CANADIAN ELECTRICAL CODE

SUBJECT: **Section 20 - Flammable Liquid and Gas Dispensing and Service Stations, Garages, Bulk Storage Plants, Finishing Processes, and Aircraft Hangars**

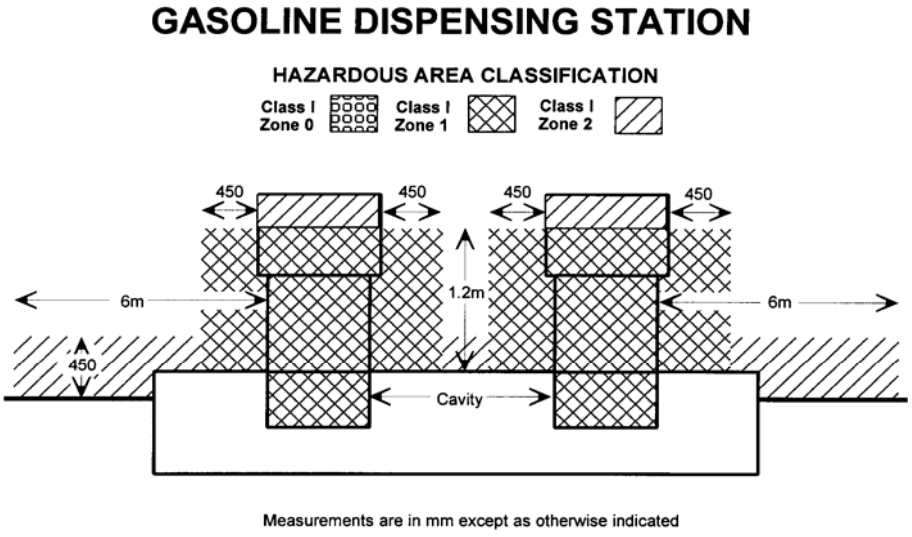
Gasoline Dispensing and Service Stations

Rule 20-004 Hazardous Areas

Rule 20-004(8) should not be interpreted as classifying the earth below the surface of the Class I, Zone 1 and Zone 2 areas around gasoline dispensing pumps as being a hazardous area. The rule stipulates that electrical wiring and equipment below the surface of areas defined as hazardous shall be considered to be within a Class I, Zone 1 location that extends to the point of emergence above grade. Therefore, electrical wiring extending from a pit or depression below the surface of the Class I, Zone 1 or Zone 2 hazardous area around gasoline dispensing pumps to the point of emergence shall be Class 1, Zone 1 wiring.

Electrical wiring buried in the area of gasoline dispensing pumps but which does not enter a pit or depression, is not required to be of a type approved for use in a Class I, Zone I hazardous location. The area however, is exposed to spilled gasoline and a sealing fitting should be provided on the raceway or cable after emergence in the unclassified area.

Seals are to be located in accordance with the requirements of Section 18 for the hazardous location involved.



See Rule 20-004

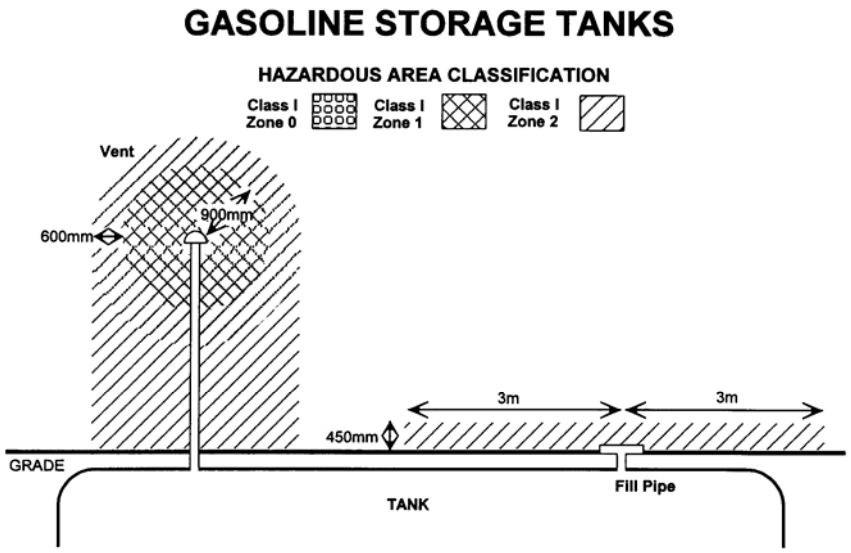
Issue of this STANDATA is authorized by the Administrator

[Original Signed]

Pierre McDonald

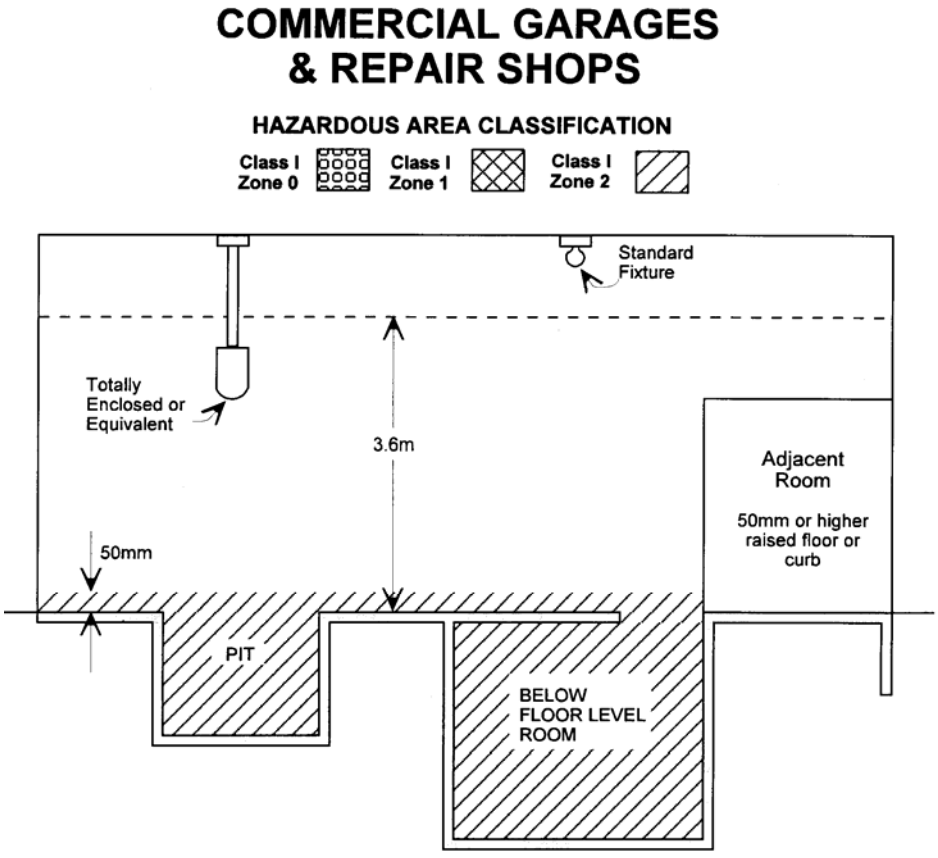
Alberta Municipal Affairs and Housing

SAFETY CODES COUNCIL



See Rule 20-004 (7)&(9)

Commercial Garages, Repairs and Storage



See Rule 20-102

Propane Dispensing, Container Filling, and Storage

The Scope of this part of Section 20 does not cover consumer's propane storage tanks. For full information regarding these installations, consult your gas inspection authority.

As a general guideline for electrical installations near consumer's propane storage tanks, the following applies:

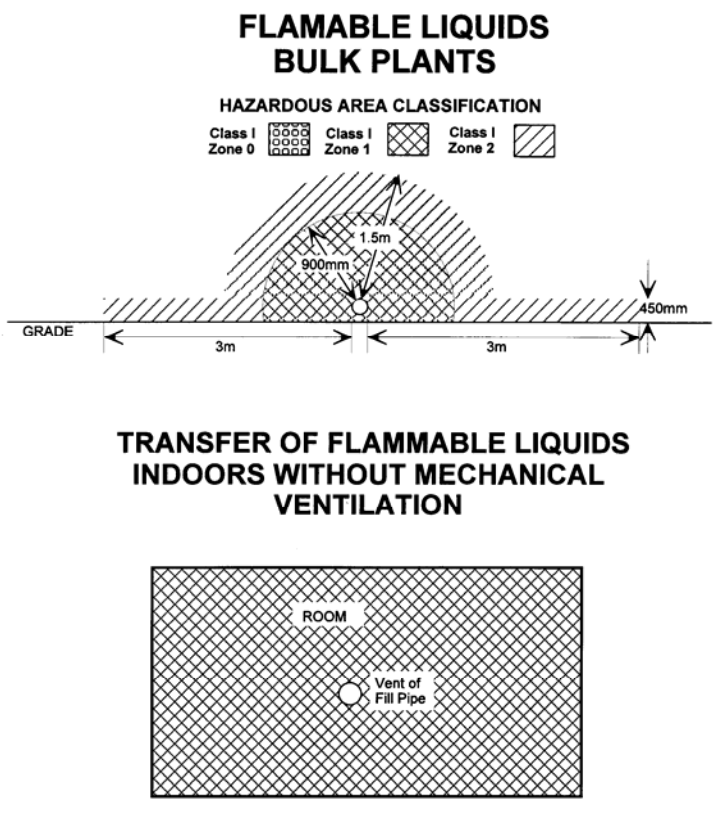
The area around a consumer propane storage tank is considered a Class I, Zone 2 hazardous location:

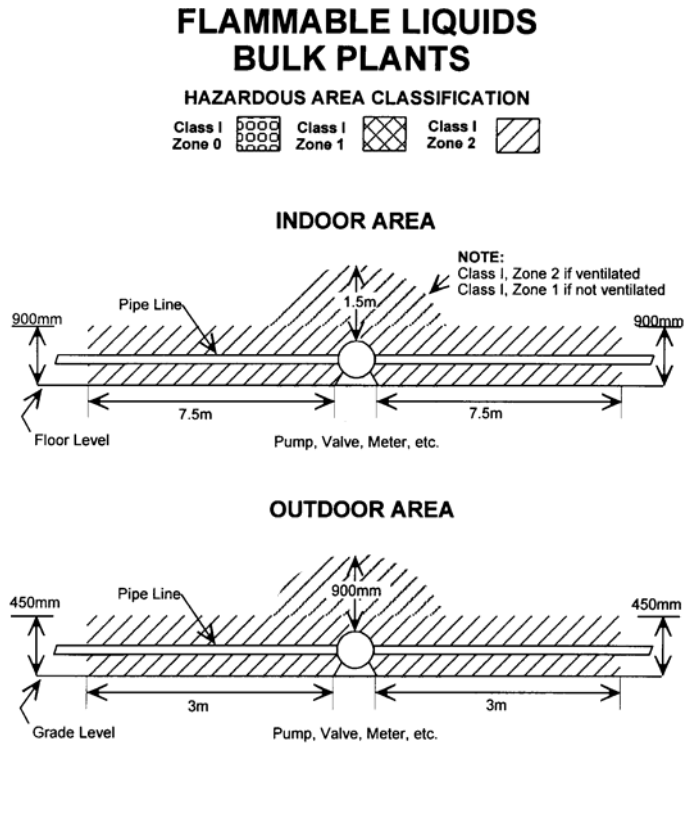
(a) Within 3 m of a tank having a capacity of 125 USWG (over 475 L) to not more than 1000 USWG (3800 L); and

(b) Within 7.5 m of a tank having a capacity in excess of 1000 USWG (over 3800 L).

A "consumer" propane storage tank is a tank used to supply propane gas for propane burning appliances and equipment, and is not used for the purpose of transferring liquid propane to other containers.

Bulk Storage Plants



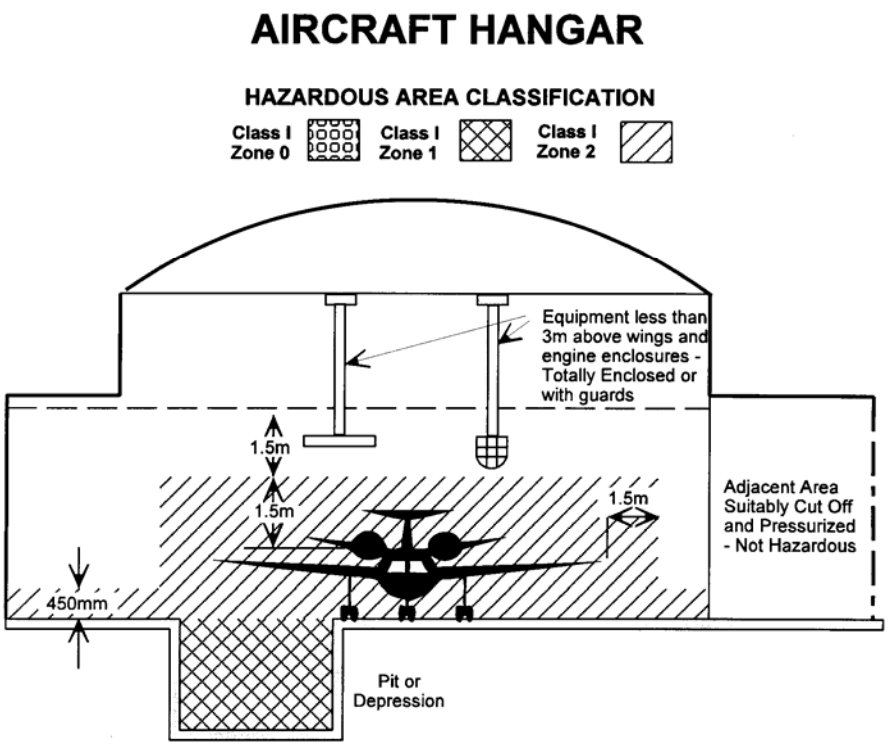


See Rule 20-302

Aircraft Hangars

Rule 20-500 Scope

Although all aircraft hangers are considered to fall within the scope of this section, there are some cases where strict compliance is not warranted. For instance, small storage sheds used for private aircraft at private airstrips, flying clubs, and the like are not considered to present the same hazard as larger commercial hangers and often wiring methods outlined in Section 12 would be acceptable. For these types of facilities, please contact the authority having jurisdiction for assistance in determining an acceptable wiring method and to obtain any required variances.



See rule 20-502

Outdoor Aboveground Gasoline Storage Tanks and Dispensing

Some gasoline dispensing operations and service stations employ aboveground gasoline storage tanks. Industry has expressed concerns that Section 20 does not clearly identify hazardous area classifications in the vicinity of above ground gasoline storage tanks when used in conjunction with gasoline dispensing operations.

Where an engineer has not classified an installation, (APEGGA signed and sealed drawings), the following guidelines may be used for the classification of outdoor aboveground gasoline storage tanks and dispensing operations:

Location	Zone	Extent of Classified Area
Tank – interior (including interstitial space)	0	Area within the tank.
Tank – exterior (single and double walled tanks)	2	Area extending 3 m in all directions from the tank surface.
Pumps, valves, manifolds etc.	2	Area within 3 m of a potential source of leakage.
Underground tank fill opening	1	Area within the spill containment box.
	2	Area within 3 m of tank fill opening extending upward to a level 450 mm above driveway or ground level.
Aboveground tank fill opening	1	Area within a 900 mm radius of the fill connection or fill opening.
	2	Area beyond the 900 mm extending to a radius of 3 m from the fill connection or opening.
Vent discharging upwards	1	The spherical volume within a 900 mm radius from the point of discharge.
	2	The spherical volume between 900 mm and 1.5 m radius from point of discharge.
Vent that does not discharge upwards		The cylindrical volume below both the Zone 1 and Zone 2 locations extending to the ground shall be considered a Class 1 Zone 2 location.
Spill containment / Dike	2	The area within the perimeter extending to the top of the spill containment.
Dispenser		Refer to Rules 20-002 to 20-014