



Rooftop Antenna Development Permit Guidelines

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Contents

Part I – General Regulations.....	3
1. Introduction.....	3
2. Intent and Use of The Guidelines.....	3
3. Exemptions.....	4
4. Regulatory Framework and authority.....	4
5. Approval Process	5
Part II - Design Guidelines	6
6. General Considerations	6
7. Standard of design.....	7

Part I – General Regulations

1. Introduction

These guidelines apply to development applications for “third party rooftop antenna system” installations in the City of North Vancouver. The City of North Vancouver recognizes that cellular communication infrastructure is imperative in the lives of residents and in the functioning of businesses operating in the City. The cellphone/wireless industry continues to expand rapidly, putting pressure on existing communications infrastructure; as data demand increases and more wireless spectrum becomes available to a greater number of carriers, the increase of towers and rooftop antennas and new technology is inevitable. These guidelines serve to provide a comprehensive understanding of the City of North Vancouver’s expectations regarding siting and the quality of design of rooftop antenna installations.

A City policy for design and consultation on other wireless communication forms (e.g. tower and utility pole installations) exists separately, in Council Policy 6: Wireless Communication Design and Consultation Policy (adopted November 20, 2017).

2. Intent and Use of the Guidelines

These guidelines are intended to provide a framework to ensure rooftop cell sites are installed in a desirable manner and ensure the impact on the public realm is minimized as much as possible. The proponent of a rooftop antenna installation should comply with the guidelines where possible.

If, due to technical constraints, certain aspects of the Rooftop Antenna Development Permit Guidelines cannot be achieved:

- A suitable alternative proposal should be provided, reflecting the intent of the guidelines;
- If satisfactory, the Director of Planning may provide a relaxation to any of the guidelines to accommodate the alternative proposal.

3. Exemptions

Installations to facilitate emergency service providers such as police, fire, ambulance and search and rescue services are exempt from the DPA guidelines.

4. Regulatory Framework and Authority

Section 488 of the Local Government Act (LGA) gives local governments in BC the authority to establish development permit areas and their associated guidelines to address issues such as the form and character of commercial, industrial or multifamily residential development.

The City's 2014 Official Community Plan establishes development permit areas (DPA) for rooftop antennas to identify specific land use categories in the city where third party rooftop antenna systems should be located, subject to compliance with these DPA guidelines and other applicable city permit requirements. The DPA guidelines work in conjunction with the Zoning Bylaw 1995, No. 6700 to provide a building height exemption for rooftop antennas and associated screening structures.

The City of North Vancouver recognizes that Innovation, Science and Economic Development Canada (ISED) regulates the location and installation of antenna systems, including masts, towers, and other antenna-supporting structures under the Radiocommunication Act and that the engagement of carriers with the City regarding Rooftop Antenna Installations is voluntary. The City also recognizes that ISED refers to Safety Code 6 as the standard to which wireless facilities are held and that the health and safety of wireless facilities in their many forms are under the jurisdiction of Health Canada. It is the applicant's responsibility to ensure compliance with Safety Code 6 guidelines for the protection of the general public.

5. Approval Process

All sites need approval of the land owner, whether public or private. In the case of a strata corporation, a letter from the strata council agreeing to the installation is required.

A. Pre-Application Meeting

To facilitate a preliminary discussion about the proposed Rooftop Antenna installation.

B. Preliminary revision

To address concerns raised during the reapplication process.

C. Application submission

D. Staff design review

E. Final revision

F. Development Permit issuance and registration at Land Titles

G. Building and Electrical permit (as required)

H. Removal (or upgraded replacement) of obsolete equipment

I. Installation of Rooftop Antennas

5.1. Submission Requirements

Each application for a development permit for rooftop antennas should be accompanied by relevant development information in the form prescribed by the city. This information includes, but is not limited to:

5.1.1. Plans to demonstrate the location of the proposed building site in context;

5.1.2. Plans to demonstrate the location of the proposed installation including equipment dimensions;

5.1.3. Plans to demonstrate the location and type of existing rooftop antenna structures and associated equipment currently located on the building by any provider;

5.1.4. Plans for screening, painting, or other measures to blend into the existing building.

Part II- Design Guidelines

6. General Considerations

6.1. Site Selection

- 6.1.1. Third party rooftop antennas are preferred in Residential Levels 5 and 6, Mixed-Use, Commercial, Industrial, and Mixed Employment designated lands as identified on Schedule A in Appendix 1.0 in the 2014 Official Community Plan, and are discouraged from locating on buildings near schools, institutions or on buildings in lower density residential areas.
- 6.1.2. Third party rooftop antenna systems should be located on buildings not less than three storeys above grade;
- 6.1.3. Third party rooftop antenna systems should not impede maintenance and building operations, this may include but is not limited to access to mechanical installations and facade maintenance systems;
- 6.1.4. Third party rooftop antenna systems should not impede access to nor diminish the quality of rooftop amenities such as playgrounds, roof decks and urban agriculture;
- 6.1.5. Third party rooftop antenna systems should not be installed on sloped roofs.

6.2. Design considerations

- 6.2.1. The visual impact of third party rooftop antenna systems should be minimized to reduce visual impact and clutter;
- 6.2.2. The visual impact on the public realm should be considered and should be minimized as much as possible.
- 6.2.3. The height of third party rooftop antennas should be minimized as much as possible;
- 6.2.4. Equipment cabinets and cable raceways included in the third party rooftop antenna system should be internal to the building, and, where external installations cannot be avoided, should be oriented for minimum visibility and treated with materials and colours similar to the building.

7. Standard of design

7.1. Unscreened third party rooftop antennas

- 7.1.1. Unscreened third party rooftop antennas should not be located within 30.48 metres (100 feet) of neighbouring residential dwelling units.
- 7.1.2. Unscreened third party rooftop antennas should only be located on the highest roof and mechanical penthouse of a building.

7.2. Unscreened third party rooftop antennas along the roof edge:

- 7.2.1. Third party rooftop antennas should be grouped on each building face and should be equally spaced.
- 7.2.2. Spacing between third party rooftop antennas should not exceed 1.52 metres (5 feet).
- 7.2.3. Except for microwave dishes, antenna groupings should be aligned with each other (see Figure 1).

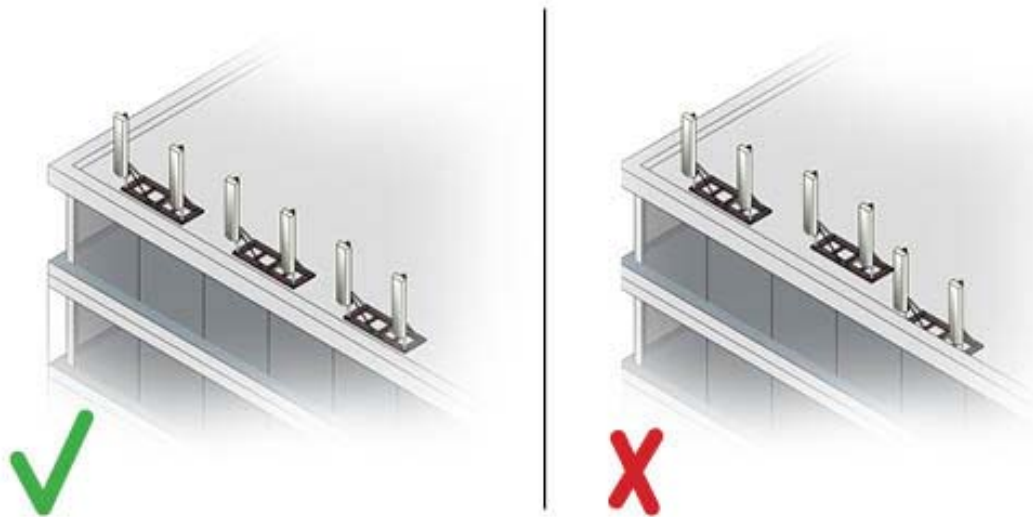


Figure 1 Antenna alignment

- 7.2.4. The top of all third party rooftop antennas should be aligned.
- 7.2.5. Mounting/cabling hardware should be cleanly housed.
- 7.2.6. Third party rooftop antennas may be mounted by means of a through-wall face mount, suspended over the parapet or can be installed on the roof edge.
- 7.2.7. Except for microwave dishes, the method of installation should be consistent for all third party rooftop antennas located on the same building.

7.2.8. In mid-rise and low-rise buildings, the maximum number of antennas should be determined according to the following formula:

Max number of antennas

$$= \text{roof edge length in meters (i.e. the entire perimeter)} \times 0.1$$

The maximum number of antennas should be rounded up to a whole number.

7.2.9. On high-rise buildings, the maximum number of antennas should be determined according to the following formula:

Max number of antennas

$$= \text{roof edge length in meters (i.e. the entire perimeter)} \times 0.15$$

The maximum number of antennas should be rounded up to a whole number.

7.3. Unscreened third party rooftop antennas on a mechanical penthouse

7.3.1. An unlimited number of units per face is permitted, except on penthouse walls flush with the exterior of the building.

7.3.2. For antennas on a penthouse wall flush with the exterior of the building, antennas should be screened to support an unlimited number of antennas or the number of antennas should be limited to 4.

7.3.3. Antenna units should align with each other (see Figure 1).

7.3.4. Mounting/cabling and hardware should be cleanly housed.

7.3.5. The tops of antennas should be aligned.

7.3.6. Antennas should be grouped and equally spaced

7.3.7. Antennas or associated equipment should not extend above the penthouse.

7.3.8. Antennas and mounting equipment colours should match the penthouse behind it.

7.4. Screened antennas along the roof edge

7.4.1. An unlimited number of antennas are permitted along a roof edge if adequately screened.

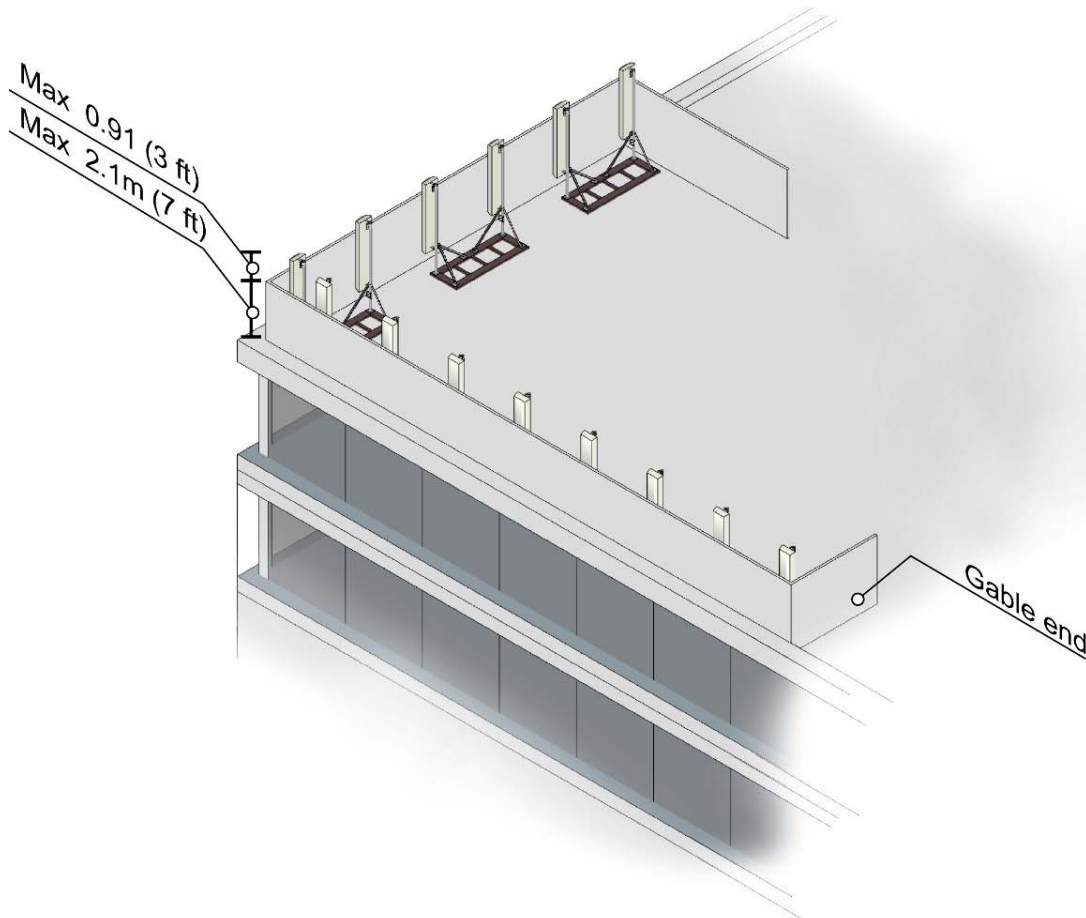


Figure 2 Screening structure

7.4.2. Screens should extend no more than 2.1 m (7 feet) high above the parapet (Figure 2).

7.4.3. Antennas should extend no more 0.91 m (3 feet) above the top of the screen (Figure 2).

7.4.4. The top of antennas that extend above a screen should be aligned.

7.4.5. Screens should have a minimum setback of 300 mm (1 foot) from the parapet.

7.4.6. Gable ends should be installed on screens if the rear of antennas is visible from adjacent streets (Figure 2).

7.4.7. Screens should cover no more than 40% of the roof edge.

7.4.8. A maximum of 4 screening structures are allowed on one building (see figure 2 as an example of one such screening structure).

7.4.9. Screens should be respectful of building massing, materials and articulation.

7.5. Screened antennas on top of mechanical penthouse

- 7.5.1. The entire penthouse roof should be screened
- 7.5.2. Antennas or associated equipment should not extend above or under the screen.
- 7.5.3. Screens should respect massing, materials and articulation of the building
- 7.5.4. A 30.48 metres (100 feet) minimum setback to dwelling units in neighbouring buildings should be provided (see Figure 3).
- 7.5.5. Rooftop antennas on top of a penthouse should only be permitted on buildings taller than 23 metres (75.50 feet).

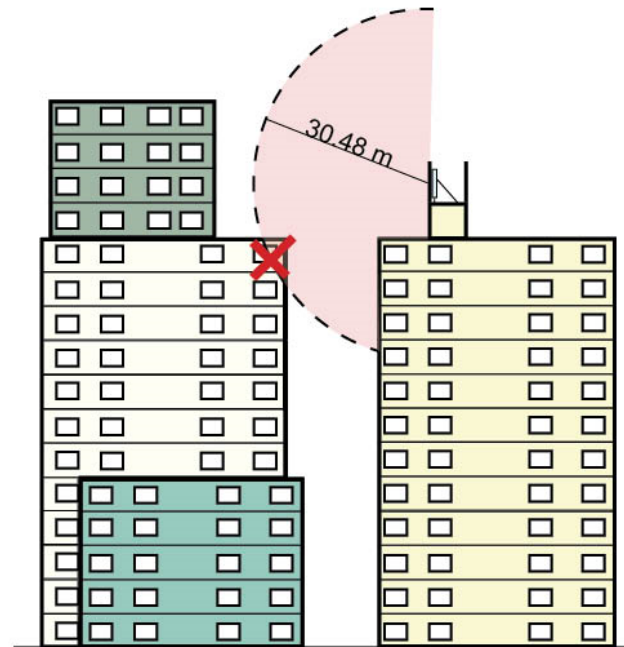


Figure 3 30.48 (100ft) setback

7.6. Obsolete antennas

- 7.6.1. For a development application for rooftop antennas on a roof with existing antennas, obsolete antennas should be identified and removed prior to the installation of any new antennas.