



Department Of Fire Prevention & Electrical Safety

MATTHEW H. MEAD GOVERNOR

LANNY APPLIGATE STATE FIRE MARSHAL

PLAN REVIEW INFORMATION TO INSTALL FLAMMABLE/ COMBUSTIBLE LIQUID ABOVE GROUND TANKS

Flammable /Combustible liquids - To install tanks for the storage, dispensing, and use of flammable\combustible liquids above ground as specified in the International Fire Code sections 105.6.17#5, 105.1.2 #2, and 105.7.5

Note: Flammable liquids have a flash point below 100 F. Combustible liquids have a flash point above 100 F.

Checkboxes for FLAMMABLE LIQUIDS, COMBUSTIBLE LIQUIDS, LIQUEFIED PETROLEUM GAS with quantity fields.

Check one box for site type: Retail (attended), Non-Retail (cardlock), Bulk Plant, Farm or Construction Site, Commercial, Industrial, Governmental or Manufacturing.

Located on Premises Known as: Phone Site Address (Street/Road): Nearest Cross Street or Road:

** ALL APPROVALS, IF REQUIRED LOCALLY, MUST BE SIGNED OFF BELOW. ** APPROVALS

SIGNATURE OF ZONING OFFICIAL

MAILING ADDRESS

CITY/COUNTY STATE ZIP

SIGNATURE OF LOCAL FIRE CHIEF

MAILING ADDRESS

CITY/COUNTY STATE ZIP

APPLICANT INFORMATION

INSTALLER TEL. PH.

ADDRESS

CITY STATE ZIP

APPLICANT/OWNER TEL. PH.

ADDRESS

CITY STATE ZIP

SIGNATURE OF APPLICANT DATE

NOTE: IT IS THE RESPONSIBILITY OF THE APPLICANT TO ENSURE THAT THIS INSTALLATION SHALL BE IN FULL COMPLIANCE WITH APPLICABLE STATUTES OF THE STATE OF WYOMING AND ANY LOCAL CODES AND ORDINANCES.

FOUR SETS OF PLANS SHALL ACCOMPANY THIS APPLICATION WHICH SHALL INCLUDE A PLOT PLAN SHOWING THE LOCATION OF BUILDINGS, STRUCTURES, TANKS, DIKING, VALVES, PIPING, TANK AND DIKE CAPACITIES, DETAILS OF DESIGN AND CONSTRUCTION, AND FIRE PROTECTION. PLANS SHALL INDICATE THE METHOD OF STORAGE, QUANTITIES, DISTANCES FROM BUILDINGS AND PROPERTY LINES, ACCESS WAYS, AND PROVISIONS FOR SPILL CONTROL, DRAINAGE, AND SECONDARY CONTAINMENT.

ABOVE GROUND TANK CHECKLIST - 2006 IFC –

Check your project against the provisions that apply to your use to meet current International Fire Code requirements.

NOTE: DEQ regulates underground tank installations

GENERAL TANK PROVISIONS:

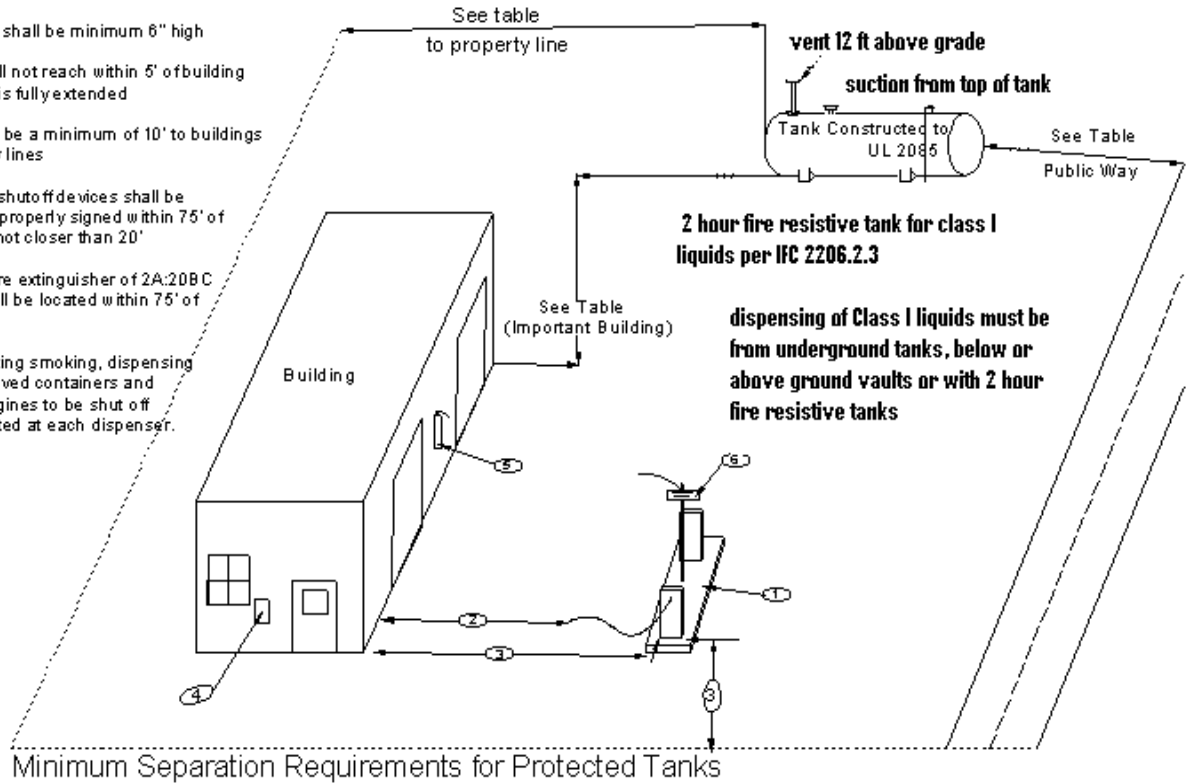
1. **DESIGN STANDARDS:** The design, fabrication and construction of tanks and equipment shall be in accordance with National Fire Protection Association Standard 30 and with recognized good engineering practices and nationally recognized standards. **(FLAMMABLE LIQUIDS per IFC 3403.6.2, 3404.2.7).** The recognized standard for the State of Wyoming is UL 142 for steel tanks and UL 2085 for 2-hour rated tanks. Also, UL 2244 for tanks with pumps attached. Tanks do not need to be UL labeled, but must be designed, constructed, and tested to an approved standard. Non - UL labeled tanks shall bear an all weather label with the following information: name and address of the tank manufacturer, year the tank was built or date of re-certification, capacity of the tank in US gallons, and the tank construction standard.
2. **LOCATION:** Storage tanks are required to be located a minimum distance from property lines which may be built upon and a minimum distance from the near side of any public way or nearest important building per IFC sec. 3404.2.9.5 and NFPA 30 tables 2-1 through 2-7. Containers and portable tanks shall be located per IFC 3404.4.2 and table 3404.2.
3. **SEPARATION TO LPG TANKS:** The minimum horizontal separation between an LPG container and a Class I, II and III-A liquid storage tank shall be 20 feet, with some exceptions. Suitable means shall be provided to prevent the accumulation of Class I, II, and III-A liquids under adjacent LPG containers such as diking, diversion curbs, or grading. See IFC 3404.2.9.5.3.
4. **NORMAL VENTING:** To prevent the development of vacuum or pressure within storage tanks vents shall be sized in accordance with IFC 3404.2.7.3 and shall be at least the size of the fill or withdrawal connection but not less than 1 and 1/4 inches inside diameter. Flammable liquid vents must terminate not less than 12 feet above grade and 5 feet from a building opening or property line. They must discharge upwards and outward.
5. **EMERGENCY VENTING:** Each aboveground tank shall be equipped with adequate additional emergency venting that will relieve excessive internal pressure caused by fire exposure. IFC 3404.2.7.4.
6. **DIKING:** The area surrounding a tank or tanks shall be provided with drainage control or shall be diked per 3404.2.10 to prevent accidental discharge of liquid from endangering adjacent tanks or adjoining property or from reaching waterways. IFC 3404.2.10.
7. **PIPING/FIRE VALVES:** All piping is required to be designed and fabricated from suitable materials having adequate strength and durability to withstand the pressures, structural stresses, and exposures to which they can be subjected. See IFC 3403.6. All underground piping shall be properly designed, installed, and maintained, and protected from corrosion by cathodic protection or construction of corrosion resistant materials. IFC 3403.6.5.
8. **ELECTRICAL:** Electrical wiring and equipment shall be installed and maintained in accordance with the National Electrical Code (NFPA 70) and as otherwise required by the Code Official. IFC 3403.1.3.
9. **FIRE VALVES:** Fire valves shall be required per IFC 3403.6.6.
10. **EXTINGUISHERS:** Extinguishers shall be provided on site per IFC 3403.2.1 and section 906 with a minimum rating of 2A-20B:C located not more than 75 ft. from the pumps. Other additional fire protection may be required per IFC 3404.2.9.1.

11. **SIGNS/PLACARDING:** Signs, placarding of product and no smoking signs shall be properly posted per IFC 3404.2.3.1, 3404.2.3.2 and 3403.5.
12. **STAIRS:** All stairs and platforms shall be built of non-combustible materials and per the International Building Code. IFC 3404.2.9.3.
13. **IMPACT PROTECTION:** Vehicle impact protection for tanks and piping and pumps shall be provided per IFC 3404.2.9.6.5. Guard posts shall be constructed of steel no less than 4 inches in diameter and concrete filled, spaced not more than four feet apart, and set not less than three feet above ground in a concrete filled footing 15 inches minimum in diameter and a minimum of three foot deep. Posts shall not be located less than 5 ft. from the tanks.
14. **OVERFILL PROTECTION:** Overfill protection shall be provided for tanks per IFC 3404.2.7.5.8 and 3402.9.6.6.

Additional Provisions for motor vehicle fuel dispensing stations

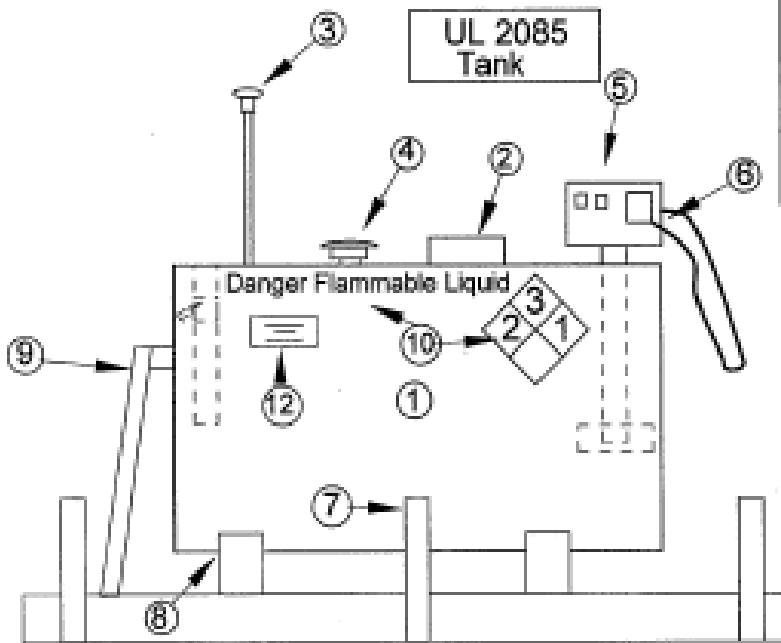
15. **OPENINGS:** Tank openings shall be through the top only per IFC 2206.6.2.1 and anti-siphon devices shall be provided per 2206.6.2.4 and 3404.2.9.6.10 when piping extends below the top of the tank.
16. **ABOVE GRADE TANKS** shall be 2-hour fire protected tanks listed and labeled for above ground service and shall be in accordance with Chapter 22 of the IFC. Above grade tanks used for storage of Class I, II, and III-A liquids shall not exceed 15,000 gallons Water Capacity for an individual tank nor 48,000 gallons in aggregate for multiple tanks. Installations with the aggregate capacity shall be separated from other installations by not less than 100 ft. Tanks in approved vaults storing Class I and II liquids at an individual site shall be limited to 15,000 gallons in individual tanks, 48,000 gallons aggregate. Tanks storing Class II and III-A liquids at a fleet vehicle service station shall be limited to a maximum single tanks capacity of 20,000 gallons and an aggregate of 80,000 gallons per IFC 2206.
17. **LISTED EQUIPMENT:** All equipment associated with dispensing of flammable/combustible liquids shall be listed equipment per IFC 2206.7.1. Dispensers/pumps shall be mounted on a concrete island a minimum of 6 inches high or shall be located on an approved protected tank. Emergency impact valves shall be provided. See IFC 2206.7.3 and 2203.7.4. Leak detection shall be provided per IFC 2206.7.7.1.
18. **DISPENSER/PUMPS** shall be located not less than 10 ft. from property lines and buildings. All portions of the vehicle being fueled shall be on the premises of the fuel station. The nozzle shall not be within 5 ft. of building openings when fully extended per 2203.1. Hoses for pumps shall be listed and approved and not over 18 ft. in length unless approved by the Authority having jurisdiction. Hoses shall be provided with break-away connections. Nozzles shall be per IFC 2206.7.6.
19. **SIGNS:** Smoking and open flames shall be prohibited where fuel is being dispensed, engines shall be shut off and glass or other unapproved containers shall not be used. Signage prohibiting such will be conspicuously posted at dispensers per IFC 2205.6
20. **EMERGENCY DISCONNECTS:** Per IFC 2203.2 emergency disconnect switches shall be provided at approved locations to stop the transfer of fuel to the fuel dispensers in the event of a spill or other emergency. These shall be within 100 ft. of dispensers but not less than 20 ft. and labeled: EMERGENCY FUEL SHUT OFF.

1. Pump island shall be minimum 6" high
2. Nozzles shall not reach within 5' of building when hose is fully extended
3. Pumps shall be a minimum of 10' to buildings and property lines
4. Emergency shutoff devices shall be located and properly signed within 75' of pumps but not closer than 20'
5. A portable fire extinguisher of 2A:20BC capacity shall be located within 75' of any pumps.
6. Sign prohibiting smoking, dispensing into unapproved containers and requiring engines to be shut off shall be posted at each dispenser.

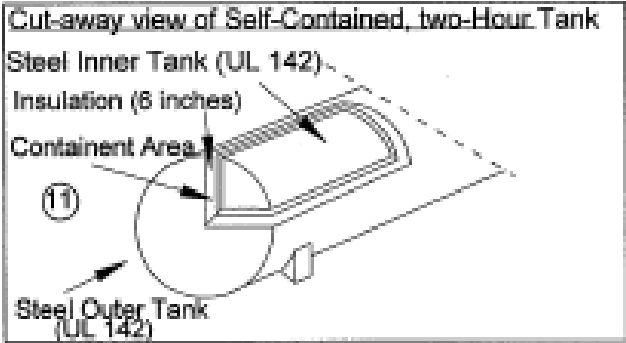


Class of liquid and tank type	Individual tank capacity (gallons)	Minimum distance to nearest important bldg. On same property (feet)	Minimum distance to nearest fuel dispenser (feet)	Minimum distance from lot line which is or can be built on, including the opposite side of a public way. (feet)	Minimum distance from the nearest side of a public way (feet)	Minimum distance between tanks (feet)
Class I protected tanks above ground or tanks in vaults	Less than or equal to 6,000	5	25 a	15	5	3
	Greater than 6,000	15	25 a	25	15	3
Class II and III protected above ground tanks or tanks in vaults	Same as Class I	Same as Class I	Same as Class I	Same as Class I	Same as Class I	Same as Class I
Other tanks	All	50	50	100	50	3

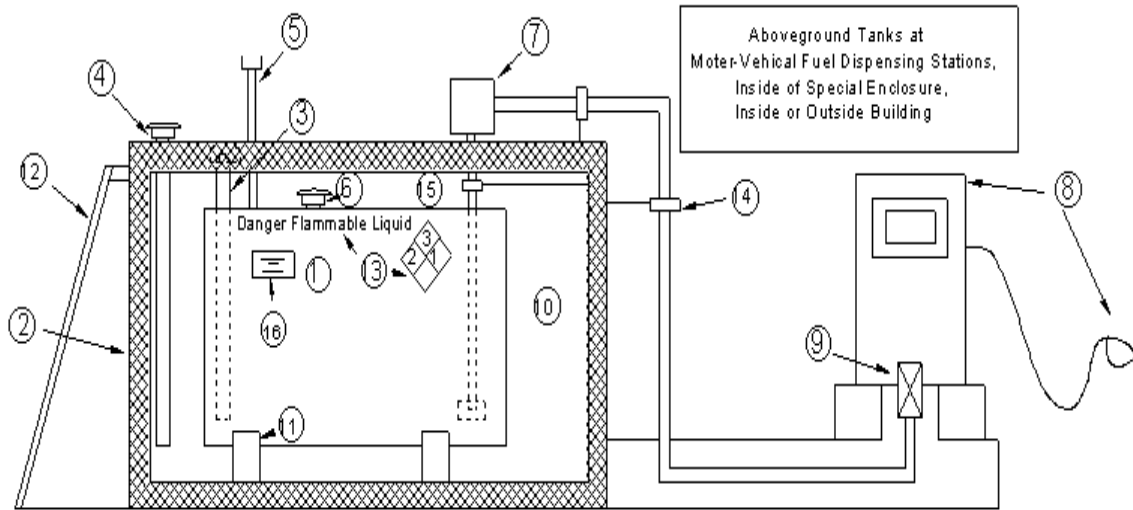
a : At fleet vehicle service stations, no minimum separation distance is required.



**Aboveground Tanks
at Motor-Vehicle Fuel Dispensing Stations,
Outside in Special Enclosures or Building,
with Two-Hour Fire Rated Protection,
Self-Contained**



<ol style="list-style-type: none"> 1. Tanks shall be listed and labeled as protected above ground tanks per IFC 2206.2.3 and have a minimum capacity of 12, 000 gallons individual and 48,000 gallons aggregate per installation. (Each installation separated by 100 ft.) 2. Spill containers shall be provided to contain not less than 5 gallons of liquid per IFC 2206.6.2.6. Tanks shall be provided with over fill protection per IFC 2206.6.2.3. 3. Normal venting is required and shall not be less than 1 ¼” diameter and terminate not less than 12 ft. above grade. 4. Emergency venting is required that will relieve internal pressure due to fire exposure. IFC 2206.6.2.5. 	<ol style="list-style-type: none"> 5. Fuel shall be suctioned from the top of the tank only by approved pumps equipped with anti-siphon devices per IFC 2206.6.2.4. 6. Dispensers shall be provided with listed automatic closing nozzles and their hoses with break away devices per IFC 2206.7.4. 7. Guard posts or other approved physical protection shall be provided the tanks and piping per IFC 2206.4. Posts shall be constructed of steel 4 inches in diameter spaced four feet apart set not less than three ft. deep in concrete 15 inches in diameter. Posts shall be located not less than 5 ft. from the tank. 8. Tank and piping supports shall be provided per IFC 3403.6.8 and 3404.2.9.1.1 and NFPA 30. 	<ol style="list-style-type: none"> 9. Stairways, platforms, and walkways shall be provided per IFC 3404.2.9.3 and NFPA 30. 10. Warning and identification signs shall be affixed to clearly indicate the hazard and product per IFC 3403.5. 11. An approved monitoring method shall be provided to detect leakage from the primary (inner) tank into the space between it and the secondary tank per NFPA 30. 12. A permanently affixed all weather metal tag shall be provided on the tank per IFC 3404.2.7 and shall include the following information: Name and address of tank manufacturer; year tank was built or re-certified; capacity in US gallons, construction standard of tank: UL 2085 or 142.
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1. Tanks shall be fabricated designed, and constructed per IFC 3403.6.2 and NFPA 30. All dispensing equipment shall be listed per IFC 2206.7. Above ground tanks may be installed in vaults above or below ground per IFC 2206.2.4.

Vaults shall be listed and constructed per IFC 3404.2.8. Tanks storing class I and II liquids shall be limited to 15,000 gallons individual and 48,000 gallons aggregate. (Class II and III-A at fleet stations limited to 80,000 gallons)

Tanks shall be provided with a permanently affixed all weather label stating : name and address of tank manufacturer, year tank was built or re-certified, Capacity in US gals., Construction Standard for tank (UL 142 , 2244, or 2085).

2. Special enclosures: The enclosure shall be of reinforced concrete at least 6 inches thick and shall be liquid and vapor tight with openings only through the top. The enclosure shall not contain backfill and not exceed 6,000 gallons of Class I, II, III-A liquids individually or 18,000 gallons aggregate and shall be surrounded by a clear space of 3 ft. IFC 2206.2.6.

3. Each fill connection shall be provided with a spill container capable of containing 5 gallons minimum and having drains back into the primary tank. IFC 2206.6.2.6. Vaults shall drain to a sump.

4. Each tank shall be provided with emergency venting to relieve internal stresses during a fire per IFC 3404.2.7.4.

5. Normal venting shall be provided and shall terminate a minimum of 12 ft. above grade not be less than 1 1/4 inches in diameter. IFC 3404.2.7.3.

6. The enclosure must have emergency venting equal to the emergency venting of the tank it contains. IFC 2206.6.2.5.

7. An approved pump shall be used to suction fuel through the top of the tank only per IFC 2206.6.2.1.

8. Dispensers shall be mounted on a concrete island at least 6 inches high and shall be secured in an approved manner. IFC 2206.7.3. Dispensers shall be equipped with approved nozzles and hoses with breakaway devices, hoses shall be a maximum of 18 ft. long. UL - 2244 tanks with pump attached are permitted.

9. Dispensers shall have emergency shutoff valves installed in the base for impact protection. IFC 2206.7.4.

10. Leak detection shall be provided per IFC 2206.7.7.1 for pumps remote from fuel dispensers. Vaults are required to have vapor detection per IFC 3404.2.8.11 and overfill protection per IFC 3404.2.8.18.

11. Tanks supports shall be provided per IFC 3404.2.7.7 and NFPA 30. Vaults and their tanks shall be anchored to prevent uplift from ground water per IFC 3404.2.8.5 and 3404.8.15 and the IBC per 3404.2.9.3.

12. Stairways, walkways, platforms and access ways shall be provided per the International Building Code and IFC 3404.2.9.3.

13. Warning signs and labeling shall be provided per IFC 3404.2.3.2 and 3403.5.

14. Piping shall be properly supported, labeled , and fire and impact protected per IFC 3403.6.

15. All electrical wiring shall be classified and constructed per the National Electrical Code and IFC table 3403.1.1.

PROJECT VALUATION AND PLAN REVIEW FEES

The construction costs for your project shall be based upon the following definition:

VALUATION: of a project shall be estimated cost to replace the project or structure in kind, based on current replacement costs.

TOTAL VALUATION	FEE
\$1.00 to \$500.00	\$16.03
\$501.00 to \$2,000.00	\$16.03 for the first \$500.00 plus \$2.08 for each additional \$100.00, or fraction thereof, and including \$2,000.00
\$2,001.00 to \$25,000.00	\$47.22 for the first \$2,000.00 plus \$9.55 for each additional \$1,000.00, or fraction thereof, to and including \$25,000.00
\$25,001.00 to \$50,000.00	\$267.12 for the first \$25,000.00 plus \$6.90 for each additional \$1,000.00, or fraction thereof, to and including \$50,000.00
\$50,001.00 to \$100,000.00	\$438.95 for the first \$50,000.00 plus \$4.78 for each additional \$1,000.00, or fraction thereof, to and including \$100,000.00
\$100,001.00 to \$500,000.00	\$677.60 for the first \$100,000.00 plus \$3.82 for each additional \$1,000.00, or fraction thereof, to and including \$500,000.00
\$500,001.00 to \$1,000,000.00	\$2,204.94 for the first \$500,000.00 plus \$3.25 for each additional \$1,000.00, or fraction thereof, to and including \$1,000,000.00
\$1,000,001.00 and up	\$3,824.33 for the first \$1,000,000.00 plus \$2.49 for each additional \$1,000.00, or fraction thereof

Other Inspections and Fees:

1. Inspections outside of normal business hours ... \$49.31 per hour
(Minimum charge - two hours)
2. Reinspection fees assessed under provisions of Section 108.8 of the 1997 Uniform Building Code
.....\$49.31 per hour*
3. Inspections for which no fee is specifically indicated \$49.31 per hour*
(Minimum charge -- one-half hour)
4. Additional plan review required by changes, additions or revisions to
plans\$49.31 per hour*
(Minimum charge -- one-half hour)
5. Outside consultants for plan checking and inspections, or bothActual costs**

*Or the total hourly cost to the jurisdiction, whichever is the greatest. This cost shall include supervision, overhead, equipment, hourly wages and fringe benefits of the employees involved.

**Actual costs include administrative and overhead costs.

FOUR SETS OF PLANS shall accompany this application. The plans shall include a site plan, drawn to scale, showing the location of property lines, the proposed tank location, any buildings/structures, any existing tanks, vehicle access, power lines and other utilities, on-site fire protection (hydrants) and vehicle impact protection for the tanks.

The plans shall also indicate the type of tank (manufacturer's information sheets), location of dispensers, location and classification of electrical equipment, emergency fuel shutdown devices. The Plan Review Information Sheet (first page of this packet) shall be completed and returned with the plans along with the appropriate plan review fee.

SEND COMPLETED FORM, FEES, AND EQUIPMENT CUT SHEETS

SHOWING

UL LISTINGS AND PLANS TO:

**DEPARTMENT OF FIRE PREVENTION AND ELECTRICAL SAFETY
2500 ACADEMY COURT, RIVERTON, WY. 82501**