

# Proposed Wireless Telecommunication Infrastructure Installation

Boyd Conservation Area – C3820  
DA.13.056

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Item # 1 (Referred)

COUNCIL – November 19, 2013

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*(Coloured version is available on-line)*



# STATE OF THE CANADIAN WIRELESS INDUSTRY

- 28 million wireless subscriptions
- 81% of Ontario households
- 50% of 18-34 y.o. households have no landline (wireless only)
- 270 million text messages a day
- More than 45% of users have a smartphone (rate is increasing)
- More than 50% of 911 calls made from a wireless device
- Data usage is increasing at a rate of 5% per month
- Within the next 3 years or so, network-wide bandwidth will need to increase 30x to keep up with demand



# PROJECTED DEMAND FOR WIRELESS SERVICES

Smartphone



Exabytes per Month

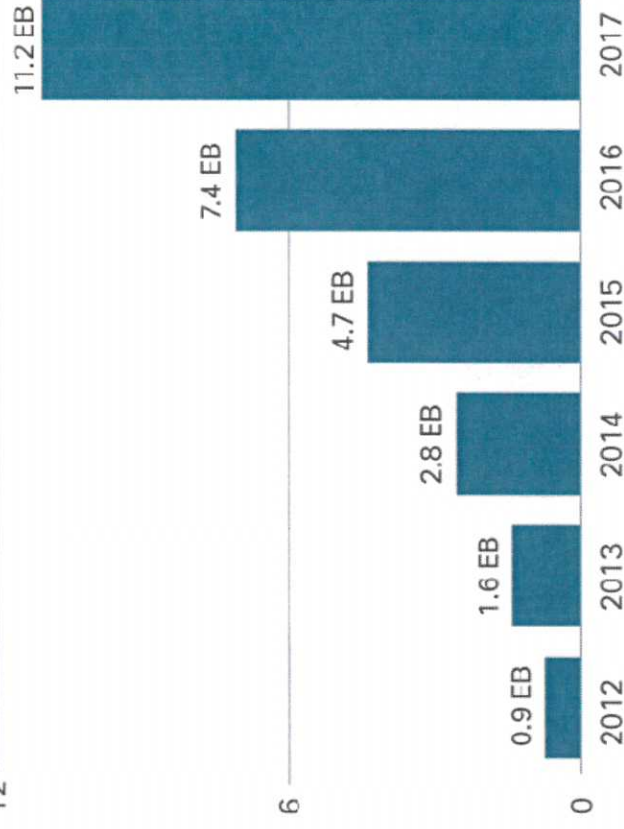
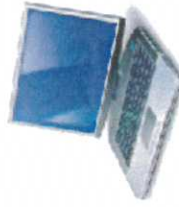
66% CAGR 2012-2017

12

Tablet with Data Plan

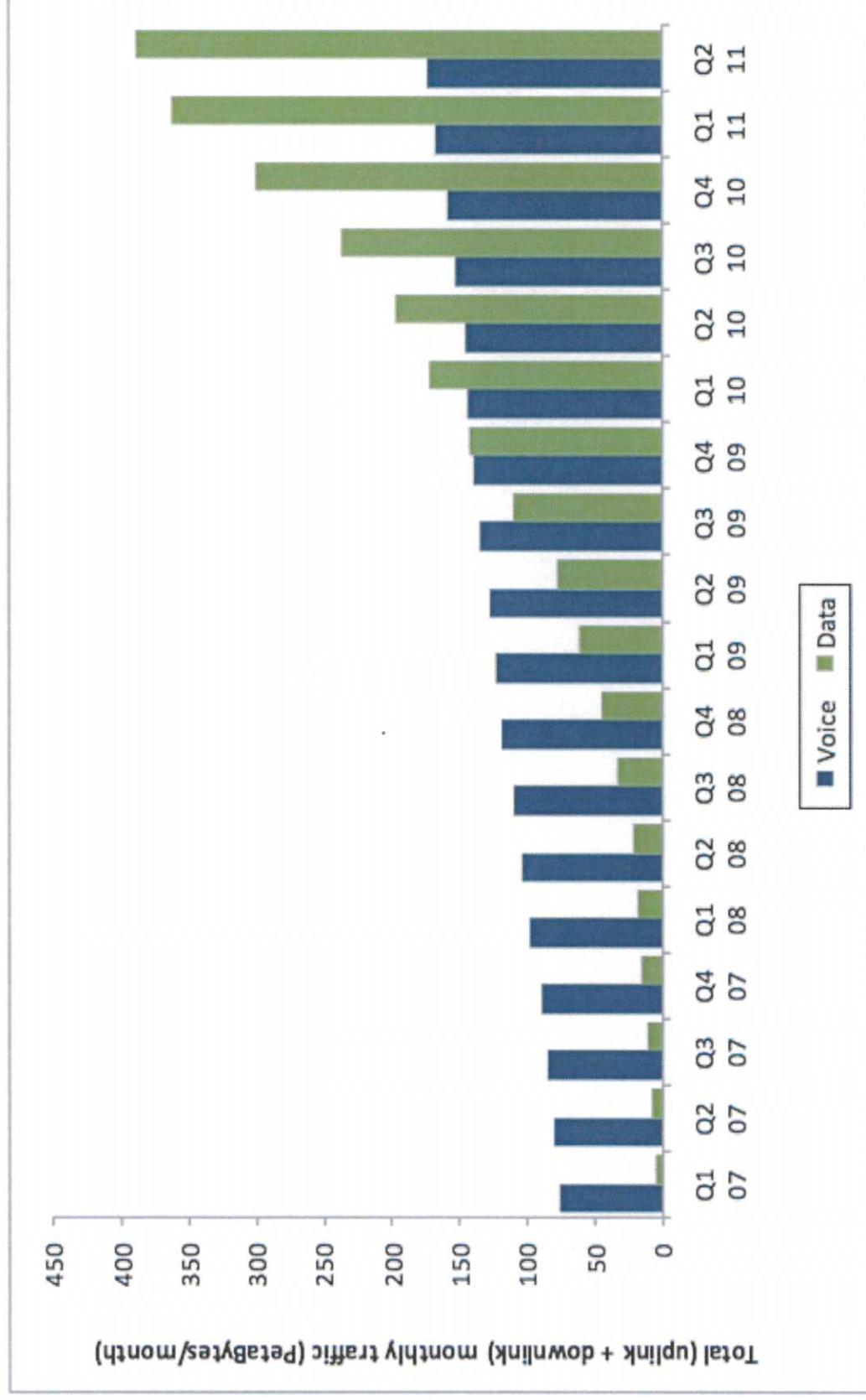


Laptop with Internet Data Stick



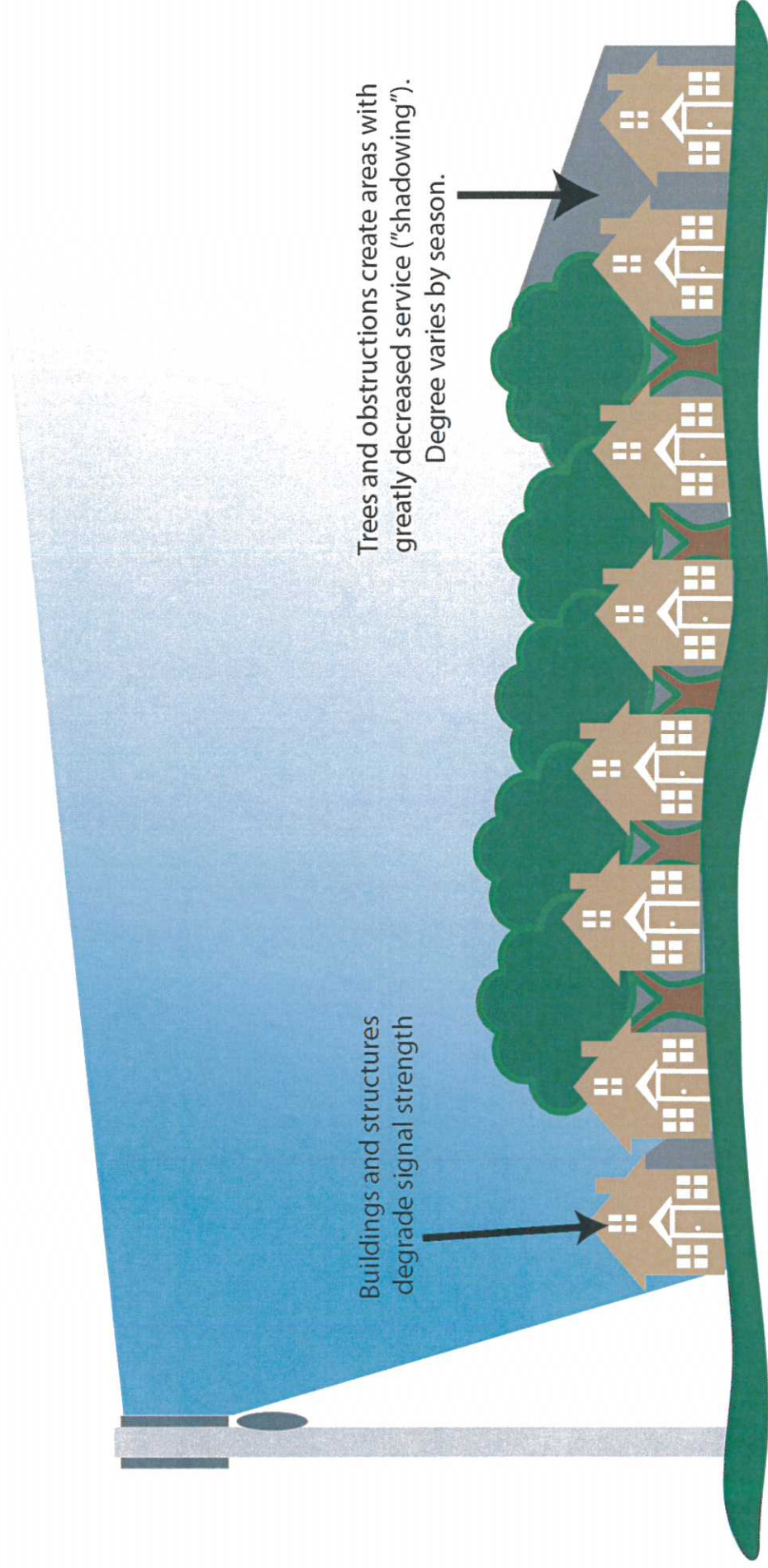
Source: Cisco VNI Mobile Forecast, 2013

# WIRELESS NETWORKS ARE DATA DRIVEN





# SIGNAL STRENGTH CONSIDERATIONS



A high number of users accessing network on the same antenna installation can also reduce the quality of the connection.



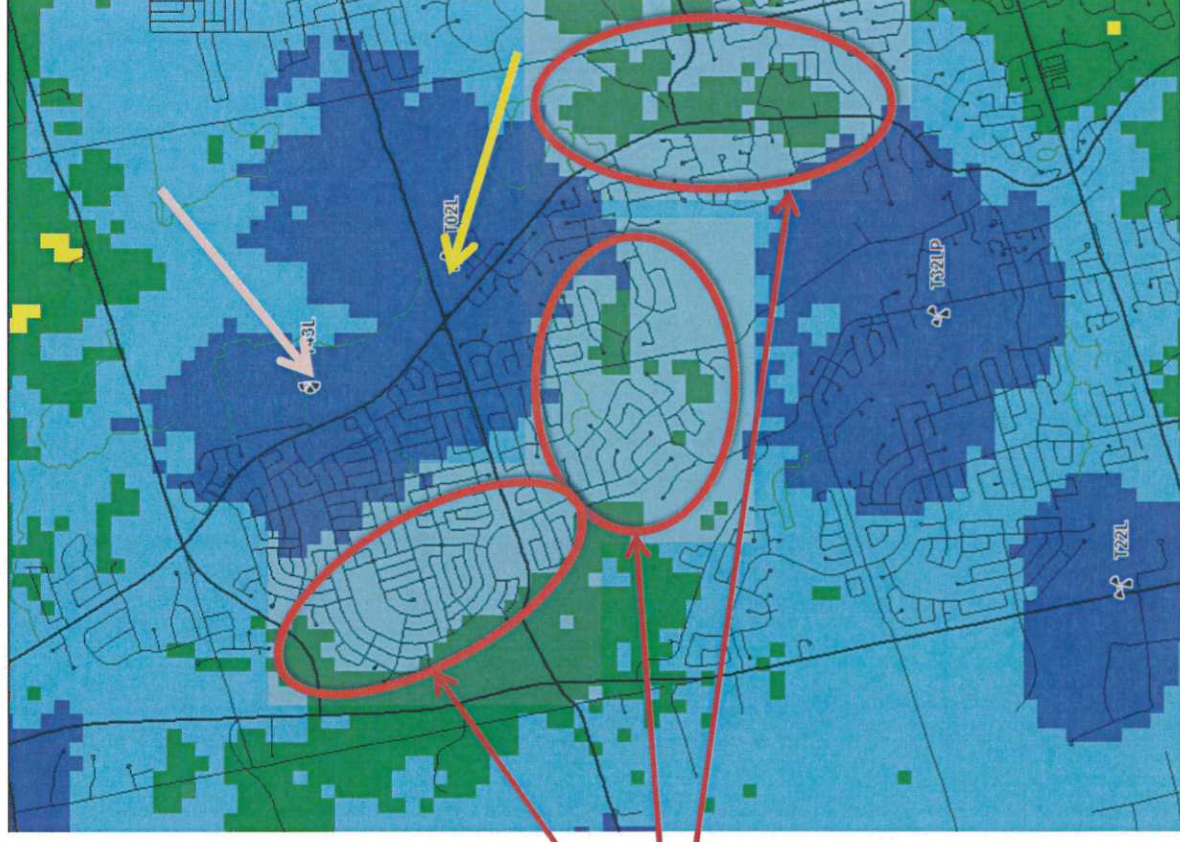
**Pine Grove / Sonoma Neighbourhoods:**

**Not Enough Coverage or Network Capacity**  
(too many users located too far from too few antennas)



# EXISTING NETWORK DEFICIENCIES

Residential areas have poor coverage and insufficient network capacity





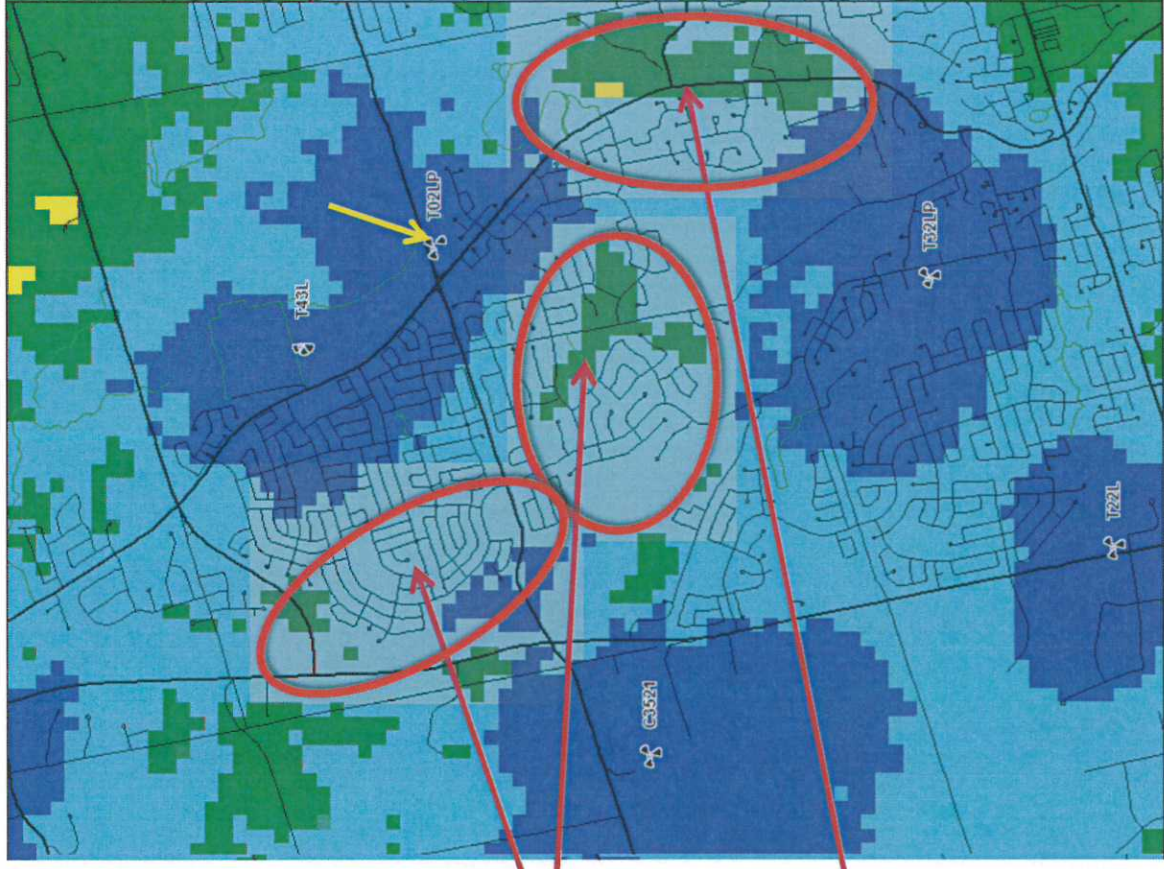
**More Network Coverage and Capacity Needed**

**=**

**More Antennas Needed**



# RELOCATING ANTENNA AT AL PALLADINI CENTRE

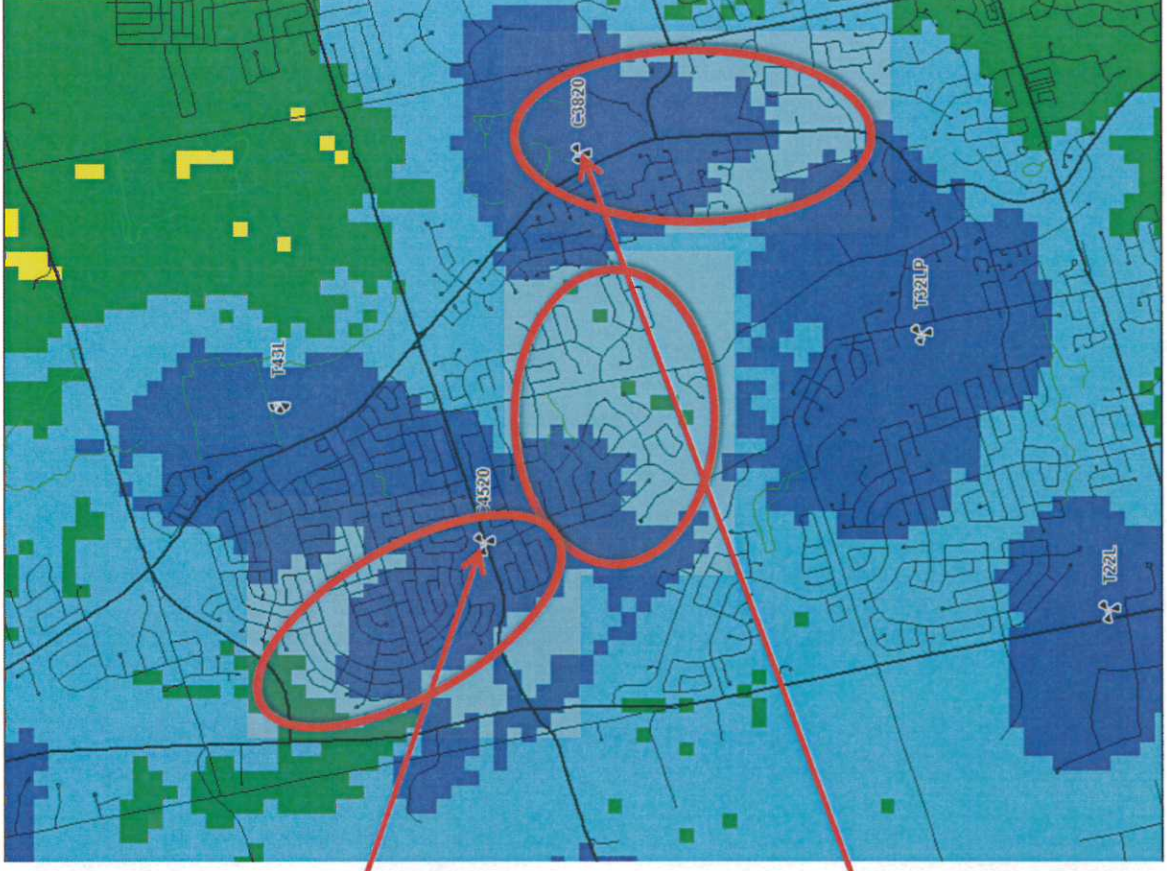


- Existing deficiencies in Sonoma and Pine Grove remain
- New antenna needed south of Boyd



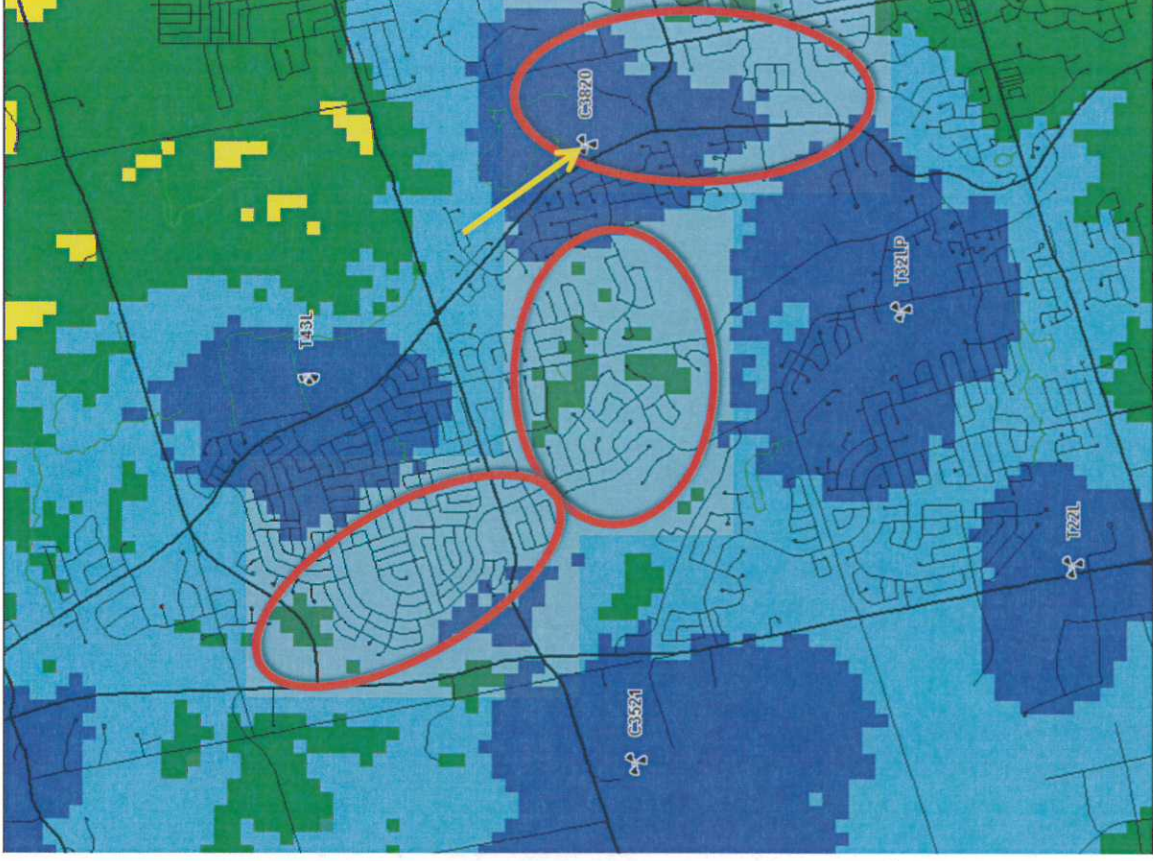
# ORIGINAL PROPOSAL: NAPA VALLEY + BOYD

Refused  
by  
Council





## PLAN B: NEW TOWER AT BOYD



- Palladini Tower removed
- Existing deficiencies in Sonoma and Pine Grove remain
- No new tower south of Boyd required



# PROPOSED BOYD TOWER DESIGN: 40m shrouded tripole

## Who?

Rogers Communications Inc.

## What?

40-metre steel shrouded tripole tower and an equipment cabinet at the base within a fenced enclosure.

## Where?

Maintenance area of Boyd Conservation Area

## Why?

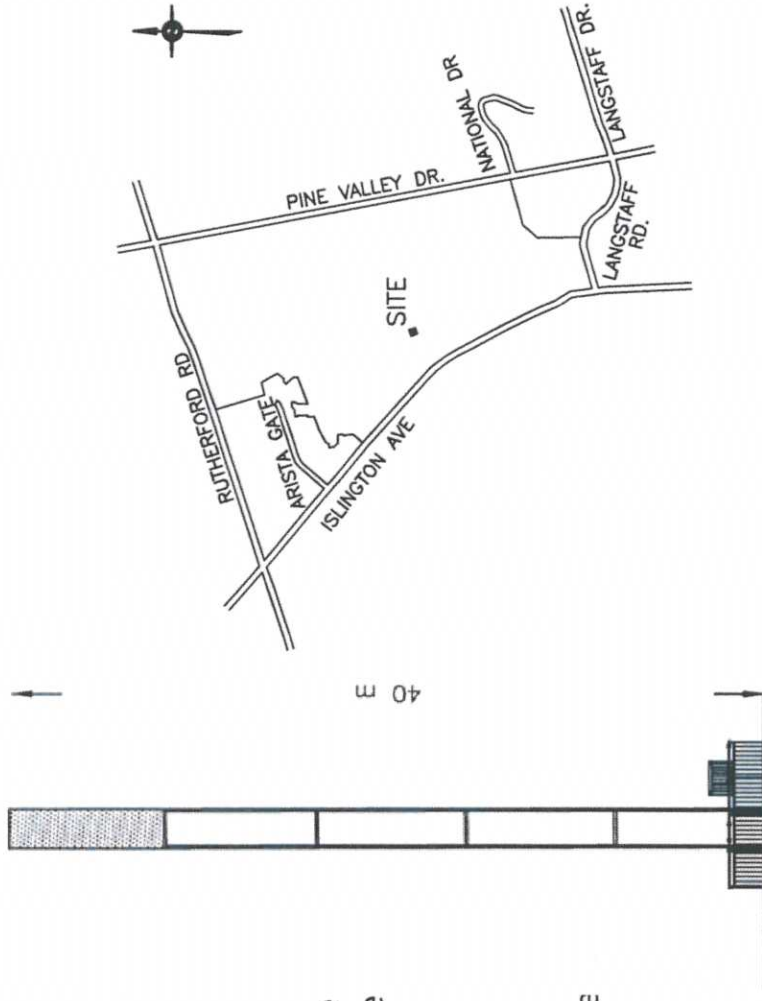
Customer complaints regarding significantly degraded voice and data network in the area and to relieve network pressure from existing antennas that are over-capacity.

## Why here and not elsewhere?

- 1) We need a willing landlord.
- 2) The site has to be able to provide access locally and be able to connect to the wider network.
- 3) The site must satisfy network engineering requirements.

## Who are the Governing Bodies for cellular antenna installations?

Industry Canada (tower)  
Health Canada (emissions)

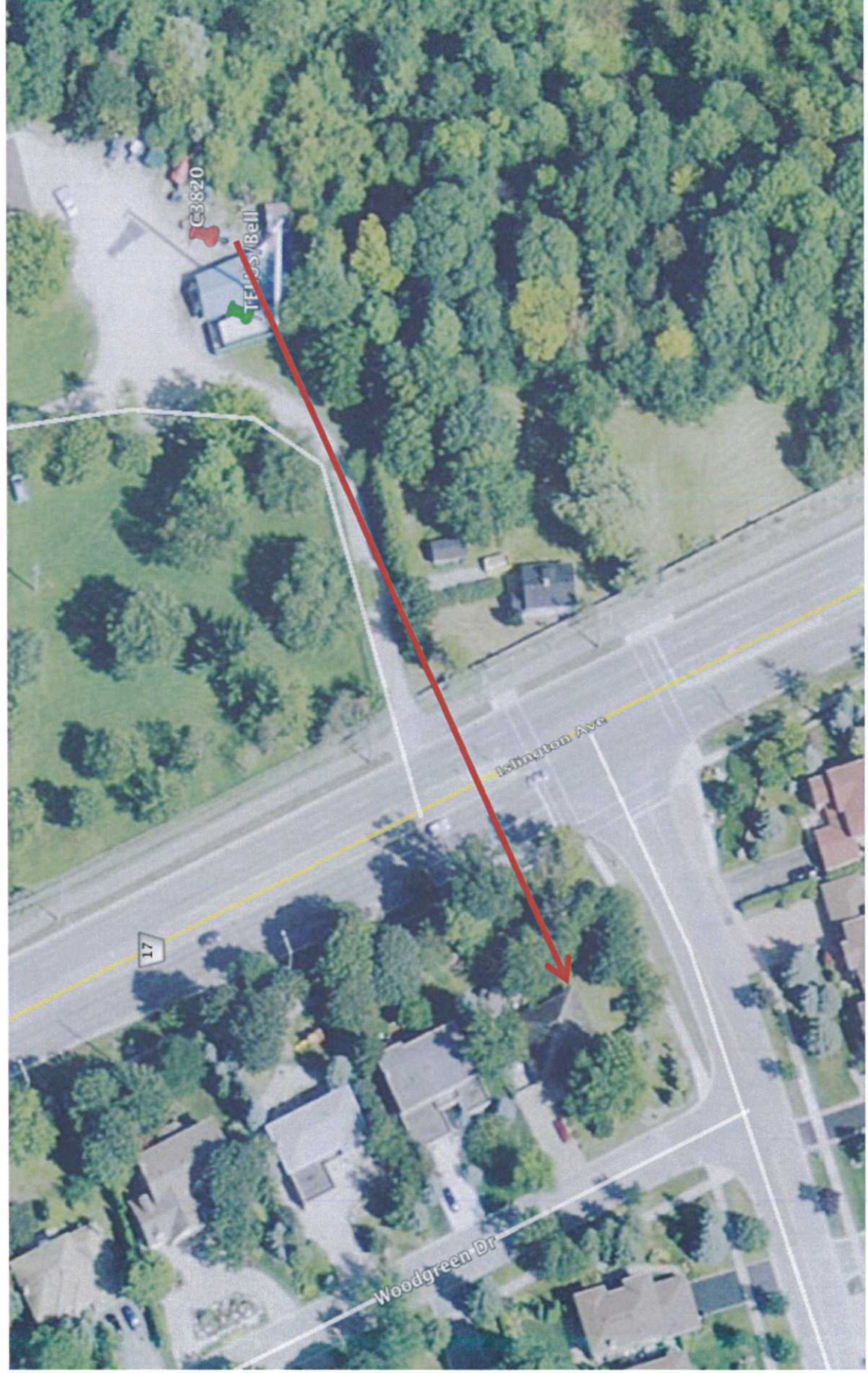


# PROPOSED BOYD TOWER DESIGN: 40m shrouded tripole





**153m TO NEAREST RESIDENCE**





# PUBLIC CONSULTATION

- Information package sent to larger area than required by Vaughan Telecommunication Protocol
- Open House held
- No written comments or questions received by Rogers directly or via City
- No attendees at open house





# HEALTH AND SAFETY

Health Canada regulates electromagnetic and microwave emissions for antenna installations (known as "Safety Code 6"). Cellular antenna tower installations commonly emit significantly lower levels than are considered safe by Health Canada. These emission level calculations include those already in the area from other existing installations and assume installed antennas are operating at full power (which rarely actually occurs).

