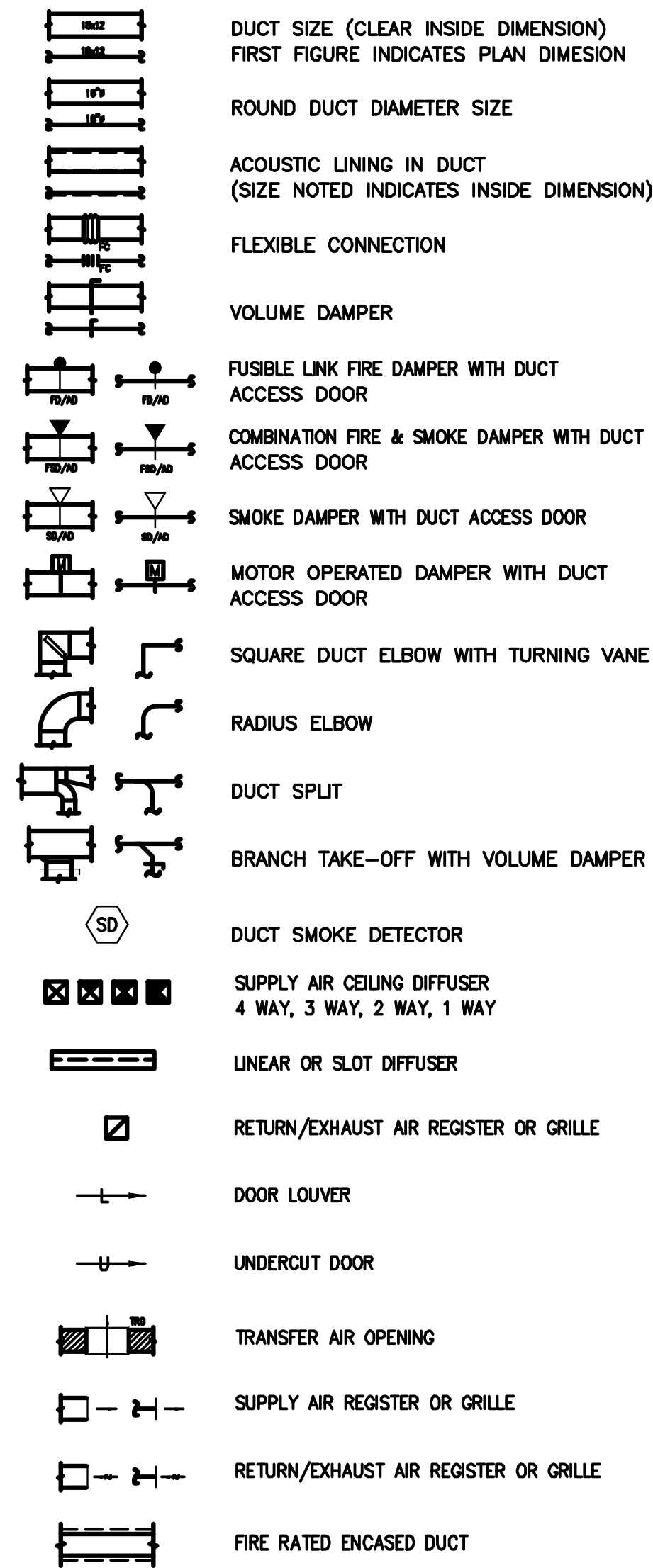
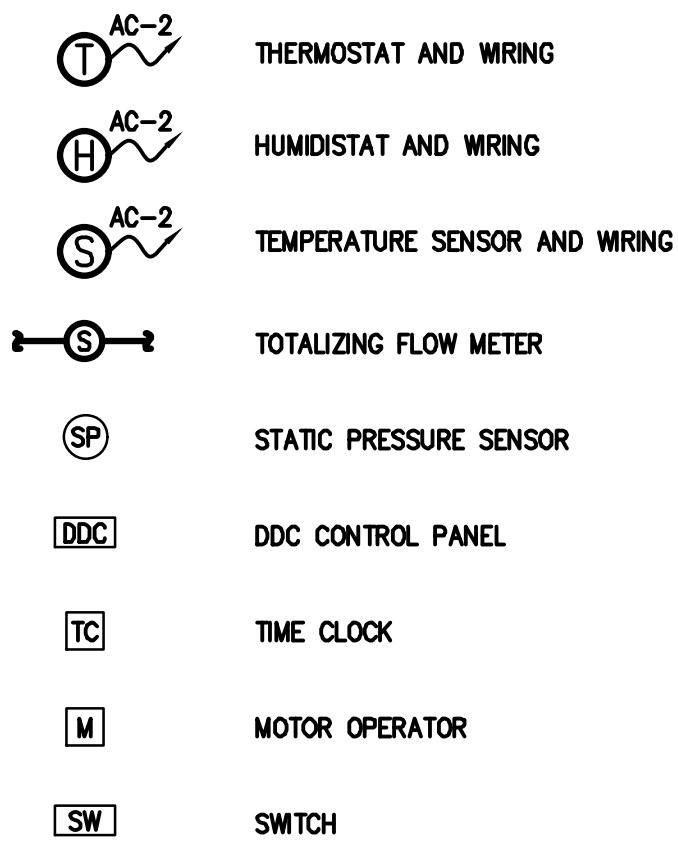


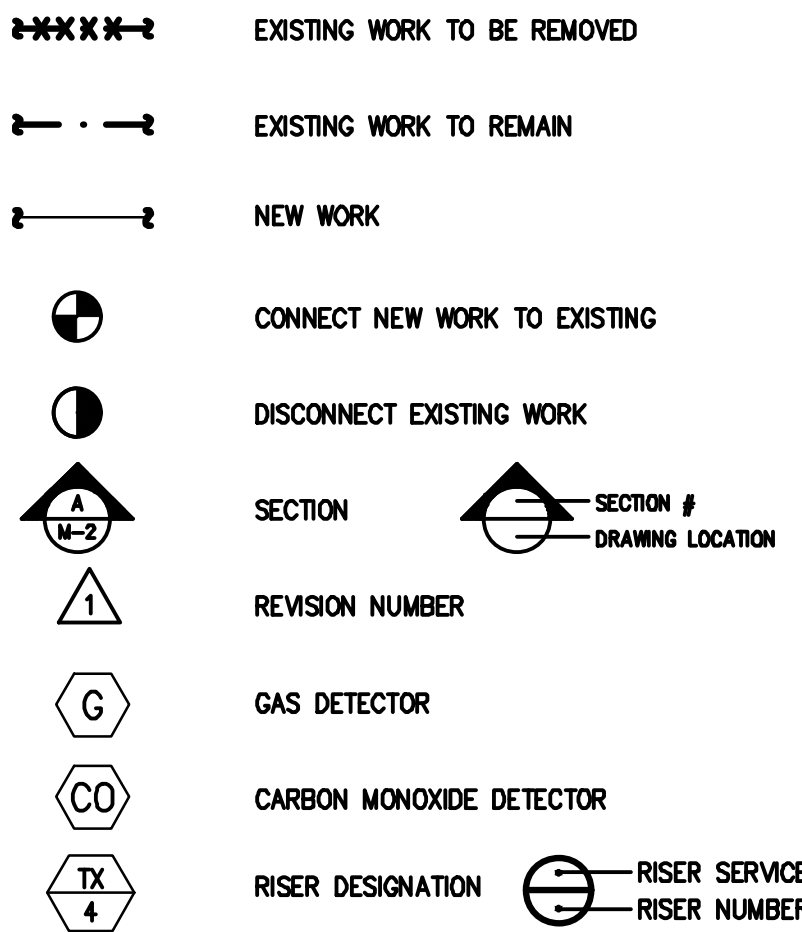
MECHANICAL SYMBOL LIST



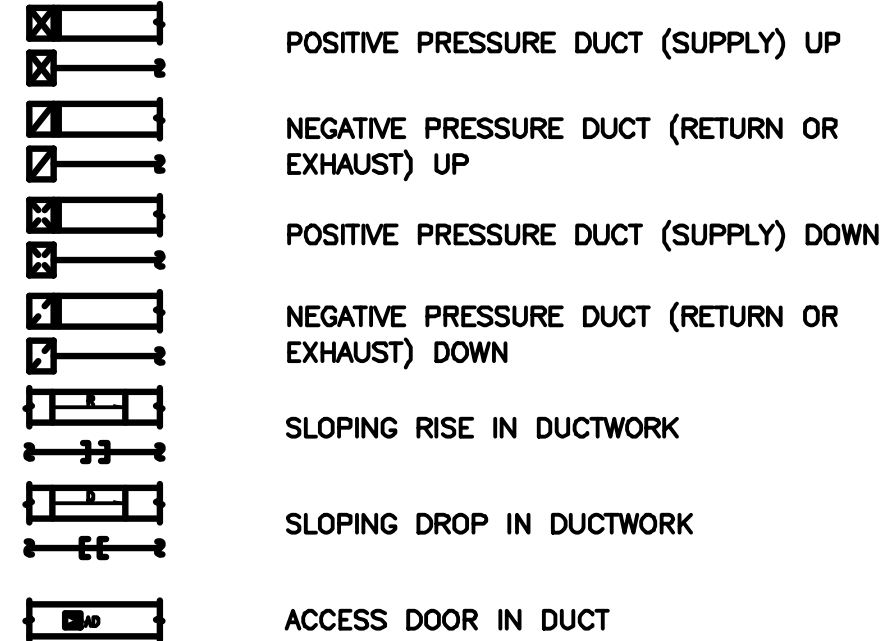
CONTROL SYMBOLS



MISCELLANEOUS SYMBOLS



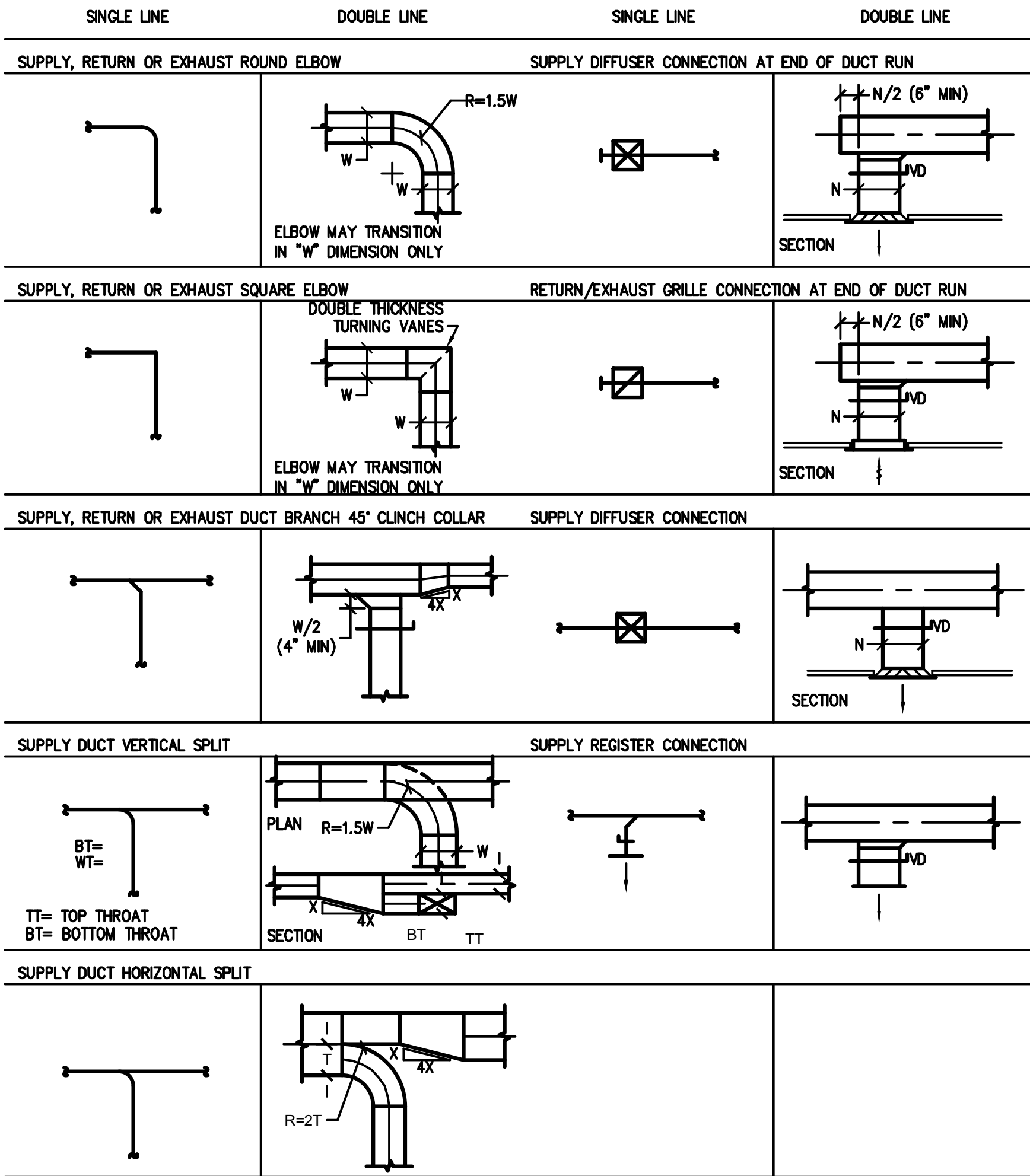
DUCTWORK SYMBOLS



MECHANICAL ABBREVIATIONS

AD	ACCESS DOOR
ATC	AUTOMATIC TEMPERATURE CONTROL
B(500)	DIFFUSER TYPE -- REFER TO SCHEDULE
BMS	BUILDING MANAGEMENT SYSTEM
BTU	BRITISH THERMAL UNIT
CFM	CUBIC FEET PER MINUTE
CG	CEILING GRILLE
CP	CONDENSATE PUMP
CR	CEILING REGISTER
CV	CONSTANT VOLUME
E	EXISTING
EAT	ENTERING AIR TEMPERATURE
ER	EXISTING EQUIPMENT TO BE REMOVED
ERR	EXISTING EQUIPMENT TO BE REMOVED AND RELOCATED
FXC	FLEXIBLE CONNECTION
FD	FIRE DAMPER WITH ACCESS DOOR
FLA	FULL LOAD AMPS
GPM	GALLONS PER MINUTE
HZ	HERTZ
IU	INDUCTION UNIT
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
MBH	THOUSAND BTU PER HOUR
MCA	MINIMUM CIRCUIT AMPS
MD	MOTORIZED DAMPER
NIC	NOT IN CONTRACT
NK	NECK SIZE
NTS	NOT TO SCALE
OED	OPEN END DUCT
PH	PHASE
PSI	POUND PER SQUARE INCH
RE	RELOCATED POSITION OF EXISTING EQUIPMENT
SD	SMOKE DETECTOR
TRD	TRANSFER DUCT
TAO	TRANSFER AIR OPENING
TR	TOP REGISTER
TYP	TYPICAL
V	VOLTS
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
WMS	WIRE MESH SCREEN

DUCTWORK SYMBOLS (CONT.)



NOTES:

CONNECTICUT STATE BUILDING CODES

- 2022 CONNECTICUT STATE BUILDING CODE
- 2021 INTERNATIONAL EXISTING BUILDING CODE
- 2021 INTERNATIONAL PLUMBING CODE
- 2021 INTERNATIONAL MECHANICAL CODE
- 2020 NATIONAL ELECTRICAL CODE (NFPA 70)
- LOCAL FIRE DEPARTMENT/FIRE MARSHAL
- ALL OTHER LOCAL AUTHORITIES HAVING JURISDICTION

CONNECTICUT STATE ENERGY CODES

- 2021 INTERNATIONAL ENERGY CONSERVATION CODE

REFERENCED STANDARDS

APPLICABLE REFERENCE STANDARDS SHALL BE AS REFERENCED BY ALL STATE AND LOCAL CODES. THE LIST BELOW IS FOR QUICK REFERENCE AND DOES NOT INCLUDE ALL APPLICABLE REFERENCE STANDARDS.

- 2019 NFPA 13 -- STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS
- 2019 NFPA 14 -- STANDARD FOR THE INSTALLATION OF STANDPIPE AND HOSE SYSTEMS
- 2019 NFPA 20 -- STANDARD FOR THE INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION
- 2021 NFPA 54 -- NATIONAL FUEL GAS CODE
- 2020 NFPA 70 -- NATIONAL ELECTRICAL CODE
- 2019 NFPA 72 -- NATIONAL FIRE ALARM AND SIGNALING CODE

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PROJECT NAME

PROPOSED OFFICE TO RESI.
CONVERSION

158 GRAND ST
WATERBURY, CT

JOB NO.: MEA-2026.00233

SCALE: NTS

DRAWING TITLE

MECHANICAL
COVER PAGE

DRAWING #

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MECHANICAL GENERAL NOTES

1. THESE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND ARE INTENDED TO CONVEY THE SCOPE OF WORK AS WELL AS INDICATE GENERAL ARRANGEMENT OF EQUIPMENT, DUCTWORK AND PIPING. THE CONTRACTOR SHALL ADHERE TO THESE DRAWINGS AS CLOSELY AS POSSIBLE. HOWEVER, THE RIGHT IS RESERVED TO VARY THE RUNS OF DUCTWORK AND PIPING AND TO MAKE OFFSETS, WHERE NECESSARY, TO ACCOMMODATE CONDITIONS ARISING AT THE JOB SITE. THE CONTRACTOR SHALL PREPARE SHOP DRAWINGS TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL. NO WORK SHALL BE PERFORMED PRIOR TO RECEIPT OF EQUIPMENT, DUCTWORK, AND PIPING FABRICATION SHOP DRAWING APPROVAL.
2. THE DRAWINGS AND SPECIFICATIONS SHALL BE INTERPRETED SO AS TO REQUIRE THE MOST SUBSTANTIAL AND COMPREHENSIVE PERFORMANCE OF THE WORK, CONSISTENT WITH THE INTENT AND REQUIREMENTS OF THE CONTRACT DOCUMENTS, AND SUCH WORK SHALL BE PERFORMED BY THE CONTRACTOR WITHOUT EXTRA COST TO THE OWNER. IN THE CASE OF A DISCREPANCY WITHIN THE CONTRACT DOCUMENTS, THE WORST CASE OR HIGHEST COST SHALL APPLY FOR BIDDING PURPOSES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCY VIA RFI PRIOR TO PERFORMING THE ASSOCIATED WORK.
3. ANY MATERIAL, WORK, OR INCIDENTAL ACCESSORIES OR MINOR DETAILS NOT SHOWN BUT NECESSARY TO MAKE THE WORK COMPLETE IN ALL RESPECTS AND READY FOR OPERATION, EVEN IF NOT PARTICULARLY SHOWN ON THE DRAWINGS, SHALL BE PROVIDED BY THE CONTRACTOR WITHOUT ADDITIONAL EXPENSE TO THE OWNER.
4. DUCT SIZES SHOWN ON DRAWINGS ARE CLEAR INSIDE DIMENSIONS. WHERE ACOUSTICALLY LINED DUCT IS SPECIFIED, OUTER DUCT DIMENSIONS SHALL BE INCREASED TO ACCOMMODATE LINING.
5. WHERE WORK IS INDICATED TO BE BY OTHER CONTRACTORS, FOR EXAMPLE: "BY GENERAL CONSTRUCTION CONTRACTOR", THIS WORK IS NOT IN THE HVAC/MECHANICAL CONTRACT. EACH CONTRACTOR WILL BE RESPONSIBLE FOR CLOSE COORDINATION WITH OTHER CONTRACTORS' WORK.
6. REFER TO APPROPRIATE SPECIFICATION SECTION FOR EQUIPMENT SELECTION PARAMETERS WHERE DRAWINGS DO NOT CONTAIN EQUIPMENT SCHEDULES.
7. FOR AIR SYSTEMS, THE MECHANICAL CONTRACTOR SHALL INCLUDE IN BID PRICING SUPPLYING AND INSTALLING BRANCH VOLUME DAMPERS FOR ALL SUPPLY, RETURN, AND EXHAUST BRANCH DUCTWORK, REGARDLESS IF VOLUME DAMPERS ARE NOT SHOWN IN CONTRACT DOCUMENTS. ALL VOLUME DAMPERS SHALL BE ADJUSTABLE HANDLE TYPE FOR LAY-IN ACCESSIBLE CEILING OR CABLE OPERATED FOR CONCEALED TYPE OF CEILING. ALL BRANCH DUCT VOLUME DAMPERS SERVING DIFFUSERS IN GYPSUM BOARD CEILINGS (OR OTHERWISE INACCESSIBLE) SHALL BE REMOTELY (CORD OR CABLE) OPERABLE THROUGH THE FACE OF THE DIFFUSER.
8. INSTALL THERMOSTATS, FAN SPEED CONTROLLERS, AND OTHER ROOM OCCUPANT ADJUSTABLE CONTROL DEVICES 4'-0" ABOVE FINISHED FLOOR OR AS DIRECTED OTHERWISE BY ARCHITECT. COORDINATE EXACT LOCATIONS WITH THE ARCHITECTURAL PLANS. DEVICE COLORS TO BE SELECTED BY THE ARCHITECT. MANUFACTURER'S LOGO SHALL NOT BE EXPOSED.
9. AC UNITS SHOWN ON DRAWINGS ARE SCHEMATIC. SEE AC UNIT DETAIL ON DETAIL SHEET FOR ACTUAL TYPICAL ARRANGEMENT REQUIRED.
10. WHERE PIPING CONNECTIONS FOR EQUIPMENT SUCH AS PUMPS, AC UNITS, COILS, ETC. DIFFER FROM THE LINE SIZE PIPING, IT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO FURNISH AND INSTALL THE NECESSARY REDUCER/EXPANDER FITTINGS TO ENABLE CONNECTION BETWEEN THE PIPING SYSTEM AND THE EQUIPMENT.
11. SOME PRESSURE AND TEMPERATURE GAUGES ARE SCHEMATICALLY SHOWN ON THE PLANS AND DETAILS. REFER TO THE SPECIFICATIONS FOR EXACT TYPES AND LOCATIONS.
12. PROVIDE UL LISTED AND LABELED FIRE DAMPERS AT ALL DUCT PENETRATIONS THROUGH FIRE RATED WALLS AND FLOORS, REGARDLESS IF FIRE DAMPERS ARE NOT SHOWN IN CONTRACT DOCUMENTS. PROVIDE 1-1/2 HOUR RATED FIRE DAMPERS AT WALLS/FLOORS WITH 2 HOUR OR LESS RATING. PROVIDE 3 HOUR RATED FIRE DAMPERS AT WALLS/FLOORS WITH 3 HOUR OR MORE RATING. ALL FIRE DAMPERS SHALL BE TYPE "B" WITH SHUTTER OUT OF AIRSTREAM, AND SHALL BE RATED FOR DYNAMIC AIRFLOW CONDITIONS 2,000 FT/MIN AND 4.0 IN-WC. PROVIDE ACCESS DOORS IN DUCTWORK, 18"x18" UNLESS OTHERWISE NOTED. COORDINATE WITH GENERAL CONTRACTOR FOR LOCATIONS AND SIZES OF ACCESS DOORS IN GENERAL CONSTRUCTION.
13. PROVIDE UL LISTED AND LABELED COMBINATION FIRE/SMOKE DAMPERS AT ALL DUCT PENETRATIONS THROUGH FIRE AND SMOKE RATED WALLS AND FLOORS, REGARDLESS IF FIRE DAMPERS ARE NOT SHOWN IN CONTRACT DOCUMENTS. ALL COMBINATION FIRE/SMOKE DAMPERS SHALL BE PROVIDED WITH AN END SWITCH FOR STATUS SIGNAL TO THE BMS AND FIRE SMOKE CONTROL PANEL. ALL COMBINATION FIRE/SMOKE DAMPERS SHALL BE RATED FOR DYNAMIC AIRFLOW CONDITIONS 2,000 FT/MIN AND 4.0 IN-WC. PROVIDE ACCESS DOORS IN DUCTWORK, 18"x18" UNLESS OTHERWISE NOTED. COORDINATE WITH GENERAL CONTRACTOR FOR LOCATIONS AND SIZES OF ACCESS DOORS IN GENERAL CONSTRUCTION.
14. PROVIDE FIRESTOPPING FOR ALL DUCT AND PIPE PENETRATIONS THROUGH FIRE RATED PARTITIONS.
15. THE MECHANICAL CONTRACTOR SHALL INCLUDE IN BID PRICING SUPPLYING AND INSTALLING THERMOSTATS FOR ANY EQUIPMENT THAT REQUIRES CONTROL, SUCH AS VAV BOXES, FCU, FANS, HEATERS, FINNED TUBE RADIATION, RTU'S, ETC., REGARDLESS IF THERMOSTATS ARE NOT SHOWN IN CONTRACT DOCUMENTS. ALL THERMOSTATS SHALL BE DIRECT DIGITAL PROGRAMMABLE TYPE, UNLESS OTHERWISE NOTED. PROVIDE ONE THERMOSTAT FOR EACH FAN COIL UNIT, FAN UNIT, VAV, FPB, ENTRANCE HEATER, BASEBOARD RADIATION, ETC. THERMOSTAT LOCATIONS SHALL BE AS SHOWN ON PLANS AND/OR WHERE DIRECTED AND APPROVED BY THE ARCHITECT AND ENGINEER.
16. ALL DUCTWORK AND PIPING REQUIRING FIRE RATING AND WHERE SHOWN ON PLANS SHALL BE PROVIDED WITH A 2-HOUR FIRE RATED ENCLOSURE (PROVIDED UNDER ANOTHER SECTION OF THE SPECIFICATIONS).
17. ALL LINEAR DIFFUSERS ARE TO BE COORDINATED WITH ARCHITECTURAL PLANS FOR EXACT LENGTHS AND LOCATIONS. ACTIVE PLENUM SECTIONS SHALL BE OF THE SIZES AS SHOWN ON PLANS. EACH BRANCH TAP SERVING THE LINEAR DIFFUSER SHALL BE PROVIDED WITH A VOLUME DAMPER WHICH SHALL BE OPERABLE THROUGH THE DIFFUSER FACE. ACTIVE SUPPLY SECTION OF LINEAR DIFFUSER SHALL BE PROVIDED WITH PATTERN CONTROL DEVICES AND EQUALIZING GRIDS. ACTIVE OR INACTIVE RETURN SECTIONS SHALL NOT BE

MECHANICAL GENERAL NOTES (CONTINUED)

- FURNISHED WITH PATTERN CONTROL OR EQUALIZING GRIDS.
18. BORDER TYPES AND METHOD OF ATTACHMENT FOR ALL DIFFUSERS, GRILLES, AND REGISTERS SHALL BE COORDINATED WITH THE ARCHITECTURAL CEILING DETAILS AND SPECIFICATIONS.
 19. REFER TO SPECIFICATIONS FOR ACOUSTIC LINING REQUIREMENTS NOT SHOWN ON THE DRAWINGS.
 20. ALL HVAC WATER PIPING RUNNING ABOVE ELECTRICAL SERVICES SHALL BE PROVIDED WITH A DRAIN PAN UNDERNEATH BY THE MECHANICAL CONTRACTOR. PIPING FROM DRAIN PAN SHALL BE PROVIDED BY MECHANICAL CONTRACTOR AND EXTEND TO NEAREST FLOOR DRAIN.
 21. THE MECHANICAL CONTRACTOR SHALL INCLUDE IN BID PRICING SUPPLYING AND INSTALLING SECONDARY DRAIN PANS FOR ALL AIR CONDITIONING CEILING HUNG EQUIPMENT REGARDLESS IF DRAIN PANS ARE NOT SHOWN IN CONTRACT DOCUMENTS. REFER TO DETAIL FOR INSTALLATION OF DRAIN PANS. IF NO DETAIL IS SHOWN, CONTRACTOR MUST REQUEST DRAIN PAN DETAIL THRU RFI PROCESS DURING BIDDING.
 22. THE MECHANICAL CONTRACTOR SHALL INCLUDE IN BID PRICING SUPPLYING AND INSTALLING CONDENSATE PIPING FOR ALL COOLING TYPE EQUIPMENT REGARDLESS IF CONDENSATE PIPING IS NOT SHOWN IN CONTRACT DOCUMENTS. ALL CONDENSATE PIPING SHALL BE INSULATED AND ROUTED TO NEAREST DRAIN OR JANITORS CLOSET. IF NO CONDENSATE PIPING IS SHOWN, CONTRACTOR MUST REQUEST CONDENSATE PIPING ROUTING THRU RFI PROCESS DURING BIDDING.
 23. GENERAL NOTES, SYMBOLS, ABBREVIATIONS, AND DETAILS ARE APPLICABLE TO ALL HVAC/MECHANICAL DRAWINGS.
 24. RELOCATE EXISTING WORK THAT INTERFERES WITH WORK OF THIS CONTRACT.
 25. COORDINATE THIS WORK WITH THAT OF OTHER TRADES.
 26. DIMENSIONS SHOWN ON PLAN ARE HORIZONTAL. DIMENSIONS SHOWN IN ELEVATION ARE VERTICAL, EXCEPT IN WAY OF STRUCTURAL STEEL, DIMENSIONS ARE MEASURED PERPENDICULAR TO FLANGE.
 27. PRODUCT INSTALLATION SHALL ADHERE TO MANUFACTURERS' RECOMMENDATIONS.
 28. PROVIDE ACCESS PANELS IN DUCTWORK IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS FOR ALL CONCEALED EQUIPMENT THAT REQUIRES PERIODIC SERVICE, INCLUDING AIR CONDITIONING UNITS, FANS, CONDENSATE PUMPS, FIRE DAMPERS, COMBINATION FIRE/SMOKE DAMPERS, AND DUCT MOUNTED SMOKE DETECTORS. COORDINATE WITH GENERAL CONTRACTOR FOR LOCATIONS AND SIZES OF ACCESS DOORS IN GENERAL CONSTRUCTION.
 29. PROVIDE HANGERS, INSERTS, ANCHORS, SUPPLEMENTAL STEEL & SUPPORTS AS REQUIRED TO SUPPORT DUCTWORK, PIPING AND EQUIPMENT FROM STRUCTURE.
 30. SCHEDULE WORK OF THIS SECTION TO AVOID INTERFERING WITH EXISTING OPERATIONS IN THE FACILITY.
 31. COORDINATE ALL ROOF PENETRATIONS WITH THE WORK OF OTHER SECTIONS AND WITH FLASHING REQUIREMENTS. COORDINATE ALL ROOF PENETRATION LOCATIONS WITH THE OWNER/LANDLORD. NOTIFY THE OWNER/LANDLORD PRIOR TO STARTING WORK AND VERIFY COMPLIANCE WITH BOND AND WARRANTY OF THE ROOF.
 32. RUN DUCTS AND PIPING CONCEALED, UNLESS OTHERWISE SPECIFIED, AND CLEAR OF CEILING INSERTS.
 33. PROVIDE CLEARANCE IN FRONT OF ALL ELECTRIC CONTROL PANELS PER N.E.C. AND EQUIPMENT MANUFACTURERS' REQUIREMENTS.
 34. ALL MOTOR STARTERS FOR HVAC EQUIPMENT SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR AND INSTALLED/WIRED BY THE ELECTRICAL CONTRACTOR, UNLESS OTHERWISE NOTED.
 35. ALL DISCONNECT SWITCHES FOR HVAC EQUIPMENT SHALL BE FURNISHED, INSTALLED, AND WIRED BY THE ELECTRICAL CONTRACTOR, UNLESS INTEGRAL TO HVAC EQUIPMENT OR OTHERWISE NOTED.
 36. USE FLAT TRANSVERSE SEAM FOR DUCTWORK WHERE SPACE AVAILABLE DICTATES.
 37. BRANCH DUCTS TO INDIVIDUAL DIFFUSERS AND REGISTERS SHALL BE THE SAME SIZE AS THE DIFFUSER OR REGISTER NECK, UNLESS OTHERWISE NOTED.
 38. ALL DUCTWORK AND PIPING SHALL BE INSTALLED TIGHT TO BOTTOM OF STRUCTURAL MEMBERS UNLESS OTHERWISE NOTED OR ABSOLUTELY REQUIRED BY FIELD CONDITIONS.
 39. DO NOT INSTALL DUCTWORK OR PIPING DIRECTLY UNDER AND PARALLEL TO THE WEB OF STRUCTURAL MEMBERS. OFFSET IN ORDER TO ALLOW FUTURE DUCTWORK AND PIPING TO CROSS OVER IN BETWEEN STRUCTURAL MEMBERS.
 40. BRANCH DUCTS TO INDIVIDUAL DIFFUSERS AND REGISTERS SHALL BE PROVIDED WITH VOLUME DAMPERS, WHETHER OR NOT THE VOLUME DAMPERS ARE SHOWN ON PLAN.
 41. VOLUME DAMPERS LOCATED ABOVE INACCESSIBLE CEILINGS SHALL BE CABLE OPERATED TYPE, WITH CABLE OPERATORS LOCATED IN ACCESSIBLE LOCATIONS AND CLEARLY LABELED FOR DIFFUSER OR REGISTER SERVED.
 42. UNLESS OTHERWISE NOTED, ALL EXPOSED DUCTWORK IN FINISHED SPACES SHALL BE SPIRAL ROUND OR FLAT OVAL TYPE, WITH SOLID OUTER WALL, PERFORATED INNER WALL, AND 1 INCH THICK INTERSTITIAL ACOUSTICAL LINING.
 43. CONDENSATE DRAIN (CD) AND CONDENSATE PUMP DISCHARGE (PD) PIPING SHALL BE RIGID COPPER, TYPE L, MINIMUM 3/4" NOMINAL PIPE SIZE, BRAZED OR SOLDERED, WITH 1" INSULATION, UNLESS OTHERWISE NOTED ON DRAWINGS.
 44. NEW AND EXISTING PERMANENT HVAC AIR EQUIPMENT MAY BE USED BY CONTRACTORS DURING CONSTRUCTION FOR TEMPORARY HEATING, COOLING, AND VENTILATION, ONLY UNDER THE FOLLOWING CONDITIONS:
 - 44.1. CONTRACTOR TO PROVIDE TEMPORARY FILTERS IN EACH UNIT DURING CONSTRUCTION, WHICH SHALL BE REPLACED WITH NEW CLEAN FILTERS AFTER GENERAL CONSTRUCTION IS COMPLETED.
 - 44.2. CONTRACTOR TO PROVIDE FILTER FABRIC AT ALL RETURN AND EXHAUST REGISTERS, GRILLES, AND OPENINGS DURING CONSTRUCTION.
 - 44.3. THE WARRANTY PERIOD FOR ALL EQUIPMENT SHALL NOT BEGIN UNTIL CONSTRUCTION IS COMPLETED. IF THE EQUIPMENT MANUFACTURER'S

MECHANICAL GENERAL NOTES (CONTINUED)

- WARRANTY PERIOD BEGINS WHILE THE UNIT USED DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH EXTENDING THE WARRANTY TO PROVIDE THE FULL PERIOD OF COVERAGE TO THE OWNER.
- 44.4. IF NEW PERMANENT HVAC AIR EQUIPMENT INSTALLED UNDER THIS PROJECT WILL NOT BE OPERATED BY THE CONTRACTOR DURING CONSTRUCTION, ALL OPEN OR INCOMPLETE DUCTWORK SHALL BE CAPPED AIRTIGHT WITH WITH HEAVY POLYETHYLENE PLASTIC. AFTER THE INSTALLATION OF DUCTWORK, REGISTERS, GRILLES, AND DIFFUSERS, THE CONTRACTOR SHALL BLANK OFF ALL REGISTERS, GRILLES, AND DIFFUSERS WITH HEAVY POLYETHYLENE PLASTIC AND TAPE AIR TIGHT, IN AREAS THAT ARE UNDER CONSTRUCTION, UNTIL WORK IS COMPLETE IN THOSE AREAS.
 - 44.5. IF THE ABOVE CONDITIONS ARE NOT MET, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY NECESSARY TEMPORARY HEATING, COOLING, AND VENTILATION EQUIPMENT, DUCTWORK, CONTROLS, PIPING, AND POWER AT HIS OWN EXPENSE.
 - 44.6. IF PERMANENT HVAC EQUIPMENT IS USED DURING CONSTRUCTION BUT NOT PROPERLY PROTECTED AS DESCRIBED ABOVE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING OUT DUST AND DEBRIS FROM DUCTWORK AND EQUIPMENT, AS WELL AS ANY NECESSARY REPAIR OR REPLACEMENT OF DAMAGED EQUIPMENT AT HIS OWN EXPENSE.
 - 44.7. WHEN GENERAL CONSTRUCTION IS COMPLETE, VACUUM CLEAN ALL DIFFUSERS, REGISTERS, GRILLES, AND HVAC EQUIPMENT IN THE PROJECT AREA OR SERVING THE PROJECT AREA. REMOVE ANY CONSTRUCTION DEBRIS.



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PROJECT NAME

PROPOSED OFFICE TO RESI. COVERSION

158 GRAND ST
WATERBURY, CT

JOB NO.: MEA-2026-00233

SCALE: NTS

DRAWING TITLE

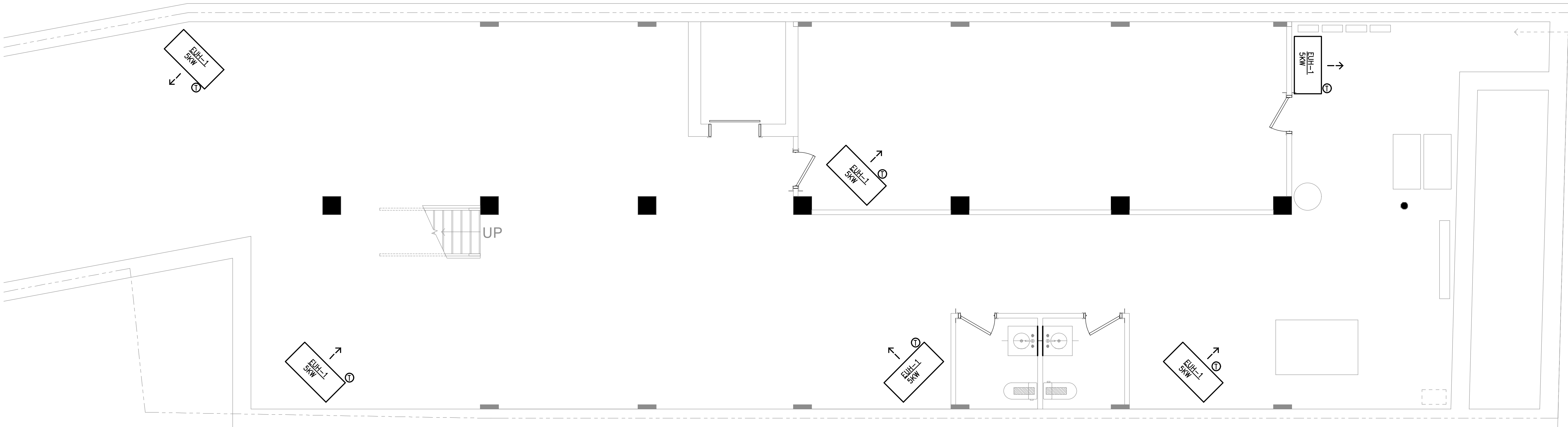
MECHANICAL
GENERAL NOTES

DRAWING #

M-002

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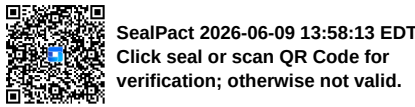
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PROJECT NAME

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COVERSION

158 GRAND ST
WATERBURY, CT

JOB NO.: MEA-2026.00233

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MECHANICAL
CELLAR PLAN

DRAWING #

M-100

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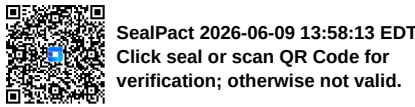
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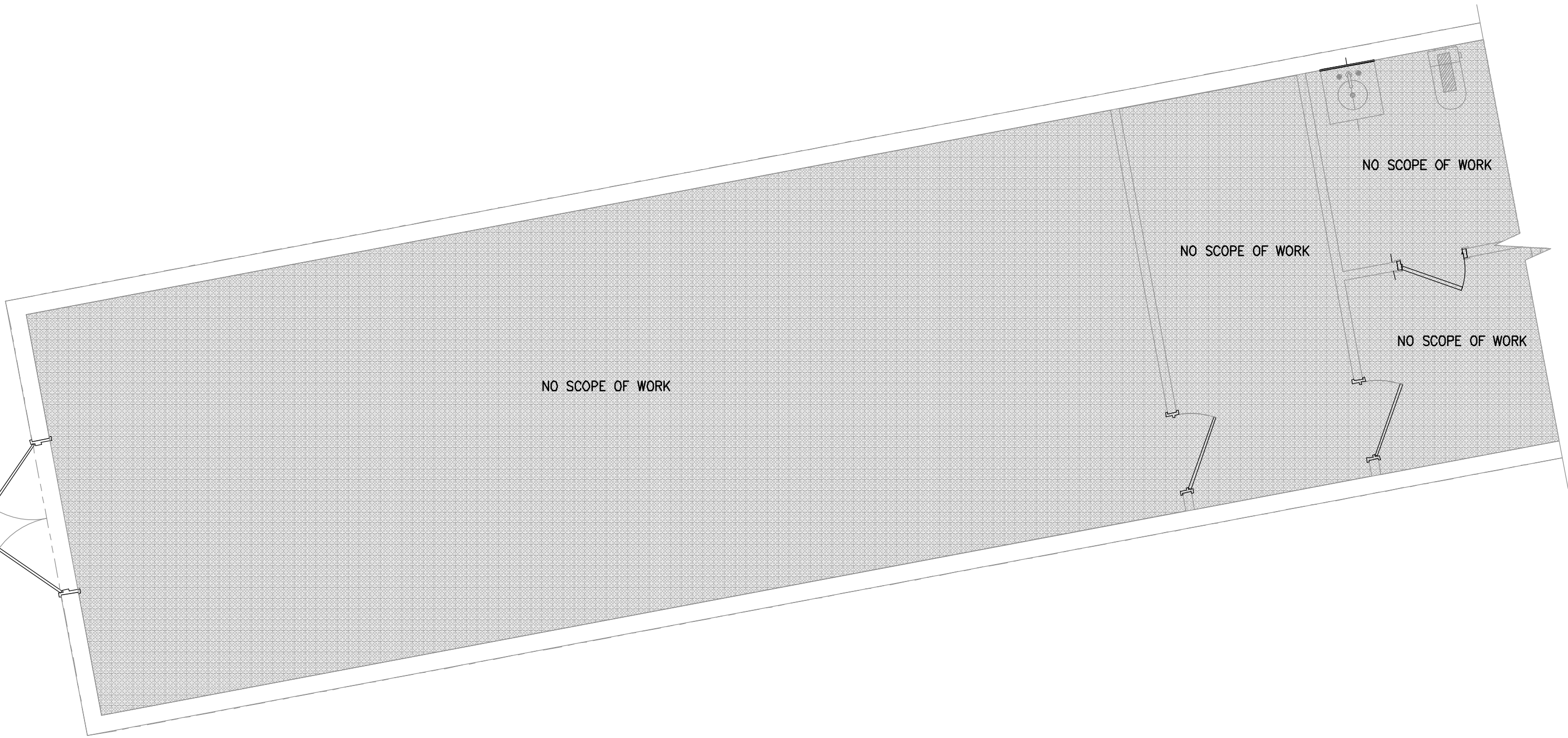
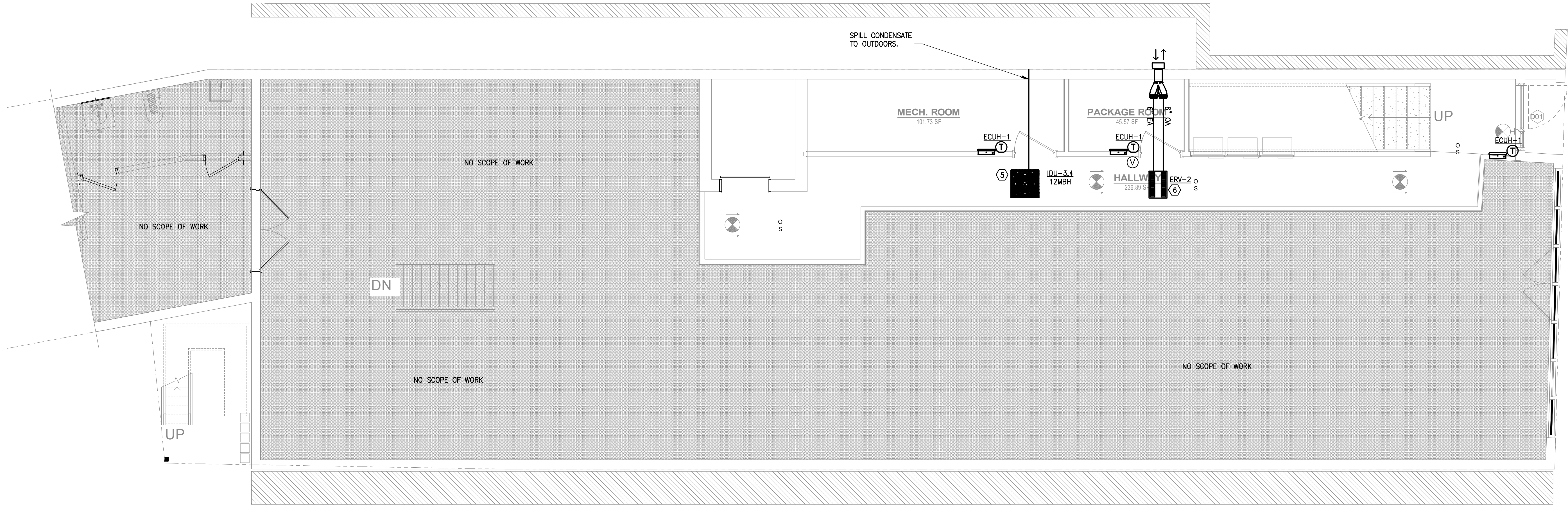
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DRAWING TITLE

MECHANICAL
1ST FLOOR PLAN

DRAWING #

M-101



REFRIGERANT NOTES FOR A2L REFRIGERANT:

- ALL REFRIGERANT PIPING CONTAINING A2L REFRIGERANTS SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS, LATEST EDITION OF THE INTERNATIONAL MECHANICAL CODE & ASHRAE 15.
- CONTRACTOR SHALL ASSUME REFRIGERANT IS TO BE PROTECTED AT EACH PENETRATION THROUGH FIRE RATED ASSEMBLIES PER UL LISTED METHODS.
- ALL REFRIGERANT PIPING IN WALLS SHALL HAVE 6" STUD DEPTH CAVITIES.
- ALL REFRIGERANT PIPING AND FITTINGS SHALL BE TEST PER ASHRAE 15 SECTION 9.13.
- ALL HORIZONTAL REFRIGERANT RUNS TO BE PROVIDED WITH PROTECTIVE ENCLOSURE

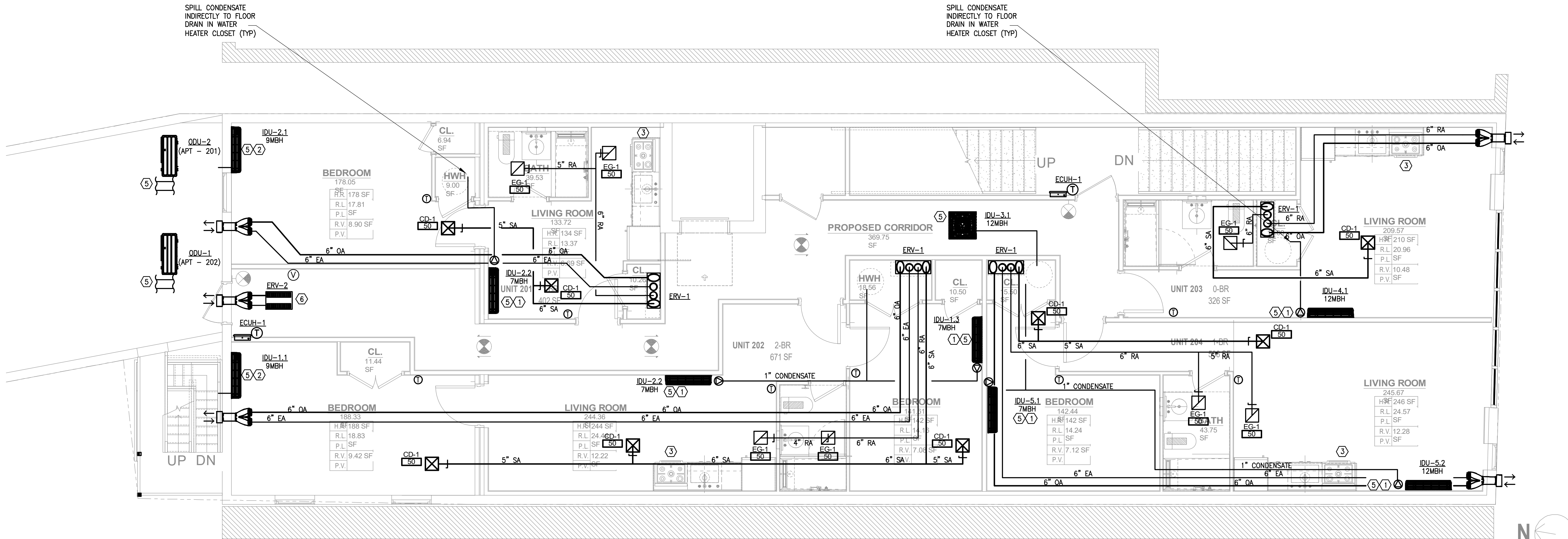
MECHANICAL KEY NOTES:

- PROVIDE CONDENSATE PUMP, DRAIN PAN AND LEAK DETECTION FOR BRANCH CONTROLLERS. ROUTE CONDENSATE TO NEAREST MECH CLOSET AND SPILL INDIRECTLY TO FLOOR DRAIN.
- SPILL CONDENSATE TO LOW ROOF.
- RECIRCULATED HOOD PROVIDED BY OTHERS
- (BLANK)
- ROUTE REFRIGERANT PIPING FROM OUTDOOR UNIT TO BC-X OR INDOOR HP UNIT PER MANUFACTURER SPECIFICATIONS. REFER TO SHEET M-400 SERIES PIPING DIAGRAMS FOR FURTHER DETAILS.
- NEW ERV-2 (MB: PANASONIC MOD#WHISPERCOMFORT60). INSTALL PER MANUFACTURERS INSTALLATION INSTRUCTIONS. PROVIDE NEW WALL MOUNT "C" CONTROLLER/SWITCH. PROVIDE MANUFACTURERS TWINNING TERMINATION KIT.
6.1. 120V/60HZ/1PH - 40W MAX POWER.

GENERAL MECHANICAL NOTES:

- CONTRACTOR TO PROVIDE WIRED THERMOSTATS TO EACH INDOOR UNIT
- ALL SUPPLY AND EXHAUST AIR CONNECTIONS TO HAVE INTEGRAL VOLUME BALANCING DAMPERS INSTALLED.
- SEE REFRIGERANT PIPING AND WIRING DIAGRAMS FOR FURTHER INFORMATION ON ROUTING AND CONNECTIONS TO BRANCH BOXES/OUTDOOR UNITS

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- REFRIGERANT NOTES FOR A2L REFRIGERANT:
- ALL REFRIGERANT PIPING CONTAINING A2L REFRIGERANTS SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS, LATEST EDITION OF THE INTERNATIONAL MECHANICAL CODE & ASHRAE 15.
 - CONTRACTOR SHALL ASSUME REFRIGERANT IS TO BE PROTECTED AT EACH PENETRATION THROUGH FIRE RATED ASSEMBLIES PER UL LISTED METHODS.
 - ALL REFRIGERANT PIPING IN WALLS SHALL HAVE 6" STUD DEPTH CAVITIES.
 - ALL REFRIGERANT PIPING AND FITTINGS SHALL BE TEST PER ASHRAE 15 SECTION 9.13.
 - ALL HORIZONTAL REFRIGERANT RUNS TO BE PROVIDED WITH PROTECTIVE ENCLOSURE

- MECHANICAL KEY NOTES:
- PROVIDE CONDENSATE PUMP, DRAIN PAN AND LEAK DETECTION FOR BRANCH CONTROLLERS. ROUTE CONDENSATE TO NEAREST MECH CLOSET AND SPILL INDIRECTLY TO FLOOR DRAIN.
 - SPILL CONDENSATE TO LOW ROOF.
 - RECIRCULATED HOOD PROVIDED BY OTHERS
 - (BLANK)
 - ROUTE REFRIGERANT PIPING FROM OUTDOOR UNIT TO BC-X OR INDOOR HP UNIT PER MANUFACTURER SPECIFICATIONS. REFER TO SHEET M-400 SERIES PIPING DIAGRAMS FOR FURTHER DETAILS.
 - NEW ERV-2 (MB: PANOSONIC MOD#WHISPERCOMFORT60). INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE NEW WALL MOUNT "O" CONTROLLER/SWITCH. PROVIDE MANUFACTURER'S TWINNING TERMINATION KIT.
6.1. 120V/60HZ/1PH - 40W MAX POWER.

- GENERAL MECHANICAL NOTES:
- CONTRACTOR TO PROVIDE WIRED THERMOSTATS TO EACH INDOOR UNIT
 - ALL SUPPLY AND EXHAUST AIR CONNECTIONS TO HAVE INTEGRAL VOLUME BALANCING DAMPERS INSTALLED.
 - SEE REFRIGERANT PIPING AND WIRING DIAGRAMS FOR FURTHER INFORMATION ON ROUTING AND CONNECTIONS TO BRANCH BOXES/OUTDOOR UNITS



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(c) 203-581-3838
jmastroluca.me@gmail.com

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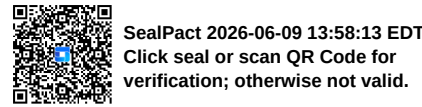
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PROJECT NAME

PROPOSED OFFICE TO RESI.
COVERSION

158 GRAND ST
WATERBURY, CT

JOB NO.: MEA.2026.00233

SCALE: 1/4" = 1'-0"

DRAWING TITLE

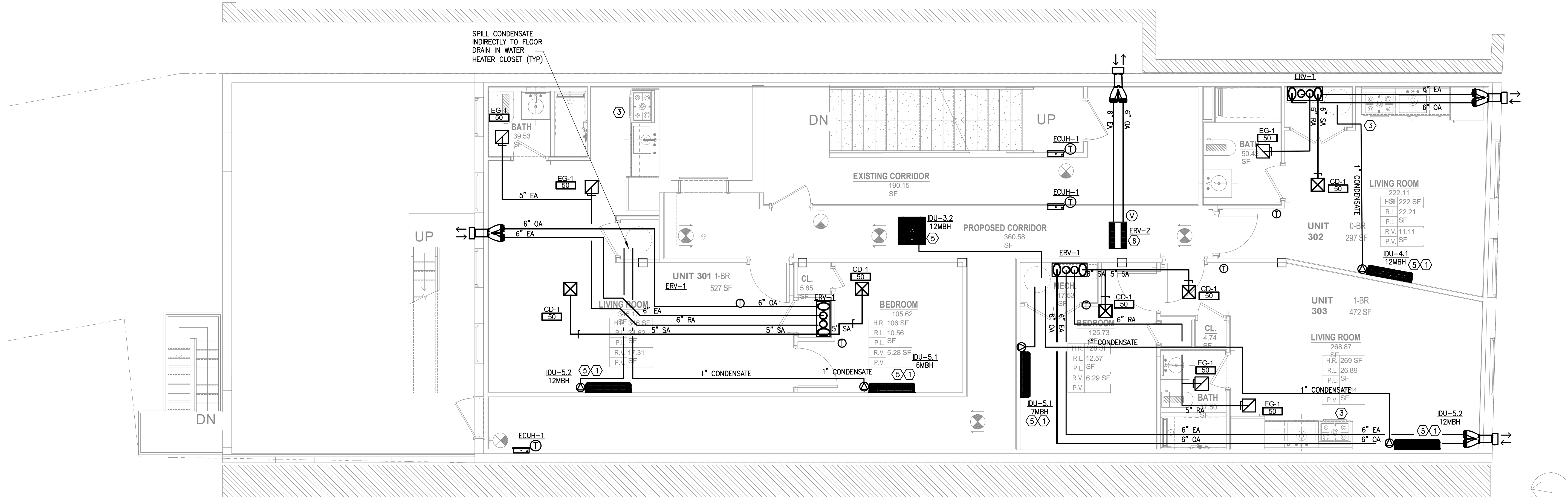
MECHANICAL
2ND FLOOR PLAN

DRAWING #

M-102

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- REFRIGERANT NOTES FOR A2L REFRIGERANT:
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 6. NEW ERV-2 (MB: PANASONIC MOD#WHISPERCOMFORT60). INSTALL PER MANUFACTURERS INSTALLATION INSTRUCTIONS. PROVIDE NEW WALL MOUNT "V" CONTROLLER/SWITCH. PROVIDE MANUFACTURERS TWINNING TERMINATION KIT.
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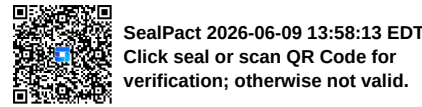
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SCALE: 1/4" = 1'-0"

DRAWING TITLE

MECHANICAL
3RD FLOOR PLAN

DRAWING #

M-103

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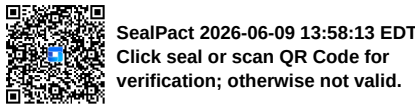
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CONVERSION

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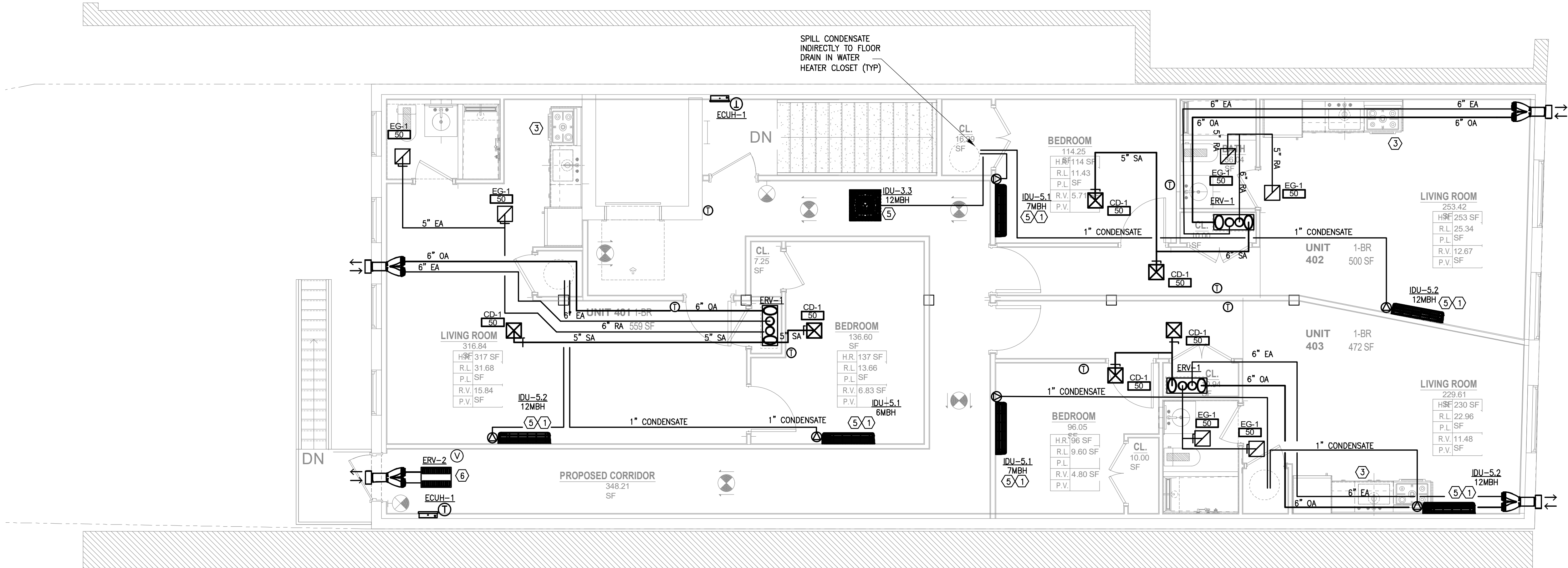
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DRAWING TITLE

MECHANICAL
4TH FLOOR PLAN

DRAWING #

M-104



- REFRIGERANT NOTES FOR A2L REFRIGERANT:
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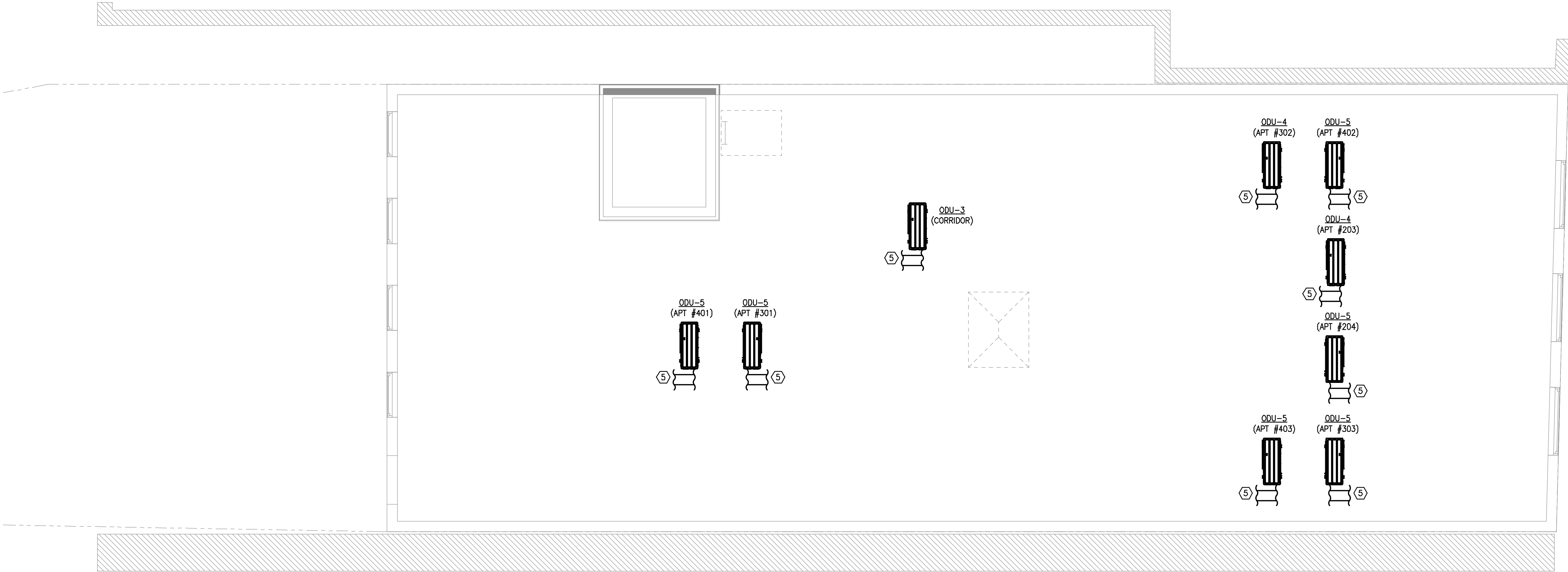
MECHANICAL KEY NOTES:

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- (BLANK)
- ROUTE REFRIGERANT PIPING FROM OUTDOOR UNIT TO BC-X OR INDOOR HP UNIT PER MANUFACTURER SPECIFICATIONS. REFER TO SHEET M-400 SERIES PIPING DIAGRAMS FOR FURTHER DETAILS.
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6.1. 120V/60HZ/1PH - 40W MAX POWER.

GENERAL MECHANICAL NOTES:

- CONTRACTOR TO PROVIDE WIRED THERMOSTATS TO EACH INDOOR UNIT
- ALL SUPPLY AND EXHAUST AIR CONNECTIONS TO HAVE INTEGRAL VOLUME BALANCING DAMPERS INSTALLED.
- SEE REFRIGERANT PIPING AND WIRING DIAGRAMS FOR FURTHER INFORMATION ON ROUTING AND CONNECTIONS TO BRANCH BOXES/OUTDOOR UNITS

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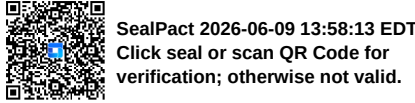
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158 GRAND ST
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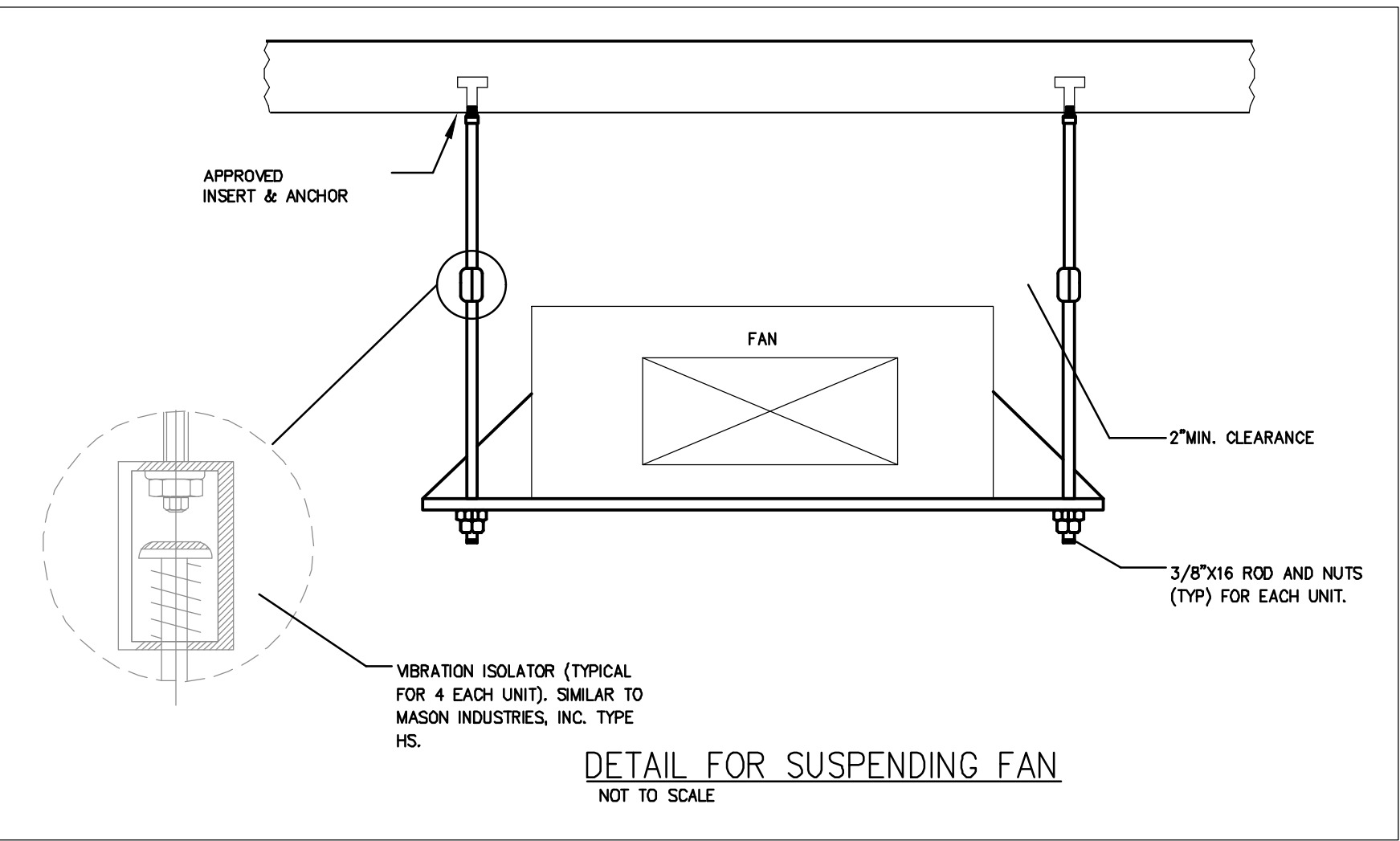
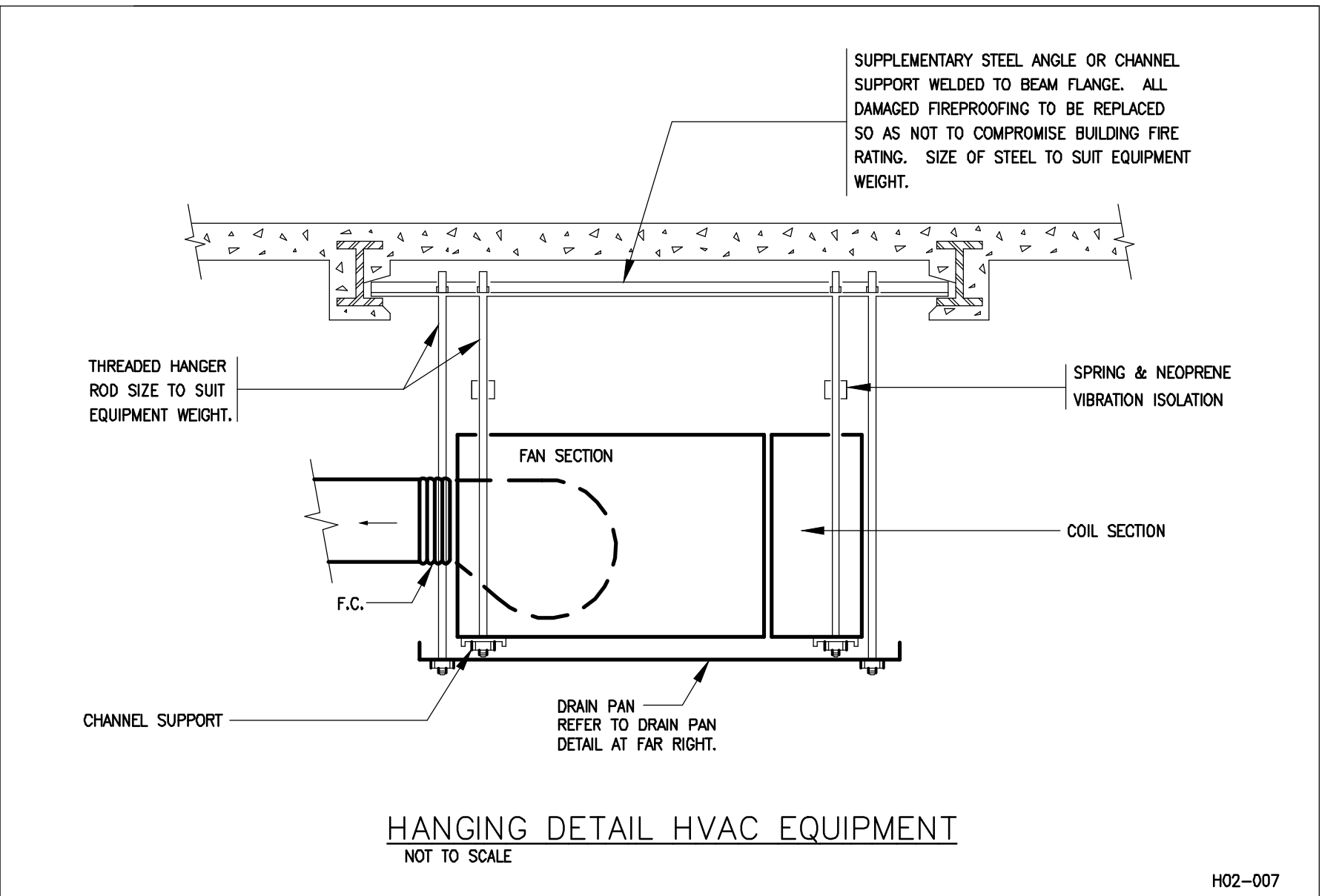
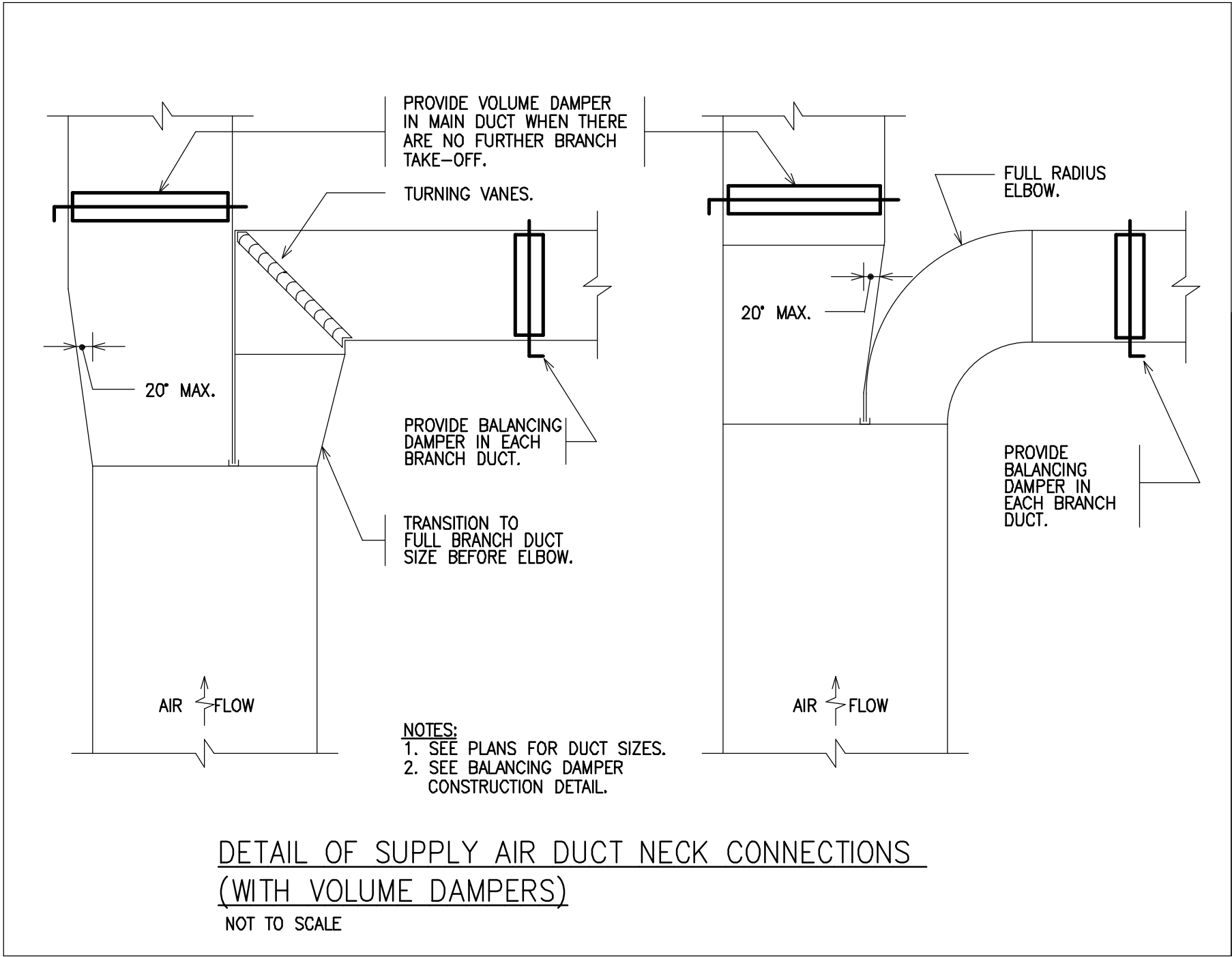
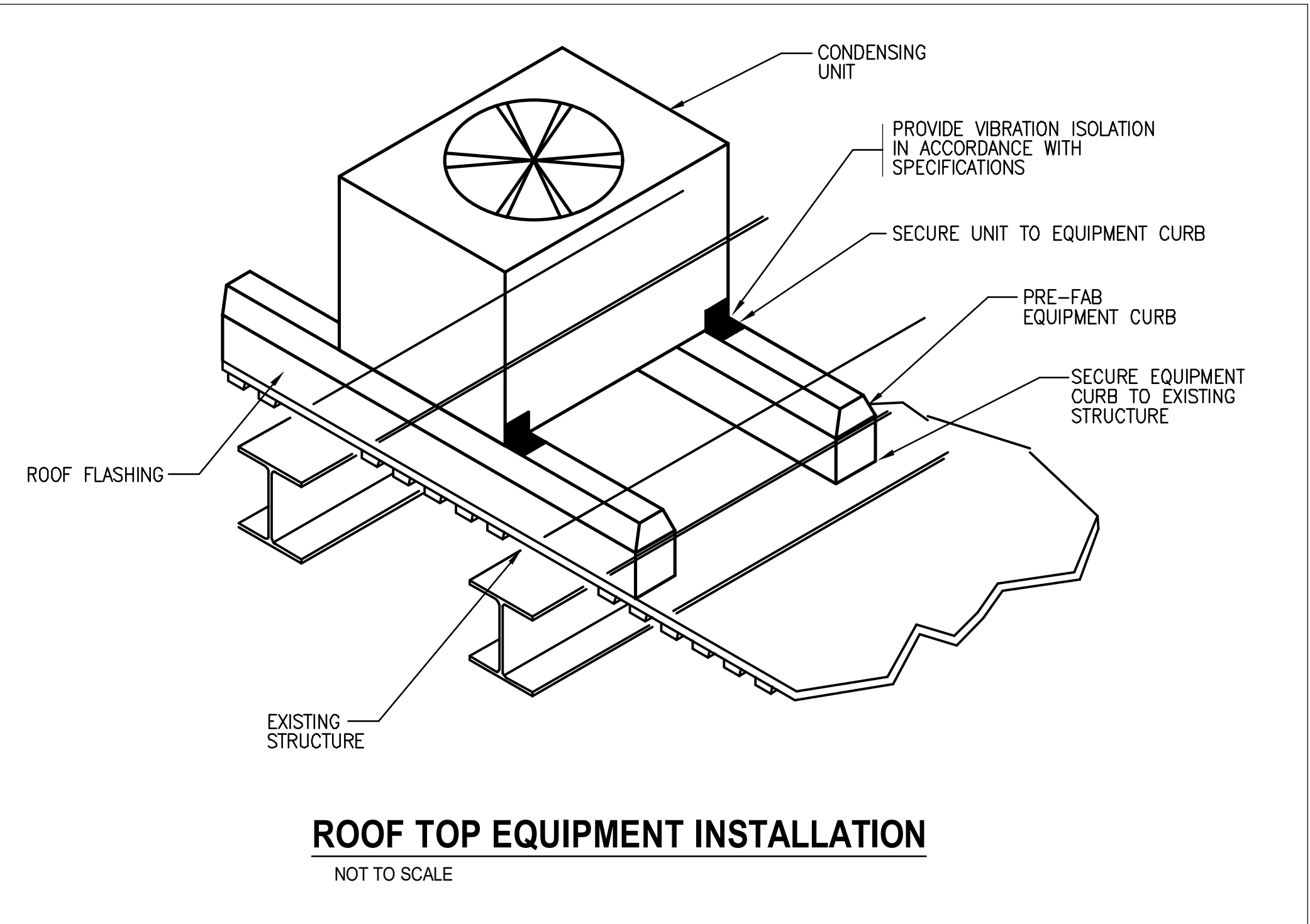
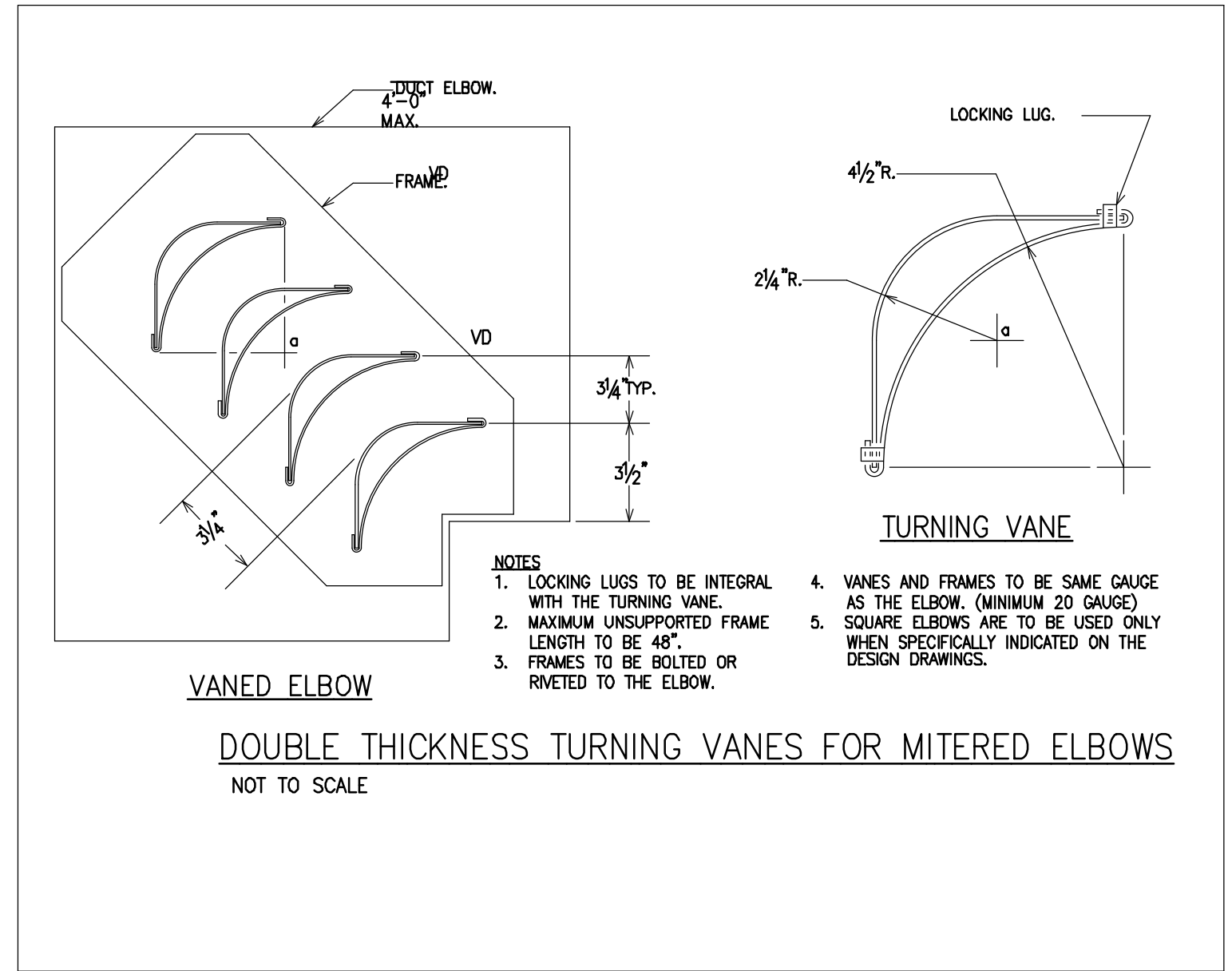
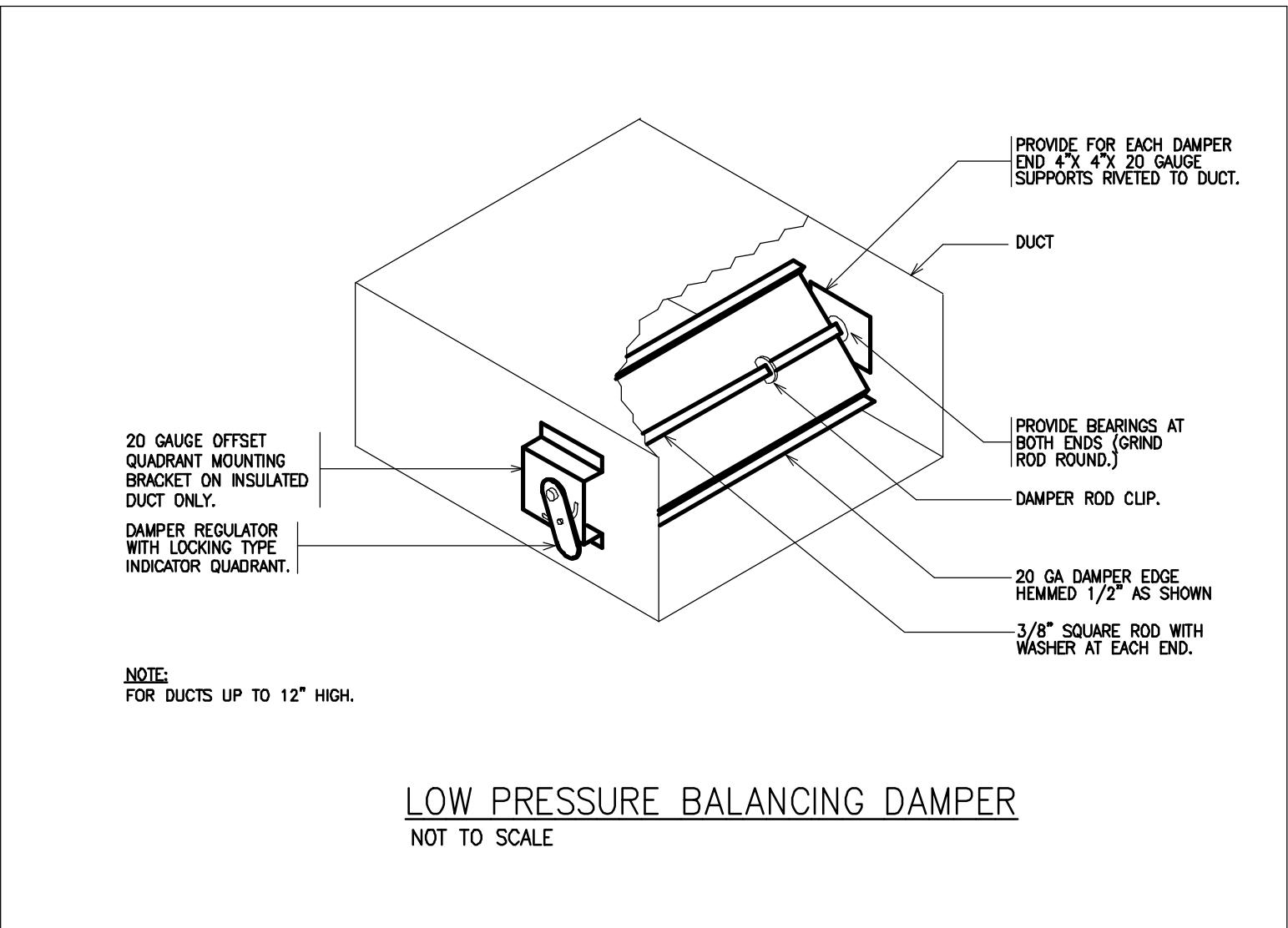
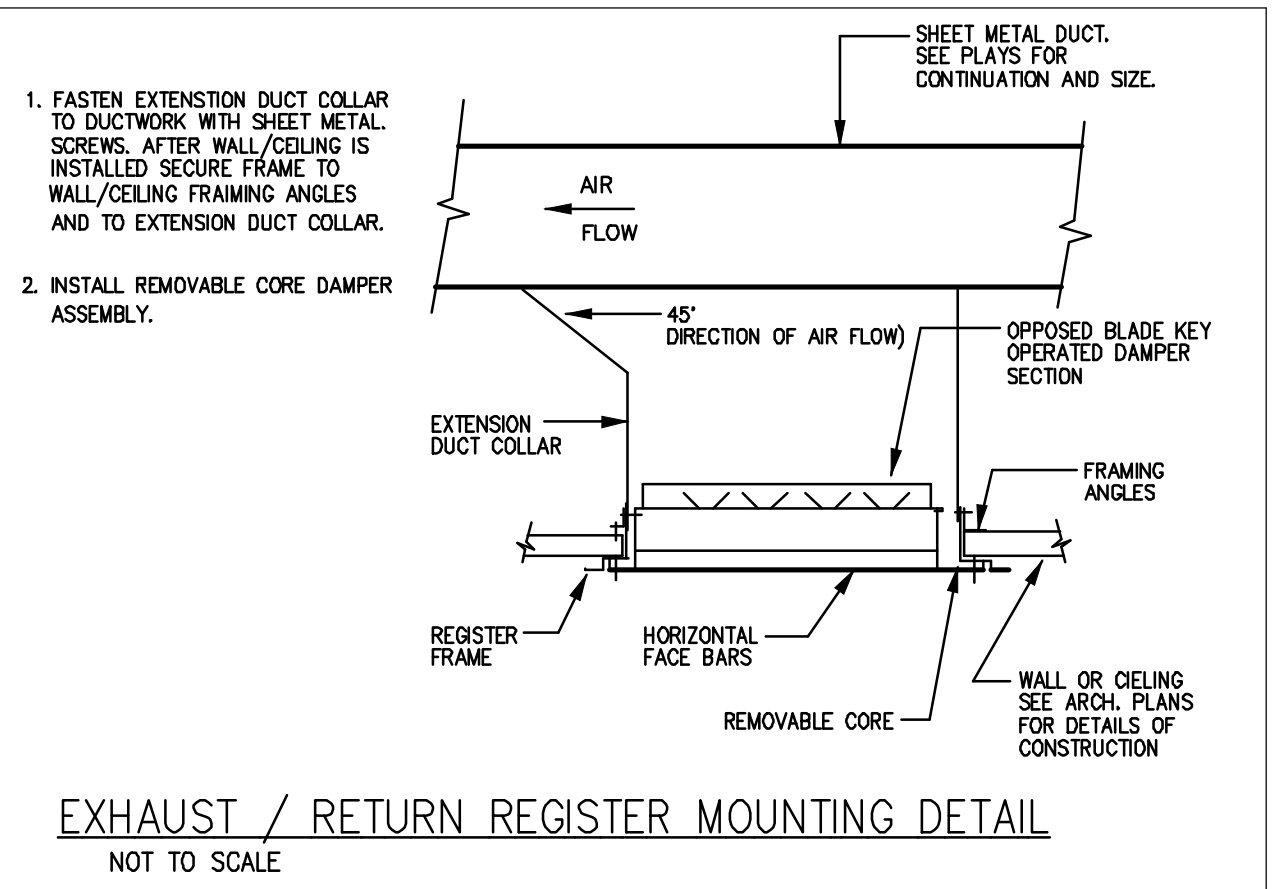
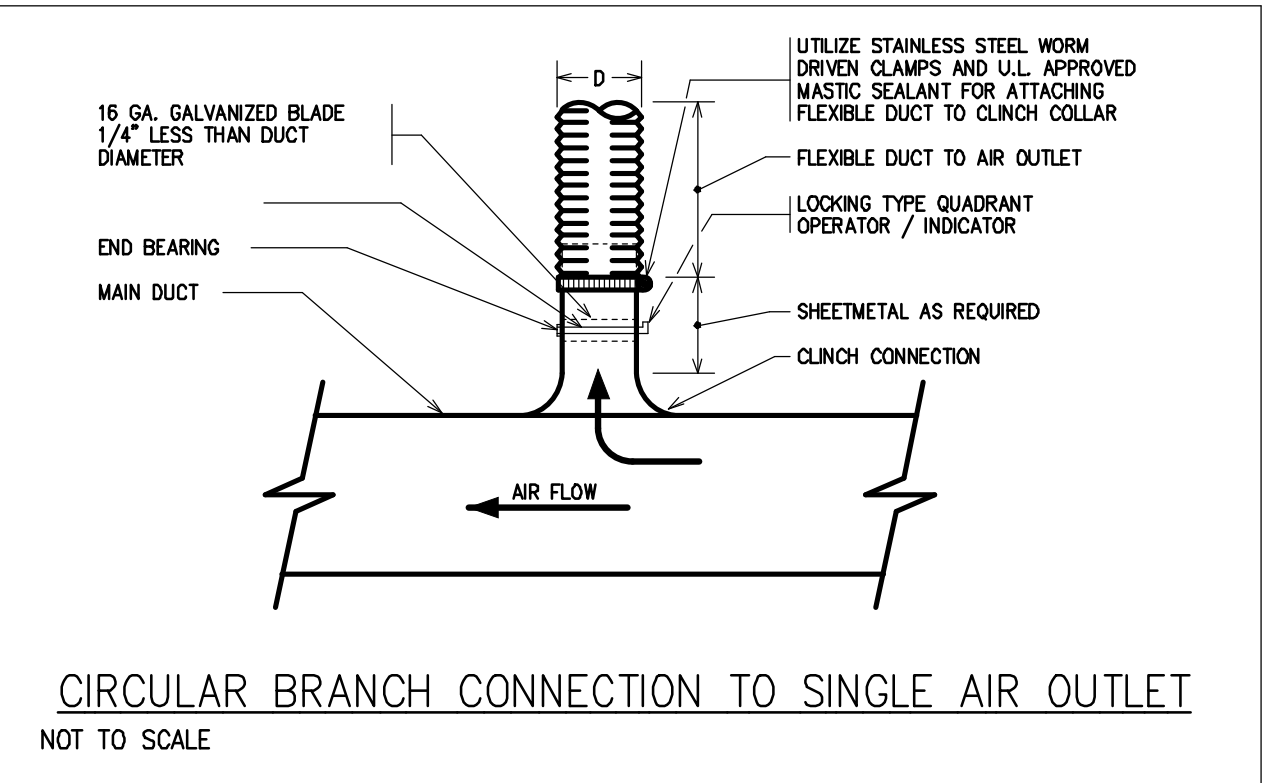
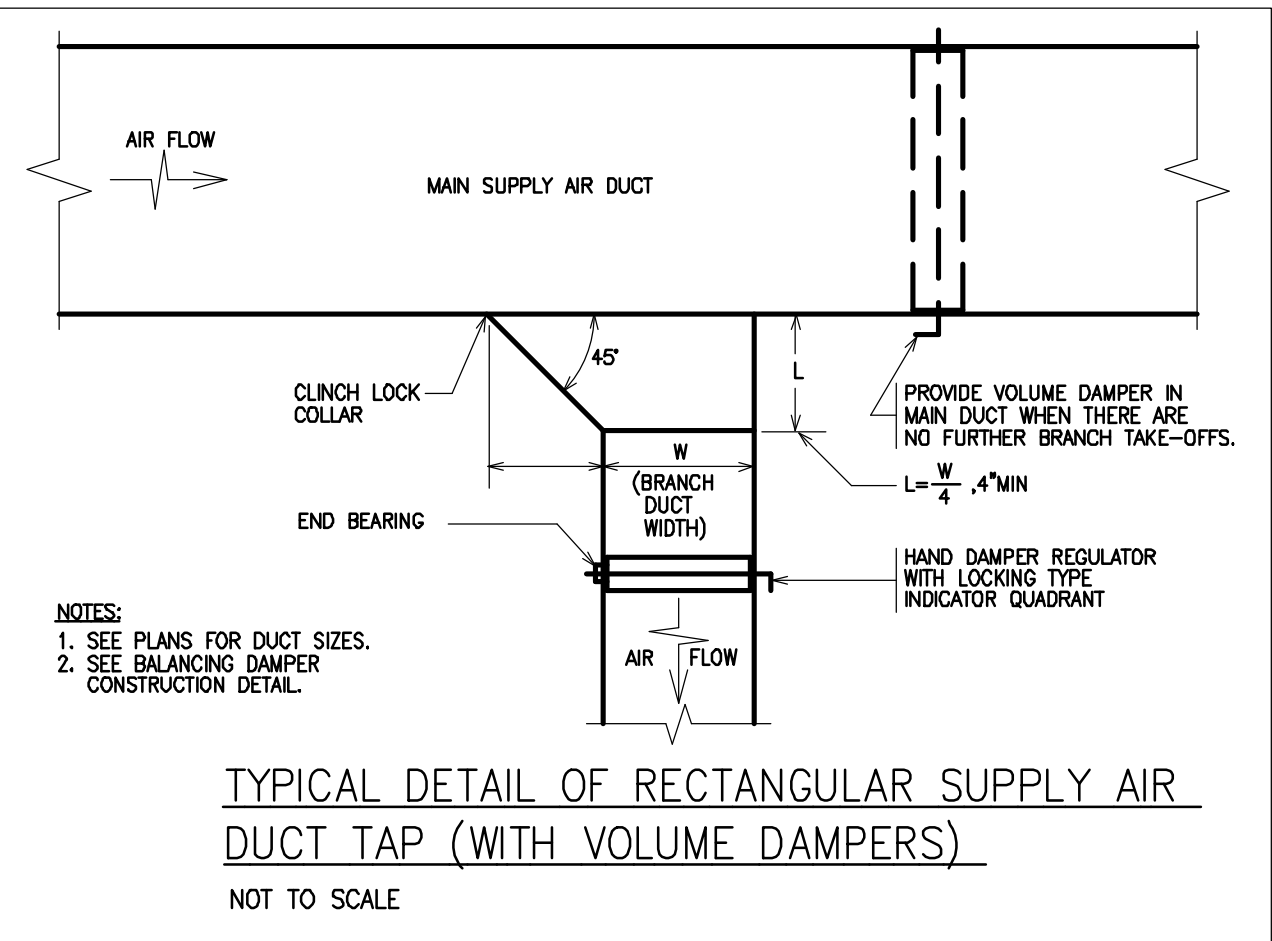
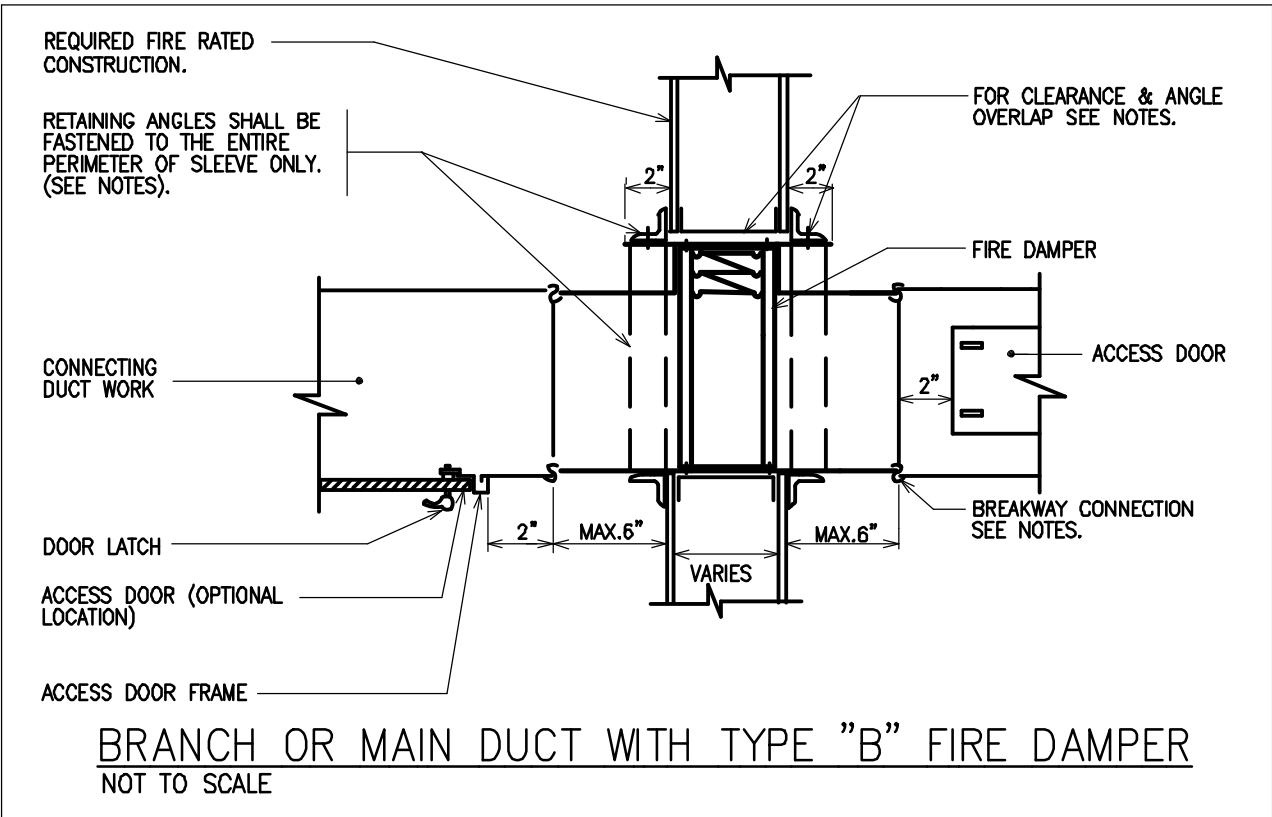
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**MECHANICAL
ROOF PLAN**

DRAWING #

M-105



ARCHITECT OF RECORD:

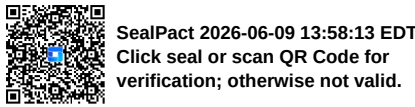
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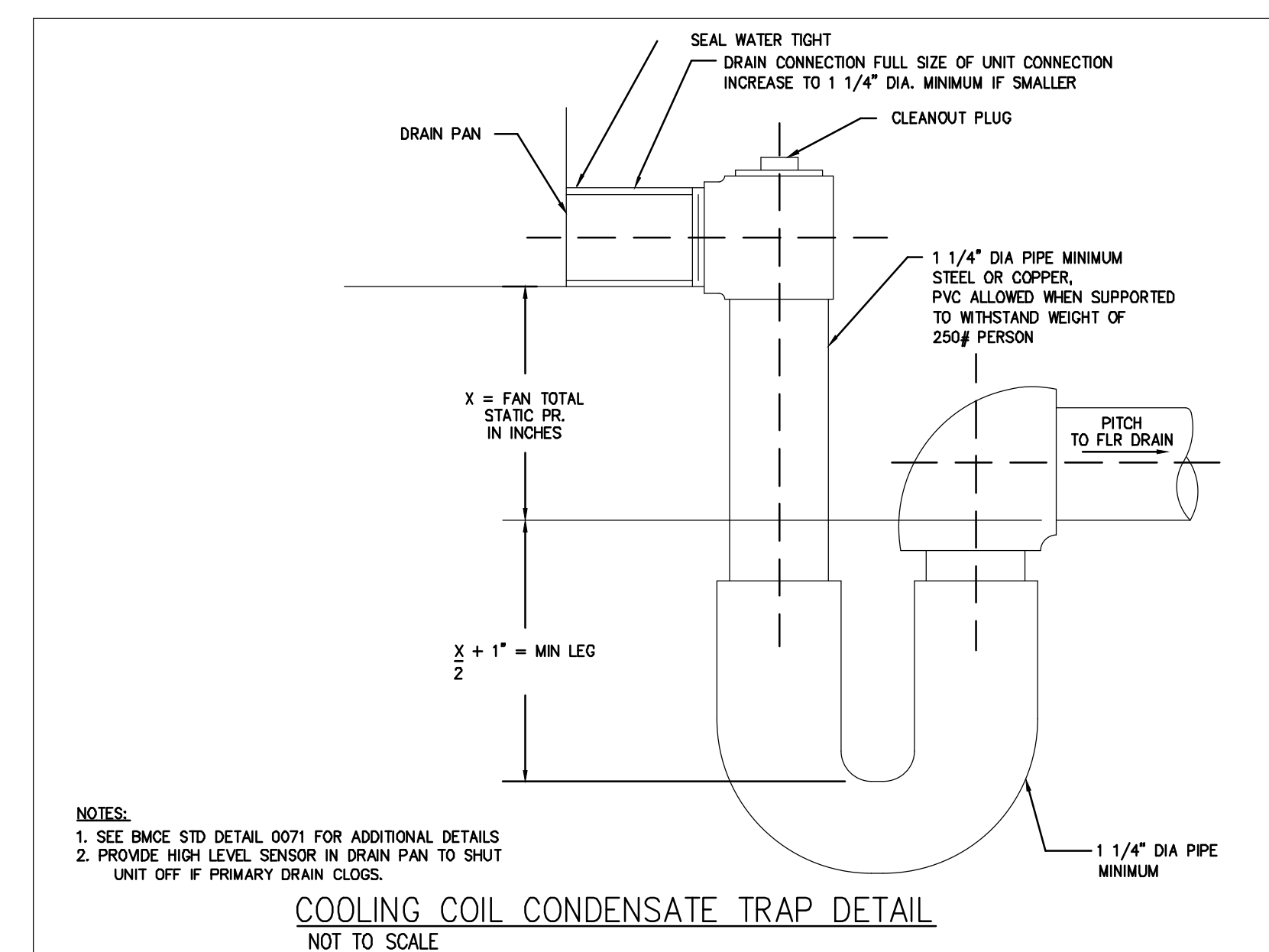
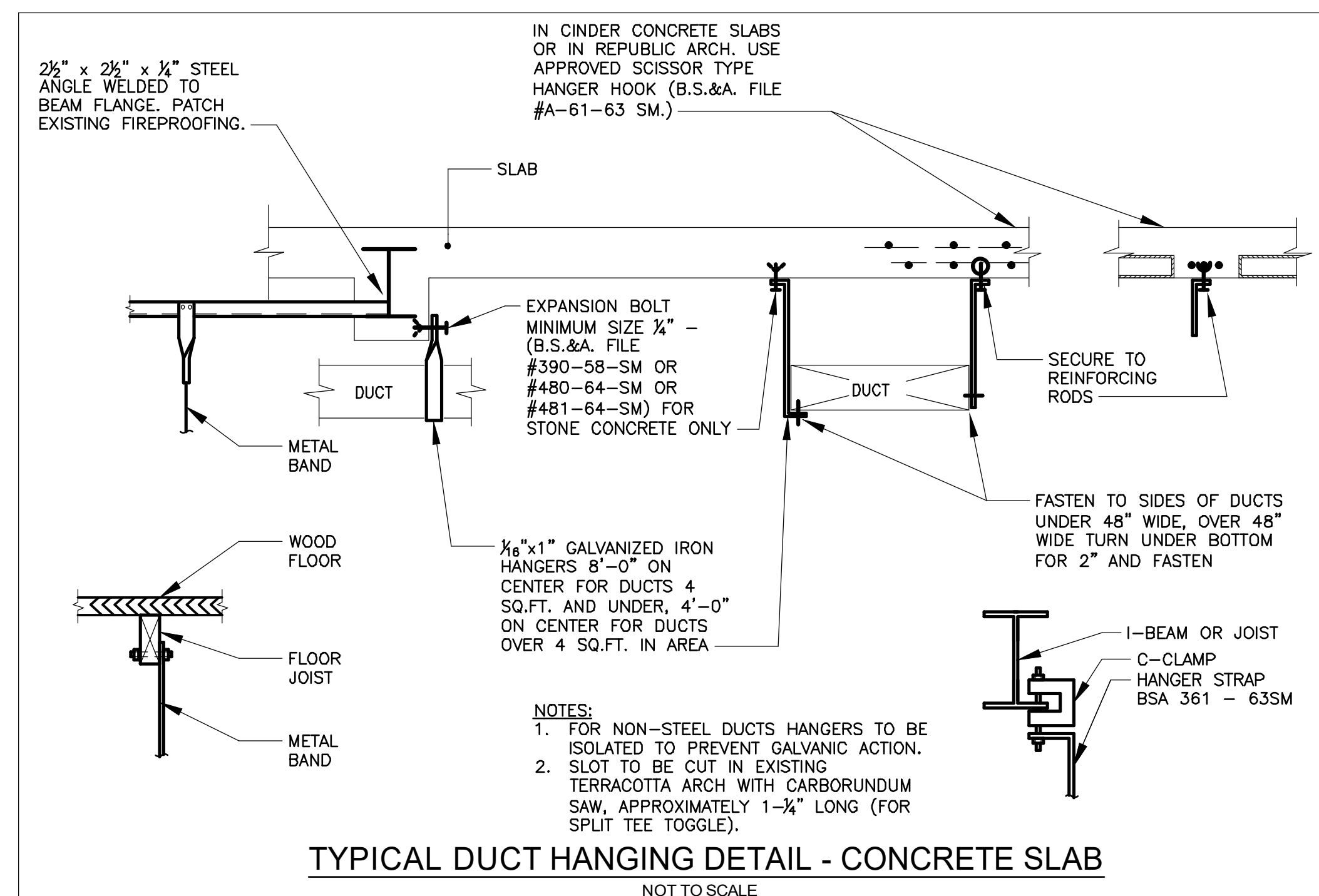
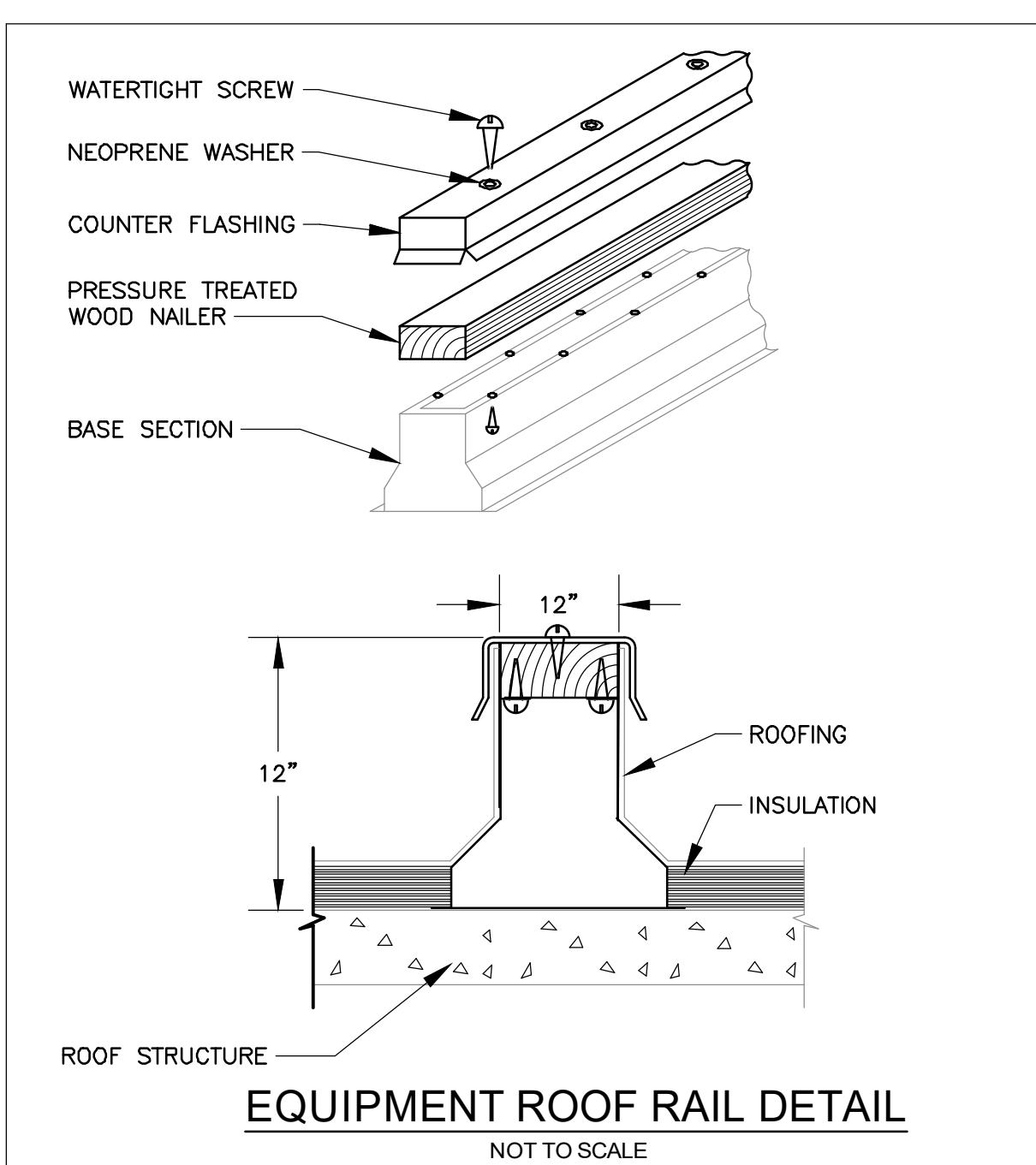
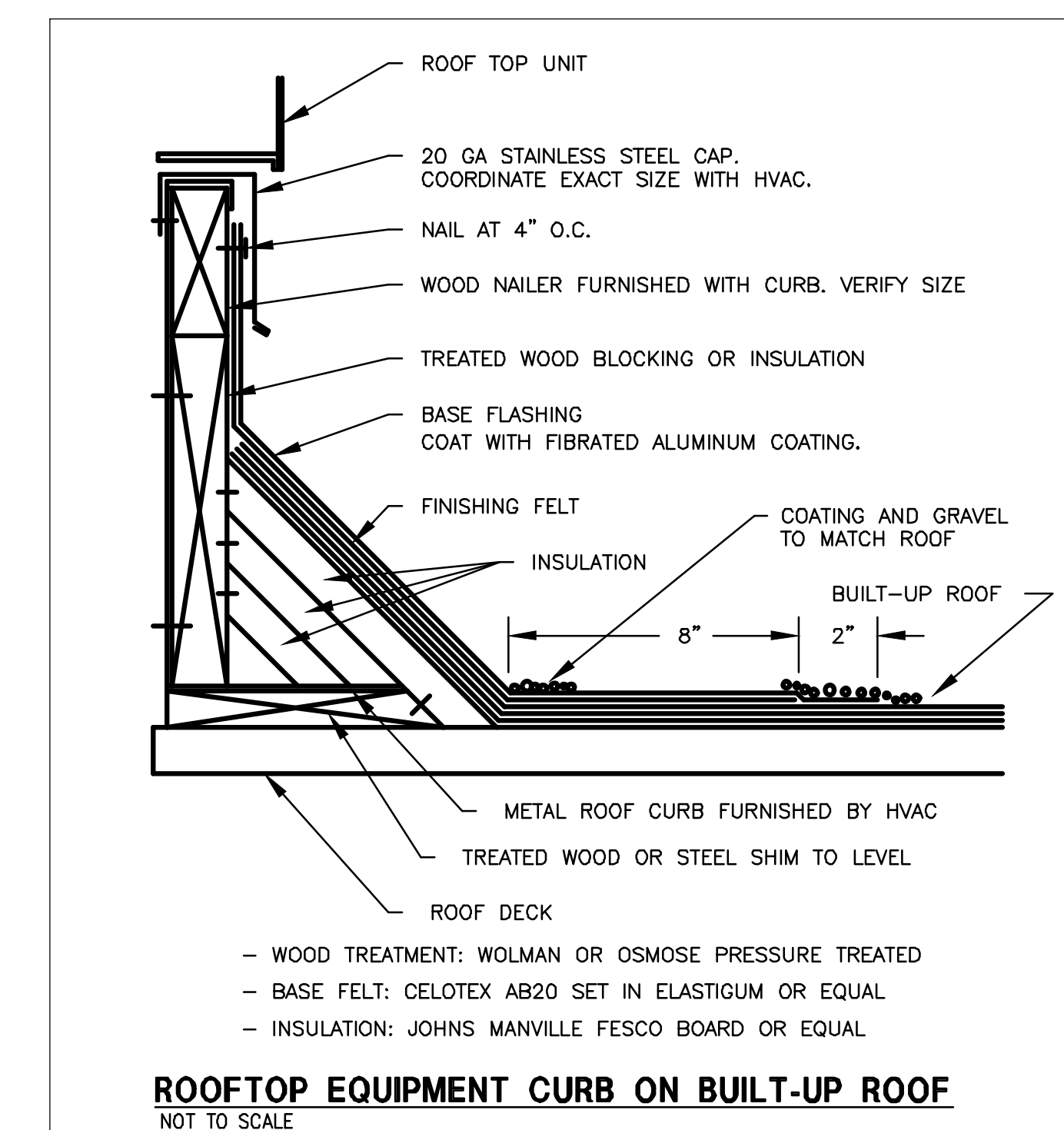
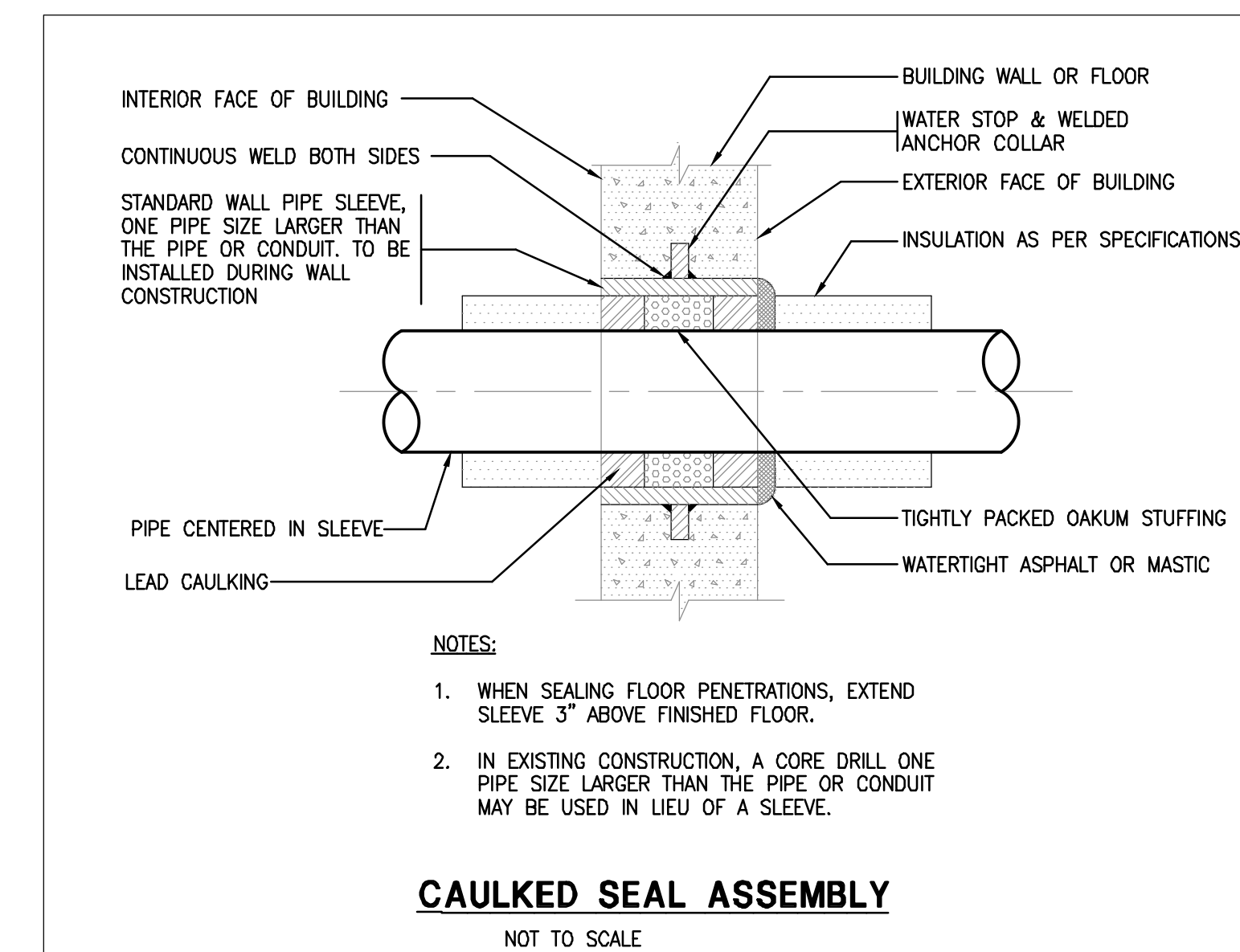
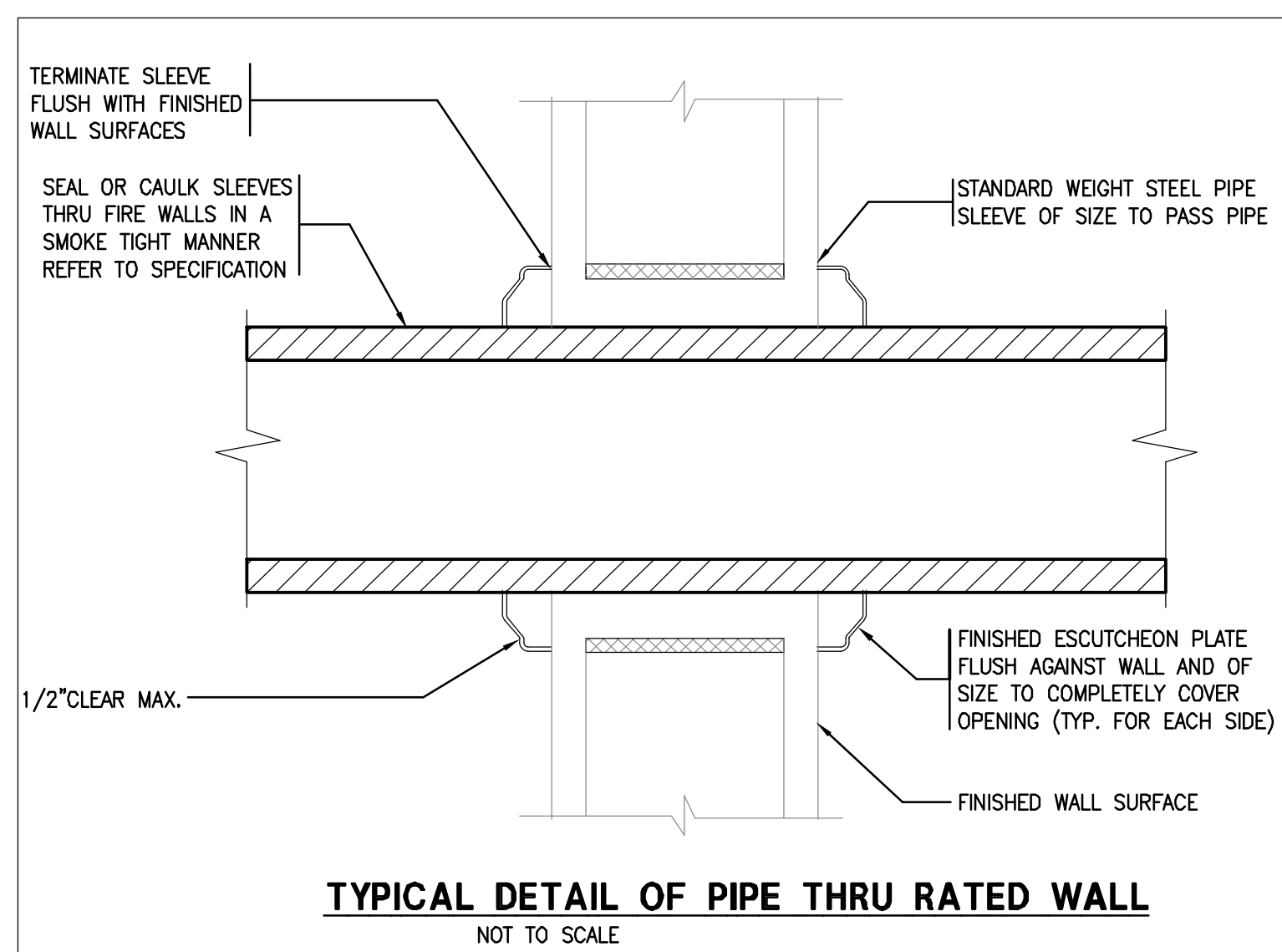
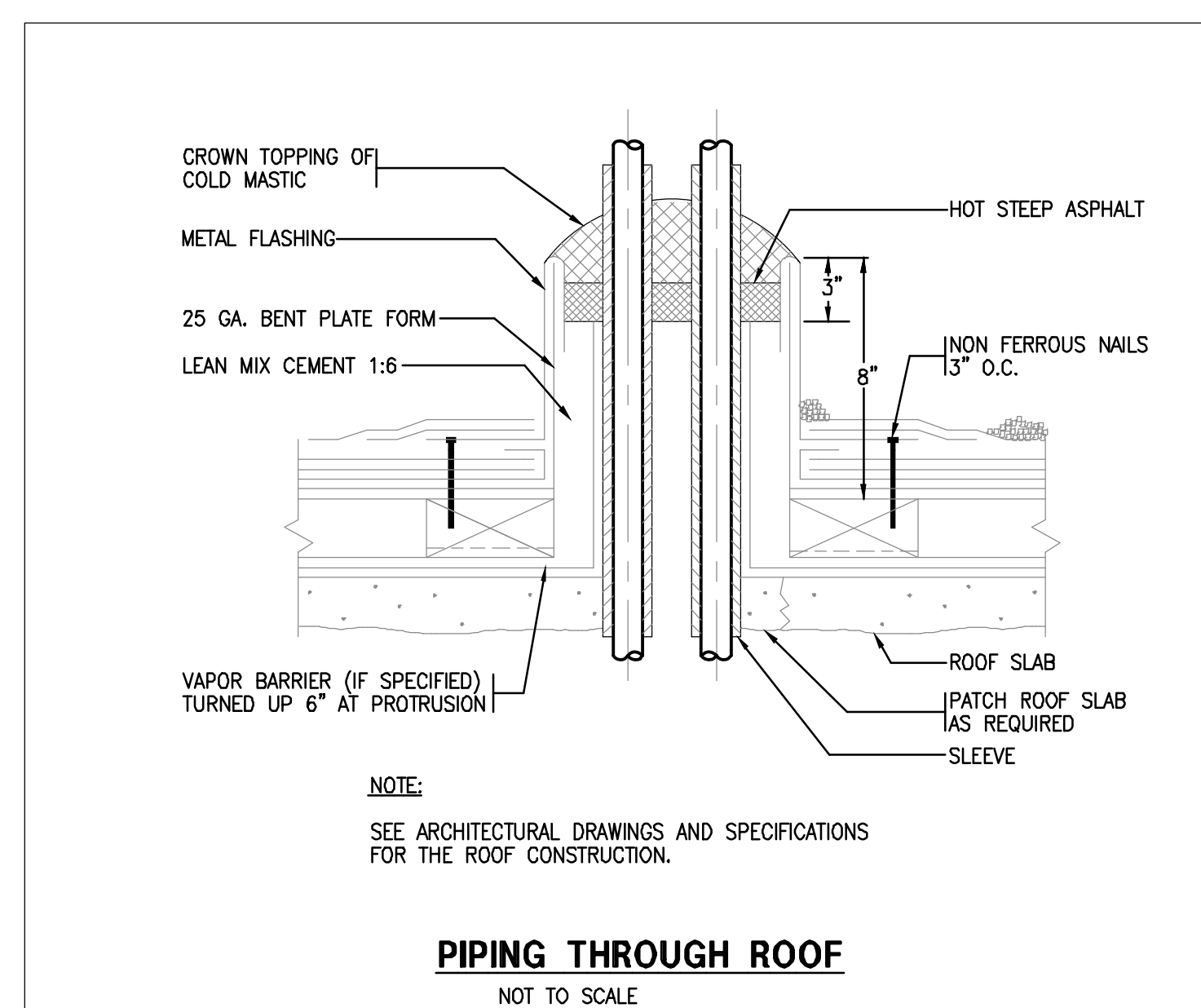
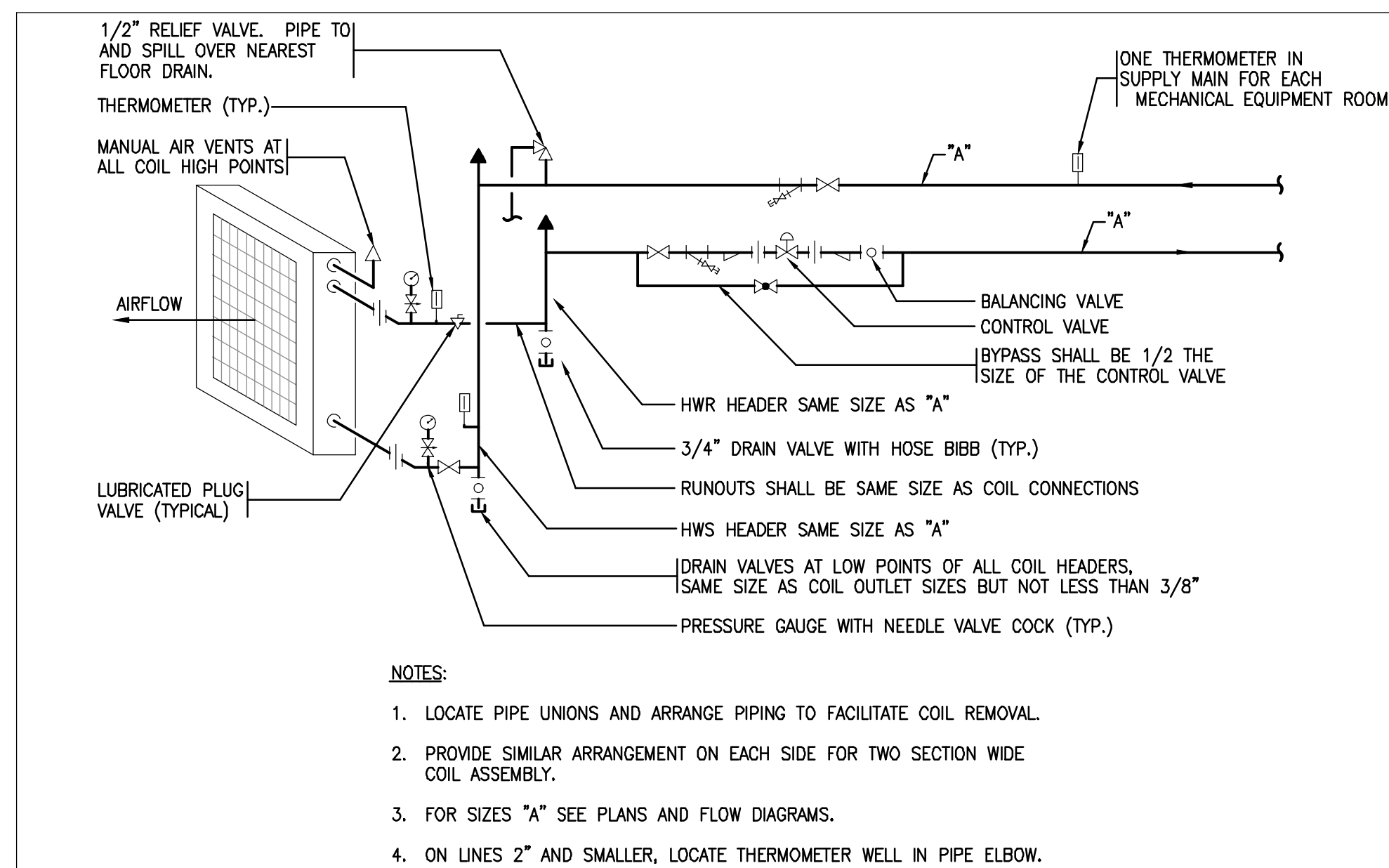
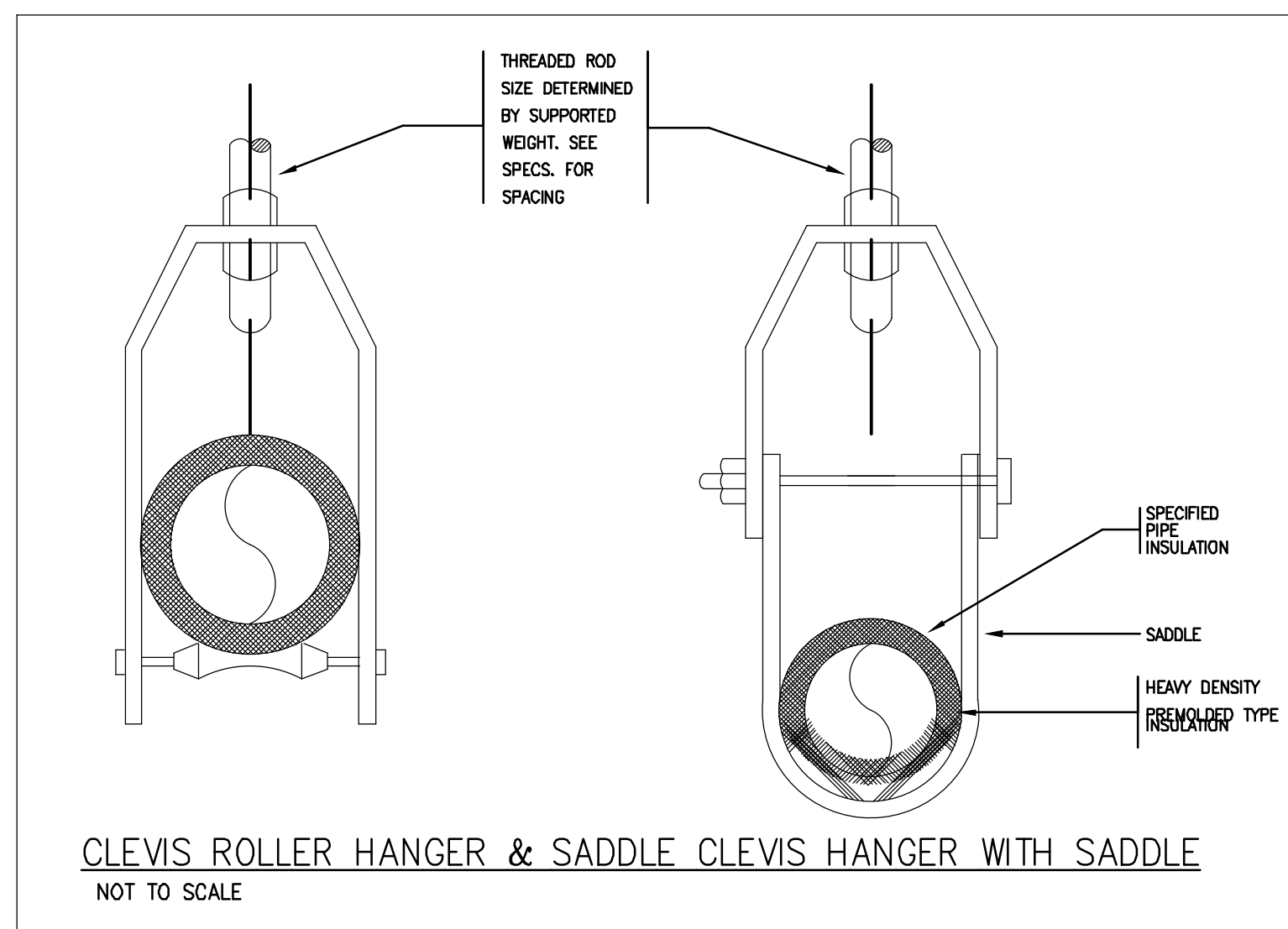
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MECHANICAL
DETAILS

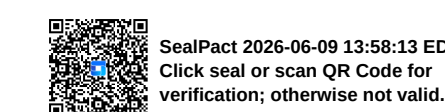
DRAWING #

M-401

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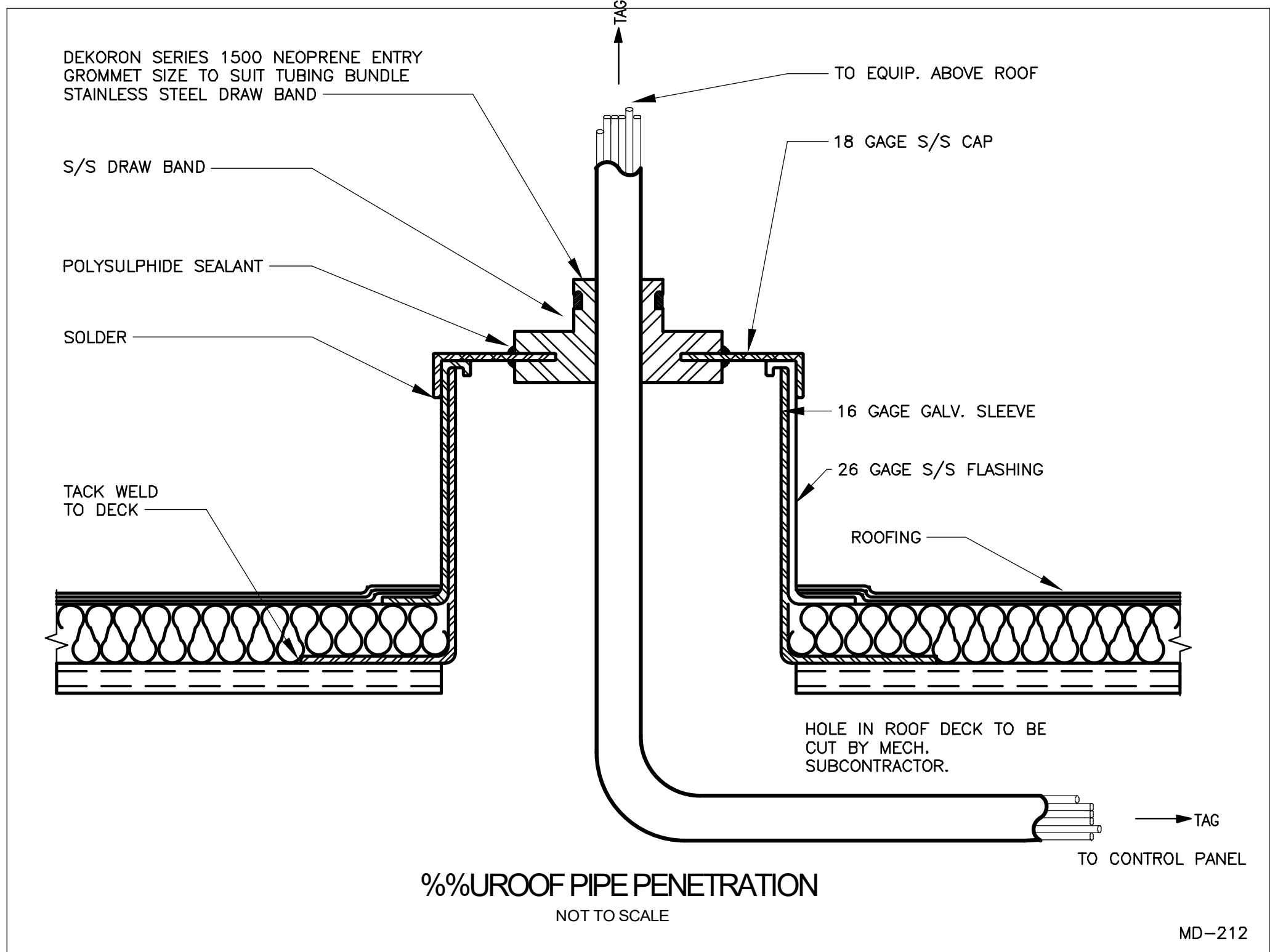
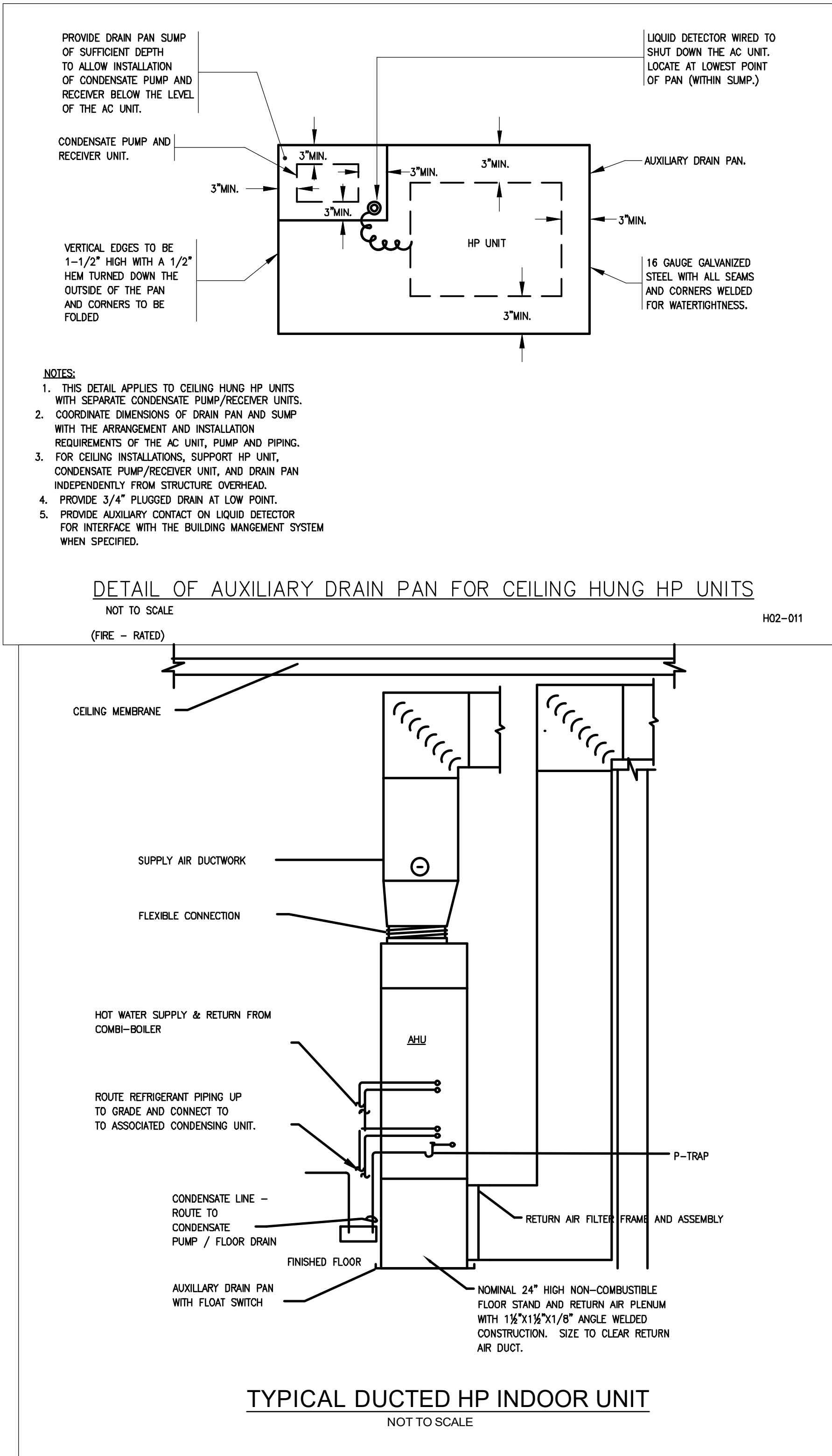
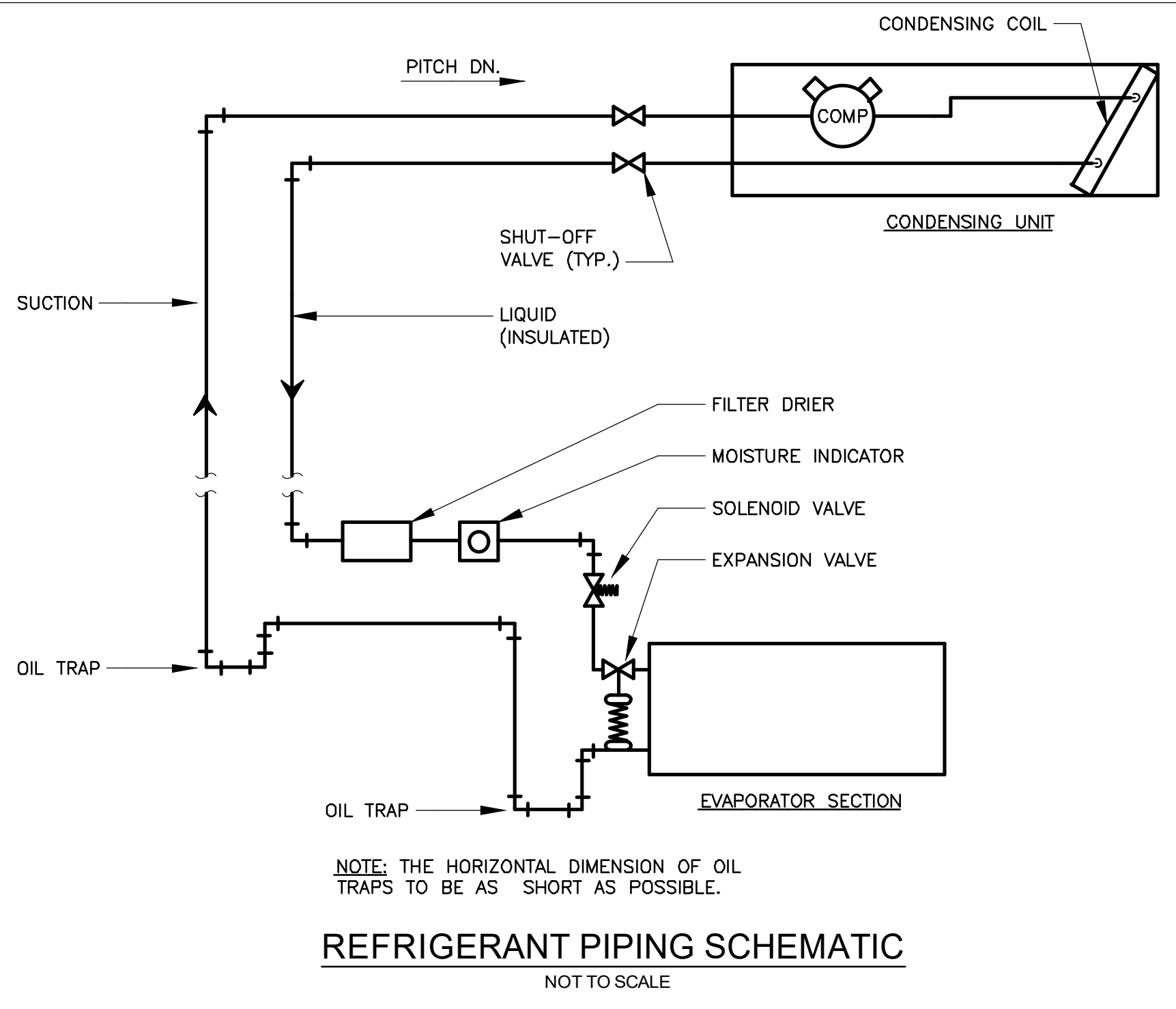
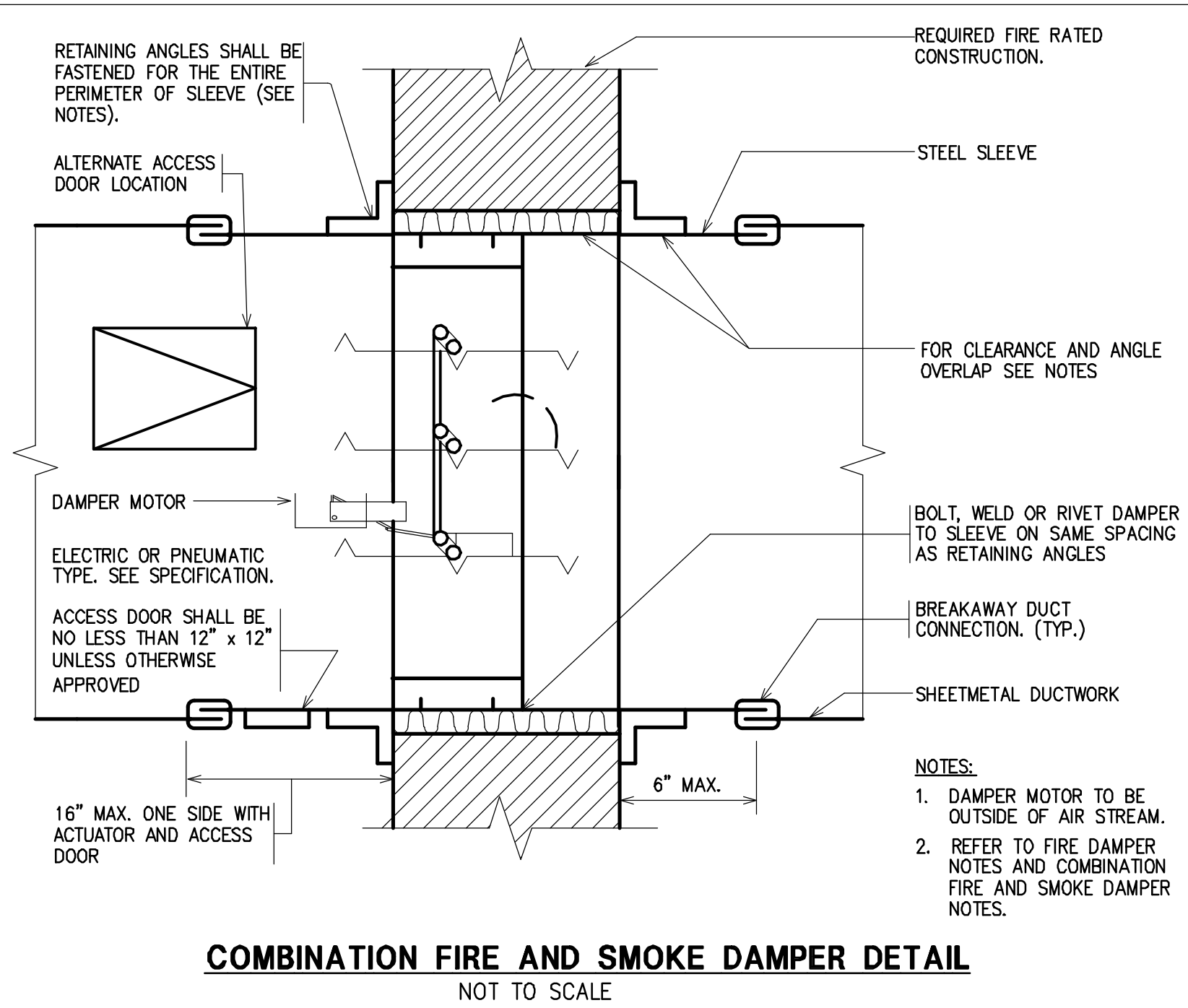
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DRAWING TITLE

MECHANICAL
DETAILS

DRAWING #

M-402



- I. FIRE DAMPER**
- FURNISH AND INSTALL A FIRE DAMPER WHERE ON THE DRAWINGS.
 - ALL FIRE DAMPERS SHALL BE RATED TO MAINTAIN THE RATING OF THE FIRE SEPARATION. THEY SHALL BE APPROVED AND LABELED BY UNDERWRITER'S LABORATORIES. THE INSTALLATION SHALL BE IN ACCORDANCE WITH MAUFACTURER'S APPROVED INSTRUCTIONS. DAMPERS SHALL BE AS MANUFACTURED BY: BY IMPERIAL DAMPER CO. MODEL # 150 TYPE A, B OR C (MEA # 300-93-M) OR APPROVED EQUAL BY THE ENGINEER.
 - ALL DUCT-SLEEVE CONNECTION SHALL COMPLY WITH UL 555 ASHRAE & SMACNA.
 - CONNECTIONS BETWEEN SLEEVE AND DUCTWORK SHALL BE BREAKAWAY TYPE SUCH AS "S" SLIP, CRIMP, OR OTHER SUP TYPE IN ACCORDANCE WITH UL 555.
 - FIRE DAMPER SLEEVE SHALL BE OF THICKNESS NOT LESS THAN THAT REQUIRED BY THE STANDARD FOR INSTALLATION OF AIR CONDITIONING SYSTEMS, NFPA 90A (LATEST EDITION).
 - AFTER THE INSTALLATION AT DAMPERS THE CONTRACTOR SHALL SEAL AND TAPE ALL JOINTS FOR AIR TIGHTNESS. SEALANTS USED SHALL BE 3M COMPANY NO. 800, MIRACLE ADHESIVE CORPORATION, OR AS APPROVED AND GREY VINYL DUCT TAPE AS MANUFACTURED BY NASHUA CORPORATION OR AS APPROVED. BREAKAWAY CONNECTION SHALL BE SEALED PER FIRE DAMPER MANUFACTURER'S RECOMMENDATION.
 - TO ALLOW FOR EXPANSION, DAMPERD SHALL HAVE A TOP CLEARANCE EQUIVALENT TO 1/8" FOR EACH FOOT OF DAMPER HEIGHT. THE SIDE CLEARANCE SHALL BE 1/8" FOR EACH FOOT OF DAMPER WIDTH DIVIDED EQUALLY TO THE RIGHT AND LEFT OF THE COLLAR. THE MAXIMUM CLEARANCE FOR THE TOP AND THE TOTAL OF BOTH SIDES SHALL BE 1/2" EACH. THE RETAINING ANGLES SHALL BE 1-1/2x1-1/2x1/4 GAUGE BENT ANGLE SO THAT THERE WILL BE A MINIMUM OF 1" OF OVERLAP ON THE FIRE SEPARATION.
 - DAMPER SHALL BE SECURED TO SLEEVE WITH EITHER 1/2" TACKWELDS, NO. 10 SHEET METAL SCREWS, 1/4" DIA. NUTS AND BOLTS, OR 3/16" STEEL RIVETS ALL ON 8" CENTER.
 - GALVANIZED STEEL RETAINING ANGLES SHALL BE SECURED TO SLEEVE WITH EITHER 1/2" TACK WELDS, NO. 10 SHEETMETAL SCREWS, 1/4" DIA. NUTS AND BOLTS, OR 3/16" STEEL RIVETS, ALL 8" ON CENTER.
 - WHERE THE HUNG CEILING DOES NOT HAVE REMOVABLE TILES AN ACCESS DOOR (FIRE RATED WHERE REQUIRED) SHALL BE FURNISHED BY MECHANICAL CONTRACTOR AND INSTALLED IN CEILING NEAR LOCATION OF FIRE DAMPER,
 - ALL DUCT ACCESS DOORS SHALL BE LOCATED SO THAT THERE WILL NOT BE ANY INTERFERANCES FOR MAINTENANCE AND INSPECTION OF DAMPER.
 - FIRE DAMPERS SHALL BE PROVIDED WITH AN APPROVED MEANS OF ACCESS (MINIMUM 24x24) TO PERMIT INSPECTION AND MAINTENANCE OF THE DAMPER AND ITS OPERATING PARTS. THE ACCESS SHALL NOT AFFECT THE INTEGRITY OF FIRE-RESISTANCE RATING OF THE ASSEMBLY. ACCESS POINTS SHALL BE PERMANENTLY IDENTIFIED ON THE EXTERIOR BY A LABEL HAVING LETTERS NOT LESS THAN 0.5-INCH IN HEIGHT READING AS FOLLOWS: "FIRE DAMPER". ACCESS DOORS IN DUCTS SHALL BE TIGHT FITTING AND SUITABLE FOR THE REQUIRED DUCT CONSTRUCTION.
- II. COMBINATION FIRE/SMOKE DAMPERS (CFSD):**
- FURNISH & INSTALL COMBINATION FIRE SMOKE DAMPERS WHERE INDICATED ON THE DRAWINGS.
 - DAMPERS ARE TO BE 1-1/2 OR 3 HOUR (AS REQUIRED) UL 555 RATED AND UL 555S CLASSIFICATION FOR C.F.S.D.
 - PROVIDE ELECTRIC OPERATOR FOR EACH CFSD. (SEE SPECIFICATIONS FOR REQUIREMENTS).
 - OPERATION: DAMPER SHALL BE CLOSED UPON RECEIVING A SIGNAL FROM THE FIRE ALARM PANEL AND/OR IN RESPONSE TO LOCAL FIRE/SMOKE SIGNAL: WHEN DAMPER IS CLOSED IN RESPONSE TO SMOKE OR FIRE, A MANUAL OVERRIDE SIGNAL FROM THE FIRE ALARM PANEL SHALL OPEN THE DAMPER IF REQUIRED. DAMPER OPERATION CAPABILITIES ARE TO BE MAINTAINED REGARDLESS OF PRESENCE OF FIRE OR SMOKE CONDITIONS.
 - MANUFACTURER: CFSD IMPERIAL MODEL #770 OR APPROVED EQUAL BY THE ENGINEER.
 - INSTALL DUCT DETECTORS AS INDICATED ON PLANS (FURNISHED BY ELECTRICAL CONTRACTOR). LOCATE DUCT DETECTORS UPSTREAM OF THE DAMPERS IN THE DIRECTION OF AIR FLOW. COORDINATE ALL WORK WITH ELECTRICAL CONTRACTOR.
 - FIRE/SMOKE DAMPERS SHALL BE PROVIDED WITH AN APPROVED MEANS OF ACCESS (MINIMUM 24x24) TO PERMIT INSPECTION AND MAINTENANCE OF THE DAMPER AND ITS OPERATING PARTS. THE ACCESS SHALL NOT AFFECT THE INTEGRITY OF FIRE-RESISTANCE RATING OF THE ASSEMBLY. ACCESS POINTS SHALL BE PERMANENTLY IDENTIFIED ON THE EXTERIOR BY A LABEL HAVING LETTERS NOT LESS THAN 0.5-INCH IN HEIGHT READING AS FOLLOWS: "FIRE/SMOKE DAMPER". ACCESS DOORS IN DUCTS SHALL BE TIGHT FITTING AND SUITABLE FOR THE REQUIRED DUCT CONSTRUCTION.
- III. LOCATION OF COMBINATION FIRE/SMOKE DAMPERS (CFSD):**
- REFER TO SHEET M-101 FOR LOCATIONS.
 - CONTRACTOR IS RESPONSIBLE FOR REVIEWING ALL SHEETS FOR LOCATIONS OF FIRE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS.

ARCHITECT OF RECORD:

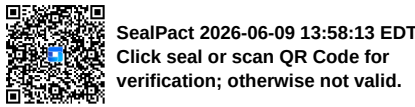
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SHEET ISSUANCE / REVISION HISTORY

#	DATE	ISSUE/REVISION DESCRIPTION
-	06/09/26	ISSUED FOR BID/PERMIT

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PROJECT NAME

PROPOSED OFFICE TO RESI.
CONVERSION

158 GRAND ST
WATERBURY, CT

JOB NO.: MEA-2026-00233

SCALE: NTS

DRAWING TITLE

MECHANICAL
DETAILS

DRAWING #

M-403

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NOTES:

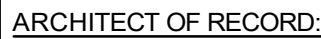
ENERGY RECOVERY VENTILATOR											
DESIGNATION	SERVICE	LOCATION	FAN DATA				POWER		ERV EFFECTIVENESS	WEIGHT (LBS)	MANUFACTURER / MODEL NO.
			SUPPLY		EXHAUST		VOLT/PH	MCA/MCCP			
			CFM	ESP	CFM	ESP					
ERV-1	TYP. APT	TYP. APT	50-100	0.6 IN.	50-100	0.6 IN.	120/1	15/15	74-80%	-	RENAIRE - ET-255MF-P340-XC0

NOTES

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NOTES:

Indoor Units																														
Variable Refrigerant Flow (VRF) Indoor Unit Schedule																														
Equipment Name	Manufacturer	Model Code	Connect Equipment	Product Description	Refrigerant	Rated Performance			Corrected Capacity						Fan			Electricity Characteristic						Noise (H)	Product Weight (lbs)	Refrigerant Pipe		Local Controller		
			Outdoor Unit			MBH	Cooling (Btu/h)	Heating (Btu/h)	Cooling				Heating		Airflow			Power (V)	Phase	Frequency (Hz)	MCA (A)	MOP (A)	FAN FLA (A)		Liquid Pipe (in)	Gas Pipe (in)				
									TOTAL (Btu/h)	SENSIBLS (Btu/h)	EAT DB (°F)	EAT WB (°F)	TOTAL (Btu/h)	EAT DB (°F)	Low (CFM)	Mid. (CFM)	High (CFM)													
IDU-1.1	Samsung	AJ009DNADCG/AA	ODU-1	Wall Mounted	R32	9	9000.00	11000.00	8947.00	6397.00	80.6	66.2	10386.00	68.0	309.00	337.00	364.00	208-230	1	60	-	-	-	37.00	19.60	1/4"	3/8"	MWR-WG01UN		
IDU-1.2	Samsung	AJ007DNADCG/AA	ODU-1	Wall Mounted	R32	7	7000.00	7500.00	6959.00	4976.00	80.6	66.2	7081.00	68.0	309.00	322.00	336.00	208-230	1	60	-	-	-	37.00	19.60	1/4"	3/8"	MWR-WG01UN		
IDU-1.3	Samsung	AJ007DNADCG/AA	ODU-1	Wall Mounted	R32	7	7000.00	7500.00	6959.00	4976.00	80.6	66.2	7081.00	68.0	309.00	322.00	336.00	208-230	1	60	-	-	-	37.00	19.60	1/4"	3/8"	MWR-WG01UN		
IDU-2.1	Samsung	AJ009DNADCG/AA	ODU-2	Wall Mounted	R32	9	9000.00	11000.00	8948.00	6397.00	80.6	66.2	10743.00	68.0	309.00	337.00	364.00	208-230	1	60	-	-	-	37.00	19.60	1/4"	3/8"	MWR-WG01UN		
IDU-2.2	Samsung	AJ007DNADCG/AA	ODU-2	Wall Mounted	R32	7	7000.00	7500.00	6959.00	4976.00	80.6	66.2	7325.00	68.0	309.00	322.00	336.00	208-230	1	60	-	-	-	37.00	19.60	1/4"	3/8"	MWR-WG01UN		
IDU-3.1	Samsung	AM012FENDCG/AA	ODU-3	WindFree 4Way600*600	R32	12	12000.00	13500.00	11690.00	9631.00	80.6	66.2	12016.00	68.0	283.00	335.00	371.00	208-230	1	60	0.26	15.00	0.21	34.00	25.60	1/4"	1/2"	MWR-WG01UN		
IDU-3.2	Samsung	AM012FENDCG/AA	ODU-3	WindFree 4Way600*600	R32	12	12000.00	13500.00	11690.00	9631.00	80.6	66.2	12016.00	68.0	283.00	335.00	371.00	208-230	1	60	0.26	15.00	0.21	34.00	25.60	1/4"	1/2"	MWR-WG01UN		
IDU-3.3	Samsung	AM012FENDCG/AA	ODU-3	WindFree 4Way600*600	R32	12	12000.00	13500.00	11690.00	9631.00	80.6	66.2	12016.00	68.0	283.00	335.00	371.00	208-230	1	60	0.26	15.00	0.21	34.00	25.60	1/4"	1/2"	MWR-WG01UN		
IDU-3.4	Samsung	AM012FENDCG/AA	ODU-3	WindFree 4Way600*600	R32	12	12000.00																							

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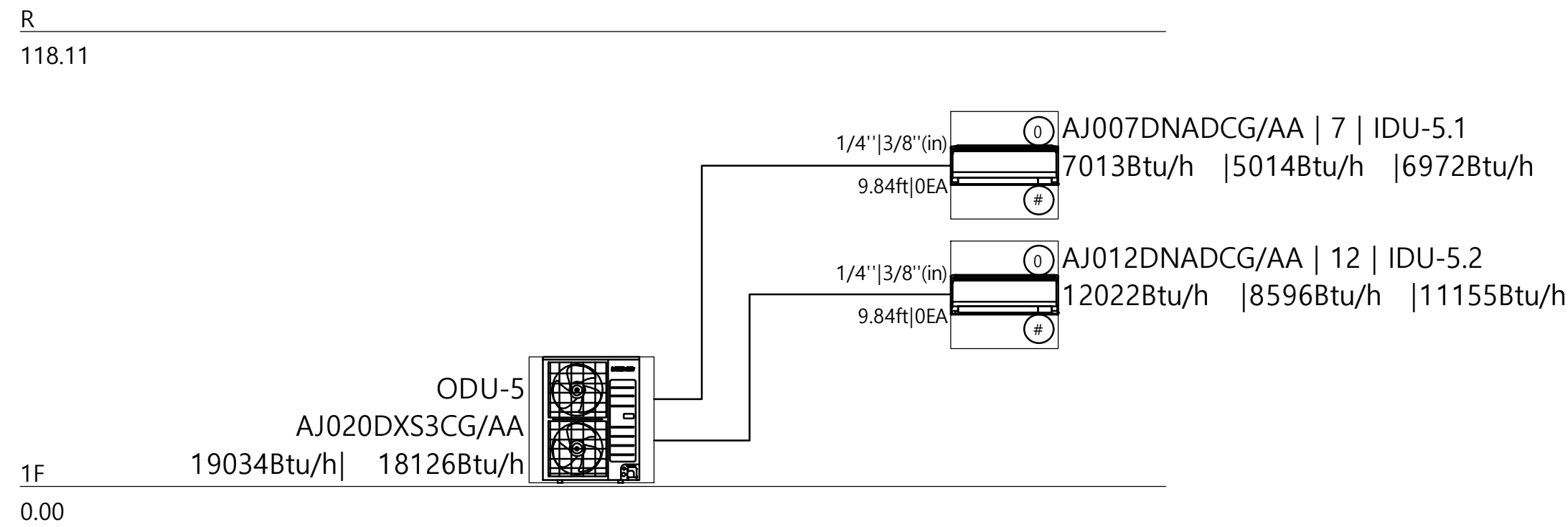
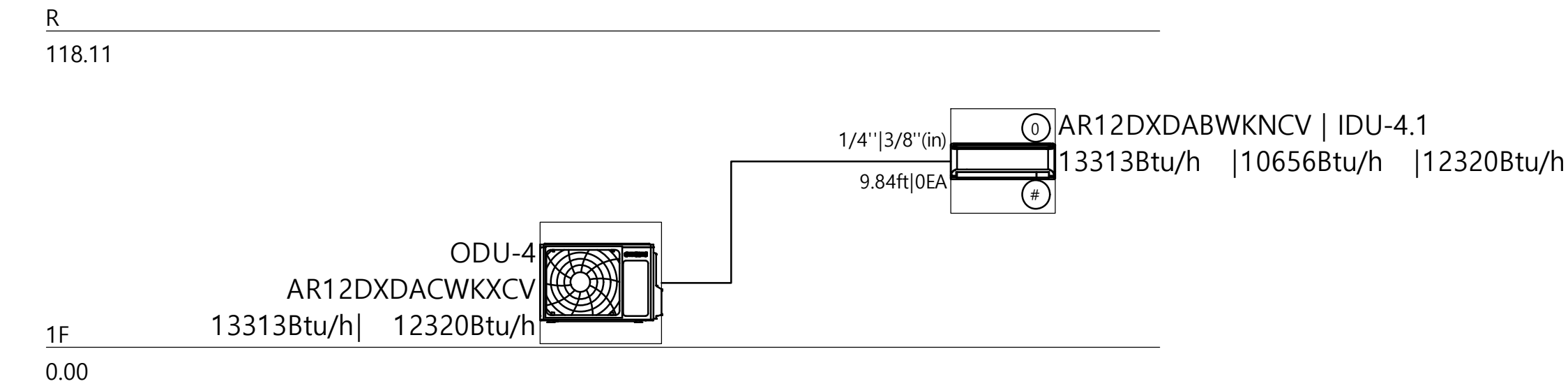
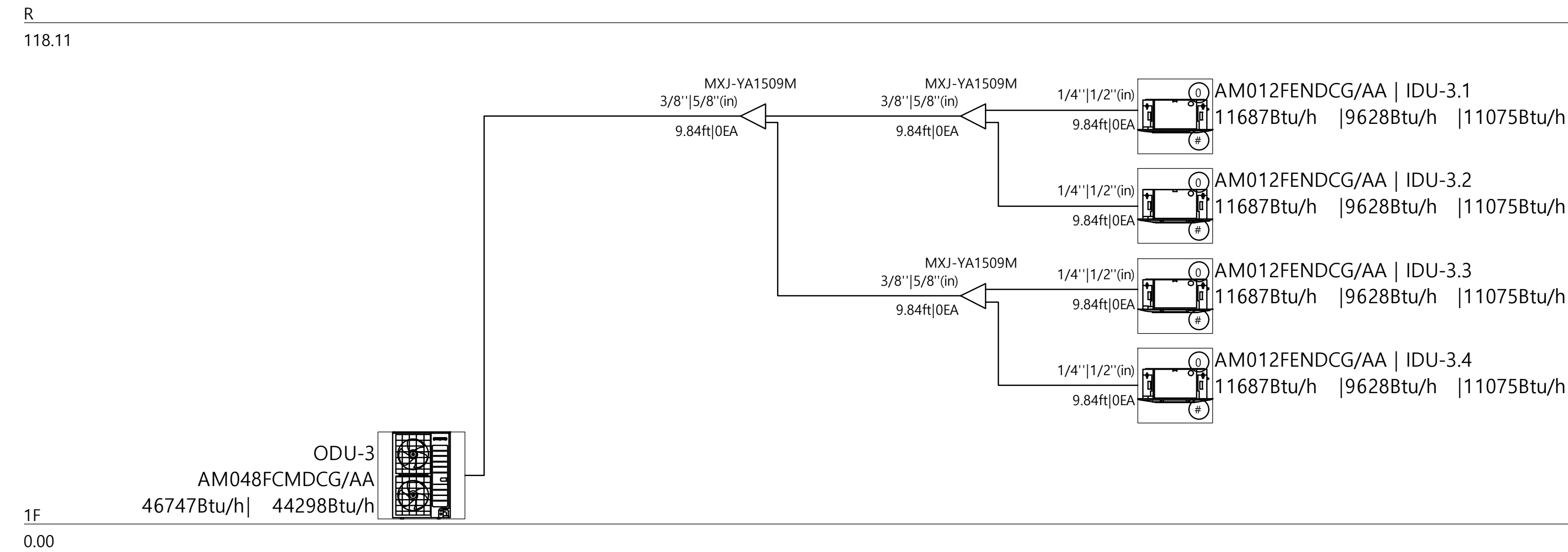
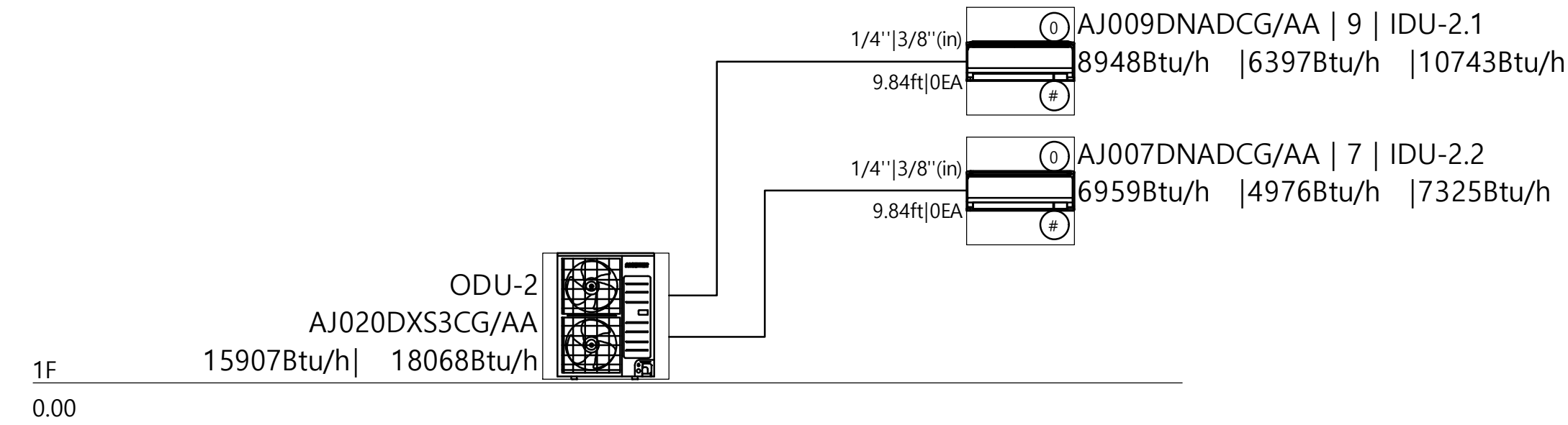
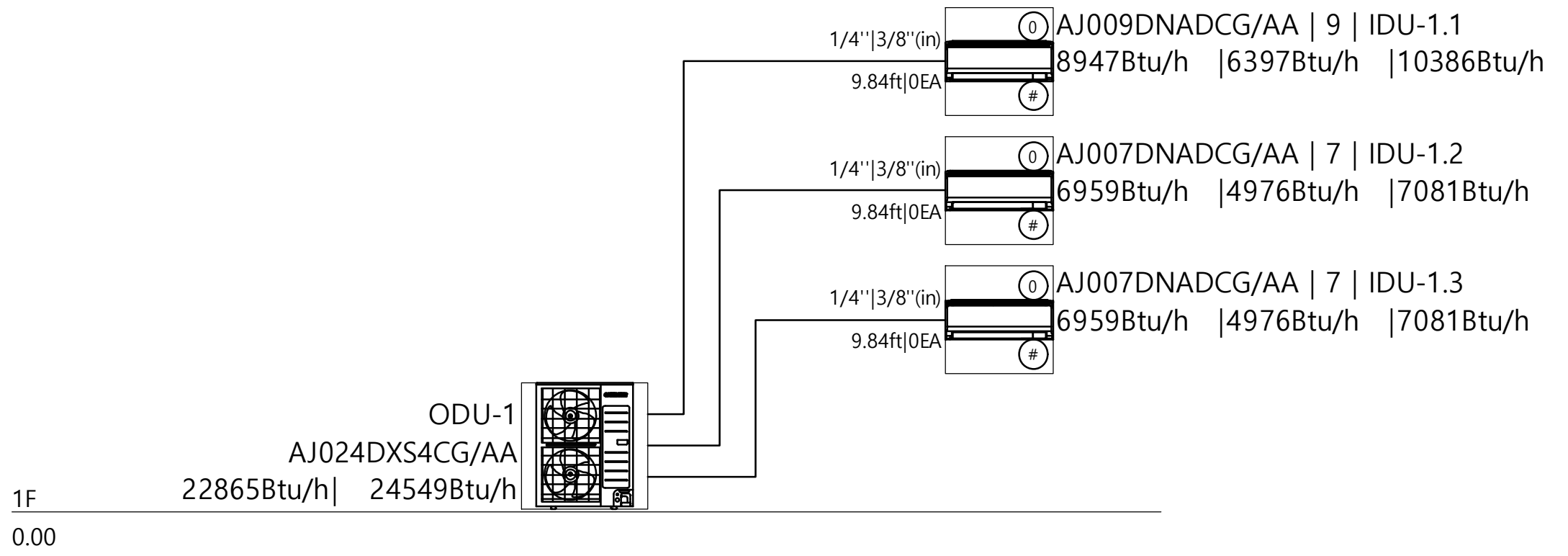
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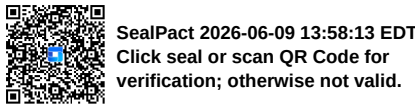
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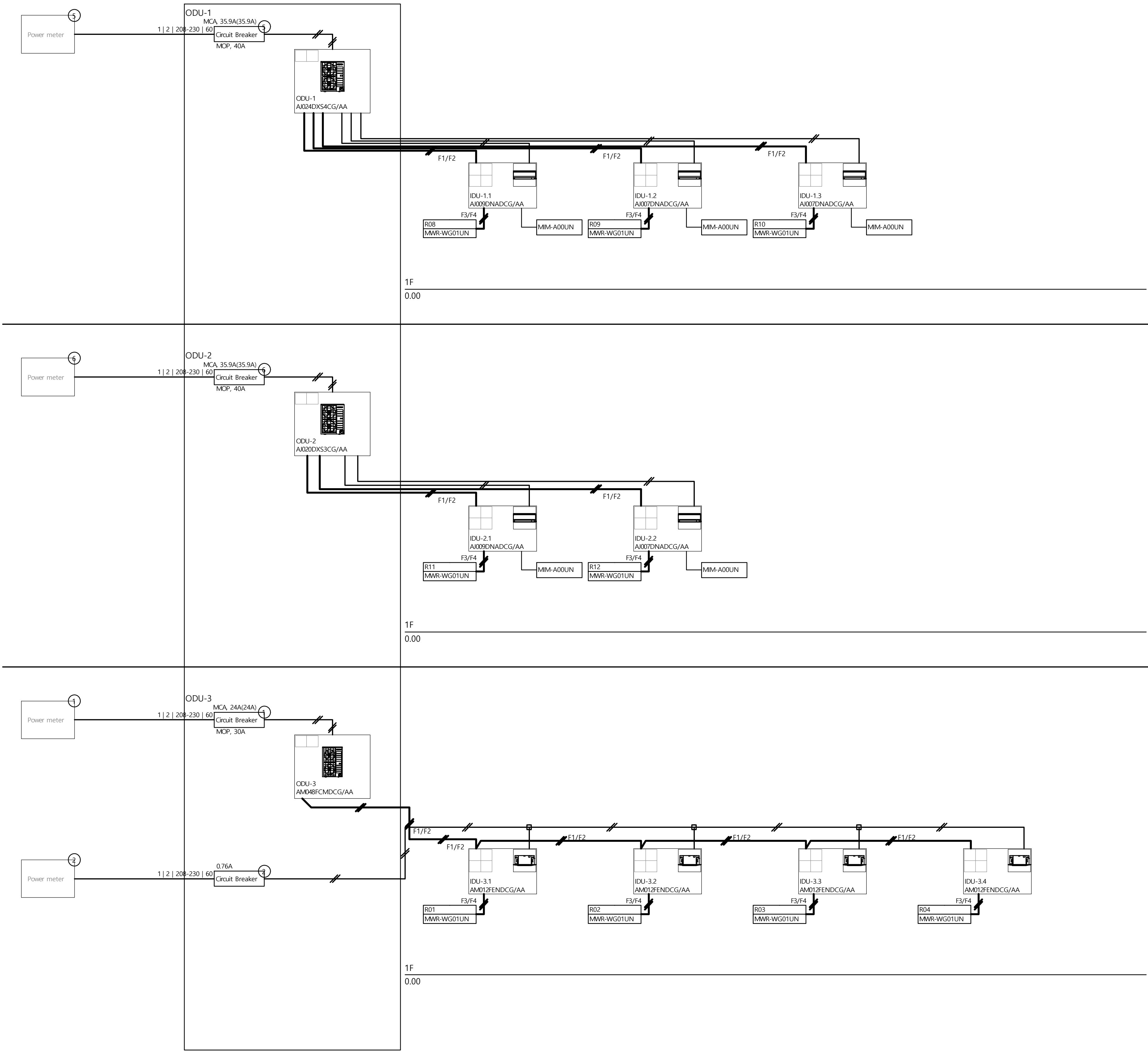
MECHANICAL
VRF PIPING

DRAWING #

M-510

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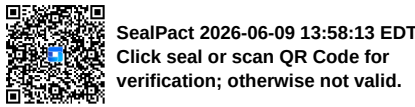
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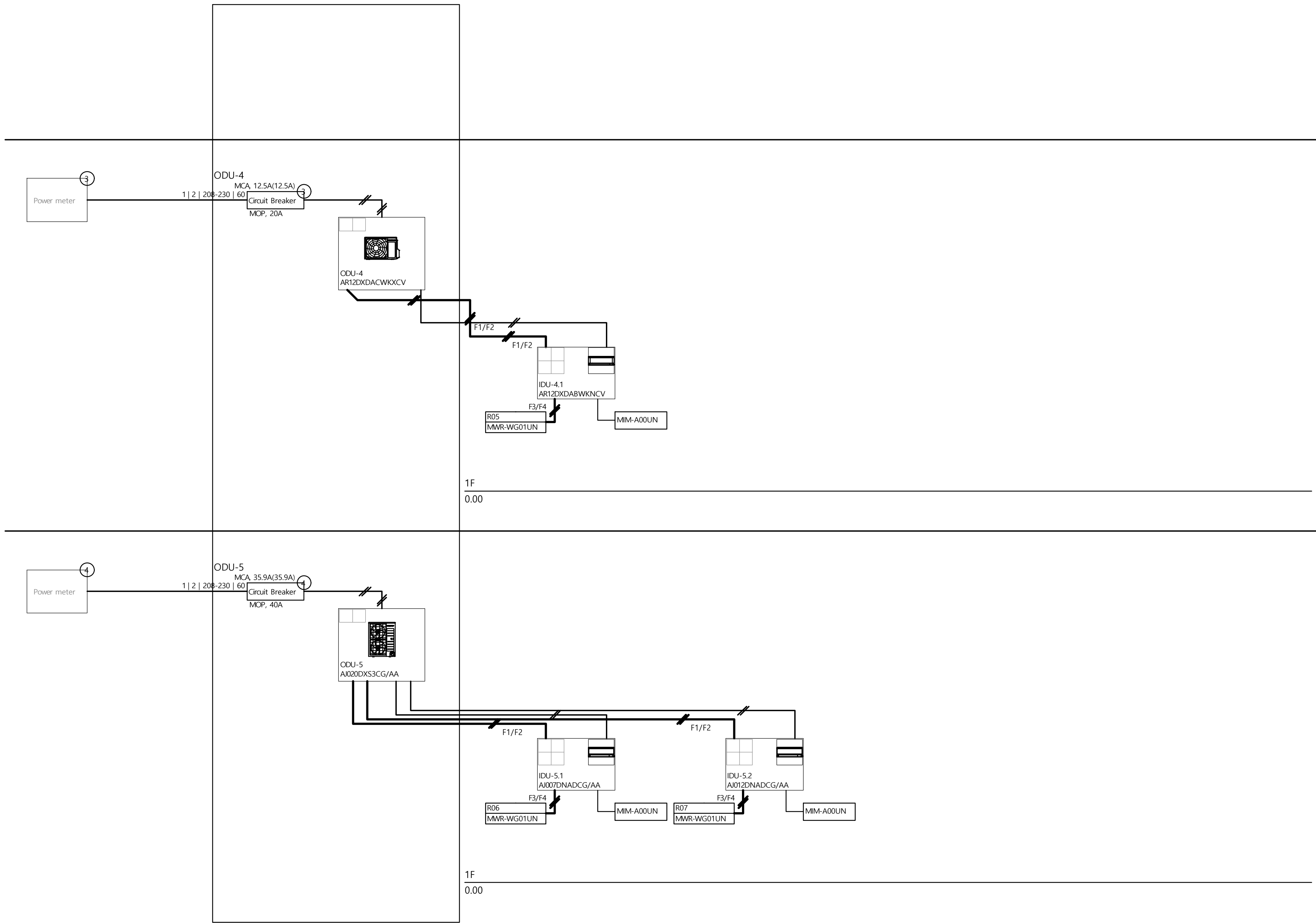
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MECHANICAL
VRF WIRING

DRAWING #

M-520

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WATERBURY, CT

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MECHANICAL
VRF WIRING

DRAWING #

M-521

ELECTRICAL SYMBOL LIST	
(NOT ALL SYMBOLS SHOWN ARE NECESSARILY USED ON THIS PROJECT)	
SYMBOL	DESCRIPTION
	20A, 125V DECORA STYLE DUPLEX RECEPTACLE - FLUSH WALL MOUNTED
	20A, 125V DECORA STYLE DUPLEX RECEPTACLE WITH DUAL USB PORTS
	20A, 125V SPLIT DUPLEX CONTROLLED RECEPTACLE. LUTRON #CAR2S-20-STR. PROGRAM TO WIRELESS SENSOR IN SPACE.
	20A, 125V SINGLE RECEPTACLE - FLUSH WALL MOUNTED
	20A, 125V DECORA STYLE QUADRUPLX RECEPTACLE - FLUSH WALL MOUNTED
	20A, 125V DECORA STYLE GFCI TYPE DUPLEX RECEPTACLE-FLUSH WALL MOUNTED
	20A, 125V GFCI TYPE WEATHER RESISTANT DUPLEX RECEPTACLE IN WEATHER PROOF ENCLOSURE
	SPECIAL PURPOSE RECEPTACLE - FLUSH WALL MOUNTED
	20A, 125V DECORA STYLE HALF SWITCHED DUPLEX RECEPTACLE - FLUSH WALL MOUNTED. BOTTOM HALF OF DUPLEX RECEPTACLE TO BE SWITCHED VIA WALL SWITCH
	FLUSH FLOOR MOUNTED COMBINATION VOICE/DATA & POWER OUTLET
	CEILING MOUNTED JUNCTION BOX WITH FINAL EQUIPMENT CONNECTION
	FLUSH WALL MOUNTED JUNCTION BOX WITH FINAL EQUIPMENT CONNECTION
	FLUSH FLOOR MOUNTED JUNCTION BOX WITH FINAL EQUIPMENT CONNECTION
	UNFUSED DISCONNECT SWITCH - 30A, 3P, U.O.N.
	FUSED DISCONNECT SWITCH - 100 AMP SWITCH, 60 AMP FUSE, UNFUSED (EXCEPT WHERE FUSE SIZE IS INDICATED) 3-POLE (EXCEPT WHERE NOTED)
	COMBINATION MOTOR CONTROLLER AND DISCONNECT SWITCH FURNISHED BY MECHANICAL CONTRACTOR INSTALLED BY ELECTRICAL CONTRACTOR. COOR. LOCATION W/MECH. CONT.
	CIRCUIT BREAKER 100A FRAME/60A TRIP, 3 POLE, U.O.N. ST - SHUNT TRIP
	VARIABLE FREQUENCY DRIVE (VFD), FURNISHED BY MECHANICAL CONTRACTOR INSTALLED BY ELECTRICAL CONTRACTOR. COORD. LOCATION WITH MECH. CONTRACTOR
	SURGE SUPPRESSER, LIEBERT ACCUVAR #ACV-120-Y-111-RKE FED WITH 30A/3P C/B MOUNT WITHIN 3ft OF TOTAL WIRE LENGTH FROM SOURCE
	COMBINATION FIRE/SMOKE DAMPER - COORD. LOCATION WITH MECH. CONTRACTOR INTERCONNECT TO FIRE ALARM SYSTEM
	MOTOR
	PULLBOX, SIZED PER NEC
	DRY TYPE 480-208V TRANSFORMER DELTA-WYE WITH GROUNDED SECONDARY SIDE, UON.
	FLUSH MOUNTED PANELBOARD
	SURFACE MOUNTED PANELBOARD
	GROUND BAR
	FLUSH MOUNTED NETWORK INTERFACE DEVICE
	2#12+1#12G-3/4"C FOR ONE CKT. HOMERUN, U.O.N.
	3#12+1#12G-3/4"C FOR TWO CKT. HOMERUN, U.O.N.
	4#12+1#12G-3/4"C FOR THREE CKT. HOMERUN, U.O.N.
	3#12+1#12G-3/4"C HOMERUN, U.O.N.
	CONCEALED CONDUIT
	CONDUIT TURNING UP
	CAPPED CONDUIT
	FLEXIBLE EQUIPMENT CONNECTION
	GROUND CONNECTION
	CIRCUIT BREAKER - MOLDED CASE TYPE
	DRAW OUT TYPE CIRCUIT BREAKER
	FUSED SWITCH, TYPE 'FA' FUSE
	FUSE
	UNFUSED SWITCH - 100 AMP SWITCH
	UTILITY METER WITH CT. COMPARTMENT
	DIGITAL SUB-METER E-MON D-MON 2000 CLASS #208400D KIT, PROVIDE A 20A/3-POLE BREAKER IN LOCAL POWER PANEL
	DOOR BELL PUSH BUTTON / DOOR BELL CHIME AND ASSOCIATED TRANSFORMER
	WALL MOUNTED TELEVISION OUTLET WITH 3/4" EMPTY CONDUIT & DRAG LINE TERMINATED IN A 90° BEND 6" INTO NEAREST ACCESSIBLE CEILING VOICE/VOICE & DATA OUTLET LOCATION WITH 1" EMPTY CONDUIT & DRAG LINE TERMINATED IN A 90 DEG. BEND 6" INTO NEAREST ACCESSIBLE CEILING
	ADA "CALL FOR ASSISTANCE" PULL CORD SWITCH, HORN/STROBE & 24V TRANS., EST EDWARDS KIT MODEL #6538-G5
	MANUAL STARTER - TOGGLE TYPE WITH THERMAL ELEMENT - 250V HP RATED, FURNISHED BY ELEC CONTRACTOR
	CEILING MOUNTED EDGE-LIT LED EXIT SIGN WITH EMERGENCY BATTERY BACKUP, DUAL-LITE LE SERIES
	WALL MOUNTED EDGE-LIT LED EXIT SIGN WITH EMERGENCY BATTERY BACKUP, DUAL-LITE LE SERIES - "LO" INDICATES LOW LEVEL EXIT SIGN
	CEILING MOUNTED WET RATED LED EXIT SIGN WITH EMERGENCY BATTERY BACKUP, COMPASS CEW SERIES
	RECESSED CEILING MOUNTED EMERGENCY LIGHTING UNIT, LIGHTALARMS PHANTOM SERIES #PHN100-2LD7-IDNA WITH REMOTE TEST PSW-1
	WALL MOUNTED EXTERIOR EMERGENCY LIGHTING UNIT, EVENLITE #WW-EM-XX-CT

LIGHTING CONTROL SYMBOL LIST	
(NOT ALL SYMBOLS SHOWN ARE NECESSARILY USED ON THIS PROJECT)	
SYMBOL	DESCRIPTION
	SINGLE POLE LINE VOLTAGE DECORA STYLE SWITCH
	3-WAY LINE VOLTAGE DECORA STYLE SWITCH
	KEY ACTIVATED LINE VOLTAGE SWITCH
	LUTRON NOVA T SERIES DIMMER SWITCH, U.O.N., EXACT DEVICE SPEC SHALL BE COORDINATED WITH LIGHT FIXTURE DIMMING CAPABILITIES
	POWER PACK MOUNTED IN JUNCTION BOX LOCATED ABOVE FINISHED CEILING LUTRON #PP-DV
	DUAL TECHNOLOGY OCCUPANCY SENSOR LOW VOLTAGE, CEILING MOUNTED. LUTRON #LOS-CDT-2000R-WH
	DUAL TECHNOLOGY VACANCY SENSOR LOW VOLTAGE, CEILING MOUNTED. LUTRON #LOS-CDT-2000R-WH
	POWER PACK MOUNTED IN JUNCTION BOX LOCATED ABOVE FINISHED CEILING LUTRON #RMJS-16R-DV-B
	POWER PACK MOUNTED IN JUNCTION BOX LOCATED ABOVE FINISHED CEILING LUTRON #RMJS-16R-DV-B-EM
	0-10V DIMMING MODULE MOUNTED IN JUNCTION BOX LOCATED ABOVE FINISHED CEILING, LUTRON #RMJS-8T-DV-B
	0-10V EMERGENCY DIMMING MODULE MOUNTED IN JUNCTION BOX LOCATED ABOVE FINISHED CEILING, LUTRON #RMJS-8T-DV-B-EM
	CFL/LED PLENUM RATED MAESTRO WIRELESS DIMMER MOUNTED IN JUNCTION BOX LOCATED ABOVE FINISHED CEILING, LUTRON #MRF2S-6CL-GR
	WIRELESS OCCUPANCY SENSOR, CEILING MOUNTED, LUTRON #LRF2-OCR2B-P-WH
	VIVE WIRELESS HUB, FLUSH MOUNTED, LUTRON #HJS-2-FM + #PS-J-20W-UNV POWER SUPPLY MOUNTED IN JUNCTION BOX
	DUAL TECHNOLOGY VACANCY SENSOR, WALL MTD. LUTRON #MS-B102
	WIRELESS DAYLIGHT SENSOR, CEILING MOUNTED, LUTRON #LRF2-DCRB-WH
	WALL MTD WIRELESS OCCUPANCY SENSOR, LUTRON #LRF2-O-W-LB-P-WH
	WIRELESS 2-BUTTON SWITCH, LUTRON #PJ2-2B-GWH-L01 + #CW-1-WH
	WIRELESS 3-BUTTON RAISE/LOWER SWITCH, LUTRON #PJ2-3BRL-GWH-L01 + #CW-1-WH
	WIRELESS 4-BUTTON SCENE SWITCH, LUTRON #PJ2-4B-GWH-L31 + #CW-1-WH
	REMOTE TIMED OVERRIDE SWITCH TORK #SSA200R-24
	DIGITAL TIME CLOCK TORK DLC SERIES #DLC400BP
	SINGLE FIXTURE GENERATOR TRANSFER DEVICE, PHILLIPS BODINE #GTD
	SINGLE CIRCUIT GENERATOR TRANSFER DEVICE WITH OVERRIDE, PHILLIPS BODINE #BLCD-20B
	SINGLE CIRCUIT GENERATOR TRANSFER DEVICE WITH DIMMING CONTROL AND OVERRIDE, PHILLIPS BODINE #GTD-20A

FIRE ALARM SYMBOL LIST	
(NOT ALL SYMBOLS SHOWN ARE NECESSARILY USED ON THIS PROJECT)	
SYMBOL	DESCRIPTION
	CEILING MOUNTED ADDRESSABLE SMOKE DETECTOR
	ELEVATOR RECALL ADDRESSABLE SMOKE DETECTOR
	CEILING MOUNTED LINE VOLTAGE (RESIDENTIAL TYPE) COMBINATION SMOKE/CARBON MONOXIDE DETECTOR
	CEILING MOUNTED ADDRESSABLE COMBINATION SMOKE/CARBON MONOXIDE DETECTOR WITH SOUNDER BASE
	WALL MOUNTED ADDRESSABLE COMBINATION SMOKE/CARBON MONOXIDE DETECTOR WITH SOUNDERBASE
	CEILING MOUNTED ADDRESSABLE THERMAL DETECTOR RATE-OF-RISE
	DUCT SMOKE DETECTOR
	SPRINKLER TAMPER SWITCH
	SPRINKLER WATER FLOW SWITCH
	FIRE ALARM DATA GATHERING PANEL
	FIRE ALARM CONTROL PANEL
	FIRE ALARM REMOTE ANNUNCIATOR PANEL
	COMBINATION FIRE ALARM AUDIBLE/STROBE LIGHT UNIT - FLUSH WALL MOUNTED (WITH ADJUSTABLE CANDELA RATING)
	FIRE ALARM STROBE LIGHT UNIT - FLUSH WALL MOUNTED (WITH ADJUSTABLE CANDELA RATING)
	FIRE ALARM AUDIBLE UNIT - FLUSH WALL MOUNTED (LOW FREQUENCY)
	FIRE ALARM PULL STATION
	DOOR HOLDER
	FIRE ALARM MONITOR MODULE
	FIRE ALARM CONTROL MODULE
	FIREFIGHTERS PHONE
	REMOTE LED INDICATOR FOR SMOKE OR DUCT DETECTOR

ELECTRICAL ABBREVIATIONS			
(NOT ALL SYMBOLS SHOWN ARE NECESSARILY USED ON THIS PROJECT)			
A	AMPERE	KCM	THOUSAND CIRCULAR MILS
AC	ABOVE COUNTER	KV	KILOVOLT
AFF	ABOVE FINISHED FLOOR	KVA	KILOVOLT AMPERE
AIC	AMP INTERRUPTING CAPACITY	KW	KILOWATT
ATS	AUTOMATIC TRANSFER SWITCH	KWH	KILOWATT HOUR
AUTO	AUTOMATIC	LTG	LIGHTING
AWG	AMERICAN WIRE GAUGE	MAX	MAXIMUM
BLDG	BUILDING	MCB	MAIN CIRCUIT BREAKER
C	CONDUIT	MCC	MOTOR CONTROL CENTER
CB	CIRCUIT BREAKER	MIN	MINIMUM
CCTV	CLOSED CIRCUIT TELEVISION	MTD	MOUNTED
CKT	CIRCUIT	N	NEUTRAL
CO	CARBON MONOXIDE	NIC	NOT IN CONTRACT
COMM	COMMUNICATION	NTS	NOT TO SCALE
CT	CURRENT TRANSFORMER	OC	ON CENTER
CU	COPPER	P	POLE
DEG	DEGREE	ø or PH	PHASE
DGP	DATA GATHERING PANEL	PNL	PANEL
DISC	DISCONNECT	PWR	POWER
DN	DOWN	R	RELOCATED
DWG	DRAWING	RECEPT	RECEPTACLE
E/EX	EXISTING TO REMAIN	TEL	TELEPHONE
EC	ELECTRICAL CONTRACTOR	TOS	TOP OF SHAFT
EM	EMERGENCY	TV	TELEVISION
ER	EXISTING TO BE REMOVED	TYP	TYPICAL
FA	FIRE ALARM	UON	UNLESS OTHERWISE NOTED
FACP	FIRE ALARM CONTROL PANEL	V	VOLT OR VOLTAGE
FL	FLOOR	VA	VOLT AMPERE
FT	FEET OR FOOT	VIF	VERIFY IN FIELD
GRD	GROUND	W	WATT
GFI	GROUND FAULT INTERRUPTER	WP	WEATHERPROOF
HID	HIGH INTENSITY DISCHARGE	WT	WATERTIGHT
HP	HORSE POWER	XP	EXPLOSION PROOF
HZ	HERTZ		
JB	JUNCTION BOX		

CONNECTICUT STATE BUILDING CODES	
2022 CONNECTICUT STATE BUILDING CODE 2021 INTERNATIONAL EXISTING BUILDING CODE 2021 INTERNATIONAL PLUMBING CODE 2021 INTERNATIONAL MECHANICAL CODE 2020 NATIONAL ELECTRICAL CODE (NFPA 70) - LOCAL FIRE DEPARTMENT/FIRE MARSHAL - ALL OTHER LOCAL AUTHORITIES HAVING JURISDICTION	
CONNECTICUT STATE ENERGY CODES	
2021 INTERNATIONAL ENERGY CONSERVATION CODE	
REFERENCED STANDARDS	
APPLICABLE REFERENCE STANDARDS SHALL BE AS REFERENCED BY ALL STATE AND LOCAL CODES. THE LIST BELOW IS FOR QUICK REFERENCE AND DOES NOT INCLUDE ALL APPLICABLE REFERENCE STANDARDS.	
2019 NFPA 13 - STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS 2019 NFPA 14 - STANDARD FOR THE INSTALLATION OF STANDPIPE AND HOSE SYSTEMS 2019 NFPA 20 - STANDARD FOR THE INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION 2021 NFPA 54 - NATIONAL FUEL GAS CODE 2020 NFPA 70 - NATIONAL ELECTRICAL CODE 2019 NFPA 72 - NATIONAL FIRE ALARM AND SIGNALING CODE	

TWO WAY COMMUNICATION SYMBOL LIST	
NOTES: 1. PROVIDE ALL EQUIPMENT, CONDUIT AND WIRING BETWEEN BASE STATION AND CALL BOXES AS REQUIRED FOR A COMPLETE CODE COMPLIANT INSTALLATION. 2. PROVIDE A COMMAND SYSTEM SUPERVISORY, AND A SECONDARY POWER SUPPLY (UPS). 3. PROVIDE LED LIGHTED SIGNS WITH BATTERY BACKUP. CIRCUIT TO NEAREST LIGHTING BRANCH CIRCUIT AHEAD OF ANY CONTROLS. 4. PROVIDE ALL SIGNAGE (CALL BOX INSTRUCTION SIGNS, EMERGENCY COMMUNICATION SIGNS, ETC.) AS REQUIRED.	
SYMBOL	DESCRIPTION
	TWO WAY COMMUNICATION BASE STATION, RATH #2500-210PSS, WITH ENCLOSURE, RATH #2500-210FM, PROVIDE 120V DEDICATED FROM EMERGENCY PANEL WITH LOCKABLE CIRCUIT BREAKER
	TWO WAY COMMUNICATION CALL BOX, RATH #2100-958SSRC2, WITH DIRECTION SIGN, RATH #7049SS

ELECTRICAL DRAWING LIST	
SHEET NUMBER	SHEET NAME
E-001	ELECTRICAL COVER SHEET
E-002	ELECTRICAL NOTES
E-003	ELECTRICAL NOTES
E-100	ELECTRICAL CELLAR POWER PLAN
E-101	ELECTRICAL 1ST FLOOR POWER PLAN
E-102	ELECTRICAL 2ND FLOOR POWER PLAN
E-103	ELECTRICAL 3RD FLOOR POWER PLAN
E-104	ELECTRICAL 4TH FLOOR POWER PLAN
E-105	ELECTRICAL ROOF POWER PLAN
E-200	ELECTRICAL CELLAR LIGHTING PLAN
E-201	ELECTRICAL 1ST FLOOR LIGHTING PLAN
E-202	ELECTRICAL 2ND FLOOR LIGHTING PLAN
E-203	ELECTRICAL 3RD FLOOR LIGHTING PLAN
E-204	ELECTRICAL 4TH FLOOR LIGHTING PLAN
E-301	ELECTRICAL POWER RISER DIAGRAM
E-302	FIRE ALARM RISER DIAGRAM
E-401	ELECTRICAL PANEL SCHEDULES
E-501	ELECTRICAL DETAILS
E-502	ELECTRICAL DETAILS



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158 GRAND ST
WATERBURY, CT

JOB NO.: MEA-2026.00233

SCALE: NTS

DRAWING TITLE

ELECTRICAL
COVER SHEET

DRAWING #

E-001

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ELECTRICAL NOTES

E-002

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ELECTRICAL POWER NOTES	ELECTRICAL LIGHTING NOTES	ELECTRICAL UNIT PLAN NOTES
A. CONTRACTOR SHALL COORDINATE WITH ARCHITECTURAL DRAWINGS AND ARCHITECT IN FIELD FOR EXACT LOCATION, QUANTITY AND ELEVATION OF POWER AND TELEPHONE/DATA OUTLETS PRIOR TO INSTALLATION. B. RECEPTACLES SHALL BE CIRCUITED IN ACCORDANCE WITH CIRCUIT NUMBER INDICATED ADJACENT TO EACH DEVICE. CIRCUITRY MAY BE SHOWN IN CERTAIN INSTANCES. C. CIRCUIT NUMBERS ARE INDICATED FOR INTENT ONLY. THE ELECTRICAL CONTRACTOR SHALL ADJUST ACCORDINGLY IN THE FIELD, TO BALANCE THE CIRCUITS EVENLY ON ALL PHASES. D. MECHANICAL EQUIPMENT IS LOCATED ABOVE THE HUNG CEILING UNLESS OTHERWISE NOTED. EXACT LOCATION SHALL BE DETERMINED FROM MECHANICAL DRAWINGS. E. EXACT LOCATIONS FOR ALL FIRE SMOKE DAMPERS, MOTORIZED DAMPERS, DUCT MOUNTED SMOKE DETECTORS & MECHANICAL EQUIPMENT SHALL BE DETERMINED FROM THE MECHANICAL DRAWINGS. COORDINATE WITH MECHANICAL CONTRACTOR IN FIELD. F. WHERE APPLICABLE, RUN 1" EMPTY CONDUIT TO NEAREST ACCESSIBLE HUNG CEILING WITH GROMMET END FITTINGS FOR TELEPHONE/DATA & PROVIDE DRAG LINES FOR PULLING CABLE. G. COORDINATE THE HARDWARE REQUIREMENTS FOR THE DOORS WITH THE ARCHITECT & SECURITY CONSULTANT PRIOR TO INSTALLATION (I.E. ELECTRIC HINGES, CARD READERS, ELECTRIC STRIKES, MAGNETIC SWITCHES, POWER SUPPLIES, ETC.) PROVIDE A BACKBOX WITH 1" CONDUIT WITH DRAG LINES STUBBED UP ABOVE CEILING FOR ALL LOW VOLTAGE DEVICES SUCH AS CARD READERS, MAGNETIC LOCKS, ELECTRIC LOCKSET, ELECTRIC STRIKE, ETC. H. ALL BRANCH CIRCUIT HOME RUNS SHALL BE 2#12 & 1#12 GND IN 3/4" CONDUIT OR MC CABLE TO PANEL & CIRCUIT INDICATED. MAXIMUM OF THREE HOME RUNS PER CONDUIT. I. ELECTRICAL CONTRACTOR SHALL REFER TO MECHANICAL DRAWINGS, PLUMBING DRAWINGS, AND COORDINATE WITH MECHANICAL CONTRACTOR AND PLUMBING CONTRACTOR FOR EXACT LOCATION OF MECHANICAL AND PLUMBING EQUIPMENT. PROVIDE DISCONNECT SWITCHES AND CIRCUITING SIZED PER THEIR EQUIPMENT SCHEDULES. HEAT TRACE CIRCUITS SHALL BE PROTECTED BY 30mA GROUND FAULT TYPE CIRCUIT BREAKERS. PROVIDE (3) FIRE ALARM MONITOR MODULES FOR EACH HEAT TRACE CONTROLLER SERVING SPRINKLER PIPES. PROVIDE (4) MONITOR MODULES FOR EACH DRY PIPE COMPRESSOR. J. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH AUDIO/VISUAL, TELECOM, AND SECURITY DRAWINGS AND CONTRACTORS FOR ANY ADDITIONAL BACKBOX, CONDUIT, AND POWER REQUIREMENTS. K. ELECTRICAL CONTRACTOR SHALL FIELD COORDINATE THE VOLTAGE, PHASE, AND HORSEPOWER OF ALL ELECTRICAL EQUIPMENT PURCHASED AND SUPPLIED TO THE SITE. ELECTRICAL CONTRACTOR SHALL SUPPLY FUSES OR CIRCUIT BREAKERS PER MANUFACTURER'S RECOMMENDATIONS WHERE NECESSARY. L. ELECTRICAL CONTRACTOR SHALL PROVIDE A COMPLETE TYPEWRITTEN PANEL SCHEDULE DIRECTORY AT PROJECT COMPLETION OF ALL CIRCUITS UTILIZED, IDENTIFYING THE LOADS THAT THEY ARE SERVING. M. ALL JUNCTION BOXES AND DISCONNECT SWITCH LOCATIONS SHALL BE COORDINATED IN THE FIELD. JUNCTION BOXES AND DISCONNECT SWITCHES FOR MECHANICAL EQUIPMENT ABOVE CEILINGS SHALL BE INSTALLED SO THAT THEY ARE ACCESSIBLE FROM ACCESS PANELS. COORDINATE WITH MECHANICAL CONTRACTOR. N. ELECTRICAL CONTRACTOR SHALL INSTALL ALL STARTERS, AND VARIABLE FREQUENCY DRIVES (FURNISHED BY MECHANICAL CONTRACTOR) AND PROVIDE CONDUIT AND WIRING TO AND FROM STARTERS AND VFDs TO MECHANICAL EQUIPMENT AND/OR ITS ASSOCIATED DISCONNECT SWITCHES. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATIONS AND REQUIREMENTS. O. ELECTRICAL CONTRACTOR SHALL INCLUDE IN BASE BID (2) 150', 20A, 120V CIRCUITS FROM NEAREST PANEL PER FLOOR FOR HVAC SYSTEM CONTROLS. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATIONS AND REQUIREMENTS. P. ALL POWER AND LIGHTING CIRCUITS, AND LOW VOLTAGE CABLING (VOICE/DATA, FIRE ALARM, LIGHTING CONTROLS, AUDIO/VISUAL, HVAC CONTROLS, ETC.) ROUTED THROUGH EXPOSED CEILINGS SHALL BE IN EMT CONDUIT. COORDINATE INSTALLATION WITH OTHER TRADES. REFER TO ARCHITECTURAL AND INTERIOR DESIGNER DRAWINGS FOR LOCATIONS OF EXPOSED CEILINGS. Q. ELECTRICAL CONTRACTOR SHALL PROVIDE (3) #12 WIRE IN 3/4" CONDUIT FROM DX SPLIT OUTDOOR AIR-COOLED CONDENSING UNITS TO DX SPLIT INDOOR UNITS WHERE UNITS ARE SHOWN AS "POWERED BY ODU." COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATIONS AND REQUIREMENTS. R. ELECTRICAL CONTRACTOR SHALL PROVIDE LOCKABLE FUSIBLE DISCONNECT SWITCHES WITH AUXILIARY CONTACTS FOR ELEVATOR CONTROLLERS AND MOTORS. COORDINATE EXACT LOCATIONS AND REQUIREMENTS WITH ELEVATOR CONTRACTOR. S. WHERE RECEPTACLES SHOWN OUTDOORS CANNOT BE WALL MOUNTED, PROVIDE A RECEPTACLE BOLLARD, B-K LIGHTING #RB-18-RE1 (FINISH BY ARCHITECT). T. ALL RECEPTACLES WITHIN 6' OF THE EDGE OF SINKS, OR INSTALLED ON COUNTERTOPS SHALL BE PROVIDED WITH GROUND FAULT PROTECTION.	A. FOR EXACT ELEVATION, LOCATION, QUANTITY AND SPECIFICATIONS OF LIGHTING FIXTURES AND SWITCHES REFER TO ARCHITECTURAL AND INTERIOR DESIGNER'S DRAWINGS AND COORDINATE WITH ARCHITECT IN THE FIELD. B. LIGHTING FIXTURES SHALL BE CIRCUITED IN ACCORDANCE WITH CIRCUIT NUMBER INDICATED ADJACENT TO EACH FIXTURE. CIRCUITRY MAY BE SHOWN IN CERTAIN INSTANCES. C. ALL JUNCTION OR OUTLET BOXES SHALL BE INSTALLED SO AS TO ALLOW ACCESS TO COVER. PROVIDE ARCHITECT APPROVED ACCESS DOORS OR PLATES AS REQUIRED IN AREAS WHERE UNOBSTRUCTED ACCESS TO BOX OR OUTLET IS NOT POSSIBLE. D. PRIOR TO ORDERING LIGHTING FIXTURES, COORDINATE WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS. IF DISCREPANCIES EXIST BETWEEN ARCHITECTURAL AND ENGINEERING INFORMATION OBTAIN CLARIFICATION PRIOR TO PROCEEDING. E. CIRCUIT NUMBERS ARE INDICATED FOR INTENT ONLY. THE ELECTRICAL CONTRACTOR SHALL ADJUST ACCORDINGLY IN THE FIELD TO BALANCE THE CIRCUITS EVENLY ON ALL PHASES. F. MULTIPLE SWITCHES SHOWN IN SAME LOCATION SHALL BE GANGED TOGETHER WITH A COMMON FACEPLATE. G. ALL LIGHTING FIXTURES CONTROLLED BY DIMMER SWITCHES SHALL BE PROVIDED WITH DEDICATED NEUTRAL CONDUCTOR. H. ALL NIGHT LIGHTS AND STAIR LIGHTS SHALL BE UNSWITCHED AND CIRCUITED DIRECTLY TO ASSOCIATED ELECTRICAL PANELS, U.O.N. I. BRANCH CIRCUIT BREAKERS FEEDING STAIR LIGHTS SHALL BE LOCKED IN "ON" POSITION. STAIR LIGHTING FIXTURES SHALL BE PROVIDED WITH INTEGRAL BATTERIES AND OCCUPANCY SENSORS. FIXTURES SHALL DIM TO 50% DURING VACANCY. J. ALL LIGHT FIXTURES DESIGNATED WITH "EM" SHALL BE PROVIDED WITH INTEGRAL BATTERIES. WHERE FIXTURE IS UNABLE TO PROVIDED WITH AN INTEGRAL BATTERY, PROVIDE A 14 WATT EXTERNAL EMERGENCY BATTERY PACK AND TEST SWITCH. K. ELECTRICAL CONTRACTOR SHALL PROVIDE A FIRE RATED BARRIER (CONTRAST LIGHTING #FRB2) FOR ALL RECESSED LIGHTING FIXTURES INSTALLED IN FIRE RATED CEILINGS. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS. L. EXTERIOR LIGHTING SHALL BE CONTROLLED BY PHOTOCELLS AND TIMECLOCKS WITH A MANUAL OVERRIDE SWITCHES LOCATED IN ELECTRICAL ROOMS. M. REFER TO ARCHITECTURAL CIVIL, INTERIOR DESIGNER, AND LANDSCAPE DRAWINGS FOR LIGHTING LAYOUTS, AND LIGHTING FIXTURE SCHEDULE. THEIR DRAWINGS SHALL SUPERSIDE THE LIGHTING LAYOUTS ON THESE DRAWINGS. ELECTRICAL CONTRACTOR SHALL PROVIDE CIRCUITING AS REQUIRED BASED ON THEIR LAYOUTS. N. EACH LIGHT FIXTURE TYPE SHALL BE ON A SEPARATE DIMMER SWITCH (VIA LUTRON DIMMING POWER PACKS). DIMMING ZONES ARE DENOTED BY LOWERCASE LETTER NEXT TO FIXTURE AND SWITCH (a, b, c, ETC.) O. CORRIDOR LIGHTING NOT DESIGNATED WITH "EM" SHALL BE CONTROLLED BY OCCUPANCY SENSORS. PROVIDE RELAY MODULES AS REQUIRED. COORDINATE WITH MANUFACTURER FOR QUANTITY. P. PROVIDE ON-SITE VISITS BY CONTROL SYSTEM VENDOR'S APPLICATION ENGINEER AND SYSTEMS PROGRAMMER TO INSPECT, START-UP, COMMISSION, AND PROGRAM THE LIGHTING SYSTEM(S) IN ORDER TO PROVIDE A COMPLETE, FULLY-FUNCTIONING LIGHTING SYSTEM. Q. PROVIDE SIXTEEN (16) HOURS INSTRUCTION TO THE OWNER'S REPRESENTATIVE DESIGNATED STAFF ON THE USE, OPERATION AND MAINTENANCE OF THE SYSTEM, SCHEDULED AS A MINIMUM OF TWO (2) SEPARATE SESSIONS, BY AN INSTRUCTOR FULLY KNOWLEDGEABLE AND QUALIFIED IN SYSTEM OPERATION. THE SYSTEM REFERENCE MANUALS SHOULD BE COMPLETE AND AVAILABLE DURING THESE DEMONSTRATIONS/INSTRUCTIONS.	1. ALL 120V 15A OR 20A BRANCH CIRCUITS SUPPLYING OUTLETS OR DEVICES SHALL BE PROVIDED WITH AN ARC FAULT CIRCUIT INTERRUPTER TYPE CIRCUIT BREAKER. 2. ALL 120V 15A OR 20A RECEPTACLES WITHIN 6' OF THE EDGE OF SINKS, OR INSTALLED ON KITCHEN COUNTERTOPS SHALL BE PROVIDED WITH GROUND FAULT PROTECTION. 3. ALL RECEPTACLES SHALL BE TAMPER RESISTANT TYPE. 4. KITCHEN ISLAND OUTLETS SHALL HAVE PANCAKE BOXES AND BE INTEGRATED INTO CABINETS. PROVIDE CONDUIT DOWN FROM LOAD CENTER AND ROUTED IN CEILING CAVITY OF FLOOR BELOW TO KITCHEN ISLAND. 5. UNIT LOAD CENTERS SHALL BE MOUNTED SO THAT THE HEIGHT OF TALLEST CIRCUIT BREAKER IS 48" MAXIMUM. 6. ELECTRICAL DEVICE HEIGHTS TO COMPLY WITH ADA REQUIREMENTS, COORDINATE WITH ARCHITECT FOR EXACT HEIGHTS AND LOCATIONS. -16" AFF MINIMUM TO BOTTOM OF RECEPTACLE -47" AFF MAXIMUM TO TOP OF SWITCH -46" AFF MAXIMUM TO TOP OF COUNTERTOP RECEPTACLES & SWITCHES. 7. SYMBOLS INDICATE THE FOLLOWING WIRING: TV -PROVIDE (1) CAT-6E AND (1) COAX RG6 8. PROVIDE (2) MICRODUCTS WITH DRAG LINES FROM EACH NID PANEL TO THE TELECOM DEMARC LOCATION IN THE BASEMENT. COORDINATE WITH TELECOM VENDOR FOR EXACT SIZES AND REQUIREMENTS. 9. FOR UNITS WITH EXPOSED CEILINGS, ELECTRICAL CONTRACTOR SHALL PROVIDE ALL CIRCUITS (POWER, LIGHTING, FIRE ALARM, LOW VOLTAGE, ETC.) IN EMT CONDUIT. COORDINATE WITH ARCHITECT. 10. ALL BACK BOXES IN DEMISING WALLS BETWEEN RESIDENTIAL UNITS SHALL BE SEPARATED BY AT LEAST 24" OR ONE FULL STUD SPACE. SEAL ALL BACK BOXES SEPARATED BY ONE FULL STUD SPACE IN DEMISING AND UNIT CORRIDOR PARTITIONS WITH FIRE-RATED PUTTY PADS. 11. GF1 RECEPTACLES FOR THE DISHWASHERS SHALL BE INSTALLED IN CABINET BELOW SINK. 12. PROVIDE A 20A, 120V CIRCUIT FOR ALL CONDENSATE PUMPS. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH THE MECHANICAL CONTRACTOR. 13. FOR TYPE A UNITS, PROVIDE A SWITCH ABOVE THE COUNTERTOP TO CONTROL THE HOOD/LIGHT ABOVE THE RANGE. 14. ALL LIGHTING FIXTURES SHALL CONTAIN ONLY HIGH-EFFICACY LIGHTING SOURCES. 15. ALL LIGHTING FIXTURES SHALL BE CIRCUITED TO CIRCUIT #1 IN THE UNITS' PANEL. 16. PROVIDE A 20A, 120V CIRCUIT FOR ALL LEAK DETECTORS. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH THE PLUMBING CONTRACTOR. 17. PROVIDE A JUNCTION BOX IN EACH BATHROOM WITH A 2-WIRE FIRE ALARM STROBE CIRCUIT FROM HORN IN THE UNIT FOR A FUTURE STROBE FOR HEARING IMPAIRED TENANTS.
ACCESSIBILITY NOTES		
1. FOR TYPE B DWELLING UNITS: 1.1. OUTLETS AND SWITCHES SHALL BE MOUNTED NO LESS THAN 15" AFF MEASURED TO THE BOTTOM OF THE ELECTRICAL BOX AND NO MORE THAN 48" AFF MEASURED TO THE TOP OF THE ELECTRICAL BOX. 1.2. OUTLETS AND SWITCHES LOCATED OVER OBSTRUCTIONS (E.G. KITCHEN COUNTERTOPS) SHALL BE MOUNTED NO MORE THAN 46" AFF MEASURED TO THE TOP OF THE BOX. REACHING OBSTRUCTIONS GREATER THAN 36" IN HEIGHT AND 25 1/2" IN DEPTH IS NOT PERMITTED. 2. FOR TYPE A DWELLING UNITS: 2.1. OUTLETS AND SWITCHES SHALL BE MOUNTED NO LESS THAN 15" AFF MEASURED TO THE BOTTOM OF THE ELECTRICAL BOX AND NO MORE THAN 48" AFF MEASURED TO THE TOP OF THE ELECTRICAL BOX. 2.2. OUTLETS AND SWITCHES LOCATED OVER OBSTRUCTIONS (E.G. KITCHEN COUNTERTOPS) SHALL COMPLY WITH THE FOLLOWING: 2.2.1. WHERE A SIDE APPROACH IS PROVIDED AT OBSTRUCTIONS GREATER THAN 10" IN DEPTH, OUTLETS AND SWITCHES SHALL BE MOUNTED NO MORE THAN 46" AFF MEASURED TO THE TOP OF THE BOX. REACHING OBSTRUCTIONS GREATER THAN 34" IN HEIGHT AND 24" IN DEPTH IS NOT PERMITTED; AND 2.2.2. WHERE A FRONT APPROACH, INCLUDING KNEE AND TOE CLEARANCE, IS PROVIDED AT OBSTRUCTIONS GREATER THAN 20" IN DEPTH, OUTLETS AND SWITCHES SHALL BE MOUNTED NO MORE THAN 44" AFF, MEASURED TO THE TOP OF THE BOX. REACHING OVER OBSTRUCTIONS GREATER THAN 25" IN DEPTH IS NOT PERMITTED.		

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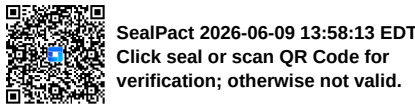
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**ELECTRICAL
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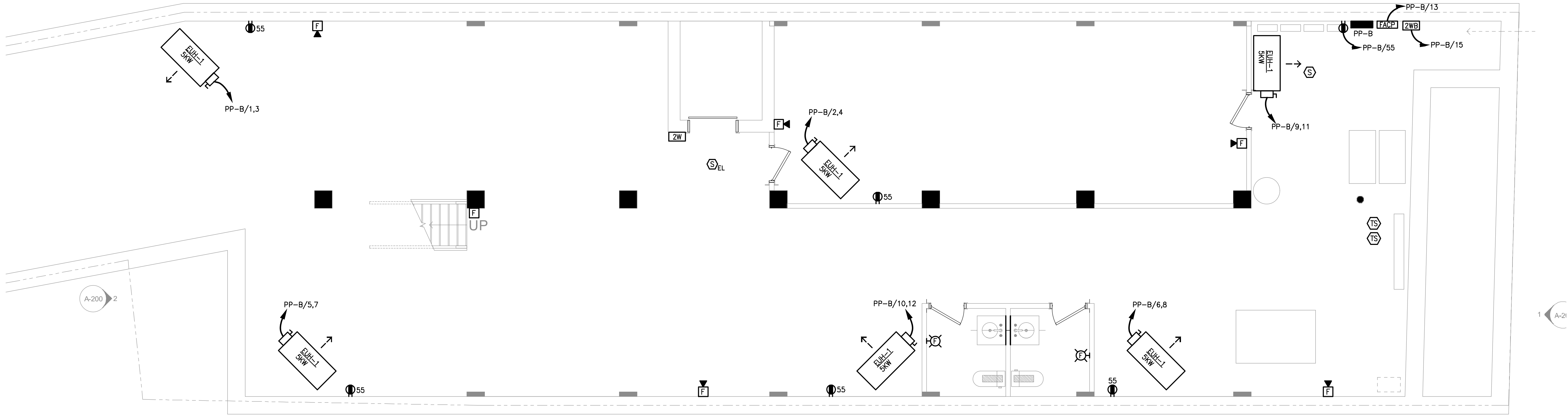
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E-003

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ELECTRICAL NOTES:

- EXISTING DEVICES TO REMAIN. RE-CIRCUIT ALL EXISTING BRANCH CIRCUITS TO NEW PANEL "PP-B." VERIFY EXACT QUANTITIES AND SIZES IN THE FIELD.
- PROVIDE NEW FIRE ALARM MONITOR MODULES FOR ALL EXISTING TAMPER SWITCHES AND WATER FLOW DEVICES. VERIFY EXACT QUANTITIES IN THE FIELD.



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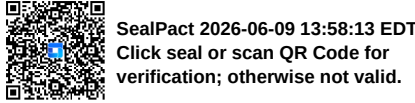
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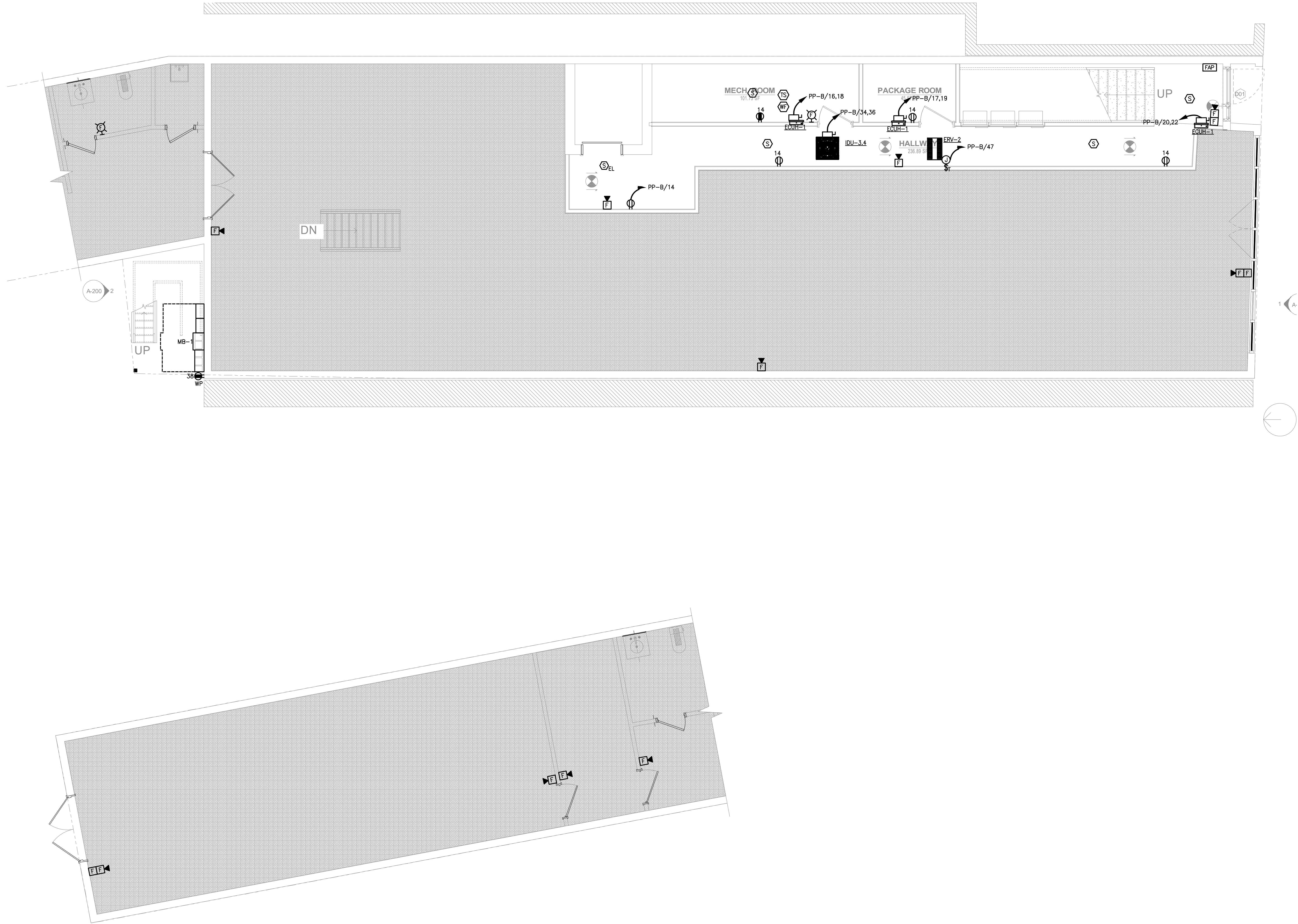
ELECTRICAL
CELLAR POWER PLAN

DRAWING #

E-100

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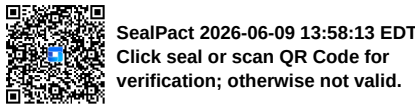
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ELECTRICAL
1ST FLOOR POWER PLAN

DRAWING #

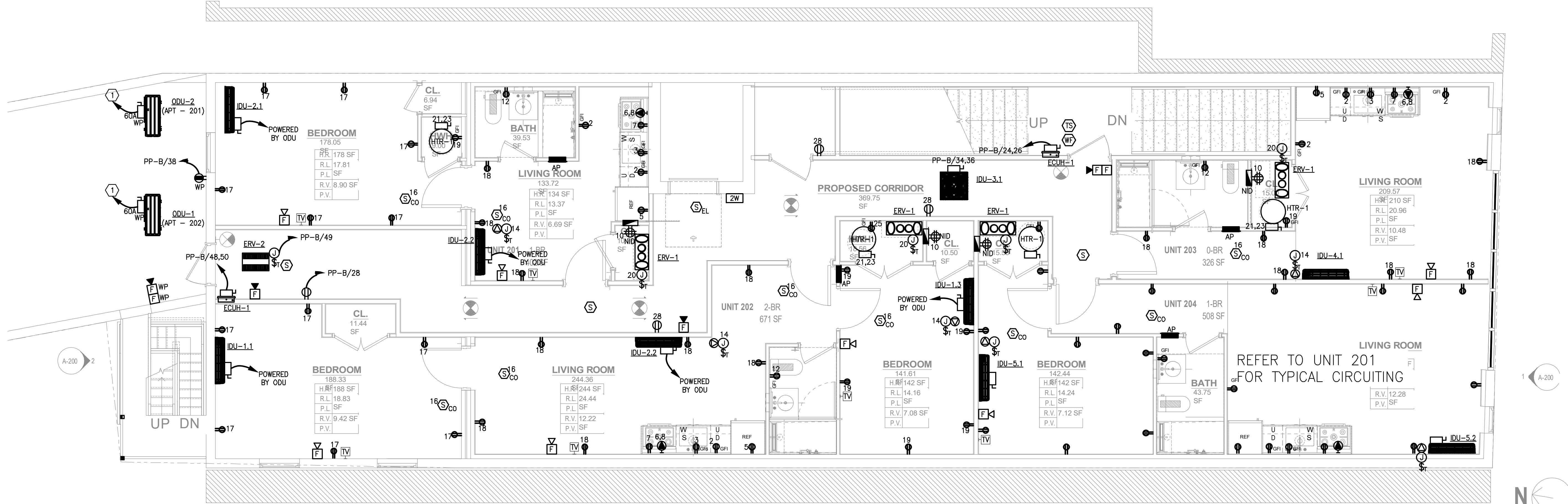
E-101

ELECTRICAL NOTES:

1. REFER TO ELECTRICAL UNIT PLAN NOTES ON DRAWING E-003 FOR ADDITIONAL INFORMATION.

POWER KEY NOTES:

1. CIRCUIT APARTMENT UNIT CONDENSING UNITS TO THEIR RESPECTIVE APARTMENT UNIT LOAD CENTERS. PROVIDE 60A UNFUSED WEATHERPROOF DISCONNECT SWITCHES. REFER TO APARTMENT UNIT PANEL SCHEDULES FOR ADDITIONAL INFORMATION. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT UNIT LOCATIONS AND REQUIREMENTS. (TYPICAL FOR ALL)



ARCHITECT OF RECORD:

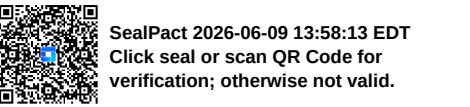
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DRAWING TITLE

ELECTRICAL
2ND FLOOR POWER PLAN

DRAWING #

E-102

ELECTRICAL NOTES:

1. REFER TO ELECTRICAL UNIT PLAN NOTES ON DRAWING E-003 FOR ADDITIONAL INFORMATION.

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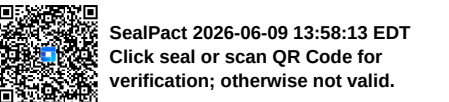
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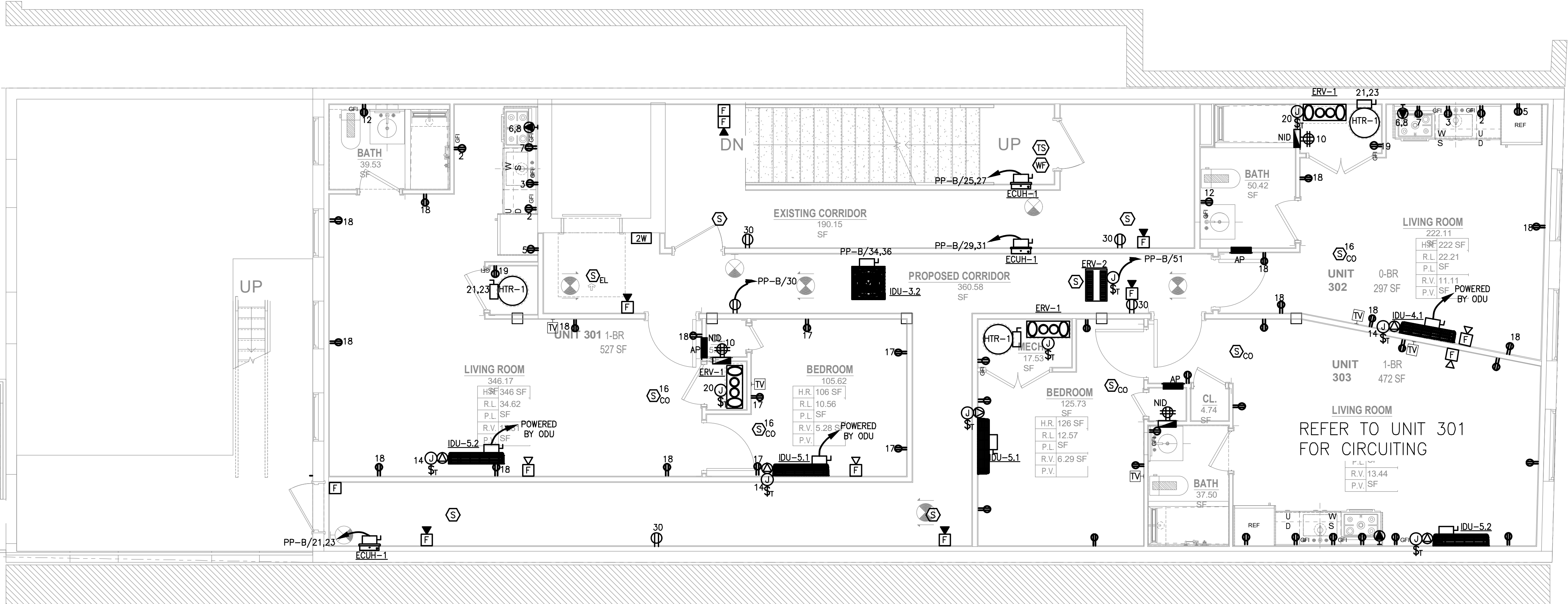
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DRAWING TITLE

ELECTRICAL
3RD FLOOR POWER PLAN

DRAWING #

E-103



ELECTRICAL NOTES:
1. REFER TO ELECTRICAL UNIT PLAN NOTES ON DRAWING E-003 FOR ADDITIONAL INFORMATION.



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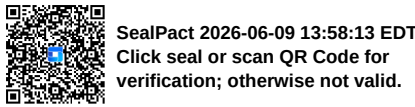
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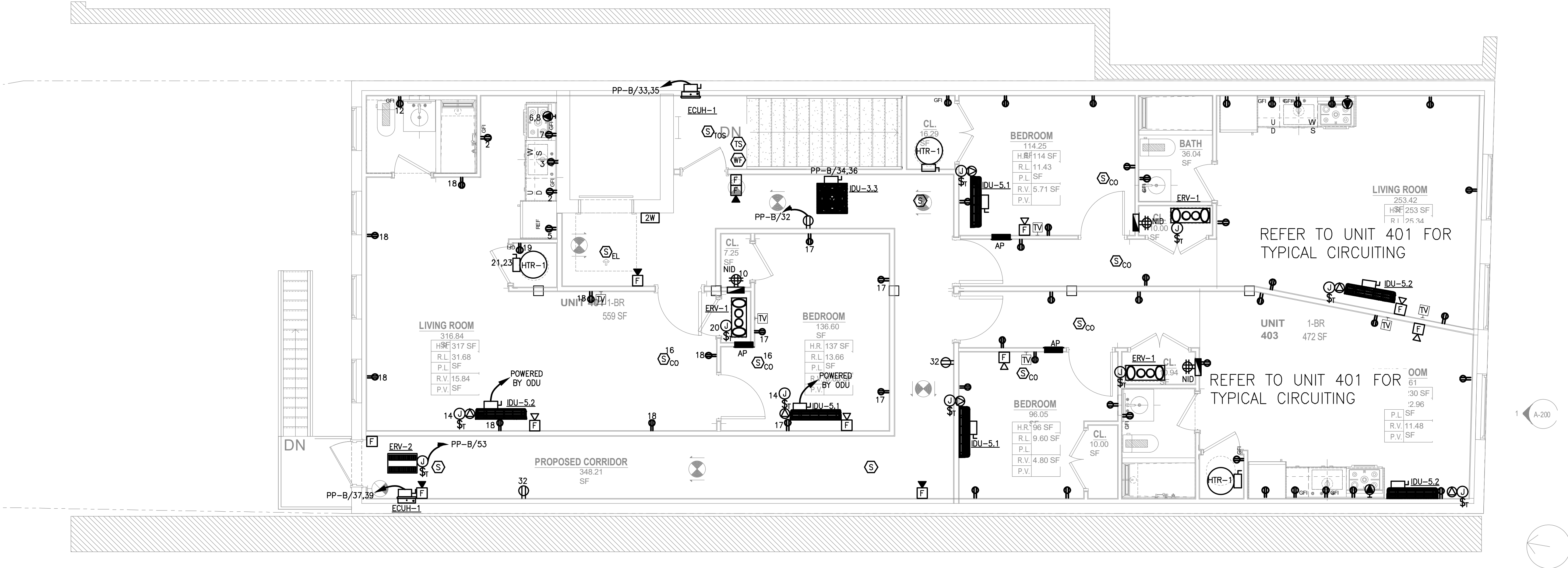
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ELECTRICAL
4TH FLOOR POWER PLAN

DRAWING #

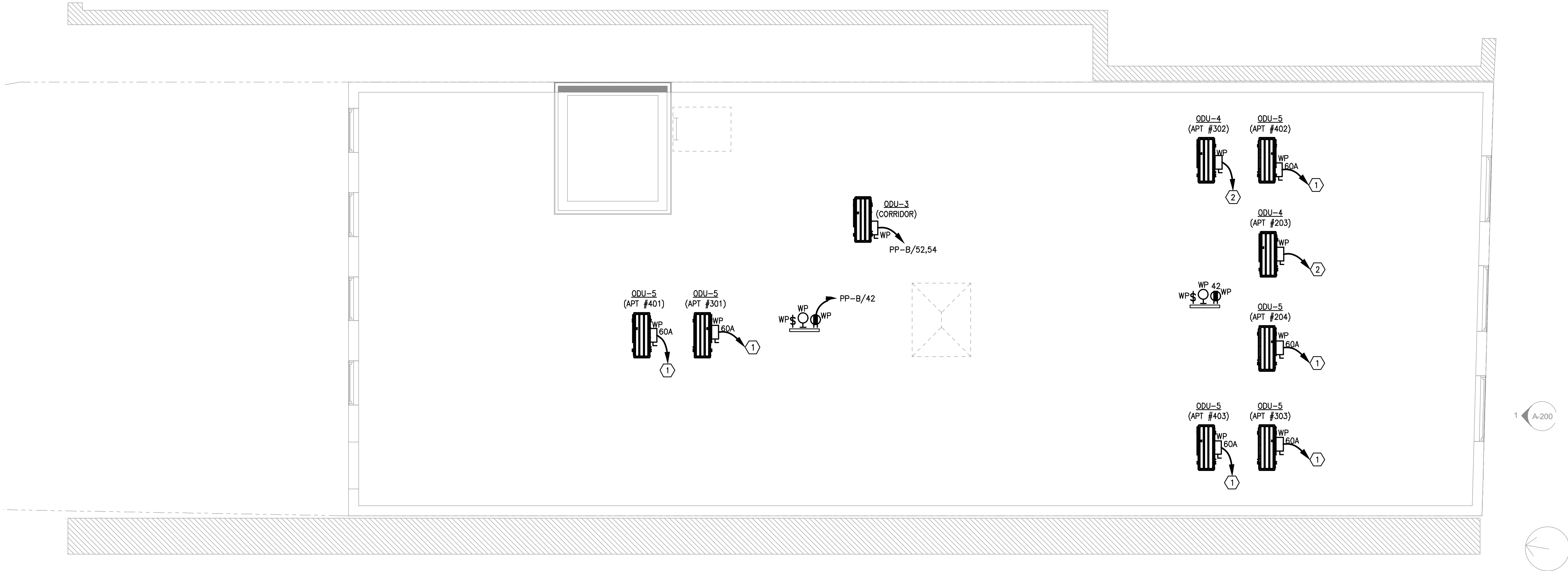
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POWER KEY NOTES:

- 1 CIRCUIT APARTMENT UNIT CONDENSING UNITS TO THEIR RESPECTIVE APARTMENT UNIT LOAD CENTERS. PROVIDE 60A UNFUSED WEATHERPROOF DISCONNECT SWITCHES. REFER TO APARTMENT UNIT PANEL SCHEDULES FOR ADDITIONAL INFORMATION. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT UNIT LOCATIONS AND REQUIREMENTS.
- 2 CIRCUIT APARTMENT UNIT CONDENSING UNITS TO THEIR RESPECTIVE APARTMENT UNIT LOAD CENTERS. PROVIDE 30A UNFUSED WEATHERPROOF DISCONNECT SWITCHES. REFER TO APARTMENT UNIT PANEL SCHEDULES FOR ADDITIONAL INFORMATION. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT UNIT LOCATIONS AND REQUIREMENTS.



ARCHITECT OF RECORD:

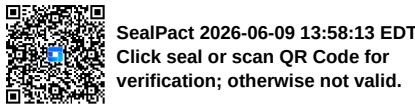
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PROJECT NAME

PROPOSED OFFICE TO RESI.
CONVERSION

158 GRAND ST
WATERBURY, CT

JOB NO.: MEA.2026.00233

SCALE: 1/4" = 1'-0"

DRAWING TITLE

ELECTRICAL
ROOF POWER PLAN

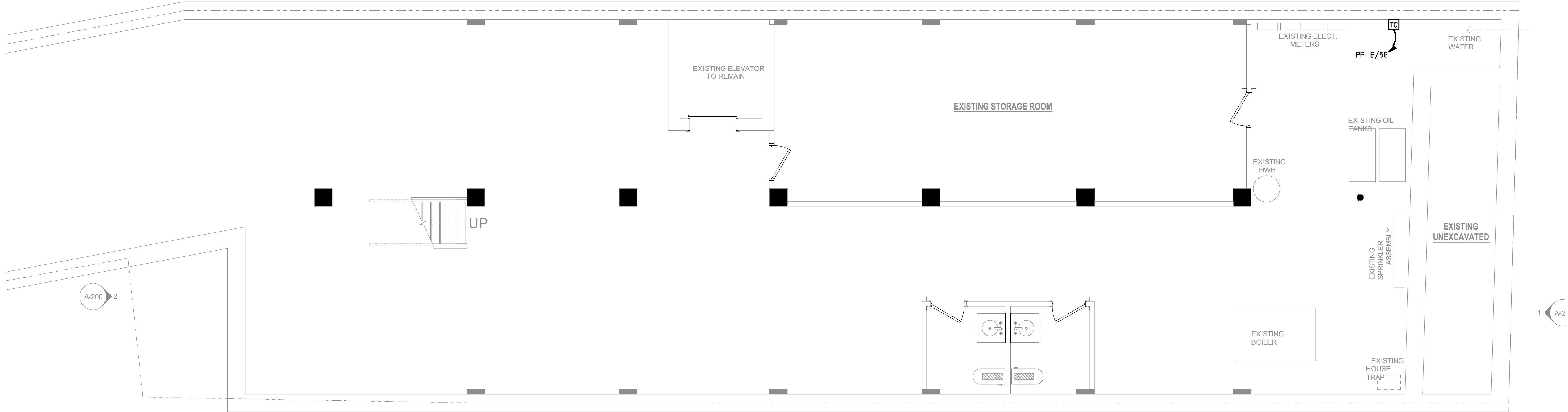
DRAWING #

E-105

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ELECTRICAL NOTES:

1. EXISTING LIGHTING AND CONTROLS TO REMAIN.
RE-CIRCUIT ALL EXISTING BRANCH CIRCUITS TO NEW
PANEL "PP-B." VERIFY EXACT QUANTITIES AND SIZES IN
THE FIELD.



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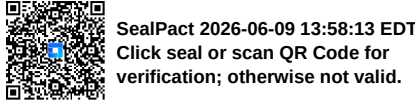
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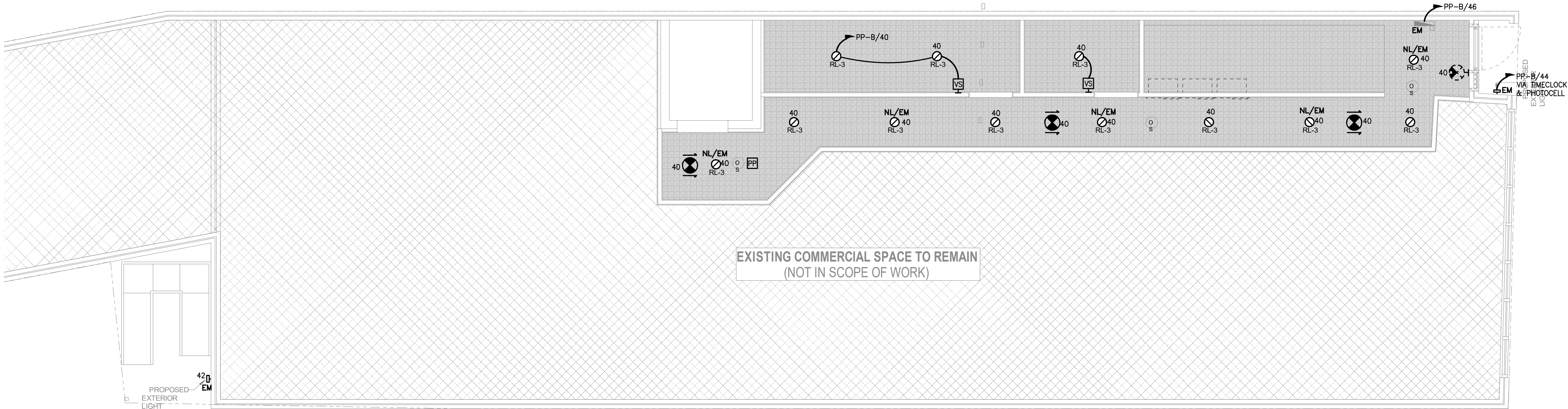
ELECTRICAL
CELLAR LIGHTING PLAN

DRAWING #

E-200

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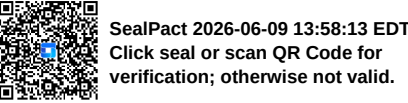
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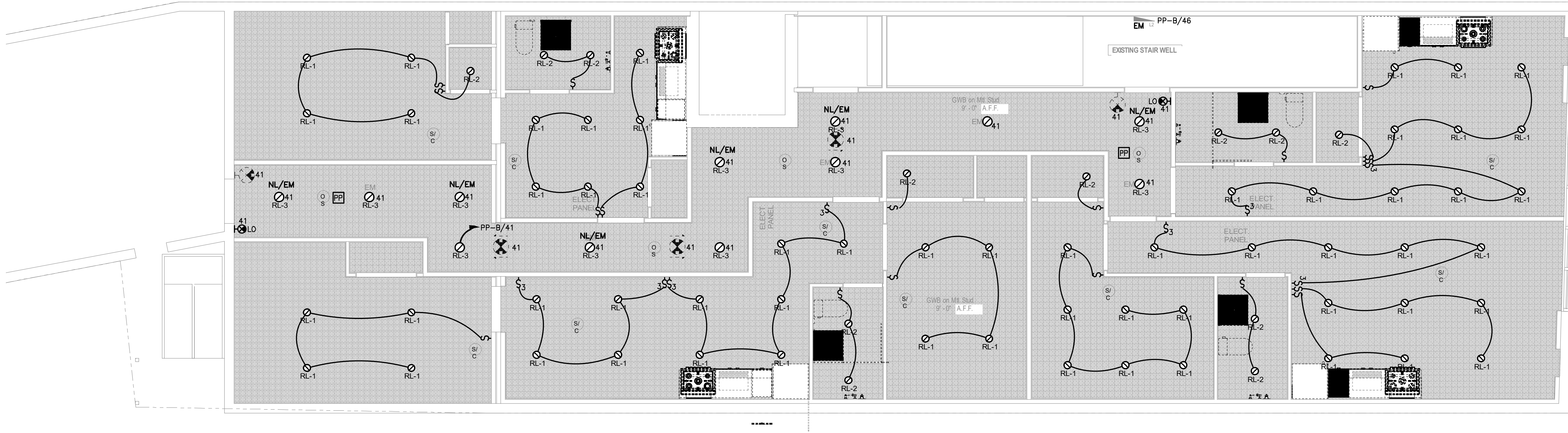
ELECTRICAL
1ST FLOOR LIGHTING PLAN

DRAWING #

E-201

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- ELECTRICAL NOTES:
- ALL LIGHTING FIXTURES WITHIN APARTMENT UNITS SHALL BE CIRCUITED TO CIRCUIT #1 IN THE UNITS' PANEL.



ARCHITECT OF RECORD:

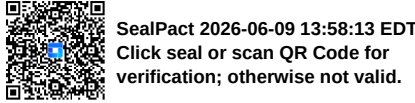
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SCALE: 1/4" = 1'-0"

DRAWING TITLE

ELECTRICAL
2ND FLOOR LIGHTING PLAN

DRAWING #

E-202

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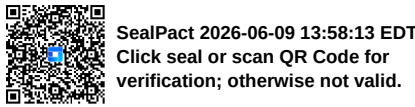
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WATERBURY, CT

JOB NO.: MEA.2026.00233

SCALE: 1/4" = 1'-0"

DRAWING TITLE

ELECTRICAL
3RD FLOOR LIGHTING PLAN

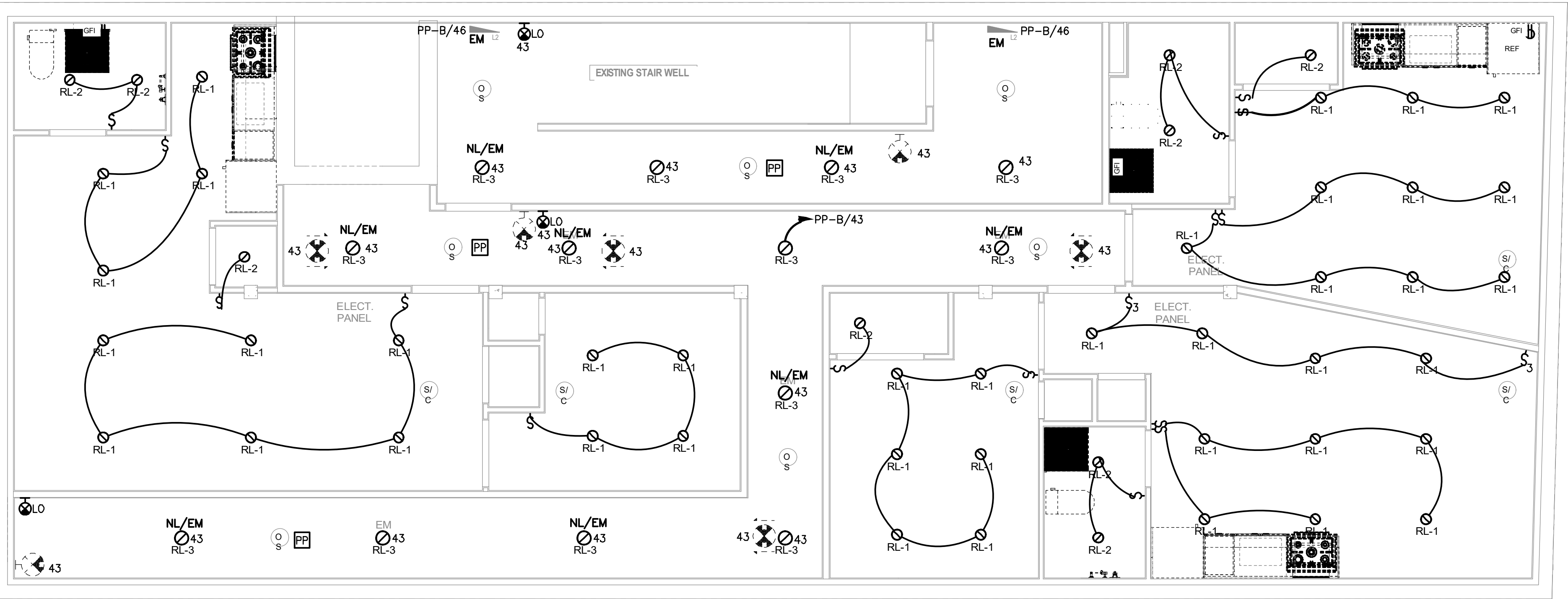
DRAWING #

E-203

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ELECTRICAL NOTES:

- ALL LIGHTING FIXTURES WITHIN APARTMENT UNITS SHALL BE CIRCUITED TO CIRCUIT #1 IN THE UNITS' PANEL.



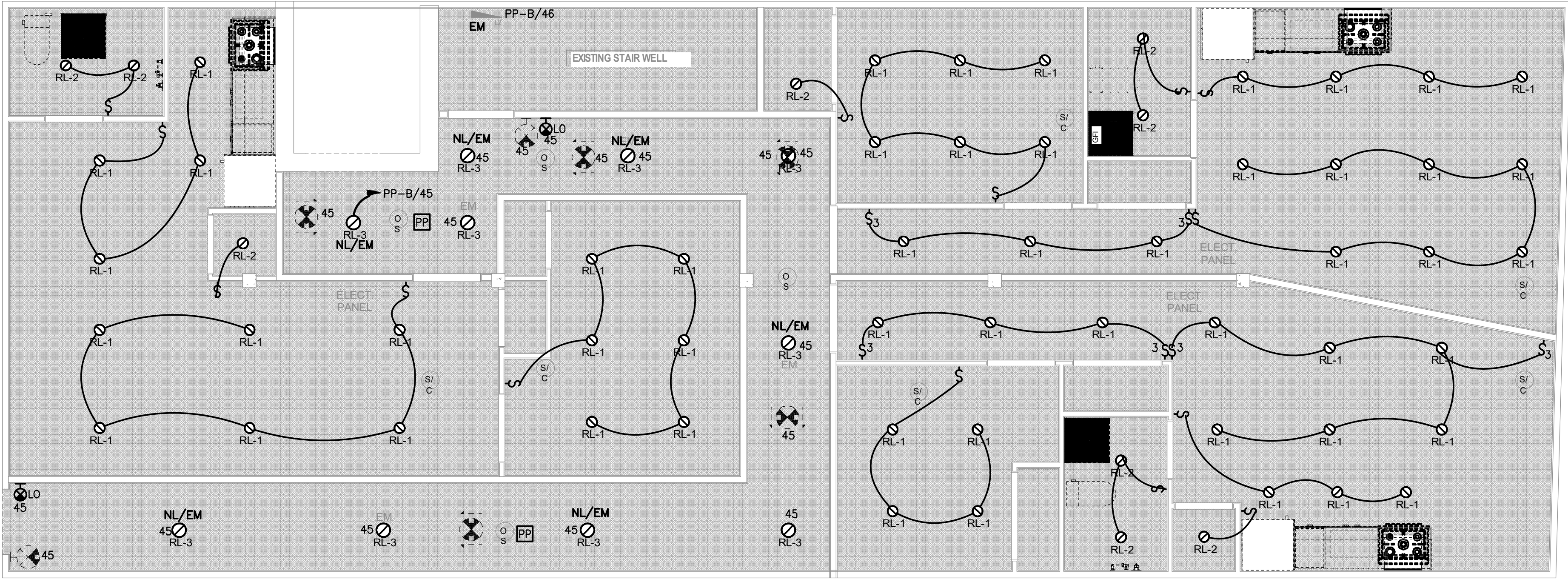
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ARCHITECT OF RECORD:

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ELECTRICAL NOTES:

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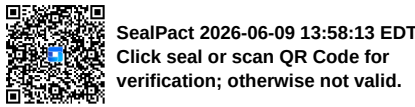


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158 GRAND ST
WATERBURY, CT

JOB NO.: MEA.2026.00233

SCALE: 1/4" = 1'-0"

DRAWING TITLE

ELECTRICAL
4TH FLOOR LIGHTING PLAN

DRAWING #

E-204

POWER RISER NOTES:

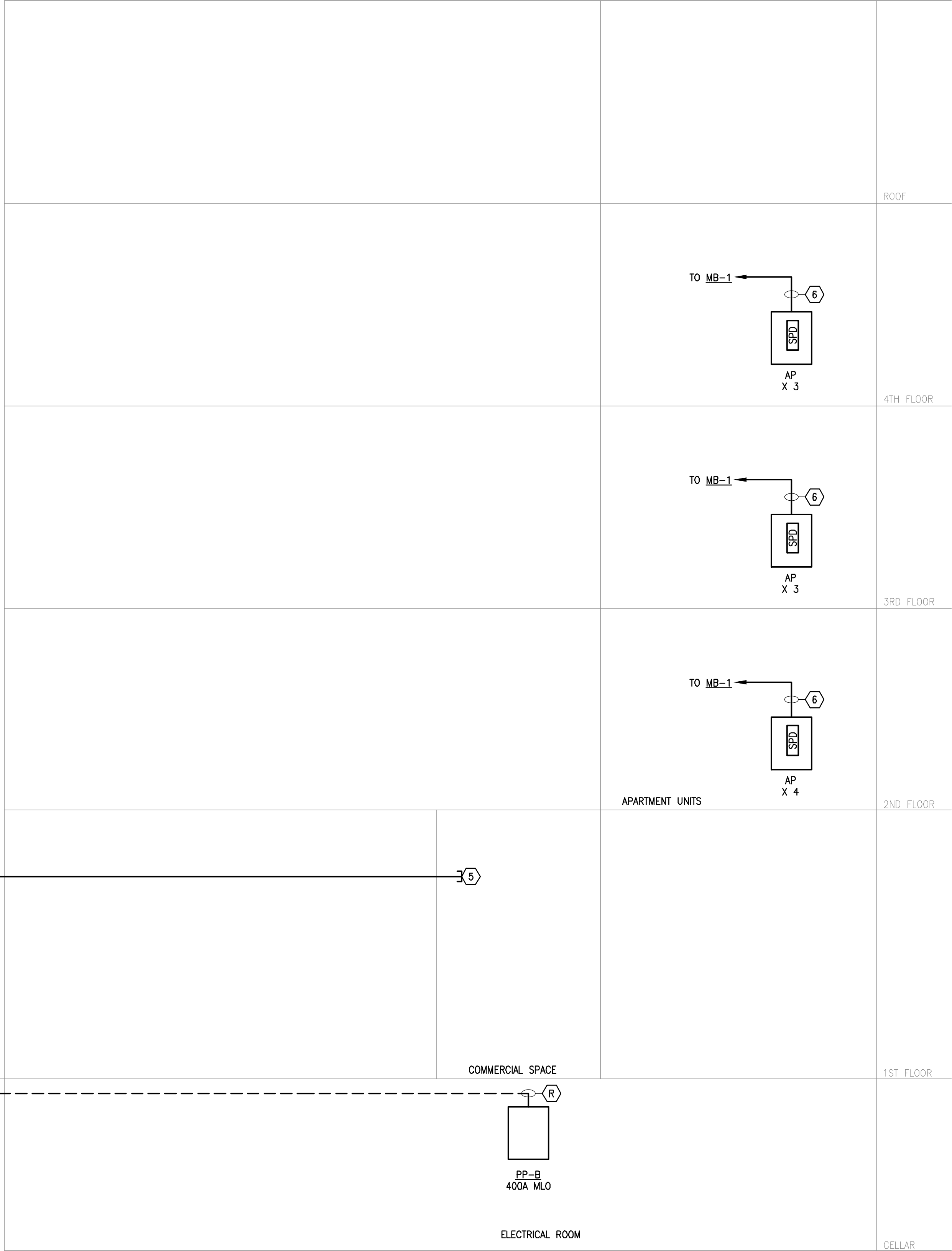
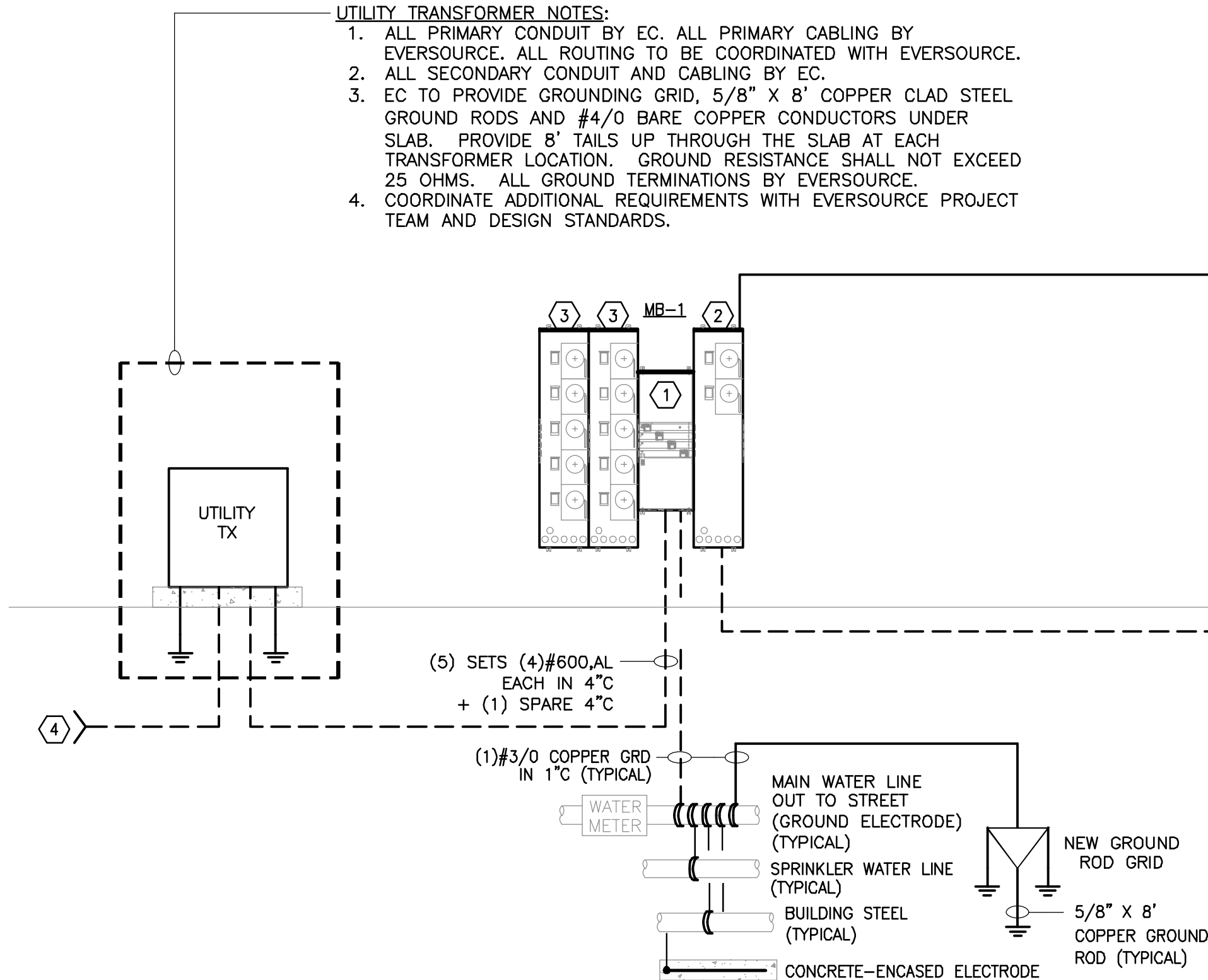
- ALL ELECTRICAL PANELS TO BE PROVIDED WITH ALUMINUM BUSING AND LOADS TO BE PHASE BALANCED.
- ALL ELECTRICAL FEEDERS TO BE ALUMINUM UNLESS OTHERWISE NOTED BY SUBSCRIPT "CU" AND ALL BRANCH CIRCUITING SHALL BE COPPER.
- ALL ELECTRICAL FEEDERS (PRIMARY OR SECONDARY) RUNNING UNDER DRIVEWAY OR ROADWAY SHALL BE ENCASED IN 2" CONCRETE.
- ELECTRICAL CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY CO. FOR REQUIREMENTS ON TRANSFORMER PAD SPECIFICATION/INSTALLATION, PRIMARY CONDUIT ROUTING AND SEQUENCING.
- ELECTRICAL CONTRACTOR SHALL COORDINATE WITH EVERSOURCE FOR ALL REQUIREMENTS FOR WORK REQUIRED WITH THEIR SWITCHES AND TRANSFORMERS THAT SHALL BE INCLUDED AS PART OF THE ELECTRICAL CONTRACTOR'S SCOPE OF WORK AS IT RELATES TO THIS PROJECT.
- ELECTRICAL CONTRACTOR SHALL ISSUE SWITCHGEAR SHOP DRAWINGS TO LOCAL UTILITY CO. FOR APPROVAL PRIOR TO ORDERING ANY EQUIPMENT. COORDINATE AIC RATING IN AREA.
- ELECTRICAL CONTRACTOR SHALL VERIFY VOLTAGE DROP ON FEEDERS BASED ON ROUTING OF FEEDER CHOSEN IN FIELD.
- PROVIDE CABLE SUPPORTS FOR ALL VERTICAL RISERS PER NEC TABLE 300.19(A).
- PROVIDE PULL BOXES AS REQUIRED, SIZED PER NEC.
- ELECTRICAL CONTRACTOR SHALL PROVIDE THE APPROPRIATE QUANTITY/SIZE OF LUGS IN PANELBOARDS, AND METER BANKS TO ACCOMMODATE THE QUANTITY/SIZE OF CONDUCTORS TO BE TERMINATED.
- INDIVIDUAL BARRIERS, SEALS, AND BARREL LOCKS BETWEEN METER POSITIONS ARE REQUIRED IN METER BANKS.
- ELECTRICAL CONTRACTOR SHALL MOUNT PANELBOARDS, METERBANK, OR OTHER ELECTRICAL EQUIPMENT ON UNISTRUT IN FRONT OF CONDUITS AS REQUIRED.
- INSTALLATIONS OF VERTICAL METERS SHALL BE INSTALLED SO THE MAXIMUM HEIGHT AT THE TOP OF THE HIGHEST METER IS 6' ABOVE FINISHED FLOOR LEVEL AND THE MINIMUM HEIGHT AT THE BOTTOM OF THE LOWEST METER IS 2' ABOVE FINISHED FLOOR LEVEL. REFER TO EVERSOURCE INSTALLATION REQUIREMENTS FOR ADDITIONAL INFORMATION.
- ELECTRICAL CONTRACTOR SHALL COORDINATE TOP OR BOTTOM FEED OF ALL PANELBOARDS.

POWER RISER KEY NOTES:

- 800A MAIN CIRCUIT BREAKER, 100KAIC, 120/208V, 3ø-4W, NEMA 3R, METER CENTER BOX. SQUARE D #EZM3800CB.
- 120/208V, 3ø-4W INPUT, 120/208V, 3ø-4W OUTPUT, NEMA 3R, (2) METER STACK RINGLESS TYPE WITH LEVER BYPASS AND (1) 400AF/400AT AND (1) 225AF/200AT CIRCUIT BREAKERS. SQUARE D #EZML332400.
- 120/208V, 3ø-4W INPUT, 120/208V, 1ø-3W OUTPUT, NEMA 3R, (5) METER STACK RINGLESS TYPE WITH LEVER BYPASS AND 125AF/125AT CIRCUIT BREAKERS. SQUARE D #EZML315125.
- (2) 4" CONDUITS WITH DRAGLINES TO UTILITY POLE. COORDINATE WITH EVERSOURCE FOR EXACT LOCATIONS AND REQUIREMENTS.
- (1) 4" CONDUIT WITH DRAGLINES FROM 200A/3P CIRCUIT BREAKER TO COMMERCIAL SPACE FOR FUTURE.
- (3) #2/0 & (1) #4 GRD MC FEEDER.

FEEDER SCHEDULE 3Ø, 4W (ALUMINUM, U.O.N.)		
TAG	FEEDER SIZES	RATING
B	(4) #6 & (1) #8 GRD - 1 1/4°C	50A
F	(4) #1 & (1) #6 GRD - 2°C	100A
G	(4) #1/0 & (1) #4 GRD - 2 1/2°C	120A
H	(4) #2/0 & (1) #4 GRD - 2 1/2°C	135A
I	(4) #3/0 & (1) #4 GRD - 2 1/2°C	155A
J	(4) #4/0 & (1) #4 GRD - 3°C	180A
K	(4) #250 & (1) #4 GRD - 3°C	205A
L	(4) #300 & (1) #2 GRD - 4°C	230A
M	(4) #350 & (1) #2 GRD - 4°C	250A
N	(4) #400 & (1) #2 GRD - 4°C	270A
O	(4) #500 & (1) #2 GRD - 4°C	310A
P	(4) #600 & (1) #1 GRD - 4°C	340A
Q	2 SETS (4) #4/0 & (1) #1 GRD - 3°C	360A
R	2 SETS (4) #250 & (1) #1 GRD - 3°C	410A
S	2 SETS (4) #300 & (1) #1/0 GRD - 4°C	460A
T	2 SETS (4) #350 & (1) #1/0 GRD - 4°C	500A
U	2 SETS (4) #400 & (1) #2/0 GRD - 4°C	540A
V	2 SETS (4) #500 & (1) #2/0 GRD - 4°C	620A
W	2 SETS (4) #600 & (1) #3/0 GRD - 4°C	680A
X	3 SETS (4) #300 & (1) #3/0 GRD - 4°C	690A
Y	3 SETS (4) #350 & (1) #3/0 GRD - 4°C	750A
Z	3 SETS (4) #400 & (1) #3/0 GRD - 4°C	810A

FEEDER SCHEDULE 3Ø, 4W (COPPER, U.O.N.)		
TAG	FEEDER SIZES	RATING
A	(4) #6 & (1) #8 GRD - 1 1/4°C	65A
C	(4) #3 & (1) #8 GRD - 1 1/2°C	100A



ARCHITECT OF RECORD:

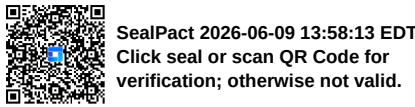
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PROJECT NAME

PROPOSED OFFICE TO RESI.
CONVERSION

158 GRAND ST
WATERBURY, CT

JOB NO.: MEA.2026.00233

SCALE: NTS

DRAWING TITLE

ELECTRICAL
POWER RISER DIAGRAM

DRAWING #

E-301

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FIRE ALARM GENERAL NOTES:

1. PROVIDE ALL EQUIPMENT, PROGRAMMING & WIRING REQUIRED FOR A COMPLETE CODE COMPLIANT SYSTEM.
2. PROVIDE ALL FILING, PERMIT & FIRE DEPARTMENT INSPECTION FEES.
3. ALL NOTIFICATION AND SIGNAL LINE CIRCUITS SHALL BE CLASS B WIRING WITHOUT T-TAPPING OF CIRCUITS.
4. PROVIDE PRIMARY & SECONDARY PHONE LINES FOR CENTRAL OFFICE CONNECTION. CENTRAL OFFICE TELEPHONE WIRING SHALL BE INSTALLED IN 1" RGS CONDUIT.
5. ALL 120V CIRCUITS FOR THE FIRE ALARM SYSTEM SHALL BE DEDICATED EMERGENCY CIRCUITS. PROVIDE LOCKABLE CIRCUIT BREAKERS FOR ALL FIRE ALARM CIRCUITS.
6. COORDINATE WITH THE LOCAL AUTHORITY HAVING JURISDICTION FOR THE EXACT SEQUENCE OF OPERATIONS.
7. SMOKE DETECTORS SHALL BE A MINIMUM OF 3 FEET FROM ALL SUPPLY DIFFUSERS.
8. PROVIDE STYLE 7 WIRING FOR ALL NETWORK WIRING BETWEEN DGP'S AND MAIN FIRE CONTROL PANEL. RETURN CIRCUIT SHALL BE IN A SEPARATE CONDUIT.
9. ALL FIRE ALARM WIRING SHALL BE INSTALLED IN CONDUIT WHEN RUN EXPOSED IN MECHANICAL ROOMS. PROVIDE CONDUIT CONCEALED IN WALLS UP TO ACCESSIBLE CEILING WITH INSULATING BUSHING FOR ALL WALL MOUNTED FIRE ALARM DEVICES.
10. PROVIDE A MINIMUM OF TWO ALTERNATELY CIRCUITED HORN/STROBE CIRCUITS PER FLOOR. MAINTAIN A MINIMUM OF 25% SPARE CAPACITY ON ALL ADDRESSABLE LOOPS AND ALL HORN AND STROBE CIRCUITS.
11. STROBE LIGHTS SHALL BE ARRANGED FOR SYNCHRONIZED OPERATION ON A PER FLOOR BASIS.
12. ALL FIRE ALARM EQUIPMENT SHALL BE APPROVED BY LOCAL AHJ PRIOR TO ORDERING.
13. FIRE ALARM RISER IS A DIAGRAMMATIC REPRESENTATION OF THE SYSTEM. REFER TO FLOOR PLANS FOR DEVICE QUANTITY AND LOCATIONS.
14. ALL FIRE ALARM CABLING SHALL BE PLENUM RATED.
15. ALL FIRE ALARM ANNUNCIATING DEVICES SHALL BE "WHITE".
16. ALL ELECTRONICALLY SECURED DOORS SHALL BE TIED TO THE BUILDING'S FIRE ALARM SYSTEM SUCH THAT IN THE EVENT THAT THE FIRE ALARM SYSTEM IS ACTIVATED, THESE DOORS FAILSAFE OPEN.
17. PROVIDE A 20A, 120V CIRCUIT FROM NEAREST CORRIDOR RECEPTACLE TO ALL DOORS WITH MAGNETIC HOLD OPENS.
18. PROVIDE A BI-DIRECTIONAL AMPLIFIER SYSTEM (BDA) AS REQUIRED BY THE 2021 IFC SECTION 510. PROVIDE ALL TRANSCENDERS, ANTENNAS, RADIO CONSOLES, AMPLIFIERS, ETC. AS REQUIRED. PROVIDE EMERGENCY CIRCUITS AS REQUIRED. COORDINATE WITH FIRE ALARM VENDOR FOR EXACT REQUIREMENTS.
19. PROVIDE A CONTROL MODULE AND RELAY FOR ALL FIRE SMOKE DAMPERS. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION AND QUANTITIES. PROVIDE DUCT SMOKE DETECTORS TO ACTIVATE FIRE SMOKE DAMPERS AS REQUIRED. PROVIDE A REMOTE TEST STATION WITH LED INDICATORS IN NEAREST ELECTRICAL/MECHANICAL CLOSET FOR EACH DUCT SMOKE DETECTOR.
20. PROVIDE (3) FIRE ALARM MONITOR MODULES FOR EACH HEAT TRACE CONTROLLER SERVING SPRINKLER PIPES. PROVIDE (4) MONITOR MODULES FOR EACH DRY PIPE COMPRESSOR.
21. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS THAT INCLUDE MANUFACTURER'S CUT SHEETS THAT INCLUDE EQUIPMENT MODEL NUMBERS, BATTERY CALCULATIONS, CONDUCTOR TYPE AND SIZES, AND VOLTAGE DROP CALCULATIONS.
22. REFER TO TYPICAL UNIT PLANS FOR QUANTITY OF HORN DEVICES IN APARTMENT UNITS. HORNS IN APARTMENTS SHALL BE LOW FREQUENCY TYPE.
23. PROVIDE A JUNCTION BOX IN EACH UNIT'S BATHROOM WITH A 2-WIRE FIRE ALARM STROBE CIRCUIT FROM THE HORN IN THE UNIT FOR A FUTURE STROBE FOR HEARING IMPAIRED TENANTS.

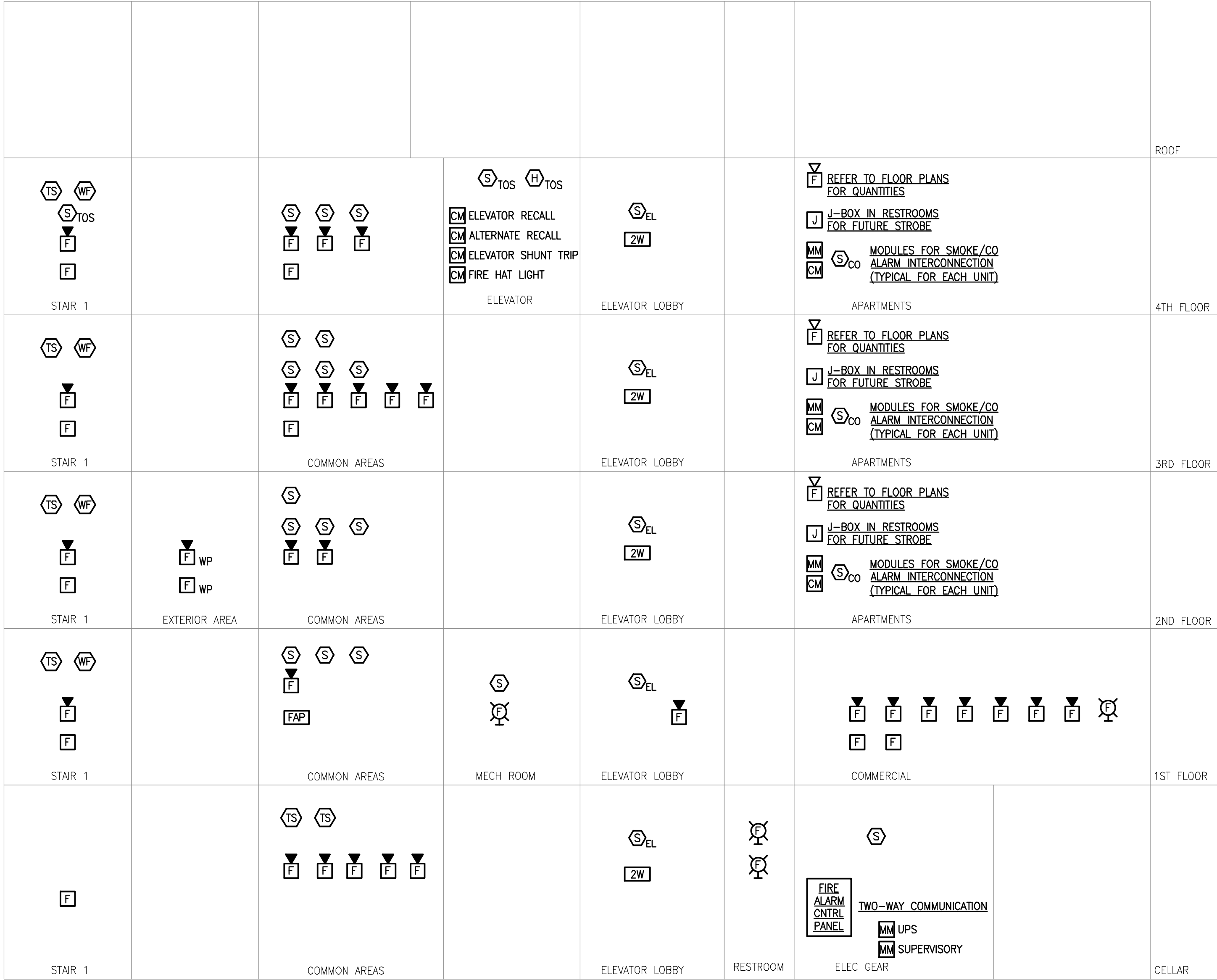
FIRE ALARM SEQUENCE OF OPERATION

1. ACTIVATION OF A MANUAL PULL STATION SHALL:
 - a. ANNUNCIATE AT THE MAIN FIRE ALARM CONTROL PANEL AND AT THE REMOTE ANNUNCIATORS.
 - b. SEND ALARM INDICATION TO CENTRAL STATION COMPANY TO NOTIFY THE FIRE DEPARTMENT.
 - c. ACTIVATE ALARM TONES ON ALL FLOORS.
2. ACTIVATION OF A SMOKE DETECTOR, HEAT DETECTOR, DUCT SMOKE DETECTOR, WATER FLOW SWITCH, IN COMMON AREAS SHALL PERFORM FUNCTIONS LISTED IN a, b & c ABOVE AND:
 - d. SHUTDOWN ALL FAN SYSTEMS
 - e. CLOSE ALL SMOKE DAMPERS
 - f. CLOSE ALL SMOKE CONTROL DOORS IN ALL BUILDINGS
3. ACTIVATION OF AN ELEVATOR LOBBY, ELEVATOR MACHINE ROOM AND HOIST WAY SMOKE DETECTOR SHALL PERFORM FUNCTIONS LISTED IN a, b, c, d, e, AND f ABOVE AND:
 - h. RECALL ALL ELEVATORS TO THE GROUND FLOOR (PROVIDE ALTERNATE RECALL AS PER NFPA) AND OPEN ASSOCIATED HOIST WAY VENT.
4. ACTIVATION OF A TOP OR BOTTOM SHAFT HEAT DETECTOR SHALL ACTIVATE ELEVATOR SHUNT TRIP BREAKER TO DISCONNECT POWER FROM ELEVATOR CAB(S) OF THAT SHAFT.
5. ACTIVATION OF SPRINKLER TAMPER SWITCH SHALL ACTIVATE A SUPERVISORY SIGNAL AT THE THE FIRE CONTROL PANEL.

FIRE ALARM - DWELLING UNIT SINGLE STATION 120 VAC
SMOKE ALARM AND CARBON MONOXIDE

DWELLING UNIT SINGLE STATION 120 VAC SMOKE ALARM AND CARBON MONOXIDE ALARM DEVICE REQUIREMENTS:
(COORDINATE LOCATION OF DWELLING UNIT DETECTION DEVICES WITH ARCHITECT)

1. ALL SMOKE ALARMS SHALL BE PHOTOELECTRIC TYPE.
2. ALL SMOKE AND CARBON MONOXIDE ALARMS SHALL PRODUCE AN ALARM SIGNAL WITH A MINIMUM 85dBA AT 10 FEET.
3. SMOKE ALARMS AND CARBON MONOXIDE ALARMS SHALL BE POWERED BY AN UNSWITCHED 120 VAC BRANCH CIRCUIT. ANNUNCIATION SHALL BE LOCAL ONLY.
4. IN DWELLING UNITS WHERE THERE ARE MULTIPLE DETECTORS, DETECTORS SHALL BE CONNECTED IN TANDEM SO THAT ALL SOUNDER BASES OF THE SAME DETECTOR TYPE, WITHIN THE SAME DWELLING UNIT, SHALL SOUND UPON ACTIVATION OF ANY SIMILAR DETECTOR.
5. ALL DEVICES SHALL BE PROVIDED WITH BATTERY BACK-UP.
6. SMOKE AND CO ALARMS SHALL BE LOCATED IN EACH SLEEPING ROOM AND OUTSIDE EACH SLEEPING ROOM WITHIN 5 FEET OF THE ENTRANCE.
7. SMOKE AND CO ALARMS SHALL BE CONNECTED TO ADDRESSABLE MONITOR AND CONTROL MODULES SO THAT LOW FREQUENCY HORNS ARE ACTIVATED UPON ACTIVATION OF A SMOKE/CO ALARM. PROVIDE MODULES AS REQUIRED.



ARCHITECT OF RECORD:

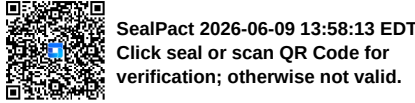
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158 GRAND ST
WATERBURY, CT

JOB NO.: MEA-2026-00233

SCALE: NTS

DRAWING TITLE

FIRE ALARM
RISER DIAGRAM

DRAWING #

E-302

PANEL DESIGNATION : **PP-B**

VOLTAGE
208Y/120 V

PHASE
3 Ø

WIRE
4 W + G

NEUTRAL
100%

SCC RATING (SYM)
100 K.A.I.C.

NEMA 1 ENCLOSURE
X

QUANTITY OF POLES
84

MAIN LUGS ONLY
400 A

MAIN BUS
400 A

SURFACE MOUNTED
X

FEED THROUGH LUGS

GROUND BUS
X

SURGE PROTECTION DEVICE
X

REMARKS :

CKT #	TRIP	LOAD DESCRIPTION	ØA (VA)	ØB (VA)	ØC (VA)	LOAD DESCRIPTION	TRIP	CKT #
1	30A	BASEMENT EUH-1	5000			BASEMENT EUH-1	30A	2
3		2#10 + 1#10 GRD - 3/4"C		5000		2#10 + 1#10 GRD - 3/4"C		4
5	30A	BASEMENT EUH-1			5000	BASEMENT EUH-1	30A	6
7		2#10 + 1#10 GRD - 3/4"C	5000			2#10 + 1#10 GRD - 3/4"C		8
9	30A	BASEMENT EUH-1		5000		BASEMENT EUH-1	30A	10
11		2#10 + 1#10 GRD - 3/4"C			5000	2#10 + 1#10 GRD - 3/4"C		12
13	20A	FACP	2400			1ST FL RECS	20A	14
15	20A	2-WAY BASE COMMUNICATION		3000		1ST FL ECUH-1	20A	16
17					3000	2#12 + 1#12 GRD - 3/4"C	20A	18
19	20A	1ST FL ECUH-1	3000			1ST FL ECUH-1	20A	20
21		2#12 + 1#12 GRD - 3/4"C		3000		2#12 + 1#12 GRD - 3/4"C		22
23	20A	3RD FL ECUH-1			3000	2ND FL ECUH-1	20A	24
25		2#12 + 1#12 GRD - 3/4"C	3000			2#12 + 1#12 GRD - 3/4"C	20A	26
27	20A	3RD FL ECUH-1		2220		2ND FL RECS	20A	28
29		2#12 + 1#12 GRD - 3/4"C			2400	3RD FL RECS	20A	30
31	20A	3RD FL ECUH-1	2400			4TH FL RECS	20A	32
33	20A	4TH FL ECUH-1		1808		IDU 3.1,3.2,3.3,3.4	15A	34
35		2#12 + 1#12 GRD - 3/4"C			1608	2#12 + 1#12 GRD - 3/4"C		36
37	20A	4TH FL ECUH-1	1680			2ND FL EXTERIOR GFI RECS	20A	38
39		2#12 + 1#12 GRD - 3/4"C		2100		GROUND FL LIGHTING	20A	40
41	20A	2ND FL LIGHTING			1040	ROOF MAINTENANCE REC. & LIGHT	20A	42
43	20A	3RD FL LIGHTING	700			EXTIEIOR AREA LIGHTING	20A	44
45	20A	4TH FL LIGHTING		600		STAIRCASE LIGHTING	20A	46
47	15A	1ST FL ERV-2			1540	2ND FL ECUH-1	20A	48
49	15A	2ND FL ERV-2	1540			2#12 + 1#12 GRD - 3/4"C		50
51	15A	3RD FL ERV-2		2536		ROOF ODU-3	30A	52
53	15A	4TH FL ERV-2			2536	2#10 + 1#10 GRD - 3/4"C		54
55	20A	CELLAR GFI REC.	1180			TIMECLOCK	20A	56
57	20A	SPARE		0		SPARE	20A	58
59	20A	SPARE			0	SPARE	20A	60
61	20A	SPARE	0			SPARE	20A	62
63	20A	SPARE		0		SPARE	20A	64
65	20A	SPARE			0	SPARE	20A	66
67	20A	SPARE	0			SPARE	20A	68
69	20A	SPARE		0		SPARE	20A	70
71	20A	SPARE			0	SPARE	20A	72
73	20A	SPARE	0			SPARE	20A	74
75	20A	SPARE		0		SPARE	20A	76
77	20A	SPARE			0	SPARE	20A	78
79	20A	SPARE	0			SPARE	20A	80
81	20A	SPARE		0		SPARE	20A	82
83	20A	SPARE			0	SPARE	20A	84
TOTAL CONNECTED LOAD PER PHASE (kVA)			25.90	25.06	25.12			
TOTAL CONNECTED LOAD			76.09 KVA		211.2 A			
TOTAL DEMAND LOAD			76.09 KVA		211.2 A			

PANEL DESIGNATION : **AP (STUDIO)**

VOLTAGE
120/208 V

PHASE
1 Ø

WIRE
3 W + G

NEUTRAL
100%

SCC RATING (SYM)
22 K.A.I.C.

NEMA 1 ENCLOSURE
X

QUANTITY OF POLES
30

MAIN LUGS ONLY
125 A

MAIN BUS
125 A

FLUSH MOUNTED
X

FEED THROUGH LUGS

GROUND BUS
X

SURGE PROTECTION DEVICE
X

REMARKS :

ALL 15A/1P & 20A/1P CIRCUIT BREAKERS SHALL BE AFCI TYPE. * INDICATES GFCI TYPE CIRCUIT BREAKER. PANELBOARD COVER SHALL BE SMOOTH WITH CONCEALED HINGES & HAVE A WHITE FINISH.

CKT #	TRIP	LOAD DESCRIPTION	ØA (VA)	ØB (VA)	LOAD DESCRIPTION	TRIP	CKT #
1	20A	LIGHTING	1700		KITCHEN GFI RECEPTACLES	20A	2
3	20A	DISHWASHER		1068			4
5	20A	REFRIGERATOR *	4480		ELECTRIC RANGE *	50A	6
7	20A	MICROWAVE *		5500	3#8 + 1 #10 GRD - 3/4" C		8
9			360		NID RECEPTACLE	20A	10
11				180	BATHROOM GFI RECEPTACLE	20A	12
13			840		CONDENSATE PUMPS	20A	14
15				20	SMOKE/CO ALARMS	20A	16
17			1080		LIVING ROOM RECEPTACLES	20A	18
19	20A	LEAK DETECTOR		1620	ERV	15A	20
21	30A	HOT WATER HEATER	3550		ODU/IDU *	20A	22
23		2#10 + 1#10 GRD - 3/4" C		3550	2#12 + 1 #12 GRD - 3/4" C		24
25			1860				26
27				0			28
29			0				30
TOTAL CONNECTED LOAD PER PHASE			13.87	11.94			
TOTAL CONNECTED LOAD			25.81 KVA		124.1 A		
TOTAL DEMAND LOAD			16.93 KVA		81.4 A		

PANEL DESIGNATION : **AP (1 BED)**

VOLTAGE
120/208 V

PHASE
1 Ø

WIRE
3 W + G

NEUTRAL
100%

SCC RATING (SYM)
22 K.A.I.C.

NEMA 1 ENCLOSURE
X

QUANTITY OF POLES
30

MAIN LUGS ONLY
125 A

MAIN BUS
125 A

FLUSH MOUNTED
X

FEED THROUGH LUGS

GROUND BUS
X

SURGE PROTECTION DEVICE
X

REMARKS :

ALL 15A/1P & 20A/1P CIRCUIT BREAKERS SHALL BE AFCI TYPE. * INDICATES GFCI TYPE CIRCUIT BREAKER. PANELBOARD COVER SHALL BE SMOOTH WITH CONCEALED HINGES & HAVE A WHITE FINISH.

CKT #	TRIP	LOAD DESCRIPTION	ØA (VA)	ØB (VA)	LOAD DESCRIPTION	TRIP	CKT #
1	20A	LIGHTING	1700		KITCHEN GFI RECEPTACLES	20A	2
3	20A	DISHWASHER		1068			4
5	20A	REFRIGERATOR *	4480		ELECTRIC RANGE *	50A	6
7	20A	MICROWAVE *		5500	3#8 + 1 #10 GRD - 3/4" C		8
9			360		NID RECEPTACLE	20A	10
11				180	BATHROOM GFI RECEPTACLE	20A	12
13			840		CONDENSATE PUMPS	20A	14
15				20	SMOKE/CO ALARMS	20A	16
17	20A	BEDROOM RECEPTACLES	1980		LIVING ROOM RECEPTACLES	20A	18
19	20A	LEAK DETECTOR		1620	ERV	15A	20
21	30A	HOT WATER HEATER	5983		ODU/IDU *	40A	22
23		2#10 + 1#10 GRD - 3/4" C		5983	2#8 + 1 #10 GRD - 3/4" C		24
25			1860				26
27				0			28
29			0				30
TOTAL CONNECTED LOAD PER PHASE			17.20	14.37			
TOTAL CONNECTED LOAD			31.57 KVA		151.8 A		
TOTAL DEMAND LOAD			21.92 KVA		105.4 A		

PANEL DESIGNATION : **AP (2 BED)**

VOLTAGE
120/208 V

PHASE
1 Ø

WIRE
3 W + G

NEUTRAL
100%

SCC RATING (SYM)
22 K.A.I.C.

NEMA 1 ENCLOSURE
X

QUANTITY OF POLES
30

MAIN LUGS ONLY
125 A

MAIN BUS
125 A

FLUSH MOUNTED
X

FEED THROUGH LUGS

GROUND BUS
X

SURGE PROTECTION DEVICE
X

REMARKS :

ALL 15A/1P & 20A/1P CIRCUIT BREAKERS SHALL BE AFCI TYPE. * INDICATES GFCI TYPE CIRCUIT BREAKER. PANELBOARD COVER SHALL BE SMOOTH WITH CONCEALED HINGES & HAVE A WHITE FINISH.

CKT #	TRIP	LOAD DESCRIPTION	ØA (VA)	ØB (VA)	LOAD DESCRIPTION	TRIP	CKT #
1	20A	LIGHTING	1700		KITCHEN GFI RECEPTACLES	20A	2
3	20A	DISHWASHER		1068			4
5	20A	REFRIGERATOR *	4480		ELECTRIC RANGE *	50A	6
7	20A	MICROWAVE *		5500	3#8 + 1 #10 GRD - 3/4"C		8
9			360		NID RECEPTACLE	20A	10
11				180	BATHROOM GFI RECEPTACLE	20A	12
13			840		CONDENSATE PUMPS	20A	14
15				20	SMOKE/CO ALARMS	20A	16
17	20A	BEDROOM RECEPTACLES	1800		LIVING ROOM RECEPTACLES	20A	18
19	20A	BEDROOM RECEPTACLES		2340	ERV	15A	20
21	30A	HOT WATER HEATER	5983		ODU/IDU *	40A	22
23		2#10 + 1#10 GRD - 3/4"C		5983	2#8 + 1 #10 GRD - 3/4"C		24
25	20A	LEAK DETECTOR	1860				26
27				0			28
29			0				30
	TOTAL CONNECTED LOAD PER PHASE		17.02	15.09			
	TOTAL CONNECTED LOAD		32.11 KVA	154.4 A			
	TOTAL DEMAND LOAD		22.04 KVA	105.9 A			

MEA

MASTROLUCA
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SHEET ISSUANCE / REVISION HISTORY		
#	DATE	ISSUE/REVISION DESCRIPTION
-	06/09/26	ISSUED FOR BID/PERMIT

PHASE

BID / PERMIT

STATE OF CONNECTICUT
JAMES R. MASTROLUCA
NO. PEN.0033886
LICENSED PROFESSIONAL ENGINEER

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Click seal or scan QR Code for
verification; otherwise not valid.

PROJECT NAME

PROPOSED OFFICE TO RESI.
CONVERSION

158 GRAND ST
WATERBURY, CT

JOB NO.: MEA.2026.00233

SCALE: NTS

DRAWING TITLE

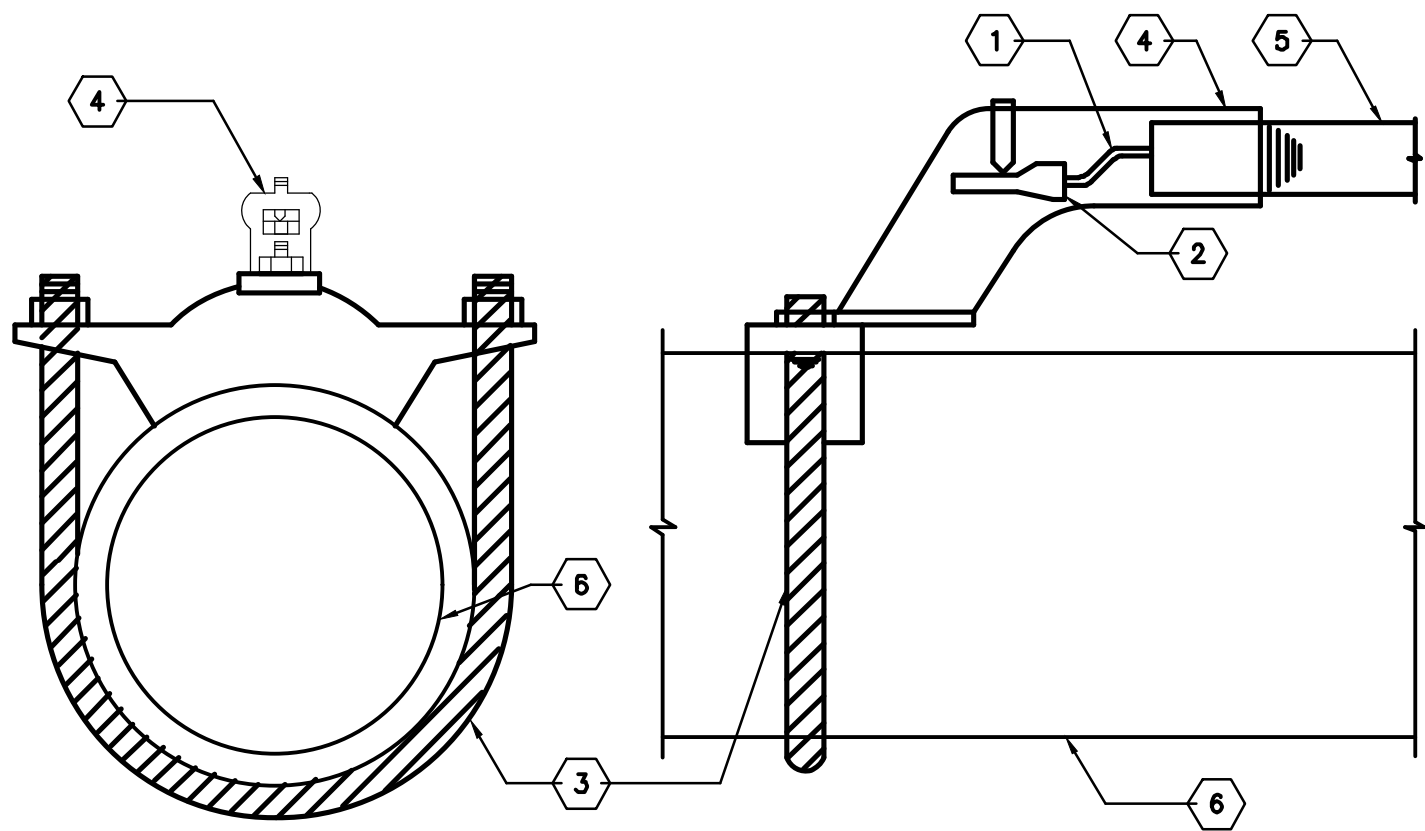
ELECTRICAL
PANEL SCHEDULES

DRAWING #

E-401

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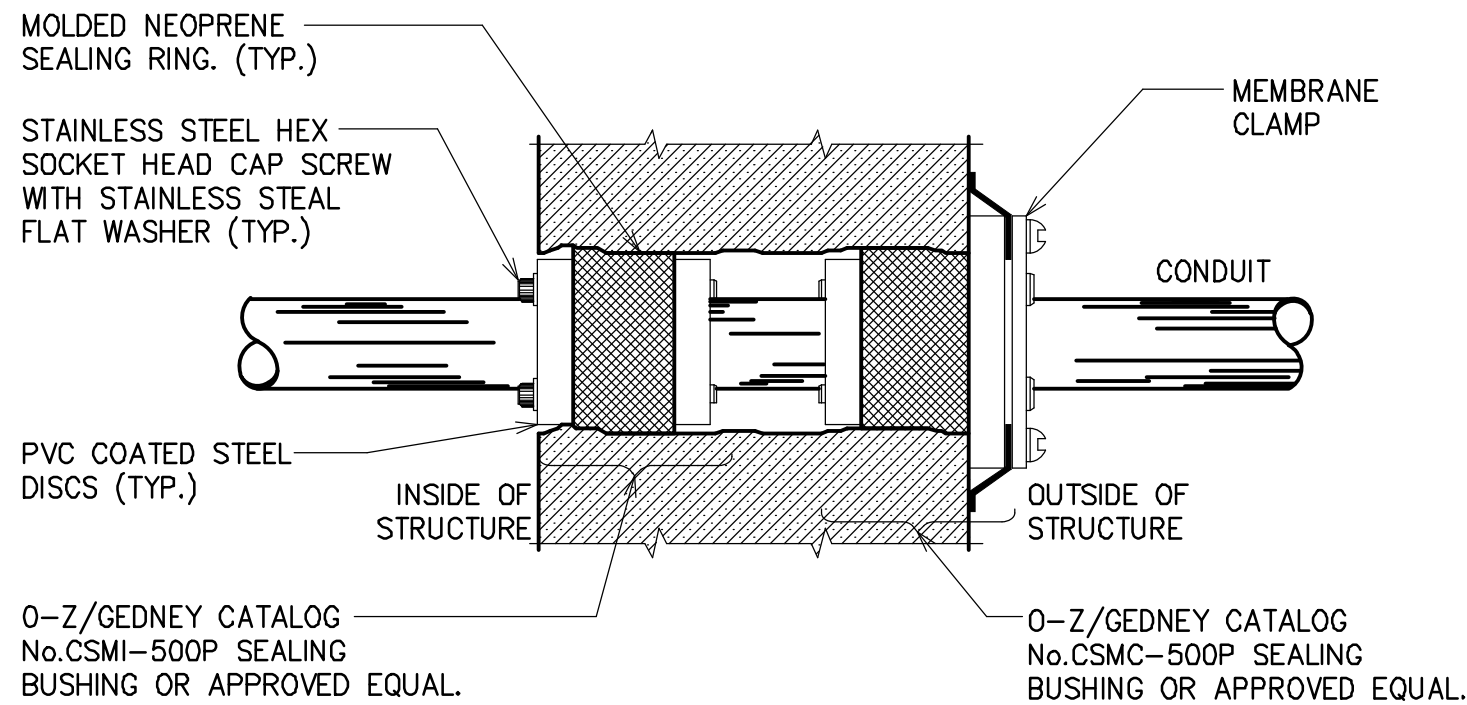


NOTES:

- 1 GROUNDING ELECTRODE CONDUCTOR
- 2 CONDUCTOR TERMINAL
- 3 GROUND CLAMP ASSEMBLY
- 4 THREADED GROUND HUB OR GROUNDING BUSHING
- 5 CONDUIT
- 6 WATER SERVICE PIPE

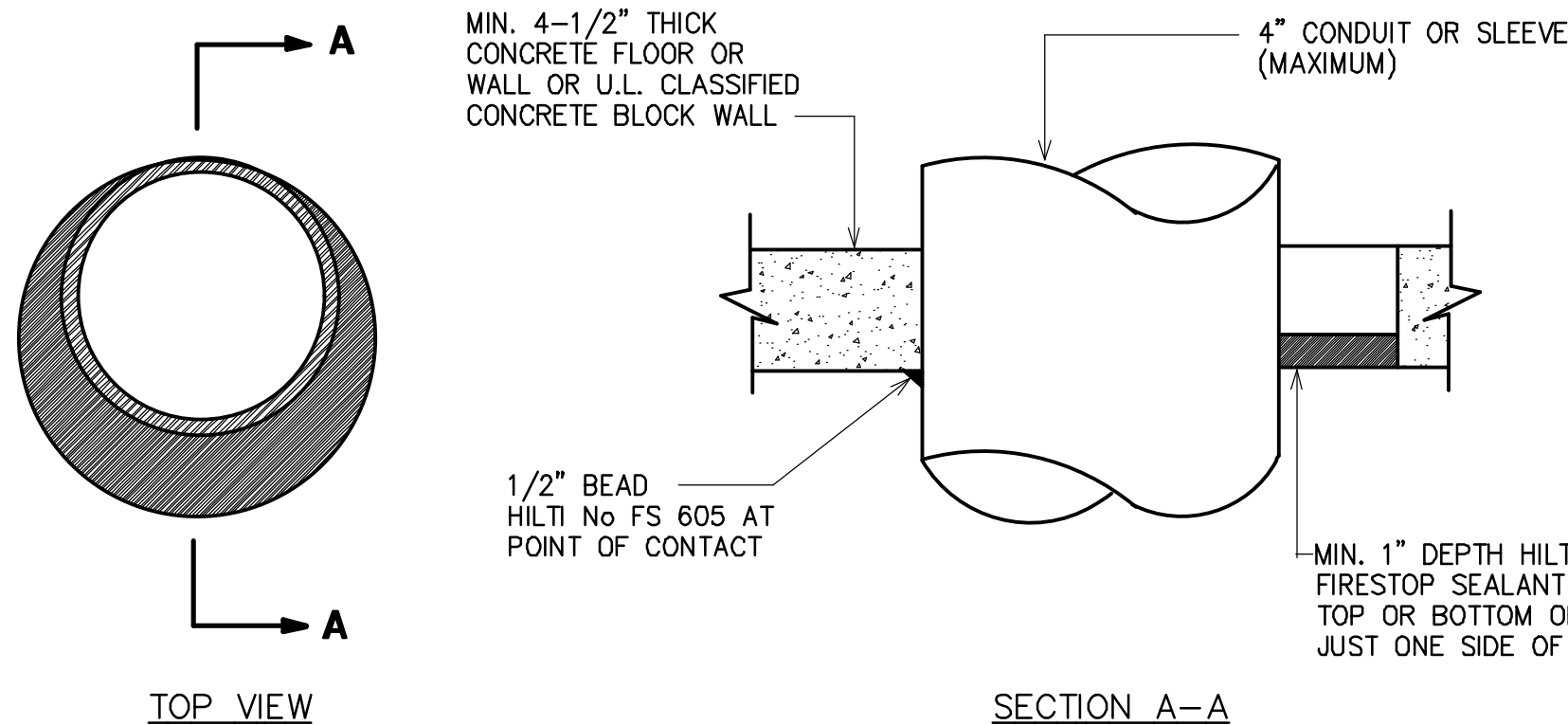
MAIN WATER PIPE ELECTRODE CONNECTION

N.T.S.



EXTERIOR WALL PENETRATION DETAIL

N.T.S.

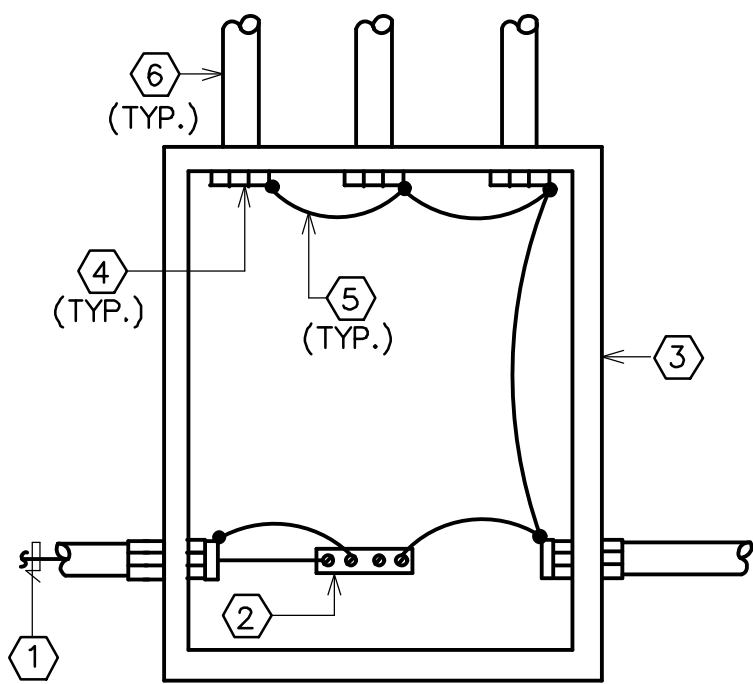


DETAIL OF CONDUIT THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL

N.T.S.

NOTES:

- CONDUIT MAY BE CENTERED OR OFFSET IN HOLE. MAXIMUM DIAMETER OF HOLE OPENING IS 14 INCHES.
- TEMPORARY FORMS MAY BE REQUIRED TO SUPPORT THE FIRESTOP SEALANT WHILE IT CURES.
- FOR CONDUIT SLEEVE INSTALATIONS PROVIDE AROUND CONDUCTORS WITHIN SLEEVE.

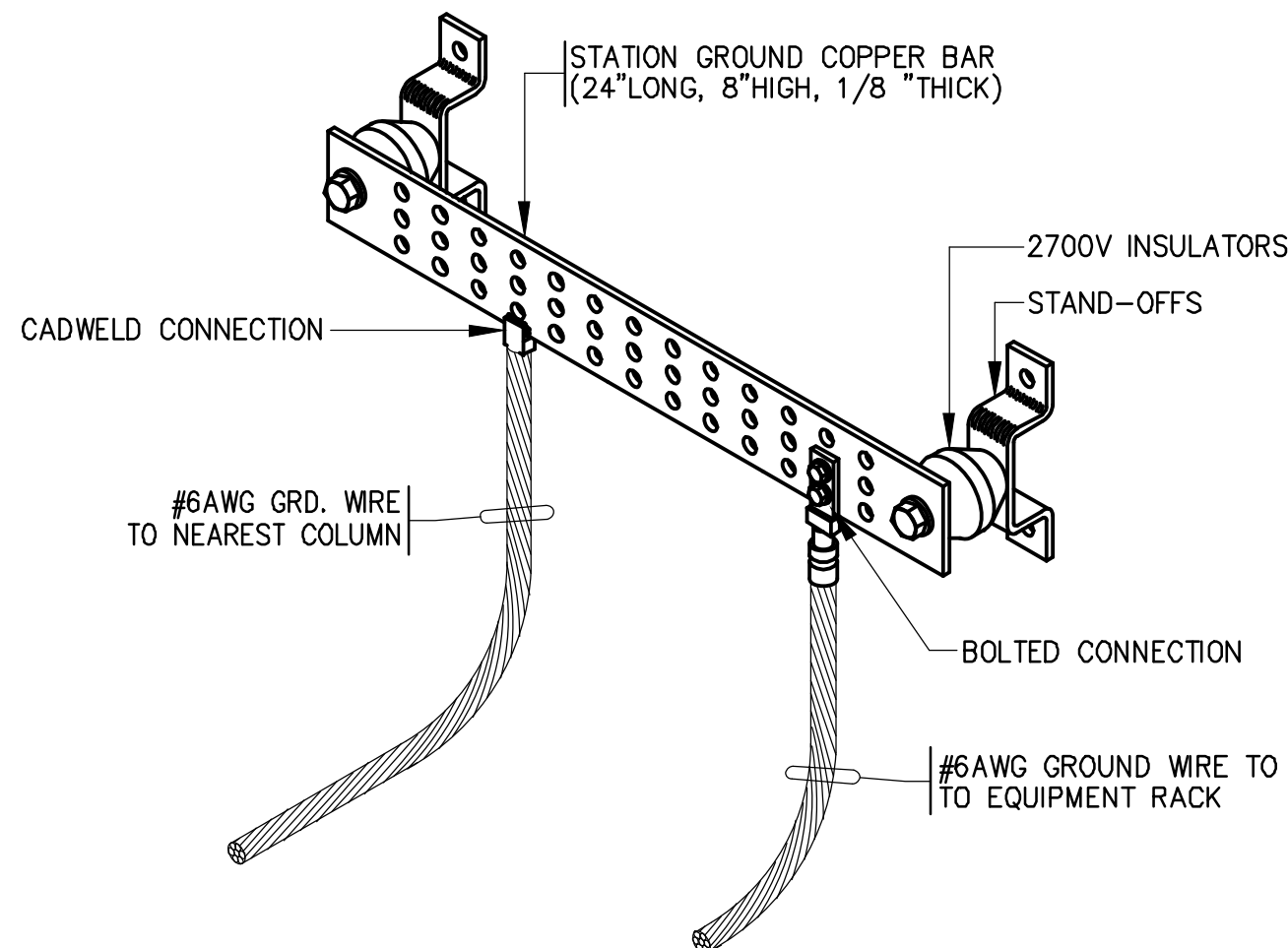


RACEWAY EQUIPMENT GROUNDING SYSTEM

N.T.S.

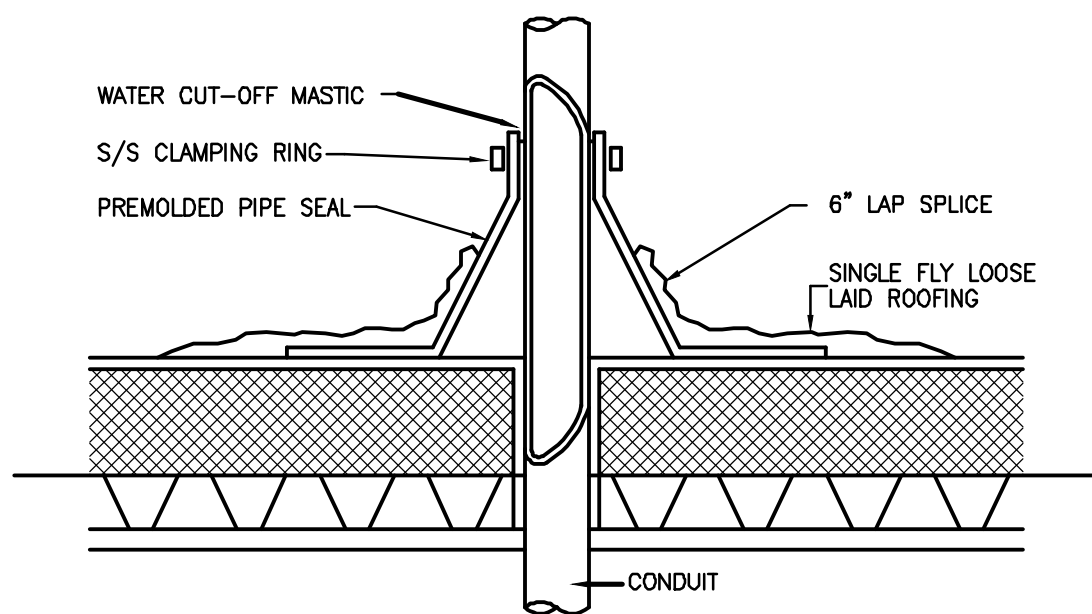
NOTES:

- 1 SYSTEM EQUIPMENT GROUNDING CONDUCTOR SIZED AS PER NEC TABLE 250.122
- 2 PANELBOARD EQUIPMENT GROUND BUS
- 3 SERVICE ENTRANCE EQUIPMENT SWITCHBOARD / PANELBOARD ENCLOSURE.
- 4 GROUNDING BUSHING
- 5 BONDING JUMPER INSTALLED AS PER NEC ARTICLE 250
- 6 METAL CONDUIT, TYPICAL



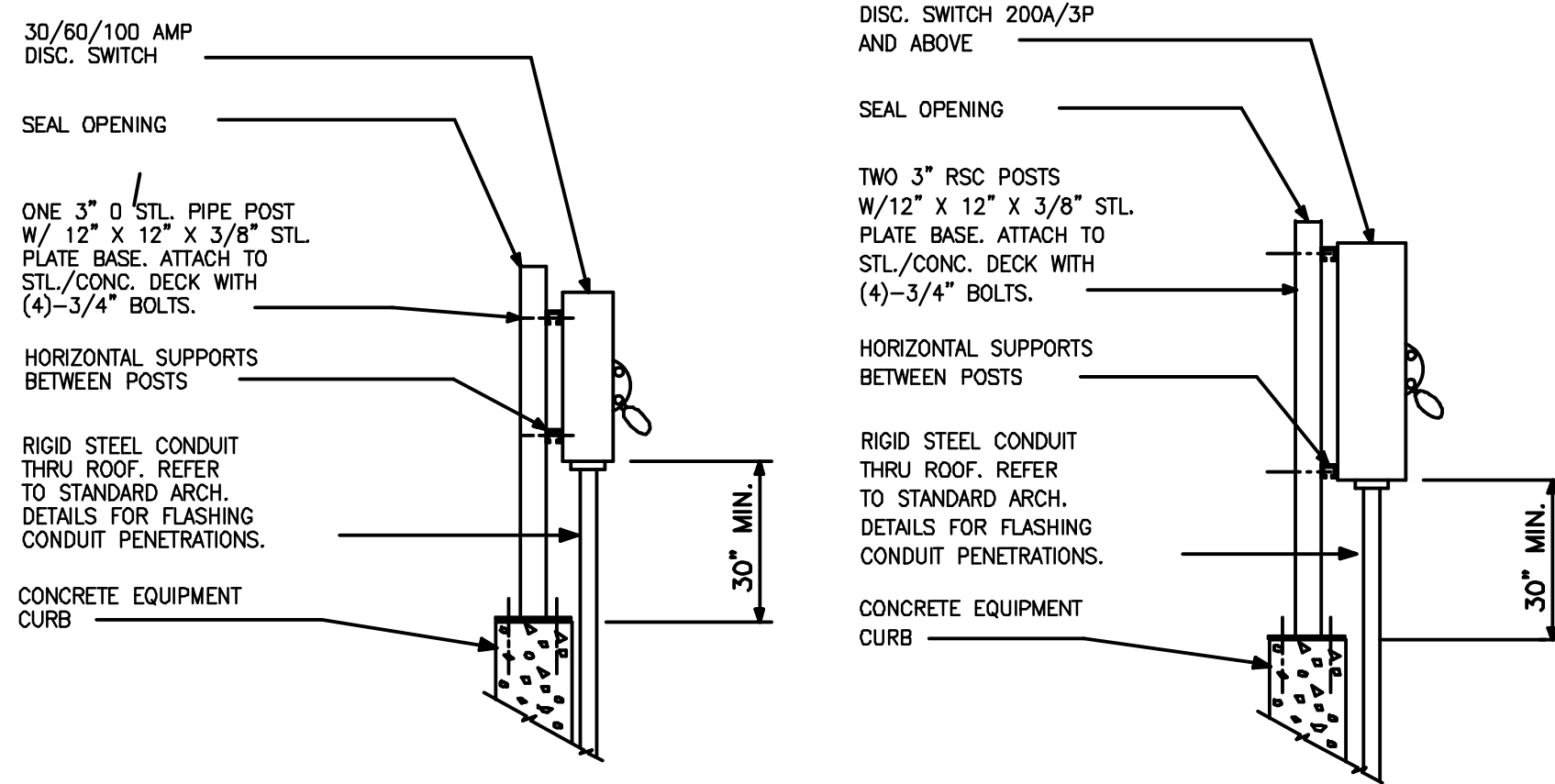
EQUIPMENT GROUNDING BAR ASSEMBLY

N.T.S.



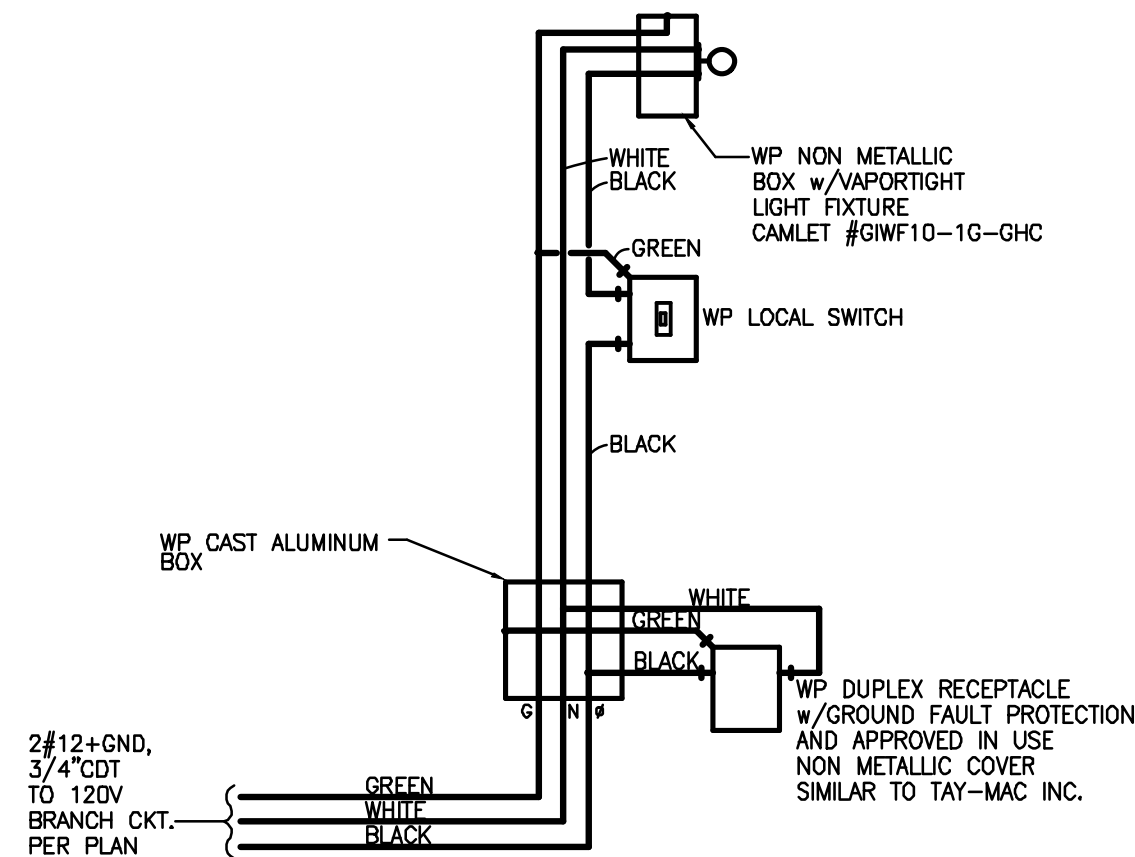
CONDUIT ROOF PENETRATION DETAIL

N.T.S.



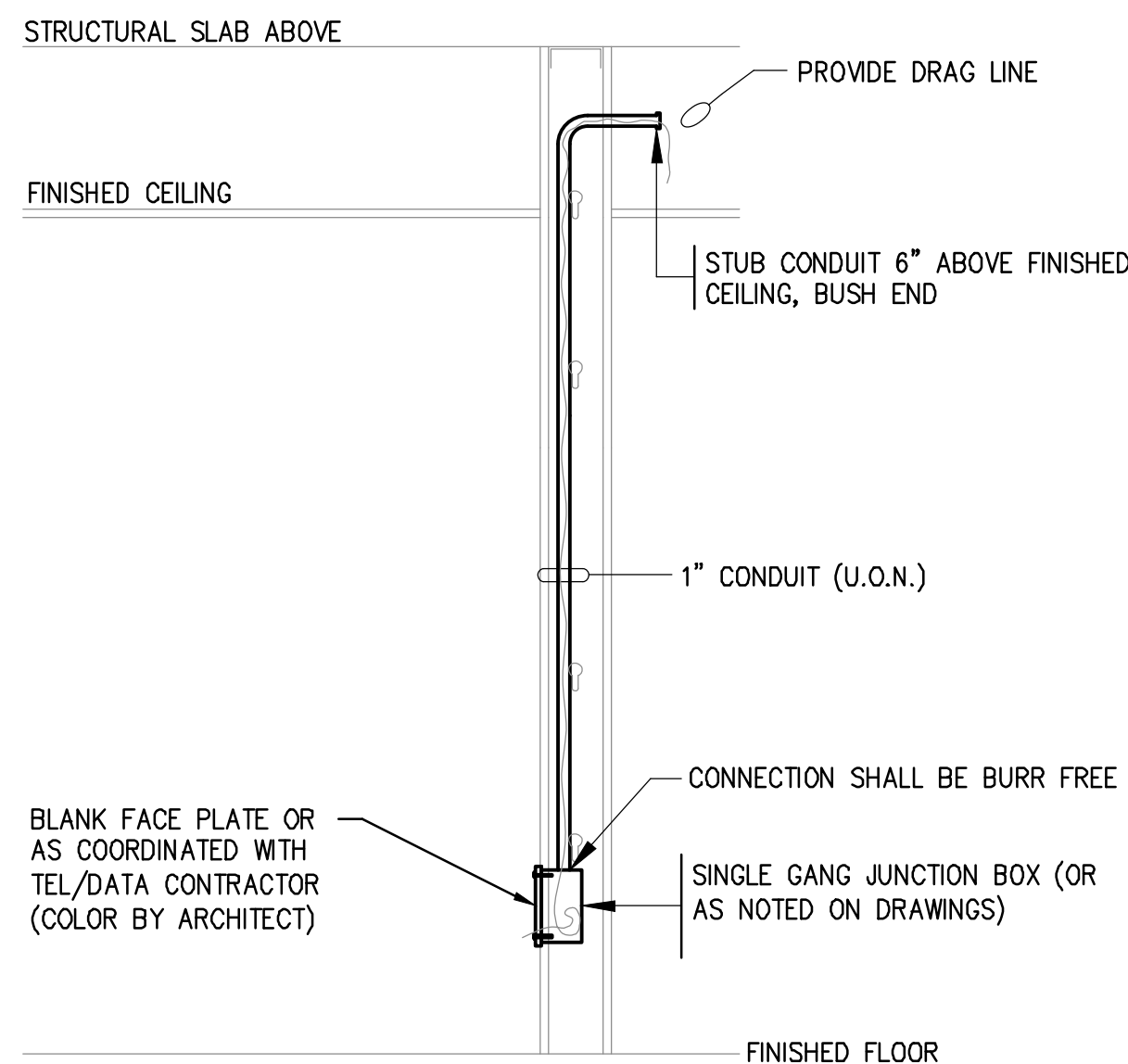
ROOF MOUNTED DISCONNECT SWITCH DETAIL

N.T.S.



ROOF TOP MAINTENANCE UNIT LTG/PWR DETAIL

N.T.S.



NOTE: ALL DATA AND TEL. CABLING IS BY OTHERS

COMMUNICATION RECEPTACLE DETAIL (TYPICAL)

N.T.S.

ARCHITECT OF RECORD:

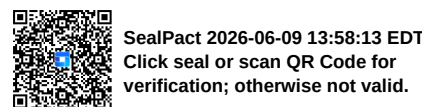
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646-398-0194
thomas@manettaarchitecture.com

SHEET ISSUANCE / REVISION HISTORY

#	DATE	ISSUE/REVISION DESCRIPTION
-	06/09/26	ISSUED FOR BID/PERMIT

PHASE

BID / PERMIT



PROJECT NAME

PROPOSED OFFICE TO RESI. COVERSION

158 GRAND ST
WATERBURY, CT

JOB NO.: MEA.2026.00233

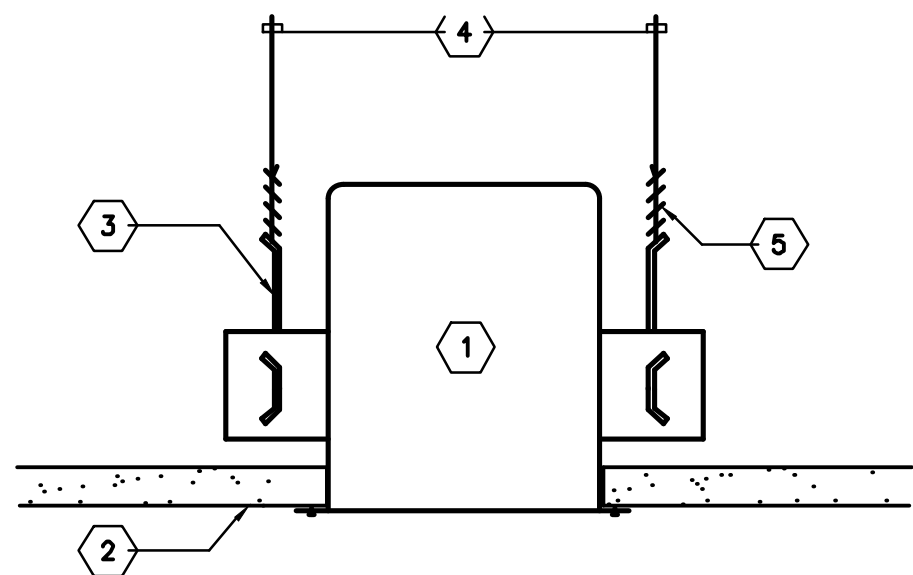
SCALE: NTS

DRAWING TITLE

ELECTRICAL DETAILS

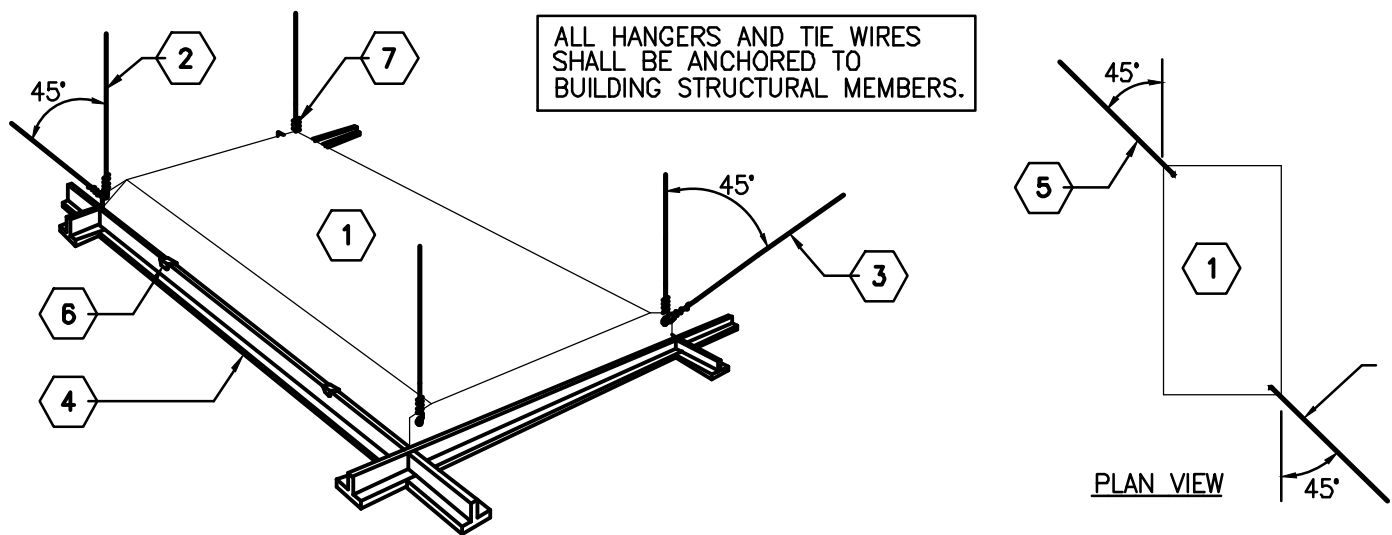
DRAWING #

E-501



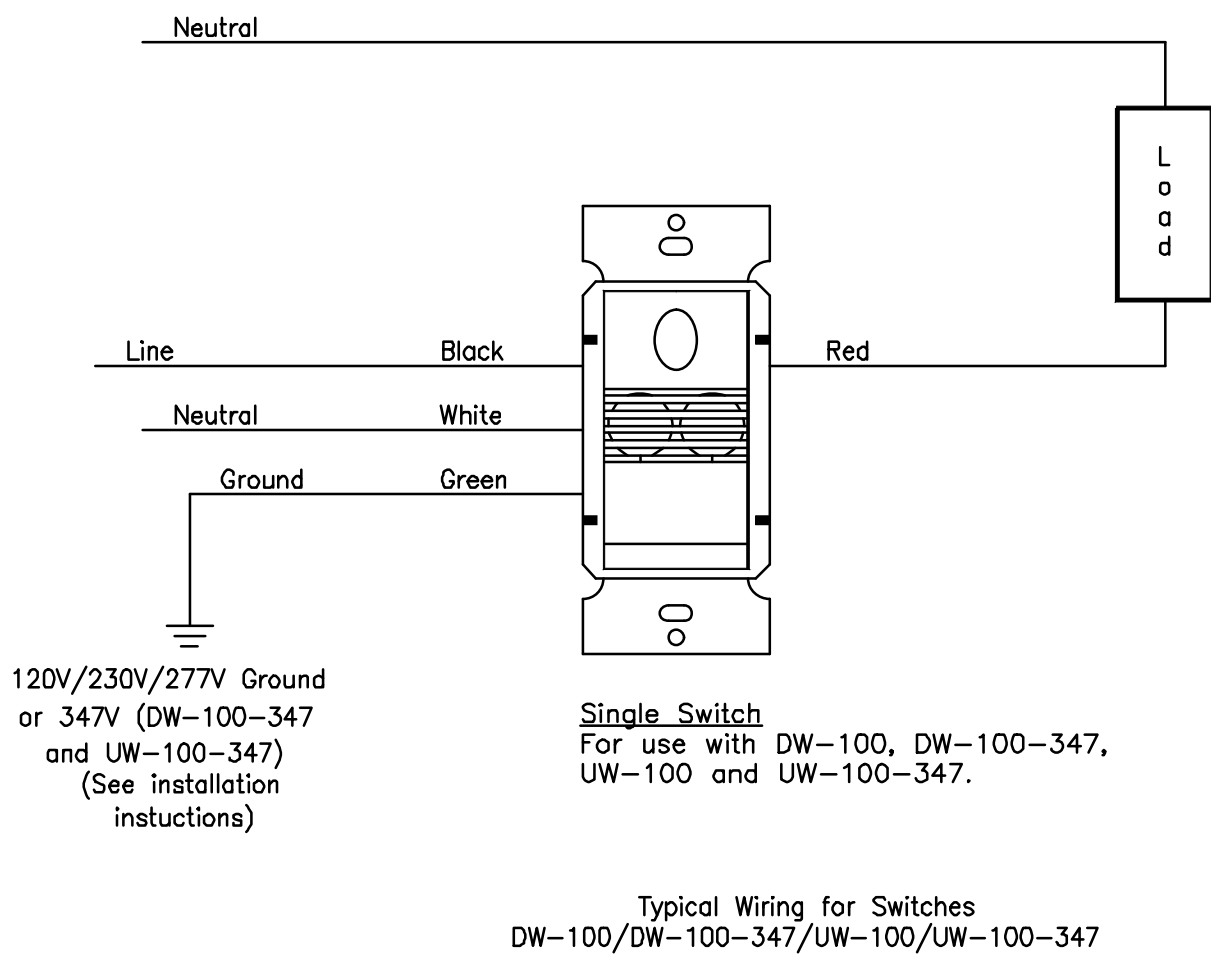
- NOTES:
- 1 RECESSED DOWNLIGHT FIXTURE
 - 2 GYPSUM BOARD OR TILE CEILING
 - 3 FIXTURE MOUNTING BRACKET
 - 4 #12 AWG HANGER WIRE CONNECTED TO BUILDING STRUCTURAL MEMBER
 - 5 MINIMUM 4 TURNS WITHIN 1-1/2" OF FIXTURE (TYPICAL)

RECESSED DOWNLIGHT SEISMIC BRACING
N.T.S.

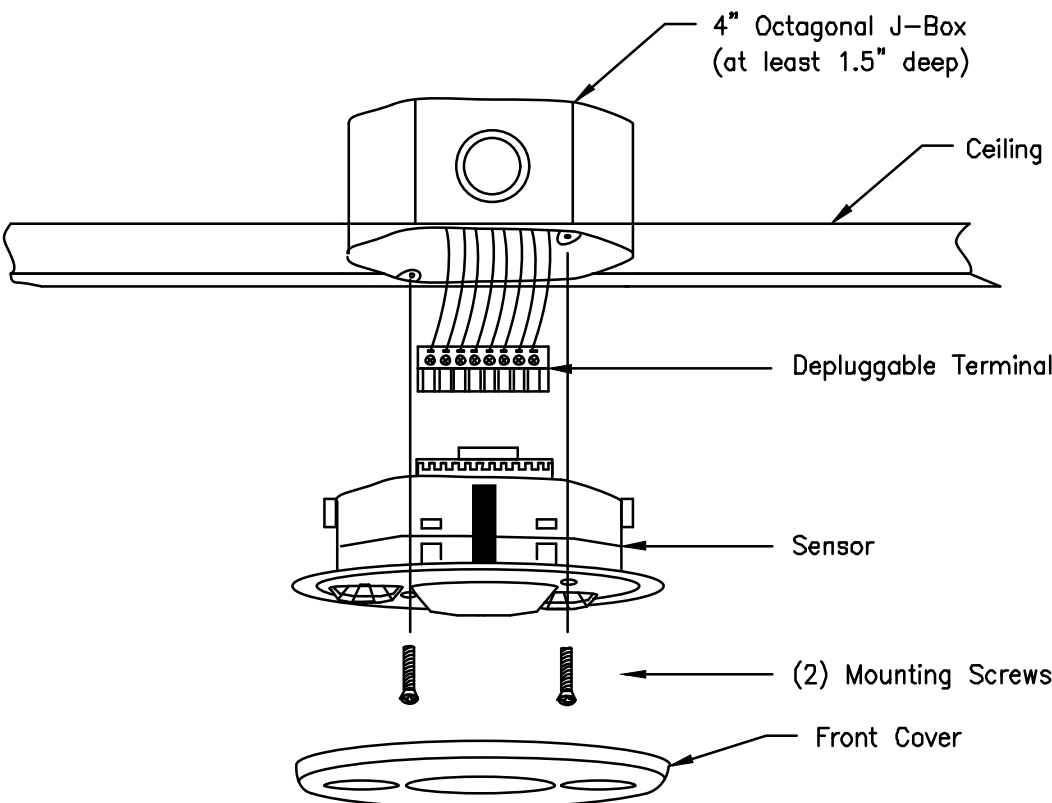
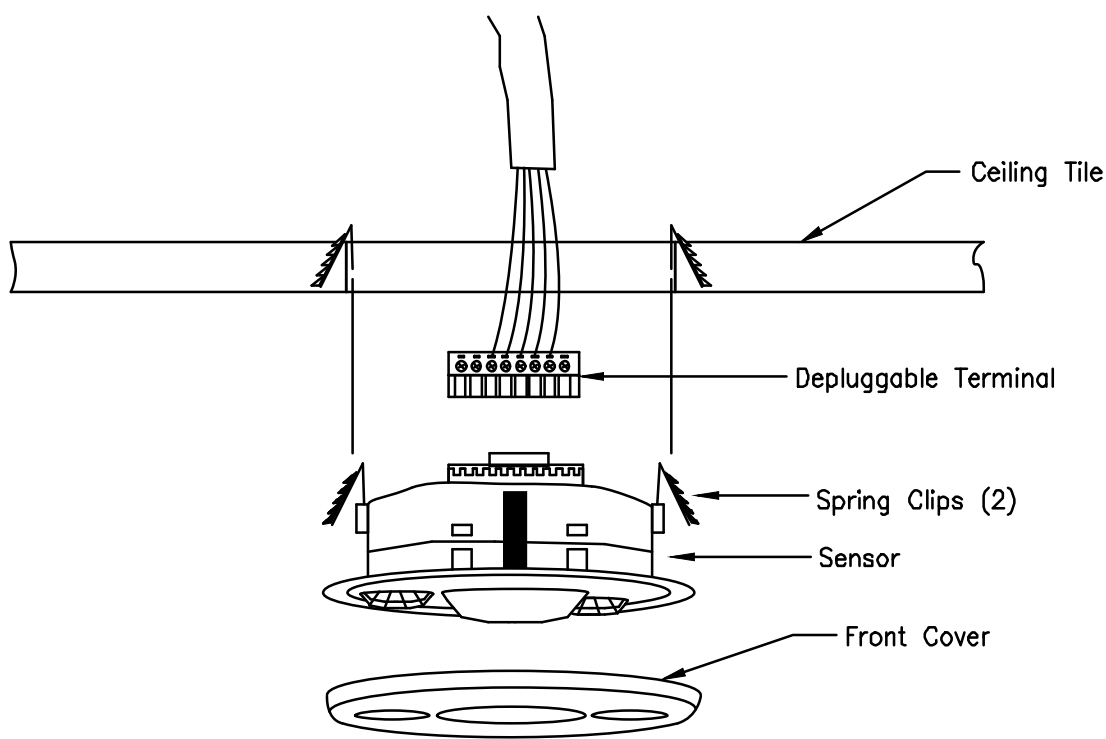


- NOTES:
- 1 RECESSED FLUORESCENT LIGHT FIXTURE
 - 2 #12 AWG HANGER WIRE (VERTICAL AT FOUR CORNERS)
 - 3 #12 AWG TIE WIRE (45° DIAGONAL AT OPPOSITE CORNERS)
 - 4 T-BAR GRID (TYPICAL)
 - 5 TIE WIRE
 - 6 CADDY T-BAR CLIP FOR SECURING FIXTURE TO T-BAR GRID (4/FIXT.)
 - 7 MINIMUM 4 TURNS WITHIN FIRST 1-1/2" (VERTICAL)

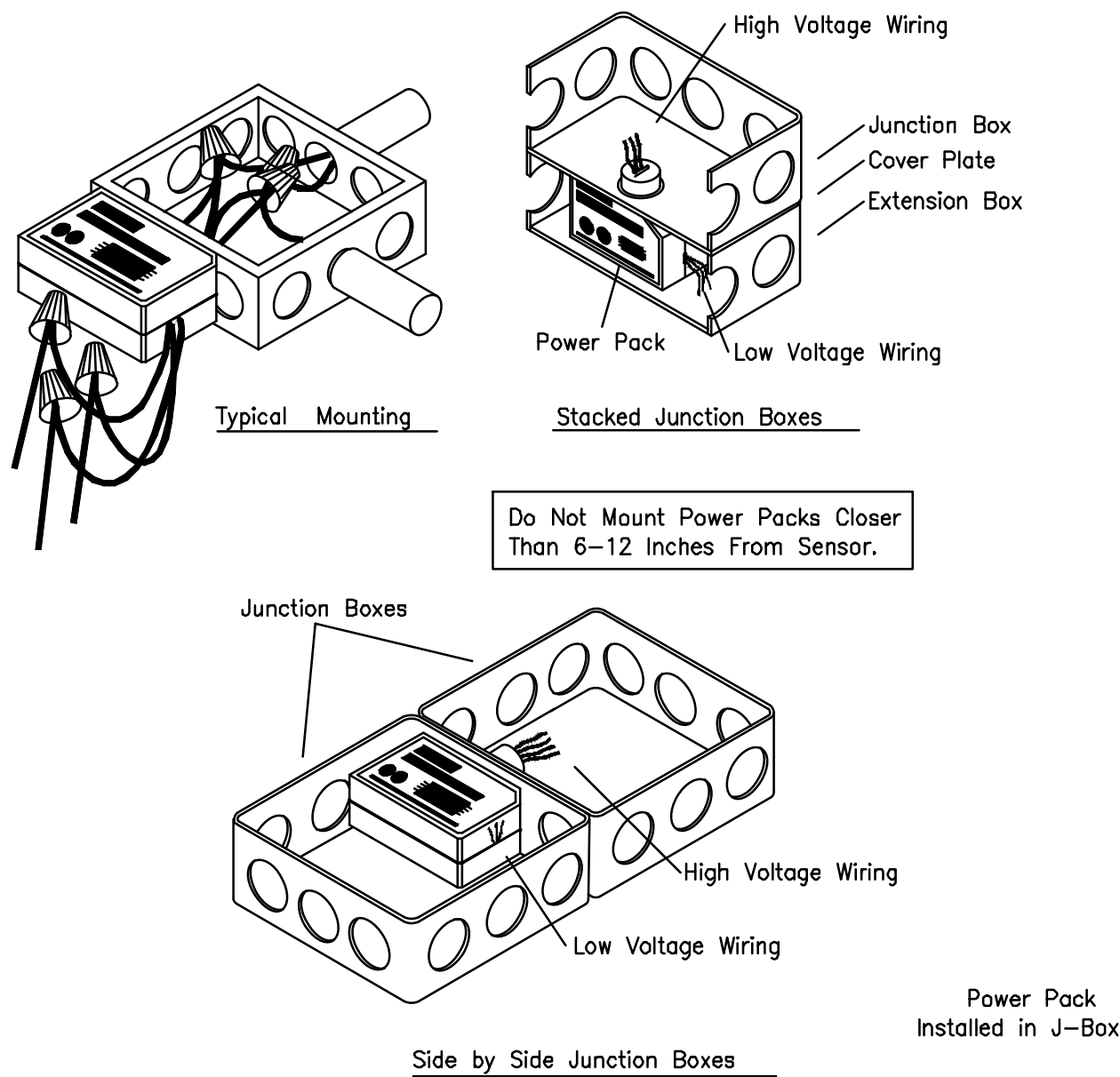
RECESSED LAY-IN FIXTURE SEISMIC BRACING
N.T.S.



WALL MTD. OCCUPANCY SENSOR WIRING DIAGRAM
N.T.S.



MOUNTING DETAIL FOR CEILING MTD.
OCCUPANCY SENSOR
N.T.S.



POWER PACK INSTALLATION DETAIL
N.T.S.

ARCHITECT OF RECORD:

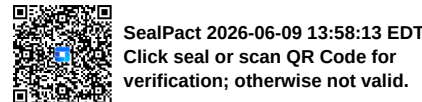
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CONVERSION

158 GRAND ST
WATERBURY, CT

JOB NO.: MEA.2026.00233

SCALE: NTS

DRAWING TITLE

ELECTRICAL
DETAILS

DRAWING #

E-502

6/9/2026 2:48 PM jmas755 U:\WORK\MEA_PROJECTS\2026\MEA_2026_00233_158 GRAND ST WATERBURY_CTD\DESIGN\DRAWINGS\MEP_FF\MEA_2026_00233_P_001.DWG

GENERAL NOTES

1. ALL REFERENCES HEREIN TO THE CONTRACTOR SHALL REFER TO THE PLUMBING CONTRACTOR UNLESS OTHERWISE NOTED.
2. THE ENTIRE INSTALLATION SHALL BE COORDINATED WITH THE WORK OF ALL OTHER TRADES PRIOR TO ANY FABRICATION OR INSTALLATION. THE CONTRACTOR SHALL VERIFY, IN THE FIELD, THE EXACT LOCATION OF ALL EXISTING FIRE PROTECTION SYSTEMS PRIOR TO MAKING NEW CONNECTIONS TO EXISTING LINES. THE CONTRACTOR SHALL PROVIDE ALL FITTINGS, OFFSETS, AND TRANSITIONS REQUIRED FOR A COMPLETE WORKABLE INSTALLATION.
3. DO NOT SCALE FROM THESE DRAWINGS.
4. DO NOT MAKE ANY CHANGES OR SUBSTITUTIONS WITHOUT SPECIFIC WRITTEN APPROVAL FROM THE ARCHITECT OR ENGINEER.
5. ANY DISCREPANCIES OR INADEQUACIES WITHIN BID DOCUMENTS, BETWEEN THESE BID DOCUMENTS AND RELATED HVAC, PLUMBING, ELECTRICAL, STRUCTURAL, ARCHITECTURAL, INTERIOR DECOR, AND STRUCTURAL BID DOCUMENTS, OR BETWEEN THESE BID DOCUMENTS AND FIELD CONDITIONS MUST BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER PRIOR TO BID SUBMISSION.
6. THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF RECORD "AS BUILT" DRAWINGS INDICATING THE PRECISE LOCATION OF ALL SYSTEMS, EQUIPMENT, CONCEALED OR EMBEDDED PIPING, EXPOSED PIPING, PIPING CONNECTIONS, AND ACCESS PANELS/DOORS. THESE DRAWINGS SHALL INCLUDE ALL CHANGES AND DEVIATIONS FROM CONSTRUCTION DOCUMENTS. THESE DOCUMENT SHALL ALSO BE PROVIDED TO THE OWNER IN AN APPROVED AUTOCAD FORMAT.
7. THE CONTRACTOR SHALL COORDINATE ELECTRICAL CHARACTERISTICS OF ALL PLUMBING EQUIPMENT WITH THE ELECTRICAL DRAWINGS AND ELECTRICAL CONTRACTOR. THE CONTRACTOR SHALL FURNISH PLUMBING EQUIPMENT WIRED FOR THE VOLTAGES SHOWN IN CONTRACT DOCUMENTS AND COORDINATED WITH ELECTRICAL CONTRACTOR.
8. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND ALL APPLICABLE CODES. THE CONTRACTOR SHALL PROVIDE ALL FITTINGS, TRANSITIONS, VALVES, AND OTHER DEVICES REQUIRED FOR A COMPLETE WORKABLE INSTALLATION.
9. THE CONTRACTOR SHALL SUBMIT, PRIOR TO ANY FABRICATION OR INSTALLATION, ALL NECESSARY DRAWINGS, EQUIPMENT/MATERIAL PRODUCT DATA, DOCUMENTATION, AND CALCULATIONS REQUIRED TO COMPLETE THE WORK OUTLINED IN THE CONTRACT DOCUMENTS.
10. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION PRIOR TO ANY FABRICATION OR INSTALLATION. ALL FEES FOR PERMITS AND INSPECTIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
11. ALL ABOVE GRADE PIPING SHALL BE PROPERLY SUPPORTED FROM THE BUILDING STRUCTURE. NO PIPING SHALL REST ON CEILING TILES OR CEILING STRUCTURE.
12. THE CONTRACTOR SHALL PROVIDE INSULATION ON ALL COLD WATER, HOT WATER, AND HOT WATER RECIRCULATION PIPING. THE CONTRACTOR SHALL PROVIDE INSULATION ON ALL HORIZONTAL STORM WATER PIPING.
13. THE CONTRACTOR SHALL PROVIDE REDUCING FITTING AT ALL CHANGES IN DIAMETER OF SANITARY, WASTE, AND STORM PIPING.
14. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY SERVICE CONNECTIONS TO ALL EQUIPMENT AND FIXTURE INDICATED ON THE ARCHITECTURAL AND PLUMBING DRAWINGS. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY SERVICE CONNECTIONS TO HVAC AND FIRE PROTECTION EQUIPMENT.
15. ALL PLUMBING FIXTURES TO BE SELECTED BY THE OWNER. CONTRACTOR TO COORDINATE WITH OWNER FOR SELECTION/SPECIFICATION AND LOCATION OF ALL PLUMBING FIXTURES. THIS ITEM SHALL BE COORDINATED WITH OWNER PRIOR TO BID RELEASE.

CONNECTICUT STATE BUILDING CODES

- 2022 CONNECTICUT STATE BUILDING CODE
- 2021 INTERNATIONAL EXISTING BUILDING CODE
- 2021 INTERNATIONAL PLUMBING CODE
- 2021 INTERNATIONAL MECHANICAL CODE
- 2020 NATIONAL ELECTRICAL CODE (NFPA 70)
- LOCAL FIRE DEPARTMENT/FIRE MARSHAL
- ALL OTHER LOCAL AUTHORITIES HAVING JURISDICTION

CONNECTICUT STATE ENERGY CODES

- 2021 INTERNATIONAL ENERGY CONSERVATION CODE

REFERENCED STANDARDS

APPLICABLE REFERENCE STANDARDS SHALL BE AS REFERENCED BY ALL STATE AND LOCAL CODES. THE LIST BELOW IS FOR QUICK REFERENCE AND DOES NOT INCLUDE ALL APPLICABLE REFERENCE STANDARDS.

- 2019 NFPA 13 – STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS

•

2019 NFPA 14 – STANDARD FOR THE INSTALLATION OF STANDPIPE AND HOSE SYSTEMS

•

2019 NFPA 20 – STANDARD FOR THE INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION

•

2021 NFPA 54 – NATIONAL FUEL GAS CODE

•

2020 NFPA 70 – NATIONAL ELECTRICAL CODE

•

2019 NFPA 72 – NATIONAL FIRE ALARM AND SIGNALING CODE

ABBREVIATIONS LIST

(NOT ALL ABBREVIATIONS SHOWN ARE NECESSARILY USED ON THIS PROJECT)

BLDG	BUILDING
CO	CLEANOUT
CODP	CLEANOUT DECKPLATE
CLG	CEILING
CONN	CONNECT / CONNECTION
CONT	CONTINUE / CONTINUATION
CV	CHECK VALVE
CW	DOMESTIC COLD WATER
DIA	DIAMETER
DCV	DOUBLE CHECK VALVE BACKFLOW PREVENTER
DN	DOWN (PENETRATES FLOOR SLAB)
DW	DISHWASHER
DWG	DRAWING
EX	EXISTING
FD	FLOOR DRAIN
FT	FEET
FU	FIXTURE UNIT(S)
G	GAS
GV	GATE VALVE
GAL	GALLONS
GPM	GALLONS PER MINUTE
HW	DOMESTIC HOT WATER
HWR	DOMESTIC HOT WATER RECIRCULATION
IN	INCH
JS	JANITOR'S SINK
LAV	LAVATORY
LB	LAUNDRY BOX
MAX	MAXIMUM
MB	MANUFACTURED BY
MIN	MINIMUM
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NTS	NOT TO SCALE
PSI	POUNDS PER SQUARE INCH – GAUGE
RPZ	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
S	SANITARY/SOIL
SK	SINK
SQFT	SQUARE FEET
ST	STORM
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
UP	UP (PENETRATES FLOOR SLAB)
UR	URINAL
V	VENT
VB	VACUUM BREAKER
VTR	VENT THROUGH ROOF
W	WASTE
WC	WATER CLOSET

SYMBOL LIST

(NOT ALL SYMBOLS SHOWN ARE NECESSARILY USED ON THIS PROJECT)

	SANITARY/SOIL PIPING	
	BURIED SANITARY/SOIL PIPING	
	GREASE WASTE PIPING	
	BURIED GREASE WASTE PIPING	
	STORM WATER PIPING	
	VENT PIPING	
	DOMESTIC COLD WATER PIPING	
	DOMESTIC HOT WATER PIPING	
	DOMESTIC HOT WATER RECIRCULATION PIPING	
	NATURAL GAS PIPING	
	ARROW REPRESENTS DIRECTION OF FLOW	
	PIPING TO BE DEMOLISHED	
	PIPE BREAK	
	CAPPED OUTLET	
	CLEANOUT / PLUGGED OUTLET	
	CLEANOUT DECK PLATE	
	P-TRAP	
	PIPE DROP / DOWN	
	PIPE RISE / UP	
	PIPE BOTTOM CONNECTION	
	PIPE TOP CONNECTION	
	PIPE SIDE CONNECTION	
	VACUUM BREAKER	
	SHOCK ARRESTOR	
	DRAIN	
	PUMP	
	VENT THROUGH ROOF	
	WATERPROOF SLEEVE	
	CHECK VALVE	
	BALL VALVE	
	GATE VALVE	
	PLUG VALVE	
	OUTSIDE SCREW & YOKE VALVE	
	WATER METER	
	MIXING VALVE	
	PRESSURE REDUCING VALVE	
	SOLENOID VALVE	
	GAS PRESSURE REGULATOR	
	GAS SHUTOFF	
	POINT OF DISCONNECTION FROM EXISTING PIPING	
	POINT OF CONNECTION TO EXISTING PIPING	
	PLUMBING RISER DESIGNATION	—RISER NUMBER
	GAS RISER DESIGNATION	—RISER NUMBER
	STORM RISER DESIGNATION	—RISER NUMBER

OPENING / SLEEVE SCHEDULE

INSULATED DOMESTIC COLD WATER, HOT WATER, AND HOT WATER RECIRCULATION PIPING		
PIPE DIAMETER	WALL / FLOOR SLEEVE DIAMETER	BEAM OPENING DIAMETER
½" & ¾"	3"	4"
1"	4"	4½"
1¼"	4"	5"
1½"	4"	5"
2" & 2½"	5"	6"
3"	6"	6½"
UNINSULATED SANITARY, WASTE, VENT, STORM, AND GAS PIPING		
PIPE DIAMETER	WALL / FLOOR SLEEVE DIAMETER	BEAM OPENING DIAMETER
1½"	3"	3"
2"	4"	3½"
2½"	4"	4"
3"	5"	4½"
4"	6"	5½"
5"	8"	6½"
6"	8"	7½"

PLUMBING DRAWING LIST

P-001	PLUMBING COVER PAGE
P-002	PLUMBING SCHEDULE SHEET
P-100	PLUMBING BASEMENT PLAN
P-101	PLUMBING 1ST FLOOR PLAN
P-102	PLUMBING 2ND FLOOR PLAN
P-103	PLUMBING 3RD FLOOR PLAN
P-104	PLUMBING ROOF PLAN
P-301	PLUMBING TYPICAL RISER DIAGRAM
P-401	PLUMBING DETAILS



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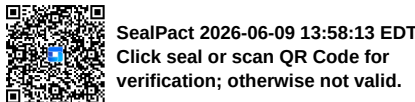
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PROJECT NAME

PROPOSED OFFICE TO RESI. COVERSION

158 GRAND ST
WATERBURY, CT

JOB NO.: MEA.2026.00233

SCALE: NTS

DRAWING TITLE

PLUMBING
COVER PAGE

DRAWING #

P-001

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PIPE, FITTING, AND JOINT MATERIAL SCHEDULE					
(NOT ALL PIPE, FITTING, AND JOINT MATERIALS SHOWN ARE NECESSARILY USED ON THIS PROJECT)					
PIPING SYSTEM	PIPING LOCATION	PIPING SIZE	PIPING SPECIFICATION	FITTING SPECIFICATION	JOINT SPECIFICATION
SANITARY/WASTE/ VENT/STORM	ALL	ALL	SCHEDULE 40 PVC	SCHEDULE 40 PVC SOLID CORE WITH SOLVENT CEMENT WELD ENDS	SOLVENT CEMENT WELDED ENDS
COLD WATER DISTRIBUTION	CORRIDORS	ALL	TYPE L HARD DRAWN COPPER TUBING	WROUGHT COPPER WITH SOLDER ENDS	95.5 TIN / 4.0 COPPER / 0.5 SILVER SOLDER
COLD WATER/HOT WATER	RESIDENTIAL UNITS	ALL	PEX TUBING	PEX CONNECTORS	PEX GRASPING FITTING/MANIFOLD
DOMESTIC WATER SERVICE PIPE	UNDERSLAB/WATER ROOM	ALL	CEMENT LINED DUCTILE IRON	CEMENT LINED DUCTILE IRON WITH MECHANICAL JOINT ENDS	BOLT-ON MECHANICAL JOINT WITH HIGH QUALITY NEOPRENE RUBBER COMPRESSION GASKET

DRAIN SCHEDULE																															
DESIGNATION	MANUFACTURER	MODEL NUMBER	DRAIN BODY SPECIFICATION									STRAINER SPECIFICATION																APPLICABLE AREAS			
			BRONZE	CAST IRON	GALVANIZED	STAINLESS STEEL	CLAMPING DEVICE	SECONDARY CLAMP	SUMP RECEIVER	ACID RESISTANT COATING	TRAP PRIMER CONNECTION	BRONZE	CAST IRON	GALVANIZED	NICKEL BRONZE	STAINLESS STEEL	CHROME PLATED	POISHED FINISH	SATIN FINISH	SECONDARY STRAINER	SEDIMENT BUCKET	LESS GRATE	HALF GRATE	FLUSH GRATE	TRACTOR GRATE	FLAT TOP	FUNNEL TOP		DOME	EXTENSION	ADJUSTABLE
FD-1	JAY R. SMITH	2310		●							●		●																	●	MECH & LAUNDRY ROOM CLOSETS
NOTES:																															
1. ALL FLOOR DRAINS IN FINISHED AREAS AND ALL ROOF DRAINS SHALL BE LOCATED AS PER THE ARCHITECTURAL DRAWINGS.																															
2. ALL FLOOR DRAINS IN MECHANICAL EQUIPMENT ROOMS, BOILER ROOMS, FAN ROOMS ETC., SHALL BE LOCATED IN COORDINATION WITH THE MECHANICAL CONTRACTOR.																															
3. THE CONTRACTOR SHALL VERIFY THE COMPATIBILITY OF THE DRAINS WITH THE APPROVED ROOFING AND/OR WATER PROOFING SYSTEMS PRIOR TO SUBMITTING SHOP DRAWINGS.																															
4. THE TOP OF ALL FLOOR DRAINS SHALL BE FLUSH WITH THE ADJACENT FINISHED FLOOR.																															
5. PROVIDE MECHANICAL SEAL TRAP GUARDS ON ALL FLOOR DRAINS UNLESS OTHERWISE NOTED.																															

WATER HEATER SCHEDULE													
DESIGNATION	MANUFACTURER	MODEL NUMBER	WATER STORAGE TEMPERATURE (°F)	WATER STORAGE CAPACITY (GAL)	RECOVERY RATE (GPH)	TEMPERATURE RISE (°F)	ELECTRICAL DATA						
							TOTAL KW	PER ELEMENT LOAD (KW)	VOLTAGE	PHASE			
HTR-1	STATE	EEAB-50-DFRS	140	50	18.45	90	4.5	(1) ● 4.5	208	1	PROVIDE MASTER MIXING VALVE (MB WATTS MOD#LFLM490-1).		

MEA

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JOB NO.: MEA-2026.00233

SCALE: NTS

DRAWING TITLE

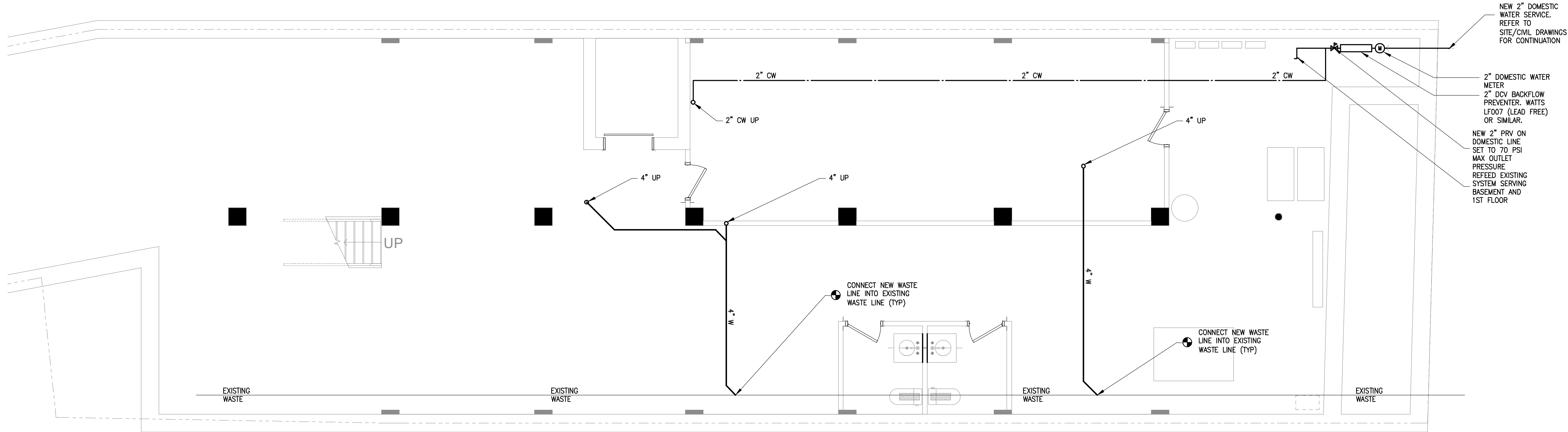
PLUMBING
SCHEDULE SHEET

DRAWING #

P-002

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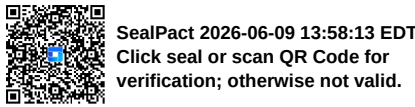
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PROJECT NAME
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COVERSION

158 GRAND ST
WATERBURY, CT

JOB NO.: MEA.2026.00233

SCALE: 1/4" = 1'-0"

DRAWING TITLE

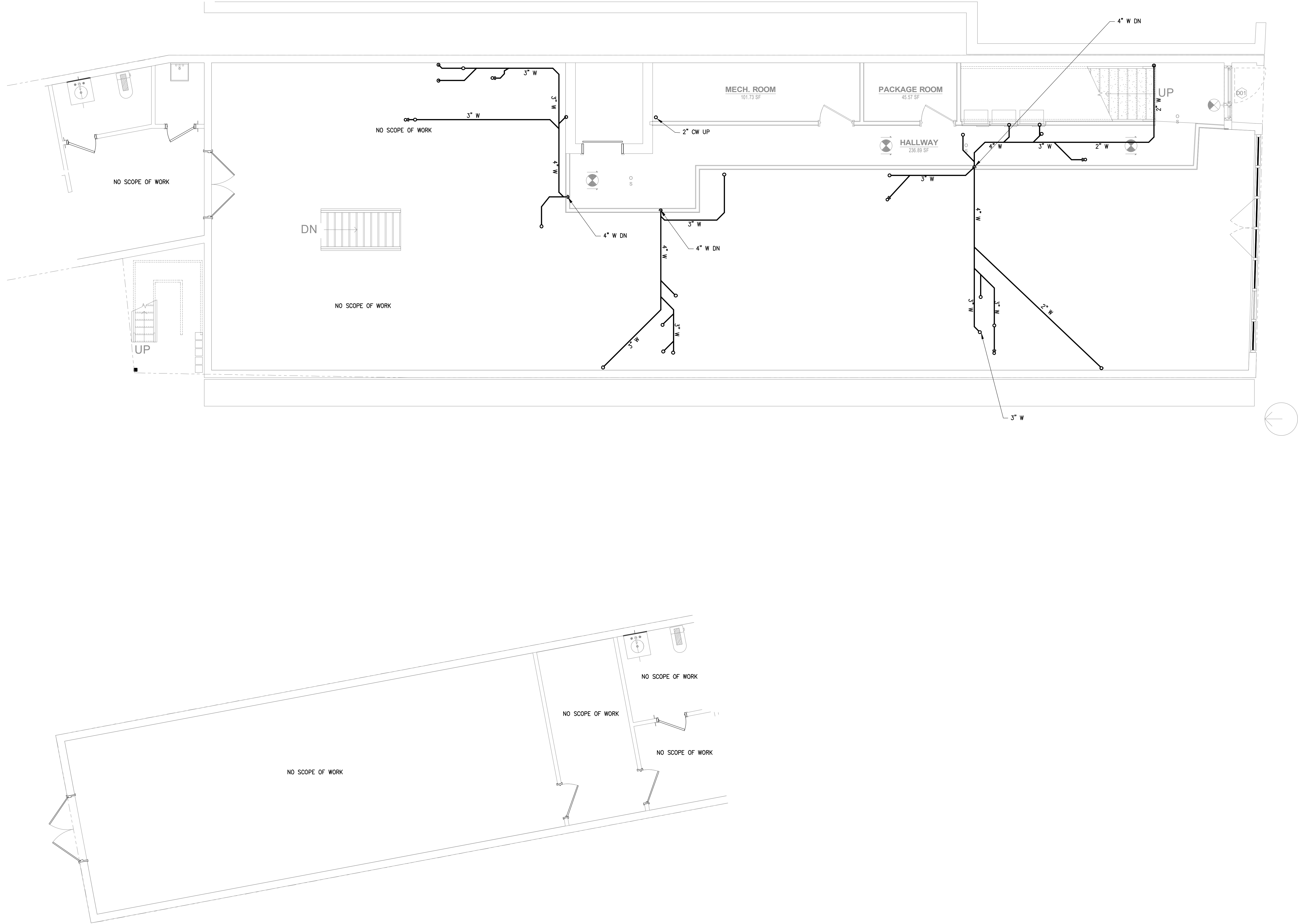
PLUMBING
CELLAR PLAN

DRAWING #

P-100

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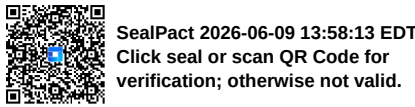
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SCALE: 1/4" = 1'-0"

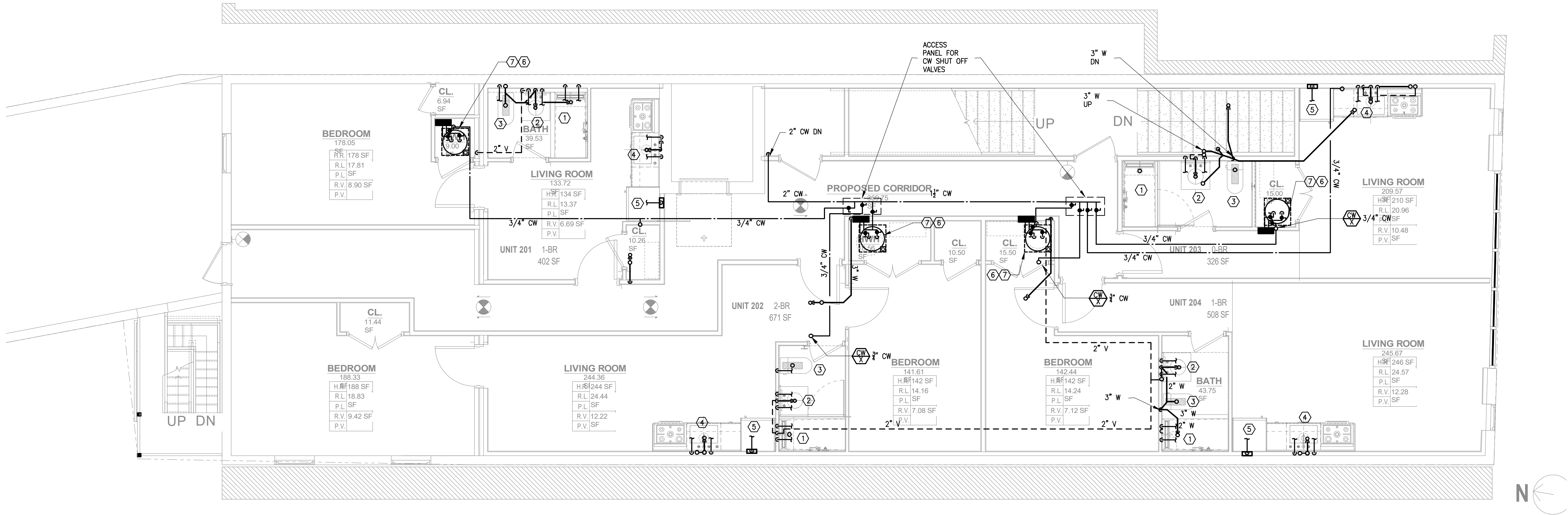
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PLUMBING
1ST FLOOR PLAN

DRAWING #

P-101

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PLUMBING KEY NOTES

- 2"W, 1/2"HW & 1/2"CW CONN. TO TUB/SHOWER.
- 2"W, 2"V, 1/2"HW & 1/2"CW CONN. TO LAV
- 3"W, 1/2"CW CONN. TO W.C.
- 2"W, 2"V, 1/2"HW & 1/2"CW CONN. TO KS/DW.
- 1/2"CW CONN TO REF. PROVIDE UTILITY BOX MB: SIOUX CHIEF MOD#696-G1010MF
- HTR-1: SEE PLUMBING DETAIL SHEET P-402 FOR FURTHER INFO
 - PROVIDE LEAK DETECTION SYSTEM. MB:TACO MOD#LEAKBREAKER WITH LB-075-H-1LF MODULE.
 - PROVIDE DRAIN PAN UNDER WATER HEATER PIPED TO 3"FD-1.
 - COORDINATE POWER RECEPTACLE WITH E.C. FOR LEAK DETECTION.
 - COORDINATE CONDENSATE DRAINAGE FROM MECHANICAL UNITS, SPILL TO FLOOR DRAIN WITHIN MECH CLOSET.
- PEX MANIFOLD. MB: ZURN MOD# QUICKPORT. CONTRACTOR TO VERIFY FINAL CONNECTION TYPE. PROVIDE VALVE FOR EACH FIXTURE HOT & COLD WATER SUPPLY. HOMERUN 1/2" PIPING TO BE PROVIDED FOR EACH FIXTURE.

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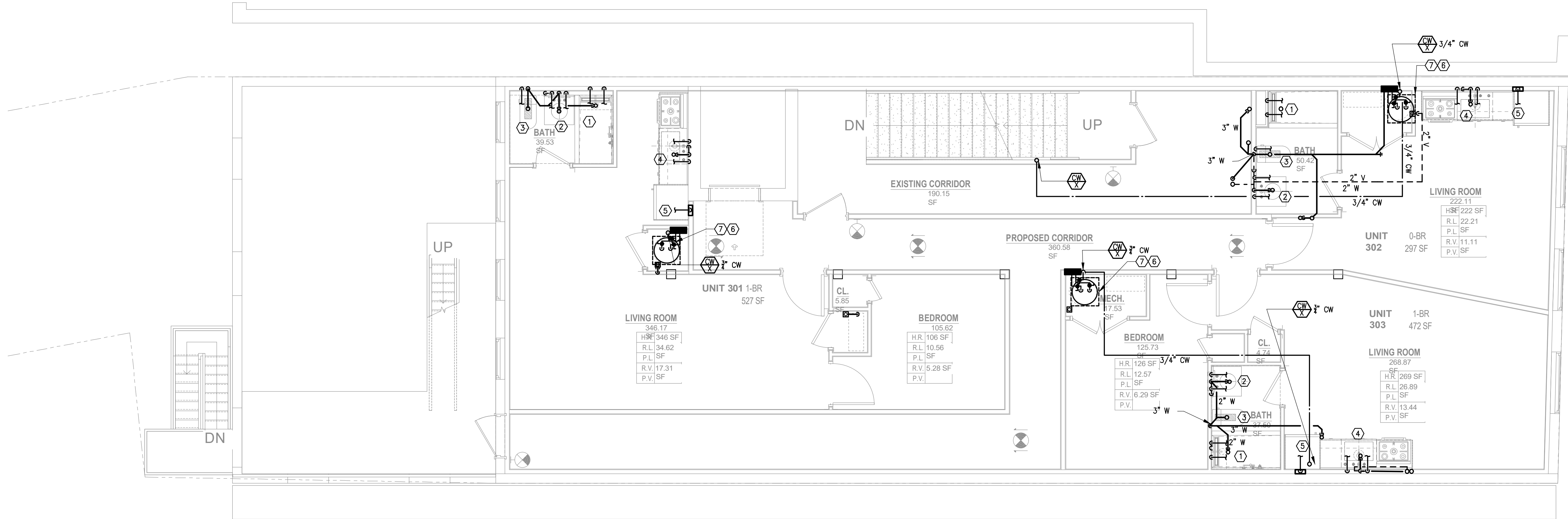
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DRAWING TITLE

PLUMBING
2ND FLOOR PLAN

DRAWING #

P-102



PLUMBING KEY NOTES

- 2"W, 1/2"HW & 1/2"CW CONN. TO TUB/SHOWER.
- 2"W, 2"V, 1/2"HW & 1/2"CW CONN. TO LAV
- 3"W, 1/2"CW CONN. TO W.C.
- 2"W, 2"V, 1/2"HW & 1/2"CW CONN. TO KS/DW.
- 1/2"CW CONN TO REF. PROVIDE UTILITY BOX MB: SIOUX CHIEF MOD#696-G1010MF
- HTR-1: SEE PLUMBING DETAIL SHEET P-402 FOR FURTHER INFO
 - PROVIDE LEAK DETECTION SYSTEM. MB:TACO MOD#LEAKBREAKER WITH LB-075-H-1LF MODULE.
 - PROVIDE DRAIN PAN UNDER WATER HEATER PIPED TO 3"FD-1.
 - COORDINATE POWER RECEPTACLE WITH E.C. FOR LEAK DETECTION.
 - COORDINATE CONDENSATE DRAINAGE FROM MECHANICAL UNITS. SPILL TO FLOOR DRAIN WITHIN MECH CLOSET.
- PEX MANIFOLD, MB: ZURN MOD# QUICKPORT. CONTRACTOR TO VERIFY FINAL CONNECTION TYPE. PROVIDE VALVE FOR EACH FIXTURE HOT & COLD WATER SUPPLY. HOMERUN 1/2" PIPING TO BE PROVIDED FOR EACH FIXTURE.

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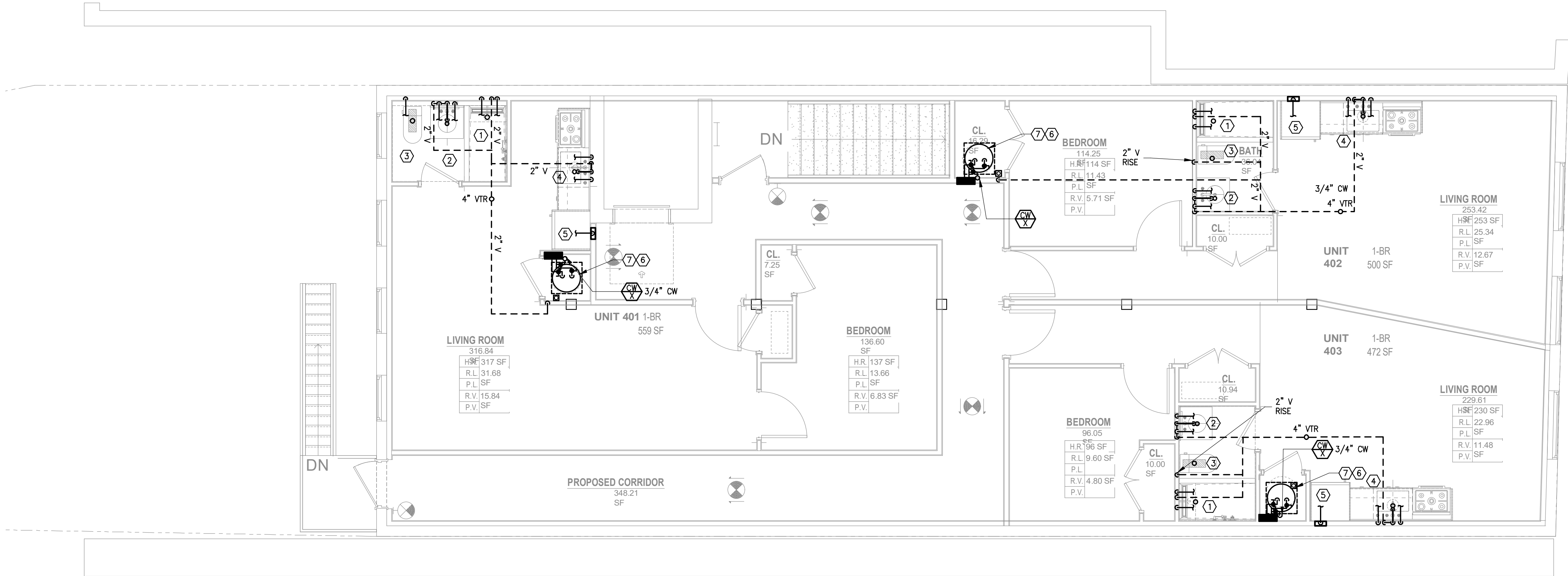
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PLUMBING
3RD FLOOR PLAN

DRAWING #

P-103

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PLUMBING KEY NOTES

- 2"W, 1/2"HW & 1/2"CW CONN. TO TUB/SHOWER.
- 2"W, 2"V, 1/2"HW & 1/2"CW CONN. TO LAV
- 3"W, 1/2"CW CONN. TO W.C.
- 2"W, 2"V, 1/2"HW & 1/2"CW CONN. TO KS/DW.
- 1/2"CW CONN TO REF. PROVIDE UTILITY BOX MB: SIOUX CHIEF MOD#696-G1010MF
- HTR-1: SEE PLUMBING DETAIL SHEET P-402 FOR FURTHER INFO
 - PROVIDE LEAK DETECTION SYSTEM. MB:TACO MOD#LEAKBREAKER WITH LB-075-H-1LF MODULE.
 - PROVIDE DRAIN PAN UNDER WATER HEATER PIPED TO 3"FD-1.
 - COORDINATE POWER RECEPTACLE WITH E.C. FOR LEAK DETECTION.
 - COORDINATE CONDENSATE DRAINAGE FROM MECHANICAL UNITS, SPILL TO FLOOR DRAIN WITHIN MECH CLOSET.
- PEX MANIFOLD, MB: ZURN MOD# QUICKPORT. CONTRACTOR TO VERIFY FINAL CONNECTION TYPE. PROVIDE VALVE FOR EACH FIXTURE HOT & COLD WATER SUPPLY. HOMERUN 1/2" PIPING TO BE PROVIDED FOR EACH FIXTURE.



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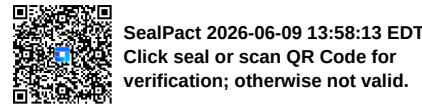
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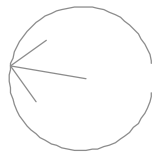
PLUMBING
4TH FLOOR PLAN

DRAWING #

P-104

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COVERSON

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SCALE: 1/4" = 1'-0"

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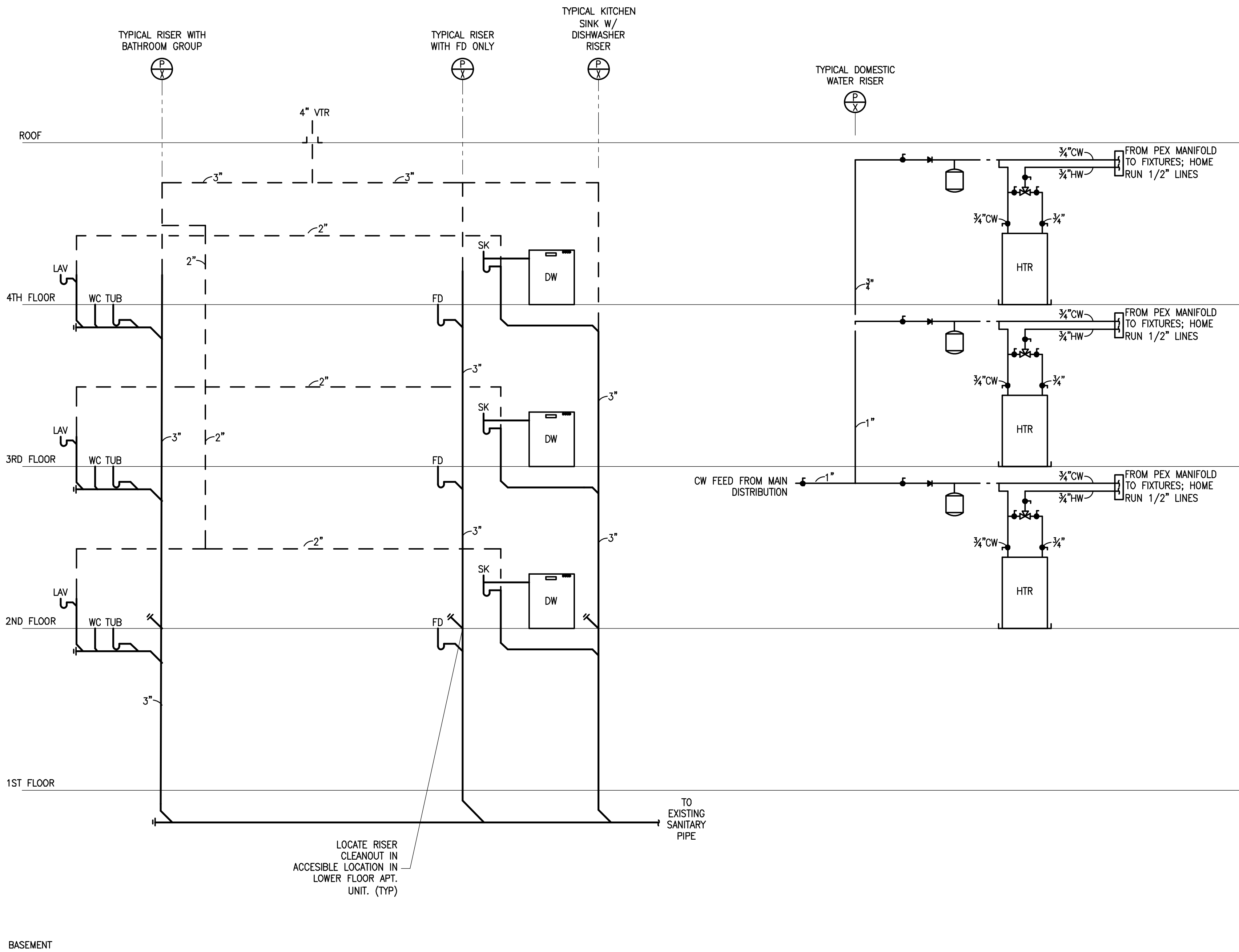
PLUMBING
ROOF PLAN

DRAWING #

P-105

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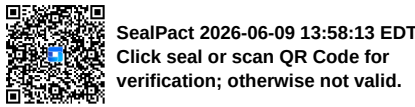
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158 GRAND ST
WATERBURY, CT

JOB NO.: MEA-2026.00233

SCALE: NTS

DRAWING TITLE

PLUMBING
TYPICAL RISER DIAGRAMS

DRAWING #

P-301

ARCHITECT OF RECORD:

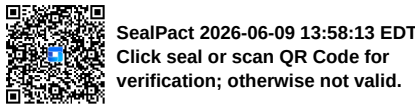
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PROJECT NAME

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CONVERSION

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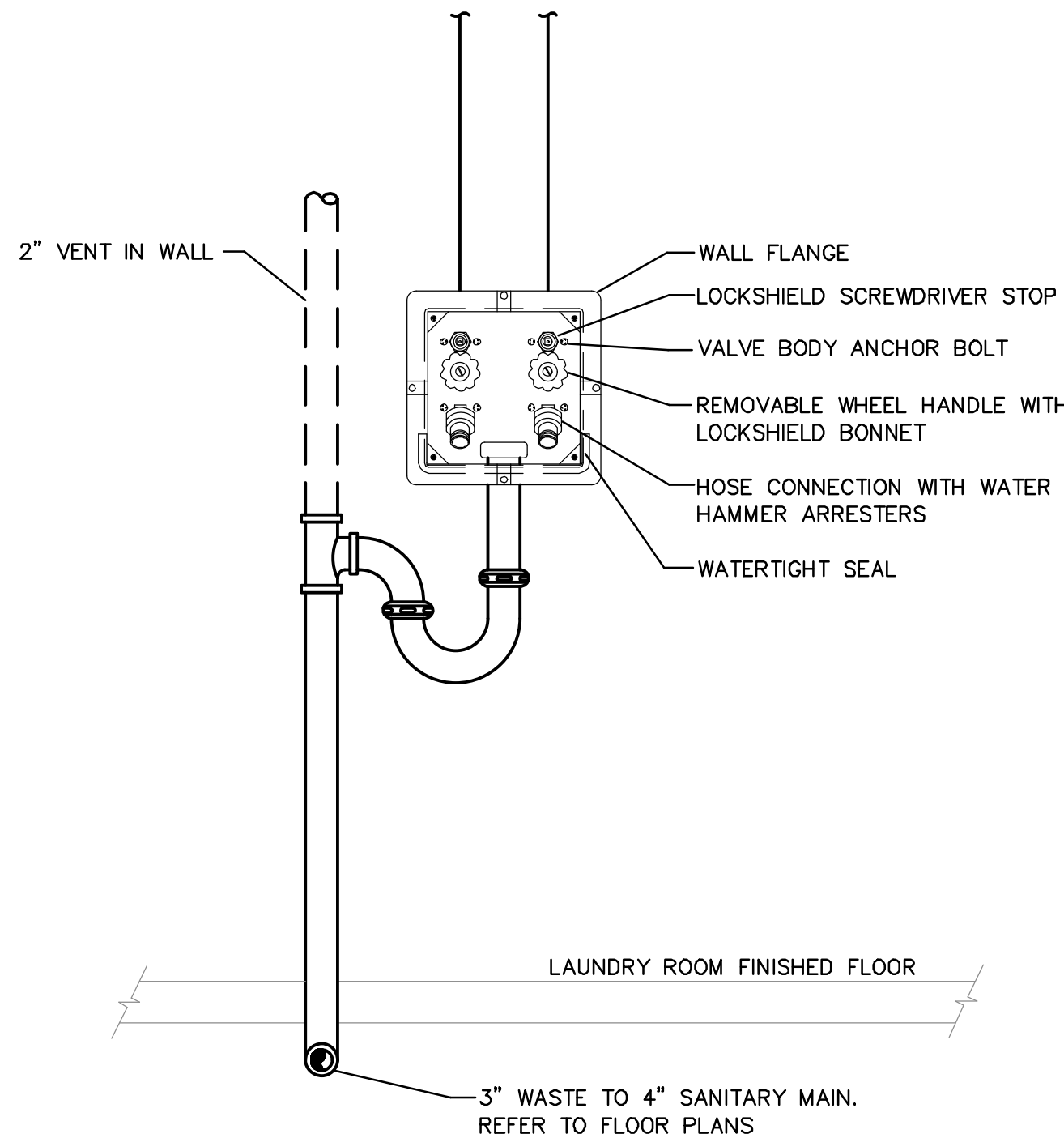
DRAWING TITLE

PLUMBING
DETAILS

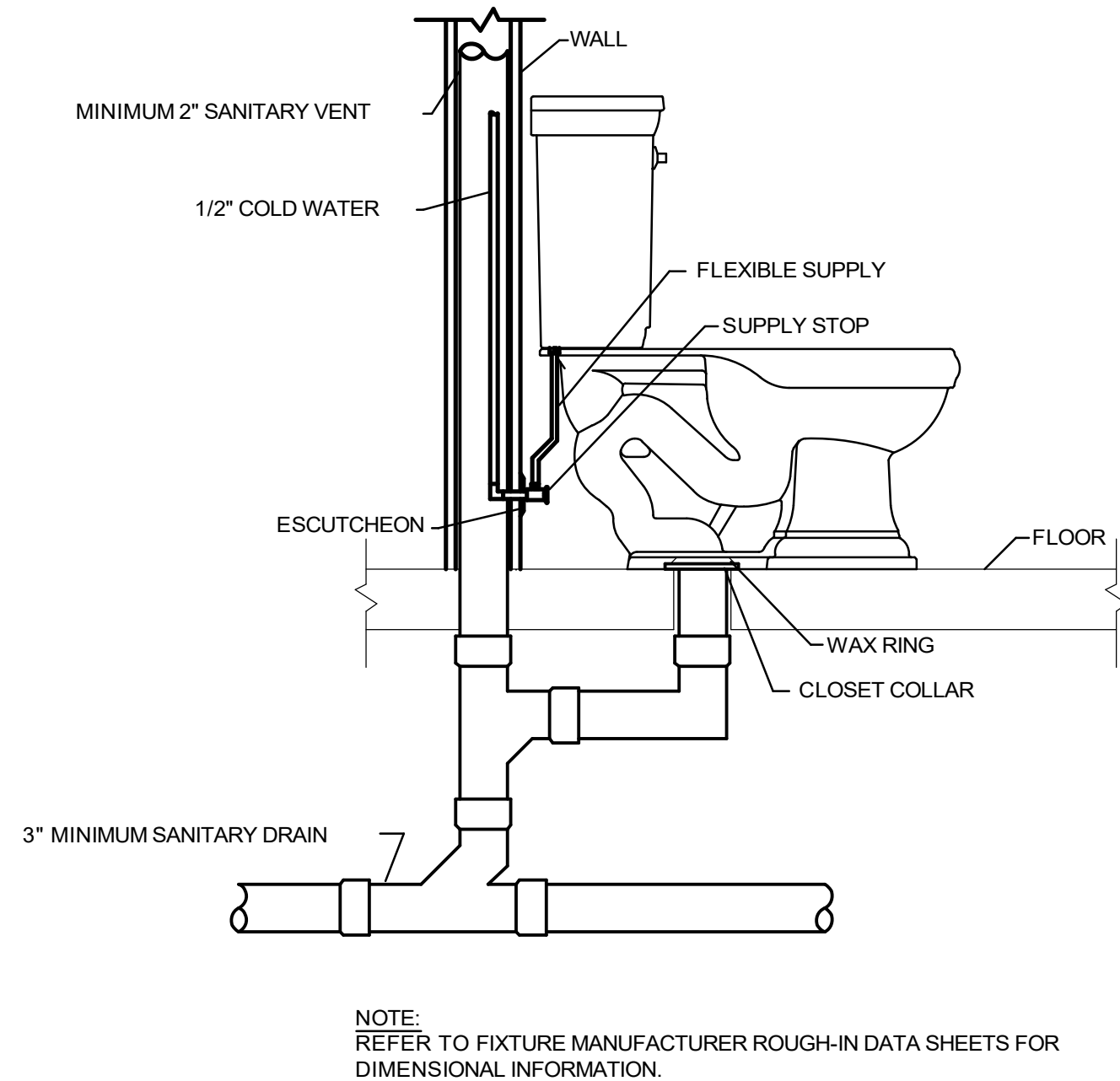
DRAWING #

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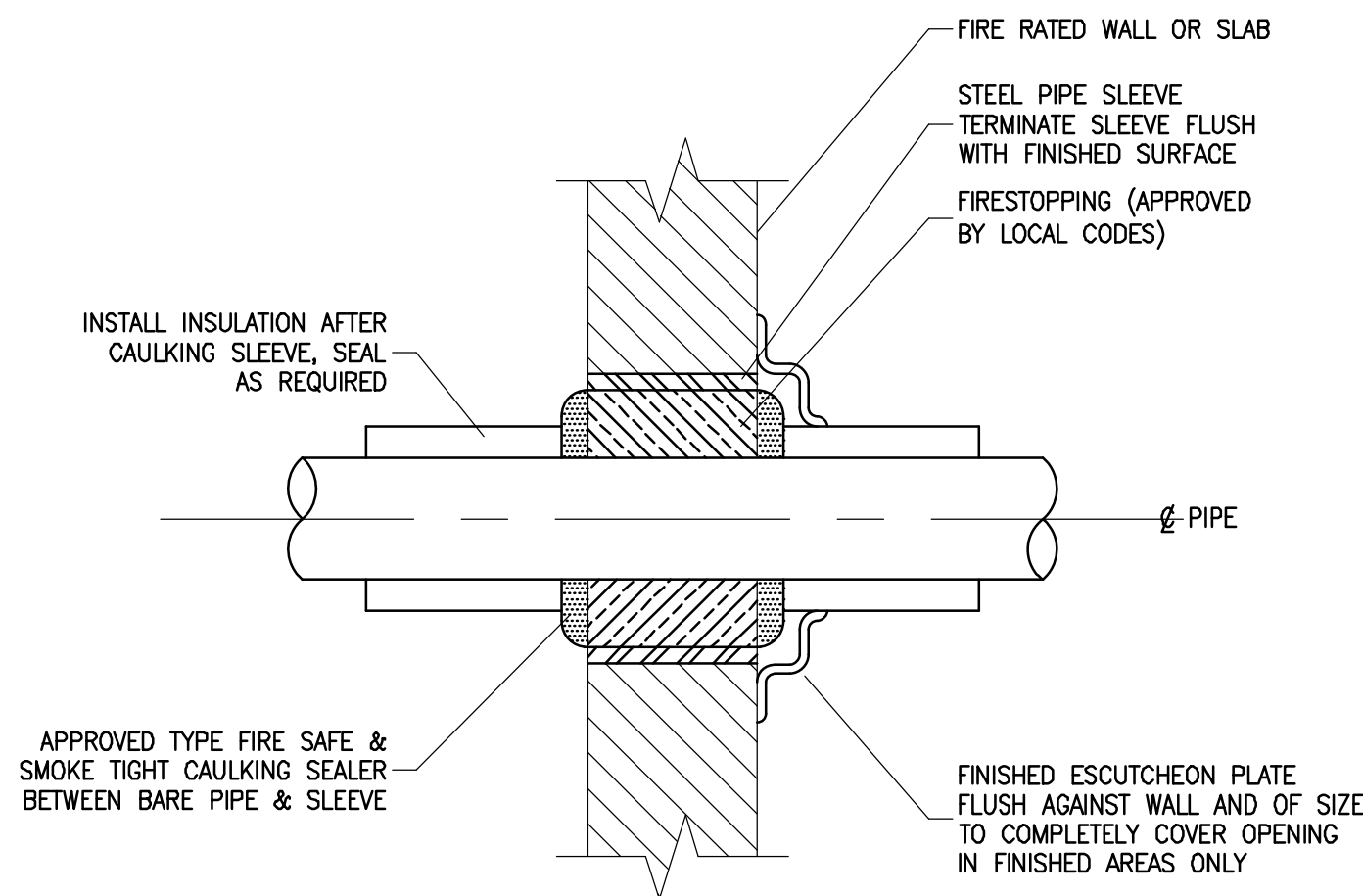


NOT TO SCALE



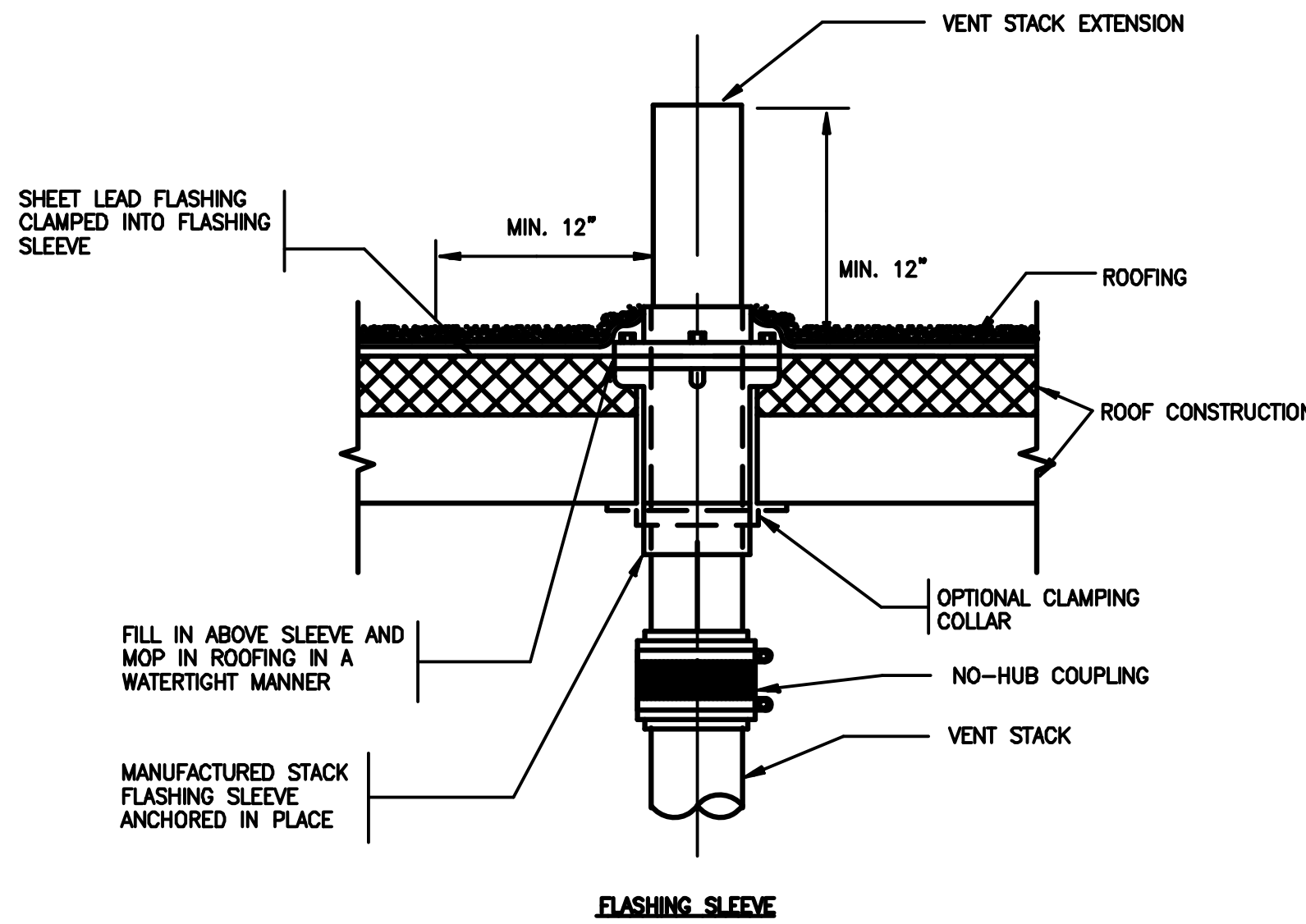
1 RESIDENTIAL TANK TYPE WATER CLOSET

NO SCALE



FIRE/SMOKE STOPPING WALL PENETRATION DETAIL

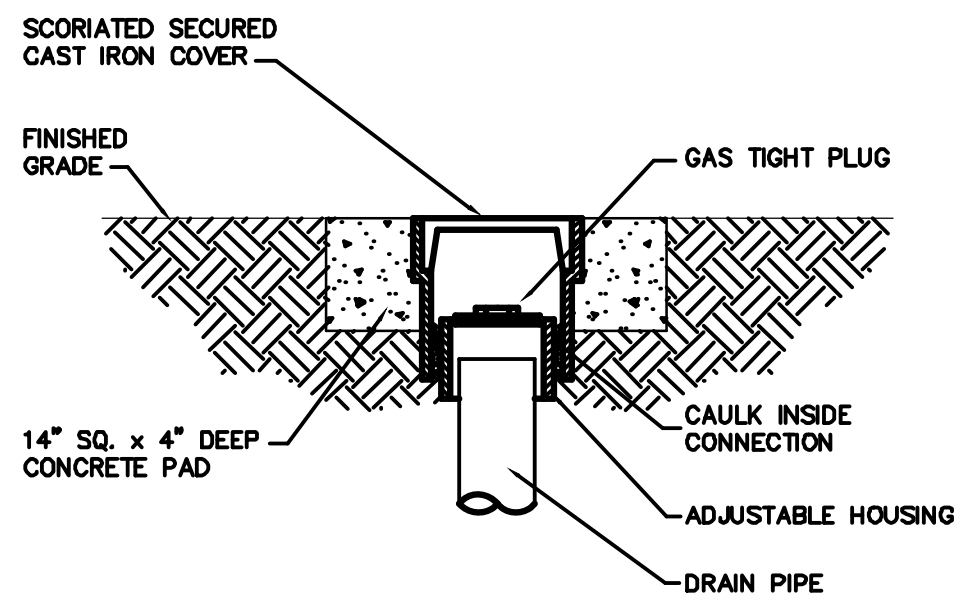
SCALE: NTS



NOTE: VENT STACK OUTLET TO BE 10 FT.(MIN)
FROM ANY WALL OR STRUCTURE OR
3 FT.ABOVE STRUCTURE

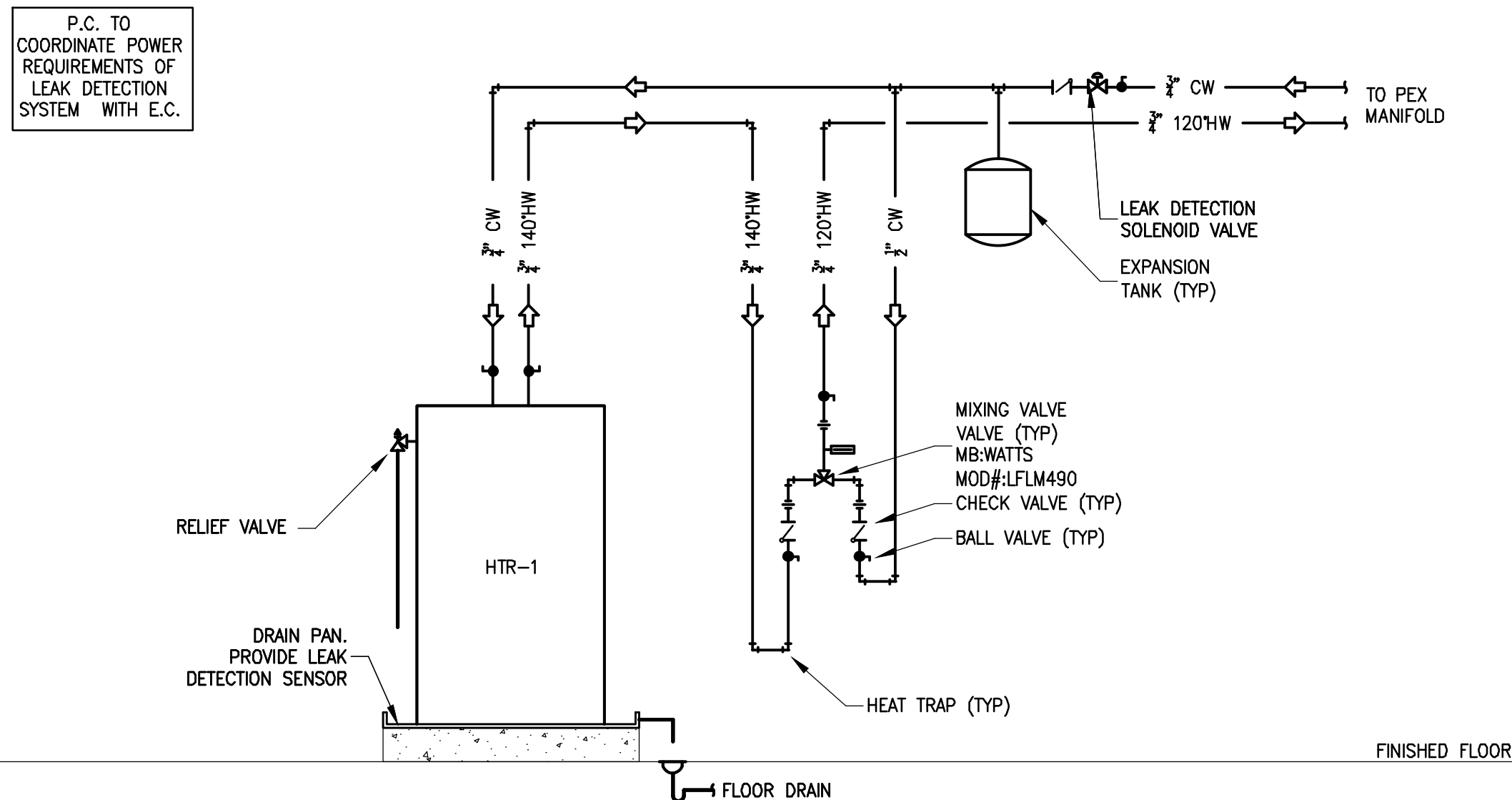
9

VENT THRU ROOF DETAIL



CLEANOUT TO GRADE

NO SCALE



DOMESTIC WATER HEATER DETAIL - HTR-1

SCALE: NTS

GENERAL NOTES

- ALL REFERENCES HEREIN TO THE CONTRACTOR SHALL REFER TO THE FIRE PROTECTION CONTRACTOR UNLESS OTHERWISE NOTED.
- THE ENTIRE INSTALLATION SHALL BE COORDINATED WITH THE WORK OF ALL OTHER TRADES PRIOR TO ANY FABRICATION OR INSTALLATION. THE CONTRACTOR SHALL VERIFY, IN THE FIELD, THE EXACT LOCATION OF ALL EXISTING FIRE PROTECTION SYSTEMS PRIOR TO MAKING NEW CONNECTIONS TO EXISTING LINES. THE CONTRACTOR SHALL PROVIDE ALL FITTINGS, OFFSETS, AND TRANSITIONS REQUIRED FOR A COMPLETE WORKABLE INSTALLATION.
- DO NOT SCALE FROM THESE DRAWINGS.
- DO NOT MAKE ANY CHANGES OR SUBSTITUTIONS WITHOUT SPECIFIC WRITTEN APPROVAL FROM THE ARCHITECT OR ENGINEER.
- THE CONTRACTOR SHALL REFER TO WRITTEN SPECIFICATION IN CONJUNCTION WITH THESE DRAWINGS FOR FULL PROJECT SCOPE.
- ANY DISCREPANCIES OR INADEQUACIES WITHIN BID DOCUMENTS, BETWEEN THESE BID DOCUMENTS AND RELATED HVAC, PLUMBING, ELECTRICAL, STRUCTURAL, ARCHITECTURAL, INTERIOR DECOR, AND STRUCTURAL BID DOCUMENTS, OR BETWEEN THESE BID DOCUMENTS AND FIELD CONDITIONS MUST BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER PRIOR TO BID SUBMISSION.
- THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF RECORD "AS BUILT" DRAWINGS INDICATING THE PRECISE LOCATION OF ALL SYSTEMS, EQUIPMENT, CONCEALED OR EMBEDDED PIPING, EXPOSED PIPING, PIPING CONNECTIONS, AND SPRINKLER HEADS. THESE DRAWINGS SHALL INCLUDE ALL CHANGES AND DEVIATIONS FROM CONSTRUCTION DOCUMENTS.
- THE CONTRACTOR SHALL SCHEDULE ALL WORK TO AVOID INTERFERENCE WITH FIRE PROOFING WORK.
- THE CONTRACTOR SHALL COORDINATE ALL LOCATIONS OF SPRINKLER HEADS WITH THE ARCHITECTURAL REFLECTED CEILING PLANS, HVAC LAYOUT, AND ELECTRICAL LIGHTING LAYOUT PRIOR TO ANY FABRICATION OR INSTALLATION. THE CONTRACTOR SHALL SUBMIT SHOP DRAWING LAYOUTS FOR ARCHITECTURAL/ENGINEERING APPROVAL.
- PLATFORMS AND CURBS FOR FIRE PROTECTION EQUIPMENT SHALL BE AS INDICATED ON THE STRUCTURAL AND ARCHITECTURAL DRAWINGS UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL COORDINATE EXACT SIZES AND LOCATIONS OF REQUIRED OPENINGS AND SUPPORTS FOR FURNISHED EQUIPMENT.
- THE CONTRACTOR SHALL COORDINATE ELECTRICAL CHARACTERISTICS OF ALL FIRE PROTECTION EQUIPMENT WITH THE ELECTRICAL DRAWINGS AND ELECTRICAL CONTRACTOR. THE CONTRACTOR SHALL FURNISH PLUMBING EQUIPMENT WIRED FOR THE VOLTAGES SHOWN IN CONTRACT DOCUMENTS AND COORDINATED WITH ELECTRICAL CONTRACTOR.
- ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND ALL APPLICABLE CODES. THE CONTRACTOR SHALL PROVIDE ALL FITTINGS, TRANSITIONS, VALVES, AND OTHER DEVICES REQUIRED FOR A COMPLETE WORKABLE INSTALLATION.
- THE CONTRACTOR SHALL SUBMIT, PRIOR TO ANY FABRICATION OR INSTALLATION, ALL NECESSARY DRAWINGS, EQUIPMENT/MATERIAL PRODUCT DATA, DOCUMENTATION, AND CALCULATIONS REQUIRED TO COMPLETE THE WORK OUTLINED IN THE CONTRACT DOCUMENTS.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION PRIOR TO ANY FABRICATION OR INSTALLATION. ALL FEES FOR PERMITS AND INSPECTIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL PROVIDE A TEMPORARY STANDPIPE DURING CONSTRUCTION AS REQUIRED BY THE AUTHORITIES HAVING JURISDICTION.
- SPRINKLER SYSTEM HAZARD CLASSIFICATION SHALL BE AS NOTED IN THE SPRINKLER SYSTEM DESIGN CRITERIA SCHEDULE UNLESS OTHERWISE NOTED. ALL UNREFERENCED AREAS SHALL BE CLASSIFIED AS PER NFPA 13.
- THE CONTRACTOR SHALL PROVIDE APPROVED SIGNAGE IDENTIFYING ALL CONTROL VALVES AND THE SYSTEMS/AREAS SERVED.
- THE CONTRACTOR SHALL PERFORM A HYDRANT FLOW TEST TO VERIFY THE AVAILABLE WATER SUPPLY PRESSURE PRIOR TO ANY PURCHASING OF EQUIPMENT, FABRICATION OR INSTALLATION.
- SPRINKLER HEAD RESPONSE AND TEMPERATURE RATINGS SHALL BE AS NOTED IN THE SPRINKLER HEAD SCHEDULE UNLESS OTHERWISE NOTED. ALL UNREFERENCED HEADS/AREAS SHALL BE CLASSIFIED AS PER NFPA 13.
- PIPE SIZING AND LAYOUT OF THE INSTALLATION DRAWINGS SHALL BE DETERMINED BY THE CONTRACTORS HYDRAULIC CALCULATIONS AND COORDINATION WITH THE INSTALLATION OF ALL OTHER TRADES. THE CONTRACTOR SHALL ALLOW FOR THIS AND SHALL INCLUDE THIS IN THE CONTRACT PRICE. THE CONTRACTOR SHALL SUBMIT SIGNED AND SEALED HYDRAULIC CALCULATIONS CORRESPONDING TO THEIR PIPE SIZING AND LAYOUT.
- THE DESIGN OF THE TEMPORARY STANDPIPE WILL BE A DELEGATE DESIGN AND WILL BE SUBMITTED BY A NYS LICENSED P.E.

SYMBOL LIST

(NOT ALL SYMBOLS SHOWN ARE NECESSARILY USED ON THIS PROJECT)	
	EXISTING FIRE SERVICE PIPING
	NEW FIRE SERVICE PIPING
	NEW FIRE STANDPIPE PIPING
	NEW DRY FIRE STANDPIPE PIPING
	NEW DRY PIPE FOAM SYSTEM PIPING
	NEW DRAIN PIPING
	NEW SPRINKLER PIPING
	NEW DRY SPRINKLER PIPING
	ARROW REPRESENTS DIRECTION OF FLOW
	PIPING WITH FREEZE PROTECTION CABLE UNDER INSULATION
	BURIED FIRE SERVICE, FIRE STANDPIPE, OR SPRINKLER PIPING
	PIPING TO BE DEMOLISHED
	PIPE BREAK
	CAPPED OUTLET
	PIPE DROP / DOWN
	PIPE RISE / UP
	PIPE BOTTOM CONNECTION
	PIPE TOP CONNECTION
	PIPE SIDE CONNECTION
	VACUUM BREAKER
	WATERPROOF SLEEVE
	UNION
	PRESSURE GAUGE
	TAMPER SWITCH
	FLOW SWITCH
	FIRE HOSE VALVE
	FIRE HOSE VALVE
	FIRE HOSE VALVE AND CABINET
	STORZ FIRE DEPARTMENT CONNECTION
	SIAMESE FIRE DEPARTMENT CONNECTION
	FIRE PUMP TEST CONNECTION
	THREE-WAY ROOF MANIFOLD
	FLOOR CONTROL VALVE ASSEMBLY
	CHECK VALVE
	BALL VALVE
	GATE VALVE
	OUTSIDE SCREW & YOKE VALVE
	PRESSURE REDUCING VALVE
	SOLENOID VALVE
	ALARM CHECK VALVE
	DRY PIPE CHECK VALVE
	POINT OF DISCONNECTION FROM EXISTING PIPING
	POINT OF CONNECTION TO EXISTING PIPING
	HYDRAULIC REFERENCE POINT - NODE
	HYDRAULIC REFERENCE POINT - ELEMENT
	FIRE STANDPIPE RISER DESIGNATION
	SPRINKLER RISER DESIGNATION

ABBREVIATIONS LIST

(NOT ALL ABBREVIATIONS SHOWN ARE NECESSARILY USED ON THIS PROJECT)	
ABD	AUTOMATIC BALL DRIP
AFF	ABOVE FINISHED FLOOR
AFP	AUTOMATIC FIRE PUMP
ATS	AUTOMATIC TRANSFER SWITCH
BLDG	BUILDING
BOP	BOTTOM OF PIPE
CLG	CEILING
CONN	CONNECT / CONNECTION
CONT	CONTINUE / CONTINUATION
CV	CHECK VALVE
DIA	DIAMETER
DCDA	DOUBLE CHECK DETECTOR ASSEMBLY BACKFLOW PREVENTER
DCV	DOUBLE CHECK VALVE BACKFLOW PREVENTER
DN	DOWN (PENETRATES FLOOR SLAB)
DR	DRAIN
DWG	DRAWING
EX	EXISTING
FCV	FLOOR CONTROL VALVE ASSEMBLY
F	FIRE SERVICE
FDC	FIRE DEPARTMENT CONNECTION
FL	FLOOR
FS	FLOW SWITCH
FSP	FIRE STANDPIPE
FT	FEET
GV	GATE VALVE
GAL	GALLONS
GPM	GALLONS PER MINUTE
HCLG	HUNG CEILING
HV	FIRE HOSE VALVE
IN	INCH
JP	JOCKEY PUMP
MAX	MAXIMUM
MB	MANUFACTURED BY
MIN	MINIMUM
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OS&Y	OUTSIDE SCREW & YOKE VALVE
PC	PLUMBING CONTRACTOR
PRHV	PRESSURE REGULATING HOSE VALVE
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH - GAUGE
RPZ	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
SPDR	STANDPIPE DRAIN
SPKR	SPRINKLER(S)
SQFT	SQUARE FEET
TS	TAMPER SWITCH
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
UP	UP (PENETRATES FLOOR SLAB)

OPENING / SLEEVE SCHEDULE

FIRE SERVICE, FIRE STANDPIPE, SPRINKLER, AND DRAIN PIPING		
PIPE DIAMETER	WALL / FLOOR SLEEVE DIAMETER	BEAM OPENING DIAMETER
1"	3"	2½"
1½"	3"	3"
2"	4"	3½"
2½"	4"	4"
3"	5"	4½"
4"	6"	5½"
5"	8"	6½"
6"	8"	7½"

CONNECTICUT STATE BUILDING CODES

- 2022 CONNECTICUT STATE BUILDING CODE
- 2021 INTERNATIONAL EXISTING BUILDING CODE
- 2021 INTERNATIONAL PLUMBING CODE
- 2021 INTERNATIONAL MECHANICAL CODE
- 2020 NATIONAL ELECTRICAL CODE (NFPA 70)
- LOCAL FIRE DEPARTMENT/FIRE MARSHAL
- ALL OTHER LOCAL AUTHORITIES HAVING JURISDICTION

CONNECTICUT STATE ENERGY CODES

- 2021 INTERNATIONAL ENERGY CONSERVATION CODE

REFERENCED STANDARDS

APPLICABLE REFERENCE STANDARDS SHALL BE AS REFERENCED BY ALL STATE AND LOCAL CODES. THE LIST BELOW IS FOR QUICK REFERENCE AND DOES NOT INCLUDE ALL APPLICABLE REFERENCE STANDARDS.

- 2019 NFPA 13 – STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS
- 2019 NFPA 14 – STANDARD FOR THE INSTALLATION OF STANDPIPE AND HOSE SYSTEMS
- 2019 NFPA 20 – STANDARD FOR THE INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION
- 2021 NFPA 54 – NATIONAL FUEL GAS CODE
- 2020 NFPA 70 – NATIONAL ELECTRICAL CODE
- 2019 NFPA 72 – NATIONAL FIRE ALARM AND SIGNALING CODE

FIRE PROTECTION DRAWING LIST

FP-001	FIRE PROTECTION COVER PAGE
FP-002	FIRE PROTECTION SCHEDULE SHEET
FP-100	FIRE PROTECTION BASEMENT PLAN
FP-101	FIRE PROTECTION 1ST FLOOR PLAN
FP-102	FIRE PROTECTION 2ND FLOOR PLAN
FP-103	FIRE PROTECTION 3RD FLOOR PLAN
FP-104	FIRE PROTECTION 4TH FLOOR PLAN
FP-301	FIRE PROTECTION RISER DIAGRAM
FP-401	FIRE PROTECTION DETAILS

ARCHITECT OF RECORD:

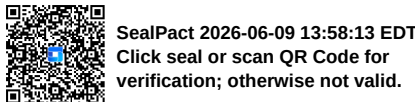
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CONVERSION

158 GRAND ST
WATERBURY, CT

JOB NO.: MEA.2026.00233

SCALE: N.T.S.

DRAWING TITLE

FIRE PROTECTION
COVER PAGE

DRAWING #

FP-001

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SPRINKLER HEAD SCHEDULE															
(NOT ALL SPRINKLER HEADS SHOWN ARE NECESSARILY USED ON THIS PROJECT)															
SYMBOL	MANUFACTURER	MODEL NUMBER	CONCEALED	PENDENT	SIDEWALL	UPRIGHT	STANDARD COVERAGE	EXTENDED COVERAGE	STANDARD RESPONSE	QUICK RESPONSE	COMMERCIAL	RESIDENTIAL	EXISTING TO BE REMOVED	EXISTING TO REMAIN	ORDINARY RATING (155° F)
•	RELIABLE	RFC49/RA0616	•				•			•		•			•
■	RELIABLE	F1FR56/RA1425				•	•			•	•				•
APPLICABLE AREAS															
RESIDENTIAL UNITS, CORRIDORS															
UNFINISHED AREAS/OPEN CEILING AREAS															
1. NOTES:															
2. FINISH/COLOR SELECTION BY ARCHITECT.															
3. EXPOSED UPRIGHT HEADS IN OCCUPIED SPACES SHALL BE CHROME FINISH.															
4. PROVIDE ESCUTCHEONS AT ALL EXPOSED WALL PENETRATIONS.															
5. PROVIDE SPRINKLER GUARDS AT ALL SPRINKLER HEADS 7'-0" AND LOWER.															

SPRINKLER SYSTEM DESIGN CRITERIA SCHEDULE						
(NOT ALL CRITERIA SHOWN ARE NECESSARILY APPLICABLE TO THIS PROJECT)						
OCCUPANCY CLASS	DESIGN DENSITY	APPLICATION AREA	MAX AREA PER HEAD	"K" FACTOR	ORIFICE SIZE	APPLICABLE AREAS
LIGHT HAZARD	0.10 GPM/SQFT	1500 SQFT	225 SQFT	5.60/4.9	½ IN	OFFICES, CORRIDORS, TOILET ROOMS, AND RESIDENTIAL UNITS
ORDINARY HAZARD (GROUP 1)	0.15 GPM/SQFT	1500 SQFT	130 SQFT	5.60	½ IN	LOADING DOCKS, MECHANICAL, TRASH, AND STORAGE ROOMS

PIPE, FITTING, AND JOINT MATERIAL SCHEDULE					
PIPING SYSTEM	PIPING LOCATION	PIPING SIZE	PIPING SPECIFICATION	FITTING SPECIFICATION	JOINT SPECIFICATION
WET FIRE STANDPIPE	ALL	ALL	SCHEDULE 40 BLACK STEEL WITH GROOVED ENDS	DUCTILE IRON WITH GROOVED ENDS	BOLT-ON MECHANICAL JOINT WITH HIGH QUALITY EPDM GASKET
WET SPRINKLER	EXPOSED AREAS WITH NO CEILING	2" & SMALLER	SCHEDULE 40 BLACK STEEL	DUCTILE OR MALLEABLE IRON WITH THREADED ENDS	THREADED
	ORDINARY HAZARD AREAS GREATER THAN 400 SQFT	2½" & LARGER	SCHEDULE 40 BLACK STEEL WITH GROOVED ENDS	DUCTILE IRON WITH GROOVED ENDS	BOLT-ON MECHANICAL JOINT WITH HIGH QUALITY EPDM GASKET
	ALL OTHER	ALL	CHLORINATED POLYVINYL CHLORIDE (CPVC)	CHLORINATED POLYVINYL CHLORIDE (CPVC) WITH SOLVENT CEMENT WELD ENDS	SOLVENT CEMENT WELDED
DRY SPRINKLER	ABOVE GROUND PARKING	2" & SMALLER	SCHEDULE 40 BLACK STEEL FIELD PAINTED	DUCTILE OR MALLEABLE IRON WITH THREADED ENDS FIELD PAINTED	THREADED
		2½" & LARGER	SCHEDULE 40 BLACK STEEL WITH GROOVED ENDS FIELD PAINTED	DUCTILE IRON WITH GROOVED ENDS FIELD PAINTED	BOLT-ON MECHANICAL JOINT WITH HIGH QUALITY EPDM GASKET



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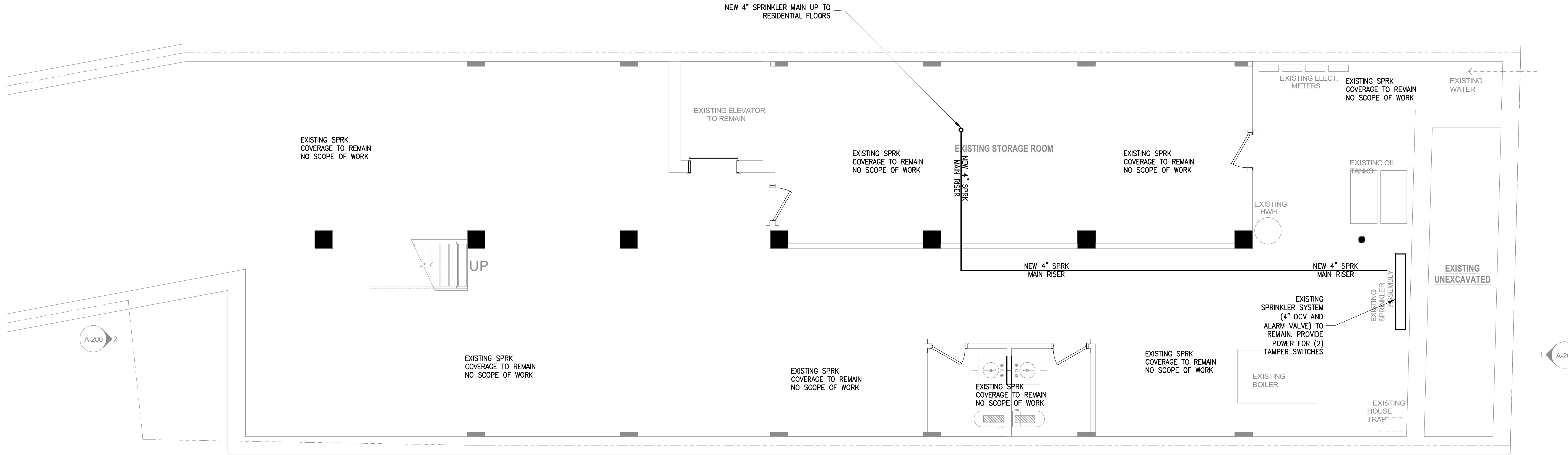
FIRE PROTECTION
SCHEDULE SHEET

DRAWING #

FP-002

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SPRINKLER SCOPE NOTES:

1. ALL EXISTING SPRINKLER BRANCH PIPING TO BE REMOVED BACK TO ACTIVE MAIN. CONTRACTOR MAY REUSE PIPING AS NECESSARY. CONTRACTOR RESPONSIBLE FOR WALKING THE PROJECT SITE BEFORE SUBMITTING BID.
2. ALL EXISTING SPRINKLER MAIN PIPING TO BE RAISED HIGHER THAN FINISHED CEILING.
3. ALL EXISTING SPRINKLER HEADS SHALL BE REMOVED AND REPLACED WITH RESIDENTIAL STYLE RATED HEADS PER SPRINKLER HEAD SCHEDULE ON FP-002.
4. CONTRACTOR RESPONSIBLE FOR COMPLETING ASBUILT SPRINKLER DRAWINGS AND HYDRAULIC CALCULATIONS TO BE SUBMITTED TO THE BLDG DEPT. ENGINEER TO REVIEW DRAWINGS PRIOR TO CONSTRUCTION FOR CODE COMPLIANCE.
5. CONTRACTOR RESPONSIBLE FOR INSTALLING SPRINKLER HEADS IN A MANNER THAT DOES NO OBSTRUCTED SPRINKLER HEAD SPRAY OR SPRINKLER HEAD COVERAGE AREA.
6. SPRINKLER SYSTEM SHALL BE NFPA 13 2019 COMPLIANT.

ARCHITECT OF RECORD:

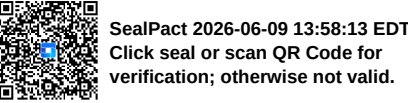
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PROJECT NAME

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158 GRAND ST
WATERBURY, CT

JOB NO.: MEA.2026.00233

SCALE: 1/4" = 1'-0"

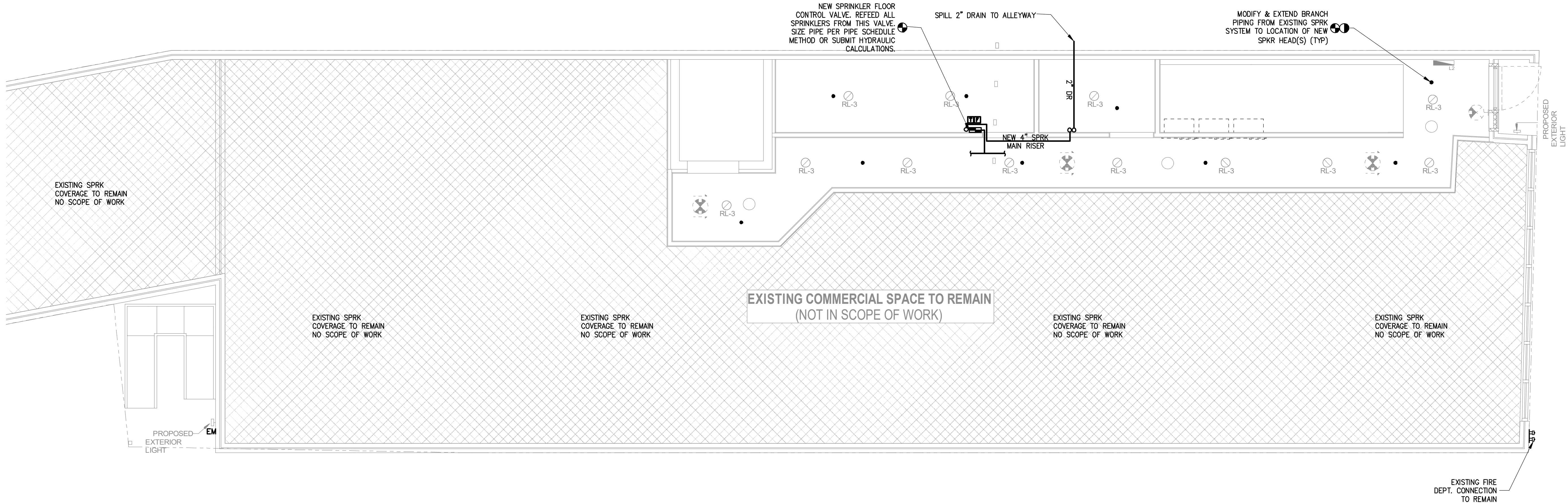
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FIRE PROTECTION
CELLAR LIGHTING PLAN

DRAWING #

FP-100

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SPRINKLER SCOPE NOTES:

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3. ALL EXISTING SPRINKLER HEADS SHALL BE REMOVED AND REPLACED WITH RESIDENTIAL STYLE RATED HEADS PER SPRINKLER HEAD SCHEDULE ON FP-002.
4. CONTRACTOR RESPONSIBLE FOR COMPLETING ASBUILT SPRINKLER DRAWINGS AND HYDRAULIC CALCULATIONS TO BE SUBMITTED TO THE BLDG DEPT. ENGINEER TO REVIEW DRAWINGS PRIOR TO CONSTRUCTION FOR CODE COMPLIANCE.
5. CONTRACTOR RESPONSIBLE FOR INSTALLING SPRINKLER HEADS IN A MANNER THAT DOES NO OBSTRUCTED SPRINKLER HEAD SPRAY OR SPRINKLER HEAD COVERAGE AREA.
6. SPRINKLER SYSTEM SHALL BE NFPA 13 2019 COMPLIANT.

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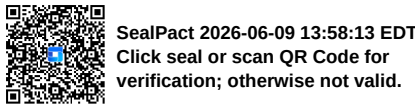
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JOB NO.: MEA.2026.00233

SCALE: 1/4" = 1'-0"

DRAWING TITLE

FIRE PROTECTION
1ST FLOOR LIGHTING PLAN

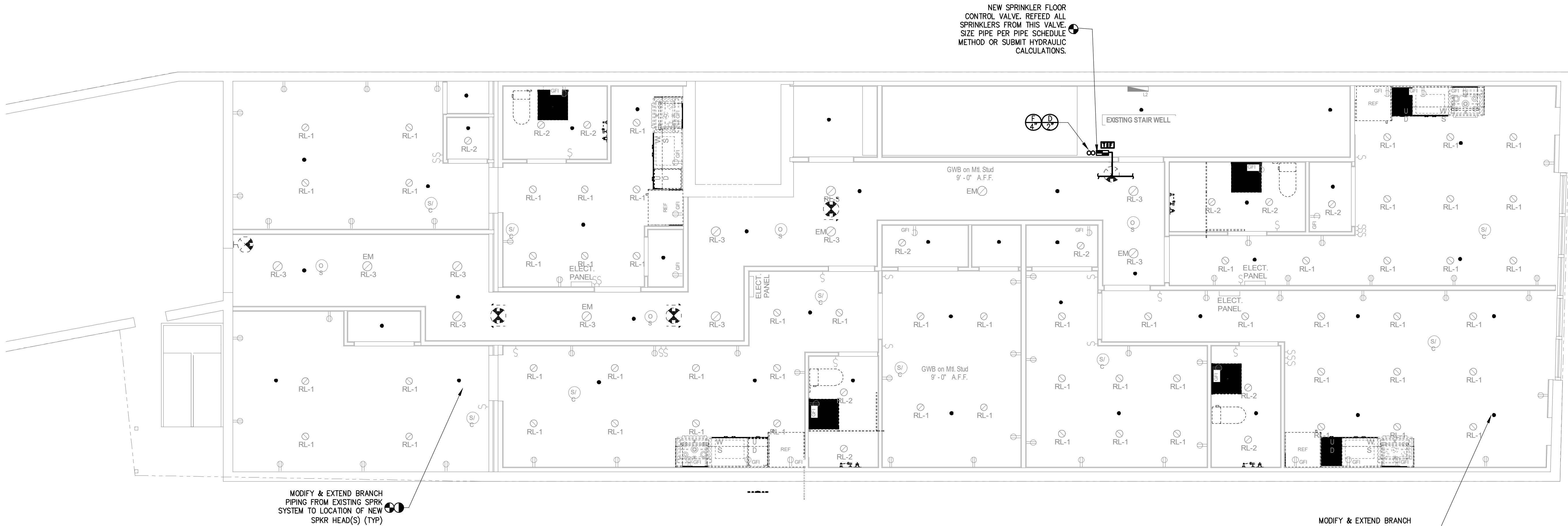
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SPRINKLER SCOPE NOTES:

1. ALL EXISTING SPRINKLER BRANCH PIPING TO BE REMOVED BACK TO ACTIVE MAIN. CONTRACTOR MAY REUSE PIPING AS NECESSARY. CONTRACTOR RESPONSIBLE FOR WALKING THE PROJECT SITE BEFORE SUBMITTING BID.
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3. ALL EXISTING SPRINKLER HEADS SHALL BE REMOVED AND REPLACED WITH RESIDENTIAL STYLE RATED HEADS PER SPRINKLER HEAD SCHEDULE ON FP-002.
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6. SPRINKLER SYSTEM SHALL BE NFPA 13 2019 COMPLIANT.



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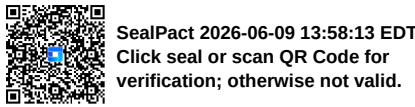
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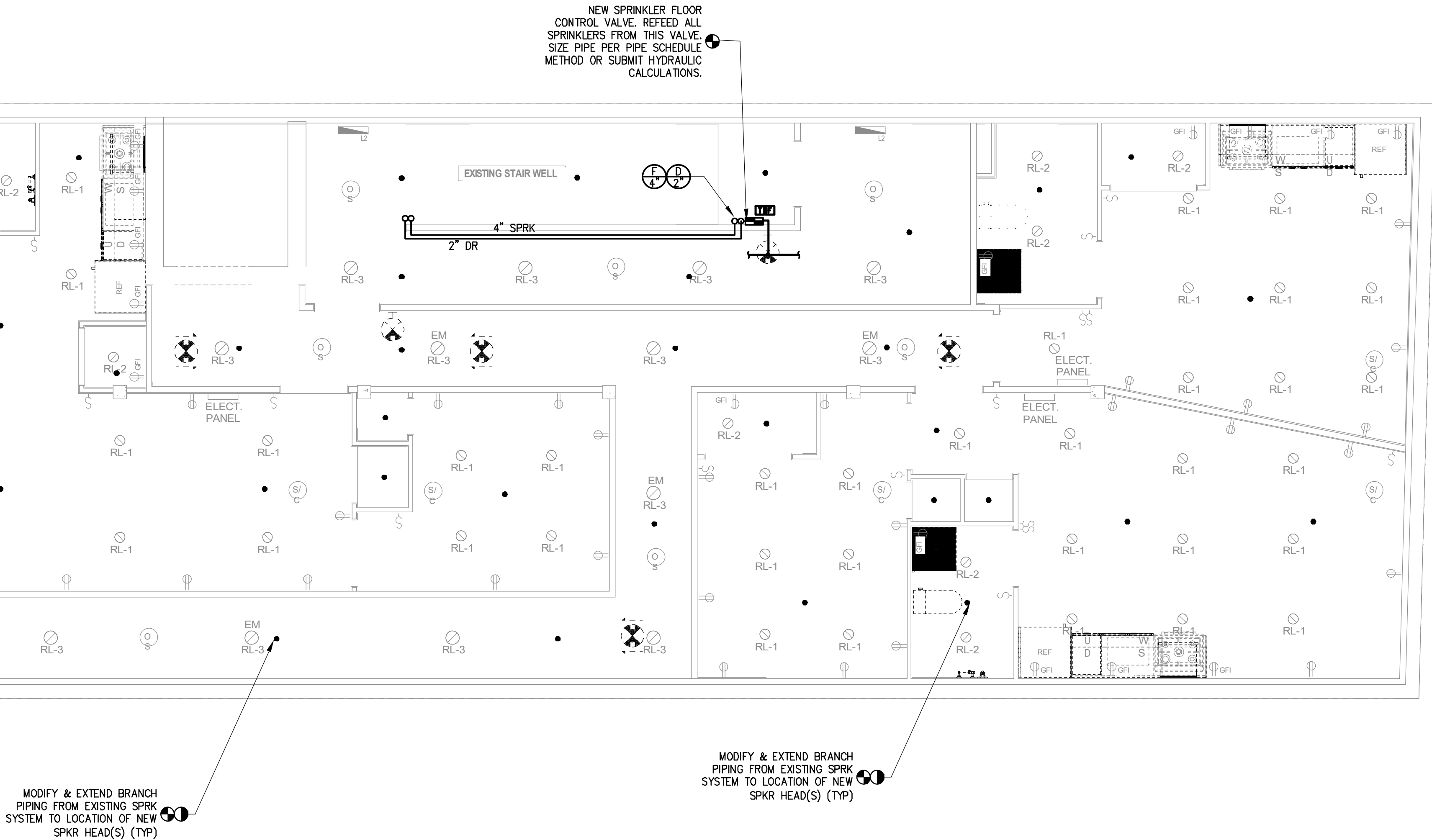
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FIRE PROTECTION
3RD FLOOR LIGHTING PLAN

DRAWING #

FP-103

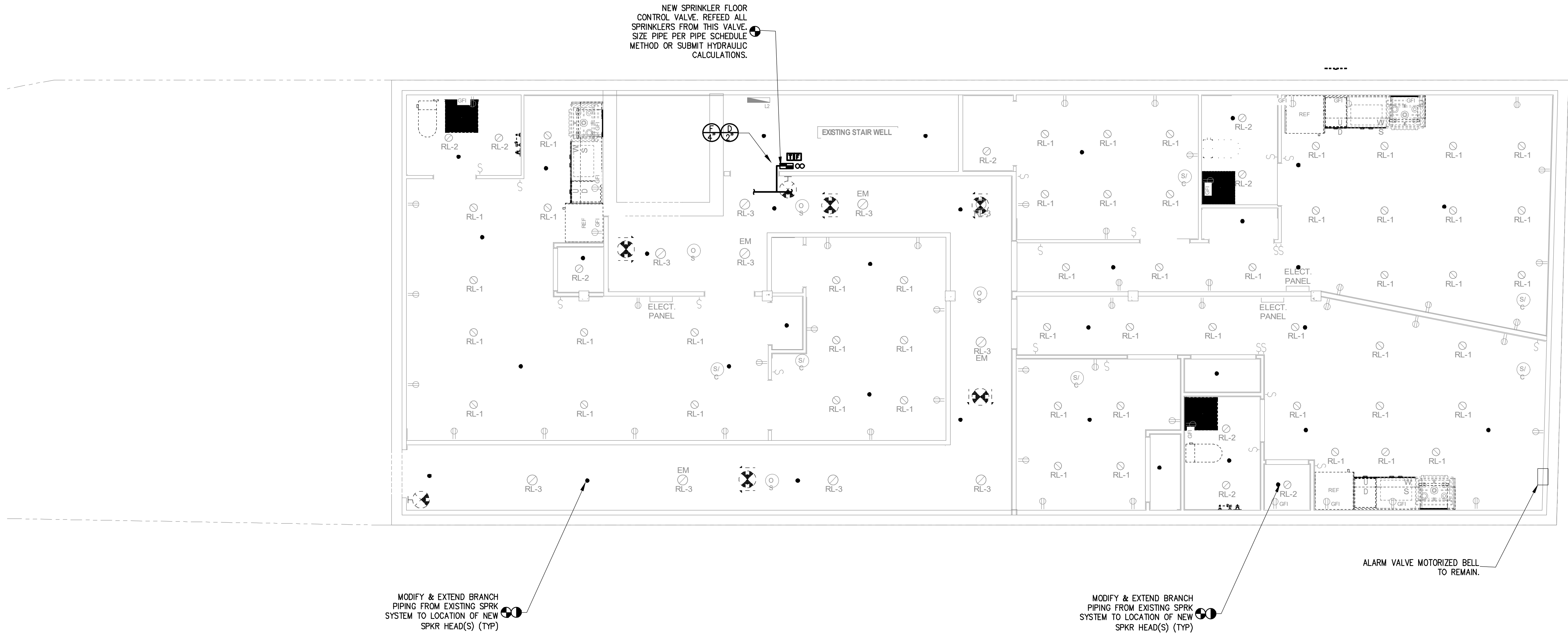


SPRINKLER SCOPE NOTES:

1. ALL EXISTING SPRINKLER BRANCH PIPING TO BE REMOVED BACK TO ACTIVE MAIN. CONTRACTOR MAY REUSE PIPING AS NECESSARY. CONTRACTOR RESPONSIBLE FOR WALKING THE PROJECT SITE BEFORE SUBMITTING BID.
2. ALL EXISTING SPRINKLER MAIN PIPING TO BE RAISED HIGHER THAN FINISHED CEILING.
3. ALL EXISTING SPRINKLER HEADS SHALL BE REMOVED AND REPLACED WITH RESIDENTIAL STYLE RATED HEADS PER SPRINKLER HEAD SCHEDULE ON FP-002.
4. CONTRACTOR RESPONSIBLE FOR COMPLETING ASBUILT SPRINKLER DRAWINGS AND HYDRAULIC CALCULATIONS TO BE SUBMITTED TO THE BLDG DEPT. ENGINEER TO REVIEW DRAWINGS PRIOR TO CONSTRUCTION FOR CODE COMPLIANCE.
5. CONTRACTOR RESPONSIBLE FOR INSTALLING SPRINKLER HEADS IN A MANNER THAT DOES NO OBSTRUCTED SPRINKLER HEAD SPRAY OR SPRINKLER HEAD COVERAGE AREA.
6. SPRINKLER SYSTEM SHALL BE NFPA 13 2019 COMPLIANT.

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ARCHITECT OF RECORD:

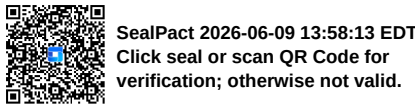
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thomas@manettaarchitecture.com

SHEET ISSUANCE / REVISION HISTORY

#	DATE	ISSUE/REVISION DESCRIPTION
-	06/09/26	ISSUED FOR BID/PERMIT

PHASE

BID / PERMIT



PROJECT NAME

**PROPOSED OFFICE TO RESI.
CONVERSION**

158 GRAND ST
WATERBURY, CT

JOB NO.: MEA-2026-00233

SCALE: 1/4" = 1'-0"

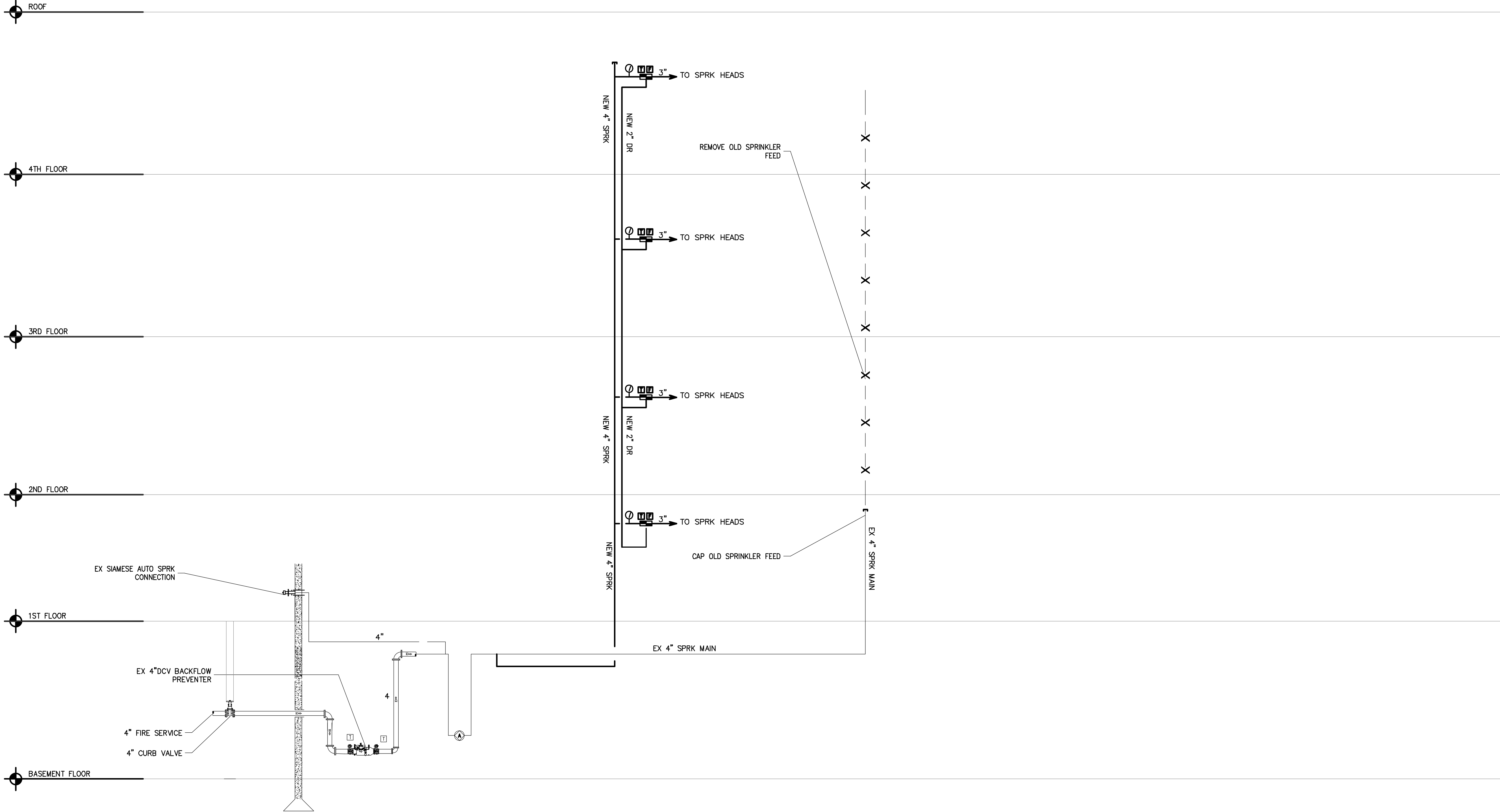
DRAWING TITLE

**FIRE PROTECTION
4TH FLOOR LIGHTING PLAN**

DRAWING #

FP-104

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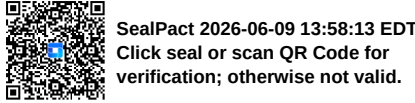
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SHEET ISSUANCE / REVISION HISTORY

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-	06/09/26	ISSUED FOR BID/PERMIT

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PROJECT NAME
PROPOSED OFFICE TO RESI.
CONVERSION

158 GRAND ST
WATERBURY, CT

JOB NO.: MEA.2026.00233

SCALE: N.T.S.

DRAWING TITLE

FIRE PROTECTION
RISER DIAGRAM

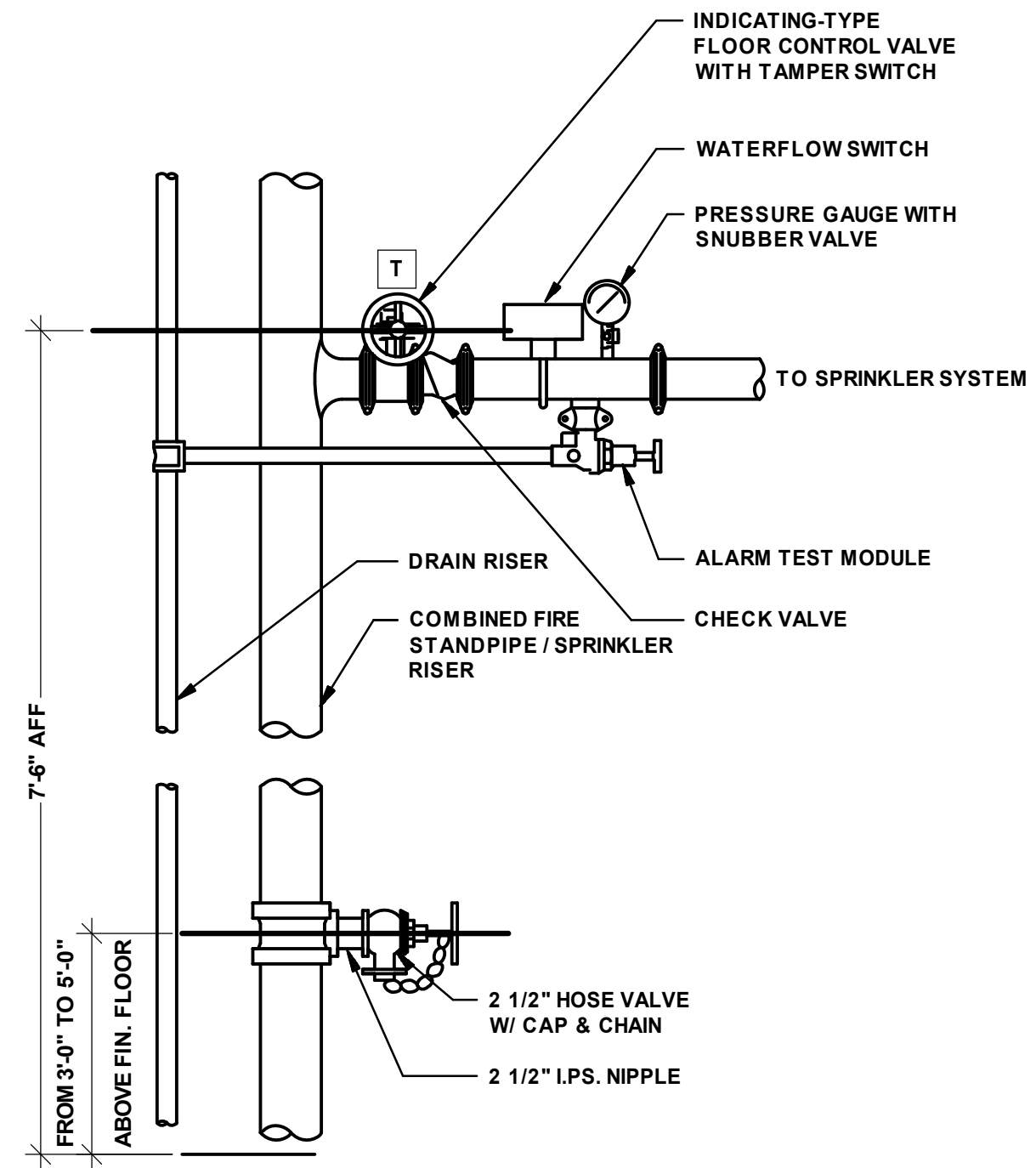
DRAWING #

FP-301

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SPRINKLER FLOOR CONTROL VALVE ASSEMBLY (FCV) FOR PRESSURES 175 PSI & UNDER DETAIL

SCALE: NTS

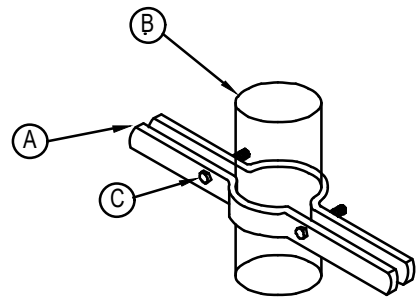
MAXIMUM DISTANCE BETWEEN HANGERS												
NOMINAL PIPE SIZE (in.)	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	3-1/2"	4"	5"	6"	8"
STEEL PIPE EXCEPT THREADED LIGHTWALL	N/A	12-0	12-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0
THREADED LIGHTWALL STEEL PIPE	N/A	12-0	12-0	12-0	12-0	12-0	12-0	N/A	N/A	N/A	N/A	N/A
COPPER TUBE	8-0	8-0	10-0	10-0	10-0	12-0	12-0	12-0	15-0	15-0	15-0	15-0
CPVC	5-6	6-0	6-6	7-0	8-0	9-0	12-0	N/A	N/A	N/A	N/A	N/A

HANGER SPACING WITH AN IN LINE DROP TEE

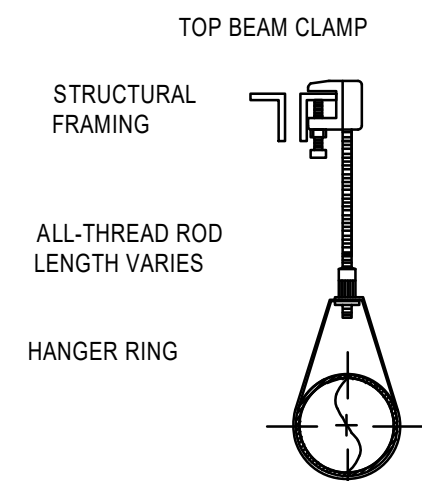
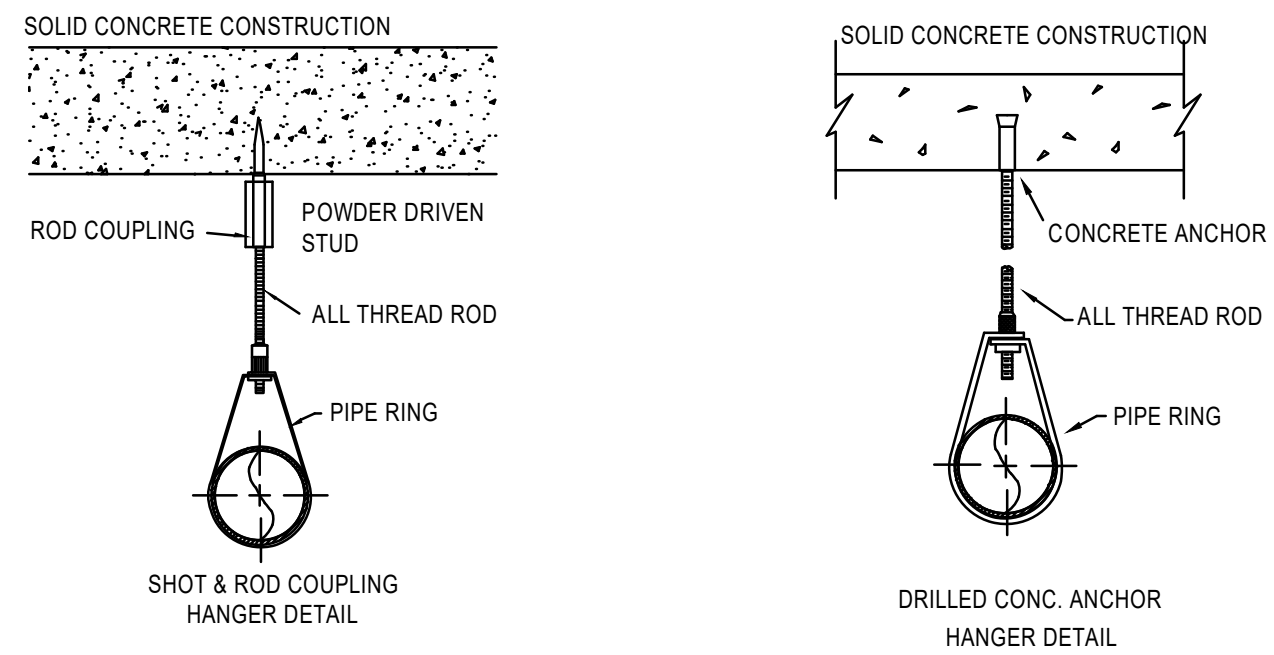
Nominal Pipe Size	Less than 100 psi	Greater than 100 psi
3/4 inch	4'	3'
1 inch	5'	4'
1 1/4 inch	6'	5'
1 1/2 inch	7'	7'
> 1 1/2 inch	7'	7'

HANGER SPACING WITH AN END LINE DROP ELBOW

Nominal Pipe Size	Less than 100 psi	Greater than 100
3/4 inch	9"	6"
1 inch	1'	9"
1 1/4 inch	1'4"	1'
1 1/2 inch	2'	1'
> 1 1/2 inch	2'	1'



A STEEL RISER CLAMP
B F.S.P. OR DRAIN RISER.
C BOLT AND NUTS.

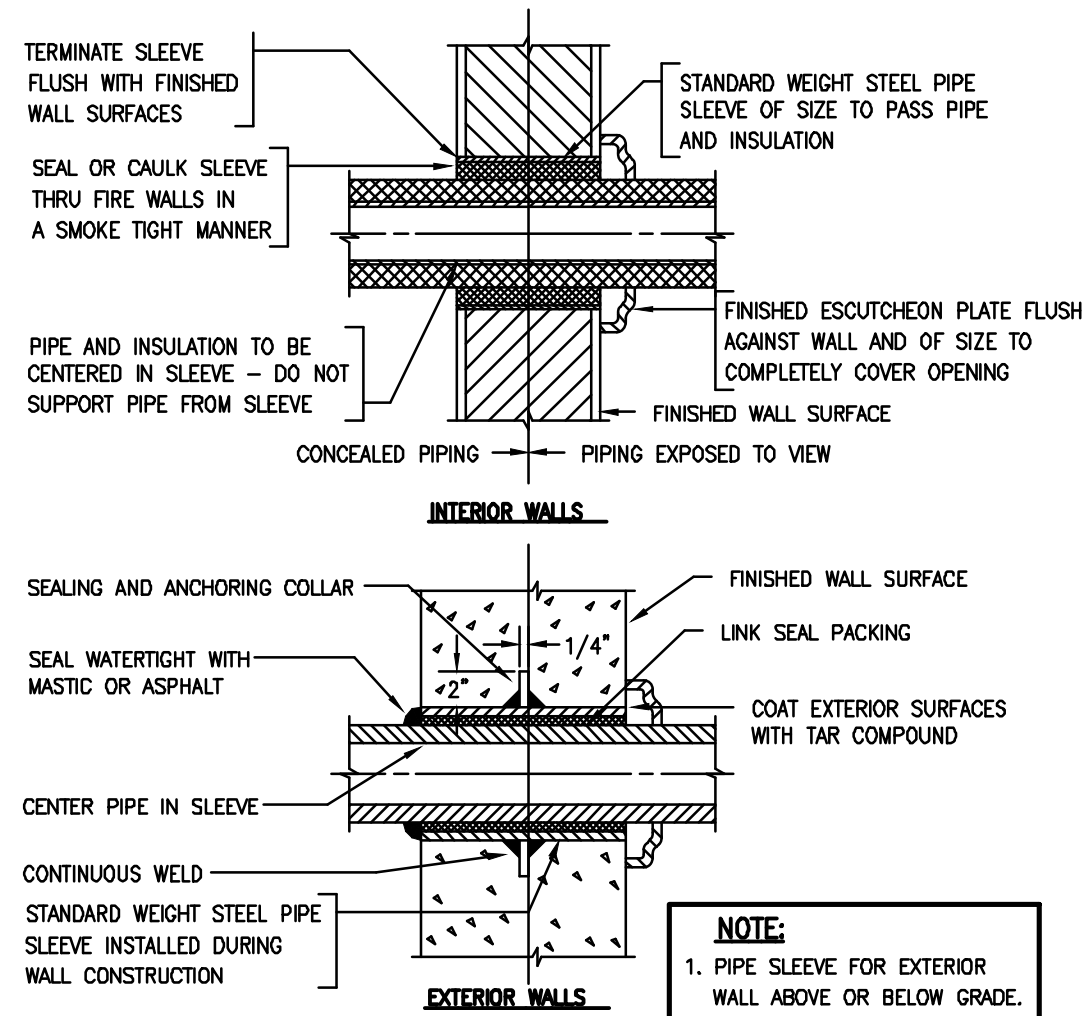


HANGER DETAIL

STEEL AND/OR CPVC PIPING UP TO 8" DIA.

PIPE HANGER DETAILS

SCALE: NTS



PIPE PENETRATION THRU WALL DETAIL (METALLIC PIPES)

SCALE: NTS



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PROJECT NAME

PROPOSED OFFICE TO RESI.
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WATERBURY, CT

JOB NO.: MEA.2026.00233

SCALE: N.T.S.

DRAWING TITLE

FIRE PROTECTION DETAILS

DRAWING #

FP-401

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