

CONSTRUCTION FIRE SAFETY PLANS FOR MAJOR PROJECTS

Includes new buildings, additions, exterior alterations and full building demolition.



TOWN OF
**DIAMOND
VALLEY**



The Fire Safety Plan

The owner, developer, or contractor responsible for a construction or demolition site is required to develop a Fire Safety Plan that is acceptable to the authority having jurisdiction (Diamond Valley Fire Rescue – Fire Safety Codes Officer (“Fire-SCO”).

The fire safety plan is a site-specific document and must address, in a manner acceptable to the Fire-SCO, all topics of covered article 2.8.2.11 of the NFC-2023(AE).

The fire safety plan should be reviewed and updated periodically as construction progresses. The fire safety plan may be reviewed at any time by the Fire-SCO.

It is required that a Fire Safety Plan be accepted in writing by the Fire Department and the Authority Having Jurisdiction.

A Fire Safety Plan:

- Shall be submitted for review and acceptance.
- Shall be accepted prior to construction or demolition, including renovations.
- Must conform to the requirements of the NFC – 2023(AE).
- Shall be complete, blank sections will result in a rejected Fire Safety Plan.

If certain provisions listed in this plan do not pertain to your specific site, please enter “NOT REQUIRED” in the section. Details for any provision that is applicable to your site MUST be included in this plan.

Background Information

National Fire Code – 2023 Alberta Edition (NFC-2023(AE))

Division B 2.8.2.11. Construction and Demolition Sites

- 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 that includes
 - 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) initiating a fire warning,
 - ii) notifying the fire department,
 - iii) instructing site personnel on the procedures to be followed once the warning has been initiated, and
 - iv) confining, controlling and extinguishing the fire,
 - c) measures for controlling fire hazards in and around the building (see Note A-2.8.2.11.(1)(c)), and
 - d) a maintenance procedure for firefighting measures required in Section 5.6.
- 2) Where construction, alteration or demolition operations are carried out in an existing building that is required to have a fire safety plan conforming to this Section, the fire safety plan shall take into account the changes occurring to the building.

Division B, Section 5.6

This section applies to fire safety for buildings, parts of buildings, facilities, adjacent buildings or facilities, and associated areas undergoing construction, alteration, or demolition.

Division B, Article 5.6.1.2(1)

A fire safety plan conforming to Section 2.8 shall be prepared.

Division C, Section 2.2.1.2(14)

The fire safety plan required for construction and demolition sites in accordance with Article 2.8.1.1 of Division B shall be accepted in writing by the fire department and the authority having jurisdiction.

This information is being provided for the construction industry and is an aid in preventing injury and fires in and around construction sites. It is the sole responsibility of the owner or representatives of the owner to:

- Be aware of all regulations the Town of Diamond Valley Municipal Boundaries.
- Carry out or make provisions that adhere to the various codes and standards applicable to their project or business.

A fillable fire safety plan is attached for your convenience. Please submit your completed fire safety plan to [Diamond Valley Fire Rescue](#) at the time of development permit application.

Fire Safety Plan

All applicable provisions must be adhered to. Construction sites may be inspected for compliance at any stage of construction. The accepted Fire Safety Plan shall be posted on site.

Development Permit Number:
Building Name/Site Address:
Diamond Valley Roll Number:
Lot/Block/Plan/Legal:
Description of Project:

1. Emergency Procedures

THE EVENT OF AN EMERGENCY

A building under construction, without functional fire protection equipment is at its most vulnerable stage, therefore it is imperative to initiate emergency response at the earliest possible opportunity.

What are your provisions for initiating emergency evacuation procedures on this site and how will you notify emergency responders (eg. sounding of air horn 3 blasts, activating fire alarm, calling 911?)

Provide a list of instructions for site personnel to follow when an alarm is sounded:

- ☐ Exit routes are provided with clearly identified signage to indicate egress from floor areas/building.
- ☐ Designated gathering location (muster point) will be off site with signage. Location:
- ☐ List of personnel on site, updated and current – you should know who is on site.
 - o Person assigned to meet the fire department and give information such as:
 - Where is the fire or injury located on site
 - Is everybody on site accounted for Name of person responsible:
- ☐ Assigned site fire warden(s), various trades represented.

Directions and training for confining, controlling and extinguishing the fire:

2. Training

Training of site personnel on evacuation procedures including:

- ☐ Site orientation (familiarize on site personnel visitors on emergency procedures.)
Name of person responsible:
- ☐ Regular site fire safety meetings incorporated into regular safety meetings.
- ☐ Simulated fire drills as applicable and warranted.

3. Assigned Site Personnel

Control of combustibles on the site and around the buildings including removal of excess garbage materials on a regular basis and general housekeeping.

Name of person responsible:

Maintain separation of combustibles from open flame devices.

Name of person responsible:

Ensure that combustible hoarding is secured to prevent contact with the heaters.

Name of person responsible:
Maintain clear unobstructed access for fire department apparatus to building(s) and to fire fighting services such as hydrants and fire department connections i.e. sprinkler and/or standpipes.
Name of person responsible:
Parking of vehicles or delivery trucks, directed so as not to obstruct fire department access to the site and buildings. (Off site parking and storage may be considered.)
Name of person responsible:
Maintenance and operation of at least one exit from every floor.
Name of person responsible:
<i>Smoking shall not be permitted in areas where conditions are hazardous or potential of ignition exists.</i>

4. Firefighting Services
Unobstructed hydrant, Siamese, sprinkler, temporary access route, standpipe.
Check all applicable fire fighting services that are installed, tested and activated at the start of construction. These must be maintained and accessible for fire fighters at all times.
<input type="checkbox"/> Hydrants (maintain 2 metre access around hydrants) <input type="checkbox"/> Standpipes (existing) <input type="checkbox"/> Siamese connections
Emergency access routes Provide Drawings detailing your emergency response plan, including <ul style="list-style-type: none"> • Nearest fire hydrant locations • Fire Department Connections • Site Muster Point • Emergency Access to the Building and Site
<input type="checkbox"/> The site is properly addressed and the sign is visible and legible to the emergency crews.
An all weather road shall be constructed prior to project commencement and must meet the road must be designed to support the expected loads imposed by firefighting equipment (38,500 kg) and have a clear width not less than 6 metres. NFC-2023(AE) 5.6.1.4 Access for Firefighting <ol style="list-style-type: none"> 1) Unobstructed access to fire hydrants, portable extinguishers and to fire department connections for standpipe and sprinkler systems shall be maintained. 2) A means shall be provided to allow firefighters to perform their duties on all levels of the building. 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. 4) Access routes for fire department vehicles shall be provided and maintained to construction and demolition sites. (See Note A-5.6.1.4.(4).) 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.

5. Fire Extinguishers

- ☐ Provide sufficient numbers and sizes. (3A:20B:C on moveable equipment and 4A:40B:C in all other locations.)
- ☐ Serviced and tagged by a certified agency, within the last year.
- Service date:
- ☐ Mounted, with proper signage, where workers are present and at exit locations on every level, and meet the required travel distance between extinguishers (75 feet or 22.86 m.)
- ☐ At or near gas or propane fuel operated equipment.
- ☐ At or near areas where combustibles are stored.
- ☐ Adjacent to any hot works operations.

6. Hot Works Operations

Does your scope of work require Hot Works Operations?

☐ Yes ☐ No

If “Yes” Please check all applicable provisions.

Definition: The burning, welding, heating of a material, or a similar operation that is capable of initiating fires or explosions including, but not limited to, cutting, welding, Thermit welding, brazing, soldering, grinding, thermal spraying, thawing pipe, torch applied roofing or membrane adhesive bonding, or any other similar heat producing activity.

- ☐ The area shall be clear of flammable and combustible materials.
- ☐ Fire watch assigned during hot works operation and for a period not less than 60 minutes after its completion.
- ☐ A final inspection of the hot works area shall be conducted 4 hours after completion of work.
- ☐ If hot works are in the proximity of combustible or flammable contents, provisions have been made for the protection of such contents by noncombustible materials, thermal barrier or other means.
- ☐ Work being performed by trained or certified personnel.
- ☐ A fire extinguisher (4A:40B:C) is present at all times.
- ☐ Proper ventilation, as required.
- ☐ If hot tar pots are on site, provide fire extinguishers. Hot tar pots must only be used by trained personnel and located away from combustible materials.

NFC-2023(AE) 5.2.3. Prevention of Fires

NFC-2023(AE) 5.2.3.1. Location of Operations

- 1) Except as provided in Sentence (2), hot work shall be carried out in an area free of combustible and flammable contents, with walls, ceilings and floors of noncombustible construction or lined with noncombustible materials.
- 2) When it is not practicable to undertake hot work in an area described in Sentence (1),
 - a) combustible and flammable materials within a 15 m distance from the hot work shall be protected against ignition in conformance with Article 5.2.3.2.,
 - b) a continuous fire watch shall be provided during the hot work and for a period of not less than 60 min after its completion in conformance with Article 5.2.3.3., and
 - c) a final inspection of the hot work area and adjacent exposed areas shall be conducted
 - i) 4 h after completion of the work, or

ii) after completion of the fire watch required in Clause (b), in which case, a more comprehensive inspection shall be conducted (see Note A-5.2.3.1.(2)(c)(ii)).

3) When there is a possibility of sparks or open flames reaching combustible materials in areas adjacent to the area where hot work is carried out,

- a) openings in walls, floors or ceilings shall be covered or closed to prevent the passage of sparks or open flames to such adjacent areas, or
- b) Sentence (2) shall apply to such adjacent areas.

NFC-2023(AE) 5.2.3.2. Protection of Combustible and Flammable Materials

- 1) Any combustible and flammable material, dust or residue shall be
 - a) removed from the area where hot work is carried out, or
 - b) except as provided in Sentence (2), protected against ignition by the use of noncombustible materials.
- 2) Combustible materials or building surfaces that cannot be removed or protected against ignition as required in Clause (1)(b) shall be thoroughly wetted where hot work is carried out.
- 3) The fire watch described in Clauses 5.2.3.1.(2)(b) and (c) shall be carried out by more than one person if combustible materials are exposed to the hot work operations but cannot be directly observed by the initial person performing the fire watch.
- 4) Any process or activity that produces flammable gases or vapours, combustible dusts or combustible fibres in quantities sufficient to create a fire or explosion hazard shall be interrupted and the hazardous conditions shall be removed before any hot work is carried out

7. Flammable/Combustible Liquid and Compressed Gas Storage

Does your scope of work require the storage of flammable/combustible liquids or compressed gases?

☐ Yes ☐ No

If Yes all provisions below are applicable

- ☐ Storage area separated from combustible material by 3m
- ☐ Storage area locked and vented.
- ☐ Storage area protected from vehicular/industrial motorized traffic.
- ☐ Portable pressurized (full or empty) cylinders secured when not in use.
- ☐ Area to have proper signage or placards in place.
- ☐ A current list of dangerous goods on site.
- ☐ A portable 4A:40B:C fire extinguisher in close proximity to storage and work areas.
- ☐ Storage area away from egress and access routes to the site.

8. Security

What are your provisions for site security when workers are absent from the site?

9. Contact Personnel

Provide a list of names and telephone numbers of persons to be contacted during nonoperating hours or in emergency situations to be posted on site.

In addition to the previous, please check off all of the following provisions that may be relevant to your scope of work:

NFC – 2023(AE) Section 5.6 Construction and Demolition Sites.

Will any part of this building continue to be occupied during construction, alteration or demolition operations?

☐ Yes ☐ No

If Yes refer to the following code requirements and describe how these provisions will be met.

NFC – 2023(AE) 5.6.1.12.(1) Fire Separations in Partly Occupied Buildings

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.

NFC – 2023(AE) 5.6.1.16 Occupied Buildings Required

exits from the occupied area shall be maintained or alternate means of egress shall be provided.

For Alteration, Construction of an addition or Demolition operations: Is the existing building protected by a Fire Alarm System, Sprinkler System, or Standpipe System?

☐ Yes ☐ No

If Yes refer to the following code requirements and describe how these provisions will be met.

NFC–2023(AE) 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.

NFC–2023(AE) 6.1.1.4 Protection during Shutdown

- 1) When any portion of a fire protection system is temporarily shut down, alternative measures shall be taken to ensure that protection is maintained.

NFC-2023 (AE) 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 fire department.

Does your scope of work require a standpipe system?

☐ Yes ☐ No

If Yes refer to the following code requirements and describe how these provisions will be met.

NFC – 2023(AE) 5.6.1.6. Standpipe Systems

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(AE) in areas permitted to be occupied.

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:

- a.) a permanent or temporary standpipe system is permitted in accordance with clauses (b) and (c),
- 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,
- c.) the pipe size, hose valves and water supply shall conform to Subsection 3.2.5. of Division B of the NBC(AE),
- d.) the standpipe system shall, as a minimum, be securely supported and restrained on alternate floors,
- 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,
- f.) valves shall be kept closed at all times and guarded against mechanical damage,
- g.) the standpipe shall not be more than one floor below the highest forms, staging, and similar combustible elements at all times, and
- h.) temporary standpipe systems shall remain in service until the permanent standpipe installation is complete.

3) 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

Does your scope of work require a temporary fuel tank?

☐ Yes ☐ No

If Yes refer to the following code requirement for the installation of fuel tanks:

NFC(AE) Div. C 2.2.3.1(1) Storage Tank Systems

Only individuals approved by the Provincial Fire Administrator are permitted to install, remove, repair or maintain aboveground or underground storage tank systems.

Submission

Name:

Phone Number:

Email:

The collection of this information is authorized by section 4 (c) of the Protection of Privacy Act, and National Fire Code – 2023 Alberta Edition, and will be used to process your permit application. Furthermore, please know that your name, address, and details related to your permit may be included on reports that are available to the public. If you have any questions about the collection, contact Diamond Valley Fire Rescue 403-933-6218.

Approval

Diamond Valley Fire Rescue Approval (Name/SCO/DOP)

Signature of Safety Codes Officer
Date of Approval