



The 2023 Alberta Building Code

Code Change Highlights

BILD Alberta's Provincial Residential Technical Committee reviewed the changes between the 2019 and 2023 Alberta Building Codes and identified the code change highlights that industry members need to be aware of. This document can assist in outlining some of the changes that industry members need to be aware of when complying with the 2023 Alberta Building Code.

The code changes are rated based on impact, cost, and frequency. These code changes were identified with consideration of the Government of Alberta's comparison document of the 2019 and 2023 Alberta Building Code. The code change identified with the rating of "one" is considered to have the largest impact to industry.

This document does not outline all the changes between the 2019 and 2023 Alberta Building Code and does not include all requirements for compliance. Industry members need to refer to the [National Building Code - 2023 Alberta Edition](#) in its entirety for compliance.

Rating	2023 ABC Section	Summary of Code Change	Impact of Code Change
1	<p><u>9.27.12.2</u></p> <p>Vinyl Siding, Insulated Vinyl Siding and Vinyl Soffits</p>	<p>New standards that suppliers will need to comply with:</p> <ul style="list-style-type: none"> • Vinyl Siding: ASTM D3679 (CAN/CGSB-41.24) • Insulated Vinyl Siding: ASTM D7793 (CAN/CGSB-41.24) • Rigid Vinyl Soffits ASTM D4477 (CAN/CGSB-41.24) <p>The attachment of the cladding must be as per Table 9.27.5.4-A.</p> <ul style="list-style-type: none"> • 400 mm (16”) on center for horizontally applied vinyl, insulated vinyl and polypropylene siding, aligning with manufactures installation instructions. <ul style="list-style-type: none"> - Previous code allowed “The attachment of vinyl siding shall conform to the requirements in Subsection 9.27.5. for metal siding.” (which was 600 mm (24”)) • 300 mm (12”) on center for vertically applied. 	<ul style="list-style-type: none"> • Spacing of studs to allow fastening at 16” O.C. and still allowing the installation of an exterior gypsum sheathing. <ul style="list-style-type: none"> - This can affect your energy model because of the additional thermal bridging at 16” O.C. compared to 24” O.C. • Change in the minimum embedment of the fastener from 25 mm (1”) to 32 mm (1 ¼”).
2	<p><u>9.10.9.8</u></p> <p>Penetrations by Outlet Boxes or Service Equipment in Concealed Spaces</p>	<ul style="list-style-type: none"> • Clarification on all outlet boxes penetrating a membrane of an assembly with a fire resistance rating must use approved firestop or exceptions below: <ul style="list-style-type: none"> - Metal boxes in fire separations or membranes, maximum size, and area requirements. - Metal boxes on opposite sides of vertical fire separations must be 600 mm apart or use enclosure or mineral wool in the stud space. - Combustible boxes in fire separations or membranes, protection achieved by use of enclosure or mineral wool in stud space, max aggregate area requirements. 	<ul style="list-style-type: none"> • Increase in costs to builders. • Large impact to multi-family and zero lot-line builders.

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3	<p><u>9.32.3.13</u></p> <p>Outdoor Intake and Exhaust Openings</p>	<ul style="list-style-type: none"> Updated clearances for intake and exhaust to align with the Gas Code at 1800 mm. Trades will need to be informed of this requirement within the Building Code. Dryer vents will need to be 1800 mm from air intake and vented soffits. 	<ul style="list-style-type: none"> Stock plans will need to be addressed for venting clearances for appliances with contaminants (gas). Will impact gas fireplaces. Will impact dryer vent placement.
4	<p><u>9.7.4.2</u></p> <p>A440.4-19 New Standard for the Installation of Windows, Doors, and Skylights</p>	<p>4.10.1</p> <ul style="list-style-type: none"> The material used for shims must be plastic, cedar, or treated plywood. <p>10.2.1.1</p> <ul style="list-style-type: none"> Sub sill drainage is not required under windows for most of Alberta unless the windows are mullled. <ul style="list-style-type: none"> If there are conflict between the provisions of this Code and those of a referenced document, the provisions of this Code shall govern (Article 1.5.1.2.). Sub sill drainage is now required under all doors. <p>10.2.1.2</p> <ul style="list-style-type: none"> Sub sill drainage is not required under doors or windows where they are protected from precipitation. <p>10.2.4.1</p> <p>The top and sides of a window or door flange must be sealed to the water resistive barrier.</p> <p>10.2.4.2</p> <ul style="list-style-type: none"> Provides a description of approved sealants. 	<ul style="list-style-type: none"> 4.10.1 will result in a change in practice. 10.2.1.1 will save costs of installation. 10.2.4.1 could impact installation.

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		<p>Figure 16</p> <ul style="list-style-type: none"> No fasteners through flanges within 200 mm from corners for flange windows. <p>Table A-1</p> <ul style="list-style-type: none"> List of Alberta locations not requiring sub sill drainage. 	
5	<p>9.8.8.1 Required Guards</p>	<ul style="list-style-type: none"> The new requirement adds that guards must be placed on a surface that might be less than 600 mm above grade adjacent to the surface, but if within 1.2 m from the edge of the surface the difference in elevation is greater than 600 mm, then a guard must be installed. The National Building Code – 2019 Alberta Edition required that a guard be installed if the adjacent surface had a slope of more than 1 in 2. New information in the appendix note. 	<ul style="list-style-type: none"> Exterior stairs on sloping properties will be affected.
6	<p>9.8.8.1 Window Opening Control Devices (WOCD)</p>	<ul style="list-style-type: none"> Every window that is more than 1800 mm (5'-10") above an adjacent surface and less than 900 mm (2'-11") above the floor surface will need to be protected by: <ul style="list-style-type: none"> A guard A mechanism as described in 9.8.8.1 (4). That mechanism is referred to in the Appendix as a Window Opening Control Device (WOCD). ASTM F2090 describes these types of devices and how they can be used to prevent the opening of the window more than 100 mm (4"). This requirement conflicts with the requirements in 9.9.10.1., which requires the bedroom egress window to be able to be opened without tools or special knowledge. Egress windows less than 900 mm above the floors are required to have a WOCD, other windows must have a restrictor, but are not required to install a WOCD. 	<ul style="list-style-type: none"> Window manufacturers will need to be aware of any egress windows that are more than 1.8 m above adjacent surfaces, and less than 0.9 m from the floor level, so that they can supply and install a WOCD. Builders may need to redesign homes if they do not want a WOCD installed. Homeowners will need to be educated on the operation and maintenance of windows with a WOCD installed.

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		<p><i>Notice: A STANDATA has been released (23-BCV-001) that will allow a WOCD mechanism that complies with ASTM F2090 “Standard Specification for Window Fall Prevention Devices with Emergency Escape (Egress) Release Mechanisms” as a means of complying with the requirements of this article.</i></p>	
7	<p>9.10.3.1 Fire-Resistance and Fire-Protection Ratings</p>	<ul style="list-style-type: none"> • Construction specifications for rated assemblies are found in Tables 9.10.3.1.-A, and 9.10.3.1.-B. • Review the note references in assembly, as some have been changed. <ul style="list-style-type: none"> - <i>Example:</i> EW2 wall assembly description: 15.9 mm Type X gypsum board (7)(15)(16) • <u>Major Addition:</u> <ul style="list-style-type: none"> - Table-A Note (16) – All joints shall be backed with lumber. 	<ul style="list-style-type: none"> • Builders will now have to install blocking between the studs, that the drywall can be attached to.

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8	<p><u>9.36.3.10</u></p> <p>Equipment Efficiency</p>	<ul style="list-style-type: none"> • Minimum equipment efficiency has been increased for: <ul style="list-style-type: none"> - Warm Air Furnaces from 92% AFUE to 95% AFUE. This aligns with NRCan’s minimum requirement changes that were effective December 12, 2019, and would apply to new construction. - Combined Space and Water-heating system (CSA P9) from TPF 0.65 to TPF 0.80, while not a common approach, this does reduce the benefit of using this system type when using the performance pathways as the Reference House will improve substantially. - All forced air system gas and electric must use ECM, high-efficiency motors. - UEF efficiency changes for gas service water heaters. • UEF efficiency changes for gas instantaneous systems may slightly increase min. performance requirements, especially for large >58.56Kw (199 MBTU) systems. 	<ul style="list-style-type: none"> • Builders using the performance path are affected as the Reference House baseline will improve making it more difficult to meet or exceed the energy target of the Reference House.

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9	<p>9.36 Air Tightness Changes</p>	<ul style="list-style-type: none"> • The new code has neutralized the effect of air tightness on performance modeling where testing is not conducted. Previous code applied a slight penalty when testing was not conducted and 9.25.3 air barrier details were used, resulting in an energy penalty of 1.2 ACH compared to the Reference House. The current code has no penalty for not using a blower door test and neutralizes energy loss calculated due to air leakage between the Proposed and the Reference House. • Modeling of the Proposed House uses a maximum of 2.5 ACH@50 this improves performance for the Reference House for single family detached homes. • Attached homes can use 3.0 ACH@50, continuing to allow for increase leakage at party walls when using the unguarded method. • If prescriptively built to code, a building has an estimated equivalency of 2.5 ACH, and testing is not required. • 9.36.6 Air Tightness is a new section adding substantial clarity around the use and targets for air tightness in all pathways of 9.36. <ul style="list-style-type: none"> - Clarity on the use of CGSB 149, as-operated, not sealing of vents or ductwork is allowed or required. - Guarded and unguarded testing is now allowed. • Industry will need clarity in planned enforcement by Authorities Having Jurisdiction (AHJ) with substantial changes in the air tightness elements of code. • Flow chart in Figure A-9.36.7.3.(9) was not adopted from the 2020 National Building Code. <ul style="list-style-type: none"> - Builders must be able to use tighter air tightness values at permit to facilitate higher levels of performance and energy savings. 	<ul style="list-style-type: none"> • Substantial improvements to the clarity, flexibility and use of air tightness testing in compliance. • Increased flexibility for builders of attached homes through the allowance of guarded and unguarded testing.

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10	<p align="center">9.36</p> <p align="center">Energy Efficiency</p>	<ul style="list-style-type: none"> 9.36.1.2 and various other clauses, update and clarify the calculations and definitions used in 9.36. 9.36.1.3.(2) is an important administrative note specific to Alberta that clarifies that Tier 1, 9.36.2-4 Prescriptive and 9.36.5 Performance are all equivalent. While the Appendix note further explains that higher levels of Tier Code while presented, are not to be enforced as they are for consumer choice in buying homes of higher Tiers. Many of the changes in 9.36 have been implemented to improve and smooth implementation. <ul style="list-style-type: none"> 9.36.2.7 – Window U-values have been slightly increased (made easier). 9.36.3.10 – Equipment performance standards and references have been updated (HSPF2, SEER2, UEF) which aligns with US suppliers and expands product accessibility. <p>Tier Code</p> <ul style="list-style-type: none"> While presented in this code, Tier compliance will not be enforceable and is reserved for marketing purposes by consumer demand. The introduced Peak Cooling Load requirements are not applicable to Tier 1 in Alberta. Peak Cooling Load is only used when comparing the performance gain from Tier 1 to Tier 2 where both houses must be compared equivalently. <p><i>Notice: A STANDATA will be released providing clarification on compliance of Tier 1 in the National Building Code - 2023 Alberta Edition.</i></p>	<ul style="list-style-type: none"> Improved alignment with EnerGuide and new Tier Code sections (9.36.7 and 8). If Peak Cooling Load is required at higher tiers, it creates a risk of non-compliance in homes with large glazing areas and high solar heat gain windows.