

City of Surrey  
**PLANNING & DEVELOPMENT REPORT**

File: 7917-0254-00

Planning Report Date: February 5, 2018

**PROPOSAL:**

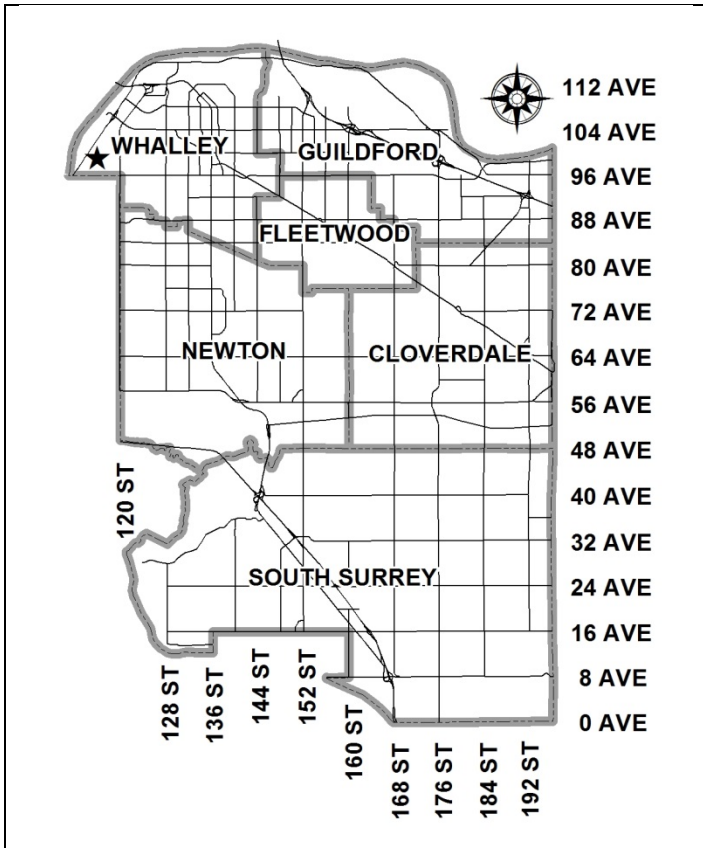
- Restrictive Covenant Amendment
- Development Variance Permit

to adjust building setbacks, height, basement access location and massing provisions to permit construction of a single family dwelling on the lot.

**LOCATION:** 11645 - 99 Avenue

**ZONING:** RF

**OCP DESIGNATION:** Urban



### RECOMMENDATION SUMMARY

- The Planning & Development Department recommends that this application be denied.

### DEVIATION FROM PLANS, POLICIES OR REGULATIONS

- To permit construction of a single family dwelling, the applicant is seeking to vary the RF Zone as follows:
  - Reduce the minimum rear (west) yard setback, for 100% of the width of the rear of the principal building, from 7.5 metres (25 ft.) to 1.8 metres (6 ft.);
  - Increase the minimum side (north) yard setback, as measured to the principal building, from 1.8 metres (6 ft.) to 6.0 metres (20 ft.); and
  - To permit construction of a basement access and basement well between the principal building and the north side lot line.
- The applicant is also proposing several amendments to the Building Scheme registered on title related to building setbacks, building height and building massing.

### RATIONALE OF RECOMMENDATION

- The subject property was created as a part of seven (7) lot subdivision under Development Application No. 7903-0455-00, finalized on January 25, 2006. In response to neighbourhood concerns that future homes on the newly created lots fronting 99 Avenue could obstruct their views, a variety of provisions were added to the Statutory Building Scheme to further regulate setbacks, building heights and second storey massing, for view preservation.
- Area residents have expressed strong opposition to the proposed variances and Building Scheme amendments, but particularly those pertaining to maximum building height, as measured between top of basement slab and underside of the upper floor ceiling, and second-storey massing.
- Staff suggested that pursuing the setback relaxations but retaining the building scheme restrictions related to height and massing may have merit as a compromise proposal. However, the applicant has advised staff that they are not amenable to proceeding with a stand-alone DVP for setbacks as they feel that the existing Building Scheme restrictions seriously hinder their ability to achieve an adequately sized RF-zoned house with a functional floor plan.
- As the height, massing and setback restrictions incorporated into the registered Building Scheme and Restrictive Covenant were to address viewscape concerns of adjacent residents, and as public consultation has demonstrated that the same concerns still remain and have not been adequately addressed by the applicant, staff do not support the application.

RECOMMENDATION

The Planning & Development Department recommends that the application be denied.

If, however, Council sees merit in the proposed variances and amendments to the Building Scheme restrictions, Council may refer the application back to staff to prepare the Development Variance Permit (DVP) for Council's consideration at a future Regular Council – Land Use meeting.

REFERRALS

Engineering:                      The Engineering Department has no objection to the proposed variances.

SITE CHARACTERISTICS

Existing Land Use:      Single family dwelling, which is to be removed.

Adjacent Area:

Direction	Existing Use	OCP Designation	Existing Zone
North:	Single family dwelling	Urban	RF
East (Across 116A Street):	Single family dwelling	Urban	RF
South (Across 99 Avenue):	Single family dwellings	Urban	RF
West:	Single family dwelling	Urban	RF

DEVELOPMENT CONSIDERATIONSBackground and Current Proposal

- The 616-square metre (6,634-sq.ft.) subject property is located at 11645 – 99 Avenue in Royal Heights. It is designated "Urban" in the Official Community Plan (OCP) and is zoned "Single Family Residential Zone (RF)".
- The subject property was created in 2006 as part of a seven (7) lot subdivision under Development Application No. 7903-0455-00. A Statutory Building Scheme and associated Building Scheme Restrictive Covenant, to regulate the character of the homes, was a requirement of subdivision.

- In response to neighbourhood concerns regarding view preservation, a variety of provisions were added to the Building Scheme, and registered on title of each of the seven (7) lots, to further regulate setbacks, building heights and second storey massing. For the subject property (11645 – 99 Avenue), these included the following, notwithstanding Surrey Zoning By-law, 1993, No. 12000, as amended:
  - increase the setback from 99 Avenue (side yard on a flanking street) from 3.6 metres (12 ft.) to 7.5 metres (25 ft.);
  - restrict the maximum basement elevation to not more than 0.01 metre (0.03 ft.) higher than the Minimum Basement Elevation (MBE) of 46.8 metres geodetic elevation;
  - restrict the maximum height, as measured between the top of the basement slab to the underside of the upper floor ceiling to not more than 8.23 metres (27 ft.); and
  - the second storey floor area of the principal building is restricted to 60% of the width of the main floor, as measured parallel to 99 Avenue, and must be kept towards the east property line.
- The applicant purchased the property in 2006 and has advised staff they were not aware of the restrictions in the Statutory Building Scheme and associated Building Scheme Restrictive Covenant until they engaged a house designer to prepare a home design in mid- 2017.
- Due to the existing Building Scheme restrictions and RF Zone setback requirements, the applicant is able to achieve a maximum house size of approximately 257 square metres (2,768 sq.ft.) on the subject property, which is 98 square metres (1,054 sq.ft.) less than the maximum permitted floor area under the RF Zone.
- As per the RF Zone, the building height of the principal building with a roof slope greater than 1:4 shall not exceed 9 metres (30 ft.), as measured from the average finished grade level and the average level between eaves and ridge. The building height of any portion of a principal building with a roof slope less than 1:4 shall not exceed 7.3 metres (24 ft.).
- The Statutory Building Scheme and associated Restrictive Covenant limits the maximum basement elevation to approximately 46.81 metres geodetic, and the maximum height between top of basement slab and underside of the upper floor ceiling to 8.23 metres (27 ft.) on the subject lot. As a result, the highest point of a flat roof and mid-point of a 7:12 pitched roof would be approximately 55.30 and 56.54 metres geodetic, respectively. This would result in a maximum building height approximately 1.5 metres (5 ft.) and 2 metres (6.5 ft.) less than the 7.3-metre (24-ft.) and 9-metre (30 ft.) maximum roof height that could be achieved for a flat roof and pitched roof principal building on the subject lot in the RF Zone if the subject Statutory Building Scheme and associated Restrictive Covenant were not in place.
- The RF Zone further states that the maximum permitted floor area of a second storey for a principal building must not exceed 80% of the floor area of the main floor, including attached garage and any porch or veranda at the front covered by a sloped roof.

- The applicant is requesting a Development Variance Permit (DVP) to reduce the rear (west) yard setback, increase the side (north) yard setback and permit construction of a basement access between the principal building and the north side lot line in order to construct a new house on the subject property. The applicant is also seeking several amendments to the Building Scheme.
- With the proposed variances and modifications to the existing Building Scheme (see Building Scheme Amendments and By-law Variances sections), the owner can achieve a maximum house size of approximately 344 square metres (3,705 sq.ft.), which is 11 square metres (118 sq.ft.) less than the maximum permitted floor area under the RF Zone.

#### Hazard Lands (Steep Slopes) Development Permit

- Although the subject property is located within the Hazard Lands (Steep Slopes) Development Permit Area, the existing on-site grades do not exceed the 20% maximum permitted under the Hazard Lands (Steep Slopes) Development Permit guidelines, therefore, a Hazard Lands (Steep Slopes) Development Permit is not required as part of the subject application.

#### PRE-NOTIFICATION

The applicant installed a Development Proposal Sign on January 8, 2017.

Pre-notification letters were sent on January 5, 2017 to 68 properties within 100 metres (300 ft.) of the subject property. To date, staff have received eight (8) emails, eight (8) telephone calls and a petition with 10 names. The overwhelming majority of these responses are in opposition to the proposal, with the following concerns (*staff comments in italics*):

- A number of area residents commented that the proposed house would not be in keeping with the character of the existing homes in the area and were opposed to the variances and Building Scheme amendments which they felt would negatively impact their views.
- Three (3) residents expressed concerns that allowing the side yard setback on a flanking street (99 Avenue) to be reduced from 7.5 metres (25 ft.) to 3.6 metres (12 ft.) to provide for a larger home would exacerbate existing driver sight-line issues at the corner of 99 Avenue and 116A Street and result in more on-street parking along this portion of 99 Avenue.

*(Staff clarified that the front (east) yard setback from 116A Avenue would remain at 7.5 metres (25 ft.) and that Parks, Recreation and Culture had approved the removal of two (2) City trees, in conjunction with the proposed development, at the corner of 99 Avenue and 116A Avenue which would help to alleviate sight-line issues.*

*The RF Zone permits a minimum side yard setback on a flanking street, to the principal building, of 3.6 metres (12 ft.). The proposed side yard setback on a flanking street (99 Avenue) would be increased to 6 metres (20 ft.) to the attached garage to ensure that the subject lot would still accommodate four (4) off-street parking spaces, exceeding the minimum Zoning By-law requirement.)*

- One (1) resident indicated that their property was also regulated by Statutory Building Scheme No. BA359520, and inquired about the specific amendments requested as part of the subject application, as they were interested in constructing a new single family dwelling on their property in approximately 2 to 3 years.

*(Staff provided the caller more information with respect to the specific Building Scheme amendments requested under the subject application. The caller indicated that they would likely reconnect with staff in the future regarding a possible RC Amendment, should they proceed with plans to construct a new single family dwelling on their lot in the next 2-3 years.)*

- The applicant originally obtained written support for the proposal from residents of 18 addresses, including that of the abutting property owners to the west (11635 – 99 Avenue) and to the south (11646 – 99 Avenue). These owners would be most impacted by the proposed variances and building scheme amendments. However, many of the correspondents, including many of those that signed the original petition in support of the proposal, indicated that there was confusion around the changes the applicant was proposing and the purpose of their signing.

*(Following further conversations with Planning staff to clarify the specifics of the proposed variances and Building Scheme amendments, area residents submitted a petition with 11 names in opposition to the subject application.*

*The petition states that residents, including the majority of those property owners who had previously signed the petition of support for the proposal, are still concerned that the proposed development is not keeping with the established character of the neighbourhood, and that they felt that proposed variances and Building Scheme amendments, especially those relating to maximum height and second storey massing, would negatively impact their views).*

## TREES

- Max Rathburn, ISA Certified Arborist of Rathburn Arborist Consulting Ltd. prepared an Arborist Assessment for the subject property. The following table 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
<b>Deciduous Trees</b>			
Pacific Dogwood	1	1	0
<b>Coniferous Trees</b>			
Douglas Fir	3	3	0
Norway Spruce	2	1	1
<b>Total</b>	<b>6</b>	<b>5</b>	<b>1</b>
<b>Total Replacement Trees Proposed (excluding Boulevard Street Trees)</b>		<b>3</b>	

<b>Total Retained and Replacement Trees</b>	<b>4</b>
<b>Contribution to the Green City Fund</b>	<b>\$2,800.00</b>

- The Arborist Assessment states that there are a total of six (6) protected trees on the site. There are no Alder or Cottonwood trees. It was determined that one (1) tree can be retained as part of this development proposal. The proposed tree retention was assessed taking into consideration the location of the building footprint.
- For those trees that cannot be retained, the applicant will be required to plant trees on a 2 to 1 replacement ratio. This will require a total of 10 replacement trees on the site. Since only three (3) replacement trees can be accommodated on the site, the deficit of seven (7) replacement trees will require a cash-in-lieu payment of \$2,800, representing \$400 per tree, to the Green City Fund, in accordance with the City's Tree Protection By-law.
- In summary, a total of four (4) trees are proposed to be retained or replaced on the site with a contribution of \$2,800 to the Green City Fund.

#### BUILDING SCHEME AMENDMENTS AND JUSTIFICATION

(a) Proposed Amendments:

- The applicant is proposing to amend the existing Building Scheme as follows:

<b>Provision</b>	<b>Existing Building Scheme and Section 219 Restrictive Covenant</b>	<b>Proposed Building Scheme and Section 219 Restrictive Covenant</b>
<i>Side Yard on a Flanking Street Setback (99 Avenue)</i>	7.5 metres (25 ft.)	3.6 metres (12 ft.) for the principal building; 6 metres (20 ft.) to the face of the attached garage.
<i>Minimum Basement Elevation (MBE)</i>	Not more than 0.01 metres (0.03 ft.) higher than the MBE (46.8 metres geodetic elevation) as determined through Development Application No. 7903-0455-00.	Not more than 0.7 metres (2.2 ft.) higher than the MBE.
<i>Maximum Height</i>	8.23 metres (27 ft.), as measured between the top of the basement slab and the underside of the upper floor ceiling.	9.75 metres (32 ft.), as measured between the top of the basement slab and the underside of the upper floor ceiling.
<i>Second Storey Massing</i>	The second storey floor area of the principal building is restricted to 60% of the width of the main floor, as measured parallel to 99 Avenue, and must be kept towards the east property line.	Restrict the portion of the second storey containing a pitched roof to only 38% of the width of the main floor, as measured parallel to 99 Avenue, and distribute the flat roofed portion (62% of the width of the main floor) evenly towards and east and west property line.

## (b) Staff Comments:

- In addition to the proposed amendments to the existing Building Scheme provisions, the applicant is proposing the following:
  - Limit the maximum ceiling height of the upper storey to 2.4 metres (8 ft.) and 2.7 metres (9 ft.) for the western and eastern flat-roofed sections respectively.
- The proposed maximum height of 9.75 metres (32 ft.), as measured between the top of the basement slab and the underside of the upper floor ceiling, would only apply to the pitched roof portion of the proposed dwelling, which covers approximately 38% of the second storey. For the proposed flat roof portions, the maximum height would be approximately 8.7 metres (28.5 ft.).
- It is noted that the Building Scheme on title is only valid for twenty years from the date of registration. Therefore, it will have no force and effect after March 12, 2026, at which time the applicant could construct a home to the maximum setback, height and second storey massing provisions of the RF Zone.
- It is also noted that should the proposed Building Scheme amendments be supported by Council, the applicant would be required to obtain sign-off from the owners of the other six (6) lots party to the Building Scheme in order to finalize the amendment documentation and subsequent registration on title.

BY-LAW VARIANCES AND JUSTIFICATION

## (a) Requested Variances:

- To reduce the rear (west) yard setback of the RF Zone for 100% of the width of the principal building from 7.5 metres (25 ft.) to 1.8 metres (6 ft.);
- To increase the side (north) yard setback of the RF Zone for the principal building from 1.8 metres (6 ft.) to 6 metres (20 ft.); and
- To permit construction of a basement access and basement well between the principal building and the north side lot line.

## Applicant's Reasons:

- The requested variances, combined with the proposed amendments to the existing Building Scheme, would allow for an adequately sized RF-Zone house and useable rear yard space to be achieved on the lot.
- The proposed house will incorporate design features such as a reduced main floor ceiling height and a flat roof over 62% of the second storey that will help to mitigate any interface issues between the subject property and the existing single family dwellings to the south. These provisions will be enforced through the registration of an amended Section 219 Restrictive Covenant and Section 220 Building Scheme.



**Staff Comments:**

- The subject property is a corner lot with frontages on 99 Avenue and 116A Street. Under the Zoning By-law, the 116A Street frontage is considered the front lot line as it is the shorter of the frontages.
- The requested variance to the rear (west) yard setback, from 7.5 metres (25 ft.) to 1.8 metres (6 ft.) for 100% of the width of the rear of the principal building, would result in a side yard to side yard condition between houses on the subject property and the property to the immediate west (11635 – 99 Avenue).
- The proposed setback variances will essentially result in the north and south yards functioning as the front and rear yards, and the east and west yards functioning as side yards even though the opposite is the case under the Zoning By-law.
- In accordance with the RF Zone, basement access and basement wells are permitted only between the principal building and the rear lot line. If the setback variances were supported, the north side yard would function as a rear yard, with the minimum side yard setback increased to 6 metres (20 ft.), and it would be reasonable to allow basement access to encroach in the north side yard.
- The northern side yard will be well-screened from 99 Avenue by the proposed dwelling and from 116A Street by a stand of off-site trees and the existing grades.

**CONCLUSION**

- Area residents have expressed strong opposition to the proposed variances and Building Scheme amendments, but particularly those pertaining to maximum building height, as measured between top of basement slab and underside of the upper floor ceiling, and second-storey massing.
- Staff suggested that pursuing the setback relaxations but retaining the building scheme restrictions related to height and massing may have merit as a compromise proposal. However, the applicant has advised staff that they are not amenable to proceeding with a stand-alone DVP for setbacks as they feel that the existing Building Scheme restrictions seriously hinder their ability to achieve an adequately sized RF-zoned house with a functional floor plan.
- Due to view preservation being a concern to area residents during the subdivision of the site in 2006, the subject height, massing and setback restrictions were incorporated into the registered Building Scheme and Restrictive Covenant. Public consultation for the subject proposal has verified that these concerns still remain and therefore the restrictions are still valid. The applicant has been unable to address these concerns and is unwilling to further modify the house design to better respond to neighbourhood concerns. As such, staff do not support the application.
- The Planning and Development Department recommends that this application be denied.

- If, however, Council sees merit in the proposed variances and amendments to the Building Scheme restrictions, Council may refer the application back to staff to prepare the Development Variance Permit (DVP) for Council's consideration at a future Regular Council – Land Use meeting.

#### INFORMATION ATTACHED TO THIS REPORT

The following information is attached to this Report:

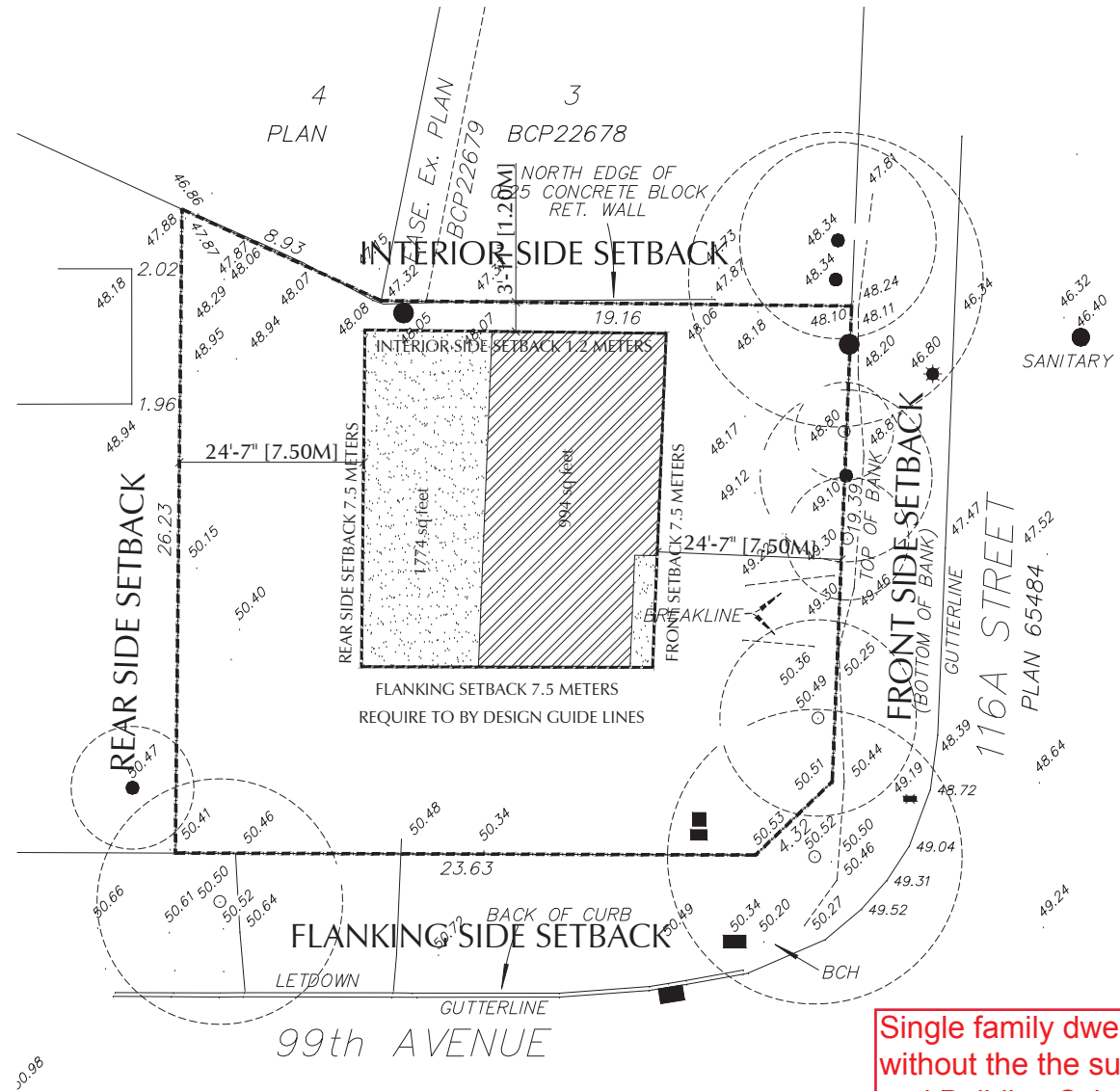
Appendix I.	Lot Owners and Action Summary (Confidential)
Appendix II.	Proposed Site Plan and Building Elevations
Appendix III.	Proposed Amendments to Building Scheme
Appendix IV.	Summary of Tree Survey and Tree Preservation
Appendix V.	Aerial Photo of the Subject Property and Neighbourhood (COSMOS)
Appendix VI.	Google Street View (Image dated June 2015)

*original signed by Ron Gill*

Jean Lamontagne  
General Manager  
Planning and Development

CRL/da

APPENDIX I HAS BEEN  
REMOVED AS IT CONTAINS  
CONFIDENTIAL INFORMATION



Single family dwelling on the site without the the subject variances and Building Scheme amendments.



PROPOSED SITE PLAN

design studio  
 11883 Baker Place Delta B.C. V4E 2V8  
 email: gsds@eastlink.ca

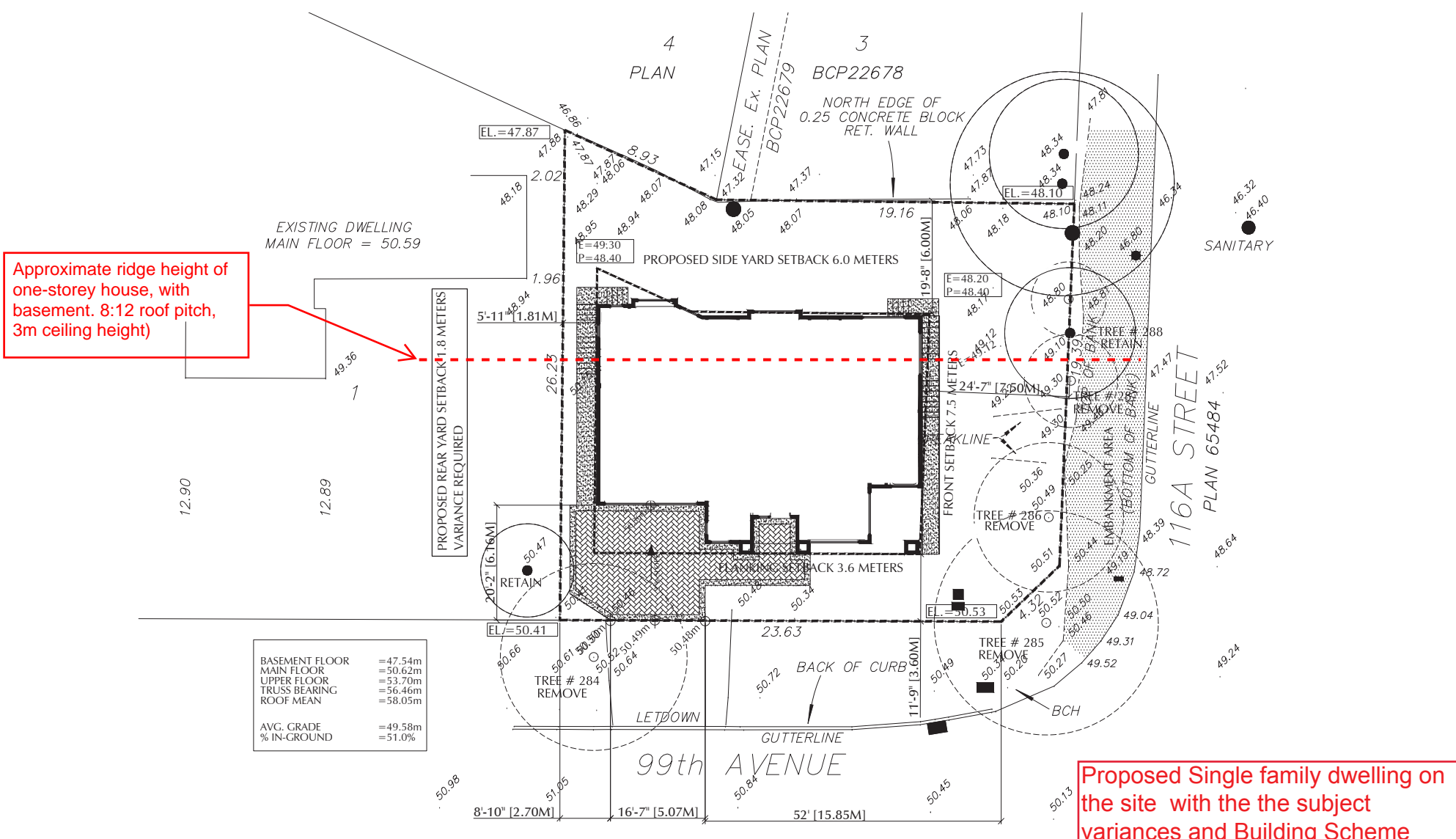
11645 99TH AVE SURREY B.C.

DEVELOPMENT VARIANCE FOR SETBACKS

REV. DATE: 06-11-17  $\frac{1}{16}'' = 1'-00''$

A-0

Approximate ridge height of one-storey house, with basement. 8:12 roof pitch, 3m ceiling height



BASEMENT FLOOR	=47.54m
MAIN FLOOR	=50.62m
UPPER FLOOR	=53.70m
TRUSS BEARING	=56.46m
ROOF MEAN	=58.05m
AVG. GRADE	=49.58m
% IN-GROUND	=51.0%

Proposed Single family dwelling on the site with the the subject variances and Building Scheme amendments.



# PROPOSED SITE PLAN

design studio  
 11883 Baker Place Delta B.C. V4E 2V8  
 email: gsd@eastlink.ca

11645 99TH AVE SURREY B.C.  
 DEVELOPMENT VARIANCE FOR SETBACKS

REV. DATE: 06-11-17

1/16" = 1'-00"

# A-1

Approximate ridge height of one-storey house, with basement. 8:12 roof pitch, 3m ceiling height)



# PROPOSED ELEVATIONS

design studio  
 11883 Baker Place Delta B.C. V4E 2V8  
 email: gds@eastlink.ca

11645 99TH AVE SURREY B.C.

DEVELOPMENT VARIANCE FOR SETBACKS

REV. DATE: 06-11-17

$\frac{1}{8}'' = 1'-00''$

A-5

Approximate ridge height of one-storey house, with basement. 8:12 roof pitch, 3m ceiling height)

Approximate ridge height of one-storey house, with basement. 8:12 roof pitch, 3m ceiling height)



PROPOSED ELEVATIONS

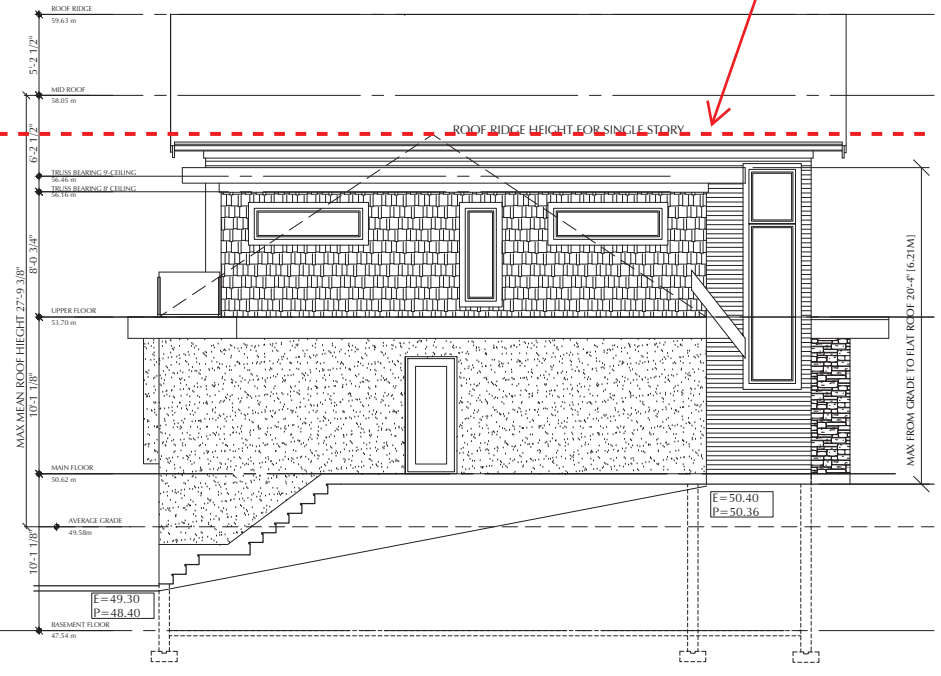
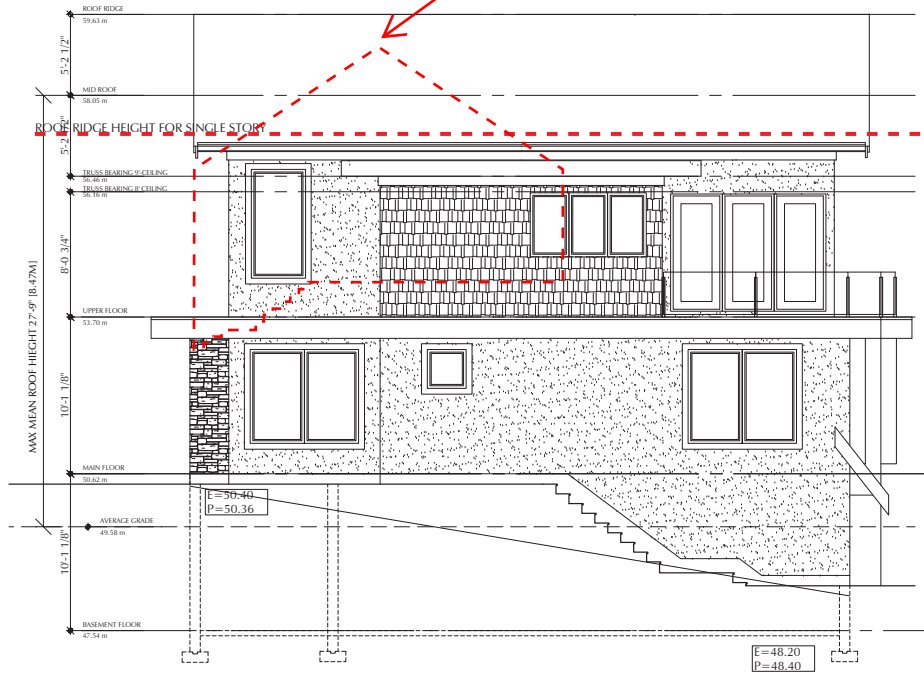
design studio  
11883 Baker Place Delta B.C. V4E 2V8  
email: gsds@eastlink.ca

11645 99TH AVE SURREY B.C.  
DEVELOPMENT VARIANCE FOR SETBACKS

REV. DATE: 06-11-17  
1/8" = 1'-00"

Approximate ridge height of one-storey house, with basement. 8:12 roof pitch, 3m ceiling height)

Approximate ridge height of one-storey house, with basement. 8:12 roof pitch, 3m ceiling height)



PROPOSED ELEVATIONS

design studio  
11883 Baker Place Delta B.C. V4E 2V8  
email: gsds@eastlink.ca

11645 99TH AVE SURREY B.C.

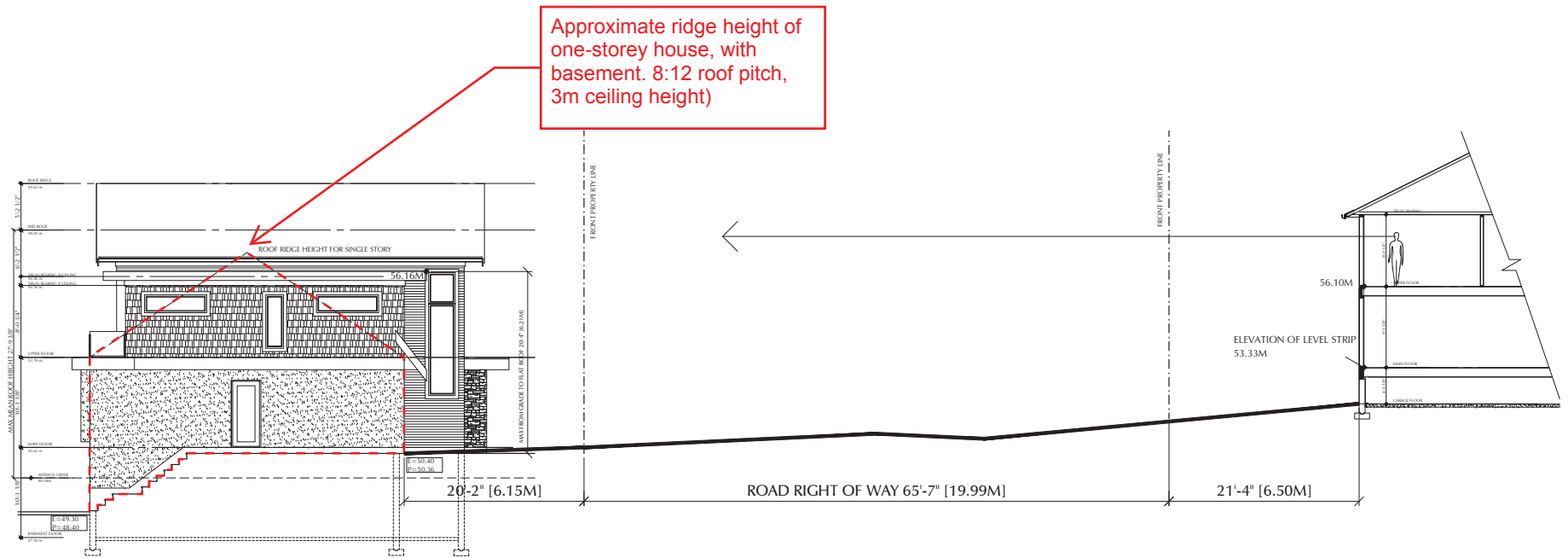
DEVELOPMENT VARIANCE FOR SETBACKS

REV. DATE: 06-11-17

1/8" = 1'-00"

A-7





### DESIGN STRATEGIES TO PRESERVE VIEWS

1. main floor level is 8 inches lower than street level
2. main floor ceiling height 9'-00" (typically 10'-00" on new houses)  
2nd floor flat roof height on west side at 8'-00" and 9'-00" on east side
3. proposed height is only 20'-4" from natural grade to top of flat roof at front of house
4. a single storey house design with 10' ceilings and a typical 8:12 pitch roof, will have its roof ridge higher in height than the top of flat roofs proposed for this house
5. 62% width of house along 99 ave has a flat roof



## PROPOSED STREET SECTION

design studio  
11883 Baker Place Delta B.C. V4E 2V8  
email: gsds@eastlink.ca

11645 99TH AVE SURREY B.C.

DEVELOPMENT VARIANCE FOR SETBACKS

REV. DATE: 06-11-17

$\frac{1}{8}'' = 1'-00''$   
**A-7**

## **Proposed Statutory Building Scheme Amendments**

Development Application No. 7917-0254-00 (11645 – 99 Avenue)

<b>Provision</b>	<b>Existing Building Scheme and Section 219 Restrictive Covenant</b>	<b>Proposed Building Scheme and Section 219 Restrictive Covenant</b>
<i>Side Yard on a Flanking Street Setback (99 Avenue)</i>	7.5 metres (25 ft.)	3.6 metres (12 ft.) for the principal building; 6 metres (20 ft.) to the face of the attached garage.
<i>Minimum Basement Elevation (MBE)</i>	Not more than 0.01 metres (0.03 ft.) higher than the MBE (46.8 metres geodetic elevation) as determined through Development Application No. 7903-0455-00.	Not more than 0.7 metres (2.2 ft.) higher than the MBE.
<i>Maximum Height</i>	8.23 metres (27 ft.), as measured between the top of the basement slab and the underside of the upper floor ceiling.	9.75 metres (32 ft.), as measured between the top of the basement slab and the underside of the upper floor ceiling.
<i>Second Storey Massing</i>	The second storey floor area of the principal building is restricted to 60% of the width of the main floor, as measured parallel to 99 Avenue, and must be kept towards the east property line.	Restrict the portion of the second storey containing a pitched roof to only 38% of the width of the main floor, as measured parallel to 99 Avenue, and distribute the flat roofed portion (62% of the width of the main floor) evenly towards and east and west property line.

- In addition to the proposed amendments to the existing Building Scheme provisions, the applicant is proposing the following:
  - Limit the maximum ceiling height of the upper storey to 2.4 metres (8 ft.) and 2.7 metres (9 ft.) for the western and eastern flat-roofed sections respectively.
- The proposed maximum height of 9.75 metres (32 ft.), as measured between the top of the basement slab and the underside of the upper floor ceiling, would only apply to the pitched roof portion of the proposed dwelling, which covers approximately 38% of the second storey. For the proposed flat roof portions, the maximum height, as measured between the top of the basement slab and the underside of the upper floor ceiling would be approximately 8.7 metres (28.5 ft.).

## TREE RETENTION ASSESSMENT – 11645 99th Street, Surrey, BC

<b>Total Replacement Trees Proposed</b> (Excluding Boulevard Street Trees)	<b>3</b>
<b>Total Retained and Replacement Trees</b> (Total + Total Replacement trees proposed)	<b>4</b>

### TREE PRESERVATION SUMMARY

Surrey Project No: 7917 0254 00

Address: 11645 99<sup>th</sup> Avenue Surrey, BC

Registered Arborist: Max Rathburn  
 ISA Certified Arborist (PN-0599A)  
 ISA Qualified Tree Risk Assessor (TRAQ)  
 BC Parks Wildlife and Danger Tree Assessor

On-Site Trees	Number of Trees
<b>Protected Trees Identified</b> (on-site and shared trees, including trees within boulevards and proposed streets and lanes, but excluding trees in proposed open space or riparian areas)	<b>6</b>
<b>Protected Trees to be Removed</b>	<b>5</b>
<b>Protected Trees to be Retained</b> (excluding trees within proposed open space or riparian areas)	<b>1</b>
<b>Total Replacement Trees Required:</b>	
- Alder & Cottonwood Trees Requiring 1 to 1 Replacement Ratio $\text{one (1)} \times \text{one (1)} = 0$	<b>10</b>
- All other Trees Requiring 2 to 1 Replacement Ratio $5X \text{ two (2)} = 10$	
<b>Replacement Trees Proposed</b>	<b>3</b>
<b>Replacement Trees in Deficit</b>	<b>7</b>
<b>Protected Trees to be Retained in Proposed [Open Space / Riparian Areas]</b>	

Off-Site Trees	Number of Trees
<b>Protected Off-Site Trees to be Removed</b>	
<b>Total Replacement Trees Required:</b>  - Alder & Cottonwood Trees Requiring 1 to 1 Replacement Ratio  $\underline{\quad} \times \text{one (1)} = 0$ - All other Trees Requiring 2 to 1 Replacement Ratio  $\quad \times \text{two (2)} = 0$	<b>0</b>
<b>Replacement Trees Proposed</b>	<b>0</b>
<b>Replacement Trees in Deficit</b>	<b>0</b>

Summary prepared and submitted by:



August 28, 2017

\_\_\_\_\_  
Arborist

\_\_\_\_\_  
Date

# TREE RETENTION AND REMOVAL PLAN

Project Address: 11645 99th Street, Surrey, BC  
 Client: Manpreet Singh Sehgal

## REFERENCE DRAWINGS

1. Base Plans Provided by: Client

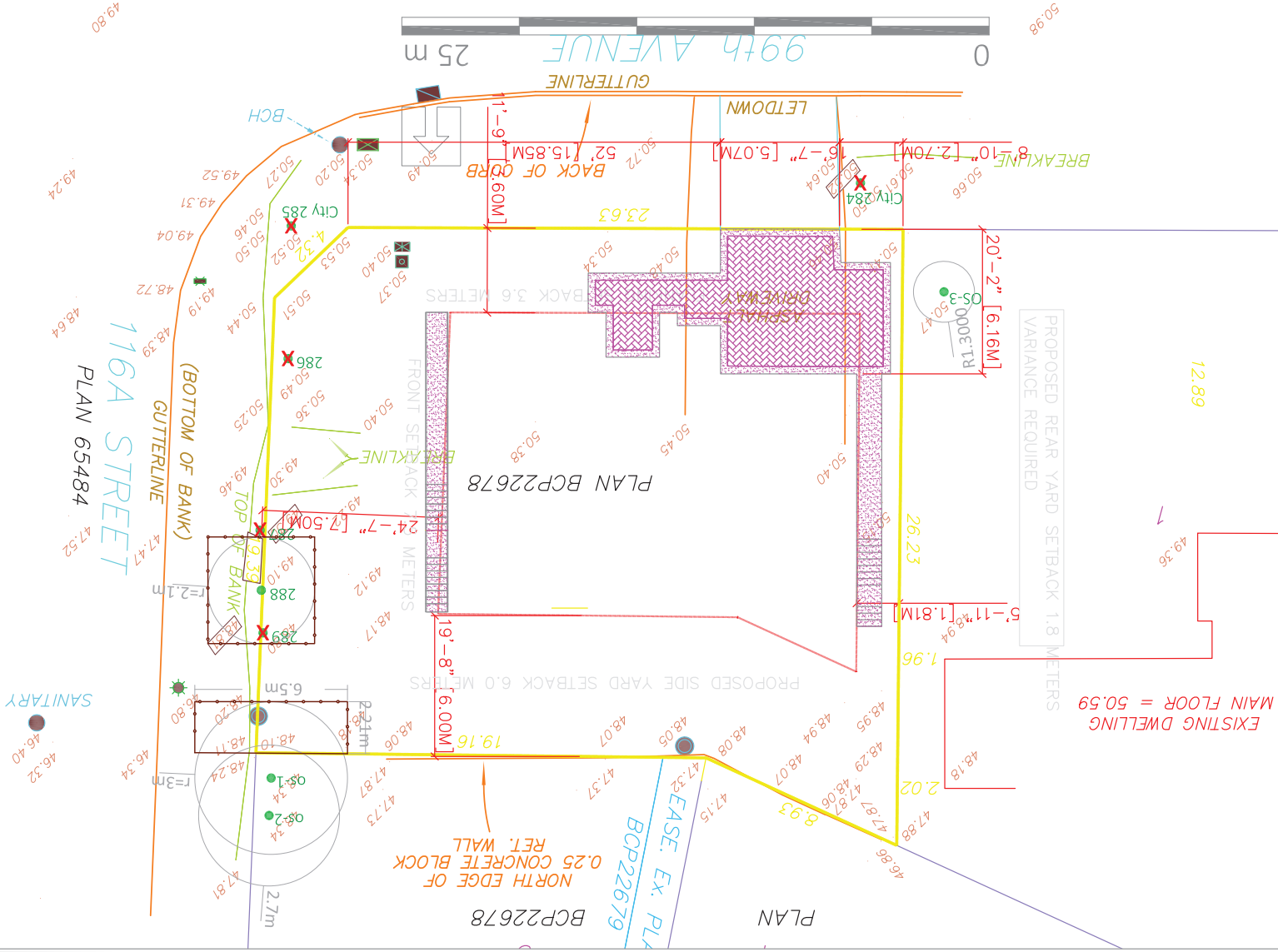
1. The location of un-surveyed trees on this plan is approximate. Their location and ownership cannot be confirmed without being surveyed by a Registered BC Land Surveyor.
2. All tree protection fencing must be built to the relevant municipal bylaw specifications. The dimensions shown are from the outer edge of the stem of the tree.
3. The tree protection zone shown is a graphical representation of the critical root zone, measured from the outer edge of the stem of the tree. (The trees diameter was added to the graphical tree protection circles to accommodate the survey point being in the center of the tree)
4. Any construction activities or grade changes within the Root Protection Zone must be approved by the project arborist.
5. This plan is provided for context only, and is not certified as to the accuracy of the location of features or dimensions that are shown on this survey plan and engineering plans.

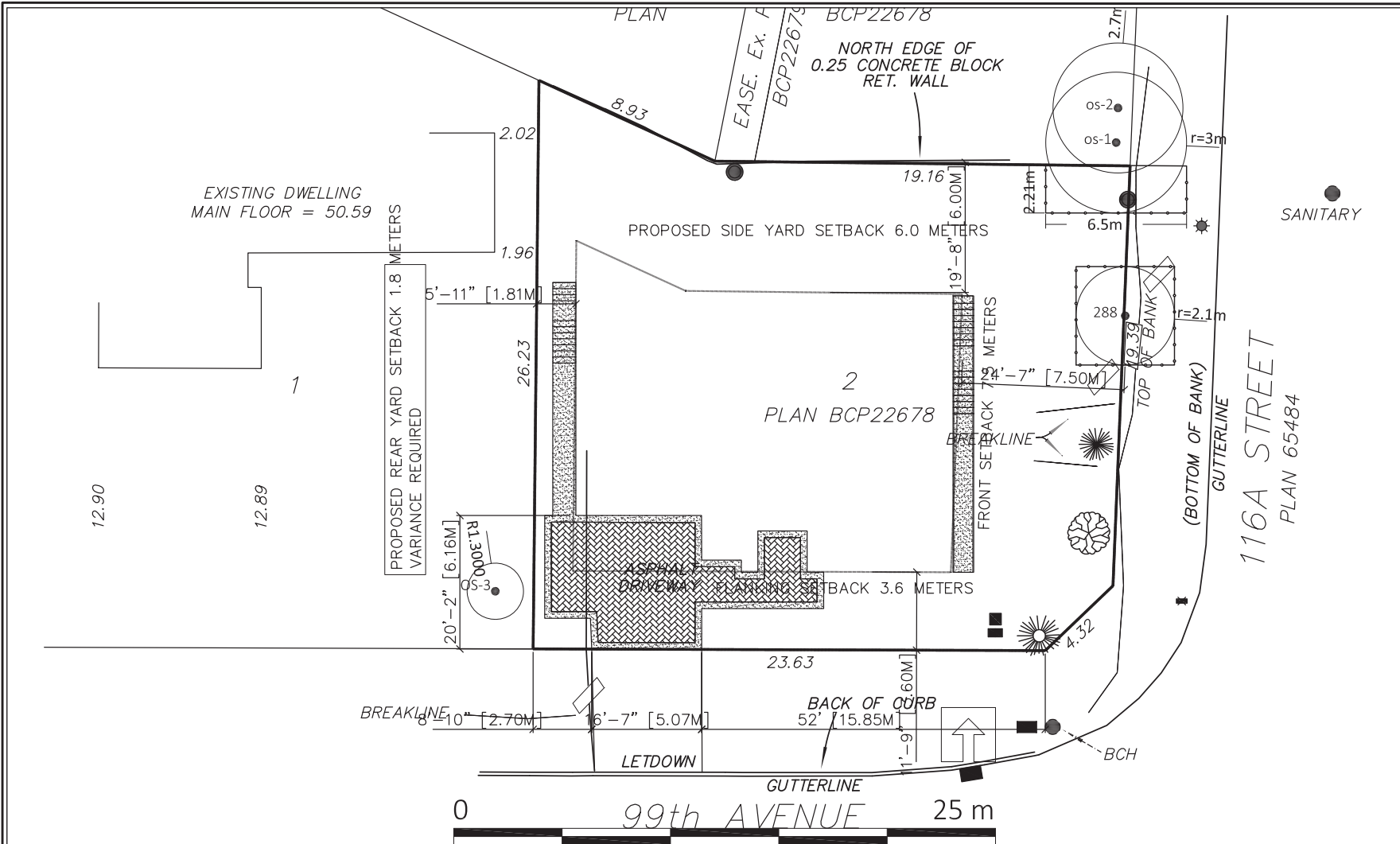
## NOTES



- ✗ TREE TO BE REMOVED
- UN-SURVEYED TREE
- TREE TO BE RETAINED
- TREE PROTECTION FENCE
- - - NO-BUILD ZONE
- TREE PROTECTION ZONE

## LEGEND





- LEGEND**
- TREE PROTECTION ZONE
  - - - NO-BUILD ZONE
  - - - TREE PROTECTION FENCE
  - TREE TO BE RETAINED
  - UN-SURVEYED TREE
  - ✕ TREE TO BE REMOVED



- NOTES**
- The location of un-surveyed trees on this plan is approximate. Their location and ownership cannot be confirmed without being surveyed by a Registered BC Land Surveyor.
  - All tree protection fencing must be built to the relevant municipal bylaw specifications. The dimensions shown are from the outer edge of the stem of the tree.
  - The tree protection zone shown is a graphical representation of the critical root zone, measured from the outer edge of the stem of the tree. (The trees diameter was added to the graphical tree protection circles to accommodate the survey point being in the center of the tree)
  - Any construction activities or grade changes within the Root Protection Zone must be approved by the project arborist.
  - This plan is provided for context only, and is not certified as to the accuracy of the location of features or dimensions that are shown on this plan. Please refer to the original survey plan and engineering plans.

**REFERENCE DRAWINGS**

- Base Plans Provided by: Client

KEY	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING	COMMENTS
	CERODIPHYLLUM JAPONICUM	KATSURA TREE	1	6 CM CAL	AS SHOWN	B. & B.
	PICEA OMORIKA	SERBIAN SPRUCE	1	3.0 METERS	AS SHOWN	B. & B.
	CHAMAECYPARIS NOOTKATENSIS 'PENDULA'	WEeping NOOTKA CEDAR	1	3.0 METERS	AS SHOWN	B. & B.

TOTAL REPLACEMENT TREES: 3

PLANTS IN THE PLANT LIST ARE SPECIFIED ACCORDING TO THE LANDSCAPE CANADA GUIDE SPECIFICATIONS FOR NURSERY STOCK AND THE BCNTA STANDARD FOR CONTAINER GROWN PLANTS.

ALL LANDSCAPING AND LANDSCAPE MATERIALS TO CONFORM TO THE LATEST EDITION OF THE BCLNA/BCSLA "LANDSCAPE STANDARDS"

ALL ASPECTS OF THIS PLAN AND THE WORK THAT IT REFERS TO OR SUGGESTS MUST CONFORM TO THE CITY OF SURREY'S TREE PRESERVATION BY-LAW #16100



# TREE REPLACEMENT PLAN

Project Address: 11645 99th Street, Surrey, BC  
 Client: Manpreet Singh Sehgal

Date: 2017/08/25  
 Drawn by: MR  
 Page Size: TABLOID  
 (11"x17")

Page #  
 1 of 1



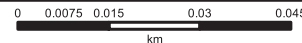
### Legend

- Light Rail Transit Route
- Early Copy Lots**
- Early Copy Lots
- Light Rail Transit Stations
- Road Names1000\_4000
- Buildings (labels)
- Dog-Off-Leash Area (labels)
- Park (labels)
- Plaza/Square (labels)
- Address Points
- Trails and Paths
- Fish Class (Open Channels)**
- A
- AO
- B
- C
- Unknown
- Fish Class (Water Bodies)**
- A
- AO
- B
- C
- Unknown
- Water Courses**
- River
- Creek
- Ditch
- Dev Apps - In Process (labels)
- Dev Apps - In Process
- Land Use Contracts**
- 

File NORTH 7917-0254-00

Scale: 1:1,250

NORTH  
 This information is compiled from various sources and is NOT warranted as to its accuracy or sufficiency by the City of Surrey. It is provided for information and convenience purposes only. Lot sizes, legal descriptions and encumbrances must be verified with the Land Title Office. Use and distribution of this map is subject to all copyright and disclaimer notices at cosmos.surrey.ca



Map created on: 2018-01-29



Existing home (one-storey with basement) on subject property.

NORTH  
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