



Planning Justification Report

Freedom Mobile Telecommunication Site: OBK3011

Sean Ogilvie, Real Estate & Government Affairs

12/15/2020

Freedom Mobile Inc. justification for a proposal to erect an 80.0m tall self-support (steel lattice) style telecommunications support structure and related equipment at 8072 County Road 44 (Part of Lot 22 and 23 Concession 8), Edwardsburgh/Cardinal ON

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1.0 Introduction

Forbes Bros Ltd Telecommunications Services has been retained by Freedom Mobile Inc. ("Freedom") with respect to a proposal to build a new freestanding telecommunications base station facility on the southern portion of the lands at 8072 County Road 44, Edwardsburgh Cardinal, Ontario. The purpose of this report is to provide analysis and justification in support of the proposed facility and to assist the land-use authority in providing comments on the proposed development.

2.0 Background

A continual growth in demand for wireless products and their associated services has created a need for increased wireless network infrastructure. Mobile phones and other wireless devices cannot operate without the necessary infrastructure, which is made up of transmitting and receiving antenna sites located on support structures, commonly referred to as "cell towers".

New infrastructure requirements are determined by monitoring the wireless network and identifying areas with weak or insufficient coverage. Freedom's network planners isolate the areas requiring improvements and conduct coverage studies to determine the ideal co-ordinates for a new antenna base station. Real estate investigations determine feasible locations for new sites. New locations include existing towers (colocation), tall buildings or other feasible structures and of course new free standing support structures.

3.0 Proposal

Freedom Mobile has proposed a new free standing 80.0m tall self-support (steel lattice) telecommunication facility (OBK3011) to be located at 8072 County Road 44, Edwardsburgh Cardinal, Ontario. The proposed facility forms one part of Freedom's network expansion across central and eastern Ontario. This proposed facility will provide enhanced wireless voice & data coverage and capacity for the area surrounding Groveton and specifically in the vicinity of Highway 416, County Road 44, and Venter Road.

3.1 Location

Freedom's proposed location is on property described as Part of Lot 22 and 23 Concession 8, and has the municipal address 8072 County Road 44, Edwardsburgh Cardinal, ON. The proposed facility would be located approximately 1.2km north from the County Road 44 and Venter Road intersection (Figure 1).

The tower is proposed to be located toward the southern portion of the subject property. The tower site and compound will be setback approximately 160m (west) from County Road 44, 99m from the closest westerly lot line and 97m from the southern property line (Figure 2) and has the geographic coordinates:

Latitude (NAD83) N 44° 52' 45.4"
Longitude (NAD83) W 75° 33' 36.3"

The proposed facility is approximately 220m away from the nearest residential dwellings.

Figure 1 – Location Map

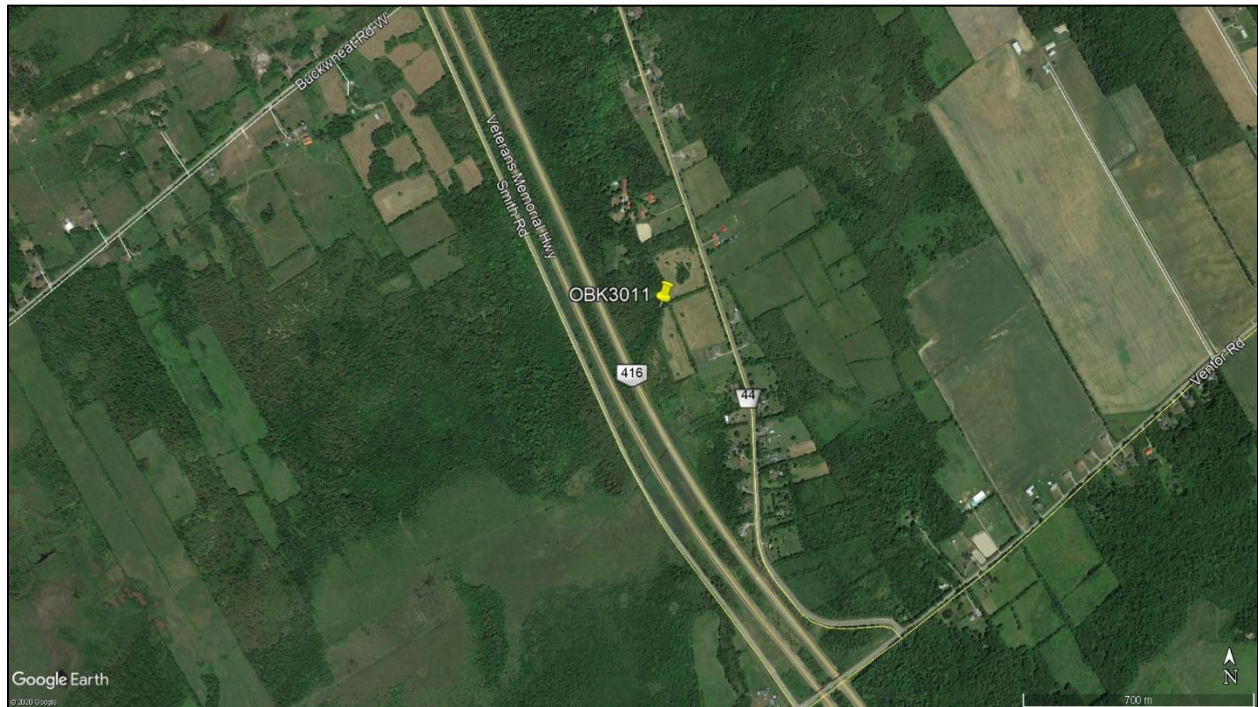


Figure 2 – Compound Location



3.2 Design

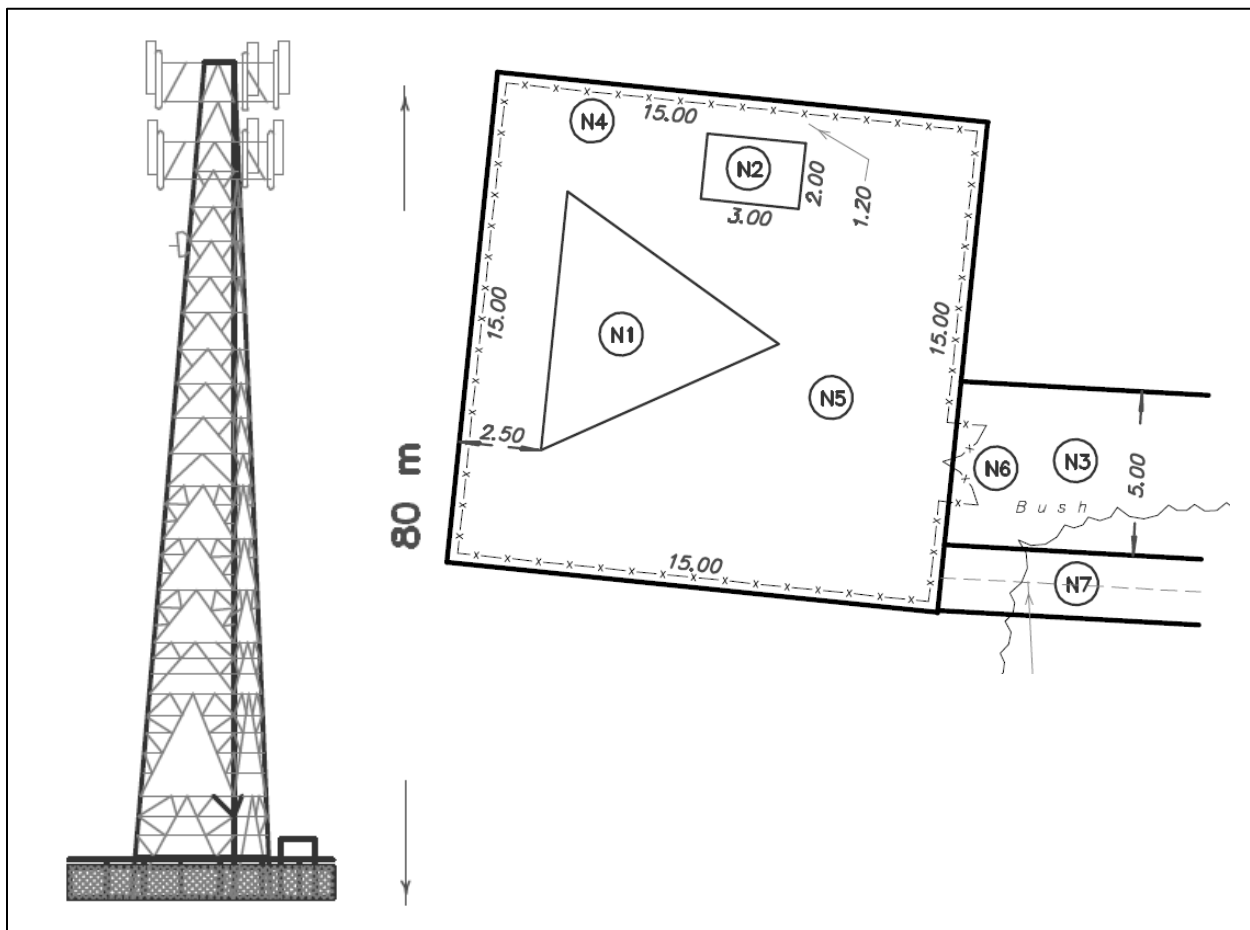
Freedom has proposed an 80.0m tall self-support (steel lattice) structure, antenna, and radio equipment secured in a fenced compound.

The proposed facility will occupy a 15.0m x 15.0m fenced compound area. The compound will contain the tower support structure and a radio equipment cabinet (Figure 3). The equipment cabinet houses the radio equipment, backup battery power, maintenance tools, manuals and a first aid kit. The equipment cabinet has the dimensions of 1.83m x 2.43m and is about 2.0m in height.

The support structure is a steel lattice framework with transmitting and receiving antennas mounted to the upper half of the structure. The tower height allows the antenna equipment to propagate wireless signals over top of obstacles (trees, buildings, varying topography) and maintain line of sight connections to other Freedom Mobile facilities in the network.

The proposed installation provides an opportunity to accommodate future technologies as well as potential co-location with other licensed carriers, thus limiting the number of new tower structures required in the area.

Figure 3 – Proposed Compound Layout Plan & Tower Elevation Plan



4.0 Rationale

The selection of a wireless communications site works similarly to fitting a piece into a puzzle. In this case, the puzzle is a complex radio network. Client demand, radio frequency engineering principles, local topography and land use opportunities working in concert with one another direct the geography of Freedom Mobile sites.

In identifying a potential tower location and design, Freedom examined the local area, assessed the visibility of the structure and considered possible tower designs. Freedom evaluated the best location for a new facility using the following criteria

4.1 Technical Requirements

The performance of a wireless network is dependent on the geographical location of its equipment, height of its antennas, line of sight requirements, the demand customers place on the network, as well as proximity to the network users. In expanding its wireless network, Freedom is seeking to improve service for the areas surrounding Groveton and specifically in the vicinity of Highway 416, County Road 44, and Ventor Road.

Freedom can achieve enhanced coverage and capacity with the proposed facility OBK3011 at 8072 County Road 44.

4.2 Evaluation of Existing Structures

Co-location and rooftop deployment are the first locations considered in achieving new coverage objectives. In order for site sharing to be considered technically feasible, existing telecommunication sites and other tall structures must be located within the search area prescribed by Freedom network planners and engineers. These locations must also provide adequate deployment height and structural capacity to hold additional equipment.

There are no existing telecommunication tower sites within 1.0km of Freedom's proposed location. The closest existing sites are over 3.0km away in Spencerville. These facilities are located too far outside Freedom's target coverage area to be considered feasible candidates.

4.3 Land-use Consideration

The site is located on property designated as Rural (RU) per the Township of Edwardsburgh Cardinal Zoning By-law 2012-35 Schedule A. The subject property is abutted by further Rural zones (RU) to the north, east, and south. The subject property is abutted by Highway 416 to the west.

As non-tower options have been disqualified we feel this site is the best possible location. The proposed facility is able to enhance coverage for the targeted areas as well as to travellers along the roadways and highways. The proposed location maintains a significant setback to any residential zones.

5.0 Review of Development Plan

5.1 Municipal Consultation Process

Freedom Mobile is regulated and licensed by Innovation, Science and Economic Development Canada (ISED) to provide inter-provincial wireless voice and data services. As a federal undertaking, Freedom is required by ISED to consult with land-use authorities in siting new mobile base station locations.

The consultation process established under ISED's authority is intended to provide the local land-use authorities an opportunity to address land-use concerns while respecting the federal government's exclusive jurisdiction in the siting and operation of wireless voice and data systems.

As the provisions of the Ontario Planning Act and other municipal by-laws and regulations do not apply to federal undertakings, wireless communication facilities are not required to obtain municipal permits of any kind. Freedom is required to follow established and documented telecommunication protocols or processes set forth by land-use authorities.

5.2 Public Consultation

In accordance with ISED procedures, public consultation is required for most new telecommunication facility proposals. Per ISED's guidelines default public consultation is conducted via written notification to property owners within three times (3x) the height of the tower measured from the base or outer most point of the tower. Depending on the height of the proposed facility a public notice in a locally circulated newspaper may also be warranted.

Both forms of notice must contain basic information about the proposal (location, design etc.) as well as contact information for the proponent and a thirty (30) day window to submit comments or questions to the proponent.

Public consultation requirements may vary where an established local policy or protocol is in effect.

5.3 Federal Requirements

In addition to the requirements for consultation with municipal authorities and the public, Freedom Mobile must also fulfill other important obligations including the following:

Canadian Environmental Assessment Act

Innovation, Science and Economic Development Canada ("ISED" formerly Industry Canada) requires that the installation and modification of antenna systems be done in a manner that complies with appropriate environmental legislation. This includes the Impact Assessment Act, 2019 (IAA), where the antenna system is incidental to a physical activity or project designated under IAA or is located on federal lands.

Freedom Mobile attests that the radio antenna system as proposed for this site is not located within federal lands or forms part of or incidental to projects that are designated by the Regulations Designating Physical Activities or otherwise designated by the Minister of the Environment as requiring an environmental assessment. In accordance with the Impact Assessment Act, this installation is excluded from assessment.

For additional detailed information, please consult the Impact Assessment Act at: <https://laws-lois.justice.gc.ca/eng/acts/I-2.75/>

Transport Canada's Aeronautical Obstruction Marking Requirements

Aerodrome safety is under the exclusive jurisdiction of NAV Canada and Transport Canada. An important obligation of wireless proponents is to comply with Transport Canada / NAV Canada aeronautical safety requirements. Transport Canada performs an assessment of the proposal with respect to the potential hazard to air navigation and notifies Freedom Mobile of any painting and/or lighting requirements for the antenna system. Freedom does not anticipate that the proposed installation will require any

painting or lighting and will submit the necessary applications to the appropriate parties to obtain the required approvals.

For additional information, please see the Transport Canada website at:

<https://tc.canada.ca/en/corporate-services/acts-regulations/list-regulations/canadian-aviation-regulations-sor-96-433/standards/standard-621-obstruction-marking-lighting-canadian-aviation-regulations-cars>

Health Canada's Safety Code 6 Compliance

Health Canada is responsible for research and investigation to determine and promulgate health protection limits for exposure to radio-frequency (RF) electromagnetic energy. Accordingly, Health Canada has developed a guideline entitled "Limits of Human Exposure to Radiofrequency Electromagnetic Fields in the Frequency Range from 3Khz to 300Ghz – Safety Code 6".

The exposure limits specified in Safety Code 6 are established by reviewing all peer-reviewed scientific research in the area of human health and RF exposure. Included in this review are hundreds of studies conducted over the past 50 years.

Radiocommunication, including technical aspects related to broadcasting, is under the responsibility of the Ministry of Industry (ISED) which has the power to establish standards, rules, policies and procedures. ISED, under this authority has adopted Safety Code 6 for the protection of the general public. With this adoption, ISED requires all proponents and operators to ensure that their installations comply with Safety Code 6 at all times, including any changes to the code and including any combined effects from other installations in the nearby radio environment.

Freedom Mobile attests that the radio antenna system described will comply with Health Canada's Safety Code 6 limits, as may be amended from time to time, for the protection of the general public including any combined effects of additional carrier co-locations and nearby installations within the local radio environment.

Engineering Practices

Freedom Mobile attests that the radio antenna system as proposed for this site will be constructed in compliance with the National Building Code and the Canadian Standards Association and comply with good engineering practices including structural adequacy.

6.0 Summary and Conclusion

As communities continue to grow to depend on wireless products and their services, it will be necessary to improve network coverage and quality. Improving network coverage and quality is achieved by increasing mobile base station infrastructure to fill coverage gaps and increase capacity for current and future wireless users.

In response to the demand for high quality wireless services in Ontario, Freedom Mobile has proposed a telecommunications site that achieves the technical requirements of the network while remaining as unobtrusive as possible for the local community.

I look forward to working with the Municipality in providing enhanced Freedom Mobile wireless services. Should you require any further information please do not hesitate to contact me at 647-224-4399 or by email at sogilvie@forbesbrosLtd.ca

Sincerely,

Sean Ogilvie, Real Estate & Government Affairs
Forbes Bros Ltd. Telecommunication Services
482 South Service Road East, Unit 130
Oakville, ON L6J 2X6