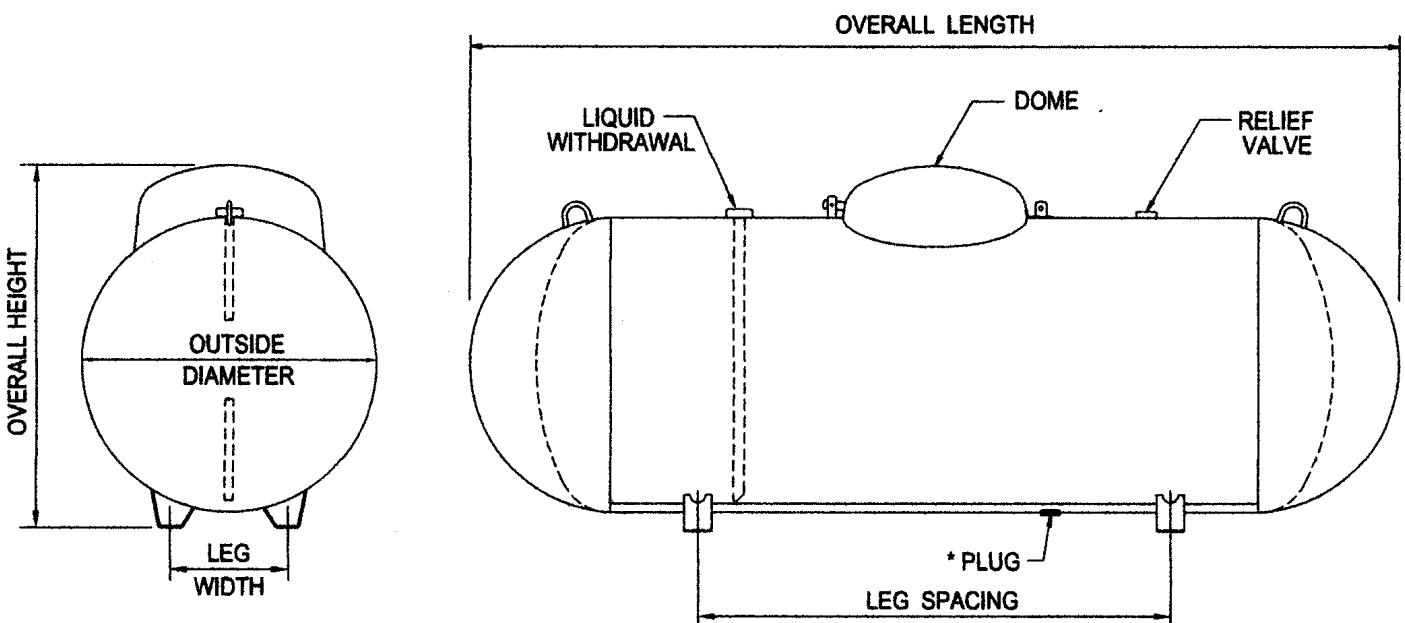


Support: Anchoring will be by concrete anchor bolts (Typically 1/2" x 5")  
Specification also shown on page 2

Description of work:  
Install 1000 wg Above Ground Storage Tank and dispenser system, container, appurtenances, piping, metering system, and electrical system per requirements of the Colorado Division of Oil and Public Safety statues and regulations NFPA 58 (2017 Edition), NFPA 30A (2015 Edition) and NIST Handbook 44 (2016) for the exiting IBox stage facility.



ABOVEGROUND DOMESTIC TANKS



General Specifications

Conforms to the latest edition of the ASME code for Pressure Vessels, Section VIII, Division 1. Complies with NFPA 58.

Rated at 250 psig from -20° F. to 125° F. All tanks may be evacuated to a full (14.7 psi) vacuum.

Vessel Finish: Coated with TGIC powder.

Liquid withdrawal opening located under the dome on the 120wg vessels ONLY.

ABOVEGROUND VESSEL DIMENSIONAL INFORMATION									
All vessels dimensions are approximate									
WATER CAPACITY	OUTSIDE DIAMETER	HEAD TYPE	OVERALL LENGTH	OVERALL HEIGHT	LEG WIDTH	LEG SPACING	WEIGHT	QUANTITY	
								FULL LOAD	PER STACK
* 120 wg. 454.2 L	24" 609.6 mm	Ellip	5'- 5 13/16" 1671.8 mm	2'- 8 1/4" 819.2 mm	10 1/8" 257.2 mm	3'- 0" 914.4 mm	245 lbs. 111.1 kg.	96	12
* 250 wg. 946.3 L	31.5" 800.1 mm	Hemi	7'- 2 1/2" 2197.1 mm	3'- 3 3/4" 1009.7 mm	12 3/4" 323.9 mm	3'- 6" 1066.8 mm	472 lbs. 214.1 kg.	63	9
* 320 wg. 1211.2 L	31.5" 800.1 mm	Hemi	8'- 11 3/4" 2736.9 mm	3'- 3 3/4" 1009.7 mm	12 3/4" 323.9 mm	4'- 0 1/4" 1225.6 mm	588 lbs. 268.7 kg.	45	9
500 wg. 1892.5 L	37.42" 950.5 mm	Hemi	9'- 10" 2997.2 mm	3'- 9 11/16" 1160.5 mm	15" 381.0 mm	5'- 0" 1524.0 mm	871 lbs. 395.1 kg	30	6
1000 wg. 3785.0 L	40.96" 1040.4 mm	Hemi	15'- 10 13/16" 4846.6 mm	4'- 1 3/8" 1254.1 mm	16 1/4" 412.8 mm	9'- 0" 2743.2 mm	1729 lbs. 784.3 kg	15	5
1465 wg. 5545.0 L	46.77" 1188 mm	Ellip	17'- 6 7/8" 5356.2 mm	4'- 4 3/4" 1339.9 mm	21" 533.4 mm	10'- 0" 3048 mm	2745 lbs. 1245 kg	12	4
2000 wg. 7570.0 L	46.77" 1188 mm	Ellip	23'- 9" 7239 mm	4'- 7" 1709.7 mm	21" 533.4 mm	14'- 0" 4267.2 mm	3676 lbs. 1667.5 kg	8	4

\* DRAIN PLUG NOT AVAILABLE

Rev: Jan. 27, 2016

LAND DEVELOPMENT

ENERGY

PUBLIC INFRASTRUCTURE

CORE CONSULTANTS, INC.

3472 S. BROADWAY

DENVER, CO 80113

303.703.4444

LIVEYOURCORE.COM

PROPANE TANK

AURORA

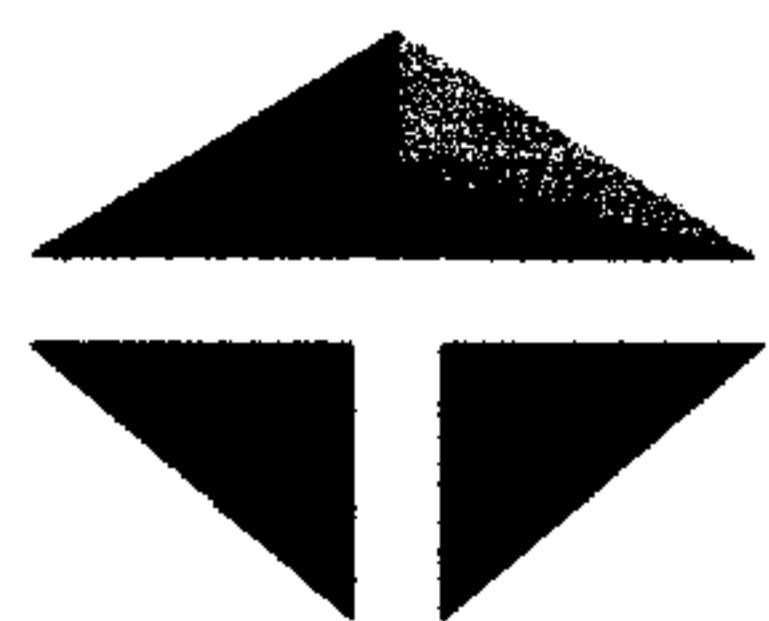
DATE:

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JOB NO.  
21-134

SHEET  
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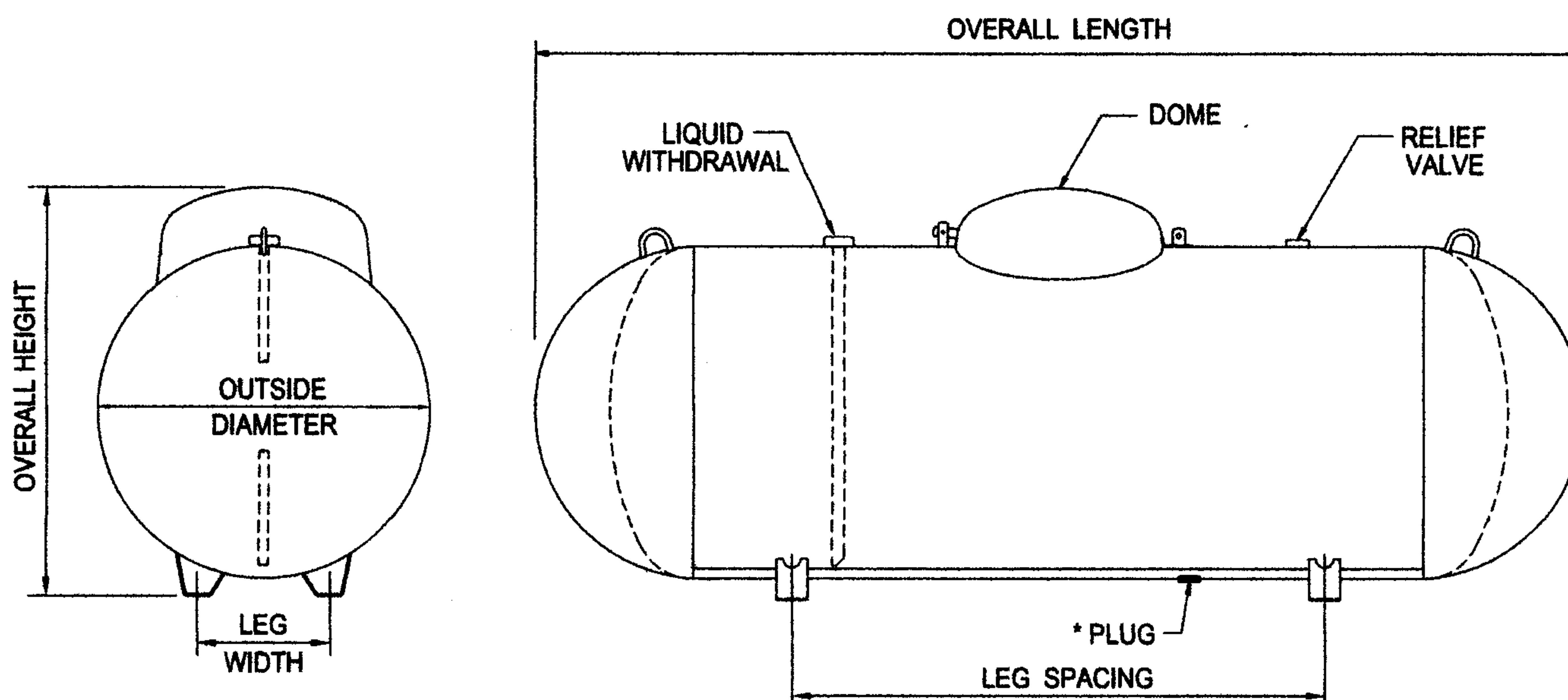




**TRINITY**  
**CONTAINERS**

Containing Our World's Energy™

# ABOVEGROUND DOMESTIC TANKS



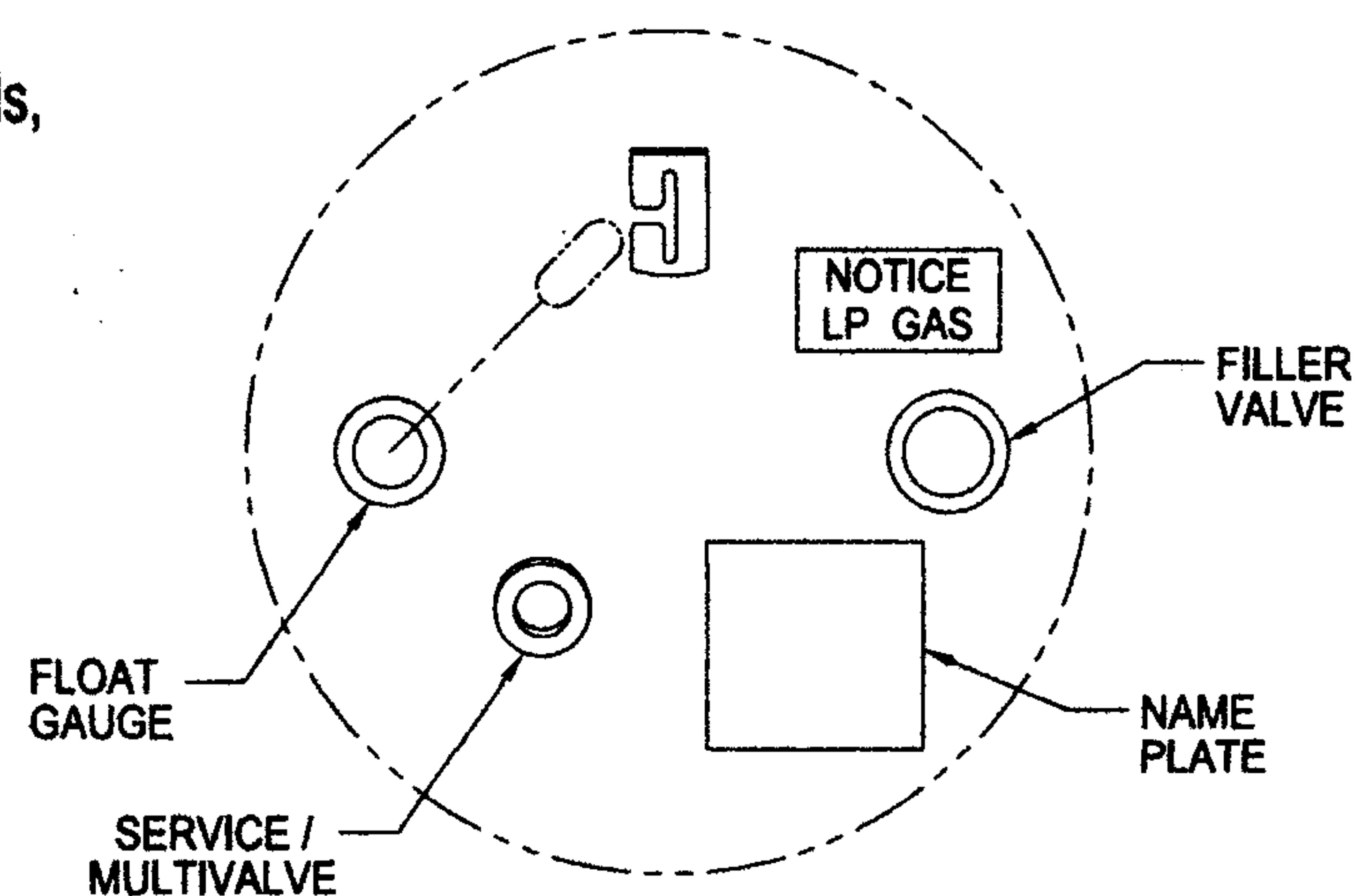
## General Specifications

Conforms to the latest edition of the ASME code for Pressure Vessels, Section VIII, Division 1. Complies with NFPA 58.

Rated at 250 psig from -20° F. to 125° F. All tanks may be evacuated to a full (14.7 psi) vacuum.

Vessel Finish: Coated with TGIC powder.

Liquid withdrawal opening located under the dome on the 120wg vessels ONLY.



## ABOVEGROUND VESSEL DIMENSIONAL INFORMATION

All vessels dimensions are approximate

WATER CAPACITY	OUTSIDE DIAMETER	HEAD TYPE	OVERALL LENGTH	OVERALL HEIGHT	LEG WIDTH	LEG SPACING	WEIGHT	QUANTITY	
								FULL LOAD	PER STACK
* 120 wg. 454.2 L	24" 609.6 mm	Ellip	5' - 5 13/16" 1671.6 mm	2' - 8 1/4" 819.2 mm	10 1/8" 257.2 mm	3' - 0" 914.4 mm	245 lbs. 111.1 kg.	96	12
* 250 wg. 946.3 L	31.5" 800.1 mm	Hemi	7' - 2 1/2" 2197.1 mm	3' - 3 3/4" 1009.7 mm	12 3/4" 323.9 mm	3' - 6" 1066.8 mm	472 lbs. 214.1 kg.	63	9
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2000 wg. 7570.0 L	46.77" 1188 mm	Ellip	23' - 9" 7239 mm	4' - 7" 1709.7 mm	21" 533.4 mm	14' - 0" 4267.2 mm	3676 lbs. 1667.5 kg.	8	4

\* DRAIN PLUG NOT AVAILABLE

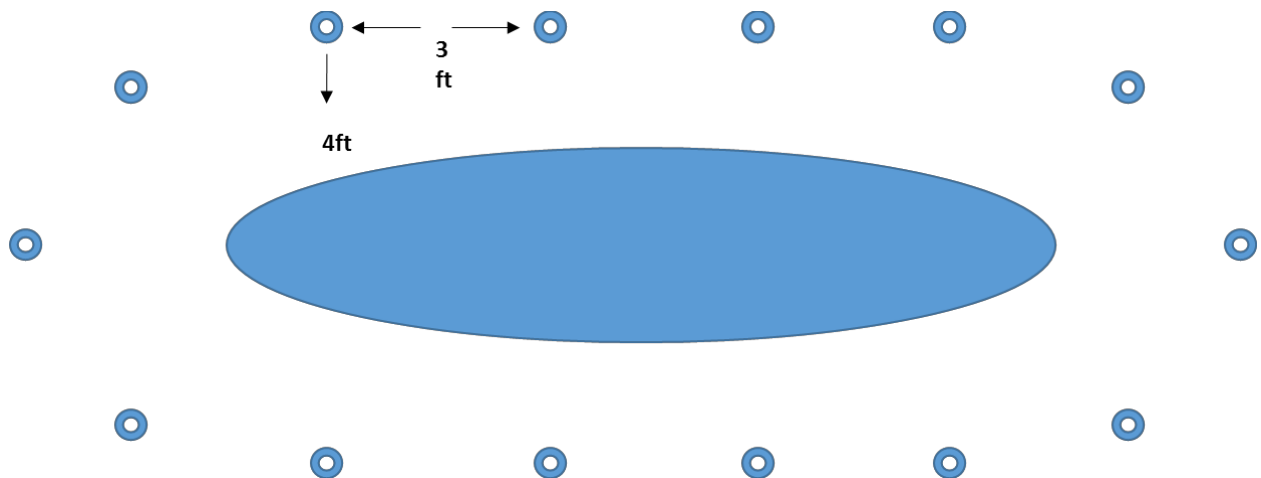
Rev: Jan. 27, 2016



## Crash Protection for Aboveground 250, 500 & 1000 Gallon Tanks

### Bollards must be the following:

- A. Three feet below ground, three feet above ground and three feet apart from each other.
- B. Bollards need to be a minimum of Four Inches in Diameter.
- C. If steel pipe is used it must be filled with concrete above and below ground.
- D. Below ground portion of bollard must be set in concrete.
- E. Bollards must be FUOR feet from the tank.



- 1. If there is a pump and dispenser cabinet it must be protected by bollards.
- 2. If there is liquid, propane coming from the tank to the use point the piping must be protected by bollards.
- 3. If there is an external vaporizer in the system it must be protected by bollards.

**NO SMOKING**

NO SMOKING DECAL  
PSC

**PROPANE**

PROPANE DECAL  
PSC

Quick shop

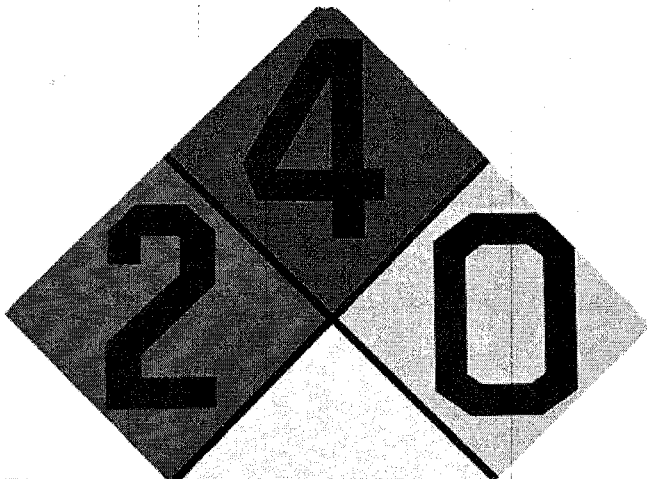
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**FLAMMABLE**

FLAMMABLE DECAL



HAZMAT PROPANE 1075 PLACARD  
PSC



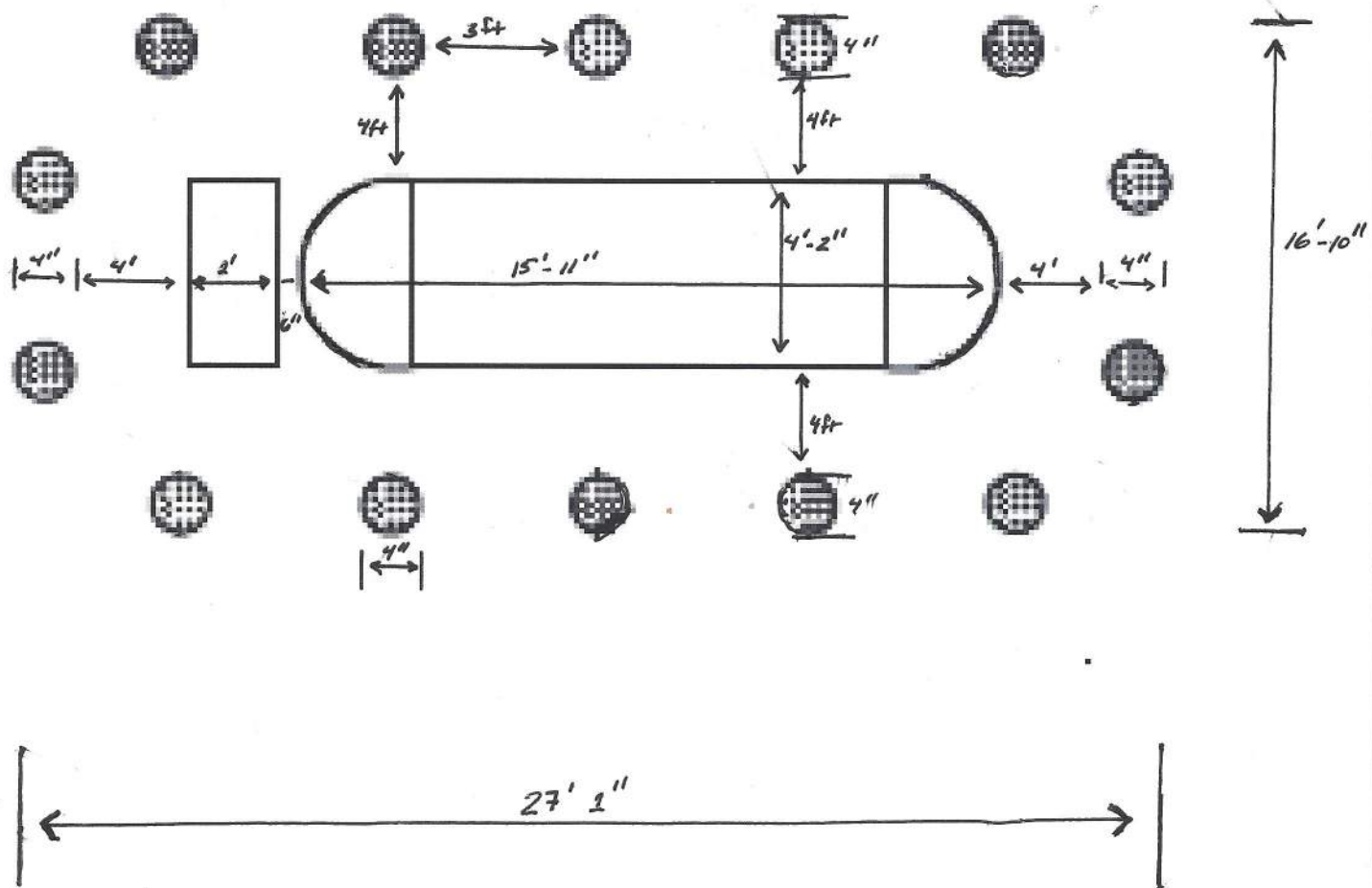
← **all ASME Tanks**

← **all ASME Tanks**

← **all ASME Tanks**

← **All ASME Tanks**

← **All ASME Tanks**



I box



# Untitled Map

Write a description for your map.

## Legend

- Murphy Creek
- Shell



Google Earth

700 ft





# 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

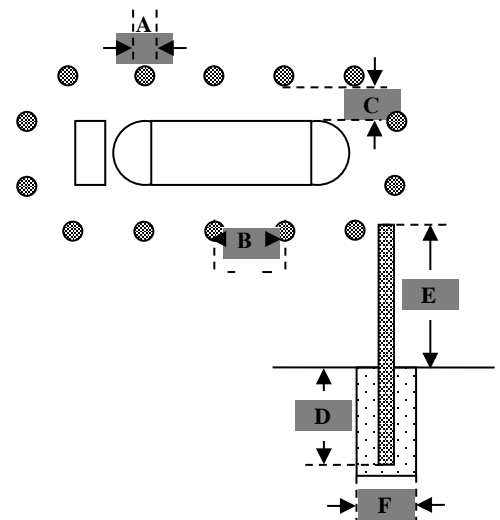
NFPA 58 (2017) 6.4.1.1 requires that *“Containers installed outside of buildings...shall be located with respect to the adjacent containers, important building, group of buildings, or line of adjoining property that can be built upon, in accordance with table 6.4.1.1”*

- 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.



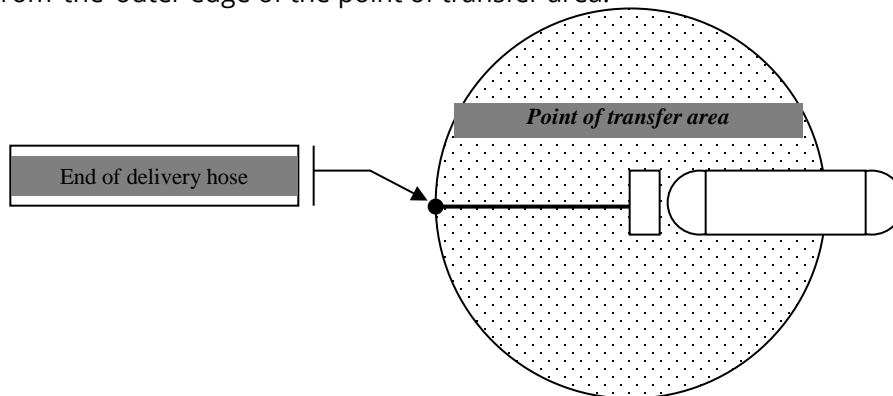
## Emergency Shutoff's

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](mailto:scott.simmons@state.co.us).



## RANSOME MANUFACTURING

www.ransomemfg.com

**RANSOME**  
 MANUFACTURING

D760B-A



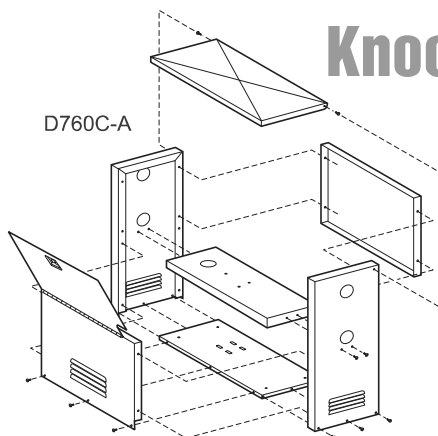
## LP-Gas Dispensers

The D760B-A and D762B-A Dispensing Units combine compact, economical and dependable operation with an attractive appearance to make it ideal for installation anywhere. These units when ordered as a complete, ready to attach dispensers, contain all quality components including a complete hose assembly with shut-off valve and Acme connector.

3/4" x 15' LPG Hose included. Cabinet dimensions: 18" x 31" x 42"

DESCRIPTION	PUMP	MOTOR	PART NUMBER	LIST PRICES
Liqua-Tech / Neptune 1" type 4D-MD	Blackmer	1 HP	<b>D760B-A</b>	15648.00
Liqua-Tech / Neptune 1" type 4D-MD	Blackmer	1.5 HP	<b>D762B-A</b>	17422.00
Liqua-Tech / Neptune 1" type 4D-MD	Blackmer	1.5 HP	<b>D762TU-A</b>	18622.00

D760C-A



## Knock Down Cabinet

The D760C-A "Knock Down" LP-Gas Dispenser Cabinet is a compact, heavy gauge dispenser designed for easy installation, use and service access. Because the cabinet is shipped unassembled, it comes complete with all the material for a quick and easy assembly. Nuts and bolts included.

DESCRIPTION	PART NUMBER	LIST PRICES
"Knock Down" Dispenser Cabinet (Shipped Unassembled)	<b>D760C-A</b>	2648.00

## Dispenser Hose Assemblies

HOSE ASSEMBLY	LENGTH (OAL)	PART NUMBER	LIST PRICES
1/2" MP x MP	10 ft.	<b>HA74310</b>	211.46
1/2" MP x MP	12 ft.	<b>HA74312</b>	178.78
1/2" MP x MP	15 ft.	<b>HA74315</b>	221.98
3/4" MP x MP	10 ft.	<b>HA74410</b>	260.20
3/4" MP x MP	12 ft.	<b>HA74412</b>	273.86
3/4" MP x MP	15 ft.	<b>HA74415</b>	304.82
3/4" MP x MP	18 ft.	<b>HA74418</b>	329.96
1" MP x MP	100 ft.	<b>HA745100</b>	1280.56
1" MP x MP	125 ft.	<b>HA745125</b>	1584.16

## Parafour Dispenser



P4-150LT

The P4-150 is the most capable and feature rich Autogas dispenser available. Single meter, dual hose, designed for the Gasguard GG20 Autogas nozzle and various cylinder fill nozzles, the P4-150 is the most flexible dispenser for propane resellers available. Attractive, functional and durable, the P4-150 gives a fresh and professional image to sites servicing a variety of customers. Cylinders, forklift tanks, RV's, mower tanks or Autogas, this compact package does it all. Fully NETP certified for installation with NTEP approved meters and fuel management systems (Compatible fleet and retail card readers / POS and consoles), the P4-150 is a full retail capable Autogas dispenser, equally desirable in a fleet only application. Designed and built in accordance with UL 495 / 1238, and NFPA 58 / 30A.



DESCRIPTION	PART NUMBER	LIST PRICES
Parafour Duel Purpose LPG Two Hose, Single Liqua-Tech Meter Dispenser	<b>P4-150LT</b>	21794.00

**RANSOME**  
 MANUFACTURING

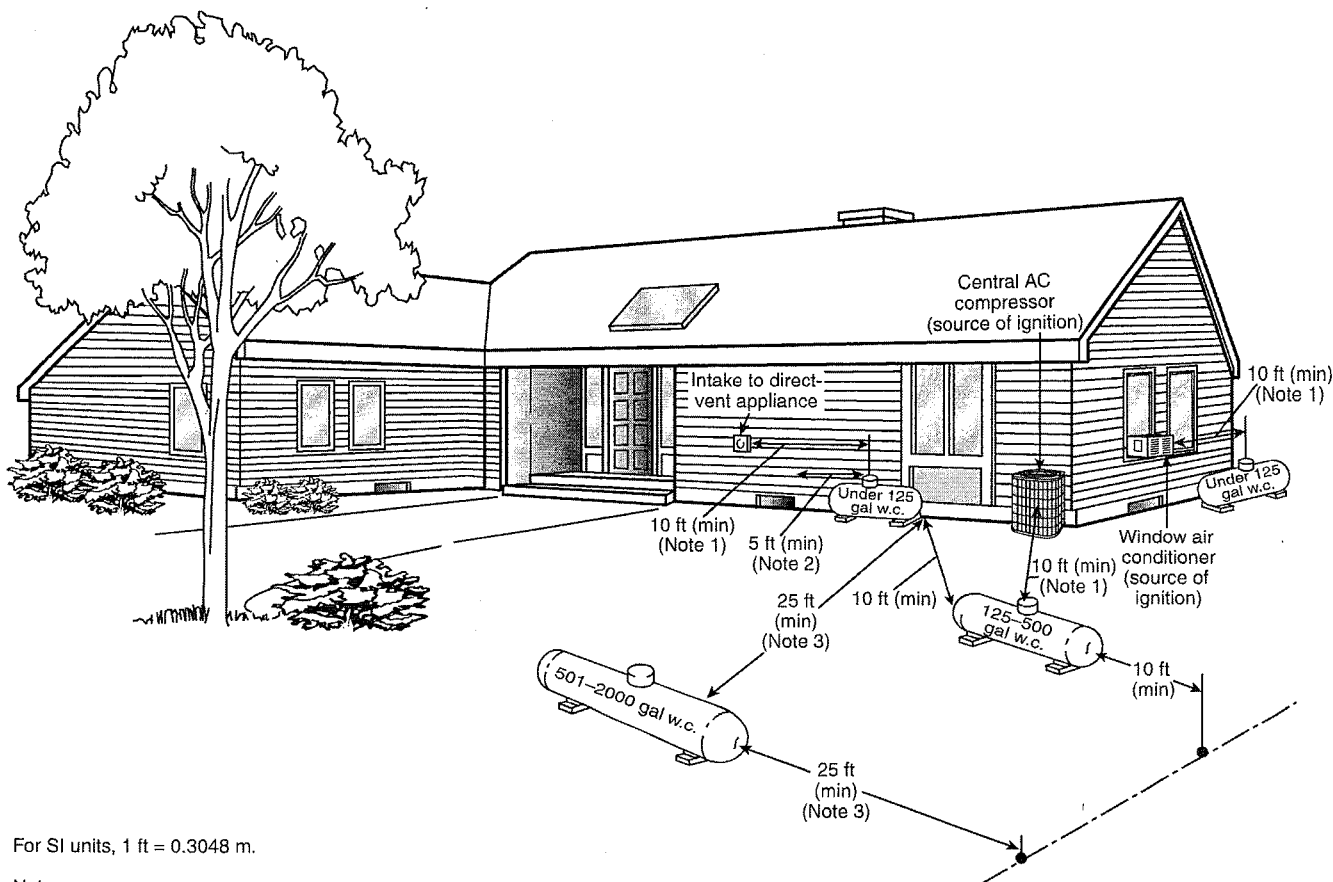
LP250



## ASME Domestic Tanks

Ransome Tanks are built to the highest standards demanded by customers who want their investment to last with little or no maintenance.

CAPACITY	DIAMETER INCHES	OA HEIGHT INCHES	OA LENGTH INCHES	PART NUMBER	LIST PRICES
124 gallon	24	34	70	<b>LP124</b>	5050.00
150 gallon	24	34	84	<b>LP150</b>	3980.00
250 gallon	30	40	94	<b>LP250</b>	5500.00
325 gallon	30	40	119	<b>LP325</b>	5600.00
500 gallon	37	48	120	<b>LP500</b>	6850.00
1000 gallon	41	52	194	<b>LP1000</b>	13460.00
1150 gallon	41	52	221	<b>LP1150</b>	16880.00
1999 gallon	54	60	221	<b>LP1999</b>	33640.00



For SI units, 1 ft = 0.3048 m.

Notes:

- (1) Regardless of its size, any ASME container filled on site must be located so that the filling connection and fixed maximum liquid level gauge are at least 10 ft from any external source of ignition (e.g., open flame, window AC, compressor), intake to direct-vented gas appliance, or intake to a mechanical ventilation system. Refer to 6.3.4.4.
- (2) Refer to 6.3.4.3.
- (3) This distance can be reduced to no less than 10 ft for a single container of 1200 gal (4.5 m<sup>3</sup>) water capacity or less, provided such container is at least 25 ft from any other LP-Gas container of more than 125 gal (0.5 m<sup>3</sup>) water capacity. Refer to 6.3.1.3.

**FIGURE I.1(b) Aboveground ASME Containers.** (Figure for illustrative purposes only; code compliance required.)

## Annex J Sample Ordinance Adopting NFPA 58

*This annex is not a part of the requirements of this NFPA document but is included for informational purposes only.*

**J.1** The following sample ordinance is provided to assist a jurisdiction in the adoption of this code and is not part of this code.

ORDINANCE NO. \_\_\_\_\_

An ordinance of the [jurisdiction] adopting the 2014 edition of NFPA 58, *Liquefied Petroleum Gas Code*, documents listed in Chapter 2 of that code; prescribing regulations governing conditions hazardous to life and property from fire or explosion; providing for the issuance of permits and collection of fees; repealing Ordinance No. \_\_\_\_\_ of the [jurisdiction] and all other ordinances and parts of ordinances in conflict therewith; providing a penalty; providing a severability clause; and providing for publication; and providing an effective date.

BE IT ORDAINED BY THE [governing body] OF THE [jurisdiction]:

**SECTION 1** That the *Liquefied Petroleum Gas Code* and documents adopted by Chapter 2, three (3) copies of which are on file and are open to inspection by the public in the office of the [jurisdiction's keeper of records] of the [jurisdiction], are hereby adopted and incorporated into this ordinance as fully as if set out at length herein, and from the date on which this ordinance shall take effect, the provisions thereof shall be controlling within the limits of the [jurisdiction]. The same are hereby adopted as the code of the [jurisdiction] for the purpose of prescribing regulations governing conditions hazardous to life and property from fire or explosion and providing for issuance of permits and collection of fees.

**SECTION 2** Any person who shall violate any provision of this code or standard hereby adopted or fail to comply therewith; or who shall violate or fail to comply with any order made thereunder; or who shall build in violation of any detailed