

Liquefied Petroleum Gases (LPG)

This section provides basic guidelines for the installation and removal of LPG containers. *Additional requirements can be found in the 2006 International Fire Code and NFPA 58.*

- A permit is required to install, remove, operate, repair, or modify AST's used for storage and dispensing of LPG.
 1. **Exception:** A permit is not required for individual containers with a 500-gallon water capacity or less serving occupancies in Group R-3

Applicants must obtain a permit for LPG from the Tucson Fire Department and the Development Services Department. The installation plans shall be submitted with a permit application.

A walk through permit process is available weekday mornings at Development Services, 201 N. Stone Avenue, (520) 791-5550.

The applicant must bring a site plan showing the location of the tank in respect to adjacent buildings and property lines. The plans shall include the design, details, and specifications. Include tank specifications with the site plan.

- Tanks may not exceed 2,000-gallon water capacity and shall be located with respect to buildings, public ways, and lines of adjoining property, which can be built upon according to the International Fire Code, Mechanical Code, and Electrical Code requirements that apply.
- Multiple container installations shall be subdivided into groups containing not more than 180,000 gallons water capacity in each group. In heavily populated areas or congested commercial areas, zoning requirements may limit the aggregate capacity.

Such groups shall be separated by a distance of not less than 50 feet unless the containers are:

1. Mounded in an approved manner.
2. Protected with approved insulation on areas that are subject to impingement of ignited gas from pipelines or other leakage.
3. Protected by firewalls of approved construction.
4. Protected by an approved system for application of water as specified in NFPA 58 Table 3-2.2.4.
5. Protected by other approved means.

Where one of these forms of protection is provided the separation shall not be less than 25 feet between container groups.

- LPG shall be used with devices or equipment only if these devices or equipment are approved for use with LPG.
- LPG shall not be released to the atmosphere except through an approved liquid-level gauge or other approved device.
- Only a qualified attendant shall perform dispensing of LPG. LPG containers shall not be filled or maintained with LPG in excess of the maximum rating of the fixed gauges installed by the manufacturer or in excess of the weight stamped on the tank.

1. Please refer to NFPA 58 for specific dispenser requirements.

- Emergency shutoff devices shall be provided for all fuel dispensers.
- Emergency shutoff devices for exterior fuel dispensers shall be located within 100 feet of, but not less than 20 feet of dispensers. Activation of the emergency shutoff device shall stop the transfer of fuel to all dispensers and close all valves which supply the dispensers, and shall be properly labeled. On new fuel station installations and re-models the LPG emergency stop must also shut off the fuel and electricity to all motor fuel dispensers.
- Safety devices on LPG containers, equipment and systems, shall not be tampered with or made ineffective. LPG containers are required to have current certification according to manufacturer's specifications.
- Emergency shutoff valves on the product line(s) shall be approved and shall incorporate all of the following means of closing:
 1. Automatic shutoff through thermal (fire) actuation.
 2. Where fusible elements are used, they shall have a melting point not exceeding 250 degrees Fahrenheit.
 3. Manual shutoff from a remote location.
 4. Manual shutoff at the installed location.
- Weeds, grass, brush, trash and other combustible materials shall not be allowed within 10 feet of LPG tanks or containers. A properly mounted **2A 20BC** fire extinguisher shall be provided at a distance of not less than 10 feet but no more than 50 feet from the container. Smoking within 15 feet is prohibited and no smoking signs shall be posted.
- Sources of ignition shall be carefully controlled during transfer operations and while connections or disconnections are made. Operating vehicles, open flames, metal cutting or welding, portable electrical tools and extension lights shall not be permitted within 15 feet of transfer point while filling operations are in progress.

- On vehicles being refueled, sources of ignition such as pilot lights, burners, electrical appliances, and engines shall be turned off.
- When exposed to possible vehicular damage due to proximity to alleys, driveways, or parking areas, LPG containers, regulators, and piping shall be protected.
- The purging of LPG Cylinders will be allowed by the Tucson Fire Department under the following conditions. The Tucson Fire Department Fire Prevention Division (520-791-4502) shall be notified a minimum of 24 hours in advance. A properly trained operator shall conduct the purge. LP-Gas between shutoff valves shall be vented before disconnecting the liquid transfer line from the container. When necessary, suitable bleeder valves shall be used. Vapors are purged through a minimum 12-foot vent stack with flame arrester.

The safety set back requirements are:

1. Smoking and other sources of ignition are not permitted within 25 feet of operation.
2. Distance from buildings, mobile homes, recreation vehicles, and modular homes with fire resistive walls shall be 10 feet.
3. The distance from buildings with other than fire resistive walls shall be 25 feet.
4. The distance from building wall openings or pits at or below of the level of the point of transfer shall be 25 feet.
5. The distance from the line of the adjoining property that can be built upon shall be 25 feet.
6. The distance from outdoor places of public assemblies, including school yards, athletic fields, and playgrounds shall be 50 feet.
7. The distance from public ways, including public streets, highways, thoroughfares, and sidewalks from LPG dispensing stations and at vehicle fuel dispensers shall be 10 feet.
8. The distance from driveways other than driveways and points of transfer at vehicle fuel dispensers shall be 5 feet.
9. The distance from mainline railroad track center lines shall be 25 feet.
10. The distance from containers other than those being filled shall be 10 feet.
11. The distance from flammable and class two combustible liquid dispensers and AST/UST containers shall be 20 feet.