CITY OF VAUGHAN

EXTRACT FROM COUNCIL MEETING MINUTES OF JANUARY 28, 2014

Item 15, Report No. 1, of the Committee of the Whole, which was adopted without amendment by the Council of the City of Vaughan on January 28, 2014.

15 TELECOMMUNICATION FACILITY SITING PROTOCOL TASK FORCE FINDINGS REPORT

The Committee of the Whole recommends approval of the recommendation contained in the following report of the City Clerk, dated January 14, 2014:

Recommendation

The City Clerk, on behalf of the Telecommunication Facility Siting Protocol Task Force, forwards the following for Council's consideration:

1) Recommendation of the December 17, 2013, meeting of the Telecommunication Facility Siting Protocol Task Force:

   1. That the Telecommunication Facility Siting Protocol Task Force Findings and Recommendations Report, as set out in Attachment 1 to this report, be referred to staff for review, and that a report be provided to a future Committee of the Whole meeting; and

   2. That the Findings report form the basis for developing the City of Vaughan's Telecommunication Facility Siting Protocol.

Contribution to Sustainability

Input from Task Forces assists Council in making complex policy decisions which have broad impacts on the community.

Economic Impact

N/A

Communications Plan

The City of Vaughan's Telecommunication Facility Siting Protocol will be posted on the City's website.

Purpose

The purpose of this report is to forward for Council's consideration the Telecommunication Facility Siting Protocol Task Force recommendation of December 17, 2013.

Background - Analysis and Options

Council, at its meeting of September 27, 2011, approved the establishment of the Telecommunication Facility Siting Protocol Task Force (Item 1, Committee of the Whole Report No.41). The objectives of the Task Force were:

1) To conduct a background review of Industry Canada requirements, applicable Provincial and Regional policies, the current City of Vaughan Protocol for Establishing Telecommunication Tower/Antenna Facilities, telecommunication protocols in other municipalities, and legal precedents;

…/2

2) To identify, review and analyze issues pertaining to the siting of telecommunication towers and antenna facilities, establish appropriate objectives, and evaluate alternative strategies in developing the new protocol;
3) To enable effective and transparent communication among members of the public, ratepayer association representatives, telecommunication industry representatives, the Region of York Medical Officer of Health, local experts in the field, Members of Council, Industry Canada, City Staff, and other stakeholders or agencies; and,

4) To make recommendations to Council addressing a Telecommunication Facility Siting Protocol, harmonized with Industry Canada, for siting telecommunication facilities within the City of Vaughan.

A comprehensive work plan was developed by the Task Force. City staff attended the Task Force meetings to provide advisory and technical support. The Task Force's deliberations also included consultation and presentations from outside sources such as Industry Canada, Public Health Ontario, Bell Mobility, Region of York Medical Officer of Health, and telecommunication industry professionals.

The Task Force met a total of 14 times during the period from November 2011 to December 2013.

The final Findings and Recommendations Report was approved by the Task Force at its December 17, 2013, meeting and is included as Attachment 1 to this report.

Relationship to Vaughan Vision 2020/Strategic Plan

This report is in keeping with the provisions of Vaughan Vision 2020, particularly:

- STRATEGIC GOAL:
  Service Excellence – Demonstrates excellence in service delivery.

Regional Implications

None.

Conclusion

The City Clerk is forwarding the Telecommunication Facility Siting Protocol Task Force's recommendation of December 17, 2013, for Council's consideration.

Attachments

1. Telecommunication Facility Siting Protocol Task Force – Findings and Recommendations Report

Report Prepared By

John Britto
Assistant City Clerk

(A copy of the attachments referred to in the foregoing have been forwarded to each Member of Council and a copy thereof is also on file in the office of the City Clerk.)

TELECOMMUNICATION FACILITY SITING PROTOCOL TASK FORCE FINDINGS REPORT

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    2. That the Findings report form the basis for developing the City of Vaughan's Telecommunication Facility Siting Protocol.

Contribution to Sustainability

Input from Task Forces assists Council in making complex policy decisions which have broad impacts on the community.

Economic Impact

N/A

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2) To identify, review and analyze issues pertaining to the siting of telecommunication towers and antenna facilities, establish appropriate objectives, and evaluate alternative strategies in developing the new protocol;

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None.

Conclusion

The City Clerk is forwarding the Telecommunication Facility Siting Protocol Task Force's recommendation of December 17, 2013, for Council's consideration.

Attachments

1. Telecommunication Facility Siting Protocol Task Force – Findings and Recommendations Report

Report Prepared By

John Britto
Assistant City Clerk

Respectfully submitted,

Jeffrey A. Abrams
City Clerk

ATTACHMENT 1

TELECOMMUNICATION FACILITY SITING PROTOCOL TASK FORCE
Findings and Recommendations Report

A – BACKGROUND

1. Summary

This report provides recommendations and guidelines for the development of a protocol for the siting of Telecommunication Towers and Antennas in the City of Vaughan. Under the *Radiocommunications Act*, Industry Canada has the final authority to approve the location of telecommunication towers and antennae. As Industry Canada currently has a process in place for taking municipal and public concerns into consideration during their review of telecommunications proposals, many Canadian municipalities have developed protocols to review telecommunication proposals. The City of Vaughan adopted a protocol in 2002, with a small revision in 2003, but has not otherwise amended it since that time.

The Task Force met regularly in 2011, 2012, and 2013. In addition to extensive discussions, the Task Force heard presentations from:

- Madeline Zito, then Director of Communications, City of Vaughan, who provided input with respect to communications;
- Melissa Rossi, Senior Planner, Policy Planning Department, City of Vaughan, with respect to the City's growth projections to 2031;
- Farhad Jalili, Urban Designer, City of Vaughan, with respect to urban design matters;
- Task Force members Stephen D'Agostino and Colin Lavery, concerning telecommunication facility siting challenges from the Industry's perspective and other municipal protocols of note;
- Samuel Domingues, RF Engineering Manager, Bell Mobility, with respect to Health Canada's Safety Code 6;
- Dr. Ray Copes, Chief, Environmental and Occupational Health, Public Health Ontario, concerning the risk of health effects; and
- Mike Lang, Spectrum Manager, Industry Canada, concerning Industry Canada's process for wireless communications approvals and expectations for a municipal protocol.

In addition to this findings report, the Task Force conducted a review of the *Terms of Reference,* and this report was prepared with express adherence to these Terms, and considered all concerns brought forward by City staff and the general public. The future City of Vaughan Telecommunication Tower and Antenna Protocol will propose to establish a vision for a harmonized municipal process and criteria for evaluating all wireless proposals subject to compliance with Industry Canada's CPC-2-0-03, and not exempted by the forthcoming protocol. This report includes recommendations that work within Industry Canada's CPC-2-0-03 guidelines, and provides a foundation for the future protocol, that will aim to appropriately site wireless facilities, promoting a transparent consultation process that considers the public and the telecommunications industry.

In response to the City of Vaughan's desire to review telecommunications towers and antennas and in consideration of the *Terms of Reference,* the following findings report has been prepared by the Task Force.

2. Objectives

The Task Force was given the following objectives:

1) To conduct a background review of Industry Canada requirements, applicable Provincial and Regional policies, the current City of Vaughan Protocol for Establishing Telecommunication Tower/Antenna Facilities, telecommunication protocols in other municipalities, and legal precedents;

2) To identify, review and analyze issues pertaining to the siting of telecommunication towers and antenna facilities, establish appropriate objectives, and evaluate alternative strategies in developing the new protocol, as discussed in Section 8.0 of this *Terms of Reference*;

3) To enable effective and transparent communication among members of the public, ratepayer association representatives, telecommunication industry representatives, the Region of York Medical Officer of Health, local experts in the field, Members of Council, Industry Canada, City Staff, and other stakeholders or agencies; and

4) To make recommendations to Council addressing a Telecommunication Facility Siting Protocol, harmonized with Industry Canada, for siting telecommunication facilities within the City of Vaughan.

The Task Force was fortunate to receive guidance and assistance from City staff. Representatives from a number of departments/divisions were present at meetings, including the Development Planning Department and Corporate Communications. Staff members made themselves available to provide support, educate, clarify, and aid the Task Force in their deliberations. A Recording

Secretary from the City Clerk's Office was also available to assist the Task Force by providing notification of meetings, preparing and circulating agendas and minutes, attending meetings, recording minutes, and keeping attendance records.

The Task Force thanks City staff for their valued clarification, assistance, and support.

B – GENERAL ISSUES

A list of key issues was provided to members of the Task Force for their consideration. These key issues are reflected and addressed in the findings of this report as are other matters deemed to be of concern to the committee, and provide the basis for a future protocol.

1. Jurisdiction

The *Terms of Reference* provided to the Task Force from the City of Vaughan outline the following:

Under the *Radiocommunications Act*, Industry Canada is the designated approval authority for all matters respecting telecommunication towers and antenna systems. As federal regulations supersede the *Ontario Building Code* and the *Planning Act*, telecommunication towers and antenna facilities are exempt from municipal zoning by-law requirements and site plan control. Industry Canada requires that Proponents seeking to install or modify an antenna system adhere to the following broadly outlined process:

1) Investigating sharing or using existing infrastructure before proposing new antenna-supporting structures;

2) Contacting the local land-use authority (LUA) to determine local requirements regarding antenna systems;

3) Undertaking public notification and addressing relevant concerns, whether by following local LUA requirements or Industry Canada's default process, as is required and appropriate; and

4) Satisfying Industry Canada's general and technical requirements, including: Health Canada guidelines as per Safety Code 6, radiofrequency immunity criteria, notification of nearby broadcasting stations, environmental considerations under the *Canadian Environmental Assessment Act*, and Transport Canada and NAV CANADA requirements regarding aeronautical safety.

The *Radiocommunication Act* and the *Telecommunications Act* provide for the regulation, where required, of Canadian telecommunications common carriers. These include, among others, the incumbent telephone companies, the new competitive local and long distance service providers, mobile and fixed wireless service providers, as well as satellite services providers.

Telecommunications has increasingly become an essential facet of daily life. This is attested to in Section 7 of the *Telecommunications Act*, which reads as follows:

> 7. It is hereby affirmed that telecommunications performs an essential role in the maintenance of Canada's identity and sovereignty and that the Canadian telecommunications policy has as its objectives:
>
> (a) to facilitate the orderly development throughout Canada of a telecommunications system that serves to safeguard, enrich and strengthen the social and economic fabric of Canada and its regions;
>
> (b) to render reliable and affordable telecommunications services of high quality accessible to Canadians in both urban and rural areas in all regions of Canada;
>
> (c) to enhance the efficiency and competitiveness, at the national and international levels, of Canadian telecommunications;
>
> (d) to promote the ownership and control of Canadian carriers by Canadians;
>
> (e) to promote the use of Canadian transmission facilities for telecommunications within Canada and between Canada and points outside Canada;
>
> (f) to foster increased reliance on market forces for the provision of telecommunications services and to ensure that regulation, where required, is efficient and effective;
>
> (g) to stimulate research and development in Canada in the field of telecommunications and to encourage innovation in the provision of telecommunications services;
>
> (h) to respond to the economic and social requirements of users of telecommunications services;
>
> (i) to contribute to the protection of the privacy of persons.

Telecommunication Facility Proponents operate their networks based on spectrum licenses issued by the Federal government pursuant to these two Acts. A spectrum license provides pre-approval for the construction of wireless facilities within a specific geographic area at a specific frequency subject to conditions of license. Once the conditions have been satisfied, the carrier is free to construct the Telecommunication Facility in accordance with its spectrum license. Compliance with the CPC-2-0-03 including the requirement to obtain municipal concurrence is a condition of those licenses. Industry Canada is only involved in decision making concerning siting and design where an impasse has arisen that requires their determination related to a specific site. As a result of the condition of license, CPC-2-0-03 provides a legal framework for the City's review of Telecommunication Facility proposals.

CPC-2-0-03 provides the framework for land-use consultation and the development of protocols. It contains default municipal and land use authority consultation provisions as well as technical requirements. The CPC requires that the Wireless Carriers follow its default consultation provisions unless the council of the municipality has adopted a protocol establishing a local wireless telecommunications process. In some respects, such as the usual requirement for co-location, protocols are permitted to influence processes or influence siting decisions to accommodate local preferences.

Based on the findings of the Task Force, and as outlined above, the City of Vaughan would have limited jurisdiction around the regulation of communication facilities. The federal government has jurisdiction over all inter-provincial and international communication facilities. Therefore, the execution of decisions around approving the location and operation of telecommunications facilities can only occur through Industry Canada's approval process. The Task Force believes that Industry Canada's requirements, including CPC-2-0-03, provide Vaughan with the ability to meaningfully influence the siting of wireless telecommunications facilities.

Recommendation: The Task Force recommends that the City of Vaughan, acting as the land use authority, participate fully in Industry Canada's land use consultation process set out in CPC-2-0-03.

2. Economic Issues

According to Section 5 of the City of Vaughan's Official Plan (2010), "Vaughan has one of the strongest local economies in the Greater Golden Horseshoe and a high ratio of jobs to population."

The City is an attractive location for newcomers, as the City boasts a wide range of employment opportunities, industries, and is expected to grow at a brisk pace as per the Growth Plan's growth projections to 2031. "A strong economic future for Vaughan requires further economic growth and diversification. Forecast to

grow from 162,200 jobs in 2006 to 266,100 jobs by 2031, economic growth will occur within strong and established sectors. However, new growth will also occur in a variety of emerging sectors that together have potential for significant expansion. With a diverse economic base, Vaughan will promote a welcoming environment for a variety of new employers and job opportunities, where residents and employees can both live and work in Vaughan."

In the context of developing a protocol for the siting of telecommunications facilities, it is important to note that, as is reflected above, the City of Vaughan is a centre of economic activity, most notably in recent decades, and the City makes the encouragement of such activity a priority. The Official Plan addresses this:

> It is the policy of Council:
>
> 5.1.1.1. To promote economic growth and diverse employment opportunities in order to:
>
> a) support the long-term economic health and financial stability of the City;
> b) allow residents and employees the opportunity to both live and work in Vaughan.

Under Section 5.1.1.1, the sheer growth and promise of stability, which will allow residents and employees to both live and work in Vaughan, ushers forward a greater need for businesses to thrive, as well as the impetus to respond to the needs of daily family life. With the many technological advances of recent years, Vaughan residents are expected to be counted among the countless users who employ wireless telecommunications in their daily lives. As such, it is essential that the City encourage further growth and provide ample opportunity for its residents to do the same.

The City should promote economic competitiveness, while supporting effective telecommunication services that meet the needs of Vaughan residents and businesses. This can be accomplished simply by providing various carriers with access to Vaughan in order to increase capacity. Information has a great role in economic development. Wireless telecommunications can impact economic development by reducing the costs of communication by lowering search costs and making information more accessible to the general population. Businesses thrive on wireless telecommunications and providing better access to business owners employing these services will encourage more businesses to open their doors in Vaughan.

The City of Vaughan establishes a set list of fees, through subsection 69(1) of the *Ontario Planning Act*, which an applicant shall remit to the City upon submission of a Planning Act application. The fee schedule is set through By-law 187-2012, which was enacted by Vaughan Council on December 10, 2012, and

establishes fees for Planning Act applications to the end of the calendar year 2016. The fees are based on the anticipated cost to process applications and include a variety of factors, including, but not limited to the complexity of each application type (e.g. Official Plan Amendment, Zoning By-law Amendment, Site Development and Draft Plan of Subdivision Applications, etc.), and the amount of staff time and resources required to review each application. The fees increase yearly for each application type. As the Task Force considers it appropriate to treat the submission of applications to site Telecommunication Facilities akin to the submission of a Site Development Application, and further, as the amount of staff time and resources required to review an application to site a Telecommunication Facility is similar to that of a Site Development Application, the Task Force deems it appropriate to install a fee for Telecommunication Facility applications that mirrors the "base fee" for Site Development Applications outlined in By-law 187-2012.

Recommendation: That the City of Vaughan implement in the protocol an application fee that is the same as the "Base Fee" for a Site Plan Application**,** which would be additional to the other fees that may be required from other approval authorities (York Region, TRCA, etc.) and ensure that any public consultation costs are borne by the Applicant.

3. Radiofrequency Exposure, Health Concerns, and Safety Standards

According to Health Canada's, ''Safety of Cell Phones and Cell Phone Towers''[1] , which discusses the concerns around the safety of cellular phone towers and the growing demand for new wireless services, "the number of cell phone users in Canada rose from 100,000 in 1987 to more than 24 million by the end of 2010 . To meet the demand for new wireless services, cell phone towers have been put up across the country." While the demand for wireless services has increased, the amount of attention on the potential risks of radiofrequency exposure has also increased. This topic was the subject of much debate during the Task Force's discussions and it should be noted that, ultimately, the Task Force was deeply divided.

Health Canada reports that "there are a small number of epidemiology studies that have shown brain cancer rates may be elevated in long-term/heavy cell phone users. Other epidemiology studies on cell phone users, laboratory studies and animal cancer studies have not supported this association."[2] Health Canada concludes that "with respect to cell phone towers, as long as exposures respect the limits set in Health Canada's guidelines (Safety Code 6), there is no scientific reason to consider cell phone towers dangerous to the public"[3] .

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[1] http://www.hc-sc.gc.ca/hl-vs/iyh-vsv/prod/cell-eng.php

[2] http://www.hc-sc.gc.ca/hl-vs/iyh-vsv/prod/cell-eng.php

[3] http://www.hc-sc.gc.ca/hl-vs/iyh-vsv/prod/cell-eng.php

According to Industry Canada's Frequently Asked Questions web page[4], while there is evidence to suggest that exposure to radiofrequency (RF) energy can result in biological effects, "for frequencies from 3 kHz to 100 kHz, the biological end point on which the limits are based is nerve and muscle stimulation. Although these are acute effects, they are non-thermal in nature. At higher frequencies, non-thermal effects are not well established and currently do not form a scientifically acceptable basis for restricting human exposure to RF energy."

In addition, Industry Canada states "Health Canada has no scientific reason to consider that RF exposures have any link to cancer initiation or promotion. The body of peer-reviewed literature in this area overwhelmingly demonstrates a lack of linkage, and where the few reports of linkage effects were found, it was concluded that these results could be attributed to factors other than RF energy."

Industry Canada's website states the following: "The biological effects from laboratory studies reported in scientific peer-reviewed literature include those related to changes in temperature, blood brain barrier, melatonin, calcium efflux, DNA damage and gene expression. However, not all these biological effects have been established or are considered to be health effects. For example, blood brain barrier and melatonin effects have not been consistently replicated. Studies on DNA strand breaks have also failed numerous independent attempts at confirmation and calcium efflux changes are considered to be more of a biological response than an adverse health effect."

"Several laboratory studies have looked into whether RF energy can initiate and promote cancer. The overwhelming majority of these studies have found no evidence that RF energy damages DNA or that it is likely to act as an initiator or a promoter of carcinogenesis."

Although currently there is no consensus, a number of studies have been published which raise concerns about the potential biological and health effects of RF energy. These studies contributed to a World Health Organization classification of RF energy as "possibly carcinogenic to humans" (Group 2B)[5].

Health Canada indicated that it updates Safety Code 6 based on monitoring and reviewing current research on the potential biological effects. Although the latest guideline was updated in 2009, the safe dose limits were unchanged since the revision completed in 1999. While there is continued scientific debate on the health effects of RF radiation, here in Canada the safe dose has not been

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[4] http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf08792.html

[5] http://monographs.iarc.fr/ENG/Monographs/vol102/mono102.pdf
IARC Press Release dated May 31, 2011.
IARC Report dated October 3, 2011

changed, although some regulators internationally have chosen to put more stringent limits to the use of this technology.

In an effort to understand the various risk factors and latest scientific findings with respect to radiofrequency exposure, the Task Force heard from Dr. Ray Copes of Public Health Ontario, as well as Mike Lang of Industry Canada, and Samuel Domingues, an RF engineer from Bell Mobility.

The Task Force heard from Mr. Lang that Industry Canada has made it a condition of the wireless carriers' licenses that they comply with the radiofrequency exposure requirements of Health Canada's Safety Code 6 on an ongoing and cumulative basis. Safety Code 6 is Health Canada's guideline for human exposure to radiofrequency electromagnetic energy. Its exposure limits are set 50 times below the threshold for potential adverse health effects. Provided a wireless facility meets the requirements of Safety Code 6, Industry Canada informed the Task Force that its process is satisfied. Industry Canada provides in its Municipal Consultation document that the adequacy of Safety Code 6 is not relevant to a Proponent's consultation with the public or a municipality.

Dr. Copes advised the Task Force of the following:

- Despite proliferation of wireless technologies, measurements done in community settings are typically a small fraction of current limits;
- Exposures from cell phone base stations, TV, radio, Bluetooth are all orders of magnitude lower than cell phones;
- In reviewing studies that addressed the possible association between environmental exposure to RF-EMF and cancer, the International Agency for Research on Cancer Working Group found the available evidence insufficient for any conclusion;
- Cell phone use dominates exposures. One can reduce exposure through: reducing use, texting, selection of phone with lower SAR, use of speaker, headset, and avoiding use where there is weak signal, because mobile devices increase power output levels to compensate. However, it is unclear whether this reduces risk of adverse effects.

The Task Force learned from Mr. Domingues and Dr. Copes that the total radiofrequency energy received by the public located close to a wireless base station, such as the one currently located at the Al Palladini Centre, is very small in relation to Safety Code 6.

In the case of the Al Palladini Centre, Public Health Ontario undertook an investigation which found that the measurement taken closest (80 metres) to the existing communication tower produced a cumulative reading (for all RF energy sources such as radio, TV and the communication tower) 1286 times below

Health Canada's requirements. Public Health Ontario's report was presented to Council in September, 2012.

The Task Force was presented with a number of studies, in addition to those referenced above, that concluded that no health effects were attributed to cell towers. In the interest of fairness, the Task Force also considered other reports that concluded that the non-thermal effects of RF radiation may in fact elicit negative health effects, contrary to the findings of the above referenced studies. In considering all such studies, there was much discussion on this subject, however no consensus emerged. It was agreed that ongoing research and reporting to Council by the Medical Officer of Health is recommended.

As detailed in Section 1, exposure limits to RF Radiation, are federally regulated by defined limits set forth in Safety Code 6. Therefore the municipality does not have the authority to address health effects. The Task Force can, however, recommend responsible siting based on other factors.

The City is expanding rapidly and wireless communications facilities will continue to be necessitated so as to respond to the demands of its citizens. While the City must respond to this need, the Task Force believes that the continued study of health effects associated with radiofrequency exposure is also in the public interest. This view was shared by several members of the public who attended Task Force meetings. As such, the Task Force recommends the following:

Recommendation:

a) That the City of Vaughan encourage Health Canada to continue to dedicate resources to the review of health effects associated with radiofrequency exposure with the goal of determining whether existing standards, such as Safety Code 6, are appropriate;

b) That the City of Vaughan requests the York Region Medical Officer of Health to provide the City with regular reviews of current research and updates, at least annually;

c) That the City of Vaughan requests that Public Health Ontario conduct radiofrequency measurement studies (similar to the Al Palladini study), at regular intervals, at various sites within the City, and report to Council;

d) That the City of Vaughan's Wireless Antenna Siting Protocol shall be drafted requiring Proponents to provide a written attestation that the proposed facilities will comply with Health Canada's Safety Code 6 on a cumulative and ongoing basis; and

e) That members of the public be referred to Industry Canada if seeking radiofrequency measurement information for existing wireless antenna facilities.

C – SITING ISSUES

1. Site Selection Criteria

The Task Force heard that site selection of Telecommunications Facilities is often constrained. Among the factors considered by the Telecommunication Facility Proponents are:

1) expected usage patterns of wireless service including proximity to users;

2) local terrain and building heights which can be a significant challenge as a result of shadowing;

3) interaction with existing radio base stations;

4) line of site requirements for high quality communications;

5) opportunities to use existing structures; and

6) the availability of a willing landlord.

Notwithstanding, the Task Force believes that it is appropriate for the City of Vaughan to influence the siting of Telecommunication Facilities recognizing that the Provincial Policy Statement requires that they be accommodated to serve present and future needs.

The Task Force believes that selection and design should, where possible, respect the policies of the relevant Provincial Plans and most updated and in-force Vaughan Official Plan document. Where such facilities are proposed within the Greenbelt or the Oak Ridges Moraine, the protocol should refer to the respective policies in each of the applicable plans, specifically Section 3.4 of the Oak Ridges Moraine Conservation Plan, subsection 3.4.10, which addresses Transportation/Infrastructure Utilities on the Oak Ridges Moraine, and Section 3.5 of the Greenbelt Plan, specifically subsection 3.5.6, which addresses General Infrastructure in the Greenbelt.

Once a preliminary consultation has occurred and/or a search area has been determined, which should include consideration of City owned land, the Proponent is strongly encouraged to contact the City's Real Estate Department, to determine if an appropriate municipally-owned property could accommodate the proposed communication facility.

The consideration of municipal or privately owned lands in the site selection process should be made with deference to the following recommendations:

Recommendation: That the City encourages Proponents to voluntarily select sites in the following order:

a) Sites co-located on existing structures at least **200 metres** from any residential area;

b) Where co-location is not possible, a new tower located 200 metres away from residential areas in:

i. Employment areas and rail facilities;
ii. Other non-residential areas;
iii. Natural areas and open space, subject to certain criteria;
iv. Other publicly-owned properties;
v. Regional and District parks;
vi. Towers should not be located at prominent vista wherever possible;

In each instance, the Proponent is encouraged to seek City-owned properties and facilities;

c) Where it is not possible to locate outside 200 metres from any residential area, and there is limited site availability, co-location may be encouraged at the time of pre-application consultation.

Recommendation: Where the Proponent is unable to comply with the City's siting preferences, the application to consult must include a justification explaining the rationale for Proponent's siting decision.

2. Co-location and Use of Existing Infrastructure

Industry Canada defines "co-location" to occur when two or more Telecommunication Facility Proponents locate their antennas on the same support structure. Co-location is the default preference expressed in CPC-2-0-03 as it has the effect of reducing the number of towers required in a given area.

While Telecommunication Facility Proponents are prepared to co-locate when the existing tower meets their radio requirements, since co-location is generally a faster and cheaper option, the Task Force discovered that co-location results in an increase in the visual obtrusiveness of the Telecommunication Facility. Generally co-location results in:

- an increase in massing compared to a facility that has not been co-located due to the additional number of antennas, cabling and other tower mounted equipment, and the increase in size of the structure required by the increased weight and wind loading;

- an increase in the height of the facility in order to meet radio objectives and prevent radio interference between antennas;
- and more radio equipment at the base of the Telecommunication Facility to power the antennas.

The Task Force learned that many of the stealth or unobtrusive designs will not accommodate co-location for the foregoing reasons. As a result it was determined that a better approach for the City would be to balance the desire for co-location against the desire to reduce impact in visually *sensitive* areas.

Accordingly, it is the opinion of the Task Force that existing tower facilities, structures and infrastructure should be utilized for the purpose of co-location, in areas where there is less concern with visual impact so as to minimize the proliferation of new tower facilities in the City of Vaughan. In order to maximize co-location opportunities and further minimize the number of Telecommunication Facilities, Proponents of new towers in areas where co-location is encouraged should notify other industry carriers.

The Task Force considered the co-utilization of Hydro One's high tension towers. Currently, Hydro One is prohibiting the use of their hydro structures for locating telecommunication antennas, however because of the negative impact these towers already exhibit on the landscape, it is advantageous to locate antennas on the existing structures and preclude the need for erecting additional structures that add to even more visual clutter.

However, in areas where visual impact is more important, (such as when Telecommunication Facilities are proposed to be located within 200 metres of a residential area), the Task Force recommends single carrier stealth or minimally obtrusive towers, except in areas of limited site availability where towers will be located in close proximity to each other. In such a scenario, a co-located tower is suggested.

Infrastructure such as utility poles and street light poles should be used when possible to minimize the visual impact of wireless facilities, especially in high-profile and visually sensitive areas.

Where co-location of towers is strongly preferred away from residential areas and encouraged in industrial/employment areas, commercial areas and natural areas and open space, incentives have been developed as detailed in Part C Section 1 Site Selection Criteria. Further guidance with respect to the siting of facilities, including co-located facilities, is provided in Part C Section 3 under Schedule 1.

Recommendation: That Proponents of telecommunication/antenna facilities be strongly encouraged to utilize existing tower facilities in all instances, except visually sensitive lands, in order to reduce further visual intrusions in these areas. In areas of limited site availability where towers will be located in close proximity

to each other, co-location may be encouraged at the time of pre-application consultation.

Recommendation: That where co-location is appropriate, Proponents be required to submit a Co-location Invitation Form, or similar evidence that the Industry has been consulted with respect to co-location opportunities.

Recommendation: That Proponents be required, where feasible and appropriate, to size leased areas to accommodate future expansion and co-location when leasing tower facilities.

Recommendation: That Council pass a resolution encouraging Hydro One to allow co-utilization of its infrastructure.

Recommendation: That co-utilization of facilities and infrastructure such as utility poles, street lights and other vertical real estate be encouraged in place of a new structure.

Recommendation: That the visual impact of radio equipment cabinets visible from public rights of way be mitigated.

Recommendation: That City staff be directed to consult with Telecommunication Facility Proponents and report back to Council on opportunities to promote unobtrusive siting using the site plan process for new mid-rise and high-rise developments and the Block Plan Process.

3. Exemptions

Industry Canada's CPC-2-0-03 contains a number of exemptions to the usual requirement to consult with municipalities such as the City of Vaughan. These exemptions were put in place after the adoption of Vaughan's current protocol. Industry Canada expects that these exemptions will be respected in local protocols. However, Industry Canada's documentation makes it clear that its exemptions may be expanded or new exemptions created in order to meet local needs.

Exemptions have long been used to encourage Telecommunication Facility Proponents to adjust the preferred location of their infrastructure based upon the encouragement of a faster process, or a path of least resistance. Often, these Proponents will, to some degree, compromise their engineering objectives in exchange for a quick approval. Where the Telecommunication Facility Proponent is unable to meet the terms of the exemption, the proposal is subject to more scrutiny through a more intense process.

The protocols considered by the Task Force contained exemptions that focused on template designs and distance from identified land uses to trigger a fast track

process (i.e. shorter consultation process). In some instances the fast track was facilitated by exempting the Telecommunication Facility Proponent from the need to consult with the municipality and/or the public. In other instances the fast track was facilitated by the delegation of the concurrence function from Council to an identified member of the City's staff.

The City of Vaughan's current protocol outlines a number of exemptions, including co-locating antennae on existing structures, or modifying or replacing towers where the proposed height does not exceed the existing height by a certain percentage. The Task Force would like to build on the current provisions in the protocol in addition to Industry Canada's requirements in order to meet the Task Force's objectives of reducing visual obtrusiveness and maximizing the distance between sensitive land uses and wireless facilities. As a result, the Task Force, would like to recommend that the following specifications be included in the forthcoming protocol:

Recommendation: That The City of Vaughan Protocol incorporate the following exemptions:

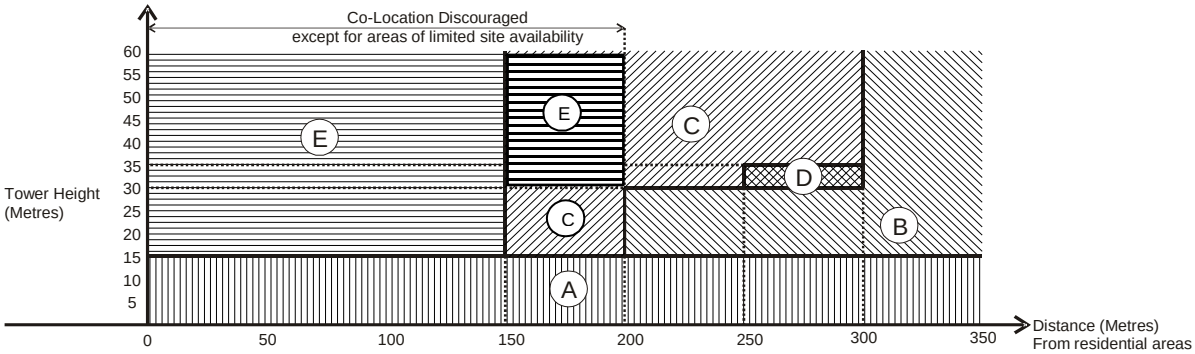
a) Industry Canada Exemptions from the Requirement to Consult with The City:
    i. The maintenance of existing telecommunications apparatus including the antenna system, transmission line, mast, or other antenna-supporting structure or maintenance of an antenna system's painting or lighting in order to comply with Transport Canada's requirements;
    ii. Addition or modification of an antenna system (including improving the structural integrity of its integral mast to facilitate sharing), the transmission line, antenna-supporting structure or other radio apparatus to existing infrastructure, a building, water tower, etc. provided the addition or modification does not result in an overall height increase above the existing structure of 25% of the original structure's;
    iii. Installation, for a limited duration (typically not more than 3 months), of an antenna system that is used for a special event, or one that is used to support local, provincial, territorial or national emergency operations during the emergency, and is removed within 3 months after the emergency or special event;
    iv. New antenna systems, including masts, towers or other antenna-supporting structure, with a height less than 15 metres above ground level;

b) Vaughan Specific Exemptions from the Requirement to Consult with the City and the Public:
    i. New telecommunications facilities located a minimum of 200 metres within employment/industrial lands;

ii. Amateur radio telecommunications towers, provided they are for personal use only, set back from the respective yards in accordance with the applicable zoning by-law and that the antenna is less than 15 metres in height.

c) Vaughan Specific Exemptions from the Requirement to Consult with Council and/or the Public In Accordance With the Chart Below.

Schedule 1: Telecommunication application review process; modified review procedures to encourage Proponents to voluntarily select sites away from residential areas



Legend:

Area "A": Exempted from Municipal Review Process (Notification Only)
Area "B": Staff Review and Approval (No Council Approval)
Area "C": Staff Review and Council Approval
Area "D": If Co-Located, Council Approval Not Required; If Single Carrier, Council Approval Required
Area "E": Full Consultation Process

Explanatory Notes for Schedule 1:

a) With respect to proposals meeting the requirements of Area "A", as per Schedule 1 above, proposals with a height of less than 15 metres are exempted from the municipal application review process. However, the submission of a notification to inform the City of a new installation is requested;

b) With respect to proposals meeting the requirements of Area "B", as per Schedule 1 above, proposals are recommended to be exempt from Council approval and public notification. Applications would be reviewed and granted concurrence/non-concurrence by City staff if:

i. a telecommunication tower is between 15 and 30 metres in height, and is located at a distance between 200 and 300 metres from residential areas; or
ii. a telecommunication tower height is equal to or higher than 15 metres and is installed farther than 300 metres from residential areas;

c) With respect to proposals meeting the requirements of Area “C”, as per Schedule 1 above, applications would be reviewed and processed by City staff and approved by City Council. These proposals are exempted from full consultation if:

- a telecommunication tower is equal to or higher than 15 metres in height and below 30 metres, and is located at a distance between 150 and 200 metres from residential areas; or
- a telecommunication tower is equal to or higher than 30 metres in height, and is located at a distance between 200 and 250 metres from residential areas; or
- a telecommunication tower is equal to or higher than 35 metres in height, and is located at a distance between 250 and 300 metres from residential areas;

d) With respect to proposals meeting the requirements of Area ”D”, as per Schedule 1 above, if a telecommunication tower is between 30 and 35 metres in height, located at a distance between 250 and 300 metres from residential areas, and is occupied by a single carrier, then the review process for Area “C” would apply. If the tower installation is co-located on an existing tower, the review process for Area “B” would apply;

e) With respect to proposals meeting the requirements of Area ”E”, as per Schedule 1 above, if a telecommunication tower has a height of 15 metres or greater and is located within 150 metres from residential areas, or if a telecommunication tower has a height of 30 metres or greater and is located at a distance between 150 and 200 metres from residential areas, then a full consultation process would apply;

f) This schedule should be reviewed by Staff in two years to reflect the industry’s new information, technology and standards;

g) This section is not meant to apply if a facility is proposed within a Heritage Conservation District, as they shall be subject to a full consultation process.

4. Telecommunication Facilities Siting on City-Owned Lands

Proponents are encouraged to consider the use of City-owned lands and/or facilities where feasible, for the siting of telecommunications facilities. It is the opinion of the Task Force that the City of Vaughan should be adequately prepared for such a possibility. The Task Force recommends the following:

Recommendation: That the City of Vaughan strongly encourage the following in the City's forthcoming protocol:

a) The Proponent should follow the same guidelines as described in Part D Section 1 of this report and should consider the additional guidelines described in this Section;

b) Telecommunication facilities shall not be installed in locations that would interfere with the City's wireless communication/security systems; Telecommunication providers are to conduct preliminary radio frequency study reports confirming that the intended wireless services will not interfere with any of the City's wireless services. City staff should provide technical information regarding the City's wireless systems when required;

c) Telecommunication providers are required to provide technical specifications of all radio equipment to be used on the premises. Providers are required to supply updated technical information when installing additional antennas/wireless services on an existing tower. Providers are also required to work with City staff to mitigate any interference caused by their systems, including the removal of devices causing interference to the City's wireless services if required;

d) Telecommunication facility proposals for City-owned lands should avoid the use of local parks in residential areas. However, when no other suitable option can be found, proposing the use of local parks in residential areas for telecommunication facilities will be considered. As part of the evaluation process, Proponents shall demonstrate other potential locations are not suitable as detailed in Part C Section 1 of this report. These evaluations shall be provided to the Development Planning Department for review;

e) Telecommunication providers shall enter into a license agreement with the City that specifies the terms and conditions of the provider's occupancy of City property, including but not limited to length of term, rent payable, insurance requirements, indemnity, co-locates, site location and access, design of facility, letter of credit;

f) Occupancy agreements with providers should facilitate the removal or relocation of a tower at no cost to the City, if necessary, in light of redevelopment of the City site;

g) Telecommunication providers shall consult with the City to provide the most suitable location on the identified City owned site that takes into account planned development or redevelopment on the site, and so as to cause the least visual disturbance;

h) Providers should be encouraged to design tower facilities in accordance with urban design guidelines referenced in Part D Section 1.

D – URBAN ISSUES

1. Urban Design Guidelines

Considering the growing demand for telecommunication facilities and their increasing presence within the public realm, the Task Force recommends that comprehensive design guidelines be developed to complement the City's Telecommunication Facilities Siting Protocol. These guidelines will provide a framework to set out the City's expectations and desires for appropriate design for future telecommunication facility proposals.

A number of municipalities in Ontario make mention of the importance of executing particular design styles that complement and respect the surrounding land uses and ensures that the telecommunication facilities are not visually obtrusive. The City of Vaughan has emphasized its recognizance of the importance of facilitating the telecommunication network as a major infrastructural component of the City. However, the character and quality of the urban areas should not be compromised. As such, the design of these facilities should strive to minimize negative visual impact, where possible. The following represent considerations the Task Force feels would be appropriate to include within the forthcoming Protocol's Urban Design Guidelines.

Recommendation: That design be harmonized with the surrounding environment. Surrounding structures and the natural environment should be considered in the design and telecommunication facilities should minimize the visual impact.

Recommendation: That public art and street furniture be considered in the design of facility siting in areas that are visually sensitive.

Recommendation: That City staff develop Urban Design Guidelines, in consultation with Industry representatives, that incorporate the above recommendations.

Recommendation: When designing rooftop antenna installations and antennas on other structures, Proponents are requested to conform with the Urban Design Guidelines.

E – PROCESS ISSUES

1. Application Process

It is the opinion of the Task Force that a comprehensive application should be made to the City at such a time as the Proponents wish to site a telecommunications facility in the municipality.

The Task Force makes the following recommendation:

Recommendation: That the City of Vaughan require the following as part of their Complete Application Requirements within the City's future protocol:

a) Any proposals for non-exempted telecommunications facilities will require the submission of a completed application form, fee, and five sets and one electronic set of the required materials to the City;

b) At the time of submission of their application, Telecommunications Facility Proponents shall append a justification report which will chronicle the network requirements in the context of the Protocol for the proposed new telecommunications facility. The report shall include the following information to support the application:

   i. Written description of the engineering rationale for the proposed tower installation;
   ii. Technical coverage and/or capacity plots (mapping) showing current compromised network state, and desired end state;
   iii. Written description of the geographical area to be serviced by the proposed tower installation;
   iv. Address and written description of the tower site being proposed;
   v. Survey plan* showing the layout of the proposed structure and ancillary equipment;
   vi. Brief description of type of tower structure being proposed;
   vii. Identification of any and all existing infrastructure(s) within the required coverage/capacity area. Its assessed suitability for co-location and reason(s) for disqualification;
   viii. Notes from pre-consultation meeting/s;
   ix. Where the proposal does not meet a preference express in the protocol and explanation.

- The justification report shall be appended to the Council Report written by Staff to accompany the application for final decision.

- Survey plans shall be prepared to appropriate metric scale showing:

- The location of existing lot lines, buildings and structures, and setbacks from those from the proposed facility;
- Setbacks from the nearest building used for low rise residential land use, measured from the nearest point of the building, structure, or feature, if applicable;
- Measurement of the subject lot to sensitive lands, if applicable;
- Existing and proposed landscaping;
- Key Plan showing the structure type, colours, height, and materials proposed to be used for all structural elements;
- Proposed access to the facility, including any motor vehicle parking spaces, if applicable.

City staff shall identify the final submission requirements through the pre-consultation process, including any additional items that may be required.

2. Preliminary Consultation with the City

There are two aspects to pre-consultation. The first is a voluntary opportunity for Proponents to meet with City planning staff early in their siting process to help identify acceptable siting options. The second is a formal requirement of the protocol prior to submission.

Pre consultation is one of the most important elements in the consultation process as it generally occurs at a point before the Proponent is committed to a site or design. As a result, it represents the City's best opportunity to influence the siting decision at an early stage since the Proponent will more likely become committed to a site once the detailed engineering has been completed. While a discussion of submission requirements is appropriate, the proposal will benefit most from early direction on matters of siting and design which will then inform the production of the detailed engineering and other studies required for the application to consult. It is for that reason that pre-consultation meetings should be documented by staff in a memo to the carrier.

In Section 6 of CPC-2-3-03, Industry Canada recommends that Proponents be prudent and consult with the land use authority and general public prior to construction, even where a proposed telecommunications facility is excluded or exempted. In the opinion of the Task Force, unless a proposal is exempt, Proponents should pre-consult with the City of Vaughan concerning siting and site design, at which point staff will provide details regarding location, potential sites within City-owned lands, process, public consultation, submission requirements, and fees, and to identify the City of Vaughan's requirement that the Proponent address issues of emission levels (in compliance with Safety Code 6), land use compatibility, consideration of sensitive lands, and any other potential impacts.

Recommendation: That wireless carriers should be encouraged to engage with the City of Vaughan's Development Planning Department biannually in order to review upcoming City wide network site requirements before commencing site acquisition activities.

Recommendation: As a courtesy, Proponents notify the City of Vaughan when siting telecommunication facilities that are exempt.

Recommendation: That the City of Vaughan's Development Planning Department host pre-consultation meetings with Proponents at the time a Telecommunications Facility Proponent begins its site search and again when the Proponent is preparing its application to consult. Based on the models of other protocols, it is suggested that requests for a formal consultation be made at least 7 working days prior to the pre-consultation meeting by submitting the following information:

a) The location of the proposed telecommunications facility (including rooftop antennas), including the address and location on the lot or structure;

b) Setbacks from the nearest residential zone; and

c) A description of the proposed telecommunications facility, its objective, applicable planning policies, search area and candidate sites if available, and, if applicable, how the facility meets one of the exclusion criteria under Part B Section 3 of this Findings Report.

3. Public Consultation

The public consultation process is a key requirement in the land use planning process, and should continue to be valued as an essential component of the planning for the siting of a telecommunications facility. Based on research into similar protocols, the Task Force recommends the following when completing a public consultation process for a new, non-exempted telecommunications facility:

Recommendation: That the Proponent shall organize and facilitate the process with support from City staff, as required;

Recommendation: That a notification package be sent to affected landowners. In the case of sensitive land uses, this may result in expanded notification;

Recommendation: That the City will provide the Proponent with a list of landowners within a radius of: the greater of 150 metres within urban areas; or 250 metres within rural areas; or, three times of the height of the proposed facility. This distance shall be measured outward from the furthest point of the

facility's supporting mechanism (i.e. outermost building edge). All properties within this distance shall be included on the mailing list;

The Proponent will be required to prepare and distribute the notification package a minimum of 21 days prior to the public open house;

The mailed notice shall include the following items:

- Address, location (including a key map), and time of the public open house;
- Description of and rationale for the proposed facility;
- The project's status under the Canadian *Environmental Assessment Act*;
- Reference to the City's Telecommunications Facilities Protocol;
- Information on how to submit comments to the Proponent and the closing date for submission of written public comments (which shall be not less than 30 days from the receipt of notification);

The Proponent shall erect one notice sign along any lot line abutting a public street for any telecommunications facility;

All notice signs shall be designed and erected on the lot so that they are clearly visible and legible from all public streets abutting the subject lot:

Public Open House: A public open house shall be required for all non-exempted facilities, and shall be open and accessible to all members of the public and local stakeholders;

The public open house will be convened and facilitated by the Proponent. The format of the event is at the sole discretion of the Proponents;

The Proponent is responsible to inform all attendees on the applicant's process and the City's responsibilities within the application process;

Newspaper Notice: the Proponent shall additionally place a Public Notice in the local print media. Publication of this Public Notice shall be synchronized with the distribution of the public notification package;

Recommendation: That the City of Vaughan provide the public, through the City's website, with easy access to the Industry Canada database of existing sites.

4. City Review Process

The application review process should consist of a clear step-by-step process by which the City can thoroughly review all applications and subsequently render them complete, or in some instances, request further information, should it be required. To aid in the review process, the Task Force recommends that the following be instituted as part of the final protocol:

Recommendation: That an application will not be accepted if it does not completely meet the submission requirements identified in the pre-consultation.

Recommendation: That the City of Vaughan consider the date a complete application was received as the official commencement of the consultation process. As such, the City shall have 60 days to provide comments to the Proponent and 120 days to complete the consultation process (from the date the site plan application is submitted).

Recommendation: If the City of Vaughan submits a request to the Proponent for additional information prior to the City deeming the application complete and no additional information is supplied within 60 days, the City shall advise Industry Canada of the incomplete status of the application and request that Industry Canada not issue any decision prior to the City issuing any comments.

5. Dispute Resolution

The City of Vaughan's existing protocol currently leaves the issue of resolving any disputes up to the Proponent. Industry Canada's[6] Guide to Assist Land-use Authorities in Developing Antenna Siting Protocols encourages municipalities to document their own process for resolving disputes while recognizing that when an impasse occurs, Industry Canada is the final decision maker.
According to that document:

"When developing protocols, LUAs should consider the means by which disputes will be resolved, ensuring that they are appropriate for the local community. By documenting this process, all stakeholders will understand their roles and responsibilities as well as the process under which disputes will be resolved. Industry Canada generally favours a process whereby the Proponent, the local public and the LUA work toward a solution which takes into consideration each other's interests."

In order to ensure that, to the extent possible, wireless facility siting decisions are made in conjunction with the City, the Task Force believes that a dispute resolution process should be adopted which fosters dialogue between the City

[6] http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf08839.html#sect26

and the Proponent in advance of a final decision. The elements of such a process include:

a) In the normal course, the Director of Development Planning or his/her delegate would be given authority to concur with applications which meet the requirements of the Protocol;

b) Where it appears to the Director that concurrence will not be granted, the Director will provide the Proponent with a letter detailing the reasons for the pending non-concurrence decision. The Proponent will be invited to meet with the Director to discuss reasonable alternatives, and to amend its application to address the issues identified. Where these discussions do not lead to concurrence with the proposal, and at the option of the Proponent, the Director shall issue a notice of non-concurrence;

c) Should the Proponent wish, it may appeal the Director's non concurrence decision to Council by requesting that the City Clerk place the matter on a Council agenda for consideration, at which time the Proponent shall be permitted to make oral or written submissions as may be appropriate;

d) At the option of the Proponent, once a notice of non-concurrence has been received, Industry Canada may be asked to intervene and grant authority to construct the proposal in accordance with Industry Canada's impasse process set out in CPC-2-0-03.

To ensure that the City is adequately prepared, should a dispute occur, the Task Force recommends the following:

Recommendation: The City of Vaughan protocol shall include a dispute resolution section containing the foregoing elements.

6. Concluding Consultation

Under the existing protocol, the City of Vaughan endeavours to conclude the consultation process via a clear and straightforward process. However, the protocol does not address the completion of the consultation process as executed by the Land Use Authority (i.e. the City of Vaughan). To provide for this aspect of the process, the Task Force makes the following recommendations:

Recommendation: That the timeline and process for the disposition of written correspondence shall be as per the Industry Canada process outlined in Section 4 of CPC-2-0-03.

Recommendation: That the Proponent will provide a package summarizing the results of public consultation to the City containing, at a minimum, the following:

a) Summary of the open house including attendee list and contact information;

b) An affidavit that the Notification Package was distributed to all required recipients;

c) Copies of all letters and other written communications received on or before the last day for comments associated with the application;

d) Copies of responses outlining how the concerns and issues raised were or will be addressed or, alternatively, clearly setting out the reasons why such concerns are not reasonable or relevant;

e) Copies of any follow-up responses received from residents.

Recommendation: That staff draft a letter of concurrence that includes a 3 year requirement for a re-consultation;

Recommendation: That if a telecommunication facility is not installed within three years after municipal concurrence and the Proponent wishes to proceed with the installation, the Proponent is required to consult with staff and review the application to determine if further action is required;

Recommendation: That copies of the Municipal Letter of Concurrence, with or without conditions, or Failure to Concur (with reasons), shall be sent directly to Industry Canada with copies sent to the following individuals:

- The Proponent;
- The Clerk of the City of Vaughan;
- The Mayor and Members of Council (when applicable);
- Any individual requesting a copy from the City.

The Letter of Concurrence shall include a statement that consultation has been completed as per the protocol.

F – DEFINITIONS

Antenna: Means an exterior transmitting device used in telecommunications designed for various uses such as telephonic, radio, or television communications by sending and/or receiving radio signals.

City: Means the City of Vaughan.

Co-location: Means the placement of antenna systems on an existing building or structure, or the placement of additional antenna systems on an existing support structure, by one or more Proponents.

CPC-2-0-03: Means Industry Canada's Client Procedures Circular, "Radiocommunication and Broadcasting Antenna Systems," Issue 4, effective January 1, 2008.

Expanded Notification: Means notification beyond that which would be required in Part C Section 3, as mutually agreed upon by staff and the Proponents, which may include for example: a more detailed information package and/or offer of an information meeting with the Proponent that may be sent to the school principal when the impacted land use is a school. Other examples include in the event a community centre is impacted, community newsletters, bulletins, and/or postings within the building.

Height: Means the vertical distance measured from the established grade of a building or structure to the highest point of the building or structure, including any components attached to the building or structure.

Industry Canada: Means the Federal Department which is responsible for radio frequency spectrum management.

Proponent: Means a company, organization or person which offers, provides, or operates a telecommunications facility for personal use or the general public.

Radiocommunications/Telecommunications Facility: Means the components, either individually or in combination, required to operate a wireless communications network including cell sites, transmitters, receivers, antennae, and signalling and control equipment, and may include an accessory equipment shelter and support structure.

Safety Code 6: Means Health Canada's Safety Code 6, "Limits of Human Exposure to Radiofrequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz," 2009.

Sensitive Lands (Community, Environmental and Visually Sensitive Lands): Means lands on which tower siting is to be discouraged or requires enhanced design or expanded notification. (***Includes:*** elementary and secondary schools, local/neighbourhood parks, community centres, low rise residential areas, environmentally *sensitive* areas (ANSI, ESA's, Woodlot, Wetlands, Interior Forest) GIS data to be provided.) *If you should be in a Community, Environmental and Visually sensitive area then the applicant should consult with the staff to determine whether if the proposed site is discouraged or will require an enhanced consultation process.*

G – References and Resources

- SUMMARY OF RESEARCH FINDINGS FOR TELECOMMUNICATIONS TASK FORCE 2011-2012 CITY OF VAUGHAN.pdf prepared by Von Chaleunsouk in support of a setback of 300m from homes, schools and daycares, submitted to the Task Force March 22, 2012

- AN OVERVIEW OF CURRENT RADIO FREQUENCY (RF) RADIATION EXPOSURE LIMITS AND ASSOCIATED HEALTH RISKS.pdf prepared by Tina Catalano, dated April 23, 2012 in support of the need for a precautionary approach for the municipal siting of telecommunication towers

- City of Cambridge Radiocommunication Tower and Antenna Systems Protocol

- Industry Canada Tower Database: http://sd.ic.gc.ca/pls/engdoc_anon/web_search.geographical_input

- Easy view of Industry Canada Tower Database: http://loxcel.com/celltower

- The reports and submissions from the Task Force Google Drive site:
    - Wireless Network Communication Within the City of Vaughan.pdf
    - Public Health Ontario Vaughan-Exposure to Radio-Frequency Electromagnetic Fields.pptx
    - CWTA Antenna FARNES.pptx
    - Industry Canada CWTA Wireless Antenna Siting Forum.PPT
    - News Article - The Globe and Mail "A Catholic teachers association looks to ban WiFi".pdf
    - Safety Code 6 and RF Exposure – Resources
    - Letter from Industry Canada dated April 10, 2008 re: Prudent Avoidance.pdf
    - Letter from Industry Canada dated January 16, 2009 re: Bell Mobility - 9200 Bathurst (Approval Letter).pdf
    - Letter from Industry Canada dated October 15, 2008 re: Telus CN Rail Tracks.pdf

- Guidance letter from Industry Canada dated September 30, 2008 re: Notice Distance Township of King.pdf
- Ontario Superior Court of Justice Decision *Telus v. City of Toronto* dated March 2, 2007.pdf
- Industry Canada Conditions of Licence for Mandatory Roaming and Antenna Tower and Site Sharing and to Prohibit Exclusive Site Arrangements (CPC-2-0-17 November 2008).pdf
- Industry Canada Radio Communication and Boradcasting Antenna Systems (CPC-2-0-03 Effective January 1, 2008).pdf
- Industry Canada Guide to Assist Land-use Authorities in Developing Antenna Siting Protocols.pdf
- Health Folder
    - American Cancer Society.pdf
    - Royal Society of Canada for Health Canada (1999).pdf
    - Royal Society of Canada (2004 – 2007).pdf
    - Norwegian Institute of Public Health.pdf
    - Health Protection Agency.pdf
    - Health Protection Agency Report.pdf
    - Health Canada Presentation to Oakville.mov
    - Carcinogenicity of Radiofrequency Electromagnetic Fields.pdf
    - BMJ Mobile Phone Use and Glioma Risk.pdf
    - BMJ: Mobile Phone Base Stations and Early Childhood Cancers.pdf
    - Royal Society of Canada (2001-2003).pdf
    - COMAR – The Committee on Man and Radiation (2009).pdf
    - Electromagnetic Hypersensitivity.pdf
    - Letter from York Region dated January 9, 2009 re: Safety Code 6.pdf
    - Vancouver Costal Health June 2011.pdf
    - Vancouver Costal Health June 20, 2005.pdf
    - Ontario Agency for Health Protection and Promotion September 16, 2010.pdf
    - Ontario Ministry of Health and Long-Term Care September 16, 2010.pdf
    - Hamilton Information Report June 10, 2008.doc
    - Letter from Halton Region Health Department February 17, 2012.pdf
    - BMJ: Mobile Phone Use and Glioma Risk March 8, 2012.pdf
    - BMJ: Mobile Phone Base Stations and Early Childhood Cancer June 22, 2010.pdf
    - Health Protection Agency April 26, 2012.pdf