

AGENDA

REGULAR MEETING OF COUNCIL

Monday, November 18, 2013

7:00 p.m.

Council Chamber, Municipal Hall

355 West Queens Road,

North Vancouver, BC

Council Members:

Mayor Richard Walton

Councillor Roger Bassam

Councillor Robin Hicks

Councillor Mike Little

Councillor Doug MacKay-Dunn

Councillor Lisa Muri

Councillor Alan Nixon



NORTH VANCOUVER
DISTRICT

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REGULAR MEETING OF COUNCIL

7:00 p.m.
Monday, November 18, 2013
Council Chamber, Municipal Hall,
355 West Queens Road, North Vancouver

AGENDA

BROADCAST OF MEETING

- Live broadcast on Shaw channel 4
- Rebroadcast on Shaw channel 4 at 9:00 a.m. Saturday
- Online at www.dnv.org

CLOSED PUBLIC HEARING ITEMS NOT AVAILABLE FOR DISCUSSION

- Bylaw 7962 – Old Dollarton/Front Street Rezoning
- Bylaw 7998 – Parks, Recreation, and Open Space Zone Amendment

1. ADOPTION OF THE AGENDA

1.1. November 18, 2013 Regular Meeting Agenda

Recommendation:

THAT the agenda for the November 18, 2013 Regular Meeting of Council for the District of North Vancouver be adopted as circulated, including the addition of any items listed in the agenda addendum.

2. PUBLIC INPUT

(limit of three minutes per speaker to a maximum of thirty minutes total)

3. PROCLAMATIONS

3.1. YMCA World Peace Day – November 16 – 23, 2013 **p. 9**

4. RECOGNITIONS

5. DELEGATIONS

5.1. Mr. Mark Wood, North Shore Mountain Bike Association **p. 13-16**
Re: To update Council on their work as Regional Leaders in trail care through their key community initiatives.

6. ADOPTION OF MINUTES

6.1. November 4, 2013 Regular Council Meeting

p. 19-26

Recommendation:

THAT the minutes of the November 4, 2013 Regular Council meeting be adopted.

7. RELEASE OF CLOSED MEETING DECISIONS

8. COMMITTEE OF THE WHOLE REPORT

Recommendation:

THAT the recommendations of the Committee of the Whole be adopted as decisions of Council.

8.1. November 5, 2013 Committee of the Whole

8.1.1. Planning for Bus Shelters

p. 29-34

THAT the report of the Transportation Planner dated October 22, 2013 entitled Planning for Bus Shelters be received.

8.1.2. Subdivision Practices

p. 35-42

THAT the report of the General Manager – Planning, Properties, and Permits dated October 24, 2013 entitled Subdivision Practices be received.

9. REPORTS FROM COUNCIL OR STAFF

With the consent of Council, any member may request an item be added to the Consent Agenda to be approved without debate.

If a member of the public signs up to speak to an item, it shall be excluded from the Consent Agenda.

*Staff suggestion for consent agenda.

Recommendation:

THAT items _____ be included in the Consent Agenda and be approved without debate.

9.1. Development Permit 9.13 435-475 Seymour River Place

p. 45-128

File No. 08.3060.20/009.13

Recommendation:

THAT Development Permit 9.13, for a 61 unit townhouse project at 435-475 Seymour River Place, is issued.

9.2. Request for Noise Bylaw Variance
Metro Vancouver Capilano Main No. 9
File No. 01.0470.35/019.001

p. 129-137

Recommendation:

THAT Council relax the provision of Noise Regulation Bylaw 7188 which regulates construction noise during the night and weekends in order that Metro Vancouver can perform work during the night on weeknights and from 7:00am to 5:00pm on Saturdays from November 2013 to June 2014.

10. REPORTS

10.1. Mayor

10.2. Chief Administrative Officer

10.3. Councillors

10.4. Metro Vancouver Committee Appointees

11. ANY OTHER BUSINESS

12. ADJOURNMENT

Recommendation:

THAT the November 18, 2013 Regular Meeting of Council for the District of North Vancouver be adjourned.

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PROCLAMATIONS

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PROCLAMATION

“YMCA World Peace Week” (November 16 – 23, 2013)

- WHEREAS:** the responsibility for peace begins with each person; and
- WHEREAS:** the responsibility extends to our relationship with family and friends; community and national activities; and
- WHEREAS:** for 127 years the YMCA of Greater Vancouver has worked for peace internationally, at home and within its diverse communities; and
- WHEREAS:** YMCA's around the world will join to commemorate YMCA World Peace Week together from November 16th to 23rd, 2013.
- NOW THEREFORE I,** Richard Walton, Mayor of the District of North Vancouver, do hereby proclaim the week of November 16 to 23, 2013 as “YMCA World Peace Week” in the District of North Vancouver.

Richard Walton
MAYOR

Dated at North Vancouver, BC
This 18th day of November 2013

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DELEGATIONS

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NSMBA Update 2013

Presentation to DNV Council
Nov 18

NSMBA 2013 Update

- NSMBA – Leader in Trail Care
- 2150 supporting members
- 3200 FB friends
- The NSMBA supports DNV Council to continue to care for our trails and keep pace with heightened user-ship of the community.

NSMBA Mission & Vision

"Trails for all, Trails Forever"

The NSMBA is a voice for the mountain biking community of the North Shore.

We protect and maintain the trails as environmental leaders, focused on sustainability through education & action. We develop trail networks that provide challenge and progression while fostering mountain bike culture and a community that embraces our sport as a positive force.



- 2013 – 60 trail days to date
- 4100 hours of labour = \$71 000
- 25 Community Groups/Local Business




- 180 grads 2012
- 150+ grads 2013
- Focus: Sustainability & Environmental

North Shore Trails

- Thousands of users
- Continued Care – Continued Support
- Collaborative Solutions through Shared Resources

Economic Impact

- Tourism
- Residents
- Local industry

We Support Council

- Collaborative Solutions to care for our trails
- Council is right to support these economic benefits through regular funding to care for, maintain and develop our trail network including access for all users and adequate facilities to serve our residents and visitors alike.

2014 Fromme Access

- Parking on Fromme
 - 2001 Temporary Ban: Private Access to a Public Resource
 - Staging facilities-Parking-trail access

2014 All Access Trail



Summary

- Collaborative Partnership
- Sustainable Solutions
- Care for the Environment
- Service to the Community

Come on People!



MINUTES

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**DISTRICT OF NORTH VANCOUVER
REGULAR MEETING OF COUNCIL**

Minutes of the Regular Meeting of the Council for the District of North Vancouver held at 7:00 p.m. on Monday, November 4, 2013 in the Council Chamber of the District Hall, 355 West Queens Road, North Vancouver, British Columbia.

Present: Mayor R. Walton
Councillor R. Bassam
Councillor R. Hicks
Councillor M. Little
Councillor L. Muri
Councillor A. Nixon

Absent: Councillor D. MacKay-Dunn

Staff: Mr. D. Stuart, Chief Administrative Officer
Mr. B. Bydwell, General Manager – Planning, Properties & Permits
Mr. G. Joyce, General Manager – Engineering, Parks & Facilities
Mr. J. Gordon, Manager – Administrative Services
Ms. S. Haid, Manager – Sustainable Community Development
Ms. M. Weston, Section Manager – Public Safety
Ms. J. Paton, Section Manager – Development Planning
Mr. B. Dwyer, Manager – Development Services
Ms. C. Rucci, Social Planner
Ms. L. Brick, Confidential Council Clerk

1. ADOPTION OF THE AGENDA

1.1. November 4, 2013 Regular Meeting Agenda

MOVED by Councillor LITTLE

SECONDED by Councillor BASSAM

THAT the agenda for the November 4, 2013 Regular Meeting of Council for the District of North Vancouver be adopted as circulated, including the addition of any items listed in the agenda addendum.

CARRIED

With the consent of Council, Mayor Walton varied the agenda as follows:

3. PROCLAMATIONS

3.1. Veterans' Week – November 5 – 11, 2013

5. DELEGATIONS

**5.1. Ms. Diana Saboe, President,
Royal Canadian Legion, Lynn Valley Branch 114
Re: Remembrance Day Ceremonies**

2. PUBLIC INPUT

- 2.1** Mr. Don Peters 600 Block West Queens Road:
- Spoke in opposition to the proposed motion for item 9.3 Business Licence for 496 West Kings Road;
 - Spoke to the quality of the application and the location of the facility; and,
 - Urged Council to reconsider the motion.
- 2.2** Ms. Margot Long, 900 Block Belmont Avenue:
- Spoke in support of item 9.2 Edgemont Senior Living; and,
 - Urged that Council pass the proposed motion to increase housing options for seniors in the Edgemont neighbourhood.
- 2.3** Ms. Nancy McLachlan, 900 Block Belvedere Avenue:
- Spoke in support of item 9.2 Edgemont Senior Living; and,
 - Urged Council to consider passing the motion.
- 2.4** Mr. Bev Penhall, 3300 Block Capilano Crescent:
- Spoke in support of item 9.2 Edgemont Senior Living; and,
 - Urged Council to pass the proposed motion.
- 2.5** Ms. Christine Yakachuk, 600 Block Roche Point Drive:
- Spoke in support of item 9.4 Community Gardens; and,
 - Commented on the waiting lists for the existing plots and the benefits of the program for the environment.
- 2.6** Mr. Ryan Sword, 300 Block East 22nd Street:
- Spoke regarding item 9.3 Business Licence for 496 West Kings Road;
 - Urged Council to reconsider denying the business licence for expansion of the daycare; and,
 - Spoke regarding the challenges of finding quality daycare.
- 2.7** Mr. Eric Miura, 1300 Block Kilmer Road:
- Represented the Lynn Valley Community Association and the Lynn Valley Lions Club in support of item 9.4 Community Gardens; and,
 - Spoke regarding their commitment to the project and the benefits of the gardens.
- 2.8** Ms. Pamela Shaw, 900 Block Kennedy Avenue:
- Spoke in support of item 9.2 Edgemont Senior Living; and,
 - Commented on the need for care facilities on the North Shore and opined that this will be an asset to the community.
- 2.9** Ms. Jessie Vroom, 4300 Block Capilano Road:
- Spoke in opposition to the proposed motion to deny the business licence for 496 West Kings Road;
 - Spoke regarding the quality of care provided by Little Bunnies Learning Centre; and,

- Commented on the need for consistency of daycare between the ages of 2 – 5 years of age.

2.10 Ms. Jessica Stanley, 1500 Block Burrill Avenue:

- Spoke in support of item 9.4 Community Gardens; and,
- Commented on the benefits to the community and individuals of having a connection with nature.

2.11 Mr. Hazen Colbert, 1100 Block 27th Street:

- Spoke in regards to the North Shore Alliance for Sensible Growth; and,
- Commented on increased density on the North Shore and the transportation and infrastructure needs that redevelopment creates.

2.12 Mr. James Gill, 502 West Kings Road

- Spoke in support of the proposed motion for item 9.2 Business Licence for 496 West Kings Road;
- Commented on the abundance of daycare facilities in the immediate vicinity; and,
- Expressed concern that the quality of life in the neighbourhood is being affected by the facilities.

4. RECOGNITIONS

Nil

3. PROCLAMATIONS

**3.2 Community Social Service Workers Appreciation Day
– November 6, 2013**

6. ADOPTION OF MINUTES

6.1. October 21, 2013 Regular Council Meeting

MOVED by Councillor MURI

SECONDED by Councillor LITTLE

THAT the minutes of the October 21, 2013 Regular Council meeting be adopted.

CARRIED

7. RELEASE OF CLOSED MEETING DECISIONS

7.1. October 7, 2013 Closed Special Council Meeting

7.1.1 William Griffin Community Centre

THAT Council defer the commencement of the formal public engagement process until 2015 and immediately commence face to face discussions with interested community groups regarding process and timing.

This item was deferred back to a Closed Meeting of Council to amend the previously adopted motion in order to bring greater clarity to the fact that it refers to the Delbrook site.

8. COMMITTEE OF THE WHOLE REPORT

Nil

9. REPORTS FROM COUNCIL OR STAFF

MOVED by Councillor NIXON

SECONDED by Councillor LITTLE

THAT item 9.6 be included in the Consent Agenda and be approved without debate.

CARRIED

- 9.8. Bylaw 7999: 435-475 Seymour River Place
(Rezoning Bylaw 1297) and Bylaw 8002: Housing
Agreement 435-475 Seymour River Place
File No. 08.3060.20/009.13**

MOVED by Councillor NIXON

SECONDED by Councillor MURI

THAT the "District of North Vancouver Rezoning Bylaw 1297 (Bylaw 7999)" is ADOPTED.

THAT the "Housing Agreement Bylaw 8002, 2013" is ADOPTED.

CARRIED

Opposed: Councillor BASSAM

- 9.1. Development Permit 25.13
270 Harbour Avenue: Canada Post Letter Carrier Depot
File No. 08.3060.20/025.13**

Public Input:

Mr. David Chung and Mr. Don Glass, Gustavson Wylie Architects Inc.:

- Spoke in support of the proposal as the architects;
- The development of this site will implement Canada Post's postal transformation program; and,
- The site will combine the Deep Cove and Charles Street depots into the new location on Mountain Highway.

MOVED by Councillor LITTLE

SECONDED by Councillor MURI

THAT Development Permit 25.13, for a new light industrial building at the property located at 270 Harbour Avenue, be issued.

CARRIED

Opposed: Councillor NIXON

9.2. Development Permit 5.13
3202 Woodbine Dr. 3220, 3240, 3255 and 3285 Canfield Cres.
& 3227 Highland Blvd. (Edgemont Senior Living)
File No. 08.3060-20/05.13

Public Input:

Mr. Ray Letkeman, 1000 Block Duchess Avenue, West Vancouver:

- Spoke on behalf of the proponent as the architect for the proposal; and,
- Reviewed the design refinements which have been implemented following the Public Hearing to keep the building in context with the neighbourhood.

Mr. Corrie Kost, 2800 Block Colwood Drive:

- Opined that the value for the sale of Canfield Crescent is inequitable and queried how the funds would be spent; and,
- Commented on the inadequacy of the Community Amenity Contribution made by the developer.

MOVED by Councillor BASSAM

SECONDED by Councillor NIXON

THAT Development Permit 5.13, for a three-storey seniors' residence at 3202 Woodbine Drive; 3220, 3240, 3255 and 3285 Canfield Crescent; and 3227 Highland Boulevard, be issued.

CARRIED

9.3. Business Licence for 496 West Kings Rd. – Little Bunnies Learning Centre
File No. 10.4750.30/001.000

Public Input:

Ms. Laya Shakery, 400 Block West Kings Road:

- Urged Council to reconsider the proposed motion and support the expansion of Little Bunnies Learning Centre; and,
- Commented that two of her neighbours do support the proposed expansion.

MOVED by Councillor BASSAM

SECONDED by Councillor LITTLE

THAT Council deny the request for a business license for an additional 10 child group care at Little Bunnies Learning Centre located at 496 West Kings Road due to neighbourhood concerns.

CARRIED

Opposed: Councillors HICKS and NIXON

The meeting recessed at 9:04 pm and reconvened at 9:10 pm.

Councillor NIXON returned at 9:12 pm.

**9.4. Proposed Community Gardens - Lynn Valley Community/
Recreation Centre and Garibaldi Park**

File No. 13.6440.20/003

Public Input:

Ms. Maya Regeher, 1900 Block Iron Court:

- President of the North Shore Community Garden Society;
- Spoke in support of the proposed motion; and,
- Commented on the site selection and the waiting lists for community gardens.

MOVED by Councillor BASSAM

SECONDED by Councillor MURI

THAT Council:

1. Authorize a License to Occupy agreement with the North Shore Community Garden Society to use a portion of the Lynn Valley Community/Recreation site and a portion of the Garibaldi Park site for the purpose of operating and maintaining community gardens subject to license terms acceptable to the Municipal Solicitor.
2. Consider a budget request of \$8,000 (up to \$4,000 per site) for the provision of water hook-up for the two garden sites as part of 2014 Financial Plan process.

CARRIED

Councillor MURI left the meeting at 9:32 pm and returned at 9:35 pm.

9.5. Medical Marihuana Regulations

File No. 08.3060.01/000.000

MOVED by Councillor NIXON

SECONDED by Councillor LITTLE

THAT:

1. Council instruct staff to prepare a text amendment to the existing zoning bylaw by which licenced medical marihuana production facilities would not be permitted without a rezoning and the attendant public input process and public hearing before Council.
2. Staff submit to Council any building permit applications received after November 12, 2013 which staff consider are in conflict with the bylaw in preparation for consideration of a resolution that the building permit be withheld for 30 days pursuant to Section 929 of the Local Government Act.
3. Staff submit to Council any business licence application received after November 12, 2013 where the use to which the land would be put and to which the business licence application relates would be contrary to the use that would be permitted by the bylaw that is under preparation for consideration of a resolution that the business licence be withheld for 90 days pursuant to Section 929(5) of the Local Government Act.

CARRIED

**9.6. BC Hydro Lynn Valley Substation Egress Duct Ditch
Request for Noise Bylaw Variance**

File No. 01.0510.40/000.000

MOVED by Councillor NIXON

SECONDED by Councillor LITTLE

THAT Council relax the provision of Noise Regulation Bylaw 7188 which regulates construction noise during the night and weekends in order that BC Hydro's contractor can perform work during the night time period, excluding weekends and holidays as defined in the Bylaw, for a three night construction window between December 2nd and December 14th, 2013.

CARRIED

9.7. Flood Study Report and Implications

File No. 11.5210.01/000.000

Ms. Michelle Weston, Section Manager – Public Safety, provided an overview of the trends in flood adaptations and the plans for Mackay and Lynn Creeks.

MOVED by Councillor BASSAM

SECONDED by Councillor MURI

THAT the October 24, 2013 report of the Public Safety Section Manager be received;

AND THAT Council approve an Emergency Management British Columbia grant application for a dyke on Mackay Creek with a District match of \$470,000.

CARRIED

10. REPORTS

10.1. Mayor

Mayor Walton invited the public to attend the upcoming Remembrance Day Ceremonies in North Vancouver.

10.2. Chief Administrative Officer

Nil

10.3. Councillors

Councillor Muri reported on the:

- Successful Fire Department Pumpkin Drop Fundraiser; and,
- Upcoming attendance at the Cates Park Remembrance Day Ceremony.

10.4. Metro Vancouver Committee Appointees

Nil

11. ANY OTHER BUSINESS

Nil

12. ADJOURNMENT

MOVED by Councillor MURI

SECONDED by Councillor BASSAM

THAT the November 4, 2013 Regular Meeting of Council for the District of North Vancouver be adjourned.

CARRIED
(10:01 pm)

Mayor

Municipal Clerk

COMMITTEE OF THE WHOLE REPORT

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Memo

November 13, 2013
File: 01.0115.30/002.000

TO: Mayor and Council

FROM: James Gordon, Municipal Clerk

SUBJECT: Planning for Bus Shelters

On November 5 the Committee of the Whole received an update on planning for bus shelters. The Committee recommends to Council:

THAT the report of the Transportation Planner dated October 22, 2013 entitled Planning for Bus Shelters be received.

A copy of this report is attached for reference.

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Briefing Note: Planning for Bus Shelters
October 22, 2013

Purpose

At the November 5, 2013 Committee of the Whole session, staff intend to recommend that Council endorse a set of principles to be applied in establishing a new bus shelter contract.

Bus shelters, bus benches and other road-related transit infrastructure are a municipal responsibility. For decades, the District has been contracting Pattison Outdoor to deliver bus shelters and Goodwill Advertising to deliver bus benches.



Pattison Outdoor Shelter on Marine Drive

Staff intend to enter a process for a new shelter contract in the coming weeks. So far, Pattison Outdoor and CBS Outdoor Decaux seem interested in delivering shelters and benches in the District. Goodwill Advertising has expressed interest in continuing to deliver benches.

Having the municipality manage bus shelter and bus bench delivery would be untenable on staff resources because of staff time for maintenance and advertising contracts.

Current Contracts

The District's bus shelter contract with Pattison Outdoor was signed in 1994 and expires in March 2014.

The District received approximately **\$58,000 in annual revenue in 2012 for the 72 shelters**. Black shelters are used throughout the District and distinct shelters are provided in Lynn Valley. Shelters provide high visibility advertising opportunities and so, Pattison installs shelters on corridors with significant drive-by traffic. Pattison maintains the shelters, for example by removing graffiti and replacing broken glass. Under the current contract, shelters are only placed in locations where both DNV and Pattison agree.



Distinct Lynn Valley Pattison Outdoor Shelter



Goodwill Bench on Lillooet Road

The District's bus bench contract with Goodwill

Advertising dates back to 1978 and has a three-month notice period. Since 1978, the District has been receiving about **\$1,200 in annual revenue for 76 advertising bus benches provided by Goodwill Advertising**. Public input has been that advertising benches do not integrate with the quality of District streetscapes.

What other Municipalities are doing

Here is a summary of what some other municipalities in the region are doing with shelter contracts:

Municipality	Shelter Provider	Highlights
District of North Vancouver (current)	Pattison Outdoor	<ul style="list-style-type: none"> Contract written in 1994 Includes 72 shelters; no non-advertising shelters ~ \$816 annual revenue per shelter per year
City of North Vancouver	Pattison Outdoor	<ul style="list-style-type: none"> Includes 27 shelters; two non-advertising shelters CNV has no advertising benches
Vancouver	CBS Outdoor Decaux	<ul style="list-style-type: none"> About half-way through 20-year contract Includes posters, transit shelters, map stands, automated public toilets
West Vancouver	Pattison Outdoor	<ul style="list-style-type: none"> Recently negotiated contract Includes 30 advertising shelters on Marine Drive \$3000 per shelter per year
Delta	Pattison Outdoor	<ul style="list-style-type: none"> Halfway through a 15 year contract Includes advertising shelters and benches; 6 non-advertising shelters
Burnaby	Municipality	<ul style="list-style-type: none"> Recently took over bus shelter delivery Involved hundreds of hours of staff time Contracting back Pattison for maintenance Contracting CBS Outdoor for advertising sales

When Burnaby tendered its bus shelter contract, Council's preference was that the municipality take-on responsibility for bus shelters. Pattison Outdoor removed its shelters. Burnaby staff indicated that going on their own has been highly staff time intensive for maintenance and advertising contracts.

Vancouver is using CBS Outdoor Decaux and their contract includes map standards. The vendor has indicated some interest in North Vancouver, but terms may be challenging to meet.

Other municipalities with advertising shelters are working with Pattison Outdoor. West Vancouver recently negotiated a 20-year



Pattison Outdoor West Vancouver Bus Shelter

contract and receives about \$3,000/shelter per year. The City of North Vancouver recently negotiated its contract and are getting some non-advertising shelters in neighbourhoods.

Delta required that Pattison Outdoor include benches in the bus shelter contract.

Opportunities

Currently the **District has access to 10 percent of bus shelter advertising spaces**. Increased use of these spaces could provide an effective way for the District to more strategically communicate with the public.

Through redevelopment, **more space will be available in the streetscape** for shelters on busy transit corridors.

There is also an **opportunity to beautify streetscapes and improve community livability** with the new contract, for example:

- **Bus shelters can be provided in a variety of ways**, such as:
 - Regular bus shelters with advertising could be **painted different colours** on different corridors or in different neighbourhoods;
 - Instead of a bus shelter, the **building canopy** provides protection; and
 - **In select locations, there may be an option that public art shelters** that do not include an advertising component can be funded by development or by the District using partial TransLink funding.



Shelters without advertising can be public art



Canopy provides shelter at Lynn Valley Library

- **Removal of advertising benches** and provision of non-advertising benches could possibly be achieved with a new contract.
- **Five busy bus stops** on quiet streets currently do not have shelters but transit riders would benefit from having **non-advertising bus shelters**. **This can be provided:**
 - **By developers**, where applicable;
 - **By the bus shelter contractor**; and/or

- **By TransLink's Transit-Related Infrastructure Program.** The program offers up to 50 percent funding for transit shelters without advertising.

Litter near Bus Stops

Pattison maintains shelters by removing graffiti, replacing broken glass, and with monthly cleaning. District crews service litter receptacles two, three or five times per week. Service frequency is determined by the volume of materials generated at a specific location. During the service, staff also clear litter.

Cigarette litter could be reduced with butt-out receptacles at bus stops and 'no smoking' signage. This could be included in the contract. While smoking near shelters is not allowed, it is still a common practice that generates litter.



*Ashtray in
Whistler Village*

Proposed Principles

The following principles are proposed to guide staff in negotiating a new bus shelter contract:

1. Provide Comfort	The primary purpose of bus shelters, benches and associated amenities is to improve comfort for transit riders with weather protection, lighting and seating.
2. Promote Transit Use	Improving comfort can support travellers in the District making the choice to use transit, a goal of the District' Official Community Plan.
3. Accommodate All	All ages and abilities should be accommodated with weather protection and accessible furniture design.
4. Enhance Streetscape	The shelters and associated amenities should enhance and be consistent with the surrounding streetscape.
5. Revenue Secondary	Revenue is a secondary goal, compared to improving streetscapes and comfort for transit users.
6. Be Flexible	The District may consider stand-alone advertising (not attached to the shelter) in appropriate locations, in compliance with bylaws.
7. No Electronics	The District will not consider moving or electronic signs.
8. Well Maintained	Prompt cleaning, repair and maintenance of graffiti, broken glass, etc.
9. Socially Acceptable	No objectionable, obscene or hateful advertising tolerated.

Recommendation

That staff proceed to finalizing a new contract using the above principles as guidance in developing contract requirements.



Memo

November 13, 2013
File: 01.0115.30/002.000

TO: Mayor and Council

FROM: James Gordon, Municipal Clerk

SUBJECT: Subdivision Practices

On November 5 the Committee of the Whole received an update on subdivision practices. The Committee recommends to Council:

THAT the report of the General Manager – Planning, Properties and Permits dated October 24, 2013 entitled Subdivision Practices be received.

A copy of this report is attached for reference.

b.
[Signature]

Briefing Note
Subdivision Practices
District of North Vancouver
October 24, 2013

Background

This briefing note, prepared for the November 5th Council Committee of the Whole meeting, discusses subdivision practices with a focus on small lot subdivisions. The objective is to provide an overview of current practice, highlight key concerns raised, which pertain primarily to smaller lot subdivisions, and recommend that Council affirm the additional measures recently developed and outlined in this report to enhance the review of subdivision applications in the District.

Official Community Plan Housing Objectives

In 2011 Council adopted the District of North Vancouver Official Community Plan, Bylaw 7900. The overall growth management strategy outlined in the OCP focusses approximately 75-90% of new residential growth within the 'network of centres' and anticipates limited changes to occur in existing residential neighbourhoods. It is anticipated that centres will predominantly address objectives regarding housing diversity and affordability. Sensitive residential infill opportunities are acknowledged in the OCP and may be considered in existing residential neighbourhoods to provide greater housing diversity and more options to suit different residents' ages, needs and incomes¹. Examples of sensitive residential infill include introducing coach houses, duplexes and/or small lot infill areas.

¹ OCP Section 7.1 Policy 2 gives direction to undertake Neighbourhood Infill plans and/or Housing Action Plans 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)

Subdivision Categories

Subdivision is the process of altering property boundaries. It may include consolidation of two lots into one; splitting one property into two or more lots; or, adjusting or re-aligning existing property lines. For many years, the majority of subdivisions in the District have occurred in existing residential neighbourhoods where they are permitted by zoning or where the new subdivision would be compatible with the pattern of the block.

Two broad categories of subdivision applications are processed at the District.

1. Subdivisions that meet zoning requirements, including designated small lot infill areas (SLIAs)
2. Subdivisions that require Council approval to meet zoning requirements (i.e. DVP for lot width or rezoning for lot size and area)

Requirements and Approval Processes

A subdivision includes a formal application process requiring approval from the District of North Vancouver *Approving Officer* and registration of the new subdivision at the *Land Title Office*. The *Approving Officer* considers many factors with respect to a subdivision proposal including:

- Conformity with District plans, policies and regulations
- Zoning (including proposed lot area, width and depth)
- Community input and the public interest
- Established lot pattern of block and neighbourhood character
- Access and parking
- Environmental impacts
- Tree preservation
- Slope, soil and drainage
- Municipal service requirements
- Park dedication (more than 3 lots)
- Site design and compatibility

Adopted Small Lot Infill Areas

There are currently 23 adopted small lot infill areas in the District of North Vancouver Zoning Bylaw. These areas were identified in the Small Lot Infill Report dated March 1987. There is no specific Small Lot Zone, rather these lots use the same zoning as the neighbouring larger lots with specific regulations built in to existing zoning (i.e. a different side yard setback based on lot width). Attachment 1 shows the small lot infill areas. (Note, staff will provide large format maps at the November 5th meeting).

The criteria used to establish these areas in the 1980s included the majority (50% or more) of the residential lots within the area are already developed as small lots and have frontages less than 13.875 metres (45 ft.) with no lot less than 10 metres (33 ft.) in width. These areas were

also divided into sub-areas based on individual blocks or block faces. This permitted the designation of sub-areas which met the 50% small lot development criteria even though the area as a whole may not have.

Of the existing designated SLIAs, future subdivision potential is minimal. Approximately 38 potential new small lots could be created, subject to homeowner's interest and ability to comply with District plans, policies and regulations and *Approving Officer* considerations.

Potential Small Lot Infill Areas

The 1987 Small Lot Infill Report also identified "potential" small lot infill areas that for the most part were in close proximity to the areas adopted in the Zoning bylaw for small lots and had some existing pattern of small lots but did not meet the 50% block face criteria. The areas identified as potential small lot infill areas have no Zoning Bylaw status, however are considered one piece of background research when processing subdivisions.

Small lot subdivisions located outside of designated small lot infill areas are forwarded to Council for consideration as they do not comply with Zoning Bylaw requirements. These subdivisions require a text amendment to the Zoning Bylaw to add the lot to the Zoning Bylaw Section 310 "Special Minimum Lot Sizes". This Special Minimum Lot Size listing has been used for the past 20 years to allow subdivisions that do not meet the minimum lot area requirement to be considered on a case by case basis using previously outlined criteria.

Current Practices

In the District, there are approximately 20,700 single family lots. Over the past 10 years the District's Approving Officer has granted approval to 62 subdivision applications creating 83 net new single family lots (approximately 8 net new lots per year). Seventy-five percent complied with existing zoning requirements and 25 percent required Council approvals (rezoning or a development variance permit). Council approval was required for 21 of these lots (8 requiring a variance and 13 requiring rezoning). Seventeen were created within the existing designated small lot infill areas (SLIAs). Subdivisions have occurred throughout the District primarily in the established residential areas located outside of the District's 'network of centres' (Attachment 2). The majority of subdivisions have resulted in lots greater than 13.875 metres (45 ft.) in width.

**Table 1: Subdivided Lots Created and Registered at Land Title Office between
January 2003 – October 2013**

	Net New Lots Created	SLIA* Program	Rezoning** Required	DVP** Required
2003	10	1	2	1
2004	12	1	1	1
2005	14	0	1	1
2006	8	2	2	0
2007	6	2	0	2
2008	6	2	0	0
2009	6	2	1	0
2010	5	3	1	1
2011	10	3	3	1
2012	5	1	2	1
2013 (to Oct 15)	1	0	0	0
Total:	83	17	13	8

*Designated Small Lot Infill Area

**Council approval required

Discussion

Several issues have arisen with regards to proposed subdivisions in established residential neighbourhoods. The majority of concerns relate to smaller lot subdivisions where the width of the lots proposed are less than 13.875 metres (45 ft.).

Concerns focus on the following:

- parking and lack of on-street parking for lots created without a lane
- similarity of house designs and mirror images of house designs
- altering the existing lot pattern, where blocks contain a variety of lot widths, thereby changing the established neighbourhood character
- inclusion of secondary suites on small lots without a lane

As a result of the above issues, the *Approving Officer* has augmented current subdivision best practices as outlined below.

- For lots less than 13.875 metres (45 ft.) in width, secondary suites are prohibited (secured by way of restrictive covenant) if no lane access is provided
- For all subdivisions to ensure unique design of dwellings, including no mirror image or identical house designs permitted, a unique design covenant is secured by way of restricted covenant
- Sufficient off street parking in a non-tandem arrangement needs to be demonstrated for all subdivisions where a secondary suite will be permitted
- For areas outside designated SLIAs, generally more than 50% of the block face needs to be already developed as small lots to be given consideration

Questions for Consideration

1. Does Council agree with the augmented best practices outlined above or,
2. Does Council wish to consider placing further restrictions on the potential for small lot subdivisions including increasing the threshold percentage of pre-existing small lots on a block face as a consideration for subdivision?

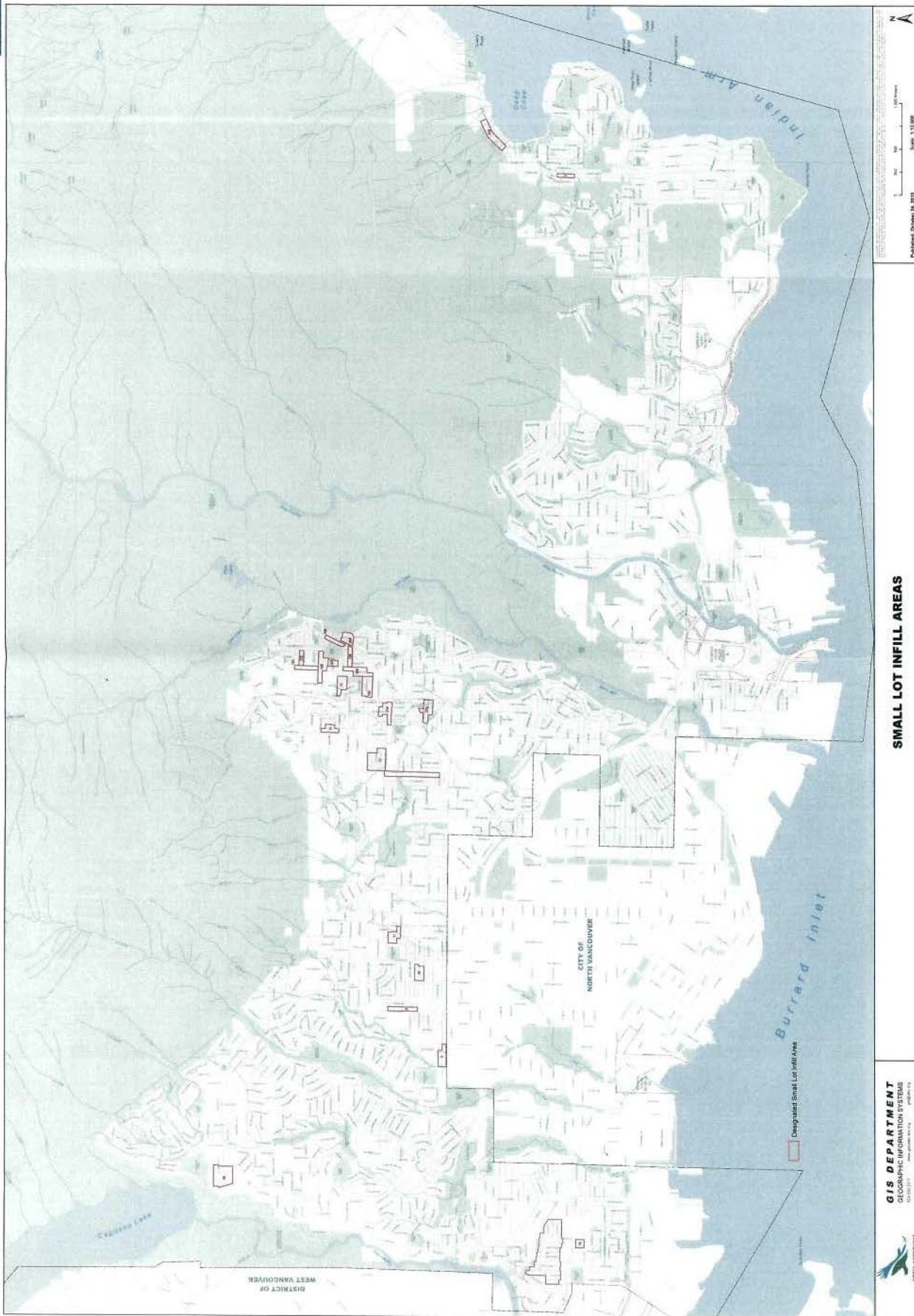
Conclusion

As an overall strategy to explore sensitive residential infill opportunities, identifying small lot infill opportunities to provide greater housing diversity is not considered a priority at this time given the focus on centres implementation planning and the significant housing capacity remaining in the centres areas. Furthermore this approach may provide only a limited ability to provide greater housing diversity and more options to suit different residents' ages, needs and incomes given other sensitive infill strategies available. For example, Council will consider a discussion paper on Coach Housing at its Committee of the Whole meeting on November 19th which is another example of a sensitive infill approach. Given the limited number of subdivision approvals over the past 10 years, it is recommended that Council support the augmented best practices for reviewing subdivision applications outlined in this report and to communicate the additional criteria to all parties (i.e. updating the subdivision application brochure).

Recommendations

That Council confirm receipt of the augmented subdivision best practices as outlined below:

- Prohibit secondary suites (secured by way of restrictive covenant) for subdivisions where the lots are less than 13.875 metres (45 ft.) in width if no lane access is provided
- Require a unique design covenant to ensure the design of dwellings do not include mirror images or identical house designs for all subdivisions
- Provide sufficient off street parking in a non-tandem arrangement on all subdivisions where secondary suites will be permitted
- Require 50% or more of the block face be developed as small lots to be given consideration for a small lot subdivision



REPORTS

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AGENDA INFORMATION	
<input checked="" type="checkbox"/> Regular Meeting	Date: <u>NOV 18, 2013</u>
<input type="checkbox"/> Workshop (open to public)	Date: _____

[Signature]
Dept.
Manager

[Signature]
GM/
Director

[Signature]
CAO

The District of North Vancouver REPORT TO COUNCIL

November 5, 2013
File: 3060-20/9.13

AUTHOR: Doug Allan, Community Planner

SUBJECT: DEVELOPMENT PERMIT 9.13 - 435-475 SEYMOUR RIVER PLACE

RECOMMENDATION:

That Development Permit 9.13 (Attachment A) for a 61 unit townhouse project at 435-475 Seymour River Place be issued.

REASON FOR REPORT:

The site is in Development Permit Areas for Form and Character of Ground-Oriented Housing and for Energy and Water Conservation and Greenhouse Gas Emission Reductions. Portions of the site are also designated for Creek Hazard and Streamside Protection purposes. Undertaking the proposed development requires issuance of a Development Permit by Council.

SUMMARY:

Bylaw 7999, rezoning the subject land to a new CD73 Zone, received 2nd and 3rd Reading on September 23, 2013 and was adopted on November 4, 2013. Development Permit 9.13 is now ready for consideration of issuance.

This residential project includes 61 townhouse units in 5, three storey buildings on either side of an interior courtyard with access off Seymour River Place. Parking is located underground.

The proposal is in compliance with the Official Community Plan (Maplewood Village Centre) land use directions and the OCP Schedule B Development Permit Area Guidelines.



BACKGROUND:

Bylaw 7999, rezoning the property to CD73, and Housing Agreement Bylaw 8002, were introduced on July 29, 2013 and, following a public hearing on September 10, 2013, received 2nd and 3rd Reading on September 23, 2013. Both Bylaws were adopted on November 4, 2013.

In addition to the rezoning and housing agreement bylaws, a development covenant has been registered on the lands which requires compliance with the approved development concept and adaptable design features, and requires an engineering servicing agreement including a construction traffic management plan. The development covenant also requires separate covenants for flood construction, green building, Maplewood Creek riparian area rehabilitation and enhancement, stormwater management and public art installation and maintenance. The Housing Agreement has been registered on the lands.

EXISTING POLICY:Land Use Designation

The subject properties are located at the north end of the Maplewood Village Centre plan area and are designated as *Residential Level 4: Transition Multi-Family*, which permits townhouse and apartment development up to approximately 1.2 FSR.

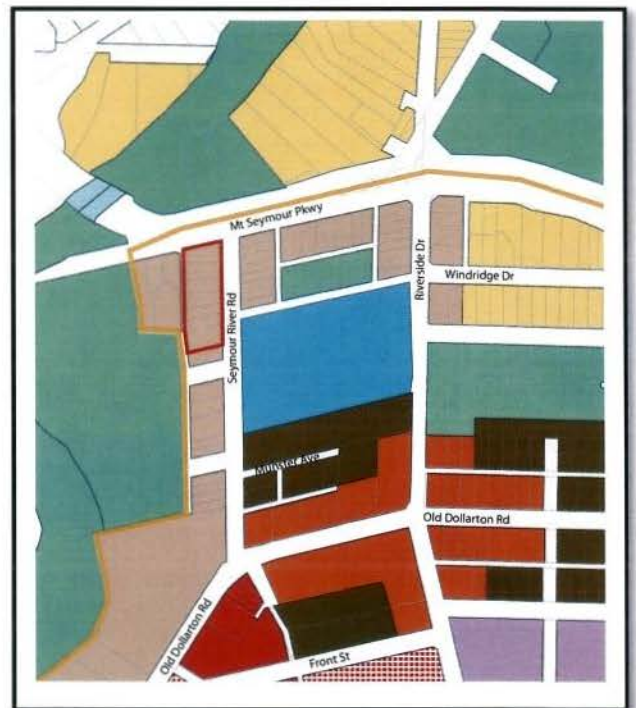
Development Permit Area Designations

The entire site is designated as Development Permit Areas for:

- Form and Character of Commercial and Multi-Family Development (Ground-Oriented Housing); and
- Energy and Water Conservation and Greenhouse Gas Emission Reductions;

In addition,

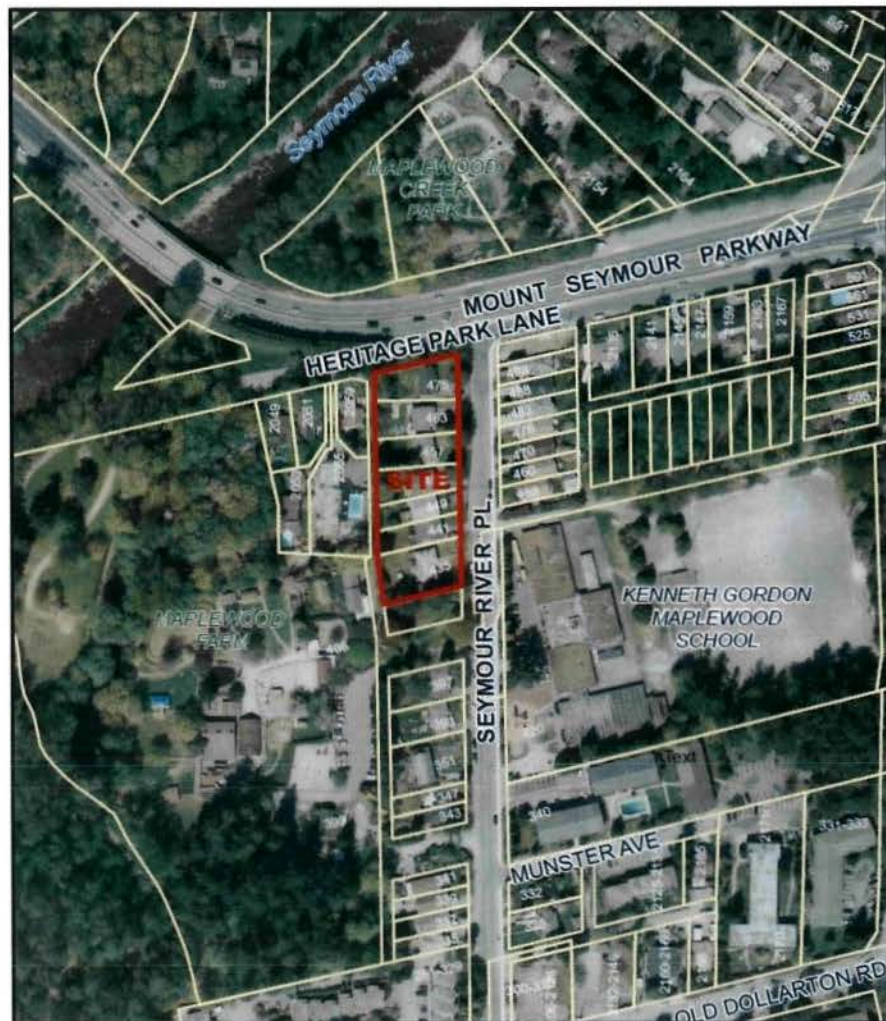
- the northwest portion is designated as a Development Permit Area for Creek Hazard; and
- the north two lots are identified for Streamside Protection purposes.



ANALYSIS:**Site and Surrounding Area:**

The development site consists of 7 single family lots located on the west side of Seymour River Place and is 4733m² (50,944ft.²) in size. An unopened lane allowance is located to the west of the site. Maplewood Creek exits a culvert beneath Mount Seymour Parkway and crosses the northwest corner of the site before continuing west and into Seymour River Heritage Park.

As shown in the following air photo, the site is adjacent to Maplewood Farm. Surrounding properties consist of: developed single family lots (zoned RS4) to the west and east across Seymour River Place; a vacant District lot to the south between the site and the entrance into Maplewood Farm; and Kenneth Gordon Maplewood School to the southeast. The OCP designates the surrounding single family properties as Residential Level 4: Transition Multi-Family, permitting a similar scale of development as the subject project.



The Proposal:Site Plan

The project consists of 61 townhouses in 5 buildings arranged on either side of a pedestrian/amenity courtyard as illustrated on the accompanying site plan. The site layout and underground parking location have been influenced by the required 15m riparian area setback for Maplewood Creek.

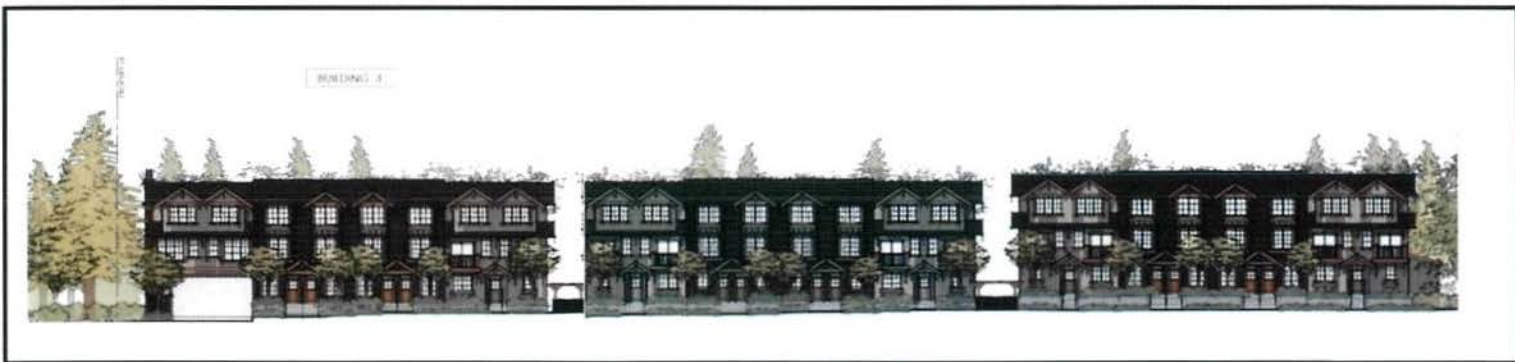
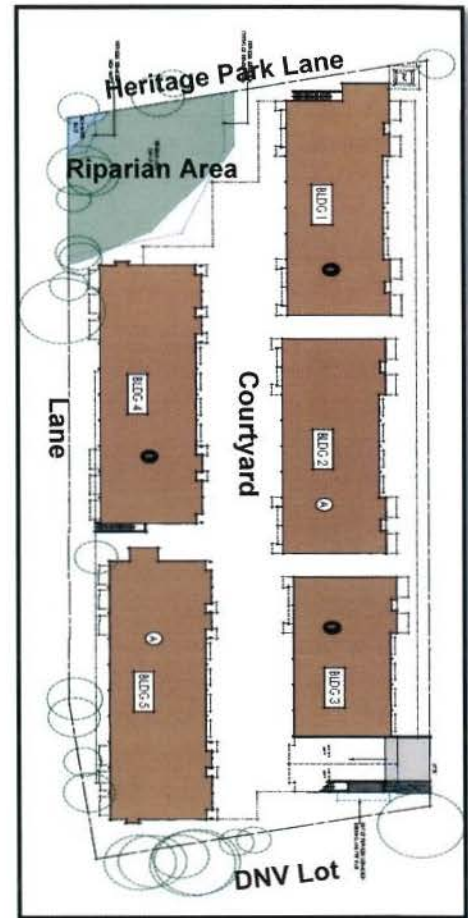
Vehicle access to the underground parking is off Seymour River Place in the southeast corner of the site. A total of 115 parking spaces are provided including the designated visitor and handicapped spaces.

The parking plan incorporates a total of 16 small car spaces which exceeds the number permitted under the CD73 Zone by 2 spaces. This is a minor issue and the Development Permit incorporates a variance to increase the number of small car stalls from 14 to 16. Otherwise, the project complies with the CD73 Zone regulations.

Development Permit for the Form and Character of Ground-Oriented Housing:

a) Building Design:

As shown on the following elevation plan, the units are three storeys in height with the exception of 5, single level, 2 bedroom units in buildings 1, 2 and 3. Each of those units have a two storey townhouse unit above.

**Seymour River Place Streetscape**



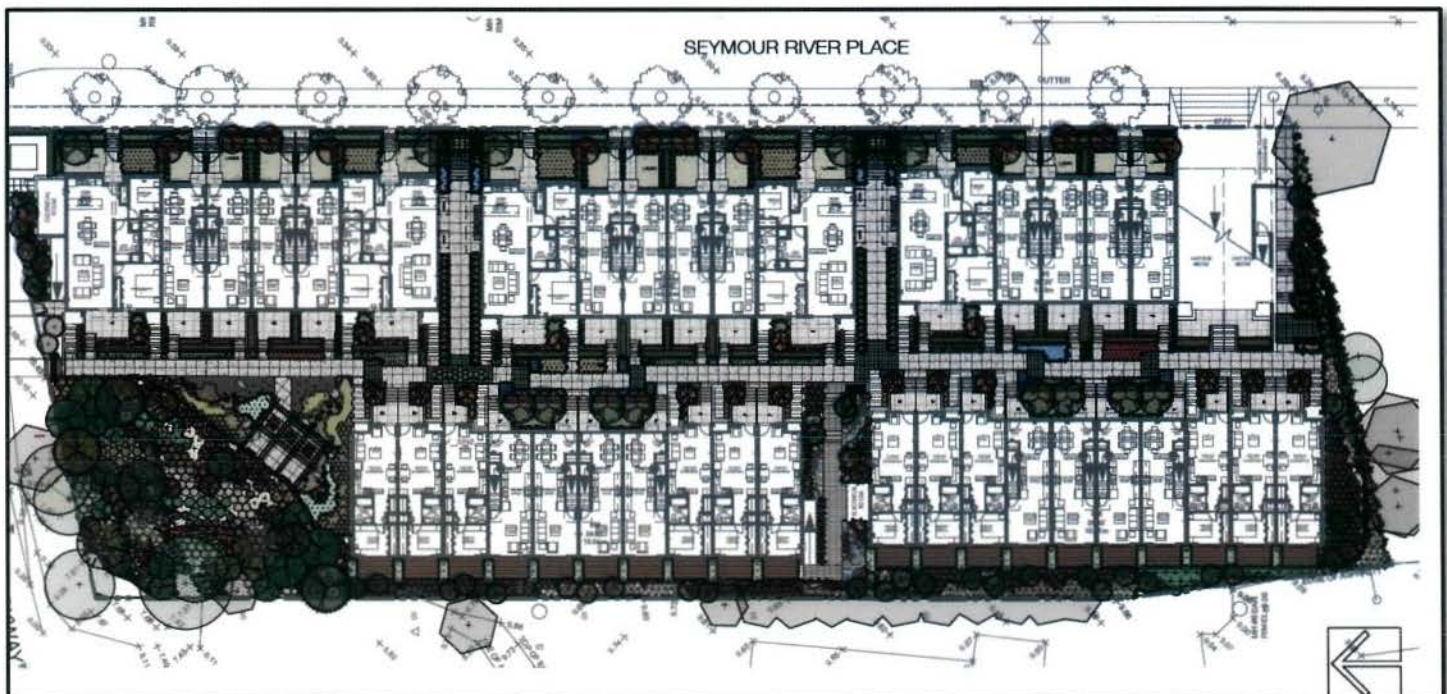
South End Elevation

The proposed units are a mix of 1, 2 and 3 bedroom units with the majority (80%) being 2 and 3 bedroom units. The units range between approximately 155.5m² (510ft.²) and 130m² (1400ft.²). The individual buildings are about 11.3m (37ft.) high.

The principal exterior building materials are fibre cement board and batten siding and painted cedar shingles in a range of grey and brown shades. The roofing material is a fibreglass shingle in a darker brown colour. Trim elements are wood painted in complementary colours. The material and colour palette creates differentiation between the 5 buildings, particularly as viewed from Seymour River Place.

b) Landscaping

As shown on the following image, the landscaping concept proposes a more formal



design at the front entries of the units facing Seymour River Place consisting of a low retaining wall with steps to a raised landscaped and fenced yard. Along the north, south and west property lines, the landscape scheme emphasizes screen planting.

The Seymour River Place streetscape is illustrated in the following rendering.



Seymour River Streetscape

Access from Seymour River Place is provided by walkways between the buildings leading to a central courtyard which incorporates a north/south walkway for access to the units on each side. Off the interior courtyard walkway, each unit has a semi-private patio partially screened and separated with hedge planting. The units in Buildings 4 and 5 on the west side of the site also have rear, west-facing decks and all 2 and 3 storey units have balconies on the upper levels.

The courtyard incorporates passive experiences including sensory gardens with edible plants; interpretive spaces, including a dry river bed between buildings 4 and 5; and active play areas for children adjacent to the creek riparian area.



Interior Courtyard View

There are 10 District trees that are either in poor or hazardous conditions and will be removed. This includes 3 trees from the District lot to the south of the site, 5 trees within the lane allowance west of the site and 2 trees located in the boulevard north of the site. The landscape plans propose the replanting of at least 90 new trees of varying species within the site and on the adjacent District lands. The Development Permit requires that the tree management plans be revised for consistency with the arborist's recommendations.

c) Adaptable Design:

The 5 single level units at the ends of Buildings 1, 2 and 3 have been designed as universal suites which could accommodate persons in wheelchairs and will satisfy the District's Level 1A Adaptable Design Guidelines and the SAFERHome standards. The developer has offered to provide electrical connections at the stairs in front of these 5 units for installation of a wheelchair lift system and will install lifts at cost for initial purchasers who may need that equipment. As the remaining 56 units are two and three storey units, wheelchair accessibility to all levels is not achievable. Therefore, staff have prepared an adjusted list of Level 1A guidelines, attached to the Development Permit as Appendix 9.13PP, establishing the standards to be met.

d) Acoustic Performance

The CD73 Zone includes the District's residential acoustic regulations for maximum noise levels in the bedrooms, living areas and other areas of the units. The applicant has provided a report from Brown Strachan Associates, which establishes the construction requirements necessary to ensure that the buildings will meet the established acoustic standards in the CD73 Zone.

This project has been designed to address the Development Permit Guidelines for the Form and Character of Ground-Oriented Housing. The guidelines have resulted in:

- the use of architectural and varied roof treatments to reduce the apparent building height, particularly as viewed from Seymour River Place;
- an interface treatment which fosters a strong relationship between the units and Seymour River Place and establishes visibility to the front of the units;
- building massing which breaks up the front facades;
- design variations which avoid a repetitive appearance;
- the provision of at least 9m² of private outdoor space for each unit;
- separation between buildings across the courtyard in excess of the recommended 9m;
- a layered landscape treatment along Seymour River Place;
- pedestrian access from the street;
- a sustainable landscape design which incorporates native and drought-tolerant plants;
- the incorporation of outdoor on-site play areas;
- a parking arrangement which is not visible from the street;
- the use of durable materials and roof shingles; and
- weather-protected entrances.

Reduced site, architectural and landscape plans are attached to the Development Permit 9.13.

Development Permit For Energy and Water Conservation and Greenhouse Gas Emission Reductions:

In accordance with the Energy and Water Conservation and Greenhouse Gas Emission Reduction Development Permit Area Guidelines and the Green Building Strategy, the project is designed to incorporate building measures to achieve an Energuide 82 energy performance rating to reduce energy consumption. The applicant is utilizing the Built Green® system and is required by the Development Covenant to achieve a building performance target equivalent to the Gold standard.

To address the Development Permit guidelines, the project will:

- incorporate under slab insulation and higher value wall insulation to improve the effectiveness of the building envelope in reducing heat loss;
- include a centralized natural gas instantaneous domestic hot water system;
- utilize EnergyStar rated windows, ventilation fans and appliances and high efficiency lighting fixtures;
- utilize native and drought-tolerant plants to minimize the need for irrigation;
- be constructed using sustainably harvested lumber and recycled content gypsum board;
- utilize no or low VOC paints for indoor air quality; and
- include an on-site construction materials recycling area.

The green building covenant will establish the minimum Energuide 82 energy performance baseline and will include a Built Green checklist outlining the measures to meet the building performance, "Gold", target.

Development Permit Area For Streamside Protection:

The proposed buildings are situated beyond the 15m riparian area setback from Maplewood Creek and the underground parking structure is sited to avoid any encroachment into the riparian area. To further protect the riparian area, the site and landscape plans do not incorporate any access into the riparian area.

The applicant has also provided a preliminary concept for the realignment of the creek back to its natural course, rehabilitation of the channel, removal of existing invasive plant species and enhancement of the setback area with new, native planting. While staff are in agreement with the concept, the Development Covenant and Development Permit require that a final creek restoration and enhancement plan, including a plan for the removal of the invasive species, be provided for approval prior to issuance of a building permit.

Development Permit Area For Creek Hazard:

To address the potential flood hazard, the applicant provided a flood hazard assessment, prepared by Northwest Hydraulic Consultants. The project has been designed to meet the recommended flood construction level of 9m with no habitable space or electrical rooms below that elevation. Both Development Permit 9.13 and the Development Covenant require compliance with the recommendations of the Northwest Hydraulic Consultants report and the recommendations from the geotechnical consultant.

OFF-SITE IMPROVEMENTS:

As part of this application, the developer will:

- contribute \$21,250 to the cost of the Mount Seymour Bike Lane Project;
- remove the existing mid-block turnaround on Seymour River Place in front of Kenneth Gordon Maplewood School and construct a new full turnaround at the north end of the street at Heritage Park Lane;
- construct a new sidewalk and curbs/gutter along Seymour River Place to the entrance into Maplewood Farm;
- construct driveway upgrades to improve the entrance to Maplewood Farm; including new curb returns and sidewalk let downs;
- replace the existing overhead BC Hydro, telephone and cable services with a underground service; and
- install fibre optic cable in Seymour River Place.

The off-site improvements will be included in an Engineering Services Agreement as required under the Development Covenant and Development Permit 9.13.

COMMUNITY AMENITY CONTRIBUTION / PUBLIC ART:

The District's Community Amenity Contribution (CAC) Policy requires an amenity contribution for projects including an increase in residential density. In this case, a CAC of \$395,000 has been calculated and this amount is included in the CD73 Zone. It is anticipated that the CACs from this development will be used for public art and contributions toward park improvements and other projects identified as part of the Maplewood Village Centre Implementation Strategy.

The applicant has prepared a public art plan which was accepted by the Public Art Advisory Committee in July 2013 and has submitted a letter of commitment to provide public art as part of the CAC in the amount of \$50,000. The Public Art Plan is based on a natural theme and envisions the Seymour River Place frontage as the prime art location as it will have the highest community visibility. While a specific art design has not yet been identified, it will include a principal installation and may include complementary smaller scale elements incorporated into the development. If the project is approved, the developer will proceed with a public art call and the selection of an artist in conjunction with the Office of Cultural Affairs and representatives from the Public Art Advisory Committee.

CONSTRUCTION MANAGEMENT PLAN:

In accordance with the requirements of the development covenant and Development Permit 9.13, a construction management plan is required to be accepted by the District prior to issuance of the Building Permit and any Highway Use Permits in order to minimize, and where possible avoid, construction impacts on local traffic and the quality of life for nearby residents.

This plan must include a detailed description of construction activities and how they are addressed. In particular the plan must:

- include measures to reduce any impacts to traffic and pedestrians;
- provide a point of contact for all calls and concerns;
- identify methods of sharing the construction schedule with neighbours;
- identify a location for truck marshalling so that construction traffic does not impact traffic circulation in the surrounding community;
- provide parking options for construction workers; and
- limit the time of any road closures.

CONCURRENCE:

Staff

The project has been reviewed by staff from Environment, Permits, Parks, Engineering, Policy Planning, Urban Design, Transportation Planning, the Fire Department, the Arts Office and the Municipal Solicitor.

Advisory Design Panel:

The Advisory Design Panel reviewed the project on March 14, 2013. The Panel commended the applicant for the quality of the proposal, and recommended approval of the project as presented.

PUBLIC INPUT:

Through the zoning process, a facilitated public information meeting was held on April 23, 2013 and a public hearing was held on September 10, 2013. Staff will maintain on-going communication with adjacent neighbors should any questions arise during the construction phase.

CONCLUSION:

The project has been developed in accordance with the CD73 Zone regulations and the OCP Development Permit Area Guidelines for Ground-Oriented Housing, Energy and Water Conservation and Greenhouse Gas Emission Reduction and Creek Hazard. It also addresses the policy directions in the OCP with reference to the provision of a range of

housing types, including family housing. Therefore, Development Permit 9.13 is ready for Council's consideration and staff recommend its issuance.

Respectfully submitted,



Doug Allan
Community Planner
Attachments:

A – Development Permit 9.13

REVIEWED WITH:		
<input type="checkbox"/> Sustainable Community Dev. _____	<input type="checkbox"/> Clerk's Office _____	External Agencies:
<input type="checkbox"/> Development Services _____	<input type="checkbox"/> Communications _____	<input type="checkbox"/> Library Board _____
<input type="checkbox"/> Utilities _____	<input type="checkbox"/> Finance _____	<input type="checkbox"/> NS Health _____
<input type="checkbox"/> Engineering Operations _____	<input type="checkbox"/> Fire Services _____	<input type="checkbox"/> RCMP _____
<input type="checkbox"/> Parks & Environment _____	<input type="checkbox"/> ITS _____	<input type="checkbox"/> Recreation Com. _____
<input type="checkbox"/> Economic Development _____	<input type="checkbox"/> Solicitor _____	<input type="checkbox"/> Museum & Arch. _____
<input type="checkbox"/> Human resources _____	<input type="checkbox"/> GIS _____	<input type="checkbox"/> Other: _____

THE CORPORATION OF THE DISTRICT OF NORTH VANCOUVER**DEVELOPMENT PERMIT 9.13**

This Development Permit 9.13 for the Form and Character of Ground-Oriented Housing, Energy and Water Conservation and Greenhouse Gas Emission Reductions, Creek Hazard and Streamside Protection, is hereby issued by the Council for The District of North Vancouver to Anthem Maplewoods Developments Limited Partnership (Inc. No. 0960808) to allow for construction of a 61 unit townhouse development at 435-475 Seymour River Place, on the land legally described as:

Lot A, Block 2, District Lot 791, Plan 11707 (PID: 009-061-606);
 Lot 7 of Lot 1, Block 3, District Lot 791, Plan 2871
 (PID: 007-043-384);
 Lot 6 of Lot 1, Block 3, District Lot 791, Plan 2871
 (PID: 007-472-111);
 Lot B (Explanatory Plan 4494), of Lots 3 to 5 of Lot 1, Block 3, District
 Lot 791, Plan 2871 (PID: 012-460-524);
 Lot 2, Block 3, District Lot 791, Plan 13688 (PID: 005-825-059);
 Lot D, Block 3, District Lot 791, Plan 17418 (PID: 007-280-653); and
 Lot C, Block 3, District Lot 791, Plan 17418 (PID: 006-103-006).

subject to the following terms and conditions:

- A. The following Zoning Bylaw regulation is varied under Section 920(2)(a) of the Local Government Act:
 1. The maximum amount of small car parking is increased from 14 to 16 spaces.
- B. The following requirement is hereby imposed under subsections 920(2)(c) and 926(1) of the *Local Government Act*:
 1. Substantial construction shall commence within two years of the date of this permit, as determined by the Manager of Permits and Licenses, or the permit shall lapse.
- C. The following requirements are hereby imposed under subsections 920(1), 920(2), (7), (7.1), (8), (9), (10.1), (10.2) and (11) of the *Local Government Act*:
 1. The site shall be developed in accordance with the attached site, building and landscaping plans (Appendices 9.13A – 9.13LL).
 2. The site shall be developed in accordance with the flood assessment report by Northwest Hydraulics Consultants Inc., dated January 28, 2012 and the report prepared by exp. dated May 27, 2013 (Appendices 9.13MM and 9.13NN);

3. The detailed design of the underground parking structure shall be based on the design parameters outlined in the report from exp. dated February 20, 2012 (Appendix 9.13OO) as may be amended;
4. The buildings shall be constructed in accordance with the recommendations in the report from Brown Strachan Associates dated December 17, 2013 to ensure that the acoustic regulations in the CD73 Zone are met;
5. Prior to issuance of a Building Permit the following shall be submitted to:
 - (a) Community Planning:
 - (i) building plans for the 5 single storey, at-grade C-type units which comply with the District's Level 1(A) Adaptable Design Guidelines and the SAFERHome standards;
 - (ii) building plans for the 56, two and three storey units, which meet the adjusted basic Level 1A adaptable design guidelines, included as Appendix 9.13(PP);
 - (iii) a completed Built Green® checklist identifying the measures to be included in the buildings such that they will meet or exceed a performance equivalent the 'Gold' level;
 - (iv) a finalized rehabilitation and enhancement program for Maplewood Creek, based on the *'Maplewood Creek Restoration Project'* report prepared by Keystone Environmental, dated June 7, 2013, including:
 - engineering details of the realignment of the creek channel;
 - a detailed planting plan(s) for the restitution and enhancement of the creek channel and associated riparian area; and
 - a plan for the removal of the invasive species on the subject lots and adjacent properties and District road allowance and a recommended treatment plan, including cost estimate, for the acceptance of the General Manager, Planning, Properties & Permits;
 - (v) a finalized landscape plan package approved by the General Manager, Planning, Properties & Permits which amends the plans attached to this Permit by incorporating the planting plans for the riparian area as noted in (iii) above and revises the tree management plans for consistency with the Project Arborist's recommendations;
 - (vi) a written landscape cost estimate for the installation of all landscaping as shown on the final approved landscape plan and, including, the cost of the invasive species removal and

treatment, submitted by the Landscape Architect, for the acceptance of the General Manager, Planning, Properties & Permits;

- (vii) a completed "Permission to Enter" agreement to provide evidence that a Landscape Architect has been retained to supervise the installation of the landscape works and the written authorization for the District or its agents to enter the premises and expend any or all of the deposit monies to complete the landscape works in accordance with the approved landscape plan;

b) Engineering:

- (i) revised engineering drawings for the acceptance of the General Manager, Engineering, Parks and Facilities; and
- (ii) an Engineering Services Agreement for the acceptance of the General Manager, Engineering, Parks and Facilities;
- (iii) a Construction Management Plan prior to issuance of the Building Permit and Excavation Permit, which may require amendments during the course of construction to ensure that construction impacts are minimized.

C. The following requirements are hereby imposed under subsections 925(1) & (2) of the Local Government Act:

- 1. A security deposit equal to the greater of 125% of the estimated cost of all on-site landscaping, in accordance with the approved cost estimate, or \$100,000. The deposit must be provided prior to issuance of a building permit for the proposed development on the Land and will be held as security for landscaping, building and environmental works.

Nothing in this Development Permit alters or affects in any way any of the preconditions to issuance of a building permit as set out in the Development Covenant registered against the Land in favour of the District under Registration Numbers CA3429044 and CA3429046.

Mayor

Municipal Clerk

Dated this the day of , 2013.

SITE DATA	MINIMUM REQUIRED/ MAXIMUM ALLOWED	PROPOSED	AREA (SQFT)
GROSS SITE AREA			51067
RIPARIAN AREA EXCLUSION			123
NET SITE AREA			50944
SITE COVERAGE			
AREA OF BUILDINGS AND STRUCTURES			
PERCENTAGE OF SITE COVERAGE*	50%	22601 SQFT	44%
*INCLUDING HARDSCAPE 3' ABOVE AVERAGE GRADE			
BUILDING COVERAGE			
AREA OF BUILDINGS			
PERCENTAGE OF BUILDING COVERAGE	50%	22039 SQFT	43%
NUMBER OF RESIDENTIAL UNITS			
Unit A1 - 3BR - 3 LEVELS		12	
Unit A2 - 2BR - 3 LEVELS		8	
Unit B1A - 2BR 2 LEVELS		4	
Unit B1B - 2BR 2 LEVELS		3	
Unit B1C - 2BR 2 LEVELS		3	
Unit B2A - 2BR 2 LEVELS		2	
Unit B2B - 2BR 2 LEVELS		8	
Unit B2C - 2BR 2 LEVELS		2	
Unit C1 - 2BR - GROUND LEVEL		1	
Unit D1A - 1BR - 1 LEVEL		2	
Unit D1B - 1BR - 1 LEVEL		6	
Unit D1C - 1BR - 1 LEVEL		2	
Total		61	
UNIT MIX			
1BR	NA	19.7%	
2BR	NA	47.5%	
3BR	NA	32.8%	
PARKING			
RESIDENT (8.8x16.7)	107	100	
DISABLED (12.1"x16.7)	2	2	
VISITOR (1.25 PER UNIT)	15	15	
TOTAL	122	115	
REFER TO A1.03 PARKING PLAN FOR PARKING CALCULATIONS			
PARKING AREA		39126 SQFT	
CLASS 2 BICYCLE (0.2 PER UNIT)	13	REFER TO LANDSCAPE	
ADDITIONAL BIKE STORAGE		61	
RECYCLE AREA	1875 SQFT	1875 SQFT	
0.19 SQM PER UNIT* ADDITIONAL 50% OF ALLOCATED AREA			
SETBACKS			
FRONT	NA	VARIES 12'0" - 18'6"	
SIDE	NA	VARIES 9'5" - 18'3"	
REAR	NA	VARIES 8'0" - 15'6"	
BUILDING HEIGHT	36.00	37.22	
REFER TO: ELEVATIONS AND AVERAGE GRADE PLAN			

DEVELOPMENT DATA

CIVIC ADDRESS:
435-475 SEYMOUR RIVER PLACE
NORTH VANCOUVER, BC

LEGAL DESCRIPTION

PROJ: LOT C, BK 3, DL 791, G 1, NWD, PLAN 17418; 006-103-006
 LOT D, BK 3, DL 791, G 1, NWD, PLAN 17418; 007-280-453
 LOT 2, BK 3, DL 791, G 1, NWD, PLAN 13048; 055-825-059
 LOT 8 (EXPLANATORY PLAN AREA OF LOTS 3 TO 5 OF LOT 1)
 BK 3, DL 791, G 1, NWD, PLAN 2871; 012-460-524
 LOT 6 OF LOT 1, BK 3, DL 791, G 1, NWD, PLAN 2871; 007-472-111
 LOT 7 OF LOT 1, BK 3, DL 791, G 1, NWD, PLAN 2871; 006-043-384
 LOT A, BK 2, DL 791, G 1, NWD, PLAN 11707; 009-061-406

UNIT TYPE	# UNITS	GROSS UNIT AREA	6" WALLS (A)	HIGH SILL BAY WINDOW (B)	WINDOW SEATS (C)	CHIMNEYS (D)	NET AREA	TOTAL GROSS	TOTAL 6" WALLS (A)	TOTAL HIGH SILL BAY WINDOWS AT STAIR (B)	TOTAL WINDOW SEATS (C)	TOTAL CHIMNEYS (D)	TOTAL NET
A1	12	1382.7	0.0	0.0	36.7	0.0	1346.0	16591.9	0.0	0.0	440.0	0.0	16151.9
A2	8	1391.9	0.0	0.0	36.7	0.0	1355.2	11135.3	0.0	0.0	293.3	0.0	10841.9
B1A	4	1094.1	0.0	0.0	24.1	0.0	1069.9	4926.6	0.0	0.0	46.6	0.0	4279.8
B1B	4	1063.4	0.0	0.0	24.1	0.0	1039.3	4504.4	0.0	0.0	144.9	0.0	4359.4
B1C	2	1152.0	0.0	0.0	24.1	0.0	1127.9	2224.0	0.0	16.5	46.3	19.3	2139.9
B2A	2	922.2	0.0	0.0	22.9	0.0	899.3	1924.4	0.0	0.0	46.5	0.0	1877.9
B2B	8	922.2	0.0	0.0	22.9	0.0	899.3	7521.3	0.0	0.0	183.0	0.0	7338.3
B2C	2	922.2	0.0	0.0	22.9	0.0	899.3	1924.4	0.0	16.5	45.8	16.5	1880.2
C1	5	1027.5	0.0	0.0	0.0	0.0	1027.5	1027.5	0.0	0.0	0.0	0.0	5437.5
D1A	2	503.0	0.0	0.0	0.0	0.0	503.0	1006.0	0.0	0.0	0.0	0.0	1006.0
D1B	6	503.0	0.0	0.0	0.0	0.0	503.0	3018.0	0.0	0.0	0.0	0.0	3975.0
D1C	2	503.0	0.0	0.0	0.0	0.0	503.0	1006.0	0.0	0.0	0.0	0.0	1006.0
TOTAL	61							63777.4	1.25	33.0	1298.3	56.2	42389.8
NOTES										0.00	0.00	0.00	1.22
A	FLOOR SPACE EXCLUSIONS TO ACCORDANCE WITH BC BUILDING FIRE CODE												
B	FLOOR SPACE EXCLUSION FOR HIGH SILL BAY WINDOWS AT STAIR												
C	FLOOR SPACE EXCLUSION FOR WINDOW SEATS												
D	FLOOR SPACE EXCLUSION FOR CHIMNEYS												
TOTAL NET PSR													



CONSULTANT LIST

DEVELOPER:	ANTHEM PROPERTIES MAPLEWOODS DEVELOPMENT LLP #300-550 BURNARD ST. VANCOUVER, BC V6C 2S5 CONTACT: STEVE FORREST, ROCKY SETHI FORMWERKS ARCHITECTURAL INC. 1425 WEST 5TH AVENUE VANCOUVER, BC V6J 1H6 CONTACT: KIM BARNESLEY THOMAS LEUNG STRUCTURAL ENGINEERING #121 WEST 6TH AVE. VANCOUVER, BC V5Y 1K3 CONTACT: THOMAS LEUNG #205-4940 CANADA WAY BURNABY, BC V5G 4H7 CONTACT: TOM RABEY	MECHANICAL:	ROCKY POINT ENGINEERING LTD. #208 - 2071 92A AVENUE SURREY, BC V4A 2J4 CONTACT: RICHARD CORRA GAGER ELECTRICAL CONSULTING 4730-203 RD ST. LANGLEY, BC V3A 5J7 CONTACT: MARC GAGER ETA LANDSCAPE ARCHITECTURE 1690 WEST 2ND AVE. VANCOUVER, BC V6J 1M4 CONTACT: GERRY ECKFORD DIAMOND HEAD CONSULTING 342 WEST 8TH AVE. VANCOUVER, BC V5Y 3K2 CONTACT: MIKE COULTHARD
ARCHITECT:		ELECTRICAL:	
STRUCTURAL:		LANDSCAPE:	
CIVIL:		ARBORIST:	
CODE:		GEOTECHNICAL CONSULTANT:	
SURVEYOR:		ENVIRONMENTAL:	
ENERGY MODELING:		HYDRAULIC:	

DRAWING LIST

COVER SHEET & DRAWINGS LIST	A0.00
AERIAL PHOTO & PROJECT DATA	A0.01
SITE PHOTOS	A0.02
PRECEDENCE PHOTOS	A0.03
CONTEXT ANALYSIS	A0.04
SHADOW STUDIES ANALYSIS	A0.05
AVERAGE GRADE PLAN	A0.06
PERSPECTIVE	A0.07
SITE PLAN - 1/16"	A1.00
SITE PLAN - 1/8"	A1.01
SITE PLAN - 1/8"	A1.02
PARKING	A1.03
SITE SECTIONS	A1.04
SITE SECTIONS	A1.05
STREETSCAPE ELEVATIONS	A1.06
STREETSCAPE ELEVATIONS	A1.07
STREETSCAPE ELEVATIONS	A1.08
STREETSCAPE ELEVATIONS	A1.09
STREETSCAPE ELEVATIONS	A1.10
COLOUR SCHEME KEY PLAN	A1.11
COLOUR SCHEME A ELEVATIONS	A1.12
COLOUR SCHEME B ELEVATIONS	A1.13
BUILDING 1 - FLOOR PLANS	A2.00
BUILDING 1 - ELEVATIONS	A2.01
BUILDING 2 - FLOOR PLANS	A2.02
BUILDING 2 - ELEVATIONS	A2.03
BUILDING 3 - FLOOR PLANS	A2.04
BUILDING 3 - ELEVATIONS	A2.05
BUILDING 4 - FLOOR PLANS	A2.06
BUILDING 4 - FLOOR PLANS	A2.07
BUILDING 4 - ELEVATIONS	A2.08
BUILDING 5 - FLOOR PLANS	A2.09
BUILDING 5 - FLOOR PLANS	A2.10
BUILDING 5 - ELEVATIONS	A2.11
UNIT TYPE A1 PLANS	A3.00
UNIT TYPE A2 PLANS	A3.01
UNIT TYPE B1A PLANS	A3.02
UNIT TYPE B1B PLANS	A3.03
UNIT TYPE B1C PLANS	A3.04
UNIT TYPE B2A PLANS	A3.05
UNIT TYPE B2B PLANS	A3.06
UNIT TYPE B2C PLANS	A3.07
UNIT TYPE C1 PLANS	A3.08
UNIT TYPE D1A, D1B, D1C PLANS	A3.09

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REVISIONS

NO.	DATE	DESCRIPTION	BY	CHKD
1	2024.01.10	ISSUED FOR PERMITTING	FORMWERKS	FORMWERKS
2	2024.01.10	ISSUED FOR PERMITTING	FORMWERKS	FORMWERKS
3	2024.01.10	ISSUED FOR PERMITTING	FORMWERKS	FORMWERKS

Anthem
PROPERTIES

FORMWERKS
ARCHITECTURAL

1025 West 8th Ave., Vancouver, BC V6J 1M4
Tel: 604.681.1111 Fax: 604.681.1111

PROJECT

MAPLEWOOD TOWNHOMES
435-475 SEYMOUR RIVER PLACE
NORTH VANCOUVER, BC

DRAWING

DATA SHEET

SCALE: 1/8" = 1'-0" SHEET: A0.01

DATE: FEBRUARY 2024

DATE _____ MUNICIPAL CLERK _____

THIS IS APPENDIX " B "

TO DEVELOPMENT PERMIT 9.13

ISSUED BY THE CORPORATION OF THE
DISTRICT OF NORTH VANCOUVER

DATE

MUNICIPAL CLERK

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REVISIONS
DATE: 1/11/2011
BY: J. B. B. (JANUARY 2011)
REASON: FOR DETAILED PLANNING
DATE: 1/11/2011
BY: J. B. B. (JANUARY 2011)
REASON: FOR DETAILED PLANNING
DATE: 1/11/2011
BY: J. B. B. (JANUARY 2011)
REASON: FOR DETAILED PLANNING

Anthem
PROPERTIES

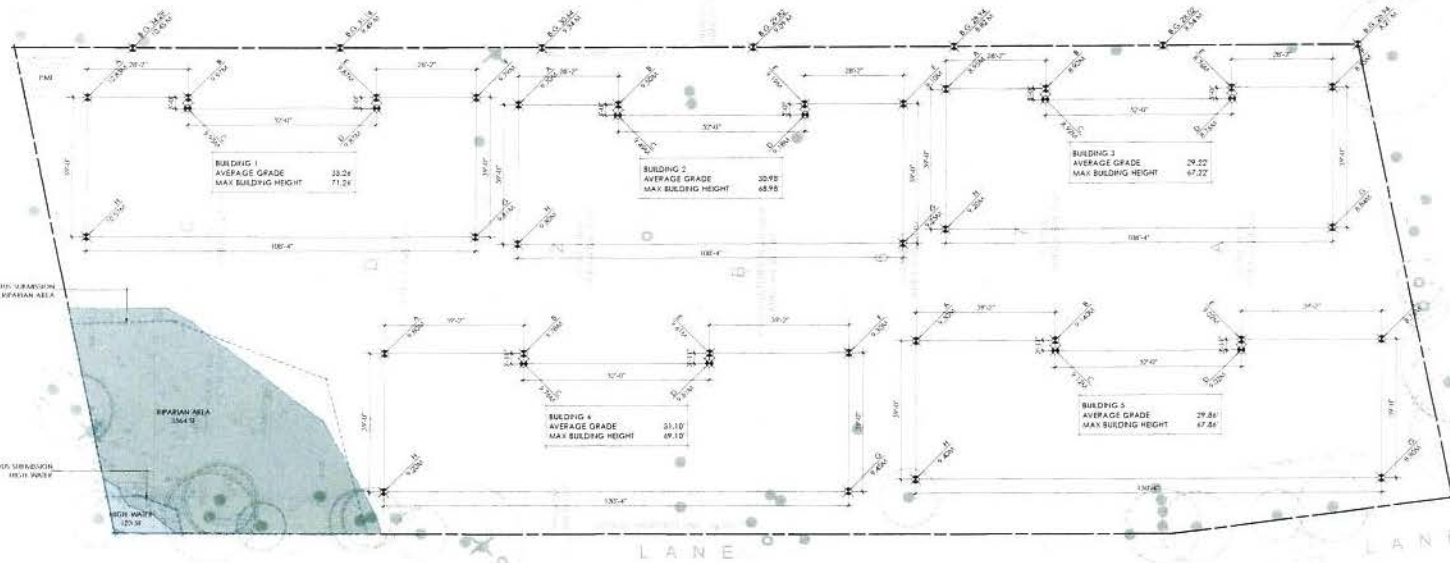
FORMWERKS
ARCHITECTURAL

1425 West 39th Ave., Vancouver, BC V6J 1H6
Tel: 604-275-1111 Fax: 604-275-1111

PROJECT
MAPLEWOOD TOWNHOMES
435-475 SEYMOUR RIVER PLACE
NORTH VANCOUVER, BC

DRAWING
AVERAGE GRADE PLAN

SCALE 1"=10'-0"
SHEET A0.06
DATE FEBRUARY 2011



PREVIOUS SUBMISSION RIPARIAN AREA = 3383 SF
PREVIOUS SUBMISSION EXISTING WATERCOURSE AREA = 175 SF
REDIRECTED STREAM RIPARIAN AREA = 3707 SF
REDIRECTED STREAM WATERCOURSE AREA = 123 SF

LEGEND
UNITS: FEET AND INCHES
TELLING CURBLINE AND
SAFETY/FORM STANDARD LEVEL IN
DITS TO BE REMOVED
ELECTRIC AL SYSTEM

Side	First E	Second E	Elevation	Length (feet)	Total
AB	10.832	9.976	34.121	26.167	967.079
BC	9.970	9.956	32.677	2.560	81.693
CD	9.950	9.876	31.912	52.306	1690.682
DE	9.876	9.870	32.382	2.560	80.955
EF	9.870	9.790	32.251	28.167	508.404
FG	9.790	9.810	32.152	39.000	1251.937
GH	9.810	10.570	31.432	108.333	3621.763
HA	10.570	10.830	35.105	39.000	1395.084
Total				299.567	9967.607

Average Grade 33.262

Side	First E	Second E	Elevation	Length (feet)	Total
AB	9.900	9.780	32.119	39.167	1258.021
BC	9.780	9.780	32.254	2.256	72.121
CD	9.780	9.810	31.775	62.900	1882.297
DE	9.810	9.810	31.529	2.256	70.940
EF	9.810	9.380	33.020	39.167	1215.914
FG	9.380	9.450	30.758	39.000	1199.557
GH	9.450	9.206	30.594	130.333	3987.386
HA	9.206	9.830	31.168	39.000	1215.551
Total				343.167	10670.847

Average Grade 31.095

Side	First E	Second E	Elevation	Length (feet)	Total
AB	9.790	9.500	31.496	28.167	887.150
BC	9.500	9.490	31.152	2.560	77.879
CD	9.490	9.180	30.627	52.007	1592.800
DE	9.180	9.190	30.135	2.560	75.336
EF	9.190	9.100	30.003	28.167	845.102
FG	9.100	8.250	30.182	39.000	1173.607
GH	8.250	8.800	31.250	108.340	3385.625
HA	8.800	8.700	31.088	39.000	1247.539
Total				299.681	9285.358

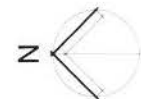
Average Grade 30.984

Side	First E	Second E	Elevation	Length (feet)	Total
AB	9.500	9.140	30.249	39.167	1184.776
BC	9.140	9.120	29.994	2.256	67.397
CD	9.120	9.020	29.757	52.000	1547.375
DE	9.020	9.020	29.593	2.256	66.585
EF	9.020	8.760	29.167	39.167	1142.371
FG	8.760	8.500	28.970	39.000	1129.823
GH	8.500	8.400	30.620	130.333	3912.556
HA	8.400	9.200	30.676	39.000	1190.355
Total				343.167	10247.240

Average Grade 29.861

Side	First E	Second E	Elevation	Length (feet)	Total
AB	9.950	9.900	29.281	28.167	824.772
BC	9.900	9.920	29.232	2.560	73.081
CD	9.920	9.740	29.003	52.000	1506.130
DE	9.740	9.760	28.740	2.560	73.850
EF	9.760	9.550	28.396	28.167	799.821
FG	9.550	8.840	28.437	39.000	1112.549
GH	8.840	9.200	29.591	108.333	3205.918
HA	9.200	8.950	29.774	39.000	1151.121
Total				299.667	8757.298

Average Grade 29.223 28.500



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REVISIONS		
ISSUED FOR COMMENCED PLANNING PERMIT APPLICATION		11/01/16
ISSUED FOR DETAILED PLANNING PERMIT APPLICATION		11/02/16
APPLICABLE PLANNING PERMIT APPLICATION - 2ND SUBMISSION		11/06/16
APPLICABLE PLANNING PERMIT APPLICATION - 2ND SUBMISSION		11/06/16



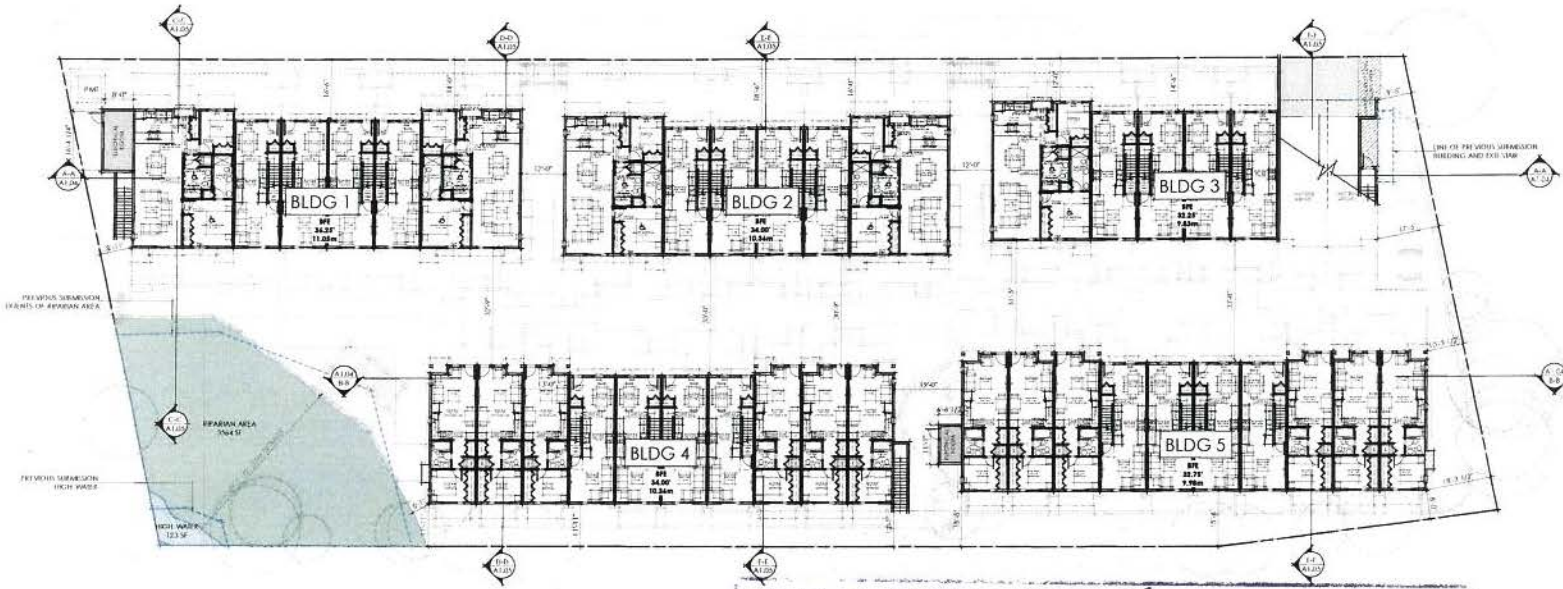
FORMWERKS ARCHITECTURAL

1425 West 41st Ave. Vancouver, BC V6L 1G8
Tel: 604-271-7071 Fax: 604-271-7071

PROJECT
MAPLEWOOD TOWNHOMES
435-475 SEYMOUR
RIVER PLACE
NORTH VANCOUVER, BC

DRAWING
SITE PLAN

SCALE	SHEET
1" = 10' (SEE V.P.P.)	A1.00
DATE	
FEBRUARY 2017	



PREVIOUS SUBMISSION RIPARIAN AREA = 3583 SF
PREVIOUS SUBMISSION EXISTING WATERCOURSE AREA = 175 SF
REDIRECTED STREAM RIPARIAN AREA = 3707 SF
REDIRECTED STREAM WATERCOURSE AREA = 123 SF
POWER TO BE PROVIDED AT FRONT AND BACK STAIRS OF UNIT TYPE C FOR FUTURE STAIR LIFT

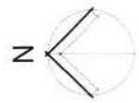
LEGEND	
	UNITS THAT MEET ADAPTABLE DESIGN CODE (2ND STORY) AND VANCOUVER STANDARDS LEVEL III
	UNITS TO BE RETAINED
	UNITS TO BE REMOVED

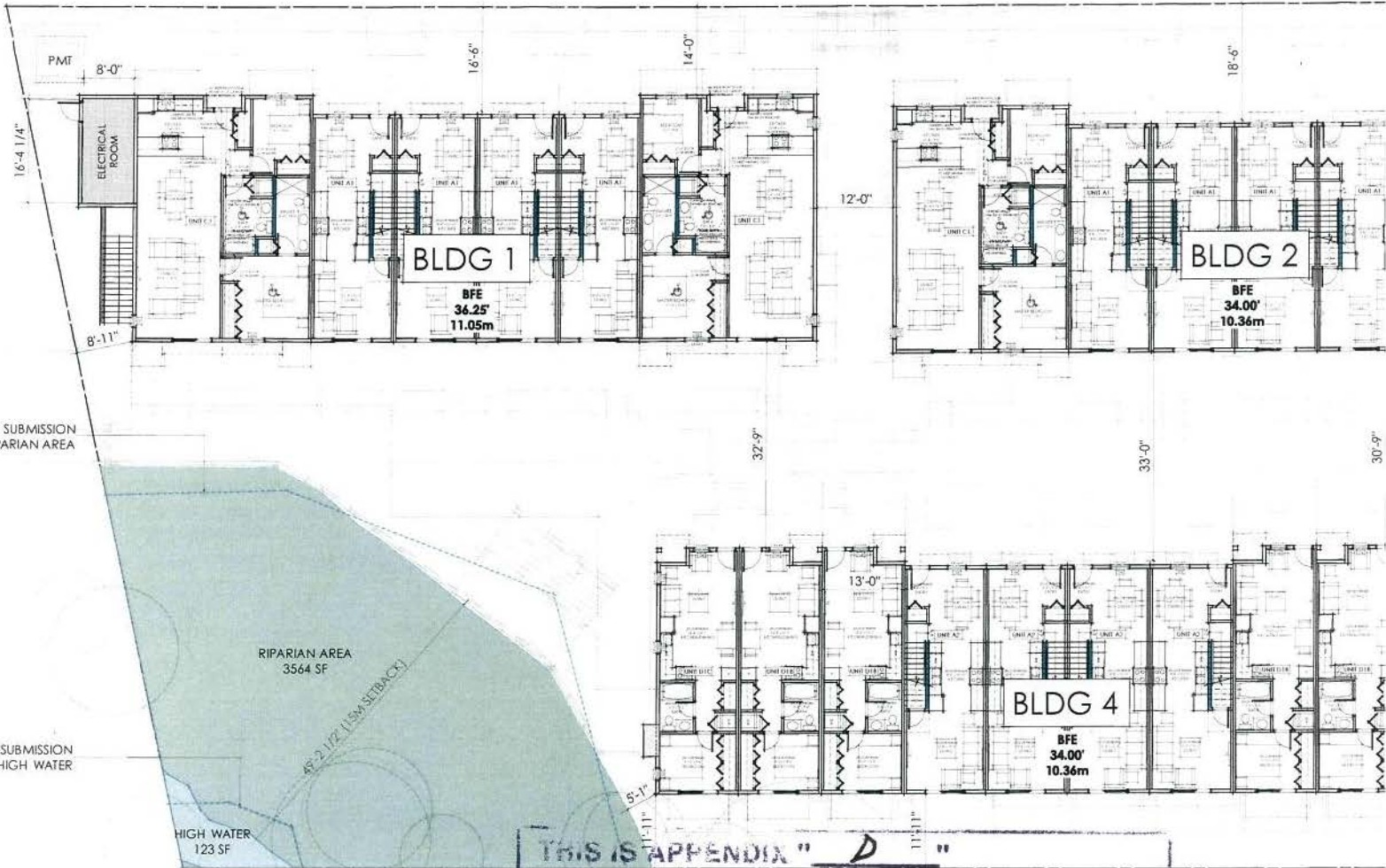
THIS IS APPENDIX " C "

TO DEVELOPMENT PERMIT 9.13

ISSUED BY THE CORPORATION OF THE DISTRICT OF NORTH VANCOUVER

DATE _____ MUNICIPAL CLERK _____





PREVIOUS SUBMISSION RIPARIAN AREA = 3583 SF
 PREVIOUS SUBMISSION EXISTING WATERCOURSE AREA = 175 SF
 REDIRECTED STREAM RIPARIAN AREA = 3707 SF
 REDIRECTED STREAM WATERCOURSE AREA = 123 SF
 POWER TO BE PROVIDED AT FRONT AND BACK STAIRS OF
 UNIT TYPE C FOR FUTURE STAIR LIFT

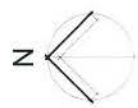
LEGEND	
	UNIT TYPE C (SEE ADJUSTMENT DESIGN GUIDELINES AND WATERMARK SIGNATURE/SEAL)
	WATERCOURSE (SEE DESIGN)
	ELECTRICAL ROOM

THIS IS APPENDIX " D "

TO DEVELOPMENT PERMIT 9.13

ISSUED BY THE CORPORATION OF THE
 DISTRICT OF NORTH VANCOUVER

DATE _____ MUNICIPAL CLERK _____



FORMWORKS ARCHITECTURAL

1425 West 5th Ave., Vancouver, BC V6Z 1H6
 Tel: 604-681-2876 Fax: 604-681-2877

PROJECT: MAPLEWOOD TOWNHOMES
 435-475 SEYMOUR RIVER PLACE
 NORTH VANCOUVER, BC

DRAWING: SITE PLAN
 1/8" = 1'-0"

SCALE: 1/8" = 1'-0"
 DATE: FEBRUARY 2013

SHEET: A1.01

REVISIONS:

ISSUED FOR: CONCEPT PLANNING	1/10/13
APPROVED: ARCHITECT	1/10/13
APPROVED: PLANNING	1/10/13
APPROVED: CIVIL ENGINEER	1/10/13
APPROVED: ELECTRICAL ENGINEER	1/10/13
APPROVED: MECHANICAL ENGINEER	1/10/13

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REVISIONS

ADDED FOR CHANGED RETURNING, RPT.	1/10/20
REVIS. ASIN.	1/10/20
REVISION TO LAYOUT PLANNING	1/10/20
REVISION TO LAYOUT PLANNING	1/10/20
REVISION TO LAYOUT PLANNING	1/10/20
REVISION TO LAYOUT PLANNING	1/10/20

Anthem
PROPERTIES

FORMWERKS
ARCHITECTURAL

1102 West 4th Ave., Vancouver, BC V6H 1M6
Ph: 604-275-1111 Fax: 604-275-1112

PROJECT

MAPLEWOOD
TOWNHOMES
435-475 SEYMOUR
RIVER PLACE
NORTH VANCOUVER, BC

DRAWING

PARKING
PLAN

SCALE

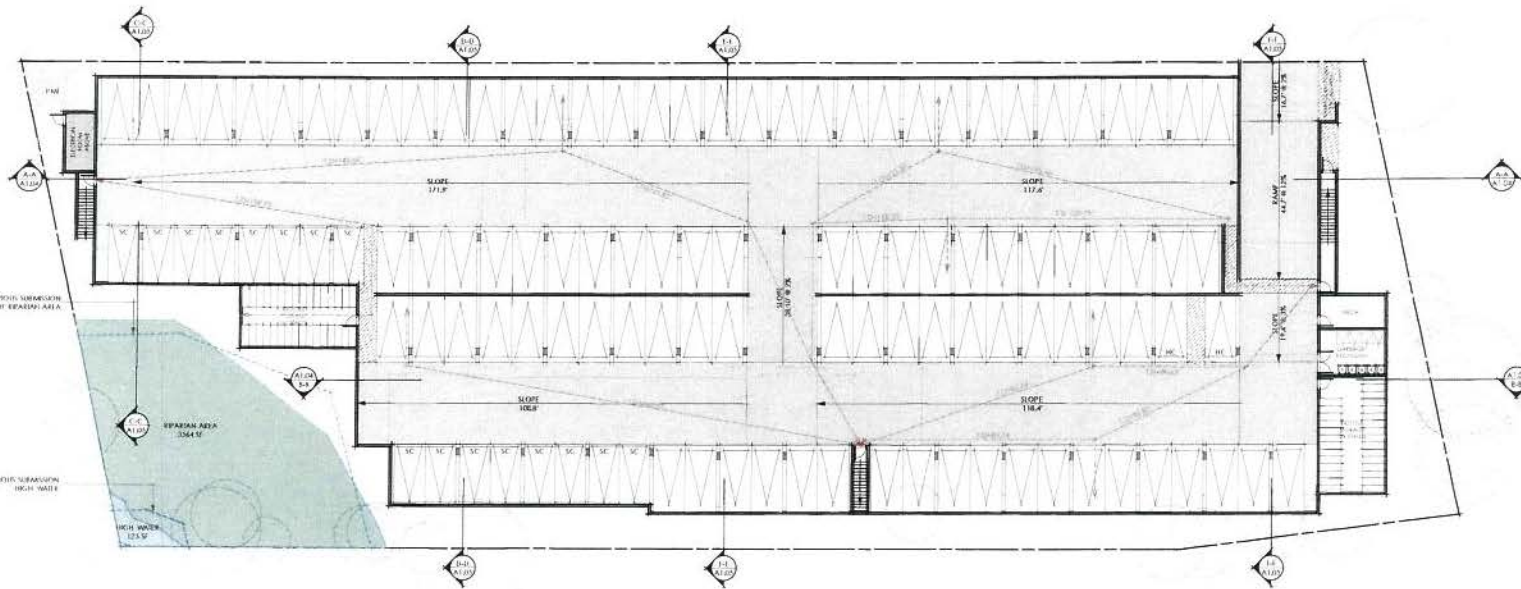
1"=20'-0"

DATE

FEBRUARY 2011

SHEET

A1.03



TOTAL COUNTS

PARKING DATA	MIN. REQUIRED/MAX. ALLOWED	PROVIDED
STANDARD PARKING		
REQUIREMENT (1) STANDARD	107	107
ACCESSIBLE (1) STANDARD	15	15
VISITOR (1) STANDARD	1	1
TOTAL	123	123
SMALL PARKING		
REQUIREMENT (1) STANDARD	40	40
TOTAL	163	163
CLASS 2 BAY STORAGE		
REQUIREMENT (1) STANDARD	10	10
TOTAL	173	173
CLASS 3 BAY STORAGE		
REQUIREMENT (1) STANDARD	10	10
TOTAL	183	183
CLASS 4 BAY STORAGE		
REQUIREMENT (1) STANDARD	10	10
TOTAL	193	193

PARKING COURT CALCULATIONS

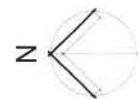
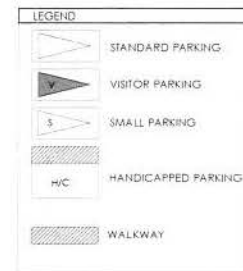
PARKING DATA	MIN. REQUIRED/MAX. ALLOWED	PROVIDED
REQUIREMENT (1) STANDARD	107	107
ACCESSIBLE (1) STANDARD	15	15
VISITOR (1) STANDARD	1	1
TOTAL	123	123
SMALL PARKING		
REQUIREMENT (1) STANDARD	40	40
TOTAL	163	163
CLASS 2 BAY STORAGE		
REQUIREMENT (1) STANDARD	10	10
TOTAL	173	173
CLASS 3 BAY STORAGE		
REQUIREMENT (1) STANDARD	10	10
TOTAL	183	183
CLASS 4 BAY STORAGE		
REQUIREMENT (1) STANDARD	10	10
TOTAL	193	193

THIS IS APPENDIX "E"

TO DEVELOPMENT PERMIT 9.13

ISSUED BY THE CORPORATION OF THE
DISTRICT OF NORTH VANCOUVER

DATE _____ MUNICIPAL CLERK _____



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REVISIONS	
BASED FOR TOWNING REZONING BY	1.00.00
APPLICABLE	1.00.01
BASED FOR DETAILED PLANNING	1.00.02
APPLICABLE	1.00.03
BASED FOR DETAILED PLANNING	1.00.04
APPLICABLE	1.00.05
BASED FOR DETAILED PLANNING	1.00.06
APPLICABLE	1.00.07

Anthem
PROPERTIES

FORMWERKS
ARCHITECTURAL

1025 West 31st Ave., Vancouver, BC V6K 1A6
Tel: 604-275-1111 Fax: 604-275-1112

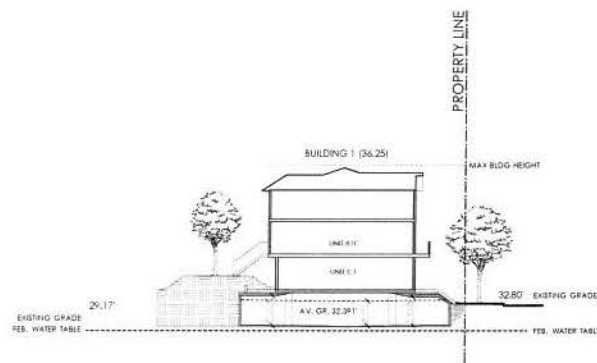
PROJECT

MAPLEWOOD TOWNHOMES
435-475 SEYMOUR
RIVER PLACE
NORTH VANCOUVER, BC

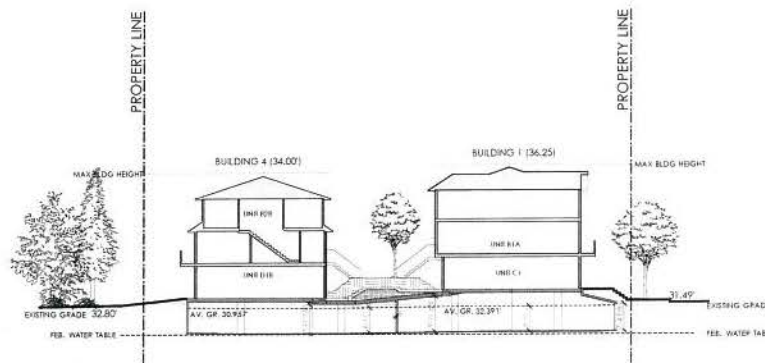
DRAWING

SITE SECTIONS

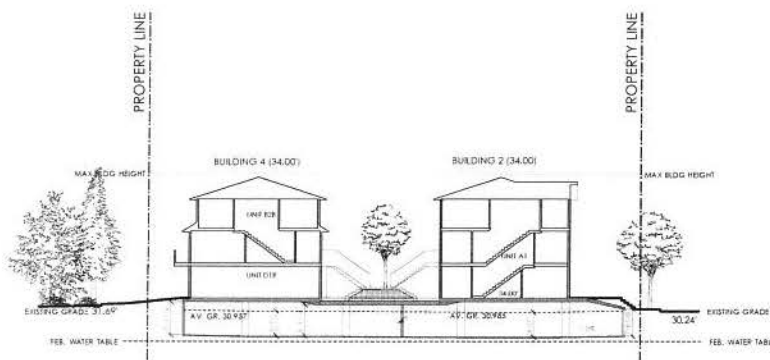
SCALE	SHEET
1/32" = 1'-0"	A1.05
DATE	FEBRUARY 2013



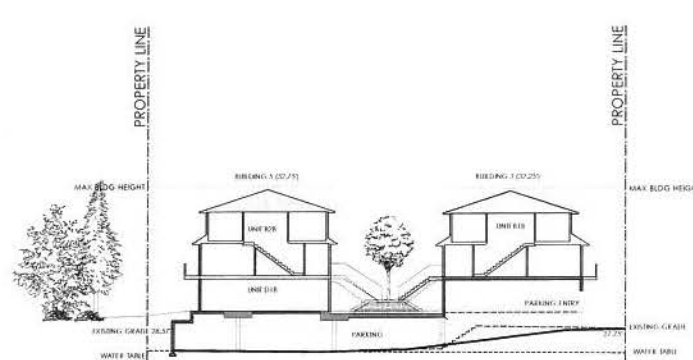
SITE SECTION C-C
1/32" = 1'-0"



SITE SECTION D-D
1/32" = 1'-0"



SITE SECTION E-E
1/32" = 1'-0"



SITE SECTION F-F
1/32" = 1'-0"

THIS IS APPENDIX " F " 9.13
TO DEVELOPMENT PERMIT
ISSUED BY THE CORPORATION OF THE
DISTRICT OF NORTH VANCOUVER

DATE _____ MUNICIPAL CLERK _____



SEYMOUR RIVER PLACE ELEVATION
SCALE: 1/16"=1'-0"



SEYMOUR RIVER PLACE ELEVATION (SOUTH)
SCALE: 3/32"=1'-0"



SEYMOUR RIVER PLACE ELEVATION (NORTH)
SCALE: 3/32"=1'-0"

ISSUED BY THE CORPORATION OF THE
DISTRICT OF NORTH VANCOUVER

DATE

MUNICIPAL CLERK

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REVISIONS

NO.	DATE	DESCRIPTION	BY
1	11/01/10	ISSUED FOR PERMITTING	AF/AS
2	11/02/10	ISSUED FOR PERMITTING	AF/AS
3	11/02/10	ISSUED FOR PERMITTING	AF/AS
4	11/02/10	ISSUED FOR PERMITTING	AF/AS
5	11/02/10	ISSUED FOR PERMITTING	AF/AS

Anthem
PROPERTIES

FORMWERKS
ARCHITECTURAL

145 West 5th Ave., Vancouver, BC V6Y 1Y6
Tel: 604-271-1111 Fax: 604-271-1111

PROJECT

**MAPLEWOOD
TOWNHOMES**
435-475 SEYMOUR
RIVER PLACE
NORTH VANCOUVER, BC

DRAWING

STREETSCAPES

SCALE

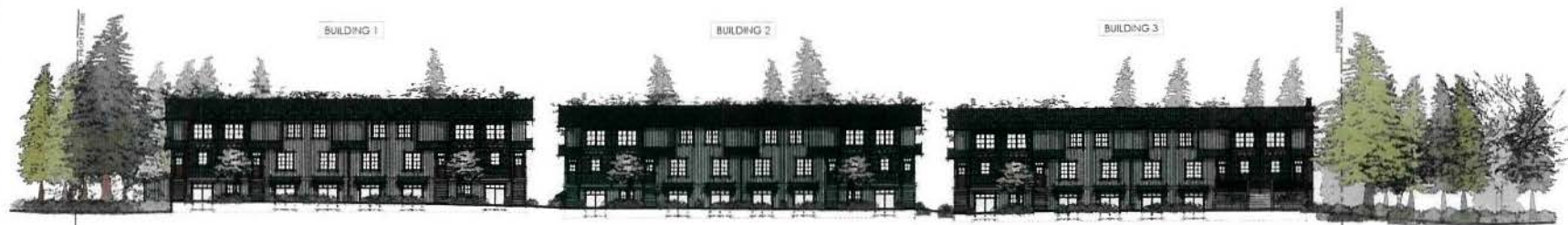
AS NOTED

DATE

FEBRUARY 2011

SHEET

A1.06



EAST COURTYARD ELEVATION
SCALE: 1/16"=1'-0"



EAST COURTYARD ELEVATION (NORTH)
SCALE: 3/32"=1'-0"

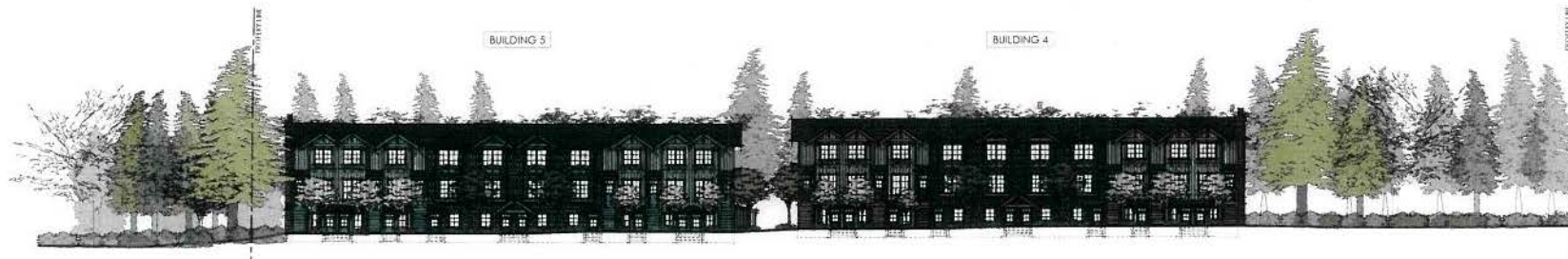


EAST COURTYARD ELEVATION (SOUTH)
SCALE: 3/32"=1'-0"

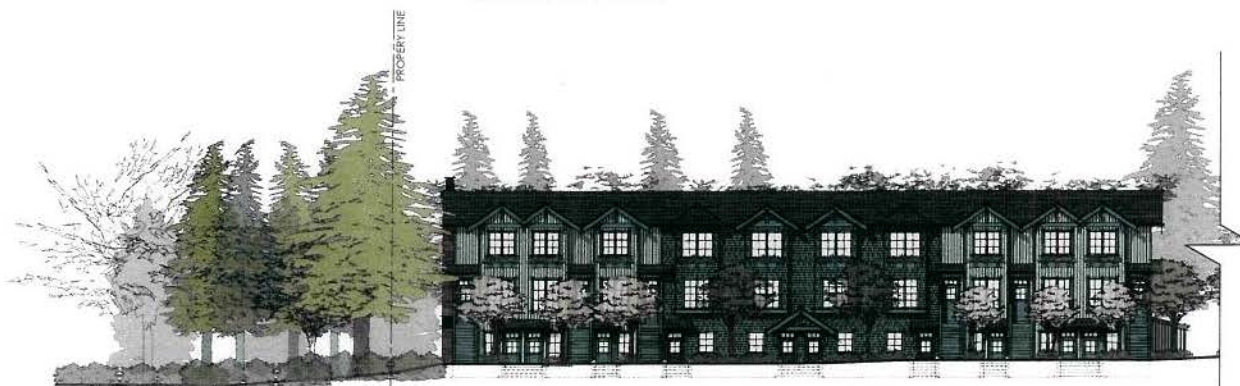
TO DEVELOPMENT PERMIT

ISSUED BY THE CORPORATION OF THE
DISTRICT OF NORTH VANCOUVER

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<p>REVISIONS</p> <table border="1"> <tr> <td>BUILD FOR COMBINED ZONING BY APPLIC. ACTION</td><td>1/20/21</td></tr> <tr> <td>REVISION 1 (LAYOUT PLANNING)</td><td>1/20/21</td></tr> <tr> <td>APPLICATION</td><td>1/20/21</td></tr> <tr> <td>REVISION 2 (LAYOUT PLANNING)</td><td>1/20/21</td></tr> <tr> <td>REVISION 3 (LAYOUT PLANNING)</td><td>1/20/21</td></tr> <tr> <td>APPLICATION - AND SUBMISSION</td><td>1/20/21</td></tr> </table>		BUILD FOR COMBINED ZONING BY APPLIC. ACTION	1/20/21	REVISION 1 (LAYOUT PLANNING)	1/20/21	APPLICATION	1/20/21	REVISION 2 (LAYOUT PLANNING)	1/20/21	REVISION 3 (LAYOUT PLANNING)	1/20/21	APPLICATION - AND SUBMISSION	1/20/21
BUILD FOR COMBINED ZONING BY APPLIC. ACTION	1/20/21												
REVISION 1 (LAYOUT PLANNING)	1/20/21												
APPLICATION	1/20/21												
REVISION 2 (LAYOUT PLANNING)	1/20/21												
REVISION 3 (LAYOUT PLANNING)	1/20/21												
APPLICATION - AND SUBMISSION	1/20/21												
<p>Anthem PROPERTIES</p> <p>FORMWERKS ARCHITECTURAL</p> <p>1425 WILSON AVE., VANCOUVER, BC V6L 1A8 Fax: 604-275-1111 Phone: 604-275-1111</p>													
<p>PROJECT</p> <p>MAPLEWOOD TOWNHOMES 435-475 SEYMOUR RIVER PLACE NORTH VANCOUVER, BC</p>													
<p>DRAWING</p> <p>STREETSCAPES</p>													
<p>SCALE</p> <p>AS NOTED</p>	<p>SHEET</p> <p>A1.07</p>												
<p>DATE</p> <p>FEBRUARY 2021</p>													



WEST COURTYARD ELEVATION
SCALE: 1/16"=1'-0"



WEST COURTYARD ELEVATION (SOUTH)
SCALE: 3/32"=1'-0"



WEST COURTYARD ELEVATION (NORTH)
SCALE: 3/32"=1'-0"

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REVISIONS	
ISSUED FOR: CONCEPT RETURNING SET	15/01/08
AFTER ADOPT: SUBMIT FOR LEASED PLANNING	15/02/08
AFTER ADOPT: DETAILED PLANNING APPLICATION - PRELIMINARY	17/04/08
RETURN TO DETAILED PLANNING	17/04/08
AFTER ADOPT - PRELIMINARY	17/04/08

Anthem
PROPERTIES

FORMWERKS
ARCHITECTURAL

1425 West 9th Ave., Vancouver, BC V6H 1B8
Tel: 604-275-7070 Fax: 604-275-7441

PROJECT
MAPLEWOOD TOWNHOMES
435-475 SEYMOUR
RIVER PLACE
NORTH VANCOUVER, BC

DRAWING
STREETSCAPES

SCALE	SHEET
AS NOTED	A1.08
DATE	FEBRUARY 2013

67 DATE

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REVISIONS	
BUILD FOR CHAIRING RETURNING AP	1.10.16
APPROVAL	1.10.16
BUILD FOR CHAIRING RETURNING AP	1.10.16
APPROVAL	1.10.16
BUILD FOR CHAIRING RETURNING AP	1.10.16
APPROVAL	1.10.16

Anthem
PROPERTIES

FORMWERKS
ARCHITECTURAL

1430 West 20th Ave. Vancouver, BC V6J 1Y6
Tel: 604.275.1111 Fax: 604.275.1112

PROJECT

MAPLEWOOD TOWNHOMES
435-475 SEYMOUR
RIVER PLACE
NORTH VANCOUVER, BC

DRAWING

STREETSCAPES

SCALE

AS NOTED

DATE

FEBRUARY 2013

SHEET

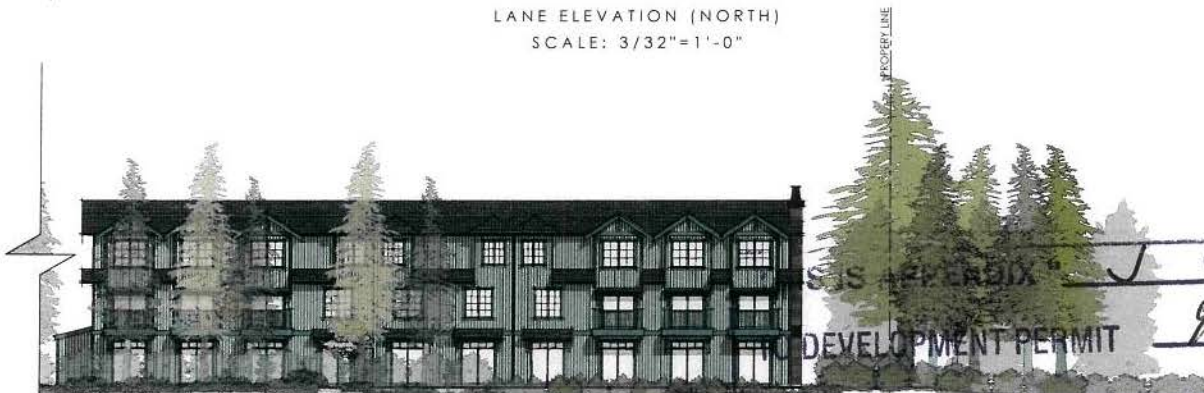
A1.09



LANE ELEVATION
SCALE: 1/16"=1'-0"



LANE ELEVATION (NORTH)
SCALE: 3/32"=1'-0"



LANE ELEVATION (SOUTH)
SCALE: 3/32"=1'-0"

STREETS CAPES

9.13

ISSUED BY THE CORPORATION OF THE DISTRICT OF NORTH VANCOUVER

DATE _____ MUNICIPAL CLERK _____



STREET ELEVATION FROM MAPLEWOOD FARMS ENTRY



STREET ELEVATION FROM MT. SEYMOUR PKWY

TO DEVELOPMENT PERMIT

9.13

ISSUED BY THE CORPORATION OF THE
DISTRICT OF NORTH VANCOUVER

DATE

MUNICIPAL CLERK

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REVISIONS

REVISION	DATE
BASED FOR COMBINED REVISIONS	11/01/20
APPROVED FOR DETAILED PLANNING	11/02/20
APPROVED FOR DETAILED PLANNING	11/02/20
REVISION TO DETAILED PLANNING	11/02/20
REVISION TO DETAILED PLANNING	11/02/20
APPROVED FOR DETAILED PLANNING	11/02/20

Anthem
PROPERTIES

FORMWERKS
ARCHITECTURAL

1025 West 10th Ave., Vancouver, BC V6H 1Y4
Tel: 604-271-1111 Fax: 604-271-1112

PROJECT

**MAPLEWOOD
TOWNHOMES**
435-475 SEYMOUR
RIVER PLACE
NORTH VANCOUVER, BC

DRAWING

STREETSCAPES

SCALE

1" = 10'-0"

DATE

11/02/2020

SHEET

A1.10

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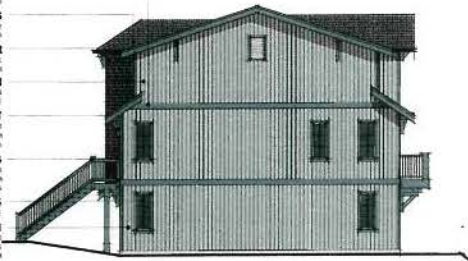
REVISIONS	
ISSUED FOR: CONCEPT PLANNING	1/10/20
APPROVED FOR: CONCEPT PLANNING	1/10/20
ISSUED FOR: DETAILED PLANNING	1/10/20
APPROVED FOR: DETAILED PLANNING	1/10/20
ISSUED FOR: DETAILED PLANNING	1/10/20
APPROVED FOR: DETAILED PLANNING	1/10/20

- ALUMINUM GUTTER**
MARK: GENERAL PAINT
COLOUR: COMBUSTIBLE BROWN
NUMBER: 100
- FIBRE CEMENT BOARD & BATTEN**
MARK: GENERAL PAINT
COLOUR: COMBUSTIBLE BROWN
NUMBER: 100
- LAMINATED FIBERGLASS SHINGLES**
MARK: FIBRE CEMENT BOARD
COLOUR: COMBUSTIBLE BROWN
NUMBER: 100
- PAINTED WOOD TRIM & BRACKETS TO MATCH**
MARK: GENERAL PAINT
COLOUR: SAGE
NUMBER: 100
- PAINTED WOOD WINDOW TRIM**
MARK: GENERAL PAINT
COLOUR: SAGE
NUMBER: 100
- VINYL SOFFIT**
MARK: GENERAL PAINT
COLOUR: SAGE
NUMBER: 100
- VINYL WINDOWS**
COLOUR: PREFINISHED BEIGE
- PAINTED FIBERGLASS DOOR TRIM**
MARK: GENERAL PAINT
COLOUR: SAGE
NUMBER: 100
- PAINTED ENTRY DOOR**
MARK: GENERAL PAINT
COLOUR: SAGE
NUMBER: 100
- PAINTED CEDAR SHINGLES**
MARK: GENERAL PAINT
COLOUR: SAGE
NUMBER: 100



COLOUR SCHEME A
FRONT ELEVATION

- PAINTED WOOD TRIM**
MARK: GENERAL PAINT
COLOUR: SAGE
NUMBER: 100
- LAMINATED FIBERGLASS SHINGLES**
MARK: FIBRE CEMENT BOARD
COLOUR: COMBUSTIBLE BROWN
NUMBER: 100
- ALUMINUM GUTTER**
MARK: GENERAL PAINT
COLOUR: COMBUSTIBLE BROWN
NUMBER: 100
- VINYL BOARD & BATTEN**
MARK: GENERAL PAINT
COLOUR: SAGE
NUMBER: 100
- PAINTED WOOD BRACKET**
MARK: GENERAL PAINT
COLOUR: SAGE
NUMBER: 100
- ALUMINUM RAILING**
TO MATCH WITH MARK: GENERAL PAINT
COLOUR: SAGE
NUMBER: 100
- VINYL WINDOWS**
COLOUR: PREFINISHED BEIGE
- FIBRE CEMENT BOARD & BATTEN**
MARK: GENERAL PAINT
COLOUR: COMBUSTIBLE BROWN
NUMBER: 100



COLOUR SCHEME A
INTERNAL ELEVATION

- ALUMINUM GUTTER**
MARK: GENERAL PAINT
COLOUR: COMBUSTIBLE BROWN
NUMBER: 100
- LAMINATED FIBERGLASS SHINGLES**
MARK: FIBRE CEMENT BOARD
COLOUR: COMBUSTIBLE BROWN
NUMBER: 100
- PAINTED WOOD WINDOW TRIM**
MARK: GENERAL PAINT
COLOUR: SAGE
NUMBER: 100
- PAINTED WOOD TRIM & BRACKETS TO MATCH**
MARK: GENERAL PAINT
COLOUR: SAGE
NUMBER: 100
- VINYL SOFFIT**
MARK: GENERAL PAINT
COLOUR: SAGE
NUMBER: 100
- PAINTED ENTRY DOOR**
MARK: GENERAL PAINT
COLOUR: SAGE
NUMBER: 100
- PAINTED CEDAR SHINGLES**
MARK: GENERAL PAINT
COLOUR: SAGE
NUMBER: 100
- FIBRE CEMENT BOARD & BATTEN**
MARK: GENERAL PAINT
COLOUR: COMBUSTIBLE BROWN
NUMBER: 100
- VINYL WINDOWS**
COLOUR: PREFINISHED BEIGE



COLOUR SCHEME A
REAR ELEVATION

- PAINTED WOOD TRIM**
MARK: GENERAL PAINT
COLOUR: SAGE
NUMBER: 100
- LAMINATED FIBERGLASS SHINGLES**
MARK: FIBRE CEMENT BOARD
COLOUR: COMBUSTIBLE BROWN
NUMBER: 100
- ALUMINUM GUTTER**
MARK: GENERAL PAINT
COLOUR: COMBUSTIBLE BROWN
NUMBER: 100
- FIBRE CEMENT BOARD & BATTEN**
MARK: GENERAL PAINT
COLOUR: COMBUSTIBLE BROWN
NUMBER: 100
- PAINTED WOOD BRACKET**
MARK: GENERAL PAINT
COLOUR: SAGE
NUMBER: 100
- ALUMINUM RAILING**
TO MATCH WITH MARK: GENERAL PAINT
COLOUR: SAGE
NUMBER: 100
- FIBRE CEMENT BOARD & BATTEN**
MARK: GENERAL PAINT
COLOUR: COMBUSTIBLE BROWN
NUMBER: 100



COLOUR SCHEME A
EXTERNAL ELEVATION

THIS IS APPENDIX " L " 9.13
TO DEVELOPMENT PERMIT

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DISTRICT OF NORTH VANCOUVER

DATE

MUNICIPAL CLERK

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Anthem
PROPERTIES
FORMWERKS
ARCHITECTURAL

1422 West 101 Ave. Vancouver, BC V6L 1P3
Tel: 604-275-1111 Fax: 604-244-1111

PROJECT
MAPLEWOOD TOWNHOMES
435-475 SEYMOUR
RIVER PLACE
NORTH VANCOUVER, BC

DRAWING
COLOUR SCHEME A

SCALE
1/8" = 1'-0"
DATE
FEBRUARY 2013
SHEET
A1.12

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REVISIONS

NO.	DATE	DESCRIPTION	BY	CHKD.
1	2023.01.10	ISSUED FOR PERMIT	ANTHEM	ANTHEM
2	2023.01.10	ISSUED FOR PERMIT	ANTHEM	ANTHEM
3	2023.01.10	ISSUED FOR PERMIT	ANTHEM	ANTHEM

Anthem
PROPERTY

FORMWERKS
ARCHITECTURAL

125 West 10th Ave. Vancouver, BC V6E 2M6
TEL: 604.681.1234 FAX: 604.681.1235
WWW.ANTHEMPROPERTY.COM WWW.FORMWERKSARCHITECTURAL.COM

PROJECT

MAPLEWOOD TOWNHOMES
431 WEST 10TH AVE
NORTH VANCOUVER, BC

DRAWING

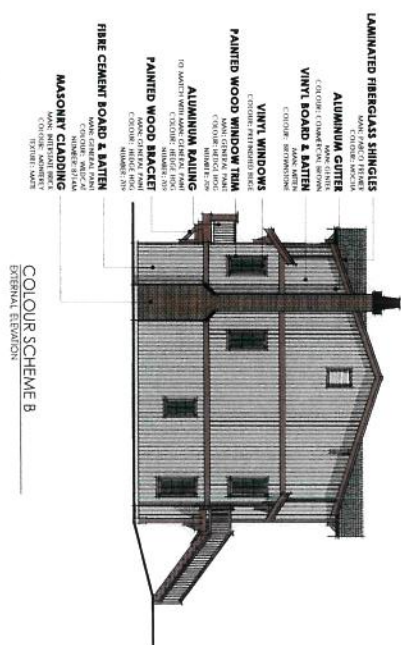
COLOUR SCHEME B

SCALE: 1/8" = 1'-0"

DATE: FEBRUARY 2023

SHEET: A1.13

COLOUR SCHEME B



COLOUR SCHEME B



COLOUR SCHEME B



COLOUR SCHEME B

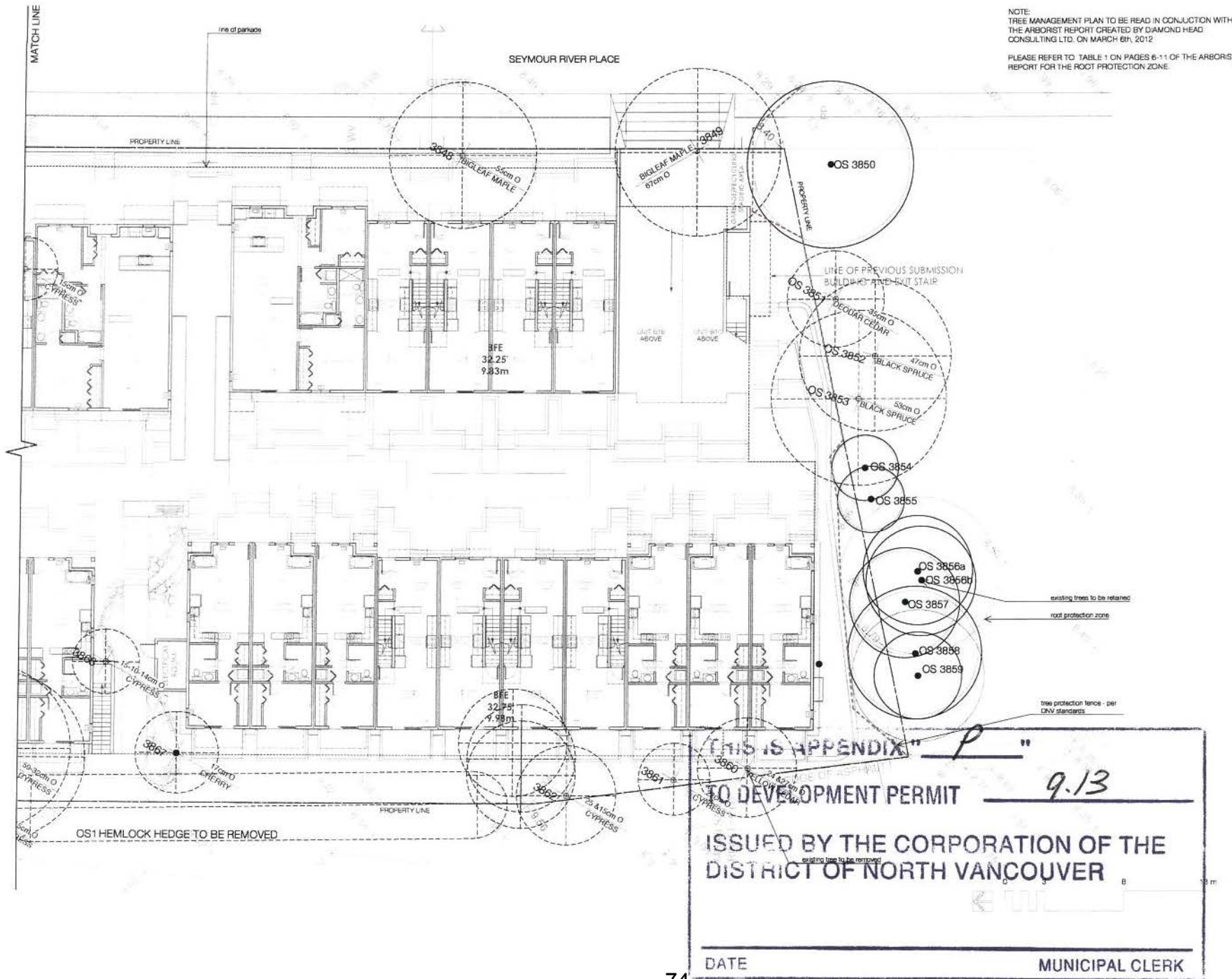


THIS IS APPENDIX "A" TO DEVELOPMENT PERMIT 9.13

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DATE _____ MUNICIPAL CLERK _____

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NOTE:
TREE MANAGEMENT PLAN TO BE READ IN CONJUNCTION WITH
THE ARBORIST REPORT CREATED BY DIAMOND HEAD
CONSULTING LTD. ON MARCH 6th, 2012

PLEASE REFER TO TABLE 1 ON PAGES 6-11 OF THE ARBORIST
REPORT FOR THE ROOT PROTECTION ZONE

NO.	DATE	REVISION
-----	------	----------

NO.	DATE	REVISION
1	04/04/12	ISSUED FOR PERMIT APPLICATION
2	04/04/12	ISSUED FOR PERMIT APPLICATION
3	04/04/12	ISSUED FOR PERMIT APPLICATION
4	04/04/12	ISSUED FOR PERMIT APPLICATION
5	04/04/12	ISSUED FOR PERMIT APPLICATION
6	04/04/12	ISSUED FOR PERMIT APPLICATION
7	04/04/12	ISSUED FOR PERMIT APPLICATION
8	04/04/12	ISSUED FOR PERMIT APPLICATION

Professional Seal

eta
eckford tyacke & associates
a chartered firm

1000 West 10th Avenue
Vancouver, BC V6H 1Y4
Tel: 604-681-1400
Fax: 604-681-1401
www.eta.ca

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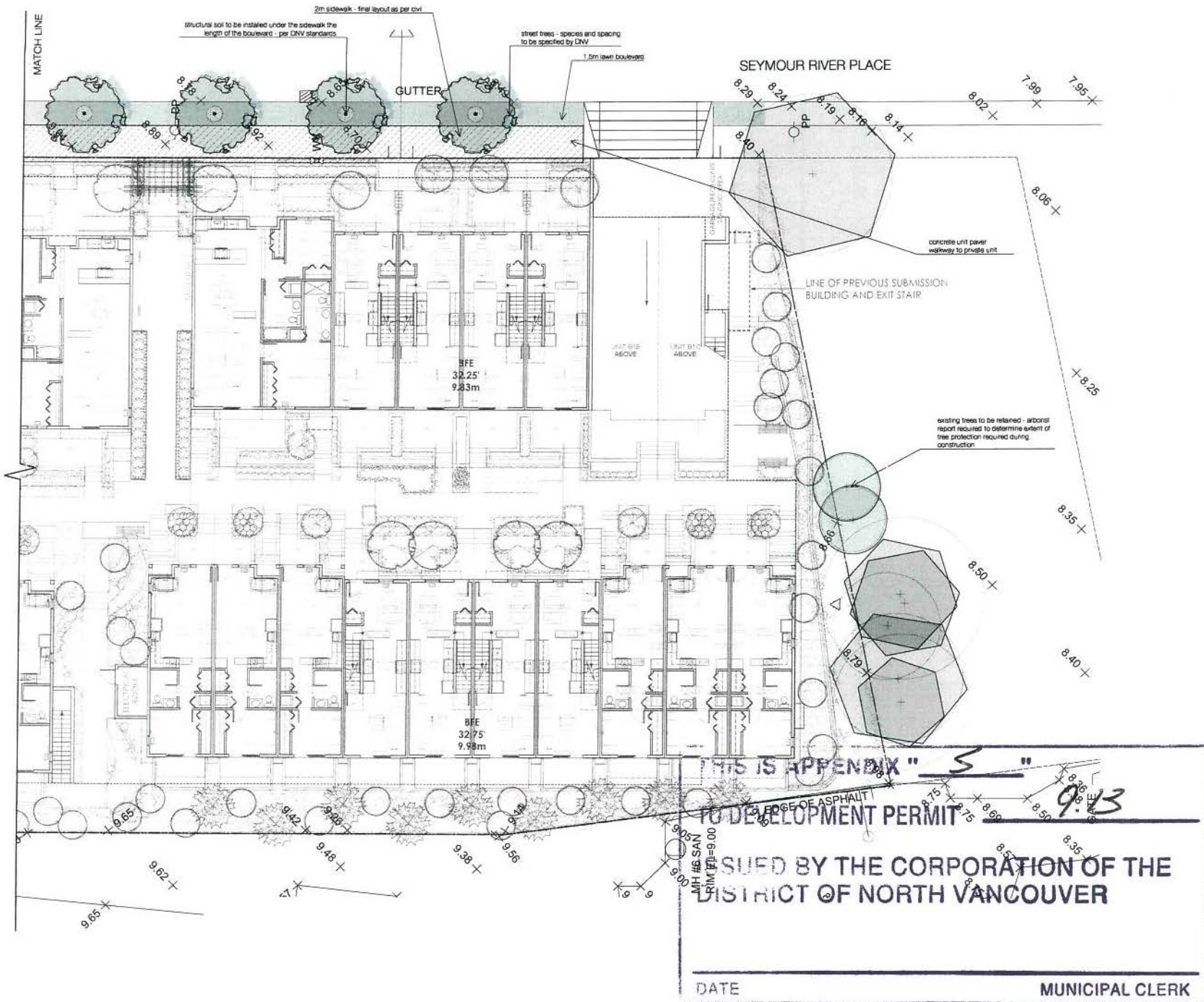
Anthem
PROPERTIES

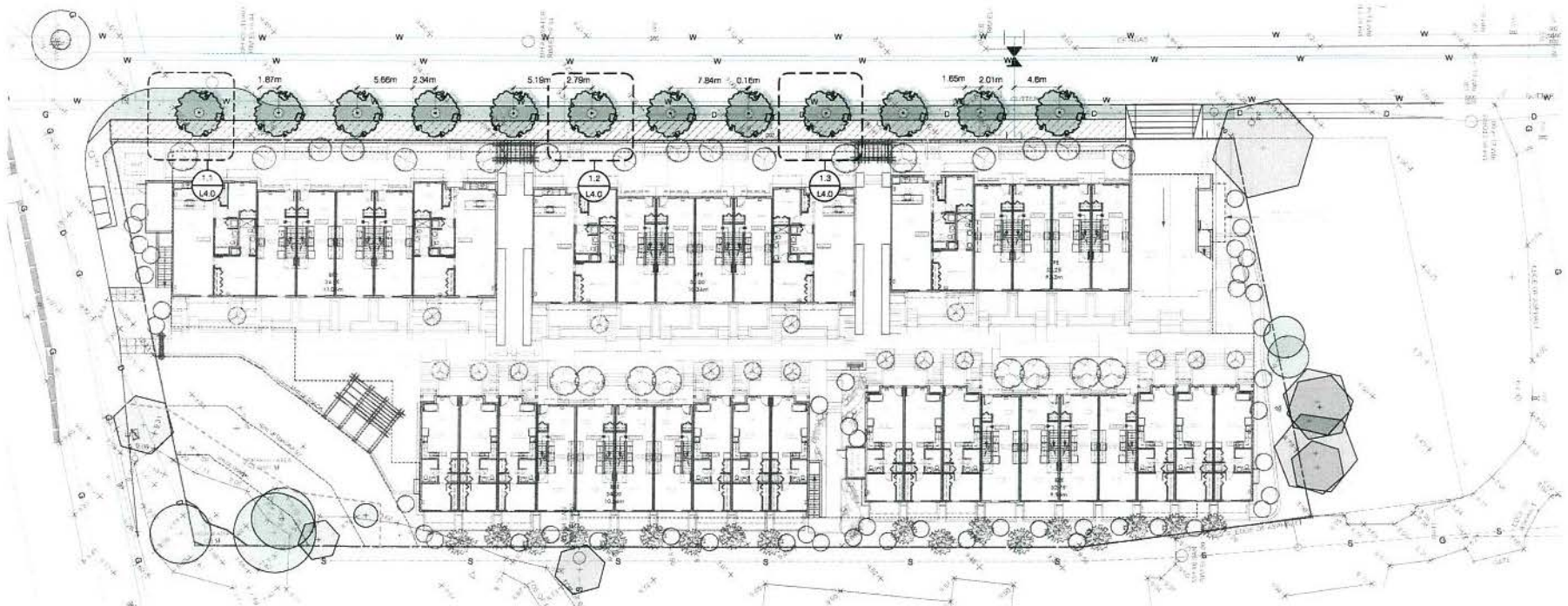
Project:
MAPLEWOOD
TOWNHOMES
430-470 Seymour River Place
North Vancouver, BC

Client: TPA
Tree Management Plan:
Area 2

Project Manager	Project No.	212104
Client No.	Date	1/1/2012
Revision No.	Revision	1.0
Date	04/04/2012	L2.2
Project Name	212104 Maplewood TOWNHOMES	2/1







Rev	Date	Description
A	05/04/12	ISSUED FOR REVIEW AND FOR APPROVAL
B	07/05/12	ISSUED FOR USE ON PERMITS
C	07/07/12	ISSUED FOR USE ON PERMITS
D	09/17/12	ISSUED FOR USE ON PERMITS
E	09/17/12	ISSUED FOR USE ON PERMITS
G	09/17/12	ISSUED FOR USE ON PERMITS

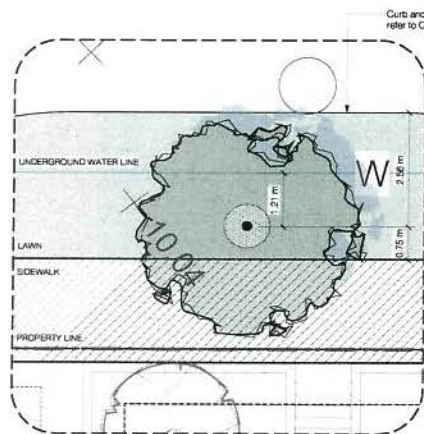
Professional Seal

eta
architectural + design
1000 West 12th Avenue
Vancouver, BC V6H 1T1
604-681-1111
www.eta.ca

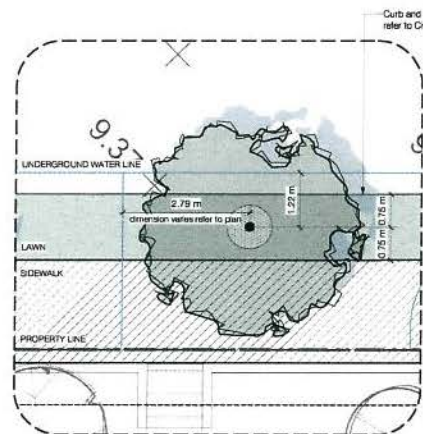
Anthem
PROPERTIES

PROJECT
MAPLEWOOD
TOWNHOMES
435-475 Seymour River Place
North Vancouver, BC

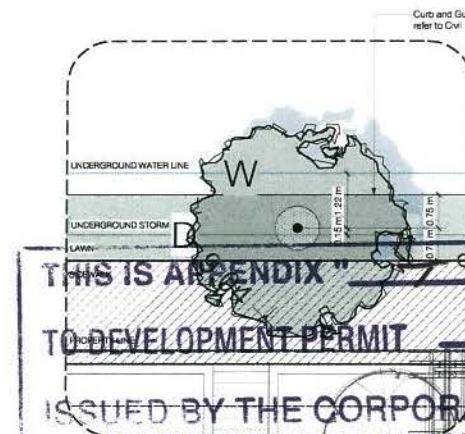
Drawn by: JTB
Site Servicing Plan



1.1 DETAIL PLAN, CONDITION 1
Scale: 1:50



1.2 DETAIL PLAN, CONDITION 2
Scale: 1:50



1.3 DETAIL PLAN, CONDITION 3
Scale: 1:50

0 16 33 49 FT

LEGEND: CIVIL SERVICING

W	Water Underground
D	Storm Underground
G	Natural Gas Underground
S	SSRW Underground

THIS IS AN APPENDIX TO DEVELOPMENT PERMIT

NOTE: SITE SERVICING PLAN HAS BEEN COORDINATED WITH R.F. BINNE & ASSOCIATES LTD. ISSUED 05.31.2015

9.13

REFER TO CIVIL DRAWINGS FOR THE GRADING AND ELEVATIONS, CURB, GUTTER, SIDEWALK, AND SIDEWALK LAYOUT.

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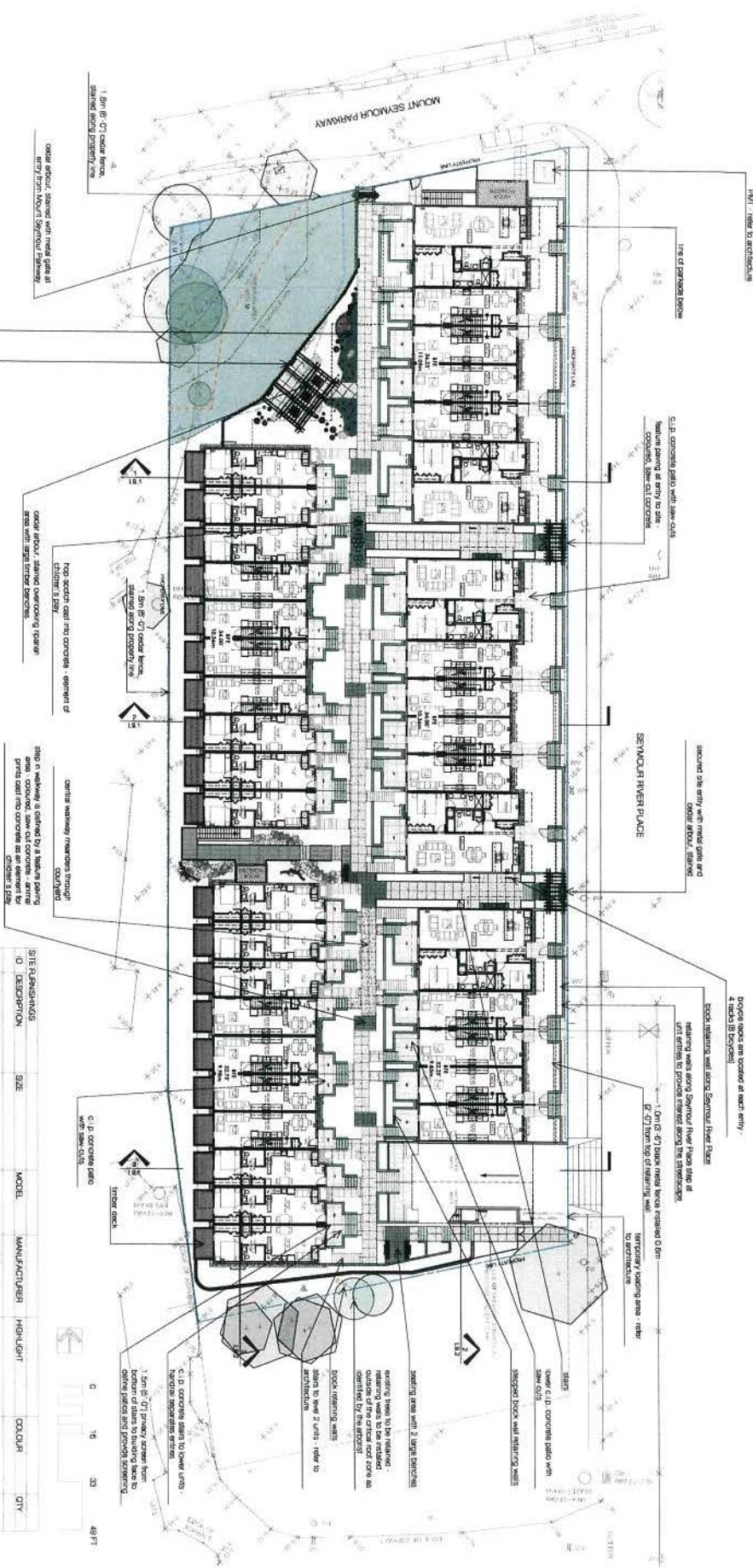
DATE _____ MUNICIPAL CLERK

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C	Arizona	1992	Arizona
D	Arkansas	1993	Arkansas
E	California	1994	California
F	Colorado	1995	Colorado
G	Connecticut	1996	Connecticut
H	Delaware	1997	Delaware
I	District of Columbia	1998	District of Columbia
J	Florida	1999	Florida
K	Georgia	2000	Georgia
L	Hawaii	2001	Hawaii
M	Idaho	2002	Idaho
N	Illinois	2003	Illinois
O	Indiana	2004	Indiana
P	Iowa	2005	Iowa
Q	Kansas	2006	Kansas
R	Kentucky	2007	Kentucky
S	Louisiana	2008	Louisiana
T	Maine	2009	Maine
U	Maryland	2010	Maryland
V	Massachusetts	2011	Massachusetts
W	Michigan	2012	Michigan
X	Minnesota	2013	Minnesota
Y	Mississippi	2014	Mississippi
Z	Missouri	2015	Missouri
AA	Montana	2016	Montana
AB	Nebraska	2017	Nebraska
AC	Nevada	2018	Nevada
AD	New Hampshire	2019	New Hampshire
AE	New Jersey	2020	New Jersey
AF	New Mexico	2021	New Mexico
AG	New York	2022	New York
AH	North Carolina	2023	North Carolina
AI	North Dakota	2024	North Dakota
AJ	Oklahoma	2025	Oklahoma
AK	Oregon	2026	Oregon
AL	Pennsylvania	2027	Pennsylvania
AM	Rhode Island	2028	Rhode Island
AN	South Carolina	2029	South Carolina
AO	South Dakota	2030	South Dakota
AP	Tennessee	2031	Tennessee
AQ	Texas	2032	Texas
AR	Utah	2033	Utah
AS	Vermont	2034	Vermont
AT	Virginia	2035	Virginia
AU	Washington	2036	Washington
AV	West Virginia	2037	West Virginia
AW	Wisconsin	2038	Wisconsin
AX	Wyoming	2039	Wyoming
AY	Unlabeled	2040	Unlabeled
AZ	Unlabeled	2041	Unlabeled
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BI	Unlabeled	2050	Unlabeled
BJ	Unlabeled	2051	Unlabeled
BK	Unlabeled	2052	Unlabeled
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BM	Unlabeled	2054	Unlabeled
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BO	Unlabeled	2056	Unlabeled
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BU	Unlabeled	2062	Unlabeled
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BW	Unlabeled	2064	Unlabeled
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CB	Unlabeled	2069	Unlabeled
CC	Unlabeled	2070	Unlabeled
CD	Unlabeled	2071	Unlabeled
CE	Unlabeled	2072	Unlabeled
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CS	Unlabeled	2086	Unlabeled
CT	Unlabeled	2087	Unlabeled
CU	Unlabeled	2088	Unlabeled
CV	Unlabeled	2089	Unlabeled
CW	Unlabeled	2090	Unlabeled

MAPLEWOOD
TOWNHOMES
435-475 Seymour River Parkway
North Vancouver, BC

Landscape Layout Plan:
Site Plan

<p> <input type="checkbox"/> Not a reference <input type="checkbox"/> Added by CJB <input type="checkbox"/> Reviewed by <input type="checkbox"/> Approved by </p> <p> Date: 04/09/2012 </p> <p> Full Name: 60227-2 E-mail: 60227-2@univox.com.br Phone: </p>	<p> <input type="checkbox"/> Added by 2/12/10 <input type="checkbox"/> Reviewed by 1/2010 <input type="checkbox"/> Approved by </p>
---	--



THIS IS APPENDIX " 4 "
TO DEVELOPMENT PERMIT 9.13
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DISTRICT OF NORTH VANCOUVER

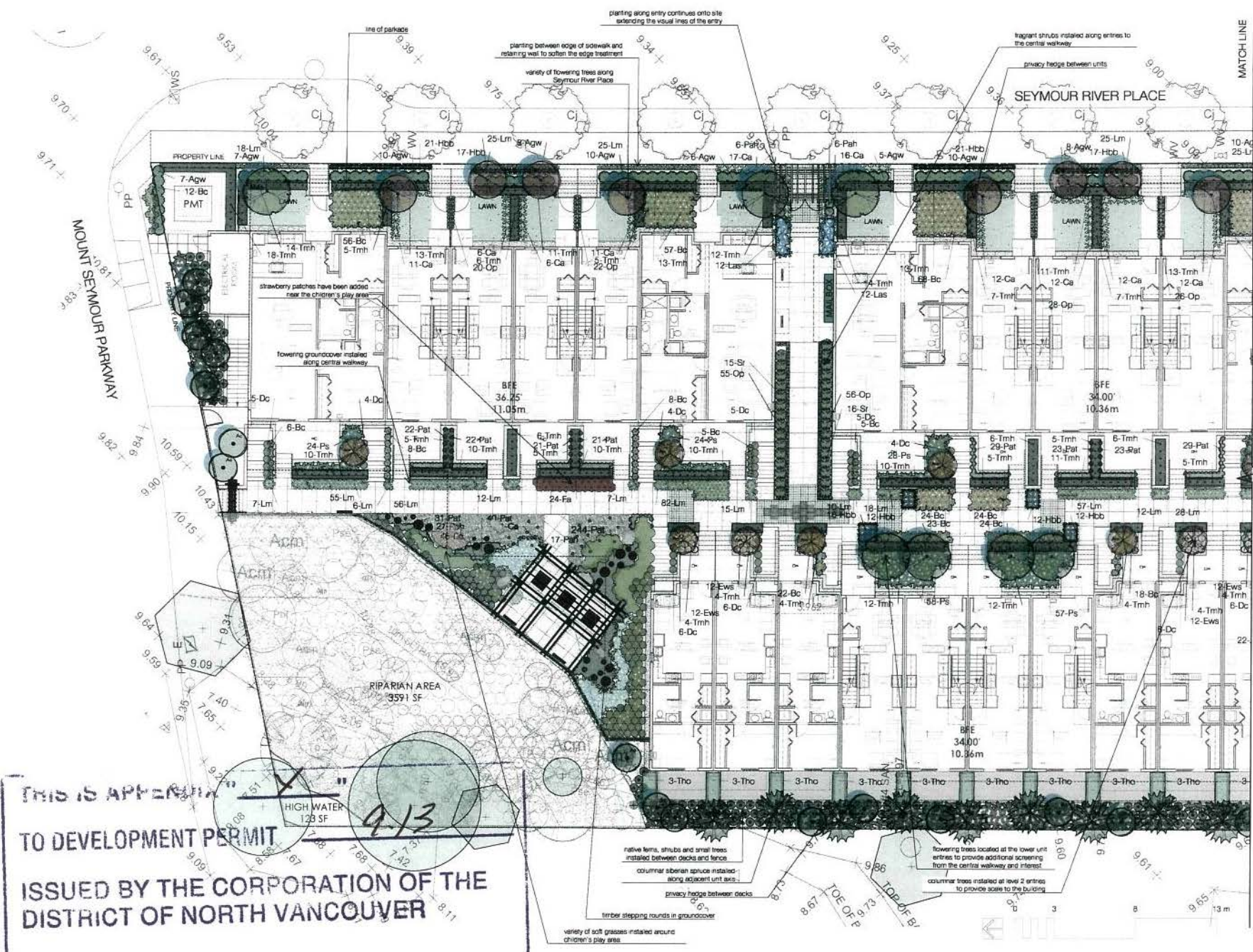
DATE _____

MUNICIPAL CLERK

THIS IS APPROPRIATE
TO DEVELOPMENT PERMIT

ISSUED BY THE CORPORATION OF THE
DISTRICT OF NORTH VANCOUVER

DATE _____ MUNICIPAL CLERK



Rev	Date	Issue
A	10/24/12	ISSUED FOR PRELIMINARY REVIEW
B	11/12/12	ISSUED FOR PRELIMINARY REVIEW
C	12/17/12	ISSUED FOR PRELIMINARY REVIEW
D	01/17/13	ISSUED FOR PRELIMINARY REVIEW
E	02/15/13	ISSUED FOR PRELIMINARY REVIEW
F	03/15/13	ISSUED FOR PRELIMINARY REVIEW
G	04/15/13	ISSUED FOR PRELIMINARY REVIEW

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Anthem
PROPERTIES

Project
MAPLEWOOD TOWNHOMES
435-475 Seymour River Place
North Vancouver, BC

Drawing Title
**Landscape Planting Plan:
Area 1**

Scale
1:100

Date
04/09/2012

Project Manager
21215

Drawn By
1:100

Checked By
1:100

Scale
1:100

Date
04/09/2012

Project Manager
21215

Drawn By
1:100

Checked By
1:100

Scale
1:100

Date
04/09/2012

interpretive zone: understanding the systems within the Riparian Zone - watercourse, plant species, rocks and wildlife



sensory zone: utilizing certain perennials and groundcovers that have different scents - edible plants with image boards describing them



Revision No. Date Revision Description

Rev	No.	Date	Description
A	05/17/15		DESIGN FOR REGIONAL FIRE APPLICATION
B	07/07/15		DESIGN FOR USE ON HILLS APPLICATION
C	07/07/15		DESIGN FOR USE ON HILLS APPLICATION
D	07/07/15		DESIGN FOR USE ON HILLS APPLICATION
E	07/07/15		DESIGN FOR USE ON HILLS APPLICATION
F	07/07/15		DESIGN FOR USE ON HILLS APPLICATION

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PROPERTIES

Project
MAPLEWOOD
TOWNHOMES
435-475 Seymour River Place
North Vancouver, BC

Drawn by: F. H.

Landscape Site:
Play Diagram

Scale

Project Name	Maplewood
Client No.	21216
City	Vancouver
Project No.	1200
Date	04/08/2012
Scale	L7.1
Project Name	Maplewood

Project Name: Maplewood

Project Name: Maplewood

Project Name: Maplewood

Project Name: Maplewood

Project Name: Maplewood

Project Name: Maplewood

Project Name: Maplewood

Project Name: Maplewood

Project Name: Maplewood

LEGEND

- ACTIVE**
- log stepping stones, 12"ht. climbing boulders, willow cone, agility poles
- INTERPRETIVE**
- understanding the natural systems and wildlife on and around the site
- wildlife prints along central walkway
- SENSORY**
- utilizing perennials and groundcovers that are scented and edible
- plant identity board
- RIPIARIAN**
- restoration of riparian area and stream bed
- community amenity

interpretive zone: wildlife prints



activity zone: opportunities for children to run-jump-climb-crawl



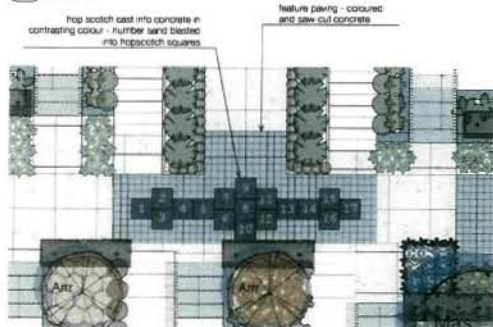
DEVELOPMENT PERMIT 9.13

BY THE CORPORATION OF THE
CITY OF NORTH VANCOUVER

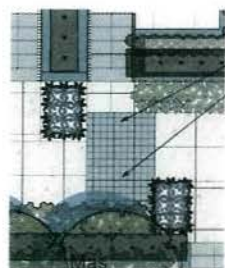
DATE _____ MUNICIPAL CLERK _____



1 PLAN: Conceptual Children's Play - Active Nature Play
Scale: 1:50



2 PLAN: Conceptual Children's Play - Active HopsCotch
Scale: 1:50



3 PLAN: Conceptual Children's Play - Interpretive Prints
Scale: 1:50



CC " 9.13

DEVELOPMENT PERMIT

APPROVED BY THE CORPORATION OF THE DISTRICT OF NORTH VANCOUVER

DATE MUNICIPAL CLERK

Revised
No. Date Description

No.	Date	Description
A	06/11/12	ISSUED FOR PUBLIC REVIEW APPLICATION
B	11/21/12	ISSUED FOR PUBLIC REVIEW APPLICATION
C	07/16/13	ISSUED FOR PUBLIC REVIEW APPLICATION
D	06/11/13	ISSUED FOR PUBLIC REVIEW APPLICATION
E	06/11/13	ISSUED FOR PUBLIC REVIEW APPLICATION
F	06/11/13	ISSUED FOR PUBLIC REVIEW APPLICATION
G	06/11/13	ISSUED FOR PUBLIC REVIEW APPLICATION

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PROPERTIES

PROJECT
MAPLEWOOD
TOWNHOMES
435-475 Seymour River Place
North Vancouver, BC

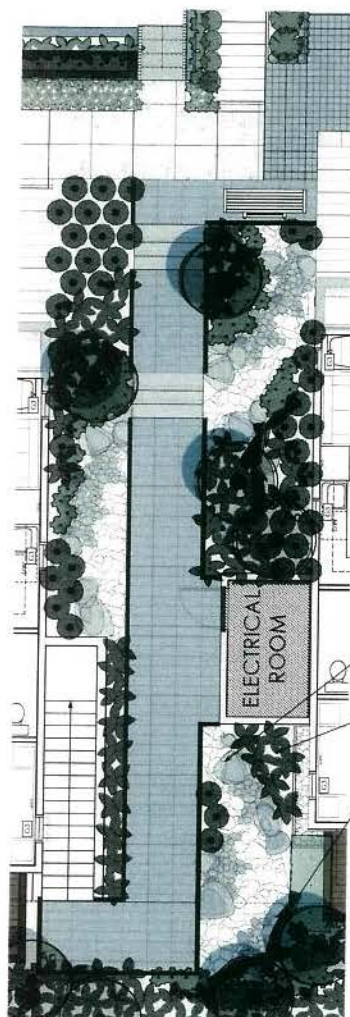
Drawing 118

Landscape Detail Plan:
Play Areas

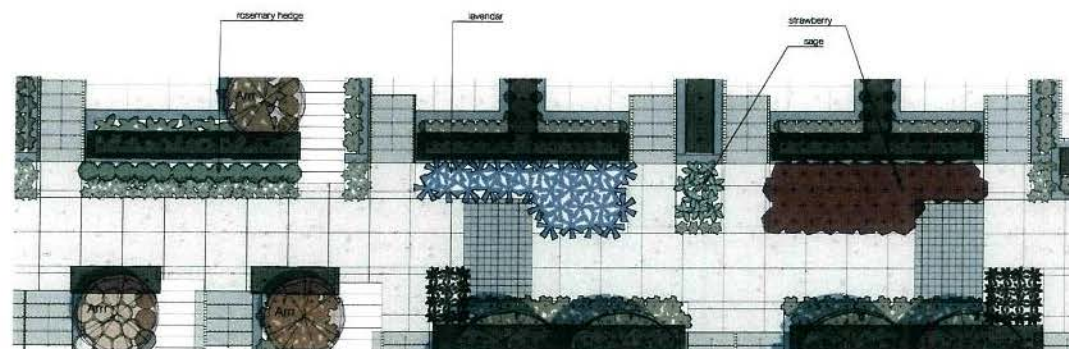
Large

Project Name	Project No.
Maplewood	271718
Client No.	Date
235	08/11/12
Revision No.	Revision
01	08/09/2012
	LB 2
	27

Print Date
08/09/12
1/1/12 Map without 08/09/12 revision 01



1 PLAN: Conceptual Children's Play - Interpretive Dry River Bed
Scale: 1:50



2 PLAN: Conceptual Children's Play - Sensory Garden
Scale: 1:50

The sensory garden consists of herbs and edible shrubs.



river rock dry river bed
native plant material: ferns, shrubs and small trees will provide habitat for native insects, birds and animals
logs placed along stream bed



THIS IS APPENDIX " DD "

TO DEVELOPMENT PERMIT 9.13

ISSUED BY THE CORPORATION OF THE
DISTRICT OF NORTH VANCOUVER

DATE _____ MUNICIPAL CLERK _____

Revised	No.	Date	Revised By
---------	-----	------	------------

No.	Date	Revised By
A	05/07/15	ISSUED FOR RELATION TO THE APPLICATION
B	07/27/15	ISSUED FOR RELATION TO THE APPLICATION
C	07/27/15	ISSUED FOR RELATION TO THE APPLICATION
D	08/27/15	ISSUED FOR RELATION TO THE APPLICATION
E	08/27/15	ISSUED FOR RELATION TO THE APPLICATION
F	08/27/15	ISSUED FOR RELATION TO THE APPLICATION

10/10/2015

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PROPERTIES

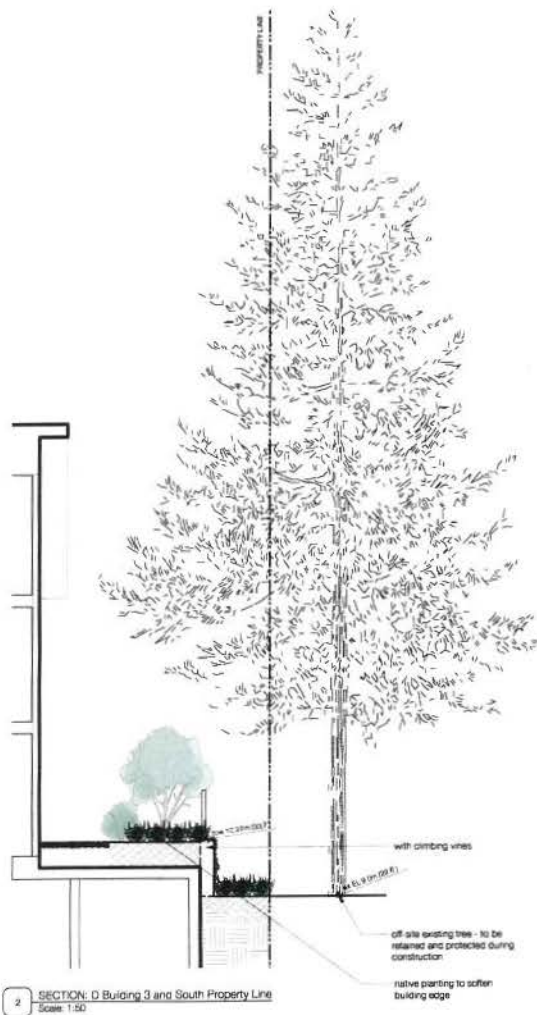
Project:
MAPLEWOOD
TOWNHOMES
435-475 Seymour River Place
North Vancouver, BC

Drawing Title:
Landscape Detail Plan:
Play Areas

Scale:

Project Manager	Project No.
Client	01216
Design By	001
Reviewed By	001
Date	04/09/2015
Page	21

10/10/2015
10/10/2015



THIS IS APPENDIX " FF "

TO DEVELOPMENT PERMIT 9.13

ISSUED BY THE CORPORATION OF THE DISTRICT OF NORTH VANCOUVER

DATE _____ MUNICIPAL CLERK _____

Revised: 1/1/18

No.	Date	Revised
1	1/1/18	ISSUED FOR REVIEW AND APPROVAL
2	1/1/18	ISSUED FOR REVIEW AND APPROVAL
3	1/1/18	ISSUED FOR REVIEW AND APPROVAL
4	1/1/18	ISSUED FOR REVIEW AND APPROVAL
5	1/1/18	ISSUED FOR REVIEW AND APPROVAL
6	1/1/18	ISSUED FOR REVIEW AND APPROVAL

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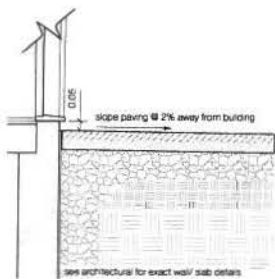
PROJECT
MAPLEWOOD
TOWNHOMES
430-470 Seymour River Place
North Vancouver, BC

DESIGNED BY
Landscape Sections

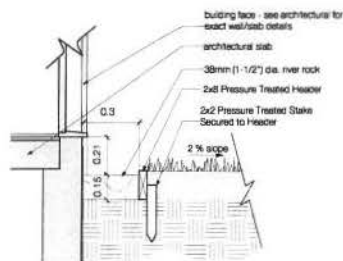
DATE

Project Manager	1/1/18
Drawn By	2/1/18
Checked By	2/1/18
Approved By	2/1/18

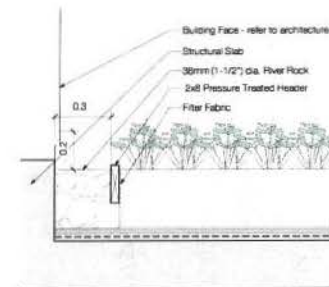
1/1/18
1/1/18
1/1/18



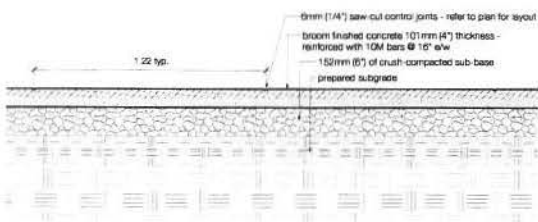
1 DETAIL: Threshold at Grade, Typical
Scale: 1:12



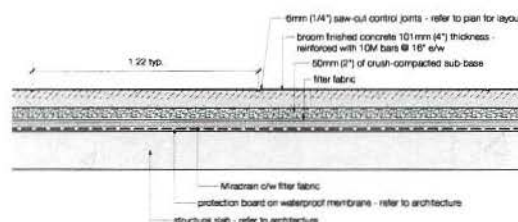
2 DETAIL: Drip Strip at Grade, Typical
Scale: 1:12



3 DETAIL: Drip Strip on Slab, Typical
Scale: 1:12



4 DETAIL: Concrete Walkway at Grade, Typical
Scale: 1" = 1'-0"



5 DETAIL: Concrete Walkway on Slab, Typical
Scale: 1" = 1'-0"

Revised
Ref. Date Revision Notes

Rev	Date	Notes
A	05/04/12	ISSUED FOR CONSTRUCTION AND FIVE MONTHS LATE
B	07/31/12	ISSUED FOR CONSTRUCTION AND FIVE MONTHS LATE
C	07/31/12	ISSUED FOR CONSTRUCTION AND FIVE MONTHS LATE
D	08/17/12	ISSUED FOR CONSTRUCTION AND FIVE MONTHS LATE
E	08/27/12	ISSUED FOR CONSTRUCTION AND FIVE MONTHS LATE
G	09/27/12	ISSUED FOR CONSTRUCTION AND FIVE MONTHS LATE

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Project:
MAPLEWOOD
TOWNHOMES
435-475 Seymour River Place
North Vancouver, BC

Drawing Title:

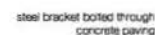
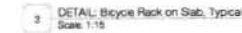
Landscape Details

Sheet:

Project Name: 21216
Client: GH
Drawing No: 001 (revised)
Drawing Date: 04/09/2012
Drawing Title: L10.1
Sheet: 21

Project Name: 21216
Client: GH
Drawing No: 001 (revised)
Drawing Date: 04/09/2012
Drawing Title: L10.1
Sheet: 21

THIS IS APPENDIX " GG " 9.13
TO DEVELOPMENT PERMIT
ISSUED BY THE CORPORATION OF THE
DISTRICT OF NORTH VANCOUVER
DATE _____ MUNICIPAL CLERK



1. All timber to be #1 Grade Western Red Cedar, stained. Stain to match Architecture.
2. All metal to be black.
3. All metal fasteners to be galvanized, contractor to provide samples to Landscape Architect for approval.
4. Contractor to provide shop drawings for approval.

MAIL No.	Date	Issue Title
A	5/24/71	ISSUE FOR REGIONAL AND APPLICANT CH
B	7/7/71	ISSUE FOR REGIONAL PANEL
C	2/14/72	ISSUE FOR DETAILED PLANNING APPLICANT CH
D	5/11/72	ISSUE FOR DETAILED PLANNING APPLICANT CH - 2nd Submittal
E	8/26/72	ISSUE IN RESPONSE TO JAV COMMENTS
F	10/23/72	ISSUE FOR COUNCIL REVIEW

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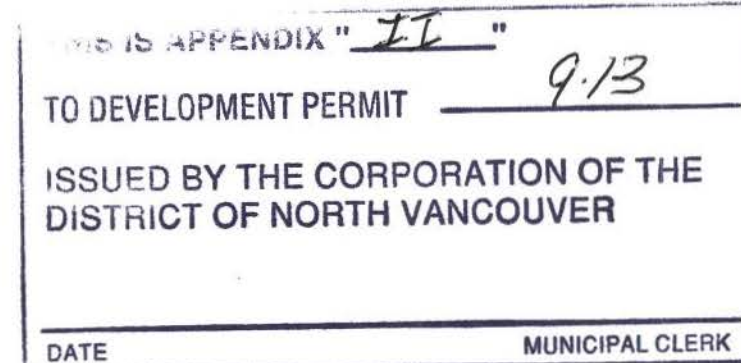
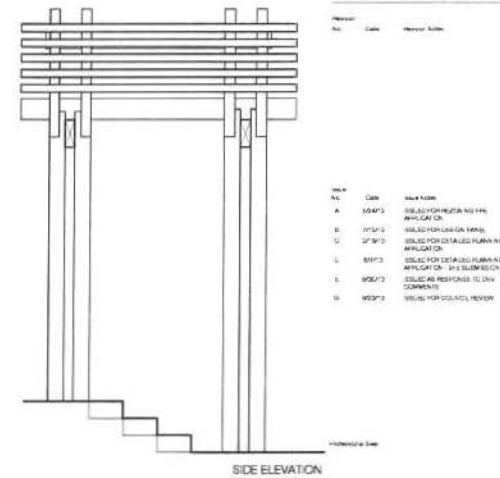
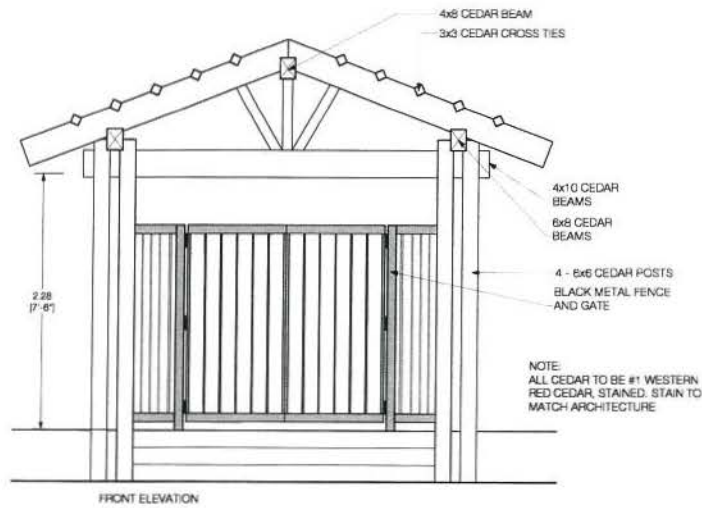
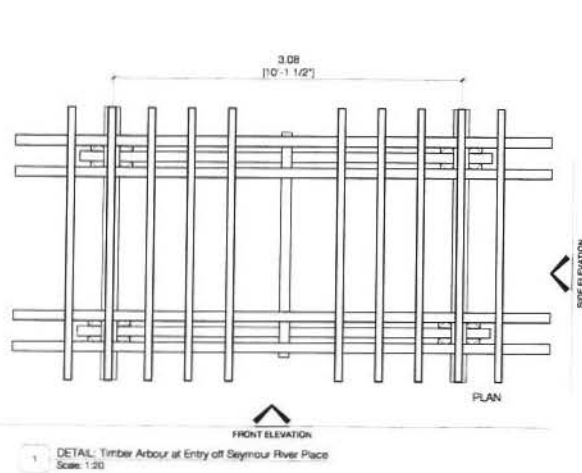


**MAPLEWOOD
TOWNHOMES**
435-475 Seymour River Place
North Vancouver, BC

Landscape Details

Large

Project Manager: Project ID:
 Lead By: 21216
 CH: Name:
 (Responsible By): MS: (Access)
(Working At)
 Date: L10.2
 04/09/2012 or
21
 Plot Scale:
 1:2500
 3-7-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100-101-102-103-104-105-106-107-108-109-110-111-112-113-114-115-116-117-118-119-120-121-122-123-124-125-126-127-128-129-130-131-132-133-134-135-136-137-138-139-140-141-142-143-144-145-146-147-148-149-150-151-152-153-154-155-156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000-1001-1002-1003-1004-1005-1006-1007-1008-1



NOTE:

1. All timber to be #1 Grade Western Red Cedar, stained. Stain to match Architecture.
2. All metal to be black.
3. All metal fasteners to be galvanized, contractor to provide samples to Landscape Architect for approval.
4. Contractor to provide shop drawings for approval.

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landscape architects

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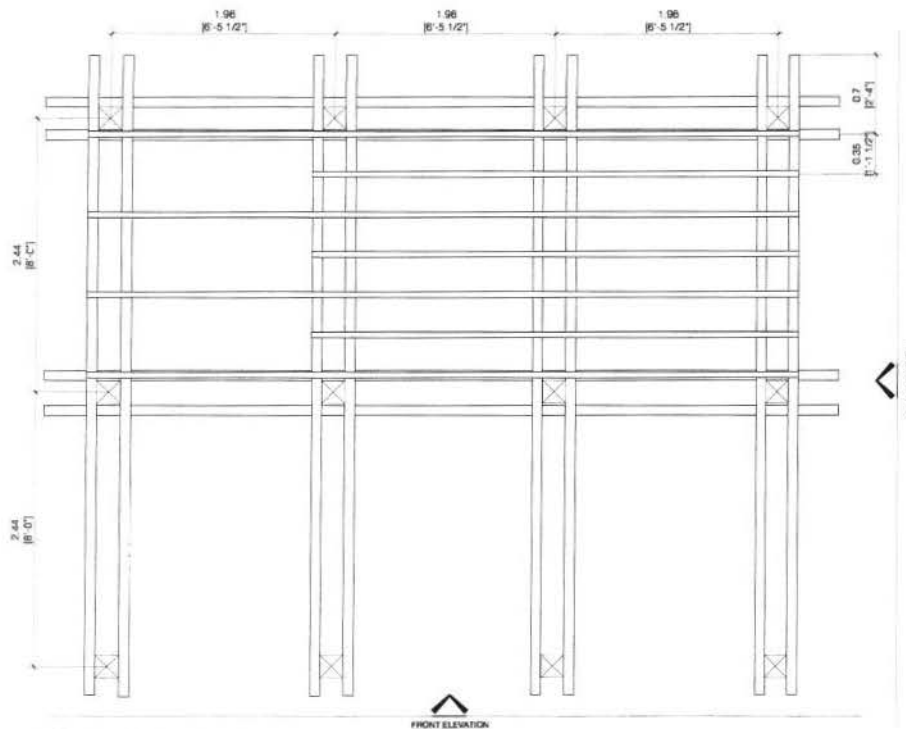
Anthem
PROPERTIES

PROJECT:
MAPLEWOOD
TOWNHOMES
435-475 Seymour River Place
North Vancouver, BC

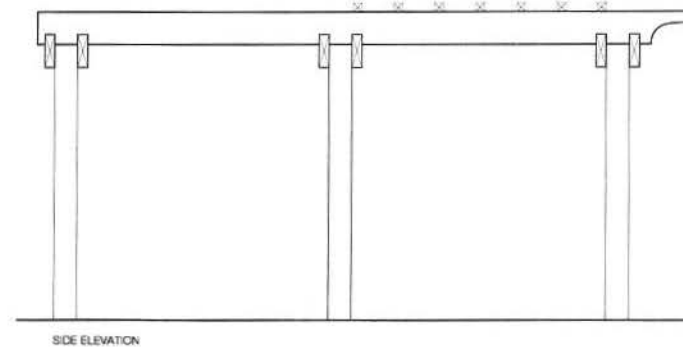
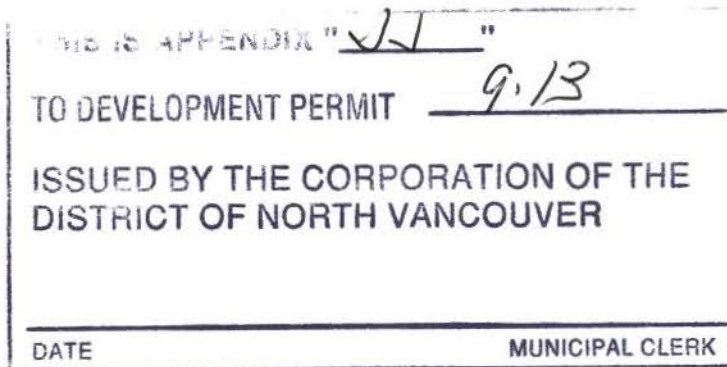
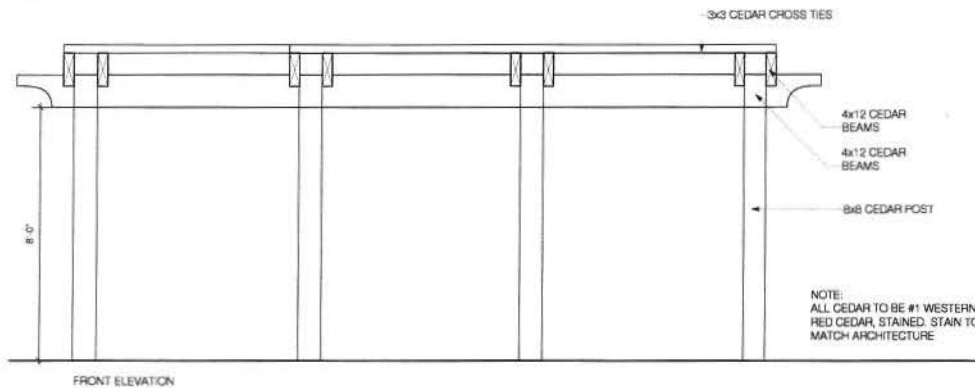
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Landscape Details

Scale:

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Date: 2/12/18
By: [Name]
Checked: [Name]
Reviewed: [Name]
Date: 04/09/2018
Scale: L10.3
File: [Name]
Sheet: 2/2



1 DETAIL: Timber Arbour at Riparian Area
Scale: 1/32



- NOTE:
1. All timber to be #1 Grade Western Red Cedar, stained. Stain to match Architecture.
 2. All metal to be black.
 3. All metal fasteners to be galvanized, contractor to provide samples to Landscape Architect for approval.
 4. Contractor to provide shop drawings for approval.

Revised
By Date Revised Notes

Rev	Date	Revised Notes
1	05/01/12	ISSUED FOR PERMITS AND APPLICANT
2	07/01/12	ISSUED FOR PERMITS AND APPLICANT
3	07/01/12	ISSUED FOR PERMITS AND APPLICANT
4	07/01/12	ISSUED FOR PERMITS AND APPLICANT
5	07/01/12	ISSUED FOR PERMITS AND APPLICANT
6	07/01/12	ISSUED FOR PERMITS AND APPLICANT
7	07/01/12	ISSUED FOR PERMITS AND APPLICANT
8	07/01/12	ISSUED FOR PERMITS AND APPLICANT

Project Name

eta
architectural systems + associates
ARCHITECTS AND DESIGNERS

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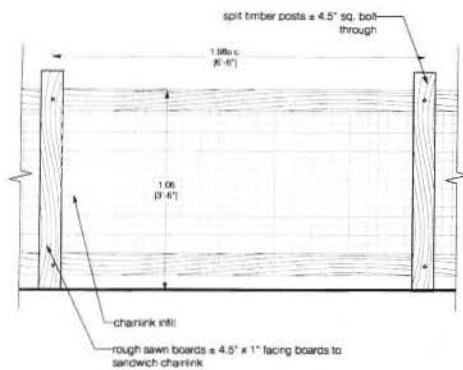
Anthem
PROPERTIES

PROJECT
MAPLEWOOD
TOWNHOMES
435-475 Seymour River Place
North Vancouver, BC

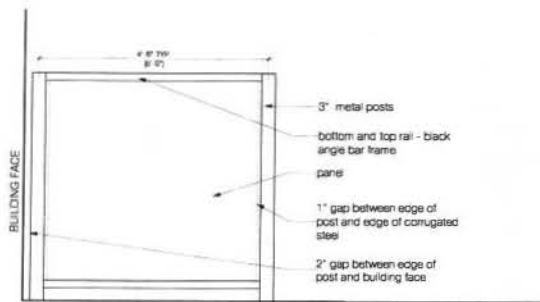
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Landscape Details

Scale

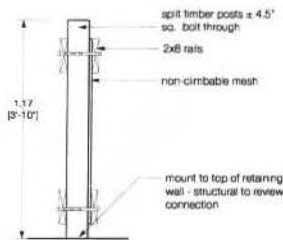
Project Number
21516
Drawing No.
L10.4
Date
04/09/2012
Project Name
Maplewood Townhomes
Project Location
435-475 Seymour River Place
North Vancouver, BC



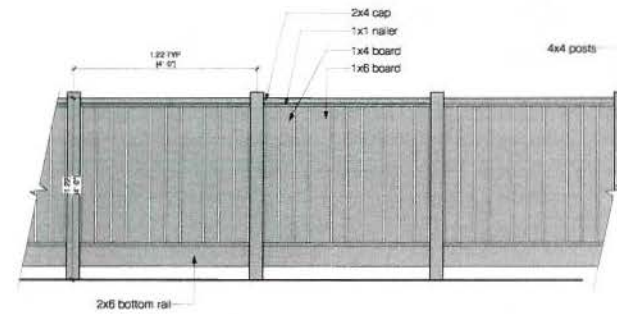
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Scale 1:12



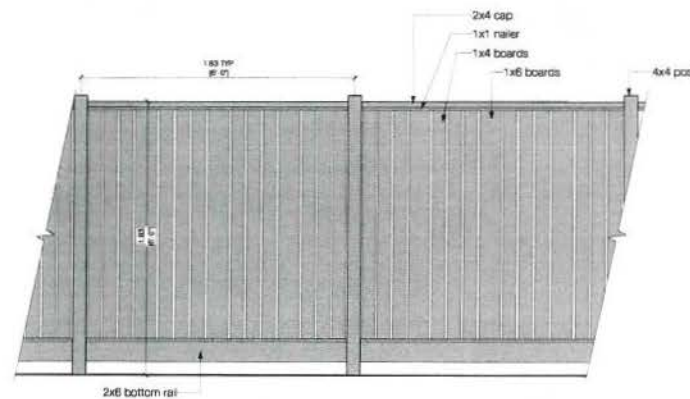
2 DETAIL: 1.5m (5'-0") Privacy Screen
Scale 1:15



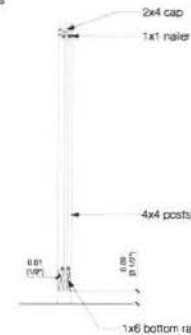
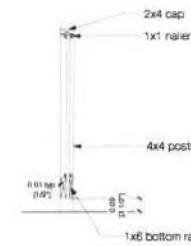
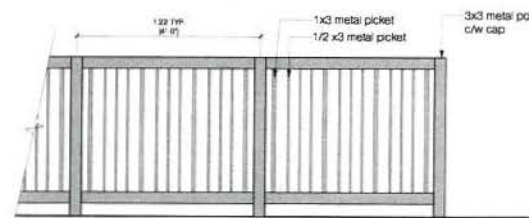
3 DETAIL: 1.2m (4'-0") Timber Fence
Scale 1:15



4 DETAIL: 1.8m (6'-0") Timber Fence
Scale 1:15



5 DETAIL: 1.06m (3'-6") Metal Fence & Gate
Scale 1:15



NOTE:

1. All timber to be #1 Grade Western Red Cedar stained. Stain to match Architecture.
2. All metal to be black.
3. All metal fasteners to be galvanized, contractor to provide samples to Landscape Architect for approval.
4. Contractor to provide shop drawings for approval.

Revision	No.	Date	Revised By
----------	-----	------	------------

Rev	Date	Revised By
1	05/04/12	DESIGNED FOR NORTH VAN ISLAND APPL. LIAISON
2	07/12/12	DESIGNED FOR DESIGN PARTIAL
3	07/12/12	DESIGNED FOR DESIGN PARTIAL
4	07/12/12	DESIGNED FOR DESIGN PARTIAL
5	08/07/12	DESIGNED FOR DESIGN PARTIAL
6	08/07/12	DESIGNED FOR DESIGN PARTIAL

Professional Seal

eta
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inc. 1000 West 10th Avenue
Vancouver, BC, Canada V6H 1Y4
Tel: 604-681-1400
Fax: 604-681-1401
www.eta.ca

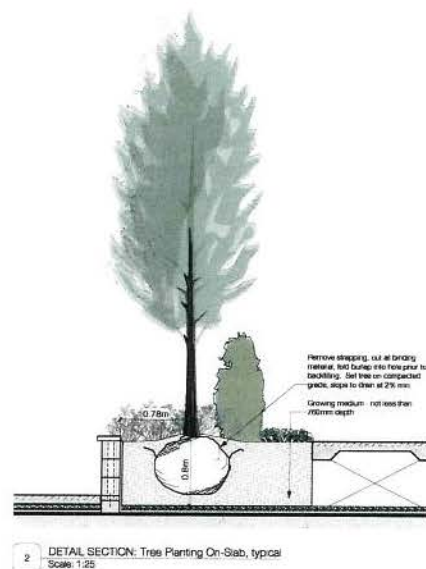
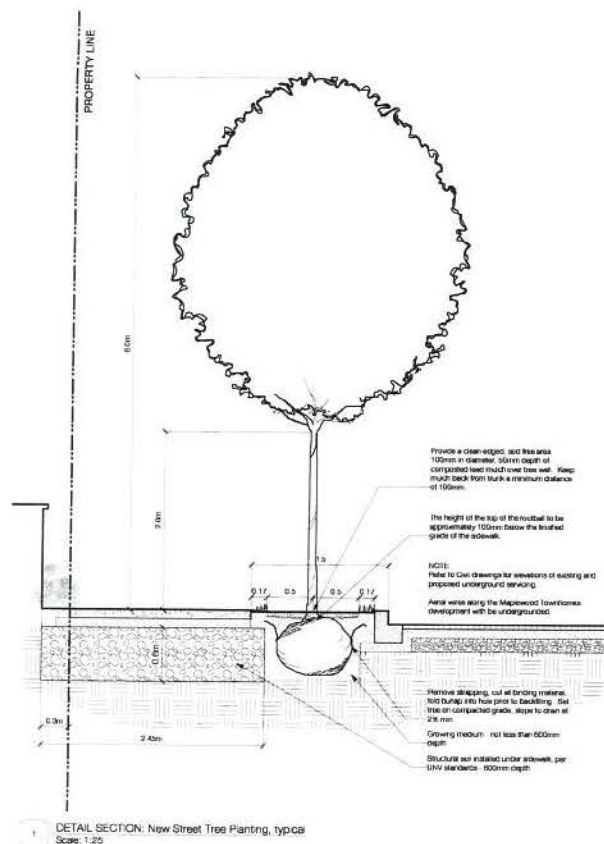
Anthem
PROPERTIES

Project
MAPLEWOOD
TOWNHOMES
435-475 Seymour River Place
North Vancouver, BC

Drawn by: L10
Landscape Details

Project Number	212115	Sheet No.	L10.5
Client No.	04	Scale	1/2"
CD	04/04/2012	Revised By	04/04/2012
Drawn By	04/04/2012	Revised By	04/04/2012

THIS IS APPENDIX " KK " 9.12
TO DEVELOPMENT PERMIT
ISSUED BY THE CORPORATION OF THE
DISTRICT OF NORTH VANCOUVER
MUNICIPAL CLERK



Harvest	Year	Harvested Volume
1	1990	1000
2	1991	1200
3	1992	1500
4	1993	1800
5	1994	2000
6	1995	2200
7	1996	2500
8	1997	2800
9	1998	3000
10	1999	3200
11	2000	3500
12	2001	3800
13	2002	4000
14	2003	4200
15	2004	4500
16	2005	4800
17	2006	5000
18	2007	5200
19	2008	5500
20	2009	5800
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22	2011	6200
23	2012	6500
24	2013	6800
25	2014	7000
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27	2016	7500
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29	2018	8000
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401	2390	101000
402	2391	101200
403	2392	101500

Item No.	Date	Issue Note
A	10/4/12	ISSUED FOR PRELIMINARY FIRE APPLICATION
B	11/7/12	ISSUED FOR DESIGN HANGAR
C	3/14/13	ISSUED FOR DESIGN BUILD PHASE NO APPLICATION
D	8/1/13	ISSUED FOR DETAILED PLANNING APPLICATION AND SUBMITTALS ON
E	10/24/13	ISSUED AS RESPONSE TO ENV COMMENTS
F	9/30/13	ISSUED FOR COUNCIL REVIEW

Inclusive (low)

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Anthem
PROPERTY

Project
**MAPLEWOOD
TOWNHOMES**
435-475 Seymour River Place
North Vancouver, BC

Drawing the

Landscape Details:
Tree Planting

11

Project Name: Project 1
Project ID: 21215
Project City: San Rafael
Project State: California
Project Date: 04/09/2012
Project Cost: \$10.6M

Print Date: 9/23/12
2115 Maplewood Dr, Suite 100, San Jose, CA 95128

THIS IS APPENDIX " 22 "
TO DEVELOPMENT PERMIT 9.13
ISSUED BY THE CORPORATION OF THE
DISTRICT OF NORTH VANCOUVER

DATE _____ MUNICIPAL CLERK _____



Job No.3000023

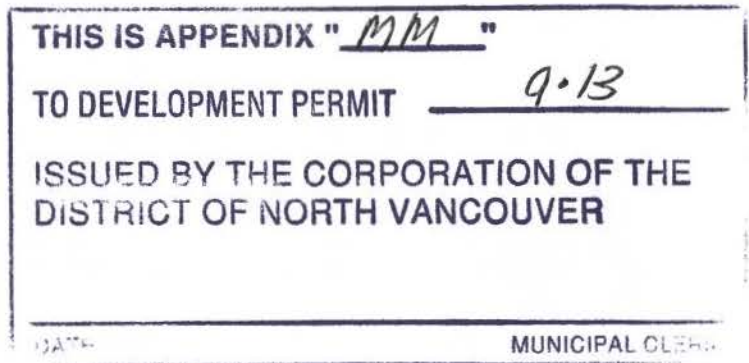
28 January 2012

Anthem Properties Group
300-500 Burrard Street
Vancouver, BC, V6C 2B5

Attention: Rocky Sethi, Development Manager

Dear Mr. Sethi:

**Subject: Anthem Properties, Maplewoods Development – North Site (435-475 Seymour River Place),
District of North Vancouver
Flood Hazard Assessment**



1 Introduction

Anthem Properties Group (Anthem) is proposing a redevelopment of single family properties between 435 and 475 Seymour River Place into a townhouse development Maplewoods - North Site (referred to herein as North Site); the addresses and legal boundaries of the lots occupied for this development are shown in **Figure 1**.

NHC (2012) prepared a Preliminary Flood Hazard Assessment (PFHA) for Anthem which assessed the potential flood hazards related to Seymour River and Maplewood Creek on the properties within the North Site. The PFHA was included in a preliminary application for townhouse development to the District of North Vancouver (DNV).

The scope of work included in this report is fulfillment of the requirements for flood hazard reporting outlined in the DNV Master Requirement SPE106 Section 219 covenant. This includes a portion of the North Site as being within the Seymour River floodplain. The flood construction level (FCL) and proposed mitigative works for Maplewoods – North Site development are outlined in this report.

2 Background

The following information has been reviewed as part of our investigation:

1. Topographic Survey by Bennett Land Surveying Ltd. of: Lots C & D, Plan 17418; Lot 2, Plan 13688; Lot B (Explanatory Plan 4494) of Lots 3 to 5 of Lot 1; Lots 6 & 7 of Lot 1, Plan 2871; ALL OF Bk 3, D.L. 791, G.1, N.W.D., and Lot A, Plan 11707, Lots B& C, Plan 10072; all of Bk 2, D.L. 791, G. 1., N.W.D.; and Lot A of Lot 3, Bk's 1 to 3 of Bk 2, D.L. 791, G.1, N.W.D., Plan 3843.

2. Floodplain Map 93-5: Floodplain Mapping, Seymour River, North Vancouver (BC MoE, 1995);
3. Design Brief on the Floodplain Mapping Study: Seymour River, North Vancouver (BC MoE, 1995b);
4. Flood Assessment Study, North Vancouver (NHC, 2010).
5. Natural Hazard Development Permit Areas (DNV, 2011).
6. Creek Hazard Development Permit Area Map (DNV, 2011b).
7. Flood Hazard Report – Section 219 Covenant, Master Requirement SPE 106 (DNV, 2011c).
8. Preliminary Flood Hazard Assessment, 475 Seymour Place, District of North Vancouver (NHC, 2012).
9. Overview-level site inspection conducted by NHC February 2012.

2.1 Background

The address and legal descriptions of the subject properties are stated in **Table 1** and shown on **Figure 1**.

Table 1: Maplewoods Development – North Site Subject Properties Addresses and Legal Descriptions

Maplewoods	Address	Legal Description
North Site	475 Seymour River Place	Lot C Block 3 District Lot 791 Plan 17418
	463 Seymour River Place	Lot D Block 3 District Lot 791 Plan 17418
	457 Seymour River Place	Lot 2 Block 3 District Lot 791 Plan 13688
	453 Seymour River Place	Lot B Block 3 District Lot 791 Explanatory Plan 4497
	449 Seymour River Place	Lot 6 Block 3 District Lot 791 Plan 2871
	441 Seymour River Place	Lot 7 Block 3 District Lot 791 Plan 2871
	435 Seymour River Place	Lot A Block 3 District Lot 791 Plan 11707

The properties front on to Seymour River Place and are bounded on the north side by an frontage road that runs beside Mount Seymour Parkway (but is separated by a barrier), on the west by a District right of way (ROW) and to the south by Lot B Block 3 District Lot 791 Plan 11707. With the exception of the northwest corner of 475 Seymour River Place, the topography within the Maplewoods - North Site properties are relatively level with nominal elevation ranging between El. 9.4 m¹ and 10.8 m (GSC) based on the Topographic Survey. Maplewood Creek flows into 475 Seymour River Place at approximately 4.5 m from the northwest corner of the property and flows out the west property boundary approximately 8 m from the northwest corner. The nominal ground elevation within the corridor occupied by Maplewood Creek in North Site properties (475 Seymour River Place) is 7.5 m (GSC).

¹ Elevations are relative to geodetic datum

3 Existing Flood Hazard

3.1 Maplewood Creek Flood Hazard

Maplewood Creek drains an area of upslope terraces above Mount Seymour Parkway that provides groundwater inputs in the form of springs and seepages, to the newly reconfigured channels in the small park adjacent to Seymour River. The channel has been reconstructed to include areas of slow-moving deep water as well as small riffles (**Photo 1**). The channel does not appear to carry sediment, although gravel of approximately 20 mm to 50 mm has been introduced to the channel as part of the habitat works. In addition to the seepage flow inputs, there is direct connection to a drainage ditch adjacent to Mount Seymour Parkway.

Maplewood Creek flows through a corrugated metal culvert underneath Mount Seymour Parkway, entering the backyard of 475 Seymour River Place with a deeply (up to 2 m deep) incised channel-way. The culvert dimensions on the upstream side of the road are approximately 95 cm wide and 70 cm high.

Maplewood Creek has a channel width of approximately 1.3 m and a channel depth of approximately 0.4 m as it passes through North properties (**Photo 2**). The channel slope is nearly flat, and a 2 m wide top of bank section extends laterally on either side of the wetted channel. This floodplain area showed signs of recent inundation, which is likely to occur numerous times per year in response to high runoff events. The edge of the floodplain on the left (east) side of the channel-way rises steeply approximately 1.7 m to the elevation of the backyard of 475 Seymour River Place. The right edge of the floodplain is bounded by fill providing driveway access to 2059 Mount Seymour Parkway. As described earlier, the creek is wholly contained within a constructed channel with both rock and concrete, and flows across the North end of the property then south into the Maplewood Farm complex. Based on available drainage area, gradient and potential flow depths in Maplewood Creek, we do not consider it capable to generate a significant flood hazard that would exceed that posed by Seymour River, and give its current configuration and flows, bank erosion is not considered a hazard at the property.

3.2 Seymour River Flood Hazard

The designated floodplain of the Seymour River is defined by BC MoE Floodplain Map 93-5, 1995 (**Figure 2**). The MoE floodplain boundary shows that the main portion of the properties identified for development area outside the floodplain but that during the design 200-year flood, water would inundate the channel-way occupied by Maplewood Creek (**Figure 3**). The elevation of the 200-year flood as shown on the map is 9 m (GSC) at the northwest corner of 475 Seymour River Place. From this intersection point with 475 Seymour River Place, the boundary of the floodplain runs to the southwest away from Seymour River Place (**Figure 3**).

NHC (2010) updated the 1-dimensional 1995 MOE flood model based on more recent floodplain topography², and provided a revised floodplain boundary (**Figure 3**). DNV has adopted the revised floodplain boundary in the draft DPA bylaw (DNV, 2011).

² NHC cautioned that water levels in the floodplain may be artificially high due to the inability of the model to account for flood attenuation. This effect is expected greatest in the lower reaches of the river, which includes the area of the subject property. NHC recommended that 2-dimensional hydraulic modelling be undertaken to improve the accuracy of the modelled flood depths and extents.



The revised floodplain boundary was compared with detailed topography from the site survey, and was found to adequately account for local topography. In the area of the properties identified for redevelopment, the revised floodplain boundary shows that Seymour River floodwaters would backwater Maplewood Creek and flow down the laneway at the western edge of 463 and 475 Seymour River Place and would inundate the ravine portions of the backyards of these properties; the properties of 463 and 475 Seymour River Place are within the 200-year floodplain.

Velocities and water depths³ in the inundated area would be very low since the floodwaters occur in a backwatered area, away from the main channel. Currently, there are no existing buildings within Maplewood - North Site properties in this floodway. The revised floodplain boundaries (NHC 2010) show that the block of properties west of the North Site properties are primarily within the 200-year floodplain, including the buildings of within the properties⁴.

3.2.1 Creek Hazard and Streamside Development Permit Areas

The subject properties of the North Site fall under the Creek Hazard and Streamside Development Area. The riparian setback has been determined by the DNV in consultation with Anthem and Keystone Environmental Ltd. and has been established as 15 m from the high water mark.

FLOOD CONSTRUCTION LEVEL

The flood construction level (FCL) is based on the 200-year instantaneous return period flood with an allowance of 0.3 m freeboard (BC MoE, 1995b) to account for uncertainty. The 200-year water level was interpolated from BC MoE Floodplain Map 93-5 and BC MOE model output at cross-sections XS-13 and XS-10 (**Figure 2**). The FCL is 9.0 m (GSC) on the north end of the North Site Properties and 8.3 m (GSC) at the south end of the North Site.

The recommended FCL for Maplewoods – North Site is El. 9.0 m (GSC).

PROPOSED MITIGATIVE WORKS

All habitable spaces should be designed and constructed above the FCL. Additionally, any infrastructure, utilities, and parking areas that are located below the FCL should be constructed such that the invert of any access points are above the FCL and the structure is designed to withstand the appropriate hydrostatic pressures and potential inundation.

Any required flood protection works are to be designed by a registered professional and all short and long term maintenance requirements must be outlined. No erosion mitigation works are proposed for the site. All development in the subject properties would be subject to safe certification described below.

³ Floodwater depths are estimated at 0-0.5 m (NHC, 2010).

⁴ NHC is not commenting on the FCL or mitigative measures for these properties. This comment has been included to highlight the differences between the BC MoE, 1995b and NHC 2010 floodplain boundaries in the area.



SAFE CERTIFICATION

NHC has not assessed the property for hazards related to fire, debris flow, debris flood, landslide, or any other hazards besides those resulting directly from flood and/or erosion. With respect to flood and erosion hazard, for flood events less than or equal to the 200-year peak instantaneous flow in the Seymour River, NHC certifies that the subject property is considered safe for the use intended if:

1. all habitable space is above the FCL;
2. all infrastructure, utilities, and parking areas that are located below the FCL should be constructed such that the invert of any access points are above the FCL and the structure is designed to withstand the appropriate hydrostatic pressures.
3. all flood protection works are designed by a registered professional. Short and long term maintenance requirements for the flood protection works are outlined by a registered professional and these works are followed by the owner/operator of the property.
4. all new construction is outside the 15 m riparian setback of Maplewood Creek;
5. any bank erosion which may occur is brought to the attention of a qualified registered professional as soon as is practically possible following occurrence; and
6. final building plans and as-built conditions have been assessed and approved for compliance with the conditions specified herein by a qualified registered professional.

4 Closure

If you have any questions regarding the report analyses, assessments or reporting of results, please do not hesitate to contact us at the North Vancouver Office.

Sincerely,

northwest hydraulic consultants ltd.

Prepared by:

Joanna Glawdel, M.A.Sc., E.I.T
Matt Gellis, P.Eng.

Reviewed by:

Barry Chilibeck, P.Eng
Principal



Anthem Properties
Maplewoods – North Site Flood Hazard Assessment
Page 6 of 14

LIMITATION

This document has been prepared by Northwest Hydraulic Consultants Ltd. in accordance with generally accepted engineering and geoscience practices and is intended for the exclusive use and benefit of the client for whom it was prepared and for the particular purpose for which it was prepared. No other warranty, expressed or implied, is made.

Northwest Hydraulic Consultants Ltd. and its officers, directors, employees, and agents assume no responsibility for the reliance upon this document or any of its contents by any party other than the client for whom the document was prepared. The contents of this document are not to be relied upon or used, in whole or in part, by or for the benefit of others without specific written authorization from Northwest Hydraulic Consultants Ltd. and our client.



REFERENCES

BC Ministry of Environment, 1995. Floodplain Mapping – Seymour River; Dwg. 93-5.

BC Ministry of Environment, 1995b. Design Brief on the Floodplain Mapping Study: Seymour River, North Vancouver.

District of North Vancouver, 2011. Natural Hazard Development Permit Areas. Draft bylaw, document number 1551255.

District of North Vancouver, 2011b. Flood Hazard Report – Section 219 Covenant, Master Requirement SPE 106. (<http://www.dnv.org/upload/pcdocsdocuments/63z01!.pdf>)

District of North Vancouver, 2011c. Creek Hazard Development Permit Area Map. Downloaded Jan 2011 from: <http://www.dnv.org/article.asp?a=5018&c=1024>.

Bennett Land Surveying Ltd., 2012. Topographic Survey of Lots C & D, Plan 17418; Lot 2, Plan 13688; Lot B (Explanatory Plan 4494) of Lots 3 to 5 of Lot 1; Lots 6 & 7 of Lot 1, Plan 2871; ALL OF Bk 3, D.L. 791, G.1, N.W.D., and Lot A, Plan 11707, Lots B & C, Plan 10072; all of Bk 2, D.L. 791, G. 1., N.W.D.; and Lot A of Lot 3, Bk's 1 to 3 of Bk 2, D.L. 791, G.1, N.W.D., Plan 3843.

Northwest Hydraulic Consultants Ltd., 2010. Flood Assessment Study, North Vancouver. Prepared for Natural Resources Canada and District of North Vancouver.

Northwest Hydraulic Consultants Ltd., 2012. Preliminary Flood Hazard Assessment 475 Seymour River Place, District of North Vancouver.



PHOTOS



Photo 2. Habitat pond in Maplewood Creek on the upstream side of Mount Seymour Parkway (16 February 2012).



Photo 1. View of Maplewood Creek looking downstream from access road. Wooden fence at Lot D Block 3 District Lot 791 Plan 17418 on left (North Site properties) and Lot 5 District Lot 791 Plan 16486 on right (West Site properties) (16 February 2012)



FIGURES

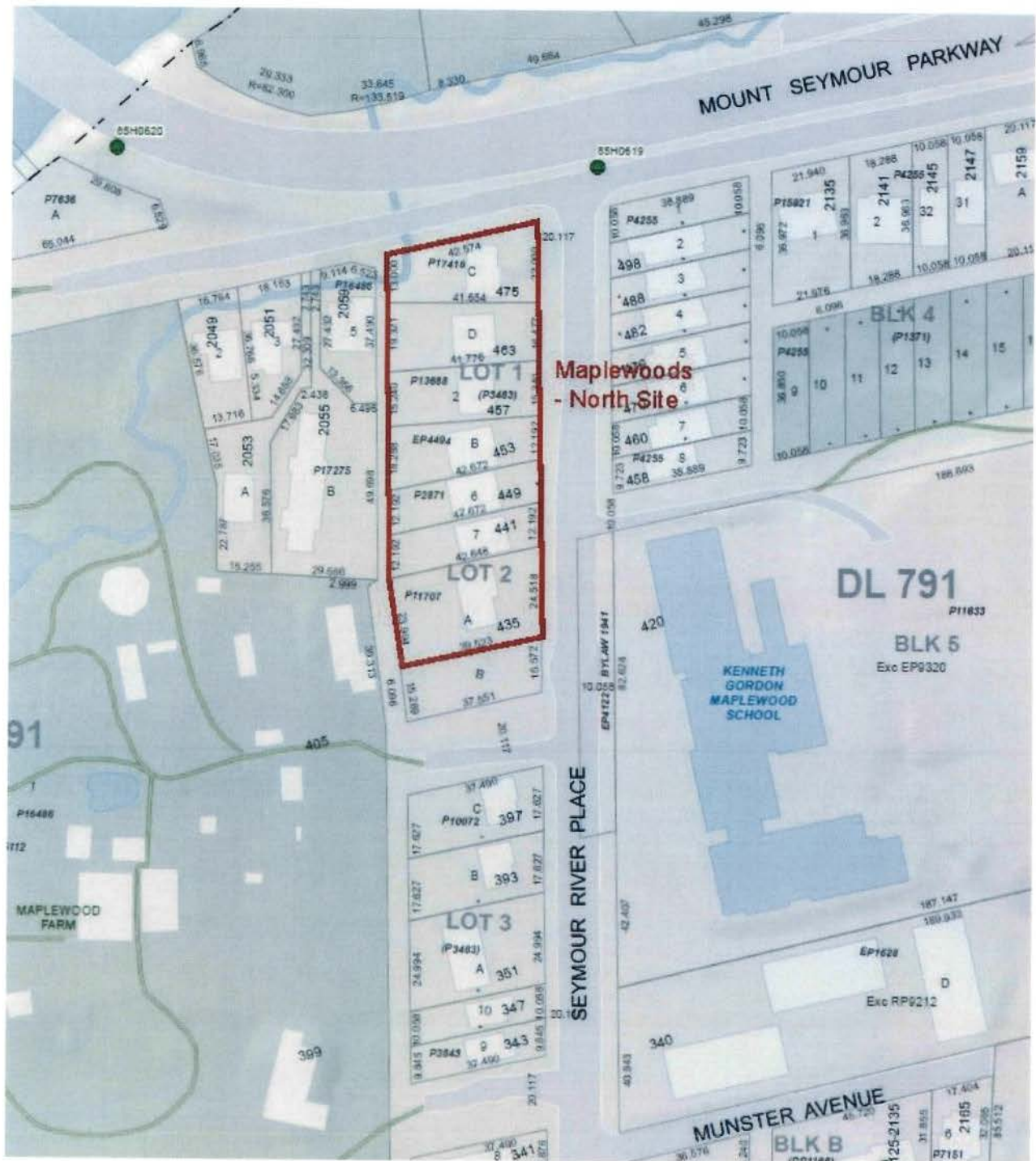


Figure 1. Maplewoods – North Site overview plan

Placeholder for Figure 2 – Flood plain map for Seymour River

Placeholder for Figure 3



THIS IS APPENDIX " <u>NV</u> "	
TO DEVELOPMENT PERMIT <u>9.13</u>	
ISSUED BY THE CORPORATION OF THE DISTRICT OF NORTH VANCOUVER	
DATE	MUNICIPAL CLERK

February 20, 2012

Reference: VAN-00204580-A0

Anthem Properties
#300 – 550 Burrard Street
Vancouver, BC V6C 2B5

Email: sforrest@AnthemProperties.com

Attention: Mr. Steve Forrest, Vice-President, Development

**Re: Proposed Residential Development
Preliminary Geotechnical Report
Seymour River Place, North Vancouver, BC**

Dear Mr. Forrest:

1.0 INTRODUCTION

In accordance with your request, the following provides geotechnical recommendations pertaining to site preparation and foundation design for the proposed development to be located at the above-mentioned site.

The geotechnical recommendations summarized herein are based on field work completed by **exp** Services Inc. (**exp**). The scope of our services was limited to the evaluation of geotechnical characteristics of the site, and does not address any environmental issues relating to soil, groundwater, or proposed construction materials. Should any changes be made to the layout, elevations, or general nature of the project, **exp** should be notified to review and modify the recommendations to reflect those changes, as appropriate.

2.0 SITE DESCRIPTION AND PROPOSED DEVELOPMENT

The development is located in North Vancouver, BC (Figure 1) and consists of two areas: Site 1 includes 351, 393, and 397 Seymour River Place; Site 2 includes 435, 441, 447, 449, 453, 463, and 475 Seymour River Place. Both sites are located on the west side of Seymour River Place with the two sites separated by a paved access to Maplewood Farm.

Site 1, approximately 121 feet wide by 200 feet long (37m x 60m), is bordered by Seymour River Place on the east, paved access to Maplewood Farm on the north, Maplewood Farm on the west, and existing single-family residential properties on the south. The ground surface slopes gently downwards to the south from an elevation of approximately 25 feet (7.6m) geodetic along the north property line to approximately 22.3 feet (6.8m) geodetic along the south property line. Three occupied residences with associated paved driveways and small sundry buildings are located on the property.

Site 2, approximately 135 feet wide by 374 feet long (41m x 114m), is bordered by Seymour River Place on the east, paved access to Maplewood Farm on the south, Seymour River Parkway on the north, and existing single-family residential properties to the west. A small stream traverses the northwest corner of the most northerly lot.

Generally, the ground surface slopes to the south from an approximate elevation of 34.5 feet (10.5m) geodetic to elevation 29.5 feet (9.0m) geodetic along the south property line. The stream on the northeast corner of the property, which flows towards the southwest, had recorded high water level at 24.6 feet (7.5m) during a survey completed on February 15, 2012.

We understand that the proposed construction would likely consist of 3-storey, wood-framed, residential townhouse/apartment buildings on each site over one level of underground parking. The proposed finished floor elevation for the parkades has not been determined at the time this report was prepared and may be influenced by required flood plain elevations and groundwater conditions.

3.0 SUBSURFACE EXPLORATION

The subsurface exploration of the site was completed on January 27, 2012 and February 7, 2012. The initial field study included drilling six auger holes with a truck-mounted drill rig and completing three dynamic cone penetration tests (DCPTs) adjacent to three of the auger holes. Local experience indicates the DCPT results correlate approximately with the Standard Penetration Test (SPT) N values, which provide a measure of in situ density of granular soils. Due to the limited penetration depth of the auger holes, two additional Odex drill holes were completed which allowed completion of SPT tests at depth providing samples and information regarding soil density.

The test holes were located, logged, and sampled in the field by representatives from exp. The approximate test hole locations are shown on attached Figure 1.

4.0 GENERAL SUBSURFACE CONDITIONS

The results of the subsurface exploration are summarized on the attached test hole logs. A generalized subsoil profile based on the test holes is provided below. Please refer to the test hole logs for detailed subsurface conditions encountered.

Because of the nature of exploratory work below ground, extrapolation of subsurface conditions between and beyond the test holes is necessary. It should be noted that differing subsurface conditions might be present due to the random nature of deposition and the alteration of topography by past grading and/or filling. The nature and extent of any variations between the field explorations may not become fully evident until construction. If variations are observed at that time, it may be necessary to re-evaluate specific recommendations in this report and make appropriate changes.

In general, the soil conditions at the two sites consist of silty sand to sand with some silt overlying a coarser grained sand to sandy gravel with cobbles. The auger holes met with refusal at depths varying from 5 feet to 10.5 feet (1.5 to 3.2m) below ground surface elevation due to the presence of the cobbles. The Odex drill hole located on the southern portion of Site 1 (the south site) encountered dense sand and gravel with cobbles for the full depth of the drill hole which was completed to 24 feet (7.3m) below existing ground surface elevations. The Odex drill hole completed on the northern portion of Site 1 encountered dense sand and gravel with cobbles to approximately 16.5 feet (5m) below existing ground surface elevations where a till like very dense grey sandy silt/ silty sand was encountered. The test hole was terminated in the till like layer at 24 feet (7.3m) below existing ground surface elevations.

Fill soil should also be expected adjacent to the existing homes and above buried utilities. Some of the existing homes were constructed with a partial basement, and, as such, the fill soil would extend to a deeper depth (see AH12-5).



In general, the encountered soil conditions are consistent with the published surficial geological maps for the area which suggests the sand and gravel layer could extend for considerable depth.

Groundwater was not encountered as free water within the auger holes, although the coarser grained sand and sandy gravel was found to be moist from about 6 to 8 feet (1.8 to 2.4m) below ground surface elevations. Standpipe piezometers installed in the two Odex drill holes suggested water levels of 8' (2.4m) below existing ground surface on the northern portion of the north site and 12.5 feet (3.8m) below existing grade within the hole completed on the southern portion of the south site. This relates to an elevation of about 24.3 feet (7.4m) geodetic for the north test hole and 11.2 feet (3.4m) geodetic for the south test hole. However, we caution that the high permeability of the native soils underlying the site are likely to result in large variations in groundwater levels in respond to the time of the year, variations in rainfall, and nearby land use. On-going measurements of the standpipe piezometers is suggested to provide some data with regards to possible groundwater level variation.

5.0 DISCUSSIONS AND RECOMMENDATIONS

5.1 General

It is expected that slab for underground parking structure proposed below the main structure will be located approximately 7 feet (2.1m) below existing ground surface elevations in order to avoid excavation below the groundwater table. The dense to very dense sand and gravel is expected to be exposed within the excavation for the underground parkade based on the anticipated excavation depth required for construction. It is considered feasible to support the proposed buildings on conventional spread and strip footings placed on the dense sand and gravel layer. A conventional permanent perimeter and underslab drainage system should be sufficient to collect and discharge anticipated groundwater flows where the proposed slab for the underground parking structure remains above the permanent groundwater table. Specific recommendations are presented in the following subsections.

5.2 Subgrade Preparation & Excavation

Site preparation should include removal of all existing structures and utilities from the site followed by stripping all remaining topsoil, vegetation and existing fills to expose the native dense soils below the building area.

It is anticipated that conventional excavation equipment could be used to excavate the soils encountered within the test holes completed at the site. Large boulders could be encountered which may require splitting and/or blasting for removal. Some groundwater flow should be expected and should be controlled by pumping from sumps and ditches.

Temporary excavation slopes should be planned no steeper than 1H:1V (horizontal:vertical) within the dense sand and gravel layer. Flatter slopes may be necessary where excavation slopes will remain for an extended period of time or where groundwater seepage is encountered.

A detailed excavation design can be provided by **exp** if required.

5.3 Structural Fill

Following subgrade preparation as described above, the exposed subgrade should be reviewed by the Geotechnical Engineer. Any soft/disturbed soils identified during the subgrade review should be over-excavated and replaced with compacted structural fill for slab areas or concrete for footing areas (or the footings could be lowered). Prior to placement of footings, the subgrade should be compacted to at least 95 percent of the Modified Proctor Dry Density within the upper 12 inches.



Structural fill used to restore or increase grade below slab areas should consist of sand and gravel or sand with less than about 5 percent fines content (percent passing the No. 200 sieve) placed in lifts with each lift compacted to at least 95 percent of the Modified Proctor Dry Density. Compaction testing should be completed on all structural fill to confirm that the compaction requirements have been met.

The final selection of structural fill type by the contractor should be based on weather conditions and the ability for the material to meet compaction requirements at the time of placement. This may require using a cleaner material for wet weather construction.

5.4 Foundation Design

Conventional spread and strip footings could be used for support of the proposed building. We recommend a maximum allowable bearing pressure of 3,000 psf be used in design for the proposed building for footings placed on the dense to very dense sand and gravel. Allowable bearing pressures may be increased by 33 percent for seismic and wind loads.

Strip footings should be at least 18 inches (0.45m) in width with pad footings having a minimum dimension of 3 feet (0.9m). For confinement and frost protection, all footings should be located a minimum of 18 inches (0.45m) below the slab-on-grade elevation or the adjacent exterior grade (whichever is lower).

Where footings must be stepped, they should be positioned to lie below a line which rises at a slope of 2H: 1V from the toe of the lower excavation. In addition, we recommend utilities and other below grade installations be set back from the gradient line. A copy of the mechanical drawings should be forwarded to **exp** to allow review of the details of any deep sumps positioned close to footing areas.

Depending on weather conditions, it may be necessary to protect the subgrade at footing locations by delaying detailed excavation of footings until immediately prior to placement of forms and concrete.

Field reviews should be carried out by the geotechnical engineer following subgrade preparation and prior to placement of structural fills, forms, or concrete to confirm the soil bearing pressure used for design, and that the subgrade preparation is adequate.

5.4.1 Seismic Foundation Design

The design should be completed following the recommendations of the 2006 British Columbia Building Code. The following seismic data, based on interpolation from the Natural Resources Canada web page, are applicable:

Near Surface Firm Ground Response Spectra

Period (seconds)	S _a (g)
0.2	0.907
0.5	0.618
1.0	0.326
2.0	0.170

Based on the exploration completed, **exp** recommends the site be classified as Site Class D in accordance with Table 4.1.8.4.A. The acceleration and velocity based site coefficients are as follows: Fa = 1.1 (based on Table



4.1.8.4.B) and $F_v = 1.17$ (Table 4.1.8.4.C). The Firm Ground Peak Ground Acceleration (PGA) for this site is 0.45g.

Based on the test hole results and on published geological information, it is possible that limited lenses and layers of saturated sand encountered below the base of the test holes may liquefy during the design earthquake. However, the sand and gravel found to the depth of the test holes is dense and would not be expected to liquefy. This non-liquefiable layer would act as a natural raft foundation, moderating potential lateral and vertical displacements to the structure. For preliminary design, vertical displacements of 2 to 3 inches (50 to 75mm) and horizontal displacements of 10 to 12 (0.25 to 0.30m) inches should be considered possible during the design earthquake.

5.5 Slab-on-Grade, Underslab Drainage, and Perimeter Drainage

Based on the results of the test holes, it appears that a conventional perimeter and underslab drainage system should be adequate for control of groundwater on the site. A 6 inch diameter perforated PVC pipe should be placed along the exterior perimeter of the parkade and at all steps in the structure. The drain should be surrounded by a minimum 6 inch (150mm) thick layer of clear crushed gravel in turn covered by a 6 inch (150mm) thick layer of birdseye gravel. The invert of the drain should be placed a minimum of 6 inches (150mm) below the underside of the slab-on-grade floor. The underslab drainage system should consist of minimum 6 inch diameter perforated PVC pipes placed at 40 foot centers and should be installed within the clear crushed underslab drainage layer, with a minimum 2 inches (50mm) of clear crushed gravel located below the invert of the drains. It is recommended that the roof drainage system be separate from the perimeter footing drain system.

Elevator pits and other below grade facilities should be designed to be waterproof.

Prior to slab-on-grade construction, the subgrade should be prepared and reviewed as described above. All fill placed below the slab-on-grade should be placed as structural fill with each lift compacted to at least 95 percent of the modified Proctor maximum dry density. In-place density testing as the fill is placed will be required.

It is recommended that floor slabs be underlain with a minimum 4 inch (100mm) thick layer of $\frac{3}{4}$ inch clear crushed gravel compacted with vibratory equipment to a dense condition. This drainage layer should be hydraulically connected to the underslab drains. Minimum 6mil polyethylene sheeting should be provided beneath the slab-on-grade to reduce dampness in moisture sensitive areas.

5.6 Perimeter Backfill

The foundation walls of the parkade should be designed for lateral pressures, which would be applied by the backfill placed against the outside of the wall and possible traffic pressures. The design lateral earth pressure may vary somewhat depending on the method of construction, the nature of the backfill soils and, in particular, on the amount of compaction of the backfill against the wall. Free draining granular fill should be used so no build up of hydrostatic pressure occurs on the outside of the wall. The attached Figure 2 provides recommendations for lateral pressures on walls.

If backfill is to be placed in a V-shaped cut between the building and a temporary excavation slope face where the use of conventional compaction equipment is feasible, the backfill materials should consist of free-draining materials such as clean sand or sand and gravel containing less than 5 percent fines (passing the No. 200 sieve). The granular backfill should be compacted in maximum 8 inch (200mm) lifts using vibratory equipment to achieve at least 95 percent of the Modified Proctor Maximum Dry Density.

Where the backfill area is confined and the use of conventional compaction equipment is not feasible, birdseye gravel should be used as backfill. The birdseye gravel should be placed in lifts and compacted using a concrete vibrator and water.

5.7 Geotechnical Field Review

The following geotechnical field reviews will be required to document that the recommendations of this geotechnical report are followed:

- confirm adequacy of stripped/excavated subgrade in structural areas;
- review of excavation slopes and/or excavation shoring;
- density testing of any required structural and perimeter fill including sub-slab fill;
- review of excavated footing subgrade to confirm allowable bearing pressure; and,
- review of perimeter backfill and perimeter and underslab drains.

6.0 CLOSURE

Please be advised that the contents of this report are based **exp's** understanding of the proposed development as described in this report. If during construction the soil conditions are noted to be different than those described in this report, **exp** must be notified promptly and the recommendations on the geotechnical aspects of the proposed development reviewed and adjusted accordingly. Also note that this report was prepared for the exclusive use of Anthem Properties and their designated consultants and agents, and may not be used by other parties without written consent of **exp** Services Inc. Following development of project drawings, they should be forwarded to **exp** for our review and to determine if the recommendations contained within this report require modification.

Exp's "Interpretation & Use of Study and Report" is attached. These instructions form an integral part of this report and should be included with any copies of this report.

If you have any questions regarding the contents of this report, please call the undersigned.

Sincerely,

exp Services Inc.

Glenn Greenfield, P.Eng.
Senior Engineer

Reviewed by:

Ben Weiss, P.Eng.
Senior Associate

Attachments: Interpretation & Use of Study and Report
Figure 1: Test Hole Location Plan
Figure 2: Lateral Pressure for Basement Wall Design
Test Hole Logs (AH12-1 to AH12-6, BH12-1 and BH12-2)



INTERPRETATION & USE OF STUDY AND REPORT

1. STANDARD OF CARE

This study and Report have been prepared in accordance with generally accepted engineering consulting practices in this area. No other warranty, expressed or implied, is made. Engineering studies and reports do not include environmental consulting unless specifically stated in the engineering report.

2. COMPLETE REPORT

All documents, records, data and files, whether electronic or otherwise, generated as part of this assignment are a part of the Report which is of a summary nature and is not intended to stand alone without reference to the instructions given to us by the Client, communications between us and the Client, and to any other reports, writings, proposals or documents prepared by us for the Client relative to the specific site described herein, all of which constitute the Report.

IN ORDER TO PROPERLY UNDERSTAND THE SUGGESTIONS, RECOMMENDATIONS AND OPINIONS EXPRESSED HEREIN, REFERENCE MUST BE MADE TO THE WHOLE OF THE REPORT. WE CANNOT BE RESPONSIBLE FOR USE BY ANY PARTY OF PORTIONS OF THE REPORT WITHOUT REFERENCE TO THE WHOLE REPORT.

3. BASIS OF THE REPORT

The Report has been prepared for the specific site, development, building, design or building assessment objectives and purpose that were described to us by the Client. The applicability and reliability of any of the findings, recommendations, suggestions, or opinions expressed in the document are only valid to the extent that there has been no material alteration to or variation from any of the said descriptions provided to us unless we are specifically requested by the Client to review and revise the Report in light of such alteration or variation.

4. USE OF THE REPORT

The information and opinions expressed in the Report, or any document forming the Report, are for the sole benefit of the Client. NO OTHER PARTY MAY USE OR RELY UPON THE REPORT OR ANY PORTION THEREOF WITHOUT OUR WRITTEN CONSENT. WE WILL CONSENT TO ANY REASONABLE REQUEST BY THE CLIENT TO APPROVE THE USE OF THIS REPORT BY OTHER PARTIES AS "APPROVED USERS". The contents of the Report remain our copyright property and we authorize only the Client and Approved Users to make copies of the Report only in such quantities as are reasonably necessary for the use of the Report by those parties. The Client and Approved Users may not give, lend, sell or otherwise make the Report, or any portion thereof, available to any party without our written permission. Any use which a third party makes of the Report, or any portion of the Report, are the sole responsibility of such third parties. We accept no responsibility for damages suffered by any third party resulting from unauthorized use of the Report.

5. INTERPRETATION OF THE REPORT

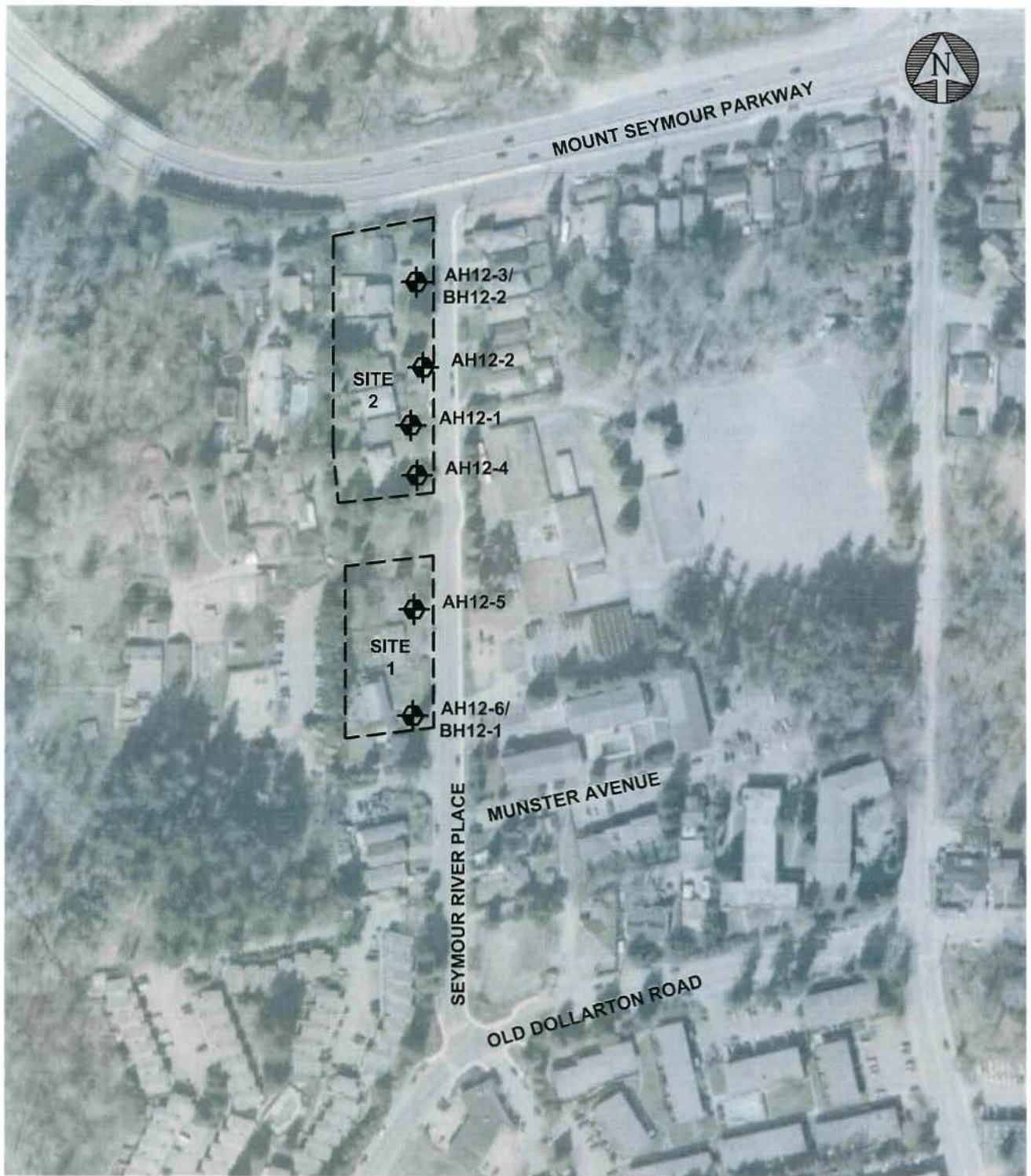
- a. Nature and Exactness of Descriptions: Classification and identification of soils, rocks, geological units, contaminant materials, building envelopment assessments, and engineering estimates have been based on investigations performed in accordance with the standards set out in Paragraph 1. Classification and identification of these factors are judgmental in nature and even comprehensive sampling and testing programs, implemented with the appropriate equipment by experienced personnel, may fail to locate some conditions. All investigations, or building envelope descriptions, utilizing the standards of Paragraph 1 will involve an inherent risk that some conditions will not be detected and all documents or records summarising such investigations will be based on assumptions of what exists between the actual points sampled. Actual conditions may vary significantly between the points investigated and all persons making use of such documents or records should be aware of, and accept, this risk. Some conditions are subject to change over time and those making use of the Report should be aware of this possibility and understand that the Report only presents the conditions at the sampled points at the time of sampling. Where special concerns exist, or the Client has special considerations or requirements, the Client should disclose them so that additional or special investigations may be undertaken which would not otherwise be within the scope of investigations made for the purposes of the Report.
- b. Reliance on Provided information: The evaluation and conclusions contained in the Report have been prepared on the basis of conditions in evidence at the time of site inspections and on the basis of information provided to us. We have relied in good faith upon representations, information and instructions provided by the Client and others concerning the site. Accordingly, we cannot accept responsibility for any deficiency, misstatement or inaccuracy contained in the report as a result of misstatements, omissions, misrepresentations or fraudulent acts of persons providing information.
- c. To avoid misunderstandings, exp Services Inc. (exp) should be retained to work with the other design professionals to explain relevant engineering findings and to review their plans, drawings, and specifications relative to engineering issues pertaining to consulting services provided by exp. Further, exp should be retained to provide field reviews during the construction, consistent with building codes guidelines and generally accepted practices. Where applicable, the field services recommended for the project are the minimum necessary to ascertain that the Contractor's work is being carried out in general conformity with exp's recommendations. Any reduction from the level of services normally recommended will result in exp providing qualified opinions regarding adequacy of the work.

6.0 ALTERNATE REPORT FORMAT

When exp submits both electronic file and hard copies of reports, drawings and other documents and deliverables (exp's instruments of professional service), the Client agrees that only the signed and sealed hard copy versions shall be considered final and legally binding. The hard copy versions submitted by exp shall be the original documents for record and working purposes, and, in the event of a dispute or discrepancy, the hard copy versions shall govern over the electronic versions. Furthermore, the Client agrees and waives all future right of dispute that the original hard copy signed version archived by exp shall be deemed to be the overall original for the Project.

The Client agrees that both electronic file and hard copy versions of exp's instruments of professional service shall not, under any circumstances, no matter who owns or uses them, be altered by any party except exp. The Client warrants that exp's instruments of professional service will be used only and exactly as submitted by exp.

The Client recognizes and agrees that electronic files submitted by exp have been prepared and submitted using specific software and hardware systems. Exp makes no representation about the compatibility of these files with the Client's current or future software and hardware systems.



REFERENCE MAP
DOWNLOADED
FROM 2012-01-27

LEGEND



AH12-3/
BH12-2

AUGERHOLE/
BOREHOLE



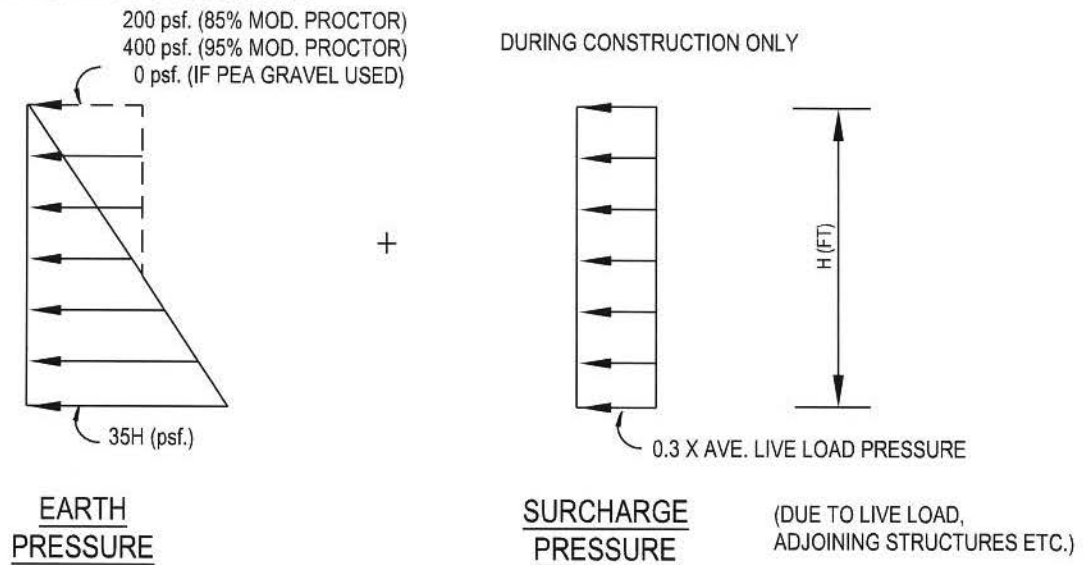
CLIENT
ANTHEM PROPERTIES
PROJECT
RESIDENTIAL DEVELOPMENT, 351-397 AND 435-475
SEYMOUR RIVER PLACE, NORTH VANCOUVER, B.C.

TITLE
TESTHOLE LOCATION PLAN

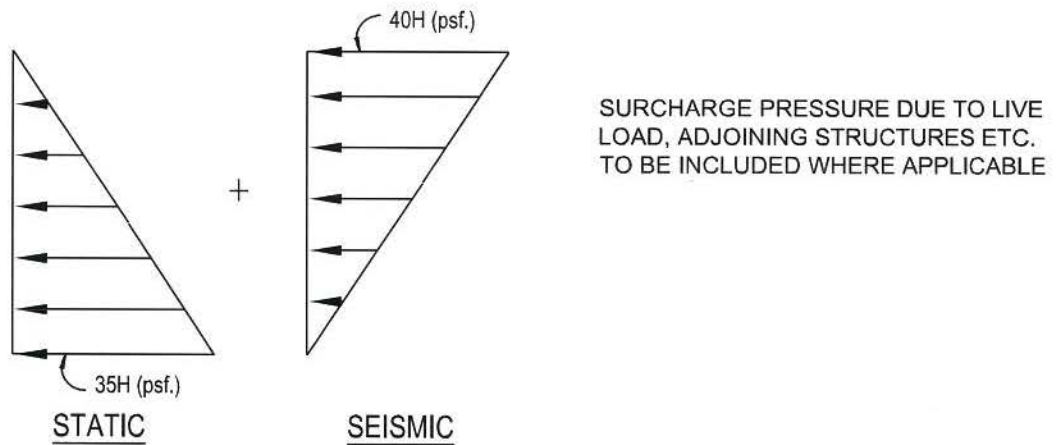
PROJECT NO. 204580	OWNER MG	DESIGNER MM	CHECKER GKG	DATE 2012-01-27	SCALE 1"=200'	DWG NO. FIGURE 1
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LATERAL LOADINGS ON FOUNDATION WALLS

CASE 1: STATIC CONDITIONS



CASE 2: STATIC + SEISMIC (WHERE APPLICABLE)



ASSUMPTIONS:

- TOP OF WALL FREE TO ROTATE 0.2% OF WALL HEIGHT
- LEVEL FREE DRAINING BACKFILL MATERIAL
- NO WATER PRESSURE BUILD-UP BEHIND WALL
- HORIZONTAL GROUND ACCELERATION = 0.45g
- BACKFILL UNIT WEIGHT = 120 pcf.

NOTE: ALL LOADS ARE UNFACTORED.



CLIENT	ANTHEM PROPERTIES		
PROJECT	RESIDENTIAL DEVELOPMENT, 351-397 AND 435-475 SEYMOUR RIVER PLACE, NORTH VANCOUVER, B.C.		
PROJECT NO.	204580	OWNER	MM
DATE	MG	DESIGN	GKG

TITLE	LATERAL PRESSURE FOR BASEMENT WALL DESIGN		
DATE	2012-01-27	SCALE	NTS
DWG. NO.	FIGURE 2		

Testhole no. : AH12-2

Equipment : TRUCK MOUNTED AUGER RIG
 DCPT 2 3/8"x6" cone, 140 lb.
 automatic trip hammer, free falling
 30ins. (blows/12" penetration unless
 otherwise noted)

Location : SEE TESTHOLE LOCATION PLAN

Ground Surface Elevation : 9.3m±

Ground Water Elevation :
 (at time of investigation)

Method of Sampling: ☐ GRAB SAMPLE

Depth (ft.)	Depth (m)	DCPT	Symbol	Description	sample no.	moisture content %	Dynamic Cone Penetration Test								Remarks		
							Blows/ft.										
0	0			3" SOD over SILTY SAND, some gravel and roots, dark brown, moist, loose to medium dense	S1		5	10	15	20	25	30	35	40			
0.5																	
1				SAND, fine grained, some silt, trace gravel, brown and black													
1.5			○	-at 5', cobbles/boulders SAND, fine to medium grained, some gravel and cobbles, trace silt, brown, moist to wet													
2				End of hole at 6.5' (refusal). Note: Augers wet at 6' but no standing ground water observed within testhole.													
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ANTHEM PROPERTIES

exp Services Inc.

RESIDENTIAL DEVELOPMENT
 351-397 AND 435-475 SEYMOUR RIVER PLACE
 NORTH VANCOUVER, B.C.

Testhole No.

AH12-2

Logged by: MM

Sheet: 1 of 1

Date of Drilling: 2012-01-27

Project No. 204580

Testhole no. : AH12-3

Equipment : TRUCK MOUNTED AUGER RIG

Location : SEE TESTHOLE LOCATION PLAN

Ground Surface Elevation : 9.8m±

Ground Water Elevation :
(at time of investigation)Method of Sampling: ☐ GRAB SAMPLE

Depth (ft)	Depth (m)	DCPT	symbol	Description	sample no.	moisture content %	Remarks
0	0			2" ASPHALT over SILTY SAND, some gravel, brown, moist, loose to medium dense			
0.5							
1				SAND, fine to coarse grained, some gravel and cobbles, trace silt, brown, moist			
1.5							
2				End of hole at 5' (refusal)			
2.5							
3							
3.5							
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5.5							

ANTHEM PROPERTIES

exp Services Inc.

RESIDENTIAL DEVELOPMENT
351-397 AND 435-475 SEYMOUR RIVER PLACE
NORTH VANCOUVER, B.C.

Testhole No.

AH12-3

Logged by: MM

Sheet: 1 of 1

Date of Drilling: 2012-01-27

Project No.: 204580

Testhole no. : AH12-4

Equipment : TRUCK MOUNTED AUGER RIG

Location : SEE TESTHOLE LOCATION PLAN

Ground Surface Elevation : 8.8m±

Ground Water Elevation :
(at time of investigation)Method of Sampling: ☐ GRAB SAMPLE

Depth (ft)	Depth (m)	DCPT	symbol	Description	sample no.	moisture content %	Remarks
0	0			1" ASPHALT over SILTY SAND, trace gravel and roots, dark brown, moist, loose to medium dense			
0.5							
1				SILTY SAND, some gravel, brown, moist			
1.5							
2				SANDY GRAVEL, some silt and cobbles, brown, moist to wet			
2.5							
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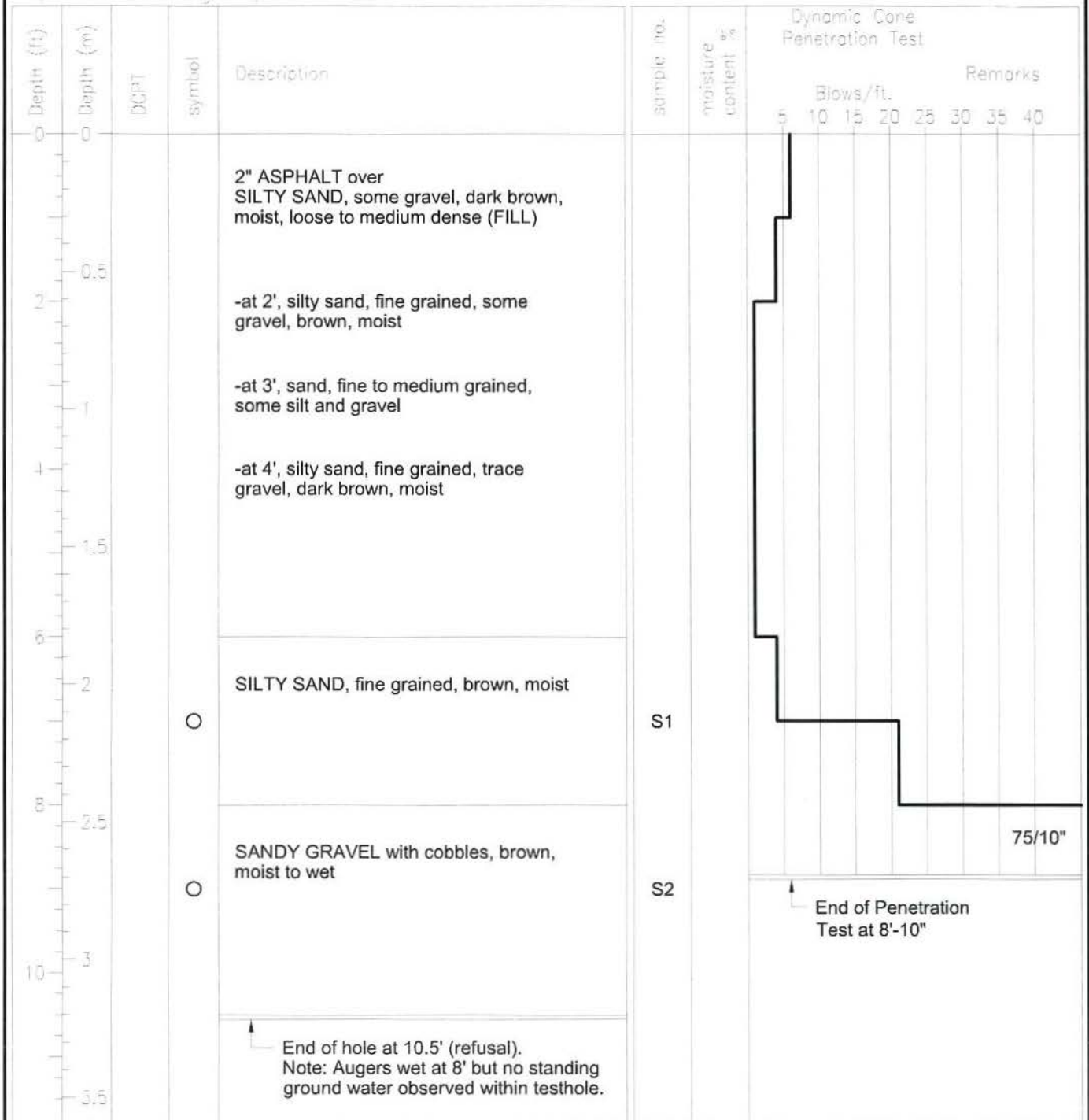
Testhole no. : AH12-5

Equipment : TRUCK MOUNTED AUGER RIG
 DCPT 2 3/8"x6" cone, 140 lb.
 automatic trip hammer, free falling
 30ins. (blows/12" penetration unless
 otherwise noted)

Location : SEE TESTHOLE LOCATION PLAN

Ground Surface Elevation : 7.8m±

Ground Water Elevation :
 (at time of investigation)

Method of Sampling: ☐ GRAB SAMPLE

ANTHEM PROPERTIES

exp Services Inc.

RESIDENTIAL DEVELOPMENT
 351-397 AND 435-475 SEYMOUR RIVER PLACE
 NORTH VANCOUVER, B.C.

Testhole No.

AH12-5

Logged by: MM

Sheet: 1 of 1

Date of Drilling: 2012-01-27

Project No. 204580

Testhole no. : AH12-6

Equipment : TRUCK MOUNTED AUGER RIG

Location : SEE TESTHOLE LOCATION PLAN

Ground Surface Elevation : 7.2m±

Ground Water Elevation :
(at time of investigation)Method of Sampling: ☐ GRAB SAMPLE

Depth (ft)	Depth (m)	DCPT	symbol	Description	sample no.	moisture content %	Remarks
0	0			GRAVEL on surface over SILTY SAND to SANDY SILT, sand is fine grained, brown, moist, loose to medium dense			
0.5				SANDY GRAVEL, sand is fine to coarse grained, trace silt, cobbles, brown, moist			
2			○	-from 3 to 5', moist to wet	S1		
4							
6				End of hole at 5.5' (refusal)			
8							
10							
3.5							

ANTHEM PROPERTIES

exp Services Inc.

RESIDENTIAL DEVELOPMENT
351-397 AND 435-475 SEYMOUR RIVER PLACE
NORTH VANCOUVER, B.C.

Testhole No.

AH12-6

Logged by: MM

Sheet: 1 of 1

Date of Drilling: 2012-01-27

Project No. 204580

Testhole no. : BH12-1		Equipment : ODEX / MUD ROTARY, SPT (35 mm ID), 63.5 kg safety hammer, free falling 760 mm (blows/150mm penetration unless otherwise noted)	
Location : 351 SEYMOUR RIVER PLACE, N. VAN., SEE TESTHOLE LOCATION PLAN			
Ground Surface Elevation : 7.2m±		<input type="radio"/> GRAB SAMPLE <input type="checkbox"/> SPLIT SPOON <input type="checkbox"/> SAMPLE CORE (HQ)	
Ground Water Elevation : (at time of investigation)		Method of Sampling:	

Depth (ft.)	Depth (m)	symbol	SPT blows/150mm	Sample Recovery (m)	Description	sample no.	moisture content %	Remarks
0	0				GRAVEL 2"			
1	0.3				SAND and GRAVEL, sand is medium grained, brown to grey, dry, dense			
5	1.5				-from 5.5 to 7.0', cobbles			
10	3.0				-at 9.5', cobbles			
11	3.3				-from 11.0', moist			
11	3.3				-at 11.0', cobbles			
13	3.9				at 13.0', cobbles			
14	4.2	<input type="checkbox"/>			bouncing		S1	
16	4.8				at 16.0', cobbles			
18	5.4	<input type="checkbox"/>	15, 33/5"		at 18.5', cobbles		S2	
20	6.0							
24	7.3	<input type="checkbox"/>			bouncing		S3	
25	7.6				End of hole at 24'			

ANTHEM PROPERTIES		exp Services Inc.	
RESIDENTIAL DEVELOPMENT 351-397 AND 435-475 SEYMOUR RIVER PLACE NORTH VANCOUVER, B.C.		Testhole No.	Logged by: GKG Date of Drilling: 2012-02-07
		BH12-1	Sheet: 1 of 1 Project No. 204580

Testhole No. : **BH12-2**Equipment : **ODEX / MUD ROTARY, SPT (35 mm ID),
63.5 kg safety hammer, free falling 760
mm (blows/150mm penetration unless
otherwise noted)**Location : **463 SEYMOUR RIVER PLACE, N. VAN.,
SEE TESTHOLE LOCATION PLAN**Ground Surface Elevation : **9.8m±**Ground Water Elevation :
(at time of investigation)Method of Sampling: ☐ GRAB SAMPLE
☐ SPLIT SPOON
SAMPLE CORE (HQ)

Depth (ft)	Depth (m)	Symbol	SPT blows/ 150mm	Sample Recovery (m)	Description	sample no.	moisture content %	Remarks
0	0				GRAVEL 2"			
1	0.3				SAND and GRAVEL, sand is fine to medium grained, brown to grey, dry, medium dense to dense			
2	0.6				-from 5.5 to 6.0', cobbles			
3	0.9				-at 6.5'±, moist			
4	1.2				-at 8.0'±, wet			
5	1.5	□	30/3"		-from 10.0 to 11.0', cobbles	S1		
6	1.8				-at 12.0', heavy water flow			
7	2.1				-from 14.0 to 15.0', boulder			
8	2.4				-at 16.0', cobbles			
9	2.7	□	20, 36, 33		-from 16.0', increasing silt content	S2		
10	3.0				SANDY SILT, trace gravel, grey, dense to very dense (TILL-LIKE)			
11	3.3				-increasing gravel content with depth			
12	3.6	□	22, 36, 33			S3		
13	3.9							
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May 27, 2013

THIS IS APPENDIX " <u>00</u> "	
TO DEVELOPMENT PERMIT <u>9.13</u>	
ISSUED BY THE CORPORATION OF THE DISTRICT OF NORTH VANCOUVER	
DATE	Reference: VAN-00204580-A0

Anthem Properties
#300 – 550 Burrard Street
Vancouver, BC V6C 2B5

Email: rsethi@AnthemProperties.com

Attention: Mr. Rocky Sethi, Development Manager

**Re: Proposed Residential Development
435-475 Seymour River Place, North Vancouver, BC
Groundwater Interception**

Dear Mr. Sethi:

The following provides exp Service Inc (exp) opinion with regards to the likely impact of construction of the proposed residential development at the above mentioned site.

The proposed development is to include two to three stories of wood frame townhouses over one level of underground parking structure. The parking structure floor slab is to be founded at about 6.67m to 7.95m geodetic or about 2.1 to 2.0m below existing ground surface elevations. Groundwater elevations measured during the geotechnical investigation were at 2.4m to 3.75m below existing ground surface elevations.

Given that the proposed parkade floor slab is above the measured groundwater elevation and any underslab drainage is at limited depth below the parkade floor, the proposed development is not expected to result in any significant lowering of the groundwater table nor is it expected to intercept or cutoff the groundwater flow.

The proposed building drainage system is designed to lower the groundwater level only during flood conditions where elevated surface "flood" water levels result in elevated groundwater levels above normal levels and above floor slab elevations. The drainage and foundation system is designed to resist the approximate 1:50 year flood elevation of 7.6m geodetic, however, for the 1:200 year flood construction level (FCL) of 8.3m to 9.0m geodetic, the parkade will flood to avoid uplift pressures which could otherwise exceed building weights if the building were fully tanked to the FCL.

It is expected that discharge of storm water back into the native soils by infiltration trenches at isolated locations will have the result of artificially elevating the groundwater table and causing additional water flow into the underslab and perimeter drainage system which then gets discharged to the storm sewer system.

If you have any questions regarding the contents of this report, please call the undersigned.

Sincerely,

exp Services Inc.



Glenn Greenfield, P.Eng.
Senior Engineer

Reviewed by:



Kai-Sing Hui, P.Eng.
Senior Associate

L:\2012 (starting at 0204310-A0)\0204580-A0 GKG Residential Development, North Vancouver\Reports\exp LE 2013 05 27 DNV Groundwater.docx

**ADJUSTED BASIC LEVEL 1A ADAPTABLE DESIGN GUIDELINES
ANTHEM MAPLEWOODS DEVELOPMENT
435-475 SEYMOUR RIVER PLACE**

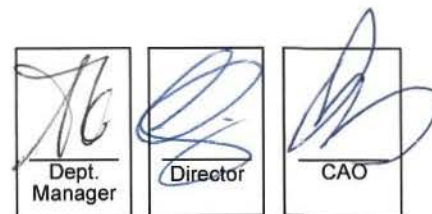
Entrance	Canopy over entrance (91 cm x 91 cm or 3'x 3')	Provide shelter to person who has difficulty unlocking front door
Entrance	91 cm or 36" wide front door	To permit easier entry by person in wheelchair
Entrance	Doorbell max 106 cm or 42 inches above floor	To permit person in wheelchair to ring bell
Entrance	Large, easily read address numbers (10 cm or 4" in contrasting colour)	Assist visually impaired
Finishing	Lever door handle on all doors is preferred	Preferred, exceptions where interior design requires
Bathroom	Pressure balanced tub/shower valves (as per code)	Prevent scalding (Now req. by building code)
Bedrooms	Duplex outlets beside telephone jacks	Enable installation of messaging equipment

THIS IS APPENDIX "PP" 9/3
TO DEVELOPMENT PERMIT _____
ISSUED BY THE CORPORATION OF THE
DISTRICT OF NORTH VANCOUVER

DATE

MUNICIPAL CLERK

COUNCIL AGENDA/INFORMATION			
<input type="checkbox"/> In Camera	Date: _____	Item # _____	
<input type="checkbox"/> Regular	Date: _____	Item # _____	
<input type="checkbox"/> Agenda Addendum	Date: _____	Item# _____	
<input type="checkbox"/> Info Package			
<input type="checkbox"/> Council Workshop	DM# _____	Date: _____	Mailbox: _____



The District of North Vancouver REPORT TO COUNCIL

October 30, 2013

File: 01.0470.35/019.001

Tracking Number: RCA -

AUTHOR: Shaun Loader – Project Engineer, Engineering Design Services

SUBJECT: Request for Noise Bylaw Variance – Metro Vancouver Capilano Main No. 9

RECOMMENDATION:

THAT Council relax the provision of Noise Regulation Bylaw 7188 which regulates construction noise during the night and weekends in order that Metro Vancouver can perform work during the night on weeknights and from 7:00am to 5:00pm on Saturdays from November 2013 to June 2014.

REASON FOR REPORT:

Metro Vancouver has applied for a variance to the District's Noise Regulation Bylaw in order to complete Phase 1 of the No. 9 Capilano Water Main Project scheduled for competition in June 2014. This work consists of the construction of a valve chamber and steel pipe at the Cleveland Dam Site on Metro Vancouver Property.

Relaxation of the Bylaw will allow the Metro Vancouver to timely and efficiently complete the works avoiding any further delays. The night time work window would be in effect starting November 2013 right through to June 2014 and will be used intermittently when the construction schedule for the day deems it necessary. Metro Vancouver will be required to provide written notice two days in advance to the District of North Vancouver, the area residents and Community Advisory Committee when concrete pours are expected to be scheduled causing night time work and when work is to start at 7:00am on a Saturday.

BACKGROUND:

Metro Vancouver is replacing Capilano Main No. 4, located on a steep slope west of Capilano Road, as the existing main has reached the end of its design life and is seismically vulnerable. The new main, Capilano Main No. 9, will extend from the parking lot at Cleveland Dam south along Capilano Road to Edgemont Boulevard. The main will be constructed in two phases with the first phase consisting of a large valve chamber and a short length of steel pipe at the Cleveland Dam parking lot. This phase of the work includes a connection to the existing water distribution system and will be undertaken by Metro Vancouver

SUBJECT: Request for Noise Bylaw Variance – Metro Vancouver Seymour/Capilano Twin Tunnels

October 30, 2013

Page 2

construction crews. Phase 2 of the project will consist of the construction of 2km of steel pipe. This work will be completed at a later date and is not included in this noise bylaw variance.

This reconstruction will replace the existing main for improved reliability and service and a Noise Bylaw exemption will allow a more flexible construction schedule for time sensitive items in Phase 1, such as concrete pours. Ultimately the relaxation of this bylaw will expedite the construction process causing less disruption to the surrounding area.

Attached is a proposed work and notification area. (Attachment 1) and the Community Monitoring Advisory Committee (CMAC) memo supporting this exemption. (Attachment 3)

EXISTING POLICY:

Under Section 6(b) of Noise Regulation Bylaw 7188 Council may, by resolution, relax the regulation that prohibits construction noise during the night and on weekends when such activities would not enable the timely completion of critical public utility projects if carried out during the day. Similar requests have been approved by the Council in the past.

ANALYSIS:

Metro Vancouver will be undertaking the following construction activities to complete Phase 1 of the project:

- excavation and soil removal;
- installation of soldier pile walls;
- concrete chamber construction;
- large diameter pipe fabrication and installation; and
- material transport, backfilling and restoration.

It is anticipated that virtually all construction activities for Phase 1 will be undertaken in conformance with the District's noise bylaw. However, there could be unanticipated occurrences which may require a variance to the bylaw including:

- periodic Saturday start times at 7:00am to meet the construction schedule;
- extended working hours beyond 8:00pm to complete concrete pours; and
- possible use of equipment that exceeds the noise limit such as a hydro vacuum truck, which can reach noise levels of 110 dBA. This equipment would only be used during normal working hours.

All steps will be taken during construction to maintain noise levels within the noise regulation bylaw. Construction equipment will be monitored to ensure compliance with the bylaw.

Metro Vancouver will provide advance notice to the District of North Vancouver (DNV), area residents and the DNV's Community Monitoring and Advisory Committee if a 7:00am start time is required or if an activity is anticipated to deviate from the noise bylaw.

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Twin Tunnels**

October 30, 2013

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The proposed schedule calls for construction to start in late November and completion, clean-up and demobilization of the project in June 2014.

Attached is a letter from Metro Vancouver Engineering dated October 28, 2013 (Attachment 2) requesting a variance to the District's Noise Regulation Bylaw for work items which require construction to take place during the night hours and some Saturdays.

The District's noise bylaw states that continuous noise, when measured at a point of reception within a Quiet Zone (i.e. residential zone), should not exceed 55 dBA during the daytime or 45 dBA during the night time. It is anticipated that all noise levels will meet the daytime noise regulation bylaw with the exception of the hydro vacuum truck. Metro Vancouver will not be permitted to use this piece of machinery outside of the regular working hours.

Noise test measurements and monitoring will be conducted by Metro Vancouver to ensure compliance. Any equipment that exceeds predicted and allowable noise levels will be immediately attenuated or removed from site.

Metro Vancouver will be required to provide written notice to all surrounding residents, the Community Monitoring and Advisory Committee, and the DNV at least two days before it is expected that work hours will stray outside the normal work hours.

TIMING / APPROVAL PROCESS

In order to complete the Phase I of the Capilano Water Main No. 9 in a timely manner, approval by council is required as early as possible.

CONCURRENCE:

The Community Monitoring and Advisory Committee (CMAC) has reviewed the request by Metro Vancouver and identified a few concerns which have been addressed in this request by the District of North Vancouver and in the memo by Metro Vancouver. A copy of CMAC's memo is attached. (Attachment 3)

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October 30, 2013

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OPTIONS:

The District is presented with two options for this project.

Option 1: (Recommended) To issue the exemption and allow the intermittent construction in the area when due notification is provided.

Option 2: To not issue the exemption and allow daytime construction only. This could cause a significant delay in the construction process and could create a much longer time period where construction vehicles are using the area and roads surrounding the construction site causing delays.



Shaun Loader
Project Engineer, Engineering Design Services

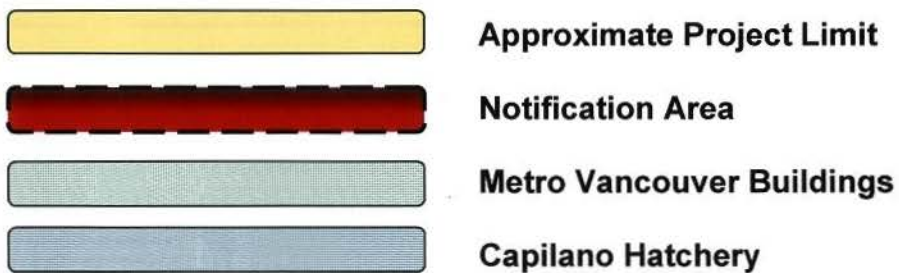
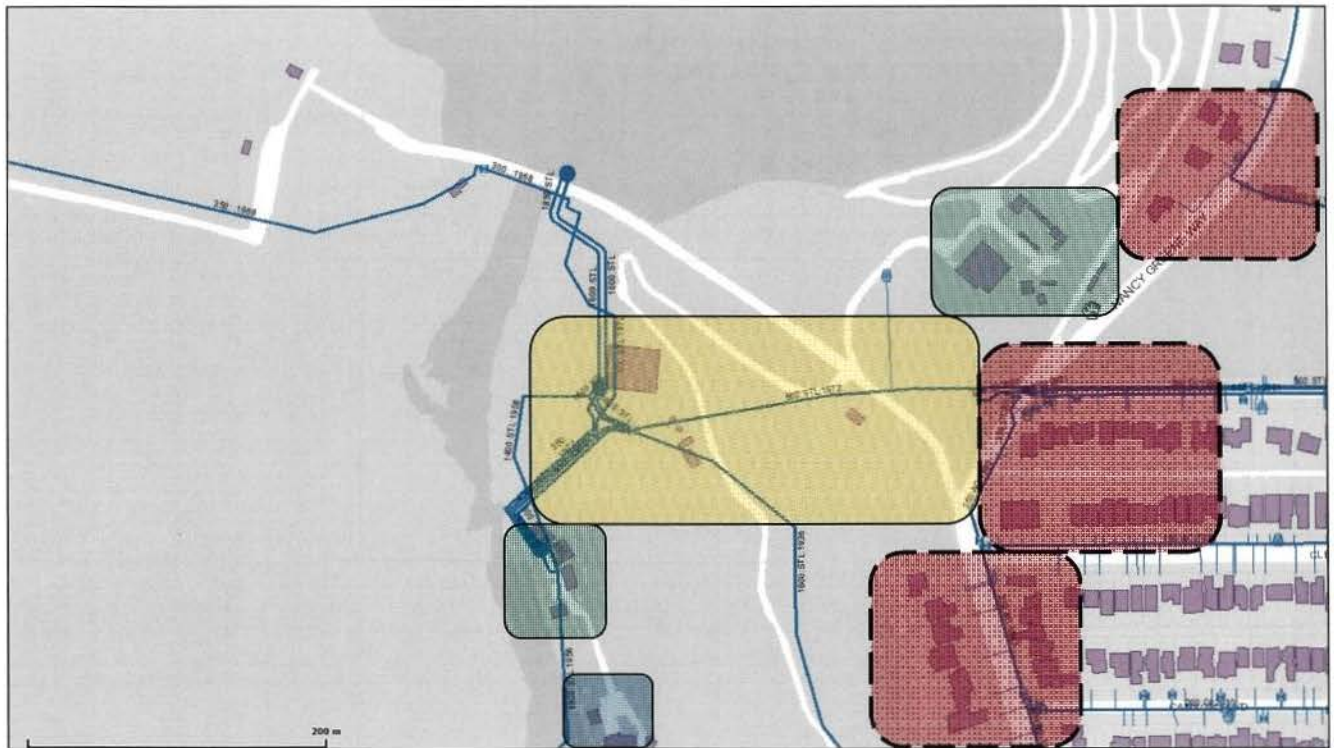
<u>REVIEWED WITH:</u>	<u>REVIEWED WITH:</u>	<u>REVIEWED WITH:</u>	<u>REVIEWED WITH:</u>
<input type="checkbox"/> Sustainable Community Development	<input type="checkbox"/> Clerk's Office	External Agencies:	Advisory Committees:
<input type="checkbox"/> Development Services	<input type="checkbox"/> Corporate Services	<input type="checkbox"/> Library Board	<input type="checkbox"/> _____
<input type="checkbox"/> Utilities	<input type="checkbox"/> Communications	<input type="checkbox"/> NS Health	<input type="checkbox"/> _____
<input type="checkbox"/> Engineering Operations	<input type="checkbox"/> Finance	<input type="checkbox"/> RCMP	<input type="checkbox"/> _____
<input type="checkbox"/> Parks & Environment	<input type="checkbox"/> Fire Services	<input type="checkbox"/> Recreation Commission	
<input type="checkbox"/> Economic Development	<input type="checkbox"/> Human resources	<input type="checkbox"/> Other: _____	
	<input type="checkbox"/> ITS		
	<input type="checkbox"/> Solicitor		
	<input type="checkbox"/> GIS		

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Attachment 1 – Project Limit and Notification Area





metrovancouver

4330 Kingsway, Burnaby, BC, Canada V5H 4G8 604-432-6200 www.metrovancouver.org

Water Services Department
Tel. (604) 432-6045 Fax (604) 432-6297

October 28, 2013

File: WA-02-01-11019-50

Mr. Gavin Joyce, P.Eng., General Manager
Engineering, Parks and Facilities Management Division
District of North Vancouver
355 West Queens Road
North Vancouver, BC V7L 4K1

Dear Mr. Joyce:

Re: Noise Bylaw Variance Request – Capilano Main No. 9 (Phase 1) Construction

We are writing to request a noise bylaw variance related to the construction of Capilano Main No. 9 – Phase 1.

Project Description

Capilano Main No. 9 will replace the existing Capilano Main No. 4, located on a steep slope west of Capilano Road. The existing main has reached the end of its design life and is seismically vulnerable. The new main will extend from the parking lot at Cleveland Dam, along Capilano Road to Edgemont Boulevard. The main will be constructed in two phases:

Phase 1: consisting of a large valve chamber and a short length of steel pipe at the Cleveland Dam parking lot. This phase of the work includes a connection to the existing water distribution system and will be undertaken by Metro Vancouver construction crews.

Construction is scheduled to start in November 2013 and be complete by spring 2014.

Phase 2: consisting of approximately 2km of 2100mm diameter steel pipe extending from the newly constructed valve chamber in the Cleveland Dam parking lot to Edgemont Boulevard.

Construction is scheduled to start in fall 2014 and be complete in winter/spring 2016.

Phase 1 Construction

In general, construction will include the following activities:

- excavation and soil removal;
- installation of soldier pile walls;

- concrete chamber construction;
- large diameter pipe fabrication and installation;
- material transport, backfilling and restoration.

It is anticipated that virtually all construction activities for Phase 1 will be undertaken in conformance with the District's noise bylaw. However, there could be unanticipated occurrences which may require a variance to the bylaw including:


- periodic Saturday start times at 7 a.m. to meet the construction schedule;
- extended working hours beyond 8 p.m. to complete concrete pours;
- possible use of equipment that exceeds the noise limit such as a hydro vacuum truck, which can reach noise levels of 110 dBA. This equipment would only be used during normal working hours.

All steps will be taken during construction to maintain noise levels within the noise regulation bylaw. Construction equipment will be monitored to ensure compliance with the bylaw.

Metro Vancouver will provide advance notice to the District of North Vancouver (DNV), area residents and the DNV's Community Monitoring and Advisory Committee if a 7 a.m. start time is required or if an activity is anticipated to deviate from the noise bylaw.

Should you have any questions or concerns, please do not hesitate to contact the undersigned at (604) 451-6134.

Yours truly,



Goran Oljaca, P.Eng.
Manager
Engineering and Construction

GO/HS/mm

cc: Steven Lewis, P.Eng., Metro Vancouver, Water Services
Hein Steunenberg, P.Eng., Metro Vancouver, Water Services
Mark MacConnell, P.Eng., Metro Vancouver, Water Services
Jim Walsh, Metro Vancouver, Water Services
Alicia Williams, Metro Vancouver, Public Involvement
Marie Griggs, Metro Vancouver, Public Involvement
Steve Billington, Metro Vancouver, Public Involvement
Raymond Penner, Community Monitoring and Advisory Committee, Facilitator

M E M O R A N D U M

To: Alicia Williams, Mark MacConnell, Metro Vancouver
Gavin Joyce, Steve Ono, District of North Vancouver

From: Raymond Penner
the Strategic Action Group (CMAC Facilitator)

Subject: CMAC input re application for a Noise Bylaw variance for Capilano Main No. 9

Date: October 25, 2013

CC: CMAC members



Please accept this memo with regard to CMAC's perspective on the draft letter circulated to CMAC on October 16, 2013 with regard to a pending Metro Vancouver request to DNV for a Noise Bylaw variance related to Capilano Main No. 9 construction.

CMAC members have had the opportunity to review this letter and basically support this request. They understand that construction causes noise and that noise is frequently the biggest cause of neighbourhood dissatisfaction so support the need to take all measures possible to control and manage the noise within the Bylaw.

CMAC also understands the vagaries of construction scenarios and that complete predictions of unfolding circumstances are not always accurate. However, two members have specifically expressed concern about a sense of an "open ended" variance to deal with such unexpected circumstances. Specifically, their concerns are as follows:

1. "Periodic Saturday start time at 7 a.m. to meet the construction schedule" - this should happen only in very exceptional circumstances, and neither Metro nor its contractor(s) should receive unspecified approval for it beforehand.
2. Open-ended variance in hours being requested "beyond 8 p.m. to complete concrete pours" - any extension beyond 8 p.m. should be limited to 10 p.m. or 11 p.m.

In order to mitigate such potential needs, CMAC suggests that there needs to be a commitment to forewarn residents of the likelihood of extended hours, whether this is to meet the construction schedule as per point 1 or to deal with possible extensions for upcoming concrete pours. These notifications would ideally be provided a day or two prior to such extensions being required.

Metro Vancouver, on learning of some of the first concern, provided this additional information:

Saturday work is not anticipated at this time; however, it may be required toward the end of the project if the contractor is to maintain its proposed completion date of June 2014. Should this be necessary, MV would begin work two hours before the stipulated Noise Regulation Bylaw hours of 9 a.m. Crews would not exceed the bylaw by working later than 5 p.m.

MV will provide advance notice to the District of North Vancouver (DNV), area residents and DNV's Community Monitoring and Advisory Committee (CMAC) should a 7 a.m. start on Saturday be required.

MV is committed to informing the affected community of upcoming construction activities, including extended hours of work. Metro Vancouver's Public Involvement Division will work closely with its Community Liaison Officer (CLO) and technical staff to regularly

communicate project progress, changes to the construction plan, and planned and unplanned disruptions. These efforts will help ensure that communications with the affected community and CMAC is timely, effective, consistent and accurate.

CMAC encourages Metro Vancouver to include these commitments in the Noise Bylaw Variance request letter to Council as well as address the second concern noted.

Thank you for this opportunity to present these considerations.

Sincerely



Raymond Penner
Facilitator, DNV Community Monitoring and Advisory Committee

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