

Fences and Retaining Walls

This brochure outlines the requirements for fences and retaining walls for single and two family properties in Burnaby.

This information is provided for convenience only and is not in substitution of applicable City Bylaws or Provincial or Federal Codes or laws. You must satisfy yourself that any existing or proposed construction or other works complies with such Bylaws, Codes or other laws.

Other brochures and documents related to this topic

- [Burnaby Zoning Bylaw 1965 - No. 4742](#)
- [Soil Deposit Bylaw 1971 - No. 5974](#)
- [Soil Removal Regulation Bylaw 1961 - No. 4251](#)
- [Swimming Pools](#)
- [Board of Variance Appeals for Single and Two Family Dwellings](#)
- [Legal Survey Requirements Single and Two Family Dwellings](#)
- [Encroachments](#)
- [Burnaby Tree Bylaw](#)
- [EGBC Professional Practice Guidelines – Retaining Wall Design](#)

General

The City's Zoning and Building Bylaws contain provisions regulating the construction of fences and retaining walls. For convenience, the most important considerations for single and two family properties are outlined in this brochure.

For requirements for fences and retaining walls for other zoning districts please contact the Planning Department at (604) 294-7400.

Permit and Inspection

Building Permits are not required for the construction of fences and screening walls. Building Permits are required for the construction of all retaining walls in all districts that are:

- greater than 1.2 m (3.94 ft.) in height; or
- part of a group of two or more terraced retaining walls, any of which are greater than 1.2 m (3.94 ft) in height; or
- terraced at a ratio steeper than 1 in 1 with an adjacent retaining wall; or
- in the opinion of a Building Inspector that the site conditions, size or complexity of the design or construction of the retaining wall might affect the safety and protection of persons, the property or adjacent properties.

Because retaining walls are structural, retaining the weight of earth or water behind them, you must engage the service of a registered professional engineer to undertake the design and construction field review of these structures. The [EGBC Professional Practice Guidelines – Retaining Wall Design](#) explains the role played by the registered professional engineer.

2 sets of structural drawings signed and sealed by professional engineer together with the original copy of Letter of Assurance, Schedule B are required for building permit application. Depending on soil condition and the complexity of the design a geotechnical report or slope stability analysis may be required.

Accurate topographical information is crucial for the proper retaining wall design and two sets are required as part of the building permit documentation. Please refer to our brochure, [Legal Survey Requirements Single and Two Family Dwellings](#), for additional information.

Other required documentation for permit application include: [application form](#), [Schedule F](#), [Agent authorization](#) and [application fee](#).

A plumbing permit will be required for drain tile associated with a retaining wall and it is mandatory to connect the drain tile to the City's storm sewer system.

Deposition of soil and removal of soil are regulated under the [Soil Deposit Bylaw 1971 - No. 5974](#) and the [Soil Removal Regulation Bylaw 1961 - No. 4251](#) respectively. For permitting requirements under these bylaws, please contact the City's Engineering Department at (604) 294-7460.

A foundation formwork inspection prior to placing concrete or location inspection of the retaining wall by the building inspector is required to confirm the location of the base of the wall and a final inspection are required when the work is complete. For more detail information, please refer to our brochure on "[Permits and Inspections for Single and Two Family Dwelling](#)".

Materials and Design

As fences are not necessarily required to provide visual privacy to the enclosed area, fence construction materials can range from solid masonry walls to open chain link mesh. Bylaw restrictions on the materials of fence construction are limited:

- Barbed wire, razor wire, or similar materials with sharp projections are prohibited in the construction of a fence in all Residential Districts.
- Where a fence is located above a retaining wall, the fence must be constructed with materials different from that used in the construction of the retaining wall, and in a manner that is visually dissimilar to the retaining wall.

Materials used for retaining walls should be selected not only for aesthetic and cost reasons, but also for durability and ease of maintenance.

Retaining Walls

A retaining wall is a structure designed to hold back, stabilize or support water, soil, rocks, or similar geotechnical materials and must comply with the requirements in Section 6.14.1 of the Zoning Bylaw. A few examples of retaining wall are: gravity wall built with concrete, wood, blocks and rocks; mechanically stabilized earth wall; prefabricated modular wall and slope protection.

Retaining walls must comply with the following design constraints:

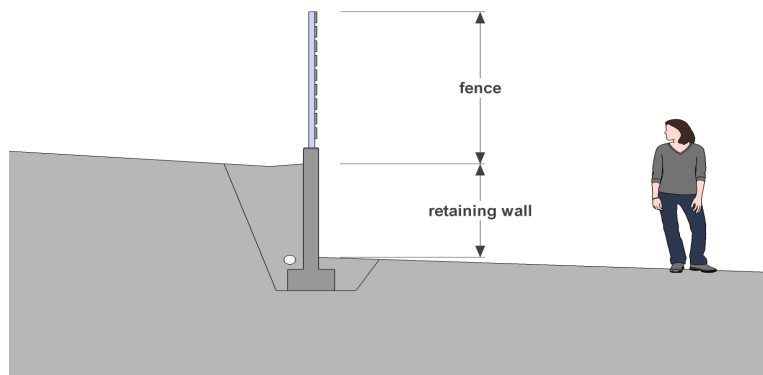
- retaining walls may not exceed 1.2 m (3.94 ft.) in height, as measured at any point along the retaining wall.

- the shortest horizontal distance between the outer face of two adjacent retaining walls may not be less than the height of the retaining wall with greater height at a ratio equal to or greater than 1 horizontal to 1 vertical by reference to the retaining wall with greater height.
- The horizontal distance between the adjacent retaining walls must be relatively level, suitably landscaped, and properly maintained.

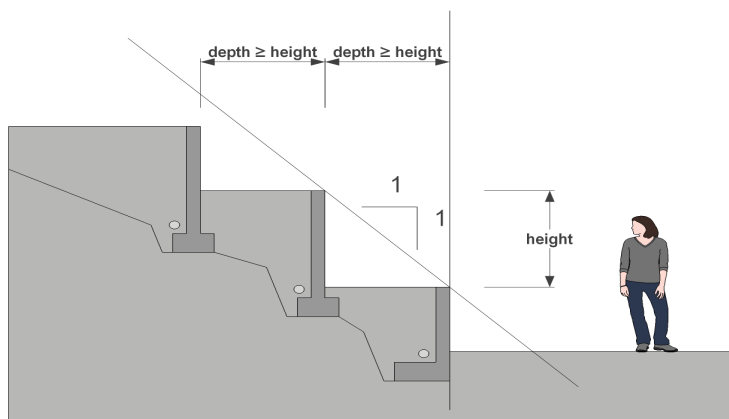
Measuring Retaining Wall Heights

The height of a retaining wall may vary along its length, but at any point along its length the vertical height of a retaining wall is measured from the lower of natural or finished grade at the base of the wall, to the surface of the ground or water that it supports.

Any portion of a retaining wall that projects above the surface of the ground or water that it supports is considered a fence, and is subject to fence height requirements described elsewhere in this document.



Retaining walls may be combined to terrace a site. Terraces must be relatively flat and landscaped. The **depth** of a terrace cannot be less than the **height** of the higher of the two retaining walls bordering it. In this diagram, the middle wall sets the minimum depth of both adjacent terraces. Note that by this requirement the steepness of the terracing cannot exceed a 1:1 ratio of height to depth.



Fences

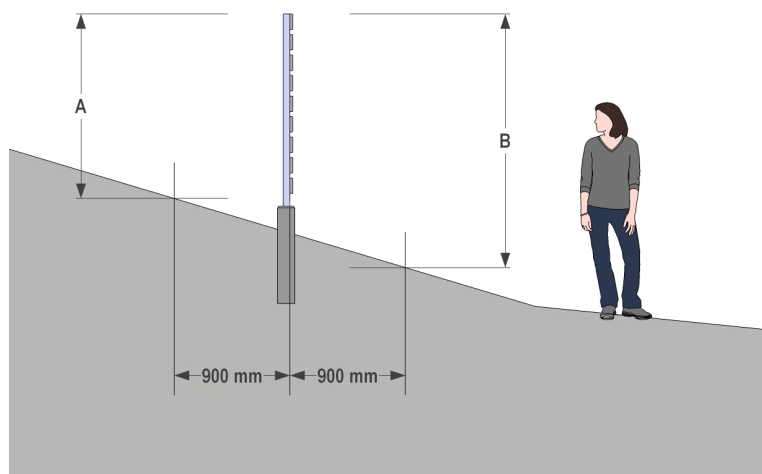
Fences are structures enclosing all or part of a lot for the purposes of screening and privacy and must comply with the requirements in Section 6.14.2 of the Zoning Bylaw. Fences must comply with the following design constraints:

- Fences or walls not greater than 1.07 m (3.51 ft.) in height may be located anywhere on a lot.
- Fences or walls not greater than 1.8 m (5.91 ft.) in height may be located on any lot to the rear of a required front yard.
- Where the rear line of a lot meets the side line of another lot, the height of fences or walls on rear lot line shall be not greater than the height permitted on the side line at that point.
- In R8 Districts (townhouses), fences or walls not greater than 1.8 m (5.91 ft.) in height may be located anywhere on a lot.
- In R10 Districts, fences are prohibited in front yards.

Measuring Fence and Wall Heights

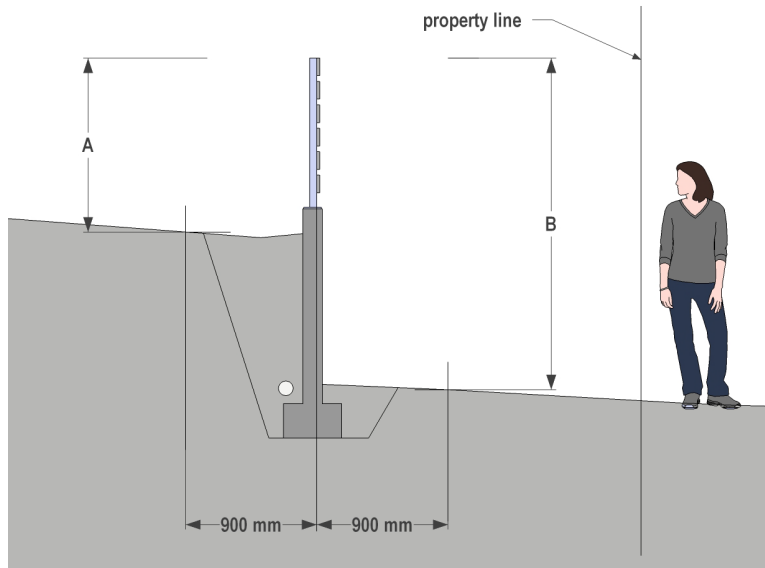
If the fence or wall is built on level ground, measure the height from the bottom to the top of the fence.

If the ground is higher on one side of the fence or wall than the other, measure the height from the ground level at the average grade level within 900 mm (2.95 ft.) of both sides the fence or wall.



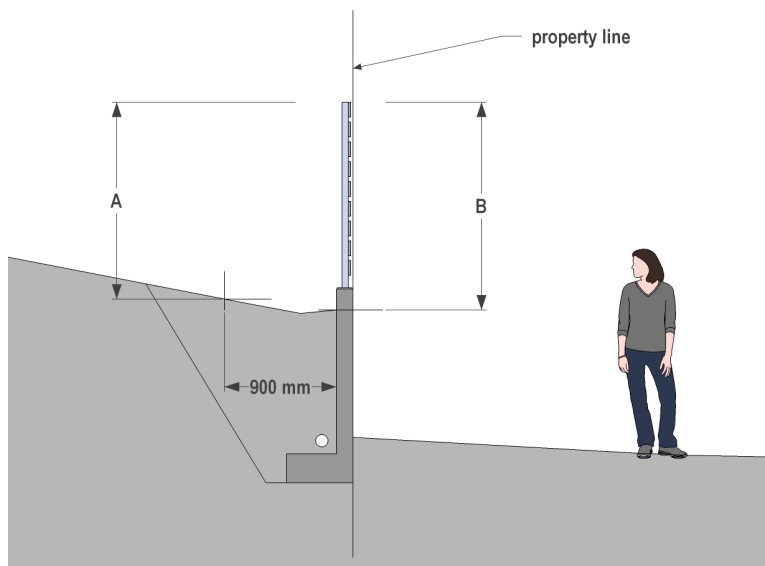
$$\text{fence height} = (A + B) / 2$$

If a wall or fence has been constructed on a retaining wall, measure from the ground level at the average grade level within 900 mm (2.95 ft.) of both sides the fence or wall.



$$\text{fence height} = (A + B) / 2$$

However, if a retaining wall has been constructed on a property line, the height of a fence or wall shall be determined by measurement from the surface of the ground that the retaining wall supports at the average grade level within 900 mm (2.95 ft.) of such retaining wall. See below.

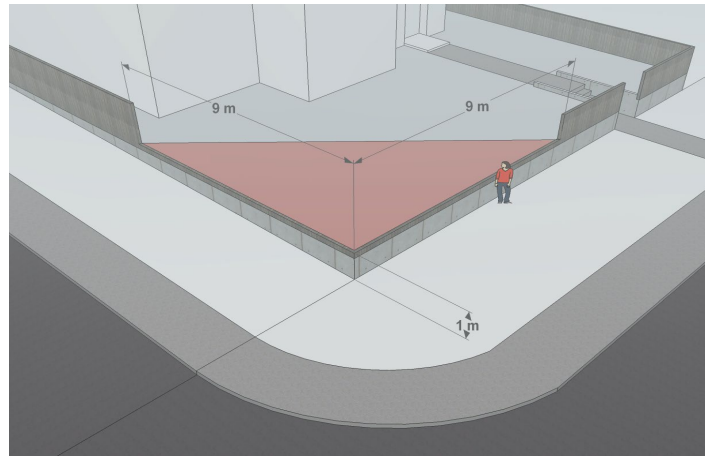


$$\text{fence height} = (A + B) / 2$$

Clearance at Intersections

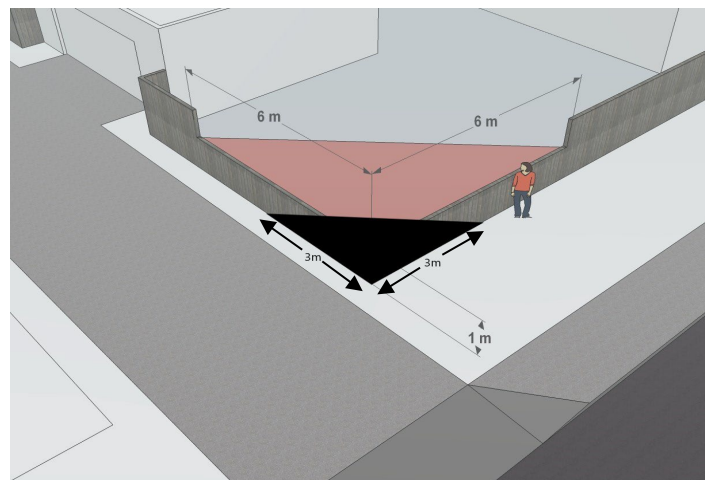
On corner lots, vision clearance regulations apply in order to maintain sightlines for vehicles at intersections. The total height of fences, walls, structures including fences and retaining walls, landscape feature, hedge, tree, or other vegetation, at to street and lane intersections is limited as follows:

- No higher than 1 m (3.51 ft.) within 9.0 m (29.53 ft.) of the point of intersection of the property lines at any street/street corner. (Note that the following diagram illustrates the fact that the height limitation applies to the combined height of the fence and the retaining wall.)



Street Intersection

- At lane corners (the intersection of a lane with another lane or with a street), no higher than 1 m (3.51 ft.) within 6.0 m (19.69 ft.) from the point of intersection of the property lines at two lanes or a lane and a street.



Lane Intersection

- At intersection of two lanes, **no** building, structure including fences and retaining walls, landscape feature, hedge, tree or other vegetation shall be permitted in the area bounded by the intersecting lot lines at the lane corner and a line joining points along the line lines and 3 m (9.84 ft.) from their point of intersection (shown as black triangle in the above sketch)

Swimming Pool Barriers

A swimming pool is any privately owned man made pool or other structure which is designed to contain water, and includes, without limitation, in-ground swimming pools, above-ground swimming pools, wading pools, hot tubs and spas.

Burnaby's Swimming Pool Enclosure Bylaw requires a minimum 1.5 m (5 ft) high non-climbable enclosure to limit access to the pool area.

Please refer to our brochure, [Swimming Pools](#), for further information.

According to the definition of retaining wall in the Zoning Bylaw, walls of above ground swimming pools are considered as retaining walls.

Other Considerations

Board of Variance

The requirements of the Zoning Bylaw are written to address development on all properties in the City. It is recognized that there are properties where conformance with the requirements of the bylaw can be challenging, particularly when it comes to designing retaining walls.

If compliance with bylaw requirements in single and two family districts would cause undue hardship a person may apply to the Board of Variance for variances of the Zoning Bylaw respecting the siting and dimensions of a building or structure. The granting or denial of an application rests solely with the Board. Please refer to our brochure, [Board of Variance Appeals for Single and Two Family Dwellings](#), for additional information. For Board of Variance appeals other than single and two family dwellings please contact the Planning Department at 604-294-7400.

Encroachments

Construction of fences, walls and retaining walls, and soil deposition or soil removal on City property, rights-of-way, and easements are prohibited. Minor exceptions may be made at the discretion of the Engineering Department, and are subject to formal encroachment agreements.

Retaining walls, including the foundations or buried base(s), built near or along property lines should be configured to avoid encroaching on or disturbing your neighbour's property both during construction and upon completion of the structure. Only a BC Land Surveyor can tell you accurately where the property line is, and the cost of the survey will be your responsibility. The City will not initiate or pay for such surveys. See also our [Encroachment](#) brochure.

Disagreements over fences, walls, and retaining walls constructed in the vicinity of a property line can be expensive. Cooperation with your neighbours is often the best strategy. Contractors and builders are encouraged to be [Good Neighbours](#).

The City does not involve itself in neighbours' disputes over fences and retaining walls; encroachment and trespass are issues that the property owners must resolve independently. Such matters fall outside the scope of the City's bylaws with the City role being limited to bylaw enforcement on a complaint basis.

Further Information

If you have any further questions, please call the Building Department at (604) 294-7130.

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