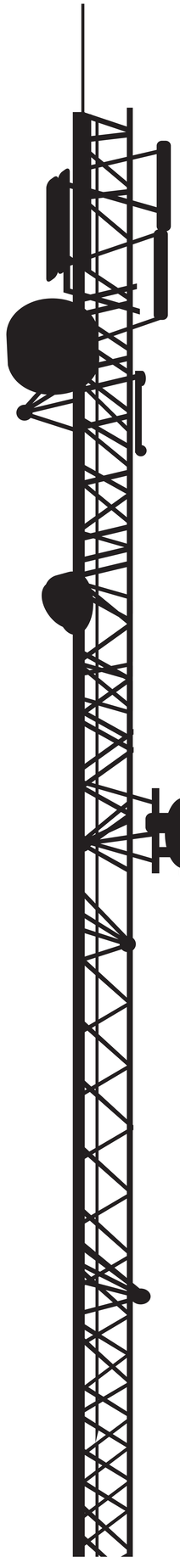


Winnipeg

North Winnipeg Antenna System Project

About the North Winnipeg Antenna System Project

The City of Winnipeg must remove an existing antenna system, used by a number of City departments, located at the North End Water Pollution Control Centre (2230 Main Street), before the end of the year to accommodate the future expansion of the North End Water Pollution Control Centre scheduled to begin in 2017. To ensure there are no gaps in coverage, a proposed antenna system must be built in the vicinity of the existing antenna system by the end of 2016, and prior to its decommissioning.

- A proposed, lower, 120 metre tall antenna system will be constructed, pending Industry Canada approval of the City's proposal.
- The antenna system will be painted with alternating sections of orange and white in compliance with all Transport Canada regulations.
- The antenna system will be equipped with lights as required by the Canadian Aviation regulations. The lights will be installed with shields to limit their visibility from nearby residences.
- A fenced compound will enclose the equipment shelter at the base of the antenna system. The locked compound will be equipped with motion-activated lighting and a video surveillance system.
- The antenna system will be supported by three sets of guy wires. Each guy anchor point will be surrounded by a security fence to prevent access or accidental contact with the guy system.

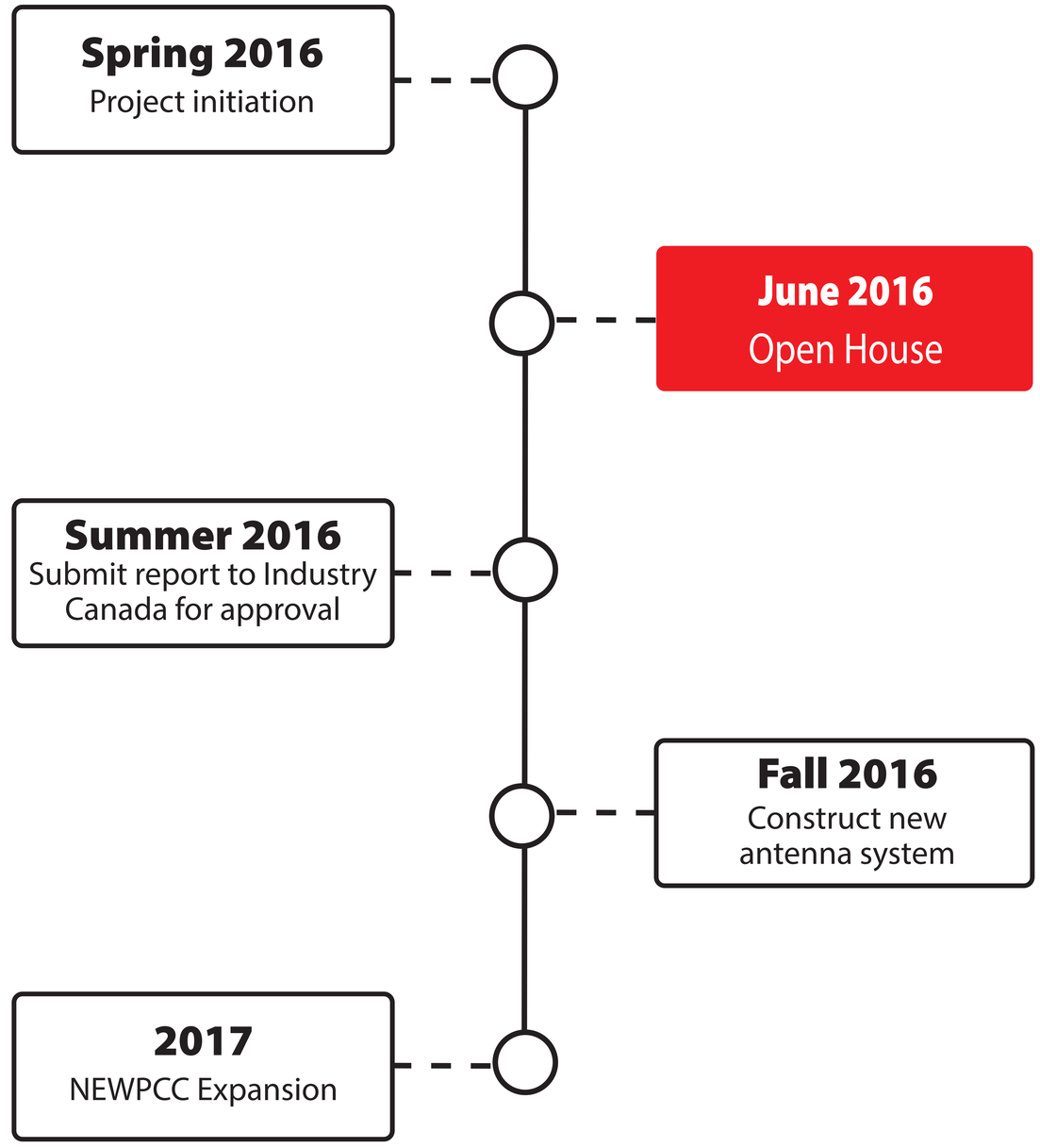
North Winnipeg Antenna System Considerations

- This antenna system is part of a network of 3 other towers used to provide city-wide communications for City departments. Each antenna system helps to ensure radio communications coverage reaches all corners of the City, and this antenna system specifically provides coverage across the northern part of Winnipeg.
- Shields will be incorporated into the design to prevent red marker beacons at the top and midway points of the antenna system from being visible from nearby residences.
- The proposed site will be landscaped with crushed gravel incorporating a weed barrier to keep the site clean and free of vegetation.
- A taller antenna system raises the transmitted energy to safe heights and ensures compliance with Health Canada's Safety Code 6 (2015) guidelines, Limits of Human Exposure to Radio frequency Electromagnetic Energy in the Frequency Range from 3kHz to 300GHz.

Why this location?

The proposed location was deemed the most suitable for various reasons, including:

- The property is owned by the City of Winnipeg;
- Provides required coverage throughout north Winnipeg;
- Minimizes the impact on nearby residential development;
- Accommodates future expansion of Chief Peguis Trail and related re-routing of Ferrier Street;
- Does not interfere with flight paths to and from Winnipeg Richardson International Airport's designated flight paths;
- Locations further east would result in diminished radio communications coverage in western Winnipeg;
- No suitable communications towers or buildings of suitable height are available in the required area.



Alternative Sites Considerations

1 Old landfill

- The composition of the soil is variable and generally considered unstable and unsuitable for building structures such as antenna systems.

2 Snow dump

- Approximately 4 acres of land would be removed from the capacity of the snow dump, as snow could not be dumped near the guy anchor points.
- Additional space would be needed to ensure trucks dumping snow would avoid the guy anchors.

3 West Kildonan Industrial

- Not City-owned land.
- Moving the antenna system to land that far west would potentially interfere with Winnipeg Richardson International Airport's designated flight paths.

4 Winnipeg Fire Paramedic Service Mechanical and Training facility

- Site is very close to a multiple-unit residential complex.
- Used for training and testing fire vehicles including aerial ladder trucks. An antenna system and associated guy wires would severely restrict the area where such vehicles could be operated safely.