

Use when a fuel system is included in the project.

Add new Section 681:

**SECTION 681  
FUEL TANK**

**681-1.01 DESCRIPTION.** This item consists of furnishing and installing a protected aboveground motor vehicle fuel or heating oil tank complete with fuel and accessories as specified. Prepare for Department use, an Environmental Protection Agency (EPA) approved Spill Prevention, Control and Countermeasure Plan (SPCC plan).

**MATERIALS**

**681-2.01 TANK.** Provide skid-mounted, doublewall, aboveground steel tank. The tank shall be of the type and capacity shown in the bid schedule. Equip tank with accessories as shown on the Plans and as follows:

1. Overfill Alarm. Provide a mechanical, audible overfill alarm, Ventalarm Signal as manufactured by Scully Signal Company, 70 Industrial Way, Wilmington, MA 01887 or approved equal.
2. Automatic Shut-Off Device. Provide a positive closing, mechanical, automatic shut-off device. Clay & Bailey model F-30 as manufactured by Clay and Bailey Manufacturing Co., 6401 East 40th Street, Kansas City, MO 64129 or approved equal.
3. Tank-Mounted Mechanical Fuel Gauge. Provide mechanical gauge with 12-hour clock face in feet and inches readout, activated by a stainless steel float connected to a stainless steel cable. Morrison Model 818 as manufactured by Morrison Bros. Co., P.O. Box 238, Dubuque, Iowa 52004 or approved equal.
4. Openings. Provide the following threaded openings and accessories on tank top:
  - a. One 2-inch Interstitial Monitoring with plug
  - b. One 2-inch Normal Vent with screen
  - c. One 2-inch Product fill opening with locking cap
  - d. One 2-inch Product pump opening with plug
  - e. One 2 to 4-inch Liquid level gauge
  - f. One 4 to 8-inch Emergency vent with plug, primary tank
  - g. One 4 to 8-inch Emergency vent with plug, secondary tank
  - h. No Drain Opening at bottom
5. Exterior Coating. Abrasive blast the exterior surface of the outer tank according to SSPC-SP 6. Coat the exterior surface with 8 mils total thickness of epoxy paint base and urethane paint finish.
6. UL Labeling. Heating oil tanks shall be manufactured and labeled according to UL 142. Motor vehicle fuel tanks shall be manufactured and labeled according to UL 142 and UL 2085.
7. Insulation. For motor vehicle fuel tanks install 3-inch thickness of insulation according to ASTM C332 and ASTM C495.

When a motor vehicle fuel-dispensing tank is specified, it shall meet or exceed the requirements of UL 2085, Underwriters Laboratories Standard for Safety for Protected Aboveground Tanks for Flammable and Combustible Liquids. Equip with a threaded opening for the specified fuel pump.

Tanks larger than 2,500 gallons require additional openings and accessories for UL rating.

**681-2.02 MANUAL DISPENSING SYSTEM.** Provide a double-action pump, equipped with detachable, self-venting bung adapter, set screws and strainer screen. Provide a dispensing system that is not gravity fed. The pump shall have 16 feet of 3/4-inch diameter arctic service fuel hose with shut-off nozzle and deliver a minimum of 20 gallons/100 strokes. The pump supplied shall be a Gasboy, Model 1720, or approved equal.

**681-2.03 ELECTRIC DISPENSING SYSTEM.** Provide an electric suction or submerged turbine pump with a delivery rate up to 18 gpm, 3-wheel, meter-register with reset and non-resettable 6 digit master totalizer in a cabinet, anti-siphon valve with internal pressure relief, gate valve, canister style fuel filter, flow meter, 20 ft arctic service fuel hose with swivel and breakaway coupling, hose retractor, OPW 11-A automatic nozzle with lockable nozzle holder, explosion proof pump activation switch, emergency pump shutoff switch mounted on the SRE building, warning signs, and BC fire extinguisher per International Fire Code (IFC) chapter 2201 – 2206.

**681-2.04 FUEL.** No. 1 diesel or No. 1 heating oil, depending on tank use.

### **CONSTRUCTION REQUIREMENTS**

**681-3.01 INSTALLATION.** Install according to the International Fire Code (IFC) chapters 22 and 34 for the type of tank specified. Mount and secure the tank on the skid base. Install dispensing system to include all fittings and hose. Install wiring of the pump and emergency shut off according to National Fire Protection Association (NFPA) 30 and the current edition of the National Electrical Code (NEC) for hazardous locations. Place tank at the location shown on the Plans, or as directed. Set automatic shut-off device to 90 percent capacity. Fill to 90 percent capacity with specified fuel.

**681-3.02 SPILL PREVENTION, CONTROL AND COUNTERMEASURE PLAN (SPCC).** Provide for Department use after tank installation, an EPA approved SPCC plan for the motor vehicle fuel or heating oil tank, that is certified by a licensed professional engineer. (See <http://www.epa.gov/oilspill/lawsregs.htm> for SPCC plan requirements).

Comply with 40 CFR 112 and address the following issues in the SPCC Plan:

1. Operating procedures that prevent oil spills;
2. Control measures installed to prevent a spill from reaching navigable waters; and
3. Countermeasures to contain, clean up, and mitigate the effects of an oil spill.

The Contractor shall coordinate with the Department to identify oil spill response resources. The SPCC Plan shall take into account the Department's on-site equipment, oil spill containment material, cleanup material, and personnel; and shall make recommendations for future improvements in these areas.

Provide two (2) copies of the SPCC Plan; deliver one to the Engineer to be retained at the site and deliver the other to the Department's Statewide Safety Officer at 5300 E. Tudor Drive, Anchorage, AK, 99507.

**681-4.01 METHOD OF MEASUREMENT.** See Subsection 109-1.02 and the following:

1. Lump Sum. No measurement of quantities will be made.
2. Unit Prices. The quantity to be paid for will be the number of units installed, complete, in place, accepted, and ready for operation.

**681-5.01 BASIS OF PAYMENT.** At the contract unit price for the pay items listed below that appear in the bid schedule. Heating fuel distribution and delivery systems are measured and paid for under other Sections or by Special Provision.

Payment will be made under:

<b>PAY ITEM</b>		
<b>Item Number</b>	<b>Item Description</b>	<b>Unit</b>
681.0001.____	Heating Fuel Tank [Capacity in gallons]	Each
681.0002.____	Fuel	Lump Sum
681.0003.____	Manual Dispensing System	Each
681.0004.____	Electric Dispensing System	Each
681.0005.____	Motor Vehicle Fuel-dispensing Tank [Capacity in gallons]	Each
681.0006.____	Spill Prevention Control and Countermeasure Plan	Lump Sum