



City of Richmond
Planning and Development Department

Report to Committee

To: Planning Committee

To Planning - Mar 18, 2008
Date: March 4, 2008

From: Brian Jackson
Director of Development

RZ 06-348772

Re: Application by Timothy C.W. Tse for Rezoning at 5640 Blundell Road from
Single-Family Housing District, Subdivision Area E (R1/E) to Townhouse
District (R2 - 0.7)

File: 12-8060-20-8345

Staff Recommendation

That Bylaw No. 8345, for the rezoning of 5640 Blundell Road from "Single-Family Housing District, Subdivision Area E (R1/E)" to "Townhouse District (R2 - 0.7)", be introduced and given first reading.

Brian Jackson
Director of Development

BJ:ke
Att.

FOR ORIGINATING DEPARTMENT USE ONLY

CONCURRENCE OF GENERAL MANAGER

Staff Report

Origin

Timothy C.W. Tse has applied to the City of Richmond for permission to rezone 5640 Blundell Road (**Attachment 1**) from Single-Family Housing District, Subdivision Area E (R1/E) to Townhouse District (R2 -- 0.7) in order to permit the development of a 7-unit townhouse project.

The property to the east (5660 Blundell Road) is currently at 3rd Reading (RZ 04-279101; Bylaw 8027) to rezone the site to facilitate a 10-unit townhouse project. The subject rezoning at 5640 Blundell Road is proposed to be consolidated with 5660 Blundell Road for a combined 17-unit project zoned R2-0.7. A comprehensive Development Permit application (DP 06-335428) will address the ultimate form and character of the proposed 17-unit townhouse development on the consolidated site. A map showing the neighbouring application is contained in **Attachment 2**.

Findings of Fact

A Development Application Data Sheet providing details about the development proposal is contained in **Attachment 3**. The proposed 7-unit project on the subject site is the western portion of the 10-unit townhouse project already under application to the east. Both sites are to be consolidated into one development parcel for a total of 17 townhouse units arranged around one access to Blundell Road and an east-west running drive aisle. A majority of the buildings are 2 storeys in height with 2 ½ storey buildings limited to Blundell Road. **Attachment 4** contains a site plan, preliminary landscape scheme and building elevations for reference purposes.

Surrounding Development

To the North: On the opposite side of Blundell Road, single-family dwellings zoned R1/E.

To the East: A vacant parcel under development application to an identical zoning district R2 – 0.7 (RZ 04-279101; DP 06-335428).

To the South: Single-family dwellings zoned R1/E.

To the West: A single-family dwelling zoned R1/E.

Related Policies & Studies

Official Community Plan (OCP) – Redevelopment on Arterial Roads

The OCP identifies this portion of Blundell Road (major arterial road) as an area for multi-family development based on:

- The properties location on a major arterial road.
- Situated in the same block as the previous approved townhouse applications or developments (neighbouring property to the east at 5640 Blundell Road).
- Situated in close proximity to a Neighbourhood Service Centre (Blundell Shopping Centre).
- Assembles the required properties (minimum 50 m frontage on development sites).

The proposed development at 5640 Blundell Road complies with all applicable locational criteria and will adhere to minimum frontage requirements as the two consolidated sites (5640 & 5660 Blundell Road) results in approximately 75 m frontage. The project also complies with the Neighbourhood and Low-Density Residential designations contained in the OCP Generalized and Specific Land Use Maps.

Richmond 2006-2031 Flood Protection Management Strategy

Registration of flood indemnity covenant identifying a minimum Building Elevation requirement of 0.9 m is a consideration of final adoption of the rezoning. This is in compliance with the guidelines contained in the Richmond 2006-2031 Flood Protection Management Strategy.

Indoor Amenity Space Contribution

In accordance with the City OCP policy on the provision of indoor amenity for multi-family developments, the developer is contributing \$7,000 in lieu of a dedicated indoor amenity area based on the guidelines (\$1,000 per unit). The 10-unit proposal at 5660 Blundell Road is contributing \$10,000 as part of the rezoning application currently at third reading. The combined contribution of \$17,000 for the consolidated projects at 5640 and 5660 Blundell Road complies with the criteria identified in the OCP.

Interim Affordable Housing Strategy

The subject rezoning application was submitted prior to the Council Adoption of Richmond's Affordable Housing Strategy on May 28, 2007 and is not subject to the provisions of this policy. As a result, provisions of the Interim Affordable Housing Strategy will apply. No voluntary contribution for the purposes of affordable housing was made for the rezoning at 5660 Blundell Road (RZ 04-279101; Third Reading) as there was no strategies or policies in place that addressed affordable housing at the time this rezoning application was processed and brought forward in 2004/05.

The developer has declined to volunteer additional contributions based on a City staff request to base contributions as outlined in the Interim Affordable Housing Strategy for the entire project involving both 5660 and 5640 Blundell Road, which are being processed under two separate rezoning applications submitted in 2004 and 2006 respectively. The applicant/developer has agreed to a voluntary cash-in lieu contribution for the buildable area associated with the subject application being considered in this staff report at 5640 Blundell Road based on the provisions established in the Interim Affordable Housing Strategy. As a result, the voluntary cash contribution is \$6,677 (based on a rate of \$0.60 per sq. ft. buildable sq.ft.) and will be attached as a rezoning consideration.

Public Input

To date, no public correspondence or feedback has been received on the application at the time of the report preparation.

Staff Comments

Transportation and Vehicle Access

The subject site (5640 Blundell Road) is proposed to be consolidated with the property under rezoning application (5660 Blundell Road; 3rd Reading). The vehicle access to the consolidated townhouse site will be from Blundell Road at the west side of 5660 Blundell Road. No legal agreement for a shared access for 5640 Blundell Road (subject site) is required as the two

properties will be consolidated and developed simultaneously. A legal agreement involving the three properties to the east (5760, 5780; 5786 Blundell Road) to facilitate a shared access has been identified as a consideration of the rezoning already processed for 5660 Blundell Road (RZ 04-279101).

5620 Blundell Road has the potential to develop into either single-family (small lots) or multi-family residential. An operational lane was established for the corner property at Clearwater Gate and Blundell Road when a rezoning and subdivision application was processed in 2003. Any redevelopment proposal involving 5620 Blundell Road will be required to utilize the existing lane established off Clearwater Gate for the purposes of vehicle access.

An examination of vehicle manoeuvring on the subject property was submitted by a Transportation Engineering consultant, which was reviewed and approved by the Transportation Division to ensure vehicle movements could be accommodated on site. Recommendations contained in the submitted consultants study will be included in the forthcoming Development Permit drawings for 5640 and 5660 Blundell Road. A minimum driveway width of 7.5 m from Blundell Road will need to be provided and followed up in the processing of the Development Permit application.

Servicing Capacity Analysis

Analyses have been completed to examine the capacity of the City storm and sanitary systems. Upgrades have been identified to the sanitary system, which will be completed through a Servicing Agreement. This Servicing Agreement will be a condition of issuance of the Building Permit. To date, the developer has submitted a Servicing Agreement application (SA 07-391386) and related drawings for review.

Tree Removal and Retention (5640 Blundell Road)

	Number of Trees	Compensation Required	Comments
On-Site Bylaw Sized Trees	7 Trees 1 Hedge	N/A	Tree survey and related arborist reports are contained in Attachment 5
On-Site Bylaw Sized Trees (Retained)	2 Trees 1 Hedge	N/A	Tree protection fencing to be installed immediately and maintained by the developer
On-Site Bylaw Sized Trees (Removed)	5 Trees	10 Trees	Tree removal required due to conflicts with building envelop and as recommended by the consulting arborist (Attachment 5)
Off-Site Trees (Removed)	1 Hedgerow	Monetary compensation required by Parks to facilitate future replanting	Hedgerow along Blundell Road is recommended for removal by the consulting arborist due to potential conflicts with vehicle entrance. City Parks Department has no objections to removal and has arranged for the appropriate compensation

Based on a preliminary landscape plan submitted by the developer, a total of 11 replacement trees can be accommodated on the subject site, which adheres to OCP guidelines of a replacement ratio of 2:1.

Tree removal and retention for the property to the east (5660 Blundell Road) has been finalized through the rezoning application that has already been processed. The preliminary landscape plan submitted outlines 29 potential replacement trees for both 5640 and 5660 Blundell Road. This number is sufficient to meet OCP guidelines of a 2:1 ratio for proposed removal and replacement trees for the future proposed consolidated site (5640 & 5660 Blundell Road). The Development Permit application process will enable staff to work with the developer to refine the landscape plan and tree plantings and ensure tree retention and replacement is adhered to. Staff have also indicated to the developer that a landscape plan must take into account a combination of evergreen and deciduous trees in the forthcoming landscape plan to ensure that appropriate year-round greenery and foliage is evident on the development site.

Analysis

Conditions of Adjacency

The subject site(s) is surrounded by existing single-family residential properties. Side yard setbacks (3 m) and rear yard setbacks (4.5 m) are in accordance with guidelines established in the OCP pertaining to multi-family development along arterial roads in consideration of existing adjacent single-family residential land uses.

A majority of building massing for the project where there are direct single-family residential adjacencies is limited at 2-storey building typologies. 2 ½ storey buildings are limited to the Blundell Road frontage with massing stepping down at 2 storeys next to single-family residential land uses. Rear units along the south property line are limited to single dwelling unit and duplex building forms.

Development on Consolidated Parcel (5640 & 5660 Blundell Road)

As proposed, 5640 and 5660 Blundell Road will be consolidated as part of the rezoning approval process. A review of the development data based on the area of the consolidated lots outlines the following:

- A proposed density of 0.69 F.A.R. which complies with the proposed zone (R2 – 0.7). Densities in the range of 0.6 and 0.7 F.A.R. can be considered for the subject site as the development is situated on a major arterial road, is located in close proximity to a shopping centre (Blundell Centre) and involves a land assembly greater than 50 m frontage (75 m).
- Outdoor amenity area is sized appropriately based on the 17 dwelling unit development proposed for 5640 & 5660 Blundell Road.

Surrounding Development Potential

The proposed development does not preclude redevelopment options for properties to the east or west. For the three properties to the east (5760, 5780 & 5786 Blundell Road), a cross access easement to enable access for these properties to Blundell Road is being secured to facilitate development into multi-family in the future. For 5620 Blundell Road to the west, single-family and multi-family options remain available as access to this property is required to go through the existing lane established from Clearwater Gate.

Development Permit Application

A Development Permit application has been submitted for 5660 Blundell Road (DP 06-335428). This Development Permit application will be amended to include the addition of 5640 Blundell Road, which will apply to the entire 17 dwelling unit townhouse project. The processing of a Development Permit application to the satisfaction of the Director of Development is a rezoning consideration identified for the existing application at 5660 Blundell Road and application under consideration in this report. The following are items to be addressed in the forthcoming Development Permit application:

- Review requested variances
 - Variances identified to date based on submitted drawings are for lot coverage (42%) and front yard setback to Blundell Road (4.5 m).
- Review and refinement of architectural detailing and building finishes.
- Review landscape plan to ensure compliance with tree replacement guidelines and agreements.
- Landscape plan review to address appropriate planting, surface and fencing treatments.
- Ensure Crime Prevention Through Environmental Design issues are addressed.
- Ensure Transportation Division requirements on minimum driveway width (7.5 m) from Blundell Road are accounted for along with the traffic consultant's recommendations to facilitate vehicle manoeuvrability in the internal drive-aisle.
- Appropriate review by the Advisory Design Panel and City Urban Design staff.

Financial Impact or Economic Impact

None anticipated.

Conclusion

The proposal to rezone 5640 Blundell Road to Townhouse District (R2 – 0.7) in order to enable the development of 7 townhouse dwellings units, which will be consolidated with the neighbouring development site at 5660 Blundell Road (10 units proposed) for a total of a 17 unit project complies with all applicable OCP guidelines for redevelopment along an arterial Road. On this basis, staff recommend approval of the rezoning.



Kevin Eng
Planner 1

KE:cas

Attachment 1: Location Map

Attachment 2: Surrounding Development Applications

Attachment 3: Development Application Data Sheet

Attachment 4: Preliminary site, landscape and elevation plans

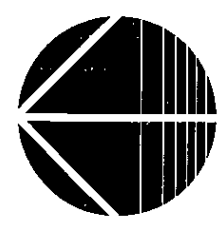
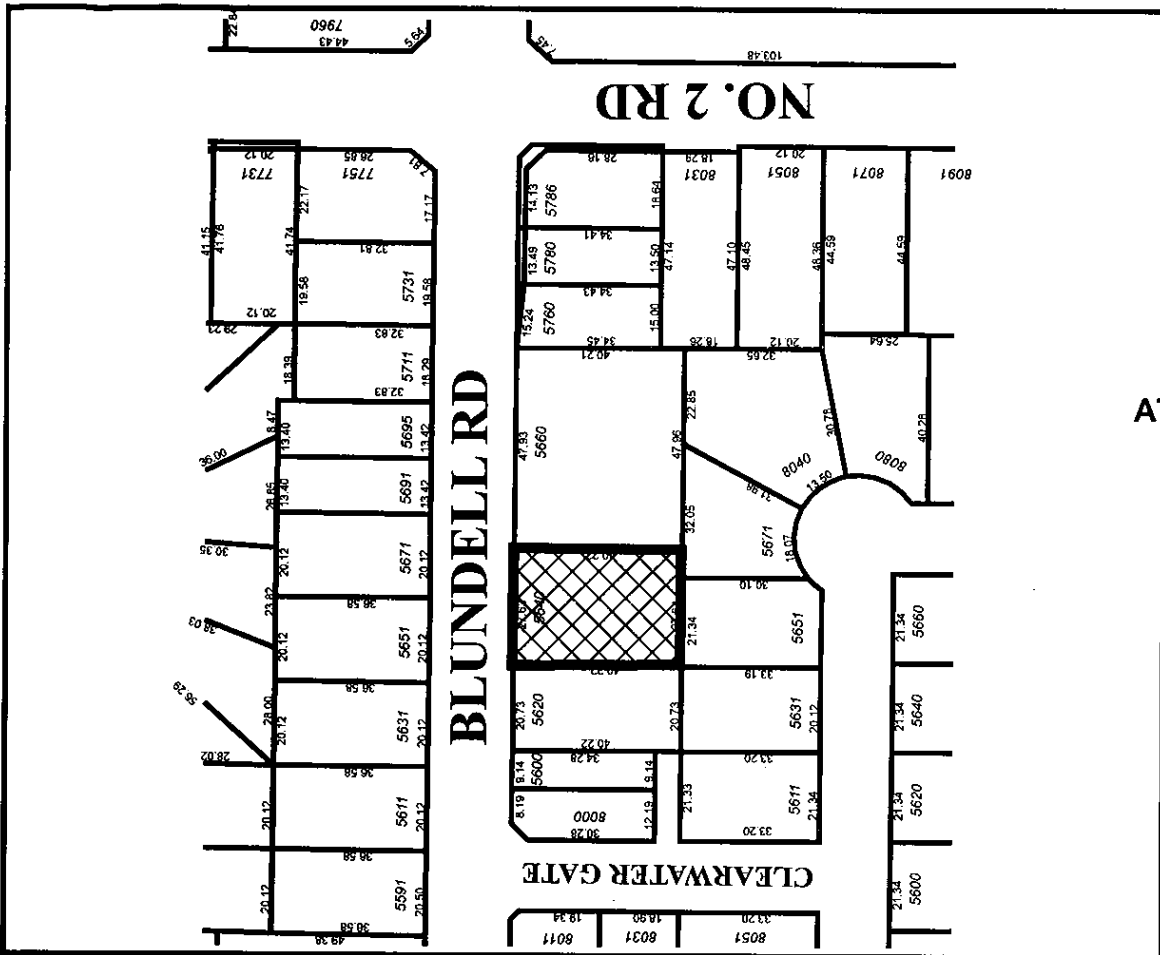
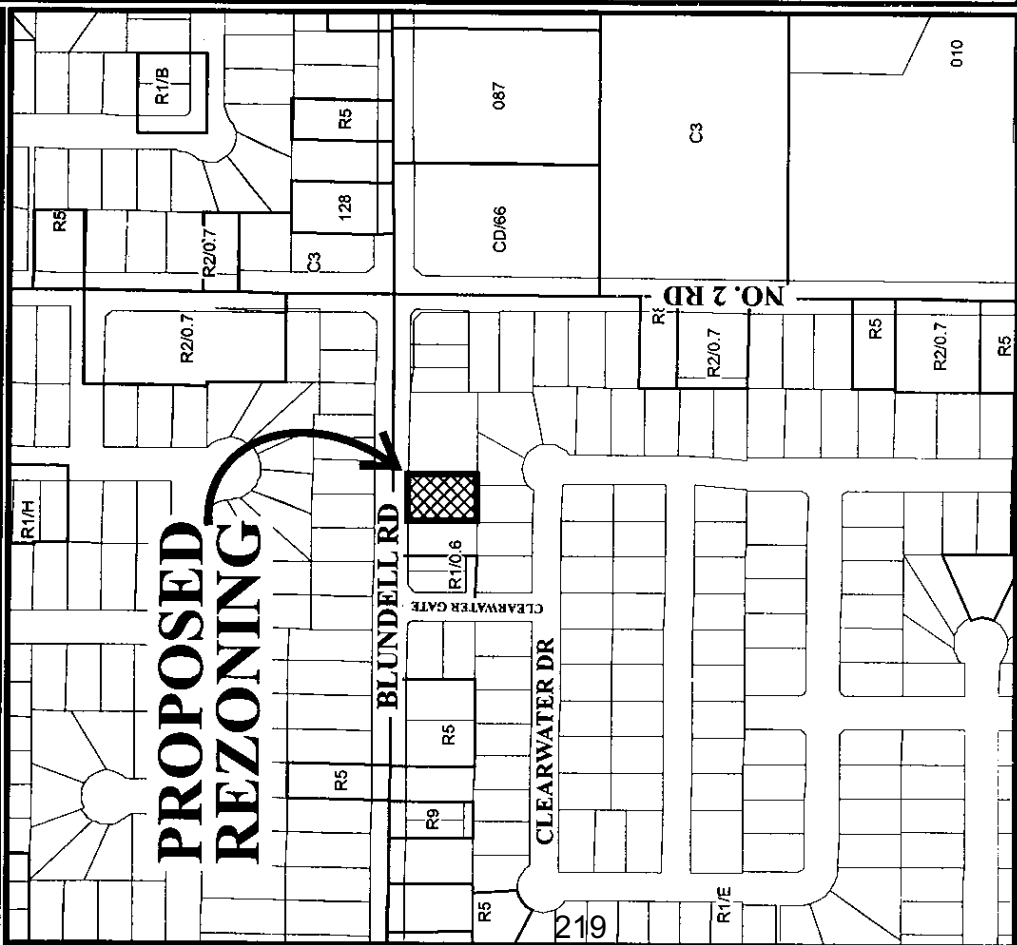
Attachment 5: Arborist Report: Original Submission, Tree Survey and Applicable Updates

Attachment 6: Rezoning Considerations



City of Richmond

PROPOSED REZONING



RZ 06-348772

ATTACHMENT 1

Original Date: 10/18/06
 Revision Date: 02/27/08
 Note: Dimensions are in METRES



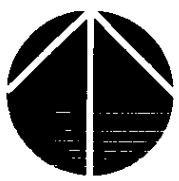
**SUBJECT
PROPERTY**

BLUNDELL RD

CLEARWATER GATE

CLEARWATER DR

NO. 2 RD



RZ 06-348772

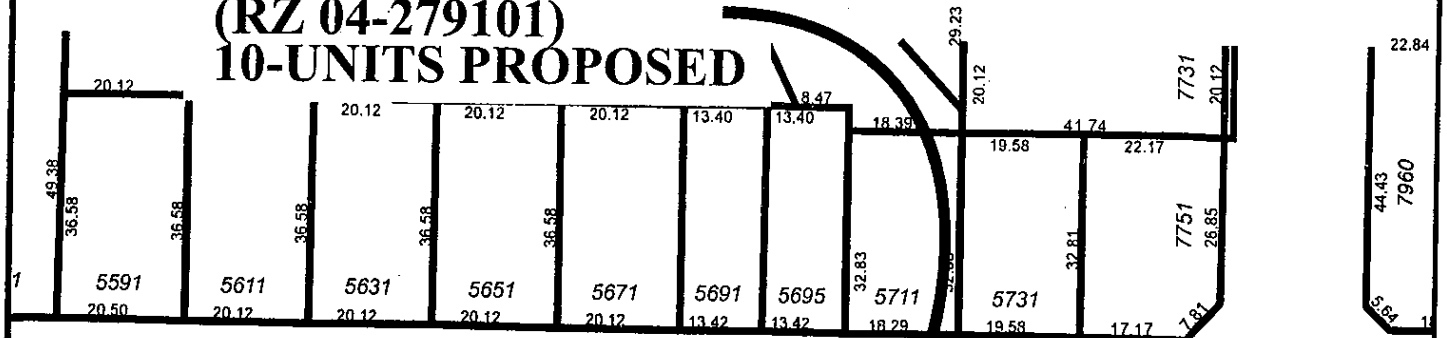
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Original Date: 10/18/06

Amended Date:

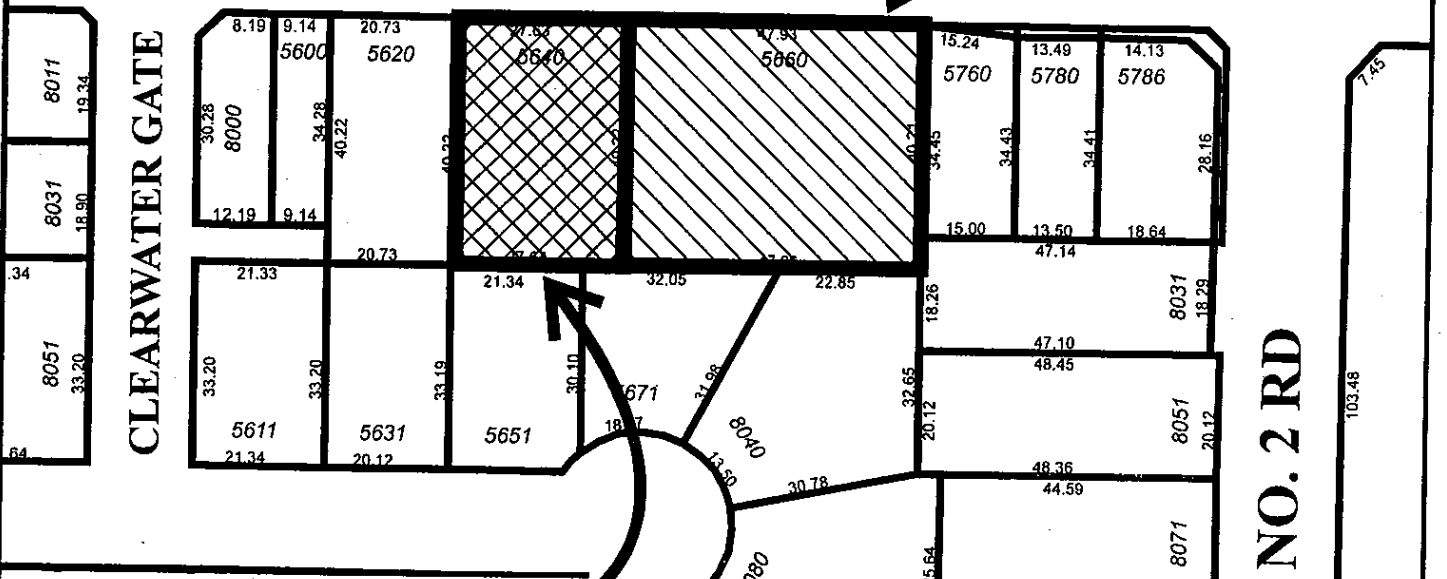
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**5660 BLUNDELL RD
(RZ 04-279101)
10-UNITS PROPOSED**



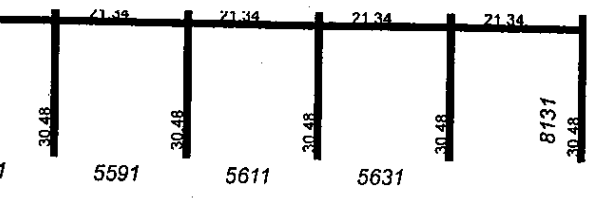
BLUNDELL RD

CLEARWATER GATE



NO. 2 RD

**SUBJECT SITE
5640 BLUNDELL RD
7-UNITS PROPOSED**



**Surrounding Development
Applications**

Original Date: 03/03/08

Amended Date:

Note: Dimensions are in METRES



City of Richmond

6911 No. 3 Road
 Richmond, BC V6Y 2C1
 www.richmond.ca
 604-276-4000

**Development Application
 Data Sheet**

RZ 06-348772 **Attachment 3**

Address: 5640 & 5660 Blundell Road

Applicant: Timothy C.W. Tse

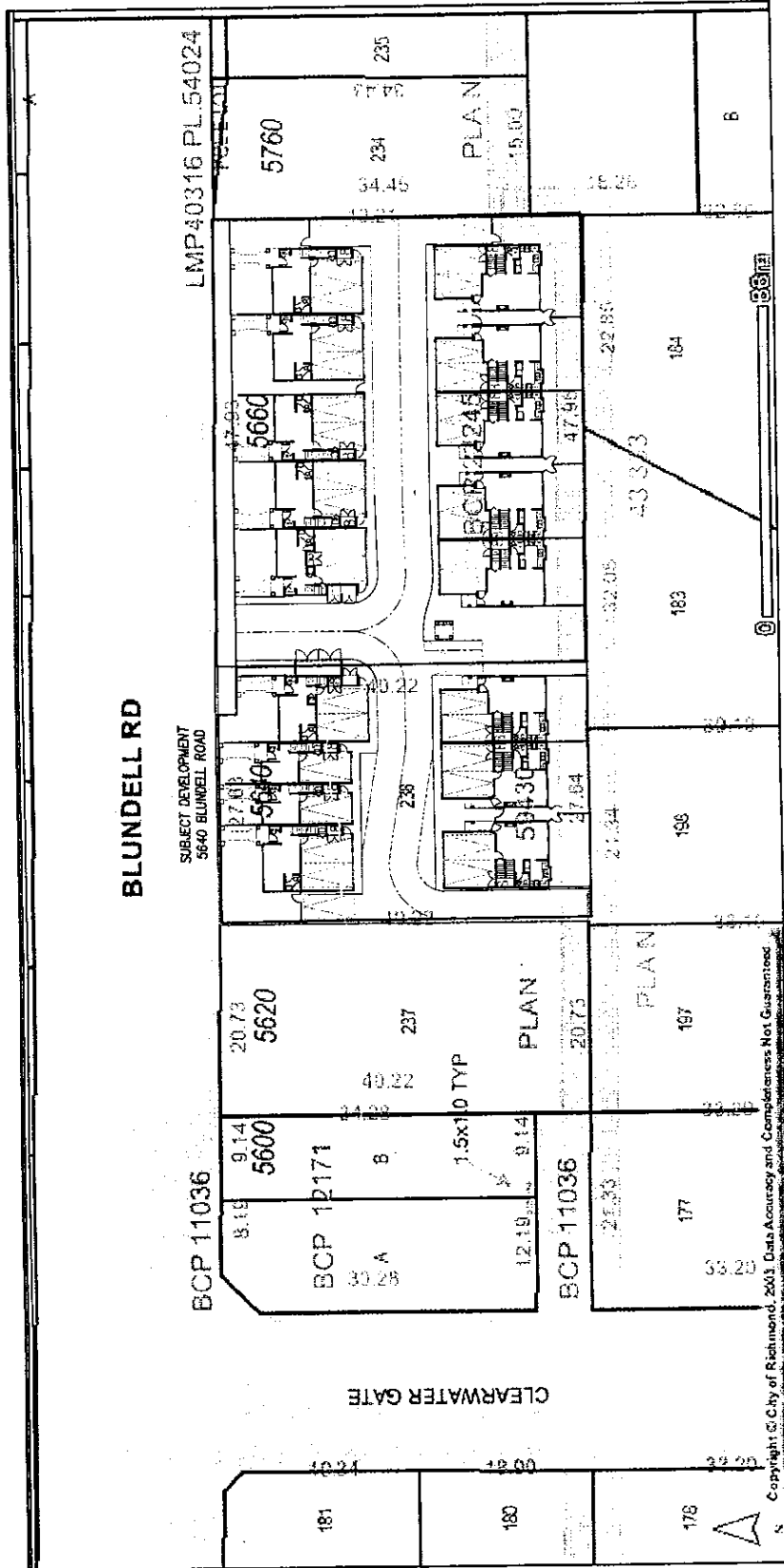
	Existing	Proposed
Site Size (m²):	3041 m ²	2934 m ² (after Blundell Road dedication)
Land Uses:	Vacant single-family lots	Multi-family residential
OCP Land Use Map Designation:	Generalized – Neighbourhood Residential Specific – Neighbourhood Residential	No change – complies with designation
Zoning:	Single-Family Housing District, Subdivision Area E (R1/E)	Townhouse District (R2 – 0.7)
Number of Units:	N/A	17

On Future Subdivided Lots	Bylaw Requirement	Proposed	Variance
Floor Area Ratio:	Max. .70 FAR	0.69 FAR	none permitted
Lot Coverage – Building:	Max. 40%	42%	2 % variance requested
Setback – Front Yard (m):	Min. 6 m	4.5 m	1.5 m reduction requested
Setback –Rear Yard (m):	Min. 3 m	4.5 m	none
Setback – Side Yard (m):	Min. 3 m	3 m	none
Height (m):	11 m	10 m	none
Off-street Parking Spaces – Regular (R) / Visitor (V):	26 (R) and 4 (V) per unit	32 (R) and 4 (V) per unit	none
Off-street Parking Spaces – Total:	30	36	none
Amenity Space – Indoor:	N/A	Cash in lieu	none
Amenity Space – Outdoor:	6 m ² per unit 102 m ² required	107 m ²	none

Other: Tree replacement compensation required for loss of significant trees.

PRELIMINARY SITE ELEVATION AND LANDSCAPE

ATTACHMENT 4



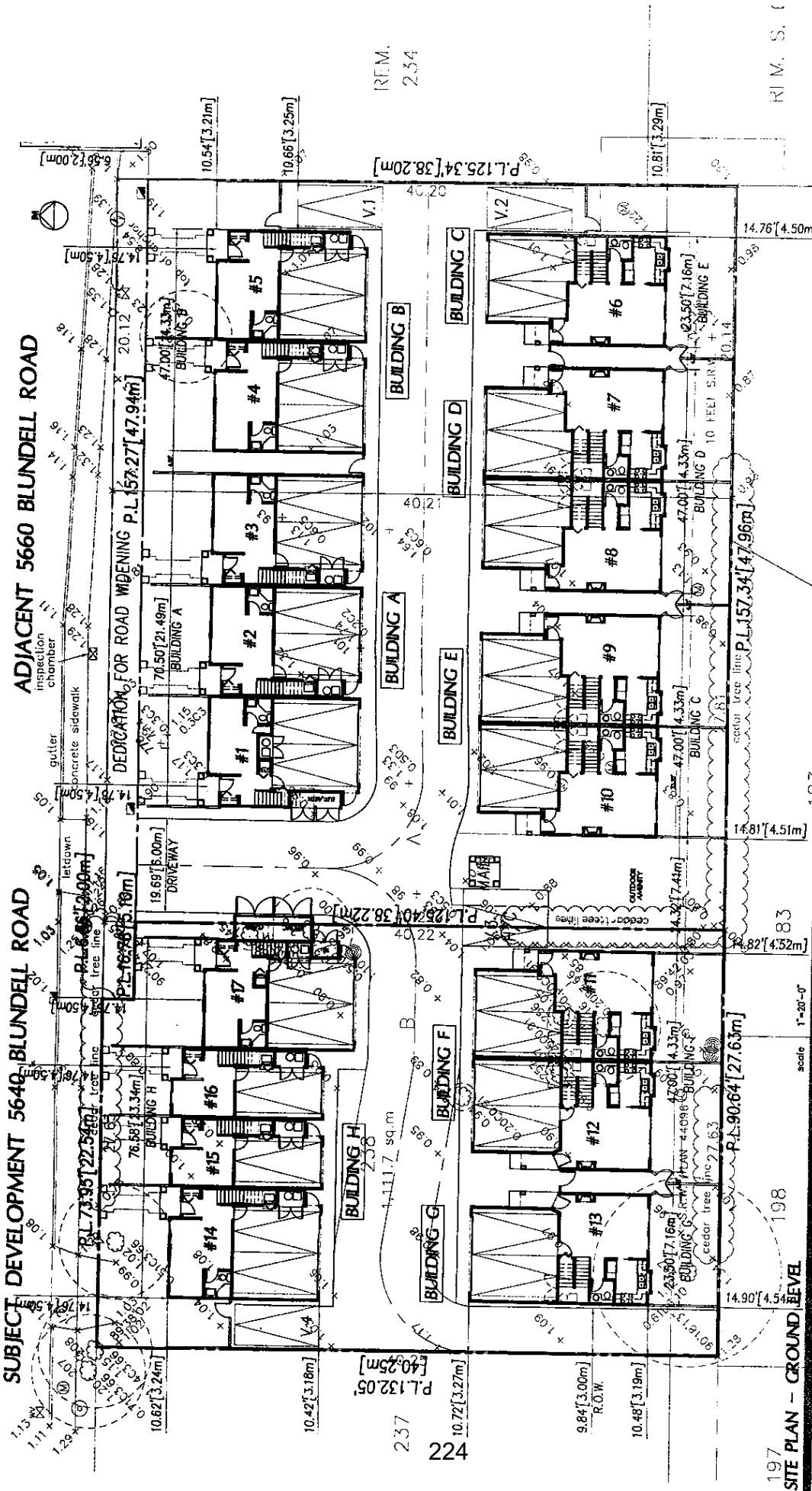
CADLAB
 cadlab design and development inc.
 tel: (604) 278-5575 fax: (604) 278-5588 email: cadlab@cadlab.com

CONTEXT PLAN
 scale 1:500
PROPOSED REZONING & TOWNHOUSES DEVELOPMENT
 5640 BLUNDELL ROAD, RICHMOND, B.C.

R1.1
 revision
 date 31 JULY 2007

SUBJECT DEVELOPMENT 5640 BLUNDELL ROAD

ADJACENT 5660 BLUNDELL ROAD



REM. 2.54

R.M. S. I

197
 SITE PLAN - GROUND LEVEL
 Project no. 104280
 scale 1"=20'-0"

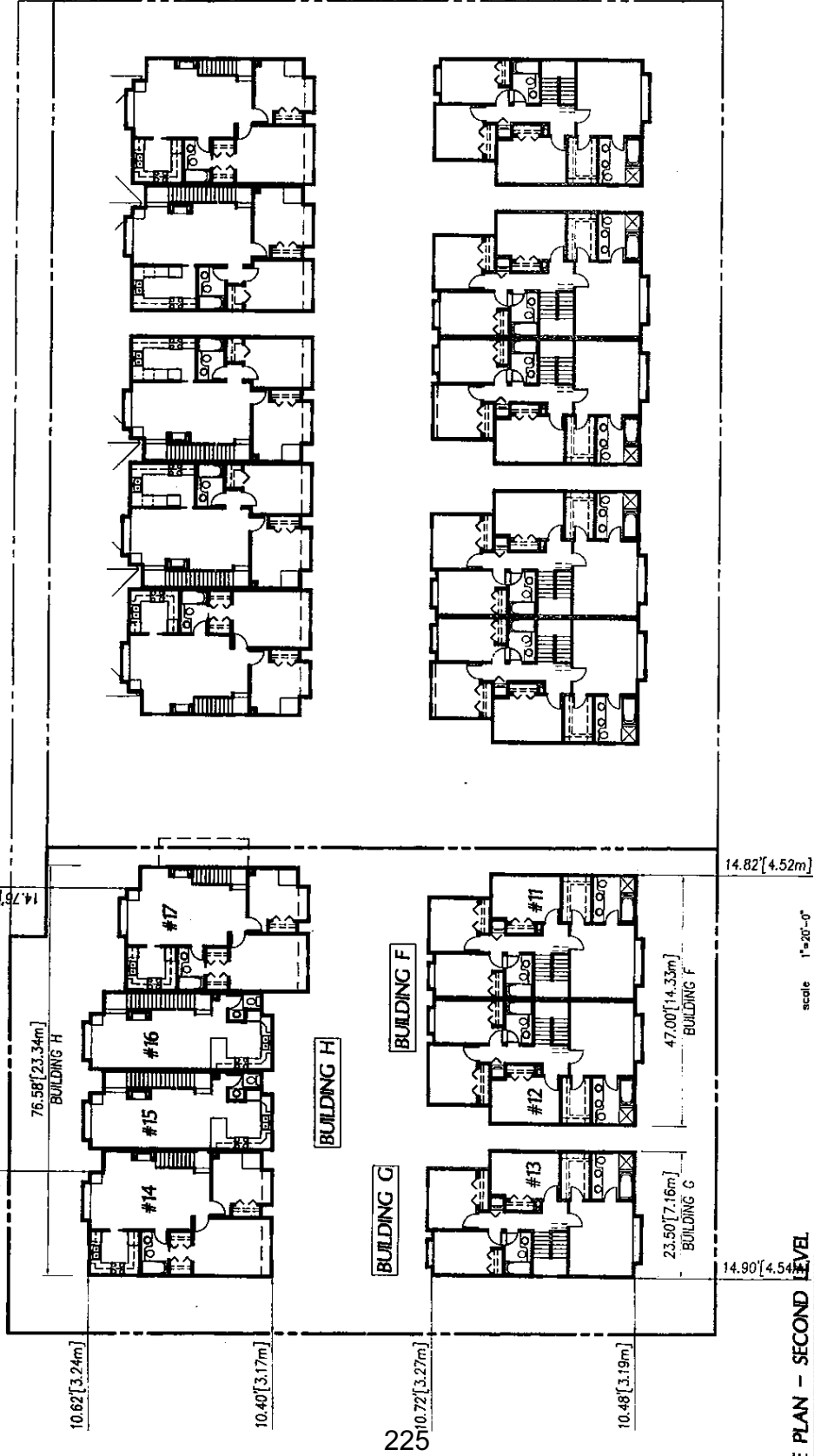
PROPOSED REZONING & TOWNHOUSES DEVELOPMENT
 5640 BLUNDELL ROAD, RICHMOND, B.C.

R2.1
 revision h
 date 31 JULY 2007

CADLAB
 cadlab design and development inc.
 tel: (604) 616-3223 fax: (604) 271-9398 email: cadlab@cadlab.com

ADJACENT 5660 BLUNDELL ROAD

SUBJECT DEVELOPMENT 5640 BLUNDELL ROAD



SITE PLAN - SECOND LEVEL

Project no. R0280

revision h

date 31 JULY 2007

PROPOSED REZONING & TOWNHOUSES DEVELOPMENT

5640 BLUNDELL ROAD, RICHMOND, B.C.

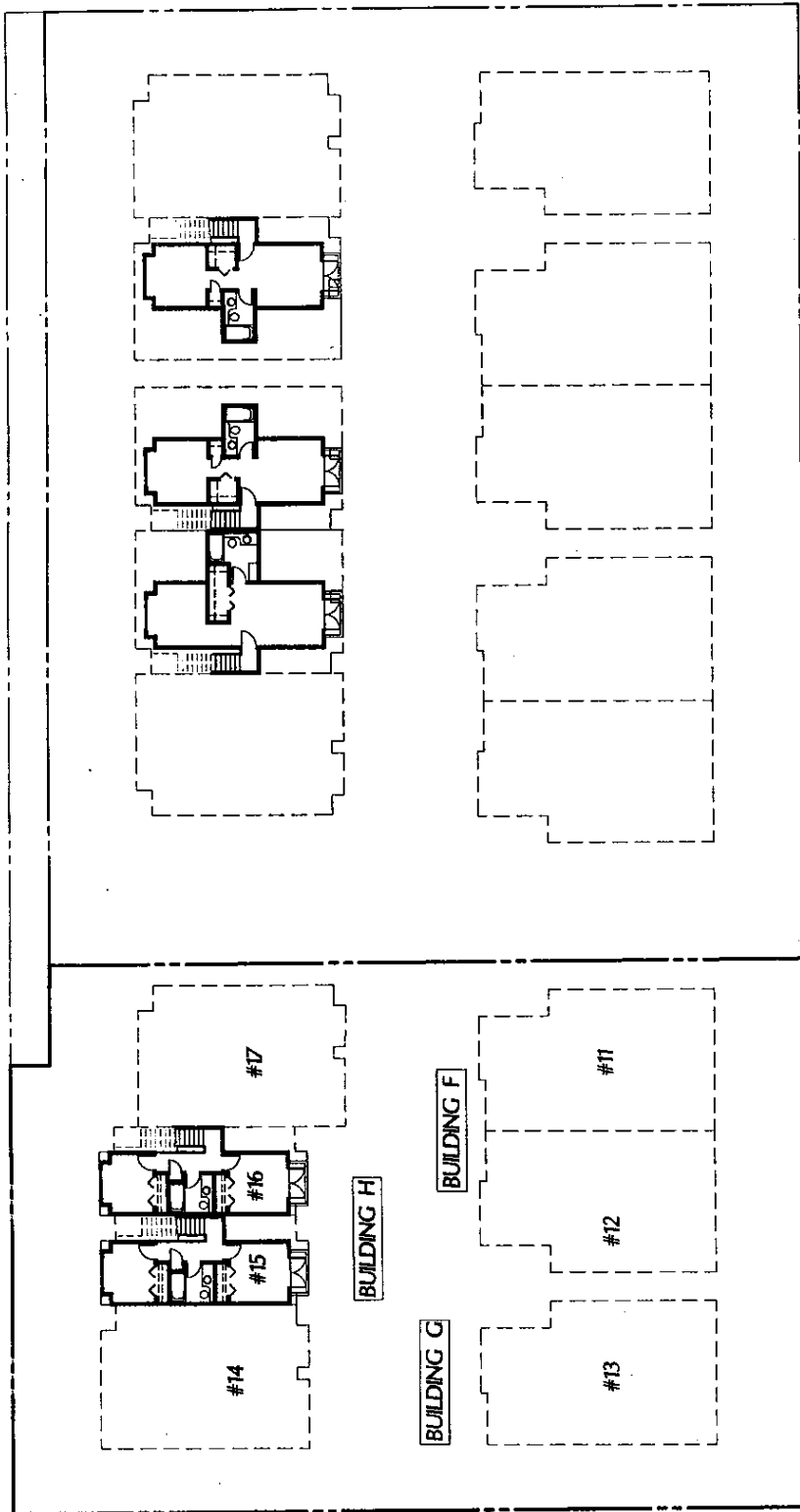
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CADLAB
cadlab design and development inc.

tel: (604) 618-3223 fax: (604) 241-9385 email: cost@cadlab.com

SUBJECT DEVELOPMENT 5640 BLUNDELL ROAD

ADJACENT 5660 BLUNDELL ROAD



SITE PLAN - THIRD LEVEL

scale 1"=20'-0"

project no. R04280

PROPOSED REZONING & TOWNHOUSES DEVELOPMENT
5640 BLUNDELL ROAD, RICHMOND, B.C.

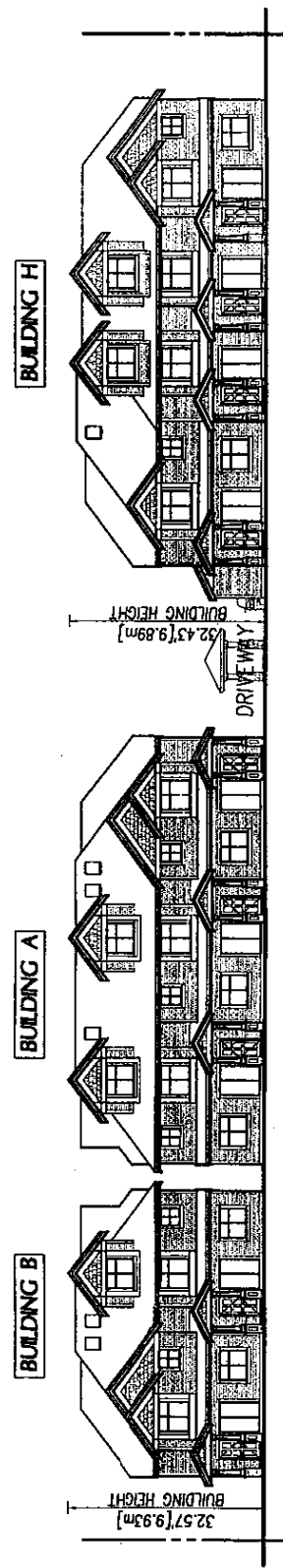
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CADLAB
cadlab design and development inc.

tel: (604) 318 3223 fax: (604) 241-9388 email: cadlab@atcompro.com

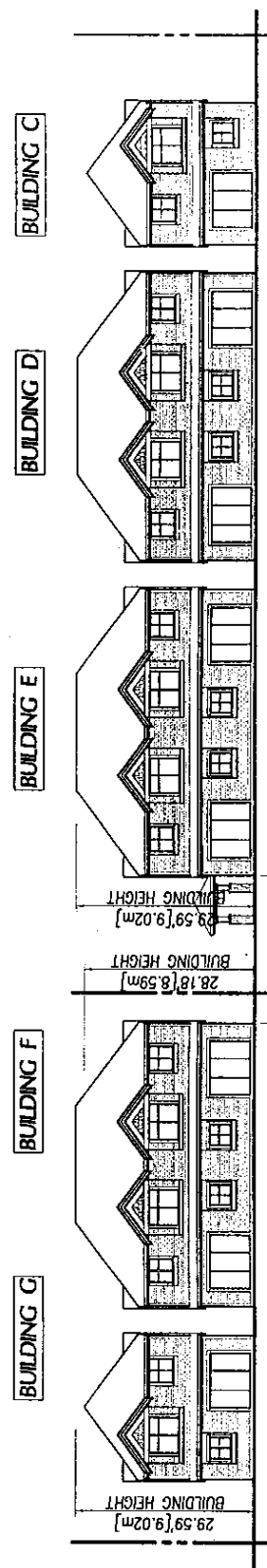
ADJACENT 5660 BLUNDELL ROAD



NORTH ELEVATION (BLUNDELL ROAD)

SUBJECT DEVELOPMENT 5640 BLUNDELL ROAD

ADJACENT 5660 BLUNDELL ROAD



SOUTH ELEVATION (BACK YARD)

FRONT & BACK ELEVATIONS

scale 1"=20'-0"

PROPOSED REZONING & TOWNHOUSES DEVELOPMENT
5640 BLUNDELL ROAD, RICHMOND, B.C.

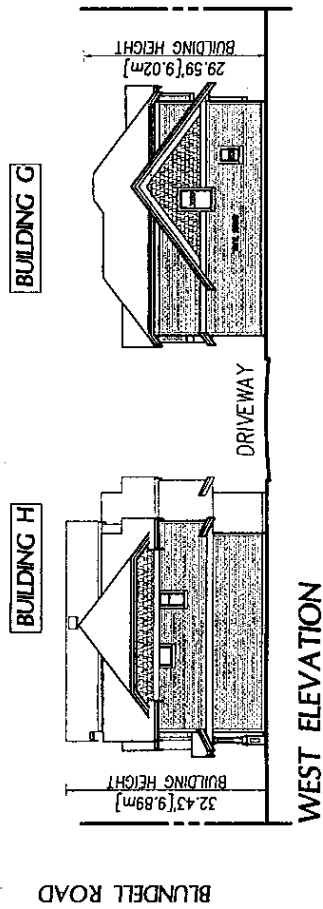
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date 02 AUGUST 2007

CADLAB
cadlab design and development inc.

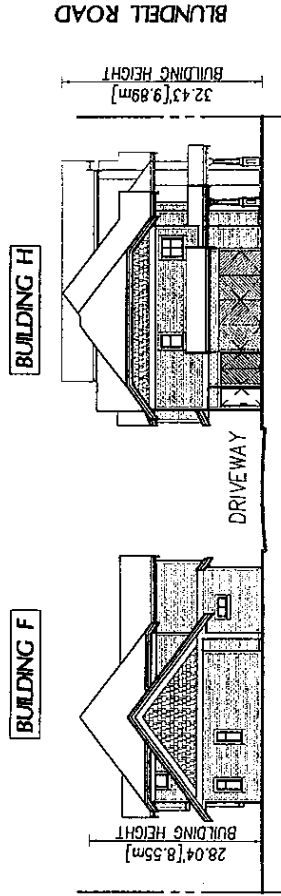
tel: (604) 618-3225 fax: (604) 241-9388 email: cndlab@icorr-pro.com

SUBJECT DEVELOPMENT 5640 BLUNDELL ROAD



WEST ELEVATION

ADJACENT 5660 BLUNDELL ROAD



EAST ELEVATION

SIDE ELEVATIONS

scale 1"=20'-0"

project no. H04260 PROPOSED REZONING & TOWNHOUSES DEVELOPMENT
5640 BLUNDELL ROAD, RICHMOND, B.C.

R3.2

revision
date 31 JULY 2007

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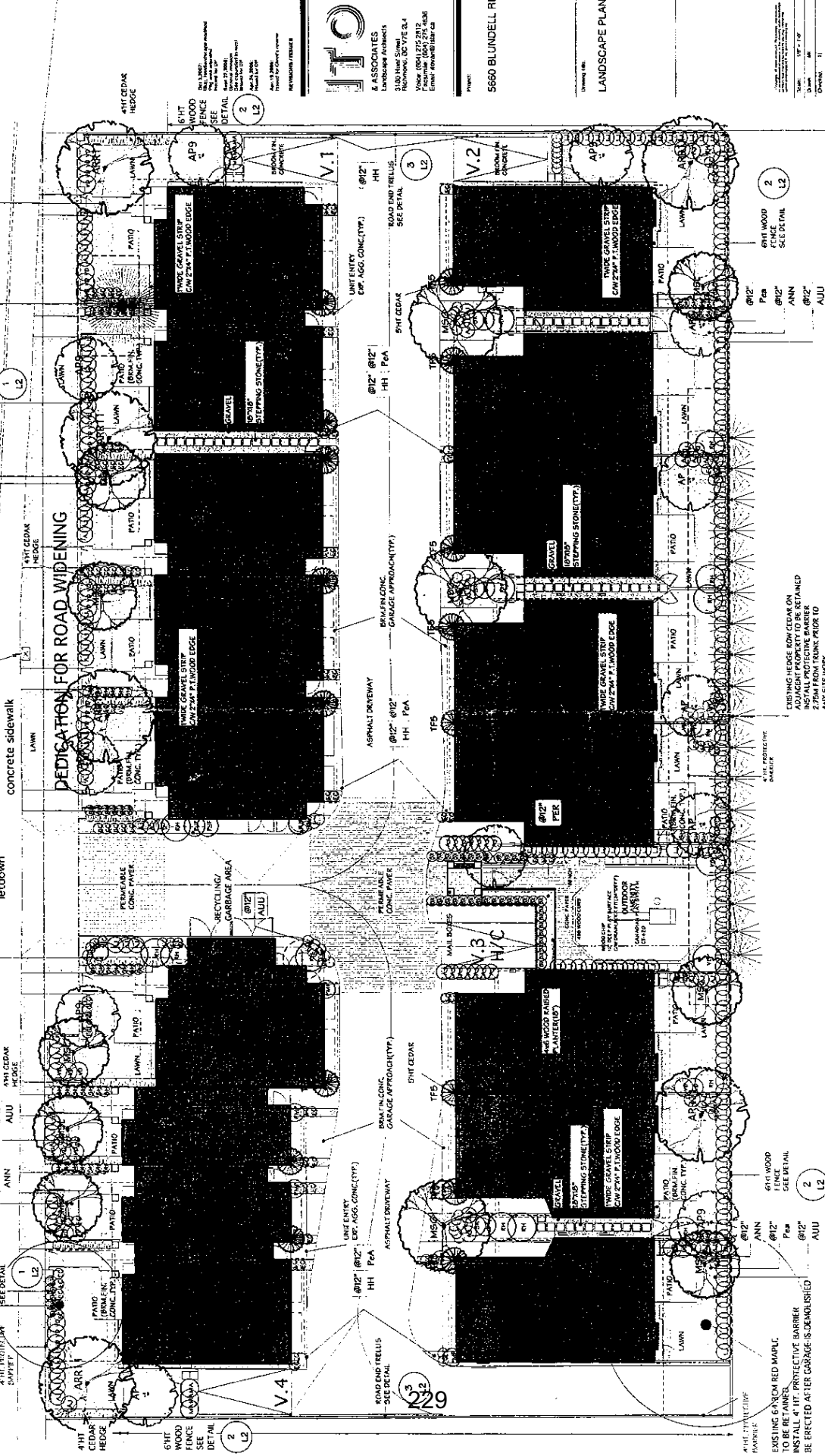
tel: (604) 618-3723 fax: (604) 741-9388 email: cadlab@shawcompra.com

EXISTING 47.8CM DOUGLAS FIR TO BE RETAINED
 INSTALL 4' HT. PROTECTIVE BARRIER 3.0M FROM TRUNK PRIOR TO ANY SITE WORK

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5660 BLUNDELL RD.

LANDSCAPE PLAN

DATE: 11/17/2008

PROJECT: 5660 BLUNDELL RD.

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

DATE: 11/17/2008

PROJECT: 5660 BLUNDELL RD.

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

JTO & ASSOCIATES
 Landscape Architects
 3100 Reed Street
 Richmond, BC V6E 2L4
 Phone: (604) 271-8282
 Fax: (604) 271-8283
 Email: info@jto.ca

Project: 5660 BLUNDELL RD.

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

Date: 11/17/2008

Author: JTO

Checker: JTO

Printer: JTO

6 HT WOOD FENCE
 SEE DETAIL 2 L2

4 HT. PROTECTIVE BARRIER
 SEE DETAIL 2 L2

EXISTING 47.8CM DOUGLAS FIR
 TO BE RETAINED
 INSTALL 4' HT. PROTECTIVE BARRIER
 3.0M FROM TRUNK PRIOR TO
 ANY SITE WORK

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EXISTING 47.8CM DOUGLAS FIR
 TO BE RETAINED
 INSTALL 4' HT. PROTECTIVE BARRIER
 3.0M FROM TRUNK PRIOR TO
 ANY SITE WORK

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L1 of 2



VanArbor Vegetation Consulting Ltd.
Consulting Arborist & Urban Forest Resources

Monday, August 20, 2007

Attention: Kevin Eng

City of Richmond
6911 No. 3 Road
Richmond, BC
V6Y 2C1

Reference: Arborist Report Addendum

Trees and Landscaping: 5640 Blundell Road
File No. RZ 06-348772

Dear Kevin;

As per your letter dated July 17, 2007, you are requesting additional information regarding on-site and off-site trees and landscaping for the proposed development site at 5640 Blundell Road. This letter report is an addendum to the original arborist report dated February 7, 2007. This letter report intends to provide follow-up, and address the issues presented in your letter.

- **Conifer hedgerow # 5561** is proposed for removal.
 - The hedgerow conflicts with the proposed building # 11, west of the hedgerow. The canopy of the hedgerow butts-up against the building and there is no clearance between the hedgerow and the building. There should be clearance between the hedgerow and the building otherwise, construction workers can not operate. Pruning the canopy is not a viable option because pruning will ruin the aesthetic and functional qualities of the hedgerow.
 - The site will require pre-loading. It is my understanding that pre-loading is to occur at least five feet outside the building foundation. Therefore, there is a conflict and pre-loading is to occur in the middle of the hedgerow.
 - There are three protected trees within the hedgerow > 20 cm diameter breast height (DBH). Therefore, the tree replacement rational shall be to replace three protected trees at 2:1 ratio.

- **Tree # 5562 is an undersized Magnolia tree** that is < 20 cm DBH.
 - The tree is not a protected tree and there is no requirement for this tree to be included in the tree inventory.
 - The tree is to be removed from the tree inventory and proposed to be not transplanted as originally planned in the February 7, 2007 arborist report.

- **Conifer hedgerow # 5558** is located on Blundell Roadway easement.
 - The arborist report dated February 7, 2007 proposed the hedgerow be removed due to conflicts with the proposed road widening along Blundell Road.
 - Plans have changed and there is now no road widening to conflict with the hedgerow. The hedgerow may be retained. Please refer to the most recent architectural drawings for the project to view plan changes. I have attached the most recent AutoCAD drawings with this email correspondence.
 - If the hedgerow is to be retained, then architectural plans will require further revision to remove the sidewalks at the rear of units # 14, 15, 16 and 17 that connect to Blundell Road.
 - As well, engineering plans should be vetted by the project arborist to help ensure there are no other tree preservation conflicts.
 - A tree protection zone (TPZ) fence should be established at 4.5 meters south of the tree's root crowns, or approximately 0.5 meters outside the dripline of the hedgerow (south side).
 - The main entry way to the proposed complex is located next to the hedgerow. The retention of the hedgerow may interfere with site lines for vehicle and pedestrian traffic entering and exiting the complex through the main entrance. There may be a safety issue.
 - Pruning to crown raise the canopy to improve site lines is not a viable option. The hedgerow is multi-stem and pruning will not likely improve site lines. As well, pruning will ruin the aesthetic and functional qualities of the hedgerow.
 - I advise the City of Richmond Parks Department and Traffic Department investigate this safety concern.
 - It is to be noted: the hedgerow is in moderate condition and not ideal candidates for preservation. The hedgerow is located directly under BC Hydro powerlines and require continuous pruning for powerline clearance. There is a long term social cost associated with the preservation of these trees.
- **Tree # 5557** may be retained.
 - The arborist report dated February 7, 2007 proposed tree # 5557 be removed due to conflicts with the proposed road widening, in front of the complex along Blundell Road.
 - There are now no conflicts with road widening and the tree may be retained.
 - It is recommended that the TPZ fence be established at a minimum 3.0 meters from the tree.
- **Off-site Pyramid hedgerow # 5565:** It is proposed the existing fence along the west property line be retained and act as the tree protection barrier fence. Any intrusion in to the neighbouring yard would be a technical trespass.
- **Hedgerow trees # 5564:** The hedgerow is located along the south property line. There is an existing garage next to the hedgerow. The existing garage needs to be removed (demolished) before a TPZ fence can be erected at the tree line.

- It is proposed the TPZ fence be erected after the garage is demolished.
- **Replacement trees:** It is beyond the scope of my expertise to provide a tree replacement plan. I would like to direct you to the project Landscape Architect to provide a tree replacement plan and rational.

I hope this letter report has provided you with appropriate information regarding your comments in your letter dated July 17, 2007. Please contact me if you require additional information. Thank you for your consideration.

Sincerely,

VanArbor Vegetation Consulting Ltd.

Ken Bell

Ken Bell, P.Ag., CAC, ISA Certified Arborist

encl. AutoCAD drawing

Arborist Report

(REV 1.0)

Proposed Townhome Development

Phase 2

5640 Blundell road
Richmond, BC

File No. DP 06-335428

Prepared for: Kensington Homes Ltd. c/o 705891 BC Ltd.

Prepared by: VanArbor Vegetation Consulting Ltd.
Ken Bell, P.Ag., ISA Certified Arborist

Date: February 7, 2007

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Introduction

October 3, 2006 VanArbor Vegetation Consulting Ltd. submitted an Arborist report for rezoning consideration. However, the City of Richmond has requested additional information. The following comments are from the *Policy Planning Department* in relation to the Arborist Report submitted for 5640 Blundell Road:

1. The identified trees composing the hedge (#5558; #5561; #5563) should be labeled to indicate the specific number of trees (including the diameter of each tree) for replacement tree/compensation purposes.
2. Please provide more details of the identified tree protection fencing on the site plan. Information needs to be included on the dimensions of the Tree Protection Zone (i.e., distance from drip line/trunk; width and length of fencing).
3. Tree Protection Fencing should also be provided for the hedge (#5565) on the neighbouring subject property to the west. Fencing should be located on 5640 Blundell Road only and should serve to protect these neighbouring hedges from typical construction activities and fill. Please ensure that fencing noted on the plan is adequately dimensioned.
4. If you want to pursue tree transplanting for tree #5562, more information is required to confirm if it is possible to transplant and where it can be situated.

The purpose of this revised report is to address the comments from the *Policy Planning Department* and update information.

Timothy C.W. Tse has applied to the City of Richmond to develop 5660 and 5740 Blundell Road, Richmond, BC in order to develop ten 2-1/2 story townhome development complex; *File No. DP 06-335428*. VanArbor has already provided an Arborist report, dated January 24, 2005 for the 5660 and 5740 Blundell Road development proposal.

Timothy C.W. Tse has acquired the property next door to the proposed development at 5640 Blundell Road. The proponent wants to incorporate the new acquisition into a 17 unit Townhouse project. The new acquisition at 5640 Blundell Road is referred to as "Phase 2" townhome development complex.

The Phase 2 development site contains significant sized trees on the proposed building lot. As well, there are trees located on neighbouring lots and on Municipal roadway allowances that may be impacted by the proposed development. The purpose of this Arborist report is to provide a *Preliminary Tree Preservation Plan* for Phase 2 proposed development site. The report includes a tree survey / evaluation report and a preliminary tree preservation plan to help enable the proposed development approval. A tree preservation plan and final Arborist construction drawings are expected to be issued after the issuance of the development permit. Providing a tree replacement plan is beyond the scope of this report and considered the responsibility of the project Landscape Architect. This *Preliminary Tree Preservation Plan* Arborist report endeavours to provide compliance with the City of Richmond Tree Protection By-law No. 8057.

Tree Survey

VanArbor conducted the field work to review site conditions and trees at Phase 2 on September 6, 2006 and February 6, 2007. The significant sized trees and conifer hedgerows were numerically field identified with a survey tag attached to the lower tree trunk(s). The Phase 2 tree survey evaluated a total of 8 trees and 5 conifer hedgerows. The following Appendixes are associated with this report:

- Appendix 1 Tree Survey shows the locations of the significant trees and hedgerows on the proposed building lot
- Appendix 2 Site Plan shows Phase 1 and Phase 2 proposed building envelopes, interior roadway system, trees and hedgerows (with tree numbers), tree protection zones
- Appendix 3 Tree Survey / Evaluation report documents the on-site and off-site trees and hedgerows listing: tree number, species, diameter-breast-height (DBH) size, condition rating, observations and tree preservation recommendations
- Appendix 4 provides a tree preservation strategy that summarizes trees proposed for retention, removal, transplant and number of replacement trees in accordance to City of Richmond Bylaw No. 8057, Schedule A
- Appendix 5 provides tree spade transplant / relocation recommendations
- Appendix 6 provides tree preservation specifications



Photograph 1 shows the Phase 2 building lot at 5460 Blundell Road proposed for townhome development. Notice the hedgerow of trees under BC Hydro powerlines.

Site and Tree Evaluation

The Phase 2 site is presently occupied by an existing home that is scheduled for demolition to enable the proposed development. The landscape has a mix of existing trees, hedgerows and shrubs. The topography on the proposed development site is relatively flat and it is assumed that the water table is ≤ 1.5 feet (very shallow) below ground surface. There are no water courses on the proposed development properties or other significant environmental features to report.

The yard is landscaped with varying mixes of trees and shrubs around the existing homes. The overall health condition of the trees and shrubs on the building lot ranges between poor/moderate – good. There is a conifer hedgerow of trees (Trees # 5558) located in the boulevard under the BC Hydro powerlines. These trees have been topped repeatedly to control the growth from encroaching into the powerlines.

There are a total of eight (8) significant trees and five (5) hedgerows associated with Phase 2 proposed development site¹. The trees and hedgerows are documented in Appendix 3 Tree survey / Evaluation.

Trees and hedgerows are located both on-site and off-site. Off-site trees are located on the neighbouring properties in close proximity to the proposed development. The off-site trees are included in the tree preservation plan; otherwise the trees may be severely injured due to poor planning and construction impacts. The subject off-site trees and hedgerows are in moderate - good condition.

Tree Preservation Plan

This report has classified the Tree Preservation Plan into four (4) categories:

- 1) Off-site trees and conifers hedgerows located on Municipal easements
 - 2) Off-site specimen trees located on the neighbouring property to the West
 - 3) On-site trees located on proposed Phase 2 building lot
 - 4) Planning considerations
- 1) Off-site trees and conifers hedgerows located on Municipal easements:
- a. Western red cedar trees # 5555 and 5556 are planted under BC Hydro powerlines in the boulevard Easement in front of 5630 Blundell Road – next door to the proposed development. They have multiple trunks originating from base and the trunks have been topped in the past. These trees are in moderate condition. It is proposed the trees be permitted for removal. However, if the City of Richmond elects to preserve the hedgerow, then a tree protection zone (TPZ) fence should be placed at the drip line on the East side of Tree # 5556.

¹ The total number of trees includes 2 hedgerows located on the neighbouring property to the West. Significant sized trees includes trees ≥ 20 cm DBH

- b. Conifer hedgerow # 5558 is planted under BC Hydro powerlines along Blundell Road next to the front street sidewalk. The multi-stem trees have been topped for powerline clearance and the trees are in moderate condition. The individual trees are planted on < 1.0 meter centres and have multiple trunks originating from base. *It is proposed the hedgerow be permitted for removal.* However, if the City of Richmond elects to preserve the hedgerow, then a tree protection zone (TPZ) fence should run the length of the hedgerow to be placed at the drip line of the conifer trees – approximately 4 meters South of the tree trunks. It is not considered necessary to install the TPZ fence on the street side of the hedgerows at this time.
- c. If the trees and hedgerows are to be preserved then the TPZ fences are to be installed prior to pre-loading and the concrete pre-load blocks are to be placed next to the TPZ fences-on the South side of the TPZ fences. The TPZ fences are to be maintained in good condition throughout the life of the construction project.

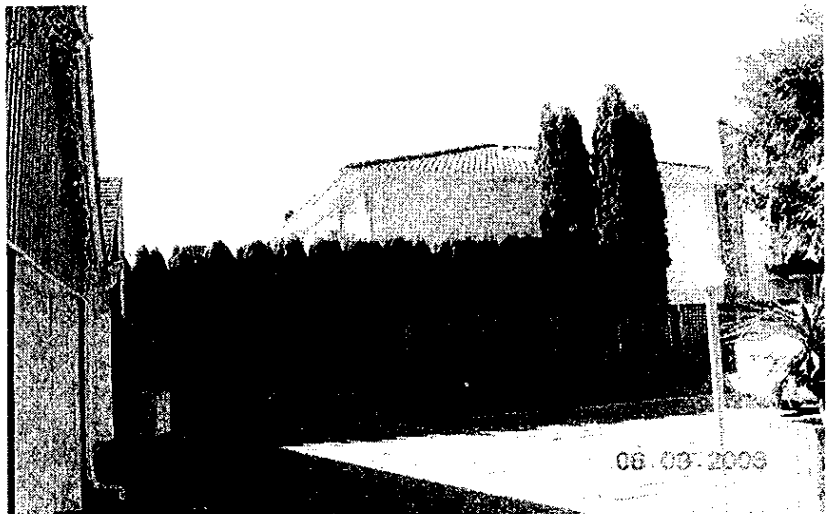
2) Off-site specimen trees / hedgerows on the neighbouring property to the West

Trees located on neighbouring properties that can be impacted by the proposed development are to be protected from proposed development activities. Off-site trees located along the property line in the rear yard at 5430 Blundell Road are to be considered in the tree preservation plan

Hedgerow Pyramid cedar trees #5565: There are two distinct hedgerow of trees located on the neighbouring property and along the West property line of the proposed Phase 2 development. The hedgerows are in good condition and provide a valuable screen to the proposed development.

It is proposed that the existing fence at the property line serve as the TPZ fence to help protect the

trees from construction encroachment. As well, there is a shrub planting bed along the West property line that may also be preserved; the planting bed may provide an additional buffer between the hedgerow and the proposed development to help protect the root system of the hedgerow trees.



Photograph 2 shows the Pyramid cedar trees # 5565 located near property line on the neighbouring lot to the West

The cement driveway adjacent to the hedgerows will require removal. The excavator should point the bucket towards the hedgerow during site demolition to remove the driveway. Pre-load concrete blocks should be installed either at the edge of the TPZ fence or at the edge of the planting bed, if the planting bed is being preserved. The demolition and excavation monitoring by the Project Arborist will help ensure the roots of the off-site trees are not excessively removed and trees treated in accordance to best management practices.

3) On-site trees located on proposed Phase 2 building lot

The on-site trees are documented in Appendix 2 Tree Survey / Evaluation. On-site trees that are in marginal condition are not considered for preservation. As well, trees located in and / too close to building envelopes or in proposed roadways are proposed for removal.

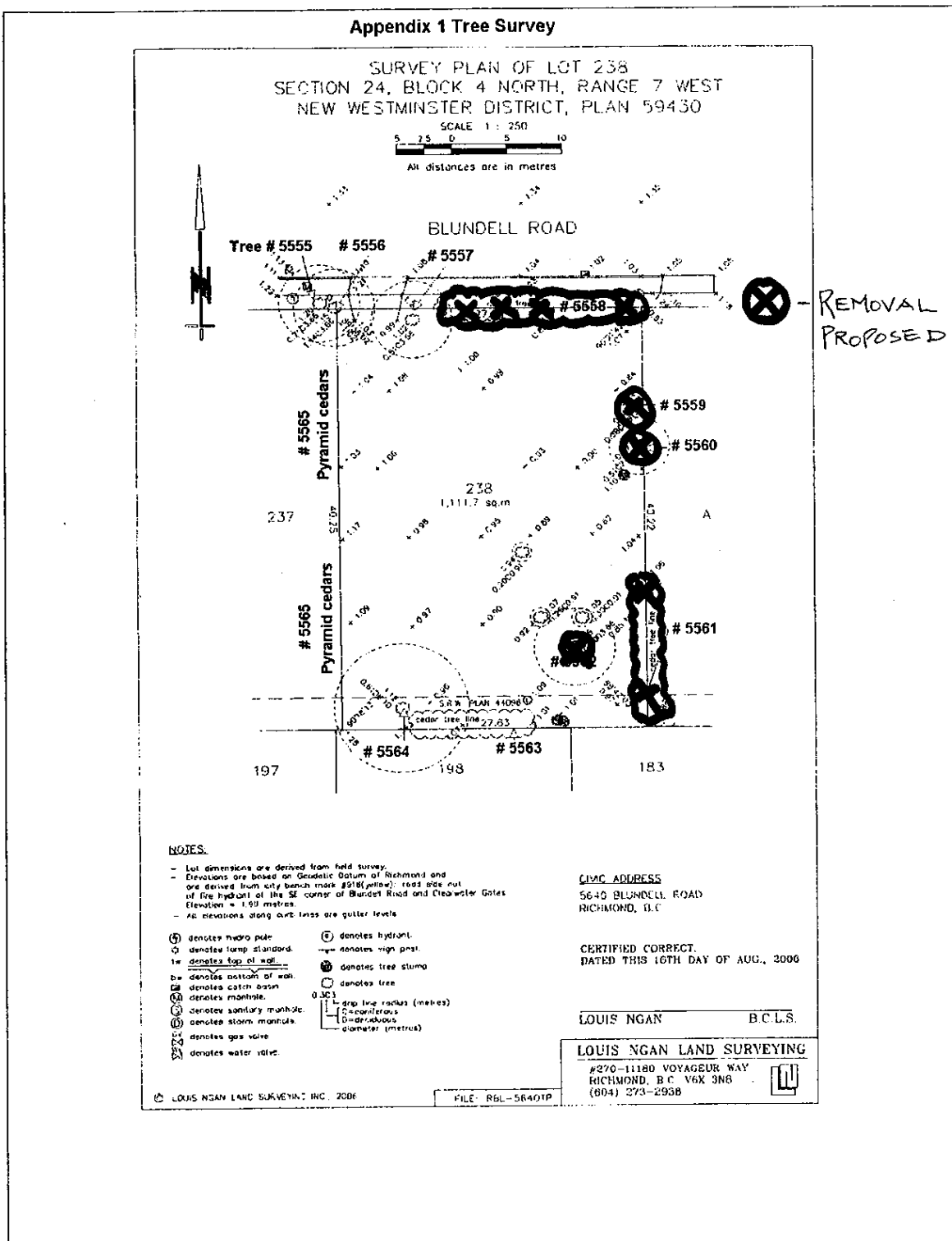
- Trees that are in marginal condition and proposed for removal include: Douglas fir Tree # 5557
- Trees located within or too close to building envelopes / roadways and proposed for removal include: Trees # 5559, 5560, 5561 and 5564 → TO BE RETAINED (REFER TO ADDENDUM REPORT DATED AUG 20, 2007)
- It is proposed that Magnolia Tree # 5562 be transplanted with a tree spade. The tree may NOT BYLAW SIZED (REFER TO ADDENDUM-AUG 20, 2007) either be:
 - Transported to a holding nursery and replanted back into the landscape during the landscape installation phase of development or
 - Used as a replacement tree at an alternate development site

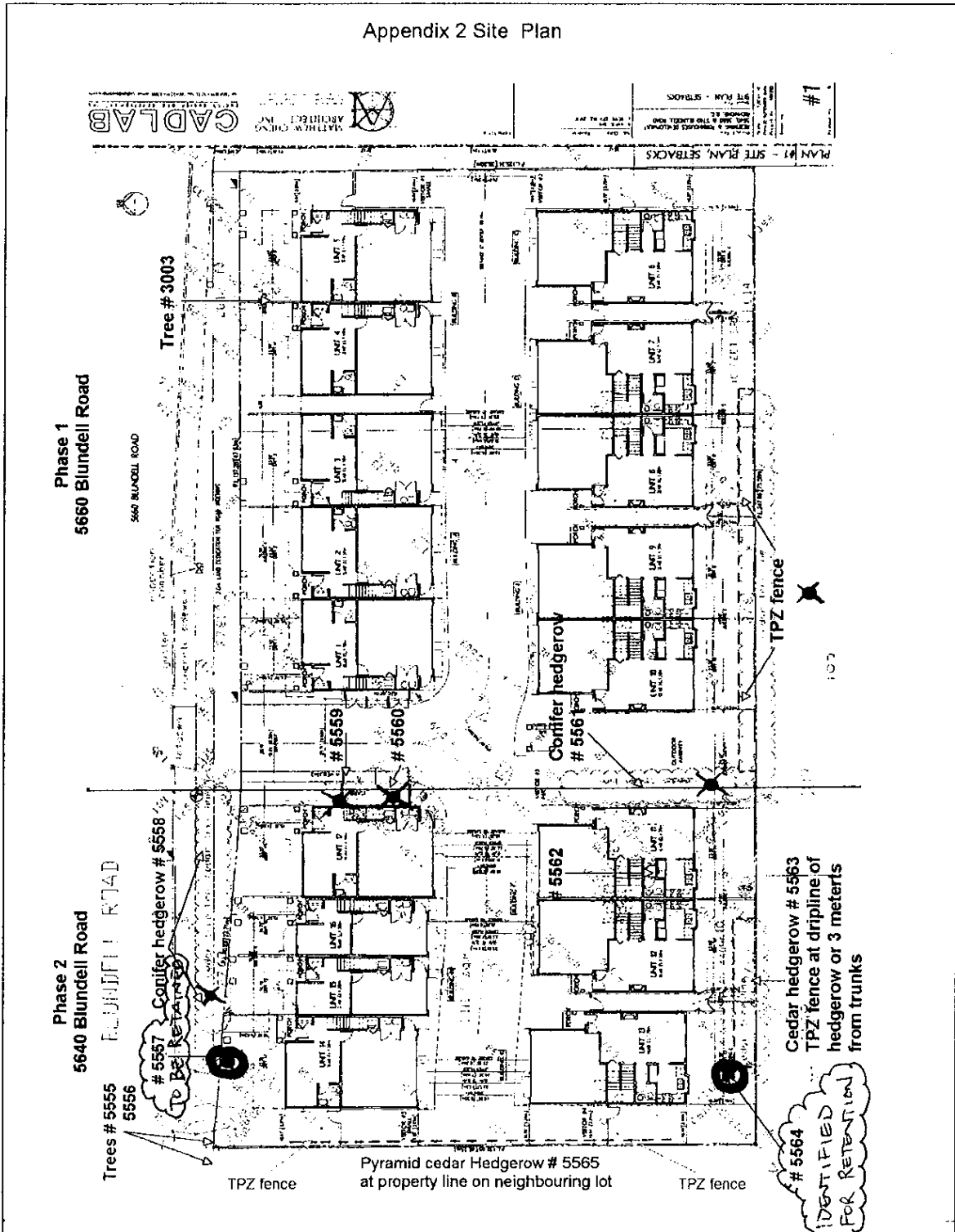
The feasibility of the mechanical transplant has been verified by Maple Leaf tree Mover Ltd., February 7, 2007. The proponent of the proposed development and the City of Richmond has to agree on terms of the transplant tree and the transplant tree counted as a replacement tree or a preserved tree.

- The tree may be dug after the existing house is demolished and before pre-loading.
- Appendix 5 provides tree digging and post digging maintenance Tree Spade specifications.
- On-site trees that may be considered for preservation include: Hedgerow trees # 5563
 - The garage located immediately adjacent to the hedgerow is scheduled for demolition to enable the proposed development. The garage will require careful removal. The excavator hoe operator has to exercise caution and care to not damage the crown of Cedar trees and not dig into the ground and disturb the tree roots.
 - A TPZ fence is to be installed 3 meters from the trees and run the length of the hedgerow
 - Pre-load concrete blocks are to be placed immediately adjacent to the TPZ, on the North side of the TPZ fence
 - Trees will require pruning to prevent crown interference with the proposed buildings. Pruning is to be supervised by the Project Arborist

4) Planning Considerations

- Preservation trees to be reviewed and vetted by project civil engineers to determine if there are design conflicts with infrastructure and final grades. No underground utilities, drainage systems, buildings or roadways may be permitted inside proposed TPZ's
- Arborist Construction drawings to be issued prior to construction/development
- Trees and TPZ barrier zones are to be plotted on civil and landscape drawings with tree preservation notes
- Total number of replacement trees subject to City of Richmond landscape design standards
- Adopt Appendix 6 Tree Preservation Specifications





Note: Site Map scale may be altered due to electronic conversion
 Site map annotations by VanArbor

Appendix 3

Tree Survey / Evaluation

5640 Blundell Road
Richmond, BC

September 6, 2006

Tree #	Species	DBH (cm)	Condition rating	Observations and Recommendations	Preservation Recommendation
5555	Western red cedar	67.54*	Moderate	<ul style="list-style-type: none"> Off-site tree located in City of Richmond boulevard/roadway easement Tree located under BC Hydro (BCH) 3 phase power line Tree topped and maintained at \approx 6 meters tall Multi-trunk trees with leader branches originating from base 	Preserve
5556	Western red cedar	87.76*	Poor - Moderate	<ul style="list-style-type: none"> Off-site tree located in City of Richmond boulevard/roadway easement Tree located under BC Hydro (BCH) 3 phase power line Tree topped and maintained at \approx 6 meters tall Multi-trunk trees with leader branches originating from base 	Preserve
5557	Douglas fir	47.8	Moderate	<ul style="list-style-type: none"> On-site tree located under BCH powerlines; tree topped and trimmed for powerline clearance 	<p>RETAIN Remove</p> <p>Aug 20/07 - ADDENDUM.</p>
5558	11 trees in Western red cedar hedgerow	1) 24.2* 2) 29.2 3) 69.2 4) 27.4 5) 49.2 6) 6.6 7) 46.6 8) 61 9) 22 10) 37.2 11) 36.4	Moderate	<ul style="list-style-type: none"> Off-site hedgerow Multi-stem trees planted in \leq 1 meter centres and appears to be growing in City of Richmond boulevard under BCH powerlines Trees topped and maintained at \approx 7 meters above base Crown spread \approx 4 meters radius on South side of hedgerow Ten (10) trees are considered protected trees and subject to tree replacement strategy 	Remove
5559	Pyramid cedars	6.5 meters tall	Good	<ul style="list-style-type: none"> On-site trees located at perimeter of lot 2 trees growing together Trees conflict with proposed building # 17 Tree not counted in tree replacements 	Remove
5560	Western red cedar	38.2*	Moderate	<ul style="list-style-type: none"> On-site tree has codominant trunks with leader branches originating at base Tree has 3 meter radius crown spread Too large to be considered for transplant Tree conflict with proposed building # 17 	Remove

Tree #	Species	DBH (cm)	Condition rating	Observations and Recommendations	Preservation Recommendation
5561	15 Golden cedar hedgerow	1) 9* 2) 13 3) 11 4) 16 5) 19 6) 13 7) 19 8) 17.2 9) 11 10) 13 11) 20.2 12) 14 13) 13 14) 23.0 15) 29.8	Moderate	<ul style="list-style-type: none"> On-site hedgerow located at perimeter of lot Trees / hedgerow has 3 meter radius crown spread planted on < 0.5 meter centres Hedgerow conflicts with proposed amenity area Three (3) trees in hedgerow considered protected trees and subject to tree replacement strategy 	Remove
5562	Magnolia	DBH = 16.6 cm Caliper = 19.2 cm	Good	<ul style="list-style-type: none"> On-site specimen tree worthy of transplant Viability of transplant verified by Maple Leaf tree Movers Ltd. February 7, 2007 Tree to be moved after demolition of existing house 	REMOVE (NOT B/L SIZED) Transplant AUG. 20/07 - ADDENDUM
5563	16 Western red cedar in hedgerow	1) 38.9* 2) 22 3) 33 4) 26.3 5) 33.4 6) 17 7) 20.2 8) 31.1 9) 25.5 10) 24.3 11) 22.5 12) 17 13) 27.0 14) 31.5 15) 19.9 16) 38.1	Moderate	<ul style="list-style-type: none"> On-site trees planted in ≤ 1 meter centres along perimeter at rear of lot 13 trees are protected sized trees Trees topped at 8 meters above base Trees provide a good screen to neighbouring lot <p>Recommendation:</p> <ul style="list-style-type: none"> Establish TPZ fence 3 meters from trees Prune trees for 3 meter radius crown spread Place concrete pre-load blocks at North edge of TPZ fence VanArbor to monitor demolition of garage next to hedgerow of trees 	Preserve
5564	Red maple	64.3	Good	<ul style="list-style-type: none"> On-site trees measured at 75 cm above base Tree has 6 meter radius crown spread Existing garage located next to tree; tree requires special consideration during building/site demolition Tree conflicts with proposed building # 13 <p>Recommendation:</p> <ul style="list-style-type: none"> Remove tree to enable proposed development 	RETAIN Remove AUG. 20/07 - ADDENDUM.

Tree #	Species	DBH (cm)	Condition rating	Observations and Recommendations	Preservation Recommendation
5565	Pyramid cedar hedge	3 – 7 meters tall	Good	<ul style="list-style-type: none"> • <u>Off-site</u> trees located on <u>neighbouring property</u> next to property line, West side of Site <p>Recommendation:</p> <ul style="list-style-type: none"> • Special consideration to be exercised during site demolition; monitored by Project Arborist • Establish TPZ barrier at property line or utilize existing fence as the TPZ barrier • Establish concrete pre-load blocks at property line 	Preserve

** The DBH of trees with multiple trunks measured at 1.4 meters above base have the sum of 100% of the diameter of the largest trunk and 60% of the diameter of each additional trunk*

Appendix 4 **SUPERCEDED**

Phase 2: Tree Replacement Strategy for trees proposed to be removed
in Accordance to Bylaw 8057, Schedule A, (November 27, 2006)

(Trees < 20 cm DBH not subject to tree replacement)

Tree #	Species	DBH (cm)	Preserve	Transplant	Remove	Tree Replacement Size
5555	Off-site Western red cedar	67.5	1			
5556	Off-site Western red cedar	87.7	1			
5557	Douglas fir	47.8			1	5.0 meter tall conifer
5558	10 off-site trees in Western red cedar hedgerow	1) 24.2* 2) 29.2 3) 69.2 4) 27.4 5) 49.2 7) 46.6 8) 61 9) 22 10) 37.2 11) 36.4			10	1) 3.5 meter tall conifer 2) 3.5 meter tall conifer 3) 6.0 meter tall conifer 4) 3.5 meter tall conifer 5) 5.0 meter tall conifer 7) 5.0 meter tall conifer 8) 6.0 meter tall conifer 9) 3.5 meter tall conifer 10) 4.0 meter tall conifer 11) 4.0 meter tall conifer
5560	Western red cedar	38.2			1	4 meter tall conifer
5561	3 Golden cedar > 20 cm DBH in hedgerow	11) 20.2 14) 23.0 15) 29.8			3	3 @ 3.5 meter tall conifer
5562	Magnolia	DBH = 16.6 cm Caliper = 19.2 cm		1		
5563	13 Western red cedar in hedgerow	≈ 30	13			
5564	Red maple	64.3			1	11 cm Deciduous
5565	Off-site Pyramid cedar hedge	3 – 7 meters tall	1			
Total trees = 33			16	1	16	

Summary of Replacement trees in accordance to Schedule A:

Size of replacement trees	Number of replacement trees
11 cm DBH Deciduous	1
3.5 meter tall conifer	7
4.0 meter tall conifer	3
5.0 meter tall conifer	3
6.0 meter tall conifer	2
Total Replacement Trees	16

Note: Total number of replacement trees may be adjusted to conform to City of Richmond Landscape design standards and/or policies

Appendix 5

Tree Spade / Tree Relocation Specifications

Tree digging, tree relocation work and tree maintenance are to be performed in accordance to best management practices. The following publications are recognized as references for best management practices:

1. BC Landscape Standards (BCLS), 6th Edition
2. ANSI A300 (Parts 1 – 6) – 2005; including Best Management Practices special companion publications

Tree digging:

- 1.1.1 Tree tags attached to the trees are to be maintained and remain attached to the tree for the duration of the project
- 1.1.2 Size of root ball shall conform with root ball standards: (BCLS - 9.2.2)
 - 1.1.2.1 Minimum root ball diameters are listed in BCLS, Tables 9-1, 9-2
- 1.1.3 Planting accessories: (BCLS - 9.2.3)
- 1.1.4 Execution: - digging of trees: (BCLS - 9.3.1.3; ANSI A300)
 - 1.1.4.1 Broken and extended roots to be pruned (cut cleanly)
 - 1.1.4.2 Tree bark to be protected with thick cardboard or burlap and care to be taken to avoid damage to tree bark
 - 1.1.4.3 Tie-back limbs as necessary to avoid mechanical damage to healthy structural branches; pruning healthy structural branches is to be avoided
- 1.2 Public safety is to be maintained at all times
 - 1.2.1 Contractor to confirm locations of underground utilities before mechanical digging of trees
 - 1.2.1.1 Tree spade to dig trees if there are no underground utility conflicts
 - 1.2.1.2 Hand dig trees if there are utility conflict
 - 1.2.2 Contractor to provide traffic control in accordance to applicable standards
 - 1.2.3 Tree holes are to be filled or covered if left unattended

Transporting trees to site

- 1.3 Transporting trees: (BCSL - 9.1.4.1; ANSI A300)
- 1.4 Unloading procedures: (BCSL - 9.1.4.3; ANSI A300)
- 1.5 Handling and storage: (BCSL - 9.1.5; ANSI A300)
- 1.6 Planting time: (BCSL - 9.1.6; ANSI A300)

Option A: Planting directly into permanent boulevard / planting bed locations

- 1.7 Tree relocation sites are to be preparation for planting in accordance to best management practices: (BCSL - 9.3.3; ANSI A300)
- 1.8 Final locations of trees planted in the boulevards or designate planting sites to be specified in advance by the Landscape Architect and / or The City of Richmond
 - 1.8.1 City of Richmond trees to be planted in boulevards, medians, park sites or as specified

- 1.8.1.1 Subcontractors to confirm locations of underground utilities before tree spade dig
 - 1.8.1.2 Tree holes are to be covered if left unattended – public safety is a primary concern
 - 1.8.1.3 Subcontractors to provide traffic control
 - 1.8.1.4 Subcontractors to protect turf grass areas from compaction and damage
 - 1.8.1.4.1 Surrounding landscape where trees are relocated to be in an acceptable “as was” or better condition, immediately after transplanting
 - 1.8.1.4.2 Damaged turf grass areas to be re-landscaped using horticulture soil-fill and reseeded to best management practices
 - 1.8.1.4.2.1 Subcontractor to provide and spread “Park Mix” grass seed obtained from Evergro Ltd., Vancouver, BC
- 1.9 Planting:** Relocated trees to be planted in accordance to best management practices (BCSL - 9.3.4; ANSI A300)
- 1.9.1 Mechanical digging of a planting hole can result in glazed planting hole walls
 - 1.9.1.1 Planting hole walls to be broken-up with hand tools before planting
 - 1.9.2 Buttress roots often grow into the upper horizontal wires of the basket and become partially girdled over many years
 - 1.9.2.1 Contractors to consider using low-profile baskets or cut wire baskets off at 6” inches (15 cm) below the shoulder of the root ball before backfilling
 - 1.9.3 Cut off and remove burlap and ties from the top and upper sides of the root ball after the tree has been placed in the hole
 - 1.9.4 Upper soil horizons consisting of sandy loam soils are to be used for back fill
 - 1.9.4.1 Remaining soils from digging tree holes are to be removed from site
 - 1.9.4.2 Soils should be backfilled into planting holes in layers up to 15 cm deep, with minimal soil compaction for each layer; upon completion of backfilling the tree is to be watered but not fertilized.
 - 1.9.4.3 Subcontractor to form a water well by forming an 8 cm berm that directs water into the root ball
- 1.10 Watering:** Relocated trees to be watered in accordance to best management practices (BCSL - 9.3.6; ANSI A300)
- 1.10.1 Documentation of watering and / or tension meter readings to be maintained
 - 1.10.2 Trees to receive at least 1.0 acre inch of water per week either through natural rainfall or supplementary irrigation throughout the growing season
- 1.11 Pruning:** Relocated trees to be pruned in accordance to best management practices (BCSL - 9.3.7 and 13.3.1.6; ANSI A300)
- 1.12 Mulching:** Relocated trees to be mulched in accordance to best management practices (BCSL - 9.3.8, 10.3.5; ANSI A300)
- 1.12.1.1 The water well is to be covered with 5 cm layer of standard bark mulch
 - 1.12.1.2 Subcontractor to use standard bark mulch: (BCSL - 10.2.1)
 - 1.12.1.3 Subcontractor to apply mulch in accordance to best management practices: Application: (BCSL - 10.3.1; ANSI A300)
- 1.13 Stabilizing trees:** Relocated trees to be stabilized in accordance to best management practices (BCSL - 9.3.8, 13.3.1.5; ANSI A300)
- 1.13.1 Stabilizing trees may be site specific and not all tree may require stabilization
- 1.14 Maintenance:** Relocated trees to be maintained in accordance to best management practices (BCSL - 13.3.1; ANSI A300) for one (1) year.

- 1.15 Weed control: Relocated trees to have weeds controlled in accordance to best management practices (CSL - 13.3.1.3; ANSI A300)
 - 1.15.1 Weed control to be maintained to maintenance level 2 (BCSL)
- 1.16 Pest control: Relocated trees to have insect and pathogens controlled in accordance to best management practices (BCSL - 13.3.1.4; ANSI A300)
- 1.17 Fertilization: Relocated trees to be fertilized in accordance to best management practices (BCSL - 13.3.1.7; ANSI A300)

Option B: Planting into temporary nursery / storage area

- 1.18 Tree relocation sites are to be preparation for planting in accordance to best management practices: (BCSL - 9.3.3; ANSI A300)
- 1.19 Planting: Relocated trees to be planted in accordance to best management practices (BCSL - 9.3.4; ANSI A300)
 - 1.19.1 Tree spacing in nursery: trees to be planted in rows and adequately spaced to ensure 1 meter clearance between each tree crown
- 1.20 Watering: Relocated trees to be watered in accordance to best management practices (BCSL - 9.3.6; ANSI A300)
 - 1.20.1 Documentation of watering and / or tension meter readings to be maintained
- 1.21 Pruning: Relocated trees to be pruned in accordance to best management practices (BCSL - 9.3.7, 13.3.1.6; ANSI A300)
- 1.22 Watering: Relocated trees to be watered in accordance to best management practices (BCSL - 9.3.6; ANSI A300)
 - 1.22.1 Documentation of watering and / or tension meter readings to be maintained
- 1.23 Mulching: Relocated trees to be mulched in accordance to best management practices (BCSL - 9.3.8, 10.3.5; ANSI A300)
 - 1.23.1 Subcontractor to use standard bark mulch: (BCSL - 10.2.1)
 - 1.23.2 Subcontractor to apply mulch in accordance to best management practices: Application: (BCSL - 10.3.1; ANSI A300)
- 1.24 Maintenance: Relocated trees to be maintained in accordance to best management practices (BCSL - 13.3.1) for one (1) year.
- 1.25 Weed control: Relocated trees to have weeds controlled in accordance to best management practices (CSL - 13.3.1.3; ANSI A300)
 - 1.25.1 Weed control to be maintained to maintenance level 2 (BCSL)
- 1.26 Pest control: Relocated trees to have insect and pathogens controlled in accordance to best management practices (BCSL - 13.3.1.4; ANSI A300)
- 1.27 Fertilization: Relocated trees to be fertilized in accordance to best management practices (BCSL - 13.3.1.7; ANSI A300)

Appendix 6

Tree Preservation Specifications

1. Trees and TPZ barrier zones are to be plotted on civil and landscape drawings. All planning professionals and on-site construction workers are to be aware of the TPZ's and know that the TPZ are no encroachment areas
2. Temporary TPZ fencing must be installed at alignments specified by the Project Arborist before any land clearing, demolition or construction commencement
3. The fence must be sturdily constructed of suitable materials. A wood post and a top rail frame with 1.2 meter snow fence is the common standard. Signs stating: "TREE PROTECTION AREA - NO ENTRY" must be affixed every 10 meters or suitable frequency. The TPZ fence is to be maintained in good order until the infrastructure and buildings are substantially complete. The fence must be removed within 2 weeks of construction completion
4. The TPZ fencing must be inspected and approved by the Project Arborist prior to work commencement and should be checked on a regular monitoring frequency during the course of construction. The frequency will be determined based on the level of construction activity in the vicinity of preserved trees and conformance results
5. If encroachment into TPZ is required for any reason, it should be authorized in advance by the Project Arborist. Special measures may need to be implemented to allow access and some activities will not be permitted
6. Tree removal operations during site demolition are to be monitored by the Project Arborist
7. Soil, debris and building materials etc. are to be piled or stored outside the TPZ. Specific dumping, liquid waste disposal and wash-out areas shall be provided, well away from trees
8. There shall be no direct discharge of storm or site drainage waters through or into the TPZ
9. All pruning and site rehabilitation work to trees within the TPZ is to be performed under the supervision of the Project Arborist
10. All machinery (excavators, bulldozers, bobcats, cars, trucks, etc.) are to be kept out of the TPZ, unless approved in writing by the Project Arborist
11. Excavators and any other machinery are to dig the earth outside the TPZ with the bucket digging towards the tree, and not digging with the bucket across the radiant of tree roots. Tree roots shall be cut cleanly by hand and under the direction of the Project Arborist. Excavation wall at the building envelope is to be covered with a black plastic tarp to

protect any exposed tree roots. Irrigating the exposed roots under the tarp maybe necessary to prevent the roots from drying-out, depending upon the season

12. Underground services, drainage and finished grading shall not cause any grade changes (excavation & fill) within the TPZ's, or grade changes of surrounding lands that would result in storm water accumulation or depletion within the TPZ's
13. Activities within and access to the TPZ's are restricted so that no one may cause or allow the deposit of any soil, spoil, aggregate, construction supplies/materials or waste materials. Vehicles and equipment may not pass within these zones. The preserved trees must not be used to affix signs, lights, cables or any devise. Pruning, root pruning or any other treatment to preserved trees must be performed by a qualified Arborist and under the direction of the Project Arborist
14. Preservation trees and tree protection areas are to be inspected by the Project Arborist prior to occupation of site, and whenever the site superintendent or owner as deemed necessary
15. Trees being retained in close proximity to any excavation require monitoring and inspection during the excavation process. Roots that encountered are to be pruned at the excavation limits, in order to protect roots from being damaged at a point closer to the tree
16. Supplemental watering of retained trees during the growing season may be required and must be undertaken by the Developer at their cost as recommended by the Project Arborist
17. Penalties and compensation rules are to established to help prevent contractors and sub-contractors to cause damage to trees. Penalties to be included in all standard contracts. Compensation rules shall include tree replacements consistent with City of Richmond Tree Preservation By-law No. 8057

Assumptions and Limiting Conditions

1. Except as expressly set out in this report and in these Assumptions and Limiting Conditions, Vanarbor Vegetation Consulting Ltd. ("**Vanarbor**") makes no guarantee, representation or warranty (express or implied) with regard to: this report; the findings, conclusions and recommendations contained herein; or the work referred to herein.
2. This report has been prepared, and the work undertaken in connection herewith has been conducted, by Vanarbor for **Timothy C.W. Tse** (the "**Client**"). It is intended for the sole and exclusive use by the Client for the purpose(s) set out in this report. Any use of, reliance on or decisions made based on this report by any person other than the Client, or by the Client for any purpose other than the purpose(s) set out in this report, is the sole responsibility of, and at the sole risk of, such other person or the Client, as the case may be. Vanarbor accepts no liability or responsibility whatsoever for any losses, expenses, damages, fines, penalties or other harm (including without limitation financial or consequential effects on transactions or property values, and economic loss) that may be suffered or incurred by any person other than the Client as a result of the use of or reliance on this report or the work referred to herein. The copying, distribution or publication of this report (except for the internal use of the Client) without the express written permission of Vanarbor (which consent may be withheld in Vanarbor's sole discretion) is prohibited. Vanarbor retains ownership of this report and all documents related thereto both generally and as instruments of professional service.
3. The findings, conclusions and recommendations made in this report reflect Vanarbor's best professional judgement in light of the information available at the time of preparation. This report has been prepared in a manner consistent with the level of care and skill normally exercised by arborists currently practicing under similar conditions in a similar geographic area and for specific application to the trees subject to this report as at the date of this report. Except as expressly stated in this report, the findings, conclusions and recommendations set out in this report are only valid for the day on which the assessment leading to such findings, conclusions and recommendations was conducted. If generally accepted assessment techniques or prevailing professional standards and best practices change at a future date (which they are likely to do), modifications to the findings, conclusions, and recommendations in this report may be necessary. Vanarbor expressly excludes any duty to provide any such modification if generally accepted assessment techniques and prevailing professional standards and best practices change.
4. Conditions affecting the trees subject to this report (the "**Conditions**", including without limitation structural defects, scars, decay, fungal fruiting bodies, evidence of insect attack, discoloured foliage, condition of root structures, the degree and direction of lean, the general condition of the tree(s) and the surrounding site, and the proximity of property and people) other than those expressly addressed in this report may exist. Unless otherwise expressed: information contained in this report covers only those Conditions and trees that are expressly stated to be subject to this report and only reflects such Conditions and trees at the time of inspection; and the inspection is limited to visual examination of such Conditions and trees without dissection, excavation, probing, or

coring. While every effort has been made to ensure that the trees recommended for retention are both healthy and safe, no guarantees, representations or warranties are made (express or implied) that those trees will remain standing or will not fail. The Client acknowledges that it is both professionally and practically impossible to predict with absolute certainty the behaviour of any single tree, or group of trees, in all given circumstances. Inevitably, a standing tree will always pose some risk. Most trees have the potential for failure and this risk can only be eliminated if the risk is removed. If Conditions change or if additional information becomes available at a future date, modifications to the findings, conclusions, and recommendations in this report may be necessary. Vanarbor expressly excludes any duty to provide any such modification if Conditions change or additional information becomes available.

5. Nothing in this report is intended to constitute or provide a legal opinion, and Vanarbor expressly disclaims any responsibility for matters legal in nature (including, without limitation, matters relating to title to and ownership of real or personal property and matters relating to cultural and heritage values). Vanarbor makes no guarantee, representation or warranty (express or implied) as to the requirements of or compliance with applicable laws, rules, regulations, or policies established by federal, provincial, local government or First Nations bodies (collectively, "**Governmental Bodies**") or as to the availability of licences, permits or authorizations of any Governmental Body. Revisions to any regulatory standards (including by-laws, policies, guidelines and any similar directions of a Government Bodies in effect from time to time) referred to in this report may be expected over time. As a result, modifications to the findings, conclusions and recommendations in this report may be necessary. Vanarbor expressly excludes any duty to provide any such modification if any such regulatory standard is revised.
6. The client agrees that Vanarbor shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services as described in the fee schedule and contract of engagement.
7. In preparing this report, Vanarbor has relied in good faith on information provided by certain persons, Governmental Bodies, government registries and agents and representatives of each of the foregoing, and Vanarbor assumes that such information is true, correct and accurate in all material respects. Vanarbor accepts no responsibility for any deficiency, misstatement or inaccuracy contained in this report as a result of omissions, misinterpretations or fraudulent acts of or information provided by such persons, bodies, registries, agents and representatives.
8. Sketches, diagrams, graphs, and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys.
9. Loss or alteration of any part of this report invalidates the entire report.

Statement of Qualifications

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- President of VanArbor Vegetation Consulting Ltd.
- Professional Agrologist, P.Ag.
- Certified Agriculture Consultant, CAC
- Certified Arborist accredited by the International Society of Arboriculture, Certification # PN-0276
- WCB Certified Tree Risk Assessor; Certification # 0035
- WCB Wildlife Danger Tree Assessor: Parks and Recreation Module; Certification # P0625
- BCSLA / BCLNA Landscape Inspector Certificate
- Diploma Horticulture, Olds College, 1980
- Bachelor of Science in Agriculture, University of Alberta, 1986
- Consulting Arborist and Landscape Consultant: April 1992 – Present
- Member:
 - International Society of Arboriculture (ISA)
 - British Columbia Institute of Agrologists (P.Ag.)
 - Canadian Consulting Agrologist Association (CAC)
 - American Society of Consulting Arborists (ASCA)
- Over 25 years of professional employment in Landscape Horticulture and Arboriculture

Rezoning Considerations
5640 Blundell Road
RZ 06-348772

Prior to final adoption of the Zoning Amendment Bylaw, the developer is required to complete the following:

1. Consolidation of 5640 Blundell Road with 5660 Blundell Road to form one development parcel.
2. Road Dedication of a 2 m wide strip of land 5.1 m in length measured from the east property line of 5640 Blundell Road frontage.
3. Processing of a Development Permit application for 5640 and 5660 Blundell Road to the satisfaction of the Director of Development.
4. Registration of a flood indemnity covenant on title to the lands (0.9 m GSM).
5. Contribution of \$7,000 in lieu of indoor amenity space
6. City's acceptance of the developers voluntary contribution of \$6,677 to the City for affordable housing (\$0.60 per sq.ft of buildable area), based on the buildable area associated with the 7 proposed units at 5640 Blundell Road.

The following are noted as requiring follow-up and completion by the developer prior to issuance of the Building Permit:

1. Completion of the City's Standard Servicing Agreement for identified upgrades to the sanitary sewer system based on the completed capacity analysis reviewed and approved by Engineering Planning.
2. Provide a construction traffic and parking management plan to the Transportation Division for review and approval (<http://www.richmond.ca/services/ttp/special.htm>).

[Signed original on file]

Signed

Date



**Richmond Zoning and Development Bylaw 5300
Amendment Bylaw 8345 (RZ 06-348772)
5640 BLUNDELL ROAD**

The Council of the City of Richmond, in open meeting assembled, enacts as follows:

1. The Zoning Map of the City of Richmond, which accompanies and forms part of Richmond Zoning and Development Bylaw 5300, is amended by repealing the existing zoning designation of the following area and by designating it **TOWNHOUSE DISTRICT (R2 – 0.7)**.

P.I.D. 003-936-155

Lot 238 Section 24 Block 4 North Range 7 West New Westminster District Plan 59430

2. This Bylaw may be cited as **“Richmond Zoning and Development Bylaw 5300, Amendment Bylaw 8345”**.

FIRST READING

A PUBLIC HEARING WAS HELD ON

SECOND READING

THIRD READING

OTHER REQUIREMENTS SATISFIED

ADOPTED

CITY OF RICHMOND
APPROVED by

APPROVED by Director or Solicitor


MAYOR

CORPORATE OFFICER