

Racking – Vertical Storage Systems Guide

Commercial, Industrial and Institutional Buildings

A building permit is required for:

- vertical storage units greater than 8 feet in height
- changes to a vertical storage unit (adding or changing racking/shelving)
- adding a mezzanine or storey within an existing space
- alterations to a tenant space; alterations to a space within a building
- removal, relocation, alteration, or construction of interior walls
- the completion of a previously unfinished area
- refer to tol.ca/building for information on other projects requiring a permit

Application

Racking permit applications are now accepted online at tol.ca/buildingpermits. Submitting your application digitally is convenient and allows for a faster application process. If you require assistance with submitting your online application, please contact Permits, Licences and Inspections.

The applicant must provide:

- Building Permit Application form, completed and signed
- Racking – Vertical Storage Systems Checklist
- Agent Authorization Form (if applicable)
- key plans/site plans
- floor plan complete with racking layout including all dimensions, size, and material of all structural members, emergency lighting, exit information including travel distance
- structural drawings including all design and code criteria signed and sealed by a professional engineer
- Letters of Assurance (Schedule B) signed and sealed by the registered professional
- letter from a structural engineer confirming the structural capacity of the slab and assuring adequate support for the racking system
- letter from the Fire Suppression Engineer regarding adequacy of the existing system or specify design and installation requirements for upgrades
- Owner's Information Certificate
- Alternative Solution Application (if applicable)

Drawings

All plans and information submitted must be of an appropriate scale with sufficient detail to establish compliance with the BC Building Code and the bylaws of the Township of Langley. If you are unable to draw appropriate plans, then you must obtain the services of a qualified person.

Drawings may be submitted in metric or imperial scale. The following are the minimum scales:

Site plan	1:100 or 1/8" = 1'-0"	Elevations	1:50 or 1/4" = 1'-0"
Floor plans	1:50 or 1/4" = 1'-0"	Construction details	1:20 or 1/2" = 1'-0"
Cross sections	1:50 or 1/4" = 1'-0"		

Key Plan/Site Plan

- Overall building of both the principal building and tenant improvements
- Indicate tenant use on either side of improvements

Plans

- Complete floor plans (entire unit) and components showing the racking layout with all dimensions
- Details to confirm compliance with the BC Building Code
- Access to exit pathways indicated
- Exits, corridors and stairways
- Exit doors, exit signs and emergency lighting
- All partitions and bearing walls
- All fire separations
- Room use and size, as well as suites/units adjacent to the alteration
- Equipment layout
- Windows/doors, including sizes and door swings
- Stairs – showing direction of travel, stair dimensions, and required handrails and/or guardrails
- Seismic restraint details
- Floor-to-ceiling height of all areas

This is not an exhaustive listing of all the bylaws and BC Building Code requirements. Additional information may be requested during the processing of the building permit application.

Architects and Engineers

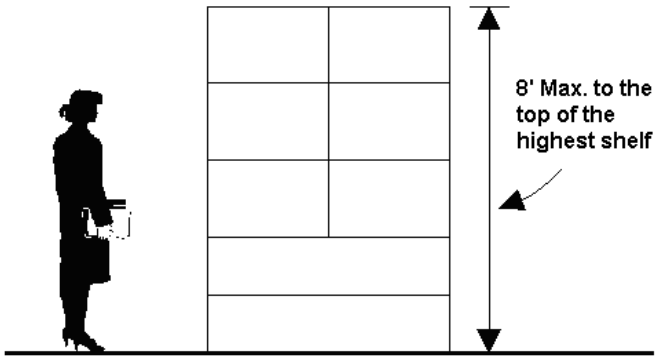
When preparing the application, a racking system may have an impact on the building's compliance with the BC Building Code; therefore, it is necessary to hire Professional Engineer(s) to address issues such as load-bearing capacity, seismic loading, exits and sprinkler protection.

Professional Engineers are required for the following:

- racking systems greater than 8 feet in height
- mezzanines
- alternative solution submission as per the BC Building Code

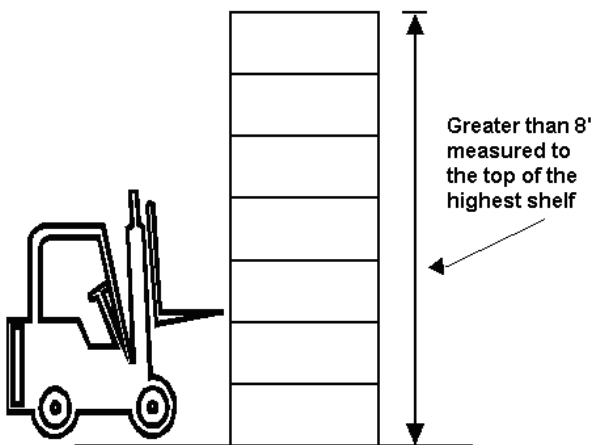
Shelving units

- Any vertical storage unit under 8 feet in height is considered shelving.
- A building permit is not required for the installation of shelving units.
- Shelving units can be constructed of combustible or non-combustible material.
- Shelving units should be restrained either by fastening them to the floor or adjacent wall.



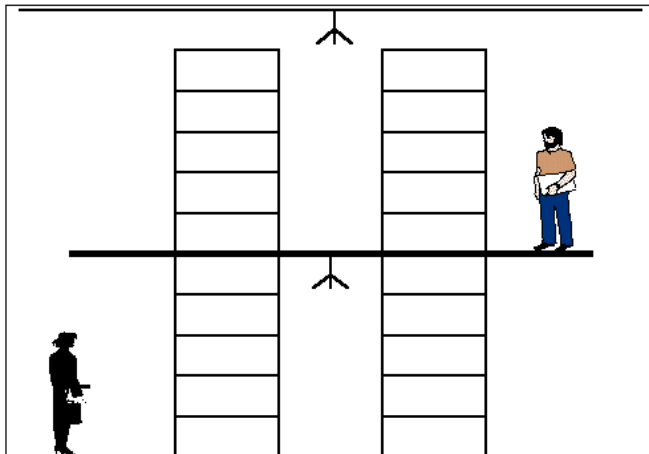
Single level racking

- A vertical storage unit greater than 8 feet in height is considered a structure and requires a building permit.
- Vertical storage units or racking/shelving over 8 feet in height must be seismically restrained and supported for geotechnical aspects as per Part 4 of the BC Building Code.
- A structural engineer is required to submit a Schedule B - Letter of Assurance of Professional Design and Commitment for Field Review.
- If the building is sprinklered, the requirements for design and installation of the sprinkler system and the racking structure shall be in accordance with NFPA 13 and 231C, for which a permit is required.
- Apart from the actual shelves, this type of storage unit must be constructed of non-combustible material.



Multi-level racking

- A vertical storage unit that is greater than 8 feet in height and supports an intermediate elevating walking platform requires a building permit.
- Vertical storage units over 8 feet in height must be seismically restrained and supported for geotechnical aspects as per Part 4 of the BC Building Code with the exception of the shelves, the structure must be constructed of non-combustible material.
- A structural engineer is required to submit a Schedule B - Letter of Assurance of Professional Design and Commitment for Field Review.
- If the building is sprinklered, the requirements for design and installation of the sprinkler system and the racking structure shall be in accordance with NFPA 13 and 231C, for which a permit is required.
- The number, location, and construction of guards and egress stairs for the catwalk system must conform to the requirements of the BC Building Code.
- Where the catwalk system has a solid walking surface, smoke alarms shall be installed at each level.
- The walking platform shall be a catwalk system, supported by the racking and only allows access to the racking. No open platform is permitted for the use of storage, manufacturing, and assembly.
- A continuous floor system supporting the upper shelving units shall be considered a mezzanine rather than a racking system.



Building Permit Application Process

Once compliance with municipal bylaws and other enactments has been demonstrated, a building permit may be issued following receipt of payment of the appropriate fees and bonds. The issuance of the permit may be delayed depending on:

- volume of applications
- the complexity of the project
- completeness of the application, including compliance with the applicable zoning and other bylaws and the current edition of the BC Building Code
- approvals from other departments and outside agencies

Prior to Issuance

Following the submission of the building permit application but prior to issuance, additional items or inspections may be required, including but not limited to:

- general contractor must obtain a valid business licence to work in the Township of Langley, and all trades and subcontractors are required to have a valid business licence
- no deposit of fill; excavation, erection, alteration, enlargement, repair, removal, or demolition of any building or structure, or part thereof, shall be commenced or undertaken without a permit first being obtained from the Permits and Inspections Department

Inspections

The following activities must occur during the duration of construction:

- inspections must be requested by owner, builder or agent
- all work being inspected must be complete and ready prior to inspection
- work must not proceed past any of the stages listed without prior approvals
- street address and permit card must be posted in a visible location on the site
- approved permit drawings to be available on-site for all inspections
- final documentation must be submitted a minimum of two business days prior to final inspection

No person may occupy or permit occupancy of any building or structure until an accepted final inspection has been undertaken by the Building Inspector and occupancy has been authorized by the Building Inspector in writing.

Last updated: January 2025