PART 1 - GENERAL

1.01 All ductwork per SMACNA standards.

1.02 Design for low to medium pressure air distribution system.

1.03 Provide volume dampers at branch take-offs rather than at diffusers.

1.04 Design and locate supply and return air terminals to provide proper distribution through the space, minimize noise, and prevent drafts at all volumes of distribution. Locate terminals so that they are easily accessible at all service points including damper controllers, airflow sensors & coil valves.

1.05 Duct Clearance: Allow 3-inch minimum clearance from all surfaces of ducts including insulation and reinforcing for ceiling, lights, T bar, structure, etc.

1.06 Design ducting system to minimize ambient room noise from traveling room to room.

1.07 Design ducting and distribution in classrooms to minimize noise and interference with smart classroom devices such as projection screens.

1.08 Require working zone accessible by a reasonable man in front of any control boxes on air terminals, fire smoke dampers, etc.

PART 2 - PRODUCTS

2.01 Construct general ductwork of galvanized sheet metal. Construct fume exhaust ductwork per Division 23 section on Fume Hood Exhaust System Ductwork.

2.02 Insulate ductwork in unconditioned spaces, outside air intake ducts, and relief ducts connected to outside louver with rigid board type insulation applied to the exterior of the ductwork. Interior duct lining for thermal insulation is not acceptable. Refer to Division 22 07 00 for further insulation details.

2.03 Specify motorized control dampers under Standard 23 09 90 Instrumentation and Controls for HVAC. Specify operation under Sequence of Operation, Standard 23 09 93.

2.04 Exhaust ductwork from wet areas such as multiple or gang showers shall have soldered joints and pitch toward outside. Cabinet fans not acceptable for shower rooms. Use utility style, with drain from scroll.

2.05 Specify all fans per appropriate AMCA standards.

2.06 Spin-in fittings are allowed only on downstream side of VAV boxes and in low pressure constant volume systems.
PART 3 - EXECUTION

3.01 Design, fabricate and install all ductwork to SMACNA standards. Seal and leak test according to SMACNA and ASHRAE standards.

3.02 Install ductwork to maintain minimum 3-inch clear from all other piping and ductwork. Where piping or ductworks are insulated this requirement applies to surface of insulation.

3.03 Make no ductwork bends greater than 90 degrees per bend.

END OF SECTION