# General

## Summary

* + 1. The Work of this Section includes, but is not limited to the following:
       1. Establishment of fire safety requirements for the Project.

## Fire safety requirements

* + 1. Fire safety plan:
       1. Contractors and their personnel shall be familiar with Section 2.8 of the Fire Code and its requirements for construction sites.
       2. A “fire safety plan”, is required to be prepared for the site prior to commencement of construction. The fire safety plan is required to include:
          1. The designation and organization of site personnel to carry out fire safety duties, including fire watch service where applicable.
          2. Emergency procedures to be used in the case of fire including sounding the alarm throughout the building, notifying the Fire Department, instructing site personnel on procedures to be followed and fire fighting procedures.
          3. The control of fire hazards in and around the building. This includes fire protection for combustible construction materials and combustible refuse on site.
          4. The maintenance of fire fighting facilities.
       3. The “fire safety plan”, is required to be submitted to the local Fire Department for approval and kept on-site in an approved location.
    2. Fire prevention:
       1. Enforce fire prevention and protection methods of good housekeeping and adhere to local and Underwriters’ fire regulations.
       2. Except where a building is provided with a fire alarm system or similar equipment acceptable to the authorities having jurisdiction, a fire watch, is required to be provided when a portion of the building is occupied during construction operations.
       3. Where a fire watch is required in this Section, the following criteria are required to be achieved:
          1. The site will be toured at least once each hour;
          2. The fire watch personnel are required to be provided with a means of communication with the Fire Department and be equipped with portable illumination and protective equipment.
          3. A log documenting each tour of the site is required and it is to be kept.
       4. Unobstructed access, for fire fighting is required to be maintained to fire protection equipment, including hydrants, Fire Department connections and portable extinguishers.
       5. Where practical, Fire Department access route, are required to be provided, to the construction site. If the site is fenced in order to prevent general entry, provision is required to be made for access by Fire Department equipment and personnel.
    3. Hot works:
       1. Hot works, involving open flames or producing heat or sparks, are required to conform to CSA W117.2.
       2. Hot work equipment is required to be maintained in good operating condition, examined for leakage or defects prior to each use, and repaired, if necessary, prior to use. When Class 2 gas (i.e. compressed gas) hot work equipment is not in use, valves are required to be closed and gas lines bled. Electric hot work equipment is required to be de-energized when not in use.
       3. Hot work is required to be carried out in an area free of combustible and flammable contents, with walls, ceilings and floors of non-combustible construction or lined with non-combustible materials. When it is not practical to undertake hot works in such an area, the following measures are required to be taken:
          1. Combustible and flammable materials within a 15m (50’) distance from the hot work are required to be either removed, protected against ignition by the use of non-combustible materials, or thoroughly wetted.
          2. A fire watch is required to be provided during the hot work and for a period not less than 60 minutes after its completion. The exposed areas are required to be examined for ignition of combustible materials by personnel equipped with and trained in the use of fire extinguishing equipment.
          3. A final inspection of the hot work area is required to be conducted 4hr after the completion of the work.
       4. Where sparks may leak onto combustible materials in areas adjacent to the area where the hot work is to be performed, openings in walls, floors or ceilings are required to be covered or closed to prevent the passage of sparks to such adjacent areas or be protected in accordance with the requirements in Clause 1.1.3.3.
       5. Hot work is not permitted to be performed on the following:
          1. Containers, equipment, or piping containing flammable or combustible liquids or Class 2.1 flammable gases unless they have been cleaned and tested with a gas detector to ascertain that they are free of explosive vapours;
          2. Totally enclosed containers, or;
          3. Metal objects that are in contact with combustible materials, unless safety precautions are taken to prevent ignition of the combustible materials by conduction.
       6. When hot work is to be carried out near piping containing Class 2.1 flammable gases, the piping is required to be cleaned and tested with a gas detector to ascertain that they are free of explosive vapours and be protected by a thermal barrier against the passage of heat.
       7. At least one portable fire extinguisher is required to be provided in the hot work area.
    4. Post-fire reporting:
       1. Report immediately all fire incidents to the Fire Department, Consultants, and Owner.
    5. Interior and exterior fire protection and alarm systems:
       1. A system that is audible throughout the building (e.g. air horns) is required to be provided to alert.
       2. Fire protection and alarm systems shall not be:
          1. Obstructed;
          2. Shut-off;
          3. Left inactive at the end of a Working Day or shift without notification and authorization from the Fire Chief or their representative.
       3. If a fire alarm system or part thereof, is shut down or inoperative for more than 2 hr for any reason, the authority having jurisdiction is required to be notified. When directed by the authorities having jurisdiction, a fire watch is required to be provided during the shut down of the fire alarm system.
       4. Fire hydrants, standpipes and hose systems shall not be used for other than fire fighting purposes unless authorized by the Fire Chief.
    6. Fire extinguishers:
       1. The Contractor shall supply fire extinguishers, to the satisfaction of the Fire Chief, necessary to protect, in an emergency, the work in progress and the Contractors physical plant on site. Listed Class A fire extinguishers having a minimum rating of 2A10BC are required to be provided on all moveable equipment. Listed Class A fire extinguishers with a minimum rating of 4A40BC are required in all other areas to protect a maximum area of 600m2 each, and located so that the maximum travel distance to an extinguisher is 25m.
       2. In addition to the requirements in Clause 1.1.6.1, fire extinguishers are required to be provided adjacent to welding or cutting operations, in areas where combustibles are stored, near or on any internal-combustion engines, adjacent to areas where flammable liquids or gases are stored/handled, adjacent to temporary oil-fired or gas-fired equipment, and adjacent to bitumen heating equipment.
    7. Blockage of roadways:
       1. The site superintendent shall be advised of any work that would impede fire apparatus response. This includes violation of minimum overhead clearance of 5m, erecting of barricades and the digging of trenches.
    8. Smoking precautions:
       1. Although smoking is not permitted in hazardous areas, care must still be exercised in the use of smoking materials in non-restricted areas. Signs are required to be posted to indicate areas where smoking is not permitted. Signs are required to have black lettering not less than 50mm x 150mm are permitted to be used in lieu of lettering. Alternatively, symbols of not less than 150mm x 150mm are permitted to be used in lieu of lettering.
    9. Rubbish and waste materials:
       1. Rubbish and waste materials are to be kept to a minimum.
       2. Combustible waste materials are not permitted to accumulate in quantities or locations that constitute an undue fire hazard.
       3. The burning of rubbish on site is prohibited.
       4. Removal:
          1. All rubbish shall be removed from the work site at the end of the Working Day or as directed.
          2. Waste material is required to be removed by means of appropriate containers, an enclosed shaft or chute conforming to NBC Sentence 8.2.7.4.(1) or a hosting apparatus if large pieces or objects are involved.
       5. Storage:
          1. Extreme care is required where it is necessary to store oily waste in work areas to ensure maximum possible cleanliness and safety.
          2. A non-combustible receptacle constructed of materials with a melting point of not less than 650 degrees Celsius and having no openings in the sides or bottom and a self-closing, tightly fitted metal cover is required to be provided for the collection of greasy or oily rags or materials subject to spontaneous combustion, or ashes. If the flooring material upon which the receptacle is placed is combustible, the receptacle is required to have a flanged bottom or legs not less than 50mm high. The contents of this receptacle are required to be removed daily and disposed of in a manner that does not create a fire hazard.
    10. Flammable liquids:
        1. The handling, storage and use of flammable liquids is required to be in conformance with Part 4 of the Fire Code.
        2. Flammable liquids such as gasoline, kerosene and naphtha may be kept for ready use in quantities not exceeding 45 litres provided they are stored in approved safety cans bearing the Underwriter's Laboratory of Canada or Factory Mutual seal of approval. Storage of quantities of flammable liquids exceeding 45 litres for work purposes requires the permission of the Site Superintendent.
        3. Transfer of flammable liquids is prohibited within buildings.
        4. Transfer of flammable liquids shall not be carried out in the vicinity of open flames or any type of heat-producing devices.
        5. Flammable liquids having a flash point below 38 degrees Celsius such as naphtha or gasoline shall not be used as solvents or cleaning agents.
        6. Flammable waste liquids, for disposal, shall be stored in approved containers located in a safe ventilated area. Quantities are to be kept to a minimum and the Fire Department is to be notified when disposal is required.
        7. Spills of flammable or combustible liquids are required to be removed immediately with an absorbent material that will not increase the hazard and be disposed of in a safe manner.
    11. Hazardous substances:
        1. If the Work entails the use of any dangerous goods (e.g. toxic or hazardous materials, chemicals and/or explosives, or otherwise creates a hazard to life, safety, health or the environment), preform Work in accordance with Section 01 35 43, and the OBC.
    12. Floor finishing:
        1. Floor finishing operations involving the use of flammable or combustible liquids are required to be provided with ventilation to prevent the accumulation of flammable vapours. Mechanical ventilation is permitted if the equipment does not constitute a source of ignition.
        2. All sources if ignition (including mechanical systems or electric motors) are required to be shut down.
        3. Smoking and the use of open flames is not permitted during the application of flammable liquids with flash points less than   
           37.8 degrees Celsius and for at least 1hr after such application.
    13. Compressed gas cylinders:
        1. Cylinders of Class 2 (compressed) gases are required to be:
           1. Protected against mechanical damage;
           2. Protected against valve damage, and;
           3. Firmly secured in a position that will not interfere with the operation of the cylinder valve assembly.
        2. Except for fire extinguishers, cylinders of Class 2 gases are not permitted to be stored:
           1. In any exit or corridor providing access to exit;
           2. Under any fire escape, outside exit stair, passage or ramp, or;
           3. Within 1m of any exit.
    14. Egress provisions:
        1. At least one exit is required to be accessible and usable at all times.
    15. Excavation:
        1. All existing gas, electrical, water, steam and other services are permitted to be left within the area of excavation provided that the service company approves the proposed method of operation, their location is determined before excavation commences, the method of excavation will not damage the services and suitable temporary supports are provided.
        2. Existing services that do not meet the criteria in Clause 1.1.16.1 are required to be shut-off, capped and labelled prior to excavation. The service company whose service connections will be affected are required to be notified in advance. Service connections that are required to be maintained are required to be relocated and protected from damage.
        3. Excavations are required to be kept reasonable clear of water so as not to endanger the safety of the public or to create conditions hazardous to health.

# Products – not used

# Execution – not used

End of section