

HVAC SPECIFICATIONS

1. A MAINTENANCE LABEL SHALL BE AFFIXED TO MECHANICAL EQUIPMENT AND A MAINTENANCE MANUAL SHALL BE PROVIDED TO THE OWNER PER STANDARDS.

2. CONCEALED SPACES, CIRCULATION AIR

INSULATED WIRES, PLASTIC TUBING OR PIPING, PIPE INSULATION, CONDENSATE PAN INSULATION, WOOD, PVC, ABS AND OTHER PLASTICS) TO BE IN CONCEALED SPACES USED TO CONVEY CIRCULATING AIR SUPPLY. WHEN COMBUSTIBLE MATERIAL IS TO BE LOCATED IN THE ABOVE SPACES, IT SHALL BE APPROVED FOR SUCH INSULATION.

3. INSULATION OF DUCTS

PORTIONS OF SUPPLY AIR AND RETURN AIR DUCTS CONVEYING HEATED OR COOLED AIR LOCATED IN ONE OR MORE OF THE FOLLOWING SPACES SHALL BE INSULATED TO A MINIMUM INSTALLED LEVEL OF R-8:

- OUTDOORS; OR
- IN A SPACE BETWEEN THE ROOF AND AN INSULATED CEILING; OR
- IN A SPACE DIRECTLY UNDER A ROOF WITH FIXED VENTS OR OPENINGS TO THE OUTSIDE OR UNCONDITIONED SPACES; OR
- IN AN UNCONDITIONED CRAWL SPACE; OR
- IN OTHER UNCONDITIONED SPACES.

PORTIONS OF SUPPLY AIR DUCTS THAT ARE NOT IN ONE OF THESE SPACES, INCLUDING DUCTS BURIED IN CONCRETE SLABS, SHALL BE INSULATED TO A MINIMUM INSTALLED LEVEL OF R-4.2 OR BE ENCLOSED IN DIRECTLY CONDITIONED SPACE.

4. SEALING

TRANSVERSE SUPPLY DUCTS, TAPED OR SEALED WITH MASTIC EXCEPT FOR DUCTS EXPOSED TO CONDITIONED SPACE, WHERE DUCT STATIC PRESSURE EXCEEDS 3/4" WATER, LONGITUDINAL JOINTS, TAPED OR SEALED WITH MASTIC.

5. INSPECTION

INSPECTION TO BE MADE AND DUCTWORK APPROVED BEFORE COVERING WITH INSULATION.

6. PIPE INSULATION

SPACE-CONDITIONING AND SERVICE WATER-HEATING SYSTEM SHALL BE INSULATED IN ACCORDANCE WITH THE FOLLOWING TABLE:

PIPE INSULATION THICKNESS							
FLUID TEMP. RANGE (°F)	CONDUCTIVITY RANGE (BTU·HR PER SQFT·F)	INSULATION MEAN RATING TEMP. (°F)	NOMINAL PIPE DIAMETER (")				
			<1	1 TO 1.5	1.5 TO 4	4 TO 8	8 AND LARGER
SPACE HEATING, HOT WATER SYSTEMS AND SERVICE WATER HEATING SYSTEMS							
350+	0.32-0.34	250	4.5	5.0	5.0	5.0	5.0
251-350	0.29-0.31	200	3.0	4.0	4.5	4.5	4.5
201-250	0.27-0.30	150	2.5	2.5	2.5	3.0	3.0
141-200	0.25-0.29	125	1.5	1.5	2.0	2.0	2.0
105-140	0.22-0.28	100	1.0	1.5	1.5	1.5	1.5
SPACE COOLING SYSTEMS (CHILLED WATER, REFRIGERANT AND BRINE)							
40-60	0.21-0.27	75	NONRES 0.5 RES 0.75		1.0	1.0	1.0
<40	0.20-0.26	50	1.0	1.5	1.5	1.5	1.5

EXCEPTIONS: THE FOLLOWING PIPING DOES NOT HAVE TO BE THERMALLY INSULATED: (1) FACTORY-INSTALLED PIPING WITHIN SPACE CONDITIONING EQUIPMENT; (2) PIPING THAT CONVEYS FLUIDS THAT HAVE A DESIGN OPERATING TEMPERATURE RANGE BETWEEN 55 DEGREES AND 105 DEGREES FAHRENHEIT; (3) GAS PIPING; (4) COLD DOMESTIC WATER PIPING; (5) DRAINS, VENTS, AND WASTE PIPING.

7. TEMPERATURE CONTROLS

EACH HVAC SYSTEM SHALL BE PROVIDED WITH AT LEAST ONE AUTOMATIC TEMPERATURE CONTROL DEVICE FOR THE REGULATION OF TEMPERATURE. THESE AUTOMATIC TEMPERATURE CONTROL DEVICES SHALL BE CAPABLE OF BEING SET TO MAINTAIN SPACE TEMPERATURE SET POINTS FROM 55 DEGREES F TO 85 DEGREES F, SHALL BE CAPABLE OF OPERATING THE SYSTEM HEATING AND/OR COOLING IN SEQUENCE.

EXCEPT AS ALLOWED, THESE CONTROLS SHALL BE ADJUSTABLE TO PROVIDE A DEAD BAND OF 5 DEGREES F BETWEEN FULL HEATING AND FULL COOLING. CONTROLS SHALL HAVE THE CAPABILITY OF TERMINATING ALL HEATING AT A TEMPERATURE NO MORE THAN 70 DEGREES F AND OF TERMINATING ALL COOLING AT A TEMPERATURE NOT LESS THAN 78 DEGREES F.

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SCOPE OF WORK

- EXISTING COMMERCIAL BUILDING 2ND AND 3RD FLOOR CONVERSION TO APARTMENT UNITS.
- NEW HVAC UNIT(S) TO BE INSTALLED.
- PROVIDE DUCTWORKS AND AIR DEVICES THROUGHOUT THE SPACE.

MECHANICAL CODE

- 2022 CMC
- 2022 BUILDING ENERGY EFFICIENCY STANDARDS

SYMBOLS AND ABBREVIATIONS

SA		SUPPLY AIR PLENUM CROSS-SECTION
RA		RETURN AIR PLENUM CROSS-SECTION
CD		SUPPLY DIFFUSER
RAG		RETURN AIR GRILLE
EAG		EXHAUST AIR GRILLE
SWS		SIDE WALL SUPPLY REGISTER
SWR		SIDE WALL RETURN GRILLE
		ROOM THERMOSTAT
		ROOM SENSOR
CFM		CUBIC FEET PER MINUTE
EA		EXHAUST AIR
EF		ROOF MOUNTED EXHAUST FAN
ESP		EXTERNAL STATIC PRESSURE
EXIST	(E)	EXISTING
FD		FIRE DAMPER
FLA		FULL LOAD AMPERES
HZ		HERTZ
HP		HORSEPOWER
MVD		MANUAL VOLUME DAMPER
NEW	(N)	NEW
OSA		OUTSIDE SUPPLY AIR
RLA		RATED LOAD AMPERES
RA		RETURN AIR
SA		SUPPLY AIR
SD		SMOKE DETECTOR
SP		STATIC PRESSURE
TYP		TYPICAL
UC		UNDERCUT DOOR
U.T.R.		UP THRU ROOF
V		VOLT
VTR		VENT THRU ROOF
		CO2 SENSOR
		MECHANICAL EQUIPMENT TAG
		POC
		NEW DUCT
		EXISTING DUCT
CD		CONDENSATE DRAIN
REF		REFRIGERANT LINE
		OSA INTAKE
OSA		OSA DUCT
		CO SENSOR

NOTE:
REFER TO PLAN SHEETS FOR ANY ADDITIONAL LEGEND, SYMBOLS AND RELATED ABBREVIATIONS.

HVAC GENERAL NOTES

- ALL WORK SHALL CONFORM TO MECHANICAL CODE, BUILDING CODE AND ALL OTHER APPLICABLE CITY CODES AND REGULATIONS.
- THE CONTRACTOR SHALL PAY FOR ALL PERMITS AND FEES.
- CONTROL LOW VOLTAGE WIRING BY MECHANICAL CONTRACTOR AND CONDUIT BY ELECTRICAL CONTRACTOR.
- CONDENSATE DRAIN PIPING AND FINAL CONNECTION TO UNIT BY PLUMBING CONTRACTOR.
- G.C. TO VERIFY CURRENT ELECTRICAL POWER CONDITION IN FIELD BEFORE PURCHASING ANY MECHANICAL EQUIPMENT.
- CONTRACTOR TO VERIFY MECHANICAL HEATING EQUIPMENT TO BE CONFORM TO LOCAL EPA STANDARD BEFORE PURCHASING EQUIPMENT.
- ACCURATE AS-BUILT DRAWINGS SHALL BE MADE DURING CONSTRUCTION AND SUBMITTED FOR APPROVAL UPON COMPLETION OF INSTALLATION.
- THE CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR FOR SIZE AND LOCATION OF DUCTWORK ROOF OPENINGS AND WITH ELECTRICAL CONTRACTOR FOR ELECTRICAL REQUIREMENTS OF ALL MECHANICAL EQUIPMENT AND ARCHITECTURAL DRAWINGS FOR AIR DISTRIBUTION LOCATION.
- THE CONTRACTOR SHALL SUBMIT BID BASED ON THE DRAWINGS AND ALTERNATE FOR COST SAVING. THESE DRAWINGS ARE FOR BIDDING PURPOSES.
- THE CONTRACTOR SHALL FURNISH ALL MATERIALS, LABOR, EQUIPMENT, TRANSPORTATION AND SERVICES NECESSARY FOR COMPLETION OF THE WORK. ALL MATERIALS AND WORK SHALL COMPLY WITH APPLICABLE CODES AND GOVERNING REGULATIONS AND MEET THE APPROVAL OF THE LOCAL JURISDICTION.
- TAKE ALL PRECAUTIONS NECESSARY TO PROTECT THE MATERIALS BEFORE, DURING AND AFTER INSTALLATION. IN THE EVENT OF DAMAGE IMMEDIATELY REPAIR ALL DAMAGED AND DEFECTIVE WORK TO THE APPROVAL OF THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
- THESE DRAWINGS ARE DIAGRAMMATIC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS WORK WITH ALL OTHER TRADES. THIS INCLUDES COORDINATING THE LOCATION AND SIZE OF ALL OPENINGS, LOCATIONS OF EQUIPMENT PADS AND CHANGES OF ELEVATIONS OF DUCTWORK, PIPING AND OTHER EQUIPMENT.
- ANY MATERIAL, ARTICLE OR PIECE OF EQUIPMENT OTHER THAN THAT INDICATED SHALL NOT BE USED UNLESS APPROVED IN WRITING BY THE ENGINEER AND ANY CHANGES IN MECHANICAL, ELECTRICAL AND/OR OTHER SYSTEMS REQUIRED DUE TO SUCH SUBSTITUTION SHALL BE THE RESPONSIBILITY OF THE HVAC CONTRACTOR, AND AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL VISIT SITE PRIOR TO BIDDING TO VERIFY LOCATIONS AND SIZES OF ALL EXISTING EQUIPMENT AND INFORM THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES.
- CONTRACTOR TO VERIFY ADEQUATE PLUMBING CONNECTIONS ARE READILY AVAILABLE FOR EVAPORATIVE COOLERS AND GAS HEATING SYSTEMS BEFORE PURCHASING EQUIPMENT.
- COORDINATE ENTIRE INSTALLATION OF THE H.V.A.C. SYSTEM WITH THE WORK OF ALL OTHER TRADES PRIOR TO ANY FABRICATION OR INSTALLATION. PROVIDE ALL FITTINGS, OFFSETS, AND TRANSITIONS AS REQUIRED FOR A COMPLETE WORKABLE INSTALLATION.
- CONTRACTOR SHALL SUBMIT A COMPLETE BALANCE REPORT FOR APPROVAL. SYSTEMS AIR BALANCE SHALL BE PERFORMED BY AN INDEPENDENT AIR BALANCE CONSULTANT, A CERTIFIED AABC OR NEBB. THE REPORT SHALL INCLUDE THE FOLLOWING:
 - AIR QUANTITIES AT EACH REGISTER.
 - STATIC PRESSURE READINGS AT INLET AND DISCHARGE OF EACH AIR HANDLING SYSTEM AND AT INLET OF EACH EXHAUST AIR SYSTEM.
 - COOLING AND HEATING SUPPLY AND RETURN AIR TEMPERATURES AT EACH AIR CONDITIONING UNIT.
- WARRANTIES: 1-YEAR WARRANTY FOR EQUIPMENT, 5-YEAR COMPRESSORS. REFER TO CONSTRUCTION CONTRACT FOR OTHER APPLICABLE WARRANTIES.
- EQUIPMENT SPECIFICATION AND INTERLOCK DIAGRAM SHALL BE SUBMITTED FOR APPROVAL PRIOR TO PURCHASE OF EQUIPMENT FOR INSTALLATION.
- ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL FITTINGS, TRANSITIONS, DAMPERS, VALVES AND OTHER DEVICES REQUIRED FOR A COMPLETE WORKABLE INSTALLATION.
- ALL HVAC AND FAN UNITS SHOWN ON THE PLAN IS RECOMMENDED. FINAL MAKE AND MODEL OF THE UNITS WILL BE DETERMINED BY THE OWNER/MECHANICAL CONTRACTOR WITH AN APPROVAL FROM THE MECHANICAL ENGINEER.
- THE HVAC SYSTEM AND COMPONENTS SHALL BE TESTED, ADJUSTED AND BALANCED IN ACCORDANCE WITH AABC'S NATIONAL STANDARDS FOR TOTAL SYSTEM BALANCE (6TH EDITION).
- PROVIDE FILTER FOR AIR CONDITIONING AND/OR AIR SIDE UNITS AS REQUIRED PER ASHRAE AND MECHANICAL CODE.
- THERMOSTAT SHALL BE 24 VOLT, ONE STAGE HEATING AND ONE OR TWO STAGE COOLING WITH MATCHING SUBBASE AND TAMPER PROOF COVER.
- CONDENSATE PIPING SHALL BE SIZED IN ACCORDANCE WITH MECHANICAL CODE.
- CONDENSATE WASTE SHALL CONNECT INDIRECTLY TO THE DRAINAGE SYSTEM THROUGH AN AIR GAP OR AIR BREAK TO PROPERLY TRAPPED AND VENTED RECEPTORS, DRY WELLS, OR THE TAILPIECE OF A PLUMBING FIXTURE.
- WHERE CONDENSATE WASTE FROM AIR CONDITIONING COILS DISCHARGES BY DIRECT CONNECTION TO A LAVATORY TAILPIECE OR TO AN APPROVED ACCESSIBLE INLET ON A BATH TUB OVERFLOW, THE CONNECTION SHALL BE LOCATED IN AN AREA CONTROLLED BY THE SAME PERSON CONTROLLING THE AIR-CONDITIONED SPACE.
- THE REFRIGERATION EQUIPMENT REFRIGERANT SERVICE PORTS LOCATED OUTDOORS SHALL BE FITTED WITH LOCKING TYPE TAMPER RESISTANT CAPS OR SHALL BE PROTECTED FROM UNAUTHORIZED ACCESS BY A MEANS ACCEPTABLE TO THE ENFORCING AGENCY.
- THE HEATING AND COOLING DUCT SYSTEM IS SIZED IN ACCORDANCE WITH ASHRAE.
- G.C. TO VERIFY SUFFICIENCY OF DUCT SPACE BEFORE PURCHASING ANY MECHANICAL EQUIPMENT.
- DUCTWORK SHALL BE INSULATED OR LINED AS NOTED ON DRAWINGS. ALL DUCTWORK EXPOSED ON ROOF SHALL BE INTERNALLY LINED UNLESS OTHERWISE INDICATED OR SPECIFIED. ALL DUCT SIZES ARE SHEET METAL SIZES. ALL DUCT JOINTS SHALL BE SEALED PER SPECIFICATIONS.
- CONNECT MAIN DUCT TO AIR CONDITIONING UNIT WITH WEATHERPROOF FLEXIBLE CONNECTION. SUN SHIELD OVER ENTIRE FLEXIBLE CONNECTIONS REQUIRED IF FLEXIBLE CONNECTION IS EXPOSED TO WEATHER.
- ALL LINED DUCT DIMENSIONS ARE NET CLEAR DIMENSION AFTER LINING HAS BEEN INSTALLED.
- ALL DUCTWORK SIZE SHOWN ON PLAN ARE INTERIOR DIAMETER. CONTRACTOR SHALL ADD INSULATION THICKNESS INTO CONSIDERATION BEFORE INSTALLATION.
- DUCTS SHALL BE SUPPORTED WITH 1" WIDE 18-GAUGE HANGER STRAPS AND SHALL BE SPACED AT NO MORE THAN 7'-0" ON CENTERS AND SHALL BE SECURED TO STRUCTURAL MEMBER. EXPOSED DUCTWORK ON ROOF SHALL BE SUPPORTED BY GALVANIZED STEEL ANGLE & SHALL BE PER LOCAL CODE.

- ROUND AND RECTANGULAR DUCTWORK ARE INTERCHANGEABLE IF CROSS SECTION AREAS ARE EQUIVALENT. CONTRACTOR IS TO VERIFY THE EXACT CEILING SPACE AND INTERCHANGE THE DUCT SIZE TO FIT THE CEILING SPACE WITHOUT ADDITIONAL FEE CHARGE.
- ALL FACTORY-FABRICATED DUCT SYSTEMS SHALL COMPLY WITH UL 181 FOR DUCTS AND CLOSURE SYSTEMS, INCLUDING COLLARS, CONNECTIONS, AND SPLICES, AND BE LABELED AS COMPLYING WITH UL 181.
- INSTALL VOLUME CONTROL DAMPERS AT EACH SUPPLY DIFFUSER TO AFFORD COMPLETE CONTROL OF THE AIR FLOW IN THE VARIOUS DUCT SYSTEMS. INSTALL SPLITTER DAMPER AT DUCT TAKEOFFS AND DAMPER AS REQUIRED.
- AUTOMATIC FIRE DAMPER REQUIREMENTS ARE AS FOLLOWS:
 - PROVIDE AUTOMATIC FIRE DAMPERS AT ALL PENETRATIONS OF FIRE-RATED CEILINGS AND WALLS THROUGHOUT. CONTRACTOR SHALL COORDINATE WITH FIRE-RATED CEILING AREAS AND WALLS AS INDICATED ON ARCHITECTURAL DRAWINGS. THIS NOTE SHALL TAKE PRECEDENCE OVER ANY OMISSIONS ON THE DRAWINGS. SEE SPECIFICATIONS.
 - LOCATION OF FIRE-RATED CEILINGS AND WALLS ARE AS INDICATED ON THE ARCHITECTURAL DRAWINGS.
- COORDINATE THE LOCATION OF ALL CEILING DIFFUSERS, REGISTERS AND GRILLES WITH THE ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL LIGHTING LAYOUT AND ARCHITECTURAL ROOM ELEVATIONS.
- ALL CEILING DIFFUSERS ARE 4-WAY UNLESS OTHERWISE NOTED.
- PROVIDE BACK-DRAFT DAMPER FOR ALL EXHAUST AIR DUCT UNLESS OTHERWISE NOTED PER CODE.
- EXHAUST TERMINATION SHALL BE MINIMUM 10'-0" AWAY OR 3'-0" ABOVE FROM ANY FRESH AIR INTAKE, OPERABLE WINDOWS, DOORS AND 10'-0" MINIMUM ABOVE GRADE.
- PROVIDE ALL FRESH AIR INTAKES AND EXHAUST OUTLETS WITH HOOD, 1/2" GALVANIZED MESH SCREENS AND OUTSIDE AIR BACK-DRAFT DAMPERS.
- DUCTS USED FOR DOMESTIC KITCHEN RANGE VENTILATION SHALL BE OF METAL OR OTHER APPROVED MATERIAL AND SHALL HAVE SMOOTH INTERIOR SURFACES. DUCTS FOR DOMESTIC RANGE HOODS SHALL ONLY SERVE COOKING APPLIANCES.

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DRAWN: D.N.	CHECKED: R.C.
DATE: 03/20/2024	SCALE:
SHEET TITLE: MECHANICAL NOTES	
M000	

SPLIT SYSTEM OUTDOOR HEAT PUMP SCHEDULE

EQ #	MARK	MANUFACTURER	MODEL	NOMINAL TONS	COOLING CAPACITY (BTUH)		HEATING CAP (BTUH)	ELECTRICAL			EER / SEER	HSPF	WEIGHT (LBS)	DIMENSIONS (HxWxD) (INCHES)
					TH	SH		V/PH/Hz	MCA	MOCP				
HP - 1		MISUBISHI	PUZ-A12NKA7	1	12,000	9,720	14,000	208 / 1 / 60	11	15	12 / 20.8	10.2	93	24-13/16 X 31-13/16 X 11-3/16
HP - 2		MISUBISHI	PUZ-A12NKA7	1	12,000	9,720	14,000	208 / 1 / 60	11	15	12 / 20.8	10.2	93	24-13/16 X 31-13/16 X 11-3/16
HP - 3		MISUBISHI	PUZ-A12NKA7	1	12,000	9,720	14,000	208 / 1 / 60	11	15	12 / 20.8	10.2	93	24-13/16 X 31-13/16 X 11-3/16
HP - 4		MISUBISHI	PUZ-A12NKA7	1	12,000	9,720	14,000	208 / 1 / 60	11	15	12 / 20.8	10.2	93	24-13/16 X 31-13/16 X 11-3/16
HP - 5		MISUBISHI	PUZ-A12NKA7	1	12,000	9,720	14,000	208 / 1 / 60	11	15	12 / 20.8	10.2	93	24-13/16 X 31-13/16 X 11-3/16
HP - 6		MISUBISHI	PUZ-A12NKA7	1	12,000	9,720	14,000	208 / 1 / 60	11	15	12 / 20.8	10.2	93	24-13/16 X 31-13/16 X 11-3/16
HP - 7		MISUBISHI	PUZ-A12NKA7	1	12,000	9,720	14,000	208 / 1 / 60	11	15	12 / 20.8	10.2	93	24-13/16 X 31-13/16 X 11-3/16
HP - 8		MISUBISHI	PUZ-A12NKA7	1	12,000	9,720	14,000	208 / 1 / 60	11	15	12 / 20.8	10.2	93	24-13/16 X 31-13/16 X 11-3/16
HP - 9		MISUBISHI	PUZ-A12NKA7	1	12,000	9,720	14,000	208 / 1 / 60	11	15	12 / 20.8	10.2	93	24-13/16 X 31-13/16 X 11-3/16
HP - 10		MISUBISHI	PUZ-A12NKA7	1	12,000	9,720	14,000	208 / 1 / 60	11	15	12 / 20.8	10.2	93	24-13/16 X 31-13/16 X 11-3/16
HP - 11		MISUBISHI	PUZ-A12NKA7	1	12,000	9,720	14,000	208 / 1 / 60	11	15	12 / 20.8	10.2	93	24-13/16 X 31-13/16 X 11-3/16
HP - 12		MISUBISHI	PUZ-A12NKA7	1	12,000	9,720	14,000	208 / 1 / 60	11	15	12 / 20.8	10.2	93	24-13/16 X 31-13/16 X 11-3/16
HP - 13		MISUBISHI	PUZ-A12NKA7	1	12,000	9,720	14,000	208 / 1 / 60	11	15	12 / 20.8	10.2	93	24-13/16 X 31-13/16 X 11-3/16
HP - 16		MISUBISHI	PUZ-A12NKA7	1	12,000	9,720	14,000	208 / 1 / 60	11	15	12 / 20.8	10.2	93	24-13/16 X 31-13/16 X 11-3/16
HP - 17		MISUBISHI	PUZ-A12NKA7	1	12,000	9,720	14,000	208 / 1 / 60	11	15	12 / 20.8	10.2	93	24-13/16 X 31-13/16 X 11-3/16
HP - 18		MISUBISHI	PUZ-A12NKA7	1	12,000	9,720	14,000	208 / 1 / 60	11	15	12 / 20.8	10.2	93	24-13/16 X 31-13/16 X 11-3/16
HP - 19		MISUBISHI	PUZ-A12NKA7	1	12,000	9,720	14,000	208 / 1 / 60	11	15	12 / 20.8	10.2	93	24-13/16 X 31-13/16 X 11-3/16
HP - 20		MISUBISHI	PUZ-A12NKA7	1	12,000	9,720	14,000	208 / 1 / 60	11	15	12 / 20.8	10.2	93	24-13/16 X 31-13/16 X 11-3/16
HP - 21		MISUBISHI	PUZ-A12NKA7	1	12,000	9,720	14,000	208 / 1 / 60	11	15	12 / 20.8	10.2	93	24-13/16 X 31-13/16 X 11-3/16
HP - 22		MISUBISHI	PUZ-A12NKA7	1	12,000	9,720	14,000	208 / 1 / 60	11	15	12 / 20.8	10.2	93	24-13/16 X 31-13/16 X 11-3/16

NOTES:

1	INSTALL OUTDOOR UNIT WITH DISCONNECT SWITCH AND ALL WEATHERPROOF GFCL.
2	INSTALL PER MANUFACTURER'S MANUAL.

FAN SCHEDULE

EQ #	MARK	EQUIP.	CFM	SP (W.G.)	RPM	HP	FLA	MOTOR (ELEC)	SONES (DB)	WT (LBS)	MANUFACTURER & MODEL NO.	REMARKS
EF - 1		RESTROOM HUMIDITY SENSING EXH FAN	80	0.1"	-	6.5W	0.3	120 / 1	0.4	8.5	BROAN AE50110DCS	1,2
KEF - 1		KITCHEN EXH FAN	250	0.25"	-	-	1.4	120 / 1	5.0	-	BROAN BCSD124	1,2

REMARKS:

1	EQUIVALENT ACCEPTABLE.
2	INSTALL WITH BACKDRAFT DAMPER.

OUTDOOR UNIT SCHEDULE

EQ #	MARK	MANUFACTURER	MODEL	TON	COOLING CAP (BTUH)	HEATING CAP (BTUH)	ELECTRICAL			EER / SEER	HSPF	WEIGHT (LBS)	DIMENSIONS (HxWxD) (INCHES)
							V/PH/Hz	MCA	MOCP				
HP - 14		MITSUBISHI	PUZ-A24NHA7	2	24,000	28,000	208/1/60	19	25	11.1 / 18.9	10.6	190	37-1/8 X 37-13/32 X 14-3/16
HP - 15		MITSUBISHI	PUZ-A24NHA7	2	24,000	28,000	208/1/60	19	25	11.1 / 18.9	10.6	190	37-1/8 X 37-13/32 X 14-3/16
HP - 23		MITSUBISHI	PUZ-A24NHA7	2	24,000	28,000	208/1/60	19	25	11.1 / 18.9	10.6	190	37-1/8 X 37-13/32 X 14-3/16

NOTES:

1	INSTALL OUTDOOR UNIT WITH DISCONNECT SWITCH AND ALL WEATHERPROOF GFCL.
2	INSTALL PER MANUFACTURER'S MANUAL.

INDOOR UNIT SCHEDULE

EQ #	MARK	MANUFACTURER	MODEL	TON	CFM	TYPE	COOLING CAP (BTUH)	HEATING CAP (BTUH)	ELECTRICAL			WEIGHT (LBS)	DIMENSIONS (HxWxD) (INCHES)
									V/PH/Hz	MCA	MOCP		
FC 14 - 1		MITSUBISHI	PKA-A12HA6	1	455	WALL-MOUNTED	12,000	14,000	208/1/60	1	-	28	11-25/32 X 35-23/64 X 9-11/32
FC 14 - 2		MITSUBISHI	PKA-A12HA6	1	455	WALL-MOUNTED	12,000	14,000	208/1/60	1	-	28	11-25/32 X 35-23/64 X 9-11/32
FC 15 - 1		MITSUBISHI	PKA-A12HA6	1	455	WALL-MOUNTED	12,000	14,000	208/1/60	1	-	28	11-25/32 X 35-23/64 X 9-11/32
FC 15 - 2		MITSUBISHI	PKA-A12HA6	1	455	WALL-MOUNTED	12,000	14,000	208/1/60	1	-	28	11-25/32 X 35-23/64 X 9-11/32
FC 23 - 1		MITSUBISHI	PKA-A12HA6	1	455	WALL-MOUNTED	12,000	14,000	208/1/60	1	-	28	11-25/32 X 35-23/64 X 9-11/32
FC 23 - 2		MITSUBISHI	PKA-A12HA6	1	455	WALL-MOUNTED	12,000	14,000	208/1/60	1	-	28	11-25/32 X 35-23/64 X 9-11/32

NOTES:

1	THERMOSTATS INSTALLED AT 48" AFF.
2	EXTEND CONDENSATE DRAIN DIRECTLY TO A LOCAL CODE APPROVED RECEPTOR.
3	INSTALL PER MANUFACTURER'S MANUAL.

SPLIT SYSTEM INDOOR FAN COIL SCHEDULE

EQ #	MARK	MANUFACTURER	MODEL	TYPE	CFM	ELECTRICAL			WEIGHT (LBS)	DIMENSIONS (HxWxD) (INCHES)
						V/PH/Hz	MCA	MOCP		
FC - 1		MISUBISHI	PKA-12LA	WALL-MOUNTED	400	208 / 1 / 60	1	-	29	11-5/8 X 35-3/8 X 9-13/16
FC - 2		MISUBISHI	PKA-12LA	WALL-MOUNTED	400	208 / 1 / 60	1	-	29	11-5/8 X 35-3/8 X 9-13/16
FC - 3		MISUBISHI	PKA-12LA	WALL-MOUNTED	400	208 / 1 / 60	1	-	29	11-5/8 X 35-3/8 X 9-13/16
FC - 4		MISUBISHI	PKA-12LA	WALL-MOUNTED	400	208 / 1 / 60	1	-	29	11-5/8 X 35-3/8 X 9-13/16
FC - 5		MISUBISHI	PKA-12LA	WALL-MOUNTED	400	208 / 1 / 60	1	-	29	11-5/8 X 35-3/8 X 9-13/16
FC - 6		MISUBISHI	PKA-12LA	WALL-MOUNTED	400	208 / 1 / 60	1	-	29	11-5/8 X 35-3/8 X 9-13/16
FC - 7		MISUBISHI	PKA-12LA	WALL-MOUNTED	400	208 / 1 / 60	1	-	29	11-5/8 X 35-3/8 X 9-13/16
FC - 8		MISUBISHI	PKA-12LA	WALL-MOUNTED	400	208 / 1 / 60	1	-	29	11-5/8 X 35-3/8 X 9-13/16
FC - 9		MISUBISHI	PKA-12LA	WALL-MOUNTED	400	208 / 1 / 60	1	-	29	11-5/8 X 35-3/8 X 9-13/16
FC - 10		MISUBISHI	PKA-12LA	WALL-MOUNTED	400	208 / 1 / 60	1	-	29	11-5/8 X 35-3/8 X 9-13/16
FC - 11		MISUBISHI	PKA-12LA	WALL-MOUNTED	400	208 / 1 / 60	1	-	29	11-5/8 X 35-3/8 X 9-13/16
FC - 12		MISUBISHI	PKA-12LA	WALL-MOUNTED	400	208 / 1 / 60	1	-	29	11-5/8 X 35-3/8 X 9-13/16
FC - 13		MISUBISHI	PKA-12LA	WALL-MOUNTED	400	208 / 1 / 60	1	-	29	11-5/8 X 35-3/8 X 9-13/16
FC - 16		MISUBISHI	PKA-12LA	WALL-MOUNTED	400	208 / 1 / 60	1	-	29	11-5/8 X 35-3/8 X 9-13/16
FC - 17		MISUBISHI	PKA-12LA	WALL-MOUNTED	400	208 / 1 / 60	1	-	29	11-5/8 X 35-3/8 X 9-13/16
FC - 18		MISUBISHI	PKA-12LA	WALL-MOUNTED	400	208 / 1 / 60	1	-	29	11-5/8 X 35-3/8 X 9-13/16
FC - 19		MISUBISHI	PKA-12LA	WALL-MOUNTED	400	208 / 1 / 60	1	-	29	11-5/8 X 35-3/8 X 9-13/16
FC - 20		MISUBISHI	PKA-12LA	WALL-MOUNTED	400	208 / 1 / 60	1	-	29	11-5/8 X 35-3/8 X 9-13/16
FC - 21		MISUBISHI	PKA-12LA	WALL-MOUNTED	400	208 / 1 / 60	1	-	29	11-5/8 X 35-3/8 X 9-13/16
FC - 22		MISUBISHI	PKA-12LA	WALL-MOUNTED	400	208 / 1 / 60	1	-	29	11-5/8 X 35-3/8 X 9-13/16

NOTES:

1	THERMOSTATS INSTALLED AT 48" AFF.
2	EXTEND CONDENSATE DRAIN DIRECTLY TO A LOCAL CODE APPROVED RECEPTOR.
3	INSTALL PER MANUFACTURER'S MANUAL.

CDI Circa Domini International, Inc.
 Engineering - Consulting
 9890 Research Dr. Suite 100, Irvine, CA 92618
 Phone (949) 533-4117 | dkang@cdieng.com

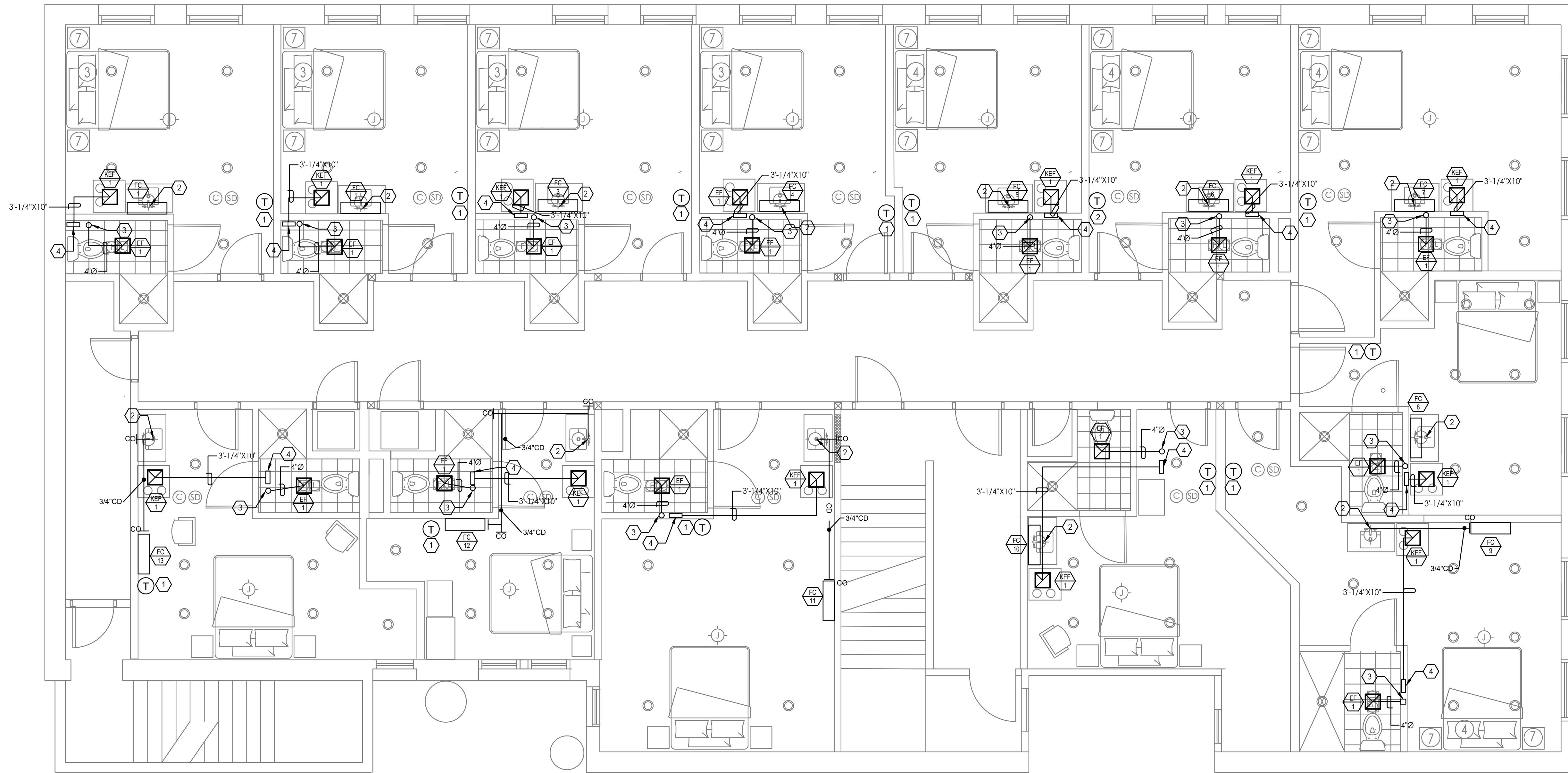


6TH. AND F RESIDENTIAL HOTEL
 545 "F" STREET
 SAN DIEGO, CA 92101

REVISION					
DRAWN:	D.N.	CHECKED:	R.C.		
DATE:	03/20/2024	SCALE:			

SHEET TITLE:
MECHANICAL SCHEDULES

M001



MECHANICAL PLAN - SECOND FLOOR

# KEYED PLAN NOTES:	
1.	INSTALL PROGRAMMABLE THERMOSTAT 48\"/>
2.	CONDENSATION PIPE DISCHARGE BY DIRECT CONNECTION TO LAV TAILPIECE.
3.	4\"/>
4.	3-1/4\"/>

GENERAL NOTES:	
1.	IF DRAWINGS ARE INCORRECT FROM THE ACTUAL SITE CONDITION, CONTRACTOR SHALL NOTIFY ENGINEER(S) AND PROVIDE INFORMATION REFLECTING ACTUAL CONDITIONS.
2.	EXHAUST SHALL TERMINATE NOT LESS THAN 3 FEET FROM A PROPERTY LINE, 10 FEET FROM A FORCED AIR INLET, AND 3 FEET FROM OPENINGS INTO THE BUILDING.



6TH. AND F RESIDENTIAL HOTEL

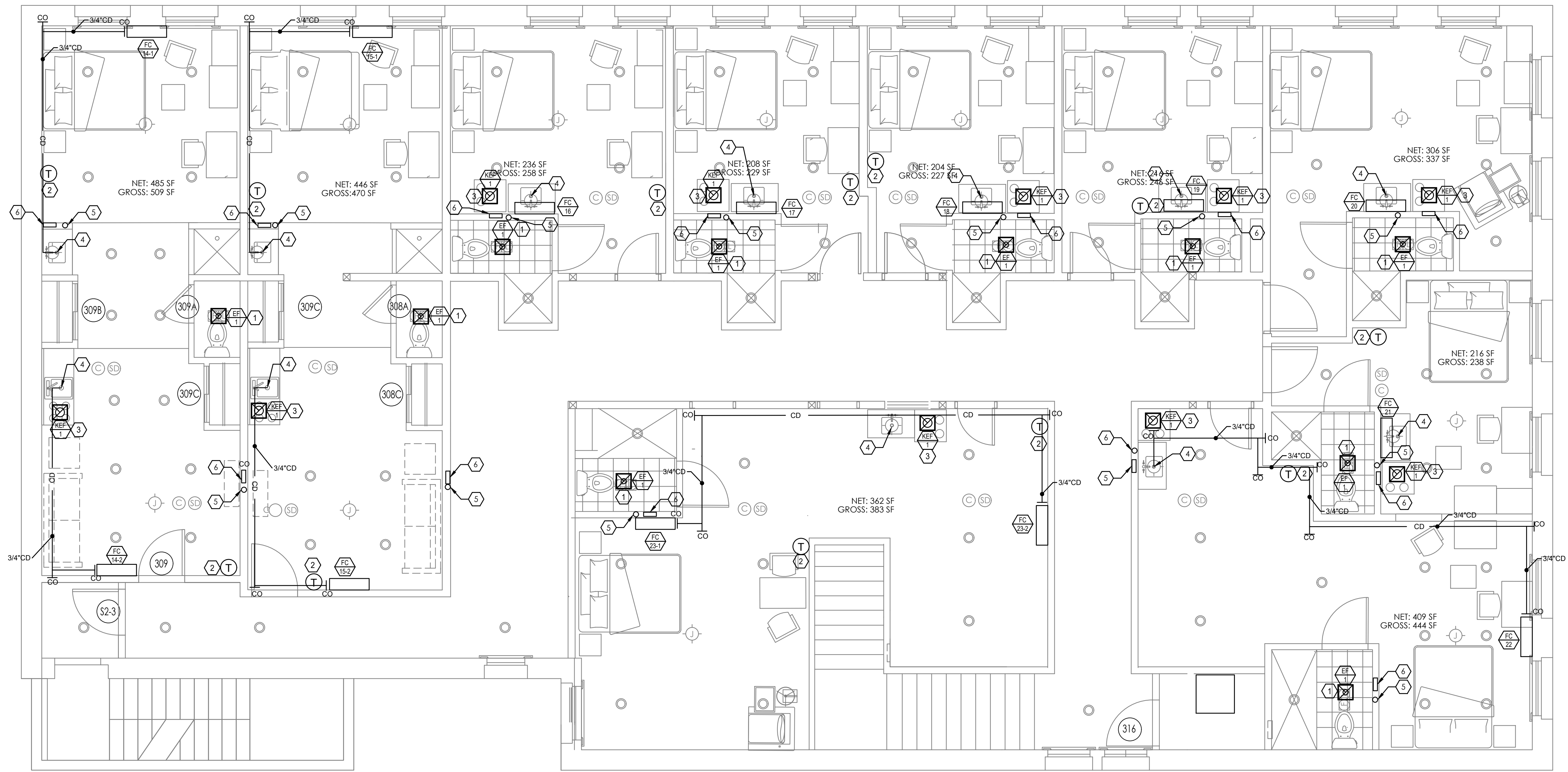
545 "F" STREET
 SAN DIEGO, CA 92101

REVISION	DATE	BY	APP'D

DRAWN: D.N. CHECKED: R.C.
 DATE: 03/20/2024 SCALE: 1/4" = 1'-0"
 SHEET TITLE:

MECHANICAL PLAN - SECOND FLOOR

M100



MECHANICAL PLAN - THIRD FLOOR

# KEYED PLAN NOTES:	
1.	4" EXHAUST VENT TO ROOF.
2.	INSTALL PROGRAMMABLE THERMOSTAT 48" AFF. CONTRACTOR TO VERIFY FINAL LOCATION WITH OWNER PRIOR INSTALLATION.
3.	7" EXHAUST VENT TO ROOF.
4.	CONDENSATION PIPE DISCHARGE BY DIRECT CONNECTION TO LAV TAILPIECE.
5.	4" Ø EXHAUST VENT FROM 2ND FLOOR TO ROOF
6.	3'-1/4"X10" EXHAUST VENT FROM 2ND FLOOR TO ROOF

GENERAL NOTES:	
1.	IF DRAWINGS ARE INCORRECT FROM THE ACTUAL SITE CONDITION, CONTRACTOR SHALL NOTIFY ENGINEER(S) AND PROVIDE INFORMATION REFLECTING ACTUAL CONDITIONS.
2.	EXHAUST SHALL TERMINATE NOT LESS THAN 3 FEET FROM A PROPERTY LINE, 10 FEET FROM A FORCED AIR INLET, AND 3 FEET FROM OPENINGS INTO THE BUILDING.



6TH. AND F RESIDENTIAL HOTEL

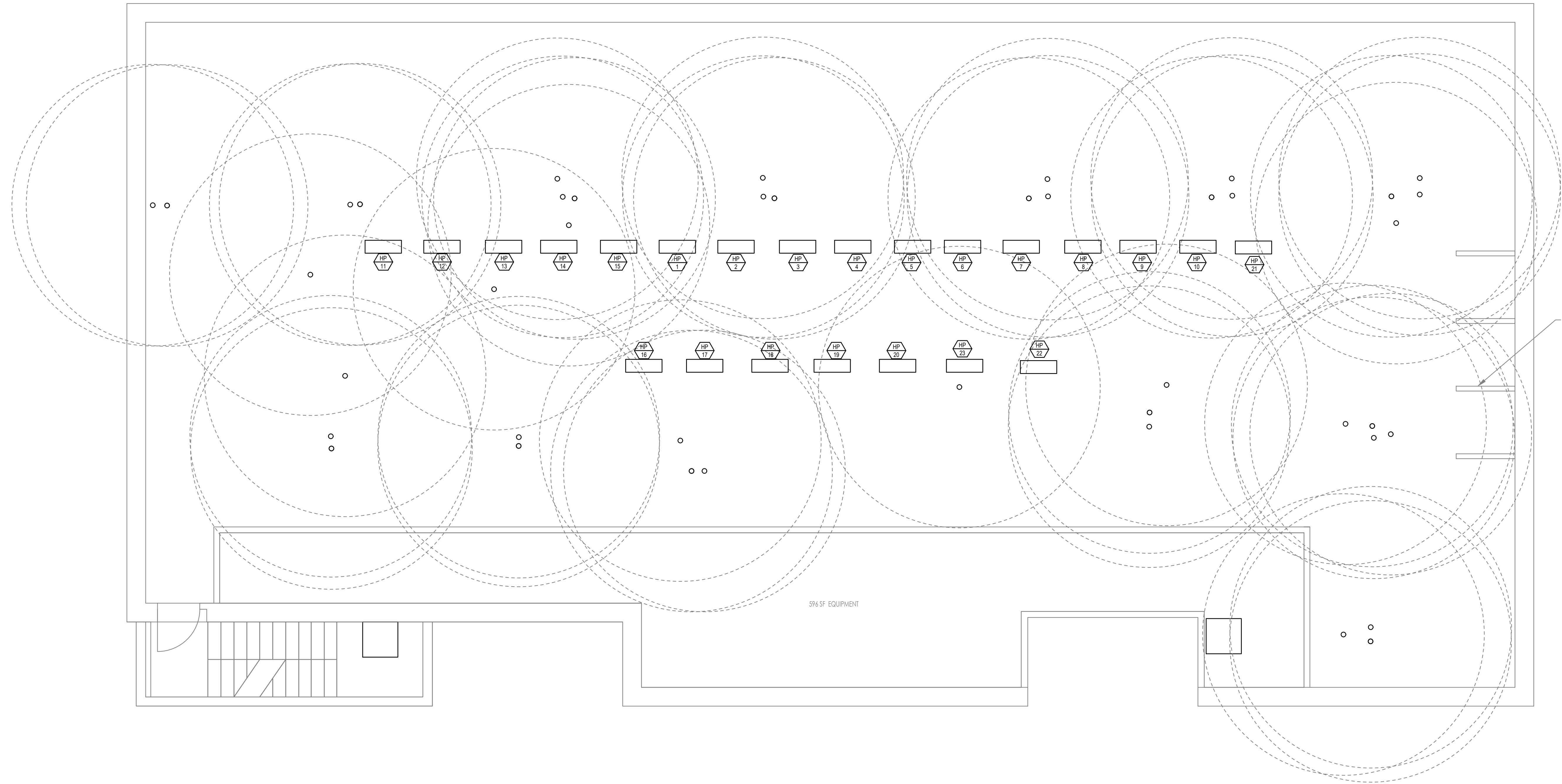
545 "F" STREET
 SAN DIEGO, CA 92101

REVISION	

DRAWN: D.N.	CHECKED: R.C.
DATE: 03/20/2024	SCALE: 1/4" = 1'-0"

SHEET TITLE:
 MECHANICAL PLAN - THIRD FLOOR

M101



MECHANICAL PLAN - ROOF

GENERAL NOTES:

- IF DRAWINGS ARE INCORRECT FROM THE ACTUAL SITE CONDITION, CONTRACTOR SHALL NOTIFY ENGINEER(S) AND PROVIDE INFORMATION REFLECTING ACTUAL CONDITIONS.
- EXHAUST SHALL TERMINATE NOT LESS THAN 3 FEET FROM A PROPERTY LINE, 10 FEET FROM A FORCED AIR INLET, AND 3 FEET FROM OPENINGS INTO THE BUILDING.



6TH. AND F RESIDENTIAL HOTEL

545 "F" STREET
 SAN DIEGO, CA 92101

REVISION	

DRAWN: D.N.	CHECKED: R.C.
DATE: 03/20/2024	SCALE: 1/4" = 1'-0"

SHEET TITLE:

MECHANICAL PLAN - ROOF

M102



STATE OF CALIFORNIA
Mechanical Systems
 CALIFORNIA ENERGY COMMISSION
 CERTIFICATE OF COMPLIANCE LMCC-MCH-01-E
 Project Name: HISTORIC BLDG Report Page: (Page 1 of 9)
 Project Address: 545 "F" STREET, SAN DIEGO, CA 92101 Date Prepared:

A. GENERAL INFORMATION

01 Project Location (City)	SAN DIEGO	04 Total Conditioned Floor Area	6719
02 Climate Zone	7	05 Total Unconditioned Floor Area	0
03 Occupancy Types Within Project:		06 # of Stories (Habitable Above Grade)	2

• Low-Rise Residential

B. PROJECT SCOPE
 This table includes mechanical systems or components that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, 170.2(b) or 141.0(b)2 and 180.2(b)2 for alterations.

01	02	03
Air System(s)	Wet System Components	Dry System Components
<input checked="" type="checkbox"/> Heating Air System	<input type="checkbox"/> Water Economizer	<input type="checkbox"/> Air Economizer
<input checked="" type="checkbox"/> Cooling Air System	<input type="checkbox"/> Pumps	<input type="checkbox"/> Electric Resistance Heat
<input type="checkbox"/> Mechanical Controls	<input type="checkbox"/> System Piping	<input checked="" type="checkbox"/> Fan Systems
<input checked="" type="checkbox"/> Mechanical Controls (existing to remain, altered or new)	<input type="checkbox"/> Cooling Towers	<input type="checkbox"/> Ductwork (existing to remain, altered or new)
	<input type="checkbox"/> Chillers	<input type="checkbox"/> Ventilation
	<input type="checkbox"/> Boilers	<input type="checkbox"/> Zonal Systems/ Terminal Boxes

Registration Number: CA Building Energy Efficiency Standards - 2022 Low-rise Multifamily Compliance
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 Documentation Software: Energy Code Ace
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STATE OF CALIFORNIA
Mechanical Systems
 CALIFORNIA ENERGY COMMISSION
 CERTIFICATE OF COMPLIANCE LMCC-MCH-01-E
 Project Name: HISTORIC BLDG Report Page: (Page 4 of 9)
 Project Address: HISTORIC BLDG Date Prepared:

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)
 Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP), DX-DOAS and Dual Fuel Heat Pumps)

01	02	03	04	05	06	07	08	09
Name or Item Tag	Size Category (kBtu/h)	Rating Condition (°F)	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency
HP1-13,16-22	<65,000	47 °Fdb / 43 °Fwb USA	HSPF2	7.5	10.2	SEER2	14.3	21
HP-14,15,23	<65,000		HSPF	7.7	10.6	SEER	13	18.9

G. PUMPS
 This section does not apply to this project.

H. FAN SYSTEMS & AIR ECONOMIZERS
 This table is used to demonstrate compliance with prescriptive requirements found in 140.4(c), 140.4(e), 140.4(f), 170.2(c)3, and 170.2(c)4A for fan systems. Fan systems serving only process loads are exempt from these requirements and do not need to be included in Table H.

System Name	HP-1-13,16-22	Quantity	20	Fan System Status	New	System Zoning	all other systems	Serving Dwelling Units	Single Dwelling Unit	Fan System Airflow (cfm)	Site Elevation	Economizer
01	02	03	04	05	06	07	08	09	10	11		
HP-1-13,16-22	20	Single Dwelling Unit	Not Central Forced AHU								NA: CZ 3-10	

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STATE OF CALIFORNIA
Mechanical Systems
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 Project Name: HISTORIC BLDG Report Page: (Page 7 of 9)
 Project Address: HISTORIC BLDG Date Prepared:

K. TERMINAL BOX CONTROLS
 This section does not apply to this project.

L. DISTRIBUTION (DUCTWORK and PIPING)
 This section does not apply to this project.

M. COOLING TOWERS
 This section does not apply to this project.

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION
 Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at <https://www.energy.ca.gov/programs-and-topics/building-energy-efficiency-standards/2022-building-energy-efficiency-3>

Form/Title	Systems/Spaces To Be Field Verified
LMCI-MCH-01-E - Must be submitted for all buildings	M001
LMCI-MCH-22-H Fan Efficacy	M001
LMCI-MCH-25-H - Refrigerant Charge Verification	N/A
LMCI-MCH-26-H Rated Space Conditioning System Equipment Verification	NA

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
 There are no NRCA forms required for this project.

Registration Number: CA Building Energy Efficiency Standards - 2022 Low-rise Multifamily Compliance
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STATE OF CALIFORNIA
Mechanical Systems
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 Project Name: HISTORIC BLDG Report Page: (Page 2 of 9)
 Project Address: HISTORIC BLDG Date Prepared:

C. COMPLIANCE RESULTS
 Table C will indicate if the project data input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D, or the table indicated as not compliant for guidance.

01	02	03	04	05	06	07	08	09
System Summary	Pumps	Fans/Economizers	System Controls	Ventilation	Terminal Box Controls	Distribution	Cooling Towers	Compliance Results
110.1, 110.2, 140.4, 170.2(c)	140.4(e), 170.2(c)4	140.4(e), 170.2(c)	110.2, 130.2, 140.4(f), 170.2(c)	120.1, 160.2	140.4(d), 170.2(c)4B	120.3, 140.4(i), 160.2, 160.3	110.2(e)2	
(See Table F)	(See Table G)	(See Table H)	(See Table I)	(See Table J)	(See Table K)	(See Table L)	(See Table M)	
Yes	AND	AND	Yes	AND	AND	AND	AND	COMPLIES

D. EXCEPTIONAL CONDITIONS
 This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS
 This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)
 Space Conditioning System Information

01	02	03	04	05	06	07
System Name	Quantity	System Serving	System Status	Space Type	Utilizing Recovered Heat	Distribution System Type
HP1-13,16-22	20	Single Dwelling Unit	New/ Addition	All Other Occupancies	<input type="checkbox"/>	System has no ducts
HP-14,15,23	3	Single Dwelling Unit	New/ Addition	All Other Occupancies	<input type="checkbox"/>	System has no ducts

Registration Number: CA Building Energy Efficiency Standards - 2022 Low-rise Multifamily Compliance
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STATE OF CALIFORNIA
Mechanical Systems
 CALIFORNIA ENERGY COMMISSION
 CERTIFICATE OF COMPLIANCE LMCC-MCH-01-E
 Project Name: HISTORIC BLDG Report Page: (Page 5 of 9)
 Project Address: HISTORIC BLDG Date Prepared:

H. DWELLING UNIT FAN EFFICACY & ENERGY/HEAT RECOVERY 170.2(c)3B

System Name	HP-14,15,23	Quantity	3	Fan System Status	New	System Zoning	all other systems	Serving Dwelling Units	Single Dwelling Unit	Fan System Airflow (cfm)	Site Elevation	Economizer
01	02	03	04	05	06	07	08	09	10	11		
HP-14,15,23	3	Single Dwelling Unit	Not Central Forced AHU								NA: CZ 3-10	

I. DWELLING UNIT FAN EFFICACY & ENERGY/HEAT RECOVERY 170.2(c)3B

01	02	03	04	05	06	07	08	09	10	11
Fan System Name or Item Tag	Qty	System Zoning	System Type	System Airflow (cfm)	Design Power (kW)	Design Watts/CFM 170.2(c)3B	Maximum Watts/CFM 170.2(c)3B	ERV/HRV	Design Sensible Recovery/Effectiveness	Required Sensible Recovery/Effectiveness 170.2(c)3Biv
HP-1-13,16-22	20	Single Dwelling Unit	Not Central Forced AHU							NA: CZ 3-10

Registration Number: CA Building Energy Efficiency Standards - 2022 Low-rise Multifamily Compliance
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STATE OF CALIFORNIA
Mechanical Systems
 CALIFORNIA ENERGY COMMISSION
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 Project Name: HISTORIC BLDG Report Page: (Page 8 of 9)
 Project Address: HISTORIC BLDG Date Prepared:

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION
 Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be completed by a HERS Rater and provided to the building inspector during construction. The final documents must be created by a HERS Provider's registry, but drafts can be found online at <https://www.energy.ca.gov/programs-and-topics/building-energy-efficiency-standards/2022-building-energy-efficiency-3>

Form/Title	Systems/Spaces To Be Field Verified
LMCV-MCH-22-H Fan Efficacy NOTE: Must be completed by a HERS Rater	Verified
LMCV-MCH-23-H Airflow rate NOTE: Must be completed by a HERS Rater	
LMCV-MCH-26-H Rated space conditioning system equipment verification NOTE: Must be completed by a HERS Rater	

Q. MANDATORY MEASURES DOCUMENTATION LOCATION
 This table is used to indicate where mandatory measures are documented in the plan set or construction documentation.

01	02
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block	Plan sheet or construction document location
No	
03	04
Mandatory Measure	Plan sheet or construction document location
Heating Equipment Efficiency per 110.1	M001
Cooling Equipment Efficiency per 110.3	M001
Furnace Standby Loss Control per 110.3(d)	N/A
Heat Pump with Supplemental electric Resistance Heater Controls per 110.2(b)	NA

Registration Number: CA Building Energy Efficiency Standards - 2022 Low-rise Multifamily Compliance
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STATE OF CALIFORNIA
Mechanical Systems
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 Project Name: HISTORIC BLDG Report Page: (Page 3 of 9)
 Project Address: HISTORIC BLDG Date Prepared:

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)
 Residential Space Conditioning (SC) Systems - Heating/Cooling/Ducts (Section 150.1(c)7)

01	02	03	04	05	06	07	08	09	10	11	12	13	14
System Name	Dwelling Unit Type	SC Type	Heating System Type	Heating Efficiency Type	Proposed Heating Efficiency	Cooling System Type	Cooling Efficiency Type	Proposed Cooling Efficiency SEER/SEER2	Proposed Cooling Efficiency EER/EER2/C	Distribution System Type	Duct Location	Duct R-Value	Thermostat Type
HP1-13,16-22	Apartment	Heat pump heating cooling	Ductless MiniSplit HP	HSPF	10.2	Ductless mini-split HP	EER/SEER	20.8	12	System has no ducts	No ducts	---	Setback
HP-14,15,23	Apartment	Heat pump heating cooling	Ductless MiniSplit HP	HSPF	10.6	Ducted mini-split HP	EER/SEER	18.9	11.1	System has no ducts	No ducts	---	Setback

Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters and DOAS systems)

01	02	03	04	05	06	07	08	09	10	11
Name or Item Tag	Equipment Category per Tables 110.2, 140.4(a)2 and 170.2(c)3a	Equipment Type per Tables 110.2 and Title 20	Smallest Size Available 140.4(a) and 170.2(c)1	Heating Output ^{1,3} (kBtu/h)	Rated Heating Output (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)
HP1-13,16-22	Unitary Heat Pumps	Air-cooled, split (1 phase)	Yes	14	14	0	9.72	12	14	12
HP-14,15,23	Variable Refrigerant Flow	VRF heat pump, air cooled	Yes	28	28	0	24	24	28	24

¹ FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per 140.4(a) and 170.2(c)1. Healthcare facilities are exempt.
² It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.
³ If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.
⁴ Authority Having Jurisdiction may ask for load calculations used for compliance per 140.4(b) and 170.2(c).

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STATE OF CALIFORNIA
Mechanical Systems
 CALIFORNIA ENERGY COMMISSION
 CERTIFICATE OF COMPLIANCE LMCC-MCH-01-E
 Project Name: HISTORIC BLDG Report Page: (Page 6 of 9)
 Project Address: HISTORIC BLDG Date Prepared:

H. DWELLING UNIT FAN EFFICACY & ENERGY/HEAT RECOVERY 170.2(c)3B

System Name	HP-14,15,23	Quantity	3	Fan System Status	New	System Zoning	all other systems	Serving Dwelling Units	Single Dwelling Unit	Fan System Airflow (cfm)	Site Elevation	Economizer
01	02	03	04	05	06	07	08	09	10	11		
HP-14,15,23	3	Single Dwelling Unit	Not Central Forced AHU								NA: CZ 3-10	

Fan Energy Index (FEI)

01	02	03
Name or Item Tag	FEI Exception	FEI
HP	<1.00 HP or 0.89 kW	
HP	<1.00 HP or 0.89 kW	

I. SYSTEM CONTROLS
 This table is used to demonstrate compliance with mandatory controls in 110.2 and 120.2 and prescriptive controls in 140.4(f) and (n), 170.2(c)4D 170.2(c)4L or requirements in 141.0(b)2E 180.2(b)2 for altered space conditioning systems.

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft²)	Thermostats 110.2(b) & (c)1, 120.2(a) 160.3(a)2A or 141.0(b)2E & 180.2(b)2	Shut-Off Controls 120.2(e) & 160.3(a)2D	Isolation Zone Controls 120.2(g) & 160.3(a)2F	Demand Response 110.12 120.2(b) & 160.3(a)2B	Supply Air Temp. Reset 140.4(f) & 170.2(c)4D	Window Interlocks per 140.4(n) & 170.2(c)4D
HP-1-13,16-22	Single-zone	<= 25,000 ft²	Setback	NA: DwellingUnit	NA: DwellingUnit	DR Tstat per 110.12	NA: DwellingUnit	NA: DwellingUnit
HP-14,15,23	Multi-zone	<= 25,000 ft²	Setback	NA: DwellingUnit	NA: DwellingUnit	NA: DwellingUnit	NA: DwellingUnit	NA: DwellingUnit

¹ FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.

J. VENTILATION AND INDOOR AIR QUALITY
 This section does not apply to this project.

Registration Number: CA Building Energy Efficiency Standards - 2022 Low-rise Multifamily Compliance
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STATE OF CALIFORNIA
Mechanical Systems
 CALIFORNIA ENERGY COMMISSION
 CERTIFICATE OF COMPLIANCE LMCC-MCH-01-E
 Project Name: HISTORIC BLDG Report Page: (Page 9 of 9)
 Project Address: HISTORIC BLDG Date Prepared:

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
 I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: RUTH CHEN
 Signature Date: 2024-03-24
 Address: 9890 RESEARCH DR, STE 100
 City/State/Zip: IRVINE, CA, 92618
 Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT
 I certify the following under penalty of perjury, under the laws of the State of California:
 1. The information provided on this Certificate of Compliance is true and correct.
 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
 3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
 4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
 5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation provided to the building owner at occupancy.

Responsible Designer Name: RUTH CHEN
 Signature Date: 2024-03-24
 Address: 9890 RESEARCH DR, STE 100
 City/State/Zip: IRVINE, CA, 92618
 License: M40915
 Phone:

Registration Number: CA Building Energy Efficiency Standards - 2022 Low-rise Multifamily Compliance
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