

FIRE Prevention



Installation of Above-Ground & Underground Storage Tanks For Flammable and Combustible Liquids

Plan Submittal minimum requirements

THE INSTALLATION OF ABOVE-GROUND TANKS (AST) AND UNDERGROUND TANKS (UST) SHALL MEET THE CRITERIA OF THE INTERNATIONAL FIRE CODE (2012 ED.), SPECIFICALLY CHAPTERS 23 AND 57, AND ANY OTHER APPLICABLE DOCUMENTS AND STANDARDS ADOPTED BY REFERENCE IN THE IFC INCLUDING NFPA 30.

AST AND UST PLANS AND ASSOCIATED DOCUMENTS, INCLUDING EQUIPMENT SPECIFICATION DOCUMENTS SHALL BE SUBMITTED TO THE AUTHORITY HAVING JURISDICTION (AHJ), THE LOWER VALLEY FIRE DISTRICT, FOR REVIEW AND APPROVAL PRIOR TO SYSTEM INSTALLATION OR OTHER WORK BEING COMPLETED (2012 IFC SEC. 105.1.1).

TYPICAL FEES INCLUDE \$50.00 PER TANK & \$50.00 PER INSPECTION.

A SEPARATE PERMIT FROM THE MESA COUNTY BUILDING DEPARTMENT MUST BE OBTAINED FOR ANY ELECTRICAL OR MECHANICAL WORK.

Tank Installations for Motor Vehicle Fuel Dispensing Facilities (Public and Fleet)

Obtaining a Permit. Each submittal shall include the following items:

1. A complete and accurate LVFD "General Installation and Operational Permit" Application
2. Project narrative describing scope of work
3. Complete copy of an approved installation permit from the Colorado Division of Oil and Public Safety
4. Equipment Specification Sheets, including UL Listings (Tank, Fuel Dispensers, etc.)
5. Hazard Classification of Liquid/Fuel Being Stored or Used (2012 IFC SEC 5701.5)
6. Material Safety Data Sheets (2012 IFC SEC 5003.4)
7. Site plan, including relevant dimensions and distances shown:

- Property lines
- Nearest buildings
- Access roads
- Access road widths
- Location of tank
- Location of vehicle impact protection around tank and dispensers.
- Location of dispensers and associated pumps/piping/equipment.
- Location of emergency disconnect switch
- Location of means of communication (i.e. phone)
- Location of fire extinguisher (minimum 2-A:20-B:C).
- Nearest fire hydrant(s)



Tank Installations Utilized for Anything OTHER than Motor Vehicle Fueling Operations

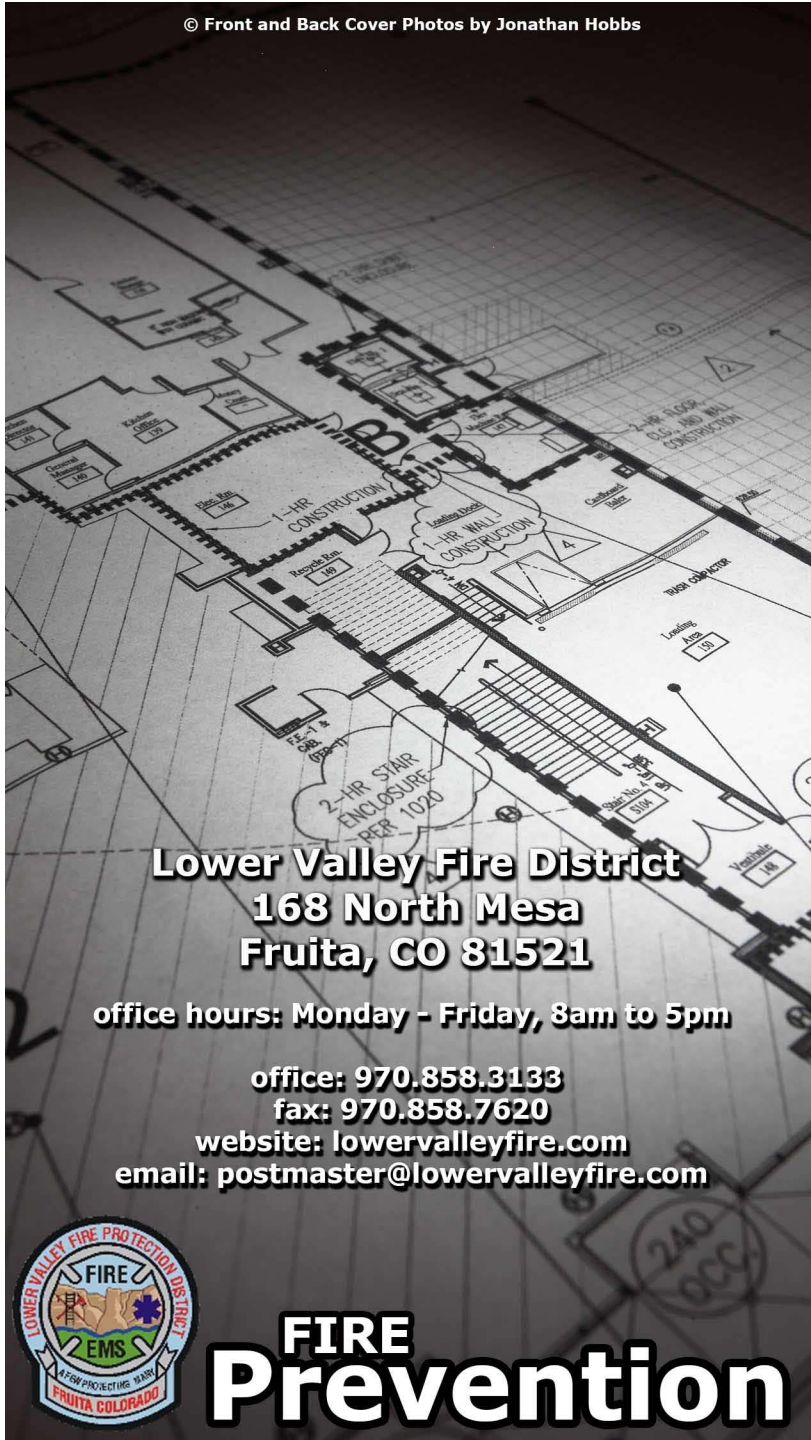
Obtaining a Permit. Each submittal shall include the following items:

1. A complete and accurate LVFD "General Installation and Operational Permit" application
2. Project narrative describing scope of work
3. Complete copy of an approved installation permit from the Colorado Division of Oil & Public Safety
4. Equipment specification sheets, including UL Listings (tank, fuel dispensers, etc.)
5. Hazard Classification of liquid/fuel being stored or used (2012 IFC SEC 5701.5)
6. Material Safety Data Sheets (2012 IFC SEC 5003.4)
7. Plans and specifications for any proposed spill control and secondary containment (2012 IFC SEC 5703.4)
8. Plans, specifications and calculations for any fire protection systems (fire alarm, fire sprinkler, etc.). Where such systems are required, generally a fire protection engineer must design it for the specific hazard. (2012 IFC SEC 5703.2)
9. Site plan, including relevant dimensions and distances shown:

- Property lines
- Nearest buildings
- Access roads
- Access road widths
- Location of tank
- Location of vehicle impact protection around tank and dispensers.
- Location of dispensers and associated pumps/piping/equipment.
- Location of emergency disconnect switch
- Location of means of communication (when required)
- Location of fire extinguisher and type per 2012 IFC.
- Nearest fire hydrant(s)
- Location of spill control and secondary containment (when required)
- Location of fire protection systems and components (when required)




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Inspections and testing requirements

General fire department inspections and testing required for all projects regardless of type include, but may not be limited to the following:



- Inspection and testing of the tank before installation including name plate (2012 IFC SEC 5704.2.12 & 5704.2.7)
- Inspection and testing of piping (2012 IFC SEC 5703.6.3)
- Final acceptance testing and inspection of the installation before facility is opened for use.

All testing procedures are conducted by the installing contractor and are witnessed by the fire code official.

Tank Installations for Motor Vehicle Fuel Dispensing Facilities (Public and Fleet)

Final Inspections and Testing (Not all inclusive)



- Required warning signage (2012 IFC SEC 2305.6)
- Required emergency procedures signage (2012 IFC SEC 2304.3.5)
- NFPA 704 Labels or Placards (2012 IFC SEC 5704.2.3)
- Operating instruction signage posted on dispensers (2012 IFC SEC 2304.3.3)
- Emergency disconnect switch must be operationally tested (2012 IFC SEC 2303.2)
- Confirm fire extinguisher(s) location and type, minimum 2-A:20-B:C (2012 IFC SEC 2305.5)
- Means of communication (e.g. telephone) (2012 IFC SEC 2304.3.6)
- Control of brush and debris with 10 feet of facility (2012 IFC SEC 2305.7)
- Vehicle impact protection (2012 IFC SEC 2306.4)
- Project is in compliance with AHJ approved plans.

Tank Installations Utilized for Anything OTHER than Motor Vehicle Fueling Operations

Final Inspections and Testing (Not all inclusive)

This will depend on the size, type and location of installation, but may include the following general requirements:



- Required warning signage and labeling (2012 IFC SEC 5703.5)
- NFPA 704 Labels or Placards (2012 IFC SEC 5704.2.3)
- Spill control and secondary containment (2012 IFC SEC 5703.4)
- Vehicle impact protection (2012 IFC SEC 5703.6.4)
- Fire extinguisher(s) location and type (2012 IFC SEC 5703.2.1)
- Required inspections and testing of fire protection systems including underground fire lines, specialized extinguishing/suppression systems (2012 IFC SEC 5703.2)
- Project is in compliance with AHJ approved plans.

Above-Ground tanks (AST)

Minimum separation requirements for above-ground tanks are addressed in 2012 IFC Table 2306.2.3.

Above-ground tanks used for outside, above-grade storage of Class I flammable liquids shall be listed and labeled as protected above-ground tanks in accordance with UL 2085 (2012 IFC SEC 2306.2.3). Fuel dispensers may be directly on such tanks if used for fueling fleet vehicles.

Other approved tanks such as UL 142 listed tanks are allowed when Class II and Class IIIA combustible liquids are being stored provided the separation distances comply with 2012 IFC Table 2306.2.3. Fuel dispensers must be located at least 50 feet away from these tanks.

Aboveground storage tanks (AST) located outside containing flammable or combustible liquids are only allowed on lands within the Lower Valley Fire District that are zoned C-2 (heavy commercial), I-1 (light industrial), or I-2 (heavy industrial). C-1 zoned properties may be allowed in some cases, but require special evaluation by the Fire Chief (City Ordinance No. 4500).

Contractor protocol

Inspection Scheduling: Requests for inspections require a minimum 48 hours notice. Scheduling of inspections should be coordinated with Inspectors with the Colorado Division of Oil and Public Safety and the Mesa County Building Department where applicable.

Permits On-Site: An approved set of plans, including comments and conditions of approval by the AHJ, shall be made available on-site while work is being completed.



Code References

- International Fire Code (2012 Edition)
- Colorado Division of Oil and Public Safety (303.318.1631)
- Mesa County Building Department (970.244.1631)