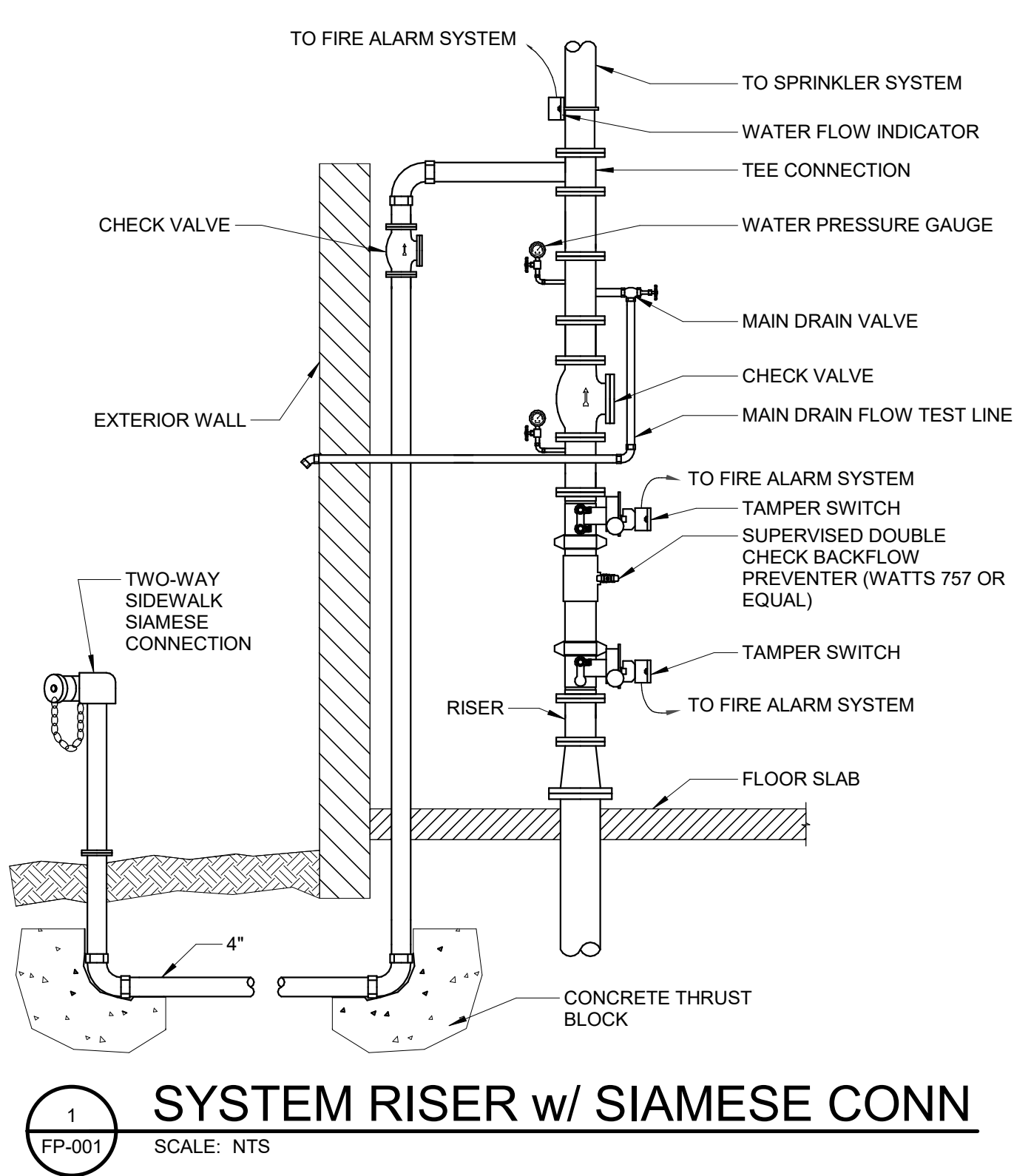


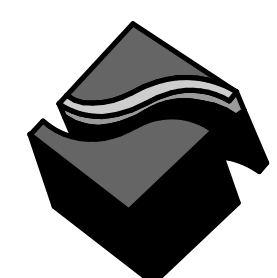
FAC 61G15-32 FIRE PROTECTION CRITERIA
61G15-32.003
(1) OVERALL DESCRIPTION THE NEW CONSTRUCTION IS A 2-STORY FUTURE OFFICE BUILDING OF APPROXIMATELY 28,000 SQUARE FEET WITH A NEW WET PIPE FIRE SPRINKLER SYSTEM. DESIGNED PER NFPA 13, 2016 EDITION. A NEW FIRE MAIN WILL TAP INTO AN EXISTING 8 INCH MAIN. THE FIRE LINE SHALL RUN UNDERGROUND TO THE FIRE RISER. THE BUILDING IS LOCATED IN JACKSONVILLE, FL.
(2) ACCEPTANCE TESTING THE FIRE SPRINKLER ACCEPTANCE TESTING SHALL BE PROVIDED PER NFPA 13, 2016 EDITION.
(3) OCCUPANCY CLASSIFICATION THE BUILDING IS A 2-STORY MIXED USE BUILDING AND IS NEW CONSTRUCTION. ALL AREAS ARE WARM DARK SHELLS AND THE BUILDING SHALL HAVE AN ORDINARY GROUP 1 HAZARD CLASSIFICATION.
(4) PREPARATION OF DOCUMENTS THE SPRINKLER SYSTEM FOR THE BUILDING WILL BE A WET PIPE SYSTEM, DESIGNED PER NFPA 13, 2016 EDITION, FOR LIGHT HAZARD AND ORDINARY HAZARD GROUP 1. THE SYSTEM WILL INCLUDE USING STEEL, SCHEDULE 40 PIPING IN THE SPACE TO UPRIGHT HEADS LOCATED IN THE BUILDING. ANY EXPOSED PIPING WILL BE STEEL, SCHEDULE 40. SPRINKLERS WILL BE 'QUICK RESPONSE' TYPE.
(5) STRUCTURAL SUPPORT STRUCTURAL SUPPORT AND STRUCTURAL OPENINGS FOR THE FIRE PROTECTION SYSTEM INCLUDING LIVE AND DEAD LOADS HAVE BEEN COORDINATED WITH THE STRUCTURAL ENGINEER. STEEL SLEEVES WILL BE SET PRIOR TO CONCRETE PLACEMENT TO PROVIDE FOR PENETRATIONS OF FIRE PROTECTION PIPING THROUGH THE FLOORS OR ROOF STRUCTURE. CORE DRILLING WILL BE ALLOWED FOR CMU WALL PENETRATIONS FOR FIRE PROTECTION PIPING AS MAY BE REQUIRED. ALL PENETRATIONS WILL BE PROPERLY FIRE-CAULKED, AS REQUIRED.
61G15-32.004
2(a) POINT OF SERVICE POINT OF SERVICE IS A 8" FIRE MAIN LOCATED APPROXIMATELY 25 FT. FROM THE PROPOSED SPRINKLER RISER. A 6" PRIVATE FIRE LINE SHALL BE EXTENDED TO SERVE THE NEW HYDRANT AND SHALL BE EXTENDED TO SERVE THE SPRINKLER SYSTEM FOR THE BUILDING.
2(b) GOVERNING STANDARDS SYSTEM DESIGN AND INSTALLATION SHALL COMPLY WITH 2016 EDITION OF NFPA 13 AND THE 2016 EDITION OF NFPA 25 AS WELL AS THE 2020 FLORIDA BUILDING CODE AND THE 7TH EDITION FLORIDA FIRE PREVENTION CODE.
2(c) OCCUPANCY CLASSIFICATIONS THIS BUILDING IS A 2-STORY MIXED USE BUILDING AND IS NEW CONSTRUCTION. THE BUILDING SHALL HAVE A LIGHT HAZARD AND AN ORDINARY GROUP 1 HAZARD OCCUPANCY.
2(d) DESIGN APPROACH THE SYSTEM SHALL BE A HYDRAULICALLY CALCULATED FULLY AUTOMATIC, WET SYSTEM INSTALLED THROUGHOUT THE ENTIRE BUILDING. LIGHT HAZARD OCCUPANCY AREAS OF THE BUILDING SUCH AS THE COMMON AREA RESTROOMS AND VESTIBULES SHALL BE DESIGNED FOR 0.10 GPM/SF OVER THE MOST DEMANDING 900 SQUARE FEET USING 155°F (K=5.6) 'QUICK-RESPONSE' HEADS (COVERAGE AREA REDUCTION BASED ON 10 FEET CEILING HEIGHTS PER NFPA 13, FIGURE 11.2.3.2.3.1) WITH A MAXIMUM COVERAGE AREA OF 225 SF PER HEAD AND MAXIMUM HEAD SPACING OF 15 FEET. ORDINARY HAZARD (GROUP 1) OCCUPANCY AREAS OF THE BUILDING SHALL BE DESIGNED FOR 0.15 GPM/SF OVER THE MOST DEMANDING 1500 SQUARE FEET USING 155°F (K=5.6) 'QUICK-RESPONSE' HEADS WITH A MAXIMUM COVERAGE AREA OF 130 SF PER HEAD AND MAXIMUM HEAD SPACING OF 15 FEET.
2(e) WATER SUPPLY CHARACTERISTICS A SINGLE 6" CONNECTION TO THE EXISTING PUBLIC MAIN SHALL BE MADE AS SHOWN IN THE CIVIL DRAWINGS. THIS CONNECTION WILL SUPPLY WATER FOR THE FIRE SUPPRESSION AND DOMESTIC WATER THROUGH SEPARATE BACKFLOW PREVENTERS.
2(f) FLOW TEST INFORMATION STATIC PRESSURE: 71 PSI RESIDUAL PRESSURE: 56 PSI PITOT TUBE AVERAGE PRESSURE: 18 PSIG FLOWRATE AT TEST: 2,148 GPM FLOWRATE AT 20 PSI: 4,159 GPM TEST CONDUCTED AT 11:32 PM ON 01/26/2021 BY CURTIS PERRIN OF JEA FLOW TEST WAS CONDUCTED ON THE HYDRANT AT PABLO PROFESSIONAL CT, 585 FEET NORTH OF SPARTINA CT (373858). PRESSURE WAS MEASURED AT THE HYDRANT AT PABLO PROFESSIONAL CT, 175 FEET NORTH OF SPARTINA CT (373555).
2(g) VALVING AND ALARM REQUIREMENTS INSTALL FLOW SWITCH IN FIRE RISER AND PUT TAMPER SWITCH ON CONTROL VALVE IN RISER WITH LOCAL AUDIBLE ALARM AND CENTRAL STATION MONITORING - ISOLATION VALVES ON BACKFLOW PREVENTER OUTSIDE SHALL BE CHAINED AND LOCKED OPEN.
2(h) MIC RISK EVALUATION THERE IS A MINIMAL RISK OF MIC IN THE WATER SUPPLY FOR THIS LOCATION ACCORDING TO THE JACKSONVILLE FIRE PLAN REVIEW OFFICE AND JEA.
2(i) BACKFLOW PREVENTION DETAILS A 6" DOUBLE CHECK DETECTOR ASSEMBLY BACKFLOW PREVENTER MEETING JEA REQUIREMENTS SHALL BE INSTALLED. MAXIMUM PRESSURE DROP ACROSS BACKFLW PREVENTER TO BE 10 PSI.
2(j) COMPONENT SPECIFICATIONS ALL INSIDE AND UNDERGROUND PIPING, VALVES, SWITCHES, AND OTHER COMPONENTS TO BE UL AND FM LISTED MATERIALS FOR FIRE PROTECTION. ALL UNDERGROUND PIPING SHALL BE INSTALLED BY A STATE (FS635.521) CERTIFIED CONTRACTOR, WHO SHALL BE RESPONSIBLE FOR PIPING OUTSIDE OF THE BUILDING UP TO ONE FOOT ABOVE FINISHED FLOOR INSIDE THE BUILDING.
2(k) FIRE PUMP DETERMINATION BASED ON PRELIMINARY HYDRAULIC ANALYSIS, A FIRE PUMP WILL NOT BE REQUIRED FOR THIS PROJECT.
2(l) FIREWATER STORAGE TANK DETERMINATION THE WATER SUPPLY FOR FIRE SPRINKLER SYSTEM IS SUPPLIED BY THE CITY. IT IS BELIEVED THAT THE SOURCE IS RELIABLE AND CAPABLE OF DELIVERING THE REQUIRED FLOW ON CONTINUOUS BASIS. AS THE RESULT, NO STORAGE TANK IS REQUIRED.
2(m) OWNERS CERTIFICATE IN STORAGE OCCUPANCIES, THE OWNER'S INFORMATION CERTIFICATE IS ATTACHED FROM THE PROPERTY OWNER AS IT CLEARLY DEFINES THE STORAGE CONFIGURATION OF THE SPACE FOR THE CURRENT AND FUTURE USE OF THE PROPERTY, AS REQUIRED BY NFPA 13-4.3

PRELIMINARY HYDRAULIC ANALYSIS WORKSHEET
ORDINARY HAZARD (GROUP 1)
1. FLOW REQUIREMENTS:
A. DENSITY x DESIGN AREA x BALANCING FACTOR DENSITY = 0.15 GPM/SF DESIGN AREA = 1500 SF BALANCING FACTOR = 1.3 (0.15 GPM/SF) x (1500 SF) x (1.3) = 293 GPM
B. OUTSIDE HOSE STREAM DEMAND = 250 GPM
TOTAL FLOW DEMAND = A + B = 293 GPM + 250 GPM = 543 GPM
2. FLOW PRESSURE REQUIREMENTS
A. END SPRINKLER PRESSURE $Q = k\sqrt{P}$ $Q^2 = k^2P$ $P = Q^2 / k^2$ $P = (Q/k)^2$ Q = DESIGN DENSITY x COVERAGE AREA PER SPRINKLER Q = 0.15 GPM/SF x 130 SF = 19.5 GPM k = 5.6 $P = (19.5/5.6)^2 = 12.1$ PSI
B. ELEVATION LOSS 23 x 0.433 23 x 0.433 = 9.96 PSI
C. OUTSIDE FRICTION LOSS (INCLUDING DDCV BACKFLOW PREVENTOR) = 10 PSI
D. INSIDE FRICTION LOSS = 20 PSI
TOTAL PRESSURE = A + B + C + D = 12.1 + 9.96 + 10 + 20 = 52.1 PSI





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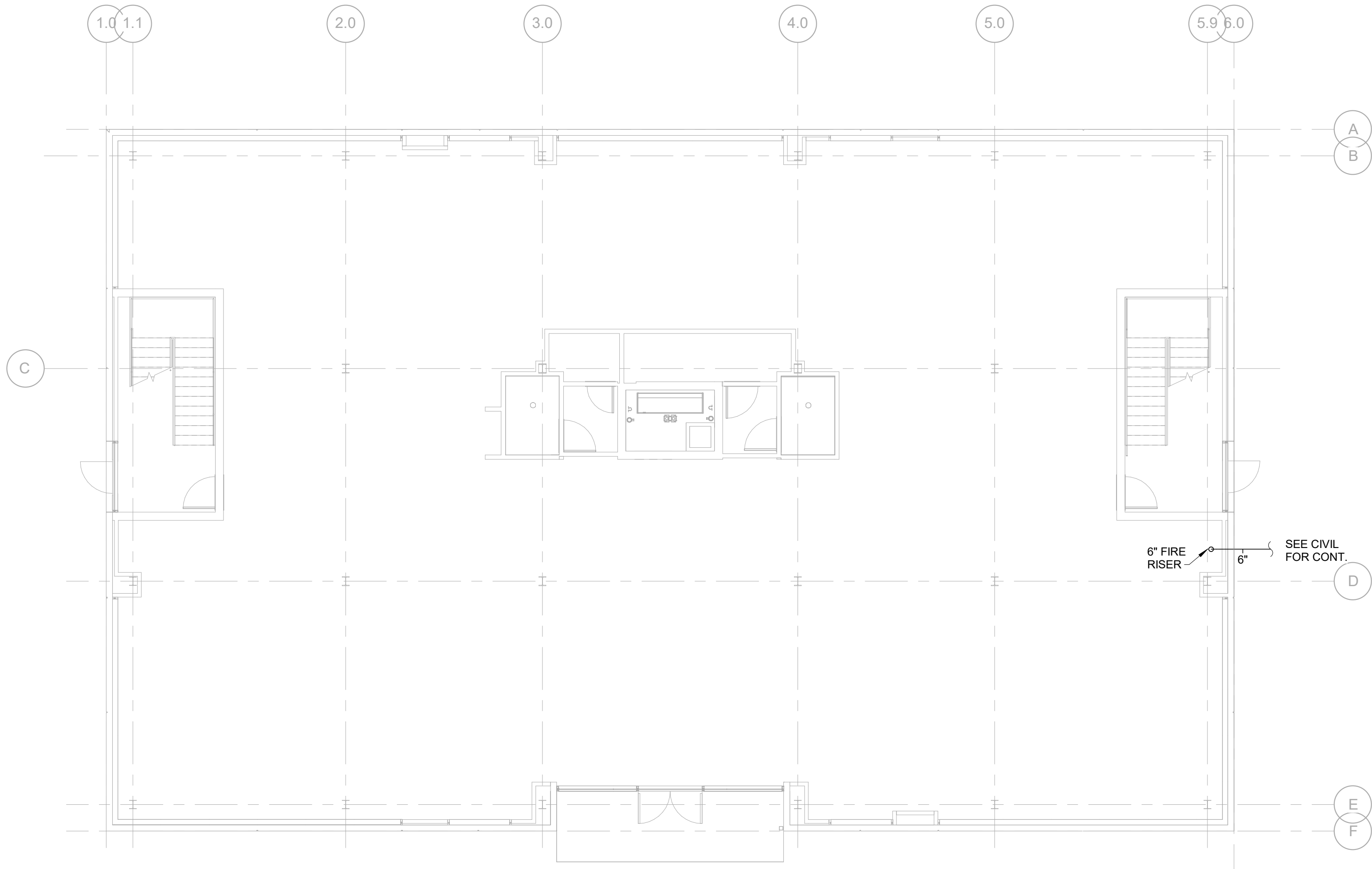
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SCALE:
AS INDICATED

**FIRE
PROTECTION
CRITERIA**

FP-001



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FP-101

FIRE PROTECTION FLOOR PLAN

SCALE: 1/8" = 1'-0"

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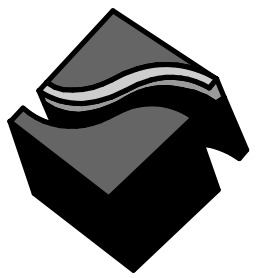
FIRE
PRITECTION
FLOOR PLAN

FP-101

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