

OUTDOOR CONDENSING UNITS

SYMBOL	MAKE	MODEL	CAPACITY BTUH			ELECTRICAL						SERVICE	WT. (LBS)	REMARKS
			COOLING	SEER	EER	V	Ø	HZ	FLA	MCA	MFS			
	CARRIER	38HDR-036	TOT: 33,400 SEN: 23,380	13.0	11.0	230	1	60	15.60	19.10	30	SEE FLR PLAN	225	EXISTING UNITS ROOF PLATFORM MTD. W/DISC. SW. CU-1 INTERLOCK W/GF-1, CU-2 W/GF-2.
	CARRIER	38HDR-024	TOT: 23,400 SEN: 16,610	13.0	11.0	230	1	60	14.30	17.70	25	SEE FLR PLAN	200	

INDOOR GAS FURNACE UNITS

SYMBOL	MAKE	MODEL	CAPACITY		CFM	ESP	ELECTRICAL				COOLING COIL	SUCTION LINE	LIQUID LINE	SERVICE	WT. (LBS)	REMARKS
			HEATING	SE%			V	Ø	HZ	HP						
	CARRIER	3-TON	IN: 88,000 OUT: 71,000	78.0	1,200	0.50"	120	1	60	1/2	CNPVT3617A	EXIST.	EXIST.	SEE FLR PLAN	200	EXIST. UP-FLOW UNITS FLOOR MTD. W/DISC. SW. PROVIDE NEW 7-DAY PROGRAMMABLE DIGITAL T'STATS. GF-1 INTERLOCK W/CU-1, GF-2 W/CU-2.
	CARRIER	2-TON	IN: 66,000 OUT: 54,000	78.0	800	0.50"	120	1	60	1/2	CNPVT2414A	EXIST.	EXIST.	SEE FLR PLAN	175	

OUTDOOR VARIABLE REFRIG. FLOW UNIT

SYMBOL	MAKE	MODEL	CAPACITY (ARI)		ELECTRICAL						SEER	EER	COP	HSPF	SERVICE	WGT. (LBS)	REMARKS
			COOLING	HEATING	VOLT	Ø	HZ	FLA	MCA	MFS							
	SAMSUNG	AJ020JCJ 2CH/AA	17,000	22,000	230	1	60	-	11.0	15	18.50	12.20	-	9.0	DORM'S #3 & 4	130	UNIT ROOF PLATFORM MTD. W/SPRING VIBRATION ISOLATORS, DISC. SW. INTERLOCK W/FC-1 & FC-2.

INDOOR FAN COIL UNITS

SYMBOL	MAKE	MODEL	CAPACITY (BTUH)		BLOWER (CFM)			ELECTRICAL				DIMENSION (INCH)			SERVICE	WT. (LBS)	REMARKS
			COOLING	HEATING	HIGH	MED.	LOW	V	Ø	HZ	FAN OUTPUT	LENGTH	WIDTH	HEIGHT			
	SAMSUNG	AJ009NBNDCH/AA	8,900	9,900	318	290	244	230	1	60	0.17A/65W	23"	23"	10"	DORM #3	30	DUCTLESS UNITS CLG. MTD. W/DISC. SW. & DIGITAL AUTO CHANGE OVER T'STATS. INTERLOCK W/OUTDOOR VRF-1 UNIT.
	SAMSUNG	AJ009NBNDCH/AA	8,900	9,900	318	290	244	230	1	60	0.17A/65W	23"	23"	10"	DORM #4	30	

EXHAUST FAN SCHEDULE

SYMBOL	MAKE	MODEL	CFM	S.P	RPM	ELECTRICAL				SERVICE	WT. (LBS)	REMARKS
						V	Ø	HZ	HP			
	GREENHECK	SP-A90	60	0.25"	900	120	1	60	29 WATTS	LAUNDRY ROOM	20	UNIT CEILING MTD. W/BDD & DISC. SW. INTERLOCK LIGHT SWITCH.

GENERAL NOTES:

- CODES, RULES AND REGULATIONS- DESIGN OF SYSTEM
 - ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, ORDINANCES AND CODES (2019 CMC).
 - WHEN THE DRAWINGS CALL FOR MATERIALS OR CONSTRUCTION OF A BETTER QUALITY OR LARGER SIZES THAN REQUIRED BY THE ABOVE MENTIONED CODES AND RULES, WORK SHALL BE AS SPECIFIED OR SHOWN RATHER THAN AS REQUIRED BY CODE. ALL ITEMS OR FEATURES OF THE MECHANICAL SYSTEMS REQUIRED BY CODE SHALL BE INCLUDED, EVEN THOUGH NOT SPECIFIED HEREIN.
 - INSTALLATION OF THE SYSTEMS SHALL BE IN ACCORDANCE WITH THE ABOVE MENTIONED CODES AND REGULATIONS AND ALSO SHALL CONFORM TO GOOD, ACCEPTED MECHANICAL PRACTICES.
- VOLUME DAMPERS IN ALL BRANCH DUCTS.
- FLEXIBLE CONNECTIONS AT SUPPLY AND RETURN AIR OPENINGS OF ALL AIR CONDITIONING UNITS.
- FLEXIBLE DUCTS TO BE GLASS-FLEX 4'-0", MAXIMUM IN LENGTH WHERE APPLICABLE, FLEXIBLE DUCTS SHALL BE USED IN LIEU OF RIGID ELBOWS.
- CEILING DIFFUSERS TO BE EQUAL TO KRUEGER SERIES 1200 MODULAR CORE O.B.D. FLUSH MOUNTED FOR SUSPENDED T-BAR CEILING AND SURFACE MOUNTED FOR GYPSUM BOARD CEILING.
- RETURN AIR REGISTERS TO MATCH CEILING DIFFUSERS.
- SIDEWALL SUPPLY AND RETURN REGISTERS TO BE EQUAL TO KRUEGER SERIES 5880 DOUBLE DEFLECTION.
- COORDINATE EXACT LOCATION OF ALL AIR OUTLETS AND INLETS (DIFFUSERS AND REGISTERS) WITH APPROPRIATE ARCHITECTURAL PLANS (REFLECTED CEILING, ELEVATIONS, ETC.) COLOR AS DIRECTED BY ARCHITECT.
- PROVIDE DUCT LINING TO SUPPLY DUCT OF EACH AC UNIT FOR MINIMUM OF 20 FT. DUCT LINING TO BE EQUAL TO JOHNS-MANVILLE, 2" THICK x 1-1/2 PCF DENSITY DUCT LINER. DUCTWORK TO BE INCREASED IN EACH DIMENSION TO INCORPORATE THICKNESS OF LINING.
- DUCT INSULATION TO CONFORM TO 2019 CALIFORNIA ENERGY CONSERVATION STANDARDS (TITLE 24).
- WIRING DIAGRAM IS INTENDED TO INDICATE SEQUENCE OF CONTROL AND DOES NOT NECESSARILY SHOW ALL CONNECTIONS REQUIRED BY LOCAL CODES.
- AUTOMATIC TEMPERATURE CONTROL DEVICE FOR REGULATION OF SPACE TEMPERATURE SHALL BE CAPABLE OF BEING SET FROM 55 TO 85°F, AND HAVE THE ABILITY TO OPERATE THE HEATING AND COOLING IN SEQUENCE. CONTROL SHALL BE ADJUSTABLE TO PROVIDE A RANGE OF UP TO 5°F BETWEEN FULL HEATING AND FULL COOLING AND HAVE CAPABILITY OF TERMINATING ALL HEATING AT A TEMPERATURE NO MORE THAN 70°F, AND COOLING AT A TEMPERATURE NOT LESS THAN 78°F.
- ROOF MOUNTED EQUIPMENT SHALL BE LABELED AS TO THE SPACE IT SERVES.
- APPLIANCES DESIGNED TO BE FIXED IN POSITION SHALL BE SECURELY FASTENED IN PLACE PER BUILDING CODE REQUIREMENTS OR APPLICABLE MANUFACTURER INSTALLATION REQUIREMENTS.
- PROVIDE SEISMIC BRACING FOR ALL MECHANICAL EQUIPMENT STRUCTURE MOUNTED, 400 LBS. OR HEAVIER.
- PROVIDE ACCESS PANEL FOR ALL CEILING MOUNTED EQUIPMENT & VOLUME DAMPERS.
- PROVIDE MIN. 10'-0" SEPARATION BETWEEN POINT OF EXHAUST AND ANY FRESH AIR INTAKE OR A/C UNIT OSA INTAKE.
- CONCEALED BUILDING SPACES USED AS RETURN AIR PLENUM SHALL BE OF NON-COMBUSTIBLE MATERIAL.
- TRANSVERSE JOINTS FOR ALL AIR SUPPLY DUCTS INSTALLED WHERE AIR LEAKAGE WOULD BE NON-BENEFICIAL TO THE OCCUPIED AREA, TEMPERATURE REQUIREMENTS SHALL BE SEALED WITH APPROVED MASTIC OR TAPE.
- A MAINTENANCE LABEL SHALL BE AFFIXED TO MECHANICAL EQUIPMENT AND A MAINTENANCE MANUAL SHALL BE PROVIDED FOR THE OWNERS USE.
- PROVIDE GALVANIZED SHEET METAL DUCTS FABRICATED AND INSTALLED TO CMC CHAPTER 6 STANDARDS 2019 EDITION.
- ALL DUCT SIZES SHOWN ON THE FLOOR PLANS ARE CLEAR INSIDE DIMENSIONS. CONTRACTOR SHALL ENLARGE DUCT SIZE IN ORDER TO ACCOMMODATE LINING INSIDE OF DUCT IF REQUIRED.
- MAINTAIN 10'-0" SEPARATION BETWEEN AIR CONDITIONING UNIT OR MAKEUP AIR UNIT AIR INTAKE AND ANY EXHAUST OR VENT TERMINATION.
- ALL FIRE DAMPERS INSTALLED IN HEATING, VENTILATION AND AIR CONDITIONING SYSTEMS INTENDED TO OPERATE WITH FAN ON (NO SMOKE DUCT DETECTOR) SHALL BE DYNAMIC TYPE AND SHALL BE INSTALLED IN ACCORDANCE WITH THEIR LISTING.
- PROVIDE FIRE DAMPER WHERE DUCT PENETRATES FIRE RATED CEILING OR WALL IF APPLICABLE.
- RECTANGULAR DUCTS CAN BE SUBSTITUTED WITH EQUIVALENT ROUND DUCTS WHERE APPLICABLE PER FOLLOWING SCHEDULE.

CFM	DUCT SIZE
0-110	6"Ø
110-240	8"Ø
240-420	10"Ø
420-675	12"Ø
675-1050	14"Ø
1050-1500	16"Ø
1500-2000	18"Ø
2000-2600	20"Ø
- ENERGY CONSERVATION STANDARDS FOR NEW NONRESIDENTIAL BUILDINGS HAVE BEEN REVIEWED AND DESIGN CONFORMS TO THEM.
- THE MECHANICAL CONTRACTOR SHALL SECURE AND PAY FOR ALL REQUIRED PERMITS AND FEES.
- THE PROJECT SHALL BE AIR BALANCED AND A COPY OF THE FINAL REPORT SHALL BE PRESENTED TO THE TENANT AND OWNER.
- MECHANICAL CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO BID AND VERIFY EXISTING LOCATION OF ALL EQUIPMENT AND THEIR WORKING CONDITION PRIOR TO WORK. ANY DISCREPANCY SHALL BE REPORTED TO ARCHITECT.
- SHAFTS (HOIST WAYS) HOUSING ELEVATORS EXTENDING THROUGH MORE THAN TWO FLOORS LEVELS SHALL BE VENTED TO THE OUTSIDE. THE AREA OF THE VENT SHALL NOT BE LESS THAN 3.5% OF THE AREA OF SHAFT. MIN. 3.0 SQ. FT. EQUIPPED WITH SMOKE DAMPER TO BE ACTIVATED BY SMOKE DETECTORS LOCATED AT TOP OF THE SHAFT.
- ALL WORK SHALL CONFORM TO THE 2019 CBC, CMC, CPC & CEC, AND 2016 TITLE-24 ENERGY COMPLIANCE FORMS.
- THERMOSTATS TO BE LOCATED BETWEEN 3 AND 4 FEET ABOVE THE FLOOR.

Occupancy Group: R-2 / Sprinklered / Renovated Area
Construction type: Type VN / Fully Sprinklered

H.V.A.C. LEGEND

SYMBOL	ABBREV.	DESCRIPTION
		DUCT RISER
		DUCT DROP
		DUCT SECTION (SUPPLY)
		DUCT SECTION (RETURN)
		DUCT SECTION (EXHAUST)
	C.D.	CEILING DIFFUSER
	R.A.R.	RETURN AIR REGISTER
	E.G.	EXHAUST AIR GRILLE
	S.W.S.	SIDE WALL SUPPLY
	S.W.R.	SIDE WALL RETURN
	S.W.E.	SIDE WALL EXHAUST
	R.G.	RELIEF GRILLE
	M.V.D.	MANUAL VOLUME DAMPER
	A.F.D.	AUTOMATIC FIRE DAMPER
	A.V.D.	AUTOMATIC VOLUME DAMPER
	D.L.	DOOR LOUVER
	STAT	ROOM THERMOSTAT
	D.H.	DUCT HEATER
	U.C.	UNDERCUT
	C.W.S.	COND. WATER SUPPLY
	C.W.R.	COND. WATER RETURN
	H.W.S.	HOT WATER SUPPLY
	H.W.R.	HOT WATER RETURN
	CH.W.S.	CHILLED WATER SUPPLY
	CH.W.R.	CHILLED WATER RETURN
		DIRECTION OF FLOW
	G.V.	GATE VALVE
	G.L.V.	GLOBE VALVE
	C.V.	CHECK VALVE
	B.V.	BUTTERFLY VALVE
	RED.	REDUCER
	STR.	STRAINER
	U.	UNION
	P.G.	PRESSURE GAUGE
	TH.	THERMOSTAT
	A.D.	ACCESS DOOR
	A.P.	ACCESS PANEL
	S.A.	SUPPLY AIR
	R.A.	RETURN AIR
	E.A.	EXHAUST AIR
	C.A.	COMBUSTION AIR
	O.S.A.	OUTSIDE AIR
	DN.	DOWN
	A.F.F.	ABOVE FINISH FLOOR
	CLG.	CEILING
	N.C.	NORMALLY CLOSED
	N.O.	NORMALLY OPEN
	N.I.C.	NOT IN CONTRACT
	P.O.C.	POINT OF CONNECTION
	G.C.	GENERAL CONTRACTOR
	P.C.	PLUMBING CONTRACTOR
	E.C.	ELECTRICAL CONTRACTOR
	U.T.R.	UP THRU ROOF
		FLEX. CONN. IN DUCT
		TURNING VANES
		EXTRACTORS
		FURN. & INST. BY ELEC.
		FURN. & INST. BY MECH.
		EXPANSION VALVE
	C.A.	CONTROL AIR
		DUCT LINING
	M.C.A.	MAX. CIRCUIT AMPACITY
	T.S.P.	TOTAL STATIC PRESSURE
	F.L.A.	FULL LOAD AMP
	B.D.D.	BACK DRAFT DAMPER
	MBH	THOUSAND BTUH
	E.R.	EXHAUST REGISTER
	SFD	SMOKE AND FIRE DAMPER
	SD	SMOKE DUCT DETECTOR

EQUIPMENT SCHEDULES, NOTES & LEGEND

Issue	XXX	XX-XX-XX
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