

Health and Safety Design Considerations

General Building Materials

- No asbestos. Request a statement from the architect that no asbestos products were specified and that to the best of his/her knowledge none were used.
- No heavy metal products (lead, cadmium, mercury, etc.)
- Low VOC paints, epoxies, adhesives, fillers, etc.
- Low or no formaldehyde products (glues, plywood, insulation, etc.)
- No PCB's
- Minimize carpeting and opt for resilient flooring, tiles, wood, cork, etc.
- If carpet is used, opt for modular systems (carpet tiles) using little or no adhesive for installation. Anti-static and anti-microbial features are desirable. Also, ensure Carpet Research Institute (CRI) approved materials (carpet, adhesives, cushion) and installers are used.
- Minimize the use of fabric and other porous surfaces (rationale: these are apt to collect dust, harbor organisms, and are difficult to clean/disinfect once subjected to water/moisture).

HVAC

- Design for easy access to all components of HVAC systems, especially mechanical parts and filters.
- Allow for ample time of curing and ventilation of products and finishes prior to re-occupancy (e.g., 48 hours of 100% outside air ventilation prior to re-occupancy).
- No ethylene glycol coolants (opt for propylene glycol)
- Locate air intakes away from potential pollutant sources (loading docks, dumpsters, cooling towers, exhaust fans, vent pipes, etc.).
- Install bird screening and other bird roosting deterrents around and near intakes.
- At minimum turndown/throttle VAV boxes must provide 25-20 cfm of outside air per person (ASHRAE 62-1989)
- Prior to occupancy clean and sanitize HVAC system using EPA registered sanitizers.

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- Interior insulation/lining of HVAC systems is not recommended. If sections must be lined for acoustical reasons, use non-porous or low-porosity, durable materials (e.g. Johns-Manville Permacote, Knauf Air Duct systems, etc.) that do not support microbial growth (per ASTM, UL, etc.)
- Consider heat recovery systems to maximize delivery of outside air while promoting energy conservation.
- Maximize individual environmental control through enhanced zoning (systems that allow adjustment of temperature and airflow are most desirable).
- Humidification, if provided, must be via dry, clean steam. Humidifier section must be downstream of heating coils. Any porous duct liner/insulation must be located at least ten feet downstream of humidifier section. Access for inspection must be available for humidifier section.
- Opt for ducted returns rather than plenums.
- Reference ASHRAE Standard 62-1989, Ventilation for Acceptable Indoor Air Quality.
- Opt for high efficiency air filters (ASHRAE 52.1-1992 Dust Spot 40% or greater) such as extended surface types (pleated, bagged, enhanced media). Supplement with lower efficiency prefilters.