

Cohasset Town Hall
Cohasset, MA
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FIRE PROTECTION SYSTEMS

NARRATIVE REPORT

The following is the Fire Protection system narrative, which defines the scope of work and capacities of the Fire Protection system, as well as, the Basis of Design.

1. CODES
 - A. All work installed under Section 210000 shall comply with the MA Building Code and all state, county, and federal codes, laws, statutes, and authorities having jurisdiction.
2. DESIGN INTENT
 - A. All work is new and consists of furnishing all materials, equipment, labor, transportation, facilities, and all operations and adjustments required for the complete and operating installation of the Fire Protection work and all items incidental thereto, including commissioning and testing.
3. GENERAL
 - A. In accordance with the provisions of the Massachusetts General Law and State Building Code the building must be protected with an automatic sprinkler system.
4. DESCRIPTION
 - A. The existing fire service and automatic sprinkler system located in the 1987 building addition will be demolished.
 - B. A new 6-inch fire service, double check valve assembly, wet alarm valve and dry alarm valve, electric bell, and fire department connection meeting local thread standards will be provided.
 - C. System will be an automatic sprinkler system designed in accordance with NFPA 13. The system will include three control valve assemblies, one for each floor level. A single dry sprinkler zone will be provided for the existing unheated combustible attic space.
 - D. Control valve assemblies shall consist of a supervised shutoff valve, check valve, flow switch and test connection with drain.
 - E. All areas of the building, including all finished and unfinished spaces, combustible concealed spaces, all electrical rooms and closets will be sprinklered.
 - F. All sprinkler heads will be quick response, pendent in hung ceiling areas and upright in unfinished areas.

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5. BASIS OF DESIGN

- A. The mechanical rooms and storage rooms are considered Ordinary Hazard Group 1; stage is considered Ordinary Hazard Group 2; all other areas are considered light hazard.
- B. Required Design Densities:

Light Hazard Areas = 0.10 GPM over 1,500 s.f.
Ordinary Hazard Group 1 = 0.15 GPM over 1,500 s.f.
Ordinary Hazard Group 2 = 0.20 GPM over 1,500 s.f.
- C. Sprinkler spacing (max.):

Light Hazard Areas = 225 s.f.
Ordinary Hazard Areas = 130 s.f.
- D. A flow test must be performed to confirm the Municipal water supply capacity.

6. PIPING

- A. Sprinkler piping 1-1/2 in. and smaller shall be ASTM A-53, Schedule 40 black steel pipe. Sprinkler/standpipe piping 2 in. and larger shall be ASTM A-135, Schedule 10 black steel pipe.

7. FITTINGS

- A. Fittings on fire service piping, 2 in. and larger, shall be Victaulic Fire Lock Ductile Iron Fittings conforming to ASTM A-536 with integral grooved shoulder and back stop lugs and grooved ends for use with Style 009-EZ or Style 005 couplings. Branch line fittings shall be welded or shall be Victaulic 920/920N Mechanical Tees. Schedule 10 pipe shall be roll grooved. Schedule 40 pipe, where used with mechanical couplings, shall be roll grooved and shall be threaded where used with screwed fittings. Fittings for threaded piping shall be malleable iron screwed sprinkler fittings.

8. JOINTS

- A. Threaded pipe joints shall have an approved thread compound applied on male threads only. Teflon tape shall be used for threads on sprinkler heads. Joints on piping, 2 in. and larger, shall be made up with Victaulic, or equal, Fire Lock Style 005, rigid coupling of ductile iron and pressure responsive gasket system for wet sprinkler system as recommended by manufacturer.

9. DOUBLE CHECK VALVE ASSEMBLY

- A. Double check valve assembly shall be MA State approved, U.L./F.M. approved, with iron body bronze mounted construction complete with supervised OS & Y gate valves and test cocks. Furnish two spare sets of gaskets and repair kits.

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- B. Double check valve detector assembly shall be of one of the following:
1. Watts Series 757-OSY
 2. Wilkins 350A-OSY
 3. Conbraco Series 4S-100
 4. Or equal