Basis of Design

This section applies to the design and installation of hangers and supports for HVAC and plumbing equipment, piping and ductwork.

Design Evaluation

The following information is required to evaluate the design:

- **Schematic Design Phase:** Provide a preliminary basis of design narrative.
- **Design Development Phase:** Provide pipe anchor locations, pipe guide locations, pipe roller locations, equipment housekeeping pads size and location, and outline specifications.
- **Construction Document Phase:** Provide pipe anchor locations and details, pipe guide locations and details, pipe roller locations and details, equipment housekeeping pad sizes, locations and details, maximum support spacing, and final specifications.

Products, Material and Equipment

**Hangers**

- Provide hangers rods with a minimum diameter of 3/8-inch.
- Expansion shells are not allowed in new construction. Discuss the use of these devices in existing construction with Engineering Services.
- Prevent contact between dissimilar metals, such as copper tubing and steel, by use of copper-plated or plastic-coated supports. Use copper-plated supports where supports contact copper tubing. Use electroplated or galvanized steel supports where supports contact steel piping.

**Inserts**

- Provide cast, not stamped, metal concrete inserts in new construction.

Installation, Fabrication and Construction

- Support all equipment, ductwork and piping from the building structure. Do not support material from adjacent equipment, ductwork, piping, or light fixtures.
- Install floor-mounted heat-producing equipment on a non-combustible pad.
- Adjust hangers and supports to provide proper alignment and slope of ducts or pipes.
- At a minimum, provide pipe support at the following locations:
  - As required on straight runs to maintain alignment and slope,
  - Adjacent to fitting at each offset or change of direction,
  - End of branch over five feet long,
  - At each floor penetration,
  - At each valve.
- Do not use perforated strap to hang or support material.

END OF DESIGN GUIDE SECTION