Addendum 1 for RFB927940-04

Project Name: WRC Decentralization Phase 4 & Fire Alarm Phase 3 (9279.40 & 9279.41) Bid Issuance #4
DAS RFB #: 927940-04
DAS Project #: 9279.40 & 9279.41
Date: 5/21/2026

Bids Due: June 9, 2026, at 2:00pm

TO: PROSPECTIVE BIDDERS:

THIS ADDENDUM FORMS A PART OF THE BIDDING AND CONTRACT DOCUMENTS AND MODIFIES THE BIDDING DOCUMENTS DATED 03-27-2026, WITH AMENDMENTS AND ADDITIONS NOTED BELOW. THIS ADDENDUM SUPERSEDES AND SUPPLEMENTS ALL PORTIONS OF THE ORIGINAL BIDDING AND CONTRACT DOCUMENTS WITH WHICH IT CONFLICTS. ACKNOWLEDGE RECEIPT OF THIS ADDENDUM IN THE IMPACS ELECTRONIC PROCUREMENT SYSTEM. FAILURE TO DO SO MAY DISQUALIFY THE BIDDER.

QUESTIONS AND ANSWERS FROM PRE-BID MEETING

Q1. Should the abatement contractor demo all the black wire/metal associated with the plaster ceiling?

A1. Yes, all this would need to be removed by BP #01-1.

Q2. Does the BP 09 contractor make all the penetrations or does each BP contractor make their own penetrations?

A2. Each contractor will need to make their own penetrations and make sure it is sealed up around devices to meet code requirements.

Q3. On 00-E012, are all panels and transformers shown to be provided as new?

A3. Panel MDP-1 is existing. All other panels and transformers on 00-E012 are new.

Q4. Do the lights need to be 120 or 277v? The specs and drawings conflict.

A4. Based on existing panel schedules, lighting appears to be both 120V and 277V. All light fixtures to be dual voltage rated. Field verify lighting voltage prior to installation.

Q5. How should the contractor pipe the new electric through the tunnel with the existing items?

A5. Conduits do not need to be installed adjacent to each other on a rack. Route individual conduits as required throughout the tunnel.

Q6. How will penetrations be handled for existing ceilings in Linden Court A/B/C/D and hallways that will not be abated? Is the intent to reuse existing conduit and back boxes?

A6. Yes, the intent is to reuse existing conduit and back boxes.

Q7. How many mobilizations will be needed for abatement? Will there be downtime between buildings?

A7. There will need to be at least four mobilizations for abatement.

Q8. When does the work in Oak Hall and other non-Linden Court buildings need to occur?

A8. This work can occur at any time before the substantial completion date, but the priority will be Linden Court buildings.

Q9. Will the fire alarm system be disabled during abatement?

A9. No, the devices will need to be taped and bagged so they are not set off during construction.

Q10. How long is the PREA training? Is it in person or virtual?

A10. This will be a virtual training session that should be less than 20 minutes.

Q11. How will the power be turned off for the abatement contractor? Can it be locked out per floor and the abatement contractor provide and install a temporary power panel?

A11. Electrical contractor to turn off power for the abatement contractor. Electrical contractor to coordinate temporary power with abatement contractor. Panels can be locked out per floor.

Q12. Are hallway devices included in this project?

A12. Hallway devices are to be included in the project.

Q13. Can the electrician build a rack off existing racks?

A13. Electricians can use existing uni-strut rack.

Q14. Will air clearances be required for Oak Hall?

A14. Yes, as other trades will be accessing the areas following abatement, it is required.

Q15. Is power and water available at Oak Hall?

A15. There is limited power and no water available. Another addendum will be issued to clarify the power availability.

Q16. For Oak Hall, is the floor pathway that needs to be abated 5’-0” wide or 1’-0” wide?

A16. The floor tile is spec’d to be removed 5’ each side of a “center line” down the corridor or open areas for a 10’ wide work area for installation of the heat tape on the ceilings.

Q17. Will fire watch be needed when the fire alarm system is bypassed for construction?

A17. Fire alarm devices will need to be taped and bagged so they are not set off during construction.

Q18. Please clarify what furniture will be removed before the abatement contractor begins work.

A18. All furniture will be removed that is not attached to the structure.

CHANGES TO DRAWINGS

DRAWINGS:

- **09-MD200 – BASEMENT MECHANICAL DUCTWORK DEMOLITION PLAN:**
  - **REVISE** extent of ductwork demolition.
- **09-MD201 – FIRST FLOOR MECHANICAL DUCTWORK DEMOLITION PLAN:**
  - **ADD** existing return transfer ducts and associated demolition.
  - **REVISE** keynote 09-MD17
  - **ADD** keynote 09-MD20
- **09-MD202 – SECOND FLOOR MECHANICAL DUCTWORK DEMOLITION PLAN:**
  - **ADD** existing return transfer ducts and associated demolition.
  - **ADD** tags to ducts.
  - **REVISE** Keynote 09-MD17.
  - **ADD** Keynote 09-MD20.
- **09-M200– BASEMENT MECHANICAL PLAN:**
  - **REVISE** supply ductwork in area B.
- **09-M201 – FIRST FLOOR MECHANICAL PLAN:**
  - **REMOVE** fire dampers between corridor and individual dorm walls.
  - **ADD** return ductwork and fire dampers.
  - **ADD** Keynote 09-M28.
- **09-M202 – SECOND FLOOR MECHANICAL PLAN:**
  - **REMOVE** fire dampers between corridor and individual dorm walls.
  - **ADD** return ductwork and fire dampers.
  - **ADD** Keynote 09-M28

- **09-M300 – THERMOSTAT PLAN:**
    - **REVISE** thermostats in Area B Basement.
- **09-M501 –MECHANICAL CONTOLS:**
    - **ADD** ERV control sequence.
    - **ADD** heat pump control sequence.
- **13-MD200 – BASEMENT MECHANICAL DUCTWORK DEMOLITION PLAN:**
    - **REVISE** extent of ductwork demolition.
- **13-MD201 – FIRST FLOOR MECHANICAL DUCTWORK DEMOLITION PLAN:**
    - **ADD** existing return transfer ducts and associated demolition.
    - **REVISE** keynote 13-MD16
    - **ADD** keynote 13-MD20
- **13-MD202 – SECOND FLOOR MECHANICAL DUCTWORK DEMOLITION PLAN:**
    - **ADD** existing return transfer ducts and associated demolition.
    - **REVISE** Keynote 13-MD16
    - **ADD** Keynote 13-MD20
- **13-M200– BASEMENT MECHANICAL PLAN:**
    - **REVISE** ERV Ductwork Area D.
- **13-M201 – FIRST FLOOR MECHANICAL PLAN:**
    - **REMOVE** fire dampers between corridor and individual dorm walls.
    - **ADD** return ductwork and fire dampers.
    - **ADD** Keynote13-M32
- **13-M202 – SECOND FLOOR MECHANICAL PLAN:**
    - **REMOVE** fire dampers between corridor and individual dorm walls.
    - **ADD** return ductwork and fire dampers.
    - **ADD** Keynote 13-M32
- **13-M300 – THERMOSTAT PLAN:**
    - **REVISE** thermostats in Area D Basement.
- **13-M501 –MECHANICAL CONTOLS:**
    - **ADD** ERV control sequence.
    - **ADD** heat pump control sequence.
- **13-M600 –MECHANICAL SCHEDULES:**
    - **REVISE** ERV schedule.

SUBSTITUTION REQUESTS

- 28 3111 Digital, Addressable Fire Alarm System – Manufacturer: Potter IPA-4000V Addressable voice notification panel – **Not Approved**
    - The fire alarm needs to be Siemens to communicate with other panels.

ATTACHMENTS

1. Pre-Bid Meeting Minutes and Sign in Sheet held on 05/15/2026.

2. Sheets 09-MD200, 09-MD201, 09-MD202, 09-M200, 09-M201, 09-M202, 09-M300, 09-M501, 13-MD200, 13-MD201, 13-MD202, 13-M200, 13-M201, 13-M202, 13-M300,13-M501, 13-M600

END OF ADDENDUM

WRC Decentralization Ph4 BI#4
Pre-Bid Meeting

5/15/2026

STORY CONSTRUCTION

Sign-in Sheet

Name	Company	Email Address	Telephone
Sam Vorrie	Story Construction Co.	sam.vorrie@storycon.com	515-291-4483
Mike Chambers	Story Construction Co.	mike.chambers@storycon.com	515-817-2616
Jennifer Kleene	DAS	jennifer.kleene@das.iowa.gov	515-725-0454
John Baumhover	Shive Hattery	jbaumhover@shive-hattery.com	515-223-8104
Kevin Bruxvoort	Shive Hattery	kbruxvoort@shive-hattery.com	515-223-8104
Cameron Manley	Shive Hattery	cmanley@shive-hattery.com	515-223-8104
Phil Thomas	Atlas	phil.thomas@oneatlas.com	402-697-9747
PAUL BOCKMANN	Bockmann Inc	pcb@bockmanninc.com	4026102319
Travis Haas	Advanced Environmental	travis.haas@advancedenvironmental.com	319-269-1820
Joshua Pearson	EliteFire Sprinkler Systems	jpearson@elitefiresprinklersystems.com	515-499-5078
Josh Copeland	ESA	josh.copeland@eisholdings.com	515-401-2495
Don Whitlatch	CAI	dwhitlatch@1insulation.com	515-346-7311
Josh Beck	HSI	JoshB@HSI123.com	515 210 9803
John Namour	KLine Electric	JNAMOUR@TEAMKLINE.NET	515-512-0046
Cami Manley	Shive-Hattery	cmanley@shiv	
Pat Diemer	Shive-Hattery	pdiemer@shive-Hattery.com	515-318-9293

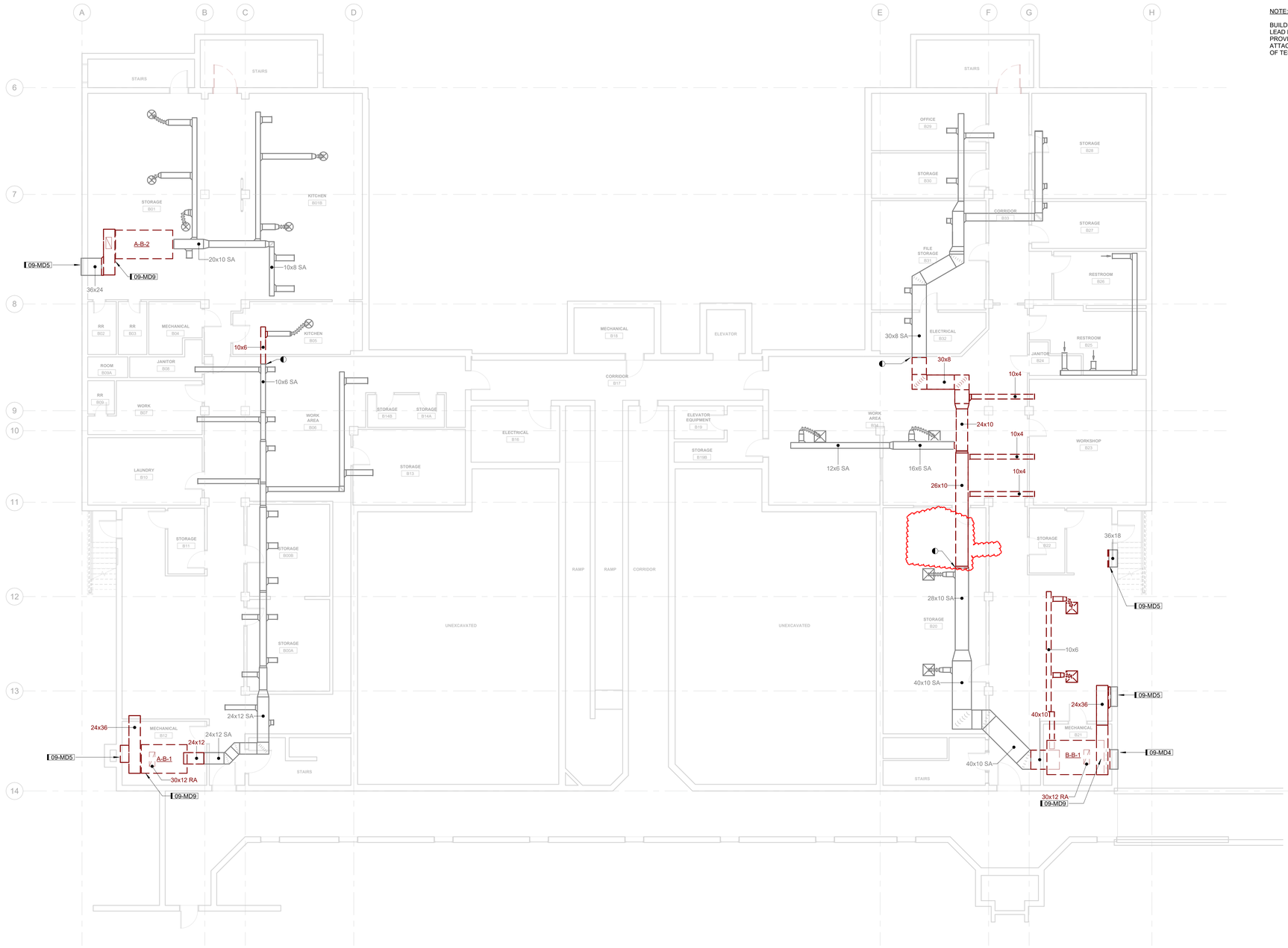
Ben Hones	JCI HVAC	ben.hones@jci.com	515-975-7609

KEYNOTES

KEY	NOTE
09-MD4	REMOVE EXISTING DUCTWORK BACK TO WALL AND CAP DUCT WITH INSULATED DUCT CAP. EXISTING LOUVER TO REMAIN.
09-MD5	REMOVE EXISTING DUCTWORK TO EXTENT SHOWN. EXISTING LOUVER AND PLENUM TO REMAIN. PREPARE PLENUM FOR NEW CONNECTION.
09-MD9	REMOVE EXISTING BLOWER COIL UNIT AND ASSOCIATED PIPING, OUTDOOR AIR DUCTWORK, AND CONTROLS. SUPPLY DUCTWORK TO REMAIN FOR RECONNECTION.

NOTE:

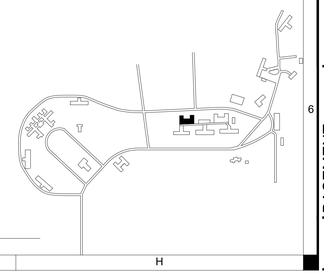
BUILDING CONTAINS HAZARDOUS MATERIAL SUCH AS ASBESTOS AND LEAD PAINT. SUPPLEMENTAL HAZARDOUS MATERIAL REPORT IS PROVIDED IN THE BID DOCUMENTS AS A SEPARATE ATTACHMENT. REFER TO HAZARDOUS MATERIAL REPORT FOR EXTENTS OF TESTING AND RESULTS.



NORTH

X-76 BASEMENT MECHANICAL DUCTWORK DEMOLITION PLAN

1/8" = 1'-0" 0 12'



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WRC Decentralization Phase 4 & Fire Alarm Phase 3 (9279.40)

9-LINDEN A/B

Iowa Department of Administrative Services
1251 334th St. Woodward, IA 50276

ADD 01	xx/xx/2202 ADD-001
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BASEMENT MECHANICAL DUCTWORK DEMOLITION PLAN

09-MD200

KEYNOTES

KEY	NOTE
09-MD2	DEMOLISH EXISTING DUCT HEATING COIL AND DUCTWORK INSIDE THE MECHANICAL ROOM.
09-MD4	REMOVE EXISTING DUCTWORK BACK TO WALL AND CAP DUCT WITH INSULATED DUCT CAP. EXISTING LOUVER TO REMAIN.
09-MD9	REMOVE EXISTING BLOWER COIL UNIT AND ASSOCIATED PIPING, OUTDOOR AIR DUCTWORK, AND CONTROLS. SUPPLY DUCTWORK TO REMAIN FOR RECONNECTION.
09-MD15	REMOVE SECTION OF DUCTWORK FOR INSTALLATION OF NEW FIRE DAMPER. SEE NEW WORK PLANS.
09-MD16	REMOVE EXISTING KITCHEN TRANSFER DUCT AND GRILLE. INFILL AND PAINT WALL TO MATCH ADJACENT WALL COLOR.
09-MD17	DEMOLISH EXISTING RETURN DUCT TO APPROXIMATE EXTENT INDICATED. DESIGN INTENT IS TO DEMOLISH RETURN DUCTWORK WHERE CEILING REPLACEMENT AND ABATEMENT IS OCCURRING. EXISTING RETURN DUCT SIZING IS SHOWN AS AN APPROXIMATION BASED ON EXISTING DRAWINGS. CONTRACTOR SHALL VERIFY EXISTING DUCTWORK SIZING PRIOR TO FABRICATING NEW CONNECTED DUCTWORK.
09-MD20	DEMOLISH PORTION OF EXISTING RETURN DUCT AS INDICATED BACK TO WALL AND PREPARE DUCT FOR NEW CONNECTION. VERIFY TERMINATION POINT AND NOTIFY ENGINEER IF TERMINATION POINT DIFFERS FROM ANTICIPATED LOCATION.

NOTE:

BUILDING CONTAINS HAZARDOUS MATERIAL SUCH AS ASBESTOS AND LEAD PAINT. SUPPLEMENTAL HAZARDOUS MATERIAL REPORT IS PROVIDED IN THE BID DOCUMENTS AS A SEPARATE ATTACHMENT. REFER TO HAZARDOUS MATERIAL REPORT FOR EXTENTS OF TESTING AND RESULTS.

NORTH

A6 FIRST FLOOR MECHANICAL DUCTWORK DEMOLITION PLAN

1/8" = 1'-0" 0 12'

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FIRST FLOOR MECHANICAL DUCTWORK DEMOLITION PLAN

09-MD201

KEYNOTES

KEY	NOTE
09-MD2	DEMOLISH EXISTING DUCT HEATING COIL AND DUCTWORK INSIDE THE MECHANICAL ROOM.
09-MD4	REMOVE EXISTING DUCTWORK BACK TO WALL AND CAP DUCT WITH INSULATED DUCT CAP. EXISTING LOUVER TO REMAIN.
09-MD9	REMOVE EXISTING BLOWER COIL UNIT AND ASSOCIATED PIPING, OUTDOOR AIR DUCTWORK, AND CONTROLS. SUPPLY DUCTWORK TO REMAIN FOR RECONNECTION.
09-MD11	DEMOLISH EXISTING DUCTWORK AND ACCESSORIES IN THIS LOCATION. PREPARE DUCTWORK FOR NEW VAV AND DUCTWORK INSTALLATION.
09-MD15	REMOVE SECTION OF DUCTWORK FOR INSTALLATION OF NEW FIRE DAMPER. SEE NEW WORK PLANS.
09-MD16	REMOVE EXISTING KITCHEN TRANSFER DUCT AND GRILLE. INFILL AND PAINT WALL TO MATCH ADJACENT WALL COLOR.
09-MD17	DEMOLISH EXISTING RETURN DUCT TO APPROXIMATE EXTENT INDICATED. DESIGN INTENT IS TO DEMOLISH RETURN DUCTWORK WHERE CEILING REPLACEMENT AND ABATEMENT IS OCCURRING. EXISTING RETURN DUCT SIZING IS SHOWN AS AN APPROXIMATION BASED ON EXISTING DRAWINGS. CONTRACTOR SHALL VERIFY EXISTING DUCTWORK SIZING PRIOR TO FABRICATING NEW CONNECTED DUCTWORK.
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01 ADD

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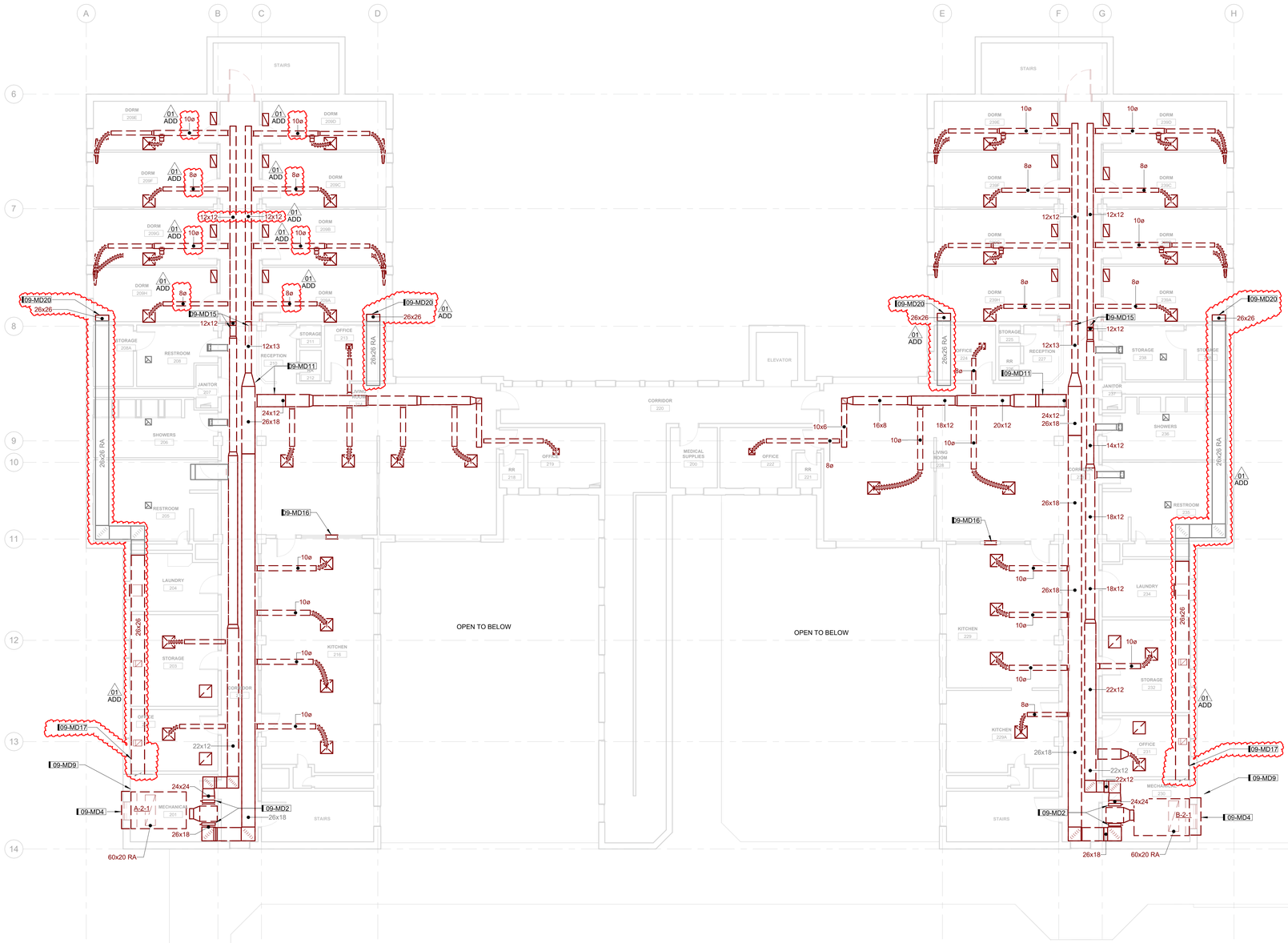
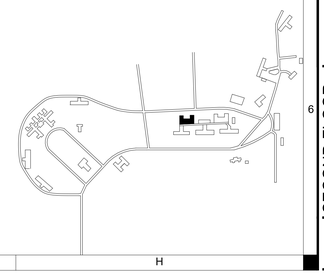


NORTH

A6 SECOND FLOOR MECHANICAL DUCTWORK DEMOLITION PLAN

1/8" = 1'-0" 0 12'



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SECOND FLOOR MECHANICAL DUCTWORK DEMOLITION PLAN

09-MD202

KEYNOTES

KEY	NOTE
09-M02	REFRIGERANT PIPING SIZE AND ROUTING SHOWN IS AN APPROXIMATION. EXACT SIZING AND ROUTING SHALL BE IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
09-M03	NEW ELECTRIC UNIT HEATER TO BE SURFACE MOUNTED ON WALL PER MANUFACTURER'S INSTRUCTIONS. MOUNT UNIT HEATERS BOTTOM TO BE APPROX 0'-6" AFF.
09-M12	ROUTE CONDENSATE PIPING FROM CONDENSATE PUMP TO JANITOR'S CLOSET. TERMINATE PIPING AT THE NEAREST FIXTURE IN JANITOR CLOSET.
09-M15	DESIGN INTENT IS TO USE EXISTING WINDOW OR PREVIOUSLY INFILLED WINDOW FOR THE WALL PENETRATION. FIELD VERIFY EXACT PENETRATION LOCATION PRIOR TO INSTALLATION.
09-M16	PIPE ROUTING SHOWN IS THE INTENDED CONDENSATE PIPE ROUTING. FIELD VERIFY EXACT PIPE ROUTING PRIOR TO INSTALLATION.
09-M17	EXTEND FLUE AND COMBUSTION AIR THROUGH WALL TO EXTERIOR. SLEEVE PENETRATIONS AND SEAL WEATHERTIGHT. REFER TO FURNACE MANUFACTURER'S WRITTEN INSTRUCTIONS FOR FLUE AND COMBUSTION VENTING REQUIREMENTS AND TERMINATION DETAILS.
09-M20	REBALANCE EXISTING DIFFUSER/GRILLE TO CFM SHOWN.
09-M22	CONNECT NEW OA INTAKE DUCT TO EXISTING LOUVER PLENUM. BALANCE OA INTAKE TO 200 CFM.
09-M23	ROUTE RETURN DUCT UP THROUGH SPACE IN STRUCTURE. OFFSET DUCT AROUND EXISTING PIPING AS REQUIRED.
09-M24	EXISTING DUCT IS CAPPED.
09-M25	BALANCE OA BRANCH TO 100 CFM.
09-M26	BALANCE OA BRANCH TO 150 CFM.
09-M27	EXTEND LOUVER PLENUM AS REQUIRED FOR CONNECTION TO NEW VENTILATION DUCT.

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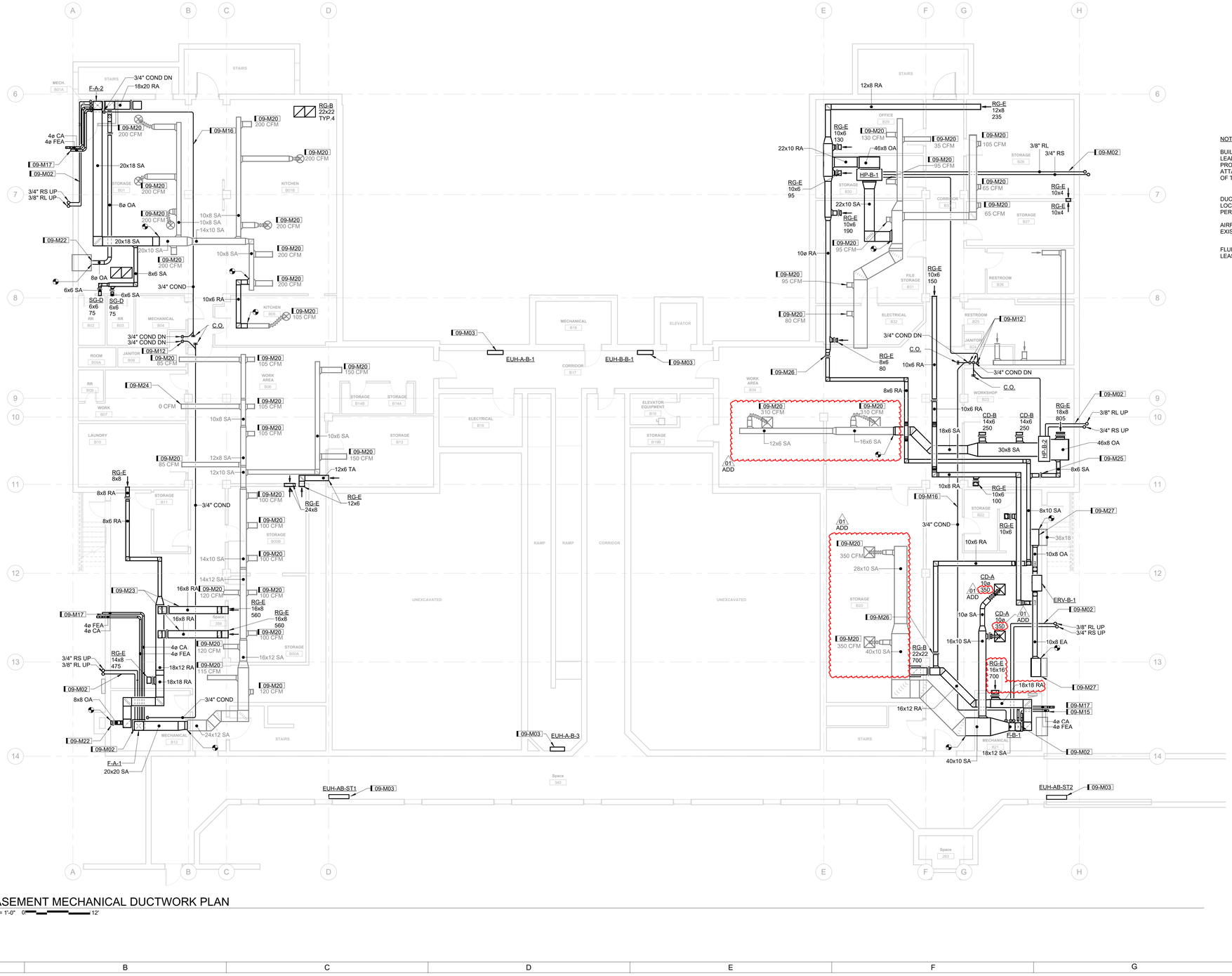
DUCT ROUTING IS BASED ON RECORD DRAWINGS AND DIFFUSER LOCATIONS ON SITE. FIELD VERIFY LOCATION OF DUCTWORK PRIOR TO PERFORMING WORK.

AIRFLOWS SHOWN ON PLANS ARE ASSUMED AIRFLOWS BASED ON EXISTING RECORD DRAWINGS.

FLUE AND COMBUSTION TERMINATION DUCTWORK TO BE TERMINATED AT LEAST 4'-0" ABOVE GRADE (TYP.).



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A6 BASEMENT MECHANICAL DUCTWORK PLAN

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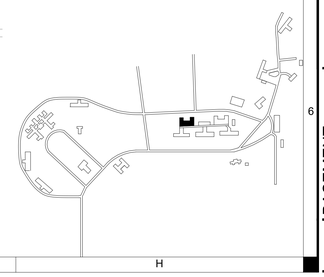

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BASEMENT MECHANICAL DUCTWORK PLAN

09-M200

KEYNOTES

KEY	NOTE
09-M03	NEW ELECTRIC UNIT HEATER TO BE SURFACE MOUNTED ON WALL PER MANUFACTURER'S INSTRUCTIONS. MOUNT UNIT HEATERS BOTTOM TO BE APPROX 0'-6" AFF.
09-M04	ACCU TO BE WALL MOUNTED PER MANUFACTURER'S INSTRUCTIONS WITH MANUFACTURER PROVIDED MOUNTING BRACKETS.
09-M06	REFER TO DETAIL G5 ON SHEET M500 FOR FIRE DAMPER DETAIL.
09-M08	INSTALL SUPPLY AND RETURN DUCTS THROUGH EXISTING OPENING FROM DEMOLISHED LOUVER. SEE ARCHITECTURAL DRAWINGS FOR FLASHING AND SEALING REQUIREMENTS.
09-M10	NEW AHU TO BE GROUND MOUNTED ON NEW EQUIPMENT PAD.
09-M11	NEW ELECTRIC REHEAT VAV TO BE INSTALLED IN THE EXISTING MECHANICAL ROOMS. EXISTING OA LOUVER PENETRATION TO BE RE-USED TO ROUTE DUCTWORK OUTSIDE.
09-M19	NEW RETURN DUCTWORK TO DRAW AIR FROM EXISTING PLENUM RETURN DUCTWORK AND MECHANICAL ROOM. TERMINATE RA OPENING IN ROOM WITH 3/4" HARDWARE CLOTH.
09-M20	REBALANCE EXISTING DIFFUSER/GRILLE TO CFM SHOWN.
09-M28	EXTEND EXISTING DUCT PAST NEW FIREWALL AND INSTALL FIRE DAMPER. TERMINATE ABOVE CEILING AFTER FIRE DAMPER.

01 ADD

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NORTH

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1/8" = 1'-0" 0 12'

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Fire Alarm Phase 3 (9279.40)

WRC Decentralization Phase 4 & Fire A
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FIRST FLOOR MECHANICAL DUCTWORK PLAN

09-M201

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10/2/2025 4:43:29 PM

Autodesk Revit 2022

KEYNOTES

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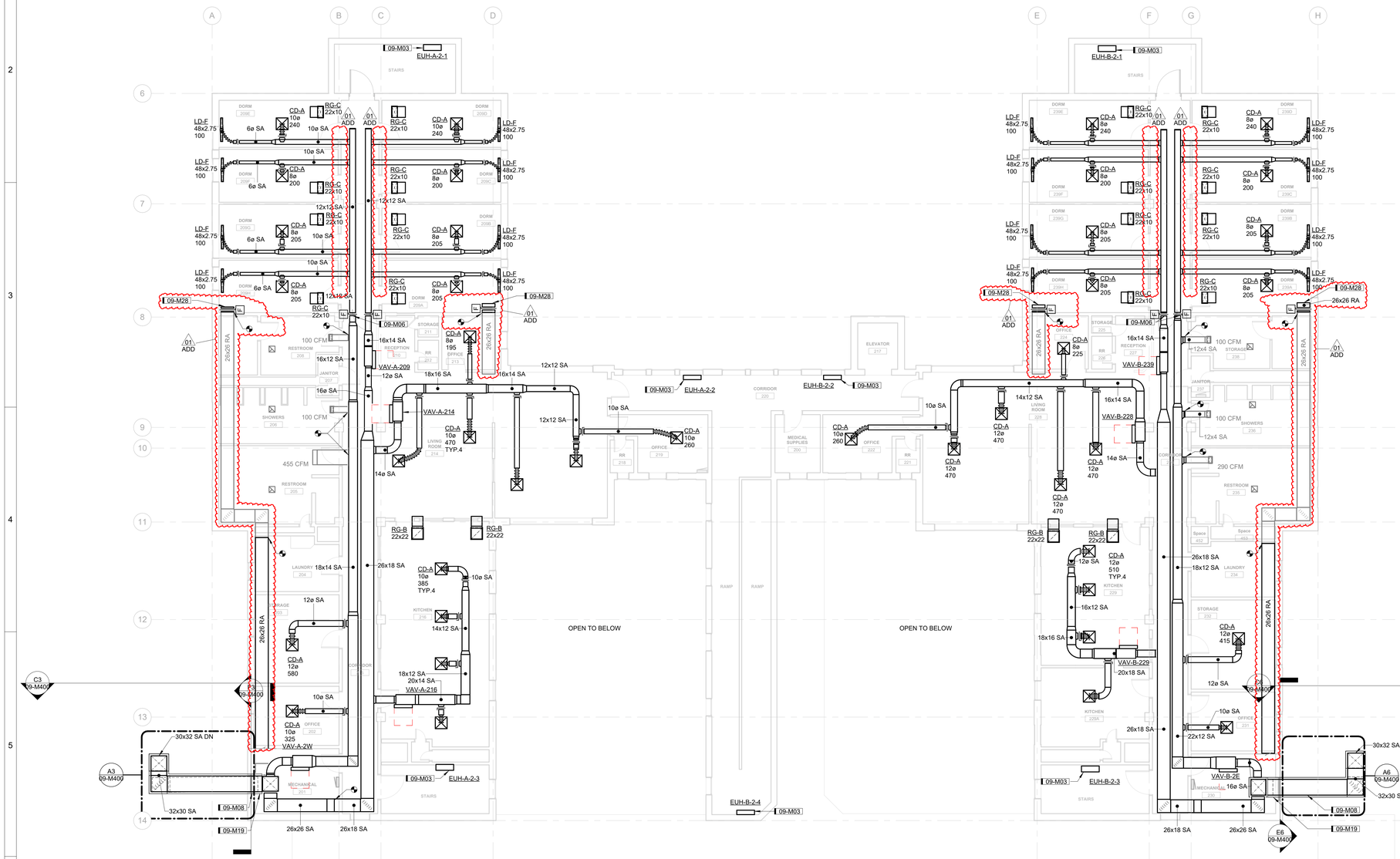
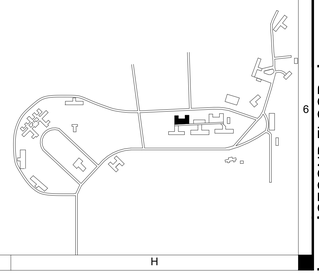


NORTH

A6 SECOND FLOOR MECHANICAL DUCTWORK PLAN

1/8" = 1'-0" 0 12'



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WRC Decentralization Phase 4 & Fire Alarm Phase 3 (9279.40)

9-LINDEN A/B

Iowa Department of Administrative Services
1251 334th St, Woodward, IA 50276

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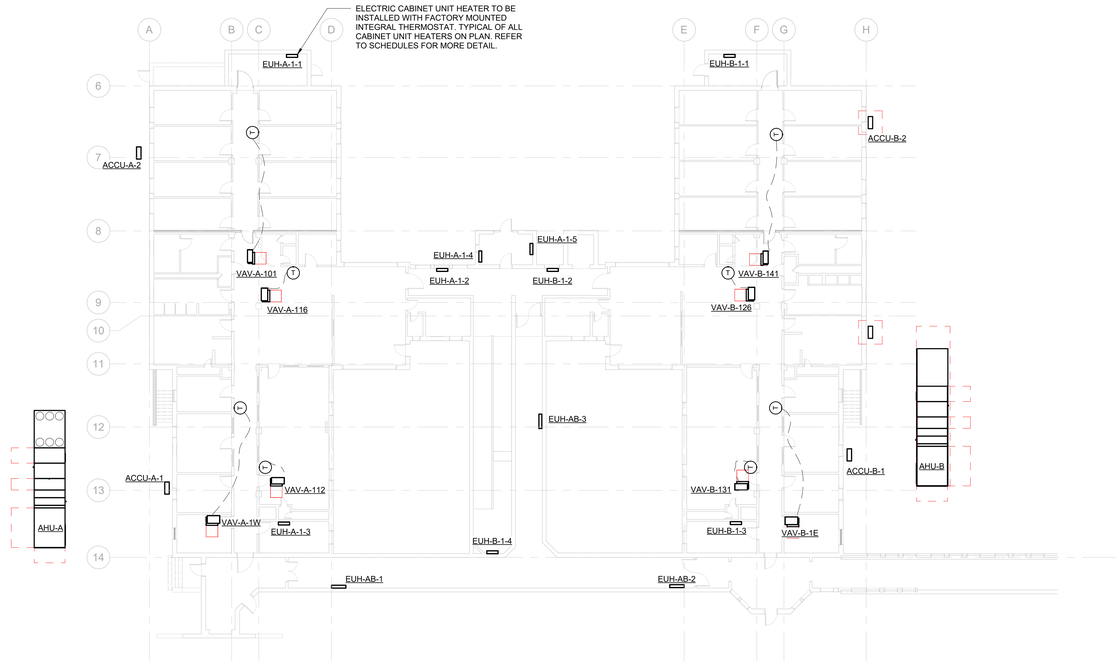
ISSUE DATE	03-27-2026
PROJECT NUMBER	2240007040
FIELD BOOK	

SECOND FLOOR MECHANICAL DUCTWORK PLAN

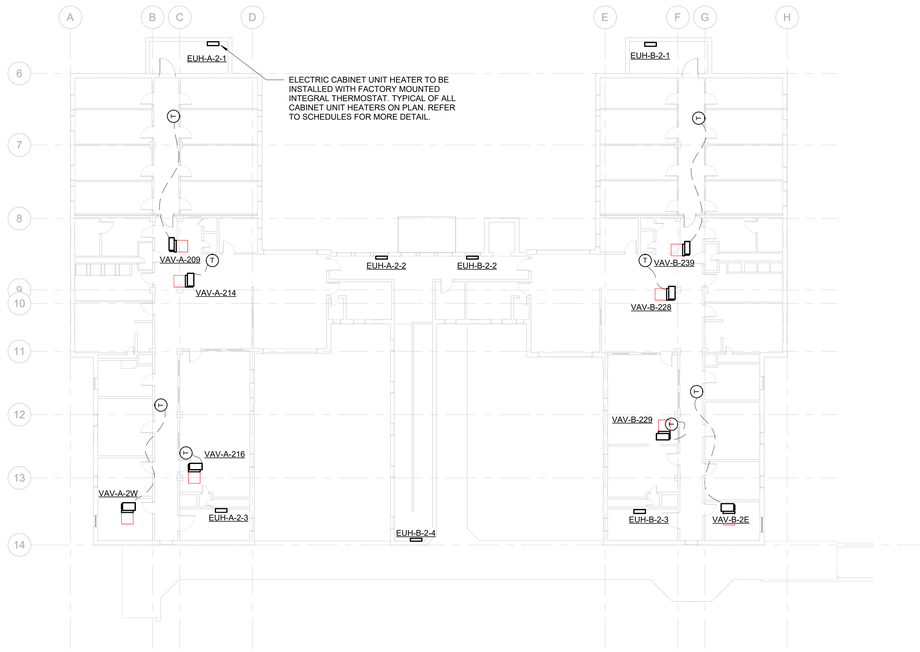
09-M202



NORTH

D4 FIRST FLOOR THERMOSTAT PLAN

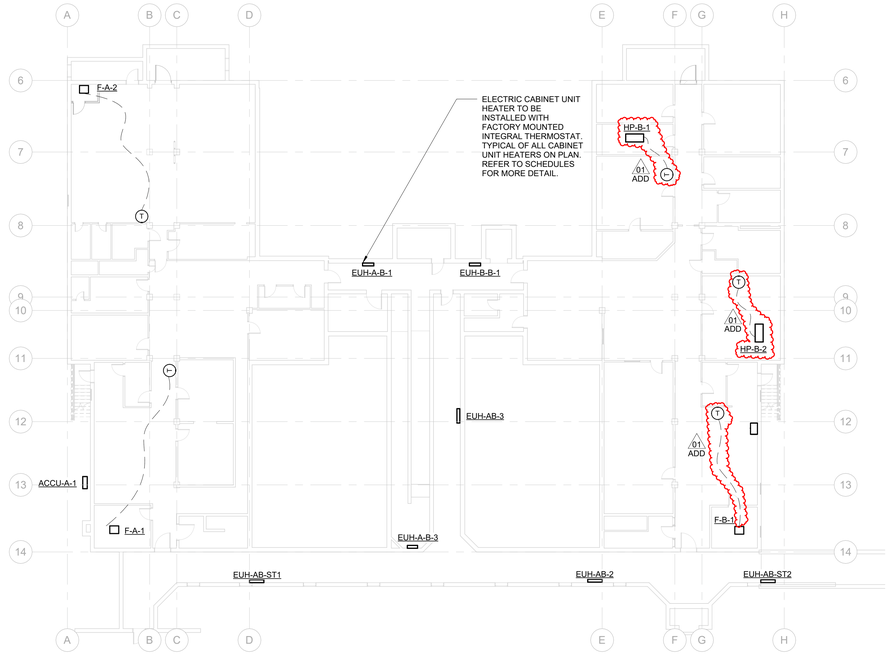
1/16" = 1'-0" 0 24'



NORTH

A6 SECOND FLOOR THERMOSTAT PLAN

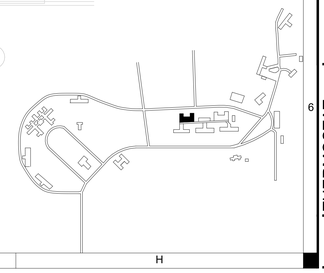
1/16" = 1'-0" 0 24'



NORTH

D6 BASEMENT THERMOSTAT PLAN

1/16" = 1'-0" 0 24'



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THERMOSTAT PLAN

09-M300

POINTS MATRIX - UH - ELECTRIC											
POINT NAME	HARDWARE POINTS				SOFTWARE POINTS						SHOW ON GRAPHIC
	AI	AO	BI	BO	AV	BV	LOOP	SCHED	TREND	ALARM	
ZONE SETPOINT ADJUST	x										x
ZONE TEMP	x								x		x
ZONE OVERRIDE			x						x		x
HEATING SETPOINT					x				x		x
HEATING STAGE 1						x			x		
HEATING STAGE 2						x			x		
SCHEDULE								x			
HIGH ZONE TEMP										x	
LOW ZONE TEMP										x	
TOTALS	2	0	1	0	1	2	0	1	5	2	4
	TOTAL HARDWARE (3)				TOTAL SOFTWARE (11)						

1. ELECTRIC UNIT HEATER

RUN CONDITIONS - SCHEDULED:
THE UNIT SHALL RUN ACCORDING TO A USER DEFINABLE TIME SCHEDULE IN THE FOLLOWING MODES:
- OCCUPIED MODE: THE UNIT SHALL MAINTAIN A HEATING SETPOINT OF 70°F (ADJ.).
- UNOCCUPIED MODE (NIGHT SETBACK): THE UNIT SHALL MAINTAIN A HEATING SETPOINT OF 65°F (ADJ.).

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- LOW ZONE TEMP: IF THE ZONE TEMPERATURE IS LESS THAN THE HEATING SETPOINT BY A USER DEFINABLE AMOUNT (ADJ.).

FAN:
THE FAN SHALL RUN ANYTIME THE ZONE TEMPERATURE IS BELOW HEATING SETPOINT, UNLESS SHUTDOWN ON SAFETIES. THE FAN SPEEDS SHALL BE INDEXED AS FOLLOWS:
- LOW SPEED SHALL RUN ANYTIME THE ZONE TEMPERATURE DROPS BELOW SETPOINT.
- HIGH SPEED SHALL RUN ANYTIME THE ZONE TEMPERATURE DROPS EVEN FURTHER BELOW SETPOINT BY A USER DEFINABLE AMOUNT (ADJ.).

THE FAN SHALL RUN FOR A USER DEFINED PERIOD OF TIME AFTER THE HEATING ELEMENT IS INDEXED OFF TO DISSPATE HEAT OFF THE HEATING ELEMENT.

ELECTRIC HEATING STAGES:
THE CONTROLLER SHALL MEASURE THE ZONE TEMPERATURE AND STAGE THE HEATING TO MAINTAIN ITS HEATING SETPOINT. TO PREVENT SHORT CYCLING, THERE SHALL BE A USER DEFINABLE (ADJ.) DELAY BETWEEN STAGES, AND EACH STAGE SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME.

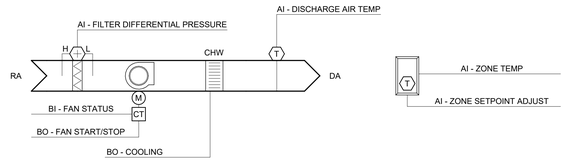
DISCHARGE AIR TEMPERATURE:
THE CONTROLLER SHALL MONITOR THE DISCHARGE AIR TEMPERATURE.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH DISCHARGE AIR TEMP: IF THE DISCHARGE AIR TEMPERATURE IS GREATER THAN 120°F (ADJ.).
- LOW DISCHARGE AIR TEMP: IF THE DISCHARGE AIR TEMPERATURE IS LESS THAN 45°F (ADJ.).

FAN STATUS:
THE CONTROLLER SHALL MONITOR THE FAN STATUS.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
- FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.

01 ADD



SPLIT-SYSTEM HEAT PUMP FAN COIL UNIT:

Run Conditions - Scheduled:
The unit shall run according to a user definable time schedule in the following modes:
- Occupied Mode: The unit shall maintain
  - A 75°F (adj.) cooling setpoint
  - A 70°F (adj.) heating setpoint.
  - DURING OCCUPIED MODE THE SUPPLY BLOWER ON THE FAN COIL UNIT SHALL OPERATE CONTINUOUSLY AT THE LOWEST FAN SETTING.
  - THE HEAT PUMP SHALL BE ENERGIZED AND SHALL PROVIDE THE NECESSARY HEATING OR COOLING CAPACITY AS REQUIRED TO MAINTAIN SPACE CONDITIONS. THE FAN SHALL ADJUST SPEED BASED ON INTERAL LOGIC TO SATISFY HEATING OR COOLING REQUIREMENTS.
- Unoccupied Mode (night setback): The unit shall maintain
  - A 85°F (adj.) cooling setpoint.
  - A 55°F (adj.) heating setpoint.

Alarms shall be provided as follows:
- High Zone Temp: If the zone temperature is greater than the cooling setpoint by a user definable amount (adj.).
- Low Zone Temp: If the zone temperature is less than the heating setpoint by a user definable amount (adj.).

Zone Optimal Start:
The unit shall use an optimal start algorithm for morning start-up. This algorithm shall minimize the unoccupied warm-up or cool-down period while still achieving comfort conditions by the start of scheduled occupied period.

Emergency Shutdown:
The unit shall shut down and generate an alarm upon receiving an emergency shutdown signal.

Fan:
The fan shall run anytime the unit is commanded to run, unless shutdown on safeties.

Filter Differential Pressure Monitor:
The controller shall monitor the differential pressure across the filter.

Alarms shall be provided as follows:
- Filter Change Required: Filter differential pressure exceeds a user definable limit (adj.).

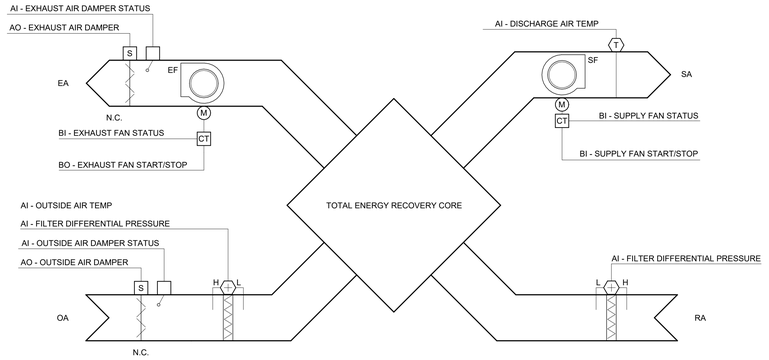
Discharge Air Temperature:
The controller shall monitor the discharge air temperature.

Alarms shall be provided as follows:
- High Discharge Air Temp: If the discharge air temperature is greater than 120°F (adj.).
- Low Discharge Air Temp: If the discharge air temperature is less than 40°F (adj.).

Fan Status:
The controller shall monitor the fan status.

Alarms shall be provided as follows:
- Fan Failure: Commanded on, but the status is off.
- Fan in Hand: Commanded off, but the status is on.
- Fan Runtime Exceeded: Fan status runtime exceeds a user definable limit (adj.).

A4 HEAT PUMP CONTROL SEQUENCE
NOT TO SCALE



ENERGY RECOVERY VENTILATOR:

Run Conditions - Scheduled:
The unit shall run according to a user definable time schedule in the following modes:

- Occupied Mode: The OUTDOOR AIR DAMPER SHALL OPEN AND THE UNIT SHALL RUN CONSTANTLY DURING SCHEDULED OCCUPIED HOURS. THE OCCUPIED HOURS SCHEDULE SHALL MATCH THAT OF THE ASSOCIATED FAN COIL UNITS AND FURNACES.
- Unoccupied Mode: THE OUTDOOR AIR DAMPER SHALL CLOSE AND THE UNIT SHALL TURN OFF DURING UNOCCUPIED HOURS.

Fan:
The fan shall run anytime the unit is commanded to run, unless shutdown on safeties.

Filter Differential Pressure Monitor:
The controller shall monitor the differential pressure across the filter.

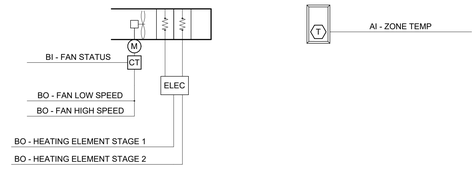
Alarms shall be provided as follows:
- Filter Change Required: Filter differential pressure exceeds a user definable limit (adj.).

Fan Status:
The controller shall monitor the fan status.

Alarms shall be provided as follows:
- Fan Failure: Commanded on, but the status is off.
- Fan in Hand: Commanded off, but the status is on.
- Fan Runtime Exceeded: Fan status runtime exceeds a user definable limit (adj.).

C4 ERV CONTROL SEQUENCE
NOT TO SCALE

G2 SEQUENCE - UH - ELECTRIC
NOT TO SCALE



G3a CONTROLS SCHEMATIC - UH - ELECTRIC
NOT TO SCALE

POINTS LIST - GAS FURNACE									
POINT NAME	AI	AO	BI	BO	AV	BV	TREND	ALARM	SHOW ON GRAPHIC
ZONE TEMPERATURE	x						x	x	x
ZONE HUMIDITY	x						x	x	x
ZONE SETPOINT ADJUST	x								x
DISCHARGE AIR TEMPERATURE	x						x	x	x
MIXED AIR DAMPER				x			x		x
ECONOMIZER DAMPER				x			x		x
SUPPLY FAN STATUS				x			x	x	x
SUPPLY FAN COMMAND			x					x	x
COOLING SETPOINT					x		x		x
COOLING MODE						x	x		x
HEATING SETPOINT					x		x		x
HEATING MODE						x	x		x
SCHEDULE									x
TOTALS	4	0	1	3	2	2	10	5	13
	TOTAL HARDWARE (12)						TOTAL SOFTWARE (28)		

1. SEQUENCE OF OPERATIONS: GAS FURNACE, DX COOLING SYSTEM

THERMOSTAT CONTROLLED OPERATIONS

RUN CONDITIONS - SCHEDULED:
THE UNIT SHALL RUN ACCORDING TO A USER DEFINABLE TIME SCHEDULE IN THE FOLLOWING MODES:
- OCCUPIED MODE: THE UNIT SHALL MAINTAIN
  - A 75°F (ADJ.) COOLING SETPOINT
  - A 70°F (ADJ.) HEATING SETPOINT.
- UNOCCUPIED MODE (NIGHT SETBACK): THE UNIT SHALL MAINTAIN
  - A 78°F (ADJ.) COOLING SETPOINT.
  - A 65°F (ADJ.) HEATING SETPOINT.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH ZONE TEMP: IF THE ZONE TEMPERATURE IS GREATER THAN THE COOLING SETPOINT BY A USER DEFINABLE AMOUNT (ADJ.).
- LOW ZONE TEMP: IF THE ZONE TEMPERATURE IS LESS THAN THE HEATING SETPOINT BY A USER DEFINABLE AMOUNT (ADJ.).

ZONE SETPOINT ADJUST:
THE OCCUPANT SHALL BE ABLE TO ADJUST THE ZONE TEMPERATURE HEATING AND COOLING SETPOINTS AT THE ZONE SENSOR. THE SETPOINT ADJUSTMENT RANGE SHALL BE LIMITED BETWEEN THE EFFECTIVE TEMPERATURE RANGE OF 68F-76F. ZONE SETPOINT ADJUSTMENT SHALL OVERRIDE TEMPERATURE FOR 2 HOURS (ADJ.). AFTER TIME EXPIRES ZONE SETPOINT RETURNS TO SCHEDULED SETPOINT.

ZONE UNOCCUPIED OVERRIDE:
A TIMED LOCAL OVERRIDE CONTROL SHALL ALLOW AN OCCUPANT TO OVERRIDE THE SCHEDULE AND PLACE THE UNIT INTO AN OCCUPIED MODE FOR 2 HOURS (ADJ.). AT THE EXPIRATION OF THIS TIME, CONTROL OF THE UNIT SHALL AUTOMATICALLY RETURN TO THE SCHEDULED SETPOINT.

SUPPLY FAN- ON - OFF
THE SUPPLY FAN SHALL RUN ANYTIME THE UNIT IS IN OCCUPIED MODE. THE SPEED OF THE SUPPLY FAN SHALL BE CONTROLLED BY THE FURNACE CONTROLLER. THE OUTDOOR AIR DAMPER SHALL BE OPEN ANYTIME THE SUPPLY FAN IS IN OPERATION.

COOLING OPERATION:
THE CONTROLLER SHALL MEASURE THE ZONE TEMPERATURE AND STAGE THE COOLING TO MAINTAIN ITS COOLING SETPOINT. TO PREVENT SHORT CYCLING, THERE SHALL BE A TIME DELAY BETWEEN STARTUP OF THE ACCU AND SHUTDOWN OF THE ACCU. INTENTION IS FOR THIS TO BE DONE VIA THE CONTROL BOARD. THIS CAN BE DONE VIA THE THERMOSTAT AS WELL.

ZONE HUMIDITY:
THE CONTROLLER SHALL MONITOR THE ZONE HUMIDITY.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH ZONE HUMIDITY: IF THE ZONE HUMIDITY IS GREATER THAN 70% (ADJ.).
- LOW ZONE HUMIDITY: IF THE ZONE HUMIDITY IS LESS THAN 35% (ADJ.).

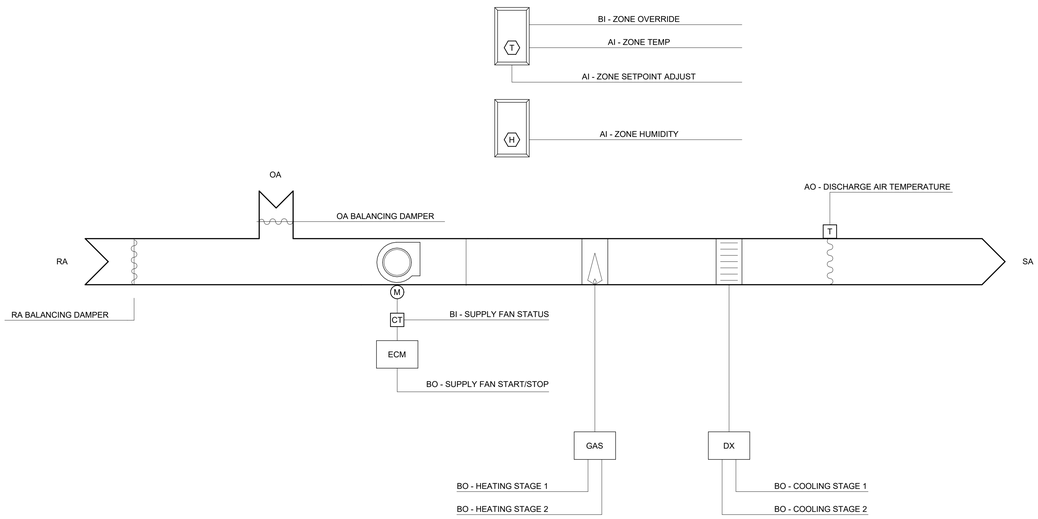
DEHUMIDIFICATION:
THE CONTROLLER SHALL MEASURE THE ROOM AIR HUMIDITY AND OVERRIDE THE COOLING SEQUENCE TO MAINTAIN THE ROOM AIR HUMIDITY AT OR BELOW 60% RH (ADJ.). DEHUMIDIFICATION SHALL BE ENABLED WHENEVER THE UNIT IS IN OCCUPIED MODE. COOLING SYSTEM IS TO BE ALLOWED TO COOL 3°F BELOW SETPOINT TO MAINTAIN ROOM HUMIDITY SETPOINT.

HARD WIRED SAFETIES

FREEZE PROTECTION:
THE UNIT SHALL SHUT DOWN AND GENERATE AN ALARM UPON RECEIVING A FREEZESTAT STATUS. OA DAMPER SHALL CLOSE.

FURNCACE CONTROL BOARD OPERATIONS

GAS HEATING STAGES:
THE INTERNAL FURNACE CONTROLLER SHALL CONTROL THE BURNER STAGING OPERATIONS.



B6 GAS FURNACE CONTROLS SCHEMATIC
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PROJECT NUMBER	2240007040	
FIELD BOOK		

MECHANICAL CONTROL

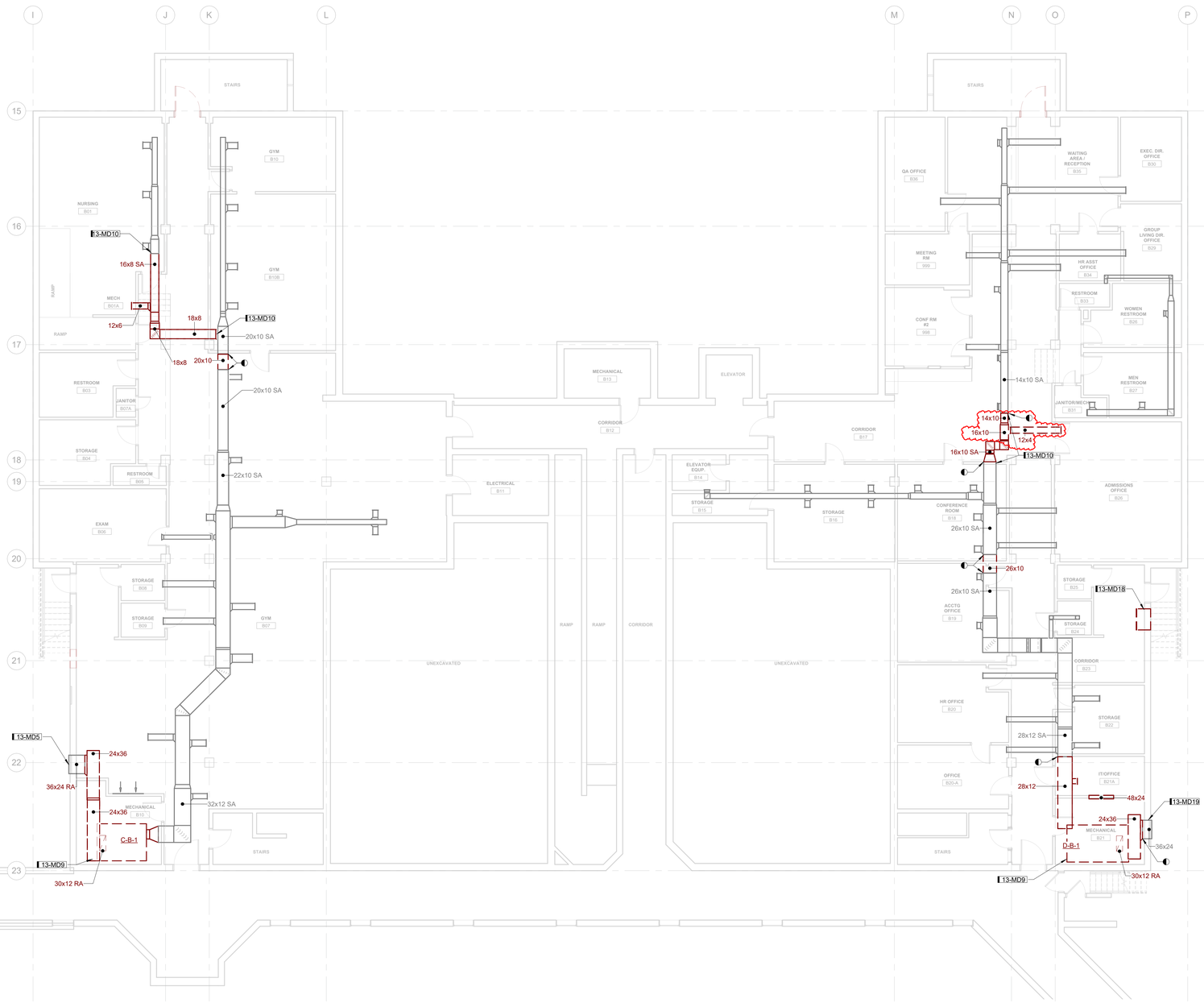
09-M501

KEYNOTES

KEY	NOTE
13-MD5	REMOVE EXISTING DUCTWORK TO EXTENT SHOWN. EXISTING LOUVER AND PLENUM TO REMAIN. PREPARE PLENUM FOR NEW CONNECTION.
13-MD9	REMOVE EXISTING BLOWER COIL UNIT AND ASSOCIATED PIPING, OUTDOOR AIR DUCTWORK, AND CONTROLS. SUPPLY DUCTWORK TO REMAIN FOR RECONNECTION.
13-MD10	PREPARE EXISTING SUPPLY DUCTWORK FOR CONNECTION TO NEW FURNACE RETURNS.
13-MD18	REMOVE EXISTING GRILLE AND DUCT BACK TO WALL. PREPARE WALL FOR INSTALLATION OF NEW LOUVER AND PLENUM IN EXISTING OPENING.
13-MD19	REMOVE EXISTING DUCTWORK TO EXTENT SHOWN. EXISTING LOUVER AND PLENUM TO REMAIN. CAP PLENUM WITH INSULATED DUCT CAP.

NOTE:

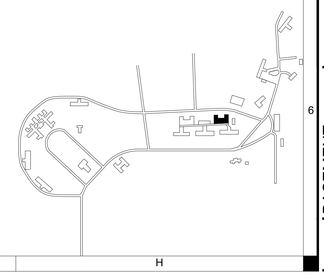
BUILDING CONTAINS HAZARDOUS MATERIAL SUCH AS ASBESTOS AND LEAD PAINT. SUPPLEMENTAL HAZARDOUS MATERIAL REPORT IS PROVIDED IN THE BID DOCUMENTS AS A SEPARATE ATTACHMENT. REFER TO HAZARDOUS MATERIAL REPORT FOR EXTENTS OF TESTING AND RESULTS.



NORTH

A6 BASEMENT MECHANICAL DUCTWORK DEMOLITION PLAN

1/8" = 1'-0" 0 12'



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WRC Decentralization Phase 4 & Fire Alarm Phase 3 (9279.40)

13-LINDEN C/D

Iowa Department of Administrative Services
1251 334th St, Woodward, IA 50276

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FIELD BOOK	

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BASEMENT MECHANICAL DUCTWORK DEMOLITION PLAN

13-MD200

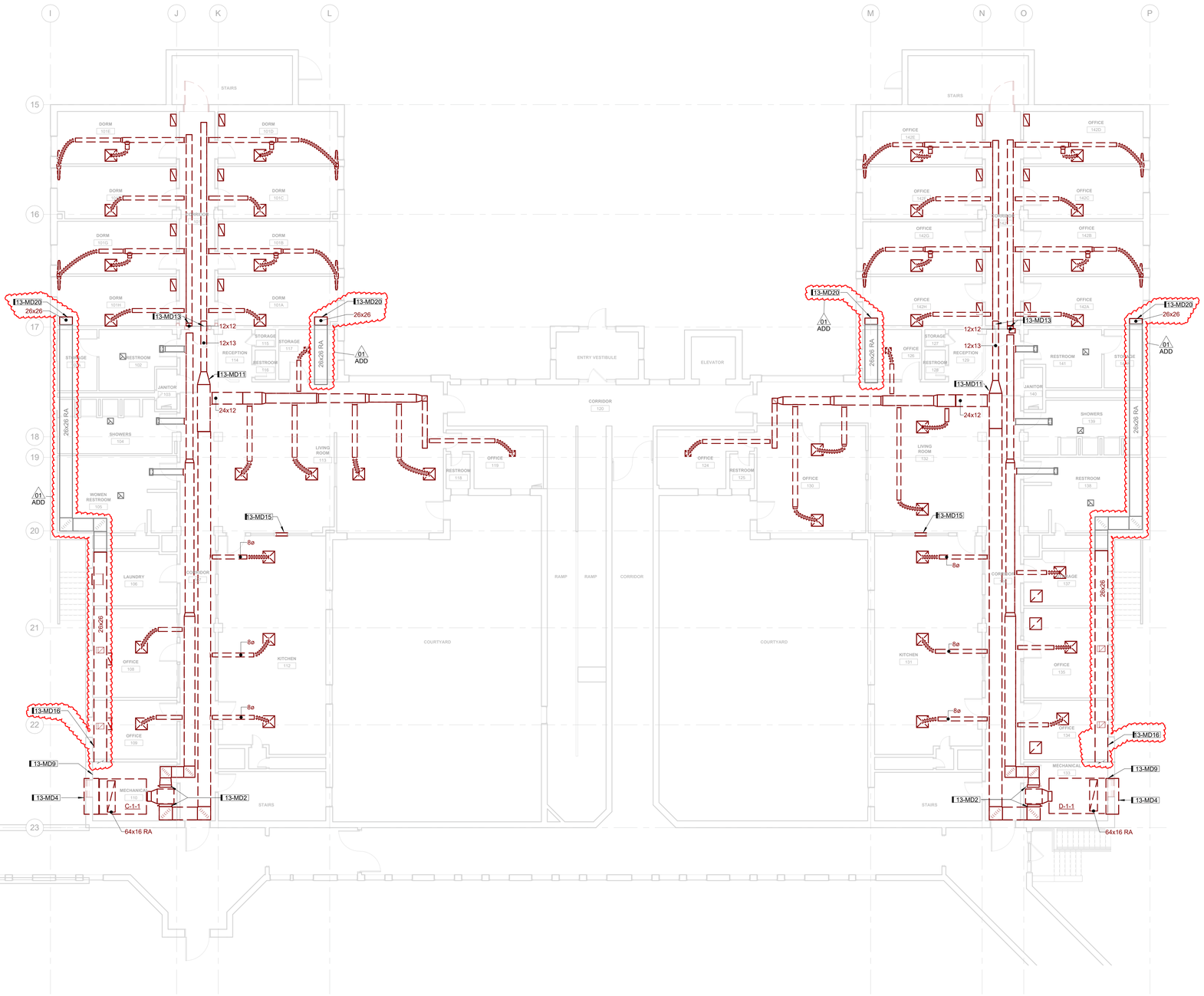
KEYNOTES

KEY	NOTE
13-MD2	DEMOLISH EXISTING DUCT HEATING COIL AND DUCTWORK INSIDE THE MECHANICAL ROOM.
13-MD4	DEMOLISH OA DUCTWORK BACK TO AHU. WALL PENETRATION TO BE REUSED FOR NEW OA DUCTWORK.
13-MD9	REMOVE EXISTING BLOWER COIL UNIT AND ASSOCIATED PIPING, OUTDOOR AIR DUCTWORK, AND CONTROLS. SUPPLY DUCTWORK TO REMAIN FOR RECONNECTION.
13-MD11	DEMOLISH EXISTING DUCTWORK AND ACCESSORIES IN THIS LOCATION. PREPARE DUCTWORK FOR NEW VAV AND DUCTWORK INSTALLATION.
13-MD13	REMOVE SECTION OF DUCTWORK FOR INSTALLATION OF NEW FIRE DAMPER. SEE NEW WORK PLANS
13-MD15	REMOVE EXISTING KITCHEN TRANSFER DUCT AND GRILLE. INFILL AND PAINT WALL TO MATCH ADJACENT WALL COLOR.
13-MD16	DEMOLISH EXISTING RETURN DUCT TO APPROXIMATE EXTENT INDICATED. DESIGN INTENT IS TO DEMOLISH RETURN DUCTWORK WHERE CEILING REPLACEMENT AND ABATEMENT IS OCCURRING.
13-MD20	DEMOLISH PORTION OF EXISTING RETURN DUCT AS INDICATED BACK TO WALL AND PREPARE DUCT FOR NEW CONNECTION. VERIFY TERMINATION POINT AND NOTIFY ENGINEER IF TERMINATION POINT DIFFERS FROM ANTICIPATED LOCATION.

01 ADD

NOTE:

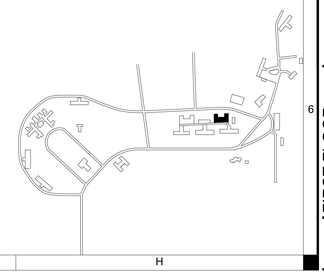
BUILDING CONTAINS HAZARDOUS MATERIAL SUCH AS ASBESTOS AND LEAD PAINT. SUPPLEMENTAL HAZARDOUS MATERIAL REPORT IS PROVIDED IN THE BID DOCUMENTS AS A SEPARATE ATTACHMENT. REFER TO HAZARDOUS MATERIAL REPORT FOR EXTENTS OF TESTING AND RESULTS.



NORTH

A6 FIRST FLOOR MECHANICAL DUCTWORK PLAN

1/8" = 1'-0" 0 12'



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FIELD BOOK	

FIRST FLOOR MECHANICAL DUCTWORK DEMOLITION PLAN

13-MD201

KEYNOTES

KEY	NOTE
09-MD2	DEMOLISH EXISTING DUCT HEATING COIL AND DUCTWORK INSIDE THE MECHANICAL ROOM.
13-MD2	DEMOLISH EXISTING DUCT HEATING COIL AND DUCTWORK INSIDE THE MECHANICAL ROOM.
13-MD4	DEMOLISH OA DUCTWORK BACK TO AHU. WALL PENETRATION TO BE REUSED FOR NEW OA DUCTWORK.
13-MD9	REMOVE EXISTING BLOWER COIL UNIT AND ASSOCIATED PIPING, OUTDOOR AIR DUCTWORK, AND CONTROLS. SUPPLY DUCTWORK TO REMAIN FOR RECONNECTION.
13-MD11	DEMOLISH EXISTING DUCTWORK AND ACCESSORIES IN THIS LOCATION. PREPARE DUCTWORK FOR NEW VAV AND DUCTWORK INSTALLATION.
13-MD13	REMOVE SECTION OF DUCTWORK FOR INSTALLATION OF NEW FIRE DAMPER. SEE NEW WORK PLANS
13-MD15	REMOVE EXISTING KITCHEN TRANSFER DUCT AND GRILLE. INFILL AND PAINT WALL TO MATCH ADJACENT WALL COLOR.
13-MD16	DEMOLISH EXISTING RETURN DUCT TO APPROXIMATE EXTENT INDICATED. DESIGN INTENT IS TO DEMOLISH RETURN DUCTWORK WHERE CEILING REPLACEMENT AND ABATEMENT IS OCCURRING.
01 ADD	13-MD20 DEMOLISH PORTION OF EXISTING RETURN DUCT AS INDICATED BACK TO WALL AND PREPARE DUCT FOR NEW CONNECTION. VERIFY TERMINATION POINT AND NOTIFY ENGINEER IF TERMINATION POINT DIFFERS FROM ANTICIPATED LOCATION.

NOTE:

BUILDING CONTAINS HAZARDOUS MATERIAL SUCH AS ASBESTOS AND LEAD PAINT. SUPPLEMENTAL HAZARDOUS MATERIAL REPORT IS PROVIDED IN THE BID DOCUMENTS AS A SEPARATE ATTACHMENT. REFER TO HAZARDOUS MATERIAL REPORT FOR EXTENTS OF TESTING AND RESULTS.

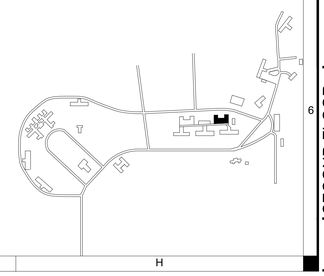
OPEN TO BELOW

OPEN TO BELOW

NORTH

A6 SECOND FLOOR MECHANICAL DUCTWORK DEMOLITION PLAN

1/8" = 1'-0" 0 12'



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Phase 4 & Fire Alarm Phase 3 (9279.40)

WRC Decentralization Phase

13-LINDEN C/D

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SECOND FLOOR MECHANICAL DUCTWORK DEMOLITION PLAN

13-MD202

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KEYNOTES

KEY	NOTE
13-M02	REFRIGERANT PIPING SIZE AND ROUTING SHOWN IS AN APPROXIMATION. EXACT SIZING AND ROUTING SHALL BE IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
13-M03	NEW ELECTRIC UNIT HEATER TO BE SURFACE MOUNTED ON WALL PER MANUFACTURER'S INSTRUCTIONS.
13-M12	ROUTE CONDENSATE PIPING FROM CONDENSATE PUMP TO JANITOR'S CLOSET. TERMINATE PIPING AT THE NEAREST FIXTURE IN JANITOR CLOSET.
13-M16	PIPE ROUTING SHOWN IS THE ANTICIPATED CONDENSATE PIPE ROUTING. FIELD VERIFY EXACT PIPE ROUTING PRIOR TO INSTALLATION.
13-M17	EXTEND FLUE AND COMBUSTION AIR THROUGH WALL TO EXTERIOR. SLEEVE PENETRATIONS AND SEAL WEATHERTIGHT. REFER TO FURNACE MANUFACTURER'S WRITTEN INSTRUCTIONS FOR FLUE AND COMBUSTION VENTING REQUIREMENTS AND TERMINATION DETAILS.
13-M26	ROUTE NEW OA INTAKE DUCT THROUGH WALL. SLEEVE PENETRATION AND SEAL WEATHERTIGHT. TERMINATE DUCT WITH GOOSENECK WITH BIRD SCREEN 3'-0" ABOVE GRADE.
13-M27	BALANCE OA INTAKE TO 200 CFM.
13-M28	BALANCE RETURN AIR DAMPER TO 1500 CFM.
13-M29	BALANCE OA BRANCH TO 100 CFM.
13-M30	BALANCE OA BRANCH TO 150 CFM.
13-M31	ROUTE NEW EXHAUST DUCT THROUGH WALL. SLEEVE PENETRATION AND SEAL WEATHERTIGHT. TERMINATE DUCT WITH GOOSENECK WITH BIRD SCREEN 3'-0" ABOVE GRADE.

NOTE:

BUILDING CONTAINS HAZARDOUS MATERIAL SUCH AS ASBESTOS AND LEAD PAINT. SUPPLEMENTAL HAZARDOUS MATERIAL REPORT IS PROVIDED IN THE BID DOCUMENTS AS A SEPARATE ATTACHMENT. REFER TO HAZARDOUS MATERIAL REPORT FOR EXTENTS OF TESTING AND RESULTS.

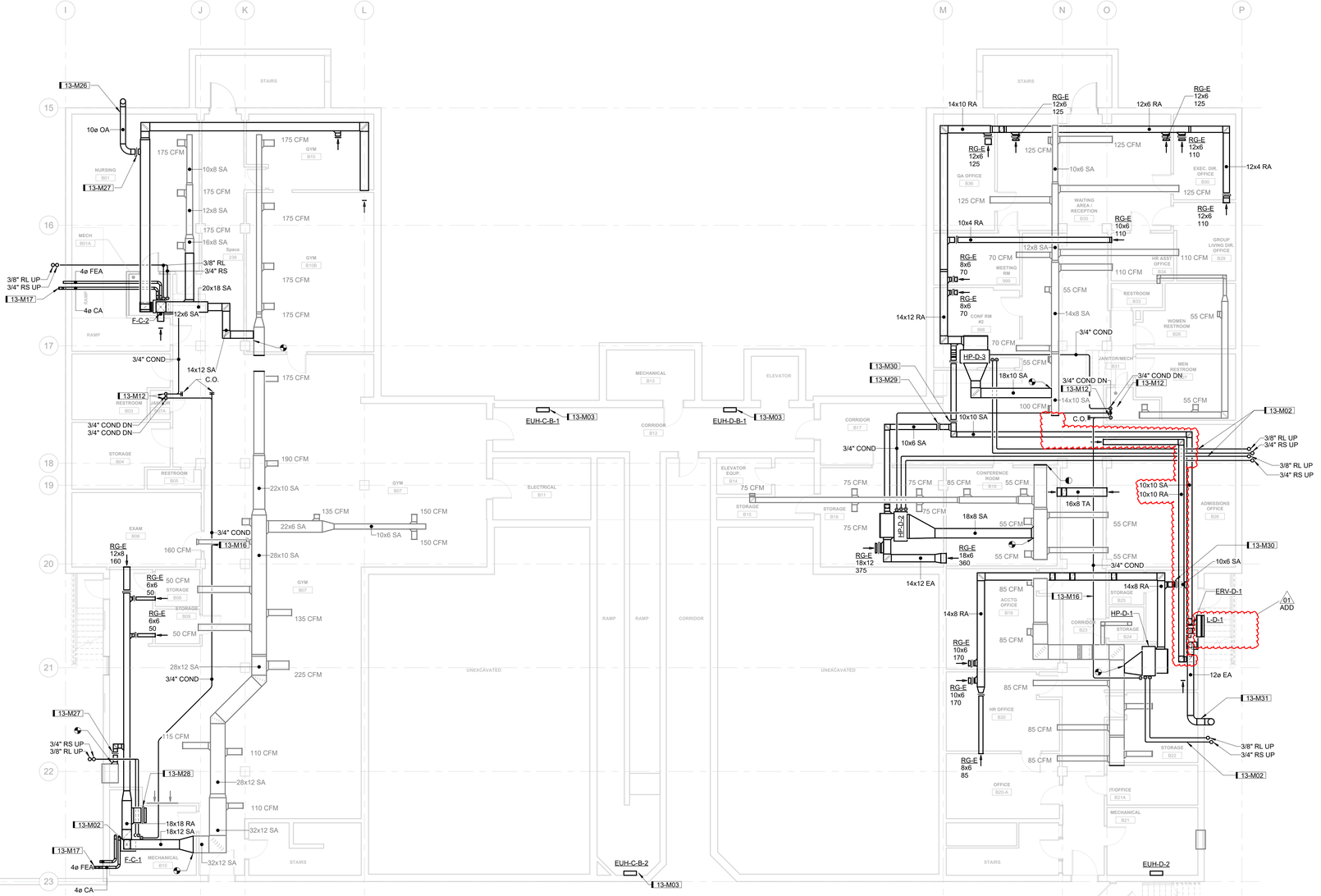
DUCT ROUTING IS BASED ON RECORD DRAWINGS AND DIFFUSER LOCATIONS ON SITE. FIELD VERIFY LOCATION OF DUCTWORK PRIOR TO PERFORMING WORK.

AIRFLOWS SHOWN ON PLANS ARE ASSUMED AIRFLOWS BASED ON RECORD DRAWINGS.

NORTH

A2 FOOD SERVICE BASEMENT TUNNEL MECHANICAL PLAN

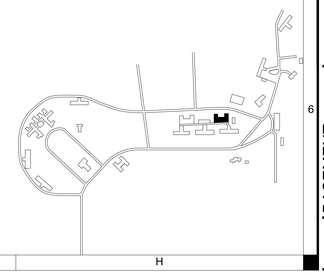
1/8" = 1'-0" 0 12'



NORTH

A6 BASEMENT MECHANICAL DUCTWORK PLAN

1/8" = 1'-0" 0 12'



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WRC Decentralization Phase 4 & Fire Alarm Phase 3 (9279.40)

13-LINDEN C/D

Iowa Department of Administrative Services
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PROJECT NUMBER	2240007040
FIELD BOOK	

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6

BASEMENT MECHANICAL DUCTWORK PLAN

13-M200

KEYNOTES

KEY	NOTE
13-M03	NEW ELECTRIC UNIT HEATER TO BE SURFACE MOUNTED ON WALL PER MANUFACTURER'S INSTRUCTIONS.
13-M04	ACCU TO BE WALL MOUNTED PER MANUFACTURER'S INSTRUCTIONS WITH MANUFACTURER PROVIDED MOUNTING BRACKETS.
13-M06	REFER TO DETAIL G5 ON SHEET M500 FOR FIRE DAMPER DETAIL.
13-M19	NEW RETURN DUCTWORK TO DRAW AIR FROM EXISTING PLENUM RETURN DUCTWORK AND MECHANICAL ROOM. TERMINATE RA OPENING IN ROOM WITH 3/4" HARDWARE CLOTH.
13-M31	ROUTE NEW EXHAUST DUCT THROUGH WALL. SLEEVE PENETRATION AND SEAL WEATHERTIGHT. TERMINATE DUCT WITH GOOSENECK WITH BIRD SCREEN 3'-0" ABOVE GRADE.
01 ADD 13-M32	EXTEND EXISTING DUCT PAST NEW FIREWALL AND INSTALL FIRE DAMPER. TERMINATE ABOVE CEILING AFTER FIRE DAMPER.

NOTE:

BUILDING CONTAINS HAZARDOUS MATERIAL SUCH AS ASBESTOS AND LEAD PAINT. SUPPLEMENTAL HAZARDOUS MATERIAL REPORT IS PROVIDED IN THE BID DOCUMENTS AS A SEPARATE ATTACHMENT. REFER TO HAZARDOUS MATERIAL REPORT FOR EXTENTS OF TESTING AND RESULTS.

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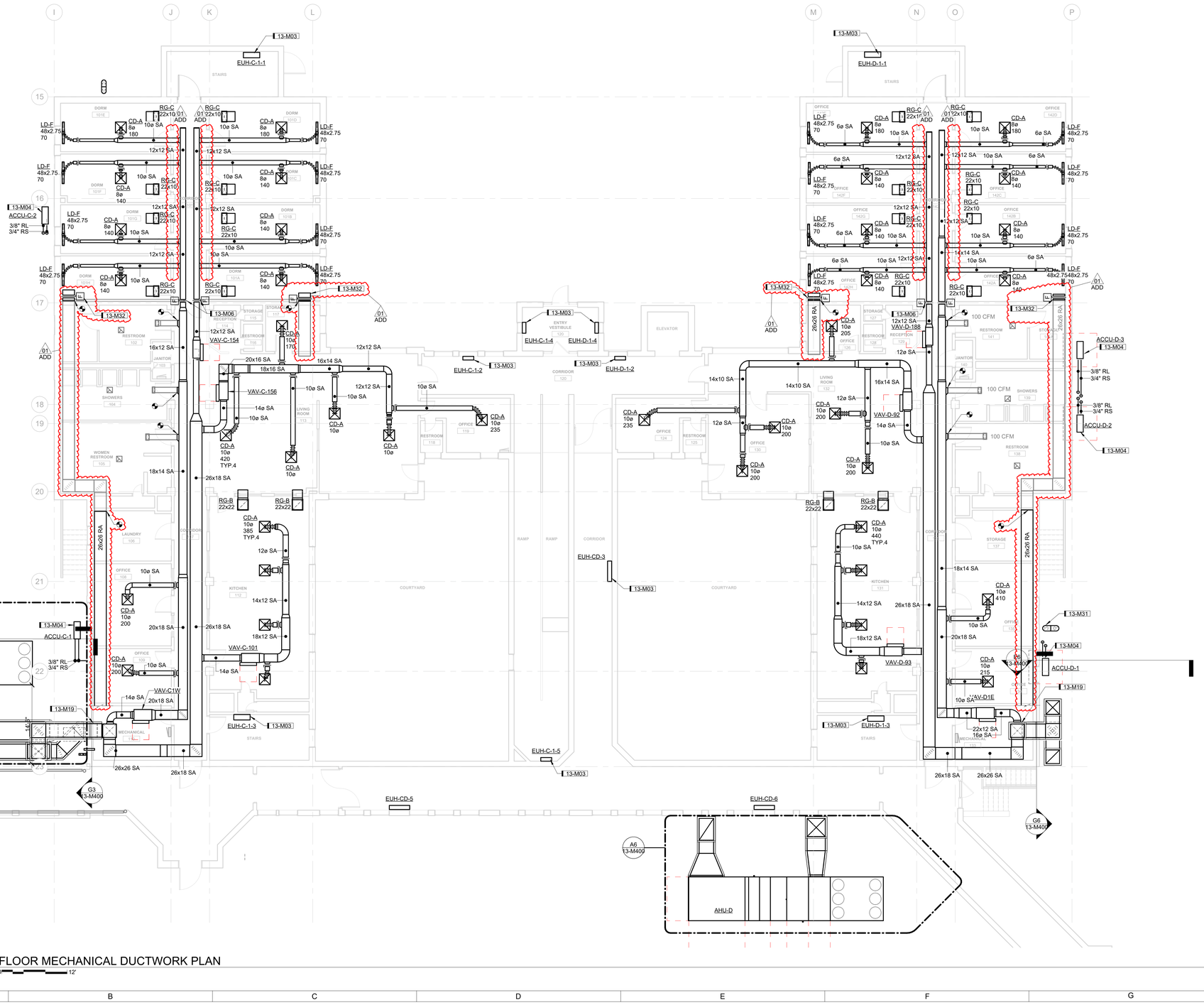
AIRFLOWS SHOWN ON PLANS ARE ASSUMED AIRFLOWS BASED ON RECORD DRAWINGS.

NORTH

A2 FOOD SERVICE FIRST FLOOR MECHANICAL PLAN
1/8" = 1'-0"



NORTH

A6 FIRST FLOOR MECHANICAL DUCTWORK PLAN
1/8" = 1'-0"

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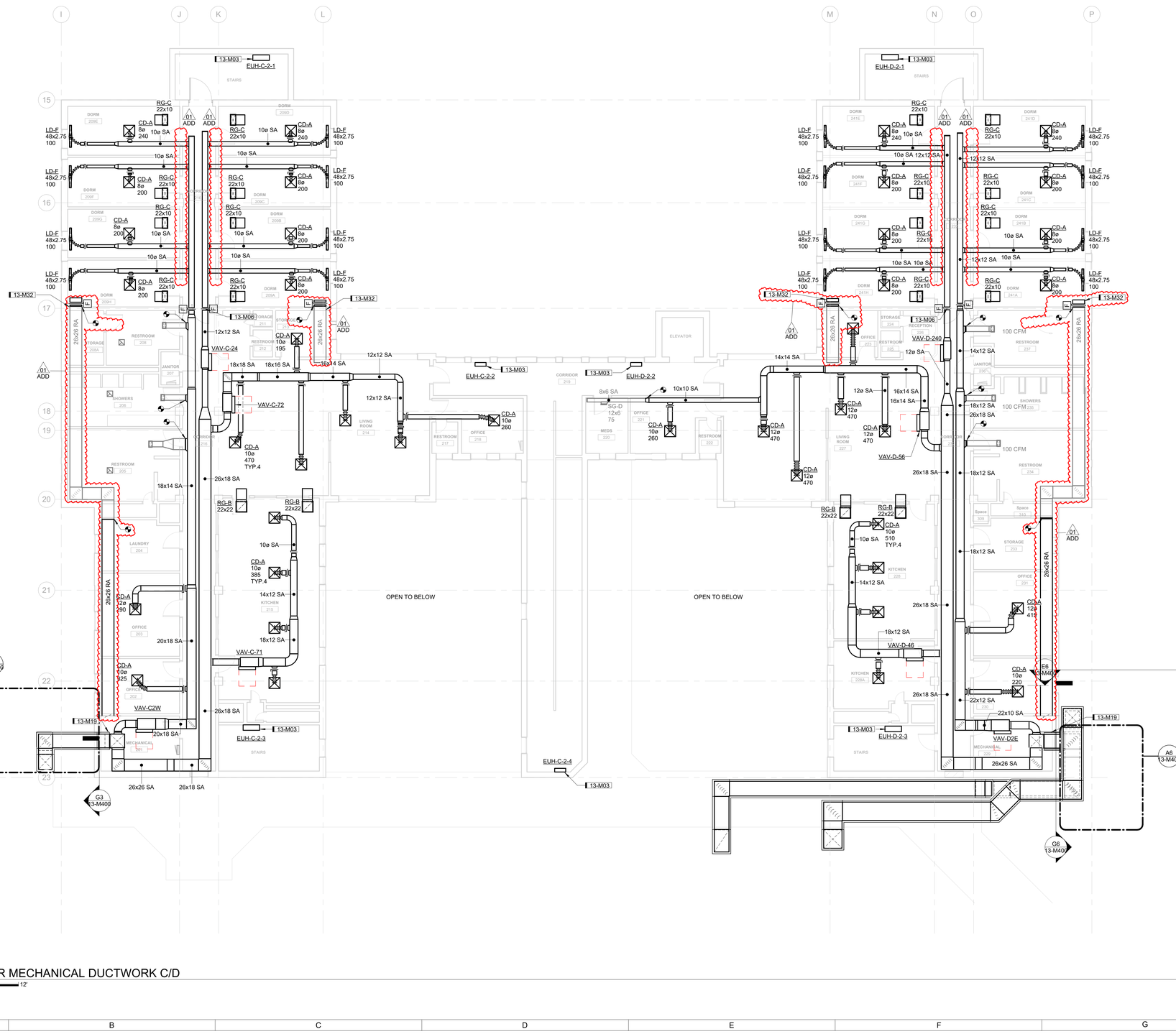
FIRST FLOOR MECHANICAL DUCTWORK PLAN

13-M201

KEYNOTES

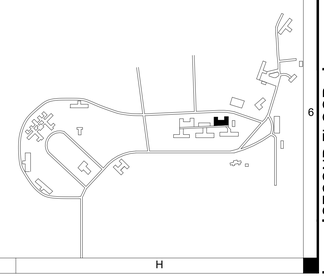
KEY	NOTE
13-M03	NEW ELECTRIC UNIT HEATER TO BE SURFACE MOUNTED ON WALL PER MANUFACTURER'S INSTRUCTIONS.
13-M06	REFER TO DETAIL G5 ON SHEET M500 FOR FIRE DAMPER DETAIL.
13-M19	NEW RETURN DUCTWORK TO DRAW AIR FROM EXISTING PLENUM RETURN DUCTWORK AND MECHANICAL ROOM. TERMINATE RA OPENING IN ROOM WITH 3/4" HARDWARE CLOTH.
13-M32	EXTEND EXISTING DUCT PAST NEW FIREWALL AND INSTALL FIRE DAMPER. TERMINATE ABOVE CEILING AFTER FIRE DAMPER.

01 ADD



NORTH

A6 SECOND FLOOR MECHANICAL DUCTWORK C/D
1/8" = 1'-0" 0 12'



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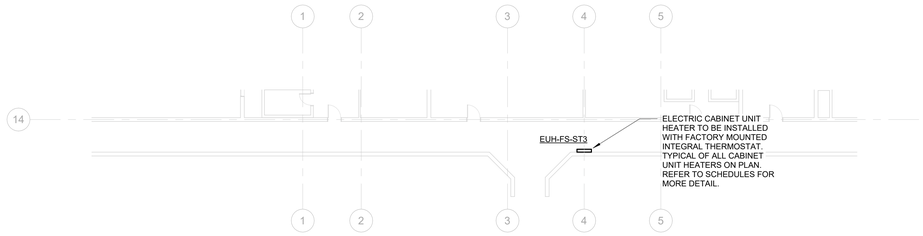
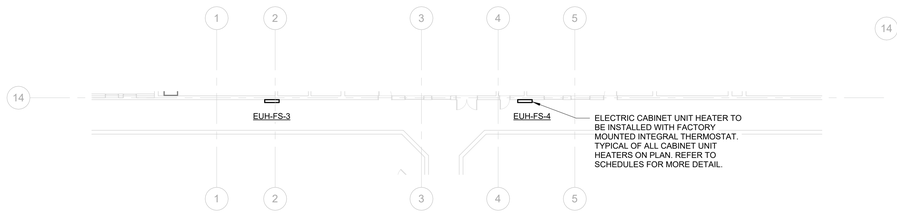
SECOND FLOOR MECHANICAL DUCTWORK PLAN

13-M202



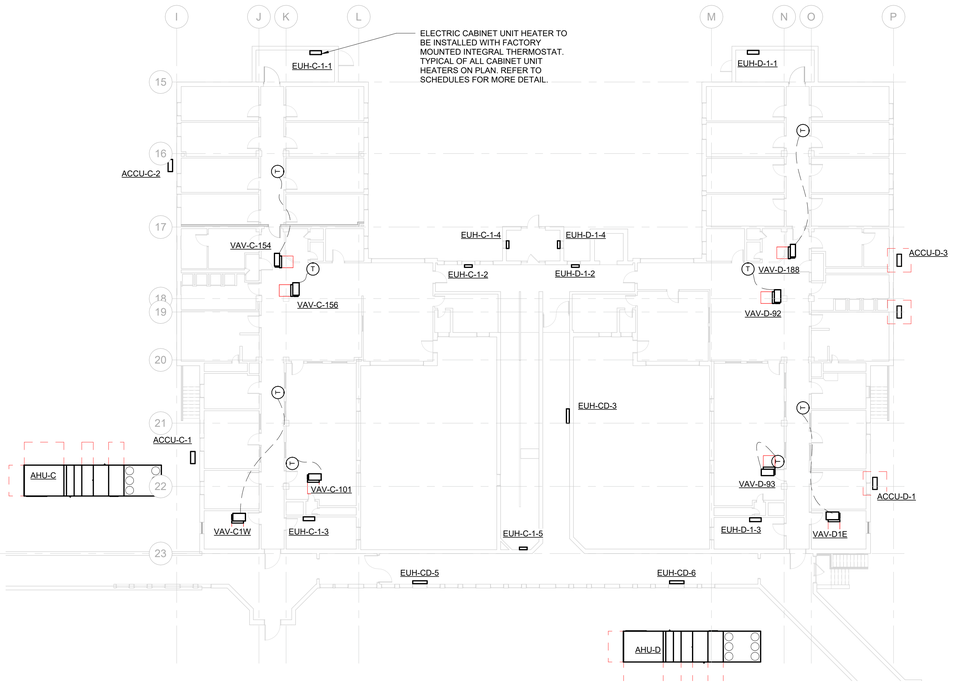
NORTH

A2 FOOD SERVICE BASEMENT TUNNEL THERMOSTAT PLAN
1/16" = 1'-0" 0 24'



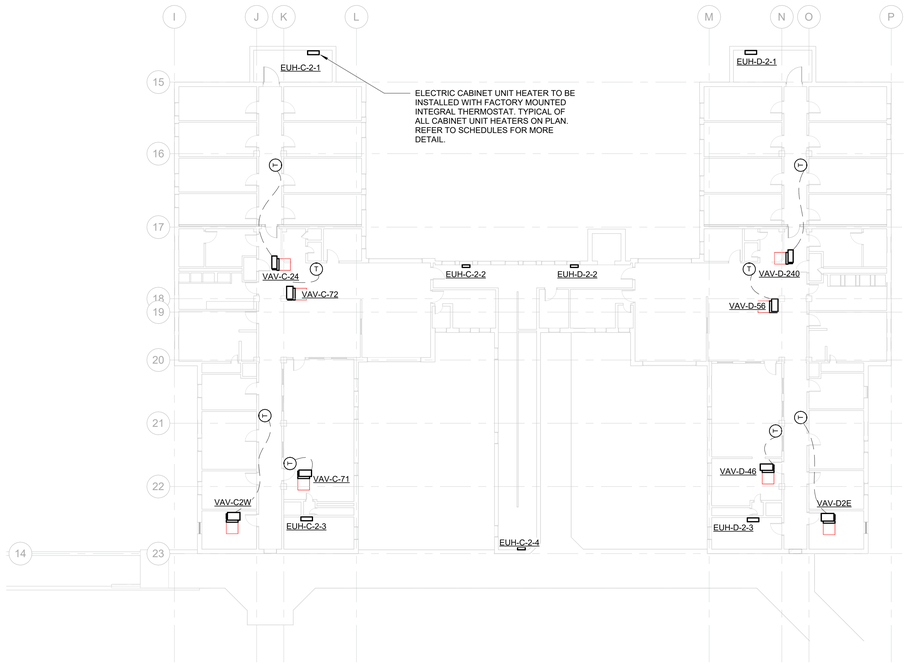
NORTH

A4 FOOD SERVICE FIRST FLOOR THERMOSTAT PLAN
1/16" = 1'-0" 0 24'



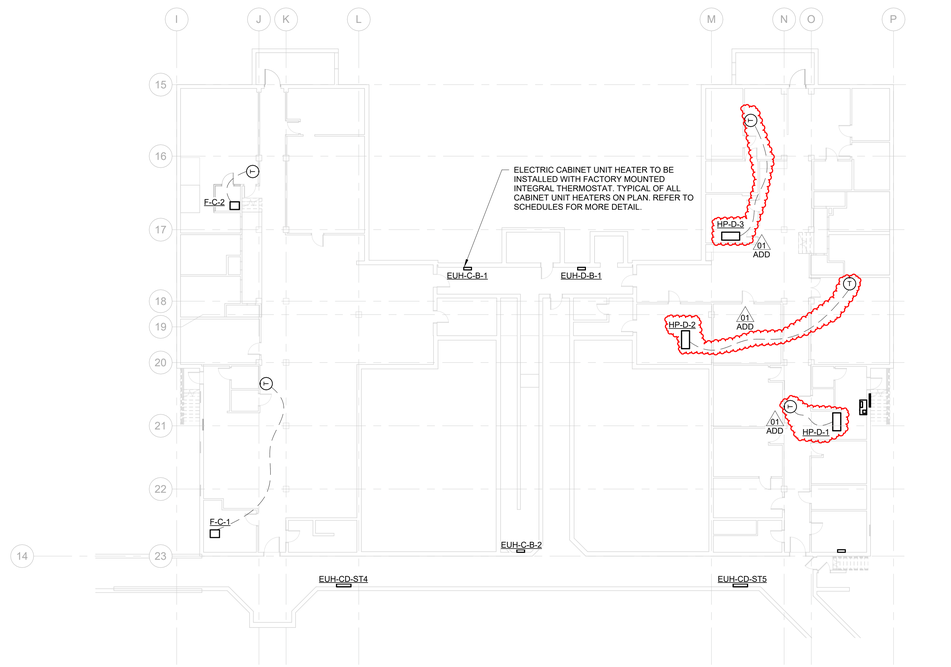
NORTH

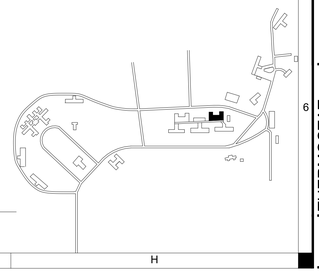
D4 FIRST FLOOR THERMOSTAT PLAN
1/16" = 1'-0" 0 24'



NORTH

A6 SECOND FLOOR THERMOSTAT PLAN
1/16" = 1'-0" 0 24'





NORTH

D6 BASEMENT THERMOSTAT PLAN
1/16" = 1'-0" 0 24'

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THERMOSTAT PLAN

13-M300

POINTS MATRIX - UH - ELECTRIC											
POINT NAME	HARDWARE POINTS				SOFTWARE POINTS						SHOW ON GRAPHIC
	AI	AO	BI	BO	AV	BV	LOOP	SCHED	TREND	ALARM	
ZONE SETPOINT ADJUST	x										x
ZONE TEMP	x								x		x
ZONE OVERRIDE			x						x		x
HEATING SETPOINT					x				x		x
HEATING STAGE 1						x			x		
HEATING STAGE 2						x			x		
SCHEDULE								x			
HIGH ZONE TEMP										x	
LOW ZONE TEMP										x	
TOTALS	2	0	1	0	1	2	0	1	5	2	4
	TOTAL HARDWARE (3)				TOTAL SOFTWARE (11)						

1. ELECTRIC UNIT HEATER

RUN CONDITIONS - SCHEDULED:
THE UNIT SHALL RUN ACCORDING TO A USER DEFINABLE TIME SCHEDULE IN THE FOLLOWING MODES:
- OCCUPIED MODE: THE UNIT SHALL MAINTAIN A HEATING SETPOINT OF 70°F (ADJ.).
- UNOCCUPIED MODE (NIGHT SETBACK): THE UNIT SHALL MAINTAIN A HEATING SETPOINT OF 65°F (ADJ.).

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- LOW ZONE TEMP: IF THE ZONE TEMPERATURE IS LESS THAN THE HEATING SETPOINT BY A USER DEFINABLE AMOUNT (ADJ.).

ZONE SETPOINT ADJUST:
THE OCCUPANT SHALL BE ABLE TO ADJUST THE ZONE TEMPERATURE HEATING SETPOINTS AT THE ZONE SENSOR.

FAN:
THE FAN SHALL RUN ANYTIME THE ZONE TEMPERATURE IS BELOW HEATING SETPOINT, UNLESS SHUTDOWN ON SAFETIES. THE FAN SPEEDS SHALL BE INDEXED AS FOLLOWS:
- LOW SPEED SHALL RUN ANYTIME THE ZONE TEMPERATURE DROPS BELOW SETPOINT.
- HIGH SPEED SHALL RUN ANYTIME THE ZONE TEMPERATURE DROPS EVEN FURTHER BELOW SETPOINT BY A USER DEFINABLE AMOUNT (ADJ.).

THE FAN SHALL RUN FOR A USER DEFINED PERIOD OF TIME AFTER THE HEATING ELEMENT IS INDEXED OFF TO DISSPATE HEAT OFF THE HEATING ELEMENT.

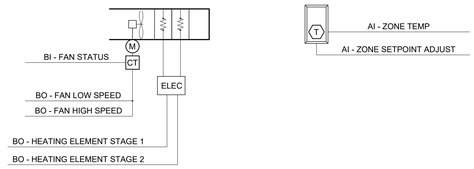
ELECTRIC HEATING STAGES:
THE CONTROLLER SHALL MEASURE THE ZONE TEMPERATURE AND STAGE THE HEATING TO MAINTAIN ITS HEATING SETPOINT. TO PREVENT SHORT CYCLING, THERE SHALL BE A USER DEFINABLE (ADJ.) DELAY BETWEEN STAGES, AND EACH STAGE SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME.

DISCHARGE AIR TEMPERATURE:
THE CONTROLLER SHALL MONITOR THE DISCHARGE AIR TEMPERATURE.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH DISCHARGE AIR TEMP: IF THE DISCHARGE AIR TEMPERATURE IS GREATER THAN 120°F (ADJ.).
- LOW DISCHARGE AIR TEMP: IF THE DISCHARGE AIR TEMPERATURE IS LESS THAN 45°F (ADJ.).

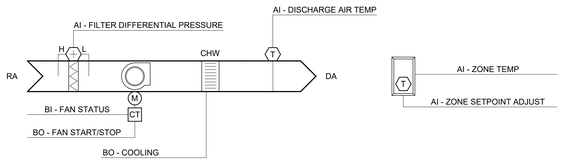
FAN STATUS:
THE CONTROLLER SHALL MONITOR THE FAN STATUS.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
- FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.



G3 CONTROLS SCHEMATIC - UH - ELECTRIC
NOT TO SCALE

01
ADD



SPLIT-SYSTEM HEAT PUMP FAN COIL UNIT:

Run Conditions - Scheduled:
The unit shall run according to a user definable time schedule in the following modes:
- Occupied Mode: The unit shall maintain
  - A 75°F (adj.) cooling setpoint
  - A 70°F (adj.) heating setpoint.
  - DURING OCCUPIED MODE THE SUPPLY BLOWER ON THE FAN COIL UNIT SHALL OPERATE CONTINUOUSLY AT THE LOWEST FAN SETTING.
  - THE HEAT PUMP SHALL BE ENERGIZED AND SHALL PROVIDE THE NECESSARY HEATING OR COOLING CAPACITY AS REQUIRED TO MAINTAIN SPACE CONDITIONS. THE FAN SHALL ADJUST SPEED BASED ON INTERAL LOGIC TO SATISFY HEATING OR COOLING REQUIREMENTS.

- Unoccupied Mode (night setback): The unit shall maintain
  - A 85°F (adj.) cooling setpoint.
  - A 55°F (adj.) heating setpoint.

Alarms shall be provided as follows:
- High Zone Temp: If the zone temperature is greater than the cooling setpoint by a user definable amount (adj.).
- Low Zone Temp: If the zone temperature is less than the heating setpoint by a user definable amount (adj.).

Zone Optimal Start:
The unit shall use an optimal start algorithm for morning start-up. This algorithm shall minimize the unoccupied warm-up or cool-down period while still achieving comfort conditions by the start of scheduled occupied period.

Emergency Shutdown:
The unit shall shut down and generate an alarm upon receiving an emergency shutdown signal.

Fan:
The fan shall run anytime the unit is commanded to run, unless shutdown on safeties.

Filter Differential Pressure Monitor:
The controller shall monitor the differential pressure across the filter.

Alarms shall be provided as follows:
- Filter Change Required: Filter differential pressure exceeds a user definable limit (adj.).

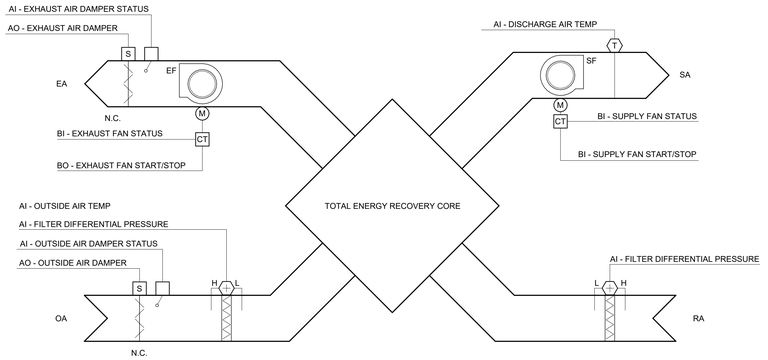
Discharge Air Temperature:
The controller shall monitor the discharge air temperature.

Alarms shall be provided as follows:
- High Discharge Air Temp: If the discharge air temperature is greater than 120°F (adj.).
- Low Discharge Air Temp: If the discharge air temperature is less than 40°F (adj.).

Fan Status:
The controller shall monitor the fan status.

Alarms shall be provided as follows:
- Fan Failure: Commanded on, but the status is off.
- Fan in Hand: Commanded off, but the status is on.
- Fan Runtime Exceeded: Fan status runtime exceeds a user definable limit (adj.).

A4 HEAT PUMP CONTROL SEQUENCE
NOT TO SCALE



ENERGY RECOVERY VENTILATOR:

Run Conditions - Scheduled:
The unit shall run according to a user definable time schedule in the following modes:

- Occupied Mode: The OUTDOOR AIR DAMPER SHALL OPEN AND THE UNIT SHALL RUN CONSTANTLY DURING SCHEDULED OCCUPIED HOURS. THE OCCUPIED HOURS SCHEDULE SHALL MATCH THAT OF THE ASSOCIATED FAN COIL UNITS AND FURNACES.

- Unoccupied Mode: THE OUTDOOR AIR DAMPER SHALL CLOSE AND THE UNIT SHALL TURN OFF DURING UNOCCUPIED HOURS.

Fan:
The fan shall run anytime the unit is commanded to run, unless shutdown on safeties.

Filter Differential Pressure Monitor:
The controller shall monitor the differential pressure across the filter.

Alarms shall be provided as follows:
- Filter Change Required: Filter differential pressure exceeds a user definable limit (adj.).

Fan Status:
The controller shall monitor the fan status.

Alarms shall be provided as follows:
- Fan Failure: Commanded on, but the status is off.
- Fan in Hand: Commanded off, but the status is on.
- Fan Runtime Exceeded: Fan status runtime exceeds a user definable limit (adj.).

C4 ERV CONTROL SEQUENCE
NOT TO SCALE

POINTS LIST - GAS FURNACE									
POINT NAME	AI	AO	BI	BO	AV	BV	TREND	ALARM	SHOW ON GRAPHIC
ZONE TEMPERATURE	x						x	x	x
ZONE HUMIDITY	x						x	x	x
ZONE SETPOINT ADJUST	x								x
DISCHARGE AIR TEMPERATURE	x						x	x	x
MIXED AIR DAMPER				x			x		x
ECONOMIZER DAMPER				x			x		x
SUPPLY FAN STATUS				x			x	x	x
SUPPLY FAN COMMAND			x					x	x
COOLING SETPOINT					x		x		x
COOLING MODE						x	x		x
HEATING SETPOINT					x		x		x
HEATING MODE						x	x		x
SCHEDULE									x
TOTALS	4	0	1	3	2	2	10	5	13
1. SEQUENCE OF OPERATIONS: GAS FURNACE_DX COOLING SYSTEM							TOTAL SOFTWARE (28)		

THERMOSTAT CONTROLLED OPERATIONS

RUN CONDITIONS - SCHEDULED:
THE UNIT SHALL RUN ACCORDING TO A USER DEFINABLE TIME SCHEDULE IN THE FOLLOWING MODES:
- OCCUPIED MODE: THE UNIT SHALL MAINTAIN
  - A 75°F (ADJ.) COOLING SETPOINT
  - A 70°F (ADJ.) HEATING SETPOINT.

- UNOCCUPIED MODE (NIGHT SETBACK): THE UNIT SHALL MAINTAIN
  - A 78°F (ADJ.) COOLING SETPOINT.
  - A 65°F (ADJ.) HEATING SETPOINT.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH ZONE TEMP: IF THE ZONE TEMPERATURE IS GREATER THAN THE COOLING SETPOINT BY A USER DEFINABLE AMOUNT (ADJ.).
- LOW ZONE TEMP: IF THE ZONE TEMPERATURE IS LESS THAN THE HEATING SETPOINT BY A USER DEFINABLE AMOUNT (ADJ.).

ZONE SETPOINT ADJUST:
THE OCCUPANT SHALL BE ABLE TO ADJUST THE ZONE TEMPERATURE HEATING AND COOLING SETPOINTS AT THE ZONE SENSOR. THE SETPOINT ADJUSTMENT RANGE SHALL BE LIMITED BETWEEN THE EFFECTIVE TEMPERATURE RANGE OF 68F-76F. ZONE SETPOINT ADJUSTMENT SHALL OVERRIDE TEMPERATURE FOR 2 HOURS (ADJ.). AFTER TIME EXPIRES ZONE SETPOINT RETURNS TO SCHEDULED SETPOINT.

ZONE UNOCCUPIED OVERRIDE:
A TIMED LOCAL OVERRIDE CONTROL SHALL ALLOW AN OCCUPANT TO OVERRIDE THE SCHEDULE AND PLACE THE UNIT INTO AN OCCUPIED MODE FOR 2 HOURS (ADJ.). AT THE EXPIRATION OF THIS TIME, CONTROL OF THE UNIT SHALL AUTOMATICALLY RETURN TO THE SCHEDULED SETPOINT.

SUPPLY FAN: ON - OFF
THE SUPPLY FAN SHALL RUN ANYTIME THE UNIT IS IN OCCUPIED MODE. THE SPEED OF THE SUPPLY FAN SHALL BE CONTROLLED BY THE FURNACE CONTROLLER. THE OUTDOOR AIR DAMPER SHALL BE OPEN ANYTIME THE SUPPLY FAN IS IN OPERATION.

COOLING OPERATION:
THE CONTROLLER SHALL MEASURE THE ZONE TEMPERATURE AND STAGE THE COOLING TO MAINTAIN ITS COOLING SETPOINT. TO PREVENT SHORT CYCLING, THERE SHALL BE A TIME DELAY BETWEEN STARTUP OF THE ACCU AND SHUTDOWN OF THE ACCU. INTENTION IS FOR THIS TO BE DONE VIA THE CONTROL BOARD. THIS CAN BE DONE VIA THE THERMOSTAT AS WELL.

ZONE HUMIDITY:
THE CONTROLLER SHALL MONITOR THE ZONE HUMIDITY.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH ZONE HUMIDITY: IF THE ZONE HUMIDITY IS GREATER THAN 70% (ADJ.).
- LOW ZONE HUMIDITY: IF THE ZONE HUMIDITY IS LESS THAN 35% (ADJ.).

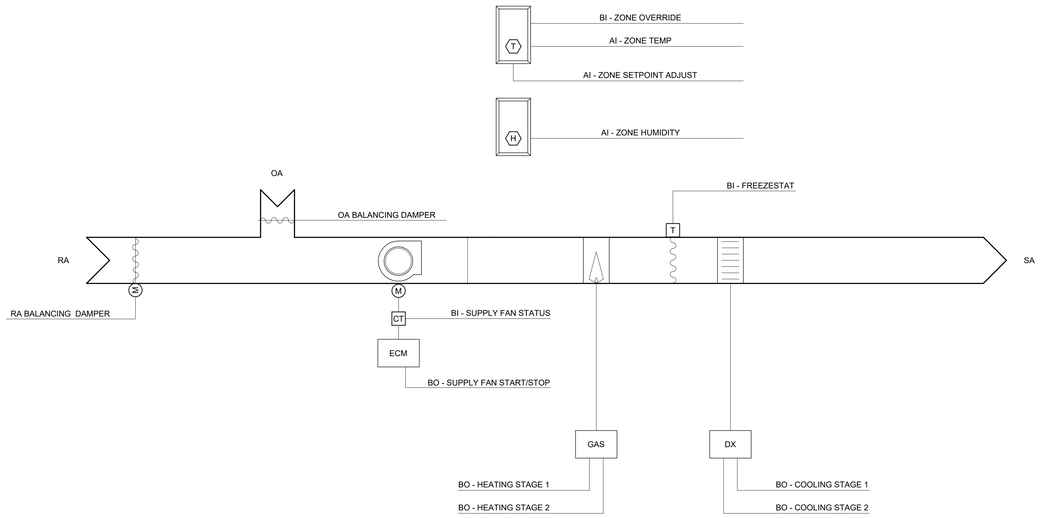
DEHUMIDIFICATION:
THE CONTROLLER SHALL MEASURE THE ROOM AIR HUMIDITY AND OVERRIDE THE COOLING SEQUENCE TO MAINTAIN THE ROOM AIR HUMIDITY AT OR BELOW 60% RH (ADJ.). DEHUMIDIFICATION SHALL BE ENABLED WHENEVER THE UNIT IS IN OCCUPIED MODE. COOLING SYSTEM IS TO BE ALLOWED TO COOL 3°F BELOW SETPOINT TO MAINTAIN ROOM HUMIDITY SETPOINT.

HARD WIRED SAFETIES

FREEZE PROTECTION:
THE UNIT SHALL SHUT DOWN AND GENERATE AN ALARM UPON RECEIVING A FREEZESTAT STATUS. OA DAMPER SHALL CLOSE.

FURNCACE CONTROL BOARD OPERATIONS

GAS HEATING STAGES:
THE INTERNAL FURNACE CONTROLLER SHALL CONTROL THE BURNER STAGING OPERATIONS.



B6 GAS FURNACE CONTROLS SCHEMATIC
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ISSUE DATE	03-27-2026
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FIELD BOOK	

MECHANICAL CONTROL

13-M501

UNIT HEATER SCHEDULE - ELECTRIC

REMARKS:
1. OR ENGINEER APPROVED EQUIVALENT
2. TO BE INSTALLED WITH MANUFACTURER'S SPECIFIED WALL MOUNTING BRACKETS
3. UNIT SHALL HAVE MANUFACTURER'S INTEGRAL TAMPER-PROOF THERMOSTAT WITH DDC INTEGRATION CAPABILITIES.
4. UNIT SHALL HAVE MANUFACTURER'S VANDAL-PROOF COVER.
5. ALL ELECTRIC UNIT HEATERS SHALL HAVE TWO-STAGE HEAT.

MARK	AREA SERVED	CFM	EAT (°F)	ELECTRICAL DATA				DESIGN BASIS
				KW	VOLTS	PHASE	FLA	
EUH-C-1-1	STAIRS 258	500	45	4	480	3	8.3	BERKO CUH935
EUH-C-1-2	CORRIDOR 158	500	45	4	480	3	7.5	BERKO CUH935
EUH-C-1-3	STAIRS 261	500	45	4	480	3	8.3	BERKO CUH935
EUH-C-1-4	ENTRY VESTIBULE B42	500	45	4	480	3	7.5	BERKO CUH935
EUH-C-1-5	RAMP B37	500	45	4	480	3	8.3	BERKO CUH935
EUH-C-2-1	STAIRS B35	500	45	4	480	3	8.3	BERKO CUH935
EUH-C-2-2	CORRIDOR 58	500	45	4	480	3	7.5	BERKO CUH935
EUH-C-2-3	STAIRS 252	500	45	4	480	3	8.3	BERKO CUH935
EUH-C-2-4	SPACE 337	500	45	4	480	3	8.3	BERKO CUH935
EUH-C-B-1	SPACE 51	500	45	4	480	3	7.5	BERKO CUH935
EUH-C-B-2	SPACE 52	500	45	4	480	3	8.3	BERKO CUH935
EUH-CD-3	TUNNEL 161	1000	45	8	480	3	11	BERKO CUH945
EUH-CD-5	CORRIDOR 161	1000	45	8	480	3	11	BERKO CUH945
EUH-CD-6	CORRIDOR 161	1000	45	8	480	3	11	BERKO CUH945
EUH-CD-ST4	STEAM TUNNEL	1000	45	8	480	3	11	BERKO CUH945
EUH-CD-ST5	STEAM TUNNEL	1000	45	8	480	3	11	BERKO CUH945
EUH-D-1-1	STAIRS 259	500	45	4	480	3	8.3	BERKO CUH935
EUH-D-1-2	CORRIDOR 158	500	45	4	480	3	7.5	BERKO CUH935
EUH-D-1-3	STAIRS 260	500	45	4	480	3	8.3	BERKO CUH935
EUH-D-1-4	ENTRY VESTIBULE B42	500	45	4	480	3	7.5	BERKO CUH935
EUH-D-2	SPACE 52	500	45	4	480	3	8.3	BERKO CUH935
EUH-D-2-1	STAIRS 255	500	45	4	480	3	8.3	BERKO CUH935
EUH-D-2-2	CORRIDOR 58	500	45	4	480	3	7.5	BERKO CUH935
EUH-D-2-3	STAIRS 253	500	45	4	480	3	8.3	BERKO CUH935
EUH-D-B-1	SPACE 51	500	45	4	480	3	7.5	BERKO CUH935
EUH-FS-3	CONNECTING CORRIDOR	1000	45	8	480	3	11	BERKO CUH945
EUH-FS-4	CONNECTING CORRIDOR	1000	45	8	480	3	11	BERKO CUH945
EUH-FS-ST3	STEAM TUNNEL	1000	45	8	480	3	11	BERKO CUH945

DIFFUSERS REGISTERS AND GRILLES SCHEDULE

REMARKS:
1. COORDINATE MOUNTING STYLE WITH MOUNTING SURFACE.

MARK	MATERIAL	DESCRIPTION	FACE SIZE	FACTORY FINISH	DESIGN BASIS
A	ALUMINUM	SQUARE PLAQUE	24"x24"	WHITE	TITUS OMNI
B	ALUMINUM	1/2" X 1/2" X 1/2" EGGCRATE	SEE PLANS	WHITE	TITUS 50F
C	ALUMINUM	1/2" SPACING, 45° DEFLECTION	24"x12"	WHITE	TITUS 4FL
D	ALUMINUM	AEROBLADE SUPPLY DIFFUSER WITH 3/4" BLADE SPACING	SEE PLANS	WHITE	TITUS 272FL
E	ALUMINUM	3/4" SPACING SHORT BLADE RETURN GRILLE	SEE PLANS	WHITE	TITUS 350RL
F	ALUMINUM	LINEAR SLOT DIFFUSER, 1" 1-SLOT, HIGHTHROW, SURFACE MOUNT, BORDER TYPE 22	SEE PLANS	WHITE	TITUS FL-10

VRF AIR COOLED CONDENSING UNIT SCHEDULE

REMARKS:
1. PROVIDE SYSTEM WITH INTEGRAL DRAIN PAN HEATER VIA HOT GAS PIPING. IF ELECTRICAL PAN HEATER IS PROVIDED IN LIEU OF HOT GAS ALL ELECTRICAL CONNECTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST.
2. VRF SYSTEM SHALL MAINTAIN CONTINUOUS HEATING DURING DEFROST OPERATION. REVERSE CYCLE DEFROST OPERATION SHALL NOT BE PERMITTED.
3. VRF SYSTEM SHALL MAINTAIN CONTINUOUS HEATING DURING OIL RETURN OPERATION.
4. PROVIDE UNIT WITH SNOW GUARDS.
5. DISCONNECT SWITCH SHALL BE PROVIDED AND INSTALLED BY E.C.
6. CIRCUIT REFRIGERANT VOLUME SHALL NOT EXCEED 20 LBS.

MARK	SYSTEM SERVED	CAPACITY (MBH)	HEATING CAPACITY (MBH)	AMBIENT TEMPERATURE (°F)		# OF COMPRESSORS	SEER	EER2	ELECTRICAL DATA				REFRIGERANT		CONSTRAINTS (LESS CURB)	DESIGN BASIS
				DESIGN	MIN				VOLTS	PHASE	MCA	MOCP	TYPE	LBS	OPERATING WEIGHT (LBS)	
ACCU-D-1	HP-D-1	36	40	95	0	1	16.9	11.8	208	1	34.6	40	R-32	8	234	DAIKIN RZA36AACJU
ACCU-D-2	HP-D-2	36	40	95	0	1	16.9	11.8	208	1	34.6	40	R-32	8	234	DAIKIN RZA36AACJU
ACCU-D-3	HP-D-3	36	40	95	0	1	16.9	11.8	208	1	34.6	40	R-32	8	234	DAIKIN RZA36AACJU

VRF INDOOR UNIT SCHEDULE

REMARKS:
1. INDOOR UNIT SHALL MAINTAIN SCHEDULED CAPACITY REGARDLESS OF OUTDOOR AIR TEMPERATURE.
2. DISCONNECT SWITCH SHALL BE PROVIDED AND INSTALLED BY E.C.
3. PROVIDE WITH INTEGRAL CONDENSATE PUMP.

MARK	CFM	ESP (IN WC)	COOLING DATA	HEATING DATA	ELECTRICAL DATA				DESIGN BASIS
			TOTAL MBH	OUTPUT MBH	VOLTS	PHASE	MCA	MOCP	
HP-D-1	795	0.8	36	40	208	1	3	15	DAIKIN FBA36
HP-D-2	795	0.8	36	40	208	1	3	15	DAIKIN FBA36
HP-D-3	795	0.8	36	40	208	1	3	15	DAIKIN FBA36

VAV BOX SCHEDULE

REMARKS:
1. OR ENGINEER PRE-APPROVED EQUIVALENT
2. PROVIDE WITH FACTORY INSTALLED DOOR INTERLOCK DISCONNECT SWITCH.
3. REFER TO PLANS FOR CONTROL BOX ORIENTATION.
4. MAXIMUM BOX HEIGHT INCLUDING CONTROL BOX NOT TO EXCEED 18"

MARK	UNIT SIZE	CFM			MAX NC	HEATING COIL DATA	AIR TEMPERATURE		ELECTRICAL					DESIGN BASIS	REMARKS
		COOLING MAX	MIN CFM	HEATING MAX		APD (IN)	EAT °F	LAT °F	VOLTS	PHASE	KW	MOP	MCA		
VAV-C1W	16	2160	1390	1900	24	0.1	60	95	480	3	21	35 A	31.6 A	TITUS DESV	1,2,3
VAV-C2W	16	2810	1365	2810	22	0.07	60	88	480	3	25	40 A	37.6 A	TITUS DESV	1,2,3
VAV-C-24	12	1250	700	1100	24	0	60	95	480	3	12	20 A	18 A	TITUS DESV	1,2,3,4
VAV-C-71	14	1540	370	1600	21	0	60	94	480	3	15	25 A	22.6 A	TITUS DESV	1,2,3,4
VAV-C-72	14	2335	985	2100	21	0	60	95	480	3	23	35 A	34.6 A	TITUS DESV	1,2,3,4
VAV-C-101	14	1540	370	1400	21	0.1	60	94	480	3	15	25 A	22.6 A	TITUS DESV	1,2,3,4
VAV-C-154	12	890	710	890	22	0.06	60	92	480	3	9	15 A	13.5 A	TITUS DESV	1,2,3,4
VAV-C-156	14	2310	850	1900	23	0.16	60	95	480	3	21	35 A	31.6 A	TITUS DESV	1,2,3,4
VAV-D1E	16	1915	1420	1915	17	0.09	60	93	480	3	20	35 A	30.1 A	TITUS DESV	1,2,3
VAV-D2E	16	2375	1295	2100	21	0.12	60	95	480	3	23	35 A	34.6 A	TITUS DESV	1,2,3
VAV-D-46	14	2040	370	1850	21	0	60	95	480	3	20	35 A	30.1 A	TITUS DESV	1,2,3,4
VAV-D-56	14	2365	730	2100	24	0	60	95	480	3	23	35 A	34.6 A	TITUS DESV	1,2,3,4
VAV-D-92	14	2040	730	1850	23	0.1	60	94	480	3	20	35 A	30.1 A	TITUS DESV	1,2,3,4
VAV-D-93	14	1760	370	1600	21	0.1	60	94	480	3	17	30 A	25.6 A	TITUS DESV	1,2,3,4
VAV-D-188	12	890	690	790	22	0.1	60	94	480	3	8.5	15 A	12.8 A	TITUS DESV	1,2,3,4
VAV-D-240	12	1250	695	1100	24	0	60	95	480	3	12	20 A	18 A	TITUS DESV	1,2,3,4

ENERGY RECOVERY VENTILATOR SCHEDULE

REMARKS:
1. UNIT SHALL HAVE FACTORY-MOUNTED DISCONNECT SWITCH.
2. UNIT HSALL HAVE MERV 8 FILTERS IN OA AND RA SECTIONS.

MARK	SUPPLY FAN DATA				EXHAUST FAN DATA				SUMMER OPERATION								WINTER OPERATION								ELECTRICAL DATA				DESIGN BASIS	APPLICABLE REMARKS
	CFM	ESP (IN WC)	BHP	HP	CFM	ESP (IN WC)	BHP	HP	OUTSIDE AIR EAT (°F)		EXHAUST AIR EAT (°F)		TEMPERED AIR LAT (°F)		EFFECTIVENESS	TOTAL REC MBH	OUTDOOR AIR EAT (°F)		EXHAUST AIR EAT (°F)		TEMPERED AIR LAT (°F)		EFFECTIVENESS	TOTAL REC MBH	VOLTS	PHASE	MCA	MOCP		
									DB	WB	DB	WB	DB	WB			DB	WB	DB	WB	DB	WB								
ERV-D-1	400	0.7	0.16	.75	400	0.7	0.22	.75	95	76	75	62	75	65	81.5	20.8	-10	-11	72	55	57	46	83.3	36	120	1	21	25	GREENHECK MINIVENT-750-VG	

LOUVER SCHEDULE

01 ADD

REMARKS:
1. OR ENGINEER PRE-APPROVED EQUIVALENT
2. LOUVER TO BE CUSTOM COLOR SELECTED BY ARCHITECT DURING THE SUBMITTAL PROCESS

MARK	SYSTEM SERVED	CFM	DIMENSIONS (IN)			FREE AREA VELOCITY (FPM)	PRESSURE DROP (IN WG)	DESIGN BASIS
			W	H	D			
L-D-1	ERV-D-1	400	40	16	4	180	0.01	GREENHECK ESD-435

AIR COOLED CONDENSING UNIT SCHEDULE

REMARKS:
1. OR ENGINEER APPROVED EQUIVALENT.
2. TO BE WALL MOUNTED WITH MANUFACTURER APPROVED MOUNTING BRACKETS.
3. DISCONNECT TO BE PROVIDED BY ELECTRICAL CONTRACTOR.

MARK	SYSTEM SERVED	CAPACITY (MBH)	COND AMBIENT AIR TEMP (°F)	MINIMUM OPERATING AMBIENT TEMPERATURE	NUMBER OF COMPRESSORS	SEER	EER	ELECTRICAL DATA				REFRIGERANT TYPE	DESIGN BASIS
								VOLTS	PHASE	MCA	MOCP		
ACCU-C-1	F-C-1	53.5	95	0	1	16.2	9	208	1	37.5	R-32	DAIKIN DC6VSS6010	
ACCU-C-2	F-C-2	53.5	95	0	1	16.2	9	208	1	37.5	R-32	DAIKIN DC6VSS6010	

FURNACE SCHEDULE - GAS

REMARKS:
1. OR ENGINEER APPROVED EQUIVALENT.
2. LITTLE GIANT CONDENSATE PUMP TO BE PROVIDED AND ROUTED BY MECHANICAL CONTRACTOR.
3. MOTORIZED OA DAMPER TO BE PROVIDED AND INSTALLED BY CONTROLS CONTRACTOR.

MARK	OA CFM	CFM	ESP (IN WC)	AIRFLOW DIRECTION	COOLING COIL DATA						HEATING DATA					ELECTRICAL DATA		DESIGN BASIS
					TOTAL MBH	EAT (°F)		LAT (°F)		MODEL	EAT (°F)	LAT (°F)	INPUT MBH	MINIMUM GAS PRESSURE	AFUE	VOLTS	PHASE	
						DB	WB	DB	WB									
F-C-1	200	2000	1	UPFLOW	60	95	75	58	58	CAPEA6030D3	55	100	100	14	96	120	1	DAIKIN DR96TC1005DN
F-C-2	200	2000	1	UPFLOW	60	95	75	58	58	CAPEA6030D3	55	100	100	14	96	120	1	DAIKIN DR96TC1005DN

AIR HANDLING UNIT SCHEDULE

REMARKS:
1. OR ENGINEER PRE-APPROVED EQUIVALENT
2. UNIT SHALL HAVE SINGLE POINT POWER CONNECTION, FACTORY-POWERED CONVENIENCE OUTLET, AND FACTORY MOUNTED DISCONNECT SWITCH.
3. UNIT SHALL HAVE HOT GAS REHEAT COIL
4. COOLING COIL SHALL HAVE STAINLESS STEEL DRAIN PAN.
5. UNIT SHALL HAVE 2" MERV 8 PRE-FILTER WITH DIRTY FILTER SWITCH INSTALLED AT EACH FILTER SECTION.
6. LEAD COMPRESSOR ON EACH AH SHALL BE VARIABLE SPEED.
7. UNIT SHALL HAVE SMOKE DETECTORS PROVIDED AND INSTALLED IN THE SUPPLY AND RETURN DUCTS BY THE E.C. AND INTEGRATED INTO THE DDC AND FIRE ALARM SYSTEM.
8. MAXIMUM UNIT DIMENSIONS SHALL BE 96.5" W X 429" L X 102" H.
9. AHU TO HAVE ACCESS DOORS ON BOTH SIDES OF THE AHU.

MARK	AREA SERVED	SUPPLY CFM	MINIMUM OA (%)	SUPPLY FAN DATA							RELIEF FAN DATA							DESIGN BASIS
				SUPPLY FAN CFM	RPM	STATIC PRESSURE		TYPE	SUPPLY FAN ELECTRICAL DATA				SUPPLY FAN ARRAY	RETURN FAN CFM	RPM	STATIC PRESSURE		TYPE	RETURN FAN ELECTRICAL DATA				RELIEF FAN ARRAY	
						TOTAL (T.S.P.)	EXTERNAL (E.S.P.)		BHP (TOTAL)	HP (EACH)	VOLTS	PHASE				TSP	ESP		BHP (TOTAL)	HP (EACH)	VOLTS	PHASE		
AHU-C	BUILDING C	15000	20	15000	1708	3.06	1.5	CENTRIFUGAL DIRECT DRIVE ECM	12.3	5.1	460	3	2X2 (4)	12500	2211	2.4	1	CENTRIFUGAL DIRECT DRIVE ECM	8.5	5.5	460	3	1X2 (2)	DAIKIN DPSA060
AHU-D	BUILDING D	15000	20	15000	1708	3.06	1.5	CENTRIFUGAL DIRECT DRIVE ECM	12.3	5.1	460	3	2X2 (4)	12500	2211	2.4	1	CENTRIFUGAL DIRECT DRIVE ECM	8.5	5.5	460	3	1X2 (2)	DAIKIN DPSA060

AIR HANDLING UNIT SCHEDULE (CONTINUED)

MARK	AREA SERVED	COOLING COIL								REHEAT COIL				HEATING ELEMENT					FINAL FILTER				ELECTRICAL DATA				DESIGN BASIS
		EAT (°F)		LAT (°F)		APD (IN WC)	REFRIGERANT TYPE	MBH	SENSIBLE MBH	MBH	EWT (°F)	LWT (°F)	APD (IN WC)	TYPE	EAT DB (°F)	LAT DB (°F)	APD (IN WC)	INPUT MBH	OUTPUT MBH	TYPE	DEPTH (IN)	FACE AREA	APD (IN WC)	VOLTS	PHASE	MOCP	MCA	
		DB	WB	DB	WB																						
AHU-C	BUILDING C	79	65.6	51	50.9	0.6	R-32	645	459	309	51	70	0.22	NATURAL GAS	45	75	0.19	600	486	MERV 8	2	56.7	0.15	460	3	150 A	130.4 A	DAIKIN DPSA060
AHU-D	BUILDING D	79	65.6	51	50.9	0.6	R-32	645	459	309	51	70	0.22	NATURAL GAS	45	75	0.19	600	486	MERV 8	2	56.7	0.15	460	3	150 A	130.4 A	DAIKIN DPSA060

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WRC Decentralization Phase 4 & Fire Alarm Phase 3 (9279.40)

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MECHANICAL SCHEDULES

13-M600