

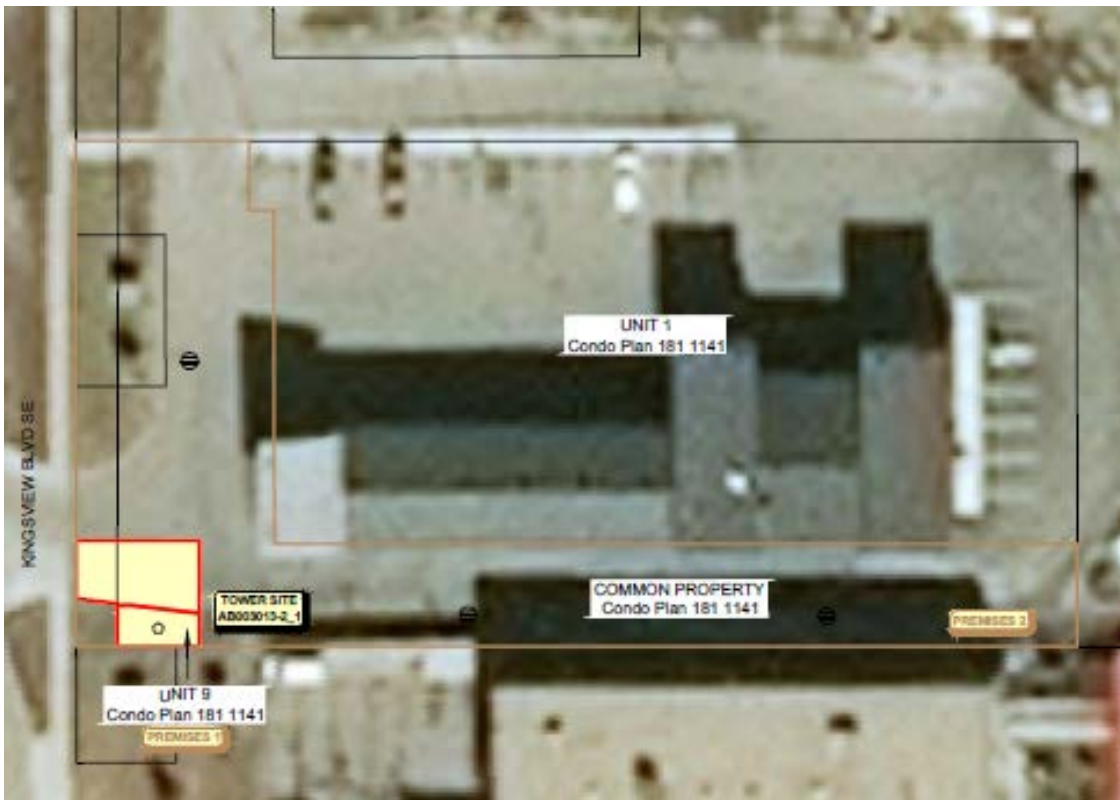
RE: Public Consultation for Proposed Telecommunications Facility

TELUS File: AB003013 – Airdrie - Kingsview
Legal Land Description: Condominium Plan 1811141; Unit 9
Address: 2920 Kingsview Blvd SE, Airdrie, Alberta T4A 0A9
Coordinates: Lat: 51.260615 N Long: -113.994814 W
Tower Type: 33m Monopole Tower

Thank you for sending us feedback regarding the proposed telecommunications facility for TELUS Communications Inc (“TELUS”). Please review the below responses to all questions and concerns we have received to date.

Location

The proposed tower location was chosen in response to increased demand for wireless services and to improve both coverage and capacity of the network. More telecommunications facilities are needed to ensure the delivery of fast and reliable wireless services. The proposed tower would address the growing coverage and capacity challenges that our modern society faces as people and machines become increasingly dependent upon wireless communication. The precise location of the tower is at the west end of the car wash building in the southwest corner of the parcel, as shown in the below image.



A combination of factors are considered when planning network enhancements including; existing and future customers, machine-to-machine connections, the traveling public, network reliability and speed for today and

the future. Telecommunications facilities face unprecedented growth in wireless usage. In 2017, Canada's mobile data traffic grew 38% and it's projected to grow at a compound annual growth rate of 34% to 2022. In addition, the consumption of data and exclusive use of wireless over wireline services continues to grow (Cisco, VNI Forecast Highlights 2018, as cited at <https://www.cwta.ca/facts-figures/> on Aug. 6, 2019). Therefore, additional telecommunications facilities are needed to ensure network reliability in our communities.

Following a review of the area and recognizing technical requirements for remaining central to the area requiring service enhancement, we found the proposed location to be the best option and consistent with municipal policy preferences. Per federal legislation ([CPC-2-0-03](#)) there is no land use setback or distance limitation that affects the placement of a telecommunications facility, so long as the facility meets the general requirements described in CPC-2-0-03. TELUS attests that the proposed facility will meet all the general requirements described by CPC-2-0-03.

The following are additional factors affecting site selection:

- Wireless radiocommunication facilities have inherent limitations in their broadcasting range
- Telecommunications facilities need to be close to wireless users
- Sites are determined in conjunction with existing and planned network facilities
- Co-location on existing towers or buildings was not feasible
- Increased development in the area provides physical obstacles (walls of the buildings, trees, etc.) that hinder the strength of radio signals emitted by cellular antennas
- There is a growing number of users that simultaneously use the wireless network, resulting in capacity challenges for existing telecommunications facilities and necessitating the addition of more facilities
- The public and businesses (e.g. point-of-sale transactions) increasingly demand ubiquitous, high-speed, low latency and reliable wireless service

In addition, the improvements to the network for wireless coverage will ensure better access to 911 emergency services provided by the police, EMS, fire department and other first responders, to help maintain the safety of the overall community.

Alternative Location

We have received comments that the tower should be west of Kingsview Boulevard and closer to Highway 2. Moving the proposed tower to this area would not improve coverage and capacity for the users east of the industrial area in the community of King's Heights. LandSolutions LP approached five other property owners east of Kingsview Boulevard and were unable to negotiate agreements with those property owners. In addition, locations within the community were not possible, due to dense residential development.

We have also received comments that the proposed tower will be too close to residences, daycares and schools. Wireless communication is widely used by people within their homes, visitors traveling through the community, for way-finding purposes as well as by students and parents. Telecommunications facilities need to be located close to the devices and people they serve, and the nature of radio communication is that the strength of signal deteriorates with distance. The facility will meet all health and safety requirements and may be placed within close proximity of schools/daycares/residential. For more information please refer to the below section on health and safety.

Evolution to the 5th Generation (5G) Network

The proposed tower will include current 4G technologies and may be upgraded to 5G in the future. The 5th Generation wireless network is a general upgrade of all related technologies, including better antennas, support equipment, use of fibre optic and utilization of new, lower and higher frequency radio waves/spectrum. Per Innovation, Science and Economic Development Canada (ISED), 5G devices will need to meet radiofrequency exposure requirements before they can be sold in Canada. Also, the current Canadian limits already cover the frequency ranges that will be used by 5G devices and antenna installations. Compliance with radiofrequency exposure requirements will continue to be an ongoing obligation for carriers and product manufacturers. All radiocommunication sites in Canada must comply with Health Canada's Safety Code 6, which establishes safety limits for human exposure to radiofrequency electromagnetic fields for all age groups on a continuous basis (ISED website (<https://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf11467.html>), April 9, 2020). For further information, please refer to the below section on health and safety.

Health and Safety

All radiocommunication sites in Canada must comply with Health Canada's Safety Code 6 (SC6) (2015), which establishes safety limits for human exposure to radiofrequency (RF) electromagnetic fields for all age groups on a continuous basis. The limits consider total exposure from all sources of RF energy and incorporates large margins of safety. The code is based on peer-reviewed scientific research and is consistent with the science-based standards used in other parts of the world, including the United States, the European Union, Japan, Australia and New Zealand. The code is periodically revised to reflect new knowledge and was last updated in 2015 to incorporate scientific literature published up to August 2014. Health Canada continues to monitor research on the subject and should SC6 limits change at any time in the future, TELUS would be required to adhere to the current limits (i.e. no grandfathering of previously approved facilities). Please note that ISED has recently published a new website on Radiofrequency Energy and Safety that can be found at the following link: <http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf11467.html>. This website provides general information on RF energy, the role of the government of Canada, and RF safety requirements.

The recommended exposure limits in SC6 are based on an ongoing review of published scientific studies, including both internal and external authoritative reviews of the scientific literature, as well as Health Canada's own research. Safety Code 6 was last updated in 2015 and sets out recommended human RF exposure limits in the frequency range from 3 kHz to 300 GHz. This range covers the frequencies used by existing communications devices and those that may be used by devices employing future 5G technology. When developing the exposure limits in SC6, Health Canada scientists consider all relevant peer-reviewed scientific studies and employ a weight-of-evidence approach [which takes into account both the quantity of studies and more importantly, the quality of those studies – poorly conducted studies (e.g. inadequate exposure evaluation, lack of appropriate control samples or inadequate statistical analysis), receive relatively little weight, while properly conducted studies (e.g. all controls included, appropriate statistics, complete exposure evaluation) receive more weight to evaluate possible health risks from exposure to RF electromagnetic energy. Health Canada's SC6 makes Canada's limits among the most stringent science-based limits in the world. SC6 has always established and maintained a recommended human exposure limit that is far below the threshold for the occurrence of all established adverse health effects associated with RF field exposure. For more information on Safety Code 6, please visit: <https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/radiation/safety-code-6-health-canada-radiofrequency-exposure-guidelines->

environmental-workplace-health-health-canada.html and <https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/radiation/fact-sheet-what-safety-code-6.html>.

Public exposure to RF electromagnetic energy from wireless devices (including cell towers) is far below the limits specified in science-based exposure guidelines such as SC6. Based on the very low exposure levels and the weight of evidence from peer-reviewed scientific studies to date, it is Health Canada's position that public exposures to the RF electromagnetic energy emitted from cell towers do not cause adverse health effects in people. This conclusion is similar to that arrived at by the International Committee on Non-Ionizing Radiation Protection (ICNIRP), the Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR, European Commission), and the World Health Organization (WHO). Therefore, Health Canada does not consider additional precautionary measures are warranted to further reduce RF energy exposure below the limits currently outlined in SC6. You may wish to visit the following link for more information: <https://www.canada.ca/en/health-canada/services/consumer-radiation/safety-cell-phones-cell-phone-towers.html>. The following links describe the current scientific opinion of ICNIRP and the WHO:

- 1) <http://www.icnirp.org/en/publications/article/hf-review-2009.html>
- 2) <http://www.icnirp.org/cms/upload/publications/ICNIRPStatementEMF.pdf>
- 3) <https://www.who.int/peh-emf/about/WhatisEMF/en/index1.html>
- 4) <https://www.who.int/peh-emf/about/WhatisEMF/en/index4.html>
- 5) <http://www.who.int/mediacentre/factsheets/fs193/en/>
- 6) <http://www.who.int/peh-emf/publications/facts/fs304/en/>
- 7) <http://www.who.int/peh-emf/publications/facts/fs296/en/>

The regulation of wireless communication technology and their associated infrastructure, including the deployment of 5G technologies, is the responsibility of Innovation, Science and Economic Development Canada (ISED), under the *Radiocommunication Act* (<https://laws-lois.justice.gc.ca/eng/acts/r-2/>). To ensure that public exposures fall within acceptable limits, ISED has developed regulatory standards that require compliance with the recommended human exposure limits outlined within Health Canada's Safety Code 6. ISED also conducts regular audits to help ensure wireless devices on the market and antenna installations are compliant. Any questions regarding testing and compliance of wireless RF-emitting devices and their associated infrastructure should be directed to ISED. For more information on ISED's regulatory process, including requirements for consultation with land-use authorities, please contact ISED directly: General - http://www.ic.gc.ca/eic/site/icgc.nsf/eng/h_07026.html; District Offices - <http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01742.html>.

The below links are to scientific literature on the health effects of RF energy:

1. <http://www.hc-sc.gc.ca/ewh-semt/radiation/cons/wifi/index-eng.php>
2. <http://www.hc-sc.gc.ca/ewh-semt/radiation/cons/radiofreq/index-eng.php>
3. <http://www.hc-sc.gc.ca/ewh-semt/radiation/cons/radiofreq/research-recherche-eng.php>
4. <http://www.icnirp.org/en/publications/index.html>
5. https://ec.europa.eu/health/sites/health/files/scientific_committees/emerging/docs/scenihr_o_041.pdf
6. <https://www.emf-portal.org/en>
7. <http://ieee-emf.com/index.cfm>
8. <http://www.who.int/peh-emf/publications/en/>

Health Canada recognizes that a few international jurisdictions (cities, provinces or countries) have applied more restrictive limits to RF field exposures from cell towers; however, there is no scientific basis to support the need for such restrictive limits. In addition, these more restrictive limits aren't applied equally to other wireless devices

operating within the same jurisdictions. For more information on SC6, please refer to this link: <https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/radiation/understanding-safety-code-6.html>.

TELUS performs RF energy analyses of its equipment and reports to ISED to ensure SC6 compliance throughout the lifetime of a telecommunications facility. Several websites are provided that detail the measures TELUS, ISED and Health Canada undertake to ensure public safety.

Property Value

Many factors influence property values, including location (e.g. proximity to amenities), land area (lot size), age of the building, interior space, supply & demand, aesthetics, redevelopment and investment potential. We have learned from our interaction with the public that many home buyers seek out neighbourhoods that have exceptional wireless coverage, as many people work from home and depend on a reliable wireless network (i.e. voice & internet services) to conduct business. In addition, many people rely exclusively on mobile telephones for wireless data and voice service and appreciate the security of having improved access to emergency services.

At the time of writing this letter, Innovation, Science and Economic Development Canada (ISED) considers property value concerns to be irrelevant per CPC-2-0-03, Section 4.2. This is because research to date has been inconclusive in showing a relationship between property value resulting from proximity to telecommunications facilities, and the importance that telecommunication facilities have in our modern society and economy.

Aesthetic Concerns

Regarding the aesthetics of the proposed tower, the tower height is needed for optimum antenna placement and broadcast of radiocommunication. Moving the tower further away from the customer base would negatively impact TELUS' ability to enhance service to the area and may result in additional telecommunications facilities being needed in the area. TELUS has devoted significant resources and effort in designing this facility, which has superior aesthetic elements when compared to traditional tower development. The monopole style tower will be surrounded at the base by a wooden fence that will decrease the visual clutter of the equipment at the base of the tower.

Need for the Facility

A variety of technologies are utilized to provide wireless service to customers, including antennas mounted on buildings, towers, in-building antenna systems, Wi-Fi, and fibre optic cables. TELUS' radiofrequency and network planning departments determined the proposed facility is needed to ensure continued reliability and enhance service in the wireless network.

Please note that ISEDC considers concerns relating to the need for telecommunications facilities as unreasonable and irrelevant per CPC-2-0-03, Section 4.2.

Other Concerns:

Please note the following comments regarding additional concerns we received:

- Existing Tower at Fraserway RV – the existing tower at Fraserway RV is too close to existing TELUS infrastructure, placing antennas at this location would not meet coverage objectives to improve service in the King’s Heights area

Conclusion

Thank you for participating in the public consultation process for this proposal. Your feedback is important to us and helps us better understand local preferences for the location and design of telecommunications facilities in your community. TELUS endeavours for locate its infrastructure in suitable locations that respect public opinion and considers the technical requirements for providing high quality wireless service to area residents, businesses and institutions.

All correspondence received will become part of the public consultation records shared with the City of Airdrie and ISEDC. Thank you for participating in the public consultation process.

Sincerely,

**LandSolutions LP, on behalf of
TELUS Communications Inc.**



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Industry and Health & Safety Info

- <http://strategis.ic.gc.ca/towers>
- <http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf11467.html>
- <http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf08792.html>
- http://www.hc-sc.gc.ca/ewh-semt/pubs/radiation/radio_guide-lignes_direct-eng.php
- <https://www.ctia.org/homepage/public-safety-channel>
- <https://www.cwta.ca/for-consumers/radiofrequency-safety-standards/>