Fairburn Fire Department

Fire Marshal's Office

Plan Review

Fire Sprinkler System Checklist (NFPA 13, 2019 Ed)[1]

NEW: ☐ **REVISION:** ☐ **TENANT FINISH:** ☐ **RETROFIT:** ☐

Job Name: _____

Address: _____

City:_____ Zip:_____ Bldg/Suite: _____

Total heads:____ Phone:(___)____-_____

GENERAL BUILDING INFORMATION

Occupancy Type: _____ Permit Number: _____

Fire Sprinkler Company: _____

Phone: (___)____-_____Contact Email: _____

Type: Wet: ☐ Dry: ☐ Pre-action: ☐ Combination: ☐

CURRENT VENDOR: YES: ☐ **NO:** ☐

✓=Pass, **X**=Fail, **E**=Existing, **NA**=Not applicable

DRAWING SUBMITTAL REQUIREMENTS	**SUBJECT TO AUTOMATIC REJECTION**
1) Provide 3 sets of drawings, 1 set of submittal data, 1 set of calculations, E-mail or provide a CD with PDF files of all documents.	
2) Declaration of Applicable Current Codes: NFPA 13 (2019), NFPA 101 (2018), 120-3-3 Rules and Regulations, and any City of Fairburn Ordinances.	
3) Certificate of Competency or PE seal including original signature **(120-3-19)**	
4) Use a common scale (1/8" = 1' is preferred) and graphic scale **(23.1.3)**	
5) Location key map and north arrow in order to define the location of work within a building **(23.1.3)**	
6) Label all rooms and specify hazard class per area **(5.1.2 and 23.1.3)**	
7) Provide a legend for system components and sprinkler heads: Quantity (total page & total project), SIN #, Make, Type, Sensitivity, K-Factor, Diameter, Temp Rating, Max spacing **(23.1.3)**	
8) Provide a copy of the FIRE LINE APPROVED utility plan stamped by FFDMO for new sprinkler systems**;** Show location of FDC **(8.17.2.4.1)**; PIV and related supply.	
9) Provide an accurate riser detail. **(23.1.3)**	
SPRINKLER COVERAGE[2] (8.5) / SYSTEM / RISERS / FDC / PIV (8.1.1)	
10) Basic Requirements: Verify spacing, location and position of sprinklers **(8.1)**	
11) Provide intermediate temperature heads for coolers/freezers **(8.3.2.5 (9))**	
12) Provide general note and code reference where sprinklers are to be omitted. **(23.1.3)**	
13) Provide total square footage for area protected by fire sprinkler system **(8.2)**	
14) Show ceiling heights and branch line elevations with deflector positions. **(8.5.4; 8.5.6)**	
15) Identify small room rule (S.R.R) locations and dimensions for light hazard areas only **(8.6.3.2.4)**	
16) Show PRV locations and settings (i.e. PRV ≤ 175 psi). **(8.16.1.2; 23.1.3) PRV's on standpipes are required to have 2 gauges per NFPA 14:5.5.2.1**	
17) Where ≥ 2 hose connections are installed downstream of PRD's **NFPA 14:7.2.4** is required to be met.	
18) Show method of freeze protection and include details **(8.16.4.1)**	
19) Identify the FDC piping, pipe size, check valve location, and ball drip. **(6.8 and 8.17)**	
20) Provide inspectors test, auxiliary drains and remote drains **(8.16.2.1 and 8.17.4.2.1)**	
21) Provide a method for flushing at systems demand when a backflow device is required **(8.17.4.6.1)**	
22) Provide hanger detail for each hanger used and show spacing per table 9.2.2.1 **(9.2)**	
23) When systems are >100 psi provide details and general note of securing end of branch lines **(9.2.3.4.4)**	
24) Storage occupancies require ordinary, intermediate or high temperature heads for wet systems and high temperature only for dry pipe. **(8.4.7.3.2-4)**	
OBSTRUCTIONS, CONCEALED SPACES AND SPECIAL SITUATIONS (8.X.5 and 8.15)	
25) Identify ceiling pockets, stairways (void spaces under), elevators/hoist way, exterior projections, electrical/mechanical/janitorial rooms, overhead doors, storage/warehouse rooms **(8.15.1-11)**	
26) Identify deflector to deck and ceiling construction type, insulated or non-insulated and provide slopes of ceilings **(8.5.4; 8.5.4.1.3; 8.6.4)**	
27) Identify the clearance between the deflector and the top of the storage/contents of the room. **(8.5.6)**	
28) Identify obstructions to sprinkler discharge pattern development. **(8.5.5.2 and 8.7.5)**	
29) All sprinklers under skylights or in unventilated areas shall be intermediate temperature; **provide a general note. (8.3.2.5; 8.5.7)**	

30) Identify obstructions > 4' including ductwork, open grate floors, and cloud ceilings; **provide a general note. (8.5.5.3.1)**	
31) Identify temperature restrictive areas, hanging heaters or other heat producing devices; **provide a general note. (8.3.2.1)**	
32) Identify all canopies, loading docks or similar areas; **provide a general note. (8.15.7.1)**	
CONSTRUCTION AND MATERIALS[4]	
33) Breezeway Crossings: Require a P.E. / F.P.E. stamp, job specific, worse case crossing calculations per permit. Include UL number for penetration details. Multiple calculations may be required.	
34) Show all pipe materials, schedules, pipe sizes, cut lengths, and routing to include changes in elevations **(23.1.3)**	
35) Provide documentation to support that all materials, system components and hardware are listed for fire service or intended use. **(23.1.3; 6.1; table A.6.1.1)[3]**	
36) Provide a listed detail for penetrations & identify any fire walls, fire barriers or partitions. **(23.1.3)**	
37) Provide elevation drawings showing ceiling/floor slope and construction and incorporate sprinkler system: multiple elevation drawings maybe required **(8.5 and 23.1.3)**	
38) Provide a detail showing exposed dry barrel length (minimum 2" from face of fitting to insulation) **(Table 8.4.9.1(a))**	
DRY/PREACTION SYSTEM	
39) Provide capacity in gallons for dry pipe systems **(7.2)**	
40) Identify the time requirement for water activation of dry system is over 750 gallon capacity. **(7.2.3.6)**	
41) Identify the slope and direction of slope for sprinkler piping. **(8.16.2)**	
42) Show the location of remote drains where required. **(8.16.2.5.3)**	
43) Show type and location of alarms and valves for pre-action, dry or deluge pipe valve **(23.1.3)**	
HYDRAULIC CALCULATIONS - REQUIRED FOR NEW or MODIFICATION OF 30 OR MORE SPRINKLER HEADS	
44) All remote areas are clearly defined & call out the design data for the remote area.	
45) Water demand requirements and design areas are clearly marked for the applicable areas (occupancy hazard/special design) **(11.1.4)**	
46) Remote areas with 30% increase: Dry pressure & ceiling slope greater than 2 in 12. **(11.2)**	
47) Provide a map locating flow/static hydrants, elevation, date, and witness of the flow test within 6 months of submittal.	
48) Provide a 24-hr pressure test for all new systems within 6 months of submittal on the plans; the witness name and account for lowest pressure over any 30 min. **(23.4)**	
49) Call out the backflow model and meter. **(23.1.3)**	
50) Provide static pressure, residual pressures and flow of the water supply **(23.1.3)**	
51) Provide elevations of the hydrant, the base of riser, sprinklers and junction points **(23.1.3)**	
52) Hydraulic reference points must be shown; include the test hydrant, meter, and backflow **(23.1.3)**	
53) Provide details of the hydraulic placard that will be posted on the riser and include all hazards. **(25.5.2)**	

[1] The above is not an all-inclusive list; all applicable codes must be met.
[2] All non-applicable items must be documented on the plans.
[3] All components are required to be listed for the intended use.
[4] *Information for storage areas to include: Type of storage, class type (I-IV and group A plastics), max storage height, ceiling height, method of packaging, shelving/piled methods, encapsulated or non-encapsulated, and fire sprinkler design requirements or current hydraulic placarding. A completed CPA maybe required before sprinkler plans are reviewed.*

Flow Test Date: _____ 24 hr. Test Date: _____

Static: _____ psi Residual: _____ psi Flow: _____ gpm

Design Density/Area: _____ gpm/ _____ ft^2

Comments:

Reviewer: _____ Date: _____