Aboveground Storage Tank Checksheet

If the single storage tank is >8000L, the aggregate sum of all storage tanks is >20,000L or any piping is buried underground then engineered drawings are required.

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, horns, strobes, communication devices.
- Piping System - underground layout, 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.
5. Spec sheet for the tank.

If engineered drawings are submitted ensure the below items are shown. If the application does not require drawings use the check sheet as a guide for your online application and installation.

Detail Check Sheet:

☐	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
☐	6m from propane cylinder or tank	NFC(AE) 4.3.2.3
☐	Min 1m spacing between storage tanks	NFC(AE) 4.3.2.2
☐	Secondary containment for single walled tanks	NFC(AE) 4.3.7

- Made of non-combustible material
- Can hold 110% of a single storage tank
- Can hold the capacity of the largest storage tank in the contained space plus 10% of the greater of the largest tank or the aggregate capacity of all other storage tanks in the contained space.
- Wall of containment no closer than 1.5m to tank shell

Detail Check Sheet cont'd:

- ☐ Distances to building and property line for tank <250,000L: NFC(AE) 4.3.2.1
  - Containing Class I liquids
    - 3m
  - Containing Class II or IIIA liquids
    - 3m to property line
    - 3m to building if tank > 80,000L
    - 1.5m to building if tank > 2500L and < 80,000L
    - Zero to building if tank < 2500L
    - Zero if the tank is CAN/ULC S655

- ☐ Collision protection by: NFC(AE) 4.3.7.4(3)
  - Concrete/steel posts 1m from tank shell and spaced 1500mm on centre or,
  - Jersey barriers not less than 750mm high and the width of base not less than the height, spaced 500mm from the tank shell.

- ☐ Vent Piping, both normal and emergency, shall terminate: NFC(AE) 4.3.5.2
  - Outside the building
  - Not less than 3.5m above adjacent ground level for Class I liquids
  - Not less than 2m above adjacent ground level for Class II or IIIA liquids
  - Not less than 1.5m from any building opening

- ☐ Tank supports and foundation NFC(AE) 4.3.3.1
  - On solid ground, steel, concrete or masonry (nothing combustible)
  - If base is > 300mm drawings stamped by an engineer licensed to practice in Alberta need to be supplied showing the base has a minimum 2 hr fire-resistance rating.

- ☐ Product identification on 2 sides of the tank NFC(AE) 4.3.1.7
- ☐ Non-combustible piping NFC(AE) 4.5.2.1
- ☐ Piping labelled with product NFC(AE) 4.5.4.1
- ☐ Interior & exterior shut off valves on piping at entrances to a building (outside tank) NFC(AE) 4.5.6.8
- ☐ Indoor overhead piping not < than 1.8m above the floor NFC(AE) 4.5.6.11
- ☐ Collision protection for pipe risers NFC(AE) 4.5.6.13
- ☐ Spill Control (ground or floor designed to keep spill away from waterway) NFC(AE) 4.1.6.1 and 4.3.7.1
- ☐ Overfill protection NFC(AE) 4.3.1.8
- ☐ Min 550mm between tank shell and wall of a room NFC(AE) 4.3.14.1

Detail Check Sheet cont'd:

☐	Bonding and grounding of tank	NFC(AE) 4.3.13.12 and NFPA 30 6.5.4.2
☐	Door to room placarded	NFC(AE) 4.3.14.5
☐	Fire Department access to within 60m of tank in outside storage area	NFC(AE) 4.3.2.4
☐	Accessible portable fire extinguisher (if dispensing see below)	NFC(AE) 2.1.5

If Dispensing:

☐	Spill kit provided	NFC(AE) 4.6.9.2
☐	Min 2 – 40BC rated portable fire extinguishers	NFC(AE) 4.6.9.1
☐	Emergency shut off 6 – 10m from dispenser	NFC(AE) 4.6.8.2(7)c)
☐	If applicable, dispenser and spill containment sumps	NFC(AE) 4.3.9
☐	Collision protection for dispensers • Concrete island 100mm high or • Posts or bollards	NFC(AE) 4.6.3.4
☐	Dispenser location and distances • 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	NFC(AE) 4.6.3.3
☐	Provisions for signs (no smoking, turn off ignition)	NFC(AE) 4.6.8.8
☐	Operating instructions posted	NFC(AE) 4.6.8.2(1)
☐	Hose nozzle valves	NFC(AE) 4.6.5.2
☐	Valve details c/w identification as per CPPI standards	NFC(AE) 4.5.7.6

If engineered drawings are required 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