



# Construction/Operational Permit Application



## LP Gases

[www.cityofvancouver.us/departments/fire-department](http://www.cityofvancouver.us/departments/fire-department)

International Fire Code as adopted by VMC 16.04 (Washington State Fire Code)

### Permitting Requirements

An **operational permit** is required for storage and use of Liquefied Petroleum Gas (LP-gas) or for operation of cargo tankers transporting LP-gas, except for individual containers with a 500-gallon water capacity or less or multiple container systems having an aggregate quantity not exceeding 500 gallons, serving occupancies in Group R-3. A **construction permit** is required for installation of or modification to an LP-gas system. Maintenance performed in accordance with this code is not considered to be a modification and does not require a permit.

### Project Information

|              |  |            |  |
|--------------|--|------------|--|
| Site Address |  | Owner Name |  |
| Other        |  |            |  |

### Applicant Information

|              |  |          |  |       |
|--------------|--|----------|--|-------|
| Company Name |  | Address  |  |       |
| Contact Name |  |          |  |       |
| Office Phone |  | Cellular |  | Email |

### Contractor

|              |  |          |  |       |
|--------------|--|----------|--|-------|
| Company Name |  | Address  |  |       |
| Contact Name |  |          |  |       |
| Office Phone |  | Cellular |  | Email |

|                   |   |                                     |  |           |
|-------------------|---|-------------------------------------|--|-----------|
| Application type: | <input type="checkbox"/> Installation <input type="checkbox"/> Operational <input type="checkbox"/> Both Installation and Operational |                                     |  |           |
| Installation by:  | <input type="checkbox"/> Contractor<br><input type="checkbox"/> Owner <input type="checkbox"/> Tenant                                 | Application (check all that apply): | <input type="checkbox"/> Interior Storage <input type="checkbox"/> Outdoor Storage <input type="checkbox"/> Dispensing<br><input type="checkbox"/> Other _____ |           |
| Related Permits:  | RES _____   | CMI _____                           | DEF _____  | MPE _____ |

### Description of Work

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## Electronic Plan Standards

### File Naming Standards:

Electronic plans and documents shall be named as specified in the City of Vancouver [ePLANS](https://www.cityofvancouver.us/business/permits-licenses-and-inspections/eplans/) system:

<https://www.cityofvancouver.us/business/permits-licenses-and-inspections/eplans/>



### Acceptable File Types:

Plans, calculations, specifications and supporting documents shall be uploaded as a PDF file.

### Plan Sheet Standards:

All plans shall be drawn to scale, as identified in the checklist, and each sheet shall state the scale and show a measurable scale on the page for measurement calibrations.

### Document Orientation:

All plans must be uploaded in "Landscape" format in the horizontal position with a north indicator. All other documents can be in "Portrait" format.

### Stamped:

Where documentation contains a code analysis or engineering calculations, such documents shall be stamped by the design professional.

## LP-Gas Submittal Checklist

- Completed Fire Install/Operate Permit Application – LP-Gas (this document) Check all *Permit Conditions* checkboxes that are applicable to your project
- Completed Hazardous Materials Inventory Statement (HMIS) and Hazardous Materials Management Plan (HMMP)
- Supporting documents listed below (See *Document Details* below)
- Site plans and floor plans (see *Plan Details* below)

## Document Details

The following information is required at time of application for the fire installation/operational permit:

- Cut Sheets of any container, equipment, or device.
- LP-Gas Safety Data Sheets.
- Construction Documents (Not required for single containers less than 2,000 gallons or total aggregate less than 4,000 gallons in multiple containers)
- Fire Safety Analysis Report, where required by WSFC Section 6108.

## Plan Details

The following is a list of information required on all plan submittals. The plan shall be drawn to 1/8" = 1'-0" minimum scale. If scale drawings are not possible, all measurements shall be called out in the drawings. The applicant is required to submit all this information so an accurate and timely review may be completed:

- Site plan indicating the lot line and location and size of the proposed tank(s) and piping system.
- Design pressure, maximum operating pressure, and test pressure.
- Type, size, setting and location of pressure relief devices, vent, and shutoff locations.
- Details to show proper construction of the foundation supporting the tank.
- Building occupancy for LP-gas storage inside buildings.
- Location of "No Smoking" signs.
- Location and type of tank mechanical protection, where applicable.
- Location of any special hazards, such as above-ground flammable or combustible liquid tanks, oxygen or gaseous hydrogen containers, flooding, or electric power lines, etc.
- Setback distances from buildings, lot lines and adjoining properties.
- Separation between LP-Gas containers, where applicable.

- Location of Fire Resistance Rating assemblies, where applicable.
- Location and type of fire extinguishers protecting the LP-Gas storage/containers.

## Permit Conditions

### Portable Containers:

- Portable LP-gas containers shall not be used in buildings except as specified in NFPA 58 and as exempted below:
  - a. Use in basement, pit or similar location is permitted if provided with an approved means of ventilation or where self-contained torch assemblies in accordance with exception #f is provided.
  - b. Portable LP-gas containers are allowed to be used in buildings or areas of buildings undergoing construction or for temporary heating as set forth in Sections 6.22.4, 6.22.5 and 6.22.8 of NFPA 58.
  - c. In Group F occupancies, portable LP-gas containers are allowed to be used to supply quantities necessary for processing, research, or experimentation. Where manifolded, the aggregate water capacity of such containers shall not exceed 735 pounds per manifold. Where multiple manifolds of such containers are present in the same room, each manifold shall be separated from other manifolds by a distance of not less than 20 feet.
  - d. In Group I occupancies and laboratories for educational use in Group B and E occupancies, portable LP-gas containers are allowed to be used for research and experimentation. Such containers shall not be used in classrooms, shall not exceed a 50-pound water capacity in occupancies used for educational purposes and shall not exceed a 12-pound water capacity in occupancies used for institutional purposes. Where more than one such container is present in the same room, each container shall be separated from other containers by a distance of not less than 20 feet.
  - e. Portable LP-gas containers are allowed to be used temporarily for demonstrations and public exhibitions. Such containers shall not exceed a water capacity of 12 pounds. Where more than one such container is present in the same room, each container shall be separated from other containers by a distance of not less than 20 feet.
  - f. Portable LP-gas containers are allowed to be used to supply approved self-contained torch assemblies or similar appliances. Such containers shall not exceed a water capacity of 2.7 pounds.
  - g. Where approved by Vancouver Fire Marshal's Office (FMO), listed LP-gas commercial food service appliances are allowed to be used for food-preparation within restaurants and in attended commercial food-catering operations in accordance with the International Fuel Gas Code, the International Mechanical Code and NFPA 58.

### Location of LP-Gas Containers:

- The storage and handling of LP-Gas and the installation and maintenance of related equipment shall comply with NFPA 58 and be subjected to the approval of the fire code official, except as provided in WSFC Section 6104, including but not limited to the following:
  - a. The LP-gas containers shall be located with respect to buildings and lot lines of adjoining property that can be built on, in accordance with Table 6104.3 of the WSFC.
  - b. LP-gas containers used in stationary installations shall not be located on the roofs of buildings.
  - c. LP-gas containers shall be located with respect to special hazards including, but not limited to, above-ground flammable or combustible liquid tanks, oxygen or gaseous hydrogen containers, flooding or electric power lines as specified in Section 6.5.3 of NFPA 58.
  - d. Multiple LP-gas container installations with a total water storage capacity of more than 180,000 gallons (150,000 gallon LP-gas capacity) shall be subdivided into groups containing not more than 180,000 gallons in each group. Such groups shall be separated by a distance of not less than 50 feet, unless the containers are protected in accordance with one of the following, in which case the separation shall be not less than 25 feet between LP-gas container groups:
    - i Mounded in an FMO approved manner.
    - ii Protected with approved insulation on areas that are subject to impingement of ignited gas from pipelines or other leakage.

- iii Protected by fire walls of FMO approved construction.
- iv Protected by an FMO approved system for application of water as specified in Table 6.5.1.2 of NFPA 58.
- v Protected by other FMO approved means.

**Storage of Portable LP-Gas Containers Awaiting Use or Resale:**

- Storage of portable LP-gas containers of 1,000 pounds or less, whether filled, partially filled or empty, at consumer sites or distribution points, and for resale by dealers or resellers, shall comply with the requirements and quantity limitations of Section 6109 including but not limited to the requirements listed below. *Exception: LP-gas containers that have not previously been in LP-gas service, LP-gas containers at distribution plants or LP-gas containers at consumer sites or distribution points, which are connected for use.*
  - a. In buildings open to the public, Department of Transportation (DOTn) specification cylinders with maximum water capacity of 2.7 pounds used in completely self-contained hand torches and similar applications are allowed to be stored or displayed. The quantity of LP-gas shall not exceed 200 pounds except as provided in #c.
  - b. In buildings, not open to the public, such as industrial buildings, the maximum quantity allowed in one storage location, shall not exceed a water capacity of 735 pounds (nominal 300 pounds of LP-gas). Where additional storage locations are required on the same floor within the same building, they shall be separated by not less than 300 feet. Storage beyond these limitations shall comply with #c. LP-gas containers carried as part of service equipment on highway mobile vehicles need not be considered in this total storage capacity, provided that such vehicles are stored in private garages and do not carry more than three LP-gas containers with a total aggregate LP-gas capacity not exceeding 100 pounds per vehicle.
  - c. Storage within buildings or rooms used for gas manufacturing, gas storage, gas-air mixing and vaporization, and compressors not associated with liquid transfer shall comply with the following:
    - i The maximum quantity of LP-gas shall be 10,000 pounds.
    - ii The construction of such buildings and rooms shall comply with requirements for Group H occupancies in the International Building Code, Chapter 10 of NFPA 58 and WSFC Section 6109.11.2.
  - d. Storage outside of buildings of LP-gas containers awaiting use, resale or part of a cylinder exchange program shall be located in accordance with Table 6109.12 of the WSFC (included below) or as required by fire code official.
  - e. Facilities operating LP-gas cylinder exchange stations that are open to the public shall comply with Section 6109.15 in addition to other applicable requirements of Chapter 61.

Table 6109.12 from the WSFC

| QUANTITY OF LP-GAS STORED (pounds) | MINIMUM SEPARATION DISTANCE FROM STORED LP-GAS CYLINDERS TO (feet):                                 |   |                           |   |   |                       |                              |
|------------------------------------|---|---|---------------------------|---|---|-----------------------|------------------------------|
|                                    | Nearest important building or group of buildings or line of adjoining property that may be built on | Line of adjoining property occupied by schools, places of religious worship, hospitals, athletic fields or other points of public gathering; busy thoroughfares; or sidewalks | LP-gas dispensing station | Doorway or opening to a building with two or more means of egress | Doorway or opening to a building with one means of egress | Combustible materials | Motor vehicle fuel dispenser |
| 720 or less                        | 0   | 0   | 5                         | 5   | 10  | 10                    | 20                           |
| 721–2,500                          | 0   | 10  | 10                        | 5   | 10  | 10                    | 20                           |
| 2,501–6,000                        | 10  | 10  | 10                        | 10  | 10  | 10                    | 20                           |
| 6,001–10,000                       | 20  | 20  | 20                        | 20  | 20  | 10                    | 20                           |
| Over 10,000                        | 25  | 25  | 25                        | 25  | 25  | 10                    | 20                           |

**Equipment and Piping:**

- The location of equipment and piping shall conform with the requirements of the International Fuel Gas Code.

**Prohibited Use:**

- Operation of devices or equipment using LP-gas shall not be permitted unless such device or equipment is approved for use with LP-gas.
- Release of LP-gas to the atmosphere shall not be permitted except in accordance with Section 7.3 of NFPA 58.

**Safety Precautions and Devices:**

- "No Smoking" signs complying with Section 310 shall be posted where required by the fire code official. Smoking within 25 feet of a point of transfer, while filling operations are in progress at LP-gas containers or vehicles, shall be prohibited.
- Weeds, grass, brush, trash, and other combustible materials shall be kept not less than 10 feet (3048 mm) from LP-gas tanks or containers.
- Where exposed to vehicular damage due to proximity to alleys, driveways or parking areas, LP-gas containers, regulators, and piping shall be protected in accordance with NFPA 58.

**Fire Protection:**

- Fire protection shall be provided for installations having LP-gas storage containers with a water capacity of more than 4,000 gallons. A Fire Safety Analysis including proposed modes of fire protection shall be submitted to the City of Vancouver for approval, as required by Section 6.29 of NFPA 58.
- Portable fire extinguishers complying with Section 906 shall be provided as specified in NFPA 58.

**NOTE:** *This is not intended to be an all-inclusive list. The WSFC requirements listed are intended to ensure that we have adequate information to begin a review of the application. Additional information may be required.*

**I understand that all applicable codes apply and that other regulatory codes may also apply. Errors and/or omissions on the plans and corrections from field inspections are the responsibility of the owner/contractor. All work is subject to compliance with City of Vancouver ordinances and laws of the State of Washington.**

APPLICANT NAME: \_\_\_\_\_ APPLICATION DATE: \_\_\_\_\_

APPLICANT SIGNATURE: \_\_\_\_\_