21 00 00 - Fire Suppression

21 00 00 General Information

1. The primary goal of the Architect and Engineer shall be to provide an environment for occupants that are reasonably safe from fire and products of combustion. To achieve this goal, the objectives are to protect occupants who are not intimate with initial fire development for the time needed to take appropriate action, and to improve the survivability of occupants who are intimate with initial fire development.

2. The secondary goals of the Architect and Engineer shall be to provide a reasonable level of building usability and property protection from the effects of fire and products of combustion. To achieve these goals, the objectives are to increase the likelihood that, in the event of a fire, critical operational functions are not interrupted for longer than 24 hours and the loss of real or personal property does not exceed $250,000.00.

3. Buildings to be renovated at CCU where construction costs will exceed 50% of the building size or 50% of the building value shall be required to have Fire Detection/Alarm and Suppression Systems as if the building were new construction.

21 05 00 Common Work Results for Fire Suppression

1. Specify for the Contractor to submit at least the following for approval by the A/E:
   a. Complete shop Drawings with hydraulic calculations
   b. All Valves
   c. Sprinkler Heads
   d. Pipe Hangers and supports
   e. Pipe and Fittings
   f. FDC
   g. Backflow Preventer Assembly  For exterior, below finish floor surfaces of masonry foundation walls and the exterior face of inner wythe exterior masonry cavity walls.

2. Specify that Fire Department Connections be located and sized in accordance with NFPA and locations approved by the CCU Fire Marshal.

3. Sprinkler risers shall be tagged with metal stamps. Stick-on labels are not permitted.

4. Post Indicator Valve locations shall be approved by the CCU Fire Marshal.
21 10 00 Water-Based Fire Suppression Systems

1. All areas shall be designed for coverage per NFPA 13, 2010 edition, State and Local code requirements. Design must be coordinated with and approved by CCU’s Fire Marshal.

2. Aboveground piping shall be specified as Schedule 40 black steel pipe: ASTM A 53 with 300 pound malleable iron threaded fittings, welded steel fittings, or with mechanical grooved joint couplings. Mechanical couplings for main sprinkler and standpipe risers shall be Victaulic style 07 "Zero-flex" coupling.

3. Underground piping and fittings shall be specified as Ductile Iron minimum Pressure Class 51 with “bolted type” joints.