NFPA 13R FIRE SPRINKLER SYSTEM DESIGN

Project Information & Design Intake Form

(Based on NFPA 13R – 2022 Edition)

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1. Project Information

Project Name: _____

Project Address: _____

City / State / Zip: _____

Owner / Developer: _____

Architect: _____

Primary Contact Name: _____

Phone: _____ **Email:** _____

General Contractor

Company Name: _____

Address: _____

City / State / Zip: _____

Phone: _____ Email: _____

Installing Fire Sprinkler Contractor

Company Name: _____

Address: _____

City / State / Zip: _____

Phone: _____ Project Manager: _____

2. Design Schedule & Fee

The typical turnaround time for a standard NFPA 13R (2022 Edition) fire sprinkler design for projects under 5,000 sq. ft. is 3–4 weeks, beginning after receipt of all required information and documentation.

Base Design Fee: $1,800

Final design cost will be determined after a complete review of the provided contract documents.

Payment Terms:

• Projects $2,500 or less: Payment due in full upon delivery of shop drawings and hydraulic calculations.

• **Projects over $2,500:**

- 90% due upon delivery of shop drawings and hydraulic calculations. Drawings will be issued with a stamp indicating “Not for Submittal” until payment is received.

- Remaining 10% due upon plan approval or 30 days after receipt of shop drawings and calculations, whichever occurs first.

3. Required Documents

☐ Architectural floor plans

☐ Reflected ceiling plans (preferred)

☐ Lighting plans (if available)

☐ Completed design intake form

☐ Current hydrant or municipal flow test

☐ Underground pipe information

☐ Water meter size and location

Accepted plan formats:

• Revit (Preferred)
• DWG
• Clean / high-resolution PDF

Lighting plans are preferred when available to assist with sprinkler layout coordination.

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4. Water Supply Information

Static Pressure (psi): _____

Residual Pressure (psi): _____

Flow (gpm): _____

Flow Test Date: _____

Flow Test Location: _____

Distance from Project: _____

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5. Water Supply Curve (If Available)

Point 1: _____ psi @ _____ gpm

Point 2: _____ psi @ _____ gpm

Source of Data: _____

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6. Water Meter Information

Meter Size: _____

Meter Manufacturer: _____

Backflow Preventer Type: _____

Backflow Model: _____

Please note that for **NFPA 13R projects**, the **total required water demand** is calculated by combining the **sprinkler system demand** with the **domestic water demand**. In many cases, this combined demand can **easily exceed 80 gpm**.

A standard **2-inch water meter typically has a maximum flow capacity of approximately 52 gpm (NFPA 13D Table 10.4.4.a)**. Because of this limitation, the available water supply through the domestic service may **not be sufficient to meet the total system demand**.

If this condition occurs, one of the following solutions may be required:

• **Installation of a separate fire service line** connected directly to the city main, or
• **Use of a standalone pump and tank system** designed to supply the sprinkler demand (for example, systems similar to the *13R pump* manufactured by Talco Fire and possibly two 1000 gallon tanks).

Contractors should evaluate the **available water supply, meter size, and total system demand early in the project** to determine whether additional fire protection infrastructure will be required.

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7. Underground Service Information

City Tap to Meter

Pipe Size: _____

Pipe Material: _____

Meter to Riser

Pipe Size: _____

Pipe Material: _____

Approximate Length: _____

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8. Building Information

Occupancy Type (Apartments / Condominiums / Hotels / Dormitories):

_____

Number of Stories: _____

Total Building Area: _____

Construction Type: _____

Number of Dwelling Units: _____

Ceiling Types

☐ Flat

☐ Sloped

☐ Vaulted

☐ Tray

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9. Attic / Concealed Space Conditions

Attic Type:

☐ Vented

☐ Conditioned

☐ Unconditioned

Freezing Concern:

☐ Yes ☐ No

Preferred Design Approach / Notes:

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10. NFPA 13R System Scope

NFPA 13R systems are permitted in residential occupancies up to four stories in height and are intended to control fires within residential compartments to allow occupant evacuation.

Areas where sprinklers may be permitted to be omitted (unless otherwise required by the Authority Having Jurisdiction – AHJ) include:

• Attics not used for living purposes
• Bathrooms smaller than 55 sq. ft.
• Small closets
• Exterior balconies
• Certain concealed spaces

11. NFPA 13R Hydraulic Design Criteria (2022)

• Design based on the four most hydraulically demanding sprinklers within a compartment
• Minimum design density of 0.05 gpm/ft² unless sprinkler listing requires otherwise
• Minimum pressure per sprinkler manufacturer listing
• Minimum flow per sprinkler manufacturer listing
• Minimum water supply duration: 30 minutes

12. Sprinkler Selection

Manufacturer:

- ☐ Tyco
- ☐ Viking
- ☐ Reliable
- ☐ Other: _____

Type:

- ☐ Concealed
- ☐ Flush
- ☐ Standard Pendent
- ☐ Sidewall

Temperature Rating: _____

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13. Pipe Material

- ☐ CPVC
- ☐ Steel
- ☐ PEX (not recommended)
- ☐ Other: _____

Notes:

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14. AHJ / Local Amendments

List any local amendments or jurisdictional requirements that affect NFPA 13R system design:

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15. Authorization to Proceed

Name: _____

Company: _____

Signature: _____

Date: _____