

# Wet Pipe – New Construction Commercial Buildings



| 0  |  |                  |            |                      |                 |                |                        |   |           |          |                      |
|----|--|------------------|------------|----------------------|-----------------|----------------|------------------------|---|-----------|----------|----------------------|
|    | All R  | EFERE            | NCES in    | n this docur         | nent ar         | e to Section   | s iı                   | n the 2007 NFPA 13 unless note  | d othe    | rwise.   |                      |
|    | erisk * indicates a<br>NFPA 13, 2006   |                  |            |                      | andards         | or Codes in    | ad                     | option during the use of the  | NOT SHOWN | NCORRECT | COMPLETED            |
| A. | GENERAL  |                  |            |                      |                 |                |                        |   | NOT 8     | INCO     | COMF                 |
| 1. | Test Summary   | / ( <u>www.s</u> | scottsdal  | <u>leaz.gov</u> – se | earch fo        | rms) and sigi  | nec                    | sdale form Fire Hydrant Flow<br>d by a qualified Arizona State<br>) minimum. 22.1.3 (10) & (49)*, |           |          |                      |
| 2. |  | 3 (48)*.         | (DR cas    | e numbers:           | search <u>v</u> | www.scottsda   |                        | ility sheet) including DR case<br>az.gov – My Neighborhood  |           |          |                      |
| 3. | Manufacturer's   | s data sh        | neets/sp   | ecification sl       | heets fo        | r sprinkler he | ad                     | s, pumps, backflow, etc. 22.1.1.1   |           |          |                      |
| 4. | Owner's inform office, assemb  |                  | ertificate | . A.22.1 (b). (      | Light ha        | azard occupa   | nci                    | ies may be exempt. Examples-  |           |          |                      |
| В. | PLANS  |                  |            |                      |                 |                |                        |   |           |          |                      |
| 1. | Complete Site materials of fire  |                  |            |                      |                 |                |                        | cluding locations, sizes and  |           |          |                      |
| 2. | Fire department (44), IFC 903.3.   |                  | ection (F  | DC), size, lo        | cation(s        | s), connection | n(s)                   | ) to system, etc. 8.17.2*, 22.1.3   |           |          |                      |
| 3. |  |                  |            |                      |                 |                |                        | or occupancy class, construction 01.2.1, IBC 106.1.   |           |          |                      |
| 4. | Piping plans & 903.3.7, IBC 10   |                  | ght cross  | s sections of        | adequa          | ite complexity | y, iı                  | ncluding: 22.1.3*, IFC 105.4,   |           |          |                      |
|    | ☐ Scale  | ☐ Nor            | th Arrow   | I                    | ☐ Dim           | nension        |                        | ☐ Head Locations  |           |          |                      |
|    | ☐ Piping locations, types, sizes & lengths (center to center) ☐ Hangar locations & details |                  |            |                      |                 |                |                        |   |           |          |                      |
|    | ☐ Spare heads & cabinet ☐ Riser location   |                  |            |                      |                 | ☐ Threads NST  |                        |   |           |          |                      |
|    | ☐ Unsprinklered compartments   |                  |            |                      | Location,       | siz            | ze of concealed spaces |   |           |          |                      |
|    | ☐ Partitions/walls & openings  |                  |            |                      | ☐ Elevat        | tior           | ns/ceiling heights     |   |           |          |                      |
|    | Slopes   |                  | Obst       | ructions             |                 | ☐ Constr       | uct                    | tion members  |           |          |                      |
|    | ☐ Calc nodes   |                  | ☐ Calc     | areas identi         | fied            | ☐ Calc a       | rea                    | as summaries  |           |          |                      |
|    |  |                  |            |                      |                 |                |                        |   |           | B. Pla   | <b>ins</b> continued |
|    |  |                  |            |                      |                 |                |                        |   |           |          |                      |

#### Planning & Development Services Department

7447 E. Indian School Road, Scottsdale, AZ 85251 • Phone: 480-312-7080 • Fax: 480-312-4203



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| В.  | PLANS continued  |   | TON       | INCC      | COM       |
| 5.  | Listing of standard(s), edition, modifications/varian design features (include Code or Standard section 101.4, 104, 106.1.1. |   |           |           |           |
| 6.  | Submittal review: minimum NICET III CET or an A date. 22.1.1.1 (5)*, 22.1.3 (52)*, IFC 901.2.3*.                             | rizona Registrant, evidenced by signature/seal and  |           |           |           |
| 7.  | Names and phone numbers: contractor; NICET/Requestions. 22.1.3 (51)*   | egistrant; whom to call to answer design            |           |           |           |
| 8.  | Seismic requirements and hangar analysis. 8.15.19  | 9.5.4, 9.3*, 22.1.3 (54)*, IBC.                     |           |           |           |
| 9.  | Occupancy classification/use of each room/area. (through 21, IFC Ch. 2, IBC.   | Ch. 3, Ch. 5, A.5 all, 6.2.4, Ch. 8, 11.1, 11.2, 12 |           |           |           |
| 10.   | Special conditions/occupancy requirement. 8.15, C  | h. 11, 12 through 21, IFC, IBC.                     |           |           |           |
| 11.   | Residential NFPA 13 systems, location and size of sprinklered). 8.15.8.1.1*, 8.15.8.2.                                       | f closets and pantries (all restrooms to be         |           |           |           |
| 12.   | Limitations of areas protected with alternative syst   | ems 4.2, IFC 903.1.1, 904.2, IBC 901.2, 904.2.      |           |           |           |
| 13.   | Each sprinkler system's allowable square footage.  | 8.2 all, 8.13.1.                                    |           |           |           |
| 14.   | Hose valves for access challenge, locations and c 905.12*.   | onnection to sprinkler system cross main(s). IFC    |           |           |           |
| 15.   | Standpipe hose valves, locations (each floor landing 14, IFC 602.3*, 905.4 through 905.11.                                   | ng & grade) and connection to standpipes. NFPA      |           |           |           |
| 16.   | Sprinkler head legend, per system, including: 6.2.   | 2, 6.2.3, 22.1.3 (12)                               |           |           |           |
|   | Model  | SIN   |           |           |           |
|   | ☐ Orifice  | ☐ Temperature                                       |           |           |           |
|   | Птуре  | ☐ Manufacturer                                      |           |           |           |
|   | Quantity   | ☐ K-factor  |           |           |           |

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| C.  | CALCULATIONS continued  | SLON      | INCOF    | COMP         |
| 12. | Calculations for access challenge hose valves. IFC 905.12*.   |           |          |              |
| 13. | Residential NFPA 13 system sprinklers. 8.4.5.1, A.8.4.5.1, 8.10,11.3.1, 11.3.1.   |           |          |              |
| 14. | Gridded systems peaked or supplemental calculations. 22.4.4.4.  |           |          |              |
| 15. | Extended coverage or other special listings limitations. Ch. 8, listings.   |           |          |              |
| 16. | Flexible tube calculation. 22.1.7*  |           |          |              |
| D.  | SPRINKLER SPACING   |           |          |              |
| 1.  | Sprinkler head allowable calculated square footage, S x L. 8.5.2, 8.5.2.2, & 8.5.3, 8.7.2.1.1, 8.7.3, listings.                               |           |          |              |
| 2.  | Allowable calculated spacing to walls, ½ S or L, or small room rule – 9 feet. 8.5.3.2, 8.7.3.2, listings.                                     |           |          |              |
| 3.  | Minimum sprinkler head spacing. 8.5.3.3, 8.5.3.4, 8.7.3.3, listings.  |           |          |              |
| 4.  | Sprinkler obstructions and clearances. 8.5.5, 8.5.6, 8.6 through 8.12, listings.  |           |          |              |
| 5.  | Sprinkler head layout for slopes 4:12 pitch. 8.6.4.1.3, 8.6.4.1.4, 11.3.3.5. 2:12 pitch. 8.15.1.6.  |           |          |              |
| 6.  | Sidewall sprinklers outside of maximum protection area. 8.7.3.1.6.  |           |          |              |
| 7.  | Residential NFPA 13 sprinklers 8.4.5.1, A.8.4.5.1, 8.10, 11.3.1.  |           |          |              |
| 8.  | Other spacing rules. Ch. 8, listings.   |           |          |              |
| E.  | MISCELLANEOUS   |           |          |              |
| 1.  | Special listed sprinklers with exposed cpvc. 6.3.6.1, listings.   |           |          |              |
| 2.  | Sprinkler temperature ratings. 8.3.2.   |           |          |              |
| 3.  | Quick response sprinkler required. 8.3.3, 8.3.3.1.1*, IFC 903.3.2.  |           |          |              |
| 4.  | Sprinkler coverage at top of elevator shaft (ASME compliant exempt) and in elevator pit. 8.15.5.  |           |          |              |
| 5.  | Sprinkler coverage at top of stairways (noncombustible stairways) and at stairway landings opening to two (2) fire areas. 8.15.3.2, 8.15.3.3. |           |          |              |
| 6.  | Sprinkler coverage under the first landing above the bottom of the shaft (noncombustible stairways). 8.15.3.2.1.                              |           |          |              |
|     |   |           | E. Misc  | c. continued |
|     |   |           |          |              |

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| E.  | MISCELLANOUS continued   | TON       | INCC     | COM       |
| 7.  | Sprinkler coverage beneath all stairways of combustible construction. 8.15.3.1.  |           |          |           |
| 8.  | Sprinkler coverage beneath all stairways of combustible construction. 8.15.3.1.  |           |          |           |
| 9.  | Sprinkler coverage under the first landing above the bottom of the shaft (noncombustible stairways). 8.15.3.2.1.   |           |          |           |
| 10. | Sprinkler heads of a corrosion-resistant type. NOTE: Required where chemicals, moisture or other corrosive vapors can cause corrosion. 6.2.6.1, 6.2.6.4. |           |          |           |
| 11. | Sprinkler coverage under canopies in educational occupancies. 8.15.7.1.1*.   |           |          |           |
| 12. | Sprinkler coverage and obstructions. 8.5.5.2, 8.6 through 8.12.  |           |          |           |
| 13. | Sprinkler coverage beneath obstructions. 8.5.5.2, 8.5.5.3.   |           |          |           |
| 14. | Dry pendent sprinkler heads in walk-in coolers/freezers. 7.9, 8.3.2.5 (9), 8.16.2.3.3.   |           |          |           |
| 15. | Fabric canopy sprinklers or flame spread cert. 8.15.7.3 (4)*   |           |          |           |
| 16. | Other special situations. 8.15 all, IFC Ch. 9, Ch. 15 through 44.  |           |          |           |
| 17. | Bell. 6.9.3.1*, 22.1.3 (26), IFC 903.4.2*.   |           |          |           |
| 18. | Third party monitoring. IFC 903.4, exception #8*.  |           |          |           |
| F.  | PIPING, VALVES, FITTINGS   |           |          |           |
| 1.  | Fire sprinkler riser assembly detail per City of Scottsdale detail 2368 or 2369. 8.16* all, 8.17.4.6, IFC 903.3.5.                                       |           |          |           |
| 2.  | Fire riser location(s), directional signage and identification. 8.16.1.1.7.1 through 8.16.1.1.7.5, 8.16.1.1.8.1.   |           |          |           |
| 3.  | Floor control valves. 8.16.1.1.2.6*, IFC 903.4.3.  |           |          |           |
| 4.  | Drain pipes & inspectors tests terminate to the exterior or approved location. 8.16.2.6, 8.17.4.2.   |           |          |           |
| 5.  | Inspectors test pipe, location and connection to system. 8.17.4.2.   |           |          |           |
| 6.  | Exterior exposed piping 2 inch minimum or insulated in an approved manner. 8.16.4.1, 8.16.4.1.3.1*.  |           |          |           |
| 7.  | CPVC exposed per listing, protective membrane, specially listed heads, noncombustible concealed space, etc. 6.3.6.1, 8.15, listings.                     |           |          |           |
| 8.  | Cutting oil compatible with CPVC. Listings.  |           |          |           |

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| G.  | OTHER  | NOT SHOWN | INCOI    | COMF      |
| 1.  | The professional registrant in charge or fire code official may require a technical opinion and report, prepared by a qualified party, and/or a professional registrant activities report containing all professional registrant duties as assigned by the State Board of Technical Registration, with seal and signature of an Arizona Registrant, who is qualified in fire sprinkler design, to accompany the plan submittal. A.1.1, IFC 104.7.2, 901, IBC 104, 106.1, 106.3.4.1, 901. |           |          |           |
| 2.  | The professional registrant in charge is responsible to coordinate deferred submittals, professional registrant activities, technical assistance reports, modifications, alternative materials and methods, and to determine that the deferred submittal documents are in general conformance to the design of the building. A.1.1, IFC 104, 901, IBC 106.1, 106.3.4.1, 901.   |           |          |           |
| н.  | LINKS/REFERENCES   |           |          |           |
|   | American Fire Sprinkler Association <u>www.sprinklernet.org</u>  |           |          |           |
|   | Arizona Automatic Fire Alarm Association <u>www.azafaa.org</u>   |           |          |           |
|   | Home Fire Sprinkler Coalition <u>www.homefiresprinkler.org</u>   |           |          |           |
|   | International Code Council <u>www.iccsafe.org</u>  |           |          |           |
|   | National Fire Protection Association <u>www.nfpa.org</u>   |           |          |           |
|   | National Fire Sprinkler Association <u>www.nfsa.org</u>  |           |          |           |
|   | Occupational Safety and Health Administration <u>www.osha.gov</u>  |           |          |           |
|   | Scottsdale Fire Code <u>scottsdaleaz.gov/codes/fireord.asp</u>   |           |          |           |
|   | Society of Fire Protection Engineers <u>www.sfpe.org</u>   |           |          |           |
|   |  |           |          |           |
|   | This checklist is provided as a baseline guide to the user of the various codes, standard, interpretations & applications, and policies that affect a successful review and approval of fire sprinkler shop drawings—intended to be used by technicians, designers, contractors, reviewers, and anyone involved in or interested in fire sprinkler system design within the City of Scottsdale.  |           |          |           |
|   |  |           |          |           |
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