



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

National Fire Code – 2019 Alberta Edition Division C 2.2.3.1.

**Drawings can be submitted electronically or two (2) hardcopies submitted to:
Red Deer Emergency Services – Fire Prevention Bureau**

Email: prevention@reddeer.ca Mail: PO Box 5008, Red Deer, Alberta T4N 3T4 Office: 403.346.5511

Drawings must bear the stamp and seal of a registered engineering professional authorized to practice in Alberta

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

**Please consult with The City of Red Deer Inspections & Licensing Department (IN&L)
in regards to requirements for a Development Permit**

**Approval will not be granted until reviewed by IN&L Development Department
Email: development@reddeer.ca Business: 403.342.8190**

The following should form part of the submitted drawings

- Code References - List of applicable codes and standards
- Site Classification - Card lock, self-serve, full serve
- Overall Site Plan - Site relative to adjacent streets and buildings, including distance to tanks, dispensers, buildings and property lines
- 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 applicable)
- 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.

A minimum notice of 5 working days 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

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| <input type="checkbox"/> Drawings have an engineer signed stamp | NFC-2019 Alberta Edition Div. C 2.2.3.1. |
| <input type="checkbox"/> Listed standard the tanks are designed to meet | NFC-2019 Alberta Edition 4.3.1.2. |
| <input type="checkbox"/> Anchorage of tanks | NFC-2019 Alberta Edition 4.3.8.9. |
| <input type="checkbox"/> Transition sumps | NFC-2019 Alberta Edition 4.3.9.1. (3) |
| <input type="checkbox"/> Leak detection of storage tanks and piping systems | NFC-2019 Alberta Edition 4.4.1. / 4.4.2. |
| <input type="checkbox"/> Leak detection of sumps | NFC-2019 Alberta Edition 4.3.9.3. / 4.4.2.1 |
| <input type="checkbox"/> Construction - Dispenser and spill containment sumps | NFC-2019 Alberta Edition 4.3.9.2 |
| <input type="checkbox"/> Tank Distances: <ul style="list-style-type: none">• 1.5m to property lines• 1m to buildings• 600mm to adjacent tanks | NFC-2019 Alberta Edition 4.3.8.2 |
| <input type="checkbox"/> Tank Installation on Minimum 150mm Sand or Other Suitable Material | NFC-2019 Alberta Edition 4.3.8.6 |
| <input type="checkbox"/> Ground Cover: <ul style="list-style-type: none">• over tanks min 600mm• if exposed to vehicular traffic then 1m OR:• Concrete slab made of 150mm reinforced or 200mm unreinforced concrete slab over 450mm sand/pea gravel that extends 300mm beyond the storage tank. | NFC-2019 Alberta Edition 4.3.8.3 |
| <input type="checkbox"/> Collision Protection for Dispensers <ul style="list-style-type: none">• Concrete island 100mm high or• Posts or Bollards | NFC-2019 Alberta Edition 4.6.3.4 |
| <input type="checkbox"/> Vent Piping <ul style="list-style-type: none">• 1.5m from any 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 | NFC-2019 Alberta Edition 4.3.11.3 |
| <input type="checkbox"/> Underground Piping <ul style="list-style-type: none">• Supported on 150mm clean sand, pea gravel, clean crushed stone• Backfilled on top and sides with 300mm clean sand, pea gravel, clean crushed stone | NFC-2019 Alberta Edition 4.5.6.6 |



Detail Check Sheet cont'd

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| <input type="checkbox"/> Dispenser Location and Distances | NFC-2019 Alberta Edition 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 | |
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| <input type="checkbox"/> Shut-off Devices | NFC-2019 Alberta Edition 4.6.4 |
| <input type="checkbox"/> Provisions for 2 Way Communication – Self-service Outlets | NFC-2019 Alberta Edition 4.6.8.2(4) |
| <input type="checkbox"/> Provision for Signs (no smoking, turn off ignition) | NFC-2019 Alberta Edition 4.6.8.8 |
| <input type="checkbox"/> Attendant Console not > 25m from Dispensers | NFC-2019 Alberta Edition 4.6.8.2(2) |
| <input type="checkbox"/> Operating Instructions Posted | NFC-2019 Alberta Edition 4.6.8.2(1) |
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| <input type="checkbox"/> Min 2 – 40BC Rated Fire Extinguishers | NFC-2019 Alberta Edition 4.6.9.1 |
| <input type="checkbox"/> Absorbent Material | NFC-2019 Alberta Edition 4.6.9.2 |
| <input type="checkbox"/> Card or Key Activated Dispensers | NFC-2019 Alberta Edition 4.6.8.4 |
| <input type="checkbox"/> Corrosion Protection of Steel Tanks and Lines | NFC-2019 Alberta Edition 4.3.10 and 4.5.3 |
| <input type="checkbox"/> Hose Nozzle Valves | NFC-2019 Alberta Edition 4.6.5.2 |

The application for permit will be reviewed once the electronic or 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:

Red Deer Emergency Services – Fire Prevention Bureau

Email – prevention@reddeer.ca

Mail – PO Box 5008, Red Deer, Alberta T4N 3T4