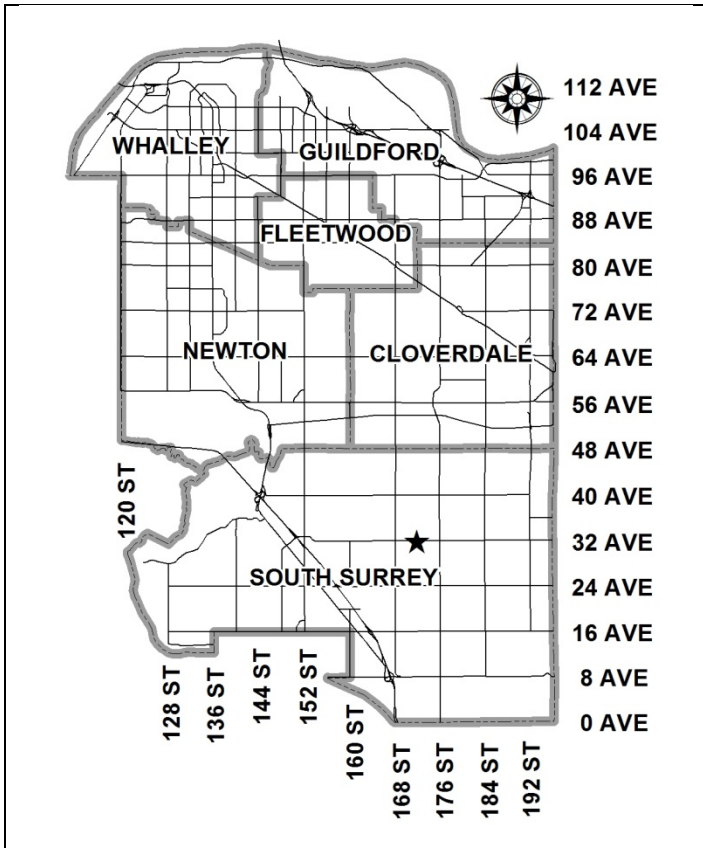


City of Surrey  
**PLANNING & DEVELOPMENT REPORT**

File: 7916-0228-00

Planning Report Date: May 7, 2018



**PROPOSAL:**

- **Rezoning** from RA to RQ
- **Development Permit**

to allow subdivision into 25 single family lots.

**LOCATION:**

- 17018 - 32 Avenue
- 17032 - 32 Avenue
- 17048 - 32 Avenue

**ZONING:**

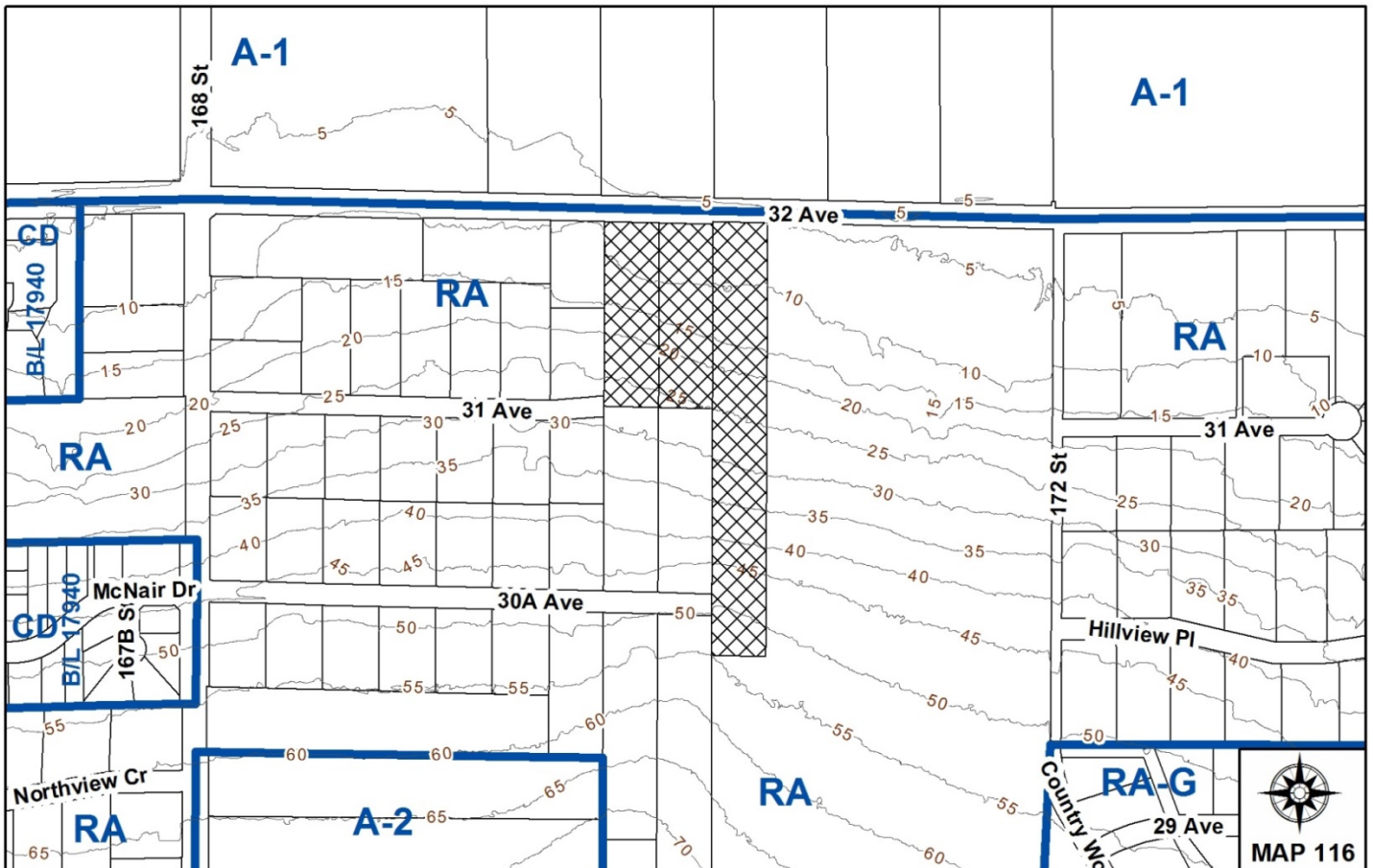
RA

**OCP DESIGNATION:**

Suburban

**NCP DESIGNATION:**

Proposed One Acre Residential (RA) and Proposed One Acre Residential Gross Density (RA-G)



### RECOMMENDATION SUMMARY

- By-law Introduction and set date for Public Hearing for rezoning.
- Approval to draft Development Permit.

### DEVIATION FROM PLANS, POLICIES OR REGULATIONS

- Amendments to the existing North Grandview Heights Neighbourhood Concept Plan (NCP) are required in order for this development proposal to proceed: (1) amend the land use designation from "Proposed One Acre Residential (RA)" and "Proposed One Acre Residential Gross Density (RA-G)" to "Single Detached (2-4 upa)"; and (2) amend the road network and locations of open space. These amendments are proceeding as part of a more comprehensive NCP amendment under Development Application No. 7915-0352-00, which received Third Reading on April 9, 2018.

### RATIONALE OF RECOMMENDATION

- The proposed land use, road network, and locations of open space proposed in the subject application were reviewed by Council and granted approval to proceed under Development Application No. 7915-0352-00. The by-laws associated with that application were granted Third Reading at the April 9, 2018 Regular Council – Public Hearing meeting.
- The subject proposal complies with the Suburban land use designation of the Official Community Plan (OCP) for the site.
- The proposed density and lot size are in keeping with other recently approved development applications in the area. The proposed new Single Detached (2-4 upa) designation in the North Grandview Heights NCP will respond to the trend toward smaller suburban lot sizes, and will fit with the proposed new suburban "Quarter Acre Residential Zone (RQ)", which permits suburban residential developments with a density of up to 10 units per hectare (4 upa), consistent with the Suburban designation in the OCP.

RECOMMENDATION

The Planning & Development Department recommends that:

1. a By-law be introduced to rezone the subject site from "One-Acre Residential Zone (RA)" to "Quarter Acre Residential Zone (RQ)" and a date be set for Public Hearing.
2. Council authorize staff to draft Development Permit No. 7916-0228-00 for Hazard Lands (steep slopes) and Farm Protection generally in accordance with the geotechnical report prepared by Western Geotechnical Consultants Ltd and proposed subdivision layout (Appendix II).
3. Council instruct staff to resolve the following issues prior to final adoption:
  - (a) ensure that all engineering requirements and issues including restrictive covenants, dedications, and rights-of-way where necessary, are addressed to the satisfaction of the General Manager, Engineering;
  - (b) submission of a subdivision layout to the satisfaction of the Approving Officer;
  - (c) submission of a finalized tree survey and a statement regarding tree preservation to the satisfaction of the City Landscape Architect;
  - (d) demolition of existing buildings and structures to the satisfaction of the Planning and Development Department;
  - (e) the applicant satisfy the deficiency in tree replacement on the site, to the satisfaction of the Planning and Development Department;
  - (f) registration of a Section 219 Restrictive Covenant on lots within 300 metres (984 ft.) of the ALR to advise of agricultural practices in the area;
  - (g) registration of a Section 219 Restrictive Covenant for tree preservation and associated building envelopes on lots where tree preservation is proposed;
  - (h) submission of a finalized lot grading plan including proposed retaining wall details to the satisfaction of the Planning & Development Department;
  - (i) registration of a Section 219 Restrictive Covenant on all lots to require engineered building foundations;
  - (j) the applicant provide an independent peer review of the geotechnical investigation and assessment report dated January 2, 2018;
  - (k) the applicant provide cash-in-lieu for planting in the ALR buffer to natural area standards, and for pathway connection and landscaping on future parkland; and
  - (l) completion of Development Application No. 7915-0352-00, including Council resolution to amend the North Grandview Heights Neighbourhood Concept Plan, is required prior to Final Adoption of the subject development application.

**REFERRALS**

**Engineering:** The Engineering Department has no objection to the project subject to the completion of Engineering servicing requirements as outlined in Appendix III.

**School District:** **Projected number of students from this development:**

9 Elementary students at Pacific Heights Elementary School  
 4 Secondary students at Earl Marriott Secondary School

(Appendix IV)

The applicant has advised that the dwelling units in this project are expected to be constructed and ready for occupancy by June 2019.

**Parks, Recreation & Culture:** Parks will accept the area shown as open space as parkland. Parks will accept cash-in-lieu for planting in the ALR buffer to natural area standards and for pathway connection and landscaping on future parkland.

**Agricultural and Food Security Advisory Committee (AFSAC):** At its September 7, 2017 meeting, the AFSAC recommended that the application be supported (Appendix V).

**SITE CHARACTERISTICS**

**Existing Land Use:** Three (3) large rural properties, each with a single family dwelling.

**Adjacent Area:**

<b>Direction</b>	<b>Existing Use</b>	<b>NCP Designation</b>	<b>Existing Zone</b>
North (Across 32 Avenue):	Farmland within the ALR	OCP: Agricultural	A-1
East:	Heavily treed 22.3 hectare (55.2 acre) site under Development Application No. 7915-0352-00 (at Third Reading)	Proposed One Acre Residential Gross Density (RA-G)	RA
South:	Large rural properties under Development Applications 7916-0389-00 (Pre-Council) and 7915-0352-00 (at Third Reading)	Proposed One Acre Residential (RA) and Proposed One Acre Gross Density Residential (RA-G)	RA
West:	Acreage single family residential properties	Existing One Acre & Half Acre Lots	RA

## DEVELOPMENT CONSIDERATIONS

### Background

- The subject site is located in the North Grandview Heights Neighbourhood Concept Plan (NCP) area. The plan was approved by Council on January 11, 1999. The NCP includes approximately 339 hectares (838 acres) of land on the northern slope of Grandview Heights.
- The NCP was based on a traditional one-acre and half-acre subdivision model.
- In 2004, with an increasing demand for different housing types and development of the area to the south (Morgan Heights), an NCP amendment process was initiated for large portions of land within the North Grandview Heights NCP.
- On September 8, 2005, Council approved the recommendations in Corporate Report C013 to amend the North Grandview Heights NCP.
- At the time of the amendment, a number of property owners chose not to participate in the amendment process. As a result, their properties remained as designated in the original NCP. The subject site was one of the properties that were excluded from the amendment; therefore, the subject site's "Proposed One Acre Residential (RA)" and "Proposed One Acre Residential Gross Density (RA-G)" land use designations were maintained (Appendix VIII).
- Since 2005, development has begun to extend into the area. Recent development applications approved by the City (Development Application Nos. 7911-0223-00, 7915-0183-00) and at Third Reading (7916-0115-00) to the west of the subject site have introduced smaller suburban lots into the area.
- The large site to the east of the subject site, at 17190 - 32 Avenue, is proceeding under Development Application No. 7915-0352-00, and proposes to rezone to a Comprehensive Development (CD) Zone to allow subdivision into 126 RQ-sized suburban lots. This application was before Council for consideration and by-law introduction (First and Second Readings) at the March 12, 2018 Regular Council – Land Use meeting. A Public Hearing was held and Third Reading was granted at the April 9, 2018 Regular Council – Public Hearing meeting.
- As part of the review process for Development Application No. 7915-0352-00, the applicant was required to review the area bounded by 32 Avenue to the north, 172 Street to the east, 28 Avenue to the south and 168 Street to the west, and propose NCP amendments comprehensively, including amendments to the land use designations, road networks, locations of open space, and the location of a proposed detention pond (Appendix IX). These amendments are discussed in detail in the Planning Report for Development Application No. 7915-0352-00.
- The proposed NCP amendments for the subject site are included in the amendments proposed as part of Development Application No. 7915-0352-00. Because the subject development proposal is contingent on the approval of the neighbouring application for approval of the NCP amendments including amendments to the land use designation, road

network, and open space and detention pond locations, Development Application No. 7915-0352-00 must complete prior to the completion of the subject development application.

### Site

- The subject site is 3.7 hectares (9.3 acres) in area and located on the northern slopes of Grandview Heights. The site incorporates three (3) separate parcels of land, which contain a single family dwelling on each lot. It is designated "Suburban" in the Official Community Plan (OCP) and "Proposed One Acre Residential (RA)" and "Proposed One Acre Residential Gross Density (RA-G)" in the North Grandview Heights NCP.

### Proposal

- The applicant is proposing:
  - to rezone the site from "One-Acre Residential Zone (RA)" to "Quarter Acre Residential Zone (RQ)";
  - a Development Permit for Hazard Lands and Farm Protection; and
  - subdivision to create 25 suburban single family residential lots.
- The NCP amendment required for the subject application to proceed will be handled via Development Application No. 7915-0352-00, which must be completed prior to the completion of the subject application as previously noted.
- The proposed lots comply with the minimum requirements of the RQ Zone. The applicant is proposing to provide 15 percent of the gross site area as open space, including the 20 metre (66 ft.) landscape buffer on 32 Avenue in accordance with the NCP, and an additional 2,265 square metre (7,431 sq ft.) park area accessed from 31B Avenue. A 10 metre wide, 371 square metre (3,993 sq. ft.) open space area along the east property line, north of 31B Avenue is also proposed in order to accommodate proposed site servicing (Appendix II).

### Building Design Guidelines and Lot Grading

- The applicant has retained Michael Tynan of Tynan Consulting Ltd. as the Design Consultant. The Design Consultant has proposed a set of building design guidelines. A summary of the guidelines is attached as Appendix VI. The Design Consultant for the subject application is also the Design Consultant for Development Application No. 7915-0352-00, and the guidelines for the subject application are consistent between the two applications.
- New homes are to be constructed to a high architectural standard, meeting or exceeding standards found in most executive-estate quality subdivision throughout the City.
- New homes will be constructed in the Traditional, Classical Heritage, Neo-Heritage or Neo-Traditional style. Homes will have balanced distribution of mass within the front façade, and high trim and detailing standards.

- Permitted roof materials include shake profile asphalt shingles with a raised ridge cap and new environmentally sustainable roofing projects, in greys, browns or black only. Vinyl siding is not permitted on exterior walls.
- The building massing regulations in the proposed building design guidelines have been developed with consideration to minimizing the visual impact of the proposed hillside development, consistent with and enhanced from the guidelines for another recent hillside development to the west of the subject site at 32 Avenue and 168 Street (Development Application No. 7911-0223-00). The proposed design requirements to address viewscales on the proposed hillside include the following elements:
  - To ensure that the fronts of homes on lots that slope steeply up the hillside to the rear present an attractive mid-scale massing design, with stepped transitional massing, the upper floor must step back from the main floor, no vertical wall at the front shall exceed a height of one and a half storeys unless broken by a roof line, the basement walls must be substantially concealed by fill and landscaping, and stairs leading up to the front door must be embedded in landscaping or concealed by it;
  - To ensure that the rear side of homes on lots that slope down the hillside do not appear massive when viewed from the low side of the lot, no vertical wall face that is unbroken by a roof, deck, or other projection shall exceed a height of one and a half storeys, a rear facing projection is required to break the rear wall plane, and gabled projections which would increase the apparent rear wall will not be permitted on the rear side of the home;
  - To ensure that homes blend into the hillside rather than stand out in contrast to it, only earth tone and neutral colours in medium to dark tones, and navy blue, are permitted on wall cladding; and
  - To ensure a strong natural post-development presence, an unusually dense planting standard featuring a minimum of 60 shrubs on interior lots and 75 shrubs on corner lots is required.
- A preliminary lot grading plan has been prepared by Aplin & Martin Consultants Ltd. and has been reviewed by staff and is generally acceptable. The plan shows areas with fill greater than 0.5 metres (1.6 feet) on the proposed site. A final lot grading plan is required prior to Final Adoption.

#### HAZARD LANDS DEVELOPMENT PERMIT

- Most of the site is sloping at grades below 20 percent, which is below the threshold that requires a Hazard Lands Development Permit for steep slopes under the OCP.
- A Development Permit (DP) is required however, due to the presence of localized steep slopes in excess of 20 percent grade on the subject site. In order to address this requirement, the applicant has submitted a geotechnical report to confirm that the site can accommodate the proposed development.

- The geotechnical report, prepared by Western Geotechnical Consultants and dated January 2, 2018, states that the proposed residential development is feasible on the subject site.
- Staff have reviewed the geotechnical report and do not have any concerns with the project moving forward to Council for consideration. Prior to Final Adoption, a geotechnical peer review is required.
- Upon approval of the documents associated with the Development Feasibility Study, they will be included in the finalized Hazard Land Development Permit. Staff will review all required documents to confirm that the objectives of the OCP are met.
- At Building Permit stage, the Building Division will require Letters of Assurance from a geotechnical engineer to ensure that building plans comply with the recommendations in the approved geotechnical report.
- In addition, engineered foundations are required for all of the lots. A Restrictive Covenant will be registered on the title of the lots to ensure that future owners are aware of this requirement.

#### FARM PROTECTION DEVELOPMENT PERMIT

- The Official Community Plan (OCP) requires that all development sites adjacent to land within the Agricultural Land Reserve (ALR) obtain a Development Permit for farming protection and conform to specific guidelines, prior to subdivision of the site. The Development Permit is required to reduce agricultural-urban conflicts through increased setbacks and vegetated buffering.
- The proposal meets or exceeds all of the requirements of the Farming Protection DP guidelines as specified in the OCP. The applicant proposes to register a Section 219 Restrictive Covenant on all properties within 300 metres (984 ft.) of the ALR lands on the north side of 32 Avenue to inform future owners of farm practices in the area. The proposal well exceeds the minimum building setback and landscape buffering requirements in the OCP. Triple-glazed windows on proposed Lots 1 to 3 inclusive (the lots closest to 32 Avenue) are also proposed.

#### TREES

- Nick McMahon, ISA Certified Arborist of Arbortech Consulting Ltd. prepared an Arborist Assessment for the subject property. The table below provides a summary of the tree retention and removal by tree species:



**Table 1: Summary of Tree Preservation by Tree Species:**

<b>Tree Species</b>	<b>Existing</b>	<b>Remove</b>	<b>Retain</b>
<b>Alder and Cottonwood Trees</b>			
Alder and Cottonwood	216	216	0
<b>Deciduous Trees (excluding Alder and Cottonwood Trees)</b>			
Bigleaf Maple	11	11	0
Japanese Maple	2	2	0
Paper Birch	14	14	0
Apple	2	2	0
Flowering Cherry	2	2	0
English Oak	1	0	1
Weeping Willow	1	1	0
<b>Coniferous Trees</b>			
Grand Fir	2	2	0
Norway Spruce	2	2	0
Shore Pine	2	2	0
Douglas Fir	42	37	5
Western Redcedar	15	14	1
Western Hemlock	2	2	0
<b>Total (excluding Alder and Cottonwood Trees)</b>	<b>98</b>	<b>91</b>	<b>7</b>
<b>Additional Trees in the proposed Open Space Area</b>	<b>3</b>	<b>1</b>	<b>2</b>
<b>Total Replacement Trees Proposed (excluding Boulevard Street Trees)</b>		<b>75</b>	
<b>Total Retained and Replacement Trees</b>		<b>82</b>	
<b>Contribution to the Green City Fund</b>		<b>\$129,200.00</b>	

- The Arborist Assessment states that there are a total of 98 protected trees on the site, excluding Alder and Cottonwood trees. 216 existing trees, approximately 69% of the total trees on the site, are Alder and Cottonwood trees. It was determined that 7 trees can be retained as part of this development proposal. The proposed tree retention was assessed taking into consideration the location of services, building footprints, road dedication and proposed lot grading.
- The Arborist Assessment indicates that 274 of the total 314 trees on the site are in unsuitable condition. An unsuitable tree is defined as a tree in very poor condition that is not viable for retention in active land use areas due to pre-existing advanced health decline or significant structural defects. In addition, the Assessment indicates that 32 trees are in marginal condition. Therefore, approximately 97% of the trees on the site are in either unsuitable condition or marginal condition. Of the 8 trees noted as being in suitable condition on the site, two (2) are proposed to be retained within the development site, and one (1) is proposed to be retained within the proposed 32 Avenue agricultural buffer and boulevard. The

remaining suitable condition trees are proposed to be removed due to grading, servicing, road construction and/or conflicts with the building footprint.

- Two (2) of the trees proposed to be retained are in unsuitable (poor) condition and are only proposed to be retained because they are shared trees and require authorization from a neighbouring property owner for removal. Therefore, if permission from the neighbour is obtained, these trees will be proposed for removal and there will be five (5) trees proposed for retention instead of seven (7).
- For those trees that cannot be retained, the applicant will be required to plant trees on a 1 to 1 replacement ratio for Alder and Cottonwood trees, and a 2 to 1 replacement ratio for all other trees. This will require a total of 398 replacement trees on the site. Since only 75 replacement trees can be accommodated on the site (based on an average of three (3) trees per lot), the deficit of 323 replacement trees will require a cash-in-lieu payment of \$129,200.00, representing \$400 per tree, to the Green City Fund, in accordance with the City's Tree Protection By-law.
- In summary, a total of 82 trees are proposed to be retained or replaced on the site with a contribution of \$129,200.00 to the Green City Fund.

#### PRE-NOTIFICATION

- Pre-notification letters were mailed out on July 28, 2017 and the development proposal signs were erected on August 9, 2017. No calls or emails were received by staff in response to the pre-notification.
- The consultation process for the proposed NCP amendments were conducted as part of the process for Development Application No. 7915-0352-00. As previously noted, this application proceeded to Council for by-law introduction on March 12, 2018, and Public Hearing and Third Reading on April 9, 2018.
- Through the consultation process for Development Application No. 7915-0352-00, six (6) neighbouring residents on 31 Avenue expressed concern and opposition to 31 Avenue becoming a connecting road. It is currently a dead-end street. Respondents cited concerns regarding the rural character of 31 Avenue, a depreciation of their quality of life, concerns about pollution, traffic noise, safety and increased crime, and a loss in wildlife.

If the subject development application is approved and the development proceeds, the planned extension of 31 Avenue will be realized.

*(Staff responded via email to neighbourhood respondents explaining why a connection is warranted on 31 Avenue. The City's Engineering Design Criteria, which sets the standards for the design of infrastructure within the City, specifies a maximum length for dead-end roads. As such, any roads longer than 200 metres (722 ft.) would require a second outlet. 31 Avenue is currently approximately 364 metres (1,194 ft.) long. This is to ensure that, in the case of an emergency, there would be adequate access for our fire and emergency services so that they may be able to reach the destination in a timely manner. This connection also establishes a finer grid local road network in accordance with the City's Transportation Strategic Plan which identifies improving local road network connectivity for all road*

*classifications throughout neighbourhoods in order to distribute traffic across, improve routing options, reduce circulation, and increase access for non-motorized modes.*

*31 Avenue is currently designated as a local road and is planned to remain as such. In the context of the planned network in the area, it is anticipated that 31 Avenue would function primarily to serve local residents in the neighbourhood, as compared to the other roads designated as collectors and arterials, which are intended to allow traffic flow and carry larger volumes of traffic.*

*Safety issues are reported on both dead-end roads and through-roads, and therefore safety issues depend less on whether or not a road is connected. Rather, more effective measures to address safety concerns may include other means such as visibility, personal and community awareness, and prevention strategies set forth by the RCMP.)*

### SUSTAINABLE DEVELOPMENT CHECKLIST

The applicant prepared and submitted a sustainable development checklist for the subject site on January 12, 2018. The table below summarizes the applicable development features of the proposal based on the seven (7) criteria listed in the Surrey Sustainable Development Checklist.

<b>Sustainability Criteria</b>	<b>Sustainable Development Features Summary</b>
1. Site Context & Location (A1-A2)	<ul style="list-style-type: none"> <li>The subject site is located within the North Grandview Heights NCP area.</li> </ul>
2. Density & Diversity (B1-B7)	<ul style="list-style-type: none"> <li>The proposed unit density is 6.8 uph (2.7 upa).</li> <li>A mix of residential and open space areas are proposed.</li> <li>The proposed lots will allow for rear yard garden space.</li> </ul>
3. Ecology & Stewardship (C1-C4)	<ul style="list-style-type: none"> <li>The proposal incorporates Low Impact Development (LIDS) in its design, including absorbent soils, sediment control devices, perforated pipe systems, permeable pavement/surfaces, Green Street Infiltration Systems, landscaping and grassed basins.</li> <li>The development proposal includes open space areas.</li> <li>The proposal includes provision for recycling and organic waste pick-up.</li> </ul>
4. Sustainable Transport & Mobility (D1-D2)	<ul style="list-style-type: none"> <li>Multi-use pathway (MUP) for cyclists and pedestrians will be provided.</li> </ul>
5. Accessibility & Safety (E1-E3)	<ul style="list-style-type: none"> <li>The design of the proposed homes will incorporate CPTED design principles such as natural surveillance and natural access control.</li> </ul>
6. Green Certification (F1)	<ul style="list-style-type: none"> <li>Green certification is not proposed.</li> </ul>
7. Education & Awareness (G1-G4)	<ul style="list-style-type: none"> <li>Surrounding residents were notified through the standard pre-notification and development proposal sign procedures.</li> <li>Residents were also consulted on the proposed NCP amendment through the consultation process for Development Application No. 7915-0352-00.</li> </ul>

INFORMATION ATTACHED TO THIS REPORT

The following information is attached to this Report:

Appendix I.	Lot Owners and Action Summary (Confidential) and Project Data Sheets
Appendix II.	Proposed Subdivision Layout
Appendix III.	Engineering Summary
Appendix IV.	School District Comments
Appendix V.	Excerpt from the September 7, 2017 AFSAC Meeting Minutes
Appendix VI.	Building Design Guidelines Summary
Appendix VII.	Summary of Tree Survey and Tree Preservation and Tree Plan
Appendix VIII.	Current North Grandview Heights NCP Plan
Appendix IX.	Proposed NCP Amendment Plan (Proceeding Under Development Application No. 7915-0352-00)

*original signed by Ron Hintsche*

Jean Lamontagne  
General Manager  
Planning and Development

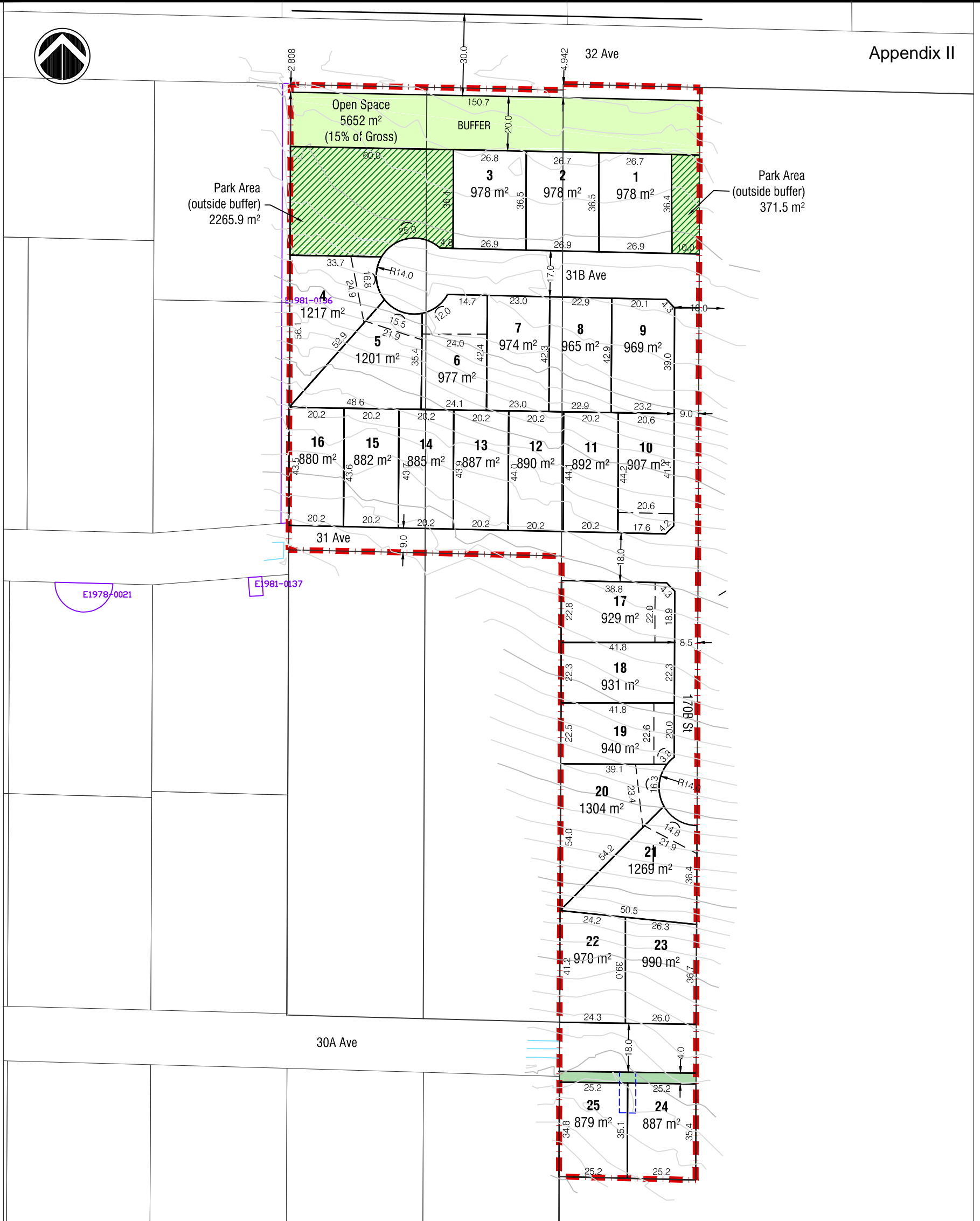
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APPENDIX I HAS BEEN  
REMOVED AS IT CONTAINS  
CONFIDENTIAL INFORMATION

## SUBDIVISION DATA SHEET

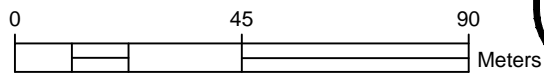
Proposed Zoning: RQ

<b>Requires Project Data</b>	<b>Proposed</b>
<b>GROSS SITE AREA</b>	
Acres	9.25
Hectares	3.74
<b>NUMBER OF LOTS</b>	
Existing	3
Proposed	25
<b>SIZE OF LOTS</b>	
Range of lot widths (metres)	20 m – 27 m
Range of lot areas (square metres)	880 m <sup>2</sup> – 1,366 m <sup>2</sup>
<b>DENSITY</b>	
Lots/Hectare & Lots/Acre (Gross)	6.68 uph / 2.7 upa
Lots/Hectare & Lots/Acre (Net)	8.3 uph / 3.3 upa
<b>SITE COVERAGE (in % of gross site area)</b>	
Maximum Coverage of Principal & Accessory Building	25%
Estimated Road, Lane & Driveway Coverage	15%
Total Site Coverage	
<b>PARKLAND</b>	
Area (square metres)	5,644 m <sup>2</sup>
% of Gross Site	15%
	<b>Required</b>
<b>PARKLAND</b>	
5% money in lieu	NO
<b>TREE SURVEY/ASSESSMENT</b>	YES
<b>MODEL BUILDING SCHEME</b>	YES
<b>HERITAGE SITE Retention</b>	NO
<b>FRASER HEALTH Approval</b>	NO
<b>DEV. VARIANCE PERMIT required</b>	
Road Length/Standards	NO
Works and Services	NO
Building Retention	NO
Others	NO



Legendary Developments Ltd.  
 Single Family Subdivision  
 17018, 17032 & 17048 32 Ave, Surrey

## SUBDIVISION CONCEPT



Project No.: 17-412  
 Date: 01 / 05 / 2018

Drawing

1

**LEGAL DESCRIPTION**

PID: 008-270-236  
 PID: 002-370-808  
 PID: 008-906-092

**GROSS SITE AREA**  
 3.75 hectares / 9.26 acres

**NET SITE AREA**  
 3.03 hectares / 7.5 acres

**EXISTING DESIGNATIONS**

Zoning: RA  
 NCP: RA/ RA-G/ Open Space  
 OCP: Suburban

**PROPOSED DESIGNATIONS**

Zoning: RQ  
 NCP: Single-Detached (2-4 upa) / Open Space  
 OCP: Suburban

**LOT YIELD**

Existing Number of Lots: 3  
 Proposed Number of Lots: 25

**DENSITY**

Gross: 6.7 uph / 2.7 upa  
 Net: 8.2 uph / 3.3 upa

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TO: **Manager, Area Planning & Development  
- South Surrey Division  
Planning and Development Department**

FROM: **Development Engineer, Engineering Department**

DATE: **May 2, 2018** PROJECT FILE: **7816-0228-00**

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RE: **Engineering Requirements  
Location: 17018 32 Ave**

### REZONE/SUBDIVISION

*The layout submitted for this development requires the applicant to obtain off-site statutory right-of-ways (SRWs) for the construction of 170B Street and 31 Avenue to the minimum 11.5m wide half road standard. Access to Lots 17 to 21 are proposed to be from 170B Street, and accesses to Lots 12 to 16 are proposed to be from 31 Avenue. The applicant will not proceed to final adoption without the necessary land to construct the 11.5m half road standard via SRW or through dedication from project 15-0352-00.*

#### **Property and Right-of-Way Requirements**

- Dedicate 2.808 m to 4.942 m on 32 Avenue for ultimate 30m Arterial Road allowance.
- Dedicate 17.0 m for 31B Ave for 17.0 m Limited Road allowance with R=14.0 m cul-de-sac.
- Dedicate 3.0 m x 3.0 m corner cut at 31B Avenue and 170B Street.
- Dedicate 18.0 m for 31 Avenue (fronting Lots 10 & 11) for 18.0 m Through Local Road.
- Dedicate 11.5 m for 31 Avenue for Half Road allowance fronting lots 12 to 16 (ultimate 18.0m Through Local Road standard), or 9.0 m road dedication with 2.5 m offsite SRW.
- Dedicate 3.0 m x 3.0 m corner cut at 31 Avenue and 170B Street.
- Dedicate 20.0 m for 30A Avenue for ultimate Through Local Road allowance.
- Dedicate 11.5 m for 170B Street half road (for ultimate 17.0 m Local Road allowance), and R=14.0 m cul-de-sac bulb (or 8.5 m dedication with 3.0m offsite SRW).
- Register 0.5 m SRW along all road frontages.
- Secure 2.5 m offsite SRW on 31 Avenue to achieve 11.5 m Half Road standard.
- Secure 3.0 m offsite SRW on 170B Street to achieve 11.5 m Half Road standard.
- Register SRW on Lots 24 and 25 for temporary turnaround, if required.
- Secure offsite SRWs for service corridors, as needed.
- Secure offsite SRW for a detention pond, if the pond is not already constructed by project 7815-0352-00.
- RC for onsite sustainable works to meet the NCP and ISMP requirements.

#### **Works and Services**

- Ensure grading at property line is +/-300 mm to centre line of 32 Avenue.
- Construct 31B Avenue to Limited Local Road standard with 8.0 pavement, and 1.5 m concrete sidewalk on both sides.
- Construct 31 Avenue along the frontage of Lots 12 to 16 to Half Road standard.

NOTE: Detailed Land Development Engineering Review available on file



- Construct 31 Avenue along the frontage of Lots 10 and 11 to Through Local Road standard with 8.5 m pavement and 1.5 m sidewalks.
- Construct 30A Avenue to Through Local Road standard with 8.5 m pavement and 1.5 m concrete sidewalk on north side, and 4.0 m Multi-Use Pathway on south side (including pedestrian lighting for Multi-Use Pathway).
- Construct temporary turnaround if required due to length of temporary dead-end.
- Construct 170B Street to Half road standard with minimum 6.0 m pavement (ultimate 8.0 m pavement width) and 1.5 m concrete sidewalk on one side.
- Secure offsite SRWs for storm drainage servicing corridors, if required.
- Confirm downstream storm system capacity is adequate to service the proposed development, upgrade if required.
- Construct the community detention pond, if the pond is not already constructed by 7815-0352-00.
- Construct storm drainage systems to service the proposed development and the frontage roads. Extend storm sewers up to the tie-in point to the existing system.
- Provide onsite sustainable drainage works as required in the NCP and the Old Logging & Burrows Ditches Integrated Stormwater Management Plan.
- Provide cash in lieu for a pathway connection and landscaping on future parkland as required in the Zoning Bylaw. Locations for the paths to be provided by Parks.
- Construct 200 mm dia water main on 31 Avenue.
- Construct 200 mm dia water main on 170B Street up to 32 Avenue (except on the cul-de-sac, downstream of last hydrant where 100 mm dia water main is required).
- Construct 200 mm dia water main on 31B Avenue.
- Construct water main on 32 Avenue as required servicing the proposed lots.
- Secure offsite SRWs for sanitary servicing corridors, if required.
- Construct the North Grandview Pump Station, if not constructed by others.
- Construct an extension of the Grandview Interceptor from the proposed point through the application site. Provide provisional sizing and profile of interceptor design, if not completed by others.
- Construct sanitary sewer mains to service the proposed lots.
- Pay any Latecomer Charges or Development Work Agreement Levies that may become available from now until completion of the Servicing Agreement for this project.
- Pay 100% cash relative to any DCC Frontender Agreement that may become available from now until completion of the Servicing Agreement for this project.

A Servicing Agreement is required prior to Rezone/Subdivision.

### DEVELOPMENT PERMIT

There are no engineering requirements relative to issuance of the Development Permit except for the items listed above.



Tommy Buchmann, P.Eng.  
Development Engineer

IK1

NOTE: Detailed Land Development Engineering Review available on file



Planning February-07-18

**THE IMPACT ON SCHOOLS**

APPLICATION #: 16 0228 00

**SUMMARY**

The proposed 25 single family lots are estimated to have the following impact on the following schools:

**Projected # of students for this development:**

Elementary Students:	9
Secondary Students:	4

September 2017 Enrolment/School Capacity

<b>Pacific Heights Elementary</b>	
Enrolment (K/1-7):	51 K + 337
Operating Capacity (K/1-7)	76 K + 232
Addition Operating Capacity (K/1-7) 2020	76 K + 512
<b>Earl Marriot Secondary</b>	
Enrolment (8-12):	1857
Capacity (8-12):	1500

**School Enrolment Projections and Planning Update:**

The following tables illustrate the enrolment projections (with current/approved ministry capacity) for the elementary and secondary schools serving the proposed development.

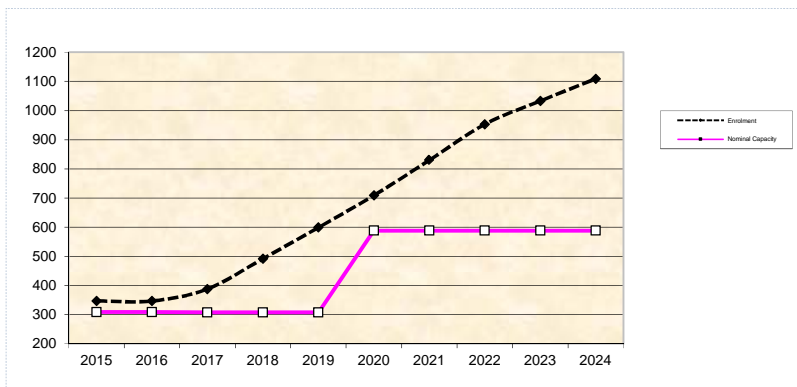
Pacific Heights Elementary is currently over capacity. Rapid enrolment growth is expected to continue into the foreseeable future. As of September 2017, there are 6 portables on site used as enrolling spaces.

In December 2017, the Ministry of Education announced funding for design and construction of the following, in the Pacific Heights catchment:

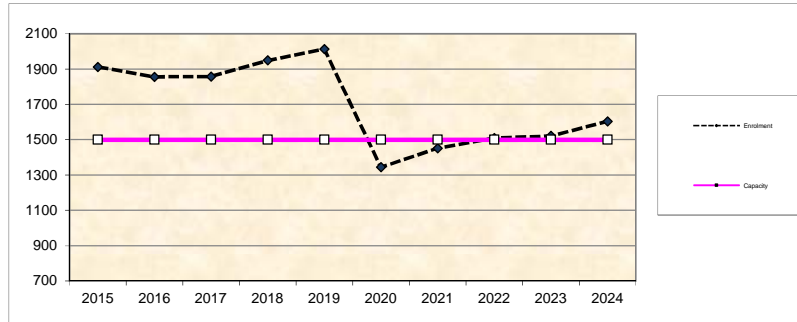
- A 12 classroom addition at Pacific Heights elementary targeted to open September 2019 and
- A new 25 classroom school on Edgewood drive targeted to open September 2020

To relieve the pressure at Earl Marriot, a new 1500 capacity high school located on 26th Ave next to the existing Pacific Heights Elementary is currently in design and construction; and is also targeted to open for September 2020. This new high school has been officially named Grandview Heights Secondary.

**Pacific Heights Elementary**



**Earl Marriot Secondary**



\* Nominal Capacity is estimated by multiplying the number of enrolling spaces by 25 students. Maximum operating capacity is estimated by multiplying the number of enrolling spaces by 27 students.

**2. Development Permit for Farm Protection**

Appendix V

Heather Kamitakahara, Planner  
File: 6880-75; 7916-0228-00

The following comments were made:

- The subject property is 3.7 hectares (9.3 acres) in size, designated Suburban in the Official Community Plan (OCP) and Proposed One Acre Residential Gross Density (RA-G) in the North Grandview Heights Neighborhood Concept Plan (NCP).
- The applicant is proposing to amend the land use designation from Proposed One Acre Residential Gross Density (RA-G) to Single Detached (2.4 upa), amend the NCP to revise the road network and location of open space, rezone from One Acre Residential Zone (RA) to Quarter Acre Residential Zone (RQ), and subdivide into 25 suburban single family residential lots. A Hazard Lands Development Permit for steep slopes and a Farm Protection Development Permit for lots adjacent to the ALR are required under the application.
- The Committee noted that the removal of the large greenspace area will continue to make these farmlands susceptible to flooding. It was noted that without appropriate rainwater management, farmlands would be impacted and the farming capability in 20 years may be worsened with flooding and drainage issues.

The Committee noted the application is consistent with neighbouring applications and generally consistent with city farm protection development permit requirements and request that staff perform a storm management plan.

It was

Moved by P. Harrison

Seconded by G. Hahn

That the Agriculture and Food Security

Advisory Committee recommend to the General Manager of Planning and Development to support Development Application 7916-0228-00.

Carried

**3. Road Connection East of 18669 18 Avenue in the ALR**

Ehab Taha, Engineering Assistant and Maria Skyers, Project Supervisor  
File: 6880-75; 7917-0286-00

The following comments were made:

- The applicants are proposing to extend 18 Avenue for approximately 300 metres which would provide road frontage for all properties in servicing agreement application 7917-0286-00.
- The subject properties are within the Agricultural Land Reserve (ALR) and in accordance with the *Agricultural Land Commission Act*, the City must apply for transportation, utility, and recreation uses in the ALR to the ALC.

## **BUILDING GUIDELINES SUMMARY**

Surrey Project no: 16-0228-00  
Project Location: 17018, 17032, and 17048 - 32 Avenue, Surrey, B.C.  
Design Consultant: Tynan Consulting Ltd., (Michael E. Tynan)

**The draft Building Scheme proposed for this Project has been filed with the City Clerk. The following is a summary of the Residential Character Study and the Design Guidelines which highlight the important features and form the basis of the draft Building Scheme.**

### **1. Residential Character**

#### **1.1 General Description of the Existing and/or Emerging Residential Character of the Subject Site:**

The subject site is located within an old (1970's-1980's) rural/suburban development area. All surrounding properties are zoned RA, and most lots are large with modest old urban homes and mostly native vegetation.

There are a variety of home types including simple rectangular Bungalows, Two Storey, Split Level, and Basement Entry types. Most homes can be classified as "old urban" or "West Coast Traditional" styles. Massing designs range from simple low-scale mass Bungalows to high scale box-like massing on the Basement Entry types. Roof slopes range from 3:12 to 12:12 and roofs surfaces include asphalt shingles, cedar shingles, and membrane type (tar and gravel or roll roofing). Wall cladding materials include vinyl, cedar, stucco, brick, and stone. Landscapes are modest. None of these homes or yards provide suitable context for a year 2017 "Quarter Acre Residential Zone" (RQ) development.

There are two exceptions. One is an estate quality 1990's, 4000+ sq.ft. "Neo-Traditional" Two-Storey home, approximately 100 feet wide, with quadruple garage at 16925 - 30A Avenue. The home has a well balanced, proportionally consistent massing design, with 12:12 slope common gable roof with seven street facing projections. The roof surface is shake profile asphalt shingles. The home is clad in stucco with cedar and stone accents. This can be considered a context home. The other context home is a 1970's, 3000 sq.ft. Cape Cod style 1½ Storey home at 17004 - 30A Avenue, with mid-scale massing characteristics, a 12:12 pitch common gable roof with cedar shingle roof surface, and cedar siding with brick accent.

More significant than the two existing context homes above are the numerous new developments under application in this area including a 13 lot CD (based on RH-G) zone development (16-0389-00) located adjacent to the south side of the subject site, a 30 lot CD (based on RH-G) development (16-0370-00) located south of the subject site, and a 133 lot CD (based on RH-G) development (15-0352-00) located adjacent to the east side of the subject site. These developments will transform this area to a new estate home area with 3500 - 5000 sq.ft Two-Storey homes designed to a high architectural standard with estate quality wall cladding, roof surface, and trim and detailing standards, and above average suburban landscape standards. The building schemes for these developments provide more guidance for the future character of this area than the existing housing stock, and therefore the best context is "regulations context" from nearby building schemes.

**Streetscape:** The subject site is located in an old growth RA zoned area with a rural/suburban character. Most homes are 35 - 45 year old 1400 - 4000+sq.ft. non-context Bungalows, Basement Entry, or Two-Storey type dwellings situated on large lots. The future streetscape implied by new surrounding developments will result in modern estate quality "Traditional", "Neo-Traditional", "Neo-Heritage", "Craftsman Heritage" and compatible style homes which could include compatible forms of "West Coast Contemporary". New homes will have desirable, well balanced, consistently proportioned mid-scale massing characteristics and will have high quality finishing materials. Lots will be landscaped to a high modern suburban standard in accordance with similar requirements of new nearby developments.

## 2. Proposed Design Guidelines

### 2.1 Specific Residential Character and Design Elements these Guidelines Attempt to Preserve and/or Create:

- The new homes are constructed to a high architectural standard, meeting or exceeding standards found in most executive-estate quality suburban subdivisions in the City of Surrey. New homes are readily identifiable as one of the following styles: "Traditional" (including English Country, English Tudor, English Manor, Cape Cod and other sub-styles that impart a formal, stately character), Classical Heritage, Neo-Heritage, estate quality manifestations of the Neo-Traditional style, and styles which are internally consistent, are compatible with other homes, and which exhibit a high level of architectural integrity as determined by the consultant, which could include suburban-estate quality manifestations of "West Coast Contemporary". Note that the proposed style range is not contained within the building scheme, but is contained within the residential character study which forms the basis for interpreting building scheme regulations.
- a new single family dwelling *constructed* on any *lot* meets post year 2016's design standards, which include the proportionally correct allotment of mass between various street facing elements, the overall balanced distribution of mass within the front facade, readily recognizable style-authentic design, and a high trim and detailing standard used specifically to reinforce the style objectives stated above.
- trim elements will include several of the following: furred out wood posts, articulated wood post bases, wood braces and brackets, louvered wood vents, bold wood window and door trim, highly detailed gable ends, wood dentil details, stone or brick feature accents, covered entrance verandas and other style-specific elements, all used to reinforce the style (i.e. not just decorative).
- the development is internally consistent in theme, representation, and character.
- the entrance element will be limited in height (relative dominance) to 1 to 1 ½ storeys.

### 2.2 Proposed Design Solutions:

#### **Interfacing Treatment with existing dwellings)**

There are two homes in this area (16925 - 30A Avenue and 17004 - 30A Avenue) that could be considered to provide acceptable architectural context. However, massing design, construction materials, and trim and detailing standards for new homes constructed in most new suburban zone subdivisions now exceed standards evident on the context homes. The recommendation therefore is to adopt standards commonly found in post year 2016 suburban zoned subdivisions, rather than to specifically emulate the aforesaid two context homes.

<b>Exterior Materials/Colours:</b>	<p>Stucco, Cedar, Fibre-Cement Board, Brick, and Stone. <u>Vinyl siding not permitted</u> on exterior walls.</p> <p>“Natural” colours such as browns, greens, clays, and other earth-tones, and “Neutral” colours such as grey, white, and cream are permitted. “Primary” colours in subdued tones such as navy blue, colonial red, or forest green can be considered providing neutral trim colours are used, and a comprehensive colour scheme is approved by the consultant. “Warm” colours such as pink, rose, peach, salmon are not permitted. Trim colours: Shade variation of main colour, complementary, neutral, or subdued contrast only.</p>
<b>Roof Pitch:</b>	<p>Minimum 6:12, with exceptions to prevent roof ridges from becoming too high (overshadowing of neighbouring lots), to allow for veranda roofs that do not cover upper floor windows, to allow for artistic expression in feature roofs, and to provide a path for exceptional designs with lower slope roofs to be approved subject to consultant approval.</p>
<b>Roof Materials/Colours:</b>	<p>Cedar shingles, shake profile concrete roof tiles, shake profile asphalt shingles with a raised ridge cap, and new environmentally sustainable roofing products should be permitted, providing that the aesthetic properties of the new materials are equal to or better than that of the traditional roofing products. Greys, black, or browns only. Membrane roofs permitted where required by B.C. Building Code.</p>
<b>In-ground basements:</b>	<p>In-ground basements are subject to determination that service invert locations are sufficiently below grade to permit a minimum 50 percent in-ground basement to be achieved. If achievable, basements will appear underground from the front.</p>
<b>Treatment of Corner Lots:</b>	<p>Significant, readily identifiable architectural features are provided on both the front and flanking street sides of the dwelling, resulting in a home that architecturally addresses both streets. One-storey elements on the new home shall comprise a minimum of 50 percent of the width of the front and flanking street elevations of the single family dwelling. The upper floor is set back a minimum of 0.9 metres [3'- 0"] from the one-storey elements.</p>
<b>Landscaping:</b>	<p><i>High suburban standard:</i> Tree planting as specified on Tree Replacement Plan plus minimum 60 shrubs of a minimum 3 gallon pot size. Corner lots shall have minimum 75 shrubs of a minimum 3 gallon pot size, of which not less than 20 shrubs are planted in the flanking street sideyard. Sod from street to face of home. Driveways: exposed aggregate, interlocking masonry pavers, stamped concrete, or coloured concrete in dark earth tones or medium to dark grey only. Driveways shall be <i>constructed</i> with a 0.4m [16 inch] wide border of a contrasting material, conforming materials listed above. Additional landscaping including a three rail transparent fence and an additional 20 shrubs shall be installed along lot lines adjacent to public spaces.</p>

**Other (massing design):** The building scheme contains numerous provisions to ensure vertical massing of the structure is limited by requirements that vertical spaces without intermediary rooflines cannot exceed a height of 1 ½ storeys. Also, the walls of any homes adjacent to a public space require interesting architectural projections, reduced massing of walls through offsets and skirt roofs, and enhanced articulation of the park facing façade.

**CPTED** on the north side of *lots* 1, 2, 3, and 4 and on the east side of *lot* 1 and on the west side of *lot* 3, which are adjacent to publically accessible open space, an “eyes on the park” approach shall be used to design the structure in a manner that provides adequate window areas (not less than 4.65 square metres [50 square feet]) on said walls of high traffic floor areas, to ensure unobstructed views of the public park. Fencing on said sides is limited to a transparent split rail fence of a maximum 4 foot height, with at least 20 shrubs in dwarf varieties only, to ensure there are unrestricted views into the public space.

**Compliance Deposit:** \$5,000.00

**Summary prepared and submitted by:** Tynan Consulting Ltd. Date: May 1, 2018

**Reviewed and Approved by:**  Date: May 1, 2018

## TREE PRESERVATION SUMMARY

Surrey Project No.: 7916 0228 00  
 Project Address: 17018, 17032 and 17048 32 Avenue, Surrey, BC  
 Consulting Arborist: Nick McMahon

ON-SITE TREES:	QUANTITY OF TREES
<b>Total Bylaw Protected Trees Identified</b> (on-site and shared trees, including trees within boulevards and proposed streets and lanes, excluding Park and ESA dedications)	<b>314</b>
<b>Bylaw Protected Trees to be Removed</b>	<b>307</b>
<b>Bylaw Protected Trees to be Retained</b> (excludes trees in Park dedication areas and ESA's)	<b>7</b>
<b>Replacement Trees Required:</b>	
Alder and Cottonwood at 1:1 ratio:                      216 times 1 =    216	
All Other Bylaw Protected Trees at 2:1 ratio:            91 times 2 =    182	
TOTAL:	<b>398</b>
<b>Replacement Trees Proposed</b>	<b>75</b>
<b>Replacement Trees in Deficit</b>	<b>323</b>
<b>Protected Trees Retained in Proposed Open Space/ Riparian Areas</b> (excluded from above quantities)	<b>2</b>

OFF-SITE TREES:	QUANTITY OF TREES
<b>Bylaw Protected Off-Site Trees to be Removed</b>	<b>0</b>
<b>Replacement Trees Required:</b>	
Alder and Cottonwood at 1:1 ratio:                      0 times 1 =    0	
All Other Bylaw Protected Trees at 2:1 ratio:            0 times 2 =    0	
TOTAL:	<b>0</b>
<b>Replacement Trees Proposed</b>	<b>0</b>
<b>Replacement Trees in Deficit</b>	<b>0</b>

N/A denotes information "Not Available" at this time.

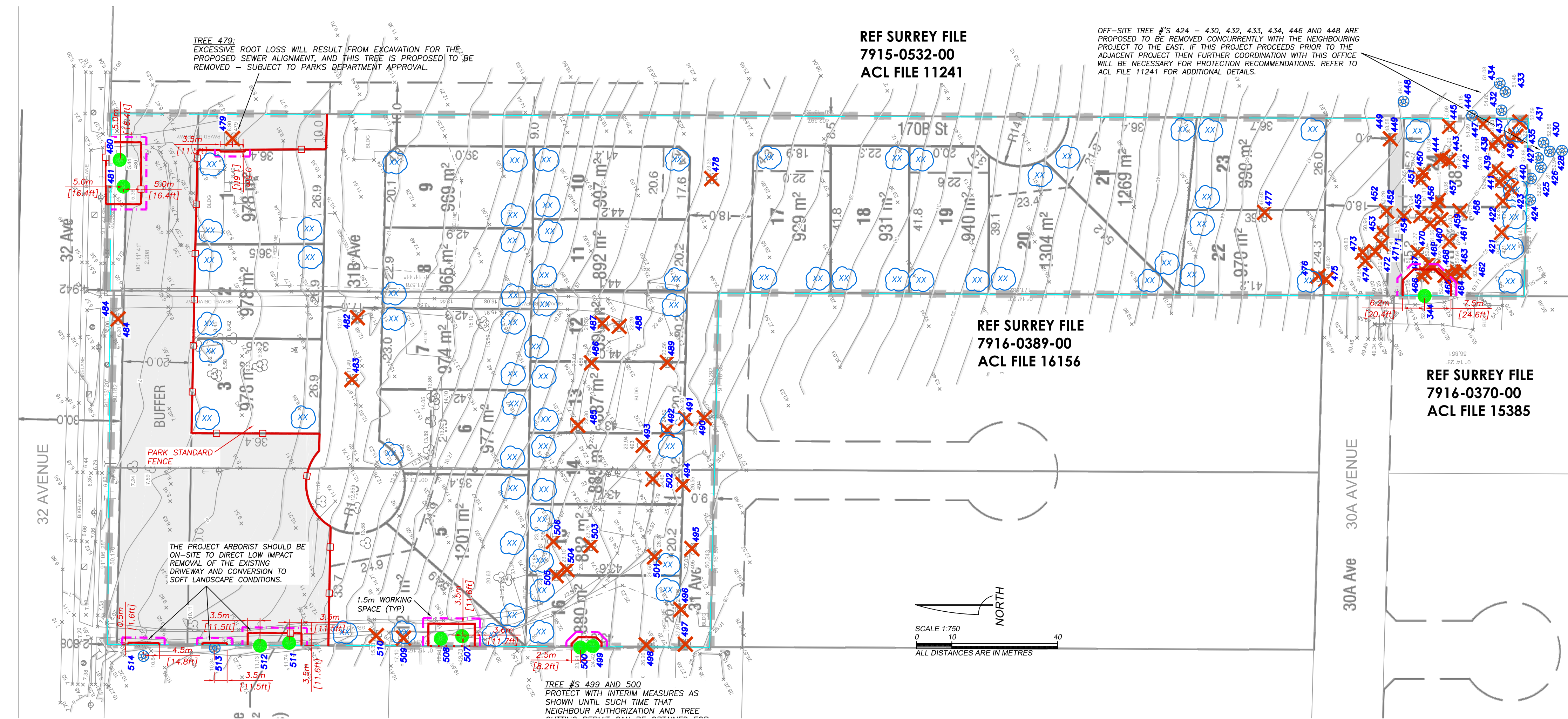
This summary and the referenced documents are prepared and submitted by:



Nick McMahon, Consulting Arborist    Dated:    May 1, 2018

Direct: 604 812 2986  
 Email: nick@aclgroup.ca





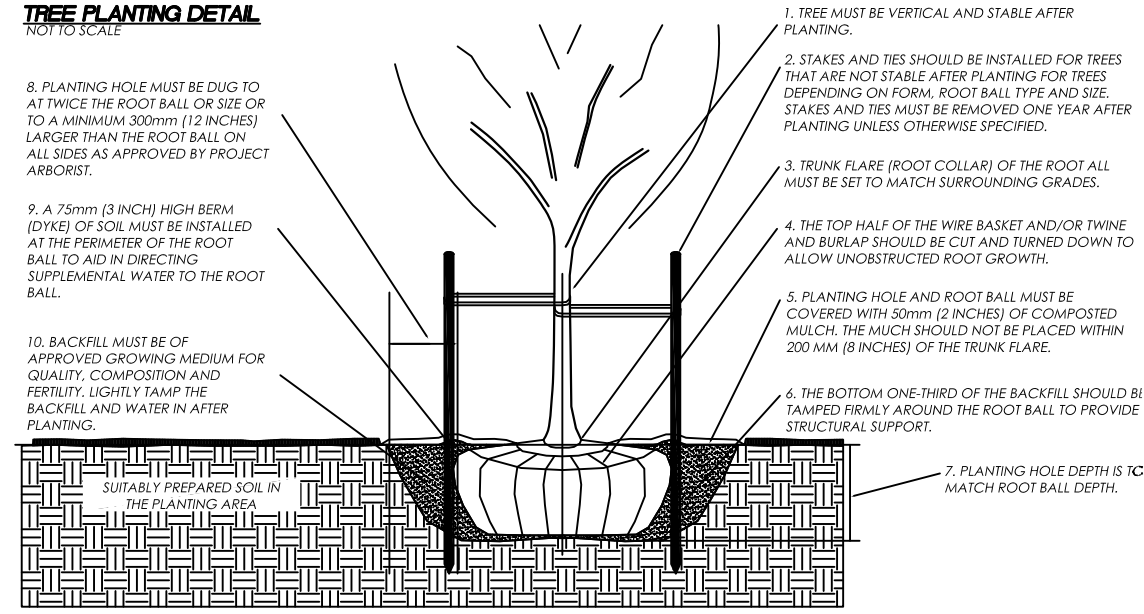
- LEGEND:**
- XXX denotes TAG NUMBER or ID REFERENCE.
  - AC denotes ALDER or COTTONWOOD TREE (untagged bylaw sized).
  - ⊗ denotes DRIPLINE (spread of the branches and foliage) of the tree.
  - denotes RETENTION tree (proposed).
  - ⊗ denotes REMOVAL tree (proposed).
  - ⊗ denotes HIGH RISK REMOVAL tree (proposed).
  - ⊗ denotes OFF-SITE tree (to be protected and/or owner contacted as noted).
  - ⊗ denotes NON-BY-LAW undersize tree (as measured by project arborist).
  - ⊗ denotes SITE or STUDY AREA BOUNDARY.
  - ⊗ denotes TREE PROTECTION ZONE (TPZ) setback alignment as specified by project arborist.
  - XX denotes REPLACEMENT TREE proposed (conceptual location - see plant list for details).

**SUGGESTED PLANT LIST: REPLACEMENT TREES**

Please use botanical name when ordering.  
Current arboricultural best management practices and BCSLA/BC/LNA standards apply to; quality, root ball, health, form, handling, planting, guying/staking and establishment care.

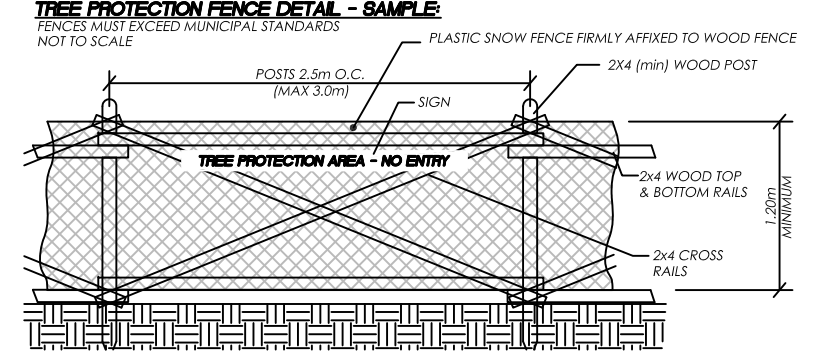
CODE	QTY	SIZE	BOTANICAL NAME	COMMON NAME
<b>DECIDUOUS - LARGE SCALE:</b>				
CJ		5cm C	Cercidiphyllum japonicum	Katsuratree
PP		5cm C	Parrotia persica	Persian ironwood
<b>DECIDUOUS - MEDIUM SCALE:</b>				
AG		5cm C	Acer griseum	Paperbark maple
CBF		5cm C	Carpinus betulus 'Fastigiata'	Fastigiate hornbeam
FSP		5cm C	Fagus sylvatica 'Pendula'	Weeping European beech
SP		5cm C	Stewartia pseudocamellia	Japanese stewartia
<b>DECIDUOUS - SMALL SCALE:</b>				
CC		3.5m H	Cercis canadensis	Redbud
MGR		5cm C	Magnolia grandiflora	Southern magnolia evergreen
SJ		5cm C	Styrax japonicum	Japanese snowbell
<b>EVERGREEN - MEDIUM SCALE:</b>				
CNP		3.5m H	Chamaecyparis nootkatensis 'Pendula'	Weeping yellow cedar
CO		3.5m H	Chamaecyparis obtusa	Hinoki cypress
<b>EVERGREEN - SMALL SCALE:</b>				
APC		3.5m H	Abies procera 'Glauca'	Noble fir
PO		3.5m H	Picea omorika	Serbian spruce

- TREE PLANTING GUIDELINES:**
- CONCEPTUAL DESIGN:** This drawing represents a conceptual schematic of replacement tree planting recommendations in context to municipal requirements. Selection of species and the siting of trees must conform to the municipal standards.
  - SITING:** Additionally, new trees should be planted at least 2.0 m from any property line and at least 3.0 m from any roads, lines, catch basins, lawn drains and other infrastructure, and at a minimum setbacks from buildings as follows: 4.0 m for small category, 6.0 m for medium category and 8.0 m for large category trees.
  - SOIL PREPARATION:** On disturbed sites or construction sites the subsoil and planting soils in proximity to the planting sites may be damaged such that the soils are overly compacted, poorly drained, and/or of inferior composition from site preparation and construction activities. In those cases, subsoil renovation and amendment, and/or replacement of existing soil with suitable growing medium to at least 60cm depth within a suitable radius of the planting site for each tree will be required.
  - STAKEOUT:** Replacement trees are to conform to Current BC Landscape Standards as published and updated from time to time by BCSLA/BC/LNA in regards to specifications for quality, selection, site preparation, handling, planting methods, staking and establishment maintenance.
  - ALTERNATES:** The species choices are for consideration only. If alternate species are desired by the owner, the species must conform to the municipal standards, and should conform to a comparable size and form of the tree species that was conceptually specified for that location (i.e. small, medium or large of mature height and/or columnar, pyramidal or columnar, spreading or normal habit).
  - LANDSCAPE SURFACE FINISHING:** The existing site surrounding the base of planted trees is to be finished as a planting bed with shrubs and/or herbaceous ground cover (i.e. not grass lawn) to complement the trees. If trees are planted within a lawn area, the grass should be excluded from a much circle of at least 1.0 m radius around each tree trunk and finished with a 75 cm depth (13 inch) depth of 33mm (1 1/2 inch) composted bark mulch. Hand weeding is favoured over using trimmers and mowers due to the potential for those mechanical devices to damage the trunk and roots of the new tree.
  - WATERING:** Most species and most landscape conditions will not require permanent irrigation after establishment. However, interim watering of the root balls will be required for at least one growing season after planting. This should be completed by hand watering from an on-site delivery system, a delivery watering device, or a temporary irrigation system. The watering schedule should be adapted to suit the weather conditions as they change, and in response to monitoring the root ball soil hydrology. On a conceptual basis, we recommend watering intervals as follows:
    - February 1 to March 31: Every two weeks
    - March 1 to June 30: Once per week (may reduce to once every 2 weeks in sustained heavy rainfall conditions)
    - July 1 to August 31: Once per week (may increase to twice per week in drought conditions)
    - September 1 to October 31: Every two weeks
    - November 1 to February 28: Every two weeks
  - STAKING:** Stake out to be installed as per BC Landscape Standards and/or as directed by the project arborist. All stakes and related hardware must be removed by the project arborist, unless otherwise required for a longer term or as directed by the project arborist.
  - MAINTENANCE:** Maintenance during the establishment period and all future tree maintenance for the life of the tree, should include a review of structural pruning requirements within the first year, and the tree should be inspected for pest or disease issues. All pruning work should be made to proper arboricultural standards. It is recommended that any assessment or treatment of trees be undertaken by a tree service contractor employing qualified ISA Certified arborists with compliance to ANSI A300 Pruning Standards.



**TREE PROTECTION GUIDELINES:**

- TREE PROTECTION ZONE (TPZ) SETBACKS:** The Tree Protection Zone (TPZ) alignments are established as directed by this office to provide a suitable setback to ensure adequate root protection to maintain tree health and stability. These alignments are based on site and tree conditions as determined by the project arborist, and they supersede any other tree protection setbacks provided by others (including setbacks derived from municipal guidelines), and are conditional to certain mitigation measures being undertaken (i.e. root pruning, compensatory measures to remaining root density). The tree protection guidelines also apply to the overhead portions of the tree (i.e. branches and foliage).
- TREE PROTECTION FENCE (BARBERS):** Barriers must be erected of the specified alignments and setbacks, maintained in good condition until the project reaches substantial completion, and the restrictions and guidelines implemented as detailed herein through the completion of the landscaping phase. The materials and installation of the fence must meet or exceed the municipal standards. Signs stating "TREE PROTECTION ZONE - NO ENTRY" must be placed on the protection fence at a suitable frequency or the discretion of the project arborist. Approach will install signs in cases that we are retained to provide field services for compliance during construction. The owner, contractor, sub-contractors and trades should be made aware of the restrictions herein, and consult with this office for any questions. If required, tree protection fencing must be inspected and approved by the municipality and/or the project arborist prior to commencement of any alteration, site preparation or construction work.
- SURVEY OF FENCES:** If any tree protection fences are aligned with or within close proximity to a restrictive covenant, a property line, and/or an environmentally sensitive or protected area, the contractor must undertake a survey of the location of those property lines such that the tree protection fence does not infringe on any such area.
- TREE PROTECTION AND LAND CLEARING OPERATIONS:** If large scale land clearing is required in the TPZ and there is undesirable vegetation located in the forest edge interfaces along the perimeter of the land clearing areas, and/or when certain trees within a TPZ are specified for removal, it is strongly recommended that the land clearing contractor should coordinate with the project arborist in advance to review their work plan and to identify retained trees and the protection measures for them, as well as during the clearing process to improve compliance and to assess forest edge and provide tree failure risk mitigation assessments. For landscaping purposes, the arborist should be required to provide unit costs for the following treatments (including disposal of waste) in the forest interface zones:
  - Removal of defective trees in size categories of small (d.b.h. up to 20 cm abn), medium (d.b.h. 21 cm to 45 cm), large (d.b.h. 46 to 75 cm) and very large (76 cm dbh and greater); and
  - Pruning services (branch).
 Note that approvals for leaving chips or large woody debris created by the waste of these operations on the site will be investigated with affected property owners upon request. In certain cases, and subject to municipal approval, interim tree protection measures instead of standard tree protection fence installation may be acceptable, such as but not limited to:
  - Retaining the services of the project arborist to attend and direct the compliance to protection measures during the clearing operation that is in proximity to the TPZ; or
  - Installing alternative demarcation of the TPZ such as survey stakes, painting lines on the ground, and/or placing rope and flagging.
- TREE NOTIFICATION GUIDELINES:** Any construction related work or activities within or directly adjacent to a TPZ requires advance approval and the on-site direction of the project arborist. The trunk, branches, foliage and roots of retained trees, as well as the soil within the tree protection zones, must not be damaged by construction activities. Except as approved and directed by the project arborist, activities within and access to the TPZ are restricted during the site preparation, construction and landscape installation phases of the project as follows:
  - Restricted low impact methods for the removal of trees and stumps within or adjacent to TPZ.
  - No soil disturbance, including trenching for underground services or utilities, shipping of organic soil for horticulture installation, excavation for building foundations, fill placement, or trenching for irrigation or conduit installation.
  - No waste or transport of soil, soil, construction materials, waste materials, etc.
  - No waste or wetting of concrete, slacks, gravel, potholes or other materials that may adversely impact the soil or roots.
  - No passage or operation of vehicles or equipment.
  - No placement of temporary structures or services.
  - No offing lights, signs, cables or any other device to retained trees.
  - No unauthorized pruning or cutting of retained trees. Any pruning or other treatment of a retained tree must be completed by a qualified arborist or tree service firm employing ISA Certified arborists and in accordance with ANSI A300 Standards, and/or under the direction of the Project Arborist from the office, and.
  - Any excavations adjacent to the TPZ will require the attendance of the project arborist and root pruning to be undertaken as necessary.
  - The use of aerial lifts, cranes or other overhead equipment is restricted in proximity to retained trees and should be planned with the site and height of the crown of the tree accordingly.
 It is recognized that certain unpreventable construction conflicts with a TPZ may arise that could interfere with the protection of the selected tree. However, any encroachment into a TPZ and/or changes to the tree retention scheme are subject to approval in advance by the project arborist and the municipality. Certain TPZ restrictions or guidelines noted herein may be waived if they are considered by the project arborist to be tolerable impacts, and/or if the impacts to the trees can be successfully mitigated by implementing special measures, protection systems, compensatory treatments, and/or follow-up work, as specified and directed by the office.
- LANDSCAPING:** The landscaping phase is when retained trees can be severely damaged. The operation of equipment, the placement of growing medium, grading and subsoil preparation for horticultural features, (i.e. sidewalks and patios), site preparation for retaining walls and footings, excavation for fences, signs and other landscape features, digging of planting holes for new plants and trees, the digging of trenches for irrigation, drainage and lighting, and the placement of turf and other finishing works, all pose a very high



**PLAN NOTES:**  
Plan is based on drawings supplied by the project surveyor (BCSLA) Engineer (P ENG) and/or Design Professional and is provided for informational purposes only. It is not intended to certify the accuracy of locations or features or dimensions. Please refer to the original drawings for those professionals for those purposes.

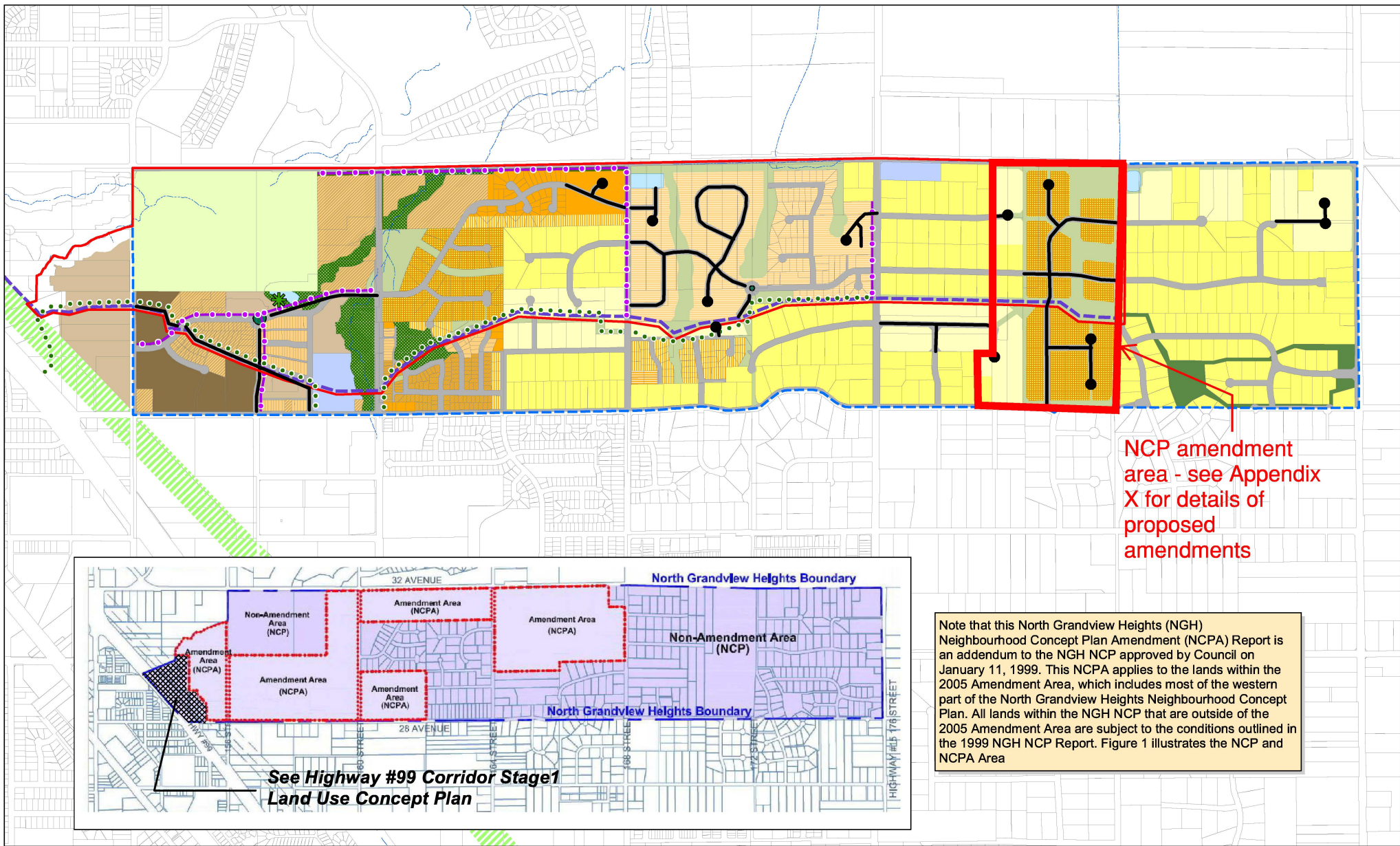
**ARBORTECH CONSULTING**

SUITE 145 - 12051 HORSESHOE WAY, RICHMOND, BC V7A 4V4 P 604 275 3484

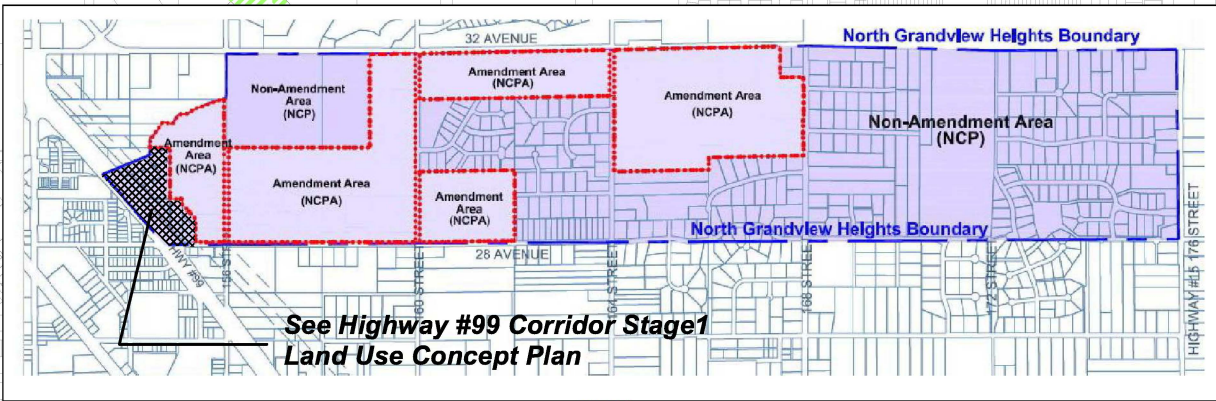
5	MAY 1, 2018	UPDATED TREE PROTECTION
0	MAR 31, 2017	INITIAL SUBMISSION
REV #	DATE	COMMENTS

**TREE MANAGEMENT DRAWING**

PROJECT: PROPOSED SUBDIVISION  
ADDRESS: 17018, 17032 & 17048 32 Ave, Surrey  
CLIENT: LEGENDARY - AFLIN AND MARTIN  
ACL FILE: 15452 SHEET: 1 OF 1



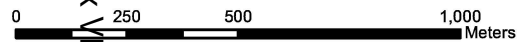
NCP amendment area - see Appendix X for details of proposed amendments



See Highway #99 Corridor Stage 1 Land Use Concept Plan

Note that this North Grandview Heights (NGH) Neighbourhood Concept Plan Amendment (NCPA) Report is an addendum to the NGH NCP approved by Council on January 11, 1999. This NCPA applies to the lands within the 2005 Amendment Area, which includes most of the western part of the North Grandview Heights Neighbourhood Concept Plan. All lands within the NGH NCP that are outside of the 2005 Amendment Area are subject to the conditions outlined in the 1999 NGH NCP Report. Figure 1 illustrates the NCP and NCPA Area

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li> Proposed One Acre Residential (RA)</li> <li> Proposed One Acre Residential Gross Density (RA-G)</li> <li> Single Detached (2 u.p.a.)</li> <li> Single Detached (3-4 u.p.a.)</li> <li> Larger Transition Lots (2-3 u.p.a.)</li> <li> Single Detached (4-6 u.p.a.)</li> <li> Cluster Housing (6-8 u.p.a.)</li> <li> Single Detached (7 u.p.a.)</li> <li> Single Family Small Lots</li> <li> Multiple Residential (15-25 u.p.a.)</li> </ul> | <ul style="list-style-type: none"> <li> Townhouse 15 u.p.a max</li> <li> Existing One Acre &amp; Half Acre Lots</li> <li> Environmental Area</li> <li> Proposed Open Space / Linear Open Space</li> <li> Existing Elementary School</li> <li> Existing Cemetery</li> <li> Proposed Detention / Sedimentation Ponds (size/location to be confirmed at detailed subdivision/rezoning stage)</li> </ul> | <ul style="list-style-type: none"> <li> Study Area Boundary</li> <li> Plan Area-NCP Area Boundary</li> <li> Hydro Right of Way / Greenway</li> <li> Proposed North Grandview Interceptor</li> <li> Creeks</li> <li> Proposed Roads</li> </ul> | <ul style="list-style-type: none"> <li> Enhanced Sidewalk/Walkway</li> <li> Linear Park / Multi-use Trail</li> <li> Round-About</li> <li> Neighbourhood Park (size/location to be confirmed at detailed subdivision/rezoning stage)</li> </ul> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



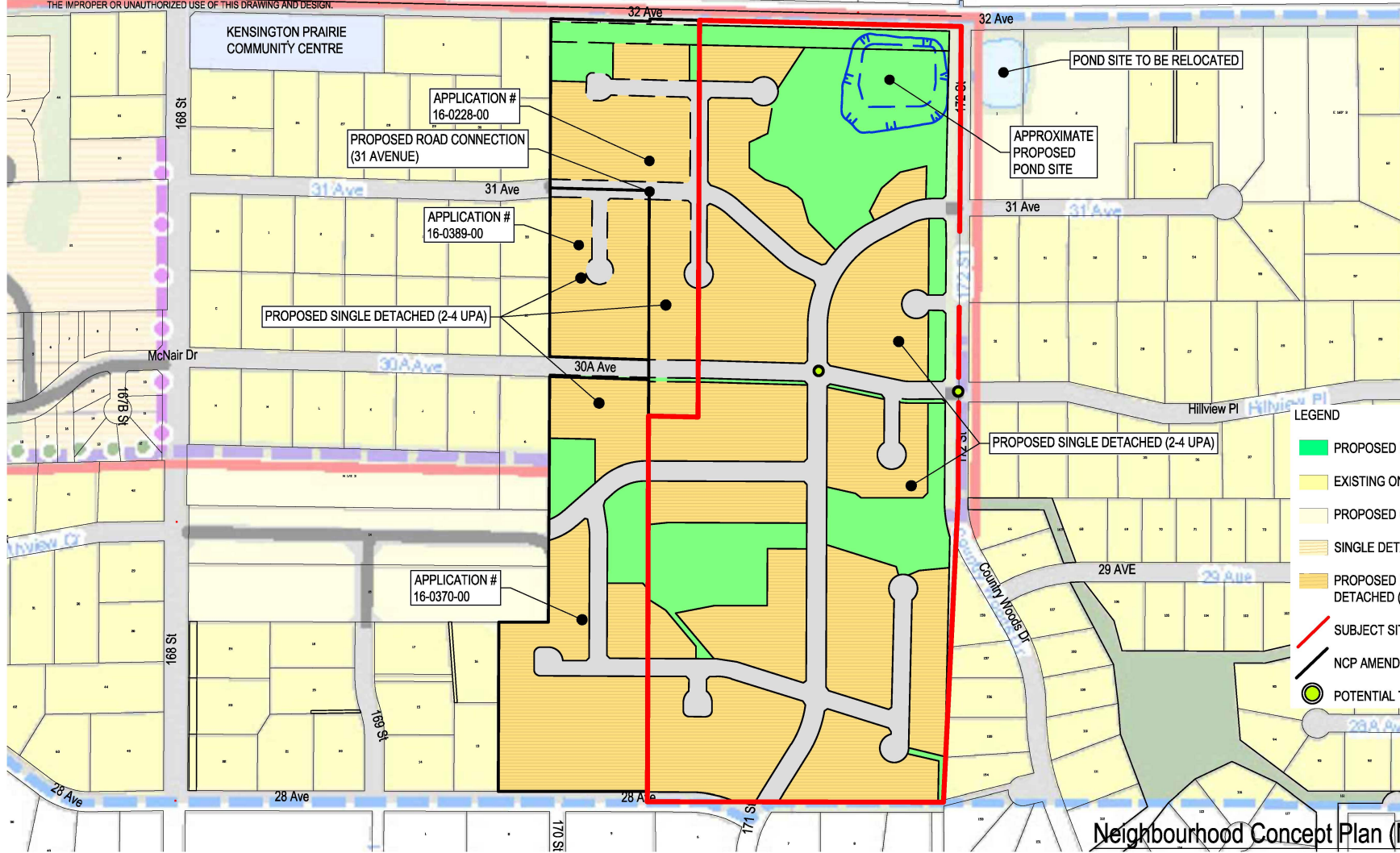
# NORTH GRANDVIEW HEIGHTS LAND USE PLAN

CITY OF SURREY - PLANNING & DEVELOPMENT DEPARTMENT

Approved by Council: January 11, 1999 Amended 12 December 2017

This map is provided as general reference only. The City of Surrey makes no warranties, express or implied, as to the fitness of the information for any purpose, or to the results obtained by individuals using the information and is not responsible for any action taken in reliance on the information contained herein.

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- LEGEND**
- PROPOSED PUBLIC OPEN SPACE
  - EXISTING ONE ACRE AND HALF ACRE LOTS
  - PROPOSED ONE ACRE RESIDENTIAL (RA)
  - SINGLE DETACHED (2.0 UNITS PER ACRE)
  - PROPOSED NEW DESIGNATION "SINGLE FAMILY DETACHED (2-4 upa)"
  - SUBJECT SITE (7915-0352-00)
  - NCP AMENDMENT BOUNDARY
  - POTENTIAL TRAFFIC MANAGEMENT FEATURE

**Neighbourhood Concept Plan (NCP) - Sketch 47**

Chia Properties - 17190 32 Ave, Surrey, BC

**McElhanney**  
 McElhanney Consulting Services Ltd.  
 SUITE 2300 - CENTRAL CITY TOWER  
 13450 102 AVENUE, SURREY, BC  
 V3T 5X3  
 P: 604-596-0391  
 F: 604-584-5050

**NOTES:**

- THIS DRAWING IS FOR PRELIMINARY LAYOUT ONLY, AND SUBJECT TO MUNICIPAL APPROVAL.
- THE AREAS AND DIMENSIONS SHOWN ON THE DRAWINGS ARE SUBJECT TO DETAILED SURVEY AND CALCULATIONS, AND MAY VARY.
- THIS DRAWING IS NOT TO BE USED FOR LEGAL TRANSACTIONS.

Scale: 1:4000  
 Date: February 27, 2018  
 Job No.: 2111-03219-0  
 Mun. Proj.: -

Appendix IX

DATE: Tuesday, February 27, 2018 10:23:28 AM LOCAL TIME PROJECT: 17190 32 AVENUE STREET SURVEY (17190 32 AVENUE) DRAWING NO.: 17190 32 AVENUE (17190 32 AVENUE) SHEET NO.: 17190 32 AVENUE (17190 32 AVENUE) SHEET SIZE: A3 (11" X 17")