

FEEDBACK REQUESTED

Proposed Rainwater Amendments to the Building By-law
Please submit comments by **Thursday, September 26, 2024**

August 15, 2024

Dear resident, developer, architect, consultant, contractor, supplier or other interested party,

The City of Vancouver is proposing rainwater management requirements effective July 1, 2025 for all new low-density developments, including single-family homes, duplexes and multiplexes. The proposals do not apply to existing buildings.

The purpose of this letter is to invite your feedback to the proposed changes to the Building By-law (**Appendix A**).[†]

These proposals build upon the rainwater management requirements that went into effect on January 1, 2024 for most Part 3 buildings[‡] (see vancouver.ca/rainwater).

Details are provided on the following pages. To provide feedback, please submit your written comments by **Thursday, September 26** to Christopher Radziminski (chris.radziminski@vancouver.ca). Comments received will be used to refine the proposals being presented to City Council for review and approval.

Interested in learning more? Join our webinar on **Thursday, September 19** at 11:30 am. You can register at vancouver.ca/rainwater. AIBC members are eligible for 1.5 core learning units.

Sincerely,

[sent electronically]

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[†] A consultation letter was shared on Jan. 30, 2024 for rainwater management requirements for multiplexes. The feedback received has been integrated into the proposal on the following pages.

[‡] Generally, a “Part 3” (complex) building exceeds 3 storeys or 600 m² in footprint.

Attachment: Building By-law proposal (7 pages excluding this cover letter).

Vancouver Building By-law Rainwater Management Proposals: Expanding Requirements to All New Developments as of July 1, 2025

Note to reader: Following are proposed changes to the Vancouver Building By-law. Please submit written feedback by Thursday, September 26, 2024 to chris.radzimirski@vancouver.ca

Key:

Black text	Existing Building By-law text
Red text	Newly proposed text
Strikethrough text	Existing text proposed for deletion

1. Book I, Division B, Section 9.14 Drainage

Section 9.14. Drainage

(See Article 2.4.2.5. of Division B of Book II (Plumbing Systems) of this By-law.)

2. Book II, Division B, Section 1.3 Referenced Documents and Organizations

Table 1.3.1.2.
Documents Referenced in Book II (Plumbing Systems) of the Building By-law
Forming Part of Sentence 1.3.1.2.(1)

Issuing Agency	Document Number ⁽¹⁾	Title of Document ⁽²⁾	By-law Reference
BC	B.C. Reg. 133/2022	Contaminated Sites Regulation	A-2.4.2.5.(9)
BC		Heritage Conservation Act	A-2.4.2.5.(9)
CoV		Engineering Design Manual ⁽⁴⁾	2.4.2.5.(3)(6)
CoV		Zoning and Development By-law ⁽⁴⁾	2.4.2.5.(1) 2.4.2.5.(2) A-2.4.2.5.(1)

3. Book II, Division B, Section 2.4 Drainage Systems

2.4.2.5. Rainwater Management

- ~~1) This Article shall apply to all *buildings*, except~~
- ~~a) *float homes*,~~
 - ~~b) *marinas*,~~
 - ~~c) retaining structures,~~
 - ~~d) those to which Part 9 applies, as described in Sentence 1.3.3.3.(1) of Division A of Book I (General) of this By-law, and~~
 - ~~e) those *buildings* used exclusively for *residential occupancy* containing no more than 8 principal *dwelling units*.~~
- 1) Except as provided in Sentence (2), all *buildings* shall manage rainwater on-site through one of the applicable compliance pathways in Table 2.4.2.5.-A, in which
- a) “small site pathway” means Sentence (4) applies, and Sentences (5) and (6), (7) and (8) do not apply, and
 - b) “engineered pathway” means Sentences (5), (6), (7) and (8) apply, and Sentence (4) does not apply.

(See Note A-2.4.2.5.(1).)

Table 2.4.2.5.-A
Compliance Pathways for On-Site Rainwater Management
Forming Part of Sentence 2.4.2.5.(1)

Site Area (m ²)	Floor Space Ratio ⁽¹⁾	Compliance Pathway
No greater than 1000	No greater than 1.0	Small site pathway
	Greater than 1.0	Engineered pathway
Greater than 1000	Any	Engineered pathway

Notes to Table 2.4.2.5.-A:

(1) As computed according to the Zoning and Development By-law.

- 2) The requirements of this Article do not apply to
- a) “laneway houses” or “infill” as defined by the Zoning & Development By-law, when the site area is no greater than 1000 m²,
 - b) “accessory buildings” as defined by the Zoning & Development By-law,
 - c) *float homes*,
 - d) *marinas*,
 - e) retaining structures, or
 - f) temporary *buildings* approved according to Subsection 1.6.8. of Division C.

3) The *Chief Building Official* shall be provided with a document summarising **demonstrating that** the *rainwater* management practices employed to satisfy the requirements of Sentences (12) and (3) **have been satisfied**, in the form prescribed by the *Chief Building Official*.

- 4) Except as provided in Sentence (9), a detention tank shall be installed with
- a) the minimum active storage capacity specified in Table 2.4.2.5.-B.,
 - b) an orifice plate with the diameter specified in Table 2.4.2.5.-B.,
 - c) overflow protection,
 - d) one or more *cleanouts* providing access to the outlet and overflow, and
 - e) for subsurface detention tanks, the capability of supporting the design depth of cover and surface loads.

(See Note A-2.4.2.5.(4).)

Table 2.4.2.5.-B
Detention Tank Specifications
 Forming Part of Sentence 2.4.2.5.(4)

Site Area (m ²)	Minimum Active Storage Capacity (L)	Orifice Plate Diameter (mm)
No greater than 400	3,400	30
Greater than 400 to no greater than 500	3,900	35
Greater than 500 to no greater than 750	4,600	45
Greater than 750 to no greater than 1000	7,200	50

- 5) Except as provided in by Sentences (8) and (9) ~~(6) and (7)~~, the first 24 mm of *rainwater* in a 24 hour period from the site area shall be detained, and the **minimum** detention volume requirement
- a) shall be calculated as the volume of water that would be present if water 24 mm deep covered the entire site, and
 - b) may be reduced by any combination of the retention or other practices listed in Table 2.4.2.5.-C, by the amounts in Column C of Table 2.4.2.5.-C.

Table 2.4.2.5.-C
Permitted Reductions to the Detention Volume Requirement
 Forming Part of Sentence 2.4.2.5.(4)(5)

Retention or Other Practice	Reduction to the Detention Volume Requirement		
	Maximum Permitted Reduction Column A	Limit to Permitted Reduction Column B	Permitted Reduction Column C
Landscape feature ⁽¹⁾	Area of, and area routed to, the landscape feature multiplied by 24 mm	<i>Rainwater</i> capture potential, calculated as <i>rainwater</i> storage potential in the growing medium (%) multiplied by the growing medium volume, plus as applicable the storage volume within a subsurface reservoir layer and the volume infiltrated into the subgrade during a 24 hour period. ⁽³⁾	The lesser of Columns A and B
<i>Vegetated roof assembly</i> ⁽²⁾	Area of, and area routed to, the <i>vegetated roof assembly</i> multiplied by 24 mm		The lesser of Columns A and B ⁽⁴⁾
<i>Alternate water source system</i>	Area routed to the <i>alternate water source system</i> multiplied by 24 mm	Storage volume of the <i>alternate water source system</i>	The lesser of Columns A and B

Notes to Table 2.4.2.5.-C:

- (1) Or other *acceptable* ground-level or subsurface based practice, such as permeable pavement or an infiltration tank.
- (2) Or other *acceptable* roof-top based practice. For *vegetated roof assemblies*, see Article 3.1.14.4. and Article 5.6.1.2. of Division B of Book I (General) of this By-law.
- (3) “*Rainwater* storage potential in the growing medium”, “volume infiltrated into the subgrade during a 24 hour period” and “storage volume within a subsurface reservoir layer” shall be demonstrated by *acceptable* data or references.
- (4) For a *vegetated roof assembly* from which the runoff is directed to an *alternate water source system*, the permitted reduction in the volume requirement shall equal Column A.

- 6) Except as provided in by Sentences (8) and (9) ~~(6) and (7)~~, the peak flow rate discharged to the *combined sewer* or *storm sewer* under post-development conditions shall not be greater than the peak flow rate discharged to the *combined sewer* or *storm sewer* under pre-development conditions, and shall be calculated using
- a) the Rational Method,
 - b) the IDF curves in the City of Vancouver Engineering Design Manual, applying
 - i) for pre-development, the IDF curve prepared for pre development estimates with a 5 year return period,
 - ii) for post-development, the 2100 IDF curve with a 10 year return period, and
 - iii) the inlet time specified in the City of Vancouver Engineering Design Manual, and
 - c) a composite runoff based on the percentages of different surfaces of the site area, applying the runoff coefficients from the City of Vancouver Engineering Design Manual. (See Note A-2.4.2.5.(36).)
- 7) An **operations and maintenance** ~~operating~~ manual conforming to Article 2.2.1.9. is required for each of the *rainwater* management practices employed to satisfy the requirements of Sentences (25) and (36).
- 8) When there is an *existing building* on the same property, the site area used in Clauses (25)(a) and (36)(c) may be reduced to be proportional to the ratio of the *buildings'* greatest horizontal area within the outside surface of exterior walls.
- 9) The *Chief Building Official* may, ~~in consultation with the City Engineer,~~ relax the requirements of Sentences ~~(2) or (3)~~ (4), (5) or (6) in accordance with Sentence 1.5.2.10.(2) of Division C if
- a) the *owner* demonstrates to the satisfaction of the *Chief Building Official* by a *subsurface investigation* that excavation is precluded or limited by soil contamination or other factors, and
 - b) it is impractical, in the opinion of the *Chief Building Official*, to meet the rainwater management requirements of Sentences ~~(2) or (3)~~ (4), (5) or (6).

(See Note A-2.4.2.5.(9).)

4. Book II, Division B, Notes to Part 2

A-2.4.2.5.(1) Rainwater Management Requirements. Area-specific rainwater management requirements exist within the [First Shaughnessy District Schedule](#) and the [RA-1 District Schedule](#) of the Zoning and Development By-law, and site-specific rainwater management requirements may apply as conditions of a rezoning approval or through a CD-1 by-law. Where such requirements differ from those of this Article, the *building's* design must meet the more restrictive of the release rate requirement and the greater of the volumetric detention/retention requirement.

A-2.4.2.5.(4) Small Site Pathway. The detention tank “minimum active storage capacity” excludes the volume below the orifice and above the emergency overflow. The overflow must bypass the outlet flow control mechanism. The orifice flow control should have appropriate debris protection to prevent blockages. The detention tank should be inspected and cleaned regularly following the manufacturer’s instructions.

A-2.4.2.5.(36) Peak Flow Rate Calculation. Pre-development means the site’s use immediately preceding development.

A-2.4.2.5.(9) Relaxation to Rainwater Management Requirements. When an *owner* ascertains that site conditions preclude excavation or infiltration, the *Chief Building Official* may relax a portion or all of the rainwater management requirements of this Article. The *Chief Building Official* may:

- consult with the *City Engineer*,
- consider evidence provided by the *owner* (Table A-2.4.2.5.(9)), and
- determine whether the *owner* has made a reasonable attempt to meet a portion or all of the rainwater management requirements without excavation or infiltration, for example, by using infrastructure above-ground, or as part of the *building*.

The decision to relax requirements shall be made by the *Chief Building Official*.

Table A-2.4.2.5.(9)
Examples of Documentation that may be Provided
by the *Owner* to the *Chief Building Official*
 Forming Part of Note A-2.4.2.5.(9)

Site Condition Precluding Excavation or Infiltration	Examples of Documentation Provided by the <i>Owner</i> Regarding a Relaxation to Rainwater Management Requirements
Archaeological resources	<i>Archaeological Impact Assessment</i> , prepared in conformance with the Heritage Conservation Act.
Artesian conditions	Hydrogeological or geotechnical engineering report.
Contamination	<i>Notification of Likely or Actual Migration</i> , prepared in conformance with the Contaminated Sites Regulation.
Geotechnical limitations	Geotechnical engineering report.

5. Book II, Division B, [Section 2.8 Objectives and Functional Statements](#)

Table 2.8.1.1.
Objectives and Functional Statements Attributed to the
Acceptable Solutions in Part 2
Forming Part of Sentence 2.8.1.1.(1)

Functional Statements and Objectives	
2.4.2.5. Rainwater Management	
(4)	[F40,F62,F80,F81-OP5,OE1.2]
(2) (5)	[F40,F62,F80,F81-OP5,OE1.2]
(3) (6)	[F40,F62,F80,F81-OP5]
(4) (7)	[F80,F81,F82-OP5,OS3.4]

6. Book II, Division C, [Section 1.5 Authority of the Chief Building Official](#)

1.5.2.10. Permits for Plumbing, Mechanical and Sprinkler Systems

- 1) The *Chief Building Official* may issue a *permit* for a *plumbing system*, *mechanical system* or *sprinkler system* in accordance with the provisions of Subsection 1.6.3.
- 2) The *Chief Building Official* may relax the rainwater management requirements of Division B, Sentences 2.4.2.5.~~(2)~~ and ~~(3)~~(4), (5) and (6) of Book II (Plumbing Systems) of this By-law as provided in Division B, Sentence 2.4.2.5.~~(7)~~9) of Book II (Plumbing Systems) of this By-law.

[Note: These amendments would also be made to Book I, Division C, [Section 1.5](#)]

7. Book II, Division C, [Section 3.3 Transition Provisions](#)

3.3.1.3. Rainwater Management Regulation Transition

- 4) For a *building* to which the “small site pathway” of Division B, Sentence 2.4.2.5.(1) applies, where an *owner* has applied to the *City* prior to January 1, 2025 for a development permit application, the requirements of Division B, Article 2.4.2.5. of Book II (Plumbing Systems) of this By-law do not apply if the *owner* has applied for a *permit* prior to January 1, 2026.

[Note: These amendments would also be made to Book I, Division C, [Section 3.3](#)]

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