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Project No: MO0102
Dutch Bros Coffee - New Freestanding Store
500 NW Chipman Road, Lee's Summit, Missouri 64086
for: Dutch Bros Coffee
110 SW 4th St.
Grants Pass, OR 97526

ISSUED FOR PERMIT:
10.11.2021

REV.	DATE:	DESCRIPTION:
01	10.14.21	CITY COMMENTS
02	11.01.21	CITY COMMENTS
03	03.15.22	OWNER REVISIONS

SHEET NAME:

MECHANICAL PLAN

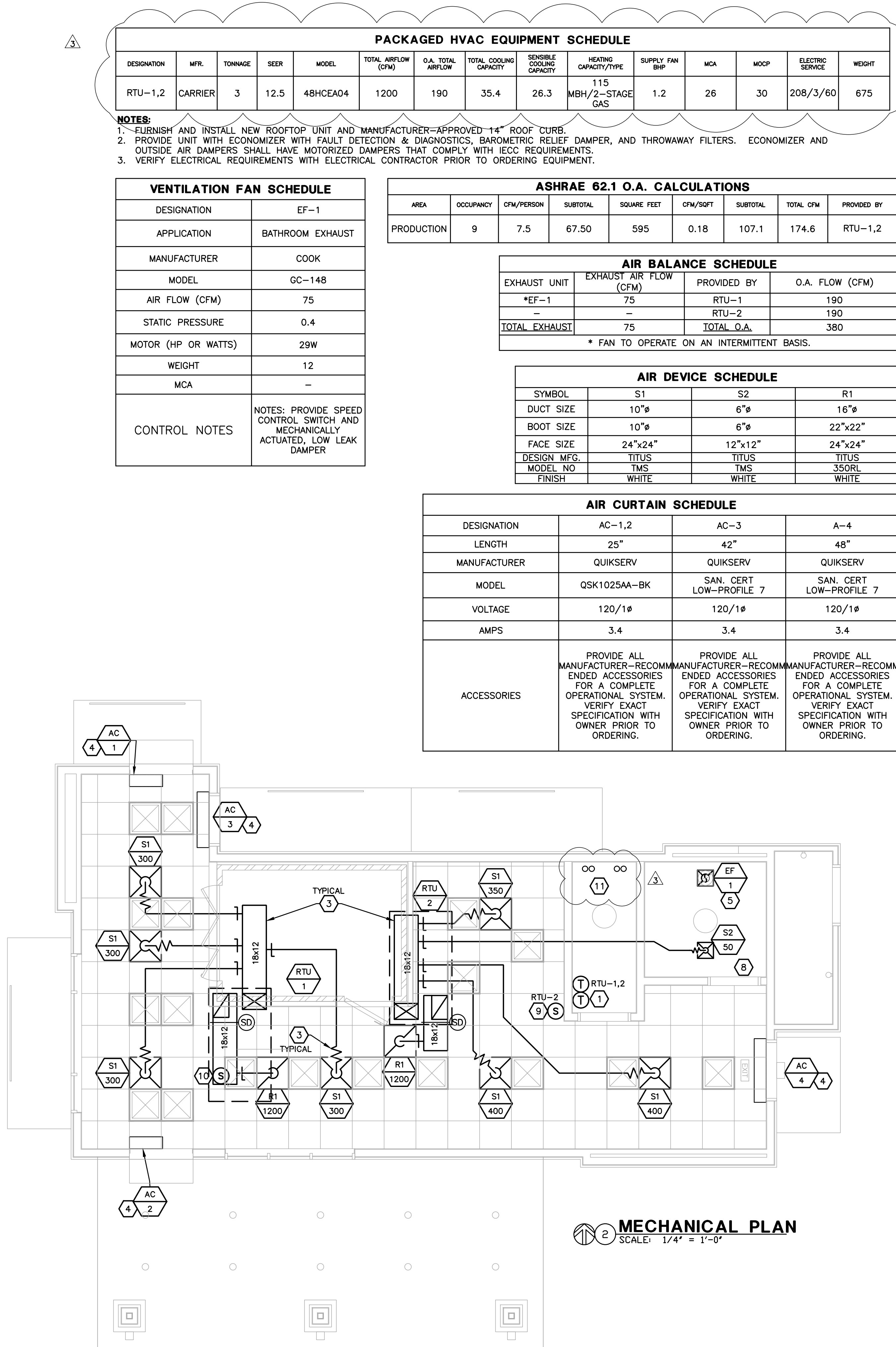
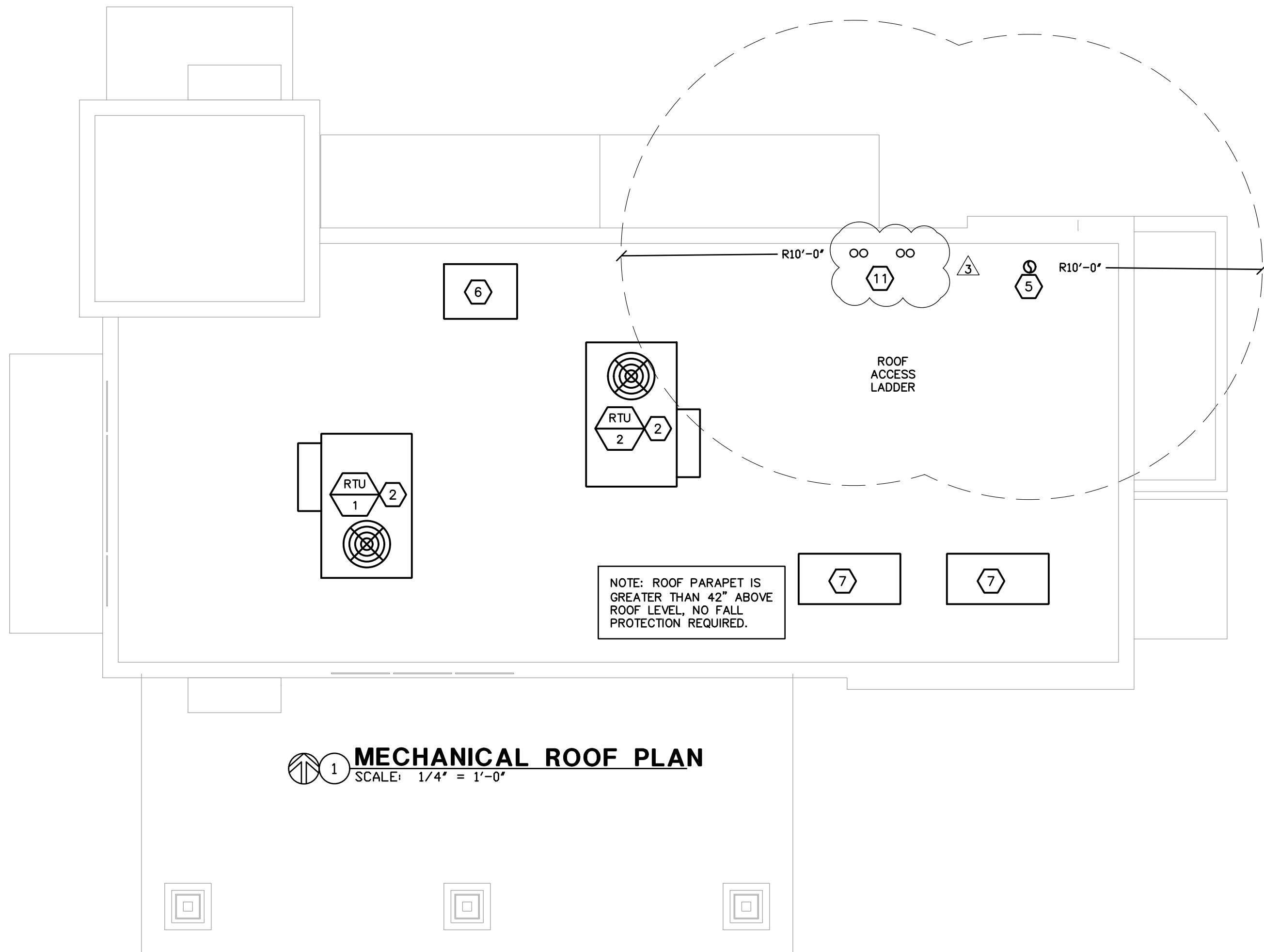
SHEET NUMBER:

M1.0

MECHANICAL SYMBOLS LEGEND		
(T)	THERMOSTAT	
(S)	TEMPERATURE SENSOR	
(SD)	SMOKE DETECTOR	
---w---	FLEXIBLE DUCT	
---v---	VOLUME DAMPER	
FD	FIRE DAMPER	
⬆	CEILING SUPPLY AIR DIFFUSER	
⬆	CEILING RETURN AIR GRILLE	
---	SIDEWALL AIR DIFFUSER OR GRILLE	
---	NEW DUCTWORK	
---	EXISTING DUCTWORK	
---D---	CONDENSATE DRAIN	
---G---	GAS PIPING	
→	PIPE TURNING DOWN	
→	PIPE TURNING UP	
⬆	BALL VALVE	
⬆	GATE VALVE	
⬆	CONNECTION OF NEW TO EXISTING	
⬆	CHECK VALVE	
⬆	GAS COCK	
⬆	UNION	
⬆	PRESSURE GAUGE	
⬆	STRAINER	
AFF	ABOVE FINISHED FLOOR	
S1	AIR DEVICE #	S - SUPPLY
100	CFM	R - RETURN
		E - EXHAUST

MECHANICAL KEYED NOTES

- 24 HR, 7 DAY PROGRAMMABLE THERMOSTAT TO BE INSTALLED 48" ABOVE THE FLOOR.
- FURNISH AND INSTALL ROOFTOP UNIT (RTU-1,2) ON ROOF. ROUTE CONDENSATE PIPING TO NEAREST ROOF DRAIN, OR (WHERE REQUIRED BY LOCAL AHJ), THROUGH ROOF TO INDIRECTLY DRAIN ABOVE MOP SINK.
- FURNISH AND INSTALL GALVANIZED STEEL DUCTWORK, SIZES AS SHOWN ON DRAWING. SIZES SHOWN ARE CLEAR, INSIDE DIMENSIONS. ALL DUCTWORK SHALL BE PROVIDED WITH MINIMUM R-6 INSULATION.
- PROVIDE WALL-MOUNTED ELECTRIC AIR CURTAIN ABOVE DOOR/WINDOW. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
- 6"Ø EXHAUST DUCT OUT THROUGH ROOF. MAINTAIN MINIMUM OF 10 FEET FROM ANY OUTSIDE ARE INTAKES.
- INSTALL OWNER-PROVIDED WALK-IN COOLER CONDENSING UNIT ON ROOF. REFRIGERANT PIPING FROM COOLER TO REMOTE CONDENSER ON THE ROOF PROVIDED BY CONTRACTOR PER MANUFACTURER'S RECOMMENDATIONS. VERIFY EXACT ROUTING AND ROOF PENETRATION LOCATION IN FIELD.
- INSTALL OWNER-PROVIDED ICE MAKER CONDENSING UNIT ON ROOF. REFRIGERANT PIPING FROM ICE MAKER TO REMOTE CONDENSER ON THE ROOF PROVIDED BY CONTRACTOR PER MANUFACTURER'S RECOMMENDATIONS. VERIFY EXACT ROUTING AND ROOF PENETRATION LOCATION IN FIELD.
- UNDERCUT DOOR 1" FOR MAKEUP AIR.
- FURNISH AND INSTALL REMOTE TEMPERATURE SENSOR AND RELATED WIRING TO CONNECT TO THERMOSTAT FOR HVAC UNIT. MOUNT ON WALL AT 60" AFF. VERIFY EXACT LOCATION IN FIELD.
- FURNISH AND INSTALL REMOTE TEMPERATURE SENSOR AND RELATED WIRING TO CONNECT TO THERMOSTAT FOR HVAC UNIT. MOUNT IN RETURN DUCT OF UNIT AS SHOWN.
- 3" PVC/CPVC INTAKE AND 3" PVC/CPVC EXHAUST FROM GAS WATER HEATER UP TO ROOF. COMBINE RIGHT BEFORE ROOF PENETRATION WITH CONCENTRIC VENT KIT. WATER HEATER PROVIDED AND INSTALLED BY OTHERS. TYPICAL OF 2.



PACKAGED HVAC EQUIPMENT SCHEDULE													
DESIGNATION	MFR.	TONNAGE	SEER	MODEL	TOTAL AIRFLOW (CFM)	O.A. TOTAL AIRFLOW	TOTAL COOLING CAPACITY	SENSIBLE COOLING CAPACITY	HEATING CAPACITY/TYPE	SUPPLY FAN BHP	MCA	MOCP	ELECTRIC SERVICE
RTU-1,2	CARRIER	3	12.5	48HCEA04	1200	190	35.4	26.3	115 MBH/2-STAGE GAS	1.2	26	30	208/3/60

- NOTES:
- FURNISH AND INSTALL NEW ROOFTOP UNIT AND MANUFACTURER-APPROVED 14" ROOF CURB.
 - PROVIDE UNIT WITH ECONOMIZER WITH FAULT DETECTION & DIAGNOSTICS, BAROMETRIC RELIEF DAMPER, AND THROWAWAY FILTERS. ECONOMIZER AND OUTSIDE AIR DAMPERS SHALL HAVE MOTORIZED DAMPERS THAT COMPLY WITH IECC REQUIREMENTS.
 - VERIFY ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR PRIOR TO ORDERING EQUIPMENT.

VENTILATION FAN SCHEDULE	
DESIGNATION	EF-1
APPLICATION	BATHROOM EXHAUST
MANUFACTURER	COOK
MODEL	GC-148
AIR FLOW (CFM)	75
STATIC PRESSURE	0.4
MOTOR (HP OR WATTS)	29W
WEIGHT	12
MCA	-
CONTROL NOTES	NOTES: PROVIDE SPEED CONTROL SWITCH AND MECHANICALLY ACTUATED, LOW LEAK DAMPER

ASHRAE 62.1 O.A. CALCULATIONS							
AREA	OCCUPANCY	CFM/PERSON	SUBTOTAL	SQUARE FEET	CFM/SQFT	SUBTOTAL	TOTAL CFM
PRODUCTION	9	7.5	67.50	595	0.18	107.1	174.6

AIR BALANCE SCHEDULE			
EXHAUST UNIT	EXHAUST AIR FLOW (CFM)	PROVIDED BY	O.A. FLOW (CFM)
*EF-1	75	RTU-1	190
-	-	RTU-2	190
TOTAL EXHAUST	75	TOTAL O.A.	380

* FAN TO OPERATE ON AN INTERMITTENT BASIS.

AIR DEVICE SCHEDULE			
SYMBOL	S1	S2	R1
DUCT SIZE	10"Ø	6"Ø	16"Ø
BOOT SIZE	10"Ø	6"Ø	22"x22"
FACE SIZE	24"x24"	12"x12"	24"x24"
DESIGN MFG.	TITUS	TITUS	TITUS
MODEL NO	TMS	TMS	35QRL
FINISH	WHITE	WHITE	WHITE

AIR CURTAIN SCHEDULE			
DESIGNATION	AC-1,2	AC-3	A-4
LENGTH	25"	42"	48"
MANUFACTURER	QUIKSERV	QUIKSERV	QUIKSERV
MODEL	QSK1025AA-BK	SAN. CERT LOW-PROFILE 7	SAN. CERT LOW-PROFILE 7
VOLTAGE	120/1Ø	120/1Ø	120/1Ø
AMPS	3.4	3.4	3.4
ACCESSORIES	PROVIDE ALL MANUFACTURER-RECOMMENDED ACCESSORIES FOR A COMPLETE OPERATIONAL SYSTEM. VERIFY EXACT SPECIFICATION WITH OWNER PRIOR TO ORDERING.	PROVIDE ALL MANUFACTURER-RECOMMENDED ACCESSORIES FOR A COMPLETE OPERATIONAL SYSTEM. VERIFY EXACT SPECIFICATION WITH OWNER PRIOR TO ORDERING.	PROVIDE ALL MANUFACTURER-RECOMMENDED ACCESSORIES FOR A COMPLETE OPERATIONAL SYSTEM. VERIFY EXACT SPECIFICATION WITH OWNER PRIOR TO ORDERING.