

2024 HVAC RENOVATIONS

LA VEGA INDEPENDENT SCHOOL DISTRICT

WACO, TEXAS



ISSUE DATE

NOV. 10, 2023

ISSUE STATUS DATE

2024 HVAC RENOVATION

LA VEGA

LA VEGA INDEPENDENT SCHOOL DISTRICT

WACO, TEXAS

KEY PLAN

EMA JOB #: 1-001-0710-001

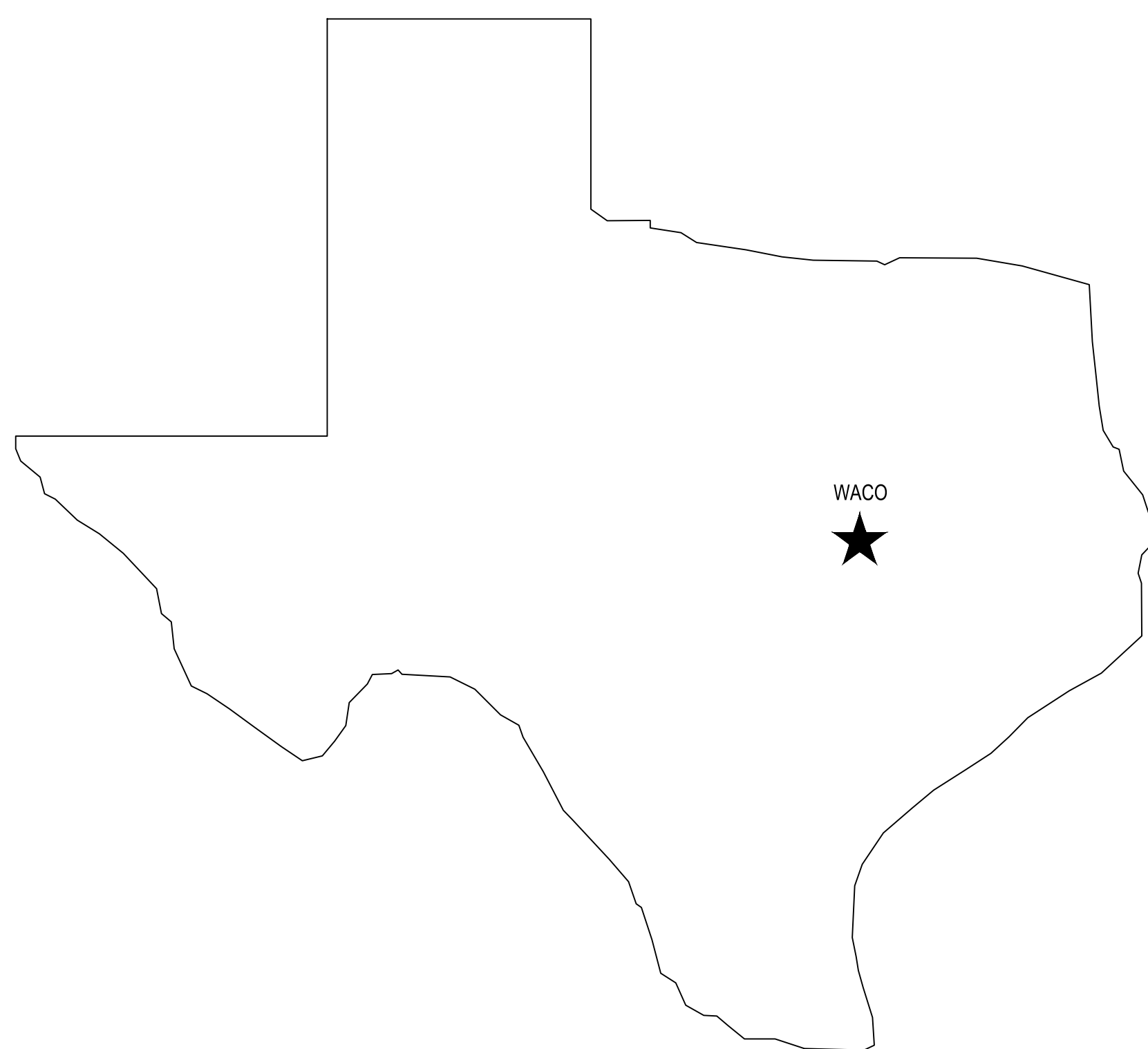
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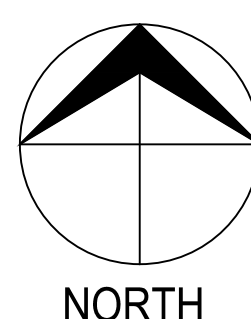
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LOCATION MAP

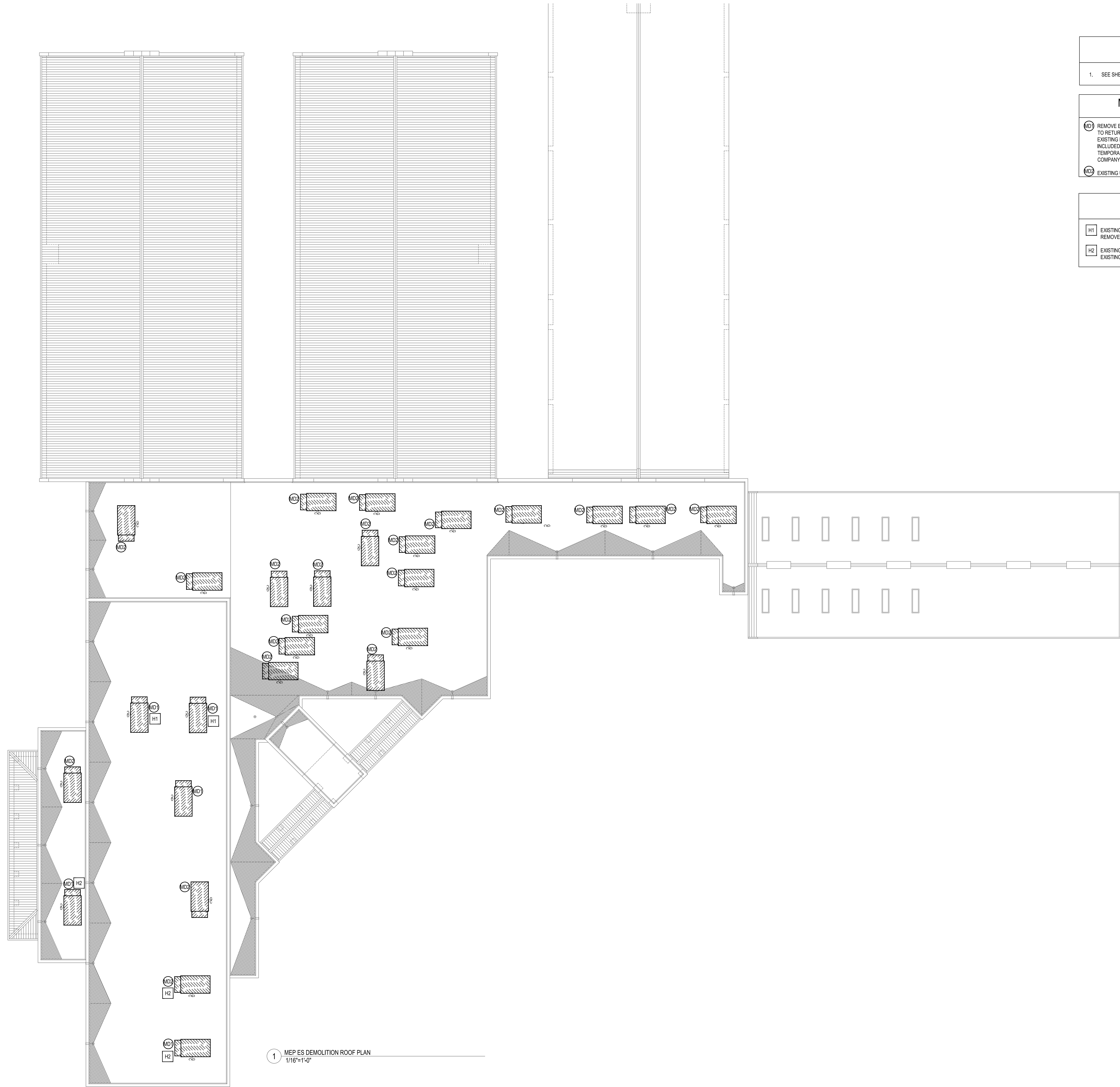


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SUBMISSION OF BID WILL BE CONSIDERED ACKNOWLEDGMENT THAT THE CONTRACTOR HAS VISITED THE SITE AND HAS VERIFIED ALL EXISTING JOB CONDITIONS AND INCLUDED ANY NECESSARY MODIFICATION TO EXISTING AND NEW WORK REQUIRED FOR INSTALLATION OF A COMPLETE AND WORKING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



1 MEP ES DEMOLITION ROOF PLAN
1/16"=1'-0"

DEMOLITION GENERAL NOTES

- SEE SHEET MEP7.1 FOR GENERAL NOTES AND PLAN NOTES APPLICABLE TO THE ENTIRE DRAWING SET.

MECHANICAL DEMOLITION PLAN NOTES

- MD1** REMOVE EXISTING ROOF TOP UNIT AND ROOF CURB ADAPTER. CONTRACTOR TO COORDINATE WITH OWNER TO RETURN DEMOLISHED UNIT AND ALL ASSOCIATED PARTS IN A LOCATIONS SPECIFIED BY THE OWNER. ALL EXISTING REFRIGERANT TO BE COLLECTED AND RETURNED TO OWNER. ALL ASSOCIATED ITEMS TO UNIT INCLUDED BUT NOT LIMITED TO GAS PIPING, CONDENSATE PIPING, ETC MUST BE DISCONNECTED AND TEMPORARILY CAPPED IN PLACE. EXISTING CONTROLS TO BE DISCONNECTED ONLY BY CONTROLS COMPANY AND STORED FOR REINSTALLATION.
- MD2** EXISTING UNIT TO REMAIN.

HVAC DEMOLITION PLAN NOTES

- H1** EXISTING HVAC UNIT TO BE REMOVED. REMOVE WIRING BACK TO SOURCE. EXISTING DISCONNECT TO BE REMOVED. CONDUIT TO BE REUSED FOR NEW UNIT.
- H2** EXISTING HVAC UNIT TO BE REMOVED AND REPLACED. EXISTING DISCONNECT TO BE REMOVED. EXISTING CIRCUIT TO BE USED TO PROVIDE POWER TO NEW UNIT.

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.



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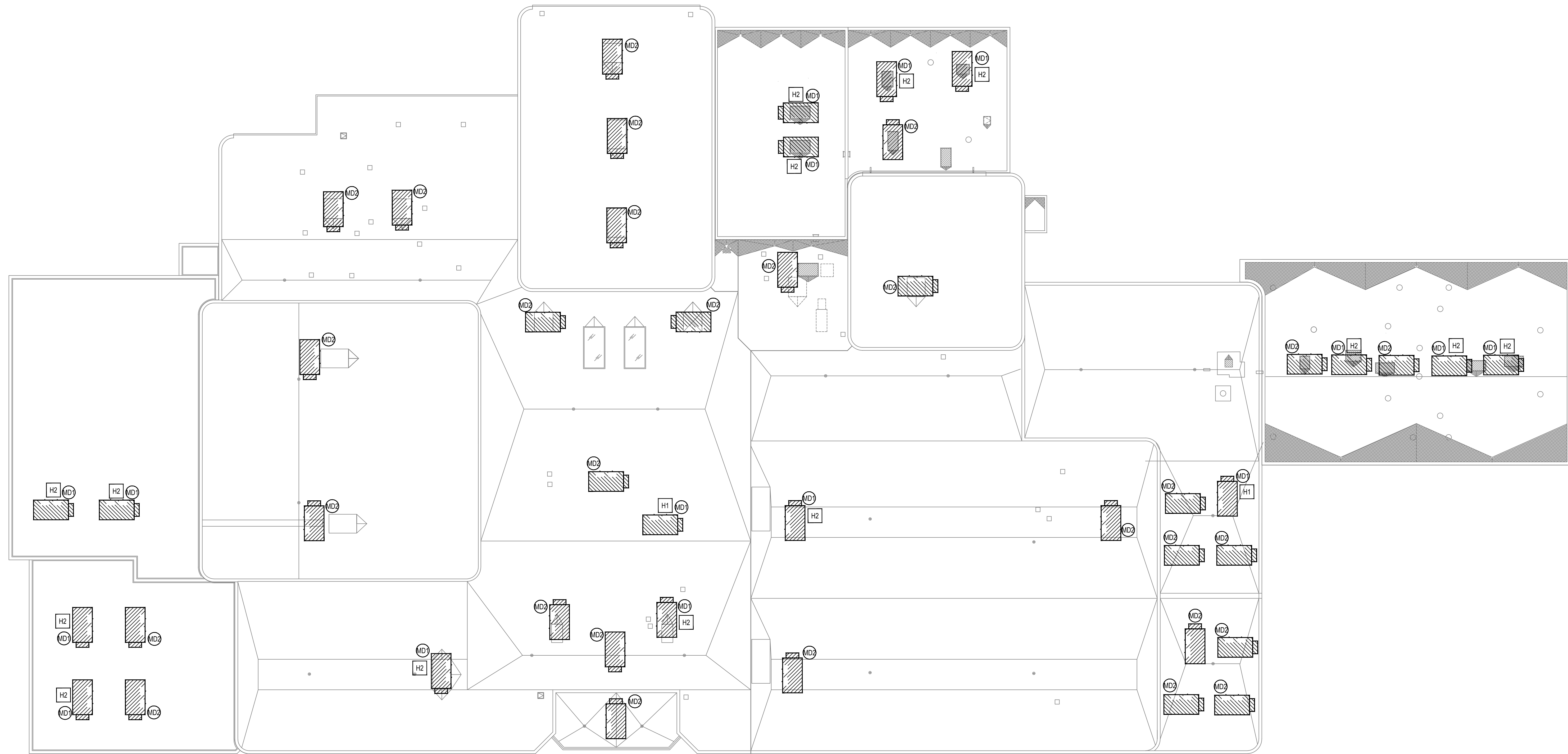
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MEP ES
DEMOLITION ROOF PLAN

SHEET NUMBER

MEPD1.1



1 MEP HS ROOF
1"=20'-0"

DEMOLITION GENERAL NOTES

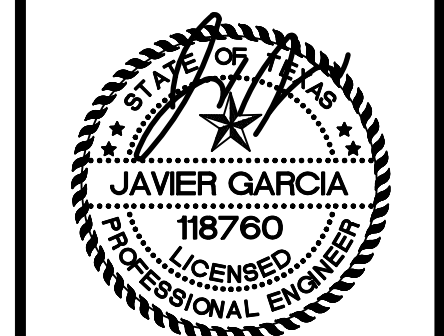
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MECHANICAL DEMOLITION PLAN NOTES

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- EXISTING UNIT TO REMAIN.

HVAC DEMOLITION PLAN NOTES

- H1 EXISTING HVAC UNIT TO BE REMOVED. REMOVE WIRING BACK TO SOURCE. EXISTING DISCONNECT TO BE REMOVED. CONDUIT TO BE REUSED FOR NEW UNIT.
- H2 EXISTING HVAC UNIT TO BE REMOVED AND REPLACED. EXISTING DISCONNECT TO BE REMOVED. EXISTING CIRCUIT TO BE USED TO PROVIDE POWER TO NEW UNIT.

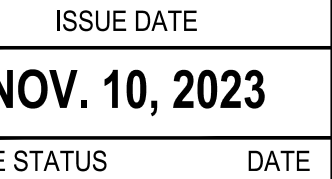


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2024 HVAC RENOVATION

LA VEGA

LA VEGA INDEPENDENT SCHOOL DISTRICT
WACO, TEXAS

PLAN

A JOB #: 1-001-0710-001

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HECKED: **QS**

STEP INTERMEDIATE DEMOLITION ROOF PLAN

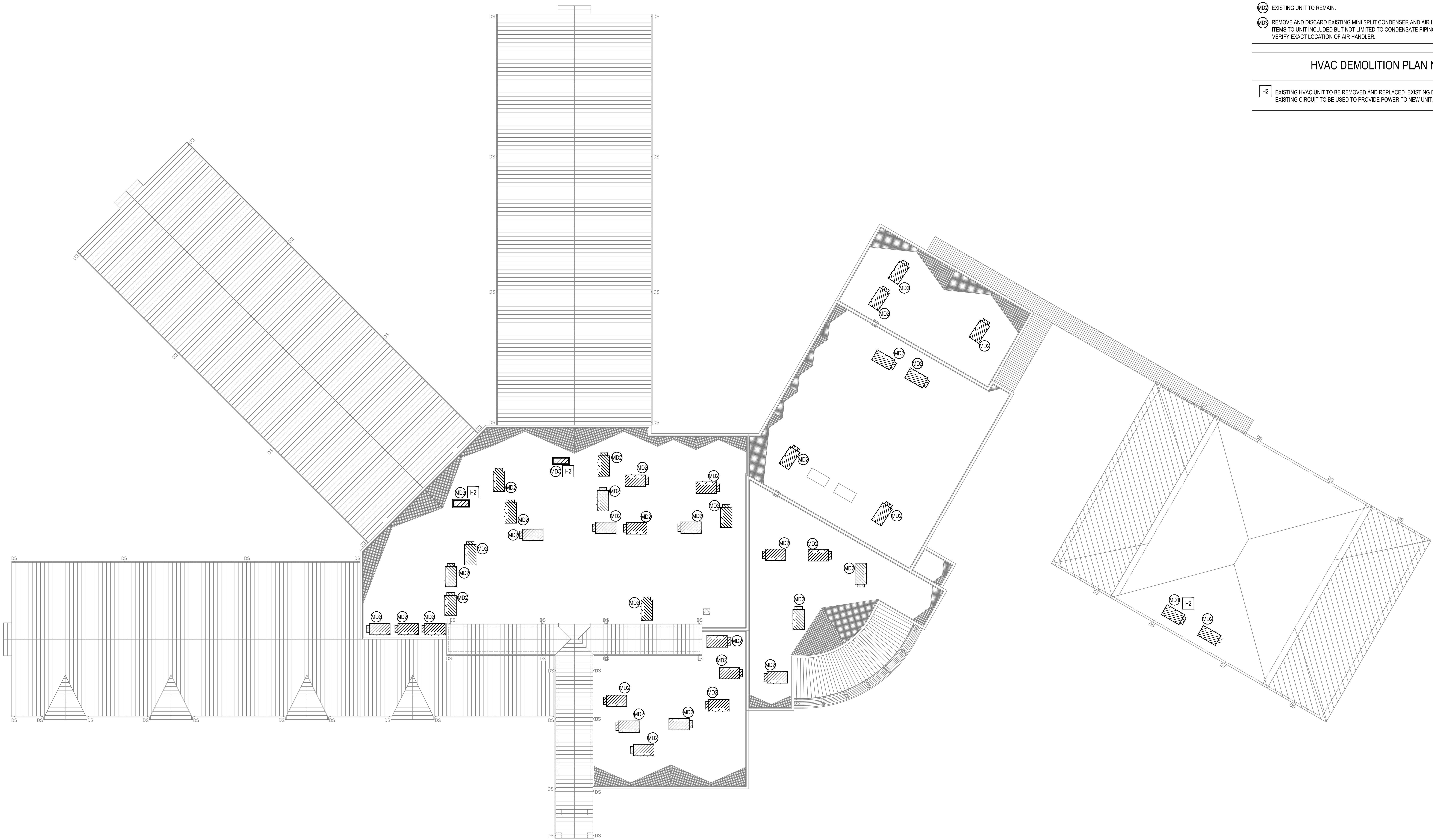
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MEPD1.3

1. SEE SHEET MEP7.1 FOR GENERAL NOTES AND PLAN NOTES APPLICABLE TO THE ENTIRE DRAWING SET.

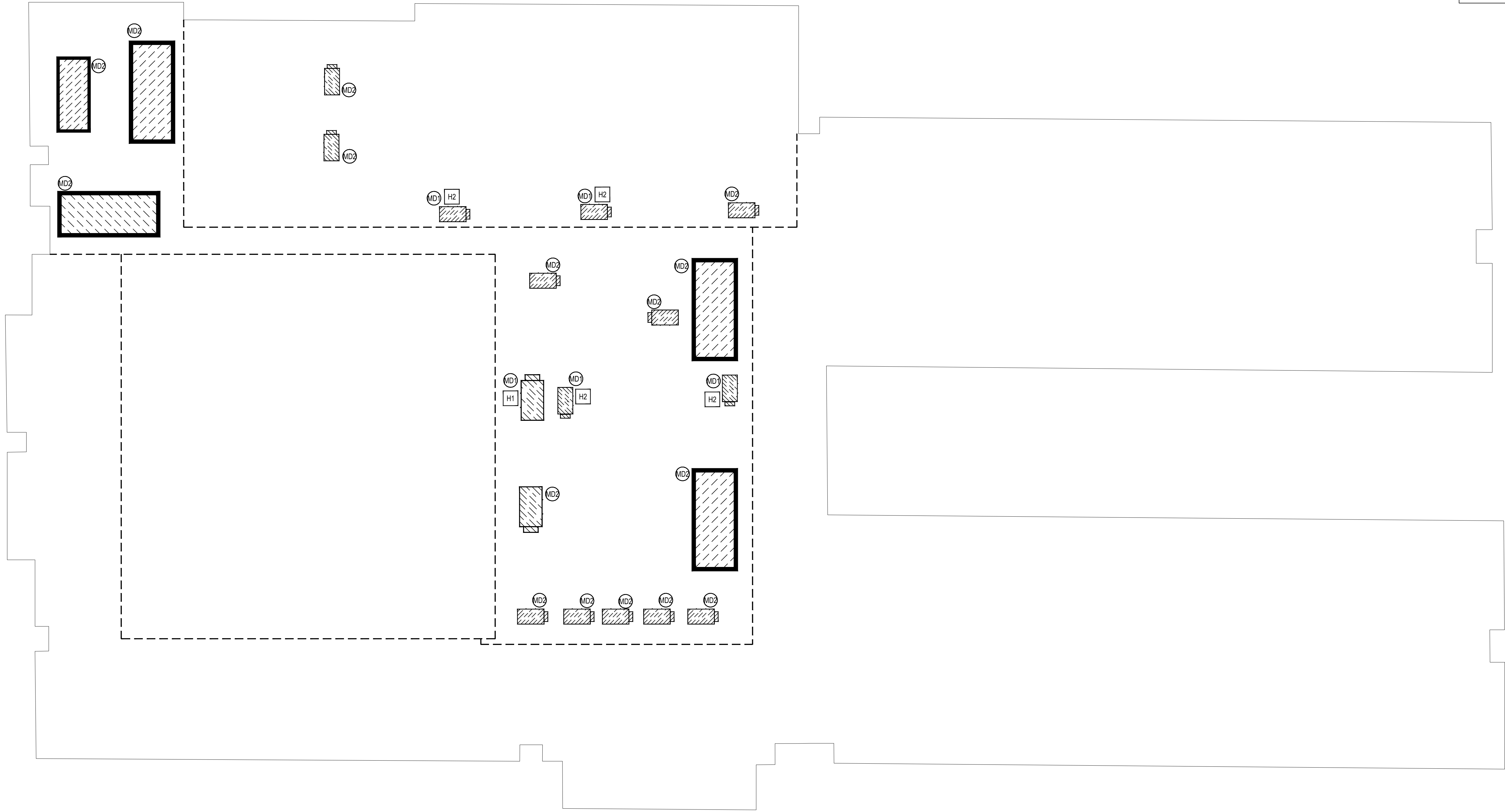
- 29 REMOVE EXISTING ROOF TOP UNIT AND ROOF CURB ADAPTER. CONTRACTOR TO COORDINATE WITH OWNER TO RETURN DEMOLISHED UNIT AND ALL ASSOCIATED PARTS IN A LOCATION(S) SPECIFIED BY THE OWNER. ALL EXISTING REFRIGERANT TO BE COLLECTED AND RETURNED TO OWNER. ALL ASSOCIATED ITEMS TO UNIT INCLUDED BUT NOT LIMITED TO GAS PIPING, CONDENSATE PIPING, ETC. MUST BE DISCONNECTED AND TEMPORARILY CAPPED IN PLACE. EXISTING CONTROLS TO BE DISCONNECTED ONLY BY CONTROLS COMPANY AND STORED FOR REINSTALLATION.
- 30 EXISTING UNIT TO REMAIN.
- 31 REMOVE AND DISCARD EXISTING MINI SPLIT CONDENSER AND AIR HANDLER. REMOVE ALL ASSOCIATED ITEMS TO UNIT INCLUDED BUT NOT LIMITED TO CONDENSATE PIPING, REFRIGERANT PIPING, ETC. FIELD VERIFY EXACT LOCATION OF AIR HANDLER.

EXISTING HVAC UNIT TO BE REMOVED AND REPLACED. EXISTING DISCONNECT TO BE REMOVED.
EXISTING CIRCUIT TO BE USED TO PROVIDE POWER TO NEW UNIT.



1 MEP INTERMEDIATE SCHOOL DEMOLITION ROOF PLAN
1"=20'-0"

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1 MEP JH DEMOLITION ROOF PLAN
1/16"=1'-0"

DEMOLITION GENERAL NOTES

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MECHANICAL DEMOLITION PLAN NOTES

- MD1 REMOVE EXISTING ROOF TOP UNIT AND ROOF CURB ADAPTER. CONTRACTOR TO COORDINATE WITH OWNER TO RETURN DEMOLISHED UNIT AND ALL ASSOCIATED PARTS IN A LOCATIONS SPECIFIED BY THE OWNER. ALL EXISTING REFRIGERANT TO BE COLLECTED AND RETURNED TO OWNER. ALL ASSOCIATED ITEMS TO UNIT INCLUDED BUT NOT LIMITED TO GAS PIPING, CONDENSATE PIPING, ETC MUST BE DISCONNECTED AND TEMPORARILY CAPPED IN PLACE. EXISTING CONTROLS TO BE DISCONNECTED ONLY BY CONTROLS COMPANY AND STORED FOR REINSTALLATION.
- MD2 EXISTING UNIT TO REMAIN.

HVAC DEMOLITION PLAN NOTES

- H1 EXISTING HVAC UNIT TO BE REMOVED. REMOVE WIRING BACK TO SOURCE. EXISTING DISCONNECT TO BE REMOVED. CONDUIT TO BE REUSED FOR NEW UNIT.
- H2 EXISTING HVAC UNIT TO BE REMOVED AND REPLACED. EXISTING DISCONNECT TO BE REMOVED. EXISTING CIRCUIT TO BE USED TO PROVIDE POWER TO NEW UNIT.

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MEPD1.4

2024 HVAC RENOVATION
LA VEGA
LA VEGA INDEPENDENT SCHOOL DISTRICT
WACO, TEXAS

KEY PLAN

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MEP JH
DEMOLITION ROOF PLAN



1 MEP DEMOLITION PRIMARY ROOF PLAN
1/16"=1'-0"

DEMOLITION GENERAL NOTES

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MECHANICAL DEMOLITION PLAN NOTES

- MD1 REMOVE EXISTING ROOF TOP UNIT AND ROOF CURB ADAPTER. CONTRACTOR TO COORDINATE WITH OWNER TO RETURN DEMOLISHED UNIT AND ALL ASSOCIATED PARTS IN A LOCATIONS SPECIFIED BY THE OWNER. ALL EXISTING REFRIGERANT TO BE COLLECTED AND RETURNED TO OWNER. ALL ASSOCIATED ITEMS TO UNIT INCLUDED BUT NOT LIMITED TO GAS PIPING, CONDENSATE PIPING, ETC MUST BE DISCONNECTED AND TEMPORARILY CAPPED IN PLACE. EXISTING CONTROLS TO BE DISCONNECTED ONLY BY CONTROLS COMPANY AND STORED FOR REINSTALLATION.
- MD2 EXISTING UNIT TO REMAIN.

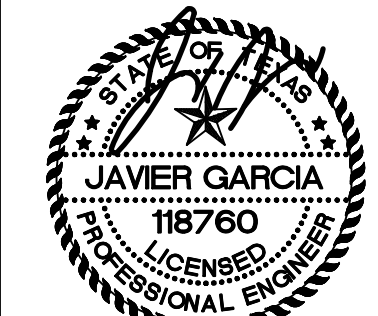
HVAC DEMOLITION PLAN NOTES

- H1 EXISTING HVAC UNIT TO BE REMOVED. REMOVE WIRING BACK TO SOURCE. EXISTING DISCONNECT TO BE REMOVED. CONDUIT TO BE REUSED FOR NEW UNIT.
- H2 EXISTING HVAC UNIT TO BE REMOVED AND REPLACED. EXISTING DISCONNECT TO BE REMOVED. EXISTING CIRCUIT TO BE USED TO PROVIDE POWER TO NEW UNIT.

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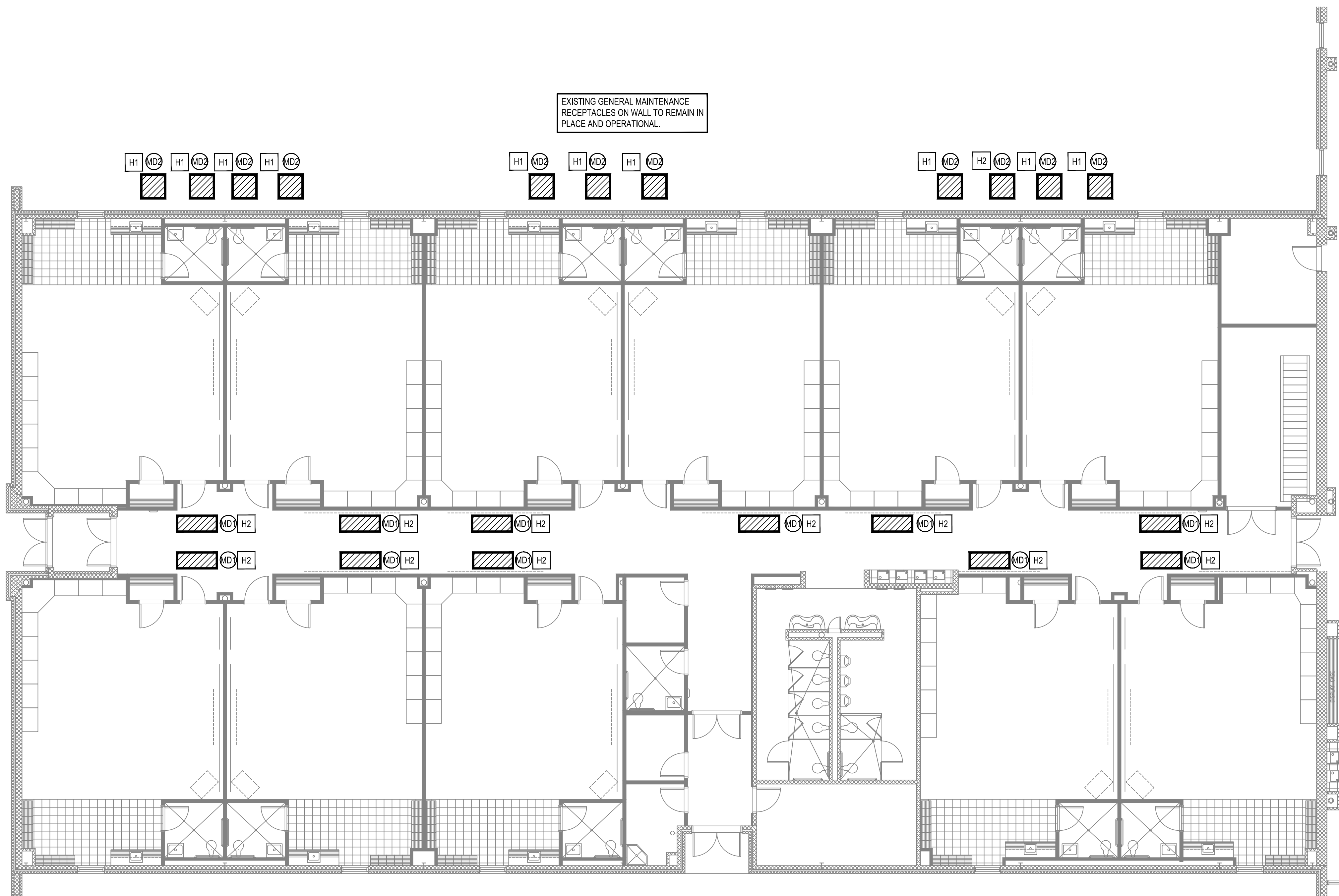
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MEP DEMOLITION
PRIMARY ROOF PLAN

SHEET NUMBER

MEPD1.5



1 MEP PRIMARY DEMOLITION FLOOR PLAN
1/8"=1'-0"

DEMOLITION GENERAL NOTES

- SEE SHEET MEP7.1 FOR GENERAL NOTES AND PLAN NOTES APPLICABLE TO THE ENTIRE DRAWING SET.

MECHANICAL DEMOLITION PLAN NOTES

- MD1 REMOVE EXISTING AIR HANDLER AND RETURN TO OWNER IN A LOCATION SPECIFIED BY THE OWNER. EXISTING REFRIGERANT TO BE COLLECTED AND RETURNED TO OWNER. REMOVE AND DISCARD ALL EXISTING REFRIGERANT LINES. ALL OTHER ASSOCIATED ITEMS TO UNIT INCLUDING BUT NOT LIMITED TO CONDENSATE PIPING, GAS PIPING, ETC MUST BE DISCONNECTED AND TEMPORARILY CAPPED IN PLACE FOR REINSTALLATION. ALL DUCTWORK TO REMAIN IN PLACE AND PROTECTED DURING DEMOLITION. EXISTING CONTROLS TO BE DISCONNECTED ONLY BY CONTROLS COMPANY AND STORED FOR REINSTALLATION.
- MD2 REMOVE EXISTING CONDENSING UNIT AND RETURN TO OWNER. SPECIFIC STORAGE OF EXISTING UNIT TO BE SPECIFIED BY OWNER. REMOVE AND DISCARD ALL REFRIGERANT PIPING. EXISTING CONDENSING PAD TO REMAIN.

HVAC DEMOLITION PLAN NOTES

- H1 EXISTING HVAC UNIT TO BE REMOVED. REMOVE WIRING BACK TO SOURCE. EXISTING DISCONNECT TO BE REMOVED. CONDUIT TO BE REUSED FOR NEW UNIT.
- H2 EXISTING HVAC UNIT TO BE REMOVED AND REPLACED. EXISTING DISCONNECT TO BE REMOVED. EXISTING CIRCUIT TO BE USED TO PROVIDE POWER TO NEW UNIT.

MEP 1.7 CONTAINS BOTH
DEMOLITION AND NEW
CONSTRUCTION OF HIGH
SCHOOL AG BUILDING.

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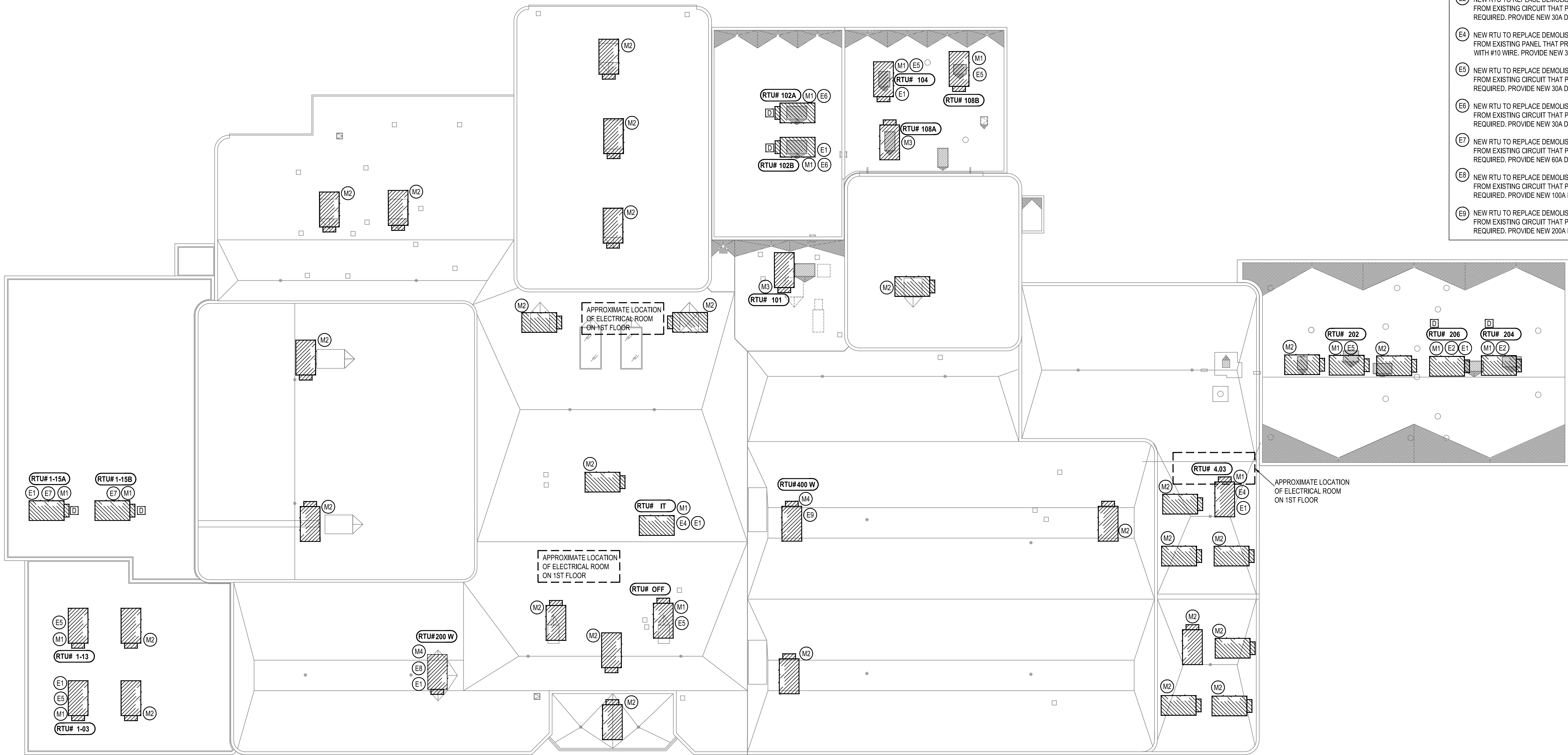
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MEPD1.6

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 MEP HS ROOF PLAN
1"=20'-0"

GENERAL NOTES

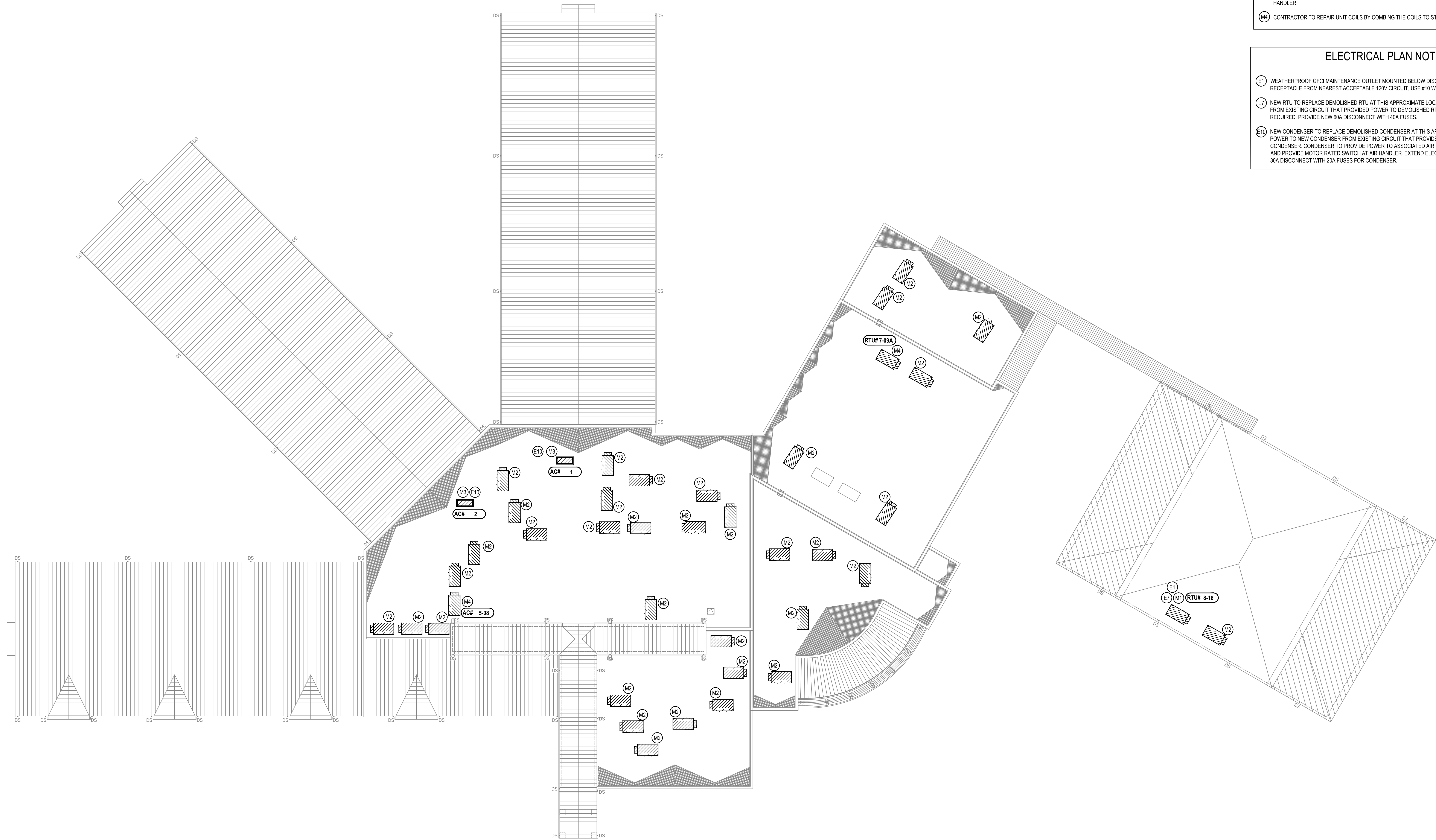
- SEE SHEET MEPT.1 FOR GENERAL NOTES AND PLAN NOTES APPLICABLE TO THE ENTIRE DRAWING SET.

MECHANICAL PLAN NOTES

- INSTALL NEW ROOF TOP UNIT IN EXISTING LOCATION. NEW ROOF CURB ADAPTER TO BE PROVIDED BY CONTRACTOR. RECONNECT ALL ASSOCIATED ITEMS TO UNIT INCLUDED BUT LIMITED TO GAS PIPING, CONDENSATE PIPING, DUCTWORK ETC. MODIFY/EXTEND PIPING AND DUCTWORK AS NEEDED TO TIE INTO NEW UNIT. CONTROLS CONTRACTOR TO RECONNECT EXISTING CONTROLS AND TIE INTO EXISTING EMCS.
- EXISTING UNIT TO REMAIN.
- CONTRACTOR TO REPAIR UNIT COILS BY COMBING THE COILS TO STRAIGHTEN ANY DAMAGED OR BENT FINS.
- INSTALL NEW COOLING ONLY ROOF TOP UNIT IN EXISTING LOCATION. NEW ROOF CURB ADAPTER TO BE PROVIDED BY CONTRACTOR. RECONNECT ALL ASSOCIATED ITEMS TO UNIT INCLUDED BUT LIMITED TO CONDENSATE PIPING, DUCTWORK ETC. MODIFY/EXTEND PIPING AND DUCTWORK AS NEEDED TO TIE INTO NEW UNIT. CONTROLS CONTRACTOR TO RECONNECT EXISTING CONTROLS AND TIE INTO EXISTING EMCS.

ELECTRICAL PLAN NOTES

- WEATHERPROOF GFCI MAINTENANCE OUTLET MOUNTED BELOW DISCONNECT. PROVIDE POWER TO RECEPTACLE FROM NEAREST ACCEPTABLE 120V CIRCUIT. USE #10 WIRE.
- NEW RTU TO REPLACE DEMOLISHED RTU AT THIS APPROXIMATE LOCATION. PROVIDE POWER TO NEW RTU FROM EXISTING CIRCUIT THAT PROVIDED POWER TO DEMOLISHED RTU. EXTEND ELECTRICAL AS REQUIRED. PROVIDE NEW 30A DISCONNECT WITH 25A FUSES.
- NEW RTU TO REPLACE DEMOLISHED RTU AT THIS APPROXIMATE LOCATION. PROVIDE POWER TO NEW RTU FROM EXISTING PANEL THAT PROVIDED POWER TO DEMOLISHED RTU. PROVIDE NEW 30A 2P BREAKER WITH #10 WIRE. PROVIDE NEW 30A DISCONNECT WITH 25A FUSES.
- NEW RTU TO REPLACE DEMOLISHED RTU AT THIS APPROXIMATE LOCATION. PROVIDE POWER TO NEW RTU FROM EXISTING CIRCUIT THAT PROVIDED POWER TO DEMOLISHED RTU. EXTEND ELECTRICAL AS REQUIRED. PROVIDE NEW 30A DISCONNECT WITH 15A FUSES.
- NEW RTU TO REPLACE DEMOLISHED RTU AT THIS APPROXIMATE LOCATION. PROVIDE POWER TO NEW RTU FROM EXISTING CIRCUIT THAT PROVIDED POWER TO DEMOLISHED RTU. EXTEND ELECTRICAL AS REQUIRED. PROVIDE NEW 30A DISCONNECT WITH 30A FUSES.
- NEW RTU TO REPLACE DEMOLISHED RTU AT THIS APPROXIMATE LOCATION. PROVIDE POWER TO NEW RTU FROM EXISTING CIRCUIT THAT PROVIDED POWER TO DEMOLISHED RTU. EXTEND ELECTRICAL AS REQUIRED. PROVIDE NEW 60A DISCONNECT WITH 40A FUSES.
- NEW RTU TO REPLACE DEMOLISHED RTU AT THIS APPROXIMATE LOCATION. PROVIDE POWER TO NEW RTU FROM EXISTING CIRCUIT THAT PROVIDED POWER TO DEMOLISHED RTU. EXTEND ELECTRICAL AS REQUIRED. PROVIDE NEW 100A DISCONNECT WITH 80A FUSES.
- NEW RTU TO REPLACE DEMOLISHED RTU AT THIS APPROXIMATE LOCATION. PROVIDE POWER TO NEW RTU FROM EXISTING CIRCUIT THAT PROVIDED POWER TO DEMOLISHED RTU. EXTEND ELECTRICAL AS REQUIRED. PROVIDE NEW 200A DISCONNECT WITH 110A FUSES.



GENERAL NOTES

- SEE SHEET MEP7.1 FOR GENERAL NOTES AND PLAN NOTES APPLICABLE TO THE ENTIRE DRAWING SET.

MECHANICAL PLAN NOTES

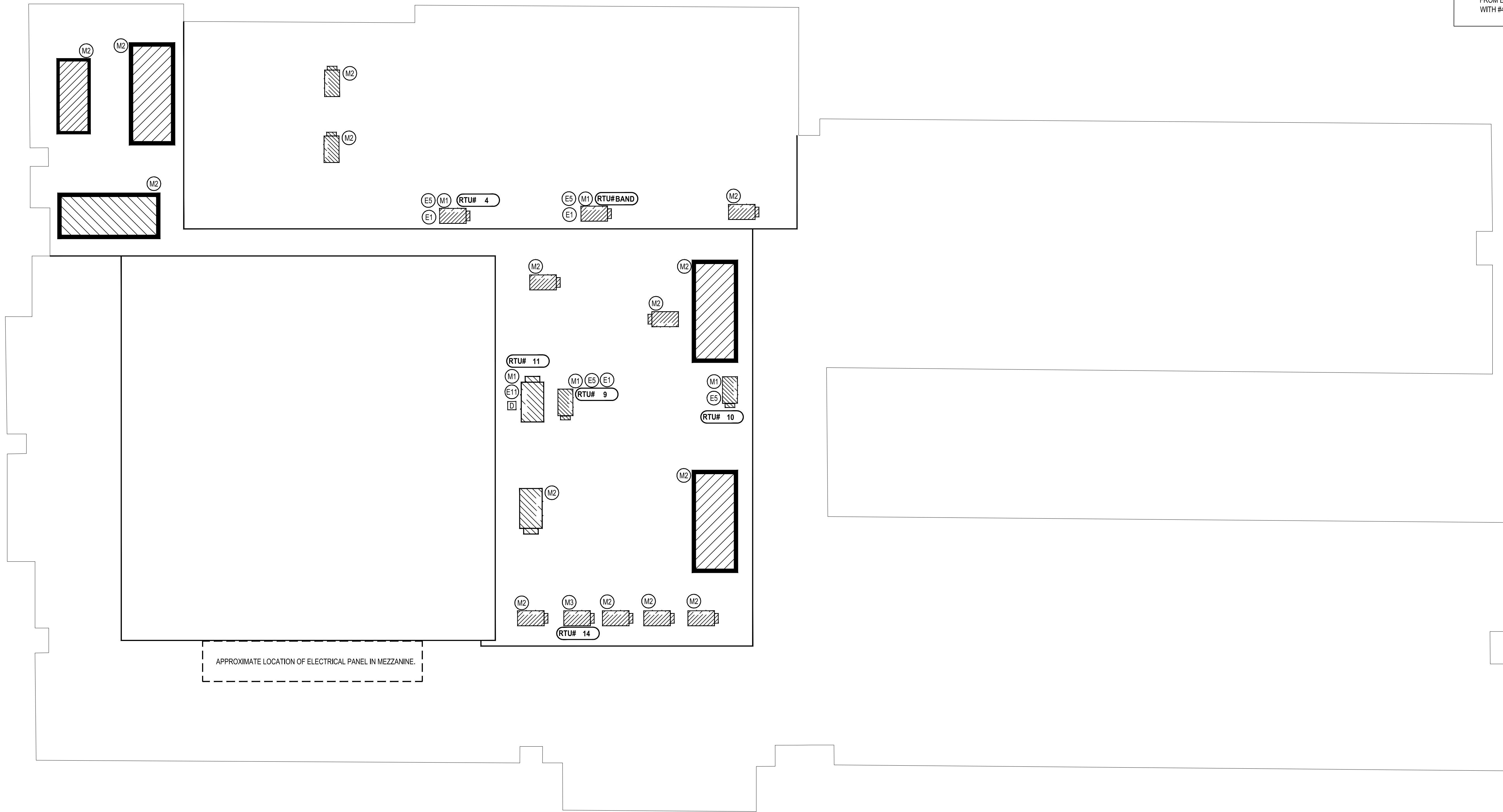
- M1** INSTALL NEW ROOF TOP UNIT IN EXISTING LOCATION. NEW ROOF CURB ADAPTER TO BE PROVIDED BY CONTRACTOR. RECONNECT ALL ASSOCIATED ITEMS TO UNIT INCLUDED BUT LIMITED TO GAS PIPING, CONDENSATE PIPING, DUCTWORK ETC. MODIFY/EXTEND PIPING AND DUCTWORK AS NEEDED TO TIE INTO NEW UNIT. CONTROLS CONTRACTOR TO RECONNECT EXISTING CONTROLS AND TIE INTO EXISTING EMCS.
- M2** EXISTING UNIT TO REMAIN.
- M3** INSTALL NEW MINI SPLIT CONDENSER AND AIR HANDLER. INSTALL ALL NEW ITEMS TO UNIT INCLUDED BUT LIMITED TO CONDENSATE PIPING, REFRIGERANT PIPING, ETC. FIELD VERIFY EXACT LOCATION OF AIR HANDLER.
- M4** CONTRACTOR TO REPAIR UNIT COILS BY COMBING THE COILS TO STRAIGHTEN ANY DAMAGED OR BENT FINS.

ELECTRICAL PLAN NOTES

- E1** WEATHERPROOF GFCI MAINTENANCE OUTLET MOUNTED BELOW DISCONNECT. PROVIDE POWER TO RECEPTACLE FROM NEAREST ACCEPTABLE 120V CIRCUIT, USE #10 WIRE.
- E7** NEW RTU TO REPLACE DEMOLISHED RTU AT THIS APPROXIMATE LOCATION. PROVIDE POWER TO NEW RTU FROM EXISTING CIRCUIT THAT PROVIDED POWER TO DEMOLISHED RTU. EXTEND ELECTRICAL AS REQUIRED. PROVIDE NEW 60A DISCONNECT WITH 40A FUSES.
- E10** NEW CONDENSER TO REPLACE DEMOLISHED CONDENSER AT THIS APPROXIMATE LOCATION. PROVIDE POWER TO NEW CONDENSER FROM EXISTING CIRCUIT THAT PROVIDED POWER TO DEMOLISHED CONDENSER. CONDENSER TO PROVIDE POWER TO ASSOCIATED AIR HANDLER. REUSE EXISTING CIRCUIT AND PROVIDE MOTOR RATED SWITCH AT AIR HANDLER. EXTEND ELECTRICAL AS REQUIRED. PROVIDE NEW 30A DISCONNECT WITH 20A FUSES FOR CONDENSER.

1 MEP INTERMEDIATE SCHOOL ROOF PLAN
1"=20'-0"

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1 MEP JH ROOF TEMPLATE
1/16"=1'-0"

GENERAL NOTES

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MECHANICAL PLAN NOTES

- M1 INSTALL NEW ROOF TOP UNIT IN EXISTING LOCATION. NEW ROOF CURB ADAPTER TO BE PROVIDED BY CONTRACTOR. RECONNECT ALL ASSOCIATED ITEMS TO UNIT INCLUDED BUT LIMITED TO GAS PIPING, CONDENSATE PIPING, DUCTWORK ETC. MODIFY/EXTEND PIPING AND DUCTWORK AS NEEDED TO TIE INTO NEW UNIT. CONDENSATE TO BE ROUTED TO NEAREST ROOF DRAIN. CONTRACTOR TO RECONNECT EXISTING CONTROLS AND TIE INTO EXISTING EMCS.
- M2 EXISTING UNIT TO REMAIN.
- M3 CONTRACTOR TO REPAIR UNIT COILS BY COMBING THE COILS TO STRAIGHTEN ANY DAMAGED OR BENT FINS.

ELECTRICAL PLAN NOTES

- E1 WEATHERPROOF GFCI MAINTENANCE OUTLET MOUNTED BELOW DISCONNECT. PROVIDE POWER TO RECEPTACLE FROM NEAREST ACCEPTABLE 120V CIRCUIT. USE #10 WIRE.
- E5 NEW RTU TO REPLACE DEMOLISHED RTU AT THIS APPROXIMATE LOCATION. PROVIDE POWER TO NEW RTU FROM EXISTING CIRCUIT THAT PROVIDED POWER TO DEMOLISHED RTU. EXTEND ELECTRICAL AS REQUIRED. PROVIDE NEW 30A DISCONNECT WITH 15A FUSES.
- E11 NEW RTU TO REPLACE DEMOLISHED RTU AT THIS APPROXIMATE LOCATION. PROVIDE POWER TO NEW RTU FROM EXISTING PANEL THAT PROVIDED POWER TO DEMOLISHED RTU. PROVIDE NEW 70A 3P BREAKER WITH #4 WIRE. PROVIDE NEW 100A DISCONNECT WITH 70A FUSES.

EMA

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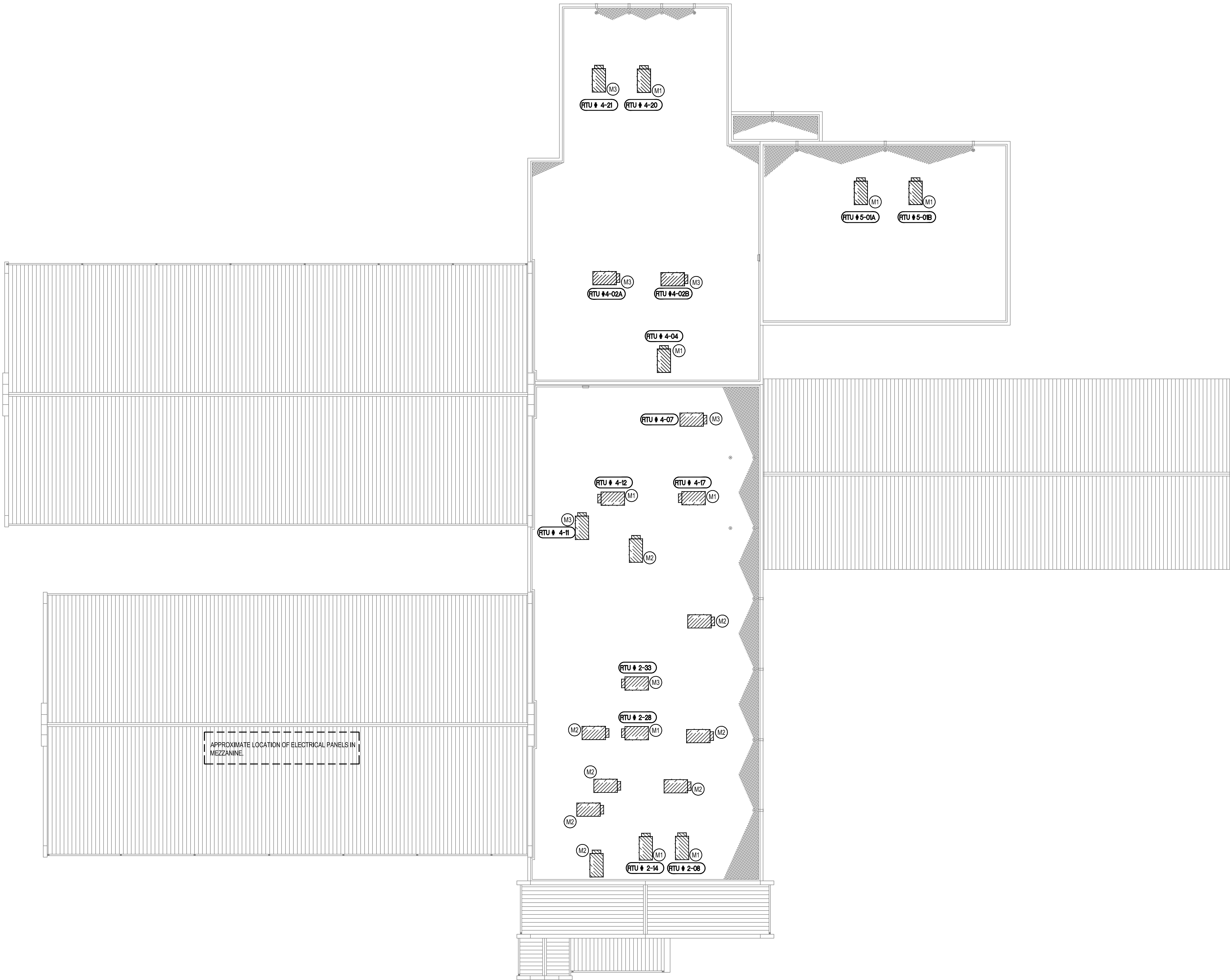
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MEP
JH ROOF PLAN

SHEET NUMBER

MEP1.4



1 MEP PRIMARY ROOF TEMPLATE
1/16"=1'-0"

GENERAL NOTES

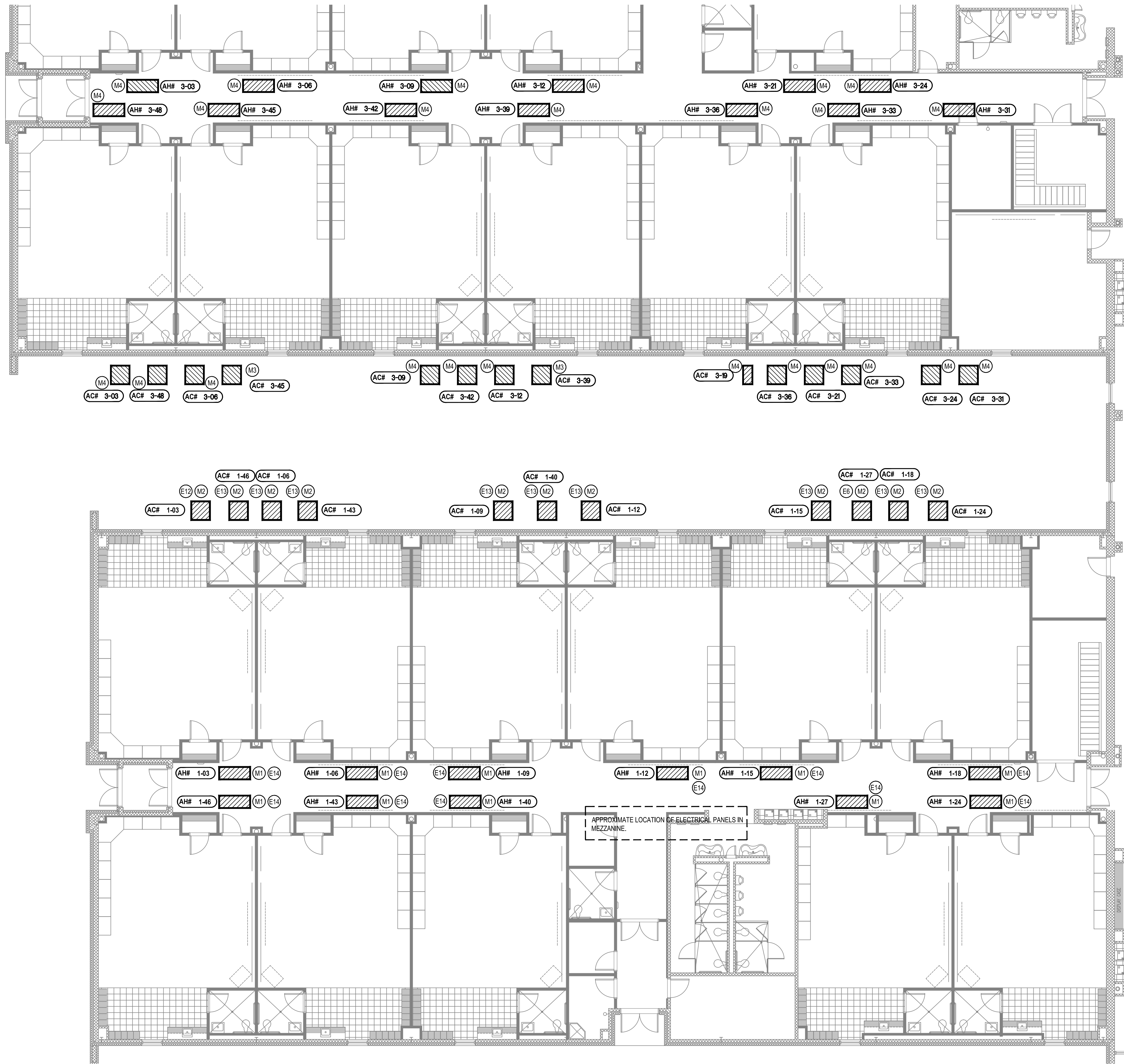
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- M2 EXISTING UNIT TO REMAIN.
- M3 CONTRACTOR TO REPAIR UNIT COILS BY COMBING THE COILS TO STRAIGHTEN ANY DAMAGED OR BENT FINS.

ELECTRICAL PLAN NOTES

- E1 WEATHERPROOF GFCI MAINTENANCE OUTLET MOUNTED BELOW DISCONNECT. PROVIDE POWER TO RECEPTACLE FROM NEAREST ACCEPTABLE 120V CIRCUIT, USE #10 WIRE.
- E5 NEW RTU TO REPLACE DEMOLISHED RTU AT THIS APPROXIMATE LOCATION. PROVIDE POWER TO NEW RTU FROM EXISTING CIRCUIT THAT PROVIDED POWER TO DEMOLISHED RTU. EXTEND ELECTRICAL AS REQUIRED. PROVIDE NEW 30A DISCONNECT WITH 15A FUSES.
- E19 NEW RTU TO REPLACE DEMOLISHED RTU AT THIS APPROXIMATE LOCATION. PROVIDE POWER TO NEW RTU FROM EXISTING PANEL THAT PROVIDED POWER TO DEMOLISHED RTU. PROVIDE NEW 30A 3P BREAKER WITH #10 WIRE. PROVIDE NEW 30A DISCONNECT WITH 25A FUSES.



1 MEP PRIMARY FLOOR PLAN
1/8"=1'-0"

GENERAL NOTES

- SEE SHEET MEP7.1 FOR GENERAL NOTES AND PLAN NOTES APPLICABLE TO THE ENTIRE DRAWING SET.

MECHANICAL PLAN NOTES

- INSTALL NEW HORIZONTAL AIR HANDLER IN EXISTING LOCATION. RECONNECT ALL ASSOCIATED ITEMS TO UNIT INCLUDING BUT NOT LIMITED TO GAS PIPING, CONDENSATE PIPING, DUCTWORK, ETC. MODIFY/EXTEND PIPING AND DUCTWORK AS NEEDED TO TIE INTO NEW UNIT. CONTROLS CONTRACTOR TO RECONNECT EXISTING CONTROLS AND TIE INTO EXISTING EIMCS.
- INSTALL NEW CONDENSING UNIT ON EXISTING CONDENSING PAD AND MODIFY PAD AS NECESSARY. INSTALL ALL NEW ASSOCIATED ITEMS TO UNIT.
- CONTRACTOR TO REPAIR UNIT COILS BY COMBING THE COILS TO STRAIGHTEN ANY DAMAGED OR BENT FINS.
- EXISTING UNITS TO REMAIN.

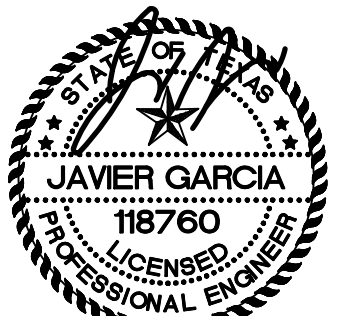
ELECTRICAL PLAN NOTES

- NEW RTU TO REPLACE DEMOLISHED RTU AT THIS APPROXIMATE LOCATION. PROVIDE POWER TO NEW RTU FROM EXISTING CIRCUIT THAT PROVIDED POWER TO DEMOLISHED RTU. EXTEND ELECTRICAL AS REQUIRED. PROVIDE NEW 30A DISCONNECT WITH 30A FUSES.
- NEW CONDENSER TO REPLACE DEMOLISHED CONDENSER AT THIS APPROXIMATE LOCATION. PROVIDE POWER TO NEW CONDENSER FROM EXISTING PANEL THAT PROVIDED POWER TO DEMOLISHED CONDENSER. PROVIDE NEW 30A 3P BREAKER WITH #10 WIRE. PROVIDE NEW 30A DISCONNECT WITH 25A FUSES.
- NEW CONDENSER TO REPLACE DEMOLISHED CONDENSER AT THIS APPROXIMATE LOCATION. PROVIDE POWER TO NEW CONDENSER FROM EXISTING PANEL THAT PROVIDED POWER TO DEMOLISHED CONDENSER. PROVIDE NEW 40A 2P BREAKER WITH #8 WIRE. PROVIDE NEW 60A DISCONNECT WITH 35A FUSES.
- NEW AIR HANDLER TO REPLACE DEMOLISHED AIR HANDLER AT THIS APPROXIMATE LOCATION. PROVIDE POWER TO NEW AIR HANDLER FROM EXISTING CIRCUIT THAT PROVIDED POWER TO DEMOLISHED AIR HANDLER. EXTEND ELECTRICAL AS REQUIRED. PROVIDE NEW MOTOR RATED SWITCH.

EMA

DESIGN SOLVE ENHANCE

EMA Engineering & Consulting, Inc.
Tyler | Austin | Houston | El Paso
DFW | San Antonio | Shreveport
Texas Firm Registration No. F-4851
License Firm Registration No. EC-518
www.EMAengineer.com



11-10-2023

ISSUE DATE

NOV. 10, 2023

ISSUE STATUS DATE

2024 HVAC RENOVATION

LA VEGA

LA VEGA INDEPENDENT SCHOOL DISTRICT
WACO, TEXAS

KEY PLAN

EMA JOB #: 1-001-0710-001

DRAWN BY: UV

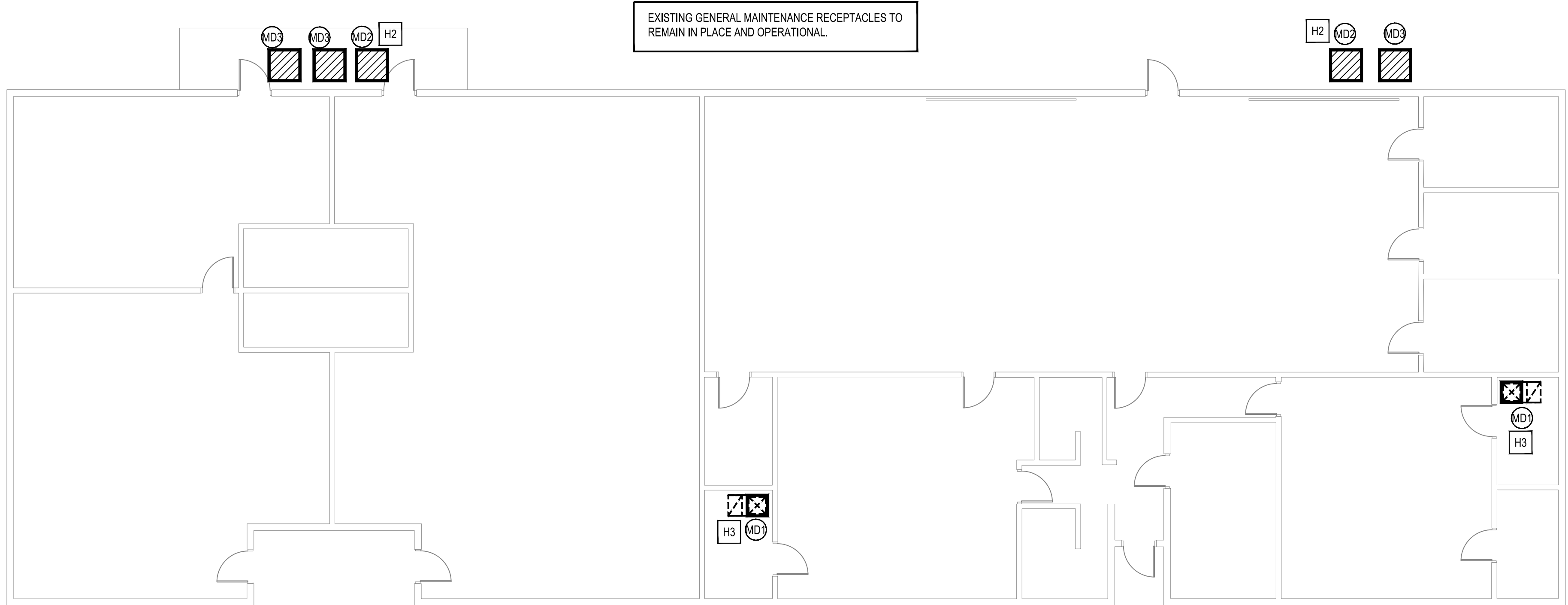
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MEP PRIMARY
FLOOR PLAN

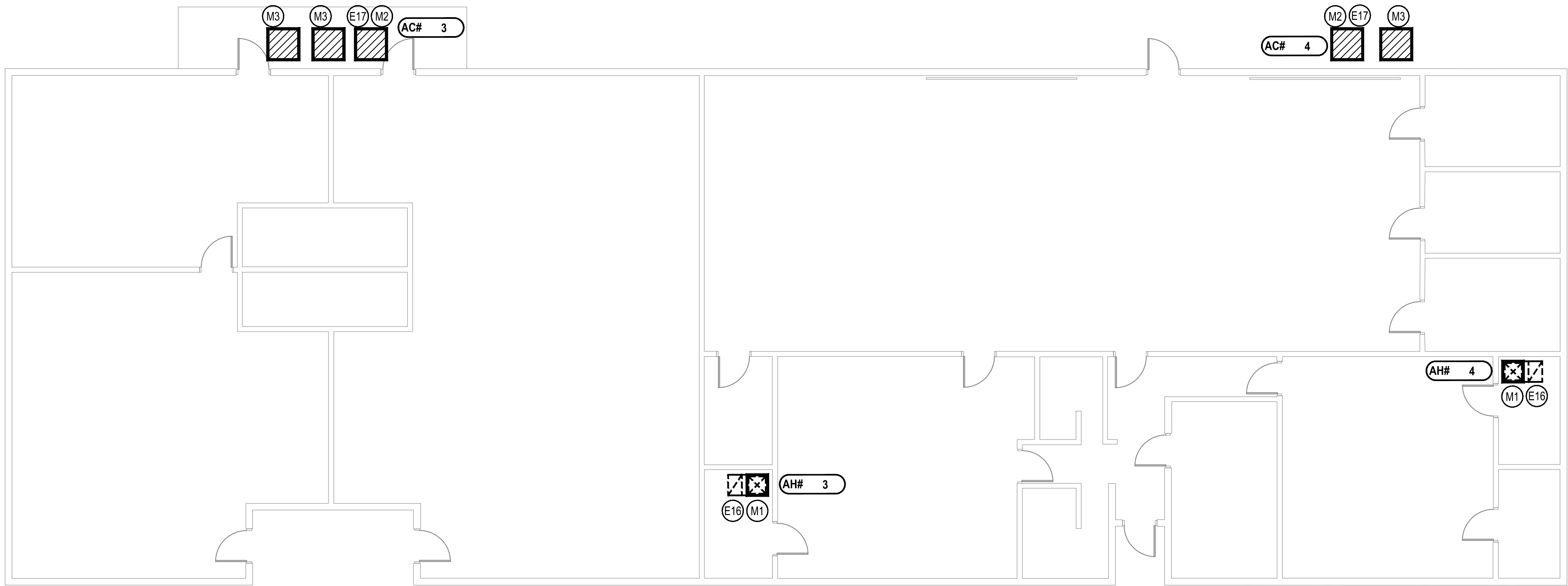
SHEET NUMBER

MEP1.6

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 MEP HS AG BUILDING DEMOLITION FLOOR PLAN
1/8"=1'-0"



2 MEP HS AG BUILDING FLOOR PLAN
1/8"=1'-0"

GENERAL NOTES

- SEE SHEET MEP7.1 FOR GENERAL NOTES AND PLAN NOTES APPLICABLE TO THE ENTIRE DRAWING SET.

MECHANICAL DEMOLITION PLAN NOTES

- REMOVE EXISTING AIR HANDLING UNIT AND RETURN TO OWNER IN A LOCATION SPECIFIED BY THE OWNER. ALL REFRIGERANT TO BE COLLECTED AND RETURNED TO OWNER. DISCONNECT ALL ASSOCIATED ITEMS TO UNIT INCLUDING BUT NOT LIMITED TO CONDENSATE PIPING, GAS PIPING, ETC. MUST BE DISCONNECTED AND TEMPORARILY CAPPED IN PLACE FOR REINSTALLATION. EXISTING CONTROLS TO BE DISCONNECTED ONLY BY CONTROLS COMPANY AND STORED FOR REINSTALLATION.
- REMOVE EXISTING CONDENSING UNIT AND RETURN TO OWNER. REMOVE ALL ASSOCIATED ITEMS TO UNIT INCLUDING BUT NOT LIMITED TO REFRIGERANT PIPING, CONDENSING PAD, ETC.
- EXISTING UNIT TO REMAIN.

MECHANICAL PLAN NOTES

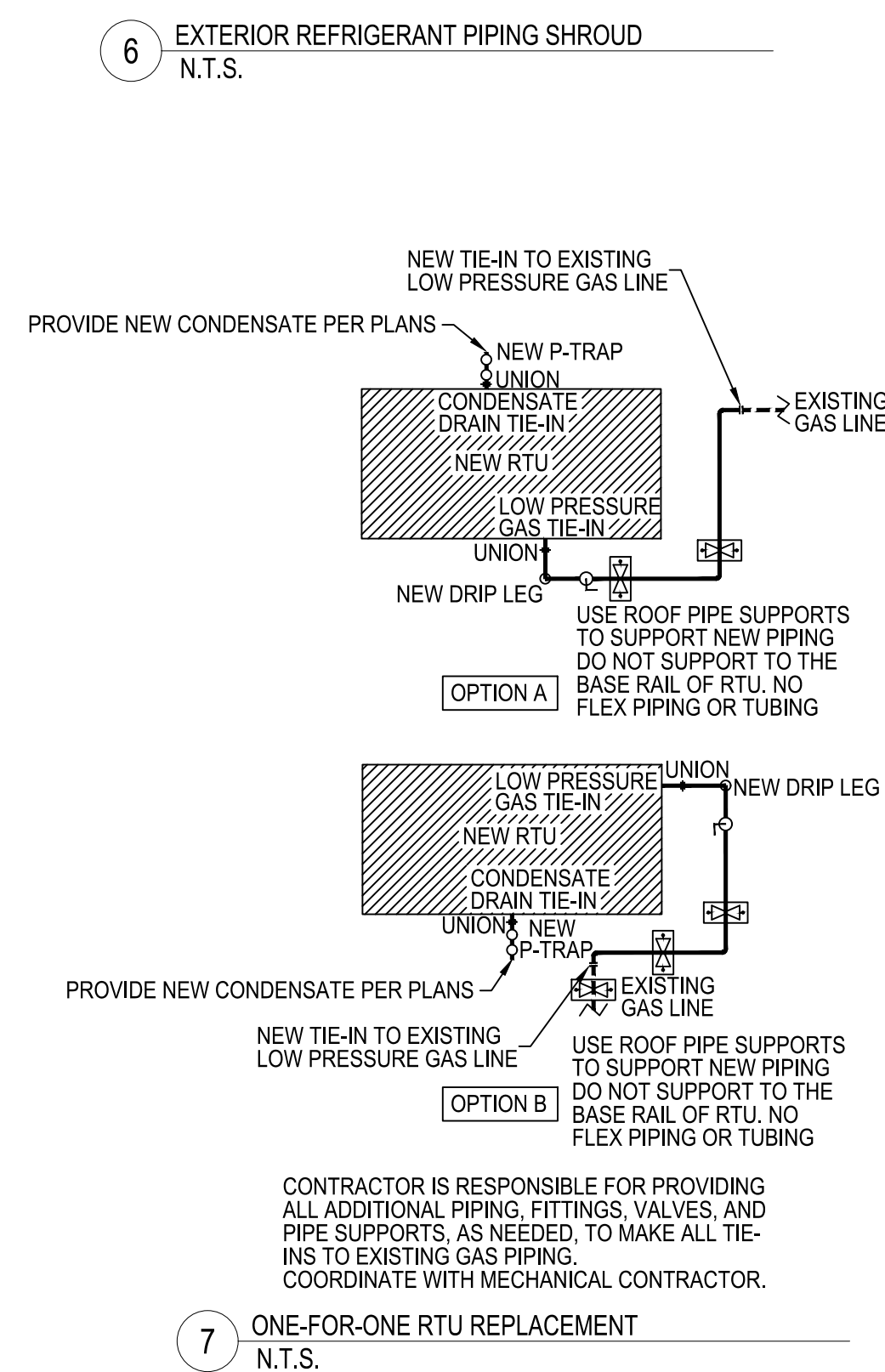
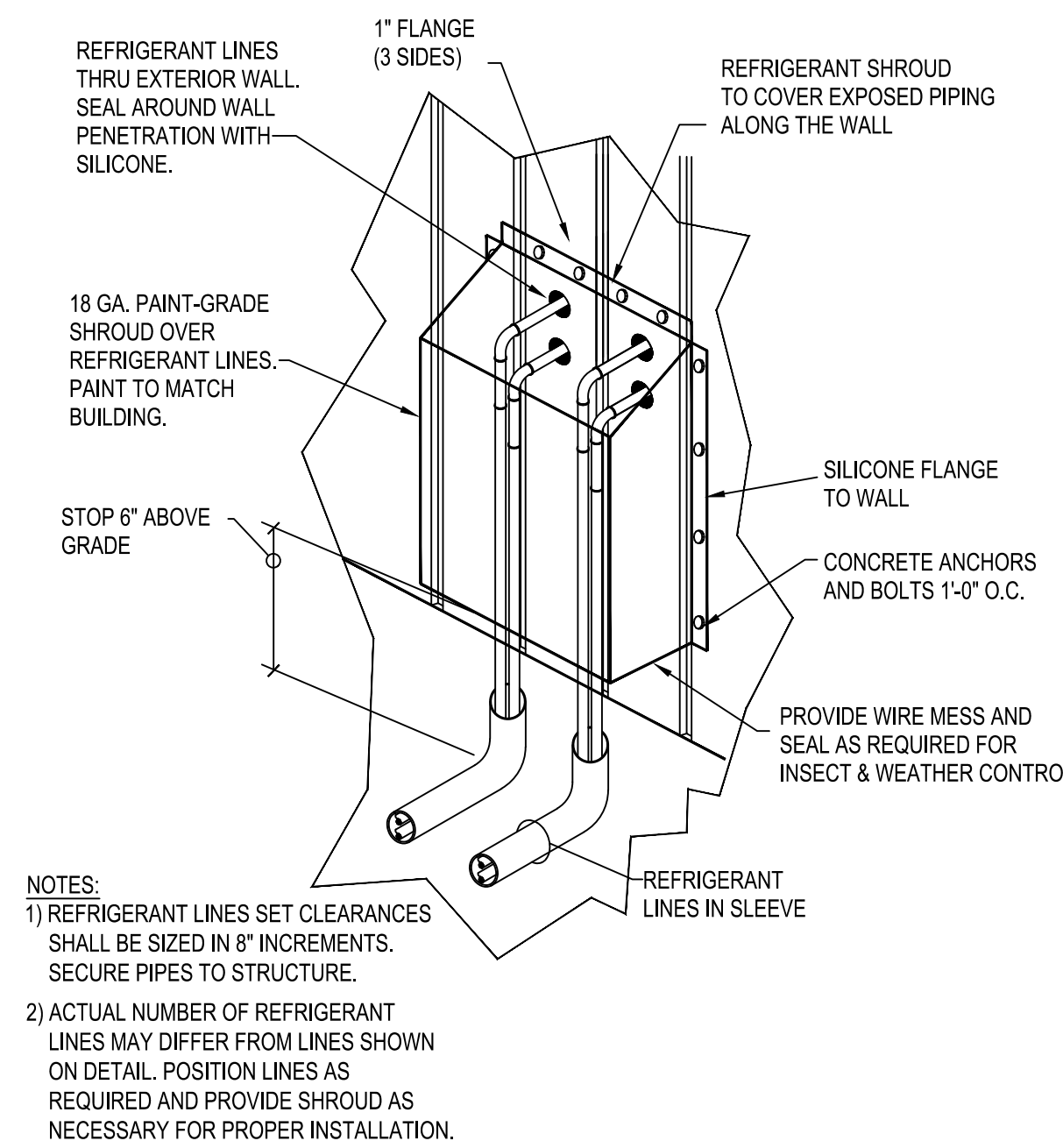
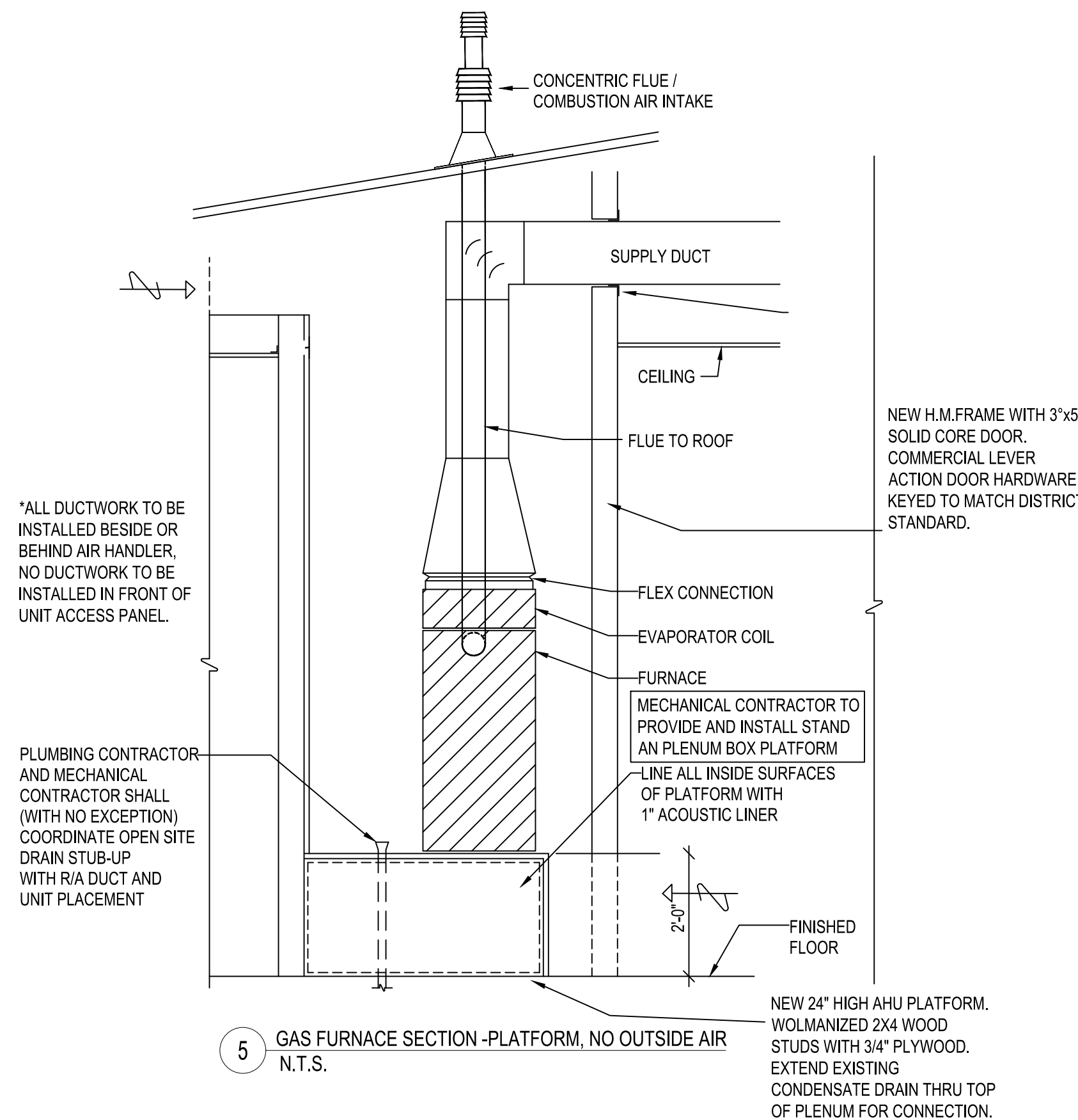
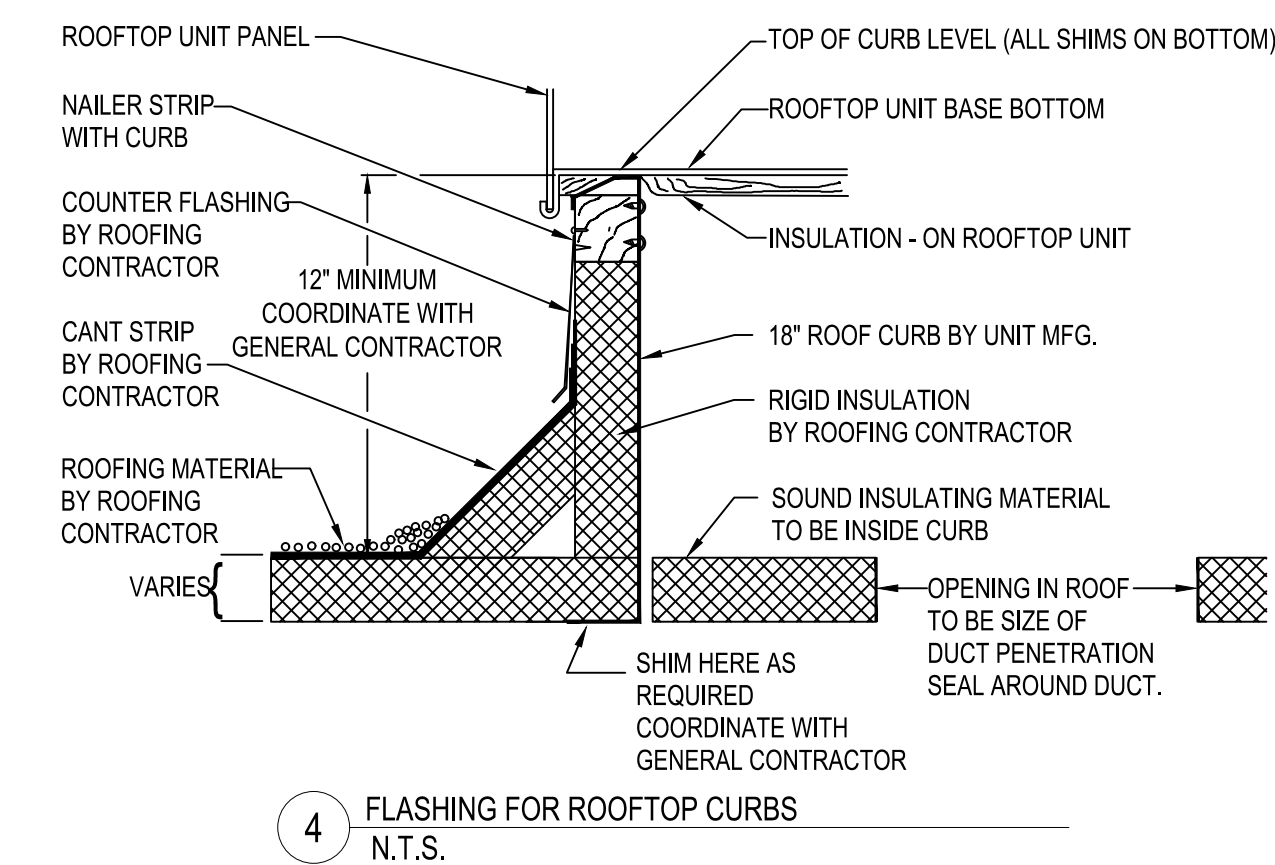
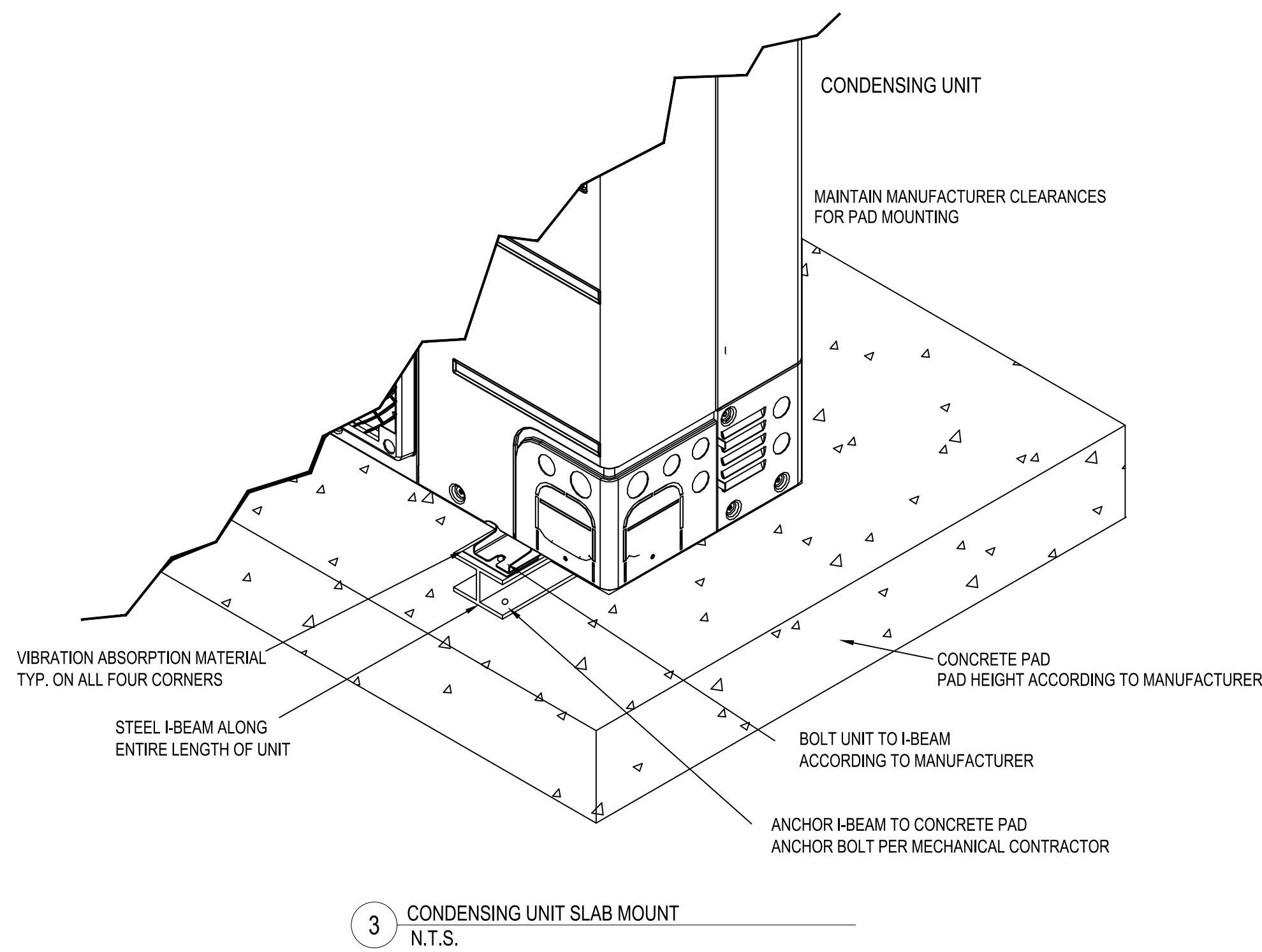
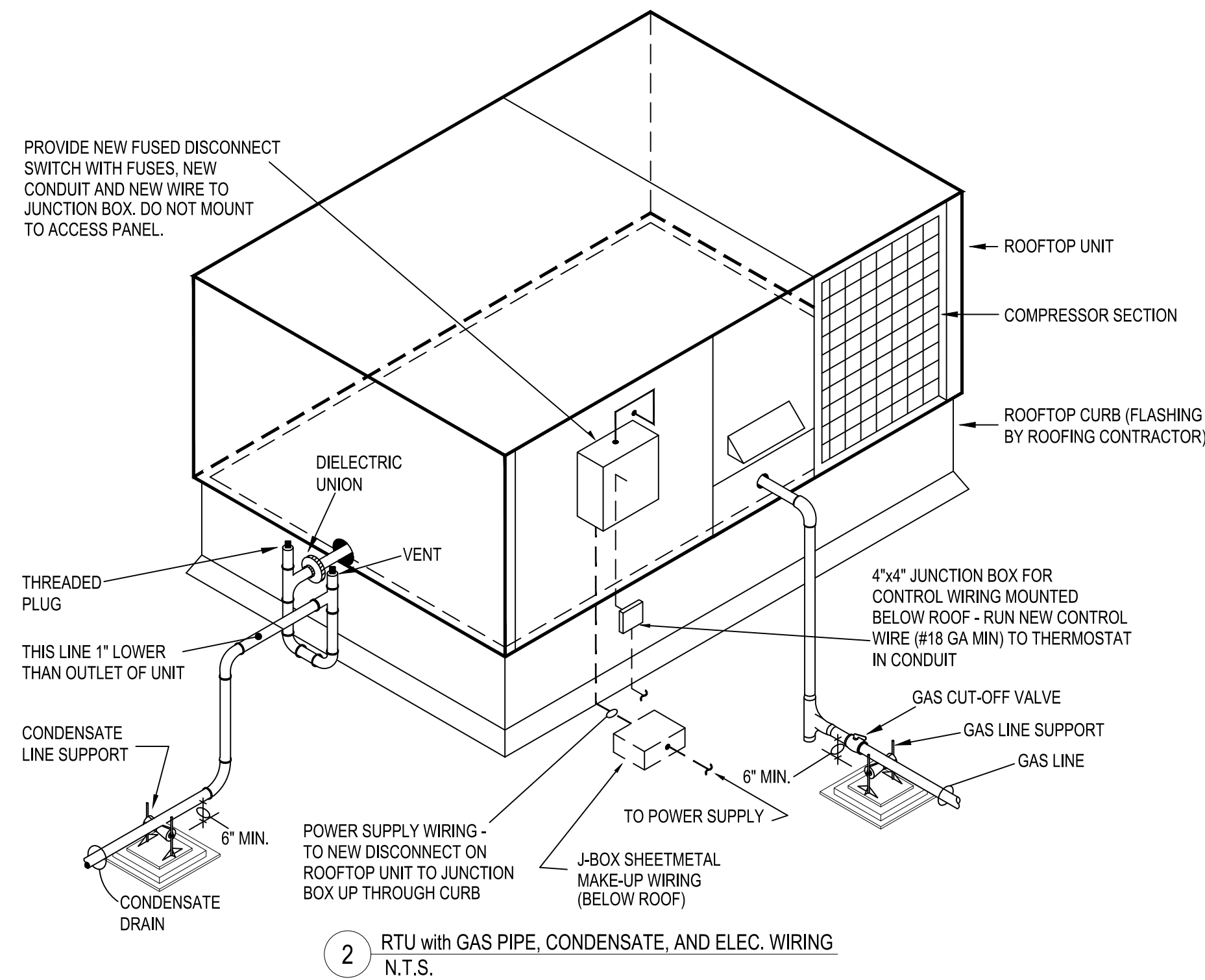
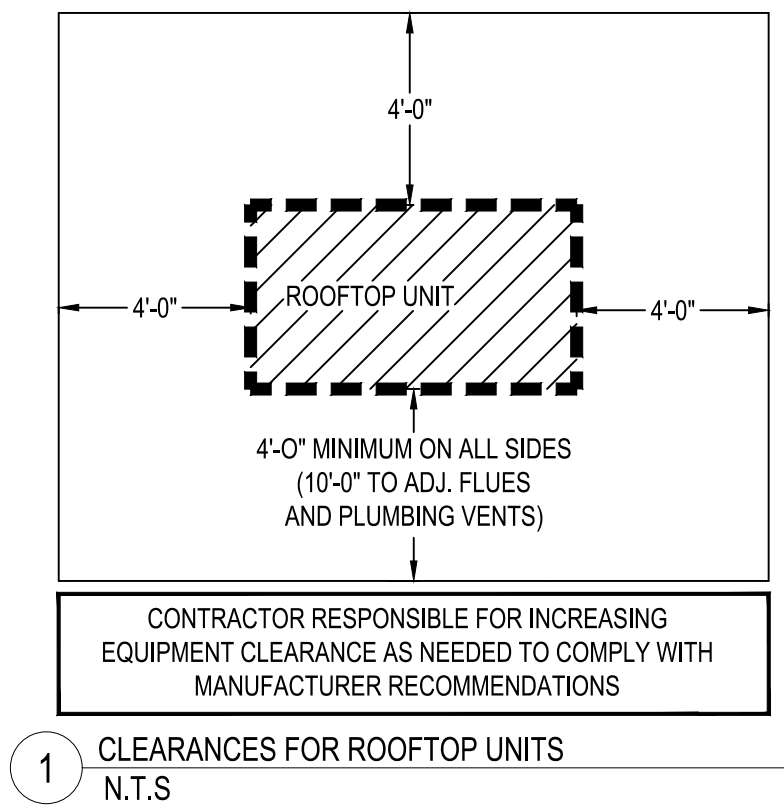
- INSTALL NEW AIR HANDLING UNIT IN EXISTING LOCATION. RECONNECT ALL ASSOCIATED ITEMS TO UNIT INCLUDING BUT NOT LIMITED TO CONDENSATE PIPING, GAS PIPING, ETC. CONTROLS TO BE RECONNECTED ONLY BY THE CONTROLS COMPANY. UNIT TO HAVE A GORE CONNECTION TO A NEMA 5-20R PLUG.
- INSTALL NEW CONDENSING UNIT ON NEW CONDENSING PAD PROVIDED BY CONTRACTOR. INSTALL ALL ASSOCIATED ITEMS TO UNIT INCLUDING BUT NOT LIMITED TO REFRIGERANT PIPING, ELECTRICAL WIRING ETC.
- EXISTING UNIT TO REMAIN.

HVAC DEMOLITION PLAN NOTES

- EXISTING HVAC UNIT TO BE REMOVED. REMOVE WIRING BACK TO SOURCE. EXISTING DISCONNECT TO BE REMOVED. CONDUIT TO BE REUSED FOR NEW UNIT.
- EXISTING HVAC UNIT TO BE REMOVED AND REPLACED. EXISTING DISCONNECT TO BE REMOVED. EXISTING CIRCUIT TO BE USED TO PROVIDE POWER TO NEW UNIT.
- EXISTING HVAC UNIT TO BE REMOVED AND REPLACED. EXISTING RECEPTACLE THAT PROVIDES POWER TO REMAIN IN PLACE AND OPERATIONAL TO PROVIDE POWER FOR NEW UNIT.

ELECTRICAL PLAN NOTES

- PROVIDE POWER TO NEW AIR HANDLERS FROM RECEPTACLE THAT PROVIDED POWER TO PREVIOUSLY DEMOLISHED AIR HANDLER.
- NEW CONDENSER TO REPLACE DEMOLISHED CONDENSER AT THIS APPROXIMATE LOCATION. PROVIDE POWER TO NEW CONDENSER FROM EXISTING CIRCUIT THAT PROVIDED POWER TO DEMOLISHED CONDENSER. EXTEND ELECTRICAL AS REQUIRED. PROVIDE NEW 60A DISCONNECT WITH 50A FUSES.



ELECTRICAL DEMOLITION GENERAL NOTES

- UNLESS NOTED ON DRAWINGS, ALL LIGHTING, SWITCHES, OUTLETS AND OTHER ELECTRICAL DEVICES ARE TO REMAIN.
- REFER TO SPECIFICATION SECTION 26 05 11, ELECTRICAL DEMOLITION REMODELING, FOR GENERAL DEMOLITION REQUIREMENTS.
- ALL MATERIAL REMOVED AND NOT RETAINED BY THE OWNER SHALL BE DISPOSED OF OFF SITE IN A LAWFUL MANNER.
- 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.

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)	Ⓢ
BALANCING DAMPER * (BAL)	Ⓢ
BACK DRAFT DAMPER (BDD)	Ⓢ
EXHAUST FAN	Ⓢ
ROOF RELIEF	Ⓢ
SUPPLY FAN	Ⓢ
EXISTING DUCT / PIPE CAP	Ⓢ
REFRIGERANT LINE	Ⓢ
SERVICE ACCESS AREA	Ⓢ
UNIT	Ⓢ
SPIRAL DUCT	Ⓢ
FLEX DUCT	Ⓢ
MEDIUM PRESSURE DUCT	Ⓢ

NOTE: SOME SYMBOLS MAY NOT BE USED.
* OPPOSED BLADE DAMPER TO BE NAILER 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.

MECHANICAL DEMOLITION GENERAL NOTES

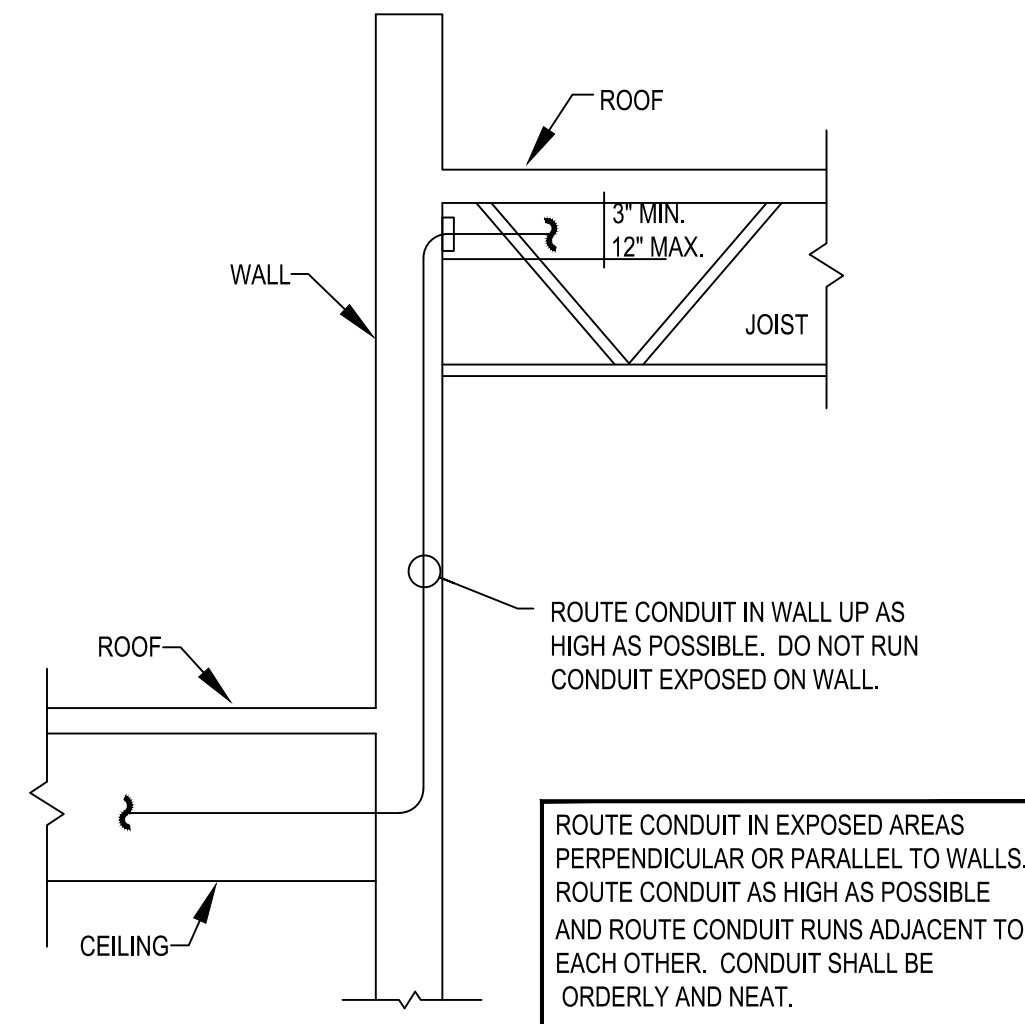
- CONTRACTOR TO VISIT SITE AND BE FAMILIAR WITH BUILDING MECHANICAL AND ELECTRICAL LAYOUTS.
- IF ASBESTOS IS FOUND CONTACT OWNER IMMEDIATELY. DO NOT WORK IN ANY AREA SUSPECTED TO CONTAIN ASBESTOS.
- ALL EXISTING EQUIPMENT SHOWN IN APPROXIMATE LOCATION. FIELD VERIFY.
- DO NOT RELEASE ANY REFRIGERANT TO 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 DUCT-WORK 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.
- IF EXISTING CEILING ARE TO REMAIN, REMOVE ONLY CEILING TILE NECESSARY TO ACCOMPLISH DEMOLITION AND NEW WORK. REMOVE AND REINSTALL ELECTRICAL LIGHTING FIXTURES, FIRE ALARM DEVICES, SPEAKERS, 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.
- WHERE 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 GAS TO EXISTING RTU(S) THAT HAVE GAS IN PLACE AND OPERATIONAL UN LESS REPLACING UNIT.
- 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 ROOFTOP UNIT HAS CONDENSATE PIPING.
- ALL AIR HANDLER BEING REINSTALLED TO MAINTAIN FILTER ACCESS. COORDINATE FILTER ACCESS DOORS WITH STRUCTURE.

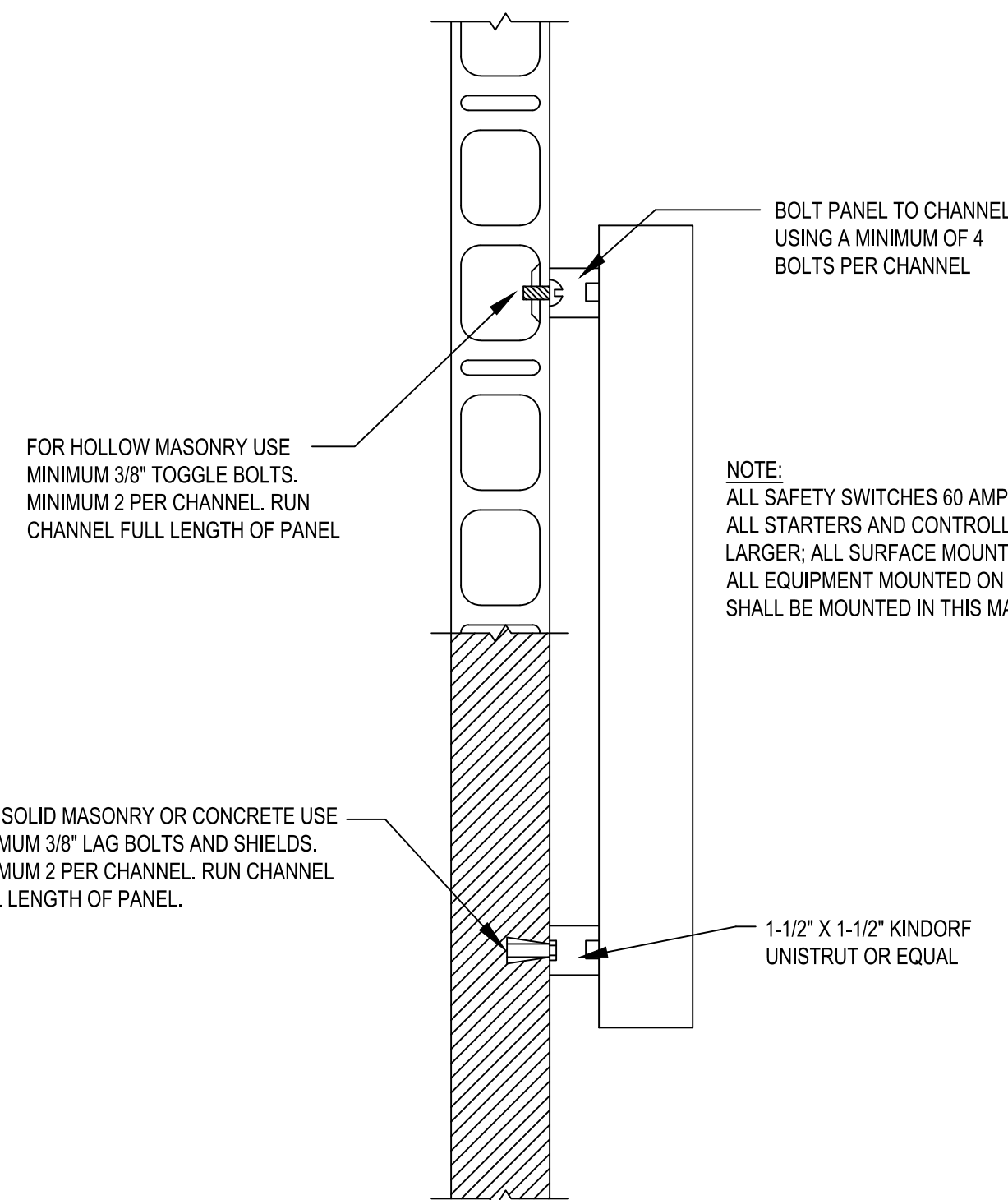
MECHANICAL GENERAL NOTES

- MECHANICAL CONTRACTOR TO PROVIDE TO THE PLUMBING CONTRACTOR THE RECOMMENDED AC MANUFACTURER'S 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.
- PROVIDE AND INSTALL MANUAL VOLUME CONTROL DAMPERS ON SUPPLY AND RETURN BRANCH DUCT SERVING A DIFFUSER OR REGISTER.
- NO MECHANICAL EQUIPMENT THAT REQUIRES SERVICE (i.e. FANS, ROOFTOP UNITS, ETC.) ON ROOF SHALL BE CLOSER THAN 10'-6" TO EDGE OF BUILDING.
- THE MECHANICAL CONTRACTOR SHALL NOT INSTALL ANY ROOF EQUIPMENT CLOSER THAN 5'-0" TO ANY ADJACENT WALLS, EXPANSION JOINTS, AND/OR PARAPETS.
- COORDINATE WITH THE PLUMBING CONTRACTOR LOCATION OF ALL ROOFTOP UNITS WITH ALL PLUMBING VENTS. MAINTAIN 10'-0" MINIMUM SEPARATION.
- COORDINATE ALL UNITS, DUCTWORK, AND GRILLES WITH ALL TRADES BEFORE INSTALLING.
- MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ROOFING CONTRACTOR ALL COUNTER FLASHING REQUIRED AT ROOF CURBS.
- MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE STEEL ERECTOR AND ROOFING CONTRACTOR THE INSTALLATION OF ALL ROOF MOUNTED EQUIPMENT.
- MECHANICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING SLOPE OF STRUCTURAL STEEL TO ALLOW ROOF CURBS TO BE INSTALLED LEVEL.
- ALL ROOFTOP UNITS AND CURBS TO BE INSTALLED LEVEL. ROOFTOP UNIT MFG. TO PROVIDE SEAL BETWEEN UNIT AND CURB.
- NO MECHANICAL EQUIPMENT THAT REQUIRES SERVICE (i.e. FANS, CONDENSING UNITS, ETC.) ON ROOF SHALL BE CLOSER THAN 10'-6" TO EDGE OF BUILDING.
- INSTALL CONDENSERS PER MANUFACTURER CLEARANCES.
- MECHANICAL CONTRACTOR SHALL SUBMIT TO ARCHITECT / 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 PANEL 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.
- ALL AIR HANDLER BEING REINSTALLED TO MAINTAIN FILTER ACCESS. COORDINATE FILTER ACCESS DOORS WITH STRUCTURE.

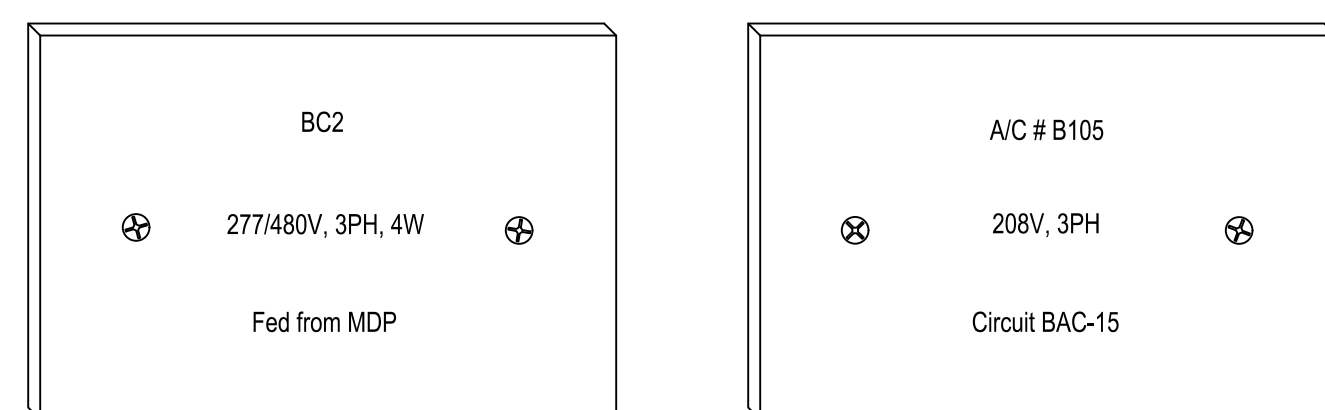
ELECTRICAL GENERAL NOTES

- 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 CABLES SHALL BE INSTALLED BETWEEN THE BOTTOM AND TOP CHORD OF JOIST. WHERE NO CEILING 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.
- 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, SFDs, 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.
- MECHANICAL - ALL VARIABLE FREQUENCY DRIVES (VFDs) ARE TO BE PROVIDED BY THE MECHANICAL CONTRACTOR, INSTALLED AND POWERED BY THE ELECTRICAL CONTRACTOR, AND CONTROLLED BY THE CONTROLS CONTRACTOR. THIS CONTRACTOR TO PROVIDE ALL NECESSARY POWER WIRING FROM PANEL TO VFDs AND FROM VFDs TO EACH MOTOR.
- 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 UTILIZING THE CIRCUIT POWERING THE UNIT. COORDINATE EXACT ELECTRICAL REQUIREMENTS WITH MECHANICAL INSTALLER. LOCATE EACH TRANSFORMER IN A NEMA 3R ENCLOSURE MOUNTED AT THE UNIT.





1 SURFACE EQUIPMENT MOUNTING DETAIL
N.T.S.



PANELBOARD LABEL (TYPICAL)

HVAC DISCONNECT SWITCH LABEL (TYPICAL)

NOTES:

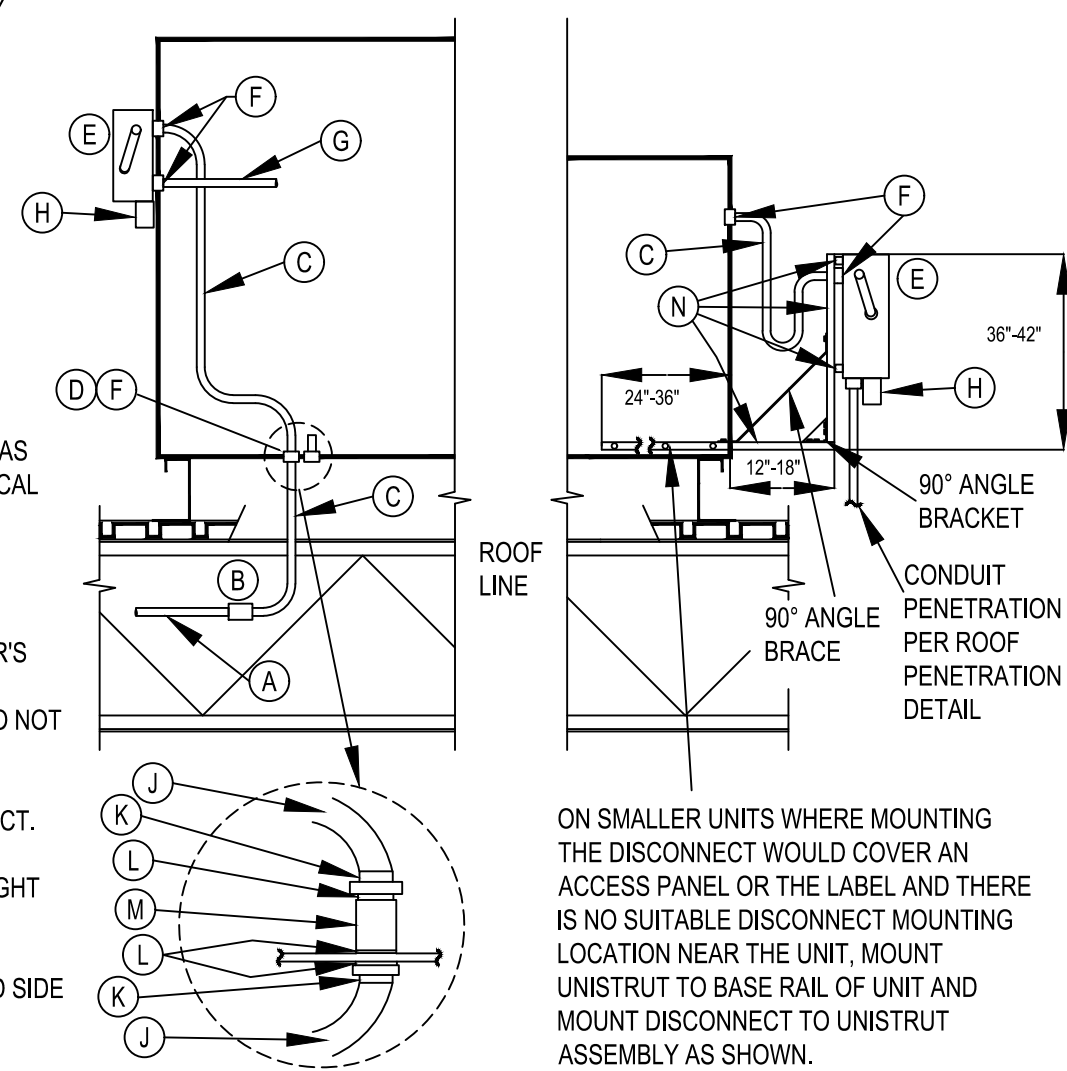
1. ATTACH SECURELY WITH NON-CORRODING STAINLESS STEEL SCREWS, NON-CORRODING POP RIVETS ARE ACCEPTABLE, ADHESIVE ATTACHMENT IS NOT ACCEPTABLE.
2. LABEL ALL PANELBOARDS, SWITCHBOARDS, TRANSFORMERS, HVAC DISCONNECT SWITCHES, AND MOTOR CONTROL CENTERS AS REQUIRED, REFERENCE SPECIFICATION SECTION 280553.

2 ELECTRICAL EQUIPMENT IDENTIFICATION
N.T.S.

NEVER MOUNT DISCONNECTING MEANS TO ACCESS PANEL OR OVER ANY DATA LABELS OR COVER PLATES. IF ADEQUATE SPACE DOES NOT EXIST ON THE SIDE OF THE UNIT, MOUNT DISCONNECT TO UNISTRUT ASSEMBLY, NOT THE UNIT. SEE PANEL ROOF SUPPORT OR RTU POWER SUPPLY FOR SUITABLE DISCONNECT MOUNTING OPTIONS.

DETAIL PLAN NOTES:

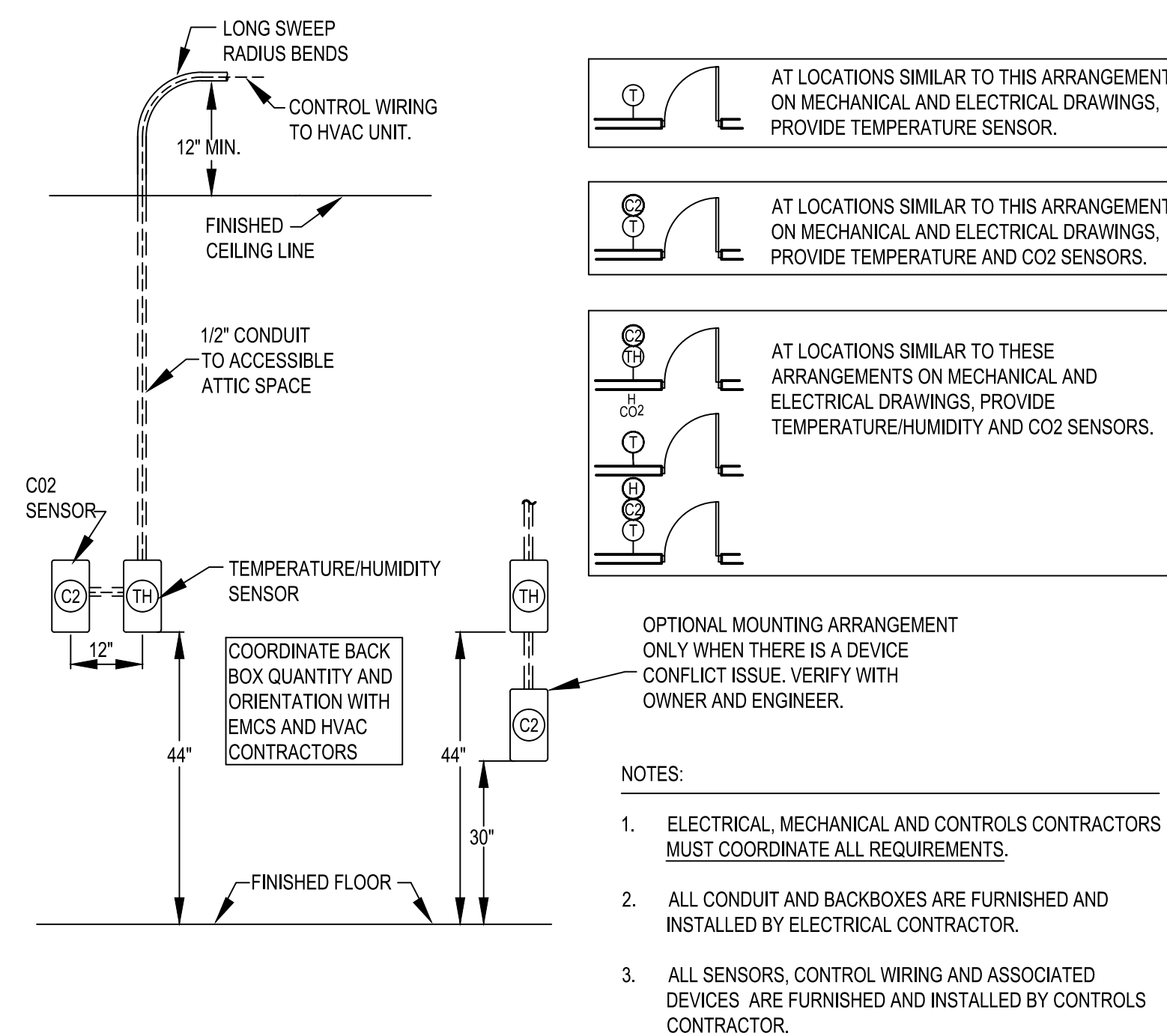
- A EMT OR RIGID CONDUIT BELOW ROOF.
- B 4" x 4" JUNCTION BOX BELOW ROOF.
- C POWER WIRING IN LIQUID TIGHT FLEXIBLE METAL CONDUIT. LENGTH TO BE AS SHORT AS PRACTICAL. COORDINATE ROUTING OF CONDUIT WITH MECHANICAL CONTRACTOR AND RTU MANUFACTURER.
- D FACTORY INSTALLED BOTTOM ENTRY KIT, IF AVAILABLE. IF A FACTORY INSTALLED BOTTOM ENTRY KIT IS NOT AVAILABLE, THEN THE ELECTRICAL CONTRACTOR IS TO PROVIDE A LIQUID TIGHT COUPLING SUCH AS A "MEYER'S HUB" OR EQUIVALENT APPROVED BY THE RTU MANUFACTURER. THE RTU MANUFACTURER MUST APPROVE THE LOCATION OF THE PENETRATION. DO NOT CUT ANY OTHER OPENINGS IN THE BOTTOM OF THE UNIT.
- E NEMA 3R HEAVY DUTY WEATHERPROOF FIELD-SUPPLIED FUSED DISCONNECT.
- F WATERTIGHT COUPLINGS, "MEYER'S HUB" OR EQUIVALENT TIED TO SEALTIGHT FOR BOTH POWER AND CONTROLS.
- G POWER WIRING IN LIQUID TIGHT FLEXIBLE METAL CONDUIT FROM THE LOAD SIDE OF THE SAFETY SWITCH TO THE RTU POWER CONNECTION POINT.
- H GFCI WEATHERPROOF RECEPTACLE AS REQUIRED. ALSO, LIGHTNING SURGE ARRESTOR. SEE SPECIFICATION 282816.
- J SEAL-TIGHT
- K SEAL-TIGHT CONNECTOR
- L RUBBER SEALING WASHER
- M RIDGED COUPLING
- N GALVANIZED UNISTRUT AND MOUNTING HARDWARE. FIELD GALVANIZE ALL CUT ENDS. UNISTRUT TO BE MOUNTED TO BOTH SIDES OF UNIT. PROVIDE UNISTRUT CROSS MEMBERS TO MOUNT DISCONNECT TO.



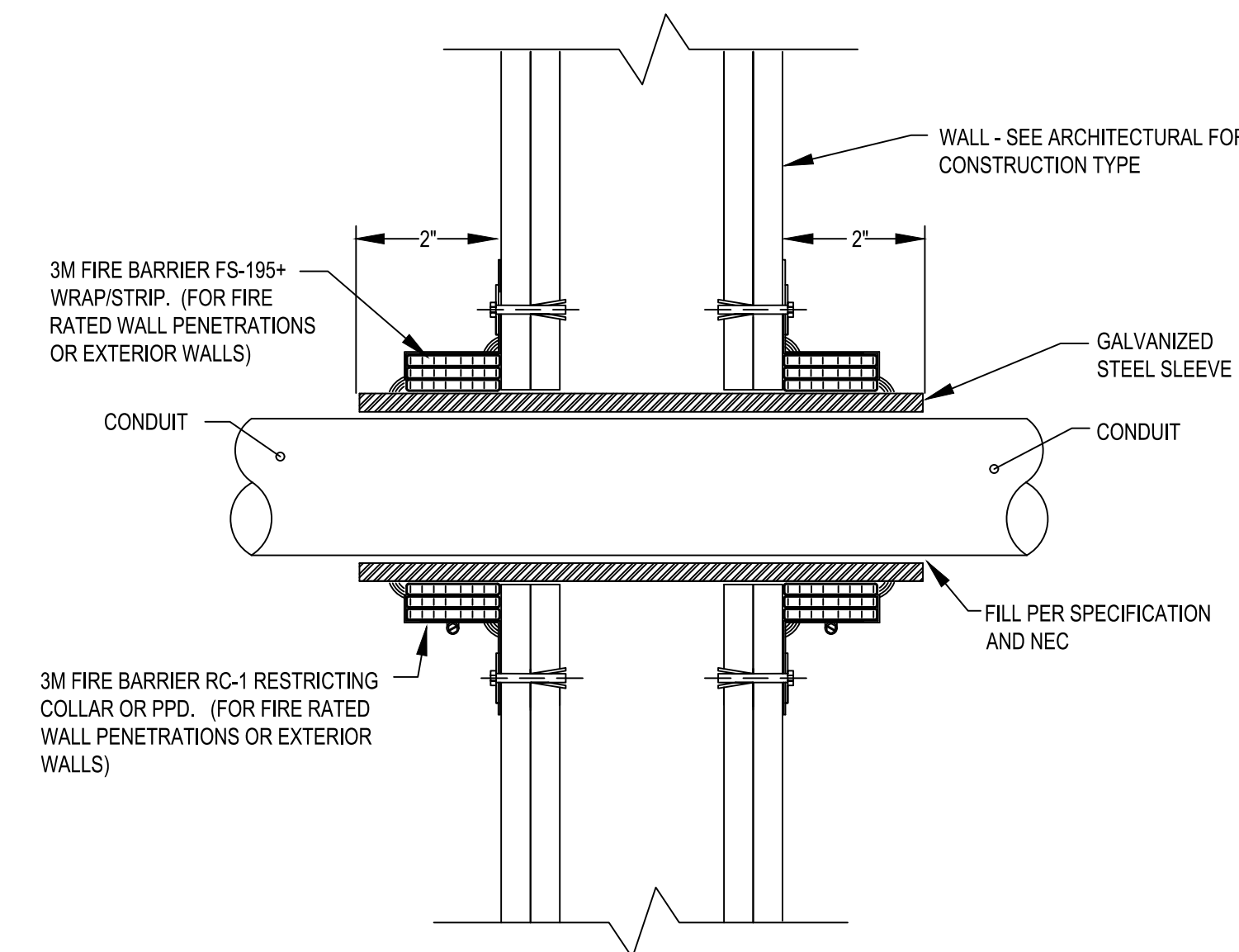
DETAIL GENERAL NOTES:

1. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL WIRING AND CONDUIT SHOWN. ANY OTHER CONDUIT AND WIRING SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR.
2. DO NOT OBSTRUCT COVERS, FILTERS, OR OTHER MECHANICAL COMPONENTS WHERE ACCESS OR REMOVAL IS REQUIRED FOR SERVICE.
3. IF BOTTOM ENTRY CANNOT BE PROVIDED, THEN ROUTE CONDUIT UP THRU ROOF IN ACCORDANCE WITH ROOF PENETRATION DETAIL.

3 RTU POWER SUPPLY
N.T.S.



4 SENSOR MOUNTING DETAIL
N.T.S.



5 WALL PENETRATION
N.T.S.

AIR IONIZER (MIDDLE SCHOOL)			
MARK	DESIGN MANUFACTURER	SYSTEM CFMS	ACCESSORIES:PROVIDE
	BIO CLIMATIC		
A	IGD-N-H	0 - 4800	UL 2998 CERTIFIED, BULB-LESS DESIGN, 24V POWER

NOTE: ANY SYSTEM WITH MORE THAN 4800 CFMS SHALL UTILIZE MULTIPLE IONIZERS

PACKAGED HVAC EQUIPMENT (ELEMENTARY SCHOOL)																			
DX COOLING / GAS HEATING																			
MARK	DESIGN MANUFACTURER	TONS	ESP (IN. W.C.)	SEER / EER	HIGH SPEED CFM	LOW SPEED CFM	DX COOLING		GAS HEATING			ELECTRICAL			UNIT WEIGHT (LB)	REMARKS:	TAGS		
	LENNOX						TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	HEAT INPUT (MBH)	VOLTAGE/ PHASE	MCA	MOCP							
RTU-7.5T	LGT092H4E	7.5	0.5	- / 12.3	3000	2000	86.0	61.4	130.0	460V / 3Ø	23	25	1300	1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15	RTU# 1-5, 1-9, 1-17B				
RTU-12.5T	LGT150H4E	12.5	0.5	- / 10.8	5000	3300	126.2	92.0	180.0	460V / 3Ø	30	40	1400	1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15	RTU# 1-3A, 1-3B				
REMARKS																			
1. 2" MERV 8 FILTERS					5. CRANKCASE HEATER					9. MULTIPLE COMPRESSORS					13. BAS TERMINAL STRIP				
2. ROOF CURB ADAPTER					6. FREEZE THERMOSTAT					10. ECM OR VFD ON SUPPLY FAN					14. AIR IONIZER				
3. HAIL COIL GUARD					7. R-410A REFRIGERANT					11. HINGED ACCESS DOORS					15. CONVENIENCE OUTLET POWERED BY EC				
4. MOTORIZED MODULATING OUTSIDE AIR DAMPER					8. TWO STAGE COMPRESSOR					12. FUSED DISCONNECT BY EC									

PACKAGED HVAC EQUIPMENT (HIGH SCHOOL)																			
MARK	DESIGN MANUFACTURER	TONS	ESP (IN. W.C.)	SEER / EER	HIGH SPEED CFM	LOW SPEED CFM	DX COOLING		GAS HEATING	ELECTRICAL			UNIT WEIGHT (LB)	REMARKS:	TAGS				
	LENNOX						TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	HEAT INPUT (MBH)	VOLTAGE/ PHASE	MCA	MOCP							
RTU-2T	KGB024S4E	2.0	0.5	- / -	800	500	22.7	17.2	65.0	208V / 1Ø	19	25	700	1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14	RTU# 4.03, IT				
RTU-3T	LGT036H4E	3.0	0.5	17 / 13.3	1200	800	34.3	24.8	65.0	460V / 3Ø	9	15	800	1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14	RTU# 108B				
RTU-4T	LGT048H4E	4.0	0.5	17 / 12.8	1600	1100	45.7	33.5	65.0	460V / 3Ø	13	15	800	1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14	RTU# 1-03				
RTU-5T	LGT060H4E	5.0	0.5	17 / 12.7	1990	1300	57.1	42.8	108.0	460V / 3Ø	14	15	800	1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14	RTU# 104, 202, OFF, 1-13				
RTU-7.5T	LGT092H4E	7.5	0.5	- / 12.3	3000	2000	56.0	61.4	130.0	460V / 3Ø	23	25	1300	1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14	RTU# 204, 206				
RTU-10T	LGT120H4E	10.0	0.5	- / 12.1	4000	2700	108.3	77.8	130.0	460V / 3Ø	26	30	1400	1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15	RTU# 102A, 102B				
RTU-12.5T	LGT150H4E	12.5	0.5	- / 10.8	5000	3300	126.2	92.0	180.0	460V / 3Ø	30	40	1400	1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15	RTU# 1-15A, 1-15B				
REMARKS																			
1. 2" MERV 8 FILTERS					5. CRANKCASE HEATER					9. MULTIPLE COMPRESSORS					13. BAS TERMINAL STRIP				
2. ROOF CURB ADAPTER					6. FREEZE THERMOSTAT					10. ECM OR VFD ON SUPPLY FAN					14. AIR IONIZER				
3. HAIL COIL GUARD					7. R-410A REFRIGERANT					11. HINGED ACCESS DOORS					15. CONVENIENCE OUTLET POWERED BY EC				
4. MOTORIZED MODULATING OUTSIDE AIR DAMPER					8. TWO STAGE COMPRESSOR					12. FUSED DISCONNECT BY EC									

SPLIT SYSTEM (HIGH SCHOOL AG BUILDING)																	
DX COOLING/GAS HEATING																	
MARK	DESIGN MANUFACTURER	TONS	ESP (IN. W.C.)	SEER / EER	HIGH SPEED CFM	LOW SPEED CFM	OA CFM	DX COOLING		GAS HEATING		ELECTRICAL			UNIT WEIGHT (LB)	REMARKS:	TAGS
	LENNOX							TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	FURNACE MODEL NUMBER	HEAT INPUT (MBH)	VOLTAGE/ PHASE	MCA	MOCP			
A	AH - CX35-48C-2F AC - XC16SD48-230	4.0	0.5	16.0 / -	1600	1100	200	41.2	30.9	ML195UH090XP48C	88.0	120V / 1Ø 208V / 1Ø	- 30	15 50	200 300	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	AH/AC# 3, 4
REMARKS																	
1. 2" FILTER RACK* WITH MERV 8 FILTERS					5. CRANKCASE HEATER					9. AIR IONIZER							
2. THERMAL EXPANSION VALVE					6. FREEZE THERMOSTAT					10. 80 % AFUE							
3. HAIL COIL GUARD					7. R-410A REFRIGERANT					11. CONCENTRIC FLUE							
4. MODULATING OUTSIDE AIR DAMPER					8. TWO STAGE COMPRESSOR												

SMALL CAPACITY SPLIT SYSTEM SCHEDULE (INTERMEDIATE SCHOOL)												
MARK	DESIGN MANUFACTURER	TONS	SEER / HSPF	SYSTEM CFM	COOLING	ELECTRICAL			UNIT WEIGHT (LB)	REMARKS:	TAGS	
	CAPACITY (BTUs)				VOLTAGE/ PHASE	MCA	MOCP					
A	AH - LSN122CE AC - LSU122CE	1.0	13 / -	330	11500.0	POWERED FROM AC 120V / 1Ø 14.3 20			50 125	CONDENSATE PUMP, WALL UNIT, MAX REFRIGERANT PIPE LENGTH 164'-0", MAX ELEVATION 64'-0" WIRED SENSOR, COIL HAIL GUARD	AC/AH# 1, 2	

PACKAGED HVAC EQUIPMENT (INTERMEDIATE SCHOOL)																			
MARK	DESIGN MANUFACTURER	TONS	ESP (IN. W.C.)	SEER / EER	HIGH SPEED CFM	LOW SPEED CFM	DX COOLING		GAS HEATING	ELECTRICAL			UNIT WEIGHT (LB)	REMARKS:	TAGS				
	LENNOX						TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	HEAT INPUT (MBH)	VOLTAGE/ PHASE	MCA	MOCP							
RTU-12.5T	LGT150H4E	12.5	0.5	- / 10.8	5000	3300	126.2	92.0	180.0	460V / 3Ø	30	40	1400	1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14	RTU# 8-18				
REMARKS																			
1. 2" MERV 8 FILTERS					5. CRANKCASE HEATER					9. MULTIPLE COMPRESSORS					13. BAS TERMINAL STRIP				
2. ROOF CURB ADAPTER					6. FREEZE THERMOSTAT					10. ECM OR VFD ON SUPPLY FAN					14. AIR IONIZER				
3. HAIL COIL GUARD					7. R-410A REFRIGERANT					11. HINGED ACCESS DOORS									
4. MOTORIZED MODULATING OUTSIDE AIR DAMPER					8. TWO STAGE COMPRESSOR					12. FUSED DISCONNECT BY EC									

PACKAGED HVAC EQUIPMENT (JUNIOR HIGH SCHOOL)															
DX COOLING / GAS HEATING															
MARK	DESIGN MANUFACTURER	TONS	ESP (IN. W.C.)	SEER / EER	HIGH SPEED CFM	LOW SPEED CFM	DX COOLING		GAS HEATING				UNIT WEIGHT (LB)	REMARKS:	TAGS
	LENNOX						TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	HEAT INPUT (MBH)	VOLTAGE/ PHASE	MCA	MOCP			
RTU-3T	LGT036H4E	3.0	0.5	17 / 13.3	1200	800	34.3	24.8	65.0	460V / 3Ø	9	15	800	1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14	RTU# 4, 9, BAND
RTU-4T	LGT048H4E	4.0	0.5	17 / 12.8	1600	1100	45.7	33.5	65.0	460V / 3Ø	13	15	800	1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14	RTU# 10
RTU-25T	LGT300S4M	25.0	0.5	- / 10.8	10000	6600	259.9	200.2	291.0	460V / 3Ø	68	80	2700	1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15	RTU# 11
REMARKS															
1. 2" MERV 8 FILTERS					5. CRANKCASE HEATER					9. MULTIPLE COMPRESSORS					13. BAS TERMINAL STRIP
2. ROOF CURB ADAPTER					6. FREEZE THERMOSTAT					10. ECM OR VFD ON SUPPLY FAN					14. AIR IONIZER
3. HAIL COIL GUARD					7. R-410A REFRIGERANT					11. HINGED ACCESS DOORS					15. CONVENIENCE OUTLET POWERED BY EC
4. MOTORIZED MODULATING OUTSIDE AIR DAMPER					8. TWO STAGE COMPRESSOR					12. FUSED DISCONNECT BY EC					

PACKAGED HVAC EQUIPMENT (HIGH SCHOOL)																
DX COOLING / GAS HEATING																
MARK	DESIGN MANUFACTURER	TONS	ESP (IN. W.C.)	EER / SEER	FAN CFM		DX COOLING		ELECTRICAL			UNIT WEIGHT (LB)	REMARKS:	TAGS		
	DAIKIN				HIGH SPEED	LOW SPEED	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	VOLTAGE/ PHASE	MCA	MOCP					
RTU-28T	MPS030F	28.0	2	10.3 / 13.2	10500	9500	337.9	257.4	460V / 3Ø	69.1	80	3945	1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16	RTU# 200W		
RTU-40T	MPS040F	40.0	2	10.3 / 13.2	15000	13500	474.3	364.4	460V / 3Ø	94.4	110	5100	1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16	RTU# 400W		
REMARKS																
1. 2" MERV 8 FILTERS					5. CRANKCASE HEATER				9. MULTIPLE COMPRESSORS				13. BAS TERMINAL STRIP			
2. ROOF CURB ADAPTER					6. FREEZE THERMOSTAT				10. ECM OR VFD ON SUPPLY FAN				14. AIR IONIZER			
3. HAIL COIL GUARD					7. R-410A REFRIGERANT				11. HINGED ACCESS DOORS				15. HOT GAS REHEAT			
4. MOTORIZED MODULATING OUTSIDE AIR DAMPER					8. TWO STAGE COMPRESSOR				12. FUSED DISCONNECT BY EC				16. CONVIENCE OUTLET POWERED BY EC			

PACKAGED HVAC EQUIPMENT (PRIMARY SCHOOL)																
DX COOLING / GAS HEATING																
MARK	DESIGN MANUFACTURER	TONS	ESP (IN. W.C.)	SEER / EER	HIGH SPEED CFM	LOW SPEED CFM	OACFM	DX COOLING		GAS HEATING	ELECTRICAL			UNIT WEIGHT (LB)	REMARKS:	TAGS
	LENNOX							TOTAL CAPACITY (MBTUH)	SENSIBLE CAPACITY (MBTUH)		VOLTAGE/ PHASE	MCA	MOCP			
RTU-3T	LGT036H4E	3.0	0.5	17 / 13.3	1200	800	200	34.3	24.8	65.0	460V / 3Ø	9	15	700	1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14	RTU# 2-08, 2-14, 2-28, 4-17, 4-20
RTU-4T	LGT048H4E	4.0	0.5	17 / 12.8	1600	1100	200	45.7	33.5	65.0	460V / 3Ø	13	15	800	1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14	RTU# 4-12
RTU-5T	LGT060H4E	5.0	0.5	17 / 12.7	1990	1300	200	57.1	42.8	108.0	460V / 3Ø	14	15	800	1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14	RTU# 4-04
RTU-7.5T	LGT092H4E	7.5	0.5	- / 12.3	3000	2000	200	86.0	61.4	130.0	460V / 3Ø	23	25	1300	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	RTU# 5-01A, 5-01B
REMARKS																
1. 2" MERV 8 FILTERS					5. CRANKCASE HEATER			9. MULTIPLE COMPRESSORS			13. BAS TERMINAL STRIP					
2. ROOF CURB ADAPTER					6. FREEZE THERMOSTAT			10. ECM OR VFD ON SUPPLY FAN			14. AIR IONIZER					
3. HAIL COIL GUARD					7. R-410A REFRIGERANT			11. HINGED ACCESS DOORS								
4. MOTORIZED MODULATING OUTSIDE AIR DAMPER					8. TWO STAGE COMPRESSOR			12. FUSED DISCONNECT BY EC								


SPLIT SYSTEM (PRIMARY SCHOOL)																	
DX COOLING/GAS HEATING																	
MARK	DESIGN MANUFACTURER	TONS	ESP (IN. W.C.)	SEER / EER	HIGH SPEED CFM	LOW SPEED CFM	OACFM	DX COOLING		GAS HEATING		ELECTRICAL			UNIT WEIGHT (LB)	REMARKS:	TAGS
	LENNOX							TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	FURNACE MODEL NUMBER	HEAT INPUT (MBH)	VOLTAGE/ PHASE	MCA	MOCP			
A	AH - CHX35-42B-6F AC - ML18XC2-036-230	3.0	0.5	17 / 13	1200	800	200	35.9	25.9	ML296UH045XV36B	44.0	120V / 1Ø 208V / 1Ø	12 20.2	15 35	200 187	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	AH/AC# 1-46, 1-06, 1-43, 1-09, 1-40, 1-12, 1-15, 1-18, 1-24
B	AH - CHX35-42B-6F AC - SSB036H4-230	3.0	0.5	15.5 / 12.2	1200	800	200	36.1	25.7	ML296UH045XV36B	44.0	120V / 1Ø 208V / 3Ø	12 16.2	15 25	200 245	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	AH/AC# 1-03
C	AH - CHX35-48C-6F AC - SSB048H4-230	4.0	0.5	15.5 / 11.5	1600	1100	200	47.4	36.9	ML296UH090XV48C	88.0	120V / 1Ø 208V / 3Ø	12 20.3	15 30	200 300	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	AH/AC# 1-27
REMARKS																	
1. 2" FILTER RACK* WITH MERV 8 FILTERS					5. CRANKCASE HEATER					9. AIR IONIZER							
2. THERMAL EXPANSION VALVE					6. FREEZE THERMOSTAT					10. 80 % AFUE							
3. HAIL COIL GUARD					7. R-410A REFRIGERANT					11. CONCENTRIC FLUE / INTAKE							
4. MOTORIZED OUTSIDE AIR DAMPER					8. TWO STAGE COMPRESSOR												
*FILTER RACK SHALL BE E-Z FILTER BASE - MODEL EZ-2025 OR EQUAL																	
**ACTUATOR FOR DAMPER SHALL BE CONTROLLED BY EMCS.																	

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

DESIGN SOLVE ENHANCE

EMA Engineering & Consulting, Inc.
Tyler | Austin | Houston | El Paso
DFW | San Antonio | Shreveport
Texas Firm Registration No. F-4851
Louisiana Firm Registration No. EC-518
www.EMAengineer.com



11-10-2023

ISSUE DATE

NOV. 10, 2023

ISSUE STATUS DATE

2024 HVAC RENOVATION

LA VEGA

LA VEGA INDEPENDENT SCHOOL DISTRICT

WACO, TEXAS

KEY PLAN

EMA JOB #: 1-001-0710-001

DRAWN BY: UV

CHECKED: QS

MECHANICAL SCHEDULES

SHEET NUMBER

MEP8.2