Flammable/Combustible Liquids Submittal Checklist

Updated Sept. 2, 2016 to the 2015 International Fire Code

City of Redmond
WASHINGTON

Electronic Plan Standards

File Naming Standards:

Electronic plans and documents shall be named as specified in **bold type** under "Permitting Requirements". For example, the seating plan must be named **"Site Plan"**.

Acceptable File Types:

Plans, calculations, specifications and supporting documents shall be uploaded as a PDF file.

Plan Sheet Standards:

All plans shall be drawn to scale, as identified in the checklist, and each sheet shall state the scale.

Document Orientation:

All **plans** must be uploaded in **"Landscape"** format in the horizontal position. All other documents can be in "Portrait" format.

Project Info

Site address: _____ Associated Permits: _____

Project name/Tenant: _____ Property Owner: _____

Permitting Requirements

An IFC Fire Installation Permit is required to install, alter, remove, or abandon a flammable/combustible liquids fuel storage tank inside or on the exterior of a building. A SEPARATE FIRE INSTALLATION PERMIT IS REQUIRED FOR EACH INSTALLATION ON THE SAME PROPERTY OR BUILDING. **The following information is required at time of application for the Fire Installation Permit:**

- ☐ Completed **"Fire Installation Permit Application"**
- ☐ Completed **"Flammable/Combustible Liquids Submittal Checklist".** Check all checkboxes that are applicable to your project.
- ☐ **Site Plan** and/or **Floor Plans**
- ☐ **HMIS** (Hazardous Materials Inventory Statement) and/or **HMMP/SPCC** (Hazardous Materials Management Plan)

Plans

The following is a list of information required on all plan submittals for review of an **aboveground flammable/combustible liquids fuel tank installation**. The plan shall be drawn to 1/8"= 1'-0" minimum scale. The applicant is required to submit all of this information so an accurate and timely review may be done:

General Requirements:

- ☐ Tanks shall be installed in accordance with Section 5004 and 5704 of IFC as applicable.
- ☐ Tanks or containers with an aggregate volume of 1320 gallons or more of oil that have the potential to discharge oil into or on the navigable waters of the US must complete a Spill Prevention Control and Countermeasure (SPCC) Plan according to 40 CFR Part 112. SPCC plan may be submitted instead of or to supplement the HMMP.
- ☐ HMMP or SPCC plan must show storm drain system and protective measures to be used to protect the storm system from spills or releases. Spill response materials and drain blockers must be maintained at the facility at all times.
- ☐ A detailed description, process flow, diagram and logic for all sensors and alarms shall be provided for all automated fuel transfer systems.
- ☐ Warning signs made of durable material shall be provided for flammable liquids. Signs shall have white lettering on a red background and shall read: DANGER – FLAMMABLE LIQUIDS. Letters shall not be less than 3 inches in height and 0.5 inches in stroke (5703.5.1).

PLANS (CONTINUED)

- ☐ Signs shall be posted in storage areas prohibiting open flames and smoking. Signs shall comply with 5703.5(5704.2.3.1)
- ☐ Tanks more than 100 gallons in capacity, which are permanently installed or mounted and used for the storage of Class I, II, or III liquids, shall bear a label and placarded identifying the material therein. Placards shall be in accordance with NFPA 704 (5704.2.3.2.).
- ☐ A 10-B fire extinguisher shall be installed within 30 feet of the fuel tank (5703.2.1; Table 906.3(2)).
- ☐ All aboveground flammable/combustible fuel storage tanks and associated piping shall be provided with secondary containment (RMC 15.06.013(51)).
- ☐ Tanks providing fuel for a generator for emergency and/or standby power required by IFC Section 604.2 shall be installed in accordance with ICC Electrical Code, NFPA 110, and NFPA 111. Provide load calculations to show that the quantity of fuel is adequate for all required loads

Exterior Tanks:

- ☐ Identify type and quantity of fuel in the tank (or generator base tank/remote tank). Exterior above-ground tanks for storage of Class I, II, or IIIA liquids with pressures of 2.5 psig or less shall be located in accordance with Table 22.4.1.1 (a) of NFPA 30. (5704.2.9.6.1.1)
- ☐ Ensure plans, elevations, sections, details and associated product specifications for the fuel tank(s) show compliance with the following IFC requirements:
  - ☐ The fuel tank shall be a double walled UL 142 or UL 2085 listed tank (5704.2.7/NFPA 30).
  - ☐ Vent pipe outlets for tanks storing Class I, II, or IIIA liquids shall be located so vapors are released at a safe point outside of buildings and not less than 12 feet above adjacent ground level. Vent outlets shall be located so that vapors will not be trapped by eaves and shall be at least 5 feet from building openings or property lines (5704.2.7.3.3).
  - ☐ Vent pipes shall be installed so they will drain toward the tank without sags or traps in which fluid can collect (5704.2.7.3.4)
  - ☐ Filling connections for tanks shall be located outside the building at a location free from sources of ignition and not less than 5 feet from building openings or lot lines. Such openings shall be provided with a liquid-tight cap (5704.2.7.5.2).
  - ☐ Fill pipes for top-loaded tanks shall be designed and installed to minimize the generation of static electricity by terminating the pipe within 6 inches of the bottom of the tank (5704.2.7.5.5).
  - ☐ An approved means or method in accordance with Section 5704.2.9.7.4 shall be provided to incorporate vehicle impact protection where above-ground tanks, piping, electrical conduit or dispensers are subject to vehicular impact
  - ☐ An approved means or method in accordance with Section 5704.2.9.7.5 shall be provided to prevent the overfill of Class I, II, and IIIA liquid storage tanks by one of the following methods:
    - ☐ Provide an independent means of notifying the person filling the tank that the fluid level has reached 90 percent of tank capacity by providing an audible or visual alarm signal providing a tank level gauge marked at 90 percent of tank capacity, or approved means; and
    - ☐ Automatically shut off the flow of fuel to the tank when the quantity of liquid in the tank reaches 95 percent of tank capacity. For rigid hose fuel-delivery systems, an approved means shall be provided to empty the fill hose into the tank after the automatic shutoff device is activated.
    - ☐ The system shall reduce the flow rate to not more than 15 gpm so that at the reduced flow rate, the tank will not overfill for 30 minutes, and automatically shut off flow into the tank so that none of the fittings on the top of the tank are exposed to product because of overfilling

      Exception: Outside above-ground tanks with a capacity of 1320 gallons or less. (5704.2.7.5.8) of Class IIIB liquid connected to fuel-burning equipment inside building.
- ☐ The fill pipe shall be provided with a means of making a direct connection to the tank vehicle's fuel delivery hose so that the delivery of fuel is not exposed to the open air during the filling operation (5704.2.9.7.6).
- ☐ A spill container having a capacity of not less than 5 gallons shall be provided for each fill connection. For tanks with a top fill connection, spill containers shall be noncombustible and shall be fixed to the tank and equipped with a manual drain valve that drains into the primary tank (5704.2.9.7.7)

PLANS *(CONTINUED)*

Additional Requirements for Interior Tanks:

☐ Emergency vents shall not discharge inside buildings (5704.2.7.4).

☐ Tanks storing Class I, II, and IIIA liquids inside buildings shall be equipped with a device or other means to prevent overflow into the building including but not limited to: a float valve; preset meter on the fill line; a valve actuated by the weight of the tanks contents; a low head pump which is incapable of producing overflow; or a liquid-tight overflow pipe at least one pipe size larger than the fill pipe and discharging by gravity back to the outside source of liquid or to an approved location (5704.2.9.5.1).

☐ Tanks containing Class IIIB liquids and connected to fuel-burning equipment shall be provided with a means to prevent overflow into buildings in accordance with Section 5704.2.7.5.8.

☐ Filling, emptying and vapor recovery connections to tanks containing Class I, II, and IIIA liquids shall be located outside of building at a location free from sources of ignition and not less than 5 feet from building openings or lot lines. Such openings shall be properly identified and provided with a liquid-tight cap (5704.2.7.5.2.).

☐ Filling and emptying connections to indoor tanks containing Class IIIB liquids and connected to fuel-burning equipment shall be located at a finished ground level location outside of buildings. Such openings shall be provided with a liquid-tight cap. A sign in accordance with Section 5003.6 that displays the following warning shall be permanently attached at the filling location:

TRANSFERING FUEL OTHER THAN CLASS IIIB COMBUSTIBLE LIQUID TO THIS TANK CONNECTION IS A VIOLATION OF THE FIRE CODE AND IS STRICTLY PROHIBITED