HVAC GENERAL SPECIFICATIONS

1. ALL MECHANICAL EQUIPMENT AND INSTALLATIONS SHALL CONFORM WITH THE REQUIREMENTS OF THE CURRENT REQUIRED CODES, THE 2017 FLORIDA BUILDING CODE, THE STATE ENERGY CODE, NFPA 90A, 96, 101, UNDERWRITERS LABORATORIES (OR ETL) AND ALL APPLICABLE LOCAL CODES AND ORDINANCES.

2. ALL MECHANICAL EQUIPMENT SHALL BE LABELED WITH BAKELITE NAMEPLATE WITH 2" HIGH WHITE LETTERS ON A BLACK BACKGROUND, NAMEPLATE SHALL SHOW EQUIPMENT TAG USED ON THESE DRAWINGS.

3. ALL MECHANICAL EQUIPMENT REQUIRING ELECTRICAL POWER SHALL BE INSTALLED WITH DISCONNECT SWITCHES AT EACH PIECE OF EQUIPMENT. COORDINATE SWITCH TYPE (FUSED OR NON-FUSED) WITH EQUIPMENT CHARACTERISTICS, MANUFACTURER'S RECOMMENDATIONS AND ELECTRICAL DRAWINGS.

4. ALL FANS SUPPLYING MORE THAN 2000 CFM OF AIR TO ANY SPACE AND ALL RECIRCULATING FAN SYSTEMS SERVING AREAS OF EGRESS SHALL BE INSTALLED WITH A SMOKE DETECTOR IN THE RETURN DUCTWORK. THE SMOKE DETECTOR SHALL BE WIRED TO STOP THE FAN UPON DETECTION OF SMOKE, AND SIGNAL THE BUILDING FIRE ALARM CONTROL PANEL (IF BUILDING IS SO EQUIPPED). IF THE BUILDING IS NOT PROVIDED WITH A FIRE ALARM SYSTEM, THE SMOKE DETECTOR SHALL CAUSE A VISIBLE AND AUDIBLE ALARM SIGNAL IN A NORMALLY OCCUPIED AREA. SMOKE DETECTOR TROUBLE CONDITIONS SHALL BE INDICATED VISUALLY OR AUDIBLY IN A NORMALLY OCCUPIED AREA AND SHALL BE IDENTIFIED AS AIR DUCT DETECTOR TROUBLE. IF A BUILDING FIRE ALARM SYSTEM IS INSTALLED, THE SMOKE DETECTOR SHALL BE FURNISHED BY THE FIRE ALARM SYSTEM CONTRACTOR, MOUNTED IN THE DUCT BY THE MECHANICAL CONTRACTOR, AND WIRED BY THE ELECTRICAL CONTRACTOR. IF A BUILDING FIRE ALARM SYSTEM IS NOT INSTALLED, THE SMOKE DETECTOR AND AUDIBLE/VISIBLE ALARM SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR.

5. PROVIDE FIRE DAMPERS IN ALL RATED WALLS, FLOOR AND CEILING PENETRATIONS. REFER TO THE ARCHITECTURAL/FIRE SAFETY PLAN FOR LOCATIONS OR RATED AREAS. PROVIDE ACCESS DOORS IN DUCTWORK AND CEILING AT EACH FIRE/SMOKE/FIRE SMOKE DAMPER LOCATION. INSTALL SMOKE DAMPERS IN ALL DUCT PENETRATIONS THROUGH SMOKE RATED WALLS. WHERE DUCTS PENETRATE WALLS THAT CARRY BOTH FIRE AND SMOKE RATINGS, THE DAMPERS INSTALLED SHALL BE COMBINATION FIRE AND SMOKE DAMPERS. ALL DAMPERS SHALL BE U.L. 555 LABELED. COORDINATE WITH ELECTRICAL CONTRACTOR FOR POWER REQUIREMENT.

6. ALL MECHANICAL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

7. ALL MECHANICAL EQUIPMENT AND SYSTEMS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR AFTER ACCEPTANCE BY OWNER.

8. ALL HVAC COMPRESSORS SHALL HAVE EXTENDED 5-YEAR MANUFACTURER'S WARRANTY.

9. INSTALL OUTDOOR AIR CONDITIONING EQUIPMENT LEVEL ON 4" THICK REINFORCED CONCRETE PADS, EXTENDING 6" BEYOND UNIT PERIMETER OF EQUIPMENT.

10. ALL DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED SHEET METAL AS RECOMMENDED IN SMACNA (LATEST EDITION) LOW PRESSURE DUCT CONSTRUCTION STANDARDS, MINIMUM THICKNESS OF 0.0217 INCH (NO. 26 GAGE), UNLESS OTHERWISE NOTED ON THE DRAWING. ALL JOINTS AND SEAMS IN ALL SHEET METAL DUCTWORK SHALL BE SEALED WITH DUCT SEALER.

11. SHEET METAL SUPPLY, RETURN, & O.A. DUCTWORK IN NON-AIR CONDITIONED AREAS AND MECHANICAL ROOMS SHALL BE EXTERNAL INSULATION WITH 2" THICK FIBERGLASS, 3/4 LB/FT3 DENSITY, DUCT INSULATION WITH FOIL VAPOR BARRIER, U.L. LISTED, MINIMUM R-6. OUTSIDE OF THE BUILDING, INTERNAL INSULATION FOR SUPPLY, RETURN & O.A DUCTWORK MUST BE 2" THICK CLOSED-CELL ELASTOMERIC, 3 LB/FT3 DENSITY.

12. ALL DUCTWORK SHALL BE SUPPORTED BY THE BUILDING STRUCTURE AND SHALL NOT REST ON CEILING TILES OR CEILING STRUCTURE. DUCT SUPPORTS AND ATTACHMENT TO STRUCTURE SHALL BE AS PER SMACNA STANDARDS.

13. FLEXIBLE DUCTWORK SHALL BE THERMAFLEX M-KE (U.L. 181 LISTED, CLASS 1 FLEXIBLE AIR DUCT) OR EQUAL. PROVIDE THERMAFLEX M-KE R-6 (R VALUE - 6.0 MINIMUM OR AS REQUIRED BY LOCAL ENERGY CODE) IN ATTICS AND OTHER UNCONDITIONED SPACES. AIR CONNECTORS ARE NOT ACCEPTABLE. SIZE TO MATCH DEVICE NECK, PROVIDE ROUND GALVANIZED STEEL DUCT RUNOUTS TO MAINTAIN A MAXIMUM FLEXIBLE DUCT LENGTH OF 5'-0". FLEXIBLE DUCTWORK SHALL BE INSTALLED, SUPPORTED AS STRAIGHT AS POSSIBLE WITHOUT FORMING CRIMPS OR OTHER AIR FLOW RESTRICTIONS. FLEXIBLE DUCT ROUTING SHALL NOT PENETRATE FIRE- RESISTANCE RATED ASSEMBLY. PROVIDE SQUARE TO ROUND ADAPTERS OR BOOTS TO CONNECT TO AIR DEVICE NECK WHEN REQUIRED

14. ROUND AND FLEXIBLE DUCTWORK SHALL BE CONNECTED TO MAIN DUCTS WITH SPIN-IN FITTINGS WITH SCOOP AND BALANCING DAMPER.

15. PROVIDE DUCT LINER ONLY WHERE REQUIRED FOR ACOUSTIC NEEDS USING 1" THICK CLOSED-CELL ELASTOMERIC MATERIAL THAT COMPLIES WITH ASTM C1534-07-E1 AND LINE ALL DUCTWORK A 10'-0" DOWNSTREAM OF ALL AIR HANDLING UNITS, FAN COIL UNITS, AND TERMINAL UNITS.

16. PORTIONS OF DUCTWORK VISIBLE THROUGH AIR DISTRIBUTION DEVICES IN FINISHED AREAS SHALL BE PAINTED FLAT BLACK.

17. DUCTWORK DIMENSIONS SHOWN ON THE DRAWINGS ARE INSIDE CLEAR DIMENSIONS.

18. REFRIGERANT PIPING SHALL BE TYPE L OR REFRIGERATION SERVICE COPPER TUBING WITH BRAZED JOINTS. REFER MANUFACTURER'S SUGESSION FOR SIZING. SUCTION PIPING SHALL BE INSULATED WITH 1" INCH AP ARMAFLEX INSULATION. INSULATION APPLIED OVER TUBING WITHOUT CUTTING. ALL JOINTS AND SEAMS SHALL BE SEALED WITH ADHESIVE.

19. REFRIGERANT PIPINGS SHALL BE INSTALLED BY THE MANUFACTURER'S INSTRUCTION INSTALLATION. LIQUID AND SUCTION SECTION OF REFRIGERANT PIPING SHALL BE INSULATED WITH 11/2" ARMALEX INSULATION. INSULATION APPLIED OVER TUBING WITHOUT CUTTING. ALL JOINTS AND SEAMS SHALL BE SEALED WITH ADHESIVE

20. CONDENSATE FROM ALL ROOFTOP AIR CONDITIONING EQUIPMENT SHALL BE TRAPPED AND ROUTED TO THE NEAREST ROOF DRAIN. CONDENSATE FROM ALL HORIZONTAL WATER SOURCE HEAT PUMPS ABOVE THE CEILING SHALL BE TRAPPED AND ROUTED TO THE NEAREST HUB DRAIN IN THE CEILING PLENUM. CONDENSATE PIPING SHALL BE SCHEDULE 40 PVC (EXCEPT INSULATED COPPER IN HVAC PLENUMS AND OUTDOORS). CONDENSATE SHALL BE PUMPED AS REQUIRED. INSULATE CONDENSATE PIPES WITH 1" INCH AMARFLEX INSULATION.

21. WATER SOURCE HEAT PUMP UNITS LOCATED ABOVE THE LOWEST LEVEL FINISHED FLOOR SHALL BE INSTALLED WITH AN AUXILIARY CONDENSATE DRAIN PAN UNDER THE UNIT. AN ELECTRONIC WATER LEVEL DETECTOR WIRED TO SHUTDOWN THE UNIT UPON DETECTION OF WATER MAY BE USED.

22. AFTER CONSTRUCTION, THE ENTIRE HVAC SYSTEM SHALL BE TESTED, ADJUSTED, AND BALANCED IN ACCORDANCE WITH AABC OR NEBB STANDARDS, TO DELIVER THE AIR (AND WATER FLOW) QUANTITIES SHOWN ON THE DRAWINGS. SUBMIT CERTIFIED TEST AND BALANCE REPORT TO ARCHITECT FOR APPROVAL.

23. PROVIDE ACCESS PANELS IN NON-ACCESSIBLE CEILINGS AND IN WALL STRUCTURE TO ALLOW ADEQUATE ROOM FOR MAINTENANCE OF EQUIPMENT AND BALANCING OF SYSTEM. ACCESS PANELS IN CEILING AND WALLS SHALL BE PROVIDED WHERE SHOWN ON THE DRAWINGS OR NECESSARY TO ACCESS DAMPERS, VALVES, ETC. COORDINATE EXACT LOCATION OR ALL ACCESS PANELS WITH THE ARCHITECT DURING THE SHOP DRAWING PROCESS.

24. MOUNT THERMOSTATS AND HUMIDISTATS 4'-6" AFF UNLESS NOTED OTHERWISE. PROVIDE CLEAR LOCKING COVER ASSEMBLIES FOR ALL PUBLIC AREA THERMOSTATS AND HUMIDISTATS.

25. ALL ROOFTOP MOUNTED EQUIPMENT SHALL BE INSTALLED LEVEL ON, AND ANCHORED TO, MINIMUM 12" HIGH INSULATED ROOF CURBS. CONTRACTOR SHALL COORDINATE ROOF SLOPE AND ACTUAL CURB HEIGHTS WITH ARCHITECTURAL DRAWINGS. ALL REFERENCES TO ROOF HEIGHTS REFER TO HEIGHTS ABOVE FINISHED ROOF SURFACE.

26. U.N.O. ROOF CURBS SHALL BE CUSTOM CURB OR APPROVED EQUAL (SUBMIT WITH SHOP DRAWINGS). VIBRATION/SOUND ATTENUATING ROOF CURBS (WHERE SCHEDULED OR NOTED) SHALL BE MASON RSC-A (2-1/2") OR EQUAL WITH ACOUSTICAL PACKAGE.

27. LOCATIONS OF GRILLES, REGISTERS, & DIFFUSERS SHOWN ON THE DRAWINGS ARE APPROXIMATE. COORDINATE EXACT LOCATIONS WITH LIGHTS, CEILING GRID, ETC. AND ARCHITECTURAL REFLECTED CEILING PLAN.

28. SLOPE ALL HORIZONTAL GAS FLUE PIPING MINIMUM 1/4"/FT.

29. GAS FLUE PIPING SHALL BE TYPE "B" DOUBLE WALL FLUE, U.L. LISTED, EXCEPT FOR INDUCED OR FORCED DRAFT EQUIPMENT, WHICH SHALL BE METALBESTOS TYPE PS OR EQUAL.

30. DUCTWORK CONNECTING KITCHEN EXHAUST HOODS TO EXHAUST FANS SHALL BE CONSTRUCTED OF 16 GAUGE BLACK STEEL WITH WELDED SEAMS AND JOINTS. ALL GREASE EXHAUST DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED ACCORDING TO REQUIREMENTS OF LOCAL CODE AUTHORITIES AND NFPA-96 REQUIREMENTS. INSTALL GASKETED ACCESS DOORS AT 20' ON CENTER AND AT EACH CHANGE OF DIRECTION.

31. KITCHEN HOOD EXHAUST DUCTWORK SHALL BE INSULATED, WHERE REQUIRED, PER NFPA 96 AND LOCAL CODE REQUIREMENTS. KITCHEN HOOD SUPPLY DUCTWORK SHALL BE INSULATED AS SPECIFIED FOR HVAC SUPPLY DUCTWORK.

32. PROVIDE MANUAL AIR VENTS AT HIGH POINTS OF ALL RECIRCULATING WATER PIPING SYSTEMS.

33. PIPING AT PUMPS AND EQUIPMENT SHALL BE SUPPORTED SO THAT NO PIPING OR ACCESSORY LOAD IS CARRIED BY THE PUMP OR EQUIPMENT.

34. ALL PIPING ABOVE GRADE SHALL BE SUPPORTED BY THE BUILDING STRUCTURE AND SHALL NOT REST ON CEILING TILES OR CEILING STRUCTURE. PIPING HUNG FROM JOISTS SHALL BE HUNG FROM THE TOP CHORDS OF THE JOISTS.

35. ALL PIPE AND DUCT PENETRATIONS OF FIRE AND/OR SMOKE-RATED ASSEMBLIES SHALL BE FIRE-STOPPED AS REQUIRED TO RESTORE ASSEMBLY TO ORIGINAL INTEGRITY. FIRE BARRIER PRODUCTS SHALL BE AS MANUFACTURED BY 3M CO., CP25 CAULK, CS195 COMPOSITE PANEL, FS195 WRAP/STRIP, OR PSS 7900 SERIES SYSTEMS AS RECOMMENDED BY MFG. FOR PARTICULAR APPLICATION, OR EQUIVALENT SYSTEM AS APPROVED BY LOCAL CODE OFFICIALS.

36. MANUAL OVER-RIDE CONTROL (EMERGENCY SHUT-DOWN) SWITCHES FOR ALL HVAC UNITS SHALL BE LOCATED IN LOCKING COVER ADJACENT TO FIRE ALARM ANNUNCIATOR PANEL OR OTHER LOCATION APPROVED BY LOCAL AUTHORITY HAVING JURISDICTION.

37. ROOFTOP HVAC UNITS SHALL BE INSTALLED SUCH THAT ROOF DECK IS COMPLETE AND CONTINUOUS UNDER BOTTOMS OF HVAC UNITS, AND SHALL BE CUT ONLY FOR UNIT SUPPLY AND RETURN OPENINGS. SPACE BETWEEN ROOF DECK AND BOTTOM OF ROOFTOP HVAC UNITS (INSIDE OF ROOF CURBS) SHALL BE FILLED WITH HIGH DENSITY, 6 LBS./CU.FT., ACOUSTICAL INSULATION.

38. DRYER VENTS SHALL BE CONSTRUCTED OF SHEET METAL AS RECOMMENDED IN SMACNA (LATEST EDITION) AND MECHANICAL CODE. INSTALL CLEAN-OUT DOOR IN HEEL OF 90° ELBOWS. DUCT DISCHARGE OPENING SHALL BE REINFORCED TO MAINTAIN SHAPE AND SHALL HAVE REMOVABLE 1/2" X 1/2" BIRD SCREEN.

39. DO NOT RUN DUCT OR PIPE OVER ELECTRICAL PANELS.

40. LOCATE VALVES/ CONTROL VOLUME DAMPER WITHIN 18° OF CEILING SO THAT THEY ARE WITHIN REACH

41. FOR ALL DUCT WORK PENETRATION THE REATED WALL IS NOT REQUIRED FD/FSD, PROVIDE A MINIMUM 12-INCH-LONG (305 MM) BY 0.060-INCH-THICK (1.52 MM) STEEL SLEEVE SHALL BE CENTERED IN EACH DUCT OPENING. THE SLEEVE SHALL BE SECURED TO BOTH SIDES OF THE WALL AND ALL FOUR SIDES OF THE SLEEVE WITH MINIMUM 11/2-INCH BY 11/2-INCH BY 0.060-INCH (38 MM BY 38 MM BY 1.52 MM) STEEL RETAINING ANGLES. THE RETAINING ANGLES SHALL BE SECURED TO THE SLEEVE AND THE WALL WITH NO. 10 (M5) SCREWS. THE ANNULAR SPACE BETWEEN THE STEEL SLEEVE AND THE WALL OPENING SHALL BE FILLED WITH MINERAL WOOL BATTING ON ALL SIDES.

42. THE CONTRACTOR SHALL VERIFY AND RECEIVE AN APPROVAL FROM THE HVAC SYSTEM'S MANUFACTURE TO ENSURE THE HVAC EQUIPMENT'S PROPER OPERATION AT THE LOCAL WEATHER.

43. THE CONTRACTORS SHALL CONSTRUCT THE MECHANICAL SYSTEM ACCORDING TO MEPG'S MECHANICAL PLANS, CALCULATION, DETAILS AND SPECIFICATION. ALL REQUESTS FOR ALTERNATE MECHANICAL EQUIPMENT AND SOLUTIONS MUST BE SUBMITTED THROUGH REQUEST FOR INFORMATION (RFI)

44. THE CONTRACTOR SHALL REVIEW THE LIFE SAFETY OR FIRE RATED WALL PLANS ON THE ARCHITECT PLANS AND MECHANICAL PLANS TO ENSURE BIDDING PROPER NUMBERS OF FIRE/SMOKER DAMPER AND CEILING RADIANT DAMPERS.

45. ALL DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED SHEET METAL AS RECOMMENDED IN SMACNA (LATEST EDITION) LOW-PRESSURE DUCT CONSTRUCTION STANDARDS, THE MINIMUM THICKNESS OF 0.0217 INCHES (NO. 26 GAGE), UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL JOINTS AND SEAMS IN ALL SHEET METAL DUCTWORK SHALL BE SEALED WITH DUCT SEALER.

46. THE COMPLETE MECHANICAL SYSTEM MUST BE TESTED, BALANCED, AND COMMISSIONED BY QUALIFIED COMMISSIONER AGENT DURING THE CONSTRUCTION PHASE PRIOR TO FULL OPERATION. FAILURE TO PROPERLY CONDUCT TESTING, BALANCING, AND COMMISSIONING THE MECHANICAL SYSTEM SHALL RESULT IN SYSTEM DYSFUNCTION, WHICH IS FULLY RESPONSIBLE BY THE CONTRACTOR

COMMERCIAL ENERGY CONSERVATION CODE COMPLIANCE

DRAWINGS: CONSTRUCTION DOCUMENTS SHALL REQUIRE THAT WITHIN 90 DAYS AFTER THE DATE OF SYSTEM ACCEPTANCE RECORD DRAWINGS OF THE ACTUAL INSTALLATION BE PROVIDED TO THE BUILDING OWNER OR THE DESIGNATED REPRESENTATIVE OF THE BUILDING OWNER. RECORD DRAWINGS SHALL INCLUDE AS A MINIMUM THE LOCATION AND PERFORMANCE DATA ON EACH PIECE OF EQUIPMENT, GENERAL CONFIGURATION OF DUCT AND PIPE DISTRIBUTION SYSTEM INCLUDING SIZES, AND THE TERMINAL AIR OR WATER DESIGN FLOW RATES.

MANUALS. CONSTRUCTION DOCUMENTS SHALL REQUIRE THAT AN OPERATING MANUAL AND A MAINTENANCE MANUAL BE PROVIDED TO THE BUILDING OWNER OR THE DESIGNATED REPRESENTATIVE OF THE BUILDING OWNER WITHIN 90 DAYS AFTER THE DATE OF SYSTEM ACCEPTANCE. THESE MANUALS SHALL BE IN ACCORDANCE WITH INDUSTRY-ACCEPTED STANDARDS (SEE APPENDIX E) AND SHALL INCLUDE, AT A MINIMUM, THE FOLLOWING:

(a) SUBMITTAL DATA STATING EQUIPMENT SIZE AND SELECTED OPTIONS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE.

(b) OPERATION MANUALS AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE, EXCEPT EQUIPMENT NOT FURNISHED AS PART OF THE PROJECT. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED.

(c) NAMES AND ADDRESSES OF AT LEAST ONE SERVICE AGENCY.

(d) HVAC CONTROLS SYSTEM MAINTENANCE AND CALIBRATION INFORMATION, INCLUDING WIRING DIAGRAMS, SCHEMATICS, AND CONTROL SEQUENCE DESCRIPTIONS. DESIRED OR FIELD-DETERMINED SET-POINTS SHALL BE PERMANENTLY RECORDED ON CONTROL DRAWINGS AT CONTROL DEVICES OR, FOR DIGITAL CONTROL SYSTEMS, IN PROGRAMMING COMMENTS.

(e) A COMPLETE NARRATIVE OF HOW EACH SYSTEM IS INTENDED TO OPERATE, INCLUDING SUGGESTED SET-POINTS.

GENERAL NOTE

1. THE CONTRACTORS SHALL CONSTRUCT MEP SYSTEM ACCORDING TO MEPG'S LANS, CALCULATION, DETAILS AND SPECIFICATION. ALL REQUESTS FOR ALTERNATE MATERIAL, EQUIPMENT AND SOLUTIONS MUST BE SUBMITTED THROUGH REQUEST FOR INFORMATION (RFI). FAILURE TO SUBMIT THE RFI SHALL RESULT IN THE DISAPPROVAL OF CHANGE ORDER (IF ANY) FOR THE PROPOSED ALTERNATE MATERIAL, EQUIPMENT, AND SOLUTION.
2. THE CONTRACTORS ARE REQUIRED TO FOLLOW THE SPECIFIED EQUIPMENT'S INSTALLATION MANUAL FROM THE MANUFACTURE
3. THE CONTRACTORS ARE REQUIRED TO FOLLOW THE LOCAL BUILDING CODE OF AUTHORITY HAVING JURISDICTION.
4. MECHANICAL CONTRACTOR TO INSTALL ROOF TOP UNITS SECURED TO ROOF PER REQUIRED SEISMIC/ WIND LOAD STANDARDS.

MECHANICAL SYMBOLS

SYMBOL	ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
	MAU	MAKE-UP AIR UNIT - Rooftop	ACCU	AIR COOLED CONDENSING UNIT	LDB	LEAVING DRY BULB TEMPERATURE
	AHU	AIR HANDLING UNIT - Horizontal (above Ceiling)	AHU	AIR HANDLING UNIT	LWB	LEAVING WET BULB TEMPERATURE
	AHU	AIR HANDLING UNIT _ Vertical	AD	ACCESS DOOR	LRA	LOCKED ROTOR AMP
	ACCU CU	AIR COOLED CONDENSING UNIT	AFF	ABOVE FINISHED FLOOR	MC	MECHANICAL CONTRACTOR
	FCU	FAN COIL UNIT - DUCTLESS	AP	ACCESS PANEL	MA	MIXED AIR
	PTAC	PACKAGE AIR-CONDITIONING UNIT	ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERANT & AIR CONDITIONING ENGINEERS	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
	EF	EXHAUST FAN	ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS	M	ONE THOUSAND
	SAD	SUPPLY AIR DIFFUSER	BTU	BRITISH THERMAL UNIT	MBH	1000 BTU PER HOUR
	SR	SIDEWALL SUPPLY REGISTER	BTUH	BRITISH THERMAL UNIT PER HOUR	OSA	OUTSIDE AIR
	RG/RR EG/ER	RETURN GRILLE OR REGISTER EXHAUST GRILLE	CA	COMBUSTION AIR	OSAT	OUTSIDE AIR TEMPERATURE
	VCD	VOLUME CONTROL DAMPER	CFM	CUBIC FEET PER MINUTE	PACU	PACKAGE AIR-CONDITIONING UNIT
M	MD	MOTORIZED DAMPER	°F	DEGREES FAHRENHEIT	RA	RETURN AIR
	FD	FIRE/SMOKE DAMPER	DIA.	DIAMETER	RG	RETURN GRILLE
		MANUAL BUTTERFLY DAMPER	DF	DUCT FURNACE	RR	RETURN REGISTER
		LOUVER FOR COMBUSTION AIR	EBBH	ELECTRIC BASEBOARD HEATER	RAT	RETURN AIR TEMPERATURE
		FLEXIBLE DUCT	EUH	ELECTRIC UNIT HEATER	RPM	REVOLUTIONS PER MINUTE
T	T'STAT	WALL MOUNTED THERMOSTAT	EAT	ENTERING AIR TEMPERATURE	SMACNA	SHEET METAL & AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
S	SD	DUCT MOUNTED SMOKE DETECTOR	EDB	ENTERING DRY BULB TEMPERATURE	TSP	TOTAL STATIC PRESSURE
H		HUMIDIFIER	EWB	ENTERING WET BULB TEMPERATURE	SA	SUPPLY AIR
			EF	EXHAUST FAN	SAG	SUPPLY AIR GRILLE
			EAD	EXHAUST AIR DUCT	SR	SUPPLY REGISTER
			EAL	EXHAUST AIR LOUVER	TΔ	TEMPERATURE DIFFERENCE
			FPM	FEET PER MINUTE	TYP.	TYPICAL
			FD	FIRE DAMPER	UL	UNDERWRITTEN LABORATORIES
			FAL	FRESH AIR LOUVER	VTAC	VERTICAL TERMINAL AIR-CONDITIONING
			FLA	FULL LOAD AMPS	VCD	VOLUME CONTROL DAMPER
			GPM	GALLONS PER MINUTE	WSA	WIRE SIZE AMPS
			GC	GENERAL CONTRACTOR		
			HVAC	HEATING, VENTILATION AND AIR CONDITIONING		
			HP	HORSE POWER		
			"WC	INCHES WATER COLUMN		
			KW	KILOWATT		
			LAT	LEAVING AIR TEMPERATURE		

KITCHEN AIR BALANCE CALCULATION TABLE:

EXHAUST AIR QUANTITIES:

- EXHAUST FAN (KEF-1): 2700 CFM
- EXHAUST FAN (KEF-2): 600 CFM

* TOTAL EXHAUST AIR: 3300 CFM

MAKE-UP AIR QUANTITIES:

- MAKE-UP AIR FAN (SF-1): 2160 CFM
- MAKE-UP AIR FROM AHU-1.9: 480 CFM

* TOTAL OUTSIDE AIR: 2640 CFM

MAKE-UP AIR = 80% EXHAUST AIR => NEGATIVE KITCHEN PRESSURIZATION

EXHAUST AIR QUANTITIES

A) TOTAL GUEST ROOM BATH EXHAUST AIR QUANTITIES 2st,3nd,4th&5th FLOOR	188 @	26 CFM	= 4888
B) UNISEX	1 @	50 CFM	= 50
C) LAUNDRY	1 @	392 CFM	= 392
D) PUBLIC RESTROOM	1 @	392 CFM	= 392
E) WATER HEATER ROOM	1 @	322 CFM	= 322
F) FITNESS ROOM	1 @	209 CFM	= 209
G) ELECTRICAL ROOM - 2nd,3rd,4th,5th&6th FLOOR	5 @	150 CFM	= 750
H) STORAGE	2 @	63 CFM	= 126
I) LINEN STORAGE	5 @	150 CFM	= 750
J) THE MARKET, ICE, GUEST LAUNDRY	8 @	90 CFM	= 720
K) ELECTRICAL ROOM 1st FLOOR	1 @	361 CFM	= 361
TOTAL EXHAUST AIR CFM			= 8960

MAKE-UP AIR QUANTITIES AND SOURCE

A) OUTSIDE AIR SERVED FOR GUESTROOM & CORRIDORS:	MAU-1	= 8700
B) OUTSIDE AIR TO ALL SPLIT SYSTEMS AT 1st FLOOR:	AHU-1.1	= 340
	AHU-1.2	= 340
	AHU-1.3	= 340
	AHU-1.4	= 160
	AHU-1.5	= 340
	AHU-1.6	= 340
	AHU-1.7	= 340
	AHU-1.8	= 320
	AHU-1.9	= 160
	AHU-1.10	= 340
TOTAL MAKE-UP AIR CFM		= 11720

MAKE-UP AIR > EXHAUST AIR => POSITIVE BUILDING PRESSURIZATION
(460 CFM EACH FLOOR IF ALL INTERMITTENT EXHAUST IS OPERATING AT THE SAME TIME)

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COURTYARD® Marriott®

REVISIONS

	30% SET	09.14.2018
	90% SET	11.20.2018

DRAWING NAME

MECHANICAL SPECIFICATIONS & SYMBOLS

PROJECT NAME

COURTYARD INN,® Lake City, Florida

SEAL+SIGNATURE

DUNG D. VU LICENSE No. 83005 STATE OF FLORIDA PROFESSIONAL ENGINEER

FLORIDA REG.: AR0007005

DATE 07 DEC 2021
PROJECT NUMBER 2K2101
DRAWING NUMBER
DECOR: XH

M1.0

PAGE NUMBER

AHU-SCHEDULES-HEAT PUMP

AIR HANDLING UNIT											HEATING			HEAT STRIP			CONDENSING UNIT							
TAG	CFM	ESP	FAN H/P	EDB/EWB (°F)	TOTAL CAPACITY (BTU/H)	SENS. CAPACITY (BTU/H)	VOLTAGE (V/P/HZ)	MCA (A)	MOCP (A)	MODEL#	TON	HEATING CAPACITY (BTU/H)	HSPF	VOLTAGE (V/P/HZ)	HEATING CAPACITY (KW)	MOCP(A)	MODEL#	TAG	AMBIENT	CAPACITY (BTU/H)	VOLTAGE (V/P/HZ)	MCA (A)	MOCP (A)	MODEL	SEER
AHU-1.1	1700	0.60	1	80/67	54000	39600	208/1/60	5.0	15	TRANE-TAM7A0C48H41	5	52000	9.20	208/1/60	5.76	40	BAYEVAC08	ACCU-1.1	105	52000	208/1/60	37	60	TRANE-4TWR7060A1	16
AHU-1.2	1700	0.60	1	80/67	54000	39600	208/1/60	5.0	15	TRANE-TAM7A0C48H41	5	52000	9.20	208/1/60	5.76	40	BAYEVAC08	ACCU-1.2	105	52000	208/1/60	37	60	TRANE-4TWR7060A1	16
AHU-1.3	1700	0.60	1	80/67	54000	39600	208/1/60	5.0	15	TRANE-TAM7A0C48H41	5	52000	9.20	208/1/60	5.76	40	BAYEVAC08	ACCU-1.3	105	52000	208/1/60	37	60	TRANE-4TWR7060A1	16
AHU-1.4	800	0.60	1/3	80/67	24400	18500	208/1/60	2.8	15	TRANE-GAM5B0B30M21	2	23800	9.02	208/1/60	2.88	25	BAYEAAC04	ACCU-1.4	105	24400	208/1/60	15	25	TRANE-4TWR7024A1	16
AHU-1.5	1700	0.60	1	80/67	54000	39600	208/1/60	5.0	15	TRANE-TAM7A0C48H41	5	52000	9.20	208/1/60	5.76	40	BAYEVAC08	ACCU-1.5	105	52000	208/1/60	37	60	TRANE-4TWR7060A1	16
AHU-1.6	1700	0.60	1	80/67	54000	39600	208/1/60	5.0	15	TRANE-TAM7A0C48H41	5	52000	9.20	208/1/60	5.76	40	BAYEVAC08	ACCU-1.6	105	52000	208/1/60	37	60	TRANE-4TWR7060A1	16
AHU-1.7	1700	0.60	1	80/67	54000	39600	208/1/60	5.0	15	TRANE-TAM7A0C48H41	5	52000	9.20	208/1/60	5.76	40	BAYEVAC08	ACCU-1.7	105	52000	208/1/60	37	60	TRANE-4TWR7060A1	16
AHU-1.8	1575	0.60	1	80/67	47000	35100	208/1/60	6.0	15	TRANE-GAM5B0C48M41	4	46000	9.02	208/1/60	3.6	30	BAYEAAC05	ACCU-1.8	105	46000	208/1/60	28	45	TRANE-4TWR7048A1	16
AHU-1.9	800	0.60	1/3	80/67	24400	18500	208/1/60	2.8	15	TRANE-GAM5B0B30M21	2	23800	9.02	208/1/60	2.88	25	BAYEAAC04	ACCU-1.9	105	24400	208/1/60	15	25	TRANE-4TWR7024A1	16
AHU-1.10	1700	0.60	1	80/67	54000	39600	208/1/60	5.0	15	TRANE-TAM7A0C48H41	5	52000	9.20	208/1/60	5.76	40	BAYEVAC08	ACCU-1.10	105	52000	208/1/60	37	60	TRANE-4TWR7060A1	16

MCA = MINIMUM CIRCUIT AMPS C.B. = CIRCUIT BREAKER MOCP = MAXIMUM OVER CURRENT PROTECTION

NOTES:

1. ALL AIR HANDLING UNITS SHALL BE PROVIDED WITH FACTORY INSTALLED HEATER PACKAGES (FUSED CIRCUIT BREAKERS), DISCONNECT SWITCH, TIME-DELAY RELAY, FACTORY-SUPPLIED POWER CORD, 40-VA- TRANSFORMER, PRE-PAINTED GALVANIZED STEEL CABINET WITH R 4.2 INSULATION, MINIMUM 2% CABINET LEAKAGE RATE WHEN TESTED AT 1.0 INCHES OF STATIC PRESSURE, PRIMARY AND SECONDARY DRAIN CONNECTIONS WITH BRASS INSERTS, INSPECTION PLATES FOR CLEANING COIL, FACTORY-SUPPLIED CLEANABLE FILTER FRAME.
2. FURNISH COMMERCIAL PROGRAMMABLE ELECTRONIC THERMOSTATS WITH 7 DAY TIMECLOCK, AUTO CHANGEOVER, MULTI STAGE CAPACITY, AND LARGE LCD TEMPERATURE DISPLAY FOR EACH ZONE.
3. FURNISH A SMOKE DETECTOR IN THE RETURN DUCT OF EACH UNIT SERVING A CORRIDOR. INTERLOCK THE UNIT TO SHUT DOWN WHEN SMOKE IS DETECTED.
4. THERMOSTATIC CONTROLS SHALL BE CAPABLE OF PROVIDING A TEMPERATURE RANGE OR DEAD BAND OF AT LEAST 3 DEGREES.
5. FURNISH A PROGRAMMABLE THERMOSTAT WITH EACH UNIT.
6. EACH COOLING COIL SHALL BE FURNISHED WITH A MATCHING THERMOSTATIC EXPANSION VALVE (TXV).
7. ALL CONDENSING UNITS SHALL BE FURNISHED WITH CRANKCASE HEATER, LOW AMBIENT KIT & WINTER START CONTROL.
8. OPTIONAL SAFETY DEVICE SHALL INCLUDE H.P. & L.P. CUTOUT SWITCH AND EVAPORATOR FREEZE THERMOSTAT.
9. IN CASE THE DISTANCE BETWEEN INDOOR AND OUTDOOR UNITS EXCEED 60 FEET, THE CONTRACTOR MUST CONTACT THE MANUFACTURE FOR INSTRUCTION.
10. PROVIDE MERV-13 FILTERS FOR ALL AIR HANDLING UNITS WHICH SERVE MULTI-OCCUPANT SPACES.

KITCHEN EXHAUST FAN

FAN UNIT NO.	FAN UNIT MODEL #	MODEL	TAG	CFM	E.S.P.	RPM	H.P.	ø	VOLT	FLA	WEIGHT (LBS.)
KEF-1	DU18OHFA	DU18OHFA		2700	2.000	1396	3	3	208	9.5	181
KEF-2	DU33HFA	DU33HFA		600	1.000	1604	0.333	1	115	5.6	75

MAKE-UP AIR FAN

FAN UNIT NO.	FAN UNIT MODEL #	BLOWER	HOUSING	TAG	CFM	S.P.	RPM	H.P.	ø	VOLT	FLA	WEIGHT (LBS.)
SF-1	A1-D.250-G10	G10	A1-D.250		2160	0.8	1285	1.5	3	208	4.6	573

COMBUSTION AIR ANALYSIS

AREA SERVED	TOTAL GAS INPUT	REQUIRED SIZE OF OPENING STANDARD (SECTION 703 - FMC 2017)	MINIMUM SIZE OF OPENING	PROPOSED LOUVERS
COMM. LAUNDRY	495,000 BTUH	1 SQ. IN. PER 2000 BTUH	248 SQ. IN.	1NOS OF 24x24

EXHAUST FAN SCHEDULE

MARK	TYPE	MANUF.	MODEL #	AREA SERVED	MIN. CAPACITY		TIP SPEED	DRIVE	RPM	ELECTRICAL			MAX SONES	REMARKS
					C.F.M.	S.P.				WATTS	HP	VOLTAGE		
EF-1	CEILING	COOK	GC-128	UNISEX RESTROOM	50	.375	1,498	DIRECT	0,750	30	--	120/1/60	1.3	NOTES #1, 2, 3, 5, 6, 7.
EF-2	INLINE	COOK	GN-622	LAUNDRY EXHAUST	392	.500	2,313	DIRECT	1,400	147	--	120/1/60	3.0	NOTES #4, 5, 7, 8.
EF-3	INLINE	COOK	GN-622	PUBLISH RESTROOM	392	.500	2,313	DIRECT	1,400	147	--	120/1/60	3.0	NOTES #4, 5, 7.
EF-4	PROPELLER	COOK	10S15D	WATER HEATER RM.	322	.125	--	DIRECT	1,250	--	1/25	120/1/60	6.4	NOTES #4, 5.
EF-5	CEILING	COOK	GC-186	FITNESS ROOM	209	.375	1,677	DIRECT	1,100	95	--	120/1/60	5.5	NOTES #1, 2, 3, 5, 6, 7.
EF-6	CENTR.	PENN	DX-11R	GUEST ROOM EXHAUST	188	.875	--	DIRECT	1,550	--	1/6	120/1/60	7.9	NOTES #8.
EF-7	CEILING	COOK	GC-168	ELECTRICAL RM. - 2nd,3rd,4th,5th&6th FLOOR	150	.375	2,317	DIRECT	1,160	57	--	120/1/60	3.5	NOTES #1, 2, 4, 5, 6, 7.
EF-8	CEILING	COOK	GC-128	POOL STORAGE, STORAGE	63	.250	1,677	DIRECT	750	30	--	120/1/60	1.0	NOTES #1, 2, 3, 5, 6, 7.
EF-9	CEILING	COOK	GC-168	LINEN STORAGE	150	.375	2,317	DIRECT	1,160	57	--	120/1/60	3.5	NOTES #1, 2, 3, 5, 6, 7.
EF-10	CEILING	COOK	GC-128	THE MARKET, ICE, GUEST LAU.	90	.250	1,498	DIRECT	0,750	30	--	120/1/60	1.0	NOTES #1, 2, 5, 6, 7, 8.
EF-11	CEILING	COOK	GC-542	ELECTRICAL RM. - 1st FLOOR	361	.250	2,644	DIRECT	1,600	145	--	120/1/60	5.5	NOTES #1, 2, 4, 5, 6, 7.
EF-12	PROPELLER	COOK	10S15D	POOL EQUIPMENT	322	.125	--	DIRECT	1,250	--	1/25	120/1/60	6.4	NOTES #4, 5.

NOTES:

1. PROVIDE FAN WITH MANUFACTURERS BRICK VENT - SUNVENT MODEL FL80B, DIMENSION = 7 3/4" H x 8 1/8" W x 1 3/4" D.
2. PROVIDE FAN WITH MANUFACTURERS CEILING RADIATION DAMPER.
3. FAN SHALL SWITCH ON/OFF WITH ROOM LIGHTS.
4. FAN SHALL BE CONTROLLED BY WALL MOUNTED THERMOSTAT.
5. PROVIDE FAN WITH MANUFACTURERS BACKDRAFT DAMPER.
6. PROVIDE FAN WITH OFF-WHITE ALUMINUM GRILLE.
7. PROVIDE FAN WITH SOLID STATE SPEED CONTROLLER.
8. WILL RUN CONTINUOUSLY.

GRILLE AND REGISTER SCHEDULE

MARK	TYPE	MANUF.	MODEL	DESCRIPTION	OPPOSE BLADE DAMPER (OBD)	MATERIAL	MOUNTING	FINISH	REMARKS
A	SUPPLY AIR DIFFUSER	TITUS	TDC	LOUVERED FACE, 12"x 12" MODULE	YES	ALUMINIUM	LAY-IN	OFF-WHITE	12"X12". PAINT TO MATCH ADJACENT SURFACE.
B	SUPPLY AIR DIFFUSER	TITUS	TDC	LOUVERED FACE, 24"x 24" MODULE	YES	ALUMINIUM	LAY-IN	OFF-WHITE	24"X24". PAINT TO MATCH ADJACENT SURFACE.
C	RETURN AIR DIFFUSER	TITUS	PAR	PERFORATED, 24"x 24" MODULE	NO	ALUMINIUM	LAY-IN	OFF-WHITE	24"X24". PAINT TO MATCH ADJACENT SURFACE.
D	SUPPLY AIR GRILLE	TITUS	300RL	SIDE THROW	YES	ALUMINIUM	SURFACE	OFF-WHITE	24"X8" . PAINT TO MATCH ADJACENT SURFACE.
E	SUPPLY AIR GRILLE	TITUS	300RL	SIDE THROW	YES	ALUMINIUM	SURFACE	OFF-WHITE	12"X8" . PAINT TO MATCH ADJACENT SURFACE.
F	EXHAUST AIR DIFFUSER	TITUS	TDC	LOUVERED FACE, 12"x 12" MODULE	YES	ALUMINIUM	LAY-IN	OFF-WHITE	12"X12". PAINT TO MATCH ADJACENT SURFACE.
G	SLOT SUPPLY AIR DIFFUSER	TITUS	FT-10	FACE SIZE 48"x6"	--	ALUMINIUM	LAY-IN	--	
H	SUPPLY AIR GRILLE	TITUS	300RL	DOUBLE DEFLECTION	YES	ALUMINIUM	LAY-IN	OFF-WHITE	6"X6" . PAINT TO MATCH ADJACENT SURFACE.

100% OUTSIDE AIR SPLIT SYSTEM UNIT SCHEDULE

TAG	OUTSIDE AIR (CFM)	ESP (in)	Cooling				Heating				Supply Fan	Electric Data					STANDARD OF PERFORMANCE
			CAPACITY (MBH)		EAT °F	LAT °F	Heat Type	CAPACITY (MBH)		EAT °F	LAT °F						
			SENSIBLE	TOTAL	DB/WB	DB/WB		INPUT	TOTAL	DB	DB	HP	VOLTAGE	UNIT FLA	MCA	MAX. FUSE	WEIGHT (LBS)	
MAU-1	8700	1.5	303.53	730.4	88.4/79.7	75/62.27	Nat.gas	810	648	29	97.9	7.5	460/3/60	114	120	125	6016	AAON RN-060-3-0-BB04-3DB

REMARKS:

(1)Summer Design Conditions based on ASHRAE .4% Evaporation Column
(2)Unit to have modulating hot gas re-heat for dehumidification (on/off not acceptable) and deliver 75 F @ 50% RH air at design conditions
(3)Unit to have hot gas bypass on ALL circuits
(4)Unit to have modulating gas heat furnaces with Stainless Steel HX carrying 25 year non-pro-rated warranty; 15:1 turndown
(5)Unit to have 6-row interlaced evaporator coil for enhanced dehumidification
(6)Cabinet construction is 2" double wall with foam injected panels with R-13 insulation value
(7)2500 Salt Spray Tested exterior paint
(8)Outside air metal mesh pre-filter; 2" pleated filters - MERV 8
(9)Factory installed electrical disconnect for single point wiring
(10)ECM Condenser fan motors for condenser head pressure control (VFD Condenser Fans acceptable)
(11)Direct Drive Plenum Supply Fan with unit mounted VFD (belt driven fans not acceptable)
(12)Phase and brownout protection monitor
(13)14" - 38" High Fully welded insulated plenum curb for vertical or horizontal discharge. Factory installed vibration isolation rails
(14)Unit shall include factory start-up and two (2) year parts and labor warranty for the entire unit, including refrigerant. Compressor warranty will extend an additional three (3) years - parts only

Call Tom Whiteley with HAVTECH - 443-534-7716 or email tomwhiteley@havtech.com for all pricing

PACKAGED AIR-CONDITIONING UNIT SCHEDULE (PTAC)

MARK	MANUF.	MODEL NO.	AREA SERVED	FAN		COOLING CAPACITY				EER	HEATING CAPACITY				ELECT. HEATER CAPACITY				VOLTAGE	REMARKS
				CFM HI/LOW	MIN. O.S.A.	TOTAL BTU/HR	SENSIBLE BTU/HR	WATTS	AMPS		BTU/HR	C.O.P.	WATTS	AMPS	BTU/HR	WATTS	MCA	MOCP		
PTAC-1	GE	AZ65H07DAC	GUEST ROOMS	409/250	35	7,000	--	535	2.7	13.0	6,100	4.0	445	2.2	6,600	1,960	9.6	15	208/1/60	SEE NOTE #1,2,3,4,5,6,7,8,9,10.
PTAC-2	GE	AZ65H09DAC	GUEST ROOMS	409/300	35	9,600	--	785	3.9	12.2	8,000	3.7	630	3.1	6,600	1,960	9.6	15	208/1/60	SEE NOTE #1,2,3,4,5,6,7,8,9,10.

NOTES:

1. FURNISH WITH FACTORY INSTALLED POWER CORD & SUB-BASE WITH ACCESS PLATES FOR THE MOUNTING OF ELECTRICAL RECEPTACLE.
2. PROVIDE INSTRUCTION PLATE AT UNIT FOR REMOTE T-STAT AT WALL.
3. FURNISH UNIT WITH REMOTE WALL T-STAT.
4. FURNISH ARCHITECTURAL OUTDOOR GRILLE MODEL "RAG67", PAINT GRILLE TO MATCH EXTERIOR WALL.
5. FURNISH INSULATED STEEL WALL SLEEVE MODEL "RAB71B."
6. FURNISH INTERNAL CONDENSATE DRAIN KIT MODEL "RAD10".
7. FURNISH UNIT WITH LOW AMBIENT CONTROL AND LOW AMBIENT LOCKOUT TO LOCKOUT COMPRESSOR BELOW 40°F.
8. FURNISH UNIT WITH 42 1/8"W x 16 1/4"H x 13 7/8"D WALL CASE.
9. MULTIPLE UNITS. SEE MECHANICAL PLANS FOR EXACT LOCATIONS AND QUANTITIES OF UNITS.
10. T-STAT/REMOTE CONTROL WITH TWO SPEED FAN CONTROL CAPABILITY.

SPLIT SYSTEM A/C SCHEDULE - DUCTLESS

INDOOR UNIT													OUTDOOR UNIT								NOTES
MARK	MANUF. BASED ON	AREA SERVED	MODEL #	FAN			COOLING CAPACITY BTUH/HR	HEAT CAPACITY		ELECTRICAL			APPROX. WEIGHT	CONFIGURATION	MARK	MANUF. BASED ON	MODEL #	NOM. CAPACITY TONS	SEER	ELECTRICAL			APPROX. WEIGHT	
				C.F.M.	O.S.A.	EXT. S.P.		SUPPLEMTL KW	HEAT PUMP MBH	M.C.A.	M.O.C.P.	VOLTAGE								M.C.A.	M.O.C.P.	VOLTAGE		
FCU-1	CARRIER OR EQUAL	COMP/TELE	40MFC022-3	580	0	--	22,000	--	--	1	15	208/1/60	26.4	HIGH WALL	CU-1	CARRIER	38MFC022-3	2.0	15	16	25	208/1/60	98.1	

* INDOOR UNIT POWERERD FROM OUTDOOR UNIT.
MCA = MINIMUM CIRCUIT AMPS
MOCP = MAXIMUM OVERCURRENT PROTECTION AMPS

FLEXIBLE DUCT SIZE SCHEDULE

SUPPLY AIR (CFM)	DIFFUSER NECK AND FLEXIBLE DUCT SIZE
0-100	6"ø
101-200	8"ø
201-300	10"ø
301-400	12"ø
401-500	14"ø

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COURTYARD® Marriott®

REVISIONS

	30% SET	09.14.2018
	90% SET	11.20.2018

DRAWING NAME

MECHANICAL
TECHNICAL SCHEDULES

PROJECT NAME

COURTYARD INN,®
Lake City, Florida

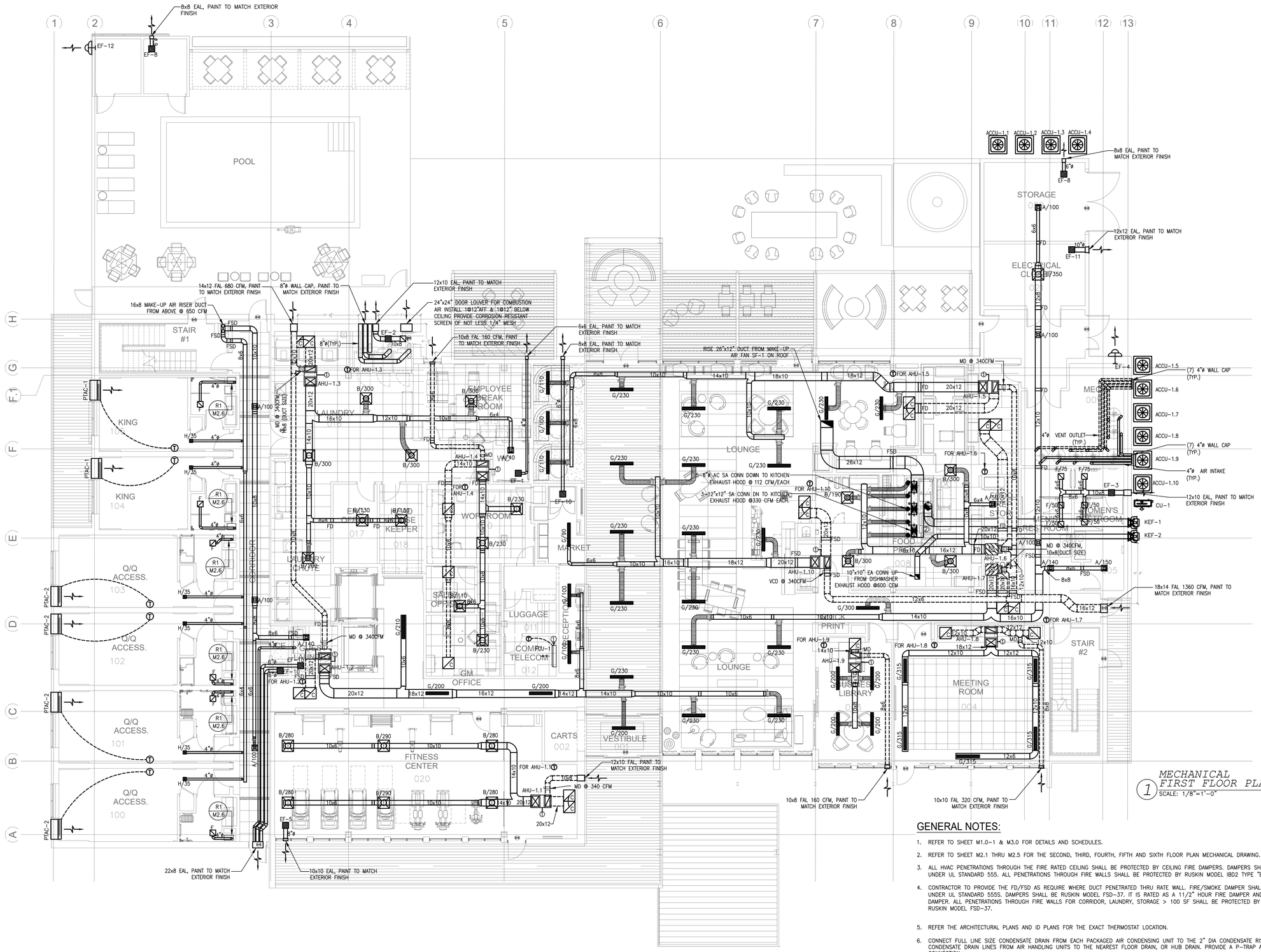
SEAL+SIGNATURE

DUNG D. VU
LICENSE
No. 83005
STATE OF FLORIDA
PROFESSIONAL ENGINEER
FLORIDA REG. AR0007005

DATE 07 DEC 2021
PROJECT NUMBER 2K2101
DRAWING NUMBER
DECOR: XH

M1.1

PAGE NUMBER



1 *MECHANICAL FIRST FLOOR PLAN*
SCALE: 1/8"=1'-0"

GENERAL NOTES:

1. REFER TO SHEET M1.0-1 & M3.0 FOR DETAILS AND SCHEDULES.
2. REFER TO SHEET M2.1 THRU M2.5 FOR THE SECOND, THIRD, FOURTH, FIFTH AND SIXTH FLOOR PLAN MECHANICAL DRAWING.
3. ALL HVAC PENETRATIONS THROUGH THE FIRE RATED CEILING SHALL BE PROTECTED BY CEILING FIRE DAMPERS. DAMPERS SHALL BE CLASSIFIED UNDER UL STANDARD 555. ALL PENETRATIONS THROUGH FIRE WALLS SHALL BE PROTECTED BY RUSKIN MODEL IBD2 TYPE "B" FIRE DAMPER.
4. CONTRACTOR TO PROVIDE THE FD/FSD AS REQUIRE WHERE DUCT PENETRATED THRU RATE WALL. FIRE/SMOKE DAMPER SHALL BE CLASSIFIED UNDER UL STANDARD 555S. DAMPERS SHALL BE RUSKIN MODEL FSD-37. IT IS RATED AS A 11/2" HOUR FIRE DAMPER AND A LEAKAGE CLASS I DAMPER. ALL PENETRATIONS THROUGH FIRE WALLS FOR CORRIDOR, LAUNDRY, STORAGE > 100 SF SHALL BE PROTECTED BY FIRE/SMOKE DAMPER RUSKIN MODEL FSD-37.
5. REFER THE ARCHITECTURAL PLANS AND ID PLANS FOR THE EXACT THERMOSTAT LOCATION.
6. CONNECT FULL LINE SIZE CONDENSATE DRAIN FROM EACH PACKAGED AIR CONDENSING UNIT TO THE 2" DIA CONDENSATE RISER. RUN CONDENSATE DRAIN LINES FROM AIR HANDLING UNITS TO THE NEAREST FLOOR DRAIN, OR HUB DRAIN. PROVIDE A P-TRAP AT EACH DRAIN CONNECTION.
7. COMBUSTION AIR SHALL NOT BE OBTAINED FROM A HAZARDOUS LOCATION OR FROM ANY AREA IN WHICH OBJECTIONABLE QUANTITIES OF FLAMMABLE VAPOR, LINT OR DUST ARE RELEASED. COMBUSTION AIR SHALL NOT BE TAKEN FROM A REFRIGERATION MACHINERY ROOM.
8. PROVIDE UV PROTECTIVE COATING/COVERING ON ALL ELASTOMERIC PIPE INSULATION WHERE EXPOSED TO SUNLIGHT.
9. PROVIDE CEILING ACCESS PANELS FOR ALL CEILING-MOUNTED EQUIPMENT.
10. PROVIDE FIRE CAULKING WHEN THE METAL DUCT PENETRATE THE RATED ASSEMBLY.
11. PROVIDE ALDES CONSTANT AIRFLOW REGULATOR AT GUESTROOM EXHAUST INLETS TO MINIMIZE BALANCING EFFORT.
12. PROVIDE REFRIGERANT PIPES FROM/TO CORRESPONDING CONDENSING UNIT. REFER TO MANUFACTURER FOR INSTRUCTION NSULATION. PROVIDE 1-1/2" AF ARMAFLEX INSULATION AS REQUIRED.

NOTES:

1. PROVIDE FULL SIZE CONDENSATE PIPE TO NEAREST SINGLE P-TRAP AT THE SINK/ FLOOR DRAIN FOR FCU/AHU. INSULATE CONDENSATE PIPE WITH 1 INCH AF ARMAFLEX INSULATION. (TYP.)
2. SEE M3.0 FOR DETAIL OF KITCHEN EXHAUST/MAKE-UP AIR RISER DUCT

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DRAWING NAME

MECHANICAL
FIRST FLOOR PLAN

PROJECT NAME

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Lake City, Florida

SEAL+SIGNATURE

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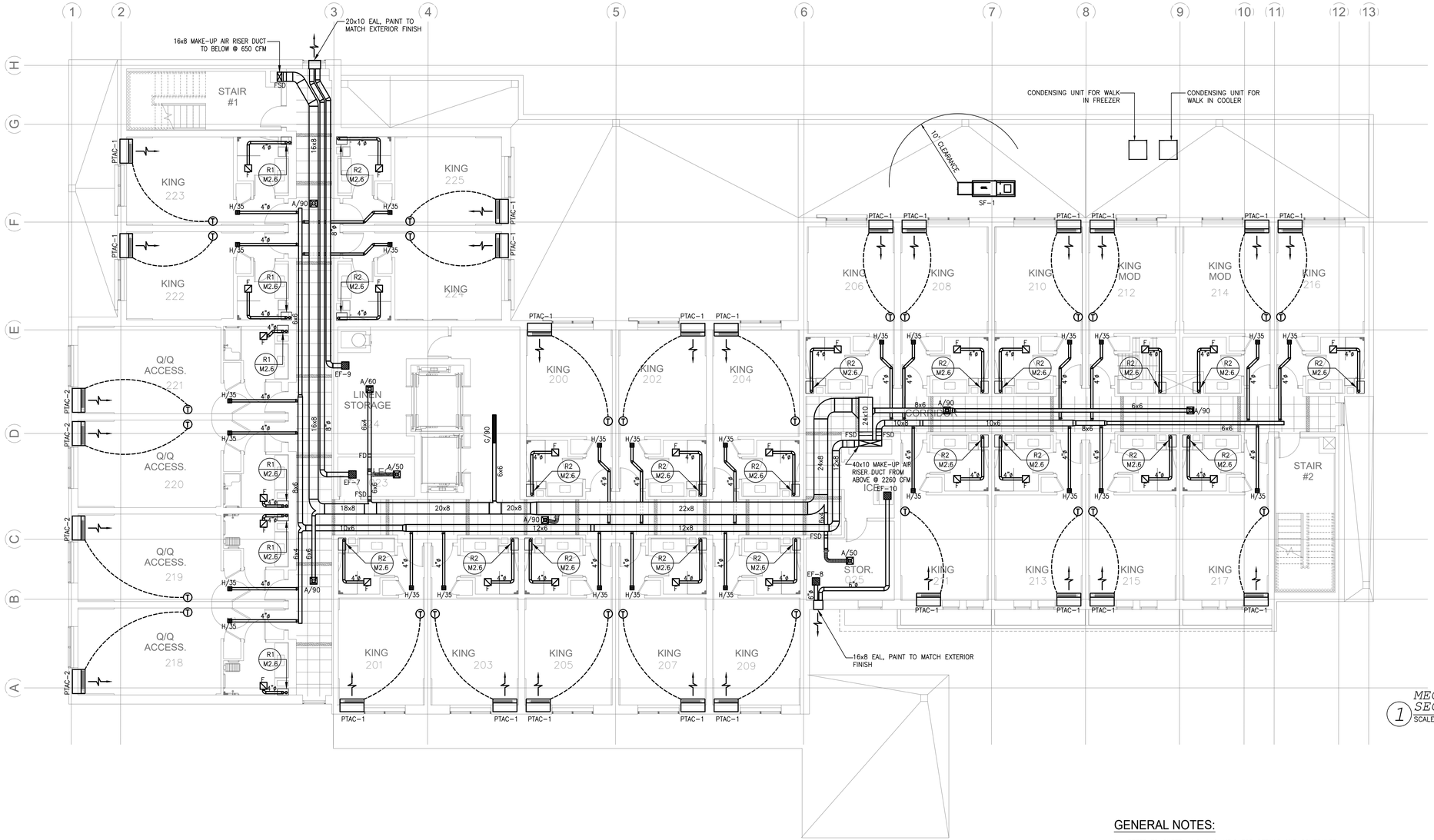

MECHANICAL SECOND FLOOR PLAN

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

GENERAL NOTES:

1. REFER TO SHEET M1.0-1 & M3.0 FOR DETAILS AND SCHEDULES.
2. REFER TO SHEET M2.1 THRU M2.5 FOR THE SECOND, THIRD, FOURTH, FIFTH AND SIXTH FLOOR PLAN MECHANICAL DRAWING.
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5. REFER THE ARCHITECTURAL PLANS AND ID PLANS FOR THE EXACT THERMOSTAT LOCATION.
6. CONNECT FULL LINE SIZE CONDENSATE DRAIN FROM EACH PACKAGED AIR CONDENSING UNIT TO THE 2" DIA CONDENSATE RISER. RUN CONDENSATE DRAIN LINES FROM AIR HANDLING UNITS TO THE NEAREST FLOOR DRAIN, OR HUB DRAIN. PROVIDE A P-TRAP AT EACH DRAIN CONNECTION.
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8. PROVIDE UV PROTECTIVE COATING/COVERING ON ALL ELASTOMERIC PIPE INSULATION WHERE EXPOSED TO SUNLIGHT.
9. PROVIDE CEILING ACCESS PANELS FOR ALL CEILING-MOUNTED EQUIPMENT.
10. PROVIDE FIRE CAULKING WHEN THE METAL DUCT PENETRATE THE RATED ASSEMBLY.
11. PROVIDE ALDES CONSTANT AIRFLOW REGULATOR AT GUESTROOM EXHAUST INLETS TO MINIMIZE BALANCING EFFORT.
12. PROVIDE REFRIGERANT PIPES FROM/TO CORRESPONDING CONDENSING UNIT. REFER TO MANUFACTURER FOR INSTRUCTION NSULATION. PROVIDE 1-1/2" AF ARMAFLEX INSULATION AS REQUIRED.

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CIVIL ENGINEER

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ARCHITECT OF RECORD :

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COURTYARD® Marriott®

REVISIONS

	30% SET	09.14.2018
	90% SET	11.20.2018

DRAWING NAME

MECHANICAL
SECOND FLOOR PLAN

PROJECT NAME

COURTYARD INN,®
Lake City, Florida

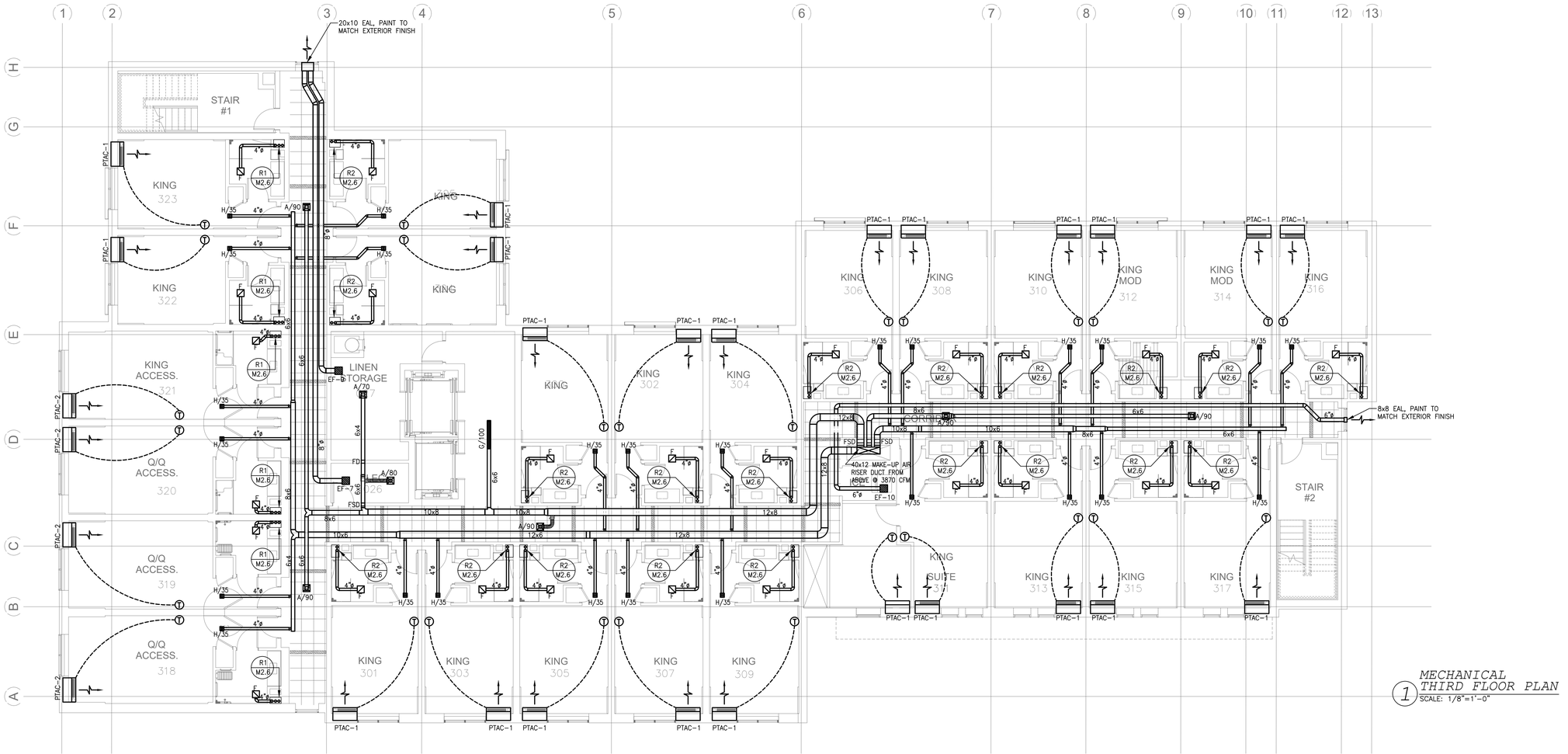
SEAL+SIGNATURE

DUNG D. VU
LICENSE
No. 83005
STATE OF FLORIDA
PROFESSIONAL ENGINEER
FLORIDA REG : AR0007005

DATE 07 DEC 2021
PROJECT NUMBER 2K2101
DRAWING NUMBER
DECOR: XH

M2.1

PAGE NUMBER



1 MECHANICAL THIRD FLOOR PLAN
SCALE: 1/8"=1'-0"

GENERAL NOTES:

1. REFER TO SHEET M1.0-1 & M3.0 FOR DETAILS AND SCHEDULES.
2. REFER TO SHEET M2.1 THRU M2.5 FOR THE SECOND, THIRD, FOURTH, FIFTH AND SIXTH FLOOR PLAN MECHANICAL DRAWING.
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5. REFER THE ARCHITECTURAL PLANS AND ID PLANS FOR THE EXACT THERMOSTAT LOCATION.
6. CONNECT FULL LINE SIZE CONDENSATE DRAIN FROM EACH PACKAGED AIR CONDENSING UNIT TO THE 2" DIA CONDENSATE RISER. RUN CONDENSATE DRAIN LINES FROM AIR HANDLING UNITS TO THE NEAREST FLOOR DRAIN, OR HUB DRAIN. PROVIDE A P-TRAP AT EACH DRAIN CONNECTION.
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DRAWING NAME

MECHANICAL
THIRD FLOOR PLAN

PROJECT NAME

COURTYARD INN,®
Lake City, Florida

SEAL+SIGNATURE

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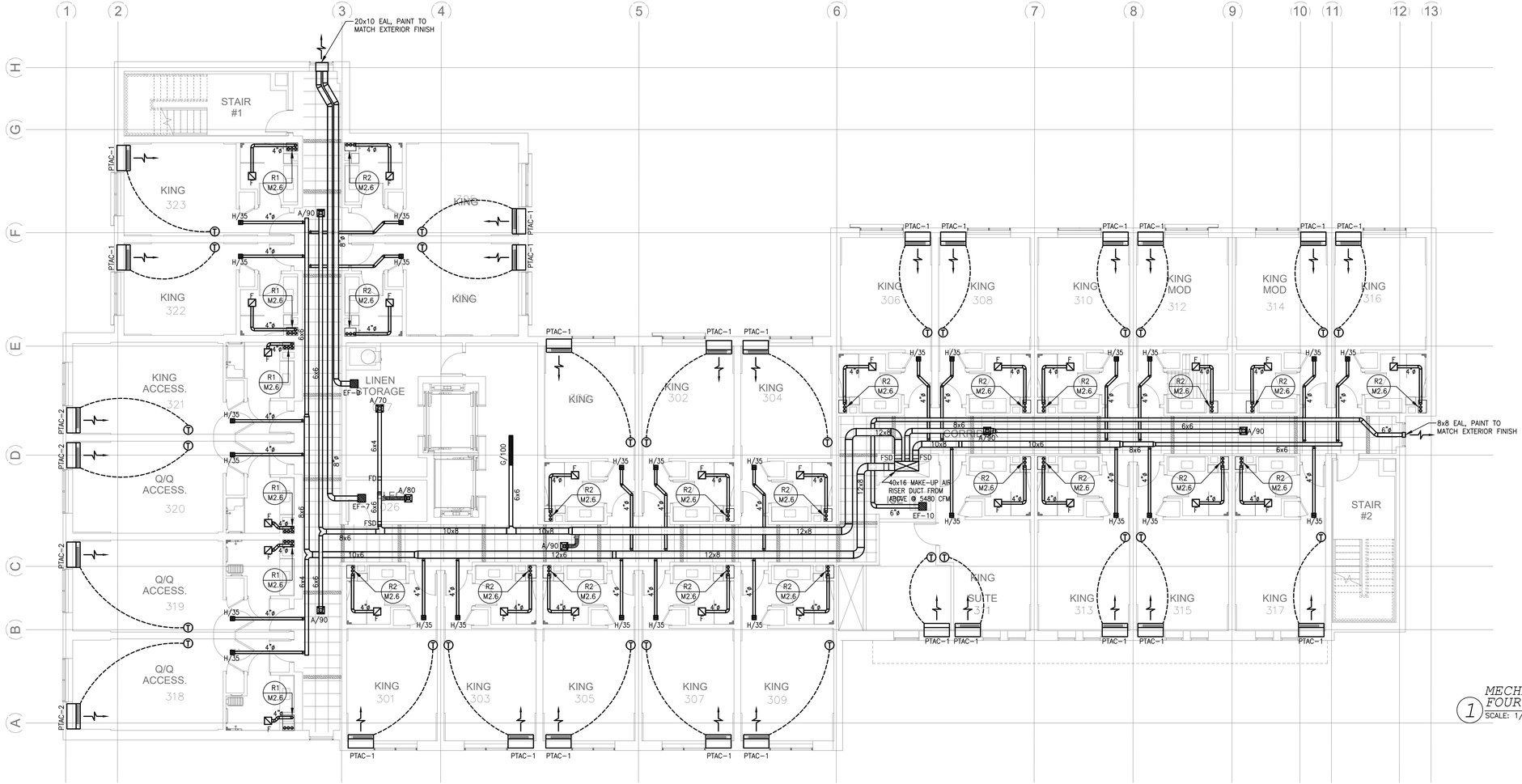

1 MECHANICAL FOURTH FLOOR PLAN
SCALE: 1/8"=1'-0"

GENERAL NOTES:

1. REFER TO SHEET M1.0-1 & M3.0 FOR DETAILS AND SCHEDULES.
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90% SET	11.20.2018

DRAWING NAME

MECHANICAL
FOURTH FLOOR PLAN

PROJECT NAME

COURTYARD INN,®
Lake City, Florida

SEAL+SIGNATURE

DUNG D VU
LICENSE
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STATE OF FLORIDA
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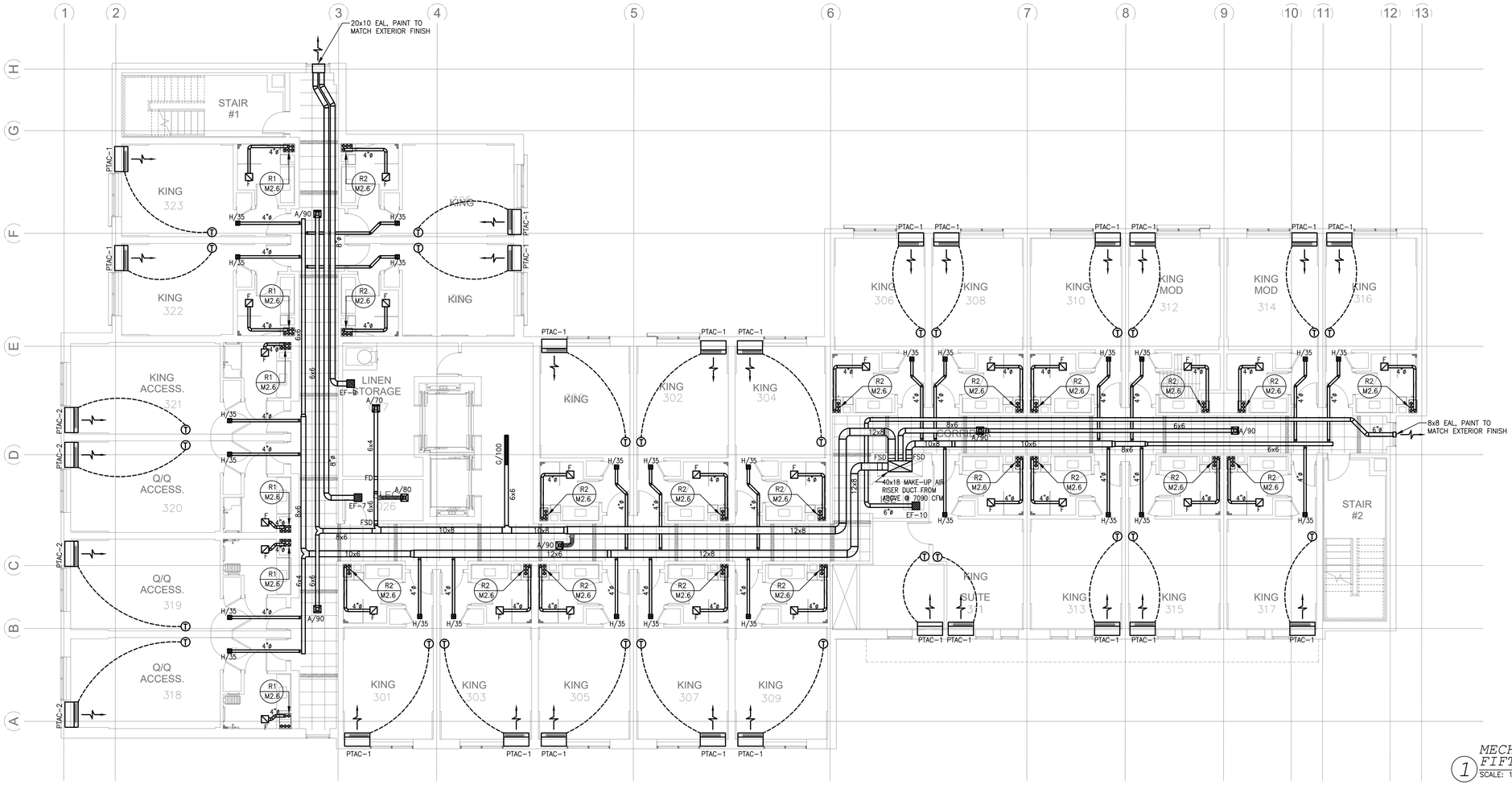

1 MECHANICAL FIFTH FLOOR PLAN
SCALE: 1/8"=1'-0"

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REVISIONS

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DRAWING NAME

MECHANICAL
FIFTH FLOOR PLAN

PROJECT NAME

COURTYARD INN,®
Lake City, Florida

SEAL+SIGNATURE

DUNG D. VU LICENSE No. 83005 STATE OF FLORIDA PROFESSIONAL ENGINEER
FLORIDA REG.: AR0007005

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PROJECT NUMBER 2K2101
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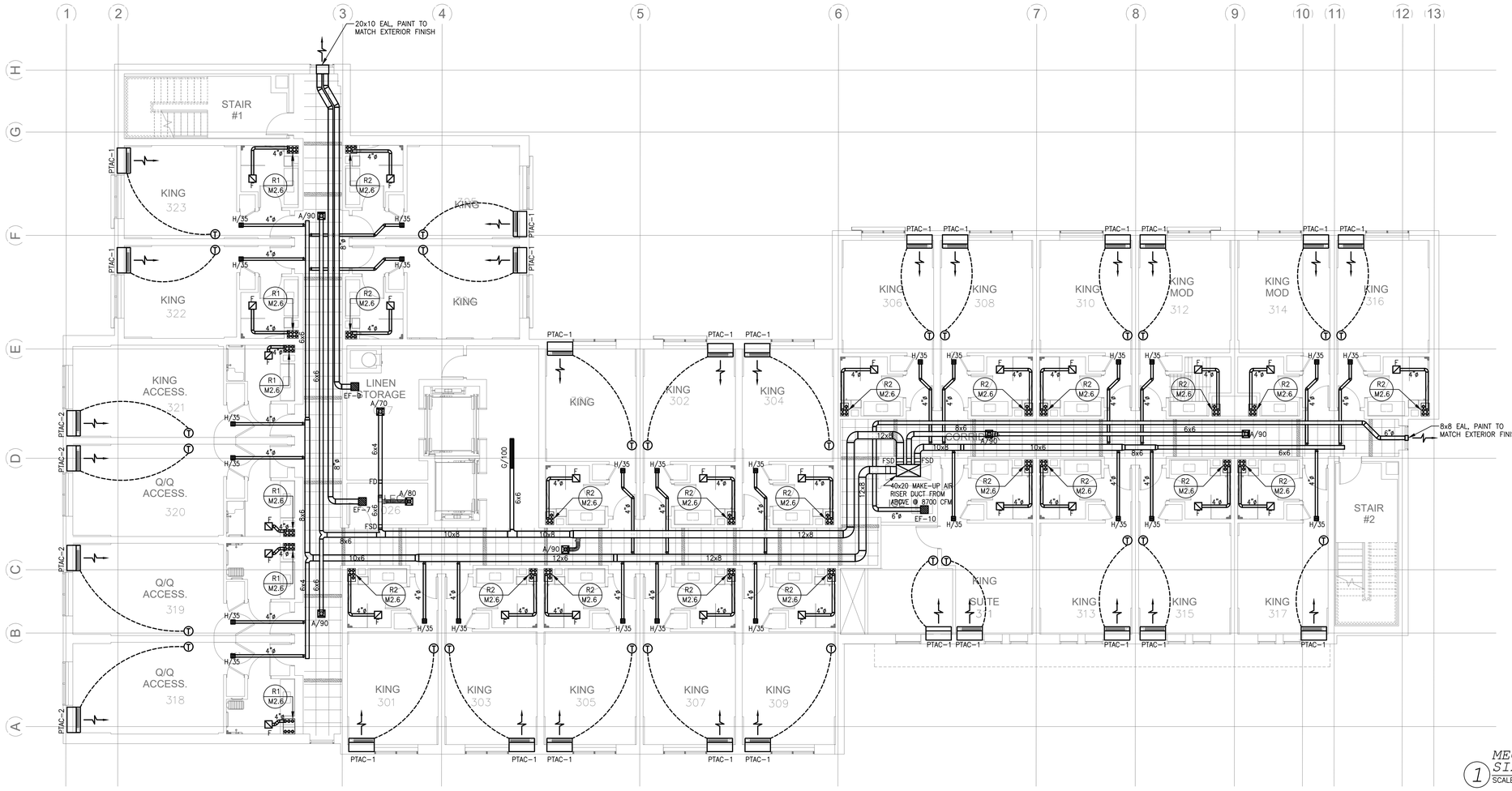

1 MECHANICAL SIXTH FLOOR PLAN
SCALE: 1/8"=1'-0"

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MECHANICAL
SIXTH FLOOR PLAN

PROJECT NAME

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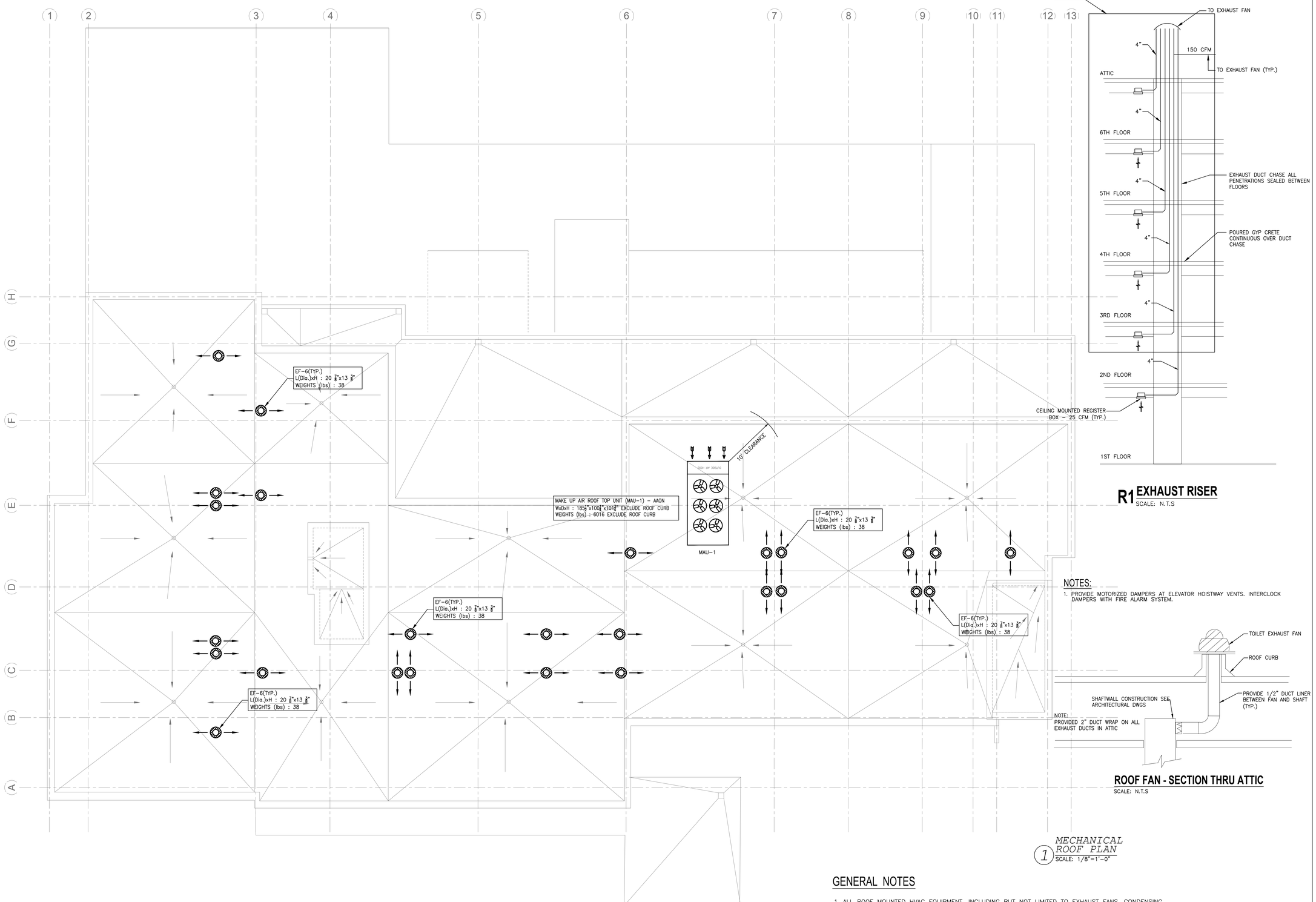

R1 EXHAUST RISER

SCALE: N.T.S

NOTES:

1. PROVIDE MOTORIZED DAMPERS AT ELEVATOR HOISTWAY VENTS. INTERCLOCK DAMPERS WITH FIRE ALARM SYSTEM.

ROOF FAN - SECTION THRU ATTIC

SCALE: N.T.S

1 MECHANICAL ROOF PLAN

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

GENERAL NOTES

1. ALL ROOF MOUNTED HVAC EQUIPMENT, INCLUDING BUT NOT LIMITED TO EXHAUST FANS, CONDENSING UNITS, AND ROOF-TOP UNITS, SHALL BE A MINIMUM OF 10' FROM THE ROOF'S EDGE, OR PARAPET, UNLESS OTHERWISE NOTED ON PLANS. IN SUCH CASE, CONTRACTOR SHALL COORDINATE WITH ARCHITECT TO PROVIDE SAFETY HANDRAILS AROUND ROOF MOUNTED HVAC EQUIPMENT THAT IS LOCATED LESS THAN 10' FROM ROOF'S EDGE, OR PARAPET.
2. PROVIDE TRANSITION AS REQUIRED TO CONNECT THE EXHAUST DUCT TO EXHAUST FAN ON ROOF. FIELD VERIFY EXACT LOCATION AT SITE.

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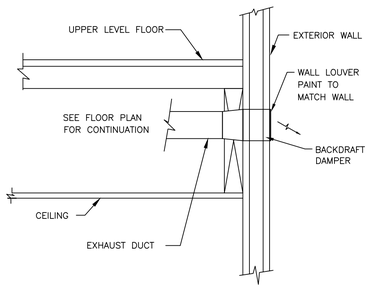
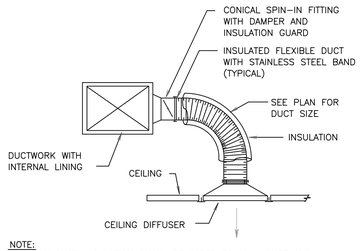


9 DUCT TRANSITION DETAIL

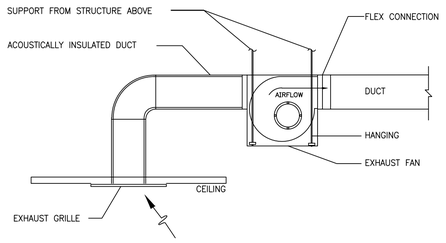
SCALE: NTS



NOTE:
FLEXIBLE DUCT INSULATION SHALL BE TAPED TO MAIN DUCT AND TO BACK OF CEILING DIFFUSER. INSULATION SHALL COVER SPIN-IN FITTING AND FLUSH WITH THE BACK OF DIFFUSER.

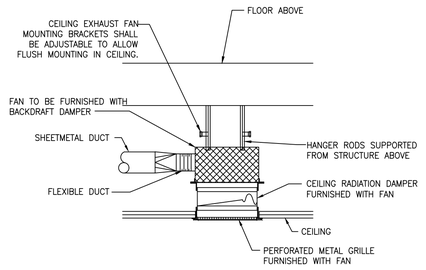
8 FLEXIBLE DUCT CONNECTION DETAIL

SCALE: NTS



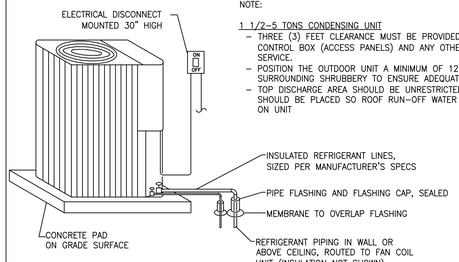
7 INLINE EXHAUST FAN DETAIL

SCALE: NTS



6 CEILING EXHAUST FAN DETAIL

SCALE: NTS

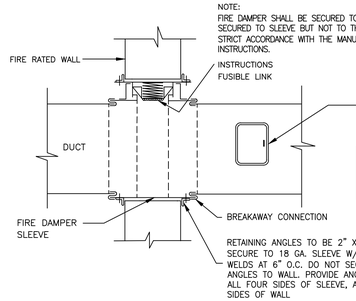


NOTE:

1 1/2-5 TONS CONDENSING UNIT
- THREE (3) FEET CLEARANCE MUST BE PROVIDED IN FRONT OF THE CONTROL BOX (ACCESS PANELS) AND ANY OTHER SIDE REQUIRING SERVICE.
- POSITION THE OUTDOOR UNIT A MINIMUM OF 12" FROM ANY WALL OR SURROUNDING SHRUBBERY TO ENSURE ADEQUATE AIRFLOW.
- TOP DISCHARGE AREA SHOULD BE UNRESTRICTED FOR 100" MINIMUM. UNIT SHOULD BE PLACED SO ROOF RUN-OFF WATER DOES NOT POUR DIRECTLY ON UNIT

5 CONDENSER UNIT SLAB @ GRADE DETAIL

SCALE: NTS

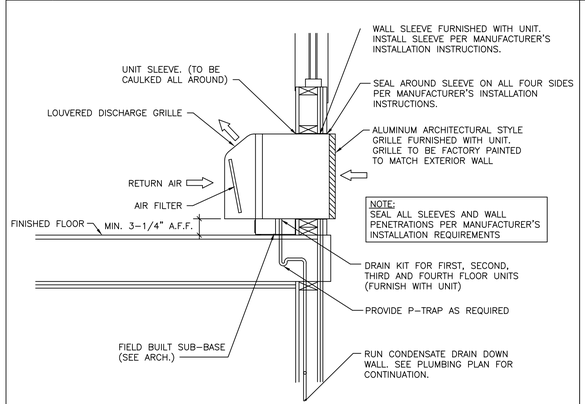


NOTE:
FIRE DAMPER SHALL BE SECURED TO A SLEEVE. ANGLES SHALL BE SECURED TO SLEEVE BUT NOT TO THE WALL. INSTALL FIRE DAMPER IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

DUCT WIDTH	DOOR SIZE
10" THRU 12"	8" x 8"
14" THRU 20"	12" x 12"
22" AND ABOVE	18" x 18"

4 FIRE DAMPER AT WALL DETAIL

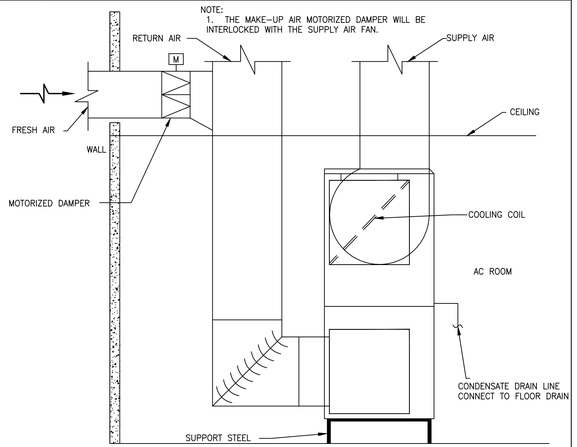
SCALE: NTS



NOTE:
SEAL ALL SLEEVES AND WALL PENETRATIONS PER MANUFACTURER'S INSTALLATION REQUIREMENTS

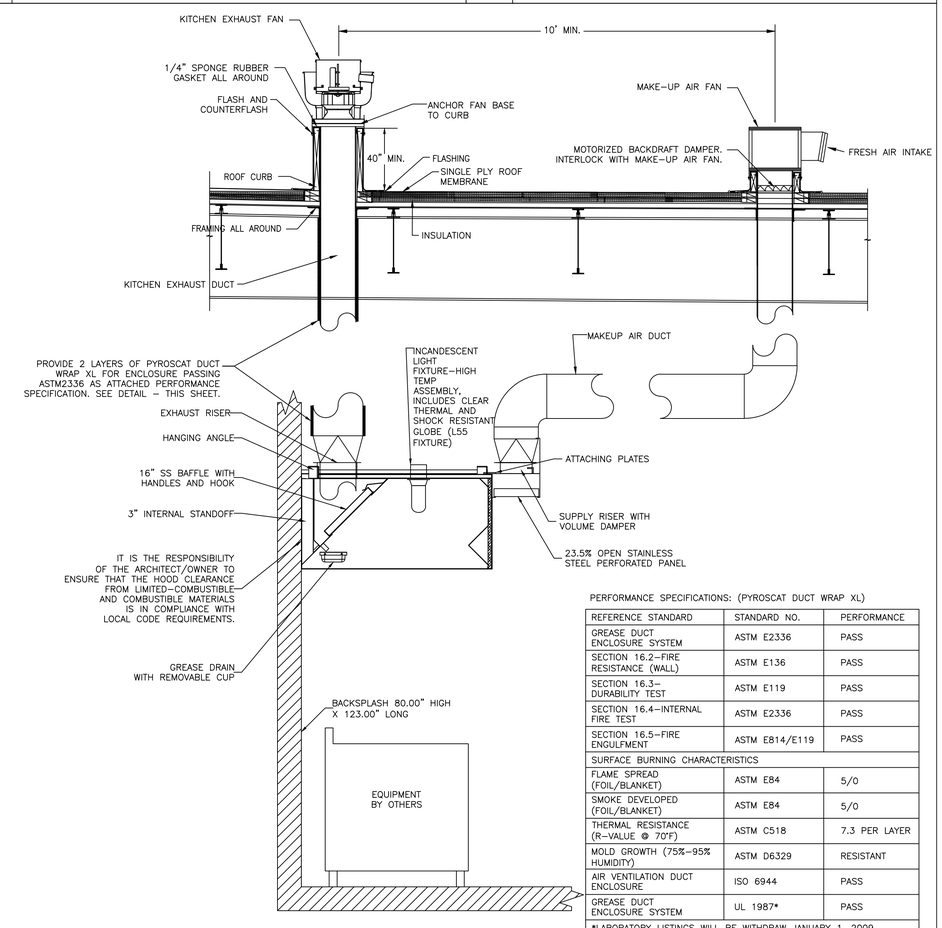
3 PACKAGED TERMINAL A/C UNIT DETAIL

SCALE: NTS



2 AHUs VERTICAL MOUNTING DETAIL

SCALE: NTS



PERFORMANCE SPECIFICATIONS: (PYROSCAT DUCT WRAP XL)

REFERENCE STANDARD	STANDARD NO.	PERFORMANCE
GREASE DUCT ENCLOSURE SYSTEM	ASTM E2336	PASS
SECTION 16.2-FIRE RESISTANCE (WALL)	ASTM E136	PASS
SECTION 16.3-DURABILITY TEST	ASTM E119	PASS
SECTION 16.4-INTERNAL FIRE TEST	ASTM E2336	PASS
SECTION 16.5-FIRE ENGULFMENT	ASTM E814/E119	PASS
SURFACE BURNING CHARACTERISTICS		
FLAME SPREAD (FOIL/BLANKET)	ASTM E84	5/0
SMOKE DEVELOPED (FOIL/BLANKET)	ASTM E84	5/0
THERMAL RESISTANCE (R-VALUE @ 70°F)	ASTM C518	7.3 PER LAYER
MOLD GROWTH (75%-95% HUMIDITY)	ASTM D6329	RESISTANT
AIR VENTILATION DUCT ENCLOSURE	ISO 6944	PASS
GREASE DUCT ENCLOSURE SYSTEM	UL 1987*	PASS

*LABORATORY LISTINGS WILL BE WITHDRAW JANUARY 1, 2009 FORCING SYSTEMS TO BE TESTED TO ASTM E2336

1 KITCHEN EXHAUST FAN INSTALLATION DETAIL

SCALE: NTS

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ARCHITECT
N.C.A.R.B. Certified
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Lake City, FL 32055
386/365-4355

OWNER

MORPHEUS GROUP
404 NW HALL OF FAME DRIVE
LAKE CITY, FL 32055

CIVIL ENGINEER

CHRISTOPHER A. GMUER, PE
GMUER ENGINEERING, LLC
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ARCHITECT OF RECORD :

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MEP GREEN DESIGN & BUILD
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HOUSTON, TX 77058
P: 281-786-1195
WWW.MEPGREENDESIGNS.COM

COURTYARD® Marriott®

REVISIONS

	30% SET	09.14.2018
	90% SET	11.20.2018

DRAWING NAME

MECHANICAL
INSTALLATION DETAILS

PROJECT NAME

COURTYARD INN,®
Lake City, Florida

SEAL+SIGNATURE

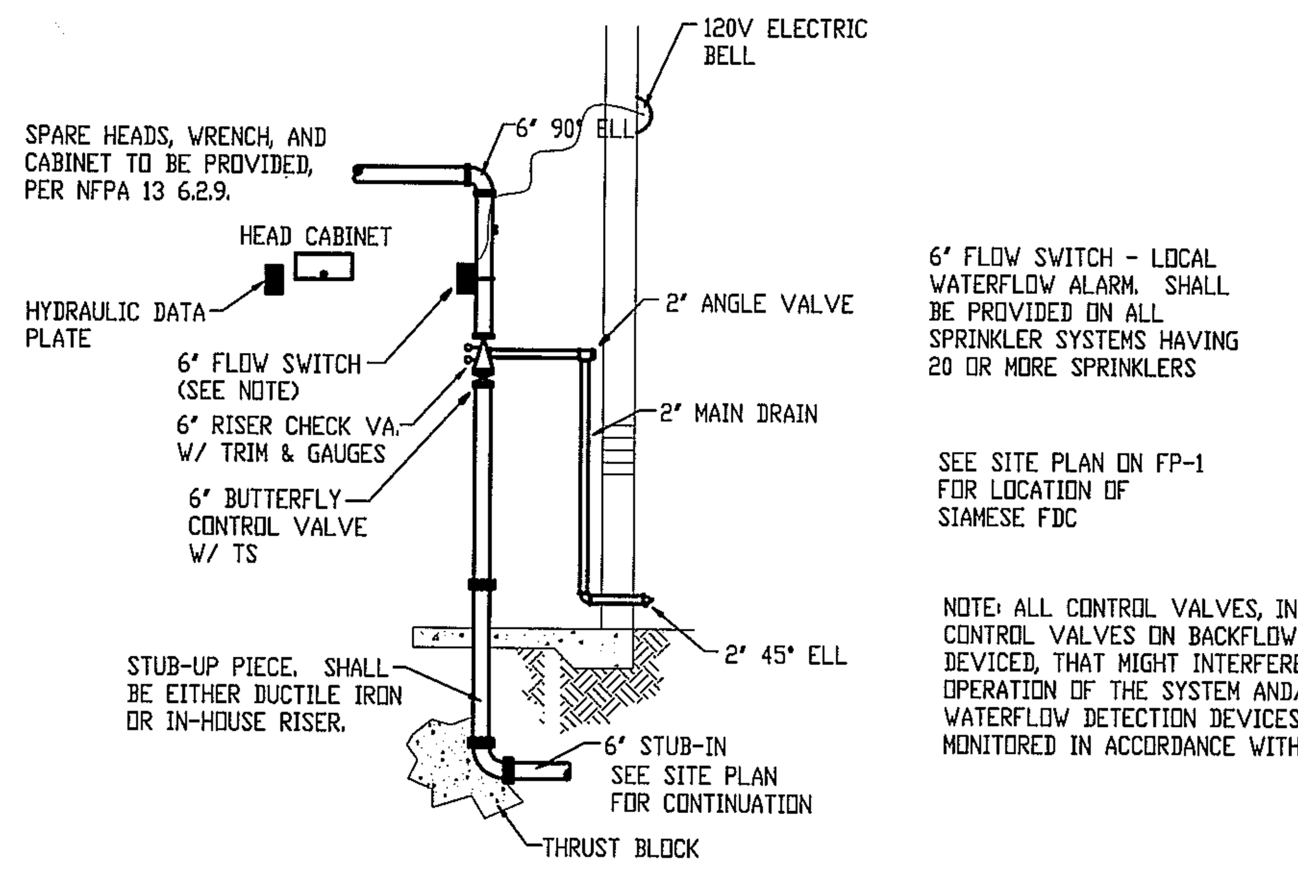
DUNG D. VU
LICENSE
No. 83005
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

FLORIDA REG.: AR0007005

DATE 07 DEC 2021
PROJECT NUMBER 2K2101
DRAWING NUMBER
DECOR: XH

M3.0

PAGE NUMBER

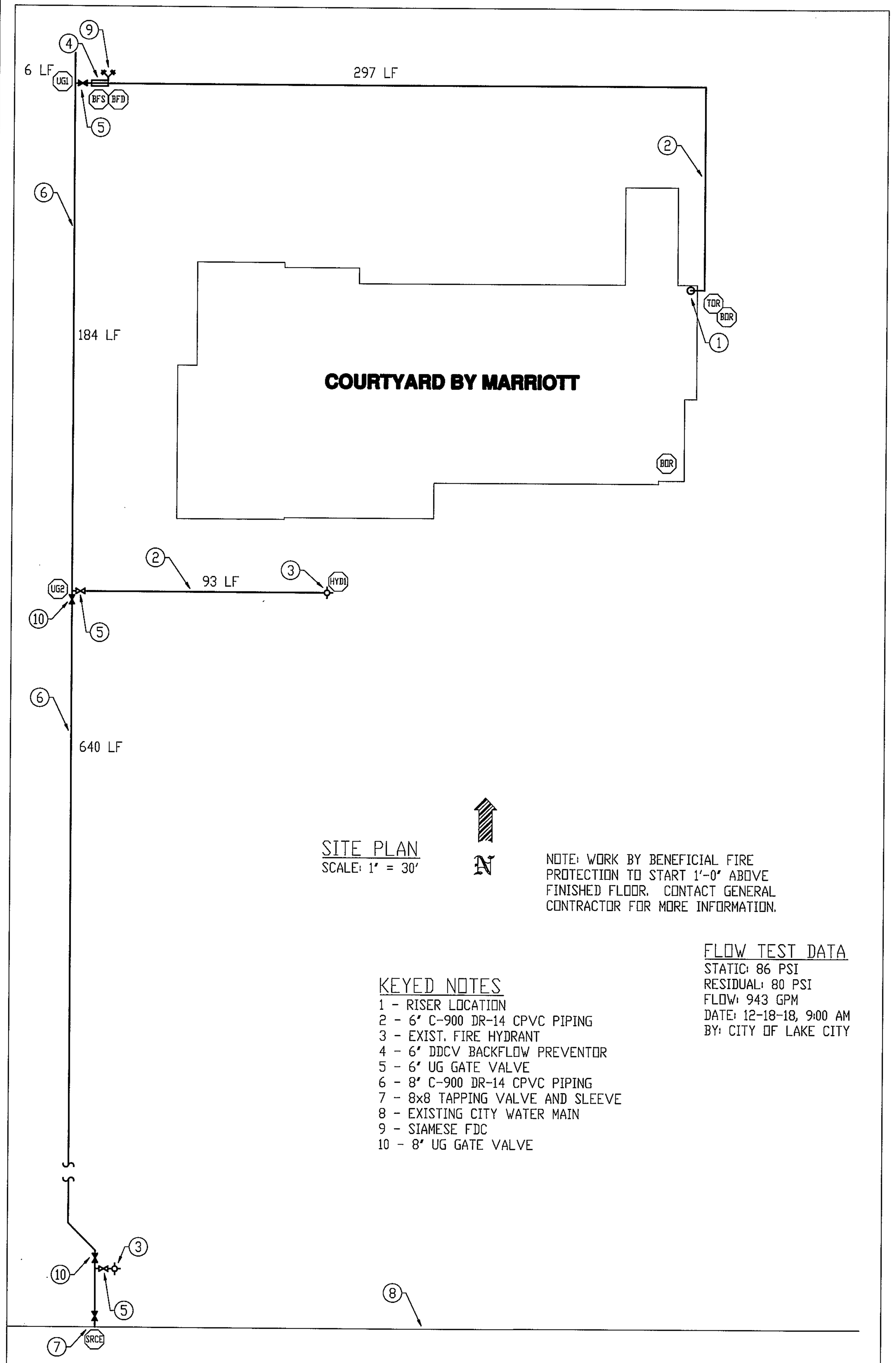


6" FLOW SWITCH - LOCAL WATERFLOW ALARM. SHALL BE PROVIDED ON ALL SPRINKLER SYSTEMS HAVING 20 OR MORE SPRINKLERS

SEE SITE PLAN ON FP-1 FOR LOCATION OF SIAMESE FDC

NOTE: ALL CONTROL VALVES, INCLUDING CONTROL VALVES ON BACKFLOW PREVENTION DEVICED, THAT MIGHT INTERFERE WITH THE OPERATION OF THE SYSTEM AND/OR ALL WATERFLOW DETECTION DEVICES SHALL BE MONITORED IN ACCORDANCE WITH NFPA #72.

RISER DETAIL
SCALE: NONE

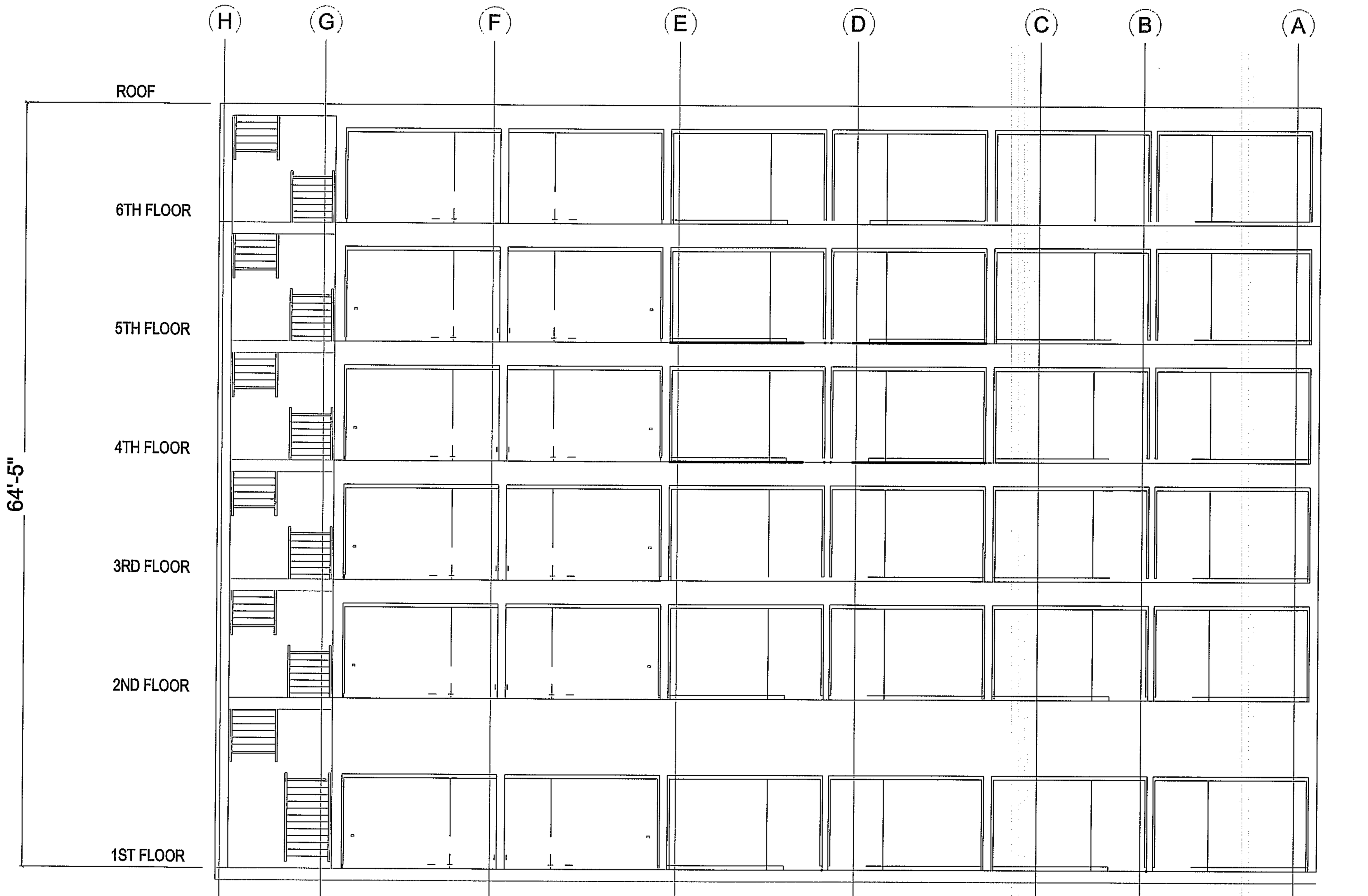


SITE PLAN
SCALE: 1" = 30'

NOTE: WORK BY BENEFICIAL FIRE PROTECTION TO START 1'-0" ABOVE FINISHED FLOOR. CONTACT GENERAL CONTRACTOR FOR MORE INFORMATION.

KEYED NOTES
1 - RISER LOCATION
2 - 6" C-900 DR-14 CPVC PIPING
3 - EXIST. FIRE HYDRANT
4 - 6" DDCV BACKFLOW PREVENTOR
5 - 6" UG GATE VALVE
6 - 8" C-900 DR-14 CPVC PIPING
7 - 8x8 TAPPING VALVE AND SLEEVE
8 - EXISTING CITY WATER MAIN
9 - SIAMESE FDC
10 - 8" UG GATE VALVE

FLOW TEST DATA
STATIC: 86 PSI
RESIDUAL: 80 PSI
FLOW: 943 GPM
DATE: 12-18-18, 9:00 AM
BY: CITY OF LAKE CITY



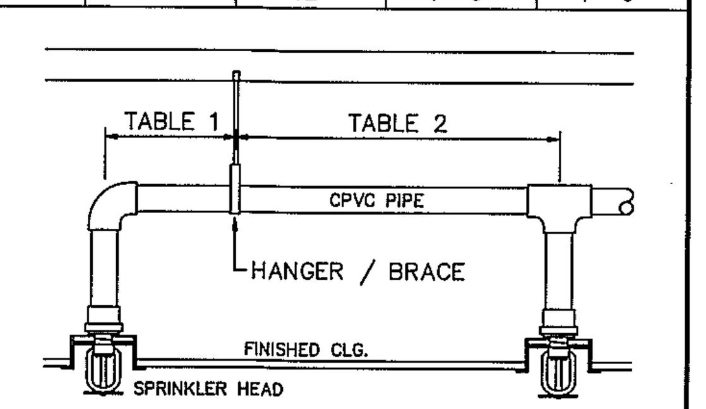
BUILDING SECTION "A"
SCALE: 1/8" = 1'-0"

GENERAL NOTES

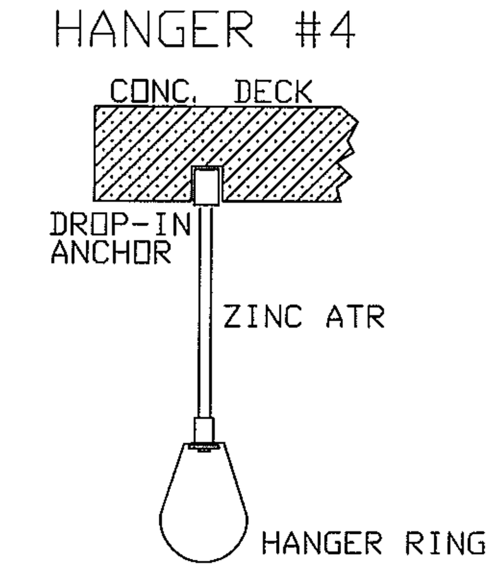
1. ALL PIPE AND MATERIALS TO BE PER NFPA 13 2013 AND SHALL BE LISTED FOR FIRE PROECTION USE.
2. SYSTEM SQUARE FOOTAGE IS 14,794 SQUARE FEET PER FLOOR AND 88,764 SQUARE FEET FOR ALL FIVE FLOORS.
3. THIS SPRINKLER SYSTEM IS A WET PIPE TYPE IN NON-COMBUSTIBLE AND COMBUSTIBLE UNOBSTRUCTED CONSTRUCTION.
4. ALL HANGERS TO BE INSTALLED AND CONFORM TO NFPA 13 STANDARDS. SEE HANGER DETAILS THIS PAGE.
5. MAXIMUM DEFLECTOR DISTANCE FROM CEILING/DECK IS 12".
6. ALL SYSTEMS TO BE HYDROSTATICALLY TESTED AT 200 PSI FOR 2 HOURS AND A MATERIAL TEST CERTIFICATE SHALL BE PROVIDED TO THE OWNER.
7. THE THREADS FOR THE FIRE DEPARTMENT CONNECTION SHALL MEET THE LOCAL FIRE DEPARTMENT REQUIREMENTS.
8. A HYDRAULIC INFORMATION SIGN SHALL BE PROVIDED FOR EACH HYDRAULIC AREA.
9. PENETRATIONS OF FIRE RATED WALLS SHALL BE FIRECAULKED WITH APPROVED CAULKING MATERIAL.
10. ALL FITTINGS TO BE APPROVED ROLL GROOVED, THREADED, OR WELDED. ALL OTHER FITTINGS ARE TO BE GROOVED AND WELDED.
11. THERE ARE NO SKYLIGHTS OR UNUSUAL CEILINGS.
12. ALL HEADS ARE TO BE GLOBE BRAND.
13. NOT USED THIS PROJECT
14. ALL AREAS TO BE LIGHT HAZARD OCCUPANCY EXCEPT FOR FOOD PREP AREA, LAUNDRY AREA, MECHANICAL, STORAGE, AND ELECTRICAL ROOMS, WHICH ARE TO BE ORDINARY HAZARD, GROUP I.
15. HEADS ARE TO COVER A MAXIMUM OF 130 SQUARE FEET PER HEAD IN ORDINARY HAZARD AREAS, 225 SQUARE FEET PER HEAD IN LIGHT HAZARD AREAS, AND 324 SQUARE FEET IN ROOMS.
16. COOKING EQUIPMENT (I.E. HOODS) SHALL BE PROTECTED PER NFPA 96 AND PROVIDE A UL 300 EXTINGUISHING SYSTEM PER MARRIOTT'S MODULE 14. NO WET PIPE SPRINKLER HEADS TO PROTECT THESE AREAS.
17. HEADS IN LAUNDRY CHUTE ARE TO BE PIPED PER NFPA 13.
18. SPARE HEADS, WRENCH, AND CABINET TO BE PROVIDED, PER NFPA 13 6.2.9.

CPVC PIPE HANGER LOCATION DETAIL

	TABLE 1		TABLE 2	
PIPE SIZE	LESS THAN 100 psi	MORE THAN 100 psi	LESS THAN 100 psi	MORE THAN 100 psi
3/4"	9"	6"	4'-0"	3'-0"
1"	12"	9"	5'-0"	4'-0"
1-1/4"	16"	12"	6'-0"	5'-0"
1-1/2"	24"	12"	7'-0"	7'-0"
2"	24"	12"	7'-0"	7'-0"
2-1/2"	24"	12"	7'-0"	7'-0"
3"	24"	12"	7'-0"	7'-0"



HANGER #4

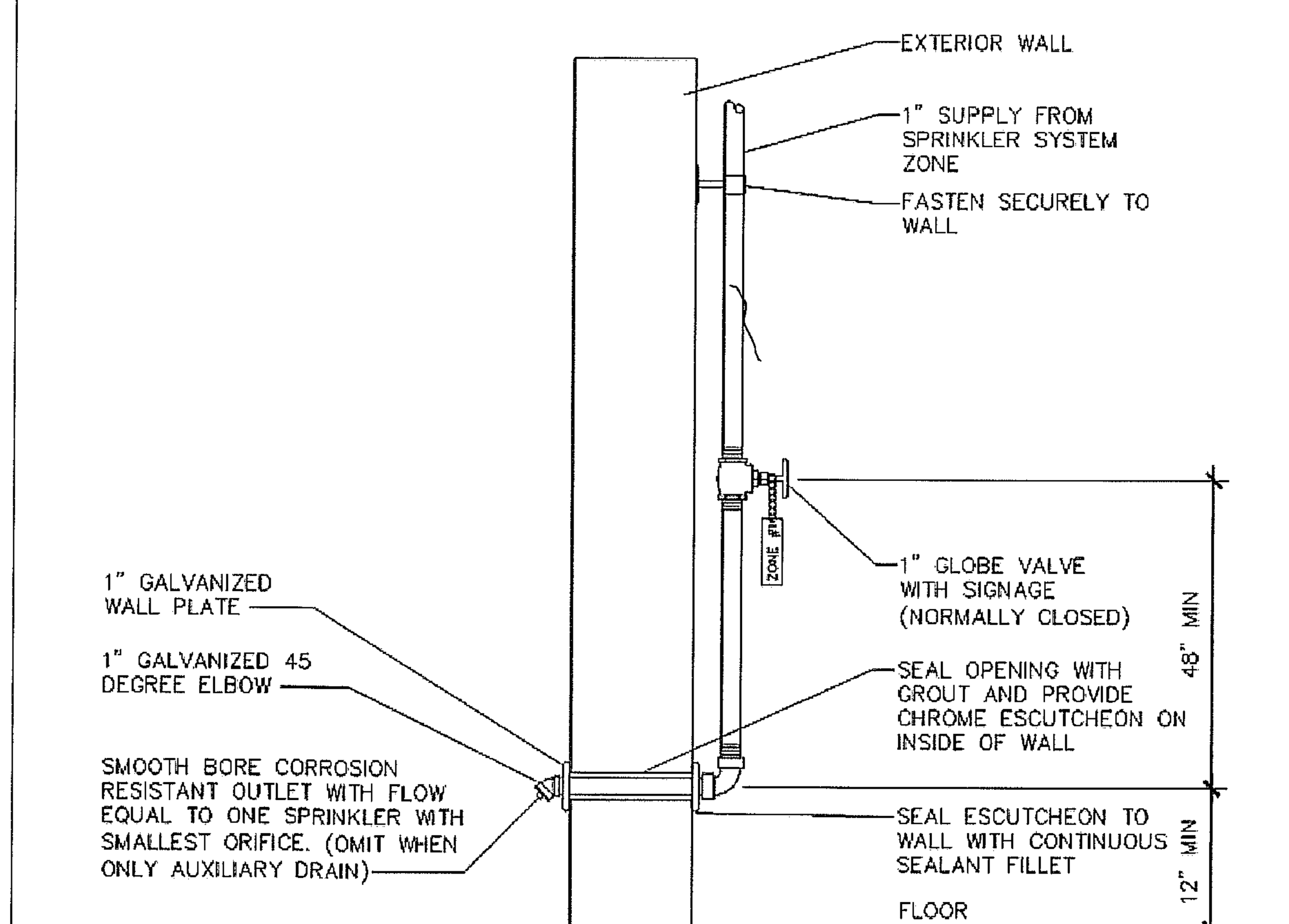


KEYED NOTES - STANDPIPE/RISER
1. 4" FROM RISER
2. 2½ HOSE VALVE W/ 1½ REDUCER
3. 2" BUTTERFLY VALVE
4. 2" FLOW SWITCH
5. PRESSURE GAUGE
6. 1" TEST-N-DRAIN VALVE
7. 4" STANDPIPE AND/OR RISER
8. 2" GANG DRAIN LINE

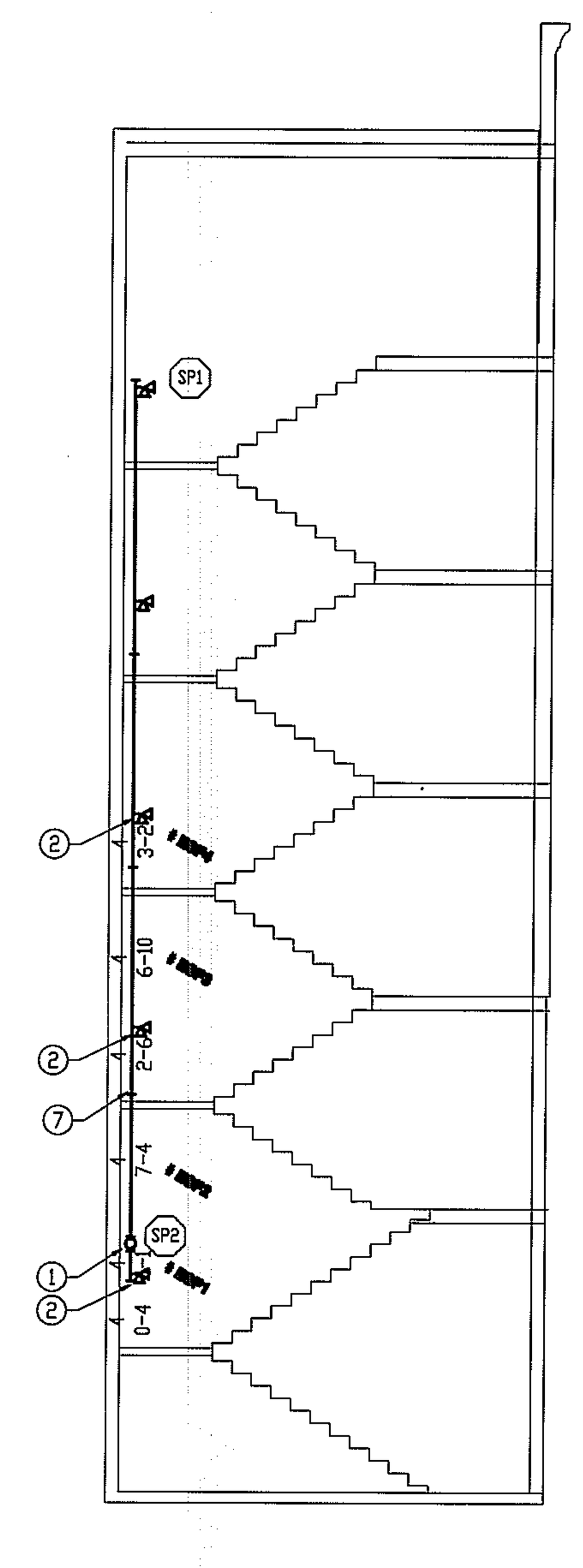
HEAD LEGEND

◉ 212	(1/2, K=5.6)	GL5601 QR 155° WHITE STD COV SEMI-REC PEND.
○ 11	(1/2", K=5.6)	GL5615 QR 200° BRASS UPRIGHT
⊗ 19	(3/4", K=11.2)	GL1113 QR 200° WHITE EXT COV SEMI-REC. PEND.
● 296	(1/2", K=4.7)	GL4710 QR 155° WHITE STD. COV. RESID SEMI-REC. PEND.
⊗ 2	(1",K=5.6)	GL5635 200° QR CHROME 401 DRY PENDENT (12")
◀ 136	(1/2, K=4.2)	GL4231 QR 155° WHITE RESID. HSW
◁ 4	(1/2, K=5.6)	GL5626 QR 200° BRASS HORIZ SIDEWALL

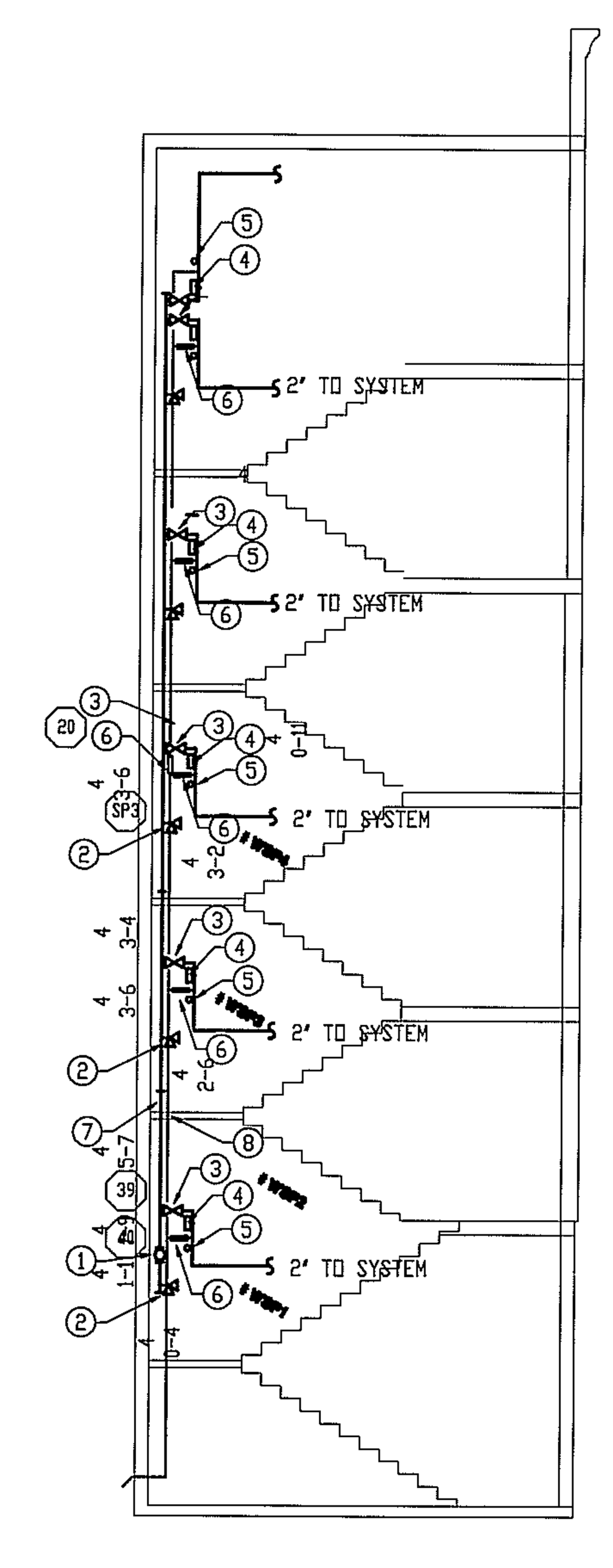
680 TOTAL HEADS



6 AUXILIARY DRAIN/INSPECTOR'S TEST
NTS 10.30.07 F12



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



STANDPIPE/SPRINKLER RISER DETAIL
SCALE: 1/8" = 1'-0"

Your Plans have been reviewed for Code Compliance. Please note any Code Sections in Red on the Plans. Every effort has been made to insure your plans comply with all applicable State and City Laws, Ordinances and Building/Fire Codes. This plan review does not relieve the owner or builder of full compliance of any Law, Ordinance or Building/Fire Codes. A copy of the NOC, Permit and Approved Plans shall be posted on the job site.
Reviewed By: Date 03/11/19

CONTRACTOR COPY

Beneficial Fire Protection, Inc.
12522 U.S. HIGHWAY 301 N., SUITE 1
THONOTOSASSA, FLORIDA 33592

LANNCO, INC
ENGINEERING CONSULTING
CERTIFICATE OF AUTHORIZATION # 26222
P.O. BOX 41481
ST. PETERSBURG
FLORIDA 33743

PROFESSIONAL SEAL

FRANK BONGHI
FLORIDA P.E. 54702

COURTYARD BY MARRIOTT
3004 W. US HIGHWAY 90
LAKE CITY, FLORIDA 32055

ISSUE DATE: 12-6-18

REVISIONS

CONTRACTOR COPY

DRAWING NUMBER:

FP-1

121918

SEPARATE BUILDING. NO OCCUPANCY.

NO SPRINKLERS.

POOL

SPRINKLERS OMITTED FROM WHEN THE STRUCTURE IS ENTIRELY OF NON-COMBUSTIBLE CONSTRUCTION PER NFPA-13 (2010 ED), SECTION 8.15.7.2

Design Area No. 3 – ORD HAZ. I
Density 0.15 Area 947 SQ FT
Flow 613.76 gpm @ 72.12 psi
Includes 250 gpm Hose allowance

REMOTE INSPECTORS TEST VALVE

4" STANDPIPE

6" SPRINKLER RISER

STAIR #1

STAIR #2

KING

KING

Q/Q ACCESS

Q/Q ACCESS

Q/Q ACCESS

Q/Q ACCESS

CORRIDOR

LAUNDRY

LAUNDRY CHUTE

EMPLOYEE BREAK ROOM

LAUNDRY

WC

ENG OFFICE

HEAD HOUSE KEEPER

WORKROOM

SALES OFFICE

GM OFFICE

LUGGAGE COMP/ TELECOM

GUEST ICE LAUNDRY

MARKET

RECEPTION

CARTS

VESTIBULE

FITNESS CENTER

STORAGE

ELECTRICAL CLOSET

MECH

WOMEN'S RESTROOM

MEN'S RESTROOM

LOUNGE

STG

FOOD PREP

STOR

QUICK PRINT

LOUNGE

MEETING ROOM

BUSINESS LIBRARY

SPRINKLERS OMITTED FROM WHEN THE STRUCTURE IS ENTIRELY OF NON-COMBUSTIBLE CONSTRUCTION PER NFPA-13 (2010 ED), SECTION 8.15.7.2

SPRINKLERS OMITTED FROM WHEN THE STRUCTURE IS ENTIRELY OF NON-COMBUSTIBLE CONSTRUCTION PER NFPA-13 (2010 ED), SECTION 8.15.7.2

SPRINKLERS OMITTED FROM WHEN THE STRUCTURE IS ENTIRELY OF NON-COMBUSTIBLE CONSTRUCTION PER NFPA-13 (2010 ED), SECTION 8.15.7.2

FIRST FLOOR PIPING PLAN
SCALE: 1/8" = 1'-0"

N

Beneficial Fire Protection, Inc.
12922 U.S. HIGHWAY 301 N., SUITE 1
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JANDO, INC
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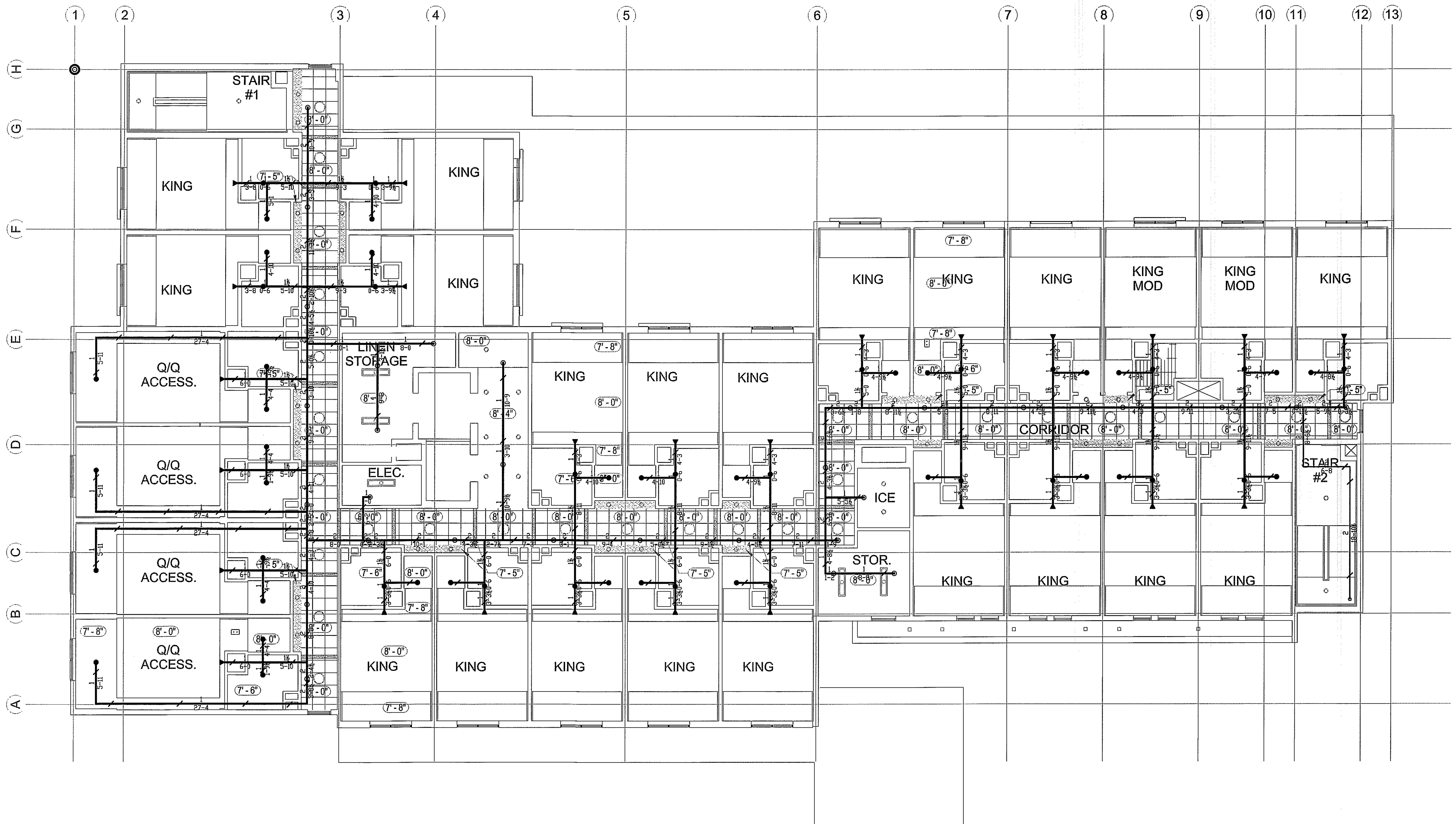

2nd THRU 5th FLOOR PIPING PLAN
SCALE: 1/8" = 1'-0"

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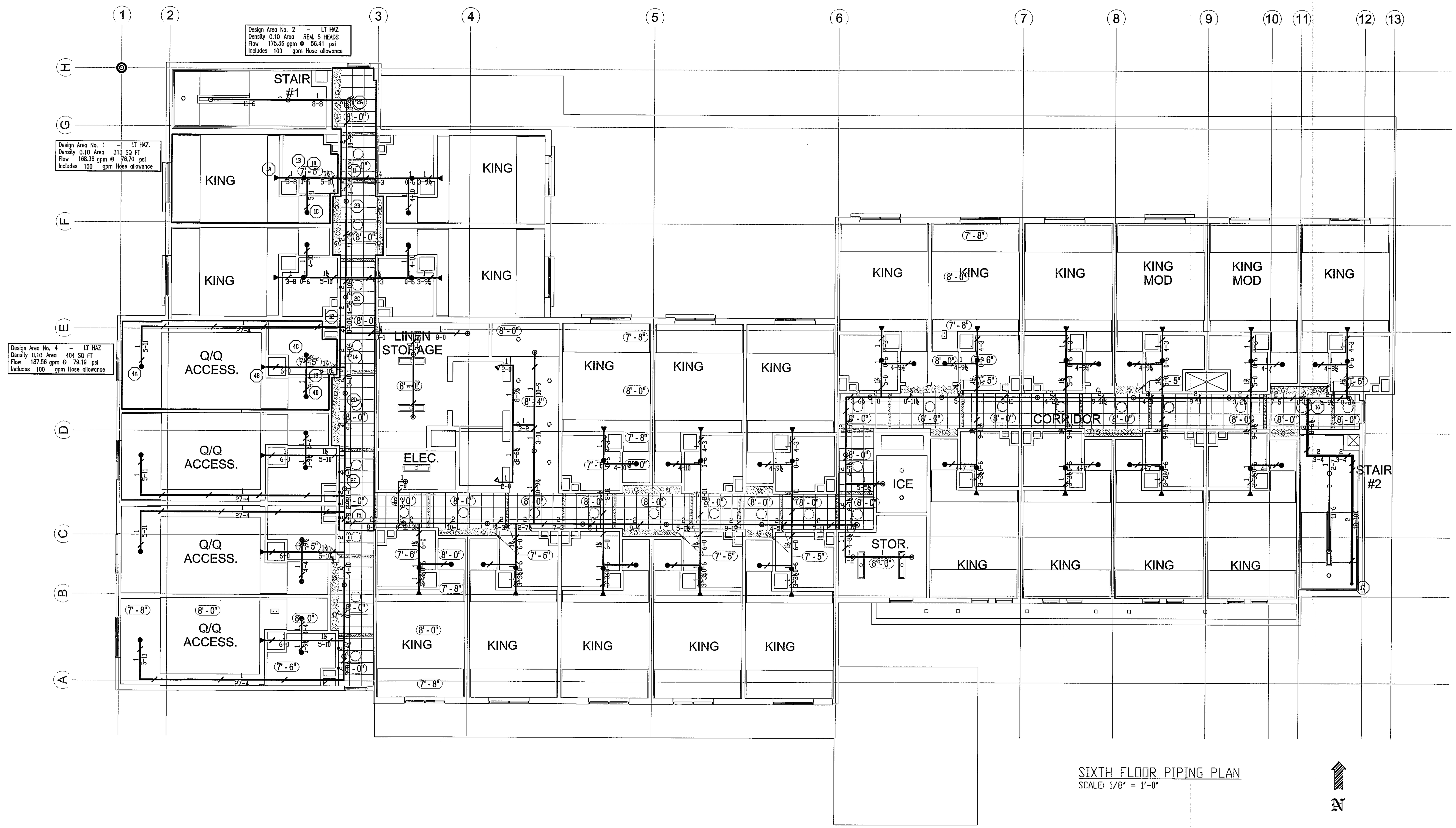
121918



SIXTH FLOOR PIPING PLAN
SCALE: 1/8" = 1'-0"

N

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