

LEGEND			
TYP.	TYPICAL	DN	DOWN
U/F	UNDER FLOOR	●	POINT OF CONNECTION –
RPZ	REDUCED PRESSURE	NIC	NEW TO EXISTING
	ZONE ASSEMBLIES	NIC	NOT IN CONTRACT
MC	MECHANICAL CONTRACTOR	FDC	FIRE DEPARTMENT CONNECTION
GC	GENERAL CONTRACTOR	—	FIRE DEPARTMENT CONNECTION
CONT.	CONTINUATION	—	FIRE DEPARTMENT CONNECTION
N/A	NOT APPLICABLE	⌵	INDICATING CONTROL VALVE
PC	PLUMBING CONTRACTOR	⌵	ALARM VALVE
RM.	ROOM		
BLDG.	BUILDING		
CS U	UNDERGROUND		
COMBINATION SERVICE			
SG	SPRINKLER GUARD		
↗	CHECK VALVE		
— — —	EXISTING SPRINKLER MAIN		
— — —	NEW SPRINKLER MAIN		
●	POINT OF DISCONNECT FROM EXISTING		

BACKFLOW PREVENTER SCHEDULE					
MARK	MANUFACTURER	SIZE	MAX. PRESSURE DROP	SERVING	REMARKS
BFP-2	WATTS	4"	10 PSI	FIRE PROTECTION SERVICE	DCDA TO BE INSTALLED BY FIRE PROTECTION CONTRACTOR. SEE DETAIL #1 ON DRAWING FP-1 FOR FIRE PROTECTION ROOM LAYOUT INSTRUCTIONS.

SPRINKLER HEADS SHALL BE QUICK RESPONSE TYPE AS REQUIRED BY CODE.

SCHEDULE OF SPRINKLER HEADS	
SYMBOL	DESCRIPTION
⊗	Pendant Semi-recessed head with white finish and upright sprinkler head, ½" orifice, 155°F. <i>UL Listed</i> and FM approved. "Rooster Style" – Reliable Sprinkler or equal.
⊗	Pendant fully-recessed anti-corrosion head with finish cover plate. ½" orifice, 155°F. <i>UL Listed</i> and FM approved. Reliable Sprinkler F1FR-56 series or Viking VK302 with ENT Coating.
⊗	Dry Pendant Semi-recessed head with white finish and upright sprinkler head, ½" orifice, 155°F. <i>UL Listed</i> and FM approved. "Rooster Style" – Reliable Sprinkler or equal.
⊗	Full-(concealed) head with white finish, ½" orifice, 165°F. <i>UL Listed</i> and FM approved. Reliable Sprinkler GS-56 series or equal.
○	Upright brass head, ½" orifice, 210°F. <i>UL Listed</i> and FM approved. Reliable Sprinkler or equal.
⊗	Anti-corrosion Upright head with corrosion resistant polyester coating. ½" orifice, 210°F. <i>UL Listed</i> and FM approved. Reliable Sprinkler F1FR-56 series or equal.
⊗	Fully-recessed Sidewall type head with white finish, ½" orifice, 165°F. <i>UL Listed</i> and FM approved. Quick Response, Extended Coverage. Reliable Sprinkler G6-80 series or equal.
⊗	Sidewall type head with white finish, ½" orifice, 155°F. <i>UL Listed</i> and FM approved. Reliable Sprinkler or equal.
⬆	Dry Sidewall type head with white finish and white escutcheon, ½" orifice, 155°F. <i>UL Listed</i> and FM approved. Reliable Sprinkler or equal.

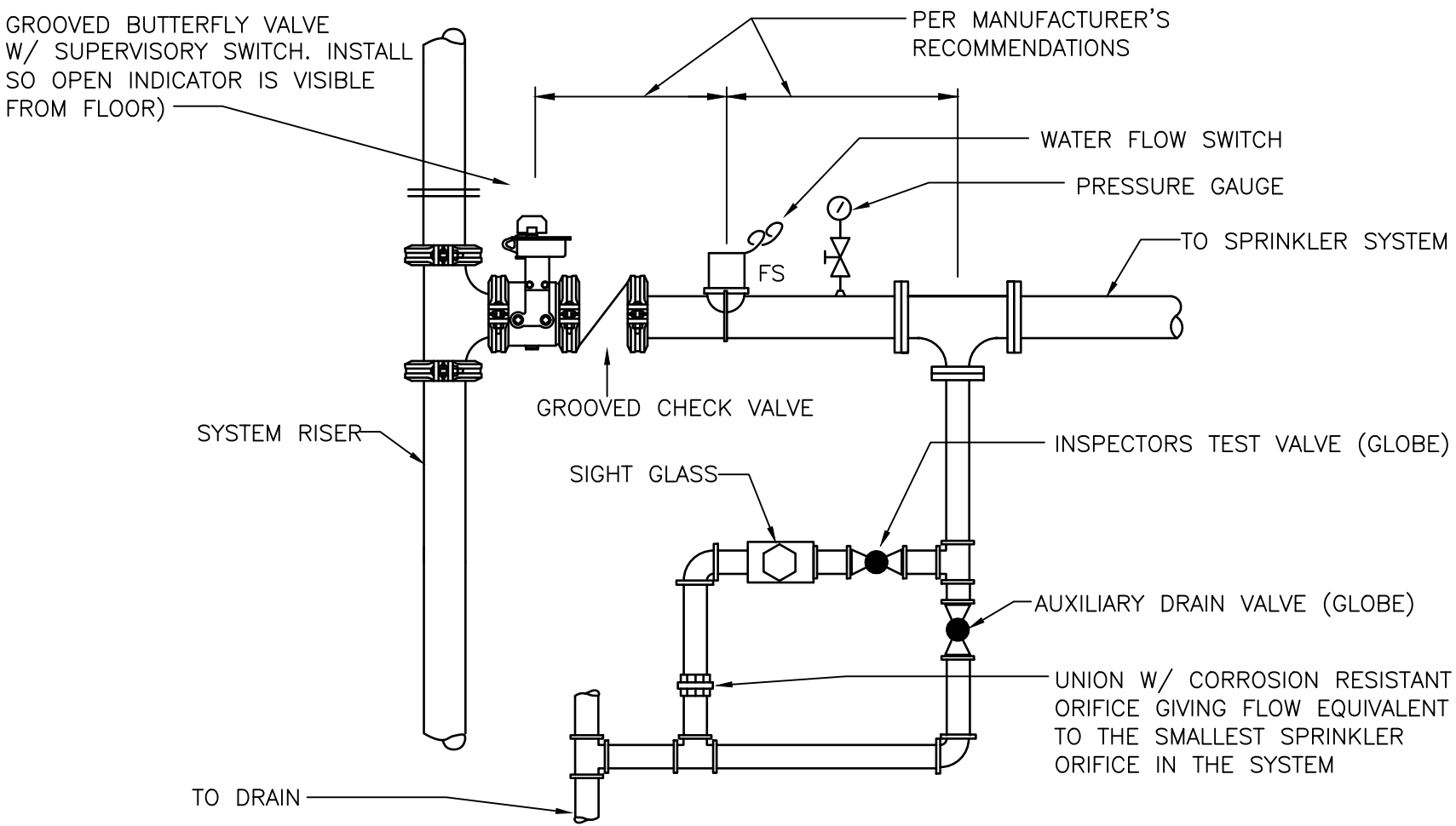
#### FIRE PROTECTION SYSTEMS SPECIFICATIONS

- The contractor shall be responsible for a complete turn key installation using Underwriter Laboratories UL listed products including design, obtaining approvals and coordination with other trades. Install to meet NFPA 13, NFPA 72, NFPA 101, and the local Authority Having Jurisdiction requirements.
- Sprinkler heads, mains, runouts, tailbacks, sprigs etc. shall be provided as follows:
  - All equipment required for the project (sprinklers, hose valves, check valves, fittings, etc.) shall meet standard pressure requirements. The fire protection contractor shall provide services for this project on a design build basis. Provide all required materials and designs for a 100% complete, functional and code compliant installation. Provide piping drawings, schematics, material specifications etc. with flow calculations to the local jurisdiction having authority for review and approval prior to installation. All prospective bidders shall visit the site prior to bid submission to verify field conditions and scope of work. Coordinate main fire protection service size requirements and all locations of fire protection mains serving the building with the Civil Engineer and Architect prior to bid submission. Provide flow and tamper switches as required and coordinate terminations with the electrical contractor. If main fire protection service is existing, provide new drops to new sprinkler heads. Coordinate exterior AV location with electrical contractor and wiring requirements in advance. Provide Siamese connection at exterior per Fire Marshal.
- Sprinkler head locations shall be used as a guide for bid. Sprinkler locations show approximate locations with full rcp and field coordination to be provided by the successful contractor. Provide all heads as required per NFPA 13. Existing fire protection service is 2½" and shall be upsized to 4" due to change in occupancy and addition of square footage. Verify with hydraulic calculations. The contractor shall perform a flow test on site and use results to perform hydraulic calculations as described here. Provide sprinklers in concealed ceiling spaces per NFPA 13. Concealed spaces under the volume of 160 cubic feet shall not require sprinklers provided they meet all requirements under NFPA 13, Chapter 8, Section 8.15.1.2. In areas noted where no ceilings are installed or where the above ceiling area is large – all work from other trades are considered obstructions and shall be sprinklered per NFPA 13 Chapter 8. See Detail #3 on drawing FP-2.
- The suggested sprinkler locations are not intended to limit the contractor from providing another design that may be more economical and still meet the requirements of the local Authority Having Jurisdiction and NFPA.
- Comply with standards mentioned above, ANSI/ASME, and Architectural requirements for painting interior piping. Paint exposed, interior metal piping, valves, and piping specialties, except components, with factory-applied paint or protective coating. Exposed sprinkler heads shall be ordered according to color requirements below.

W.B. Light Industrial Coating: MPI INT 5.1B – GS. Prime Coat: Rust Inhibitive Primer. (MPI #107). Intermediate Coat: W.B. Light Industrial Coating (MPI #153). Topcoat: W.B. Light Industrial Coating (MPI #153). Color: Black.

Damage and Touchup: Repair marred and damaged factory-applied finishes with materials and by procedures to match original factory finish.
- Working plans and computerized hydraulic calculations shall be prepared by a minimum Level 3 N.I.C.E.T. Certified Sprinkler Layout Designer. Submit working plans and hydraulic calculations signed and sealed by a Professional Fire Protection Engineer registered in the state in which the project is located, to Authorities that Have Jurisdiction. Design documents are for permit purposes. The design is not intended to limit the contractor from providing another design that may be more economical and still meet the requirements of the Local Authority Having Jurisdiction. All drawings, including As-Built, shall be submitted electronically in AUTO CAD compatible format.
- The hydraulic calculations shall include the pressure drop through all pipe, fittings and devices, including the pressure drop through the reduced pressure principle backflow preventer, from the most hydraulic remote point of the sprinkler system to the location of the test hydrant.
- Submit drawings to local fire dept. and obtain necessary approvals, permits and certificates prior to submission to the engineer for final review.
- Where required by code or directed by local authorities, contractor shall provide seismic hanging & constraints on all piping in complete accordance with the latest issue of the State Plumbing Building Code, local codes and NFPA.
- The fire protection contractor shall provide a guarantee covering all design, installation, material and workmanship for one year following date of acceptance by Owner.
- The hydraulic calculations shall be based on the flow test data listed below (this information shall be provided by the fire protection contractor at submittal of shop drawings and calculations):
  - Static pressure psi.
  - Residual pressure psi.
  - Flow gpm.
  - Flow/test hydrant locations.
  - Date of test.
  - Time of test.
  - Responsible party conducting test.
  - Hydrant outlet discharge coefficient.

- Piping shall be sloped to drain back to sprinkler riser. Auxiliary drainage in accordance with NFPA 13 shall be provided for all trapped sections of pipe.
- Pipe all drains and inspector's test to outside, or discharge to a drain approved by the owner for sprinkler discharge.
- Provide automatic sprinkler below obstructions 48 inches and wider. (platforms, ductwork, stairways, unit heater, etc).
- Refer to the architectural drawings for reflected ceiling plans and coordinate all work with all other contractors prior to installation of the sprinkler system. Up front field coordination between all contractors is required due to limited space constraints.

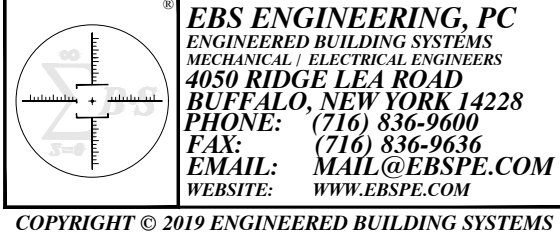


NOTE:  
RISER PIPING SIZE IS TO BE VERIFIED WITH HYDRAULIC CALCULATIONS PER THE SPECIFICATIONS. COORDINATE FINAL RISER LOCATION WITH ALL TRADES AND ARCHITECT TO AVOID CONFLICTS AND ENSURE REQUIRED EGRESS PATHS ARE ACHIEVABLE. RISER IS NOT TO BE LOCATED IN ANY AREA WHERE DRY SYSTEMS ARE INDICATED. TAMPER AND FLOW SWITCHES TO BE ELECTRICALLY SUPERVISED. COORDINATE WITH ELECTRICAL CONTRACTOR FOR INSTALLATION.

3 FLOOR CONTROL VALVE DETAIL  
FP-1 SCALE: NONE

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SEAL:

TITLE:  
**FIRE PROTECTION  
LEGENDS,  
SCHEDULES,  
DETAILS, &  
SPECIFICATIONS**



**SILVESTRI  
ARCHITECTS • PC**

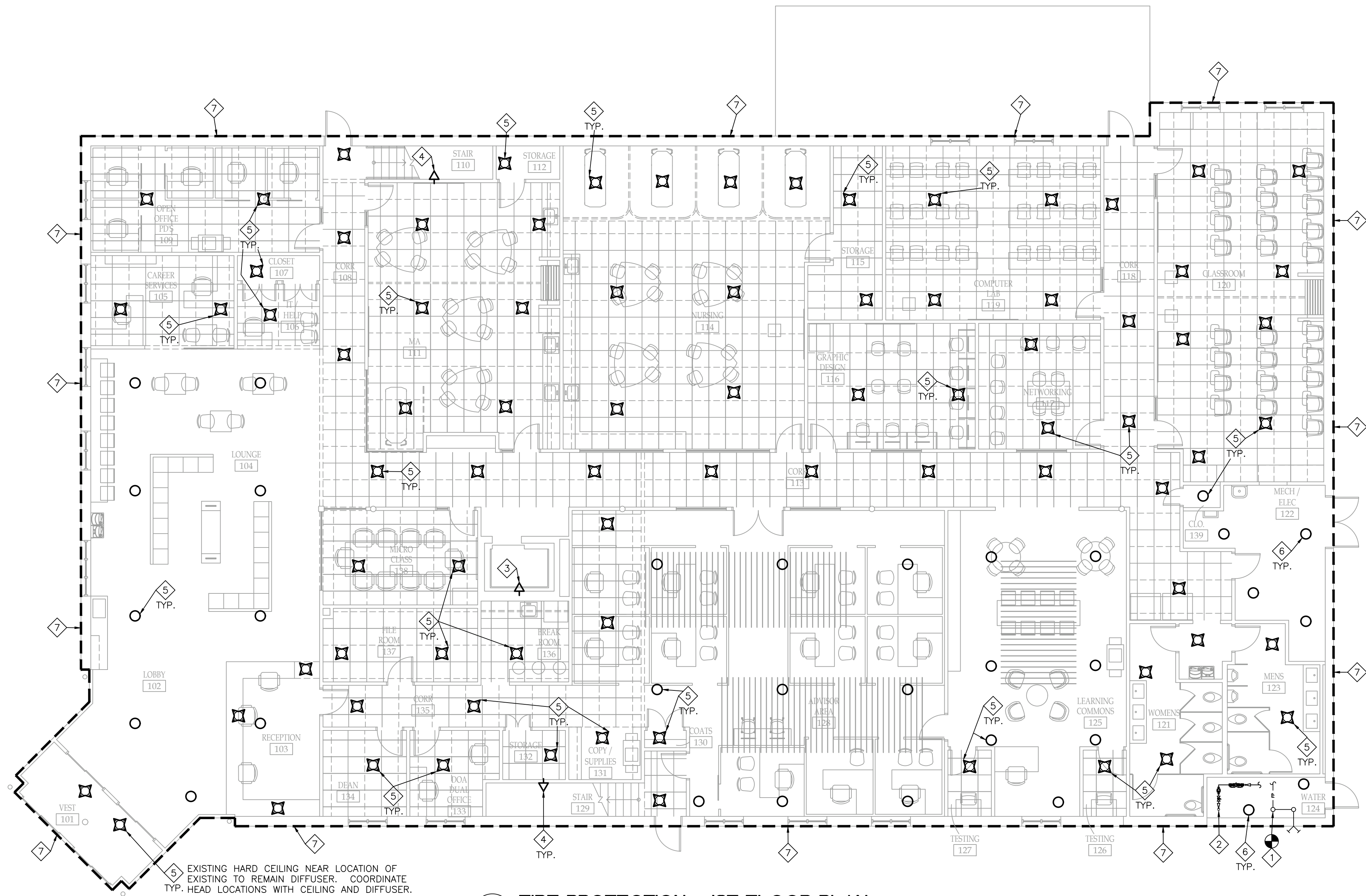
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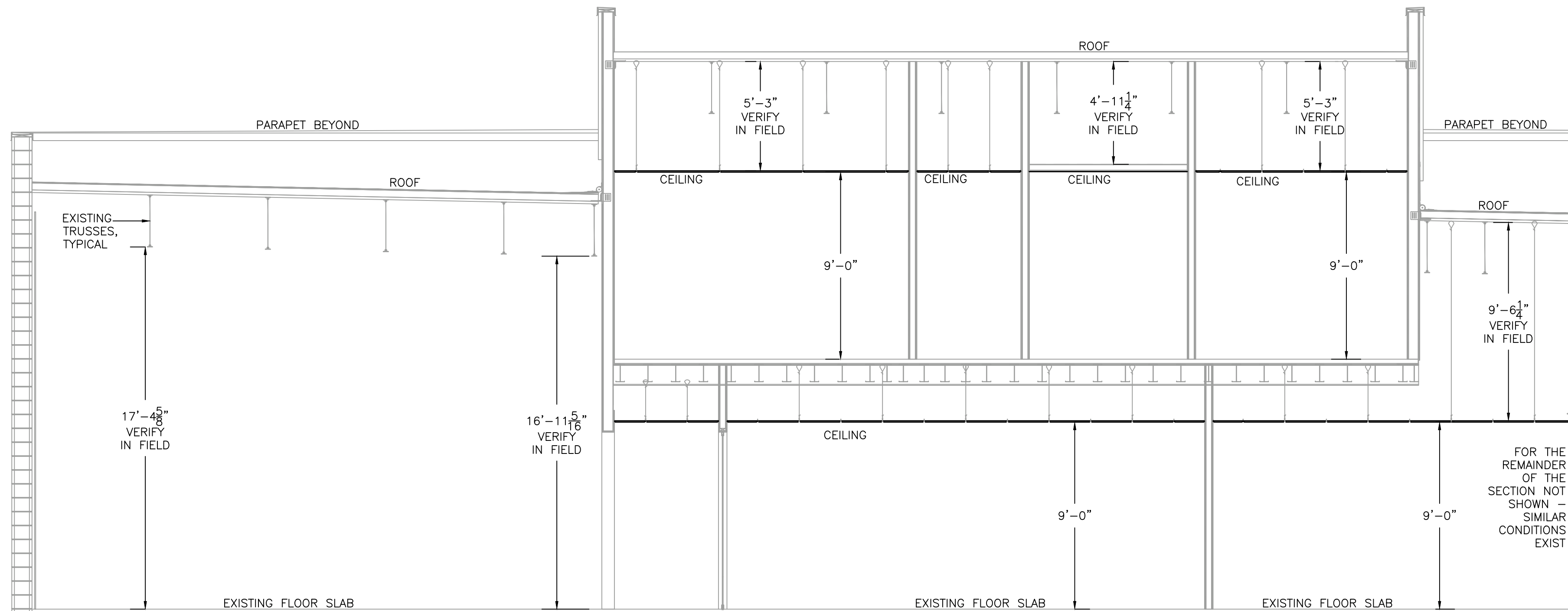
DATE:  
**04-08-19**

DRAWING #:  
**FP-1**

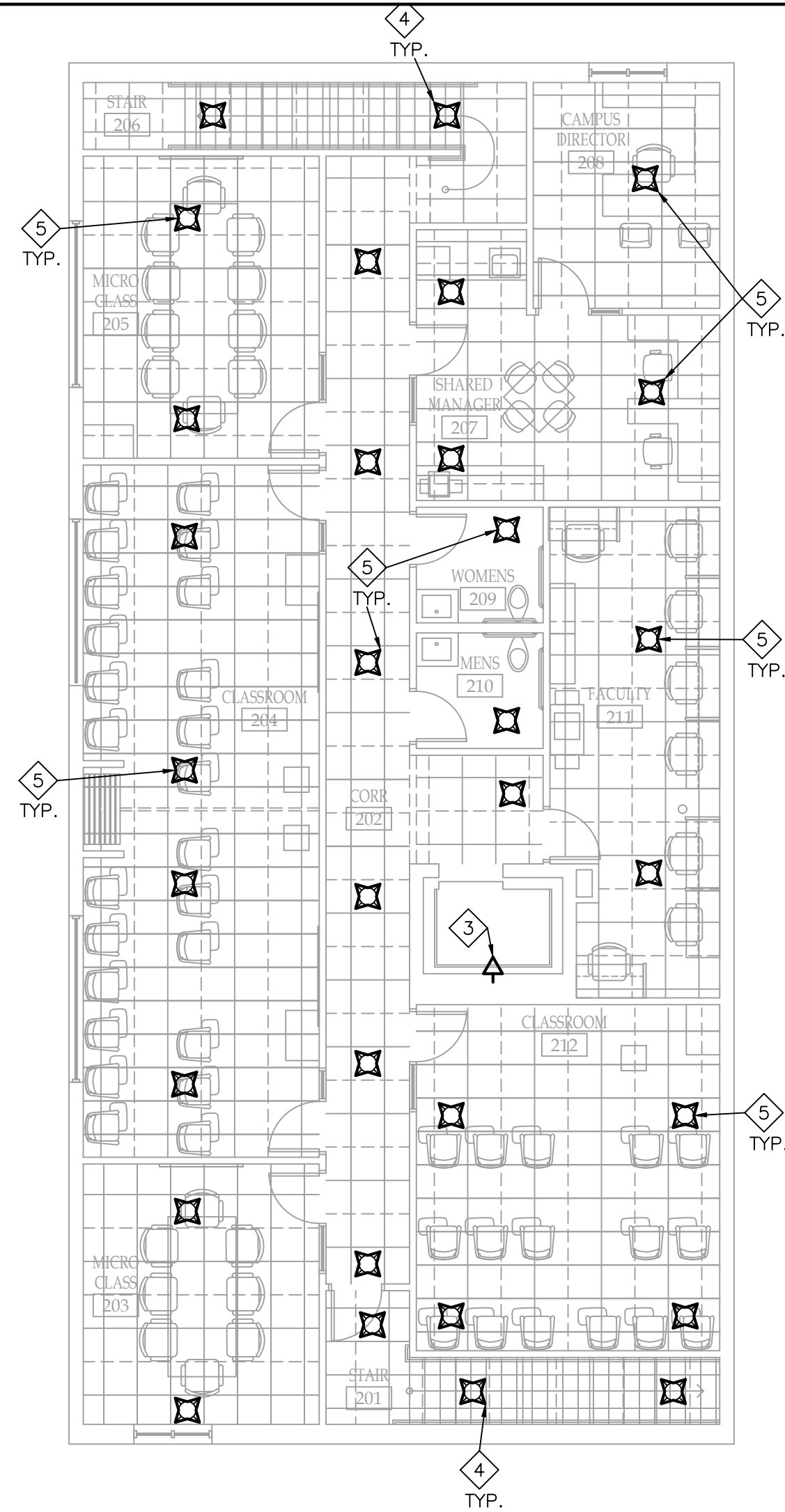




1 FIRE PROTECTION - 1ST FLOOR PLAN  
FP-2 SCALE: 1/8" = 1'-0"



3 PARTIAL BUILDING SECTION DETAIL  
FP-2 SCALE: NONE



2 FIRE PROTECTION - 2ND FLOOR PLAN  
FP-2 SCALE: 1/8" = 1'-0"

GENERAL FIRE PROTECTION DRAWING NOTES:

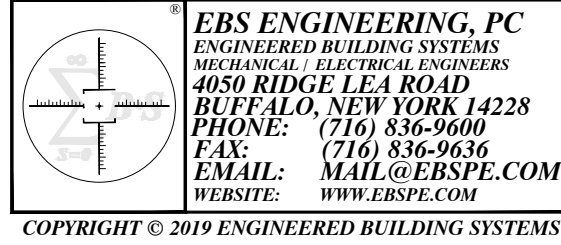
1. CONTRACTOR TO FOLLOW OCCUPANCY HAZARDS REFERRED TO IN DRAWINGS NOTES. IF NO HAZARD OR NOTE IS GIVEN FOR A SPACE, THE CONTRACTOR IS TO FOLLOW NFPA 13.
2. WHERE UPRIGHT SPRINKLER HEADS ARE SHOWN, SPRINKLER PIPING IS TO RUN EXPOSED TO EACH HEAD.
3. COORDINATE ALL PIPING WITH STRUCTURE AND ALL OTHER WORK. COORDINATE WORK WITH CEILING TYPES SHOWN ON ARCHITECTURAL DRAWINGS.
4. CONTRACTOR TO COORDINATE WITH CEILING, MECHANICAL, PLUMBING, AND ELECTRICAL CONTRACTORS IN REGARDS TO RUNNING SPRINKLER PIPING AND HEAD LOCATIONS BEFORE BEGINNING WORK. BUILDING CONSTRUCTION REQUIRES SPRINKLERS IN CONCEALED SPACES (SEE SPECIFICATIONS) - HEADS INSIDE SAID SPACES WILL NOT BE SHOWN ON DRAWINGS FOR CLARITY'S SAKE.

FIRE PROTECTION DRAWING NOTES:

(THIS IS A MASTER LIST. NOT EVERY NOTE IS USED ON EVERY FIRE PROTECTION DRAWING.)

1. EXISTING FIRE PROTECTION SERVICE IS 2 1/2" AND SHALL BE UPSIZED TO 4" DUE TO CHANGE IN OCCUPANCY AND ADDITION OF SQUARE FOOTAGE. SEE DETAILS #1, #2, AND #3 ON DRAWING FP-1. CONTINUE AS REQUIRED PER SPRINKLER LAYOUTS AND NFPA 13 AS NOTED.
2. EXISTING 1" CW SERVICE TO BE UPSIZED TO 2 1/2" CW SERVICE WITH 2" BFP-1 BY PLUMBING CONTRACTOR. SHOWN FOR CLARITY ONLY.
3. PROVIDE SPRINKLER HEADS AT TOP AND BOTTOM OF ELEVATOR SHAFT PER NFPA 13.
4. PROVIDE SPRINKLER HEADS PER NFPA 13 IN STAIRWELLS.
5. PROVIDE WET SPRINKLER SYSTEM INSTALLED AS PER NFPA 13, TYPICAL FOR CORRIDORS, PUBLIC RESTROOMS, JANITOR'S CLOSETS, LECTURE HALLS, AND LOBBIES. THE SPACES ARE LIGHT HAZARD.
6. PROVIDE WET SPRINKLER SYSTEM INSTALLED AS PER NFPA 13, TYPICAL FOR SERVICE ROOMS. THE SPACES ARE ORDINARY HAZARD GROUP 1.
7. PROVIDE WET SPRINKLER SYSTEM INSTALLED AS PER NFPA 13, TYPICAL FOR ABOVE CEILING AREAS AND IN TRUSS SPACE AS NOTED. UPRIGHT HEADS MUST BE UTILIZED - COORDINATE FINAL HEAD LOCATIONS WITH ALL MECHANICAL, ELECTRICAL, PLUMBING, AND STRUCTURAL WORK - AS THESE ITEMS ARE CONSIDERED OBSTRUCTIONS IN AREAS WITH NO CEILINGS. SEE DETAIL #3 ON DRAWING FP-2, GENERAL DRAWING NOTE #4, AND SPECIFICATIONS. THE SPACES ARE LIGHT HAZARD.

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FIRST & SECOND  
FLOOR PLANS



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DRAWING #:  
FP-2