

STANDATA errata 23-BCE-001

Building

Errata

Date Issued: May 2024

Page 1 of 3

Discussion

The National Building Code - 2023 Alberta Edition came into force on May 1, 2024. It was discovered that the published document contains some technical errors. This errata corrects those errors.

Code References

Code Reference	Change (highlighted in yellow)	Description of Change
Division B		
3.2.5.7. Water Supply Coefficient 2) The private water supply referred to in Clause (1)(b) shall be a) capable of being delivered at a rate of not less than i) 2 700 L/min for a <i>building</i> required to have a quantity less than 75 000 L, and ii) 3 800 L/min for a <i>building</i> required to have a quantity of 75 000 L or greater, and b) provided with a i) dry hydrant conforming to Chapter 8 of “Standard on Water Supplies for Suburban and Rural Fire Fighting,” or ii) pressurized hydrant conforming to the requirements of NFPA 24, “Standard for the Installation of Private Fire Service Mains and Their Appurtenances.”	3.2.5.7. Water Supply Coefficient 2) The private water supply referred to in Clause (1)(b) shall be a) capable of being delivered at a rate of not less than i) 2 700 L/min for a <i>building</i> required to have a quantity less than 75 000 L, and ii) 3 800 L/min for a <i>building</i> required to have a quantity of 75 000 L or greater, and b) provided with a i) dry hydrant conforming to Chapter 8 of NFPA 1142 “Standard on Water Supplies for Suburban and Rural Fire Fighting,” or ii) pressurized hydrant conforming to the requirements of NFPA 24, “Standard for the Installation of Private Fire Service Mains and Their Appurtenances.”	The Standard reference “NFPA 1142” was added.
3.6.4.7. Access to Roof-Mounted HVAC Equipment 1) A <i>building</i> shall be provided with access to the roof in conformance with Clauses 4.1.4.5 and 4.1.4.6 of CSA B149.1, “Natural gas and propane installation code,” if heating, ventilating or air-conditioning equipment is installed on the roof. 2) Fixed access shall be provided to rooftop heating, ventilating or air-	3.6.4.7. Access to Roof-Mounted HVAC Equipment 1) A <i>building</i> shall be provided with access to the roof in conformance with Clauses 4.14.5 and 4.14.6 of CSA B149.1, “Natural gas and propane installation code,” if heating, ventilating or air-conditioning equipment is installed on the roof. 2) Fixed access shall be provided to rooftop heating, ventilating or air-	The referenced clauses were changed to “4.14.5” and “4.14.6”.

conditioning equipment that is installed on a sloped roof.	conditioning equipment that is installed on a sloped roof.																	
<p>3.8.4.3. Bathrooms</p> <p>1) An adaptable dwelling unit shall be provided with a bathroom containing</p> <p>a) a shower conforming to Clauses 3.8.3.17.(1)(a) to (e) and (h), or</p> <p>b) a bathtub conforming to Clauses 3.8.3.18.(1)(a) to (d).</p>	<p>3.8.4.3. Bathrooms</p> <p>1) An adaptable dwelling unit shall be provided with a bathroom containing</p> <p>a) a shower conforming to Clauses 3.8.3.17.(1)(a) to (e) and (h), or</p> <p>b) a bathtub conforming to Clauses 3.8.3.18.(1)(a) to (d).</p>	The term “dwelling unit” was italicized.																
<p>Table 4.1.8.4.-B</p> <p>Site Classes, S, for Site Designation Xs Forming Part of Sentence 4.1.8.4.(3)</p> <p>Row “E,” bullet point #3</p> <table border="1"> <tr> <td> <ul style="list-style-type: none"> undrained shear strength, $s_u < 25$ kPa </td> </tr> </table>	<ul style="list-style-type: none"> undrained shear strength, $s_u < 25$ kPa 	<p>Table 4.1.8.4.-B</p> <p>Site Classes, S, for Site Designation Xs Forming Part of Sentence 4.1.8.4.(3)</p> <p>Row “E,” bullet point #3</p> <table border="1"> <tr> <td> <ul style="list-style-type: none"> undrained shear strength, $\bar{s}_u < 25$ kPa </td> </tr> </table>	<ul style="list-style-type: none"> undrained shear strength, $\bar{s}_u < 25$ kPa 	The variable “ s_u ” was changed to “ \bar{s}_u ”.														
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<p>Table 9.25.2.1.</p> <p>Insulation Requirements Forming Part of Sentence 9.25.2.1.(2)</p> <p>Rows “Ceiling-below-attic assembly” and “Cathedral ceiling or flat roof assembly”</p> <table border="1"> <tr> <td>Separating attached...</td> <td>6.0</td> </tr> <tr> <td>Separating heated...</td> <td>6.0</td> </tr> <tr> <td>Separating attached...</td> <td>4.67</td> </tr> <tr> <td>Separating heated...</td> <td>4.67</td> </tr> </table>	Separating attached...	6.0	Separating heated...	6.0	Separating attached...	4.67	Separating heated...	4.67	<p>Table 9.25.2.1.</p> <p>Insulation Requirements Forming Part of Sentence 9.25.2.1.(2)</p> <p>Rows “Ceiling-below-attic assembly” and “Cathedral ceiling or flat roof assembly”</p> <table border="1"> <tr> <td>Separating attached...</td> <td>6.0</td> </tr> <tr> <td>Separating heated...</td> <td>6.0</td> </tr> <tr> <td>Separating attached...</td> <td>4.67</td> </tr> <tr> <td>Separating heated...</td> <td>4.67</td> </tr> </table>	Separating attached...	6.0	Separating heated...	6.0	Separating attached...	4.67	Separating heated...	4.67	A horizontal line was added in between the values in the column “Minimum Thermal Resistance, RSI”.
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Division C																		
<p>2.2.1.4. Barrier-Free Relaxations</p> <p>1) The <i>Provincial Barrier-Free Administrator</i> and <i>Provincial Building Administrator</i> may grant relaxation of one or more of the requirements of Section 3.8. of Division B if an owner can demonstrate to the satisfaction of the <i>Provincial Barrier-Free Administrator</i> and <i>Provincial Building Administrator</i> that</p> <p>a) the specific requirements are unnecessary, or</p> <p>b) extraordinary circumstances prevent conformance.</p>	<p>2.2.1.4. Barrier-Free Relaxations</p> <p>1) The <i>Provincial Barrier-Free Administrator</i> and <i>Provincial Building Administrator</i> may grant relaxation of one or more of the requirements of Section 3.8. of Division B if an owner can demonstrate to the satisfaction of the <i>Provincial Barrier-Free Administrator</i> or <i>Provincial Building Administrator</i> that</p> <p>a) the specific requirements are unnecessary, or</p> <p>b) extraordinary circumstances prevent conformance.</p>	The word “and” was changed to “or”.																
<p>Appendix B</p> <p>Footnotes</p> <p>(2) Schedule B should be attached to the drawings and specifications for a building permit.</p>	<p>Appendix B</p> <p>Footnotes</p> <p>(2) Schedules B should be attached to the drawings and specifications submitted for a building permit.</p>	<p>An “s” was added to the end of “Schedule.”</p> <p>The word “submitted” was added.</p>																
<p>Appendix B</p> <p>Schedules A and C1</p> <p>*in the header box*</p>	<p>Appendix B</p> <p>Schedules A and C1</p> <p>*in the header box*</p>	The term “Registered Professional of Record” was changed to “Coordinating																

Project Reference/Components (for Registered Professional of Record)	Project Reference/Components (for Coordinating Registered Professional)	Registered Professional.”
<p>Appendix B Schedule B (c) they shall notify the <i>coordinating registered professional</i> should they or the undersigned <i>professional permit holder</i> (if applicable) cease to be retained at any time during the <i>project</i>. Notification shall be given before the date the <i>registered professional of record</i> or the undersigned <i>professional permit holder</i> (if applicable) ceases to be retained; if that is not possible, then as soon as possible; and</p>	<p>Appendix B Schedule B (c) they shall notify the <i>coordinating registered professional</i> should they or the undersigned <i>professional permit holder</i> (if applicable) cease to be retained at any time during the <i>project</i>. Notification shall be given before the date the <i>registered professional of record</i> or the undersigned <i>professional permit holder</i> (if applicable) ceases to be retained; if that is not possible, then as soon as possible; and</p>	<p>The word “undersigned” was deleted.</p>

Unless stated otherwise, all Code references in this STANDATA are to the National Building Code - 2023 Alberta Edition

Issued by the Provincial Building Administrator

[Original signed]
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Part 2

Administrative Provisions

Section 2.1. Application

2.1.1. Application

2.1.1.1. Application

1) This Part applies to all *buildings* covered in this Code. (See Article 1.1.1.1. of Division A.)

Section 2.2. Administration

2.2.1. Administration

2.2.1.1. Conformance with Administrative Requirements

1) This Code shall be administered in conformance with the Safety Codes Act and its Regulations and can be cited as the National Building Code – 2023 Alberta Edition.

2.2.1.2. Variances

(See Note A-2.2.1.2.)

1) A written request for a variance may be submitted to the *Provincial Building Administrator*.

2) A request referred to in Sentence (1) shall conform to the requirements stated in Section 2.3.

3) After a request referred to in Sentence (1) has been reviewed, the *Provincial Building Administrator* may issue a written variance.

4) The *Provincial Building Administrator* may include terms or conditions in the variance referred to in Sentence (3).

5) A variance referred to in Sentence (3) is applicable throughout Alberta.

2.2.1.3. Interpretations

1) A written request for an interpretation may be submitted to the *Provincial Building Administrator*, and the request shall include

- a) specific Code references, and
- b) a statement identifying the ambiguity or lack of clarity resulting in the request for an interpretation.

2) After a request referred to in Sentence (1) has been reviewed, the *Provincial Building Administrator* may issue a written interpretation.

3) An interpretation referred to in Sentence (2) is applicable throughout Alberta.

2.2.1.4.**2.2.1.4. Barrier-Free Relaxations**

1) The *Provincial Barrier-Free Administrator* and *Provincial Building Administrator* may grant relaxation of one or more of the requirements of Section 3.8. of Division B if an owner can demonstrate to the satisfaction of the *Provincial Barrier-Free Administrator* or *Provincial Building Administrator* that

- a) the specific requirements are unnecessary, or
- b) extraordinary circumstances prevent conformance.

2.2.2. Information Required for Proposed Work**2.2.2.1. General Information Required**

1) Sufficient information shall be provided to show that the proposed *work* will conform to this Code and whether or not it may affect adjacent property.

2) Plans shall be drawn to scale and shall indicate the nature and extent of the *work* or proposed *occupancy* in sufficient detail to establish that, when completed, the *work* and the proposed *occupancy* will conform to this Code.

3) When proposed *work* is changed during the *project*, information on the changes shall comply with the requirements of this Section for proposed *work*.

4) Drawings and specifications shall include, so far as is applicable,

- a) floor plans on a scale of not less than 1:100,
- b) dimensions of all rooms,
- c) a description of the purpose of all rooms,
- d) the location of all walls, *partitions*, doorways, windows and other openings,
- e) the finish of all floors, walls and ceilings,
- f) the location and description of all fixed equipment, and
- g) *building* sections, elevations and details sufficient to determine if the proposed *work* meets the requirements of this Code.

2.2.2.2. Site Plans

1) If requested by the *authority having jurisdiction*, the owner shall submit an up-to-date plan of survey or real property report prepared by a registered Alberta Land Surveyor.

2) Site plans shall show

- a) by dimensions from property lines, the location of the proposed *building*,
- b) the similarly dimensioned location of every adjacent existing *building* on the property,
- c) existing and finished ground levels to an established datum at or adjacent to the site, and
- d) the access routes for firefighting.

2.2.2.3. Dimensional Tolerances

1) If life safety will not be reduced, the *authority having jurisdiction* may accept a minor variation, not more than 2%, of a dimension given in this Code.

2.2.2.4. Fabrication and Erection of Steel

1) If requested by the *authority having jurisdiction*, the owner shall submit evidence, before the *project* begins, that all fabricators and erectors of welded construction for *buildings* designed in accordance with Part 4 of Division B are certified by the Canadian Welding Bureau.

2.2.2.5. Aquatic Facilities

1) Before a slide or other piece of play equipment is permanently installed or constructed in a *swimming pool* or *water spray park*, the design and location shall be submitted for review and acceptance by the *authority having jurisdiction*.

3.2.5.5. Location of Access Routes

- 1)** Access routes required by Article 3.2.5.4. shall be located so that the principal entrance and every access opening required by Articles 3.2.5.1. and 3.2.5.2. are located not less than 3 m and not more than 15 m from the closest portion of the access route required for fire department use, measured horizontally from the face of the *building*.
- 2)** Access routes shall be provided to a *building* so that
 - a) for a *building* provided with a fire department connection, a fire department pumper vehicle can be located adjacent to the hydrants referred to in Article 3.2.5.15.,
 - b) for a *building* not provided with a fire department connection, a fire department pumper vehicle can be located so that the length of the access route from a hydrant to the vehicle plus the unobstructed path of travel for the firefighter from the vehicle to the *building* is not more than 90 m, and
 - c) the unobstructed path of travel for the firefighter from the vehicle to the *building* is not more than 45 m.
- 3)** The unobstructed path of travel for the firefighter required by Sentence (2) from the vehicle to the *building* shall be measured from the vehicle to the fire department connection provided for the *building*, except that if no fire department connection is provided, the path of travel shall be measured to the principal entrance of the *building*.
- 4)** If a portion of a *building* is completely cut off from the remainder of the *building* so that there is no access to the remainder of the *building*, the access routes required by Sentence (2) shall be located so that the unobstructed path of travel from the vehicle to one entrance of each portion of the *building* is not more than 45 m.

3.2.5.6. Access Route Design

- 1)** A portion of a roadway or yard provided as a required access route for fire department use shall
 - a) have a clear width not less than 6 m, unless it can be shown that lesser widths are satisfactory,
 - b) have a centre-line radius not less than 12 m,
 - c) have an overhead clearance not less than 5 m,
 - d) have a change of gradient not more than 1 in 12.5 over a minimum distance of 15 m,
 - e) be designed to support the expected loads imposed by firefighting equipment and be surfaced with concrete, asphalt or other material designed to permit accessibility under all climatic conditions,
 - f) have turnaround facilities for any dead-end portion of the access route more than 90 m long, and
 - g) be connected with a public thoroughfare.

(See Note A-3.2.5.6.(1).)

- 2)** For *buildings* conforming to Article 3.2.2.51. or 3.2.2.60., no portion of the access route described in Sentence 3.2.2.10.(3) shall be more than 20 m below the uppermost floor level.

3.2.5.7. Water Supply

(See Note A-3.2.5.7.)

- 1)** Except as provided in Sentences (3) to (5), and except for a *building* that is neither more than 3 *storeys* in *building height* nor more than 600 m² in *building area*, a *building* shall have water available for firefighting purposes that is provided by a
 - a) piped municipal water supply capable of being delivered at a
 - i) rate of not less than 3 800 L/min, and
 - ii) residual pressure of not less than 140 kPa, or
 - b) private water supply that is not less than the quantity derived from the following formula:

$$Q = V \times O \times S$$

where

- Q = minimum water supply (litres),
- V = total *building* volume (cubic metres),
- O = water supply coefficient (from Table 3.2.5.7.), and
- S = spatial coefficient whose value is 1.5 for a *building* that has any *limiting distance* less than 7.5 m, otherwise whose value is 1.0.

Table 3.2.5.7.
Water Supply Coefficient
Forming Part of Sentence 3.2.5.7.(1)

Type of Construction	Classification by Group and Division in Accordance with Table 3.1.2.1.				
	A-1, A-3, F-3	A-2, B-1, B-2, B-3, C, D	A-4	E, F-2	F-1
	Applicable Water Supply Coefficient				
A <i>building</i> of <i>noncombustible construction</i> with all <i>loadbearing</i> walls, columns and arches, having a <i>fire-resistance rating</i> at least equivalent to that required for the supported assembly, but not less than 45 min	11	10	14	17	23
A <i>building</i> of <i>noncombustible construction</i> in accordance with Article 3.1.5.1.	17	15	20	25	34
A <i>building</i> having all structural members of <i>noncombustible</i> material, or if of <i>combustible</i> material, a <i>fire-resistance rating</i> of at least 45 min, or of <i>heavy timber construction</i>	22	19	27	34	45
A <i>building</i> of <i>combustible construction</i>	34	27	40	50	67

- 2)** The private water supply referred to in Clause (1)(b) shall be
 - a) capable of being delivered at a rate of not less than
 - i) 2 700 L/min for a *building* required to have a quantity less than 75 000 L, and
 - ii) 3 800 L/min for a *building* required to have a quantity of 75 000 L or greater, and
 - b) provided with a
 - i) dry hydrant conforming to Chapter 8 of NFPA 1142, "Standard on Water Supplies for Suburban and Rural Fire Fighting," or
 - ii) pressurized hydrant conforming to the requirements of NFPA 24, "Standard for the Installation of Private Fire Service Mains and Their Appurtenances."
- 3)** Capacity requirements under Sentence (1) do not apply to a *building* having a standpipe system conforming to the requirements of NFPA 14, "Standard for the Installation of Standpipe and Hose Systems."
- 4)** Capacity requirements under Sentence (1) do not apply to a *building* that is *sprinklered* in conformance with
 - a) NFPA 13, "Standard for the Installation of Sprinkler Systems,"
 - b) NFPA 13R, "Standard for the Installation of Sprinkler Systems in Low-Rise Residential Occupancies," or
 - c) NFPA 13D, "Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes."
- 5)** Sentence (1) does not apply to a *building* classified as a *medium-hazard industrial occupancy* or *low-hazard industrial occupancy*, provided
 - a) the *building* is
 - i) not more than 1 200 m² in *building area*,
 - ii) not more than 1 *storey* in *building height*,
 - iii) of *noncombustible construction*, and
 - iv) not intended for the manufacture or storage of *combustible* materials and does not contain a *mercantile occupancy*,

3.6.4. Horizontal Service Spaces and Service Facilities

3.6.4.1. Scope

1) This Subsection applies to *horizontal service spaces* and service facilities, including ceiling spaces, duct spaces, crawl spaces and *attic or roof spaces*.

3.6.4.2. Fire Separations for Horizontal Service Spaces

1) Except as provided in Article 3.6.3.5., a *horizontal service space* that penetrates a required vertical *fire separation* shall be separated from the remainder of the *building* it serves in conformance with Sentence (2).

2) If a *horizontal service space* or other concealed space is located above a required vertical *fire separation* other than a vertical shaft, this space need not be divided at the *fire separation* as required by Article 3.1.8.3. provided the construction between this space and the space below is a *fire separation* with a *fire-resistance rating* equivalent to that required for the vertical *fire separation*, except that the *fire-resistance rating* is permitted to be not less than 30 min if the vertical *fire separation* is not required to have a *fire-resistance rating* more than 45 min. (See Note A-3.6.4.2.(2).)

3.6.4.3. Plenum Requirements

1) A concealed space used as a *plenum* within a floor assembly or within a roof assembly need not conform to Sentence 3.1.5.18.(1) and Article 3.6.5.1., provided

- a) all materials within the concealed space have a *flame-spread rating* not more than 25 and a smoke developed classification not more than 50, except for
 - i) tubing for pneumatic controls,
 - ii) optical fibre cables and electrical wires and cables with *combustible* insulation, jackets or sheathes that are used for the transmission of voice, sound or data and conform to Sentences 3.1.4.3.(2) and 3.1.5.21.(2),
 - iii) totally enclosed non-metallic raceways with an FT6 rating, when tested in accordance with Clause 3.1.5.23.(1)(a), in *buildings* required to be of *noncombustible construction* or in *buildings* or parts of *buildings* permitted to be of *encapsulated mass timber construction*, and
 - iv) totally enclosed non-metallic raceways with an FT4 rating, when tested in accordance with Clause 3.1.5.23.(1)(a), in *buildings* permitted to be of *combustible construction*, and
- b) the supports for the ceiling membrane are of *noncombustible* material having a melting point not below 760°C.

2) If a concealed space referred to in Sentence (1) is used as a return-air *plenum* and incorporates a ceiling membrane that forms part of the required *fire-resistance rating* of the assembly, every opening through the membrane shall be protected by a *fire stop flap* that

- a) stops the flow of air into the concealed space in the event of a fire,
- b) is supported in a manner that will maintain the integrity of the ceiling membrane for the duration of time required to provide the required *fire-resistance rating*,
- c) conforms to CAN/ULC-S112.2, "Standard Method of Fire Test of Ceiling Firestop Flap Assemblies," and
- d) activates at a temperature approximately 30°C above the normal maximum temperature that occurs in the return-air *plenum*, whether the air duct system is operating or shut down.

3.6.4.4. Attic or Roof Space Access

1) An *attic or roof space* more than 600 mm high shall be provided with access from the floor immediately below by a hatchway not less than 550 mm by 900 mm or by a stairway.

3.6.4.5.**3.6.4.5. Horizontal Service Space Access**

1) A *horizontal service space*, consisting of ceiling and duct spaces, which is more than 1 200 mm high and 600 mm wide shall have inspection doors not less than 300 mm in both horizontal and vertical dimensions placed so that the entire interior of the duct or space can be viewed.

3.6.4.6. Crawl Space Access

1) A crawl space shall have at least one access opening not less than 550 mm by 900 mm.

3.6.4.7. Access to Roof-Mounted HVAC Equipment

1) A *building* shall be provided with access to the roof in conformance with Clauses 4.14.5 and 4.14.6 of CSA B149.1, "Natural gas and propane installation code," if heating, ventilating or air-conditioning equipment is installed on the roof.

2) Fixed access shall be provided to rooftop heating, ventilating or air-conditioning equipment that is installed on a sloped roof.

3.6.5. Air Duct and Plenum Systems**3.6.5.1. Duct Materials**

1) Except as permitted by Sentences (2) to (5) and Article 3.6.4.3., all ducts, duct connectors, associated fittings and *plenums* used in air duct systems shall be constructed of steel, aluminum alloy, copper, clay or other *noncombustible* material.

2) Except as permitted by Sentence (3), ducts, associated fittings and *plenums* are permitted to contain *combustible* material provided they

- a) conform to the appropriate requirements for Class 1 duct materials in CAN/ULC-S110, "Standard Methods of Test for Air Ducts,"
- b) conform to Article 3.1.5.18. in a *building* required to be of *noncombustible construction* or in a *building* or part of a *building* permitted to be of *encapsulated mass timber construction*,
- c) conform to Subsection 3.1.9.,
- d) are used only in horizontal runs in a *building* required to be of *noncombustible construction* or in a *building* or part of a *building* permitted to be of *encapsulated mass timber construction*,
- e) are not used in vertical runs serving more than 2 *storeys* in a *building* permitted to be of *combustible construction*, and
- f) are not used in air duct systems in which the air temperature could be more than 120°C.

3) *Combustible* ducts which are part of a duct system conveying only ventilation air and are contained entirely within a *dwelling unit* need not comply with the requirements of Sentences (1) and (2).

4) Duct sealants shall have a *flame-spread rating* not more than 25 and a smoke developed classification not more than 50.

5) Duct connectors that contain *combustible* materials and that are used between ducts and air outlet units shall

- a) conform to the appropriate requirements for Class 1 air duct materials in CAN/ULC-S110, "Standard Methods of Test for Air Ducts,"
- b) be not more than 4 m long,
- c) be used only in horizontal runs, and
- d) not penetrate a required *fire separation*.

3.6.5.2. Vibration Isolation Connectors

1) Except as permitted by Sentence (2), vibration isolation connectors in air duct systems shall be *noncombustible*.

- 2)** *Combustible* fabric vibration isolation connectors are permitted provided they
- a) are not more than 250 mm long,

- c) they shall be arranged so that
 - i) at least two designated spaces are located side by side, and
 - ii) at least one fixed seat is located beside each designated space,
- d) they shall be located adjoining a *barrier-free* path of travel without infringing on egress from any row of seating or any aisle requirements, and
- e) they shall be situated, as part of the designated seating plan, to provide a choice of viewing location and a clear view of the event taking place in each
 - i) floor level of seating, and
 - ii) viewing section.

(See Note A-3.8.2.3.(5) and (6) and 3.8.3.22.(1) and (4).)

2) Spaces designated for wheelchair use in waiting rooms or areas as required by Sentence 3.8.2.3.(4) shall

- a) be clear and level, and
- b) comply with Clauses (1)(b) and (d).

3) Adaptable seats required by Sentence 3.8.2.3.(5) shall

- a) be located adjoining an aisle without infringing on egress from any row of seating or any aisle requirements,
- b) be equipped with a movable or removable armrest on the side of the seat adjoining the aisle, and
- c) be situated, as part of the designated seating plan, to provide a choice of viewing location and a clear view of the event taking place.

4) Storage spaces for mobility aids shall be provided in a location

- a) that is on the same level as and in proximity to the adaptable seats required by Sentence 3.8.2.3.(5),
- b) that is within the room side of the *fire separation* required by Article 3.3.2.2., and
- c) where they will not infringe on egress.

(See Notes A-3.8.3.22.(4) and A-3.8.2.3.(5) and (6) and 3.8.3.22.(1) and (4).)

3.8.3.23. Parking Stalls

1) A parking stall intended for use by persons using a wheelchair or other mobility aid shall

- a) be designed as a 2.4 m wide parking stall adjacent to a 2.4 m wide access aisle where the access aisle is demarcated to indicate no parking,
- b) have a firm, slip-resistant and level surface,
- c) be clearly marked and identified by
 - i) a vertically mounted sign, located near the centre line of each designated stall, with the centre of the sign between 1 600 to 2 500 mm from the finished surface, and
 - ii) the International Symbol of Access painted on the pavement,
- d) be located adjoining a *barrier-free* path of travel leading to the nearest *barrier-free* entrance, and
- e) be designed so that parked vehicles do not obstruct access onto an elevated and level surface.

(See Note A-3.8.3.23.(1).)

3.8.4. Adaptable Dwelling Units

3.8.4.1. Application

1) Where adaptable *dwelling units* are required in accordance with Sentence 3.8.1.1.(3), they shall be designed in accordance with this Subsection.

3.8.4.2. General Accessibility

1) At least one entrance serving an adaptable *dwelling unit* shall be *barrier-free*. (See also Article 3.8.2.2. for common entrances to *buildings* and Article 3.8.2.5. for parking stalls.)

3.8.4.3.

- 2)** A *barrier-free* path of travel that complies with Subsection 3.8.3. shall be provided between a *barrier-free* entrance referred to in Sentence (1) and
- a designated *barrier-free* parking area not in a *storage garage*, where a parking area not in a *storage garage* is provided,
 - a designated *barrier-free* parking area on at least one parking level in a *storage garage*, where a *storage garage* is provided,
 - an exterior passenger-loading zone, where provided, and
 - a public thoroughfare.
- 3)** A *barrier-free* path of travel shall be provided between the interior living space of the *dwelling unit* and any ancillary space serving it, including the garage, balcony or deck.
- 4)** Entryways, kitchens, washrooms, laundry rooms and other areas of a *dwelling unit* shall be designed with an unobstructed turning diameter of not less than 1 700 mm.
- 5)** Openable windows shall
- be equipped with opening devices located not more than 60 mm above the window sill and of a design that does not require tight grasping, pinching with fingers, or twisting of the wrist as the only means of operation, and
 - be located so that the sill is not less than 400 mm from the floor level and not more than 865 mm above the floor level.
- 6)** Controls for the operation of *building* services or safety devices, including electrical switches, electrical panels, thermostats and intercom switches, shall conform to Article 3.8.3.8.
- 7)** Electrical receptacles shall be mounted between 400 mm and 1 200 mm above the finished floor.
- 8)** Every doorway within the *dwelling unit* shall have a clear width not less than 850 mm when the door is in the open position.
- 9)** A doorway referred to in Sentence (8) or present in the *barrier-free* path of travel referred to in Sentences (1) to (3) shall conform to Sentences 3.8.3.6.(5) and (11).
- 10)** Door and window frames and baseboards shall be contrasting in colour to doors, walls and floors.

3.8.4.3.**Bathrooms**

- 1)** An adaptable *dwelling unit* shall be provided with a bathroom containing
- a shower conforming to Clauses 3.8.3.17.(1)(a) to (e) and (h), or
 - a bathtub conforming to Clauses 3.8.3.18.(1)(a) to (d).
- 2)** The bathroom referred to in Sentence (1) shall be provided with a lavatory conforming to Clauses 3.8.3.16.(1)(b) to (e).
- 3)** The bathroom referred to in Sentence (1) shall be provided with a water closet conforming to Article 3.8.3.14. and Subclause 3.8.3.12.(1)(e)(ii).
- 4)** The bathroom referred to in Sentence (1) shall be designed to allow for the installation of grab bars conforming to
- Clauses 3.8.3.12.(1)(f) and (g) to serve the water closet,
 - Clause 3.8.3.17.(1)(f) to serve the shower where one is provided, and
 - Clause 3.8.3.18.(1)(f) to serve the bathtub where one is provided.

3.8.4.4.**Kitchens**

- 1)** Every kitchen counter shall have at least one section that complies with Article 3.8.3.20.
- 2)** Counters intended for the installation of a kitchen sink or a *cooktop* shall be provided with a means of adjusting their height so that the counter surface is
- not less than 710 mm above the finished floor, and
 - not more than the height of the adjacent counter surface.

Appendix B

Schedules of Professional Involvement

Schedules of Professional Involvement. The Schedules of Professional Involvement are intended to clearly define the relationship between the owner and the required *registered professionals*. They also show how the various professional disciplines will be coordinated. The coordination relates to both the design and *field review* of all aspects of the *project*.

The following Schedules are provided on the following pages:

- **Schedule A** Confirmation of Commitment by Owner and *Coordinating Registered Professional*⁽¹⁾
- **Schedule B** Assurance of Professional Design Involvement and Commitment for *Field Reviews* by the *Registered Professional of Record*⁽²⁾
- **Schedule C-1** Assurance of Compliance by the *Coordinating Registered Professional*⁽³⁾
- **Schedule C-2** Assurance of *Field Reviews* and Compliance by the *Registered Professional of Record*⁽³⁾
- **Schedule C-3** Assurance of Delegated Design Compliance and *Field Reviews* by the Delegated Professional⁽³⁾

(1) Schedule A should be submitted at the earliest opportunity, but no later than the building permit application.

(2) Schedules B should be attached to the drawings and specifications submitted for a building permit.

(3) Schedules C-1, C-2 and C-3 should be submitted after substantial completion of the project.

Building Permit Number
(for Authority Having Jurisdiction)

Project Reference / Components
(for Coordinating Registered Professional)

SCHEDULE A
CONFIRMATION OF COMMITMENT BY OWNER AND
COORDINATING REGISTERED PROFESSIONAL

- Notes:
1. Italicized words contained in this schedule have the same meanings as defined in the National Building Code – 2023 Alberta Edition (NBC(AE)).
 2. This schedule shall be submitted by the owner to the *authority having jurisdiction* before issuance of a *building permit*.
 3. If this schedule is signed by the owner’s agent, a letter of appointment shall be attached to this schedule. If the owner is a corporation, the letter of appointment shall be signed by the owner’s designated representative and the owner’s designated representative shall set forth their position in the corporation.
 4. This schedule is endorsed by the Alberta Association of Architects and the Association of Professional Engineers and Geoscientists of Alberta. Both associations have a user guide available on their website that provides information on the use of this schedule.

To: the *authority having jurisdiction*

Name of *authority having jurisdiction* (print)

Re:

Name of *project* (print)

Address of *project* (print)

Legal survey description of *project* (print)

The undersigned owner has retained

Name of *registered professional*

of

Name of *professional permit holder* (if applicable)

as a *coordinating registered professional* to coordinate the design and *field reviews* of the *registered professionals of record* required for this *project*. The undersigned owner has confirmed the *coordinating registered professional* has the relevant experience for the *project* and has confirmed the *coordinating registered professional* and the *professional permit holder* they are appointed by (if applicable) are licensed in accordance with the Architects Act or the Engineering and Geoscience Professions Act.

Building Permit Number
(for Authority Having Jurisdiction)

Project Reference / Components
(for Coordinating Registered Professional)

SCHEDULE A - Continued

The undersigned owner shall identify the *constructor* to the *authority having jurisdiction* as soon as possible.

Name of *constructor* (if known)

Constructor's contact information:

The undersigned owner shall

- (a) ensure the relationship between the *coordinating registered professional* and the *constructor* is clear with regard to meeting the Safety Codes Act (SCA) related requirements of the *project*;
- (b) notify the *authority having jurisdiction* should the undersigned *coordinating registered professional* or the undersigned *professional permit holder* (if applicable) cease to be retained at any time during the *project*. Notification shall be given before the date the *coordinating registered professional* or the *professional permit holder* (if applicable) ceases to be retained; if that is not possible, then as soon as possible;
- (c) cease work on the portion of the *project* for which the undersigned *coordinating registered professional* was responsible should the *coordinating registered professional* or the undersigned *professional permit holder* (if applicable) cease to be retained until such time as
 - (i) a new *coordinating registered professional* or the *professional permit holder* the *coordinating registered professional* is appointed by (if applicable) is retained, and
 - (ii) a new Schedule A is filed with the *authority having jurisdiction*;
- (d) notify the *authority having jurisdiction* should a *registered professional of record* or the *professional permit holder* the *registered professional of record* is appointed by (if applicable) cease to be retained at any time during the *project*. Notification shall be given before the date the *registered professional of record* or the *professional permit holder* the *registered professional of record* is appointed by (if applicable) ceases to be retained; if that is not possible, then as soon as possible; and
- (e) cease work on the portion of the *project* for which the *registered professional of record* was responsible should a *registered professional of record* or the *professional permit holder* the *registered professional of record* is appointed by (if applicable) cease to be retained until such time as
 - (i) a new *registered professional of record* or the *professional permit holder* the *registered professional of record* is appointed by (if applicable) is retained, and
 - (ii) a new Schedule B is filed with the *authority having jurisdiction*.

Building Permit Number
 (for Authority Having Jurisdiction)

Project Reference / Components
 (for Coordinating Registered Professional)

SCHEDULE A - Continued

The undersigned *coordinating registered professional* shall

- (a) identify the *project* scope and the details of the *project*;
- (b) determine if professional involvement is required by the NBC(AE), SCA, Architects Act, Engineering and Geoscience Professions Act and *authority having jurisdiction*. A building code analysis to support the *coordinating registered professional's* determination of professional involvement shall be attached to this schedule or included with the drawings and specifications submitted in support of the *building permit* application;
- (c) document the *registered professionals of record* and the *professional permit holder* each *registered professional of record* is appointed by (if applicable) that will perform the following work as applicable
 - (i) Architectural/licensed interior design
 - (ii) Structural
 - (iii) Mechanical
 - (iv) Electrical
 - (v) Geotechnical
- (d) identify all authorized entities involved in the *project*
 - (i) *Authority having jurisdiction*
 - (ii) Owner, owner's designated representative and the owner's agent (if applicable)
 - (iii) *Professional permit holders*
 - (iv) *Coordinating registered professional*
 - (v) *Registered professionals of record*

the list of authorized entities shall be attached to this schedule or included with the drawings and specifications submitted in support of the *building permit* application;
- (e) confirm, through documentation, that all *registered professionals of record* and *professional permit holders* involved in the *project* are competent to perform their responsibilities and are licensed with a sufficient scope of practice in accordance with the Architects Act or the Engineering and Geoscience Professions Act. (See Note A-1.4.1.2.(1) of Division A of the NBC(AE).);
- (f) document changes to the authorized entities involved in the *project*;
- (g) document changes to the *project* scope;
- (h) coordinate the design done by the *registered professionals of record* to ensure that the design will substantially comply with the NBC(AE) and the SCA;
- (i) obtain Schedule C-2 from each *registered professional of record* with supporting Schedules C-3 (if applicable) attached to ensure that *field reviews* have been completed and the final design of the *project* (including approved changes), as constructed, substantially complies with the NBC(AE) and SCA;

Building Permit Number
(for Authority Having Jurisdiction)

Project Reference / Components
(for Coordinating Registered Professional)

SCHEDULE A - Continued

- (j) ensure authenticated documents submitted to the *coordinating registered professional* are authenticated by a *registered professional* in accordance with the requirements of the Architects Act or the Engineering and Geoscience Professions Act;
- (k) notify the owner and *authority having jurisdiction* should they or the undersigned *professional permit holder* (if applicable) cease to be retained at any time during the *project*. Notification shall be given before the date the *coordinating registered professional* or the *professional permit holder* (if applicable) ceases to be retained; if that is not possible, then as soon as possible; and
- (l) notify the owner and *authority having jurisdiction* should a *registered professional of record* or the *professional permit holder* the *registered professional of record* is appointed by (if applicable) cease to be retained at any time during the *project*. Notification shall be given before the date the *registered professional of record* or the *professional permit holder* the *registered professional of record* is appointed by (if applicable) ceases to be retained; if that is not possible, then as soon as possible.

All information required above shall be fully transparent and readily available to all authorized entities involved in the *project*.

The undersigned *professional permit holder* shall notify the owner and *authority having jurisdiction* should they or the undersigned *coordinating registered professional* cease to be retained at any time during the *project*. Notification shall be given before the date the *professional permit holder* or *coordinating registered professional* ceases to be retained; if that is not possible, then as soon as possible.

The undersigned owner and *coordinating registered professional* confirm they have read and understand Part 1 of Division A and Part 2 of Division C of the NBC(AE).

The undersigned *coordinating registered professional* gives assurance of competence in the necessary fields of expertise to undertake the *project* and that they are a *registered professional* as defined in the NBC(AE).

Building Permit Number
(for Authority Having Jurisdiction)

Project Reference / Components
(for Coordinating Registered Professional)

SCHEDULE A - Continued

Professional Permit Holder (if applicable)

Professional permit holder's phone number

Professional permit holder's e-mail (print)

Professional permit holder's validation

Coordinating Registered Professional

Coordinating registered professional's legal name (print)

Coordinating registered professional's address (print)

Coordinating registered professional's phone number

Coordinating registered professional's e-mail (print)

Coordinating registered professional's authentication

Owner

Owner's legal name (print)

Owner's designated representative's or agent's legal name (print)

Owner's address (print)

Owner's phone number

Owner's, owner's designated representative's or agent's signature

Owner's e-mail (print)

Date

Building Permit Number
(for Authority Having Jurisdiction)

Project Reference / Components
(for Registered Professional of Record)

SCHEDULE B

**ASSURANCE OF PROFESSIONAL DESIGN INVOLVEMENT AND COMMITMENT FOR
FIELD REVIEWS BY THE REGISTERED PROFESSIONAL OF RECORD**

- Notes:
1. Italicized words contained in this schedule have the same meanings as defined in the National Building Code – 2023 Alberta Edition (NBC(AE)).
 2. This schedule shall be submitted by each *registered professional of record* to the *coordinating registered professional* before the application for a *building permit* is submitted.
 3. This schedule is endorsed by the Alberta Association of Architects and the Association of Professional Engineers and Geoscientists of Alberta. Both associations have a user guide available on their website that provides information on the use of this schedule.

To: the *coordinating registered professional*

Name of *coordinating registered professional* (print)

Re:

Name of *project* (print)

Address or legal survey description of *project* (print)

The undersigned *registered professional of record* hereby gives assurance that

- (a) the design of the
(Instructions: Mark only the component(s) listed below that the undersigned *registered professional of record* is responsible for)

- architectural/licensed interior design
- structural
- mechanical
- electrical
- geotechnical

components of the *project* described on the drawings and specifications prepared by the undersigned *registered professional of record* in support of the application for a *building permit*, substantially complies with the NBC(AE) and the Safety Codes Act (SCA);

<i>Building Permit Number</i> (for Authority Having Jurisdiction)	<i>Project Reference / Components</i> (for Registered Professional of Record)
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SCHEDULE B - Continued

- (b) they shall conduct or coordinate *field reviews* during construction of the above referenced components to verify the final design of the components (including approved changes), as constructed, substantially complies with the NBC(AE) and SCA;
- (c) they shall notify the *coordinating registered professional* should they or the undersigned *professional permit holder* (if applicable) cease to be retained at any time during the *project*. Notification shall be given before the date the *registered professional of record* or the *professional permit holder* (if applicable) ceases to be retained; if that is not possible, then as soon as possible; and
- (d) they are a *registered professional* as defined in the NBC(AE) and licensed with a sufficient scope of practice in accordance with the Architects Act or the Engineering and Geoscience Professions Act. (See Note A-1.4.1.2.(1) of Division A of the NBC(AE).)

The design and *field reviews* delegated to other *registered professionals* are described in the drawings and specifications prepared by the undersigned *registered professional of record* and the following Schedules C-3 shall be provided after substantial completion of the *project*. The undersigned *registered professional of record* shall confirm, through documentation, that *registered professionals* and the *professional permit holder* each *registered professional* is appointed by (if applicable) that have been delegated design and *field reviews* are competent to perform their responsibilities. The undersigned *registered professional of record* will review or coordinate the review of all applicable shop drawings.

Schedules C-3 required:

The *constructor* is responsible under the SCA to ensure that the work complies with the drawings and specifications.

<hr/> <i>Building Permit Number</i> (for Authority Having Jurisdiction)	<hr/> <i>Project Reference / Components</i> (for Registered Professional of Record)
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SCHEDULE B - Continued

The undersigned *professional permit holder* shall notify the *coordinating registered professional* should they or the undersigned *registered professional of record* cease to be retained at any time during the *project*. Notification shall be given before the date the *professional permit holder* or *registered professional of record* ceases to be retained; if that is not possible, then as soon as possible.

Professional Permit Holder (if applicable)

Professional permit holder's phone number

Professional permit holder's e-mail (print)

Professional permit holder's validation

Registered Professional of Record

Registered professional of record's legal name (print)

Registered professional of record's address (print)

Registered professional of record's phone number

Registered professional of record's e-mail (print)

Registered professional of record's authentication

Building Permit Number
 (for Authority Having Jurisdiction)

Project Reference / Components
 (for Coordinating Registered Professional)

SCHEDULE C-1

ASSURANCE OF COMPLIANCE BY THE COORDINATING REGISTERED PROFESSIONAL

- Notes:
1. Italicized words contained in this schedule have the same meanings as defined in the National Building Code – 2023 Alberta Edition (NBC(AE)).
 2. This schedule shall be submitted by the *coordinating registered professional* to the *authority having jurisdiction* after substantial completion of the *project* and before permission to occupy is given by the *authority having jurisdiction*.
 3. This schedule is endorsed by the Alberta Association of Architects and the Association of Professional Engineers and Geoscientists of Alberta. Both associations have a user guide available on their website that provides information on the use of this schedule.

To: the *authority having jurisdiction*

 Name of *authority having jurisdiction* (print)

Re:

 Name of *project* (print)

 Address or legal survey description of *project* (print)

The undersigned *coordinating registered professional* hereby gives assurance that

- (a) they have fulfilled their obligations for coordinating the *field reviews* as outlined in Sentence 2.4.2.3.(1) of Division C of the NBC(AE) and as agreed to in the previously submitted Schedule A;
- (b) if requested by the *authority having jurisdiction*, they will make available all documents supporting all approved changes to the drawings and specifications on which the *building permit* was issued for this *project*;
- (c) the final design of the *project* (including approved changes), as constructed, substantially complies with the NBC(AE) and Safety Codes Act; and
- (d) they are a *registered professional* as defined in the NBC(AE).

Attached are Schedules C-2 from all the *registered professionals of record* that have signed a Schedule B.

Attached are Schedules C-3 from *registered professionals* that have been delegated responsibility for design and *field reviews* as described on Schedules B.

Building Permit Number
(for Authority Having Jurisdiction)

Project Reference / Components
(for Coordinating Registered Professional)

SCHEDULE C-1 - Continued

Professional Permit Holder (if applicable)

Professional permit holder's phone number

Professional permit holder's e-mail (print)

Professional permit holder's validation

Coordinating Registered Professional

Coordinating registered professional's legal name (print)

Coordinating registered professional's address (print)

Coordinating registered professional's phone number

Coordinating registered professional's e-mail (print)

Coordinating registered professional's authentication

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9.24.3.6.

9.24.3.6. Attachment of Studs to Runners

- 1) Studs shall be attached to runners by screws, crimping or welding around wall openings and elsewhere where necessary to keep the studs in alignment during construction.
- 2) Where clearance for expansion is required in Article 9.24.3.2., attachment required in Sentence (1) shall be applied between studs and bottom runners only.

9.24.3.7. Openings for Fire Dampers

- 1) Openings for *fire dampers* in *non-loadbearing fire separations* required to have a *fire-resistance rating* shall be framed with double studs on each side of the opening.
- 2) The sill and header for openings described in Sentence (1) shall consist of a runner track with right angle bends made on each end so as to extend 300 mm above the header or below the sill and fastened to the studs.
- 3) The openings described in Sentence (1) shall be lined with a layer of gypsum board not less than 12.7 mm thick fastened to stud and runner webs.

Section 9.25. Heat Transfer, Air Leakage and Condensation Control

9.25.1. General

9.25.1.1. Scope and Application

- 1) This Section is concerned with heat, air and water vapour transfer and measures to control condensation.
- 2) All walls, ceilings and floors separating *conditioned space* from unconditioned space, the exterior air or the ground shall be
 - a) provided with
 - i) thermal insulation conforming to Subsection 9.25.2. and Section 9.36.,
 - ii) an air barrier conforming to Subsection 9.25.3. and Section 9.36., and
 - iii) a *vapour barrier* conforming to Subsection 9.25.4., and
 - b) constructed in such a way that the properties and relative position of all materials conform to Subsection 9.25.5.(See Note A-9.25.1.1.(2).)

- 3) Insulation and sealing of heating and ventilating ducts shall conform to Sections 9.32., 9.33. and 9.36.

9.25.2. Thermal Insulation

9.25.2.1. Required Insulation

- 1) All walls, ceilings and floors separating heated space from unheated space, the exterior air or the exterior *soil* shall be provided with sufficient thermal insulation to prevent moisture condensation on their room side during the winter and to ensure comfortable conditions for the occupants. (See Note A-9.1.1.1.(1).)
- 2) Except as permitted by Sentence (3) and required by Sentence (4), insulation conforming with Table 9.25.2.1. shall be provided for attached garages and heated detached garages serving a *building of residential occupancy*. (See Note A-9.25.2.1.(2).)

Table 9.25.2.1.
Insulation Requirements
 Forming Part of Sentence 9.25.2.1.(2)

Assembly in Which Insulation Is Placed	Location of Assembly	Minimum Thermal Resistance, RSI
Wall assembly	Separating attached garage from exterior or unconditioned space	2.1
	Separating heated detached garage from exterior or unconditioned space	2.1
Ceiling-below-attic assembly	Separating attached garage from exterior or unconditioned space	6.0
	Separating heated detached garage from exterior or unconditioned space	6.0
Cathedral ceiling or flat roof assembly	Separating attached garage from exterior or unconditioned space	4.67
	Separating heated detached garage from exterior or unconditioned space	4.67

3) Concrete walls in unheated attached garages need not comply with Sentence (2).

4) Where batt or loose-fill insulation is used in a wall assembly, the insulation shall fill the cavity.

9.25.2.2. Insulation Materials

1) Except as required in Sentence (2), thermal insulation shall conform to the requirements of

- a) ASTM C726, “Standard Specification for Mineral Wool Roof Insulation Board,”
- b) CAN/CGSB-51.25-M, “Thermal Insulation, Phenolic, Faced,”
- c) CGSB 51-GP-27M, “Thermal Insulation, Polystyrene, Loose Fill,”
- d) CAN/ULC-S701.1, “Standard for Thermal Insulation, Polystyrene Boards,”
- e) CAN/ULC-S702.1, “Standard for Mineral Fibre Thermal Insulation for Buildings, Part 1: Material Specification,”
- f) CAN/ULC-S703, “Standard for Cellulose Fibre Insulation (CFI) for Buildings,”
- g) CAN/ULC-S704.1, “Standard for Thermal Insulation, Polyurethane and Polyisocyanurate, Boards, Faced,”
- h) CAN/ULC-S705.1, “Standard for Thermal Insulation – Spray Applied Rigid Polyurethane Foam, Medium Density – Material Specification,” or
- i) CAN/ULC-S706.1, “Standard for Wood Fibre Insulating Boards for Buildings.”

2) The *flame-spread ratings* requirements contained in the standards listed in Sentence (1) shall not apply. (See Note A-9.25.2.2.(2).)

3) Insulation in contact with the ground shall be inert to the action of *soil* and water and shall be such that its insulative properties are not significantly reduced by moisture.

9.25.2.3. Installation of Thermal Insulation

1) Insulation shall be installed so that there is a reasonably uniform insulating value over the entire face of the insulated area.

2) Insulation shall be applied to the full width and length of the space between furring or framing.

3) Except where the insulation provides the principal resistance to air leakage, thermal insulation shall be installed so that at least one face is in full and continuous contact with an element with low air permeance. (See Note A-9.25.2.3.(3).)

4) Insulation shall be installed over the full height of *foundation* walls enclosing a *basement* or heated crawl space. (See also Note A-9.36.2.5.(5).)

5) Insulation around concrete slabs-on-ground shall be located so that heat from the *building* is not restricted from reaching the ground beneath the perimeter, where exterior walls are not supported by footings extending below frost level.

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