

Summary

The application of the National Building Code - 2023 Alberta Edition (NBC(AE)) Division B, Article 9.9.4.4. - Openings Near Unenclosed Exterior Stairs and Ramps, has exposed a number of technical and administrative challenges given a recent focus on built-forms including secondary suites in houses, and rowhouses. This has led to inconsistency in both the application of Article 9.9.4.4., as well as solutions for compliance. This interpretation has been established to ensure that the application of Article 9.9.4.4. is consistent and fair for all applicants, and that alternative solutions have a clear threshold for application.

This analysis provided in Appendix A outlines the technical and regulatory justification for limiting the application of Article 9.9.4.4. resulting in the following policy statement:

Policy

Application Criteria

For **exterior exit stairs or ramps** Article 9.9.4.4. **need not apply** if:

- the stair or ramp is not more than **1.5 m** *above* adjacent ground level, or
- the stair or ramp is not more than **600 mm** *below* adjacent ground level.

For additional information on the development of this interpretation, please refer to [Appendix A](#).



Steve Goodwin
Director

**Safety Codes, Permits, and Inspections
Development Services**



Jeff Salame
General Supervisor - Safety Codes Permits
**Safety Codes, Permits, and Inspections
Development Services**

APPENDIX A - Explanatory Information

Acceptable Methods of Protection

The NBC(AE) is an objective-based code, which means that there are two methods of achieving compliance.

- 1) The applicant complies with the prescriptive requirements of the code article (e.g., wired glass in fixed steel frames or glass block).
- 2) The applicant may submit a "[Request for Specific Variance](#)" along with an alternative solution report demonstrating how the alternative will meet the objective and functional statements of the prescriptive requirements, and meet or exceed the minimum performance level required by the code.

One of the following construction methods can be applied to the building to provide a safe path of travel for occupants using single exit exterior stairs and ramps **without** the need for an alternative solution:

Below-Grade Exterior Passageway:

While **NBC(AE) Article 9.9.9.2.** generally mandates that dwelling units have access to two separate exits via a public corridor or exterior passageway, secondary suites in houses remain exempt, acknowledging their lower risk profile. A below-grade exterior passageway equipped with two remotely located exit stairs at opposite ends is an acceptable solution that satisfies the code's intent for two means of egress.

To ensure the safety of this egress path, the following construction and protection standards must be met:

- Wall Fire-Resistance: The exterior wall of the below-grade passageway must maintain a fire-resistance rating equal to that of the floor assembly above the space it serves.
- Secondary Suite Specifications: For secondary suites, this requirement is satisfied by a smoke-tight barrier consisting of not less than 12.7 mm thick gypsum board (drywall) (9.9.4.2.(2)).
- Door Protection: Exterior doors leading to the passageway must be at least 45 mm thick constructed of solid-core wood and be equipped with a self-closing device (9.10.9.3.(2)).

Because this dual-exit configuration provides occupants with multiple paths of travel, it excludes the scope/application of **Article 9.9.4.4.** regarding ". . .the only means of egress from a suite". Consequently, additional opening protection for windows or other apertures is not required, provided the exit stairs are located with sufficient physical separation to ensure independent access.

Protected Opening:

The scope of Article 9.9.4.4. is limited to unprotected openings. Therefore the installation of opening protection devices, such as an NFPA80-tested fire shutter activated by a fusible link, may be used to avoid these requirements, provided the affected windows do not serve a bedroom or are not otherwise required for egress.

Alternative Solution Compliance

As per Division A, Clause 1.2.1.1.(1)(a), an alternative solution which achieves at least the minimum level of performance required by Division B may be used as an alternative path to compliance. Alternative solutions must be documented as per Division B, Section 2.3., and must be submitted with a [Request for Specific Variance](#).

Regulatory Framework: Functions, Objectives, and Intent

The enforcement of Article 9.9.4.4. must align with the defined objectives of the NBC(AE).

9.9.4.4. Openings Near Unenclosed Exterior Exit Stairs and Ramps:

- 1) *Unprotected openings* in exterior walls of the *building* shall be protected with wired glass in fixed steel frames or glass block conforming to Articles 9.10.13.5. and 9.10.13.7., where
- a) an unenclosed exterior *exit* stair or *ramp* provides the only *means of egress* from a *suite* and is exposed to fire from *unprotected openings* in the exterior walls of
 - i) another *fire compartment*, or
 - ii) another *dwelling unit*, ancillary space or common space in a house with a *secondary suite*, and
 - b) *unprotected openings* in the exterior walls of the *building* are within 3 m horizontally and less than 10 m below or less than 5 m above the *exit* stair or *ramp*.

Sentence 9.9.4.4.(1)

Objective

OS1 - Fire Safety

Attributions

[F05-OS1.5]

Functional Statement: F05 - To retard the effects of fire on emergency egress facilities.

Objective: OS1.5 - To limit the probability that persons will be delayed in or impeded from moving to a safe place during a fire emergency.

Intent(s)

Intent 1. To expand the application of Articles 9.10.13.5. and 9.10.13.7. to include wired glass and glass blocks in unprotected openings in exterior walls under certain conditions.

Intent 1. To limit the probability that fire will spread from a fire compartment, dwelling unit, ancillary space or common space in a house containing a secondary suite through unprotected openings in exterior building walls to an exterior exit stair or ramp, which could lead to delays in the evacuation or movement of persons to a safe place, which could lead to harm to persons.

Justification for the 1.5 m Above-Grade Threshold

The Code consistently establishes **1.5 m** as the vertical limit where an egress path transitions from a "safe escape" to a "hazard requiring protection."

A. Exit Termination Definition (Article 9.9.9.1.)

9.9.9.1. Travel Limit to Exits or Egress Doors

- 1) Except as provided in Sentences (2) and (3), every dwelling unit containing more than 1 storey shall have exits or egress doors located so that it shall not be necessary to travel up or down more than 1 storey to reach a level served by
 - a) an egress door to a public corridor, enclosed exit stair or exterior passageway, or
 - b) an exit doorway not more than 1.5 m above adjacent ground level.
- 2) Where a dwelling unit is not located above or below another suite, the travel limit from a floor level in the dwelling unit to an exit or egress door may exceed 1 storey where that floor level is served by an openable window
 - a) providing an unobstructed opening of not less than 1 m in height and 0.55 m in width, and
 - b) located so that the sill is not more than
 - i) 1 m above the floor, and
 - ii) 7 m above adjacent ground level.
- 3) The travel limit from a floor level in a dwelling unit to an exit or egress door may exceed 1 storey where that floor level has direct access to a balcony.

Sentence 9.9.9.1.(1)

Objective

OS3 - Safety In Use

Attributions

[F10-OS3.7]

Functional Statement: F10 (To facilitate the timely movement of persons to a safe place in an emergency).

Objective: OS3.7 (Safety in Use - To limit the probability that persons will be delayed in or impeded from moving to a safe place).

Intent(s)

Intent 1. To supersede the requirements of Sentences 9.9.8.2.(1) and 9.9.8.2.(2), which would otherwise impose other travel distance or exit limitations.

Intent 1. To limit the probability of excessive travel distances to reach a level served by an egress door or exit doorway in an emergency situation, which could lead to delays in the evacuation or movement of persons to a safe place, which could lead to harm to persons.

Analysis:

Sentence 9.9.9.1.(1) equates reaching an exterior doorway not more than 1.5 m above adjacent ground with reaching a fully protected, fire-separated enclosed stair. It establishes that the brief descent to adjacent ground level from this height is not an "excessive travel distance" (Intent 1) and will not unacceptably delay or impede final evacuation (OS3.7). Functionally, the code treats reaching a door at not more than 1.5 m above adjacent ground as equivalent to reaching ground level.

Conclusion:

If the elevation difference is equal to or less than 1.5 m, the travel distance is not considered "excessive" or hazardous enough to require distinct exit facility protections. The stair is treated as a ground-adjacent continuation of the means of egress.

B. The "Added Hazard" of Height (Article 9.9.9.3.)

9.9.9.3. Shared Egress Facilities

1) Except for *dwelling units* in a house with a *secondary suite*, a *dwelling unit* shall be provided with a second and separate *means of egress* where an egress door from the *dwelling unit* opens onto

- a) an *exit* stairway serving more than one *suite*,
- b) a *public corridor*
 - i) serving more than one *suite*, and
 - ii) served by a single *exit*,
- c) an exterior passageway
 - i) serving more than one *suite*,
 - ii) served by a single *exit* stairway or *ramp*, and
 - iii) more than 1.5 m above adjacent ground level, or
- d) a balcony
 - i) serving more than one *suite*,
 - ii) served by a single *exit* stairway or *ramp*, and
 - iii) more than 1.5 m above adjacent ground level.

2) Where a *dwelling unit* is located above another *dwelling unit* or common space in a house with a *secondary suite*, the upper *dwelling unit* shall be provided with a second and separate *means of egress* where an egress door from that *dwelling unit* opens onto an exterior passageway that

- a) has a floor assembly with a *fire-resistance rating* less than 45 min,
- b) is served by a single *exit* stairway or *ramp*, and
- c) is located more than 1.5 m above adjacent ground level.

Sentences 9.9.9.3.(1) and 9.9.9.3.(2)

Objective

OS3 - Safety In Use

Attributions

[F10-OS3.7]

Functional Statement: F10 (To facilitate the timely movement of persons to a safe place in an emergency).

Objective: OS3.7 (Safety in Use - To limit the probability that persons will be delayed in or impeded from moving to a safe place).

Intent(s)

Intent 1. To supersede the requirements of Sentence 9.9.7.2.(1), which would otherwise permit a single exit or doorway from a suite.

Intent 1. To limit the probability that persons will not have access to an alternative egress route in the event one route is blocked or obstructed in an emergency situation, which could lead to delays in the evacuation or movement of persons to a safe place, which could lead to harm to persons.

Analysis:

- The code permits a single exit path for exterior stairs and passageways rising **not more than 1.5 m** above adjacent ground level. This suggests that below this height, the risk of the path being impacted by fire from an adjacent fire compartment is less problematic because occupants are close enough to ground level to bypass the obstruction without a backup route.
- Since the proximity to adjacent ground level ensures "timely movement to a safe place" (F10) can occur even if the stair is compromised, the requirement to "retard fire effects" (F05) on that stair is redundant.

Conclusion:

The code permits a single, unprotected path of travel when the means of egress is not more than 1.5 m above adjacent ground level. In alignment with this provision, the opening protection requirements of Article 9.9.4.4. do not apply to stairs within this height limit, as a second exit would not be required.

Justification for the 600 mm Below Adjacent Ground Level Threshold

This threshold identifies the point where a minor elevation change becomes a confined exit. Unlike above-grade exits that allow for immediate lateral escape in multiple directions, a depressed well forces occupants into a single, restricted path of travel.

A. Definition of Physical Hazard (Article 9.8.8.1.)

The code utilizes **600 mm** as the critical vertical dimension distinguishing a safe change in elevation from a hazardous drop.

9.8.8.1. Required Guards

(See Note A-9.8.8.1.)

1) Except as provided in Sentence (2) and except at the leading edge at the top of a *flight*, every surface to which access is provided, including but not limited to *flights* of steps and *ramps*, exterior landings, porches, balconies, *mezzanines*, galleries and raised *walkways*, shall be protected by a *guard* on each side that is not protected by a wall for the length where the difference in elevation is more than **600 mm** between the walking surface and the adjacent surface within 1.2 m.

Sentence 9.8.8.1.(1)

Objective

OS3 - Safety In Use

Attributions

[F30-OS3.1]

Functional Statement: F30 - To minimize the risk of injury to persons as a result of tripping, slipping, falling, contact, drowning or collision.

Objective: OS3.1 (Safety in Use) - To limit the probability that a person will be exposed to an unacceptable risk of injury due to tripping, slipping, falling, contact, drowning or collision).

[F10-OS3.7]

Functional Statement: F10 - To facilitate the timely movement of persons to a safe place in an emergency.

Objective OS3.7 - To limit the probability that persons will be delayed in or impeded from moving to a safe place during an emergency.

Intent(s)

Intent 1. To limit the probability of inadequate fall protection at significant changes in elevation between adjacent surfaces, which could lead to:

- persons falling, or
- persons falling in an emergency situation, which could lead to delays in the evacuation or movement of persons to a safe place.

This is to limit the probability of harm to persons.

Analysis:

While Article 9.8.8.1. addresses the risk of falling *into* a space, the physical reality of the 600 mm threshold applies inversely to the ability to escape *out of* that space.

- A vertical rise greater than 600 mm creates a physical barrier that impedes lateral movement. In a fire emergency, an occupant in a well deeper than 600 mm cannot readily step away from the building face; they are forced to use the stair as the single direction of egress as the stairwell pit is enclosed by a guardrail..

B. Wading Pool Comparison for Depressed Spaces (Article 1.4.1.2. and 7.2.6.3.)

The code's treatment of water hazards provides a direct parallel for evaluating the risks of depressed spaces.

7.2.6.3. Wading Pools

- 1) Except for the requirements of Sentences (2) and (3), a *wading pool* shall be constructed in accordance with the remainder of this Section.
- 2) A *wading pool* or group of wading pools shall be designed to be served by an independent circulation system.
- 3) A *wading pool* shall have a
 - a) floor with a maximum slope of 1:25 and a minimum slope of 1:50,
 - b) depth of not more than 600 mm, and
 - c) freeboard of not more than 150 mm.

Division A - 1.4.1.2. Defined Terms

Wading pool means a *swimming pool* that is 600 mm or less in depth throughout and is used for swimming, bathing, wading, or other similar purposes.

Division A, Article 1.4.1.2., defines a *wading pool* as having a depth of "600 mm or less throughout." By establishing this specific depth, the code recognizes 600 mm as a threshold where a physical depression, even when filled with a hazard like water, does not pose an entrapment or drowning risk significant enough to require the full-scale protection of a standard swimming pool. Just as a 600 mm pool is deemed safe enough for unassisted entry and exit by children, a 600 mm egress well can be justified as not presenting a physical barrier that would delay or impede movement to a safe place during a fire.

C. The Threshold for Dedicated Egress Facilities (Sentence 7.2.3.12.(1))

The code establishes the depth at which a below-grade basin physically necessitates a formal means of escape. Sentence 7.2.3.12.(1) regarding pool access states that "ramps, ladders or recessed stairs shall be provided... if the water depth is greater than 600 mm." By mandating these facilities only for depths exceeding 600 mm, the code inherently recognizes that a physical depression of 600 mm or less can be navigated unassisted; it assumes occupants (including children using a wading pool) likely possess the physical ability to simply step or scramble out of the space.

D. Maintaining Unobstructed Lateral Escape

To ensure multi-directional egress, wells 600 mm or shallower must remain unobstructed. Since **Sentence 9.8.8.1.(1)** exempts these depths from guard requirements, omitting enclosures on top of the walls allows occupants to exit from any side rather than being "corralled" into a single path.

Conclusion:

The code consistently recognizes 600 mm as a functional boundary between a manageable depression and a hazardous "pit" requiring dedicated egress facilities. When an exterior well is 600 mm or less in depth, and the perimeter retaining walls remain free of guard enclosures, occupants retain the physical ability to safely "scramble" or step out of the space in multiple directions. Because this shallow, unobstructed configuration prevents entrapment and does not force an occupant into a single path of travel exposed to fire effects, it does not function as an "exterior exit stair." Therefore, the opening protection requirements of Article 9.9.4.4. need not apply unless the well depth exceeds this 600 mm limit, at which point it becomes a restricted egress path requiring protection.

Justification for Bi-Directional Below-Grade Exterior Passageways

In semi-detached and row house configurations with secondary suites, below-grade exterior passageways often serve multiple units. This analysis determines when such passageways are exempt from 9.9.4.4. protection.

A. Clause 9.9.4.4.(1)(a) explicitly states that protection is required where the exterior exit stair "provides the **only means of egress** from a *suite*."

9.9.2.1. Types of Exits

1) Except as otherwise provided in this Section, an *exit* from any *floor area* shall be one of the following used singly or in combination:

- a) an exterior doorway,
- b) an exterior passageway,
- c) an exterior *ramp*,
- d) an exterior stairway,
- e) a fire escape,
- f) a *horizontal* exit,
- g) an interior passageway,
- h) an interior *ramp*, or
- i) an interior stairway.

2) Fire escapes shall only be used as *exits* on existing *buildings* and shall be designed and installed in conformance with Subsection 3.4.7.

3) Where a *horizontal* exit is used, it shall conform to Sentence 3.4.1.6.(1) and Article 3.4.6.10.

Sentence 9.9.2.1.(1)

Intent(s)

Intent 1. To clarify which types of egress facilities are permitted to be accepted as exits.

Intent 2. To clarify that, in cases of conflict, more specific requirements or limitations in this Section take precedence over this general statement.

B. Clause 9.9.2.1.(1)(b) lists "an exterior passageway" as a permitted type of exit.

- If a below-grade door opens into an exterior passageway served by a stair at *each* end, the occupant can travel in opposite directions to two separate exits.
- This configuration satisfies **Article 9.9.9.2.**

9.9.9.2. Two Separate Exits

1) Except as provided in Sentence 9.9.7.3.(1) and except for dwelling units in a house with a secondary suite, where an egress door from a dwelling unit opens onto a public corridor or exterior passageway it shall be possible from the location where the egress door opens onto the corridor or exterior passageway to go in opposite directions to 2 separate exits unless the dwelling unit has a second and separate means of egress.

Sentence 9.9.9.2.(1)

Objective

OS3 - Safety in Use

Attributions

[F10-OS3.7]

Functional Statement: F10 - To facilitate the timely movement of persons to a safe place in an emergency.

Objective OS3.7 - To limit the probability that persons will be delayed in or impeded from moving to a safe place during an emergency.

Intent(s)

Intent 1. To limit the probability that persons will not have access to an alternative egress route in the event one route is blocked or obstructed in an emergency situation, which could lead to delays in the evacuation or movement of persons to a safe place, which could lead to harm to persons.

C. Article 9.9.9.2. requires bi-directional travel in public corridors/exterior passageways where a dwelling unit opens onto it, providing access to two separate exits. However, dwelling units in houses with secondary suites are exempt, acknowledging their lower risk. A design **voluntarily incorporating** two remotely located exits at opposite ends of a below-grade exterior passageway is deemed to satisfy the code's intent for two means of egress.

D. Because the occupant has a choice of two directions the condition in Clause 9.9.4.4.(1)(a) is not met, and the requirement to protect openings with wired glass/glass block **does not apply**.

E. For the bi-directional exemption to be valid, the two stairs must be sufficiently separated so that a single fire does not block both.

9.9.8.4. Location of Exits

1) Where more than one exit is required from a floor area, at least 2 exits shall be independent of each other and be placed remote from each other along the path of travel between them. (See Note A-9.9.8.4.(1).)

Sentence 9.9.8.4.(1)

Objective

OS1 - Fire Safety

Attributions

[F10-OS1.5]

Functional Statement: F10 - To facilitate the timely movement of persons to a safe place in an emergency.

Objective OS1.5 - To limit the probability that persons will be delayed in or impeded from moving to a safe place during a fire emergency

Intent(s)

Intent 1. To limit the probability that persons will not have access to an alternative exit in the event one exit is blocked or obstructed in a fire situation, which could lead to delays in the evacuation or movement of persons to a safe place, which could lead to harm to persons.

F: While Part 9 does not strictly mandate the 9 m separation found in Part 3 (Article 3.4.2.3.), Note A-9.9.8.4.(1) advises using Part 3 as a target. Therefore the two stairs in the below-grade passageway should be placed as far apart as possible (using the 9 m in Part 3 as a target) to ensure they function as truly separate exits.

G. While the application of **Article 9.9.4.4.** may be waived under the "bi-directional egress" exemption, the below-grade passageway itself is part of the exit and must be separated from the remainder of the building as per Article 9.9.4.2..

9.9.4.2. Fire Separations for Exits

1) Except as provided in Sentences (2) and (5) and Article 9.9.8.5., every exit other than an exterior doorway shall be separated from each adjacent floor area or from another exit

a) where there is a floor assembly above the floor area, by a fire separation having a fire-resistance rating not less than that required for the floor assembly above the floor area (see Article 9.10.9.12.), and

b) where there is no floor assembly above the floor area, by a fire separation having a fire-resistance rating not less than the greater of

i) that required by Subsection 9.10.8. for the floor assembly below, or

ii) 45 min.

2) Where an exit is located in a house with a secondary suite including their common spaces, the exit shall be protected by a continuous smoke-tight barrier of not less than 12.7 mm thick gypsum board installed on

a) both sides of walls separating the exit from the remainder of the building, and

b) the underside of floor-ceiling framing separating the exit from the remainder of the building.

5) The requirements in Sentences (1) and (2) do not apply to an exterior *exit* passageway provided the passageway has not less than 50% of its exterior sides open to the outdoors and is served by an *exit* stair at each end of the passageway.

H. Below-grade passageways typically consist of a retaining wall on one side and the building face on the other. Unless the passageway is exceptionally wide or terraced, it rarely achieves the "50% open" criteria. Therefore, the separation requirements of **Sentence (1)** or **(2)** generally remain applicable.

- **Clause 9.9.4.2(1)(a):** Where a building's main floor or exterior landing is situated over an exterior passageway, it must have a fire-resistance rating at least equal to that of the floor assembly above. In the case of houses with secondary suites, compliance with Sentence 9.9.4.2.(2) is required.
- **Sentence 9.9.4.2.(2):** This provision allows the exit walls and floor assemblies above to be constructed with standard **12.7 mm (1/2") gypsum board** rather than the Type X gypsum usually required for a 45-minute fire-resistance rating, as there only needs to be a smoke tight barrier between the secondary suite and primary dwelling unit.
- **Sentence 9.10.9.3.(2):** Doors in smoke-tight barriers shall a) be solid-core, wood doors at least 45 mm thick, and b) have a self-closing device.

Conclusion:

Article 9.9.4.4. **does not apply** to the proposed below-grade exterior passageway provided the following conditions are met:

- By providing an exit stair at each end of the passageway, the design offers two separate paths of travel. Because a stair no longer serves as the "only means of egress," the protection requirements of Clause 9.9.4.4.(1)(a) are not triggered.
- Per Article 9.9.8.4., the two stairs must be located remote from one another (targeting a 9 m separation) to significantly lower the risk of a fire obstructing both exit paths simultaneously.
- Although opening protection is waived, the passageway must remain a tenable exit. It must be separated from the building by a smoke-tight barrier (min. 12.7 mm gypsum board) with 45 mm solid-core, self-closing doors as per Sentences 9.9.4.2.(2) and 9.10.9.3.(2).

Definitions

For the purposes of this report and the application of **Article 9.9.4.4.**, the following terms are defined as:

Definition of Exterior Exit Stair for the Application of 9.9.4.4.

An exterior stair or ramp serving a *dwelling unit* shall be considered an **exterior exit stair or ramp** only if it meets one of the following vertical criteria:

- **Above Adjacent Ground Level:** The walking surface of the stair, ramp, or landing is **more than 1.5 m** above the adjacent finished ground level.
- **Below Adjacent Ground Level:** The stair or ramp serves an egress door located in an excavation or well where the adjacent finished ground level is **more than 600 mm** above the door threshold.

Definition of "Remotely Located" Egress for Below-Grade Passageways

To qualify for the bi-directional egress (below-grade) exemption, the exterior exit stairs must be remotely located to ensure that a single fire event does not render both paths untenable.

- **Note A-9.9.8.4.(1):** The distance between the two exterior exit stairs should be used as a design target of **9 m**, in alignment with the principles of Article 3.4.2.3.
- **Application:** Recognizing that the 9 m separation may be impracticable for some Part 9 building configurations, distances **less than 9 m** are permitted provided that:
 1. the exits are placed as far apart as possible within the constraints of the design, and
 2. the exits are not located so close together that a single fire plume would clearly block or contaminate both stairs simultaneously.

Ground-Adjacent Continuation of the Means of Egress

An exterior stair, ramp, or passageway located **not more than 1.5 m** above adjacent ground level. Based on **Article 9.9.9.3.** and **Sentence 3.3.4.4.(3)**, facilities at this elevation do not require redundant egress paths; therefore, they function as a continuation to the exit discharge rather than a structural *exit* requiring the opening protection prescribed in **Article 9.9.4.4.**

Unprotected Opening

As defined in **Article 1.4.1.2.**, a doorway, window, or opening other than one equipped with a *closure* having the required *fire-protection rating*. For the specific application of **Articles 9.9.4.4.** and **9.9.4.6.**, this document primarily addresses **glazed openings** (windows and glazed doors) capable of transmitting excessive radiant heat to the egress path, necessitating wired glass or glass block protection.

Conclusion

The City of Edmonton has determined that the application of Article 9.9.4.4. is technically justified only when the egress facility presents a specific hazard of delay or entrapment (Objective OS1.5).

1. Stairs rising not more than 1.5 m (above adjacent ground level) or not more than 600 mm (below adjacent ground level) are ground-adjacent continuations of the means of egress and do not warrant Article 9.9.4.4. protection.
2. Below-adjacent ground level passageways providing access to two remotely located stairs (ideally separated by 9 m) create a redundant egress system. This negates the "only means of egress" trigger in Clause 9.9.4.4.(1)(a), rendering window protection unnecessary, provided the passageway walls meet the fire separation requirements of Article 9.9.4.2.