

SECTION 15600HVAC - GENERALPART 1 - GENERAL1.1 DESCRIPTION

A. Work included:

1. Furnish all labor, materials, equipment and transportation as required to completely install the heating and ventilation system as shown on the Drawings and as specified herein.
2. The heating and ventilating work shall include, but not be limited to the following:
 - a. Heating system piping, valves, supports, and specialties.
 - b. Heat generation and transfer equipment.
 - c. Ductwork and devices.
 - d. Air moving and air handling equipment.
 - e. Automatic temperature control systems.
 - f. Pipe and equipment insulation.
 - g. Balancing air and water systems.
 - h. Connections to equipment installed by other trades.
 - i. Installation of components and devices furnished by other trades that are located in Heating and Ventilating piping, ducts, or equipment.

B. Related Work Specified Elsewhere (When Applicable)

1. Pipe Sleeves and Seals are specified in Section 15092.
2. Pipe Hangers and Supports are specified in Section 15094.
3. Pipe, insulation, ductwork, dampers, fans, etc., are specified in the appropriate Sections in this Division.
4. Electrical Work:
 - a. The H&V work shall include the installation of all motors, temperature controls, limit switches, etc., as herein specified. All 480 volt, 208 volt and 120 volt wiring and connections, and all motor starters, not specified in this Section, will be provided under Division 16 - Electrical.
 - b. All 24 volt wiring and auxiliary devices required for the specified systems, equipment and operations indicated in this Section shall be provided under this Section, unless specifically indicated on the Drawings related to Division 16 - Electrical. This shall include, but is not necessarily limited to, all wiring for automatic temperature and damper modulation control.
 - c. The materials and methods for all electrical work provided under this Section shall comply with the requirements specified under Division 16 - Electrical. Coordinate equipment ratings, starter sizes, protective device sizes, wire and conduit sizes, holding coil voltages and control voltages with Division 16.

- C. Design Criteria: The Drawings do not show every detail of pipe, valves, fittings, hangers and equipment which are necessary for the complete installation, but are provided to show the general arrangement and extent of work to be performed.

1.2 SUBMITTALS TO THE ENGINEER

- A. Submit shop drawings as specified in the General Conditions of the Construction Contract and as stated in each Section.
- B. Submit manufacturer's installation, operation, and maintenance information for all mechanical equipment as specified in the General Conditions. Information shall consist of, but not be limited to, the following:
 - 1. Manufacturer's operation & maintenance manuals.
 - 2. Parts List.
 - 3. Address of local suppliers for parts.
 - 4. Address of local factory approved service organizations.

1.3 SEISMIC CONTROL

- A. Contractor shall coordinate support arrangements to eliminate interference with similar systems installed under Electrical, Plumbing, Fire Protection and Process.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. The Contractor shall be responsible for the care and protection of all materials and mechanical work until the project is accepted by the Owner.
- B. Immediately remove from the construction site all materials damaged and/or destroyed and replace with new materials to the complete satisfaction of the Engineer without additional cost to the Owner.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Provide and install only new materials and equipment and of the latest design of the respective manufacturers.
- B. All materials and equipment of the same classification shall be the product of the same manufacturer unless otherwise specified.
- C. Provide all electrical specialties and accessories as specified with the equipment in accordance with requirements of Division 16.
- D. Furnish to the proper trades, all manufacturer's wiring diagrams for installation of mechanical equipment.
- E. Provide tee fittings, elbows, reducers, sheet metal safig, and other required components to install equipment and control devices furnished by other trades.
- F. Furnish and install all necessary supports and bases for all items furnished under HVAC as required for the specific item/equipment to provide alignment to adjacent inlet and outlet interconnecting piping and/or ductwork. In the absence of specific details within the Contract Documents for the supports and bases, submit proposal outlining supports/bases for the specific item/equipment being provided including materials of construction, size, components and other necessary details for review

and acceptance by the Engineer. Materials of construction shall be suitable for the intended operating environment. Standard 4-inch concrete housekeeping pads are not included within this specification and are furnished by others.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install all work with a neat and orderly appearance, as specified and as shown on the Drawings.
- B. Make all installations structurally sound throughout.
- C. Locate all installations to avoid interference with cranes and materials handling equipment, storage areas, work of other trades, and traffic areas.
- D. Perform all work incidental to the installation of the apparatus and materials including, but not limited to, cutting, patching, trenching, excavating, backfilling, trench covering, plastering and the constructing of chases, slots, furring, foundations, piers and pads, when applicable. All work shall be performed in accordance with the applicable Divisions of this Specification by qualified workmen regularly employed in the applicable trades.

3.2 CLEANING

- A. Do not allow refuse and surplus materials to accumulate and obstruct the construction site.
- B. Upon completion of the installation, remove refuse and surplus materials from the construction site and leave the building neat and clean.

3.3 BALANCING

- A. Balancing of air and water system flows shall be in accordance with Section 15907.

END OF SECTION