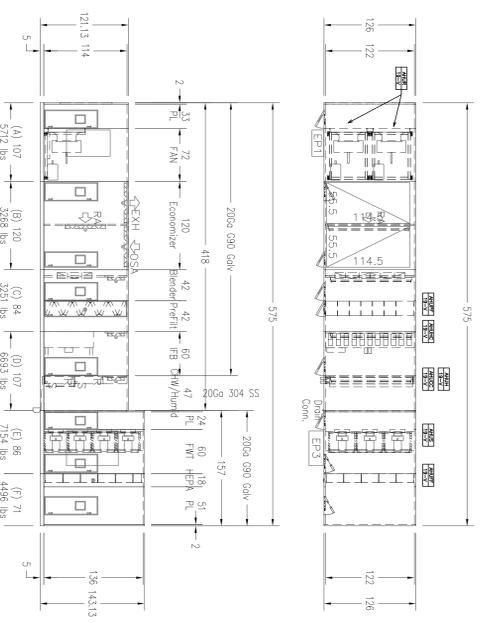


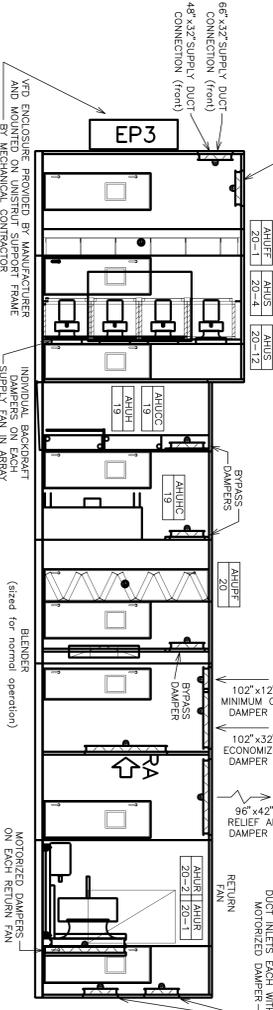
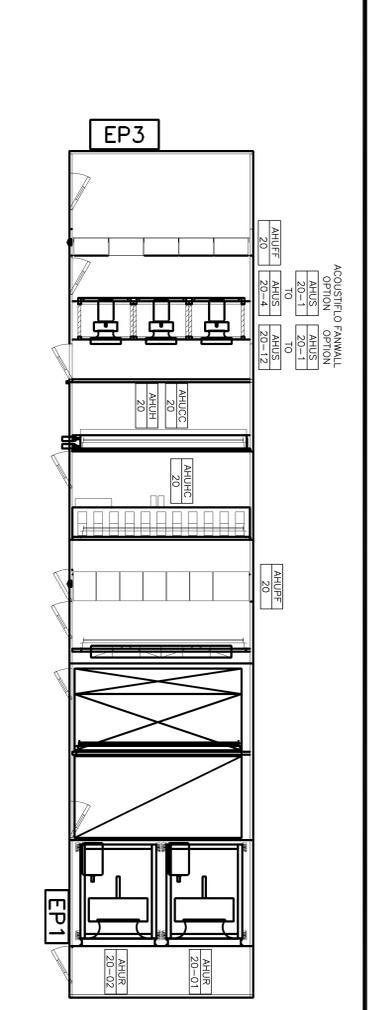
1 NO SCALE
70-AH2NW-20 DEMOLITION PLAN



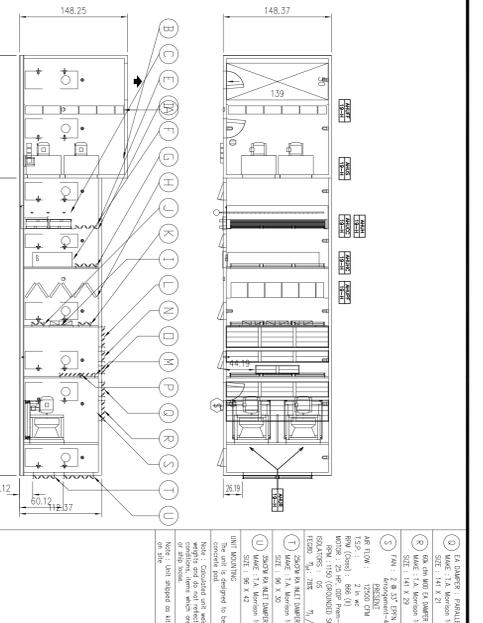
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3 NO SCALE
70-AH2NW-20 PLAN (BID OPTION #1)

GENERAL NOTES:
GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS SHOWN ON THESE PLANS AND SHALL BE RESPONSIBLE FOR VARIATIONS BETWEEN PLOTTED DIMENSIONS AND ACTUAL FIELD DIMENSIONS. WHERE VARIATIONS ARE FOUND TO OCCUR, THE GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE VA COR AND LOCAL AGENCIES. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE VA COR AND LOCAL AGENCIES.



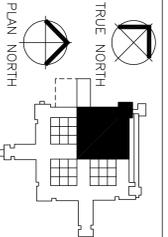
2 NO SCALE
70-AH2NW-20 INSTALLATION PLAN



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4 NO SCALE
70-AH2NW-20 PLAN (BID OPTION #2)

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Drawing Title
70-AH2NW-20 AIR HANDLER 20 MECHANICAL PLANS

Approved: Catherine Joyce, Chief, Projects Section
Approved: Steven Crutcher, Director, Engineering

Project Title
UPGRADE AHU'S PHASE 2

Location
VA MEDICAL CENTER MINNEAPOLIS, MN 55417

Office of Facilities Management
Department of Veterans Affairs

GENERAL NOTES:

- REFER TO GENERAL NOTES SHOWN ON DRAWING 70-AH2NW-20 FOR GENERAL NOTES.
- REFER TO DRAWING 1293-70-AH28 FOR BALANCING SCHEDULE. ON DRAWING 1293-70-AH28, PHASE 2 SCHEDULES SHALL BE DIRECTLY TO CONSOLE FOR APPROVAL PRIOR TO PROCEEDING TO NEXT PHASE.

PHASING NOTES FOR AH2NW-20

BELOW IS A GENERAL OUTLINE OF THE PHASING STEPS REQUIRED TO COMPLETE PHASE 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MINIMIZE DISRUPTION OF SURGICAL SUITE AREAS. CONTRACTOR TO NOTE THAT THIS PLAN INVOLVES SEVERAL OUTAGES THAT WILL AFFECT THE SURGICAL SUITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY PROTECT THE STERILE ENVIRONMENT WITHIN EACH OPERATING ROOM PRIOR TO ANY TEMPORARY DUCT WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE VA COR AND LOCAL AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE VA COR AND LOCAL AGENCIES.

AHU SITE ASSEMBLY NOTES:

- MECHANICAL CONTRACTORS SHALL BE RESPONSIBLE TO ACCEPT DELIVERY OF ALL EQUIPMENT COMPONENTS AND INSPECT FOR DAMAGE. ANY REPAIR OR REPLACEMENT OF SPECIFIC COMPONENTS SHALL BE PERFORMED BY THE CONTRACTOR AT THEIR EXPENSE.
- CUSTOM AIR HANDLING UNIT WILL ARRIVE ON PALETTES WITH ALL COMPONENTS COMPLETELY DISASSEMBLED DOWN TO EACH INDIVIDUAL WALL PANEL. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR REASSEMBLY OF THE UNIT. A THIRD PARTY CRANE COMPANY TO LIFT ALL MATERIAL UP THROUGH AIR PLENUM FROM EXTERIOR ACCESS POINT. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE VA COR AND LOCAL AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE VA COR AND LOCAL AGENCIES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE VA COR AND LOCAL AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE VA COR AND LOCAL AGENCIES.
- MECHANICAL CONTRACTORS SHALL FORM AGREEMENT WITH EQUIPMENT MANUFACTURER TO MAINTAIN ALL WARRANTY WORK OR REPAIRS. ALL CONTRACTORS WILL BE EXPECTED TO MANUFACTURER GUIDELINES TO MAINTAIN ORIGINAL SERVICE WARRANTY OF ALL COMPONENTS.
- THE MANUFACTURER WILL SEND A FACTORY REPRESENTATIVE TO SUPERVISE ALL ASSEMBLY EFFORTS FOR A PERIOD OF ONE(1) WEEK (per each assembled AHU). CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE VA COR AND LOCAL AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE VA COR AND LOCAL AGENCIES.
- A GENERIC ASSEMBLY PROCEDURE GUIDELINE FROM THE MANUFACTURER SHALL BE PROVIDED TO THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE VA COR AND LOCAL AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE VA COR AND LOCAL AGENCIES.
- EQUIPMENT STAGING SHALL NOT BE ALLOWED ON HOSPITAL GROUNDS WITHOUT APPROVAL FROM THE VA COR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE VA COR AND LOCAL AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE VA COR AND LOCAL AGENCIES.

PHASING PLAN FOR FULL AHU REPLACEMENT

PHASE 1A - DEMOLITION OF EXHAUST AND HEAT RECOVERY

Prior to any system demolition, Balancing Contractor to provide pressure readings along duct main as directed by engineer. Refer to drawing 1441, 14M2.2 for phasing/demolition of return/exhaust ductwork to EF-31 and return/demolition of return/exhaust ductwork to EF-32. Remove all pumps and piping components related to the return recovery loop to allow space for new return duct

Refer to drawing 14M2.6 for demolition of existing exhaust to be split apart from existing main being converted to return. Note that all new duct shown on drawing 14M2.7 needs to be installed in parallel with existing ductwork. Coordinate with VA COR and Engineer.

PHASE 1B - CONVERSION OF #19 TO RECIRCULATED RETURN AIR

Refer to drawing 14M2.3 for installation of temporary return unit #19 after that has been converted to recirculated return air.

Perform balancing for all operating rooms and support spaces now temporarily back-fed through the single AH2NW-19 prior to demolition of AH2NW-19 and AH28.

PHASE 2A - DEMOLITION OF UNIT 20-AH2NW-20

Once everything is safely back-fed through #19, demolition of AH2NW-20 may begin. Open section of rafter lower for removal of AH2NW-20. Coordinate with VA COR and Engineer. Remove all AH2NW-20 connections to outdoor air intake, chilled water, steam heating/humidifier, reheat water, and any remaining heat recovery coils and piping.

PHASE 2B - INSTALLATION OF NEW AH2NW-20

General Contractor to supply pre-cast concrete equipment pad, or structural steel base rolls, as required to raise entire new custom air handling unit high enough for condensate traps.

Replace existing AH2NW-20 with new custom AHU that is factory assembled and tested for disassembly and shipment to site. Coordinate with VA COR and Engineer. The contractor shall be responsible for transporting the unit into existing mechanical room where it will be fully reassembled on site. AHU manufacturer shall to supervise assembly in order to maintain factory standards for warranty, and assist mechanical contractor in start-up and owner training.

After AH2NW-20 is completely assembled, Contractor shall complete installation of all sensors and controls and building AH2NW-20 with new custom AHU that is factory assembled and tested for disassembly and shipment to site. Coordinate with VA COR and Engineer. The contractor shall be responsible for transporting the unit into existing mechanical room where it will be fully reassembled on site. AHU manufacturer shall to supervise assembly in order to maintain factory standards for warranty, and assist mechanical contractor in start-up and owner training.

PHASE 3A - DEMOLITION OF UNIT 20-AH2NW-19

Once everything is safely back-fed through #19, demolition of AH2NW-19 may begin. Open section of rafter lower for removal of AH2NW-19. Coordinate with VA COR and Engineer. Remove all AH2NW-19 connections to outdoor air intake, chilled water, steam heating/humidifier, reheat water, and any remaining heat recovery coils and piping.

PHASE 3B - INSTALLATION OF NEW AH2NW-19

Replace existing AH2NW-19 with new custom AHU that is factory assembled and tested for disassembly and shipment to site. Coordinate with VA COR and Engineer. The contractor shall be responsible for transporting the unit into existing mechanical room where it will be fully reassembled on site. AHU manufacturer shall to supervise assembly in order to maintain factory standards for warranty, and assist mechanical contractor in start-up and owner training.

After AH2NW-19 is completely assembled, Contractor shall complete installation of all sensors and controls and building AH2NW-19 with new custom AHU that is factory assembled and tested for disassembly and shipment to site. Coordinate with VA COR and Engineer. The contractor shall be responsible for transporting the unit into existing mechanical room where it will be fully reassembled on site. AHU manufacturer shall to supervise assembly in order to maintain factory standards for warranty, and assist mechanical contractor in start-up and owner training.

Close all dampers that temporarily back feed duct connections and reconnected to new AH2NW-19 and perform complete balance on entire system.

Rebalance AH2NW-20 after temporary back feed duct connection has been installed.

Perform a complete commissioning of both completed air handling units. Mechanical Contractor shall coordinate with Controls Contractor and Engineer's commissioning agent.

Office of Facilities Management
Department of Veterans Affairs

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