

ABBREVIATIONS	
AFF	ABOVE FINISHED FLOOR
AHD	AUTHORITY HAVING JURISDICTION
ANSI	AMERICAN NATIONAL STANDARD INSTITUTE
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATION, AND AIR-CONDITIONING ENGINEERS
BAS	BUILDING AUTOMATION SYSTEM
CAP	CAPACITY
CD	CONDENSATE DRAIN
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
CLR	CLEAR
COND	CONDENS (-ER, -ING, -ATION, -ATE)
CONT	CONTINU (-ED, -OUS)
DB	DRY BULB
DBT	DRY BULB TEMPERATURE
DDC	DIRECT DIGITAL CONTROLS
DEG	DEGREE (-S)
DIA	DIAMETER (-S)
DN	DOWN
DWG	DRAWING
EAT	ENTERING AIR TEMPERATURE
ENGR	ENGINEER
EQ	EQUAL
ETR	EXISTING TO REMAIN
EXT	EXTERIOR
FPM	FEET PER MINUTE
FV	FACE VELOCITY
GA	GAGE/GAUGE
GPM	GALLONS PER MINUTE
H	HUMIDITY
HORIZ	HORIZONTAL
HVAC	HEATING, VENTILATING, & AIR-CONDITIONING
IN	INCH (-ES)
LAT	LEAVING AIR TEMPERATURE
LF	LINEAR FEET/FOOT
MAX	MAXIMUM
MBH	BTU PER HOUR [THOUSANDS]
MFG	MANUFACTURER
MIN	MIN (-IMUM, -UTE)
MISC	MISCELLANEOUS
MTG	MOUNTING
N/A	NOT APPLICABLE
NEBB	NATIONAL ENVIRONMENTAL BALANCING BUREAU
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN OR NUMBER
NTS	NOT TO SCALE
CFI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
OR	OPEN RECEPTACLE
PC	PLUMBING CONTRACTOR
PD	PRESSURE DROP
PLBG	PLUMBING
PPM	PARTS PER MILLION
PSI	POUNDS PER SQUARE INCH
RH	RELATIVE HUMIDITY (%)
SQ FT	SQUARE FEET OR FOOT
TAB	TESTING AND BALANCING
TBD	TO BE DETERMINED
TEMP	TEMPERATURE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VFD	VARIABLE FREQUENCY DRIVE
WB	WET BULB
WT	WEIGHT
W/	WITH
W/O	WITHOUT
%	PERCENT
ΔP	DIFFERENTIAL PRESSURE
ΔT	TEMPERATURE DIFFERENCE
℄	CENTERLINE

MECHANICAL GENERAL NOTES

- A THE CONTRACTOR SHALL EXERCISE EXTREME CARE IN THE COURSE OF THEIR WORK SO AS TO INSURE THAT THEY DO NOT INTERRUPT ANY EXISTING SERVICE. FOR SAFETY PURPOSES, PAY PARTICULAR ATTENTION TO THIS PRECAUTION RELATIVE TO NATURAL GAS AND ELECTRICAL LINES. VERIFY THE LOCATION, SIZE, TYPE, ETC., OF EACH UNDERGROUND OR OVERHEAD UTILITY. ALL WORK SHALL BE PERFORMED IN ACCORD WITH ALL FEDERAL, STATE AND/OR LOCAL RULES, REGULATIONS, STANDARD AND SAFETY REQUIREMENTS. UTILITIES SHALL BE INSTALLED IN ACCORD WITH THE APPLICABLE MUNICIPALITY OR UTILITY COMPANY STANDARDS. IN ALL CASES, THE MOST STRINGENT REQUIREMENT SHALL APPLY.
- B WHERE WORK IS REQUIRED ABOVE EXISTING LAY-IN, PLASTER OR GYPSUM BOARD CEILINGS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND REINSTALLATION (OR REPLACEMENT, IF DAMAGED) OF ALL CEILING OR TILE AND GRID MEMBERS NECESSARY TO PERFORM HIS WORK. NEW TILE AND GRID SHALL MATCH THE SURROUNDING AREAS. ALL PATCHING WORK SHALL MATCH ADJACENT SURFACES.
- C PATCH, REPAIR AND PAINT OR PROVIDE WALL COVERING FOR (TO OWNER'S STANDARDS) EXISTING WALLS, CEILINGS, ETC., THAT ARE TO REMAIN IF DAMAGED DURING CONSTRUCTION. REPAIRS SHALL MATCH ADJACENT SURFACES TO THE SATISFACTION OF THE ARCHITECT AND OWNER.
- D OBSERVE ALL APPLICABLE CODES, RULES AND REGULATIONS THAT MAY APPLY TO THE WORK UNDER THIS CONTRACT. (CITY, COUNTY, LOCAL, FEDERAL, MUNICIPALITY, UTILITY COMPANY, COMMONWEALTH OF KENTUCKY, ETC.)
- E CONTRACTOR SHALL BE AWARE OF UNSEEN PLUMBING, HVAC AND ELECTRICAL WORK DURING DEMOLITION. IF ITEMS ARE UNCOVERED DURING DEMOLITION THEN FIELD VERIFY THE USE OF THE ITEMS AND PLAN AN ALTERNATE ROUTE TO RUN THESE ITEMS. THEN CONTACT THE ENGINEERS TO REVIEW THE ROUTING.
- F ALL WORK REQUIRING DOWNTIME OF ANY AREA IN THE BUILDING SHALL BE SCHEDULED 2 WEEKS IN ADVANCE, AND SHALL COMPLY WITH INTERIM LIFE SAFETY MEASURES.
- G ALL DUCTWORK, PIPING, CONDUITS, ETC. IN ROOMS WITH CEILINGS SHALL BE ABOVE CEILING EXCEPT AS NOTED.
- H LOCATIONS OF PIPING, DUCTS AND EQUIPMENT ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. DO NOT SCALE THE DRAWINGS.
- I INSTALL ALL PIPING, DUCTWORK AND EQUIPMENT IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTION. IF IN CONFLICT WITH THE DESIGN INDICATED IN CONTRACT DOCUMENTS, ADVISE THE ENGINEERS PRIOR TO INSTALLATION FOR CLARIFICATION. PROVIDE RECOMMENDED ACCESS AND SERVICE CLEARANCES FOR ALL EQUIPMENT.
- J SEAL AIRTIGHT AROUND ALL DUCTS AND PIPING PENETRATIONS THROUGH WALLS, FLOORS AND ROOF. PROVIDE FIRE STOPPING IN FIRE PARTITION.
- K SEAL ALL NEW DUCTWORK JOINTS WITH UNITED MCGILL, IRONGRIP 601 OR EQUAL WATER BASED SEALANT.
- L THE CONTRACTOR SHALL RELOCATE OR AVOID ANY EXISTING EQUIPMENT APURTENANCES, ETC., THAT CONFLICT WITH NEW WORK.
- M WHERE MOUNTING HEIGHTS ARE NOT INDICATED OR ARE IN CONFLICT WITH ANY OTHER BUILDING SYSTEM, CONTACT THE ENGINEERS BEFORE INSTALLATION. REFER ALSO TO ARCHITECTURAL WALL INTERIOR AND EXTERIOR WALL ELEVATIONS, CEILING HEIGHTS AND OTHER DETAIL OF THESE DOCUMENTS.
- N DOUBLE WIDTH TURNING VANES SHALL BE INSTALLED IN ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK ELBOWS. TURNING VANES NOT REQUIRED FOR KITCHEN EXHAUSTS.
- O VALVES, BALANCING DAMPERS OR ANY MECHANICAL/ELECTRICAL ITEM REQUIRING ACCESS SHALL NOT BE LOCATED ABOVE A HARD CEILING. IF THIS IS NOT POSSIBLE, THEN AN APPROPRIATELY SIZED ACCESS DOOR SHALL BE PLACED UNDER THE ITEM TO ALLOW EASY MAINTENANCE AND ADJUSTMENT. ADDITIONALLY ALL SUCH ITEMS SHALL NOT BE LOCATED AN UNREASONABLE DISTANCE ABOVE THE CEILING. IN GENERAL ALL SUCH ITEMS UNLESS INDICATED OTHERWISE SHALL BE MOUNTED SIX TO TWELVE INCHES ABOVE THE CEILING. IF IN DOUBT, CONTACT ENGINEER PRIOR TO INSTALLING.
- P THE DOCUMENTS COMPLY WITH 2015 IMC, 2018 KBC, AND ASHRAE 90.1-2010.
- Q WORK IN CONFINED AREAS SHALL BE IN ACCORDANCE WITH THE OWNER'S SAFETY POLICY REQUIREMENTS.

GENERAL SYMBOLS

	TAGGED NOTE DESIGNATOR
	REVISION TRIANGLE
	ROOM TAG
	EQUIPMENT TAG
	POINT OF CONNECTION / CONNECT TO EXISTING
	POINT OF DEMOLITION

HVAC LEGEND

	SUPPLY AIR DIFFUSER
	RETURN AIR DIFFUSER
	EXHAUST AIR DIFFUSER
	TRANSFER AIR DIFFUSER W/ SOUND ATTENUATING BOOT
	SIDEWALL DIFFUSER/GRILLE
	SIDEWALL DIFFUSER/GRILLE
	AIR DEVICE TAG (REGISTER, GRILLE, DIFFUSER, LOUVER)
	RECTANGULAR DUCT
	ROUND/SPIRAL DUCT
	FLAT OVAL DUCT
	SUPPLY AIR DUCT
	RETURN AIR DUCT
	EXHAUST AIR DUCT
	OUTSIDE AIR DUCT
	SA AIR DUCT TURNING UP
	SA AIR DUCT TURNING DOWN
	RA AIR DUCT TURNING UP
	RA AIR DUCT TURNING DOWN
	EA AIR DUCT TURNING UP
	EA AIR DUCT TURNING DOWN
	HUMIDITY SENSOR

MECHANICAL LEGEND
ESTILL COUNTY WEST IRVINE ESSER II PROJECT
FOR:
ESTILL COUNTY SCHOOLS
IRVINE, KENTUCKY

M.E.&P. Engineer:
CMI/A, Inc.
2429 Members Way
Lexington, KY 40304
p.857.253.0892

BG# 21-244

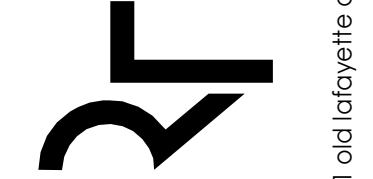
Project No: XEWI21
Drawn By: CRK
Rev'd By: CMR

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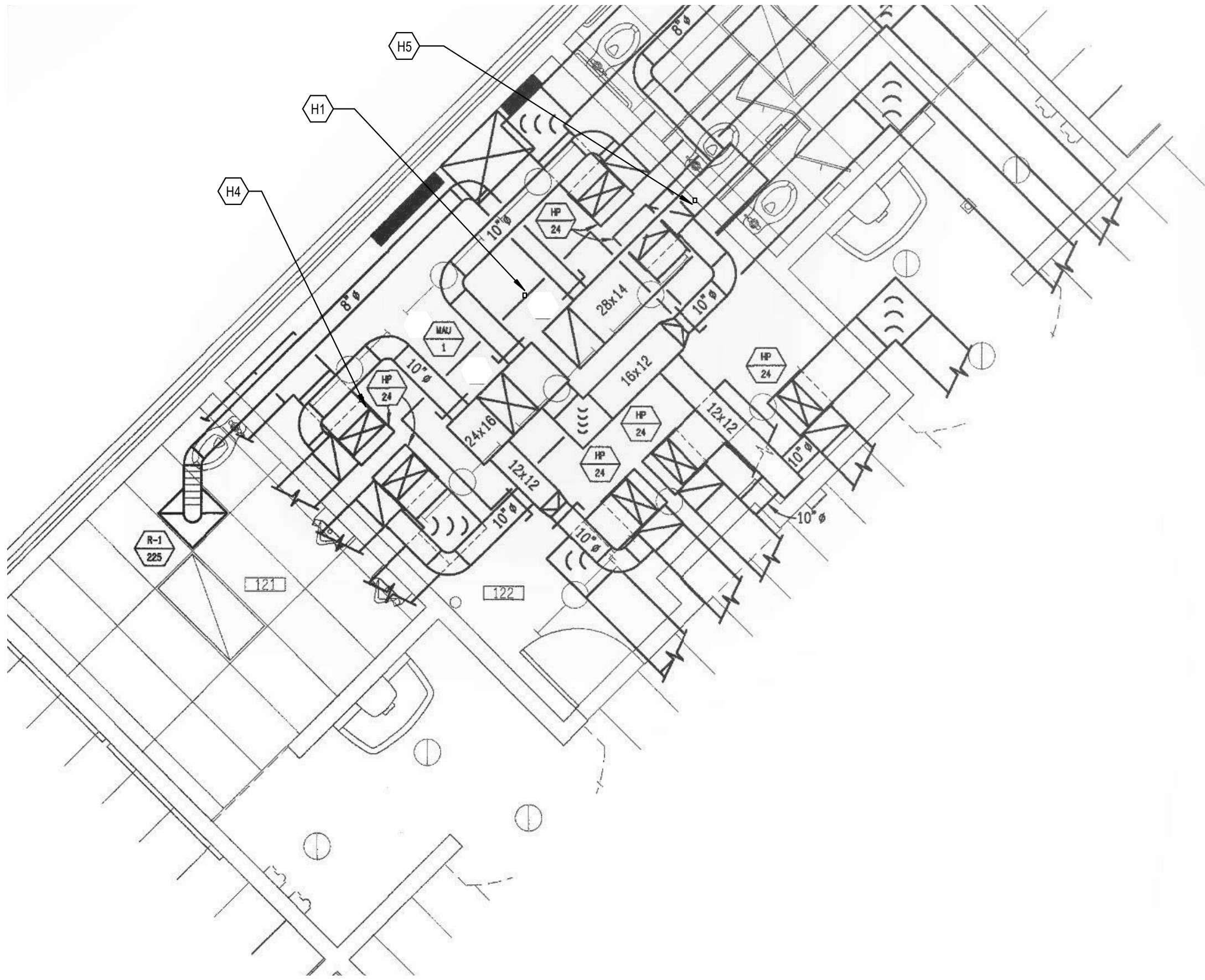
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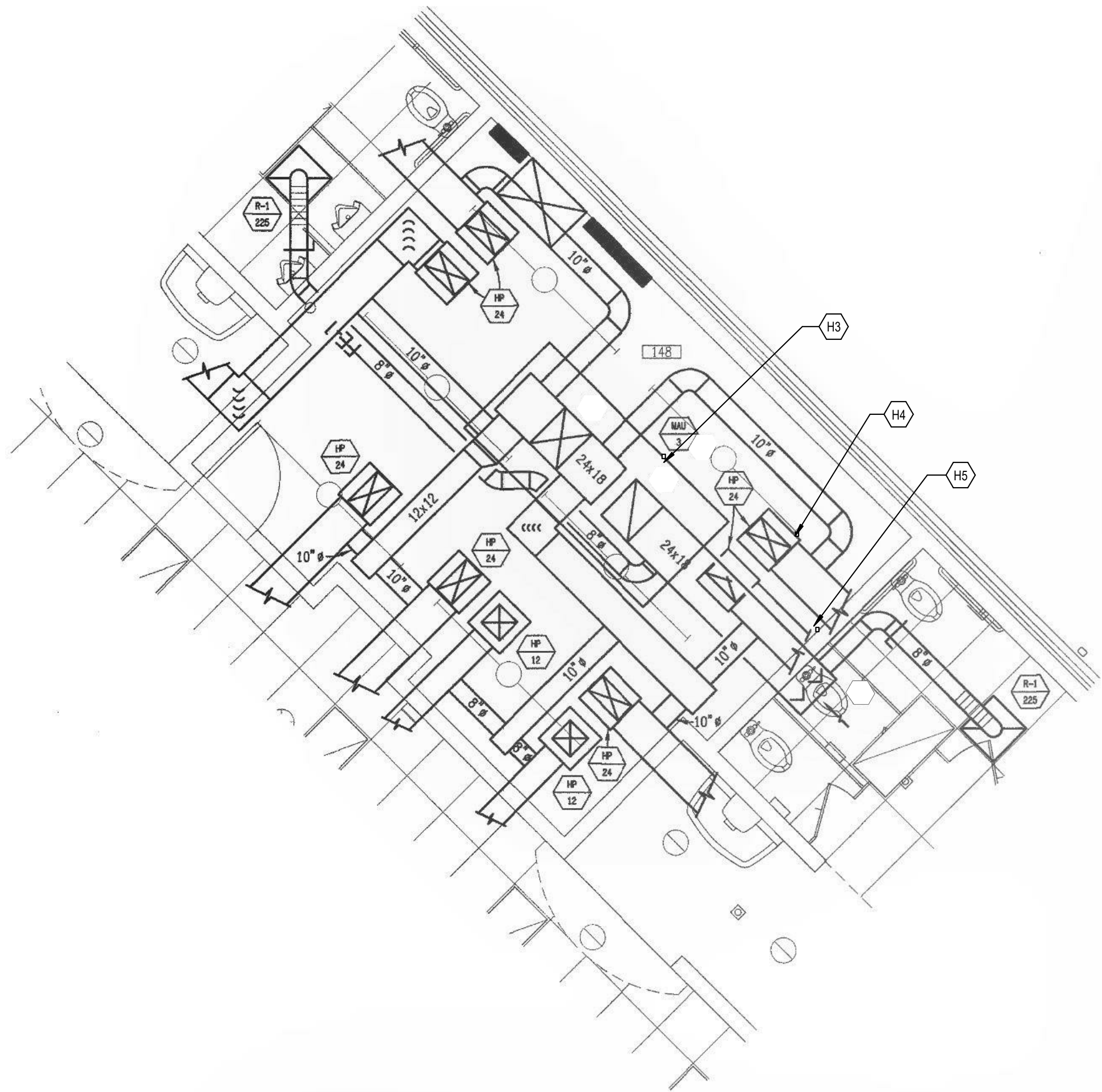
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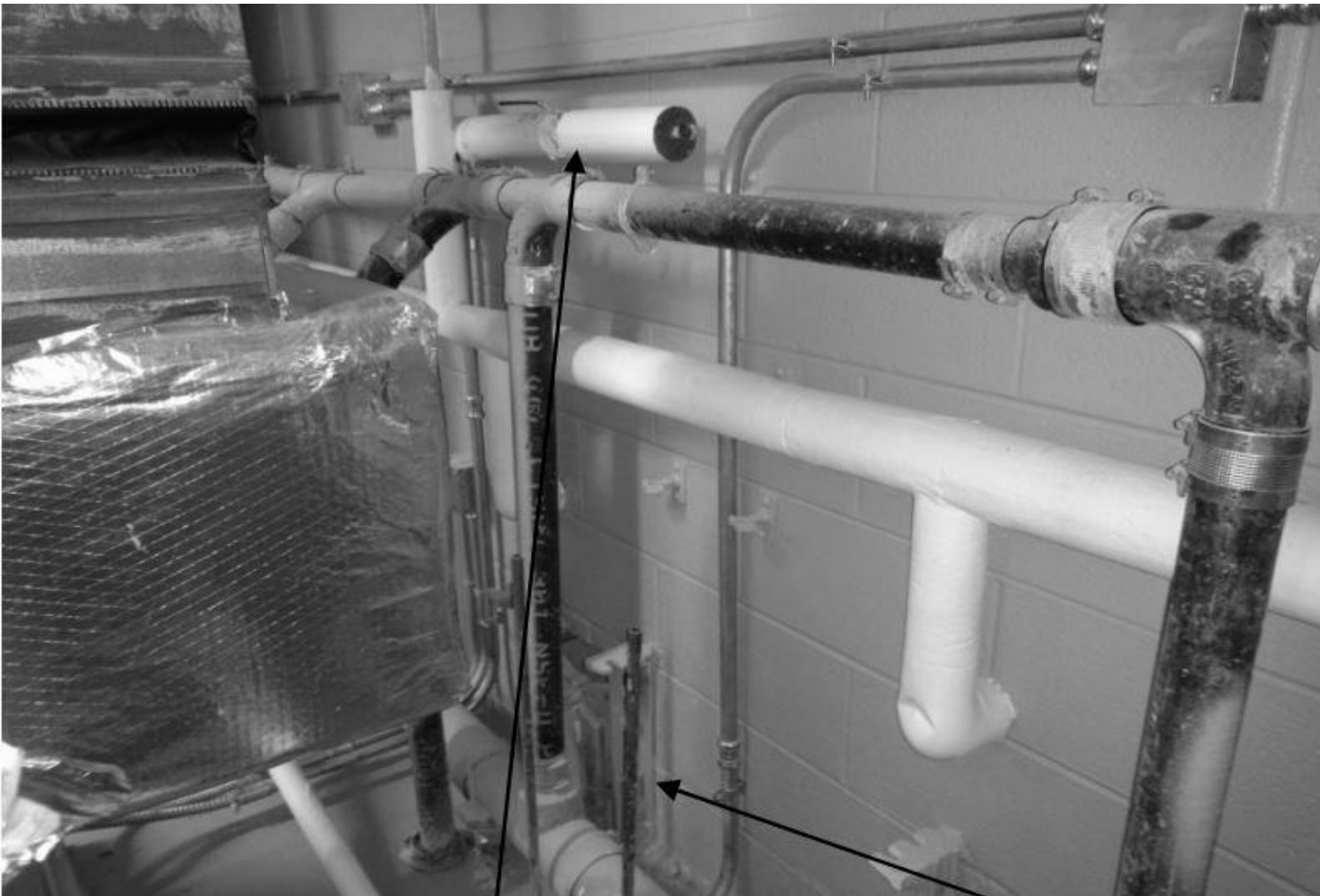
101 old ladyette avenue lexington, kentucky 40502 p.857.254.4018



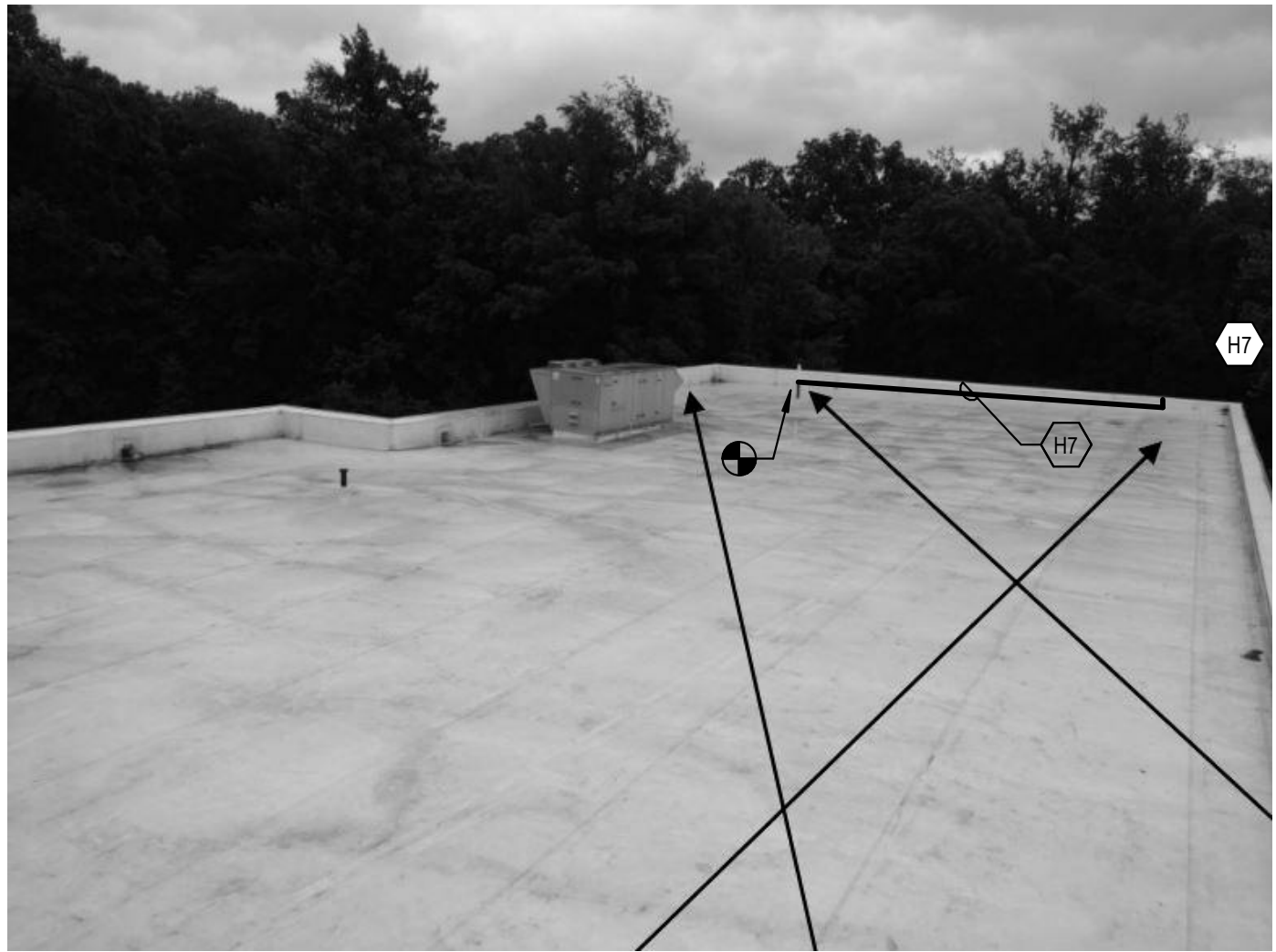
ENLARGED MECHANICAL ROOM 122
1/8" = 1'-0"



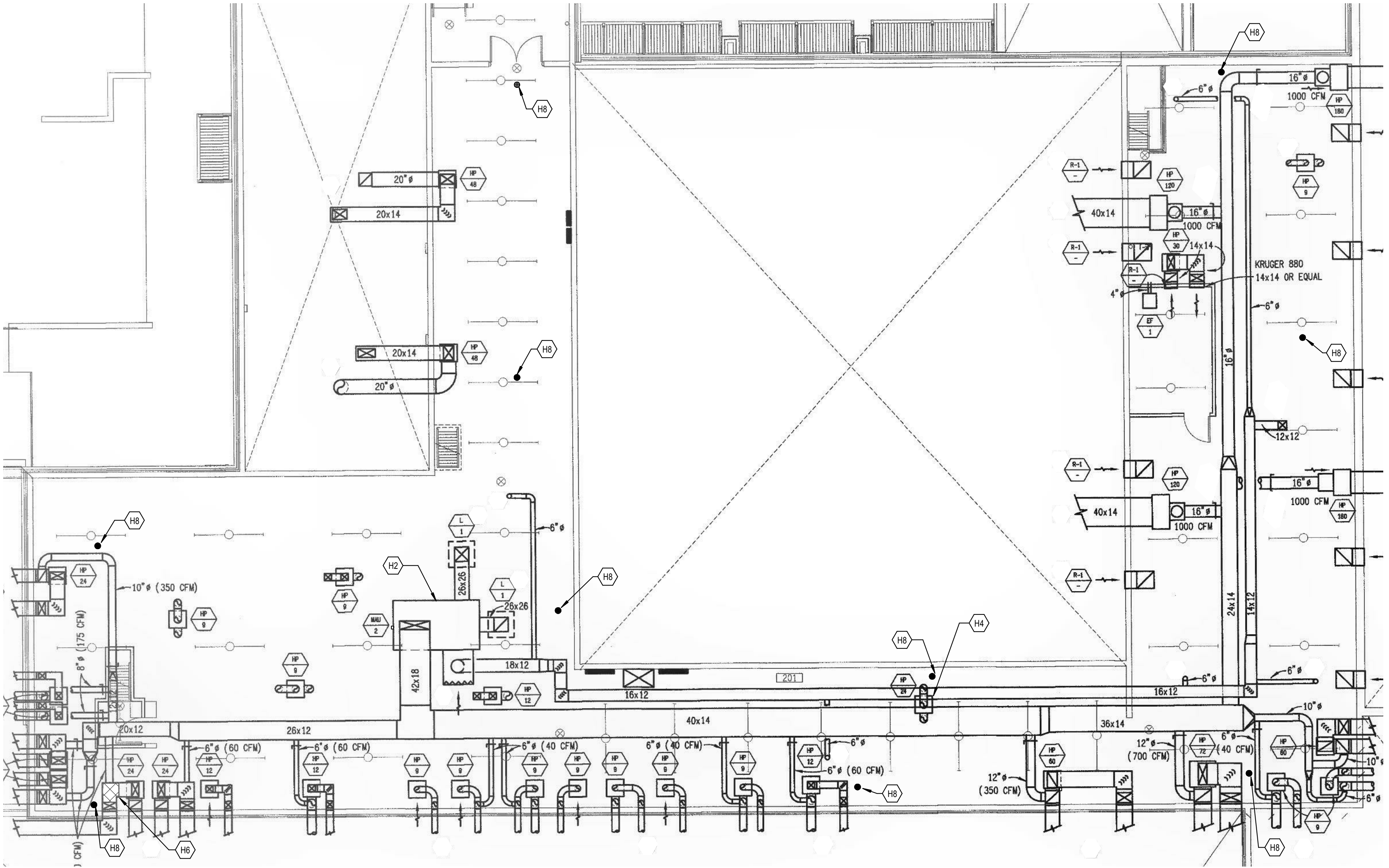
ENLARGED MECHANICAL ROOM 148
1/8" = 1'-0"



EXISTING CONDITION FOR TRAP PRIMER INSTALLATION



EXTEND EXISTING VENT LOCATION



ENLARGED MECHANICAL MEZZANINE
1/8" = 1'-0"

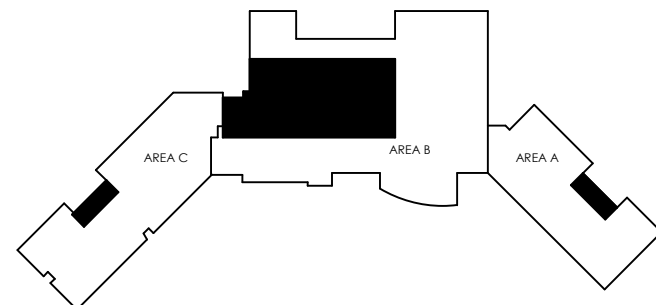
TAGGED NOTES

- H1 REMOVE EXISTING FAILED HEAT ENERGY RECOVERY WHEEL TO EXISTING MAKE-UP AIR UNIT, MAU-1 MODEL VPRE-210-20A-40E-C-1AA, SERIAL NO. 12386621. PROVIDE AND INSTALL NEW ENERGY RECOVERY WHEEL. CLEAN EXISTING COILS AND GREASE ALL MOTORS, BEARINGS, AND DAMPERS OF EXISTING MAKE-UP AIR UNIT.
- H2 REMOVE ONE OF THE TWO EXHAUST FAN MOTORS WITH BAD BEARINGS TO EXISTING MAKE-UP AIR UNIT, MAU-2 MODEL VPRE-210-20H-WSHP-C-4CA, SERIAL NO. 12386622. PROVIDE AND INSTALL NEW EXHAUST FAN MOTOR. REMOVE OVERHEATED VFD AND PROVIDE AND INSTALL NEW VFD FOR FAN FOR MAU-2. REMOVE FAILED SPACE TEMPERATURE SENSOR AND PROVIDE AND INSTALL NEW SPACE TEMPERATURE SENSOR FOR MAU-2. CLEAN EXISTING COILS AND GREASE ALL MOTORS, BEARINGS, AND LOUVERS OF EXISTING MAKE-UP AIR UNIT.
- H3 RECOVER REFRIGERANT AND LEAK CHECK BOTH REFRIGERANT CIRCUITS OF EXISTING MAKE-UP AIR UNIT, MAU-3 MODEL VPRE-210-20H-WSHP-C-1AA, SERIAL NO. 12386623. REPAIR, PULL VACUUM, AND WEIGH IN CORRECT REFRIGERANT CHARGE TO EXISTING UNIT. REMOVE BOTH OF THE TWO (2) SUPPLY FAN MOTORS AND PROVIDE AND INST TWO (2) NEW SUPPLY FAN MOTORS. REMOVE EXISTING HEAT WHEEL, HEAT WHEEL BELT, AND HEAT WHEEL MOTOR OF EXISTING MAU-3. PROVIDE AND INSTALL NEW ENERGY RECOVERY WHEEL, WHEEL BELT AND WHEEL MOTOR FOR EXISTING MAU-3. REMOVE FAILED EXHAUST FAN MOTOR AND PROVIDE AND INSTALL NEW EXHAUST FAN MOTOR. PROVIDE AND INSTALL NEW CONDENSATE TRAP. CLEAN EXISTING COILS AND GREASE ALL MOTORS, BEARINGS, AND DAMPERS OF EXISTING MAKE-UP AIR UNIT.
- H4 PROVIDE FILTER RACK COVERS/GUARDS ON EXISTING FILTER SECTION OF EXISTING HEAT PUMP. TYPICAL OF ALL FIFTY-NINE (59) HEAT PUMPS.
- H5 PROVIDE AND INSTALL PRECISION PLUMBING PRODUCTS MODEL PRIME-TIME PTS-12, ELECTRIC TRAP PRIMING MANIFOLD OR EQUIVALENT. PROVIDE WITH ATMOSPHERIC VACUUM BREAKER, PRE-SET 24 HOUR CLOCK, MANUAL OVERRIDE SWITCH, 120 VOLT SOLENOID VALVE WITH 120V/3WIRE CONNECTION. PROVIDE IN 12"x12" SURFACE MOUNTED METAL CABINET. PROVIDE WITH 12 OPENING MANIFOLD. UNUSED MANIFOLD OPENINGS SHALL BE CAPPED. INSTALL UNIT AS REQUIRED BY MANUFACTURER. REFER TO EXISTING CONDITION FOR TRAP PRIMER INSTALLATION INDICATING PROVIDED DOMESTIC WATER SUPPLY WITH SHUT-OFF VALVE AND WATER SUPPLY LINES PROVIDED TO EXISTING FLOOR DRAINS.
- H6 PROVIDE AND INSTALL RETURN AIR DUCT TRANSITION TO EXISTING OPEN-ENDED RETURN AIR DUCT AND 14"x12" RETURN AIR DUCT TO EXISTING FLOOR OPENING IN MEZZANINE SLAB. SHEET METAL SHALL EXTEND TO ABOVE CEILING SPACE AND TERMINATE OPEN-ENDED. SEAL DUCT PENETRATION AIR-TIGHT.
- H7 EXTEND SCHEDULE 40 GALVANIZED STEEL VENT PIPING ON ROOF TO REROUTE APPROXIMATELY 40' FROM MAKE-UP AIR UNIT INTAKE. PROVIDE ROOF WALKING PADS WITH CMU ANCHORS AND SUPPORTS FOR LATERAL VENT PIPING.
- H8 PROVIDE AND INSTALL 4" SURESEAL FLOOR DRAIN TRAP SEALER OR EQUAL TO EXISTING FLOOR DRAIN.

GENERAL NOTES

- A. PROVIDE NEW BUILDING MANAGEMENT SYSTEM WITH FRONT END GRAPHICS AND PROGRAMMING FOR THE EXISTING THREE (3) MAKE-UP AIR UNITS, BOILER PLANT, FIFTY-NINE (59) HEAT PUMPS, BUILDING ENERGY MONITORING, AND ALL CURRENT VENTILATION CONTROLS (I.E. CAFETERIA, GYM, ETC.). REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- B. EXISTING EQUIPMENT TAGS FOR REFERENCE ONLY. EQUIPMENT IS EXISTING TO REMAIN.

KEY PLAN



SCALE: NTS

rostarrant
architects

101 old ladyette avenue | lexington, kentucky 40502 | p. 859.254.4018

NOT FOR
CONSTRUCTION

MECHANICAL PLAN

ESTILL COUNTY WEST IRVINE ESSER II PROJECT

FOR:

ESTILL COUNTY SCHOOLS

IRVINE, KENTUCKY

M.E.&P. Engineer:
CMIA, Inc.
2429 Members Way
Lexington, KY 40504
p. 859.253.0892

BG# 21-244

Project No.: XEWI21
Drawn By: CRK
Rev'd By: CMR

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MECHANICAL PLAN

DATE ISSUED:
APRIL 15, 2021