

MECHANICAL CONTROLS LEGEND	
SYMBOL	DESCRIPTION
	CONTROL POINT, ANALOG INPUT
	CONTROL POINT, ANALOG OUTPUT
	CONTROL POINT, DIGITAL INPUT
	CONTROL POINT, DIGITAL OUTPUT
	AIRCUIITY SENSOR
	POSITIONING BLADE SWITCH
	ELECTRICAL CURRENT SWITCH
	CARBON MONOXIDE SENSOR
	CARBON DIOXIDE SENSOR
	DUCT HEAT DETECTOR
	DIFFERENTIAL PRESSURE SWITCH
	DUCT SMOKE DETECTOR
	END SWITCH
	FLOW METER
	FLOW SWITCH
	HUMIDISTAT
	HIGH TEMPERATURE THERMOSTAT
	KEY OPERATED SWITCH
	LEVEL SENSOR
	LOW TEMPERATURE THERMOSTAT (FREEZE)
	MOTOR OR ACTUATOR
	MOISTURE SENSOR
	OXYGEN SENSOR
	VERRIDE BUTTION
	OCCUPANCY SENSOR
	PRESSURE SENSOR
	PUSH BUTTON
	PURGE PUSH BUTTION
	PRESSURE SWITCH
	RELATIVE HUMIDITY SENSOR
	RADIANT SLAB / SNOW MELT SENSOR
	WALL MOUNTED ROOM SENSOR (TEMP, RH, CO ₂ , CO, ETC.) REFER TO ROOM BY ROOM CONTROL MATRIX FOR SPECIFIC ROOM SENSOR TYPE(S)
	TEMPERATURE SENSOR
	TIMER SWITCH
	WINDOW CONTACT SWITCH
	AIRFLOW CONTROLLER
	AUTOMATIC CONTROL VALVE, 2-WAY
	AUTOMATIC CONTROL VALVE, 3-WAY
	AUTOMATIC CONTROL VALVE, 6-WAY
	BUTTERFLY VALVE, MOTORIZED
	CHILLED BEAM, ACTIVE
	CHILLED BEAM, PASSIVE
	COIL, COOLING
	COIL, HEATING
	COIL, REHEAT
	DAMPER, GRAVITY
	DAMPER, MOTORIZED OPPOSED BLADE
	DAMPER, MOTORIZED PARALLEL BLADE
	FAN, SUPPLY, RETURN OR EXHAUST
	FILTER
	HUMIDIFIER
	LAB AIR CONTROL VALVE
	LAB AIR CONTROL VALVE, VENTURI
	PUMP
	RADIANT CEILING PANEL
	RADIANT FLOOR
	STARTER / DISCONNECT
	VARIABLE FREQUENCY DRIVE
	VARIABLE AIR VOLUME BOX
	VARIABLE AIR VOLUME BOX W/ INTEGRAL REHEAT COIL
	VISUAL INDICATOR

MECHANICAL PIPING SYSTEMS LEGEND	
SYMBOL	DESCRIPTION
	AUTOMATIC CONTROL VALVE
	BALANCE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	CHECK VALVE
	ISOLATION VALVE
	MULTI-PURPOSE VALVE (BALANCE, CHECK, SHUT-OFF)
	OUTSIDE SCREW & YOKE GATE VALVE (OS&Y)
	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE
	3-WAY CONTROL VALVE
	6-WAY CONTROL VALVE
	ELBOW, TURNED DOWN
	ELBOW, TURNED UP
	BRANCH OFF TOP OF MAIN
	BRANCH OFF BOTTOM OF MAIN
	PIPING TO BE REMOVED
	CONDENSATE DRAIN LINE
	CHILLED GLYCOL RETURN
	CHILLED GLYCOL SUPPLY
	CHILLED WATER RETURN
	CHILLED WATER SUPPLY
	CONDENSATE PUMP DISCHARGE
	CONDENSER GLYCOL RETURN
	CONDENSER GLYCOL SUPPLY
	CONDENSER WATER RETURN
	CONDENSER WATER SUPPLY
	DUAL TEMPERATURE WATER RETURN
	DUAL TEMPERATURE WATER SUPPLY
	FUEL OIL RETURN
	FUEL OIL SUPPLY
	HOT GLYCOL RETURN
	HOT GLYCOL SUPPLY
	HIGH PRESSURE CONDENSATE
	HIGH PRESSURE STEAM
	HEAT RECOVERY GLYCOL RETURN
	HEAT RECOVERY GLYCOL SUPPLY
	HEAT RECOVERY WATER RETURN
	HEAT RECOVERY WATER SUPPLY
	HOT WATER RETURN
	HOT WATER SUPPLY
	LOW PRESSURE CONDENSATE
	LOW PRESSURE STEAM
	MEDIUM TEMPERATURE CHILLED WATER RETURN
	MEDIUM TEMPERATURE CHILLED WATER SUPPLY
	MEDIUM PRESSURE CONDENSATE
	MEDIUM PRESSURE STEAM
	PRE-HEAT HOT WATER RETURN
	PRE-HEAT HOT WATER SUPPLY
	REFRIGERANT HOT GAS
	REFRIGERANT LIQUID
	REFRIGERANT SUCTION
	PIPE GUIDE
	PIPE ANCHOR
	AIR VENT (MANUAL OR AUTOMATIC)
	FINNED TUBE RADIATION
	FLOAT & THERMOSTATIC TRAP ASSEMBLY
	INVERTED BUCKET TRAP ASSEMBLY
	PRESSURE GAUGE
	PUMP
	STRAINER
	THERMOMETER
	UNION
	DEMOLITION WORK: POINT OF REMOVAL
	DEMOLITION WORK: POINT OF ATTACHMENT

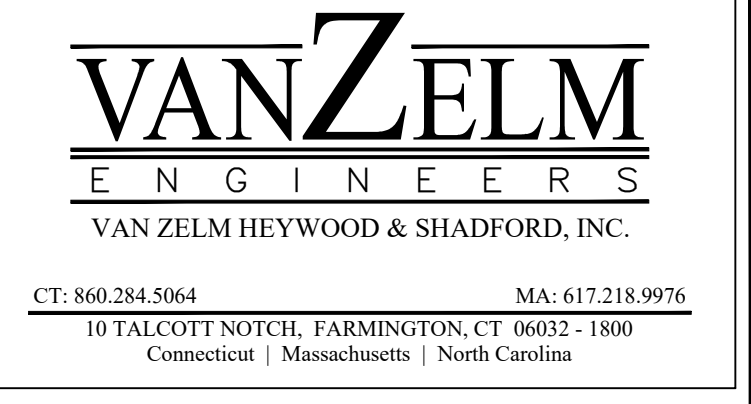
MECHANICAL AIR SYSTEMS LEGEND	
SYMBOL	DESCRIPTION
	SUPPLY DUCT UP
	SUPPLY DUCT DOWN
	RETURN DUCT UP
	RETURN DUCT DOWN
	EXHAUST DUCT UP
	EXHAUST DUCT DOWN
	EXISTING DUCT (SINGLE LINE)
	EXISTING DUCT (DOUBLE LINE)
	NEW DUCT (SINGLE LINE)
	NEW DUCT (DOUBLE LINE)
	ACOUSTICALLY LINED DUCT (SINGLE LINE)
	ACOUSTICALLY LINED DUCT (DOUBLE LINE)
	FIRE WRAPPED DUCT (DOUBLE LINE)
	DUCT TO BE REMOVED (SINGLE LINE)
	DUCT TO BE REMOVED (DOUBLE LINE)
	FLUSH CAP, SINGLE LINE
	SUPPLY DIFFUSER
	RETURN GRILLE
	EXHAUST GRILLE
	SUPPLY AIR FLOW
	RETURN/EXHAUST AIR FLOW
	LOUVER DOOR (SIZE AS NOTED)
	UNDER CUT DOOR
	REHEAT COIL
	VAV BOX
	VAV BOX WITH INTEGRAL SOUND ATTENUATOR
	AIRFLOW CONTROLLER
	AIRFLOW CONTROLLER WITH INTEGRAL SHUTOFF DAMPER
	LABORATORY AIRFLOW CONTROL VALVE
	SOUND ATTENUATOR
	AUTOMATIC CONTROL DAMPER
	FIRE DAMPER
	GRAVITY DAMPER
	VOLUME DAMPER
	FIRE SMOKE DAMPER
	SMOKE DAMPER
	OPPOSED BLADE DAMPER
	PARALLEL BLADE DAMPER
	HUMIDIFIER
	DEMOLITION WORK: POINT OF REMOVAL
	DEMOLITION WORK: POINT OF ATTACHMENT

MECHANICAL ABBREVIATIONS LEGEND	
AC	AIR CURTAIN
ACCU	AIR COOLED CONDENSING UNIT
ACU	AIR CONDITIONING UNIT
ACV	AIRFLOW CONTROL VALVE
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AS	AIR SEPARATOR
B	BOILER
BMS	BUILDING MANAGEMENT SYSTEM
CA	COMBUSTION AIR
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CP	CONDENSATE PUMP
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
DN	DOWN
DOAS	DEDICATED OUTDOOR AIR SYSTEM
DX	DIRECT EXPANSION
EA	EXHAUST AIR
EF	EXHAUST FAN
EMH	ELECTRICAL MANHOLE
ERV	ENERGY RECOVERY VENTILATOR
ET	EXPANSION TANK
FCU	FAN COIL UNIT
FTR	FINNED TUBE RADIATION
GEN	GENERATOR
GEX	GENERAL EXHAUST
GPM	GALLONS PER MINUTE
HRU	HEAT RECOVERY UNIT
HUM	HUMIDIFIER
HWC	HOT WATER COIL
HX	HEAT EXCHANGER
LEA	LABORATORY EXHAUST AIR
LSA	LABORATORY SUPPLY AIR
M	MANIFOLD FOR RADIANT FLOOR
NLEA	NON-LAB EXHAUST AIR
NLSA	NON-LAB SUPPLY AIR
OA	OUTSIDE AIR
P	PUMP
RA	RETURN AIR
RCP	RADIANT CEILING PANEL
RHC	REHEAT COIL
SA	SUPPLY AIR
SATT	SOUND ATTENUATOR
SF	SUPPLY FAN
SMH	STEAM MANHOLE
TYP	TYPICAL
UH	UNIT HEATER
VAV	VARIABLE AIR VOLUME
VFD	VARIABLE FREQUENCY DRIVE
VRF	VARIABLE REFRIGERANT FLOW

- ### MECHANICAL GENERAL NOTES
- ALL MATERIALS, METHODS AND EQUIPMENT INSTALLED UNDER THIS CONTRACT SHALL BE IN COMPLIANCE WITH ALL APPLICABLE CODES AND REGULATIONS.
 - COORDINATE EXACT LOCATIONS, MOUNTING HEIGHTS, AND FINISHES WITH THE ARCHITECTURAL DRAWINGS.
 - ALL EQUIPMENT SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS. IN THE INSTANCE WHERE EQUIPMENT MUST BE INSTALLED BEHIND A WALL OR ABOVE AN INACCESSIBLE CEILING, AN APPROPRIATELY SIZED ACCESS DOOR SHALL BE PROVIDED. REFER TO ARCHITECTURAL PLANS FOR ACCESS DOOR LOCATIONS IN WALLS, CEILINGS AND FLOORS.
 - IN THE EVENT OF A CONFLICT BETWEEN DOCUMENTS, ARCHITECT SHALL BE NOTIFIED AND THE LARGER QUANTITY AND/OR MORE EXPENSIVE ITEMS SHALL BE CARRIED AS PART OF THE BID.
 - THERMOSTAT AND SWITCH LOCATIONS SHALL BE GENERALLY AS SHOWN. ACTUAL LOCATIONS SHALL BE COORDINATED WITH ARCHITECTURAL ELEVATIONS.
 - ALL FLOOR MOUNTED AIR HANDLING UNITS SHALL BE INSTALLED ON A 6" CONCRETE HOUSEKEEPING PAD AND ALL OTHER FLOOR MOUNTED EQUIPMENT SHALL BE INSTALLED ON A 4" CONCRETE HOUSEKEEPING PAD, UNLESS OTHERWISE NOTED.
 - PROVIDE SEISMIC RESTRAINTS ON ALL EQUIPMENT AND PIPING IN COMPLIANCE WITH PROJECT SPECIFICATIONS AND APPLICABLE CODES.
 - THESE PLANS ARE DIAGRAMMATIC IN NATURE. EVERY ELBOW, FITTING, ETC. ARE NOT SHOWN. PROVIDE SUCH COMPONENTS AS REQUIRED FOR COMPLETE INSTALLATION, PROPERLY COORDINATED WITH ALL TRADES.
 - THE HVAC SYSTEMS FOR THIS BUILDING HAVE BEEN DESIGNED AND MODELED FOR LOW TRANSPORT ENERGY (LOW VELOCITY AND LOW PRESSURE DROP), WHEN OFFSETTING THE DUCTWORK AND PIPING IS REQUIRED, THE CONTRACTOR SHALL MAKE EVERY EFFORT TO MINIMIZE THE NUMBER OF FITTINGS AND TRANSITIONS AND TO PROVIDE FITTING TYPES WITH THE LEAST POSSIBLE PRESSURE DROP.
 - ANY DUCTWORK AND PIPING NOT SERVING STAIRWELLS, SHAFTS, ELEVATOR MACHINE ROOMS OR EMERGENCY ELECTRICAL ROOMS SHALL NOT PENETRATE THOSE WALLS.
 - DUCTWORK AND/OR PIPING SHALL NOT BE INSTALLED OVER ELECTRICAL PANELS.
 - COORDINATE NEW DUCTWORK AND PIPING WITH OTHER TRADES. CONTRACTOR SHALL FIELD VERIFY AVAILABLE CEILING CLEARANCE PRIOR TO BID.
 - PROVIDE VOLUME DAMPERS IN ALL SUPPLY, RETURN, OUTSIDE AIR AND EXHAUST BRANCH DUCTS NEAR THE MAIN DUCT TAKE-OFF AS REQUIRED TO PROPERLY BALANCE THE ENTIRE AIR SYSTEM. PROVIDE REMOTELY OPERATED (CABLE) DAMPERS WHEN DAMPERS ARE INACCESSIBLE. COORDINATE WITH ARCHITECTURAL REFLECTED CEILING PLANS.
 - DUCT SIZING SHOWN INDICATES CLEAR INSIDE DIMENSIONS OF DUCT AND INSULATION.
 - PROVIDE NEW DUCTWORK, DIFFUSERS AND GRILLES WHERE SHOWN. SEE SPECIFICATIONS. COORDINATE NEW DIFFUSER LOCATIONS WITH ARCHITECT'S REFLECTED CEILING PLAN.
 - ALL FLEXIBLE DUCT SHALL BE A MAXIMUM OF 3 FEET LONG WITH NO BENDS GREATER THAN 45 DEGREES.
 - SUPPORT ALL PIPING FROM STRUCTURE ABOVE. WHEN PIPE RUNS ARE PERPENDICULAR TO BEAMS, INSTALL PIPING TIGHT TO BOTTOM OF BEAM TO MAXIMIZE SPACE. WHEN PIPE RUNS ARE PARALLEL TO BEAMS, INSTALL PIPING TIGHT TO FLOOR SLAB. PROVIDE ALL NECESSARY TRANSITIONS AND FITTINGS.
 - PROVIDE EXPANSION COMPENSATORS, LOOPS, ANCHORS AND GUIDES FOR ALL PIPING SYSTEMS OPERATING ABOVE AMBIENT CONDITIONS AND INSTALL AS DICTATED BY CODE AND INDUSTRY STANDARDS. EQUIPMENT AND INSTALLATION DETAILS SHALL BE SUBMITTED FOR APPROVAL. THE CONTRACTOR SHALL HIRE AN ENGINEER TO REVIEW DETAILS AND PREPARE COMPLETE DESIGN FOR EXPANSION COMPENSATION SYSTEMS.
 - AIR VENTS SHALL BE PROVIDED AT ALL HIGH POINTS AND DRAINS SHALL BE PROVIDED AT ALL LOW POINTS FOR HYDRONIC SYSTEMS.
 - ALL SUPPLY AND RETURN BRANCH PIPING SHALL BE MINIMUM 3/4" UNLESS OTHERWISE NOTED.
 - PROVIDE BRANCH ISOLATION VALVES OFF OF ALL BUILDING PIPING MAINS ON EACH FLOOR.
 - REFRIGERANT PIPING SHOWN ON FLOOR PLANS SHALL BE USED AS A GUIDE. THE ACTUAL SIZE AND FITTINGS MAY VARY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND THE MANUFACTURER OF THE EQUIPMENT TO REVIEW THE PIPE SIZING AND MAKE THE NECESSARY ADJUSTMENTS IN SIZES.
 - PROVIDE CLEANOUTS IN ALL MAIN AND BRANCH CONDENSATE PIPING TO ALLOW FOR CLEANING OF ALL PIPING.

- ### LEGEND NOTE
- THESE ARE THE GENERAL LEGENDS OF SYMBOLS AND ABBREVIATIONS, AND SHALL BE USED AS A REFERENCE TO DEFINE ITEMS INDICATED ON DRAWINGS. NOT ALL SYMBOLS OR ABBREVIATIONS DEFINED ARE NECESSARILY USED ON THIS PROJECT.

- ### MECHANICAL DEMOLITION NOTES
- EXISTING MECHANICAL ITEMS THAT ARE BEING DISCONNECTED AND REMOVED SHALL BE DISPOSED OF PROPERLY.
 - NOTIFY CONSTRUCTION MANAGER OF OPENINGS CAUSED BY REMOVAL OF EXISTING EQUIPMENT. ENSURE THE PATCHING IS COMPLETE.
 - REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL RELATED DEMOLITION WORK.
 - REMOVE AND PROPERLY DISPOSE OF EQUIPMENT INCLUDING ELECTRICAL CONNECTIONS BACK TO PANEL.



CONSULTANTS:

PROJECT NAME:

**Juliet W. Long School
 1854 Route 12
 Gales Ferry, CT 06335**

KEYPLAN

REVISIONS		
REV.	DATE	DESCRIPTION

DRAWING TITLE:

MECHANICAL LEGENDS

DATE: 08/05/24	DRAWING NUMBER:
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CHECKED BY: RSM	
SCALE: N.T.S.	
PROJ #: 2024087.00	

CONSULTANTS:

PROJECT NAME:

**Juliet W. Long School
1854 Route 12
Gales Ferry, CT 06335**

KEYPLAN



REVISIONS

REV.	DATE	DESCRIPTION

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**MECHANICAL PIPING
DEMOLITION PLAN**

DATE: 08/05/24

DRAWN BY: JDP/SPM

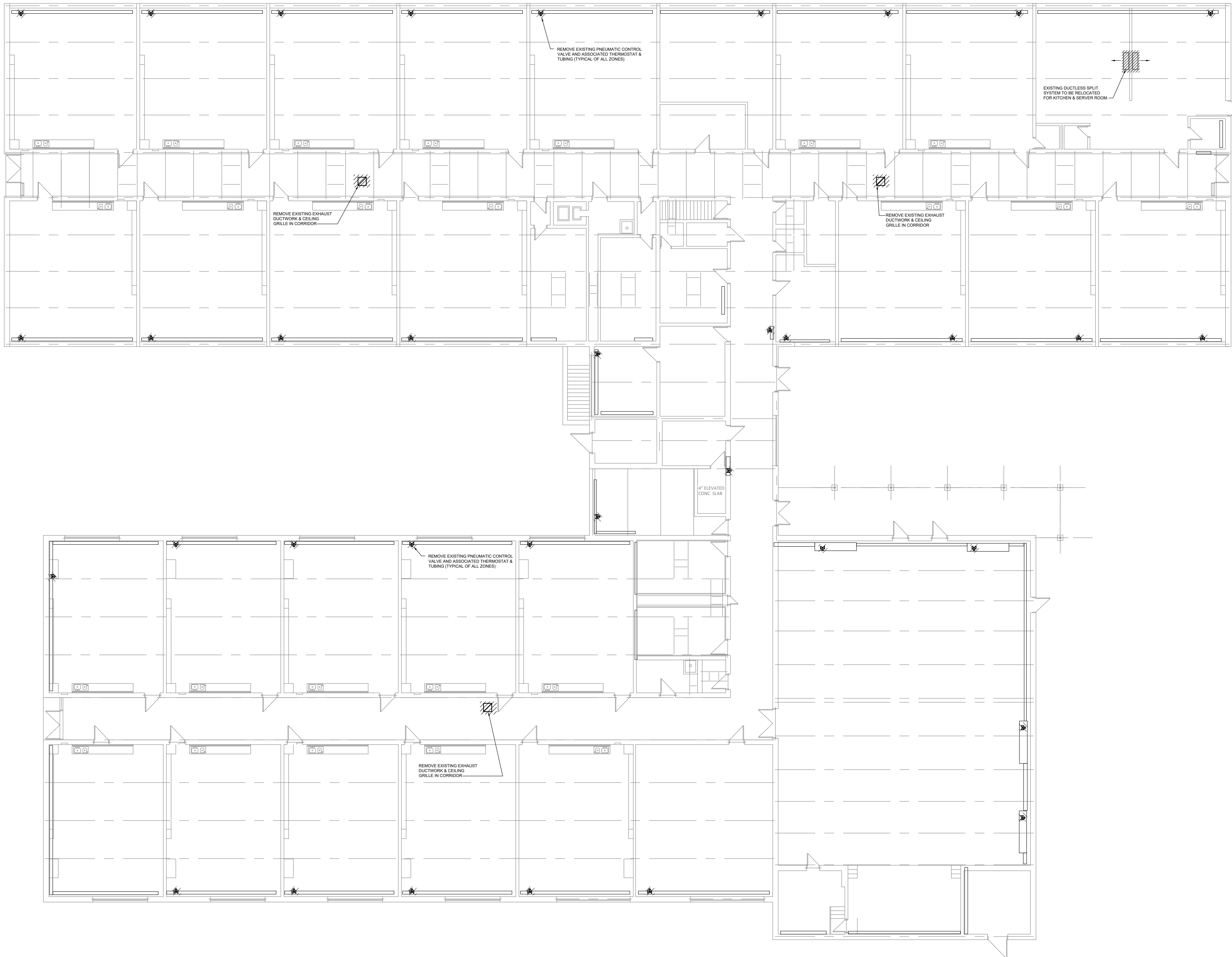
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SCALE: 1/8"=1'-0"

PROJ #: 2024087.00

DRAWING NUMBER:

MPD101



1 MECHANICAL PIPING DEMOLITION PLAN
SCALE: 1/8"=1'-0"

CONSULTANTS:

PROJECT NAME:
**Juliet W. Long School
1854 Route 12
Gales Ferry, CT 06335**

KEYPLAN



REVISIONS		
REV.	DATE	DESCRIPTION

DRAWING TITLE:
**MECHANICAL ROOF
DEMOLITION PLAN**

DATE: 08/05/24

DRAWN BY: JDP/SPM

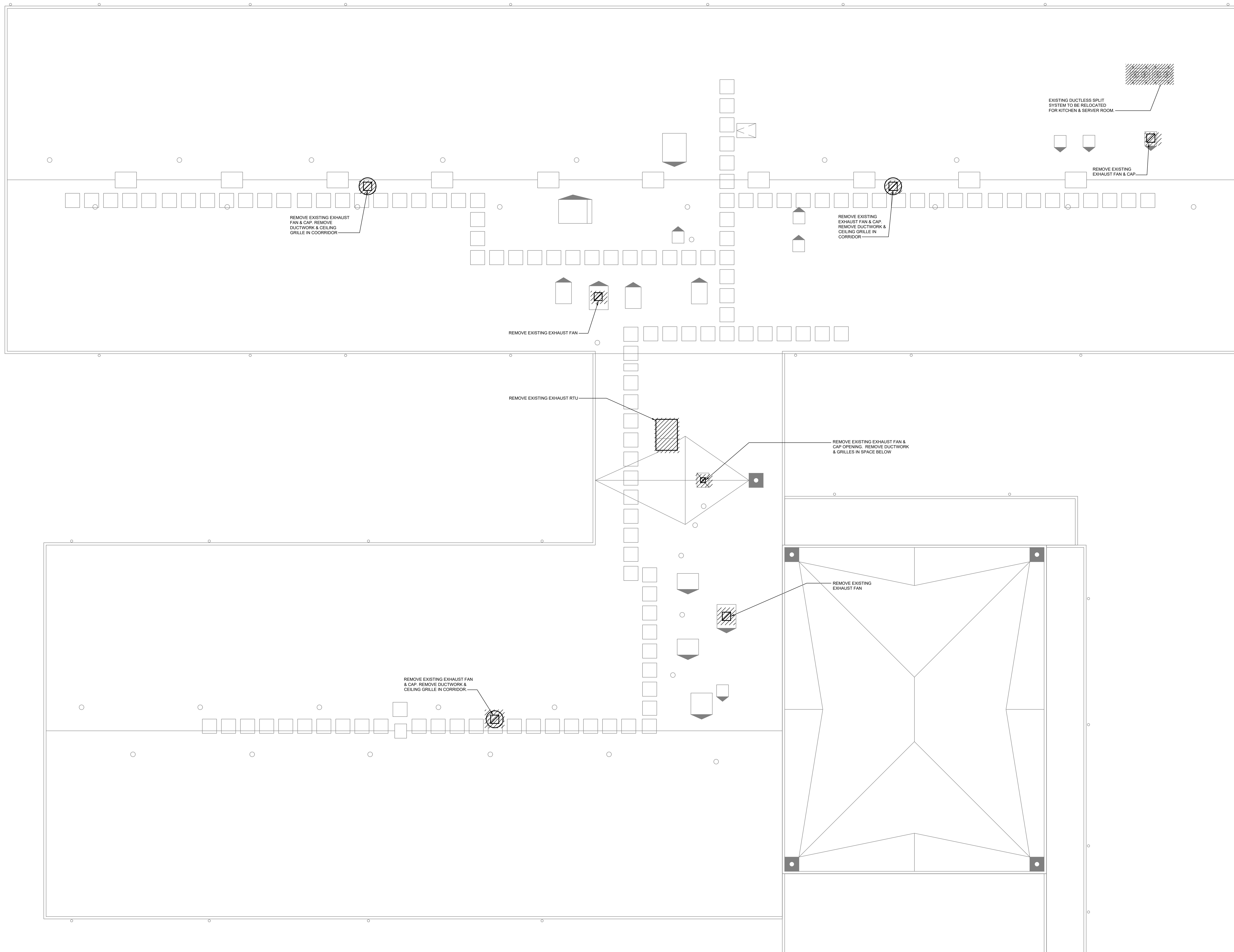
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PROJ #: 2024087.00

DRAWING NUMBER:

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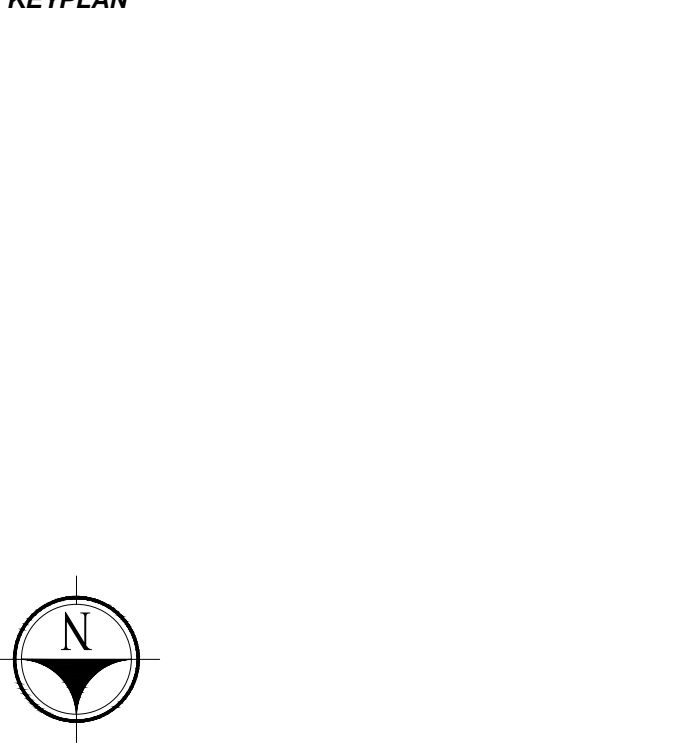
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SCALE: 1/8"=1'-0"

CONSULTANTS:

PROJECT NAME:

Juliet W. Long School
1854 Route 12
Gales Ferry, CT 06335

KEYPLAN



REVISIONS

REV.	DATE	DESCRIPTION

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BOILER ROOM
DEMOLITION PLAN

DATE: 08/05/24

DRAWN BY: JDP/SPM

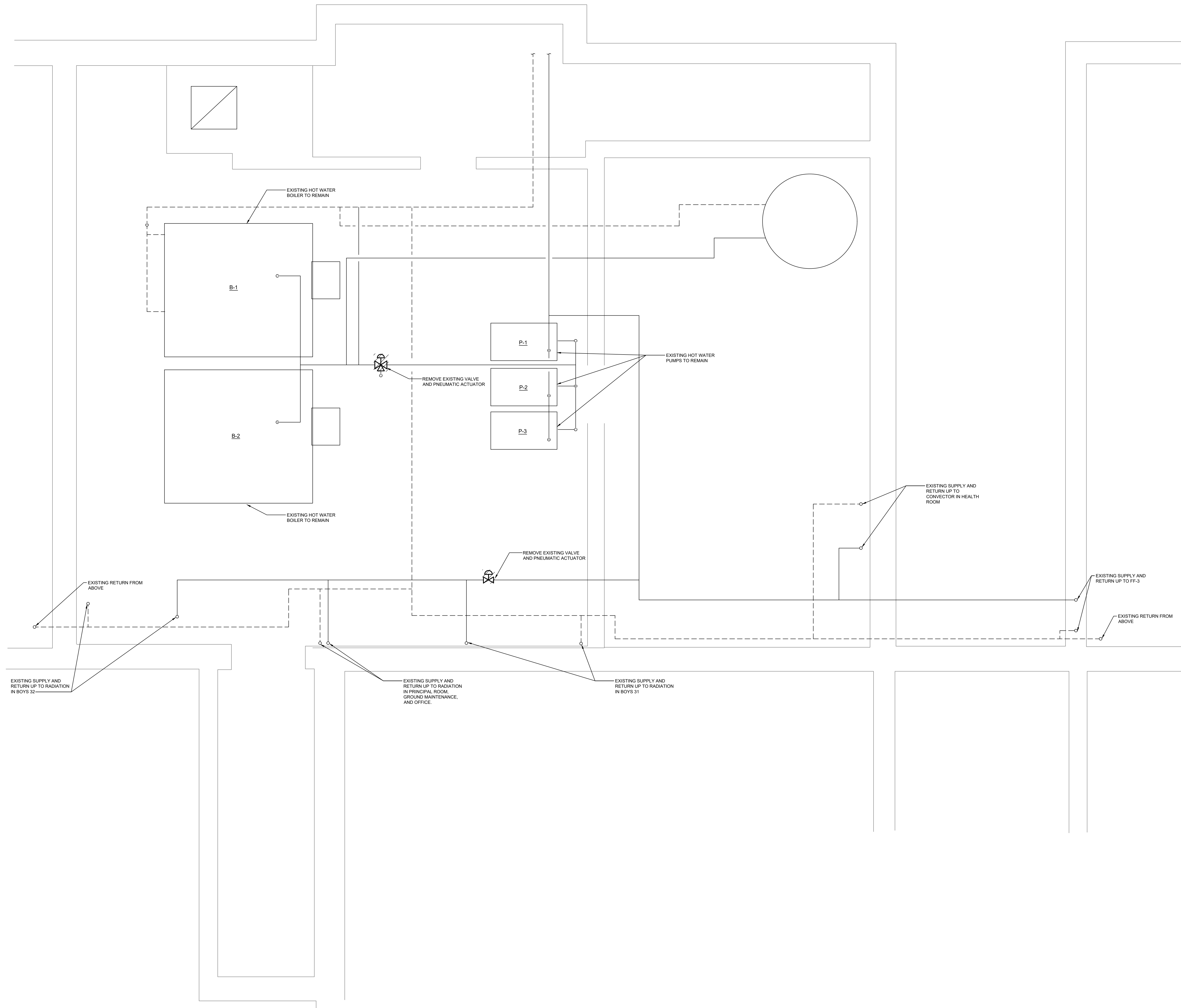
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PROJ #: 2024087.00

DRAWING NUMBER:

MD201



1 BOILER ROOM DEMOLITION PLAN
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CONSULTANTS:

PROJECT NAME:

**Juliet W. Long School
1854 Route 12
Gales Ferry, CT 06335**

KEY PLAN



REVISIONS

REV.	DATE	DESCRIPTION

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MECHANICAL AIR FLOOR PLAN

DATE: 08/05/24

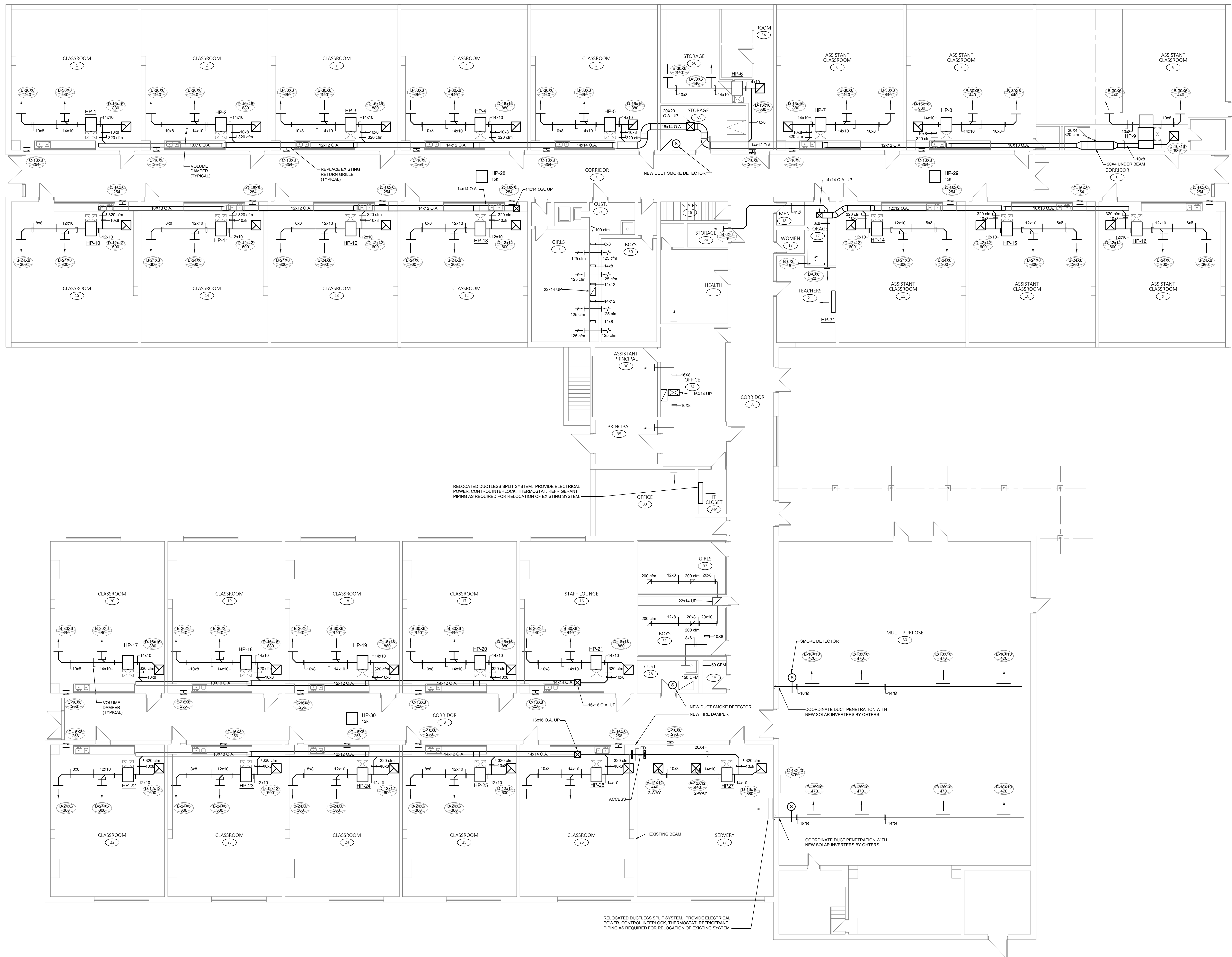
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PROJ #: 2024087.00

MA101



MECHANICAL AIR FLOOR PLAN
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CONSULTANTS:

PROJECT NAME:
**Juliet W. Long School
1854 Route 12
Gales Ferry, CT 06335**

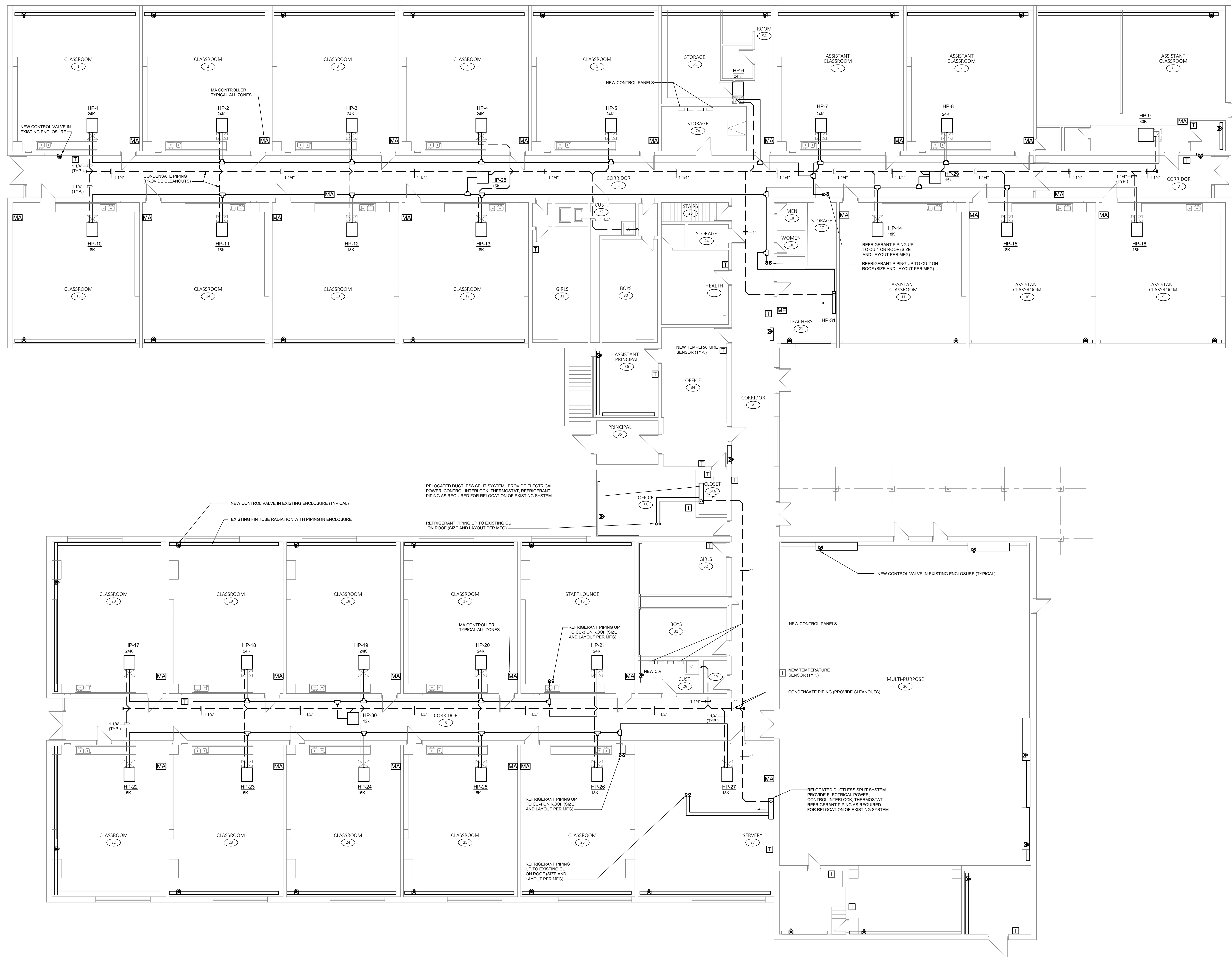
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REVISIONS		
REV.	DATE	DESCRIPTION

DRAWING TITLE:
**MECHANICAL PIPING
FLOOR PLAN**

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 8/5/2024

CONSULTANTS:

PROJECT NAME:

**Juliet W. Long School
1854 Route 12
Gales Ferry, CT 06335**

KEYPLAN



REVISIONS

REV.	DATE	DESCRIPTION

DRAWING TITLE:
**MECHANICAL ROOF
NEW WORK PLAN**

DATE: 08/05/24

DRAWN BY: JDP/SPM

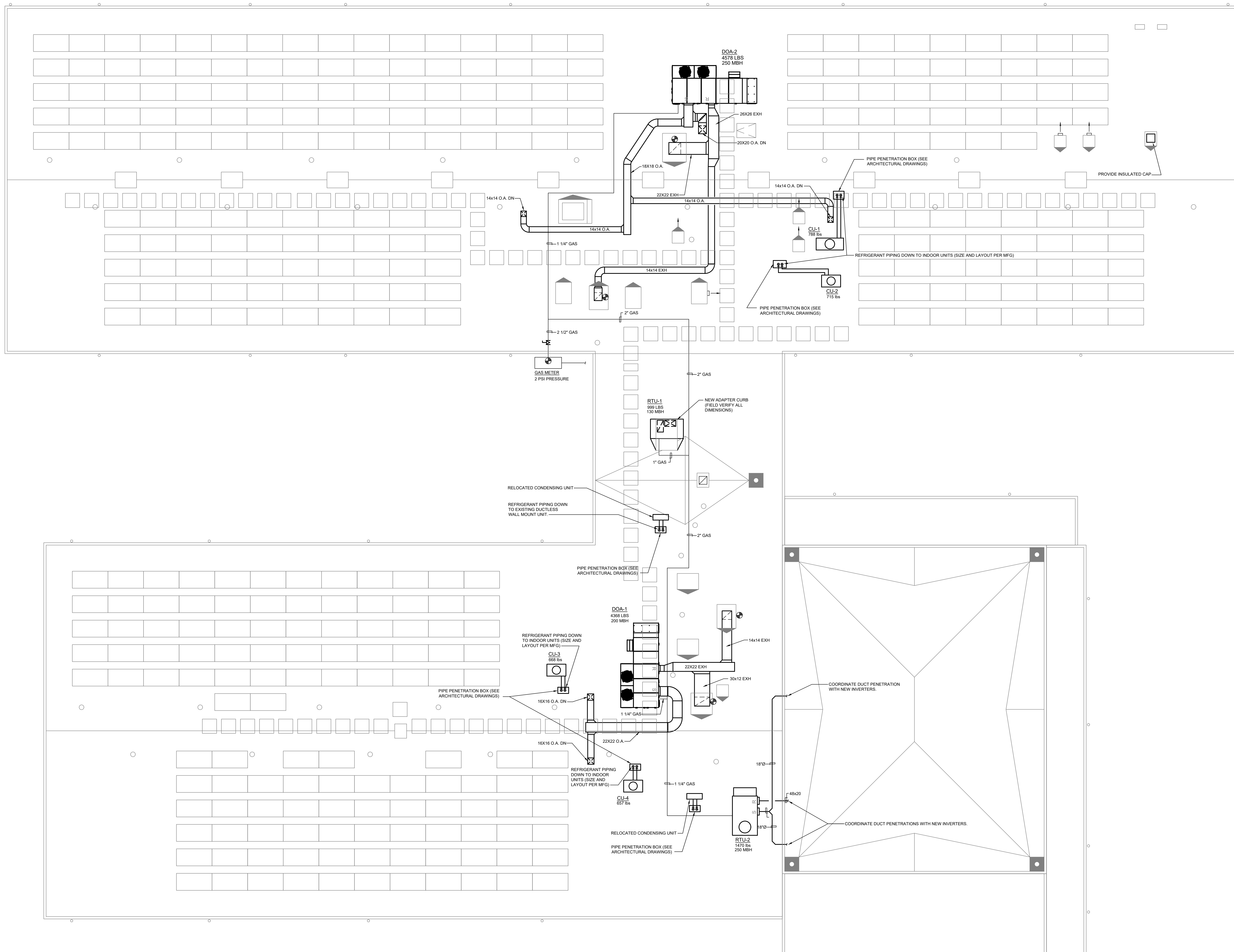
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PROJ #: 2024087.00

DRAWING NUMBER:

M102



MECHANICAL ROOF NEW WORK PLAN
SCALE: 1/8"=1'-0"

CONSULTANTS:

PROJECT NAME:

Juliet W. Long School
1854 Route 12
Gales Ferry, CT 06335

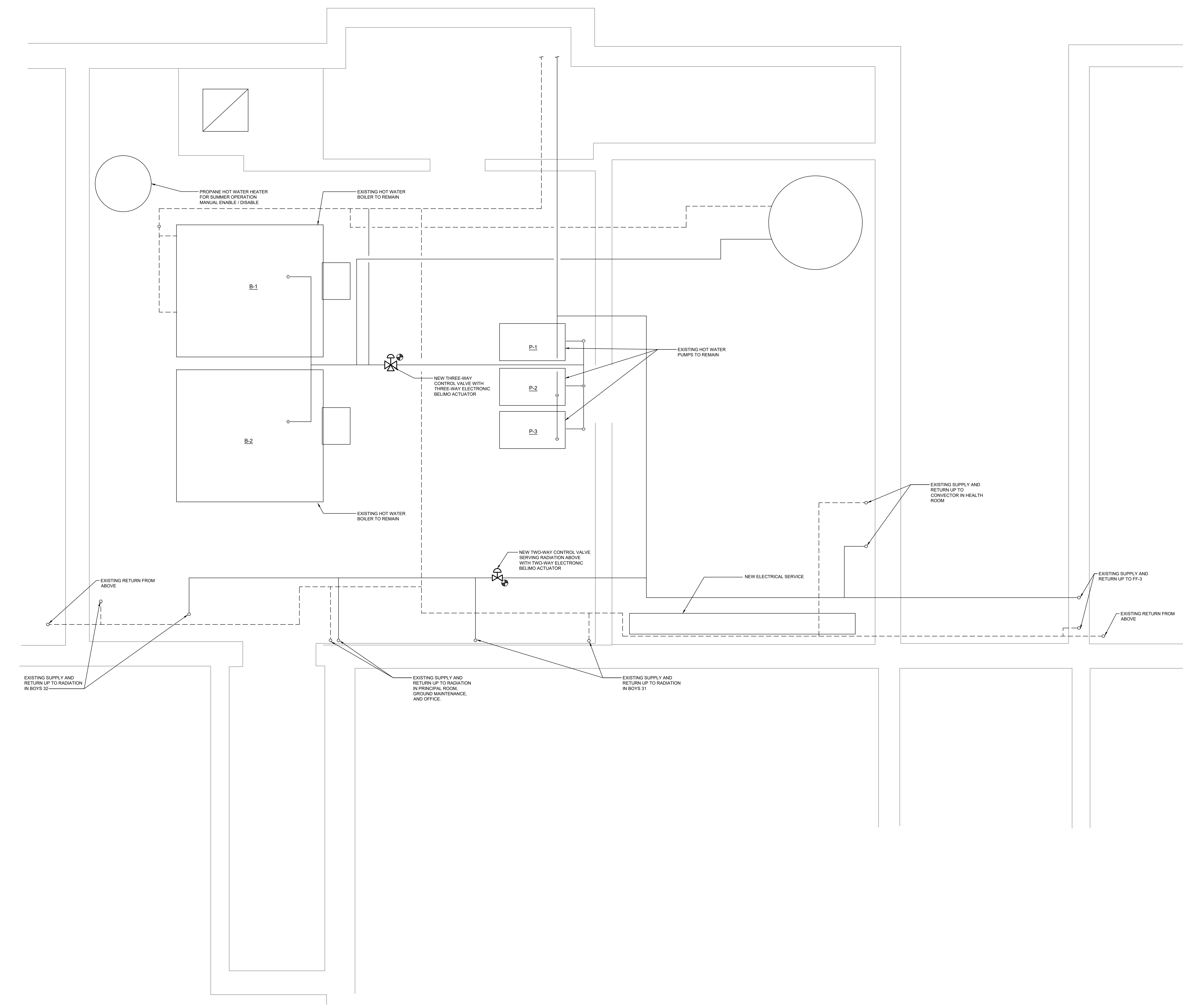
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REVISIONS		
REV.	DATE	DESCRIPTION

DRAWING TITLE:
BOILER ROOM
NEW WORK PLAN

DATE:	08/05/24	DRAWING NUMBER:	M201
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CHECKED BY:	RSM		
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PROJ #:	2024087.00		



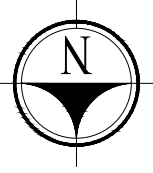
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CONSULTANTS:

PROJECT NAME:
**Juliet W. Long School
1854 Route 12
Gales Ferry, CT 06335**

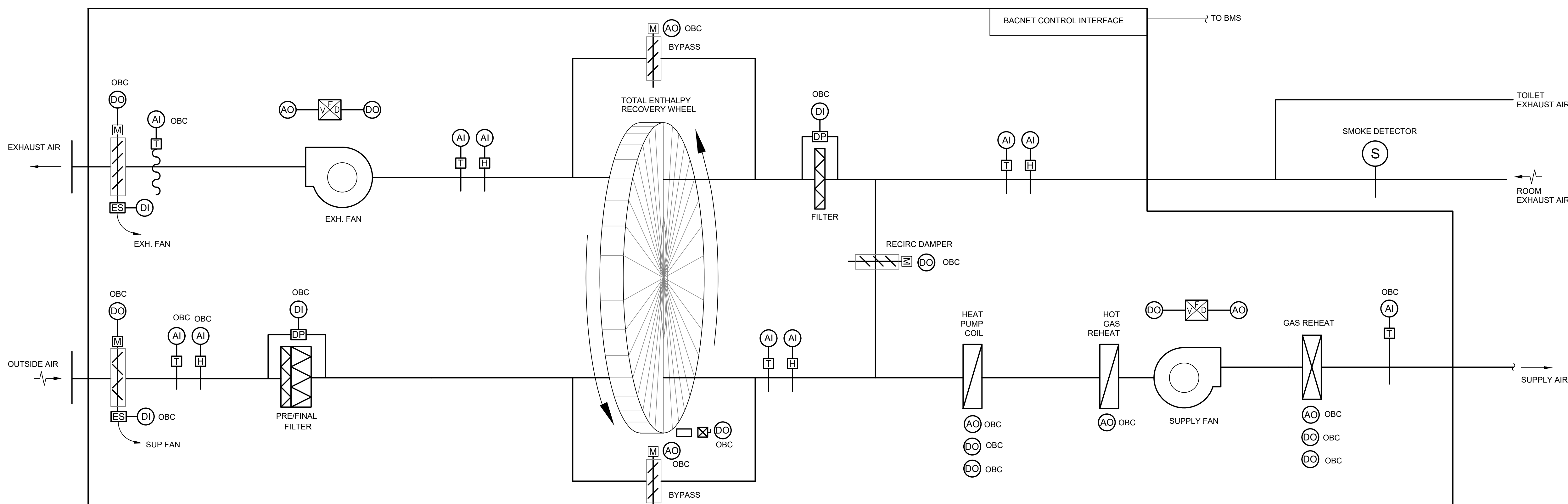
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REV.	DATE	DESCRIPTION

DRAWING TITLE:
**MECHANICAL
CONTROLS**

DATE: 08/05/24
DRAWN BY: JDP/SPM
CHECKED BY: RSM
SCALE: N.T.S.
DRAWING NUMBER:
M300
PROJ #: 2024087.00



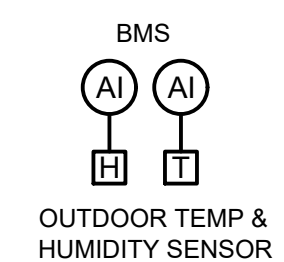
CONTROLS LEGEND

(AO)	ANALOG OUTPUT
(AI)	ANALOG INPUT
(DO)	DIGITAL OUTPUT
(DI)	DIGITAL INPUT
(T)	TEMPERATURE SENSOR
(S)	SMOKE DETECTOR
(DP)	DIFFERENTIAL PRESSURE SENSOR
(H)	HUMIDITY SENSOR
(LT)	FREEZE PROTECTION THERMOSTAT
(P)	STATIC PRESSURE SENSOR
(T)	PNEUMATIC THERMOSTAT
(◇)	ELECTRIC THERMOSTAT
(M)	MOTOR STARTER
(VFD)	VARIABLE FREQUENCY DRIVE
GWS	GLYCOL WATER SUPPLY
GWR	GLYCOL WATER RETURN
GS	GLYCOL SUPPLY
GR	GLYCOL RETURN
STM	STEAM SUPPLY
(CS)	CURRENT SENSOR
(CO2)	CARBON DIOXIDE SENSOR
BMS	BUILDING MANAGEMENT SYSTEM POINT
OBC	ON BOARD CONTROLLER POINT

NOTES:

- BMS SHALL ENABLE UNITS BASED ON TIME SCHEDULE
- UNIT SHALL SUPPLY 70°F discharge temperature during heating and cooling modes
- UNIT SHALL BE OFF DURING UN-OCCUPIED PERIODS
- HOT GAS REHEAT SHALL BE UTILIZED FOR DEHUMIDIFICATION
- BMS SHALL PROVIDE FOLLOWING ALARMS (EITHER HARD WIRED OR VIA BACNET)
 - A - FAN FAILURE
 - B - DAMPER FAILURE
 - D - HIGH HUMIDITY
 - E - VFD FAULT (SUPPLY & RETURN FAN & WHEEL)
 - F - FILTER DIRTY
 - G - WHEEL FAILURE
 - H - COMPRESSOR FAILURE
 - I - GAS HEAT ALARM
 - J - HIGH / LOW DISCHARGE AIR TEMP

1. BMS SHALL INTERFACE WITH DOA SYSTEM VIA BACNET. COORDINATE WITH DOA MFG & OWNER TO DETERMINE THE NUMBER OF POINTS NEEDED TO SATISFY CONTROL SEQUENCE AND PROVIDE ADEQUATE MONITORING FOR MAINTENANCE PERSONNEL.



1 HEAT RECOVERY AIR HANDLING UNIT CONTROL DIAGRAM (DOA#)
SCALE: N.T.S.

CONSULTANTS:

PROJECT NAME:

**Juliet W. Long School
1854 Route 12
Gales Ferry, CT 06335**

KEYPLAN



REVISIONS		
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**MECHANICAL
CONTROLS**

DATE: 08/05/24

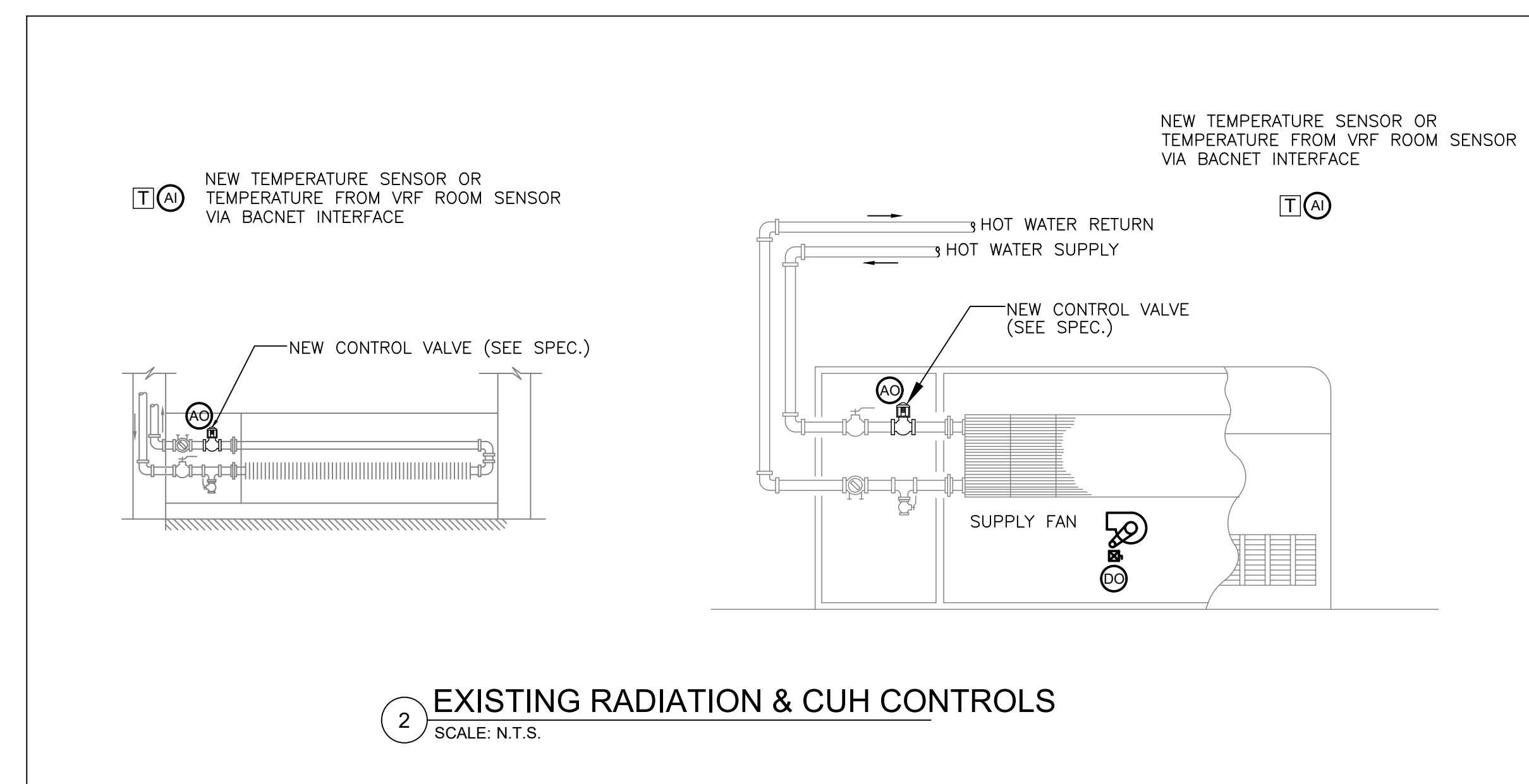
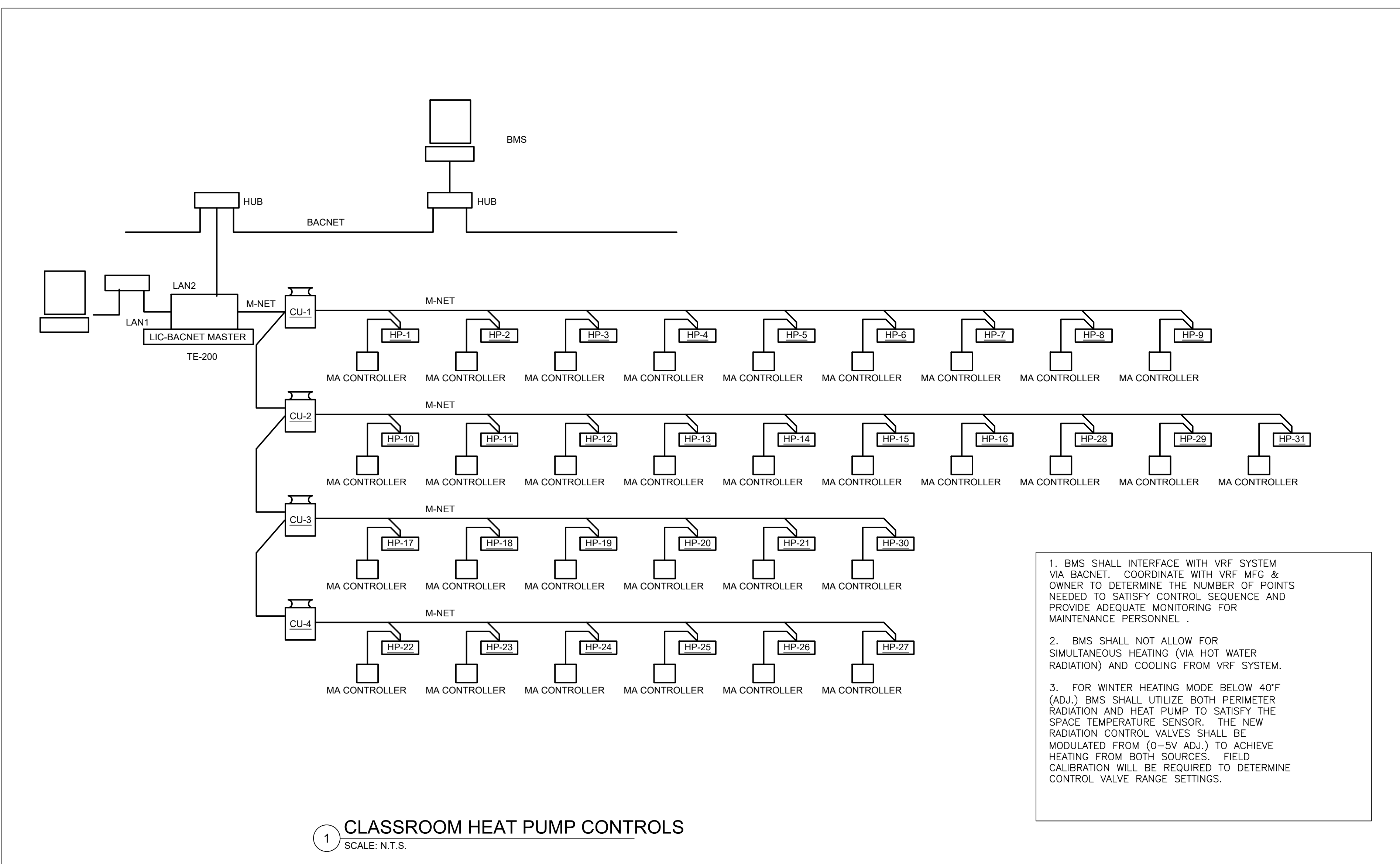
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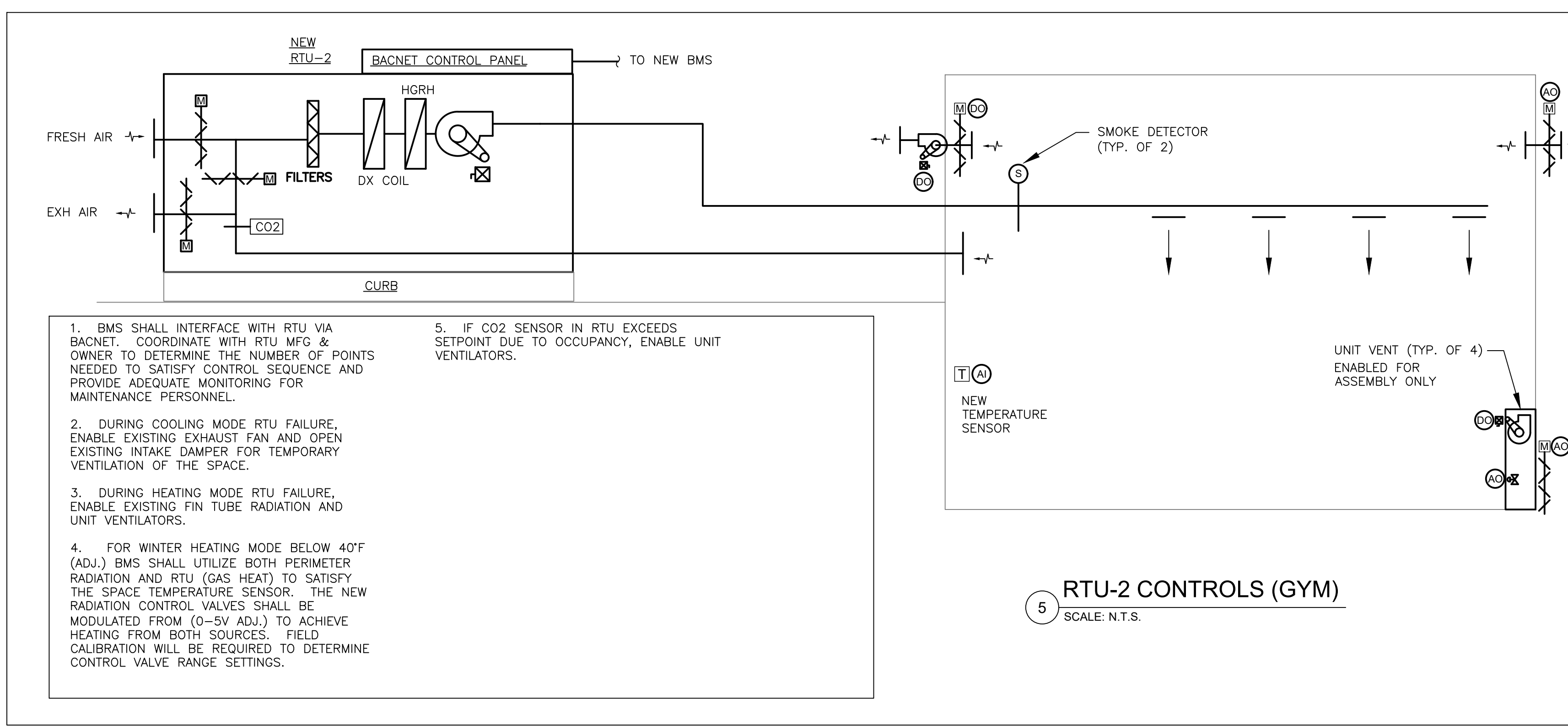
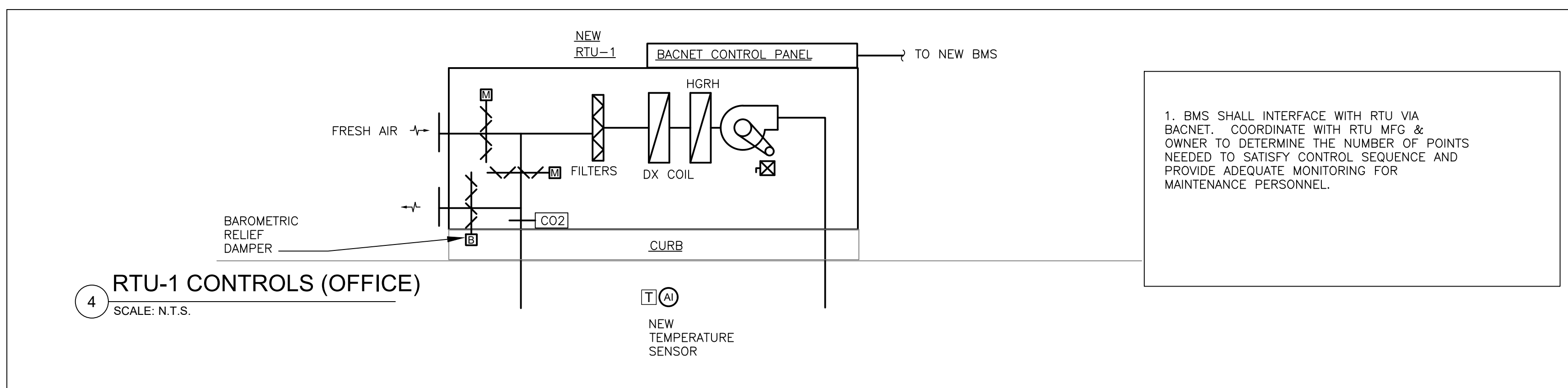
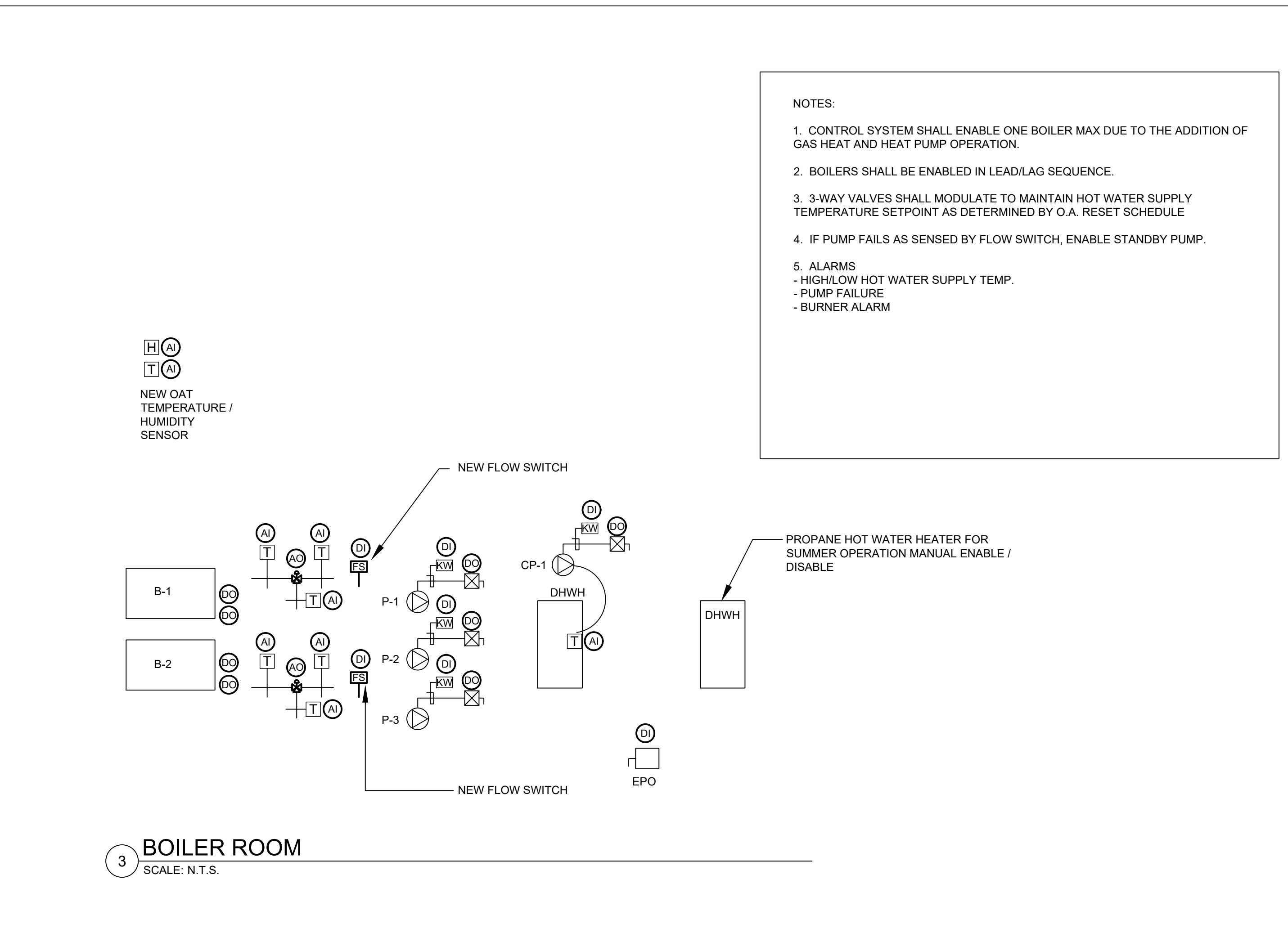
PROJ #: 2024087.00

DRAWING NUMBER:
M301



NEW CONTROL SYSTEM NOTES:

- EXISTING CONTROL SYSTEM IN BUILDING IS PNEUMATIC. ALL EXISTING PNEUMATIC CONTROLS SHALL BE REPLACED WITH NEW DDC CONTROLS.
- NEW CONTROL SYSTEM SHALL BE BY HONEYWELL, DISTEC OR TRANE-LYNX (NAGARA BASED).
- NEW CONTROL SYSTEM SHALL INCLUDE HEAD END. IF HONEYWELL IS CHOSEN THE EXISTING SYSTEM IN THE ADJACENT BUILDING CAN BE EXPANDED AS REQUIRED.



CONSULTANTS:

PROJECT NAME:
Juliet W. Long School
1854 Route 12
Gales Ferry, CT 06335

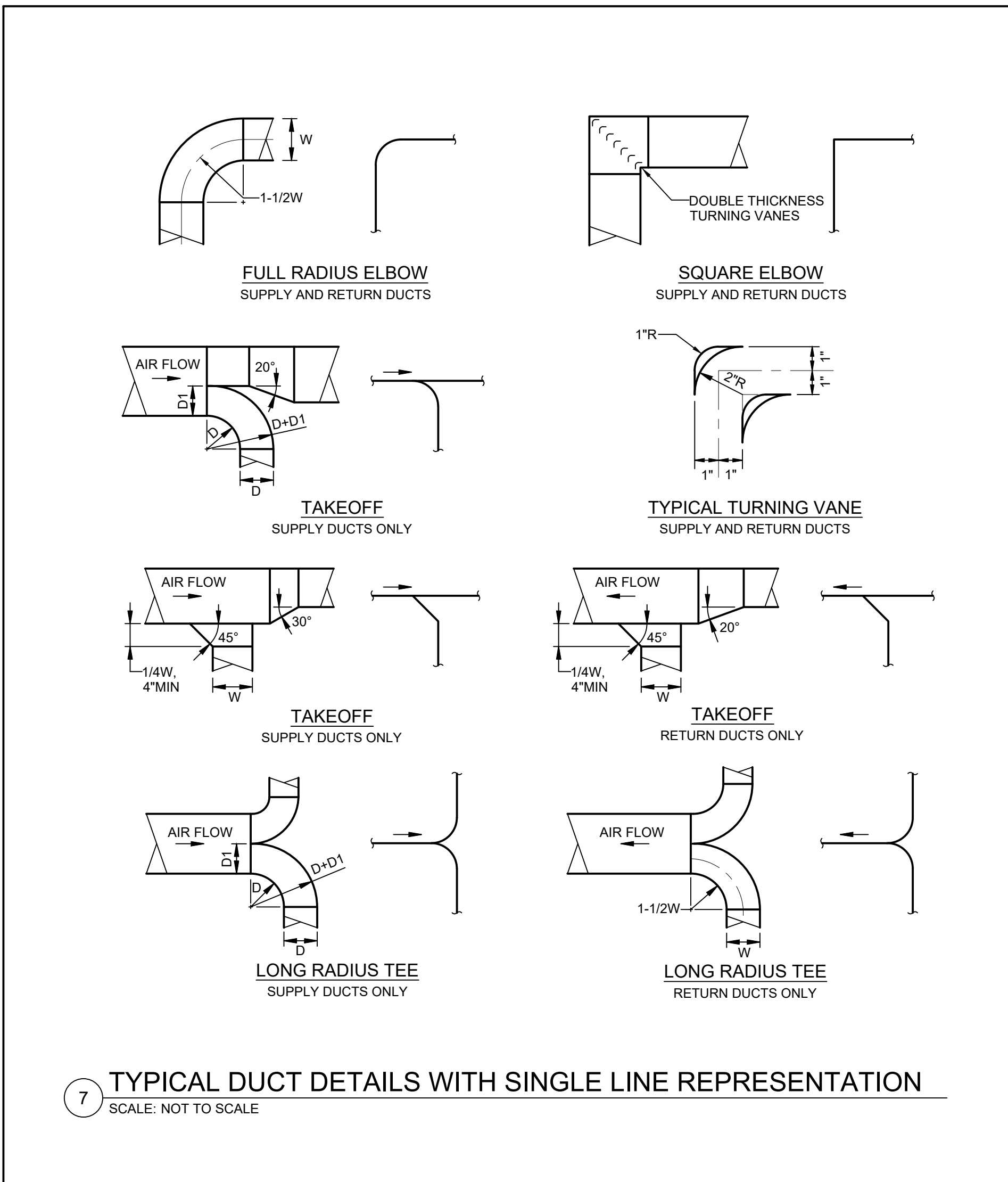
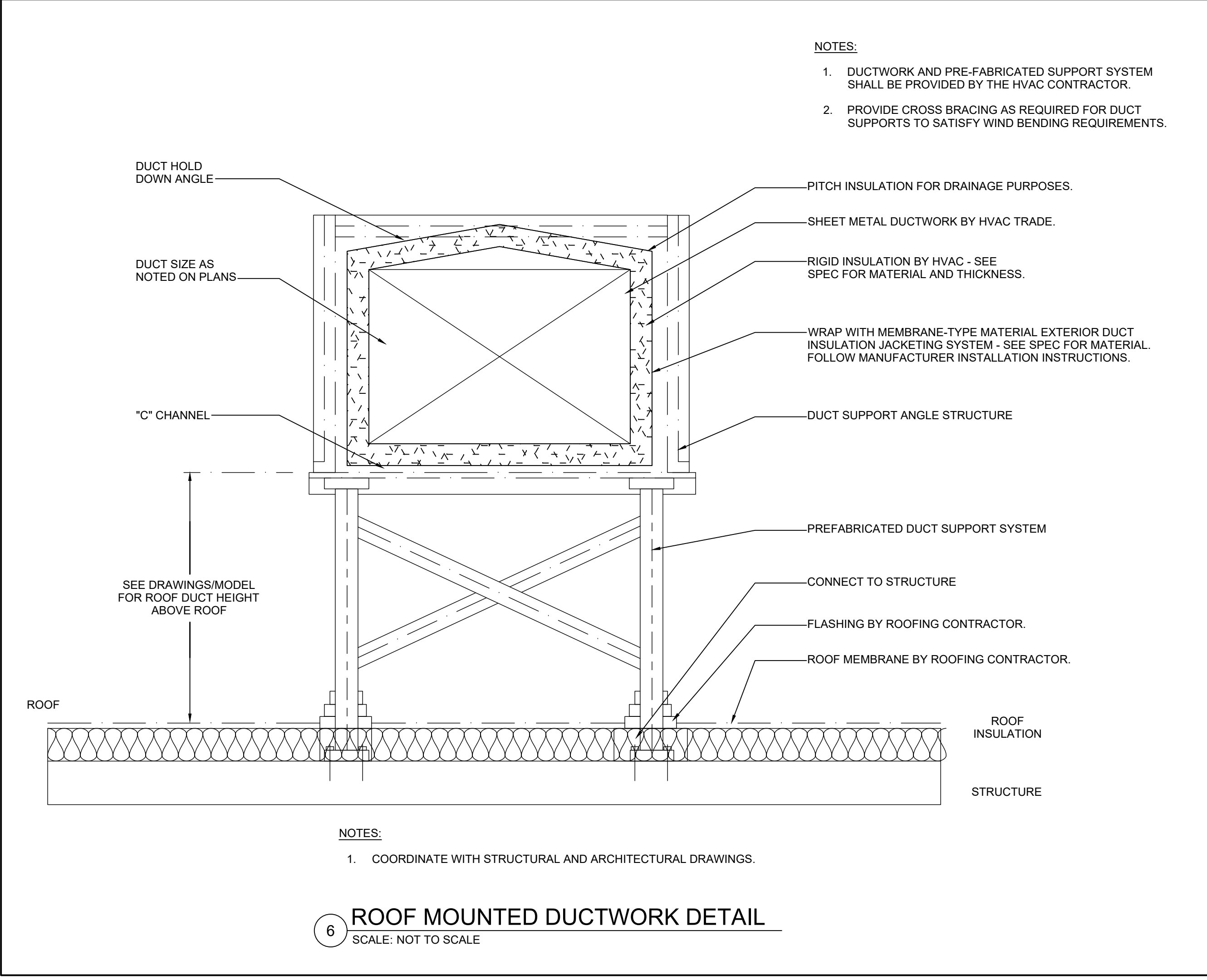
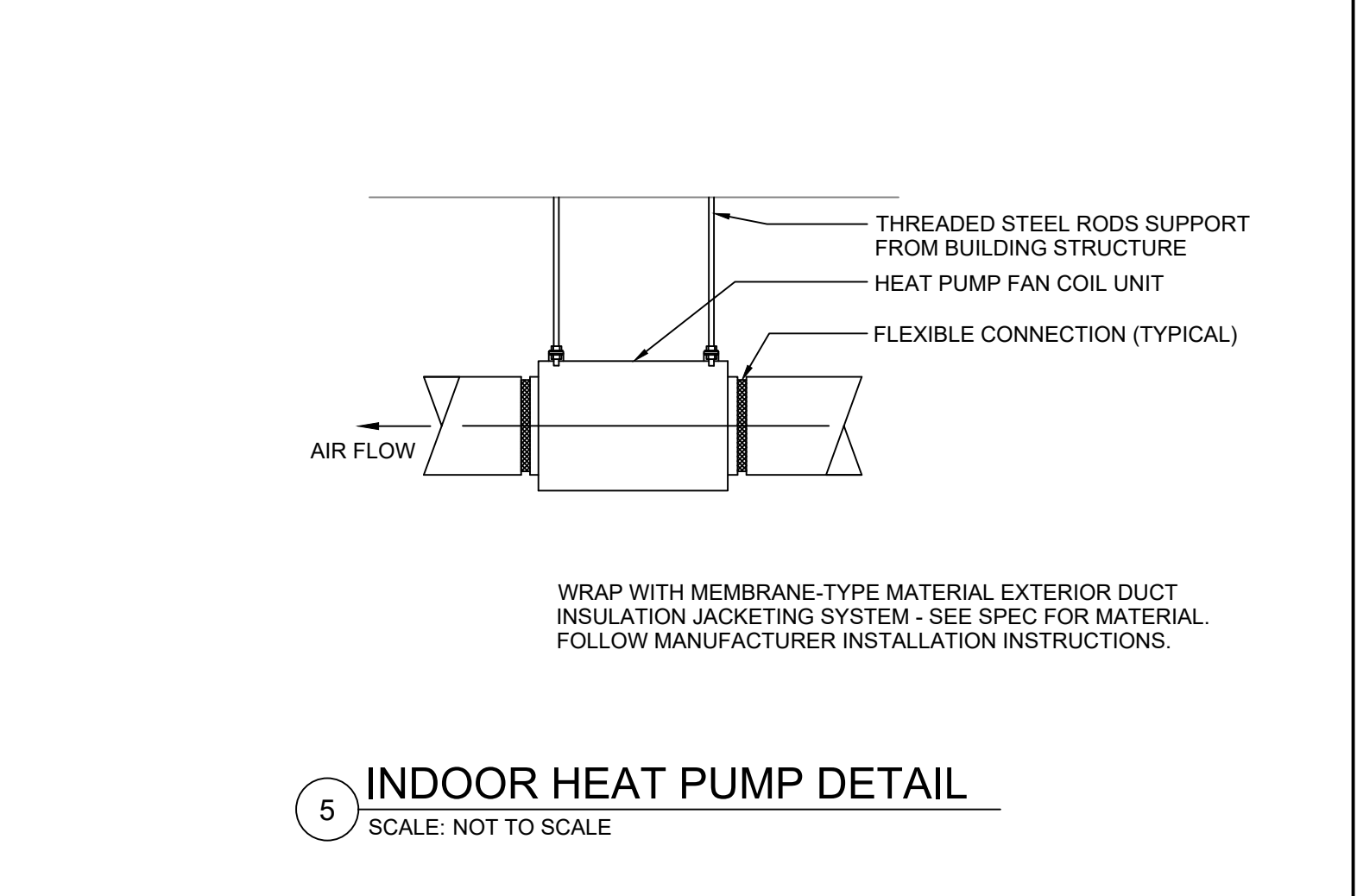
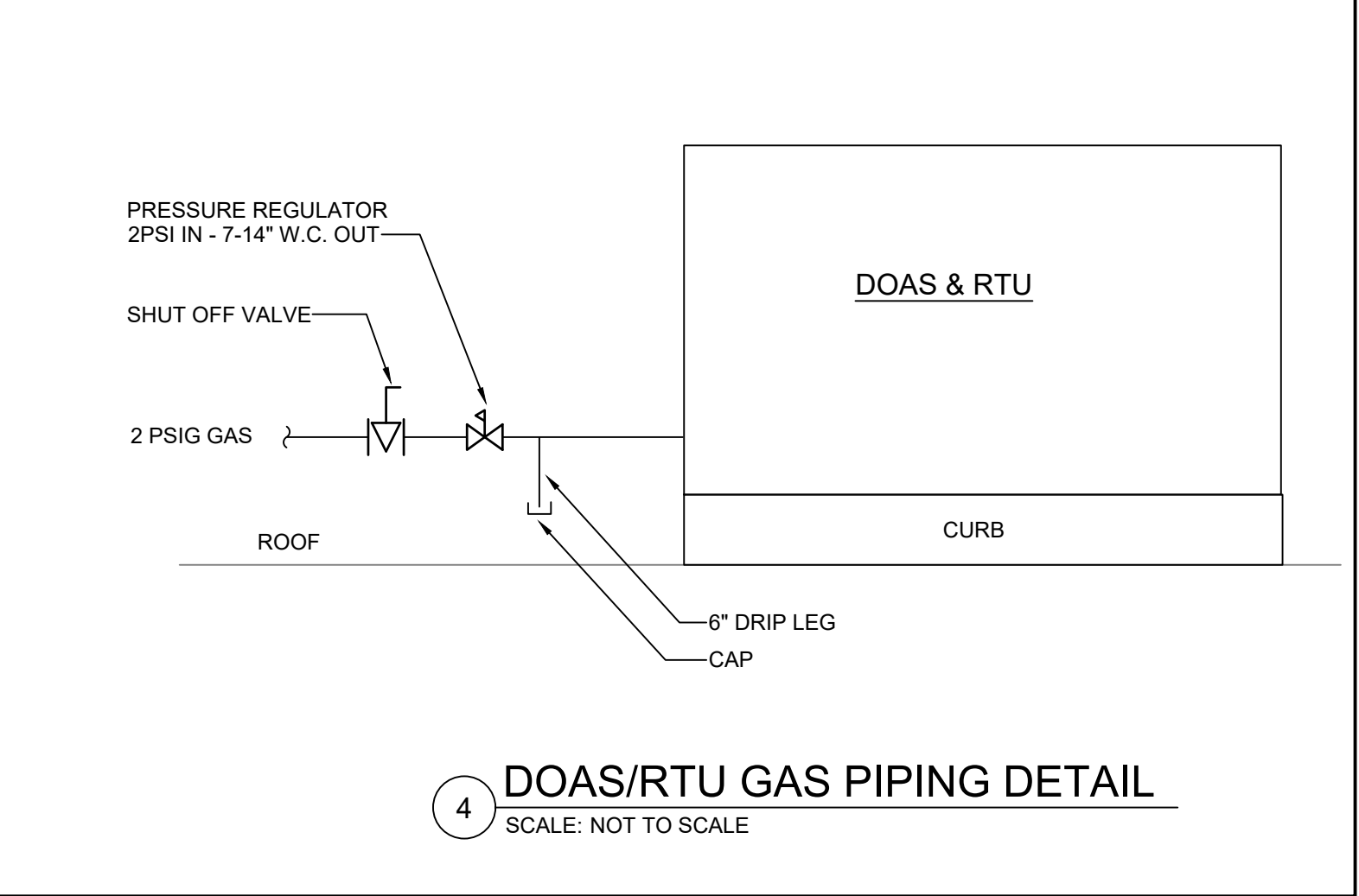
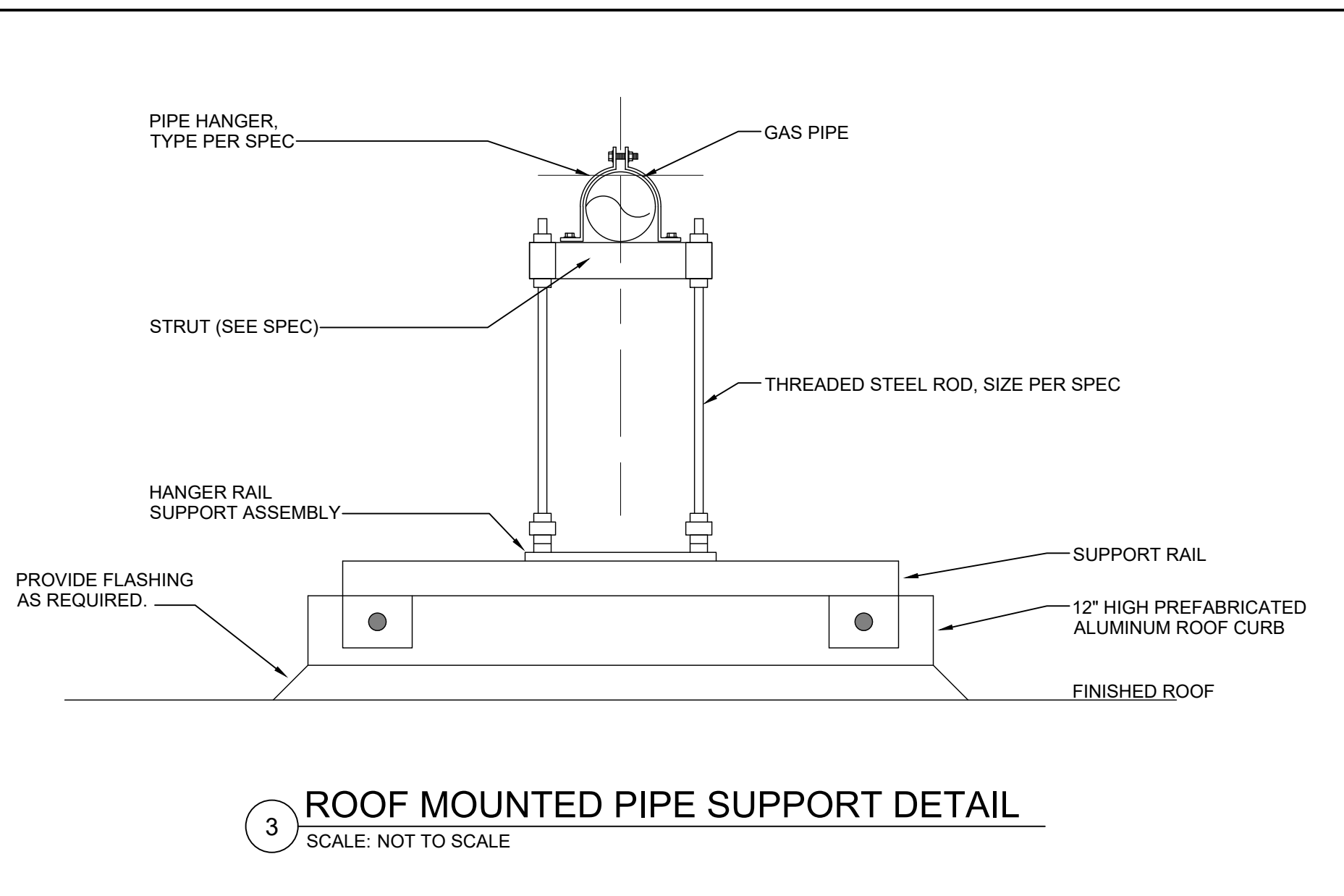
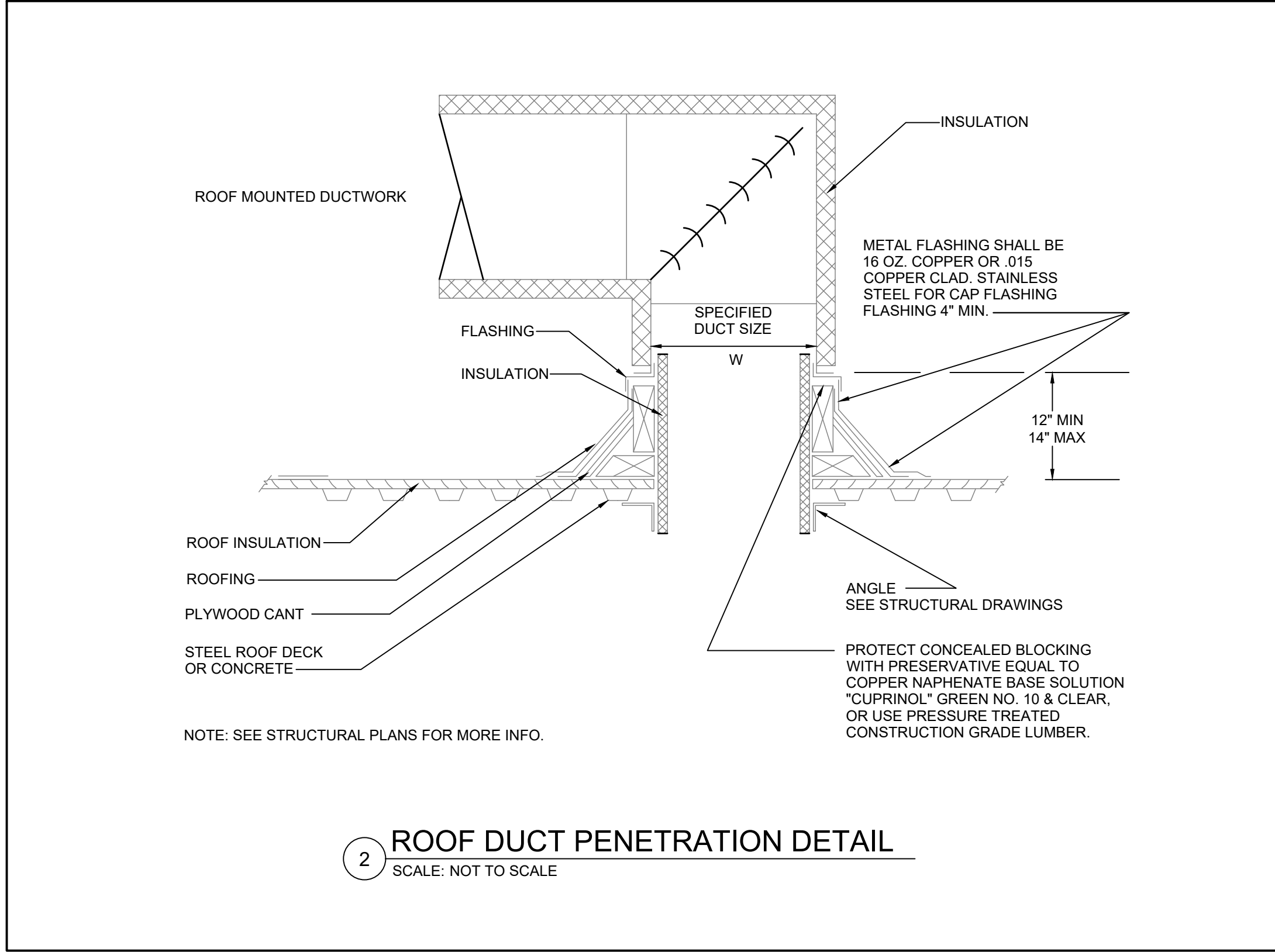
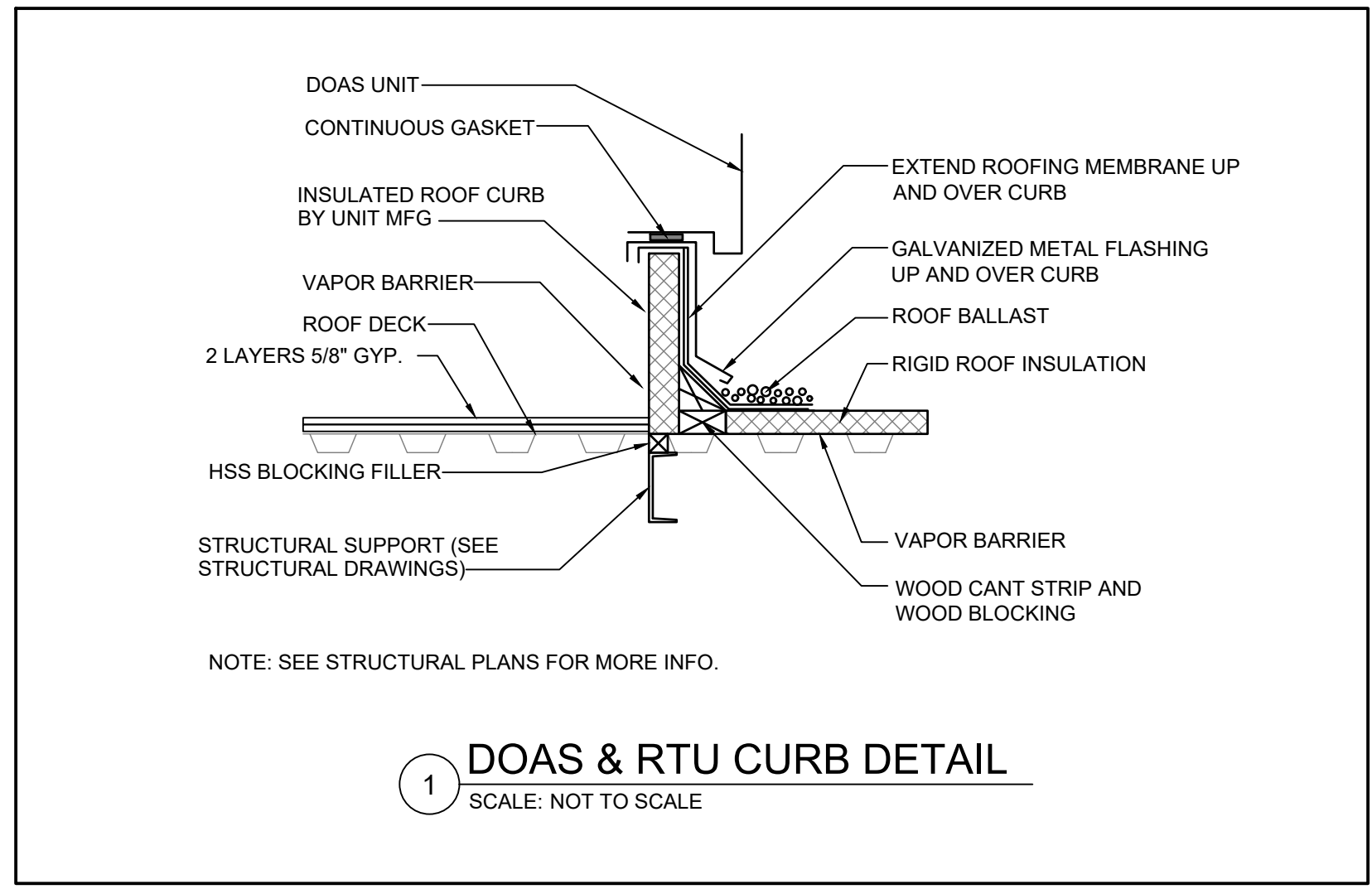
KEYPLAN

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DRAWING TITLE:
**MECHANICAL
DETAILS**

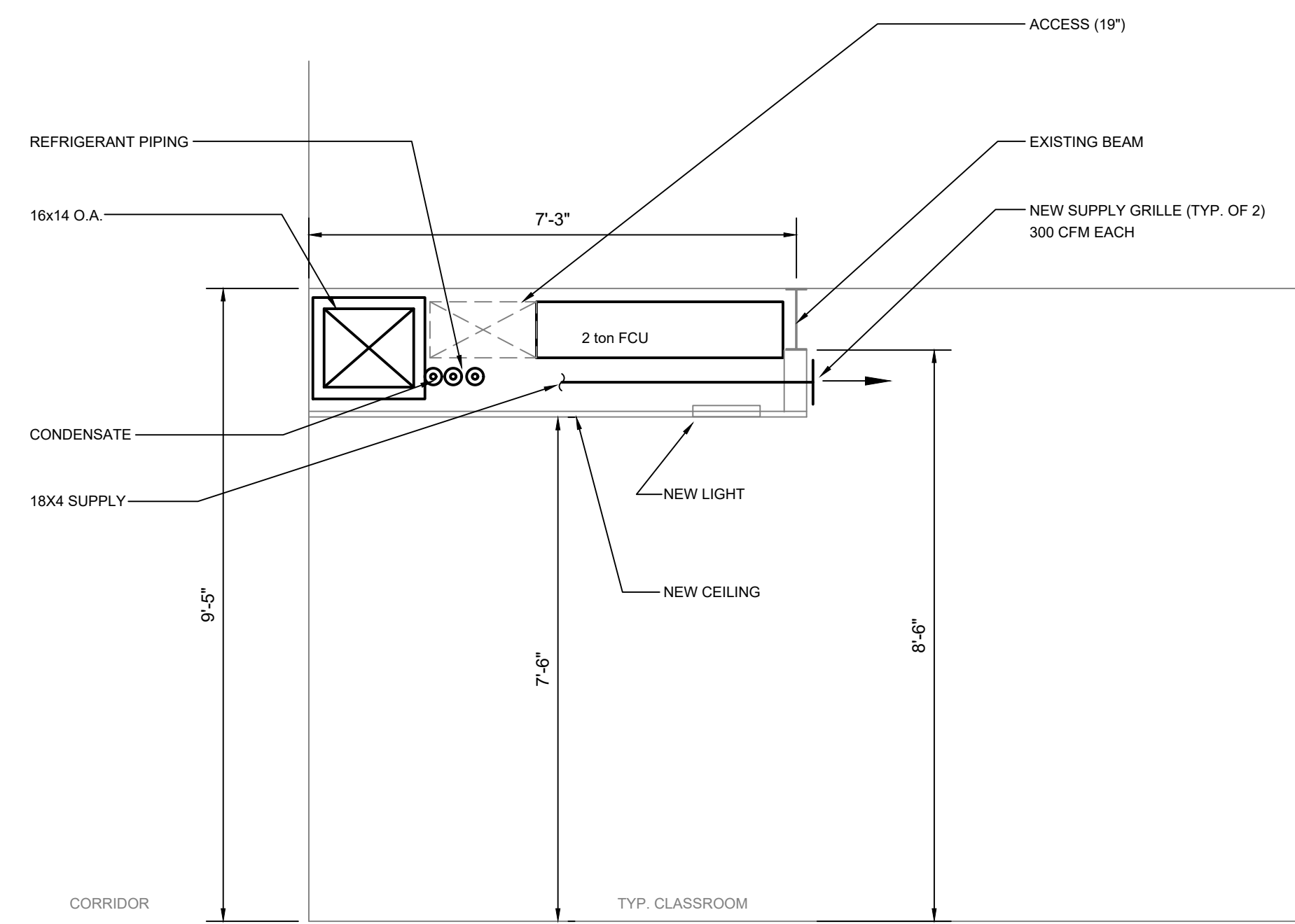
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CHECKED BY: RSM
SCALE: N.T.S.
PROJ #: 2024087.00
DRAWING NUMBER:
M400

- GENERAL NOTES**
- FLOOR PLANS ARE DIAGRAMMATIC ONLY. CONTRACTOR SHALL PERFORM DETAILED SITE VISIT PRIOR TO BIDDING JOB TO LOOK ABOVE CEILINGS WHERE NEW DUCTWORK AND PIPING IS RUN.
 - BALANCING CONTRACTOR SHALL PROVIDE AIR BALANCING ON ALL EXISTING AND NEW REGISTERS AND ALL NEW FANS. BALANCING CONTRACTOR SHALL PROVIDE WATER BALANCING ON ALL EXISTING AND NEW EQUIPMENT. BALANCING CONTRACTOR SHALL WORK WITH CONTROLS CONTRACTOR AS REQUIRED FOR USING VFD'S SETTINGS TO SATISFY AIRFLOW REQUIREMENTS.
 - ROOF MOUNTED DUCTWORK AND EQUIPMENT SHALL BE COORDINATED WITH EXISTING SOLAR PANELS, POWER WIRING, ROOF DRAINS AND PLUMBING VENTS.
 - SEE STRUCTURAL PLANS FOR EXACT LOCATIONS OF UNITS.

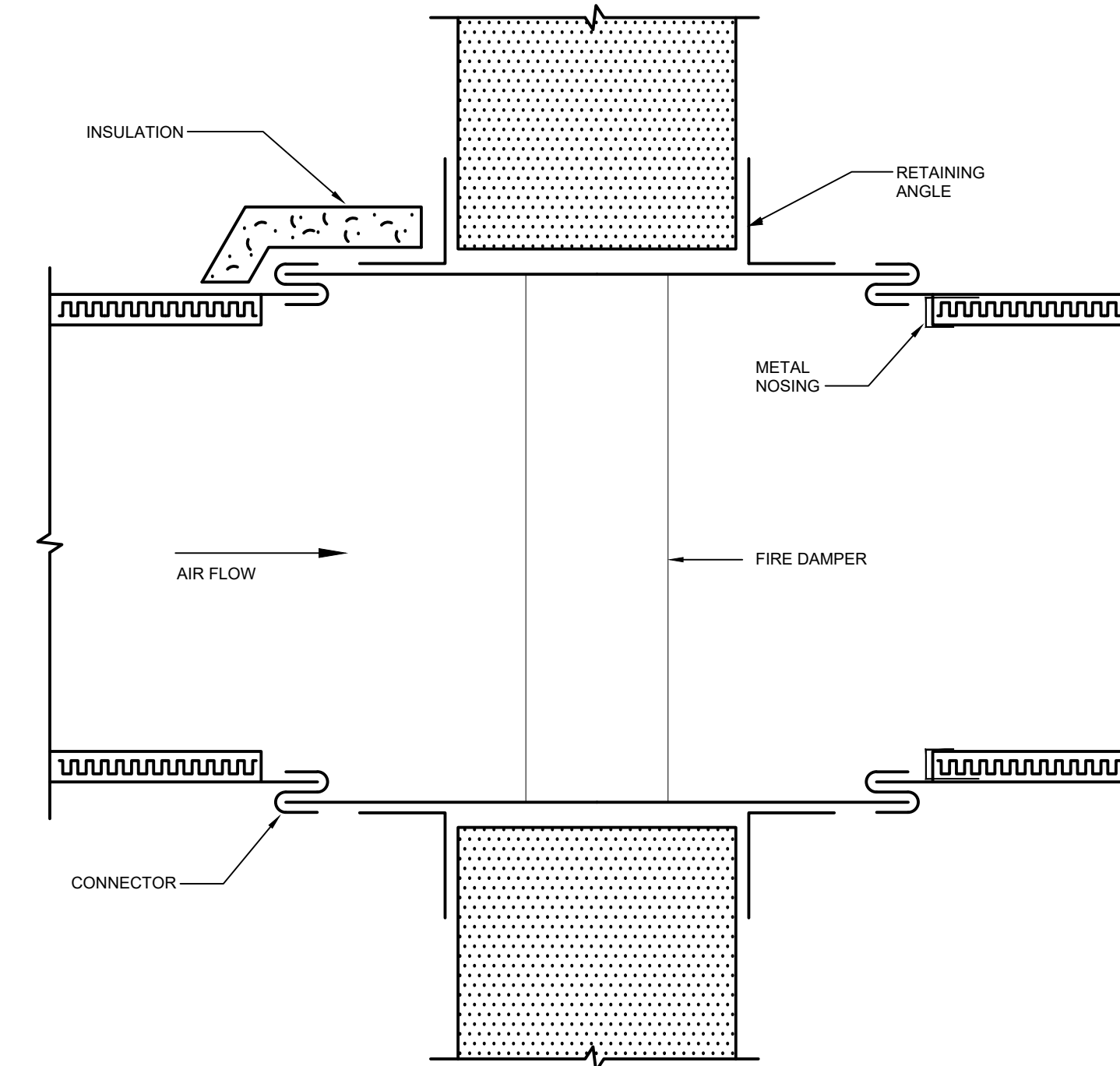


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CONSULTANTS:



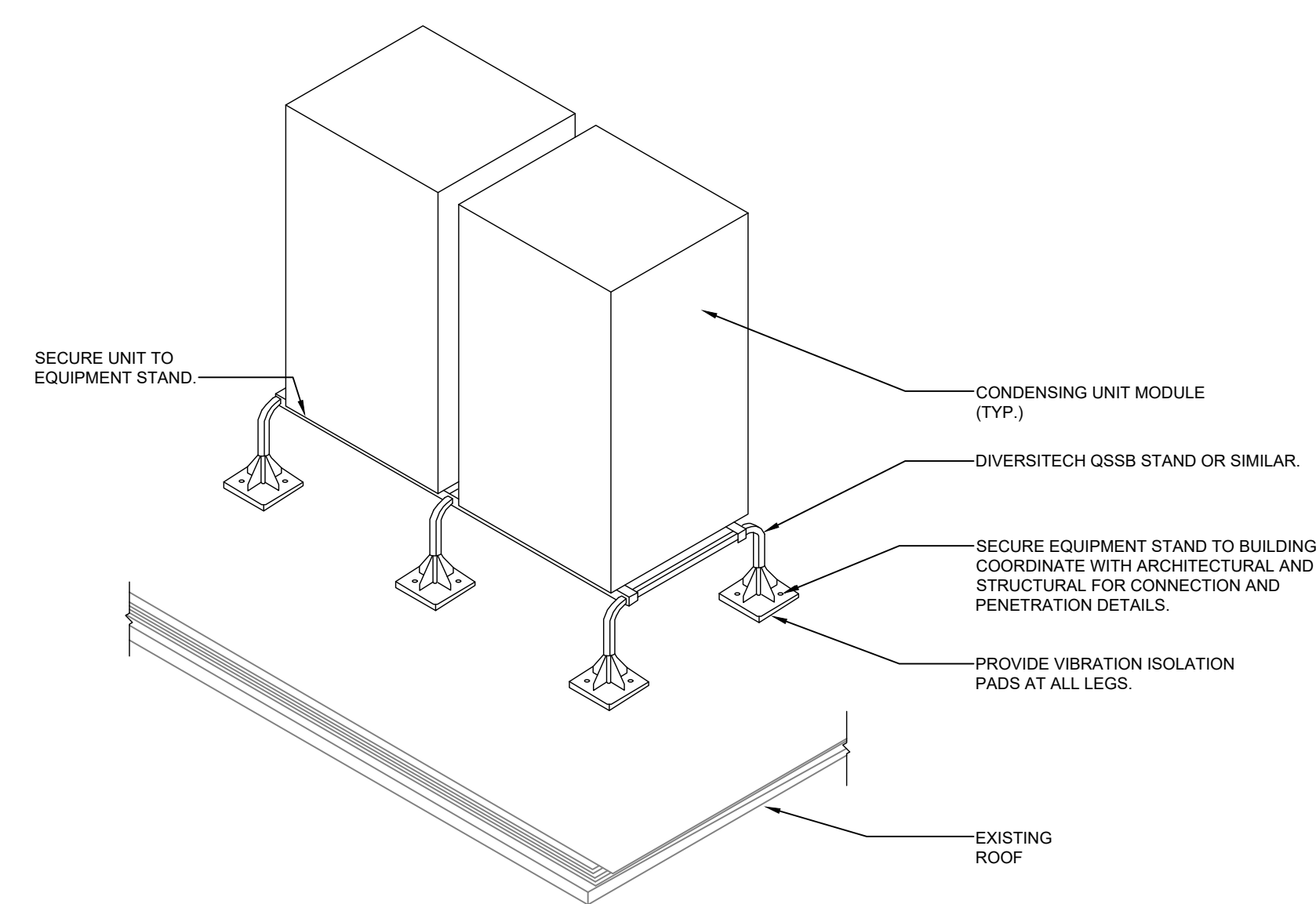
1 TYPICAL CLASSROOM SECTION
SCALE: N.T.S.



2 HORIZONTAL FIRE DAMPER DETAIL
SCALE: N.T.S.

NOTES:

1. OPENING IN FLOOR SHALL BE A MINIMUM OF 1/8" PER FOOT LARGER THAN OVERALL SIZE OF DAMPER AND SLEEVE ASSEMBLY FOR GALVANIZED STEEL DAMPERS. MAXIMUM OPENING NOT TO EXCEED 1/8" PER FOOT PLUS ONE INCH FOR GALVANIZED STEEL DAMPERS. OPENING SHALL NOT BE LESS THAN 1/4" LARGER FOR ANY SIZE DAMPER AND SLEEVE ASSEMBLY.
2. MOUNTING ANGLES SHALL BE A MINIMUM OF 1-1/2" x 1-1/2" x 1/4" AND FASTENED WITH #10 BOLTS OR SCREWS, 1/2" LG. WELDS OR 3/16" RIVETS TO SLEEVE AT A MAXIMUM SPACING OF 4" WITH A MINIMUM OF TWO CONNECTIONS IN EACH SIDE, TOP AND BOTTOM.
3. WHEN MULTIPLE DAMPER ASSEMBLIES ARE JOINED OR FASTENING DAMPER TO SLEEVE, DAMPERS SHALL BE FASTENED WITH NO. 10 BOLT OR SCREWS, 3/16" RIVET OR 1/2" LG. WELD STAGGERED INTERMITTENTLY, AND SPACED 12" MAXIMUM C-C.

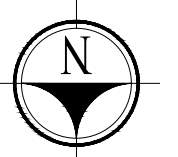


3 VRF CONDENSING UNIT MOUNTING DETAIL
SCALE: N.T.S.

PROJECT NAME:

Juliet W. Long School
1854 Route 12
Gales Ferry, CT 06335

KEYPLAN



REVISIONS

REV.	DATE	DESCRIPTION

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DETAILS**

DATE: 08/05/24

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SCALE: N.T.S.

PROJ #: 2024087.00

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ROOFTOP UNIT SCHEDULE

Table with columns: AIR HANDLING UNIT DATA, SUPPLY FAN DATA, DX COIL DATA, HOT GAS REHEAT DATA, GAS HEAT SECTION DATA, ELEC DATA, REMARKS.

NOTES: 1. PREMIUM EFFICIENCY MOTOR. 2. PROVIDE COATED CONDENSER COILS DUE TO COASTAL PROXIMITY...

RTU-1 - THIS UNIT IS REPLACING AN EXISTING RTU EXISTING UNIT INFO: CARRIER MODEL - 507J 005 501 SERIAL - 2894G20167...

DEDICATED OUTDOOR AIR SYSTEM SCHEDULE

Table with columns: AIR HANDLING UNIT DATA, SUPPLY FAN DATA, EXHAUST FAN DATA, HEAT PUMP COOLING DATA, HEAT PUMP HEATING DATA, HOT GAS REHEAT COIL DATA.

DEDICATED OUTDOOR AIR SYSTEM SCHEDULE (CONTINUED)

Table with columns: GAS FURNACE DATA, ENERGY WHEEL DATA, FILTERS, ELECTRICAL SINGLE POINT POWER, REMARKS.

NOTES: 1. MANUFACTURER 1-YEAR PARTS ONLY WARRANTY. DIGITAL SCROLL COMPRESSOR 5-YEAR WARRANTY. FURNACE HX WARRANTY 25-YEARS...

OUTDOOR VRF CONDENSING UNIT SCHEDULE

Table with columns: UNIT NO., MANUFACTURER, MODEL & SIZE, TOTAL CAPACITY (BTU/H), OUTDOOR TEMP (°F), EFFICIENCY, REFRIGERANT, POWER SUPPLY, SOUND POWER, REMARKS.

NOTES: 1. MANUFACTURER 1-YEAR PARTS ONLY WARRANTY. DIGITAL SCROLL COMPRESSOR 5-YEAR WARRANTY. 2. MINIMUM ASTM B117 SALT SPRAY TEST STANDARD FOR 2000HRS FOR CONDENSING UNITS...

DIFFUSER & REGISTER SCHEDULE

Table with columns: TYPE, MANUFACTURER, MODEL & SIZE, FUNCTION, DESCRIPTION, REMARKS.

NOTES: 1. ALL NECK SIZES ARE NOTED ON DRAWINGS. 2. THROW PATTERNS ARE 4-WAY UNLESS NOTED OTHERWISE.

VRF INDOOR UNIT SCHEDULE

Table with columns: UNIT NO., SERVED BY, LOCATION, MANUFACTURER, MODEL & SIZE, TOTAL CAPACITY (BTU/H), INDOOR TEMP (°F), POWER SUPPLY, REMARKS.

NOTES: 1. PROVIDE CONDENSATE PUMPS FOR ALL UNITS. (CEILING CASSETTES AND DUCTED UNITS HAVE INTEGRAL CONDENSATE PUMPS) 2. VRF City-Multi Standard Warranty is 1 year parts, 7 year compressor from the time of startup...

PROJECT NAME: Juliet W. Long School 1854 Route 12 Gales Ferry, CT 06335

Table with columns: REVISIONS, REV. NO., DATE, DESCRIPTION.

GENERAL ELECTRICAL DEMOLITION NOTES	
A.	REMOVE ALL EXISTING ELECTRICAL EQUIPMENT WITHIN DESIGNATED AREA, EXCEPT WHERE MARKED OTHERWISE. (i.e. LIGHTING, SWITCHES, OUTLETS, PANELBOARDS, ASSOCIATED WIRING BACK TO SOURCE OR TO LAST ACTIVE DEVICE, CONDUIT, ETC. IN PREPARATION FOR NEW WORK. THIS WORK INCLUDES COMPLETE DEMO AND IS NOT LIMITED TO THE EQUIPMENT SHOWN ON DEMO PLANS.
B.	REMOVE ALL EXISTING LOW VOLTAGE SYSTEMS AND EQUIPMENT WITHIN DESIGNATED AREA, INCLUDING BUT NOT LIMITED TO TELEPHONE, DATA, TV, AND P.A. CLOAK AND SECURITY SYSTEMS (INCLUDING OUTLETS, ETC. AND ASSOCIATED WIRING) BACK TO SOURCE OR TO LAST ACTIVE DEVICE.
C.	REMOVE EXISTING FIRE ALARM SYSTEM IN AREA DESIGNATED INCLUDING BUT NOT LIMITED TO: FIRE ALARM DEVICES, WIRING, CONDUIT, BOXES, PANELS, ETC. COORDINATE REMOVAL WORK WITH INSTALLATION OF NEW FIRE ALARM SYSTEM SUCH THAT AN OPERATIONAL FIRE ALARM SYSTEM IS MAINTAINED THROUGHOUT PERIODS OF BUILDING OCCUPATION. COORDINATE ANY SERVICE SHUT-DOWN WITH LOCAL FIRE OFFICIAL AND OWNER. PROVIDE FIRE WATCH AS REQUIRED.
D.	DISCONNECT AND REMOVE EXISTING WIRING, CONDUIT, BOXES, ETC. SERVING ALL EQUIPMENT BEING REMOVED BY MECHANICAL AND OTHER TRADES. REFER TO PLUMBING, MECHANICAL AND ARCHITECTURAL DRAWINGS FOR COORDINATION OF REQUIRED WORK. REMOVALS SHALL BE BACK TO SOURCE PANEL COMPLETE.
E.	EXISTING ELECTRICAL ITEMS THAT ARE BEING DISCONNECTED AND REMOVED AND NOT BEING REUSED SHALL BE DISPOSED OF PROPERLY.
F.	ALL ABANDONED ELECTRICAL WIRING AND DEVICES SHALL BE REMOVED.
G.	IF CONTINUITY OF WIRING TO EXISTING ELECTRICAL ITEMS IS INTERRUPTED BY REMOVAL OF DEVICES, CONTRACTOR SHALL INSTALL ALL NECESSARY WIRING AND RACEWAY TO ENSURE THE CONTINUITY OF CIRCUITRY IN OTHER AREAS.
H.	WIRING FOR ITEMS BEING REMOVED SHALL BE REMOVED BACK TO POWER SOURCE OR LAST DEVICE TO REMAIN ACTIVE, UNLESS OTHERWISE INDICATED.
I.	NOTIFY CONSTRUCTION MANAGER OR GENERAL CONTRACTOR OF OPENINGS CAUSED BY REMOVAL OF EXISTING EQUIPMENT NOT BEING REPLACED. ENSURE THE PATCHING IS COMPLETE.
J.	REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL RELATED WORK.
K.	ALL EXISTING EXPOSED RACEWAY THAT IS SERVING DEVICES IN FINISHED AREAS THAT ARE TO REMAIN SHALL BE REMOVED AND REPLACED WITH NEW CONCEALED CONDUIT/RACEWAY AND CONDUCTORS TO SERVE DEVICES.
L.	INSTALL BLANK COVER PLATES ON RECESSED OUTLET BOXES ABANDONED UNDER THIS CONTRACT IN WALLS THAT ARE TO REMAIN.
M.	WHERE POWER AND TELEDATA OUTLETS EXIST ON WALLS TO BE FURRED OUT, THE ELECTRICAL CONTRACTOR SHALL REMOVE AND REINSTALL DEVICES AND PLATES AND PROVIDE BOX EXTENSIONS AS NECESSARY TO EXTEND THE OUTLETS TO THE NEW SURFACES.
N.	REMOVE DEVICE PLATES (AND DEVICES WHERE NECESSARY) TO ACCOMMODATE NEW WALL FINISHES. REINSTALL COVER PLATES AND DEVICES AFTER NEW FINISHES ARE COMPLETE.
O.	THE BUILDING WILL BE OCCUPIED DURING DEMOLITION. COORDINATE PHASING OF DEMO WORK WITH CONSTRUCTION MANAGER OR GENERAL CONTRACTOR. EXISTING PANELS MAY NEED TEMPORARY RE-FEED. ENSURE CONTINUITY OF SERVICES.

GENERAL ELECTRICAL NOTES	
A.	ALL HOMERUN CIRCUITS TO BE 20A, 120V, 120/240, 34FC TO A 20A-1P CIRCUIT BREAKER IN DESIGNATED PANEL, UNLESS NOTED OTHERWISE. NUMBERS SHOWN AT EACH DEVICE HOMERUN REPRESENT CIRCUIT NUMBER IN PANELBOARD.
B.	WIRE AND RACEWAY SIZES INDICATED ON HOMERUN CIRCUITS SHALL BE CONTINUOUS FOR ENTIRE LENGTH, UNLESS NOTED OTHERWISE.
C.	ALL WIRING (CONDUITS, ETC.) TO BE CONCEALED. NO SURFACE WIRING SHALL BE INSTALLED IN FINISHED AREAS. THIS CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CHANNELING REQUIRED OF EXISTING WALLS AND FLOORS TO ACCOMMODATE NEW WIRING. SEE PATCHING SPECIFICATIONS, FLOOR PLANS AND ELEVATIONS FOR ADDITIONAL INFORMATION ON ARCHITECTURAL AND WIRING ROUTING.
D.	ALL WIRING ABOVE CEILING THAT IS NOT IN CONDUIT AND IS LOCATED IN A PLENUM SPACE SHALL BE PLENUM RATED. REFER TO MECHANICAL PLANS FOR PLENUM AREAS.
E.	ELECTRICAL CONDUITS, WIRING, BOXES, ETC. SHALL NOT PENETRATE STAIR ENCLOSURE, UNLESS THEY ARE FEEDING DEVICES LOCATED WITHIN THE STAIR ENCLOSURE.
F.	PROVIDE ELECTRICAL OUTLET PLATE GASKET SEALS AT RECEPTACLES, SWITCHES AND OTHER ELECTRICAL BOXES ON EXTERIOR WALLS AND INTERIOR WALLS BETWEEN CONDITIONED AND NON-CONDITIONED SPACES.
G.	ALL INDIVIDUAL OR GENERAL PURPOSE BRANCH 120 VOLT CIRCUITS OVER 100'-0" IN CONDUCTOR LENGTH SHALL BE INCREASED ONE WIRE SIZE (i.e. FROM #12AWG TO #10AWG) AND CIRCUITS OVER 175'-0" IN CONDUCTOR LENGTH SHALL BE INCREASED TWO WIRE SIZES (i.e. FROM #12AWG TO #8AWG) UNLESS NOTED OTHERWISE.
H.	ALL INDIVIDUAL OR GENERAL PURPOSE BRANCH 277 VOLT CIRCUITS OVER 200'-0" IN CONDUCTOR LENGTH SHALL BE INCREASED ONE WIRE SIZE (i.e. FROM #12AWG TO #10AWG) AND CIRCUITS OVER 300'-0" IN CONDUCTOR LENGTH SHALL BE INCREASED TWO WIRE SIZES (i.e. FROM #12AWG TO #8AWG) UNLESS NOTED OTHERWISE.
I.	SEAL ALL CONDUITS AT THE LAST STRUCTURE PRIOR TO CONDUITS ENTERING A BUILDING. PER SPECIFICATIONS AND DETAILS. ALL SPIRAL CONDUITS SHALL HAVE NYLON PULL STRINGS AND FOOTAGE TAP.
J.	RACEWAY AND WIRING INDICATED ON DRAWINGS ARE RECOMMENDATIONS FOR SPECIFIC ROUTES OR SPECIAL CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR DETERMINING ACTUAL ROUTING.
K.	ALTHOUGH ALL FEEDER AND BRANCH CIRCUIT WIRE AND CONDUIT IS NOT SPECIFICALLY SHOWN, IT IS THE INTENT OF THESE DOCUMENTS THAT A COMPLETE FEEDER AND BRANCH CIRCUIT WIRING SYSTEM BE INSTALLED.
L.	ENSURE THAT NO PIPING, DUCTWORK, LEAK PROTECTION APPARATUS OR OTHER EQUIPMENT FOREIGN TO THE ELECTRICAL TRADE PASSES THROUGH THE SPACE EQUAL TO THE WIDTH AND DEPTH OF THE ELECTRICAL DISTRIBUTION EQUIPMENT AND EXTENDING FROM THE FLOOR TO THE STRUCTURAL CEILING.
M.	IN COMPOUNG ROOMS #MNG 132 AND MNG 136, SEAL AND GASKET ALL WALL PENETRATIONS WITH SILICONE CAULKING TO BE AIR/WATER TIGHT INCLUDING LIGHT FIXTURES, WALL SWITCHES, RECEPTACLES, DATA OUTLETS, FIRE ALARM DEVICES, ETC.

GENERAL LIGHTING NOTES	
A.	REFER TO ARCHITECTURAL REFLECTED CEILING PLAN DRAWINGS FOR FINAL LOCATION OF ALL CEILING MOUNTED LIGHT FIXTURES.
B.	REFER TO ARCHITECTURAL ELEVATIONS AND DETAILS FOR FINAL LOCATION OF WALL MOUNTED LIGHTING FIXTURES AND TASK LIGHTING.
C.	SWITCHES SHOWN ON PLANS DOES NOT SHOW SWITCH LEG/TRACER WIRE BETWEEN SWITCHES. PROVIDE ALL REQUIRED WIRING FOR SWITCHING OF LIGHTING.
D.	CONNECT UNDER CABINET LIGHTING TO LOCAL, NON-COMPUTER BRANCH RECEPTACLE CIRCUIT.
E.	A SWITCH IN A SPACE SHALL CONTROL LIGHTING IN THAT SPACE UNLESS OTHERWISE INDICATED.
F.	ALL EXIT SIGNS SHALL BE WIRED TO LINE SIDE OF THE LIFE SAFETY (EMERGENCY) LIGHT CIRCUIT SERVING THE SAME AREA FOR CONTINUOUS ILLUMINATION.

GENERAL POWER NOTES	
A.	COORDINATE EXACT LOCATION OF ELECTRICAL DEVICES SUCH AS RECEPTACLES, SWITCHES, FIRE ALARM DEVICES, ETC. WITH ARCHITECTURAL PLANS, ELEVATIONS AND DETAILS PRIOR TO START OF WORK. REQUEST CLARIFICATIONS FROM ARCHITECT PRIOR TO INSTALLATION.
B.	ANY RECEPTACLE LOCATED WITHIN 6'-0" OF EDGE OF SINK SHALL BE A GFI RECEPTACLE OR PROTECTED BY A GFI CIRCUIT BREAKER.
C.	UNLESS OTHERWISE INDICATED, REFER TO MOTOR CIRCUIT SCHEDULE FOR ELECTRICAL REQUIREMENTS OF ALL MECHANICAL, ETC. PLUMBING, FIRE PROTECTION, ETC. EQUIPMENT. REFER TO DRAWINGS FOR EACH TRADE FOR EXACT LOCATION OF EQUIPMENT.
D.	DO NOT INSTALL OUTLETS BACK TO BACK. PROVIDE MINIMUM 24 INCH HORIZONTAL SPACING IN FIRE RATED WALLS. MOUNT LOW VOLTAGE AND POWER OUTLETS IN DIFFERENT STUD WALL CAVITIES.
E.	WHEN THE COMBINING OF CIRCUITS OR HOMERUNS IS PERMITTED ELSEWHERE IN THE CONTRACT DOCUMENTS, RACEWAYS SHALL BE LIMITED TO SIX CURRENT CARRYING CONDUCTORS (THREE PHASE AND THREE NEUTRALS) PLUS GROUNDING CONDUCTORS UNLESS OTHERWISE INDICATED. PROVIDE A DEDICATED NEUTRAL FOR EACH SINGLE PHASE CIRCUIT, UNLESS "OVERSIZED" NEUTRAL IS PROVIDED AS PART OF MANUFACTURED ASSEMBLY. IF MANUFACTURED ASSEMBLY IS PROVIDED WITH "OVERSIZED" NEUTRALS, PROVIDE MATCHING "OVERSIZED" NEUTRALS FROM SOURCE PANEL TO MANUFACTURED ASSEMBLY.
F.	PROVIDE NYLON PULL STRINGS IN ALL EMPTY CONDUIT SYSTEMS FOR USE IN INSTALLING SYSTEM WIRING.
G.	REFER TO TELECOMMUNICATION, SECURITY AND AUDIOVISUAL DRAWINGS FOR EXACT LOCATION OF ALL TELECOMMUNICATION OUTLETS, SECURITY DEVICES, VIDEO OUTLETS, AMPLIFIER SPEAKERS, ETC. PROVIDE ALL REQUIRED RACEWAY FOR THESE SYSTEMS FOR A COMPLETE INSTALLATION. SEE ELECTRICAL, TELECOMMUNICATION, SECURITY AND AUDIOVISUAL SPECIFICATIONS AND DRAWINGS FOR ADDITIONAL REQUIREMENTS.
H.	COORDINATE EXACT LOCATION OF JUNCTION BOX FOR EQUIPMENT WHICH IS FURNISHED BY OWNER OR OTHERS WITH EQUIPMENT SUPPLIER PRIOR TO CONSTRUCTION. PROVIDE WIRING FROM JUNCTION BOX TO EQUIPMENT CONNECTION AS REQUIRED.
I.	WIRING INDICATED BY CIRCUIT NUMBER SYMBOL SHALL INCLUDE A NEUTRAL WHEN THE LOAD SERVED HAS PROVISIONS FOR, OR REQUIRES A NEUTRAL. TYPICALLY, ALL FEEDERS AND BRANCH CIRCUITS WILL REQUIRE A NEUTRAL, EXCEPT MOST MOTOR CIRCUITS.

GENERAL FIRE ALARM NOTES - RENO	
A.	THE EXISTING BUILDING FIRE ALARM SYSTEM SHALL REMAIN IN PLACE AND ACTIVE FOR FULL SYSTEM COMPATIBILITY. ALL NEW FIRE ALARM DEVICES SHALL BE MANUFACTURED BY SAME MANUFACTURER AS THE EXISTING SYSTEM. THERE ARE NO SUBSTITUTIONS OF FIRE ALARM DEVICES.
B.	EXISTING FIRE ALARM CONDUIT AND BOXES MAY BE REUSED IF THEY SUIT THE PURPOSE. EXISTING FIRE ALARM CONDUIT AND BOXES NOT REUSED FOR NEW WIRING AND DEVICES SHALL BE REMOVED.
C.	SHUTDOWNS OF A PORTION OF THE BUILDING FIRE ALARM SYSTEM MAY BE REQUIRED TO REMOVE AND REINSTALL FIRE ALARM DEVICES. COORDINATE THE TIME AND DURATION OF ANY FIRE ALARM SYSTEM SHUTDOWNS WITH OWNER. UNDER NO CIRCUMSTANCES WILL ANY UNATTENDED AREAS BE LEFT WITHOUT FIRE ALARM SYSTEM PROTECTION.
D.	FIRE ALARM SYSTEM WIRING SHALL BE IN ACCORDANCE WITH NEC ARTICLE 760, AND AS RECOMMENDED BY THE MANUFACTURER OF THE FIRE ALARM SYSTEM. ALL WIRES SHALL BE COLOR CODED. NUMBER AND SIZE OF CONDUCTORS SHALL BE AS RECOMMENDED BY THE FIRE ALARM SYSTEM MANUFACTURER, BUT NOT LESS THAN #18 AWG FOR INITIATING DEVICE CIRCUITS AND #14 AWG FOR NOTIFICATION DEVICE CIRCUITS.
E.	FIRE ALARM WIRING SHALL BE RUN IN 3/4" EMT MINIMUM. CONDUIT FILL SHALL NOT EXCEED 40% FILL. NEW DEVICES SHALL BE SECURELY AFFIXED TO BUILDING SURFACES.
F.	NEW JUNCTION BOXES, PULL BOXES AND OUTLET BOXES IN THE FIRE ALARM SYSTEM SHALL BE PAINTED RED. COVERS SHALL BE PAINTED RED AND SHALL BE IDENTIFIED WITH WHITE MARKINGS AS "FA" FOR JUNCTION BOXES. LETTERINGS SHALL BE A MINIMUM OF 3/4 INCH HIGH.
G.	AS PART OF THE FIRE ALARM EQUIPMENT SUBMITTAL PACKAGE, THE ELECTRICAL CONTRACTOR SHALL FURNISH BATTERY CALCULATIONS INDICATING ADDITIONAL BATTERY CAPACITY REQUIRED TO POWER ALL NEW FIRE ALARM SYSTEM DEVICES INCLUDED AS PART OF THIS PROJECT.
H.	THE MODIFICATIONS TO THE FIRE ALARM SYSTEM DESCRIBED SHALL BE INSTALLED, TESTED AND DELIVERED TO THE OWNER IN FULLY OPERATIONAL AND FIRST CLASS CONDITION BY AN AUTHORIZED MANUFACTURER'S FIRE ALARM SYSTEM AGENT ONLY. WORK ON THE FIRE ALARM SYSTEM SHALL INCLUDE ALL HARDWARE, RACEWAYS, INTERCONNECTING WIRING, SOFTWARE AND PROGRAMMING TO ACCOMPLISH THE REQUIREMENTS OF THIS CONTRACT. THE FIRE ALARM EQUIPMENT SUPPLIER SHALL HAVE A MINIMUM OF TEN (10) YEARS PREVIOUS EXPERIENCE WITH FACILITY OPERATIONS AND REQUIREMENTS.
I.	REFER TO ELECTRICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

SWITCHES	
SYMBOL	DESCRIPTION
Ⓢ	SINGLE-POLE SWITCH
Ⓢ:	DOUBLE-POLE SWITCH
Ⓢ:	3-WAY SWITCH
Ⓢ:	SINGLE-POLE DIMMER SWITCH
Ⓢ:	MANUAL STARTER WITH THERMAL OVERLOAD PROTECTION
Ⓢ:	CEILING MOUNTED OCCUPANCY SENSOR; SUB-LETTER INDICATES TYPE
Ⓢ:	POWER PACK FOR OCCUPANCY SENSOR
Ⓢ:	LIGHTING CIRCUIT MONITOR CONTROL MODULE
Ⓢ:	LIGHTING CIRCUIT TRANSFER CONTROL MODULE
Ⓢ:	WALL MOUNTED OCCUPANCY SENSOR; SUB-LETTER INDICATES TYPE

POWER DEVICES	
SYMBOL	DESCRIPTION
Ⓢ	ELECTRICAL PANEL 200V/120 VOLT
Ⓢ	FUSED DISCONNECT SWITCH
Ⓢ	ELECTRIC MOTOR
Ⓢ	VARIABLE FREQUENCY DRIVE
Ⓢ	JUNCTION BOX

LEGEND NOTE	
THESE LEGENDS AND ABBREVIATIONS DEFINE ITEMS INDICATED ON DRAWINGS. NOT ALL SYMBOLS OR ABBREVIATIONS DEFINED ARE NECESSARILY USED ON THIS PROJECT.	

NORMAL LIGHTING	
SYMBOL	DESCRIPTION
Ⓢ	CEILING MOUNTED 2x2' LIGHT FIXTURE
Ⓢ	SINGLE-FACED CEILING OR WALL MOUNTED, EXIT SIGN WITH CHEVRONS AS INDICATED ON PLANS

SPECIAL SYSTEMS	
SYMBOL	DESCRIPTION
Ⓢ	COMBINATION DATA, TELEPHONE OUTLET WITH BACKBOX AND EMPTY CONDUIT STUBBED UP TO ABOVE FINISHED CEILING, INCLUDING DRAG LINE
Ⓢ	TELEPHONE OUTLET WITH BACKBOX AND EMPTY CONDUIT, STUBBED UP TO ABOVE ACCESSIBLE FINISHED CEILING, INCLUDING DRAG LINE
Ⓢ	DATA OUTLET WITH BACKBOX AND EMPTY CONDUIT STUBBED UP TO ABOVE FINISHED CEILING, INCLUDING DRAG LINE
Ⓢ	DATA OUTLET WITH BACKBOX AND EMPTY CONDUIT STUBBED UP TO ABOVE FINISHED CEILING, INCLUDING DRAG LINE. SUB-LETTER "N" INDICATES OUTLET TO BE MOUNTED 6" ABOVE COUNTER TOP OR 48" AFF
Ⓢ	CEILING MOUNTED DATA OUTLET WITH BACKBOX AND EMPTY CONDUIT STUBBED TO ACCESSIBLE CEILING, INCLUDING DRAG LINE (WA INDICATES WIRELESS POINT)
Ⓢ	DATA OUTLET WITH BACKBOX AND EMPTY CONDUIT TO ACCESSIBLE CEILING, INCLUDING DRAG LINE. SUB-LETTER "C" INDICATES CEILING MOUNTED
Ⓢ	CEILING MOUNTED SOUND SYSTEM SPEAKER

RECEPTACLES	
SYMBOL	DESCRIPTION
Ⓢ	SUBLETTER "S" ADJACENT TO DEVICE INDICATES RECEPTACLE ON STANDER SOURCE. RECEPTACLE AND COVER PLATE SHALL BE RED IN COLOR
Ⓢ	DUPEX RECEPTACLE. COORDINATE LOCATION WITH ARCHITECT
Ⓢ	DUPEX RECEPTACLE. SUB-LETTER "N" INDICATES RECEPTACLE TO BE MOUNTED 6" ABOVE COUNTER TOP OR 48" AFF
Ⓢ	DUPEX RECEPTACLE. SUB-LETTER "N" INDICATES MOUNTED IN ARCHITECTURAL MILLWORK
Ⓢ	DUPEX RECEPTACLE. CEILING MOUNTED
Ⓢ	DOUBLE DUPEX RECEPTACLE. COORDINATE LOCATION WITH ARCHITECT
Ⓢ	DOUBLE DUPEX RECEPTACLE. SUB-LETTER "N" INDICATES RECEPTACLE TO BE MOUNTED 6" ABOVE COUNTER TOP OR 48" AFF
Ⓢ	DOUBLE DUPEX RECEPTACLE. SUB-LETTER "N" INDICATES MOUNTED IN ARCHITECTURAL MILLWORK
Ⓢ	DOUBLE DUPEX RECEPTACLE. CEILING MOUNTED
Ⓢ	SINGLE RECEPTACLE. COORDINATE LOCATION WITH ARCHITECT
Ⓢ	SINGLE RECEPTACLE. SUB-LETTER "N" INDICATES RECEPTACLE TO BE MOUNTED 6" ABOVE COUNTER TOP OR 48" AFF
Ⓢ	SINGLE RECEPTACLE. SUB-LETTER "N" INDICATES MOUNTED IN ARCHITECTURAL MILLWORK
Ⓢ	SINGLE RECEPTACLE. CEILING MOUNTED
Ⓢ	DUPEX RECEPTACLE-ONE OUTLET SWITCHED
Ⓢ	DUPEX RECEPTACLE CONTROLLED BY AUTOMATIC DEVICE; PROVIDE ANNOTATION ENGRAVED ON RECEPTACLE BODY
Ⓢ	FLUSH FLOOR MOUNTED DOUBLE DUPEX RECEPTACLE
Ⓢ	FLUSH FLOOR MOUNTED DOUBLE DUPEX RECEPTACLE
Ⓢ	SPECIAL PURPOSE OUTLET. AMPERAGE AND VOLTAGE AS INDICATED ON PLANS. CONTRACTOR TO VERIFY CONNECTION / NEMA CONFIGURATION REQUIREMENTS WITH EQUIPMENT BEING FURNISHED
Ⓢ	DUPEX RECEPTACLE WITH USB CHARGER PORT
Ⓢ	DUPEX RECEPTACLE WITH WEATHER-PROOF IN-USE HOUSING
Ⓢ	DUPEX RECEPTACLE. SUB-LETTER "TR" INDICATES TAMPER RESISTANT
Ⓢ	GROUND FAULT CIRCUIT INTERRUPTER-STYLE DUPEX RECEPTACLE
Ⓢ	ARC FAULT CIRCUIT INTERRUPTOR-STYLE DUPEX RECEPTACLE
Ⓢ	ISOLATED GROUND DUPEX RECEPTACLE
Ⓢ	SURGE SUPPRESSION STYLE DUPEX RECEPTACLE
Ⓢ	DUPEX RECEPTACLE FOR TELEVISION. COORDINATE MOUNTING HEIGHT AND LOCATION WITH ARCHITECTURAL ELEVATIONS
Ⓢ	WALL CLOCK

NORMAL LIGHTING	
SYMBOL	DESCRIPTION
Ⓢ	CEILING MOUNTED 2x2' LIGHT FIXTURE
Ⓢ	SINGLE-FACED CEILING OR WALL MOUNTED, EXIT SIGN WITH CHEVRONS AS INDICATED ON PLANS

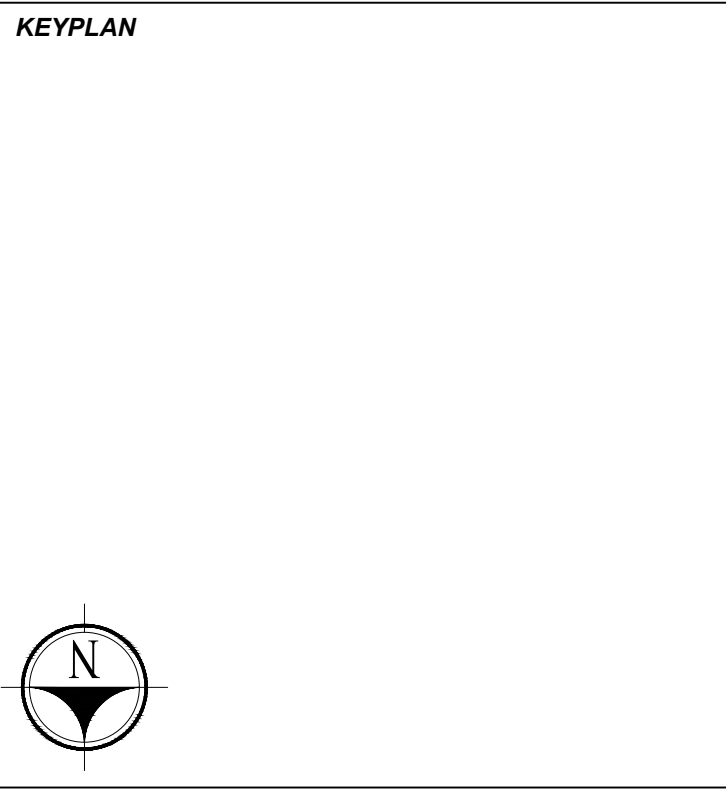
SECURITY / ACCESS CONTROL	
SYMBOL	DESCRIPTION
Ⓢ	CARD READER / PROXIMITY READER

FIRE ALARM	
SYMBOL	DESCRIPTION
Ⓢ	FIRE ALARM SMOKE DETECTOR
Ⓢ	FIRE ALARM VISUAL INDICATING UNIT. SUB-LETTER "N" INDICATES SPECIAL CANDELA RATING
Ⓢ	FIRE ALARM AUDIO / VISUAL INDICATING UNIT WITH SPEAKER. SUB-LETTER "H" INDICATES HORN
Ⓢ	DUCT MOUNTED SMOKE DETECTOR
Ⓢ	REMOTE DUCT SMOKE DETECTOR TEST SWITCH / INDICATOR
Ⓢ	ADDRESSABLE INTERFACE MODULE
Ⓢ	FIRE ALARM CONTROL PANEL
Ⓢ	SMOKE DAMPER OR FIRE / SMOKE DAMPER

ABBREVIATIONS	
SYMBOL	DESCRIPTION
ER	EXISTING TO REMAIN
GFI / GFCI	GROUND FAULT INTERRUPTER
NE	NEW LOCATION OF EXISTING RELOCATED
NE	NEED LIGHT
NR	NEW TO REPLACE EXISTING
P	POLE (SPACE IN PANELBOARD)
RE	REMOVE EXISTING
RL	RELOCATE EXISTING
TYP	TYPICAL
UNV	UNIVERSAL
VAC	VOLTS AC
WM	SURFACE MOUNTED RACEWAY

CONSULTANTS:

PROJECT NAME:
Juliet W. Long School
1854 Route 12
Gales Ferry, CT 06335



REVISIONS		
REV.	DATE	DESCRIPTION

DRAWING TITLE:
ELECTRICAL LEGENDS AND GENERAL NOTES

DRAWING NUMBER:	
DATE:	08/05/24
DRAWN BY:	RZP
CHECKED BY:	RSM
SCALE:	N.T.S.
PROJ #:	2024087.00

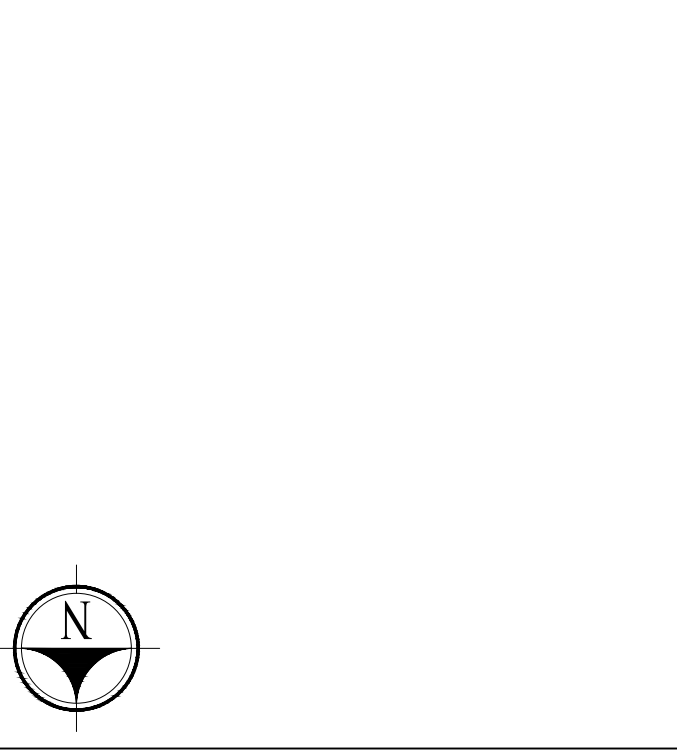
E000

CONSULTANTS:

PROJECT NAME:

**Juliet W. Long School
1854 Route 12
Gales Ferry, CT 06335**

KEYPLAN



REVISIONS

REV.	DATE	DESCRIPTION

DRAWING TITLE:
**ELECTRICAL ROOF
DEMOLITION PLAN**

DATE: 08/05/24

DRAWN BY: RZP

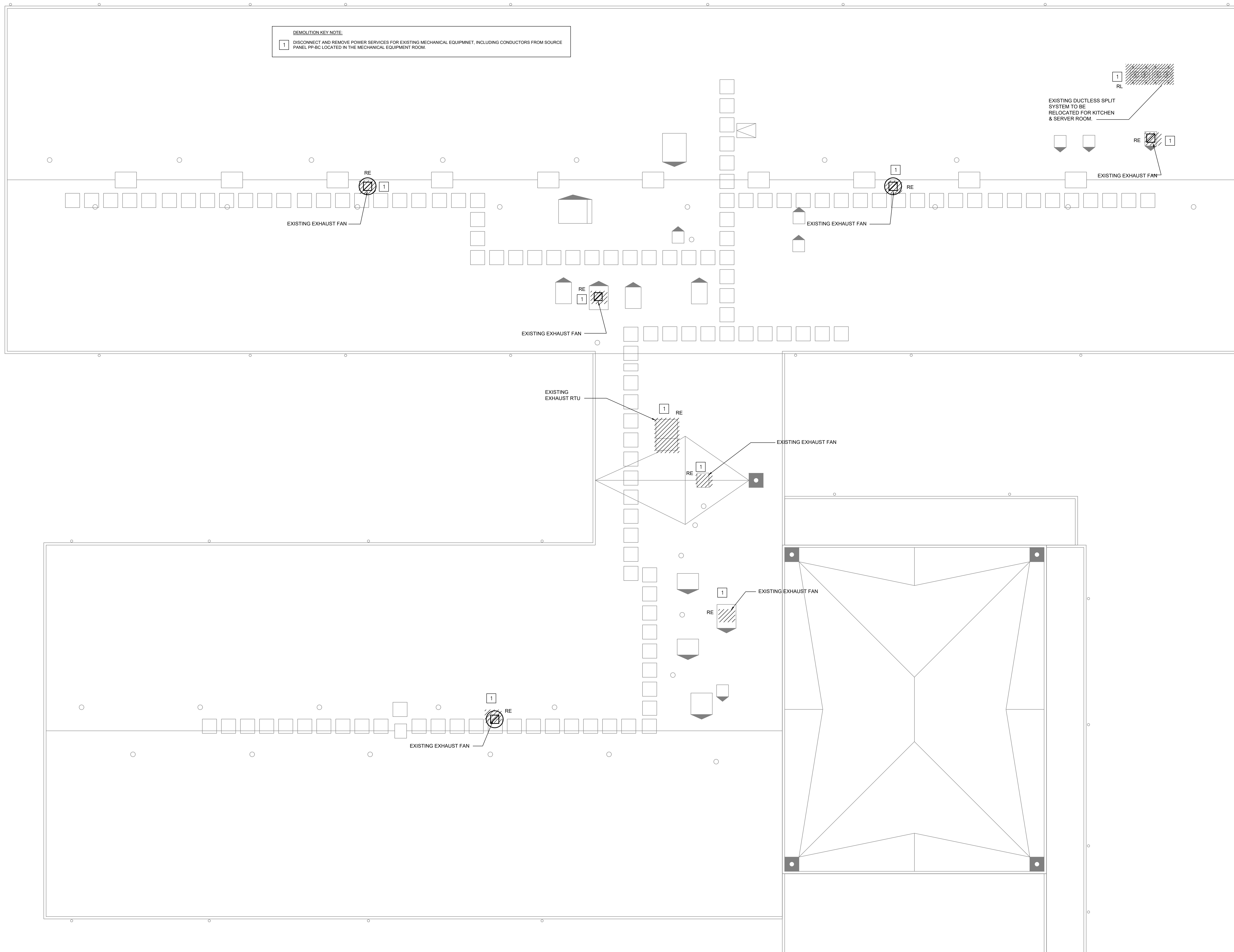
CHECKED BY: RSM

SCALE: 1/8"=1'-0"

PROJ #: 2024087.00

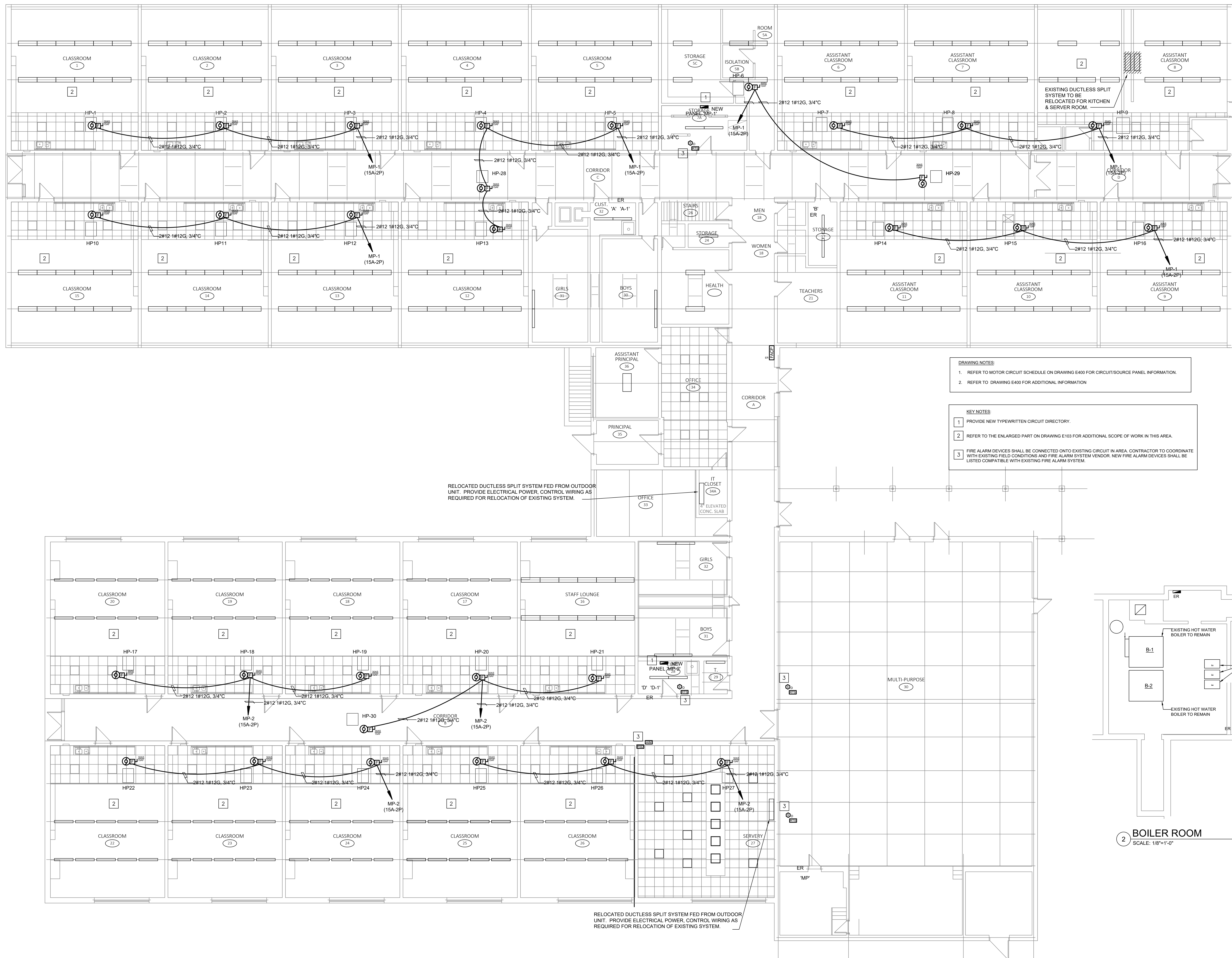
DRAWING NUMBER:

ED101



1 MECHANICAL ROOF DEMOLITION PLAN
SCALE: 1/8"=1'-0"

CONSULTANTS:

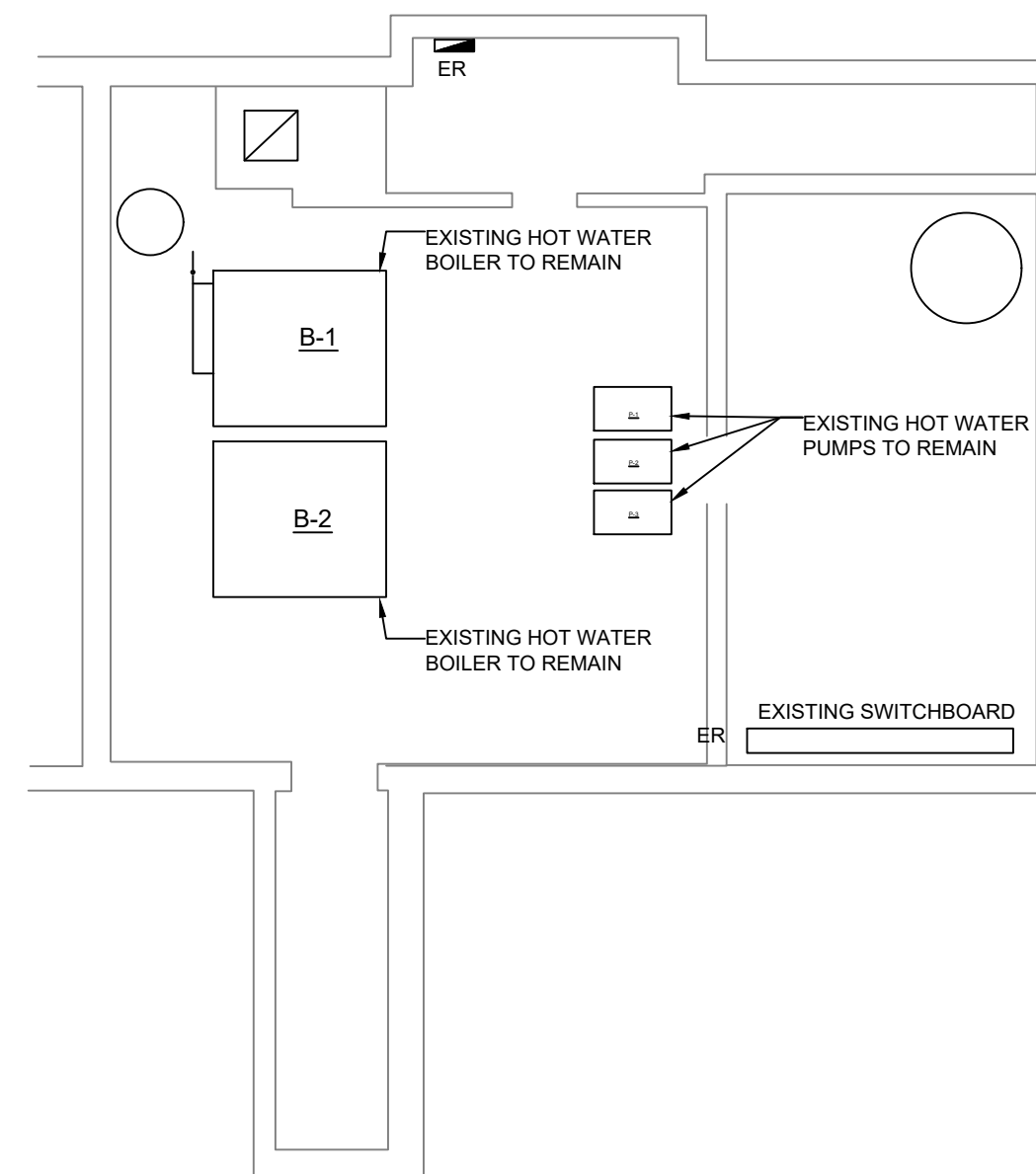


DRAWING NOTES:

- REFER TO MOTOR CIRCUIT SCHEDULE ON DRAWING E400 FOR CIRCUIT/SOURCE PANEL INFORMATION.
- REFER TO DRAWING E400 FOR ADDITIONAL INFORMATION.

KEY NOTES:

- PROVIDE NEW TYPEWRITTEN CIRCUIT DIRECTORY.
- REFER TO THE ENLARGED PART ON DRAWING E103 FOR ADDITIONAL SCOPE OF WORK IN THIS AREA.
- FIRE ALARM DEVICES SHALL BE CONNECTED ONTO EXISTING CIRCUIT IN AREA. CONTRACTOR TO COORDINATE WITH EXISTING FIELD CONDITIONS AND FIRE ALARM SYSTEM VENDOR. NEW FIRE ALARM DEVICES SHALL BE LISTED COMPATIBLE WITH EXISTING FIRE ALARM SYSTEM.



PROJECT NAME:

**Juliet W. Long School
1854 Route 12
Gales Ferry, CT 06335**

KEYPLAN



REVISIONS

REV.	DATE	DESCRIPTION

DRAWING TITLE:
ELECTRICAL POWER FLOOR PLAN

DATE: 08/05/24

DRAWN BY: RZP

CHECKED BY: RSM

SCALE: 1/8"=1'-0"

PROJ #: 2024087.00

DRAWING NUMBER:

EP101

1 ELECTRICAL POWER FLOOR PLAN
SCALE: 1/8"=1'-0"

CONSULTANTS:

PROJECT NAME:

**Juliet W. Long School
1854 Route 12
Gales Ferry, CT 06335**

KEYPLAN



REVISIONS

REV.	DATE	DESCRIPTION

DRAWING TITLE:
**ELECTRICAL ROOF
NEW WORK PLAN**

DATE: 08/05/24

DRAWN BY: RZP

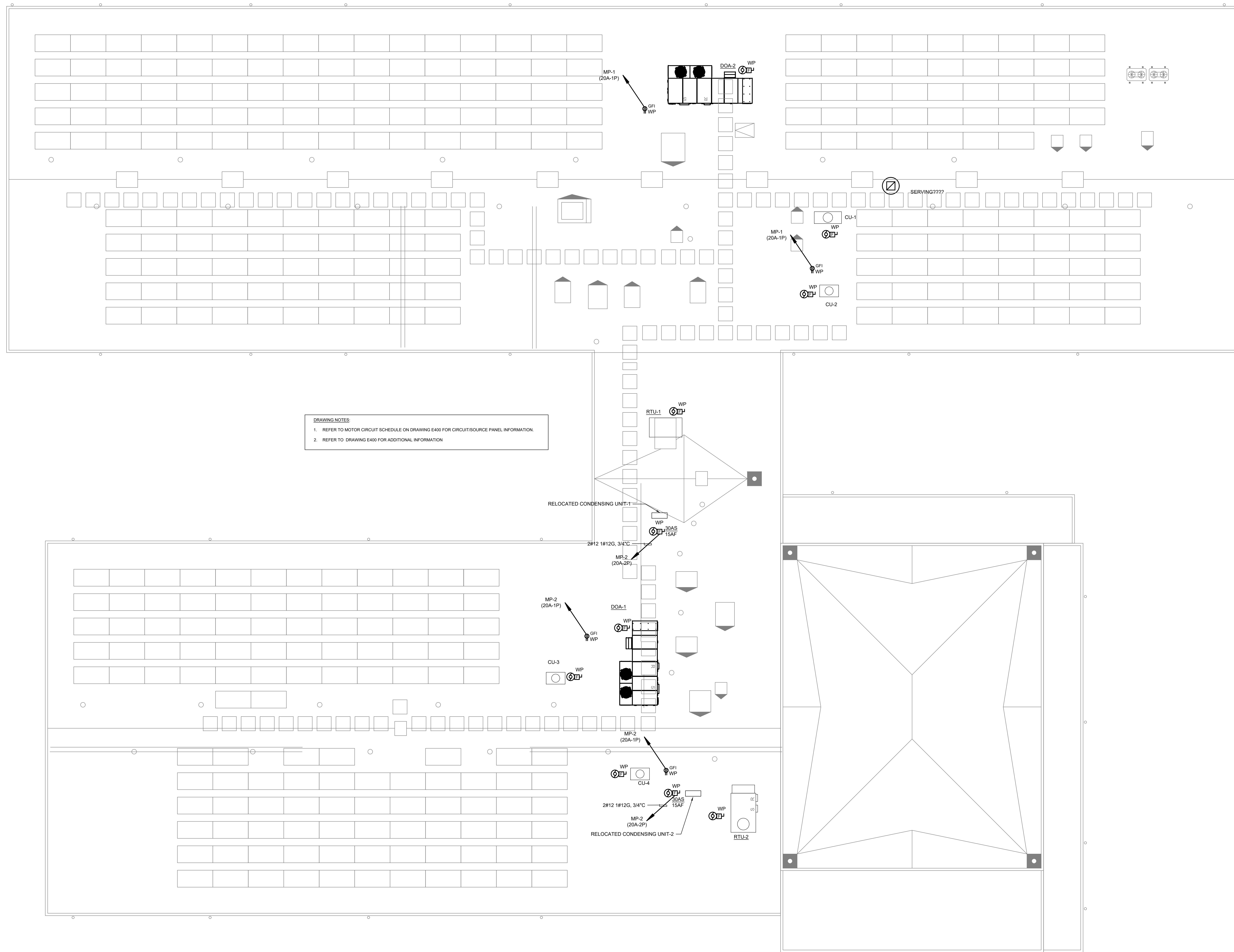
CHECKED BY: RSM

SCALE: 1/8"=1'-0"

PROJ #: 2024087.00

DRAWING NUMBER:

EP102



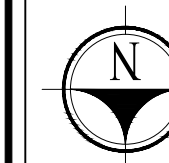
DRAWING NOTES:
1. REFER TO MOTOR CIRCUIT SCHEDULE ON DRAWING E400 FOR CIRCUIT/SOURCE PANEL INFORMATION.
2. REFER TO DRAWING E400 FOR ADDITIONAL INFORMATION.

CONSULTANTS:

PROJECT NAME:

**Juliet W. Long School
1854 Route 12
Gales Ferry, CT 06335**

KEYPLAN



REVISIONS

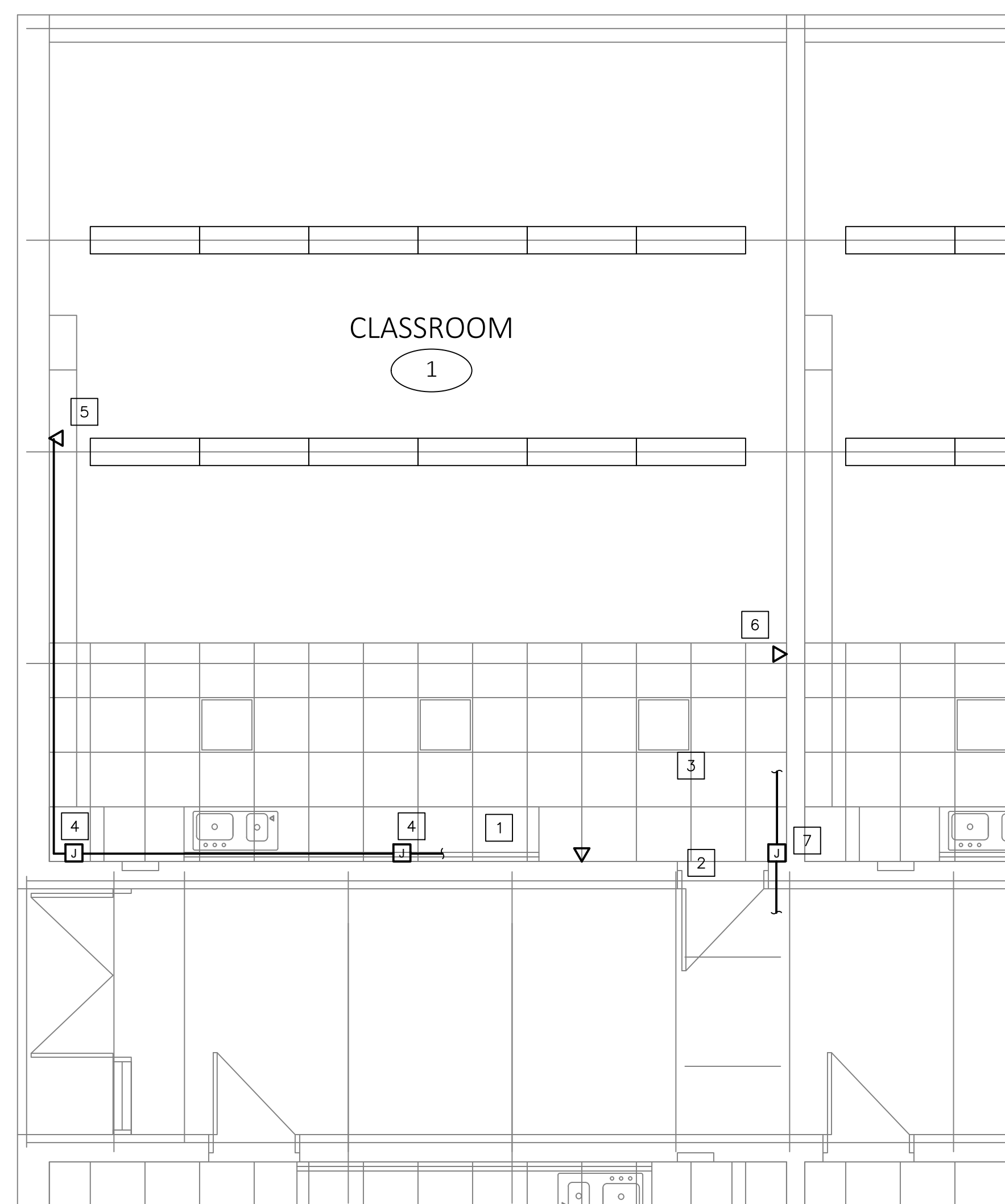
REV.	DATE	DESCRIPTION

DRAWING TITLE:
**ELECTRICAL POWER AND
LIGHTING ENLARGED
CLASSROOM FLOOR
PLAN TYPICAL**

DATE: 08/05/24
DRAWN BY: RZP
CHECKED BY: RSM
SCALE: AS NOTED
PROJ #: 2024087.00

DRAWING NUMBER:

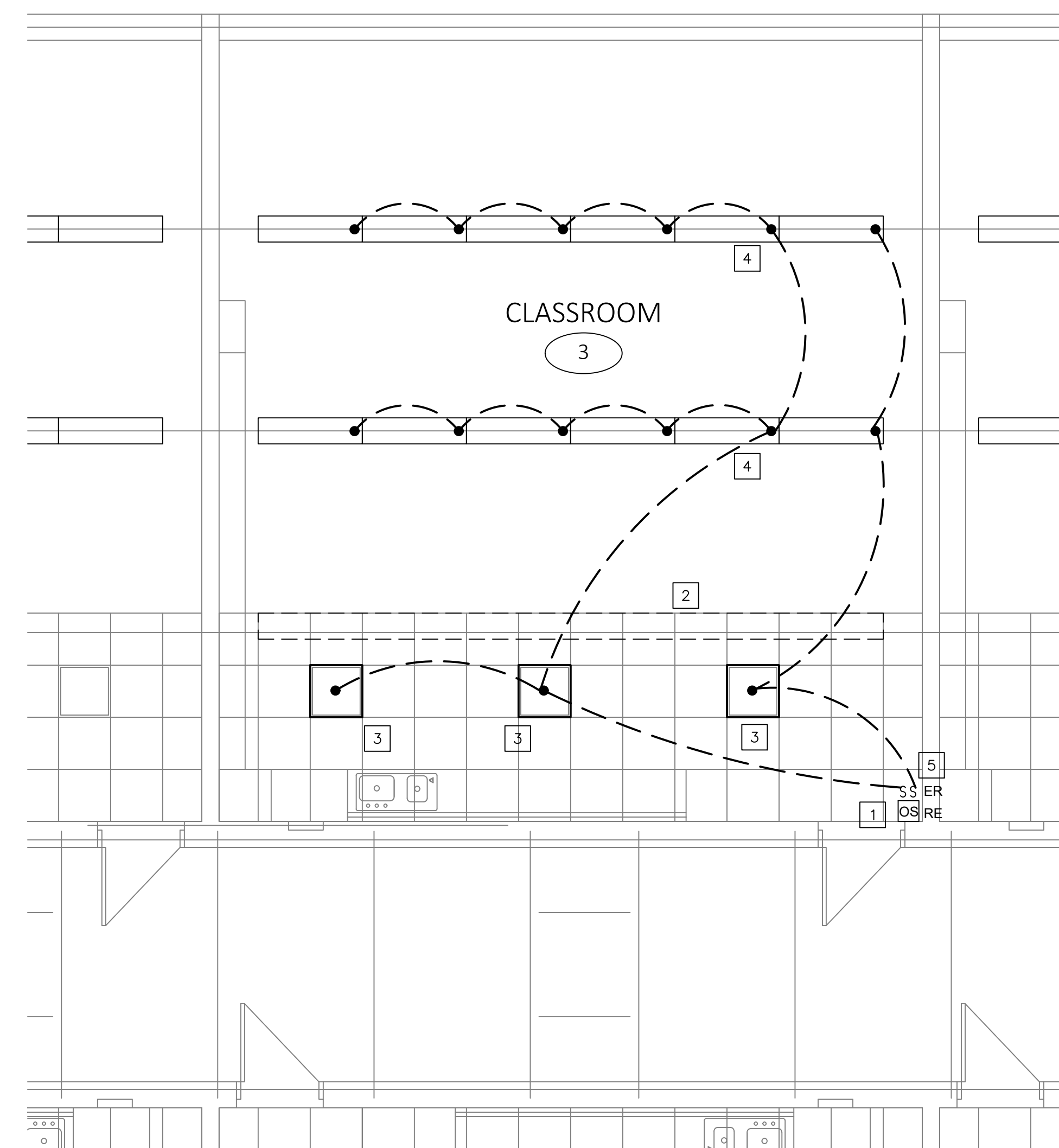
E103



1 ELECTRICAL POWER PLAN
SCALE: 1/4" = 1'-0"

POWER PLAN-KEY NOTES:

- 1 RELOCATE EXISTING WALL-MOUNTED CLOCK. THE EXISTING WALL CLOCK SHALL BE MOUNTED ON THE SIDE OF THE NEW SOFFIT. EXTEND 120VAC CIRCUIT AS REQUIRED. COORDINATE WITH THE ARCHITECT AND OWNER'S REPRESENTATIVE ACTUAL LOCATION PRIOR TO INSTALLATION.
- 2 REMOVE EXISTING SPEAKER ON WALL. EXISTING WIRING TO REMAIN.
- 3 FURNISH AND INSTALL NEW CEILING MOUNT 25-VOLT SPEAKER. NEW SPEAKER SHOULD BE COMPATIBLE WITH THE EXISTING BOSEIN CONTROL PANEL MODEL NUMBER MCP35A. EXTEND WIRING AS REQUIRED.
- 4 RELOCATE EXISTING JUNCTION BOX PART OF DATA RACEWAY. RE-ROUTED CONDUIT BELOW NEW DUCTWORK IN THE AREA WHERE A NEW CEILING IS INSTALLED.
- 5 EXISTING DATA DROP TO REMAIN. COORDINATE WITH THE OWNER'S REPRESENTATIVE IF THE DATA DROP WILL BE REMOVED IN SOME SPECIFIC CLASSROOM PRIOR TO RE-ROUTE THE CONDUIT IN THE AREA WHERE A NEW DROP CEILING IS INSTALLED.
- 6 SHIFT EXISTING DATA DROP TO THE LEFT TO CLEAR NEW CEILING. EXTEND CAT WIRE AS REQUIRED.
- 7 RELOCATE EXISTING JUNCTION BOX PART OF POWER WIRING.



1 ELECTRICAL LIGHTING PLAN
SCALE: 1/4" = 1'-0"

LIGHTING PLAN-KEY NOTES:

- 1 RELOCATE EXISTING WALL-MOUNTED OCCUPANCY SENSOR. MOUNT OCCUPANCY SENSOR AT 7' A.F.F. EXTEND CONTROL WIRING AS REQUIRED. REFER TO EACH ROOM FOR ACTUAL LOCATION.
- 2 REMOVE EXISTING LIGHT FIXTURES. EXISTING LED LIGHTS AT STEEL BEAM TO BE SALVAGED AND RETURNED TO OWNER FOR RE-USE.
- 3 FURNISH AND INSTALL NEW 2x2 LIGHT FIXTURE. COORDINATE LIGHT FIXTURE TYPE/SPECIFICATIONS WITH THE OWNER. EXTEND POWER AND CONTROL WIRING AS REQUIRED.
- 4 EXISTING LIGHT FIXTURES TO BE REMAIN.
- 5 EXISTING SINGLE POLE LIGHT SWITCHES TO BE REMAIN. COORDINATE LIGHTING CONTROL APPROACH WITH THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. REFER TO EACH ROOM FOR ACTUAL LOCATION.

Juliet W. Long School
1854 Route 12
Gales Ferry, CT 06335

PROJECT NAME:

KEYPLAN



REVISIONS		
REV.	DATE	DESCRIPTION

DRAWING TITLE:
**ELECTRICAL
SCHEDULES AND ONE-
LINE RISER DIAGRAM**

DATE: 08/05/24
DRAWN BY: RZP
CHECKED BY: RSM
SCALE: N.T.S.
DRAWING NUMBER:
E400
PROJ #: 2024087.00

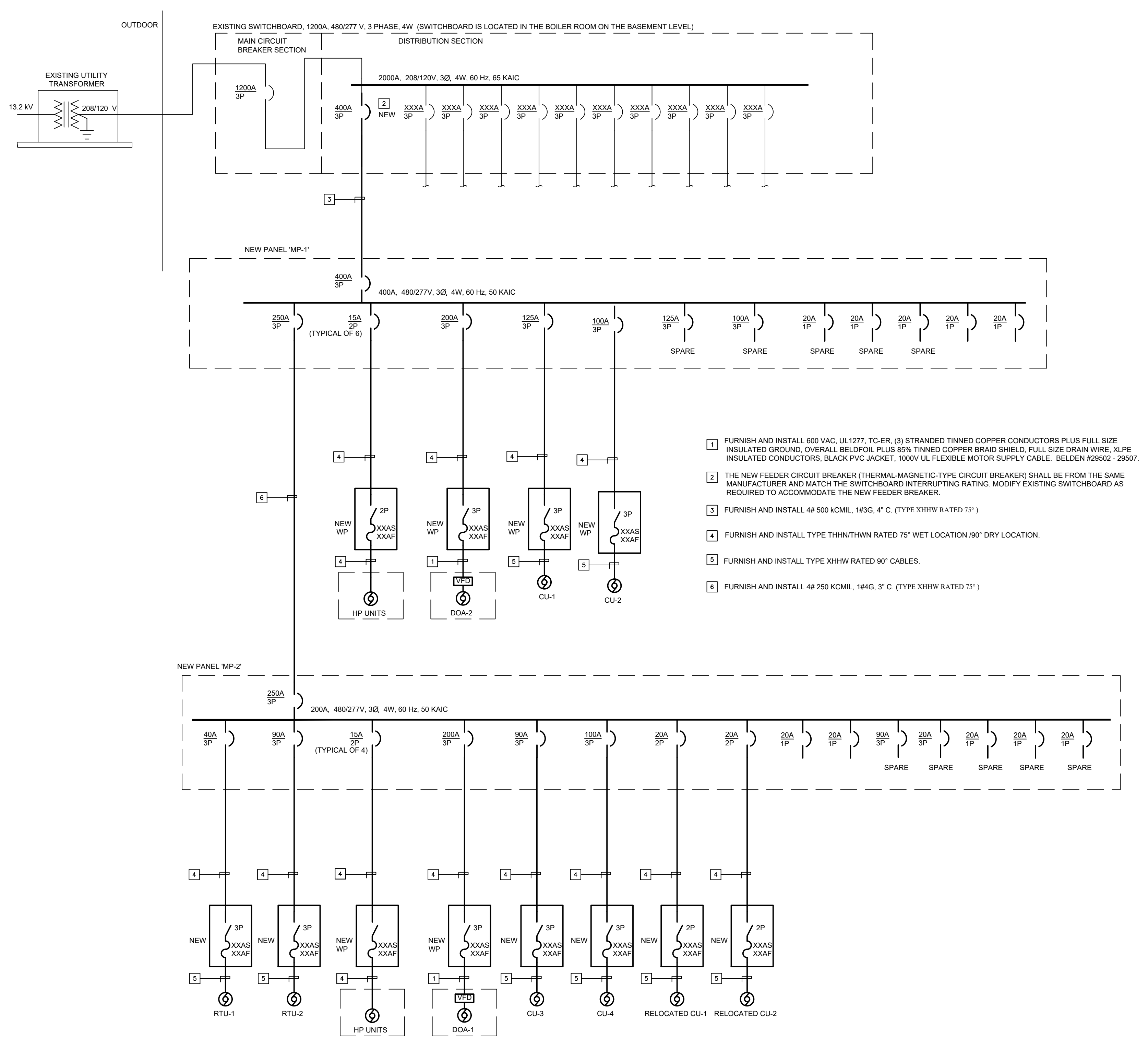
MOTOR CIRCUIT SCHEDULE

EQUIPMENT	LOCATION	SUPPLY FROM	WIRE	O.C.P. DEVICE	DISC SIZE	DISC FUSE	STARTER TYPE	STARTER SIZE	HP	VOLT/PH	NOTES
RTU-1	ROOF	MP-2	3#8, 1#6G, 1" C	40	60	40	VFD		7.5	208 3Ø	NOTES 1 AND 2
RTU-2	ROOF	MP-2	3#4, 1#6G, 1 1/4" C	90	100	90	VFD		7.5	208 3Ø	NOTES 1 AND 2
DOA-1	ROOF	MP-2	3#2, 1#4G, 1 1/2" C	200	200	125	VFD		91.5 FLA	208 3Ø	NOTES 1 AND 3
DOA-2	ROOF	MP-1	3#1, 1#4G, 2" C	200	200	125	VFD		104.7 FLA	208 3Ø	NOTES 1 AND 3
CU-1	ROOF	MP-1	3#2, 1#6G, 1 1/2" C	125	100	80	FWE		64 FLA	208 3Ø	NOTES 1
CU-2	ROOF	MP-1	3#4, 1#6G, 1 1/4" C	100	60	60	FWE		48 FLA	208 3Ø	NOTES 1
CU-3	ROOF	MP-2	3#4, 1#6G, 1 1/4" C	90	60	60	FWE		44 FLA	208 3Ø	NOTE 1
CU-4	ROOF	MP-2	3#6, 1#6G, 1" C	70	60	45	FWE		35.2 FLA	208 3Ø	NOTE 1

MOTOR CIRCUIT SCHEDULE GENERAL NOTES:

- REFER TO SPECIFICATIONS FOR STANDARD FEATURES.
- ABBREVIATIONS:
VFD - VARIABLE FREQUENCY DRIVE
FNVR - FULL VOLTAGE, NON-REVERSING
RVNR - REDUCED VOLTAGE, NON-REVERSING
FHMS - FRACTIONAL HORSEPOWER MOTOR STARTER
2 SPD - TWO-SPEED, NON REVERSING
MAN - MANUAL STARTER (TOGGLE SWITCH WITH THERMAL OVERLOADS)
FWE - FURNISHED WITH EQUIPMENT.
- O.C.P. DEVICES AND LOCAL DISC. SWITCHES ARE THREE POLE UNLESS OTHERWISE NOTED.
- LOCAL DISCONNECT SWITCH SIZE INDICATES SWITCH FRAME FOLLOWED BY FUSE SIZE (I.E. 30A/20A REPRESENTS 30A FRAME SWITCH WITH 20A FUSES).
- PROVIDE WEATHERPROOF FUSED DISCONNECT SWITCHES WHERE LOCATED OUTSIDE OR IN WET LOCATIONS.
- STARTERS, DISCONNECT SWITCHES, CIRCUIT BREAKERS, BRANCH CIRCUIT WIRING, ETC. INDICATED IN THE MOTOR CIRCUIT SCHEDULE SHALL BE FURNISHED AND INSTALLED BY DIVISION 28 UNLESS OTHERWISE NOTED.
- THE "O.C.P. DEVICE" SHALL BE A CIRCUIT BREAKER UNLESS OTHERWISE NOTED.

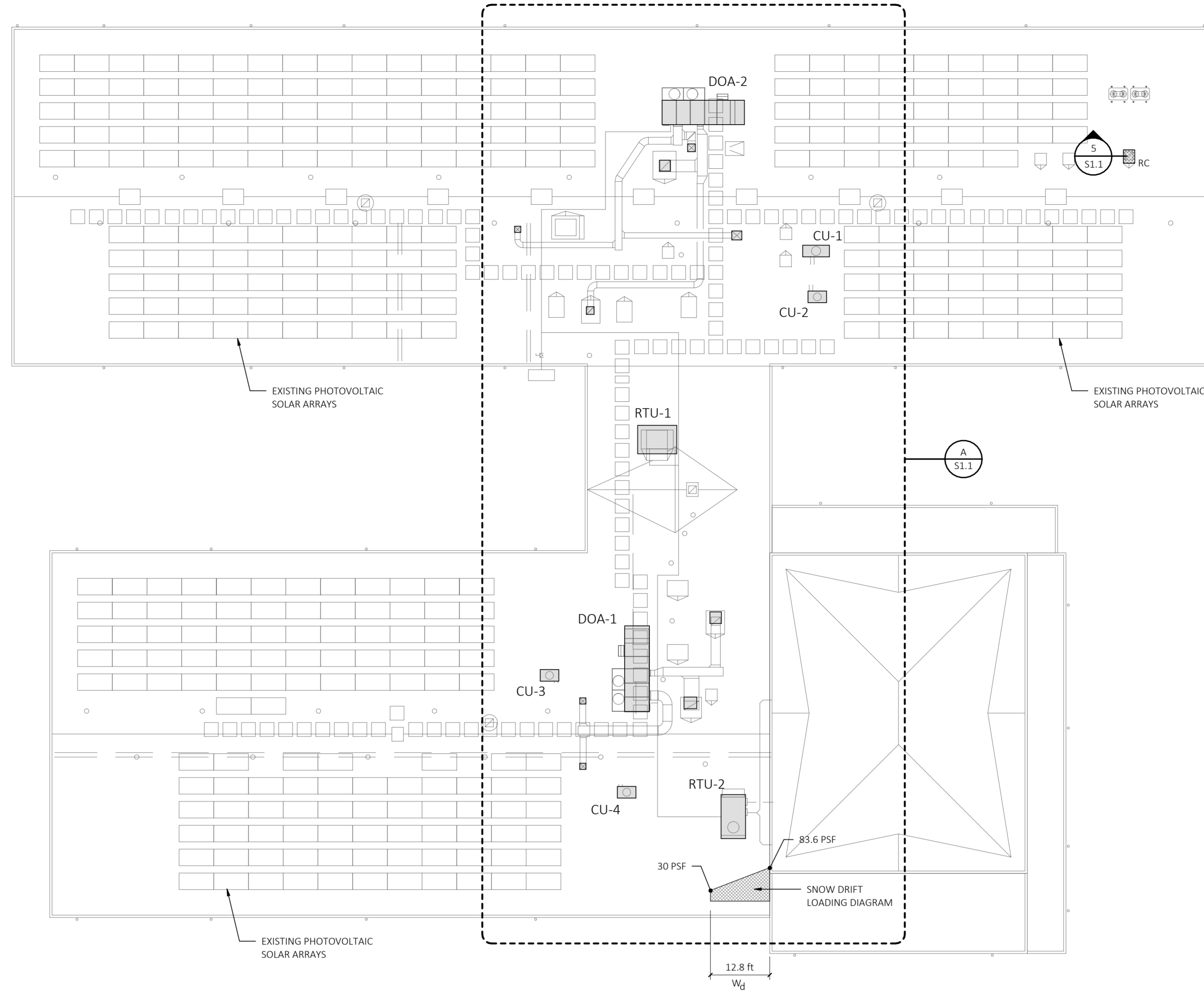
- MOTOR CIRCUIT SCHEDULE REFERENCED NOTES:
- REFER TO FLOOR PLANS FOR CIRCUIT/SOURCE PANEL INFORMATION.
 - VFD FURNISHED BY DIVISION 23 AND INSTALLED BY DIV. 26. POWER WIRING FROM SOURCE TO VFD BY DIV. 26. POWER WIRING BETWEEN VFD AND MOTORS BY DIV. 26. CONTROL WIRING BY DIVISION 23.
 - SINGLE POINT POWER CONNECTION UNIT WITH INTEGRAL VFD'S.



- FURNISH AND INSTALL 600 VAC, UL1277, TO-ER, (3) STRANDED TINNED COPPER CONDUCTORS PLUS FULL SIZE INSULATED GROUND, OVERALL BELDFOIL PLUS 85% TINNED COPPER BRAID SHIELD, FULL SIZE DRAIN WIRE, XLPE INSULATED CONDUCTORS, BLACK PVC JACKET, 1000V UL FLEXIBLE MOTOR SUPPLY CABLE. BELDEN #29502 - 29507.
- THE NEW FEEDER CIRCUIT BREAKER (THERMAL-MAGNETIC TYPE CIRCUIT BREAKER) SHALL BE FROM THE SAME MANUFACTURER AND MATCH THE SWITCHBOARD INTERRUPTING RATING. MODIFY EXISTING SWITCHBOARD AS REQUIRED TO ACCOMMODATE THE NEW FEEDER BREAKER.
- FURNISH AND INSTALL 4# 500 KCMIL, 193G, 4" C. (TYPE XHHW RATED 75°)
- FURNISH AND INSTALL TYPE THHN/THWN RATED 75° WET LOCATION /80° DRY LOCATION.
- FURNISH AND INSTALL TYPE XHHW RATED 90° CABLES.
- FURNISH AND INSTALL 4# 250 KCMIL, 1#4G, 3" C. (TYPE XHHW RATED 75°)

**HVAC Upgrades
Juliet W. Long School
1854 Route 12
Gales Ferry, CT 06335**

PROJECT NAME:



ROOF FRAMING KEY PLAN

1/16" = 1'-0"

STRUCTURAL NOTES

- A. GENERAL**
- A1. UNLESS OTHERWISE NOTED WITHIN THE STRUCTURAL DRAWINGS, THE SECTIONS AND DETAILS SHOWN SHALL BE CONSIDERED TYPICAL AND CONTIGUOUS AND SHALL BE APPLICABLE TO SIMILAR CONDITIONS WITHIN THE PROJECT SCOPE.
- A2. THE STRUCTURAL DRAWINGS, INCLUDING ALL PLANS, SECTIONS, DETAILS AND SPECIFICATIONS, SHALL BE USED IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS, SITE/CIVIL/LANDSCAPE DRAWINGS, MECHANICAL/ELECTRICAL/PLUMBING DRAWINGS AND VENDOR CERTIFIED DIMENSION DRAWINGS TO PREPARE SHOP DRAWINGS WITH SUFFICIENT DETAIL AND DIMENSIONS TO COMPLETE THE WORK.
- A3. PRIOR TO THE START OF CONSTRUCTION THE CONTRACTORS SHALL VERIFY ALL EXISTING CONDITIONS THAT WILL EFFECT THE LAYOUT AND SEQUENCING OF THE WORK.
- A4. EXISTING BUILDING INFORMATION, DIMENSIONS AND ELEVATIONS ARE TAKEN FROM OWNER PROVIDED DRAWINGS AND SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTORS. INCONSISTENCIES BETWEEN EXISTING CONDITIONS AND THE INFORMATION PROVIDED IN THESE DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR INTERPRETATION AND DIRECTION.
- A5. ATTACHMENT AND SUPPORT OF MECHANICAL EQUIPMENT SHALL FOLLOW THE MANUFACTURER INSTALLATION INSTRUCTIONS.
- A6. THE STRUCTURE HAS BEEN ENGINEERED TO BE SELF-SUPPORTING ONCE THE WORK IS COMPLETE. THE CONTRACTOR HAS SOLE RESPONSIBILITY FOR THE STRUCTURES STABILITY DURING CONSTRUCTION INCLUDING MEANS METHODS OF ERECTION, TEMPORARY SHORING AND TEMPORARY BRACING.
- A7. THE CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR FOLLOWING ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF THE WORK.
- A8. INSPECTION AND MATERIALS TESTING SHALL BE AS SPECIFIED IN THE DRAWINGS AND THE "SCHEDULE OF SPECIAL INSPECTIONS" DOCUMENT.
- A9. ALL MECHANICAL OR ADHESIVE ANCHORS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURERS WRITTEN INSTALLATION REQUIREMENTS.
- A10. CONTRACTOR SHALL VERIFY SIZE AND LOCATION OF ALL ROOF AND FLOOR OPENINGS WITH ARCHITECTURAL AND MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS.
- B. DESIGN INFORMATION**
- B1. ALTERATIONS TO THE BUILDING STRUCTURE HAVE BEEN ENGINEERED IN ACCORDANCE WITH THE APPLICABLE STRUCTURAL PROVISIONS IN THE BUILDING CODE LISTED IN THE DESIGN DATA TABLE.
- B3. REFER TO THE DESIGN DATA TABLE FOR THE APPLICABLE CODES AND DESIGN REFERENCES USED IN THE ENGINEERING OF WORK PRESENTED IN THESE DOCUMENTS.
- B3. REFER TO THE DESIGN DATA TABLE FOR LIVE LOADS, SNOW LOADS, WIND LOADS, SEISMIC LOADS AND RELATED DESIGN PARAMETERS.
- B4. THE ALLOWABLE SOIL BEARING CAPACITY HAS BEEN ASSUMED TO BE AS LISTED WITHIN DESIGN DATA TABLE FOR SHALLOW FOUNDATION DESIGN. THIS BEARING CAPACITY SHALL BE VERIFIED IN THE FIELD BY A QUALIFIED GEOTECHNICAL ENGINEER ENGAGED BY THE OWNER. FOOTINGS SHALL NOT BE PLACED WITHOUT APPROVAL FROM THE GEOTECHNICAL ENGINEER.
- B5. THE DESIGN LOADING FOR MECHANICAL EQUIPMENT SPECIFIED IN THE WORK IS BASED ON THE OPERATIONAL WEIGHT AND DYNAMIC FORCES PUBLISHED IN MANUFACTURERS CUT SHEET DATA AT THE TIME OF THE DESIGN.
- C. BUILDING EARTHWORK**
- C1. NOT IN PROJECT SCOPE
- D. FOOTINGS**
- D1. NOT IN PROJECT SCOPE
- E. CONCRETE**
- E1. NOT IN PROJECT SCOPE
- F. STRUCTURAL STEEL**
- F1. ALL CONNECTIONS SHALL BE DETAILED BY THE STEEL FABRICATOR TO SUPPORT THE UNIFORM LOAD TABLE'S MAXIMUM UNIFORM LOAD AS CALLED FOR IN THE A.I.S.C. UNLESS THE REACTIONS ARE INDICATED ON THE PLANS.
- F2. WELDING TO EXISTING STEEL SURFACES SHALL BE CONDUCTED IN ACCORDANCE WITH AWS D1.1 REQUIREMENTS. WHEN WELDING SURFACE PREPARATION REQUIRES THE REMOVAL OF PAINT THE OWNER SHALL PROVIDE APPROPRIATE DOCUMENTATION AS TO THE IDENTIFICATION OF ANY LEAD BASED PAINT AND SHALL PROVIDE THE REMOVAL OR ABATEMENT OF LEAD BASED PAINT IN THE AREA TO BE WELDED. REMOVAL AND DISPOSAL OF LEAD BASED PAINT SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.
- F3. ALL BOLTED CONNECTIONS SHALL USE HIGH STRENGTH A325 OR A490 BOLTS
- F4. ALL WELDED CONNECTIONS SHALL USE E70-XX ELECTRODES
- F5. STAIR FRAMING ARRANGEMENT SHOWN FOR GENERAL LOAD PATH ONLY. SEE SPECIFICATIONS FOR ENGINEERING REQUIREMENTS. REFER TO ARCHITECTS DRAWINGS FOR RAILINGS, STRINGERS, RISERS, TREADS, HANDRAILS, MISCELLANEOUS STEEL.
- F6. ALL STEEL AND CONNECTING HARDWARE EXPOSED TO THE WEATHER SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A123, ASTM 153, OR ASTM A653 AS APPLICABLE.
- G. UNIT MASONRY**
- G1. CONCRETE MASONRY CONSTRUCTION WORK SHALL CONFORM TO:
BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES ACI 530/530R-14
SPECIFICATIONS FOR MASONRY STRUCTURES ACI 530.1/530.1R-14
- G2. CONCRETE MASONRY STRENGTH F_m SHALL BE NOT LESS THAN 1,500 PSI.
- G3. CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90, TYPE 1
- G4. MORTAR FOR REINFORCED CMU SHALL CONFORM TO ASTM C270, TYPE S.
- G5. GROUT SHALL CONFORM TO ASTM C476, FINE TYPE WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 2,500 PSI. CONCRETE MASONRY WALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH LOW LIFT GROUTING METHOD.
- G6. HORIZONTAL JOINT REINFORCING SHALL CONFORM TO ASTM A82, #9 WIRE SPACED AT 16" o.c. VERTICALLY.
- G7. VERTICAL REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60 DEFORMED BARS.
- G8. HOT-DIP GALVANIZED UNTELS SHALL BE PROVIDED IN ALL NEW OPENINGS IN EXISTING MASONRY. PROVIDE ONE- 1/4 x 3/8 FOR EVERY 4" OF MASONRY WALL THICKNESS. PROVIDE 4" BEARING AT EACH END. MAXIMUM MASONRY OPENING 48".
- H. ROUGH CARPENTRY**
- H1. SAWN LUMBER SHALL BE SPRUCE-PINE-FIR (SPF) NO. 2 OR BETTER GRADE.
- H1. WOOD EXPOSED TO WEATHER OR IN CONTACT WITH CONCRETE FOUNDATIONS SHALL BE PRESSURE TREATED SOUTHERN PINE NO. 2, OR BETTER.
- H1. ENGINEERED LUMBER REFERENCED IN THESE PLANS ARE BASED ON WEYERHAEUSER MANUFACTURER PRODUCT LINES. MANUFACTURER SUBSTITUTIONS SHALL BE EQUAL IN MATERIAL AND SECTION PROPERTIES FOR THE WEYERHAEUSER SIZES INDICATED.
- H1. NAILING OF WOOD MEMBERS SHALL BE IN ACCORDANCE WITH IBC 2015 TABLE 2304.10.1 FASTENING SCHEDULE. UNLESS OTHERWISE NOTED.
- H1. FLOOR SHEATHING SHALL BE A MINIMUM OF 3/4" EXTERIOR GRADE PLYWOOD NAILED TO FLOOR FRAMING WITH 10d COMMON NAILS AT 6" o.c. ALONG PANEL EDGES AND 12" IN THE FIELD, UNBLOCKED.
- I. COLD FORMED LIGHT GAGE METAL FRAMING**
- I1. SYSTEM COMPONENTS: MANUFACTURER'S STANDARD LOAD-BEARING STEEL STUDS AND JOISTS OF TYPE, SIZE, AND SHAPE AS INDICATED IN THE DRAWINGS. WITH EACH TYPE OF METAL FRAMING REQUIRED, PROVIDE MANUFACTURER'S STANDARD STEEL RUNNERS (TRACKS), BLOCKING, UNTELS, CLIP ANGLES, SHOES, REINFORCEMENTS, FASTENERS, AND ACCESSORIES FOR APPLICATIONS INDICATED AS NEEDED TO PROVIDE A COMPLETE METAL FRAMING SYSTEM.
- I2. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS OF ONE OF THE FOLLOWING:
1. DALE INDUSTRIES, INC.
2. DIETRICH INDUSTRIES, INC.
3. MARINO INDUSTRIES, INC.
- I3. MATERIALS AND FINISHES OF COLD FORMED METAL FRAMING SHALL BE AS FOLLOWS:
1. FOR 16 GAGE AND HEAVIER UNITS, FABRICATE METAL FRAMING COMPONENTS OF STRUCTURAL QUALITY STEEL SHEET WITH A MINIMUM YIELD POINT OF 40,000 P.S.I.; A.S.T.M. A-570 OR A-611.
2. FOR 18 GAGE AND LIGHTER UNITS, FABRICATE A METAL FRAMING COMPONENTS OF COMMERCIAL QUALITY STEEL SHEET WITH A MINIMUM YIELD POINT OF 33,000 P.S.I.; A.S.T.M. A-446, A-570, OR A-611.
3. PROVIDE GALVANIZED FINISH TO METAL FRAMING COMPONENTS COMPLYING WITH A.S.T.M. A-653 FOR MINIMUM 600 COATING.
4. FASTENERS: PROVIDE NUTS, BOLTS, WASHERS, SCREWS, AND OTHER FASTENERS WITH CORROSION-RESISTANT PLATED FINISH.
5. GALVANIZING REPAIR: WHERE GALVANIZED SURFACES ARE DAMAGED, PREPARE SURFACES AND REPAIR IN ACCORDANCE WITH PROCEDURES SPECIFIED IN A.S.T.M. A-780.
- I4. ATTACH SIMILAR COMPONENTS BY WELDING OR SCREWING. ATTACH DISSIMILAR COMPONENTS BY WELDING, BOLTING, OR SCREW FASTENERS, AS STANDARD WITH MANUFACTURER.
- I5. FABRICATION AND INSTALLATION OF CFMF SHALL COMPLY WITH AISI'S "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" AND ITS "STANDARD FOR COLD-FORMED STEEL FRAMING - GENERAL PROVISIONS."

ABBREVIATIONS

ARCH.	ARCHITECTURAL
B.	BOTTOM
B.F.	BOTTOM OF FOOTING
BP	BEARING PLATE
C.C.	CENTER TO CENTER
C.J.	CONTROL JOINT
CANTIL.	CANTILEVER
CONC.	CONCRETE
DIA.	DIAMETER
do.	DITO/SAME
DWG.	DRAWING
EA.	EACH
E.J.	EXPANSION JOINT
ELEV.	ELEVATION
F.P.	FIREPROOFING
HD	HOLD DOWN
HPP	HOUSEKEEPING PAD
K	KIP
K*Ft	KIP-FOOT
LBS.	POUNDS
LGFM	LIGHT GAGE METAL FRAMING
LSL	LAMINATED STRAND LUMBER
LVL	LAMINATED VENEER LUMBER
MEP	MECHANICAL ELECTRICAL PLUMBING
NP	NEW PENETRATION
O.C.	ON CENTER
O.F.	OUTSIDE FACE
P.A.F.	POWDER ACTUATED FASTENER
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSL	PARALLEL STRAND LUMBER
P/C	PRE-CAST
RC	REMOVE AND CAP
REINF.	REINFORCED
S.F.	STEP FOOTING
SIML	SIMILAR
STL	STEEL
SW	SHEAR WALL
T.	TOP
T.P.	TOP OF PIER
T.S.	TOP OF SHELF
T.W.	TOP OF WALL
TYP.	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
W.W.F.	WELDED WIRE FABRIC
WD.	WOOD
WF	WIDE FLANGE

DESIGN DATA

CODES USED

2022 CONNECTICUT STATE BUILDING CODE
2021 INTERNATIONAL BUILDING CODE
2021 INTERNATIONAL EXISTING BUILDING CODE

AG 318-19
ANSI/AISC 360-16
ASCE/SEI 7-16

DESIGN STRESSES USED

STRUCTURAL STEEL SHAPES	ASTM - A992	$F_y = 50$ ksi
MISC. ANGLES AND PLATES	ASTM - A36	$F_y = 36$ ksi
HOLLOW STRUCTURAL STEEL - RECT.	ASTM - A500 GRADE B	
CONCRETE	f'_c AT 28 DAYS	3,500 psi
REINFORCING STEEL	ASTM - GRADE 60	
CONCRETE MASONRY	f'_m	1,500 psi
GROUT COMPRESSIVE STRENGTH		2,000 psi
MORTAR FOR BLOCK	TYPE S	
SOIL BEARING CAPACITY		2,000 PSF

LIVE LOADS

ROOFS	20 PSF
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SNOW LOADS

GROUND SNOW LOAD	$P_g = 30.0$ PSF
SNOW THERMAL FACTOR	$C_t = 1.0$
SNOW EXPOSURE FACTOR	$C_e = 1.0$
BUILDING CATEGORY	CATEGORY III
SNOW IMPORTANCE FACTOR	$I_s = 1.1$

WIND LOADS

BASIC WIND SPEED	140 MPH
BUILDING RISK CATEGORY	CATEGORY III
WIND EXPOSURE CATEGORY	C
INTERNAL PRESSURE COEFFICIENT	$G_{cp} = +/- 0.18$

SEISMIC DATA

ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE
BUILDING RISK CATEGORY	CATEGORY III
SEISMIC IMPORTANCE FACTOR	$I_s = 1.25$
MAPPED SPECTRAL RESPONSE ACCELERATION, SHORT	$S_s = 0.190$
MAPPED SPECTRAL RESPONSE ACCELERATION, 1-sec	$S_1 = 0.053$
SITE CLASS	D
DESIGN SPECTRAL RESPONSE ACCELERATION, SHORT	$S_{DS} = 0.203$
DESIGN SPECTRAL RESPONSE ACCELERATION, 1-sec	$S_{D1} = 0.085$
SEISMIC DESIGN CATEGORY	B
RESPONSE MODIFICATION FACTOR	$R = 1.5$
SEISMIC RESPONSE COEFFICIENT	$C_p = 0.161$
DESIGN BASE SHEAR	UNCHANGED FROM EXISTING
BASIC SEISMIC FORCE-RESISTING SYSTEM	EXISTING UNALTERED

KEYPLAN



ISSUED FOR BID

REVISIONS		
REV NO.	DATE	DESCRIPTION

DRAWING TITLE:

DESIGN DATA AND ROOF KEY PLAN

DRAWING NUMBER:

S1.0

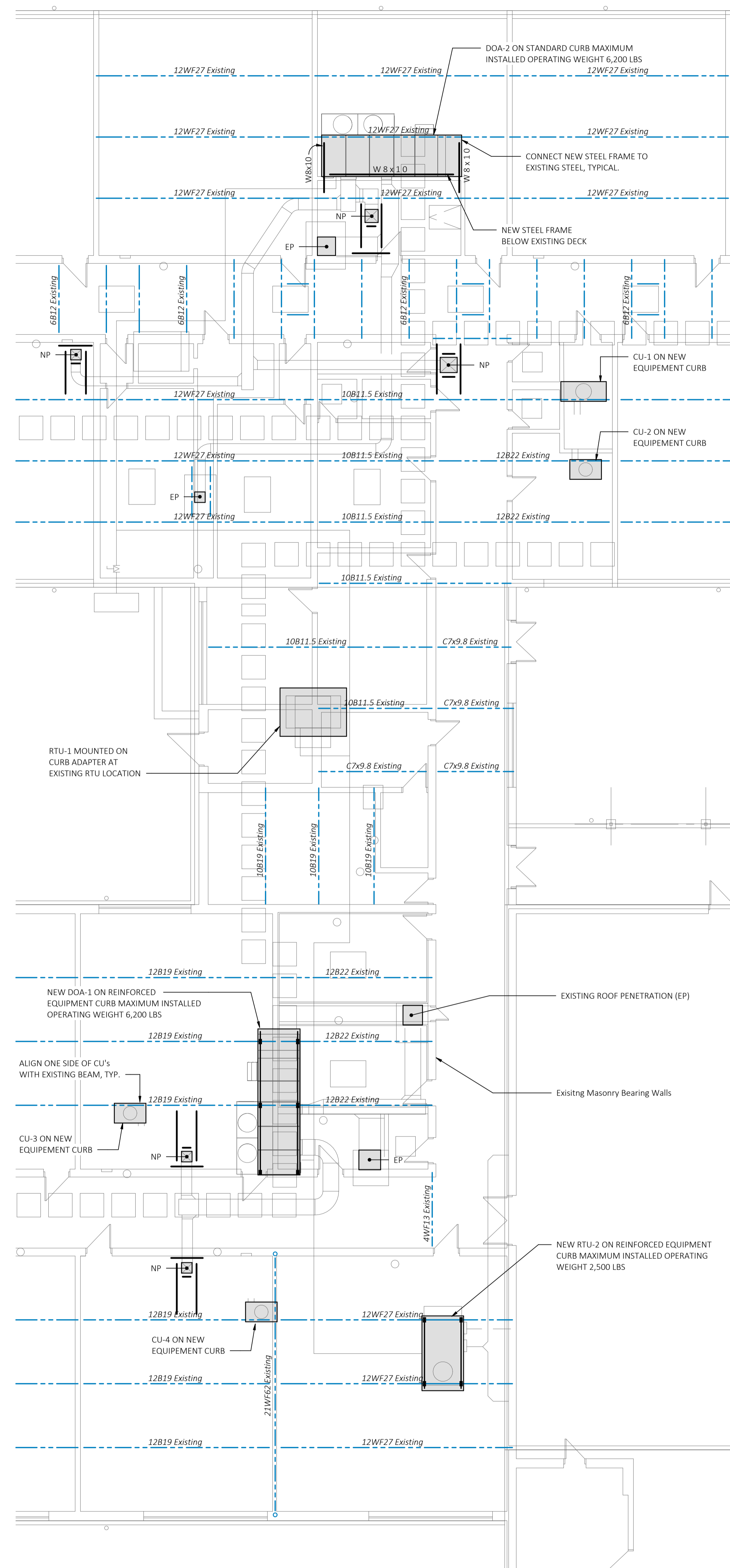
DATE: 2/2/2024

DRAWN BY: KB/KA

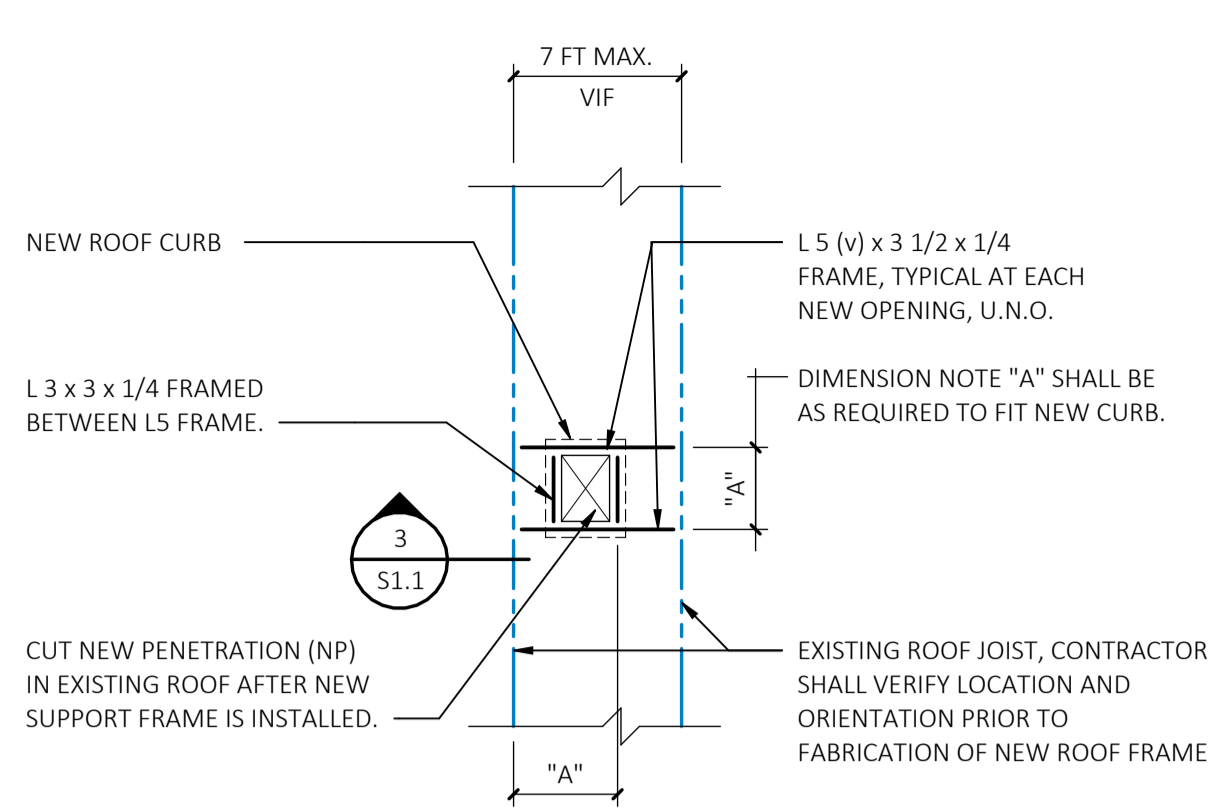
CHECKED BY: KA

SCALE: As indicated

PROJ #: 24001

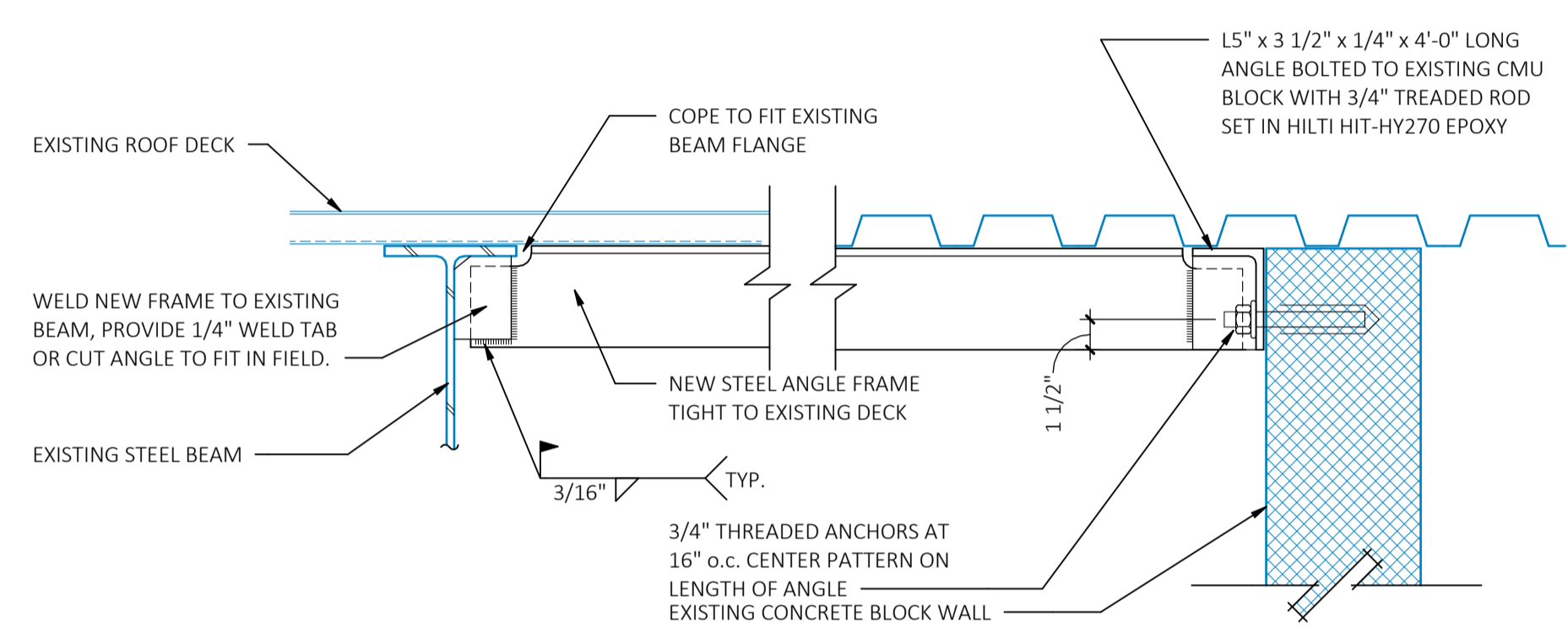


PARTIAL ROOF FRAMING PLAN
1/8" = 1'-0" A
S1.1

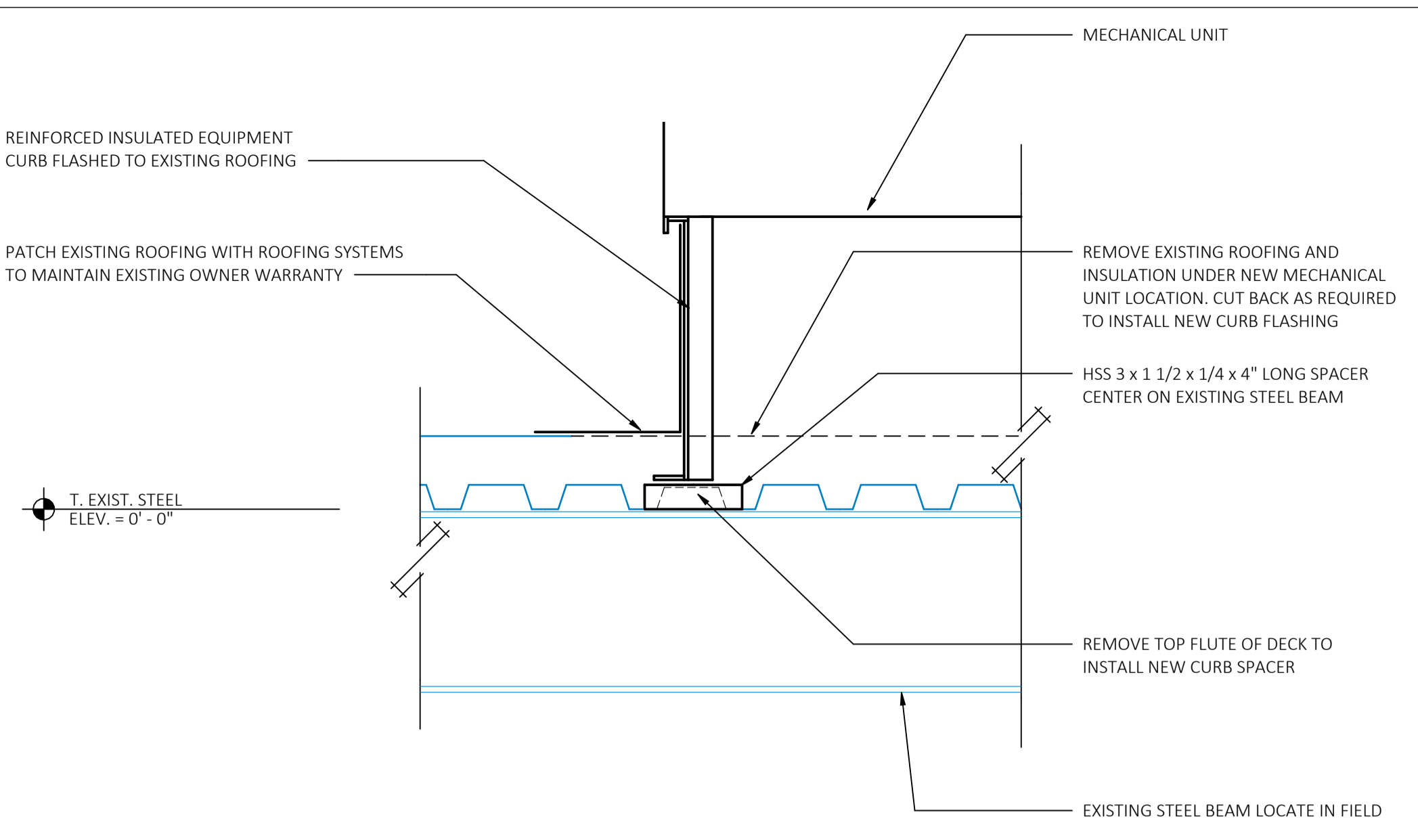


TYPICAL STEEL DECK PENETRATION SUPPORT FRAME
NOT TO SCALE 1
S1.1

- NOTES:
1. THE GENERAL CONTRACTOR SHALL COORDINATE DIMENSIONS NOTED AS "A" WITH THE MECHANICAL CONTRACTOR AND THE FIELD CONDITIONS.
 2. FASTEN EXISTING METAL DECK TO THE NEW STEEL FRAME WITH SELF-TAP SCREWS AT 6" o.c. AROUND THE PERIMETER OF THE NEW OPENING.

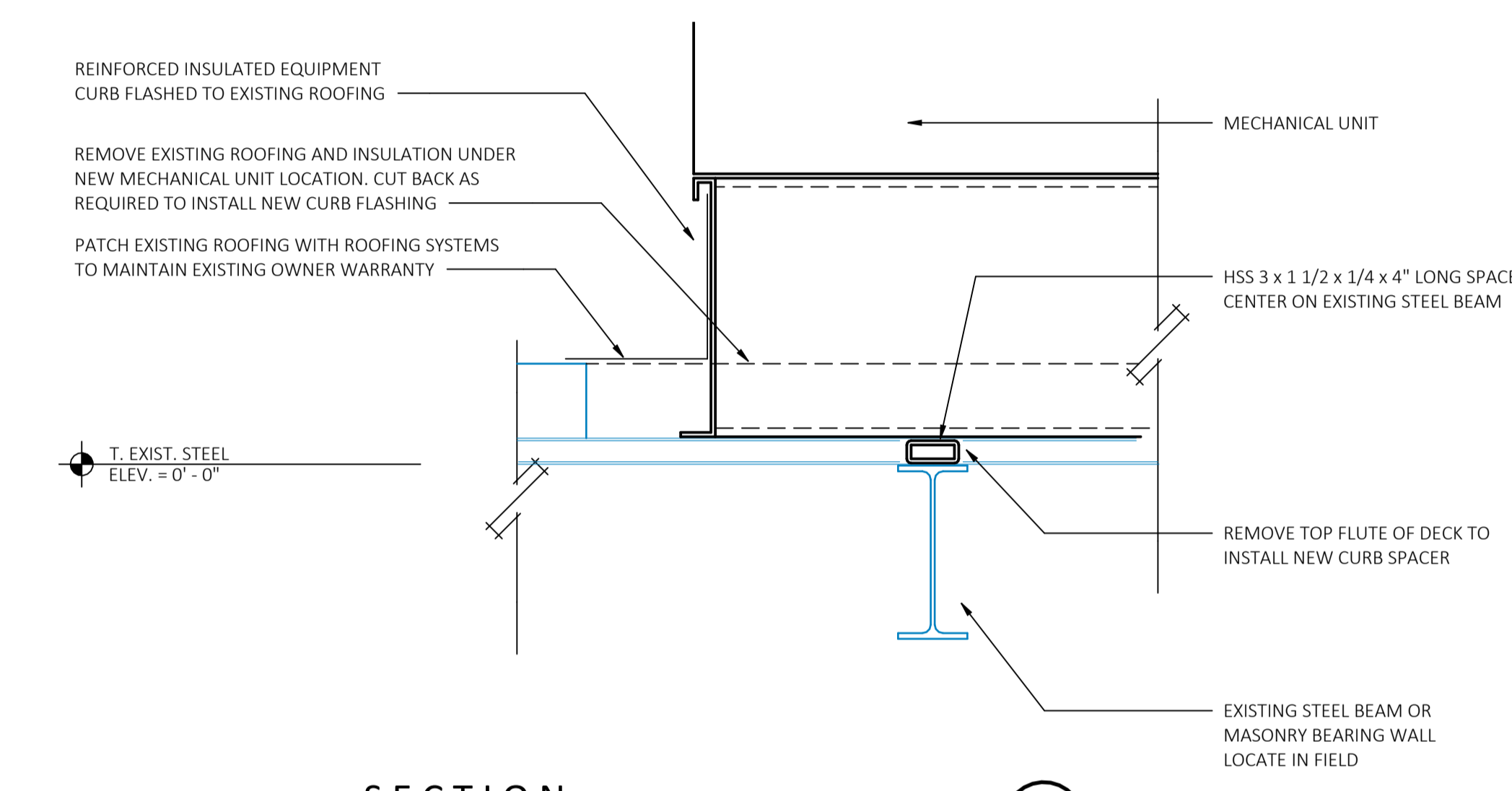


TYPICAL ROOF FRAME CONNECTION DETAIL
1 1/2" = 1'-0" 3
S1.1

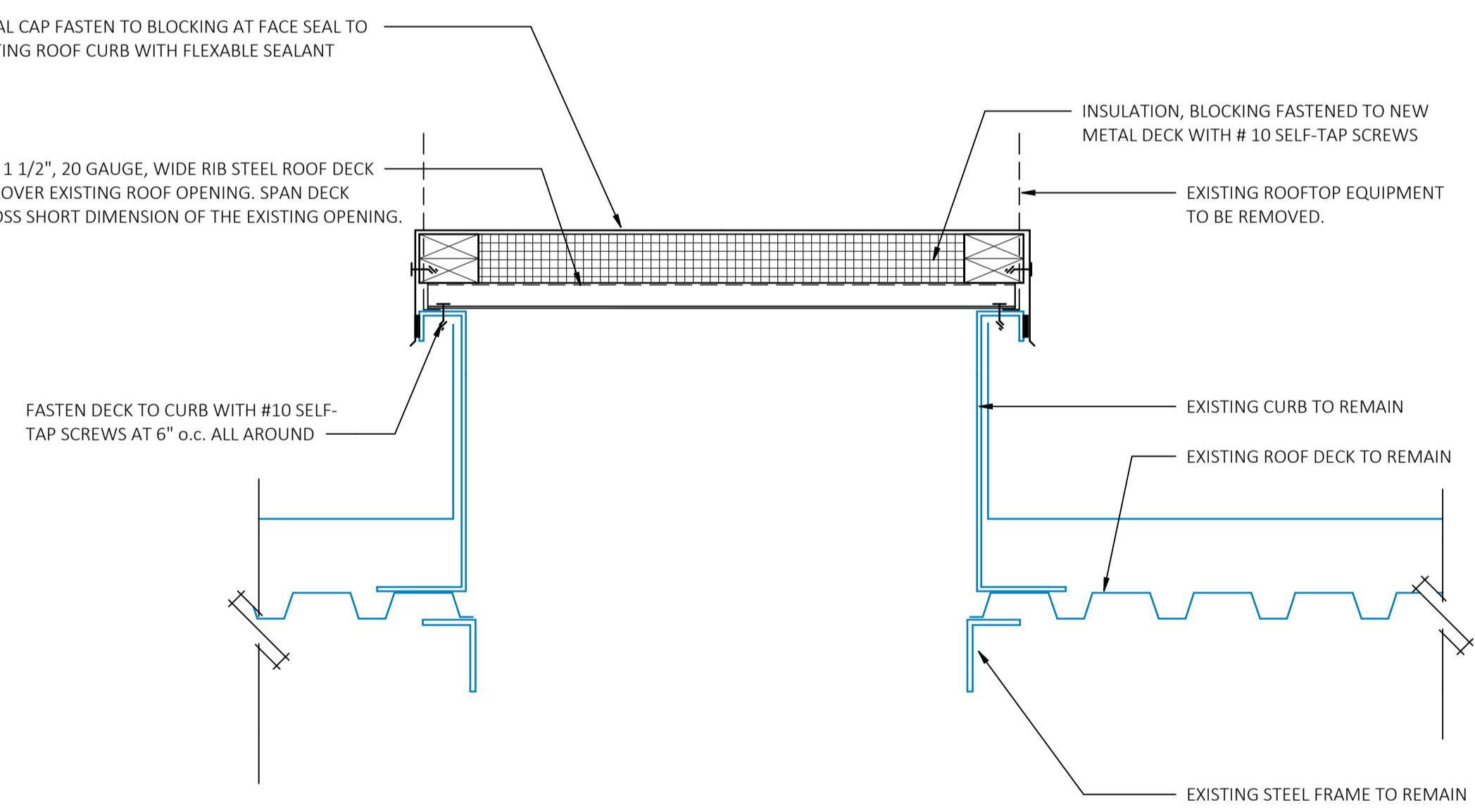


SECTION
1 1/2" = 1'-0" 2
S1.1

NOTE:
CURB DEPTH VARIES TO ACCOMMODATE EXISTING ROOF PITCH. SET TOP OF PREFABRICATED CURB LEVEL.



SECTION
1 1/2" = 1'-0" 4
S1.1



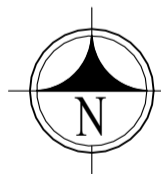
TYPICAL EXHAUST FAN CAP DETAIL
1 1/2" = 1'-0" 5
S1.1

- NOTES:
1. ROOF CAP SHALL BE PROVIDED FOR ALL EXISTING ROOF OPENINGS TO BE INFILLED. REFER TO MECHANICAL DRAWINGS FOR MECHANICAL UNITS TO BE REMOVED AND OTHER AREAS TO BE INFILLED.
 2. MAXIMUM OPENING DIMENSION 36" CLEAR.

HVAC Upgrades
Juliet W. Long School
1854 Route 12
Gales Ferry, CT 06335

PROJECT NAME:

KEYPLAN



ISSUED FOR BID

REVISIONS		
REV No.	DATE	DESCRIPTION

DRAWING TITLE:
FRAMING PLANS

DATE:	6/3/24	DRAWING NUMBER:	S1.1
DRAWN BY:	KB/KA		
CHECKED BY:	KA		
SCALE:	As Indicated		
PROJ #:	24001		