

HVAC LEGEND	
SYMBOL	DESCRIPTION
A.F.F.	ABOVE FINISHED FLOOR
A.F.G.	ABOVE FINISHED GRADE
⊖	TEMPERATURE SENSOR
Ⓟ	PRESSURE MONITOR
⊘	SHUT OFF VALVE
DOAS	DEDICATED OUTSIDE AIR SYSTEM
EF	EXHAUST FAN
AP	ACCESS PANEL
FD	FIRE DAMPER
BMS	BUILDING MANAGEMENT SYSTEM
CH	CHILLER
CWS/CWR	CHILLED WATER SUPPLY/RETURN
CWP	CHILLED WATER PUMP
AS	AIR SEPARATOR
BT	BUFFER TANK
PF	CHEMICAL POT FEEDER
ET	EXPANSION TANK
VFD	VARIABLE FREQUENCY DRIVE
M	MOTORIZED DAMPER
⊘	MOTORIZED VALVE
⊘ ABS	TYPE "A" DIFFUSER @85 CFM
C	INSULATED CONDENSATE DRAIN LINE

**GENERAL MECHANICAL NOTES:**

- A. ALL NEW WORK SHALL COMPLY WITH LOCAL, STATE, FEDERAL, CODES, AND NATIONAL INSTITUTES OF HEALTH DESIGN REQUIREMENTS MANUAL TO THE SATISFACTION OF CODE AUTHORITIES HAVING JURISDICTION.
- B. COORDINATE ALL CEILING DEVICES, DUCTWORK, ETC. WITH LIGHTING, STRUCTURE, ETC. THROUGH GENERAL CONTRACTOR. REFER TO ALL DRAWINGS, (STRUCTURAL, PLUMBING, ELECTRICAL, ARCHITECTURAL, ETC.). NOTIFY ARCHITECT/ENGINEER CONCERNING ANY CONFLICTS NOTED PRIOR TO BIDS FOR CLARIFICATION TO THE SATISFACTION OF THE BIDDER. REFER TO SPECIFICATIONS FOR REQUIREMENTS. REFER TO LATEST ARCHITECTURAL REFLECTED CEILING PLAN. COORDINATE ALL CEILING DEVICE LOCATIONS WITH CEILING GRID.
- C. ALL SUPPLY, RETURN, EXHAUST, AND OUTSIDE AIR DUCTWORK SHALL BE EXTERNALLY INSULATED UNLESS NOTED OTHERWISE ON PLANS. DUCT SIZES SHOWN ARE CLEAR METAL TO METAL. WRAP DUCTWORK EXTERNALLY.
- D. HARDCAST ALL NEW DUCTWORK JOINTS FOR AIRTIGHT SYSTEM. REFER TO DETAILS FOR DUCTWORK TAP, SPLITTER, BRANCH CONFIGURATION, ETC. INSTALL IN ACCORDANCE WITH SMACNA RECOMMENDATIONS AND INSTALLATION GUIDELINES.
- E. VERIFY ALL OUTSIDE AIR INTAKES ARE A MINIMUM OF 40'-0" FROM EXHAUST OUTLETS, SEWER VENTS, ETC.
- F. MECHANICAL CONTRACTOR SHALL COORDINATE THROUGH GENERAL CONTRACTOR TO PROVIDE OPENINGS FOR DUCTWORK IN WALLS, NEW AND EXISTING, THAT EXTEND FULL HEIGHT ABOVE LAY-IN CEILINGS.
- G. CONTRACTOR SHALL SEAL ALL DUCT PENETRATIONS THROUGH WALLS AND FLOORS AS PER THE RATED UL DESIGNATION'S REQUIREMENTS. REFER TO ARCHITECTURAL PLANS FOR ALL UL RATINGS.
- H. PROVIDE ACCESS PANELS (PER SPECIFICATIONS) AS NEEDED FOR ACCESS TO ALL NEW FIRE DAMPERS, MANUAL DAMPERS, AND MOTORIZED DAMPERS. COORDINATE FINAL LOCATION/SIZES WITH ENGINEER/OWNER.
- I. CONTRACTOR SHALL CAP AND SEAL ALL DUCTWORK DURING CONSTRUCTION TO PREVENT CONTAMINATION DUE TO CONSTRUCTION DEBRIS.
- J. ALL DAMPERS, ACCESS PANELS, ETC SHALL BE INSTALLED FOR MAXIMUM ACCESSIBILITY.
- K. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS, DETAILS, ETC. INSTALL WORK TO CONFORM TO ARCHITECTURAL AND STRUCTURAL DRAWINGS AS REQUIRED.
- L. RUN MAIN TRUNK LINES APPROXIMATELY AS SHOWN. COORDINATE EXACT LOCATION WITH STRUCTURE, PIPING, CONDUIT, DEVICES ABOVE CEILING, ETC. MAKE ALL REQUIRED OFFSETS, TRANSITIONS, ETC. (MAINTAIN EQUIVALENT DUCT FREE AREA IN TRANSITIONS). CONTRACTOR SHALL FIELD MEASURE/VERIFY SPACING TO RUN DUCT PRIOR TO FABRICATION OR INSTALLATION OF ANY DUCTWORK. RUN DUCTWORK TO MINIMIZE OFFSETS, CHANGES IN ELEVATION, TRANSITIONS, ETC. COORDINATE WITH OTHER TRADES.
- M. PROVIDE MANUAL DAMPER AT DUCT TAP SPIN FITTING AND BALANCE TO CFM INDICATED AT GRILLE. DUCT TAPS SHALL BE A MINIMUM OF 12" FROM END OF SUPPLY AIR DUCT. (TYPICAL)
- N. REVIEW COMPLETE SET OF CONTRACT DOCUMENTS PRIOR TO SUBMITTING BID.

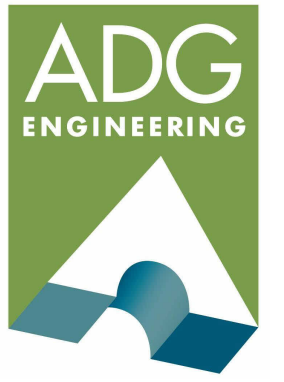


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Project No. 26004

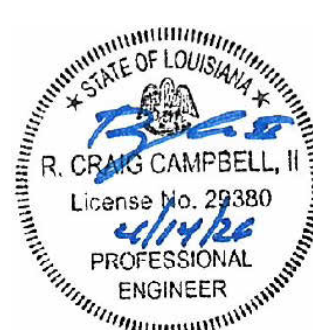
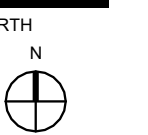
**REVISIONS**

NO.	DESCRIPTION	DATE
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**THIRD FLOOR RENOVATION OF BLDG 29 LABORATORIES AT NIRX**

4401 W. ADMIRAL DOYLE DRIVE,  
 NEW IBERIA, LOUISIANA  
 70560

**MECHANICAL LEGEND**



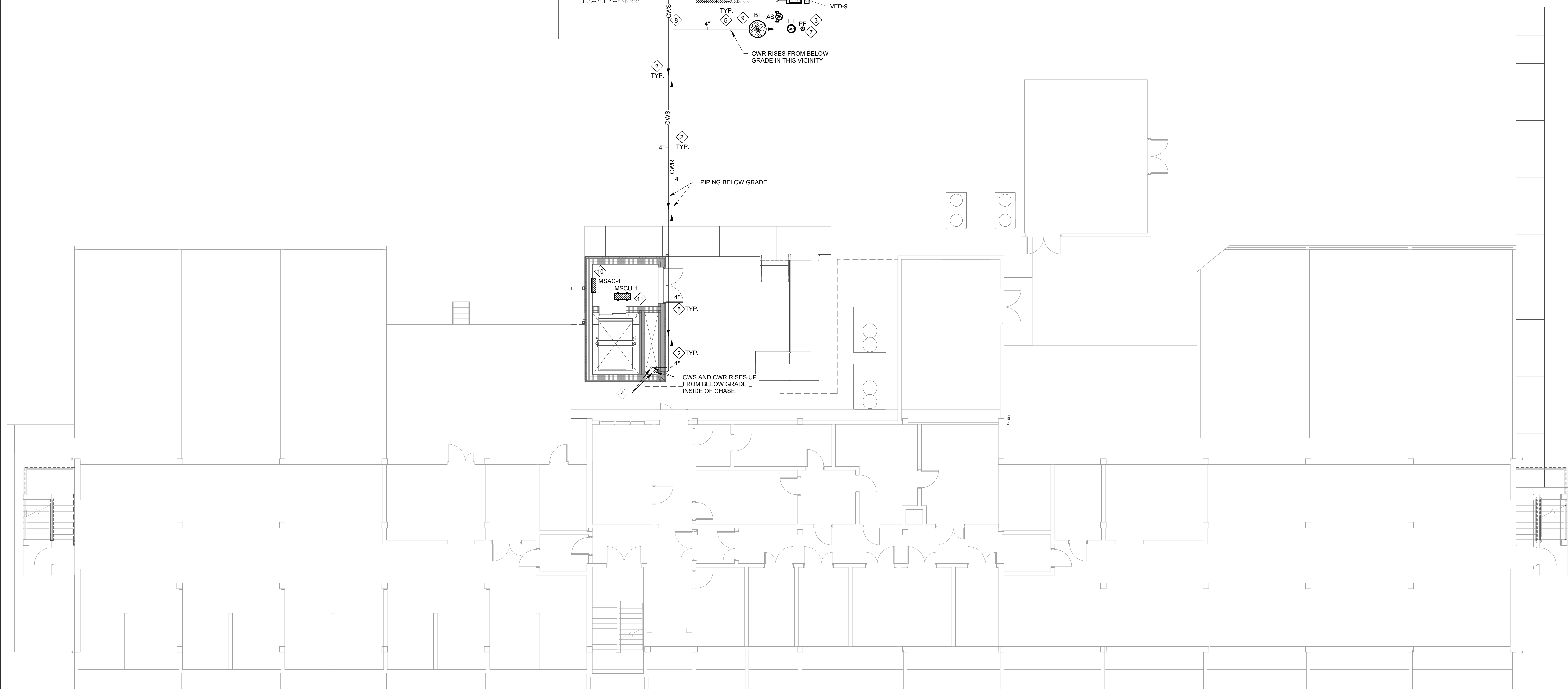
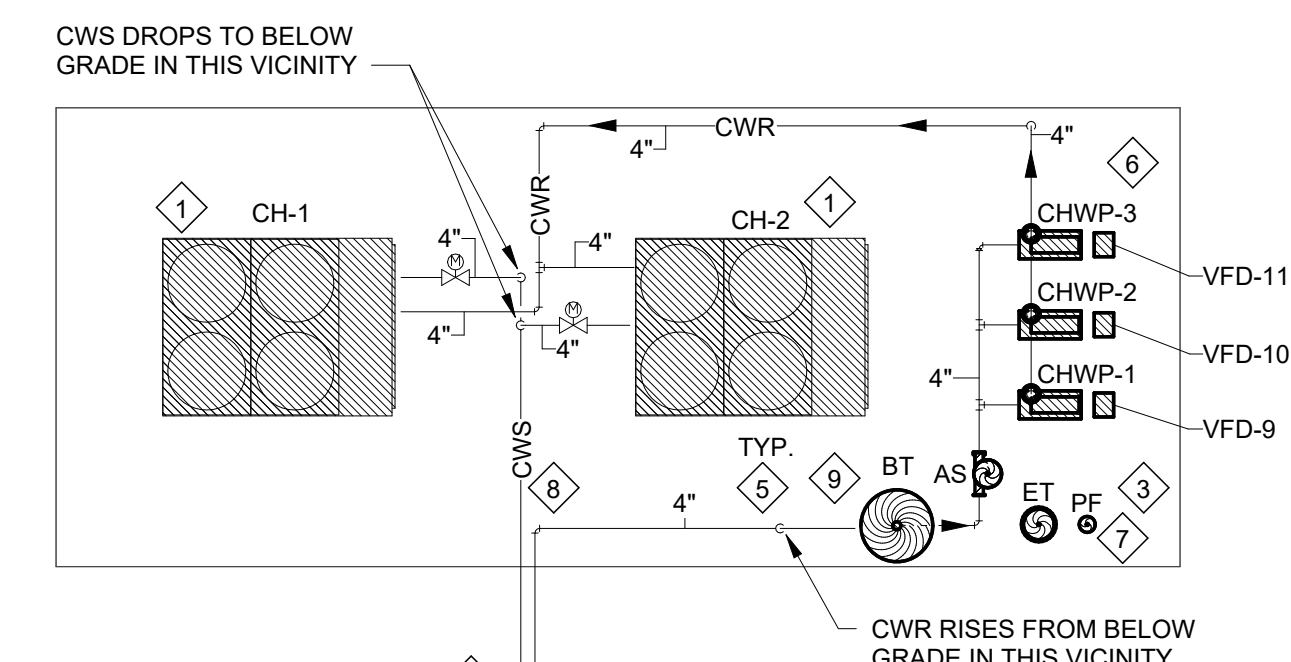
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1 MECHANICAL PLAN - FIRST FLOOR  
 1/8" = 1'-0" REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS

**GENERAL MECHANICAL NOTES:**

- A. ALL NEW WORK SHALL COMPLY WITH LOCAL, STATE, FEDERAL CODES, AND NATIONAL INSTITUTES OF HEALTH DESIGN REQUIREMENTS MANUAL TO THE SATISFACTION OF CODE AUTHORITIES HAVING JURISDICTION.
- B. MECHANICAL CONTRACTOR SHALL COORDINATE THROUGH GENERAL CONTRACTOR TO PROVIDE OPENINGS FOR DUCTWORK IN WALLS, NEW AND EXISTING, THAT EXTEND FULL HEIGHT ABOVE LAY-IN CEILINGS.
- C. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS, DETAILS, ETC. INSTALL WORK TO CONFORM TO ARCHITECTURAL AND STRUCTURAL DRAWINGS AS REQUIRED.
- D. REVIEW COMPLETE SET OF CONTRACT DOCUMENTS PRIOR TO SUBMITTING BID.

**MECHANICAL KEYNOTES:**

- 1. INSTALL NEW AIR-COOLED CHILLER ON LEVEL CONCRETE PAD IN THIS VICINITY. COORDINATE WITH CIVIL/STRUCTURAL DRAWINGS FOR HOUSEKEEPING PAD AND DRAINAGE. CHILLED WATER PIPING DROPS DOWN TO BELOW GRADE IN THIS VICINITY. ALL PIPING BELOW GRADE SHALL BE INSTALLED A MINIMUM OF 6" DEEP (TOP OF PIPE) AND SHALL BE DUCTILE IRON WITH CREMATURE EPOXY LINING AND EPOXY EXTERIOR COATING. PROVIDE ALL REQUIRED TRANSITIONS.
- 2. COORDINATE EXACT ROUTING OF CWS/CWR PIPING WITH ALL STRUCTURE, EQUIPMENT, WIRING, ETC. PRIOR TO ROUGH-IN. PROVIDE PIPING SUPPORT STANDS SECURED TO CHILLER YARD PAD FOR ALL PIPING ABOVE SLAB. SEE PIPE SUPPORT DETAILS. COORDINATE WITH OTHER TRADES PRIOR TO ROUGH-IN. (TYPICAL)
- 3. REFER TO DETAILS FOR INSTALLATION REQUIREMENTS OF THE EXPANSION TANK AND AIR SEPARATOR.
- 4. INSULATED CHILLED WATER PIPING RISES UP INSIDE OF NEW CHASE TO 3RD FLOOR. REFER TO M-120 FOR CONTINUATION.
- 5. 3/4" AIR RELIEF VENTS WITH PET COCKS (PROVIDE BRASS NIPPLE AND FITTINGS) AT ALL HIGH POINTS IN PIPING. REFER TO DETAILS. (TYPICAL)
- 6. MOUNT VFD'S ON UNISTRUT MOUNT IN THIS VICINITY IN ACCESSIBLE LOCATION AS PER MANUFACTURER'S RECOMMENDATIONS. COORDINATE EXACT LOCATION IN FIELD WITH ELECTRICAL CONTRACTOR PRIOR TO ROUGH-IN.
- 7. EXTEND 3/4" DOMESTIC WATER PIPING TO EXPANSION TANK / AIR SEPARATOR. REFER TO EXPANSION TANK PIPING DETAIL. REFER TO DETAILS.
- 8. INSTALL CHILLERS, CHILLED WATER BUFFER TANK, CHILLED WATER PUMPS, AIR SEPARATOR AND EXPANSION TANK ON CONCRETE SLAB. REFER TO DETAIL FOR PIPE SIZING.
- 9. PROVIDE ISOLATION VALVES ON EACH SIDE OF BUFFER TANK. INSTALL A BY-PASS, FULL SIZED, WITH A NORMALLY CLOSED ISOLATION VALVE AROUND THE BUFFER TANK.
- 10. PROVIDE AND INSTALL A WALL MOUNTED INDOOR UNIT IN THIS VICINITY. INSTALL AS PER MANUFACTURER'S INSTRUCTIONS AND DIRECTIONS. PROVIDING ALL ACCESSORIES AND ITEMS REQUIRED. COORDINATE LOCATION & MOUNTING HEIGHT WITH GENERAL CONTRACTOR PRIOR TO ROUGH-IN. ROUTE CONDENSATE LINE AND TIE INTO STORM DRAINAGE GUTTER ON EXTERIOR WALL.
- 11. PROVIDE A MINI-SPLIT CONDENSING UNIT ON THE ELEVATOR VESTIBULE ROOF IN THIS VICINITY. PROVIDE ALL REFRIGERANT ACCESSORIES AND ITEMS REQUIRED FOR PROPER INSTALLATION. INSTALL ON MINI-SPLIT STAND. SECURE UNIT TO THE STAND. ANCHOR STAND TO ROOF AS REQUIRED TO WITHSTAND LOCAL WIND RATINGS. CONDENSING UNITS SHALL BE INSTALLED SO THAT RUN OFF WATER FROM ROOF DOES NOT POUR DIRECTLY ONTO UNIT. REFRIGERANT LINES SHALL PENETRATE ROOF THROUGH PITCH POCKET. COORDINATE PENETRATION PROTECTION WITH ROOFING CONTRACTOR TO ENSURE PENETRATION IS SEALED AIR AND WATER TIGHT. PROVIDE TWO (2) COATS OF WEATHERPROOF MASTIC ON EXTERIOR OF INSULATED REFRIGERANT LINES. INSULATION SHALL BE CONTINUOUS THROUGH SUPPORT CLAMPS. PROVIDE REFRIGERANT ACCESSORIES AND ITEMS REQUIRED FOR PROPER INSTALLATION AND OPERATION.

**REVISIONS**

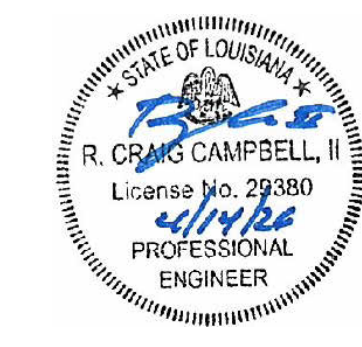
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**THIRD FLOOR RENOVATION OF BLDG 29 LABORATORIES AT NIRC**

4401 W. ADMIRAL DOYLE DRIVE,  
 NEW IBERIA, LOUISIANA  
 70560

**MECHANICAL PLAN - FIRST FLOOR**

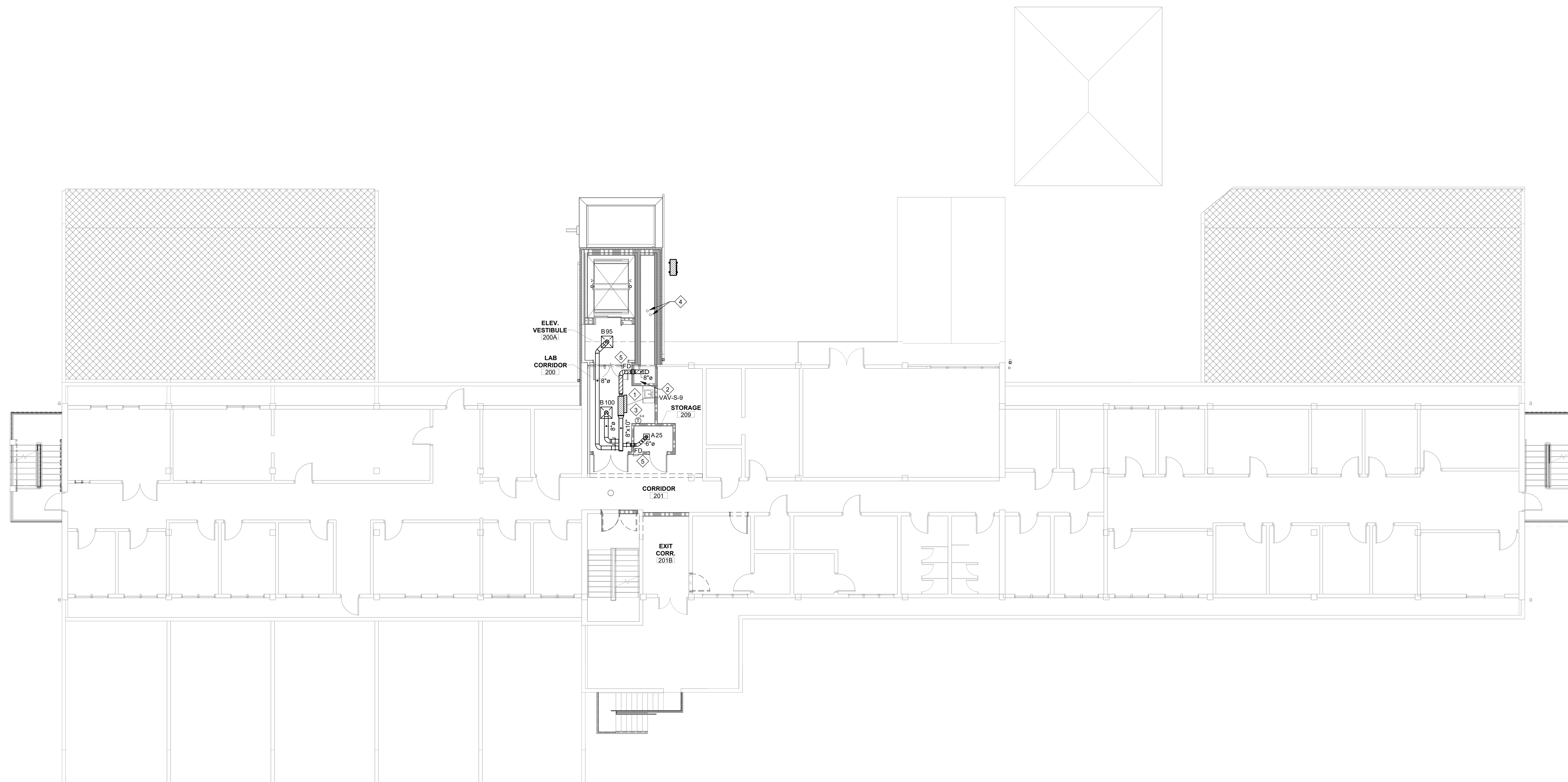
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1 MECHANICAL PLAN - SECOND FLOOR  
1/8" = 1'-0" REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS

**GENERAL MECHANICAL NOTES:**

- A. ALL NEW WORK SHALL COMPLY WITH LOCAL, STATE, FEDERAL CODES, AND NATIONAL INSTITUTES OF HEALTH DESIGN REQUIREMENTS MANUAL TO THE SATISFACTION OF CODE AUTHORITIES HAVING JURISDICTION.
- B. COORDINATE ALL CEILING DEVICES, DUCTWORK, ETC. WITH LIGHTING, STRUCTURE, ETC. THROUGH GENERAL CONTRACTOR. REFER TO ALL DRAWINGS, (STRUCTURAL, PLUMBING, ELECTRICAL, ARCHITECTURAL, ETC.), NOTIFY ARCHITECT/ENGINEER CONCERNING ANY CONFLICTS NOTED PRIOR TO BIDS FOR CLARIFICATION TO THE SATISFACTION OF THE BIDDER. REFER TO SPECIFICATIONS FOR REQUIREMENTS. REFER TO LATEST ARCHITECTURAL REFLECTED CEILING PLAN. COORDINATE ALL CEILING DEVICE LOCATIONS WITH CEILING GRID.
- C. ALL SUPPLY, RETURN, EXHAUST, AND OUTSIDE AIR DUCTWORK SHALL BE EXTERNALLY INSULATED UNLESS NOTED OTHERWISE ON PLANS. DUCT SIZES SHOWN ARE CLEAR METAL TO METAL. WRAP DUCTWORK EXTERNALLY.
- D. HARDCAST ALL NEW DUCTWORK JOINTS FOR AIRTIGHT SYSTEM. REFER TO DETAILS FOR DUCTWORK TAP, SPLITTER, BRANCH CONFIGURATION, ETC. INSTALL IN ACCORDANCE WITH SMACNA RECOMMENDATIONS AND INSTALLATION GUIDELINES.
- E. MECHANICAL CONTRACTOR SHALL COORDINATE THROUGH GENERAL CONTRACTOR TO PROVIDE OPENINGS FOR DUCTWORK IN WALLS, NEW AND EXISTING, THAT EXTEND FULL HEIGHT ABOVE LAY-IN CEILINGS.
- F. CONTRACTOR SHALL SEAL ALL DUCT PENETRATIONS THROUGH WALLS AND FLOORS AS PER THE RATED UL DESIGNATION'S REQUIREMENTS. REFER TO ARCHITECTURAL PLANS FOR ALL UL RATINGS.
- G. PROVIDE ACCESS PANELS (PER SPECIFICATIONS) AS NEEDED FOR ACCESS TO ALL NEW FIRE DAMPERS, MANUAL DAMPERS, AND MOTORIZED DAMPERS. COORDINATE FINAL LOCATION/SIZE WITH ENGINEER/OWNER.
- H. CONTRACTOR SHALL CAP AND SEAL ALL DUCTWORK DURING CONSTRUCTION TO PREVENT CONTAMINATION DUE TO CONSTRUCTION DEBRIS.
- I. ALL DAMPERS, ACCESS PANELS, ETC SHALL BE INSTALLED FOR MAXIMUM ACCESSIBILITY.
- J. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS, DETAILS, ETC. INSTALL WORK TO CONFORM TO ARCHITECTURAL AND STRUCTURAL DRAWINGS AS REQUIRED.
- K. RUN MAIN TRUNK LINES APPROXIMATELY AS SHOWN. COORDINATE EXACT LOCATION WITH STRUCTURE, PIPING, CONDUIT, DEVICES ABOVE CEILING, ETC. MAKE ALL REQUIRED OFFSETS, TRANSITIONS, ETC. (MAINTAIN EQUIVALENT DUCT FREE AREA IN TRANSITIONS). CONTRACTOR SHALL FIELD MEASURE/VERIFY SPACING TO RUN DUCT PRIOR TO FABRICATION OR INSTALLATION OF ANY DUCTWORK. RUN DUCTWORK TO MINIMIZE OFFSETS, CHANGES IN ELEVATION, TRANSITIONS, ETC. COORDINATE WITH OTHER TRADES.
- L. PROVIDE MANUAL DAMPER AT DUCT TAP SPIN FITTING AND BALANCE TO CFM INDICATED AT GRILLE. DUCT TAPS SHALL BE A MINIMUM OF 12" FROM END OF SUPPLY AIR DUCT. (TYPICAL)
- M. REVIEW COMPLETE SET OF CONTRACT DOCUMENTS PRIOR TO SUBMITTING BID.

**MECHANICAL KEYNOTES:**

- 1 CONTRACTOR SHALL COORDINATE LOCATION OF VAV BOX WITH LIGHTING PLAN. DO NOT LOCATE ABOVE LIGHT FIXTURE. LOCATE FOR OPTIMUM ACCESSIBILITY. INSTALL VAV BOXES WITH THREE TIMES DUCT DIAMETER OF STRAIGHT SPIRAL DUCT AT INLET AND ALLOW 48" OF STRAIGHT DUCT DOWNSTREAM OF OUTLET. CONTROL PANEL SHALL BE INSTALLED ON SIDE OF VAV BOX.
- 2 8" ROUND MEDIUM PRESSURE DUCTWORK FROM THIRD FLOOR. REFER TO M-130 FOR CONTINUATION.
- 3 INSTALL THERMOSTAT IN THIS VICINITY. COORDINATE FINAL THERMOSTAT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.
- 4 INSULATED CHILLED WATER PIPING CONTINUES TO RISE UP INSIDE OF NEW CHASE TO 3RD FLOOR. REFER TO M-130 FOR CONTINUATION.
- 5 PROVIDE FIRE DAMPER AT RATED WALL PENETRATION WITH ACCESS PANEL IN CORRESPONDING DUCT FOR FIRE DAMPER MAINTENANCE.

**DUCTWORK LEGEND**

LOW PRESSURE DUCTWORK	
WELDED 316L STAINLESS STEEL DUCTWORK AND FITTINGS	
MEDIUM PRESSURE DUCTWORK AND FITTINGS	

**NOTE:**  
FOR AREAS WITH EXPOSED SYSTEMS (REFER TO ARCHITECTURAL REFLECTED CEILING PLAN)  
FOR EXPOSED DUCTWORK, CONTRACTOR SHALL UTILIZE DOUBLE WALL PAINT GRIPPED DUCTWORK. COORDINATE EXACT PAINT COLOR WITH ARCHITECT. COORDINATE REQUIRED PAINTING WITH GENERAL CONTRACTOR PRIOR TO BID. DIMENSIONS SHOWN ON THE DRAWINGS ARE CLEAR METAL TO METAL.  
FOR PIPING, CONTRACTOR SHALL UTILIZE 0.030 PVC WHITE JACKETING OVER PIPING INSULATION.

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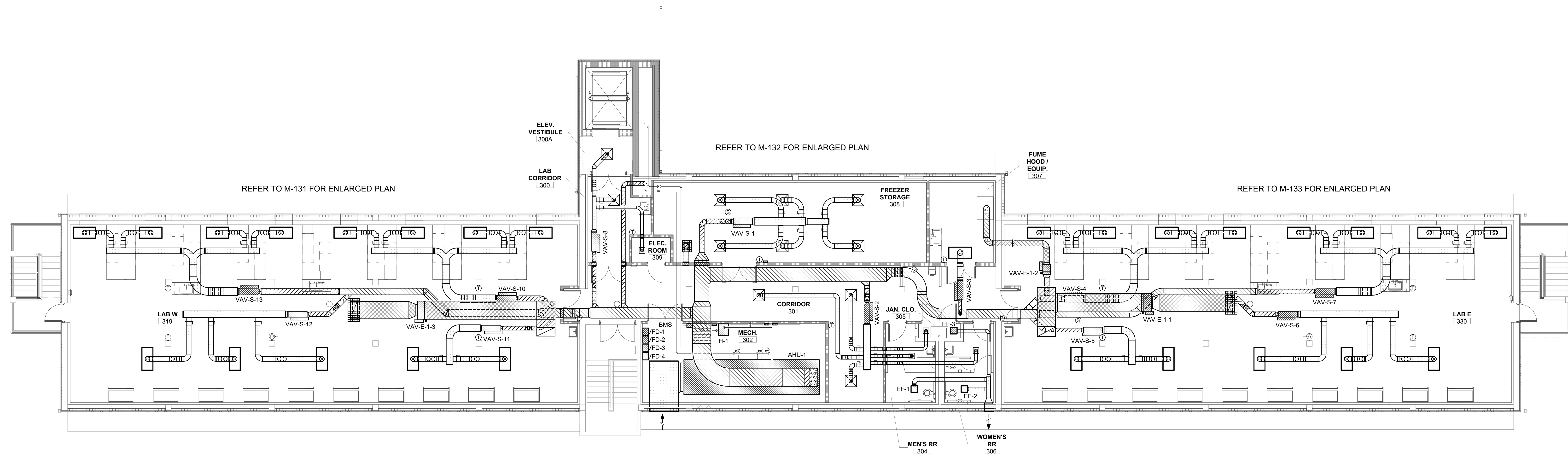
**THIRD FLOOR RENOVATION OF BLDG 29 LABORATORIES AT NIRC**

4401 W. ADMIRAL DOYLE DRIVE,  
NEW IBERIA, LOUISIANA  
70560

**MECHANICAL PLAN - SECOND FLOOR**

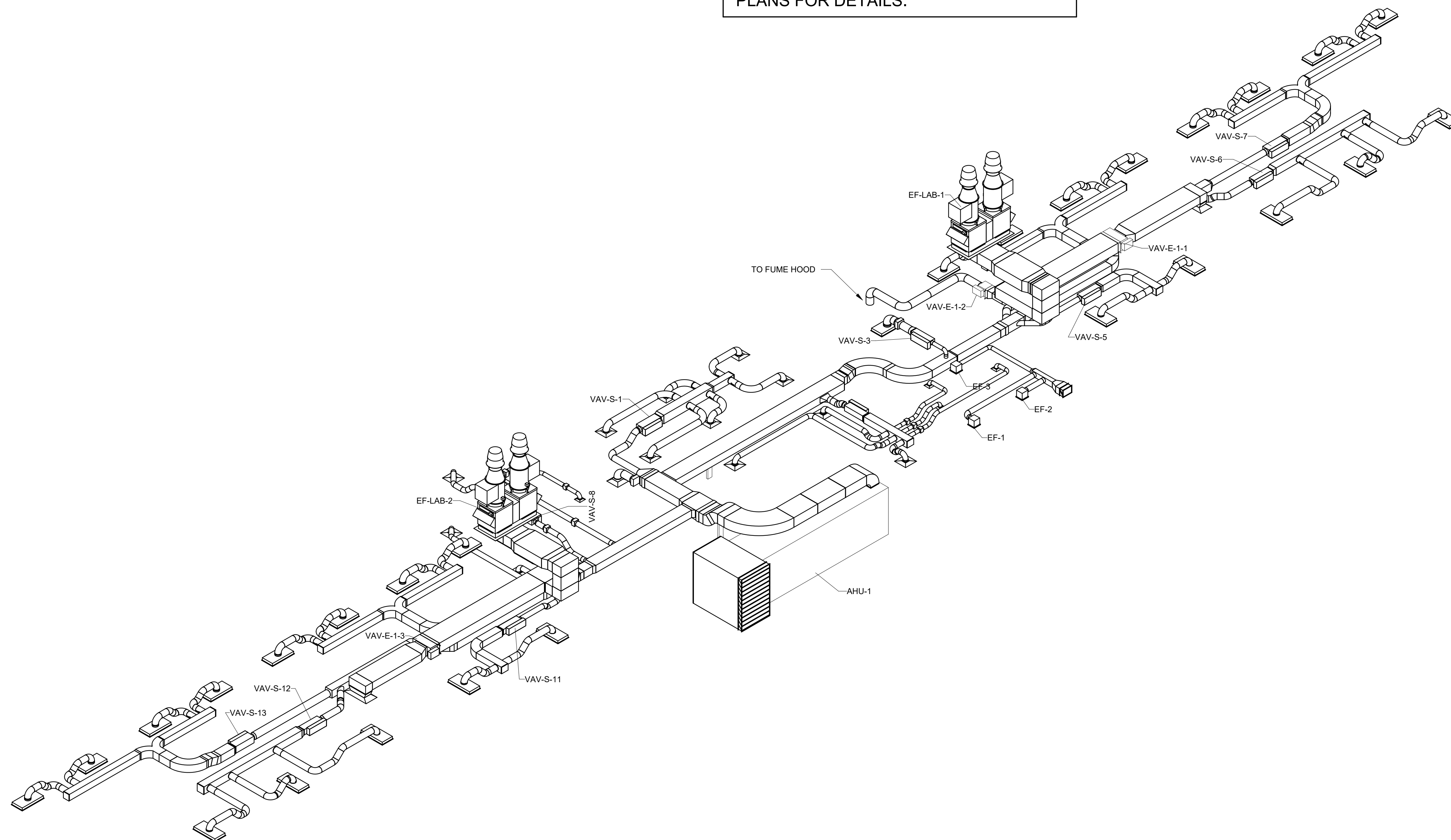
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1 OVERALL MECHANICAL PLAN - THIRD FLOOR  
 1/8" = 1'-0" REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS

**NOTE:**  
 OVERALL PLAN FOR COORDINATION  
 PURPOSES ONLY. REFER TO ENLARGED  
 PLANS FOR DETAILS.



2 OVERALL MECHANICAL ISOMETRIC VIEW  
 N.T.S.

DUCTWORK LEGEND	
LOW PRESSURE DUCTWORK	
WELDED 316L STAINLESS STEEL DUCTWORK AND FITTINGS	
MEDIUM PRESSURE DUCTWORK AND FITTINGS	

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**MECHANICAL PLAN - THIRD FLOOR**

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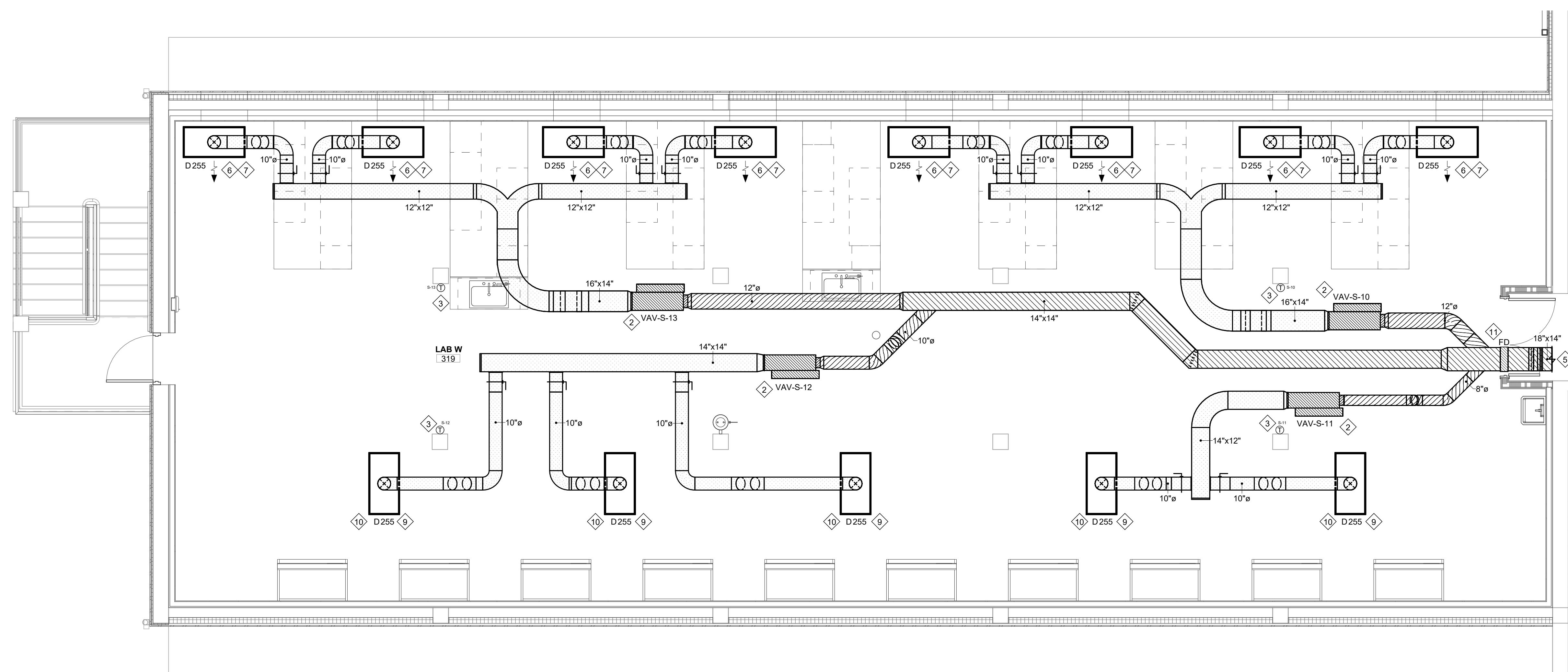
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- D. HARDCAST ALL NEW DUCTWORK JOINTS FOR AIRTIGHT SYSTEM. REFER TO DETAILS FOR DUCTWORK TAP, SPLITTER, BRANCH CONFIGURATION, ETC. INSTALL IN ACCORDANCE WITH SMACNA RECOMMENDATIONS AND INSTALLATION GUIDELINES.
- E. VERIFY ALL OUTSIDE AIR INTAKES ARE A MINIMUM OF 4'-0" FROM EXHAUST OUTLETS, SEWER VENTS, ETC.
- F. MECHANICAL CONTRACTOR SHALL COORDINATE THROUGH GENERAL CONTRACTOR TO PROVIDE OPENINGS FOR DUCTWORK IN WALLS, NEW AND EXISTING, THAT EXTEND FULL HEIGHT ABOVE LAY-IN CEILINGS.
- G. CONTRACTOR SHALL SEAL ALL DUCT PENETRATIONS THROUGH WALLS AND FLOORS AS PER THE RATED UL DESIGNATION'S REQUIREMENTS. REFER TO ARCHITECTURAL PLANS FOR ALL UL RATINGS.
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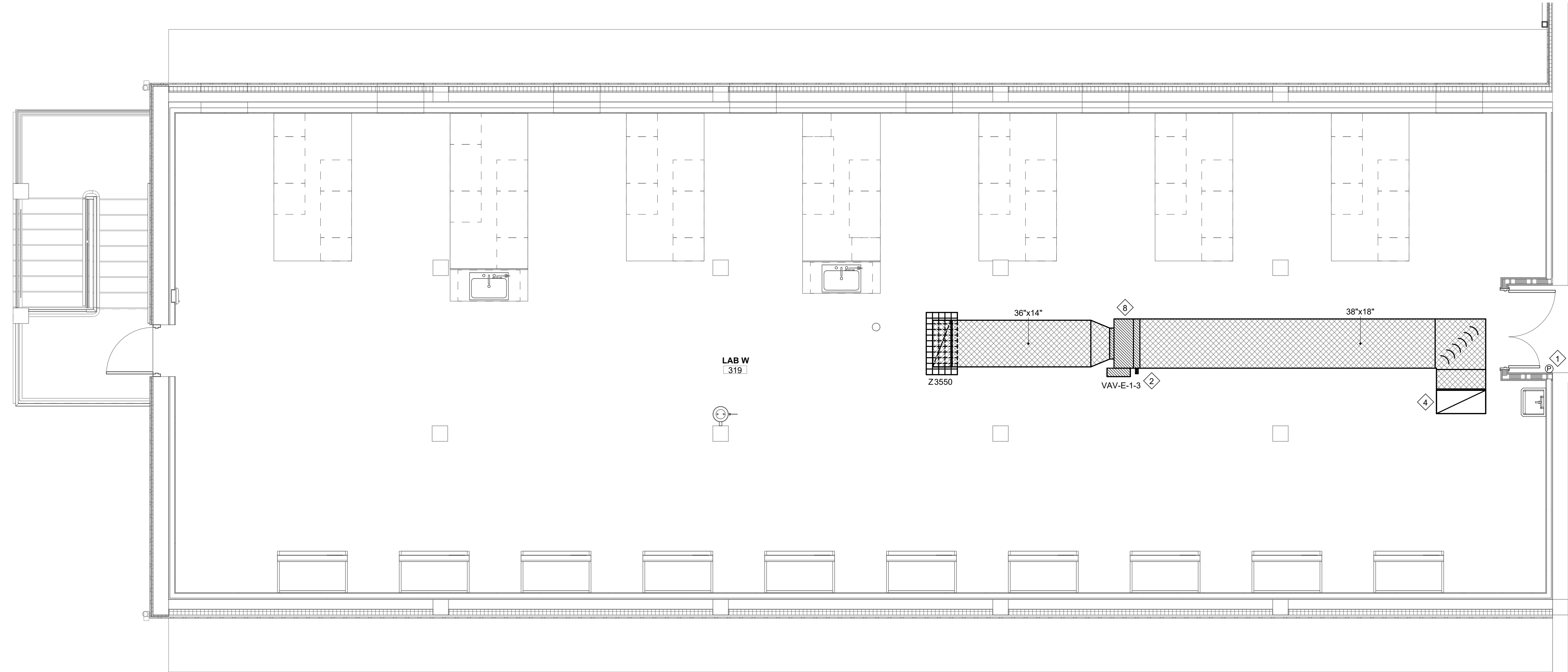
**MECHANICAL KEYNOTES:**

- 1 PROVIDE ALARMABLE ROOM DIFFERENTIAL PRESSURE MONITOR ACROSS DOOR.
- 2 CONTRACTOR SHALL COORDINATE LOCATION OF VAV BOX WITH LIGHTING PLAN. DO NOT LOCATE ABOVE LIGHT FIXTURE. LOCATE FOR OPTIMUM ACCESSIBILITY. INSTALL VAV BOXES WITH THREE TIMES DUCT DIAMETER OF STRAIGHT SPIRAL DUCT AT INLET AND ALLOW 48" OF STRAIGHT DUCT DOWNSTREAM OF OUTLET. CONTROL PANEL SHALL BE INSTALLED ON SIDE OF VAV BOX. COORDINATE HANDING PRIOR TO ORDERING.
- 3 INSTALL THERMOSTAT IN THIS VICINITY. COORDINATE FINAL THERMOSTAT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.
- 4 EXHAUST DUCTWORK RISES UP TO ROOF AND ROUTES TO LAB EXHAUST FAN ON ROOF. REFER TO SHEET M-140 FOR CONTINUATION.
- 5 REFER TO SHEET M-132 FOR CONTINUATION.
- 6 LAMINAR FLOW DIFFUSER SHALL BE ONE-WAY THROW AS SHOWN ON PLAN.
- 7 LAMINAR FLOW DIFFUSER INSTALLED APPROXIMATELY 7'-10" A.F.F. IN THIS VICINITY. DIFFUSER TO BE HUNG FROM STRUCTURE. DUCTWORK SHALL BE HARD PIPED TO DIFFUSER. (TYPICAL)
- 8 GENERAL EXHAUST BOX SHALL BE INSTALLED HORIZONTALLY IN EXHAUST DUCT IN THIS VICINITY. MAINTAIN SERVICE CLEARANCES.
- 9 LAMINAR FLOW DIFFUSER INSTALLED APPROXIMATELY 8'-6" A.F.F. IN THIS VICINITY. DIFFUSER TO BE HUNG FROM STRUCTURE. DUCTWORK SHALL BE HARD PIPED TO DIFFUSER. (TYPICAL)
- 10 LAMINAR FLOW DIFFUSER SHALL BE LOCATED A MINIMUM 3' FROM FACE OF THE BIOMEDICAL SAFETY CABINET AND SHALL NOT BLOW AIR DIRECTLY AT THE FACE OF THE BIOMEDICAL SAFETY CABINET.
- 11 PROVIDE FIRE DAMPER AT RATED WALL PENETRATION WITH ACCESS PANEL IN CORRESPONDING DUCT FOR FIRE DAMPER MAINTENANCE.

2 MECHANICAL PLAN - THIRD FLOOR (WEST WING SUPPLY)  
 1/4" = 1'-0"  
 REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS



1 MECHANICAL PLAN - THIRD FLOOR (WEST WING EXHAUST)  
 1/4" = 1'-0"  
 REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS



**NOTE:**  
 FOR AREAS WITH EXPOSED SYSTEMS (REFER TO ARCHITECTURAL REFLECTED CEILING PLAN)  
 FOR EXPOSED DUCTWORK, CONTRACTOR SHALL UTILIZE DOUBLE WALL PAINT GRIPPED DUCTWORK. COORDINATE EXACT PAINT COLOR WITH ARCHITECT. COORDINATE REQUIRED PAINTING WITH GENERAL CONTRACTOR PRIOR TO BID. DIMENSIONS SHOWN ON THE DRAWINGS ARE CLEAR METAL TO METAL.  
 FOR PIPING, CONTRACTOR SHALL UTILIZE 0.030 PVC WHITE JACKETING OVER PIPING INSULATION.

**DUCTWORK LEGEND**

LOW PRESSURE DUCTWORK	
WELDED 316L STAINLESS STEEL DUCTWORK AND FITTINGS	
MEDIUM PRESSURE DUCTWORK AND FITTINGS	

REVISIONS		
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 NEW IBERIA, LOUISIANA  
 70560

**MECHANICAL PLAN - ENLARGED THIRD FLOOR (WEST WING)**

PROJECT NUMBER 2025.040	DRAWN BY LC/PP
DATE APRIL 14, 2026	CHECKED BY PP/CC
PHASE BID DOCUMENTS	

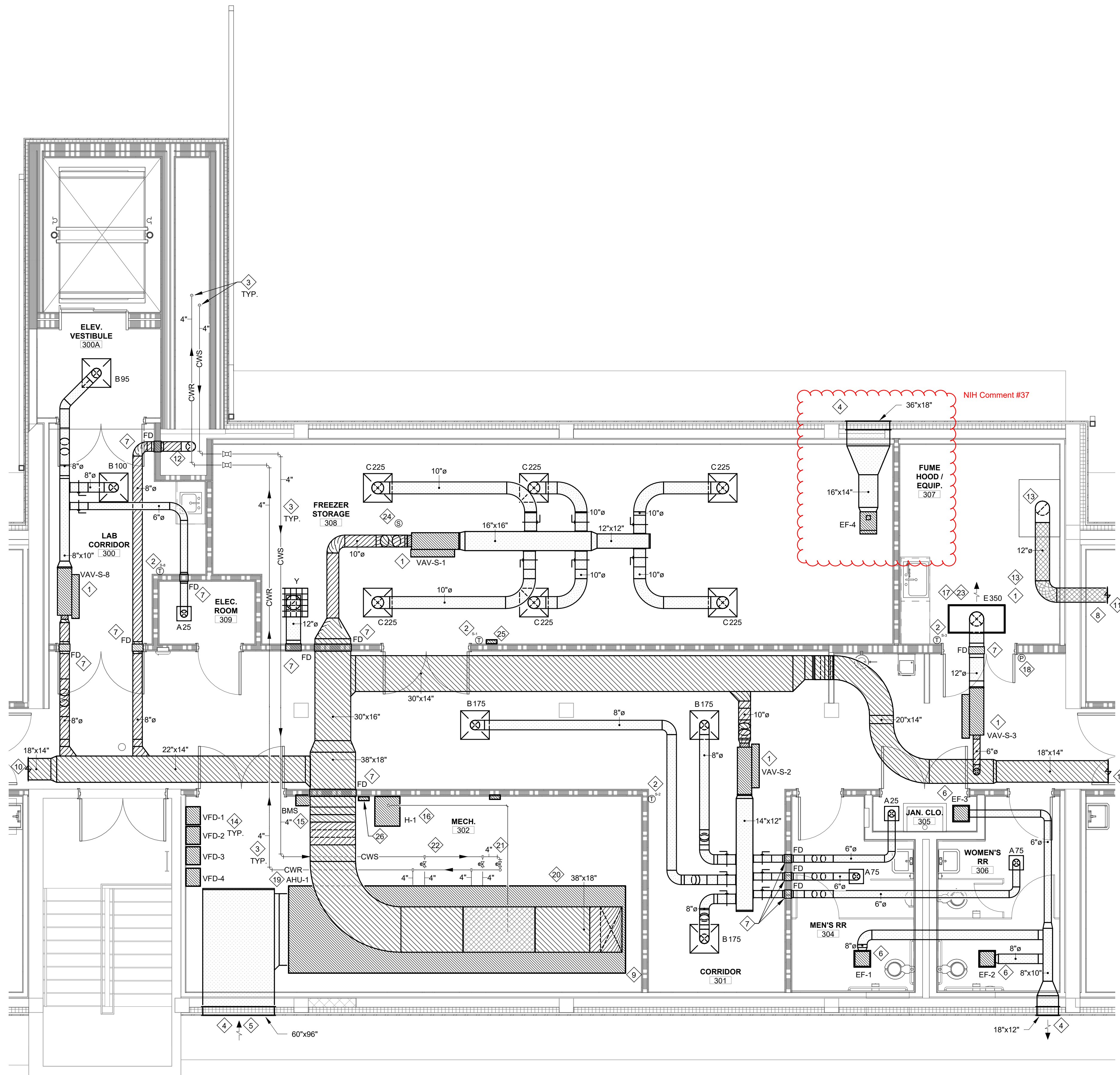


**GENERAL MECHANICAL NOTES:**

- A. ALL NEW WORK SHALL COMPLY WITH LOCAL, STATE, FEDERAL CODES, AND NATIONAL INSTITUTES OF HEALTH DESIGN REQUIREMENTS MANUAL TO THE SATISFACTION OF CODE AUTHORITIES HAVING JURISDICTION.
- B. COORDINATE ALL CEILING DEVICES, DUCTWORK, ETC. WITH LIGHTING, STRUCTURE, ETC. THROUGH GENERAL CONTRACTOR. REFER TO ALL DRAWINGS, (STRUCTURAL, PLUMBING, ELECTRICAL, ARCHITECTURAL, ETC.) NOTIFY ARCHITECT/ENGINEER CONCERNING ANY CONFLICTS NOTED PRIOR TO BIDS FOR CLARIFICATION TO THE SATISFACTION OF THE BIDDER. REFER TO SPECIFICATIONS FOR REQUIREMENTS. REFER TO LATEST ARCHITECTURAL REFLECTED CEILING PLAN. COORDINATE ALL CEILING DEVICE LOCATIONS WITH CEILING GRID.
- C. ALL SUPPLY, RETURN, EXHAUST, AND OUTSIDE AIR DUCTWORK SHALL BE EXTERNALLY INSULATED UNLESS NOTED OTHERWISE ON PLANS. DUCT SIZES SHOWN ARE CLEAR METAL TO METAL. WRAP DUCTWORK EXTERNALLY.
- D. HARDCAST ALL NEW DUCTWORK JOINTS FOR AIRTIGHT SYSTEM. REFER TO DETAILS FOR DUCTWORK TAP, SPLITTER, BRANCH CONFIGURATION, ETC. INSTALL IN ACCORDANCE WITH SMACNA RECOMMENDATIONS AND INSTALLATION GUIDELINES.
- E. VERIFY ALL OUTSIDE AIR INTAKES ARE A MINIMUM OF 40'-0" FROM EXHAUST OUTLETS, SEWER VENTS, ETC.
- F. MECHANICAL CONTRACTOR SHALL COORDINATE THROUGH GENERAL CONTRACTOR TO PROVIDE OPENINGS FOR DUCTWORK IN WALLS, NEW AND EXISTING, THAT EXTEND FULL HEIGHT ABOVE LAY-IN CEILINGS.
- G. CONTRACTOR SHALL SEAL ALL DUCT PENETRATIONS THROUGH WALLS AND FLOORS AS PER THE RATED UL DESIGNATION'S REQUIREMENTS. REFER TO ARCHITECTURAL PLANS FOR ALL UL RATINGS.
- H. PROVIDE ACCESS PANELS (PER SPECIFICATIONS) AS NEEDED FOR ACCESS TO ALL NEW FIRE DAMPERS, MANUAL DAMPERS, AND MOTORIZED DAMPERS. COORDINATE FINAL LOCATION/SIZE WITH ENGINEER/OWNER.
- I. CONTRACTOR SHALL CAP AND SEAL ALL DUCTWORK DURING CONSTRUCTION TO PREVENT CONTAMINATION DUE TO CONSTRUCTION DEBRIS.
- J. ALL DAMPERS, ACCESS PANELS, ETC. SHALL BE INSTALLED FOR MAXIMUM ACCESSIBILITY.
- K. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS, DETAILS, ETC. INSTALL WORK TO CONFORM TO ARCHITECTURAL AND STRUCTURAL DRAWINGS AS REQUIRED.
- L. RUN MAIN TRUNK LINES APPROXIMATELY AS SHOWN. COORDINATE EXACT LOCATION WITH STRUCTURE, PIPING, CONDUIT, DEVICES ABOVE CEILING, ETC. MAKE ALL REQUIRED OFFSETS, TRANSITIONS, ETC. (MAINTAIN EQUIVALENT DUCT FREE AREA IN TRANSITIONS). CONTRACTOR SHALL FIELD MEASURE/VERIFY SPACING TO RUN DUCT PRIOR TO FABRICATION OR INSTALLATION OF ANY DUCTWORK. RUN DUCTWORK TO MINIMIZE OFFSETS, CHANGES IN ELEVATION, TRANSITIONS, ETC. COORDINATE WITH OTHER TRADES.
- M. PROVIDE MANUAL DAMPER AT DUCT TAP SPIN FITTING AND BALANCE TO CFM INDICATED AT GRILLE. DUCT TAPS SHALL BE A MINIMUM OF 12" FROM END OF SUPPLY AIR DUCT. (TYPICAL)
- N. REVIEW COMPLETE SET OF CONTRACT DOCUMENTS PRIOR TO SUBMITTING BID.

**MECHANICAL KEYNOTES:**

- 1. CONTRACTOR SHALL COORDINATE LOCATION OF VAV BOX WITH LIGHTING PLAN. DO NOT LOCATE ABOVE LIGHT FIXTURE. LOCATE FOR OPTIMUM ACCESSIBILITY. INSTALL VAV BOXES WITH THREE TIMES DUCT DIAMETER OF STRAIGHT SPIRAL DUCT AT INLET AND ALLOW 48" OF STRAIGHT DUCT DOWNSTREAM OF OUTLET. CONTROL PANEL SHALL BE INSTALLED ON SIDE OF VAV BOX. COORDINATE HANDING PRIOR TO ORDERING.
- 2. INSTALL THERMOSTAT IN THIS VICINITY. COORDINATE FINAL THERMOSTAT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.
- 3. INSULATED CHILLED WATER PIPING CONTINUES TO RISE UP INSIDE OF NEW CHASE TO MAXIMUM HEIGHT ON THIRD FLOOR. CHILLED WATER IS ROUTED TO SERVE AIR HANDLING UNIT (AHU-1). PIPING SHALL NOT BE ROUTED OVER ANY IT/ELECTRICAL ROOM INCLUDING "309 ELEC. ROOM".
- 4. PROVIDE A WALL LOUVER WITH BIRDSCREEN AT SIZE INDICATED. DRIP CAP, EXTENDED SILL, AND ANODIZED FINISH (COLOR BY ARCH). LOUVER SHALL BE GREENHECK STEEL 3900 WIND-DRIVEN RAIN LOUVER, EXTRUDED ALUM., DRAINABLE, OR APPROVED EQUAL WITH BACKDRAFT DAMPER. CONNECT DUCTWORK FULL SIZE TO LOUVER. COORDINATE EXACT LOCATION WITH ARCHITECTURAL ELEVATIONS AND STRUCTURAL CROSS BRACING. CONTRACTOR SHALL PROVIDE INSULATED FLENUM BOX FULL SIZE OF LOUVER FOR DUCT CONNECTION.
- 5. MAINTAIN MINIMUM 40' CLEARANCE BETWEEN FRESH AIR INTAKE AND EXHAUST DISCHARGE HOODS, FLUES, PLUMBING VENTS, ETC.
- 6. INSTALL NEW CEILING MOUNTED EXHAUST FAN IN THIS VICINITY. COORDINATE FINAL LOCATION WITH ARCHITECTURAL REFLECTIVE CEILING PLAN. OCCUPANCY SENSOR SHALL ACTIVATE EXHAUST FAN WITH TIMER. MECHANICAL CONTRACTOR SHALL PROVIDE SENSOR & TIMER AND ELECTRICAL CONTRACTOR SHALL INSTALL SENSOR & TIMER.
- 7. PROVIDE FIRE DAMPER AT RATED WALL PENETRATION WITH ACCESS PANEL IN CORRESPONDING DUCT FOR FIRE DAMPER MAINTENANCE.
- 8. EXHAUST DUCTWORK SHALL BE INSULATED CONTINUOUSLY WITH FIRE WRAP 10' BEFORE AND AFTER ALL PENETRATIONS THROUGH FIRE RATED WALLS.
- 9. EXTEND 56"x40" INSULATED SUPPLY AIR FLENUM FROM TOP OF UNIT TO MAXIMUM HEIGHT. SUPPLY MAIN SHALL TAP FLENUM WITH 45° TAP.
- 10. REFER TO SHEET M-131 FOR CONTINUATION.
- 11. REFER TO SHEET M-133 FOR CONTINUATION.
- 12. 8" ROUND DUCTWORK DRIPS IN CHASE TO 2ND FLOOR. REFER TO M-120 FOR CONTINUATION.
- 13. HOOD EXHAUST BOX SHALL BE INSTALLED HORIZONTALLY IN EXHAUST DUCT CONNECTING TO HOOD IN THIS VICINITY. PROVIDE ALL ACCESSORIES REQUIRED TO MAKE FINAL CONNECTIONS TO FUME HOOD. MAINTAIN SERVICE CLEARANCES. CONNECT 12" WELDED STAINLESS STEEL DUCTWORK TO FUME HOOD CONNECTION. PROVIDE ALL OFFSETS/ACCESSORIES REQUIRED.
- 14. MOUNT VFD'S ON WALL IN THIS VICINITY IN ACCESSIBLE LOCATION AS PER MANUFACTURERS RECOMMENDATIONS. COORDINATE EXACT LOCATION IN FIELD WITH ELECTRICAL CONTRACTOR PRIOR TO ROUGH-IN. POWER FROM VFD'S TO BE ROUTED TO FAN ARRAY CONTROLLER ON UNIT. COORDINATE REQUIREMENTS WITH DIVISION 26 CONTRACTOR.
- 15. INSTALL BMS PANEL ON WALL IN THIS VICINITY. 120V EMERGENCY POWER SHALL BE BROUGHT TO PANEL. COORDINATE REQUIREMENTS WITH DIVISION 26 CONTRACTOR.
- 16. INSTALL WALL MOUNTED ELECTRIC STEAM HUMIDIFIER ON WALL IN THIS VICINITY. INSULATED STEAM PIPING RISES UP AND CONNECTS TO DUCT MOUNTED DISPERSION TUBE AS SHOWN. STEAM PIPING SHALL SLOPE BACK TO HUMIDIFIER. DUCTWORK SHALL BE STAINLESS STEEL MINIMUM 2" UPSTREAM AND 3" DOWNSTREAM OF DISPERSION TUBE. STAINLESS STEEL DUCTWORK SHALL BE PUNCHED WITH VALVED DRAIN AND 3/4" HOSEBIBB CONNECTION.
- 17. LAMINAR FLOW DIFFUSER INSTALLED APPROXIMATELY 7'-10" A.F.F. IN THIS VICINITY. DIFFUSER TO BE HUNG FROM STRUCTURE. DUCTWORK SHALL BE HARD PIPED TO DIFFUSER. (TYPICAL)
- 18. PROVIDE AND INSTALL ALARMABLE ROOM DIFFERENTIAL PRESSURE MONITOR ACROSS DOOR.
- 19. INSTALL AIR HANDLING UNIT ON MIN. 4" HOUSEKEEPING PAD IN EMERGENCY DRAIN PAN EXTENDING 6" ALL AROUND PERIMETER OF UNIT. ADJUST HEIGHT OF CONCRETE PAD AS NECESSARY TO ACHIEVE AIR HANDLING UNIT MANUFACTURERS RECOMMENDED CONDENSATE P-TRAP DEPTH PLUS INSULATION. PROVIDE 1" COPPER DRAIN LINE FROM DRAIN PAN WITH BALL VALVE (NC) TO NEAREST FLOOR DRAIN.
- 20. INSTALL SUPPLY DUCT SMOKE DETECTOR IN SUPPLY DUCT PROVIDED BY FIRE ALARM CONTRACTOR. PROVIDE CONTROLS SYSTEM POINTS FOR INTERFACE TO FIRE ALARM SYSTEM TO SHUT DOWN AHU UPON SIGNAL FROM FIRE ALARM. COORDINATE WITH FIRE ALARM CONTRACTOR. BMS CONTRACTOR SHALL CONNECT TO FIRE ALARM RELAY AT EACH SMOKE DETECTOR.
- 21. 4" MINIMUM FLOW CHILLED WATER BY-PASS CONTROL VALVE. SET FOR 100 GPM.
- 22. CHILLED WATER SUPPLY & RETURN PIPING TO RESPECTIVE AIR UNIT. INSTALL ACCESSIBLE SHUT OFF VALVES IN CHILLED WATER LINES. REFER TO COIL DETAIL FOR CONNECTIONS TO HANDLING UNIT. COORDINATE COIL PULL CLEARANCES IN MECHANICAL ROOM PRIOR TO INSTALL. CONTRACTOR SHALL INSTALL FLANGE CONNECTION IN PIPING TO ALLOW REMOVAL OF UNIT.
- 23. LAMINAR DIFFUSER SHALL BE ONE-WAY THROW AS SHOWN ON PLAN.
- 24. INSTALL REMOTE OXYGEN SENSOR AT CEILING.
- 25. INSTALL AMI OXYGEN DEPLETION MONITOR WITH REMOTE PROBE SENSOR AND LOCAL VISUAL/AUDIBLE ALARM (MODEL 221R) ON WALL IN THIS VICINITY. O2 MONITOR SHALL ALARM LOCALLY AND ALARM THE BAS UPON DETECTION OF UNSATISFACTORY OXYGEN LEVELS (BELOW 19.5%).
- 26. INSTALL LEAK DETECTION BOX IN THIS VICINITY. COORDINATE LEAK DETECTION ROUTING WITH EQUIPMENT IN THE FIELD.
- 27. PROVIDE INLINE EXHAUST FAN WITH 0-10V SPEED CONTROLLER. OPEN TO SPACE IN THIS VICINITY. INSTALL AIR FLOW MEASURING STATION IN EXHAUST DUCTWORK. EXHAUST FAN SHALL MODULATE WITH VAV-S-1 TO MAINTAIN A CFM OFFSET OF 470 CFM FOR BUILDING PRESSURIZATION.



1 MECHANICAL PLAN - THIRD FLOOR (CENTER)  
 1/4" = 1'-0" REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS

**NOTE:**  
 WATER FLOOD DETECTION/ALARM SYSTEM TO BE INSTALLED IN MECHANICAL ROOM "MECH. 302"

**NOTE:**  
 SINGLE VAV BOX FOR FUME HOOD/EQUIPMENT ROOM DUE TO FUME HOOD BEING CONSTANT VOLUME WITH BY-PASS.

**NOTE:**  
 PIPING SHALL NOT BE ROUTED OVER ANY IT/ELECTRICAL ROOM INCLUDING "309A ELEC. ROOM".

**NOTE:**  
 FOR AREAS WITH EXPOSED SYSTEMS (REFER TO ARCHITECTURAL REFLECTED CEILING PLAN)  
 FOR EXPOSED DUCTWORK, CONTRACTOR SHALL UTILIZE DOUBLE WALL PAINT GRIPPED DUCTWORK. COORDINATE EXACT PAINT COLOR WITH ARCHITECT. COORDINATE REQUIRED PAINTING WITH GENERAL CONTRACTOR PRIOR TO BID. DIMENSIONS SHOWN ON THE DRAWINGS ARE CLEAR METAL TO METAL.  
 FOR PIPING, CONTRACTOR SHALL UTILIZE 0.030 PVC WHITE JACKETING OVER PIPING INSULATION.

DUCTWORK LEGEND	
LOW PRESSURE DUCTWORK	
WELDED 316L STAINLESS STEEL DUCTWORK AND FITTINGS	
MEDIUM PRESSURE DUCTWORK AND FITTINGS	

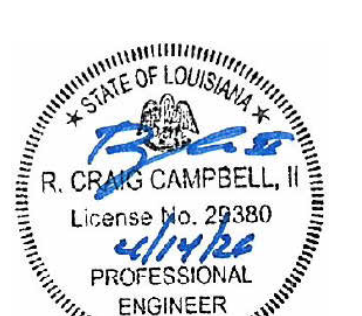
REVISIONS		
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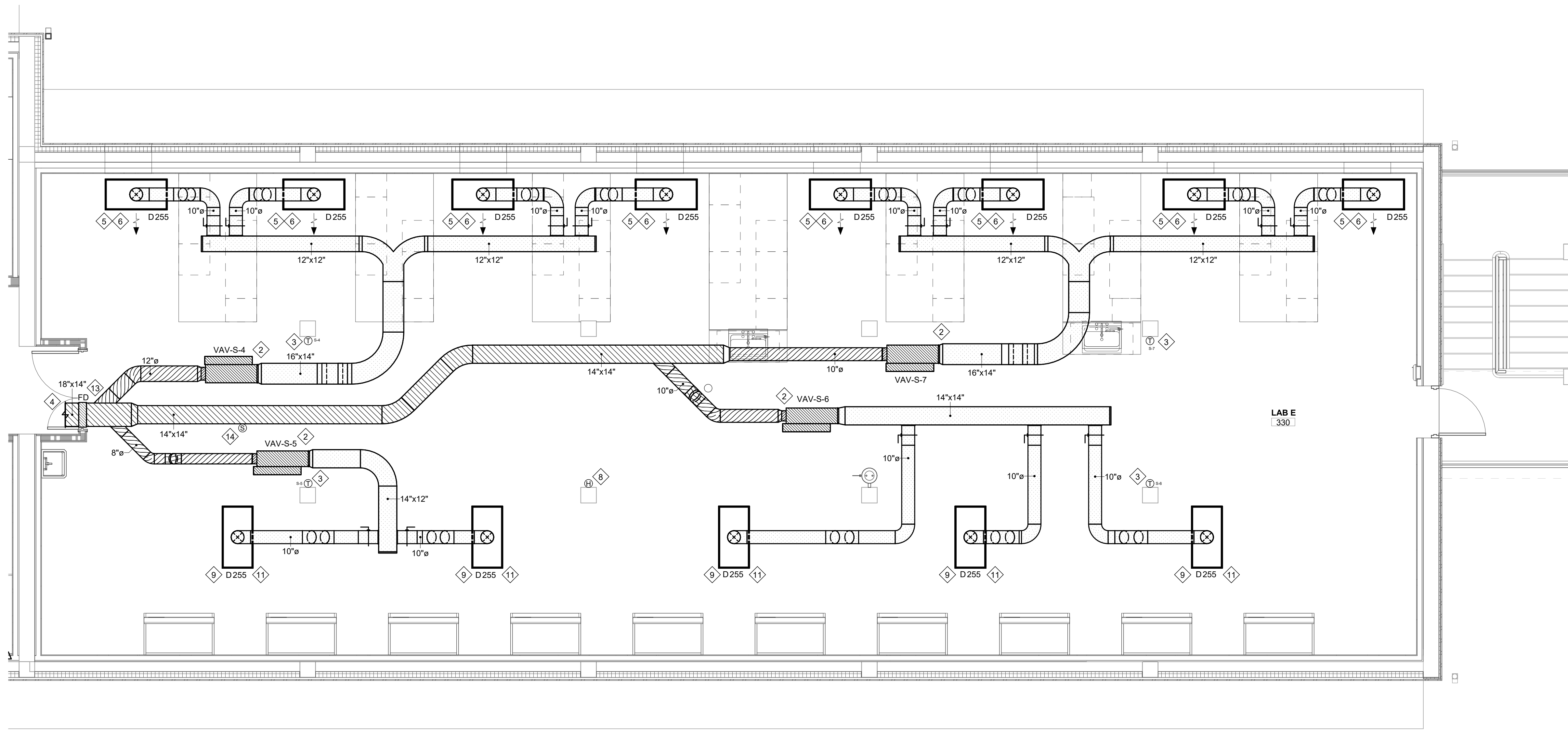
**THIRD FLOOR RENOVATION OF BLDG 29 LABORATORIES AT NIRC**

4401 W. ADMIRAL DOYLE DRIVE,  
 NEW IBERIA, LOUISIANA  
 70560

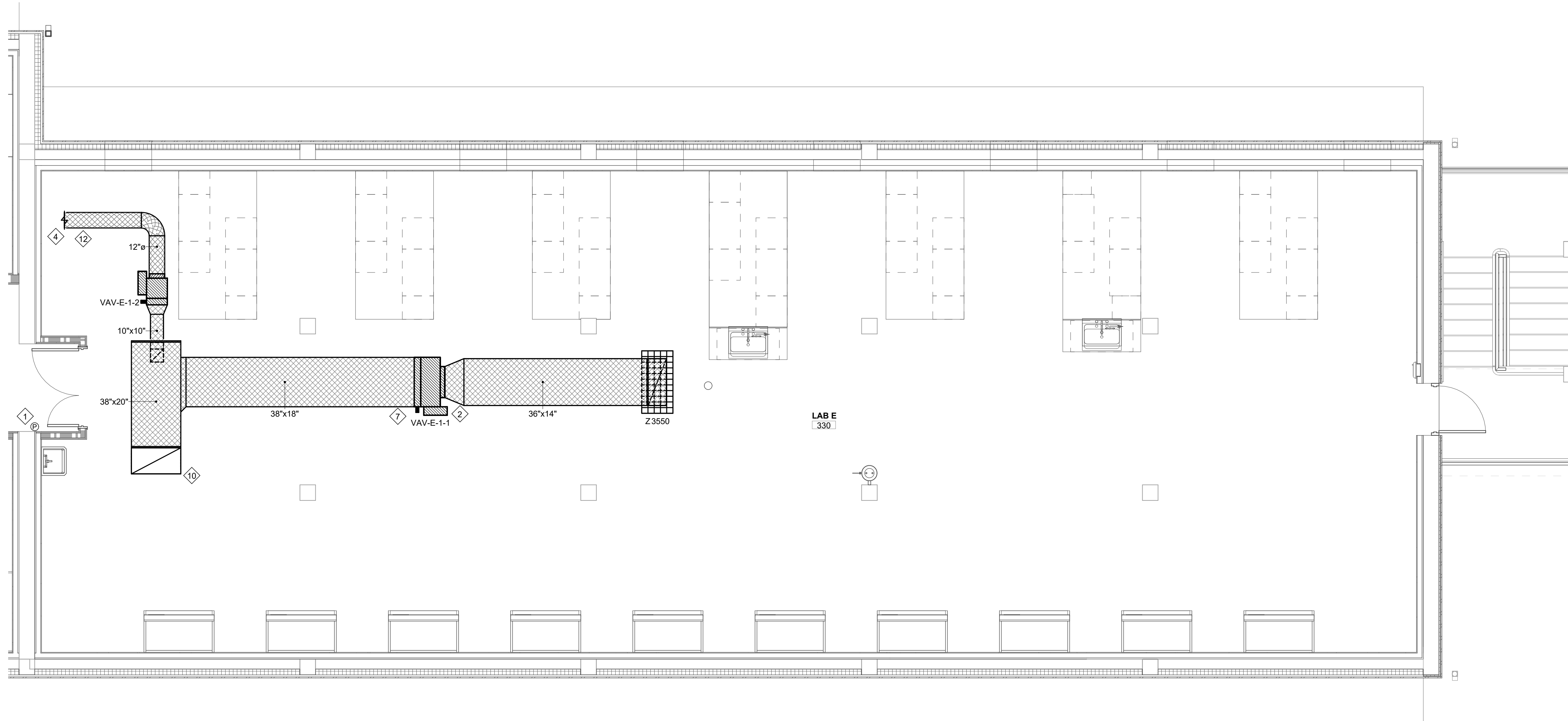
**MECHANICAL PLAN - ENLARGED THIRD FLOOR (CENTER)**

PROJECT NUMBER 2025.040	DRAWN BY LC/PP
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PHASE BID DOCUMENTS	





1 MECHANICAL PLAN - THIRD FLOOR (EAST WING SUPPLY)  
1/4" = 1'-0" REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS



2 MECHANICAL PLAN - THIRD FLOOR (EAST WING EXHAUST)  
1/4" = 1'-0" REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS

**GENERAL MECHANICAL NOTES:**

- A. ALL NEW WORK SHALL COMPLY WITH LOCAL, STATE, FEDERAL CODES, AND NATIONAL INSTITUTES OF HEALTH DESIGN REQUIREMENTS MANUAL TO THE SATISFACTION OF CODE AUTHORITIES HAVING JURISDICTION.
- B. COORDINATE ALL CEILING DEVICES, DUCTWORK, ETC. WITH LIGHTING, STRUCTURE, ETC. THROUGH GENERAL CONTRACTOR. REFER TO ALL DRAWINGS, (STRUCTURAL, PLUMBING, ELECTRICAL, ARCHITECTURAL, ETC.). NOTIFY ARCHITECT/ENGINEER CONCERNING ANY CONFLICTS NOTED PRIOR TO BIDS FOR CLARIFICATION TO THE SATISFACTION OF THE BIDDER. REFER TO SPECIFICATIONS FOR REQUIREMENTS. REFER TO LATEST ARCHITECTURAL REFLECTED CEILING PLAN. COORDINATE ALL CEILING DEVICE LOCATIONS WITH CEILING GRID.
- C. ALL SUPPLY, RETURN, EXHAUST, AND OUTSIDE AIR DUCTWORK SHALL BE EXTERNALLY INSULATED UNLESS NOTED OTHERWISE ON PLANS. DUCT SIZES SHOWN ARE CLEAR METAL TO METAL. WRAP DUCTWORK EXTERNALLY.
- D. HARDCAST ALL NEW DUCTWORK JOINTS FOR AIRTIGHT SYSTEM. REFER TO DETAILS FOR DUCTWORK TAP, SPLITTER, BRANCH CONFIGURATION, ETC. INSTALL IN ACCORDANCE WITH SMACNA RECOMMENDATIONS AND INSTALLATION GUIDELINES.
- E. VERIFY ALL OUTSIDE AIR INTAKES ARE A MINIMUM OF 40'-0" FROM EXHAUST OUTLETS, SEWER VENTS, ETC.
- F. MECHANICAL CONTRACTOR SHALL COORDINATE THROUGH GENERAL CONTRACTOR TO PROVIDE OPENINGS FOR DUCTWORK IN WALLS, NEW AND EXISTING, THAT EXTEND FULL HEIGHT ABOVE LAY-IN CEILINGS.
- G. CONTRACTOR SHALL SEAL ALL DUCT PENETRATIONS THROUGH WALLS AND FLOORS AS PER THE RATED UL DESIGNATIONS REQUIREMENTS. REFER TO ARCHITECTURAL PLANS FOR ALL UL RATINGS.
- H. PROVIDE ACCESS PANELS (PER SPECIFICATIONS) AS NEEDED FOR ACCESS TO ALL NEW FIRE DAMPERS, MANUAL DAMPERS, AND MOTORIZED DAMPERS. COORDINATE FINAL LOCATION/SIZE WITH ENGINEER/OWNER.
- I. CONTRACTOR SHALL CAP AND SEAL ALL DUCTWORK DURING CONSTRUCTION TO PREVENT CONTAMINATION DUE TO CONSTRUCTION DEBRIS.
- J. ALL DAMPERS, ACCESS PANELS, ETC SHALL BE INSTALLED FOR MAXIMUM ACCESSIBILITY.
- K. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS, DETAILS, ETC. INSTALL WORK TO CONFORM TO ARCHITECTURAL AND STRUCTURAL DRAWINGS AS REQUIRED.
- L. RUN MAIN TRUNK LINES APPROXIMATELY AS SHOWN. COORDINATE EXACT LOCATION WITH STRUCTURE, PIPING, CONDUIT, DEVICES ABOVE CEILING, ETC. MAKE ALL REQUIRED OFFSETS, TRANSITIONS, ETC. (MAINTAIN EQUIVALENT DUCT FREE AREA IN TRANSITIONS). CONTRACTOR SHALL FIELD MEASURE/VERIFY SPACING TO RUN DUCT PRIOR TO FABRICATION OR INSTALLATION OF ANY DUCTWORK. RUN DUCTWORK TO MINIMIZE OFFSETS, CHANGES IN ELEVATION, TRANSITIONS, ETC. COORDINATE WITH OTHER TRADES.
- M. PROVIDE MANUAL DAMPER AT DUCT TAP SPIN FITTING AND BALANCE TO CFM INDICATED AT GRILLE. DUCT TAPS SHALL BE A MINIMUM OF 12" FROM END OF SUPPLY AIR DUCT. (TYPICAL)
- N. REVIEW COMPLETE SET OF CONTRACT DOCUMENTS PRIOR TO SUBMITTING BID.

**MECHANICAL KEYNOTES:**

- 1 PROVIDE ALARMABLE ROOM DIFFERENTIAL PRESSURE MONITOR ACROSS DOOR.
- 2 CONTRACTOR SHALL COORDINATE LOCATION OF VAV BOX WITH LIGHTING PLAN. DO NOT LOCATE ABOVE LIGHT FIXTURE. LOCATE FOR OPTIMUM ACCESSIBILITY. INSTALL VAV BOXES WITH THREE TIMES DUCT DIAMETER OF STRAIGHT SPIRAL DUCT AT INLET AND ALLOW 48" OF STRAIGHT DUCT DOWNSTREAM OF OUTLET. CONTROL PANEL SHALL BE INSTALLED ON SIDE OF VAV BOX. COORDINATE HANDING PRIOR TO ORDERING.
- 3 INSTALL THERMOSTAT IN THIS VICINITY. COORDINATE FINAL THERMOSTAT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.
- 4 REFER TO SHEET M-132 FOR CONTINUATION.
- 5 LAMINAR DIFFUSER SHALL BE ONE-WAY THROW AS SHOWN ON PLAN.
- 6 LAMINAR FLOW DIFFUSER INSTALLED APPROXIMATELY 7'-10" A.F.F. IN THIS VICINITY. DIFFUSER TO BE HUNG FROM STRUCTURE. DUCTWORK SHALL BE HARD PIPED TO DIFFUSER. (TYPICAL)
- 7 GENERAL EXHAUST BOX SHALL BE INSTALLED HORIZONTALLY IN EXHAUST DUCT IN THIS VICINITY. MAINTAIN SERVICE CLEARANCES. AIR VALVE SHALL BE OPEN TO ROOM.
- 8 INSTALL HUMIDISTAT ON COLUMN IN THIS VICINITY.
- 9 LAMINAR FLOW DIFFUSER SHALL BE LOCATED A MINIMUM 3' FROM FACE OF THE BIOMEDICAL SAFETY CABINET AND SHALL NOT BLOW AIR DIRECTLY AT THE FACE OF THE BIOMEDICAL SAFETY CABINET.
- 10 EXHAUST DUCTWORK RISES UP TO ROOF AND ROUTES TO LAB EXHAUST FAN ON ROOF. REFER TO SHEET M-140 FOR CONTINUATION.
- 11 LAMINAR FLOW DIFFUSER INSTALLED APPROXIMATELY 8'-6" A.F.F. IN THIS VICINITY. DIFFUSER TO BE HUNG FROM STRUCTURE. DUCTWORK SHALL BE HARD PIPED TO DIFFUSER. (TYPICAL)
- 12 EXHAUST DUCTWORK SHALL BE INSULATED CONTINUOUSLY WITH FIRE WRAP 10' BEFORE AND AFTER ALL PENETRATIONS THROUGH FIRE RATED WALLS.
- 13 PROVIDE FIRE DAMPER AT RATED WALL PENETRATION WITH ACCESS PANEL IN CORRESPONDING DUCT FOR FIRE DAMPER MAINTENANCE.
- 14 APPROXIMATE LOCATION OF STATIC PRESSURE SENSOR.

**NOTE:**  
FOR AREAS WITH EXPOSED SYSTEMS (REFER TO ARCHITECTURAL REFLECTED CEILING PLAN)  
FOR EXPOSED DUCTWORK, CONTRACTOR SHALL UTILIZE DOUBLE WALL PAINT GRIPPED DUCTWORK. COORDINATE EXACT PAINT COLOR WITH ARCHITECT. COORDINATE REQUIRED PAINTING WITH GENERAL CONTRACTOR PRIOR TO BID. DIMENSIONS SHOWN ON THE DRAWINGS ARE CLEAR METAL TO METAL.  
FOR PIPING, CONTRACTOR SHALL UTILIZE 0.030 PVC WHITE JACKETING OVER PIPING INSULATION.

DUCTWORK LEGEND	
LOW PRESSURE DUCTWORK	
WELDED 316L STAINLESS STEEL DUCTWORK AND FITTINGS	
MEDIUM PRESSURE DUCTWORK AND FITTINGS	

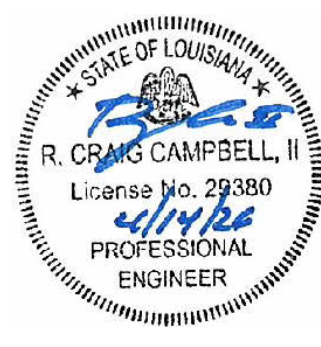
REVISIONS		
NO.	DESCRIPTION	DATE

**THIRD FLOOR RENOVATION OF BLDG 29 LABORATORIES AT NIRC**

4401 W. ADMIRAL DOYLE DRIVE,  
NEW IBERIA, LOUISIANA  
70560

**MECHANICAL PLAN - ENLARGED THIRD FLOOR (EAST WING)**

PROJECT NUMBER 2025.040	DRAWN BY LC/PP
DATE APRIL 14, 2026	CHECKED BY PP/CC
PHASE BID DOCUMENTS	





ASSOCIATED DESIGN GROUP, INC.  
3909 West Congress Street, Suite 201  
Lafayette, Louisiana 70506  
Phone: (337) 234-3710  
Email: adginc@adginc.org

Project No. 26004



1 MECHANICAL PLAN - ROOF  
1/8" = 1'-0" REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS



**GENERAL MECHANICAL NOTES:**

- A. ALL NEW WORK SHALL COMPLY WITH LOCAL, STATE, FEDERAL CODES, AND NATIONAL INSTITUTES OF HEALTH DESIGN REQUIREMENTS MANUAL TO THE SATISFACTION OF CODE AUTHORITIES HAVING JURISDICTION.
- B. ALL EXHAUST DUCTWORK SHALL BE EXTERNALLY INSULATED UNLESS NOTED OTHERWISE ON PLANS. DUCT SIZES SHOWN ARE CLEAR METAL TO METAL. WRAP DUCTWORK EXTERNALLY.
- C. HARDCAST ALL NEW DUCTWORK JOINTS FOR AIRTIGHT SYSTEM. REFER TO DETAILS FOR DUCTWORK TAP, SPLITTER, BRANCH CONFIGURATION, ETC. INSTALL IN ACCORDANCE WITH SMACNA RECOMMENDATIONS AND INSTALLATION GUIDELINES.
- D. VERIFY ALL OUTSIDE AIR INTAKES ARE A MINIMUM OF 4'-0" FROM EXHAUST OUTLETS, SEWER VENTS, ETC.
- E. CONTRACTOR SHALL SEAL ALL DUCT PENETRATIONS THROUGH WALLS AND FLOORS AS PER THE RATED UL DESIGNATION'S REQUIREMENTS. REFER TO ARCHITECTURAL PLANS FOR ALL UL RATINGS.
- F. CONTRACTOR SHALL CAP AND SEAL ALL DUCTWORK DURING CONSTRUCTION TO PREVENT CONTAMINATION DUE TO CONSTRUCTION DEBRIS.
- G. ALL DAMPERS, ACCESS PANELS, ETC SHALL BE INSTALLED FOR MAXIMUM ACCESSIBILITY.
- H. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS, DETAILS, ETC. INSTALL WORK TO CONFORM TO ARCHITECTURAL AND STRUCTURAL DRAWINGS AS REQUIRED.
- I. REVIEW COMPLETE SET OF CONTRACT DOCUMENTS PRIOR TO SUBMITTING BID.

**MECHANICAL KEYNOTES:**

- 1 INSTALL LAB EXHAUST FAN ON ROOF CURB IN THIS VICINITY. INSTALL PER MANUFACTURER'S RECOMMENDATION. SECURE EXHAUST FAN TO ROOF CURB TO MEET LOCAL WIND SPEED REQUIREMENTS.
- 2 MOUNT VFD'S ON UNISTRUT MOUNT IN THIS VICINITY IN ACCESSIBLE LOCATION AS PER MANUFACTURER'S RECOMMENDATIONS. COORDINATE EXACT LOCATION IN FIELD WITH ELECTRICAL CONTRACTOR PRIOR TO ROUGH-IN. SECURE UNISTRUT TO ROOF TO MEET LOCAL WINDSPEED REQUIREMENTS.
- 3 LAB EXHAUST DUCT FROM BELOW. ROUTE ON ROOF AS SHOWN AND CONNECT TO EXHAUST FAN FACTORY PLENUM. PROVIDE CURB AND FLASHING AT ANY ROOF PENETRATION. COORDINATE OPENING REQUIREMENT WITH ROOFING CONTRACTOR.
- 4 EXHAUST DUCT WORK TO BE SUPPORTED BY MIFAB MODEL DSAW ROOF DUCT SUPPORTS. SUPPORTS SHALL BE ANCHORED TO ROOF. DUCT WORK SHALL BE SECURED TO ROOF SUPPORTS AS REQUIRED TO WITH STAND LOCAL WIND SPEED REQUIREMENTS. (TYPICAL)

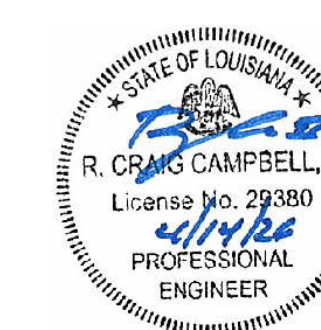
**REVISIONS**

NO.	DESCRIPTION	DATE
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**THIRD FLOOR RENOVATION OF BLDG 29 LABORATORIES AT NIRC**

4401 W. ADMIRAL DOYLE DRIVE,  
NEW IBERIA, LOUISIANA  
70560

**MECHANICAL PLAN - ROOF**



PROJECT NUMBER: 2025.040  
DATE: APRIL 14, 2026  
PHASE: BID DOCUMENTS  
DRAWN BY: LC/PP  
CHECKED BY: PP/CC

AIR HANDLING UNIT SCHEDULE																														
UNIT		FAN							ELECTRIC HEATING										COOLING COIL (x2)								REMARKS	NOTES		
UNIT NO.	SERVICE	MIN CFM	CFM OA	STATIC PRES.		FAN HP	ELECTRIC SERVICE	MIN. BTUH OUTPUT	K.W. ELECTRIC STRIP	FLA	EAT (°F)	LAT (°F)	ELECTRIC SERVICE	MIN. BTUH OUTPUT	K.W. ELECTRIC STRIP	FLA	EAT (°F)	LAT (°F)	ELECTRIC SERVICE	TOTAL CAPACITY BTUH	EAT (°F)		LAT (°F)		CHILLED WATER					
				EXT.	TOTAL																DB	WB	DB	WB	IN (°F)	OUT (°F)	GPM	PD (FT)		
AHU-1	UL NIRC 3RD FLOOR	11,365	11,365	2.5	5.94	4 @ 3 HP ea.	208/3/60	129,656	38.0	--	25.0	35.6	208/3/60	184,248	54.0	--	35.6	50.6	208/3/60	948,000	95.0	80.0	54.0	53.9	45.0	60.0	133	6.8	TEMPTROL OR APPROVED EQUAL	1, 2, 3, 4
	*BALANCE TO*	9,470	9,470	--	--	--	--	129,656	38.0	--	25.0	37.7	--	184,248	54.0	--	37.7	55.7	--	--	--	--	--	--	--	--	6.8	TEMPTROL OR APPROVED EQUAL	1, 2, 3, 4	

- NOTES:**
- UNIT SHALL BE PROVIDED WITH PRE-FILTER (MERV 8) SECTION, TWO (2) ELECTRIC PRE-HEAT COIL SECTIONS (1 ON STAND-BY POWER, 1 ON REGULAR POWER), ACCESS PANELS FOR EACH SECTION, TWO CHILLED WATER COIL SECTIONS (N+1) EACH WITH UV LIGHT, FAN ARRAY SECTION (N+1) WITH REMOTE VFDs, AND DISCHARGE PLENUM WITH MERV-14 FINAL FILTER. UV LIGHT SHALL BE PROVIDED DOWNSTREAM OF COOLING COIL. PROVIDE 120V CIRCUIT FOR UV LIGHT. ALL COMPONENTS/WIRING EXPOSED TO UV LIGHT SHALL BE SHIELDED FOR UV EXPOSURE.
  - COOLING COILS SHALL HAVE A MINIMUM OF 6 ROWS/MAXIMUM 8 ROWS AND A MAXIMUM OF 10 FINS PER INCH.
  - UNIT SHALL MEET THE FOLLOWING REQUIREMENTS SPECIFIED BY THE NIH DESIGN REQUIREMENTS MANUAL:
    - UNIT SHALL BE DOUBLE WALL CONSTRUCTION WITH 3" THICK MINIMUM R-17 INSULATION. INTERIOR AND EXTERIOR SHALL BE CONSTRUCTED OF 18 GAUGE SOLID G90 GALVANIZED STEEL. ROOF AND FLOOR CONSTRUCTION SHALL BE 1 GAUGE THICKER THAN WALLS. INTERIOR PANELS FOR THE COOLING COIL SECTIONS SHALL BE CONSTRUCTED OF 304 STAINLESS STEEL.
    - UNIT SHALL BE RATED FOR A MAXIMUM LEAKAGE RATE OF .5% @ 10" W.G.
    - UNIT SHALL HAVE FULL THERMAL BREAK
    - EACH SECTION SHALL BE PROVIDED WITH WATERPROOF MARINE LIGHTS CONTROLLED BY A SINGLE PILOT SWITCH LOCATED NEXT TO ONE OF THE ACCESS DOORS.
    - 24" ACCESS DOORS ON EACH SIDE OF THE UNIT
    - EACH ACCESS DOOR SHALL BE PROVIDED WITH A MINIMUM 12"x12" VISION PANEL.
    - FILTER FACE VELOCITY SHALL NOT EXCEED 500 FPM
    - COOLING COILS SHALL BE CONSTRUCTED ON .035 CU TUBES AND .0095 ALUMINUM FINS. EACH COOLING COIL SHALL BE A MAXIMUM OF 10'x3' HIGH. IF A COIL EXCEEDS THESE DIMENSIONS, THEY WILL BE REQUIRED TO BE SPLIT INTO MULTIPLE COILS. EACH COIL SHALL BE VALVED SEPARATELY TO ALLOW ISOLATION AND DRAINAGE WHILE THE OTHER COILS REMAIN OPERATIONAL.
    - EACH SECTION SHALL BE PROVIDED WITH DRAIN TO ALLOW WASHDOWN OF THE INSIDE OF THE UNIT.
    - COOLING COIL STAINLESS STEEL DRAIN PANS SHALL EXTEND MINIMUM 12" DOWNSTREAM OF COIL
    - FAN MOTORS SHALL NOT OPERATE AT MORE THAN 90HZ
  - ADEQUATE SPACE SHALL BE PROVIDED BETWEEN PRE-HEAT COIL AND CHILLED WATER COIL FOR PRE-HEAT TEMPERATURE SENSOR INSTALLATION.

AIR COOLED CHILLER SCHEDULE													
NO	SERVICE	COOLING TONS	CHILLER WATER				AMBIENT TEMP (°F)	REFRIGERANT TYPE	ELECTRIC SERVICE	MCA	RFS	REMARKS	NOTES
			IN	OUT	GPM	PD							
CH-1	AHU-1	83.56	60	45	133	5.87	95	R454B	208/3/60	401	450	YORK YLAA0089SJ17XFB OR APPROVED EQUAL	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
CH-2	AHU-1	83.56	60	45	133	5.87	95	R454B	208/3/60	401	450	YORK YLAA0089SJ17XFB OR APPROVED EQUAL	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

- NOTES:**
- PROVIDE VERTICALLY RESTRAINED SPRING VIBRATION ISOLATORS BELOW EACH CHILLER.
  - PROVIDE UNIT MOUNTED VARIABLE FREQUENCY DRIVE (VFD).
  - UNIT SHALL HAVE SINGLE POINT POWER CONNECTION WITH UNIT MOUNTED LOCKABLE NON-FUSED DISCONNECT.
  - CONDENSER COILS SHALL BE COATED WITH A FLEXIBLE EPOXY POLYMER COATING FOR CORROSION PROTECTION.
  - UNIT SHALL BE PROVIDED WITH LOW SOUND KIT FOR ADDITIONAL SOUND ATTENUATION.
  - UNIT SHALL BE PROVIDED WITH EVAPORATOR HEATERS TO PREVENT EVAPORATOR FREEZE-UP.
  - UNIT SHALL BE PROVIDED WITH CONDENSER COIL TRIM PANELS, UPPER HAIL GUARDS AND SECURITY GRILLES.
  - UNIT SHALL BE EQUIPPED WITH MINIMUM LOAD CONTROL PERMITTING UNIT OPERATION DOWN TO 15% CAPACITY.
  - UNIT SHALL INCLUDE FACTORY INSTALLED 115V GFI CONVENIENCE OUTLET.
  - UNIT SHALL INCLUDE BACnet CAPABILITY FOR INTEGRATION INTO THE BUILDING MANAGEMENT SYSTEM.
  - UNIT SHALL INCLUDE CONTROL TRANSFORMER TO ALLOW CONTROL CIRCUIT POWER FROM THE MAIN UNIT POWER SUPPLY.
  - UNIT SHALL INCLUDE REFRIGERANT DISCHARGE ISOLATION AND LIQUID VALVES FOR EACH REFRIGERANT CIRCUIT.
  - UNIT SHALL BE RATED FOR 65K SCCR.

FAN SCHEDULE													
NO.	SERVICE	MINIMUM CFM	EXTERNAL S.P.	RPM	FAN HP	SONES	TYPE	DRIVE	ELECTRICAL SERVICE	CONTROL	REMARKS	NOTES	
EF-1	MEN'S 304	140	0.25	948	50.6 W	0.8	CEILING	DIRECT	120/1/60	OCC SENSOR W/ 15 MIN TIMER	COOK MODEL GC-422 OR APPROVED EQUAL	1, 2	
EF-2	306 WOMEN'S	140	0.25	948	50.6 W	0.8	CEILING	DIRECT	120/1/60	OCC SENSOR W/ 15 MIN TIMER	COOK MODEL GC-422 OR APPROVED EQUAL	1, 2	
EF-3	305 JAN. CLO.	40	0.25	601	23.7 W	0.3	CEILING	DIRECT	120/1/60	OCC SENSOR W/ 15 MIN TIMER	COOK MODEL GC-166 OR APPROVED EQUAL	1, 2	
LAB-EF-1	LAB W 319	4,700	1.50	3,600	2 @ 5 HP ea.	33	ROOF	BELT	208/3/60	VFD	TWIN CITY FAN QIFE 150 LV OR APPROVED EQUAL	3, 4, 5	
LAB-EF-2	LAB E 330	4,260	1.50	3,600	2 @ 5 HP ea.	33	ROOF	BELT	208/3/60	VFD	TWIN CITY FAN QIFE 150 LV OR APPROVED EQUAL	3, 4, 6	

- NOTES:**
- FAN SHALL HAVE W.B.E. GRILLE, BACKDRAFT DAMPER, S.S.S.C. AND MOUNTING BRACKETS.
  - MECHANICAL CONTRACTOR SHALL PROVIDE OCCUPANCY SENSOR WITH A 15 MIN TIMER. OCCUPANCY SENSOR SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR.
  - PROVIDE DUAL LAB EXHAUST FAN (NH) WITH NOZZLE DISCHARGE (MINIMUM 10' ABOVE ROOF), MODULATING OPPOSED BLADE BY-PASS DAMPERS, PIEZOMETER FLOW RING, DUAL MIXING PLENUM BOX, PARALLEL BLADE ISOLATION DAMPERS, UV EPOXY COATING, AND SHAFT GROUNDING RING. FAN SHALL BE PROVIDED WITH AN INSULATED ROOF CURB TO ALLOW HORIZONTAL CONNECTION OF DUCTWORK.
  - PROVIDE VARIABLE FREQUENCY DRIVE (NEMA 3R) WITH BYPASS ON UNISTRUT.
  - FAN SHALL BE BALANCED TO 4,000 CFM.
  - FAN SHALL BE BALANCED TO 3,550 CFM.

VARIABLE AIR VOLUME BOX SCHEDULE														
VAV	SERVICE	COOLING				MAX SP LOSS ACROSS BOX	BTUH	HEATING CFM	AIR TEMP (°F)		KW STRIP	ELECTRICAL SERVICE	REMARKS	NOTES
		INLET SIZE	MAX CFM	MIN CFM	ENT				LEAV.					
VAV-S-1	308 FREEZER STORAGE	10"	1,350	350	0.25	46,656	1080	55	95	13.7	SCR	TITUS MODEL DESV OR APPROVED EQUAL	--	
VAV-S-2	301 CORRIDOR	8"	700	200	0.25	23,760	550	55	95	7.0	SCR	TITUS MODEL DESV OR APPROVED EQUAL	--	
VAV-S-3	307 FUME HOOD/EQUIP.	6"	350	350	0.25	15,120	350	55	95	4.5	SCR	TITUS MODEL DESV OR APPROVED EQUAL	--	
VAV-S-4	330 LAB E	10"	1,020	1,020	0.25	44,064	1,020	55	95	12.9	SCR	TITUS MODEL DESV OR APPROVED EQUAL	--	
VAV-S-5	330 LAB E	8"	510	510	0.25	22,032	510	55	95	6.5	SCR	TITUS MODEL DESV OR APPROVED EQUAL	--	
VAV-S-6	330 LAB E	8"	765	765	0.25	33,048	765	55	95	9.7	SCR	TITUS MODEL DESV OR APPROVED EQUAL	--	
VAV-S-7	330 LAB E	10"	1,020	1,020	0.25	44,064	1,020	55	95	12.9	SCR	TITUS MODEL DESV OR APPROVED EQUAL	--	
VAV-S-8	300 LAB CORRIDOR	6"	220	100	0.25	7,560	175	55	95	2.2	SCR	TITUS MODEL DESV OR APPROVED EQUAL	--	
VAV-S-9	200 LAB CORRIDOR	6"	220	100	0.25	7,560	175	55	95	2.2	SCR	TITUS MODEL DESV OR APPROVED EQUAL	--	
VAV-S-10	319 LAB W	10"	1,020	1,020	0.25	44,064	1,020	55	95	12.9	SCR	TITUS MODEL DESV OR APPROVED EQUAL	--	
VAV-S-11	319 LAB W	8"	510	510	0.25	22,032	510	55	95	6.5	SCR	TITUS MODEL DESV OR APPROVED EQUAL	--	
VAV-S-12	319 LAB W	8"	765	765	0.25	33,048	765	55	95	9.7	SCR	TITUS MODEL DESV OR APPROVED EQUAL	--	
VAV-S-13	319 LAB W	10"	1,020	1,020	0.25	44,064	1,020	55	95	12.9	SCR	TITUS MODEL DESV OR APPROVED EQUAL	--	
VAV-E-1-1	330 LAB E	24"x16"	3,550	3,550	0.25							TITUS MODEL DESV OR APPROVED EQUAL	--	
VAV-E-1-2	307 FUME HOOD/EQUIP.	6"	450	450	0.25							TITUS MODEL DESV OR APPROVED EQUAL	--	
VAV-E-1-3	319 LAB W	24"x16"	3,550	3,550	0.25							TITUS MODEL DESV OR APPROVED EQUAL	--	

- NOTES:**
- CONTROLS CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING 24 VOLT POWER TO ALL VAV BOXES FOR ACTUATOR AND CONTROLS.
  - VAV BOX SUPPLIER SHALL COORDINATE WITH MECHANICAL CONTRACTOR PRIOR TO ORDERING BOXES TO ORDER CONTROL PANELS ON ACCESSIBLE SIDE OF VAV BOX (AFTER FINAL DUCT WORK LAYOUT HAS BEEN DETERMINED IN FIELD).



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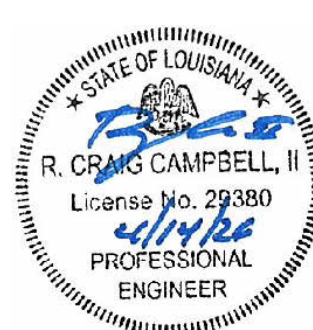
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**THIRD FLOOR RENOVATION OF BLDG 29 LABORATORIES AT NIRC**

4401 W. ADMIRAL DOYLE DRIVE,  
 NEW IBERIA, LOUISIANA  
 70560

**MECHANICAL SCHEDULES**

PROJECT NUMBER	2025.040	DRAWN BY	LC/PP
DATE	APRIL 14, 2026	CHECKED BY	PP/CC
PHASE	BID DOCUMENTS		



PUMP SCHEDULE										
UNIT NO	TYPE OF SERVICE	TOTAL GPM	HEAD FT H2O	MOTOR HP	PUMP RPM	MINIMUM % EFFICIENCY	CONTROL	ELECTRIC SERVICE	REMARKS	NOTES
CHWP-1	CHILLED WATER	67	65	5	1,683	55.02	BMS	208/3/60	ARMSTRONG SERIES 4030 OR APPROVED EQUAL	1, 2, 3, 4, 5, 6
CHWP-2	CHILLED WATER	67	65	5	1,683	55.02	BMS	208/3/60	ARMSTRONG SERIES 4030 OR APPROVED EQUAL	1, 2, 3, 4, 5, 6
CHWP-3	CHILLED WATER	67	65	5	1,683	55.02	BMS	208/3/60	ARMSTRONG SERIES 4030 OR APPROVED EQUAL	1, 2, 3, 4, 5, 6

- NOTES:**
- PROVIDE INVERTER DUTY MOTOR AND SHAFT GROUNDING RING FOR ALL PUMPS. MOTOR SELECTIONS SHALL BE NON-OVERLOADING.
  - PROVIDE VARIABLE FREQUENCY DRIVE (VFD).
  - PROVIDE TOTALLY ENCLOSED FAN COOLED (TEFC) OUTDOOR RATED MOTOR.
  - PROVIDE PUMP FLANGED SUPPORT MOUNTINGS
  - PROVIDE LINE SIZE Y-STRAINER AND FLANGED STAINLESS STEEL BRAIDED FLEXIBLE PIPING CONNECTOR AT PUMP SUCTION
  - PROVIDE TRIPLE-DUTY VALVE AND FLANGED STAINLESS STEEL BRAIDED FLEXIBLE PIPING CONNECTORS AT PUMP DISCHARGE.

ELECTRONIC HUMIDIFIER									
UNIT NO	SERVICE	HUMIDIFIER CAPACITY (LBS./HR.)	ABSORPTION DISTANCE	POWER (KW)	ELECTRICAL SERVICE	FLA	CONTROL	REMARKS	NOTES
H-1	AHU-1	144	10"	44.0	208/3/60	133.2	SENSOR	DRISTEEM RTS OR APPROVED EQUAL	1

- NOTES:**
- HUMIDIFIER SHALL BE PROVIDED WITH AIRFLOW SWITCH, HIGH LIMIT HUMIDISTAT, FILL CUP EXTENSION, WALL MOUNT KIT, BACNET COMPATIBLE CONTROLLER, INTERGAL DRAIN COOLER TO TEMPER DRAINAGE BELOW 140°F PRIOR TO DISCHARGE, AND 304 STAINLESS STEEL DISPENSION TUBE.
  -

AT 10,750 CFM OF 100% OUTSIDE AIR				
	DB (°F)	WB (°F)	RH	DB (GRAIN/LB.)
OUTSIDE AIR	39.7	31.3	35	12.7
TEMPERED AIR	54	39.3	20	12.4
HUMIDIFIED AIR	55	46.3	51	33
ROOM AIR	70	52.9	30	32.9

BUFFER TANK SCHEDULE					
UNIT NO.	SERVICE	CAPACITY (GALLONS)	SIZE	REMARKS	NOTES
BT	CHILLED WATER	400	36"Ø x 99"	AMERICAN WHEATLEY AWCBT-400 OR APPROVED EQUAL	1, 2, 3, 4

- NOTES:**
- INSULATE ENTIRE UNIT WITH 1" THICK ARMAFLEX SHEET INSULATION AND COVERED WITH ALUMINUM JACKETING.
  - TANK SHALL BE ASME RATED FOR 125 PSI @ 450° F.
  - TANK SHALL BE PROVIDED WITH 4" FLANGED INLET AND OUTLET CONNECTION.
  - TOP OF TANK SHALL BE PROVIDED WITH 3/4" NPT TOP AIR VENT CONNECTION AND 1" NPT BOTTOM DRAIN.

PRESSURIZED EXPANSION TANK SCHEDULE				
UNIT NO.	SERVICE	TANK AND ACCEPTANCE VOLUME (GALLONS)	REMARKS	NOTES
ET	CHILLED WATER	34.4	BELL & GOSSETT SERIES B (ASME) OR APPROVED EQUAL	1, 2, 3

- NOTES:**
- TANK SHALL BE ASME RATED FOR 125 PSI AND UP TO 240° F OPERATING TEMPERATURE.
  - TANK SHALL BE PRE-CHARGED.
  - TANK SHALL INCLUDE INTEGRAL BLADDER MONITOR ALONG WITH A SITE GLASS.

ATTENUATOR SCHEDULE																		
UNIT NO	SERVICE	AIRFLOW (CFM)	OVERALL SIZE	PRESSURE DROP (MAX)	FLOW DIRECTION	FACE VELOCITY (FPM)	OCTAVE BAND-Hz DYNAMIC INSERTION LOSS (DB)										REMARKS	NOTES
							63	125	250	500	1000	2000	4000	5000				
ATTEN-1	EF-LAB-1	4,000	26"W X 20"H X 60"L	0.16"	REVERSE	-2000	7	7	14	17	11	9	7	7	VIBRO-ACOUSTICS MODEL RNM-HV-F3, NO-MEDIA HIGH VELOCITY SILENCER	1		
ATTEN-2	EF-LAB-2	3,550	26"W X 20"H X 60"L	0.16"	REVERSE	-2000	7	7	14	17	11	9	7	7	VIBRO-ACOUSTICS MODEL RNM-HV-F3, NO-MEDIA HIGH VELOCITY SILENCER	1		

- NOTES:**
- ATTENUATOR SHALL BE CONSTRUCTED OF WELDED 304 STAINLESS STEEL.

MINI-SPLIT INDOOR UNIT SCHEDULE																						
System Tag	Room Name	Tag Reference	M-NET Address	Model	Type	Nominal Cooling Capacity (BTU/h)	Nominal Heating Capacity (BTU/h)	Cooling Design Entering Temp DB(WB) (°F) / [Water in temp]	Heating Design Entering Temp DB(WB) (°F) / [Water in temp]	Cooling Diversity Full/Partial (See Note 5, 6)	Cooling Total Capacity (BTU/h)	Cooling Sensible Capacity (BTU/h)	Heating Diversity Full/Partial (See Note 5, 6)	Heating Capacity (BTU/h)	Refrig Pipe Dim Liquid/Suction (inch)	Refrig Type	Fan Speed Setting	Peak Fan Airflow (cfm) / [Design gpm G(US)/min]	Sound Pressure Per Fan Speed 208V/230V (dBA)	Voltage / Phase	Electrical MCA/MFSA	Notes / Options
MSCU-1	1ST FLOOR ELEVATOR VESTIBULE	MSAC-3	N/A	MSZ-FX06NL	Wall -Mounted	6,000	9,000	80.0/67.0	70	FULL DEMAND	6,195.8	5,443.6	FULL DEMAND	14,468.5	3/8 / 1/4	R454B	HIGH	477	20-24-29-36-42/20-24-29-36-42	208/230V/1-phase	Powered by Outdoor	1, 2, 3, 4

- NOTES:**
- NOMINAL COOLING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 80/67°F (DB/WB), OUTDOOR OF 95°F (DB).
  - NOMINAL HEATING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 70°F (DB), OUTDOOR OF 43°F (WB).
  - SEE OUTDOOR UNIT SCHEDULE FOR OUTDOOR AMBIENT CONDITIONS, CONNECTED CAPACITY, AND OTHER FACTORS ASSOCIATED WITH CORRECTED CAPACITIES.
  - CONTRACTOR SHALL PROVIDE AND INSTALL A PLASMA AIR MODEL 600 IONIZER IN THE VRF INDOOR UNITS. CONTRACTOR SHALL INTERLOCK IONIZATION MODULE'S OPERATION WITH BLOWER ON UNIT. INSTALL IONIZATION MODULE PER MANUFACTURERS RECOMMENDATIONS. IONIZATION MODULE SHALL MEET UL 2998.

MINI-SPLIT OUTDOOR UNIT SCHEDULE																			
System Tag	Tag Reference	M-NET Address	Model Number	Nominal Cooling Capacity (BTU/h)	Nominal Heating Capacity (BTU/h)	EER2 [SEER2]	Heating COP @ 47°F [HSPF]	Nom System Connected Capacity (% of NOM)	Design Cooling Outdoor Temp DB (°F)	Design Heating Outdoor Temp WB (°F)	Corrected Cooling Total Capacity (BTU/h)	Corrected Heating Capacity (BTU/h)	Sound Pressure (dBA)	Refrig Type	Electrical - Per Module (Module 1, Module 2)				Notes / Options
															208V				
															Voltage / Phase	MCA 208	RFS	MOCP	
MSCU-1	MSCU-1	N/A	MUZ-FX06NLHZ	6,000	9,000	21.45 [35]	0 [13]	100.0 %	93.0	26.9	6,195.8	14,468.5	47/48	R454B	208/230V / 1-phase	12	15	15	1, 2, 3, 4, 5

- NOTES:**
- NOMINAL COOLING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 80/67°F (DB/WB), OUTDOOR OF 95°F (DB).
  - NOMINAL HEATING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 70°F (DB), OUTDOOR OF 43°F (WB).
  - EFFICIENCY VALUES FOR EER, IEER, COP ARE BASED ON AHRI 1230 TEST METHOD FOR MIXTURE OF DUCTED & NON-DUCTED INDOOR UNITS.
  - FOR SYSTEMS WITH MULTIPLE MODULES, REFRIGERANT PIPE DIMENSIONS INDICATE TOTAL SYSTEM COMBINED PIPING DOWNSTREAM OF MODULE TWINNING.
  - ADDED FIELD CHARGE LISTED IS IN ADDITION TO FACTORY CHARGE. THIS MUST BE UPDATED BASED UPON FINAL AS-BUILT PIPING LAYOUT.

VARIABLE FREQUENCY DRIVE SCHEDULE						
NO.	SERVICE	CABINET	HP	VOLTAGE	REMARKS	NOTES
VFD-1	AHU-1	NEMA 4	3	208/3/60	YASKAWA, DANFOSS, OR APPROVED EQUAL	2
VFD-2	AHU-1	NEMA 4	3	208/3/60	YASKAWA, DANFOSS, OR APPROVED EQUAL	2
VFD-3	AHU-1	NEMA 4	3	208/3/60	YASKAWA, DANFOSS, OR APPROVED EQUAL	2
VFD-4	AHU-1	NEMA 4	3	208/3/60	YASKAWA, DANFOSS, OR APPROVED EQUAL	2
VFD-5	LEF-1	NEMA-3R	5	208/3/60	YASKAWA, DANFOSS, OR APPROVED EQUAL	1
VFD-6	LEF-1	NEMA-3R	5	208/3/60	YASKAWA, DANFOSS, OR APPROVED EQUAL	1
VFD-7	LEF-2	NEMA-3R	5	208/3/60	YASKAWA, DANFOSS, OR APPROVED EQUAL	1
VFD-8	LEF-2	NEMA-3R	5	208/3/60	YASKAWA, DANFOSS, OR APPROVED EQUAL	1
VFD-9	CHWP-1	NEMA-3R	5	208/3/60	YASKAWA, DANFOSS, OR APPROVED EQUAL	1
VFD-10	CHWP-2	NEMA-3R	5	208/3/60	YASKAWA, DANFOSS, OR APPROVED EQUAL	1
VFD-11	CHWP-3	NEMA-3R	5	208/3/60	YASKAWA, DANFOSS, OR APPROVED EQUAL	1

- NOTES:**
- VFD PROVIDED WITH INTERGAL BY-PASS AND BACNET INTERFACE CARD.
  - VFD PROVIDED WITHOUT INTERGAL BY-PASS AND BACNET INTERFACE CARD.

GRILLE SCHEDULE						
LABEL	SIZE	SERVICE	LOCATION	FINISH	REMARKS	NOTES
A	12"x12"	SUPPLY	SUSPENDE	W.B.E	TITUS MODEL TMS-AA W/ 6"Ø NECK OR APPROVED EQUAL	1, 3
B	24"x24"	SUPPLY	SUSPENDE	W.B.E	TITUS MODEL TMS-AA W/ 8"Ø NECK OR APPROVED EQUAL	1, 3
C	24"x24"	SUPPLY	SUSPENDE	W.B.E	TITUS MODEL TMS-AA W/ 10"Ø NECK OR APPROVED EQUAL	1, 3
D	24"x48"	SUPPLY	SUSPENDE	W.B.E	TITUS MODEL TRITECH-SS W/ 10"Ø NECK OR APPROVED EQUAL	1
E	24"x48"	SUPPLY	SUSPENDE	W.B.E	TITUS MODEL TRITECH-SS W/ 12"Ø NECK OR APPROVED EQUAL	1
Y	24"x24"	RETURN	SUSPENDE	BY ARCH.	TITUS MODEL 50F W/REMOVEABLE CORE OR APPROVED EQUAL	2
Z	24"x48"	EXHAUST	SUSPENDE	BY ARCH.	TITUS MODEL 50F W/REMOVEABLE CORE OR APPROVED EQUAL	2

- NOTES:**
- TOPS OF ALL DIFFUSERS SHALL BE INSULATED. REFER TO DETAIL.
  - SHEET METAL CONTRACTOR TO PROVIDE SHEET METAL CEILING BOX FOR ATTACHMENT OF DUCTWORK TO AIR REGISTER.
  - ALL SUPPLY DIFFUSERS SHALL BE 4-WAY PATTERN UNLESS SHOWN OTHERWISE ON PLANS. REFER TO DETAIL.

AIR BALANCE SCHEDULE					
ITEM	O.A.	R.A.	S.A.	E.A.	PRESSURE
EF-1	--	--	--	-140	-140
EF-2	--	--	--	-140	-140
EF-3	--	--	--	-40	-40
LAB-EF-1	--	--	--	-4,000	-4,000
LAB-EF-2	--	--	--	-3,550	-3,550
AHU-1	9,470	--	--	--	+9470
TOTAL	9470	0	0	-7870	+1600



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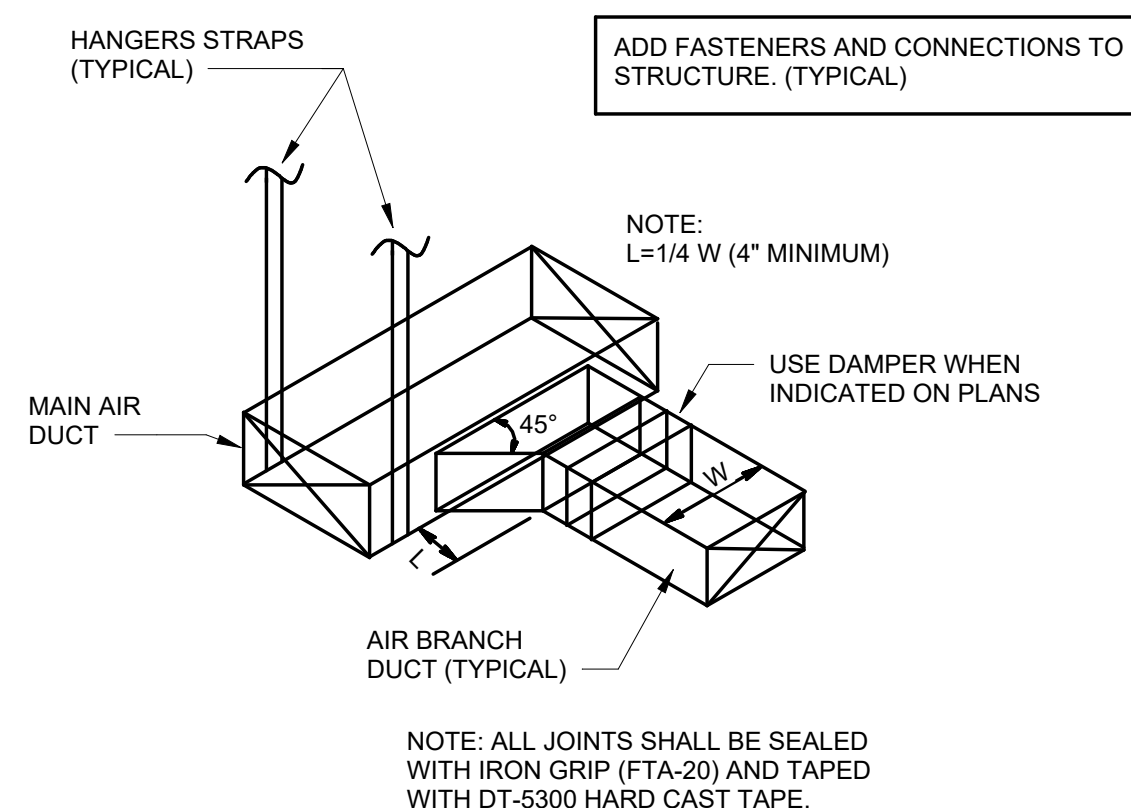
### THIRD FLOOR RENOVATION OF BLDG 29 LABORATORIES AT NIRC

4401 W. ADMIRAL DOYLE DRIVE,  
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 70560

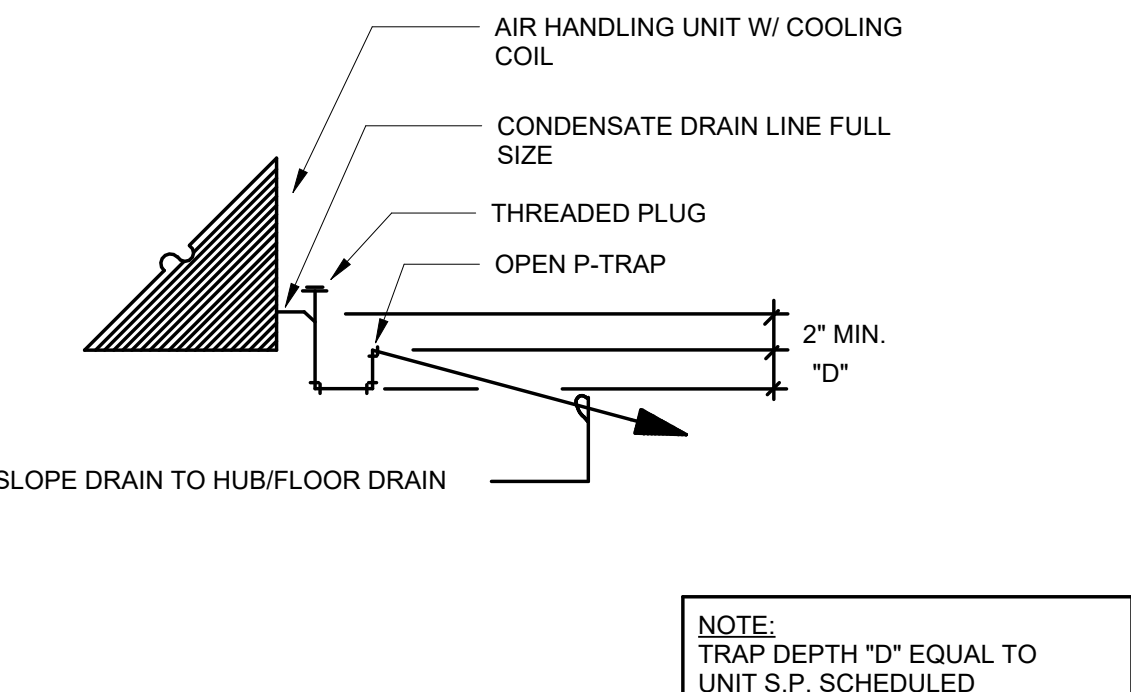
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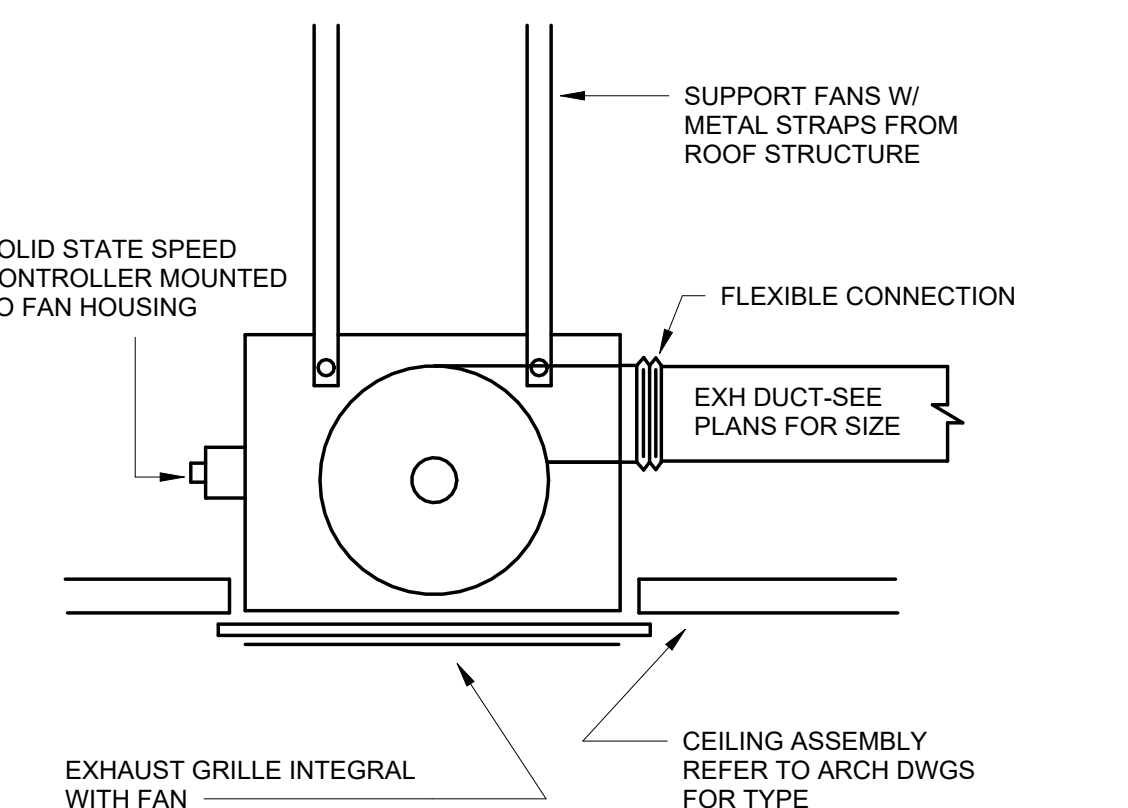
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 DRAWN BY LC/PP  
 CHECKED BY PPI/CC



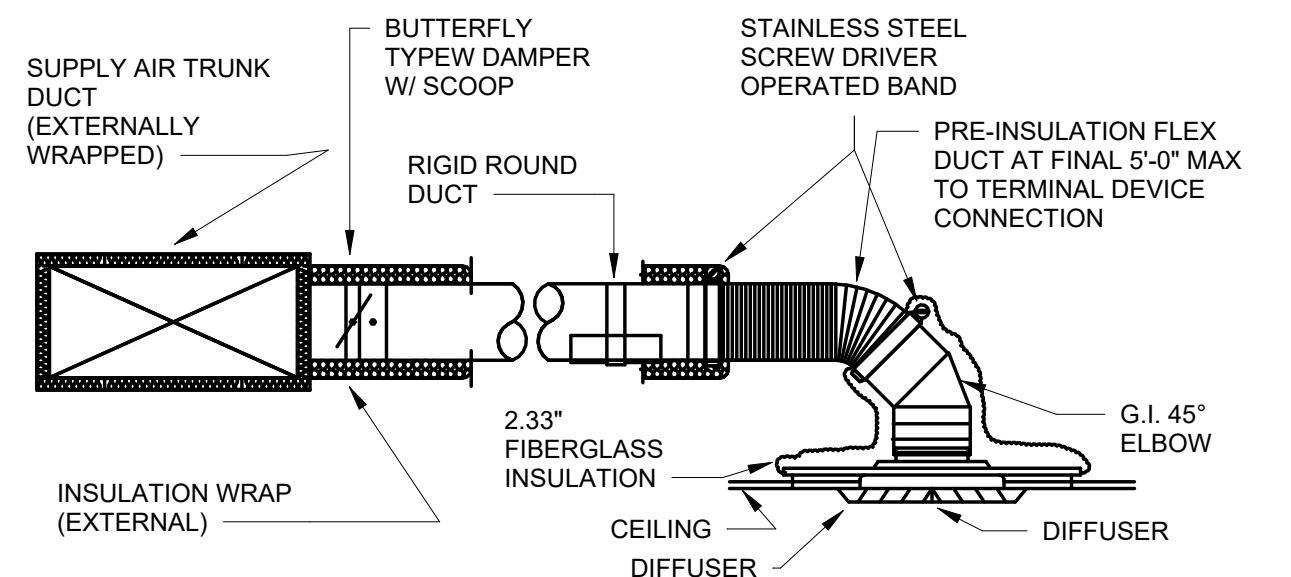
1 AIR DUCT CONNECTION DETAIL  
N.T.S.



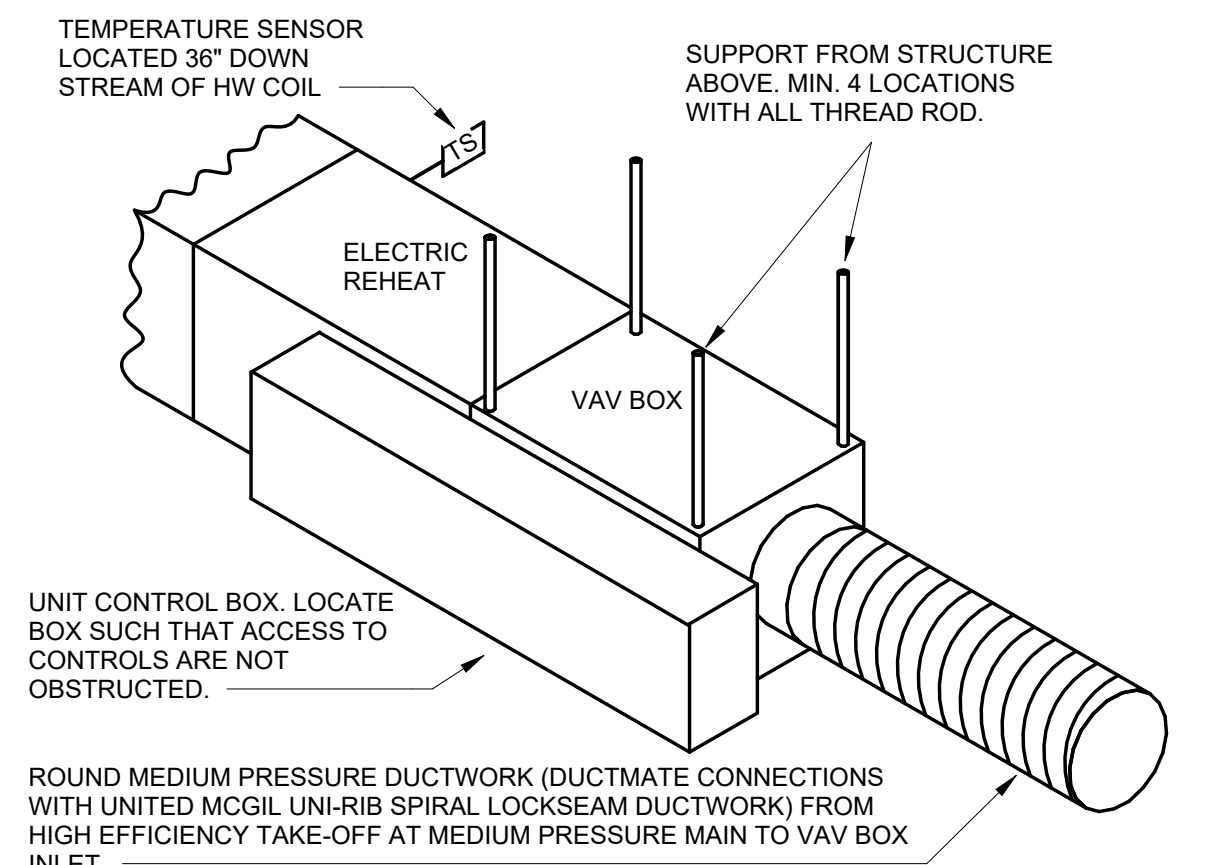
2 AIR HANDLING UNIT DRAIN PIPING DIAGRAM  
N.T.S.



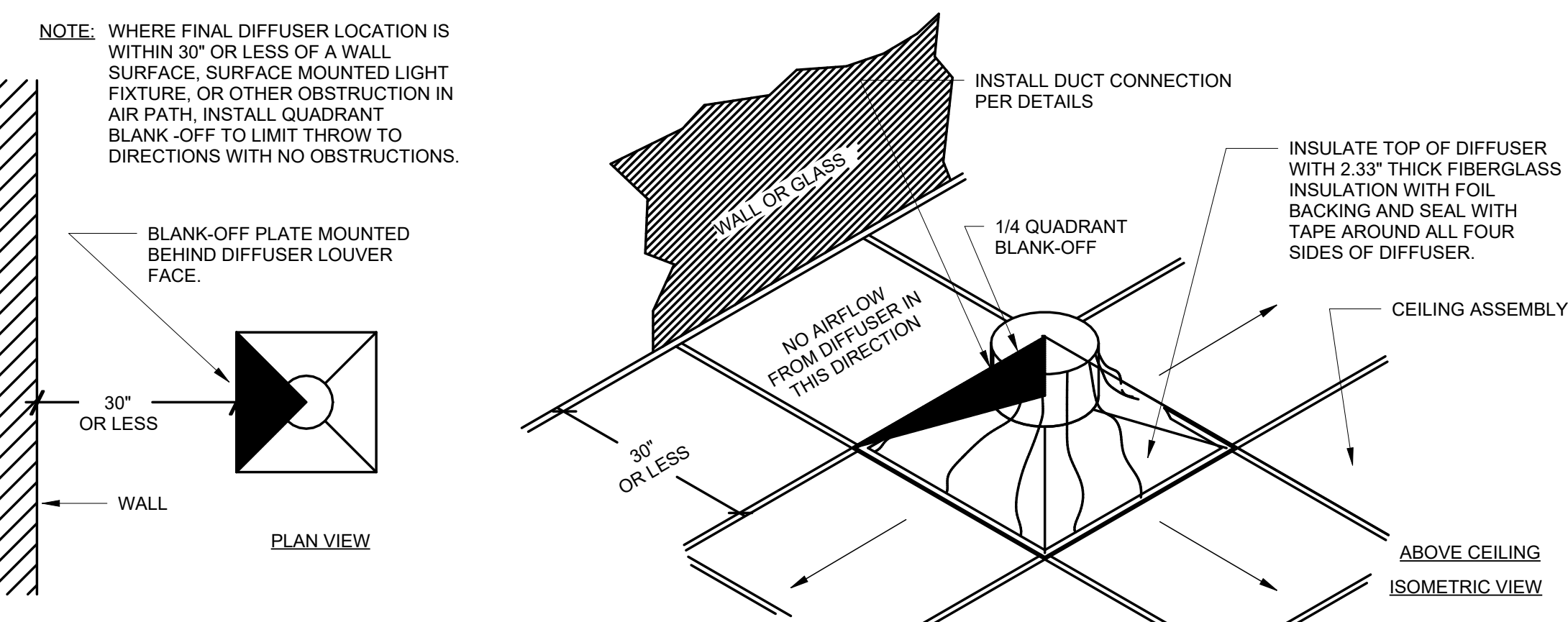
3 CEILING MOUNTED EXHAUST FAN DETAIL  
N.T.S.



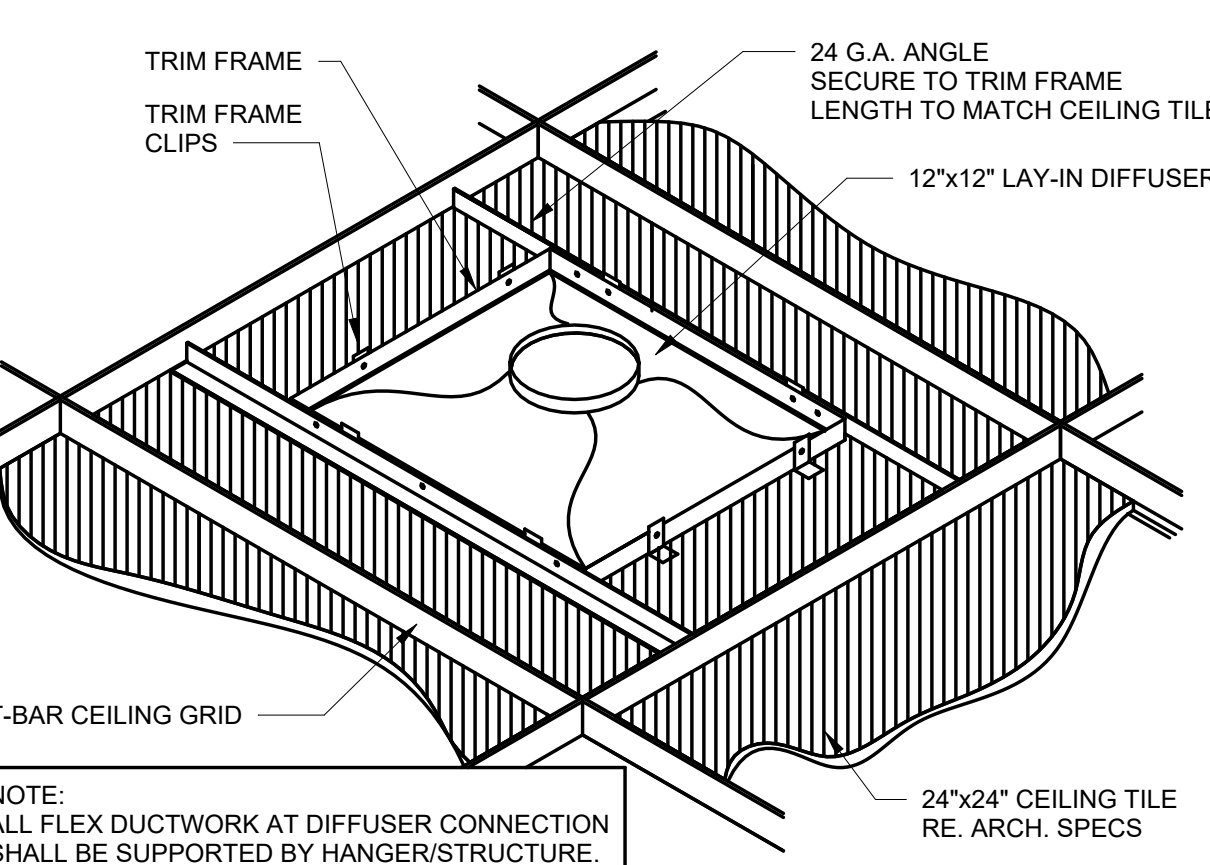
4 DIFFUSER/DUCT INSTALLATION DETAIL  
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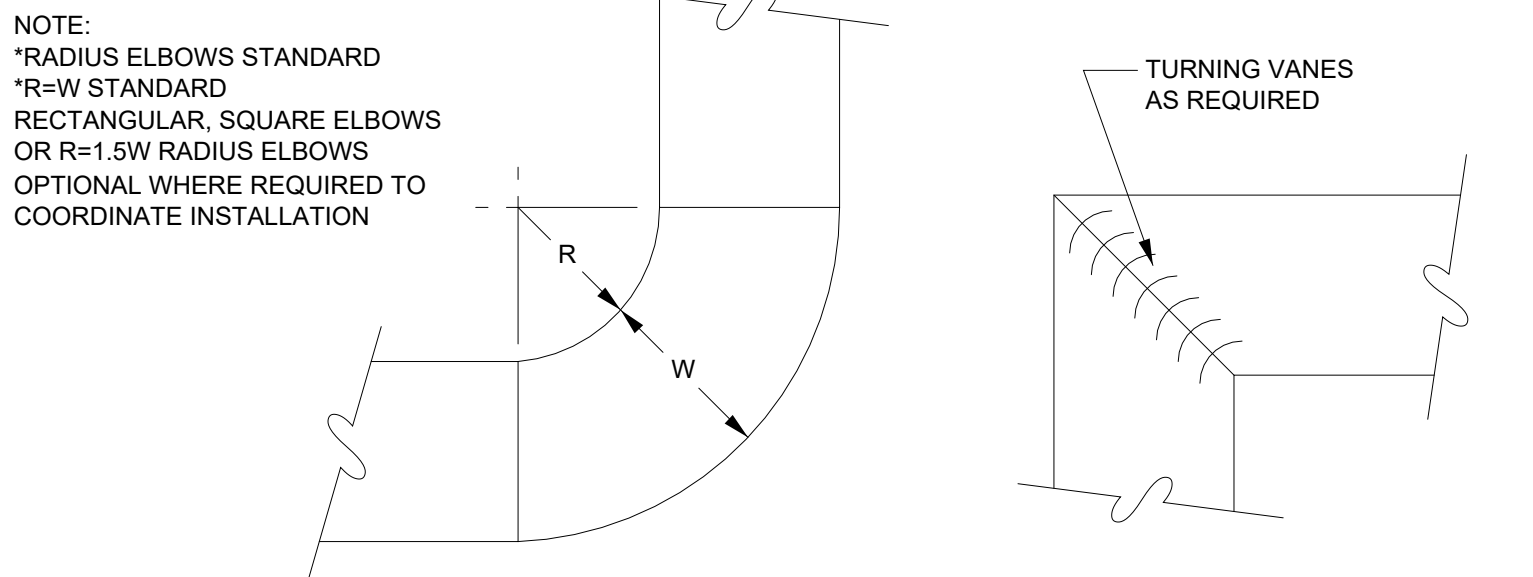
5 TYPICAL VAV BOX DETAIL (ELECTRIC REHEAT)  
N.T.S.



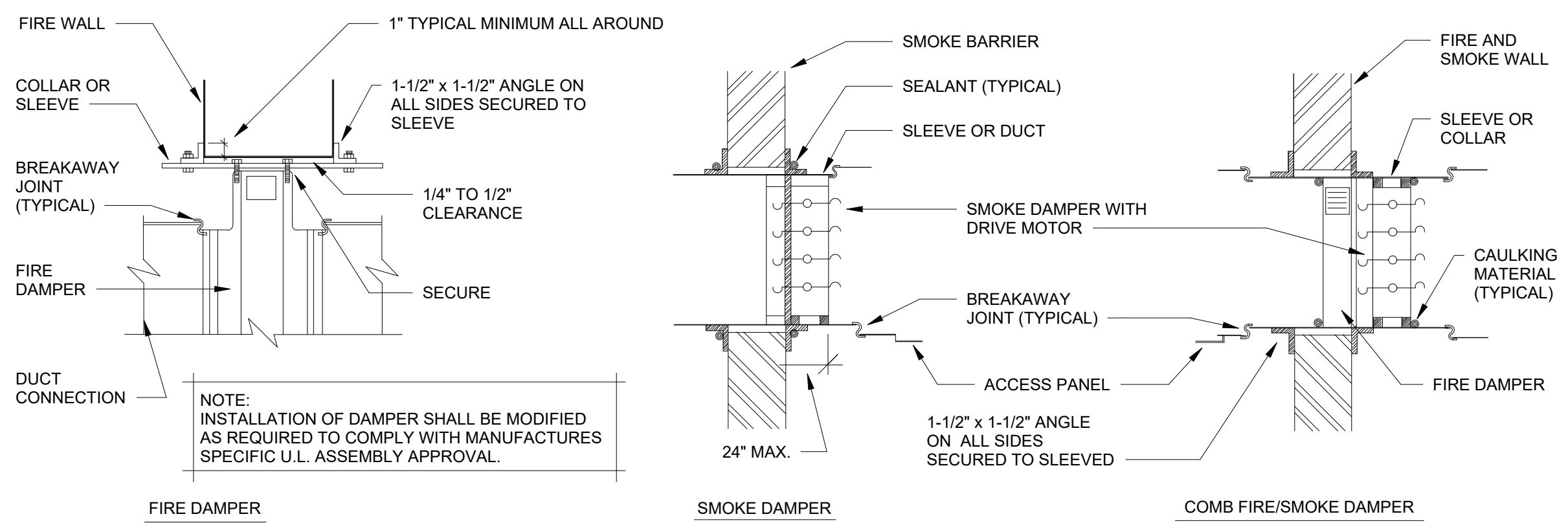
6 DIFFUSER THROW CONTROL DETAIL  
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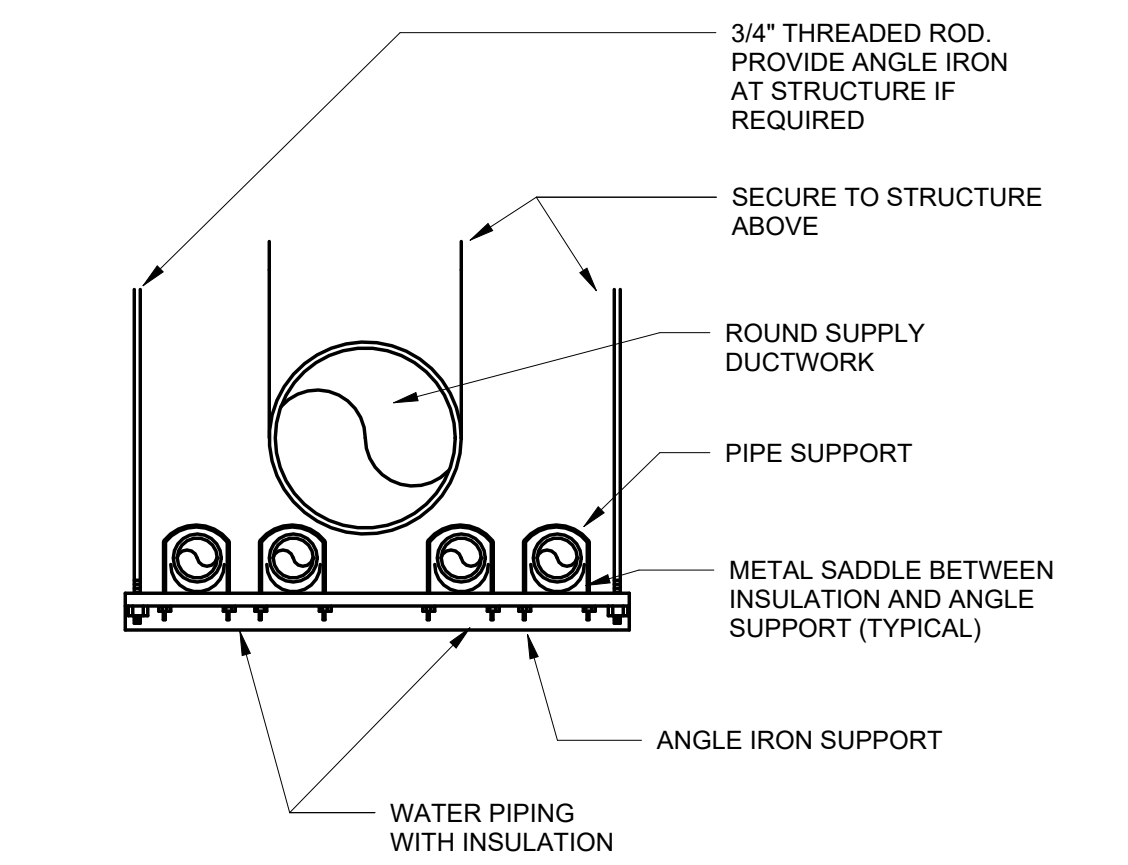
7 TRIM FRAME INSTALLATION DETAIL  
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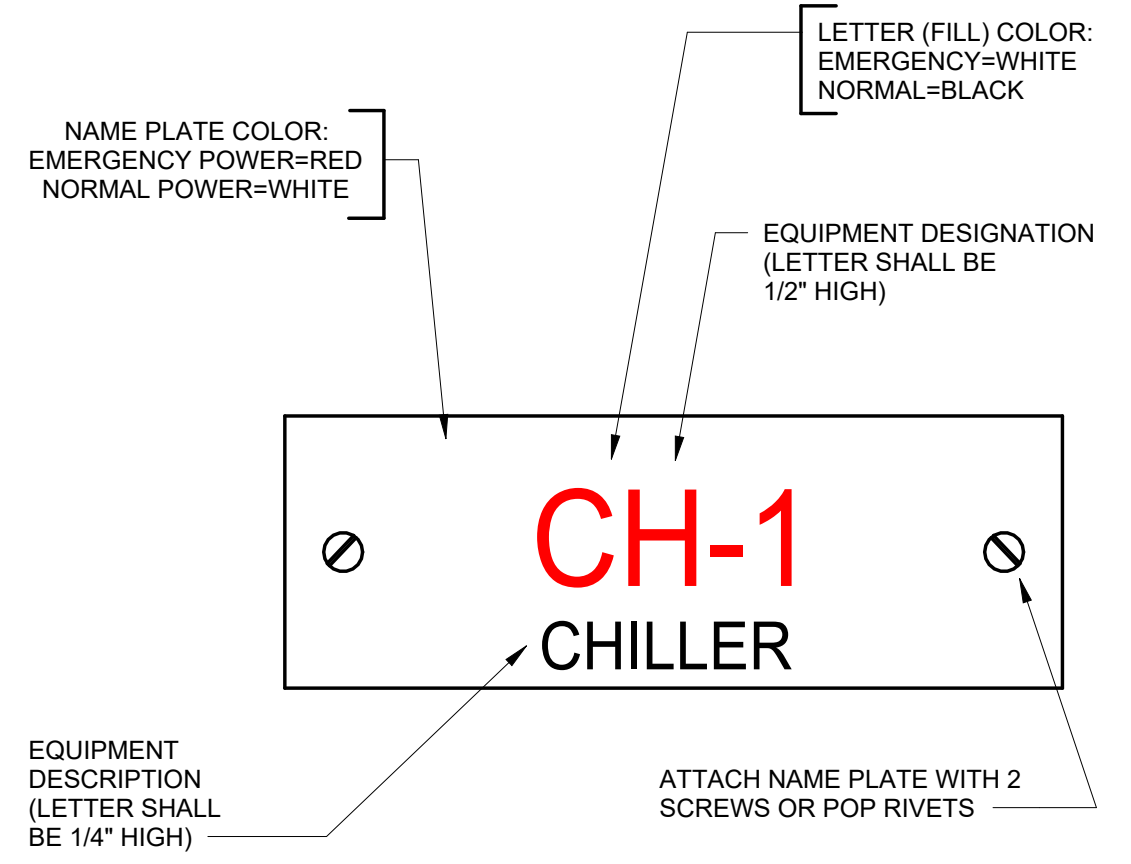
8 ELBOW CONSTRUCTION DETAIL  
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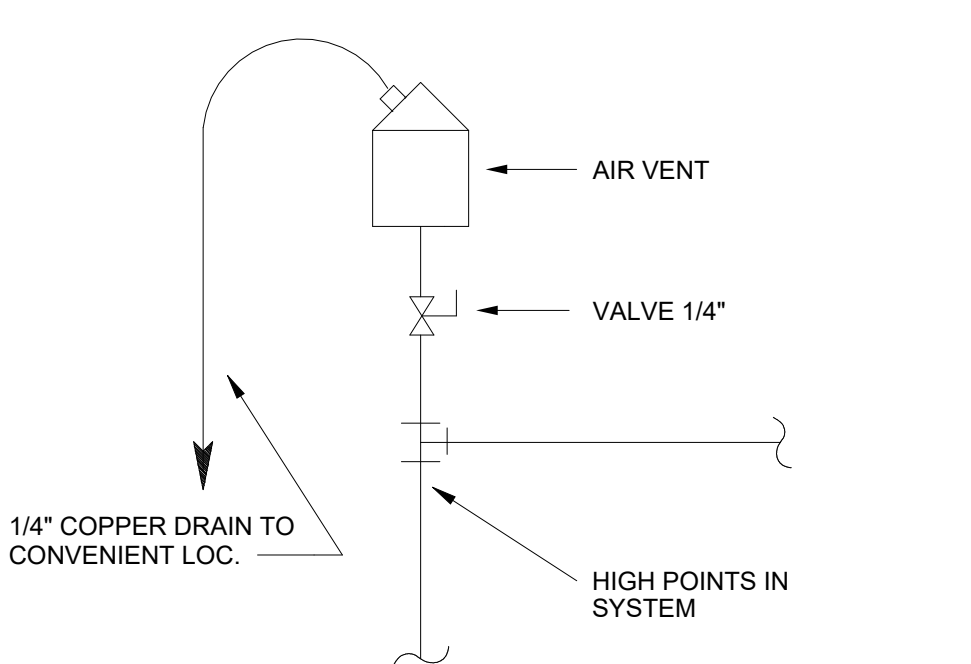
9 FIRE DAMPER INSTALLATION DETAIL  
N.T.S.



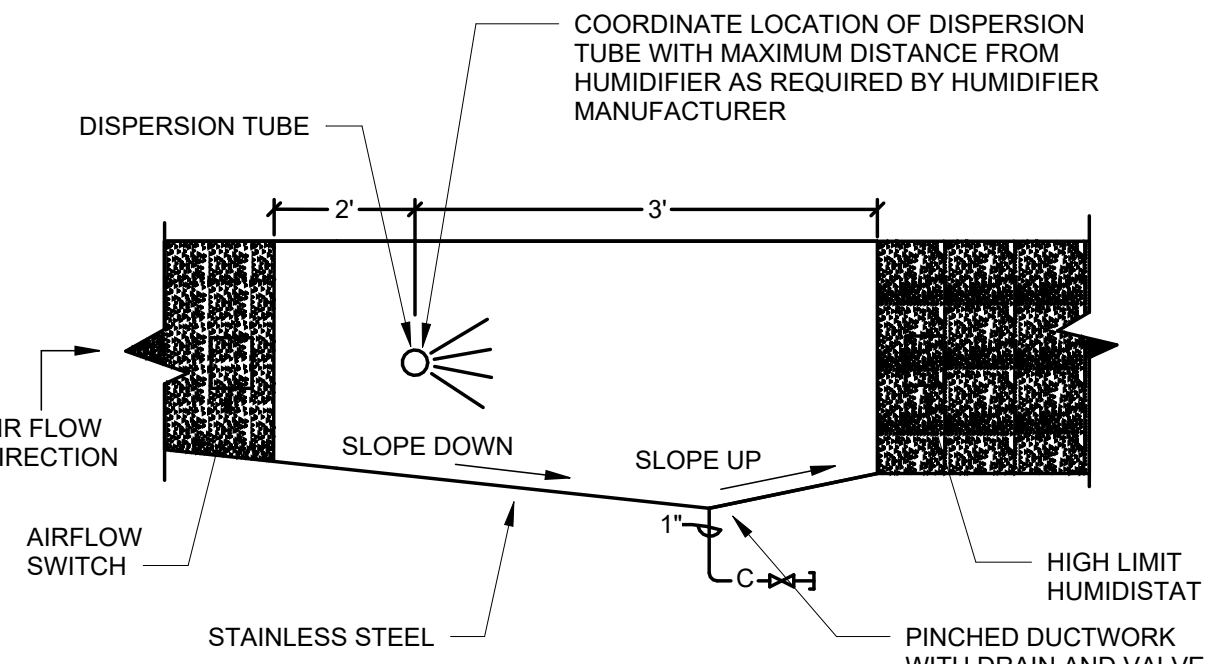
10 PIPE AND DUCTWORK SUPPORT DETAIL  
N.T.S.



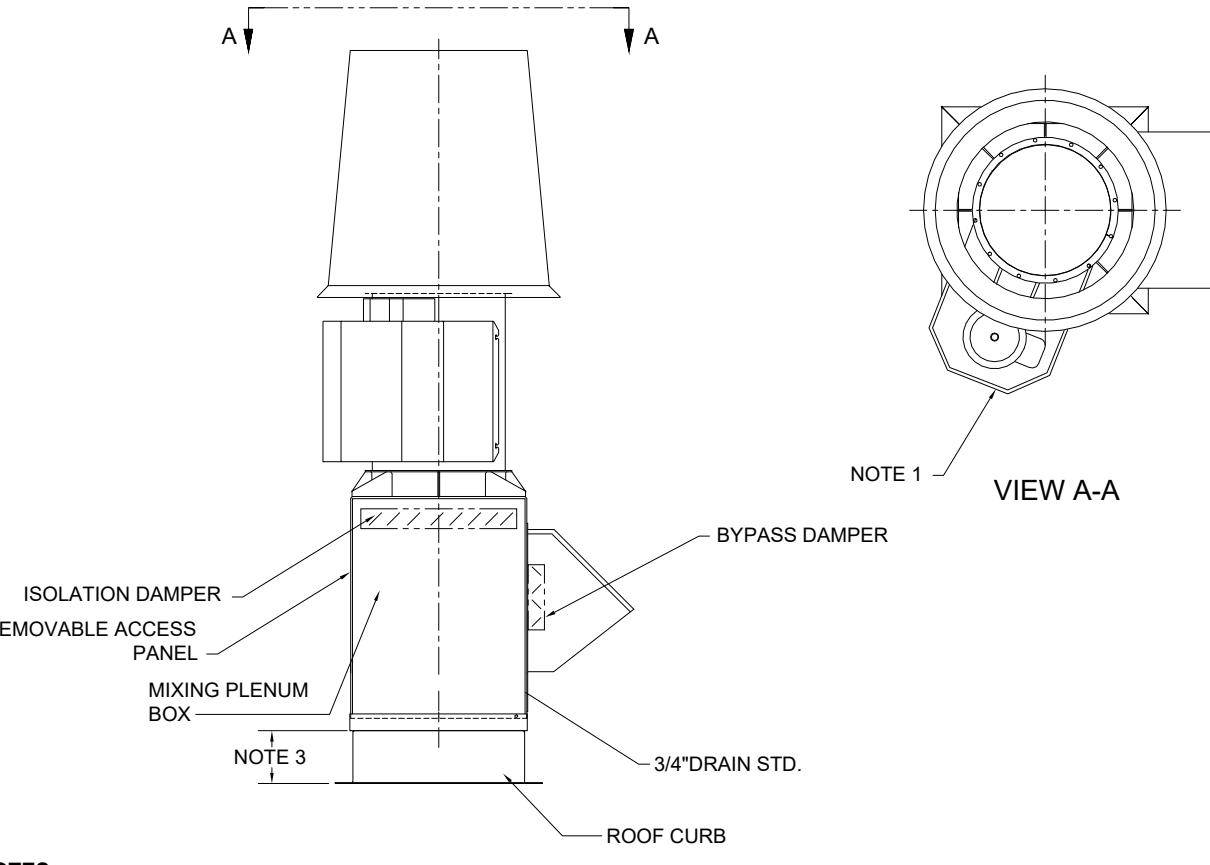
11 PLASTIC LAMINATE NAME PLATE DETAIL  
N.T.S.



12 TYPICAL AIR VENT DETAIL  
N.T.S.



13 HUMIDIFIER DISPERSION TUBE INSTALLATION DETAIL  
N.T.S.



14 LAB EXHAUST FAN DETAIL  
N.T.S.

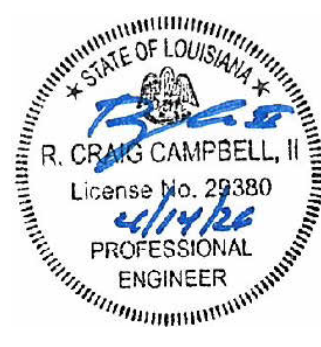
REVISIONS		
NO.	DESCRIPTION	DATE

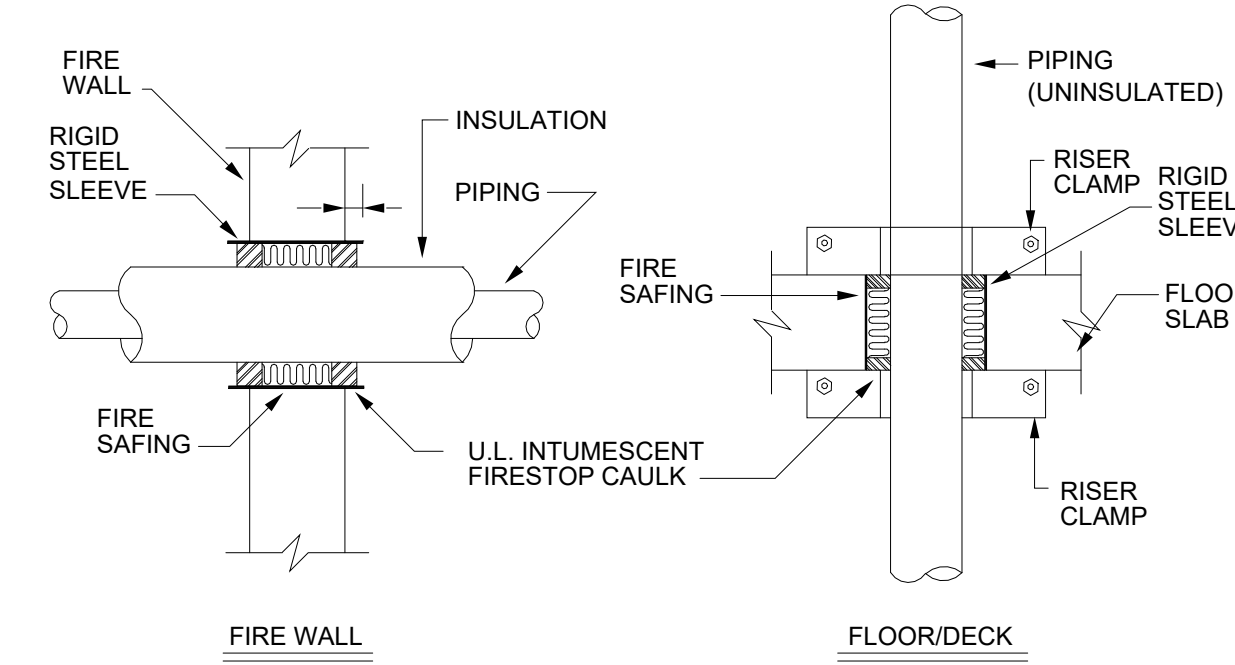
**THIRD FLOOR RENOVATION OF BLDG 29 LABORATORIES AT NIRC**

4401 W. ADMIRAL DOYLE DRIVE,  
NEW IBERIA, LOUISIANA  
70560

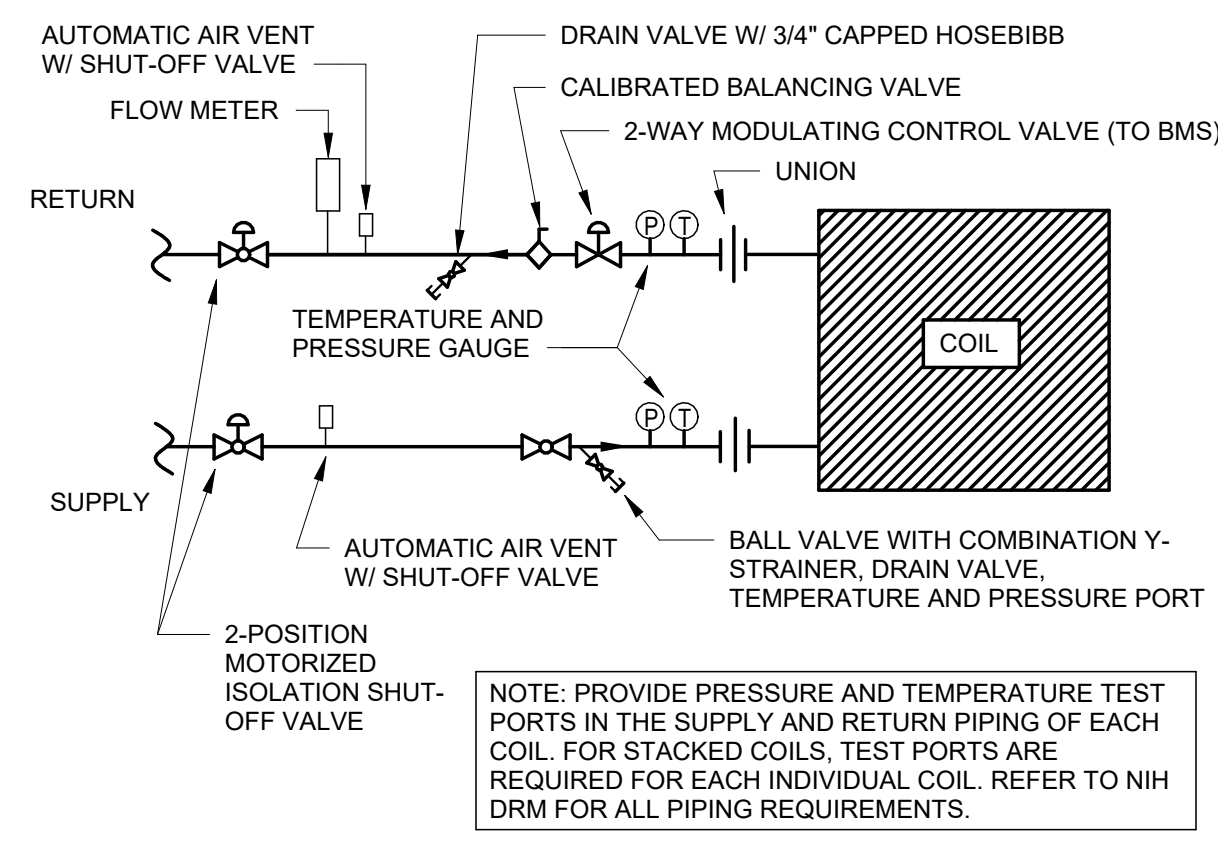
**MECHANICAL DETAILS**

PROJECT NUMBER	2025.040	DRAWN BY	LC/PP
DATE	APRIL 14, 2026	CHECKED BY	PP/CC
PHASE	BID DOCUMENTS		

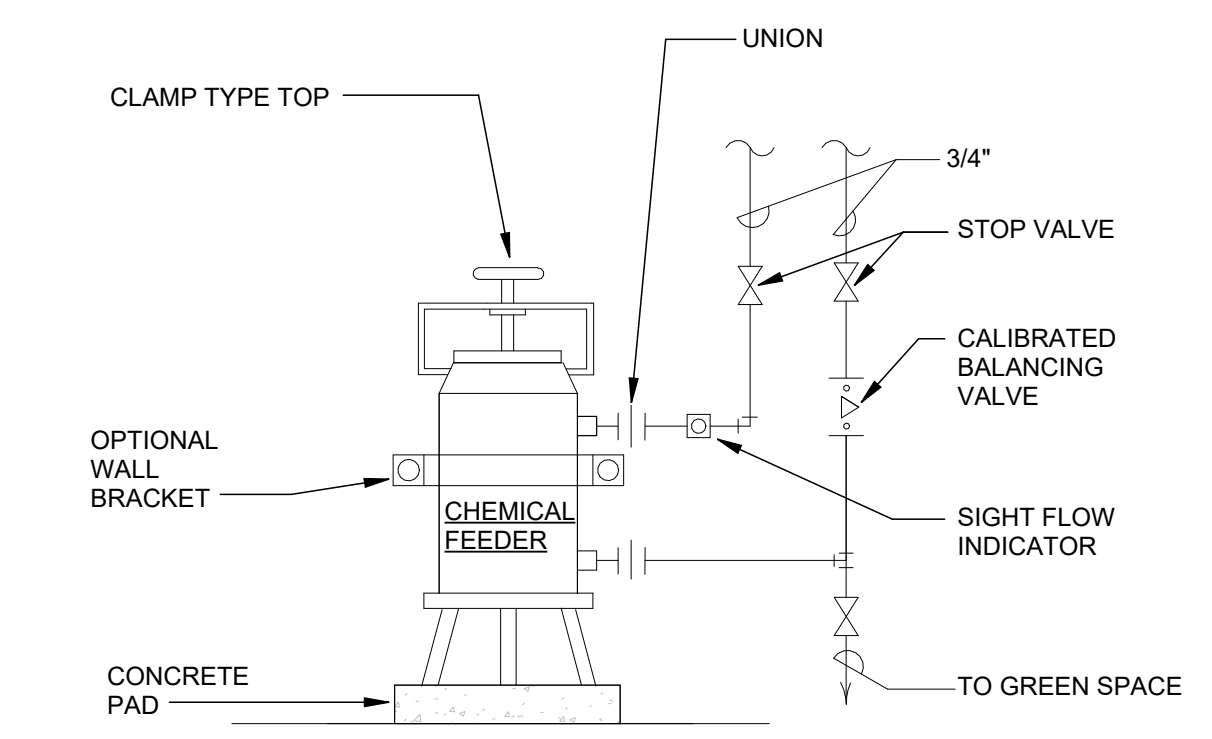




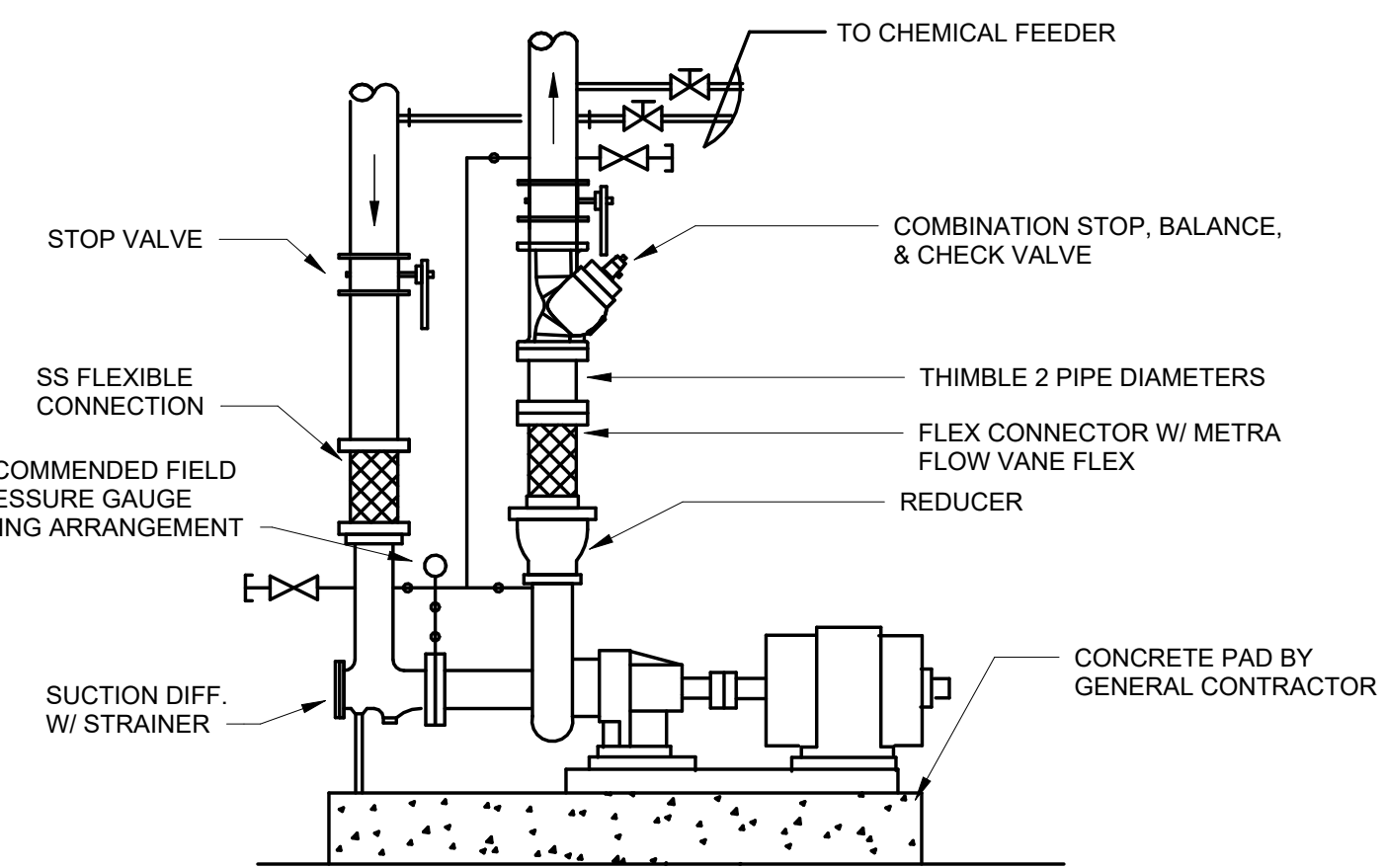
1 TYPICAL FIRE WALL PENETRATION DETAIL  
N.T.S.



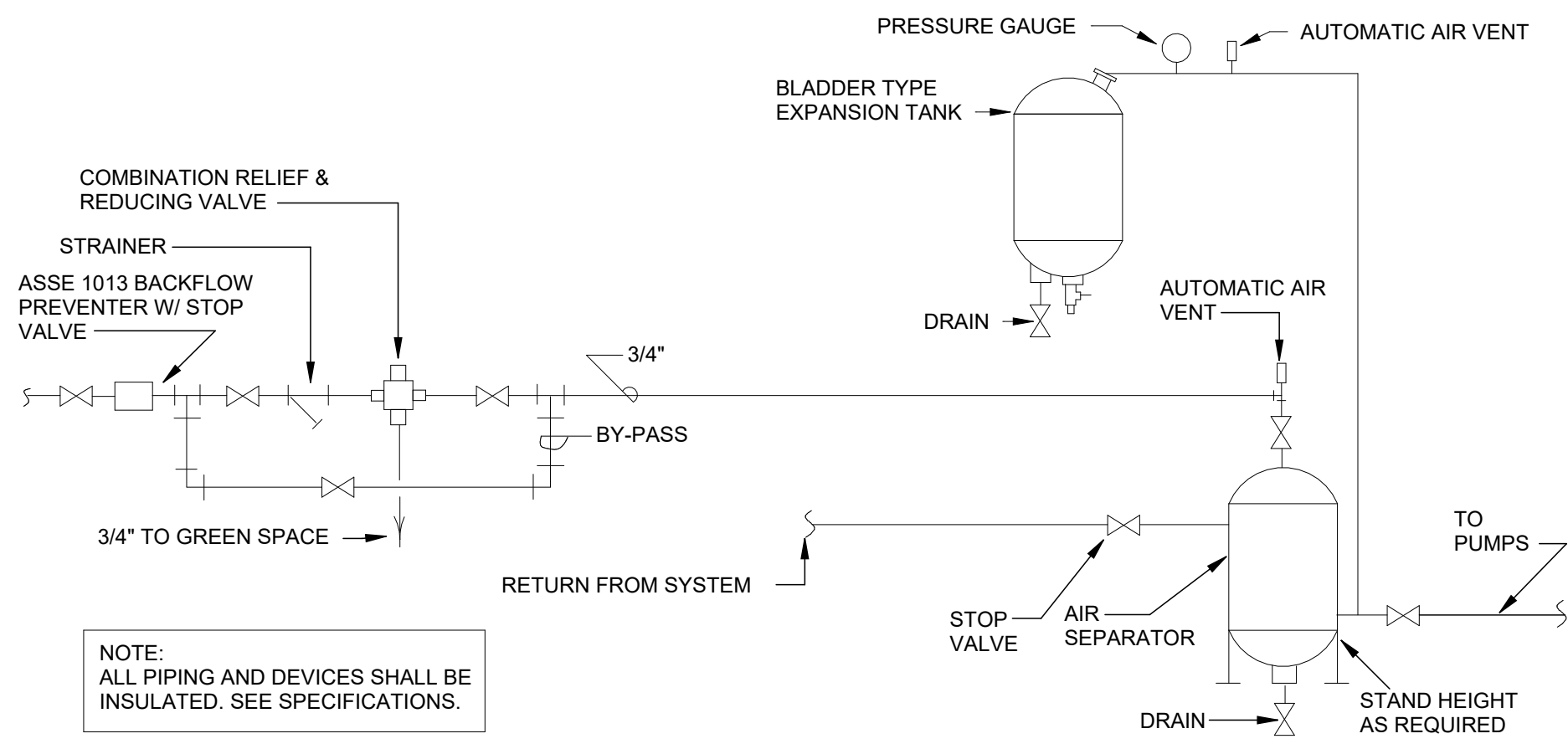
2 TYPICAL 2-WAY COIL PIPING DIAGRAM  
N.T.S.



3 CHEMICAL POT FEEDER DETAIL  
N.T.S.



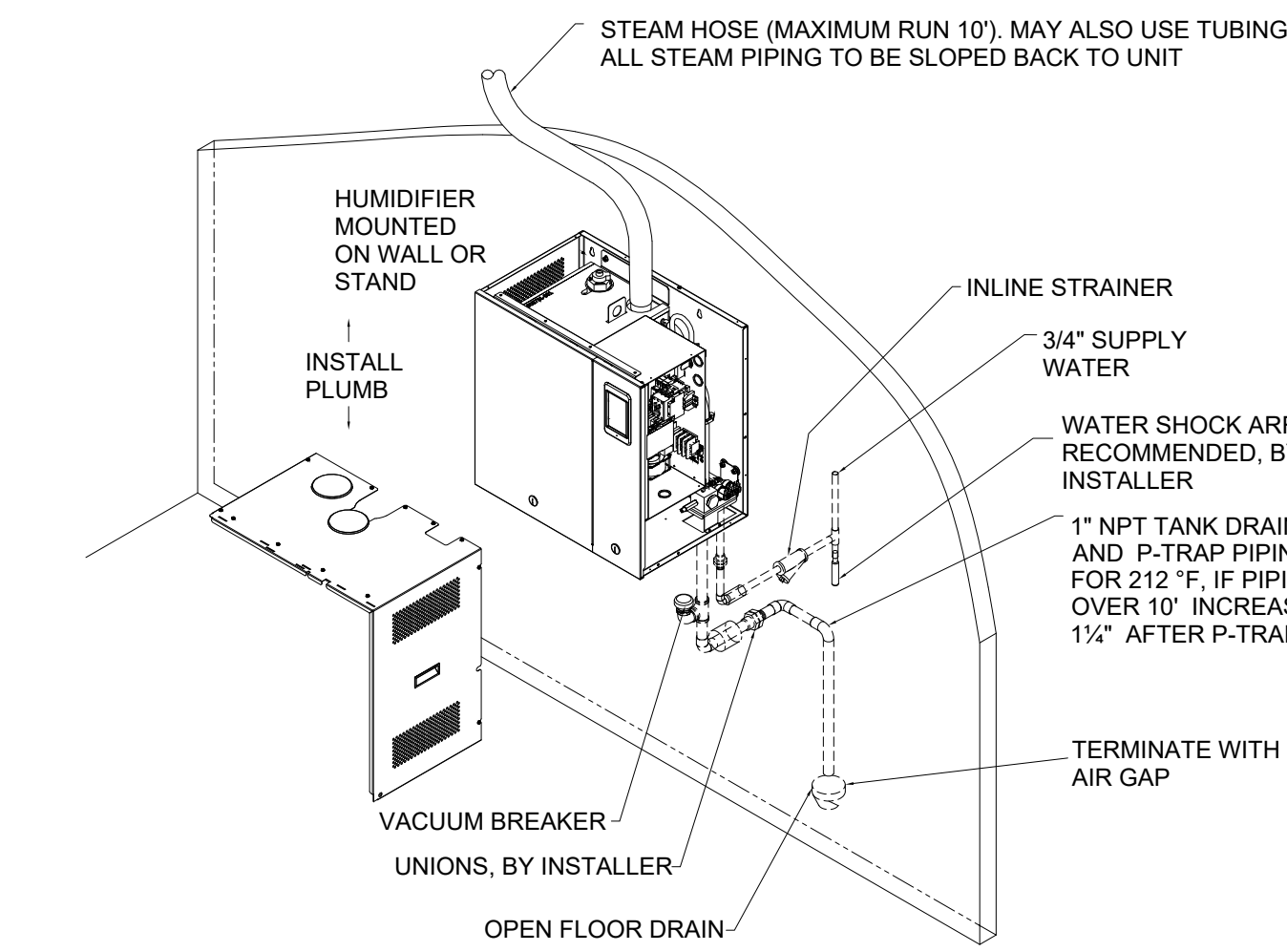
4 BASE MOUNTED PUMP PIPING DETAIL  
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5 AIR SEPARATOR PIPING DIAGRAM  
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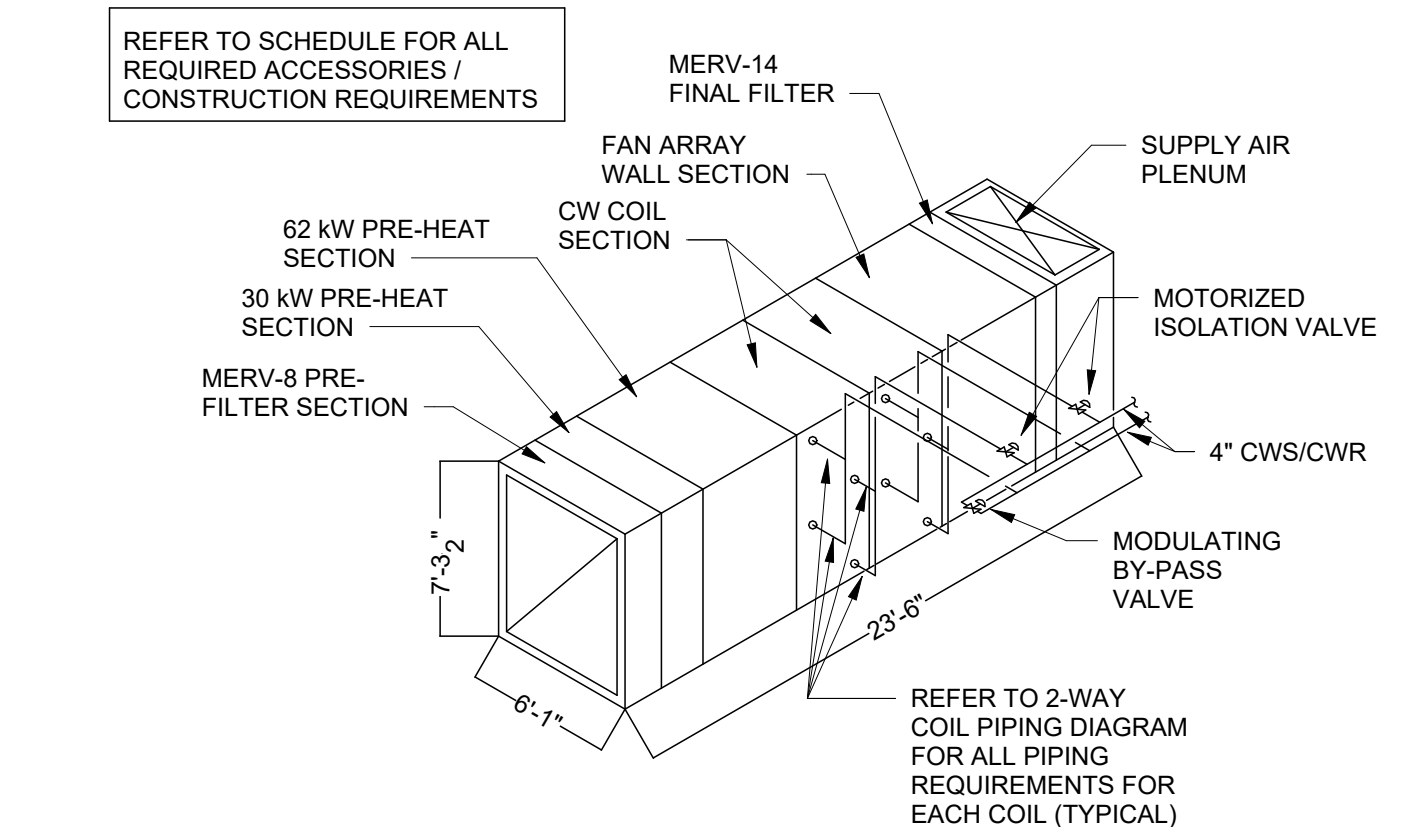


6 AIR COOLED CHILLER PIPING DIAGRAM  
N.T.S.

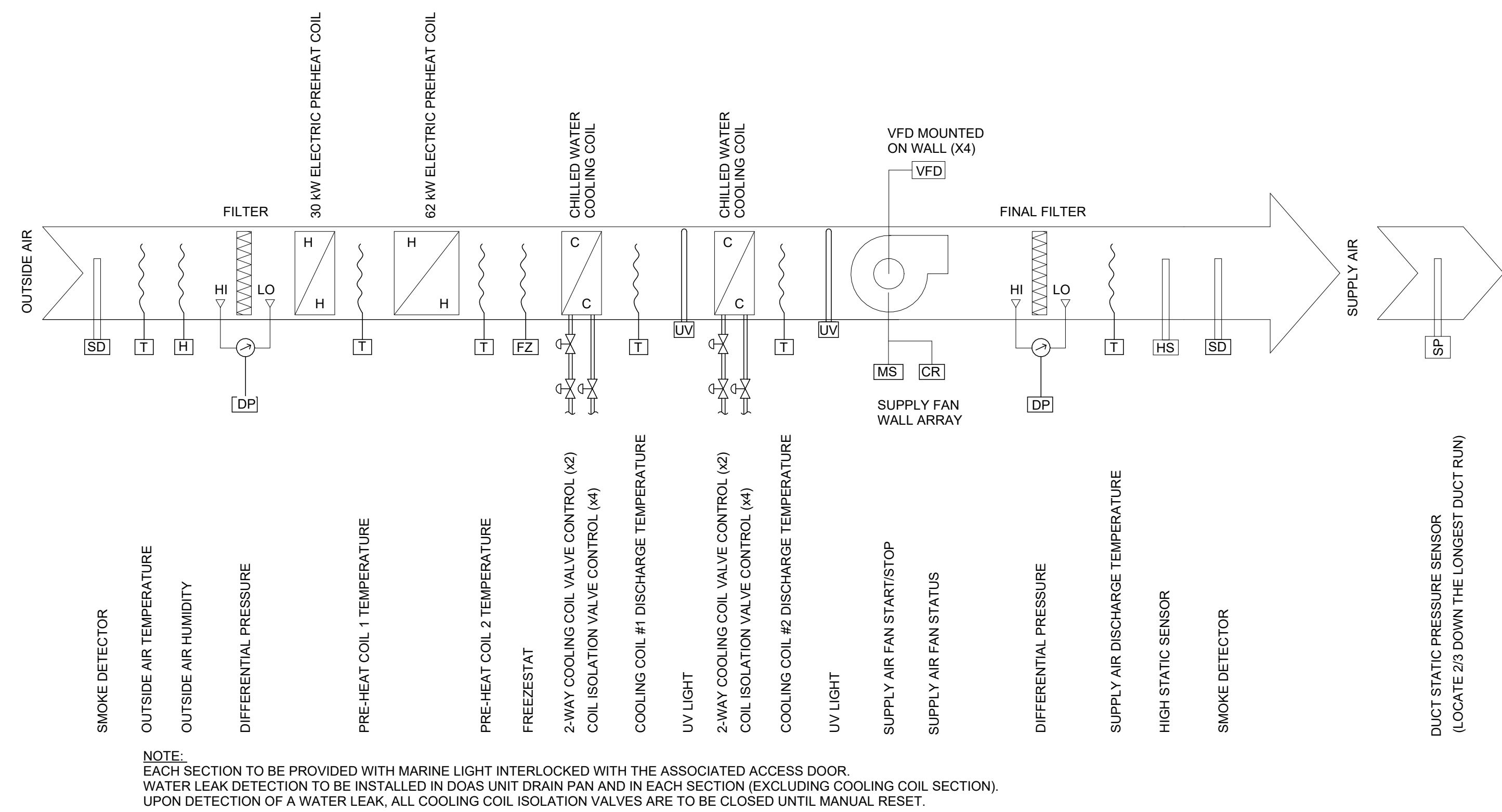


- NOTES:
- HUMIDIFIER TO BE PROVIDED WITH INTEGRATED DRAIN WATER TEMPERING SYSTEM SO THAT DRAIN WATER IS TEMPERED TO BELOW 140°F PRIOR TO BEING DISCHARGED.
  - DASHED LINES INDICATE PROVIDED BY INSTALLER.
  - INSTALL A UNION IN THE WATER SUPPLY AND DRAIN LINES AS SHOWN TO ALLOW TANK REMOVAL.
  - COORDINATE WALL MOUNT OR STAND MOUNT REQUIREMENTS PRIOR TO ORDERING.
  - INSTALL PER MANUFACTURER RECOMMENDATIONS.

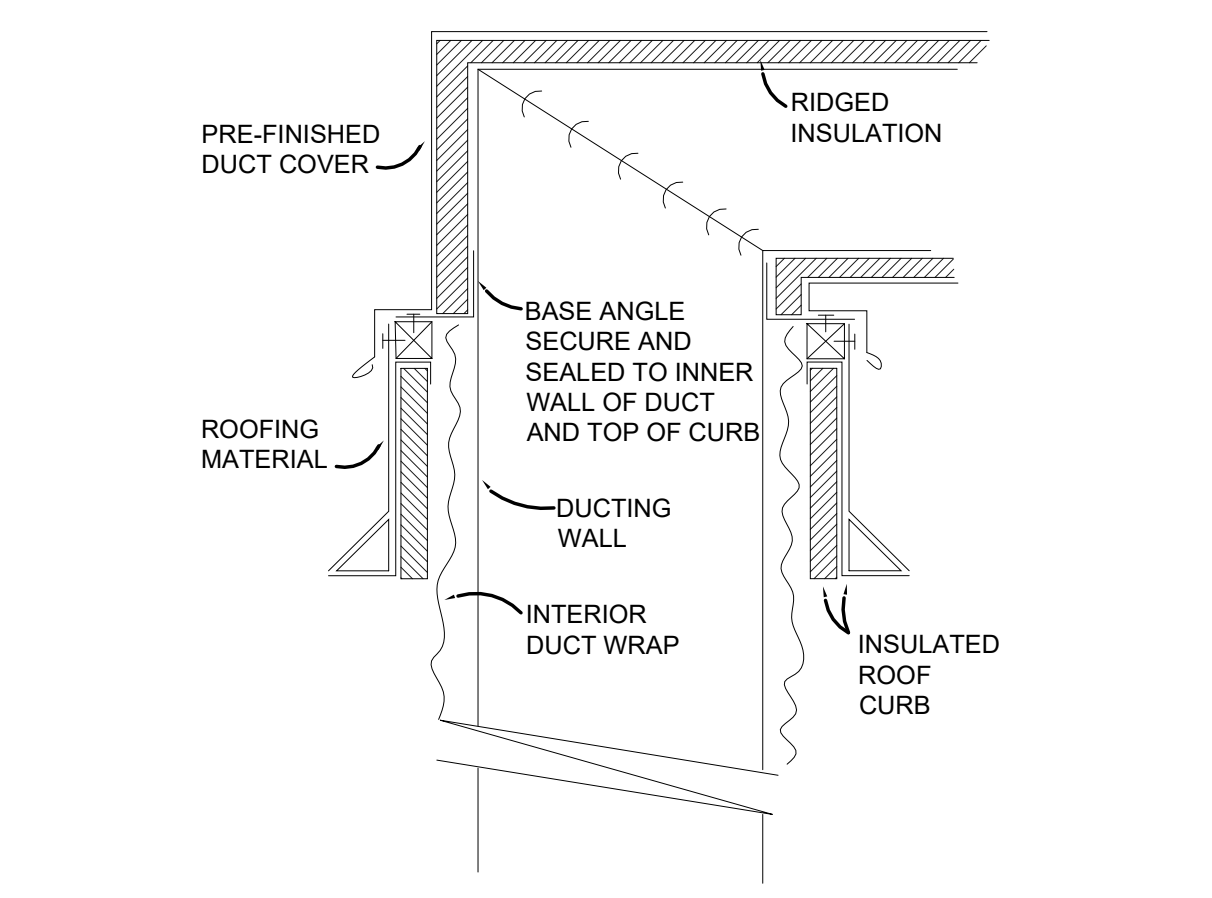
7 ELECTRIC STEAM HUMIDIFIER DETAIL  
N.T.S.



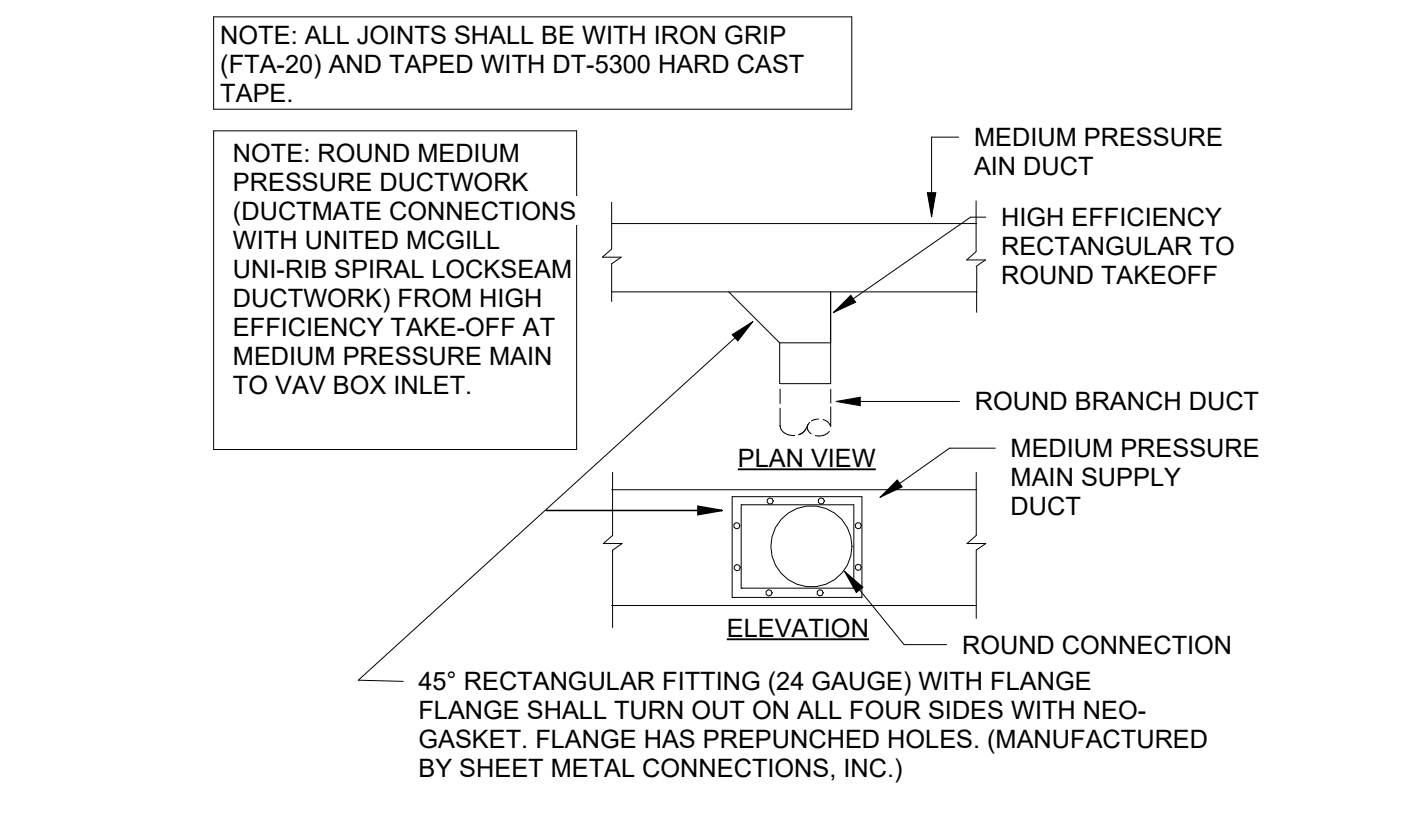
8 DOAS UNIT DETAIL  
N.T.S.



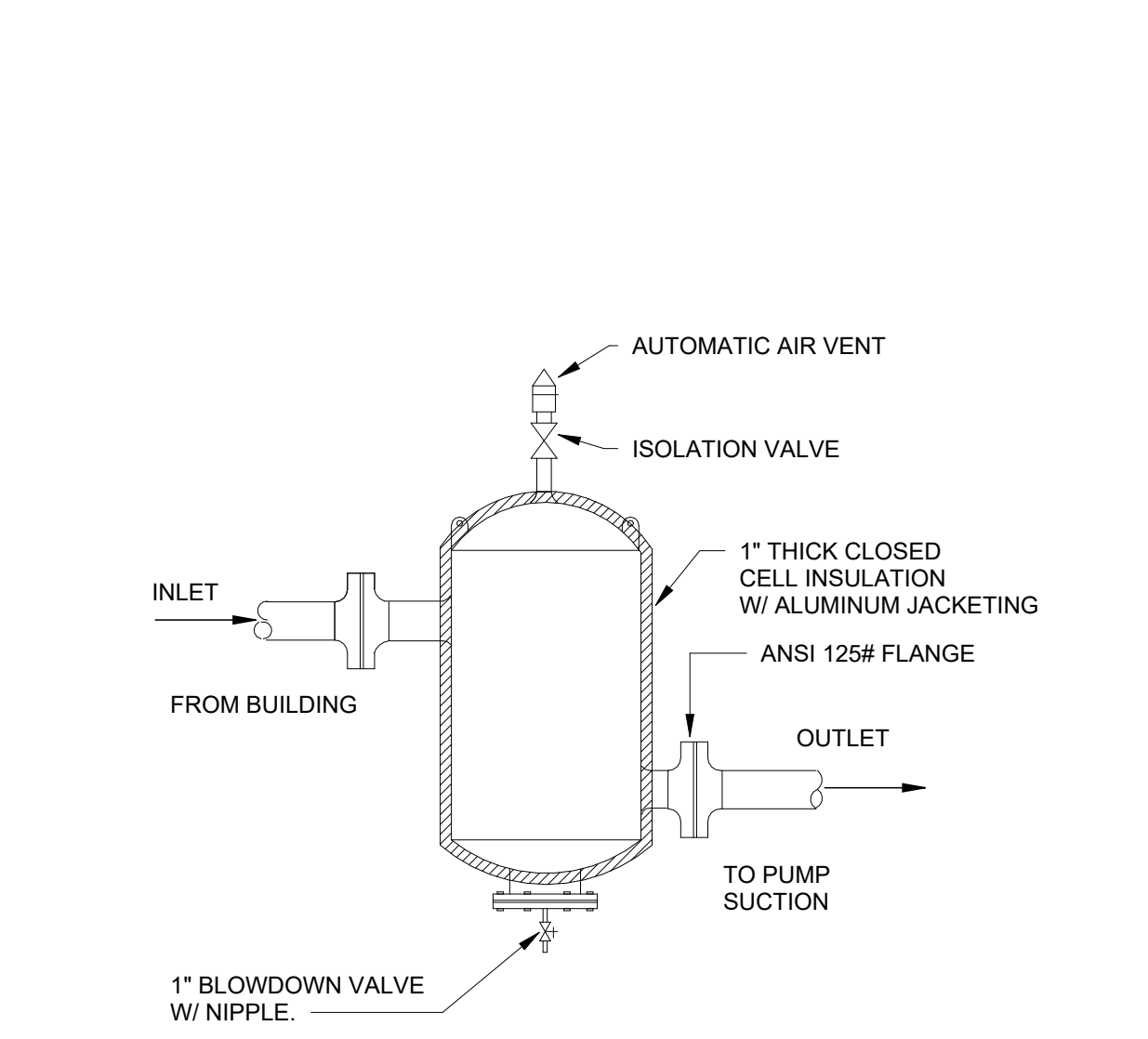
9 DOAS CONTROL DIAGRAM  
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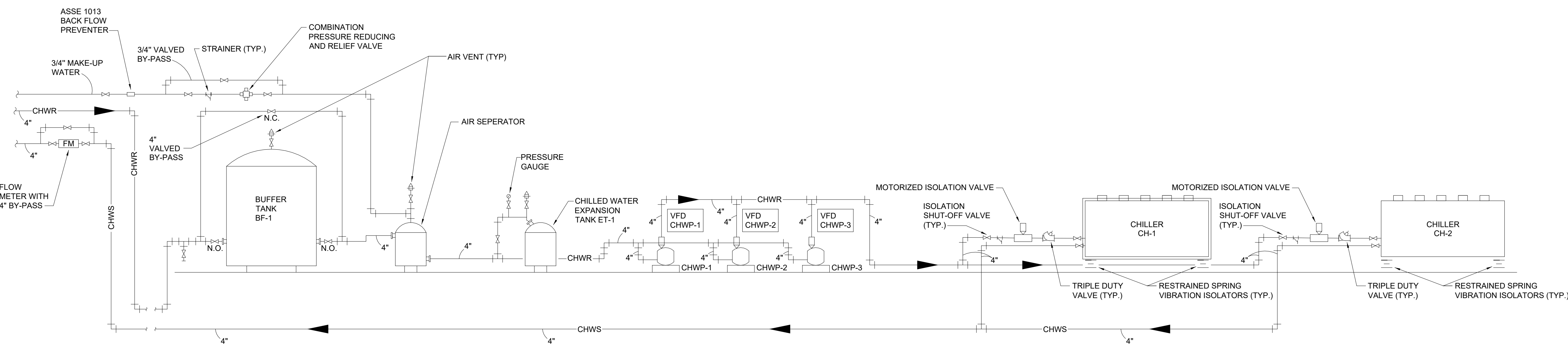
10 DUCTWORK ROOF PENETRATION DETAIL  
N.T.S.



11 MEDIUM PRESSURE VAV BRANCH CONNECTION DETAIL  
N.T.S.



12 AIR SEPARATOR DETAIL  
N.T.S.



13 CHILLED WATER FLOW DIAGRAM  
N.T.S.

REVISIONS		
NO.	DESCRIPTION	DATE

**THIRD FLOOR RENOVATION OF BLDG 29 LABORATORIES AT NIRC**

4401 W. ADMIRAL DOYLE DRIVE,  
NEW BERIA, LOUISIANA  
70560

**MECHANICAL DETAILS**

PROJECT NUMBER	DATE	PHASE	BY	CHECKED BY
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