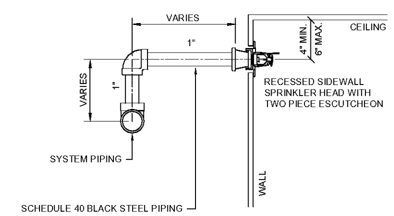
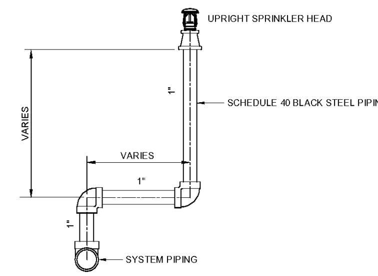
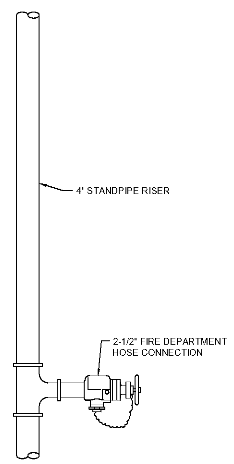


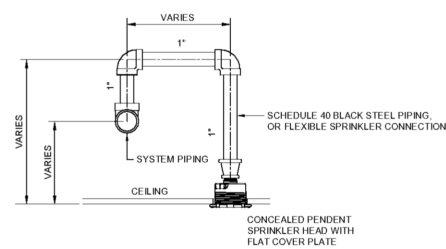
6 SIDEWALL SPRINKLER HEAD DETAIL
FP.001 NOT TO SCALE



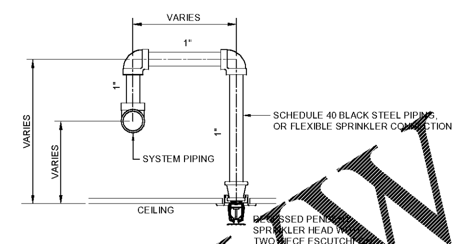
7 UPRIGHT SPRINKLER HEAD DETAIL
FP.001 NOT TO SCALE



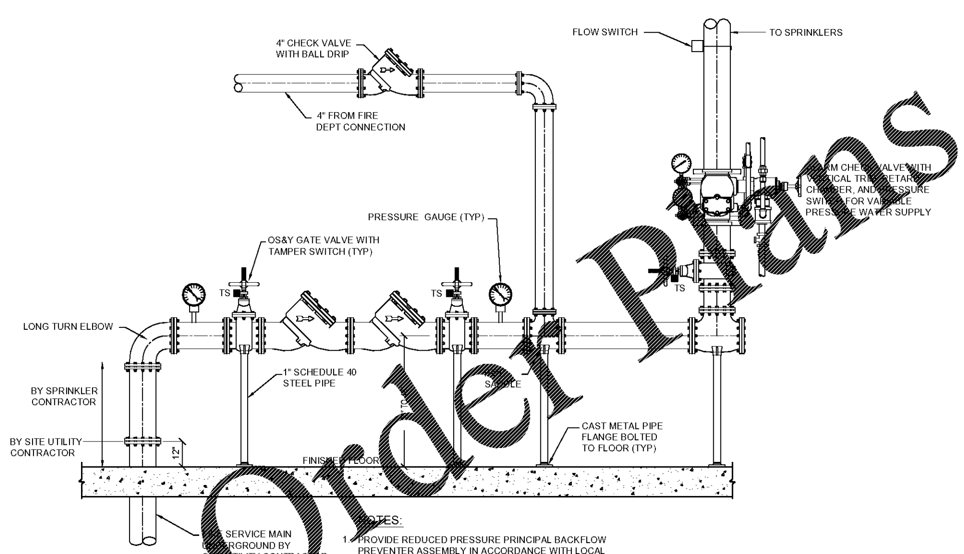
3 STANDPIPE DETAIL
FP.001 NOT TO SCALE



4 CONCEALED PENDANT SPRINKLER HEAD DETAIL
FP.001 NOT TO SCALE



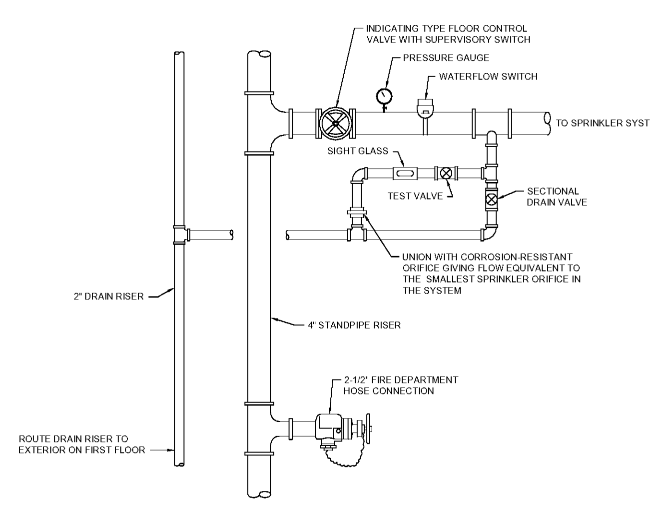
5 RECESSED PENDANT SPRINKLER HEAD DETAIL
FP.001 NOT TO SCALE



NOTES:

1. PROVIDE REDUCED PRESSURE PRINCIPAL BACKFLOW PREVENTER ASSEMBLY IN ACCORDANCE WITH LOCAL AUTHORITY'S REQUIREMENTS.
2. COORDINATE LOCATION OF FIRE DEPARTMENT CONNECTION AND ALARM BELL ON BUILDING WITH FIRE MARSHALL AND ARCHITECT.
3. ALL PIPING HYDRAULICALLY SIZED BY CONTRACTOR.
4. MAINTAIN MINIMUM 1'-0" CLEARANCE BETWEEN WALL AND ITEMS SHOWN IN THIS DETAIL.
5. ALL DRAINS FROM SPRINKLER ALARM VALVE SHALL BE RUN TO EXTERIOR.

1 FIRE SERVICE ENTRANCE DETAIL
FP.001 NOT TO SCALE



2 STANDPIPE DETAIL WITH FLOOR CONTROL ASSEMBLY
FP.001 NOT TO SCALE

FIRE PROTECTION GENERAL NOTES

GENERAL REQUIREMENTS:

1. THE DESIGN, MATERIALS, AND INSTALLATION SHALL MEET OR EXCEED ALL REQUIREMENTS OF THE APPLICABLE NFPA STANDARDS, STATE FIRE MARSHALL, LOCAL FIRE MARSHALL HAVING JURISDICTION, OWNER'S INSURANCE CARRIER, AND GOVERNING CITY AND COUNTY CODES.
2. PROVIDE A COMPLETE AUTOMATIC WET PIPE SPRINKLER SYSTEM IN ALL CONDITIONED AREAS OF THE BUILDING. PROVIDE A COMPLETE AUTOMATIC DRY PIPE SPRINKLER SYSTEM WHERE REQUIRED IN EXTERIOR COVERED AREAS. PROVIDE STANDPIPES IN ALL REQUIRED STAIRWAYS.
3. ALL FIRE PROTECTION SYSTEMS SHALL BE DESIGNED, HYDRAULICALLY SIZED, AND INSTALLED IN FULL COMPLIANCE WITH THE REQUIREMENTS OF NFPA 13, NFPA 14, OWNER'S INSURANCE UNDERWRITER, LOCAL AUTHORITIES, AND OTHER APPLICABLE CODES AND STANDARDS.
4. WARRANT THE SYSTEM LABOR, MATERIALS, AND EQUIPMENT FOR ONE YEAR AFTER COMPLETION AND ACCEPTANCE. REPLACE OR REPAIR ALL DEFECTIVE WORKMANSHIP, EQUIPMENT, AND MATERIALS AT NO ADDITIONAL COST TO THE OWNER.
5. THE INFORMATION GIVEN HEREIN AND ON THE DRAWINGS IS AS EXACT AS COULD BE SECURED FOR BIDDING PURPOSES AND ITS ACCURACY IS NOT GUARANTEED.
6. INCLUDE ALL NECESSARY PERMITS, FEES, AND CHARGES IN THE BID.

DESIGN:

1. THE SPRINKLER SYSTEM SHALL BE DESIGNED AND HYDRAULICALLY CALCULATED UTILIZING THE INFORMATION INCLUDED HEREIN AND MEET ALL NFPA STANDARDS WHETHER OR NOT INDICATED WITHIN THESE DOCUMENTS.
2. THE DESIGN, INCLUDING HYDRAULIC CALCULATIONS, MATERIALS, AND LAYOUT, SHALL BE BY A SPECIALTY DESIGNER WHO IS A NICET LEVEL 3 OR HIGHER, AS REQUIRED BY STATE LAW, AND LICENSED FOR FIRE PROTECTION DESIGN.
3. PRIOR TO PERFORMING HYDRAULIC CALCULATIONS, OBTAIN APPROVED FIRE FLOW DATA (FLOW AND PRESSURE) FROM THE NEAREST WATER SUPPLY.
4. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING SHOP DRAWINGS INCLUDING, BUT NOT LIMITED TO, ALL ITEMS WHICH APPLY AS OUTLINED IN NFPA 13, CHAPTER 23, "PLANS AND CALCULATIONS".
5. PROVIDE ALL NECESSARY OFFSETS, RISES, OR DROPS IN THE PIPING AND AUXILIARY DRAINS AS REQUIRED BY BUILDING CODES WHETHER OR NOT SHOWN ON THE PLANS.
6. THE CONTRACTOR IS RESPONSIBLE FOR INVESTIGATING IF SEISMIC PROTECTION IS REQUIRED FOR THE PROJECT AND SHALL DESIGN, PROVIDE, AND INSTALL SEISMIC RESTRAINTS IN ACCORDANCE WITH NFPA 13 AND BUILDING CODE REQUIREMENTS.
7. SPRINKLER SYSTEM DESIGN CRITERIA:
   KITCHEN, LAUNDRY, MECHANICAL, ELECTRICAL, AND STORAGE AREAS: ORDINARY HAZARD, GROUP 1.
   DENSITY: [illegible] GPM OVER AN AREA OF OPERATION OF 1500 SF.
   ALL OTHER AREAS: LIGHT HAZARD.
   DENSITY: .10 GPM OVER AN AREA OF OPERATION OF 1500 SF.

PIPING AND COMPONENTS:

1. VALVES, SPRINKLER HEADS, FLOW SWITCHES, AND ALL OTHER COMPONENTS USED IN THE SPRINKLER SYSTEM SHALL BE UL LISTED AND SHALL CONFORM TO ALL REQUIREMENTS AS LISTED IN THE LATEST EDITION OF THE NFPA CODES.
2. ABOVE GROUND PIPE AND FITTINGS, WET PIPE SYSTEMS:
   MINIMUM SIZE IS 1". FOR 1" TO 2" PIPING: SCHEDULE 40 BLACK STEEL, ASTM A 53 / A 53M, WITH THREADED, WELDED, OR GROOVED-END FITTINGS AND JOINTS. FOR 2-1/2" AND LARGER PIPING: SCHEDULE 40 BLACK STEEL, ASTM A 53 / A 53M, WITH GROOVED-END FITTINGS AND JOINTS; OR THINWALL BLACK STEEL, ASTM A 135 OR ASTM A 795 / A 795M, WITH WALL THICKNESS EQUAL TO OR GREATER THAN SCHEDULE 10, WITH GROOVED-END FITTINGS AND JOINTS. SCHEDULE 5 PIPING WILL NOT BE PERMITTED.
3. IF PERMITTED BY LOCAL CODES, ASTM F 442 / F 442M AND UL 1821 CPVC PIPE, AND UL LISTED FITTINGS MAY BE USED. PIPE AND FITTINGS MUST INCLUDE "LISTED", AND "CPVC SPRINKLER" MARKINGS.
4. ABOVE GROUND PIPE AND FITTINGS, DRY PIPE SYSTEMS:
   MINIMUM SIZE IS 1". FOR 1" TO 2" PIPING: SCHEDULE 40 GALVANIZED STEEL, ASTM A 53 / A 53M, WITH THREADED OR GROOVED-END FITTINGS AND JOINTS. FOR 2-1/2" AND LARGER PIPING: SCHEDULE 40 GALVANIZED STEEL, ASTM A 53 / A 53M, WITH GROOVED-END FITTINGS AND JOINTS.
5. PIPE HANGERS:
   SHALL CONFORM TO NFPA AND UL STANDARDS FOR SPACING, NUMBER, SIZE, AND TYPE. PIPE TO BE GENERALLY SUPPORTED BY CLAMPS AND RODS SECURED TO OVERHEAD CONSTRUCTION.
6. VALVES:
   O.S.&Y. GATE VALVES, CAST IRON BODY, WITH BRONZE TRIM, SOLID WEDGE; OR BUTTERFLY VALVES, DUCTILE IRON BODY, WITH STAINLESS STEEL STEM, DUCTILE IRON DISC. VALVES SHALL BE UL LISTED AND APPROVED FOR FIRE PROTECTION SERVICE.
7. ESCUTCHEONS:
   PROVIDE CHROME PLATED BRASS ESCUTCHEONS WHERE EXPOSED PIPES PASS THROUGH WALLS, FLOORS, OR CEILINGS.
8. PROVIDE FIRE DEPARTMENT CONNECTION IN COMPLIANCE WITH LOCAL FIRE DEPARTMENT REQUIREMENTS, IF NOT PROVIDED BY SITE UTILITY CONTRACTOR.

SPRINKLER HEADS:

1. SPRINKLER HEAD LOCATIONS ARE SHOWN AS A BASIS OF DESIGN ONLY. FINAL SPRINKLER HEAD LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR BASED ON HYDRAULIC CALCULATIONS AND NFPA 13 REQUIREMENTS.
2. SPRINKLERS IN PUBLIC AREAS WITH CEILINGS AND IN GUEST ROOMS SHALL BE BRASS CONCEALED PENDENT TYPE, WITH COVER PLATE, COLOR SELECTED BY ARCHITECT.
3. SPRINKLERS IN OFFICES AND BACK-OF-HOUSE AREAS WITH CEILINGS SHALL BE RECESSED PENDENT TYPE, WITH TWO-PIECE ESCUTCHEON, CHROME PLATED OR WHITE AS SPECIFIED BY ARCHITECT.
4. SPRINKLERS IN AREAS WITHOUT CEILINGS SHALL BE BRASS UPRIGHT TYPE OR SIDEWALL TYPE.
5. INSTALL WIRE CAGE SPRINKLER GUARDS ON ALL EXPOSED SPRINKLERS IN STORAGE AREAS, LAUNDRY, UTILITY/SERVICE ROOMS, AND IN MECHANICAL AND ELECTRICAL ROOMS.
6. PROVIDE SIDEWALL SPRINKLER HEADS AT THE BOTTOM OF ALL HYDRAULIC ELEVATOR SHAFTS NOT MORE THAN 2'-0" ABOVE SHAFT FLOOR.
7. PROVIDE UPRIGHT OR SIDEWALL SPRINKLER HEADS AT THE TOP OF ALL ELEVATOR SHAFTS, EXCEPT SHAFTS FOR PASSENGER ELEVATORS THAT ARE NONCOMBUSTIBLE WITH CAR ENCLOSURES THAT MEET THE REQUIREMENTS OF ASME A17.1.

APPROVALS:

1. THE DESIGN SHALL BE SUBMITTED TO AND APPROVED BY THE AUTHORITY HAVING JURISDICTION, AND THE OWNER'S INSURANCE COMPANY, PRIOR TO FABRICATION OR INSTALLATION.
2. BEFORE STARTING INSTALLATION OF THE WORK, THE CONTRACTOR SHALL SUBMIT EQUIPMENT DATA, PIPING DRAWINGS, AND HYDRAULIC CALCULATIONS OF THE PROPOSED LAYOUT TO THE ARCHITECT FOR REVIEW. NUMBER OF COPIES AS SPECIFIED BY THE ARCHITECT.

INSTALLATION:

1. SPRINKLER SYSTEMS SHALL BE INSTALLED BY PERSONNEL WHO HAVE FACILITIES AND EXPERIENCE IN SUCH WORK, AND WHO ARE REGULARLY EMPLOYED TO DO SUCH WORK.
2. COORDINATE THE LOCATION OF ALL INSPECTOR'S TEST VALVES AND ROUTE TO EXTERIOR. PROVIDE AND INSTALL ACCESS PANELS AS REQUIRED.
3. IN ROOMS WITH 2'x2' LAY-IN TILE CEILINGS, SPRINKLER HEADS SHALL BE LOCATED IN THE CENTER OF CEILING TILES (BOTH DIRECTIONS). IN ROOMS WITH 2'x4' LAY-IN TILE CEILINGS, SPRINKLER HEADS SHALL BE LOCATED IN THE CENTER OF CEILING TILES (NARROW DIRECTION), AND IN THE CENTER OR 1'-0" OFF OF CENTER OF CEILING TILES (WIDE DIRECTION). IN ROOMS WITH GYPSUM BOARD CEILINGS, SPRINKLER HEADS SHALL BE LOCATED SYMMETRICALLY WITH RESPECT TO OTHER ELEMENTS IN THE CEILING (LIGHTS, GRILLES, ETC.).
4. PROVIDE ALL REQUIRED DRAINS, TEST STATIONS, VALVES, TAMPER SWITCHES, FLOW SWITCHES, ETC. FOR A COMPLETE SPRINKLER SYSTEM. PROVIDE ALL REQUIRED DEVICES AND COMPONENTS FOR INTER-LOCK WIRING WITH THE BUILDING FIRE ALARM.
5. SPRINKLER PIPING SHALL BE CONCEALED ABOVE CEILINGS WHERE POSSIBLE. COORDINATE ROUTING OF PIPING WITH DUCTWORK, PIPING, CONDUIT, ETC. INSTALLED BY OTHER TRADES. DO NOT INSTALL PIPING BENEATH AIR HANDLING BOXES OR WITHIN CLEARANCES REQUIRED FOR MAINTENANCE. INSTALL PIPING AT LEAST 4" ABOVE LIGHT FIXTURES TO ALLOW FOR FUTURE REMOVAL OF FIXTURES.
6. REFER TO THE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL SMOKE AND FIRE WALLS. PIPING WHICH PENETRATES SMOKE OR FIRE WALLS SHALL BE SEALED IN AN APPROVED MANNER. PROVIDE SLEEVES OR OTHER APPROVED MEANS AND SEAL OPENINGS IN WALLS, FLOORS, AND CEILINGS IN SUCH A MANNER AS TO MAINTAIN THE SMOKE AND FIRE RATING.
7. THE CONTRACTOR SHALL EXAMINE THE JOB CONDITIONS AND VERIFY ALL MEASUREMENTS, DISTANCES, ELEVATIONS, CLEARANCES, PIPE SIZES, ETC. BEFORE STARTING THE WORK. THE LOCATION OF THE SPRINKLER HEADS SHALL BE COORDINATED WITH OTHER ELEMENTS IN THE CEILING INCLUDING, BUT NOT LIMITED TO, ARCHITECTURAL FEATURES, ELECTRICAL LIGHTS AND DEVICES, AND HVAC GRILLES.

TESTING:

1. ABOVE GROUND PIPING:
   ALL PIPING AND ATTACHED APPURTENANCES SHALL BE HYDROSTATICALLY TESTED AT 200 PSI AND SHALL MAINTAIN THAT PRESSURE WITHOUT LOSS FOR TWO HOURS.

FIRE PROTECTION LEGEND

PIPING	
—F—	FIRE MAIN
	PIPE CONTINUES
OR	PIPE DOWN
OR	PIPE UP
SYMBOLS	
	ALARM BELL
	BACKFLOW PREVENTER ASSEMBLY
	FIRE DEPARTMENT HOSE CONNECTION
	FIRE DEPARTMENT INLET CONNECTION (FDC)
	FIRE SERVICE ENTRANCE RISER
	FLOW SWITCH
	OS&Y GATE VALVE W/TAMPER SWITCH
	PRESSURE GAUGE
SPRINKLER HEADS	
●	DRY SPRINKLER HEAD
	PENDENT SPRINKLER HEAD
	SIDEWALL SPRINKLER HEAD
○	UPRIGHT SPRINKLER HEAD

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STRAND HOSPITALITY SERVICES
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KEY PLAN

Revisions		
#	Date	Description

Project Number:	18021
Issued for:	CONSTRUCTION
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DRAWING TITLE
FIRE PROTECTION NOTES AND DETAILS

SHEET NUMBER
FP.001

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