Colorado Department of Labor and Employment
Division of Oil and Public Safety – Compliance Section
633 17th Street, Suite 500
Denver, CO 80202-3610

Phone: 303-378-1103
Email: scott.simmons@state.co.us
Web: www.https://ops.colorado.gov/Petroleum

UNDERSTANDING PROPANE VEHICLE FUEL DISPENSER AND DISPENSING STATION INSTALLATION REQUIREMENTS

(REVISED 4/14/2021)

General

The entire dispenser system, including the container, appurtenances, piping, metering system and electrical system must meet the requirements of the Colorado Division of Oil and Public Safety statutes and regulations, NFPA 58 (2017 Edition), NFPA 30A (2015 Edition) and NIST Handbook 44 (2016 Edition).

Container/Appurtenances

NFPA 58 (2017) 5.2.5.1 requires that an *"ASME container shall be equipped with openings for the service for which the container is to be used."*

- **A.** When used, manual shutoff valves in vapor service shall be equipped with excess flow protection.
- **B.** When used, the actuated liquid withdrawal excess-flow valve shall not be connected for continuous use unless the valve is recommended by the manufacturer for such service.

Container Location Requirements

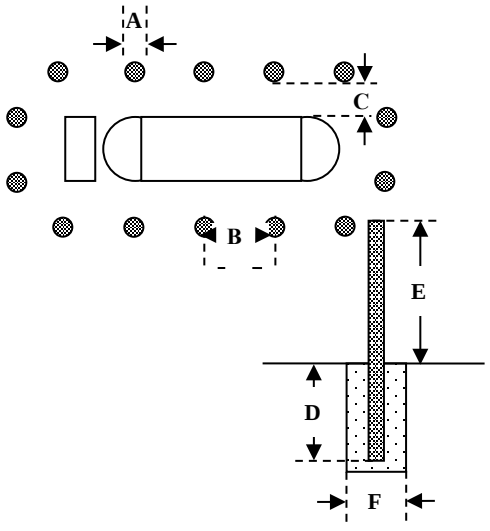
NFPA 58 (2017) 6.4.1.1 requires that "*Containers installed outside of buildings…shall be located with respect to the adjacent containers, important building, group of buildings, or line of adjoining property that can be built upon, in accordance with table 6.4.1.1"*

- **A.** The propane container (tank) must be located at least 10 feet (for a 500 gallon or a single 1,000 gallon) from any buildable property line or building. The property line measurement may be taken from the opposite side of a public road where the property is adjacent to a public road.
- **B.** The propane container must be located at least 20 feet from any other fuel (gasoline, diesel, etc.) tanks.
- **C.** The propane container must be located at least 6 feet from an overhead power line greater than 600 volts.
- **D.** The propane container must be located at least 20 feet from other fuel (gasoline, diesel, etc.) dispensers at retail gas stations.

Vehicle Protection

NFPA 58 (2017) 6.8.1.2 requires that "*LP-Gas containers or systems that are installed within 10 feet of public vehicular thoroughfares (public ways) shall be provided with a means of vehicle barrier protection."* While there are many acceptable methods to accomplish this (guard rails, concrete barriers, fencing, etc.), one common method of protection is to install guard posts. If you choose to install guard posts, the following design shall be acceptable.

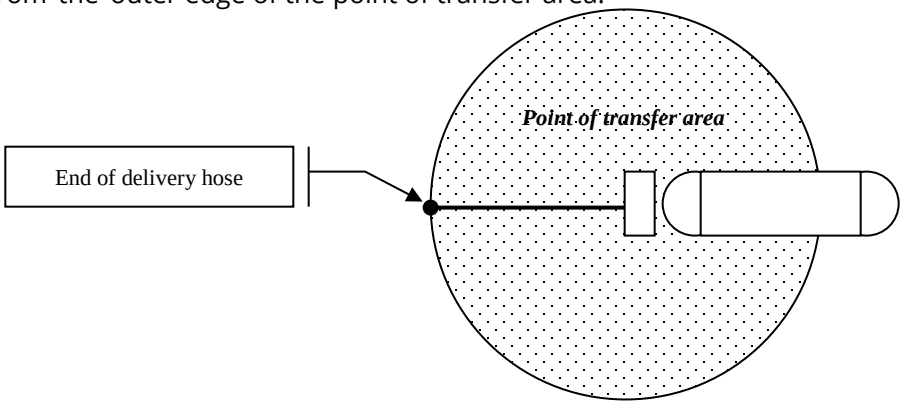
- **A.** They shall be constructed of steel not less than **4 inches** in diameter and shall be filled with concrete.
- **B.** They shall be spaced not more than **4 feet** on center.
- **C.** They shall be located not less than **3 feet** from the LP-Gas container or system they are protecting.
- **D.** They shall be set not less than **3 feet** deep.
- **E.** They shall be set with the top of the posts not less than **3 feet** above ground.
- **F.** They shall be set in a concrete footing of not less than **15 inches** in diameter.



Emergency Shutoff's
NFPA 58 (2017) requires dispensing stations to be equipped with the ability to remotely close the liquid supply valve and the electrical power in the event of an emergency.

- **A.** **6.27.3.8**: The container liquid withdrawal opening used with vehicle fuel dispensers and dispensing stations shall be equipped with one of the following.
  - (1) An internal valve fitted for remote closure and automatic shutoff using thermal (fire) actuation
  - (2) A positive shutoff valve that is located as close to the container as practical in combination with an excess-flow valve installed in the container, plus an emergency shutoff valve that is fitted for remote closure and installed downstream in the line as close as practical to the positive shutoff valve
- **B.** **6.27.3.9**: An identified and accessible remote emergency shutoff device for either the internal valve or the emergency shutoff valve required by 6.27.3.8(1) or (2) shall be installed not less than 3 feet or more than 100 feet from the liquid transfer point.
- **C.** **6.27.3.17**: An identified and readily accessible switch or circuit breaker shall be installed outside at a location not less than 20 feet or more than 100 feet from the dispenser to shut off the power in the event of a fire, an accident, or other emergency.

Point of Transfer
The point of transfer (POT) is defined by NFPA 58 (2017) 3.3.60 as *"The location where connections and disconnections are made or where LP-Gas is vented to the atmosphere in the course of transfer operations."* Because containers are filled with a flexible hose, the point of transfer cannot be defined as one fixed location. Therefore, wherever the end of the delivery hose can reasonably be expected to be located while propane is being dispensed will define the point of transfer area. All required separation distances from the point of transfer must be measured from the outer edge of the point of transfer area.



- **A.** The POT must be located at least 25 feet from buildings, building openings at elevations lower than the POT, or pits.
- **B.** The POT must be located at least 25 feet from buildable property lines. This measurement may be taken from the opposite side of a public road where the property is adjacent to a public road.
- **C.** The POT must be located at least 50 feet from places of outdoor public assembly (school yards, playgrounds, athletic fields, etc.).
- **D.** The POT must be located at least 10 feet from a public way (road).
- **E.** The POT must be located at least 10 feet from gasoline and diesel dispensers.
- **F.** The POT must be located at least 20 feet from above ground gasoline and diesel tanks and the fill and vent openings of underground gasoline and diesel tanks.
- **G.** Non-explosion proof electrical must not be located within 15-20 feet (depending on the type of dispenser) of the container or POT.
- **H.** The drain or blow off from a POT must be located at least 15 feet from a sewer system opening.

Anyone who has questions regarding the installation of propane vehicle fuel dispensers and dispensing stations or any other propane regulatory issues, are welcome to contact Scott Simmons of the Colorado Division of Oil and Public Safety at 303-378-1103 or scott.simmons@state.co.us.