

# Existing Buildings Regulation

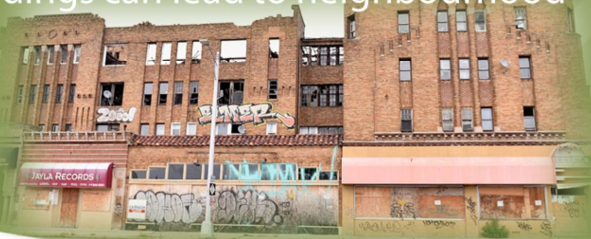
June 17<sup>th</sup>, 2020

Murray Fischer  
City of Brandon  
February 25, 2021



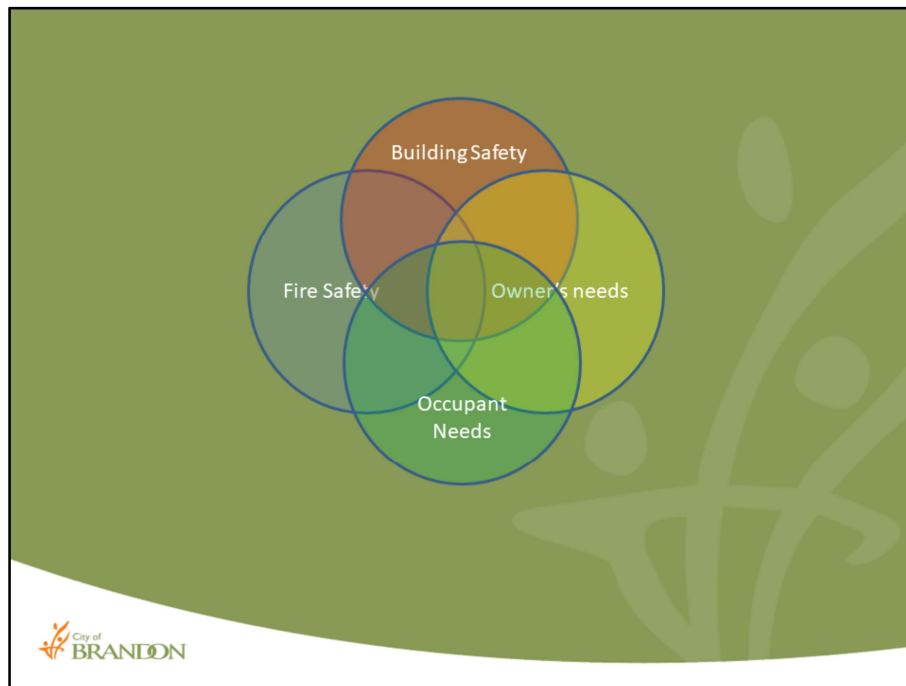
## Why do we need an existing Building Regulation?

1. Many buildings were built before the first Building Code
2. Many Code requirements can be costly, leading to vacant buildings
3. Vacant buildings can lead to neighbourhood decay



The primary reason behind the need for an existing building regulation is to preserve the health and vibrancy of Brandon's downtown. There are several reasons why buildings are difficult to rehabilitate, the primary reason is the difficulty to comply with existing building codes. The cost of rehabilitating these old buildings also has some owners making the decision to move their operations from the downtown, which then leads to vacant buildings. If these vacant buildings are not repurposed, neighbourhood decay can quickly take over.





Before investigating requirements of the regulation, we sought out to identify the key objectives of the regulation. Similar to our current objective-based building code, we wanted to clearly define what functions this regulation serve. It was also determined, that because no single function serves a greater purpose than the other, it was important that each function is equally represented during the creation of the regulation.

## Identifying Objectives and Prioritizing those Objectives

1. Occupant Safety (exiting, reducing hazards)
2. Fire Protection (structural fire protection)
3. Health (plumbing, indoor air quality)
4. Accessibility (Barrier free design)
5. Environment (energy efficiency)



Our next step was to address the objectives within the National Building Code, and prioritize them within this specific regulation. It was determined that not all objectives will be served through this regulation, and that those not addressed within this regulation will be dealt with on a case-by-case basis, due to the complex and highly unique nature of the buildings in the downtown.

## Goals and Objectives

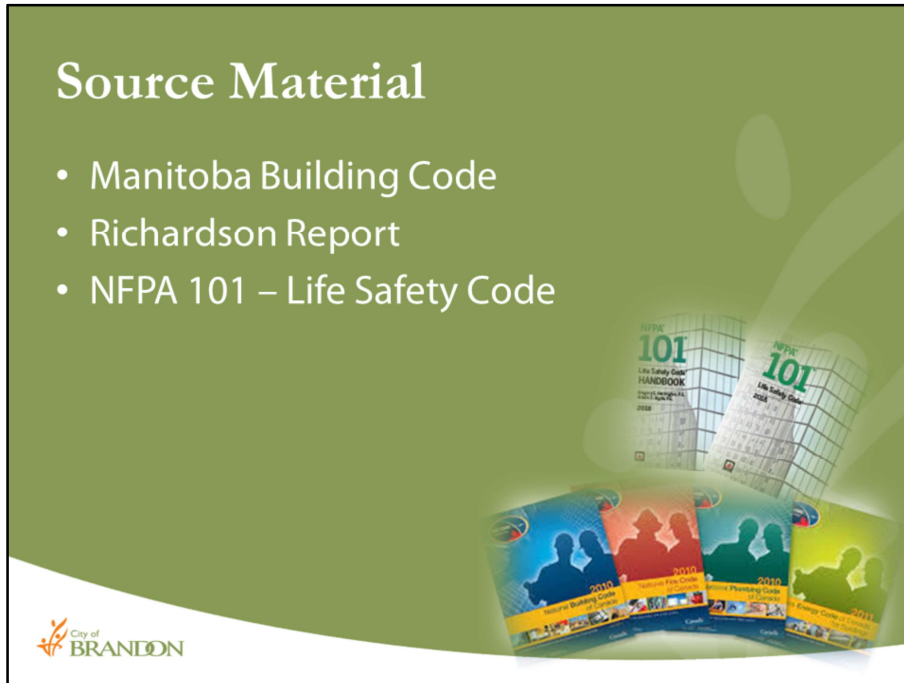
- Easy to use
- Encourage development
- Protect the occupants



Once we had a purpose for the regulation, we wanted to then make sure that it wouldn't be a cumbersome, complex and difficult regulation to interpret and use. It should be flexible and offer solutions without being difficult and confusing to understand.

## Source Material

- Manitoba Building Code
- Richardson Report
- NFPA 101 – Life Safety Code



Once we identified the goals, functions and objectives of the regulation, we sought out the material we deemed best to serve us in creating the articles and requirements within the regulation. These would serve only as a guideline when generating the requirements.

## Limited Scope

- Only those buildings constructed prior to 1980
- Regulation is limited to building & fire safety
- Not more than 3 storeys (including roof)
- Under 600m<sup>2</sup>
- Must not need a fire alarm system
- Limited to certain occupancy types



The very first question once we embarked on the actual statements within the regulation, was “what buildings will this regulation govern?”. We then applied the original principles we just identified and determined that typical Part 9, or commonly known as low-rise non-complex buildings, would be a good start. Going beyond that scope would result in a very complex and possibly confusing regulation. This would also allow us to create a “one size fits all” regulation.

## Basements

- Basements with no mechanical room may be considered a crawl space
  - No fire resistance rating
  - Limited egress requirements



So, once we started into the building we decided to work from the ground up. We then sought to identify basements as a safe place where fires are not likely to occur, and where people generally do not occupy or visit. Thus, making basements a generally safe space similar to attics and crawl spaces. This means that basements will have to follow specific limitations, such as no heating equipment and no storage.

## Buildings Containing Residential Occupancies

- A 1-hour fire separation is required between the residential suites and the business located on the main floor, or
  - A fire alarm system is installed
  - A sprinkler system is installed



One of the objectives of the code is life safety. And we felt it was important to address this by ensuring that the people that regularly occupy the space are protected in the event of a fire.

## Exits & Signage

- At least one exit provided per floor (subject to 3.4. or 9.9. of the Manitoba Building Code)
  - Basements exempt
- Exit signage provided throughout the building



In identifying requirements for this regulation, we endeavored to include those that provided the greatest amount of protection to the occupants at the lowest cost. And we feel that requiring exit signage throughout the building is an inexpensive and effective way to increase the level of safety in these buildings.



## Smoke/CO Detection

- Where no fire alarm system is installed:
  - Smoke alarms required on each floor including basements
  - CO detectors required on each floor, except for basements
  - Heat detectors required on each floor and in mechanical rooms serving multiple suites or floors
  - Heat detectors to signal all alarms upon fire event



One of the chief goals of the regulation is to maintain a system in place that addresses fast notification of fire events. This will be addressed by requiring either fire alarm systems, or early warning & detection systems, such as interconnected smoke alarms and heat detectors.

## Other considerations

- Scope of upgrades will be determined on a case-by-case basis
- Barrier free requirements will be determined on a case-by-case basis



Due to the complex and unique nature of many of the existing buildings, additional requirements may be required to address building and/or occupant safety. The condition of the existing building should always be assessed prior to considering any major renovations, and special requirements will be applied on a case-by-case basis.

Questions?





# **Adaptive Reuse Heritage Buildings and Code Compliance**

February 25, 2021 12:00 to 1:00 pm CST

**Brant Hryhorczuk, Heritage Conservation Branch**



Assiniboia Court House  
1930







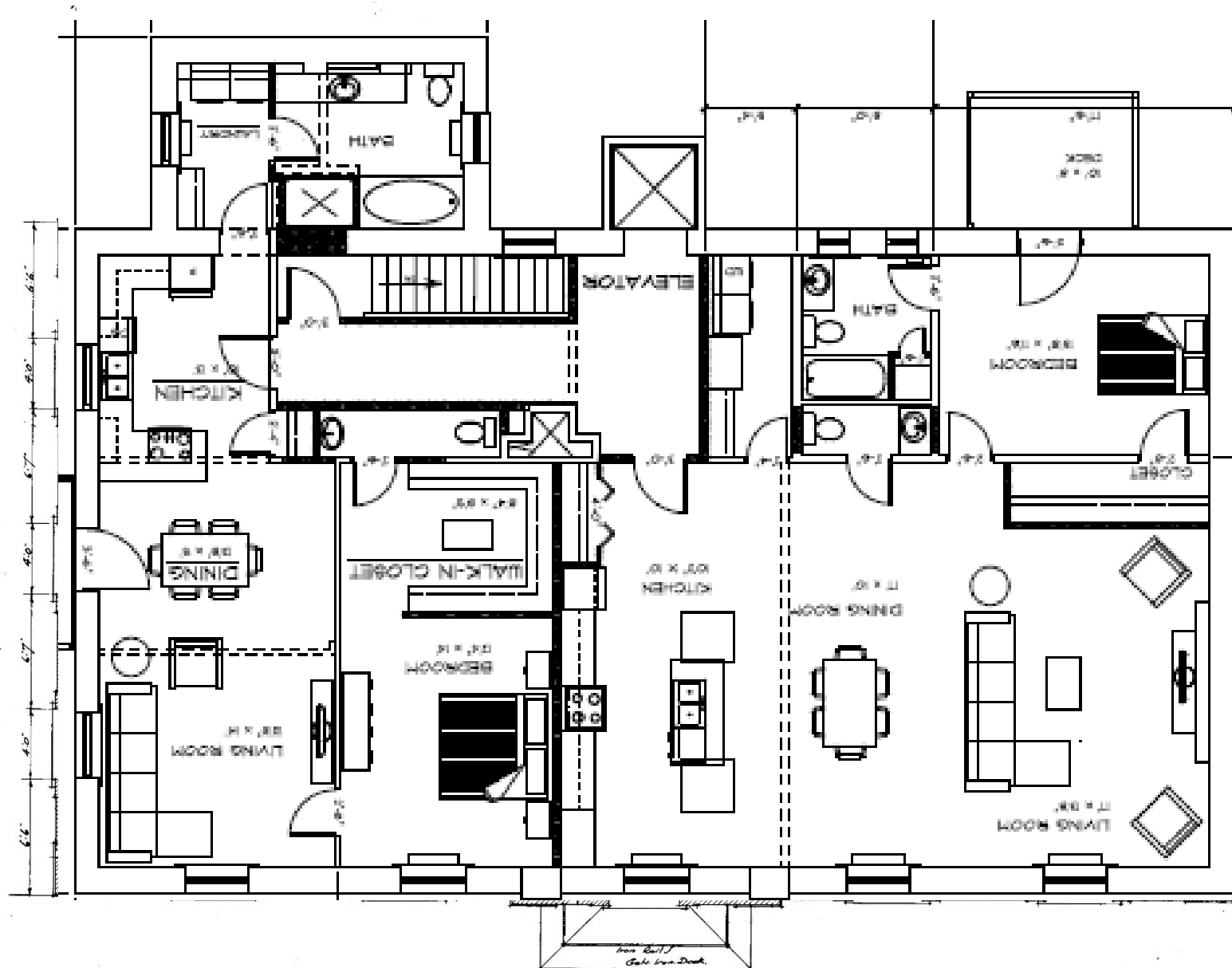


















# Moose Jaw Land Titles 1910







Yvette Moore Gallery of Fine Art

A Prairie









Gallery Café



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TABLE



GALLERY CAFE

THE LUNCH BOX

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BE SEATED

Please wear a mask

Masking is now required in all indoor public places in Mount Airy.



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PLEASE USE THE  
DISINFECTING  
HAND SANITIZER  
BEFORE ENTERING  
THE GALLERY  
CAFE.





















College Building  
University of Saskatchewan  
1912











Bishop's Court  
Diocese of Qu'Appelle - Regina  
1926





















Regina Union Station - 1911







WAL

TO TRAINS

BOX OFFICE

GUEST SERVICES

COAT CHECK

GUEST SERVICE







**POWERBUCKS**  
IGT

**\$1 MILLION JACKPOT**

**Play**

Item	Quantity
100' of 1/2" EMT	100'
100' of 3/4" EMT	100'
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100' of 2" EMT	100'
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100' of 100" EMT	100'

**\$1 MILLION JACKPOT**

**Play**

**IGT**

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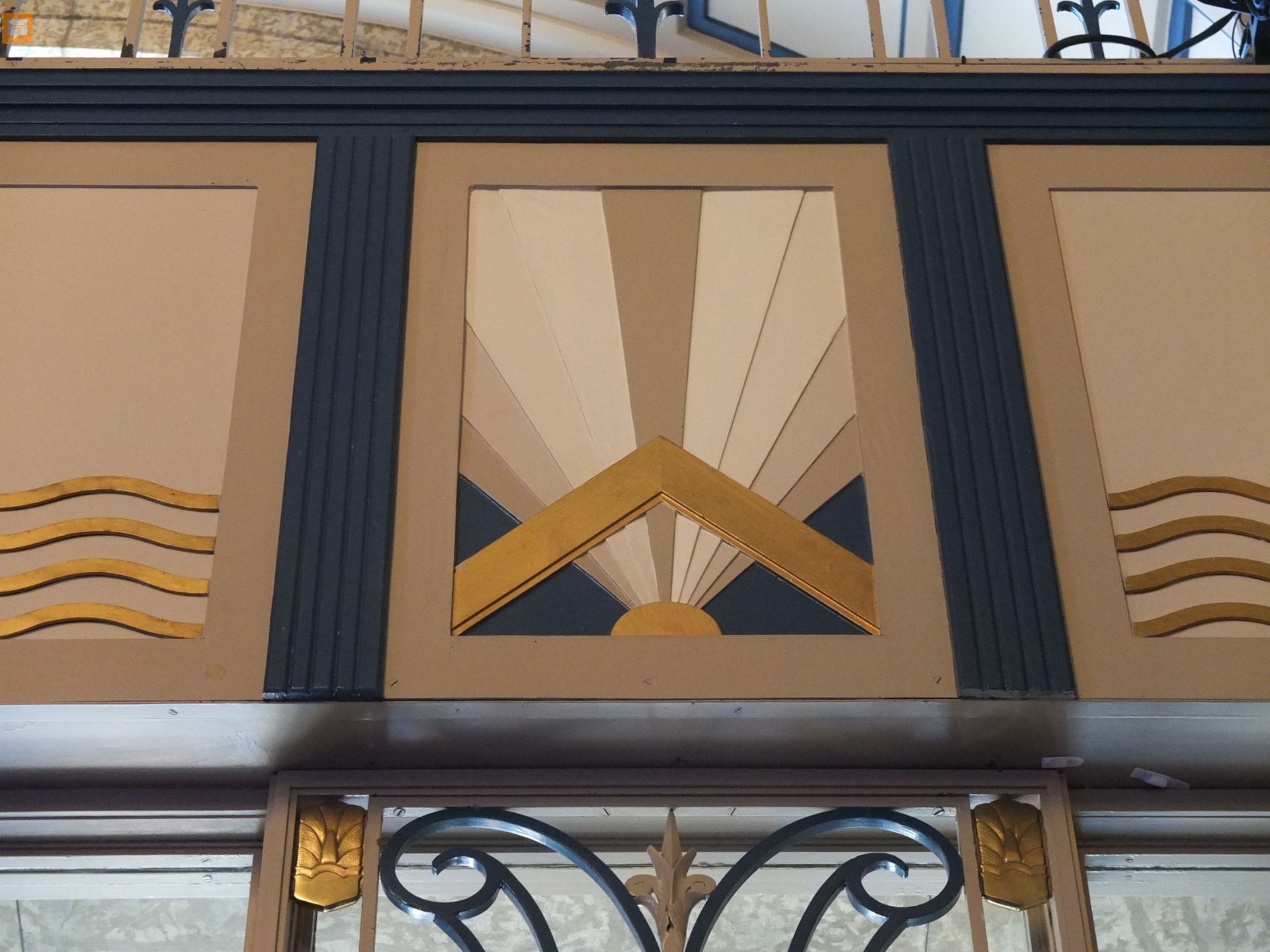
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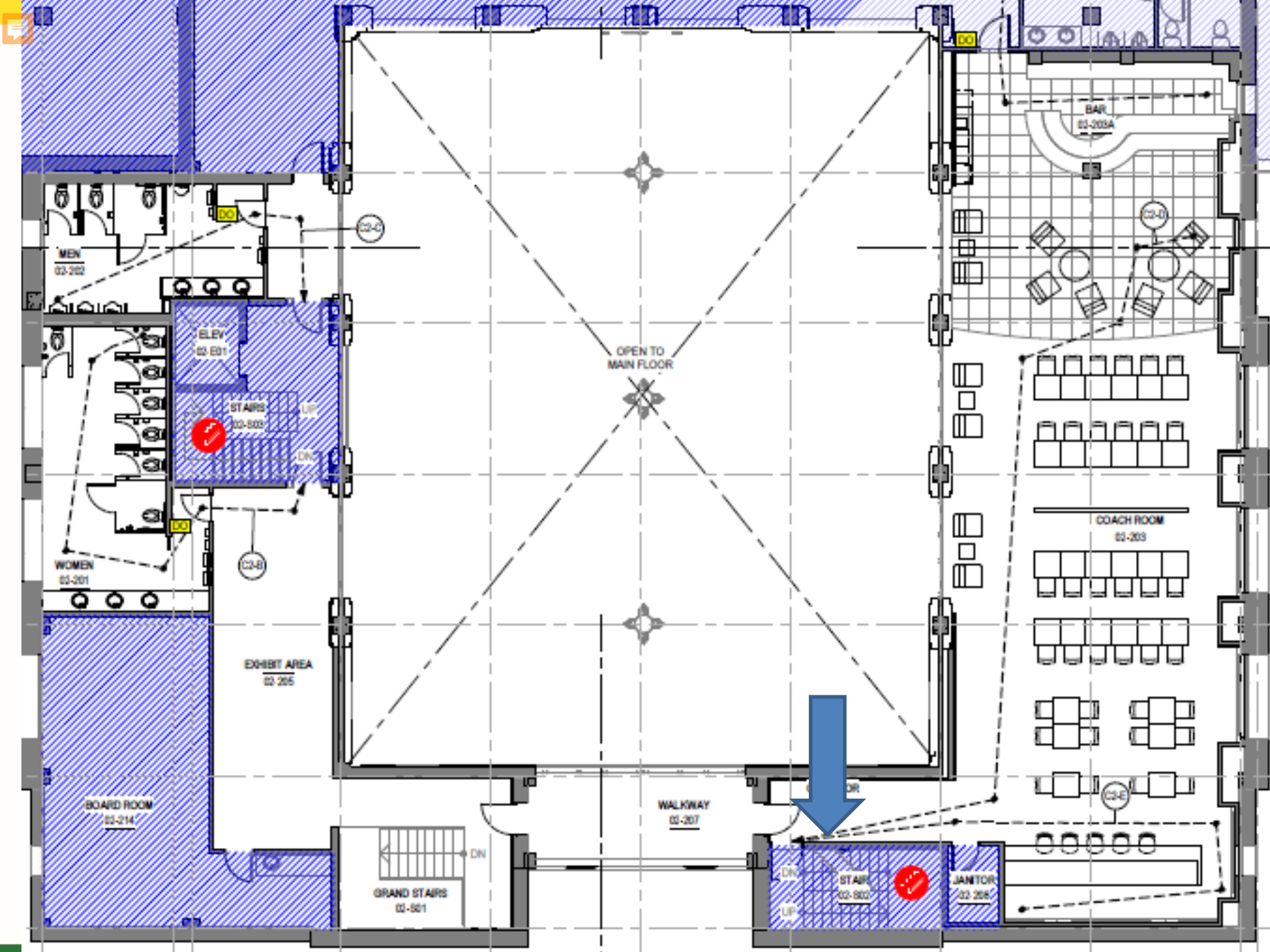


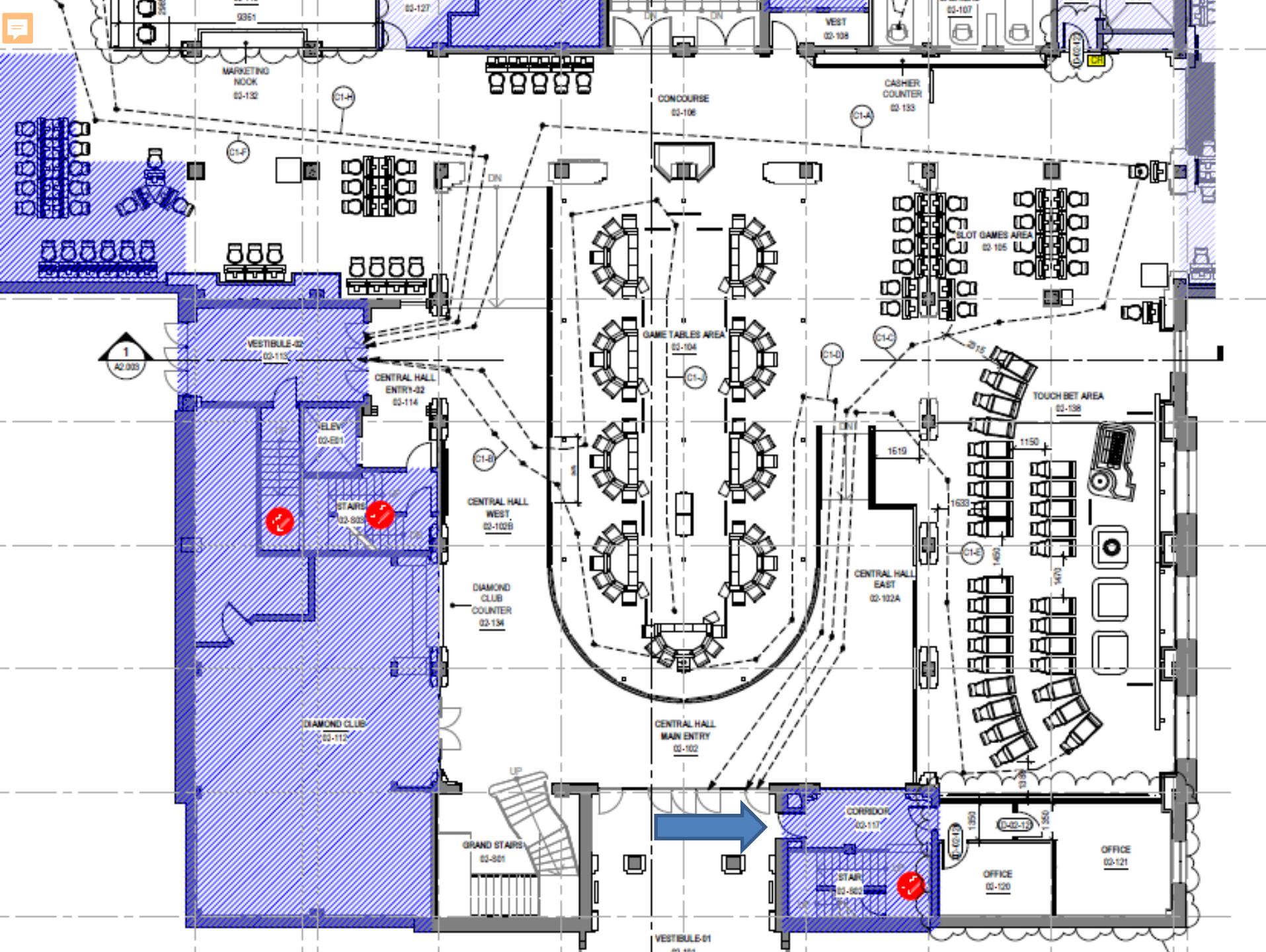




















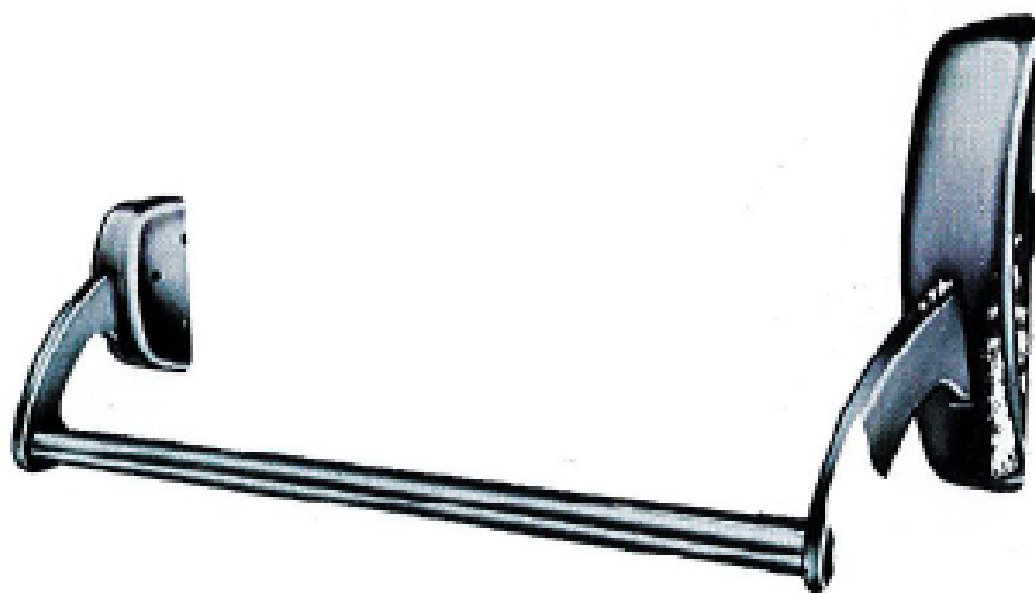


## 9800 Series Rim Exit Device

90 Series Exit Devices

**SARGENT**

**ASSA ABLOY**



### 9800 Rim Exit Device

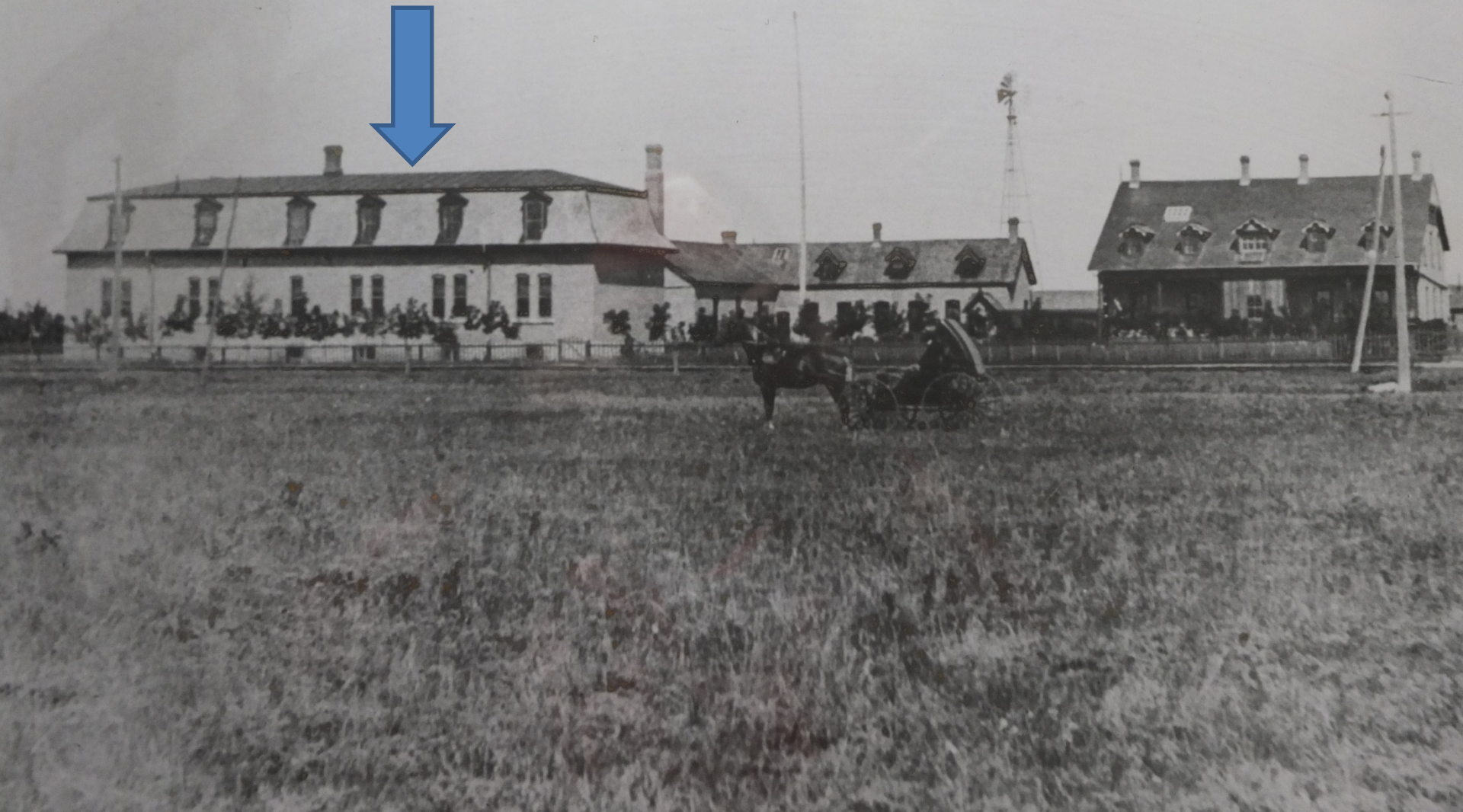
The 9800 Series exit devices are ordered with trim and shipped complete with the strike, screw packs and cylinder as required in one carton. The cross bars are cut to the correct length, based on door width.





# Territorial Administration Building

1891











Over the last 130 years the building has had a number of occupants including....

Training school for East European immigrants.

School for the deaf.

Maternity hospital.

Since 1978 it has served primarily as offices for a variety tenants.







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North-West Territorial  
Administration Building  
Provincial Heritage Property



Northwest Territories  
Government  
Ministry of  
Government Services

3304 Dewdney Ave





# *Uniform Building and Accessibility Standards Act*

## PART II

### Building Standards

(2) The building standards **do not apply** to: (a) a building on which construction was commenced or completed prior to the coming into force of this section,

but the building standards **do apply** to an alteration, repair, renovation, demolition, relocation, removal or **change of use or occupancy** of such a building;

Territorial Administration Building

Authority Having Jurisdiction determined that the occupancy has changed from D (*Business and Personal Services*) to A (*Assembly*).

So now it must comply with the current edition of the code.

















Entire building is sprinklered.





# *Uniform Building and Accessibility Standards Act*

## PART III Accessibility Standards

If there is a change in the major occupancy of an existing building that:

- (a) has a building area in excess of 600 m<sup>2</sup> ; and
- (b) is not barrier-free;

the owner of the existing building shall ensure that the existing building is made barrier-free in conformance with the Code.

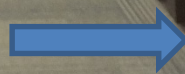








1800 mm

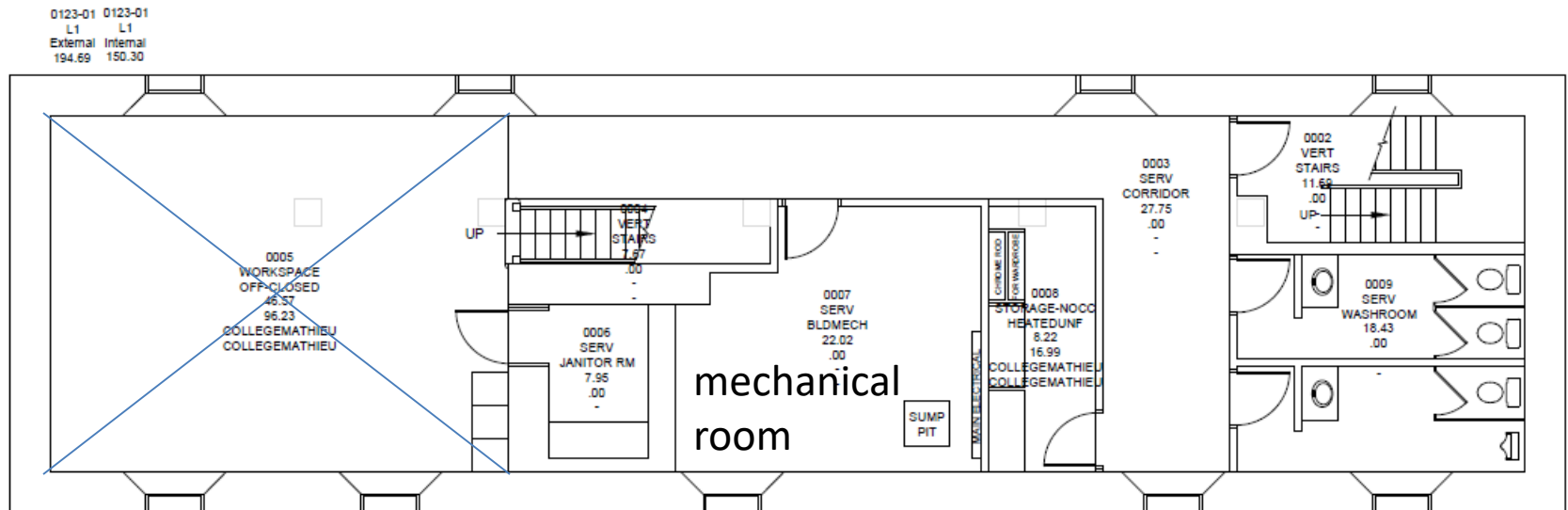




## 2015 National Building Code

“alternative solutions can be used in lieu of compliance with acceptable solutions”

“to do something different from the acceptable solutions, a builder, designer or building owner must show that their proposed alternative solution will perform at least as well as the acceptable solution it is replacing”



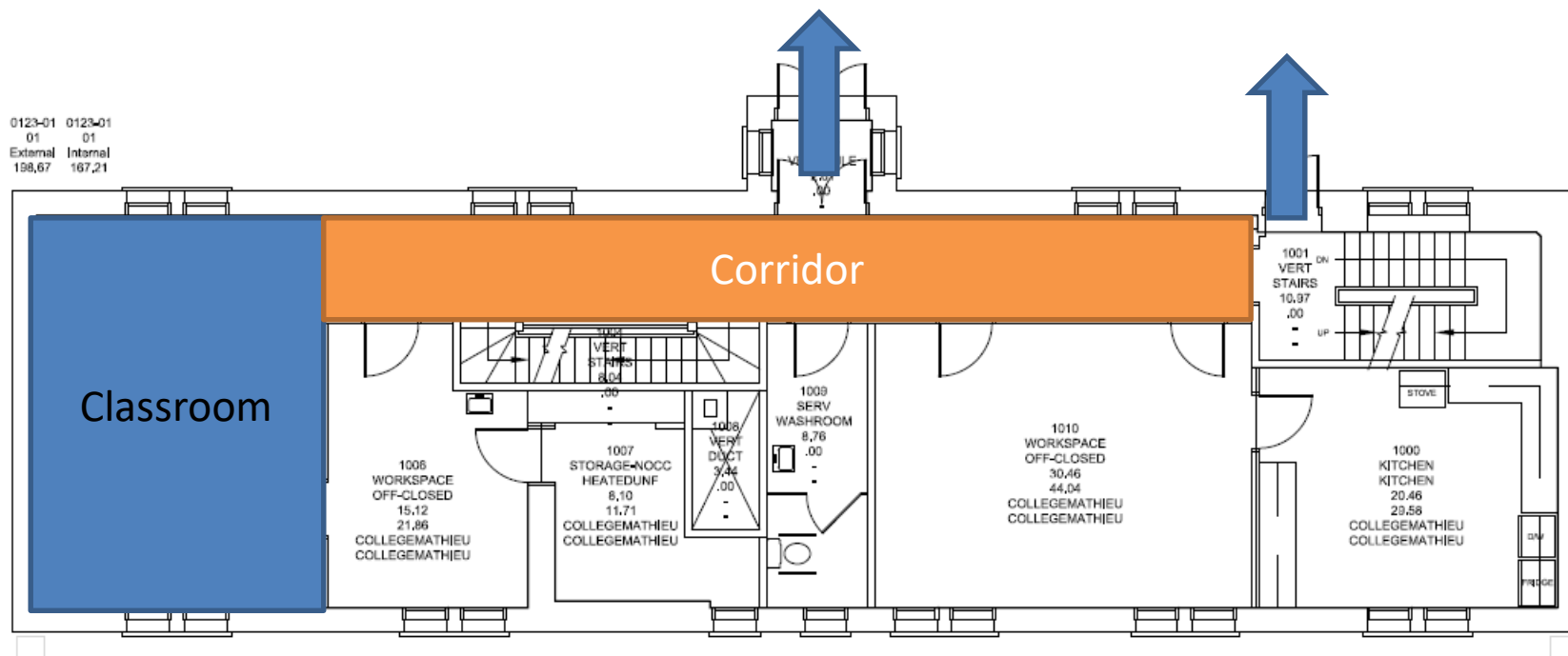
Basement Floor Plan

Basement will not be used for office or classroom use.





0123-01 0123-01  
01 01  
External Internal  
198,67 167,21



Main Floor Plan – Building Area = 250 sq. m Occupant Load = 25

### 3.3.1.4 Public Corridor Separations

(1)(2) Separated from remainder of storey by a minimum 45 minute fire separation.

#### Exception

(3) If a storey is sprinklered throughout, no fire resistance rating is required.





Second Floor Plan – Occupant Load = 29 – Floor Area 170 sq. m.

### 3.4.2.1 Minimum Number of Exits

1) every floor area intended for occupancy shall be served by at least 2 exits.

#### Exception

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

b) In a floor area that is sprinklered throughout....

Maximum travel distance is not more than **25m**.

Maximum floor area does not exceed **200 sq. m**





# Nova Scotia Building Code

## Schedule "D"

### Alternate Compliance Methods for Existing *Buildings*

No.	Code Requirement	Alternate Compliance Method
1	Fire Separations Article 3.1.3.1. (Part 3, Division B) and Table 3.1.3.1. (Part 3, Division B); Subsection 9.10.9. (Part 9, Division B) <i>2 h fire separation</i> required between some <i>major occupancies</i> .	Except for F1 <i>occupancies</i> , 1 h <i>fire separation</i> is acceptable, if the <i>building</i> is fully sprinklered.
2	Fire Separations Article 3.1.3.1 (Part 3, Division B) and Table 3.1.3.1. (Part 3, Division B); Subsection 9.10.9. (Part 9, Division B) <i>1 h fire separation</i> required between some <i>major occupancies</i> .	30 min. <i>fire separation</i> is acceptable if the <i>building</i> is fully sprinklered.



# BC Building Code

Table A-1.1.1.21.(15) Alternate Compliance Methods for Heritage Buildings <sup>1</sup>		
No.	Code Requirement in Division B	Alternate Compliance Method
15	<p><b>Separation of Suites</b> Article 3.3.1.1., Article 9.10.9.13., Article 9.10.9.14.</p> <p>Suites are required to be separated from adjoining suites by 45 min or 1 h rated fire separations.</p>	<p>Existing fire separations of 30 min, such as wood lath and plaster in good condition, are acceptable in sprinklered buildings not exceeding 6 storeys in building height.</p>
22	<p><b>Exits</b> Article 3.4.2.1., Article 9.9.8.2.</p> <p>Floor areas shall be served by not fewer than 2 exits except as permitted by Sentence 3.4.2.1.(2).</p>	<p>Floor areas may be served by a single exit within the limits of Sentence 3.4.2.1.(2) provided:</p> <ul style="list-style-type: none"><li>(a) the building does not exceed 3 storeys in building height,</li><li>(b) the building is sprinklered with fast response sprinklers, and</li><li>(c) all floor areas are protected by a system of smoke detectors connected to a fire alarm system.</li></ul>



# 2018 International Existing Building Code

## CHAPTER 12 HISTORIC BUILDINGS

Fourth Printing: Feb 2020

### **1203.7 One hour fire-resistant assemblies.**

Where 1-hour fire-resistant rated construction is required by these provisions, it need not be provided, regardless of construction or occupancy, where the existing wall and ceiling finish is wood or metal lath and plaster.

### **1203.9 Stairway railings.**

Grand stairways shall be accepted without complying with the handrail and guard requirements. Existing handrails and guards at all stairways shall be permitted to remain, provided they are not structurally dangerous.





National Research  
Council Canada

Conseil national de  
recherches Canada

Canada

Task group on alterations to existing buildings.

Recommends that heritage buildings should be within the scope of existing building regulatory measures but that **additional flexibility should be applied to ensure that alteration requirements are reasonable.**

### **Principle 7**

Requiring flexibility so as to preserve officially recognized (designated/registered) heritage elements.

CANADIAN COMMISSION  
ON BUILDING AND FIRE CODES

## **Final Report - Alterations to Existing Buildings**

Joint CCBFC/PTPACC Task Group on  
Alterations to Existing Buildings

April 2020