

# City of Surrey PLANNING & DEVELOPMENT REPORT Application No.: 7921-0107-00

Planning Report Date: September 13, 2021

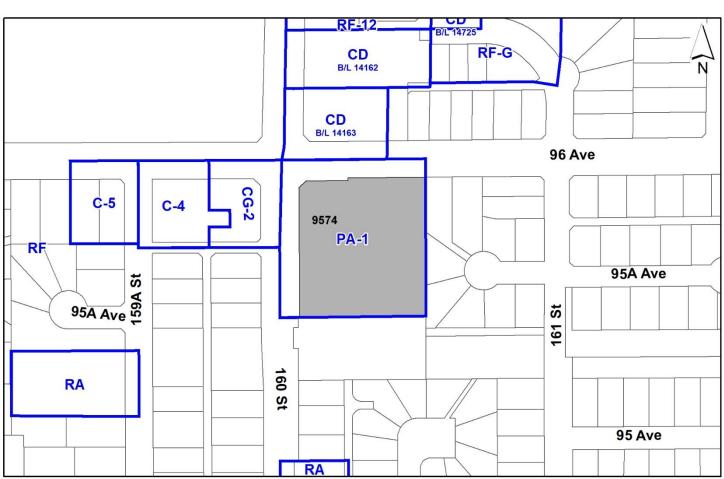
## **PROPOSAL:**

# • Development Variance Permit

to increase the maximum height of two (2) free-standing telecommunications antenna system towers from 12 metres to 16 metres.

LOCATION: 9574 - 160 Street

ZONING: PA-1
OCP DESIGNATION: Urban



## **RECOMMENDATION SUMMARY**

• Approval for Development Variance Permit to proceed to Public Notification.

# **DEVIATION FROM PLANS, POLICIES OR REGULATIONS**

Proposing to increase the maximum height for a free-standing antenna system under Part 4
 General Provisions of the Zoning Bylaw.

#### RATIONALE OF RECOMMENDATION

- The proposal complies with a majority of the criteria identified in the City's Antenna System Siting Policy (No. O-62).
- The applicant has provided information indicating that there are no existing structures of sufficient height that are suitable to mount an antenna system within a 500-metre radius of the subject site.
- The proposed location of the two antenna systems are within a church parking lot away from neighbouring residential properties. The base of the antenna system is approximately 20 metres from the road frontage of 160 Street and 26 metres from 96 Avenue and 70 metres from residential properties.
- The applicant has provided documentation which indicates that there is a demonstrated coverage gap in the area, which the wireless carriers would like to resolve to provide better service to existing and potentially new customers.

#### RECOMMENDATION

The Planning & Development Department recommends that Council approve Development Variance Permit No. 7921-0107-00 (Appendix II), to vary Part 4 General Provisions of the Zoning By-law to increase the maximum height of two (2) free-standing antenna system towers from 12 metres to 16 metres, to proceed to Public Notification.

#### SITE CONTEXT & BACKGROUND

Direction	Existing Use	OCP Designation	<b>Existing Zone</b>
Subject Site	Church	Urban	PA-1
North (Across 96 Avenue):	Gas station and single family dwellings.	Urban	RF and CD (By-law No. 14163)
East:	Single family dwellings.	Urban	RF
South (Across Greenway/Hydro ROW):	Single family dwellings.	Urban	RF
West (Across 160 Street):	Gas station and single family dwellings.	Urban	RF and CG-2

# Context & Background

- The subject site is located at 9574 160 Street and is at the southeast corner of 160 Street and 96 Avenue. The site is approximately 9,278 square metres in area. The site is designated Urban in the Official Community Plan (OCP) and is zoned Assembly Hall 1 Zone (PA-1). The subject site currently is home to Parkland Fellowship Church.
- Through a previous Development Application No. 7918-0340-00, the applicant explored swapping out a wooden hydro pole within a greenway/parkland for a 21-metre tall (metal) telecommunication tower, approximately 80 metres to the southeast of the subject site (see Appendix VI). Due to community opposition that application was closed.

#### **DEVELOPMENT PROPOSAL**

## **Planning Considerations**

- Cypress Land Services Ltd. on behalf of Rogers, is proposing to erect two (2) 15.8-metres tall free-standing antenna system towers and related equipment compounds in the centre of the church parking lot on the west side of the subject site.
- The Zoning By-law allows for 12 metre tall free-standing antenna system in all zones.
- The applicant is proposing a Development Variance Permit to increase the maximum height of two free-standing antenna system towers from 12 metres to 16 metres.
- The proposal will provide improved telecommunication coverage and capacity for the area generally bound by 98 Avenue to the north, 162A Street to the east, 92 Avenue to the south, and 156 Street to the west (see Appendix III).

#### Referrals

Engineering: The Engineering Department has no objection to the project.

#### **POLICY & BY-LAW CONSIDERATIONS**

- Staff have conveyed to telecommunication companies the importance of a comprehensive strategy to ensure adequate coverage for all carriers while minimizing the number of singular user installations. Staff have also emphasized the importance of keeping the height of installations to a minimum without compromising the existing policy guidelines, especially antenna systems in proximity to residential areas, and to ensure that an appropriate design is being considered.
- Improving high speed wireless service supports the growing high technology sector, high tech education, emergency services and broadens community consultation opportunities through social media.
- The proposed free-standing antenna systems are required for current and future network capacity upgrades. This proposal will provide increased service to the surrounding area. Many residents and businesses use wireless service as their primary means of communication and have come to expect it as an essential utility.
- The proposed location for the free-standing antenna systems is in the middle of the parking lot away from neighbouring residential properties. This location should have minimal impact on neighbouring residential properties.
- The proposed free-standing antenna systems support the City of Surrey's vision for building a strong economy.

# City's Antenna System Siting Policy

- On February 22, 2021, Council approved the City's Antenna System Siting Policy (No. O-62), which replaced Policy No. O-49 Telecommunication Towers. Policy No. O-62 was developed by City staff in coordination with industry representatives to ensure that development of antenna systems throughout Surrey meet the needs of residents and conform to telecommunication industry best practices. The policy provides parameters on how free-standing antenna systems should be sited and designed.
- The subject application generally complies with the current Antenna System Siting Policy No. O-62 and is therefore being presented for Council's consideration.
- The following is an evaluation of the current proposal in relation to applicable components of Antenna System Siting Policy No. O-62:

### Co-Location

• Co-location will generally result in taller and wider towers, more antennas on each structure and physical limitations on how many antennas a single antenna supporting structure can structurally support. The City recognizes that the objective of promoting co-location and the objective of making antenna systems less noticeable may sometimes come into conflict.

The applicant has confirmed that both of the 15.8 metre towers will be only for Rogers. Including additional carriers would require substantially taller towers.

# **Location Preferences**

• It is preferable that new free-standing antenna systems be sited in non-residential locations and preferably outside of agricultural areas unless other options are exhausted. If free-standing antenna systems are proposed on agricultural land, the proposal should ensure siting avoids farmland, and ensures maximum potential for farming on the remainder of the site.

The proposed location is within a church parking lot approximately 70 metres away from any residential properties to the east.

# **Design Preferences**

• The appropriate type of telecommunication antenna supporting structure for each situation should be selected with the goal of making best efforts to blend in with the nearby surroundings and minimizing the visual aesthetic impacts of the antenna system on the community. The use of monopoles is strongly encouraged.

The applicant proposes a design that mimics two lighting poles with internal antennas which is considered appropriate for this installation.

• The City prefers that towers be a maximum of 15 metres in height, except in industrial, mixed employment, commercial and agricultural areas. The City will consider increased height for a tower when located in an industrial or mixed employment area, and preferably at a distance of at least six times the height of the antenna supporting structure away from residential areas.

The applicant has advised the increased height of the proposed tower is necessary to fill coverage gaps in the area (see Appendix III). Although, there are commercial sites to the north and west of the property, neighbouring landlords were not willing to sign leases.

The proposed 15.8 metres is marginally higher than the 15 metre maximum height that is preferred by the City.

• Landscaping shall be appropriately placed around telecommunication towers and ancillary facilities, such as equipment shelters, to minimize their visual impact on the neighbourhood. In all instances, the proponent should mitigate negative visual impacts through the use of appropriate landscaping, screening, and stealth design techniques. The design of antenna systems should generally be unobtrusive and consistent with area guidelines. Towers and communication equipment should have a non-glare surface.

No landscaping is proposed for screening as the tower and compound are located in the centre of the parking lot. The proposed equipment cabinets are small (1 metre wide by 1.3 metre deep and 2.1 metre tall) and will have minimal impact on the streetscape.

There a several trees located along both 160 Street and 96 Avenue that will further screen the equipment cabinets and towers from the street. The base of the towers is approximately 20 metres from 160 Street and 26 metres from 96 Avenue.

### **Public Consultation Process**

In accordance with policy No. O-62, the applicant sent out 14 notification packages on June 10, 2021, to the neighbouring property owners and mailing addresses within a notification area of 50 metres, which is approximately three times the height of the proposed tower.

Four (4) responses in opposition were received by the applicant and staff concerning the proposed towers as a result of the notifications.

A resident was concerned with radiation and health issues form the proposed telecommunication towers.

(The proposed tower is required to be designed, constructed, and operated in adherence with the minimum standards set by Health and Industry Canada, including Safety Code 6.)

A resident suggested that the proposed towers should be in a commercial or industrial site or the Public Works Yard approximately 400 metres to the south.

(There are two commercial (gas station) options across 96 Avenue to the north and across 160 Street to the east. Neither gas station had a willing landlord for a lease. Locating the towers at the gas stations would also move the towers closer to residential properties which is partly why the subject site was chosen.

Staff and the applicant have previously explored telecommunication towers in the Hemlock Works Yard to the south, but the height of the proposed towers would require a minimum 40-metre height to reach above the trees)

# **Zoning By-law**

- The applicant is requesting the following variance:
  - o to vary Part 4 General Provisions of the Zoning By-law to increase the maximum height of two free-standing antenna systems from 12 metres to 16 metres.
- The proposed free-standing antenna system and cabinet locations are compliant with the accessory building setbacks of the PA-1 Zone.
- As the free-standing antenna system and equipment cabinet are setback more than 20 metres from the nearest public road and the perimeter of the site along the street frontages has existing landscaping, no additional landscaping or screening is proposed.
- The proposed southern tower is screened from residential properties by the existing church.
- Both proposed towers are approximately 70 metres from the neighbouring residential properties to the east.
- Both proposed towers are 16 metres in height which is marginally above the 15 metre recommendation in the Antenna System Siting Policy No. O-62.
- Staff support the requested variance to proceed for consideration.

## **TREES**

 No trees are proposed to be removed or planted to accommodate either the compounds or monopoles.

# INFORMATION ATTACHED TO THIS REPORT

The following information is attached to this Report:

Appendix I. Survey Plan, and Elevations

Appendix II. Development Variance Permit No. 7921-0107-00

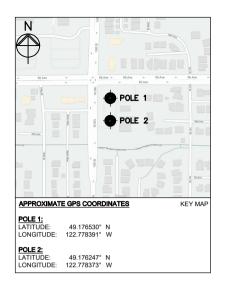
Appendix III. Coverage Maps
Appendix IV. Photo Renderings

Appendix V. Previously Proposed Pole Location (7918-0340-00)

approved by Ron Gill

Rémi Dubé Acting General Manager Planning and Development

JKS/cm





**SITE NAME: 160TH ST AND 96TH AVE** 

SITE ID: W2559

LOCATION: 9574 160TH ST

SURREY, BC

**SITE TYPE:** LIGHT POLE EXTENSIONS WITH EQUIPMENT ON GRADE

**DRAWING LIST:** S101 TITLE PAGE

CELLULAR LOADING SPECIFICATIONS

S301 SITE PLAN

S302 PARTIAL SITE PLAN (POLE 1) S303 PARTIAL SITE PLAN (POLE 2)

S401 SOUTH AND WEST ELEVATIONS (POLE 1) S402 SOUTH AND WEST ELEVATIONS (POLE 2)

ALL DIMENSIONS IN MILLIMETERS UNLESS NOTED OTHERWISE

No.:	Date:	Description:
	2021.02.23	ISSUED FOR CLIENT REVIEW
	2021.08.26	CLIENT REVIEW

Revisions:

Project: 220332

Drawing:

TITLE PAGE

Sheet Title:

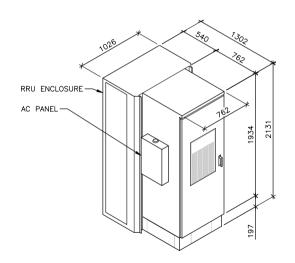
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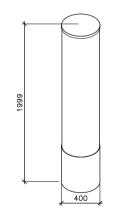




					AN	ITENNA TABLE								
	ANT.		ANTENNA ID	MOUNT	ANTENNA		(1)	ME	Γ (*)	AZIMUTH	JUMPER/	No. OF RRUs	OF STATUS	
	POS. No.	TECHNOLOGY	LABEL	HEIGHT AGL(m)	MOUNT (UP/DOWN)	ANTENNA TYPE )	MDT (*)	700/ 850	1900/ 2100/ 2600	(*)	LINE TYPE			
	1-1	LTE	LTE-1		UP		NA	TBD	TBD	40	6-LDF4-50A			
POLE 1	1-2	LTE	LTE-2	15.8	UP UP	TTS-608015/D172718DEI-65FT2	NA	TBD	TBD	160	6-LDF4-50A	-	INITIAL	
	1-3	LTE	LTE-3				NA	TBD	TBD	280	6-LDF4-50A			
ſ	2-1	LTE OFFSET	OFFSET-1		UP		NA	TBD	TBD	100	6-LDF4-50A			
POLE 2	2-2	LTE OFFSET	OFFSET-2	15.8 UP	TTS-608015/D172718DEI-65FT2	NA	TBD	TBD	220	6-LDF4-50A	9	INITIAL		
	2-3	LTE OFFSET	OFFSET-3		UP		NA	TBD	TBD	340	6-LDF4-50A			
	3	GPS	GPS-1	13.8	UP	KRE1012395/2	_	-	_	-	TBD	_	INITIAL	
	NOTES:		ITENTS TO BE CONFIRMED WITH ND RADIUS AS PER MANUFACTU HEIGHT TO TOP OF ANTENNAS.		COMMENDATIO	ONS.								





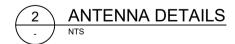


ANT. TYPE: TONGYU
MODEL: TTS-608015/D172718DEI-65FT2
HEIGHT: 1999mm
DIAMETER: 400mm
WEIGHT: 50.0kg



MANUFACTURER: ERICSSON
MODEL: KRE1012395/2
HEIGHT: 74mm
DIAMETER: 77mm
WEIGHT: 0.3kg





	2021.08.26	ISSUED FOR CLIENT REVIEW		
		ISSUED FOR CLIENT REVIEW		
No.:	Date:	Description:		
Revi	sions:			

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GS - Sayers
ENGINEERING LTD.

1661 West 5" Avenue
Vancouver, BC V61 115
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www.glotumanismpson.cor

Project: Site ID: **W2559 160TH ST AND 96TH AVE**9574 160TH ST, SURREY, BC

O ROGERS.

Sheet Title:

CELLULAR LOADING
Scale: NTS
SPECIFICATIONS
Drawn: RS

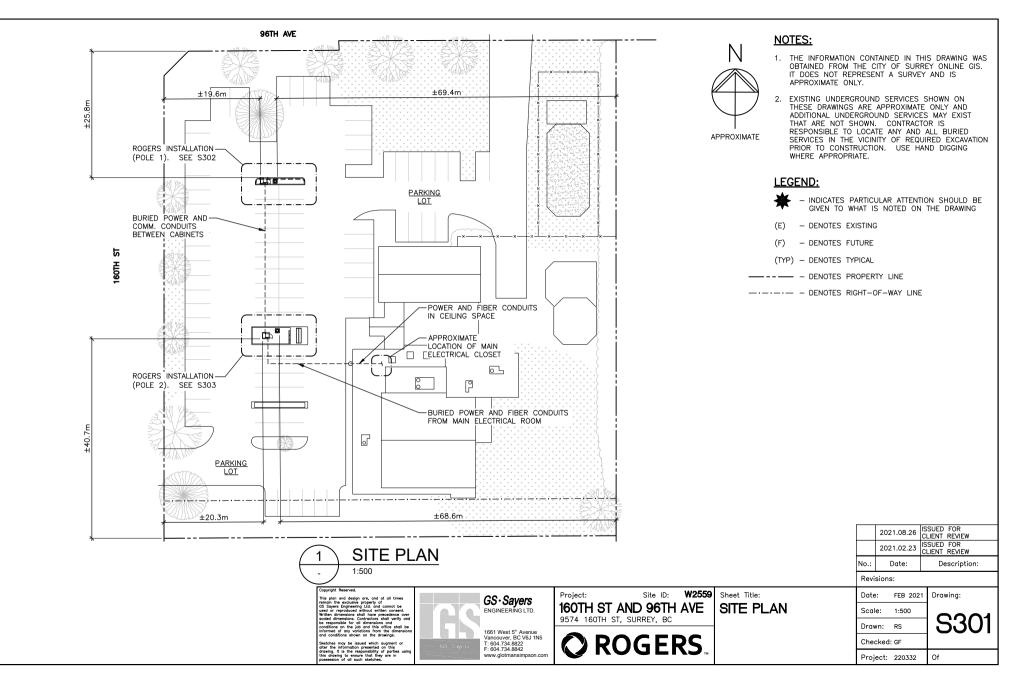
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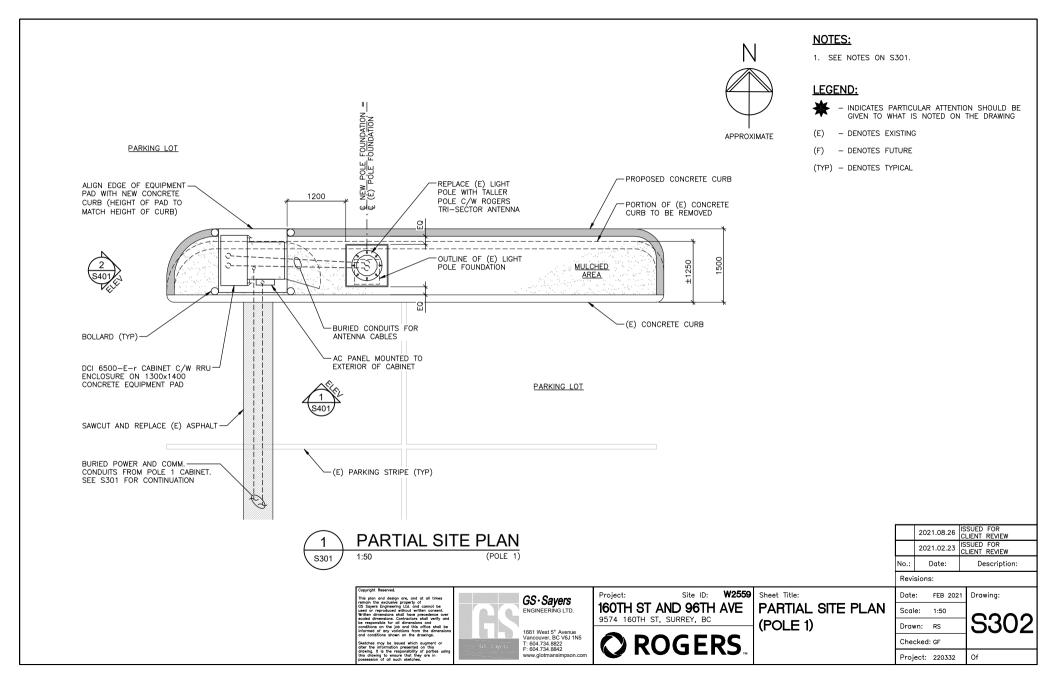
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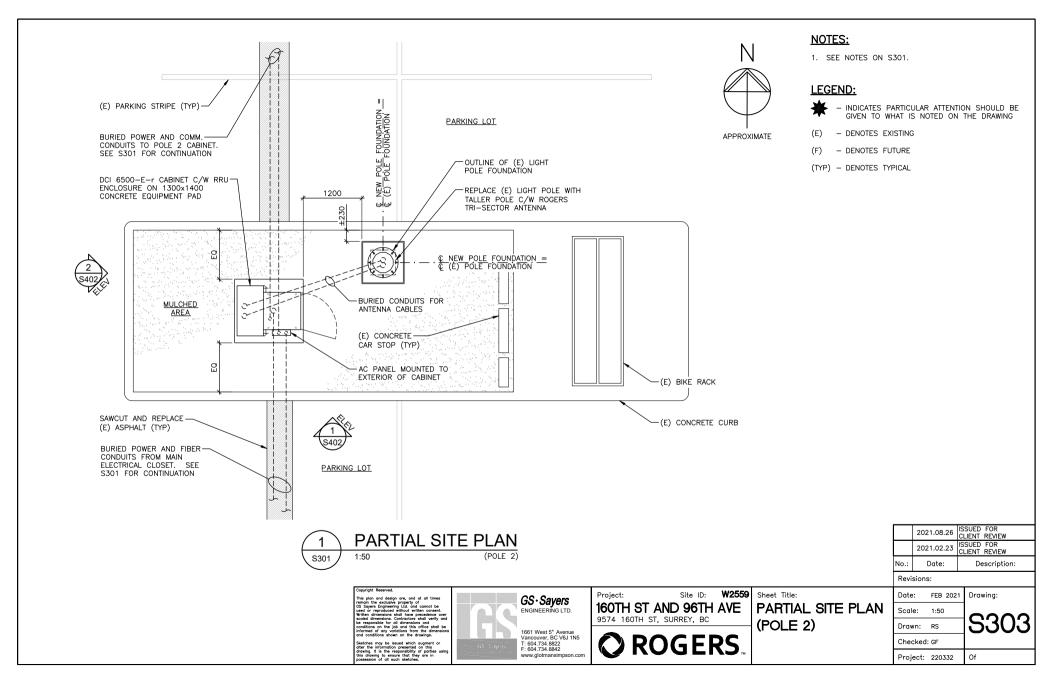
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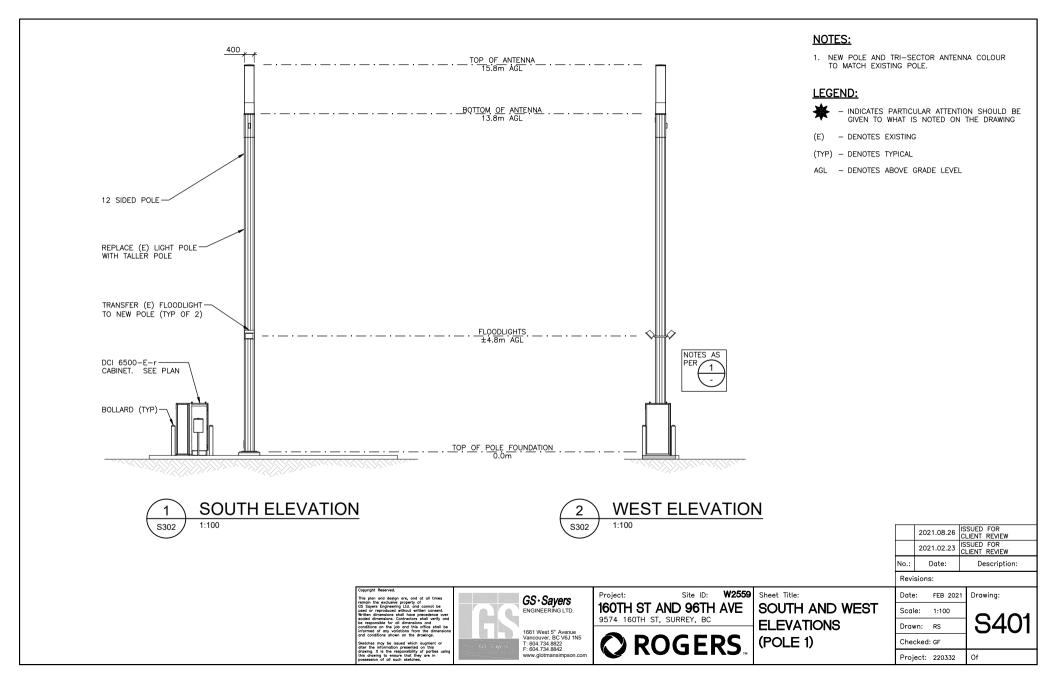
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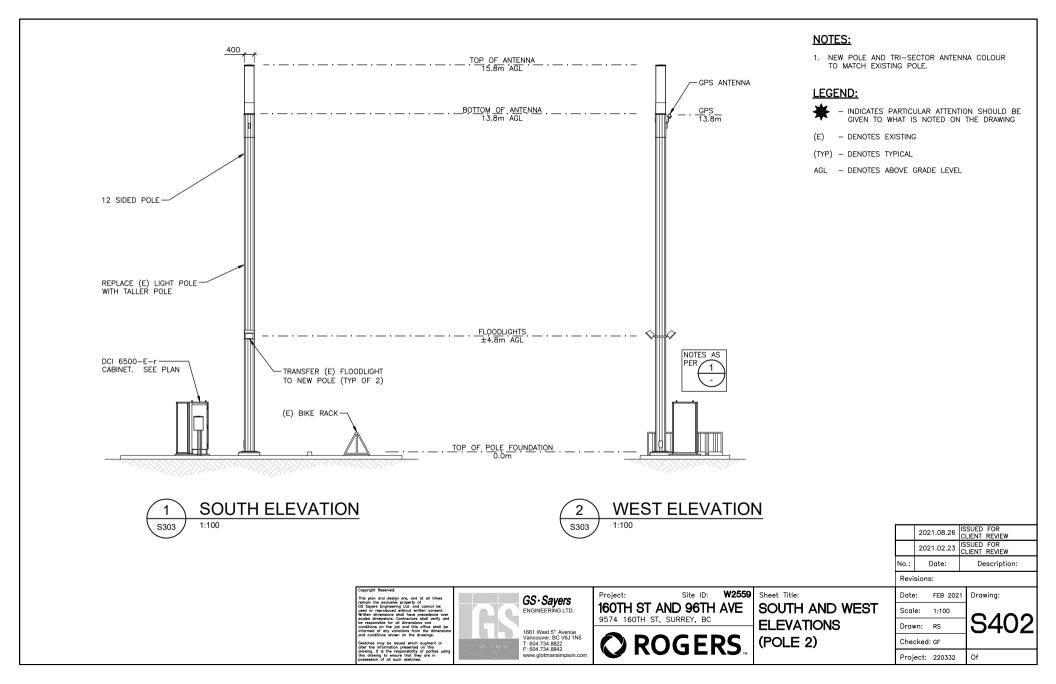
Proving:











## **CITY OF SURREY**

(the "City")

### **DEVELOPMENT VARIANCE PERMIT**

NO.: 7921-0107-00

Issued To:

(the "Owner")

Address of Owner:

- 1. This development variance permit is issued subject to compliance by the Owner with all statutes, by-laws, orders, regulations or agreements, except as specifically varied by this development variance permit.
- 2. This development variance permit applies to that real property including land with or without improvements located within the City of Surrey, with the legal description and civic address as follows:

Parcel Identifier: 011-164-832

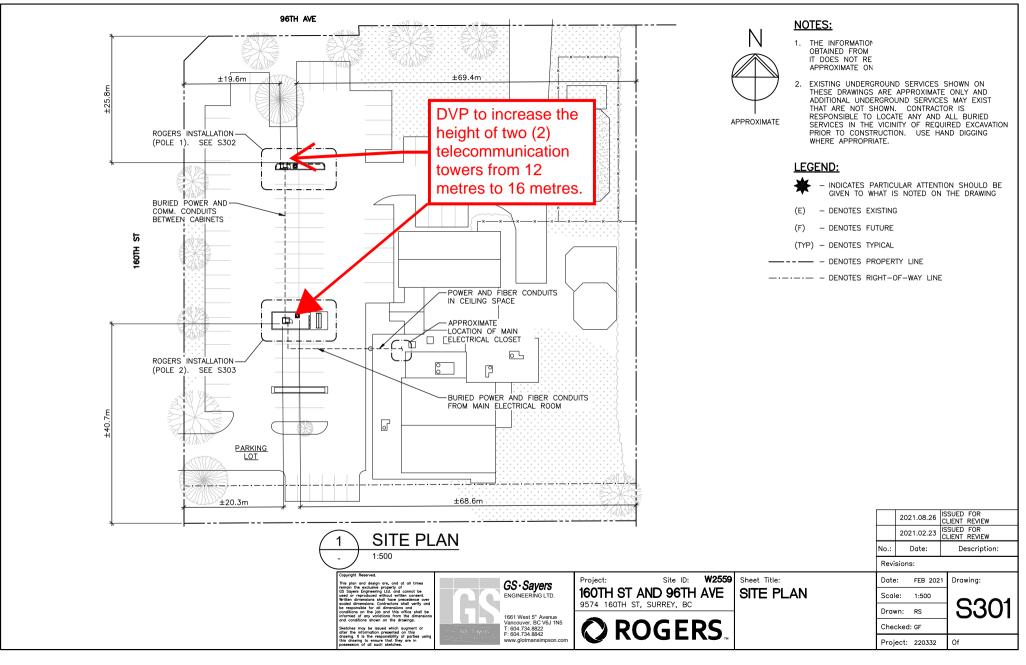
West Half of the North Half Lot 1 Section 36 Township 2 New Westminster District Plan 5790 Except Parcel A (Bylaw Plan 84207), Plans LMP40357, BCP46282 and EPP53028

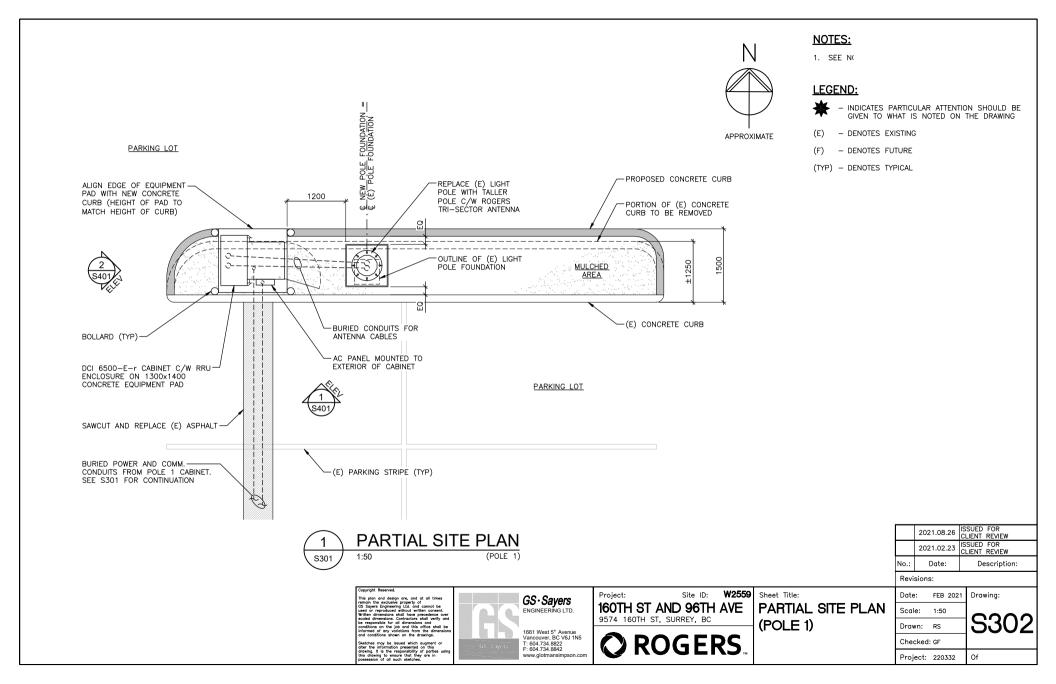
9574 - 160 Street

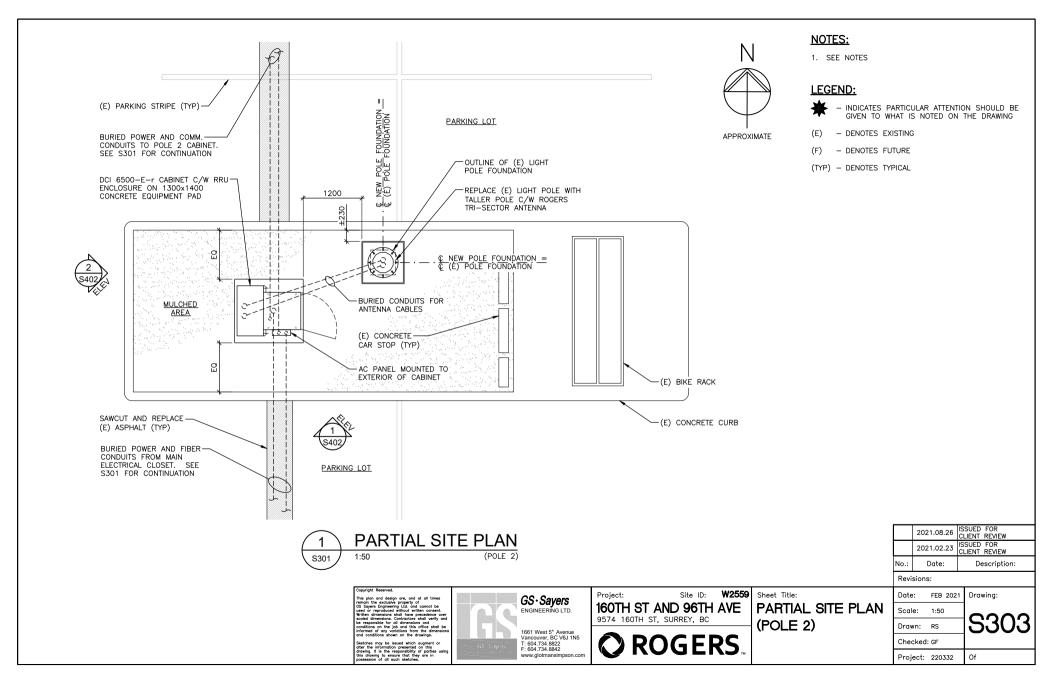
(the "Land")

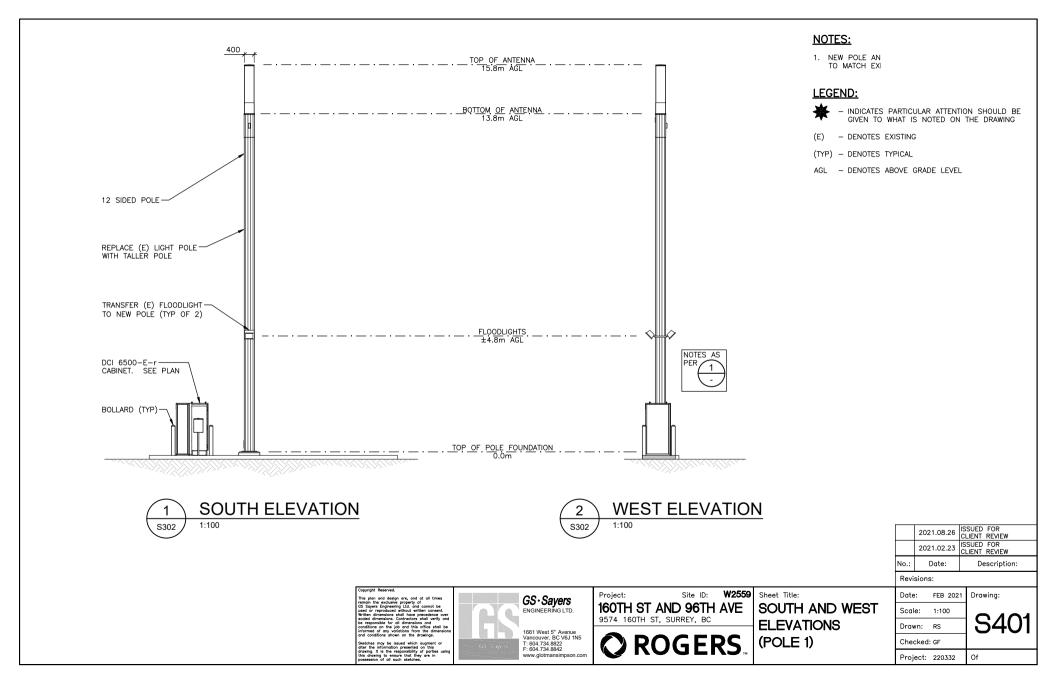
- 3. Surrey Zoning By-law, 1993, No. 12000, as amended is varied as follows:
  - (a) In Sub-section A.1(a)ii.b. of Part 4 General Provisions, the height of two (2) telecommunication tower is increased from 12 metres to 16 metres.
- 4. The siting of buildings and structures shall be in accordance with the drawings numbered 7921-0107-00(A) through to and including 7921-0107-00(E) (the "Drawings") which are attached hereto and form part of this development variance permit.
- 5. This development variance permit applies to only that portion of the buildings and structures on the Land shown on Schedule A which is attached hereto and forms part of this development variance permit. This development variance permit does not apply to additions to, or replacement of, any of the existing buildings shown on attached Schedule A, which is attached hereto and forms part of this development variance permit.

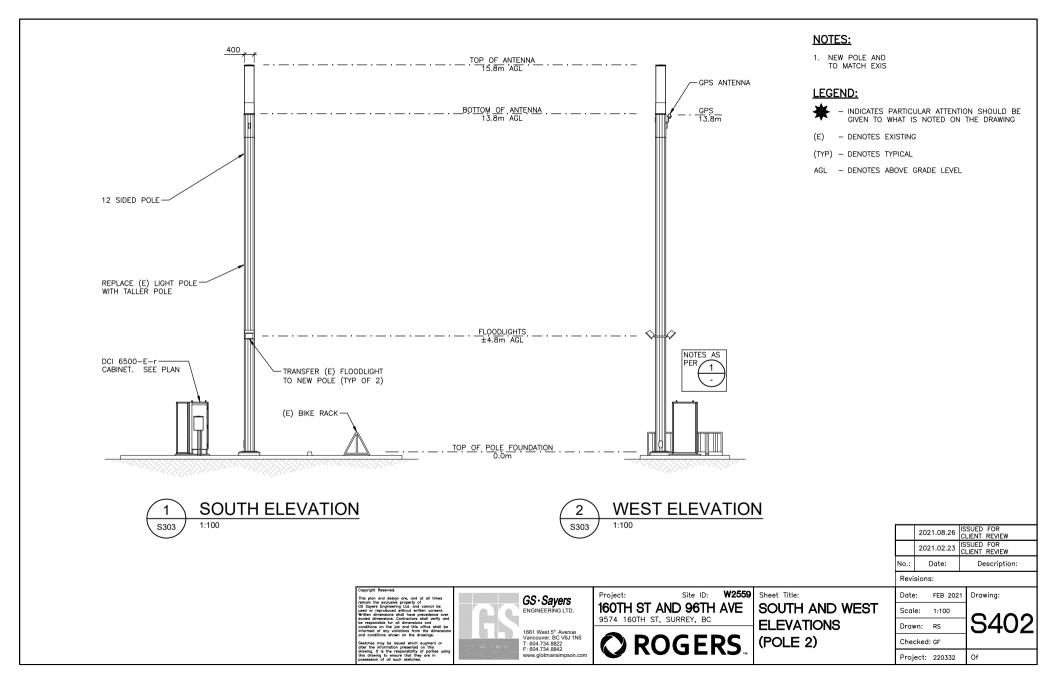
This development variance permit shall lapse if the Owner does not substantially start as construction with respect to which this development variance permit is issued, within tw (2) years after the date this development variance permit is issued.			
The terms of this development varieties persons who acquire an interest is	ariance permit or any amendment to it, are binding on a in the Land.		
This development variance perm	it is not a building permit.		
ORIZING RESOLUTION PASSED D THIS DAY OF , 20 .	BY THE COUNCIL, THE DAY OF , 20 .		
	Mayor - Doug McCallum		
	The terms of this development variance permons who acquire an interest of this development variance permons.		





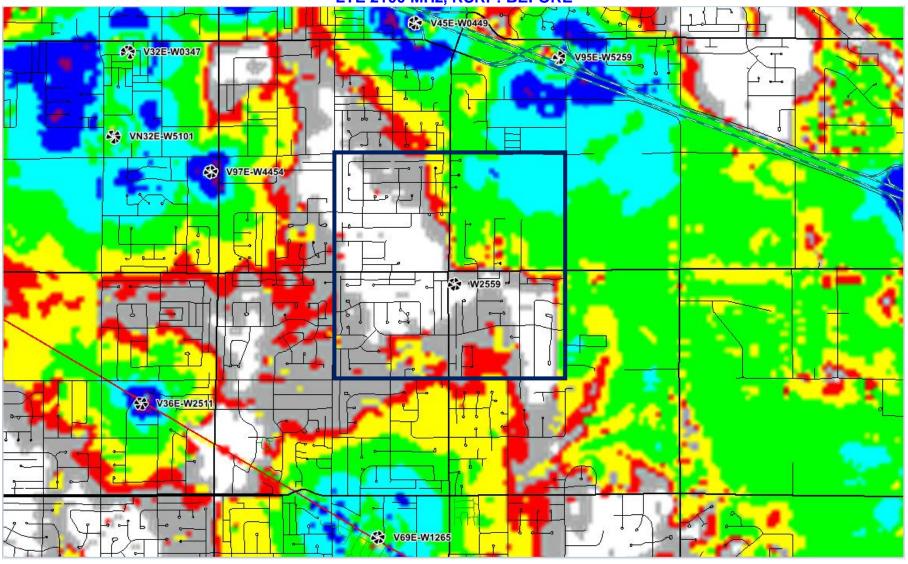






# **RADIO SITE QUALIFICATION**

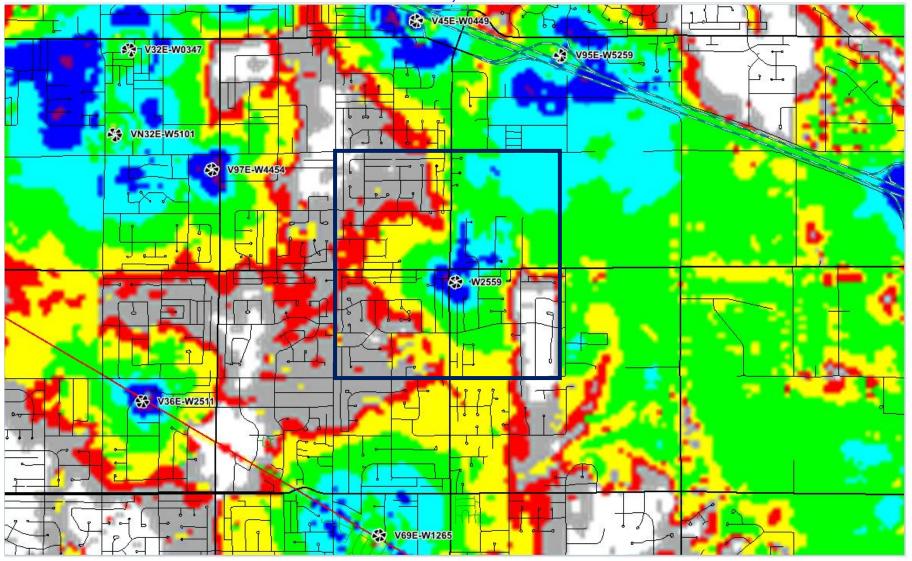
LTE 2100 MHz, RSRP: BEFORE



ROGERS WIRELESS RADIO ENGINEERING DEPARTMENT

# **RADIO SITE QUALIFICATION**

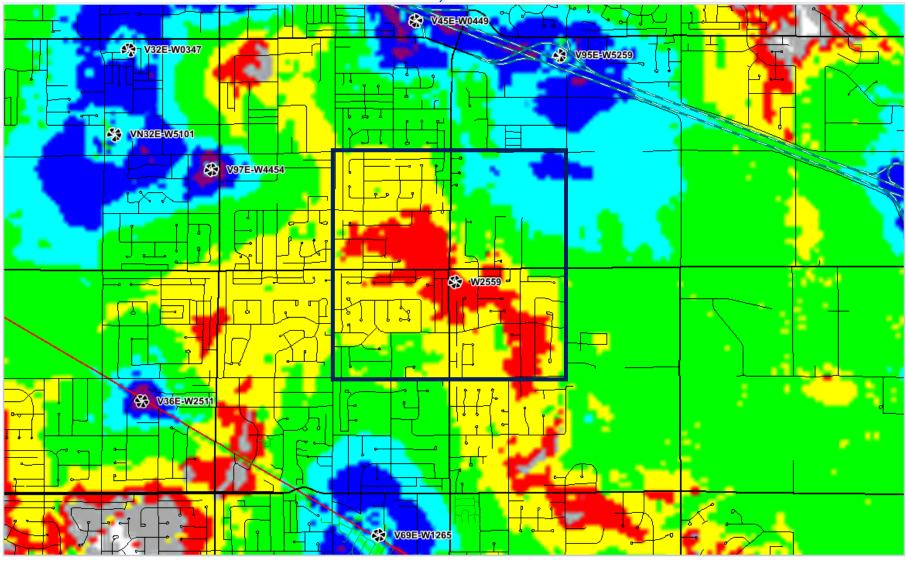
LTE 2100 MHz, RSRP: AFTER



ROGERS WIRELESS RADIO ENGINEERING DEPARTMENT

# **RADIO SITE QUALIFICATION**

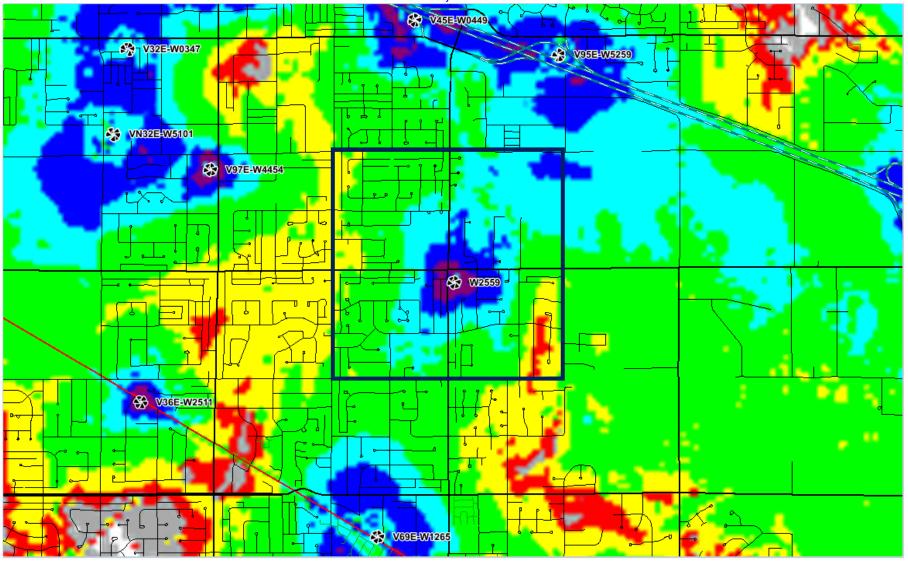
LTE 700 MHz, RSRP: BEFORE



ROGERS WIRELESS RADIO ENGINEERING DEPARTMENT

# **RADIO SITE QUALIFICATION**

LTE 700 MHz, RSRP: AFTER









# City of Surrey Mapping Online System



1