

GENERAL NOTES:

THIS PROJECT WILL BE A DESIGN BUILD FIRE SPRINKLER INSTALLATION IN A RENOVATED EXISTING BUILDING BY A LICENSED FIRE SPRINKLER CONTRACTOR AS THE ENGINEER OF RECORD (EOR). THE DESIGN-BUILD FIRE PROTECTION CONTRACTOR SHALL PROVIDE AND INSTALL A COMPLETE AND OPERATIONAL SYSTEM IN COMPLIANCE WITH THE APPLICABLE NFPA STANDARDS, THE 2022 OREGON FIRE CODE, THE 2021 OREGON RESIDENTIAL SPECIALTY CODE (ORSC), THE 2022 OREGON STRUCTURAL SPECIALTY CODE, LOCAL COUNTY AND MUNICIPAL CODES, INCLUDING ALL REFERENCED STANDARDS AND GUIDELINES, LOCAL AND STATE AUTHORITIES HAVING JURISDICTION AT NO ADDITIONAL COST.

THE WORK SHALL CONFORM TO ALL STATE AND LOCAL CODES, AND ALL REFERENCED STANDARDS WITHIN.

WORK OF THIS SECTION SHALL BE GOVERNED BY THE CONTRACT DOCUMENTS. PROVIDE MATERIALS, LABOR, EQUIPMENT AND SERVICES NECESSARY TO FURNISH, DELIVER AND INSTALL ALL WORK OF THIS SECTION AS SHOWN ON THE DRAWINGS, AS SPECIFIED HEREIN, AND/OR AS REQUIRED BY JOB CONDITIONS.

DRAWINGS ARE DIAGRAMMATIC AND INDICATE A GENERAL ARRANGEMENT OF WORK. GENERAL DESIGN CONCEPTS INDICATED MUST BE FOLLOWED OR BETTERED. THE BID SHALL INCLUDE OFFSETS, ADDITIONAL PIPING, VALVES AND FIRE PROTECTION EQUIPMENT AND COMPONENTS AS REQUIRED TO MEET CONSTRUCTION CONDITIONS FOR PROPER OPERATION. DO NOT SCALE DRAWINGS. VISIT THE SITE TO SURVEY EXISTING CONDITIONS, AND CONSULT ARCHITECTURAL AND STRUTURAL DRAWINGS FOR SPACE CONDITIONS AND ADDITIONAL FIXTURES. DEVELOP AND SUBMIT COORDINATION DRAWINGS.

THE WORK UNDER THIS SECTION SHALL INCLUDE ALL INCIDENTALS, LABOR, MATERIAL, EQUIPMENT, APPLIANCES, SERVICES, HOISTING, SCAFFOLDING, SUPPORTS, TOOLS, CONSUMABLE ITEMS, FEES, LICENSES, AND ADMINISTRATIVE TASKS REQUIRED TO COMPLETE AND MAKE OPERABLE THE FIRE PROTECTION WORK AS INTENDED.

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL EQUIPMENT AS NECESSARY TO PROVIDE A COMPLETE INSTALLATION INCLUDING COORDINATION, SYSTEM CHECK OUT AND START UP ON EACH ITEM AND SYSTEM.

THIS CONTRACTOR SHALL INFORM HIMSELF FROM THE GENERAL CONSTRUCTION SPECIFICATIONS AND PLANS, OF THE EXACT DIMENSION OF FINISHED WORK AND OF THE HEIGHT OF FINISHED CEILINGS IN ALL ROOMS WHERE EQUIPMENT OR PIPES ARE TO BE PLACED AND ARRANGE HIS WORK IN ACCORDANCE WITH THE SCHEDULE OF INTERIOR FINISHES, AS INDICATED ON THE ARCHITECTURAL DRAWINGS.

MATERIAL QUALIFICATIONS: SHALL CONFORM TO ALL LOCAL, STATE, AND NATIONAL/FEDERAL CODES AND REGULATIONS WHICH MAY APPLY AND NOTHING IN THESE SPECIFICATIONS SHALL BE INTERPRETED AS AN INFRINGEMENT OF SUCH CODES OR REGULATIONS.

CONCEALED, INTERIOR INSTALLATIONS: CONCEALED FROM VIEW AND PROTECTED FROM PHYSICAL CONTACT BY BUILDING OCCUPANTS. EXAMPLES INCLUDE ABOVE CEILINGS AND IN CHASES.

COORDINATION

PREPARE AND SUBMIT COORDINATION DRAWINGS. COORDINATE PRELIMINARY HEAD LOCATIONS AND EXPOSED PIPE ROUTING WITH ARCHITECT, AND OBTAIN ARCHITECT APPROVAL PRIOR TO SUBMITTING PERMIT DRAWINGS TO AHJ.

CLOSELY SCHEDULE THE WORK SO THAT WORK WILL BE INSTALLED AT THE PROPER TIME WITHOUT DELAYING THE COMPLETION OF THE ENTIRE PROJECT.

PREPARE COMPLETE SET OF DRAWINGS SHOWING ALL NECESSARY SLAB OPENINGS AND STRUCTURAL SUPPORTS THAT REQUIRE STRUCTURAL FRAMING. DRAWINGS SHALL CLEARLY INDICATE SIZES AND LOCATION RELATIVE TO ESTABLISHED COLUMN LINES. DRAWINGS SHALL BE COMPLETED IN SUFFICIENT TIME TO ALLOW FOR STRUCTURAL STEEL FABRICATION SO AS NOT TO DELAY PROJECT SCHEDULE.

COORDINATE INSTALLATION OF REQUIRED SUPPORTING DEVICES WITH SEOR. COORDINATE UNDERGROUND CONNECTIONS WITH CIVIL ENGINEER AND SITE WORK CONTRACTOR. COORDINATE ELECTRICAL CONNECTIONS FOR FIRE PUMP, ALARM DEVICES, ETC. WITH ELECTRICAL AND FIRE ALARM CONTRACTORS.

SHOP DRAWINGS AND SUBMITTALS

SUBMIT FOR REVIEW, WITHIN FIFTEEN (15) DAYS AFTER SIGNING CONTRACTS, THE REQUIRED NUMBER OF COPIES OF A COMPLETE LIST OF MATERIAL PROPOSED FOR USE, INCLUDING SIZES, CAPACITIES, ETC. THIS LIST INCLUDES:

- SPRINKLERS
- PIPING
- FITTINGS
- HANGERS / PIPE STANDS / SEISMIC BRACING MATERIALS / ANCHORS
- PRESSURE GAUGES
- VALVES (CONTROL, CHECK, RISER CHECK, DRY PIPE, DRAIN, TEST, ETC.)
- AIR COMPRESSOR & TANK AND VAPOR PHASE DEPOSITION SYSTEM OR NITROGEN SYSTEM
- ALARM DEVICES

SHOP COORDINATION DRAWINGS SHALL SHOW ALL DETAILS AND INFORMATION REQUIRED BY NFPA 13, INCLUDING ALL EARTHQUAKE BRACING (LONGITUDINAL AND LATERAL). IF UNNECESSARY DEVIATION FROM DRAWINGS ARE MADE BY CONTRACTOR WHICH CAUSE ADDITIONAL COST TO THE OWNER, CONTRACTOR SHALL SUBMIT THE CHANGES TO THE ARCHITECT FOR COMPLIANCE VERIFICATION AND THE ADDITIONAL COST SHALL BE BORNE BY THE CONTRACTOR

FINAL RECORD DRAWINGS SHALL BE SUBMITTED IN ACCORDANCE WITH THE ABOVE PARAGRAPH, SHOWING EXACT DIMENSIONAL LOCATIONS OF ALL UNDERGROUND PIPING AND OF ALL RISERS, MAINS AND CROSS-MAINS.

ON COMPLETION OF THE JOB, FURNISH THE ARCHITECT WITH A COPY OF THE "CONTRACTORS MATERIAL AND TEST CERTIFICATE" (PART A AND/OR B), SIGNED BY THE LOCAL FIRE MARSHALL AND A COPY OF THE TRANSMITTAL LETTER SENDING THE CERTIFICATE TO THE RATING AGENCY

SHOP DRAWINGS

THE CONTRACTOR SHALL SUBMIT ALL FIRE PROTECTION SHOP DRAWINGS IN ACCORDANCE WITH NFPA 13, AND LOCAL - REQUIREMENTS, EQUIPMENT AND CALCULATIONS TO THE LOCAL AHJ - "AUTHORITY HAVING JURISDICTION" (IE: FIRE MARSHAL), OWNERS INSURANCE COMPANY, ARCHITECT AND ENGINEER. APPROVAL TO BE SECURED PRIOR TO INSTALLATION

PROVIDE DIMENSIONAL INSTALLATION PIPING LAYOUT/S COORDINATED WITH ALL TRADES. INCLUDE ALL FIRE PUMP EQUIPMENT, FIRE PROTECTION PIPING, DRAINS, PIPE SIZES, HANGER STYLES AND LOCATIONS, VALVES, ALARM EQUIPMENT, AND ALL OTHER ITEMS FOR A COMPLETE SHOP DRAWING. SUBMITTAL SHOP DRAWINGS SHALL BE CLEAR AND LEGIBLE. ALL SPRINKLER INFORMATION MUST STANDOUT ON THE SHOP DRAWINGS (IE: BOLD PIPING, ETC. OR LIGHTER BACKGROUND).

SUBMIT FIELD TEST REPORTS AND CERTIFICATES: INDICATE AND INTERPRET TEST RESULTS FOR COMPLIANCE WITH PERFORMANCE REQUIREMENTS AND AS DESCRIBED IN NFPA. CONTRACTOR RESPONSIBLE TO DOCUMENT AND SUBMIT "CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR ABOVEGROUND PIPING" AND "CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING."

OVERHEAD PIPE AND FITTINGS  
SCHEDULE 10 AND SCHEDULE 40 BLACK LISTED SPRINKLER PIPE PER PIPE SCHEDULE ON DRAWINGS. ALL NEW PIPE SHALL HAVE AN BACTERIA-RESITANT ANTI-MIC COATING THAT IS COMPATIBLE WITH CPVC.

LOW POINT DRAIN VALVES

PROVIDE VALVES AND/OR PLUGS AS REQUIRED OR INDICATED LOCATIONS FOR COMPLETE DRAINAGE OF SYSTEMS.

PROVIDE AT REQUIRED LOCATIONS PER NFPA 13.

PIPE TO SPILL OVER FLOOR DRAIN, OVER SUMP PIT, OVER MOP SINK, TO DRAIN RISER OR OTHER APPROVED LOCATION.

AT SYSTEM LOW POINTS WHERE DRAIN PIPING DOES NOT EXTEND TO A DRAIN RECEPACLE, PROVIDE A THREADED HOSE AND ADAPTER AT THE VALVE OUTLET.

DRY SYSTEM AIR COMPRESSOR:  
UL LISTED FOR FIRE PROTECTION. TANK MOUNTED. QUIET RUN (DESIGNED TO RUN BELOW 60 dBA)

ELECTRIC ALARM BELL

PROVIDE ELECTRIC ALARM BELL IF ONE IS NOT CURRENTLY INSTALLED AT SITE. BELL TO BE WIRED BY OTHERS.  
10", 120VAC, WITH WEATHERPROOF BACKBOX, UL & FM LISTED/APPROVED. POTTER OR APPROVED EQUAL.

ALL SPRINKLER SYSTEM ALARM AND TROUBLE DEVICES SHALL BE WIRED TO BUILDINGS MAIN FIRE ALARM PANEL. COORDINATE WITH FIRE ALARM CONTRACTOR AND LOCAL FIRE MARSHAL.

VALVE TAGS, SIGNS, CHARTS AND MARKERS

DRAIN, AND TEST CONNECTION VALVES SHALL BE PROVIDED WITH PERMANENTLY MARKED WEATHERPROOF METAL OR RIGID PLASTIC IDENTIFICATION SIGNS IN ACCORDANCE WITH NFPA 13. ALL PIPING SHALL BE MARKED CONTINUOUSLY ALONG ITS LENGTH AND LABELED IN ACCORDANCE WITH NFPA 13.

CHARTS: PROVIDE LAMINATED DIAGRAMMATIC MOUNTED CHARTS SHOWING ESSENTIAL FEATURES OF SYSTEM, VALVES AND CONTROLS NUMBERED AND LETTERED TO CORRESPOND TO DESIGNATION ON METAL TAGS. LIST OF VALVES AND CONTROLS GIVING LOCATION AND FUNCTION, MINIMUM SIZE IS 11" X 17".

PIPE MARKERS: PROVIDE PIPE MARKERS WITH FLOW ARROWS AT 50'-0" MAXIMUM INTERVALS ON ALL CONCEALED AND EXPOSED PIPING.

CLOSEOUT:

SUBMIT AS-BUILT DRAWINGS AND A COPY OF NFPA 25: THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF AS-BUILT DRAWINGS FORMAT AS REQUESTED BY CLIENT. THE AS-BUILT DRAWINGS SHALL REFLECT AS INSTALLED CONDITIONS INCLUDING ALL ADDENDA, AND MISCELLANEOUS REVISIONS. THE CONTRACTOR SHALL MAKE NECESSARY MODIFICATIONS TO THE AS-BUILT DRAWINGS BASED UPON THE REVIEW SUBMISSION COMMENTS. THE FINAL PRODUCT SHALL INCLUDE A COPY OF ALL ELECTRONIC FILES AND PLOTS OF ALL AS-BUILT DRAWINGS OF SIZE AND FORMAT CONSISTENT WITH THE PROJECT STANDARDS

TESTING:  
TEST SYSTEMS IN ACCORDANCE WITH NFPA 13, AND AUTHORITIES HAVING JURISDICTION. ALL SPRINKLERS SYSTEMS PIPING MUST BE HYDROSTATICALLY TESTED FOR A PERIOD OF TWO (2) HOURS IN THE PRESENCE OF THE GENERAL CONTRACTOR.

NFPA 13 (2019 ) SEC. 28.2.1.1 AND 28.2.1.3, ALL PIPING AND ATTACHED APPURTENANCES SUBJECTED TO SYSTEM WORKING PRESSURE SHALL BE TESTED AT 200 PSI AND SHALL MAINTAIN THAT PRESSURE WITHOUT LOSS FOR 2 HOURS FOR SYSTEM PRESSURES UP TO 150 PSI, AND 50 PSI IN EXCESS OF SYSTEM WORKING PRESSURE FOR 2 HOURS WHERE SYSTEM PRESSURES EXCEED 150 PSI. THE LOCAL FIRE DEPARTMENT SHOULD BE NOTIFIED OF DATE AND TESTING SO THEY MAY OBSERVE TESTING.

THE PLANS SHALL INCLUDE THE INFORMATION ON THE HYDRAULIC DESIGN INFORMATION SIGN, IN COMPLIANCE WITH NFPA 13 SECTION 27.1.3 ITEM 33

NFPA 13 (2019) SPRINKLER CONTRACTOR SHALL COMPLETE AND SIGN CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR THE OVERHEAD SPRINKLER SYSTEM USING FORM IN FIGURE 25.1. THIS COMPLETED FORM SHALL BE GIVEN TO THE APPROVING AUTHORITY, OWNER, AND CONTRACTOR.

THE SPRINKLER CONTRACTOR SHALL HAVE A REPRESENTATIVE PRESENT AT THE ROUGH-IN/HYDRO INSPECTION

SCOPE OF WORK:

- PROVIDE AND INSTALL COMPLETE FIRE SPRINKLER SYSTEMS TO PROTECT THROUGHOUT NEW BUILDING.
- POINT OF CONNECTION IS TO NEW UNDERGROUND FIRE SUPPLY 5-0 OUTSIDE THE BUILDING FOOTPRINT AND TO THE NEW UNDERGROUND FDC SUPPLY 5-0 OUTSIDE THE BUILDING
- COORDINATE EXPOSED PIPE RUNS OUTSIDE OF RISER ROOM WITH ARCHITECT.
- COORDINATE HEAD LAYOUT WITH ARCHITECT.

LIST OF GOVERNING CODES

THIS WORK SHALL CONFORM TO ALL CURRENT AND ADOPTED LOCAL CODES

- OREGON STRUCTURAL SPECIALTY CODE (OSSC)
- OREGON MECHANICAL SPECIALTY CODE (OMSC)
- OREGON PLUMBING SPECIALTY CODE (OPSC)
- OREGON ENERGY CODE (OEG)
- OREGON FIRE CODE (OFC)

DESIGN CRITERIA:

TYPICAL AREAS AND NFPA 13 PROTECTION CRITERIA

SPACING INDICATED BELOW BASED ON STANDARD SPRAY (SS) SPRINKLERS

LIGHT HAZARD (LH) AND ORDINARY HAZARD SPACING:  
MAX DISTANCE BETWEEN SS SPRINKLERS: 15-0  
MIN DISTANCE BETWEEN SS SPRINKLERS: 6-0  
MAX DISTANCE FROM WALL: 7-6  
MIN DISTANCE FROM WALL: 0-4

1. CLASSROOMS, OFFICES, RESTROOMS, AND COMMON SPACES:

PROTECT PER LIGHT HAZARD  
0.10 GPM/SQFT OVER 1500 SQFT\*  
MAX AREA WITH STANDARD SPRAY (SS) SPRINKLERS PER CODE: 225 SQFT\*\*

2. MECHANICAL, ELECTRICAL, AND DATA ROOMS:

PROTECT PER ORDINARY HAZARD GROUP I  
0.15 GPM/SQFT OVER 1500 SQFT\*  
MAX AREA WITH STANDARD SPRAY (SS) SPRINKLERS PER CODE: 130 SQFT\*\*

3. STORAGE CLOSETS:

PROTECT PER ORDINARY HAZARD GROUP II  
0.20 GPM/SQFT OVER 1500 SQFT\*  
MAX AREA WITH STANDARD SPRAY (SS) SPRINKLERS PER CODE: 130 SQFT\*\*

\* MINIMUM DESIGN AREA INCREASES FOR CEILINGS SLOPED OVER 2:12 OR DRY SYSTEMS UNLESS OTHERWISE INDICATED BY SPRINKLER LISTING  
30% AREA INCREASE FOR SLOPED CEILINGS = (E.G. 1500 X 1.3 = 1950 SQFT)  
30% AREA INCREASE FOR DRY SYSTEMS = (E.G. 1500 X 1.3 = 1950 SQFT)  
COMPOUNDED INCREASE FOR DRY SYSTEMS SLOPED OVER 2:12 (E.G. 1500 \* 1.3 \*1.3) = 2535 SQFT)

\*\* REDUCED SPACING MAY BE REQUIRED BY HYDRAULIC CALCULATIONS.

AVAILABLE WATER SUPPLY

THE FIRE PROTECTION CONTRACTOR SHALL OBTAIN/PERFORM A CURRENT FIRE FLOW TEST ACCEPTABLE TO THE AHJ (PERFORMED WITHIN ONE YEAR OF PERMIT SUBMITTAL - OR LESS IF REQUIRED BY THE AHJ). THE PRELIMINARY VALUES BELOW WERE OBTAINED FROM THE CIVIL ENGINEER. DATES OF TESTS ARE UNKNOWN, AND HAVE NOT BEEN ADJUSTED FOR ANY ELEVATION DIFFERENCE TO PROJECT POINT OF CONNECTION.

STATIC AND RESIDUAL MEASURED AT HYDRANT #1139 FOR BOTH TESTS

TEST 1  
FLOW HYDRANT: CFK HYDRANT #874  
STATIC AT HYD 1139: 59 PSI  
RESIDUAL AT HYD 1139: 51 PSI  
FLOW: 2041 GPM

TEST 2  
FLOW HYDRANT: CFK HYDRANT #1140  
STATIC AT HYD 1139: 53 PSI  
RESIDUAL AT HYD 1139: 31 PSI  
FLOW: 1655 GPM

AVAILABLE WATER QUALITY  
CONTRACTOR SHALL REQUEST AND OBTAIN AN EVALUATION FROM THE OWNER THAT INDICATES WHETHER THE WATER SUPPLY FOR UNUSUAL CORROSIVE PROPERTIES. WHERE THERE ARE UNUSUAL CORROSIVE PROPERTIES, INSTALL CORROSION MONITORING STATIONS FOR EACH SYSTEM (EQUIVALENT TO AGF CORRINSITE), AND PROVIDE PRELIMINARY COORDINATION FOR THE ADDITION OF WATER TREATMENT (ADDITION OF WATER TREATMENT OUTSIDE THIS SCOPE).

PRELIMINARY PIPE SIZE ESTIMATE

PRELIMINARY ESTIMATE BASED ON WET SYSTEM PROTECTION OF ATTIC (1950 SQFT)  
MAIN PIPING: 4"  
LINES: 2"

PRELIMINARY DEMAND ESTIMATE FOR THIS AREA / CONFIGURATION: 41 PSI AT 430 GPM

SIZES INDICATED FOR PRELIMINARY COORDINATION FOR ARCHITECT AND STRUCTURAL ENGINEER. FIRE PROTECTION CONTRACTOR SHALL PROVIDE LARGER SIZES AS REQUIRED BY THEIR DESIGN AT NO ADDITIONAL COST. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE GENERAL CONTRACTOR AND ARCHITECT IF LARGER PIPE WILL BE REQUIRED.

FIRE PUMP SIZE ESTIMATE

FIRE PROTECTION CONTRACTOR SHALL IMMEDIATELY NOTIFY THE GENERAL CONTRACTOR AND ARCHITECT IF THE AVAILABLE WATER FLOW THEY OBTAIN APPEARS INSUFFICIENT TO MEET THEIR SPRINKLER SYSTEM DESIGN DEMAND.

SEISMIC BRACING

SPECTRAL RESPONSE:  
LATITUDE: 42.19646949937342  
LONGITUDE: -121.70072801287859  
STANDARD: ASCE/SEI 7-16  
S<sub>i</sub> = 0.897

SEISMIC COEFFICIENT:  
C<sub>p</sub> = 0.4788 (2019 NFPA 13-TABLE 18.5.9.3)

USE C<sub>p</sub> = 0.48

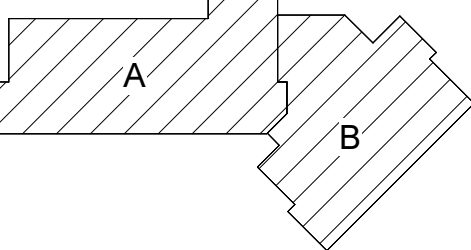
MAXIMUM LINE RESTRAINT SPACING WHERE C<sub>p</sub> <= 0.5  
PIPE MAXIMUM SPACING (FT)

1" 43  
1.25" 46  
1.5" 49  
2" 53

FIRE PROTECTION LEGEND				
SYMBOL	ABBRV.	IDENTIFICATION	ABBRV.	IDENTIFICATION
----	F	UNDERGROUND FIRE SUPPLY - IN SCOPE	FM	FACTORY MUTUAL INSURANCE COMPANY
-----	F	UNDERGROUND FIRE SUPPLY - BY OTHERS	FS	FLOOR SINK
----	W	EXISTING UNDERGROUND WATER SUPPLY	FPM	FEET PER MINUTE
=====	M	WET SYSTEM SPRINKLER MAIN PIPING	FT	FEET
-----	BL	WET SYSTEM BRANCH LINE PIPING	FT HD	FEET HEAD
----- DSP	DSP	DRY STAND PIPE	GPM	GALLONS PER MINUTE
----- BV	BV	BALL VALVE	GALV	GALVANIZED
----- CHVA	CHVA	CHECK VALVE	GA	GAUGE
----- OS&Y	OS&Y	OUTSIDE SCREW & YOKE GATE VALVE	GC	GENERAL CONTRACTOR
----- BV/SOV	BP/SOV	BALANCING/SHUT-OFF VALVES	HP	HORSEPOWER
-----		GATE VALVE	HR	HOURL
----- T&PRV	T&PRV	TEMP & PRESS RELIEF VALVE	HZ	HERTZ
----- GV	GV	GLOBE VALVE	ID	INSIDE DIAMETER
-----		SOLENOID VALVE	IE	INVERT ELEVATION
-----			IN	INCH
----- DCBP	DCBP	DOUBLE CHECK BACKFLOW PREVENTER	INT	INTERIOR
-----		UNION	INV	INVERT
----- P		PRESSURE GAUGE	ITM	INSPECTIONS TESTING AND MAINTENANCE
-----	FP	FIRE PUMP	KW	KILOWATTS
----- FC	FC	FLEXIBLE CONNECTION	LBS	POUNDS
-----		HYDROSTATIC RELIEF VALVE	LG	LONG
----- RPBP	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER	LRA	LOCKED ROTOR AMPS
-----			LVG	LEAVING
----- FH	FH	FIRE HYDRANT	MAX	MAXIMUM
----- FSR	FSR	FIRE SPRINKLER RISER	MC	MECHANICAL CONTRACTOR
----- PIV	PIV	POST INDICATING VALVE	MCA	MINIMUM CIRCUIT AMPS
----- EQB	EQB	FOUR WAY EQUIPMENT BRACING	MECH	MECHANICAL
----- AD	AD	ACCESS DOOR	MFR	MANUFACTURER
----- DIA	DIA	DIAMETER	MIN	MINIMUM
----- P.O.C.	P.O.C.	POINT OF CONNECTION	MOCP	MAXIMUM OVERCURRENT PROTECTION
-----		CENTERLINE	(N)	NEW
----- &	&	AND	NC	NORMALLY CLOSED
----- @	@	AT	NIC	NOT IN CONTRACT
----- °F	°F	DEGREES FAHRENHEIT	NO	NORMALLY OPEN
----- AD	AD	AREA DRAIN	NTS	NOT TO SCALE
----- AFF	AFF	ABOVE FINISH FLOOR	OC	ON CENTER
----- AGGR	AGGR	AGGREGATE	OD	OUTSIDE DIAMETER
----- AMP	AMP	AMPERE	PD	PRESSURE DROP
----- APPROX	APPROX	APPROXIMATE	PH	PHASE
----- ARCH	ARCH	ARCHITECT/ARCHITECTURAL	P/N	PART NUMBER
----- BHP	BHP	BRAKE HORSEPOWER	PRESS	PRESSURE
----- BJ	BJ	BETWEEN JOISTS	PRV	PRESSURE REDUCING VALVE
----- BLDG	BLDG	BUILDING	PSI	POUNDS PER SQUARE INCH
----- BTU	BTU	BRITISH THERMAL UNIT	P/T	PRESSURE/TEMPERATURE
----- CFH	CFH	CUBIC FEET PER HOUR	QTY	QUANTITY
----- CI	CAST	CAST IRON	REQD	REQUIRED
----- CIRC	CIRCULATING		REQS	REQUIREMENTS
----- CLG	CEILING		RLA	RATED/RUNNING LOAD AMPS
----- CONC	CONCRETE		RM	ROOM
----- CONN	CONNECTION		RPM	REVOLUTIONS PER MINUTE
----- CONT	CONTINUED		RV	RELIEF VALVE
----- COORD	COORDINATE		SEOR	STRUCTURAL ENGINEER OF RECORD
----- CONST	CONSTRUCTION		SM	SHEETMETAL
----- DN	DOWN		SOV	SHUT-OFF VALVE
----- DWGS	DRAWINGS		SPEC	SPECIFICATION
----- (E)	EXISTING		SQ	SQUARE
----- EC	ELECTRICAL CONTRACTOR		STD	STANDARD
----- ELEC	ELECTRICAL		STRUCT	STRUCTURAL
----- ELEV	ELEVATION		STSL	STAINLESS STEEL
----- EMBT	EMBEDMENT		TEMP	TEMPERATURE
----- EQUIP	EQUIPMENT		TYP	TYPICAL
----- EXT	EXTERIOR		UL	UNDERWRITER'S LABORATORIES
----- FD	FLOOR DRAIN		UON	UNLESS OTHERWISE NOTED
----- FFE	FINISHED FLOOR ELEVATION		V	VOLT
----- FLA	FULL LOAD AMPS		W/	WITH
----- FLEX	FLEXIBLE		WC	WATER COLUMN
----- FLR	FLOOR		WT	WEIGHT

FIRE PROTECTION SHEET KEY	
SHEET NUMBER	DESCRIPTION
F201	OVERALL FIRE PROTECTION
F211	FIRE PROTECTION - SECTOR A
F212	FIRE PROTECTION - SECTOR B
F213	FIRE PROTECTION - ATTIC
F401	FIRE PROTECTION - SECTIONS

KEYPLAN





PIPE AND FITTINGS

WET SYSTEM PIPE:

1" - 1½":  
UL/FM LISTED SCHEDULE 40 BLACK PIPE ASTM A795/A795M  
ASTM A53

2"+:  
UL/FM LISTED SCHEDULE 10 BLACK PIPE (TYP) ASTM A795 / A135  
UL/FM LISTED SCHEDULE 40 BLACK PIPE (IF THREADING  
REQUIRED) ASTM A795/A795M ASTM A53

DRY SYSTEM PIPE:

UL/FM LISTED SCHEDULE 40 BLACK PIPE ASTM A795/A795M  
ASTM A53

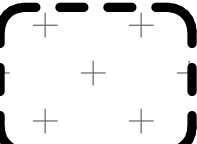
JOINING OF PIPE AND FITTINGS:

SCHEDULE 10 PIPE  
UL/FM LISTED GROOVED FITTINGS AND COUPLINGS  
WELDED CONNECTIONS PER NFPA 13  
OUTLET FITTINGS PER NFPA 13

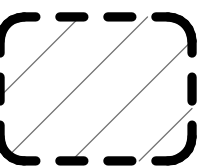
SCHEDULE 40 PIPE  
CAST IRON THREADED CLASS 125 AND 250 ASME B16.4  
CAST IRON FLANGED ASME B16.1  
MALLEABLE IRON THREADED CLASS 150 AND 300 ASME B16.3  
UL/FM LISTED GROOVED FITTINGS AND COUPLINGS  
WELDED CONNECTIONS PER NFPA 13  
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NFPA 13 HAZARD CLASSIFICATIONS

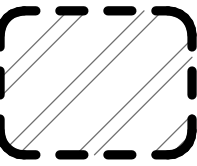
MINIMUM LEVEL OF PROTECTION REQUIRED\*  
TYPICAL AREAS ARE LIGHT HAZARD. AREAS  
IDENTIFIED AS OTHER THAN LIGHT HAZARD  
ARE INDICATED AS FOLLOWS:



NO  
SPRINKLERS  
REQUIRED

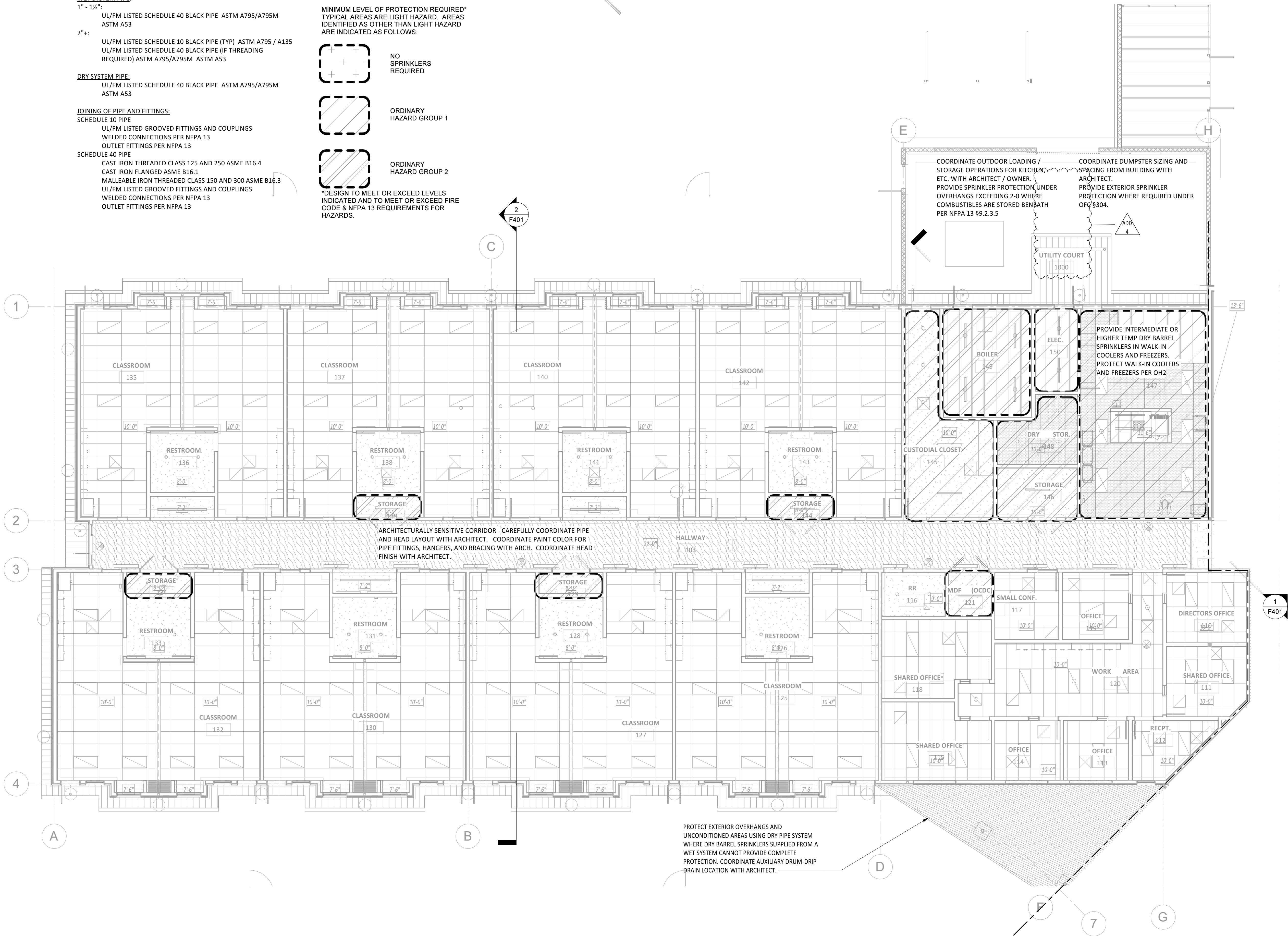


ORDINARY  
HAZARD GROUP 1



ORDINARY  
HAZARD GROUP 2

\*DESIGN TO MEET OR EXCEED LEVELS  
INDICATED AND TO MEET OR EXCEED FIRE  
CODE & NFPA 13 REQUIREMENTS FOR  
HAZARDS.



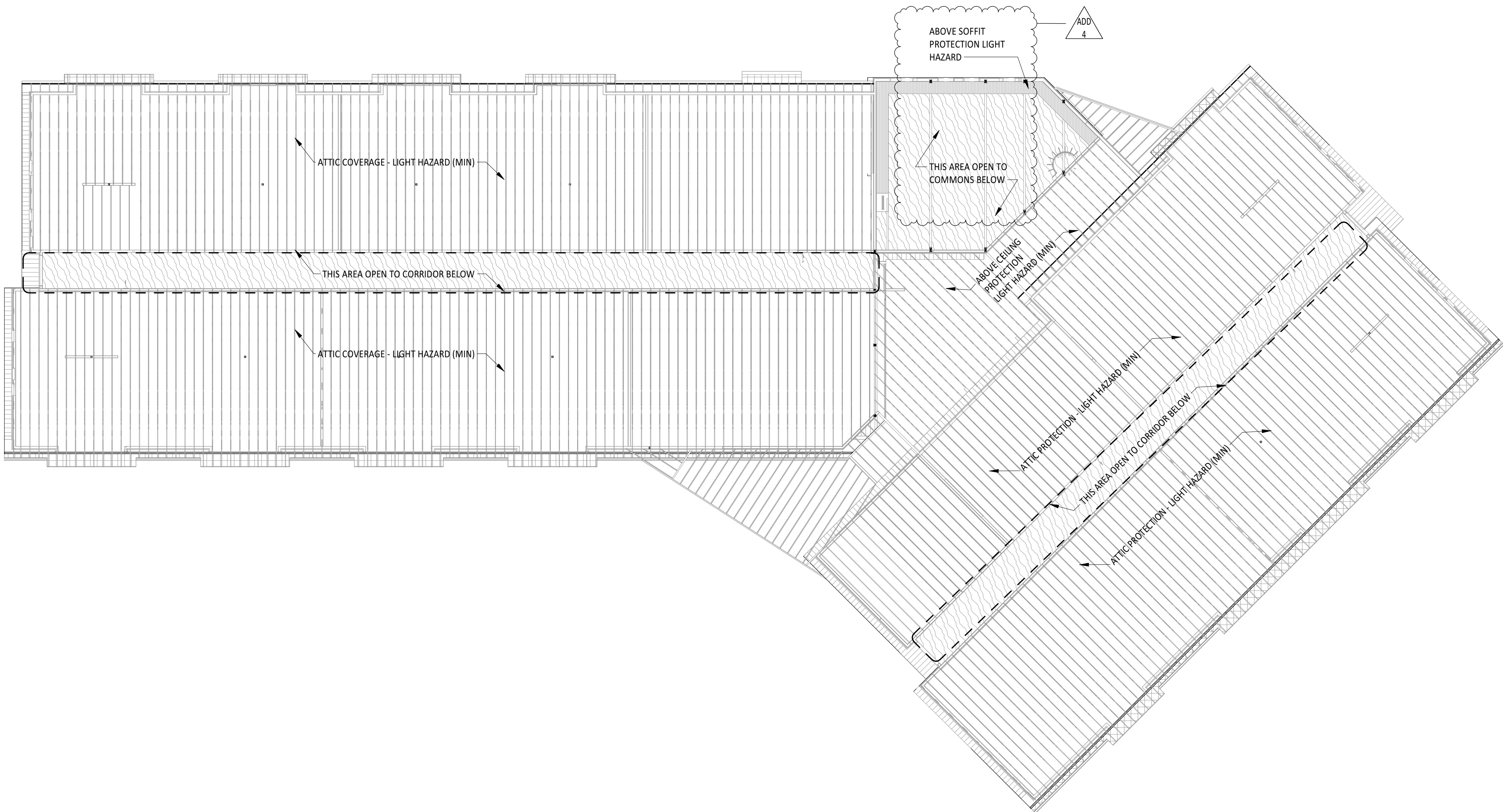
1 FIRE PROTECTION PLAN - SECTOR A  
F211 1/8" = 1'-0"



1  
F213

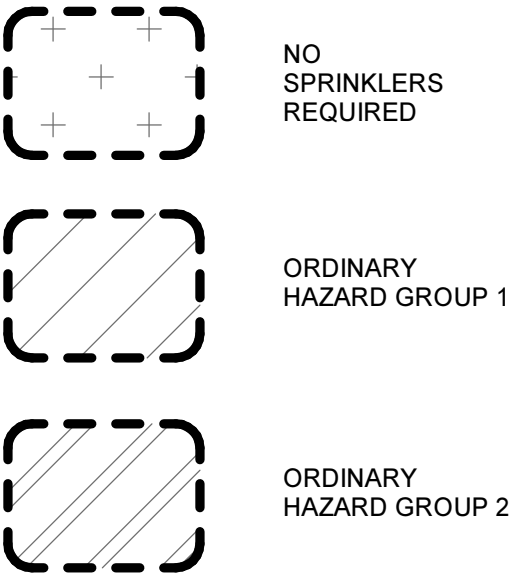
FIRE PROTECTION ATTIC PLAN

1/16" = 1'-0"



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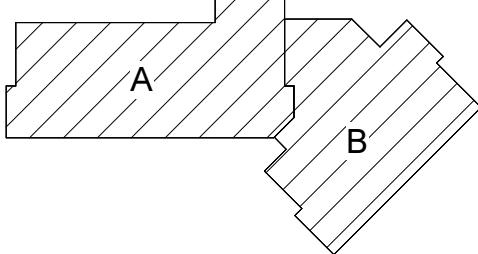
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JOINING OF PIPE AND FITTINGS:  
SCHEDULE 10 PIPE  
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WELDED CONNECTIONS PER NFPA 13  
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KEYPLAN



BID AND PERMIT SET

KCC CHILDCARE LEARNING  
CENTER

PROJECT #: 20230862  
KLAMATH COMMUNITY COLLEGE  
7390 S. 6TH ST.  
KLAMATH FALLS, OR  
97603

SHEET TITLE:

FIRE  
PROTECTION -  
ATTIC

REVISIONS:		
#	DESCRP.	DATE
1	ADD 4	08/29/2025

ISSUE DATE: 08/01/2025

F213

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