
<td>Lot 11 (3152 canfield Crescent)</td>
<td>2 stem leader, small japanese maple, good condition, relatively new installed (associated with new residence), 10' width canopy; on city boulevard</td>
<td>Conflicts with excavation and grading requirements for proposed servicing/civil works/municipal curb, gutter; easily relocatable</td>
<td>Relocate</td>
</tr>
<tr>
<td>Tree Number</td>
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</tr>
<tr>
<td>OS-E</td>
<td>Bloodgood Japanese Maple, Acer palmatum ‘Bloodgood’</td>
<td>10, 8, 6 dia</td>
<td>3m</td>
<td>N</td>
<td>G</td>
<td>N</td>
<td>Lot 11 (3152 canfield Crescent)</td>
<td>3 stem leader, small japanese maple, good condition, relatively new installed (associated with new residence), 10’ width canopy; on city boulevard</td>
<td>Conflicts with excavation and grading requirements for proposed servicing/civil works/municipal curb, gutter; easily relocatable</td>
<td>Relocate</td>
</tr>
<tr>
<td>OS-F</td>
<td>Bloodgood Japanese Maple, Acer palmatum ‘Bloodgood’</td>
<td>6, 8, 6 dia</td>
<td>3m</td>
<td>N</td>
<td>G</td>
<td>N</td>
<td>Lot 11 (3152 canfield Crescent)</td>
<td>3 stem leader, small japanese maple, good condition, relatively new installed (associated with new residence), 10’ width canopy; on city boulevard</td>
<td>Conflicts with excavation and grading requirements for proposed servicing/civil works/municipal curb, gutter; easily relocatable</td>
<td>Relocate</td>
</tr>
<tr>
<td>OS-G</td>
<td>Douglas Fir; Pseudotsuga mensiezi</td>
<td>17 dia</td>
<td>5m</td>
<td>N</td>
<td>G</td>
<td>N</td>
<td>Lot 10 (3130 Canfield Crescent)</td>
<td>Small douglas fir; possibly seeded; shared, on property line. Good condition; LCR 70%</td>
<td>Critical root zone equivalent to canopy; 1.5m dia.</td>
<td>Retain and protect; tree fencing 1.5m from face of tree.</td>
</tr>
<tr>
<td>OS-H</td>
<td>Devils walking stick; Aralia spinosa</td>
<td>8 dia</td>
<td>3.5m</td>
<td>N</td>
<td>M</td>
<td>N</td>
<td>Lot 10 (3130 Canfield Crescent)</td>
<td>small newly planted aralia; moderate condition, Shared on city land. Critical root zone small; against small swale area, proposed road works ends at ditch; protect</td>
<td>Critical root zone equivalent to canopy; 1.5m dia.</td>
<td>Retain and protect; tree fencing 1.5m from face of tree.</td>
</tr>
<tr>
<td>OS-I</td>
<td>Sequoia; Sequoiadendron giganteum</td>
<td>13 dia</td>
<td>3.5m</td>
<td>N</td>
<td>M-G</td>
<td>N</td>
<td>Lot 10 (3130 Canfield Crescent)</td>
<td>Relatively new installed sequoia; will have a large taproot; moderate to good condition, LCR 80%. Not on city land. Critical root zone small; against small swale area, proposed road works ends at ditch; protect</td>
<td>Critical root zone equivalent to canopy; 1.5m dia.</td>
<td>Retain and protect; tree fencing 1.5m from face of tree.</td>
</tr>
</tbody>
</table>
March 2, 2021

District of North Vancouver
355 West Queens Road
North Vancouver, BC
V7N 4N5

Attn: Planning and Councillors

RE: 3155 / 3175 Canfield Crescent to be NetZero Ready Certified and Low Emissions

Canfield Crescent LP has contracted E3 Eco Group as the consultant to review the energy efficiency and Green House Gas emissions of their Canfield Crescent development located at 3155 / 3175 Canfield Crescent in the District of North Vancouver. Canfield Crescent LP can confirm they are committing to the following:

1) Step Code Level 5
2) NetZero Ready CHBA Certification
3) No Fossil Fuels (100% electric development)

The commitment is to Certify the project NetZero Ready and meet Level 5 of the BC Energy Step Code. Currently the District only requires Step Code level 3. This shows the commitment of the developer to execute this development as a leading model of enhanced energy efficiency. In addition, the developer is also committing to a fully electric project meaning no fossil fuels for space heating, domestic hot water heating, and cooking. This will be an ultra-low Green House Gas emissions project.

For NetZero compliance Canfield will implement all of the following energy efficiency upgrades. Some of these items may not have been required at Step 3 and will increase the overall construction cost of the project:

i) Triple paned windows range USI 0.8 – 1.2
ii) Exterior insulation 2.0”
iii) Exterior Air Barrier to meet requirement of 1.0 ACH @ 50Pa
iv) Heat Recovery Ventilation with enhanced efficiency >75% SRE
v) Nominal R40-50 insulation in flat roof
vi) Full under slab insulation
vii) PV Ready Design

E3 has completed a plan review and can confirm that the current design lends itself well to NetZero Ready and Step 5. The homes are compact and geometrical making them inherently more energy efficient. In order to meet the commitments E3 recommends that 2” of exterior insulation will be required. In order to incorporate this into the current design Canfield Crescent will need to apply for an exclusion of this 2” from the building setbacks and allowable floor area. This request is similar to allowances made for Passive House buildings. With the additional 2” of exterior insulation the development as designed will meet NetZero Ready and Step 5.

If you have any questions please contact the undersigned,

Emma Conway
NetZero Energy Advisor
E3 Eco Group Inc
emma@e3ecogroup.com
Canfield Crescent LP  
420 – 1112 West Pender Street  
Vancouver, BC  
V6E 2S1  

JUN 27 2018  

June 26th, 2018  
File#: 15670  

Attention: Joelle Calof

Re: Groundwater Investigation Report – Canfield Townhomes  
Canfield Crescent at Highland Boulevard, North Vancouver, B.C.

1.0 INTRODUCTION

We understand that a new townhouse development is proposed at the above referenced location. Preliminary drawings provided by Grimwood Architecture show two stories of above grade townhomes, with roof decks, over a common single storey of below grade parking. We anticipate wood framed construction for the above grade portion of the development and concrete construction for the below grade parking. The proposed elevation of the underground parkade slab varies between 85.3 m and 86.0 m geodetic, whereas existing grades on site vary from 89.0 m at the north end of the site to 88.0 m at the south end of the site.

The following report summarizes the groundwater monitoring program conducted between December 14th, 2017 and June 19th, 2018. This report has been prepared exclusively for Canfield Crescent LP, for their use and the use of others on their design and construction team. We understand it may also be provided to the District of North Vancouver, for use in the development and permitting process, but remains the property of GeoPacific Consultants Ltd.

2.0 SITE DESCRIPTION

The development site is located south of the intersection of Canfield Crescent and Highland Boulevard and is currently occupied by two single storey at grade residential homes with the civic addresses 3155 and 3175 Canfield Crescent. The site is pie shaped with a radius of approximately 45 m. It is bounded by Canfield Crescent to the east, Highland Boulevard to the north, and Woodbine Drive to the south. It slopes gently from north to south with a grade difference of approximately 1 m.

The site is located within the Mosquito Creek Catchment area within the Capilano Watershed. It is centrally located between MacKay Creek to the west and Mosquito Creek to the east.

The location of the site and the surrounding area is shown on the attached plan, Drawing No. 15670-01, presented in Appendix A.

3.0 FIELD INVESTIGATION

On December 5th, 2017, GeoPacific were onsite to investigate the sub-surface conditions and install two monitoring wells using a truck mounted auger rig that was supplied by Uniwide Drilling of Richmond, BC. Prior to the investigation all test hole locations were cleared of underground utilities using our utility locate staff. During the investigation, 2 solid stem auger holes were advanced. The auger holes were drilled to depths of between 4.6 m and 6.1 m below grade.
After the auger holes were completed, monitoring wells were installed in each test hole. The monitoring wells consist of a 50 mm diameter screened PVC pipe that allows continual monitoring of groundwater levels. The area outside of the monitoring well was backfilled with filter sand and sealed with bentonite chips and grout as required by the BC Groundwater Protection Legislation.

4.0 SUBSURFACE CONDITIONS

4.1 Soil Conditions

According to the Geological Survey of Canada Surficial Geology Map 1486A, the site is underlain by Capilano Sediments of the Pleistocene Epoch, which are defined as raised deltaic and channel fill medium sand to cobble gravel up to 15 m thick deposited by proglacial streams and commonly underlain by silty to silty clay loam. The soil profile encountered in our test holes consisted of a thin layer of TOPSOIL and/or FILL underlain by a layer of SAND, then SAND and GRAVEL, followed by SILT.

TOPSOIL/FILL

Each test hole was drilled in grassy/landscaped areas thus the upper layer is comprised of topsoil. Fill was encountered at TH17-02 and consisted of 0.7 m of silty sand containing some gravel and traces of sand and was noted as compact, moist, and brown.

SAND AND GRAVEL/SAND

A surficial layering of sand or sand and gravel followed by sand was encountered within both test holes to a depth of approximately 1.5 m. This layer contained trace to some silt and some cobbles and was noted to be compact to dense, moist, and grey or light brown.

SAND AND GRAVEL

A sand and gravel layer was encountered within both test holes at a depth of 1.5 m and extended to depths ranging from 3.4 m to 3.7 m. The sand and gravel layer was cobbly and contained only traces of silt and was noted as dense or very dense, moist to wet, and grey or brownish grey.

SILT

A silt layer was encountered beneath the sand and gravel layer in both test holes to the final depth of exploration. The silt was observed to be low in plasticity and was free of any sand or gravel. It was noted as stiff and grey or brownish grey.

For a more detailed description of the subsurface soil conditions refer to the test hole logs provided in Appendix B, following this report.

4.2 Groundwater Conditions

Groundwater levels were measured using both manual and automated methods. The following table shows the depth to water levels below current site grades at their respective locations between December 14th, 2017 and June 19th, 2018 using a handheld water level meter. These manual measurements are intended to confirm and verify the automated data obtained from piezometers.
Table 1: Manual Groundwater Measurements At Monitoring Wells

<table>
<thead>
<tr>
<th>Well #</th>
<th>Dec 14th, 2017</th>
<th>Dec 29th, 2017</th>
<th>Mar 19th, 2018</th>
<th>Jun 19th, 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>MW17-01</td>
<td>1.92</td>
<td>1.22</td>
<td>2.03</td>
<td>2.21</td>
</tr>
<tr>
<td>MW17-02</td>
<td>1.58</td>
<td>1.60</td>
<td>1.67</td>
<td>1.46</td>
</tr>
</tbody>
</table>

The following graphs summarize the automated data collected from both monitoring wells and represent fluctuations in groundwater levels at the respective locations.

Figure 1: Average Groundwater Elevation above Sea Level at MW17-01

---

**Ground Surface**

**Proposed Excavation 86.0 m**

---

File #: 15670
Groundwater Monitoring Report – Canfield Crescent, North Vancouver, B.C.
CONULTING GEOTECHNICAL ENGINEERS
Groundwater levels recorded at MW17-01 and MW17-02 follow a similar trend which indicates that they are hydraulically connected. The data also indicates that water levels at both monitoring wells were observed above the proposed excavation. Groundwater at this depth, in this area, is typically perched due to the presence of less permeable layers as per the silt identified at both MW17-01 and MW17-02.

The data from both monitoring wells were graphed with precipitation data collected by Environment Canada from the North Vancouver Wharves weather station. The following graph shows the amalgamated data.
The spikes in groundwater appear to correlate with the precipitation data collected from Environment Canada, as illustrated in Figure 3, above. The correlation is likely a result of precipitation infiltrating through the sandy soils and recharging the perched water table above the low permeability silts.

The following table summarizes water levels recorded during the 6 month monitoring program at the site. Ground surface is reported as well as the maximum and minimum depths to water below current site grades.

<table>
<thead>
<tr>
<th>Well #</th>
<th>Ground Surface (metres above sea level)</th>
<th>Maximum Water Depth Below Ground Surface (m)</th>
<th>Minimum Water Depth Below Ground Surface (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MW17-01</td>
<td>89.0</td>
<td>2.18</td>
<td>1.06</td>
</tr>
<tr>
<td>MW17-02</td>
<td>88.4</td>
<td>1.70</td>
<td>0.40</td>
</tr>
</tbody>
</table>

5.0 DISCUSSION

5.1 General Comments

Based on experience in the area, a static water table is typically expected within very dense sand and gravel deposits below the silt stratum identified at the bottom of our exploration. These confined very dense sand and gravel deposits are found at a depth of approximately 3 to 5 m below ground surface and are believed to be hydraulically connected to MacKay Creek and therefore fluctuate seasonally.

We expect that the water observed within the wells at MW17-01 and MW17-02 represents perched water found within the sands and gravels and above the silt stratum. Moderate inflows should be anticipated initially from approximately 1 m below current site grades but once stabilized, seepage into the excavation area should not exceed 20 L/min and should be managed using pumped sumps.

The District of North Vancouver does not permit permanent pumping of groundwater. As a result, some form of tanking will be required for the below grade structure.

6.0 CONCLUSION

We are pleased to be of assistance to you on this project and trust that our comments and recommendations are both helpful and sufficient for your purposes at this time. If you require any further details or clarifications, please do not hesitate to contact the undersigned.

For:
GeoPacific Consultants Ltd.

Reviewed By:

Nathalie Sahakyan, B.Sc., GIT
Geoscientist-in-Training

Matt Kokan, M.A.Sc., P.Eng.
Principal

File #: 15570
Groundwater Monitoring Report – Canfield Crescent, North Vancouver, B.C.
APPENDIX A
APPENDIX B
## Test Hole Log: TH17-01

**File:** 15670  
**Project:** CANFIELD TOWNHOMES  
**Client:** CANFIELD CRESCENT LP  
**Site Location:** CANFIELD CR. AT HIGHLAND BLVD., NORTH VANCOUVER

### Inferred Profile

<table>
<thead>
<tr>
<th>Depth (ft/m)</th>
<th>Symbol</th>
<th>Soil Description</th>
<th>Depth (m/Elev. m)</th>
<th>Moisture Content (%)</th>
<th>DCPT (blows per foot)</th>
<th>Groundwater/Well</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0/0.0</td>
<td>TOPSOIL</td>
<td>Ground Surface</td>
<td>0.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.3</td>
<td>SAND AND GRAVEL</td>
<td>Sand and Gravel, trace Silt. Material is dense, moist, grey.</td>
<td>0.3</td>
<td>5.2%</td>
<td>45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.9</td>
<td>SAND</td>
<td>Sand, some Gravel, some Silt, trace Organics. Material is dense, moist-wet, grey, contains some Cobble.</td>
<td>0.9</td>
<td>19.3%</td>
<td>&gt;50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td>GRAVELY SAND</td>
<td>Sand, Gravely, trace Silt, Material is dense, wet, grey, contains some Cobble.</td>
<td>1.5</td>
<td>16.2%</td>
<td>32, 38</td>
<td></td>
<td>Groundwater level is approximately 1.5 m beneath surface.</td>
</tr>
<tr>
<td>3.7</td>
<td>SILT</td>
<td>Silt is stiff, wet, brownish-grey. Grey beyond 4.0 m.</td>
<td>3.7</td>
<td>21.0%</td>
<td>9, 11, 15, 23, 25</td>
<td></td>
<td>DCPT refusal at 1.2 m. Drilled out to 3.4 m and continued.</td>
</tr>
</tbody>
</table>

Logged: MAK  
Method: SOLID STEM AUGER  
Date: DECEMBER 5, 2017  
Datum: GROUND ELEVATION  
Figure Number: A.01  
Page: 1 of 1
# Test Hole Log: TH17-02

**File:** 15670  
**Project:** CANFIELD TOWNHOMES  
**Client:** CANFIELD CRESCENT LP  
**Site Location:** CANFIELD CR. AT HIGHLAND BLVD., NORTH VANCOUVER

## Inferred Profile

<table>
<thead>
<tr>
<th>Depth (ft/m)</th>
<th>Symbol</th>
<th>Soil Description</th>
<th>Depth (m/Elev, m)</th>
<th>DCPT (blows per foot)</th>
<th>Moisture Content (%)</th>
<th>Groundwater / Well</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0/0</td>
<td></td>
<td>Ground Surface</td>
<td>0.0</td>
<td></td>
<td>10 20 30 40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/0.3</td>
<td></td>
<td><strong>TOPSOIL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/0.3</td>
<td></td>
<td><strong>Silty Sand (Fill)</strong></td>
<td>Sand, Silty, some Gravel, trace Organics. Material is compact, moist, brown.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2/1.5</td>
<td></td>
<td><strong>SAND</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2/1.5</td>
<td></td>
<td>Sand, trace Gravel. Material is compact-dense, moist, light brown.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.5/2.5</td>
<td></td>
<td><strong>SAND AND GRAVEL</strong></td>
<td>Sand and Gravel, Cobbly. Material is very dense, moist-wet, brownish grey.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/3.4</td>
<td></td>
<td><strong>SILT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/3.4</td>
<td></td>
<td>Silt is stiff, wet, grey.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/4.6</td>
<td></td>
<td>End of Borehole</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Groundwater level is approximately 1.5 m beneath surface.
DCPT refusal at 2.1 m.

Logged: MAK  
Method: SOLID STEM AUGER  
Date: DECEMBER 5, 2017

Datum: GROUND ELEVATION  
Figure Number: A.02  
Page: 1 of 1
Canfield Crescent LP
420 – 1112 West Pender Street
Vancouver, BC
V6E 2S1

Attention: Joelle Calof

December 12th, 2017
File#: 15670

Re: Canfield Townhomes – Geotechnical Investigation
Canfield Crescent at Highland Boulevard, North Vancouver, BC

1.0 INTRODUCTION

We understand that a new townhouse development is proposed at the above referenced location. Preliminary drawings provided by Grimwood Architecture show two stories of above grade townhomes, with roof decks, over a common single storey of below grade parking. We anticipate wood framed construction for the above grade portion of the development and concrete construction for the below grade parking. The proposed elevation of the underground parkade slab varies between 85.3 m and 86.0 m geodetic, whereas existing grades on site vary from 89.0 m at the north end of the site to 88.0 m at the south end of the site.

This report presents the results of our investigation of the soil and groundwater conditions at the proposed site as well as the fronting District of North Vancouver roads and provides recommendations for the design and construction of the new development. This report has been prepared exclusively for Canfield Crescent LP, for their use and the use of others on their design and construction team. We understand it may also be provided to the District of North Vancouver, for use in the development and permitting process, but remains the property of GeoPacific Consultants Ltd.

2.0 SITE DESCRIPTION

The development site is located south of the intersection of Canfield Crescent and Highland Boulevard and is currently occupied by two single storey at grade residential homes with the civic addresses 3155 and 3175 Canfield Crescent. The site is pie shaped with a radius of approximately 45 m. It is bounded by Canfield Crescent to the east, Highland Boulevard to the north, and Woodbine Drive to the south. It slopes gently from north to south with a grade difference of approximately 1 m.

The location of the site and the surrounding area is shown on the attached plan, Drawing No. 15670-01.

3.0 FIELD INVESTIGATIONS

3.1 Subsurface Ground Conditions

The subsurface ground conditions at the site were investigated on December 5th, 2017 using a truck mounted auger drill rig that was supplied by Uniwide Drilling of Richmond, BC. Prior to the investigation all test hole locations were cleared of underground utilities using our utility locate staff. During the investigation, 2 solid stem auger holes and 2 Dynamic Cone Penetration Tests (DCPT) were advanced. The auger holes were drilled to depths of between 4.6 m and 6.1 m below grade. The DCPT’s were advanced adjacent to each auger hole to assist in assessing the relative density of the soil profile.
The DCPT is comprised of a 55 mm blunt noded cone that is driven into the soil with a 63.5 kg drop hammer from a controlled height of 760 mm and yields results similar to the Standard Penetration Test.

After the auger holes and DCPT’s were completed, monitoring wells were installed in each test hole. The monitoring wells consist of a 50 mm diameter screened PVC pipe that allows continual monitoring of groundwater levels. The area outside of the monitoring well was backfilled with filter sand and sealed with bentonite chips and grout as required by the BC Groundwater Protection Legislation.

The approximate locations of the auger holes, along with the DCPT’s and monitoring wells are shown on our Drawing No. 15670-01.

3.2 Benkelman Beam Testing

A Benkelman Beam Test (BBT) was completed by GeoPacific Consultants Ltd. using an ELE Benkelman Beam (HT-350). The BBT consists of the measurement of the asphalt rebound after being subjected to the weight of a single axle truck, provided by Thompson Trucking, loaded to a total axle weight of 18,000 lbs. The testing apparatus is setup between dual wheels on alternating sides of the rear axle. As the truck advances beyond the test point, the upward rebound at the surface is recorded. Rebound values are corrected for seasonal and temperature effects to obtain standardized values. The Most Probable Spring Rebound (MPSR) calculated from this data provides an indication of the ability of the current road structure to support the anticipated future traffic.

The BBT data and results are presented in Appendix B, following the text of this report.

4.0 SUBSURFACE CONDITIONS

4.1 Soil Conditions

According to the Geological Survey of Canada Surficial Geology Map 1486A, the site is underlain by Capilano Sediments of the Pleistocene Epoch, which are defined as raised deltaic and channel fill medium sand to cobble gravel up to 15 m thick deposited by proglacial streams and commonly underlain by silty to silty clay loam. The soil profiled encountered in our test holes consisted of a thin layer of TOPSOIL and/or FILL underlain by a layer of SAND, then SAND and GRAVEL, followed by SILT.

TOPSOIL/FILL

Each test hole was drilled in grassy/landscaped areas thus the upper layer is comprised of topsoil. Fill was encountered at TH17-02 and consisted of 0.7 m of silty sand containing some gravel and traces of sand and was noted as compact, moist, and brown.

SAND AND GRAVEL/SAND

A surficial layering of sand or sand and gravel followed by sand was encountered within both test holes to a depth of approximately 1.5 m. This layer contained trace to some silt and some cobbles and was noted to be compact to dense, moist, and grey or light brown. DCPT refusal occurred in the sand layer at TH17-01 at 1.2 m and was continued at 3.4 m after further drilling.

SAND AND GRAVEL

A sand and gravel layer was encountered within both test holes at a depth of 1.5 m and extended to depths ranging from 3.4 m to 3.7 m. The sand and gravel layer was cobbly and contained only traces of silt and was noted as dense or very dense, moist to wet, and grey or brownish grey. DCPT refusal occurred in the sand and gravel layer at TH17-02 at 2.1 m.
SILT

A silt layer was encountered beneath the sand and gravel layer in both test holes to the final depth of exploration. The silt was observed to be low plastic and was free of any sand or gravel. It was noted as stiff and grey or brownish grey.

For a more detailed description of the subsurface soil conditions refer to the test hole logs provided in Appendix A, following this report.

4.2 Groundwater Conditions

Groundwater was encountered at approximately 1.5 m below grade at both test holes. Based on our experience in the area, groundwater is perched on the fine grained silt and till layers that underlie the site. In our experience the water table can be readily lowered with sump pumps. Long term flows can be expected to be moderate.

GeoPacific Consultants Ltd. will monitor the groundwater level within the monitoring wells over the next 3 to 6 months and provide update reports and a summary report before the development begins.

5.0 DISCUSSION

5.1 General Comments

We expect that the proposed townhouse development can be supported on conventional strip and pad footings. Based on the existing elevations and the proposed elevations of the below grade parkade, the excavation depth for the proposed building foundations is approximately 2.7 m at the south side and 3.7 m at the north side. Buildings are to be setback from property lines which will allow for a sloped excavation to be implemented. We anticipate that the footings will be founded on the existing dense or very dense sand and gravel, the existing stiff silt, or imported engineered fill.

The subsurface soils are not considered prone to liquefaction or other forms of ground softening under the design earthquake defined under the 2012 British Columbia Building Code (BCBC).

We can confirm, from a geotechnical point of view, that the proposed development is feasible provided that the recommendations outlined in Section 6.0 are adhered to.

5.2 Existing Pavements

Benkelman Beam Testing was carried out in 5 metre intervals along Canfield Crescent, Highland Boulevard and Woodbine Drive fronting the proposed development. The District of North Vancouver’s Development Servicing Bylaw No. 8145, Table 5d in conjunction with the DNV’s Street Classification Map state the following properties of the roads in question; Canfield Crescent is defined as a Local-Residential roadway and requires a maximum MPSR of 1.30 mm, Highland Boulevard is defined as a Minor Arterial roadway and requires a maximum MPSR of 0.75 mm, Woodbine Drive is defined as a Collector-Residential roadway and requires a maximum MPSR of 1.00 mm. Table 1 below summarizes the results of the BBT.

<table>
<thead>
<tr>
<th>Roadway Tested</th>
<th>Road Type</th>
<th>Required MPSR (mm)</th>
<th>Calculated MPSR (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canfield Crescent northbound</td>
<td>Local-Residential</td>
<td>1.30</td>
<td>2.33</td>
</tr>
<tr>
<td>Canfield Crescent southbound</td>
<td>Local-Residential</td>
<td>1.30</td>
<td>1.86</td>
</tr>
<tr>
<td>Highland Boulevard westbound</td>
<td>Minor Arterial</td>
<td>0.75</td>
<td>0.74</td>
</tr>
<tr>
<td>Highland Boulevard eastbound</td>
<td>Minor Arterial</td>
<td>0.75</td>
<td>0.64</td>
</tr>
<tr>
<td>Woodbine Drive northbound</td>
<td>Collector-Residential</td>
<td>1.00</td>
<td>0.69</td>
</tr>
<tr>
<td>Woodbine Drive southbound</td>
<td>Collector-Residential</td>
<td>1.00</td>
<td>0.62</td>
</tr>
</tbody>
</table>

All lanes of Highland Boulevard and Woodbine Drive meet the requirements of the District of North Vancouver. The northbound and southbound lanes of Canfield Crescent have high MPSR’s and do not meet the requirements of the District of North Vancouver. Canfield Crescent is very narrow and essentially a one-way street so there is likely some overlap in the northbound and southbound lane test results.

Canfield Crescent contains high severity alligator cracking along its entire length and the asphalt surface is in poor condition. The asphalt surface of Highland Boulevard and Woodbine Drive is in relatively good condition and only minor asphalt deterioration along their lengths was observed, with the exception of one section of high severity alligator cracking along the westbound lane of Highland Boulevard at approximately Station 0+15 and another section along the eastbound lane of Highland Boulevard at Station 0+40.

The full results of the BBT, including a description of the condition of the asphalt surface, are attached in Appendix B following this report.

6.0 RECOMMENDATIONS

6.1 Site Preparation

Prior to construction of foundations and grade supported floor slabs, all organic materials, debris, fill and loose or otherwise disturbed soils must be removed from the construction area to expose a suitable undisturbed subgrade of dense or very dense Sand and Gravel or stiff Silt.

Should grade reinstatement be required, we recommend the use of engineered fill. For the context of this report, “Engineered Fill” is generally defined as clean sand to sand and gravel containing silt and clay less than 5% by weight, compacted in 300 mm loose lifts to a minimum of 95% of the Modified Proctor Dry Density (ASTM D1557) at a moisture content that is within 2% of optimum for compaction.

6.2 Spread Foundations

Pad and strip footings founded on the undisturbed, dense or very dense sand and gravel, stiff silt, or engineered fill can be designed on a serviceability limit state (SLS) bearing pressure of 200 kPa and a factored ultimate limit state (ULS) bearing pressure of 300 kPa.

Regardless of the recommended bearing pressures, pad footings should not be less than 600 mm by 600 mm and strip footings should not be less than 450 mm in width. Footings should also be buried a minimum of 450 mm below the surface for frost protection.

We estimate for foundations designed as recommended, settlements should not exceed 25 mm total and 2 mm per 1 m differential.

*Foundation subgrades must be reviewed by the geotechnical engineer prior to footing construction.*

6.3 Seismic Design of Foundations

We have considered the 2012 BCBC design earthquake with a 2% probability of exceedance over a 50 year period which equates to a return period of 1 in 2475 years. Accordingly, we have considered an earthquake having a peak horizontal ground acceleration of 0.427 g (Ref. National Resources Canada, Site Coordinates: 49.3380 N and 123.1006 W)
The site qualifies as “Site Class C” as defined in Table 4.1.8.4.A of the 2012 BCBC.

As discusses in Section 5.1, the subsurface soils in this area are not considered prone to liquefaction or other forms of ground softening under the design earthquake defined under the 2012 British Columbia Building Code (BCBC).

6.4 Slab-On-Grade Floors

Floor slabs should be underlain by a minimum of 150 mm of free draining granular material, such as 19 mm clear crush gravel or 19 mm road mulch, compacted sufficiently. General grade reinstatement of backfill beneath slab on grade areas should be done with engineered fill, as described in Section 6.1. A moisture barrier should underlie the slab directly above the free draining granular material where slab-on-grade floors are constructed beneath habitable areas.

Compaction of the slab-on-grade fill must be reviewed by the geotechnical engineer.

6.5 Foundation Drainage

A conventional perimeter drainage system around the building will be required. The granular drainage layer under the slab on grade should be hydraulically connected to the perimeter drainage system which should be connected to the storm drainage system. All backfill placed against the below grade foundation walls should be free draining to prevent the build-up of excess water pressures against the foundation walls.

We anticipate that the site and foundation drainage system will be collecting persistent groundwater seepage from the surrounding areas. Based on our experience with similar projects in the vicinity, we anticipate groundwater flows will be in the range of 10 to 20 litres per minute for the entire site; however this should be confirmed at the time of construction.

6.6 Temporary Excavations

The excavation depths for the development are expected to be between 2.7 m and 3.7 m below the existing site grades. The excavation can be sloped at an angle of 1 horizontal to 1 vertical (1H:1V) within the dense sand and gravel or stiff silt. Steeper slopes can likely be achieved locally where required by using lock blocks for support.

6.7 Earth Pressures on Foundation Walls

We recommend that the foundation walls be designed to resist a static triangular soil pressure distribution of 5H kPa where H is equivalent to the backfill height in metres. The dynamic loading induced by the 2012 BCBC design earthquake should be added to the static loads and should be taken as 4H kPa inverted triangular. The dynamic earth pressure is based upon unfactored soil parameters. The earth pressures presented assume that the area behind the wall is completely drained of water.

6.8 On-Site Storm Water Infiltration

On-site infiltration would be feasible in the upper sand or sand and gravels that exist on-site, though given the perched water table encountered and relatively impermeable silt layer encountered beneath the sand and gravel it may not be practical to infiltrate storm water on the site.

6.9 Existing Off-Site Pavement Structures

Highland Boulevard and Woodbine Drive meet the District of North Vancouver’s deflection criteria and do not require any improvements of the pavement structure. All moderate and high severity distresses observed at the surface can be cleaned and sealed using liquid asphalt to prevent the infiltration of water and saturation of the underlying pavement structure fill material.
Canfield Crescent does not meet the District of North Vancouver’s deflection criteria and will require improvement of the pavement structure. To improve the pavement structure and ensure Canfield Crescent meets the criteria of a Local-Residential road, we make the following recommendations:

1. Remove the full depth of asphalt.
2. Proof roll the existing pavement structure using a large vibratory drum roller to determine if there are any soft or loose areas in the pavement structure fill material or underlying subgrade.
3. Conduct test pits within the existing pavement structure to determine the thickness of the pavement structure fill material. The District of North Vancouver’s Development Servicing Bylaw No. 8145, Table 5d requires a minimum sub-base course of 200 mm and a minimum base course of 150 mm for Local-Residential roads.
4. Replace any areas of the pavement structure that do not meet DNV requirements.
5. Compact all pavement structure fill material to a minimum of 95% of the Modified Proctor Dry Density (ASTM D1557) at a moisture content that is within 2% of optimum for compaction.
6. Repave Canfield Crescent using hot-mix asphalt. The District of North Vancouver’s Development Servicing Bylaw No. 8145, Table 5d requires a minimum of 60 mm of lower course asphalt and 40 mm of surface course asphalt for Local-Residential roads.

6.10 New On-Site Pavement Structures

After completion of the recommended site preparation we expect that the pavement structure provided in Table 2 below is sufficient to support the anticipated traffic loading.

<table>
<thead>
<tr>
<th>Material</th>
<th>Thickness (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphaltic Concrete (surface course)</td>
<td>75</td>
</tr>
<tr>
<td>19 mm minus crushed aggregate base course</td>
<td>100</td>
</tr>
<tr>
<td>75 mm minus, well graded, clean sand and</td>
<td>200</td>
</tr>
<tr>
<td>gravel sub-base course</td>
<td></td>
</tr>
</tbody>
</table>

All base and sub-base fills should be compacted to a minimum of 95% of the Modified Proctor Dry Density (ASTM D1557) at a moisture content that is within 2% of optimum for compaction.

6.11 Utility Installation

Utility excavations shall be sloped at 1H:1V or shored in accordance with the latest Work Safe BC regulations. Any excavation in excess of 1.2 m in height requiring worker entry must be reviewed by a professional engineer prior to entry.

Moderate perched groundwater seepage may be encountered during excavations, depending on their depth. We expect that it can be controlled using conventional sumps and pumps.

Pipe bedding, backfill materials and compaction requirements should conform to the specifications outlined in the Master Municipal Construction Documents (MMCD)

7.0 FIELD REVIEWS

GeoPacific Consultants Ltd. will carry out sufficient field reviews during construction to ensure that the geotechnical design recommendations contained within this report have been adequately communicated to the design team and to the contractors implementing the design. These field reviews are not carried out for the benefit of the contractors, and therefore they do not in any way affect the contractor’s obligations to perform under the terms of his/her contract.
It is the contractors’ responsibility to advise GeoPacific Consultants Ltd. a minimum of 48 hours in advance that a field review is required. Geotechnical field reviews are normally required at the time of the following activities:

1. Review of site stripping
2. Review of foundation subgrade prior to footing construction
3. Review of slab-on-grade fill compaction prior to slab construction
4. Review of compaction of any engineered fill
5. Review of any temporary cut slopes or excavations in excess of 1.2 m in height requiring worker-entry
6. Review of pavement structure subgrade
7. Review of pavement base and sub-base fill materials and compaction

It is critical that these reviews are carried out to ensure that our intentions have been adequately communicated. It is also critical that contractors working on the site view this document in advance of any work being carried out so that they become familiar with the sensitive aspects of the works proposed. It is the responsibility of the developer to notify GeoPacific Consultants Ltd. when conditions or situations not outlined within this document are encountered.

8.0 CLOSURE

This report has been prepared exclusively for Canfield Crescent LP and their design and construction team as well as the District of North Vancouver for the purpose of providing geotechnical recommendations for the design and construction of the proposed development described herein. The report remains the property of GeoPacific Consultants Ltd. and any unauthorized use or duplication of this report is prohibited.

We are pleased to be of assistance to you on this project and trust that our comments and recommendations are both helpful and sufficient for your purposes at this time. If you require any further details or clarifications, please do not hesitate to contact the undersigned.

For:
GeoPacific Consultants Ltd.

Reviewed By:

Matt Akenhead, B.Sc., GIT
Geoscientist In Training

Matt Kokan, M.A.Sc., P.Eng.
Principal

File #: 15670  
Geotechnical Investigation – Canfield Crescent and Highland Boulevard, North Vancouver  
Page 7

CONSULTING GEOTECHNICAL ENGINEERS
Appendix A – Test Hole Logs
<table>
<thead>
<tr>
<th>Depth (m)</th>
<th>Symbol</th>
<th>Soil Description</th>
<th>DCPT (blows per foot)</th>
<th>Groundwater/Well</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td></td>
<td>Ground Surface</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.3</td>
<td></td>
<td>TOPSOIL</td>
<td>3</td>
<td>&gt;50</td>
<td></td>
</tr>
<tr>
<td>0.3</td>
<td></td>
<td>Sand and Gravel</td>
<td>5.2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.9</td>
<td></td>
<td>Sand</td>
<td>19.3%</td>
<td>&gt;50</td>
<td></td>
</tr>
<tr>
<td>0.9</td>
<td></td>
<td>Sand, some Gravel, some Silt, trace Organics. Material is dense, moist-wet, grey, contains some Cobbles.</td>
<td>16.2%</td>
<td></td>
<td>Groundwater level is approximately 1.5 m beneath surface. DCPT refusal at 1.2 m. Drilled out to 3.4 m and continued.</td>
</tr>
<tr>
<td>1.5</td>
<td></td>
<td>GRAVELLY SAND</td>
<td>21.2%</td>
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</tr>
<tr>
<td>3.7</td>
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<td>SILT</td>
<td>21.0%</td>
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<td></td>
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</table>

Logged: MAK
Method: SOLID STEM AUGER
Date: DECEMBER 5, 2017
**Test Hole Log: TH17-02**

**File:** 15670  
**Project:** CANFIELD TOWNHOMES  
**Client:** CANFIELD CRESCENT LP  
**Site Location:** CANFIELD CR. AT HIGHLAND BLVD., NORTH VANCOUVER

---

### INFERRED PROFILE

<table>
<thead>
<tr>
<th>Depth (ft)</th>
<th>Symbol</th>
<th>SOIL DESCRIPTION</th>
<th>Depth (m)/Elev (m)</th>
<th>Moisture Content (%)</th>
<th>DCPT (blows per foot)</th>
<th>Groundwater / Well</th>
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<tr>
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<td>SILTY SAND (FILL)</td>
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<td>SAND</td>
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<tr>
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Logged: MAK  
Method: SOLID STEM AUGER  
Date: DECEMBER 5, 2017  
Datum: GROUND ELEVATION  
Figure Number: A.02  
Page: 1 of 1

Remarks:

Groundwater level is approximately 1.5 m beneath surface.  
DCPT refusal at 2.1 m.
Appendix B – BBT Results
BENKELMAN BEAM RESULTS

MOST PROBABLE SPRING REBOUND (MPSR): 2.33 mm  **FAIL**

<table>
<thead>
<tr>
<th>START LOCATION:</th>
<th>WOODBINE DRIVE</th>
<th>MAXIMUM ALLOWABLE MPSR:</th>
</tr>
</thead>
<tbody>
<tr>
<td>LANE:</td>
<td>EAST</td>
<td>1.30</td>
</tr>
<tr>
<td>ROAD TYPE:</td>
<td>LOCAL - RESIDENTIAL</td>
<td>5.0</td>
</tr>
<tr>
<td>MATERIL TESTED:</td>
<td>ASPHALT</td>
<td>1.23</td>
</tr>
</tbody>
</table>

LEGEND

- LS: LOW SEVERITY
- MS: MODERATE SEVERITY
- HS: HIGH SEVERITY
- AC: ALLIGATOR CRACKING
- LIC: LONGITUDINAL JOINT CRACKING
- LWP: LONGITUDINAL WHEEL PATH CRACKING
- MLE: MEANDERING LONGITUDINAL CRACKING
- PEC: PAVEMENT EDGE CRACKING
- TC: TRANSVERSE CRACKING
- DST: DISTORTION
- RGT: RAVELING
- RUT: RUTTING
- SHV: SHOWING
- BLD: BLEEDING
- POTH: POTHOLIES

* Cracks that have been fully sealed are denoted with a subscript "s" (e.g., TCs)

Reviewed by: Jakub Szary, B.Sc., ASCT

Perr: Quentin Nguyen, Dip.T, GradTech

Lab Technician

Engineering Technologist
<table>
<thead>
<tr>
<th>STATION (m)</th>
<th>FIELD READING (mil)</th>
<th>FIELD REBOUND (mm)</th>
<th>FINAL CORRECTED READINGS (mm)</th>
<th>NOTES/COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0+00</td>
<td>4</td>
<td>0.203</td>
<td>0.320</td>
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</tr>
<tr>
<td>0+05</td>
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<td>0.879</td>
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<tr>
<td>0+10</td>
<td>7</td>
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<td>0.960</td>
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<td>1.039</td>
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<td>0.799</td>
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<tr>
<td>0+30</td>
<td>14</td>
<td>0.711</td>
<td>1.119</td>
<td>HS-AC</td>
</tr>
<tr>
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<td>0.965</td>
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<td>HS-AC</td>
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<tr>
<td>0+40</td>
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<td>0.762</td>
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<td>0+45</td>
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<td>1.519</td>
<td>HS-AC</td>
</tr>
</tbody>
</table>

Per: Quentin Nguyen, Dip.T, GradTech

By: Jakub Szary, B.Sc., AScT

Lab Technician

Engineering Technologist
BENKELMAN BEAM RESULTS

MOST PROBABLE SPRING REBOUND (MPSR): 1.86 mm

FAIL

START LOCATION: HIGHLAND BOULEVARD
MAXIMUM ALLOWABLE MPSR: 1.30

LANE: WEST
ASPHALT TEMPERATURE (°C): 5.0

ROAD TYPE: LOCAL - RESIDENTIAL
TEMPERATURE CORRECTION FACTOR: 1.23

MATERIAL TESTED: ASPHALT
SEASONAL CORRECTION FACTOR: 1.28

LEGEND

<table>
<thead>
<tr>
<th>LS</th>
<th>LOW SEVERITY</th>
<th>LWP</th>
<th>LONGITUDINAL WHEEL PATH CRACKING</th>
<th>RUT</th>
<th>RUTTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS</td>
<td>MODERATE SEVERITY</td>
<td>MLE</td>
<td>MEANDERING LONGITUDINAL CRACKING</td>
<td>SHV</td>
<td>SHOWING</td>
</tr>
<tr>
<td>HS</td>
<td>HIGH SEVERITY</td>
<td>PEC</td>
<td>PAVEMENT EDGE CRACKING</td>
<td>BLD</td>
<td>BLEEDING</td>
</tr>
<tr>
<td>AC</td>
<td>ALLIGATOR CRACKING</td>
<td>TC</td>
<td>TRANSVERSE CRACKING</td>
<td>POT</td>
<td>POTHOLES</td>
</tr>
<tr>
<td>LIC</td>
<td>LONGITUDINAL JOINT CRACKING</td>
<td>DST</td>
<td>DISTORTION</td>
<td>RAV</td>
<td>RAVELING</td>
</tr>
</tbody>
</table>

*Cracks that have been fully sealed are denoted with a subscript "s" (e.g., TCs)

Per: Quentin Nguyen, Dip.T, GradTech
Reviewed by: Jakub Szary, B.Sc., AScT

Lab Technician
Engineering Technologist
<table>
<thead>
<tr>
<th>STATION</th>
<th>FIELD READING (m)</th>
<th>FIELD REBOUND (mm)</th>
<th>FINAL CORRECTED READINGS (mm)</th>
<th>NOTES/COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0+00</td>
<td>4</td>
<td>0.203</td>
<td>0.320</td>
<td></td>
</tr>
<tr>
<td>0+05</td>
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<td>0.711</td>
<td>1.119</td>
<td>NS-AC</td>
</tr>
<tr>
<td>0+10</td>
<td>9</td>
<td>0.457</td>
<td>0.720</td>
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</tr>
<tr>
<td>0+15</td>
<td>7</td>
<td>0.356</td>
<td>0.560</td>
<td>LS-MS LWP</td>
</tr>
<tr>
<td>0+20</td>
<td>13</td>
<td>0.660</td>
<td>1.039</td>
<td>LS-AC</td>
</tr>
<tr>
<td>0+25</td>
<td>11</td>
<td>0.559</td>
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<tr>
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<td>0.569</td>
<td>0.879</td>
<td>HS-AC</td>
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</tbody>
</table>

Per: Quentin Nguyen, Dip.T, GradTech

Reviewed by: Jakub Szary, B.Sc., AScT

Lab Technician

Engineering Technologist
# Benkelman Beam Test Report

**Client:** CANFIELD CRESCENT LP  
**Project Name:** CANFIELD TOWNHOMES  
**Project Location:** 3155 CANFIELD CRESCENT, NORTH VANCOUVER, BC  
**Project #:** 15670  
**Date:** 12/5/2017  
**Method:** ASTM D4695

**Road Tested:** HIGHLAND BOULEVARD - WESTBOUND

## Benkelman Beam Results

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<tr>
<th>Station (m)</th>
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<th>0.10</th>
<th>0.15</th>
<th>0.20</th>
<th>0.25</th>
<th>0.30</th>
<th>0.35</th>
<th>0.40</th>
<th>0.45</th>
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</thead>
<tbody>
<tr>
<td>Rebound (mm)</td>
<td>0.00</td>
<td>0.10</td>
<td>0.20</td>
<td>0.30</td>
<td>0.40</td>
<td>0.50</td>
<td>0.60</td>
<td>0.70</td>
<td>0.80</td>
<td>0.90</td>
</tr>
</tbody>
</table>

- **MPSR**
- **Corrected Readings**
- **Maximum Allowable MPSR**

**Most Probable Spring Rebound (MPSR):** 0.74 mm  
**Pass**

<table>
<thead>
<tr>
<th>Start Location:</th>
<th>CANFIELD CRESCENT</th>
<th>Maximum Allowable MPSR: 0.75</th>
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<tbody>
<tr>
<td>Lane:</td>
<td>NORTH</td>
<td>Asphalt Temperature (°C): 5.0</td>
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<tr>
<td>Road Type:</td>
<td>ARTERIAL</td>
<td>Temperature Correction Factor: 1.23</td>
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<td>Material Tested:</td>
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## Legend

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<th>HS</th>
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<td>LONGITUDINAL JOINT CRACKING</td>
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<td>DST</td>
</tr>
<tr>
<td>Longitudinal, Wheel Path Cracking</td>
<td>Meandering Longitudinal Cracking</td>
<td>Pavement Edge Cracking</td>
<td>Transverse Cracking</td>
<td>Distortion</td>
</tr>
<tr>
<td>Rutting</td>
<td>Shoving</td>
<td>Bleeding</td>
<td>Pot_holes</td>
<td>Ravelling</td>
</tr>
</tbody>
</table>

*Cracks that have been fully sealed are denoted with a subscript "s" (i.e. TCs)

**Per:** Quentin Nguyen, Dip.T, GradTech  
**Reviewed by:** Jakub Szary, B.Sc., AsstT

**Lab Technician:**

**Engineering Technologist:**

---

[Stamp Image]
### BENKELMAN BEAM TEST REPORT

**CLIENT:** CANFIELD CRESCENT LP  
**PROJECT NAME:** CANFIELD TOWNHOMES  
**PROJECT LOCATION:** 3155 CANFIELD CRESCENT, NORTH VANCOUVER, BC  
**PROJECT #:** 15670  
**DATE:** 12/5/2017  
**METHOD:** ASTM D4695

**ROAD TESTED:** HIGHLAND BOULEVARD - WESTBOUND

<table>
<thead>
<tr>
<th>STATION (m)</th>
<th>FIELD READING (mil)</th>
<th>FIELD REBOUND (mm)</th>
<th>FINAL CORRECTED READINGS (mm)</th>
<th>NOTES/COMMENTS</th>
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</thead>
<tbody>
<tr>
<td>0+00</td>
<td>4</td>
<td>0.203</td>
<td>0.320</td>
<td></td>
</tr>
<tr>
<td>0+05</td>
<td>8</td>
<td>0.406</td>
<td>0.640</td>
<td>TRENCH PATCH</td>
</tr>
<tr>
<td>0+10</td>
<td>7</td>
<td>0.356</td>
<td>0.560</td>
<td>MS-AC</td>
</tr>
<tr>
<td>0+15</td>
<td>4</td>
<td>0.203</td>
<td>0.320</td>
<td>HS-AC</td>
</tr>
<tr>
<td>0+20</td>
<td>6</td>
<td>0.305</td>
<td>0.480</td>
<td>MS-AC</td>
</tr>
<tr>
<td>0+25</td>
<td>7</td>
<td>0.356</td>
<td>0.580</td>
<td>LS-TC</td>
</tr>
<tr>
<td>0+30</td>
<td>7</td>
<td>0.356</td>
<td>0.560</td>
<td>LS-TC</td>
</tr>
<tr>
<td>0+35</td>
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<td>0.254</td>
<td>0.400</td>
<td></td>
</tr>
<tr>
<td>0+40</td>
<td>4</td>
<td>0.203</td>
<td>0.320</td>
<td>TRENCH PATCH</td>
</tr>
<tr>
<td>0+45</td>
<td>8</td>
<td>0.406</td>
<td>0.640</td>
<td></td>
</tr>
</tbody>
</table>

*NOTE: TRENCH PATCH RUNS ALONG EDGE OF LANE THROUGHOUT LENGTH OF TEST AREA*

---

Per: Quentin Nguyen, Dip.T, GradTech  
Reviewed by: Jakub Szary, B.Sc., ASCT

Lab Technician  
Engineering Technologist
BENKELMAN BEAM RESULTS

**Most Probable Spring Rebound (MPSR):** 0.64 mm

**Legend**

- **LS**: Low Severity
- **MS**: Moderate Severity
- **HS**: High Severity
- **AC**: Alligator Cracking
- **LC**: Longitudinal Cracking
- **LWP**: Longitudinal Wheel Path Cracking
- **MLC**: Meandering Longitudinal Cracking
- **PEC**: Pavement Edge Cracking
- **TC**: Transverse Cracking
- **DIST**: Distortion
- **RUT**: Rutting
- **SHV**: Shoving
- **BLD**: Bleeding
- **POT**: Potholes
- **RAV**: Raveling

---

**Client:** CANFIELD CRESCENT LP  
**Project Name:** CANFIELD TOWNHOMES  
**Project Location:** 3155 CANFIELD CRESCENT, NORTH VANCOUVER, BC

**Method:** ASTM D4695

---

**Start Location:** Woodbine Drive  
**Lane:** South  
**Road Type:** Arterial  
**Material Tested:** Asphalt

**Maximum Allowable MPSR:** 0.75

**Asphalt Temperature (°C):** 5.0

**Temperature Correction Factor:** 1.23

**Seasonal Correction Factor:** 1.28

---

**Per:** Quentin Nguyen, Dip.T, GradTech

**Reviewed by:** Jakub Szary, B.Sc., AsCt

**Lab Technician:**

**Engineering Technologist:**

---

**Date:** 12/5/2017

---

**32599**

**Jakub Szary**  
**DEL 08 2017**

---

**Lab Technician**  
**Engineering Technologist**
### BENKELMAN BEAM TEST REPORT

**CLIENT:** CANFIELD CRESCENT LP  
**PROJECT NAME:** CANFIELD TOWNHOMES  
**PROJECT LOCATION:** 3155 CANFIELD CRESCENT, NORTH VANCOUVER, BC  
**PROJECT #:** 15670  
**DATE:** 12/5/2017  
**METHOD:** ASTM D4695  

**ROAD TESTED:** HIGHLAND BOULEVARD - EASTBOUND

<table>
<thead>
<tr>
<th>STATION</th>
<th>FIELD READING</th>
<th>FIELD REBOUND</th>
<th>FINAL CORRECTED READINGS</th>
<th>NOTES/COMMENTS</th>
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<tbody>
<tr>
<td>(m)</td>
<td>(mil)</td>
<td>(mm)</td>
<td>(mm)</td>
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</tr>
<tr>
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<td>0.305</td>
<td>0.480</td>
<td></td>
</tr>
<tr>
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<td>0.203</td>
<td>0.320</td>
<td></td>
</tr>
<tr>
<td>0+10</td>
<td>3</td>
<td>0.152</td>
<td>0.240</td>
<td>LS-AC</td>
</tr>
<tr>
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<td>5</td>
<td>0.254</td>
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<td>0.080</td>
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<tr>
<td>0+25</td>
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<td>0.356</td>
<td>0.560</td>
<td>MS-AC</td>
</tr>
<tr>
<td>0+30</td>
<td>5</td>
<td>0.254</td>
<td>0.400</td>
<td>MS-AC</td>
</tr>
<tr>
<td>0+35</td>
<td>3</td>
<td>0.152</td>
<td>0.240</td>
<td>MS-AC</td>
</tr>
<tr>
<td>0+40</td>
<td>4</td>
<td>0.203</td>
<td>0.320</td>
<td>HS-AC</td>
</tr>
<tr>
<td>0+45</td>
<td>6</td>
<td>0.305</td>
<td>0.480</td>
<td>LS/MS-TC</td>
</tr>
</tbody>
</table>

**Per:** Quentin Nguyen, Dip.T, GradTech  
**Reviewed by:** Jakub Szary, B.Sc., ASCT

Lab Technician  
Engineering Technologist
**BENKELMAN BEAM RESULTS**

**Rebound (mm)**

<table>
<thead>
<tr>
<th>Station (m)</th>
<th>0.00</th>
<th>0.05</th>
<th>0.10</th>
<th>0.15</th>
<th>0.20</th>
<th>0.25</th>
<th>0.30</th>
<th>0.35</th>
<th>0.40</th>
<th>0.45</th>
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<tbody>
<tr>
<td>MPSR</td>
<td>1.00</td>
<td>1.00</td>
<td>0.80</td>
<td>0.60</td>
<td>0.40</td>
<td>0.30</td>
<td>0.20</td>
<td>0.10</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Corrected Readings</td>
<td>0.69 mm</td>
<td><strong>PASS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Allowable MPSR</td>
<td>0.69 mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Most Probable Spring Rebound (MPSR):** 0.69 mm

---

**Legend**

- **LS:** Low Severity
- **MS:** Moderate Severity
- **HS:** High Severity
- **AC:** Alligator Cracking
- **LJC:** Longitudinal Joint Cracking
- **LWP:** Longitudinal Wheel Path Cracking
- **MLE:** Meandering Longitudinal Cracking
- **PEC:** Pavement Edge Cracking
- **TC:** Transverse Cracking
- **DST:** Distortion
- **RUT:** Rutting
- **SHV:** Shearing
- **BLD:** Bleeding
- **POT:** Potholes
- **RAV:** Ravelling

*Cracks that have been fully sealed are denoted with a subscript "s" (i.e. TCs)*

---

Peer: Quentin Nguyen, Dip.T, GradTech

**Signature:** Jakub Szary, B.Sc., ASCT

**Lab Technician:**

---

**Project Details:**

- **Client:** CANFIELD CRESCENT LP
- **Project Name:** CANFIELD TOWNHOMES
- **Project Location:** 8155 CANFIELD CRESCENT, NORTH VANCOUVER, BC
- **Date:** 12/5/2017
- **Method:** ASTM D4695

---

**GEOPACIFIC CONSULTANTS LTD.,**
1779 West 75th Avenue
Vancouver, B.C V6P 6P2
604-439-0922 lab@geopacific.ca

---

32599

Lab Technician

---

DEC 18 2017
<table>
<thead>
<tr>
<th>STATION</th>
<th>FIELD READING (m)</th>
<th>FIELD REBOUND (mm)</th>
<th>FINAL CORRECTED READINGS (mm)</th>
<th>NOTES/COMMENTS</th>
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<tbody>
<tr>
<td>0+00</td>
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<td>0.203</td>
<td>0.320</td>
<td></td>
</tr>
<tr>
<td>0+05</td>
<td>7</td>
<td>0.356</td>
<td>0.560</td>
<td></td>
</tr>
<tr>
<td>0+10</td>
<td>8</td>
<td>0.406</td>
<td>0.640</td>
<td>LS-AC</td>
</tr>
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<td>0.356</td>
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</tr>
<tr>
<td>0+45</td>
<td>4</td>
<td>0.203</td>
<td>0.320</td>
<td>LS-AC</td>
</tr>
</tbody>
</table>
BENKELMAN BEAM RESULTS

- MPSR
- CORRECTED READINGS
- MAXIMUM ALLOWABLE MPSR

MOST PROBABLE SPRING REBOUND (MPSR): 0.62 mm  
PASS

<table>
<thead>
<tr>
<th>START LOCATION</th>
<th>HIGHLAND BOULEVARD</th>
<th>MAXIMUM ALLOWABLE MPSR:</th>
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<tbody>
<tr>
<td>LANE:</td>
<td>WEST</td>
<td>ASPHALT TEMPERATURE (°C):</td>
</tr>
<tr>
<td>ROAD TYPE:</td>
<td>COLLECTOR - RESIDENTIAL</td>
<td>TEMPERATURE CORRECTION FACTOR:</td>
</tr>
<tr>
<td>MATERIAL TESTED:</td>
<td>ASPHALT</td>
<td>SEASONAL CORRECTION FACTOR:</td>
</tr>
</tbody>
</table>

LEGEND

- LS: LOW SEVERITY
- MS: MODERATE SEVERITY
- HS: HIGH SEVERITY
- AC: ALLIGATOR CRACKING
- LC: LONGITUDINAL JOINT CRACKING
- LWP: LONGITUDINAL WHEEL PATH CRACKING
- MLE: MEANDERING LONGITUDINAL CRACKING
- PEC: PAVEMENT EDGE CRACKING
- TC: TRANSVERSE CRACKING
- DST: DISTORTION

* Cracks that have been fully sealed are denoted with a subscript "s" (i.e. TCs)

Per: Quentin Nguyen, Dip.T, GradTech

Lab Technician:  
Engineering Technologist:
<table>
<thead>
<tr>
<th>STATION</th>
<th>FIELD READING</th>
<th>FIELD REBOUND</th>
<th>FINAL CORRECTED READINGS</th>
<th>NOTES/COMMENTS</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>(m)</td>
<td>(mill)</td>
<td>(mm)</td>
<td></td>
</tr>
<tr>
<td>0+00</td>
<td>7</td>
<td>0.356</td>
<td>0.560</td>
<td>LS-TC</td>
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<tr>
<td>0+05</td>
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</tr>
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</tr>
<tr>
<td>0+15</td>
<td>3</td>
<td>0.152</td>
<td>0.240</td>
<td>TRENCH PATCH</td>
</tr>
<tr>
<td>0+20</td>
<td>3</td>
<td>0.152</td>
<td>0.240</td>
<td>TRENCH PATCH</td>
</tr>
<tr>
<td>0+25</td>
<td>5</td>
<td>0.254</td>
<td>0.400</td>
<td>LS-AC</td>
</tr>
<tr>
<td>0+30</td>
<td>3</td>
<td>0.152</td>
<td>0.240</td>
<td>LS-AC</td>
</tr>
<tr>
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<td>5</td>
<td>0.254</td>
<td>0.400</td>
<td></td>
</tr>
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<td>0+40</td>
<td>7</td>
<td>0.356</td>
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<td>LS-AC</td>
</tr>
<tr>
<td>0+45</td>
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<td>0.102</td>
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</tbody>
</table>

Per: Quentin Nguyen, Dip.T, GradTech
Audited by: Jakub Szary, B.Sc., ASCT

Lab Technician
Engineering Technologist
Appendix C – Laboratory Results
# MOISTURE CONTENT REPORT

(APST D2216)

**CLIENT:** CANFIELD CRESCENT LP

**PROJECT:** CANFIELD TOWNHOMES

**LOCATION:** CANFIELD CRESCENT AT HIGHLAND BOULEVARD, NORTH VANCOUVER

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<thead>
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<th>TH17-01</th>
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<tbody>
<tr>
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<td>6.5'</td>
<td>8.5'</td>
<td>13'</td>
</tr>
<tr>
<td>M/C</td>
<td>5.2%</td>
<td>19.3%</td>
<td>16.2%</td>
<td>21.2%</td>
<td>21.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HOLE #</th>
<th>TH17-01</th>
<th>TH17-02</th>
<th>TH17-02</th>
<th>TH17-02</th>
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</thead>
<tbody>
<tr>
<td>DEPTH</td>
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<td>3.5'</td>
<td>8'</td>
<td>14'</td>
</tr>
<tr>
<td>M/C</td>
<td>22.0%</td>
<td>21.9%</td>
<td>11.9%</td>
<td>28.0%</td>
</tr>
</tbody>
</table>

**COMMENTS:**

**DISTRIBUTION:** Matt Akenhead, GeoPacific

Per: Nathalie Sahakyan, B.Sc., GIT
Lab Technician

Sealed By: Jakub Szary, B.Sc., AScT