Red Deer

AMA Regional Meeting

Electrical, Plumbing, Gas, Private Sewage, Building and Fire
AGENDA

8:30 am  Call to Order and Introductions  Mike Hill, AMA

8:35 am – 8:45 am  AMA General Updates  Q & A  Joe Healy, AMA

8:45 am – 9:30 am  Safety Codes Council Updates  Q & A  Tyler Wightman, Safety Codes Council

9:30 am – 10:00 am  Open Mic
• What is a kitchen?
• Air Admittance Valve
• Temporary Heat
• Private vs Public Washrooms
• Non-Metallic Electrical Boxes
• Wireless Interconnection of Smoke Alarms  Q & A

COFFEE BREAK 10:00 am – 10:20 am  Sponsored by the Safety Codes Council

10:20 am – 11:45 am  Break-Out Sessions
Electrical – Fairview Room
Plumbing / Gas / PSDS – Northlands Room
Fire / Building – Kentwood Room

LUNCH 11:45 am – 12:45 pm  Sponsored by the Safety Codes Council
AMA Updates – Joint Session

Builders Licencing
Regulations currently sit with the Cabinet for approval. The timeline in this document may change, depending on Cabinet’s directive.

Overview
In its aim to strengthen protection of consumers who purchase a new home, the New Home Buyer Protection Amendment Act, if passed, will create a Builder Licensing Program. The Bill is anticipated to come into force December 2017.

The Program will require potential builders to first obtain a license in order to build as a requirement for obtaining warranty coverage and building permits in Alberta. To ensure construction activities are not disrupted, the program will be phased in at the enforcement date with full implementation planned for May 1, 2018.

The Amending Act requires all new homes to be built by someone with either a valid builder’s license or an owner builder authorization. This means that going forward, all owner builders must apply for an authorization regardless of whether they are choosing to build with or without warranty.

AMA website: http://municipalaffairs.alberta.ca/builder-licencing-faqs
AMA Updates – Joint Session

Permit Regulation Review
Permit Regulation is under review but not for broad amendment this term. The current Permit Regulation expires on January 31, 2019.

There is likely to be solicitation for stakeholder input on potential changes but no changes to the permit regulation until after 2019, unless the changes are needed to accommodate other legislation.
What is a Kitchen?
Kitchen counter and fridge receptacles are exempt from CAFCI protection. Yet where a wet bar is installed with the same design, because not considered a kitchen, both CAFCI and TR requirements are enforced. What defines a kitchen?

After some discussion it appears that a range is still a key factor in defining a space as a kitchen. Rooms not defined as kitchens are not AFCI protection exempt under CEC 26-724 (f).

If a room has a sink, dedicated counter receptacles, a microwave, and fridge circuits in place, should meet the intent of a kitchen as laid out by the CEC. A wet bar counter with a shared circuit receptacle for a blender and bar fridge may not be considered a kitchen.

In summary, wet bar receptacles require AFCI protection regardless of intended use such as counter receptacle or fridge. As currently written, only fridges in kitchens are AFCI exempt. There is no dedicated circuits required by code on wet bar counters. GFCI protection for receptacles near sinks is still required, as per CEC 26-700 (11).
Air Admittance Valves
There has been considerable discussion regarding Article 2.5.9.2.1 (d) of the National Plumbing Code of Canada which allows for the installation of an Air Admittance Valve where connection to a vent may not be practical. What are your thoughts?

Air Admittance Valves
1) *Air admittance valves* shall only be used to vent
   a) *fixtures* located in island counters,
   b) *fixtures* that may be affected by frost closure of the vent due to local climatic conditions,
   c) *fixtures* in one- and two-family dwellings undergoing renovation, or
   d) installations where connection to a vent may not be practical.
Construction Heat using a Residential Furnace

What are the requirements surrounding the use of the installed residential furnace as the appliance providing temporary heat during construction? What is everyone accepting?

A STANDATA is being drafted which will be taken to the Gas Sub Council, to provide parameters around the use of furnaces installed during the construction of a home, as the means of providing heat during construction.

A change in manufacturers certified installation instructions for residential style furnaces was made on May 1, 2017. This change restricts these furnaces from being used to heat buildings which are under construction or being renovated. Buildings would be considered under construction or renovation where dusty conditions may be created from installing drywall or textured finishes are present.
Definition of Private vs Public

When is a washroom considered private rather than public?

The National Plumbing Code requires each lavatory in a public washroom to be equipped with a device capable of automatically shutting off the flow of water when the lavatory is not in use. Examples of these types of water shut-off devices include occupant sensors and self-closing valves.

Private use (as applying to the classification of plumbing fixtures) means fixtures in residences and apartments, in private bathrooms of hotels, and in similar installation in other building for one family or an individual.

Public use (as applying to the classification of plumbing fixtures) means fixtures in general washrooms of schools, gymnasiums, hotels, bars, public comfort stations and other installation where fixtures are installed so that their use is unrestricted.
Non-Metallic Electrical Boxes

When a non-metallic rated box is installed within the same stud space in a rated wall assembly, is firestopping required?

Non-metallic electrical boxes are used in construction quite frequently. When these boxes are used in fire separations, a non-metallic box is permitted as long as it does not exceed 160 cm² in size.

Where these boxes are within the same stud space in a fire separation, the boxes must be protected by means such as drywall boxes or putty packs OR the boxes must be rated to a Canadian standard for the FRR required for the wall assembly.

9.10.9.6. Penetration of Fire Separations
8) Combustible outlet boxes are permitted in an assembly required to have a fire-resistance rating without being incorporated in the assembly at the time of testing as required in Sentence (3), provided the opening through the membrane into the box does not exceed 160 cm².
Upcoming STANDATAS

Wireless Interconnection of Smoke Alarms (14-BCI-XXX)
To provide clarification on what is meant in the Alberta Building Code 2014 (ABC 2014) by interconnected smoke alarms, and to recognize the appropriate application of listed devices that perform this function using wireless technology.

APPLICATION
This STANDATA applies where smoke alarms are required to be interconnected under the ABC 2014, so that the actuation of one smoke alarm will cause all interconnected smoke alarms within the dwelling unit or house with a secondary suite to sound.

INTERPRETATION
A smoke alarm that is certified in conformance with CAN/ULC-S531, “Smoke-Alarms” and uses wireless interconnection technology is an acceptable means of meeting the interconnection requirements of Sentence 3.2.4.21.(9) and Sentences 9.10.19.5.(1) and (2).
Breakout Session Locations

Electrical Meeting – Fairview Room
Plumbing, Gas & PSDS Meeting – Rotary Room
Fire / Building Meeting – Kentwood Room
Joint Fire / Building Meeting
AMA Updates – Joint Session
Harmonization of the Alberta Codes

This is a priority ongoing process between Code update and Harmonization using the NBC 2015 as a Base document. The comparison review and analysis between the NBC 2010 – NBC 2015, as well as comparing to the ABC 2014 for Alberta specifics and where we can update and Harmonize towards the National Codes.

At this time, we have a goal of automatic code adoption of the NBC 2020 with a supplement to address the retained Alberta Specific requirements.

The NBC 2020 expected publication date may be around December 2020 or January 2021. Automatic code adoption in Alberta would come into effect one year after publication.

Section 3.8 and Part 7 has a number of Alberta Specifics and at this time is being retained, such differences would go into the supplement.

Administrative requirements have Alberta Specifics which will be retained.

There is a ULC standards committee currently drafting up a National Standard for Relocatable Structures, using ABC Part 10 as the seed document. This should address ABC specific Part 10.

Only the Edmonton Airport Vicinity is currently affected by ABC Part 11 and there is currently a review in process for the AVPA, this may address the retention of Part 11 in the ABC.

This is a brief overview of the extensive review process and all items may not have been captured, but to give you an idea of our direction towards updating and Harmonization.
AMA Updates – Joint Session
Next Code Cycle

The Government of Alberta is currently reviewing the possibility of skipping the next Code cycle which was to be based on the NBC 2015. The proposal has gone forward to the Minister, and is waiting final response.

This was a proposal which was originally brought forward by the Building Sub-Council, and which seems to be the same viewpoint from most SCO’s when asked for comment.
NFPA 96 – Annunciation for Commercial Kitchens

NFPA 96-11 is the standard for hood fans over commercial cooking appliances. In that standard, section 10.6 discusses system annunciation. If the building has a fire alarm system and the hood fan fire suppression system goes off, 10.6.2 requires the suppression system to activate the fire alarm (and annunciate as a separate zone). This seems to be consistently applied.

What is not consistently applied is 10.6.1 for annunciation if the building DOES NOT have a building-wide fire alarm system. What are SCO’s accepting?

NFPA 96

10.6 System Annunciation.

10.6.1 Upon activation of an automatic fire-extinguishing system, an audible alarm or visual indicator shall be provided to show that the system has activated.

10.6.2 Where a fire alarm signaling system is serving the occupancy where the extinguishing system is located, the activation of the automatic fire-extinguishing system shall activate the fire alarm signaling system.
Breweries vs Distilleries

What is the difference between a Brewery and a Distillery?
Distilleries are referenced within the Alberta Fire Code. Distilleries are occupancies where the distilled beverage alcohol content is more than 20% by volume of alcohol. Distilleries should only be classified as F1 Occupancies. Micro-breweries where the alcohol content by volume is less than 20%, can be reviewed as other occupancy classifications.

Section 4.10. Distilleries
4.10.2.1. Building Classification
1) Except as provided in Sentence (2), buildings or parts of buildings in which distilled beverage alcohol is distilled, processed or stored in bulk shall be classified as high-hazard industrial occupancies.

Distillery means a process plant where distilled beverage alcohols are produced, concentrated or otherwise processed, and includes facilities on the same site where the concentrated products may be blended, mixed, stored or packaged.

Distilled beverage alcohol means a beverage that is produced by fermentation and contains more than 20% by volume of water-miscible alcohol.
Alternative Solution Proposals and Acceptance

When should an alternative solution proposal be accepted by the local AHJ?

Alternative solution proposals are required by both the ABC and the AFC to achieve at least the minimum level of performance required by Division B in the areas defined by the objectives and functional statement attributes. All proposals must be made to demonstrate that an alternative solution will perform as well as a design that would satisfy the applicable acceptable solutions in Division B – not “well enough,” but “as well as”.

1.2.1.1. Compliance with this Code

1) Compliance with this Code shall be achieved by

a) complying with the applicable acceptable solutions in Division B (see Appendix A), or

b) using alternative solutions that will achieve at least the minimum level of performance required by Division B in the areas defined by the objectives and functional statements attributed to the applicable acceptable solutions (see Appendix A).
Upcoming STANDATAS

Door Release Hardware for Exit Doors (14-BCV-000)
To provide a compliant means to reduce the probability of wandering occupants unknowingly exiting a building or supervised area and exposing themselves or others to undue risks, while still maintaining an acceptable level of safety for the occupants of the building.

APPLICATION
This Variance applies to doors in Group B, Division 2 and Division 3 occupancies.

VARIANCE
This variance, which can be applied to new and existing buildings, provides approximately equivalent or greater safety performance with respect to persons and property as that provided for by the Safety Codes Act, the ABC 2014 and the AFC 2014.
Upcoming STANDATAS

Buildings Used for Parking, Repairing and/or Servicing Tank Vehicles (14-BCB-XXX)

Tank vehicles containing flammable liquids or vapours or combustible liquids or vapours present a unique hazard when they are brought into a building. In addition to the hazard inherent in the product itself, there is a potential for the release of flammable or combustible vapours in significant quantities that can overwhelm a standard ventilation system for a building and become a fire or explosion risk.

1. Buildings to be used for parking tank vehicles which contain flammable or combustible gases or vapours (classified as Group F, Division 1, high hazard industrial occupancies),
2. Buildings to be used for parking, repairing and/or servicing tank vehicles (classified as Group F, Division 2, medium hazard industrial occupancies),
3. Buildings containing both uses, parking tank vehicles that contain flammable or combustible gases or vapours classified as Group F, Division 1 (F-1) according to Sentence 1, and parking, repairing and/or servicing tank vehicles classified as Group F, Division 2 (F-2) according to Sentence 2 provided:
Existing Non-Permitted Secondary Suites

The existing Fire STANDATA FCI-08-07 speaks to secondary suite construction exiting prior to December 31, 2008. What should a Building SCO do to ensure conformance of a secondary suite developed after 2008? What are you doing?

The previous Standata provided an option for a Safety Codes Officer, when reviewing existing secondary suites constructed prior to December 31, 2008, to use their discretionary powers to alleviate any safety concerns they may have with the suite.

FCI-08-07 Secondary Suites STANDATA
“This Interpretation Bulletin supports the intent to give owners of existing secondary suites time to bring their properties into compliance with the AFC requirements;…” “Requirements in the Alberta Building Code for secondary suites have been adopted and came into force on December 31, 2006, and apply to all new construction.”
Bedroom egress Windows Under Decks

When a bedroom egress window exits under a deck, what clearances should the deck have to ensure proper evacuation?

Where a bedroom egress window is situated below a exterior deck, a concern of whether or not safe evacuation has been provided comes into question. There are some municipalities who have mandated that a minimum headroom clearance be maintained under the deck, for an egress window to open into that area.

The ABC is silent on this piece, and only requires a minimum egress dimension of 380mm and a minimum opening size of 0.35m$^2$ to be provided. Additionally, the ABC requires that where a window well is installed, that the clearance between the window sash and grade maintain a minimum clearance of 760mm.
Afternoon Break Out Session Locations

Fire Meeting – Northland Meeting Room

Building Meeting – Kentwood Room
AMA Regional SCO Meeting
Building, Fire, Electrical, Plumbing, Gas & Private Sewage

October 18, 2017
8:30 am - 4:00 pm

Red Deer
Quality Inn & Suites Center
7150 50 Avenue
Kentwood Room
AMA Regional SCO Meeting
Building, Fire, Electrical, Plumbing, Gas & Private Sewage
October 18, 2017
8:30 am – 4:00 pm

Quality Inn & Suites Center
7150 50 Avenue
Red Deer
Kentwood Room

Facilitators: Mike Hill, Technical Advisor, AMA
             Joe Healy, Technical Advisor, AMA

AGENDA

8:30 am Call to Order and Introductions
Mike Hill, AMA

8:35 am – 9:00 am AMA General Updates
Joe Healy, AMA
• Code Harmonization
• Next Code Cycle
• Q & A

9:00 am – 9:45 am Safety Codes Council Updates
Tyler Wightman, Safety Codes
• Q & A
Council

9:45 am – 10:00 am Open Mic
• What is a kitchen
• Air Admittance Valve
• Temporary Heat
• Private vs Public Washrooms
• Non-Metallic Electrical Boxes
• Wireless Interconnection of Smoke Alarms
• Q&A

COFFEE BREAK
10:00 am – 10:20 am
Sponsored by the Safety Codes Council

10:20 am – 11:45 am Joint Fire / Building Break-Out Session
Kentwood Room

10:20 am – 11:45 am Discipline Specific Break-Out Sessions
Electrical – Fairview Room
Plumbing/Gas/PSDS – Northlands Room

LUNCH
11:45 am – 12:45 pm
Sponsored by the Safety Codes Council

*** See Individual Building / Fire / Electrical / Plumbing & Gas & Private Sewage Agendas ***
*** For Afternoon Meeting Information ***
AMA Regional SCO Meeting
Fire/Building Break-Out Session
10:20pm – 11:45 pm
Kentwood Room

AGENDA

10:20 pm – 11:45 pm  Joint Fire/Building Break-Out Session
  • NFPA 96 – Annunciation for Commercial Kitchens
  • Alternative Solution Acceptance
  • Buildings Used for Parking, Repairing, and or Servicing Tank Vehicles STANDATA
  • Existing Non-Permitted Secondary Suites
  • Door Release Hardware for Exit Doors STANDATA
  • Bedroom Egress Windows under Decks
  • Micro-Breweries vs Distilleries

LUNCH
11:45 am – 12:45 pm
Sponsored by the Safety Codes Council

Building Break-Out Session
12:45 pm – 4:00 pm
Kentwood Room

12:45 pm – 1:15 pm  General Updates from AMA
  • Standata – New & Upcoming
  • Brochures / Energy Q&A / Energy Check Sheets
  • Mobile Cooking Operations Standata

1:15 pm – 2:00 pm  Discussion Topics / Questions
  • Submission of Electronic Models instead of Drawings R. Singh
  • Attached Garages and Compliance (9.36.1.3.(5)) Red Deer
  • Marijuana Greenhouse Grow-Ops DR Inspections
  • Building Ventilation Systems for FD Smoke Removal Terry Mullinger
  • FDWR Ratios for Part 9 Buildings Red Deer

COFFEE BREAK
2:00 pm – 2:20 pm
Sponsored by Safety Codes Council

2:20 pm – 4:00 pm  Discussion Topics / Questions
  • Secondary Suites and Furnace Room Access Red Deer
  • HRV’s and Ventilation Rates Airdrie
  • Cancellation of New Home Buyer Insurance Strathmore
  • Application of 9.36 to Additions
  • Distilleries St. Albert
  • Make Up Air for Depressurization
  • Two Furnaces, One HRV?
  • Pipe insulation
  • Multiple Tenant Self Storage

*** MEETING AJOURNED ***
AMA Regional SCO Meeting

Fire/Building Break-Out Session
10:20pm – 11:45 pm
Kentwood Room

AGENDA

10:20 pm – 11:45 pm  Joint Fire/Building Break-Out Session
  • NFPA 96 – Annunciation for Commercial Kitchens
  • Alternative Solution Acceptance
  • Buildings Used for Parking, Repairing, and or Servicing Tank Vehicles STANDATA
  • Existing Non-Permitted Secondary Suites
  • Door Release Hardware for Exit Doors STANDATA
  • Bedroom Egress Windows under Decks
  • Micro-Breweries vs Distilleries

LUNCH
11:45 am – 12:45 pm
Sponsored by the Safety Codes Council

Fire Break-Out Session
12:45pm – 4:00 pm
Rotary Room

Facilitator: Tom Harnos, OFC

12:45 pm – 2:00 pm  Discussion Topics / Questions
  • Community and Technical Support (Organizational Scope)
  • STANDATA
  • S.A.F.E. Registry
  • Harmonization

COFFEE BREAK
2:00 pm – 2:20 pm
Sponsored by Safety Codes Council

2:20 pm – 4:00 pm  Discussion Topics / Questions
  • Food Trucks
  • General discussion and questions

*** MEETING AJOINED ***

*** Meeting Minutes will be posted on the Safety Codes Council website ***
AMA Regional SCO Meeting
Electrical Break-Out Session
10:20pm – 4:00 pm
Fairview Room

Facilitator: Cameron Doram,
Community & Technical Support, AMA

AGENDA

10:20 pm – 11:45 pm  Discussion Topics / Questions
• Community and Technical Support (Organizational Scope)
• STANDATA

LUNCH
11:45 am – 12:45 pm
Sponsored by the Safety Codes Council

12:45 pm – 2:00 pm  Discussion Topics / Questions
• AMA & STANDATA Updates
• Questions from the floor

COFFEE BREAK
2:00 pm – 2:20 pm
Sponsored by Safety Codes Council

2:20 pm – 4:00 pm  Discussion Topics / Questions
• Staying Current – SCA responsibilities, STANDATA
• Alberta Built Products
• Bathroom Luminaires
• Non-Metallic Outlet Boxes
• In-situ Modification
• Cannabis Extraction Facilities
• Wireless Switches
• High Voltage Cable Ampacity
• EMT and Luminaire Support
• Outdoor Receptacles
• Hotels/Motels with Cooking Facilities
• Table 39
• Consumer Service

*** MEETING AJOURNED ***

*** Meeting Minutes will be posted on the Safety Codes Council website ***
AMA Regional SCO Meeting
Plumbing, Gas & PSDS Break-Out Session
10:20pm – 4:00 pm
Northlands Room

Facilitator: Perry Wager, AMA
Joe Petryk, AMA

AGENDA

10:20 pm – 11:45 pm  “Open Mike” Group Discussion - What's on your mind?
Potential Topics:

- ECO flows/turbos to create secondary treatment – Certification
- Should SCOs be asking for verification of the type of sand that was used in a mound?
- Venting of floor drains. 2.5.1.1 (3) (4) fall of a 4” floor drain’s fixture drain exceed 4”

LUNCH
11:45 am – 12:45 pm
Sponsored by the Safety Codes Council

12:45 pm – 2:00 pm  “Open Mike” Group Discussion - What's on your mind?
Potential Topics

- Protection from condensation NPC 2.3.5.6. Would vent termination piping require protection?
- CSST and gas connectors B149.1 - 6.2.21
- NPC 2.4.4.3 (1) Consensus regarding: Should a commercial dishwasher should go into grease interceptor prior to entering the sanitary drainage

COFFEE BREAK
2:00 pm – 2:20 pm
Sponsored by Safety Codes Council

2:20 pm – 4:00 pm  “Open Mike” Group Discussion - What's on your mind?
Potential Topics:

- Furnaces used for construction heat:
- Air Admittance Valves

*** MEETING ADJOURNED ***

*** Meeting Minutes will be posted on the Safety Codes Council website ***
AMA Regional SCO Meeting
Fire/Building Break-Out Session
10:20pm – 11:45 pm
Kentwood Room

AGENDA

10:20 pm – 11:45 pm  Joint Fire/Building Break-Out Session
• NFPA 96 – Annunciation for Commercial Kitchens
• Alternative Solution Acceptance
• Buildings Used for Parking, Repairing, and or Servicing Tank Vehicles STANDATA
• Existing Non-Permitted Secondary Suites
• Door Release Hardware for Exit Doors STANDATA
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LUNCH
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Building Break-Out Session
12:45pm – 4:00 pm
Kentwood Room

12:45 pm – 1:15 pm  General Updates from AMA
• Standa – New & Upcoming
• Brochures / Energy Q&A / Energy Check Sheets
• Mobile Cooking Operations Standa

1:15 pm – 2:00 pm  Discussion Topics / Questions
• Submission of Electronic Models instead of Drawings
• Attached Garages and Compliance (9.36.1.3.(5))
• Marijuana Greenhouse Grow-Ops
• Building Ventilation Systems for FD Smoke Removal
• FDWR Ratios for Part 9 Buildings

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2:20 pm – 4:00 pm  Discussion Topics / Questions
• Secondary Suites and Furnace Room Access
• HRV’s and Ventilation Rates
• Cancellation of New Home Buyer Insurance
• Application of 9.36 to Additions
• Distilleries
• Make Up Air for Depressurization
• Two Furnaces, One HRV?
• Pipe Insulation
• Multiple Tenant Self Storage

*** MEETING AJOURNED ***
BUILDING LICENSING – AN OVERVIEW
New Home Buyer Protection Amendment Act 2017

In its aim to strengthen protection of consumers who purchase a new home, the New Home Buyer Protection Amendment Act, if passed, will create a Builder Licensing Program. The Bill is anticipated to come into force December 2017.

The Program will require potential builders to first obtain a licence in order to build as a requirement for obtaining warranty coverage and building permits in Alberta. To ensure construction activities are not disrupted, the program will be phased in at the enforcement date with full implementation planned for May 1, 2018.

The phased in implementation would enable granting of Provisional Licence to builders that are registered in the system and who have good track record based on their recent construction history in Alberta. This licence will expire on May 1, 2018 after which they will then participate in the annual renewal process. Other builders, including new builders, can apply for a full licence at the expected program launch.

"Builders" refer to individuals and companies that construct new homes (this also includes major renovations that are more than 75% of the home's footprint) and condominium property. For greater transparency, two classes of licence are being proposed that also cover sales arrangements administered by builders which have direct relation with consumers. (1) Developer licences are for those who build or sell new homes that include construction under Part 3 of the Alberta Building Code. (2) General contractor licences are for those who construct or sell smaller home buildings or under Part 9 of the Alberta Building Code. It will not apply to construction projects on First Nation Reserves or Métis Settlements.

The Amending Act requires all new homes to be built by someone with either a valid builder's licence or an owner builder authorization. This means that going forward, all owner builders must apply for an authorization regardless of whether they are choosing to build with or without warranty.

The legislation establishes powers of the Registrar who will render decisions stemming from the results of screening applications and vetting builders' information to determine risks of granting licences. Screening will be based on the builder’s corporate structure, compliance with relevant legislation, financial standing and other material changes as disclosed to the Registrar.


There will also be provisions for the Registrar to remove builders or place conditions on a licence based on risk assessments on records of fraud convictions, construction-related court proceedings, undischarged company bankruptcies, arrangements under the Companies' Creditors Arrangement Act, warranty de-enrollments, status of business registration through the Corporate Registry and loss of builder licence in another Canadian jurisdiction. In addition, a random audit will also be exercised throughout the year with the provision for the Registrar to obtain additional information from builders for auditing purposes.

Consumers' complaints will be reviewed by the Registrar who will consider whether the nature of the complaint indicates that the licence decision should be revisited, using the risk matrix and the scoring rubric. Complaints will be investigated to determine whether a material breach has occurred that could harm consumers if allowed to continue.

In light of duty of fairness, all licencing decisions may be appealed through the New Home Buyer Protection Board by which all Board appeals may be appealed to the Court.

This pertinent information will be made available to the public. A Builder Registry Platform targeted to be active by Spring 2018 will be accessible online to provide information on builders, their associated companies, licence status, compliance record and warranty provider acceptance.

A new home is, after all, the most substantial investment an individual can make and the Builder Licensing Program will assist in protecting both the consumers and their investment.
Energy Efficiency Q & A

Check Sheets

A Question and Answer document for some of the common questions surrounding energy efficiency under Section 9.36 is also available on the GoA website.

Alberta Municipal Affairs Website:
http://www.municipalaffairs.alberta.ca/CP_Energy_Codes_Information

All documents are printable from the website when opened.
Energy Efficiency Check Sheets

Check Sheets
The GoA website now has available a document to assist industry and SCO's with examples of check sheets, trade-off sample calculations, and a project summary.

Alberta Municipal Affairs Website:

http://www.municipalaffairs.alberta.ca/CP_Energy_Codes_Information

All documents are printable from the website when opened.
Brochures

Safety Tips
The new updated brochures are now available on the GoA website. All documents are PDF and printable from the website when opened.

Alberta Municipal Affairs Website:

Safety Codes Council Website:
http://www.safetycodes.ab.ca/Public/Pages/Safety-Tips.aspx

To obtain tri-fold brochures contact
safety.services@gov.ab.ca
STANDATA Updates
New & Proposed

Variances

14-BCV-001 Joint Fire/Building Code Variance-Construction Site Fire Safety Plans

14-BCV-002 Tall Wall Generic Engineered Details
To recognize the acceptability of the values within the “Guidelines for the Construction of Residential Tall Walls” prepared by Grubb Engineering Corporation.

14-BCV-003 Wind Data for Low-Rise Buildings Guideline
To recognize the acceptability of the values within the “Guideline for specifying the required NAFS ratings of fenestration in low-rise buildings applicable to Part 9 of Division B of the Alberta Building Code 2014,” as prepared by Berkeley Vadocz Engineering Inc. (Issued May 11, 2016)

14-BCV-004 Spans for Joists, Rafters and Beams
To recognize the acceptability of the values within the “The Span Book” published by the Canadian Wood Council.

14-BCV-005 CSA-A277-16 Procedure for Certification of Prefabricated Buildings, Modules, and Panels
To recognize the acceptability of CSA-A277-16 “Procedure for certification of prefabricated buildings, modules, and panels”.

14-BCV-006 Elevators and Passenger-Elevating Devices
This STANDATA has been developed regarding the use of a passenger elevator where a lift for persons with physical disabilities (LPPD) that conforms to the CSA-B355 standard would suffice to meet the requirements of a barrier free path of travel.

14-BCV-007 Interior Stairways for Roof Access
This STANDATA has been developed to allow the use of fixed attic folding stairs, rung-type ladders or “ship’s ladders/fixed industrial stairs” in place of the interior stairways required by the Alberta Building Code 2014 (ABC 2014).

14-BCV-008 Separation of Suites in Strip Malls
Many smaller malls, commonly referred to as “strip” malls, do not include an enclosed public corridor as each suite exits directly to the outside. In these cases, must suites of business and personal services and mercantile occupancies be separated from each other by fire separations in accordance with Sentence 3.3.1.1.(1) or 9.10.9.13.(1)
14-BCV-009 Polyethylene Film for Greenhouse Enclosure
The purpose of this STANDATA is to allow the use of products specifically designed for commercial greenhouse facilities occupied only by greenhouse staff, where members of the public are not permitted access.

14-BCV-000 Door Release Hardware for Exit Doors
To provide a compliant means to reduce the probability of wandering occupants unknowingly exiting a building and exposing themselves to undue risks, while still maintaining an acceptable level of safety for the occupants of the building.

14-BCV-000 CSA-S16-14 Design of Steel Structures
To recognize the acceptability of CSA-S16-14 “Design of Steel Structures.”
STANDATA Updates
New & Proposed

Interpretations

14-BCI-002 Visual Signals
The purpose of this Standata is to clarify the intended locations for Visual Signal Devices under the Alberta Building Code 2014 (ABC 2014).

14-BCI-004 Mechanically Vented Appliances
This STANDATA has been developed to provide clarity to safety codes officers and industry stakeholders as to what types of appliances are considered to meet the definitions of *mechanically vented* and *direct-vented* in the Alberta Building Code 2014 (ABC 2014) and, subsequently, when make-up air would need to be provided within a dwelling unit to protect against the effects of depressurization.

14-BCI-005 Rooms Containing Gaseous Chlorine
The purpose of this STANDATA is to provide guidance as to what is meant by "mechanical proportioning device" and how to achieve a reasonable measure of "gas-tightness."

14-BCI-006 Barrier Free Design Requirements
Barrier-free design requirements apply to all buildings as specified in Article 3.8.1.1. Application. All new builds, including additions, are expected to comply with all barrier-free design requirements. There are various occupancy types where people with disabilities are unemployable for reasons of safety, and would be exempt from providing barrier-free design requirements.
A Pre-Assessment for Relaxation of Barrier-Free Requirements form must be attached to all barrier-free relaxation requests. This form must be signed by the local AHJ, and the submitted drawings noted as being reviewed by the local AHJ.

14-BCI-XXX Application of Energy Efficiency Requirements to Existing Buildings
This STANDATA was developed to clarify the application of energy efficiency code requirements to existing buildings. The installation or replacement of one piece of equipment or renovation of a building would not adversely affect the overall energy usage of the building as a whole. Under the requirements of the Government of Canada Energy Efficiency Act and regulations installation of new equipment or renovations using current energuide products and construction practices would be more energy efficient than the existing building conditions.
The Government of Canada Energy Efficiency Act and regulations may be viewed at http://www.nrcan.gc.ca/energy/regulations-codes-standards/6845

14-BCI-XXX PIB-XXX Joint Building Code Interpretation/ Plumbing Information Bulletin, Radon-Soil Gas Vent Termination
This Standata is to provide direction for Soil Gas Vent Termination when an active soil depressurization (ASD) system is installed.
14-BCI-XXX Photoluminescent Exit Signs
This Standard was developed to provide clarification regarding the required illumination of photoluminescent (PL) exit signs according to Articles 3.4.5.1 and 9.9.11.3. of the Alberta Building Code 2014 (ABC 2014). CAN/ULC-S572 “Photoluminescent and Self-Luminous Signs and Path Marking Systems” is the standard to which PL exit signs are to be constructed in conformance with as per the ABC14.

14-BCI-XXX Attached Garage Insulation
This Standard was developed to provide a consistent approach to the insulation of attached garages, at the walls and ceilings adjacent to unconditioned space or the exterior.
The principle objective of the attached garage insulation in conjunction with the air and vapour barrier is to reduce the probability of damage to or deterioration of building or facility elements.

14-BCI-XXX Interconnected Smoke Alarms
To provide clarification on what is meant in the Alberta Building Code 2014 (ABC 2014) by interconnected smoke alarms, and to recognize the appropriate application of listed devices that perform this function using wireless technology. Interconnection has been achieved by hardwiring the smoke alarms to each other so that the activation of one smoke alarm will cause all the interconnected smoke alarms to sound. With the advent of wireless interconnection this same function can be provided wirelessly. It must be noted that at least two certified smoke alarms with wireless capabilities are needed for this interconnection to occur.

14-BCI-XXX Non-Liquid Disposal Systems
To provide guidance related to installations of Non-Liquid Disposal Systems.
A non-liquid disposal system as related to this Standard is not a:
- plumbing system
- water-closet
- plumbing fixture
- chemical toilet
Therefore these systems fall within the scope of the Building Discipline. A non-liquid disposal system is considered as, other means for the disposal of human waste.

14-BCI-XXX Application of ABC for Structural Insulated Panels
The Standard is to present the issue of how to consider Structural Insulated Panels (SIPs) under the Alberta Building Code 2014 (ABC 2014) in single family, duplex and row house construction, and the professional involvement requirements.
STANDDATA Updates
New & Proposed

Bulletins

14-BCB-001 Steel Building Systems
This bulletin is to emphasize the importance of compliance to the CSA A660 standard by responsible persons under the Safety Codes Act including manufacturers, designers, vendors and owners, as well as to provide guidance for safety codes officers and local authorities in applying the requirements of the Alberta Building Code (ABC) 2014 for steel building systems.

How Do I Find Out if a Manufacturer is Certified to CSA A660?
A list of certified manufacturers can be accessed through the web site of the Canadian Welding Bureau (CWB Group) at https://www.cwbgroup.org/services/certified-directory search or under Certified Directory Search. Be advised that this list can change frequently as new companies are certified.

14-BCB-002 Roof Anchors
The purpose of this STANDATA is to describe situations where roof anchors are required in the Alberta Building Code 2014 (ABC 2014).

This Bulletin was developed to identify the requirements within the Alberta Building Code 2014 (ABC 2014) for labeling of radon/soil gas pipes.

14-BCB-XXX Spray Foam Insulation-Hybrid Assemblies and CAN/ULC S705.2
This Bulletin was developed to inform the industry of situations where 2lb. (closed cell) spray foam is being applied over 1/2 lb. (open cell) spray foam insulation in buildings. The Standata is to inform builders that installing 2 lb. spray foam over 1/2 lb. spray foam is not an acceptable practice unless testing has been conducted in accordance with CAN/ULC S705.2 and approval for this type of installation has been identified in the product CCMC evaluation report. Documentation providing evidence of testing and approval must be provided to the Authority Having Jurisdiction prior to this "hybrid" system being used within their Jurisdiction.

14-BCB-XXX Firestop Technical Judgements
This Standata was developed to provide guidance on where an Engineering Judgement for Firestop Systems may be considered as an acceptable solution under Division B or as an alternative solution under Division A of the Alberta Building Code 2014 (ABC 2014). For the purpose of this Standata Engineering Judgements shall be referred to as Technical Judgements (TJ). The Standata includes a Table to assist with determining what documentation is required for most situations.
STANDATA Update

Mobile Cooking Operations

The Administrators from the Fire, Building, Electrical, Plumbing and Gas disciplines have come together to write the STANDATA. The concept of the STANDATA has also been taken to the Sub-Councils, in which it appears that there is support for the writing of the STANDATA.

MA is taking the stance that although these structures are not considered to be "buildings", there are certain aspects of the facility which should be compliant to the Codes in Alberta. An example being a Ventilation and Fire Suppression system as per NFPA 96. We are currently working with NFPA and our legal department to alter the documents to reflect the requirements under the Alberta Fire Code, Electrical Code, Plumbing and Gas codes.

Once this STANDATA is complete, it will be reviewed by the Fire Sub Council, Electrical Sub Council and Plumbing and Gas Sub Council before it is published to our website.
Submission of Electronic Models

Question:
As Engineering companies are discovering ways to cut costs to be more and more competitive, companies are now transferring electronic models to the SCO and not drawings. How are SCO’s planning to equip themselves to face this situation? Has anyone come across this scenario yet?
Within Division C Article 2.2.2.1., the Alberta Building Code references the requirement for sufficient information including plans to be provided, to show that the proposed work will confirm. Therefore, an SCO could require that plans be provided for all building permit applications, while not accepting electronic models.

Background Information:
2014 Alberta Building Code
2.2.2. Information Required for Proposed Work
2.2.2.1. General Information Required
1) Sufficient information shall be provided to show that the proposed work will conform to this Code and whether or not it may affect adjacent property.

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

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

4) Plans and specifications shall include, so far as is applicable,
a) floor plans on a scale of not less than 1:100,
b) dimensions of all rooms,
c) a description of the purpose of all rooms,
d) the location of all walls, partitions, doorways, windows and other openings,
e) the finish of all floors, walls and ceilings,
f) the location and description of all fixed equipment, and
g) building sections, elevations and details sufficient to determine if the proposed work meets the requirements of this Code.
9.36. and Attached Garages

Question 1:
What does Section 9.36. require for Code compliance relating to attached garages?
There is a Draft Standata in the process of addressing insulation requirements within an attached garage (heated or unheated). The proposed interpretation applies to the framed walls and ceiling of an attached garage adjacent to unconditioned space or the exterior and serving not more than one dwelling unit or a house with a secondary suite.

This interpretation is expected to contain the following information (in part):
1. The exterior framed walls shall be thermally insulated to a minimum nominal insulation value of RSI-2.11 (R12).
2. Where batt/loose fill insulation is used, provide no less than full cavity insulation. i.e. 2 x 6 wall RSI-3.52 (R-20) nominal or 2 x 4 wall RSI-2.11 (R12) nominal.
3. Exterior above grade concrete garage foundation walls do not require thermal insulation for unconditioned garages.
4. The ceiling below attic spaces shall be thermally insulated to a minimum nominal insulation value of RSI-6.0 (R-34).
5. Installation of insulation shall conform to Section 9.25.
6. Installation of vapour barrier shall conform to Section 9.25.

Question 2:
What does Section 9.36. & Sections 9.33. & 9.25 require for Code compliance relating to detached residential buildings?
This question is currently being reviewed, and discussed within AMA, especially when considering heated buildings. Although Section 9.36 is clear that energy efficiency requirements are not applicable to parking garages serving residential occupancies, concerns for moisture control in these building once heated, and the requirements within Section 9.33 and 9.25 are also being looked at.

AMA is currently conferring with the NRC, and reviewing the direction taken by other provinces to determine the intent of the requirements. AMA anticipates that we will have to develop a new STANDATA to address this topic.

Background Information:
2014 Alberta Building Code
9.36.2.1. Scope and Application
8) The requirements of this Subsection also apply to components of a building envelope assembly that separate a heated or unheated attached garage from unconditioned space or the exterior air, where the attached garage serves
a) not more than one dwelling unit, or
b) a house with a secondary suite.
9.36.1.3. Compliance and Application
2) Subsections 9.36.2. to 9.36.4. apply to
   a) buildings of residential occupancy to which Part 9 applies,
   b) buildings containing business and personal services, mercantile or low-hazard
      industrial occupancies to which Part 9 applies whose combined total floor area
      does not exceed 300 m2, excluding parking garages that serve residential
      occupancies,

5) Except as required by Sentence 9.36.2.1.(8), buildings or portions of buildings that are not
   required to be conditioned spaces are exempted from the requirements of this Section. (See
   Appendix A.)

A-9.36.1.3.(5) Exemptions. Examples of buildings and spaces that are exempted from the
   requirements of Section 9.36. include seasonally heated buildings, storage and parking
   garages, small service buildings or service rooms and unconditioned spaces in buildings.
   However, note that, where a building envelope assembly of an exempted building is adjacent to
   a conditioned space, this assembly must meet the requirements of Section 9.36.

9.33.2.1. Required Heating Systems
1) Residential buildings intended for use in the winter months on a continuing basis shall be
   equipped with heating facilities conforming to this Section.

9.33.3.1. Indoor Design Temperatures
1) At the outside winter design temperature, required heating facilities shall be capable of
   maintaining an indoor air temperature of not less than
   a) 22°C in all living spaces,
   b) 18°C in unfinished basements,
   c) 18°C in common service rooms, ancillary spaces and exits in houses with a secondary suite,
   and
   d) 15°C in heated crawl spaces.

9.25.1.1. Scope and Application
2) All walls, ceilings and floors separating conditioned space from unconditioned space, the
   exterior air or the ground shall be
   a) provided with
      i) thermal insulation conforming to Subsection 9.25.2. and Section 9.36.,
      ii) an air barrier conforming to Subsection 9.25.3. and Section 9.36., and
      iii) a vapour barrier conforming to Subsection 9.25.4., and
   b) constructed in such a way that the properties and relative position of all materials conform to
      Subsection 9.25.5.
Buildings Used for Growing, Processing, or Handling of Marijuana (Greenhouses)

Question:
What are the requirements surrounding medical marijuana greenhouse construction?

Buildings used for the growing, processing or handling of marijuana should be categorized as an Industrial occupancy (F1, F2, or F3) depending on the type of operations being carried out within the building or portion of the building. The Alberta Building Code is applicable to these buildings and these buildings should not be deemed as "agricultural".

Growing marijuana inside a building can present hazards to building occupants. Growing operations can have higher humidity levels which can cause damage to building materials and result in excessive mould growth.

Other considerations which should also be reviewed are the ventilation systems, which should be in conformance with Part 6, and any other compliance related regulations including those identified within Part 3 and Part 5 of the ABC.

In addition to the building requirements stated by the Alberta Building Code (ABC) a licenced medical marijuana growing operation is required to meet the current legislation in force by the Government of Canada, which states the requirements for obtaining a license to legally grow, process, store, import, export, distribute and facility security requirements.

Background Information:
To date, here are some concerns that are being considered, and should be addressed by the local AHJ:

1. Buildings (includes greenhouses) where only growing operations take place and are typically of low-human occupancy may be identified as a Low-hazard industrial occupancy (Group F, Division 3), in which the combustible content is not more than 50 kg/m² or 1200 MJ/m² of floor area.

2. Buildings where processing and handling operations take place would be identified as Medium-hazard industrial occupancy (Group F, Division 2), in which the combustible content is more than 50 kg/m² or 1200 MJ/m² of floor area and not classified as a high-hazard industrial occupancy.
3. Buildings where processing may include flammable liquids or gases would move the classification into High-hazard industrial occupancy (Group F, Division 1) where sufficient quantities of highly combustible and flammable or explosive materials which, because of their inherent characteristics, constitute a special fire hazard.


5. Compliance with other related regulations or regulatory authority.

Cannabis for Medical Purposes Regulations
Link to website
Ventilation Systems for Smoke Removal

Question:
If and when can the kitchen hood exhaust system and associated make-up air unit be used for fire department smoke removal?
The use of the building exhaust system as a means of smoke removal is referenced within the ABC under Part 6 and Part 3 for High Buildings.

A kitchen hood exhaust system should not be used for venting or smoke removal as per NFPA 204.

Background Information:
2014 Alberta Building Code
6.2.3.8. Exhaust Ducts and Outlets
14) Where an exhaust duct system is used for smoke removal in a high building, the requirements of Article 3.2.6.6. shall apply.

3.2.6.6. Venting to Aid Firefighting
1) Means of venting each floor area to the outdoors shall be provided by windows, wall panels, smoke shafts, or the building exhaust system. (See Appendix B.)

B-3.2.6.6.(1) Venting to Aid Firefighting. The requirements of Sentence 3.2.6.6.(1) are met by incorporating in a floor area windows or wall panels, as described in Sentence (1), by smoke shafts as described in Sentences (2) to (8), or by the use of building exhaust systems as described in Sentence (9).

9) The building air handling system may be used for smoke venting, provided
a) the system can maintain an exhaust to the outdoors at the rate of 6 air changes per hour from any floor area, and
b) emergency power to the fans providing the exhaust required by Clause (a) is provided as described in Article 3.2.7.9.

NFPA 96 Ventilation Control and Fire Protection of Commercial Cooking Operations
8.2.3. Exhaust Fan Operation
8.2.3.1 A hood exhaust fan(s) shall continue to operate after the extinguishing system has been activated unless fan shutdown is required by a listed component of the ventilation system or by the design of the extinguishing system.

8.2.3.2 The hood exhaust fan shall not be required to start upon activation of the extinguishing system if the exhaust fan and all cooking equipment served by the fan have been shut down.

NFPA 204 Smoke and Heat Venting
Chapter 1 Administration
1.1 Scope.
1.1.1* This standard shall apply to the design of venting systems for the emergency venting of products of combustion from fires in buildings. The provisions of Chapters 4 through 10 shall
apply to the design of venting systems for the emergency venting of products of combustion from fires in non sprinklered, single storey buildings using both hand calculations and computer based solution methods as provided in Chapter 9. Chapter 11 shall apply to venting in sprinklered buildings.

1.1.2 This standard shall not specify under which conditions venting is to be provided or required.

1.1.3 Where a conflict exists between a general requirement and a specific requirement, the specific requirement shall be applicable.

1.3 Application.

1.3.1 This standard shall not apply to ventilation within a building designed for regulation of environmental air for personnel comfort, to regulation of commercial cooking operations, to regulation of odor or humidity in toilet and bathing facilities, to regulation of cooling of production equipment, or to venting for explosion pressure relief.

1.3.2 This standard shall apply to building construction of all types.

1.3.3 This standard shall apply to venting fires in building spaces with ceiling heights that permit the design fire plume and smoke layer to develop.
Part 9 FDWR Ratios

Question:
The National Energy Code has set maximum fenestration and door to wall area ratios (FDWR) for Part 3 buildings. There is no maximum FDWR requirements set out in the ABC 9.36. for Part 9 buildings when following the Prescriptive Path. Are other jurisdictions then referring to the NECB for Part 9 buildings to set maximum FDWR? Designs must be completed under one Path, and under one Code. Section 9.36. of the ABC has limitations for FDWR in rare cases of the Trade Off option, and in all cases of Performance Path. But, there is no restriction when designing under the Prescriptive Path of Section 9.36.

NECB limits the FDWR as per the location of the building in relation to HDD(heating degree days).

Background Information:
2014 Alberta Building Code
9.36.5.14. Modeling Building Envelope of Reference House
10) The fenestration and door area to gross wall area ratio (FDWR) of the reference house shall be
   a) for houses containing 1 or 2 dwelling units,
      i) as per the proposed house, where its FDWR is between 17% and 22%,
      ii) 17%, where the FDWR of the proposed house is less than 17%, or
      iii) 22%, where the FDWR of the proposed house is greater than 22%, and
   b) for buildings of residential occupancy containing more than 2 dwelling units,
      i) the FDWR determined in Clause (a) for the areas determined in accordance with Sentence 9.36.2.3.(2) and, where the FDWR determined in accordance with the calculation in Sentence 9.36.2.3.(3) only does not exceed 40%, or
      ii) 40% of the gross wall area enclosing conditioned space where the area of fenestration and doors is greater than 40% of the gross wall area enclosing conditioned space determined in accordance with Sentence 9.36.2.3.(2).

9.36.2.11. Trade-off Options for Above-ground Building Envelope Components and Assemblies
4) The effective thermal resistance of one or more portions of floor insulation or ceiling insulation in attics under sloped roofs in buildings that are one storey in building height is permitted to be less than that required in Article 9.36.2.6., provided
   a) the total area of fenestration, excluding skylights, and doors does not exceed 15% of the above-ground gross wall area as calculated in accordance with Article 9.36.2.3.,
   b) the floor-to-ceiling height measured from the top of the subfloor to the underside of the finished ceiling of the storey does not exceed 2.34 m,
c) the distance measured from the top of the subfloor to the underside of the bottom chord of the truss or joist of the roof is not more than 2.39 m, and
d) the difference between the sum of the proposed areas of ceilings or floors divided by their respective proposed effective thermal resistance and the sum of the reference areas of ceilings or floors divided by their respective thermal resistance required in Article 9.36.2.6. is not more than
the difference between 17% fenestration and door area and the proposed fenestration and door areas divided by the required effective thermal resistance values for windows and doors in Article 9.36.2.7

Trade Off Option Note:
Sentence 9.36.2.11.(4)] describes trades that are allowed where the effective RSI of attic or exposed-floor insulation may be decreased in buildings where there is limited window and door area. These trade-offs are permitted only in single storey buildings where ceiling height is lower than standard and the FDWR excluding skylights does not exceed 15%. The trade-off is meant to address height limitations that are imposed by transportation regulations on some factory-constructed buildings while recognizing equivalent performance.
Secondary Suite Furnace Room Access

Question:
Our Building SCO group have discussed tenant accessibility to mechanical systems in a house with a secondary suite. For example, we have had several applications were the upper floor occupant would have to enter the lower floor occupant's living space to access a tripped electrical breaker. We have not found anything in the ABC that deals with this issue of privacy. We are curious as to how other jurisdictions deal with this.

The Alberta Building Code does not address required access to common areas within a house with a secondary suite, such as the furnace room, for both tenants.

The Canadian Electrical Code simply states that the panel is to be accessible, however it does not specify for both tenants.
HRV & Ventilation Rates

Question 1:
If a supplemental exhaust fan is not installed in a bathroom, but rather an exhaust air intake for the principal ventilation fan (HRV) instead, does the exhaust air intake also required to provide minimum 25 L/s?

Sentence 9.32.3.12.(1) reads “This Article shall apply to heat recovery ventilators installed to provide one or more of the fans required by this Subsection”, which indirectly permits HRVs to be able to act in place of fans mentioned in the Subsection. Although there is no mention of HRVs being able to do the work of a supplemental exhaust in Article 9.32.3.7. (like Sentence 9.32.3.3.(3) does for principal exhaust fans), Article 9.32.3.12. does so.

Article 9.32.3.12. (Heat Recovery Ventilators) does not provide special air flow data when using an HRV in lieu of other exhausts. However, since Sentence (1) of the Article states HRVs may do the job of any fan, it would make sense to believe that the HRV inlet for any exhaust it is replacing would have to provide the same or greater air flow as required for that exhaust.

If the HRV is acting as the principal exhaust and is connected to multiple inlets throughout the house (one being the bathroom, as per your inquiry), a supplemental exhaust would most likely be required in the bathroom as referenced in Appendix A of Div. B for Article 9.32.3.7.

The Appendix recognizes that when the principal ventilation fan has more than one inlet (like an HRV typically does), the room in which it is located may require a dedicated supplemental exhaust to serve that room specifically – as there will not be enough draw from the inlet in the room to exhaust contaminants and vapour from that room as per Article 9.32.3.7. Using that rationale, if an HRV is used in lieu of dedicated exhaust fans for the principal and supplemental exhausts in a dwelling, the exhaust inlet in each room that requires supplemental exhaust would have to be able to draw the minimum air flow as specified for supplemental exhaust (25 L/s) or a dedicated supplemental exhaust would have to be installed in that room.

Background Information:
2014 Alberta Building Code
9.32.3.7. Supplemental Exhaust (See Appendix A.)
4) Where an exhaust air intake for the principal ventilation fan is not located in a bathroom or water-closet room, a supplemental exhaust fan with a rated capacity not less than 25 L/s shall be installed in that bathroom or water-closet room.
A-9.32.3.7. Supplemental Exhaust. The CAN/CSA-F326-M standard requires a certain amount of exhaust from kitchens to capture pollutants at the source. When the principal ventilation fan air intake is not located in the kitchen, a separate kitchen exhaust fan must be installed [see Sentence 9.32.3.7.(1)]. However, when the principal ventilation fan is located in the kitchen but is connected to multiple inlets, there will not be enough exhaust from the kitchen. Therefore, a separate kitchen exhaust fan is required in this circumstance as well, unless the exhaust rate of the principal ventilation fan can be increased when additional kitchen ventilation is needed [see Sentence 9.32.3.7.(3)]. The bathroom is another possible location for an air intake of a principal ventilation fan. As with the kitchen, if this option is not chosen, a separate bathroom exhaust fan must be installed [see Sentence 9.32.3.7.(4)].

Supplemental exhaust fans, which in most instances are located in kitchens and bathrooms, are required to be coupled to supply fans of similar capacity. The make-up air is necessary so that operation of the supplementary exhaust fan(s) will not depressurize the house [see Sentence 9.32.3.8.(2)]. See also Appendix Note A-9.32.3.8.

9.32.3.12. Heat Recovery Ventilators (See Appendix A.)

1) This Article shall apply to heat recovery ventilators installed to provide one or more of the fans required by this Subsection.

2) Two or more heat recovery ventilators shall not be connected in parallel airflow to a common air supply duct, unless specifically permitted by the manufacturer.

3) Two or more heat recovery ventilators shall not be connected in parallel airflow to a common downstream exhaust duct.

4) All start-up procedures recommended by the manufacturer, including air balancing and airflow determination, shall be followed.

5) A means for the free flow of condensate shall be provided in accordance with the manufacturer's recommendations or, in their absence, a condensate drain of at least 1/2 inch nominal pipe size pitched in the direction of flow and complete with a trap or condensate pump of sufficient capacity shall be installed and connected to the dwelling unit's drain, waste and vent system.

6) The heat recovery ventilator and all condensate lines shall be installed in a space where the ambient temperature will not adversely affect the operation of the system.
Cancellation of New Home Buyer Protection After the Fact

Question:
The New Home Buyer Protection (NHBP) Department notifies us if coverage has been cancelled. If this happens after issuance of a permit, what should the building inspector do?

When warranty insurance coverage has been cancelled, either by the builder or the insurance provider, a New Home Buyer Protection Officer will contact the local AHJ to advise them, so that no further inspections or work is done.

Under the Permit Regulation, a permit can be suspended or cancelled if a permit has been issued, where incorrect of insufficient information is provided under section 11. Additionally, a permit can also be cancelled or suspended where the undertaking contravenes the Act or another enactment, or where there is a contravention of a condition under which the permit was issued.

When coverage has been cancelled, the permit application requirements have no longer been met, and the permit can be suspended or cancelled until appropriate corrections have been made.

In situations where the house has previously been finalised, but NHBP has now been cancelled. A copy of the final inspection report should be provided to the NHBP Department, so they can contact the warranty provider.

Background Information:

SCA - Permit Regulation

Refusal to issue, suspension or cancellation
26 Without restricting the generality of section 46 of the Act, a permit issuer may refuse to issue a permit and, without restricting the generality of section 44 of the Act, a safety codes officer may suspend or cancel a permit that has been issued if
(b.1) incorrect or insufficient information is provided under section 11 of the New Home Buyer Protection (General) Regulation or section 2 of the New Home Buyer Protection (Regional Municipality of Wood Buffalo) Regulation,
(b.2) evidence provided under section 6.1(2) was incorrect or is no longer correct,
(c) in the opinion of the permit issuer, the undertaking for which the permit would be or has been issued would or does contravene the Act or another enactment,
(d) the permit fee has not been paid,
(e) there is a contravention of any condition under which the permit was issued, or
Application of Section 9.36 to Additions

Question:
Under the ABC Section 9.36, is an addition required to meet energy efficiency requirements? Where you have an existing deck being turned into a four-season room, would the room have to address all aspects of Section 9.36?

There is a reference within the 2011 NECB which provides a definition for “addition” within which provides the parameters of an addition as meaning a floor surface area of more than 10m². The 2011 NECB therefore excludes an addition of less than 10m² from complying with the energy efficiency requirements of the 2011 NECB.

The 2014 ABC does not include the same reference definition and therefore, additions of any size are required to meet the energy efficiency requirements within Section 9.36.

Within the 2014 ABC, under Sentence 9.36.1.3.(1). a building can conform to the prescriptive or trade-off requirements, the performance requirements, or the requirements within the 2011 NECB. Should an owner decide to meet the 2011 NECB requirements, an addition of less than 10m² would still be required to comply to energy efficiency requirements because the scope of the 2014 ABC is what is being referenced, and not that of the 2011 NECB. In this situation, the requirements within the 2011 NECB should be looked at in the same light as that of any referenced standard.

Where an existing deck is being changed into a four-season room, a change of use of the existing space is occurring, and therefore should be viewed as new construction which would be required to meet Section 9.36 Energy Efficiency requirements.

Background Information:
2014 Alberta Building Code
1.1.1.1. Application of this Code
1) This Code applies to any one or more of the following:
f) an addition to any building,

9.36.1.3. Compliance and Application
(See Appendix A.)
1) Except as provided in Sentences (2) to (5), buildings shall comply with a) the prescriptive or trade-off requirements in Subsections 9.36.2. to 9.36.4., b) the performance requirements in Subsection 9.36.5., or c) the NECB.

2011 National Energy Code of Canada for Buildings
Addition means any conditioned space that is added to an existing building and that increases the building’s floor surface area by more than 10 m².
Micro-Breweries and Distilleries

Question?
Can a distillery be classified as an Occupancy other than an F1 Occupancy?

The Alberta Fire Code provides some clarification on the classification of a building. A distilled beverage alcohol is defined as: a beverage that is produced by fermentation and contains more than 20% by volume of water-miscible alcohol.

The AFC indicates that beer, wine, and spirits which contain less than 20% by volume alcohol may not be considered as flammable liquids and therefore, are not regulated under Section 4.10 of the AFC for Distilleries.

Therefore, occupancies such as a micro-brewery which handles only beverages with an alcohol content of less than 20% by volume, has the ability to be classified as other than an F1 occupancy, when demonstrated through empirical data that the risks associated with the amounts of combustible or flammable materials are sufficiently low.

Where the occupancy deals with the distilling, processing or storage in bulk of fermentation containing more than 20% by volume of water-miscible alcohol, these buildings should, as per the requirements of the Alberta Fire Code Article 4.10.2.1. be considered Distilleries, and shall be classified as High-Hazard Industrial occupancies (F1).

The Alberta Fire Code Article 4.10.2.1. does not address a consideration for other classifications based on the size of the operation, or the amount of product within the building. The AFC permits one exception; where the building or parts of the building is used for the storage of closed containers.

Background Information:
2014 Alberta Fire Code
Section 4.10. Distilleries
4.10.2. General
4.10.2.1. Building Classification
1) Except as provided in Sentence (2), buildings or parts of buildings in which distilled beverage alcohol is distilled, processed or stored in bulk shall be classified as high-hazard industrial occupancies.

2) Buildings or parts of buildings used for the storage of closed containers of distilled beverage alcohols shall be classified as medium-hazard industrial occupancies.
1.4.1.2. Defined Terms

Distilled beverage alcohol means a beverage that is produced by fermentation and contains more than 20% by volume of water-miscible alcohol.

Closed container means a container sealed by means of a lid or other device such that neither liquid nor vapour will escape from it at ordinary temperatures.

A-4.10.1.1.(1) Beer, wine, and spirits that contain less than 20% by volume alcohol are not considered to be flammable liquids and are not regulated by this Section. Section 4.10. does not apply to wineries where distilled beverage alcohol is used to fortify wine.
Make-Up Air for Depressurization

Question:
In meeting with CHBA Edmonton it appears our Builders have the understanding that no MUA is required in a residential application providing they use direct vent or mechanically vented gas appliances. They cited 9.32.3.8 in their defense. Article 9.32.3.8 only applies to spillage susceptible appliances. Is it correct to negate the rest of Section 9.32 for the sake of one article?

As per Article 9.32.3.8, where dwelling units contain a fuel-fired space heating appliance, or a fuel-fired water heating appliance, where these appliances are direct-vented or mechanically vented, protection against depressurization is not required.

There are some appliances available which have been tested to comply to the Gas Code CSA B149.1, as meeting category III or IV which are designed to be mechanically vented.

Where these appliances are being proposed, the SCO should confirm that the appliances are classed as category III or IV, are mechanically vented, and that the appliance has been installed with or without combustion air as per the manufacturer's installation instructions. The SCO has the ability to permit the installation of these appliances, (which draw air from the inside of the house), without requiring additional make-up air.

Background Information:
2014 Alberta Building Code
9.32.3.8. Protection Against Depressurization (See Appendix A.)
1) This Article applies to
a) dwelling units that contain a fuel-fired space-heating appliance or fuel-fired water-heating appliance of other than direct-vented or mechanically vented types, and
b) ancillary spaces that contain an exhaust device, where the space is not within a dwelling unit in a house with a secondary suite and where the house with a secondary suite contains a fuel-fired space-heating appliance or fuel-fired water-heating appliance of other than direct-vented or mechanically vented types.

Direct-vented (as applying to a fuel-fired space- or water-heating appliance) means an appliance and its venting system in which all the combustion air is supplied directly from the outdoors and the products of combustion are vented directly to the outdoors via independent, totally enclosed passageways connected directly to the appliance.

Mechanically vented (as applying to a fuel-fired space- or water-heating appliance) means an appliance and its combustion venting system in which the products of combustion are entirely exhausted to the outdoors by a mechanical device, such as a fan, blower or aspirator, upstream or downstream from the combustion zone of
the appliance, and the portion of the combustion venting system that is downstream of the fan, blower or aspirator is sealed and does not include draft hoods or draft control devices. (See Appendix A.)

Mechanically Vented
The definition of this term is intended to include all types of appliances and venting systems that rely entirely on fans to evacuate the products of combustion. Systems variously referred to as "forced draft," "power vented" and "induced draft" in standards and industry terminology may be covered by this definition. The key characteristic of such systems is that they are more resistant to depressurization-induced spillage of combustion products into the building in which they are housed because the combustion venting system downstream of the fan is "sealed," i.e. includes no draft hood or draft control device.

2014 ABC
A-9.32.3.8. Protection against Depressurization. When an exhaust device extracts air from a house and there are no provisions for the introduction of outdoor air, such as by means of an outdoor air duct as required by Articles 9.32.3.4. and 9.32.3.5., and no supply fans are operating simultaneously, the exhausted air will automatically be replaced by outdoor air that has infiltrated through the house's building envelope. The rate of inward leakage will automatically equal the rate of outward extraction; otherwise the house would eventually implode. The instant the exhaust device is turned on, the house pressure is lowered and the inside/outside pressure difference drives outdoor air in through any leaks it can find. See Figure A-9.32.3.8.-A.

Even if the house is made more airtight, the inward leakage will equal the outward fan flow. However, because there are fewer and/or smaller leakage sites in an airtight house, it will take a larger inside/outside pressure difference to drive the same amount of air through the remaining leakage sites. See Figure A-9.32.3.8.-B.

It is possible that the exhaust device will no longer be able to achieve its rated flow when operating against a very high inside/outside pressure difference. However, in this case, the inward flow will also decrease and will still be in equilibrium with the outward flow, but now at a higher inside/outside pressure difference than in a leakier house.

An exhaust device not operated in conjunction with a supply fan will always depressurize a house to some extent—even a leaky house. But it will depressurize a tight house more than it will depressurize a leaky house. And, of course, an exhaust device with a higher capacity will depressurize a house more than a device with a smaller capacity.

Spillage of Combustion Products
Depressurization of the house by the ventilation system or other exhaust devices can cause the spillage of combustion products from certain types of combustion appliances. The types of appliances that are susceptible to pressure-induced spillage can generally be identified by the fact that they are vented through a natural draft chimney rather than through an arrangement that uses a fan to draw the products of combustion out of the house. Naturally aspirated gas furnaces with draft hoods and oil furnaces with barometric dampers are examples of spillage-susceptible appliances.

On the other hand, some gas furnaces with induced draft venting systems and the "sealed combustion" oil furnaces commonly used in mobile homes, are more resistant to spillage. Terms
used in gas appliance standards to describe categories of spillage-resistant appliances include “direct-vented” and “side-wall-vented.”

Almost all fireplaces are spillage-susceptible, even those with so called “airtight” glass doors and outside combustion air intakes, since most “airtight” doors are not really airtight. Certain types of gas combustion appliances, such as cooking appliances and “decorative appliances,” are not required to be vented. Their operation will not be significantly affected by depressurization of the house.

The Alberta Building Code addresses the potential for spillage from combustion appliances with requirements for:
• makeup air, and
• carbon monoxide alarms.

**Makeup Air Requirements**
Depressurization caused by the principal ventilation system itself is not an issue in houses with balanced systems (that is, non-exhaust-only systems). However, the operation of other exhaust devices, such as stove-top barbecues, can cause depressurization. Therefore, in a house with spillage-susceptible appliances, any such exhaust devices, including the required supplemental exhaust fans, must be provided with makeup air [see Sentence 9.32.3.8.(2)].

In the past, the Alberta Building Code and other codes and standards have tended to rely on the passive supply of makeup air through makeup air openings. This is no longer considered to be a reliable approach in the context of a simple, prescriptively described system without sophisticated controls on depressurization. Therefore, the makeup air must be provided by a supply fan that is automatically activated whenever the exhaust device that requires the makeup air is activated [see Sentences 9.32.3.8.(2) and (3)].

The need for makeup air can be avoided by not using spillage-susceptible combustion equipment.

**CSA B149.1 - 4.25.1**
Every heating appliance, water heater, or refrigerator installed in a mobile home or a vehicle, other than a canvas-top tent trailer, shall be of the direct-vent appliance type or equivalent, and shall be installed to provide complete separation of the combustion system from the atmosphere of the space provided for living.
Two Furnaces, One HRV

Question:
When a new building is constructed with two furnaces and an HRV, how many HRV's are required? One for each furnace, or one in total?

There are no requirements within the 2014 ABC, within Section 9.36 Energy Efficiency which require 2 HRV's when 2 furnaces are installed in a dwelling unit. However, ventilation for a dwelling unit should be designed and installed to meet the requirements of Section 9.32., which is intended to ensure ventilation to a home is distributed through-out the dwelling unit.

Furnace and HRV installations should be designed to meet the requirements of the ABC for ventilation. Where two separate furnaces are installed, and if each furnace is providing ventilation to specific and separate portions of the building, considerations should be provided to ensure ventilation to all portions of the dwelling unit are being achieved.

Background Information:
2014 Alberta Building Code
9.32.3.1. Required Ventilation
1) The heating-season ventilation required by Clause 9.32.1.2.(1)(b) shall be provided by a mechanical ventilation system complying with
   a) good practice such as that described in CAN/CSA-F326-M, "Residential Mechanical Ventilation Systems;"
   b) for dwelling units with 5 or fewer bedrooms, the balance of this Subsection, or
   c) Part 6. (See Appendix A.)

2) Mechanical ventilation systems complying with the balance of this Subsection shall incorporate at least the following components:
   a) a principal ventilation system complying with Article 9.32.3.3.,
   b) supplemental exhaust fans complying with Article 9.32.3.7., and
   c) protection against depressurization in accordance with Article 9.32.3.8.

9.32.3.3. Principal Ventilation System
(See Appendix A.)
1) The principal ventilation system shall incorporate the following components:
   a) a principal ventilation fan complying with this Article, and
   b) provision for the introduction of outdoor air to the dwelling unit in conformance with Article 9.32.3.4. or 9.32.3.5.

2) The principal ventilation fan shall be capable of operating at an exhaust capacity complying with Table 9.32.3.3., referred to hereinafter as the "normal operating
exhaust capacity.” (See Appendix A.)

3) The requirement for a principal ventilation fan may be satisfied by a single fan, by the exhaust side of a heat recovery ventilator, or by a group of fans, provided all fans in the group are controlled simultaneously by a controller complying with Sentences (5), (6) and (7). (See Appendix A.)

A-9.32.3.3. Principal Ventilation System. The principal ventilation system circulates air throughout the house for the purpose of maintaining acceptable indoor air quality. Each ventilation system has three main components:

- indoor air exhaust
- outdoor air supply
- distribution of air

Indoor Air Exhaust
The principal ventilation fan extracts indoor air. Its operation is linked with a means of introducing and distributing outdoor air to the dwelling unit at approximately the same rate at which the indoor air is exhausted.
The principal ventilation fan must be capable of drawing air from throughout the dwelling unit and exhausting it to the outdoors. Though actual usage will be determined by the occupants, the fan must be capable of continuous operation. Unfortunately, there is no standard method of testing and designating fans for continuous use. Therefore, such a designation is not a mandatory requirement [see Sentence 9.32.3.3.(4)].

2010 NBC Intent Statements

9.32.3.1.(1)

- OS3
- OH1

Objective
OS3 Safety in Use

Attribution
[F40,F50,F53-OS34]

Intent
Intent 1:
To limit the probability of the inadequate replacement of indoor air with outdoor air, which could lead to excessive negative pressure in dwelling units, which could lead to the spillage of combustion products from fuel-burning appliances that are susceptible to spillage.
This is to limit the probability of the entry of carbon monoxide gas into living space, which could lead to the acute poisoning or asphyxiation of persons.
Insulating Pipes

Question 1:
It appears to be a major expense and undertaking to insulate piping as per 9.36.3.4.(2)(b) to the requirements for exterior above ground walls for very little to no gain. Can a maximum length of piping within or outside the plane of insulation be acceptable before the insulation requirements of 9.36. take effect? Typically, 3'-4' of piping is adequate to make the connection to the condenser.

The Alberta Building Code and Energy Efficiency requirements mandate that the inlet and outlet piping for a service water heating system, as well as for a heating and cooling system, be insulated to reduce the energy lost through convection. Although cost prohibitive, the intent of the Articles is to ensure energy efficiency is increased for the overall dwelling. Therefore, reducing the amount of insulation, or removing it entirely for a portion of the piping should not be permitted without the approval of an alternative solution proposal. Where a proposal is made, the AHJ should look for empirical data which can show that the same level of protection will be provided even though lesser insulation is installed.

Question 2:
Who is asking for all piping forming part of a continuously operating recirculating service water heating system to be insulated?

Question to be posed to the group.

Background Information:
2014 Alberta Building Code
9.36.3.4. Piping for Heating and Cooling Systems
2) Except for high-temperature refrigerant piping, all piping forming part of a heating or air-conditioning system shall be located
a) inside the plane of insulation, or
b) within or outside the plane of insulation, provided the piping is insulated to a thermal resistance not less than that required in Subsection 9.36.2. for exterior above-ground walls. (See Appendix A.)

9.36.4. Service Water Heating Systems
9.36.4.4. Piping
1) The first 2 m of outlet piping downstream and of inlet piping upstream leading from a storage tank or heating vessel shall be covered with piping insulation that is at least 12 mm thick.
2) All piping forming part of a continuously operating recirculating service water heating system shall be covered with piping insulation that is at least 12 mm thick.

**Functional and Objective Statements**
- **F93** To limit the amount of uncontrolled thermal transfer through system components.
- **OE1.1** – excessive use of energy
- **F96** To limit the unnecessary demand and/or consumption of energy for service water heating.

**Illustrated Users Guide NBC-10**

9.36.4.4. Piping

This Article provides the requirements for the energy-efficient construction and design of piping for service water heating systems. Covering the first 2 m (6 ft. 6 in.) of outlet piping with insulation provides a simple method to reduce the heat loss through the pipes, which results in decreasing the amount of energy required to heat the water. **The Article also includes minimum insulation requirements for recirculation lines.**

The requirements target periods of stand-by, where the water is not being used, and a substantial amount of heat loss from the pipes occurs directly adjacent to the tank. Insulating this portion of the pipes can reduce the heat loss at these locations.

**ASHRAE 62**

**Defined Terms**

**Recirculating system:** a domestic or service hot-water distribution system that includes a closed-circulation circuit designed to maintain usage temperatures in hot-water pipes near terminal devices (e.g., lavatory faucets, shower heads) in order to reduce the time required to obtain hot water when the terminal device valve is opened. The motive force for circulation is either natural (due to water density variations with temperature) or mechanical (recirculation pump).
Multiple Tenant Self-Storage Warehouse

Question:
Will the requirements for mini storage buildings be changed to coincide with the 2015 NBC requirements?

A previous 1997 STANDATA which previously permitted some exceptions for construction requirements for multi-tenant storage buildings was withdrawn and the requirements for fire separations can be found within 3.3.5.9.

Currently AMA is reviewing the changes within the 2015 NBC, to determine if a new STANDATA should be developed which will address various options. This review will also take place as part of the discussions towards addressing any Code changes which should be established should Alberta decide to skip a code cycle, which is also still under review.

If a permit application for a multiple tenant self-storage warehouse were proposed prior to the issuance of a STANDATA, The local SCO would have to ability to review an Alternative Solution proposal which identified the 2015 NBC requirements as rationale for meeting the intent of the ABC.

Background Information:
2014 Alberta Building Code
3.3.5.9. Multiple-Tenant Self-Storage Warehouses
1) Unless the building is sprinklered throughout, each individual tenancy in a multiple-tenant self-storage warehouse classified as an industrial occupancy shall be separated from the remainder of the building by a fire separation having a fire-resistance rating not less than 45 min.

9.9.6.4.(5) Exit doors need not conform to Sentences (1) or (2), where
a) the doors serve accessory buildings where life safety is not adversely affected,
b) the doors serve storage garages or other accessory buildings serving not more than one dwelling unit, or
c) the doors
   i) serve storage suites of not more than 20 m² in gross area that are in warehousing buildings of not more than one storey, and
   ii) open directly to the exterior at ground level.

Ontario Building Code
3.10.2.5. Exit Requirements
(1) Except as provided in Sentences (2) and (3), the requirements in Section 3.4. shall apply.
(2) The clear width of an exit stair shall be not less than 1 100 mm.
(3) Exit doors from rental spaces are not required to swing on a vertical axis provided, 
   (a) the area of the rental space is not more than 50 m², and
   (b) the travel distance within the rental space is not more than 10 m.
Section 3.9. Self-service Storage Buildings

3.9.1. General

3.9.1.1. Definition

1) For the purpose of this Section, the term "self-service storage building" shall mean a building that is open to the public for the sole purpose of providing individual self-service storage units.

3.9.1.2. Application

1) This Section applies to self-service storage buildings that
   a) are not more than one story in building height,
   b) do not contain a basement or mezzanine,
   c) consist of individual self-service storage units with external access only,
   d) are used for no purpose other than storage, and
   e) except as provided in Sentences 3.9.3.1.(2) and (4), contain no other major occupancy.

2) Where there is a conflict between the requirements of this Section and other requirements in Part 3, this Section shall govern.

3) The requirements in Part 3 regarding occupant load shall not apply to self-service storage buildings.

3.9.1.3. Occupancy Classification

1) Self-service storage buildings shall be classified as Group F, Division 2 major occupancies.

3.9.2. Building Fire Safety

3.9.2.1. Building Area

1) For the purpose of applying the requirements of Subsections 3.2.1. and 3.2.2. to self-service storage buildings, building area shall mean
   a) the building area of each building, or
   b) the total of the building areas of all buildings as a group.
(See Note A-3.9.2.1.(1).)

3.9.2.2. Spatial Separation
(See Note A-3.9.2.2.)

1) Except as provided in Sentence (3), the spatial separation requirements in Subsection 3.2.3. shall apply to self-service storage buildings.
3.9.2.3. **Access Route**

1) Where Clause 3.9.2.1.(1)(b) is applied to a group of buildings, Article 3.2.5.4, and Sentence 3.2.5.5.(1) shall apply to that group of buildings as if they were a single building.

3.9.3. **Floor Areas**

3.9.3.1. **Safety Requirements Within Floor Areas**

1) Except as provided in Sentences (2) to (6), the requirements of Section 3.3. shall apply. (See Note A-3.9.3.1.(1).)

2) Not more than one dwelling unit is permitted to be contained within one of the self-service storage buildings on a property.

3) A dwelling unit referred to in Sentence (2) shall be separated from individual self-service storage units by a fire separation having a fire-resistance rating not less than 2 h.

4) Where an office not more than 50 m² in area is adjacent to a dwelling unit referred to in Sentence (2), it shall be considered as part of the dwelling unit.

5) Fire separations required by Sentences 3.3.1.1.(1) and 3.3.5.9.(1) need not be provided between individual self-service storage units.

6) The floor area of self-service storage buildings shall be
   a) subdivided into compartments not more than 500 m² in area by a fire separation having a fire-resistance rating not less than 1 h, or
   b) sprinklered.

(See also Sentence 3.4.6.12.(2) for the exemption applying to exit doors of individual self-service storage units.)

3.9.3.2. **Sanitary Facilities**

1) Except as provided in Sentence 3.7.2.1.(1), two public washrooms, each containing a water closet and a lavatory, shall be provided within one of the self-service storage buildings on the property. (See Note A-3.9.3.2.(1).)

3.4.6.12. **Direction of Door Swing**

1) Except for doors serving a single dwelling unit and except as permitted by Sentence (2) and Article 3.4.6.14., every exit door shall
   a) open in the direction of exit travel, and
   b) swing on its vertical axis.

2) Exit doors need not conform to Sentence (1) where
   a) they serve storage garages serving not more than one dwelling unit,
   b) they serve accessory buildings serving not more than one dwelling unit,
   c) they
      i) serve storage suites not more than 28 m² in area that are on the first storey in warehousing buildings, and
      ii) open directly outdoors at ground level, or
   d) they serve individual self-service storage units referred to in Section 3.9.
Spray Foam over Ductwork

Question?
The ABC says you can’t spray foam around supply ducts, yet it seems to be common practice with the condition that joints are sealed? How is everyone accepting this?
There are some jurisdictions who have been accepting foam plastic insulation in contact with heating ductwork where the manufacturer has had testing completed confirming compliance to the CAN/ULC-S705.1 or the CAN/ULC-S102, as well as testing of the products flame-spread rating and smoke development classification.

In these situations, the AHJ has accepted a city wide variance for the manufacturer’s product as long as it is installed as per their proposal.

The 2015 National Building Code has implemented a change within the document, which permits this installation where certain conditions have been met. See references below for conditions.

Background Information :
2014 Alberta Building Code Requirements
9.32.3.11. Ducts
8) Joints in all ventilation system ducting shall be sealed with mastic, metal foil duct tape or the manufacturers’ specified sealants.

Coverings, Linings, Adhesives and Insulation (3.6.5.4. and 9.33.6.4.)
3.6.5.4. & 9.33.6.4. Coverings, Linings, Adhesives and Insulation
5) Except as permitted by Sentence (6), foamed plastic insulation shall not be used as part of an air duct system or for insulating an air duct.

9.33.6.4.(5)
OS1 Fire Safety
Intent
Intent 1:
To limit the probability that foamed plastic, once ignited, will contribute to the rapid spread of fire and smoke throughout the building, which could lead to harm to persons.

3.6.5.4.(5)
OS1 Fire Safety
Intent
Intent 1:
To limit the probability that foamed plastic insulation will be used in air duct systems or for insulating air ducts, which could lead to the insulation contributing to the growth or spread of fire, which could lead to the spread of fire to other parts of the building by means of the air duct systems, which could lead to harm to persons.
2015 National Building Code

9.33.6.4.

5) Except as provided by Sentence (6) & (7), foamed plastic insulation shall not be used as part of an air duct or for insulating an air duct.

6) Foamed plastic insulation confirming to Article 9.25.2.2. is permitted to be used to insulate a galvanized steel, stainless steel or aluminum air duct, provided
a) the foamed plastic insulation applied to supply ductwork is not less than 3m from the furnace bonnet,
b) the temperature within the ductwork where the insulation is installed is not greater than 50 degrees C,
c) duct joints are taped with a product conforming to Sentence 9.33.6.3.(1),
d) return air plenums are separated from the foamed plastic insulation, and
e) the foamed plastic insulation is protected
   i) by one of the interior finishes described in Subsection 9.29.4. to 9.29.9.,
   ii) provided the building does not contain a Group C major occupancy, by sheet metal that is mechanically fastened to the supporting assembly independent of the insulation, is not less than 0.38mm thick and has a melting point of 650 degrees C, or
   iii) by any thermal barrier that meets the requirements of Clause 3.1.5.15.(2)(e).

Excerpt from 2014 NBC Illustrated User’s Guide:

9.33.6.3. Tape

This Article requires, through reference to a standard, acceptable tape for sealing duct joints that will not create a fire hazard by facilitating the spread of fire along its surface.

9.33.6.4. Coverings, Linings, Adhesives and Insulation

This Article requires that air ducts (including plenums) and their components, such as coverings, linings, insulation and adhesives, not facilitate the spread of fire along the ducts, and not generate excessive amounts of smoke in the event of a fire. It requires that these materials not ignite when they are near sources of high temperatures, and that they be able to preserve the integrity of any fire separation through which the ducts pass. Lining materials can interfere with the operation of dampers or fire block flaps. This has to be prevented.

Example of an Alternative Solution Approval

The information evaluated in relation to this Sentence follows:

- Testing of the Spray Foam to ASTM C411, Test Method for Hot-Surface Performance of High Temperature Thermal Insulation. The test results show that the Spray Foam, in contact with a hot surface maintained at 121±14°C for 96 hours did not flame, glow, smoulder or smoke, nor was there any evidence of melting, dripping, cracking, delaminating or warping. This constitutes a pass for this test.
- The CCMC evaluation report allows product 1 to be used at maximum in-service temperatures not exceeding 70°C, and CAN/ULC-S705.2 allows product 2 to be used at maximum in-service temperatures not exceeding 80°C.
- Your office provided information that the maximum exterior surface temperature of a residential duct would be in the range of 60°C at a distance of at least 3 m from the furnace.

Based on your office’s submission and our subsequent review and interpretation of the articles involved, we agree that the Spray Foam may be installed in direct contact with forced air heating ductwork and return air ductwork in residential construction limited to single family homes, semi-detached houses, duplexes and row houses that are not stacked. This is subject to the following limitations.

1. The Spray Foam may be applied to supply ductwork at a distance of 3 m or greater from the furnace bonnet and there must be a temperature of 50°C or less within the ductwork at the point where the
Spray Foam is being applied.

2. Ductwork section joints are to be taped with a product complying to the ABC – Article 9.33.6.3. prior to installing the Spray Foam.

3. Return air plenums are to be isolated from the Spray Foam by sheet metal.

4. All void spaces around ducts are to be filled with the Spray Foam up to the thermal barrier.

5. A thermal barrier is to cover the Spray Foam in order to isolate it from adjacent space other than adjacent concealed spaces, as required by the CCMC evaluation report for the product, and the ABC – Article 9.10.17.10.

6. The Spray Foam insulation is to be kept away from heat emitting devices such as chimneys, recessed lights etc., as outlined in CAN/ULC-S705.2 and the CCMC evaluation report.

7. The Spray Foam shall not isolate any plumbing pipes so that pipes may be exposed to unheated areas.

We also note that the installer intends to supply an identification certificate on-site to identify the type of foam used, builder, and/or certified contractor doing the installation. We suggest that this information be supplied to the home builder at the start of the job and be available for our Safety Codes Officers in the on-site job pouch. In this way our inspection staff will be aware of the type of insulation and will look for the appropriate installation of heating and plumbing pipes in relation to the installation.
Wireless Smoke Alarms

Question:
Can wireless radio frequency smoke alarms be used in new construction and/or existing construction?
Currently there are certified smoke alarms which utilize wireless interconnection technology. For the purposes of the ABC 2014, smoke alarms must be provided with power from a hardwired source and provided with a battery back-up.

Prior to certified wireless interconnectable devices, common practice to achieve interconnection was to hardwire the smoke alarms to each other so the activation of one smoke alarm would cause all of the interconnected smoke alarms to sound. With the advent of wireless interconnection, this same function can be provided wirelessly. It must be noted that at least two certified smoke alarms with wireless capabilities are needed for this interconnection to occur.

Proposed Standata will state: A smoke alarm that is certified in conformance with CAN/ULC-S531, "Smoke-Alarms" and uses wireless interconnection technology is an acceptable means of meeting the interconnection requirements of Sentence 3.2.4.21.(9) and Sentences 9.10.19.5.(1) and (2).

Background Information:

CAN/ULC-S553-02 Installation of Smoke-Alarms
INTERCONNECTED - Installed to operate in combination with other smoke-alarms to provide common signalling on all smoke-alarms such that activation of one smoke-alarm will cause all connected smoke-alarms to sound.

2014 Alberta Building Code
9.10.19.5. Interconnection of Smoke Alarms
1) Except as permitted in Sentence (3), where more than one smoke alarm is required in a dwelling unit, the smoke alarms shall be wired so that the activation of one alarm will cause all alarms within the dwelling unit to sound.

2) Smoke alarms in a house with a secondary suite shall be wired so that the activation of any one smoke alarm causes all smoke alarms within the house with a secondary suite to sound.

9.10.19.4. Power Supply
1) Except as provided in Sentences (2) and (3), smoke alarms described in Sentence 9.10.19.1.(1) shall
   a) be installed with permanent connections to an electrical circuit (see A-3.2.4.21.(6)(a) in Appendix A),
   b) have no disconnect switch between the overcurrent device and the smoke alarm,
c) in case the regular power supply to the smoke alarm is interrupted, be provided with a battery as an alternative power source that can continue to provide power to the smoke alarm for a period of no less than 7 days in the normal condition, followed by 4 minutes of alarm.

3.2.4.21. Smoke Alarms
9) If more than one smoke alarm is required in a dwelling unit, the smoke alarms shall be wired so that the actuation of one smoke alarm will cause all smoke alarms within the dwelling unit to sound.
Door Release Hardware for Exit Doors (B2,B3)

Question:
The Code allows for three storey combustible B3 occupancies. Most of these buildings will have people with dementia, Alzheimer’s or other similar mental illnesses. This would require some form of impeded egress. Article 3.2.2.19. prohibits impeded egress zones in buildings more than one storey in height unless it is classified as a B1 occupancy (non-combustible construction). There was Standata 97-DR-016 which spoke to wandering patient security systems. I’m not aware of any newer versions of this Standata. There appears to be a disconnect in the Code with the inclusion of the B3 occupancy with no revision to the impeded egress requirements.

Door Release Hardware for Exit Doors (14-BCV-000) Standata is being developed to provide a compliant means to reduce the probability of wandering occupants unknowingly exiting a building or supervised area and exposing themselves or others to undue risks, while still maintaining an acceptable level of safety for the occupants of the building.

The Variance is intended to apply to doors in Group B, Division 2 and Division 3 occupancies and could be applicable to new and existing buildings. The Variance is looking at implementing electromagnetic locks under these conditions:

Electromagnetic locks that do not incorporate latches, pins or other similar devices to keep the door in the closed position are permitted to be installed on doors in Group B, Division 2 and Division 3 occupancies, provided

a) the building is
   i) equipped with a fire alarm system, and
   ii) sprinklered,

b) the electromagnetic lock releases upon
   i) actuation of the alarm signal from the building’s fire alarm system,  
   ii) loss of its power supply and of power to its auxiliary controls,  
   iii) actuation of a manually operated switch that is readily accessible at a constantly attended location within the locked space, and  
   iv) actuation of the manual station installed within 0.5 m of each door and equipped with an auxiliary contact, which directly releases the electromagnetic lock, (these manual stations may be covered with a transparent box that sets off an audible signal when opened).

c) upon release, the electromagnetic lock requires manual resetting by actuation of the switch referred to in Subclause (b)(iii),
d) a legible sign with the words “EMERGENCY EXIT UNLOCKED BY FIRE ALARM” written in letters at least 25 mm high with a stroke at least 5 mm wide is permanently mounted on the door,

e) the operation of any by-pass switch, where provided for testing of the fire alarm system, sets off an audible signal and a visual signal at the fire alarm annunciator panel and at the monitoring station referred to in Sentence 3.2.4.8.(4) of ABC 2014, and

f) emergency lighting is provided at the doors.

One optional additional release device (e.g. swipe card device, key pad) can be installed to facilitate the free movement of staff and visitors in the building.”