



AUTOMATIC SPRINKLER SYSTEM PLAN REVIEW CHECKLIST

Williamson County ESD #3 / Hutto Fire Rescue The following checklist is based on the requirements in NFPA® 13, *Standard for the Installation of Sprinkler Systems*, 2022 edition. Please complete the form and return with submitted sprinkler plans.



STEP 1: GENERAL PROJECT INFORMATION

Permit no.: _____ Project/occupancy name: _____

Project address: _____

Owner's name: _____

Sprinkler contractor name: _____

Contractor address: _____

Point of contact (name): _____

Contractor phone: _____ e-mail: _____

Date of review by AHJ: _____ Date comments sent to contractor: _____

Name of AHJ plans examiner: _____

• Code and edition governing project: _____

• Edition of NFPA 13 used for design: _____

• Type of system being installed: Wet Dry Preaction Deluge

• Is this a new system or a change to an existing system? New system Change to existing system

• Owner certificate included: Yes No

• Building description:

Square footage of the project: _____

Use of building: _____ Building height: _____

Total area of building: _____ Area per floor: _____

Total number for floors above grade: _____ below grade: _____

• What is the construction type?

Fire resistive Noncombustible Ordinary
 Heavy timber Wood frame Mixed

• What is the fire sprinkler occupancy hazard classification? [4.3]

Light hazard Extra hazard Group I Storage
 Ordinary hazard Group I Extra hazard Group II
 Ordinary hazard Group II Special occupancy

• Are there special occupancy requirements for the system? Yes No
(Flammable/combustible liquids, aircraft hangars, oxidizers, etc.)

• Is there storage over 12 ft (3.7 m)? Yes No

• If this is a storage occupancy, what is the commodity classification?

Class I Class II Class III Class IV
 Group A Group B Group C



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STEP 2: GENERAL PLANS INFORMATION

The following has been shown on plans correctly:

YES NO

- | | | |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Name and address of building being protected [28.1.3(1)] |
| <input type="checkbox"/> | <input type="checkbox"/> | Name, telephone number, and address of installing contractor [28.1.3(2)] |
| <input type="checkbox"/> | <input type="checkbox"/> | Point of compass and graphic scale indications [28.1.3(3)] |
| <input type="checkbox"/> | <input type="checkbox"/> | Location of all partitions that extend to or are within a minimum of 18 in. to the finished ceiling or exposed deck above [28.1.3(4)] |
| <input type="checkbox"/> | <input type="checkbox"/> | Label finished or exposed ceiling heights for each space [28.1.3(9)] |
| <input type="checkbox"/> | <input type="checkbox"/> | Location of partitions fire rated partitions, fire barriers, draft stops, and draft curtains [28.1.3(5)] |
| <input type="checkbox"/> | <input type="checkbox"/> | Identification of all rooms and spaces [28.1.3(6)] |
| <input type="checkbox"/> | <input type="checkbox"/> | Identification and labeling of all spaces, above and below ceilings, where sprinklers will be omitted [28.1.3(7)] |
| <input type="checkbox"/> | <input type="checkbox"/> | Location of all fixtures, diffusers, lights, and devices installed in or mounted to the ceiling structure [28.1.3(8)] |
| <input type="checkbox"/> | <input type="checkbox"/> | Location and identification of major mechanical, plumbing, and electrical equipment installed above or below the ceiling spaces [28.1.3(10)] |
| <input type="checkbox"/> | <input type="checkbox"/> | Location and identification of all major structural members and identification and labeling of construction types [28.1.3(11)] |
| <input type="checkbox"/> | <input type="checkbox"/> | Location and identification of concealed spaces and of architectural and/or structural features not shown or easily identifiable in the floor plan or reflected ceiling plan views [28.1.3(12)] |

STEP 3: WATER SUPPLY

The following water supply information is clearly indicated on plans:

- Capacity is verified at _____ gpm (L/min) for a duration of _____ hours for a total capacity of _____ gal (L). [19.2.3.1.2]

Type of water supply:

- Public Stored water (tanks) Raw water source

YES NO

- | | | |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Location and elevation of static and residual hydrants in relationship to the riser location [4.5.1] |
| <input type="checkbox"/> | <input type="checkbox"/> | Date and time of flow test (must be within one year of design) [4.5.1] |
| <input type="checkbox"/> | <input type="checkbox"/> | Static, residual, and flow from test [4.5.1] |
| <input type="checkbox"/> | <input type="checkbox"/> | Name of person who conducted or source of water supply information [4.5.1] |
| <input type="checkbox"/> | <input type="checkbox"/> | Size of water source [28.1.3(13)] |
| <input type="checkbox"/> | <input type="checkbox"/> | Dimensions [28.1.3(13)] |
| <input type="checkbox"/> | <input type="checkbox"/> | Configuration [28.1.3(13)] |
| <input type="checkbox"/> | <input type="checkbox"/> | Flow test locations, dates, and sources [28.1.3(13)] |
| <input type="checkbox"/> | <input type="checkbox"/> | Adjustments from raw data required by the engineer of record or the water authority, if applicable [28.1.3(13)] |

Fire Pump

- Electric Diesel Steam N/A

Rated Capacity: _____

- The pump layout complies with NFPA 20.



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Water Tank

- Steel Wood Concrete Fiberglass NA
- Water tanks comply with the requirements of NFPA 22.

STEP 4: SPRINKLER SYSTEM TYPE AND COVERAGE

- Type of sprinkler system Wet [8.1] Dry [8.2] Preaction [8.3] Deluge [8.3]
- Classification of occupancy: (Chapter 4)
 - Light hazard
 - Ordinary: Group 1 Group 2
 - Extra hazard: Group 1 Group 2
- Classification of commodity: (Chapter 4)
 - Class I Group A plastic
 - Class II Group B plastic
 - Class III Group C plastic
 - Class IV Mixed commodity
 - Plastic pallet storage? Reinforced Unreinforced
- Are sprinklers omitted in any areas? Yes No [9.1.1]
- If yes, are omissions allowed per NFPA 13? Yes No N/A [9.2]
- What is the area of coverage? [9.1.1(1)]
 - Total Partial Special hazard Other
- All wet piping is in areas that can be maintained above 4°C (40°F) [16.4.1]

STEP 5: SPRINKLER SYSTEM COMPONENTS

The following sprinkler component information is clearly indicated on plans /specifications:

- Product data is included in the shop drawing submittal
- Make, type, model, nominal K-factor of sprinklers, and sprinkler identification number [7.2, 28.1.3(17)(b)]
- Temperature rating and location of high-temperature sprinklers [7.2.4.1 / 9.4.2]
- Pipe type and schedule of wall thickness [7.3.1.1 / 28.1.3(17)(a)]
- Nominal pipe size and cutting lengths of pipe (or center-to-center dimensions) [28.1.3(17)(a)]
- Type of fittings and joints and location of all welds and bends [7.4.1 / 28.1.3(17)(a)]
- Specifications of any sections to be shop welded and type of fittings or formations to be used [7.5.2]
- Type and location of hangers, sleeves, braces, and methods of securing sprinklers when applicable [28.1.3(22) and (23) / 17.1]
- All control valves and check valves [28.1.3(17)(a) / 16.9]
- Make, type, model, and size of wet pipe, dry pipe, preaction, or deluge valves [28.1.3(17) / 8.1 / 8.2 / 8.3]
- Size and location of standpipe risers, hose outlets, hand hose, monitor nozzles, and related equipment [28.1.3(19) / 16.15]
- Calculation of loads for sizing and details of sway bracing [28.1.3(22) / Chapter 18]
- Setting for pressure-reducing valves [28.1.3(23)(d) / 16.9.7]
- Manufacturer, size, type of backflow preventers [28.1.3(17) / 16.14.5]
- Type and amount of antifreeze solution used [28.1.3(23)(d) / 8.6]
- A pressure gauge on the system and the supply [8.1.1]



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STEP 6: DESIGN

The following design information is clearly indicated on plans or specifications:

- Total area protected by each system on each floor [4.5 / 28.1.3(16)]
- Sprinkler spacing and location verified [9.5]
- Spray patterns free of obstruction [9.5.5]
- Total number of sprinklers on each dry pipe, preaction, combined dry pipe-preaction, or deluge system [28.1.3 (16)]
- Approximate capacity [in gal (L)] of each dry pipe system [8.2.3 / 28.1.3(23)(d)]
- Pitch of pipe for dry pipe, preaction, combined dry pipe-preaction, or deluge system [16.10.3]
- Size and capacity for air compressor (where provided) for dry pipe, preaction, combined dry pipe-preaction, or deluge system [8.2.6.6]
- Details of air supply connections for other types of air supply [8.2.6]
- Piping provisions for flushing [28.1.3(18) / 16.6]
- Size, location, and arrangement of all auxiliary drain connections [16.10.5]
- Where equipment is to be installed as an addition to an existing system, enough detail of the existing system indicated to make all conditions clear [28.1.3.1]
- Hydraulic data nameplate (for hydraulically designed systems) [29.4]
- Size, location, thread type, and piping arrangement of fire department connections [28.1.3(20) / 16.12]
- Size, location, and arrangement of inspector's test connection [28.1.3(18) / 16.14]
- Location of main drain connection [28.1.3(17)(a) / 16.14]

STEP 7: HYDRAULIC DESIGN SPECIFICATIONS

The following information has been clearly indicated on plans / specifications / hydraulic calculations:

- Type of system: Hydraulically calculated [28.2] Pipe schedule [28.5]
- Proper hydraulic calculations forms used?
 - Design area and water application rate:
 - Density/area method [19.2.3.2] Special design areas [19.2.3.4]
 - Room design method [19.2.3.3] Special design approaches [19.3]
- Density/area method
 - Area of operation and density noted?
 - Area of operation reduced for: Quick-response sprinklers High-temperature sprinklers
 - Area of operation increased for: Sloped ceilings Dry pipe/double-interlock preaction systems
 - Multiple adjustments needed?
 - Area per sprinkler [9.5.2.1]
 - Water supply sufficient? [19.1.5.1]
- Allowance for in-rack sprinklers provided (where required) [28.2.5]
- Limitations (dimension, flow, and pressure) for listed special sprinklers specified [28.2.4.6.1]
- Most demanding area calculated [28.2.4]
- Hydraulic reference points shown on the plan that correspond with comparable reference points on the hydraulic calculation sheets [28.1.3(21)]
- Pipe sizes and lengths shown on the plan correspond with the sizes and lengths shown on the hydraulic calculations sheets [28.1.3(17)(a)]
- Total quantity of water and pressure required noted at a common reference point for each system
- Relative elevations of sprinklers, junction points, and supply or reference points [28.1.3(21)]
- All unprotected wall openings throughout the floor protected for room design method where permitted [19.2.3.3]
- Pressure loss for backflow preventer, meter or other devices included in hydraulic calculations [28.1.3(21)(b)]

OWNER'S INFORMATION CERTIFICATE

Name/address of property to be protected with sprinkler protection:

Name of owner: _____

Existing or planned construction is:

- Fire resistive or noncombustible
- Wood frame or ordinary (masonry walls with wood beams)
- Unknown

Describe the intended use of the building: _____

Note regarding speculative buildings: The design and installation of the fire sprinkler system is dependent on an accurate description of the likely use of the building. Without specific information, assumptions will need to be made that will limit the actual use of the building. Make sure that you communicate any and all use considerations to the fire sprinkler contractor in this form and that you abide by all limitations regarding the use of the building based on the limitations of the fire sprinkler system that is eventually designed and installed.

Is the system installation intended for one of the following special occupancies:

- | | | |
|---------------------------------|------------------------------|-----------------------------|
| Aircraft hangar | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Fixed guideway transit system | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Race track stable | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Marine terminal, pier, or wharf | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Airport terminal | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Aircraft engine test facility | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Power plant | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Water-cooling tower | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

If the answer to any of the above is "yes," the appropriate NFPA standard should be referenced for sprinkler density/area criteria.

Indicate whether any of the following special materials are intended to be present:

- | | | |
|---------------------------------------|------------------------------|-----------------------------|
| Flammable or combustible liquids | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Aerosol products | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Nitrate film | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Pyroxylin plastic | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Compressed or liquefied gas cylinders | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Liquid or solid oxidizers | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Organic peroxide formulations | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Idle pallets | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

If the answer to any of the above is "yes," describe type, location, arrangement, and intended maximum quantities.

Indicate whether the protection is intended for one of the following specialized occupancies or areas:

- | | | |
|--|------------------------------|-----------------------------|
| Spray area or mixing room | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Solvent extraction | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Laboratory using chemicals | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Oxygen-fuel gas system for welding or cutting | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Acetylene cylinder charging | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Production or use of compressed or liquefied gases | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Commercial cooking operation | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Class A hyperbaric chamber | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Cleanroom | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Incinerator or waste handling system | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Linen handling system | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Industrial furnace | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Water-cooling tower | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

If the answer to any of the above is "yes," describe type, location, arrangement, and intended maximum quantities.

Will there be any storage of products over 12 ft (3.7 m) in height? Yes No

If the answer is "yes," describe product, intended storage arrangement, and height.

Will there be any storage of plastic, rubber, or similar products over 5 ft (1.5 m) high except as described above?
 Yes No

If the answer is "yes," describe product, intended storage arrangement, and height.

Is there any special information concerning the water supply? Yes No

If the answer is "yes," provide the information, including known environmental conditions that might be responsible for corrosion, including microbiologically influenced corrosion (MIC).

Provide water supply data for the project: _____

Is seismic protection required? Yes No

Provide design spectral response acceleration at short periods, S_{DS} : _____

I certify that I have knowledge of the intended use of the property and that the above information is correct.

Signature of owner's representative or agent: _____ Date: _____

Name of owner's representative or agent completing certificate (print): _____

Relationship and firm of agent (print): _____