

HVAC FLOOR PLAN 2

Scale: 1/4"=1'-0"

M-100

MAKE UP AIR CALCULATION:

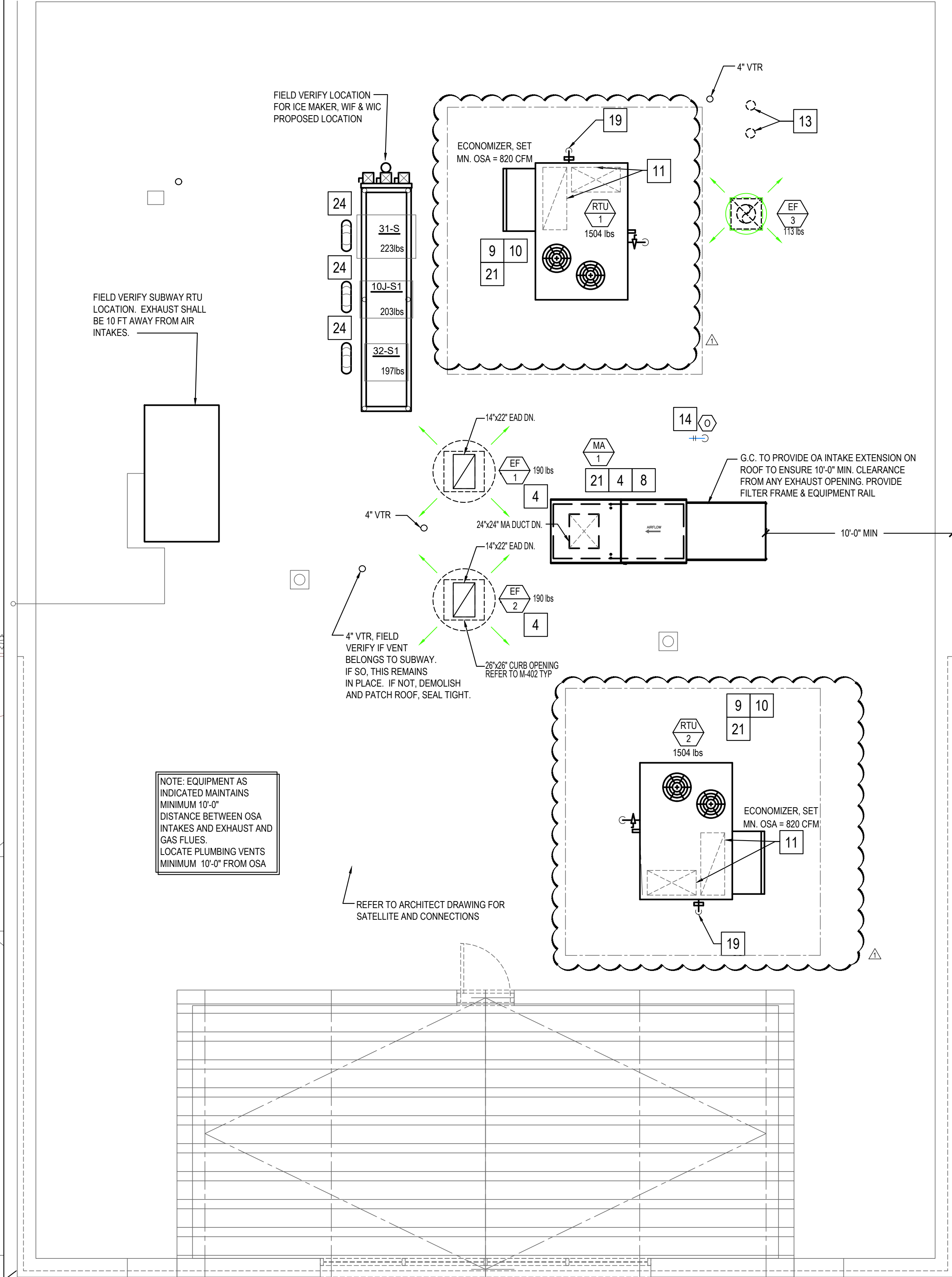
CALCULATION FOR MAKE UP AIR TEMPERATURE DIFFERENTIAL BETWEEN MAKEUP AIR AND THE AIR IN THE CONDITIONED SPACE SHALL NOT EXCEED 10 DEG F. FOR EACH SITE. CALCULATE AVERAGE DAILY TEMPERATURE FOR PREVIOUS 5 YEARS. OCCUPIED COOLING SET POINT IS 75 F. IF TEMPERATURES AVERAGE 85 F OR ABOVE FOR MORE THAN 14 DAYS PROVIDE COOLING ON MAKEUP AIR. OCCUPIED HEATING SET POINT IS 70 F. IF TEMPERATURES AVERAGE 60 F OR BELOW FOR MORE THAN 14 DAYS PROVIDE HEATING ON MAKEUP AIR. FROM THE NATIONAL WEATHER SERVICE CLIMATE DATA FOR: FAIRFAX, VA (WASHINGTON DULLES, DC) FROM MAY THRU SEPTEMBER.

YEAR	AVERAGE # OF DAYS TEMP OVER 85 F
2015	0
2016	9
2017	0
2018	1
2019	2

TOTAL:
TOTAL AVERAGE 12 / 5 = 2.4 DAYS

MONTH/YEAR	AVERAGE # OF DAYS TEMP BELOW 60 F
JAN/2019	31

PANDA HAS APPROVED THAT COOLING IS NOT REQUIRED. HEATING SHALL BE PROVIDED.



HVAC ROOF PLAN 1

Scale: 1/4"=1'-0"

M-100

MECHANICAL KEY NOTES:

1. INSTALL GREASE EXHAUST HOODS FURNISHED BY PANDA. HOOD SHALL BE ONE CAPTIVEAIRE 4824ND HOOD EXHAUSTING 2,975 CFM. SUPPORT FROM STRUCTURE ABOVE WITH UNISTRUT AND ALL THREAD ROD. MOUNT HOOD PER LOCAL CODE REQUIREMENTS. REFER TO PLAN FOR HOOD CONNECTIONS. SEE CODE COMPLIANCE DRAWINGS ON SHEET M-500 AND CAPTIVEAIRE HOOD DRAWINGS FOR ADDITIONAL REQUIREMENTS. (TWO SECTIONS TOTAL).
2. PROVIDE AND INSTALL GREASE EXHAUST DUCT, ROUTE ON TOP OF MAKE UP AIR DUCT, FROM INLET OF ROOF MOUNTED GREASE EXHAUST FAN, TRANSITION TO 22"x14" BETWEEN ROOF JOIST, CONNECT TO EXHAUST HOOD COLLAR. FIELD VERIFY WRAP WITH THERMAL CERAMIC FIREMASTER DUCT WRAP+ OR EQUAL. FABRICATE CURB FROM 16 GAUGE STEEL WITH WELDED SEAM CONSTRUCTION SEAL TO THE ROOF CURB WITH FIRE CAULKING. SEE HOOD DETAIL DRAWINGS ON SHEET M-500 AND CAPTIVEAIRE DRAWINGS. TRANSITION DUCT TO CURB AND FAN INLET SIZE. TRANSITION TO 22X12" DUCT COLLAR SIZE.
3. MOUNT THERMOSTAT AT MANAGER STATION. REFER TO DETAIL #1 ON SHEET E-200. SEE DWG FOR EXACT LOCATION OF REMOTE SENSOR. SEE ROOFTOP UNIT SCHEDULE AND TEMPERATURE CONTROL DIAGRAM DETAIL 5 ON SHEET M-501 FOR ADDITIONAL INFORMATION.
4. INSTALL GREASE EXHAUST FAN WITH CURB (EF-1 AND EF-2) AND MAKE UP AIR (MA-1) FURNISHED BY PANDA. COORDINATE LOCATION OF UNIT WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.
5. PROVIDE AND INSTALL A REMOTE SENSOR FOR ROOFTOP UNIT AT THIS LOCATION. MOUNT REMOTE SENSOR IN RETURN AIR DUCTWORK. SEE TEMPERATURE CONTROL DIAGRAM ON SHEET M-501 FOR ADDITIONAL INFORMATION.
6. PROVIDE AND INSTALL DUCT MOUNTED SMOKE DETECTOR AT MAIN SUPPLY AIR DUCT PER UMC, SEC. 609, OR AT RETURN AIR DUCT PER IMC, SECTION 606.2.1. DETECTORS SHALL BE INTERLOCKED TO SHUT DOWN ROOFTOP UNITS UPON DETECTION OF SMOKE. PROVIDE ALL CONTROL WIRING NECESSARY TO PERFORM THIS OPERATION.
7. PROVIDE FLEXIBLE CONNECTION BETWEEN UNIT, ROUTE DUCT THRU ROOF CURB AND TRUSS.
8. FOR GAS OR WATER CONNECTION, SEE PLUMBING DRAWINGS.
9. PROVIDE FABRICATED CURB PER MANUFACTURERS REQUIREMENTS AND COORDINATE EXACT LOCATION OF UNIT IN FIELD. SHIM ROOF CURB LEVEL FOR PROPER CONDENSATE DRAINAGE.
10. FURNISH AND INSTALL ALL TEMPERATURE CONTROL WIRING FROM THE UNIT TO THE THERMOSTAT OR OTHER CONTROL DEVICES.
11. FULL SIZE SA AND RA UP TO RTU. TRANSITION AS REQUIRED TO RTU INLET/OUTLET SIZE.
12. PVC VENT AND COMBUSTION AIR PIPING PROVIDED AND INSTALLED BY PLUMBING FOR SEALED COMBUSTION WATER HEATER. REFER TO PLUMBING PLANS.
13. WATER HEATER VENT AND COMBUSTION AIR INTAKE PIPES. REFER TO PLUMBING PLANS. OFFSET AS REQUIRED FOR CLEARANCE FROM AIR INTAKES.
14. ROOF HYDRANT. REFER TO PLUMBING DRAWINGS.
15. NOT USED.
16. MA DUCT (BELOW MAKE UP AIR) CONNECT TO 28"x10" RISER FROM SUPPLY PLENUM. 1,190 CFM
17. PROVIDE DUCT EXTERNAL INSULATION WRAP AT TRUNK, TYPICAL.
18. NOT USED.
19. CONDENSATE DRAIN LINE DOWN THRU ROOF. REFER TO DETAIL 16/P-500 AND PLUMBING SHEET P-100.
20. NOT USED.
21. PROVIDE AND INSTALL ALL EQUIPMENT WITH MANUFACTURER'S RECOMMENDED CLEARANCES FOR MAINTENANCE. MAINTAIN MINIMUM CLEARANCES TO ELECTRICAL AND SERVICE ACCESS PANELS AND DISCONNECTS.
22. GREASE DUCT CLEANOUT LOCATION. PROVIDE ACCESS TO CLEANOUT ABOVE CEILING. REFER TO MECHANICAL SPECIFICATIONS SHEET M-000
23. 8" CONNECTION TO HOOD RTU SUPPLY PLENUM COLLAR. BALANCE TO 223 CFM.
24. PROVIDE AND INSTALL ACR TUBING, SIZED AND ROUTED PER MANUFACTURER'S INSTRUCTIONS. FROM REMOTE REFRIGERANT CONDENSERS TO WALK-IN COOLER AND FREEZER FAN COILS, AND ICE MAKER. TEST, PURGE, EVACUATE AND CHARGE LINES AS REQUIRED BY MANUFACTURER. (START-UP FOR ICE MAKER IS BY OWNER'S REPRESENTATIVE). ROUTE REFRIGERANT LINES THROUGH "ATR HUB" PROVIDED AND INSTALLED BY GC (REFER TO ARCH. ISO 3 AND 4, SHEET A-108).
25. ROOM AIR SENSOR FROM CAPTIVEAIRE HOOD ON BACK OF MENU BOARD WALL, AS CLOSE TO CEILING AS POSSIBLE.
26. INSTALL ANSUL SYSTEM SUCH THAT TOP OF CABINET IS ON THE UNDERSIDE OF ACT CEILING.
27. PROVIDE CO2 MONITORING SYSTEM, CHART MODEL NUMBER AX60. CO2 SENSOR SHALL BE MOUNTED 12" TO 18" ABOVE FINISHED FLOOR NEAR CO2 TANK. CENTRAL DISPLAY AND CO2 ALARM SHALL BE MOUNTED VISIBLE TO OCCUPANTS FOR ALARM. REFER TO ARCH AND ELECTRICAL PLANS.

NOTE: MAXIMUM FLEXIBLE DUCT LENGTH ALLOWED SHALL BE PER 5 FT.



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REVISIONS:

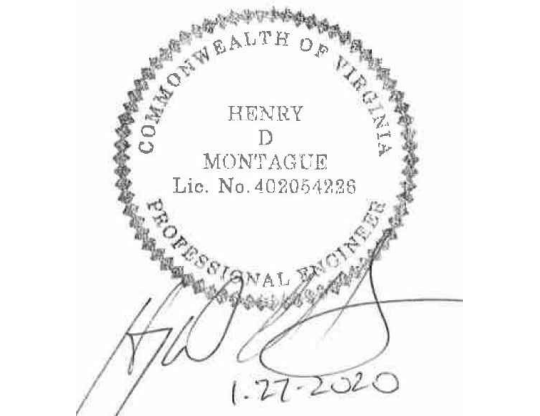
REVISION	PERMIT RESPONSE 1	06-01-2020

ISSUE DATE:

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