



Knightdale Fire Department

Fire Marshal's Office
967 Steeple Square Ct.
Knightdale, NC 27545
Phone: (919) 217-2292

SPRINKLER PLAN SUBMITTAL CHECKLIST

NFC 901.2 Construction Documents the Fire Code Official shall have the authority to require construction documents and calculations for all fire protection systems and to require permits be issued for the installation, rehabilitation, or modification of any fire protection system. Construction documents for fire protection systems shall be submitted for review and approval prior to system installation.

NFPA 13 23.1.3 Working plans shall be drawn to an indicated scale, on sheets of uniform size, with a plan of each floor, and shall show those items from the following list that pertain to the design of the system:

1. Name of owner and occupant.
2. Location, including street address of project.
3. Point of compass.
4. Full height cross section or schematic diagram, including structural member information if required for clarity and including ceiling construction and method of protection for nonmetallic piping.
5. Ceiling/roof heights and slopes not shown in full height cross section.
6. Location of partitions.
7. Location of fire walls.
8. Occupancy class of each area or room.
9. Location and size of concealed spaces, closets, attics, and bathrooms.
10. Any small enclosures in which no sprinklers will be installed.
11. Size of city main in street and whether dead end or circulating; if dead end, direction and distance to nearest circulating main; and city main test results and system elevation relative to test hydrant
12. Other sources of water supply, with pressure or elevation.
13. Make, type, model, and nominal K-factor, including sprinkler identification number.
14. Temperature rating and location of high-temperature sprinklers.
15. Total area protected by each system on each floor.
16. Number of sprinklers on each riser per floor.
17. Total number of sprinklers on each dry pipe system, preaction system, combined dry pipe-preaction system, or deluge system.
18. Approximate capacity in gallons in each dry pipe system.
19. Pipe type and schedule of wall thickness.
20. Nominal pipe size and cutting lengths of pipe (or center-to-center dimensions). Where typical branch lines prevail, it shall be necessary to size only one typical line.
21. Location and size of riser nipples.
22. Type of fittings and joints and location of all welds and bends. The contractor shall specify on drawing any sections to be shop welded and the type of fittings or formations to be used.
23. Type and location of hangers, sleeves, braces, and methods of securing sprinklers when applicable.
24. All control valves, check valves, drain pipes, and test connections.
25. Make, type, model, and size of backflow prevention assembly, and means to forward flow test at system demand.
26. Make, type, model, and size of alarm or dry pipe valve.
27. Make, type, model, and size of preaction or deluge valve.
28. Kind and location of alarm bells.
29. Size and location of standpipe risers, house outlets, hand hose, monitor nozzles, and related equipment.

30. Private fire service main sizes, lengths, locations, weights, materials, point of connection to city main; the sizes, types and locations of valves, valve indicators, regulators, meters, and valve pits; and the depth that the top of the pipe is laid below grade.
31. Piping provisions for flushing.
32. Where the equipment is to be installed as an addition to an existing system, enough of the existing system indicated on the plans to make all conditions clear.
33. For hydraulically designed systems, the information on the hydraulic data nameplate.
34. A graphic representation of the scale used on all plans.
35. Name, address, and phone number(s) of contractor.
36. Hydraulic reference points shown on the plan that correspond with comparable reference points on the hydraulic calculation sheets.
37. The minimum rate of water application (density or flow or discharge pressure), the design area of water application, in-rack sprinkler demand, and the water required for hose streams both inside and outside.
38. The total quantity of water and the pressure required noted at a common reference point for each system.
39. Relative elevations of sprinklers, junction points, and supply or reference points.
40. If room design method is used, all unprotected room openings throughout the floor protected.
41. Calculation of loads for sizing and details of sway bracing.
42. Zones of influence used in calculations for seismic bracing indicated on plans.
43. The setting for pressure-reducing valves.
44. Information about listed antifreeze solution used (type and amount).
45. Size and location of hydrants showing size and number of outlets and if outlets are to be equipped with independent gate valves. Whether hose houses and equipment are to be provided, and by whom, shall be indicated. Static and residual hydrants that were used in flow tests shall be shown.
46. Size, location, and piping arrangement of fire department connections.
47. Edition year of NFPA 13 to which the fire sprinkler system is designed.

NFPA 13 23.1.4 A signed copy of the owners certificate and the working plans submitted shall include the manufacturers installation instructions for any specially listed equipment, including descriptions, applications, and limitations for any sprinklers, devices, piping or fittings.

In addition to the items noted above, this office requires the following:

1. Space for approval stamp at the lower right corner
2. Sprinkler Contractor's name, address and North Carolina License number
3. Full name of designer(s) (no abbreviations)
4. Vicinity map (showing location of project)
5. Plans" 1/8" = 1' with sufficient detail to fully indicate the nature and scope of work to be performed
6. A graphic scale
7. Grid points and line numbers. (Column Lines)
8. No red in the drawing.

Signature of Applicant

I have completed the above checklist noting all pages and supporting documents for the project.

Print Name

Signature of Applicant

Date