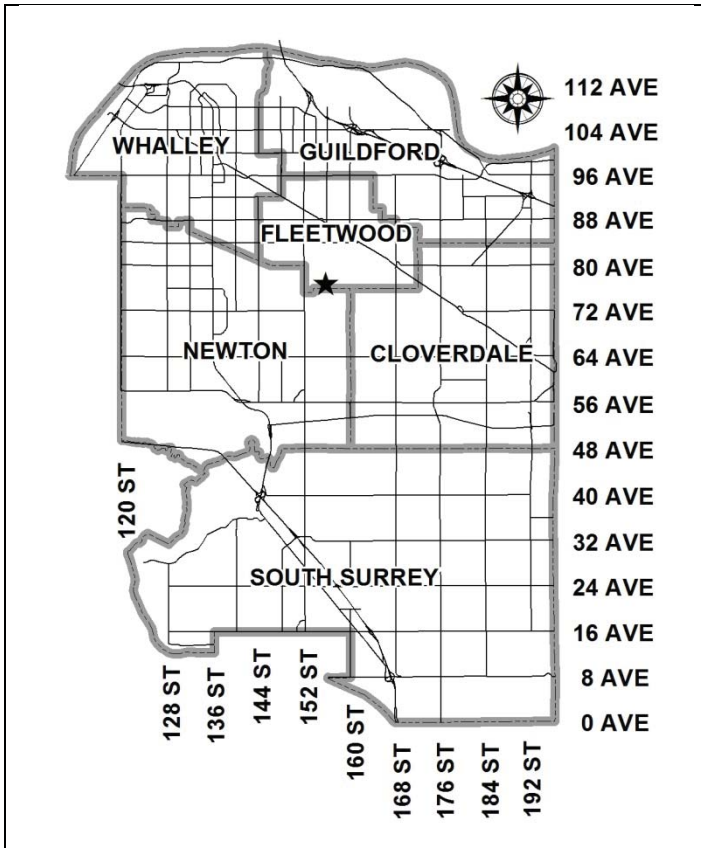


City of Surrey
PLANNING & DEVELOPMENT REPORT

File: 7916-0222-00

Planning Report Date: September 12, 2016



PROPOSAL:

- **NCP Amendment** from 1/4 Acre Gross Density (4 upa) to Low-Medium Density Cluster (5 upa)
 - **Rezoning** from RA to RF
- to allow subdivision into 8 single family lots.

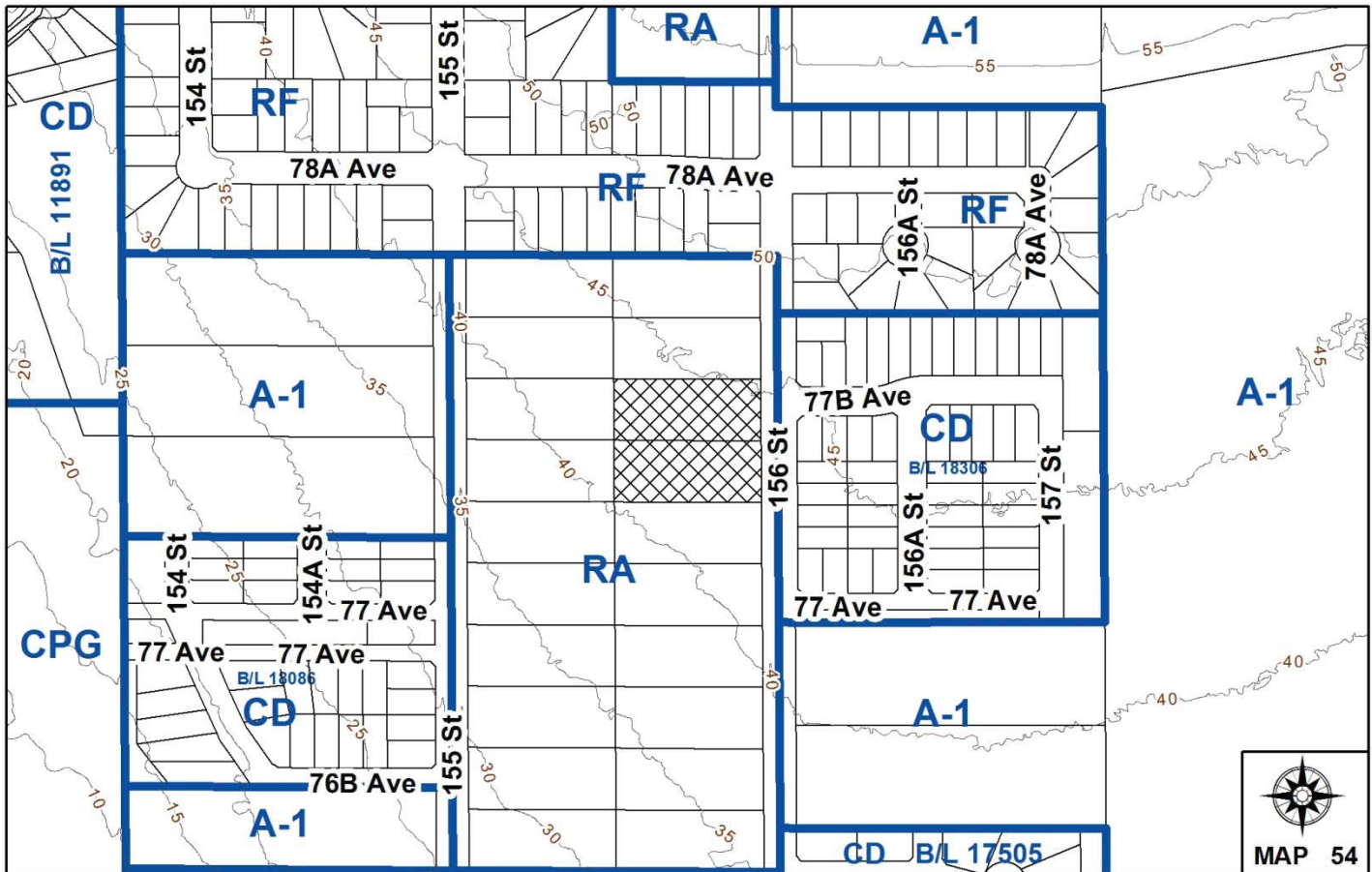
LOCATION: 7761 and 7781 - 156 Street

OWNERS: Kewal S Birk et al

ZONING: RA

OCP DESIGNATION: Urban

NCP DESIGNATION: 1/4 Acre Gross Density (4 upa)



RECOMMENDATION SUMMARY

- By-law Introduction and set date for Public Hearing for Rezoning.

DEVIATION FROM PLANS, POLICIES OR REGULATIONS

- An amendment to the Fleetwood Enclave Infill Area Concept Plan is required to permit an increase in the allowable density from 4 units per acre (upa) to 5 upa.

RATIONALE OF RECOMMENDATION

- Despite the increase in density, the proposed lot areas and lot widths are consistent with those proposed in the Fleetwood Enclave Infill Area Concept Plan, which was approved by Council on March 11, 2013 (Corporate Report No. R049; 2013).
- The applicant will provide cash-in-lieu compensation to fulfill the 8.5% open space requirement of the Fleetwood Enclave Infill Area Concept Plan.
- In order to compensate for the additional pressure that an amendment to the "Low-Medium Density Cluster (5 upa)" designation will have on the larger community, the applicant has agreed to a community benefit in the form of additional cash-in-lieu compensation.
- The proposed increase in density is consistent with the development applications to the east and south of the subject site (File No. 7915-0379-00, 7916-0066-00, 7915-0275-00 and 7914-0357-00). Each of these rezoning applications (from RA to RF) has been granted Third Reading by Council and requires a similar amendment to the Fleetwood Enclave Infill Area Concept Plan from 4 upa to 5 upa for which the applicants have agreed to a community benefit (additional cash-in-lieu of open space compensation).

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 "Single Family Residential Zone (RF)" and a date be set for Public Hearing.
2. 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) the applicant address open space requirements of the Fleetwood Enclave Infill Area Concept Plan, to the satisfaction of the General Manager, Planning and Development;
 - (g) the applicant provide an additional community benefit to address the additional pressure that an amendment to the "Low-Medium Density Cluster (5 u.p.a.)" designation will have on the larger community, to the satisfaction of the General Manager, Parks, Recreation and Culture; and
 - (h) registration of a Section 219 Restrictive Covenant for "no build" on a portion of proposed Lot 1 until future consolidation with a portion of the adjacent property to the south (7743 - 156 Street).
3. Council pass a resolution to amend the Fleetwood Enclave Infill Area Concept Plan to redesignate the land from "1/4 Acre Gross Density 4 (upa)" to "Low-Medium Density Cluster (5 upa)" when the project is considered for final adoption.

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:**

4 Elementary students at Coyote Creek Elementary School
2 Secondary students at Fleetwood Park 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 Summer 2017.

Parks, Recreation & Culture: Parks notes that an increase in density to "Low-Medium Density Cluster (5 upa)" designation in the Fleetwood Enclave Plan will place additional pressure on parks and open space in the community. Parks supports the proposed amendment with the provision of an appropriate community benefit.

SITE CHARACTERISTICS

Existing Land Use: Residential acreage parcels with existing houses, to be demolished.

Adjacent Area:

Direction	Existing Use	NCP Designation	Existing Zone
North:	Single family dwelling on acreage parcel.	1/4-Acre Density (4 upa)	RA
East (Across 156 Street):	Single family dwellings.	Low-Medium Density Cluster (5 upa)	CD By-law No. 18306 (based on RF-G)
South:	Single family dwelling on acreage parcel under Application No. 7916-0359-00 (to rezone to RF under review).	1/4-Acre Density (4 upa)	RA
West:	Single family dwellings on acreage parcels under Applications No. 7916-0080-00 and 7915-0379-00 to rezone to RF (both at Third Reading)	1/4-Acre Density (4 upa). Proposed for Low-Medium Density Cluster (5 upa).	RA (RF at Third Reading)

SITE CONTEXT

- The 0.69-hectare (1.71-acre) subject site is located in Fleetwood within the area that comprises the Fleetwood Enclave Infill Area Concept Plan ("Fleetwood Enclave Plan" shown as Appendix VII). The Fleetwood Enclave Plan area, which covers approximately 26 hectares (65 acres) of land, consists of large acreage residential properties, and recently created single family lots and is bordered by an established single family residential neighbourhood to the north, the unopened 76 Avenue right-of-way and ALR to the south, the Eaglequest (Coyote Creek) Golf Course to the west and Fleetwood Park to the east.
- The Fleetwood Enclave Plan was adopted by Council on March 11, 2013 (Corporate Report No. R049). The related Fleetwood Enclave Area Servicing Strategy was approved by Council on September 9, 2013 (Corporate Report No. R161).
- The subject site is designated "Urban" in the Official Community Plan (OCP), following the adoption of OCP By-law No. 18020 (approved by Council on October 20, 2014).
- The subject site is designated "1/4 Acre Gross Density (4 upa)" in the Fleetwood Enclave Plan, and is zoned "One-Acre Residential Zone (RA)".

DEVELOPMENT CONSIDERATIONS

Current Application

- The subject proposal is to redesignate the site in the Fleetwood Enclave Plan from "1/4 Acre Gross Density (4 upa)" to "Low-Medium Density Cluster (5 upa)" and to rezone from "One-Acre Residential Zone (RA)" to "Single Family Residential Zone (RF)", in order to allow subdivision into eight (8) single family lots at a density 4.7 units per acre (upa) or 11.6 units per hectare (uph).
- A redesignation to increase the density from 4 upa (10 uph) to 5 upa (13 uph) in the Fleetwood Enclave Plan is necessary based on the proposed overall gross site density of 4.7 upa (11.6 uph).
- Four of the proposed new lots (proposed Lots 1 to 4) front 156 Street. These proposed lots are approximately 629 square metres (6,770 sq.ft.) in area, 16 metres (52 ft.) in width, and 39.3 metres (129 ft.) in depth.
- The remaining four lots (proposed Lots 5 to 8) front a new 155A Street. These proposed lots are approximately 660 square metres (7,104 sq.ft.) in area, 16 metres (52 ft.) in width and 41.3 metres (135 ft.) in depth.
- A "no build" restrictive covenant is required over portions of proposed Lot 1 until future consolidation with a portion of the adjacent property to the south (7743 - 156 Street), which is currently under Application No. 7916-0359-00.

Biodiversity Conservation Strategy and Open Space

- The Fleetwood Enclave Plan proposes approximately 2.5 hectares (6.2 acres) of total open space, including parkland and pathways, within the Plan area and was developed in accordance with the City of Surrey's *Biodiversity Conservation Strategy* (BCS), which was approved by Council on July 21, 2014 (Corporate Report No. R141). The proposed open space areas on the west, south and east edges of the Fleetwood Enclave Plan area will be maintained as a natural woodland habitat.
- A central concept within the BCS is the "Green Infrastructure Network" (GIN), which identifies large habitat areas throughout the City for protection (referred to as "hubs" and "sites"), and ensures connectivity between them (through "corridors").
- Protecting green infrastructure hubs and sites is critical to preserving natural habitat refuges and a diversity of habitat features, while maintaining and enhancing corridors ensures connectivity between fragmented hubs allowing for genetic variation throughout the City. The closest Biodiversity Hub connection in the GIN to the subject site is the Fleetwood Urban Forest (Fleetwood Park). Corridors are often used to meet several City objectives, including wildlife corridors as well as recreational greenways.
- The open spaces and pathways proposed in the Fleetwood Enclave Plan connect to the existing trail networks that are within the adjacent Fleetwood and Surrey Lake Parks (see Appendix VII). Both Fleetwood Park and Surrey Lake Park are valuable recreational spaces, and high value, ecologically significant hubs. The Fleetwood Enclave Plan has placed a priority on preserving and enhancing these important park spaces/hubs, and on supporting the connections that link the Fleetwood Enclave Plan area to Fleetwood Park and Surrey Lake Park.
- The BCS GIN map identifies a Local BCS corridor (identified as Corridor #81; see Appendix VIII) to the south of the subject site, in the Fleetwood BCS management area, with a Medium ecological value. The BCS further identifies the GIN area of the subject site and surrounding area as having a Moderately High habitat suitability rating, derived from species at risk presence, species accounts and known ecosystem habitat inventories.
- The BCS recommends a target corridor width of 15 metres (50 ft.), which is to be provided as a linear park bisecting the Fleetwood Enclave neighbourhood. The linear park consists of a meandering pathway that is to bisect the neighbourhood from east to west through the middle of 77 Avenue, with vehicle travel lanes located on both the north and south sides of this linear park. This proposed linear park serves two purposes:
 - Designed to incorporate a meandering path, native vegetation and tree coverage, the park will function primarily as an amenity for area residents. With limited vehicle crossings, residents (particularly children) will have the ability to safely cross the neighbourhood, eventually connecting to Fleetwood Park to the east;
 - In addition, consistent with its designation as a local corridor in the GIN, it is designed to provide movement of wildlife species that are tolerant of human disturbance, serving as only one component of a larger regional network; and

- The design concept, along with the ultimate 15-metre (50 ft.) width of this linear park, allows for the retention or re-planting of tree coverage that is more significant than that found in a typical recreational greenway.
- This method of GIN retention will assist in the long term protection of the natural features and allows the City to better achieve biodiversity at this location consistent with the guidelines contained in the BCS.
- Within the portion of the Fleetwood Enclave Plan area designated "1/4 Acre Gross Density (4 upa)", proposed developments are to provide either 8.5% of the gross site area as open space to allow for the development of the linear park noted above, or to provide compensation in the form of cash-in-lieu for any shortfall in area preserved as open space. This value was determined through the planning process for the Fleetwood Enclave Plan as it allows the Parks, Recreation and Culture Department to acquire and construct the linear park for the portion of the Fleetwood Enclave Plan area situated between 155 Street and 156 Street. For the remaining portions of the linear park within the Fleetwood Enclave Plan area, within the other land use designations, proposed developments are to provide 13% of the gross site area as open space or cash-in-lieu of open space compensation.
- The proposed linear park does not bisect the subject site. The applicant will therefore be required to provide 8.5% cash-in-lieu of open space.
- As the applicant is proposing to redesignate the subject site to "Low-Medium Density Cluster (5 upa)", the applicant has offered to provide an additional community benefit of 2.25%, resulting in a total cash-in-lieu of open space contribution of 10.75%.

Road Construction Requirements

- The applicant will be required to construct 156 Street to the Collector Road standard and 155A Street to the Neo-Traditional Through Local Road standard, fronting the site.

Neighbourhood Character Study and Building Scheme

- The applicant for the subject site has retained Mike Tynan of Tynan Consulting Ltd. as the Design Consultant. The Design Consultant conducted a character study of the surrounding homes and based on the findings of the study, which suggest that the older housing stock in the area does not provide suitable architectural context, has proposed a set of building design guidelines that recommend an updated design standard (Appendix V) consistent with the other new development projects in the Plan area.

Proposed Lot Grading

- In-ground basements are proposed for all lots based on the lot grading (prepared by Hub Engineering Inc.). Basements will be achieved with minimal cut or fill. The information provided has been reviewed by staff and found generally acceptable.

PRE-NOTIFICATION

Pre-notification letters were sent out on June 29, 2016 to a total of 90 addresses and the development sign was installed on August 18, 2016. Staff received one response from a resident seeking further information and who had no concerns with the proposed development.

JUSTIFICATION FOR PLAN AMENDMENT

- The subject site is designated "1/4 Acre Gross Density (4 upa)" in the Fleetwood Enclave Plan (see Appendix VII). This designation comprises all of the properties in the centre of the Fleetwood Enclave Plan area, bounded by the existing single family residential neighbourhood to the north, 76A Avenue to the south, 155 Street to the west, and 156 Street to the east as well as a small area in the northwest corner of the Plan area, west of 155 Street.
- The applicant proposes to redesignate the subject site to "Low-Medium Density Cluster (5 upa)".
- Despite the increase in density, the proposed lot areas and lot widths are consistent with those proposed under the "1/4 Acre Gross Density (4 upa)" designation in the Fleetwood Enclave Plan. As previously noted, the proposed 8 lots range from approximately 629 square metres (6,770 sq.ft.) to 660 square metres (7,104 sq.ft.), are 16 metres (52 ft.) in width and 39.3 metres (129 ft.) to 41.3 metres (135 ft.) in depth. The Fleetwood Enclave Plan suggests a minimum lot size of 557 square metres (6,000 sq.ft.), a minimum lot width of 16 metres (52 ft.) and a minimum lot depth of 40 metres (130 ft.) for lots created under the "1/4 Acre Gross Density (4 upa)" designation.
- On March 25, 2015, as part of the application review and public consultation process for Application No. 7914-0357-00 to the southwest of the subject application, the applicant held a Public Information Meeting (PIM) in the community. The PIM was held at Coyote Creek Elementary School to apprise local residents and property owners of the proposed amendment to the Fleetwood Enclave Plan. No objections were raised at that PIM.
- It was anticipated at that time that, if the applicant for Application No. 7914-0357-00 received Council support for redesignating that subject site to the southwest, subsequent development proposals would likely seek similar redesignations to the remaining properties that are designated "1/4 Acre Gross Density (4 upa)". It is also reasonable to assume that the properties within the "Low Density Cluster (4 upa)" designation not currently under application may seek to redesignate to permit a similar 5 upa density.
- The buildout scenarios developed for the Fleetwood Enclave Plan projected that the "1/4 Acre Gross Density (4 upa)" designation would yield approximately 79 dwelling units. A redesignation to "Low-Medium Density Cluster (5 upa)" would result in approximately 20 additional single family lots.
- In total, the projected total number of lots in the Fleetwood Enclave Plan area at buildout could potentially increase by 28 lots, from 240 total lots up to 268 total lots.

- As part of the Engineering Servicing Strategy of the Fleetwood Enclave Plan, the City retained a Transportation consultant, Bunt & Associates Engineering Ltd, to perform a Traffic Impact Assessment (TIA) to identify potential transportation infrastructure improvements. The TIA included an assumption that 56% of the single family lots will include secondary suites, and incorporated this into the trip generation rate.
- Using information from the TIA, Transportation staff determined that an additional 28 lots will result in up to 47 additional peak hour trips to and from the neighbourhood through the intersection of 80 Avenue and 156 Street. Transportation staff anticipate that the intersection will continue to function at an adequate level of service with the potential increase in lots.
- As the size of the proposed lots are consistent with the original intent of the Fleetwood Enclave Plan, and as no concerns were raised by local residents and property owners through the pre-notification process or at the PIM held as part of Application No. 7914-0357-00, and as the applicant is volunteering a community benefit in the form of an additional cash-in-lieu of open space contribution, staff support the proposed amendment to the Fleetwood Enclave Plan.

TREES

- Kristian Short, ISA Certified Arborist of Diamond Head 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:

Tree Species	Existing	Remove	Retain
Alder and Cottonwood Trees			
Alder	32	32	0
Cottonwood	2	2	0
Deciduous Trees (excluding Alder and Cottonwood Trees)			
Bigleaf Maple	8	7	1
Bitter Cherry	3	1	2
Horsechestnut	1	1	0
Japanese Cherry	1	1	0
Japanese Maple	1	1	0
Lombardy Poplar	1	1	0
Magnolia	2	2	0
Paper Birch	2	2	0
Purple Plum	1	1	0
Silver Birch	1	1	0
Coniferous Trees			
Blue Spruce	1	0	1
Douglas Fir	27	22	5
Eastern White Cedar	2	2	0
Norway Spruce	1	1	0
Ponderosa Pine	1	0	1
Shorepine	1	1	0

Tree Species	Existing	Remove	Retain
Western Hemlock	4	0	4
Western Red Cedar	16	14	2
Total (excluding Alder and Cottonwood Trees)	74	58	16
Total Replacement Trees Proposed (excluding Boulevard Street Trees)			
		22	
Total Retained and Replacement Trees		38	
Contribution to the Green City Fund		\$51,200	

- The Arborist Assessment states that there are a total of 74 mature trees on the site, excluding Alder and Cottonwood trees. Thirty-four (34) existing trees, approximately 31 % of the total trees on the site, are Alder and Cottonwood trees. It was determined that sixteen (16) 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 Fleetwood Enclave Plan has placed a priority on preserving and enhancing the existing habitat and open space areas connected to Fleetwood Park, and on supporting the green infrastructure network (i.e. "habitat corridors") that surround and bisect the Fleetwood Enclave. Therefore, the focus will be on the protection and replanting of native trees in the identified open space areas of the Plan.
- 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 one hundred and fifty (150) replacement trees on the site. Only twenty-one (22) replacement trees can be accommodated on the site (based on an average of 3 trees per lot). The deficit of one hundred and twenty-eight (128) replacement trees will require a cash-in-lieu payment of \$51,200, representing \$400 per tree, to the Green City Fund, in accordance with the City's Tree Protection By-law.
- In addition to the replacement trees, boulevard street trees will be planted on 156 Street and 155A Street. This will be determined by the Engineering Department during the servicing design review process.
- In summary, a total of thirty-eight (38) trees are proposed to be retained or replaced on the site with a contribution of \$51,200 to the Green City Fund.

SUSTAINABLE DEVELOPMENT CHECKLIST

The applicant prepared and submitted a sustainable development checklist for the subject site on May 16, 2016. The following table summarizes the applicable development features of the proposal based on the seven (7) criteria listed in the Surrey Sustainable Development Checklist.

Sustainability Criteria	Sustainable Development Features Summary
1. Site Context & Location (A1-A2)	<ul style="list-style-type: none"> • Within the Fleetwood Enclave Infill Plan area.
2. Density & Diversity (B1-B7)	<ul style="list-style-type: none"> • Density is calculated on the gross site area, as the development is providing cash-in-lieu as compensation for open space. • Secondary suites will be permitted, offering a diversity of housing options.
3. Ecology & Stewardship (C1-C4)	<ul style="list-style-type: none"> • The development incorporates Low Impact Development Standards such as natural landscaping. • The development will contribute to the acquisition and development of open space in the neighbourhood which is to be provided as a linear park bisecting the Plan area. • Some existing trees are proposed for retention.
4. Sustainable Transport & Mobility (D1-D2)	<ul style="list-style-type: none"> • N/A
5. Accessibility & Safety (E1-E3)	<ul style="list-style-type: none"> • The development incorporates CPTED principles, such as providing "eyes on the street", and is accessible to outdoor space that is suitable for different age groups.
6. Green Certification (F1)	<ul style="list-style-type: none"> • N/A
7. Education & Awareness (G1-G4)	<ul style="list-style-type: none"> • N/A

INFORMATION ATTACHED TO THIS REPORT

The following information is attached to this Report:

- Appendix I. Lot Owners, Action Summary and Project Data Sheets
- Appendix II. Proposed Subdivision Layout
- Appendix III. Engineering Summary
- Appendix IV. School District Comments
- Appendix V. Building Design Guidelines Summary
- Appendix VI. Summary of Tree Survey and Tree Preservation
- Appendix VII. Fleetwood Enclave Plan and Instream Amendments
- Appendix VIII. BCS Green Infrastructure Network (GIN) Map

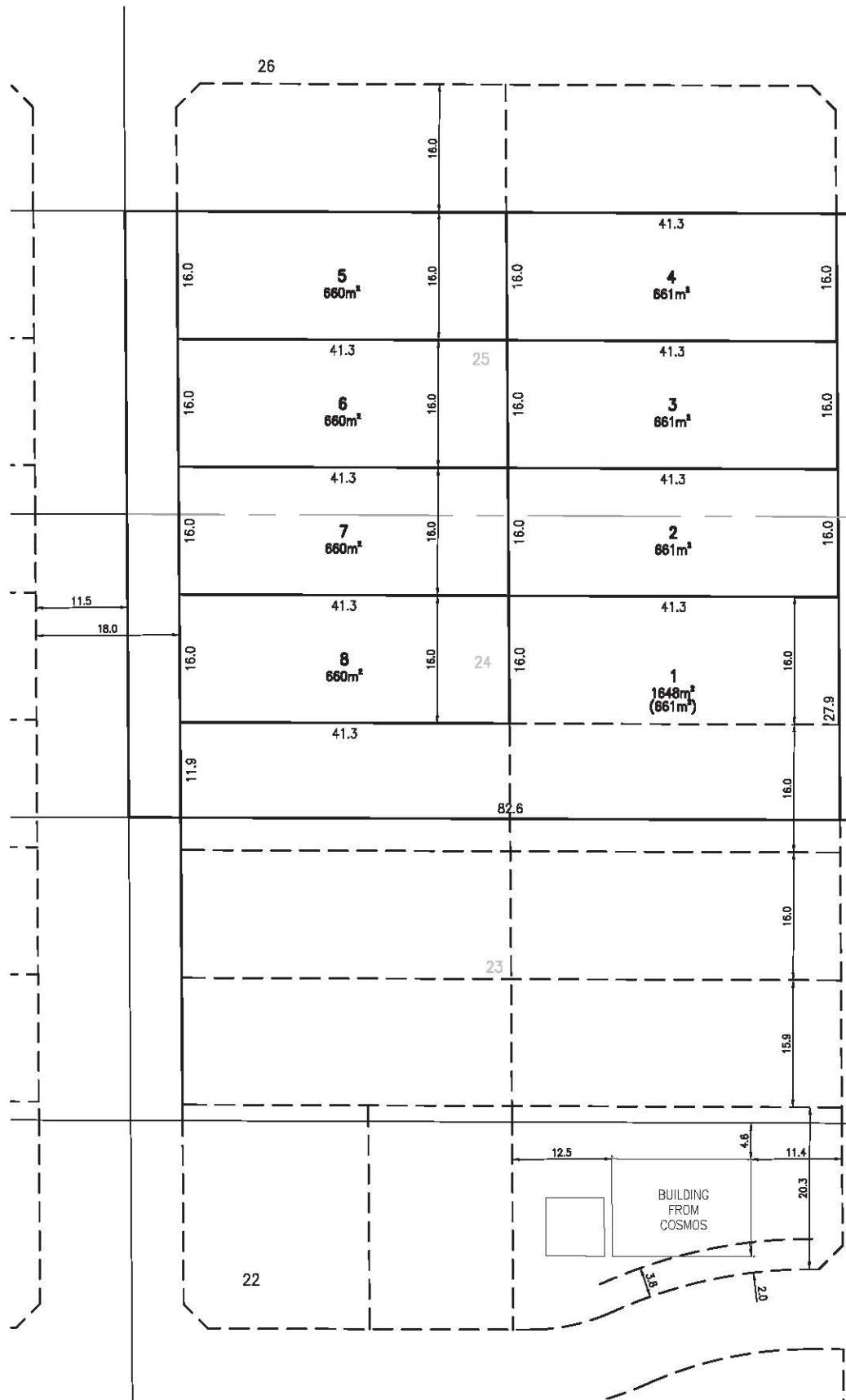
original signed by Judith Robertson

Jean Lamontagne
General Manager
Planning and Development

SUBDIVISION DATA SHEET

Proposed Zoning: RF

Requires Project Data	Proposed
GROSS SITE AREA	
Acres	1.7 acres
Hectares	0.69 hectares
NUMBER OF LOTS	
Existing	2
Proposed	8
SIZE OF LOTS	
Range of lot widths (metres)	16 – 27.9 m
Range of lot areas (square metres)	629 – 1,591 m ²
DENSITY	
Lots/Hectare & Lots/Acre (Gross)	11.6 lots/hectare & 4.7 lots/acre
Lots/Hectare & Lots/Acre (Net)	13.1 lots/hectare & 5.3 lots/acre
SITE COVERAGE (in % of gross site area)	
Maximum Coverage of Principal & Accessory Building	38%
Estimated Road, Lane & Driveway Coverage	27%
Total Site Coverage	65%
PARKLAND	
Area (square metres)	N/A
% of Gross Site	N/A
Required	
PARKLAND	
5% money in lieu	YES (plus additional)
TREE SURVEY/ASSESSMENT	
	YES
MODEL BUILDING SCHEME	
	YES
HERITAGE SITE Retention	
	NO
FRASER HEALTH Approval	
	NO
DEV. VARIANCE PERMIT required	
Road Length/Standards	NO
Works and Services	NO
Building Retention	NO
Others	NO



156 STREET

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Hub Engineering Inc. Member PACIFIC LAND GROUP
 Engineering and Development Consultants
 Suite 212, 12992 - 76 Avenue, Surrey, B.C. V3W 2V6
 tel: 604-572-4328 | fax: 604-501-1625 | mail@hub-inc.com | www.hub-inc.com

CLIENT:		PROJECT: 7761 & 7781 - 156 STREET, SURREY		
DRAWING TITLE: RESIDENTIAL SUBDIVISION				
PROJECT No. 16035	DATE: APR 2016	LEGAL:	SCALE: 1:500	MUNICIPAL PROJECT No:

PRELIMINARY PLAN - SUBJECT TO APPROVAL(S) FROM FEDERAL, PROVINCIAL AND LOCAL AUTHORITIES

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

FROM: **Development Project Engineer, Engineering Department**

DATE: **August 25, 2016**

PROJECT FILE: **7816-0222-00**

RE: **Engineering Requirements
Location: 7761 & 7781 - 156 Street**

NCP AMENDMENT

There are no engineering requirements relative to the NCP Amendment.

REZONING AND SUBDIVISION

Property and Right-of-Way Requirements

- Dedicate 1.942 m for 156 Street towards the 24.0 m Collector Road allowance;
- Dedicate 11.500 m for 155A Street toward the 18.0 m Local Road allowance;
- Provide 0.5 m statutory rights-of-way along 156 Street and 155A Street frontages; and
- Provide applicable off-site statutory rights-of-way, working easement and tree cutting permits.

Works and Services

- Construct west side of 156 Street to Collector Road standard;
- Construct 155A Street to Local Half Road standard;
- Construct sanitary main, storm main and water main on 155A Street to service the site;
- Construct off-site works and services, if applicable;
- Submit arborist report regarding impact to off-site trees from proposed works;
- Secure and provide applicable off-site working easements;
- Register restrictive covenants for on-site stormwater management features, if applicable; and
- Provide cash-in-lieu for removal of temporary works, if applicable.

A Servicing Agreement is required prior to Rezoning and Subdivision.



Robert Cooke, Eng.L.
Development Project Engineer

HB



Monday, July 25, 2016
 Planning

THE IMPACT ON SCHOOLS

APPLICATION #: 16 0222 00

SUMMARY

The proposed 8 Single family with suites are estimated to have the following impact on the following schools:

Projected # of students for this development:

Elementary Students:	4
Secondary Students:	2

September 2015 Enrolment/School Capacity

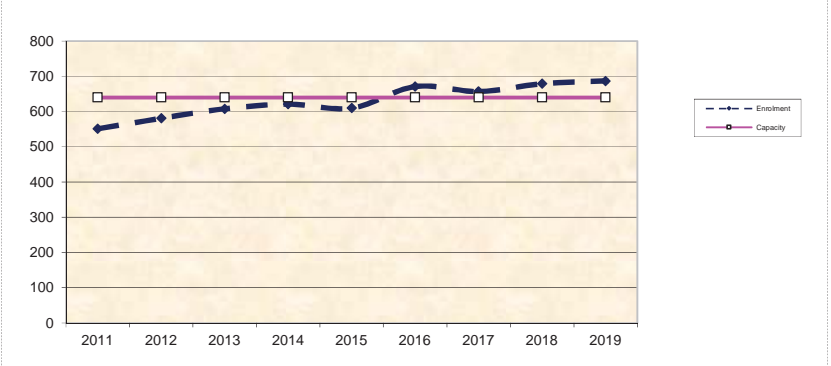
Coyote Creek Elementary	
Enrolment (K/1-7):	61 K + 549
Capacity (K/1-7):	40 K + 600
Fleetwood Park Secondary	
Enrolment (8-12):	1371
Nominal Capacity (8-12):	1200
Functional Capacity*(8-12):	1296

School Enrolment Projections and Planning Update:

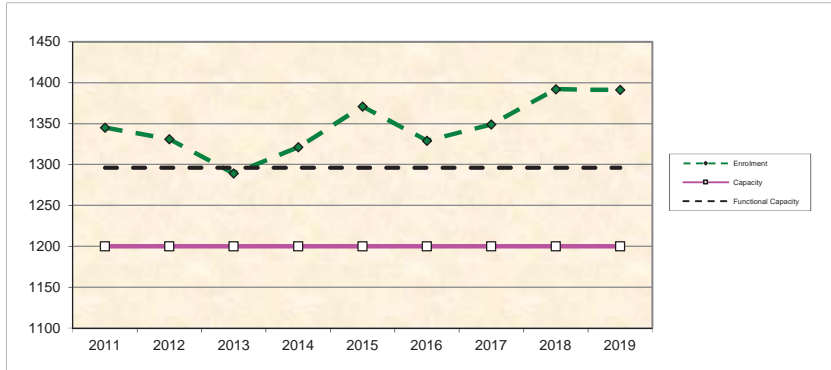
The following tables illustrate the enrolment projections (with current/approved ministry capacity) for the elementary and secondary schools serving the proposed development.

Capacity for Coyote Creek Elementary in the table below includes the main school building (40K + 500) plus a modular classroom complex with capacity for 100 students. The projections below include the estimated phased enrolment growth from The Enclave and other development in the catchment area. Both the elementary school and secondary school are projected to be at or over capacity in the near future and portables or catchment changes may be required to balance enrolment in the future.

Coyote Creek Elementary



Fleetwood Park Secondary



*Functional Capacity at secondary schools is based on space utilization estimate of 27 students per instructional space. The number of instructional spaces is estimated by dividing nominal facility capacity (Ministry capacity) by 25.

BUILDING GUIDELINES SUMMARY

Surrey Project no: 7916-0222-00
 Project Location: 7761 and 7781 - 156 Street, 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 in an old growth area. Most homes are "old urban" homes situated on RA zoned lots, west and south of the site. East of the site are undeveloped lands. North of the site are RF zoned lots developed during the mid 1990s to the post - 2010s. Homes in this area were built out over a time period spanning from the 1960's to the post-2010's. The age distribution from oldest to newest is: 1960's or earlier (50%), 1980's (6%), 1990's (31%), and post year 2010's (13%).

A majority of homes in this area have a floor area in the 2501 - 3000 sq.ft. size range. Home size distribution is: 1000 - 1500 sq.ft. (19%), 1501 - 2000 sq.ft. (13%), 2001 - 2500 sq.ft. (6%), 2501 - 3000 sq.ft. (50%), 3001 - 3550 sq.ft. (13%). Styles found in this area include: "Old Urban" (31%), "West Coast Traditional (Bavarian emulation)" (13%), "West Coast Modern" (25%), "Heritage (Old B.C.)" (6%), and "Neo-Traditional" (25%). Home types include: Bungalow (25%), 1½ Storey (13%), Basement Entry (6%), and Two-Storey (56%).

Massing scale (front wall exposure) characteristics include: low mass structure (38%), low to mid-scale massing (13%), mid-scale massing (19%), mid-scale massing with proportionally consistent, well balanced massing design (13% context homes), mid to high scale massing (13%), and high scale, box-like massing (6%). The scale (height) range for front entrance structures include: one storey front entrance (75%), one storey front entrance veranda in heritage tradition (6%), 1½ storey front entrance (13%), and two storey front entrance (6%).

The range of roof slopes found in this area is: 4:12 (19%), 5:12 (19%), 6:12 (19%), 7:12 (19%), 8:12 (13%), 12:12+ (13%). Main roof forms (largest upper floor truss spans) include: Main common hip roof (56%), and Main common gable roof (44%). Feature roof projection types include: None (17%), Common Hip (25%), Common Gable (38%), Dutch Hip (8%), Shed roof (8%), and Carousel Hip (4%). Roof surfaces include: Interlocking tab type asphalt shingles (13%), Rectangular profile type asphalt shingles (6%), Shake profile asphalt shingles (38%), Concrete tile (shake profile) (6%), and Cedar shingles (38%).

Main wall cladding materials include: Horizontal cedar siding (12%), Horizontal vinyl siding (12%), and Stucco cladding (76%). Feature wall trim materials used on the front facade include: no feature veneer (56%), Brick feature veneer (25%), Stone feature veneer (6%), and Horizontal cedar accent (13%). Wall cladding and trim colours include: Neutral (45%), Natural (50%), and Primary derivative (5%).

Covered parking configurations include: No covered parking (20%), Double carport (13%), and Double garage (67%).

A variety of landscaping standards are evident with standard ranging from "primarily natural state" to above-average modern urban landscape standard featuring numerous shrub plantings. Driveway surfaces include: gravel (6%), asphalt (44%), exposed aggregate (50%).

It should be noted that there is a new application, Surrey project 7914-0138-00 comprised of 47 RF-12 lots located directly across and east of the subject site. That application will have a significant impact on the emergent character of this area, and so it is important that building scheme regulations for the subject site are compatible with building scheme regulations for 7914-0138-00.

1.2 Features of Surrounding Dwellings Significant to the Proposed Building Scheme:

- 1) **Context Homes:** 13 percent of homes in this area could be considered to provide acceptable architectural context. However, massing design, construction materials, and trim and detailing standards for new homes constructed in RF-12 zone subdivisions now exceed standards evident on the context homes. The recommendation therefore is to adopt standards commonly found in post year 2015 RF-12 zoned subdivisions, rather than to emulate the aforesaid context homes, but also to ensure that building scheme regulations are compatible with those of the aforesaid 47 lot site on the east side of 156 Street, opposite the subject site.
- 2) **Style Character:** There is a mix of old urban and modern urban styles in this neighbourhood. Preferred styles for this site include "Neo-Traditional", "Neo-Heritage", and compatible styles as determined by the design consultant, as these styles are an ideal bridge between old urban and modern urban. Note that style range is not restricted in the building scheme. However, the consultant refers to the character study when reviewing plans for meeting style-character intent.
- 3) **Home Types:** There is a wide range of home types evident, and so some flexibility is justified. Home type (Two-Storey, Bungalow, Basement Entry, Split Level, etc.) will not be regulated in the building scheme.
- 4) **Massing Designs:** Massing designs should meet new standards for RF-12 zoned subdivisions. New homes should exhibit "mid-scale" massing. Various elements and projections on the front of the home should be interesting architecturally, and should be in pleasing natural proportions to one another. These elements and projections should be located so as to create balance across the façade.
- 5) **Front Entrance Design:** Front entrance porticos range from one to two storeys in height. The recommendation however is to limit the range of entrance portico heights to between one storey and 1 ½ storeys to ensure there is not proportional overstatement of this one element.
- 6) **Exterior Wall Cladding:** A wide range of cladding materials have been used in this area, including vinyl, cedar, stucco, brick, and stone. Reasonable flexibility should therefore be permitted, including the use of vinyl siding, provided the overall quality of wall cladding materials meets or exceeds common standards for post 2010 developments.
- 7) **Roof surface :** This is area in which a wide variety of roof surface materials have been used. Most homes however are older homes, with old roofing materials that are not being used for context. It is expected that most new homes will have asphalt shingle roofs, and for continuity, asphalt shingles are recommended. A single cedar shingle or concrete tile roof would stand out as inconsistent due the large difference in textures (thickness) between asphalt shingles and cedar shingles or concrete tiles, and so these products are not recommended. However, where opportunities arise to introduce new environmentally sustainable products, they should be embraced. Generally, these materials have thicknesses between asphalt shingles and cedar shingles and will not appear out of place texturally. Therefore, to ensure consistency of character, only shake profile asphalt shingles and shake profile sustainable products are recommended.

- 8) **Roof Slope :** A significant number of neighbouring homes have low slope roofs that are not well suited to the proposed style range. Emulation of the low slope roof characteristic is therefore not recommended. Roofs slopes of 8:12 or higher are recommended, with standard exceptions to allow lower slopes at verandas (so front windows at the upper floor can be of sufficient depth) and to ensure that roofs are not overly high, resulting in over-shadowing of neighbouring lots, or resulting in view corridor blockage. However, due to emerging trends in which contemporary designs are being increasingly sought, lower slope roofs could be approved subject to the consultant determining that the architectural integrity of the contemporary design is sufficient to warrant approval.

Streetscape: East of the site are undeveloped lands. West and south of the site are large RA zoned lots with 50 year old. "Old urban" homes. North of the site are RF zoned homes from the mid 1990's, and post 2000's, which provide the best context for the subject site. These newer homes have mid-scale massing designs with mass allocated in a proportionally correct and balanced manner across the façade. Main roof forms are common hip or common gable at an 8:12 slope. All new homes have common gable projections articulated with either cedar shingles or with hardiboard and 1x4 vertical wood battens. The colour range of all homes, except one, includes only natural and neutral hues. Landscaping meets a common modern urban standard.

2. Proposed Design Guidelines

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

- the new homes are readily identifiable as one of the following styles: "Neo-Traditional", "Neo-Heritage", or "Contemporary", as determined by the consultant 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 year 2000'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)

13 percent of homes in this area could be considered to provide acceptable architectural context. However, massing design, construction materials, and trim and detailing standards for new homes constructed in RF zone subdivisions now exceed standards evident on the context homes. The recommendation therefore is to adopt standards commonly found in post year 2015 RF zoned subdivisions, rather than to emulate the aforesaid context homes. Homes should also be compatible with

the new application to the east for 47 RF-12 lots under Surrey project 7914-0138-00

- Exterior Materials/Colours:** Stucco, Cedar, Vinyl, Hardiplank, Brick, and Stone.
- “Natural” colours such as browns, greens, clays, and other earth-tones, and “Neutral” colours such as grey, white, and cream are permitted. Primary colours are not recommended on main cladding for this development. “Warm” colours such as pink, rose, peach, salmon are not permitted. Trim colours: Shade variation of main colour, complementary, neutral, or subdued contrast only.
- Roof Pitch:** Minimum 7:12, with "standard" exceptions, and possible exceptions where "Contemporary" styles are used, as determined by the consultant.
- Roof Materials/Colours:** Only shake profile asphalt shingles with a raised ridge cap and new environmentally sustainable roofing products providing that aesthetic properties of the new materials are equal to or better than the traditional roofing products. Greys, browns, or black only. Membrane products also permitted where required by the BC Building Code.
- In-ground basements:** Permitted, subject to determination that service invert locations are sufficiently below grade. Basements will appear underground from the front.
- Treatment of Corner Lots:** 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 40 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.
- Landscaping:** *Moderate modern urban standard:* Tree planting as specified on Tree Replacement Plan plus minimum 20 shrubs of a minimum 3 gallon pot size. Corner lots shall have an additional 10 shrubs of a minimum 3 gallon pot size, planted in the flanking street sideyard. Sod from street to face of home. Driveways: exposed aggregate, interlocking masonry pavers, or stamped concrete.

Compliance Deposit: \$5,000.00

Summary prepared and submitted by: Tynan Consulting Ltd. Date: June 28, 2016

Reviewed and Approved by:



Date: June 28, 2016

Table 3. Tree Preservation Summary

TREE PRESERVATION SUMMARY	
Surrey Project No:	7616-0222
Address:	7761, 7781 156 th Street, Surrey, BC
Registered Arborist:	Andrew Connell B.Sc. ISA Certified Arborist (PN6991A) ISA Qualified Tree Risk Assessor (TRAQ) Certified Landscape Technician
On-Site Trees	Number of Trees
Protected Trees Identified (on-site and shared trees, including trees within boulevards and proposed streets and lanes, but excluding trees in proposed open space or riparian areas)	108
Protected Trees to be Removed	92
Protected Trees to be Retained (excluding trees within proposed open space or riparian areas)	16
Total Replacement Trees Required:	
- Alder & Cottonwood Trees Requiring 1 to 1 Replacement Ratio 34 X one (1) = 34	150
- All other Trees Requiring 2 to 1 Replacement Ratio 58 X two (2) = 116	
Replacement Trees Proposed	22
Replacement Trees in Deficit	128
Protected Trees to be Retained in Proposed [Open Space / Riparian Areas]	
Off-Site Trees	Number of Trees
Protected Off-Site Trees to be Removed	3
Total Replacement Trees Required:	
- Alder & Cottonwood Trees Requiring 1 to 1 Replacement Ratio ____ X one (1) = 0	6
- All other Trees Requiring 2 to 1 Replacement Ratio 3 X two (2) = 6	
Replacement Trees Proposed	-
Replacement Trees in Deficit	6

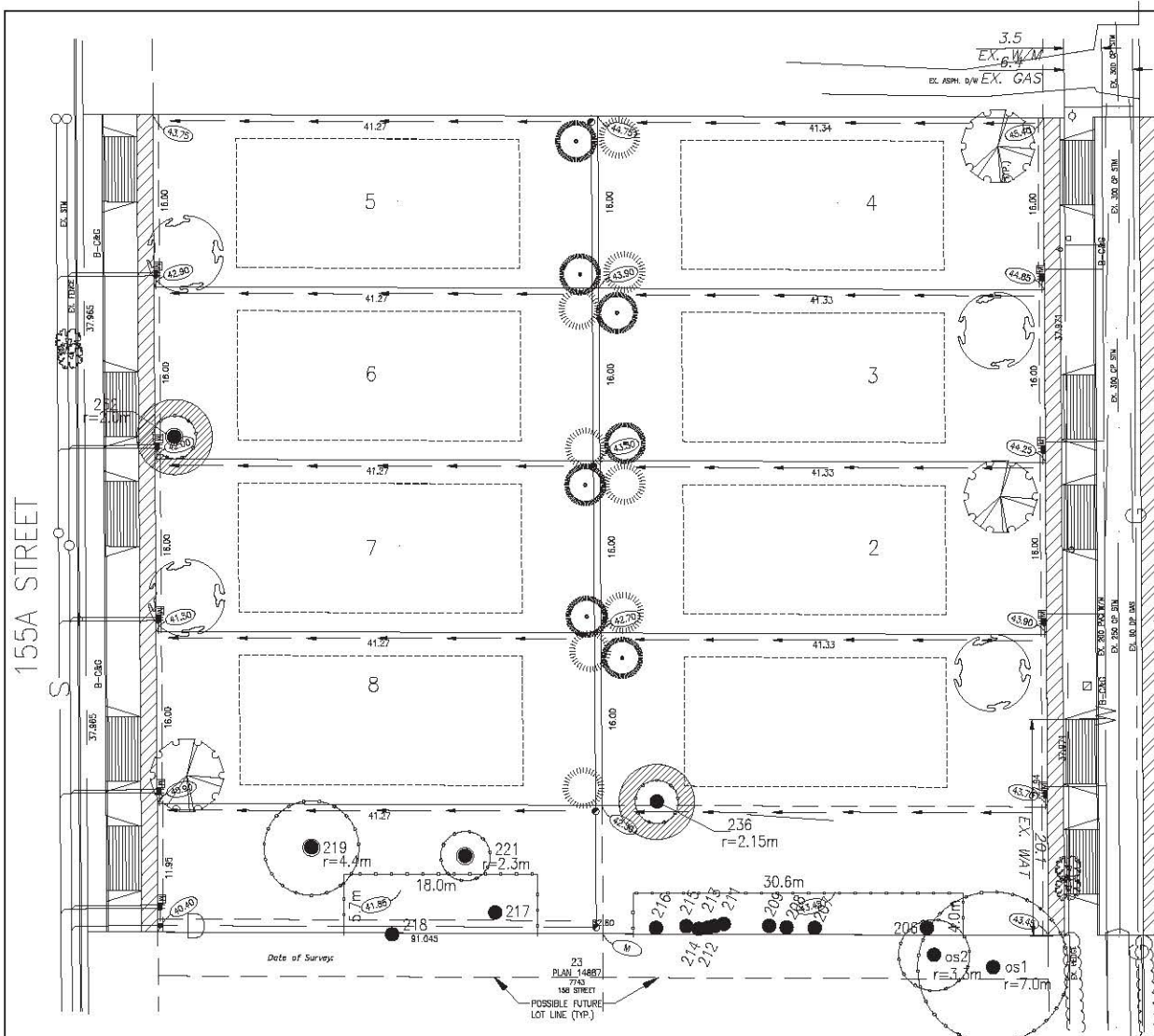
Summary prepared and
submitted by:



September 6, 2016

Arborist

Date



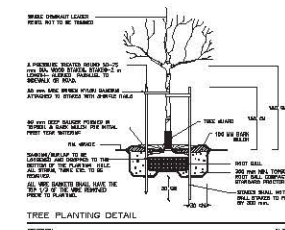
155A STREET

156 STREET

KEY	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING	REMARKS
	SYRINGA RETICULATA 'IVORY SILK'	LILAC TREE	3	6 CM. CAL.	AS SHOWN	B. & B.
	PRUNUS YEDONENSIS 'AKEBONO'	DAYBREAK CHERRY	4	6 CM. CAL.	AS SHOWN	B. & B.
	PICEA OMORICA	SERBIAN SPRUCE	7	3.00 METERS	AS SHOWN	B. & B.
	PINUS SYLVESTRIS FASTIGIATA	COLUMNAR SCOTS PINE	8	3.00 METERS	AS SHOWN	B. & B.

REPLACEMENT TREE LIST

- PLANT SEEDS IN THIS LIST ARE SPECIFIED ACCORDING TO THE LANDSCAPE STAFFING LATEST EDITION. THE SEEDS SHALL BE PROVIDED AS PER THE LANDSCAPE STAFFING PLAN AND CONTAINERS AND THE MANUFACTURER'S NAME, GRADE AND OTHER RELEVANT INFORMATION AVAILABLE TO THE GENERAL CONTRACTOR SHALL BE OBTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE SEEDS AND SUBSTITUTIONS TO SPECIFIED MATERIALS, UNLESS OTHERWISE NOTED. ALL SEEDS SHALL BE SUBMITTED TO THE LANDSCAPE STAFFING FOR APPROVAL.
- ALL PLANT MATERIALS MUST BE PROVIDED FROM CERTIFIED TRUSTEE FRESH MATERIAL. ALL PLANT MATERIALS MUST CONFORM TO THE LATEST EDITION OF THE LANDSCAPE STAFFING. PROTECTIVE COFFERS SHALL BE PROVIDED FOR ALL PLANT MATERIALS TO BE PLANTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE LATEST EDITION OF THE LANDSCAPE STAFFING.
- ALL PLANTING MATERIALS DEPTH OVER PREPARED SUBGRADE SHALL BE:
 - LAWN AREAS: 100 mm
 - ORCHARD COVER AREAS: 100 mm
 - DRIVE AREAS: 100 mm
 - TREE PIT: 300 mm AROUND ROOT BALL
- CONCRETE AREAS SHALL HAVE FINISH AND CHEMICAL PROPERTIES AS SPECIFIED BY THE CONTRACTOR FOR CONCRETE AND SHALL BE SUBJECT TO THE REQUIREMENTS OF THE APPLICABLE PROTECTIVE AND FINISHING SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE LATEST EDITION OF THE LANDSCAPE STAFFING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE LATEST EDITION OF THE LANDSCAPE STAFFING.
- ON-SITE OR IMPORTED SOIL SHALL OBTAIN THE REQUIREMENTS OF THE CONTRACTOR FOR CONCRETE AND SHALL BE SUBJECT TO THE REQUIREMENTS OF THE APPLICABLE PROTECTIVE AND FINISHING SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE LATEST EDITION OF THE LANDSCAPE STAFFING.
- ALL PLANTING AREAS SHALL BE PROTECTED BY 100 mm HIGH BARRIERS.
- PLANT SEEDS AND MATERIALS MAY NOT BE SUBSTITUTED WITHOUT THE APPROVAL OF THE LANDSCAPE STAFFING.
- THE CONTRACTOR SHALL OBTAIN ALL MATERIALS AND APPROVEMENTS FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE. UNLESS OTHERWISE SPECIFIED, ALL PLANT MATERIALS AND SERVICES TO BE PROVIDED BY THE CONTRACTOR SHALL BE PROVIDED BY THE CONTRACTOR AT NO EXTRA COST TO THE OWNER.
- THE CONTRACTOR SHALL OBTAIN ALL MATERIALS AND APPROVEMENTS FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE. UNLESS OTHERWISE SPECIFIED, ALL PLANT MATERIALS AND SERVICES TO BE PROVIDED BY THE CONTRACTOR SHALL BE PROVIDED BY THE CONTRACTOR AT NO EXTRA COST TO THE OWNER.



LEGEND

- = TREES TO BE RETAINED
- = TREES TO BE REMOVED
- = PROTECTION BARRIER

2007/18	City comments	2
2007/18	City comments	1
DATE	REVISED	NO.
	PREPARED	

K. KAVOLINAS & ASSOCIATES INC.

BCSLA CSLA

2465 CENTRAL COURT

ABBOTSFORD, B.C.

V3G 2E8

PHONE (604) 857-2376

CLIENT

MRS. SUKH OPRANAL

c/o HUB ENGINEERING INC.

SUITE #210

12882 76th AVENUE

SURREY, B.C.

V3W 2J8

604-572-4328

TITLE

PLAN VIEW

TREE LOCATION PLAN

TREE REPLACEMENT PLAN

8 LOT SUBDIVISION

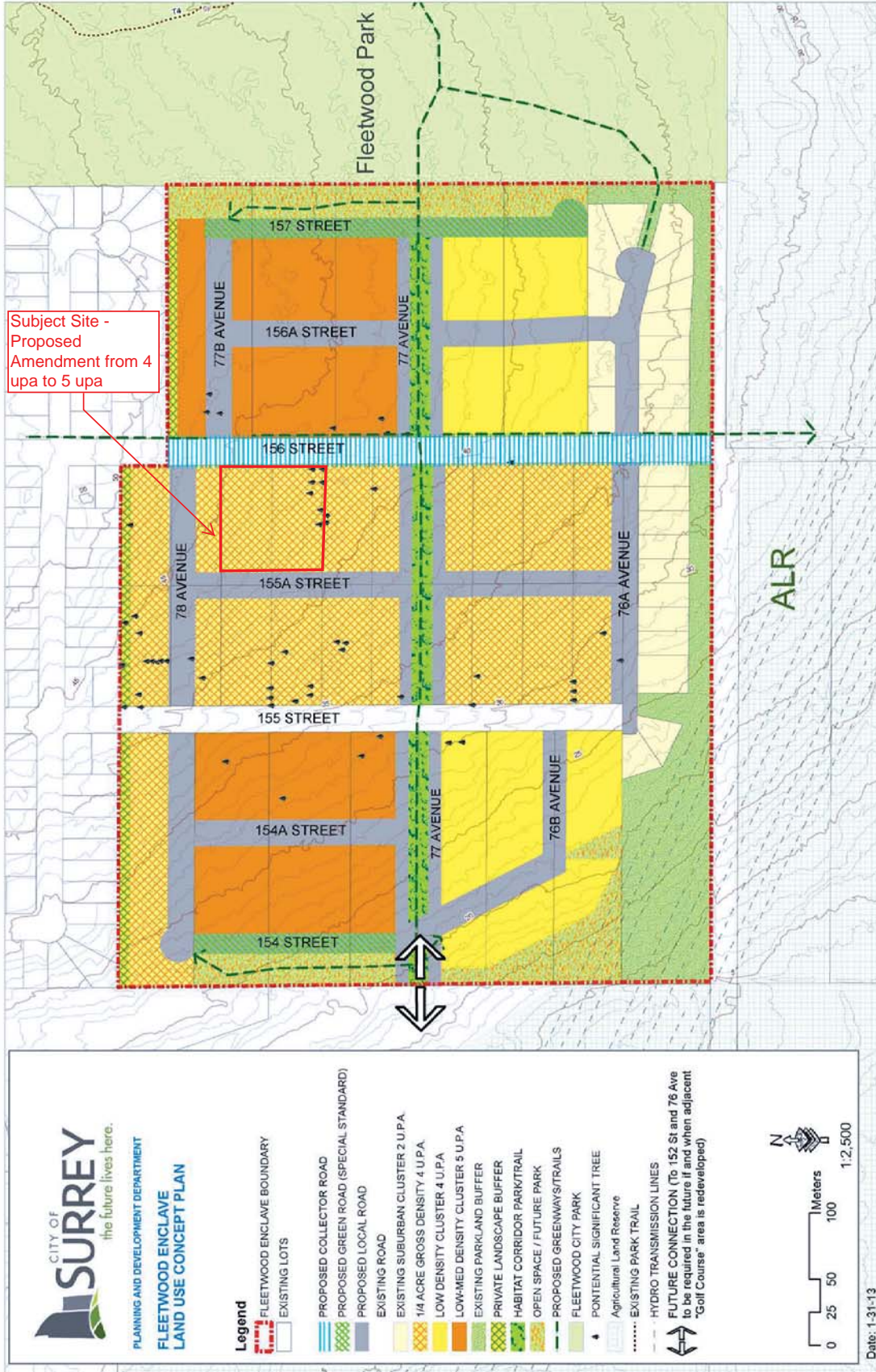
7781 7781 - 156 STREET

SURREY, B.C.

SCALE	1:200	DATE	JUN/16
DRAWN	DAD		
CHECK	DAD		
APPROVED	AS BUILT		

PROJECT

TR-2



Subject Site - Proposed Amendment from 4 upa to 5 upa



Approximate location of subject site



Biodiversity Strategy
GREEN INFRASTRUCTURE NETWORK

- GREEN INFRASTRUCTURE NETWORK
- PROTECTED HUBS AND SITES
- UNPROTECTED HUBS AND SITES
- REGIONAL CORRIDORS
- LOCAL CORRIDORS
- SUPPORTING PARK SITES
- AGRICULTURAL LAND RESERVE

JUNE 2014

Data Sources: City of Surrey
Data Developed By: Diamond Head Consulting Ltd.
Map Design: Ecoplan International

