

## **SECTION 5.6 Construction and Demolition Sites**

### **5.6.1. General**

#### **5.6.1.1. Application**

- 1) This section applies to *buildings*, parts of *buildings*, <and associated areas> undergoing construction or demolition operations, including renovations
- 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.)

#### **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
    - 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).

#### **5.6.1.3. Fire Safety**

- 1) Fire safety at construction sites and demolition sites shall conform to this Section.

#### **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.

2) Where practicable, access routes for fire department vehicles shall be provided to construction and demolition sites. (See Appendix A.)

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.

#### **5.6.1.5. Portable Extinguishers**

1) In addition to the other requirements of this Code, portable extinguishers shall be provided

- a) adjacent to cutting or welding operations,
- b) in areas where combustibles are stored,
- c) near or on any internal combustion engines,
- d) adjacent to areas where *flammable liquids* or gases are stored or handled,
- e) adjacent to temporary oil-fired or gas-fire equipment, and
- f) adjacent to bitumen heating equipment.

2) The 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.

#### **5.6.1.6. Standpipe Systems**

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 the BCBC.

2) Where a *building* being demolished floor by floor is equipped with a standpipe system, the system, together with fire department connections and valves, shall be maintained in operable condition on all *storeys* below the one being demolished, except for the *storey* immediately below it. (See Appendix A.)

#### **5.6.1.7. Cutting and Welding Operations**

1) Cutting and welding operations shall conform to Section 5.2

#### **5.6.1.8. Provision for Egress**

1) In areas of a *building* where construction 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.

#### **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*.

#### **5.6.1.10. Building Service Shut-off at Demolition Sites**

1) Except as required in Sentence (2) and except for water supplies for firefighting, building services shall be shut off and gas and fuel lines shall be capped in a building being demolished.

2) Temporary electrical installations shall be installed in conformance with the British Columbia Safety Standards Act and pursuant regulations.

#### **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 the British Columbia Building Code or in conformance with the minimum clearances shown on certified heating equipment.

#### **5.6.1.12. 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," British Columbia Building Code or

b) The British Columbia Safety Standards Act and pursuant regulations.

#### **5.6.1.13. Tank, Piping and Machinery Reservoir Safety at Demolition Sites**

1) Tanks, piping and machinery reservoirs at a demolition site that contain *combustible liquids* or *flammable liquids* or that are likely to contain flammable vapours shall be drained and, except as permitted by Sentence (2), removed prior to the demolition of the *building*.

2) Where it is impracticable to remove tanks, piping or machinery reservoirs from the *building* prior to demolition, such equipment shall be conspicuously identified and removed as soon as conditions permit.

3) Tanks, piping and machinery reservoirs referred to in Sentences (1) and (2) that once contained *combustible liquids*, *flammable liquids* or flammable gases shall be purged with inert materials prior to demolition to prevent an explosion. (See Appendix A.)

#### **5.6.1.14. 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.

#### **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 with 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.

#### **5.6.1.16. Smoking Restrictions**

1) Smoking shall be permitted only if Subsection 2.4.2. is complied with.

#### **5.6.1.17. Combustible Liquid and Flammable Liquid Storage**

1) *Combustible liquids* and *flammable liquids* shall be stored and used in conformance with Part 4.

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.

4) 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. 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.

**5.6.1.19. Disposable 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 the British Columbia Building Code).

**5.6.1.20. Demolition Operations**

1) During demolition operations, measures shall be taken to protect the public in conformance with CSA S350-M, “Code of Practice for Safety in Demolition of Structures,” and this Section.

**5.6.2. Excavation**

**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 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.

**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 provided with suitable temporary supports.