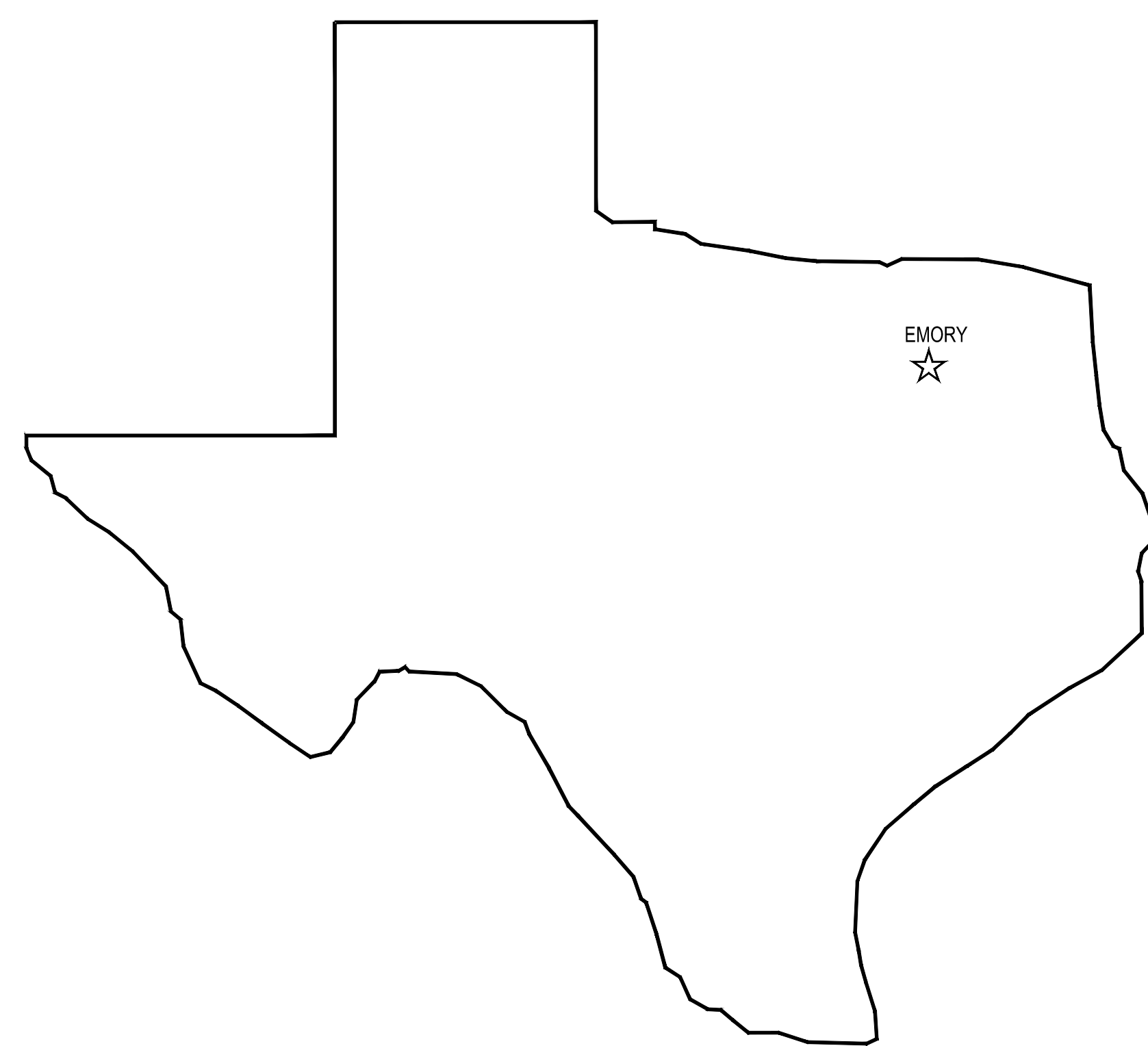
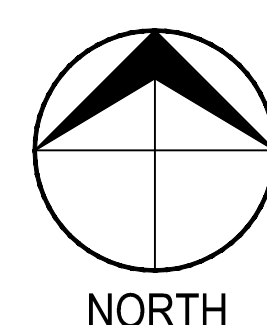


2022 HVAC RENOVATIONS RAINS JUNIOR HIGH SCHOOL

RAINS INDEPENDENT SCHOOL DISTRICT
EMORY, TEXAS



LOCATION MAP



NORTH

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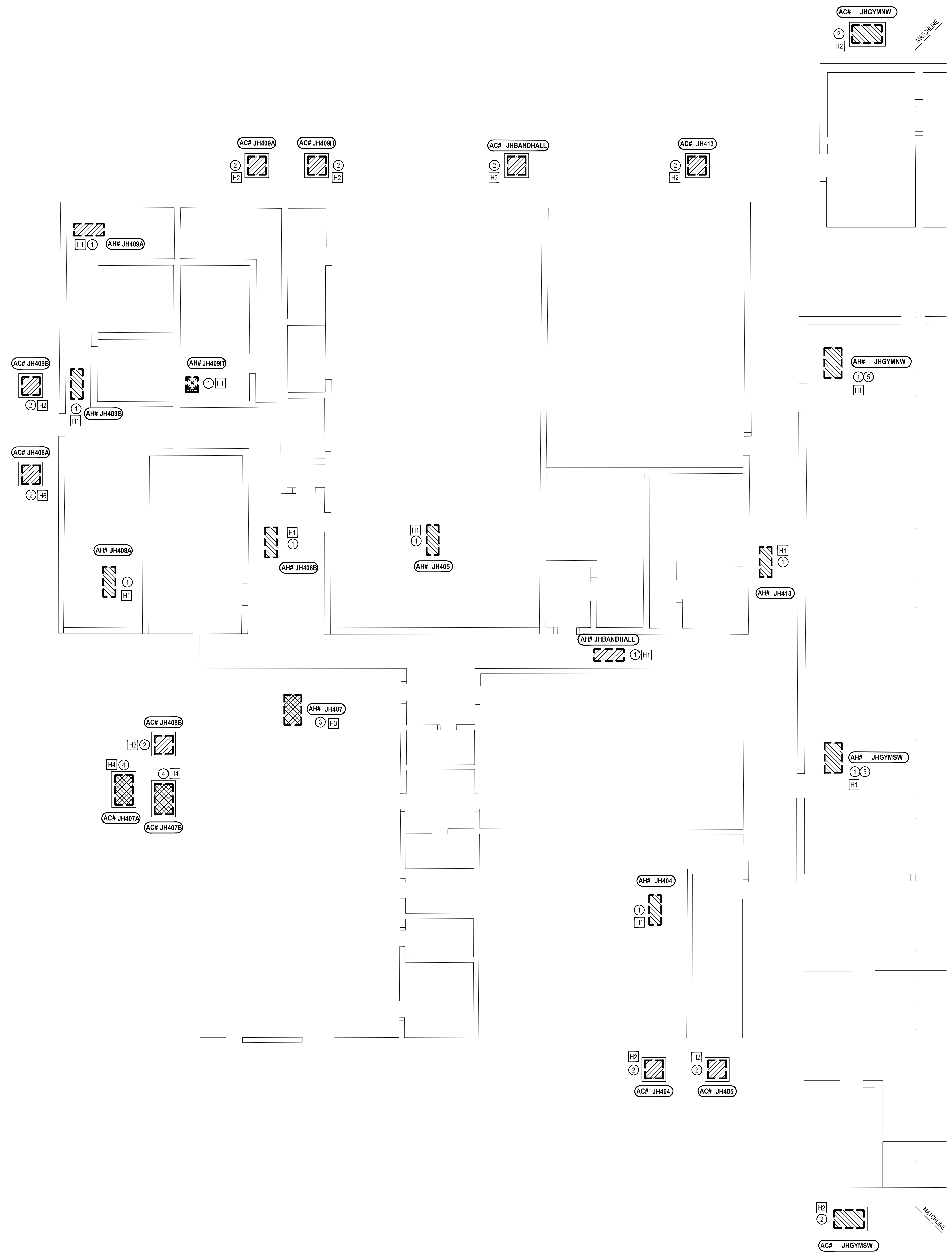
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MECHANICAL DEMOLITION PLAN NOTES

- 1 REMOVE AND DISCARD EXISTING AIR HANDLER, EXISTING DUCTWORK AND CONDENSATE PIPING TO REMAIN. NEW AIR HANDLER TO BE MOUNTED IN EXISTING LOCATION. REMOVE EXISTING THERMOSTAT AND CONTROL WIRING TIED TO UNIT AND REPLACE WITH NEW THERMOSTAT IN SAME LOCATION.
- 2 REMOVE AND DISCARD EXISTING CONDENSER AND ASSOCIATED REFRIGERANT PIPING.
- 3 EXISTING AIR HANDLER TO REMAIN IN PLACE AND OPERATIONAL. REMOVE EXISTING THERMOSTAT AND CONTROL WIRING TIED TO UNIT AND REPLACE WITH NEW THERMOSTAT IN SAME LOCATION.
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- 5 REMOVE EXISTING VISIBLE CHILLED WATER PIPING AND FITTINGS IN EXPOSED CEILING AREAS. PATCH PENETRATIONS AS REQUIRED TO MATCH EXISTING.

REFER TO SHEET MH7.2 FOR GENERAL DEMOLITION NOTES.

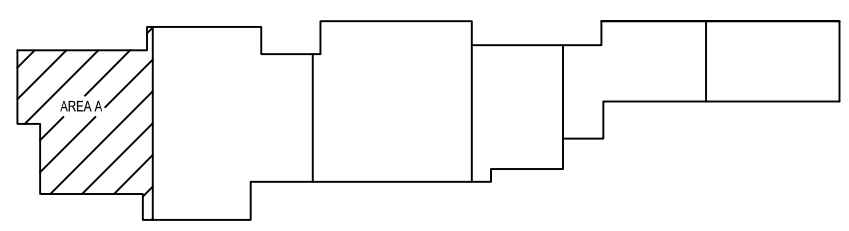
ELECTRICAL DEMOLITION GENERAL NOTES

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- H7 EXISTING CONDENSING UNIT TO BE REMOVED. REMOVE EXISTING CONDUIT AND WIRING BACK TO SOURCE. TAG BREAKER AS SPARE.

KEYPLAN



1 MECHANICAL/ELECTRICAL/PLUMBING DEMOLITION FLOOR PLAN - AREA A
1/8"=1'-0"



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MECHANICAL/ELECTRICAL/
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DEMOLITION
FLOOR PLAN
AREA A

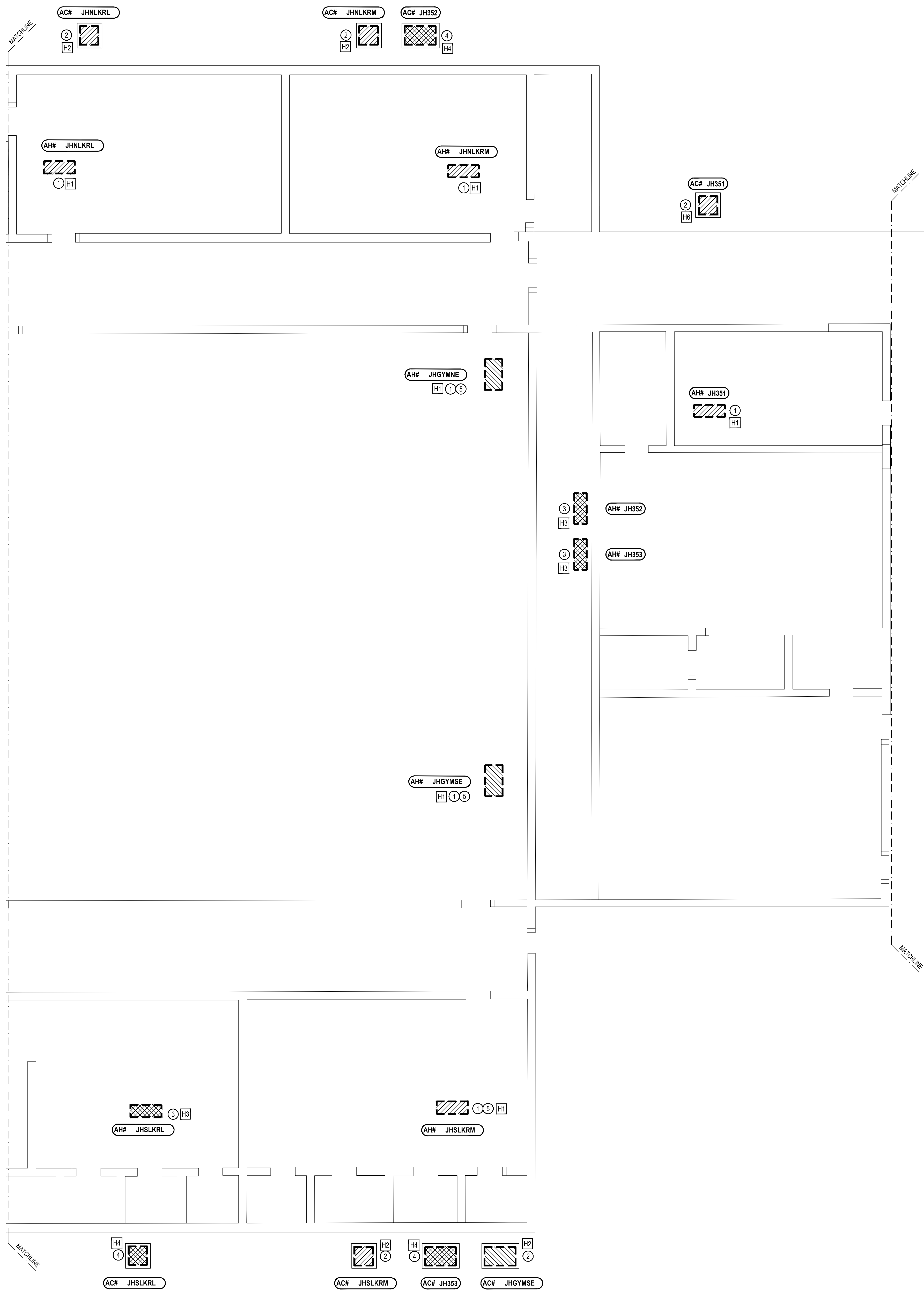
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MECHANICAL DEMOLITION PLAN NOTES

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- ② REMOVE AND DISCARD EXISTING CONDENSER AND ASSOCIATED REFRIGERANT PIPING.
- ③ EXISTING AIR HANDLER TO REMAIN IN PLACE AND OPERATIONAL. REMOVE EXISTING THERMOSTAT AND CONTROL WIRING TIED TO UNIT AND REPLACE WITH NEW THERMOSTAT IN SAME LOCATION.
- ④ EXISTING CONDENSER UNIT TO REMAIN IN PLACE AND OPERATIONAL.
- ⑤ REMOVE EXISTING VISIBLE CHILLED WATER PIPING AND FITTINGS IN EXPOSED CEILING AREAS. PATCH PENETRATIONS AS REQUIRED TO MATCH EXISTING.

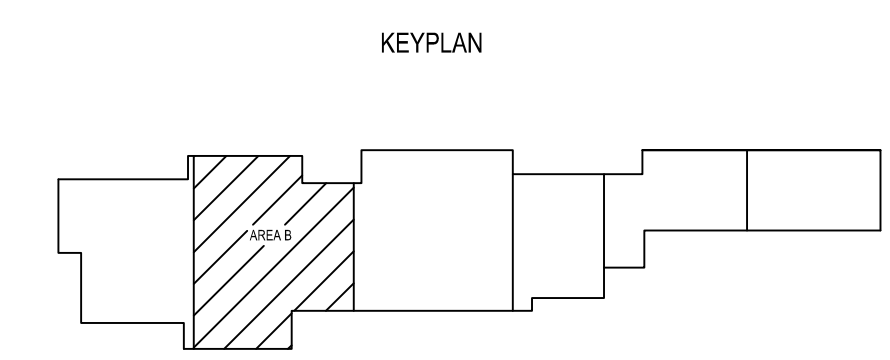
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ELECTRICAL DEMOLITION GENERAL NOTES

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HVAC DEMOLITION PLAN NOTES
(SOME NOTES MAY NOT BE USED)

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- H3 EXISTING AIR HANDLER TO REMAIN IN PLACE AND OPERATIONAL.
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- H5 EXISTING AIR HANDLER TO BE REMOVED AND REPLACED. REMOVE EXISTING CONDUIT AND WIRING BACK TO SOURCE. TAG BREAKER AS SPARE.
- H6 EXISTING AIR CONDENSER TO BE REMOVED AND REPLACED. REMOVE EXISTING CONDUIT AND WIRING BACK TO SOURCE. TAG BREAKER AS SPARE.
- H7 EXISTING CONDENSING UNIT TO BE REMOVED. REMOVE EXISTING CONDUIT AND WIRING BACK TO SOURCE. TAG BREAKER AS SPARE.



① MECHANICAL/ELECTRICAL/PLUMBING DEMOLITION FLOOR PLAN - AREA B
1/8"=1'-0"



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MECHANICAL/ELECTRICAL/
PLUMBING
DEMOLITION
FLOOR PLAN
AREA B

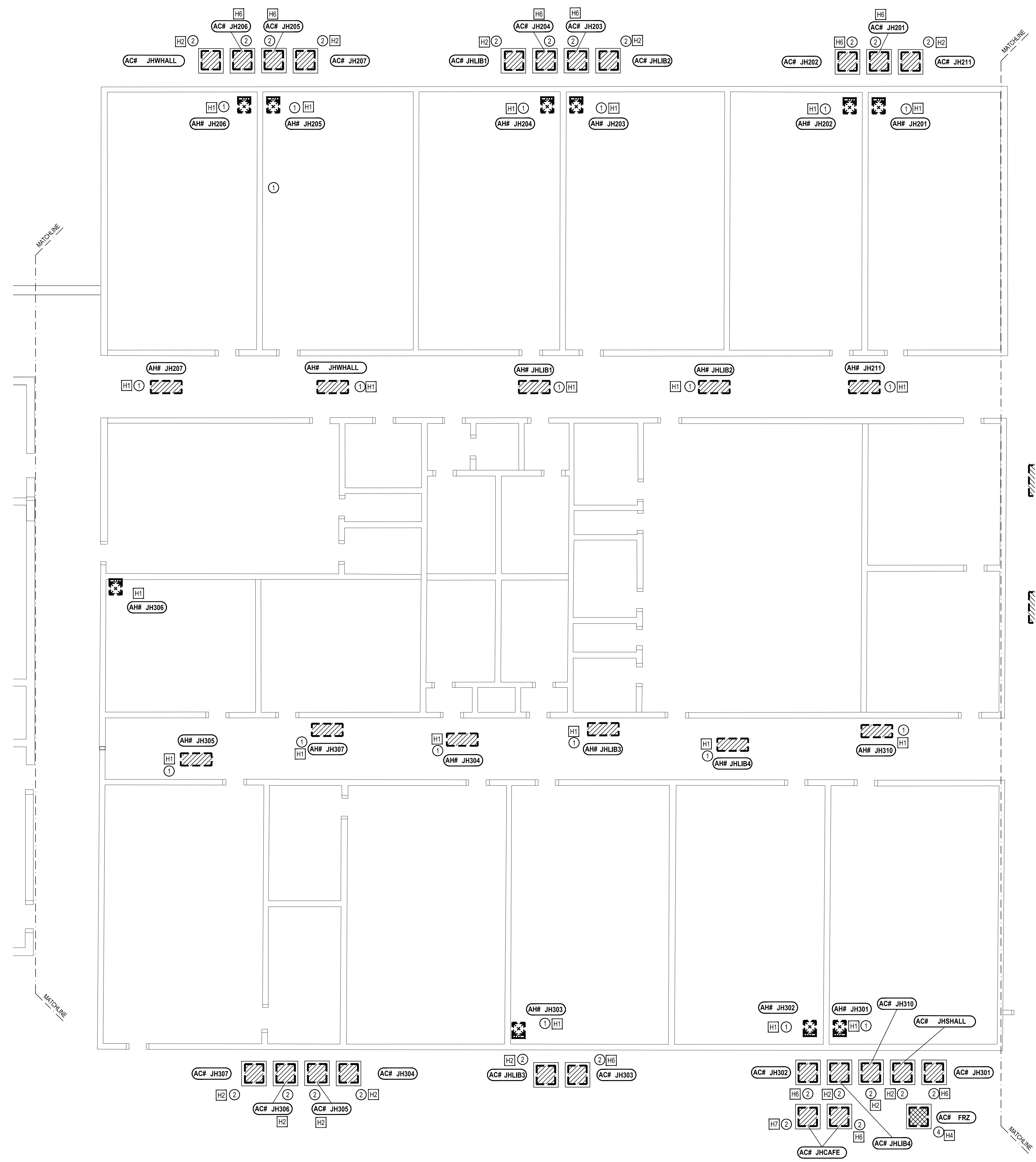
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MEPD1.2



MECHANICAL DEMOLITION PLAN NOTES

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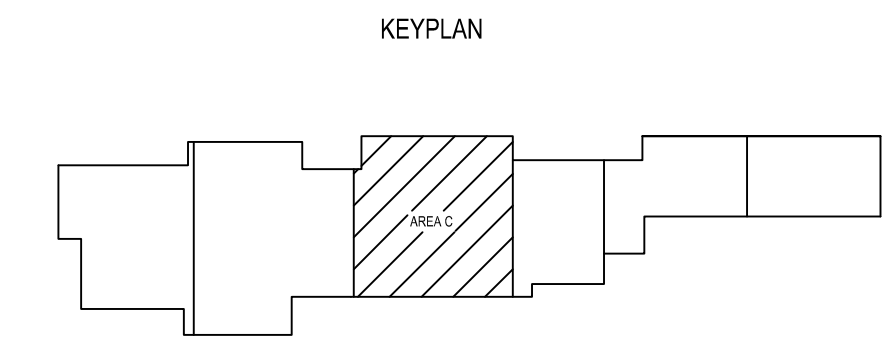
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ELECTRICAL DEMOLITION GENERAL NOTES

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- H6 EXISTING AIR CONDENSER TO BE REMOVED AND REPLACED. REMOVE EXISTING CONDUIT AND WIRING BACK TO SOURCE. TAG BREAKER AS SPARE.
- H7 EXISTING CONDENSING UNIT TO BE REMOVED. REMOVE EXISTING CONDUIT AND WIRING BACK TO SOURCE. TAG BREAKER AS SPARE.



1 MECHANICAL/ELECTRICAL/PLUMBING DEMOLITION FLOOR PLAN - AREA C
1/8"=1'-0"



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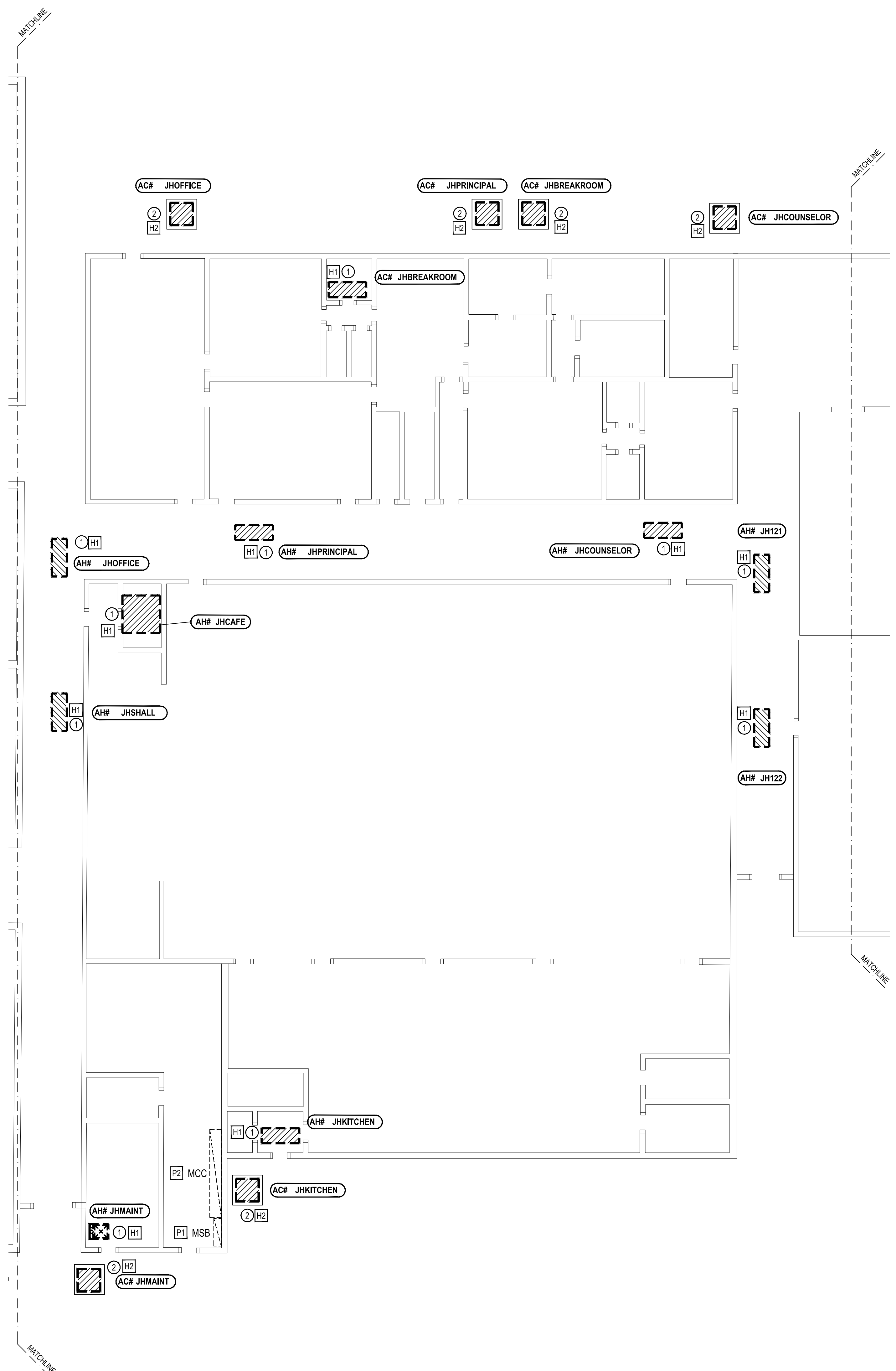
MECHANICAL/ELECTRICAL/
PLUMBING
DEMOLITION
FLOOR PLAN
AREA C
SHEET NUMBER



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MEPD1.3



1 MECHANICAL/ELECTRICAL/PLUMBING DEMOLITION FLOOR PLAN - AREA D
1/8"=1'-0"

MECHANICAL DEMOLITION PLAN NOTES

- 1 REMOVE AND DISCARD EXISTING AIR HANDLER. EXISTING DUCTWORK AND CONDENSATE PIPING TO REMAIN. NEW AIR HANDLER TO BE MOUNTED IN EXISTING LOCATION. REMOVE EXISTING THERMOSTAT AND CONTROL WIRING TIED TO UNIT AND REPLACE WITH NEW THERMOSTAT IN SAME LOCATION.
- 2 REMOVE AND DISCARD EXISTING CONDENSER AND ASSOCIATED REFRIGERANT PIPING.
- 3 EXISTING AIR HANDLER TO REMAIN IN PLACE AND OPERATIONAL. REMOVE EXISTING THERMOSTAT AND CONTROL WIRING TIED TO UNIT AND REPLACE WITH NEW THERMOSTAT IN SAME LOCATION.
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- 5 REMOVE EXISTING VISIBLE CHILLED WATER PIPING AND FITTINGS IN EXPOSED CEILING AREAS. PATCH PENETRATIONS AS REQUIRED TO MATCH EXISTING.

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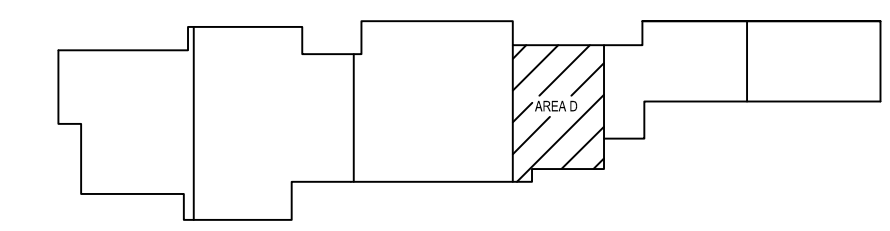
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PANEL DEMOLITION PLAN NOTES
(SOME NOTES MAY NOT BE USED)

- P1 EXISTING PANEL TO BE REMOVED AND REPLACED. EXISTING FEEDER AND BRANCH CIRCUITS TO BE REFEED FROM NEW PANEL WHERE IT IS LOCATED.
- P2 EXISTING MCC TO BE REMOVED. REMOVE EXISTING FEEDER BACK TO SOURCE. EXISTING BRANCH CIRCUITS TO REMAIN IN PLACE AND OPERATIONAL. ELECTRICAL CONTRACTOR SHALL RECORD A LIST OF EXISTING LOADS REMAINING IN MCC PRIOR TO SENDING SUBMITTALS.

KEYPLAN



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MECHANICAL/ELECTRICAL/
PLUMBING
DEMOLITION
FLOOR PLAN
AREA D

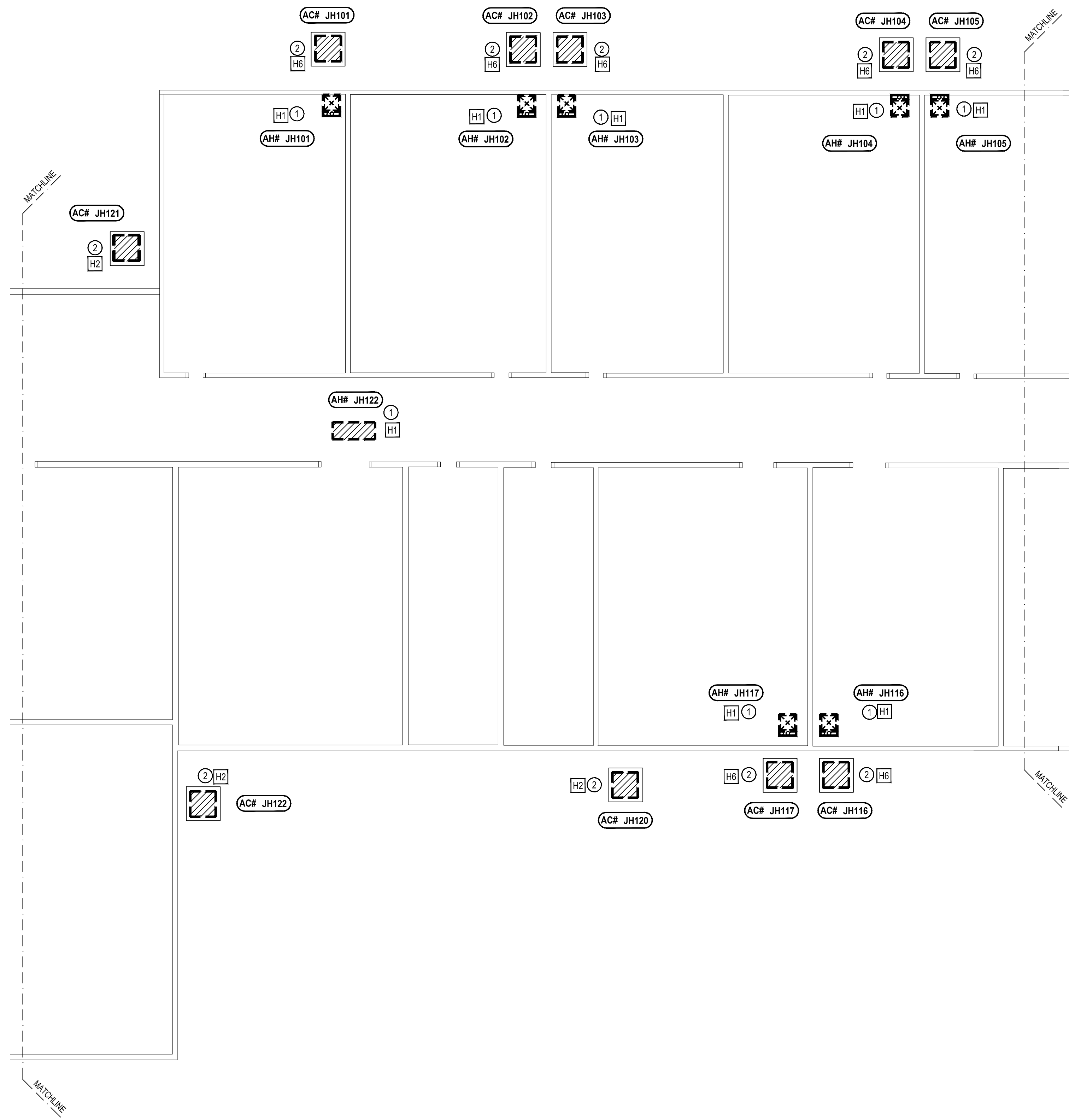
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1 MECHANICAL/ELECTRICAL/PLUMBING DEMOLITION FLOOR PLAN - AREA E
1/8"=1'-0"

**MECHANICAL DEMOLITION
PLAN NOTES**

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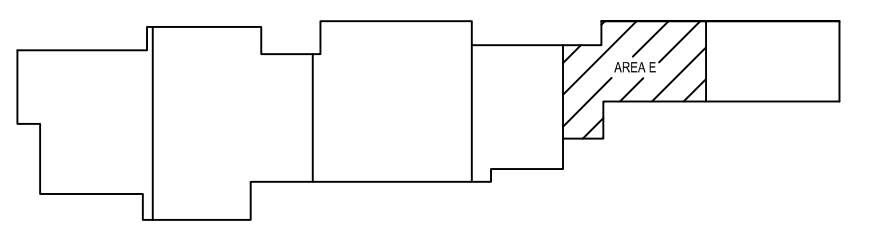
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SUBMISSION OF BID WILL BE CONSIDERED ACKNOWLEDGMENT THAT THE CONTRACTOR HAS VISITED THE SITE AND HAS VERIFIED ALL EXISTING JOB CONDITIONS AND INCLUDED ANY NECESSARY MODIFICATION TO EXISTING AND NEW WORK REQUIRED FOR INSTALLATION OF A COMPLETE AND WORKING SYSTEM.

EMA JOB #: 1-001-0959-001

DRAWN BY: LRU

CHECKED: QS

MECHANICAL/ELECTRICAL/
PLUMBING
DEMOLITION
FLOOR PLAN
AREA E

SHEET NUMBER

SHEET NUMBER

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**MECHANICAL DEMOLITION
PLAN NOTES**

- ① REMOVE AND DISCARD EXISTING AIR HANDLER. EXISTING DUCTWORK AND CONDENSATE PIPING TO REMAIN. NEW AIR HANDLER TO BE MOUNTED IN EXISTING LOCATION. REMOVE EXISTING THERMOSTAT AND CONTROL WIRING TIED TO UNIT AND REPLACE WITH NEW THERMOSTAT IN SAME LOCATION.
- ② REMOVE AND DISCARD EXISTING CONDENSER AND ASSOCIATED REFRIGERANT PIPING.
- ③ EXISTING AIR HANDLER TO REMAIN IN PLACE AND OPERATIONAL. REMOVE EXISTING THERMOSTAT AND CONTROL WIRING TIED TO UNIT AND REPLACE WITH NEW THERMOSTAT IN SAME LOCATION.
- ④ EXISTING CONDENSER UNIT TO REMAIN IN PLACE AND OPERATIONAL.
- ⑤ REMOVE EXISTING VISIBLE CHILLED WATER PIPING AND FITTINGS IN EXPOSED CEILING AREAS. PATCH PENETRATIONS AS REQUIRED TO MATCH EXISTING.

REFER TO SHEET MH7.2 FOR
GENERAL DEMOLITION NOTES.

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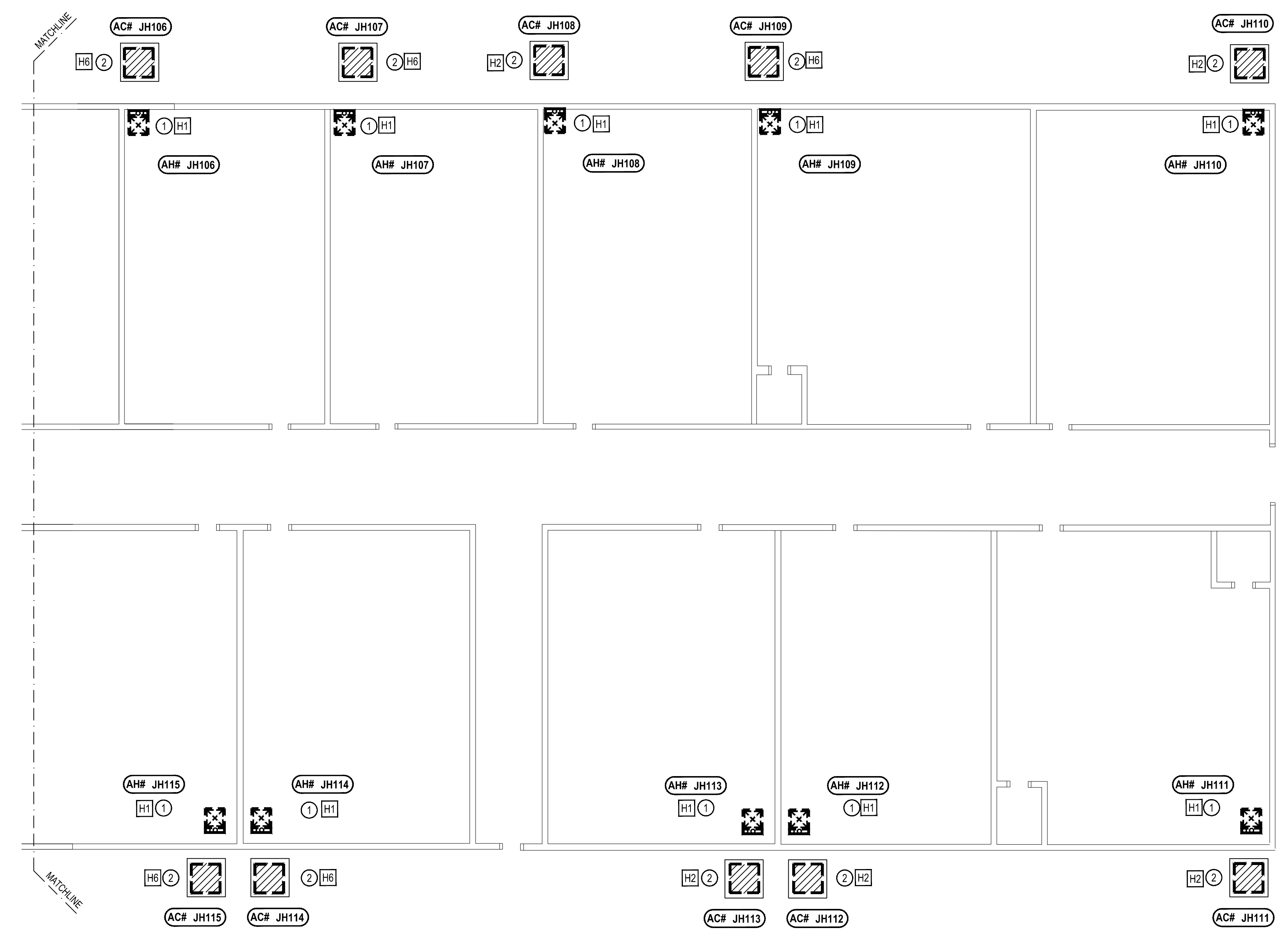
ELECTRICAL DEMOLITION GENERAL NOTES

- 1. UNLESS NOTED ON DRAWINGS, ALL LIGHTING, SWITCHES, OUTLETS AND OTHER ELECTRICAL DEVICES ARE TO REMAIN.
- 2. REFER TO SPECIFICATION SECTION 26 05 11, ELECTRICAL DEMOLITION REMODELING, FOR GENERAL DEMOLITION REQUIREMENTS.
- 3. ALL MATERIAL REMOVED AND NOT RETAINED BY THE OWNER SHALL BE DISPOSED OF OFF SITE IN A LAWFUL MANNER.
- 4. BEFORE DEMOLISHING PANELS, TRACE ALL BRANCH CIRCUITS TO CONFIRM THAT EXISTING LOADS HAVE BEEN RELOCATED TO NEW PANELS. IF A LOAD EXISTS THAT HAS NOT BEEN RELOCATED TO NEW PANELS, CONTACT THE ENGINEER FOR INSTRUCTIONS.

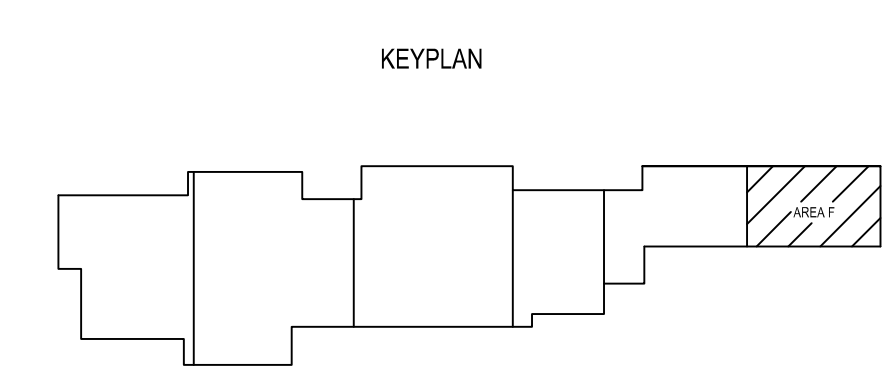
HVAC DEMOLITION PLAN NOTES

(SOME NOTES MAY NOT BE USED)

- H1] EXISTING AIR HANDLER TO BE REMOVED AND REPLACED. EXISTING CIRCUIT SHALL BE USED TO PROVIDE POWER TO NEW AIR HANDLER AT THE SAME LOCATION.
- H2] EXISTING AIR CONDENSER TO BE REMOVED AND REPLACED. EXISTING CIRCUIT SHALL BE USED TO PROVIDE POWER TO NEW AIR CONDENSER AT THE SAME LOCATION.
- H3] EXISTING AIR HANDLER TO REMAIN IN PLACE AND OPERATIONAL.
- H4] EXISTING AIR CONDENSER TO REMAIN IN PLACE AND OPERATIONAL.
- H5] EXISTING AIR HANDLER TO BE REMOVED AND REPLACED. REMOVE EXISTING CONDUIT AND WIRING BACK TO SOURCE. TAG BREAKER AS SPARE.
- H6] EXISTING AIR CONDENSER TO BE REMOVED AND REPLACED. REMOVE EXISTING CONDUIT AND WIRING BACK TO SOURCE. TAG BREAKER AS SPARE.
- H7] EXISTING CONDENSING UNIT TO BE REMOVED. REMOVE EXISTING CONDUIT AND WIRING BACK TO SOURCE. TAG BREAKER AS SPARE.



① MECHANICAL/ELECTRICAL/PLUMBING DEMOLITION FLOOR PLAN - AREA F
1/8"=1'-0"



2022 HVAC RENOVATION
RAINS JUNIOR HIGH SCHOOL
 RAINS INDEPENDENT SCHOOL DISTRICT
 EMORY, TX

EMA JOB #: 1-001-0959-001

DRAWN BY: LRU

CHECKED: QS

MECHANICAL/ELECTRICAL/
PLUMBING
DEMOLITION
FLOOR PLAN
AREA F

SHEET NUMBER

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MECHANICAL/ELECTRICAL/
PLUMBING
FLOOR PLAN
AREA A

SHEET NUMBER

MEP1.1

ELECTRICAL GENERAL NOTES
(SOME NOTES MAY NOT BE USED)

- SEE SHEET EP7.1 FOR GENERAL NOTES AND PLAN NOTES APPLICABLE TO THE ENTIRE DRAWING SET.

ELECTRICAL PLAN NOTES
(SOME NOTES MAY NOT BE USED)

- NEW AIR HANDLER SHALL REPLACE EXISTING AIR HANDLER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR HANDLER. PROVIDE NEW 30A DISC. AND FUSES PER MANUFACTURER'S RECOMMENDATIONS. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 25A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 30A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 3P 30A BREAKER. USE #10 WIRE. PROVIDE NEW 30A DISC. W/ 30A FUSES.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 35A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 3P 60A BREAKER. USE #4 WIRE. PROVIDE NEW 60A DISC. W/ 60A FUSES.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 45A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 60A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 15A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 2P 40A BREAKER. USE #6 WIRE. PROVIDE NEW 60A DISC. W/ 35A FUSES.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 20A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW SUPPLY FAN AT THIS APPROXIMATE LOCATION. PROVIDE POWER FROM NEAREST ACCEPTABLE 120V PANEL. PROVIDE NEW 1P 20A BREAKER. UP TO 4 NEW SUPPLY FANS MAY BE TIED INTO THE SAME CIRCUIT.

ELECTRICAL PANELBOARD PLAN NOTES
(SOME NOTES MAY NOT BE USED)

- PROVIDE NEW PANEL MSB AT THIS APPROXIMATE LOCATION TO REPLACE DEMOLISHED MSB. PROVIDE POWER TO NEW PANEL FROM EXISTING FEEDER. ANY REMAINING LOADS FROM DEMOLISHED PANEL MSB SHALL BE RE-POWERED FROM NEW PANEL MSB AND MHPD. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- PROVIDE NEW PANEL MCH AT THIS APPROXIMATE LOCATION TO REPLACE DEMOLISHED MCC. PROVIDE NEW 4-4/0, 1-4/4 GRN. 2 1/2" COPPER FEEDER FROM PANEL MSB. ANY REMAINING LOADS FROM DEMOLISHED PANEL MCC SHALL BE RE-POWERED FROM NEW PANEL MCH. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- PROVIDE NEW PANEL MHPD AT THIS APPROXIMATE LOCATION. PROVIDE POWER TO NEW MHPD FROM PANEL MSB. PROVIDE NEW 2-2" WITH 4-#3/0, 1-#4 GRN IN EACH COPPER FEEDER. NEW PANEL MHPD SHALL RE-POWER REMAINING LOADS FROM DEMOLISHED PANEL MSB. SEE PANEL SCHEDULES FOR MORE INFORMATION. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- EXISTING 277/480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #1 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS. AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 120/208V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #4 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS. AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 120/208V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #3 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS. AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 277/480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #6 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS. AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 120/208V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #8 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS. AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 277/480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #8 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS. AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 277/480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #4 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS. AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING SERVICE ENTRANCE PANEL MSB2 AT THIS APPROXIMATE LOCATION. ELECTRICAL CONTRACTOR SHALL PROVIDE A NEW GROUNDING BONDING JUMPER FROM MSB TO MSB2 SIZE AT 400CM. BONDING JUMPER SHALL CONNECT THE GROUND BUS AND THE ENCLOSURE OF EACH SWITCHGEAR TOGETHER.

MECHANICAL PLAN NOTES

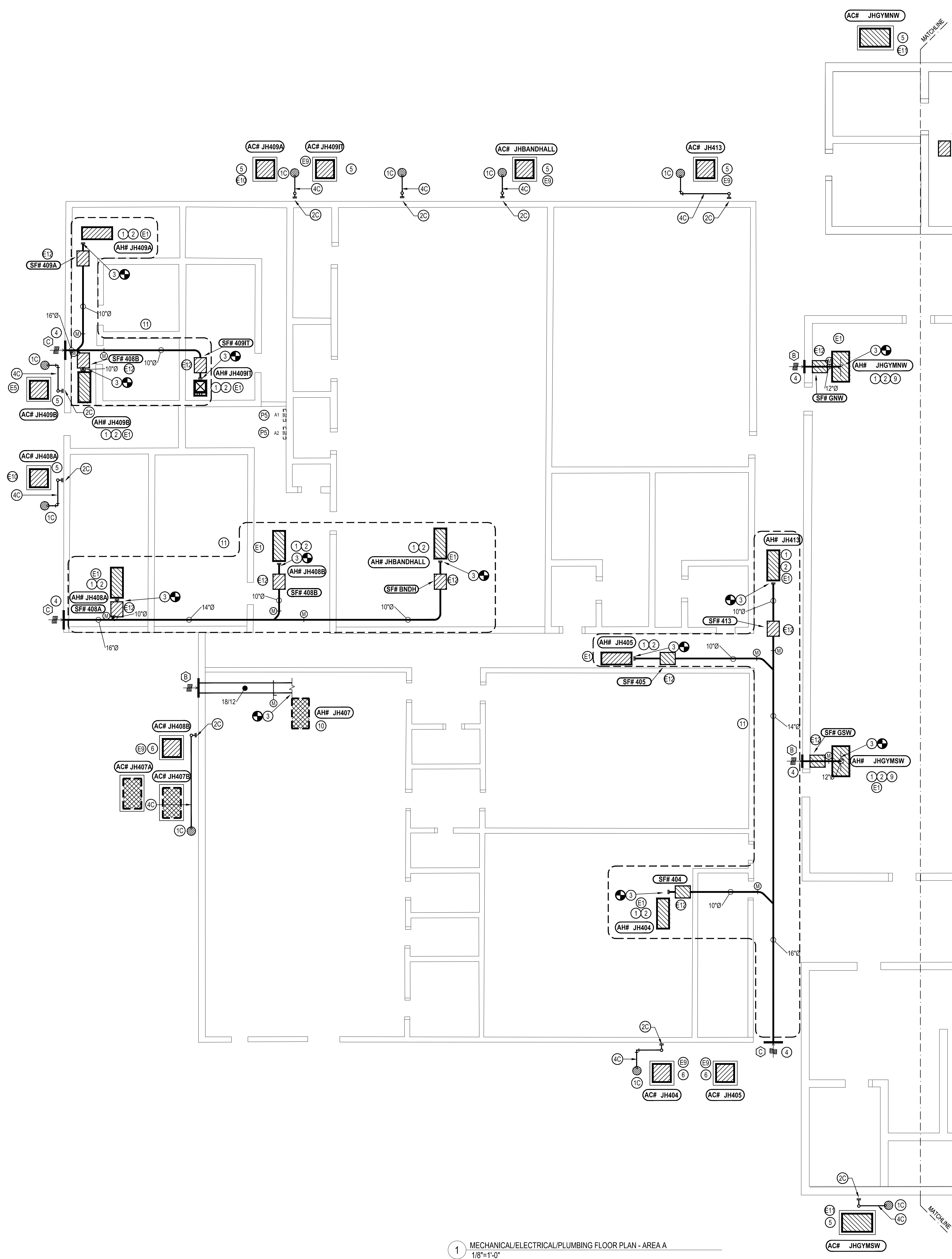
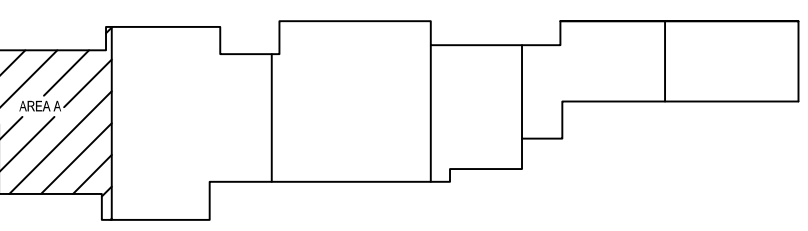
- INSTALL NEW AIR HANDLER UNIT IN EXISTING LOCATION. FIELD VERIFY ALL REQUIREMENTS FOR INSTALLATION OF NEW AIR HANDLER. EXISTING AIR HANDLER GLOSET PLATFORM OUTSIDE AIR, RETURN AIR, ETC. TO REMAIN IN PLACE AND OPERATIONAL. INSTALL NEW THERMOSTAT IN EXISTING LOCATION AND PATCH WALL AS REQUIRED TO MATCH EXISTING.
- PROVIDE NEW P-TRAP AT NEW UNIT AND CONNECT TO EXISTING CONDENSATE PIPING. CONNECT UNIT TO EXISTING DUCTWORK. COORDINATE ORIENTATION OF UNIT WITH EXISTING DUCTWORK. MODIFY EXISTING DUCTWORK AS REQUIRED AND PROVIDE TRANSITIONS AS NECESSARY TO ADAPT SIZE OF EXISTING DUCT FOR TIE-IN.
- TIE IN NEW OUTSIDE AIR DUCT INTO EXISTING RETURN DUCT. ADD NEW BALANCING DAMPER TO RETURN. CONTRACTOR TO VERIFY EXISTING RETURN DUCT ROUTING ABOVE CEILING.
- INSTALL NEW OUTSIDE AIR LOUVER IN EXTERIOR WALL.
- INSTALL NEW CONDENSER UNIT ON EXISTING SLAB AND EXTEND/MODIFY EXISTING HOUSEKEEPING PAD AS REQUIRED. CONDENSERS TO RECEIVE NEW REFRIGERANT PIPING. NEW PIPING SHOULD TO BE INCLUDED AND EXTENDED ABOVE THE EXISTING CEILING. PAINT TO MATCH EXISTING BRICK.
- INSTALL NEW CONDENSER UNIT ON NEW 4" HOUSEKEEPING WITH WELDED WIRE MESH FOR REINFORCING. REINFORCING JOINT MATERIAL TO BE USED WHERE THE NEW PAD ABUTS THE EXISTING BUILDING.
- PROVIDE NEW GAS VALVE AND PRESSURE REGULATOR. RECONNECT TO EXISTING CONDENSATE LINES AND EXISTING GAS PIPING. REFER TO PLUMBING DETAILS FOR CONDENSATE TRAP AND GAS CONNECTION. INSTALL NEW CONCENTRIC FLUE ON ROOF.
- INSTALL NEW OUTSIDE AIR LOUVER IN EXTERIOR WALL AND CONNECT INTO EXISTING PLENUM BOX WITH 10" DUCT AND MOTORIZED DAMPER.
- REUSE EXISTING WALL SUPPORTS FOR NEW EQUIPMENT.
- CONNECT EXISTING AIR HANDLER TO NEW EMCS.
- OVER LOCATIONS WHERE NEW OUTSIDE AIR DUCTWORK IS INSTALLED (OUTLINED BY DASHED LINES FOR CLARITY), CONTRACTOR SHALL REMOVE EXISTING CEILING GRID AND TILE FOR INSTALLATION OF NEW DUCTWORK AND REPLACE AFTER COMPLETION OF INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR BROKEN TILE AND GRID.

CONDENSATE PIPING PLAN NOTES

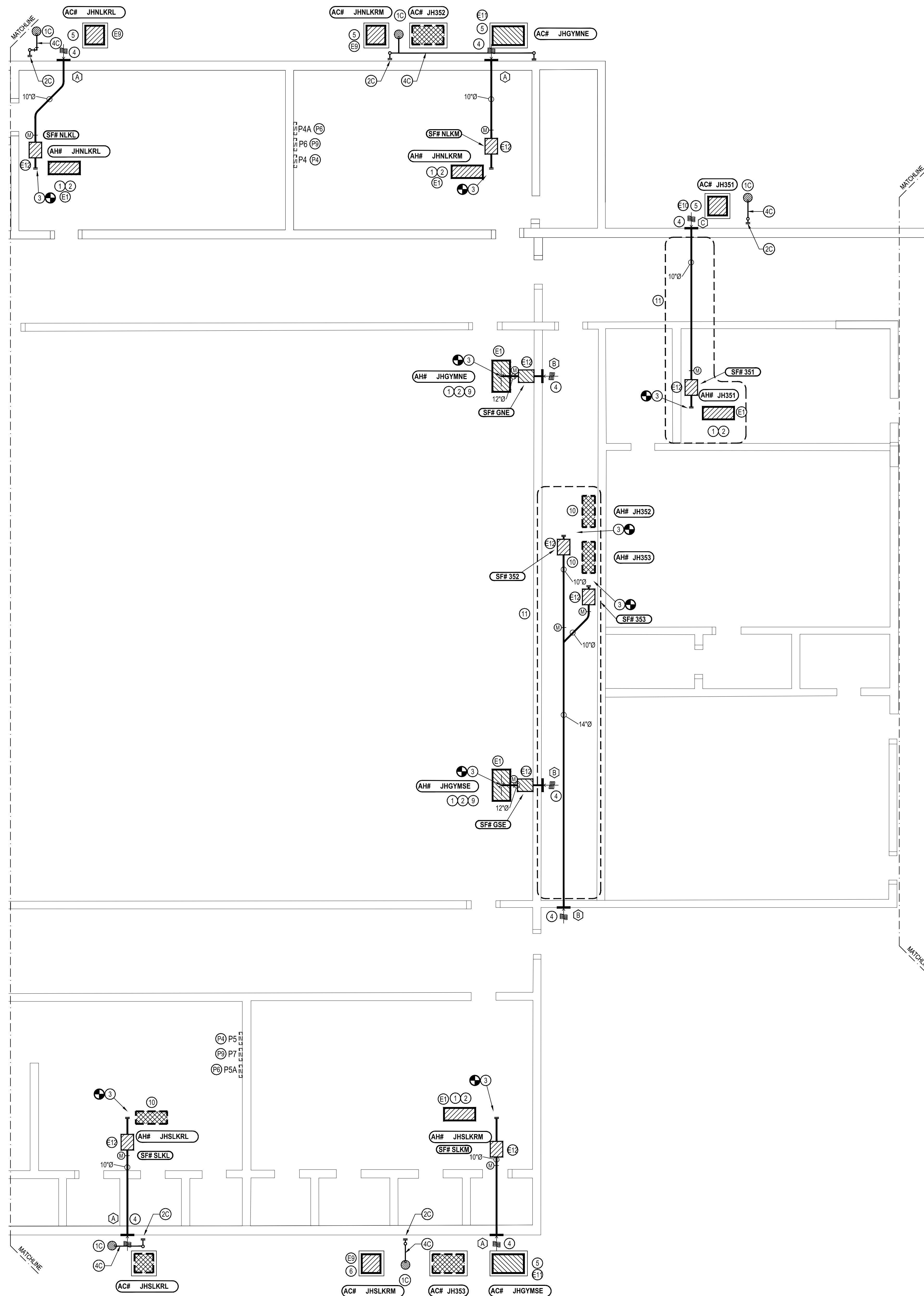
- 1" CONDENSATE DRAIN DOWN TO CONDENSATE PIT.
- 1" CONDENSATE DRAIN TIE-IN TO EXISTING CONDENSATE DRAIN.
- 1" CONDENSATE DRAIN ABOVE GRADE.
- 1" CONDENSATE DRAIN BELOW GRADE.

REFER TO SHEET MH7.2 FOR GENERAL NOTES.

KEYPLAN



1 MECHANICAL/ELECTRICAL/PLUMBING FLOOR PLAN - AREA A
1/8"=1'-0"



1 MECHANICAL/ELECTRICAL/PLUMBING FLOOR PLAN - AREA B
1/8"=1'-0"

ELECTRICAL GENERAL NOTES
(SOME NOTES MAY NOT BE USED)

- SEE SHEET EP7.1 FOR GENERAL NOTES AND PLAN NOTES APPLICABLE TO THE ENTIRE DRAWING SET.
- ELECTRICAL PLAN NOTES**
(SOME NOTES MAY NOT BE USED)
- NEW AIR HANDLER SHALL REPLACE EXISTING AIR HANDLER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR HANDLER. PROVIDE NEW 30A DISC. AND FUSES PER MANUFACTURER'S RECOMMENDATIONS. EXTEND ELECTRICAL AS REQUIRED.
 - NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 25A FUSES. EXTEND ELECTRICAL AS REQUIRED.
 - NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 30A FUSES. EXTEND ELECTRICAL AS REQUIRED.
 - NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 3P 30A BREAKER. USE #10 WIRE. PROVIDE NEW 30A DISC. W/ 30A FUSES.
 - NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 35A FUSES. EXTEND ELECTRICAL AS REQUIRED.
 - NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 3P 60A BREAKER. USE #4 WIRE. PROVIDE NEW 60A DISC. W/ 60A FUSES.
 - NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 45A FUSES. EXTEND ELECTRICAL AS REQUIRED.
 - NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 3P 60A BREAKER. USE #4 WIRE. PROVIDE NEW 60A DISC. W/ 60A FUSES.
 - NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 15A FUSES. EXTEND ELECTRICAL AS REQUIRED.
 - NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 2P 40A BREAKER. USE #6 WIRE. PROVIDE NEW 60A DISC. W/ 35A FUSES.
 - NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 20A FUSES. EXTEND ELECTRICAL AS REQUIRED.
 - NEW SUPPLY FAN AT THIS APPROXIMATE LOCATION. PROVIDE POWER FROM NEAREST ACCEPTABLE 120V PANEL. PROVIDE NEW 1P 20A BREAKER. UP TO 4 NEW SUPPLY FANS MAY BE TIED INTO THE SAME CIRCUIT.

ELECTRICAL PANELBOARD PLAN NOTES
(SOME NOTES MAY NOT BE USED)

- PROVIDE NEW PANEL MSB AT THIS APPROXIMATE LOCATION TO REPLACE DEMOLISHED MSB. PROVIDE POWER TO NEW PANEL FROM EXISTING FEEDER. ANY REMAINING LOADS FROM DEMOLISHED PANEL MSB SHALL BE RE-POWERED FROM NEW PANEL MSB AND MHPD. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- PROVIDE NEW PANEL MCH AT THIS APPROXIMATE LOCATION TO REPLACE DEMOLISHED MCC. PROVIDE NEW 4-4#10, 1-4# GRN, 2 1/2" C. COPPER FEEDER FROM PANEL MSB. ANY REMAINING LOADS FROM DEMOLISHED PANEL MCC SHALL BE RE-POWERED FROM NEW PANEL MCH. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- PROVIDE NEW PANEL MHPD AT THIS APPROXIMATE LOCATION. PROVIDE POWER TO NEW MHPD FROM PANEL MSB. PROVIDE NEW 2-2" C. WITH 4-#10, 1-#8 GRN IN EACH COPPER FEEDER. NEW PANEL MHPD SHALL RE-POWER REMAINING LOADS FROM DEMOLISHED PANEL MSB. SEE PANEL SCHEDULES FOR MORE INFORMATION. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- EXISTING 277/480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #1 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 120/208V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #4 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
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- EXISTING SERVICE ENTRANCE PANEL MSB2 AT THIS APPROXIMATE LOCATION. ELECTRICAL CONTRACTOR SHALL PROVIDE A NEW GROUNDING BONDING JUMPER FROM MSB TO MSB2 SIZE AT 400MCM. BONDING JUMPER SHALL CONNECT THE GROUND BUS AND THE ENCLOSURE OF EACH SWITCHGEAR TOGETHER.

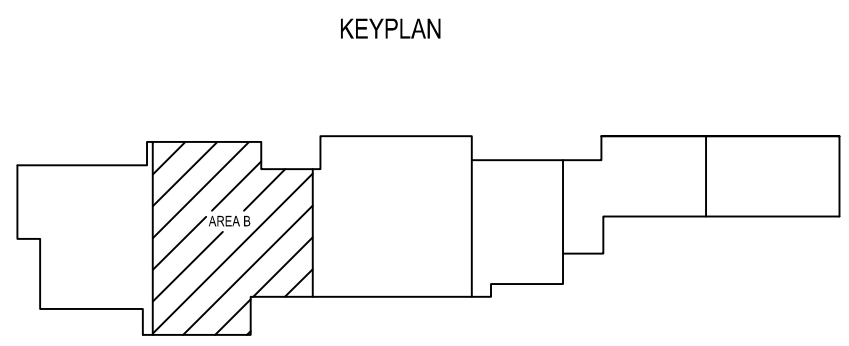
MECHANICAL PLAN NOTES

- INSTALL NEW AIR HANDLER UNIT IN EXISTING LOCATION. FIELD VERIFY ALL REQUIREMENTS FOR INSTALLATION OF NEW AIR HANDLER. EXISTING AIR HANDLER GLOBSET PLATFORM OUTSIDE AIR, RETURN AIR, ETC. TO REMAIN IN PLACE AND OPERATIONAL. INSTALL NEW THERMOSTAT IN EXISTING LOCATION AND PATCH WALL AS REQUIRED TO MATCH EXISTING.
- PROVIDE NEW P-TRAP AT NEW UNIT AND CONNECT TO EXISTING CONDENSATE PIPING. CONNECT UNIT TO EXISTING DUCTWORK. COORDINATE ORIENTATION OF UNIT WITH EXISTING DUCTWORK. MODIFY EXISTING DUCTWORK AS REQUIRED AND PROVIDE TRANSITIONS AS NECESSARY TO ADAPT SIZE OF EXISTING DUCT FOR TIE-IN.
- TIE IN NEW OUTSIDE AIR DUCT INTO EXISTING RETURN DUCT. ADD NEW BALANCING DAMPER TO RETURN. CONTRACTOR TO VERIFY EXISTING RETURN DUCT ROUTING ABOVE CEILING.
- INSTALL NEW OUTSIDE AIR LOUVER IN EXTERIOR WALL.
- INSTALL NEW CONDENSER UNIT ON EXISTING SLAB AND EXTEND/MODIFY EXISTING HOUSEKEEPING PAD AS REQUIRED. CONDENSERS TO RECEIVE NEW REFRIGERANT PIPING. NEW PIPING SHOULD TO BE INCLUDED AND EXTENDED ABOVE THE EXISTING CEILING. PAINT TO MATCH EXISTING BRICK.
- INSTALL NEW CONDENSER UNIT ON NEW 4" HOUSEKEEPING WITH WELDED WIRE MESH FOR REINFORCING. EXPANSION JOINT MATERIAL TO BE USED WHERE THE NEW PAD ABUTS THE EXISTING BUILDING.
- PROVIDE NEW GAS VALVE AND PRESSURE REGULATOR. RECONNECT TO EXISTING CONDENSATE LINES AND EXISTING GAS PIPING. REFER TO PLUMBING DETAILS FOR CONDENSATE TRAP AND GAS CONNECTION. INSTALL NEW CONCENTRIC FLUE ON ROOF.
- INSTALL NEW OUTSIDE AIR LOUVER IN EXTERIOR WALL AND CONNECT INTO EXISTING PLENUM BOX WITH 10" DUCT AND MOTORIZED DAMPER.
- REUSE EXISTING WALL SUPPORTS FOR NEW EQUIPMENT.
- CONNECT EXISTING AIR HANDLER TO NEW EMCS.
- OVER LOCATIONS WHERE NEW OUTSIDE AIR DUCTWORK IS INSTALLED (OUTLINED BY DASHED LINES FOR CLARITY), CONTRACTOR SHALL REMOVE EXISTING CEILING GRID AND TILE FOR INSTALLATION OF NEW DUCTWORK AND REPLACE AFTER COMPLETION OF INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR BROKEN TILE AND GRID.

CONDENSATE PIPING PLAN NOTES

- 1" CONDENSATE DRAIN DOWN TO CONDENSATE PIT.
- 1" CONDENSATE DRAIN TIE-IN TO EXISTING CONDENSATE DRAIN.
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REFER TO SHEET MHT.2 FOR GENERAL NOTES.



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 EMORY, TX

EMA JOB #: 1-001-0959-001

DRAWN BY: LRU

CHECKED: QS

MECHANICAL/ELECTRICAL/
PLUMBING
FLOOR PLAN
AREA B

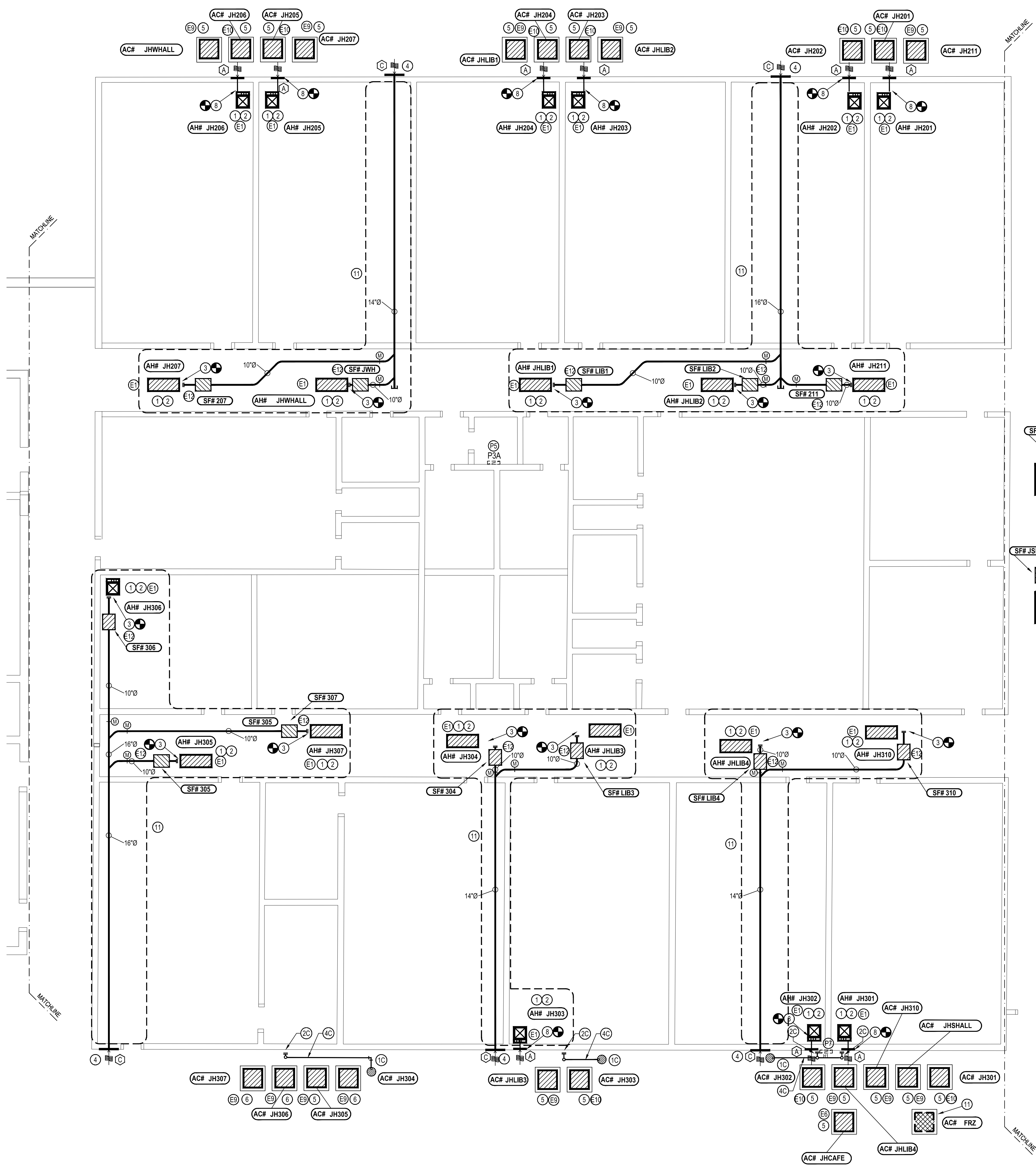
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SUBMISSION OF BID WILL BE CONSIDERED ACKNOWLEDGMENT THAT THE CONTRACTOR HAS VISITED THE SITE AND HAS VERIFIED ALL EXISTING JOB CONDITIONS AND INCLUDED ANY NECESSARY MODIFICATION TO EXISTING AND NEW WORK REQUIRED FOR INSTALLATION OF A COMPLETE AND WORKING SYSTEM.



1 MECHANICAL/ELECTRICAL/PLUMBING FLOOR PLAN - AREA C
1/8"=1'-0"

ELECTRICAL GENERAL NOTES

(SOME NOTES MAY NOT BE USED)

- SEE SHEET EP.1 FOR GENERAL NOTES AND PLAN NOTES APPLICABLE TO THE ENTIRE DRAWING SET.

ELECTRICAL PLAN NOTES

(SOME NOTES MAY NOT BE USED)

- NEW AIR HANDLER SHALL REPLACE EXISTING AIR HANDLER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR HANDLER. PROVIDE NEW 30A DISC. AND FUSES PER MANUFACTURER'S RECOMMENDATIONS. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 25A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 30A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 3P 30A BREAKER. USE #10 WIRE. PROVIDE NEW 30A DISC. W/ 30A FUSES.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 35A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 20A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 15A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 2P 40A BREAKER. USE #8 WIRE. PROVIDE NEW 60A DISC. W/ 35A FUSES.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 20A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW SUPPLY FAN AT THIS APPROXIMATE LOCATION. PROVIDE POWER FROM NEAREST ACCEPTABLE 120V PANEL. PROVIDE NEW 1P 20A BREAKER. UP TO 4 NEW SUPPLY FANS MAY BE TIED INTO THE SAME CIRCUIT.

ELECTRICAL PANELBOARD PLAN NOTES

(SOME NOTES MAY NOT BE USED)

- PROVIDE NEW PANEL MSB AT THIS APPROXIMATE LOCATION TO REPLACE DEMOLISHED MSB. PROVIDE POWER TO NEW PANEL FROM EXISTING FEEDER. ANY REMAINING LOADS FROM DEMOLISHED PANEL MSB SHALL BE RE-POWERED FROM NEW PANEL MSB AND MHPD. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- PROVIDE NEW PANEL MCH AT THIS APPROXIMATE LOCATION TO REPLACE DEMOLISHED MCC. PROVIDE NEW 4-4/0, 1-4# GRN. 2 1/2" COPPER FEEDER FROM PANEL MSB. ANY REMAINING LOADS FROM DEMOLISHED PANEL MCC SHALL BE RE-POWERED FROM NEW PANEL MCH. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- PROVIDE NEW PANEL MHPD AT THIS APPROXIMATE LOCATION. PROVIDE POWER TO NEW MHPD FROM PANEL MSB. PROVIDE NEW 2-2" WITH 4-#30, 1-#8 GRN IN EACH COPPER FEEDER. NEW PANEL MHPD SHALL RE-POWER REMAINING LOADS FROM DEMOLISHED PANEL MSB. SEE PANEL SCHEDULES FOR MORE INFORMATION. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- EXISTING 277/480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #1 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 120/208V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #4 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
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- EXISTING SERVICE ENTRANCE PANEL MSB2 AT THIS APPROXIMATE LOCATION. ELECTRICAL CONTRACTOR SHALL PROVIDE A NEW GROUNDING BONDING JUMPER FROM MSB TO MSB2 SIZE AT 400CM. BONDING JUMPER SHALL CONNECT THE GROUND BUS AND THE ENCLOSURE OF EACH SWITCHGEAR TOGETHER.

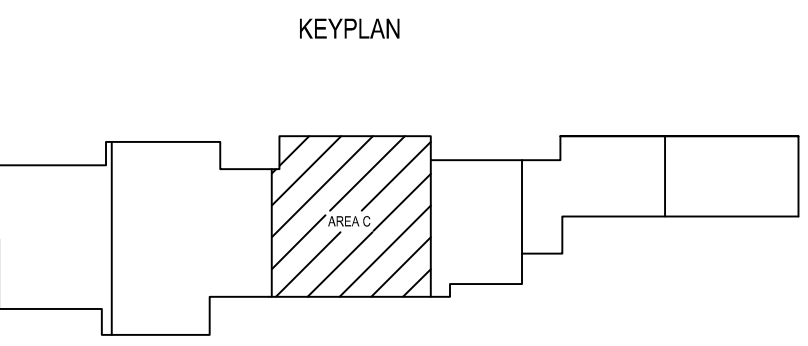
MECHANICAL PLAN NOTES

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- PROVIDE NEW P-TRAP AT NEW UNIT AND CONNECT TO EXISTING CONDENSATE PIPING. CONNECT UNIT TO EXISTING DUCTWORK. COORDINATE ORIENTATION OF UNIT WITH EXISTING DUCTWORK. MODIFY EXISTING DUCTWORK AS REQUIRED AND PROVIDE TRANSITIONS AS NECESSARY TO ADAPT SIZE OF EXISTING DUCT FOR TIE-IN.
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- INSTALL NEW CONDENSER UNIT ON NEW 4" HOUSEKEEPING WITH WELDED WIRE MESH FOR REINFORCING. EXPANSION JOINT MATERIAL TO BE USED WHERE THE NEW PAD ABUTS THE EXISTING BUILDING.
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DRAWN BY: LRU

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MECHANICAL/ELECTRICAL/
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FLOOR PLAN
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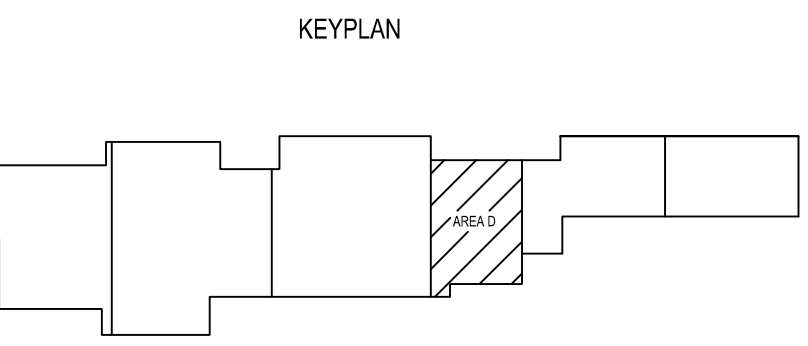
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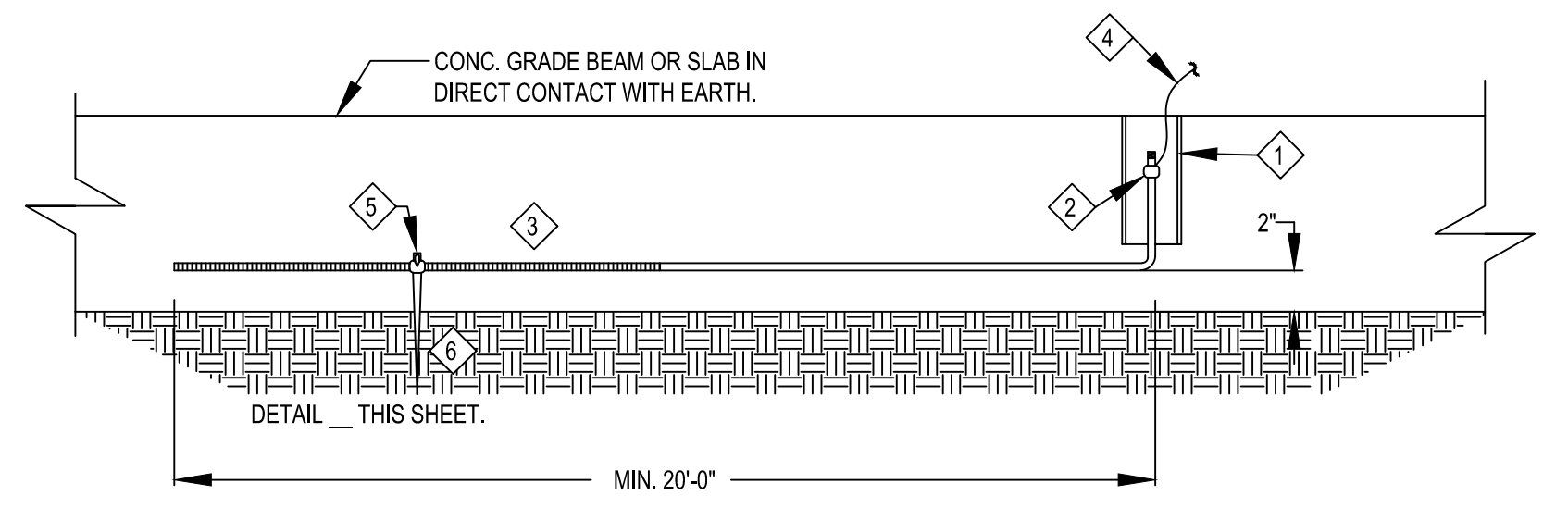
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- NEW AIR HANDLER SHALL REPLACE EXISTING AIR HANDLER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR HANDLER. PROVIDE NEW 30A DISC. AND FUSES PER MANUFACTURER'S RECOMMENDATIONS. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 25A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 30A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 3P 30A BREAKER. USE #10 WIRE. PROVIDE NEW 30A DISC. W/ 30A FUSES.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 35A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 3P 60A BREAKER. USE #4 WIRE. PROVIDE NEW 60A DISC. W/ 60A FUSES.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 45A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 60A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 15A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 2P 40A BREAKER. USE #8 WIRE. PROVIDE NEW 60A DISC. W/ 35A FUSES.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 20A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW SUPPLY FAN AT THIS APPROXIMATE LOCATION. PROVIDE POWER FROM NEAREST ACCEPTABLE 120V PANEL. PROVIDE NEW 1P 20A BREAKER. UP TO 4 NEW SUPPLY FANS MAY BE TIED INTO THE SAME CIRCUIT.

ELECTRICAL PANELBOARD PLAN NOTES
(SOME NOTES MAY NOT BE USED)

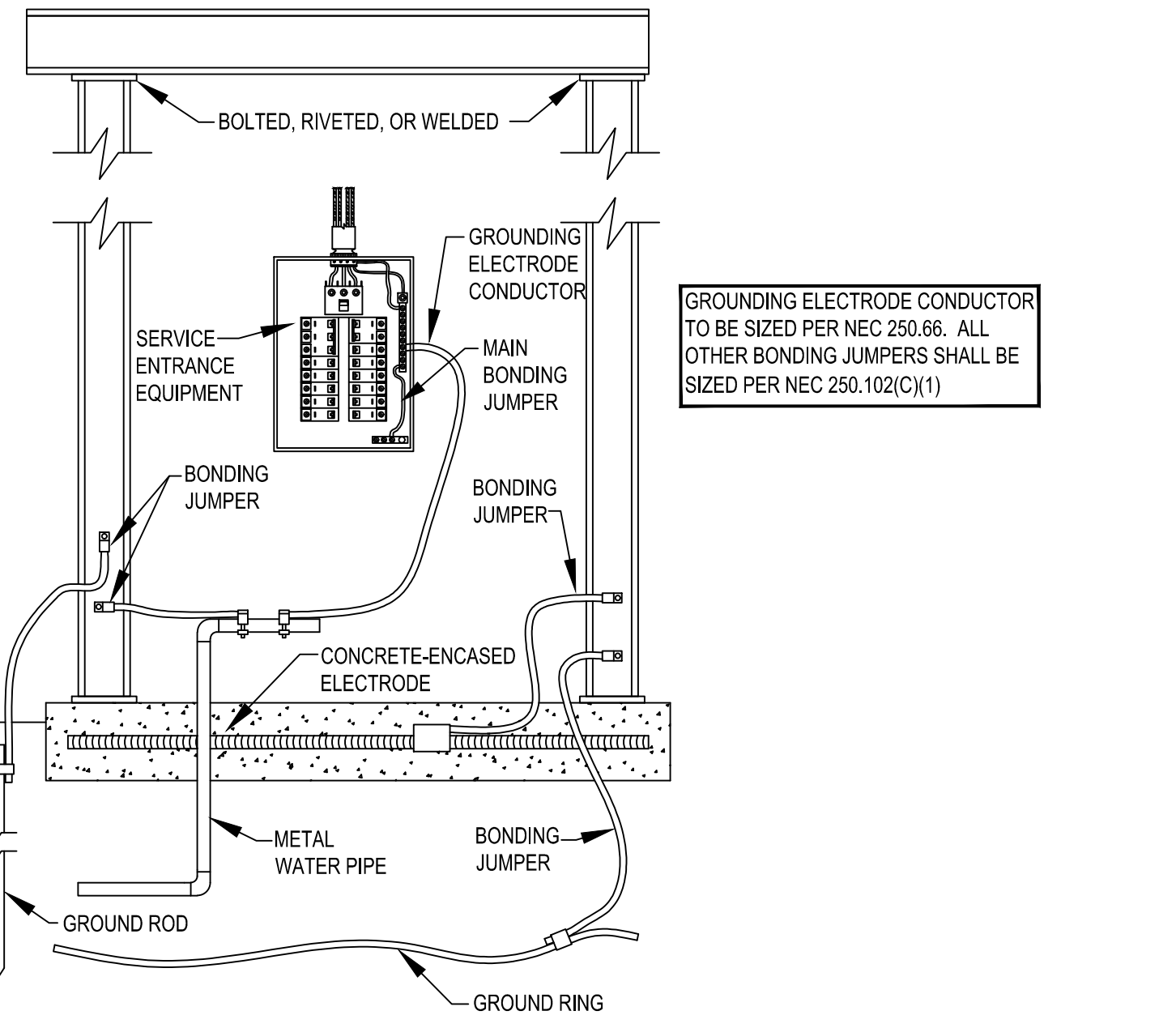
- PROVIDE NEW PANEL MSB AT THIS APPROXIMATE LOCATION TO REPLACE DEMOLISHED MSB. PROVIDE POWER TO NEW PANEL FROM EXISTING FEEDER. ANY REMAINING LOADS FROM DEMOLISHED PANEL MSB SHALL BE RE-POWERED FROM NEW PANEL MSB AND MHDP. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- PROVIDE NEW PANEL MCH AT THIS APPROXIMATE LOCATION TO REPLACE DEMOLISHED MCC. PROVIDE NEW 4-4#10, 1-4" GRN, 2 1/2" C. COPPER FEEDER FROM PANEL MSB. ANY REMAINING LOADS FROM DEMOLISHED PANEL MCC SHALL BE RE-POWERED FROM NEW PANEL MCH. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- PROVIDE NEW PANEL MHDP AT THIS APPROXIMATE LOCATION. PROVIDE POWER TO NEW MHDP FROM PANEL MSB. PROVIDE NEW 2-2" C. WITH 4-#10, 1-#8 GRN IN EACH COPPER FEEDER. NEW PANEL MHDP SHALL RE-POWER REMAINING LOADS FROM DEMOLISHED PANEL MSB. SEE PANEL SCHEDULES FOR MORE INFORMATION. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- EXISTING 277/480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #1 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS. AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 120/208V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #4 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS. AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 120/208V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #3 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS. AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
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- EXISTING 120/208V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #8 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS. AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
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- EXISTING 277/480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #4 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS. AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING SERVICE ENTRANCE PANEL MSB2 AT THIS APPROXIMATE LOCATION. ELECTRICAL CONTRACTOR SHALL PROVIDE A NEW GROUNDING BONDING JUMPER FROM MSB TO MSB2 SIZE AT 400CM. BONDING JUMPER SHALL CONNECT THE GROUND BUS AND THE ENCLOSURE OF EACH SWITCHGEAR TOGETHER.

CONTRACTOR TO TEST EXISTING GROUNDING ELECTRODE SYSTEM FOR THIS BUILDING PER REQUIREMENTS OF SPEC SECTION 26 08 11 TESTING OF ELECTRICAL SYSTEM. IF EXISTING SYSTEM DOES NOT MEET THE SPEC REQUIREMENTS, PROVIDE ADDITIONAL GROUND RODS UNTIL IT DOES MEET THE SPEC.



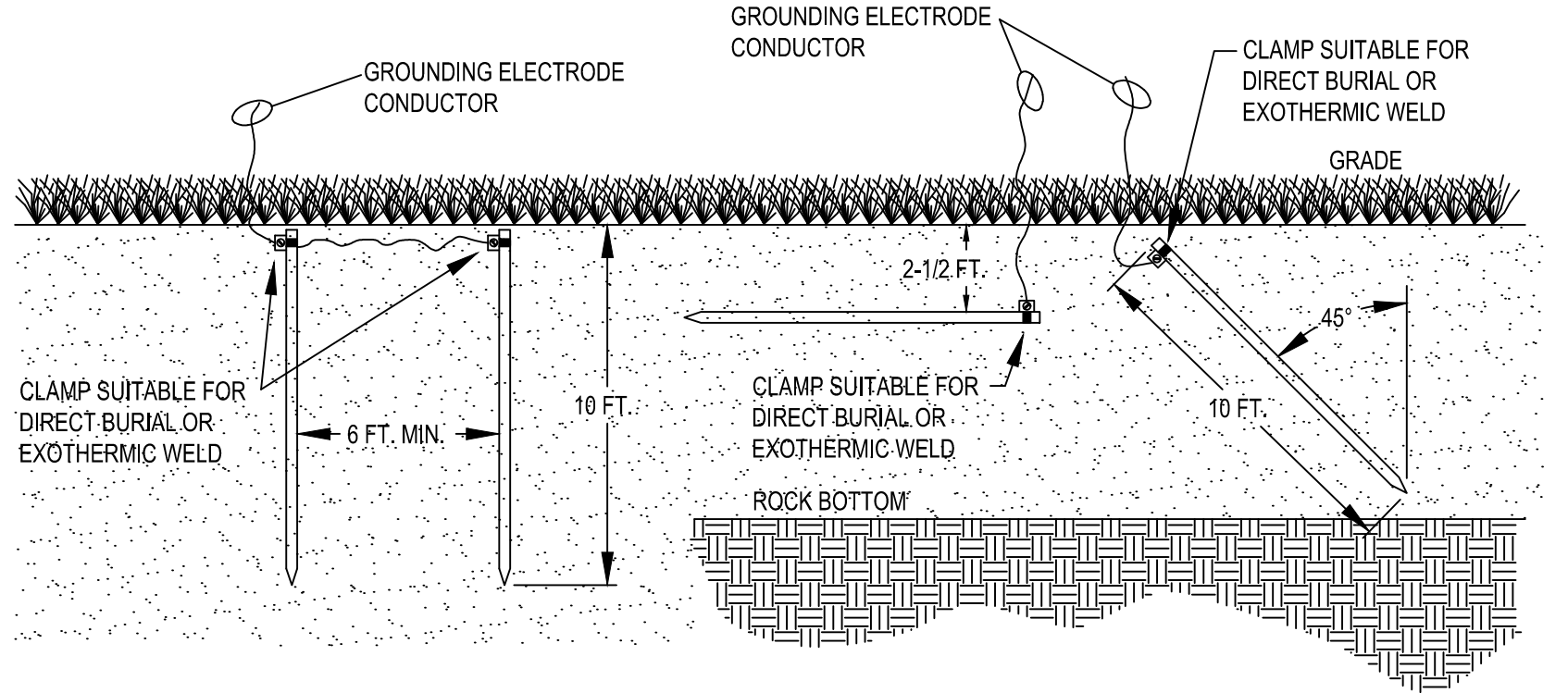
- NOTE BY SYMBOL " "
- 4" PVC SLEEVE FOR PROTECTION OF GROUND LEAD IN SWITCH GEAR
 - COPPER WELD OR EQUAL 2-BOLT GROUND CLAMP
 - COPPER GROUNDING CONDUCTOR
 - COPPER GROUNDING ELECTRODE CONDUCTOR
 - CRIMP CONNECTION, CADWELD TYPE "GY" OR EQUIVALENT.
 - 3/4"x1/2" COPPER-CLAD GROUND ROD. FURNISH AS REQUIRED BY LOCAL SOIL CONDITIONS TO ACHIEVE MINIMUM RESISTANCE PER NETA 7.13

2 ELECTRICAL BUILDING GROUNDING ELECTRODE SYSTEM
N.T.S.



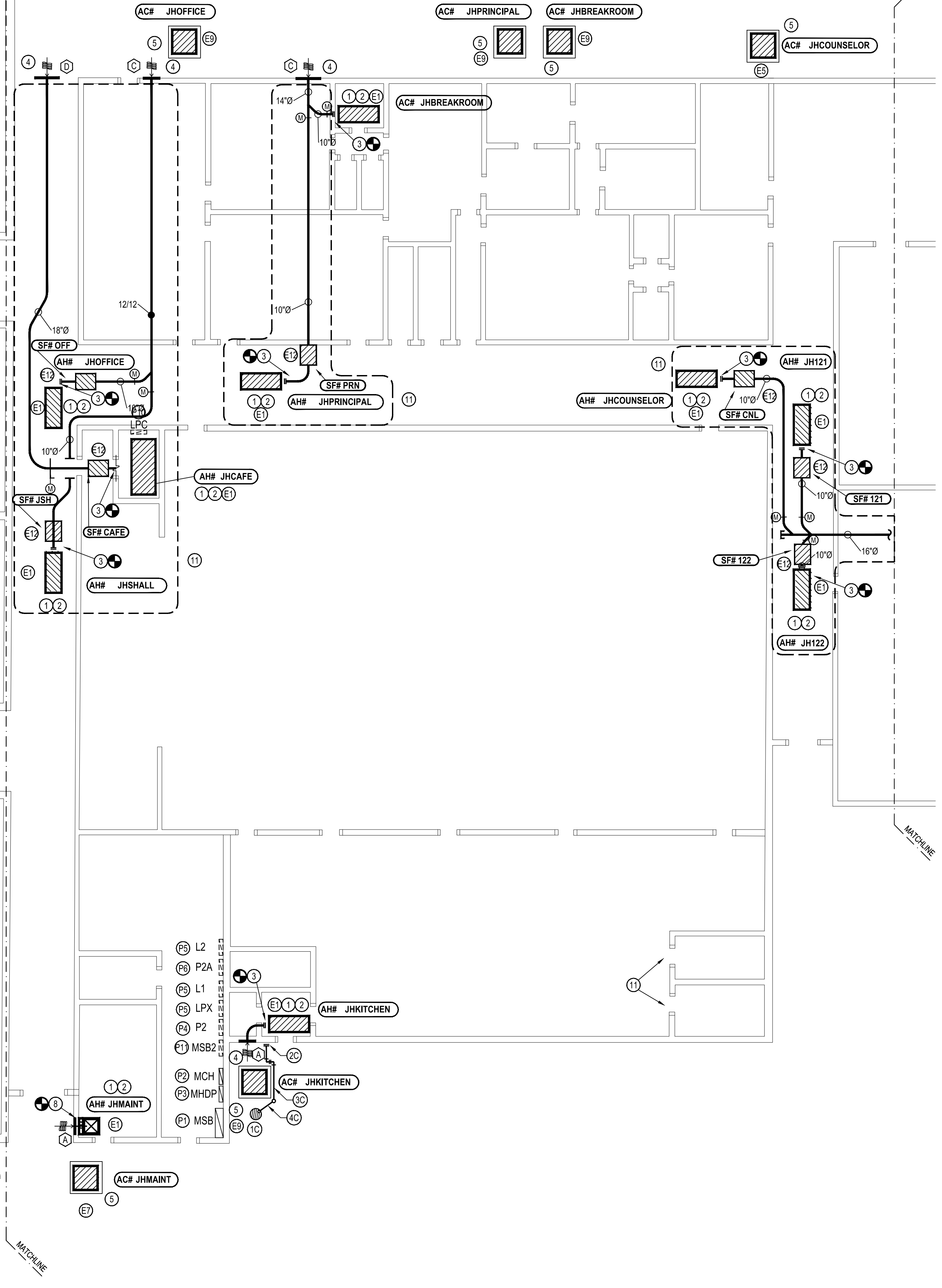
GROUNDING ELECTRODE CONDUCTOR TO BE SIZED PER NEC 250.66. ALL OTHER BONDING JUMPERS SHALL BE SIZED PER NEC 250.102(C)(1)

3 GROUNDING ELECTRODE SYSTEM
N.T.S.



NOTE: ALL PIPE AND ROD ELECTRODES MUST HAVE 8 FEET OF LENGTH IN CONTACT WITH SOIL REGARDLESS OF ROCK BOTTOM IN ORDER TO ENSURE THAT THE UPPER END OF THE ELECTRODE IS FLUSH WITH OR BELOW GROUND LEVEL UNLESS THE ABOVEGROUND PORTION IS PROTECTED FROM PHYSICAL DAMAGE.

4 NEC GROUNDING ROD DETAILS
N.T.S.



1 MECHANICAL/ELECTRICAL/PLUMBING FLOOR PLAN - AREA D
1/8"=1'-0"



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ELECTRICAL GENERAL NOTES
(SOME NOTES MAY NOT BE USED)

- SEE SHEET EP7.1 FOR GENERAL NOTES AND PLAN NOTES APPLICABLE TO THE ENTIRE DRAWING SET.

ELECTRICAL PLAN NOTES
(SOME NOTES MAY NOT BE USED)

- NEW AIR HANDLER SHALL REPLACE EXISTING AIR HANDLER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR HANDLER. PROVIDE NEW 30A DISC. AND FUSES PER MANUFACTURER'S RECOMMENDATIONS. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 25A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 30A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 3P 30A BREAKER. USE #10 WIRE. PROVIDE NEW 30A DISC. W/ 30A FUSES.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 35A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 3P 60A BREAKER. USE #4 WIRE. PROVIDE NEW 60A DISC. W/ 60A FUSES.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 45A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 60A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 15A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 2P 40A BREAKER. USE #6 WIRE. PROVIDE NEW 60A DISC. W/ 35A FUSES.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 20A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW SUPPLY FAN AT THIS APPROXIMATE LOCATION. PROVIDE POWER FROM NEAREST ACCEPTABLE 120V PANEL. PROVIDE NEW 1P 20A BREAKER. UP TO 4 NEW SUPPLY FANS MAY BE TIED INTO THE SAME CIRCUIT.

ELECTRICAL PANELBOARD PLAN NOTES
(SOME NOTES MAY NOT BE USED)

- PROVIDE NEW PANEL MSB AT THIS APPROXIMATE LOCATION TO REPLACE DEMOLISHED MSB. PROVIDE POWER TO NEW PANEL FROM EXISTING FEEDER. ANY REMAINING LOADS FROM DEMOLISHED PANEL MSB SHALL BE RE-POWERED FROM NEW PANEL MSB AND MHPD. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- PROVIDE NEW PANEL MCH AT THIS APPROXIMATE LOCATION TO REPLACE DEMOLISHED MCC. PROVIDE NEW 4-4#10, 1-4# GRN, 2 1/2" C. COPPER FEEDER FROM PANEL MSB. ANY REMAINING LOADS FROM DEMOLISHED PANEL MCC SHALL BE RE-POWERED FROM NEW PANEL MCH. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- PROVIDE NEW PANEL MHPD AT THIS APPROXIMATE LOCATION. PROVIDE POWER TO NEW MHPD FROM PANEL MSB. PROVIDE NEW 2-2" C. WITH 4-#10, 1-#8 GRN IN EACH COPPER FEEDER. NEW PANEL MHPD SHALL RE-POWER REMAINING LOADS FROM DEMOLISHED PANEL MSB. SEE PANEL SCHEDULES FOR MORE INFORMATION. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- EXISTING 277480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #1 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 120208V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #4 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 120208V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #3 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 277480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #6 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 120208V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #8 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
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- EXISTING SERVICE ENTRANCE PANEL MSB2 AT THIS APPROXIMATE LOCATION. ELECTRICAL CONTRACTOR SHALL PROVIDE A NEW GROUNDING BONDING JUMPER FROM MSB TO MSB2 SIZE AT 400CM. BONDING JUMPER SHALL CONNECT THE GROUND BUS AND THE ENCLOSURE OF EACH SWITCHGEAR TOGETHER.

MECHANICAL PLAN NOTES

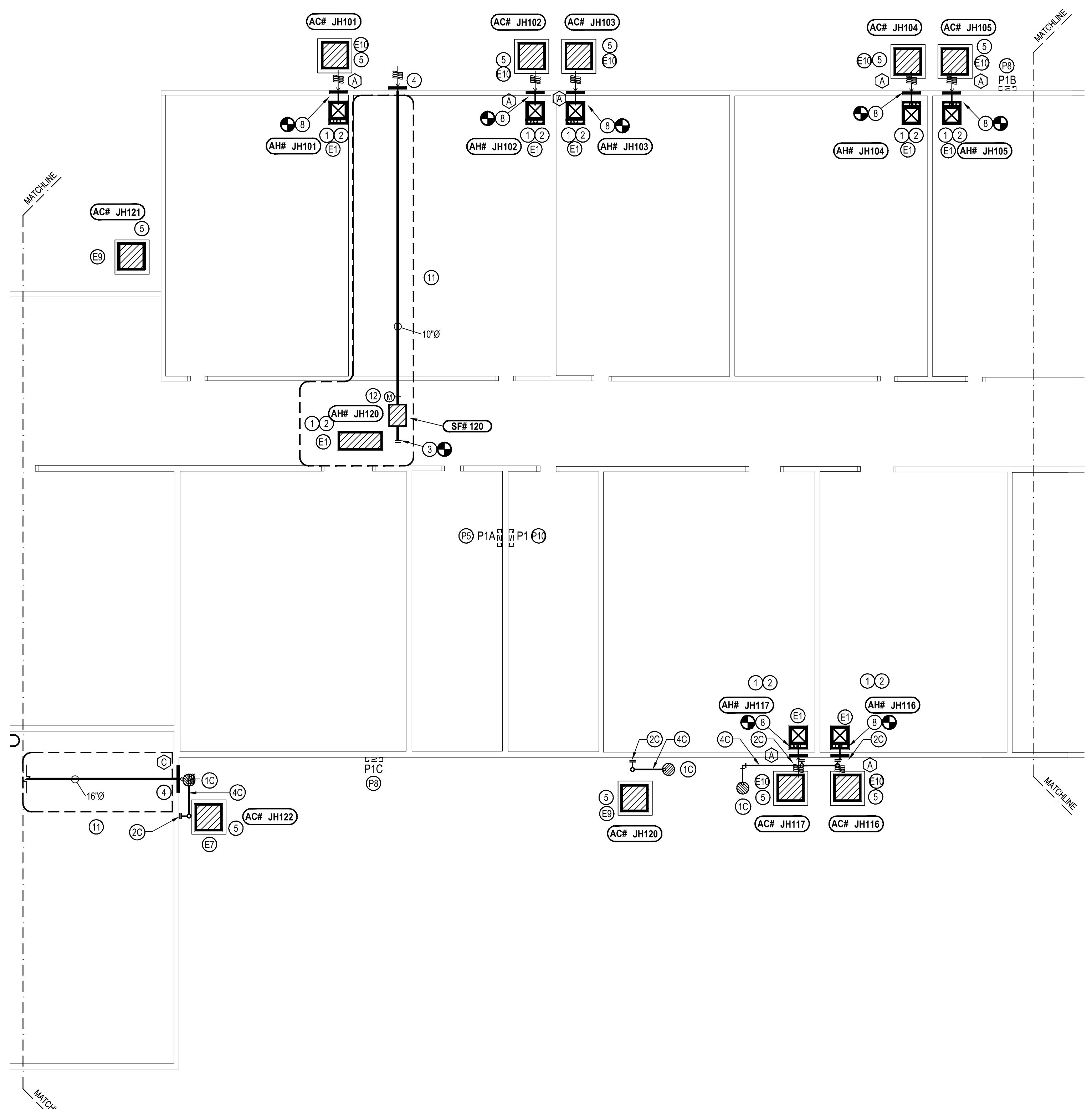
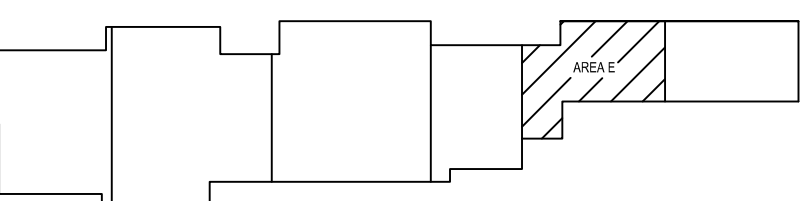
- INSTALL NEW AIR HANDLER UNIT IN EXISTING LOCATION. FIELD VERIFY ALL REQUIREMENTS FOR INSTALLATION OF NEW AIR HANDLER. EXISTING AIR HANDLER GLOBSET PLATFORM OUTSIDE AIR, RETURN AIR, ETC. TO REMAIN IN PLACE AND OPERATIONAL. INSTALL NEW THERMOSTAT IN EXISTING LOCATION AND PATCH WALL AS REQUIRED TO MATCH EXISTING.
- PROVIDE NEW P-TRAP AT NEW UNIT AND CONNECT TO EXISTING CONDENSATE PIPING. CONNECT UNIT TO EXISTING DUCTWORK. COORDINATE ORIENTATION OF UNIT WITH EXISTING DUCTWORK. MODIFY EXISTING DUCTWORK AS REQUIRED AND PROVIDE TRANSITIONS AS NECESSARY TO ADAPT SIZE OF EXISTING DUCT FOR TIE-IN.
- TIE IN NEW OUTSIDE AIR DUCT INTO EXISTING RETURN DUCT. ADD NEW BALANCING DAMPER TO RETURN. CONTRACTOR TO VERIFY EXISTING RETURN DUCT ROUTING ABOVE CEILING.
- INSTALL NEW OUTSIDE AIR LOUVER IN EXTERIOR WALL.
- INSTALL NEW CONDENSER UNIT ON EXISTING SLAB AND EXTEND/MODIFY EXISTING HOUSEKEEPING PAD AS REQUIRED. CONDENSERS TO RECEIVE NEW REFRIGERANT PIPING. NEW PIPING SHOULD TO BE INCLUDED AND EXTENDED ABOVE THE EXISTING CEILING. PAINT TO MATCH EXISTING BRICK.
- INSTALL NEW CONDENSER UNIT ON NEW 4" HOUSEKEEPING WITH WELDED WIRE MESH FOR REINFORCING. EXPANSION JOINT MATERIAL TO BE USED WHERE THE NEW PAD ABUTS THE EXISTING BUILDING.
- PROVIDE NEW GAS VALVE AND PRESSURE REGULATOR. RECONNECT TO EXISTING CONDENSATE LINES AND EXISTING GAS PIPING. REFER TO PLUMBING DETAILS FOR CONDENSATE TRAP AND GAS CONNECTION. INSTALL NEW CONCENTRIC FLUE ON ROOF.
- INSTALL NEW OUTSIDE AIR LOUVER IN EXTERIOR WALL AND CONNECT INTO EXISTING PLENUM BOX WITH 10"Ø DUCT AND MOTORIZED DAMPER.
- REUSE EXISTING WALL SUPPORTS FOR NEW EQUIPMENT.
- CONNECT EXISTING AIR HANDLER TO NEW EMCS.
- OVER LOCATIONS WHERE NEW OUTSIDE AIR DUCTWORK IS INSTALLED (OUTLINED BY DASHED LINES FOR CLARITY), CONTRACTOR SHALL REMOVE EXISTING CEILING GRID AND TILE FOR INSTALLATION OF NEW DUCTWORK AND REPLACE AFTER COMPLETION OF INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR BROKEN TILE AND GRID.

CONDENSATE PIPING PLAN NOTES

- 1" CONDENSATE DRAIN DOWN TO CONDENSATE PIT.
- 1" CONDENSATE DRAIN TIE-IN TO EXISTING CONDENSATE DRAIN.
- 1" CONDENSATE DRAIN ABOVE GRADE.
- 1" CONDENSATE DRAIN BELOW GRADE

REFER TO SHEET MH7.2 FOR GENERAL NOTES.

KEYPLAN



1 MECHANICAL/ELECTRICAL/PLUMBING FLOOR PLAN - AREA E
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ELECTRICAL GENERAL NOTES
(SOME NOTES MAY NOT BE USED)

- SEE SHEET EP7.1 FOR GENERAL NOTES AND PLAN NOTES APPLICABLE TO THE ENTIRE DRAWING SET.

ELECTRICAL PLAN NOTES
(SOME NOTES MAY NOT BE USED)

- NEW AIR HANDLER SHALL REPLACE EXISTING AIR HANDLER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR HANDLER. PROVIDE NEW 30A DISC. AND FUSES PER MANUFACTURER'S RECOMMENDATIONS. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 25A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 30A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 3P 30A BREAKER. USE #10 WIRE. PROVIDE NEW 30A DISC. W/ 30A FUSES.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 35A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 45A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 3P 60A BREAKER. USE #4 WIRE. PROVIDE NEW 60A DISC. W/ 60A FUSES.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 45A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 60A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 15A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 2P 40A BREAKER. USE #6 WIRE. PROVIDE NEW 60A DISC. W/ 35A FUSES.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 20A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW SUPPLY FAN AT THIS APPROXIMATE LOCATION. PROVIDE POWER FROM NEAREST ACCEPTABLE 120V PANEL. PROVIDE NEW 1P 20A BREAKER. UP TO 4 NEW SUPPLY FANS MAY BE TIED INTO THE SAME CIRCUIT.

ELECTRICAL PANELBOARD PLAN NOTES
(SOME NOTES MAY NOT BE USED)

- PROVIDE NEW PANEL MSB AT THIS APPROXIMATE LOCATION TO REPLACE DEMOLISHED MSB. PROVIDE POWER TO NEW PANEL FROM EXISTING FEEDER. ANY REMAINING LOADS FROM DEMOLISHED PANEL MSB SHALL BE RE-POWERED FROM NEW PANEL MSB AND MHPD. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- PROVIDE NEW PANEL MCH AT THIS APPROXIMATE LOCATION TO REPLACE DEMOLISHED MCC. PROVIDE NEW 4-4#10, 1-4# GRN, 2 1/2" C. COPPER FEEDER FROM PANEL MSB. ANY REMAINING LOADS FROM DEMOLISHED PANEL MCC SHALL BE RE-POWERED FROM NEW PANEL MCH. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- PROVIDE NEW PANEL MHPD AT THIS APPROXIMATE LOCATION. PROVIDE POWER TO NEW MHPD FROM PANEL MSB. PROVIDE NEW 2-2" C. WITH 4-#30, 1-#8 GRN IN EACH COPPER FEEDER. NEW PANEL MHPD SHALL RE-POWER REMAINING LOADS FROM DEMOLISHED PANEL MSB. SEE PANEL SCHEDULES FOR MORE INFORMATION. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- EXISTING 277/480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #1 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 120/208V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #4 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 120/208V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #3 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 277/480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #6 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 120/208V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #8 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 277/480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #8 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 277/480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #4 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING SERVICE ENTRANCE PANEL MSB2 AT THIS APPROXIMATE LOCATION. ELECTRICAL CONTRACTOR SHALL PROVIDE A NEW GROUNDING BONDING JUMPER FROM MSB TO MSB2 SIZE AT 400CM. BONDING JUMPER SHALL CONNECT THE GROUND BUS AND THE ENCLOSURE OF EACH SWITCHGEAR TOGETHER.

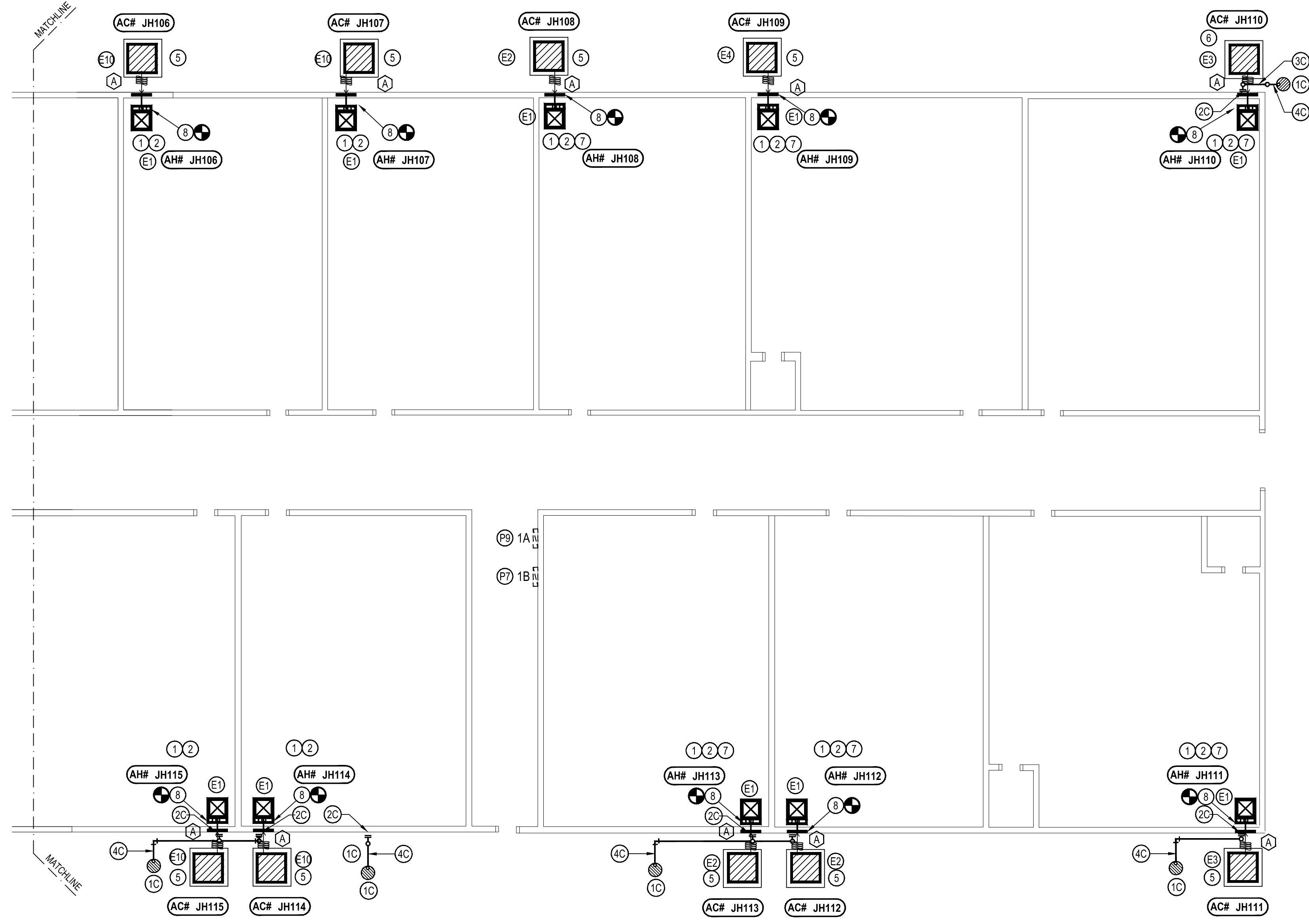
MECHANICAL PLAN NOTES

- INSTALL NEW AIR HANDLER UNIT IN EXISTING LOCATION. FIELD VERIFY ALL REQUIREMENTS FOR INSTALLATION OF NEW AIR HANDLER. EXISTING AIR HANDLER GLOSET PLATFORM OUTSIDE AIR, RETURN AIR, ETC. TO REMAIN IN PLACE AND OPERATIONAL. INSTALL NEW THERMOSTAT IN EXISTING LOCATION AND PATCH WALL AS REQUIRED TO MATCH EXISTING.
- PROVIDE NEW P-TRAP AT NEW UNIT AND CONNECT TO EXISTING CONDENSATE PIPING. CONNECT UNIT TO EXISTING DUCTWORK. COORDINATE ORIENTATION OF UNIT WITH EXISTING DUCTWORK. MODIFY EXISTING DUCTWORK AS REQUIRED AND PROVIDE TRANSITIONS AS NECESSARY TO ADAPT SIZE OF EXISTING DUCT FOR TIE-IN.
- TIE IN NEW OUTSIDE AIR DUCT INTO EXISTING RETURN DUCT. ADD NEW BALANCING DAMPER TO RETURN. CONTRACTOR TO VERIFY EXISTING RETURN DUCT ROUTING ABOVE CEILING.
- INSTALL NEW OUTSIDE AIR LOUVER IN EXTERIOR WALL.
- INSTALL NEW CONDENSER UNIT ON EXISTING SLAB AND EXTEND/MODIFY EXISTING HOUSEKEEPING PAD AS REQUIRED. CONDENSERS TO RECEIVE NEW REFRIGERANT PIPING. NEW PIPING SHOULD TO BE INCLUDED AND EXTENDED ABOVE THE EXISTING CEILING. PAINT TO MATCH EXISTING BRICK.
- INSTALL NEW CONDENSER UNIT ON NEW 4" HOUSEKEEPING WITH WELDED WIRE MESH FOR REINFORCING. EXPANSION JOINT MATERIAL TO BE USED WHERE THE NEW PAD ABUTS THE EXISTING BUILDING.
- PROVIDE NEW GAS VALVE AND PRESSURE REGULATOR. RECONNECT TO EXISTING CONDENSATE LINES AND EXISTING GAS PIPING. REFER TO PLUMBING DETAILS FOR CONDENSATE TRAP AND GAS CONNECTION. INSTALL NEW CONCENTRIC FLUE ON ROOF.
- INSTALL NEW OUTSIDE AIR LOUVER IN EXTERIOR WALL AND CONNECT INTO EXISTING PLENUM BOX WITH 10" DUCT AND MOTORIZED DAMPER.
- REUSE EXISTING WALL SUPPORTS FOR NEW EQUIPMENT.
- CONNECT EXISTING AIR HANDLER TO NEW EMCS.
- OVER LOCATIONS WHERE NEW OUTSIDE AIR DUCTWORK IS INSTALLED (OUTLINED BY DASHED LINES FOR CLARITY), CONTRACTOR SHALL REMOVE EXISTING CEILING GRID AND TILE FOR INSTALLATION OF NEW DUCTWORK AND REPLACE AFTER COMPLETION OF INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR BROKEN TILE AND GRID.

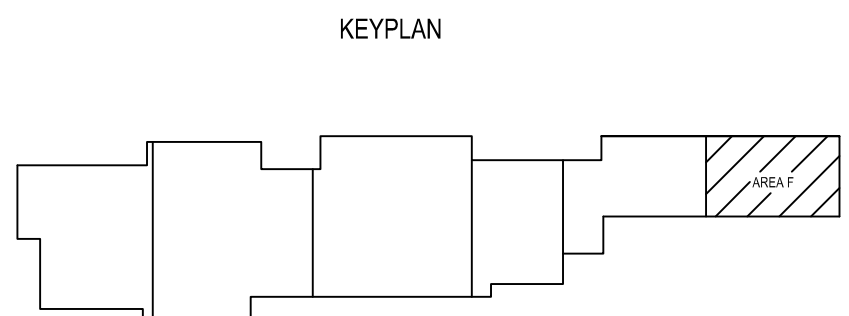
CONDENSATE PIPING PLAN NOTES

- 1" CONDENSATE DRAIN DOWN TO CONDENSATE PIT.
- 1" CONDENSATE DRAIN TIE-IN TO EXISTING CONDENSATE DRAIN.
- 1" CONDENSATE DRAIN ABOVE GRADE.
- 1" CONDENSATE DRAIN BELOW GRADE.

REFER TO SHEET MH7.2 FOR GENERAL NOTES.



1 MECHANICAL/ELECTRICAL/PLUMBING FLOOR PLAN - AREA F
1/8"=1'-0"



SUBMISSION OF BID WILL BE CONSIDERED ACKNOWLEDGMENT THAT THE CONTRACTOR HAS VISITED THE SITE AND HAS VERIFIED ALL EXISTING JOB CONDITIONS AND INCLUDED ANY NECESSARY MODIFICATION TO EXISTING AND NEW WORK REQUIRED FOR INSTALLATION OF A COMPLETE AND WORKING SYSTEM.



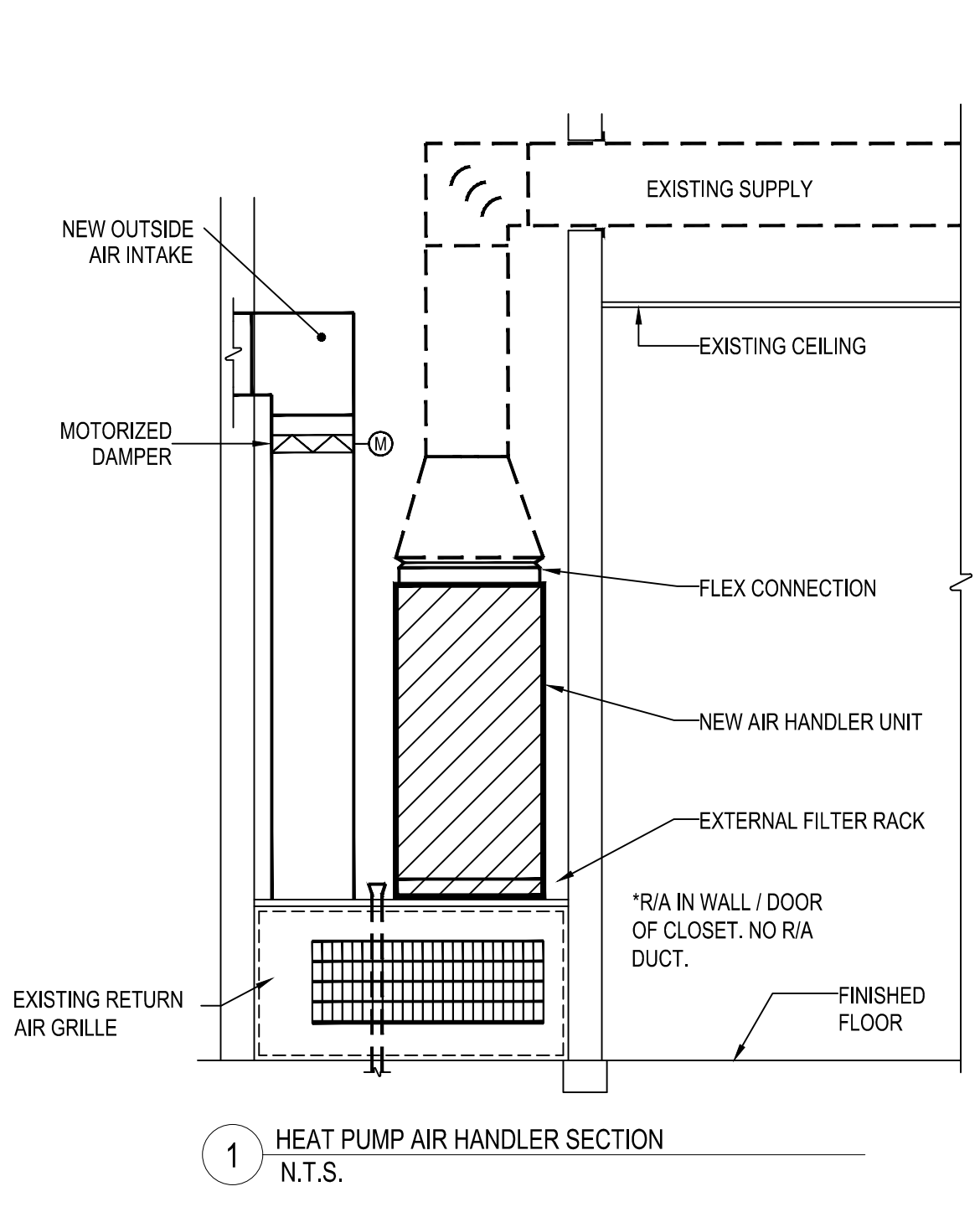
01-25-2022

ISSUE DATE

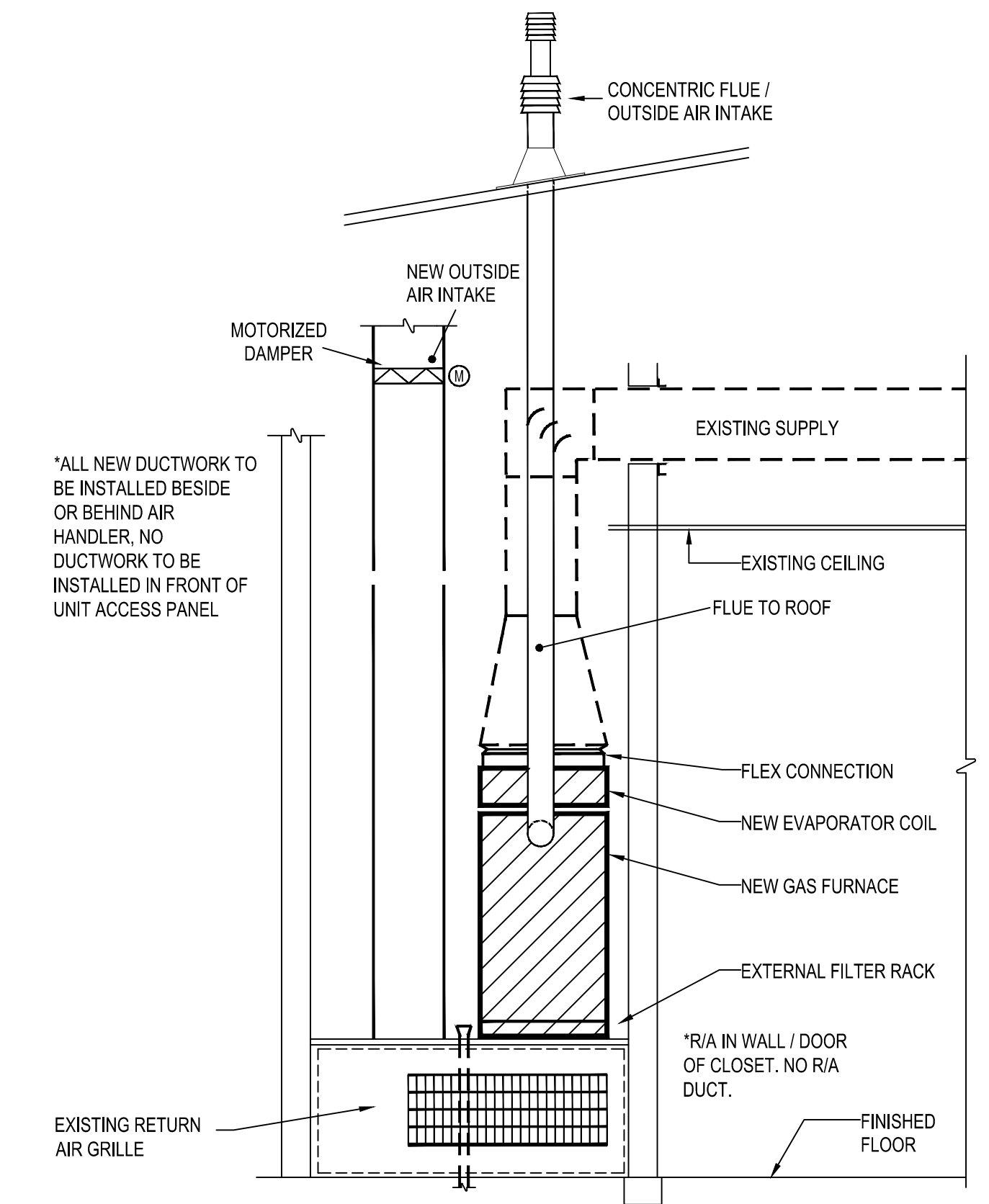
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REVISION DATE

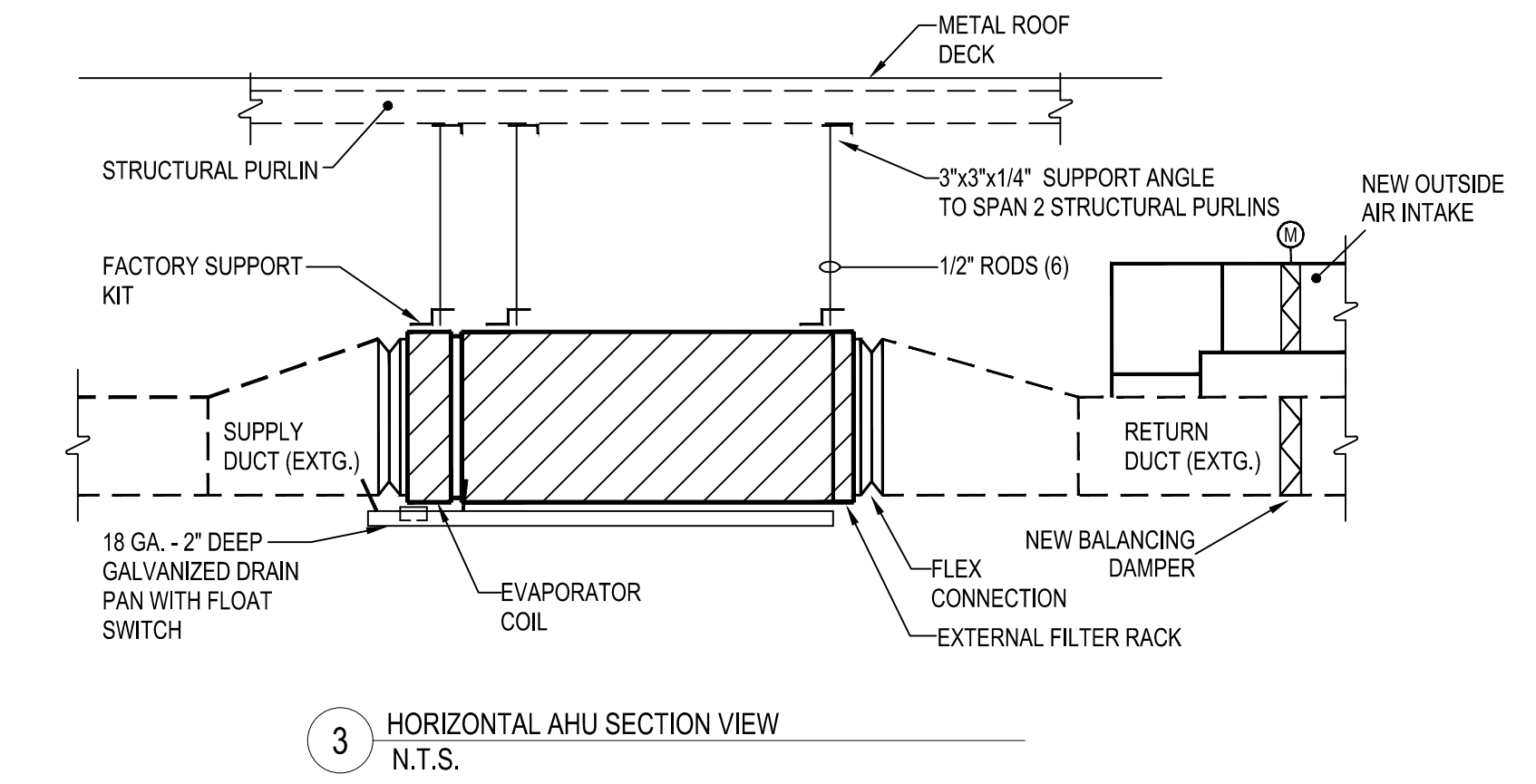
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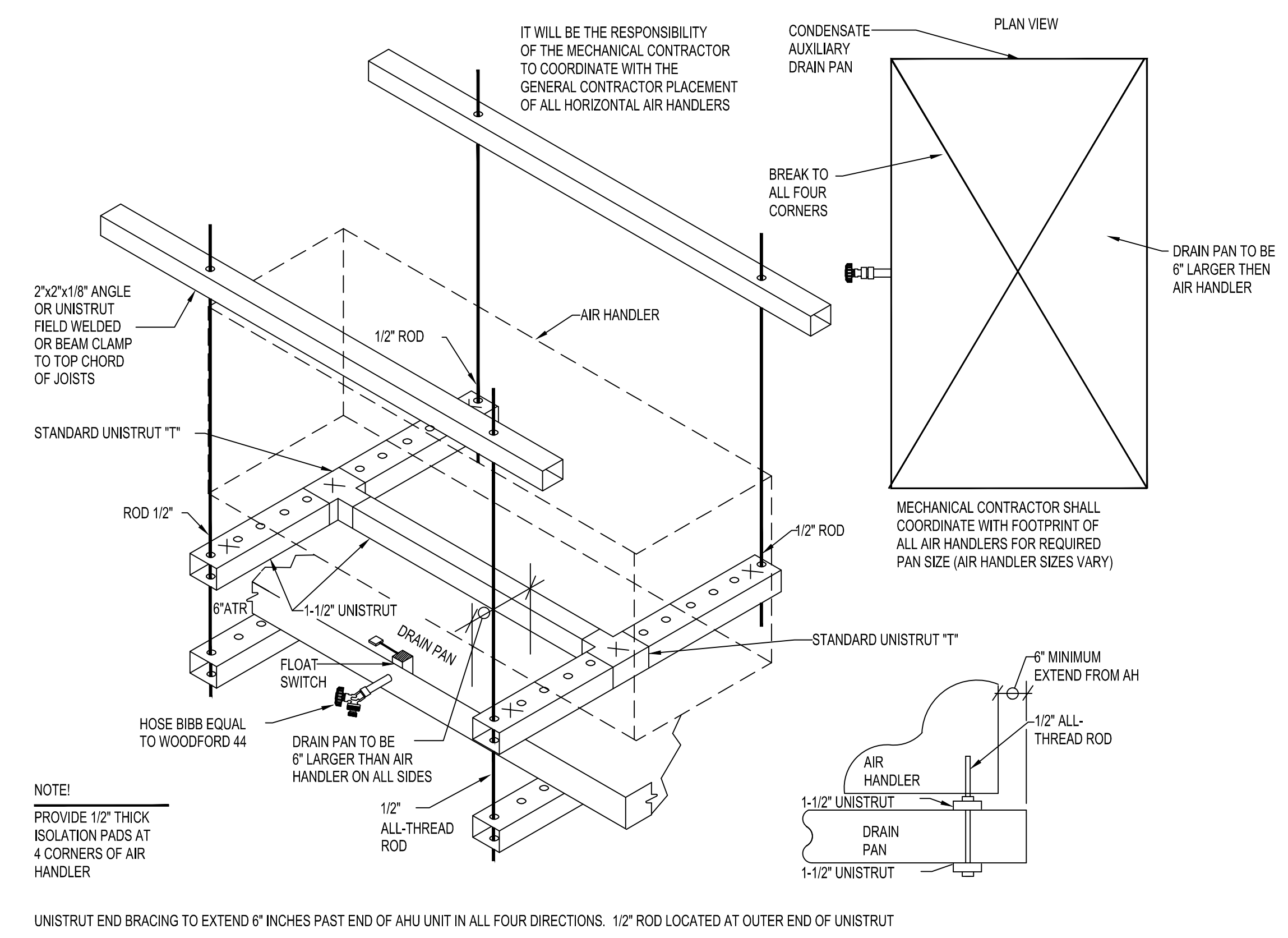
1 HEAT PUMP AIR HANDLER SECTION
N.T.S.



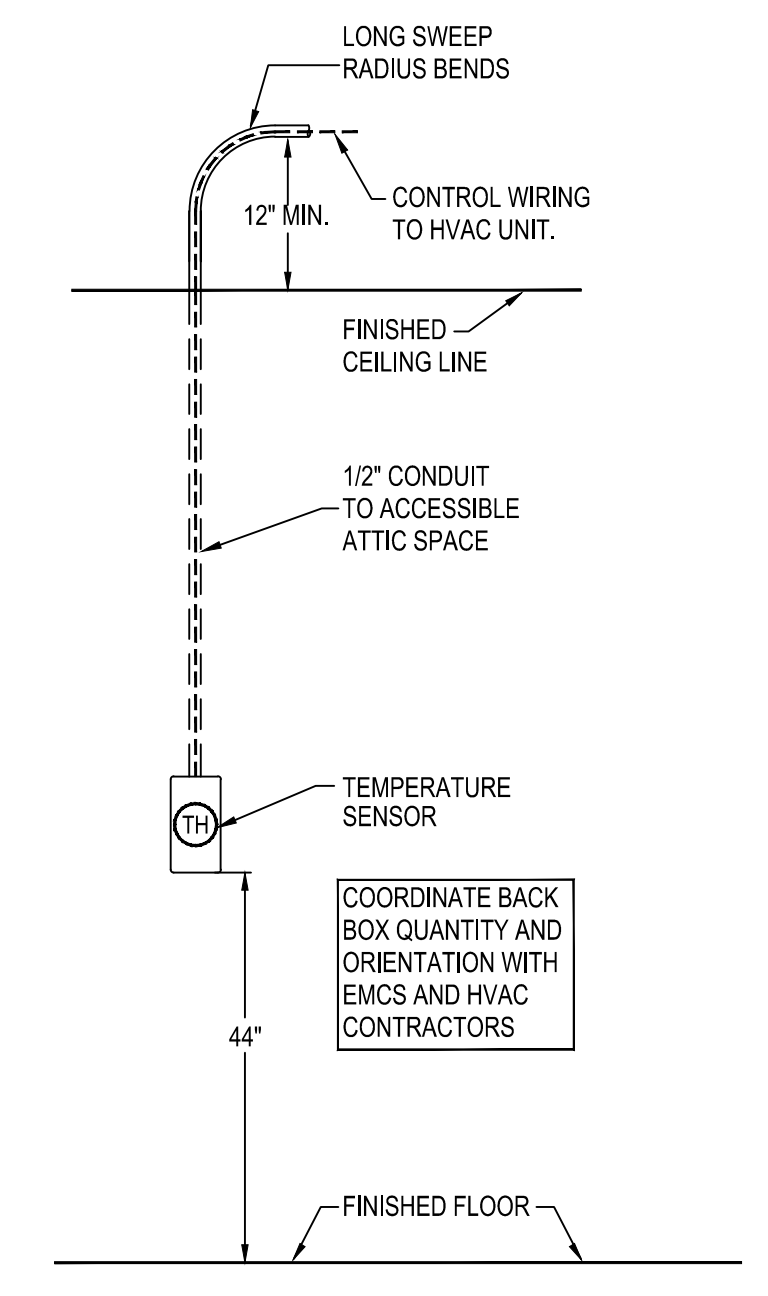
2 GAS/ELECTRIC AIR HANDLER SECTION
N.T.S.



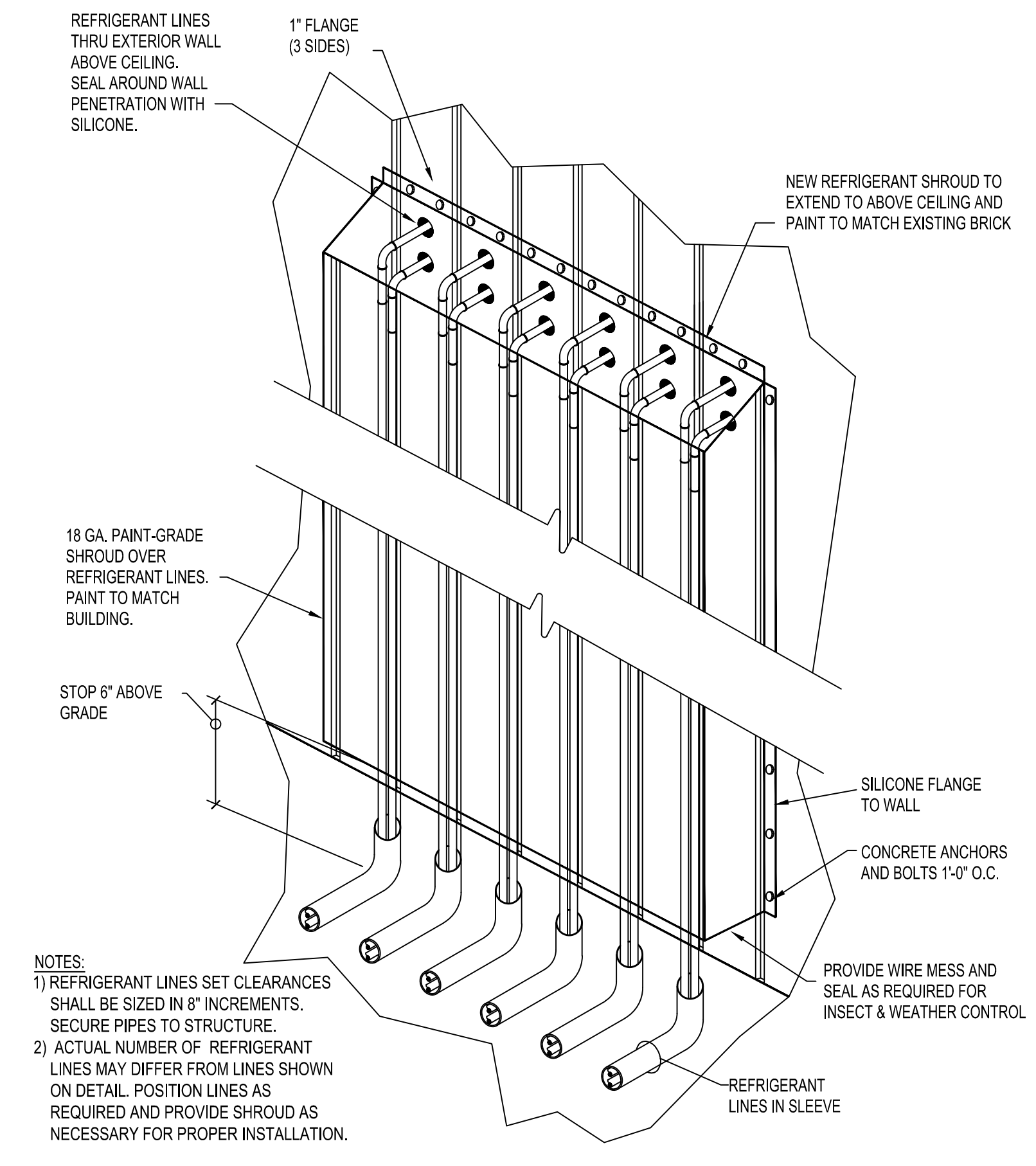
3 HORIZONTAL AHU SECTION VIEW
N.T.S.



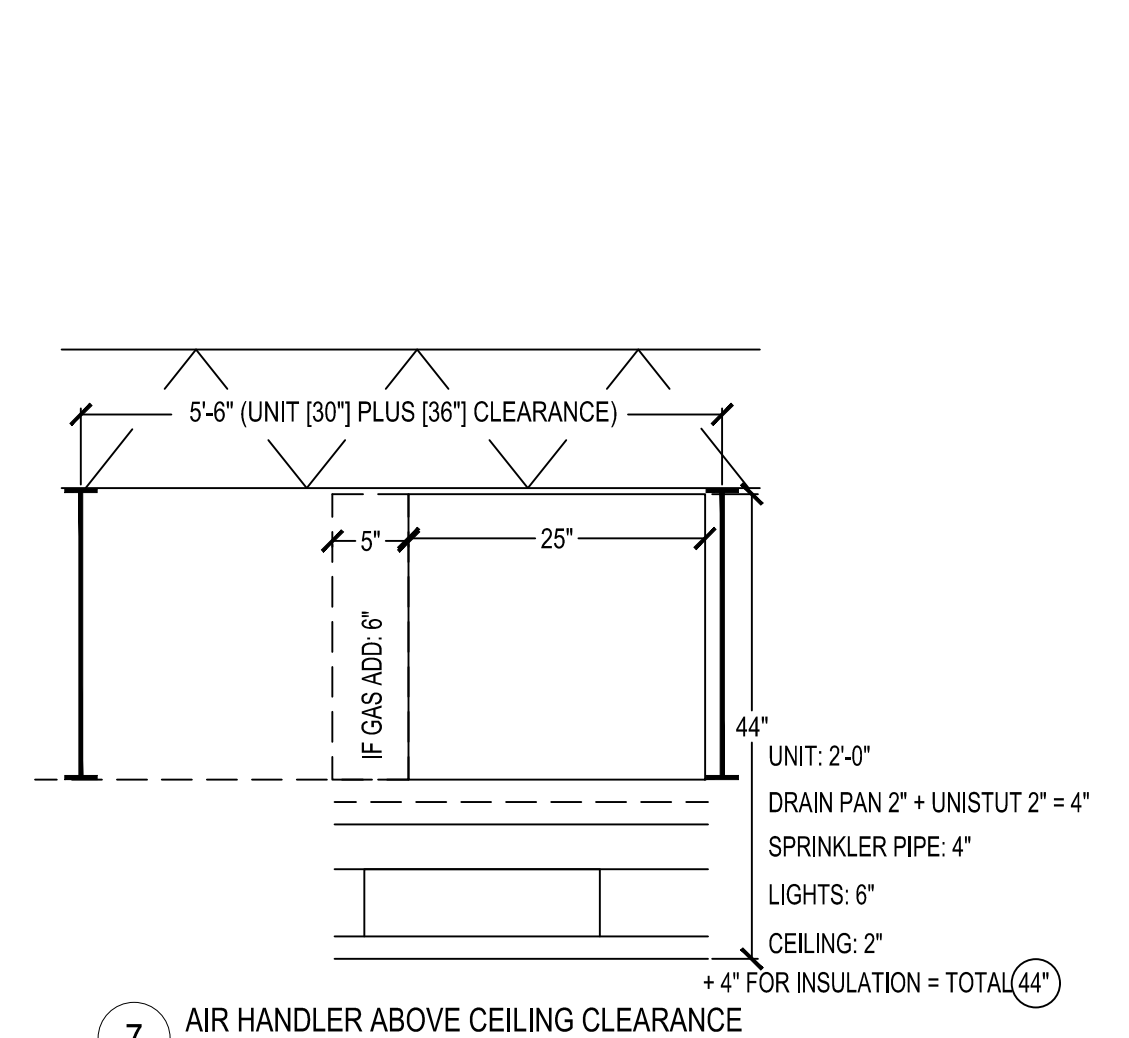
4 AIR HANDLER UNISTRUT SUPPORT
N.T.S.



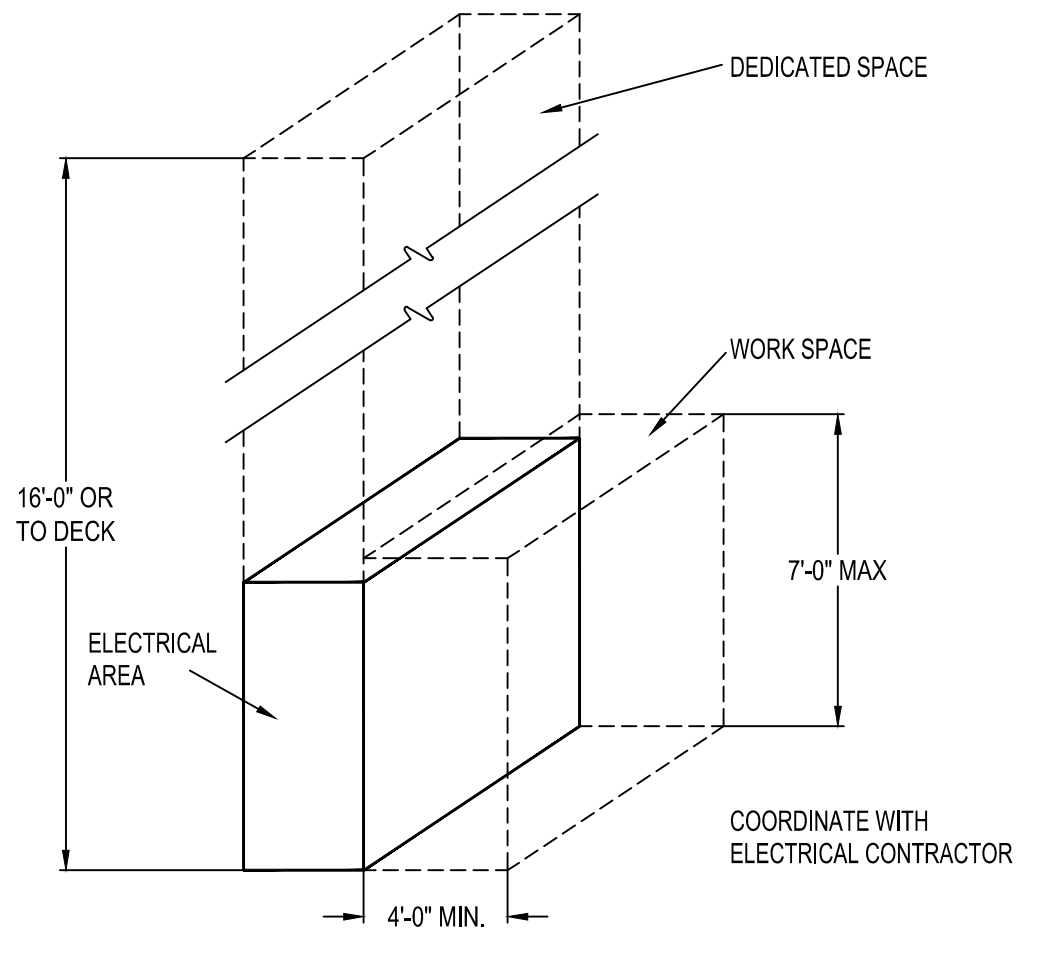
5 SENSOR MOUNTING
N.T.S.



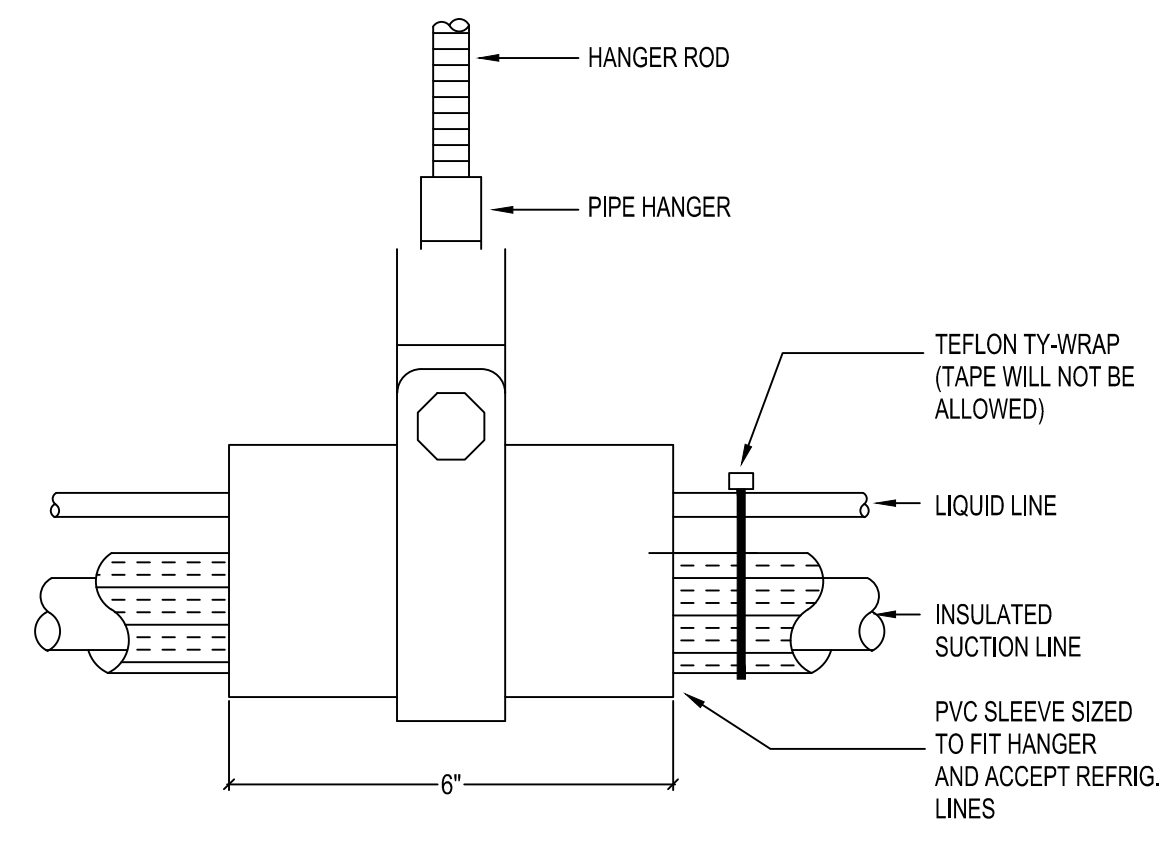
6 EXTERIOR REFRIGERANT PIPING SHROUD
N.T.S.



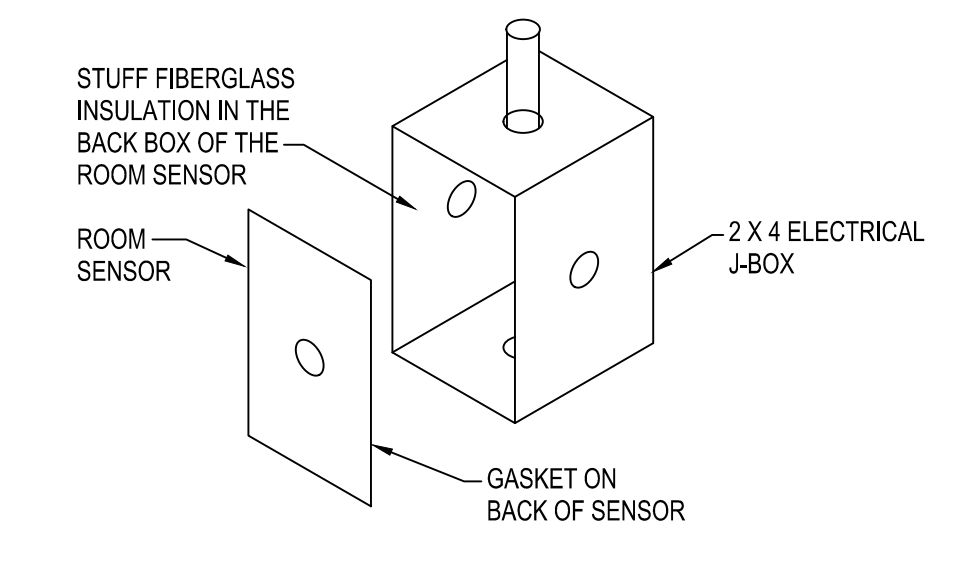
7 AIR HANDLER ABOVE CEILING CLEARANCE
N.T.S.



8 INSTALLATION CLEARANCES AROUND ELECTRICAL EQUIPMENT
N.T.S.



9 REFRIGERANT LINE SUPPORT
N.T.S.



10 ROOM SENSOR INSULATION
N.T.S.

2022 HVAC RENOVATION
RAINS JUNIOR HIGH SCHOOL
 RAINS INDEPENDENT SCHOOL DISTRICT
 EMORY, TX

EMA JOB #: 1-001-0959-001

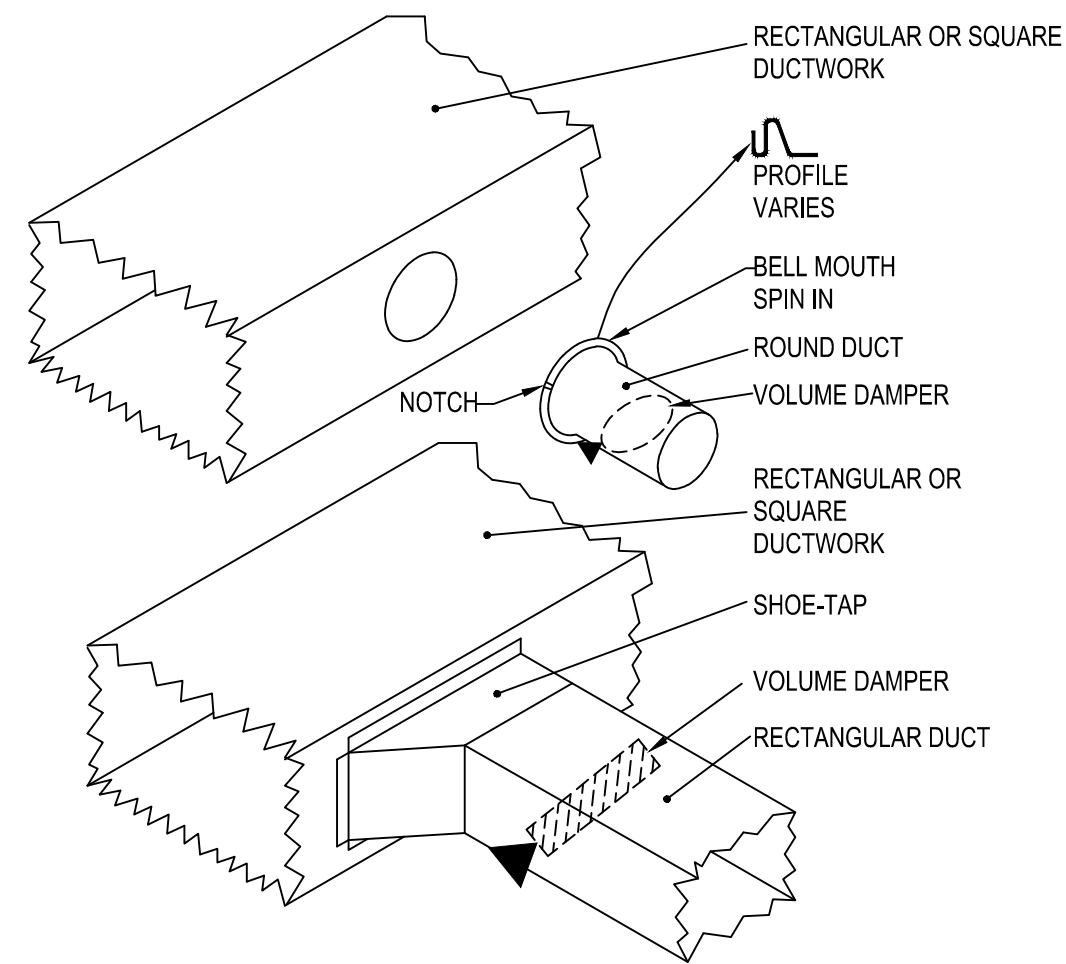
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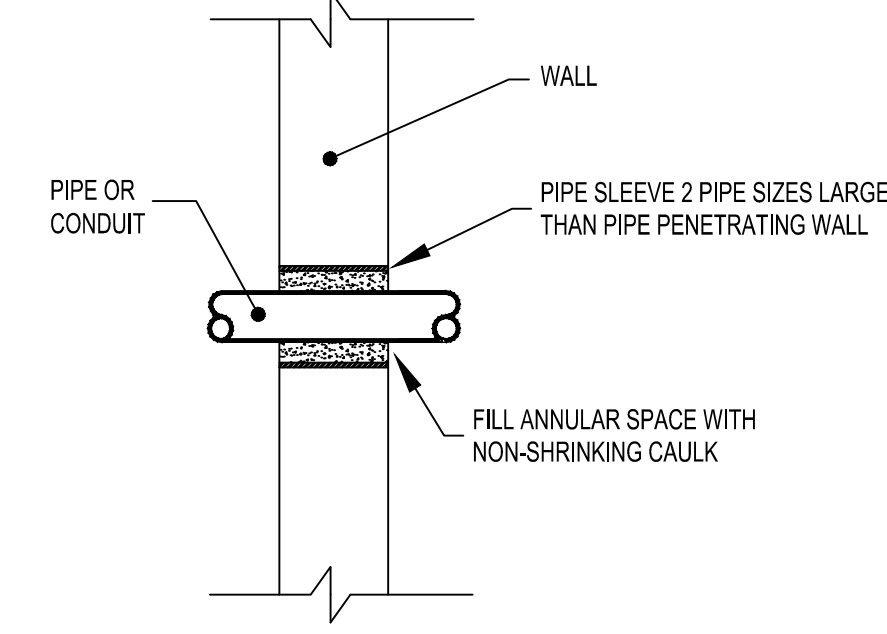
MECHANICAL/PLUMBING
 DETAILS

SHEET NUMBER

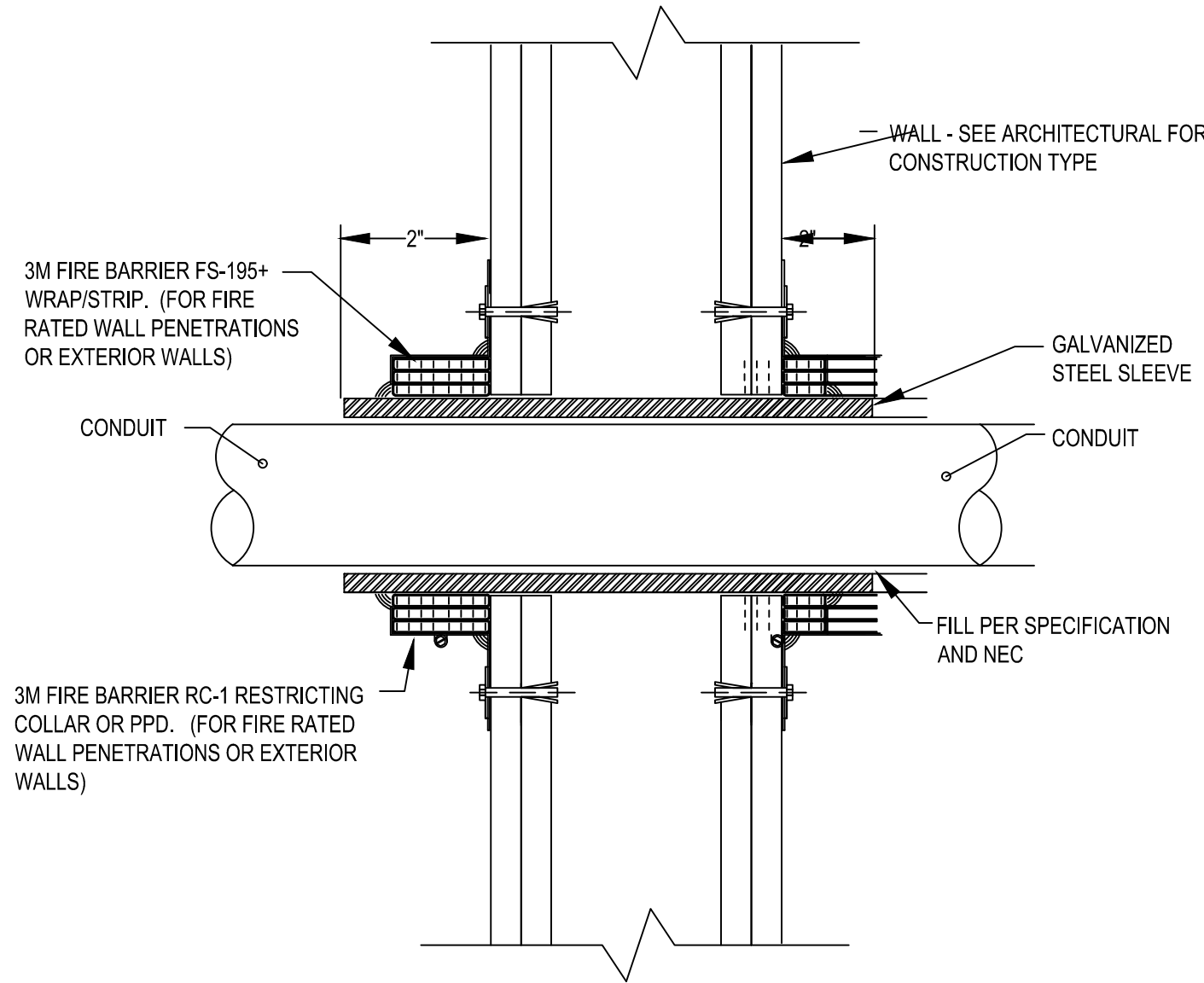
MEP7.1



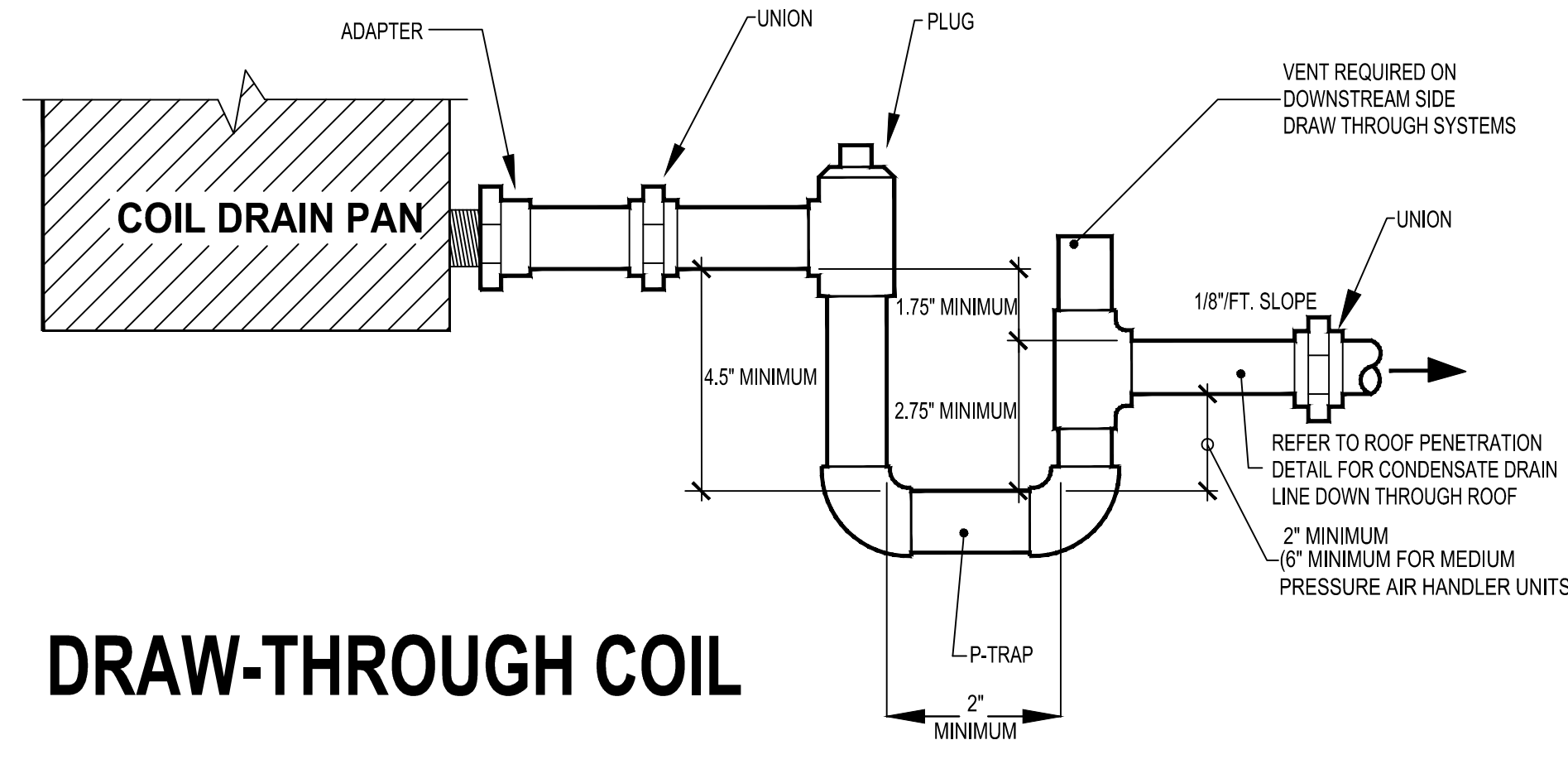
1 DUCT TAKEOFF
N.T.S.



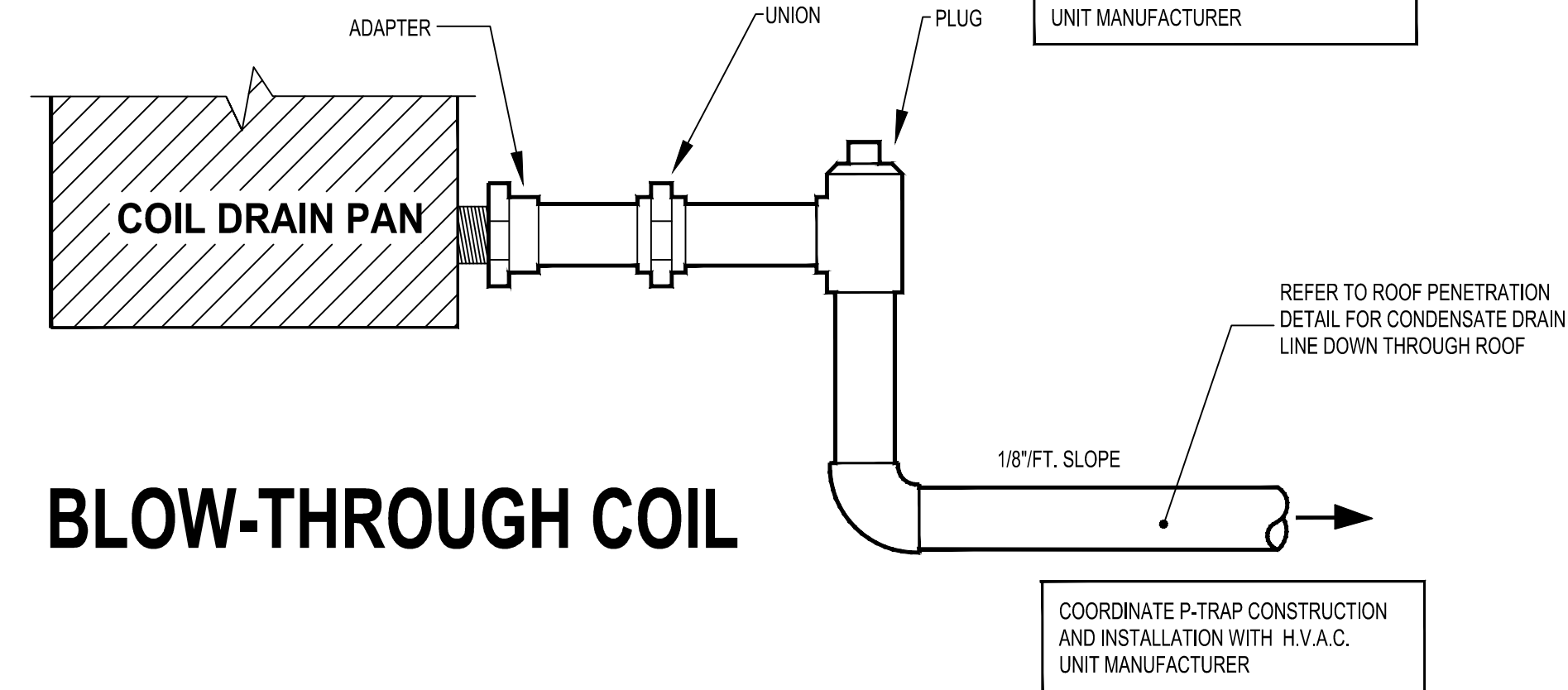
2 EXTERIOR WALL PIPE PENETRATION
N.T.S.



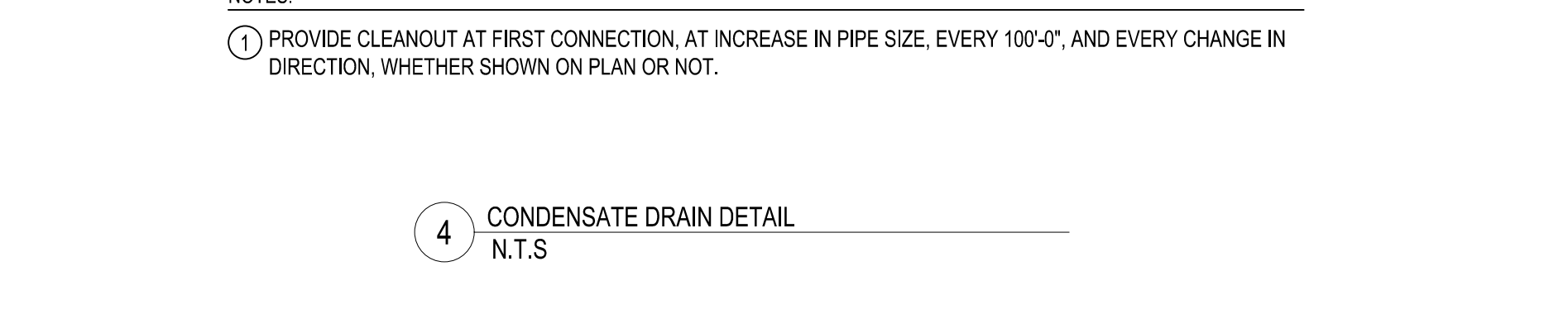
3 WALL PENETRATION
N.T.S.



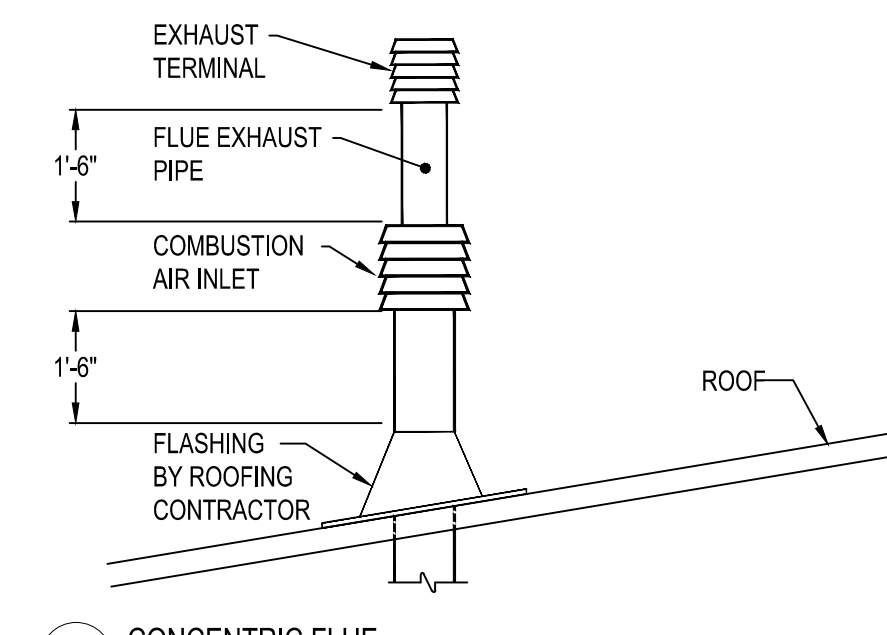
DRAW-THROUGH COIL



5 CONDENSATE PIT DETAIL
N.T.S.



6 IN-LINE EXHAUST FAN
N.T.S.



7 CONCENTRIC FLUE
N.T.S.

PLUMBING SYMBOLS

SS	SS	SANITARY SEWER LINE
ES	ES	EXISTING SANITARY SEWER LINE
V	V	VENT LINE
EV	EV	EXISTING VENT LINE
CW	CW	COLD WATER LINE
ECW	ECW	EXISTING COLD WATER LINE
HW	HW	HOT WATER LINE
EHW	EHW	EXISTING HOT WATER LINE
COND	COND	CONDENSATE LINE
EC	EC	EXISTING CONDENSATE LINE
G	G	GAS LINE
EG	EG	EXISTING GAS LINE
AW	AW	EXISTING FIRE RATED WALL A FIRE DAMPER IS TO BE PROVIDED AND INSTALLED.
EAW	EAW	EXISTING ACID WASTE LINE
CUT-OFF VALVE		
CHECK VALVE		
HOSE BIBB		
CAP		
DRAIN		
GAS METER		
FLOOR SINK / O.S.D.		
SPRINKLER HEAD		
PLUMBING RISER		
WATER METER		
GAS COCK (VALVE)		
PRIMARY / OVERFLOW ROOF DRAIN		
V.T.R.		
F	F	
EF	EF	EXISTING SPRINKLER LINE
RD	RD	PRIMARY ROOF DRAIN LINE
ERD	ERD	EXISTING PRIMARY ROOF DN. LN.
ORD	ORD	OVERFLOW ROOF DRAIN LINE
EORD	EORD	EXISTING OVERFLOW RF. DN. LN.
SD	SD	STORM DRAIN
ESD	ESD	EXISTING STORM DRAIN LINE
INDICATES SAWCUT SLAB AND PATCH TO MATCH AFTERWARDS		

NOTE: NOT ALL SYMBOLS ARE USED

MECHANICAL DEMOLITION GENERAL NOTES

- CONTRACTOR TO VISIT SITE AND BE FAMILIAR WITH BUILDING MECHANICAL AND ELECTRICAL LAYOUTS.
- IF ASBESTOS IS FOUND CONTACT OWNER IMMEDIATELY. DO NOT WORK IN ANY AREA SUSPECTED TO CONTAIN ASBESTOS.
- ALL EXISTING EQUIPMENT SHOWN IN APPROXIMATE LOCATION. FIELD VERIFY.
- DO NOT RELEASE ANY REFRIGERANT TO ATMOSPHERE. DISPOSE OF IN A LAWFUL MANNER.
- ALL REUSED EXISTING MECHANICAL EQUIPMENT SHALL BE INSPECTED AND CLEANED FOR PROPER OPERATION.
- PROVIDE AND INSTALL A FIRE DAMPER WHERE NEW DUCTWORK CROSSES AN EXISTING FIRE RATED WALL. IF ANY EXISTING DUCTWORK CROSSES A NEW FIRE RATED WALL A FIRE DAMPER IS TO BE PROVIDED AND INSTALLED.
- ALL MATERIAL, EQUIPMENT, DUCTS, PIPE, ETC. TO BE REMOVED SHALL BE DISPOSED OF OFF SITE IN A LEGAL AND LAWFUL MANNER.
- ALL EXISTING FIRE DAMPERS OR SMOKE DAMPERS BEING REUSED SHALL REMAIN IN PLACE AND OPERATIONAL.
- REMOVE ONLY CEILING TILE NECESSARY TO ACCOMPLISH DEMOLITION AND NEW WORK, DUCT, ELECTRICAL, ETC. REPLACE ALL BROKEN TILES WITH NEW TILES TO MATCH EXISTING WHERE REQUIRED. REUSE EXISTING TILES.
- CAP ANY UNUSED PIPE AT FLOOR, WALL, CEILING. REMOVE MATERIAL NOT BEING REUSED.
- WHEN REMOVING HVAC AND PIPING, PATCH ALL WALLS WITH 5/8 SHEET ROCK ON EACH SIDE OF WALL. PAINT TO MATCH.
- LEAVE ANY DOMESTIC WATER HEATER IN PLACE AND OPERATIONAL.
- LEAVE ALL EXISTING EXHAUST FANS IN PLACE AND OPERATIONAL, UNLESS DRAWINGS SHOW TO REPLACE OR ADD EXHAUST FANS.
- REMOVE ALL CONDENSATE DRAIN PIPING FROM UNITS THAT ARE TO BE REPLACED. EACH AIR HANDLER UNIT HAS CONDENSATE PIPING.
- ALL AIR HANDLER BEING REINSTALLED TO MAINTAIN FILTER ACCESS. COORDINATE FILTER ACCESS DOORS WITH STRUCTURE.
- FOR ALL UNITS ABOVE THE CEILING THE CONTRACTOR SHALL REMOVE THE EXISTING CEILING GRID AND TILE FOR DEMOLITION AND REPLACE UPON INSTALLATION OF NEW EQUIPMENT. CONTRACTOR IS RESPONSIBLE FOR BROKEN TILE AND GRID.

MECHANICAL GENERAL NOTES

- MECHANICAL CONTRACTOR TO PROVIDE TO THE PLUMBING CONTRACTOR THE RECOMMENDED AC MANUFACTURERS DATA FOR CONDENSATE TRAPS PER EACH TYPE OF UNIT.
- THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OR ADJUSTMENT OF ALL HOLD DOWN BOLTS ON COMPRESSORS AT HVAC EQUIPMENT TO ALLOW FOR PROPER VIBRATION ISOLATION.
- THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF ALL ABANDONED SCREWS, PIPING, TAPE, PAPERS, PACKING PRODUCTS, ETC.
- ALL EQUIPMENT SHALL BE PROPERLY LABELED PER SPECIFICATIONS.
- CLOSE ALL OUTSIDE AIR DAMPERS UPON INSTALLATION AND KEEP ALL OUTSIDE AIR DAMPERS CLOSED UNTIL THE "TEST AND BALANCE" IS PERFORMED.
- SEAL WITH FIRE RETARDING SEALANT AROUND PIPE THROUGH ANY PENETRATION OF FIRE WALLS.
- ALL GRILLES ARE SHOWN IN APPROXIMATE LOCATION. FIELD VERIFY PLACEMENT WITH CEILING GRID.
- ALL DIFFUSERS/FLEX CONNECTIONS SHALL HAVE A RIGID METAL ELBOW UNLESS COMING DIRECTLY DOWN FROM A UNIT OR HEIGHT OF CEILING IS EXTREME. ALL FLEX DUCT TO HAVE AT LEAST ONE SUPPORT STRAP.
- THE SPACE AROUND DUCTS AND PENETRATING ITEMS OF SMOKE PARTITION WALLS SHALL BE FILLED WITH AN IBC APPROVED MATERIAL LIMITING THE FREE PASSAGE OF SMOKE.
- INSTALL CONDENSERS PER MANUFACTURER CLEARANCES.
- MECHANICAL CONTRACTOR SHALL SUBMIT TO ENGINEER REFRIGERANT LINE SET DESIGN AND ROUTING PER MANUFACTURER FOR REVIEW BEFORE INSTALLATION BEGINS.
- THE MECHANICAL CONTRACTOR SHALL APPLY ULTRA-VIOLET PROTECTIVE COATING OVER REFRIGERANT INSULATION PER MANUFACTURER.
- COORDINATE ALL UNITS, DUCTWORK, GRILLES, AND NEW REFRIGERANT LINES WITH ALL TRADES BEFORE INSTALLING.
- ALL HORIZONTAL AIR HANDLERS ABOVE CORRIDOR CEILINGS SHALL BE LOCATED TO POSITION SERVICE ACCESS PANELS TO FACE TOWARD CENTER OF CORRIDOR.
- ALL AIR HANDLERS: NO PIPING, CONDUITS, DUCTS, WIRING, DISCONNECTS, ETC. WILL BE ALLOWED TO BE INSTALLED CLOSER THAN 3'-0" (THREE FEET) IN FRONT OF THE SERVICE ACCESS PANEL.
- PROVIDE AND INSTALL 18 GAUGE 2" DEEP GALVANIZED DRAIN PAN UNDER EACH AIR HANDLER (PER DETAIL).
- ALL THERMOSTAT WIRING TO A/C UNITS SHALL BE SECURED TO REFRIGERANT LINES UTILIZING TEFLON TY-WRAPS.

PLUMBING GENERAL NOTES

- PLUMBING CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR A.D.A. PLUMBING FIXTURE AND STANDARD MOUNTING HEIGHTS.
- PLUMBING CONTRACTOR TO COORDINATE ALL PIPING ROUTING ABOVE WITH MECHANICAL AND ELECTRICAL CONTRACTORS BEFORE INSTALLING.
- ALL VALVES SHALL BE INSTALLED NO HIGHER THAN 2'-0" ABOVE THE CEILING. ACCESS DOORS TO BE INSTALLED AT ALL HARD CEILING LOCATIONS.
- ALL PIPING PENETRATIONS SHALL BE SLEEVED. COMPLETELY GROUT AROUND OUTSIDE OF SLEEVE AND FILL SLEEVE VOID AROUND PIPE WITH FIBERFRAX FIBRE-PUTTY.
- AT ALL DISSIMILAR METAL CONNECTIONS, PROVIDE AND INSTALL DIELECTRIC UNIONS IMMEDIATELY TO MINIMIZE USE OF GALVANIZED PIPE MATERIAL.
- PLUMBING CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR MOUNTING HEIGHTS OF ALL AIR HANDLERS TO GUARANTEE POSITIVE DRAINAGE OF ALL CONDENSATE DRAINS (1/8" PER FT. SLOPE - MINIMUM).
- MECHANICAL CONTRACTOR TO PROVIDE TO THE PLUMBING CONTRACTOR THE RECOMMENDED AC MANUFACTURERS' DATA FOR CONDENSATE TRAPS PER EACH TYPE OF UNIT.
- ALL CONCEALED EXISTING PIPING SHOWN IS BASED ON EXISTING M.E.P. DRAWINGS. FIELD VERIFY AS NECESSARY.
- PLUMBING CONTRACTOR TO COORDINATE ROUTING OF ANY NEW SEWER PIPING UNDER EXISTING BUILDINGS WITH STRUCTURAL ENGINEER TO AVOID PIERS.



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Phone: 1.800.933.0538



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01-25-2022

REVISION DATE

2022 HVAC RENOVATION
RAINS JUNIOR HIGH SCHOOL
 RAINS INDEPENDENT SCHOOL DISTRICT
 EMORY, TX

EMA JOB #: 1-001-0959-001

DRAWN BY: LRU

CHECKED: QS

MECHANICAL/PLUMBING
DETAILS
& NOTES

SHEET NUMBER

MEP7.2



EMA Engineering and Consulting
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SUBMISSION OF BID WILL BE CONSIDERED ACKNOWLEDGMENT THAT THE CONTRACTOR HAS VISITED THE SITE AND HAS VERIFIED ALL EXISTING JOB CONDITIONS AND INCLUDED ANY NECESSARY MODIFICATION TO EXISTING AND NEW WORK REQUIRED FOR INSTALLATION OF A COMPLETE AND WORKING SYSTEM.



ISSUE DATE
01-25-2022

REVISION	DATE

2022 HVAC RENOVATION
RAINS JUNIOR HIGH SCHOOL
RAINS INDEPENDENT SCHOOL DISTRICT
EMORY, TX

EMA JOB #: 1-001-0959-001
DRAWN BY: LPL
CHECKED: QS

ELECTRICAL GENERAL NOTES, DETAILS, SYMBOLS, AND PANEL SCHEDULES

SHEET NUMBER
MEP7.3

ELECTRICAL GENERAL NOTES (SOME NOTES MAY NOT BE USED)

- BRANCH CIRCUIT - PROVIDE A SEPARATE NEUTRAL CONDUCTOR FOR EACH CIRCUIT. MULTIPLE CIRCUITS SHALL NOT SHARE A COMMON NEUTRAL. NEUTRAL CONDUCTORS SHALL BE SIZED AS LARGE AS THE PHASE CONDUCTORS. NEUTRAL CONDUCTORS SHALL NOT BE OF A REDUCED SIZE.
- CONDUIT - WHERE POSSIBLE, ALL CONDUIT AND/OR CABLING SHALL BE INSTALLED BETWEEN THE BOTTOM AND TOP CHORD OF JOIST. WHERE NO CEILINGS ARE SCHEDULED, ALL CONDUIT SHALL BE UP AGAINST BOTTOM OF THE TOP CHORD. DO NOT SUPPORT OR REST CONDUITS ON BOTTOM CHORD OF THE JOISTS.
- CONDUIT - ROUTE CONDUIT IN EXPOSED AREAS PERPENDICULAR OR PARALLEL TO WALLS. ROUTE CONDUIT AS HIGH AS POSSIBLE AND ROUTE CONDUIT RUNS ADJACENT TO EACH OTHER. CONDUITS SHALL BE ORDERLY AND NEAT.
- EQUIPMENT - DURING THE SUBMITTAL PHASE, THIS CONTRACTOR SHALL SUBMIT LAYOUT OF ALL PANELS, SWITCHGEAR, TRANSFORMERS, CONTACTORS, ETC. IN EACH EQUIPMENT ROOM WHERE THIS EQUIPMENT IS LOCATED. ALL LAYOUTS MUST BE DRAWN TO SCALE AND DIMENSIONED.
- UTILITY - THE CONTRACTOR AND SUBCONTRACTORS SHALL COORDINATE WITH ALL UTILITY COMPANIES AND THE OWNER'S REPRESENTATIVE TO DETERMINE THE LOCATION OF ALL EXISTING LINES AND UTILITIES BEFORE DITCHING IS PERFORMED. THE CONTRACTOR AND SUBCONTRACTORS SHALL BE RESPONSIBLE FOR REPAIR OF ANY CUT OR DAMAGED LINES OR UTILITIES THAT ARE NOT SHOWN ON ANY PLANS.
- MECHANICAL - EXACT MECHANICAL EQUIPMENT LOCATIONS AND TYPE SHALL BE COORDINATED WITH MECHANICAL PLANS AND MECHANICAL CONTRACTOR. DO NOT INSTALL CONDUIT/CABLING WITHIN 3'-0" OF ANY HVAC UNIT UNLESS THE CONDUIT AND/OR CABLING SERVES THAT UNIT.
- MECHANICAL - UNLESS OTHERWISE NOTED ON THE DRAWINGS OR IN THE SPECIFICATIONS, PROVIDE A LISTED MANUAL MOTOR-CIRCUIT SWITCH AS A DISCONNECTING MEANS AT EACH MOTOR. FOR MOTORS SHOWN WITH "MS" PROVIDE A LISTED MANUAL MOTOR-CIRCUIT SWITCH WITH OVERLOAD PROTECTION AS A DISCONNECTING MEANS AT EACH MOTOR.
- MECHANICAL - SEE EXHAUST FAN SCHEDULE ON MECHANICAL SHEET FOR EXHAUST FAN SWITCHING. UNLESS CONTROLS ARE SPECIFICALLY NOTED ON THE DRAWINGS, WHERE TEMOS IS MENTIONED, PROVIDE MECHANICALLY-HELD CONTACTORS AS NECESSARY FOR FAN CONTROL. COORDINATE CONTACTOR COIL ELECTRICAL REQUIREMENTS WITH MECHANICAL CONTROLS CONTRACTOR, WHERE "24/7" IS MENTIONED, PROVIDE A MOTOR-RATED SWITCH AT THE MOTOR ONLY.
- CONDUIT - COORDINATE CONDUIT ROOF PENETRATIONS WITH MECHANICAL ROOF TOP UNITS AND/OR THRU HOODED PLUMBING PENETRATIONS TO CONDENSING UNITS.
- MECHANICAL - REFER TO THE MECHANICAL SHEETS FOR ALL SENSOR LOCATIONS, THERMOSTAT, HUMIDISTAT, CO2, etc. DUCT DETECTORS, CONTROL RELAYS, MOTORIZED DAMPERS, SPDs, etc. THIS CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY CONDUIT, BACK BOXES AND LINE VOLTAGE WIRING TO SENSORS, DEVICES, etc. AS REQUIRED TO ENSURE A COMPLETE AND OPERATIONAL SYSTEM. FOR MORE INFORMATION, REFER TO SPECIFICATIONS AND SENSOR INSTALLATION DETAIL.
- BRANCH CIRCUIT - ALL COMPUTER POWER OUTLETS TO BE ISOLATED GROUND WITH #10 AWG NEUTRAL. DIFFERENT CIRCUITS SHALL NOT SHARE A COMMON NEUTRAL.
- MECHANICAL - FOR ALL UNITS WITH PLASMA AIR IONIZATION DEVICE, PROVIDE CONTROL WIRING AS REQUIRED BY MANUFACTURER FROM LOW VOLTAGE FAN CONTROL TERMINALS TO POWER INPUT TERMINALS ON IONIZATION DEVICE. PROVIDE STEP-DOWN TRANSFORMERS AS REQUIRED TO PROVIDE LOW VOLTAGE POWER FROM UTILITIES TO THE CIRCUIT POWERING THE UNIT. COORDINATE EXACT ELECTRICAL REQUIREMENTS WITH MECHANICAL INSTALLER. LOCATE EACH TRANSFORMER IN A NEMA 3R ENCLOSURE MOUNTED AT THE UNIT.
- EXISTING METALLIC CONDUIT SYSTEM IS USED AS A GROUND IN THIS BUILDING. CONTRACTOR SHALL BOND ALL CONDUITS TO THE NEW PANEL CAN AS REQUIRED TO MAINTAIN ELECTRICAL CONTINUITY. PROVIDE JUMPERS AROUND ANY JOINTS OR PROVIDE LISTED CONNECTORS TO MAINTAIN CONDUIT GROUND FOR ANY EXTENSIONS OF EXISTING CONDUIT. RECONNECT ALL NEW AND EXISTING GROUND WIRES TO THE GROUND BUSS AND RECONNECT ALL NEW AND EXISTING NEUTRAL WIRES TO THE NEUTRAL BUSS.

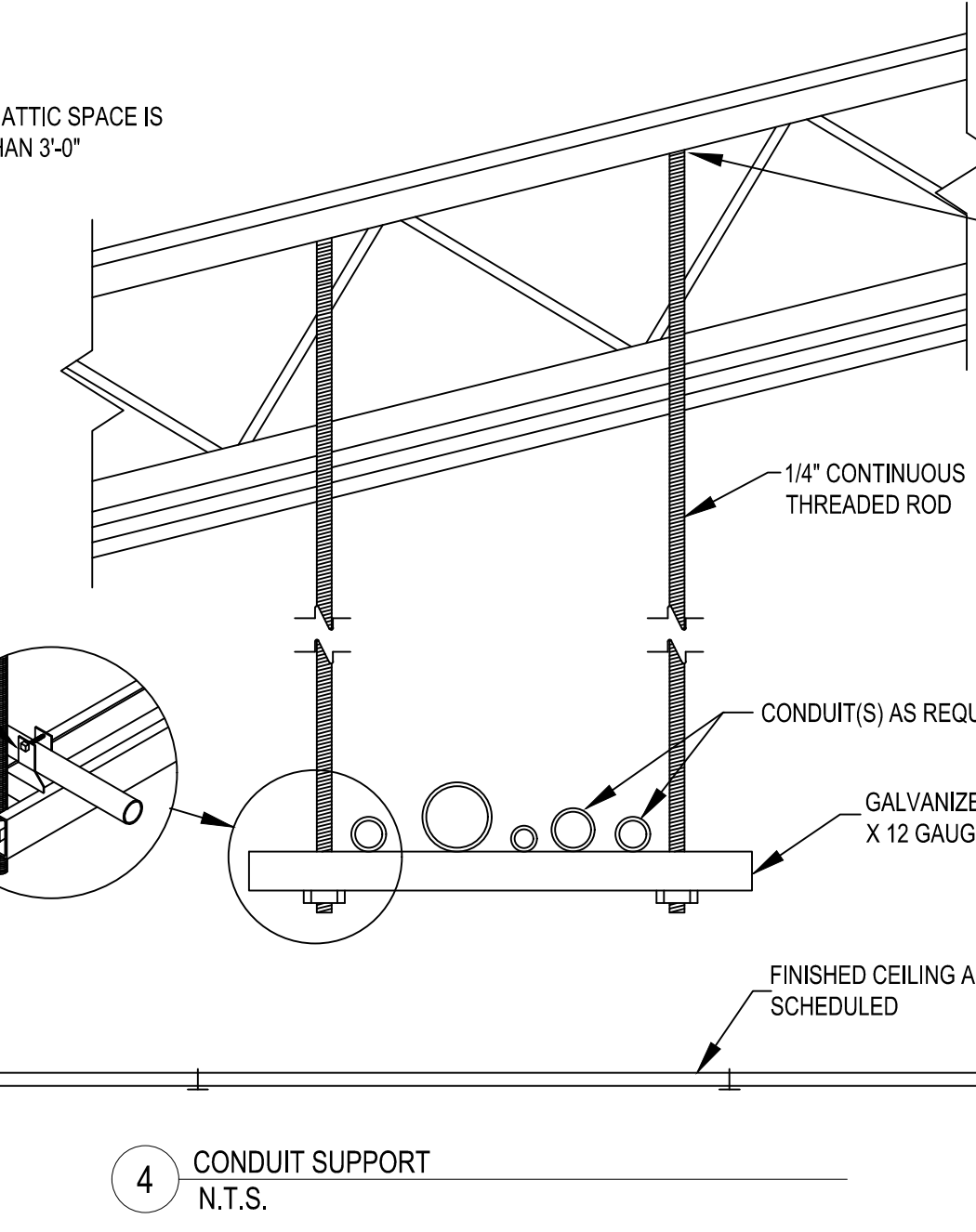
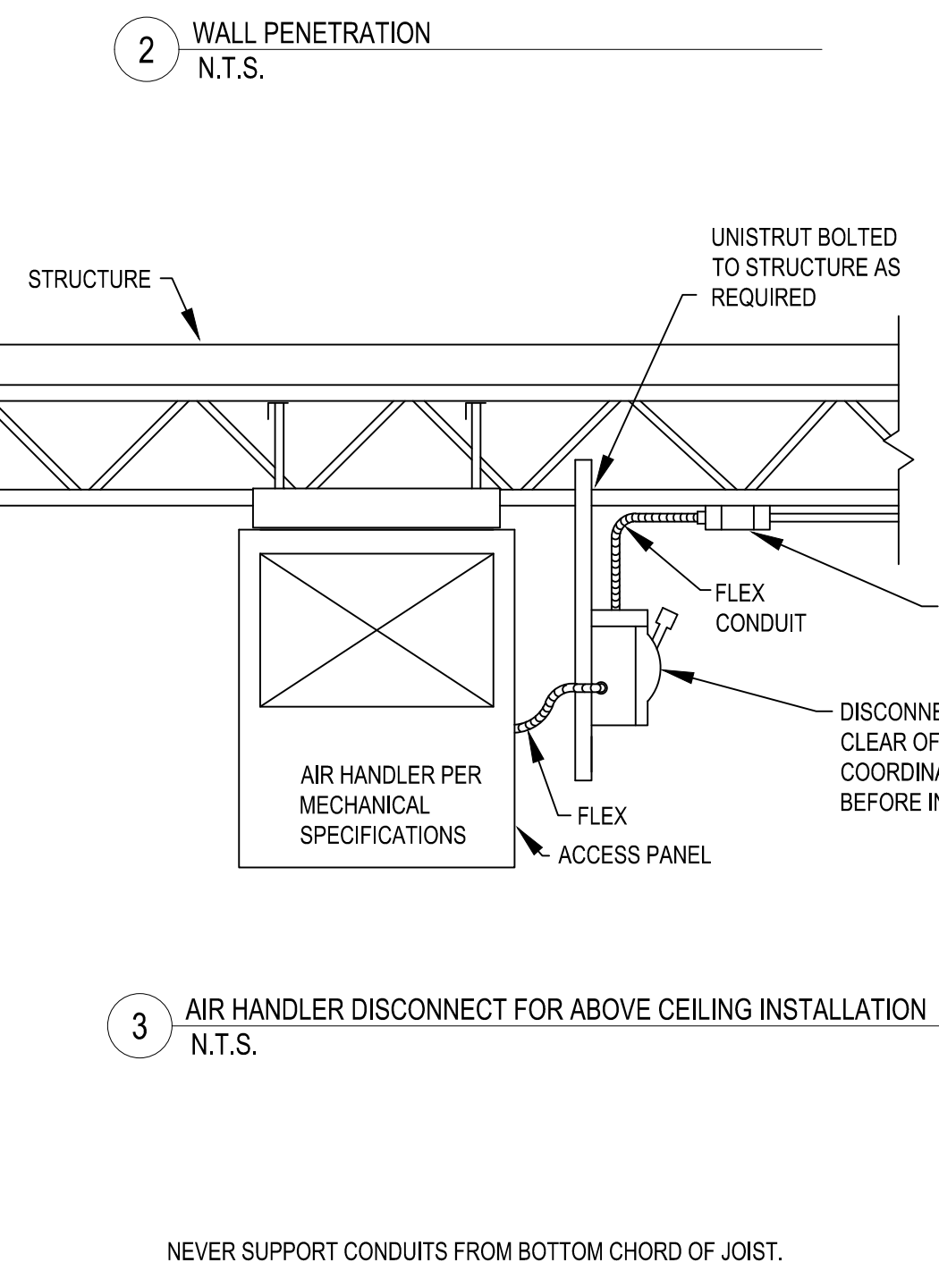
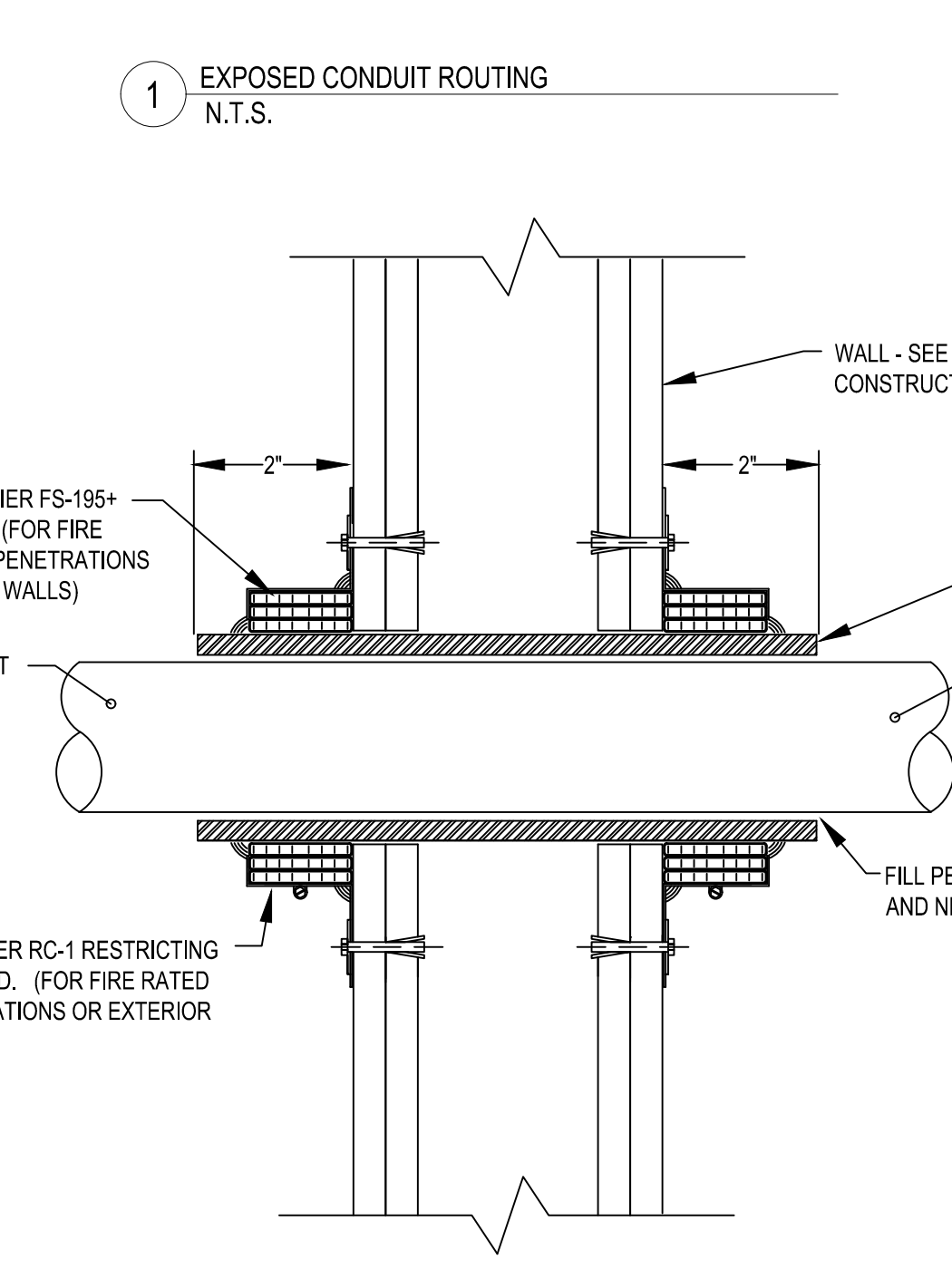
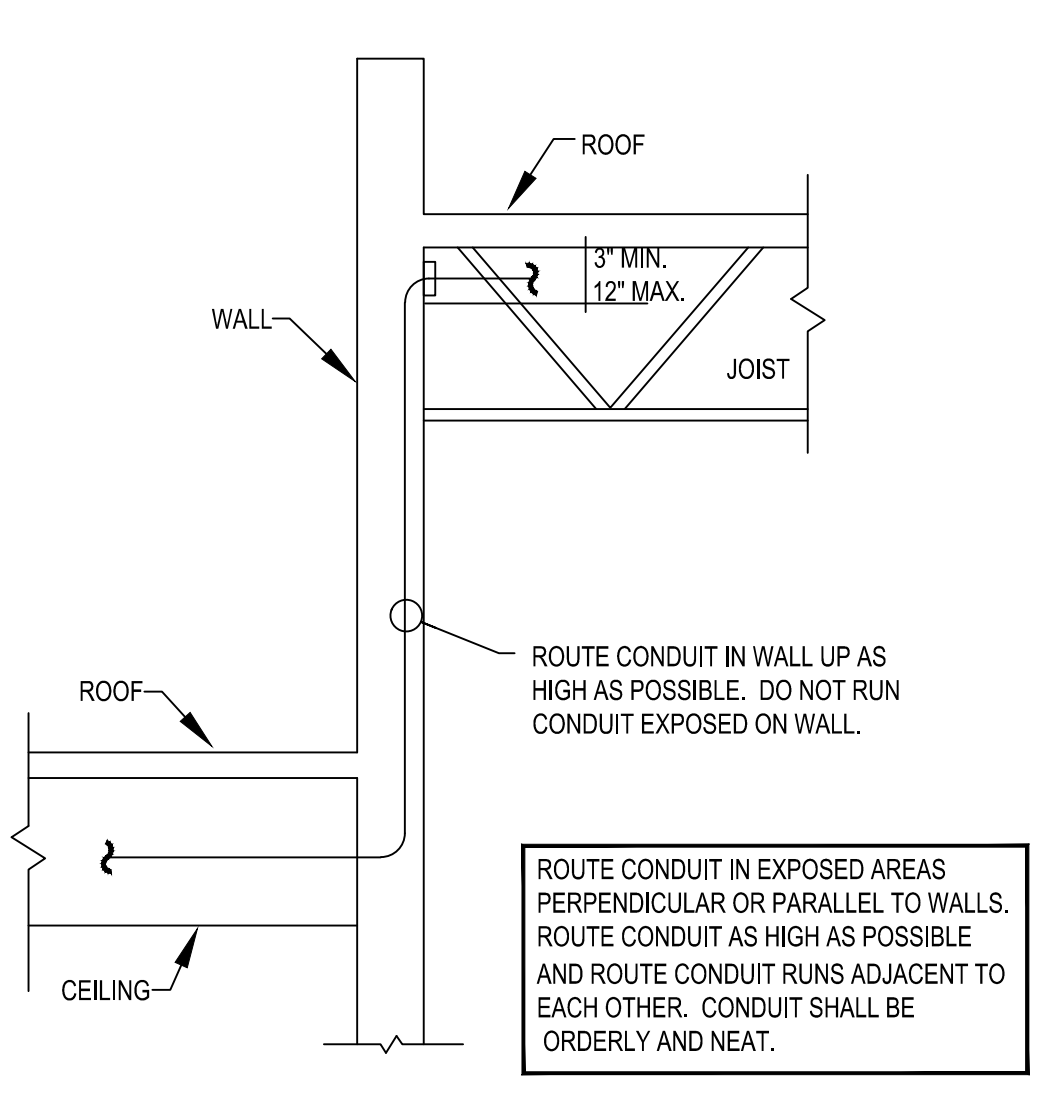
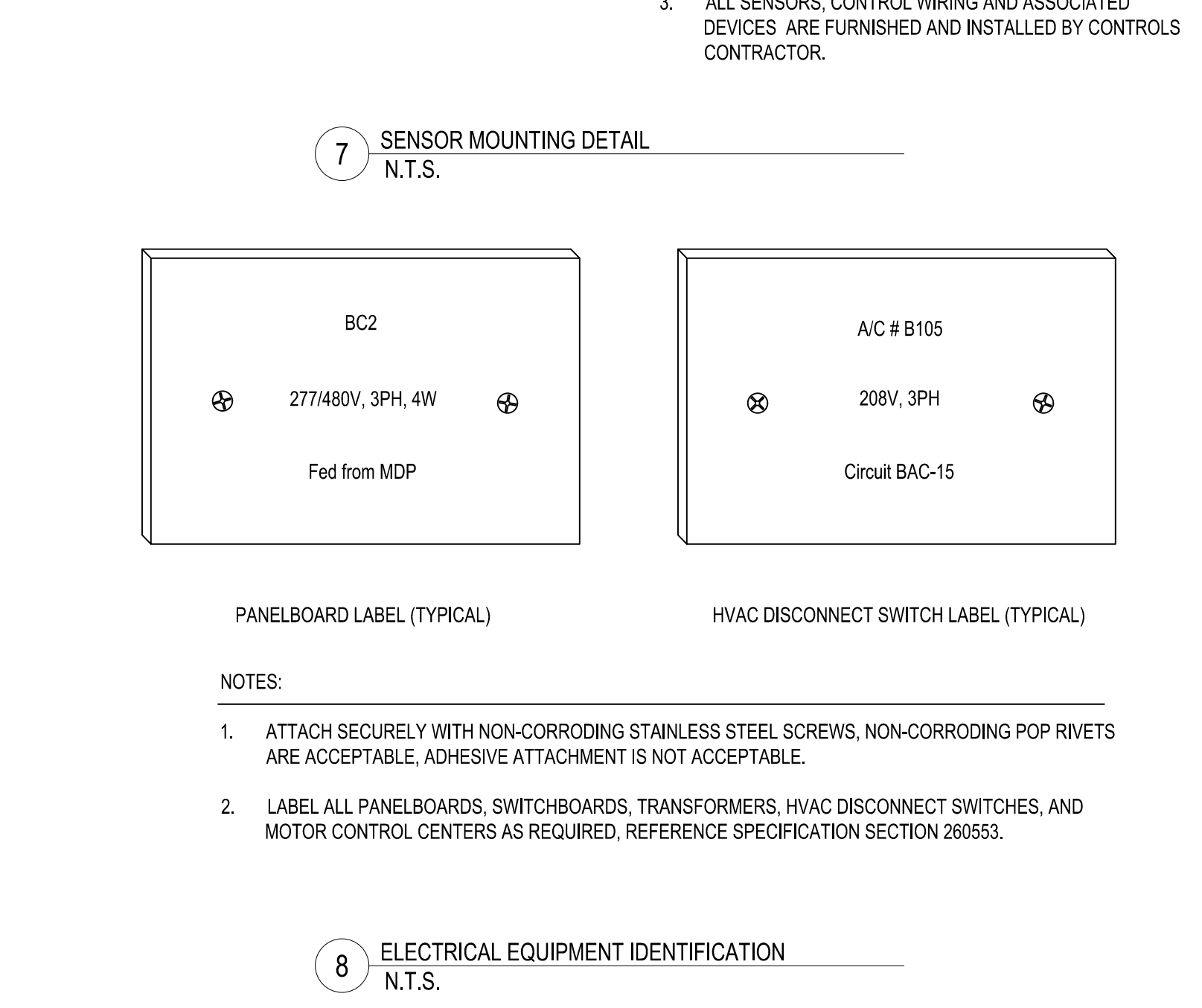
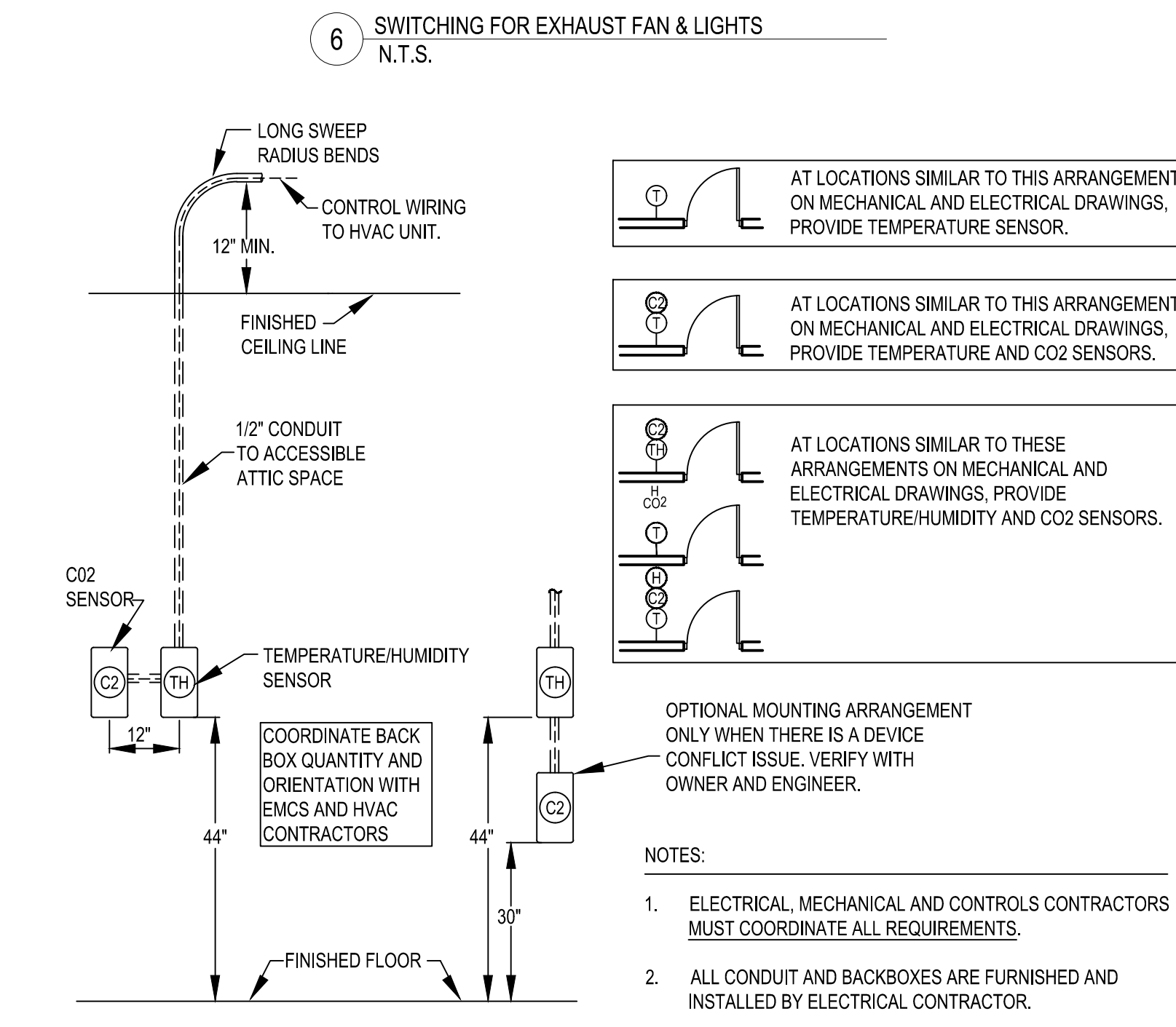
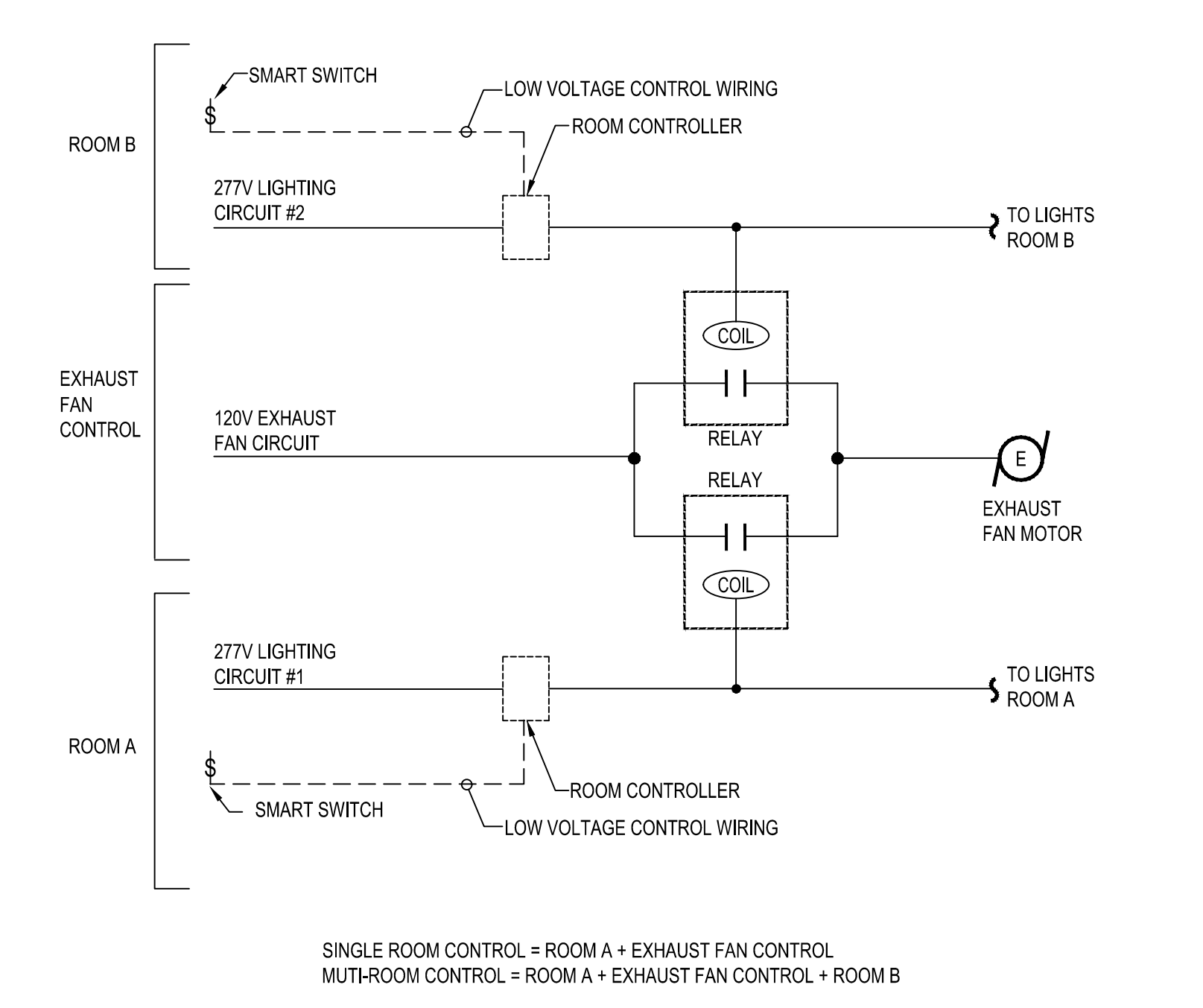
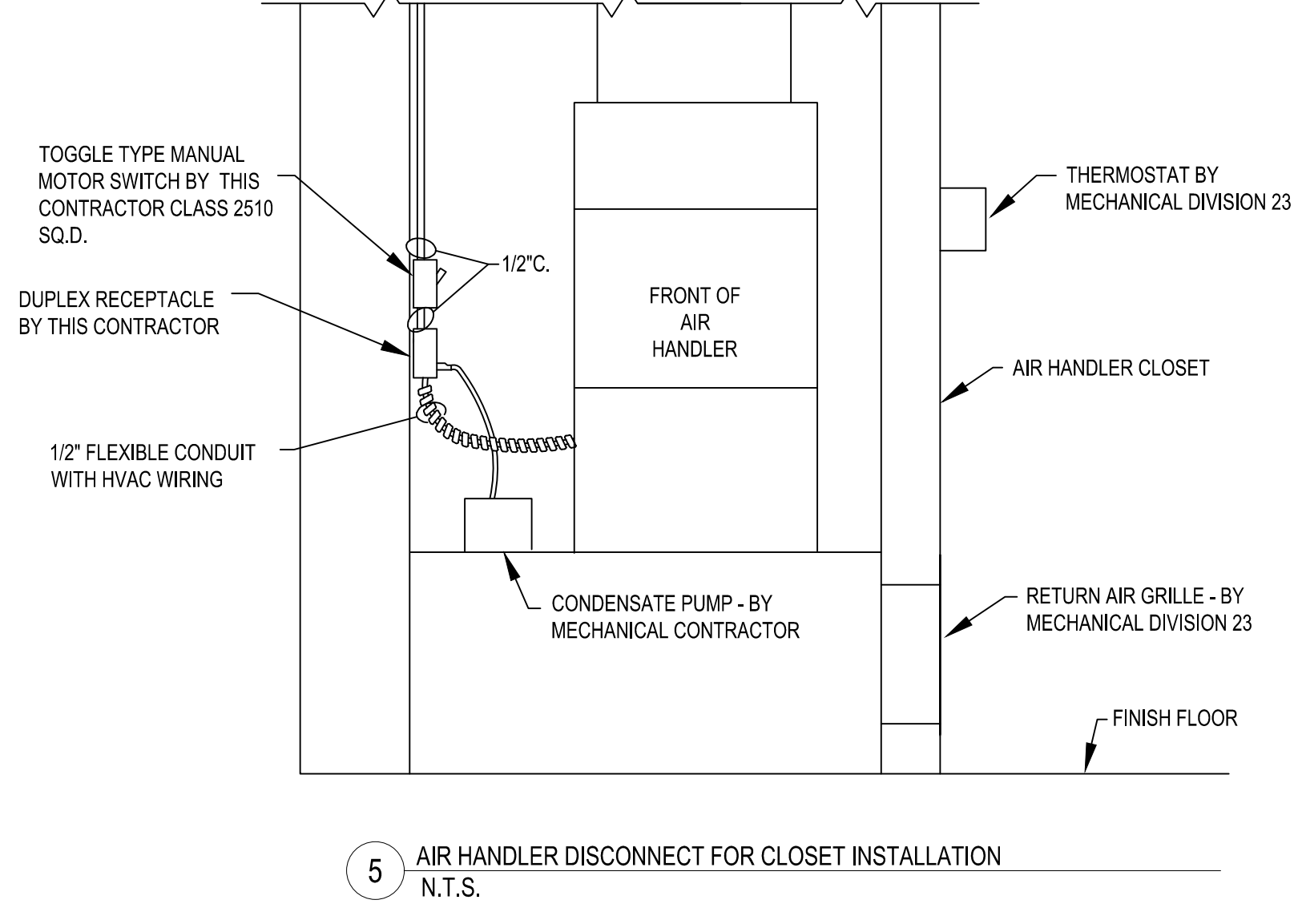
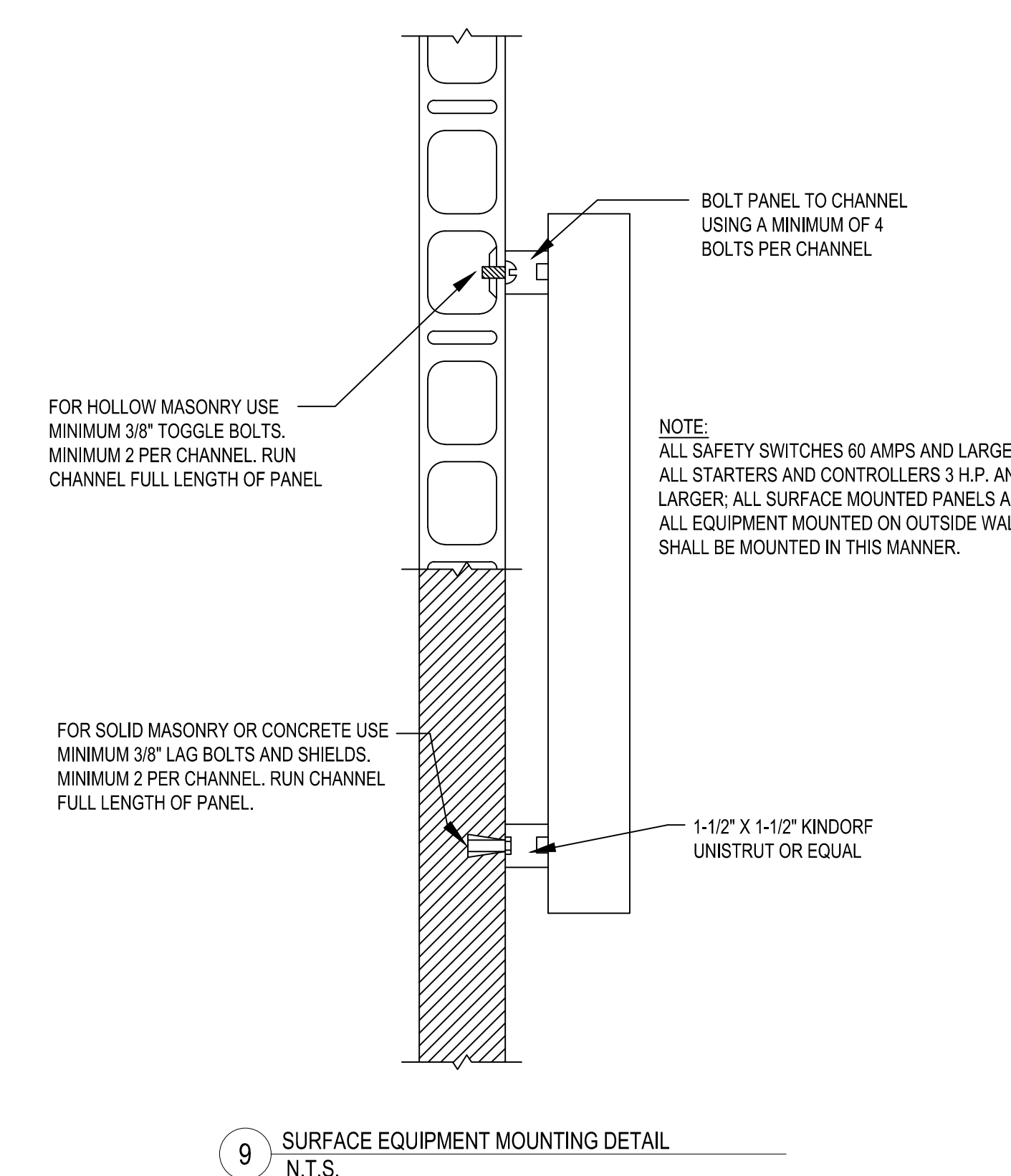
SYMBOL	DESCRIPTION
—	BRANCH CIRCUIT - CONDUIT IN WALL or ABOVE CEILING, INDICATES DEVICES AND EQUIPMENT ON A CIRCUIT. NOT INTENDED TO SHOW ROUTING
→ CL-1.3.5	ARROW INDICATES HOMERUN, TEXT INDICATES PANEL AND CIRCUIT
▭	PANEL BOARD or SWITCHGEAR (SEE PANEL SCHEDULES AND RISER DIAGRAM)
⊠	DISCONNECT / SAFETY SWITCH - SEE SCHEDULES FOR MORE INFORMATION
⊙	JUNCTION BOX - @ 18" AFF OR AS NOTED; FLUSH WALLS / FLUSH CEILING or FLOOR or ELSE
⊕	GFCI DUPLEX RECEPTACLE @6" ABOVE BACKSLASH IF SHOWN AT MILLWORK or @18" AFF - WEATHERPROOF GFCI
⊕	MOTOR - W/MOTOR SWITCH, OVERLOADS S.O.D. CLASS 2510, NEMA ENCL. (TYPE K) or AS NOTED. FINAL CONNECTION BY ELECTRICAL CONTRACTOR - MOTOR (GENERAL); EXHAUST FAN; SUPPLY FAN; PUMP
⊕	MOTOR TOGGLE SWITCH

- NOTES:
1. SOME SYMBOLS MAY NOT BE USED.
2. ALL DASHED SYMBOLS ARE SAME AS ABOVE BUT EXISTING.
3. ACCESSIBLE DEVICES HIGHEST OPERABLE PART TO BE 46" MAXIMUM/18" MINIMUM A.F.F. - REFER TO ELECTRICAL DETAILS AND ARCHITECTURAL DRAWINGS.

Panel - MSB		Bus - 1200A / 1000MCB		Located - MAIN ELEC						
Fed from - UTIL (480V 3PH)		Service - 277/480 3PH 4Wire		Floor Mount - Outside (NEMA 3R) Branch AIC - 65kA (43.13kA - Available)						
Provide *Provide - SPD, GFCI, GROUNDING & METERING PER SPECS		Div. Load - 0A (A), 0A (B), 0A (C)		* See Riser Diagram for wire size						
* See Riser Diagram for wire size		* See Riser Diagram for wire size		* See Riser Diagram for wire size						
DEVICES & EQUIPMENT SERVED	Phase	Tripp	Wire	CH#	LOAD KiloWatts	in CH#	Wire	Tripp	Phase	DEVICES & EQUIPMENT SERVED
PANEL MCH	3	225	-	1	0 (a) 0	2	-	400	3	PANEL MHDP
EXISTING LOAD FROM DEMOLISHED MSB	3	125	-	7	0 (a) 8	8	-	125	3	EXISTING LOAD FROM DEMOLISHED MSB
EXISTING LOAD FROM DEMOLISHED MSB	3	175	-	13	0 (a) 14	12	-	175	3	EXISTING LOAD FROM DEMOLISHED MSB
EXISTING LOAD FROM DEMOLISHED MSB	3	100	-	19	0 (a) 20	20	-	250	3	EXISTING LOAD FROM DEMOLISHED MSB
EXISTING LOAD FROM DEMOLISHED MSB	3	100	-	29	0 (a) 28	28	-	100	3	EXISTING LOAD FROM DEMOLISHED MSB
SPACE	3	125	-	31	0 (a) 32	32	-	125	3	SPACE
SPACE	3	125	-	33	0 (b) 34	34	-	125	3	SPACE
				39	0 (b) 40	40	-	125	3	SPACE
				41	0 (c) 42	42	-	125	3	SPACE

Panel - MHDP		Bus - 400A / MLO		In Room - MAIN ELEC						
Fed from - MSB (480V 3PH)		Service - 277/480 3PH 4Wire		Surface Mount - Inside (NEMA 1) Branch AIC - 42kA (40.25kA - Available)						
* See Riser Diagram for wire size		* See Riser Diagram for wire size		* See Riser Diagram for wire size						
DEVICES & EQUIPMENT SERVED	Phase	Tripp	Wire	CH#	LOAD KiloWatts	in CH#	Wire	Tripp	Phase	DEVICES & EQUIPMENT SERVED
EXISTING LOAD FROM DEMOLISHED MSB	3	30	-	1	0 (a) 0	2	-	30	3	EXISTING LOAD FROM DEMOLISHED MSB
EXISTING LOAD FROM DEMOLISHED MSB	3	30	-	7	0 (a) 8	8	-	30	3	EXISTING LOAD FROM DEMOLISHED MSB
EXISTING LOAD FROM DEMOLISHED MSB	3	30	-	11	0 (a) 12	12	-	30	3	EXISTING LOAD FROM DEMOLISHED MSB
EXISTING LOAD FROM DEMOLISHED MSB	2	30	-	13	0 (a) 14	14	-	30	3	EXISTING LOAD FROM DEMOLISHED MSB
EXISTING LOAD FROM DEMOLISHED MSB	3	30	-	17	0 (c) 18	18	-	15	3	EXISTING LOAD FROM DEMOLISHED MSB
EXISTING LOAD FROM DEMOLISHED MSB	3	30	-	19	0 (a) 20	20	-	15	3	EXISTING LOAD FROM DEMOLISHED MSB
EXISTING LOAD FROM DEMOLISHED MSB	3	70	-	23	0 (c) 24	24	-	100	3	SPACE
SPACE	1	-	-	29	0 (c) 30	30	-	100	3	SPACE
SPACE	3	100	-	31	0 (a) 32	32	-	100	3	SPACE
SPACE	3	100	-	33	0 (b) 34	34	-	100	3	SPACE
				35	0 (c) 36	36	-	100	3	SPACE
				37	0 (a) 38	38	-	100	3	SPACE
				39	0 (b) 40	40	-	100	3	SPACE
				41	0 (c) 42	42	-	100	3	SPACE

Panel - MCH		Bus - 225A / MLO		In Room - MAIN ELEC						
Fed from - MSB (480V 3PH)		Service - 277/480 3PH 4Wire		Surface Mount - Inside (NEMA 1) Branch AIC - 42kA (31.62kA - Available)						
* See Riser Diagram for wire size		* See Riser Diagram for wire size		* See Riser Diagram for wire size						
DEVICES & EQUIPMENT SERVED	Phase	Tripp	Wire	CH#	LOAD KiloWatts	in CH#	Wire	Tripp	Phase	DEVICES & EQUIPMENT SERVED
EXISTING LOAD - AC #JHGYMSW	3	20	-	1	0 (a) 0	2	-	20	3	EXISTING LOAD - AC #JHGYMNV
EXISTING LOAD - AC #JHGYMSE	3	20	-	7	0 (a) 8	8	-	30	3	EXISTING LOAD FROM DEMOLISHED MCC
EXISTING LOAD FROM DEMOLISHED MCC	3	30	-	11	0 (a) 12	12	-	30	3	EXISTING LOAD FROM DEMOLISHED MCC
EXISTING LOAD FROM DEMOLISHED MCC	3	30	-	15	0 (b) 16	16	-	30	3	EXISTING LOAD FROM DEMOLISHED MCC
EXISTING LOAD FROM DEMOLISHED MCC	3	30	-	17	0 (c) 18	18	-	30	3	EXISTING LOAD FROM DEMOLISHED MCC
EXISTING LOAD FROM DEMOLISHED MCC	3	30	-	19	0 (a) 20	20	-	30	3	EXISTING LOAD FROM DEMOLISHED MCC
EXISTING LOAD FROM DEMOLISHED MCC	3	30	-	21	0 (b) 22	22	-	30	3	EXISTING LOAD FROM DEMOLISHED MCC
EXISTING LOAD FROM DEMOLISHED MCC	3	30	-	23	0 (c) 24	24	-	30	3	EXISTING LOAD FROM DEMOLISHED MCC
EXISTING LOAD FROM DEMOLISHED MCC	3	30	-	25	0 (a) 26	26	-	30	3	EXISTING LOAD FROM DEMOLISHED MCC
EXISTING LOAD FROM DEMOLISHED MCC	3	30	-	27	0 (b) 28	28	-	30	3	EXISTING LOAD FROM DEMOLISHED MCC
EXISTING LOAD FROM DEMOLISHED MCC	3	30	-	29	0 (c) 30	30	-	30	3	EXISTING LOAD FROM DEMOLISHED MCC
EXISTING LOAD FROM DEMOLISHED MCC	3	30	-	31	0 (a) 32	32	-	30	3	EXISTING LOAD FROM DEMOLISHED MCC
				33	0 (b) 34	34	-	30	3	EXISTING LOAD FROM DEMOLISHED MCC
				35	0 (c) 36	36	-	30	3	EXISTING LOAD FROM DEMOLISHED MCC
				37	0 (a) 38	38	-	30	3	EXISTING LOAD FROM DEMOLISHED MCC
				39	0 (b) 40	40	-	30	3	EXISTING LOAD FROM DEMOLISHED MCC
				41	0 (c) 42	42	-	30	3	EXISTING LOAD FROM DEMOLISHED MCC



TOGGLE TYPE MANUAL MOTOR SWITCH BY THIS CONTRACTOR CLASS 2510 S.O.D.

1/2" FLEXIBLE CONDUIT WITH HVAC WIRING

ROOF

WALL

JOIST

3" MIN. 12" MAX.

ROUTE CONDUIT IN WALL UP AS HIGH AS POSSIBLE. DO NOT RUN CONDUIT EXPOSED ON WALL.

ROUTE CONDUIT IN EXPOSED AREAS PERPENDICULAR OR PARALLEL TO WALLS. ROUTE CONDUIT AS HIGH AS POSSIBLE AND ROUTE CONDUIT RUNS ADJACENT TO EACH OTHER. CONDUIT SHALL BE ORDERLY AND NEAT.

1 EXPOSED CONDUIT ROUTING N.T.S.

2 WALL PENETRATION N.T.S.

3 AIR HANDLER DISCONNECT FOR ABOVE CEILING INSTALLATION N.T.S.

NEVER SUPPORT CONDUITS FROM BOTTOM CHORD OF JOIST.

USE WHERE ATTIC SPACE IS GREATER THAN 3'-0"

ATTACH TO TOP CHORD OF STRUCTURE AS REQUIRED WITH BEAM CLAMPS

1/4" CONTINUOUS THREADED ROD

CONDUIT(S) AS REQUIRED

GALVANIZED CHANNEL - 1 5/8" X 1 5/8" X 12 GAUGE SPACED AS DIRECTED

FINISHED CEILING AS SCHEDULED

4 CONDUIT SUPPORT N.T.S.

5 AIR HANDLER DISCONNECT FOR CLOSET INSTALLATION N.T.S.

ROOM B

ROOM A

SMART SWITCH

LOW VOLTAGE CONTROL WIRING

ROOM CONTROLLER

277V LIGHTING CIRCUIT #2

TO LIGHTS ROOM B

120V EXHAUST FAN CIRCUIT

RELAY

RELAY

EXHAUST FAN MOTOR

277V LIGHTING CIRCUIT #1

TO LIGHTS ROOM A

SMART SWITCH

LOW VOLTAGE CONTROL WIRING

3 SWITCHING FOR EXHAUST FAN & LIGHTS N.T.S.

LONG SWEEP RADIUS BENDS

12" MIN.

CONTROL WIRING TO HVAC UNIT.

FINISHED CEILING LINE

1/2" CONDUIT TO ACCESSIBLE ATTIC SPACE

AT LOCATIONS SIMILAR TO THIS ARRANGEMENT ON MECHANICAL AND ELECTRICAL DRAWINGS, PROVIDE TEMPERATURE SENSOR.

AT LOCATIONS SIMILAR TO THIS ARRANGEMENT ON MECHANICAL AND ELECTRICAL DRAWINGS, PROVIDE TEMPERATURE AND CO2 SENSORS.

AT LOCATIONS SIMILAR TO THESE ARRANGEMENTS ON MECHANICAL AND ELECTRICAL DRAWINGS, PROVIDE TEMPERATURE/HUMIDITY AND CO2 SENSORS.

OPTIONAL MOUNTING ARRANGEMENT ONLY WHEN THERE IS A DEVICE CONFLICT ISSUE. VERIFY WITH OWNER AND ENGINEER.

NOTES:

- ELECTRICAL, MECHANICAL AND CONTROLS CONTRACTORS MUST COORDINATE ALL REQUIREMENTS.
- ALL CONDUIT AND BACKBOXES ARE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
- ALL SENSORS, CONTROL WIRING AND ASSOCIATED DEVICES ARE FURNISHED AND INSTALLED BY CONTROLS CONTRACTOR.

7 SENSOR MOUNTING DETAIL N.T.S.

BC2

277/480V, 3PH, 4W

Fed from MDP

A/C # B105

208V, 3PH

Circuit BAC-15

PANELBOARD LABEL (TYPICAL)

HVAC DISCONNECT SWITCH LABEL (TYPICAL)

NOTES:

- ATTACH SECURELY WITH NON-CORRODING STAINLESS STEEL SCREWS, NON-CORRODING POP RIVETS ARE ACCEPTABLE. ADHESIVE ATTACHMENT IS NOT ACCEPTABLE.
- LABEL ALL PANELBOARDS, SWITCHBOARDS, TRANSFORMERS, HVAC DISCONNECT SWITCHES, AND MOTOR CONTROL CENTERS AS REQUIRED. REFERENCE SPECIFICATION SECTION 260553.

8 ELECTRICAL EQUIPMENT IDENTIFICATION N.T.S.

GRILLE SCHEDULE						
"XX" CFM	DESCRIPTION	MODEL	FINISH	NECK	REMARKS: PROVIDE	
A	OUTSIDE AIR INTAKE LOUVER	POTTORFF EXD-645	BAKED ENAMEL	12"x12"	MOTORIZED DAMPER TO CLOSE WHEN UNIT IS OFF, FINISH COLOR TO BE DETERMINED BY OWNER.	
B	OUTSIDE AIR INTAKE LOUVER	POTTORFF EXD-645	BAKED ENAMEL	18"x12"	MOTORIZED DAMPER TO CLOSE WHEN UNIT IS OFF, FINISH COLOR TO BE DETERMINED BY OWNER.	
B	OUTSIDE AIR INTAKE LOUVER	POTTORFF EXD-645	BAKED ENAMEL	24"x18"	MOTORIZED DAMPER TO CLOSE WHEN UNIT IS OFF, FINISH COLOR TO BE DETERMINED BY OWNER.	
C	OUTSIDE AIR INTAKE LOUVER	POTTORFF EXD-645	BAKED ENAMEL	36"x18"	MOTORIZED DAMPER TO CLOSE WHEN UNIT IS OFF, FINISH COLOR TO BE DETERMINED BY OWNER.	

AIR IONIZER SCHEDULE			
SYSTEM CFM	MANUFACTURER	MODEL	REMARKS
0 - 1400	BIOCLIMATIC	IGDN-1	BULB-LESS DESIGN, 24V POWER
1400 - 2800	BIOCLIMATIC	IGDN-2	BULB-LESS DESIGN, 24V POWER
2800 - 4200	BIOCLIMATIC	IGDN-3	BULB-LESS DESIGN, 24V POWER
4200 - 6000	BIOCLIMATIC	IGDN-4	BULB-LESS DESIGN, 24V POWER
6000 - 7200	BIOCLIMATIC	IGDNR-6	BULB-LESS DESIGN, 24V POWER
7200 - 8400	BIOCLIMATIC	IGDNR-7	BULB-LESS DESIGN, 24V POWER. 8000 CFM+ REQUIRE 2 IONIZERS

NOTE: UNITS RECEIVING IONIZERS SHALL HAVE 2 POSITION DAMPERS (OPEN AND CLOSED)

SUPPLY FAN SCHEDULE							
MARK	CFM @ E.S.P.	MOTOR HP/W	MANUFACTURER MODEL	ELECTRICAL DATA	SONES	CONTROL	ACCESSORIES: PROVIDE
A	350 0.25	1/8 HP	COOK 100-SQ-N-D	120V, 1Ø	3.1	EMCS	
B	400 0.25	1/8 HP	COOK 100-SQ-N-D	120V, 1Ø	3.4	EMCS	
C	600 0.25	1/8 HP	COOK 120-SQ-N-D	120V, 1Ø	4.4	EMCS	
D	1600 0.25	1/4 HP	COOK 150-SQ-N-D	120V, 1Ø	8.3	EMCS	

- A SFH CNL, JWH, JSH, LIB1, LIB2, LIB3, LIB4, NLK, NLKM, OFF, PRN, 120, 122, 207, 211, 304, 305, 306, 307, 310, 351, 404, 405, 408A, 409A, 409IT,
 B SFH BNDH, SKL, SKM, 121, 352, 353, 413
 C SFH GSE, GSW, GNE, GNW
 D SFH CAPE

GAS/ELEC SPLIT SYSTEM																
MARK	NOM. TONS	HIGH SPEED CFM	LOW SPEED CFM	OA CFM MAX	OA CFM MIN	MANUFACTURER USED IN DESIGN: TRANE MODEL NO.	EXTERNAL STATIC PRESSURE (IN. W.C.)	SEER/EER	ELECTRICAL		DX COOLING		HEATING		UNIT WEIGHT (LB.)	REMARKS:
									VOLTAGE/PHASE	MCA/MOCP	TOTAL CAPACITY (MBTUH)	SENSIBLE CAPACITY (MBTUH)	HEAT OUTPUT (MBTUH)	AUX. HEAT INPUT (KW)		
A	3.0	1200	800	350	200	AH - 4TXC0065S3 FURNACE - SV920004MPSB AC - 4TTA7036A3	0.5	17.5/12.5	AH - 120V, 1Ø AC - 208V, 3Ø	AH - 12/15 AC - 15/25	34.9	27.7	32.8	N/A	AH - 200 AC - 200	1, 2, 3, 4, 5, 6, 7, 8, 9
B	4.0	1600	1100	350	200	AH - 4TXC0090S3 FURNACE - SV92C100USP5B AC - 4TTA7048A3	0.5	17.0/13.0	AH - 120V, 1Ø AC - 208V, 3Ø	AH - 14/15 AC - 18/30	46.4	35.4	47.5	N/A	AH - 200 AC - 200	1, 2, 3, 4, 5, 6, 7, 8, 9

- A JH108, JH112, JH113
 B JH109, JH110, JH111

- Remarks:
 1. 2" EXTERNAL FILTER RACK W/ MERV 8 FILTERS
 2. THERMAL EXPANSION VALVE
 3. HAIL COIL GUARD
 4. MOTORIZED OUTSIDE AIR DAMPER
 5. R410-A REFRIGERANT
 6. TWO STAGE COMPRESSOR
 7. MULTIPLE COMPRESSORS
 8. BIPOLAR IONIZATION
 9. SINGLE POINT POWER

HEAT PUMP SPLIT SYSTEM - 208V, 1Ø																
MARK	NOM. TONS	HIGH SPEED CFM	LOW SPEED CFM	OA CFM MAX	OA CFM MIN	MANUFACTURER USED IN DESIGN: TRANE MODEL NO.	EXTERNAL STATIC PRESSURE (IN. W.C.)	SEER/EER	ELECTRICAL		DX COOLING		HEATING		UNIT WEIGHT (LB.)	REMARKS:
									VOLTAGE/PHASE	MCA/MOCP	TOTAL CAPACITY (MBTUH)	SENSIBLE CAPACITY (MBTUH)	HEAT OUTPUT (MBTUH)	AUX. HEAT INPUT (KW)		
A	3.0	1200	800	350	200	AH - TEM6A0836 AC - 4TW7036	0.5	17.0/-	AH - 208V, 1Ø AC - 208V, 1Ø	AH - 23/25 AC - 21/35	34.9	27.7	32.0	2.88 KW @208V	AH - 200 AC - 200	1, 2, 3, 4, 5, 6, 7, 8, 9
B	4.0	1600	1100	350	200	AH - TEM6A0848 AC - 4TW7048	0.5	17.0/-	AH - 208V, 1Ø AC - 208V, 1Ø	AH - 26/30 AC - 28/45	46.4	35.4	46.5	2.88 KW @208V	AH - 200 AC - 200	1, 2, 3, 4, 5, 6, 7, 8, 9
C	5.0	1990	1300	400	200	AH - TEM6A0860 AC - 4TW7060	0.5	16.5/-	AH - 208V, 1Ø AC - 208V, 1Ø	AH - 26/30 AC - 37/60	54.8	42.3	54.5	2.88 KW @208V	AH - 200 AC - 200	1, 2, 3, 4, 5, 6, 7, 8, 9

- A JHCounselor, JH101, JH102, JH103, JH104, JH105, JH106, JH107, JH114, JH115, JH116, JH117, JH201, JH202, JH203, JH204, JH205, JH206, JH301, JH302, JH303, JH351, JH408A, JH409A, JH409B
 B JHMaint, JH122
 C JH409IT

- Remarks:
 1. 2" EXTERNAL FILTER RACK W/ MERV 8 FILTERS
 2. THERMAL EXPANSION VALVE
 3. HAIL COIL GUARD
 4. MOTORIZED OUTSIDE AIR DAMPER
 5. R410-A REFRIGERANT
 6. TWO STAGE COMPRESSOR
 7. MULTIPLE COMPRESSORS
 8. BIPOLAR IONIZATION
 9. SINGLE POINT POWER

HEAT PUMP SPLIT SYSTEM - 460V, 3Ø																
MARK	NOM. TONS	HIGH SPEED CFM	LOW SPEED CFM	OA CFM MAX	OA CFM MIN	MANUFACTURER USED IN DESIGN: TRANE MODEL NO.	EXTERNAL STATIC PRESSURE (IN. W.C.)	SEER/EER	ELECTRICAL		DX COOLING		HEATING		UNIT WEIGHT (LB.)	REMARKS:
									VOLTAGE/PHASE	MCA/MOCP	TOTAL CAPACITY (MBTUH)	SENSIBLE CAPACITY (MBTUH)	HEAT OUTPUT (MBTUH)	AUX. HEAT INPUT (KW)		
A	3.0	1200	800	350	200	AH - TEM6A0C36 AC - 4TW7036A4	0.5	17.0/-	AH - 208V, 1Ø AC - 460V, 3Ø	AH - 23/25 AC - 8/15	35.6	28.3	33.6	2.88 KW @208V	AH - 200 AC - 200	1, 2, 3, 4, 5, 6, 7, 8, 9
B	4.0	1600	1100	350	200	AH - TEM6A0C48 AC - 4TW7048A4	0.5	17.0/-	AH - 208V, 1Ø AC - 460V, 3Ø	AH - 26/30 AC - 9/15	46.4	35.4	47.5	2.88 KW @208V	AH - 200 AC - 200	1, 2, 3, 4, 5, 6, 7, 8, 9
C	5.0	1990	1300	400	200	AH - TEM6A0C60 AC - 4TW7060A4	0.5	16.5/-	AH - 208V, 1Ø AC - 460V, 3Ø	AH - 26/30 AC - 10/15	54.8	42.3	55.0	2.88 KW @208V	AH - 200 AC - 200	1, 2, 3, 4, 5, 6, 7, 8, 9
D	7.5	3000	2000	600	200	AH - TEM6A0C36 AC - 4TW7036A4	0.5	- / 12.8	AH - 460V, 3Ø AC - 460V, 3Ø	AH - 12/15 AC - 15/20	92.8	74.2	52.8	5.00 KW @460V	AH - 360 AC - 420	1, 2, 3, 4, 5, 6, 7, 8, 9
E	20.0	8000	5300	1600	200	AH - TEM6A0C60 AC - 4TW7060A4	0.5	- / 12.8	AH - 460V, 3Ø AC - 460V, 3Ø	AH - 23/25 AC - 46/60	248.6	196.0	150.3	10.01 KW @460V	AH - 900 AC - 850	1, 2, 3, 4, 5, 6, 7, 8, 9

- A JHBreakRoom, JHLIB1, JHLIB2, JHLIB3, JHLIB4, JHNLKRL, JHNLKRM, JHOffice, JHPrincipal, JHSHall, JHWHall, JH408B, JH207, JH211, JH304, JH305, JH306, JH307, JH310, JH404, JH405
 B JH120
 C JHBandHall, JHKitchen, JHSLKRM, JH121, JH409IT, JH413,
 D JHGymSE, JHGymSW, JHGymNE, JHGymNW
 E JHCafe

- Remarks:
 1. 2" EXTERNAL FILTER RACK W/ MERV 8 FILTERS
 2. THERMAL EXPANSION VALVE
 3. HAIL COIL GUARD
 4. MOTORIZED OUTSIDE AIR DAMPER
 5. R410-A REFRIGERANT
 6. TWO STAGE COMPRESSOR
 7. MULTIPLE COMPRESSORS
 8. BIPOLAR IONIZATION
 9. SINGLE POINT POWER

MECHANICAL SYMBOLS	
THERMOSTAT/SENSOR (PER SPEC.)	⊕
CO2 SENSOR	⊕
HUMIDISTAT	⊕
THERMOSTAT / HUMIDISTAT	⊕
CONTROL RELAY	⊕
DUCT DETECTOR WITH CONTROL RELAY	⊕
CFM (CUBIC FT. PER MIN.)	⊕
GRILLE TYPE	⊕
DUCT DIAMETER	⊕
RETURN AIR GRILLE WITH ARROW	⊕
SUPPLY GRILLE WITH AIR FLOW	⊕
MANUAL VOLUME DAMPER	⊕
DOWN WITH MANUAL VOLUME DAMPER	⊕
MOTORIZED DAMPER	⊕
FIRE DAMPER (FD)	⊕
SMOKE FIRE DAMPER (SFD)	⊕
ROUND	⊕
BALANCING DAMPER * (BAL)	⊕
SACK DRAFT DAMPER (BDD)	⊕
EXHAUST FAN	⊕
ROOF RELIEF	⊕
SUPPLY FAN	⊕
EXISTING DUCT / PIPE CAP	⊕
REFRIGERANT LINE	⊕
SERVICE ACCESS AREA	⊕
UNIT	⊕
SPRAL DUCT	⊕
FLEX DUCT	⊕
MEDIUM PRESSURE DUCT	⊕
FLAT OVAL DUCT	⊕

NOTE: SOME SYMBOLS MAY NOT BE USED.
 * OPPOSED BLADE DAMPER TO BE NAULER SERIES 1021 OR EQUAL FOR AIR BALANCING

EXISTING MECHANICAL SYMBOLS	
EXISTING THERMOSTAT	⊕
CFM (CUBIC FT. PER MIN.)	⊕
EXISTING RETURN AIR GRILLE	⊕
EXISTING SUPPLY GRILLE	⊕
EXISTING DUCT	⊕
EXISTING UNIT	⊕
EXISTING EXHAUST/SUPPLY FAN/ ROOF RELIEF	⊕
EXISTING GAS REGULATOR	⊕
EXISTING GAS METER	⊕
EXISTING GAS LINE	⊕
CAP	⊕

NOTE: SOME SYMBOLS MAY NOT BE USED.

COMcheck Software Version 4.1.5.1 Mechanical Compliance Certificate

Project Information

Energy Code: 2015 IECC
 Project Title: Rains, JH HVAC Renovations
 Location: Emory, Texas
 Climate Zone: 3a
 Project Type: Alteration

Construction Site: Rains, TX
 Owner/Agent: Rains ISD
 Designer/Contractor: EMA Engineering & Consulting
 328 S Broadway
 Tyler, TX 75702

Mechanical Systems List

Quantity System Type & Description

25 HP, 208/1 - 3T (Single Zone):
 Split System Heat Pump
 Heating Mode: Capacity = 32 kBtu/h,
 Proposed Efficiency = 8.20 HSPF, Required Efficiency = 8.20 HSPF
 Cooling Mode: Capacity = 35 kBtu/h,
 Proposed Efficiency = 17.00 SEER, Required Efficiency = 14.00 SEER
 Fan System: Supply Fan 1/2 HP -- Compliance (Motor nameplate HP method) : Passes

Fans:
 FAN 1 Supply, Constant Volume, 1200 CFM, 0.5 motor nameplate hp, 0.0 fan efficiency grade

2 HP, 208/1 - 4T (Single Zone):
 Split System Heat Pump
 Heating Mode: Capacity = 47 kBtu/h,
 Proposed Efficiency = 8.20 HSPF, Required Efficiency = 8.20 HSPF
 Cooling Mode: Capacity = 46 kBtu/h,
 Proposed Efficiency = 17.00 SEER, Required Efficiency = 14.00 SEER
 Fan System: Supply Fan 1/2 HP -- Compliance (Motor nameplate HP method) : Passes

Fans:
 FAN 1 Supply, Constant Volume, 1200 CFM, 0.5 motor nameplate hp, 0.0 fan efficiency grade

1 HP, 208/1 - 5T (Single Zone):
 Split System Heat Pump
 Heating Mode: Capacity = 55 kBtu/h,
 Proposed Efficiency = 8.20 HSPF, Required Efficiency = 8.20 HSPF
 Cooling Mode: Capacity = 55 kBtu/h, Air Economizer
 Proposed Efficiency = 16.50 SEER, Required Efficiency = 14.00 SEER
 Fan System: Supply Fan 1/2 HP -- Compliance (Motor nameplate HP method) : Passes

Fans:
 FAN 1 Supply, Constant Volume, 1200 CFM, 0.5 motor nameplate hp, 0.0 fan efficiency grade

21 HP, 460/3 - 3T (Single Zone):
 Split System Heat Pump
 Heating Mode: Capacity = 34 kBtu/h,
 Proposed Efficiency = 8.20 HSPF, Required Efficiency = 8.20 HSPF
 Cooling Mode: Capacity = 36 kBtu/h,
 Proposed Efficiency = 16.50 SEER, Required Efficiency = 14.00 SEER
 Fan System: Supply Fan 1/2 HP -- Compliance (Motor nameplate HP method) : Passes

Project Title: Rains JH HVAC Renovations
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Quantity System Type & Description

Fans:
 FAN 1 Supply, Constant Volume, 1200 CFM, 0.5 motor nameplate hp, 0.0 fan efficiency grade

1 HP, 460/3 - 4T (Single Zone):
 Split System Heat Pump
 Heating Mode: Capacity = 48 kBtu/h,
 Proposed Efficiency = 8.20 HSPF, Required Efficiency = 8.20 HSPF
 Cooling Mode: Capacity = 48 kBtu/h,
 Proposed Efficiency = 16.50 SEER, Required Efficiency = 14.00 SEER
 Fan System: Supply Fan 1/2 HP -- Compliance (Motor nameplate HP method) : Passes

Fans:
 FAN 1 Supply, Constant Volume, 1200 CFM, 0.5 motor nameplate hp, 0.0 fan efficiency grade

6 HP, 460/3 - 5T (Single Zone):
 Split System Heat Pump
 Heating Mode: Capacity = 55 kBtu/h,
 Proposed Efficiency = 8.20 HSPF, Required Efficiency = 8.20 HSPF
 Cooling Mode: Capacity = 55 kBtu/h, Air Economizer
 Proposed Efficiency = 16.50 SEER, Required Efficiency = 14.00 SEER
 Fan System: Supply Fan 1/2 HP -- Compliance (Motor nameplate HP method) : Passes

Fans:
 FAN 1 Supply, Constant Volume, 1200 CFM, 0.5 motor nameplate hp, 0.0 fan efficiency grade

4 HP, 460/3 - 7.5T (Single Zone):
 Split System Heat Pump
 Heating Mode: Capacity = 93 kBtu/h,
 Proposed Efficiency = 3.20 COP, Required Efficiency = 3.20 COP
 Cooling Mode: Capacity = 93 kBtu/h, Air Economizer
 Proposed Efficiency = 14.00 IER, Required Efficiency = 11.00 IER + 12.0 IER
 Fan System: Supply Fan 1/2 HP -- Compliance (Motor nameplate HP method) : Passes

Fans:
 FAN 1 Supply, Constant Volume, 1200 CFM, 0.5 motor nameplate hp, 0.0 fan efficiency grade

1 HP, 460/3 - 20T (Single Zone):
 Split System Heat Pump
 Heating Mode: Capacity = 150 kBtu/h,
 Proposed Efficiency = 8.20 COP, Required Efficiency = 3.20 COP
 Cooling Mode: Capacity = 249 kBtu/h, Air Economizer
 Proposed Efficiency = 14.00 IER, Required Efficiency = 9.50 IER + 10.6 IER
 Fan System: Supply Fan 20 Ton -- Compliance (Motor nameplate HP method) : Passes

Fans:
 FAN 1 Supply, Constant Volume, 8000 CFM, 3.0 motor nameplate hp, 0.0 fan efficiency grade

3 GAS/ELEC - 3T (Single Zone):
 Heating: 1 each - Central Furnace, Gas, Capacity = 83 kBtu/h
 Proposed Efficiency = 80.00% Et, Required Efficiency: 80.00 % Et or 78% AFUE
 Cooling: 1 each - Split System, Capacity = 35 kBtu/h, Air-Cooled Condenser, Air Economizer
 Proposed Efficiency = 17.00 SEER, Required Efficiency: 13.00 SEER
 Fan System: Supply Fan 1/2 HP -- Compliance (Motor nameplate HP method) : Passes

Fans:
 FAN 1 Supply, Constant Volume, 1200 CFM, 0.5 motor nameplate hp, 0.0 fan efficiency grade

3 GAS/ELEC - 4T (Single Zone):
 Heating: 1 each - Central Furnace, Gas, Capacity = 48 kBtu/h
 Proposed Efficiency = 80.00% Et, Required Efficiency: 80.00 % Et or 78% AFUE
 Cooling: 1 each - Split System, Capacity = 47 kBtu/h, Air-Cooled Condenser, Air Economizer
 Proposed Efficiency = 17.00 SEER, Required Efficiency: 13.00 SEER
 Fan System: Supply Fan 1/2 HP -- Compliance (Motor nameplate HP method) : Passes

Fans:
 FAN 1 Supply, Constant Volume, 1200 CFM, 0.5 motor nameplate hp, 0.0 fan efficiency grade

Project Title: Rains JH HVAC Renovations
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Quantity System Type & Description

FAN 1 Supply, Constant Volume, 1200 CFM, 0.5 motor nameplate hp, 0.0 fan efficiency grade

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2015 IECC requirements in COMcheck Version 4.1.5.1 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Liam Urwiler - Mechanical Designer
 Name - Title Signature Date 01/24/2022

Project Title: Rains JH HVAC Renovations
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ISSUE DATE
 01-25-2022

REVISION DATE

2022 HVAC RENOVATION
RAINS JUNIOR HIGH SCHOOL
 RAINS INDEPENDENT SCHOOL DISTRICT
 EMORY, TX

EMA JOB #: 1-001-0959-001

DRAWN BY: LRU

CHECKED: QS

MECHANICAL SYMBOLS & SCHEDULES

SHEET NUMBER

MEP8.1

EMA Engineering and Consulting
 Tyler | Austin | Houston | El Paso
 DFW | San Antonio | Shreveport
 TBPE Firm Registration No. F-893
 Website: www.EMAengineer.com
 Phone: 1.800.933.0538

SUBMISSION OF BID WILL BE CONSIDERED ACKNOWLEDGMENT THAT THE CONTRACTOR HAS VISITED THE SITE AND HAS VERIFIED ALL EXISTING JOB CONDITIONS AND INCLUDED ANY NECESSARY MODIFICATION TO EXISTING AND NEW WORK REQUIRED FOR INSTALLATION OF A COMPLETE AND WORKING SYSTEM.