



Pride in Service with Integrity

**Department of Fire Rescue & Emergency Services
Fire Marshal's Office
Dania Beach District**

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FIRE SPRINKLER SHOP DRAWING SUBMITTAL REQUIREMENTS

A **Fire Sprinkler System Shop Drawing** is required for review by the Fire Prevention Bureau for any modification(s) or change(s) to existing fire sprinkler systems and any new installations. The Fire Sprinkler System Shop Drawing(s) must include all of the information listed below. ***If any portion does not apply, a note must be provided on the plan stating that it is not applicable.*** If any portion of the requested information is not provided or clarified, the plan will be returned for that provision or clarification to be made and a re-examination fee may apply. Should you have any questions, please contact the Fire Prevention Bureau with the information provided in the letterhead.

THE FIRE SPRINKLER SYSTEM SHOP DRAWINGS MUST INCLUDE ALL OF THE FOLLOWING INFORMATION:

1. A detailed Scope of Work
2. A scaled plan with the scale indicated
3. North Directional Indicator
4. A total square footage of the work area or tenant space
5. Identify all of the following: Occupancy Classification, Commodity Classification (In accordance with NFPA 13.5.6.3), Classification of Hazard (In accordance with NFPA 13:5.1 through 13:5.5)
6. A complete legend in accordance with the Fire Safety Symbols of N.F.P.A. 170, 2006 Edition (to include all symbols related to plan).
7. Product spec sheets for all sprinkler system components
8. The plans must be signed and sealed by the architect and/or engineer. If the job value is less than \$5,000.00 and the plan is not signed and sealed by the architect or engineer, provide a copy of the signed contract with the plan submittal.
9. A note on the plan indicating that all drawings and installations shall comply with N.F.P.A. 13, 2002 Edition.
10. Piping material information, hangar detail and locations. In addition, provide a note on the plan indicating that hangar spacing is in accordance with NFPA 13, 2002 ed., Chapter 9, Table 9.2.2.1
11. Any methods of storage (Rack, Pallets, Palletized Rack Storage, Encapsulated, Storage of Idle Pallets, etc.) If no storage, indicate on the plan (**THE PLAN WILL BE REJECTED IF THE STORAGE METHOD OR LACK THEREOF IS NOT IDENTIFIED ON THE PLAN**)
12. The locations of any Rack Storage or Shelving and a scaled layout, elevations and type of racks or shelves being used
13. A sectional drawing for all areas with drop-down ceilings and/or concealed spaces

14. The location of, and identification of all Valves, Fire Department Connections (FDC's), Backflow Prevention Devices, Tamper Switches/Alarms, Water Flow Alarms, etc.
15. The location of the Fire Pump (where applicable) and other related information (size, capacity, etc.)
16. A note that spare sprinklers will be provided in accordance with NFPA 13:17.2.3
17. Any concealed spaces
18. All information as listed on the hydraulic nameplate for the system. This must be demonstrated on the plan. (NFPA 13:16.5)
19. Hydraulic Calculations are required for the addition or relocation of seven (7) or more fire sprinkler heads (per BSO A.H.J.) - **to be signed and sealed by a Fire Protection Engineer. Hydraulic Calcs must include all the following:**
 - a. **Provide a summary sheet** to include all the following where applicable (NFPA 13:14.3.2)
 - b. **Provide a detailed worksheet** to include all the following where applicable (NFPA 13:14.3.3)
 - c. **Provide a Graph Sheet** of the complete hydraulic calculation plotted on a semi-exponential graph paper to include all the following where applicable (NFPA 13:14.3.4)
20. A PDF format copy of the **complete set of approved plans**. They can be sent via email to kennethsean_brown@sheriff.org (For Fire Department Pre-Fire Planning Use Only).

*****NOTE***NOTE***NOTE***NOTE***NOTE*****

A letter-format response is required for all corrections made to any portion(s) of the plan indicating the page or sheet numbers where the corrections can be found. Failure to provide this letter format response will result in the plan being rejected without review. Additional plan review fees shall be applied.

If any item(s) is overlooked in the plan review process and discovered during the field inspection it MUST be corrected to meet the actual code requirements.

BROWARD COUNTY AMENDMENTS TO THE FLORIDA FIRE PREVENTION CODE
FLOW TESTING AND WATER SUPPLY

F-22 — Automatic Sprinklers Required:

F-22.1 --- Fire flow testing of the Water Supply for Automatic Fire Protection Systems (AFPS) and Automatic Standpipe Systems (ASS) using water as an extinguishing agent for new buildings and structures and existing buildings and structures where the AFPS and ASS are altered by more than seventy-five (75) percent of their value shall be as follows:

a) Fire flow test of the water supply for AFPS and ASS shall be in accordance with NFPA 291, Recommended Practice for Fire Flow Testing and Marking of Hydrants, Florida Administrative Code (FAC) 69A-60.005(2).

b) Design for AFPS and/or ASS shall be calculated using a maximum of fifty (50) pounds per square inch (PSI) as the static pressure to allow for drought conditions.

EXAMPLE: If the result of a Fire Flow Test has a static pressure of eighty (80) PSI, a residual pressure of seventy-two (72) PSI and a flow of 1,300 gallons per minute (GPM), the design water supply for an AFPS and/or ASS would be a static pressure of fifty (50) PSI, a residual pressure of forty-two (42) PSI and a flow of 1,300 GPM.

c) Design for AFPS and/or ASS at or below a static pressure of 55.56 PSI shall be calculated using a ten (10) percent reduction in the static pressure from the fire flow test to allow for drought conditions.

EXAMPLE: If the result of a Fire Flow Test has a static pressure of fifty-three (53) PSI, a residual pressure of forty-five (45) PSI and a flow of 925 GPM, the design water supply for an AFPS and/or ASS would be a static pressure of 47.70 PSI, a residual pressure of 39.70 PSI and a flow of 925 GPM.

FLOW TESTING AND WATER SUPPLY (cont'd.)

d) Design for AFPS and/or ASS for the residual pressure shall be equal to the difference between the static and residual pressures as obtained from the fire flow test to allow for drought conditions.

EXAMPLE: If the result of a Fire Flow Test has a static pressure of eighty-five (85) PSI, a residual pressure of seventy-seven (77) PSI the difference in the static and residual pressures would be eight (8) PSI which would be utilized for the drought condition water supply design criteria. If the result of a Fire Flow Test has a static pressure of forty (40) PSI, and a residual pressure of thirty (30) PSI, the difference in the static and residual pressures would be ten (10) PSI which would be utilized for the drought condition water supply design criteria.

e) Design of the water flow for the AFPS and/or ASS shall be the same as that obtained from the fire flow test.

f) The residual pressure at the required water flow at the connection to the water main for an AFPS and/or ASS shall not be less than 20 PSI.

g) The static pressure at the water main shall be determined by a recorded method for a minimum twenty-four (24) hour period.

h) Fire flow test data shall not be more than one (1) year prior to the plans, hydraulic calculations and submittals for the AFPS and/or ASS being submitted to the Authority(ies) Having Jurisdiction (AHJ) for their review and acceptance. The results of the fire flow test shall be provided to the AHJ at the time of the submittal of the plans, hydraulic calculations and submittals for the water based AFPS and/or ASS.

