

LANDSCAPING & RETAINING WALL REQUIREMENTS

Building Permit and Zoning Regulations for Landscaping

PURPOSE

The following information is provided to outline the recent amendments within City's Building Bylaw 2018-01 regarding regulations for permits and engineering for lot grading and retaining wall structures. This guide will also outline the Zoning Bylaw regulations pertaining to retaining wall heights, location and fencing when part of a retaining wall.

Note that we are here to help you, if you are planning a landscaping or building project requiring lot grading changes, then please contact our office to arrange a free consultation meeting to discuss compliance with grading, drainage and retaining regulations. Failure to obtain the necessary permits or follow good building practices could result in stop work delays and costly repairs to neighbouring properties.

REFERENCE & DEFINITIONS

BC Building Code – Sections 9.3 and 9.4

City of Penticton - Building Bylaw 2018-01 – Part 14, Part 21 & 27

Zoning Bylaw 2017-08 – Section 5.6

DEFINITIONS

BUILDING GRADE (Zoning bylaw) means the lowest of the average levels of finished ground adjoining each exterior wall of a building, excluding localized depressions.

RETAINING WALL means any structure other than a building that holds or retains soil or other earth material behind it.

YARD (Zoning bylaw) means an area created by a **setback**.



IMPLEMENTATION

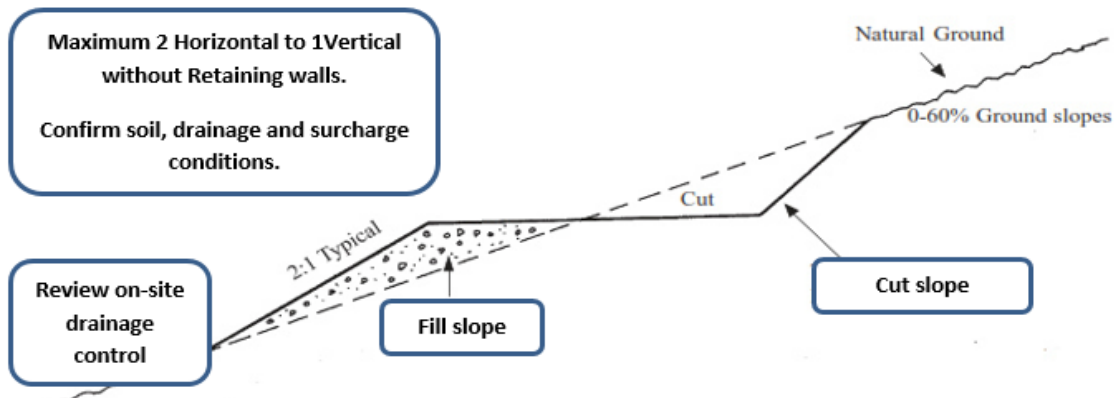
Prior to the repair, replacement or construction of a new retaining wall or major landscaping works, owner/contractors should contact the building department to confirm whether a retaining wall building permit is required.

LANDSCAPING AND RETAINING REQUIREMENTS

BUILDING BYLAW NO. 2018-01

PART 27. FINISHED GRADES and SLOPE RETENTION

27.1 Except as certified by a professional engineer with expertise in geotechnical engineering registered in the Province of British Columbia, fill material placed or excavation into natural grade on a parcel must not have a surface slope exceeding a ratio of one linear unit vertically to two linear units horizontally, unless restrained by a permitted retaining wall. (see drawing below)



27.2 Retaining walls are not permitted to be constructed of stacked uncemented rock or boulders or creosoted timbers.



27.3 No person may occupy a building unless the finished grade complies with all applicable enactments.

Please refer to Building Bulletin No. 18-02 for information on Geotechnical requirements when working in potentially sensitive areas like steep banks, infill development or watercourses.



PART 21 RETAINING WALL PERMITS

21.1 Without limiting Section 6.3 of this bylaw, a person must not construct, or structurally repair, a retaining wall without a valid building permit.

Application Requirements

- 21.2 An application for a building permit with respect to a retaining building permit must
- be made in the prescribed form and signed by the owner, or a signing officer if the owner is a corporation;
 - pay applicable application fee as prescribed in the City of Penticton Fees and Charges Bylaw;
 - provide a site plan showing all buildings and structures and servicing locations.

Professional Design and Permit closure

21.3 A registered professional shall undertake the design and conduct field reviews of the construction and drainage of a retaining structure greater than 1.2m in height or where a sequence of walls are located closer than 2 horizontal to 1 vertical.

Site Safety Conditions

21.4 If a building official determines that an unsafe condition exists as the result of the construction of a retaining wall requiring a building permit, a guard or fence may be required.

2018 BC Building Code – Section 9.4

9.4.4.5. Retaining Walls

- Walls shall be designed to resist the lateral pressure of the retained material.

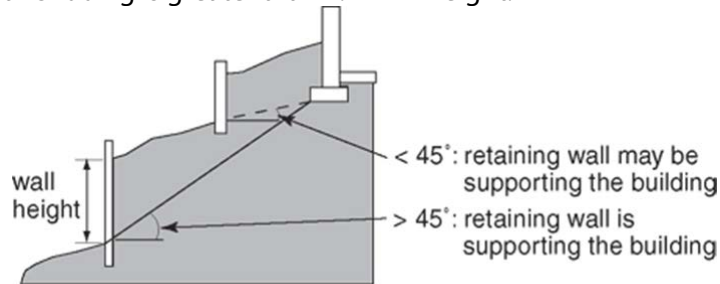
9.4.4.6. Walls Supporting Drained Earth (See A-9.4.4.6. and 9.15.1.1. in Appendix A.)

- Except where constructed in accordance with Section 9.15., walls supporting drained earth shall be designed
 - for a pressure equivalent to that exerted by a fluid that has a density of not less than 480 kg/m³ and a depth equal to that of the retained earth, or

- b) in accordance with Section 4.2. so as to be able to resist the loads and effects described in Article 4.1.2.1.
- 2) Walls supporting other than drained earth shall be designed
 - a) for the pressure described in Clause (1)(a) plus the fluid pressure of the surcharge, or
 - b) in accordance with Section 4.2. so as to be able to resist the loads and effects described in Article 4.1.2.1

9.3.2.9. Termite and Decay Protection

- 4) Structural wood elements used in retaining walls and cribbing shall be pressure-treated with a preservative to resist decay, where
 - a) the retaining wall or cribbing supports ground that is critical to the stability of building foundations, or
 - b) the retaining wall or cribbing is greater than 1.2 m in height.



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9.12.3.3. Deleterious Debris and Boulders (this includes retaining structures)

- 1) Backfill that is within 600 mm of the foundation shall be free of deleterious debris and boulders larger than 250 mm diam. (See Note A-9.12.3.3.(1).)

ZONING REGULATIONS – Zoning Bylaw No.2017-08

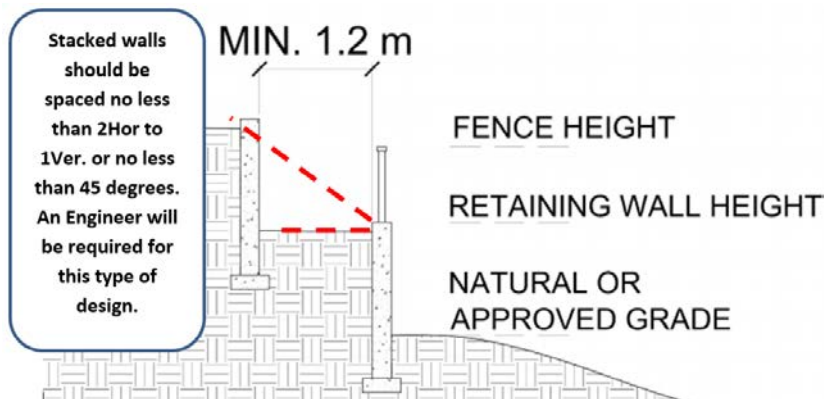
5.6.2 Retaining walls

.1 **Retaining walls** that are located within any required **yards**, must not exceed a height of 1.2 m above **building grade**.

.2 Multiple parallel **retaining walls** must be spaced to provide at least a 1.2 m horizontal separation between them.

5.6.3 Fences on retaining walls

.1 In the case where a fence is built on top of a **retaining wall**, the height of the fence and the height of the **retaining wall** shall be measured separately according to their respective regulations.



Stacked walls should be spaced no less than 2Hor to 1Ver. or no less than 45 degrees. An Engineer will be required for this type of design.

Please note that stacked retaining walls can create unique structural challenges and it is best to contact the building department if you are proposing stacked walls that are individually less than 1.2m (48") in retained height.

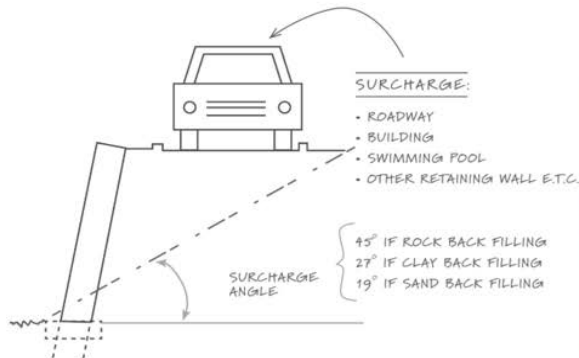


Please note: Building Bulletins are prepared to provide convenient information for customers, and should not be considered a replacement for reviewing the bylaw or associated legal documents. If there is any contradiction between this guide and relevant municipal bylaws and/or applicable codes, please refer to the bylaws and/or codes for legal authority.

OTHER CONDITIONS THAT MAY TRIGGER A PERMIT

Please note that Building Permits and Engineering may be required for walls under 1.2m in height where:

- Located within a geotechnical or environmentally sensitive area (Development Permit area) – high hazard or works along steep banks or watercourses,
- The Building Official determines that the existing site conditions, such as overburden (such a driveway or steep slope) or poor drainage conditions which may create a hazardous condition.

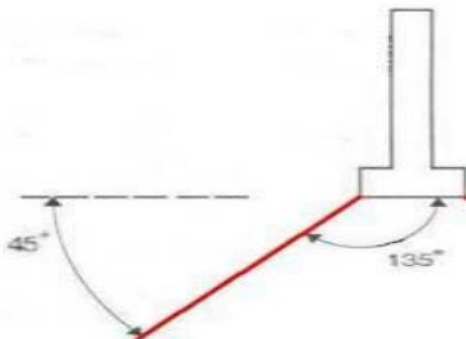


Example of surcharges on retaining



WORKS NEAR EXISTING STRUCTURES AND WALLS

It is important to also verify that landscaping projects will not compromise an existing structure or dwelling. Proposed excavations should not be below a depth of a structure/footing projecting from a line at 45 degrees from the base of the footing/structure. (angle of repose –see side picture).



Existing subdivision walls

Where working near existing subdivision retaining walls, it is important to ascertain if there are restrictions noted on the property title as a covenant or Statutory Rights of Way. Adding additional surcharge with fill, structures such as a pool or drainage may compromise the existing structure.

DRAINAGE

Consideration should be given to surface and retaining wall drainage. All surface water is to be controlled on-site and drainage should not negatively affect other structures or dwellings.

SITE SAFETY

Under Part 8 of the BC Building Code precautions are to be taken to ensure the protection of adjacent properties and the general public. It is highly recommended that you contact adjacent property owners prior to the start of your project.



8.2.2.2. Protection of Adjoining Property

1) If the stability of adjoining buildings may be endangered by the work of excavating, adequate underpinning, shoring and bracing shall be provided to prevent

- a) damage to, or movement of, any part of the adjoining building, and
- b) the creation of a hazard to the public.

**Before any excavation you should contact
BC One Call-Call Before You Dig at 1-800-474-6886**



PROTECTION OF MUNICIPAL PROPERTY

Building Bylaw 2018-01- Damage to Municipal Property

9.5. Every owner to whom a permit is issued is responsible for the cost to repair any damage to municipal works or land that occurs during and arises directly or indirectly from the work authorized by the permit.

9.6. In addition to payment of the security deposit under City bylaws, every owner must pay to the City, within 30 days of receiving an invoice for same from the City, the cost to repair any damage to public property or works located on public property arising directly or indirectly for which a permit was issued.

Have questions? We're here to help. Please contact the Building Department at 250-490-2571 or buildinginfo@penticton.ca for more information.

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