

Mechanical Checklist

City of Salem, Virginia Community Development Building Inspections

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.

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.

General Requirements:

- Construction documents prepared and sealed by a registered design professional for all occupancies, except R-5
- Construction documents that are not required to be prepared by an RDP, prepared by a licensed master plumber or master mechanical worker, or a licensed Class A contractor with an associated plumbing or mechanical specialty designation
- Name, occupation, address and telephone number of the person who prepared the plans
- All pages of the plan set the same size. If different discipline designers use different page sizes, re-print the smaller pages on sheets the size of the largest in the set.
- Mechanical plans on same sized sheets as rest of plans in building permit package
- Mechanical code edition.
- New work vs. existing work clearly distinguished
- Equipment location, access, service space and guard rails as applicable
- Each mechanical sheet with distinct sheet numbers (i.e. M1, M2, etc.)
- A Boiler/Mechanical Permit is required prior to scheduling inspections

HVAC

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

Ventilation

- Occupant loads and amount of outside air in accordance with table 403.1.1 of the current enforced edition of the Virginia Mechanical Code
- Capacity of all exhaust fans; exhaust quantities added as outside air to ventilation

Penetrations of Fire- or Smoke-resistance Rated Assemblies

- Location of any fire-resistance rated or smoke-resistant construction. Activation and control for smoke dampers
- Penetration protection details for HVAC ducts or vents penetrating fire-resistance rated or smoke-resistant construction

Miscellaneous

- Kitchen Hoods:
 - Complete details for Type I and Type II kitchen hoods, clearances to combustibles and cooking equipment
 - UL 710 listing criteria if applicable
 - All cooking and dishwashing equipment
 - Duct sizes, cleanout locations, and fire-resistance rated shafts where required
 - Source and capacity of make-up air system
 - Exhaust fan/make-up air interlock, exhaust fan/gas supply interlock
- Storage Tanks: tank contents, construction standards, piping materials and details
- Boiler: details to include safety controls and distribution piping layout
- Combustion Air: combustion air sources for fuel-fired appliances and venting detail
- Dryer exhaust systems: routing and developed length of dryer exhaust
- Hazardous Exhaust System: engineered design for hazardous exhaust system
- Smoke Management System: engineered design for smoke management system
- Where an appliance is connected to an existing chimney, the flue gas passageway shall be free of obstructions and combustible deposits. Persons performing such changes or installations shall certify to the building official that this has been met. (Section 801.18, Virginia Mechanical Code)