



ROANOKE COUNTY COMMUNITY DEVELOPMENT  
Office of Building Safety  
COMMERCIAL FIRE SUPPRESSION  
SUBMITTAL CHECKLIST



Project Name: _____		Date: _____	
Occupancy Address: _____			
Owner: _____		Telephone: _____	
Occupant/Tenant: _____		Telephone: _____	
Owner's Address: _____			
Designer: (print) _____		Signature _____	
Address: _____			
Telephone: _____		Fax: _____	Email: _____

This checklist is to accompany all plan submittals. Three complete sets of drawings, scaled to 1/8" or 1/4" per foot.<sup>2</sup> Design, layout, and installation is to be done in accordance with the current edition of the Uniform Statewide Building Code and all adopted standards.\* Information on shop drawings should include all of the following applicable items, and please mark N/A where appropriate:

Y N/A

- Floor plans dimensioned showing, in plan view, locations and spacing of all devices, and the locations of all walls and/or partitions. Please indicate construction of the protected enclosure and partitions and how the rated assemblies will be maintained when penetrated by equipment and/or wiring, per IBC section 712
- Point of compass (i.e. direction of north)
- Enclosure cross section, full height or schematic diagram, including location of construction of building floor/ceiling assemblies above and below, raised access floor and suspended ceiling.
- Type of agent being used by brand name and chemical nomenclature; please include design extinguishing or inerting concentration of mixture as applicable
- Description of occupancies and hazards being protected, designating whether or not the enclosure is normally occupied
- Description of the agent storage containers used including internal volume, storage pressure and nominal capacity expressed in units of agent mass, or volume at standard conditions of temperature and pressure
- Description of nozzle(s) used including size, orifice port configuration, and equivalent orifice area
- Description of pipe and fittings used including material specifications, grade and pressure rating



Description of wire or cable used including classification gauge (AWG), shielding, number of strands in conductor, conductor material and color-coding schedule. Segregation requirements of various system conductors shall be clearly indicated. The required method of making wire terminations shall be detailed

- ☐ ☐ Description of the method of detector mounting
- ☐ ☐ Equipment schedule or bill of materials for each piece of equipment or device showing device name, manufacturer, model or part number, quantity and description
- ☐ ☐ Plan view of protected area showing enclosure partitions (full and partial height); agent distribution system including agent storage containers, piping, nozzles; type and location of pipe hangers; detection, alarm, and control system including all devices and schematic wiring interconnection between them; end-of-line device locations; location of controlled devices such as dampers and shutters; location of instructional signage
- ☐ ☐ Isometric view of agent distribution system showing the length and diameter of each pipe segment; node reference numbers relating to the flow calculations; fittings including reducers and strainers; orientation of tees, nozzles including size, orifice port configuration, flow rate and equivalent orifice area
- ☐ ☐ Details of each unique rigid pipe support configuration showing method of securement to the pipe and to the building structure<sup>1</sup>
- ☐ ☐ Manufacturer's data sheets on all equipment used in the system. Where manufacturer's data sheets over multiple devices, indicate those devices used in the system.
- ☐ ☐ Complete step-by-step description of the system sequence of operations including functioning of abort and maintenance switches, delay timers, and emergency power shutdown
- ☐ ☐ Complete calculations to determine volume and quantity of agent and capacity of backup batteries, if necessary. Flow calculations shall be performed in accordance with approved engineering methods prescribed by the appropriate standard. The system shall be within the manufacturer's listed limitations

<sup>1</sup>Piping hanging supports in areas with a seismic design category of other than A or B must be reviewed and approved by the registered design professional in accordance with IBC section 1613 and ASCE 7, section 9.6.

<sup>2</sup>Fire protection system design is considered engineering work and must be done under the supervision of the design professional of record, where applicable with State Law. Fire suppression shop drawings must first be submitted to the design professional, where applicable and stamped "approved" prior to submittal to our office

\*Currently adopted edition of applicable standards for general design/installation:

- *International Building Code 2012; International Fire Code 2012*
- NFPA 2013 Low Expansion Foam
- NFPA 2013 Carbon Dioxide Extinguishing Systems
- NFPA 2013 Halon 1301 Fire Extinguishing Systems
- NFPA 2013 Installation of Standpipe and Hose Systems
- NFPA 2013 Installation Foam-Water Sprinkler & Foam-Water Spray Systems
- NFPA 2013 Standard on Water Mist Fire Protection Systems
- NFPA 2013 Clean Agent Fire Extinguishing Systems

