



Comparison of the Canadian Construction Site Fire Safety Regulations/Guidelines

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1.0 INTRODUCTION AND SCOPE

This report provides a detailed comparison of construction site fire and life safety regulations and guidelines from a selection of jurisdictions throughout Canada.

1.1 INTRODUCTION

Recent construction site fires have received significant national attention and have highlighted the potential level of risk associated with fires in course of construction structures. Fire and life safety on construction sites is regulated provincially by building codes, fire codes and occupational health and safety regulations. Guidelines and interpretations of these regulations are provided by cities and trade associations to inform and bridge the current regulations. However, the requirements of these are broad-based and not uniformly applied across the country.

To assist in providing an overview of the current state, this report provides a framework for comparison of these national, provincial and local regulations and jurisdiction guidelines in a common and structured context.

1.2 SCOPE

This report has been prepared at the request of the Canadian Wood Council to provide a detailed comparison of fire and life safety provisions from applicable regulations and guidance documents related to construction sites.¹ Therefore, the scope of this report is to present a detailed comparison of the construction site safety provisions of:

- the National Model Codes of Canada and the Provincial Codes that differ from the National Model Codes in this respect.
- the Occupational Health and Safety Regulations for each of the provinces and territories of Canada.
- Guidelines and interpretations of construction site safety regulations issued by cities of Canada.

The similarities and differences between the construction site fire and life safety provisions will be discussed within a common framework of comparison. This framework and the specific regulations and guidelines to be compared are discussed in more detail in the following sections of this report.

¹ Although the scope of some of the regulations/guidelines analyzed in this report include fire and life safety on demolition sites, such provisions are not specifically considered within the context of this study.

2.0 APPROACH TO COMPARISON

The breadth and diversity of regulations addressing construction site fire and life safety is significant across Canada. This is challenging relative to providing a comparative assessment of the requirements in a manner that facilitates risk assessment. The following sections of this report summarize the regulations and guidelines to be compared and the approach applied for this comparison.

2.1 REGULATIONS/GUIDELINES USED IN THE COMPARISON

The regulations and guidelines to be compared are listed according to primary function and include construction regulations, fire regulations (maintenance), occupational health and safety regulations, and jurisdiction-specific guidelines and interpretations.

The Provinces are responsible for regulating building construction. Each Province or Territory adopts and/or modifies the model codes issued nationally. These regulations contain provisions relative to construction site fire and life safety, and based on national model codes are relatively consistent across the country. However, there are some differences.

The Provinces are also responsible for regulating worker and worksite safety and developing occupational health and safety regulations, which in some cases contain regulations relative to construction site fire and life safety. However, these regulations are not based on a common national model resulting in a diversity of provisions.

Several guidelines and interpretations to the application of the construction and fire regulations have been provided by trade associations and cities to facilitate local application.

The regulations and guidelines to be compared are discussed in more detail in the following sections of this report.

2.1.1 Construction Regulations

Construction regulations are intended to cover the fire and life safety aspects of a building at the time of construction. Typically these do not apply once a building is occupied, unless the building is undergoing alteration. The majority of the construction regulations in Canada include provisions relative to protection of the public at construction sites. The following construction regulations are included in the comparison:

- Part 8, 2010 National Building Code of Canada
- Part 8, 2014 Vancouver Building By-law
- Part 8, 2006 Alberta Building Code

Provinces and territories who have adopted Part 8 of the 2010 National Building Code of Canada with little or no modification relative to the fire and life safety on construction sites are:

- British Columbia
- Saskatchewan
- Manitoba
- Quebec
- New Brunswick
- Newfoundland and Labrador
- Northwest Territories
- Nova Scotia
- Nunavut

- Yukon
- Prince Edward Island

The 2012 Ontario Building Code does not include requirements for fire and life safety at construction sites.

2.1.2 Fire Regulations

Fire regulations are intended to cover fire and life safety operations and on-going maintenance of existing buildings. The majority of fire regulations include provisions relative to fire and life safety of construction sites including operations taking place at those sites. The following fire regulations are included in the comparison:

- Section 5.6, 2010 National Fire Code of Canada
- Section 5.6, 2012 British Columbia Fire Code
- Section 5.6, 2006 Alberta Fire Code

Provinces and territories who have adopted Section 5.6 of the 2010 National Fire Code of Canada with little or no modification are:

- Saskatchewan
- Manitoba
- Quebec
- New Brunswick
- Newfoundland and Labrador
- Nova Scotia
- Yukon
- Northwest Territories

The 2012 Ontario Fire Code does not include requirements for fire and life safety at construction sites. However fire and life safety requirements are prescribed for demolition (2014 Ontario Fire Code, Part 8) and precautions during repairs or renovations (2014 Ontario Fire Code, Article 2.6.1.10).

Nunavut and Prince Edward Island have not adopted fire regulations that address the scope of fire and life safety at construction sites.

2.1.3 Occupational Health and Safety Regulations

Occupational health and safety (OHS) regulations are primarily focused on protection of workers and others present at workplaces. Worker safety tends to be addressed for construction sites by generally applicable provisions. However, some regulations address construction sites through specific provisions. The following OHS regulations are included in the comparison:

- British Columbia Occupational Health and Safety Regulation
- Alberta Occupational Health and Safety Code
- Saskatchewan Occupational Health and Safety Regulations
- Manitoba Workplace Safety and Health Regulation
- Ontario Occupational Health and Safety Regulation, Construction Projects
- Quebec Act Respecting Occupational Health and Safety
- Newfoundland and Labrador Occupational Health and Safety Regulations
- Nova Scotia Occupational Safety General Regulations
- New Brunswick Workers' Compensation Regulation
- Prince Edward Island Occupational Health and Safety Act, General Regulations

- Yukon Occupational Health Regulations
- Northwest Territories Occupational Health & Safety Regulations

2.1.4 Jurisdiction Specific Guidelines/Interpretations

Several cities in Canada have published guidance relative to fire and life safety at construction sites, or interpretations of provincial regulations. These guidance/interpretation documents are not necessarily mandatory instruments, but primarily intended to supplement the mandatory construction/fire regulations. The following guidelines/interpretations are included in the comparison:

- City of Surrey, Surrey Fire Service, “Construction Fire Safety Plan Bulletin”.
- City of Calgary, Fire Prevention Bureau, “Calgary Fire Marshal Bulletin Regarding: Alberta Fire Code (AFC) Article – 5.6.1.2. Protection of Adjacent Building”.
- City of Calgary, “Practical Guide for Construction Sites in Calgary: A Guide to Roles, Responsibilities and Legislation Governing Construction and Demolition in Calgary”.
- Alberta Safety Codes Council, Fire Code Interpretation, FCI-09-02, “Protection of Adjacent Building”.
- Alberta Safety Codes Council, Fire Code Interpretation, FCI-09-03, “FIRE SAFETY PLAN – Construction and Demolition Sites”.
- City of Calgary, Regulation Bulletin, “RB06-005: Use of Chain-Link for Fencing and Barricading Construction Sites”.

A more complete list is included in **Section 6.1** and **Appendix E, Table 10**.

2.2 COMPARISON FRAMEWORK

As noted previously in this report, the breadth and diversity of regulations addressing construction site fire and life safety is significant across Canada and these regulations are not uniform. This lack of uniformity complicates a direct comparison of provisions. Therefore, an objective-based framework following the Fire Safety Concepts Tree detailed in NFPA 550, “Guide to the Fire Safety Concepts Tree” is proposed. This framework provides a structured means to relate fire prevention and fire damage control strategies of differing regulations/guidelines within a common fire safety objectives structure.

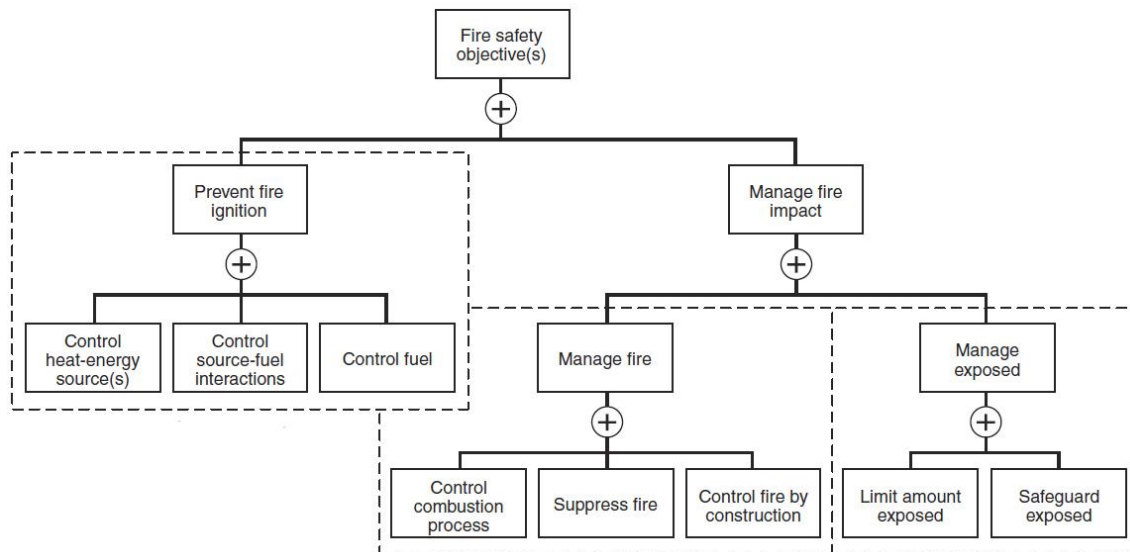


Figure 1: Top levels of the Fire Safety Concepts Tree [1].

The structure of the Fire Safety Concepts Tree, shown in **Figure 1**, facilitates risk-based analyses of the interrelation, importance and redundancy of strategies. This is achieved through hierarchical logic relationships of fire safety concepts. The logic relationships are either “and” or “or” gates. An “and” gate (shown by a dot in a circle) indicates that all of the concepts below it are required to achieve the concept above, whereas an “or” gate (shown by a plus sign in a circle) indicates that any of the concepts below it are required to achieve the concept above. Note that there are no “and” gates in the higher level concepts of the tree shown in **Figure 1**, but they are included in certain lower levels of the tree (See **Appendix A**).

The NFPA 550 Fire Safety Concepts Tree has been used in this report to methodically analyze the fire and life safety requirements for the building regulations, fire regulations, OHS regulations and supplementary documents from jurisdictions. The top levels of the Fire Safety Concepts Tree have been used with modifications (by the report authors) appropriate to the application of the framework to life and fire safety at construction sites.

Thus, all provisions related to preventing ignition by limiting smoking, for example, will be categorized under “Prevent Fire Ignition” and further categorized under “Control Heat-Energy Source(s)”. This allows for an examination between the provision intended to “Prevent Fire Ignition” and those intended to “Manage Fire Impact”, which – following the logic of the Concepts Tree – are considered redundant (i.e., conservative) in achieving the overall objective of fire and life safety on construction sites. The result of such an examination is to qualify the importance of certain provisions as they relate to other provisions and the overall objective(s) of limiting fire and life safety risk on construction sites. Such an examination exercise is outside the scope of this report, but highlights the advantage and intent of providing the information in the proposed context.

The provisions from the regulations and guidance documents are tabulated in **Appendix B** to this report with the Fire Safety Concept Tree objectives/concepts in rows and the corresponding regulations/guidance documents in columns. Single or groups of provisions are included in each of the table cells corresponding with the tree concept and the document from which the provisions are sourced. Additional levels of the Fire Safety Concepts Tree are included as **Appendix A** to this report for information purposes, but are not utilized in this report.

A visual demonstration of the mapping of the top levels of the NFPA 550 Fire Safety Concepts Tree to the table format that is used to present the analysis of the Canadian, provincial, territorial and local codes, regulations and supplementary documents related to course of construction life and fire safety is depicted in **Figure 3**.

The Fire Safety Concepts Tree does not address administrative activities that support achieving the Concept Tree objectives. These administrative functions include education, training, legislation and enforcement accomplished through various means and illustrated through an Administrative Action Tree in NFPA 550, shown in **Figure 2**.

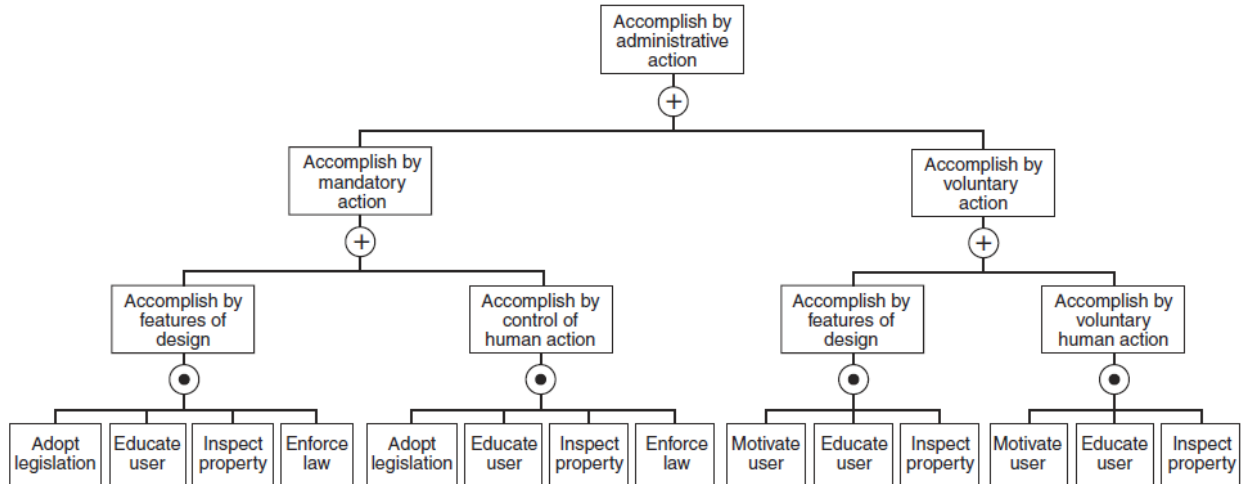


Figure 2: Administrative Action Tree [1].

Utilization of the Administrative Action Tree in addition to the Fire Safety Concepts Tree would add an unnecessary level of complexity to the analysis of the regulations and guidance documents. Therefore, administrative functions were included as part of the Fire Safety Concepts Tree. Two components were added:

- “Systems & Operational Readiness” was added to the “Manage Fire” branch to account for management of the utilities, etc. that would influence the “Suppress Fire” concept; and,
- “Awareness and Ability” was added to the “Manage Exposed” branch to account for site-specific training and provision of fire safety plans that would complement the concept of “Safeguard Exposed”.

In order to link the specific provisions in each of the regulations and guidance documents, elements were attributed to each of the top level tree concepts as follows:

Under the concept of “Control Heat Energy Source(s)” are the elements of:

- Smoking,
- Limit Unauthorized Access, and
- Other.

Under the concept of “Control Source-Fuel Interactions” are the elements of:

- Hot work,
- Electrical,
- Heater, and
- Other.

Under the concept of “Control Fuel” are the elements of:

- Flammable and combustible liquids,
- Compressed gas,
- Housekeeping/waste, and
- Storage of combustibles.

Under the concept of “Control Combustion Process” are the elements of:

- Fire Extinguishers.

Under the concept of “Suppress Fire” are the elements of:

- Fire Department,
- Access,
- Standpipe,
- Hydrant, and
- Sprinklers.

Under the concept of “Control Fire by Construction” are the elements of:

- Compartment, and
- Building.

Under the concept of “System & Operational Readiness” are the elements of:

- Water supply.

Under the concept of “Limit Amount Exposed” are the elements of:

- Limit unauthorized access,
- Detection – Manual, and
- Detection – Automatic.

Under the concept of “Safeguard Exposed” are the elements of:

- Detection – Manual,
- Detection – Automatic,
- Alarm, and
- Egress.

Under the concept of “Awareness and Ability” are the elements of:

- Construction process and procedure,
- Site inspection, and
- Training.

These elements are included in the mapping schematic shown in **Figure 3**.

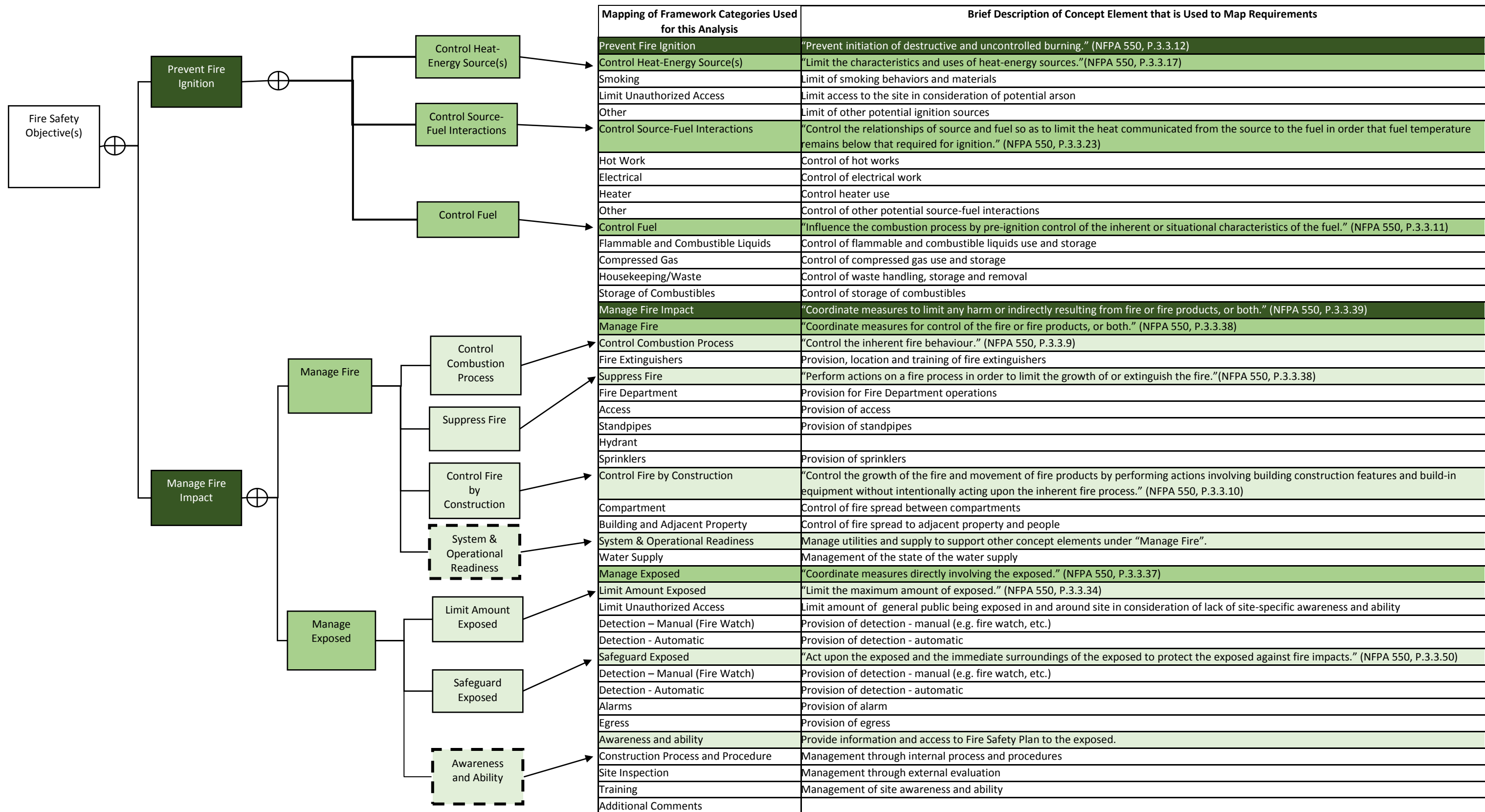


Figure 3: Schematic of the mapping of the top levels of the NFPA 550 Fire Safety Concepts Tree to the tabular presentation of the Canadian codes, regulations and supplementary documents relating to fire and life safety at course of construction.

3.0 RESULTS OF COMPARISON

Comparisons of the content of the national, provincial and territorial regulations relating to construction site fire and life safety using the NFPA 550 Fire Safety Concepts Tree approach are included in this report as follows:

- Construction regulations are included in **Table 1** in **Appendix B**.
- Fire regulations are included in **Table 2** in **Appendix B**.
- Occupational health and safety regulations are included in **Appendix C** for:
 - British Columbia and Alberta - included in **Table 3**,
 - Manitoba and Ontario - included in **Table 4**,
 - Newfoundland and Labrador, and New Brunswick - included in **Table 5**, and
 - Prince Edward Island and Yukon - included in **Table 6**.

The order in which the local jurisdiction requirements relating to construction site fire and life safety using the NFPA 550 Fire Safety Concepts Tree approach are included in **Appendix D** is:

- Alberta Standata and notices and Calgary, AB, Bulletins are presented in **Table 7**, and
- Ottawa and Toronto, ON, by-laws are presented in **Table 8**.

4.0 DISCUSSION

The following sections of this report summarize key observations of the provisions for each of the regulations/guides based on the identified function groups. These are discussed in more detail in the following sections of this report.

4.1 CONSTRUCTION REGULATIONS (BUILDING CODES)

The primary objective of the construction regulations relative to construction sites is to protect the general public from activities and hazards associated with construction sites; therefore, they do not generally address the range of considerations laid out in the NFPA 550 Fire Safety Concepts Tree.

The focus of these regulations is towards limiting and mitigation of waste-related issues and unnecessary access to the site. This is observed with focus on the element of “Housekeeping/Waste” within the concept of “Control Source-Fuel Interactions” and “Limit Unauthorized Access” within “Manage Exposed” and “Control Source-Fuel Interactions”. The focus on these concepts reflects the perspective of fire and life safety from an external perspective, whereby protection of the public and the surrounding environment is the more dominant focus.

4.2 FIRE REGULATIONS (FIRE CODES)

The fire regulations are intended to apply to “fire safety for buildings, parts of buildings, facilities, adjacent buildings or facilities, and associated areas undergoing construction, alteration or demolition operations” [2010 NFC, Division B, Sentence 5.6.1.1.(1)] and includes consideration of life safety of those who may be impacted by activities on the site. This is a broad scope of application relative to the construction site regulations, and as a result addresses a greater degree of risk through broader provisions.

These regulations provide a more even balance across the NFPA 550 tree than is observed from the results of the analysis of the construction regulations. However the analysis of the fire regulations indicated a greater focus on the branches of “Prevent Fire Ignition”, “Manage Exposed” and “Awareness and Ability” than other concepts. The focus on these concepts and development of associated provisions is likely a result of a response to significant construction site fires that have occurred over the last several decades.

4.3 OCCUPATIONAL HEALTH AND SAFETY REGULATIONS

The majority of occupational health and safety regulations do not have provisions specific to fire and life safety on construction sites. General fire and life safety provisions within these regulations, applicable to all workplaces, can be applied and are quite relevant to construction sites. An example is the egress provisions. It is primarily these more general provisions, with the exception of the regulations that have construction-site-specific provisions, that have been summarized in the tables included in **Appendix C** of this report.

The primary purpose of occupational health and safety regulations is to safeguard workers and others occupying a workplace. As a result, the provisions of these regulations are more specific to achieving life safety or indirectly achieving life safety by limiting ignition, growth and spread of fire. For example, most of the occupational health and safety regulations have detailed provisions for worker egress, including emergency lighting, but only a few address provision of standpipes and none address firefighting access.

Similar to the construction codes, the occupational health and safety regulations have a narrow fire and life safety focus compared to the results of the analysis of the fire regulations. This is primarily a result of the purpose of the occupational health and safety and construction regulations, which is protection of workers on a construction site and protection of the general public who may interface with a construction site. In contrast, fire regulations address construction sites, adjacent sites and occupants on or adjacent to the site who may be impacted by construction activities on the site.

The Ontario Occupational Health and Safety Regulation has specific provisions relative to construction sites, which are the most comprehensive of the occupational health and safety regulations reviewed.

4.4 JURISDICTION SPECIFIC GUIDELINES/INTERPRETATIONS

Jurisdiction specific guidelines and interpretations are intended to facilitate compliance with the applicable regulations, and the need for these guidelines and interpretations tends to be geographically dependent or follow the occurrence of a specific incident or incidents. Thus, there is no single theme among them. However, their existence suggests increased concern relative to specific risk(s), and can be utilized to identify these risks.

The comparison analysis indicates that the focus of by-laws, interpretations, and guidelines is on the most subscribed elements - more specifically, focusing on the concepts of "Limit Amount Exposed", "Control Fuel", and "Awareness and Ability"; and even more specifically, the elements of "Limit Unnecessary Access", "Housekeeping/Waste" and "Construction Process and Procedure". These supplementary documents provide an opportunity to address the less subscribed elements of the tree. For example, the discussion related to the element "Building" within the concept of "Control Fire by Construction", as presented by the Calgary Fire Marshal Bulletin, Regarding: Alberta Fire Code 2006 Article 5.6.1.2., Protection of Adjacent Building, May 14, 2010. This element is not a focus of most of the fire regulations reviewed, and therefore the Calgary Fire Marshal Bulletin indicates the potential for a local interpretation of the application of the fire regulations.

5.0 CONCLUSION

This report has provided a detailed summary of the construction, fire, occupational health and safety regulations and jurisdictional guidelines/interpretations relative to fire and life safety on construction sites. The detailed mapping summaries have been organized based on these four primary functions within a framework consistent with the NFPA 550 Fire Safety Concepts Tree to facilitate future risk-based analyses of the provisions.

A review of the provisions within the above-noted context indicates several trends that can be summarized as follows:

- Fire and life safety on construction sites in Ontario is primarily addressed through the occupational health and safety regulation.
- The latest Vancouver Building By-law incorporates the provisions typical to both Part 8 of the construction regulations and Subsection 5.6 of the fire regulations into Part 8 of the By-law.
- The construction regulations and occupational health and safety regulations are narrow in their focus relative to the breadth of the fire safety tree concepts. The fire regulations are more broadly applicable relative to the fire safety concepts tree; however, the focus is still weighted towards the concepts of “Awareness and Ability” (especially through the element of “Construction Process and Procedure”), “Limit Amount Exposed” (particularly for element of “Limit Unauthorized Access”) and “Control Fuel” (particularly for the “Housekeeping/Waste” element).
- Jurisdiction specific guidelines and interpretations provide insight into geographic and incident-specific focus and local interpretations of regulatory provisions relative to construction site fire and life safety.
- Construction site provisions are typically presented in tandem with demolition site provisions. The basis for fire and life safety provisions would not necessarily be similar for both. The fire hazards and applicable scenarios for construction and demolition sites may vary significantly. If they are similar, then previous fire safety experience from demolition site applications may be a useful resource for course site fire safety. However if they are dissimilar, then different fire safety design and strategies may be more appropriate to address the dissimilar items. Mapping the fire hazards and current fire and life safety provisions for construction sites to those of demolition sites could assist to identify the similarities and differences.
- The overriding focus of the regulations and guidance documents reviewed relate to “Prevent Fire Ignition”, and the administrative functions that support this element. There is much less focus on elements that support reducing the consequences (i.e., “Manage Exposed”) of a fire once ignition has occurred such as “Control Fire by Construction”, “Suppress Fire” and “System & Operational Readiness”.

The observations summarized above suggest a divergence of provisions relative to a comprehensive solution to reducing the risk to fire and life safety for construction sites. Quantification of this divergence and means to establishing a comprehensive set of cohesive provisions can be assessed through a systemic risk analysis as outlined in Chapter 7 of NFPA 550, supplemented with evidence-based data to identify key concepts and relationships between concepts. This type of analysis can assist with qualifying the effectiveness of certain provisions and groups of provisions in reducing the risk of significant fire incidents on construction sites.

6.0 SOURCES OF INFORMATION

6.1 REGULATION AND GUIDANCE DOCUMENTS

A list of the regulation and guidance documents that have been used in the preparation of this report is summarized in **Appendix E, Table 10** (arranged by jurisdiction and document type). Where online versions of the document were publically available at the time of preparation of this report, an electronic link is included.

2011 Good Building Practice for Northern Facilities Updated March 5, 2012, Government of the Northwest Territories Public Works and Services, Canada.

Alberta Building Code 2006, National Research Council of Canada, Ottawa, Canada.

Alberta Code Explanation Guide, Published on July 01, 2009, Legislative Assembly of Alberta, Edmonton, AL, Canada.

Alberta Code, Published on July 01, 2009, Legislative Assembly of Alberta, Edmonton, AL, Canada.

Alberta Fire Code 2006, National Research Council of Canada, Ottawa, ON, Canada.

Alberta Municipal Affairs, Fire Code Interpretation, Standata 06-BCB-002-R1, July 2008, Occupancy of Buildings under Construction, Alberta Municipal Affairs, Edmonton, AL, Canada.

Alberta Municipal Affairs, Fire Code Interpretation, Standata FCI-09-01, July 2009, Water Supplies and Access for Fire Fighting, Alberta Municipal Affairs, Edmonton, AL, Canada.

Alberta Municipal Affairs, Fire Code Interpretation, Standata FCI-09-02, July 2009, Protection of Adjacent Building, Alberta Municipal Affairs, Edmonton, AL, Canada.

Alberta Municipal Affairs, Fire Code Interpretation, Standata FCI-09-03, November 2009, Fire Safety Plan - Construction and Demolition Sites, Alberta Municipal Affairs, Edmonton, AL, Canada.

Alberta Municipal Affairs, Fire Code Interpretation, Standata FCI-12-01, May 2012, Application - Alberta Fire Code, Alberta Municipal Affairs, Edmonton, AL, Canada.

Alberta OHS Act, Published on October 01, 2013, Legislative Assembly of Alberta, Edmonton, AL, Canada.

Alberta Regulation, Published on October 01, 2013, Legislative Assembly of Alberta, Edmonton, AL, Canada.

British Columbia Building Code 2012, Office of Housing and Construction Standards & National Research Council Canada, Ottawa, ON, Canada.

British Columbia Fire Code 2012, Office of Housing and Construction Standards & National Research Council Canada, Ottawa, ON, Canada.

Building Code – 1985 Regulation, Chapter S-2.1, r.0.1), Province of Quebec, Canada.

Buildings and Mobile Homes Act (C.C.S.M. c. B93) Regulation 31/2011, Manitoba Government, Winnipeg, MB, Canada.

Calgary Fire Marshal Bulletin, Regarding: Alberta Fire Code 2006 Article 5.6.1.2 Protection of Adjacent Building, May 14, 2010, Calgary, AL, Canada.

Canada Occupational Health and Safety Regulations, SOR/86-304, Last amended on May 29, 2014.

Charlottetown Area Municipalities Building Code Bylaw, Amended/Approved June 13, 2011, Charlottetown, PI, Canada.

Charlottetown Area Municipalities Fire Prevention Bylaw, Amended/Approved February 13, 2012, Charlottetown, PI, Canada.

Charlottetown Area Municipalities Fire Protection and Emergency Services Bylaw, Amended/Approved March 09, 2009, Charlottetown, PI, Canada.

City of Calgary Fire Department, Fire Prevention Bureau, Fire Department Access Standard, October 23, 2008, Calgary, AL, Canada.

- City of Calgary Regulation Bulletin, RB06-005, Issued November 14, 2008, Previously I-47, Use of Chain-Link or Fencing and Barricading Construction sites, Calgary, AL, Canada.
- City of Calgary, Advisory Bulletin, April 2012, Public Protection Site Safety Plan, Calgary, AL, Canada.
- City of Halifax By-law B-201, Building, Passed April 14, 1998, Halifax, NS, Canada.
- City of Iqaluit, By-Law No.620, Iqaluit Building By-Law, Passed on November 8, 2005, Iqaluit, NU, Canada.
- City of Iqaluit, By-Law No.710, Iqaluit Building By-Law, Iqaluit, NU, Canada.
- City of Ottawa By-Law No. 2005-208, Property Maintenance By-Law, Enacted May 11, 2005, Ottawa, ON, Canada.
- City of Ottawa BY-LAW NO. 2013-416, A by-law of the City of Ottawa to provide for standards under which properties are maintained, Enacted December 11, 2013, City Council Authority CPSC Report 26, Item 6, Ottawa, ON, Canada.
- City of Vancouver Bulletin 2002-001-EV, Construction Site Wastes, April 19, 2007 (Revised), Community Services Group, Office of the Chief Building Official, Vancouver, BC, Canada.
- City of Vancouver Bulletin 2011-0003-AD, May 10, 2011, WorkSafeBC Compliance or Refusal of Inspection Service, Office of the Chief Building Official, Vancouver, BC, Canada.
- City of Vancouver, Bulletin 2004-002 EL April 19, 2007, Permits for Temporary Power Service Connection, Community Services Group, Office of the Chief Building Official, Vancouver, BC, Canada.
- City of Vancouver, Bulletin 2012-001-BU, March 29, 2012, Revised October 29, 2012, Demolition of Buildings, Community Services Group, Licenses and Inspections, Vancouver, BC, Canada.
- City of Vancouver, Construction of New buildings/Addition to Existing Buildings, Vancouver, BC, Canada.
- City of Winnipeg By-Law no. 150/2004, The Fire Prevention By-Law, Passed on October 27, 2004, with Amendments up to July 16, 2014, Winnipeg, MB, Canada.
- City of Winnipeg By-law NO. 4304/86, Residential Buildings Fire Safety, Enacted April 30, 1986, with Amendments to March 23, 2011, Winnipeg, MB, Canada.
- City of Winnipeg By-law No. 4555/87, The Winnipeg Building by-Law, Enacted 1987, with Amendments to March 21, 2012, Winnipeg, MB, Canada.
- City of Yellowknife Consolidation of Building By-law No. 4469, Adopted January 28, 2008, Yellowknife, NT, Canada.
- District of North Vancouver Fire Bylaw, Bylaw 7581, Effective date June 21, 2004, Date of adoption December 12, 2012, North Vancouver, BC, Canada.
- Halifax Regional Municipality By-Law Number F-100, Respecting Fire Prevention, Passed on December 17, 1996, with amendments to September 23, 2003, Halifax, NS, Canada.
- High-Intensity Residential Fires Working Group, Final Report, October 31, 2007, Alberta Municipal Affairs and Housing, Edmonton, AL, Canada.
- Manitoba Buildings and Mobile Homes Act, 2012, B93, Manitoba Government, Winnipeg, MB, Canada.
- Manitoba Workplace Safety and Health Act C.C.S.M. c. W210, In force on 1 April 2014, Province of Manitoba, Canada.
- Manitoba Workplace Safety and Health Act and Regulation 2014, Province of Manitoba, Canada. (Office Consolidated)
- Manitoba Workplace Safety and Health Regulation, The Workplace Safety and Health Act C.C.S.M. c. W210, M.R. 217/2006, In force on 1 April 2014, Province of Manitoba, Canada.
- Manitoba WSH Act and Regulations,
- National Building Code of Canada, 2010, Canadian Commission on Building and Fire Codes, National Research Council of Canada, Ottawa, Canada.
- National Fire Code of Canada, 2010, Canadian Commission on Building and Fire Codes, National Research Council of Canada, Ottawa, ON, Canada.

- New Brunswick Chapter O-0.2 Occupational Health and Safety Act, Assented to August 05, 1983, Province of New Brunswick, Canada.
- New Brunswick Chapter W-14 Workplace Health, Safety and Compensation Commission Act, assented to December 16, 1994, Province of New Brunswick, Canada.
- New Brunswick Regulation 82-20, 1982 (Consolidated to December 1, 2011), Province of New Brunswick, Canada.
- New Brunswick Regulation 84-26, Administration, Occupational Health and Safety Act (O.C. 84-111), Province of New Brunswick, Canada.
- New Brunswick Regulation 91-191, General Regulation, Occupational Health and Safety Act (O.C. 91-1035), Filed December 03, 1991, Province of New Brunswick, Canada.
- Newfoundland and Labrador regulation 2012, regulation 45/12, Fire Protection Services Regulations, Part I Adoption of Codes, Dated April 30, 2012, St John's, Newfoundland and Labrador, Canada.
- Newfoundland and Labrador Regulation 5/12, Occupational Health and Safety Regulations, 2012, Dated January 17, 2012, St John's, Newfoundland and Labrador, Canada.
- Nova Scotia Building Code Regulations, 2013, Part 3, Province of Nova Scotia.
- Nova Scotia Fire Safety Regulations, 2013, Province of Nova Scotia.
- Nova Scotia Workplace Health and Safety Regulations made under Section 82 of the Occupational Health and Safety Act S.N.S. 1996, c.7, Effective June 12, 2013, Province of Nova Scotia.
- Nunavut Building Code Act, 2012, S.Nu. 2012, c.15, Current to May 7, 2014, Iqaluit, NU, Canada.
- NWT Fire Prevention Act and Regulations, Amended by Northwest Territories Statues S.N.W.T. 1995, c.11; and Nunavut Statues: S.Nu. 2006, c.8, in force June 15, 2006. Government of Nunavut, Iqaluit, NU, Canada.
- Occupational Health and Safety Act, Ontario Regulation 213/91, Construction Projects, Consolidated from April 8, 2013, Province of Ontario, Canada.
- Occupational Health and Safety Regulations, 1996, Chapter O-1.1 Reg 1, Effective from December 4, 1996, including Amendments up to and including Saskatchewan Regulations 5/2014, Province of Saskatchewan, Canada.
- Ontario Building Code, 2012, Ministry of Municipal Affairs and Housing Building and Development Branch, Ontario, Canada.
- Ontario Regulation 213/07, 2007, Fire Protection and Prevention Act, Province of Ontario, Canada.
- Practical Guide for Construction Sites in Calgary, A Guide to Roles, Responsibilities and legislation Governing construction and Demolition in Calgary, Revised June 2011, The City of Calgary, Calgary, AL, Canada.
- Prince Edward Island Chapter O-1 Occupational Health and Safety Act, General Regulations, Legislative Counsel Office, Province of Prince Edward Island, Canada.
- Prince Edward Island Chapter O-1.01 Occupational Health and Safety Act, Legislative Counsel Office, Province of Prince Edward Island, Canada.
- Prince Edward Island Provincial Building Code Act, Chapter P-24, Legislative Counsel Office, Province of Prince Edward Island, Canada.
- Quebec Act Respecting Occupational Health and Safety (Updated to August 2014) Chapter S-2.1, Province of Quebec, Canada.
- Quebec Construction Code (Updated 1 August 2014), Chapter I, Building, and National Building Code of Canada, 2005, Province of Quebec, Canada.
- Quebec Safety Code for the Construction Industry, Chapter S-2.1, r.4), Province of Quebec, Canada.
- Quebec Safety Code, Chapter VIII - Building, and National Fire Code of Canada, 2010 Amendment, Province of Quebec, Canada.
- Report on the Draft Northwest Territories Occupational Health & Safety Regulations, Volume 3 Northwest Territories, Final Revisions to the proposed Occupational Health and Safety

- Regulations, January 2012, Worker' Safety & Compensation Commission, Northwest Territories, Canada.
- Safety Services Branch, Notice, Intumescent Coatings on Exterior Sheathing, ISBN #978-0-7785-7129-2, February 2012, Alberta Municipal Affairs, Edmonton, AL, Canada.
- Saskatchewan Fire Prevention Act, 1992, chapter F-15.001 of the Statutes of Saskatchewan, 1992, including Amendments to 2014 c.19, Province of Saskatchewan, Canada.
- Saskatchewan Uniform Building and Accessibility Standards Act, Chapter U-1.2 of the Statutes of Saskatchewan, 1983-84, including Amendments to 2013 c.27, Province of Saskatchewan, Canada.
- The Fires Prevention and Emergency Response Act (C.C.S.M. c.F80), Regulation 155/2011, Manitoba Government, Winnipeg, MB, Canada.
- Toronto Municipal Code Chapter 363, Building Construction and Demolition, Enacted September 9, 2011, Toronto, ON, Canada.
- Toronto Municipal Code Chapter 629, Building Construction and Demolition, Enacted September 9, 2011, Toronto, ON, Canada.
- Vancouver Building By-Law No. 10908, A By-law to regulate the construction of buildings and related matters and to adopt the British Columbia Building Code, The Council of the City of Vancouver (Enacted 1 April, 2014), Vancouver, BC, Canada.
- Vancouver Fire By-law No. 8191, A by-law respecting the prevention and suppression of fire, the regulation of dangerous goods and explosives and the administration of the fire department (2002 with Amendments to July 22, 2014), Vancouver, BC, Canada.
- WorkSafeBC, Part 20 Construction, Excavation and Demolition, 2013, Workers' Compensation Board of British Columbia.
- Yukon Building Standards Act, Chapter 19, Revised Statutes of the Yukon 2002, Whitehorse, YT.
- Yukon Occupational Health Regulations, Yukon Territory, Canada.

6.2 ADDITIONAL REFERENCES

The following sources of information have been used in the preparation of this report.

1. National Fire Protection Association, "Guide to the Fire Safety Concepts Tree", NFPA 550, 2012 Edition.

Appendix A



Lower Level Fire Safety Concept Tree Branches

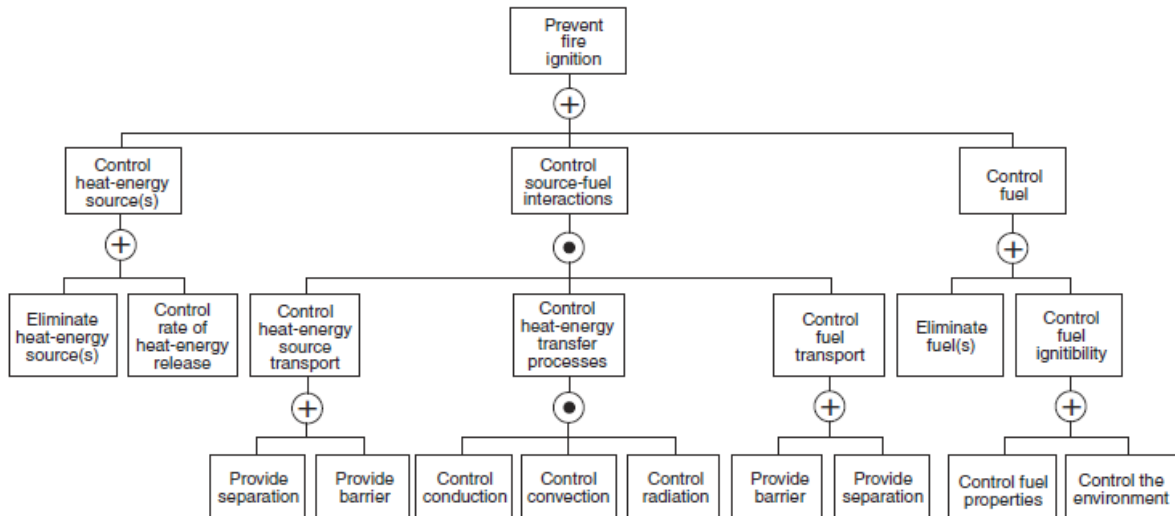


Figure A.1: Prevent fire ignition branch of the Fire Safety Concepts Tree [1].

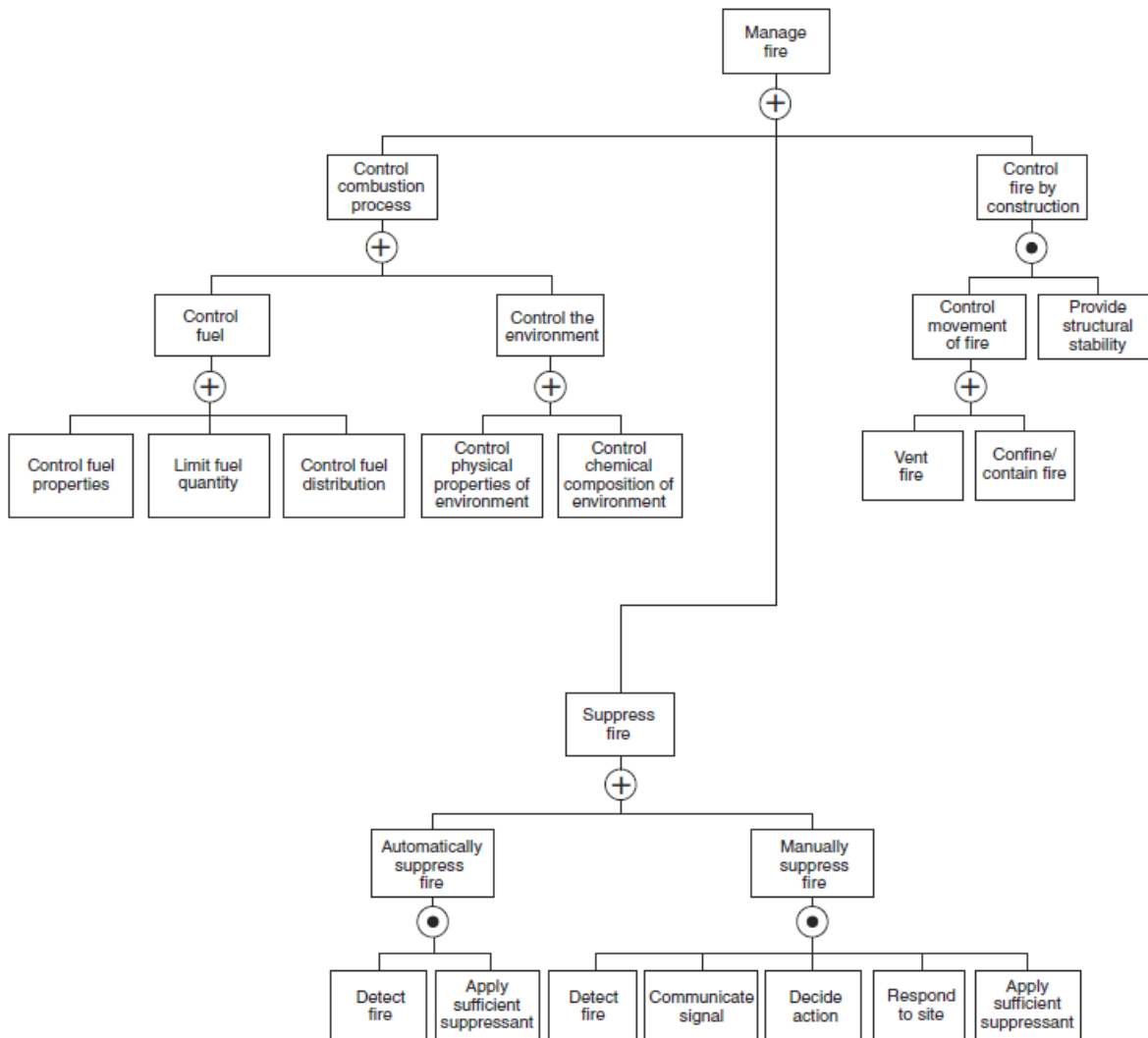


Figure A.2: Manage fire branch of the Fire Safety Concepts Tree [1].

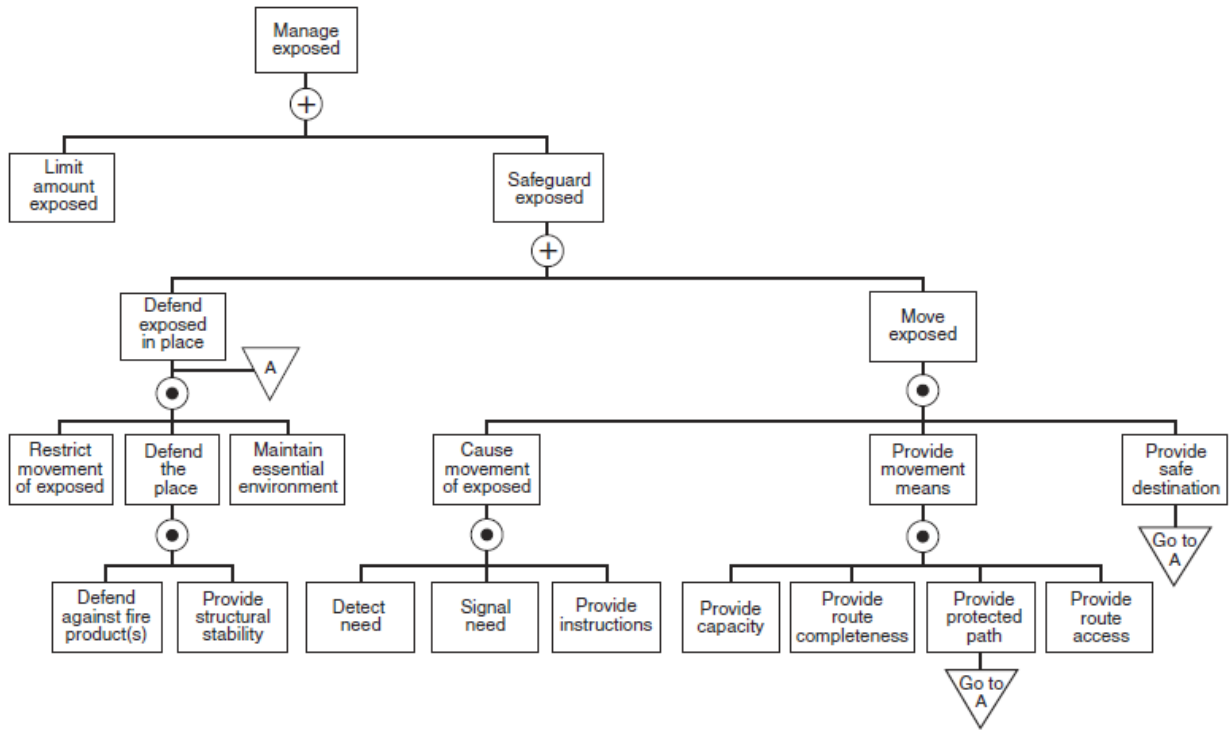


Figure A.3: Manage exposed branch of the Fire Safety Concepts Tree [1].

Appendix B



Summary Tables for Construction and Fire Regulations

Table 1: Construction Regulations Comparison

Framework Categories	2010 NBCC	2014 Vancouver Building By-Law	2006 ABC
Prevent Fire Ignition			
Control Heat-Energy Source(s)			
Smoking		8.2.6.15. Smoking Restrictions on Construction Sites 1) Smoking shall only be permitted on construction sites in accordance with the Fire By-law.	
Limit Unauthorized Access (same as entry below, at *)			
Other		8.2.6.8. Ignition Sources (See Appendix A.) 1) Internal combustion engines, temporary heating equipment and other equipment capable of causing ignition shall be kept at a safe distance away from combustible materials. 2) The clearance between combustible materials and temporary heating equipment, including flues, shall be in conformance with Part 6 or in conformance with the minimum clearances shown on certified heating equipment.	
Control Source-Fuel Interactions			
Hot Work		8.2.6.7. Hot Surface Applications 1) Roofing operations and other surface applications that involve heat sources and hot processes shall be considered hot works and shall conform to the requirements in the Fire By-law. 2) Bitumen kettles shall not be located on roofs, and shall be a) provided with a close-fitting cover constructed of steel with a minimum thickness of No. 14 sheet metal gauge, b) under constant supervision when in operation, and c) maintained free of excessive residue.	
Electrical		8.2.6.9. Utility Services to Buildings under Construction 1) Except as required in Sentence (3) and except for water supplies for firefighting, utility services shall be terminated at a point located outside the building undergoing deconstruction or demolition.	
Heater			
Other		8.2.6.19. Temporary Enclosures on Construction Sites 1) Fabrics and films used to temporarily enclose Buildings shall be securely fastened to prevent contact with heaters or other ignition sources.	
Control Fuel			
Flammable and combustible liquids		8.2.6.10. Fuel Supply Installation 1) Fuel supplies for heating equipment and internal combustion engines shall conform to a) CAN/CSA-B139-M, "Installation Code for Oil-Burning Equipment," or b) the British Columbia Gas Safety Regulation. 8.2.6.11. Safety of Fuel Tanks and Piping at Construction Sites 1) Fuel tanks and piping at a deconstruction or demolition site which contain or may have contained flammable or combustible liquids or vapours shall be decommissioned in conformance with the Fire By-law. 2) Fuel tanks and piping at a deconstruction or demolition site which contain or may have contained flammable or combustible liquids or vapours shall be drained or vented and removed prior to the deconstruction or demolition of a building, except as permitted by Sentence (3). 3) Where it is impracticable to remove fuel tanks or piping from the construction site prior to deconstruction or demolition of a building, such equipment shall be tagged for identification and removed as soon as conditions permit. 4) Fuel tanks and piping referred to in Sentences (1), (2) and (3) shall be purged with inert materials prior to deconstruction or demolition of a building. (See Appendix A.)	

Framework Categories	2010 NBCC	2014 Vancouver Building By-Law	2006 ABC
Compressed Gas			
Housekeeping/waste	<p>8.2.5.1. Control of Waste Material 1) Waste material or other material shall not be permitted to fall freely from one storey to another.</p> <p>8.2.5.2. Removal of Waste Material 1) Waste material shall be removed as quickly as possible by means of a) appropriate containers, b) an enclosed shaft or chute conforming to Sentence 8.2.5.4.(1), or c) a hoisting apparatus if large pieces or objects are involved.</p>	Same as 2010 NBCC	Same as 2010 NBCC
	<p>8.2.5.3. Enclosures for Waste Material 1) Waste material cleared as provided in Sentence 8.2.5.2.(1) shall be deposited in an enclosure a) so arranged as to prevent waste material from being projected beyond the confines of the enclosure, and b) not accessible to the public.</p>	<p>Similar wording to 2010 NBCC</p> <p>8.2.5.3. Enclosures for Waste Material 1) Waste material removed in accordance with Sentence 8.2.5.2.(1) shall be deposited in a container which is a) designed to ensure that waste material cannot escape from the container, and b) secure and inaccessible to the public.</p>	Same as 2010 NBCC
	<p>8.2.5.4. Chutes for Waste Material 1) The chute described in Clause 8.2.5.2.(1)(b) shall be closed if it is inclined more than 45° to the horizontal.</p>	Same as 2010 NBCC	Same as 2010 NBCC
		<p>8.2.5.5. Disposal of Waste Material 1) Except as provided in Sentence (2), all waste material on a construction site shall be sorted, diverted and disposed of in a manner satisfactory to the Chief Building Official (see Appendix A.) 2) Sentence (1) does not apply to a) proposed work of a value of \$50,000 or less, and b) corrective measures or immediate measures carried out by the Chief Building Official in accordance with Articles 1.5.3.4. and 1.5.3.5.</p>	
Storage of Combustibles		<p>8.2.6.7. Hot Surface Applications 3) Mops used to spread bitumen shall be stored in a safe location at a safe distance away from buildings, when not in use.</p> <p>8.2.6.18. Storage and Use of Dangerous Goods on Construction Sites 1) Combustible liquids and flammable liquids shall be stored and used in conformance with the Fire By-law. 2) Dangerous goods and materials shall be stored in conformance with the Fire By-law. 3) Dangerous goods and materials shall be used in conformance with the Fire By-law.</p> <p>8.2.6.20. Storage of Combustible Refuse 1) Combustible refuse shall be stored a safe distance away from buildings, and at a safe location. (See also Subsection 8.2.5.)</p>	
Manage Fire Impact			
Manage Fire			
Control Combustion Process			
Fire Extinguishers		<p>8.2.6.5. Portable Extinguishers 1) Portable extinguishers shall be provided in unobstructed locations in all areas where a) hot work operations are carried out, b) combustibles are stored, c) internal combustion engines are located, d) flammable liquids and combustible liquids or gases are stored or handled, and</p>	

Framework Categories	2010 NBCC	2014 Vancouver Building By-Law	2006 ABC
		e) temporary fuel-fired equipment is used. 2) Portable extinguishers required by Sentence (1) shall have a minimum rating of a) 2-A:10-B:C on moveable equipment, and b) 4-A:40-B:C in all other locations.	
Suppress Fire			
Fire Department Access		8.2.6.4. Access for Firefighting 1) Unobstructed access to fire hydrants, portable extinguishers and fire department connections for standpipe and sprinkler systems shall be maintained in all construction sites. 2) Firefighters shall be provided with unobstructed access to all levels of the building. 3) Firefighters shall be provided with unobstructed access to all elevators, hoists or lifts in the building. 4) Firefighters shall be provided with unobstructed access to access routes for fire department vehicles. 5) Where a construction site is enclosed by fencing, boarding or barricades, firefighters shall be provided with 24 hour emergency access for fire department equipment and personnel.	
Standpipes		8.2.6.6. Standpipe Systems (See Appendix A.) 1) Where a standpipe system is installed in a building under construction, the standpipe system shall be installed progressively, in conformance with Subsection 3.2.5. of Division B of this By-law, in occupied portions of a building. 2) Where a standpipe system is to be installed progressively in unoccupied portions of a building under construction, a permanent or temporary standpipe system is permitted, and the standpipe system shall have a) conspicuously marked and readily accessible fire department connections on the outside of the building at street level b) at least one hose outlet at each floor, c) pipe size, hose valves and water supply conforming to Subsection 3.2.5. of Division B of this By-law, d) as a minimum, secure supports and restraints on alternate floors, e) at least one hose valve for attaching fire department hose at each intermediate landing or floor level in the exit stairway, and f) valves which are kept closed and protected from mechanical damage at all times. 3) A standpipe system installed in accordance with Sentence (2) shall be progressively installed so that it is no more than one floor below the highest forms, staging, and similar combustible construction materials at all times. 4) A temporary standpipe system shall remain in service until the installation of the permanent standpipe system is complete. 5) If a building equipped with a standpipe system is being deconstructed or demolished floor by floor, the standpipe system, together with all fire department connections and valves, shall be maintained in operable condition at all times on all storeys, except for the storey located immediately below the storey being deconstructed or demolished. 8.2.6.13. Protection During Fire Protection System Shutdown 1) Except as permitted in Sentence (2), where a fire protection system is provided, it shall remain operational throughout the entire building during construction. 2) If any portion of a fire protection system is temporarily shut down during construction, protection of the building shall comply with the Fire By-law.	
Hydrants		8.2.6.4. Access for Firefighting 1) Unobstructed access to fire hydrants, portable extinguishers and fire department connections for standpipe and sprinkler systems shall be maintained in all construction sites.	
Sprinkler			
Control Fire by Construction			
Compartment		8.2.6.12. Fire Separations in Partly Occupied Buildings	

Framework Categories	2010 NBCC	2014 Vancouver Building By-Law	2006 ABC
		1) Where part of a building under construction is occupied, the occupied part of the building shall be separated from the part of the building under construction by a fire separation having a fire-resistance rating of no less than 1 h.	
Building		8.2.6.2. Protection of Adjacent Buildings 1) Protection shall be provided for adjacent buildings that could be exposed to fire originating from buildings undergoing construction. (See Appendix A.)	
Suppression System Readiness			
Water Supply			
Manage Exposed			
Limit Amount Exposed			
Limit Unauthorized Access (same as entry above, at *)	Section 8.2. Protection of the Public	Section 8.2. Protection of the Public	Same as NBCC
	<p>8.2.1. Fencing and Barricades</p> <p>8.2.1.1. Covered Way Exceptions</p> <p>1) Where the construction may constitute a hazard to the public, work shall not commence on the construction, alteration or repair of a building until a covered way has been provided as described in Article 8.2.1.2. to protect the public, except where</p> <p>a) the work is done within a solid enclosure,</p> <p>b) the building is at a distance of 2 m or more from a public way used by pedestrians, or</p> <p>c) site conditions warrant a distance greater than provided in Clause (b).</p>	<p>8.2.1. Walkways, Fencing, Boarding and Barricades</p> <p>8.2.1.1. Covered Walkways</p> <p>1) If construction of a building may cause a hazard for persons using the adjacent sidewalk, work shall not commence until a covered walkway has been provided on the sidewalk in accordance with Article 8.2.1.2.</p> <p>2) Despite the provisions of Sentence (1) a covered walkway is not required on a sidewalk if</p> <p>a) the work is carried out entirely behind fencing, boarding or barricades which separate the construction site from the sidewalk, or</p> <p>b) the building is located no less than 2 m from a sidewalk used by pedestrians, except that the Chief Building Official may require a covered walkway for a site which contains a building located more than 2 m from a sidewalk if, in the opinion of the Chief Building Official, site conditions so warrant.</p>	
	<p>8.2.1.2. Covered Way Construction</p> <p>1) A covered way shall</p> <p>a) have a clear height of not less than 2.5 m,</p> <p>b) have a clear width of not less than 1.5 m or the width of the public way, whichever is the lesser,</p> <p>c) be designed and constructed to support safely all loads that may be reasonably expected to be applied to it, but in no case less than 2.4 kPa on the roof,</p> <p>d) have a weathertight roof sloped towards the site or, if flat, be equipped with a splash board not less than 300 mm high on the street side,</p> <p>e) be totally enclosed on the site side with a structure having a reasonably smooth surface facing the public way,</p> <p>f) have a railing 1 070 mm high on the street side where the covered way is supported by posts on the street side, and</p> <p>g) be adequately lighted when the public way is lighted.</p>	<p>8.2.1.2. Covered Walkway Construction</p> <p>1) A covered walkway shall be</p> <p>a) no less than 2.5 m in height,</p> <p>b) no less than 1.5 m in width, or the width of the sidewalk, whichever is the lesser,</p> <p>c) designed and constructed to support loads no less than 2.4 kPa on the roof,</p> <p>d) designed and constructed to support all loads that may be applied to it,</p> <p>e) equipped with a weather tight roof sloped towards the site or a flat roof with a splash board no less than 300 mm high on the street side,</p> <p>f) totally enclosed on the construction site side of the sidewalk,</p> <p>g) constructed with a wall with a smooth surface facing the sidewalk,</p> <p>h) equipped with a railing 1070 mm high measured from the walking surface and located on the street side of the sidewalk if the covered walkway is supported by posts on the street side of the sidewalk, and</p> <p>i) constructed with sufficient lighting to enable the public to walk safely through any walkway which is constructed on a sidewalk which is illuminated by overhead street lighting at night.</p>	<p>Clause 8.2.1.2.(1)(h) added:</p> <p>h) have, at each opening for pedestrian access, a gate not less than 1 200 mm high that can be locked or bolted in a closed position.</p>
	<p>8.2.1.3. Fencing, Boarding or Barricades</p> <p>1) When a construction or demolition activity may constitute a hazard to the public and is located 2 m or less from a public way, a strongly constructed fence, boarding or barricade not less than 1.8 m high shall be erected between the site and the public way or open sides of a construction site.</p> <p>2) Barricades shall have a reasonably smooth surface facing the public way and shall be without openings, except those required for access.</p> <p>3) Access openings through barricades shall be equipped with gates that shall be</p> <p>a) kept closed and locked when the site is unattended, and</p> <p>b) maintained in place until completion of the construction or demolition activity.</p>	<p>8.2.1.3. Fencing, Boarding or Barricades</p> <p>1) If construction which may cause a hazard to the public is located 2 m or less from a street, fencing, boarding or barricades no less than 1.8 m high shall be erected between the construction site and the street.</p> <p>2) Fencing, boarding or barricades erected in accordance with Sentence (1) shall have a smooth surface facing the street and shall have no openings, except openings required for access to the construction site.</p> <p>3) Deleted.</p> <p>4) Access openings through fencing, boarding or barricades erected in accordance with Sentence (1) shall be equipped with gates that shall be</p> <p>a) closed and locked when the construction site is unattended, and</p> <p>b) maintained in place until construction is completed.</p>	<p>Same as NBCC</p>
	8.2.1.4. Special Hazards	8.2.1.4. Special Hazards	Same as NBCC

Framework Categories	2010 NBCC	2014 Vancouver Building By-Law	2006 ABC
	1) Where any special hazard exists from which it is not possible to protect the public by other means, persons shall be employed to prevent the public from entering the danger zone at any time of the day or night.	1) If an unusual hazard exists on a construction site, security guards shall be posted 24 hours a day and 7 days a week, to prevent public access to the area where the unusual hazard is located.	
	8.2.1.5. Work Shutdown 1) When work on a construction site is suspended or ceases so that it will not be occupied during normal working hours, the hazardous part of the construction site shall be protected by a) covering all windows, doors and other openings located within 3 m of the ground which may give access to the building with a securely fastened barricade, or b) a fence or barricade constructed according to the requirements of Article 8.2.1.3.	8.2.1.5. Work Shutdown 1) All hazardous areas on a construction site shall be secured against unauthorized entry at all times when workers are not present on the site. 2) If workers are not present on a construction site during normal working hours, a) all windows, doors and other openings located within 3 m of the ground shall be secured with barricades, or b) fencing, boarding or barricades shall be constructed around the entire site in accordance with Article 8.2.1.3.	Same as NBCC
Detection – Manual (Fire Watch)		8.2.6.14. Requirement for Fire Watch 1) If a Building is partly occupied and part of the building is undergoing deconstruction or demolition, a fire watch shall be maintained at all times, unless the building is provided with an active fire alarm system. 2) A fire watch as required by Sentence (1) shall include: a) a complete tour of inspection of the site at least once every hour, b) facilities to provide a fire warning to occupants, to the satisfaction of the Chief Building Official, and c) facilities to communicate with the fire department in the event of fire, to the satisfaction of the Chief Building Official.	
Detection - Automatic Safeguard Exposed			
Detection – Manual (Fire Watch)		8.2.6.14. Requirement for Fire Watch 1) If a Building is partly occupied and part of the building is undergoing deconstruction or demolition, a fire watch shall be maintained at all times, unless the building is provided with an active fire alarm system. 2) A fire watch as required by Sentence (1) shall include: a) a complete tour of inspection of the site at least once every hour, b) facilities to provide a fire warning to occupants, to the satisfaction of the Chief Building Official, and c) facilities to communicate with the fire department in the event of fire, to the satisfaction of the Chief Building Official.	
Detection - Automatic Alarms			
Egress		8.2.6.16. Egress from Buildings under Construction 1) In buildings under construction, there shall be at least one Exit which is accessible and usable at all times. 2) In Buildings under construction there shall be least one stairway maintained in usable condition at all times.	
Awareness and ability			
Construction process and procedure	8.1.2.2. Protection from Risk 1) Precautions shall be taken to ensure that no person is exposed to undue risk. Division B, Appendix A A-8.1.2.1.(1) Application The use of streets or public property and vehicular traffic during construction or demolition is normally controlled by regulations of authorities other than the building department (e.g., police department).	Same as NBCC	Same as NBCC
		8.1.3. Construction Safety Program 8.1.3.1. Requirements for Construction Safety Program 1) Unless otherwise provided in Article 8.1.3.2., before the commencement of any construction a Construction Safety Program shall be submitted to the Chief Building Official.	

Framework Categories	2010 NBCC	2014 Vancouver Building By-Law	2006 ABC
		<p>2) A Construction Safety Program shall include</p> <ul style="list-style-type: none"> a) the names and emergency phone numbers of the constructor, the coordinating registered professional and the Construction Safety Officer, b) details of the construction procedures relating to site access, traffic control, scaffolding and swing stages, protection at excavations, hoisting equipment (including its location and scheduling), fire protection facilities, material storage, waste material disposal, control of dust and debris, protection at the perimeters of all floor levels, barricades, covered walkways and any other details required by the City Engineer, the Chief Building Official or any other city official having jurisdiction, and c) a construction site plan showing the location on the site of the equipment, facilities and safety measures detailed in the Construction Safety Program in accordance with Clause (b). <p>3) The Construction Safety Program shall be amended from time to time to reflect the current stage of construction.</p> <p>8.1.3.2. Exemptions</p> <p>1) A Construction Safety Program is not required for minor interior alterations contained within a suite or for minor alterations or additions to a one-family dwelling, except that the Chief Building Official may require a Construction Safety Program if, in the opinion of the Chief Building Official, the work may cause a hazard for persons occupying the building, construction workers or the public.</p> <p>8.1.3.3. Posting Requirements</p> <p>1) No construction shall commence until a copy of the Construction Safety Program which complies with this subsection is posted on the construction site in accordance with Sentence (2).</p> <p>2) The copy of the Construction Safety Program required by Sentence (1) shall be</p> <ul style="list-style-type: none"> a) posted on a plywood board measuring no less than 600 mm by 600 mm, which is staked into the ground, protected from the weather and visible from the street, or b) posted on the exterior of the principal construction site shelter. <p>3) A copy of the Construction Safety Program shall be posted on the construction site at all times during construction.</p> <p>8.1.4. Construction Safety Officer</p> <p>8.1.4.1. Requirement for Construction Safety Officer</p> <p>1) Where construction of a building includes the services of a Coordinating Registered Professional, a full-time Construction Safety Officer shall be present on the construction site at all times during construction</p> <p>8.1.4.2. Requirement for Site Reviews</p> <p>1) During construction, the Construction Safety Officer shall carry out site reviews at least twice daily to ensure that work is proceeding safely and in conformance with the Construction Safety Program.</p> <p>2) After each site review, the Construction Safety Officer shall post a copy of the site review in a location adjacent to the posted copy of the Construction Safety Program.</p> <p>8.1.4.3. Site Safety Meetings Required</p> <p>1) The Construction Safety Officer shall hold regular construction site safety meetings at least monthly with the constructor and a representative of each trade.</p> <p>8.1.4.4. Safety Meeting Minutes</p> <p>1) The Construction Safety Officer shall keep minutes of the construction site safety meetings held in accordance with Article 8.1.4.3. and copies of those minutes shall be provided to the coordinating registered professional and shall be available at the construction site for inspection by the Chief Building Official.</p>	

Framework Categories	2010 NBCC	2014 Vancouver Building By-Law	2006 ABC
		<p>8.1.4.5. Violation of Construction Safety Program</p> <p>1) If the Construction Safety Officer observes that a procedure set out in the Construction Safety Program is not being followed, the Construction Safety Officer shall immediately inform the appropriate trades safety coordinator or, if that person is unavailable at the site, the supervisor of the appropriate sub-contractor.</p> <p>2) If corrective measures are not taken immediately by the person informed in accordance with Sentence (1), the Construction Safety Officer shall promptly inform the constructor or an agent of the constructor.</p> <p>8.2.6.3. Fire Safety Plan</p> <p>1) Before the commencement of construction, a fire safety plan for the construction site shall be submitted to and accepted by the Chief Building Official.</p> <p>2) Unless otherwise required by Sentence (3), a fire safety plan shall conform with the requirements of the Fire By-law and shall include</p> <p>a) measures to reduce fire hazards in and around the building (see Appendix A), and</p> <p>b) a maintenance program for firefighting measures required by the Fire By-law.</p> <p>3) Where construction occurs in an existing building that is required to have a fire safety plan conforming to the Fire By-law, the existing fire safety plan shall be modified to incorporate the alterations to the existing building.</p>	
Site Inspection			
Training			
Additional Comments			

Table 2: Fire Regulations Comparison

Framework Categories	2010 NFCC	2012 BCFC	2006 AFC (Standata References are listed at end of Table 2)
Prevent Fire Ignition			
Control Heat-Energy Source(s)			
Smoking	5.6.1.15. Smoking Restrictions 1) Smoking shall be permitted only under the conditions stated in Subsection 2.4.2.	Same as 2010 NFCC	Similar to 2010 NFCC wording with some minor differences. Same as 2005 NFCC 5.6.1.16. Smoking Restrictions 1) Smoking shall be permitted only if Subsection 2.4.2. is complied with.
Limit Unauthorized Access (same as entry below, at *)			
Other	5.6.1.8. Ignition Sources (See Appendix A.) 1) Devices capable of producing ignition, internal combustion engines, temporary heating equipment and associated devices shall be kept at a safe distance from combustible material so as not to cause ignition. 2) The clearance between combustible materials and temporary heating equipment, including flues, shall be in conformance with Part 6 of Division B of the NBC or in conformance with the minimum clearances shown on certified heating equipment. A-5.6.1.8. Minimum clearances shown on certified heating equipment or as described in Part 6 of Division B of the NBC should be provided between combustible materials and temporary heating equipment, including flues such as exhaust discharges from internal combustion engines.	Same as 2010 NFCC, but with references to 2012 BCBC	Do not exist in the same format in the 2010 NFCC Same as 2005 NFCC: 5.6.1.7. Cutting and Welding Operations 1) Cutting and welding operations shall conform to Section 5.2.
Control Source-Fuel Interactions			
Hot Work	5.6.1.7. Hot Surface Applications 1) Roofing operations and other surface applications that involve heat sources and hot processes shall be considered hot works and shall conform to the requirements in Sentences (2) and (3) and Section 5.2. 2) Bitumen kettles shall a) not be located on roofs, b) be provided with adequate metal covers that are close-fitting and constructed of steel having a thickness of not less than No. 14 sheet metal gauge thickness, c) be under constant supervision when in operation, and d) be maintained free of excessive residue.	Same as 2010 NFCC	Required to comply with Subsection 5.2 of 2006 AFC, "Hot Works" Requirements include maintenance of equipment, inspection, compressed gas equipment, location of operations, protection of combustible construction, fire extinguishing equipment, fire safety plan and fire watch. 5.6.1.17. 2) Bitumen heating equipment at a construction site shall be provided with metal covers. 3) Bitumen heating equipment at a construction site shall be under constant supervision when in operation
Electrical	5.6.2.1. Services Shut-off 1) Except as provided in Article 5.6.2.2., before excavation begins, building services shall be shut off, terminated and labelled so as to be easily identifiable outside the limits of the excavation. (See also Sentence 5.6.1.9.(1).) 2) The service company whose service connections will be affected shall be notified before any action mentioned in Sentence (1) is taken and, if it is necessary to maintain any service, it shall be a) relocated as necessary, and b) protected from damage.	Same as 2010 NFCC	Similar to 2010 NFCC with a few wording differences Same as 2005 NFCC: 5.6.2.1. Building Services Shut-off 1) Except as provided in Article 5.6.2.2., before excavation begins, all existing gas, electrical, water, steam and other services shall be shut off, capped and labelled so as to permit them to be easily identified outside the limits of the excavation. 2) The service company whose service connections will be affected shall be notified before any action mentioned in Sentence (1) is taken and, if it is necessary to maintain any service, it shall be a) relocated as necessary, and b) protected from damage so as to keep the public safe.

Framework Categories	2010 NFCC	2012 BCFC	2006 AFC (Standata References are listed at end of Table 2)
	5.6.2.2. Maintaining Existing Services 1) Existing gas, electrical, water, steam and other services are permitted to be left within the area of the excavation provided that a) before work begins, the service company concerned has approved the proposed method of operation, b) the location of the services is determined before excavation commences, c) a suitable method of excavation is adopted that will ensure that the services are not damaged, and d) the services are provided with suitable temporary supports.	Same as 2010 NFCC	Same as 2010 NFCC
Heater			
Other			5.6.1.11. Clearance to Combustible Materials 1) Internal combustion engines shall be located so that their exhaust discharges not less than 500 mm from combustible materials. 2) Where exhaust from internal combustion engines is piped to the outdoors, a clearance of not less than 150 mm shall be maintained between the exhaust pipe and any combustible material. 3) The clearance between combustible materials and temporary heating equipment, including flues, shall be in conformance with Part 6 of Division B of the Alberta Building Code 2006 or in conformance with the minimum clearances shown on certified heating equipment.
Control Fuel			
Flammable and combustible liquids	5.6.1.10. Fuel Supply Installation 1) Fuel supplies for heating equipment and internal combustion engines shall conform to a) CSA B139, "Installation Code for Oil-Burning Equipment," or b) CAN/CSA-B149.1, "Natural Gas and Propane Installation Code."	Same as 2010 NFCC	Similar to 2010 NFCC, but no reference to CAN/CSA-B149.1, "Natural Gas and Propane Installation Code."
	5.6.1.18. Storage and Use of Dangerous Goods 1) Combustible liquids and flammable liquids shall be stored and used in conformance with Part 4.	Same as 2010 NFCC	Same as 2010 NFC with minor title differences
Compressed gas			
Housekeeping/waste	5.6.1.7. Hot Surface Applications 2) Bitumen kettles shall d) be maintained free of excessive residue.	Same as 2010 NFCC	5.6.1.17. 2) Bitumen heating equipment at a construction site shall be provided with metal covers.
	5.6.1.19. Temporary Enclosures 1) Fabrics and films used to temporarily enclose buildings shall be securely fastened to prevent them from being blown against heaters or other ignition sources.	Same as 2010 NFCC	Same as 2010 NFCC
	5.6.1.20. Disposal of Combustible Refuse 1) Combustible refuse in sufficient quantities to constitute a fire hazard shall be moved to a safe location. (See also Subsection 8.2.5. of Division B of the NBC.)	Same as 2010 NFC, but with references to 2012 BCBC	Same as 2010 NFCC, but with references to 2006 ABC
Storage of Combustibles	5.6.1.7. Hot Surface Applications 3) Mops that have been used for spreading bitumen shall be kept outside the building in a safe location when not in use. 5.6.1.18. Storage and Use of Dangerous Goods 1) Combustible liquids and flammable liquids shall be stored and used in conformance with Part 4. 2) Dangerous goods shall be stored in conformance with Part 3. 3) Dangerous goods shall be used in conformance with Part 5.	Same as 2010 NFCC	5.6.1.17. 4) Mops that have been used for spreading bitumen shall be kept outside the building in a safe location when not in use. A-5.6.1.2.(2)(c) The control of fire hazards in and around buildings being constructed, renovated or demolished includes fire protection for combustible construction materials and combustible refuse on the site. The sizes of piles of materials and refuse and the location of such piles in relation to adjacent buildings are factors that should be taken into consideration in determining which fire protection measures to implement. The selection of fire protection measures for demolition operations will also depend on the demolition procedure being used, the specific conditions existing on the site and the firefighting capabilities of the responding fire department. It is the intent of this Code that requirements regarding the outdoor storage of materials stated in Section 3.3. be referred to and applied at construction and demolition sites.
Manage Fire Impact			

Framework Categories	2010 NFCC	2012 BCFC	2006 AFC (Standata References are listed at end of Table 2)
Manage Fire			
Control Combustion Process			
Fire Extinguishers	<p>5.6.1.5. Portable Extinguishers</p> <p>1) In addition to the other requirements of this Code, portable extinguishers shall be provided in unobstructed and easily accessible locations in areas</p> <p>a) where hot work operations are carried out,</p> <p>b) where combustibles are stored,</p> <p>c) near or on any internal combustion engines,</p> <p>d) where flammable liquids and combustible liquids or gases are stored or handled, and</p> <p>e) where temporary fuel-fired equipment is used. 2) The extinguishers required by Sentence (1) shall have a minimum rating of</p> <p>a) 2-A:10-B:C on moveable equipment, and</p> <p>b) 4-A:40-B:C in all other locations.</p>	Same as 2010 NFCC	<p>Similar wording to 2010 NFCC</p> <p>Same as 2005 NFCC</p> <p>5.6.1.5. Portable Extinguishers</p> <p>1) In addition to the other requirements of this Code, portable extinguishers shall be provided</p> <p>a) adjacent to cutting or welding operations,</p> <p>b) in areas where combustibles are stored,</p> <p>c) near or on any internal combustion engines,</p> <p>d) adjacent to areas where flammable liquids or gases are stored or handled,</p> <p>e) adjacent to temporary oil-fired or gas-fired equipment, and</p> <p>f) adjacent to bitumen heating equipment.</p> <p>2) The extinguishers required by Sentence (1) shall have a minimum rating of</p> <p>a) 2-A:10-B:C on moveable equipment, and</p> <p>b) 4-A:40-B:C in all other locations.</p>
Suppress Fire			
Fire Department			
Access	<p>5.6.1.4. Access for Firefighting</p> <p>1) Unobstructed access to fire hydrants, portable extinguishers and to fire department connections for standpipe and sprinkler systems shall be maintained.</p> <p>2) A means shall be provided to allow firefighters to perform their duties on all levels of the building.</p> <p>3) Provision shall be made for the use of existing elevators, hoists or lifts to assist firefighting personnel in reaching all levels of the building.</p> <p>4) Access routes for fire department vehicles shall be provided and maintained to construction and demolition sites.</p> <p>5) Where a construction or demolition site is fenced so as to prevent general entry, provision shall be made for access by fire department equipment and personnel.</p>	Same as 2010 NFCC	<p>Similar wording to 2010 NFCC</p> <p>Same as 2005 NFCC</p> <p>5.6.1.4. Access for Firefighting</p> <p>1) Unobstructed access to fire hydrants, portable extinguishers and to fire department connections for standpipe and sprinkler systems shall be maintained.</p> <p>2) Where practicable, access routes for fire department vehicles shall be provided to construction and demolition sites. (See Appendix A.)</p> <p>3) Where a construction or demolition site is fenced so as to prevent general entry, provision shall be made for access by fire department equipment and personnel.</p> <p>A-5.6.1.4.(2) Firefighting in storeys above the first storey requires prompt vertical movement by fire department personnel. Provision shall be made for the use of elevators, hoists or lifts to assist such personnel in reaching the upper storeys of the building.</p> <p>Standata FCI-09-01 [Table Reference A.1]: Water Supplies and Access for Fire Fighting ISSUE: Fire safety provisions for owners, workers and firefighters at construction and demolition sites are established in Section 5.6 Construction and Demolition Sites of Division B of the Alberta Fire Code (AFC). Prior to the adoption of these requirements in the AFC there has been an inconsistent understanding and application of these measures. Article 5.6.1.4. Access for Fire Fighting sets out specific conditions to give the fire department the ability to ensure that fire fighting crews, equipment and apparatus can reach a construction or demolition site in order to effectively control a fire situation. These provisions also ensure that firefighters have access to all levels of the buildings on the site and to the portable and fixed fire protection equipment serving the site. During the public review of recommendations for High Intensity Residential Fires (HIRF) it was determined that concerns regarding fire department access and water supplies for fire fighting be further clarified. INTERPRETATION: The AFC applies to all construction and demolition sites including single family residential developments. The owner, developer or contractor responsible for a construction or demolition site is required to incorporate measures which:</p>

Framework Categories	2010 NFCC	2012 BCFC	2006 AFC (Standata References are listed at end of Table 2)
			<p>a) provide the fire department with unobstructed access to roads, routes, stairways and lifts (where applicable) that accommodates fire fighting personnel, apparatus and equipment,</p> <p>b) ensure that unobstructed access is always provided to fire hydrants (or other water supplies and connections acceptable to the authority having jurisdiction) serving the site as well as to the portable extinguishers and fire department connections for standpipe and sprinkler systems on the site, and</p> <p>c) verifying, in cooperation with the municipality and the fire department, that water supply systems, where required by the Alberta Building Code (ABC), the AFC, municipal infrastructure standards, development permit conditions and/or subdivision approval, are operational and sufficient for firefighting operations.</p> <p>Given the potential complexity that may be involved in undertaking these measures on any particular site or sites based on:</p> <ul style="list-style-type: none"> - weather, - location, - road surfaces, - geography, - topography, - security provisions, - shared access to infrastructure, - impacts of other related activities, - material storage, - parking of vehicles and equipment - multiple employees and/or employers, - multiple owners of multiple sites, and - other issues that may arise during construction or demolition. <p>It is critical that regular communication take place between the owner(s), developer(s), municipality and the building and fire authorities to ensure that appropriate action has been taken and that these measures and equipment are maintained and continue to operate to an acceptable level throughout the duration of construction and, where applicable, on into the occupancy phase. All of the matters noted above are required to be taken under consideration and addressed where applicable in the required Fire Safety Plan as per Article 5.6.1.3. of the AFC.</p>
Standpipes	<p>5.6.1.6. Standpipe Systems (See Appendix A.)</p> <p>1) Where a standpipe system is to be installed in a building under construction or alteration, the system shall be installed progressively in conformance with Subsection 3.2.5. of Division B of the NBC in areas permitted to be occupied.</p> <p>2) Where a standpipe system is to be installed in portions of a building under construction or alteration that are not occupied, the following shall apply:</p> <p>a) a permanent or temporary standpipe system is permitted in accordance with Clauses (b) and (c),</p> <p>b) the standpipe system shall be provided with conspicuously marked and readily accessible fire department connections on the outside of the building at street level and shall have at least one hose outlet at each floor,</p> <p>c) the pipe size, hose valves and water supply shall conform to Subsection 3.2.5. of Division B of the NBC,</p> <p>d) the standpipe system shall, as a minimum, be securely supported and restrained on alternate floors,</p> <p>e) at least one hose valve for attaching fire department hose shall be provided at each intermediate landing or floor level in the exit stairway,</p> <p>f) valves shall be kept closed at all times and guarded against mechanical damage,</p> <p>g) the standpipe shall be not more than one floor below the highest forms, staging, and similar combustibles elements at all times, and</p> <p>h) temporary standpipe systems shall remain in service until the permanent standpipe installation is complete.</p>	Same as 2010 NFCC, but with references to 2012 BCBC	<p>Same as 2005 NFC, but with reference to 2006 NBCC</p> <p>Significant differences from 2010 NFCC</p> <p>5.6.1.6. Standpipe Systems</p> <p>1) Where a standpipe system is to be installed in a building under construction, the system shall be installed progressively in conformance with Subsection 3.2.5. of Division B of the Alberta Building Code 2006.</p>

Framework Categories	2010 NFCC	2012 BCFC	2006 AFC (Standata References are listed at end of Table 2)
	A-5.6.1.6. Not all aspects of Subsection 3.2.5. of Division B of the NBC are applicable to unoccupied areas of buildings, parts of buildings, facilities and associated areas undergoing construction, alteration or demolition operations. When the temperature causes freezing conditions, the standpipe should be drained to prevent damage to the equipment. It is not expected that hoses and nozzles be made available in the building undergoing construction, alteration or demolition operations, as they will be brought to the relevant floor by the responding fire department.		
Hydrants	5.6.1.4. Access for Firefighting 1) Unobstructed access to fire hydrants, portable extinguishers and to fire department connections for standpipe and sprinkler systems shall be maintained.	Same as 2010 NFCC	Same as 2010 NFCC, plus Standata FCI-09-01 [Table Reference A.1]: Water Supplies and Access for Fire Fighting ISSUE: Fire safety provisions for owners, workers and firefighters at construction and demolition sites are established in Section 5.6 Construction and Demolition Sites of Division B of the Alberta Fire Code (AFC). Prior to the adoption of these requirements in the AFC there has been an inconsistent understanding and application of these measures. Article 5.6.1.4. Access for Fire Fighting sets out specific conditions to give the fire department the ability to ensure that fire fighting crews, equipment and apparatus can reach a construction or demolition site in order to effectively control a fire situation. These provisions also ensure that firefighters have access to all levels of the buildings on the site and to the portable and fixed fire protection equipment serving the site. During the public review of recommendations for High Intensity Residential Fires (HIRF) it was determined that concerns regarding fire department access and water supplies for fire fighting be further clarified. INTERPRETATION: The AFC applies to all construction and demolition sites including single family residential developments. The owner, developer or contractor responsible for a construction or demolition site is required to incorporate measures which: ... b) ensure that unobstructed access is always provided to fire hydrants (or other water supplies and connections acceptable to the authority having jurisdiction) serving the site as well as to the portable extinguishers and fire department connections for standpipe and sprinkler systems on the site, ...
Sprinklers			
Control Fire by Construction			
Compartment	5.6.1.12. Fire Separations in Partly Occupied Buildings 1) Where part of a building continues to be occupied, the occupied part shall be separated from the part being demolished or constructed by a fire separation having a fire-resistance rating of not less than 1 h.	Same as 2010 NFCC	Same as 2010 NFCC
	5.6.1.13. Protection during Shutdown 1) Except as permitted in Sentence (2), where a fire protection system is provided, it shall remain operational throughout the construction, alteration or demolition area where reasonably practical. 2) When any portion of a fire protection system is temporarily shut down during construction, alteration or demolition operations, protection during shutdown shall comply with Article 6.1.1.4.	Same as 2010 NFCC	????
Building	5.6.1.2. Protection of Adjacent Buildings 1) Protection shall be provided for adjacent buildings and facilities that would be exposed to fire originating from buildings, parts of buildings, facilities and associated areas undergoing construction, alteration or demolition operations. (See Appendix A.) A-5.6.1.2.(1) Methods and materials used to protect adjacent buildings and facilities can range from active to passive systems such as spatial separation, installing water curtains, using construction methods and materials that include gypsum sheathing, or erecting a temporary fire barrier such as a fire tarpaulin.	Same as 2010 NFCC	Same as 2010 NFCC Standata FCI-09-02 [Table Reference A.2]: Protection of Adjacent Building ISSUE: Safety provisions at construction and demolition sites are established in Section 5.6 Construction and Demolition Sites of Division B of the Alberta Fire Code (AFC). Article 5.6.1.2. Protection of Adjacent Building sets out requirements to protect buildings and facilities from fire originating from other buildings, facilities and associated areas undergoing construction, alteration and demolition. During the public review of recommendations for High Intensity Residential Fires (HIRF) it was determined that concerns regarding protection of adjacent buildings be further clarified.

Framework Categories	2010 NFCC	2012 BCFC	2006 AFC (Standata References are listed at end of Table 2)
			<p>INTERPRETATION: The AFC applies to all construction and demolition sites including single family residential developments.</p> <p>The owner, developer or contractor responsible for a construction or demolition site is required to incorporate measures, acceptable to a Safety Codes Officer, Fire, and outlined in the required Fire Safety Plan (see Article 5.6.1.3). These protection measures, as outlined in the Fire Safety Plan, should provide a reasonable expectation that circumstances of ignition are removed from, or mitigated on, the site and that any fire which does originate on a building or facility construction or demolition site will not quickly spread to exposed adjacent buildings or facilities.</p> <p>These measures must take into account the size, type and configuration of the project, the methods of construction or demolition to be utilized and the distance to, and stage of completion of, adjacent exposures. Solutions may be active, passive or a combination of both to achieve the desired protection. As such there is no "one solution" that will be appropriate for all projects.</p> <p>For explanatory purposes this Interpretation focuses on single family residential construction in new sub-divisions. Most of these suggested solutions are adaptable or scalable and could be used to mitigate other situations. AFC Appendix reference A-5.6.1.2. provides a non-exhaustive, non-exclusive list of suggestions which notes the following items:</p> <ul style="list-style-type: none"> - spatial separation, - water curtains, - fire resistive construction methods, or - temporary fire barriers such as a fire tarpaulin. <p>Other methods which could be utilized to provide some of the required protection include:</p> <ul style="list-style-type: none"> - application of an acceptable intumescent or flame-retardant coating in accordance with the manufacturer's directions and the criteria utilized in any performance tests, - installation of an acceptable temporary flame/heat resistant membrane that can be temporarily affixed to the exterior sheeting of exposed walls prior to closure and cladding in accordance with the manufacturer's directions and the criteria utilized in any performance tests, - temporary fencing and securing of a building site, - on site security personnel tasked with regular fire watch duties, - smoking in designated areas outside the building or facility, - limitations on the amount of combustible and flammable materials on site. - proper separation and storage of combustible and flammable materials on site, - daily clean up and disposal of combustible waste in secured non-combustible containers, - a fire watch at the beginning of every break period on site in addition to a comprehensive site inspection at the end of each day, - temporary electronic intrusion and thermal detection systems, or - planned and coordinated non-sequential construction, in new residential subdivisions <p>Other provisions of Section 5.6 deal with Hot Works procedures and permits, the refueling and usage of fuel fired appliances and equipment and the use of temporary heating during construction.</p> <p>It must be noted that the calculations for required limiting distances, spatial separations and unprotected openings as outlined in the Alberta Building Code 2006 deal with the exposed walls as a completed assembly at the conclusion of construction. Where two adjacent structures are expected to be at the framing or sheeting stage at the same time it is necessary for the Safety Codes Officer, Fire, in consultation with the affected owners/contractors, to determine what measures are appropriate during this period when the structures are the most vulnerable to fire spread.</p> <p>The methods and steps outlined are only some of the possible suggestions. Some may only be required for a specific period(s) of time when on site conditions or activities create increased vulnerability.</p> <p>Innovation, collaboration and discussion between contractors, owners, developers, local Safety Codes Officers (Building and Fire) and Workplace Health Safety Officers would be expected to result in additional solutions that meet the need for protection and determining when the use of each of the identified solutions, singly or in sets, would be the most effective for the owner and acceptable to the fire authority.</p>

Framework Categories	2010 NFCC	2012 BCFC	2006 AFC (Standata References are listed at end of Table 2)
Manage Exposed			
Limit Amount Exposed			
Limit Unnecessary Access (same as entry above, at *)			
Detection – Manual (Fire Watch)	5.6.1.14. Watch 1) A watch, with tours at intervals of not more than 1 h, shall be provided throughout demolition sites when there are occupants in the portion of the building not being demolished. 2) Except where a building is provided with a fire alarm system or similar equipment, a watch, with tours at intervals of not more than 1 h, shall be provided when a portion of the building is occupied while construction operations are taking place. 3) Facilities shall be provided to enable the watcher referred to in Sentences (1) and (2) to a) ensure a fire warning is sounded to notify occupants, and b) communicate with the fire department.	Same as 2010 NFCC	Similar to 2010 NFCC with slight difference in Sentence (3) 5.6.1.15. Watch 1) A watch, with tours at intervals of not more than 1 h, shall be provided throughout demolition sites when there are occupants in the portion of the building not being demolished. 2) Except where a building is provided with a fire alarm system or similar equipment, a watch, with tours at intervals of not more than 1 h, shall be provided when a portion of the building is occupied while construction operations are taking place. 3) Facilities shall be provided to enable the watcher referred to in Sentences (1) and (2) to communicate with the fire department.
Detection - Automatic			
Safeguard Exposed			
Detection – Manual (Fire Watch)			
Detection - Automatic			
Alarms	5.6.1.17. Fire Warning 1) A means shall be provided to alert site personnel of a fire and such means shall be capable of being heard throughout the building or facility.	Same as 2010 NFCC	Same as 2005 NFCC Similar wording to 2010 5.6.1.9. Fire Warning 1) A system shall be provided to alert site personnel of a fire. 2) The system required by Sentence (1) shall be capable of being heard throughout the building.
Egress	5.6.1.16. Provision for Egress 1) In areas of a building where construction, alteration or demolition operations are taking place, at least one exit shall be accessible and usable at all times. 2) In buildings being demolished, at least one stairway shall be maintained in usable condition at all times.	Same as 2010 NFCC	Similar to 2010 NFCC without “alteration and demolition” included in Sentence (1) Occupied Buildings 3) Required exits from the occupied area shall be maintained or alternate means of egress shall be provided. (See Appendix A.)
Awareness and ability			
Construction process and procedure	5.6.1.1. Application (See Appendix A.) A-5.6.1.1. The degree of application should be determined in advance in conjunction with the authority having jurisdiction. In construction, alteration or demolition operations that do not pose an exposure hazard to other buildings or to occupants, the degree of application of Section 5.6. may be minimal. The degree of application of Section 5.6. to each operation should be determined in advance, as part of the fire safety plan for the operation, taking into consideration such issues as the size of the operation, exposure of adjacent buildings or facilities to hazards, and the site conditions. Operations can range from large multi-storey buildings to small single-storey residences and may include additions or alterations to existing buildings.	Same as 2010 NFCC	5.6.1.1. Application 2) The degree of application of this Section to each construction or demolition project shall be determined as part of the fire safety plan prior to the commencement of operations. (See Appendix A.) A-5.6.1.1.(2) In demolition operations in buildings that do not pose an exposure hazard to other buildings, or in which there is little fire hazard to occupants, as is the case with small buildings, the degree of application of Section 5.6. may be minimal. The degree of application should be determined in advance in conjunction with the authority having jurisdiction. Construction projects can range from large multi-storey buildings to small single-storey residences and may include additions or renovations to existing buildings. The degree to which Section 5.6. should apply to each project should be determined in advance, as part of the fire safety plan for the construction project, taking into consideration such issues as the size of the project and the site conditions.
	5.6.1.3. Fire Safety Plan 1) Except as required in Sentence (2), prior to the commencement of construction, alteration or demolition operations, a fire safety plan shall be prepared for the site and shall include a) the designation and organization of site personnel to carry out fire safety duties, including a fire watch service if applicable, b) the emergency procedures to be followed in the event of a fire, including i) sounding the fire alarm, ii) notifying the fire department,	Same as 2010 NFCC	Same as 2005 NFCC 5.6.1.2. Fire Safety Plan 1) Prior to the commencement of construction or demolition operations, a fire safety plan conforming to Section 2.8. shall be prepared for the site. 2) The fire safety plan shall include a) the designation and organization of site personnel to carry out fire safety duties, including a fire watch service if applicable, b) the emergency procedures to be followed in the event of a fire, including

Framework Categories	2010 NFCC	2012 BCFC	2006 AFC (Standata References are listed at end of Table 2)
	<p>iii) instructing site personnel on the procedures to be followed when the alarm sounds, and iv) firefighting procedures, c) measures for controlling fire hazards in and around the building (see Appendix A), and d) a maintenance procedure for firefighting measures required in Section 5.6. 2) Where construction, alteration or demolition operations occur in an existing building that is required to have a fire safety plan conforming to Section 2.8., the fire safety plan shall take into account the changes occurring to the building.</p>		<p>i) sounding the fire alarm, ii) notifying the fire department, iii) instructing site personnel on the procedures to be followed when the alarm sounds, and iv) firefighting procedures, c) measures for controlling fire hazards in and around the building (see Appendix A), and d) a maintenance procedure for firefighting facilities (see Appendix A).</p> <p>Standata FCI-09-03 [Table Reference A.3]: FIRE SAFETY PLAN – Construction and Demolition Sites ISSUE: Safety provisions at construction and demolition sites are established in Division B, Section 5.6 Construction and Demolition Sites of the Alberta Fire Code (AFC). Article 5.6.1.3. Fire Safety Plan sets out specific items for inclusion in a mandatory Fire Safety Plan to provide a safe environment for workers and outline emergency procedures at sites where construction, alteration and demolition are occurring. These provisions also ensure that hazard control measures are in place and maintenance of firefighting measures and systems required elsewhere in Section 5.6 occurs. During the public review of recommendations for High Intensity Residential Fires (HIRF) it was determined that the content, format and use of the required construction and demolition fire safety plans should be further clarified. INTERPRETATION: The AFC applies to all construction and demolition sites including single family residential developments. Fire Safety Plans for construction or demolition sites will apply to all inspectors, workers, suppliers and contractors on site. There can only be one Fire Safety Plan for each site. Should circumstances change on site then the plan must be modified appropriately and resubmitted to the Safety Codes Officer, Fire (SCO-Fire) for acceptance. The owner, developer or contractor responsible for a construction or demolition site is required to develop a Fire Safety Plan acceptable to a SCO-Fire. In addition to covering the subject matter of previous Standata FCI-09-01 and FCI-09-02 the Fire Safety Plan must specifically address: a) Assignment of responsibility for fire safety duties to workers, b) Emergency procedures to: provide fire warning, notify the fire department, evacuate the site and conduct first aid firefighting, c) Control of fire hazards on the site, and d) Procedures to ensure maintenance of firefighting measures. As noted in Sentence 5.6.1.3.(2) these provisions must be incorporated into required Fire Safety Plans for existing buildings when construction, alteration or demolition occurs.</p>
	<p>A-5.6.1.3.(1)(c) The control of fire hazards in and around buildings being constructed, renovated or demolished includes fire protection for combustible construction materials and combustible refuse on the site. The sizes of piles of materials and refuse and the location of such piles in relation to adjacent buildings are factors that should be taken into consideration in determining which fire protection measures to implement. The selection of fire protection measures for demolition operations will also depend on the demolition procedure being used, the specific conditions existing on the site and the firefighting capabilities of the responding fire department. It is the intent of this Code that requirements regarding the outdoor storage of materials stated in Section 3.3. be referred to and applied at construction and demolition sites.</p>	<p>Same as 2010 NFCC</p>	<p>Occupied Buildings 1) When a building is occupied prior to its completion or during extensive alterations to it, fire safety measures in the occupied portions of the building shall be maintained or alternate provisions made. 2) Measures shall be taken to cordon off and control access to the work areas.</p> <p>A-5.6.1.2.(2)(d) When demolition operations are in progress in a building of combustible construction, efforts should be made to keep any sprinkler systems in operation as long as possible in order to ensure added protection for the structure and the surrounding buildings.</p> <p>Standata FCI-09-03 [Table Reference A.4]: Occupancy of Buildings Under Construction DISCUSSION: Sentence 2.2.10.2.(1) of Division C allows for an authority having jurisdiction to issue an occupancy permit for a building before construction is actually finished. This can occur in a number of situations: • a multi-unit residential building built in phases; first phase sells out and is used to finance the next phase of construction, • the office area of an industrial building is completed before the exterior finish and roofing materials are installed in the shop area,</p>

Framework Categories	2010 NFCC	2012 BCFC	2006 AFC (Standata References are listed at end of Table 2)
			<ul style="list-style-type: none"> • a wing of a hospital is built while the rest of the facility is still in use. Sentence 8.1.1.1.(3) specifies that the fire safety at construction and demolition sites shall conform to the requirements in Section 5.6. of Division B of the Alberta Fire Code 2006, which in turn requires the development of a fire safety plan. This fire safety plan should be developed in consultation with and will be the responsibility of the local fire department and/or fire prevention personnel. All building services, including those for fire safety, boilers and pressure vessels, elevators, gas, plumbing, and electrical, must be considered when determining the necessary provisions required to safeguard the occupants of a building. To assist, a checklist of standard provisions is provided below. The list covers normal items that would be expected to be complete, however, other provisions may also be necessary depending on the specific situation. <ol style="list-style-type: none"> 1. The fire safety plan required by Section 5.6. of Division B of the Alberta Fire Code 2006 and Sentence 8.1.1.1.(3) of the Alberta Building Code 2006 for buildings and portions of buildings under construction is to be adapted to include provisions for the occupants and the trades people to the satisfaction of the fire and building authority having jurisdiction. 2. The structure and enclosing walls of the building are complete up to and including the roof. 3. The walls enclosing the space to be occupied are complete. 4. All guards for balconies are complete. 5. Stair shafts are complete for the full height of the building, including all doors between the stair shafts and adjacent floor areas. 6. The fire elevator in high rise buildings is operational for all storeys up to and including the one to be occupied. 7. All fire separations and closures are complete on all stories up to and including the storey to be occupied. 8. Exits and accesses to exit are complete including fire separations, doors, door hardware, self-closing devices, guards and handrails from the uppermost storey to be occupied down to the level from which occupants will exit the building (or the lowest level in the basement up to the exit level if the exit serves the basement). Means of access to the building may need to be enclosed to protect the building occupants from falling objects. 9. All aspects of barrier-free design outlined in Section 3.8. shall be completed for all areas intended to be occupied. 10. If service rooms are in operation, fire separations around the service rooms are complete and closures are installed. 11. All service shafts, including closures, are complete to the floor/ceiling assembly above the storey to be occupied and have a temporary fire separation at that assembly. 12. Water supply, drain, waste and vent systems are complete and operational for all storeys up to and including the one to be occupied. Vent systems should be completed. All unused openings in waste pipes must be effectively capped off. 13. Emergency power supply systems are installed, operational, connected to the equipment and appliances requiring emergency power supply and shall be maintained throughout the duration of construction. Lighting in corridors, exits and stairwells is complete for all storeys up to and including the one to be occupied. 14. Standpipe, sprinkler, fire alarm and detection systems are complete and operational for all storeys up to and including the one to be occupied and exterior connections for fire department use are installed and operational. Standpipe systems for firefighting on all unfinished floors are operational. Standpipe, sprinkler, fire alarm and detection systems shall be maintained throughout the duration of construction on all occupied floors. 15. Garbage rooms, chutes and ancillary services are complete and operational for all storeys to be occupied. 16. Firefighting access routes around the building are provided and accessible. 17. Floors, halls, corridors, lobbies and means of egress are free of construction materials and other hazards. 18. Outside stairways and walkways are complete to all exits and entrances. 19. Security items such as panic hardware and electromagnetic locks are installed at all exits and entrances. 20. Mechanical systems such as heating, ventilating and air conditioning systems serving occupied areas are

Framework Categories	2010 NFCC	2012 BCFC	2006 AFC (Standata References are listed at end of Table 2)
			<p>complete and operational.</p> <p>21. If smoke control measures are required by Code, the measures are complete and operational for all floors to be occupied, including floors designated as areas of refuge.</p> <p>22. Measures are taken to prevent access by unauthorized persons to parts of the building and site that are incomplete.</p> <p>23. Finishes in food establishments, dairy plants and abattoirs are complete.</p> <p>24. Sanitary facilities are in place and functional.</p> <p>25. Swimming pool circulating systems in the area to be occupied are complete and operational.</p> <p>Boilers and Pressure Vessels, Electrical, Elevator, Fire, Gas, Plumbing and other authorities may expect to see a letter from the authority having jurisdiction stating that the preceding safeguards are adequate and have been satisfied before permitting the use of the building or the building services by other than the constructor or subcontractors for the project.</p> <p>It should also be noted that Sentence 2.2.10.1.(2) of Division C states that the occupancy permit issued by the authority having jurisdiction does not operate as a license to carry on any intended business function within the building. It is the responsibility of the owner to obtain all necessary permits and licenses prior to commencing any commercial operations on the premises.</p> <p>Notwithstanding any of the preceding, the authority having jurisdiction may accept alternate arrangements that, in their opinion, satisfy the safety requirements of the Alberta Building Code.</p> <p>CODE REFERENCES</p> <p>1. Sentence 2.2.10.1.(2) of Division C states: 2.2.10.1. Occupancy Permit ... 2) An occupancy permit or permission to use a building issued under the Safety Codes Act shall not be construed to be a licence to operate or engage in any business.</p> <p>2. Article 2.2.10.2. of Division C states: 2.2.10.2. Occupancy before Completion</p> <p>1) The authority having jurisdiction may issue an occupancy permit, subject to compliance with provisions to safeguard persons in or about the project, to allow occupancy of a building before completion of the project.</p> <p>2) The owner shall ensure that no unsafe condition exists or will exist because of construction or work being undertaken or not completed should occupancy occur before the completion of the construction or work.</p> <p>3. Sentence 8.1.1.1.(3) states: 8.1.1.1. Scope ... 3) Fire safety at construction and demolition sites shall conform to Section 5.6. of Division B of the Alberta Fire Code 2006.</p>
Site Inspection			
Training			
Additional Comments			

Table 2 Notes:

References used in Table are:

- A.1 Alberta Municipal Affairs, Fire Code Interpretation, Standata FCI-09-01, July 2009, Water Supplies and Access for Fire Fighting.
- A.2 Alberta Municipal Affairs, Fire Code Interpretation, Standata FCI-09-02, July 2009, Protection of Adjacent Building.
- A.3 Alberta Municipal Affairs, FIRE CODE INTERPRETATION, Standata FCI-09-03, November 2009, FIRE SAFETY PLAN – Construction and Demolition Sites.
- A.4 Alberta Municipal Affairs, Fire Code Interpretation, Standata 06-BCB-002-R1, July 2008, Occupancy of Buildings under Construction.
- AN.1 Alberta Municipal Affairs - Safety Services Branch, Notice, Intumescent Coatings on Exterior Sheathing, ISBN #978-0-7785-7129-2, February 2012.

Appendix C



Summary Tables for Occupational Health and Safety Regulations

Table 3: Occupational health and safety regulations for British Columbia, Alberta and Saskatchewan.

Fire Safety Tree Concepts	British Columbia OH&S Regulations	Alberta OH&S Regulations	Saskatchewan OH&S
Prevent Fire Ignition			
Control Heat-Energy Source(s)			
Smoking			
Limit Unauthorized Access			
Other		<p>Section 165 Protective procedures and precautions in hazardous locations (3) An employer must ensure that (a) equipment used in a hazardous location will not ignite the flammable substance, and (b) static electricity is effectively controlled.</p>	<p>Control of ignition sources, static charges 367 An employer or contractor shall ensure that: (a) suitable procedures are developed and implemented to prevent the ignition of flammable liquids or explosive dusts that are present at a worksite; (b) all sources or potential sources of ignition are eliminated or controlled where an explosive atmosphere exists or is likely to exist; and (c) static charge accumulations during transfer of flammable liquids or explosive substances from one container to another are prevented by electrically bonding the containers.</p>
Control Source-Fuel Interactions			
Hot Work	<p>12.112 Standards Welding, cutting and similar processes must be carried out according to the requirements of CSA Standard W117.2-94, Safety in Welding, Cutting, and Allied Processes.</p> <p>12.116 Flammable and explosive substances (2) Burning, welding or other hot work must not be done on any vessel, tank, pipe or structure, or in any place where the presence of a flammable or explosive substance is likely until (a) tests have been made by a qualified person to ensure the work may be safely performed, and (b) suitable safe work procedures have been adopted, including additional tests made at intervals that will ensure the continuing safety of the workers.</p>	<p>Section 169 Hot work (1) Despite any other section in this Part, an employer must ensure that hot work is done in accordance with subsections (2) and (3) if (a) the work area is a hazardous location, or (b) the work area is not normally a hazardous location but an explosive atmosphere may exist for a limited time because (i) a flammable substance is or may be in the atmosphere of the work area, (ii) a flammable substance is or may be stored, handled, processed or used in the location, (iii) hot work is on or in an installation or item of equipment that contains a flammable substance or its residue, or (iv) the hot work is on a vessel that contains residue that may release a flammable gas or vapour when exposed to heat. (2) An employer must ensure that hot work is not begun until (a) a hot work permit is issued that indicates (i) the nature of the hazard, (ii) the type and frequency of atmospheric testing required, (iii) the safe work procedures and precautionary measures to be taken, and (iv) the protective equipment required, (b) the hot work location is (i) cleared of combustible materials, or (ii) is suitably isolated from combustible materials, (c) procedures are implemented to ensure continuous safe performance of the hot work, and (d) testing shows that the atmosphere does not contain (i) a flammable substance, in a mixture with air, in an amount exceeding 20 percent of that substance's lower explosive limit for gas or vapours, or</p>	<p>Hot work 370(1) Where a flammable substance is or may be present, an employer or contractor shall ensure that no hot work is performed until: (a) suitable tests have been conducted that: (i) indicate whether the atmosphere contains a flammable substance in a quantity sufficient to create an explosive atmosphere; and (ii) confirm that the work may be safely performed; and (b) the work procedures developed pursuant to clause 363(1)(b) have been implemented to ensure continuous safe performance of the work. (2) While hot work is being performed, an employer or contractor shall conduct tests described in clause (1)(a) at intervals appropriate to the work being performed and record the results. (3) An employer or contractor shall not require or permit any hot work to be performed in the vicinity of a material that may constitute a fire hazard until suitable steps have been taken to reduce the risk of fire. (4) An employer or contractor shall ensure that a container or piping that contains or has contained a flammable substance is purged using an effective method to remove the flammable substance from the container or piping before any hot work is begun on that container or piping. (5) An employer or contractor shall not require or permit any welding or cutting of metal that has been cleaned with a flammable or combustible liquid until the metal has thoroughly dried.</p>

Fire Safety Tree Concepts	British Columbia OH&S Regulations	Alberta OH&S Regulations	Saskatchewan OH&S
		<p>(ii) the minimum ignitable concentration for dust.</p> <p>(3) An employer must ensure that the tests referred to in subsection (2)(d) are repeated at regular intervals appropriate to the hazard associated with the work being performed.</p> <p>Section 171.1 Welding – general</p> <p>(1) An employer must comply with the requirements of CSA Standard W117.2-06, Safety in welding, cutting and allied processes.</p> <p>(2) An employer must ensure that welding or allied process equipment is erected, installed, assembled, started, operated, used, handled, stored, stopped, inspected, serviced, tested, cleaned, adjusted, carried, maintained, repaired and dismantled in accordance with the manufacturer’s specifications.</p> <p>(3) An employer must ensure that, before a welding or allied process is commenced, the area surrounding the operation is inspected and</p> <p>(a) all combustible, flammable or explosive material, dust, gas or vapour is removed, or</p> <p>(b) alternate methods of rendering the area safe are implemented.</p>	
Electrical			
Heater			
Other			
Control Fuel			
Flammable and combustible liquids			<p>Receptacles for materials contaminated by flammable liquids</p> <p>364(1) An employer, contractor or owner shall ensure that materials contaminated by flammable liquids are placed in receptacles that:</p> <p>(a) are non-combustible and have close-fitting metal covers;</p> <p>(b) are labelled “flammable”; and</p> <p>(c) are located at least one metre away from other flammable liquids.</p> <p>(2) Where the surface on which a receptacle required by subsection (1) is placed is combustible, an employer shall ensure that the receptacle has a flanged bottom or legs that are not less than 50 millimetres high.</p> <p>(3) A worker shall place materials contaminated by flammable liquids and garbage that may constitute a fire hazard into the appropriate receptacle required by this section or by section 362.</p> <p>Receptacles for combustible or flammable liquids</p> <p>365 An employer, contractor or owner shall ensure that combustible and flammable liquids are kept in receptacles that meet the requirements of the National Fire Code of Canada 1990, including any Revisions and Errata published from time to time, respecting the storage of flammable and combustible liquids.</p> <p>Hazardous activities involving combustible or flammable liquids</p> <p>366(1) An employer or contractor shall ensure that:</p> <p>(a) no gasoline is used to start a fire or used as a cleaning agent; and</p>

Fire Safety Tree Concepts	British Columbia OH&S Regulations	Alberta OH&S Regulations	Saskatchewan OH&S
			(b) no worker is required or permitted: (i) to replenish a tank on a heating device with a combustible or flammable liquid while the device is in operation or is hot enough to ignite the liquid; or (ii) to place a tar pot, while in use, within three metres of an entrance to or exit from a building. (2) A worker shall not: (a) use gasoline to start a fire or use gasoline as a cleaning agent; or (b) replenish a tank on a heating device with a flammable or combustible liquid while the device is in operation or is hot enough to ignite the liquid.
Compressed gas			
Housekeeping/waste			Garbage as fire hazard 362 Where garbage that may constitute a fire hazard is present at a place of employment, an employer, contractor or owner shall provide covered receptacles for the garbage that are suitable to the nature of the hazard.
Storage of Combustibles			Procedures for flammable substances 363(1) Where a flammable substance is or is intended to be handled, used, stored, produced or disposed of at a place of employment, an employer, contractor or owner shall develop written procedures to ensure the health and safety of workers who: (a) handle, use, store, produce or dispose of a flammable substance that may spontaneously ignite or ignite when in combination with any other substance; or (b) perform hot work where there is a risk of fire.
Manage Fire Impact			
Manage Fire			
Control Combustion Process			
Fire Extinguishers	12.126 Fire extinguishers (1) At least one fire extinguisher of a suitable type and capacity must be immediately available at a work location where welding or cutting is done. (2) Fire extinguisher locations must be marked and made known to workers.		Fire extinguishers 361(1) An employer, contractor or owner shall ensure that portable fire extinguishers are selected, located, inspected, maintained and tested so that the health and safety of workers at the place of employment is protected. (2) An employer, contractor or owner shall ensure that portable fire extinguishers are placed not more than nine metres away from: (a) each industrial open-flame portable heating device, tar pot or asphalt kettle that is in use; and (b) each welding or cutting operation that is in progress.
Suppress Fire			
Fire Department			
Access			
Standpipes			
Hydrants			
Sprinklers			
Control Fire by Construction			
Compartment			

Fire Safety Tree Concepts	British Columbia OH&S Regulations	Alberta OH&S Regulations	Saskatchewan OH&S
Building			
System & Operational Readiness			
Water Supply			
Manage Exposed			
Limit Amount Exposed			
Limit Unauthorized Access* (same as entry below, at ‡)			
Detection – Manual (Fire Watch)			
Detection - Automatic			
Safeguard Exposed			
Detection – Manual (Fire Watch)			
Detection - Automatic			
Alarms			
Egress	<p>4.69 Emergency lighting</p> <p>(1) If failure of a lighting system would create conditions dangerous to the health and safety of workers, an emergency lighting system must be provided for the workplace and the exit routes.</p> <p>(2) An emergency lighting system must provide dependable illumination while the primary lighting system is off to enable all emergency measures to be carried out, including</p> <p>(a) emergency shutdown procedures, and</p> <p>(b) evacuation of workers from the premises.</p> <p>(3) An emergency lighting system in a fixed facility must meet the requirements of section 3.2.7 (Lighting and Emergency Power Systems) of the BC Building Code with regard to</p> <p>(a) illumination level,</p> <p>(b) use of recessed fixtures,</p> <p>(c) duration of emergency lighting,</p> <p>(d) the use of self-contained emergency lighting units, and</p> <p>(e) emergency electrical power supply.</p> <p>(4) The emergency lighting system must be inspected, tested and maintained to meet the requirements of section 6.8 (Emergency Power Systems and Unit Equipment for Emergency Lighting) of the BC Fire Code.</p> <p>5.100 Procedures for evacuation</p> <p>(1) Written evacuation procedures appropriate to the risk must be developed and implemented to</p> <p>(a) notify workers, including the first aid attendant, of the nature and location of the emergency,</p> <p>(b) evacuate workers safely,</p>	<p>Section 119 Safe entry and exit</p> <p>(1) An employer must ensure that every worker can enter a work area safely and leave a work area safely at all times.</p> <p>(2) An employer must ensure that a work area’s entrances and exits are in good working order.</p> <p>(3) An employer must ensure that a work area’s entrances and exits are free from materials, equipment, accumulations of waste or other obstructions that might endanger workers or restrict their movement.</p> <p>(4) An employer must ensure that, if a worker could be isolated from a primary escape route,</p> <p>(a) there is a ready, convenient and safe secondary means of escape from the work area, and</p> <p>(b) the secondary escape route is readily useable at all times.</p> <p>(5) An employer must ensure that all workers are familiar with escape routes from the work area.</p> <p>Section 121 Walkways, runways and ramps</p> <p>(1) An employer must ensure that a walkway, runway or ramp</p> <p>(b) is at least 600 millimetres wide,</p> <p>Section 122 Stairways</p> <p>(1) An employer must ensure that</p> <p>(a) the width of the treads and the height of the rise of a stairway are uniform throughout its length, and</p> <p>(b) the treads of a stairway are level.</p> <p>(2) An employer must ensure that</p> <p>(a) a stairway with 5 or more risers has the appropriate handrail required by</p>	<p>Lighting</p> <p>69(3) Where failure of the regular lighting system is likely to create conditions dangerous to the health or safety of workers, an employer, contractor or owner shall provide appropriate emergency lighting of at least five decalux for the worksite and exit routes from the worksite.</p> <p>Handrails</p> <p>121(1) An employer, contractor or owner shall ensure that a stairway with five or more treads:</p> <p>(a) is equipped with a handrail that:</p> <p>(i) extends the entire length of the stairway;</p> <p>(ii) is adequately secured to the structure;</p> <p>(iii) is installed on the stairway at a height of between 800 and 920 millimetres above the front edge of the treads; and</p> <p>(iv) is strong enough to support a worker who falls on the stairway; and</p> <p>(b) on an open side, is equipped with both a handrail and an intermediate rail or equivalent safeguard.</p> <p>(2) Where a handrail is required for a temporary stairway to which subsection (1) applies, an employer, contractor or owner shall ensure that the handrail is constructed of at least 38 by 89 millimetre construction grade lumber, or material of equivalent strength, and is supported by posts that are not more than three metres apart.</p> <p>General duty re: entrances, exits</p> <p>248 An employer, contractor or owner shall provide and maintain a safe means of entrance to and exit from a place of employment and all worksites and work-related areas in or on a place of employment.</p> <p>Travelways</p>

Fire Safety Tree Concepts	British Columbia OH&S Regulations	Alberta OH&S Regulations	Saskatchewan OH&S
	<p>(c) check and confirm the safe evacuation of all workers, (d) notify the fire department or other emergency responders, and (e) notify adjacent workplaces or residences which may be affected if the risk of exposure to a substance extends beyond the workplace. (2) Notification of the public must be in conformity with the requirements of other jurisdictions, including provincial and municipal agencies.</p> <p>14.17 Access and egress (1) A crane or hoist must have a safe means of access to and egress from (a) the operator's position, and (b) all maintenance and inspection locations on the crane and hoist. (2) If the normal safe means of egress is not always available to the operator during crane operations, an alternative safe means must be provided for the operator to get from the operating position to a safe area in the event of a power failure or other emergency.</p> <p>20.5 Temporary floors (1) During the erection of a building or structure of skeleton construction, a temporary floor, decking or formwork must be installed at the main working level where work is being done. (2) If compliance with subsection (1) is not practicable, a temporary floor or other effective means of protection must be installed not more than two levels or 8 m (25 ft) below the main working level. (3) Subsections (1) and (2) do not apply during the initial connection of structural members where it is not practicable to provide a floor or decking. (4) There must be a safe means of access and egress to each main working level referred to in subsection (1). (5) A stairway comprised of at least framing, treads and a handrail must be provided to each floor level before construction of the next floor or deck surface is undertaken, and the treads on the stairway must not create a tripping or slipping hazard. (1) Except as otherwise provided in this section and section 4.69, an employer must provide and maintain minimum illumination levels to ensure safe working conditions, safe passage and the identification of hazards or obstructions as follows: (b) 54 lux (5 fc) in areas of high activity, such as frequently used walkways and building access and egress points.</p>	<p>this Code, and (b) a stairway with open sides has a handrail and an intermediate rail or equivalent safeguard on each open side. (3) An employer must ensure that temporary stairs are at least 600 millimetres wide. Section 123 Handrails on stairways (1) This section applies to stairways with 5 or more risers. (2) An employer must ensure that a stairway is equipped with a handrail that (a) extends the entire length of the stairway, (b) is secured and cannot be dislodged, (c) is between 800 millimetres and 920 millimetres above the front edge of the treads, and (d) is substantial and constructed of lumber that is not less than 38 millimetres by 89 millimetres or material with properties the same as or better than those of lumber. (3) An employer must ensure that posts supporting a handrail (a) are spaced not more than 3 metres apart at their vertical centres, and (b) are constructed of lumber that is not less than 38 millimetres by 89 millimetres or materials with properties the same or better than those of lumber. Section 186 Lighting (4) Emergency lighting must generate enough light so that workers can (a) leave the work site safely,</p>	<p>250(1) An employer, contractor or owner shall ensure that every travelway: (a) is strong enough to withstand any traffic to which the travelway may be subjected; (b) has secure footing for workers and adequate traction for vehicles or equipment; and (c) is at least: (i) 600 millimetres wide, in the case of travelways installed before July 1, 1997; and (ii) 900 millimetres wide, in the case of travelways installed on and after July 1, 1997. (2) An employer, contractor or owner shall ensure that every travelway that may give rise to a hazard described in subsection 116(2) is provided with a guardrail.</p> <p>Stairs 251 An employer, contractor or owner shall ensure that: (a) the widths of treads, the depths of treads and the vertical distances between treads are uniform throughout the length of any stairway and that each tread is level; and (b) any stairs installed on or after the day on which this section comes into force, including temporary stairs, are at least 600 millimetres wide.</p>
Awareness and ability			
Construction process and procedure	<p>5.97 Emergency plan (1) A workplace must have a written emergency plan, appropriate to the hazards of the workplace that addresses the requirements of sections 5.98 to 5.102. (2) The plan must address emergency conditions which may arise from within the workplace and from adjacent workplaces. (3) The plan must be developed, implemented and annually reviewed in consultation with the joint committee or the worker health and safety representative, as applicable.</p>	<p>Section 115 Emergency response plan (1) An employer must establish an emergency response plan for responding to an emergency that may require rescue or evacuation. (2) An employer must involve affected workers in establishing the emergency response plan. (3) An employer must ensure that an emergency response plan is current.</p> <p>Section 116 Contents of plan</p>	<p>Fire safety plan 360(1) An employer, contractor or owner shall: (a) take all reasonably practicable steps to prevent the outbreak of fire at a place of employment and to provide effective means to protect workers from any fire that may occur; and (b) develop and implement a written fire safety plan that provides for the safety of all workers in the event of a fire. (2) A plan developed pursuant to subsection (1) must include:</p>

Fire Safety Tree Concepts	British Columbia OH&S Regulations	Alberta OH&S Regulations	Saskatchewan OH&S
		<p>An emergency response plan must include the following:</p> <ul style="list-style-type: none"> (a) the identification of potential emergencies; (b) procedures for dealing with the identified emergencies; (c) the identification of, location of and operational procedures for emergency equipment; (d) the emergency response training requirements; (e) the location and use of emergency facilities; (f) the fire protection requirements; (g) the alarm and emergency communication requirements; (h) the first aid services required; (i) procedures for rescue and evacuation; (j) the designated rescue and evacuation workers. 	<p>(a) the emergency procedures to be used in case of fire, including:</p> <ul style="list-style-type: none"> (i) sounding the fire alarm; (ii) notifying the fire department; and (iii) evacuating endangered workers, with special provisions for workers with disabilities; <p>(b) the quantities, locations and storage methods of all flammable substances present at the place of employment;</p> <p>(c) the designation of persons to carry out the fire safety plan and the duties of the designated persons;</p> <p>(d) the training of designated persons and workers in their responsibilities for fire safety;</p> <p>(e) the holding of fire drills; and</p> <p>(f) the control of fire hazards.</p> <p>(3) An employer, contractor or owner shall ensure that:</p> <ul style="list-style-type: none"> (a) designated persons and workers who have been assigned fire safety duties are adequately trained in, and implement, the fire safety plan; (b) the fire safety plan is posted in a conspicuous place for reference by workers; and (c) a fire drill is held at least once during each 12-month period.
Site Inspection			
Training	<p>4.16 Training (1) All workers must be given adequate instruction in the fire prevention and emergency evacuation procedures applicable to their workplace.</p> <p>5.102 Training and drills The employer must</p> <ul style="list-style-type: none"> (a) provide training in the appropriate emergency procedures to all workers who may be affected, and (b) conduct drills to test the adequacy of procedures and to ensure that workers and supervisors are familiar with their roles and responsibilities. 		<p>Training of workers 19(1) An employer shall ensure that a worker is trained in all matters that are necessary to protect the health and safety of the worker when the worker:</p> <p>(2) The training required by subsection (1) must include:</p> <ul style="list-style-type: none"> (a) procedures to be taken in the event of a fire or other emergency;
Additional Comments	Specific construction regulations	No specific construction site regulations	No specific construction site regulations

Table 4: Occupational health and safety regulations for Manitoba, Ontario and Quebec.

Fire Safety Tree Concepts	Manitoba OH&S Regulations	Ontario OH&S Regulations	Quebec OH&S Regulations
Prevent Fire Ignition			
Control Heat-Energy Source(s)			
Smoking	<p>Regulations</p> <p>18(1) The Lieutenant Governor in Council may make regulations (c.1) respecting the prohibition of smoking at workplaces, including deeming a contravention of The Non-Smokers Health Protection Act relating to workplaces to be a contravention of this Act for the purpose of issuing an improvement order under section 26;</p>		<p>51. Smoking prohibition: Smoking in any area where there may be flammable vapours or gases is prohibited.</p> <p>O.C. 885-2001, s. 51.</p>
Limit Unauthorized Access‡ (same as entry below, at *)			
Other			
Control Source-Fuel Interactions			
Hot Work	<p>Hot work</p> <p>19.9(1) An employer must ensure that hot work is performed in accordance with the Manitoba Fire Code.</p> <p>19.9(2) Before any hot work begins, an employer must ensure that a container or piping that contains or has contained a flammable substance is purged using an effective removal method.</p> <p>19.9(3) An employer must ensure that welding or cutting of metal that has been cleaned with a flammable or combustible liquid or flammable gases does not take place until the metal has thoroughly dried.</p>	<p>123. Precautions to prevent a fire shall be taken when using a blow torch or welding or cutting equipment or a similar piece of equipment. O. Reg. 213/91, s. 123.</p> <p>211. (1) Only a competent worker shall operate a hot tar or bitumen roadtanker or kettle. O. Reg. 213/91, s. 211 (1).</p> <p>(2) If a hot tar or bitumen roadtanker or kettle is fitted with a propane-fuelled heater,</p> <p>(a) the storage cylinder for propane shall not be placed closer than three metres to a source of fire or ignition;</p> <p>(b) the lines connecting the storage cylinder for propane to the heating device shall be located so that they do not come into contact with the hot tar or bitumen in the case of a spill or a failure of a component of the system; and</p> <p>(c) a fire extinguisher with an Underwriters’ Laboratories of Canada rating of at least 4A40BC shall be provided with the roadtanker or kettle. O. Reg. 213/91, s. 211 (2).</p> <p>(3) A propane burner used on a bitumen roadtanker or kettle,</p> <p>(a) shall have a thermal rating no greater than that recommended by the manufacturer of the roadtanker or kettle; and</p> <p>(b) shall consist of components that are adequate for their intended use. O. Reg. 213/91, s. 211 (3).</p> <p>(4) Hot tar or bitumen shall be transferred from a roadtanker to a kettle through enclosed piping. O. Reg. 213/91, s. 211 (4).</p>	<p>313. Prohibition: Welding and cutting operations are prohibited close to combustible substances or in places containing flammable gases or vapours or combustible dusts presenting a fire or explosion hazard, unless special precautions are taken to prevent any risk of fire or explosion.</p> <p>O.C. 885-2001, s. 313.</p> <p>314. Arc welding and cutting: Any task involving arc welding or cutting, as well as the installation, handling and maintenance of equipment required for doing so, shall comply with Chapter 5 of the CAN/CSA W117.2-M94 Code for safety in welding, cutting and adjacent processes standard.</p> <p>O.C. 885-2001, s. 314.</p> <p>315. Resistance welding: Any task involving resistance welding, as well as the installation, handling and maintenance of equipment required for doing so, shall comply with Chapter 6 of the CAN/CSA W117.2-M94 Code for safety in welding, cutting and adjacent processes standard.</p> <p>O.C. 885-2001, s. 315.</p> <p>316. Gas welding, brazing and cutting: Any task involving gas welding, brazing or cutting, as well as the installation, handling and maintenance of equipment required for doing so, shall comply with Chapter 8 of the CAN/CSA W117.2-M94 Code for safety in welding, cutting and adjacent processes standard.</p> <p>O.C. 885-2001, s. 316.</p>
Electrical			
Heater		<p>49. (1) A fuel-fired heating device shall be located, protected and used in such a way that there is no risk of igniting a tarpaulin or similar temporary enclosure or combustible materials adjacent to it. O. Reg. 213/91, s. 49 (1).</p>	

Fire Safety Tree Concepts	Manitoba OH&S Regulations	Ontario OH&S Regulations	Quebec OH&S Regulations
Other	<p>Control of ignition sources, static charges</p> <p>19.7 An employer must ensure that</p> <p>(a) static charge accumulations during the transfer of a flammable liquid or explosive substance from one container to another are prevented by either electrically bonding or grounding the containers;</p> <p>(b) metallic or conductive containers used to transfer flammable liquids are electrically bonded to each other or are electrically grounded while their contents are being transferred from one container to the other; and</p> <p>(c) only flammable fuel transfer equipment and portable fuel transfer tanks approved by the CSA or the Underwriters Laboratories of Canada are used to transfer flammable liquids.</p>		
Control Fuel			
Flammable and combustible liquids	<p>Containers for contaminated materials</p> <p>19.4 An employer must ensure that any material contaminated by a flammable or combustible liquid is placed in a container that is stored in accordance with the Manitoba Fire Code.</p> <p>Containers for combustible or flammable liquids</p> <p>19.5 An employer must ensure that any flammable or combustible liquid is kept in a container that meets the requirements of the Manitoba Fire Code. Workplace Safety And Health Regulation</p> <p>Use of gasoline</p> <p>19.6(1) An employer must ensure that gasoline is not used to start a fire or used as a cleaning agent.</p> <p>19.6(2) An employer must ensure that a worker does not</p> <p>(a) refill a tank connected to a heating device with a combustible or flammable liquid while the device is in operation or is hot enough to ignite the liquid; or</p> <p>(b) place a tar pot that is in use within 3 m of an entrance to or exit from a building or structure.</p>	<p>43(2) No more than one work day's normal supply of a flammable liquid shall be stored in a building or structure on a project unless it is stored,</p> <p>(a) in a container that is suitable for the particular hazards of the liquid; and</p> <p>(b) in a controlled access area or a room,</p> <p>(i) that has sufficient window area to provide explosion relief to the outside, and</p> <p>(ii) that is remote from the means of egress from the building or structure. O. Reg. 213/91, s. 43 (2).</p> <p>(3) A portable container used to store or transport flammable liquids,</p> <p>(a) shall be approved for use for that liquid by a recognized testing laboratory; and</p> <p>(b) shall have a label stating the use for which the container is approved and the name of the testing laboratory which gave the approval required by clause (a). O. Reg. 213/91, s. 43 (3).</p>	
Compressed gas	<p>Compressed gas equipment</p> <p>19.10 An employer must ensure that all compressed gas cylinders are stored in accordance with the Manitoba Fire Code.</p>	<p>42(4) No storage cylinder for propane shall be placed closer than three metres to a source of ignition or fire. O. Reg. 213/91, s. 42 (4).</p> <p>(5) Subsection (4) does not apply to a storage cylinder,</p> <p>(a) that forms part of hand-held propane equipment;</p> <p>(b) that forms part of a lead pot used in plumbing or electrical work;</p> <p>(c) that forms part of a propane-powered or propane-heated vehicle; or</p> <p>(d) that is protected from a source of ignition by a barrier, wall or other means of separation. O. Reg. 213/91, s. 42 (5).</p>	
Housekeeping/waste		<p>35. (1) Waste material and debris shall be removed to a disposal area and reusable material shall be removed to a storage area as often as is necessary to prevent a hazardous condition arising and, in any event, at least once daily. O. Reg. 213/91, s. 35 (1).</p> <p>41. A combustible, corrosive or toxic substance shall be stored in a suitable container. O. Reg. 213/91, s. 41.</p>	

Fire Safety Tree Concepts	Manitoba OH&S Regulations	Ontario OH&S Regulations	Quebec OH&S Regulations
Storage of Combustibles			81. Storage: Flammable and combustible substances shall be stored: (1) away from areas with a high fire hazard; (2) away from combustible substances or powerful oxidizing agents. O.C. 885-2001, s. 81.
Manage Fire Impact			
Manage Fire			
Control Combustion Process			
Fire Extinguishers	<p>Fire protection equipment and fire extinguishers</p> <p>19.3(1) An employer must ensure that</p> <p>(a) fire protection equipment of an appropriate type and sufficient size and capacity to be effective is installed in the workplace in accordance with the Manitoba Fire Code ; and</p> <p>(b) portable fire extinguishers are located in the workplace in accordance with the Manitoba Fire Code.</p> <p>19.3(2) An employer must ensure that all fire protection equipment and portable fire extinguishers are maintained in accordance with the manufacturer’s specifications and the Manitoba Fire Code.</p>	<p>52. (1) Fire extinguishing equipment shall be provided at readily accessible and adequately marked locations at a project. O. Reg. 213/91, s. 52 (1).</p> <p>52 (2) Without limiting subsection (1), at least one fire extinguisher shall be provided,</p> <p>(a) where flammable liquids or combustible materials are stored, handled or used;</p> <p>(b) where oil-fired or gas-fired equipment, other than permanent furnace equipment in a building, is used;</p> <p>(c) where welding or open-flame operations are carried on; and</p> <p>(d) on each storey of an enclosed building being constructed or altered. O. Reg. 213/91, s. 52 (2).</p> <p>(3) At least one fire extinguisher shall be provided in a workshop for each 300 or fewer square metres of floor area. O. Reg. 213/91, s. 52 (3).</p> <p>53. (1) Fire extinguishing equipment shall be of a suitable type and size to permit the evacuation of workers during a fire. O. Reg. 213/91, s. 53 (1).</p> <p>(2) Every fire extinguisher,</p> <p>(a) shall be a type whose contents are discharged under pressure; and</p> <p>(b) shall have an Underwriters’ Laboratories of Canada 4A40BC rating. O. Reg. 213/91, s. 53 (2).</p> <p>54. (1) Fire extinguishing equipment shall be protected from physical damage and from freezing. O. Reg. 213/91, s. 54 (1).</p> <p>(2) After a fire extinguisher is used, it shall be refilled or replaced immediately. O. Reg. 213/91, s. 54 (2).</p> <p>55. Every fire extinguisher shall be inspected for defects or deterioration at least once a month by a competent worker who shall record the date of the inspection on a tag attached to it. O. Reg. 213/91, s. 55.</p>	<p>36. Portable fire extinguishers: portable fire extinguishers shall be installed in all buildings so that action may be taken in the early stages of a fire.</p> <p>The choice, installation, utilization and maintenance of these portable fire extinguishers shall comply with the NFPA-10 Portable Fire Extinguishers standard, applicable according to the year the extinguishers were installed.</p> <p>Additional fire extinguishers shall be installed in places where there is a localized risk of fire.</p> <p>O.C. 885-2001, s. 36.</p> <p>37. Operating conditions: Portable fire extinguishers shall:</p> <p>(1) be approved by Underwriters' Laboratories of Canada (ULC);</p> <p>(2) provide protection according to the nature of the hazard;</p> <p>(3) be filled after use;</p> <p>(4) bear the name of the person entrusted therewith and the date of the last inspection.</p> <p>O.C. 885-2001, s. 37.</p>
Suppress Fire			
Fire Department		57 (12) The constructor shall give a copy of the floor plan to the fire department located nearest to the project. O. Reg. 145/00, s. 18 (2).	
Access			
Standpipes		<p>56. No work shall be carried out at a height of 84 metres or more in a building unless the building has temporary or permanent fire pumps that provide a minimum water flow of 1,890 litres per minute at a discharge pressure of at least 450 kilopascals at and above the 84-metre height. O. Reg. 145/00, s. 17.</p> <p>57. (1) As construction proceeds in a building with two or more storeys, a permanent or temporary standpipe shall be installed to within two storeys</p>	

Fire Safety Tree Concepts	Manitoba OH&S Regulations	Ontario OH&S Regulations	Quebec OH&S Regulations
		<p>of the uppermost work level. O. Reg. 145/00, s. 18 (1).</p> <p>(2) Subsection (1) does not apply to work carried out in a building which is not required by the Building Code to have a permanent standpipe. O. Reg. 213/91, s. 57 (2).</p> <p>(3) A permanent standpipe,</p> <p>(a) shall have sufficient hose outlets to permit every part of the building to be protected by a hose not longer than twenty-three metres;</p> <p>(b) shall have a connection for the use of the local fire department located on the street side of the building not more than 900 millimetres and not less than 300 millimetres above ground level and to which there is clear access at all times; and</p> <p>(c) shall be maintained so as to be readily operable if required to be used. O. Reg. 213/91, s. 57 (3).</p> <p>(4) Every hose outlet in a permanent standpipe shall have a valve. O. Reg. 213/91, s. 57 (4).</p> <p>(5) Every hose used with a permanent standpipe,</p> <p>(a) shall be at least thirty-eight millimetres in diameter;</p> <p>(b) shall have a combination straight stream and fog nozzle; and</p> <p>(c) shall be stored on a rack in such a way as to protect it from damage and keep it available for immediate use. O. Reg. 213/91, s. 57 (5).</p> <p>(6) If a temporary standpipe has been installed, it shall not be disconnected until the permanent standpipe is connected, so that there is always a standpipe in service. O. Reg. 145/00, s. 18 (2).</p> <p>(7) A temporary standpipe shall be maintained so that it is readily operable. O. Reg. 145/00, s. 18 (2).</p> <p>(8) A temporary standpipe shall have at least one hose outlet per floor, with a valve and a hose attached to each hose outlet and a nozzle attached to each hose. O. Reg. 145/00, s. 18 (2).</p> <p>(9) In addition to the requirements of subsection (8), there shall be a connection to which there is clear access at all times, located between 30 and 90 centimetres above ground level on a side of the building that faces the street. O. Reg. 145/00, s. 18 (2).</p> <p>(10) A hose outlet on a temporary standpipe,</p> <p>(a) shall have a valve; and</p> <p>(b) shall be capable of accepting a hose that is 38 millimetres in diameter. O. Reg. 145/00, s. 18 (2).</p> <p>(11) If a temporary standpipe is installed in a building under construction, the constructor shall post at the project, or have available for review, a floor plan of the building indicating,</p> <p>(a) the location of the hose outlets on each floor;</p> <p>(b) the location of the point on the perimeter of each floor that is furthest from the hose outlet on that floor; and</p> <p>(c) the location of each exit on each floor. O. Reg. 145/00, s. 18 (2).</p>	
Hydrants			
Sprinklers			
Control Fire by Construction			

Fire Safety Tree Concepts	Manitoba OH&S Regulations	Ontario OH&S Regulations	Quebec OH&S Regulations
Compartment			
Building			
System & Operational Readiness			
Water Supply			
Manage Exposed			
Limit Amount Exposed			
Limit Unauthorized Access			
Detection – Manual (Fire Watch)			
Detection - Automatic			
Safeguard Exposed			
Detection – Manual (Fire Watch)			
Detection - Automatic			
Alarms			
Egress	<p>Safe access and egress</p> <p>13.1(1) An employer and an owner must provide and maintain a safe means of access to and egress from</p> <p>(a) the workplace; and</p> <p>(b) all work-related areas at a workplace.</p> <p>13.1(2) An employer and an owner must ensure that each means of access and egress</p> <p>(a) complies with the Manitoba Building Code and Manitoba Fire Code ;</p> <p>(b) is free from all obstructions, including obstructions from materials and equipment and accumulations of waste and ice and snow; and</p> <p>(c) has sufficient traction to allow workers to move safely.</p> <p>Temporary doorways: construction project site</p> <p>13.2 An employer and a prime contractor must ensure that a temporary doorway used for access or egress at a construction project site</p> <p>(a) is designed and constructed to open outward from the workplace; and</p> <p>(b) is not locked in the closed position when a worker is at the site.</p> <p>Secondary means of egress</p> <p>13.4 An employer must ensure that there is a ready, convenient and safe secondary means of egress from the workplace that is conspicuously marked and readily usable at all times if</p> <p>(a) the primary means of egress from a workplace becomes unusable because of a malfunction of equipment or a work process; or</p> <p>(b) a worker could be isolated from the primary means of egress.</p>	<p>49(4) No fuel-fired heating device shall be located so as to restrict any means of egress. O. Reg. 213/91, s. 49 (4).</p> <p>70. (1) Access to and egress from a work area located above or below ground level shall be by stairs, runway, ramp or ladder. O. Reg. 213/91, s. 70 (1).</p> <p>(2) Subsection (1) does not apply to a work area that is a suspended scaffold able to be moved to give access to a floor, roof or platform or to ground level. O. Reg. 213/91, s. 70 (2).</p> <p>71. Adequate means of egress shall be provided from a work area to permit the evacuation of workers during an emergency. O. Reg. 213/91, s. 71.</p> <p>72. A work area, a route to and from a work area and a scaffold platform on which work is being performed shall be maintained at all times in a condition that does not endanger workers and, without limiting the generality of the foregoing,</p> <p>(a) shall be kept clear of obstructions;</p> <p>(b) shall be kept clear of snow, ice or other slippery material; and</p> <p>(c) shall be treated with sand or similar material when necessary to ensure a firm footing. O. Reg. 213/91, s. 72.</p> <p>75. (1) No work shall be performed in a building or structure that will be at least two storeys high when it is finished unless stairs are installed in accordance with this section. O. Reg. 213/91, s. 75 (1).</p> <p>(2) As the construction of a building or structure progresses, permanent or temporary stairs shall be installed up to,</p> <p>(a) the uppermost work level; or</p> <p>(b) if stairs would interfere with work on the uppermost work level, to within the lesser of two storeys or nine metres below the uppermost work level. O. Reg. 213/91, s. 75 (2).</p> <p>(3) Subsection (2) does not apply with respect to,</p> <p>(a) a part of a building or structure in which only the structural steel beams</p>	<p>34. Evacuation plan: In any establishment, an emergency evacuation plan shall be drawn up and be in force, if applicable.</p> <p>O.C. 885-2001, s. 34.</p> <p>15. Walkways: Walkways inside a building shall:</p> <p>(1) be kept in good order and free from any obstruction;</p> <p>(3) be wide enough to allow the safe handling of materials and be at least 600 mm wide;</p> <p>(4) be at least 1,100 mm wide if they serve as direct access to an exit;</p> <p>O.C. 885-2001, s. 15.</p> <p>22. Service stairs: Any service stairs shall:</p> <p>(1) have a minimum width of 550 mm for stairways built or modified on or after 2 August 2001;</p> <p>(2) have a slope between at least 20° and at most 50° with the horizontal, except for stairways installed before 1 January 1973 which may have a slope up to 60°;</p> <p>(3) be provided with guardrails along any free side;</p> <p>(4) be provided with steps having:</p> <p>(a) a uniform depth and width in any one flight;</p> <p>(b) a depth of at least 150 mm (nose excluded);</p> <p>(c) a maximum height of 240 mm, except for stairs built before 1 January 1973 for which the stair height may reach 280 mm;</p> <p>(5) have a free space of at least 2 m above each stair, measured from the nose or the forward part of the stair.</p> <p>The depth of stairs on circular or spiral service stairs shall measure 230 mm from the post or the supports for the inside railing.</p>

Fire Safety Tree Concepts	Manitoba OH&S Regulations	Ontario OH&S Regulations	Quebec OH&S Regulations
	<p>Emergency exits 13.5 An employer and an owner must ensure that emergency exits and means of egress from a workplace are conspicuously marked and designed to enable quick and unimpeded evacuation of the workplace.</p> <p>Stairs to be provided 13.6(1) When work at a construction project site on a multi-storey building or structure has progressed to 10 or more metres above ground level, an employer and a prime contractor must ensure that permanent or temporary stairs to the ground are provided from each working level of the project.</p>	<p>or columns are erected; or (b) a structure to which a permanent ladder is attached before the structure is raised into position. O. Reg. 213/91, s. 75 (3). 77. (1) No work shall be performed in a building or structure with stairs unless the stairs meet the requirements of this section. O. Reg. 213/91, s. 77 (1). (2) Stairs shall have, (a) a clear width of at least 500 millimetres; (b) treads and risers of uniform width, length and height; (c) subject to subsection (3), stringers with a maximum slope of 50 degrees from the horizontal; (d) landings that are less than 4.5 metres apart measured vertically; (e) a securely fastened and supported wooden handrail on the open sides of each flight; and (f) a guardrail on the open side of each landing. O. Reg. 213/91, s. 77 (2). (3) The stringers of prefabricated stairs erected inside a tower formed by scaffold frame sections shall have a maximum slope of 60 degrees from the horizontal. O. Reg. 213/91, s. 77 (3). (4) A wooden handrail shall measure thirty-eight millimetres by eighty-nine millimetres and shall be free of loose knots, sharp edges, splinters and shakes. O. Reg. 213/91, s. 77 (4). (5) Skeleton steel stairs shall have temporary wooden treads securely fastened in place that are made of suitable planking extending the full width and breadth of the stairs and landings. O. Reg. 213/91, s. 77 (5).</p>	<p>O.C. 885-2001, s. 22.</p>
Awareness and ability			
Construction process and procedure		<p>14. (1) A constructor shall appoint a supervisor for every project at which five or more workers will work at the same time. O. Reg. 213/91, s. 14 (1). (3) A supervisor or a competent person appointed by the supervisor shall inspect all machinery and equipment, including fire extinguishing equipment, magazines, electrical installations, communication systems, sanitation and medical facilities, buildings and other structures, temporary supports and means of access and egress at the project to ensure that they do not endanger any worker. O. Reg. 213/91, s. 14 (3).</p>	
Inspection			
Training	<p>Safe work procedures 19.2 An employer must (a) develop and implement safe work procedures for fire and explosive hazards in the workplace, including hot work if hot work is performed in the workplace; (b) train workers in the safe work procedures; and (c) ensure that workers comply with the safe work procedures.</p>	<p>52 (1.1) Every worker who may be required to use fire extinguishing equipment shall be trained in its use. O. Reg. 145/00, s. 16.</p>	
Additional Comments	No construction site specific requirements	Specific requirements for construction sites	No specific requirements for construction sites

Table 5: Occupational health and safety regulations for Newfoundland & Labrador, New Brunswick and Nova Scotia.

Fire Safety Tree Concepts	Newfoundland and Labrador OH&S Regulations	New Brunswick OH&S Regulations	Nova Scotia OH&S Regulations
Prevent Fire Ignition			
Control Heat-Energy Source(s)			
Smoking			
Limit Unauthorized Access* (same as entry below, at ‡)			
Other			
Control Source-Fuel Interactions			
Hot Work	<p>Hot work</p> <p>448. Fire suppression equipment shall be readily available and appropriate to the potential loss exposure at a location where hot work takes place.</p> <p>Gas welding and burning</p> <p>449. (1) Welding, cutting, and similar processes shall be carried out according to the requirements of</p> <p>(a) CSA Standard W117.2 in "Safety in Welding, Cutting and Allied Processes" or another standard acceptable to the minister;</p> <p>(b) the manufacturer's instructions and recommendations for the equipment being used; and</p> <p>(c) the applicable requirements of these regulations.</p> <p>Burning and welding</p> <p>453. (1) Burning, welding or other hot work shall not be done in an area where there is a likelihood of the presence of flammable substances until</p> <p>(a) tests have been done to ensure that work may be safely performed; and</p> <p>(b) suitable procedures have been adopted to ensure that all existing or potential sources of ignition have been eliminated or effectively controlled.</p> <p>(2) Where testing procedures are used, tests shall be conducted at intervals to ensure the continuing safety of workers.</p> <p>(3) Burning, welding or cutting shall not be done where there is a danger of extreme heat coming into contact with a concrete surface unless that surface is protected from the source of heat.</p> <p>(4) Suitable safety devices to prevent reverse gas flow and to arrest a flashback shall be installed according to the manufacturer's instructions on each hose in an oxygen system between the torch and the regulator.</p>	<p>274(1) An employer and an employee shall each comply with the requirements of CSA standard W117.2-94, "Safety in Welding, Cutting and Allied Processes".</p> <p>274(2) This section does not apply where a firefighter is engaged in a rescue. 97-121; 2001-33</p> <p>275(1) No employee shall commence a welding, cutting, burning or soldering operation unless the employee has thoroughly inspected the entire area surrounding the area around the operation to ensure that all combustible, flammable or explosive material, dust, gas or vapour has been removed from the area, if possible, or that adequate precautions have been taken to prevent fire or explosion.</p> <p>275(2) An employer shall not permit any welding, cutting, burning or soldering operation until the precautions required by subsection (1) have been carried out.</p> <p>275(3) An employer and an employee shall each ensure that suitable fire extinguishing equipment in good working order is readily available where any welding, cutting, burning or soldering operation or any other allied process using heat application is performed.</p>	<p>General provisions</p> <p>109 (1) In this Part, "welding or allied process" means any specific type of electric or oxy fuel gas welding or cutting process including those processes referred to in Appendix A of the latest version of CSA standard CSA W117.2, "Safety in Welding, Cutting, and Allied Processes", and includes</p> <p>(a) arc welding, brazing, solid-state welding, soldering, resistance welding, and other welding; and</p> <p>(b) allied processes such as arc cutting, oxygen cutting, thermal spraying, thermal adhesive bonding and other cutting.</p> <p>Subsection 109(1) amended: O.I.C. 2000-130, N.S. Reg. 52/2000; O.I.C. 2013-65, N.S. Reg. 53/2013.</p> <p>(2) An employer shall, where reasonably practicable, comply with the requirements of the latest version of CSA standard CSA-W 117.2, "Safety in Welding, Cutting and Allied Processes".</p> <p>Subsection 109(2) amended: O.I.C. 2000-130, N.S. Reg. 52/2000; O.I.C. 2013-65, N.S. Reg. 53/2013.</p> <p>111 (1) An employer shall ensure that, before a welding or allied process is commenced, the person who is to operate the equipment has inspected the area surrounding the operation to ensure that adequate precautions have been taken</p> <p>(a) to remove from the area all hazardous material or processes that produce combustible, flammable or explosive material, dust, gas or vapour; and</p> <p>(b) to prevent fire or explosion.</p>
Electrical			
Heater			
Other			
Control Fuel			
Flammable and combustible liquids	<p>444.</p> <p>(5) Waste material contaminated with a solvent, oil, grease, paint or other flammable substance shall be placed in covered metal containers before</p>		

Fire Safety Tree Concepts	Newfoundland and Labrador OH&S Regulations	New Brunswick OH&S Regulations	Nova Scotia OH&S Regulations
	<p>disposal and shall not be stored in work areas.</p> <p>(6) Where a volatile or flammable substance, gas or vapour is present, or arises out of material or equipment or from a work process, existing or potential sources of ignition shall be controlled or eliminated.</p> <p>(7) For the purpose of subsection (6), a source of ignition includes an open flame, spark-producing mechanical equipment, welding and cutting processes, smoking, static discharge, electrical equipment or an installation that is not approved for hazardous locations, as specified by the Canadian Electrical Code.</p> <p>(8) Where work involves more than one employer, a principal contractor shall ensure that sources of ignition resulting from the work of one employer are eliminated or adequately controlled where a flammable gas or a flammable liquid is handled, used or stored by another employer.</p>		
Compressed gas			<p>(2) Subject to the Fire Safety Act, an employer shall ensure that a portable compressed gas cylinder is stored</p> <p>(a) in a well-ventilated storage area where the temperature does not exceed 52oC;</p> <p>(b) with cylinders grouped by types of gas and the groups arranged to take into account the gases contained;</p> <p>(c) with full and empty cylinders separated;</p> <p>(d) at a safe distance from all operations that produce flames, sparks or molten metal or result in excessive heating of the cylinder;</p> <p>(e) securely; and</p> <p>(f) with protective devices in place.</p> <p>Subsection 47(2) amended: O.I.C. 2013-65, N.S. Reg. 53/2013.</p>
Housekeeping/waste			<p>Bulk material in bins, hoppers and tanks</p> <p>30 An employer shall ensure that a bin, hopper, tank or other similar structure used to store combustible bulk material</p> <p>(a) has a lid, an adequate ventilation system and is fire resistant; or</p> <p>(b) has alternative measures that provide an equivalent level of safety.</p> <p>Section 30 replaced: O.I.C. 2000-130, N.S. Reg. 52/2000.</p>
Storage of Combustibles			
Manage Fire Impact			
Manage Fire			
Control Combustion Process			
Fire Extinguishers			
Suppress Fire			
Fire Department			
Access			
Standpipes			
Hydrants			
Sprinklers			
Control Fire by Construction			

Fire Safety Tree Concepts	Newfoundland and Labrador OH&S Regulations	New Brunswick OH&S Regulations	Nova Scotia OH&S Regulations
Compartment			
Building			
System & Operational Readiness			
Water Supply			
Manage Exposed			
Limit Amount Exposed			
Limit Unauthorized Access			
Detection – Manual (Fire Watch)			
Detection - Automatic			
Safeguard Exposed			
Detection – Manual (Fire Watch)			
Detection - Automatic			
Alarms			
Egress	<p>Emergency lighting</p> <p>40. (1) Where a failure of a lighting system would create conditions dangerous to the health and safety of workers, an emergency lighting system shall be provided for the workplace and the exit routes.</p> <p>(2) An emergency lighting system shall provide dependable illumination while the primary lighting system is off to enable all emergency measures to be carried out, including</p> <p>(a) emergency shutdown procedures, and</p> <p>(b) evacuation of workers from the premises.</p> <p>Temporary floors</p> <p>377. (1) During the erection of a building or structure of skeleton construction, a temporary floor, decking or formwork shall be installed at the main working level where work is being done.</p> <p>(4) A safe means of access and egress to a main working level referred to in subsection (1) shall be provided</p> <p>(5) A stairway comprised, at a minimum, of framing, treads, midrail and a handrail shall be provided to each floor level before construction of the next floor or deck surface is undertaken, and the treads on the stairway shall not create a tripping or slipping hazard.</p> <p>Stairways</p> <p>403. Stairways, complete with handrails, shall be left intact until access to the level served by the stairway is no longer required.</p> <p>Access, egress and movement</p> <p>458. (1) All workplaces shall have safe and appropriate means of access and egress.</p>	<p>Access and Egress</p> <p>113(1) An employer shall provide a safe means of access to and egress from all areas where work is performed.</p> <p>113(2) An employer shall ensure that an emergency means of escape is provided from any area where the normal means of escape may be rendered dangerous or unusable.</p> <p>113(2.1) This section does not apply where a firefighter is engaged in structural fire-fighting or rescue.</p> <p>Stairways</p> <p>115(1) An employer shall ensure that a stairway</p> <p>(a) is of sufficient strength to sustain a live load of 4.8 kPa,</p> <p>(b) is a minimum of 1.12 m in width,</p> <p>(c) is pitched not less than 20 degrees and not more than 35 degrees from the horizontal,</p> <p>(d) has risers constant in height that are not less than 127 mm and not more than 200 mm,</p> <p>(e) has a maximum height of 3.7 m between landings,</p> <p>(f) has landings, if any, with a minimum clearance of 1.12 m measured in the direction of the run,</p> <p>(g) has a vertical clearance of 2.05 m from the top of the tread at all points in the stairway,</p> <p>(h) has treads constant in width and not less than 225 mm in width, and</p> <p>(i) has a non-slip nosing or a strip of non-slip material not less than 50 mm in width and installed 25 mm from the front edge of the tread on all treads where there may be a hazard of slipping due to the material of the tread.</p> <p>115(2) Paragraphs (1)(b), (c) and (h) do not apply to a service stairway.</p> <p>115(3) An employer shall ensure that a service stairway</p> <p>(a) is a minimum of 900 mm in width,</p>	<p>Access and exit</p> <p>140 (1) An employer shall provide a safe means of access to and exit from all work areas.</p> <p>(2) An employer shall provide adequate information to ensure that every person in the workplace is able to exit the workplace in a safe manner in the event of an emergency.</p> <p>(3) An employer shall provide overhead protection at every means of access to and exit from a building, structure or project where there is a hazard of falling material that may injure a person at or near the workplace.</p> <p>(4) This Section does not apply where a firefighter is engaged in structural firefighting or rescue.</p> <p>Subsection 140(4) amended: O.I.C. 2000-130, N.S. Reg. 52/2000.</p> <p>Stairways</p> <p>141 (1) Subject to subsections (2) and (3), an employer shall ensure that a permanent stairway is designed, constructed and maintained in accordance with the National Building Code of Canada, as adopted and modified under the Building Code Act and the Nova Scotia Building Code Regulations made under that Act.</p> <p>(2) Where the National Building Code of Canada, as adopted and modified under the Building Code Act and the Nova Scotia Building Code Regulations made under that Act does not apply to a permanent stairway built after this Section comes into force, an employer shall ensure that the permanent stairway</p>

Fire Safety Tree Concepts	Newfoundland and Labrador OH&S Regulations	New Brunswick OH&S Regulations	Nova Scotia OH&S Regulations
	<p>(2) Work areas shall be arranged to allow the safe movement of workers, equipment and materials.</p> <p>(3) An aisle or passageway designated for pedestrian traffic shall be clearly indicated by markings or other means and, where practicable, floor or grade markings shall be used.</p> <p>(4) Practical means of emergency escape shall be provided from a work area in which work processes could create an immediate threat to workers, and where regular means of egress could be rendered dangerous or unusable.</p> <p>(5) A walkway shall not be less than 50.80 centimetres wide and shall be accessible by means of a fixed ladder or stairway.</p> <p>(6) A curb shall be installed on an elevated thoroughfare to prevent equipment from running off the open edge of the thoroughfare.</p> <p>Exits and doors</p> <p>459. (1) An emergency exit shall be designed and marked to provide quick and unimpeded exit, and periodic emergency drills shall be held to ensure workers' awareness of the availability of the exits.</p> <p>(2) A door shall not open directly onto a stairway, but shall open onto a floor or a landing having a width that exceeds the swing of the door.</p> <p>(3) A double-acting swing door shall be designed and installed to permit an adequate view through the door where the door presents a safety hazard.</p> <p>(4) A transparent glass door or a glass panel that extends less than 30.48 centimetres from the floor and which could be mistaken for a doorway, shall be constructed of laminated, tempered or wired safety glass meeting the requirements of the National Building Code of Canada.</p> <p>(5) Subsection (4) does not apply where the glass is fitted with bars, or other devices or markings which clearly indicate the presence and position of the door or panel.</p> <p>Stairs</p> <p>460. (1) A flight of stairs with more than 4 risers shall be equipped with handrails as follows:</p> <p>(a) on all open sides of stairway;</p> <p>(b) on one side of an enclosed stairway 1.12 metres in width; and</p> <p>(c) on both sides of enclosed stairways over 1.12 metres wide.</p> <p>(2) The height of the upper surface of a stair rail from and perpendicular to the forward edge of the tread shall be not less than 91.44 centimetres and not more than 1.07 metres.</p>	<p>(b) is pitched not less than 20 degrees and not more than 50 degrees from the horizontal, and</p> <p>(c) has treads constant in width and not less than 150 mm in width.</p> <p>115(4) An employer shall ensure that a stairway having four or more risers</p> <p>(a) that are 2.24 m or less in width, has a handrail and supporting structure on any open side and a handrail on any enclosed side, and</p> <p>(b) that are more than 2.24 m in width, has a handrail and supporting structure on any open side and in the centre and a handrail on any enclosed side.</p> <p>115(5) An employer shall ensure that a handrail and supporting structure referred to in subsection (4) is constructed so that</p> <p>(a) the height of the handrail and supporting structure from the upper surface of the handrail to the surface of the tread in line with the face of the riser at the forward edge of the tread is not less than 750 mm and not more than 900 mm,</p> <p>(b) the supporting structure is capable of withstanding a load of 100 kg applied in any direction,</p> <p>(c) the handrail is</p> <p>(i) continuous throughout the flight of stairs and landings,</p> <p>(ii) capable of withstanding a load of 100 kg applied in any direction, and</p> <p>(iii) at least 40 mm wide,</p> <p>(d) a handrail mounted directly on a wall or partition is fixed so as not to interfere with the smoothness of the top and side surfaces, and</p> <p>(e) if brackets are used, the brackets to which a handrail is fixed are spaced not more than 2.4 m apart and have a clearance of at least 40 mm between the handrail and any wall or partition or any obstruction on the wall or partition to which the brackets are attached.</p> <p>116 Where a stairway has treads or landings made of perforated material, an employer shall ensure that the perforated material does not have openings larger than 11 mm.</p> <p>117(1) Where work on a building or structure progresses to one storey or 4.5 m above the lowest floor level, whichever is the lower, an employer shall ensure that permanent stairs or temporary stairs are installed in the building or structure leading from the lowest floor level to all the floors above.</p> <p>117(2) An employer may use guardrails for temporary stairs and landings in place of the handrails and supporting structures required under subsections 115(4) and (5).</p> <p>118 An employer shall ensure that a skeleton steel stairway with treads that are not completed during the construction stages has temporary wooden treads set into the full length and width of the steps and landings.</p>	<p>(a) meets or exceeds the requirements of Section 142; or</p> <p>(b) is certified by an engineer as having been constructed in accordance with the certified design of an engineer.</p> <p>(3) Where</p> <p>(a) the National Building Code of Canada, as adopted and modified under the Building Code Act and the Nova Scotia Building Code Regulations made under that Act does not apply to a permanent stairway built before this Section comes into force; and</p> <p>(b) there is reasonable doubt as to whether the permanent stairway is adequate, an employer shall ensure that an engineer provides a written assessment of the permanent stairway.</p> <p>142 (1) An employer shall ensure that a temporary stairway</p> <p>(a) is of sufficient strength to withstand 4 times the maximum load likely to be imposed;</p> <p>(b) has treads that are a minimum of 900 mm in length;</p> <p>Clause 142(1)(b) amended: O.I.C. 2000-130, N.S. Reg. 52/2000.</p> <p>(c) is pitched not more than 60° from the horizontal;</p> <p>(d) has risers constant in height that are not less than 125 mm and not more than 260 mm in height;</p> <p>(e) has a maximum height of 4 m between landings;</p> <p>(f) has landings, if any, with a minimum clearance of 900 mm measured in the direction of the run;</p> <p>(g) has a vertical clearance of 2 m from the top of the tread at all points in the stairway; and</p> <p>(h) has treads constant in width and not less than 230 mm in width.</p> <p>Subsection 142(2) repealed: O.I.C. 2013-65, N.S. Reg. 53/2013.</p> <p>(3) An employer shall ensure that a temporary stairway having 4 or more risers</p> <p>(a) has a guardrail on any open side and a railing on any enclosed side, where the risers are 2.2 m or less in length and</p> <p>(b) has a guardrail on any open side and in the centre and a railing on any enclosed side, where the risers are more than 2.2 m in length.</p> <p>Subsection 142(3) amended: O.I.C. 2000-130, N.S. Reg. 52/2000.</p> <p>(4) An employer shall ensure that a guardrail referred to in subsection (3) is installed</p> <p>(a) with posts that</p> <p>(i) are spaced at intervals of not more than 2.4 m, and</p> <p>(ii) are secured against movement by the attachment of the posts to the stairway, or by another means that provides an equivalent level of safety;</p> <p>(b) with a top railing that is between 0.90 and 1.06 m above the midpoint of the tread and securely fastened to posts secured in compliance with clause (a); and</p> <p>Clause 142(4)(b) amended: O.I.C. 2000-130, N.S. Reg. 52/2000.</p> <p>(c) with a second railing on the inner side of the posts midway between the top railing and the midpoint of the tread.</p>

Fire Safety Tree Concepts	Newfoundland and Labrador OH&S Regulations	New Brunswick OH&S Regulations	Nova Scotia OH&S Regulations
			<p>Clause 142(4)(c) amended: O.I.C. 2000-130, N.S. Reg. 52/2000. Subsection 142(4) amended: O.I.C. 2000-130, N.S. Reg. 52/2000.</p> <p>(5) An employer shall ensure that a wooden supporting structure or wooden railing of a temporary stairway, in addition to the requirements of subsection (4),</p> <p>(a) is at least 50 mm thick and 100 mm wide; and (b) is made of No. 1 or No. 2 spruce, pine, or fir as graded according to the latest version of CSA standard CSA 0141, "Softwood Lumber", or other lumber that provides an equivalent level of safety.</p> <p>Clause 142(5)(b) replaced: O.I.C. 2000-130, N.S. Reg. 52/2000; amended: O.I.C. 2013-65, N.S. Reg. 53/2013.</p> <p>6) An employer shall ensure that a railing of a temporary stairway that is mounted directly on a wall or partition</p> <p>(a) is fixed so as not to interfere with the smoothness of the top and side surfaces of the railing; (b) is continuous throughout the flight of stairs and landings; (c) is at least 40 mm in width; and (d) where brackets are used, has brackets to which a railing is fixed spaced not more than 2.4 m apart and has a clearance of at least 40 mm between the railing and any wall or partition or any obstruction on the wall or partition to which the brackets are attached.</p>
Awareness and ability			
Construction process and procedure			
Site Inspection			
Training	<p>Emergency training</p> <p>41. (1) A worker shall be given adequate instruction in the fire prevention and emergency evacuation procedures applicable to his or her workplace.</p> <p>(2) A worker assigned to firefighting duties in a workplace shall be given adequate training by a qualified instructor in fire suppression methods, fire prevention, emergency procedures, organization and chain of command, firefighting crew safety and communications applicable to the workplace in accordance with National Fire Protection Association standards.</p> <p>(3) Retraining for firefighting duties shall be provided periodically, but not less than once a year.</p>		<p>Compliance with policies, procedures, plans and codes of practice</p> <p>7 (3) A person must comply with all written policies, procedures, plans and codes of practice established for the purposes of the Act and these regulations, including undergoing any training required.</p> <p>Section 7 replaced: O.I.C. 2013-65, N.S. Reg. 53/2013.</p> <p>Communicating and updating policies, procedures, plans and codes of practice</p> <p>7A (1) In addition to any specific requirements under the Act, an employer must ensure that all policies, procedures, plans and codes of practice are</p> <p>(2) Before any work is undertaken, an employer must ensure that the necessary information, instruction, training, supervision, facilities and equipment are provided to implement any part of a policy, procedure, plan or code of practice applicable to a workplace.</p> <p>Section 7A added: O.I.C. 2013-65, N.S. Reg. 53/2013.</p>
Additional Comments	No specific construction site requirements	Specific construction site requirements, but not fire safety related	Has construction site specific requirements

Table 6: Occupational health and safety regulations for Prince Edward Island, Yukon and Northwest Territories.

Fire Safety Tree Concepts	Prince Edward Island OH&S Regulations	Yukon OH&S Regulations	Northwest Territories OH&S Regulations
Prevent Fire Ignition			
Control Heat-Energy Source(s)			
Smoking			
Limit Unauthorized Access			
Other			
Control Source-Fuel Interactions			
Hot Work	<p>37.2 The employer shall ensure that a welding and cutting operation is prohibited in an area containing combustible materials, or in the close proximity of explosive or flammable dusts, gases or vapours, unless adequate precautions are taken to prevent fires or explosions. (EC180/87)</p> <p>37.5 Fire retardant blankets shall be placed over open gratings to contain slag and sparks produced by welding and cutting operations. (EC180/87)</p> <p>37.8 The employer shall ensure that adequate fire extinguishing equipment in good working order is readily available where any welding, soldering or flame-cutting or heating operations or any other process which uses heat application are performed. (EC180/87)</p> <p>37.16 (1) The employee shall ensure that a welding or cutting torch is not laid down until the gases have been completely shut off.</p>		<p>405. (1) Where a flammable substance is or may be present, an employer shall ensure that no hot work is performed until</p> <p>(a) suitable tests have been conducted that</p> <p>(i) indicate whether the atmosphere contains a flammable substance in a quantity sufficient to create an explosive atmosphere, and</p> <p>(ii) confirm that the work may be safely performed; and</p> <p>(b) the work procedures developed pursuant to paragraph 398(1)(b) have been implemented to ensure continuous safe performance of the work.</p> <p>(2) While hot work is being performed, an employer shall conduct tests described in paragraph (1)(a) at intervals appropriate to the work being performed and record the results.</p> <p>(3) An employer shall not require or permit any hot work to be performed in the vicinity of a material that may constitute a fire hazard until suitable steps have been taken to reduce the risk of fire.</p> <p>(4) An employer shall ensure that a container or piping that contains or has contained a flammable substance is purged using an effective method to remove the flammable substance from the container or piping before any hot work is begun on that container or piping.</p> <p>(5) An employer shall not require or permit any welding or cutting of metal that has been cleaned with a flammable or combustible liquid until the metal has thoroughly dried.</p>
Electrical			
Heater	<p>7.1 The employer shall ensure that liquid fuel or gas for a temporary heating device in excess of one day's supply shall</p> <p>(a) be stored in safe conditions;</p> <p>(b) not be stored in a building or structure unless in a fire resistant room constructed for the purpose;</p> <p>(c) not be stored adjacent to a means of egress. (EC180/87)</p> <p>7.2 The employer shall ensure that a fuel fired heating device, including a temporary furnace</p> <p>(a) shall be placed on the ground or on a non-combustible floor, but it may be placed upon a wooden floor if it is separated therefrom by 76 mm (3 in.) of non-combustible material covered by sheet metal and extending 600 mm (23.6 in.) beyond all sides of the device;</p> <p>(b) shall be so located, protected and used that it will not ignite</p> <p>(i) tarpaulins or similar temporary enclosures, or</p>		

Fire Safety Tree Concepts	Prince Edward Island OH&S Regulations	Yukon OH&S Regulations	Northwest Territories OH&S Regulations
	(ii) wood or other combustible materials; (c) shall be provided with a securely supported short metal pipe to discharge the products of combustion outdoors where necessary; (d) shall, where specified by the manufacturer, be vented to the outside atmosphere to remove harmful or noxious fumes; (e) shall be used only where there is adequate general ventilation while employees are in the building or structure. (EC180/87)		
Other			398. (1) Where a flammable substance is or is intended to be handled, used, stored, produced or disposed of at a work site, an employer shall develop written procedures to ensure the health and safety of workers who (a) handle, use, store, produce or dispose of a flammable substance that may spontaneously ignite or ignite when in combination with any other substance; or (b) perform hot work where there is a risk of fire. (2) An employer shall ensure that all workers who are required or permitted to perform work referred to in subsection (1) are trained in, and implement, the procedures developed pursuant to subsection (1). (3) Workers who perform work referred to in subsection (1) shall implement the procedures developed pursuant to subsection (1)
Control Fuel			
Flammable and combustible liquids	25.6 No person shall use gasoline or highly volatile material for starting fires. (EC180/87)		399. (1) An employer shall ensure that materials contaminated by flammable liquids are placed in receptacles that (a) are non-combustible and have close-fitting metal covers; (b) are labelled "flammable"; and (c) are located at least 1 m away from other flammable liquids. (2) Where the surface on which a receptacle required by subsection (1) is placed is combustible, an employer shall ensure that the receptacle has a flanged bottom or legs that are not less than 50 mm high. (3) A worker shall place materials contaminated by flammable liquids and garbage that may constitute a fire hazard into the appropriate receptacle required by this section or by section 397. 400. An employer shall ensure that combustible and flammable liquids are kept in receptacles that meet the requirements of the National Fire Code of Canada 2010 as amended from time to time, respecting the storage of flammable and combustible liquids 401. (1) An employer shall ensure that (a) no gasoline is used to start a fire or used as a cleaning agent; and (b) no worker is required or permitted (i) to replenish a tank on a heating device with a combustible or flammable liquid while the device is in operation or is hot enough to ignite the liquid, or (ii) to place a tar pot, while in use, within 3 m of an entrance to or exit from a building. (2) A worker shall not (a) use gasoline to start a fire or use gasoline as a cleaning agent; or

Fire Safety Tree Concepts	Prince Edward Island OH&S Regulations	Yukon OH&S Regulations	Northwest Territories OH&S Regulations
			<p>(b) replenish a tank on a heating device with a flammable or combustible liquid while the device is in operation or is hot enough to ignite the liquid</p> <p>402. An employer shall ensure that</p> <p>(a) suitable procedures are developed and implemented to prevent the ignition of flammable liquids or explosive dusts that are present at a work site;</p> <p>(b) all sources or potential sources of ignition are eliminated or controlled where an explosive atmosphere exists or is likely to exist; and</p> <p>(c) static charge accumulations during transfer of flammable liquids or explosive substances from one container to another are prevented by electrically bonding the containers.</p>
Compressed gas			
Housekeeping/waste	<p>43.36</p> <p>Bins used for storing highly combustible dry materials shall be of fire-resistant construction and provided with lids and an adequate ventilation system. (EC180/87)</p>		<p>397. (1) In this section, “garbage” does not include waste that is being processed at a waste disposal facility.</p> <p>(2) Where garbage that may constitute a fire hazard is present at a work site, an employer shall provide covered receptacles for the garbage that are suitable to the nature of the hazard.</p>
Storage of Combustibles			
Manage Fire Impact			
Manage Fire			
Control Combustion Process			
Fire Extinguishers	<p>7.4</p> <p>An approved fire extinguisher of adequate size shall be readily available at the location of every temporary heating device. (EC180/87)</p> <p>25.1</p> <p>At least one approved 4.5 kg (10 lb.) ABC multipurpose fire extinguisher shall be provided</p> <p>(a) in every workshop;</p> <p>(b) in every storage building for combustible materials;</p> <p>(c) in places where welding or flame cutting operations are carried on and for a reasonable time after their conclusion; and</p> <p>(d) on each storey having a floor space of 464.5 m² (5000 sq. ft.) or less in an enclosed building being constructed or altered, and an additional fire extinguisher for each additional 464.5 m² (5000 sq. ft.) of floor space in the storey or any fraction thereof. (EC180/87)</p> <p>25.2</p> <p>One or more dry chemical extinguishers with a capacity of 2.2 kg (5 lb.) ABC multipurpose or equally effective extinguisher shall be provided</p> <p>(a) where flammable liquids are stored or handled;</p> <p>(b) where oil or gas-fired heating equipment is used; and</p> <p>(c) where a tar or asphalt kettle is used. (EC180/87)</p> <p>25.4</p> <p>Fire extinguishers shall be</p> <p>(a) protected from mechanical injury;</p>		<p>396. (1) An employer shall ensure that portable fire extinguishers are selected, located, inspected, maintained and tested so that the health and safety of workers at the work site is protected.</p> <p>(2) An employer shall ensure that portable fire extinguishers are placed not more than 9 m away from</p> <p>(a) each industrial open - flame portable heating device, tar pot or asphalt kettle that is in use; and</p> <p>(b) each welding or cutting operation that is in progress.</p>

Fire Safety Tree Concepts	Prince Edward Island OH&S Regulations	Yukon OH&S Regulations	Northwest Territories OH&S Regulations
	(b) located for easy access at suitably marked stations; and (c) maintained in good operating condition. (EC180/87)		
Suppress Fire			
Fire Department			
Access			
Standpipes	25.5 Where a permanent standpipe is to be installed in a building, it shall (a) be installed progressively, so far as is practicable, as the building construction proceeds; (b) be provided with a valve at each hose outlet; (c) be provided at each hose outlet with a nozzle of not less than 38 mm (1 1/2in.) diameter installed in all storeys in such locations that each portion of the building is protected by means of a hose not over 22 870 mm (900 in.) in length; and (d) have a suitable connection for the municipal fire department located on the street side, not more than 900 mm (36 in.) and not less than 300 mm (12 in.) above grade. (EC180/87)		
Hydrants			
Sprinklers			
Control Fire by Construction			
Compartment			
Building			
System & Operational Readiness			
Water Supply			
Manage Exposed			
Limit Amount Exposed			
Limit Unauthorized Access	20.3 Where a building or other structure being constructed, altered, repaired or demolished is located 2 130 mm (84 in.) or more from a sidewalk or other public way used by pedestrians, a substantially constructed fence or boarding not less than 1 800 mm (72 in.) high shall be constructed if, in the written opinion of an officer, the persons using the sidewalk or other public way might be endangered. (EC180/87)		
Detection – Manual (Fire Watch)			
Detection - Automatic			
Safeguard Exposed			
Detection – Manual (Fire Watch)			
Detection - Automatic			
Alarms			

Fire Safety Tree Concepts	Prince Edward Island OH&S Regulations	Yukon OH&S Regulations	Northwest Territories OH&S Regulations
Egress	<p>EMERGENCY LIGHTING</p> <p>Emergency lighting shall be provided in places of employment normally used during periods of darkness. Such emergency lighting shall provide a minimum level of 10 lux (1 f.c.) at all means of egress from the place of employment. (EC180/87)</p> <p>6.3 The employer shall ensure that in an area of a building where a failure of the regular lighting system would create conditions which might endanger the safety of any person in the building, emergency lighting is provided which</p> <ul style="list-style-type: none"> (a) turns on automatically when the regular lighting fails; (b) is independent of the regular lighting source; (c) provides adequate lighting for evacuation of the area; and (d) is tested at least once every three months to ensure the system will function in an emergency, but not less frequently than recommended by the manufacturer. (EC180/87) <p>7.3 The employer shall ensure that portable heaters are not</p> <ul style="list-style-type: none"> (b) located in or adjacent to a means of egress. (EC180/87) <p>15.1</p> <p>The employer shall ensure that all places where work is performed shall have safe means of access and egress from each floor appropriate to the conditions of the work area and</p> <ul style="list-style-type: none"> (a) emergency exits shall be designed and marked to provide quick and unimpeded exit; (b) doors shall not open directly on to stairways, but shall open to floors or landings having a width in excess of the swing of the doors; (c) transparent glass panels which could be mistaken for doorways shall be clearly identified. (EC180/87) <p>15.2</p> <p>On construction sites the employer shall ensure that means of access to every excavation, floor, platform and fixed scaffold where work is being performed above or below ground level shall</p> <ul style="list-style-type: none"> (a) be provided by a stair, runway, ramp, scaffold or ladder; and (b) be maintained in place and in safe condition at all times. (EC180/87) <p>22.1</p> <p>The employer shall ensure that when any work on a building has progressed to a height of more than 7 315 mm (24 ft.) above ground level, the means of egress shall be by permanent or temporary stairs that shall</p> <ul style="list-style-type: none"> (a) be provided for the entire height from the ground to the uppermost working level; and (b) be continued as the height of the project is increased. (EC180/87) <p>22.2</p>	<p>2(2)</p> <p>A safety officer may set in writing a standard in respect to the level and quality of illumination, including emergency lighting, standby lighting, and exterior lighting, in any workplace.</p>	<p>12. The duties of an employer at a work site include</p> <ul style="list-style-type: none"> (d) provision and maintenance of a safe means of entrance to and exit from the work site. <p>72. (3) Where failure of the regular lighting system is likely to create conditions dangerous to the health or safety of workers, an employer shall provide appropriate emergency lighting of at least 50 lux for a work site and exit routes from the work site.</p> <p>253. An employer shall provide and maintain a safe means of entrance to and exit from a work site.</p> <p>255. (1) In this section, "travelway" means any place where workers or vehicles regularly travel or pass, and includes a ramp, runway, catwalk, bridge, conveyor, gantry or passage.</p> <p>(2) An employer shall ensure that every travelway</p> <ul style="list-style-type: none"> (a) is strong enough to withstand any traffic to which the travelway may be subjected; (b) has secure footing for workers and adequate traction for vehicles or equipment; and (c) is at least 900 mm wide. <p>256. An employer shall ensure that</p> <ul style="list-style-type: none"> (a) the widths of treads, the depths of treads and the vertical distances between treads are uniform throughout the length of any stairway and that each tread is level; and (b) any stairs installed on or after the day on which this section comes into force, including temporary stairs, are at least 600 mm wide.

Fire Safety Tree Concepts	Prince Edward Island OH&S Regulations	Yukon OH&S Regulations	Northwest Territories OH&S Regulations
	<p>The employer shall ensure that temporary stairs shall</p> <ul style="list-style-type: none"> (a) be maintained in a safe condition until the permanent stairs have been installed; (b) be not less than 1 200 mm (48 in.) wide. (EC180/87) <p>22.3</p> <p>The employer shall ensure that skeleton steel stairs shall have temporary wood treads</p> <ul style="list-style-type: none"> (a) of suitable planking extending the full width of the stairs and landings; and (b) securely fastened in place. (EC180/87) <p>22.4</p> <p>The employer shall ensure that permanent stairs shall be installed as soon as working conditions permit. (EC180/87)</p> <p>22.5</p> <p>The employer shall ensure stairs and landings shall be designed and constructed to safely support a live load of 488 kg per m (100 lbs. per sq. ft.) with a safety factor of 4 and shall</p> <ul style="list-style-type: none"> (a) have a vertical distance between landings not exceeding 3 656 mm (12 ft.) and intermediate landings shall have a dimension of not less than 1 117 mm (44 in.) measured in the direction of the run; (b) have a handrail or guardrail securely fastened and supported in place on the open side or sides of each flight and at each landing. (EC180/87) <p>22.6</p> <p>The employer shall ensure that</p> <ul style="list-style-type: none"> (a) stairs and platforms made of perforated material shall not contain openings larger than 11 mm (7/16 in.); (b) stairs, except service stairs which may be used for access to oiling platforms, machinery, etc., should be not less than 1 117 mm (44 in.) in width clear of all obstructions except handrails, and in no case shall be less than 914 mm (36 in.); (c) the pitch of stairways except service stairways should be between 30 degrees and 35 degrees from horizontal and shall in no case be less than 20 degrees or more than 50 degrees; (d) where the pitch would be less than 20 degrees a ramp shall be used and where the pitch is greater than 50 degrees a fixed ladder shall be used; (e) head room with a vertical clearance of 2 286 mm (7.5 ft.) from the top of the tread on a line with the face of the riser, shall be provided at all points in the stairwell; (f) except for service stairs, the treads exclusive of nosings or projections shall be not less than 229 mm (9 in.) in width and the risers shall not be more than 197 mm (7 3/4 in.) or less than 127 mm (5 in.) in height; (g) the width of the treads and the height of the risers shall be constant in any flight and all stairways having four or more risers shall be equipped with stair railings on any open side; (h) the top and the bottom treads of any flight shall be clearly distinguishable; 		

Fire Safety Tree Concepts	Prince Edward Island OH&S Regulations	Yukon OH&S Regulations	Northwest Territories OH&S Regulations
	<p>(i) enclosed stairways less than 1 117 mm (44 in.) wide shall be equipped with at least one handrail, preferably on the right side descending;</p> <p>(j) stairways 1 117 mm (44 in.) or more in width shall be equipped with one stair railing on each open side and one handrail on each enclosed side;</p> <p>(k) stairways 2 235 mm (88 in.) or more in width shall be equipped with an intermediate handrail down the centre;</p> <p>(l) stair railings shall be constructed in a permanent and substantial manner of wood, pipe, structural metal or other material of sufficient strength;</p> <p>(m) the height of stair railings from the upper surface of the top rail to the surface of the tread in line with the face of the riser at the forward edge of the tread, shall not be less than 762 mm (30 in.), if the railing is used as a handrail the height shall not be more than 864 mm (34 in.);</p> <p>(n) wooden handrails shall be at least 50 mm x 50 mm (2 in. x 2 in.) in size and of smooth finish;</p> <p>(o) metal handrails shall be at least 38 mm (1 1/2 in.) in diameter;</p> <p>(p) handrails mounted directly on walls or partitions shall be fixed by means of brackets attached to the lower side of the rails so as not to interfere with the smoothness of the top and the side surface of the rails;</p> <p>(q) brackets shall be spaced not more than 2.4 m (8 ft.) apart and shall provide for a clearance of at least 38 mm (1 1/2 in.) between the rails and the walls or any obstruction on the walls;</p> <p>(r) handrail structure shall be capable of withstanding a load of 100 kg (220 lb.) applied in any direction at any point of the rail;</p> <p>(s) the clear width of service stairs shall be at least 914 mm (3 ft.);</p> <p>(t) the pitch of service stairs shall not be more than 50 degrees and the width of the treads shall not be less than 152 mm (6 in.);</p> <p>(u) stairways shall be adequately illuminated and lights shall be located so that they do not cause glare;</p> <p>(v) a non-slip nosing or strip shall be used on all stair treads on which there is danger of slipping due to the material of the tread;</p> <p>(w) a non-slip nosing or strip shall be installed within a distance of 31 mm (1 1/4 in.) from the front edge of the tread and shall be at least 31 mm (1 1/4 in.) wide;</p> <p>(x) a suitable roof or enclosure is provided for outside stairways.</p> <p>(EC180/87)</p>		
Awareness and ability			
Construction process and procedure			<p>395. (1) An employer shall</p> <p>(a) take all reasonably practicable steps to prevent the outbreak of fire at a work site and to provide effective means to protect workers from any fire that may occur; and</p> <p>(b) develop and implement a written fire safety plan that provides for the safety of all workers in the event of a fire.</p> <p>(2) A plan developed pursuant to subsection (1) must include</p> <p>(a) the emergency procedures to be used in case of fire, including</p> <p>(i) sounding the fire alarm,</p> <p>(ii) notifying the fire department, and</p>

Fire Safety Tree Concepts	Prince Edward Island OH&S Regulations	Yukon OH&S Regulations	Northwest Territories OH&S Regulations
			(iii) evacuating endangered workers, with special provisions for workers with disabilities; (b) the quantities, locations and storage methods of all flammable substances present at the work site; (c) the designation of persons to carry out the fire safety plan and the duties of the designated persons; (d) the training of designated persons and workers in their responsibilities for fire safety; (e) the holding of fire drills; and (f) the control of fire hazards. (3) An employer shall ensure that (a) designated persons and workers who have been assigned fire safety duties are adequately trained in, and implement, the fire safety plan; (b) the fire safety plan is posted in a conspicuous place for reference by workers; and (c) a fire drill is held at least once during each 12 - month period.
Site Inspection			
Training			18. (1) An employer shall ensure that a worker is trained in those matters that are necessary to protect the health and safety of the worker at a work site when the worker (a) begins work at the work site; or (b) is moved from one work activity or work site to another that differs with respect to hazards, facilities or procedures. (2) The training required by subsection (1) must include (a) procedures to be taken in the event of a fire or other emergency;
Additional Comments	No specific construction site requirement section, but does have specific construction site requirements	No specific construction site requirements	No specific construction site requirement section, but does have specific construction site requirements

Appendix D



Summary Tables for Guidance Documents and Local By-Laws

Table 7: Alberta notices and Calgary, AB, Bulletins relating to course of construction fire and life safety. (References to each Notice and Bulletin are located at the end of the table.)

Framework Categories	Alberta Notices	Calgary, AB Bulletin
Prevent Fire Ignition		
Control Heat-Energy Source(s)		
Smoking		
Limit Unauthorized Access		
Other		
Control Source-Fuel Interactions		
Hot Work		
Electrical		
Heater		
Other		
Control Fuel		
Flammable and combustible liquids		
Compressed gas		
Housekeeping/waste		
Storage of Combustibles		
Manage Fire Impact		
Manage Fire		
Control Combustion Process		
Fire Extinguishers		
Suppress Fire		
Fire Department		
Access		
Standpipes		
Hydrants		
Sprinklers		
Control Fire by Construction		
Compartment		
Building		<p>[Table Reference AC.1]: The objective of the AFC 2006 as related to "Protection of Adjacent Building", according to 2006 AFC 5.6.1.2.(2)(c), "is to limit the probability that adjacent buildings or facilities will be exposed to an unacceptable risk of damage due to fire." To meet the intent of this Clause all of the requirements of NFC 5.6.1.2 shall be included as requirements:</p> <ul style="list-style-type: none"> • Fire Safety Plan for each site, AFC 5.6.1.3 • Access for firefighting to the building, AFC 5.6.1.4 • Fire extinguisher on site, AFC 5.6.1.5 • Standpipe systems installed progressively where they are required, AFC 5.6.1.6 • Hot works – involve heat and hot processes, AFC 5.6.1.7 • Safe egress – accessible and useable, AFC 5.6.1.8 • Clearance between combustible storage, 3 m separation from buildings, AFC 5.6.1.11 • Temporary fuel supply meets gas regulations and AFC Part 4, AFC 5.6.1.12 • Fire separation to partially occupied buildings (1 hour), AFC 5.4.1.14 • Watch as required in partially occupied buildings, AFC 5.6.1.15 • No smoking signs posted, to meet AFC 2.4.2, AFC 5.6.1.16 • Flammable and combustible liquids stored and used as per AFC Part 4, AFC 5.6.1.17 • Dangerous goods used and stored as per AFC Part 3,5, AFC 5.6.1.17 • Disposal of combustible refuse as a regular routine, AFC 5.6.1.19 • Protection during shutdown of fire protection systems, AFC 5.6.1.20

		<ul style="list-style-type: none"> Protection and safe egress maintained in buildings that are occupied prior to completion, AFC 5.6.1.21 <p>ABC Table 9.10.14.4. Please Note: The Limiting Distance in metres from the Table is to be used as the spatial separation guide between all exposing building faces for the purposes of meeting AFC 5.6.1.2.</p> <p>Where the spatial separation between buildings is less than the limiting distance for the 100% unprotected openings value provided in Table 9.10.14.4.A of the ABC, protection of the adjacent structures shall be provided.</p>
System & Operational Readiness		
Water Supply		
Manage Exposed		
Limit Amount Exposed		
Limit Unnecessary Access		<p>[Table Reference AC.2]:</p> <p>Question: Does chain-link fencing comply with the above Sentences?</p> <p>Commentary / Relevant Facts: Intent Statements for 8.2.1.3.(2): "To limit the probability that persons will inadvertently wander onto the site, which could lead to persons being exposed to unsafe conditions, which could lead to harm to persons." "To limit the probability that persons will be injured from contact with rough surfaces of the barricade, which could lead to harm to persons."</p> <p>The intent of providing a fence or barricade around a construction site is to: a) create a barrier against entering (especially by children) into the site, and b) prevent debris being accidentally thrown out of the site.</p> <p>By limiting the height of a fence to 1.8 m, the Code recognizes that there is an extent to the level of safety that it can provide. If a person is intent on entering a site, he/she will overcome any barrier built to prevent such entering. A chain link fence, strongly constructed by being properly attached to posts which are well anchored into the ground will provide a reasonable barrier against entering. Although holes in such a fence can be misused as toe or finger holds, prevention of such abuse is outside the scope of the Code.</p> <p>The closeness of the wire mesh in a chain-link fence will provide an effective barrier against flying debris in construction sites. Chain-link fences have the following additional advantages: a) relatively low cost for the level of safety they provide, and b) by providing visual access, discouraging theft and vandalism inside a site.</p> <p>Conclusion: Yes. A chain-link fence is acceptable as fencing for a construction site, to comply with Sentence 8.2.1.3.(1) and Sentence 8.2.1.3.(2) with the following exception: Chain-link fences should not be used where construction may cause hazard to the public and where a solid enclosure and covered way are required to comply with Sentence 8.2.1.1. and Article 8.2.1.2. of the Code. Also acceptable is the use of mobile construction fencing which is typically 1.8m in height and made from welded metal tubing panels with wire mesh throughout the interior portion of the panel. A snow fence may not be substituted for chain-link fence as it does not provide adequate stability and strength as a barrier.</p>
Detection – Manual (Fire Watch)		
Detection - Automatic		
Safeguard Exposed		
Detection – Manual (Fire Watch)		
Detection - Automatic		
Alarms		
Egress		
Awareness and ability		
Construction process and procedure	<p>[Table Reference AN.1]: NOTICE Intumescent Coatings on Exterior Sheathing To delay the possible spread of fire during construction, the Alberta Fire Code 2006 (AFC 06) contains provisions requiring fire protection of adjacent buildings during construction. Further guidelines and clarification were provided in a Fire Code Interpretation</p>	<p>[Table Reference AC.1]: The objective of the AFC 2006 as related to "Protection of Adjacent Building", according to 2006 AFC 5.6.1.2.(2)(c), "is to limit the probability that adjacent buildings or facilities will be exposed to an unacceptable risk of damage due to fire." To meet the intent of this Clause all of the requirements of NFC 5.6.1.2 shall be included as requirements: Fire Safety Plan for each site, AFC 5.6.1.3</p>

(STANDATA FCI-09-02) issued in July 2009.

The AFC 06 states:

5.6.1.2. Protection of Adjacent Building¹) Protection shall be provided for exposed adjacent buildings or facilities from fire originating from buildings, parts of buildings, facilities and associated areas undergoing construction, alteration or demolition operations. (See Appendix A)

The Appendix to the AFC 06 states: A-5.6.1.2.(1) Methods or materials to protect adjacent buildings or facilities can range from active to passive systems such as spatial separation, installing water curtains, using construction methods and materials that may include gypsum sheathing, or erecting a temporary fire barrier such as a fire tarpaulin.

Background

FCI-09-02 outlines a number of methods that can be utilized by a builder, if approved by a Fire Safety Codes Officer, to comply with the requirement of Article 5.6.1.2. to protect buildings from fire during construction.

Where combustible sheathing is installed on a building, one of the methods outlined in FCI-09-02 is:

- application of an acceptable intumescent or flame-retardant coating in accordance with the manufacturer's directions and the criteria utilized in any performance tests, A number of products have come into the marketplace and are being marketed as meeting the requirements for protection called for in Article 5.6.1.2. and described in FCI-09-02.

In many instances, these products are also being marketed as an alternative to gypsum sheathing to meet requirements of the Alberta Building Code 2006 (ABC 06).

The use of such products as an alternative solution under the ABC 06 is discussed in the "NOTICE – Fire Resistant Coatings on Exterior Sheathing" issued by Alberta Municipal Affairs Safety Services Branch on February 1, 2012.

Recommendation

Alberta Municipal Affairs recommends that Fire SCOs only consider wood-based sheathing materials, treated with fire-resistant coatings, as one of the acceptable methods of meeting the requirements of Article 5.6.1.2. when the product adequately addresses:

Flame Spread - the product should have flame spread performance characteristics of less than 25 as tested according to CAN/ULC-S102, "Test for Surface Burning Characteristics of Building Materials and Assemblies").

The manufacturer should empirically demonstrate, through listing or marking, compliance to this standard in accordance with the requirements of the Standards Council of Canada.

Weather Resistance - the product should be capable of withstanding expected weather exposures and maintaining flame spread performance characteristics during the period it will be exposed.

Water Vapour Transmission - the product as installed should have no detrimental effects to the building envelope's ability to shed moisture.

Quality Control - the manufacturer must be able to demonstrate that the product is manufactured and applied to the wood-based substrate in a consistent and verifiable method.

Function -the builder must demonstrate how the installed product will contribute to the fire protection of the exposed structures and facilities and the building which the product is being installed on.

Installation - if the sheathing materials are to be permanently installed on the building under construction the builder must ensure that the installation meets the objectives of the Alberta Building Code.

Intent - the installed product may be considered one of a number of elements which will contribute to the overall approved Fire Safety Plan for the building site.

Access for firefighting to the building, AFC 5.6.1.4

Fire extinguisher on site, AFC 5.6.1.5

Standpipe systems are to be installed progressively where they are required, AFC 5.6.1.6

Hot works – involve heat and hot processes, AFC 5.6.1.7

Safe egress – accessible and useable, AFC 5.6.1.8

Clearance between combustible storage, 3 m separation from buildings, AFC 5.6.1.11

Temporary fuel supply to meet gas regulations and AFC Part 4, AFC 5.6.1.12

Fire separation to partially occupied buildings (1 hour), AFC 5.4.1.14

Watch as required in partially occupied buildings, AFC 5.6.1.15

No smoking signs posted, to meet AFC 2.4.2, AFC 5.6.1.16

Flammable and combustible liquids stored and used as per AFC Part 4, AFC 5.6.1.17

Dangerous goods used and stored as per AFC Part 3

5, AFC 5.6.1.17

Disposal of combustible refuse as a regular routine, AFC 5.6.1.19

Protection during shutdown of fire protection systems, AFC 5.6.1.20

Protection and safe egress shall be maintained in buildings which are occupied prior to completion, AFC 5.6.1.21

ABC Table 9.10.14.4. Please Note: The Limiting Distance in metres from the Table is to be used as the spatial separation guide between all exposing building faces for the purposes of meeting AFC 5.6.1.2.

Where the spatial separation between buildings is less than the limiting distance for the 100% unprotected openings value provided in Table 9.10.14.4.A of the ABC, protection of the adjacent structures shall be provided.

[Table Reference AC.2]:

8.2.6.2. Protection of Adjacent Buildings

(1)[F03-OS1.2, OP3.1]

[Table Reference AC.3]:

Public Protection Site Safety Plan

Commencing May 1, 2012, it is mandatory to provide a public protection site safety plan for construction, demolition and major alterations of the façade on buildings five storeys or greater within The City of Calgary or designated as a high building as per article 3.2.6 of the current Alberta Building Code.

The requirement for mandatory public protection site safety plans is a new initiative that aligns with The City's goals to ensure people feel safe in public spaces. Authority to require a public protection site safety plan It is a stated major objective of the Alberta Building Code to limit the probability that, as a result of the design, construction or demolition of a building, a person in or adjacent to the building will be exposed to an unacceptable risk of injury.

Division B Part 8 of the Code stipulates the safety measures at construction and demolition sites in general terms.

Division C Sentence 2.2.2.1.(1) states:

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. Process for reviewing a site safety plan. While the review process is currently in a pilot phase the public protection site safety plans themselves are not a pilot initiative. They are considered mandatory if your project meets the stated criteria.

For the duration of the pilot phase, the public protection site safety plan does not need to be submitted concurrently with the building permit application; however, it must be submitted for review prior to the issuance of any authorization to commence construction. In effect, this means that partial building permits for work below grade will only be issued once the public protection site safety plan has been submitted for review.

The review of the public protection site safety plan must be completed prior to the issuance of the full building permit or partial permits for work above grade.

Once the public protection site safety plan review is complete and the building permit is issued, a pre-construction site meeting will occur, which will be followed by regular inspections to monitor compliance with the plan.

The inspections will occur for the duration of the authorized construction activity.

1. Items to be addressed at the pre-construction site meeting are:

- a) the names of the owner and constructor and an emergency phone number,
- b) protection procedures for falling debris, tools and equipment,
- c) protection of the public during stripping of formwork,

		<p>d) storage of materials at high heights, e) storage and handling of construction waste materials, f) protection of the public walkways and public thoroughfares, g) protection of the public during hoisting and lifting operations, h) provide letter of engagement for engineered design of temporary hoarding and false work, and i) any process or procedure to protect the public during construction.</p> <p>2. Elements of public protection must be incorporated into a hazard assessment; these elements must include, but are not limited to the following: a) ensure regular site meetings occur with representatives of each trade and constructor, to discuss the remediation of any unsafe work practices or safety concerns on and adjacent to the site, b) include a procedure for remediation of any unsafe condition which shall be documented, and c) the person in charge of construction at the project shall maintain and make available to the authority having jurisdiction, documentation of all aforementioned processes and procedures.</p> <p>3. The authority having jurisdiction may inspect, review, examine and evaluate any process or activity to which the public protection site safety plan applies.</p> <p>4. The authority having jurisdiction may request an owner to complete a public protection site safety plan for a structurally unsafe building.</p> <p>5. The owner or authorized agent shall ensure the implementation of the public protection site safety plan.</p> <p>6. The public protection site safety plan shall be reviewed and updated as new hazards are identified or created, when new constructors are engaged or other conditions change.</p> <p>7. When required, the site safety plan shall include an Advance Weather Forecasting System acceptable to the authority having jurisdiction.</p> <p>All construction work must also comply with applicable City of Calgary Bylaws and Occupational Health and Safety Act requirements.</p> <p>Owner and constructor responsibilities</p> <p>The owner is responsible for construction, maintenance, care and control of a construction site. During construction the owner is often the contractor. When a public protection site safety plan is required, the owner, or constructor shall prominently post the plan, ensure the plan is current and maintained, and in view of all site personnel on the project, until the completion or occupancy has been granted. No construction or demolition of the buildings shall be undertaken unless a public protection site safety plan, acceptable to the authority having jurisdiction is submitted.</p> <p>Owners and constructors are obligated by the Alberta Safety Codes Act to ensure that when a demolition or construction process or activity is undertaken, is done in a safe manner and that no person is exposed to undue risk. The public protection site safety plan is intended to enhance safety measures around activities governed by the Alberta Safety Codes Act. Where the public is expected to be present, the requirements for protection would apply.</p>
Site Inspection		
Training		
Additional Comments		

Table 7 Notes:

References used in Table are:

AN.1 Alberta Municipal Affairs - Safety Services Branch, Notice, Intumescent Coatings on Exterior Sheathing, ISBN #978-0-7785-7129-2, February 2012.

AC.1 Calgary Fire Marshal Bulletin, Regarding: Alberta Fire Code 2006 Article 5.6.1.2 Protection of Adjacent Building, May 14, 2010.

AC.2 The City of Calgary Regulation Bulletin, RB06-005, Issued November 14, 2008, Previously I-47, Use of Chain-Link or Fencing and Barricading Construction sites.

AC.3 The City of Calgary, Advisory Bulletin, April 2012, Public Protection Site Safety Plan.

Table 8: Ottawa and Toronto, ON, By-Laws relating to course of construction fire and life safety. (References to each Bulletin are located at the end of the table.)

Framework Categories	Ottawa, ON, By-Law for Property Standards [ONO.BL1 (Application limited to small residential)]	Ottawa, ON, By-Law for Property Maintenance[ONO.BL2] (Application limited to small residential)	Toronto, ON, Municipal Code for Construction and Demolition [ONT.BL1]
Prevent Fire Ignition			
Control Heat-Energy Source(s)			
Smoking			
Limit Unauthorized Access			
Other			
Control Source-Fuel Interactions			
Hot Work			
Electrical			
Heater			
Other			
Control Fuel			
Flammable and combustible liquids			
Compressed gas			
Housekeeping/waste	Part II, Residential Property Standards, Yards (20) ... temporary storage of materials or refuse resulting solely from the construction, demolition or alteration of a building or part thereof may be placed on the property, provided that, (a) it is removed frequently and in its entirety from the property; (b) it will not cause risk to the health or safety of any persons; and (c) it is not stored in an unsightly manner.	REMOVAL OF REFUSE AND DEBRIS 3 (1) Where on any lands there is refuse or debris, the owner or occupant shall remove the refuse or debris from the land so that the land is left in a clean condition. (2) Where on any lands there is heavy undergrowth, long grass or weeds, the owner or occupant shall clear the lands of such heavy undergrowth, long grass or weeds so as to be consistent with the surrounding environment.	
Storage of Combustibles			
Manage Fire Impact			
Manage Fire			
Control Combustion Process			
Fire Extinguishers			
Suppress Fire			
Fire Department			
Access			
Standpipes			
Hydrants			
Sprinklers			
Control Fire by Construction			
Compartment			
Building			
System & Operational Readiness			
Water Supply			
Manage Exposed			
Limit Amount Exposed			
Limit Unnecessary Access			ARTICLE III Fencing of Construction and Demolition Sites [Adopted 2000-10-05 by By-law No. 721-2000] §363-13. Definitions. As used in this article, the following terms shall have the meanings indicated: RESIDENTIAL SITE-A construction or demolition site for a building that is used

only for residential purposes and that is not more than three storeys in building height and not more than one level below grade.

§363-14 Fence required; conditions for exemption.

A. Unless granted an exemption under Subsection B, a person issued a construction or demolition permit under the Building Code Act, 1992, for any work in the City of Toronto shall erect and maintain a fence to enclose the construction or demolition site, including any areas where equipment is operated or equipment or material is stored.

B. The Chief Building Official is authorized to grant an exemption from the requirement in Subsection A to erect a fence if the Chief Building Official is satisfied that conditions at a site would not present a particular hazard to the public after having regard for:

- (1) The proximity of the site to occupied dwellings;
- (2) The proximity of the site to places frequented by the public, including streets, parks, businesses and workplaces;
- (3) The effectiveness of any existing fencing adjacent to the site;
- (4) The feasibility and effectiveness of fencing the site;
- (5) Any proposed security measures to deter entry to the site;
- (6) The hazard presented by the activity occurring and materials used on the site;
- (7) The expected duration of the hazard; and
- (8) Any other safety considerations.

C. Where work on a construction or demolition site is substantially suspended or abandoned, the Chief Building Official may revoke an exemption granted under Subsection B by serving written notice of the revocation on the permit holder.

§363-15

General requirements

Every fence required by this article shall:

- A. Be erected at the perimeter of the site to fully enclose the site.
- B. Be built to deter entry by unauthorized persons or vehicles.
- C. Have no rails, other horizontal or diagonal bracing, attachments or pattern of openings on the outside that would facilitate climbing.
- D. Contain no opening more than 150 millimetres wide or less than 900 millimetres above the bottom of the fence except where required for access to and from the site.
- E. At any access opening, be equipped with gates that shall:
 - (1) Contain wire mesh or similar material sufficient to provide visibility for traffic entering or exiting the site;
 - (2) Be built to specifications that provide performance and safety at least equivalent to the fence; and
 - (3) Deter entry by unauthorized persons;
- F. Be maintained:

- (1) In good repair with no gaps larger than 100 millimetres below the fencing and be free of graffiti and posters;

[Amended 2001-04-27 by By-law No. 218-2001]

- (2) Free from health, fire and accident hazards; and
- (3) So that any access opening is closed and locked or securely reinstalled when the site is unattended.

G. Be removed not later than 30 days after completion of the construction or demolition work.

§363-16 Fence height.

			<p>A fence required by §363-14 shall:</p> <p>A. If erected on a residential site between an excavation on the site and a public sidewalk or lane that is within 3.0 metres of the excavation, have a height not less than 1.8 metres above the grade outside the enclosed area.</p> <p>B. If erected on any other residential site, have a height not less than 1.2 metres above the grade outside the enclosed area.</p> <p>C. If erected on any other construction or demolition site, have a height not less than 1.8 metres above the grade outside the enclosed area.</p> <p>§363-17Fence construction standards.</p> <p>A fence required by §363-14 shall be built to the following minimum standards:</p> <p>A. If erected between an excavation and a public sidewalk or lane that is within 3.0 metres of the excavation, the fence shall be built of wood.</p> <p>B. If built of wood, the outside face shall be smooth exterior grade plywood or wafer board 12.5 millimetres thick that is close-boarded, securely nailed or screwed to 89 millimetre by 89 millimetre vertical posts spaced at 2.4 metre centres and embedded sufficiently deep into the ground to provide a rigid support, and securely nailed or screwed to 39 millimetre by 89 millimetre horizontal rails secured to the vertical posts at the top, bottom and intermediate locations at 600 millimetre centres.</p> <p>C. If built with plastic mesh, the fencing shall be fastened securely at 200 millimetre centres to steel T or 50 millimetre wide U posts, spaced at not more than 1.2 metre centres and embedded at least 600 millimetres into the ground, with the top and bottom of the plastic mesh secured horizontally by an 11-gauge lacing cable threaded through the mesh and looped and fastened to each post.</p> <p>D. If built with chain link, the mesh shall have openings no larger than 50 millimetres and shall be fastened securely both to vertical steel posts, spaced at not more than 2.4 metre centres and embedded at least 600 millimetres into the ground, and to top and bottom horizontal steel rails or 9-gauge steel wire.</p> <p>E. Any hoarding, canopy or similar protective barrier required under provincial law may form part of the fence.</p> <p>F. The fence may be a combination of the fence types specified in this article or may be built of other materials if the fence can be shown to provide performance and safety equivalent to fence types specified and the Chief Building Official authorizes its use.</p> <p>§363-18Conflicting provisions.</p> <p>Where this article conflicts with any other by-law, the more restrictive by-law applies.</p>
Detection – Manual (Fire Watch)			
Detection - Automatic			
Safeguard Exposed			
Detection – Manual (Fire Watch)			
Detection - Automatic			
Alarms			
Egress			
Awareness and ability			
Construction process and procedure			
Site Inspection			

Training			
Additional Comments			

Table 8 Notes:

Table References are:

ONO.BL1 City of Ottawa BY-LAW NO. 2013-416, A by-law of the City of Ottawa to provide for standards under which properties are maintained, Enacted December 11, 2013, City Council Authority CPSC Report 26, Item 6.

ONO.BL2 City of Ottawa By-Law No. 2005-208, Property Maintenance By-Law, Enacted May 11, 2005.

ONT.BL1 Toronto Municipal Code Chapter 363, Building Construction and Demolition, Enacted September 9, 2011.

Appendix E



List of Documents Reviewed

A summary of the documents used in the preparation of this report and their online locations, where available, is presented in Table 10. To assist in the identification of the different types of documents, a colour code is identified in Table 9.

Table 9: Key to the table of documents listed in Table 10.

Colour	Description of Type of Document and Location of Applicability
	Canada
	Province or Territory
	City or Municipality that is an Authority Having Jurisdiction
	Documents related to the NBCC Part 8 adoption, adaption or similar requirements
	Documents related to the NFCC Section 5.6 adoption, adaption or similar requirements
	Other document related to the NBCC Part 8 or NFCC Section 5.6 requirements (e.g. Alberta Standata, etc.)
	OH&S related documents
	Local by-laws and guidance for application
	Additional information or useful links

Table 10: List of documents used in the preparation of this report, including online locations where publically available. (Some NRCC websites were partially locked down at the time this report was prepared. It is anticipated that the technical issues with the website will be resolved and therefore the online locations are included for future reference.) (The key to the use of colours to denote the types of documents is presented in Table 9.)

Abbreviation Used in this Report	Document Description	Online Location (If publically available document is not available then the publisher's site is included.)	Comment or Notes
Canada			
2010 NRCC	2010 National Building Code of Canada 2010, Canadian Commission on Building and Fire Codes, National Research Council of Canada, Ottawa, Canada.	http://www.nrc-cnrc.gc.ca/eng/publications/codes_centre/2010_national_building_code.html	
2010 NFCC	2010 National Fire Code of Canada, 2010, Canadian Commission on Building and Fire Codes, National Research Council of Canada, Ottawa, ON, Canada.	http://www.nrc-cnrc.gc.ca/eng/publications/codes_centre/2010_national_fire_code.html	
	Canada Occupational Health and Safety Regulations, SOR/86-304, Last amended on May 29, 2014.	http://laws.justice.gc.ca/eng/regulations/sor-86-304/index.html	
Alberta			
2006 ABC	2006 Alberta Building Code, 2006, National Research Council of Canada, Ottawa, Canada.	http://www.nrc-cnrc.gc.ca/eng/publications/codes_centre/2006_alberta_building_code.html	
2006 AFC	2006 Alberta Fire Code 2006, National Research Council of Canada, Ottawa, ON, Canada.	http://www.nrc-cnrc.gc.ca/eng/publications/codes_centre/2006_alberta_fire_code.html	
Standata FCI-09-03	Alberta Municipal Affairs, Fire Code Interpretation, Standata FCI-09-02, July 2009, Protection of Adjacent Building, Alberta Municipal Affairs, Edmonton, AL, Canada.	http://municipalaffairs.alberta.ca/documents/ss/STANDATA/fire/fci/FCI-09-03.pdf	
Standata FCI-09-01	Alberta Municipal Affairs, Fire Code Interpretation, Standata 06-BCB-002-R1, July 2008, Occupancy of Buildings under Construction, Alberta Municipal Affairs, Edmonton, AL, Canada.	http://municipalaffairs.alberta.ca/documents/ss/STANDATA/fire/fci/FCI-09-01.pdf	
Standata FCI-09-02	Safety Services Branch, Notice, Intumescent Coatings on Exterior Sheathing, ISBN #978-0-7785-7129-2, February 2012, Alberta Municipal Affairs, Edmonton, AL, Canada.	http://municipalaffairs.alberta.ca/documents/ss/STANDATA/fire/fci/FCI-09-02.pdf	
Standata 06-BCB-002	Alberta Municipal Affairs, Fire Code Interpretation, Standata FCI-12-01, May 2012, Application - Alberta Fire Code, Alberta Municipal Affairs, Edmonton, AL, Canada.	http://www.municipalaffairs.alberta.ca/documents/ss/STANDATA/building/bcb/06BCB002.pdf	

Abbreviation Used in this Report	Document Description	Online Location (If publically available document is not available then the publisher's site is included.)	Comment or Notes
Notice, Intumescent Coatings on Exterior Sheathing	Alberta Municipal Affairs, Fire Code Interpretation, Standata FCI-09-02, July 2009, Protection of Adjacent Building, Alberta Municipal Affairs, Edmonton, AL, Canada.	http://www.municipalaffairs.alberta.ca/documents/ss/STANDATA/fire/IntumescentCoatingsOnExteriorSheathing.pdf	The Article number referenced in the document relates most closely to 2006 AFC 5.6.1.2.(2).(c) and 2010 NFC 5.6.1.2, instead of the reference to 2006 AFC 5.6.1.2.
	Alberta OHS Act, Published on October 01, 2013, Legislative Assembly of Alberta, Edmonton, AL, Canada.	http://work.alberta.ca/SearchAARC/35.html	
	Alberta Regulation, Published on October 01, 2013, Published on October 01, 2013, Legislative Assembly of Alberta, Edmonton, AL, Canada.	http://work.alberta.ca/SearchAARC/36.html	
	Alberta Code, Published on July 01, 2009, Legislative Assembly of Alberta, Edmonton, AL, Canada.	http://work.alberta.ca/SearchAARC/38.html	
	Alberta Code Explanation Guide, Published on July 01, 2009, Legislative Assembly of Alberta, Edmonton, AL, Canada.	http://work.alberta.ca/SearchAARC/37.html	
	Alberta Municipal Affairs, Fire Code Interpretation, Standata FCI-12-01, May 2012, Application - Alberta Fire Code	http://www.municipalaffairs.alberta.ca/documents/ss/STANDATA/fire/fci/FCI-12-01-Application-AlbertaFireCode.pdf	Clarification on the application of the version of the Alberta Fire Code to be referenced.
Calgary, AB			
	Calgary Fire Marshal Bulletin, Regarding: Alberta Fire Code 2006 Article 5.6.1.2 Protection of Adjacent Building, May 14, 2010, Calgary, AL, Canada.	https://www.calgary.ca/CSPS/Fire/Documents/alberta_fire_code_5_6_1_2.pdf?noredirect=1	The Article number referenced in the document relates most closely to 2006 AFC 5.6.1.2.(2).(c) and 2010 NFC 5.6.1.2, instead of the reference to 2006 AFC 5.6.1.2.
	Practical Guide for Construction Sites in Calgary, A Guide to Roles, Responsibilities and legislation Governing construction and Demolition in Calgary, Revised June 2011, The City of Calgary, Calgary, AL, Canada.	http://calgary.csc-dcc.ca/img/content/city_of_calgary_-_practical_guide_for_construction_sites_in_calgary_-_appendix_b.pdf	
	City of Calgary Regulation Bulletin, RB06-005, Issued November 14, 2008, Previously I-47, Use of Chain-Link or Fencing and Barricading Construction sites, Calgary, AL, Canada.	http://www.calgary.ca/PDA/pd/Documents/building/regulation_bulletins/regulation_bulletin_rb06_005.pdf	
	City of Calgary, Advisory Bulletin, April 2012, Public Protection Site Safety Plan, Calgary, AL, Canada.	http://verticalaccess.ca/wp-content/uploads/2014/05/City-of-Calgary-Public-Safety-plan.pdf	
	List of The City of Calgary, Building Regulation Bulletins	http://www.calgary.ca/PDA/pd/Pages/Permits/Building-permits/Regulation-Bulletins.aspx	
	City of Calgary Fire Department, Fire Prevention Bureau, Fire Department Access Standard, October 23, 2008, Calgary, AL, Canada.	http://www.calgary.ca/cspfs/fire/documents/fire_access_standard.pdf?noredirect=1	The building owner is responsible for preparing a fire safety plan, acceptable to the Fire Marshal, and appointing supervisory staff to carry out the same in all public assembly buildings, care or detention buildings, all buildings equipped with a fire alarm, demolition and construction sites, storage areas, areas where flammable liquids or combustible liquids are stored or handled and areas where hazardous processes or operations occur.
	High-Intensity Residential Fires Working Group, Final Report, October 31, 2007, Alberta Municipal Affairs and Housing, Edmonton, AL, Canada.	http://www.municipalaffairs.alberta.ca/documents/ss/HIRF_Final_Report_web.pdf	A section on Construction Site Fire Safety and Security
Edmonton, AB			
	List of by-laws	http://www.edmonton.ca/bylaws_licences/bylaws/bylaws-a-z.aspx	

British Columbia			
2012 BCBC	2012 British Columbia Building Code 2012, Office of Housing and Construction Standards & National Research Council Canada, Ottawa, ON, Canada.	http://www.bccodes.ca/building-code.aspx	
2012 BCFC	2012 British Columbia Fire Code 2012, Office of Housing and Construction Standards & National Research Council Canada, Ottawa, ON, Canada,	http://www.bccodes.ca/building-code.aspx	
	WorkSafeBC, Part 20 Construction, Excavation and Demolition, 2013, Workers' Compensation Board of British Columbia.	http://work.alberta.ca/SearchAARC/37.html	
	Other useful links	www.housing.gov.bc.ca/mod/consult.htm	
Vancouver, BC			
	Vancouver Building By-Law No. 10908, A By-law to regulate the construction of buildings and related matters and to adopt the British Columbia Building Code, The Council of the City of Vancouver (Enacted 1 April, 2014), Vancouver, BC, Canada.	http://former.vancouver.ca/blStorage/10908.PDF	
	Vancouver Fire By-law No. 8191, A by-law respecting the prevention and suppression of fire, the regulation of dangerous goods and explosives and the administration of the fire department (2002 with Amendments to July 22, 2014), Vancouver, BC, Canada.	http://vancouver.ca/your-government/fire-bylaw.aspx	No construction site safety requirements described here.
	City of Vancouver Bulletin 2002-001-EV, Construction Site Wastes, April 19, 2007 (Revised), Community Services Group, Office of the Chief Building Official, Vancouver, BC, Canada.	http://former.vancouver.ca/commsvcs/LICANDINSP/bulletins/2002/2002-001.pdf	
	City of Vancouver Bulletin 2011-0003-AD, May 10, 2011, WorkSafeBC Compliance or Refusal of Inspection Service, Office of the Chief Building Official, Vancouver, BC, Canada.	http://former.vancouver.ca/commsvcs/LICANDINSP/bulletins/2011/2011-003.pdf	
	City of Vancouver, Construction of New buildings/Addition to Existing Buildings, Vancouver, BC, Canada.	http://vancouver.ca/files/cov/const-new-bldg-add-existing-bldg-app.pdf	
	City of Vancouver, Bulletin 2012-001-BU, March 29, 2012, Revised October 29, 2012, Demolition of Buildings, Community Services Group, Licenses and Inspections, Vancouver, BC, Canada.	http://former.vancouver.ca/commsvcs/LICANDINSP/bulletins/2012/2012-001.pdf	
	City of Vancouver, Bulletin 2004-002 EL April 19, 2007, Permits for Temporary Power Service Connection, Community Services Group, Office of the Chief Building Official, Vancouver, BC, Canada.	http://former.vancouver.ca/commsvcs/LICANDINSP/bulletins/2004/2004-002.pdf	
	A summary of Vancouver by-laws	http://vancouver.ca/your-government/vancouver-building-bylaw.aspx	
	A list of bulletins and advisories	http://former.vancouver.ca/commsvcs/LICANDINSP/bulletins/index.htm	
District of North Vancouver			
	District of North Vancouver Fire Bylaw, Bylaw 7581, Effective date June 21, 2004, Date of adoption December 12, 2012, North Vancouver, BC, Canada.	http://www.dnv.org/upload/pdocsdocuments/ct6m01!.pdf	No construction site safety requirements described here.
Manitoba			
	Manitoba Buildings and Mobile Homes Act 2012, B93, Manitoba Government, Winnipeg, MB, Canada.	http://web2.gov.mb.ca/laws/statutes/ccsm/b093e.php	
	The Buildings and Mobile Homes Act (C.C.S.M. c. B93) Regulation 31/2011, Manitoba Government, Winnipeg, MB, Canada.	http://web2.gov.mb.ca/laws/regs/current/_pdf-regs.php?reg=31/2011	2010 NBC adopted with the 2011 Manitoba Amendments, no amendments are made to Part 8
	The Fires Prevention and Emergency Response Act (C.C.S.M. c.F80), Regulation 155/2011, Manitoba Government, Winnipeg, MB, Canada.	http://web2.gov.mb.ca/laws/statutes/ccsm/f080e.php	

	Manitoba WSH Act and Regulations,		
	Manitoba The Workplace Safety and Health Act C.C.S.M. c. W210, In force on 1 April 2014, Province of Manitoba, Canada.	http://web2.gov.mb.ca/laws/statutes/ccsm/_pdf.php?cap=w210	
	Manitoba Workplace Safety and Health Regulation, The Workplace Safety and Health Act C.C.S.M. c. W210, M.R. 217/2006, In force on 1 April 2014, Province of Manitoba, Canada.	http://web2.gov.mb.ca/laws/regs/current/217.06.pdf	
	Manitoba Workplace Safety and Health Act and Regulation 2014, Province of Manitoba, Canada. (Office Consolidated)	http://safemanitoba.com/sites/default/files/files/2014%20WHS%20WorkPlaceSafety%20Act%20and%20Regs_web.pdf	
	Other useful links	http://www.firecomm.gov.mb.ca/codes.html	
Winnipeg, MB			
	City of Winnipeg By-law No. 4555/87, The Winnipeg Building by-Law, Enacted 1987, with Amendments to March 21, 2012, Winnipeg, MB, Canada.	http://www.winnipeg.ca/clkdms/DocExt/ViewDoc.asp?DocumentTypeId=1&DocId=1265	No construction site safety requirements described here.
	City of Winnipeg By-law NO. 4304/86, Residential Buildings Fire Safety, Enacted April 30, 1986, with Amendments to March 23, 2011, Winnipeg, MB, Canada.	http://www.winnipeg.ca/clkdms/DocExt/ViewDoc.asp?DocumentTypeId=1&DocId=488	No construction site safety requirements described here.
	City of Winnipeg By-Law no. 150/2004, The Fire Prevention By-Law, Passed on October 27, 2004, with Amendments up to July 16, 2014, Winnipeg, MB, Canada.	http://www.winnipeg.ca/clkdms/DocExt/ViewDoc.asp?DocumentTypeId=1&DocId=1710	No construction site safety requirements described here.
	List of by-laws	http://www.winnipeg.ca/clkdms/DocExt/BL_Default.asp?DocumentTypeId=1	
New Brunswick			
	New Brunswick Regulation 82-20, 1982 (Consolidated to December 1, 2011), Province of New Brunswick, Canada.	http://laws.gnb.ca/en/showfulldoc/cr/82-20//20140905?command=search&caller=SI&fragment=national%20building%20code&search_type=all&day=5&month=9&year=2014&search_domain=cr&length=10&offset=2#idhit1	2010 NBC adopted, with the exception of Parts 2 and 7 of Division B of Volume 2
	New Brunswick Regulation 82-20, 1982 (Consolidated to December 1, 2011), Province of New Brunswick, Canada.	http://laws.gnb.ca/en/showfulldoc/cr/82-20//20140905?command=search&caller=SI&fragment=national%20building%20code&search_type=all&day=5&month=9&year=2014&search_domain=cr&length=10&offset=2#idhit1	2010 NFC is adopted without modification
	New Brunswick Chapter W-14 Workplace Health, Safety and Compensation Commission Act, assented to December 16, 1994, Province of New Brunswick, Canada.	http://laws.gnb.ca/en/ShowPdf/cs/W-14.pdf	
	New Brunswick Chapter O-0.2 Occupational Health and Safety Act, Assented to August 05, 1983, Province of New Brunswick, Canada.	http://laws.gnb.ca/en/ShowPdf/cs/O-0.2.pdf	
	New Brunswick Regulation 84-26, Administration, Occupational Health and Safety Act (O.C. 84-111), Province of New Brunswick, Canada.	http://laws.gnb.ca/en/ShowPdf/cr/84-26.pdf	
	New Brunswick Regulation 91-191, General Regulation, Occupational health and Safety Act (O.C. 91-1035), Filed December 03, 1991, Province of New Brunswick, Canada.	http://laws.gnb.ca/en/ShowPdf/cr/91-191.pdf	
	List of OHS links	http://www.worksafenb.ca/acts-and-regulations	
	New Brunswick Building Code Act, BILL 75	http://www.gnb.ca/legis/bill/FILE/56/3/Bill-75-e.htm	2010 NBC is adopted
	Other useful links	http://www.worksafenb.ca/acts-and-regulations	
Newfoundland and Labrador			
	Newfoundland and Labrador regulation 2012, regulation 45/12, Fire Protection Services Regulations, Part I Adoption of Codes, Dated April 30, 2012, St John's, Newfoundland and Labrador, Canada.	http://www.assembly.nl.ca/legislation/sr/annualregs/2012/nr120045.htm	2010 NBC, except part 9 where relative to one and 2 family dwellings within Group C

	Newfoundland and Labrador regulation 2012, regulation 45/12, Fire Protection Services Regulations, Part I Adoption of Codes, Dated April 30, 2012, St John's, Newfoundland and Labrador, Canada.	http://www.assembly.nl.ca/legislation/sr/annualregs/2012/nr120045.htm	2010 NFC adopted.
	Newfoundland and Labrador Regulation 5/12, Occupational Health and Safety Regulations, 2012, Dated 17, 2012, St John's, Newfoundland and Labrador, Canada.	http://www.assembly.nl.ca/legislation/sr/regulations/rc120005.htm	
Northwest Territories			
	NWT Fire Prevention Act and Regulations, Amended by Northwest Territories Statues S.N.W.T. 1995, c.11; and Nunavut Statues: S.Nu. 2006, c.8, in force June 15, 2006. Government of Nunavut, Iqaluit, NU, Canada.	http://www.justice.gov.nt.ca	Website was not available.
	Report on the Draft Northwest Territories Occupational Health & Safety Regulations, Volume 3 Northwest Territories, Final Revisions to the proposed Occupational Health and Safety Regulations, January 2012, Worker' Safety & Compensation Commission, Northwest Territories, Canada.	http://www.wsc.nt.ca/YourWSCC/WhoWeAre/Documents/OHS%20Regs%20Digests%20Vol%203%20NWT.pdf	
	2011 Good Building Practice for Northern Facilities Updated March 5, 2012, Government of the Northwest Territories Public Works and Services, Canada.	http://www.pws.gov.nt.ca/pdf/GBP/GBP%202011.pdf	
Yellowknife, NT			
	City of Yellowknife Consolidation of Building By-law No. 4469, Adopted January 28, 2008, Yellowknife, NT, Canada.	http://www.yellowknife.ca/Assets/City+Clerks/By-laws/Consolidated+By-laws/ConsolidatedBuildingBy-lawNo.4469January27%202014.pdf	Covers permit issues for unsafe construction site.
	List of by-Laws	http://www.yellowknife.ca/City_Hall/By-law_s/Numbered_By-laws_List.html	
Nova Scotia			
	Nova Scotia Building Code Regulations 2013, Part 3, Province of Nova Scotia.	http://novascotia.ca/lae/buildingcode/docs/140107_FinalUsersversionNOVASCOTIABUILDINGCODEREGULATIONSDecember312013MASTER.pdf	No amendments listed for NBC Division B, Part 8
	Nova Scotia Fire Safety Regulations 2013, Province of Nova Scotia.	http://www.novascotia.ca/just/regulations/regs/fsfiresf.htm	2010 NFC adopted province wide and modified as listed in 2013 Nova Scotia Fire Safety Regulations, Part 3 Fire Code. 2010 NFC Section 5.6 is adopted without modification
	Nova Scotia Workplace Health and Safety Regulations made under Section 82 of the Occupational Health and Safety Act S.N.S. 1996, c.7, Effective June 12, 2013, Province of Nova Scotia.	http://www.novascotia.ca/just/regulations/regs/ohsworkplace.htm	
	Other useful links	http://www.novascotia.ca/just/regulations/regs/ohsworkplace.htm	
Halifax, NS			
	City of Halifax By-law B-201, Building, Passed April 14, 1998, Halifax, NS, Canada.	http://halifax.ca/legislation/bylaws/hrm/documents/By-LawB-201.pdf	
	Halifax Regional Municipality By-Law Number F-100, Respecting Fire Prevention, Passed on December 17, 1996, with amendments to September 23, 2003, Halifax, NS, Canada.	http://halifax.ca/legislation/bylaws/hrm/blf100.pdf	The NFC is adopted. No modifications or amendments are made to Part 5.
	List of bylaws	http://halifax.ca/legislation/bylaws/hrm/	
Nunavut			
	Nunavut Building Code Act, 2012, S.Nu. 2012, c.15, Current to May 7, 2014, Iqaluit, NU, Canada.	https://www.canlii.org/en/nu/laws/stat/snu-2012-c-15/latest/snu-2012-c-15.html	Current version of the NBC adopted.
	2005 Good Building Practices Guideline	http://cgs.gov.nu.ca/PDF/Good%20Building%20Practices%20Guideline.pdf	No construction site safety requirements described here.
Iqaluit, NU			
	City of Iqaluit, By-Law No.710, Iqaluit Building By-Law, Iqaluit, NU, Canada.	http://www.city.iqaluit.nu.ca/i18n/english/files/710.pdf	No construction site safety requirements described here.

	City of Iqaluit, By-Law No.620, Iqaluit Building By-Law, Passed on November 8, 2005, Iqaluit, NU, Canada.	http://www.city.iqaluit.nu.ca/i18n/english/files/by-law%20620.pdf	Covers permit issues for unsafe construction site.
	List of by-laws	http://www.city.iqaluit.nu.ca/i18n/english/bylaw.html	
Ontario			
2012 OBC	Ontario Building Code 2012, Ministry of Municipal Affairs and Housing Building and Development Branch, Ontario, Canada.	http://www.mah.gov.on.ca/Page7393.aspx	Does not include construction site or course of construction safety/fire safety requirements.
	Ontario Regulation 213/07, 2007, Fire Protection and Prevention Act, Province of Ontario, Canada.	http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_070213_e.htm	2007 OFC, Part 8 Demolition covers requirements for this items, but is outside of the scope of construction and renovation sites; In addition, there are requirements related to repairs and renovations (e.g. 2.6.1.10.(1) and 2.6.1.11)
	Occupational health and Safety Act, Ontario Regulation 213/91, Construction Projects, Consolidated from April 8, 2013, Province of Ontario, Canada.	http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_910213_e.htm	
	A Safer Ontario, The State of Public Safety Report 2006, 2006, Ontario Technical Standards and Safety Authority (TSSA).	http://www.tssa.org/corplibrary/ArticleFile.asp?Instance=136&ID=C265E4B926974AE8A975C412F46668E8	
Ottawa, ON			
	City of Ottawa By-Law No. 2005-208, Property Maintenance By-Law, Enacted May 11, 2005, Ottawa, ON, Canada.	http://ottawa.ca/en/residents/laws-licenses-and-permits/laws/property-maintenance-law-no-2005-208	
	City of Ottawa BY-LAW NO. 2013-416, A by-law of the City of Ottawa to provide for standards under which properties are maintained, Enacted December 11, 2013, City Council Authority CPSC Report 26, Item 6, Ottawa, ON, Canada.	http://documents.ottawa.ca/sites/documents.ottawa.ca/files/documents/bylaw_2013_416_en.pdf	Applicable to residential properties.
	List of bylaws	http://ottawa.ca/en/residents/laws-licenses-and-permits/laws/laws-z	
Toronto, ON,			
	Toronto Municipal Code Chapter 363, Building Construction and Demolition, Enacted September 9, 2011, Toronto, ON, Canada.	http://www.toronto.ca/legdocs/municode/1184_363.pdf	Applicable to residential sites, where a residential site is "a construction or demolition site for a building that is used only for residential purposes and that is not more than three storeys in building height and not more than one level below grade".
	Toronto Municipal Code Chapter 629, Building Construction and Demolition, Enacted September 9, 2011, Toronto, ON, Canada.	http://www.toronto.ca/legdocs/municode/1184_629.pdf	
	List of by-laws	http://www.toronto.ca/legdocs/bylaws/lawmcode.htm	
Prince Edward Island			
	Prince Edward Island Provincial Building Code Act, Chapter P-24, Legislative Counsel Office, Province of Prince Edward Island, Canada.	http://www.gov.pe.ca/law/statutes/pdf/p-24.pdf	Current version of the NBC adopted.
	Prince Edward Island Chapter 0-1.01 Occupational Health and Safety Act, Legislative Counsel Office, Province of Prince Edward Island, Canada.	http://www.gov.pe.ca/law/statutes/pdf/o-01_01.pdf	
	Prince Edward Island Chapter 0-1 Occupational Health and Safety Act, General Regulations, Legislative Counsel Office, Province of Prince Edward Island, Canada.	http://www.gov.pe.ca/law/regulations/pdf/O&1-01G.pdf	
	List of useful links	http://www.wcb.pe.ca/workplace/ohsactandregulations	
Charlottetown, PI			
	Charlottetown Area Municipalities Building Code Bylaw, Amended/Approved June 13, 2011, Charlottetown, PI, Canada.	http://www.city.charlottetown.pe.ca/pdfs/bylaws/Building_Code_Bylaw.pdf	Adopts the 2010 NBC with amendments. No modifications are made to Part 8.

	Charlottetown Area Municipalities Fire Prevention Bylaw, Amended/Approved February 13, 2012, Charlottetown, PE, Canada.	http://www.city.charlottetown.pe.ca/pdfs/bylaws/Fire-Prevention-Bylaw-amended-Feb-13-12.pdf	Adopts the 2010 NFC and NFPA 1 Uniform Fire Code (NFPA 31 Standard for the Installation of Oil-Burning Equipment, NFPA 70 National Electrical Code and NFPA 5000 Building Construction and Safety Code).
	Charlottetown Area Municipalities Fire Protection and Emergency Services Bylaw, Amended/Approved March 09, 2009, Charlottetown, PE, Canada.	http://www.city.charlottetown.pe.ca/pdfs/bylaws/Fire_Protection_and_Emergency_Services_Bylaw.pdf	No construction site safety requirements described here.
	List of by-laws	http://www.city.charlottetown.pe.ca/bylaws.php	
Quebec			
2014 QCC	Quebec Construction Code (Updated 1 August 2014), Chapter I, Building, and National Building Code of Canada, 2005, Province of Quebec, Canada.	http://www2.publicationsduquebec.gouv.qc.ca/dynamicSearch/telecharge.php?type=3&file=/B_1_1/B1_1R2_A.HTM	Construction site is within the chapter definition of "designated location" in Chapter VIII Petroleum Equipment Installation, Division I Interpretation, 8.01. This has requirements associated with petroleum.
2014 QSC	Quebec Safety Code, Chapter VIII - Building, and National Fire Code of Canada, 2010 Amendment, Province of Quebec, Canada.		2010 National Fire Code with Amendments as listed in Chapter VIII Building, Division A, Section 370
	Quebec Act Respecting Occupational Health and Safety (Updated to August 2014) Chapter S-2.1, Province of Quebec, Canada.	http://www2.publicationsduquebec.gouv.qc.ca/dynamicSearch/telecharge.php?type=2&file=/S_2_1/S2_1_A.html	
	Quebec Safety Code for the Construction Industry, Chapter S-2.1, r.4), Province of Quebec, Canada.	http://www2.publicationsduquebec.gouv.qc.ca/dynamicSearch/telecharge.php?type=3&file=/S_2_1/S2_1R4_A.HTM	
	Building Code – 1985 Regulation, Chapter S-2.1, r.0.1), Province of Quebec, Canada.	http://www2.publicationsduquebec.gouv.qc.ca/dynamicSearch/telecharge.php?type=3&file=/S_2_1/S2_1R0_1_A.HTM	
	Useful links	https://www.rbq.gouv.qc.ca/en/laws-regulations-and-codes/construction-code-and-safety-code.html	General outline of documents with links in-page.
Montreal, QC			
	List of by-laws	http://ville.montreal.qc.ca/portal/page?_pageid=3620,4034177&_dad=portal&_schema=PORTAL	
Saskatchewan			
	Saskatchewan Uniform Building and Accessibility Standards Act, Chapter U-1.2 of the Statutes of Saskatchewan, 1983-84, including Amendments to 2013 c.27, Province of Saskatchewan, Canada.	http://gr.gov.sk.ca/Announcements/NBC-SK-Amendments	2010 NBC adopted.
	Saskatchewan Fire Prevention Act, 1992, chapter F-15.001 of the Statutes of Saskatchewan, 1992, including Amendments to 2014 c.19, Province of Saskatchewan, Canada.	http://gr.gov.sk.ca/Training-Workshops/NFC-SK-Amendments	2010 NFC adopted.
	Occupational Health and Safety Regulations, 1996, Chapter O-1.1 Reg 1, Effective from December 4, 1996, including Amendments up to and including Saskatchewan Regulations 5/2014, Province of Saskatchewan, Canada.	http://www.qp.gov.sk.ca/documents/English/Regulations/Regulations/O1-1R1.pdf	
	Other useful links	http://gr.gov.sk.ca/Codes-and-Standards	

Yukon			
	Yukon Building Standards Act, Chapter 19, Revised Statutes of the Yukon 2002, Whitehorse, YT.	http://www.gov.yk.ca/legislation/acts/bust.pdf	2010 NBC adopted.
	Yukon Occupational Health Regulations, Yukon Territory, Canada.	https://www.wcb.yk.ca/getattachment/ec42dd92-6df3-4885-a685-6c8e7b67f3e7/Occupational%20Health%20Regulations.aspx	
	Other useful Information	http://www.community.gov.yk.ca/pdf/2010_national_construction_codes_letter.pdf	2010 NFC adopted.