Marietta Fire Department

Fire Marshal's Office

Plan Review

Fire Sprinkler- NFPA 13 System [1,5]

Tenant Name:_____ Date: _____
Address:_____ Bldg:____ Suite:_____
City: _____ Zip:_____

GENERAL BUILDING INFORMATION
Construction Type: _____ Stories/Height (ft): _____/_____
Contractor Name/Company:_____
Contact: _____ Phone: _____ E-Mail: _____

☐ New System ☐ Retrofit ☐ Renovation Building plans on file Y❑ N❑
Type: ☐ wet ☐ dry ☐ pre-action Total Heads/Per Riser: _____/_____

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

DRAWING SUBMITTAL REQUIREMENTS - SUBJECT TO AUTOMATIC REJECTION	
1) **IN PDF (Please do NOT submit paper)** - Provide one (1) set of drawings, 1 set of calculations, 1 set of submittal data (scope of work on letterhead, specification sheets for all components)	
2) Declaration of applicable current Codes [120-3-19-.11(2); 23.1.3(46)]	
3) Name, number and signature of the Certificate of Competency holder & Designer (may be electronic) [120-3-19-.11(1) and 22.1.3(50)]	
4) Use a common scale and labeled graphically [23.1.3(32)]	
5) Location key map and north arrow [23.1.3(3)]	
6) Label all rooms and specify hazard occupancy per room [5.1.2 and 23.1.3(4-8)]	
7) Provide legends for system components and sprinkler heads: Quantity (total page and total project), SIN #, Make, Type, Model, K-Factor, Diameter, Temp Rating, Max spacing [23.1.3(12-13)]	
8) Provide the approved site plan utility drawing with the Marietta stamp. Include FDC, water meter, PIV, DCDA backflow assembly and all applicable devices. [23.1.3(28/41)]	
9) Accurate riser detail (DCDA water dept. approved backflow assembly if required), valves, gauges, water flow (requires monitoring), FDC tie in, test and drains, and fire pump (when each are applicable).	
10) Include type of construction (i.e. obstructed or unobstructed as defined in Section 3.7), and the distance between the sprinkler deflector and the structure in exposed structure areas. [22.1.3(47)]	
11) Indicate the system is a NFPA 13 designed system. [22.1.3(48)]	
12) Include an Owner's Certificate (may be downloaded from MFD website) [22.1.3(49)]	
SPRINKLER COVERAGE[2] / SYSTEM / FDC / PIV (8.1.1)	
13) Basic Requirements: Verify spacing, location and position of sprinklers [8.1]	
14) Deflector Position: Show ceiling heights and branch line elevations [8.5.4; 8.5.6]	
15) Small Room Rule (light hazard only): Show room area and dimensions [A.8.6.3.2.4]	
16) Provide General Note: Where sprinklers are to be omitted. [23.1.3(9)]	
17) Sprinkler piping and fire detection devices shall be automatically supervised where more than 20 sprinklers are on the system [7.3.4.1]	
18) Show locations of installed floor control valve assemblies, PIV, check valves, hose valves [8.16.1]	
19) Show FDC, including hose connections, system tie in, and size of piping [8.17.2.1/17.2.4.6*]	
20) PRV > 175 psi: Show PRV settings and locations on drawings [8.16.1.2; 23.1.3(40)]	
21) Show the location of a local water flow alarm 110V electric bell or water motor alarm [8.17.1.1]	
22) Area of Protection: Show on drawing total area per riser/standpipe of area each is protecting [8.2]	
23) Show the location of the Inspectors Test and Auxiliary Drains [8.16.2.1 and 8.17.4.2.1]	
24) Provide hanger details and spacing [9.1]	
25) Show method of freeze protection and include details [8.16.4.1]	
CONCEALED SPACES AND SPECIAL SITUATIONS (8.15)	
26) Consideration: ceiling pockets, shafts/stairways, elevators/hoist way, exterior projections, small rooms, electrical/mechanical/janitorial rooms, overhead doors [8.15]	
27) Show all canopies, the construction and loading docks or areas. [8.15.7.1]	
28) Identify all 4 ft obstructions to include ductwork, open grate floors, cloud ceilings [8.5.5.3.1]	
29) All sprinklers under skylights or in unventilated areas shall be intermediate temperature [8.3.2.5; 8.5.7]	
30) Deflector positions identified with construction type, unobstructed/obstructed and the deflector to deck distance [8.5.4]	
31) Identify temperature restrictive areas, hanging heaters or other heat producing devices [8.3.2.1 & 8.3.2.5]	

CONSTRUCTION AND MATERIALS[4]	
32) Breezeway Crossings require calculations per permit. Include UL number for penetration details. Multiple calculations may be required. [8.2.4; AHJ]	
33) Show all pipe materials, schedules, pipe sizes, cut lengths, and routing to include changes in elevations [23.1.3(4/18/19/21)]	
34)[3] All materials, system components and hardware are listed for use [6.1; table A.6.1.1]	
35) Identify all fire walls, fire barriers or partitions. [23.1.3(6)]	
36) Provide elevation drawings showing ceiling/floor slope and construction, specify wet or dry pipe, and sprinklers incorporated: **multiple elevation drawings maybe required** [9.2; 8.5 and 23.1.3(4)]	
DRY/PREACTION SYSTEM	
37) Provide capacity in gallons for dry pipe systems [7.2]	
38) Show type and location of alarms and valves for pre-action, dry or deluge pipe valve [23.1.3*(23-25)]	
HYDRAULIC CALCULATIONS (11.2; 23.2.1; 23.3.2) - ≥ 20 HEADS REQUIRE CALCULATIONS	
39) All remote areas are clearly defined and call out the design data for the remote area. [AHJ]	
40) Remote areas requiring an increase of 30%: Dry systems and ceiling slope greater than 2 in 12. [11.2]	
41) Location and date of 24-hr static pressure test within 6 months of plan review. [23.1.3(43); AHJ]	
There shall be a minimum 10 psi (0.69 bar) cushion between the hydraulically calculated sprinkler system demand and supply when there is a backflow prevention device present [22.4.4.10.2]	
42) Hydraulic base must account for lowest pressure over any 30 min for 24-hr period [23.4]	
43) Hydraulic reference points must be shown; include the test hydrant, meter, backflow [23.1.3(34)]	
44) Call out the backflow make and model. Provide technical data sheet [23.1.3(41)]	
45) Show static pressure, residual pressures and flow (GPM) of the water supply [23.1.3]	
46) Provide elevations of the hydrant, the base of riser, sprinklers and junction points [23.1.3]	
47) Water demand requirements and design areas are clearly marked for the applicable areas (occupancy hazard/special design) [11.1.4]	
48) Provide detail of new hydraulic name plate information to be posted on riser and include hazards [25.5.2]	
STORAGE AND COMMONDITY ASSESSMENT[4] – REQUIRED FOR STORAGE AREAS	
49)[4] Commodity Assessment (CPA): Show max heights of storage and ceilings, shelving methods [23.1.3(4/35)]	
50) Provide cross sectional drawings for racks and specify commodities being stored. [5.6]	
51)[4] Provide storage arrangement and commodity specific letter including type of packing materials and enclosures signed by the owner. *All buildings with racks require separate racking permit* [4.3; 23.1.4]	

[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 not, and PSI and GPM requirements.
[5] Codes referenced in this checklist are to NFPA 13, 2013 Edition with GSFC modifications unless otherwise indicated.

Notes:_____

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Reviewer:_____ Date:_____