

STAFF REPORT

Background:

The adopted and in-force City Protocol for consulting the public on proposed Antenna Systems came into effect on June 28, 2016, when Council ratified the resolutions of the May 30, 2016, meeting of the Planning Committee which recommended approval of the updated [City of Greater Sudbury Radio-communication and Broadcasting Antenna System Public Consultation Protocol](#). The City's public consultation Protocol for proposed Antenna Systems is modeled upon the [Joint Antenna System Siting Protocol \(JASSP\)](#) that was released and endorsed on February 20, 2013, by the Federation of Canadian Municipalities (FCM) and the Canadian Wireless Telecommunication Association (CWTA). The approved City Protocol is also in general keeping with Innovation, Science and Economic Development Canada's (ISED) [Radiocommunication and Broadcasting Antenna Systems Client Procedures Circular \(CPC-2-0-03\)](#) along with ISED's [Guide to Assist Land-use Authorities in Developing Antenna Siting Protocols](#).

Staff has committed to continually monitoring emerging trends in the radio-communication and broadcasting antenna system industry in an effort to always respond and adapt quickly to a fast growing and often changing industry. Staff also monitors and continually reviews the effectiveness of the City's Protocol for consulting with the public when a non-excluded Antenna System is proposed by a Proponent. This report outlines a number of housekeeping amendments and provides a general status update as they pertain to the in-force Protocol for conducting public consultation on proposed Antenna Systems in the City of Greater Sudbury. Emerging trends and expected future amendments to the City's Protocol are also discussed.

General Updates:

Staff has received six new requests from Proponent's seeking formal pre-consultation with the City since the new Protocol was adopted by Council on May 30, 2016. Staff also estimates that between 15-20 phone calls were received by the Planning Services Division with respect to potential future Antenna System installations. With respect to those inquiries that did proceed to formal pre-consultation with the City, one proceeded to a public consultation application, but was in excess of 300 m (984 ft) from the nearest Residential Area which only required an internal staff review and a letter from the DMO to ISED giving concurrence on the proposed Antenna System installation (File # 705/18-1). Two pre-consultation and site investigation meetings resulted in the DMO utilizing Section 4.3 of the Protocol to fully exempt the Proponents from public consultation requirements as both proposed Antenna Systems in these cases were to be located in excess of 1.9 km (1.18 miles) from the nearest Residential Area (Files # 705/18-2 & 705/18-3). These exemptions were provided to the Creighton Mine Site and to an Ontario Power Generation station located to the south-east of the Coniston settlement area. The remaining three pre-consultations have not proceeded beyond initial discussions with the Proponent.

As a result, staff remains satisfied at this time that the "incentive-based" and "path of least resistance" approach through the modified review process to encourage locations away from Residential Areas has been successful in terms of ensuring that locations are chosen which maximize the distances between an Antenna System and the nearest Residential Area.

Housekeeping Amendments:

1. Freestanding Antenna System Height

The JASSP document did not include a formal definition with respect to identifying or calculating the height of a Freestanding Antenna System. There is however a reference to Freestanding Antenna System height in Section 8.2 of the JASSP which addresses how notice is to be given when a public information session is required. Specifically, the JASSP outlines at the end of Section 8.2 that, “Height is measured from the lowest ground level at the base, including the foundation, to the tallest point of the antenna system. Depending on the particular installation, the tallest point may be an antenna, lightning rod, aviation obstruction lighting or some other appurtenance. Any attempt to artificially reduce the height (eg. addition of soil, aggregate, etc.) will not be included in the calculation or measurement of the height of the antenna system.” Staff did not include this part of the JASSP in the City’s Protocol because its exclusion was not at the time considered to be detrimental to Section 8.2 when drafted as a collective whole.

Since the Protocol was adopted by Council, the City did process an application for public consultation (File # 705/16-1) under the current in-force Protocol whereby the Proponent afterward informed staff that the maximum height of the Freestanding Antenna System tower would be slightly higher after it was discovered that the foundation required to support the Freestanding Antenna System in relation to the existing grade of the lands would result in the height exceeding 30 m (100 ft) by approximately 1 m (3.28 ft). The Designated Municipal Officer in this case provided an amended positive statement of concurrence to ISEDC clarifying the small change to the maximum height of the Freestanding Antenna System and further that the amended concurrence did not alter any other plans and supporting documentation which formed the original position of concurrence from the City. The definition as proposed is consistent with ISEDC’s explanation of height as outlined in the CPC-2-0-03.

Staff is therefore recommending for clarity purposes that a defined term for height, including the calculation for the height of a Freestanding Antenna System, be added to Section 3.0 – Definitions of the City’s Protocol. Any occurrence of the word “height” in the Protocol should also be updated to “**Height**” as a result. The proposed definition would be as follows:

- “9) **Height:** The measurement of a **Freestanding Antenna System** is calculated from the lowest ground level at the base of a **Freestanding Antenna System**, including any foundation, to the tallest point of the **Antenna System** which shall include any antennae, lightning rods, aviation obstruction lighting fixtures and any other attached appurtenances. Any attempt to artificially reduce the height of an **Antenna System** (eg. addition of soil or aggregate) will not be included in the calculation or measurement of said **Antenna System** height.”

2. Addressing the Emergence of Residential Antenna Systems

Staff has received several recent inquiries from the public relating to the installation of privately operated residential Antenna Systems that would be less than 15 m (49.21 ft) in height above ground level. Staff would note here that ISEDC in their “Exclusions” outlined in Section 6 of *CPC-2-0-03* provides for a general exclusion from municipal public consultation requirements for new Antenna Systems, including masts, towers or other antenna-supporting structures with a height of less than 15 m (49.21 ft) above ground level. The residential installations are intended to utilize low power and license-exempt radio-communication devices that are then affixed to the Antenna System tower that in principle would meet the exclusion criteria that ISEDC has set out in *CPC-2-0-03*. Section 4.0 of the City’s Protocol does outline that depending on the type of Antenna System being proposed and the system’s proximity to discouraged locations, structures typically excluded by ISEDC may be required to follow all or part of the pre-consultation, proposal submission and public consultation requirements outlined in the City’s Protocol.

Having reviewed the emerging and potential ease of access and lowering costs of installing and operating an Antenna System having a height above ground level of less than 15 m (49.21 ft) within a Residential Area, staff is recommending that the Protocol be amended to make it clear that such installations in a Residential Area would be considered subject to some degree of public consultation at the local municipal level. Staff would note that the expected volume of residential antenna systems is low at this point in time and that should a residential antenna system proceed to an application for public consultation, the City would collect the fee which is presently in place for antenna system public consultation applications.. Staff would recommend that the following be added to Section 4.0 of the City's Protocol:

"4.5 Siting Within a Residential Area

Any proposal by a **Proponent** to install any **Antenna System** at any **Height** located within a **Residential Area** is required to pre-consult with the **Designated Municipal Officer** in order to determine if the installation shall be considered to be excluded from public consultation as provided for in Section 6 of the *Radiocommunication and Broadcasting Antenna Systems Client Procedures Circular (CPC-2-0-03)*. The **Designated Municipal Officer** shall in each case determine whether or not the exclusion provided for by ISEDC shall continue to apply, or alternatively if all or part of the public consultation requirements as outlined in this protocol is applicable to the proposed **Antenna System** that is to be located within a **Residential Area**. The **Designated Municipal Officer** will provide the **Proponent** with a written response outlining their decision with respect to any public consultation requirements that may be required within ten working days of having received a request from a **Proponent**."

3. Further Exemptions From Public Consultation

The intent of Section 4.3 of the Protocol is to allow the Designated Municipal Officer flexibility to exempt a proposed antenna system entirely from the City's Protocol where the situation warrants from a land use planning perspective. A recent example of this flexibility would be where a ground-based antenna system was proposed at a distance in excess of 2.5 km (1.55 miles) from the nearest Residential Area. In this particular case, an internal staff review was conducted and a letter of exemption was provided to ISEDC and copied to the Proponent. A position of concurrence or non-concurrence was not in this case required to be provided by the DMO to ISEDC as the installation was deemed to be entirely exempt from the City's Protocol. It should be noted however that where such an exemption is provided by the DMO, the City still engages in pre-consultation with the Proponent in order to determine and confirm that no land use planning matters are present, which would compel the City to require and specify expectations around what public consultation is considered to be appropriate.

For clarity purposes, Section 4.3 should be amended to include clearer language and direct reference to both Section 5.0 (ie. Pre-Consultation) and Section 8.0 (ie. Public Consultation), as the DMO will often conduct and complete pre-consultation and a site investigation meeting with a Proponent before deeming the proposed antenna system to be fully exempt from the City's Protocol. The following unnecessary words would also be deleted from Section 4.3: "For example, the City of Greater Sudbury may decide to exclude certain proposals from the requirement to hold a public meeting, but not from issuing a public notification to affected property owners within the **Prescribed Distance**." Many municipalities have opted to remove sentences referencing examples in their Protocols in order to prevent confusion or assumptions on what may or may not be exempt from occurring.

The new and amended Section 4.3 would read as follows:

“4.3 Further Exemption From Public Consultation Only

In addition to ISED’s basic exemption listed in Section 4.1 and the City’s modified review process outlined in Section 4.2, the **Designated Municipal Officer** may on a case-by-case basis, exempt a **Proponent** from all or part of the consultation requirements under Section 5.0 and Section 8.0 of this protocol.”

Next Steps & Emerging Trends:

1. Deployment of “5G Network” Infrastructure

The next generation “5G Network” (ie. 5G) is considered by CWTA to be critical for Canada and something that all stakeholders including the industry itself, regulators, policy-makers and the public will need to work together in order to ensure the successful deployment of 5G for the benefit of all Canadians. In short, 5G will deliver more capacity, faster speeds, enhanced reliability, lower latency and enabling a massive number of devices to connect to each other at the same time. The benefits extend to mission-critical services such as those related to public safety (eg. ambulance, fire, hospitals, police, military, etc.). Non-critical services, such as smart sensors used in agricultural and/or mining and mineral operations, also stand to benefit greatly from 5G. These networks may be capable of connecting 1 million devices per 1 km (0.62 miles). This deployment is expected to result in the industry investing approximately \$26 billion over a seven year period along with adding approximately 250,000 permanent jobs in Canada by the year 2026. The construction of the physical infrastructure necessary to deploy 5G across Canada will at some point impact how municipalities conduct public consultation on proposed Antenna Systems in their local communities as there will be an increase in the number of Antenna System installation requests to ISEDC in almost every local community across Canada. More detailed information on the 5G deployment is available through Accenture Strategy’s report [“Fuel For Innovation: Canada’s Path in the Race to 5G”](#) which was published in June of 2018.

2. “Small Cells” Technology

The deployment of 5G will also lead to smaller antenna systems referred to as “smart cells.” To provide context, smart cells are often referred to in terms of their size as being “pizza boxes” or “backpacks” and it is estimated that up to 273,000 smart cells will be deployed across Canada in the next 5-7 years, whereas 33,000 antenna system towers were deployed in Canada across the previous 20 years. CWTA has outlined that the existing regulatory environment and local municipal Protocols may need to adapt quickly to facilitate the timely deployment of 5G in our local communities. More precise positioning is going to be required by Proponents along with a larger number of siting approvals. Providing fair and reasonable access to sites is expected to become a theme in the industry and in the regulatory environment as a result. For the information of Planning Committee and Council, the City has already been approached by a Proponent to explore the possibility of a master agreement with the City that would reduce the timeline to regulatory approvals from ISEDC on sites within municipal rights-of-way or where locations on municipal properties are considered to be of an optimal location for installing a smart cell to provide 5G service (eg. arenas, parks, bus-shelters, hydro poles, etc.).

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3. Master Agreements for Municipalities

Staff expects that requests for master (or “blanket”) agreements between Proponents and the City to allow for the installation of small cells within City rights-of-way and on City-owned properties and other physical City-owned infrastructure will increase due to the pressures expected to come along with the 5G deployment. These master agreements are expected to establish parameters around which a Proponent can notify the City of an impending and needed small cell installation without requiring site-by-site pre-consultation and site-by-site agreements with the City to mount a small cell Antenna System. As previously mentioned, staff from the Development Approvals Section and the City’s Real Estate Section did meet with a Proponent to better understand their specific request and the parameters and preferences that they would be looking for to be included in a master agreement scenario. The Proponent did provide a draft example to staff but at the time of writing this report the Proponent has not further pursued the matter with the City. Staff will continue to review this issue and if needed will bring forward any housekeeping amendment to the City’s Protocol and related business processes. Staff would advise

however that at present Section 4.4 of the City’s Protocol addresses siting on municipally-owned property whereby any proposal to do so would require a Proponent to meet any and all of the City’s needs and requirements. This part of the Protocol may however require an update for clarity purposes with respect to small cell technology and the desire for Proponents to obtain master agreements with the City to install said Antenna Systems.

4. Review of the City’s Development Guidelines for Antenna Systems

The next housekeeping amendment to the City’s Protocol will examine the incoming 5G technology in light of the location and design preferences identified within Section 6.0 of the City’s Protocol. While staff do not anticipate major changes being necessary, by the end of 2019 it is expected that both ISEDC and CWTA will have a clearer picture as to how local municipalities can assist in ensuring that the 5G network deployment balances both land use planning matters and concerns with the fast-paced timeframes that an industry Proponent is expected to face when seeking out locations for the physical infrastructure that will be necessary for 5G. This will also represent an appropriate point in time to review the results with respect to Antenna Systems installed in the City since on May 30, 2016 and to determine if any changes to the City’s identified preferences would be desirable.

Summary:

Staff is satisfied with the effectiveness of the City’s new Protocol for conducting public consultation on proposed Antenna Systems. The results to date have had the effect of locating several new Antenna Systems at increased distances from Residential Areas and general inquiries from Proponents with staff have been positive in nature whereby site locations and design preferences that best address land use planning concerns associated with Antenna Systems are being considered actively by Proponents.

At this time, staff is proposing three amendments to the City’s in-force Protocol for conducting public consultation on proposed Antenna Systems. The three amendments are intended to provide clarity to how the height of an Antenna System is to be measured, to clarify when and how the DMO may fully exempt a Proponent from all Protocol requirements and to require that all residential Antenna Systems proceed through the City’s pre-consultation requirements as set out in the Protocol.

There are also a number of emerging trends at present within the radio-communication and broadcasting industry that staff will continue to monitor and if required a further housekeeping amendment report will be brought forward to Planning Committee for consideration. It is on this basis that the Planning Services Division therefore recommends that the City’s Radio-communication and Broadcasting Antenna Systems Public Consultation Protocol be amended as outlined in the recommendation section of this report.