



City of Vancouver *Planning By-law Administration Bulletins*

Planning, Urban Design and Sustainability Department

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M AND I DISTRICTS - DEVELOPMENT CRITERIA FOR FUNCTIONAL INDUSTRIAL SPACE

Authority - Director of Planning

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1 General Information

The purpose of this bulletin is to support and preserve the viability of the City's employment lands by ensuring that industrial space located in 'M' and 'I' zoned areas is adequately designed for sustainable and continuous functional use. As such, the bulletin outlines criteria for the design and development of functional industrial space, including general considerations for height, vertical clearance, loading criteria, and landscaping.

The development criteria support the City's *Industrial Lands Policies* (1995) and the commitment to protect the industrial land supply as laid out in the *Regional Context Statement Official Development Plan* (2013).

2 Development Criteria of Industrial Spaces

The design and development of floor area intended for industrial use is subject to the following general criteria:

- Industrial floor area is preferably developed in an open floor plan, and:
 - must be located at or near base surface;
 - should be a unified space, located nearest to existing grade, and conveniently serviced by loading facilities; and
 - should not be disjointed or configured into small spaces that do not support robust industrial uses.

Further development criteria including floor-to-floor heights, loading spaces, freight and passenger elevators, ground floor industrial space, and landscape considerations are listed below.

(a) Floor-to-Floor Height

A minimum floor-to-floor height of 6 m (20 ft.) at the ground floor (i.e., at or near the base surface of a building) is preferred; however, a floor-to-floor height of 5.5 m (18.0 ft.) may be considered if the former is not achievable. Figure 2 illustrates the preferred floor to floor heights for industrial spaces at or near the base surface.

(b) Loading Spaces

All industrial floor area and individual tenancies should have immediately convenient access to loading spaces or clear access to a shared loading corridor suitable for the frequent movement of goods in and out of the building. A shared corridor should have a minimum width of 1.83 m (6 ft.), while all loading doors should have a minimum width of 2.44 m (8 ft.) and a minimum height of 2.44 m (8 ft.).

In the case of sites having a lane, access to loading spaces should be located at the lane.

All loading spaces should be designed to comply with the provisions of the Parking By-law. Applicants seeking further information may also reference the Parking and Loading Design Supplement which provides more details on ramp, parking, and loading design.

(c) Elevators

Floor area intended for industrial uses not located on the same level as the loading spaces must have immediately convenient access to a freight elevator.

If a mixed-use building contains industrial and non-industrial uses, a separate freight elevator and a separate dedicated passenger elevator must be provided.

Elevators in North America must follow the safety standards established in *ASME A.17.1/CSA B44 – Safety Code for Elevators and Escalators*. Elevator manufacturers have designed to this standard and generally have the following dimensions and capacities:

Elevator type	Minimum Hoistway Width	Minimum Hoistway Depth	Minimum Capacity
Freight	2.2 m (7.25 ft.)	2.7 m (9 ft.)	1814 kg (4000 lbs)
Passenger	2.2 m (7.25 ft.)	1.75 m (5.75 ft.)	907 kg (2000 lbs)
Shared freight/passenger	Refer to ASME A.17.1/CSA B44	Refer to ASME A.17.1/CSA B44	Refer to ASME A.17.1/CSA B44

(d) Defining ground floor industrial area and mezzanines

Some district schedules allow additional office floor area to a maximum of 1.0 FSR, if an equal amount of area is provided for industrial use at the ground floor i.e., at or near base surface of the building. In all cases, industrial uses at the ground floor must be serviced by accessible loading spaces at the lane (see Figure 1).

In cases where an industrial use may not be wholly accommodated at the ground floor, a contiguous mezzanine space may be considered, provided its location does not impede loading, access, or the movement of goods. In no case, should a mezzanine be located less than 2.75m (9 ft.) from the ground level. To maintain a high functioning industrial manufacturing space, industrial mezzanines are strongly encouraged to be no greater than 30% (0.30 FSR) of the required industrial uses at the ground floor. In the case of sites with irregularities or, where a functional need can be demonstrated, a mezzanine in excess of 30% may be considered based on the intent and objectives of this bulletin if:

- the total floor area of the mezzanine does not exceed 50% (0.50 FSR) of the industrial manufacturing use at the ground floor;
- the floor to floor height is a minimum of 8.0m (26ft) with a minimum floor to floor height of 4.0m (13ft) above and below the mezzanine;
- loading function, including ceiling height and access, is minimally impacted; and
- the provision of double height industrial manufacturing space is maximized.

* In this bulletin, mezzanine refers to any contiguous interconnected floor space that is open to the space it serves with minimal intervention of walls, windows, doors or similar obstructions. Provision of mezzanines or interconnected floor spaces should be understood in reference to the Vancouver Building By-Law. Not achieving a full 1.0 FSR at the ground floor and mezzanine for industrial manufacturing space may limit the ability to achieve the maximum FSR of other uses.

Figure 1: Example of conditional office floor area in an I-1 zone based on minimum of 1.0 FSR at ground level

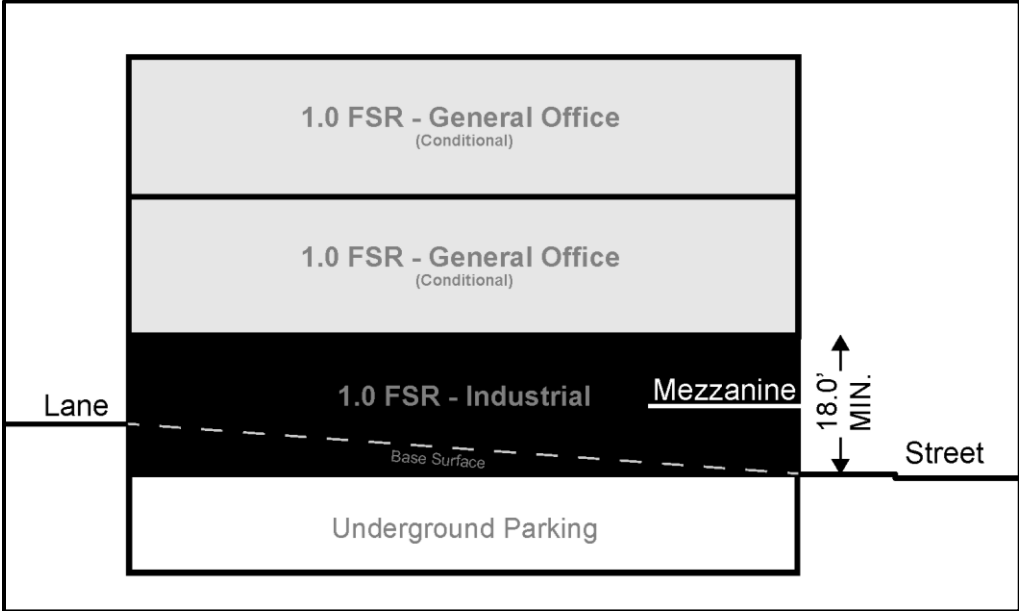
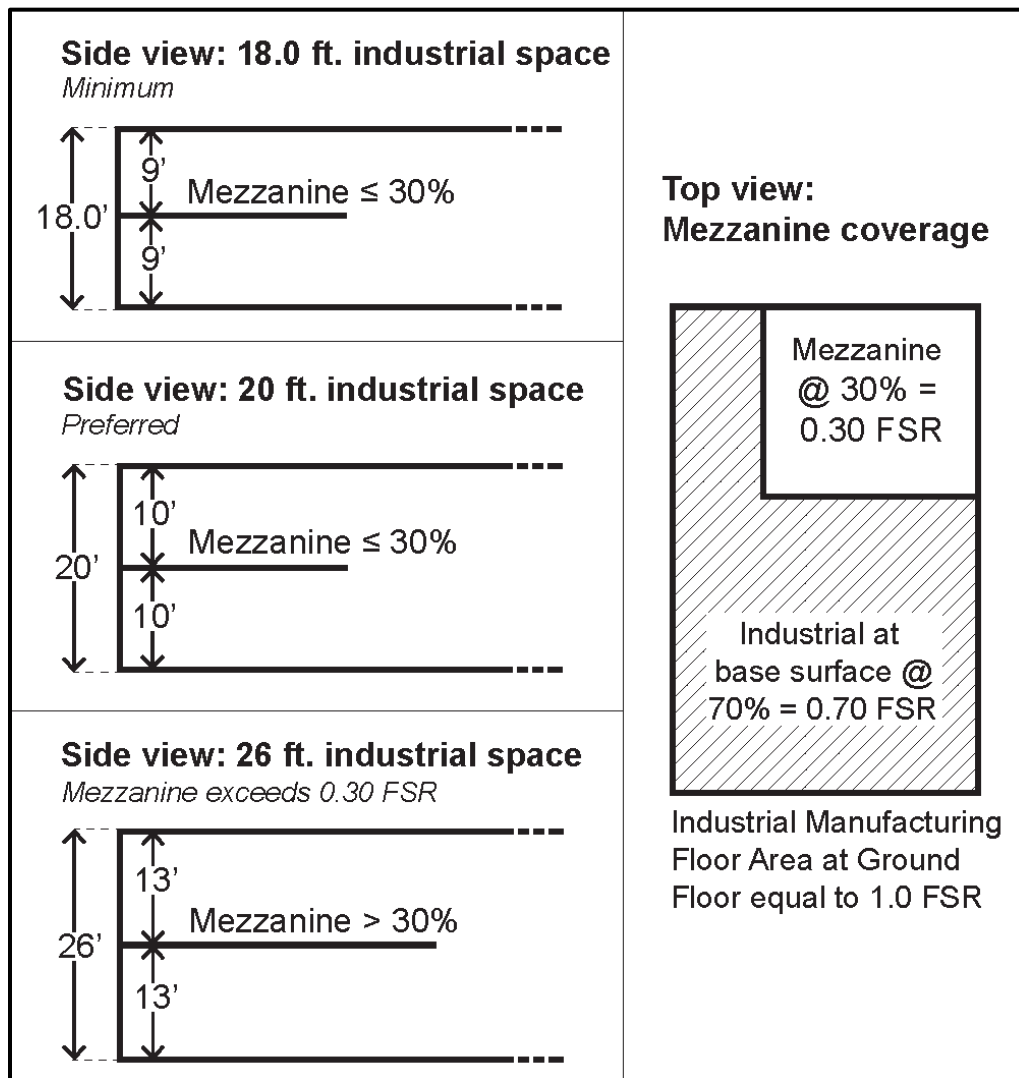


Figure 2: Example of mezzanine heights/coverage



(e) **Landscape Considerations**

Opportunities for improving the urban environment should also be considered within industrial zones.

Industrial sites should provide street trees, green roofs, trees and planted terraces and other landscaping, in support of the City's *Urban Forest Strategy*, *Integrated Rainwater Management Plan* and ongoing efforts to reduce urban heat island effect.

Where possible, industrial developments should also work to create and/or retain permeable planted areas on-site or in adjacent street right-of-ways to improve storm water management.