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PLOTTED: 01/02/24 5:30:00 PM PROJECT: A325-N BOLTS - CITY OF FEDERAL WAY FILE PATH: C:\bidding\pds\cmm\023-087\023-087-087.dwg \$\$\$\$\$\$



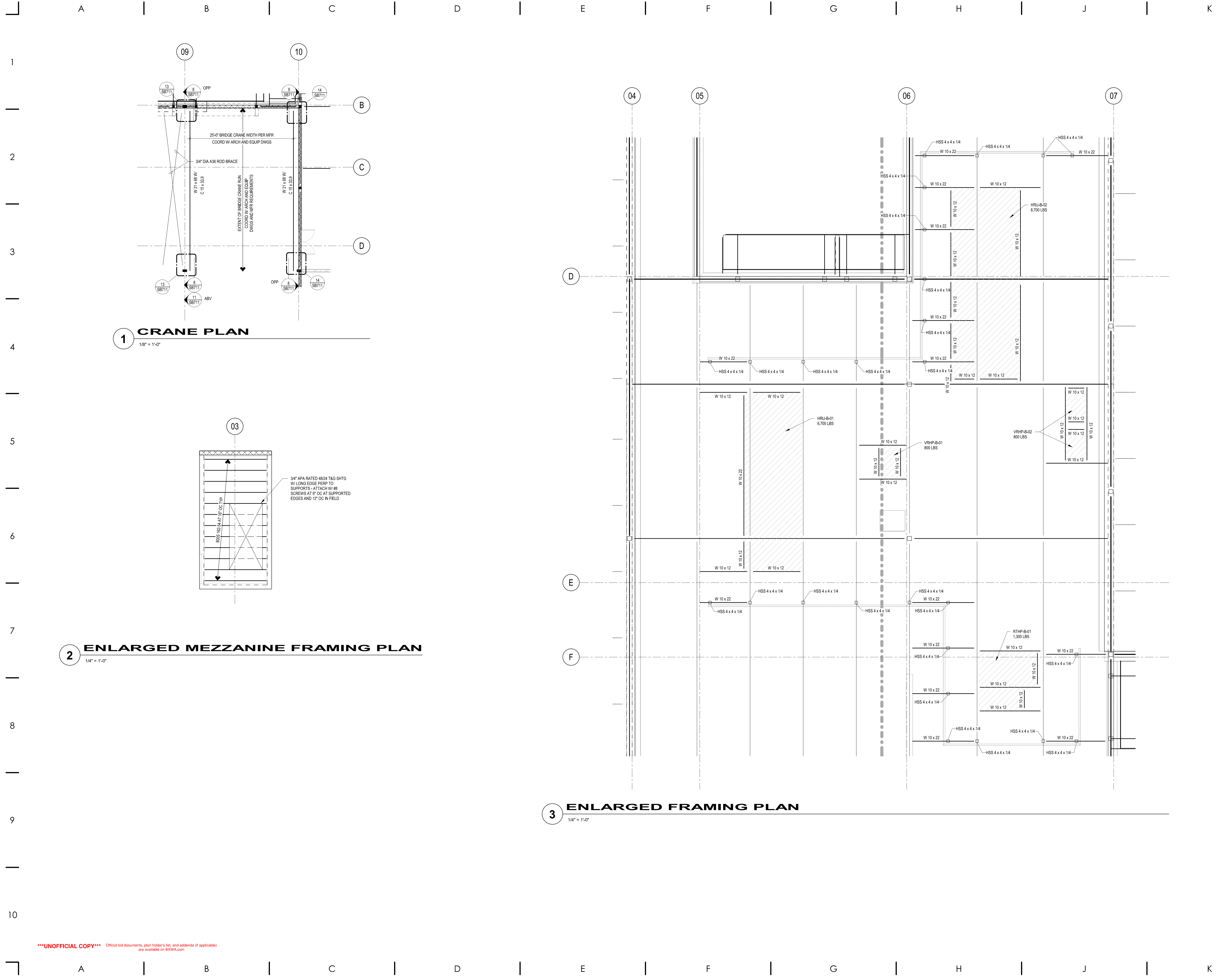
EQUIPMENT SUPPORT PLANS

CITY OF FEDERAL WAY FLEET & SHOP BUILDING

FEDERAL WAY, WASHINGTON	
REVISION	DATE
DATE	JOB NO.
05.04.24	023-087
BID SET	

SB701

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PLotted: 01/02/24 4:30:28 PM PROJECT: ARMY, CITY OF FEDERAL WAY FILE PATH: C:\Users\jgarcia\Documents\2023\023-087\FLEET & SHOP\023-087-001.dwg PLOT DATE: 05/04/24

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MECHANICAL SCHEDULES

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

Table with columns for REVISION and DATE, containing multiple empty rows for revision tracking.

DATE: 05.06.24 JOB NO: a23-087

BID SET
DRAWING NO. MB003

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HEAT RECOVERY UNIT SCHEDULE

Table with columns: MARK, LOCATION, AREA SERVED, MANUFACTURER / MODEL NO., COIL MAX OA (CFM), SUPPLY FAN (TYPE, AIRFLOW, MIN FLOW, TSP, ESP, SPEED CONTROL, RPM, BKW, KW), SUPPLY FAN MOTOR (TYPE, TYPE, MAX FLOW, MIN FLOW, TSP, ESP, SPEED CONTROL, RPM, BKW, KW), EXHAUST FAN (TYPE, MAX FLOW, MIN FLOW, TSP, ESP, SPEED CONTROL, RPM, BKW, KW), EXHAUST FAN MOTOR (TYPE, TYPE, MAX FLOW, MIN FLOW, TSP, ESP, SPEED CONTROL, RPM, BKW, KW), NOTES, MARK.

NOTES:
1. EQUIPMENT SHALL BE PROVIDED WITH A VISIBLE NAMEPLATE INDICATING THE SHORT CIRCUIT CURRENT RATING (SCCR) IN ACCORDANCE WITH UL REQUIREMENTS. REFER TO ELECTRICAL DRAWINGS FOR MINIMUM RATINGS.
2. PROVIDE WITH ONE DAIKIN AHU INTEGRATION VALVE KIT MODEL EKEV400 AND ONE DAIKIN W-CONTROLLER.
3. PROVIDE WITH TWO DAIKIN AHU INTEGRATION VALVE KITS MODEL EKEV400 AND TWO DAIKIN W-CONTROLLERS.
4. PROVIDE SINGLE POINT POWER CONNECTION FOR UNIT AND DAIKIN CONTROLLERS.
5. VERIFY ELECTRICAL CHARACTERISTICS WITH ELECTRICAL PLANS.
6. REFER TO TERMINAL UNIT SCHEDULES FOR MINIMUM AIRFLOWS IN VARIOUS MODES OF OPERATION.
7. PROVIDE WITH FACTORY MOUNTED SENSORS AS INDICATED ON SHEET MB901.
8. PROVIDE WITH BACNET IP CARD FOR INTEGRATION WITH DDC CONTROL SYSTEM.
9. PROVIDE WITH PRE-FABRICATED ROOF CURB IN ACCORDANCE WITH SPECIFICATION SECTION 233400.

HEAT RECOVERY UNIT SCHEDULE

Table with columns: MARK, TYPE, SUPPLY (CFM), EXHAUST (CFM), MAX APD (IN WC), MAX FV (FPM), W SA EAT (DEG F), W SA LAT (DEG F), W EA EAT (DEG F), W EA LAT (DEG F), WINTER EFF. (%), S SA EAT (DEG F), S SA LAT (DEG F), S EA EAT (DEG F), S EA LAT (DEG F), SUMMER EFF. (%), NOTES, MARK.

NOTES:
1. EQUIPMENT SHALL BE PROVIDED WITH A VISIBLE NAMEPLATE INDICATING THE SHORT CIRCUIT CURRENT RATING (SCCR) IN ACCORDANCE WITH UL REQUIREMENTS. REFER TO ELECTRICAL DRAWINGS FOR MINIMUM RATINGS.
2. PROVIDE WITH ONE DAIKIN AHU INTEGRATION VALVE KIT MODEL EKEV400 AND ONE DAIKIN W-CONTROLLER.
3. PROVIDE WITH TWO DAIKIN AHU INTEGRATION VALVE KITS MODEL EKEV400 AND TWO DAIKIN W-CONTROLLERS.
4. PROVIDE SINGLE POINT POWER CONNECTION FOR UNIT AND DAIKIN CONTROLLERS.
5. VERIFY ELECTRICAL CHARACTERISTICS WITH ELECTRICAL PLANS.
6. REFER TO TERMINAL UNIT SCHEDULES FOR MINIMUM AIRFLOWS IN VARIOUS MODES OF OPERATION.
7. PROVIDE WITH FACTORY MOUNTED SENSORS AS INDICATED ON SHEET MB901.
8. PROVIDE WITH BACNET IP CARD FOR INTEGRATION WITH DDC CONTROL SYSTEM.
9. PROVIDE WITH PRE-FABRICATED ROOF CURB IN ACCORDANCE WITH SPECIFICATION SECTION 233400.

HEAT RECOVERY UNIT SCHEDULE

Table with columns: MARK, REF, ROWS / FPI / CIRCUITS, FACE VEL (FPM), APD (IN. WG.), LAT DB/WB (DEG F), LAT DB/WB (DEG F), CAP TOT (MBH), CAP SENS (MBH), EAT (DEG F), LAT (DEG F), CAP (MBH), TYPE, MERV RATING, FACE VEL (FPM), INITIAL PD (IN WC), FINAL PD (IN WC), TYPE, MERV RATING, FACE VEL (FPM), INITIAL PD (IN WC), FINAL PD (IN WC), V / Ø, MCA, MOCP, LxWxH (INxINxIN), WEIGHT (LBS), MOUNTING / SUPPORT, DETAIL / DIAGRAM REFERENCE, CONTROL DIAGRAM / SEQUENCE, NOTES, MARK.

NOTES:
1. EQUIPMENT SHALL BE PROVIDED WITH A VISIBLE NAMEPLATE INDICATING THE SHORT CIRCUIT CURRENT RATING (SCCR) IN ACCORDANCE WITH UL REQUIREMENTS. REFER TO ELECTRICAL DRAWINGS FOR MINIMUM RATINGS.
2. PROVIDE WITH ONE DAIKIN AHU INTEGRATION VALVE KIT MODEL EKEV400 AND ONE DAIKIN W-CONTROLLER.
3. PROVIDE WITH TWO DAIKIN AHU INTEGRATION VALVE KITS MODEL EKEV400 AND TWO DAIKIN W-CONTROLLERS.
4. PROVIDE SINGLE POINT POWER CONNECTION FOR UNIT AND DAIKIN CONTROLLERS.
5. VERIFY ELECTRICAL CHARACTERISTICS WITH ELECTRICAL PLANS.
6. REFER TO TERMINAL UNIT SCHEDULES FOR MINIMUM AIRFLOWS IN VARIOUS MODES OF OPERATION.
7. PROVIDE WITH FACTORY MOUNTED SENSORS AS INDICATED ON SHEET MB901.
8. PROVIDE WITH BACNET IP CARD FOR INTEGRATION WITH DDC CONTROL SYSTEM.
9. PROVIDE WITH PRE-FABRICATED ROOF CURB IN ACCORDANCE WITH SPECIFICATION SECTION 233400.

ROOFTOP HEAT PUMP SCHEDULE

Table with columns: MARK, LOCATION, AREA SERVED, MANUFACTURER / MODEL NO., VENT. MIN OA (CFM), COIL MAX OA (CFM), SUPPLY FAN (TYPE, MAX FLOW, MIN FLOW, TSP, ESP, RPM, SPEED CONTROL, BHP, HP), SUPPLY FAN MOTOR (TYPE, V/Ø), POWER EXHAUST FAN (TYPE, MAX FLOW, MIN FLOW, TSP, ESP, RPM, SPEED CONTROL, BHP, HP), POWER EXHAUST FAN MOTOR (TYPE, V/Ø), NOTES, MARK.

NOTES:
1. EQUIPMENT SHALL BE PROVIDED WITH A VISIBLE NAMEPLATE INDICATING THE SHORT CIRCUIT CURRENT RATING (SCCR) IN ACCORDANCE WITH UL REQUIREMENTS. REFER TO ELECTRICAL DRAWINGS FOR MINIMUM RATINGS.
2. PROVIDE WITH LOW AMBIENT CONTROL AND HIGH STATIC MOTOR KIT.
3. PROVIDE SINGLE POINT POWER CONNECTION.
4. AMBIENT TEMPERATURES LISTED ARE FOR HEATING/COOLING EFFICIENCIES PER AHRI 360 AND THE 2018 WSEC.
5. VERIFY ELECTRICAL CHARACTERISTICS WITH ELECTRICAL PLANS.
6. PROVIDE WITH FACTORY AND FIELD MOUNTED SENSORS AS INDICATED ON SHEET MB902.
7. PROVIDE WITH BACNET IP CARD FOR INTEGRATION WITH DDC CONTROL SYSTEM.
8. PROVIDE WITH PRE-FABRICATED ROOF CURB IN ACCORDANCE WITH SPECIFICATION SECTION 238100.

ROOFTOP HEAT PUMP SCHEDULE

Table with columns: MARK, CAPACITY (MBH), OA TEMP. (DEG F), HEATING (EAT, LAT, CAP / COP), COOLING (EAT, LAT, CAP / COP), CONDENSING SECTION (TYPE, COND. FAN), AUX. ELEC. HEAT (TOTAL KW, CONTROL), PREFILTER / FINAL FILTER (TYPE, MERV RATING, FACE VEL, INITIAL PD, FINAL PD), QTY/SIZE, ELECTRICAL (V/Ø, MCA, MOCP), PHYSICAL (LxWxH, WEIGHT), MOUNTING / SUPPORT, DETAIL / DIAGRAM REFERENCE, CONTROL DIAGRAM / SEQUENCE, NOTES, MARK.

NOTES:
1. EQUIPMENT SHALL BE PROVIDED WITH A VISIBLE NAMEPLATE INDICATING THE SHORT CIRCUIT CURRENT RATING (SCCR) IN ACCORDANCE WITH UL REQUIREMENTS. REFER TO ELECTRICAL DRAWINGS FOR MINIMUM RATINGS.
2. PROVIDE WITH LOW AMBIENT CONTROL AND HIGH STATIC MOTOR KIT.
3. PROVIDE SINGLE POINT POWER CONNECTION.
4. AMBIENT TEMPERATURES LISTED ARE FOR HEATING/COOLING EFFICIENCIES PER AHRI 360 AND THE 2018 WSEC.
5. VERIFY ELECTRICAL CHARACTERISTICS WITH ELECTRICAL PLANS.
6. PROVIDE WITH FACTORY AND FIELD MOUNTED SENSORS AS INDICATED ON SHEET MB902.
7. PROVIDE WITH BACNET IP CARD FOR INTEGRATION WITH DDC CONTROL SYSTEM.
8. PROVIDE WITH PRE-FABRICATED ROOF CURB IN ACCORDANCE WITH SPECIFICATION SECTION 238100.

PROJECT: 05/02/24 2:55:43 PM PROJECT: a23-087 CITY OF FEDERAL WAY FILE PATH: C:\Users\hargis\Documents\Bids\0523087\0523087_001_Bidding\0523087_001\Submittal





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MECHANICAL SCHEDULES

CITY OF FEDERAL WAY
FLEET & SHOPS

Table with columns for REVISION and DATE. Includes fields for DATE (05.04.24) and JOB NO. (a23-087).

BID SET

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FAN SCHEDULE

FAN SCHEDULE table with columns: MARK, LOCATION, AREA SERVED, MANUFACTURER / MODEL NO., FAN TYPE, AIRFLOW (CFM), ESP (IN WG), FAN RPM, FAN WHEEL TYPE, DRIVE, CLASS, RPM, BHP, HP, VFD, SPEED CONTROL, BACKDRAFT DAMPTER AT FAN, MCA, MOCF, SCCR (kA), PHYSICAL (DIAxH / WxHxL (INxIN) / (INxINxIN)), WEIGHT (LBS), SOUND INLET (SONES), MOUNTING / SUPPORT, INTERLOCK DIV 23, INTERLOCK DIV 26, DETAIL / DIAGRAM REFERENCE, CONTROL DIAGRAM / SEQUENCE, NOTES, MARK.

- NOTES:
1. EQUIPMENT SHALL BE PROVIDED WITH A VISIBLE NAMEPLATE INDICATING THE SHORT CIRCUIT CURRENT RATING (SCCR) IN ACCORDANCE WITH UL REQUIREMENTS. REFER TO ELECTRICAL DRAWINGS FOR MINIMUM RATINGS.
2. PROVIDE WITH MOTORIZED DAMPER, BIRDSCREEN, NEMA 3R DISCONNECT, CURB SEAL, HINGED BASE, ROOF CURB IN ACCORDANCE WITH SPECIFICATION SECTION 233400, AND ECM MOTOR WITH 0-10 VDC INPUT.
3. PROVIDE WITH VARI-GREEN HOA.
4. VERIFY ELECTRICAL CHARACTERISTICS WITH ELECTRICAL PLANS.

VARIABLE AIR VOLUME UNIT SCHEDULE

VARIABLE AIR VOLUME UNIT SCHEDULE table with columns: MARK, LOCATION, AREA SERVED (NOTE 4), MANUFACTURER / MODEL NO., ASSOCIATED UNIT, UNIT TYPE, MAXIMUM AIRFLOW (CFM), HEATING AIRFLOW (CFM), MINIMUM AIRFLOW (CFM), UNOCCUPIED MINIMUM AIRFLOW (CFM), INLET DUCT (IN DIA), OUTLET DUCT (INxIN), INLET SP (IN WC), OUTLET SP (IN WC), KW, MAX APD (IN WG), EAT (DEG F), LAT (DEG F), VFD, CONTROL STEPS, ELEC VFD, PHYSICAL (LxWxH (INxINxIN)), WEIGHT (LBS), MOUNTING / SUPPORT, DETAIL / DIAGRAM REFERENCE, CONTROLS DIAGRAM / SEQUENCE, NOTES, MARK.

- NOTES:
1. SEE DETAIL 10MB801 AND 11MB801 FOR VAV UNIT INSTALLATION AND SUPPORT DETAILS.
2. PROVIDE WITH HANGER BRACKETS, FIBER FREE LINER, LOW LEAKAGE ACCESS DOOR, AND REMOVABLE FLOW SENSOR.
3. DIV 230900 CONTRACTOR SHALL PROVIDE ELECTRICAL 24V/10 CONNECTION TO VAV BOX.
4. AREA SERVED INDICATES ROOM WHERE TEMPERATURE SENSOR IS LOCATED FOR EACH TERMINAL UNIT. SEE HVAC ZONE PLANS FOR ALL ROOMS SERVED BY EACH TERMINAL UNIT.
5. VERIFY ELECTRICAL CHARACTERISTICS WITH ELECTRICAL PLANS.
6. HRU-B-01 IS OFF UNLESS UNOCCUPIED HEATING OR COOLING IS REQUIRED. IF REQUIRED, MINIMUM AIRFLOW AND MINIMUM HEATING AIRFLOW ARE AS SCHEDULED.
7. TERMINAL UNITS SHALL OPERATE AT MINIMUM AIRFLOW 24/7 UNLESS UNOCCUPIED HEATING OR COOLING SETPOINTS ARE EXCEEDED. IF SO, AIRFLOWS SHALL BE AS SCHEDULED FOR OCCUPIED. IF GAS CONCENTRATIONS RISE ABOVE SETPOINTS, AIRFLOWS ARE SET TO MAXIMUM PER SEQUENCE OF OPERATION.
8. TERMINAL UNITS ARE SET TO ZERO FLOW UNLESS REQUIRED FOR UNOCCUPIED HEATING AND COOLING. IF REQUIRED, MINIMUM AIRFLOW AND MINIMUM HEATING AIRFLOW ARE AS SCHEDULED.

ELECTRIC DUCT HEATER SCHEDULE

ELECTRIC DUCT HEATER SCHEDULE table with columns: MARK, LOCATION, AREA SERVED, MANUFACTURER / MODEL NO., ASSOCIATED UNIT, AIRFLOW (CFM), CAPACITY (KW), V / Ø, EAT (DEG F), LAT (DEG F), MAX FV (FPM), MAX APD (IN WC), CONTROL TYPE, PHYSICAL (LxW (INxIN)), WEIGHT (LBS), MOUNTING / SUPPORT, DETAIL / DIAGRAM REFERENCE, CONTROL DIAGRAM / SEQUENCE, NOTES, MARK.

- NOTES:
1. CONTROL PANEL SHALL BE PROVIDED WITH A VISIBLE NAMEPLATE INDICATING THE SHORT CIRCUIT CURRENT RATING (SCCR) IN ACCORDANCE WITH THE UL REQUIREMENTS. REFER TO THE ELECTRICAL DRAWINGS FOR MINIMUM RATINGS.
2. VERIFY ELECTRICAL CHARACTERISTICS WITH ELECTRICAL PLANS.

ELECTRIC UNIT HEATER SCHEDULE

ELECTRIC UNIT HEATER SCHEDULE table with columns: MARK, LOCATION, SPACE SERVED, MANUFACTURER / MODEL NO., TYPE, AIRFLOW (CFM), FAN MOTOR HP, ELECTRIC HEATING COIL (TOTAL CAP (KW), TEMP RISE (DEG F), STAGES (#)), ELECTRICAL (VFD, AMPS (A)), PHYSICAL (WxHxD (INxINxIN)), WEIGHT (LBS), MOUNTING / SUPPORT, CONTROL DIAGRAM / SEQUENCE, NOTES, MARK.

- NOTES:
1. PROVIDE WITH WALL BRACKET.
2. VERIFY ELECTRICAL CHARACTERISTICS WITH ELECTRICAL PLANS.

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HVAC VENTILATION, LOAD CALCULATIONS, AND WSEC SCHEDULES

CITY OF FEDERAL WAY FLEET & SHOPS

FEDERAL WAY, WASHINGTON

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DATE: 05/04/24 JOB NO: 023-087 BID SET

MB006

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Main HVAC load calculation table with columns for Unit Tag, Room, Area (sf), Clg Type, Water Showers, and various load metrics (Sensible, Latent, Total, etc.) for units HRU-B-01, HRU-B-02, and RTHP-B-01.

FAN EFFICIENCY GRADE (FEG) table showing Impeller Diameter (in), Minimum Peak Total Efficiency (%), and Minimum Peak Total Efficiency (%). Includes notes on how to use the table for fan selection.

DUCT SYSTEMS INSULATION SCHEDULE table detailing duct system type, location of duct, duct configuration, insulation type, minimum R-value, and insulation thickness.

PIPING SYSTEMS INSULATION SCHEDULE table detailing pipe type, installation location, insulation type, pipe size, and insulation thickness.

ENERGY CODE NOTES table listing 13 specific notes regarding motor efficiencies, duct insulation, duct sealing, record drawings, system balancing, energy metering, and fan efficiency.

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