
SPRINKLER SYSTEM REVIEW CHECKLIST & FEE SCHEDULE

As an aid to streamline our sprinkler system review process, we ask that you complete this checklist, and attach it to your Plan Review Application. Please address each checklist item in your package, whether the item is conveyed on the shop drawings, cut sheets, general notes, calculations, or cover letter, etc. Any items not addressed may cause unnecessary delays or "hold" on your review. Your help will facilitate a complete submittal package and allow us to provide an accurate review in a timely manner. Please verify that each item listed below is provided correctly in your submittal and is coordinated within all parts of the submittal. Indicate that each item has been address by check mark or N/A for items not applicable.

Project Name (please print): _____

Architectural Review Number: _____

Project Address: _____

Checklist Completed by: _____ Date: _____

Checklist Verified by: POR/Owner: _____ Date: _____

PLAN REVIEW APPLICATION

1. ____ Denote applicable State Fire Marshal Architectural (new Construction or Renovation) Review number, associated with this sprinkler submittal. If the architectural review exists as a "Preliminary, Hold or Not in Compliance type, the sprinkler package may be found not in compliance, and returned without benefit of a review. If the architectural scope of work is exempt from review by this office, provide a copy of the exemption notice/letter or exemption PO number. If the sprinkler design is based on an appeal response, provide a copy of this letter with the submittal. If the Professional of Record (POR) or Owner requests the review be based on prior or alternate editions of these standards, he/she shall submit this request as a formal appeal. The use of alternate standards such as FM Global also requires prior approval. Request to use an alternate standard is to be submitted before or with the submitted package. Response to the written request will be processed by the Chief Architect or Sprinkler Supervisor.
2. ____ Application is to be complete and the information provided is to match the information provided in the architectural review. If application information is provided by both the sprinkler contractor and the Professional of Record/Owner, then the POR/Owner shall sign the "Checklist Verified line".
3. ____ Provide POR name, address and license number on the application. If the POR is different from the architectural review, indicate here the relation of the POR for the sprinkler submittal to the POR for the architectural review. _____
4. ____ Provide copy of inspection report, if applicable. (Report may have been generated by the State Fire Marshal, sprinkler contractor, local fire district or fire department.)
5. ____ "Preparer of Shop Drawings" information is to be complete on application. All information shall match the State Fire Marshal Licensing Department's Listing of Licensed Contractors".

SHOP DRAWINGS – IN ADDITION TO THE ITEMS REQUIRED BY THE APPLICABLE STANDARD PROVIDE:

6. ____ Drawings to be legible copies (bluelines, photocopies or computer plots), not originals, and all drawn and REPRODUCED to scale. Live ink or pencil notes applied by hand is not acceptable. Submittals requiring a POR that are received without the POR shop drawing stamp are subject to being returned without benefit a review. One submittal set is required. A maximum of 2 set can be sent. Second set may be sent to sprinkler contractor if requested. Note: this second set is for reference only and cannot be used at time of final inspection.

7. ____ Professional of record shop drawing review and executed review stamp to be provided on each drawing sheet, and on cover of calculations and cut sheets. The alternative to a shop drawing stamp is a handwritten note signed and dated by the professional of record placed on each sheet as indicated above stating the project has been reviewed and no exceptions are noted.
8. ____ Occupancy class of each area or room identified at each area or room unless the building is predominantly light hazard, then the exceptions shall be noted in each area or room.
9. ____ All sprinklers affecting the submittal scope of work shall be identified differentiating new heads from existing heads to remain. Sprinkler legend shall match sprinkler plans (graphic symbols to be consistent and legible).
10. ____ Dedicated and miscellaneous storage shall be protected in accordance with Chapter 12 and Chapter 13 as applicable.
11. ____ For dedicated storage areas, provide maximum storage height, method of storage, description of commodities (i.e., Commodity Class, Group A Plastics, etc). If project is specialized storage design (e.g.,High Piled storage, Special Occupancy Chapter of NFPA 13, etc.), provide complete design statement(s) denoting methodology or applicable references from the standard for arriving at project area/densities.
12. ____ All piping affecting the submittal scope of work shall be identified differentiating new piping from existing piping to remain.
13. ____ Sufficient ceiling information to determine head location and position. (examples: ceiling pocket, ceiling clouds, vaulted or coffered ceilings, furrings, wood or other combustibles used as the finished ceiling surface and exposed above within the concealed space)
14. ____ Concealed spaces to include voids and spaces above ceilings; describe if combustible. If sprinklers are not provided, describe application of sections 13:8.15.1.2 and/or 13:11.2.3.4 (4) as applicable.
15. ____ H.V.A.C. diffusers shall be shown that affect sprinkler heads per NFPA 13 Table 8.3.2.5(a). Expected temperature range of ceiling at diffuser to be noted if less than or greater than 100 degrees.
16. ____ Method of maintaining sprinkler system at or above 40 degrees F identified ("owner to provide heat" is unacceptable). Describe all unheated applicable areas, and explain methodology of all types, sizes, locations, etc. of freeze protection devices. Submit alternative methods of freeze protection (e.g., insulation; heat tracing, etc.) and / or POR sealed heat transfer calculations to the attention of the SFM Sprinkler Supervisor.
17. ____ Graphically highlight each hydraulic area (perimeter dashed line, etc.), title each area on the plans, with matching title on each calculation set.
18. ____ Location and rating of firewalls and fire barriers, unprotected vertical openings, and other assemblies affecting sprinkler design.
19. ____ Size of city main at street, denoting dead end or circulating (or denote private supply). Verify that pressure losses in any dead end main are accounted for.
20. ____ Total area protected by each system on each floor.
21. ____ Location, type, and listing of hangers ("hanger spacing complies with NFPA 13" is unacceptable). Verify that any special hanger requirements are noted on the plans (e.g., for CPVC pipe, or for pressure exceeding 100 psi)
22. ____ Underground pipe size, length, location, weight, type, point of connection to city main, bury depth, thrust blocks, and all appurtenances (valve types, water meters, valve pits, backflow preventers, etc.), with appropriate back-up cut sheets denoting manufacturer's fire protection equipment listing and friction/pressure loss for each device.
23. ____ All hydraulic name plate information.
24. ____ Hydraulic reference points in the calculations shall correspond to the drawings.
25. ____ Setting for pressure reducing valve denoted.

HYDRAULIC CALCULATIONS – IN ADDITION TO THE ITEMS REQUIRED BY THE APPLICABLE STANDARD PROVIDE:

26. ____ Verify the water supply, test location, date (must be 12 months current) peak demand time (or calculated adjustment), and account for test elevation at calculations.
27. ____ Verify hazard classification (light, ordinary, special occupancy, etc.).
28. ____ Verify the design criteria (density/sq. ft. over the hydraulic design area).
29. ____ Verify the location of the area calculated (most hydraulically demanding not always the most physically remote).
30. ____ Verify the dimensions of the area calculated (design area shall not extend beyond designated area served by each sprinkler). Sufficient length parallel to the branch lines or cross-mains, as required.
31. ____ Verify the densities (sprinklers flowing at or above minimum required flow rate).
32. ____ Verify the pipe sizes lengths, equivalent lengths of fittings, and flow paths (account for all pressure losses)

- 33. ____ Verify the hose demand.
- 34. ____ Confirm that the system demand is at or less than the available water supply (include demand vs. supply graph).
- 35. ____ For any antifreeze solutions greater than 40 gal. in size, the friction loss shall ALSO be calculated using the Darcy-Weisbach formula. Include manufacturer's charts.

MATERIAL CUT SHEETS – TO PROVIDE DETAIL INFORMATION REGARDING ITEMS SHOWN ON PLANS

- 36. ____ To be provided for sprinklers, pipes, valves, pressure-reducing devices, flow switches, backflow preventers, water meters (all system devices effecting hydraulic design, whether existing or proposed) denoting manufacturer's fire protection equipment listing, friction/pressure loss for each device, and limitations of use (such as for CVPC piping), etc.
- 37. ____ Fire pump design curves (provide current pump test for existing pump).

FEE CALCULATIONS

- 1. Money orders, cashier's checks, certified checks, and company checks are accepted (NO TEMPORARY CHECKS ACCEPTED)
- 2. Minimum base fee for any project is \$55. This includes Restamp/Lost Plans.
- 3. Attic protection to be considered a separate floor.

ITEM	NUMBER OF FLOORS – FEES		REVIEW FEE		SUBTOTAL
SPRINKLER HEADS PER FLOOR	1 - 50	X	\$30	=	\$
SPRINKLER HEADS PER FLOOR	51-300	X	\$60	=	\$
SPRINKLER HEADS PER FLOOR	301-450	X	\$120	=	\$
SPRINKLER HEADS PER FLOOR	541 – above	X	\$150	=	\$
SETS OF HYDRAULIC CALCULATIONS		X	\$40	=	\$
POSTAGE/HANDLING				+	\$25
CALCULATED FEE ATTACHED				=	TOTAL