



County of Prince George, Virginia

“A welcoming community • Embracing its rural character • Focusing on its prosperous future”

Requirements for Mechanical Plans

(To be submitted with the building permit application)

The following checklist contains the minimum information and details required on mechanical plans prior to submission for plan review. This is a basic pre-submittal checklist that is intended to expedite the plan review process by minimizing the number of required revisions. Review these items and ensure that your plans are complete prior to submission.

A mechanical permit is required for installation of HVAC systems, storage tanks, paint spray and powder coating booths, walk-in cooler/freezer, and kitchen hoods. A Boiler/Mechanical Permit is required prior to scheduling inspections.

General Requirements

- Construction documents for mechanical and plumbing systems are required to be prepared and sealed by a registered design professional for occupancies of groups: I (institutional), E (educational) and H (high hazard). Additionally construction documents for mechanical and plumbing systems are required to be prepared and sealed by a registered design professional for all buildings over 3-stories in height, any building or occupancy using non-packaged equipment, or packaged equipment exceeding 300° F (other than flue gases) and pressures greater than 125 psi. Construction documents for mechanical and plumbing systems that are not required to be prepared by a registered design professional must be prepared by a licensed master plumber or master mechanical worker, or a licensed class A contractor with an associated plumbing or mechanical specialty designation. The name, phone number, address and occupation of the person that prepared the construction documents must be printed on the construction documents.
- All pages of the plan set shall be the same size. If different discipline designers use different page sizes have smaller pages re-printed on sheets the size of the largest in the set. Mechanical plans shall be submitted on same sized sheets as rest of plans in building permit package.
- Provide the Mechanical code edition used for design. The current code edition is the 2018 IMC (VUSBC).
- Clearly distinguish new work from existing work.
- Clearly show equipment location, access, service space and guard rails as applicable.
- Clearly identify each mechanical sheet with distinct sheet numbers.

HVAC

- Provide equipment schedule (system type, cooling/heating capacity, blower rating).
- Include any equipment options provided (economizer, duct heaters, CO2).
- Provide duct sizes, location of all supplies, returns, exhaust, fresh air ducts, and duct smoke detectors.

Ventilation

- Provide occupant loads and amount of outside air in accordance with table 403.3 of IMC.
- Indicate capacity of all exhaust fans. Exhaust quantities shall be added as outside air to ventilation.

Penetrations of Rated Assemblies

- Clearly show location of any fire or smoke rated construction. Specify the activation and control for smoke dampers.
- Provide penetration protection details for HVAC ducts or vents penetrating fire or smoke rated construction.

Miscellaneous

- Kitchen Hoods: Provide complete details for Type I and Type II kitchen hoods, clearances to combustibles and cooking equipment; Provide UL 710 listing criteria if applicable; Identify all cooking and dishwashing equipment; Provide duct sizes, cleanout locations, and fire shafts where required; Indicate source and capacity of make-up air system; Show exhaust fan/make-up air interlock, exhaust fan/gas supply interlock.
- Storage Tanks: Indicate tank contents, construction standards, piping materials and details.
- Boiler: Provide details to include safety controls and distribution piping layout.
- Combustion Air: Provide combustion air sources for fuel fired appliances and venting detail.
- Dryer exhaust systems: show routing and developed length of dryer exhaust.
- Hazardous Exhaust System: Provide engineered design for hazardous exhaust system.
- Smoke Management System: Provide engineered design for smoke management system.