Underground Flammable & Combustible Liquid Storage Tanks (UST) Check Sheet and Information Required on Submitted Drawings

Drawings - Electronic set of drawings stamped and signed by an engineer licensed to practice in the Province of Alberta – National Fire Code – 2019 Alberta Edition Division "C" 2.2.3.1; inclusive of all piping and transfers systems requiring excavation.

Unless otherwise specified all references are to the National Fire Code – 2019 Alberta Edition [NFC(AE)] Division "B

The following should form all or part of the submitted drawings

- Overall Site Plan - showing the site relative to adjacent streets and buildings
- Site Finished Grades - indicating a spill is designed to stay on the property
- Mechanical Site Plan - showing underground drainage (catch basins, piping, oil/water separator if there is one)
- Electrical Site Plan - emergency shut down locations, horns, strobes, communication devices
- Piping System - underground layout, distances, dispensers and sumps and associated details
- Tank Sections & Details - distances, tank size and listing, product, supporting slab, collision protection, vent rack, spill containment etc.

General Information to be included on the drawings or attached documents;

1. List of applicable codes and standards, product and tank size.
2. Dimensions, distances to tanks, buildings, property lines, dispensers.
3. Site classification – card lock, self serve, full serve.
4. Emergency shutoff, communication devices.

A minimum 5 working days notice is needed for the following required site inspections:

- Tank removal
- Tank installation
- Sump and line pressure test
- Product first fill (Ensure the fuel company can provide a copy of their first fill procedures to the inspector on site)

Detail Check Sheet (ensure the below items, if applicable, are shown on the supplied drawings):

☐	Drawings have an engineer signed stamp	NFC(AE) Div. C 2.2.3.1
☐	Listed standard the tanks are designed to meet	NFC(AE) 4.3.1.2
☐	Anchorage of tanks	NFC(AE) 4.3.8.9
☐	Leakage detection of storage tanks and piping systems (ie: Veeder Root)	NFC(AE) 4.4.1
☐	Dispenser and spill containment sumps	NFC(AE) 4.3.9
☐	Monitoring wells/piezometer location	NFC(AE) 4.4.2.1

***Detail Check Sheet cont'd** (ensure the below items, if applicable, are shown on the supplied drawings):*

☐ Tank distances: NFC(AE) 4.3.8.2
- 1.5m to property lines
- 1m to buildings
- 600mm to adjacent tanks

☐ Tank installation on min 150mm sand or other suitable material NFC(AE) 4.3.8.6

☐ Ground cover: NFC(AE) 4.3.8.3
- over tanks min 600mm
- if exposed to vehicular traffic then 1m OR:
- Concrete slab made of 150mm re-enforced or 200mm unreinforced concrete over 450mm sand/pea gravel that extends 300mm beyond the storage tank.

☐ Collision protection for dispensers NFC(AE) 4.6.3.4
- Concrete island 100mm high or
- Posts or bollards

☐ Vent piping NFC(AE) 4.3.11.3
- 1.5m from building opening
- 7.5m from dispensers
- 3.5m above adjacent ground level for Class I liquids
- 2m above adjacent ground level for Class II or IIIA liquids
- Protected from collision

☐ Underground piping NFC(AE) 4.5.6.6
- Supported on 150mm sand or pea gravel
- Backfilled on top and sides with 300mm sand or pea gravel

☐ Dispenser location and distances NFC(AE) 4.6.3.3
- 3m from right of way and property line
- 3m from propane dispenser
- 6m from propane cylinder or storage tank
- 1.5m from natural gas dispenser
- 6m from fixed source of ignition
- 3m from building opening other than attendant shelter
- 6m from manhole or sewer opening

☐ Provisions for emergency shut off devices NFC(AE) 4.6.4 and 4.6.8.2

☐ Provisions for 2 way communication NFC(AE) 4.6.8.2(4)

☐ Provision for signs (no smoking, turn off ignition) NFC(AE) 4.6.8.8

☐ Attendant console not > 25m from dispensers NFC(AE) 4.6.8.2(2)

☐ Operating instructions posted NFC(AE) 4.6.8.2(1)

***Detail Check Sheet cont'd** (ensure the below items, if applicable, are shown on the supplied drawings):*

☐	Min 2 – 40BC rated fire extinguishers	NFC(AE) 4.6.9.1
☐	Spill kit	NFC(AE) 4.6.9.2
☐	Card or Key Activated Dispensers	NFC(AE) 4.6.8.4
☐	Corrosion protection of steel tanks and lines	NFC(AE) 4.3.10 and 4.5.3
☐	Hose nozzle valves	NFC(AE) 4.6.5.2

The application for permit will be reviewed once the hard copy drawings are received. If the application or drawings are incomplete an email requesting more information will be sent to the applicant. Once all supplied information is correct a permit will be issued and work on the installation can begin at that time.

Submit Drawings to:

Edmonton Fire Rescue Services
Fire Prevention – Technical Services
10425 106 Ave
Edmonton, Alberta T5H 0P5