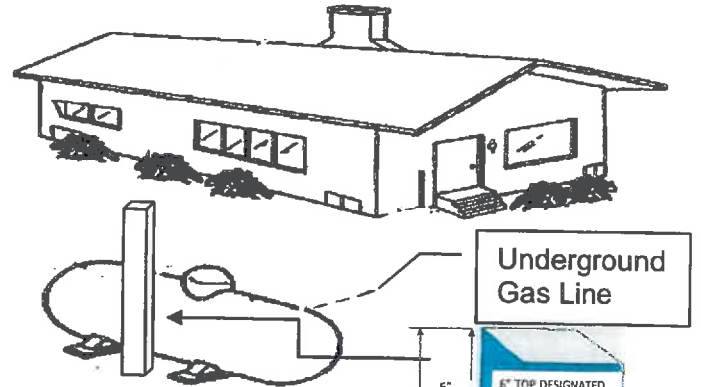




PROPANE/LPG TANK INSTALLATION
ABOVE 5,000 FT ELEVATION
PLACER COUNTY CODE ARTICLE 15.12

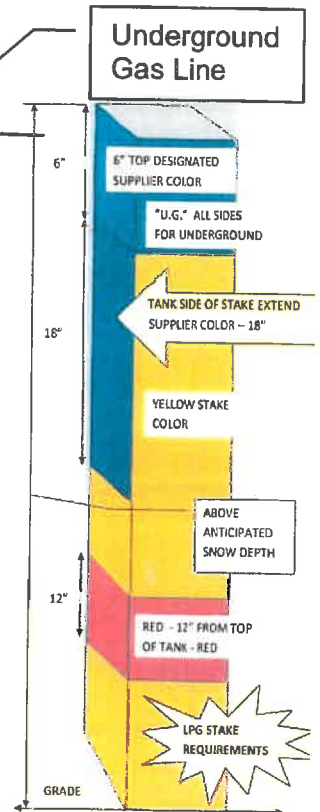
1. REGULATORS/ VALVES:

- Second-stage regulator and riser piping shall be installed on gable end of building, avoiding shedding snow & ice.
- The second-stage regulator shall be protected with an approved cover.
- An approved gas-shut off valve shall be placed directly upstream of second-stage regulator.
- Visible identification signs to be placed on building located as high as practicable directly above the shut-off valve.



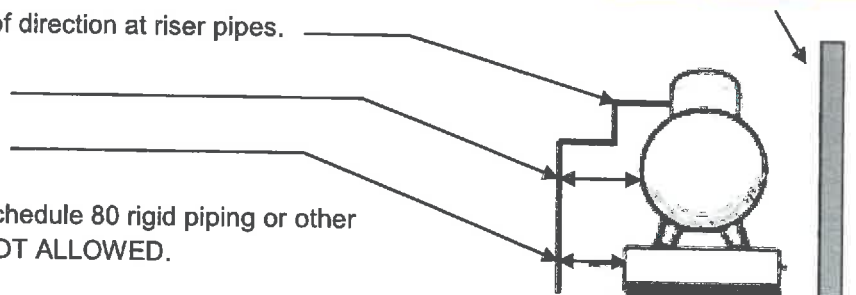
2. SNOW STAKES:

- LPG tanks shall be marked with yellow snow stakes, placed on side opposite of riser, extending above snow depth by Nov 1st ea. year & shall remain the entire snow season.
- Top 6" of stake shall be painted in supplier's color. Underground tanks shall be marked "UG" in top 6" of stake.
- The side of the stake indicating the tank location will be painted 18" min. from top of stake and be opposite the tank shut-off valve, in the supplier's color.
- Stake shall additionally be painted "RED" beginning at the top of the tank & extending 12" above the tank as a tank warning indicator.



3. PIPING:

- First-stage regulator shall be under tank dome, or approved cover per the local Fire Authority.
- Swing joints shall be used at all changes of direction at riser pipes.
- Riser pipe shall be within 3" of tank walls.
- Keep riser pipes 3" clear of hard surfaces.
- Riser piping at tank or structure shall be schedule 80 rigid piping or other approved materials. SCHEDULE 40 IS NOT ALLOWED.
- Tank supports shall be in accordance with NFPA or as approved by the permitting authority.



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**Section 5701
General**

5701.6 Above Ground Storage. Any above ground storage must be approved, in writing, by the District. This section shall not be applicable to portable containers suitable for such storage of 5 gallons or less.

**Section 5704.2
Tank Storage**

5704.2.9.6.1 – Amended. Storage of Class I and Class II flammable liquids in aboveground tanks outside of buildings is prohibited unless approved by the Fire Chief. When permitted by the Fire Chief, all aboveground tank or vault installations for the storage of Class I, II or III flammable and combustible liquids shall comply with those requirements as set forth by the California Fire Code. The CFC shall also apply to installations other than motor vehicle fuel-dispensing stations, where above ground storage is required.

**Chapter 61
LIQUEFIED PETROLEUM & NATURAL GASES – Amended**

**Section 6102
Definitions**

Add and/or amend the following definitions to Section 902 of the California Fire Code:

INSTALLATION shall mean a storage tank designed for the containment of liquefied petroleum gas, or meter assembly regulating natural gas, for use by a customer for residential, commercial, or industrial purposes, together with appurtenant pipes, risers, gauges, and related equipment.

LPG Liquefied petroleum gas.

SUPPLIER shall mean any person or business, which sells, at retail, LPG, or any company, which supplies natural gas, for residential, commercial or industrial use.

INTERRUPTION OF SERVICE (shall only apply to LPG installations) shall mean the service shall be considered to be interrupted whenever service is discontinued because of hazardous condition, change in size or type of service, whenever the tank, meter, regulator(s), valve or other exterior service supply components are removed, replaced, or repaired, whenever the service is relocated, whenever the building, tank piping or components are damaged to the extent that the servicing utility, fire or building department considers the service to be potentially hazardous. Normal refilling of an empty or partially empty tank, and routine maintenance of interior appliances, shall not be considered as an interruption of service.

Section 6112 is added as follows: High Elevation Liquefied Petroleum Gas Installations (4,000' and Above).

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Section 6112 of Chapter 61 of the Fire Code of the District is added to read as follows:

Section 6112
Requirements for New Installations

6112.1 Requirements for LPG installations. Any new LPG installation shall comply with the following:

1. A permit is required by this Code for individual LPG containers of 125 gallons or greater. At the time of application by any person for a permit to install an LPG system as required by this Code, the applicant shall submit a LPG plot plan to the District for approval and shall contain the following:
 - a. Stamp of approval of the prospective LPG supplier.
 - b. Tank location showing distances to structure and edge to edge of pavement or other identifying mark.
 - c. Tank capacity in US gallons.
 - d. Location of riser pipe at building.
 - e. Property boundaries.
 - f. An outline of all existing/proposed buildings on the lot and a depiction of the roof
 - g. ridge line of any building to be supplied with LPG
2. Two stage regulator systems shall be installed on all LPG installations in accordance with manufacturer's instructions. All first stage regulators and connecting pigtails shall be installed under a protective valve cover on tank. All regulators installed under this cover shall be listed and approved for this use and position of mounting. A connector providing flexibility shall be used to connect the first stage regulator to the main service valve on the tank. All copper pigtails shall be internally tinned and use only forged flare nuts.
3. The riser from the yard piping shall be a minimum of Schedule 80 and shall be located not more than 3 inches horizontally from the walls of the tank, and swing joints will be used above and below tank level to provide for tank movement (street elbows shall not be used). An approved flexible alternative is preferred in lieu of rigid steel pipe for the tank riser. This shall include but not be limited to plastic (PE), copper tubing, stainless steel. ALL FLEXIBLE MATERIAL USED FOR THE TANK RISER SHALL BE SHEATHED IN AN APPROVED STEEL COVER FOR PROTECTION. As swing joints are eliminated in an approved flexible alternative, sufficient slack must be maintained to allow for tank movement and/or expansion and contraction of the alternative material. All plastic pipe shall be buried at least 18" below finished grade. An electrically continuous corrosion resistant tracer wire (min. AWG 14) or tape shall be buried with the plastic pipe to facilitate locating. One end shall be brought above ground at the building wall or riser and the other end shall be brought above ground at the tank.

4. The second stage regulator and riser pipe shall be installed on the gable end of the building, as close as practical to the building wall, unless this is not feasible due to structural or topographical constraints. An approved gas shutoff valve rated for a minimum of 125 PSI shall be installed immediately prior to the second stage regulator. An approved gas shut off sign or other identifier shall be installed directly above the gas shut off valve, on the building in a visible location within three (3) feet of the eaves of the roof or roof line if no eaves are present. If the second stage regulator or a combination first/second stage regulator is used at the tank, then an approved gas shut off valve shall be located at the building.
5. A protective cover shall be installed over the second stage regulator and meter (if installed) at the building. The minimum design for the protective cover shall be equal to, or greater than, the Building Design Load (determined by the building department), and shall be securely supported to the ground or diagonally to the building wall. When supported to the ground, the footing for the supports shall be founded 6 inches below finished grade. Pre-cast concrete piers may be used in lieu of poured footings, provided they are placed on stable soil. If second stage regulator/meter assemblies could be subject to vehicle damage, then minimum of 3" steel crash post filled with concrete shall be installed for protection. Crash posts shall have a minimum depth in the ground of 24", embedded in concrete.
6. Observation and inspection, if any, by the District shall not constitute an approval of the work of installation of the aforementioned protective cover, nor shall it be deemed to create any liability or responsibility on the part of the District for the design or construction of the protective cover, nor to any third party or entity whatsoever.
7. The riser pipes for the yard piping shall not be embedded in concrete, asphalt or other rigid substance. Such substance placed around a riser shall be held back at least 3 inches from all sides of the pipe. All exposed exterior gas piping used for runs along walls or roofs shall be minimum schedule 80 steel pipe supported and secured by approved straps at intervals not to exceed four (4) feet.
8. LPG tanks shall be permanently marked by a square or other approved equal stake of wood or other material with a minimum dimension of 2" X 2" or a cross sectional width of 2", nominal lumber.
9. Such stakes shall be of sufficient height to rise above the anticipated snow depth, with the minimum height being 10 feet. The snow stakes shall be yellow in color and will be placed on the opposite side of the tank from the riser, and directly opposite the tank valves. The top ~~six~~ twelve inches of the stake shall be painted orange. The side of the stake adjacent to the tank shall continue with the orange color a minimum of 18 inches from the top of the stake.
10. Installation and maintenance of all tank stakes shall be the responsibility of the LPG supplier. No tank shall be filled or serviced unless staked as provided in this chapter.
11. Any supplier supplying propane to a tank must affix a label or other means of

identification to the inside of the tank valve protective cover. The label or other device must be waterproof and contain the supplier's name and emergency telephone number.

12. All LPG tanks shall be placed on approved concrete supports. Acceptable tank supports shall include, but not be limited to: Pre-cast reinforced concrete pads, reinforced concrete slab, or pre-cast reinforced concrete saddles. Use of un-reinforced cinder building blocks is specifically prohibited. If saddles are used they shall contact a minimum of 110 degrees of the tank circumference. Asphalt impregnated felt of not less than 3/8" thickness shall be installed between the container and the concrete saddle. Supports may be poured in place in lieu of prefabricated supports. If poured in place it shall be a minimum of 4 inches thick and reinforced with not less than WWF 6X12, W16 by W26 or 4 #3 rebar in each direction. In areas where tank may be subject to shifting snow, unstable ground or other hazardous condition, the Fire Chief may require additional tank supporting, securing or protection.

6112.2 Permits and Plans. Permits shall be required and plans shall be submitted for all underground tank installations and approved by the District.

6112.3 Underground LPG Tank Ownership. Underground LPG tanks shall be prohibited from being sold to end-users and shall be retained by the LPG company under a lease-type system to ensure proper annual maintenance requirements are met and recorded.

6113.4 Requirements for existing natural gas installations. Existing natural gas installations shall comply with the following:

1. The meter assembly shall be installed on the gable end of the building, as close as practical to the building wall, unless this is not feasible due to structural or topographical constraints.
2. A protective cover, designed to be equal to or greater than the Building Design Load (determined by the building department), approved by the supplier, shall be installed over the meter assembly, securely supported to the ground or diagonally to the building wall. When supported to the ground, the footing for the supports shall be founded 6 inches below finished grade. Pre-cast concrete piers may be used in lieu poured footings, provided they are placed on stable soil.

Section 6114 Violations

6114.1 Violations. It shall be unlawful for an LPG supplier to provide service to a LPG installation, which does not comply with the provisions in section 6112 or 6113.

6114.1.1 Failure to provide cover. Failure by the customer to provide a cover as required for a natural gas meter assembly is a violation of this code and will subject the customer to a one hundred dollar (\$100.00) fine.