



# Telecommunications Antenna Structures Siting Protocols

## **Publishing Information**

Title: Telecommunications Antenna Structures Siting Protocols

Author: The City of Calgary

Contact: 311 or Outside of Calgary 403-268-2489

ISC: Unrestricted

Web: [calgary.ca](https://calgary.ca)

SR: 21-0013641-ADV-10088

© The City of Calgary 2022

# Table of Contents

<b>Definitions . . . . .</b>	<b>5</b>
<b>1.0 Purpose and Objectives of the Protocols . . . . .</b>	<b>8</b>
1.1 Purpose . . . . .	8
1.2 Objectives . . . . .	8
<b>2.0 The City's Authority Regarding Telecommunications Antenna Structures . . . . .</b>	<b>9</b>
<b>3.0 The City's Role at a Public Consultation Meeting . . . . .</b>	<b>10</b>
<b>4.0 The City's Role in Reviewing a Telecommunication Submission . . . . .</b>	<b>11</b>
4.1 Location Criteria for Developed Areas . . . . .	11
4.2 Location Criteria for New/Greenfield Areas . . . . .	12
a. Preferred Locations . . . . .	12
b. Discouraged Locations . . . . .	12
<b>5.0 Submissions to The City of Calgary . . . . .</b>	<b>13</b>
5.1 Pre-Submission Consultation . . . . .	13
5.2 Submission Content Requirements . . . . .	13
5.3 Submission Processing Time Period . . . . .	14
5.4 Extending the Submission Processing Time Period . . . . .	14
5.5 Concurrence . . . . .	14
5.6 Non-Concurrence . . . . .	14
5.7 Rescinding a Concurrence . . . . .	14
5.8 Duration of Concurrence . . . . .	15
5.9 Transfer of Concurrence . . . . .	15
<b>6.0 Submission Categories . . . . .</b>	<b>16</b>
6.1 Type A Submissions . . . . .	16
6.2 Type B Submissions . . . . .	16
6.3 Type C Submissions . . . . .	17
6.4 Type D Submissions . . . . .	17
<b>7.0 Design Characteristics . . . . .</b>	<b>18</b>
7.1 Disguised and Camouflaged Structures . . . . .	18
7.2 Preferred Built Forms . . . . .	18
7.3 Screening Features . . . . .	18
7.4 Signage . . . . .	18
7.5 Lighting . . . . .	19
7.6 Residential Development Setback Guidelines . . . . .	19
7.7 Design Characteristics – Visual Examples . . . . .	20

**8.0 Co-Location . . . . . 22**

8.1 Co-location Options . . . . . 22

8.2 Replacement or Modification due to Co-location . . . . . 22

8.3 Evidence of Co-location Review . . . . . 23

8.4 Co-location and Unobtrusiveness . . . . . 23

**9.0 Notification and Public Consultation Process . . . . . 24**

9.1 Initial Contact with The City of Calgary . . . . . 24

9.2 Notification Obligations When a Public Consultation Meeting is not Required . . . . . 24

9.3 Notification Obligations When a Public Consultation Meeting is Required . . . . . 24

9.4 Notification to Affected Residential Properties. . . . . 25

9.5 Exceptions to the Notification Area Requirement . . . . . 25

9.6 Public Consultation Meeting Notification Method and Timing . . . . . 25

9.7 Public Consultation Meeting Notification Form and Content . . . . . 26

9.8 Public Consultation Meeting Format . . . . . 26

9.9 Proponent Obligations after the Public Consultation Meeting . . . . . 27

9.10 Documenting the Public Consultation Meeting . . . . . 27

**10.0 Redundant Telecommunication Antenna Structures . . . . . 28**

# Definitions

<b>(the) Administration</b>	Means, for the purposes of this document, the staff of The City of Calgary Community Planning business unit, which is tasked with receiving, evaluating and processing submissions for telecommunications antenna structures.
<b>Adjacent Residential Development</b>	Means residential properties that abut a proposed or existing telecommunication antenna structure site, including those sites separated by a public or private thoroughfare, utility right-of-way, railway, stream, river or other natural or man-made feature or element as determined by The City of Calgary.
<b>Affected Residential Properties</b>	Means all residential properties within a 300 metre radius of a proposed telecommunications antenna structure to which notification of a public consultation meeting must be sent.
<b>Co-location</b>	Means the placement of telecommunication antennas and equipment operated by one or more proponents on a telecommunications antenna structure operated by a different proponent, thereby creating a shared facility.
<b>Futures</b>	Means the identification of locations on a telecommunications antenna structure allocated for antenna arrays which will be installed at some time in the future rather than at the time of the initial construction of the structure.
<b>Letter of Concurrence</b>	Means a letter from The City of Calgary supporting the proponent's proposal for the installation of a telecommunication antenna structure within the city.
<b>Letter of Non-concurrence</b>	Means a letter from The City of Calgary signifying no support for the proponent's proposal for the installation of a telecommunication antenna structure within the city.
<b>Proponent</b>	Means a company, business or organization providing wireless telecommunication services.
<b>(the; these) Protocols</b>	Means the provisions of The City of Calgary's <i>Telecommunications Antenna Structures Siting Protocols</i> .
<b>Public Consultation Meeting</b>	Means a meeting conducted by a proponent's representative(s), to which members of the public (see <b>Affected Residential Properties</b> ) are invited, and at which the public is informed about a proposed telecommunication antenna structure placement within the community. The meeting may be either formal or open house format, at the discretion of the proponent.
<b>Residential Development</b>	Means land that has residential (dwellings) constructed upon it.

<b>Residential District</b>	Means any area of land designated by The City of Calgary Land Use Bylaw as an area primarily for residential development.
<b>Residential Properties</b>	Means land subdivided for residential development that either has existing residential buildings on it or is currently vacant but intended for the future residential use.
<b>Roof Top Installation</b>	Means any telecommunication antenna structure that is placed on the roof of a building.
<b>Safety Code 6</b>	Means Health Canada's standards for acceptable human exposure to radiofrequency electromagnetic fields as set out in its document <i>Limits of Human Exposure to Radiofrequency Electromagnetic Fields in the Frequency Range from 3 KHZ to 300 GHZ</i> , as amended. Pursuant to Federal requirements, all telecommunication antenna structures within the City of Calgary must comply with these standards.
<b>Stealth Structure or Stealth Installation</b>	Means the installation of a telecommunication antenna structure in a manner that is designed and constructed to hide, camouflage or integrate the telecommunication antenna structure into an existing building, landscape, topography or structure.
<b>Submission</b>	Means an information package regarding a proposed telecommunication antenna structure submitted by a proponent to The City of Calgary for concurrence, and containing materials for review such as site plans, photographs, and detailed drawings of the structure.
<b>Telecommunication Antenna</b>	Means a device that requires a permit from the Federal Government and is used to receive and/or to transmit radio-frequency (RF) signals, microwave signals, or other communications energy transmitted from or to be received by other antennas.
<b>Telecommunication Antenna Structure</b>	Means any roof-top, building-mounted or ground-mounted pole, tri-pole, spire, lattice work or other freestanding structure, tower, streetlight, parking lot light or combination thereof, including supporting lines, cables, wires, and braces intended for the purpose of mounting a telecommunication antenna or series of antenna on it. Also included are any cabinets or shelters containing electronic or other equipment associated with these antenna structures and any compound required to accommodate these components. Amateur Radio Antenna Structures are excluded and not administered by these Protocols.

<b>Tower</b>	Means any ground-mounted monopole, tri-pole, or lattice work structure upon which telecommunication antennas are attached. Not included are streetlight poles, parking light poles, existing electric utility towers or similar type structures as determined by The City of Calgary.
<b>Type A Submission</b>	Means the type of submission processing method for those telecommunication antenna structures listed in subsection 6.1 of these Protocols.
<b>Type B Submission</b>	Means the type of submission processing method for those telecommunication antenna structures listed in subsection 6.2 of these Protocols.
<b>Type C Submission</b>	Means the type of submission processing method for those telecommunication antenna structures listed in subsection 6.3 of these Protocols.
<b>Type D Submission</b>	Means the type of submission processing method for those telecommunication antenna structures listed in subsection 6.4 of these Protocols.

# 1.0 Purpose and Objectives of the Protocols

## 1.1 Purpose

The purpose of the *Telecommunications Antenna Structures Siting Protocols* is to establish procedural standards that will allow The City of Calgary to effectively participate in and influence the placement of telecommunications antenna structures proposed within the city limits. The Protocols are also intended to assist City Council, City Staff, Innovation, Science and Economic Development Canada, representatives of the telecommunications industry and members of the public in being aware of and understanding the implementation methods, processes, procedures and criteria used to achieve this purpose.

## 1.2 Objectives

The objectives of these Protocols are:

1. To establish a process and criteria for consistently and equitably reviewing, evaluating and deciding upon each proposal for placing a telecommunication antenna structure within the City of Calgary.
2. To provide clear and reasonable requirements for effective participation and cooperation between the proponents and The City of Calgary.
3. To minimize the number of towers required for telecommunication antenna networks within Calgary.
4. To ensure co-location opportunities for telecommunication antenna structures are explored and acted upon.
5. To encourage and promote opportunities for improved telecommunication antenna structure design and concealment in order to minimize their visual impacts on the surrounding area and the city in general.
6. To provide an opportunity for residents located near specific types of proposed telecommunication antenna structures (towers) to make comments, ask questions or raise concerns related to the proposal, make the proponent aware of local considerations and provide recommendations regarding the placement and/or appearance of the structure.



## 2.0 The City's Authority Regarding Telecommunications Antenna Structures

The City of Calgary **is not the approving authority** for telecommunications antenna structures.

The federal Innovation, Science and Economic Development **is the approving authority** for the development and operation of radiocommunication in Canada, including telecommunication antenna structures, pursuant to the *Radiocommunication Act*. Innovation, Science and Economic Development Canada\* is tasked with, among other things, administering the orderly development and operation of telecommunication antenna structures.

In this regard, Innovation, Science and Economic Development Canada requires that, in certain cases, the local land use authority and the public must be consulted for input regarding the proposed placement of a telecommunication antenna structure. The City of Calgary's Community Planning business unit is responsible for reviewing these submissions on The City's behalf and, depending on the nature of the proposal, a letter of support (concurrence) or non-support (non-concurrence) is sent to the wireless service provider upon completion of The City's review of the proposal.

The Community Planning business unit reviews each proposed submission for a telecommunication antenna structure based on specific physical criteria. This involves reviewing and evaluating such things as the proposed location of the telecommunication antenna structure and aspects of its design, including, but not limited to, height, colour, type, number of antennae to be placed on the structure, screening of any equipment compound, the design of materials to be used for any equipment storage shed, the potential for co-location of other proponents on the structure, and compliance with *The City of Calgary Telecommunication Antenna Structures Siting Protocols*. Based on this review, a letter of support (concurrence) or non-support (non-concurrence) is issued.

Note that in cases where The City does not support a proposal, it cannot prevent a proponent from ultimately gaining permission from Innovation, Science and Economic Development Canada to install a telecommunication antenna structure even if it contravenes The City's telecommunication Protocols.

\* For additional information regarding Innovation, Science and Economic Development Canada's mandate and the application of its authority in the wireless telecommunications process, please consult Innovation, Science and Economic Development Canada's Client Procedures Circular CPC-2-0-03. This publication and others pertinent to telecommunications are available at <http://strategis.gc.ca/spectrum>.

## 3.0 The City's Role at a Public Consultation Meeting

The City of Calgary performs three main functions at a public consultation meeting. These are:

1. To scrutinize the consultation process:
  - by observing how and what information is provided to the public by the proponent about the proposed telecommunication antenna structure and its intended location;
  - by observing what questions arise from the public about the proposed installation;
  - by observing what answers to these questions are provided by the proponent; and
  - by observing how concerns and other issues regarding the proposed telecommunication antenna structure's placement are resolved.
2. To clarify the provisions of The City's *Telecommunications Antenna Structures Siting Protocols* as required:
  - by explaining the procedures regarding the notification process;
  - by articulating what is expected in terms of resolving the issues brought forward at the meeting by the public;
  - by communicating The City's objective regarding the co-location of other proponents' antennas on existing and proposed telecommunication antenna structures; and
  - by outlining the circumstances required for the issuance of a letter of concurrence or non-concurrence.
3. To explain The City's role in the deployment of telecommunications antenna structures, which includes:
  - ensuring The City's *Telecommunication Antenna Structures Siting Protocols* are followed;
  - evaluating each proposal based on specific criteria, reasoning and development guidelines;
  - confirming that the proponent has conducted and completed any follow-up work arising from a public consultation meeting; and
  - facilitating communication between other proponents regarding co-location arrangements.

## 4.0 The City's Role in Reviewing a Telecommunication Submission

The City of Calgary reviews and evaluates each submission it receives for a telecommunication antenna structure. The specific elements and issues observed, reviewed, analyzed, evaluated and decided upon in reaching a decision to either support or not support a submission are predominantly, but not limited to, the following\*:

- proposed location in a community or area;
- existing and proposed on-site uses and structures;
- adjacent sites and their existing and proposed uses and structures;
- co-location potentials on this site and on nearby sites with other existing or proposed telecommunication antenna structures;
- compliance with the *Telecommunications Antenna Structures Siting Protocols*;
- conformity with the City's Municipal Development Plan policies regarding historic sites and environmentally sensitive areas; and
- design aspects of the proposal, including:
  - height,
  - colour,
  - type of structure,
  - diameter (if a monopole or tripole),
  - number of arrays (including futures),
  - shrouding of antenna arrays,
  - potential for disguising or camouflaging, screening of equipment compound and shelter(s), plans, arrangement, materials and colour of equipment shelter(s),
  - location on site,
  - access/egress to the facility,
  - impact on on-site parking facilities and vehicular movement,
  - impact on on-site garbage facilities,
  - impact on on-site utility R.O.W.s,
  - proposed signage or other markings and lighting,
  - distance to other existing towers,
  - removal of redundant structure(s) (if a re-build, replacement or co-location).

Prior to contacting The City to make a submission for a telecommunications antenna structure (as outlined in Section 5.0 of the Protocols), proponents are encouraged to consider the information detailed in the location criteria set out in subsections 4.1 and 4.2 below.

### 4.1 Location Criteria for Developed Areas

The placement of telecommunications antenna structures in developed areas often raises concerns about aesthetics, property values and exposure to radio frequency electromagnetic fields created by these installations.

With respect to aesthetics and property values, Section 7.0 of the Protocols encourages proponents to consider the use of disguised, camouflaged and/or integrated antenna structures wherever possible. The City has also provided options regarding preferred built forms as a means to reducing visual impacts telecommunications antenna structures may have on a community or neighbourhood.

\* The City of Calgary does not assess any submission for a telecommunication antenna structure with respect to **health and radiofrequency exposure issues** or any other non-placement or non-design related issues. Any questions or comments the public may wish to make regarding health issues related to cell phones, cell towers and radiofrequency exposure guidelines (Safety Code 6) should be directed to Health Canada on-line at [healthcanada.gc.ca](http://healthcanada.gc.ca) and to the proponent's representative. Innovation, Science and Economic Development Canada, Spectrum Management Operations Branch may also be contacted for information by phone at 403-292-4575 or by e-mail at [spectrum.calgary@ic.gc.ca](mailto:spectrum.calgary@ic.gc.ca).

Regarding health and radiofrequency (RF) exposure issues and limits for telecommunication antenna systems, these elements are regulated by Health Canada's Safety Code 6 guidelines. Health Canada's position is that there are no human health effects as long as the guidelines are followed.

The City of Calgary has neither the authority nor the medical/biological research expertise/capability to assess or evaluate any submission for telecommunications antenna structures with respect to RF and health issues. However, the Protocols do provide guidelines for separation distances between residential uses (dwellings) and proposed telecommunication antenna structures (see subsection 7.6 of the Protocols).\*

### 4.2 Location Criteria for New/ Greenfield Areas

For locations within the city that have not yet been developed, proponents are encouraged to select sites for the placement of their telecommunications antenna structures prior to development taking place. The City promotes this course of action so that those purchasing properties in these new developing areas will be able to make informed decisions based on an understanding of where initially telecommunication antenna structures are likely to be installed.\*\*

Accordingly, The City has established the following lists of preferred and discouraged locations for telecommunications antenna structure placement in these new communities, as follows:

#### a. Preferred Locations

- Incorporated into community landmark or entranceway architectural features.
- Industrial and commercial areas.
- Transportation and Utility Corridors.

- In close proximity to similarly-scaled structures.
- Some institutional uses where appropriate, including, but not limited to, those institutions that require telecommunications technology, i.e.: colleges and universities.
- Appropriate or innovative architectural features within developments.
- Other non-Residential areas considered appropriate by The City of Calgary.
- Within or adjacent to parks, green spaces, golf courses and other recreational parcels, preferably incorporated into light standards for ball parks or parking areas.

#### b. Discouraged Locations

- Close proximity to residences (see subsection 7.6 Residential Development Setback Guidelines).
- Ecologically significant natural lands.
- Riverbank lands.
- Sites of topographical prominence.
- Heritage areas.
- Heritage structures (unless forming an integrated part of that structure's overall design through the use of camouflaging or other hidden stealth structures, features and forms).
- Pitched roofs (unless screened or housed to hide the antenna array).
- Proximity to schools (towers should be no closer than 100 metres away from the nearest portion of a school building or the nearest portable classroom, whichever is closer to the proposed installation).

\* Note: These separation distances are not based on any medical or scientific requirement, evidence, or verification.

\*\* Note: This should not be construed to mean that telecommunication antenna structures will be confined to these locations only. Changes in technology and increased demand for cellular phone service and data streaming may require additional sites in the community that cannot presently be determined.

## 5.0 Submissions to The City of Calgary

### 5.1 Pre-Submission Consultation

Proponents are encouraged to conduct a pre-submission consultation with The City of Calgary to identify preliminary issues of concern prior to making their submissions. In this regard, pre-submission consultations should ensure the following factors are addressed:

- the submission type;
- the proposed telecommunication antenna structure location;
- potential alternative locations;
- the type and height of the proposed telecommunication antenna structure;
- documentation regarding the investigation of co-location potentials on existing or proposed telecommunication structures within 500 metres of the subject proposal;
- documentation regarding the offer for co-location on the proposed telecommunication antenna structure;
- issuance of a pre-submission notification to the Ward Councillor; and
- the necessity for a public consultation meeting.

### 5.2 Submission Content Requirements

The details provided by a proponent in support of a submission to The City of Calgary for a proposed telecommunication antenna structure must include all the following information and materials for the submission to be considered complete:

- the type of telecommunication antenna structure being proposed;
- a filled out copy of the Complete Application Requirement List – Telecommunication Antenna form (available from the Customer Advisory Services Division at 403-268-5311) or online at [www.calgary.ca](http://www.calgary.ca), including an address for the

proposed location of the telecommunication antenna structure obtained from the Addressing business unit (notwithstanding the subject property may already have a municipal address) at [addressing@calgary.ca](mailto:addressing@calgary.ca);

- a letter of authorization from the registered property owner of the land, their agent, or other person(s) having a legal or equitable interest in the land. Where an agent is authorizing the use on the property, proof of verifying agent's authority must be submitted;
- the proponent's name, company name and address, phone and fax numbers;
- colour photographs showing the proposed location of the telecommunications antenna structure as well as the immediate surroundings;
- the appropriate submission fee (available from the Customer Advisory Services Division at 403-268-5311 or online at [www.calgary.ca](http://www.calgary.ca));
- where applicable, a brief or report documenting any pre-submission consultation or meeting between the proponent and The City, the Ward Councillor or a Community Association;
- a brief, or report documenting the public consultation meeting required for telecommunication antenna structure where required by the Protocols;
- copies of **correspondence documenting co-location information** pursuant to section 8.3 of the Protocols (this is a must have and the 21 day Type A submission processing period will not commence unless and until this information is provided to the City);
- a completed *Public Tree Disclosure Statement* (form available from the Customer Advisory Services Division at 403-268-5311) or online at [www.calgary.ca](http://www.calgary.ca));

- five (5) copies of a site plan, drawn to a readable and measurable scale, showing:
  - north arrow
  - municipal address and assigned City address
  - legal address (plan/block/lot)
  - property lines with adjacent streets and lanes
  - location of the antenna structure and any support buildings, including their dimensions
  - location of existing buildings on the site and access to the site
  - existing and proposed landscaping, fencing, screening
  - distance to the nearest residential property (or residential district if no dwellings are existing yet)
  - elevation drawings showing all sides of the antenna structure
  - proposed colour, material, diameter and height (if pole or tri-pole structure); and
- any other additional information or material the Administration determines to be necessary and appropriate to properly evaluate the proposed submission.

### 5.3 Submission Processing Time Period

Except as set out in subsections 5.4, 6.2, 6.3 and 6.4 of the Protocols, The City of Calgary will render a decision of either concurrence or non-concurrence within 21 days of receiving a complete telecommunications antenna structure submission.

### 5.4 Extending the Submission Processing Time Period

The 21 day processing time period may be extended by the proponent or The City of Calgary, through mutual consent, when:

- further negotiations are deemed by either party to be required;
- additional notification is deemed by either party to be required; or
- a public consultation meeting that was not initially thought to be required is determined by The City of Calgary to be necessary.

### 5.5 Concurrence

When a submission is given concurrence, the proponent will receive a letter of concurrence and a set of the drawings stamped *Concurrence Rendered on This Plan* from The City of Calgary documenting its decision. A copy of the letter will also be sent to the Ward Councillor for information purposes. In addition, in those cases involving a Type A and Type B submissions (see subsections 6.1 and 6.2 of the Protocols for particulars) the community association will also receive written notification of the concurrence, including a set of drawings stamped as noted above.

### 5.6 Non-Concurrence

When a submission is given a non-concurrence decision, the proponent will receive a letter of non-concurrence and a set of drawings stamped *Non-Concurrence Rendered on This Plan*. The City of Calgary will provide reasons for its position, and send copies of the correspondence to the Ward Councillor, as well as to the Community Association in those cases involving Type A and Type B submissions (see subsection 6.1 and 6.2 of the Protocols for particulars). The City of Calgary will also send a copy of the non-concurrence letter to Innovation, Science and Economic Development Canada for information purposes.

### 5.7 Rescinding a Concurrence

If, following the issuance of a concurrence, it is determined by The City of Calgary that the submission contains a misrepresentation or a failure to disclose all the pertinent information regarding the proposal, or the plans and conditions upon which the concurrence was issued have not been complied with, and a resolution cannot be reached to correct the issue, The City may rescind its concurrence. Notification of any such action will be given in writing to the proponent and to Innovation, Science and Economic Development Canada and will include the reason(s) for the rescinding of its concurrence.

### 5.8 Duration of Concurrence

A concurrence remains in effect for a minimum period of three years from the date it was issued by The City of Calgary. If construction has not commenced within this time period the concurrence expires and a new submission and review process, including a public consultation (where required by these Protocols) is necessary prior to any construction occurring. For the purpose of these Protocols, construction will be deemed by The City to have commenced when the preparation of a base for a telecommunication antenna structure has been physically initiated on the site concurrence was issued for or an existing telecommunication antenna structure is about to be altered in any way in preparation of an increase in height to that structure.

In addition, if construction has not commenced after two years from the date the concurrence was issued, The City requests that the proponent send a written notification of an intent to construct to the applicable community association, Ward Councillor and The City of Calgary once the work to erect the structure is about to start. This notification should be sent 60 days prior to any construction commencing. No further consultation or notification by the proponent is required.

### 5.9 Transfer of Concurrence

Once concurrence has been issued, that concurrence may be transferred from the proponent that initially received the concurrence (the original proponent) to another proponent (the current proponent) without the need for further consultation with The City or the public, provided that:

- all information gathered by the original proponent in support of obtaining the concurrence from The City, including correspondence and information arising from the public consultation meeting, is also transferred to the current proponent to substantiate concurrence;
- the structure for which concurrence was issued to the original proponent is what the current proponent builds\*; and
- construction of the structure is commenced within three years of the date the concurrence was issued, not three years from when the current proponent obtained the concurrence from the proponent to whom it was originally issued.

\* Note: If the structure will be shorter than what the concurrence was originally issued for, it will not be necessary to obtain new concurrence or conduct a public consultation. However, The City must be notified in writing of this change. If the structure to be increased in height or changed (as an example) from a monopole to a tri-pole, then the current proponent must make a new submission to The City, undertake a public consultation following the provisions set out in Section 9.0 of these Protocols and obtain a new concurrence prior to any construction taking place.



## 6.0 Submission Categories

The City of Calgary recognizes that different types of telecommunication antenna structures may create different magnitudes or degrees of impact and concern within the community and on the existing built environment of the city in general. Consequently, The City has grouped the various types of telecommunication antenna structures into four main categories with the objective of making the assessment and evaluation of these types of submissions more efficient and functional with respect to procedures, actions required and processing times.

### 6.1 Type A Submissions

Type A submissions involve those telecommunications antenna structures deemed by The City of Calgary to have potential impacts on or concerns for the community, the environment or the existing urban fabric of the city in general, that are proposed:

- on towers of any height\* to be placed within 100 metres of any residential development or residential district (said 100 metres to be measured from the centre of the base of the proposed structure);
- on towers of any height to be placed in areas of environmental, historic, strategic or operational importance or sensitivity as identified by The City of Calgary Municipal Development Plan;
- to increase the height of an existing tower by more than 25% of the existing height; and
- on any other telecommunication antenna structure not identified as a Type B, C or D submission structure, excluding Amateur Radio Antenna Structures which are not governed by these Protocols.

A copy of each Type A submission received will be

forwarded by the Administration to the appropriate Ward Councillor and Community Association for information and comment purposes. A public consultation meeting, conducted prior to making a submission to The City, will be required pursuant to the provisions set out in Section 9.0 of the Protocols. The City of Calgary recommends at least a two week interval between the date of the public consultation meeting and making a submission to the The City to ensure time for post-consultation inquiries and comments to be received from the public and answered by the proponent. Type A submissions will be processed by The City of Calgary within 21 days of receipt of a complete telecommunication antenna submission.

In addition to the preceding, Type A submissions also include telecommunication antenna structures (towers) that are 15 metres or greater in height proposed in locations designated as a commercial, industrial or institutional district and further than 100 metres away from any residential development or residential district. These Type A submissions will follow the same circulation and processing procedures as those noted above, however, no public consultation process will be required for this group of telecommunication antenna structures.

The use of any City owned park or reserve land proposed for the placement of a Type A telecommunication antenna structure will require a public consultation process pursuant to the provisions set out in Section 9.0 of these Protocols.

### 6.2 Type B Submissions

Type B submissions include those telecommunication antenna structures considered by The City of Calgary to have low or no adverse impacts or concerns with respect to the community or the city in general. These include proposed

\* The measurement to determine the height of any proposed or existing tower shall be taken **from the ground**, not the top of any base upon which the tower may sit, and extends **to the highest point of the tower** which includes any GPS or antenna array, lightening rod or other attached device.



telecommunication antenna structures in such locations as:

- on roof tops of high rise buildings (Note: the roof top should be higher than any adjacent residential development(s) or a public consultation may be required at the discretion of The City of Calgary);
- macro cell antennas on street light poles;
- macro cell antennas on parking lot light poles;
- on existing utility towers and similar structures as determined by The City of Calgary; and
- on towers less than 15 metres in height that are not identified as a Type A or Type D telecommunication antenna structure in subsection 6.1 and 6.4 of the Protocols.

A copy of each Type B submission received will be forwarded by the Administration to the applicable Ward Councillor and Community Association for information purposes only. A public consultation meeting will not be required and the submission will be processed within 10 working days of receipt of a complete telecommunication antenna application.

### 6.3 Type C Submissions

Type C submissions primarily apply to proposals for those telecommunication antenna structures that will have a limited operational time frame and no or negligible adverse impacts on the community, the environment or the existing urban fabric of the city in general, as determined by The City of Calgary. This category also includes the addition of telecommunication antenna structures to an existing tower in specific circumstances. Type C submissions include:

- a temporary telecommunication antenna structure, including a Cell on Wheels (COW), for a duration of no longer than 3 months;
- a time extension request for an existing temporary telecommunication antenna structure or COW to remain in place beyond the initial 3 month duration limit;
- a telecommunication antenna structure to be used for a special event;
- a telecommunication antenna structure to be used for an

urgent situation or emergency event;

- the co-location of a proponent's telecommunication antennas on an existing tower where an increase in tower height is not required; and
- the addition of new shelters, cabinets and other similar enclosures or compounds required to house a proponent's equipment associated with the telecommunication antennas being connected to an existing telecommunication antenna structure.

The proponent will submit a written notification to The City of Calgary and to the appropriate Ward Councillor for information, allowing 10 days for response time prior to installing any proposed Type C telecommunication antenna structure or commencing a time extension for an existing Type C telecommunication antenna structure within the city. Type C telecommunication antenna structures used to provide service during an emergency event may be installed without submitting a written notification to The City of Calgary and are excluded from the 10-day response period requirement. As a courtesy, The City encourages a verbal notification in these circumstances, to be completed within 24 hours of the deployment of the telecommunication antenna structure.

### 6.4 Type D Submissions

Type D submissions apply to small cell antenna installations on existing structures, or poles such as streetlights where the installation does not increase the structure height by 25% or more for the purpose of accommodating the installation. These antennas often appear closer to street level visible within the public realm and are anticipated to have minimal impacts. Submission is not required for small cell antennas interior to buildings.

A copy of each Type D submission received will be forwarded by Administration to the applicable Ward Councillor for information purposes only. A public consultation meeting will not be required, and the submission will be processed within 10 working days of receipt of a complete telecommunication antenna submission. One submission can be made for up to 20 small cell installations for streetlights in proximity to one another.

## 7.0 Design Characteristics

### 7.1 Disguised and Camouflaged Structures

The City of Calgary encourages the use of telecommunication antenna structures that are designed to be as stealthy, unobtrusive and inconspicuous as possible, particularly in residential areas and on sites abutting residential uses. This includes the hiding, or disguising of telecommunication antennas in or on buildings, placing them on roof tops or on other existing structures, and the camouflaging of telecommunication antennas on street lights or other apparatuses, appliances and objects. The appropriate type of telecommunication antenna structure for each situation should be selected based upon the goal of making best efforts to blend with the nearby surroundings and minimize the visual aesthetic impacts of telecommunication antenna structures on the community.

### 7.2 Preferred Built Forms

Roof top installations, freestanding telecommunication antenna structures in the form of monopole and tri-pole towers with flush mounted or cluster mounted telecommunication antennas and streetlight and parking lot light poles that have telecommunication antennas sheathed completely within the pole are preferred built forms for telecommunication antenna structures within Calgary. Pinwheel telecommunication antennas are discouraged, as is the use of guy wires and cables to steady, support or reinforce a tower. Lattice work towers may be considered in specific circumstances, at the discretion of The City of Calgary.

Preferred small cell installations are neatly organized, utilize as few antennas as possible, and hide conduit, cable trays, wiring, mounting brackets or other hardware behind the antenna or within shrouding. Wall-mounted antennas are to be attached as close to the wall as possible and not project above the height of the wall they are mounted on. In addition, where placement on a building façade or podium is required, antenna locations are encouraged to blend with the building's architectural character, the rhythm of primary and secondary architectural elements, fenestration patterns, cornice lines, building materials, textures and colours.

### 7.3 Screening Features

The use of landscaping, fences and architectural features on and around the equipment compounds, shelters and cabinets associated with a telecommunication antenna structure is encouraged to assist these structures to blend in with their surrounding environment.

### 7.4 Signage

The placement of signs on telecommunication antenna structures is generally discouraged. However, in circumstances where The City of Calgary determines it is appropriate, signage\* may be used to assist in screening, disguising or camouflaging a telecommunication antenna structure. In these cases, signage must be limited to identifying only businesses, uses or services occurring on the site.

\* Note: an approved development permit for the signage component will be required as signage is not an essential element needed for the operation of a telecommunication installation. The 21 day processing period for a letter of concurrence or non-concurrence does not apply to the signage portion of any such submission.

### 7.5 Lighting

Unless specifically required by Transport Canada, the display of any type of lighting on a telecommunication antenna structure is discouraged. Where Transport Canada requires a telecommunication antenna structure to be lit, the lighting should be limited to the minimum number of lights and the lowest illumination allowable. Any required strobe lighting should be set to the maximum strobe interval allowed by Transport Canada. The lighting of telecommunication antenna structure compounds for security purposes is supportable provided it is shielded from adjacent residential properties, is kept to a minimum number of lights and illumination intensity and, where possible, it is provided by a motion detector type of system.

### 7.6 Residential Development Setback Guidelines

The City of Calgary recommends the placement of telecommunication antenna structures (towers) should not be in very close proximity to residential developments of any built form or density. As a guideline, it is recommended that any tower proposed to be placed on a site abutting existing dwellings should be located:

- a. at least three times the height of the proposed tower away from those dwellings for towers less than 15 metres in height;
- b. at least 75 metres away from those dwellings for towers 15 to 30 metres in height;
- c. at least 100 metres away from those dwellings for towers 31 to 45 metres in height;
- d. at least 122 metres away from those dwelling units for towers 46 to 55 metres in height; and
- e. at least three times the height of the proposed tower away from those dwellings for towers 56 metres or greater in height.

The distance shall be determined by measuring from the nearest wall of the nearest dwelling unit (including any secondary suite located in a rear yard or on a detached garage) to the proposed tower. In addition, for the purpose of this subsection, where the height of a tower is between whole numbers, the measurement shall be rounded up to the next full number (example: if the tower measures 30.34 metres in height, it will be considered to be 31 metres high).

The City of Calgary may, at its discretion, modify these setback guidelines on a site by site basis, taking into account such factors as buffering topography and vegetation, intervening major transportation and utility corridors, rivers and streams, intervening non-residential buildings and information arising from a public consultation meeting concerning the telecommunication antenna structure. Exceptions will also be considered for those telecommunication antenna structures that are stealth type installations (i.e. hidden or, for the most part, screened by design, structure(s) or other camouflaging techniques).

## 7.7 Design Characteristics – Visual Examples

### Encouraged

#### Parapets



Inconspicuous installations below the parapet are encouraged.

### Discouraged



Conspicuous installations above the parapet are discouraged.

#### Façades



Orderly integration into the building façade with concealed wiring is encouraged.



Disorderly application on the building façades and/or exposed wiring/conduit is discouraged.

## Alternate methods to mitigate visual impact

### Screening



Partial or full screening of rooftop antennas minimizes visibility from a distance and from street level.



Partial or full screening of rooftop antennas minimizes visibility from a distance and from street level.

### Reflective Films



Films applied to antennas reflect the sky and minimize visibility from a distance.

## 8.0 Co-Location

### 8.1 Co-location Options

The City of Calgary encourages the co-location of telecommunication antenna structures. This may include, but is not limited to:

- the installation of a proponent's telecommunication antennas on any existing telecommunication antenna structure;
- the construction of a new telecommunication antenna structure on which other proponents are invited to co-locate;
- the reconstruction or modification of an existing telecommunication antenna structure to accommodate the equipment of additional proponents; or
- the relocation of a proponent's existing telecommunication antennas to another proponent's telecommunication antenna structure followed by the removal of the redundant existing telecommunication antenna structure.

In cases where a telecommunication antenna structure is being replaced or taken out of service, The City of Calgary acknowledges that the existing telecommunication antenna structure could remain temporarily while a new telecommunication antenna structure is being built and the telecommunication antennas and equipment relocated from the existing structure to the new structure.

### 8.2 Replacement or Modification due to Co-location

Where the reconstruction or modification of an existing telecommunication antenna structure 15 metres or greater in height is proposed to accommodate either additional telecommunication antennas or a co-location not identified on the drawings approved with the original concurrence, a public consultation is not required if the height of the replacement or modified structure is not increased more than 25% of the existing structure's height. However, the proponent's representative is requested to provide the following information to the appropriate Ward Councillor and to The City of Calgary – Development and Building Approvals Business Unit:

- the height and type (e.g. monopole, tri-pole, etc.) of the existing telecommunication antenna structure;
- the height and type of the proposed reconstructed telecommunication antenna structure;
- the location and type (e.g. pinwheel, cluster mount, etc.) of all telecommunication antennas, including any futures;
- the location, size, height, colour and finishing materials of any additional equipment shelter and screening for same;
- the name of any co-locating proponent; and
- any other material that the proponent's representative considers important in explaining clearly what changes are proposed to take place and why.

No changes to the existing telecommunication antenna structure, its screening or its equipment shelter should take place until a written acknowledgement is received from The City of Calgary or the 10 day response period set out in subsection 6.3 of the Protocols has lapsed, whichever occurs first.

### 8.3 Evidence of Co-location Review

The City of Calgary strongly recommends that a co-location review take place prior to any Type A or Type B submission for concurrence for a telecommunication antenna structure. In this regard, the proponent is requested to provide written evidence, as part of its submission to The City of Calgary, demonstrating that co-location on an existing telecommunication antenna structure, a replacement or modified telecommunication antenna structure or a proposed new telecommunication antenna structure has been reviewed with other proponents operating within the city limits. Also requested is information regarding the feasibility of co-location verses the construction of an additional telecommunication antenna tower structure. All existing and proposed telecommunication antenna tower structures within a 500 metre radius of any proposed new telecommunication antenna tower's location must be included in the review for co- location potentials. If co-location is not possible for technical reasons, a statement signed by an appropriate technical expert is requested in support of the written evidence noted above. If co-location is not possible due to a lack of interested participants or other considerations, a statement signed by an appropriate authority for the proponent making the submission is requested as part of the aforementioned written evidence.

### 8.4 Co-location and Unobtrusiveness

The City of Calgary recognizes that the objective of promoting co-location as described in this Section of the Protocols, and the objective of making telecommunication antenna structure facilities less noticeable, as described in Section 7.0 of the Protocols, may sometimes come into conflict. Nevertheless, The City of Calgary intends to review each submission on its merits with a view to promoting both objectives and, where necessary, will determine the appropriate balance between them. The proponent will be given direction in this regard by The City of Calgary during the pre-submission consultation process, or if no pre-submission consultation has taken place, during the review and evaluation of the submission.

## 9.0 Notification and Public Consultation Process

This section represents the enhanced public consultation requirements of the City of Calgary in the review of land use concurrence. The City of Calgary makes no representations that these public consultation requirements satisfy those of ISED under ISED CPC-2-0-03 Client Procedures Circular, and recommends that proponents consult with ISED to ensure that public consultation requirements for an antenna installation are met.

### 9.1 Initial Contact with The City of Calgary

Prior to physically investigating an area for potential telecommunication antenna structure site locations, The City of Calgary requests that proponents provide the Administration and the appropriate Ward Councillor with a courtesy notification that locations in the community are being assessed for a telecommunication antenna structure site.

### 9.2 Notification Obligations When a Public Consultation Meeting is not Required

When a public consultation meeting is not required, pursuant to subsections 6.2, or 6.3 of the Protocols, notification of a proposed telecommunication antenna structure siting shall be given to the appropriate Ward Councillor and community association by the proponent either in advance or at the time a submission is made to The City of Calgary for concurrence. This notification must be made by written means (a letter, an e-mail or a brief) and must include:

- the proponent's name and contact information;
- the municipal address of the proposed location;
- the type and height of the telecommunication antenna structure; and
- a brief explanation as to why a public consultation meeting is not required.

### 9.3 Notification Obligations When a Public Consultation Meeting is Required

When a public consultation meeting is required, pursuant to subsections 5.4, or 6.1 of the Protocols, written notification of a proposed telecommunication antenna structure siting shall be given by the proponent to the appropriate Ward Councillor, the appropriate community association (including any adjoining community if portions of it lie within the 300 metre notification ring detailed in subsection 9.4 below) and The City of Calgary. Notification of Community Associations shall be by registered mail. The proponent shall include in the notification a copy of the plans for the structure and a copy of the Notice of Public Consultation Meeting. The proponent shall then undertake the Public Consultation Meeting process by conducting a public meeting prior to making a telecommunication antenna structure submission to The City of Calgary in accordance with the provisions of subsections 9.4, 9.6, 9.7 and 9.8 of the Protocols.



### 9.4 Notification to Affected Residential Properties

Except as may be allowed in subsection 9.5 below, when a public consultation meeting is required pursuant to subsections 5.4, or 6.1 of the Protocols, notification of the proposed siting of a telecommunication antenna structure shall be sent by the proponent to all affected residential properties within a 300 metre radius of the proposed telecommunication antenna structure, including any that are located in an adjoining municipality. The measurement to determine the 300 metre distance shall be taken from the centre of the proposed structure. Where the 300 metre notification ring cuts through a multi-unit residential building or a residential block, notice shall be extended to the whole building or to all residential properties on the affected block face. In addition, for apartment buildings and condominium buildings, the proponent must provide notification to each dwelling unit in the building.

### 9.5 Exceptions to the Notification Area Requirement

The City of Calgary anticipates that, in certain cases, it may be reasonable to reduce the 300 metre notification area. This may involve, but is not limited to, proposed telecommunication antenna structures where the location is separated and or buffered from residential properties within the 300 metre notification area by:

- significant or extensive topographical features;
- a major transportation or utility corridor;
- tall buildings that will block all or most of the proposed telecommunication antenna structure's visibility from those residential properties beyond them; or

- substantial tree cover that will block all or most of the proposed telecommunication antenna structure's visibility from those residential properties beyond them.

Any reduction of the 300 metre notification area will be at the discretion of The City of Calgary and must be negotiated with The City by the proponent at the pre-submission consultation stage.

### 9.6 Public Consultation Meeting Notification Method and Timing

When a public consultation meeting is required, the proponent shall issue a notification in written form in accordance with subsection 9.7 of the Protocols and deliver it, either by regular mail service or by hand, to all affected residential properties within the notification area defined in subsection 9.4 of the Protocols. If the notification is to be given by regular mail service, it must be sent out at least 21 days prior to the date of the public consultation meeting event. If the notification is to be hand delivered, it must be delivered to the affected residential properties at least 14 days prior to the date of the public consultation meeting event. It is recommended that the proponent keep a log or similar record showing mail out or delivery dates, times and addresses in case of a dispute regarding the notification procedure.

## 9.7 Public Consultation Meeting Notification Form and Content

A written public consultation notification shall be sent out in an envelope addressed to the “Occupant” and shall clearly show in bold type on the face of the envelope the statement:

**A CELL TOWER IS PROPOSED WITHIN 300 METRES OF THIS RESIDENCE. YOU ARE INVITED TO A PUBLIC MEETING. INFORMATION IS ENCLOSED.**

No advertisement shall be on the outside of the envelope. The notification shall include, as a minimum, the following information:

- the date, time and place (virtual or in person) the public meeting will be held;
- any agenda or itinerary for the meeting;
- the name and telephone number of the proponent’s representative as a contact for the public;
- information about the size, type, location on the site and diameter of the proposed telecommunication antenna structure, as well as the number and type of antenna arrays to be mounted (such as pin wheel mounted, cluster mounted, etc.), including any potential for future antenna arrays and co-location opportunities; and
- any other material the proponent deems appropriate to best inform the public.

Details should also be provided to show the proposed telecommunication antenna structure and its associated equipment shelter(s) in context with the area immediately adjacent. In this regard, presentation of accurately scaled photographic simulations depicting the proposed facility and its environs is also recommended, but is not mandatory as part of the notice.

## 9.8 Public Consultation Meeting Format

It is solely the responsibility of the proponent, at its own cost, to arrange, organize and conduct a public consultation meeting. At its discretion, the proponent may conduct the meeting in either a formal manner or an open house format. Both formats described below can be adjusted to be conducted virtually.

A formal meeting entails the public seated facing the proponent’s representatives, who provide information concerning the proposed telecommunication antenna structure and answer questions about the proposal and telecommunications in general.

An open house format involves a meeting with no formal seating provided and the public being free to walk through a series of displays providing information about the proposal and telecommunications in general and at which the proponent’s representatives are available to discuss issues and answer questions in a one-on-one setting.

In either case, The City of Calgary recommends the following basic information be provided at a public consultation meeting:

- the location of the telecommunication antenna structure;
- why / how the location was chosen;
- what other locations were considered and why they weren’t chosen;
- an aerial photograph or plan showing the proposed location of the telecommunication antenna structure, the notification area and the properties within the notification area that received a notice of the meeting;
- the height, type of telecommunication antenna structure, colour, materials, type and number of telecommunication antennas (including futures) and co-locations;
- a site plan showing where on the property the telecommunication antenna structure will be situated;

- plans showing the design and appearance of the telecommunication antenna structure and any equipment shelters, cabinets, compounds, fencing and landscaping to be provided as part of or in support of it;
- accurately scaled photographic simulations showing the property with and without the telecommunication antenna structure in place;
- the name, phone number, e-mail address and fax number of a contact person employed by the proponent;
- health and safety information regarding radio frequency transmission (Safety Code 6);
- technical information regarding radio frequency transmission as it relates to cell phone and cell tower functions;
- the time frame within which questions, concerns and comments will be received and addressed by the proponent after the meeting and prior to making a submission to The City of Calgary; and
- any other material that the proponent considers important to best inform the public regarding its proposal.

### **9.9 Proponent Obligations after the Public Consultation Meeting**

Following a public consultation meeting, the proponent must respond to any concerns or issues arising from it. It is recommended that 10 working days be allowed to ensure time for receiving and responding to any concerns from the public arising as a result of the meeting. Subsequently, the proponent may proceed with a submission to The City of Calgary.

### **9.10 Documenting the Public Consultation Meeting**

Where a public consultation meeting has been conducted and the proponent proceeds with a telecommunication antenna structure submission, a brief containing the names and addresses of all attendees at the public consultation meeting must be included. A copy of any agenda, presentation, minutes or similar record may also be included at the proponent's discretion; however, the brief must document the topics discussed, concerns raised, resolutions reached and, where arising, any outstanding issues that could not be resolved. The proponent must demonstrate how the issues have been addressed and subsequently resolved or, where issues have not been resolved, the brief must explain why.

## 10.0 Redundant Telecommunication Antenna Structures

Regardless of telecommunication antenna structure Type, when a telecommunication antenna structure becomes redundant to the operation of a proponent's telecommunications network, The City of Calgary requests that the proponent removes the telecommunication antenna structure and all buildings and associated equipment from the site and remediates the property to the satisfaction of the property owner. Unless otherwise specified in a written agreement with the property owner, The City recommends removal and remediation take place within 60 days of the telecommunication antenna structure becoming redundant. Notification to The City is requested within 30 days of the proponent(s) abandoning / decommissioning the telecommunication antenna structure.

Regardless of telecommunication antenna structure Type, in cases where a redundant telecommunication structure is not being removed by the proponent abandoning / decommissioning the structure, but is instead to be sold to a party that is not another proponent or a party that will not be using the telecommunication antenna structure for wireless telecommunication or other radiocommunication purposes, The City of Calgary requests a notification in writing within 30 days of the sale of the telecommunication antenna structure.