Frederick County, Virginia
Fire and Rescue Department
Fire Marshal's Office
(540) 665-6350

FIRE SPRINKLER PRE-INSPECTION CHECKLIST NFPA 13

PERMIT #:_____ DATE:_____

PROJECT NAME:_____

ADDRESS:_____

CONTRACTOR:_____

Please perform the following before calling the Fire Marshal's Office to schedule an inspection.

The numbers following checklist comments represent NFPA code sections unless otherwise specified.

Checklist legend: OK = No problems N = Need to fix and retest N/A = not applicable

1.	SYSTEM INSTALLATION	OK	N	N/A
A	Stamped, approved plans on job site			
B	Sprinkler contractor required to be licensed by Virginia			
C	Heads match SIN number listed on plans			
D	Riser/manifold per plans			
E	Piping installed per plans			
F	Prior to system being hooked up, perform an underground flush. Produce passing paperwork to Fire Marshal at time of inspection.			
G	Hangers and end of line restraints per plans: *Minimum 1 hanger per pipe section; hanger spacing per Table 9.2.3.5; armovers no longer than 24" w/o brace; wrap around hanger at end of line or threaded rod tight against pipe; end of line restraint if required.*			
H	Inspector's test valve at end of line			
I	FDC shall be installed no higher than 18" – 48" (13:8.17.2)			
J	FDC must be visible, accessible, couplings swivel, caps in place, ID signs in place, check valve not leaking			
K	Standard spacing from the wall for upright and pendent sprinkler should be 4" (13:8.6.3.3) Max space of heads=15', unless otherwise specified.			
L	Standard spacing from the ceiling for side wall sprinkler should be 4-6" (13:8.7.4.1.1)			
M	Pressure water gauges should be provided on each side of the water supply when an alarm check valve is installed			
N	Caution signs shall be attached to all valves controlling sprinklers. Control, drain, test connection valves shall also be indentified.			
O	2" main drain must be opened until system pressure stabilizes. **Static Pressure: Residual Pressure:**			
P	All exposed sprinkler system piping shall be protected against freezing (40°F)			

Q	System valves and gauges shall be accessible for operation, inspection, tests, and maintenance (13:8.1.2)			
2.	**WET SPRINKLER SYSTEM**			
A	Modifications affecting more than 20 sprinklers will require testing. (20 or fewer sprinklers shall not require testing in excess of system working pressure)			
B	All piping and attached accessories subjected to system working pressure shall be hydrostatically tested at 200 psi and shall maintain that pressure without loss for 2 hours. (24.2.1.1)			
C	Test pressure read from gauge located at the low elevation point of the system or portion being tested (24.2.1.8)			
D	Record Initial Pressure: **Time:** **Date:**			
E	Return in 2 hours; determine if there is any gauge pressure loss or visual leakage			
F	Record Final Pressure: **Time:** **Date:**			
G	Witness system drain/Gauge must drop as system drains			
3.	**DRY SPRINKLER SYSTEM**			
A	Hydro Test Performed **Initial Pressure:** **Time:** **Final Pressure:** **Date:**			
B	Is there a minimum of 40 psi on the gauge? (If no, adjust the pressure switch higher in order to do the test.)			
C	24 hour Air & Trip Test Performed; system is not to lose more than 1.5 psi over the 24 hour period. (24.2.2.1) **Initial Pressure:** **Time:** **Final Pressure:** **Date:**			
D	Quickly open the inspectors test valve. Dry pipe system must get a solid sustained stream of water in 60 seconds or less. **Time water reached test outlet:**			
E	If the pressure was adjusted higher to get 40 psi for the test, bleed down to normal pressure.			
F	Open main water valves.			
4.	**SPRINKLER FINAL**			
A	Are all of the valves open to allow water to flow into system?			
B	Is there pressure on the gauges?			
C	There should be spare sprinkler heads on the premises, as well as a sprinkler wrench.			
D	Inspect sprinkler heads for dirt, damage, paint, and obstruction.			
E	Sprinkler heads that are damaged or painted over must be replaced.			
F	Sprinklers shall be installed under fixed obstruction over 4 ft. wide such as ducts, decks, open grate flooring, cutting tables, and overhead doors.			
G	Check that sprinkler head and location match the type indicated on the plans.			

H	Hydraulic plates (calc plates) shall identify location of design area(s), discharge densities over design area(s), required flow & residual pressure demand at base of riser, occupancy or commodity classification & max permitted storage height, hose stream demand in addition to sprinkler demand (24.5.1)			
	MAIN DRAIN TEST:			
I	Is the system being monitored for fire alarms? Check that flowing water will alert the fire department and alarm company.			
J	Is there a calc plate? (Note the pressure on the plate.)			
K	The main drain should be able to be fully opened without causing water damage.			
L	Open the drain valve and let it run. When the pressure stabilizes, note whether the pressure dropped and stayed below the residual pressure on the calc plate. If it does, there is a problem with the system.			
	FLOW TEST:			
M	Is the system being monitored for fire alarms? Check that flowing water will alert the fire department and alarm company.			
N	Open the inspectors test valve at the end of the system or the alarm valve at the system riser. Did some type of alarm go off when the system flowed?			

When no problems with the system are apparent and all pre-inspection items have been checked, contact the Fire Marshal's Office to schedule a sprinkler hydro and final.