BSTG&G Fire District
Fire Prevention Bureau

Clean Agent Fire Extinguishing Systems

Project Name:	*Date:*
Project Address:	
Designers Name:	
Company Name:	
Phone Number:	
Email:	*Fax:*

All supporting documentation showing items listed below are required for review. The checklist is based on the **2015 Edition of NFPA 2001** and the **2017 Ohio Fire Code**

BOXES MUST BE CHECKED (X) UPON COMPLETION

General (All submissions shall include the following):

☐ A minimum of one (1) set of full size paper 30" x 42" and one (1) AutoCad Base Drawing w/ TIFF image of each sheet, PDF or Jpeg on CD in protective case.

☐ Provide the name and address of the building owner. **2015 NFPA 2001 – Section 5.1.2.2**

☐ Provide the name, address, and telephone/fax numbers for the designer of the fire suppression/ detection system**. 2015 NFPA 2001 - Section 5.1.2.2**

☐ The plans shall be drawn to a uniform size and to a recognized scale. **2015 NFPA 2001 – Section 5.1.2.2**

☐ Indicate the point of compass and the symbol legend**. 2015 NFPA 2001 – Section 5.1.2.2**

☐ Indicate the location and the construction of the protected enclosure walls and partitions. **2015 NFPA 2001 – Section 5.1.2.2**

☐ The submitted plans shall clearly indicate total area protected by each system riser on each floor. **2016 NFPA 13 – Section 23.1.3**

- ☐ Provide an enclosure cross section, full height or schematic diagram, including the location and the construction of the building floor/ceiling assemblies above and below the raised access floor and the suspended ceiling. **2015 NFPA 2001 – Section 5.1.2.2**

- ☐ Indicate the type of clean agent being used by its brand name and its chemical nomenclature. **2015 NFPA 2001 – Section 5.1.2.2**

- ☐ Provide the design extinguishing concentration or inert concentration. **2015 NFPA – Section 5.1.2.2**

- ☐ Provide a description of the occupancies and hazards being protected designating whether or not the enclosure is normally occupied. **2015 NFPA 2001 – Section 5.1.2.2**

- ☐ Provide a description of the adjacent exposures and occupancies surrounding the enclosure. **2015 NFPA 2001 – Section 5.1.2.2**

- ☐ Provide the description of the agent storage containers used including the internal volume, the recommended storage pressure, and the nominal capacity expressed in units of agent mass, or volume at standard conditions of temperature and pressure. **2015 NFPA 2001 5.1.2.2**

- ☐ Provide a description of nozzle(s) being used including the size, the orifice port configuration, and the equivalent orifice area. **2015 NFPA 2001 – Section 5.1.2.2**

- ☐ Provide a description of the pipe and fittings used including the material specifications, the grade, and pressure rating. **2015 NFPA 2001 – Section 5.1.2.2**

- ☐ Provide a description of the wire or cable used including the classification gauge (AWG), shielding, the number of strands in conductor, the conductor material, and the color – coding schedule. The segregation requirements of various system conductors shall be clearly indicated. **2015 NFPA 2001 – Section 5.1.2.2**

- ☐ Provide a detail or description of the method of the detector mounting **2015 NFPA 2001 – Section 5.1.2.2**

- ☐ Provide the equipment schedule or list of materials for each piece of equipment or device showing the device name, its manufacture, its model or part number, the quantity of devices to be installed, and the description and function for each device. **2015 NFPA 2001 – Section 5.1.2.2**

- ☐ Submitted plans shall provide a plan view of the protected area showing the enclosure partitions (full and partial height), the agent distribution system including the agent storage containers, piping, and nozzles; the type of pipe hangers and rigid pipe supports; the detection, alarm, and control system including all devices and a schematic of the wiring interconnection between them; the end of the line device locations; the location of controlled devices such as dampers and shutters and location of instructional signage. **2015 NFPA 2001 – Section 5.1.2.2**

- ☐ Provide an isometric view of agent distribution system showing the length and diameter of each pipe segment; the node reference numbers relating to the flow calculations; the fittings including reducers and strainers; the orientation of tees and nozzles including the size, the orifice port configuration, the flow rate and equivalent orifice area. **2015 NFPA 2001 – Section 5.1.2.2**

- ☐ Scaled drawings shall be provided showing the layout of the indicator panel graphics. **2015 NFPA 2001 – Section 5.1.2.2**

- ☐ Provide details of each unique rigid pipe support configuration showing the method of securing the pipe to the building structure **2015 NFPA 2001 – Section 5.1.2.2**

- ☐ Provide details of the method for the container securing showing the method of securing to the container and to the building structure**. 2015 NFPA 2001 Section – 5.1.2.2**

- ☐ Provide step by step description of the system sequence of operations including the function of abort and the maintenance switches, the delay timers, the emergency power shutdown. **2015 NFPA 2001 Section – 5.1.2.2**

- ☐ The submitted plans shall include a point to point wiring schematic diagram(s) in a plan view and a system riser diagram showing all the circuit connections to the system control panel and the graphic enunciator panel. This is to include any external or add on relays. **2015 NFPA 2001 – Section 5.1.2.2 and 2016 NFPA 72 Section – 21.2.4, 21.2.5 and 21.2.6**

- ☐ Provide a complete set of calculations to verify the enclosure volume and to determine the quantity of clean agent required. **2015 NFPA 2001 Section – 5.1.2.2**

- ☐ Provide a complete set of back up battery calculations and voltage drop calculations for the detection system**. 2015 NFPA 2001 Section – 5.1.2.2**

- ☐ Indicate the method used to determine the number and location of audible and visual indicating devices and the number and locations of the detectors**. 2015 NFPA 2001 – Section 5.1.2.2**

- ☐ Provide details and wiring diagrams for any special features, i.e.; interconnection of release panel with building fire alarm system, interface of the system with the HVAC controls, interface of the system with the security/special locking devices. **2015 NFPA 2001 Section – 5.1.2.2 and 2016 NFPA 72 Section – 21.2.4, 21.2.5 and 21.2.6**

- ☐ The submitted plans shall include the flow calculations for the system. The version of the flow calculation program shall be identified on the computer calculation printout. **2015 NFPA 2001 Section – 5.1.2.5.1**

- ☐ Where field conditions necessitate any material change from approved plans, the change shall be submitted for approval prior to installation. **2015 NFPA 2001 Section – 5.1.3.2**

☐ The system flow calculations shall be performed using a calculation method listed or approved for the agent by the authority having jurisdiction. The system design shall be within the manufacture's listed limitations**. 2015 NFPA 2001 Section – 5.2.1**

☐ All valves and fittings shall be rated for equivalent length in terms of pipe or tubing sizes with which they will be used. The equivalent length of the container valves shall be listed and shall include the siphon tube, the valve, the discharge head, and the flexible connector. **2015 NFPA 2001 Section – 5.2.2**

☐ The submitted plans shall show the wiring details for shut down of non self- contained HVAC forced air ventilation systems**. 2015 NFPA 2001 Section – 5.3.6**

☐ The submitted plans shall show the wiring details for the automatic closure of the fire or fire/smoke dampers in the HVAC forced – air duct units that supply the protected enclosure. **2015 NFPA 2001 Section – 5.3.6**

All submissions shall include the appropriate Manufacturer's Data Sheets for the following:

- Agent Cylinder and Valve Assemblies
- Agent Cylinder Data
- Agent Valve Outlet Adapters
- Agent Discharge Nozzles
- Agent Release Control Heads
- Agent System Release Control Panels
- Suppression System Abort Devices
- Agent Manual Release Stations
- Initiating Devices
- Notification Appliances
- Conductor Wire, Relays, Interface Modules
- Other_____

Where multiple contractors are involved in the system design and installation, the plan approval requires the concurrent submittal and review of the fire suppression and detection systems.

STATE OF OHIO LICENSE

Attach a copy of the State of Ohio Fire Marshal, Companies Sprinkler License and All Installing Contractors License for this job. **Per 2017 OFC Section 916.1 thru 916.26**