



BOABC – 2024 BCBC Lunch and Learn Year End – Manufactured Housing

December 12, 2024

Hosted by: Ken Kunka, AScT BCQ

Promoting Building Safety and Professionalism



Overview

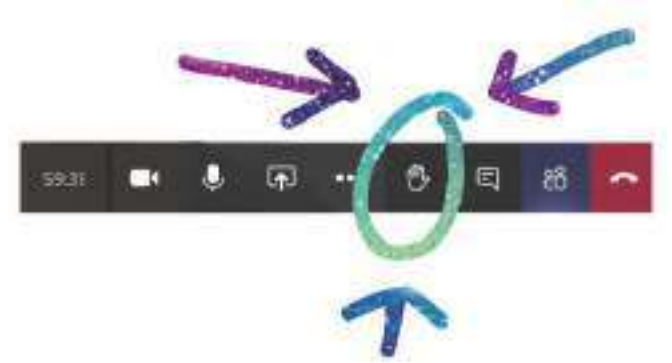
Information presented today does not directly represent the opinions of the Building Officials Association of BC (BOABC) or Manufactured Housing Association of BC (MHABC)

This presentation is conceptual and for informal educational purposes only. The presenters and association takes no responsibility for application of any concepts or interpretations in this presentation to specific projects.

The slides must not be considered complete or exhaustive. Code provisions have been generally represented and may not reflect all exceptions.



Rules of the Room



- Registration will be tracked
- Presentation is not recorded but PowerPoint will be posted
- Please use raise hand icon if you have a question or comment
- PUT IT in the CHAT
- Please mute your microphone
- You may need to turn off your camera
- Please follow up by email if you have specific question or example to share with the membership.
 - kkunka@boabc.org



Poll Questions

Poll Question #1

What is your level of BOABC Qualification?

- Level 01 Building = 25%
- Level 02 Building = 11%
- Level 03 Building = 29%
- Level 01 Plumbing = 25%
- Level 02 Plumbing = 8%
- Other = 2%
 - Retired, professional, etc

Poll Question #2

What region are you from?

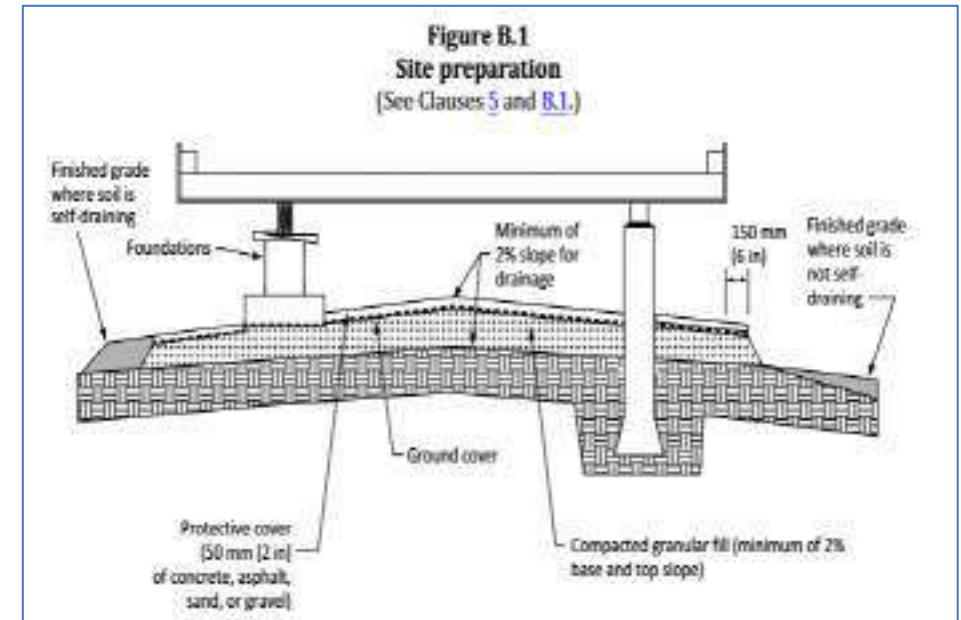
- Lower Mainland = 38%
- South Central Interior = 13%
- Kootenay = 13%
- Northwest = 0% (where are you?)
- Central North Interior = 8%
- Vancouver Island North = 20%
- Vancouver Island South = 10%



December 12 – Year End Manufactured Housing

Today's Session

- What's New Update and Training
- Year End House Keeping
- Appeals and Interpretations
- Manufactured Housing
 - Background
 - Code References
 - Standards – Z240MH, A277, and Z250
 - Permit Application & Inspection Checklists
- Q & A



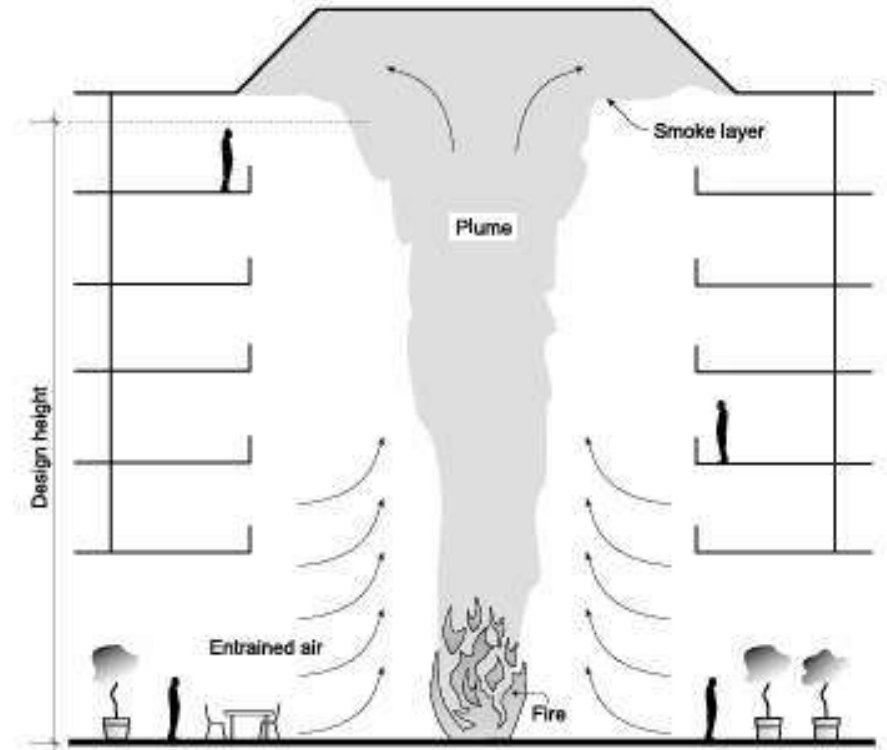
Education Focus – All Levels



November – Interconnect Flr. Space

Recap – Nov 21

- Single Egress Stairs questions
- Do you have a Risk Assessment Policy
- Interconnected Floor Spaces
 - Background
 - Reference Info
 - Basic Code requirements
 - Case Study example





November - Interconnected Floor Space (Jensen Hughes) – Case Study

Two Storey Office Building (Group D) - Part 9 & 3

- Sprinklered
- Combustible or Non-Combustible
- 45 Minute Floor Fire Separation
- Single Egress Stair permitted
- **Interconnected space with no special protection???**

3.4.2.1. Minimum Number of Exits

2) A floor area in a building not more than 2 storeys in building height, is permitted to be served by one exit provided the total occupant load served by the exit is not more than 60, and

a) in a floor area that is not sprinklered throughout, the floor area and the travel distance are not more than the values in Table 3.4.2.1.-A, or

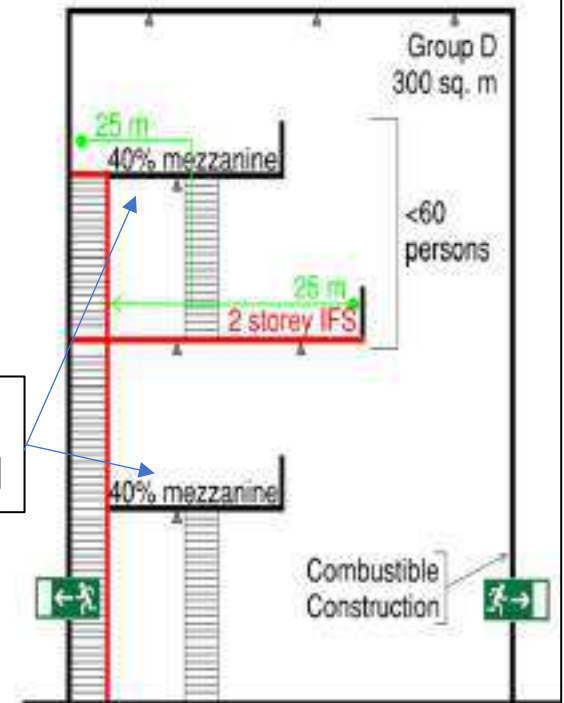
b) in a floor area that is sprinklered throughout i) the travel distance is not more than 25 m, and ii) the floor area is not more than the value in Table 3.4.2.1.-B.

“2 Storey” Interconnection

Canada Approach

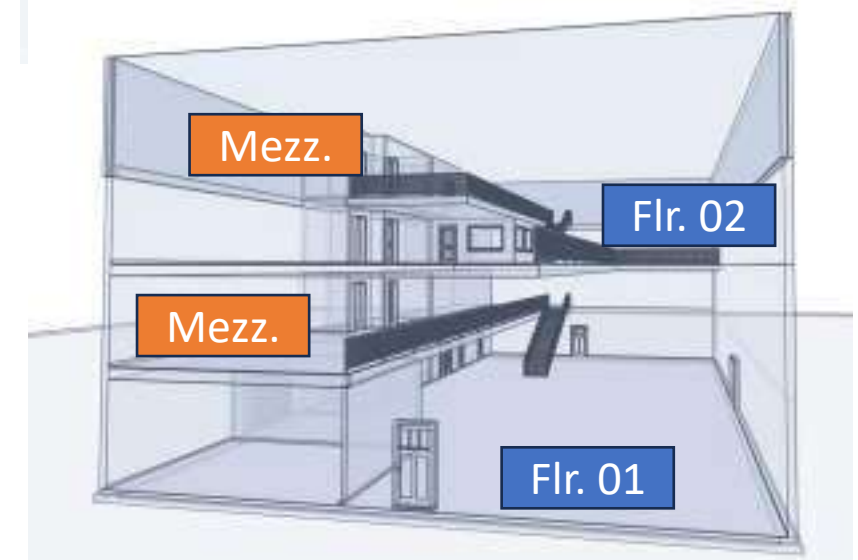
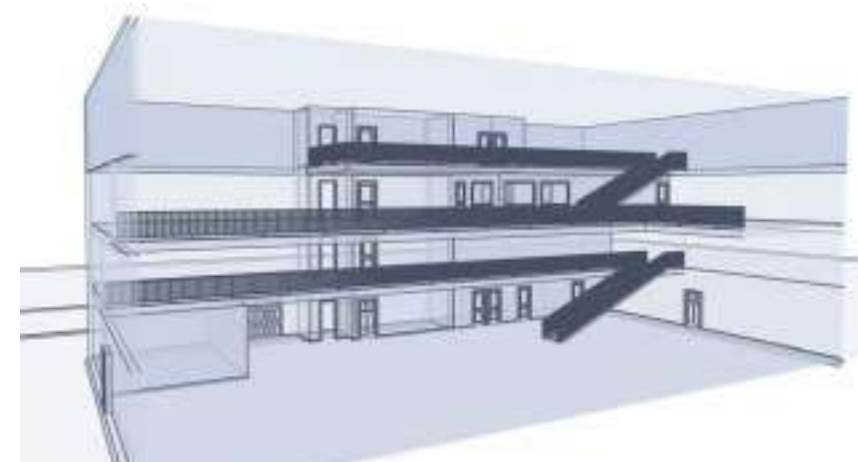
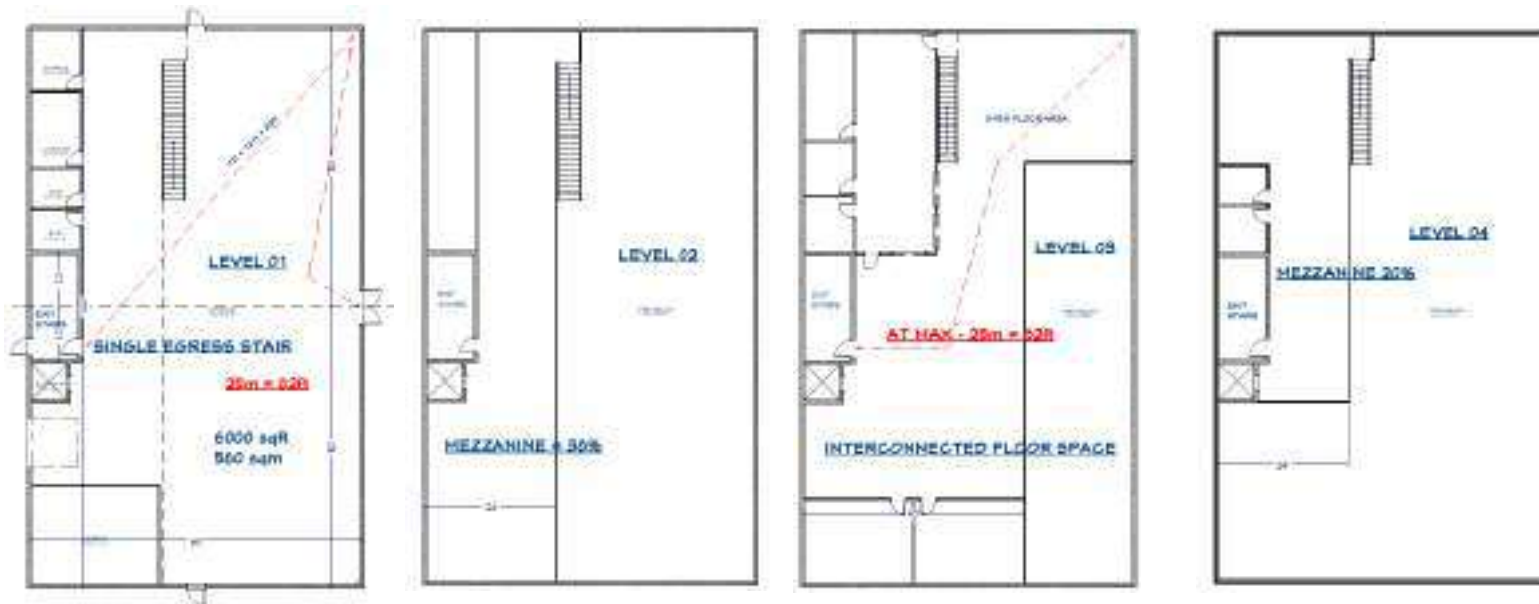
- Mezzanine not considered a storey
- 2 Storey “interconnection”
- No special protection requirements
- Combustible construction
- Single exit permitted, no vestibules
- *Effectively 4 storeys?*

Not superimposed



Interconnected Floor Space

Case Study – does it work for two storey - SES?

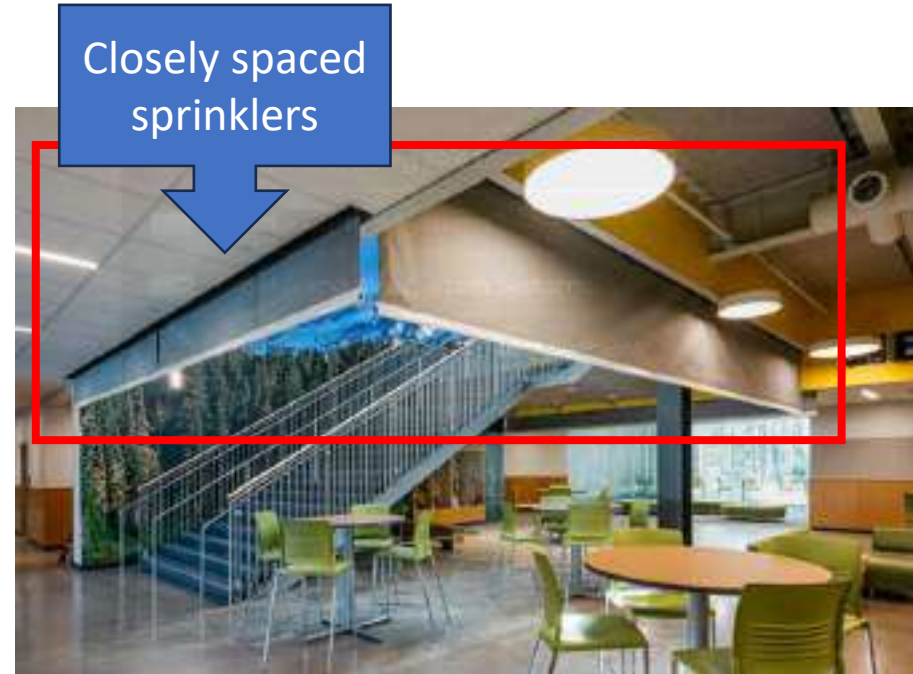
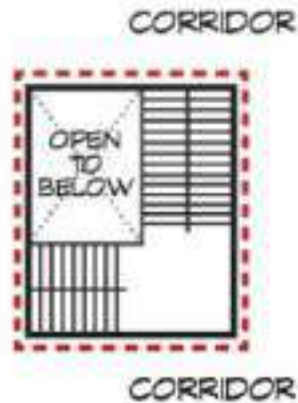


There could be an issue with meeting – 3.2.1.1. Exceptions for Determining Building Height – sentence (3b) - visual obstructions – first floor?

FBS drawing for space planning – single egress at two storeys.



Poll Question – Auto Baffles



Option to have a concealed baffle for atheistic reasons – still requires closely spaced sprinklers.

3.2.8.6. Draft Stops

1) A draft stop shall be provided at each floor level within an *interconnected floor space*, immediately adjacent to and surrounding the opening, and shall be not less than 500 mm deep measured from ceiling level down to the underside of the draft stop.

#3- Would this be acceptable without an Alternative Solution?

- Yes = 8%
- No = 47%
- Not sure = 44%



Poll Question – Auto Baffles

3.2.8.6. Draft Stops

1) A draft stop shall be provided at each floor level within an **interconnected floor space**, immediately adjacent to and surrounding the opening, and shall be not less than 500 mm deep measured from ceiling level down to the underside of the draft stop.

3.2.8.6. Draft Stops

| | |
|-----|--|
| (1) | [F02 - OS1.2] [F11 - OS1.5] [F13 - OS1.5, OS1.2] |
| | [F02, F13 - OP1.2] |

- F02** To limit the severity and effects of fire or explosions.
- F11** To notify persons, in a timely manner, of the need to take action in an emergency.
- F13** To notify emergency responders, in a timely manner, of the need to take action in an emergency.

OS Safety

The risks of injury due to fire addressed in this Code are those caused by

OS1.2 - Fire or explosion impacting areas beyond its point of origin

OS1.5 - persons being delayed in or impeded from moving to a safe place during a fire emergency

OP Fire and Structural Protection of Buildings

The risks of damage due to fire addressed in this Code are those caused by:

OP1.2 - fire or explosion impacting areas beyond its point of origin

#3- Would this be acceptable without an Alternative Solution?

- **Yes = 8%**
- **No = 47%**
- **Not sure = 44%**



November – Poll Question Results

Poll Questions

Poll Question #1
What is your level of BOABC Qualification?

- Level 01 Building = 17%
- Level 02 Building = 11%
- Level 03 Building = 54%
- Level 01 Plumbing = 2%
- Level 02 Plumbing = 9%
- Other = 7%
 - Retired, architect,

Poll Question #2
What region are you from?

- Lower Mainland = 50%
- South Central Interior = 22%
- Kootenay = 4%
- Northwest = 0%
- Central North Interior = 2%
- Vancouver Island North = 11%
- Vancouver Island South = 11%

POLL QUESTIONS

Poll Questions

Poll Question #3
Have you dealt with an interconnected floor space project?

- Yes = 69%
- No = 31%

Poll Question #4
What occupancy types have you encountered?

- Large Part 3 (no exceptions) = 27%
- Part 9 = 22%
- Group B = 5%
- Group A (1, 2, 3) = 19%
- Group D = 17%
- Group E = 9% (multiple answers)

Poll Question #5
If you have reviewed an interconnected floor space, have you had an Alternative solution proposal for the design?

- Yes = 45%
- No = 55%

POLL QUESTIONS

Where's the Northwest?

Does your department have a policy to determine the potential severity of Risks/Hazards?

- Yes – Dept. centric = 13%
- Yes – LG policy = 11%
- No = 37%
- Unknown = 37%

Step 4 – Determine Risk Priority

The priority ranking category allocated for each risk is determined based on the chosen likelihood rating and impact rating. The risk priority matrix shown below determines the priority that City of Porticton will apply to each risk based on its selected likelihood plus impact rating.

Risk Priority Matrix (Heat Map)

| | | IMPACT | | | | |
|------------|---------------------|-----------------|-------------|-----------------|-------------|----------------|
| | | I Negligible | II Minor | III Moderate | IV Major | V Extensive |
| LIKELIHOOD | I Almost Certain | | | | | |
| | II Likely | | | | | |
| | III Possible | | | | | |
| | IV Unlikely | | | | | |
| | V Rare | | | | | |



2024 Lunch and Learns (Ken K)

- January 18, 2024 – [Secondary Suites and Accessory Dwelling Units – part 2](#)
- February 22, 2024 – [Radon](#)
- March 22, 2024 – [2024 BCBC, Bylaws & Regulations for Registered Professional](#)
- April 25, 2024 – [Fire Protection 9.10](#)
- June 20, 2024 – [Accessibility \(part 1\)](#)
- July 25, 2024 – [Accessibility \(Part 2\) – BC Adaptable Dwelling Units](#)
- August 22, 2024 – [Drainage and Storm Water](#)
- September 19, 2024 – [Single Egress Stairs – part 1](#)
- **September 23, 2024 – [Manufactured & Modular Housing Standards](#) (Gord R.)**
- October 17, 2024 – [Single Egress Stairs – part 2](#)
- November 21, 2024 – [Interconnected Floor Spaces](#)

Lunch and Learns

CPD Eligibility: 1 point/presentation (Category A4). You will need to self report this point. Initial next to the presentation and then save it as a pdf to upload as proof. Previous Lunch and Learns can be found:

<https://boabc.org/lunch-learn-webinars/>



Don't Forget proposed 2025 NBC change input

The public review will close at **11:59 pm PST on December 19, 2024**, after which **comments will no longer be accepted.** Example - 9.27.2. Required Protection from Precipitation

[Link - Public Review – fall 2024](#)

Home / News / National Model Codes Public Review

National Model Codes Public Review

The Canadian Board for Harmonized Construction Codes (CBHCC) is continuing the consultation on the proposed changes for the 2025 National Construction Codes and is inviting the public to take part.

The public review will run from **October 21 to December 19, 2024**. Those interested in participating in the review can access the proposed changes on the [CBHCC's website](#) and provide feedback.

The public review is an opportunity for all Canadians to participate in the code development process. We strongly encourage our industry partners and stakeholders to participate in the 2025 National Construction Codes consultation series.

Following the public review, all comments will be considered by the relevant code development committees, and recommendations on the proposed changes will be made to the CBHCC. If approved, the changes will be included in the 2025 editions of the National Model Codes.

As we work towards increased harmonization of the construction codes, these consultations are also an opportunity for the Province to receive your feedback on proposed changes that we intend to adopt in future editions of BC Codes.

For more information, please contact the CBHCC at CBHCCSecretary-SecretaireCCHCC@nrc-cnrc.gc.ca.



Figure [A-9.27.2.-A]

Rough opening - Second plane of protection maintained into the rough opening





2024 BC Code Appeals - Interpretations

BC Code Appeals – binding Interpretations – not binding

Building and Plumbing Code Interpretations 2024

Search:

| Code Edition | Interpretation Number | Title | Date Approved | File |
|--------------|-----------------------|--|---------------|--------------------------|
| NEW 2024 | 24-0055 | Curtains for Accessible Showers | 15/10/2024 | Download |
| NEW 2024 | 24-0051 | Small Residential Care Home | 15/10/2024 | Download |
| NEW 2024 | 24-0050 | Group A Division 2 Occupancy in an Article 3.2.2.60 Building Without Group D Occupancy | 15/10/2024 | Download |
| NEW 2024 | 24-0049 | Adaptable Water Closet Encroachments | 24/09/2024 | Download |
| NEW 2024 | 24-0048 | Sprinklers on top Floor Residential Balconies | 24/09/2024 | Download |
| NEW 2024 | 24-0046 | Opening Restrictor on Bedroom Window | 15/10/2024 | Download |
| 2024 | 24-0045 | Industrial Mineral Stockpile Cover | 13/08/2024 | Download |
| 2024 | 24-0043 | Venting Requirements for Floor Drains NPS 3 and Larger | 13/08/2024 | Download |
| NEW 2024 | 24-0042 | Camera as a Door Viewer | 24/09/2024 | Download |
| 2024 | 24-0038 | Separation of Suites in a House having a Suite without a Kitchen | 13/08/2024 | Download |
| NEW 2024 | 24-0037 | Fire Dampers in Houses with Secondary Suites | 24/09/2024 | Download |



Interpretation 24-0046- Window Restrictor

Question: In an unsprinklered Part 9 building, can an openable window required for emergency egress from a bedroom have a restrictor to limit the extent of its opening?

Interpretation: No.

The openable portion of the bedroom window must be at a height where it does not require a restrictor or guard.

Code references

- Article 9.8.8.1. - Required Guards
- Sentences 9.8.8.1.(4) and (5)
- Article 9.9.10.1 - Egress Windows or Doors for Bedrooms

A bedroom window could have a restrictor or guard if the suite is sprinklered, or if the bedroom has a door or another window that complies with Article 9.9.10.1.

(Is there a maximum sill height for egress windows?)
- openable portion of window rather than sill height -



4) Except as provided in Sentence (5), openable windows in buildings of residential occupancy shall be protected by

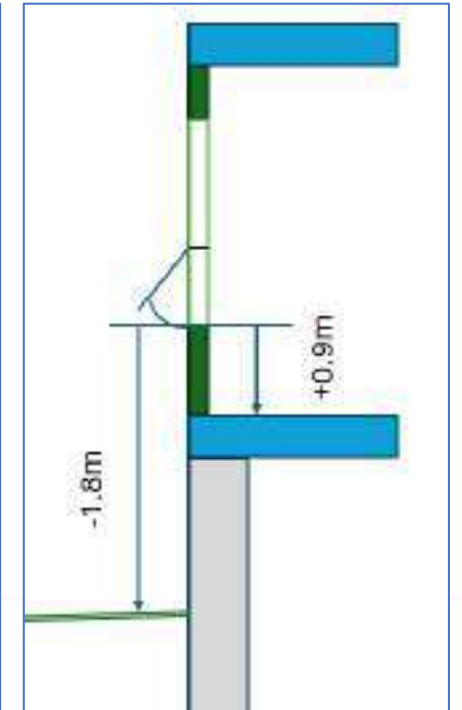
- a) a guard, or
- a mechanism that can only be released with the use of tools or special knowledge to control the free swinging or sliding operation of the operable part of the window so as to limit any clear unobstructed opening to not more than 100 mm measured either vertically or horizontally.

(See Note A-9.8.8.1.(4).)

5) Windows need not be protected in accordance with Sentence (4), where the bottom edge of the openable portion of the window is located

- more than 900 mm above the finished floor, or
- less than 1 800 mm above the floor or ground on the other side of the window.

(See Note A-9.8.8.1.(4).)





Members Forum – Code Interpretations

Latest Updates

- New Career Posted** 05/11/2024
Building Official - City of Mission
- Forum Posting** 14/11/2024
Create Questions
- New Career Posted** 05/11/2024
Inspector - Trades & Plumbing - District of West Vancouver
- New Career Posted** 05/11/2024
Assistant Manager of Building & Licensing - City of Langley
- New Career Posted** 05/11/2024
Building Official - Regional District of Central Okanagan

Welcome to BOABC

We are the Association of professional building officials serving British Columbia since 1954. The term building official is often used for a professional providing building and planning plan review, field monitoring, or inspections for any form of building construction. Building officials ensure that construction meets the minimum acceptable building regulations established by the Provincial Government. The review addresses not only structural strength of the buildings, but a multitude of fire and life safety systems, healthy and energy efficient environmental systems, and safe plumbing and mechanical systems.

[Read More](#)

[Login Portal](#) | [Monitor Forum](#) | [Career Listings/Post a Job](#) | [Buy/Reserve](#) | [Member Registry](#)

Code Interpretations

Welcome to BOABC | Personal | Code Interpretations

This forum has 26 topics, 207 postings, and was last updated 1 month, 2 weeks ago by [Terry Davidson](#).

Viewing 1 - 5 through 26 of 26 results

| Topic | Views | Posts | Last Post |
|--|-------|-------|--|
| Pre Engineered Buildings Started by Terry Davidson | 2 | 3 | 1 month, 2 weeks ago Terry Davidson |
| BYOC requirements in Part 9 commercial buildings Started by Inspector | 1 | 3 | 1 month, 2 weeks ago Terry Davidson |
| Structural Steel Started by Inspector | 3 | 4 | 2 months ago Inspector |
| Cladding System Started by Inspector | 0 | 4 | 3 months, 4 weeks ago Inspector |
| Quality Inspection of Concrete using SPW 10.1.1 Started by Inspector | 0 | 9 | 1 month, 2 weeks ago Terry Davidson |
| Roof joints below a floor system Started by Inspector | 0 | 1 | 1 month, 2 weeks ago Arny Christ |

Engineering for engineered buildings (steel).

Hey friends,

How are building officials and their respective jurisdictions regulating pre engineered buildings? Most applications we receive for these structures have sealed drawings but not a Schedule B. It appears manufacturer's are reluctant to provide this documentation. To date, 2.2.7 has been the guiding prescription in requesting a letter of assurance for the structure and for the foundation it will be placed on since the components fall outside the scope of Part 9.

2.2.7.1(c)(i), c) the following, in respect of buildings within the scope of Part 9 of Division B other than buildings described in Clause (b),

i) structural components that are not within the scope of Part 9 of Division B
(See Note A-2.2.7.1.(1)(c)(i)).

If this process is a misrepresentation of the prescription I'm happy to be corrected. Any information on how these structures are being reviewed in your practice is appreciated!

Thank you for this supportive network it is a huge help.



Members Forum – Code Interpretations

Engineering for engineered buildings (steel).

LOAs are BC specific, and sometimes these pre-eng products come from other jurisdictions that may not be familiar with process in this province. In any case, it's the professional responsibility of the designer to understand the requirements the location in which they are working.

Typically, in my experience where the pre-engineered building's structural design is outside of the scope of Pt9, two structural Schedule Bs are received. One for the design only, and a second from a (more) local professional for field review. This process is outlined in Section 9 of the [Guide to LOAs](#).

If you're receiving pushback to your requests, you can always loop in the EGBC Practice Advisor. They are very helpful, and would want to know if BC registrants were not following practice guidelines.

Tim W.

Professionals involved:

LofA – Geotechnical (if applicable) – Schedule B and C

LofA – Steel Structure – Design only (site modifications) – no Sch C

LofA - Foundation – Design & Field review (local) + Schedule C

LofA – Steel Structure – Field review install + Schedule C

LofA – Architect Regulation – Part 9 building?

(CRP Required??)

9. Design and Field Review Conducted by Different Registered Professionals of Record

The Letters of Assurance are based on the preferred and most common concept that there is a single registered professional of record within each discipline who is responsible for both the design and field review associated with that discipline. The division of responsibilities for design and field review to two separate registered professionals of record is generally undesirable and should be avoided. However, there are instances where a single, continuing registered professional of record within a discipline may not be possible, and design and field review are performed by different registered professionals of record. The registered professional of record providing field reviews may or may not be from within the same firm as the registered professional of record providing the design. In either case, the Letters of Assurance must be amended to reflect these two different registered professionals of record.

The registered professional of record providing the design maintains responsibility for substantial compliance of the original design with the Building Code, and possibly any changes to the design during construction. The registered professional of record providing field reviews takes on the responsibility for field reviews during construction and possibly substantial compliance with the Building Code of any design changes during construction. Depending on when the transfer of responsibility happens in the building permit application process, the registered professional of record providing field reviews may also take on responsibility for some design changes prior to construction.

Since the purpose of field review is to confirm that the construction substantially complies with the Building Code and the submitted plans and supporting documents, it is imperative that close coordination and communication exist between the registered professional of record providing design and the registered professional of record providing field review.

The registered professional of record providing design must amend their Schedule B as follows:

- Cross out and initial "and Commitment for Field Review" from the title on page 1
- Cross out and initial the last 2 lines on page 1 regarding field review
- Cross out and initial the top 2 lines on page 2 regarding notification to the authority having jurisdiction
- Cross out and initial "and Field Review" from the title on page 3

The registered professional of record providing field review must amend their Schedule B as follows:

- If the registered professional of record providing field review is taking responsibility for design changes during construction, revise the word "design" throughout to read "design changes during construction".
- If the registered professional of record providing field review is taking responsibility for design changes that occur prior to issuance of the building permit as well as design changes during construction, revise the word "design" throughout to read "design changes before and during construction"




Steel Building – Code References

[Link - CSSBI-B8-15.pdf](#)

4.3.4.3. Steel Building Systems

1) **Steel** building systems shall be manufactured by companies certified in accordance with the requirements of CSA A660, "Certification of manufacturers of **steel** building systems."

| | | | |
|-----|---------|---|-------------|
| CSA | A660-10 | Certification of manufacturers of steel building systems | 4.3.4.3.(1) |
|-----|---------|---|-------------|



A660-10 (R2024)

Certification of manufacturers of steel building systems

English, French | Publication Year 2010 | Published by CSA Group | Reaffirmed in 2024

**Does anyone have the standardized steel building permit checklist?
In the CSA A660 – thanks Ron**

November 2015

Canadian Sheet Steel Building Institute



CSSBI B8-2015:
Buildings Incorporating Steel Building Systems: Responsibilities of the Parties Involved

Copyright © November 2015. All rights reserved. This publication, nor any part thereof, may be reproduced in any form without the written permission of the publisher. ISBN: 978-1-926530-94-0

PREFACE

One of the objectives of the Canadian Sheet Steel Building Institute is the development of publications to provide safety and sound construction practices. This publication is intended to assist architects, designers, buyers, manufacturers, and others of steel building systems by providing information which can be adopted by reference to various codes. This publication replaces the previous edition dated August 2008.

While the material is believed to be technically correct and is based on the best available information at the time of publication, it does not assume the need to determine its suitability for a given situation. Neither the Canadian Sheet Steel Building Institute nor its members warrant or assume liability for the suitability of the material for any general or particular application.

1. INTRODUCTION

This Bulletin outlines responsibilities implicit in the National Building Code of Canada (NBCC), National Energy Code for Buildings (NECB) and Provincial Building Codes. It outlines parties involved in the design and construction of buildings incorporating Steel Building Systems (SBS).

A SBS is an integrated assembly of manufactured steel structural components and cladding components, specifically designed by the manufacturer to support and transfer loads and provide a complete or partial building shell. SBS are intended primarily for buildings with commercial, industrial or institutional occupancies.

2. THE PARTIES DEFINED

For the purposes of this Bulletin, the parties involved in the design and construction of buildings incorporating SBS are considered to be (a) the Owner, (b) the Designer (or the Structural), (c) the Constructor, (d) the Design-Builder and (e) the SBS Manufacturer.

3. RESPONSIBILITIES AS PRESCRIBED BY NBCC, NECB, AND PROVINCIAL BUILDING CODES

The NBCC is a guide document used by some Provinces to develop their building codes. Some Provinces do not have their own provincial building code and adopt the NBCC instead; others make modifications. The essential roles of the parties are the same in each jurisdiction. The Provincial building codes are administered by the municipalities. This publication only addresses buildings required by code to have a designer, and to be designed in accordance with Division B, Part 4 of NBCC.

The NECB is also a guide document that the Provinces may adopt or use as a model for their own energy conservation legislation. An objective of the NECB is to "limit the probability that, as a result of the design or construction of the building, the environment will be affected in an unacceptable manner." Provisions are included for limiting the thermal characteristics of the building envelope, lighting, HVAC, water heating and electrical power systems. Trade-offs can be made between the various energy uses to meet the code-prescribed building energy consumption targets. The designer in an SBS building project is defining which of the parties involved is responsible for meeting the energy code requirements.

In brief, the Owner is responsible for obtaining all required permits and approvals to build, for giving any final notice to the building official, for ensuring design is carried out by a professional engineer or other architect as permitted by the code, for ensuring that general review of construction is carried out by an architect or professional engineer, and generally for complying with all the terms and conditions under which the building permit or any other required permit or approval is obtained.

The Designer (or the Structural) is professionally responsible, on behalf of the Owner, for the structural design of the building. He, or another suitably qualified person, is also responsible for review of the construction to determine conformance with the drawings.

The Constructor is responsible for obtaining all construction safety requirements, for not structuring on public property without permission, and is responsible jointly and severally with the Owner for any work actually undertaken.

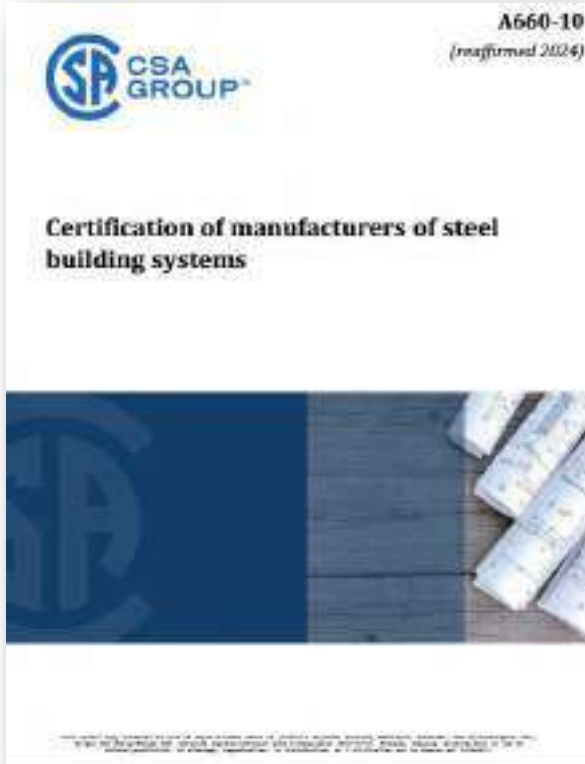
The Design-Builder is a constructor who employs or retains a professional engineer and/or architect so that the Design-Builder can assume the roles of both the Designer (of the structure) and Constructor.

The SBS Manufacturer is responsible for the design and fabrication of only the components that are furnished by it. The Designer of the SBS structural components is professionally responsible on behalf of the SBS Manufacturer.

652 Bishop St. R. Unit 29, Cambridge, Ontario, Canada N0H 4W8 | Telephone: (519) 690-1201 | Fax: (519) 690-8861 | www.cssbi.ca



Steel Building – Code References



© Canadian Standards Association Certification of manufacturers of steel building systems

Certificate of design and manufacturing conformance

This Certificate is to affirm that all components of the steel building system described below, to be supplied by the named manufacturer certified in accordance with CSA A660, have been or will be designed and fabricated in accordance with the following Standards to carry the loads and load combinations specified.

1. DESCRIPTION
 Manufacturer's name and address _____
 Manufacturer's Certificate No. under CSA A660 _____
 Customer order number _____
 Building type and size _____
 Intended use and occupancy _____
 Importance category [NBC, Sentence 4.1.2.1.(3)] _____
 Site location _____
 Applicable building code _____
 Builder's name and address _____
 Owner's name and address _____

Engineer's initials*

2. DESIGN STANDARDS
 National Building Code of Canada, 2005, Part 4: Structural Design
 CSA S16-09, Design of steel structures
 CSA S136-07, North American specification for the design of cold-formed steel structural members
 Other (specify) _____ dated _____

3. MANUFACTURING STANDARDS
 (a) Fabrication has been or will be in accordance with CSA S16 and CSA S136, as applicable.
 (b) Welding has been or will be performed in accordance with CSA W59 and CSA S136, as applicable.
 (c) The manufacturer has been certified in accordance with CSA W47.1, for Division 1 or 2, and/or CSA W55.3, if applicable.
 (d) Welders have been qualified in accordance with CSA W47.1.

4. PURLIN STABILITY
 Purlin braces are provided in accordance with CSA S136, Clause D3 and Appendix B, Clause D3.2.3. In particular, for a standing seam roof supported on movable clips, braces providing lateral support to both top and bottom purlin flanges have been or will be provided. The number of rows is determined by analysis but in no case is it less than 1 for spans up to 7 m inclusive or less than 2 for spans greater than 7 m.

5. LOADS
(a) Snow, ice, and rain load
 1-in-50 year ground snow load, S_g _____ (kPa)
 1-in-50 year associated rain load, S_r _____ (kPa)
 Wind exposure factor, C_{we} _____
 Importance factor, I_s _____
 Roof snow load, S _____ (kPa)
 Drift load considered (NBC, Sub-section 4.1.6.2.B). Refer to drawing of specific building.
 Specified rain load (NBC, Clause 4.1.6.4) _____ (mm)
 *Initial each true statement. Mark N/A if statement does not apply.

A660-10 © Canadian Standards Association

Engineer's initials*

(b) Full and partial snow load
 (i) Applied on any one and any two adjacent spans of continuous purlins
 (ii) Applied on any one and any two adjacent spans of modular rigid frames with continuous roof beams
 (iii) Applied as described for the building geometry in NBC, Part 4, and in the User's Guide — NBC 2005: Structural Commentaries (Part 4), Commentary G: Snow Loads

(c) Wind load
 1-in-50 year reference velocity pressure _____ (kPa)
 Importance factor, I_w _____

(d) Wind load application
 (i) Applied in accordance with NBC, Part 4, Section 4.1.7
 (ii) Pressure coefficients in accordance with User's Guide — NBC 2005: Structural Commentaries (Part 4), Commentary I: Wind Loads, Figures I3 through I12
 (iii) Building internal pressure category in accordance with User's Guide — NBC 2005: Structural Commentaries (Part 4), Commentary I: Wind Loads

(e) Crane loads (where applicable)
 Type _____ (top-running) (under-running) (jib)
 Capacity _____ (tonnes)
 Wheel base _____ (m)
 Maximum static, vertical wheel load _____ (kN)
 Vertical impact factor _____
 Lateral factor _____ % Lateral wheel load _____ (kN)
 Longitudinal factor _____ % Maximum longitudinal load _____ (kN/side)

(f) Mezzanine live load _____ (kPa)

(g) Seismic load
 Applied in accordance with NBC, Part 4, Sub-section 4.1.8
 $S_d(0.2)$ _____ $S_d(0.5)$ _____ $S_d(1.0)$ _____ $S_d(2.0)$ _____
 Site class _____ F_a _____ F_v _____ I_s _____

(h) Other live loads (specify) _____

(i) Dead loads
 Dead load of building components is incorporated in the design
 Collateral load (mechanical, electrical, ceiling, sprinklers, etc.) _____ (kPa)
 Mezzanine _____ (kPa)
 Other (specify) _____ ()

(j) Load combinations
 Applied in accordance with NBC, Part 4, Section 4.1.

6. GENERAL REVIEW DURING CONSTRUCTION
 The manufacturer does not provide general review during construction for regulatory purposes.
 *Initial each true statement. Mark N/A if statement or section does not apply.

7. CERTIFICATION BY ENGINEER
 I, _____, an Engineer registered or licensed to practice in the Province or Territory of _____, hereby certify that I have reviewed the design and manufacturing process for the steel building system described. I certify that the foregoing statements, initialled by me, are true.
 Name _____ Signature _____
 Title _____
 Affiliation _____ Date _____
 Professional Seal



2025

Year End & Education Opportunities

Calendar

| January 2025 | | | | | | |
|--------------|---------|-----------|--|--------|----------|--------|
| Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
| | | 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 BOABC Breakfast Meeting XZEB 1001 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 BCB & FRC 2025 Zero Energy Meeting Lunch & Learn XZEB 1001 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 XZEB 1001 | 24 | 25 | 26 |
| 27 | 28 | 29 | 30 XZEB 1001 | 31 | | |

Category Key
General

Don't forget to update your CPD & Annual Report!

Home / News / CPD Opportunity - BCIT Fundamentals of Zero Energy/ Emissions and Passive House Buildings - XZEB 1001

CPD Opportunity – BCIT Fundamentals of Zero Energy/ Emissions and Passive House Buildings – XZEB 1001

The Association is pleased to announce that it is partnering with BC Home and BCIT to offer a new energy code education for qualified building officials. This education is being offered to help enhance the capacity of qualified officials and local authorities to implement the Energy Step Code in the BCBC 2025 Code Update.

Course Name: XZEB 1001 Fundamentals of Zero Energy/Emissions and Passive House Buildings (online offering for BOA/BC)

Delivery Format: Online (Interactive and Instructor led)

Duration: Weekly three (3) hour sessions for seven (7) weeks (21 total hours of instructional time)

Dates: Thursday, January 9 – February 20, 2025 (you are committing to all sessions when you register)

Time: All sessions are 1:00 pm – 4:00 pm (PST)

Cost: \$225 plus GST per session. This special price for members is made possible by generous support from BC Home and BCIT.

Registration: Only BCBC 2025 registered and approved.

CPD Points: 11 points in one (1) category (automatically submitted to your member portal when you register)

07 Week course

BOABC MEMBER DASHBOARD

Hello, Kenneth F. Kunka (Log Out)

Message Center

CPD Reminders

Your total number of points for this reporting cycle and an annual report confirming your completion of CPD requirements must be submitted before December 31.

If you are unable to meet annual CPD and reporting requirements before December 31, you can apply to the Association to receive until January 31, a 31-day grace period, to complete your outstanding obligations. The Grace Period Application can be found on the 'Applications' page. This application is due by December 15.

A qualified official will have qualifications removed if they have not achieved the required number of CPD points by December 31 and they:

- did not submit a grace period application by December 15; OR
- submitted a grace period application that was not approved; OR
- did not complete their outstanding CPD points within the approved grace period by January 31.

MENU

- Edit Personal Info
- Invoices
- CPD**
- Applications
- Registration History
- Course Advising
- Annual Report**



Education Opportunities – Free Online



[Link - Standards for more efficient modular construction projects - CSA Group](#)

Feature

New online CSA Group training, available at no fee, aims to help the industry and regulators better understand the benefits and processes of modular construction. This can facilitate smoother delivery, certification, and approval of modular construction projects and contribute to broader adoption of this alternative method.

No-fee online training

***Modular Construction Projects
– Delivery, Certification,
Approvals Processes***

[Start learning](#) ↗



Modular Construction Projects



[Link - Standards for more efficient modular construction projects - CSA Group](#)

Learning Objectives

After taking this course, you will be able to:

- Describe the differences between modular construction and conventional buildings.
- Explain the relationships between the modular design, construction, and installation processes and how the processes impact the various project parties.
- Outline the role of the authority having jurisdiction/building inspectors off site and on site.
- List the key factors in the pre-construction and planning phases of a project.
- Identify the main aspects of module fabrication and certification in an off-site factory.
- Describe post-fabrication phase processes, considerations, and best practices to address them.

Target Audience

Building Inspectors / AHJs, manufacturers, other interested parties (e.g. architects, consultants)



Volumetric Modular Projects- CSA Z250



This Standard has been developed in compliance with Standards Council of Canada requirements for National Standards of Canada. It has been published as a National Standard of Canada by CSA Group.

Scope

1.1 Inclusions

This Standard describes processes for the delivery of permanent volumetric modular buildings, where modules are constructed in a factory. This Standard specifies the procedures for

- a) design;
- b) quality control in modular manufacturing;
- c) approvals;
- d) logistics, transportation and storage;
- e) non-modular and modular sitework;
- f) lifting, placement, and setting;
- g) installation and finishing; and
- h) commissioning and handover.

Local governments should be involved early in the project design phase (pre-applications)

1.2 Exclusions

This Standard does not cover the procedure for in-factory certification of buildings, modules, or panels.

Note: See CSA A277 for the procedure for in-factory certification of buildings, modules, or panels.



Volumetric Modular Projects- CSA Z252

CSA Z252:23



Volumetric modular construction — Guide to compliance and approval processes

Local governments should be involved early in the project design phase (pre-applications)

| | | |
|----------|---|-----------|
| 5 | Permits and codes compliance achievement methodology | 16 |
| 5.1 | General | 16 |
| 5.1.1 | Overview of the applicable permit application process | 16 |
| 5.1.2 | Building permit submission process | 16 |
| 5.1.3 | Special consideration for complex projects | 17 |
| 5.2 | Compliance with building codes | 17 |
| 5.2.1 | General | 17 |
| 5.2.2 | Alternative solutions | 17 |
| 5.3 | Compliance with other applicable laws, regulations codes, and standards | 17 |
| 5.4 | Drawings and documents | 18 |
| 5.4.1 | Applications | 18 |
| 5.4.2 | Modular building code analysis | 18 |
| 5.4.3 | Module schedule | 19 |
| 5.4.4 | SOW and RAM | 19 |
| 5.4.5 | Scope delineation matrix | 19 |
| 5.4.6 | Construction schedules | 19 |
| 5.4.7 | Connection point schedule | 20 |
| 5.4.8 | Additional drawings and documentation | 20 |



Save the Date - 2025 Conference - Kelowna

2025 Conference



Save the Date: 2025 BOABC Conference

May 11 to 14, 2025

Delta Hotels Grand Okanagan Resort
Kelowna, BC



2025 MHABC Modular Housing Summit - Coming Soon!

May 5th to 7th, Penticton BC, Lakeside Resort

Save the Date – MHABC Summit - Penticton

- Get early access to registration for the 2025 MHABC Modular Housing Summit!
- Limited number of 50% registration covered by community housing for BOABC members.
- Last year's event sold out, so don't miss your chance—REGISTER now using the link below.
- <https://mhabc.com/modular-housing-summit-2024/>



Manufactured Housing — creating a consistent & efficient permitting process.

Photos from SRI website





Purpose

For the past several years, the Manufactured Housing Association of BC (MHABC) has been working on improving awareness and education on manufactured/modular housing as a solution to creating more affordable housing units in BC.

In 2023, MHABC conducted an extensive review of local government bylaws and processes related to manufactured housing and found several possible changes to help improve the use of manufactured housing.



Findings - Challenges

Findings from Consultation

Current Barriers:

- Stigma of Modular
- By-laws outdated, Not inclusive of Modular
- Permitting process unclear,
- Understanding of Modular in Planning Departments
- Inspection process requires clarity in some cases
- Overall Education and Familiarity

Who is taking the lead in the permit application and on-site works leading into Occupancy?

How many players are involved?





Solutions

The following material will provide some background to the challenges we face & solutions moving forward.

It will take all industry parties involved to have a better understanding of total process and their part to improve the overall uptake of manufactured housing in BC.





Poll Questions

Poll Question #4

Have you plan checked and or inspected a Z240MH project.

- Yes = 65%
- No = 35%

Poll Question #5

Have you plan checked and or inspected a A277 project?

- Yes = 63%
- No = 37%

Poll Question #6

Have you plan checked and or monitored a multi-modular residential project?

- Yes = 33%
- No = 67%



Major Players & Phases

For most small-scale projects (A277, Z240) there are typically

Manufacturer

Retailer

Transporter

Park Manager
(Z240)

Local
Government

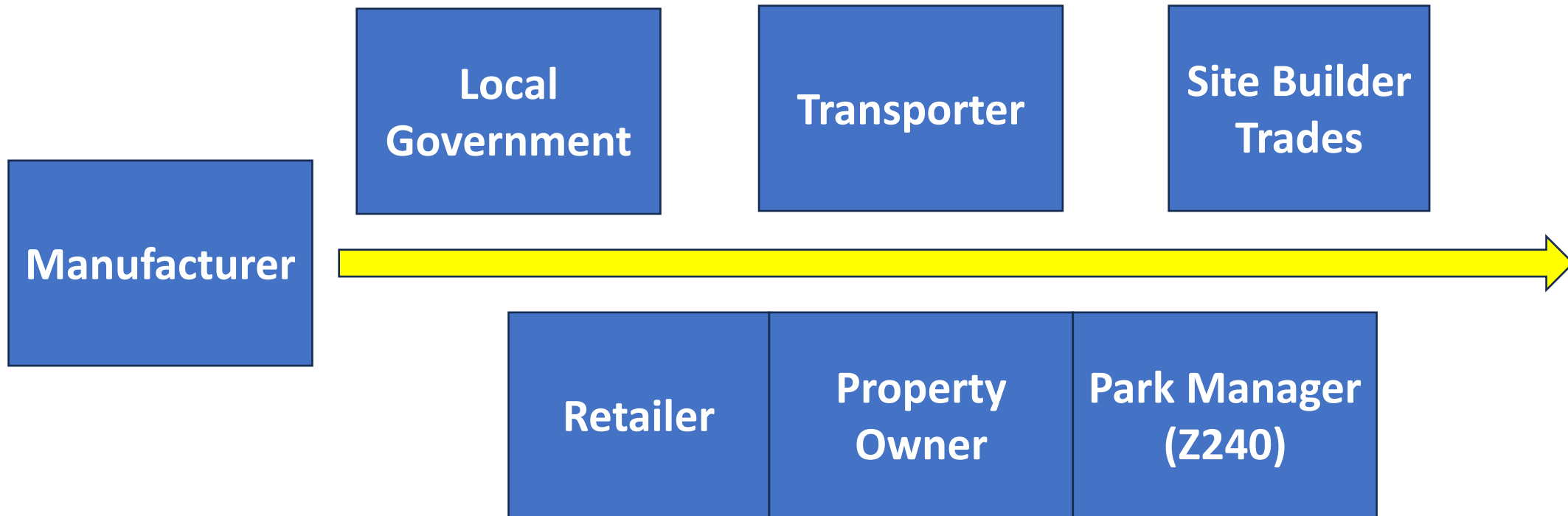
Site Builder

Property
Owner



Major Players & Phases

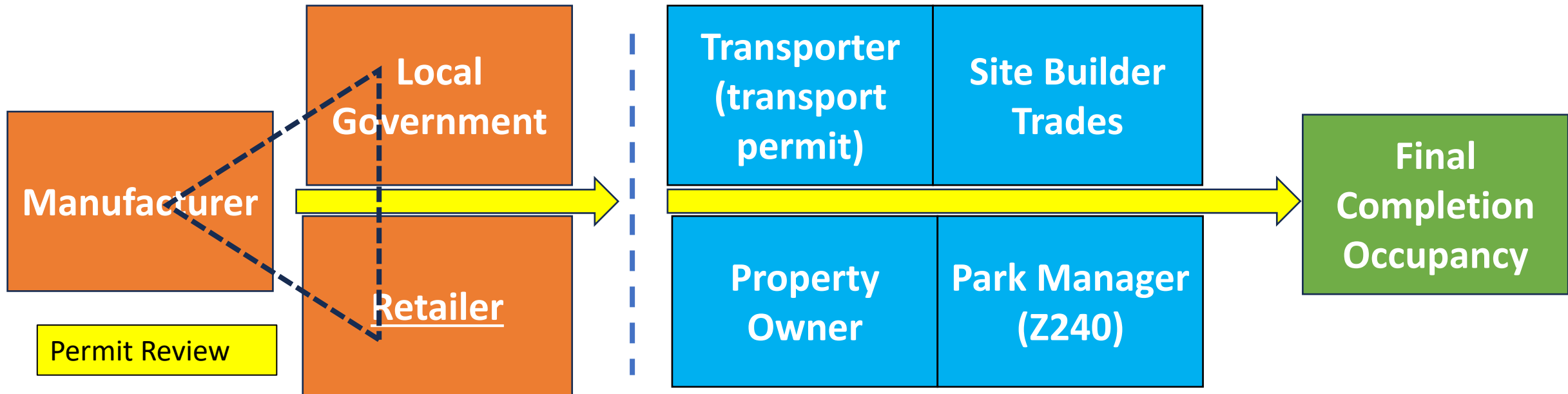
Understanding the sequence and who is involved/responsible at each phase can be the start point of a good permit process – but who is taking the lead?





Major Players & Phases

Usually, the Retailer is the permit holder on behalf of the owner and is involved with the permit process with the manufacturer and local authority.

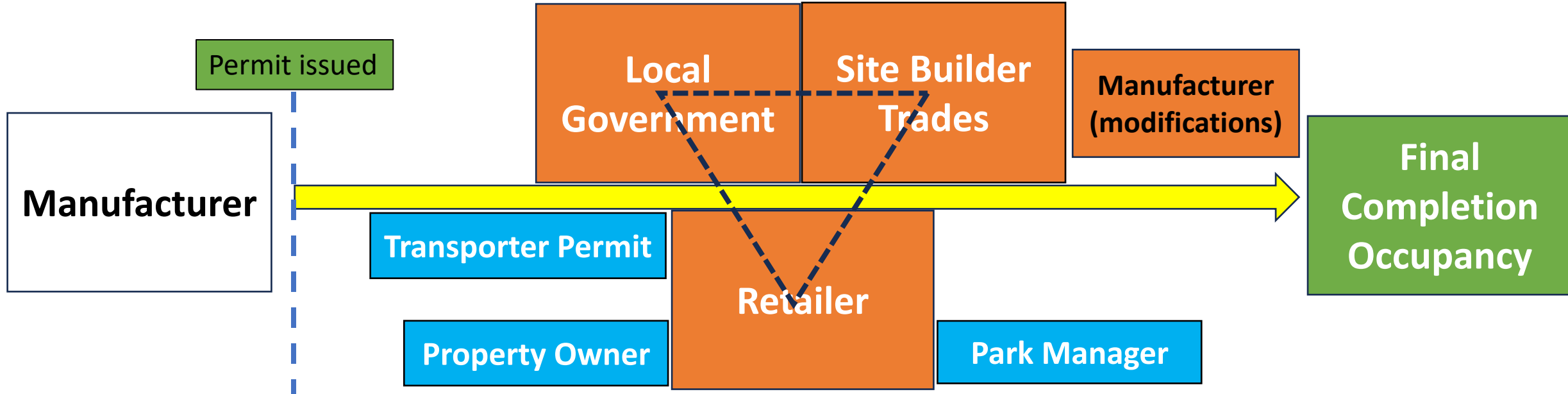


Things become more complicated when involving the other players moving to final inspection.



Major Players & Phases

Typically, the manufacturer is no longer involved in the project once it leaves the factory - unless issues arise during shipping or on-site placement.

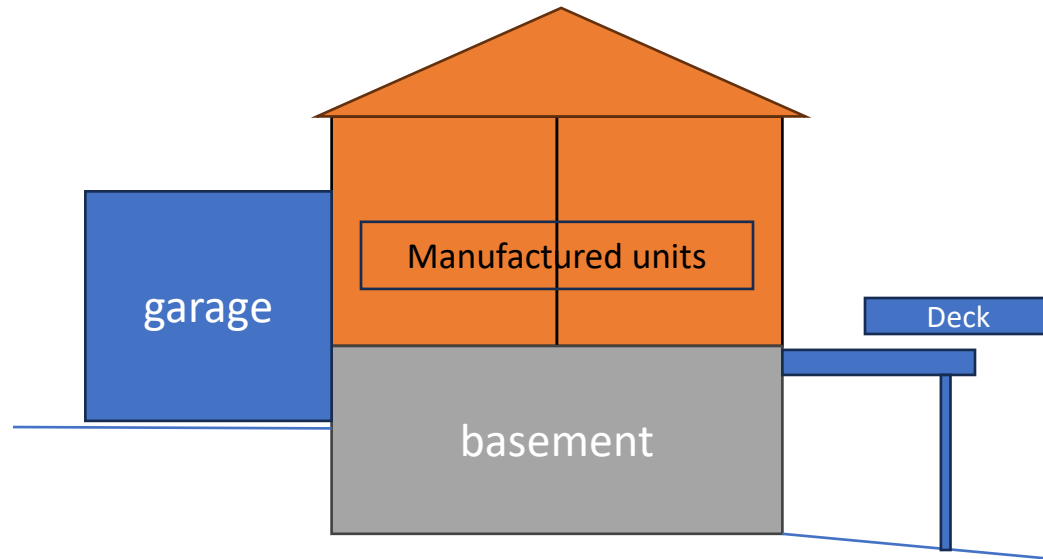


The Retailer/Owner must be fully engaged along with the Site builder to ensure success



Example - Multiple players and stages (herding cats)

CSA – A277 Project



Mix of modular unit placement with site-built elements.

Who's in charge?

Mid-Construction blower door testing once units set?

Mechanical/Ventilation – Step Code

Problems arise in the coordination of manufactured and on-site elements

Multiple players that can/should be involved

- Manufacturer
- Owners
- Retailers
- Shipping/site set up
- General contractor – trades (on-site)

No warranty requirements - HPO, which makes most Building Officials nervous.

Occupancy issue - Required Step Code not achieved at Occupancy may not be approved by AHJ.



My Observations

Challenges for Building Department

- Time constraints
- Code knowledge - training
- Outdated bylaws and processes
- Point of contact
 - Multiple parties
- Risks – no HPO.

Challenges for Manufactured Industry

- Time Constraints
- Lack of Code knowledge
- Lack of local bylaw knowledge
- **LG – Inconsistent application forms, interpretations and requirements (forms)**
- **Multiple parties**



Possible Solutions


- Industry wide joint-training
- Certified trades – modular construction
- Standardized processes and bylaws
- Standardized permit/inspection checklists
- Pre-approved designs – prefab
- Trust in the process/standards



Solutions

The creation of a standardized permit application and on-site inspection checklist for A277 and Z240 projects.

The checklists will help ensure a consistent level of awareness of the CSA standards & Codes as well as the manufacturing and delivery process for all parties involved in the permitting process.



Inspection Check List

| | | | | | |
|--------------------------------------|------------|---|--------------------------------|-------------|-------------|
| Project Planning, Design, and Budget | Permitting | Site Prep & Foundation Manufacturing Process | Transportation Installation | Inspections | Final Steps |
|--------------------------------------|------------|---|--------------------------------|-------------|-------------|

- Developing an Inspection Check list Clearly Communicating what and when inspections should occur
- Provide an Information document that gives the same communication to Industry and Building Officials
- Standardized Checklist - specific to Modular Manufacturing A277 / Z240, with Photos and descriptions
- First Draft Completed in September 2023



Poll - Forum Questions

Poll Question #7

Pre-Approved Manufactured Homes?

Has your local jurisdiction discussed fast tracking “prefab factory-built designs”?

- Yes = 6%
- No = 82%
- Not sure = 10%

Hi, I was reading this NDP article from late September and wondering if any communities have been directly involved in changing processes for speeding up manufactured home permits? <https://www.bcndp.ca/releases/more-homes-built-faster-eby-grow-factory-home-construction>

David Eby and the BC NDP will fast-track the growth of B.C.'s factory-built home construction industry by:

- **Reducing red tape and letting the industry get on with the job.** Working with municipalities, First Nations, and the industry, we'll create a province-wide framework to put every municipality on the same playing field – so builders know what's required in every community.
- **Pre-approving a set of construction designs.** Just as we've done with site construction, we'll approve ready-to-use designs to reduce the time it takes to get homes built – without the need for lengthy permitting processes.
- **Boosting skills training.** In partnership with the industry leaders, we'll work together to develop the skills training needed for this kind of home construction, creating jobs and opportunities in more communities.



Codes and Standards

Have all parties spend time to ensure they understand the Code and Standards requirements is key. (updates)

Know the difference between (CSA-A277 and Z240MH).

Ensure local government bylaws & forms are updated in relation to Codes and Standards.

- There are many outdated bylaws and forms.
- Create consistency



CSA A277 – Z240MH Refresher

Section 1.1. General

1.1.1. Application of this Code

1.1.1.1. Application of this Code

Manufactured and Modular Housing Standards Refresher

Examples of Z240MH housing units



Z240: Double wide



Z240: Single wide

Note – site-built structures such as decks, carports and porches are to be self-supported and designed under BC Building code. Permanent foundations can be used as outlined within Sections 6 and 7 of Z240.10.1:19



A277-16 (R2021)

Procedure for certification of prefabricated buildings, modules, and panels

English, French | Publication Year 2016 | Published by CSA Group | Reaffirmed in 2021

Full application of the BCBC

Please refrain from using the term “mobile homes”. There are no wheels.

Note A277 – also includes modules (pods) and panels.



CSA A277 – Z240MH Refresher

Manufactured and Modular Housing Standards Refresher

Examples of Z240MH housing units



Z240: Double wide



Z240: Single wide

Note – site-built structures such as decks, carports and porches are to be self-supported and designed under BC Building code. Permanent foundations can be used as outlined within Sections 6 and 7 of Z240.10.1:19

Please refrain from using the term “mobile homes”. There are no wheels

6 Foundations

Note: See Annex C.

6.1 General

6.1.1 Compliance

Pile and pier foundations shall be designed and constructed in accordance with

- a) Clauses [6.1.3](#) and [6.2](#); and
- b) except as provided in Clause [6.1.2](#), Clauses [6.3](#) to [6.6](#) where the building
 - i) is one-storey;
 - ii) is not constructed with masonry, heavy roofing such as concrete or clay roof tile, or concrete floor topping; and
 - iii) has a maximum specified uniformly distributed design live load on the floor of 2.4 kPa (50 lb/ft²).

7 Anchorage to resist overturning and pier toppling due to wind

Note: See Annex D.

7.1 Rating

7.1.1 Required rating

Buildings shall be rated with respect to their resistance to overturning and buildings with their supporting piers shall be rated with respect to pier toppling

- a) under 1/50 hourly design wind pressures and assumed exposure factor ($C_e C_t$); and
- b) when the building is installed in accordance with the manufacturer's instructions without anchorage.

Ratings shall be calculated according to accepted engineering practice.

Note: For design wind pressures for various locations in Canada, see the NBC, Division B, Appendix C.



Z240MH Refresher

Manufactured and Modular Housing Standards Refresher

Examples of Z240MH housing units



Z240: Double wide



Z240: Single wide

Note – site-built structures such as decks, carports and porches are to be self-supported and designed under BC Building code. Permanent foundations can be used as outlined within Sections 6 and 7 of Z240.10.1:19

Please refrain from using “mobile homes”.

Part 1 Compliance

Section 1.1. General

1.1.1. Application of this Code

1.1.1.1. Application of this Code

2) This Code does not apply to the following:

g) factory-built housing and components complying with CSA-Z240 MH Series standard, but this exemption does not extend to on site preparations (**siting, foundations, mountings**), **connection to services and installation of appliances.**



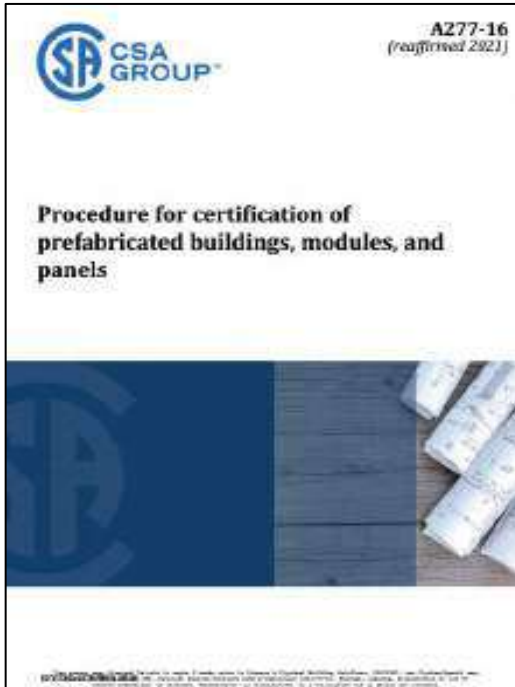
Code Update – Div B – Part 01

Standards have been updated from the 2018 BCBC to 2024 BCBC

Referenced in the Table 1.3.1.2.

Documents Referenced in Book I (General) of the British Columbia Building Code(1)

Forming Part of Sentence 1.3.1.2.(1)



2018

| Issuing Agency | Document Number ⁽²⁾ | Title of Document ⁽³⁾ | Code Reference |
|----------------|--------------------------------|--|------------------------------|
| CSA | A277-08 | Procedure for Factory Certification of Buildings | A-1.1.1.1.(3) ⁽⁴⁾ |

2024

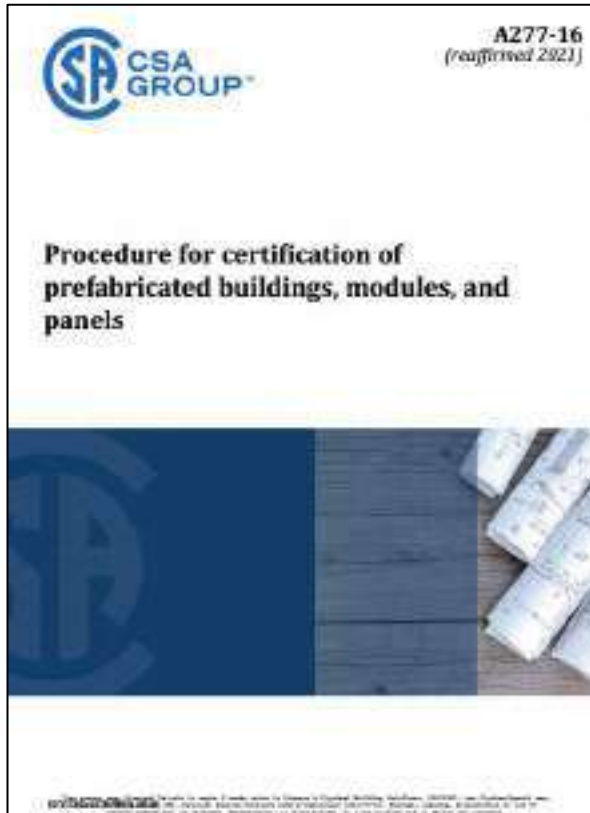
| | | | |
|-----|---------|---|------------------------------|
| CSA | A277-16 | Procedure for certification of prefabricated buildings, modules, and panels | A-1.1.1.1.(3) ⁽⁴⁾ |
|-----|---------|---|------------------------------|





Code Update – A277

Requires Trust in the certification process



A-1.1.1.1.(3) Factory-Constructed Buildings. The British Columbia Building Code applies the same requirements to site-built and factory-constructed buildings. However, it can often be difficult to determine whether a factory-constructed building complies with the Code once it has been delivered to the construction site because many of the wall, roof and floor assemblies are closed in and so their components cannot be inspected. CSA A277, "Procedure for certification of prefabricated buildings, modules, and panels" was developed to address this problem with regard to residential, commercial and industrial buildings. This standard describes a procedure whereby an independent certification agency can review the quality control procedures of a factory and make periodic unannounced inspections of its products. The standard is not a building code, only a procedure for certifying compliance of factory-constructed components with a building code or other standard. If a factory-constructed building bears the label of an accredited certification agency indicating that compliance with the National Building Code has been certified using the CSA A277 procedure, the accepting authority will have some assurance that the concealed components do not require re-inspection on site.



Code Update – Div B – Part 01

Standards have been updated from the 2018 BCBC to 2024 BCBC

Referenced in the Table 1.3.1.2.

Documents Referenced in Book I (General) of the British Columbia Building Code(1)

Forming Part of Sentence 1.3.1.2.(1)



2018

2024

| Issuing Agency | Document Number ⁽²⁾ | Title of Document ⁽³⁾ | Code Reference |
|----------------|--------------------------------|---|--|
| CSA | Z240 MH Series | Manufactured Homes | 1.1.1.1.(2) ⁽⁴⁾ A-1.1.1.1.(2) ⁽⁴⁾ |
| CSA | Z240.2.1-09 | Structural Requirements for Manufactured Homes | A-1.1.1.1.(2) ⁽⁴⁾ 9.12.2.2.(6) 9.15.1.3.(1) |
| CSA | Z240.10.1-08 | Site Preparation, Foundation, and Anchorage of Manufactured Homes | A-1.1.1.1.(2) ⁽⁴⁾ 9.15.1.3.(1) 9.23.6.3.(1) |

| | | | |
|-----|----------------|---|--|
| CSA | Z240 MH Series | Manufactured homes | 1.1.1.1.(2) ⁽⁴⁾ A-1.1.1.1.(3) ⁽⁴⁾ |
| CSA | Z240.2.1-16 | Structural requirements for manufactured homes | A-1.1.1.1.(3) ⁽⁴⁾ 9.12.2.2.(6) 9.15.1.3.(1) |
| CSA | Z240.10.1:19 | Site preparation, foundation, and installation of buildings | A-1.1.1.1.(3) ⁽⁴⁾ 9.15.1.3.(1) 9.23.6.3.(1) |





Code Update – Div B – Part 01

| | | | |
|-----|----------------|---|---|
| CSA | Z240 MH Series | Manufactured homes | 1.1.1.1.(2) (4) A-1.1.1.1.(3) (4) |
| CSA | Z240.2.1-16 | Structural requirements for manufactured homes | A-1.1.1.1.(3) (4) 9.12.2.2.(6) 9.15.1.3.(1) |
| CSA | Z240.10.1:19 | Site preparation, foundation, and installation of buildings | A-1.1.1.1.(3) (4) 9.15.1.3.(1) 9.23.6.3.(1) |



9.12.2.2.(6) Minimum Depth of Foundations

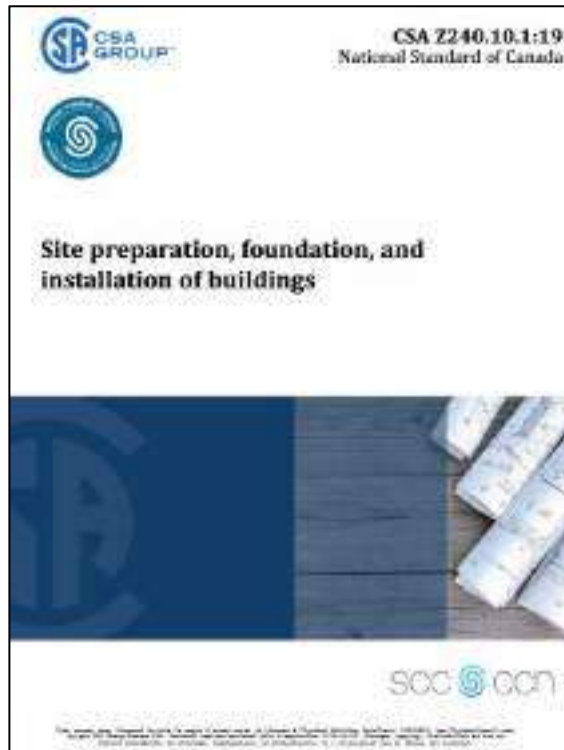
- 6)** The *foundation* depths required by Sentence (1) do not apply to *foundations* for
- a) *buildings*
 - i) that are not of masonry or masonry veneer construction, and
 - ii) whose superstructure conforms to the requirements of the deformation resistance test in CSA Z240.2.1, "Structural requirements for manufactured homes" or

9.15.1.3. Foundations for Deformation-Resistant Buildings

- 1)** Where the superstructure of a detached *building* conforms to the requirements of the deformation resistance test in CSA Z240.2.1, "Structural requirements for manufactured homes" the *foundation* shall be constructed in conformance with
- a) the remainder of this Section, or
 - b) CSA Z240.10.1, "Site preparation, foundation, and installation of buildings."

9.23.6.3. Anchorage of Smaller Buildings

- 1)** *Buildings* not more than 4.3 m wide and not more than 1 *storey* in *building height* that are not anchored in accordance with Sentence 9.23.6.1.(1) shall be anchored in conformance with the requirements of CSA Z240.10.1, "Site preparation, foundation, and installation of buildings."





Code Update – A.1.1.1.1.(2) - Z240MH



On the other hand, standards in the CSA Z240 MH Series, "Manufactured homes" do resemble a building code. Most of the individual standards in the series contain requirements regarding many issues also covered in this Code. Some of these Z240 MH Series provisions are performance requirements with no quantitative criteria, some simply reference the applicable British Columbia Building Code requirements, while others contain requirements that differ from those in the British Columbia Building Code. One of the individual standards in the Z240 MH Series deals with special requirements for manufactured homes related to the fact that these houses must be moved over roads, which is an issue the British Columbia Building Code does not address.

Therefore, labeling that indicates that a factory-constructed house complies with the Z240 MH Series standards can NOT be taken as an indication that the house necessarily complies with the building code in effect for the location where the house will be sited.

The British Columbia Building Code does reference CSA Z240.10.1, "Site preparation, foundation, and installation of buildings" which is not actually part of the CSA Z240 MH Series. This standard contains requirements for surface foundations where buildings-not just houses-comply with the deformation resistance test provided in CSA Z240.2.1, "Structural requirements for manufactured homes."



Code Update – Z240.10.1.19

As standards are modernized, they are not always referenced in the latest Code version.

Difficulty arises with confirming if designers, manufactures, installers and Building Officials are on the same page and updating documents such as permit application and on-site requirement checklists.

The use of unique priority products should also be clarified with the local authority having jurisdiction.



Are the use of plastic pier pads acceptable?

Document History



Z240.10.1:19

January 1, 2019

Site preparation, foundation, and installation of buildings

Application This Standard applies to single- and multi-section buildings supported on longitudinal floor beams, or perimeter rim joists designed to perform as beams. Issues addressed This Standard...



CSA Z240.10.1

January 1, 2016

Site preparation, foundation, and installation of buildings

Application This Standard applies to single- and multi-section buildings supported on longitudinal floor beams, or perimeter rim joists designed to perform as beams. Issues addressed This...



Z240.10.1-08

March 1, 2008

Site preparation, foundation, and anchorage of manufactured homes

This Standard applies to manufactured and modular homes designed to be supported on longitudinal floor beams. Note: For simplicity, the term "manufactured home" is used in this Standard to refer to...



Ensure Guides and Application forms are up to date with current Code requirements and Standards.

Forms and Guides

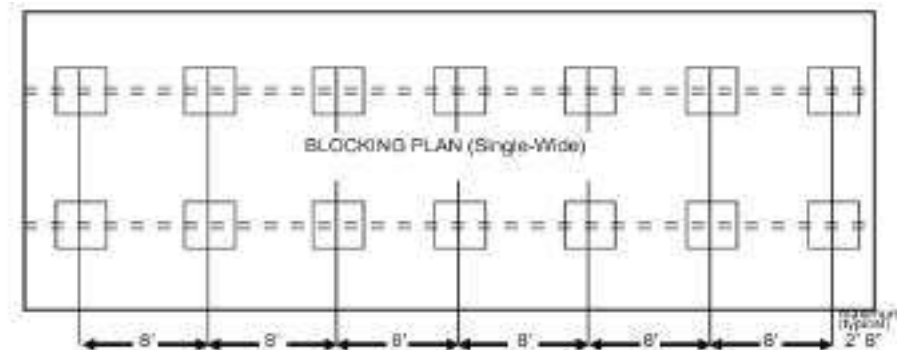
Mobile Homes On Private Property

A building permit is required when you wish to:

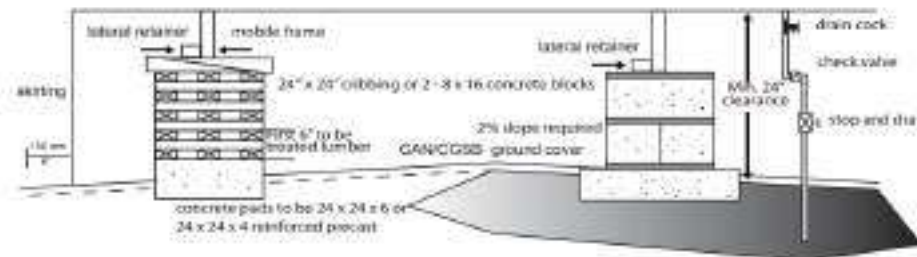
- Move a mobile home onto a property
- Relocate a mobile home on an existing property
- Add an addition to a mobile, including decks over 2 feet above grade
- Construct an aluminum cover for a deck, patio or carport
- Refer to tol.ca/building for guidelines on other projects requiring a permit application

The placement of a mobile home on a property as a single family dwelling or temporary accessory dwelling is subject to the regulations under the _____ Zoning Bylaw. For properties located in the Agricultural Land Reserve (ALR), please note that the Agricultural Land Commission (ALC) regulations may also affect allowances for placement of mobile homes. Applicants should familiarize themselves with the ALC legislative provisions if the subject property is located within the ALR.

Mobile homes must comply with the CSA A277-M1990 or CAN/CSA Z240 MH Series-M86 standards.



Engineering is required for the foundation system and anchorage when blocking height exceeds three (3) blocks high



Examples of online placement details from AHJ – are they up to date?



BL8306 replaced definition:

"Building" means any construction used or intended for supporting or sheltering any use or occupancy and includes a mobile home;

BL8306 added the Definitions "Mobile Home" and "Mobile Home Park":

"Mobile Home" means a transportable single family dwelling unit meeting minimum Canadian Standards Association Z-240 or A-277, or National Building Code Standards, suitable for long term occupancy, and designed to be transported on wheels;

"Mobile Home Park" means land use or occupied by any person for the purposes of providing spaces for the accommodation of two or more mobile homes and for imposing a charge or rental for the use of such space;

2. **MOBILE HOMES**

\$175.00 + \$11.00 per \$1000.00 of construction value of the foundations, mountings, skirting and blockings.

Building Bylaws

Part 18 - Moving of a Building

85. No person shall move any building without first obtaining a permit.
86. Every application for a permit to move a building shall identify the lot from which the building is to be moved and the lot to which the building is to be moved. Authorization to use the public streets for such a move shall be obtained from the General Manager, Engineering, prior to the issuance of a permit.
87. A demolition permit is required for the removal of the existing foundation and the disconnection of City services.
88. An electrical permit is required for disconnection of the electrical service connection to the building to be moved.
89. No building or portion of a building that is to be used for a residential occupancy may be moved into the City unless the building:
- (a) has never been occupied;
 - (b) is a manufactured home as defined in the Zoning Bylaw; and
 - (c) is placed on a lot that lists manufactured homes as a permitted use in the Zoning Bylaw.
90. A building may be moved within the City provided:
- (a) the building is not older than the majority of the buildings situated on lots within 155 metres of the lot to which the building is proposed to be located; and
 - (b) the building is architecturally compatible, in the opinion of the Building Official, with the majority of the buildings situated on lots within 155 metres of the lot to which the building is proposed to be located.



Z240MH and A277 - final drafts

Checklist outline

MODULAR BUILDING PERMIT CHECKLIST – Z240MH

This guide has been developed in conjunction with industry partners, including the Building Officials Association of BC (BOABC), to provide a consistent approach in the building permit application and site inspections process for manufactured homes constructed and placed under Z240MH in British Columbia. Remember that each jurisdiction (Authority Having Jurisdiction – AHJ) may have specific requirements, so be sure to confirm with the local authorities and review the Building Permit application and permit condition letter in detail.

1. Z240MH Background – Codes and Standards

For the purposes of permit applications and inspections for residential buildings in BC, it is important to understand the requirements outlined by the local government regulations where the unit(s) are to be located, such as zoning and building & plumbing bylaws, and the BC Code with the applicable referenced standards.



Checklist outline

Prefabricated building (CSA standard) a building partially or fully constructed in a factory.

Seasonal use – there is no definition of seasonal use in the Code, however “non-heating season” is noted in several sections of the code. Please also see A-9.1.1.1.(1) Application of Part 9 to Seasonally and Intermittently Occupied Buildings.

- **Note** - *For the purpose of this guide all residential units under Z240 are for year-round use. There is no allowance for the placement of CSA Z241 Park Model & CSA Z240RV in most jurisdictions, which are not intended for permanent residency.*



Poll - Forum Questions

Poll Question #8

CSA Z241 Park Models

Are they allowed in your jurisdiction:

- **Yes = 15%**
- **No = 69%**
- **Special Cases = 15%**
 - **Example - Only for seasonal camps**

How are jurisdictions fielding requests to place Park Models on permanent foundations? Do Park models have a limit of time they can be in one location? Looking for any and all information of how municipalities are governing these structures.

Thank you!



Checklist outline – defined terms

Authority having jurisdiction (AHJ) means the governmental body responsible for the enforcement of any part of this Code or the official or agency designated by that body to exercise such a function. Notwithstanding this definition, the Chief Inspector of Mines has the sole responsibility for administration and enforcement in respect to all buildings, structures and site services used at a mine, as defined in the Mines Act.

Please note that Local Authorities can only request permit and construction requirements by Bylaw and the referenced areas within the BC Building Code.

Dwelling unit means a suite operated as a housekeeping unit, used or intended to be used by one or more persons and usually containing cooking, eating, living, sleeping and sanitary facilities.

Manufactured home – there is no definition within the BC Building Code. Refer to CSA standard (Prefabricated building) and your local authority's bylaw(s).



Checklist outline – Design

2. Design and Pre-Application Review

It is highly recommended that the manufacturers, owners, transporters, and permit applicants (retailers) be fully versed in the local government's permit requirements and local regulations. A phone call or office visit while you are planning out your project prior to permit application will help avoid miscommunication, application rejections or on-site delays.

Additional requirements that may affect your project (outside BC Code or the Standard):

- State of Title, Zoning (Mobile Home) bylaws, Development Permit areas (including wildfire protection zones, Driveways and Fire Department access, Sprinkler Bylaws (NFPA 13D), Electrical Infrastructure clearances, solar requirements, Relocation of older units (age restrictions), Transportation and site logistics (road/sidewalk closures).



Checklist outline – Applications

3. Permit Application Requirements

Typically, Z240MH building permits are referred to as “placement” or “relocation” permits. Ensure that the permit application is reviewed in detail and that you are aware of the AHJ Building Bylaw, Zoning Bylaw and other regulations or policies related to placement of a Z240 unit(s) within that jurisdiction. An incomplete application* will most likely not be accepted by the local building authority, which will delay your project. Important items to ensure are reviewed as part of the application.

- a. Owner or Agent information involved in construction (see item references below),
- b. Correct civic and legal address,
- c. CSA number & Manufactured Home Registration,
- d. Current Title Search (30 days), which will confirm ownership and any charges on title such as covenants, Rights-of-Ways, and Easements,
- e. Manufacturer of units and general contractor completing installation,
- f. Type of manufactured unit and types of works to be completed onsite,
- g. Climatic data (refer to the AHJ Building Bylaw and or the Code),
- h. Start date and Estimated cost of construction, which typically includes all hard and soft costs associated with the project including site-built structures.
- i. Confirmation of On-Site Wastewater, Potable Water, and Site Drainage in areas where local government servicing is not provided,
- j. Geotechnical Letters of Assurance (Schedule 1) and report (if applicable).



Checklist outline – Applications

3. Permit Application Requirements

Licensing and Consumer Service Registration (Home Protection Act (Act))

- Not required for Building under CSA A277 or Z240, unless the unit(s) are significantly modified on site or when a site built self-contained unit is attached such as for a duplex. Site works such as garages, decks, and basements (including secondary suites) are permitted without requiring the triggers of the Act.

Refer to: Regulatory Bulletin 29 for more information.

Radon Provisions

The BC Code now requires the installation of radon protection in all regions of BC. When units are proposed to be placed on permanent foundations – ensure the area below the units are suitably cross vented to be considered unconditioned space for exemptions to radon requirements.

(coordination of on-site and manufactured unit important)



2024 BC Code – 9.36 – Energy Step Code

BC Energy and Zero Step Code requirements

As outlined in Div 1– 1.1.1.1.(2)(g) – Z240MH units are exempt from the code requirements, other than site preparations (siting, foundations, mountings), connection to services and installation of appliances.

Therefore Part 9 requirements for Step Code and Cooling requirements are exempt for Z240MH units.

However

CSA Z20MH (R2021) Part 13.1 still allows option to go with 9:36. We need to understand where a local government by-law does not address Part 13.1

This will become very confusing for building officials if not clarified. The Code exemption is clear in BCBC, however Section 13 Energy Efficiency in the Z240 standard imply that is meets NBC (which we do not use in BC)

CSA Z240MH

13 Energy efficiency

13.1 Compliance

Manufactured homes shall comply with

- NBC Section 9.36, Energy Efficiency;
- building energy efficiency requirements in force at the installation location; or
- Clauses [13.2](#) to [13.4](#).

Notes:

- NBC Section 9.36, Energy Efficiency, and provincial-territorial requirements based on NBC 9.36., are more stringent than the prescriptive requirements in Clauses [13.2](#) to [13.4](#), but provide trade-offs and a performance compliance path which allow more flexibility in design compared to the prescriptive requirements in this Standard.*
- Some authorities having jurisdiction have regulations that apply more stringent energy efficiency requirements to manufactured homes. These include, for example, the British Columbia Energy Efficiency Standards Regulation with respect to appliance efficiencies and the Nova Scotia Building Code Regulations which applies NBC Section 9.36. to all homes. Manufacturers should be aware of all applicable requirements.*



Poll - Forum Questions

Poll Question #9

Z240MH – Step Code compliance

Is it required for Z240MH units?

- Yes = 2%
- No = 73%
- Not sure = 24%

I'm getting push-back from Z240MH manufacturers.

Is there anyone out there asking for the Pre-construction Step Code Compliance report?



Checklist outline – Inspections

4. Modular Inspection Checklist Guide

The following checklist includes the most common types of inspections and requirements for on-site works leading towards final Occupancy approvals for Z240MH modular units.

Building permit inspections may vary and be sure to review your Permit Condition Letter/Drawings prior to construction. Any changes to the approved permit drawings should be reviewed with your local Building Official as soon as possible.

Note – Please ensure you are ready for the required inspection prior to requesting. It is also critical to have a copy of the permit package, including approved drawings, always on site. Failure to have these documents on site at the time of the required inspection may result in failed inspection.

1. Site Orientation and Site Preparation Inspection
2. Modular Unit placement – Foundation Support Inspection
3. Water Service Inspection
4. Sewer Service Inspection
5. Framing (site built – self supporting decks/car covers)
6. Final Plumbing, Electrical and Gas signoffs
7. Occupancy (final)*

A277 projects would likely follow the standard bylaw inspection protocols with exception of review of off-site manufactured units.

Would you still walk thru the manufactured portion at final?



Checklist outline – Final Specifications

4. Modular Inspection Checklist Guide (A277)

4. Modular Inspection Checklist Guide (Z240MH?)

7.4.1.3 Labels and stamps

Labels installed in accordance with Clauses [7.4.1.1](#) and [7.4.1.2](#) shall

- a) comply with CSA C22.2 No. 0.15, Type B or C
 - i) for indoor use where installed in a location that will not be exposed to the exterior in the completed building; or
 - ii) for outdoor use where installed in a location that will be exposed to the exterior in the completed building;
- b) be located only on surfaces identified by the label manufacturer as appropriate for the label; and
- c) not be located on surfaces whose temperatures exceed the maximum specified by the manufacturer.

Stamps shall provide a performance level equivalent to that required for labels.

7.4.2 Specification sheet

7.4.2.1 Provision of specification sheets

Specification sheets shall be provided as follows:

- a) for prefabricated buildings:
 - i) be permanently affixed on the inside of each prefabricated building in a location that will be readily visible when the building is complete; and
 - ii) in the case of a multi-unit or multi-suite building, be affixed on the inside of each unit or suite in a location that will be readily visible when the building is complete;
- b) for prefabricated modules that are not part of a prefabricated building that is certified in accordance with this Standard and affixed with a specification sheet in accordance with Item a):
 - i) be permanently affixed on the inside of the module or building in a location that will be readily visible in order to confirm compliance at the installation site; or
 - ii) be provided to the purchaser, where the specification sheet cannot be affixed as described in Item i) (see Annex A); or
- c) for prefabricated panels that are not part of a prefabricated building that is certified in accordance with this Standard and affixed with a specification sheet in accordance with Item a):
 - i) be permanently affixed on the inside of the building in a location that will be readily visible when the building is complete; or
 - ii) be provided to the purchaser.

Notes:

- 1) Where multiple modules or panels are installed in a building, a single specification sheet may be provided for all modules or panels in the building.


Spec sheet for
Z240MH?



2024 BC Code – 9.36 – Energy Step Code

May 1, 2023 - 2018 BCBC – Rev 05

- Code requirement
 - Part 9 – Step 3
 - Part 3 – Step 2
- Exception allowed for communities to stay Prescriptive under 9.36.2 – but must be in the Building Bylaw and cannot flip/flop between.
 - More intensive prescriptive requirements
 - Does your local manufacturer know what your bylaw requires? (A277)

 **BRITISH COLUMBIA**
www.gm.bc.ca

Information Bulletin
Building and Safety Standards Branch
PO Box 9844 Stn Prov Govt
Victoria BC V8W 8T2
Email: buildinginfo@gsps.bc.ca
Website: www.gov.bc.ca/buildingcodes

No. B23-01
May 1, 2023

20%-Better Energy Efficiency & Zero Carbon Step Code
British Columbia Building Code 2018 - Revision 5

The purpose of this bulletin is to provide information about the Revision 5 changes to the British Columbia Building Code 2018 (BCBC) regarding energy efficiency and the introduction of voluntary requirements for greenhouse gas reduction. This bulletin also provides information about how these changes may involve or affect local government bylaws.

20%-Better Energy Efficiency

To meet CleanBC's goal of net-zero energy ready new construction by 2032, the BCBC will gradually increase energy efficiency requirements. As of May 1, 2023, the first incremental change to the BCBC requires new construction to be 20% more energy efficient.

Prescriptive Approach

As of May 1, 2023, the prescriptive values for energy efficiency in the BCBC will increase, targeting an improvement of 20%. These prescriptive requirements are applicable to Part 9 buildings not within the scope of the BC Energy Step Code such as Part 9 non-residential and some mixed-use buildings. Under the prescriptive approach, buildings must meet specific requirements for insulation, windows, and other equipment. This approach focuses on individual assemblies or pieces of equipment, rather than the performance of the whole building as a system.

On a temporary basis, the Building Act General Regulation will allow local authorities to permit the prescriptive approach to be used for those Part 9 buildings that the BC Energy Step Code would otherwise apply to, for example, single-family homes. This may be necessary in rural and remote areas of the province where access to energy modelling and airtightness testing services is limited or impractical.

Where a local authority chooses to allow for compliance with the prescriptive requirements, they may not restrict builders from voluntarily complying with the performance requirements of Step 3, Step 4, or Step 5, as an acceptable alternative to the prescriptive requirements.

However, where a local authority requires compliance with Step 4 or Step 5 for Part 9 buildings, builders may not use the prescriptive requirements and must satisfy the performance requirements of the BC Energy Step Code (energy modelling and airtightness testing), with the exception of log homes.



Poll - Member Question

Background

Who is responsible for the building when in transit? A building may meet the requirement for air tightness at the factory but once it has traveled the highway, damage and cracking may occur which could result in noncompliant air tightness which will have to be corrected.

Does the A277 standard account for damage incurred while in transit?

Poll Question #10

When should a blower door test done to a factory constructed building? (A277)

- **in the factory = 13%**
- **on site = 37%**
- **Both = 46%**
- **Not at all = 2%**



Poll - Member Question

Background

Who is responsible for the building when in transit? A building may meet the requirement for air tightness at the factory but once it has traveled the highway, damage and cracking may occur which could result in noncompliant air tightness which will have to be corrected.

Does the A277 standard account for damage incurred while in transit?

Unlike Z240MH, which has a specific structural requirements for shipping – this does not appear in the A277 standard (which is not purpose of the standard)

6 Structural design

6.1 Design and construction compliance

A manufactured home shall be designed and constructed as a completely integrated structure capable of sustaining the design loads required by this Standard, and shall be capable of transmitting such loads to foundations, including piers, without causing unsafe deformation or abnormal internal movement of the structure or its structural parts. During transit, the integrated structure shall be capable of transmitting the specified in-transit loads to the wheel assembly, which, in turn, shall be designed to transmit these loads safely to the ground.

Note: See also Clause 6.2.1 on structural design for wind load.

Gord or Paul?

I cannot locate this CSA standard.

| | | | |
|-----|-------------|--|--|
| CSA | Z240.2.1-16 | Structural requirements for manufactured homes | A-1.1.1.1.(3) ⁽⁴⁾ 9.12.2.2.(6) 9.15.1.3.(1) |
|-----|-------------|--|--|



Checklist outline – Closing

In conclusion, we thank our industry partners in the development of this guide to provide a consistent approach for building permit applications and site inspections for manufactured homes constructed and placed under Z240 in British Columbia.

Remember that each jurisdiction (Authority Having Jurisdiction – AHJ) may have specific requirements, so be sure to confirm with the local authorities and review the Building Permit application and permit condition letter in detail.



Poll Question

Poll Question #11

Did this webinar provide value to help you better understand the manufactured housing process, to create a more efficient permitting process?

- Yes = 44%
- Yes – but would like more info = 46%
- No = 4%

Add comments in the chat. (January follow up)

- How to deal with alterations to Z240MH and A277 units.
- Loss of certification labels.
- Snow load confirmation – review the name plate & specification form.
- What is Z250 and Z252



Next Lunch and Learns – 2025

January 16 – Roof Top Occupancies – Level 02 & 03 focus

February – Decks – from foundation to final – Level 01 focus

Please forward any questions or suggestions for the presentation to kkunka@boabc.org.



Questions - Contact Us



Session feedback & future topics
kkunka@boabc.org



Engagement & Communication Reminder

BOABC contacts
Zone Meetings
Zone Directors - Mentors
Member Forum Discussions

Contact Us

[Home](#) / [Contact Us](#)

Your Name (required)

Your Email (required)

Department

Please Choose

Subject

Your Message

Get in Touch

Please complete the form. We'll do everything we can to respond to you as quickly as possible. Our goal is to reply to every email within two business days.

Mailing Address

☎ Suite 224
186 - 8120 No. 2 Road
Richmond, BC
V7C 5B8

☎ 604-270-9516

✉ info@boabc.org

Departments

Membership Services (Qualification, Certification, Exams etc.)
604-270-9516 - Jennifer Schwaertzel

Webinar survey to follow.