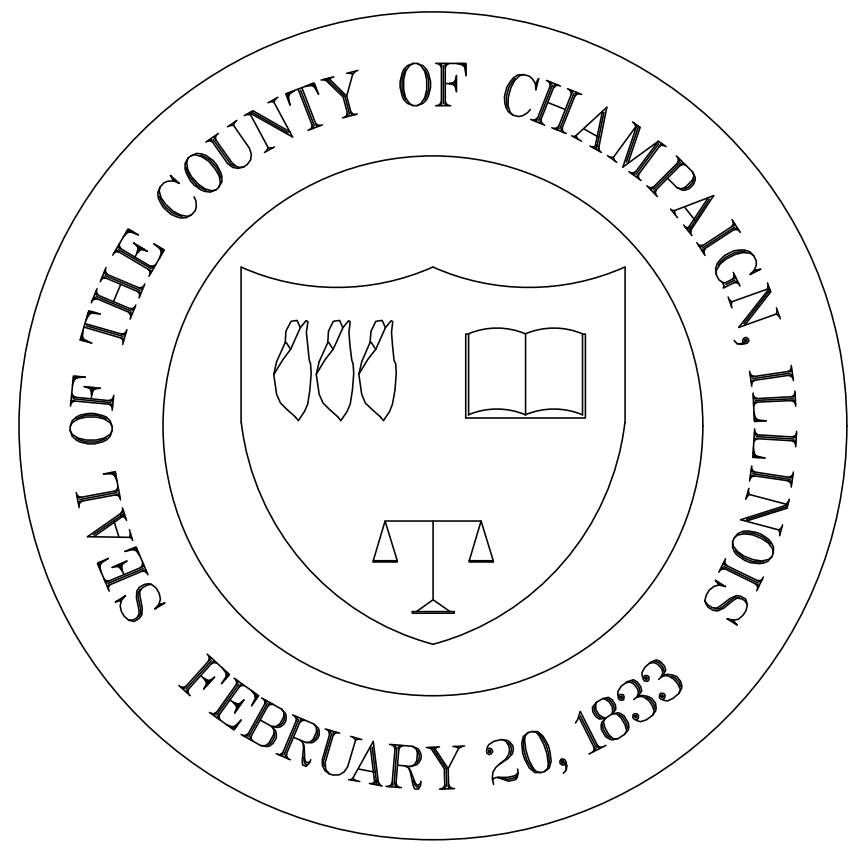
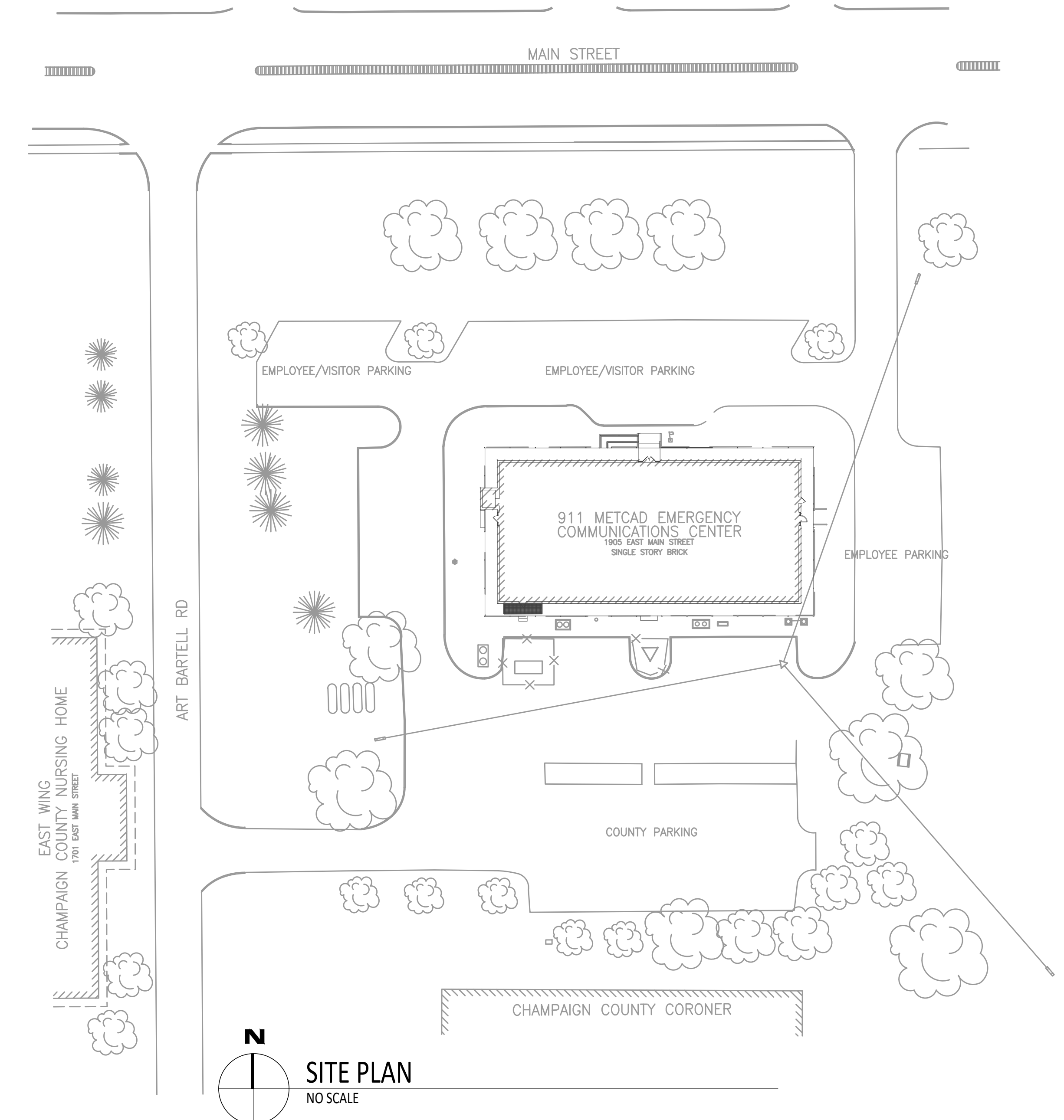
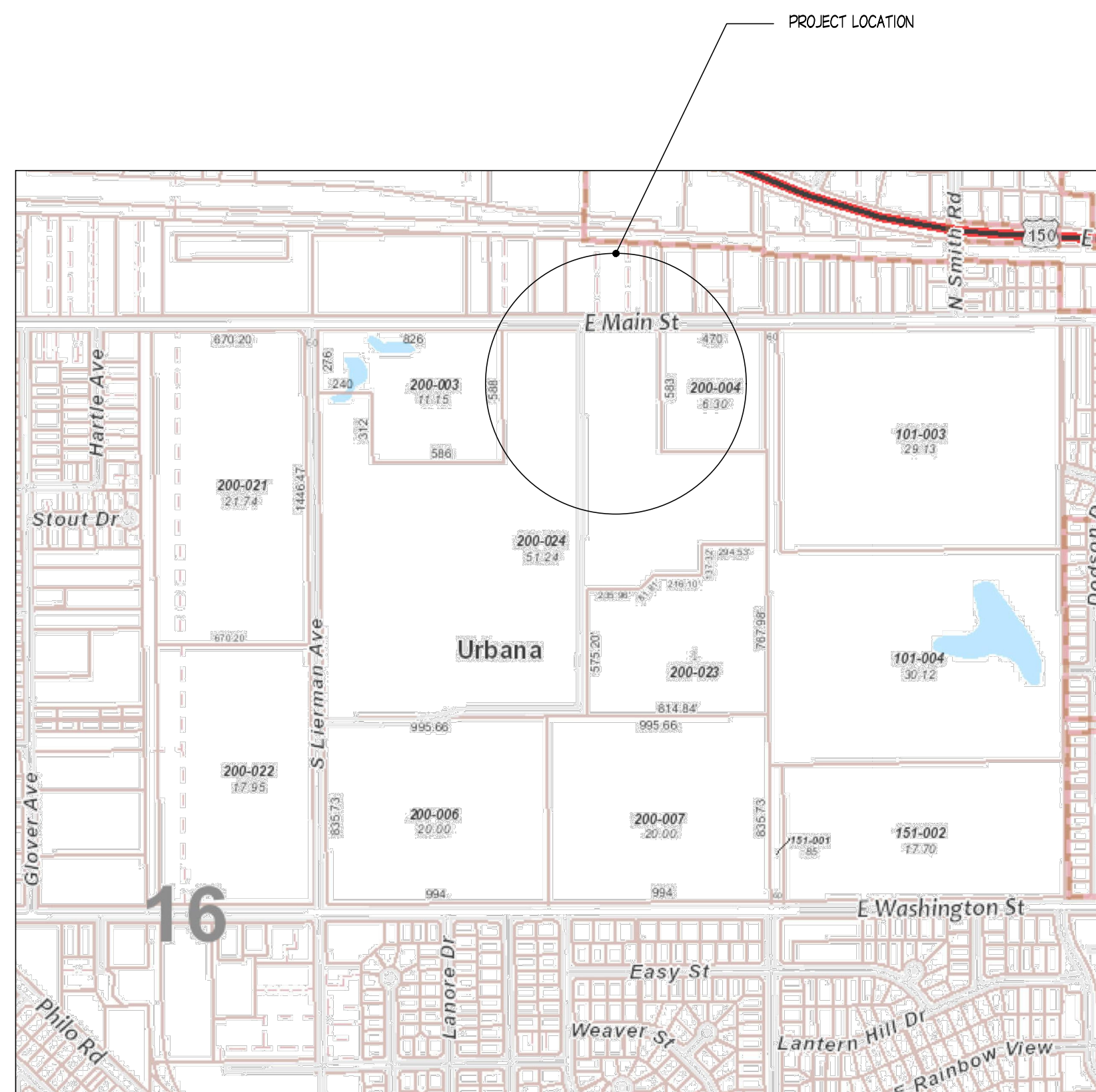




CHAMPAIGN COUNTY ADMINISTRATIVE SERVICES

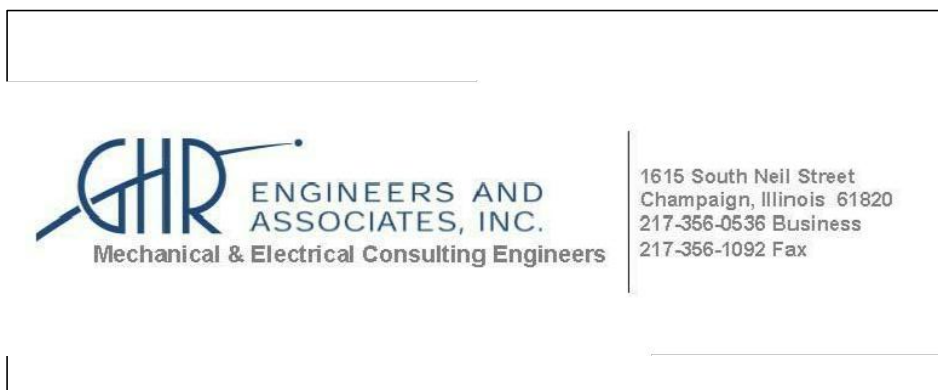
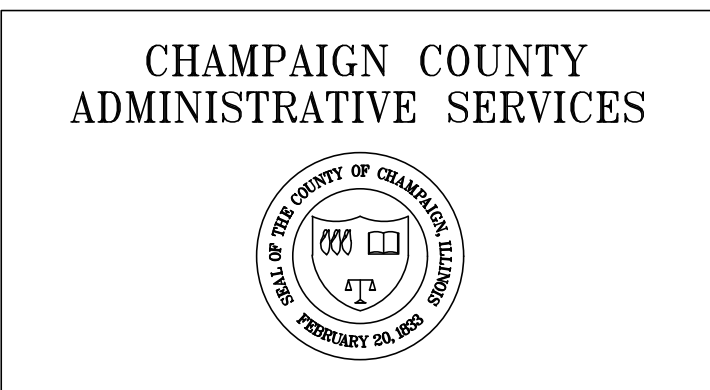
911 METCAD EMERGENCY COMMUNICATIONS CENTER LOWER LEVEL MECHANICAL REMODEL 1905 EAST MAIN STREET URBANA, ILLINOIS 61801

GHR Engineers & Associates, Inc.	
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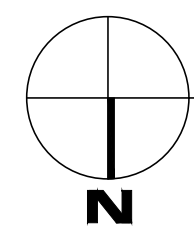
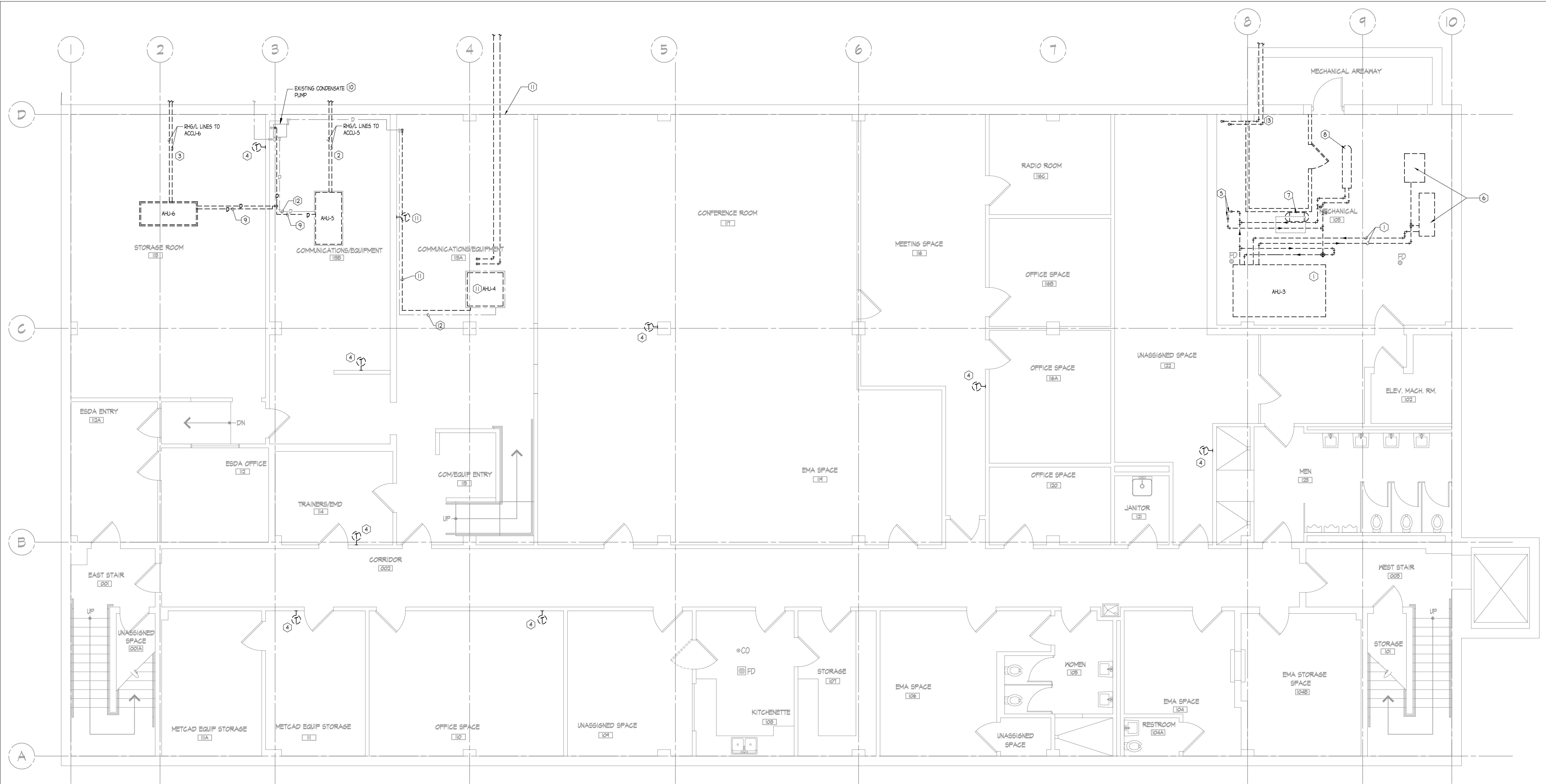
DATE	NO.	DESCRIPTION



COVER SHEET	
911 METCAD EMERGENCY COMMUNICATIONS CENTER	
CHAMPAIGN COUNTY OFFICE BUILDING	1905 E. MAIN ST.
URBANA, ILLINOIS	

DATE	NO.	DESCRIPTION
MLT	JNG	DEC 4, 2019
BID DOCUMENTS	7205	
SHEET:	C-1	

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LOWER LEVEL FLOOR PLAN - HEATING DEMOLITION
SCALE: 1/4" = 1'-0"



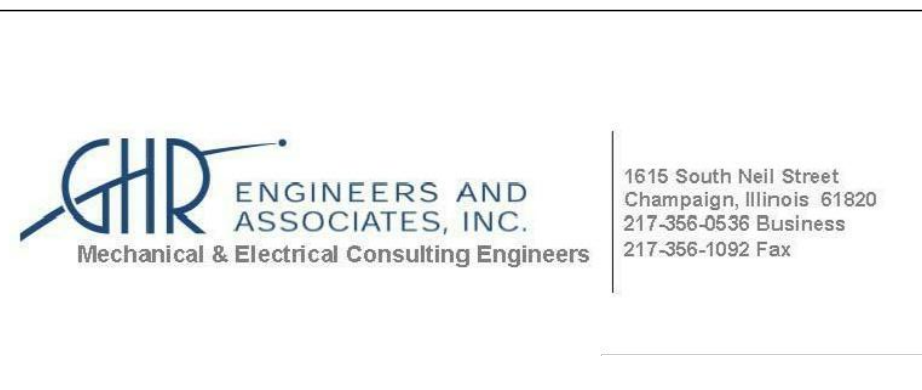
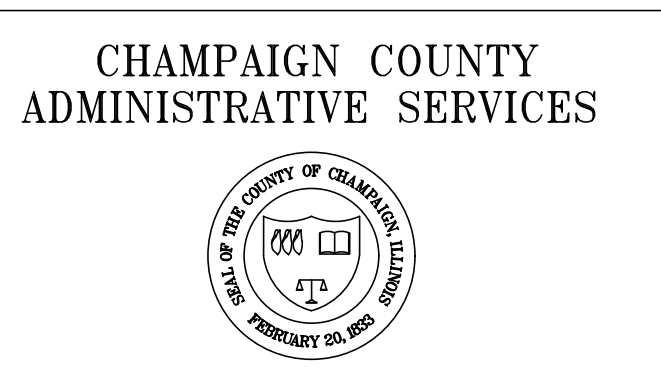
KEYED NOTES - (FOR THIS SHEET ONLY) (SYMBOL)

1. REMOVE EXISTING AHU-3 AND ASSOCIATED RHG, L LINES TO UNIT ACQU-3 ON GRADE ABOVE.
2. REMOVE EXISTING AHU-5 AND ASSOCIATED RHG, L LINES PATCH AND SEAL WALL AS REQUIRED.
3. REMOVE EXISTING AHU-6 AND ASSOCIATED RHG, L LINES PATCH AND SEAL WALL AS REQUIRED.
4. EXISTING PNEUMATIC THERMOSTAT & ASSOCIATED LINES TO BE REMOVED.
5. REMOVE EXISTING H4 PIPING BACK TO RISERS AND INSTALL BALL VALVES TO FACILITATE NEW CONNECTIONS.
6. EXISTING ACQU-3 REFRIGERANT EQUIPMENT TO BE REMOVED.
7. EXISTING CONTROLS COMPRESSOR TO BE REMOVED. REMOVE ASSOCIATED PNEUMATIC TUBING.
8. ABANDONED HEAT EXCHANGER TO BE REMOVED.
9. REMOVE CONDENSATE DRAIN LINE BACK TO CONDENSATE PUMP AS SHOWN.
10. EXISTING CONDENSATE PUMP TO REMAIN. VERIFY IN PROPER WORKING ORDER.
11. ALTERNATE #2 REMOVE EXISTING AHU-4 AND ASSOCIATED REFRIGERANT AND CONDENSATE DRAIN LINE. EXISTING PNEUMATIC THERMOSTAT & ASSOCIATED LINES TO BE REMOVED. SUPPLEMENTAL DRAIN PAN AND CONDENSATE DRAIN LINE TO REMAIN.
12. EXISTING DRAIN LINE FROM SUPPLEMENTAL DRAIN PAN TO REMAIN.
13. REMOVE EXISTING REFRIGERANT PIPING FROM AHU-1.

GENERAL NOTES:

1. COORDINATE ALL MECHANICAL AND ELECTRICAL DEMOLITION AND NEW WORK WITH OWNER AND OTHER TRADES.
2. FIELD VERIFY EXISTING CONDITIONS TO COORDINATE FOR INSTALLATION OF NEW WORK AND EQUIPMENT.
3. VERIFY PROPER OPERATION OF EXISTING HOT WATER SYSTEM.
4. FIELD VERIFY ALL EXISTING PIPE SIZES FOR NEW CONNECTIONS.
5. COORDINATE CRANE LIFT LOCATIONS, DATES AND TIMES WITH OWNER. THE HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE ASPHALT OR SOIL FROM THE CRANE WORK.
6. REMOVE ALL EXISTING DUCTWORK AND GRILLES/DIFFUSERS UNLESS NOTED TO REMAIN.

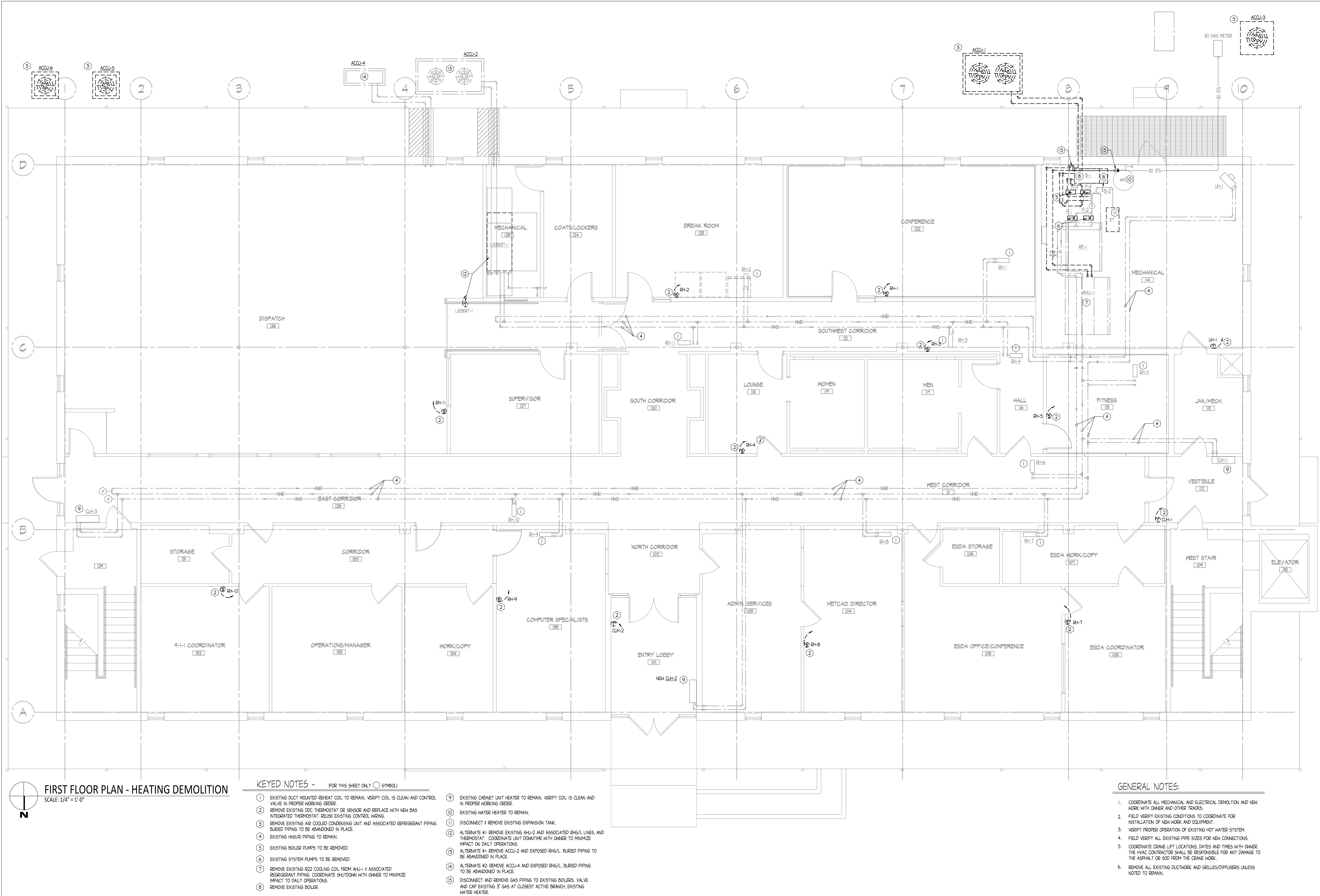
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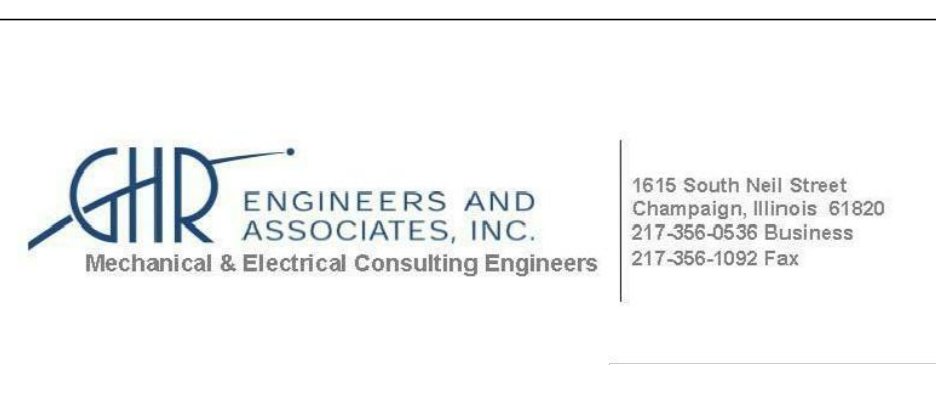
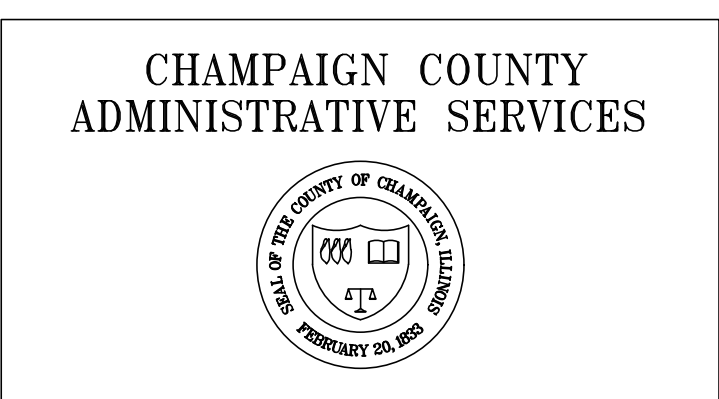
LOWER LEVEL FLOOR PLAN - HEATING DEMOLITION
911 METCAD EMERGENCY COMMUNICATIONS CENTER
CHAMPAIGN COUNTY OFFICE BUILDING
1905 E. MAIN ST. URBANA, ILLINOIS

SEAL	DRAWN: MSH DATE: DEC 4, 2019 PROJECT: 7205	APPROVED: JNG DATE: DEC 4, 2019 PROJECT: 7205	SHEET: HD-1
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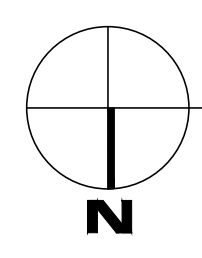


FIRST FLOOR PLAN - HEATING DEMOLITION

911 METCAD EMERGENCY COMMUNICATIONS CENTER

CHAMPAIGN COUNTY OFFICE BUILDING
1905 E. MAIN ST. URBANA, ILLINOIS

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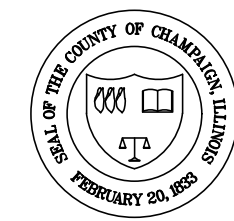
SCALE: 1/4" = 1'-0"



- 1) TC TO INSTALL NEW DDC THERMOSTAT. INTEGRATE WITH BAS.
- 2) NEW 3/4" HWS PIPING TO VAV BOXES. SEE DETAIL 
- 3) NEW 3/4" HWR PIPING FROM VAV BOXES. SEE DETAIL 
- 4) PROVIDE AND INSTALL NEW VAV BOXES. SEE AHJ-03 VARIABLE AIR VOLUME BOX SCHEDULE SHEET V-3.
- 5) CONNECT NEW HWS/R PIPING TO EXISTING RISERS. INSTALL NEW BALANCING VALVE AT RISERS. CUT, PATCH AND SLEEVE THROUGH WALLS AS REQUIRED.
- 6) PROVIDE AND INSTALL NEW VRF CASSETTE. SEE VRF CASSETTE SCHEDULE SHEET H-4.
- 7) NEW RHG/L FROM VRF CASSETTES TO NEW ACQ-4 ON ROOF ABOVE. SIZE PER MANUFACTURER WRITTEN INSTRUCTIONS. SLEEVE AND CORE THROUGH WALLS AS SHOWN AND FLOOR SLAB TO MECH 125. PATCH & SEAL FLOOR AND WALLS AS REQUIRED.
- 8) PROVIDE AND INSTALL NEW CRQJ-5 COMPUTER ROOM COOLING EQUIPMENT OVER EXISTING SUPPLEMENTAL DRAIN PAN. SEE SCHEDULE OF COMPUTER ROOM COOLING EQUIPMENT. SHEET H-4.
- 9) NEW RHG/L FROM CRQJ-5 TO NEW ACQ-5 ON ROOF ABOVE. SIZE PER MANUFACTURER WRITTEN INSTRUCTIONS. SLEEVE AND CORE THROUGH WALLS AS SHOWN AND THROUGH FLOOR SLAB TO MECH 125. PATCH AND SEAL FLOOR AND WALLS AS REQUIRED.
- 10) PROVIDE AND INSTALL NEW AHJ-3. SEE AHJ SCHEDULE V-3.
- 11) ROUTE NEW RHG/L BETWEEN AHJ-3 AND NEW ACQ-3 ON GRADE ABOVE THROUGH AREA WELL. RE-USE EXISTING WALL PENETRATIONS. PATCH AND SEAL AS REQUIRED. SIZE PER MANUFACTURER WRITTEN INSTRUCTIONS. PATCH AND SEAL EXTERIOR WALL AS REQUIRED.
- 12) ALTERNATE H2: PROVIDE AND INSTALL NEW CRQJ-4 AND ASSOCIATED RH/L TO NEW ACQ-4 ON ROOF ABOVE. PROVIDE NEW PIPING TO EXISTING CONDENSATE PUMP. SEE SCHEDULE OF COMPUTER ROOM COOLING UNITS SCHEDULE ON H-4.
MOUNT CRQJ-4 OVER EXISTING SUPPLEMENTAL DRAIN PAN.
- 13) CONNECT VAV03-06 TO HOT WATER SYSTEM WITH 3-WAY VALVE. SEE DETAIL 
- 14) TC TO ADD NEW HIGH WATER ALARM TO EXISTING CONDENSATE PUMP. INTEGRATE WITH BAS.
- 15) TC TO ADD NEW HIGH WATER ALARM TO EXISTING SUMP PUMP. INTEGRATE WITH BAS.
- 16) PROVIDE FLOOR LEVEL MOISTURE SENSOR. THE TIO BAS PROVIDE ALARM IF MOISTURE IS DETECTED. CONFIRM FINAL LOCATION WITH OWNER.
- 17) NEW TEMPERATURE CONTROL PANEL.
- 18) INSTALL NEW DIFFERENTIAL PRESSURE SENSOR.

1. COORDINATE ALL WORK WITH OWNER AND OTHER TRADES.
2. INSTALL ALL EQUIPMENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
3. FIELD VERIFY EXISTING CONDITIONS TO COORDINATE FOR INSTALLATION OF NEW WORK AND EQUIPMENT.
4. VERIFY PROPER OPERATION OF EXISTING HOT WATER SYSTEM.
5. FIELD VERIFY ALL EXISTING PIPE SIZES FOR NEW CONNECTIONS.

DATE	NO.	DESCRIPTION



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LOWER LEVEL FLOOR PLAN - HEATING
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CHAMPAIGN COUNTY OFFICE BUILDING
1905 E. MAIN ST. URBANA, ILLINOIS

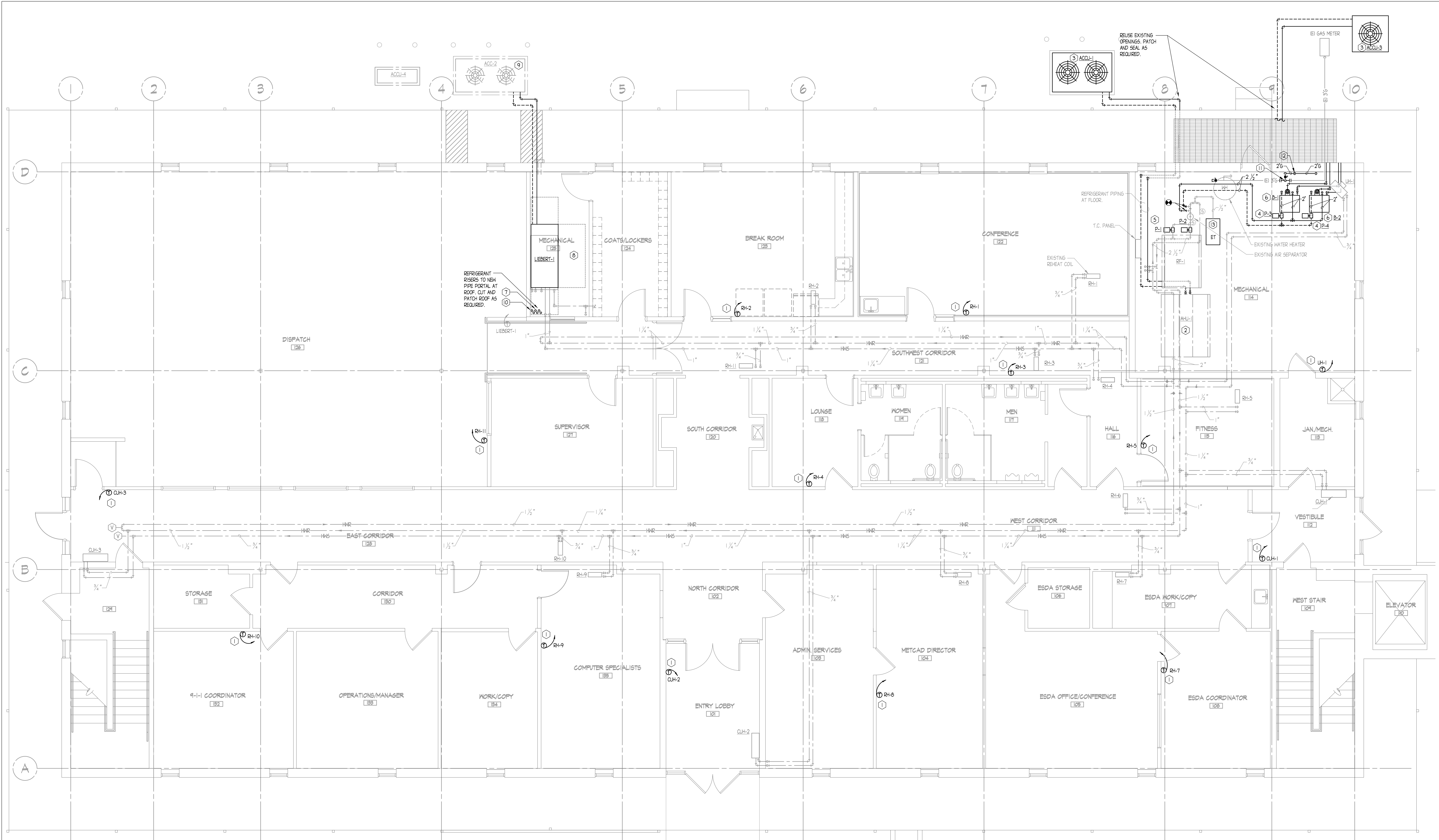
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LOWER LEVEL FLOOR PLAN - HEATING DEMOLITION
SCALE: 1/4" = 1'-0"

KEYED NOTES - (FOR THIS SHEET ONLY) (SYMBOL)

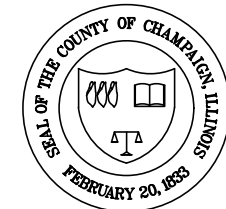
1. T.C. TO PROVIDE AND INSTALL NEW D.C. THERMOSTAT. INTEGRATE WITH BAS.
2. PROVIDE & INSTALL NEW R410A COOLING COIL FOR AHU-1. SEE AHU SCHEDULE SHEET H-4. REUSE EXISTING CONCRETE PAD.
3. PROVIDE & INSTALL NEW R410A CONDENSING UNIT. SEE SCHEDULE SHEET H-4. RE-USE EXISTING CONCRETE PAD.
4. PROVIDE AND INSTALL NEW BOILER PUMP. SEE PUMP SCHEDULE SHEET H-4.
5. PROVIDE AND INSTALL NEW SYSTEM PUMPS P-1 & P-2. T.C. TO INTEGRATE INTO BAS. SEE PUMP SCHEDULE SHEET H-4.
6. PROVIDE AND INSTALL NEW CONDENSING TYPE BOILERS AND ASSOCIATED PIPES AND INTAKES. SEE BOILER SCHEDULE SHEET H-4. SEE DETAILS 9 & 10.
7. ROUTE NEW R6/L UP TO ACQU-5 AND ACQU-6 ON ROOF ABOVE. CUT, PATCH AND SEAL ROOF WATER TIGHT AS REQUIRED.
8. ALTERNATE #1: PROVIDE AND INSTALL NEW AHU-2.
9. ALTERNATE #1: PROVIDE AND INSTALL NEW ACC-2 IN LOCATION OF EXISTING. SLEEVE AND COSE THROUGH EXTERIOR WALL FOR NEW R6/L CONNECTIONS. SIZE R6/L PIPING PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
10. ALTERNATE #2: PROVIDE AND INSTALL NEW ACQU-4 ON ROOF ABOVE.
11. CONNECT NEW 2" GAS TO EXISTING 3" GAS PIPING.
12. 1-1/4" GAS DN TO BOILER. PROVIDE AND INSTALL SHUT-OFF AND 6" DRIP LEG.
13. NEW EXPANSION TANK. SIZE TO MATCH EXISTING.

GENERAL NOTES:

1. COORDINATE ALL WORK AND PENETRATIONS THROUGH THE WALLS WITH STRUCTURE, OWNER AND OTHER TRADES.
2. INSTALL ALL EQUIPMENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
3. FIELD VERIFY EXISTING CONDITIONS TO COORDINATE FOR INSTALLATION OF NEW WORK AND EQUIPMENT.
4. VERIFY PROPER OPERATION OF EXISTING HOT WATER SYSTEM.
5. FIELD VERIFY ALL EXISTING PIPE SIZES FOR NEW CONNECTIONS.
6. COORDINATE FINAL POWER AND CONTROL WIRING CONNECTIONS WITH ELECTRICAL AND TEMPERATURE CONTROL SUB-CONTRACTOR.

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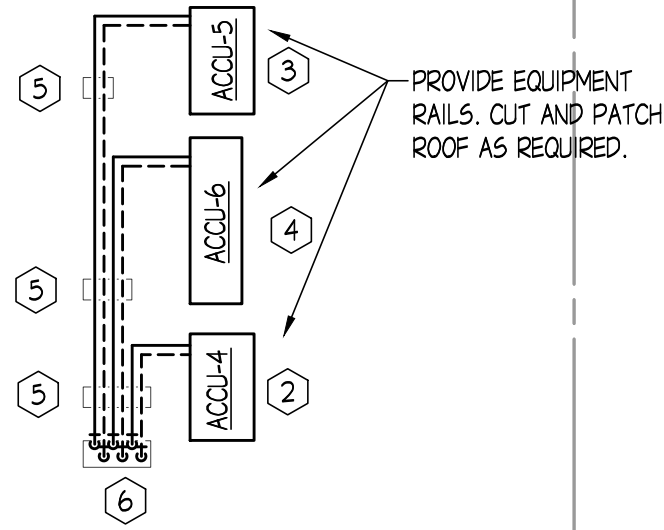
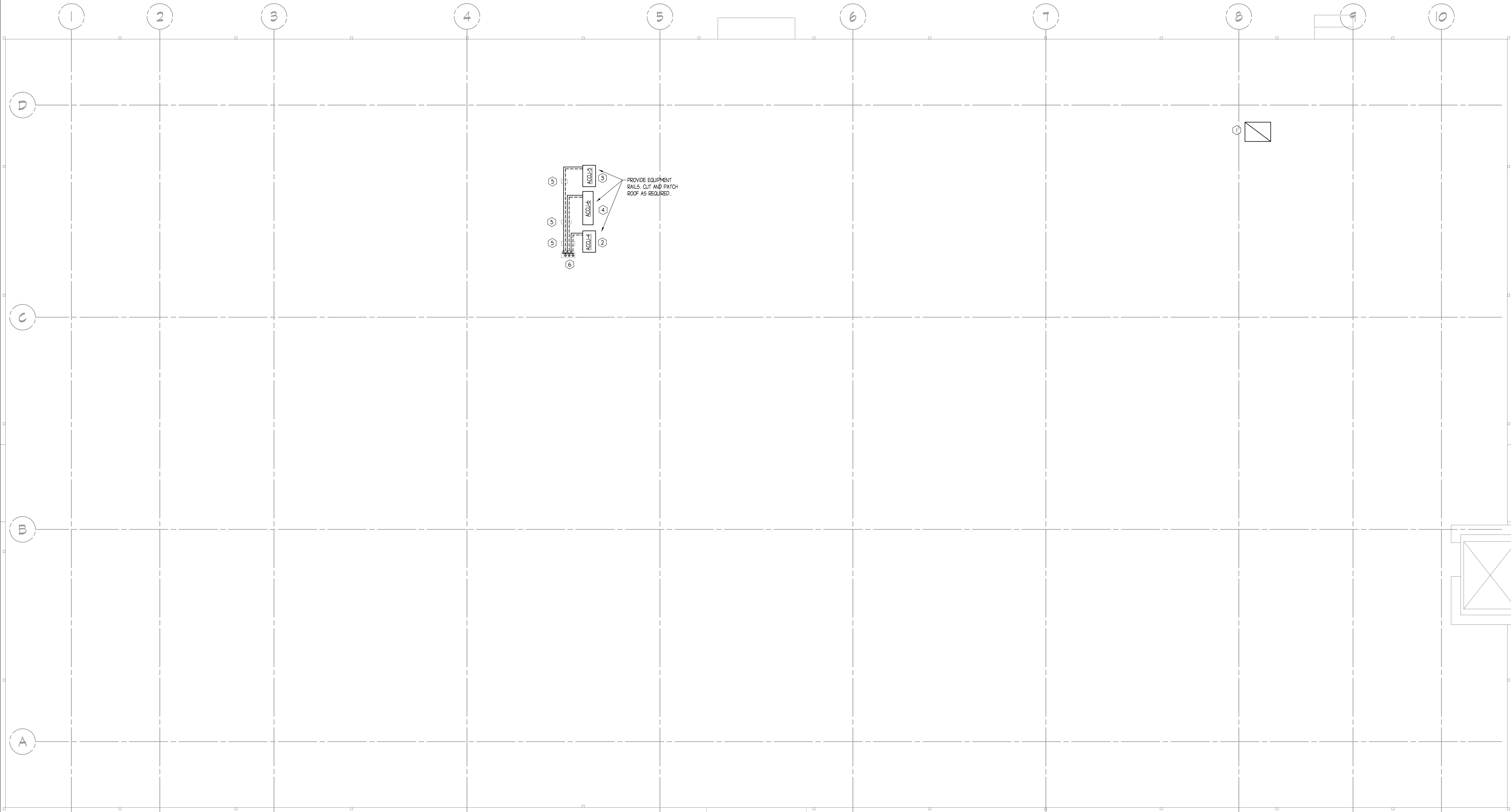
1915 South Neil Street
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217-366-1092 Fax

FIRST FLOOR PLAN - HEATING
911 METCAD EMERGENCY COMMUNICATIONS CENTER
CHAMPAIGN COUNTY OFFICE BUILDING
1905 E. MAIN ST. URBANA, ILLINOIS

DATE	NO.	DESCRIPTION
MSH	JNG	
DATE	DEC 4, 2019	
BID DOCUMENTS		
PROJECT	7205	

SHEET: **H-2**

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- KEYED NOTES - (FOR THIS SHEET ONLY ○ SYMBOL)
- 1. INSTALL NEW AHU-3 GOOSENECK THROUGH ROOF. SEE DETAIL. (7 V-3)
 - 2. ALTERNATE #2: INSTALL NEW ACCU-4 PER MANUFACTURER WRITTEN INSTRUCTIONS. SEE DETAIL. (8 H-A)
 - 3. INSTALL NEW ACCU-5 PER MANUFACTURER WRITTEN INSTRUCTIONS. SEE DETAIL. (8 H-A)
 - 4. INSTALL NEW ACCU-6 PER MANUFACTURER WRITTEN INSTRUCTIONS. SEE DETAIL. (8 H-A)
 - 5. PROVIDE PIPE SUPPORTS. SEE DETAIL. (7 H-A)
 - 6. PROVIDE PIPE PORTAL. SEE DETAIL. (8 H-A)

- GENERAL NOTES:
- 1. COORDINATE ALL WORK WITH OWNER AND OTHER TRADES.
 - 2. INSTALL ALL EQUIPMENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
 - 3. FIELD VERIFY EXISTING CONDITIONS TO COORDINATE FOR INSTALLATION OF NEW WORK AND EQUIPMENT.
 - 4. COORDINATE ALL ROOF WORK WITH HOLDER OF WARRANTY.

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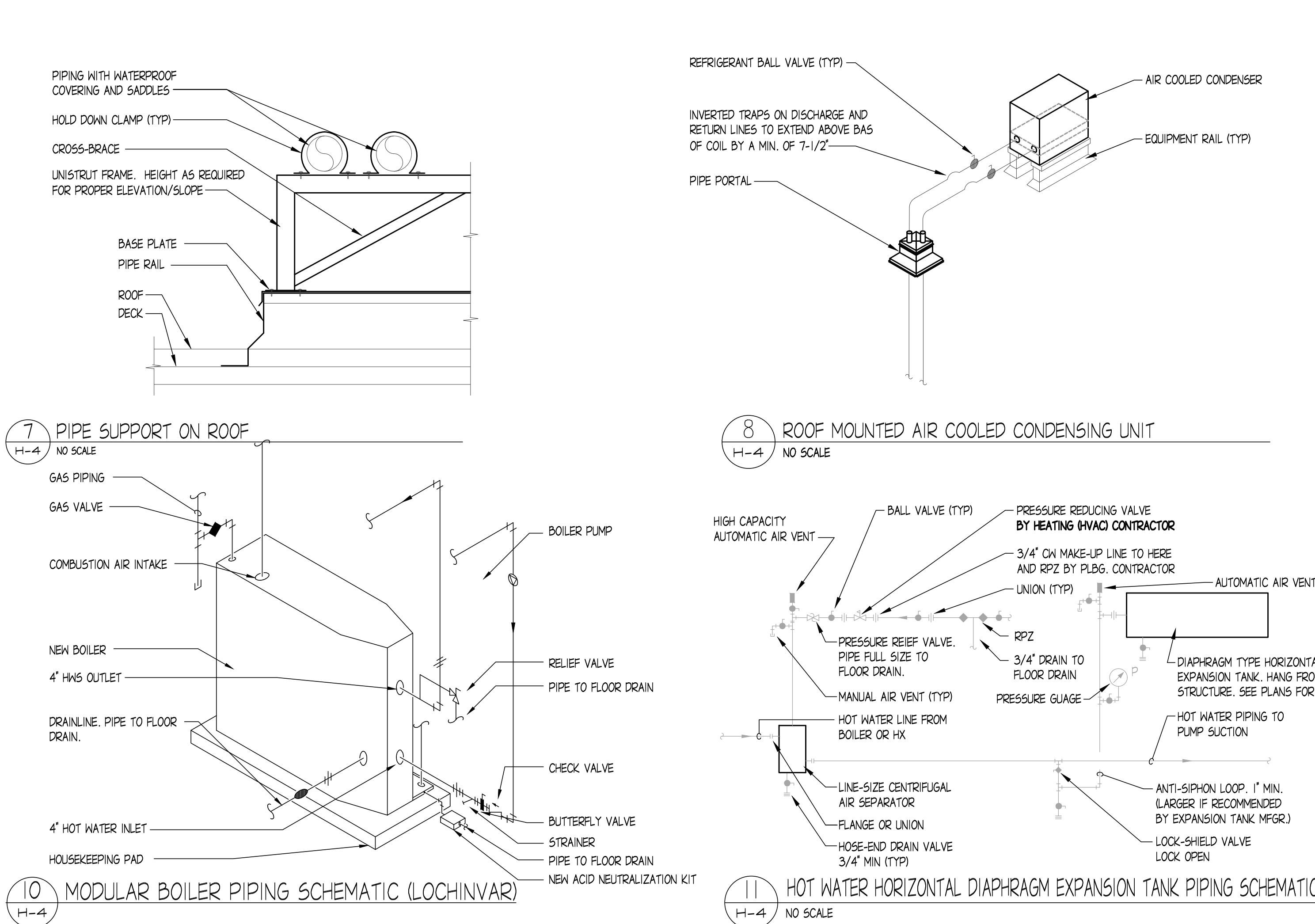
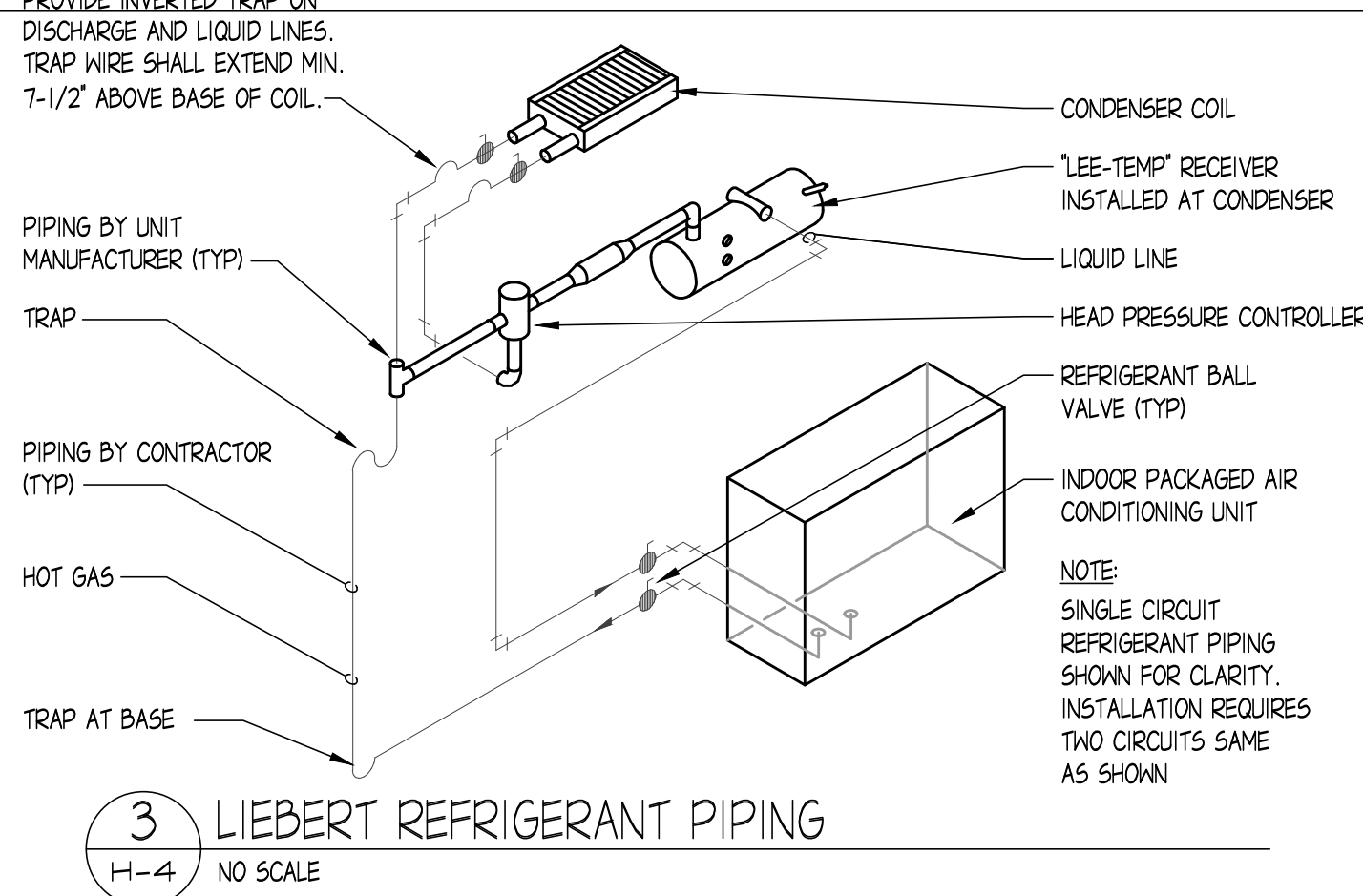
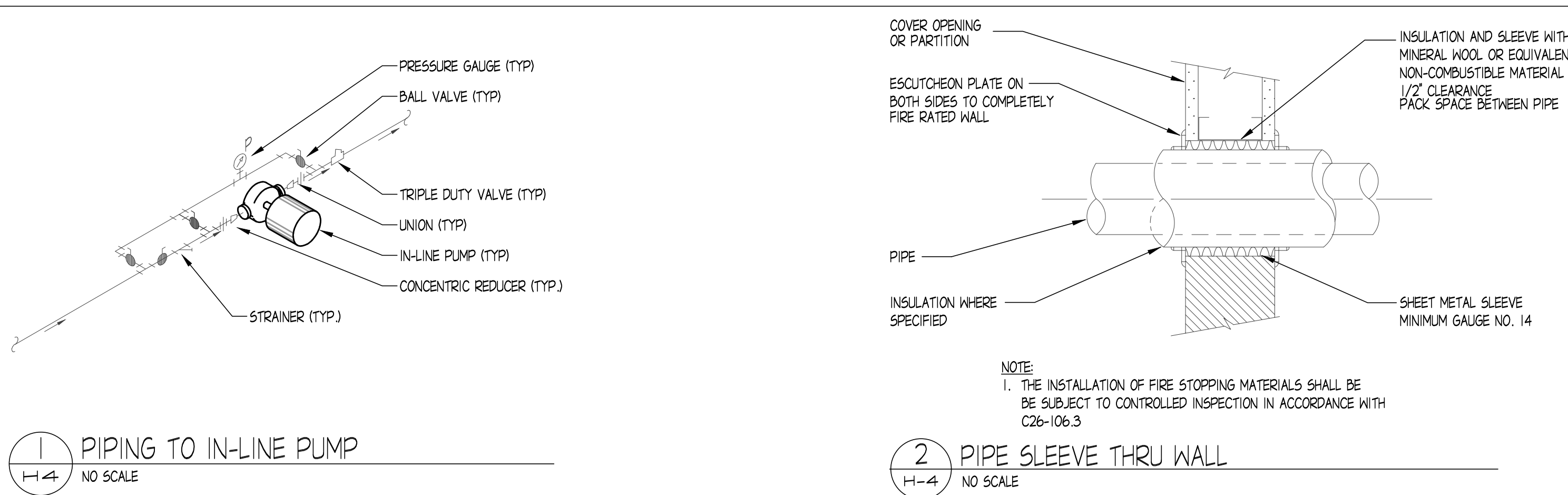
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ROOF PLAN - HEATING

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MECHANICAL ABBREVIATIONS					
ACCU	AIR COOLED CONDENSING UNIT	FD	FIRE DAMPER	PRV	PRESSURE REDUCING VALVE
AHU	AIR HANDLING UNIT	FFP	FINS PER FOOT	PSI	POUNDS PER SQUARE INCH
APD	AIR PRESSURE DROP	FFM	FEET PER MINUTE	QTY	QUANTITY
B	BOILER	GPM	GALLONS PER MINUTE	RA	RETURN AIR
BAS	BUILDING AUTOMATION SYSTEM	HPSA	HIGH PRESSURE SUPPLY AIR	RAD	RETURN AIR DAMPER
BTU	BRITISH THERMAL UNIT	HVAC	HEATING, VENTILATION & AIR CONDITIONING	REFRIG	REFRIGERANT
BTUH	BRITISH THERMAL UNIT PER HOUR	IN	INCH	RF	RETURN FAN
CAV	CONSTANT AIR VOLUME UNIT	IN W.C.	INCHES IN WATER COLUMN	RHC	REHEAT COIL
CD	CONDENSATE DRAIN	KW	KILOWATT	RLA	RELIEF AIR DAMPER
CFM	CUBIC FEET PER MINUTE	LA	LEAVING AIR TEMPERATURE	SF	SUPPLY FAN
CP	CONTROL PANEL	LBS	POUNDS	SP	STATIC PRESSURE
CRCU	COMPUTER ROOM COOLING UNIT	LF	LINEAR FEET	SQ. FT.	SQUARE FEET
D	DRAIN	LPSA	LOW PRESSURE SUPPLY AIR	SS	STAINLESS STEEL
DB	DRY BULB	MAX	MAXIMUM	T	THERMOSTAT
DDC	DIRECT DIGITAL CONTROL	MBH	THOUSAND BTU PER HOUR	UH	UNIT HEATER
DEG.F	DEGREE FAHRENHEIT	MCA	MINIMUM CIRCUIT AMPERES	VAV	VARIABLE AIR VOLUME
DIA	DIAMETER	MECH	MECHANICAL	VD	VOLUME DAMPER
DIFF	DIFFUSER	MFR	MANUFACTURER	VEL	VELOCITY
DN	DOWN	MIN	MINIMUM	VFD	VARIABLE FREQUENCY DRIVE
DX	DIRECT EXPANSION	MOCP	MAXIMUM OVER CURRENT PROTECTION	VRF	VARIABLE REFRIGERANT FLOW UNIT
EA	EXHAUST AIR	NTS	NOT TO SCALE	W	WATT
EAT	ENTERING AIR TEMPERATURE	OA	OUTDOOR AIR	WB	WET BULB
EER	ENERGY EFFICIENCY RATING	OAD	OUTDOOR AIR DAMPER	WPD	WATER PRESSURE DROP
EF	EXHAUST FAN	P	PUMP	10" Ø	ROUND DUCTWORK
EFF	EFFICIENCY	PD	PRESSURE DROP	10" x10"	RECTANGULAR DUCTWORK
EQUIP	EQUIPMENT	PH	PHASE	10" /10" Ø	FLAT OVAL DUCTWORK

DUCT SYMBOLS	
---	1 HR FIRE RATED WALL (VERIFY WITH ARCH LIFE SAFETY PLANS)
---	1 HR SMOKE AND FIRE RATED WALL (VERIFY WITH ARCH LIFE SAFETY PLANS)
---	2 HR FIRE RATED WALL (VERIFY WITH ARCH LIFE SAFETY PLANS)
---	2 HR SMOKE AND FIRE RATED WALL (VERIFY WITH ARCH LIFE SAFETY PLANS)
⊗	SUPPLY DUCT / AIR TERMINAL
⊗	RETURN DUCT / AIR TERMINAL
⊗	EXHAUST DUCT / AIR TERMINAL
⊗	RECTANGULAR - RISE
⊗	RECTANGULAR - DROP
⊗	ROUND DUCT - RISE
⊗	ROUND DUCT - DROP
⊗	SUPPLY DIFFUSER (WITH HARD DUCT)
⊗	SUPPLY DIFFUSER (WITH FLEXDUCT)
⊗	RETURN GRILLE
⊗	EXHAUST GRILLE
⊗	SIDEWALL SUPPLY DIFFUSER
⊗	SIDEWALL RETURN/EXHAUST GRILLE
⊗	FIRE DAMPER
⊗	VOLUME DAMPER
⊗	SQUARE ELL WITH TURNING VANES
⊗	200% CONNECTION WITH VOLUME DAMPER AND FLEX DUCT
⊗	TAKE OFF
⊗	ACCESS DOOR

PIPING SYSTEMS	
HOT WATER SYSTEMS:	
---	HWR
---	HWS
---	HWR
---	HWS
REFRIGERANT SYSTEMS:	
---	RHG
---	RL
---	RHG
---	RL

DUCT SYSTEMS	
EA	EXHAUST AIR
HPSA	HPSA AIR
LPSA	LPSA AIR
OA	OUTSIDE AIR
RLA	RELIEF AIR
RA	RETURN AIR

SCHEDULE OF AIR COOLED CONDENSING UNITS											
MARK	MANUFACTURER	MODEL	LOCATION	CAPACITY (BTU)	VOLTS / PHASE	COMPRESSORS			CONDENSER FANS		
						Number	FLA/MOCP	K.W.	Number	H.P.	Phase
ACCU-1	TRANE	TTA30043C	GRADE	318,000	208-230 / 3	2	102/125	11.7	2	1	1
ACC-2	LIEBERT	MCM080E	GRADE	-	208 / 3	-	4.6/15	-	-	-	-
ACCU-3	TRANE	TTA18043C	GRADE	-	208-230 / 3	2	67/ 110	15.6	2	1	1
ACCU-4	LIEBERT	PPD-067A	ROOF	75,000	208 / 3	1	26.2/50	-	1	-	-
ACCU-5	LIEBERT	PPD-067A	ROOF	75,000	208 / 3	1	26.2/50	-	1	-	-
ACCU-6	MTSUBISHI	PUMT-P60NPM12Z-B51	GRADE	60,000	208-230 / 1	1	36/45	3.9	2	-	-

NOTES
1. PROVIDE EQUIPMENT RAILS
2. REUSE EXISTING PAD
PROVIDE HAIL GUARDS FOR ALL CONDENSING UNITS.

SCHEDULE OF COMPUTER ROOM COOLING UNITS											75°F DB/61°F WB, 45% RH
MARK	MANUFACTURER	MODEL	LOCATION	STYLE	COOLING CAPACITY TOTAL/SENSIBLE (BTU/H)	TOTAL CFM	OUTSIDE AIR (CFM)	ELECTRICAL DATA			REMARKS
								Volts / Phase/ Cycle	FLA	MOCP	
AHU-2	LIEBERT	V5035A	125 MECHANICAL	FLOOR MTD	115,000 / 102,000	5200	N/A	208 / 3	70.7	90	ALT #1, SEE NOTE 1.
CRUJ-4	LIEBERT	MT060	15A COMMUNICATIONS/EQUIP	HANGING	59,7000 / 55,300	-	N/A	208 / 3 / 60	44.8	60	ALT #2, SEE NOTE 2 AND 3.
CRUJ-5	LIEBERT	MT060	15B COMMUNICATIONS/EQUIP	HANGING	59,7000 / 55,300	-	N/A	208 / 3 / 60	44.8	60	SEE NOTE 2.

NOTES
1. INFERRED HUMIDIFIER (1) LB/HR, ELECTRIC RE-HEAT (5 KW)
2. STEAM HUMIDIFIER (BL/HR), ELECTRIC RE-HEAT (11.2 KW), MOUNT WITH SEISMIC BRACING. SEE DETAIL
3. PROVIDE GRILLE ON RETURN OPENING.

VRF CASSETTE SCHEDULE											
MARK	MANUFACTURER	MODEL	LOCATION	STYLE	COOLING CAPACITY (BTU/H)	TOTAL CFM (L/MIN@24-MID-HI)	OUTSIDE AIR (CFM)	SEER	ELECTRICAL DATA		REMARKS
									Volts / Phase	AMPS	
VRF6-1	MTSUBISHI ELECTRIC	PLFY-P30NEMJE	STORAGE ROOM 115	DUCTLESS	30,000	#94-600-742-883	N/A	X	208/230V / 1-PHASE	0.7	
VRF6-2	MTSUBISHI ELECTRIC	PLFY-P30NEMJE	STORAGE ROOM 115	DUCTLESS	30,000	#94-600-742-883	N/A	X	208/230V / 1-PHASE	0.7	

NOTES

SCHEDULE OF PACKAGED MODULAR BOILERS							ACCEPTABLE MANUFACTURERS (SUBJECT TO DELIVERY RESTRICTIONS) THERMAL SOLUTIONS ARC 2500, PATTERSON - KELLY P-K MACH 62500	
MARK	LOCATION	MANUFACTURER	MODEL NUMBER	CSA INPUT MBH	CSA OUTPUT MBH	FUEL	ELECTRICAL WITH OUT PUMP	REMARKS
B-1	BOILER ROOM	LOCHINVAR	FTX500N	500	489	NAT. GAS	120 V, 1ø	PROVIDE CONTROLS, BOILER CIRCULATION KIT, EMERGENCY GAS SHUT DOWN CONTROL, CONDENSATE NEUTRALIZATION KITS.
B-2	BOILER ROOM	LOCHINVAR	FTX500N	500	489	NAT. GAS	120 V, 1ø	PROVIDE CONTROLS, BOILER CIRCULATION KIT, EMERGENCY GAS SHUT DOWN CONTROL, CONDENSATE NEUTRALIZATION KITS.

PUMP SCHEDULE													
MARK	MANUFACTURER	MODEL	LOCATION	SYST	FLUID	Fluid Temp	FLOW GPM			SIZE, IN.	HEAD, FT WG	Disch PSIG	REMARKS
							Design	Future	Total				
P-1	BELL & GOSSETT	B6-E80-3x3/4TC-55182M-I-N	MECHANICAL 114	HW	WATER	180 F	147.9	N/A	147.9	3	3	43.1	TC TO PROVIDE VFD
P-2	BELL & GOSSETT	B6-E80-3x3/4TC-55182M-I-N	MECHANICAL 114	HW	WATER	180 F	147.9	N/A	147.9	3	3	43.1	TC TO PROVIDE VFD
BP-1	TACO	1911	MECHANICAL 114	HW	WATER	180 F	49	N/A	49	2	2	14	
BP-2	TACO	1911	MECHANICAL 114	HW	WATER	180 F	49	N/A	49	2	2	14	

NOTES

DATE	NO.	DESCRIPTION

CHAMPAIGN COUNTY ADMINISTRATIVE SERVICES

GHR ENGINEERS AND ASSOCIATES, INC.
Mechanical & Electrical Consulting Engineers

1815 South Neil Street
Champaign, Illinois 61820
217-366-0538 Business
217-366-1092 Fax

HEATING ABBREVIATIONS + SYMBOLS, DETAILS + SCHEDULES

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CHAMPAIGN COUNTY OFFICE BUILDING

1905 E. MAIN ST.

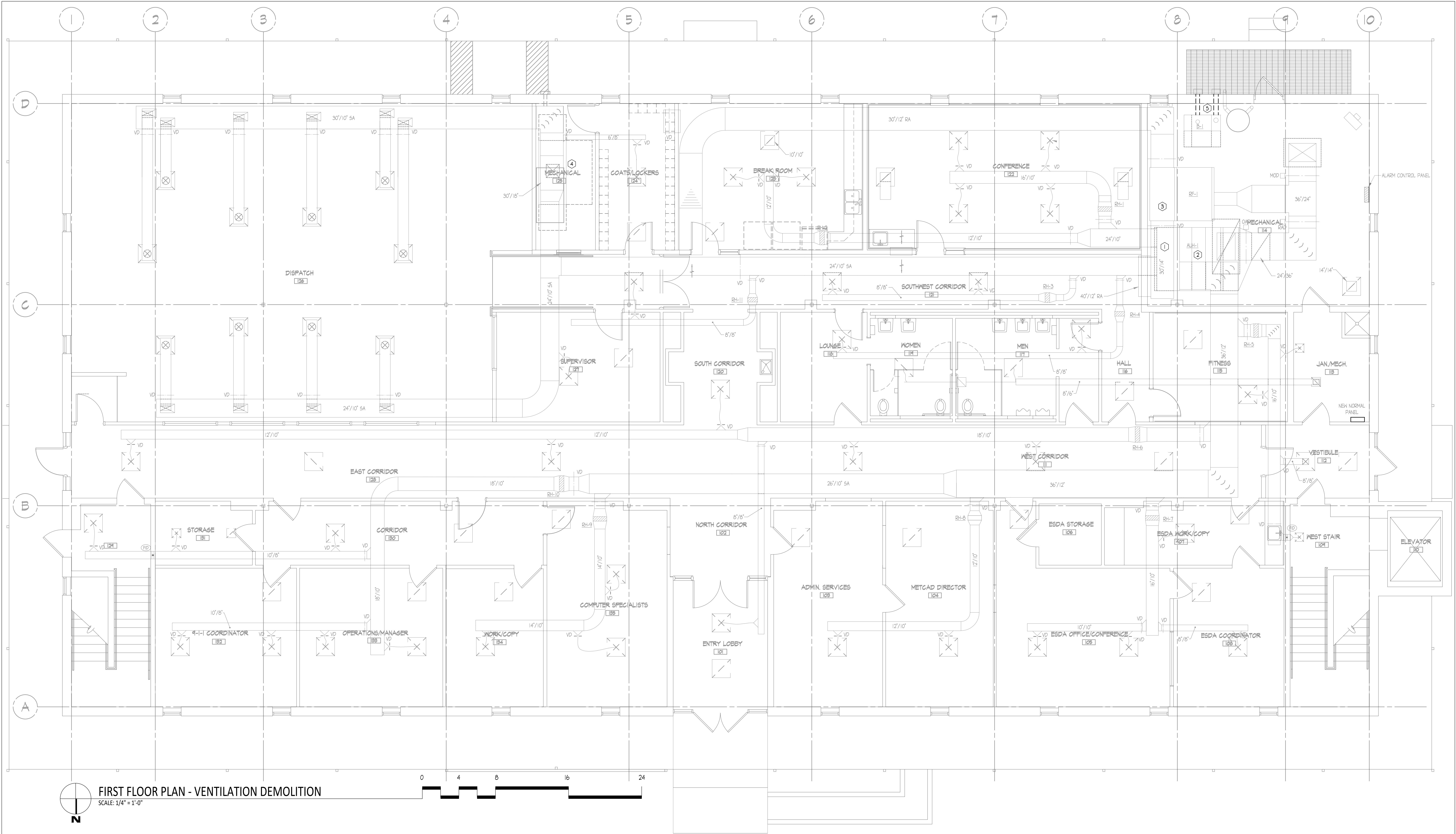
URBANA, ILLINOIS

SEAL

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DATE: DEC 4, 2019	
BID DOCUMENTS	
PROJECT: 7205	

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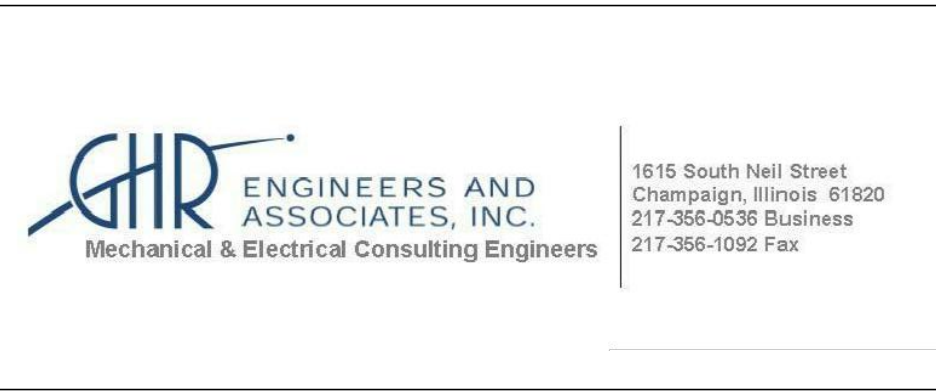
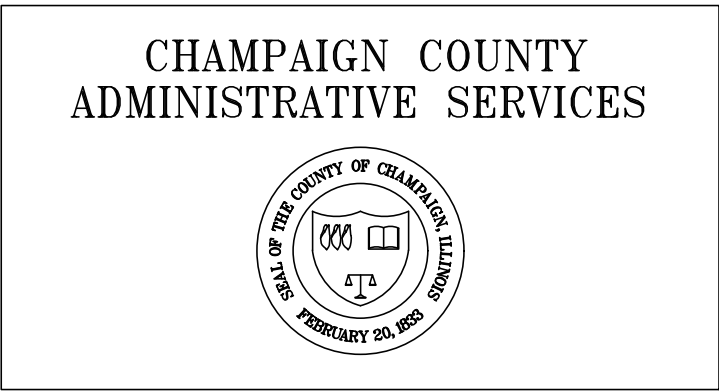
KEYED NOTES - (FOR THIS SHEET ONLY) (SYMBOL)

1. T.C. TO CONVERT AHU-1 CONTROLS TO D.D.C. INTEGRATE INTO BAS AND PROVIDE ALARM NOTIFICATIONS.
2. REMOVE AND DISCONNECT AHU-1 FAN MOTOR.
3. DISCONNECT & REMOVE RF-1 FAN MOTOR.
4. ALTERNATE #1: REMOVE AHU-2. EXISTING ASSOCIATED DUCTWORK AND AIR TERMINALS TO REMAIN.
5. REMOVE EXISTING BOILER FLUES, PATCH AND SEAL WALL AS REQUIRED.

GENERAL NOTES:

1. COORDINATE ALL MECHANICAL AND ELECTRICAL DEMOLITION AND NEW WORK WITH OWNER AND OTHER TRADES.
2. FIELD VERIFY EXISTING CONDITIONS TO COORDINATE FOR INSTALLATION OF NEW WORK AND EQUIPMENT.
3. VERIFY PROPER OPERATION OF EXISTING HOT WATER SYSTEM.
4. FIELD VERIFY ALL EXISTING PIPE SIZES FOR NEW CONNECTIONS.
5. COORDINATE CRANE LIFT LOCATIONS, DATES AND TIMES WITH OWNER. THE HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE ASPHALT OR SOD FROM THE CRANE WORK.
6. REMOVE ALL EXISTING DUCTWORK AND GRILLES/DIFFUSERS UNLESS NOTED TO REMAIN.
7. ALL LEVEL 01 EXISTING DUCTWORK AND ASSOCIATED AIR TERMINALS TO REMAIN UNLESS OTHERWISE NOTED.

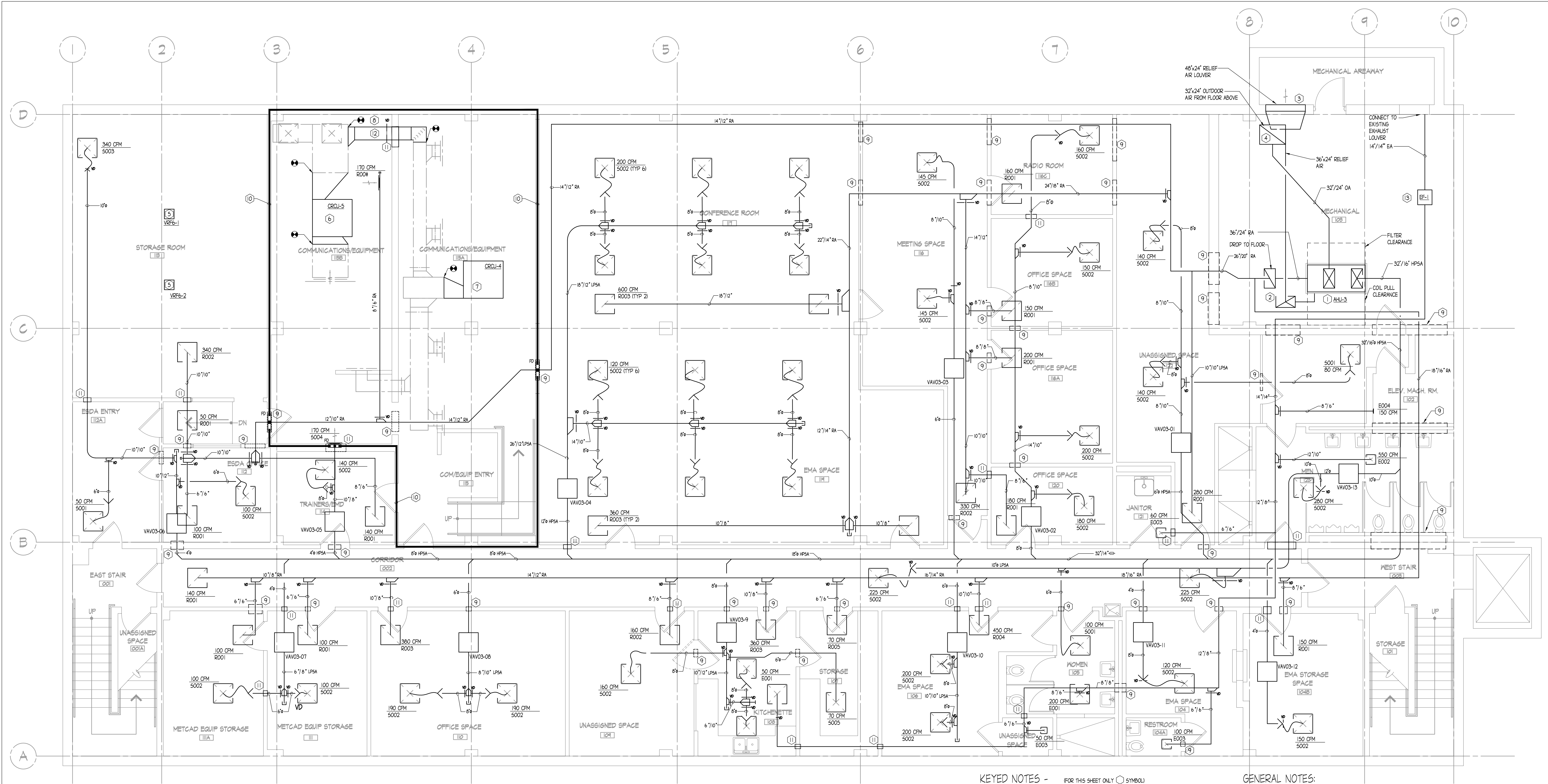
DATE	NO.	DESCRIPTION



FIRST FLOOR PLAN - VENTILATION DEMOLITION	
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PRINTED: 12/04/2019



LOWER LEVEL FLOOR PLAN - VENTILATION
SCALE: 1/4" = 1'-0"

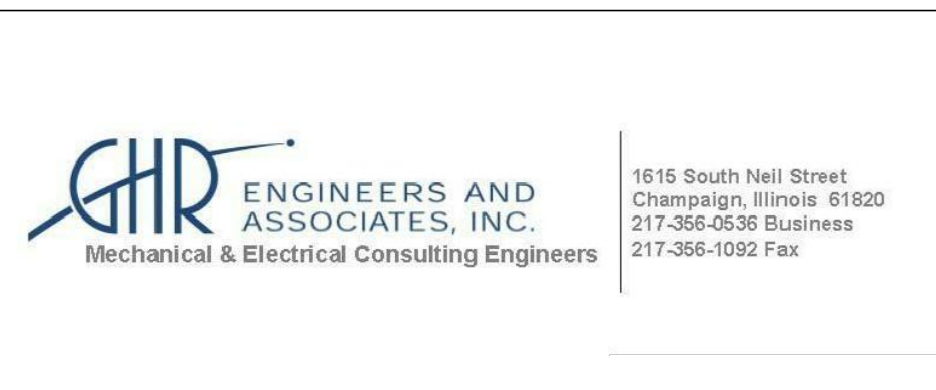
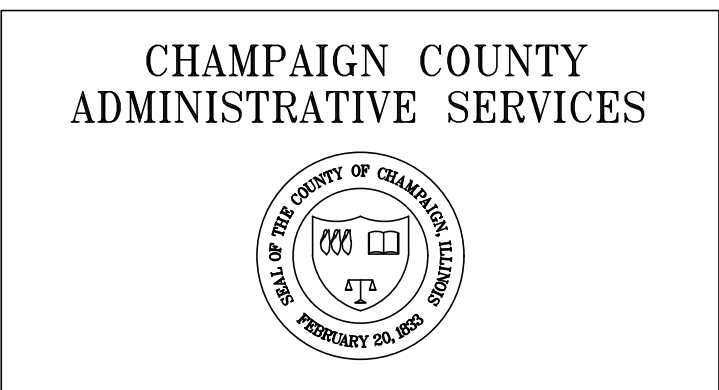
KEYED NOTES - (FOR THIS SHEET ONLY) SYMBOL

1. PROVIDE & INSTALL NEW AHU-3 ON NEW 4" TALL DOWEL RODDED HOUSEKEEPING PAD, 6" LARGER THAN UNIT ON ALL SIDES. SEE AHU SCHEDULE SHEET V-3.
2. PROVIDE AND INSTALL NEW EXHAUST FAN EF-1.
3. CONNECT NEW AHU-3 36x24 RELIEF AIR DUCT TO EXISTING LOUVER. BLANK OFF UNUSED PORTION OF LOUVER.
4. CUT AND PATCH FLOOR SLAB OF MECHANICAL ROOM ABOVE AS REQUIRED TO INSTALL NEW 32"x24" OUTDOOR AIR RISER.
5. PROVIDE AND INSTALL NEW DUCTLESS VRF CEILING CASSETTE. SEE SCHEDULE, SHEET V-3.
6. PROVIDE AND INSTALL NEW CRUJ-5. INSTALL DUCTWORK AS SHOWN, CONNECTING TO DUCTWORK FROM AHU-4. SEE SCHEDULE OF COMPUTER ROOM COOLING UNITS H-4.
7. ALTERNATE #2 PROVIDE AND INSTALL NEW CRUJ-4. SEE SCHEDULE OF COMPUTER ROOM COOLING UNITS H-4.
8. INSTALL VOLUME DAMPER IN DUCTWORK AS SHOWN.
9. RE-USE EXISTING WALL OPENING FOR NEW DUCTWORK. MODIFY AS REQUIRED. PATCH AND SEAL UNUSED PORTIONS OF WALL OPENING AS REQUIRED.
10. PATCH AND SEAL EXISTING UNUSED OPENINGS AS REQUIRED TO SEAL 115A AND 115B OFF FROM THE REST OF LEVEL 0 FOR EXISTING INERT GAS FIRE SUPPRESSION SYSTEM.
11. CUT AND PATCH NEW OPENING ABOVE CEILING FOR DUCTWORK.
12. CONNECT CRUJ-5 SUPPLY DUCT TO CRUJ-4 EXISTING SUPPLY DUCT. SIZE NEW CONNECTION TO MATCH EXISTING CRUJ-4 DUCT.
13. NEW EXHAUST FAN. SEE EXHAUST FAN SCHEDULE SHEET V-3.

GENERAL NOTES:

1. COORDINATE ALL WORK AND PENETRATIONS THROUGH THE WALLS WITH STRUCTURE, OWNER AND OTHER TRADES.
2. INSTALL ALL EQUIPMENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
3. FIELD VERIFY EXISTING CONDITIONS TO COORDINATE FOR INSTALLATION OF NEW WORK AND EQUIPMENT.
4. VERIFY PROPER OPERATION OF EXISTING HOT WATER SYSTEM.
5. FIELD VERIFY ALL EXISTING PIPE SIZES FOR NEW CONNECTIONS.
6. COORDINATE FUEL, POWER AND CONTROL WIRING CONNECTIONS WITH ELECTRICAL AND TEMPERATURE CONTROL SUB-CONTRACTOR.
7. SEE GRILLES, REGISTERS & DIFFUSERS SCHEDULE SHEET V-3 FOR NECK SIZES.
8. G.C. TO INSTALL NEW CEILING GRID AND LAY-IN CEILING FOR ALL ROOMS IN LEVEL 0 EXCEPT FOR 115A AND 115B.

DATE	NO.	DESCRIPTION



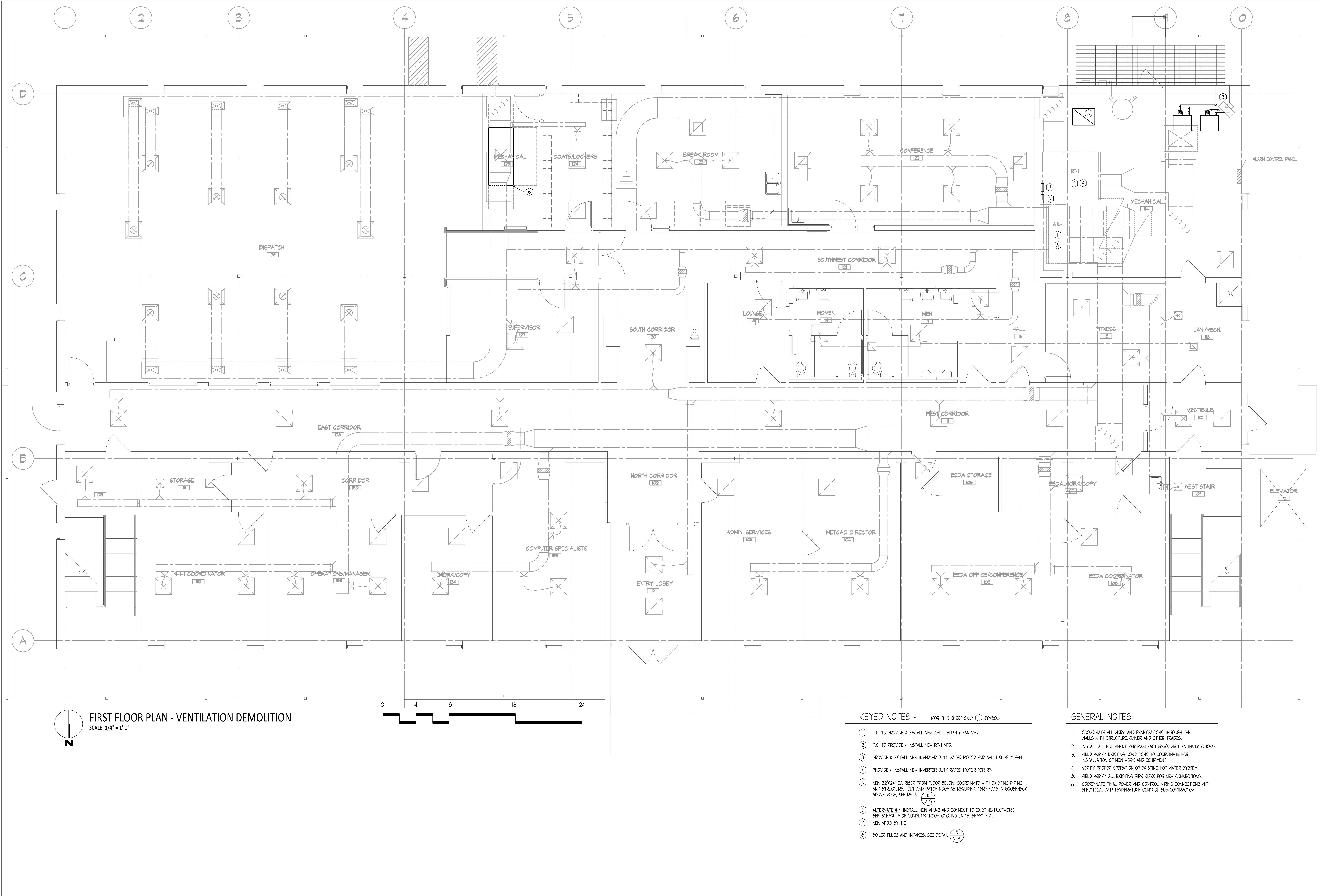
LOWER LEVEL FLOOR PLAN - VENTILATION DEMOLITION

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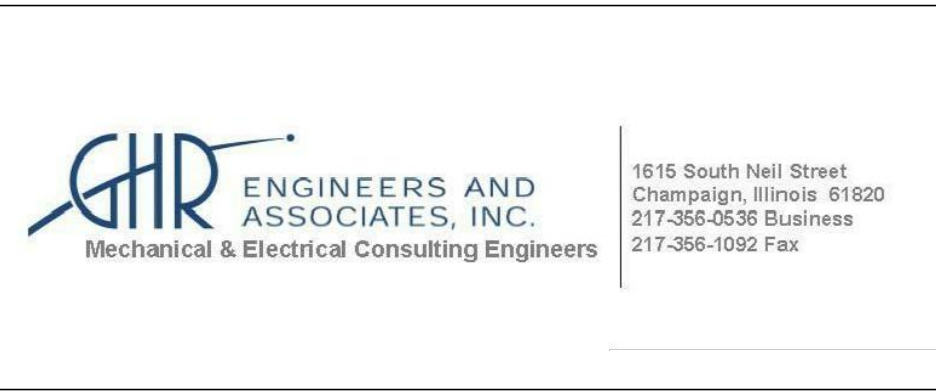
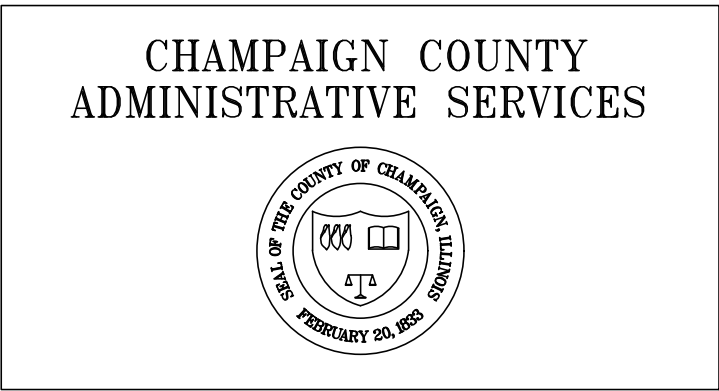
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1905 E. MAIN ST. URBANA, ILLINOIS

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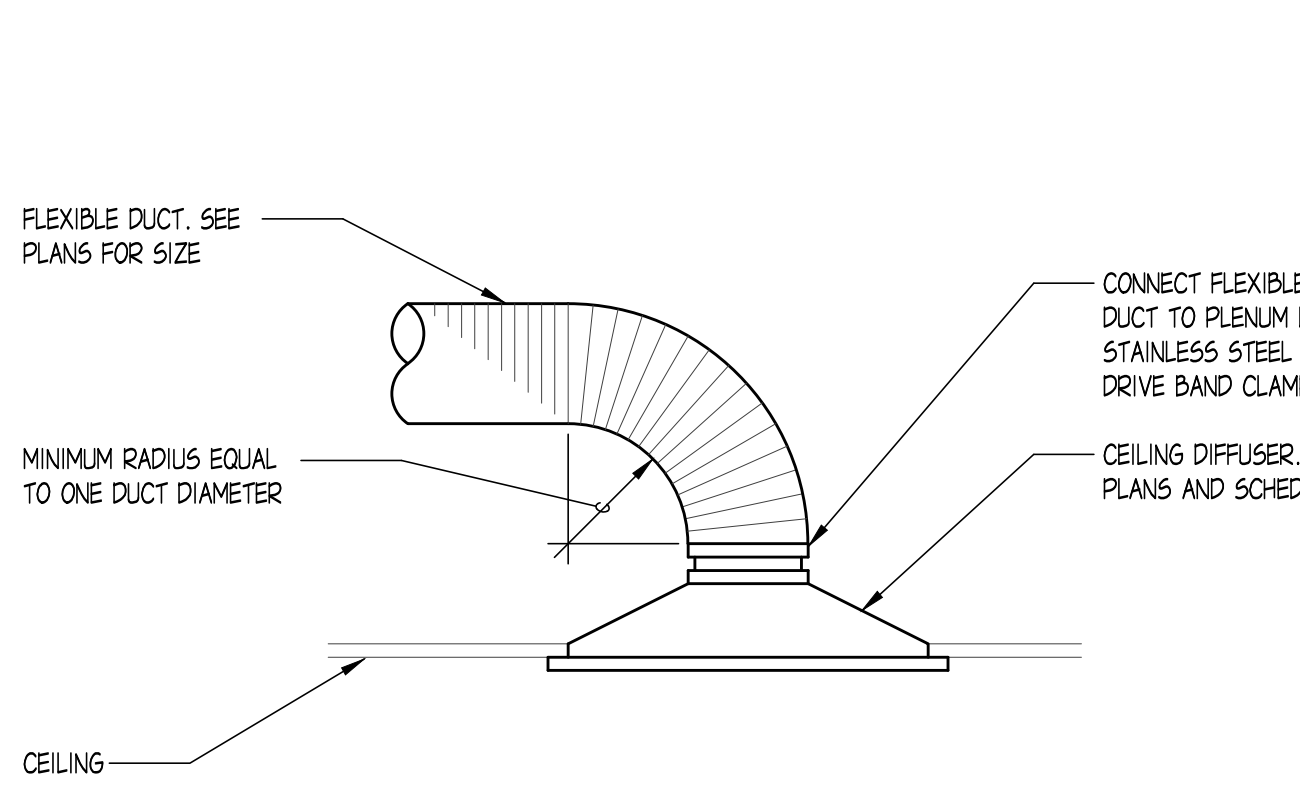


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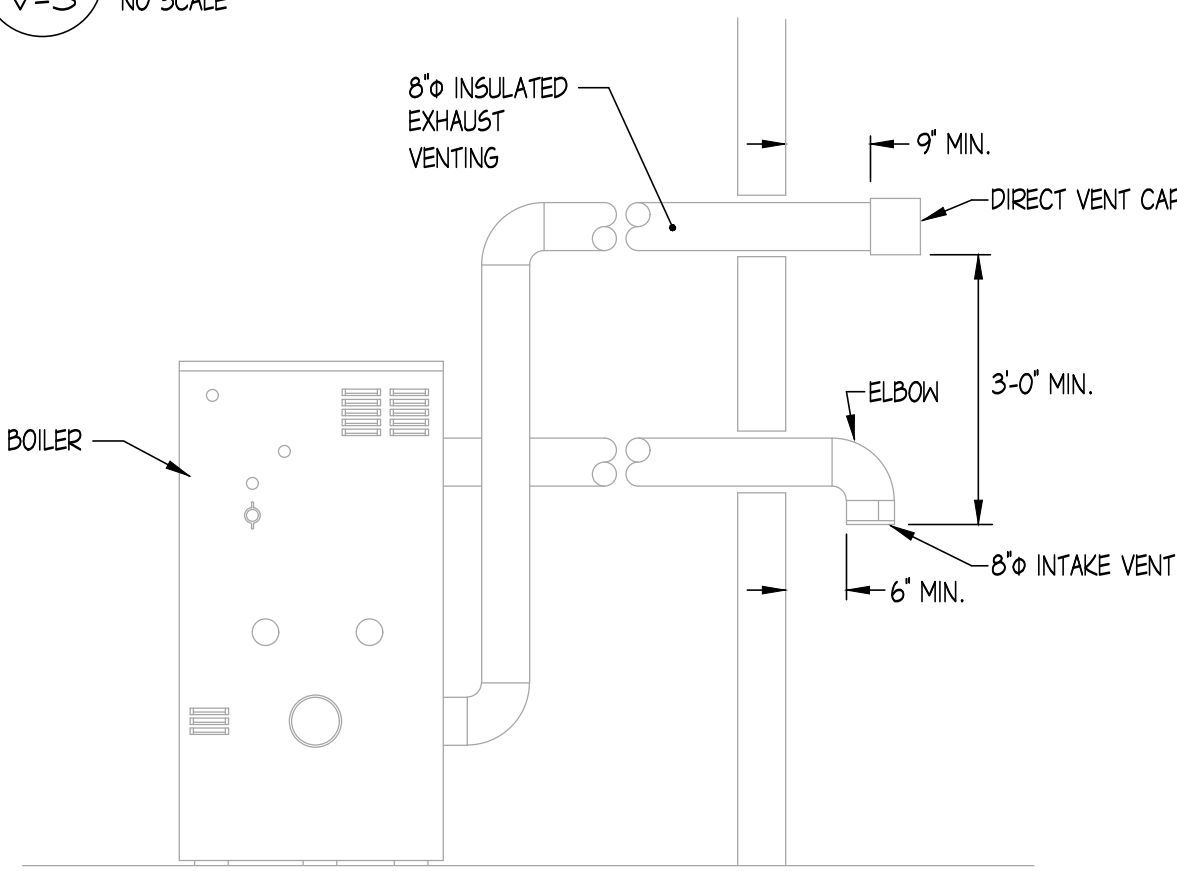


FIRST FLOOR PLAN - VENTILATION
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CHAMPAIGN COUNTY OFFICE BUILDING
1905 E. MAIN ST. URBANA, ILLINOIS

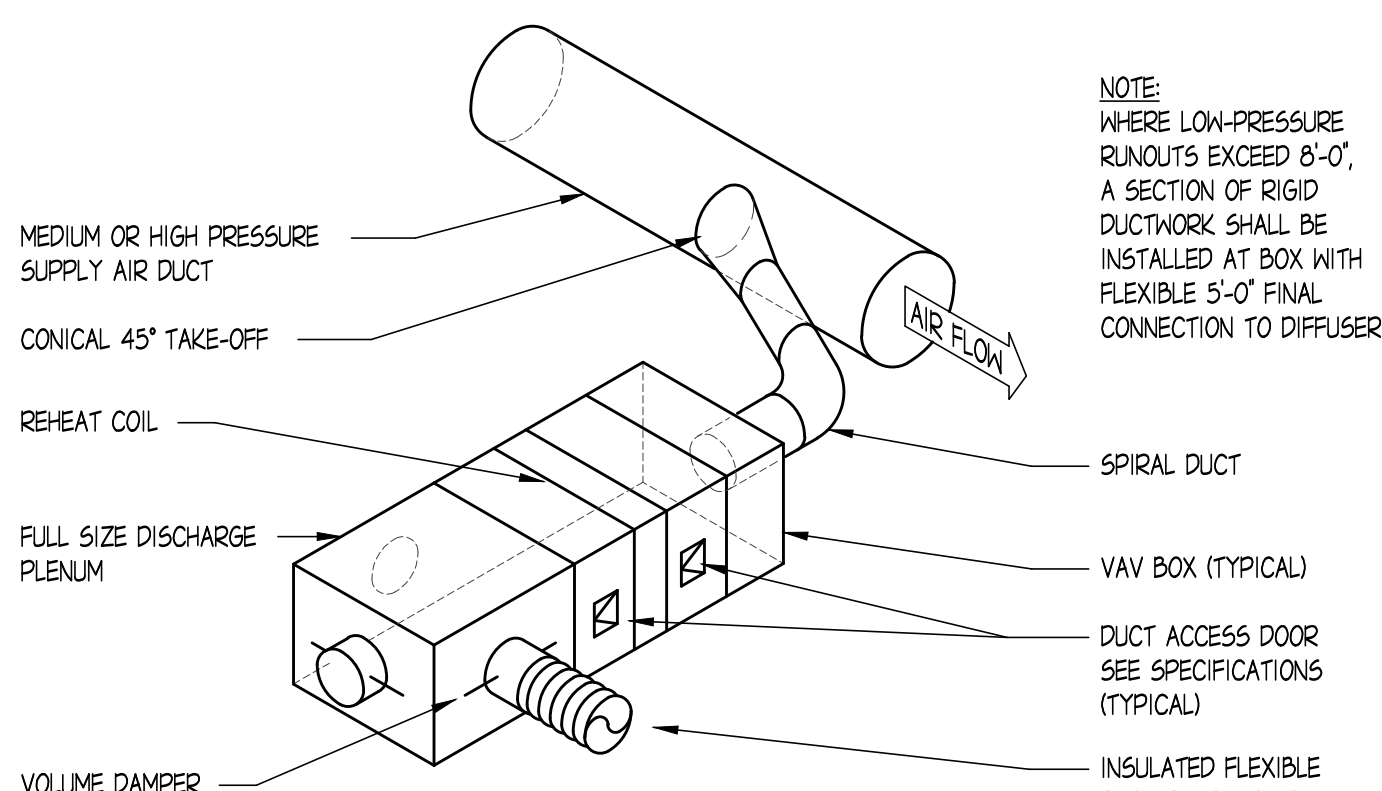
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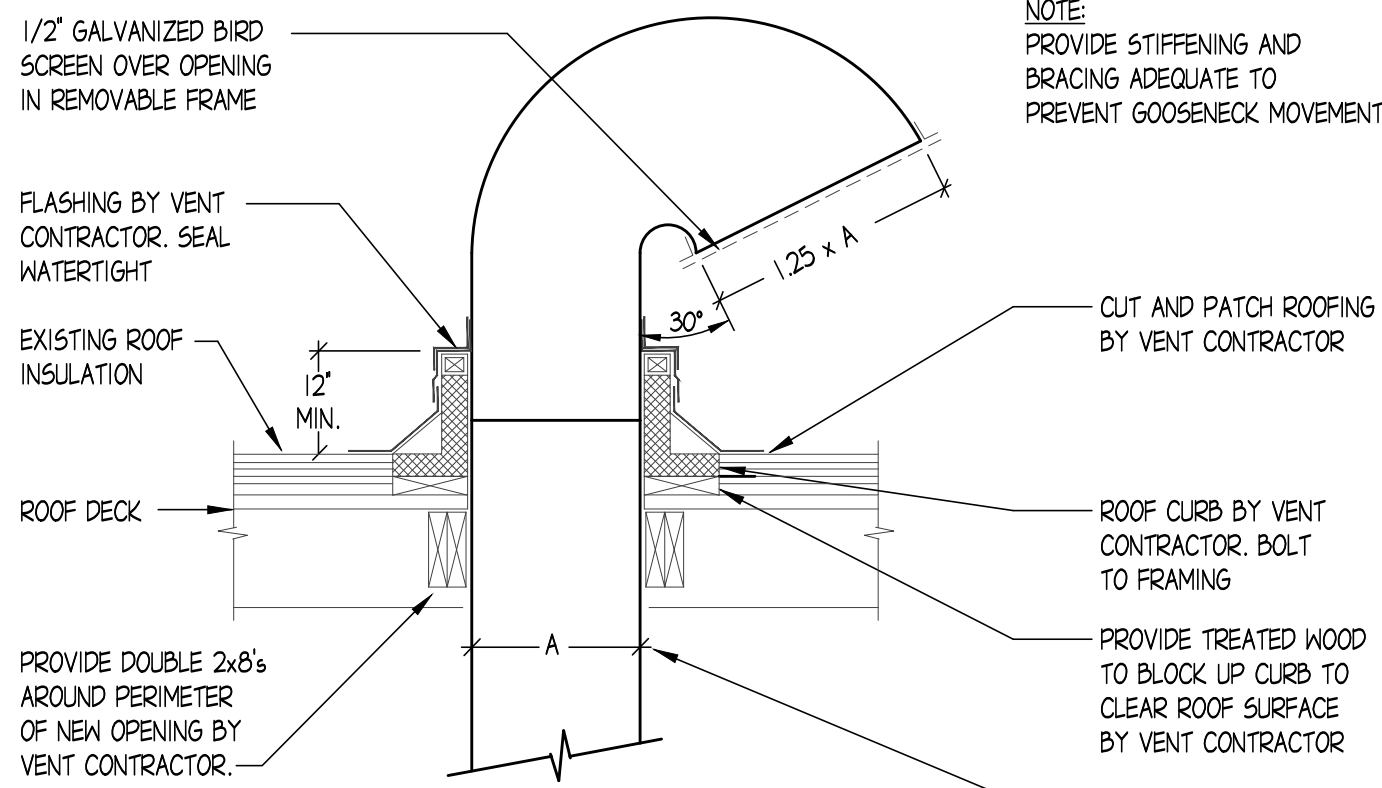
1 DIFFUSER CONNECTION
V-3 NO SCALE



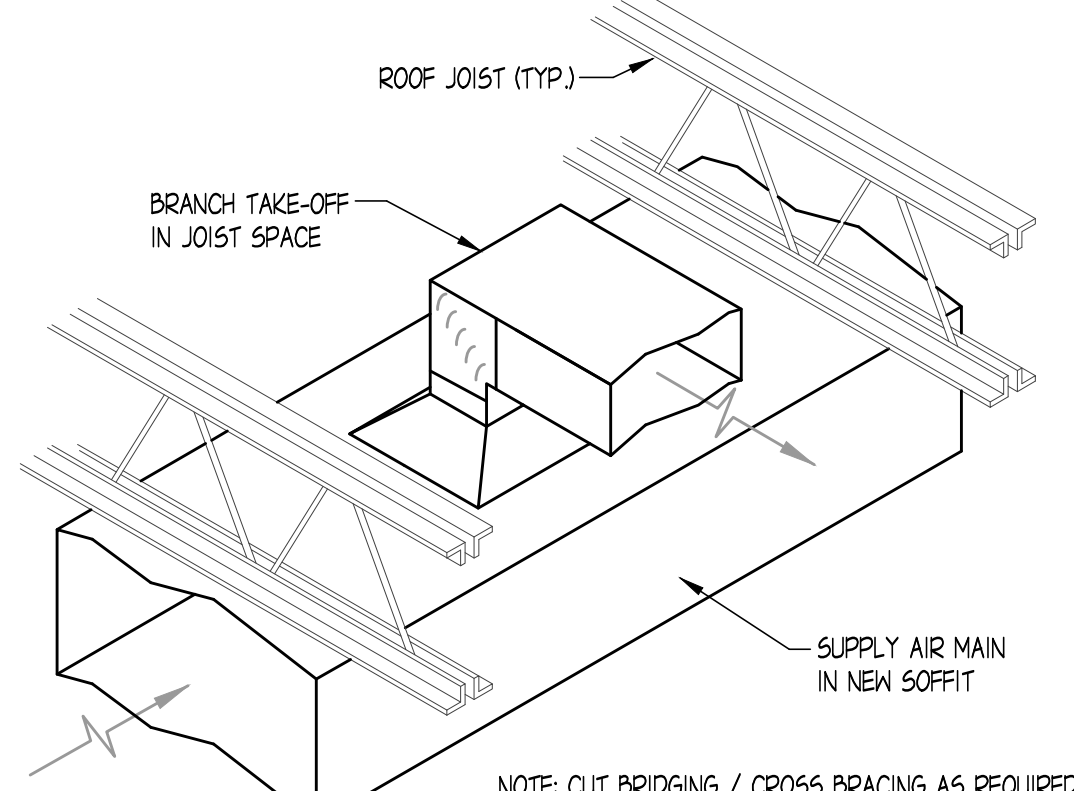
5 BOILER VENT/INTAKE THRU WALL
V-3 NO SCALE



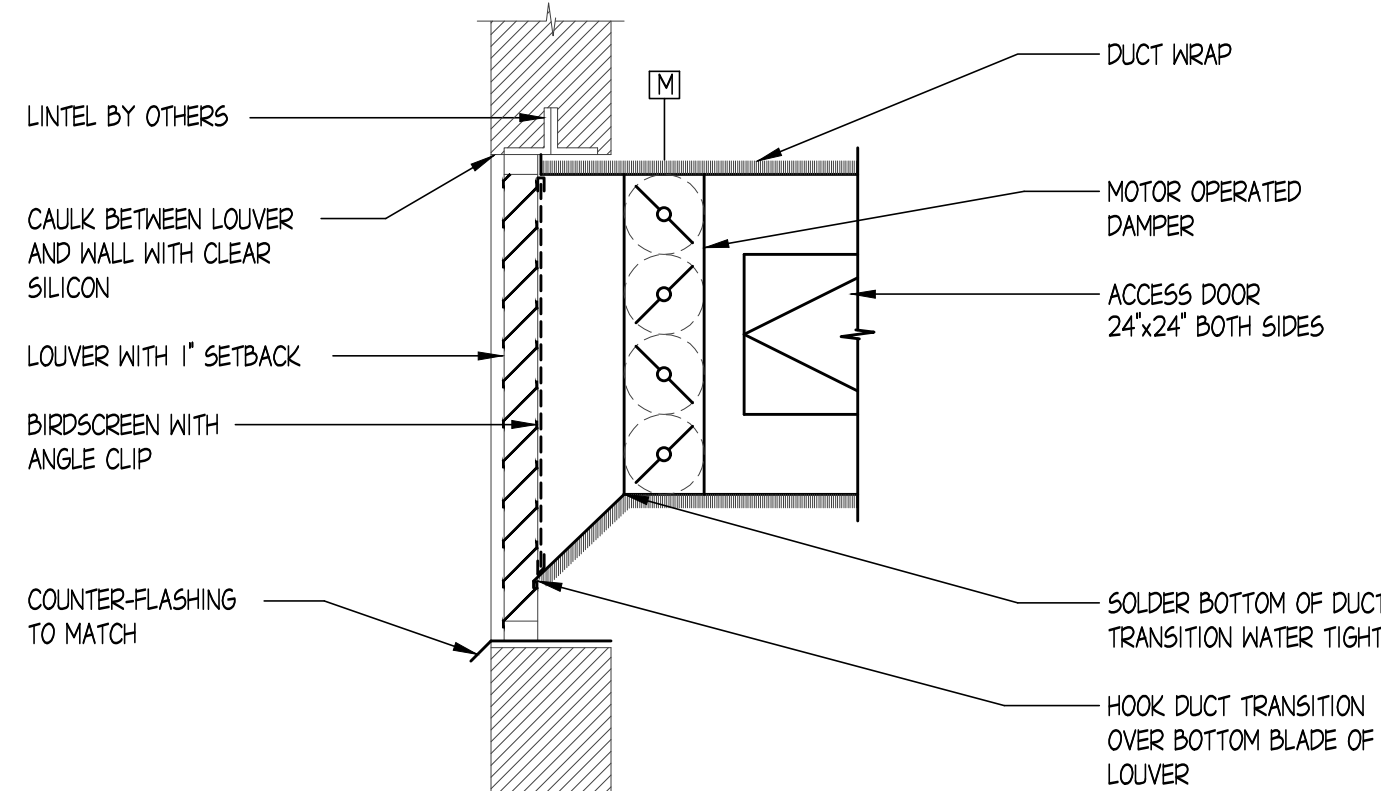
2 VAV BOX DUCT CONNECTIONS
V-3 NO SCALE



6 GOOSENECK INSTALLATION
V-3 NO SCALE



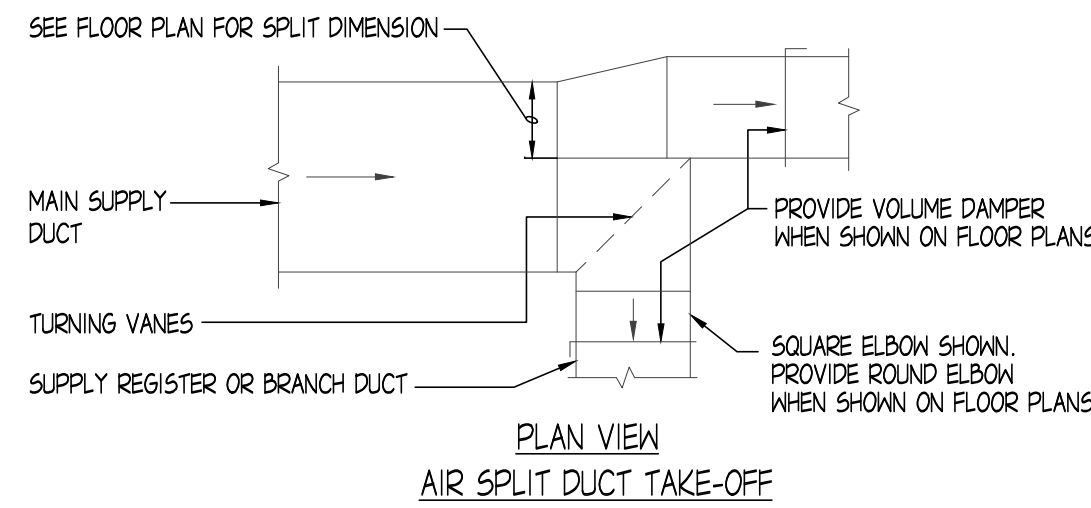
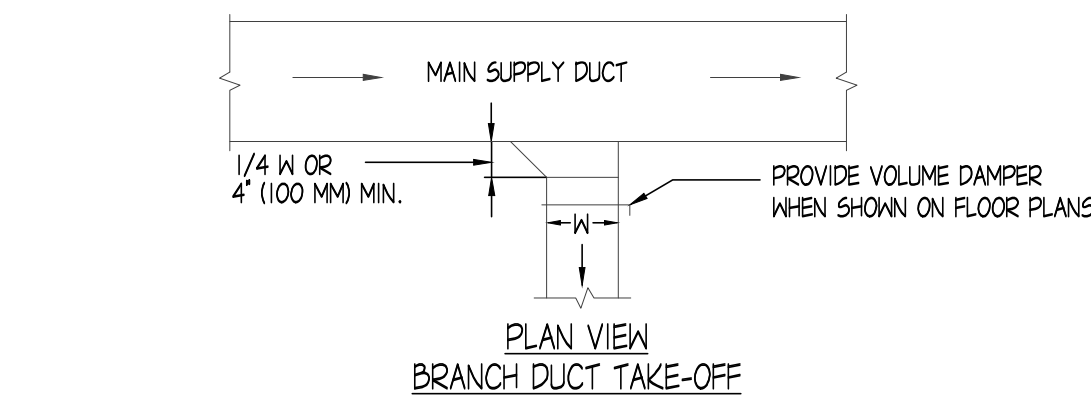
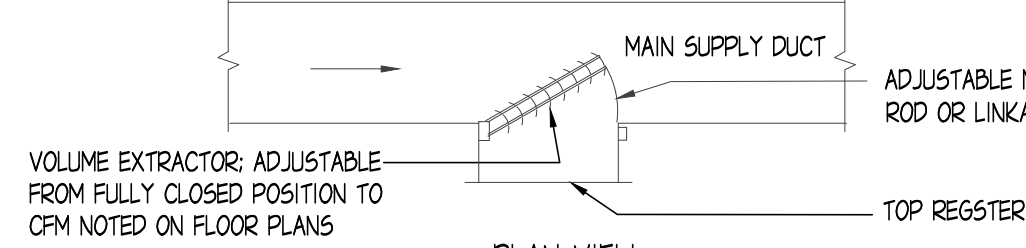
3 DUCT TAKE-OFF IN JOIST SPACE
V-3 NO SCALE



4 RELIEF AIR LOUVER
V-3 NO SCALE

DESIGNER'S NOTES:

1. THE SUPPLY REGISTER TAKE-OFF MAY BE USED FOR UP TO 25% OF THE MAIN DUCT CFM. THE BRANCH DUCT TAKE-OFF MAY BE USED FOR UP TO 15% OF THE MAIN DUCT CFM ANYTIME AND UP TO 40% WHEN THE MAIN DUCT VELOCITY IS 1000 FPM (5 M/S) OR LESS. THE AIR SPLIT DUCT TAKE-OFF SHALL BE USED IN ALL OTHER CASES AND MAY BE USED AT ANYTIME.
2. SHOW VOLUME DAMPERS ON FLOOR PLANS.



7 SUPPLY DUCTWORK TAKE-OFFS
V-3 NO SCALE

FAN SCHEDULE														
MARK	Qty	LOCATION	USE	CONTROL	MANUFACTURER	MODEL	TYPE	DRIVE	CFM	SP in WG	FAN RPM	MOTOR		REMARKS
												HP	V/Ph	
EF-1	1	103 MECHANICAL	GENERAL EXH	BAS	GREENHECK	SQ-120-VG	IN-LINE	DIRECT	1,160	0.57	1,412	1/4	120 / 1	

AHU-03 ROOM AIR DISTRIBUTION SCHEDULE													
ZONE	ROOM No. / NAME	SUPPLY AIR (+)				EXHAUST AIR (-)				RETURN AIR (-)			
		Max	Min	Type	Qty	Max	Min	Type	Qty	Max	Min	Type	Qty
VAV03 - 001	122 STORAGE	280	140	S002	2	140				280	140	R001	1
	122A CORRIDOR	80	40	S001	1	80				130	65	R001	1
	102 ELEV. MACH. RM	50	25	S001	1	50							
TOTAL 1													

ZONE	ROOM No. / NAME	SUPPLY AIR (+)				EXHAUST AIR (-)				RETURN AIR (-)				BALANCE	See Note
		Max	Min	Type	Qty	Max	Min	Type	Qty	Max	Min	Type	Qty	Max	Min
VAV03 - 001	122 STORAGE	280	140	S002	2	140				280	140	R001	1	280	
	122A CORRIDOR	80	40	S001	1	80				130	65	R001	1	130	-50
	102 ELEV. MACH. RM	50	25	S001	1	50								50	25
VAV03 - 002	103 MECHANICAL	180	90	S002	1	180				180	90	R001	1	180	
	116A EMA OFFICE	200	100	S002	1	200				200	100	R001	1	200	
	116B EMA OFFICE	150	75	S002	1	150				150	75	R001	1	150	
	116C EMA OFFICE	160	80	S002	1	160				160	80	R001	1	160	
VAV03 - 003	116 EMA MEETING SPACE	330	165	S002	2	165				330	165	R002	1	330	
VAV03 - 004	117 CONFERENCE	1180	590	S002	6	196.67				1180	590	R002	3	393.33	
	119 EMA SPACE	700	350	S002	4	175				700	350	R002	3	233.33	
VAV03 - 005	114 TRAINERS/EMD	140	70	S002	1	140				140	70	R001	1	140	
	115B COMM/EQUIP	170	85	S005	1	170				170	85	R005	1	170	
VAV03 - 006	112 ESDA OFFICE	100	50	S002	1	100				100	50	R001	1	100	
	112A ESDA ENTRY	50	25	S001	1	50								50	25
	112B ESDA CORRIDOR									50	25	R001	1	50	-50
	113 STORAGE ROOM	340	170	S003	1	340				340	170	R002	1	340	
VAV03 - 007	111A METCAD EQUIP STOR	100	50	S002	1	100				100	50	R001	1	100	
	111 METCAD EQUIP STOR	100	50	S002	1	100				100	50	R001	1	100	
VAV03 - 008	110 OFFICE	380	190	S002	2	190				380	190	R002	1	380	
VAV03 - 009	107 STORAGE	70	35	S001	1	70				70	35	R001	1	70	
	108 BREAK	360	180	S002	2	180				360	180	R002	1	360	
	109 OFFICE	160	80	S001	2	80				160	80	R001	1	160	
VAV03 - 010	106 EMA OFFICE	400	200	S002	2	200				450	225	R002	1	450	-50
	106A STOR						50	50	E003	1	50			-50	-50
VAV03 - 011	104 EMA OFFICE	120	60	S002	1	120								120	60
	104A TLT	150	75	S002	1	150	100	100	E003	1	100			-100	-100
VAV03 - 012	104B OFFICE	150	75	S002	1	150				150	75	R001	1	150	
VAV03 - 013	002 CORRIDOR	450	225	S002	2	225				190	95	R001	1	190	260
	105 WOMEN	100	50	S001	1	100	200	200	E001	1	200			-100	-150
	121 JANITOR						60	60	E001	1	60			-60	-60
	123 MEN	450	225	S003	1	450	550	550	E002	1	550			-100	-325
TOTAL 32														6,950	-520

NOTES																		
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* FOIL FACED LINING FOR ALL UNITS.

GENERAL AHU DATA	MARK	AHU-1 (EXISTING)	AHU-3
	SERVING	FIRST FLOOR	LOWER LEVEL
	LOCATION	MECHANICAL ROOM 114	MECHANICAL ROOM 103
	UNIT TYPE	DRAW-THRU	DRAW-THRU
	ARRANGEMENT	TOP INVERTED	TOP INVERTED
SUPPLY FAN DATA	MANUFACTURER	CARRIER	YORK
	MODEL NUMBER	39MNI44001455136X5	CSAA012
	CFM (STANDARD AIR)	7080	3590
	EXTERNAL STATIC PRESSURE (INCHES W.C.)	1.45	2.5
	TOTAL STATIC PRESSURE (INCHES W.C.)	3.66	4.23
DX COOLING COIL DATA	OUTLET VELOCITY (FPM)	3454	1398
	RPM	1294	2256
	MOTOR HORSEPOWER / VOLTAGE / PHASE	10 / 208 / 3	7.5/208/3
	MINIMUM OUTDOOR AIR (GPM)	1200	-
	REFRIGERANT	R-410A (NEW COIL)	R-410A
RETURN FAN DATA	FACE AREA (SQ. FT.)	-	12.11
	FIN HEIGHT / FIN LENGTH	-	32/55"
	ROKs / TYPE / F.P.F.	6/CDX/120	6 / CDX / 121
	ENTERING AIR T _{db} /T _{wb}	-	78 / 63.8
	LEAVING AIR T _{db} /T _{wb}	55	53.5/53.02
PREFILTER	AIR SIDE PRESSURE DROP (INCHES W.C.)	0.86	0.744
	SENSIBLE MBH	202	150.22
	TOTAL MBH	298	176.57
	UNIT TYPE	FC	FC
	ARRANGEMENT	REAR	REAR
FILTER	MANUFACTURER	CARRIER	YORK
	MODEL NUMBER	-	AP-120
	CFM (STANDARD AIR)	5880	5880
	TOTAL STATIC PRESSURE (INCHES W.C.)	1.27	1.27
	OUTLET VELOCITY (FPM)	2868	2868
REFRIGERANT	RPM	780	780
	MOTOR HORSEPOWER / VOLTAGE / PHASE	5.0 / 208 / 3	5.0 / 208 / 3
	MANUFACTURER	-	
	EFFICIENCY	30%	
	NUMBER / TYPE / SIZE	2' PLEATED (6) 16x25"	
EFFICIENCY	INITIAL PRESSURE DROP CLEAN (INCHES W.C.)	0.21	
	FINAL PRESSURE DROP DIRTY (INCHES W.C.)	0.50	
	MANUFACTURER	-	
	EFFICIENCY	65%	
	NUMBER / TYPE / SIZE	2' PLEATED (6) 16x25"	
INITIAL PRESSURE DROP	INITIAL PRESSURE DROP CLEAN (INCHES W.C.)	0.30	
	FINAL PRESSURE DROP DIRTY (INCHES W.C.)	0.25	

NOTE:
GENERAL CONTRACTOR TO REMOVE EXISTING LAY-IN CEILINGS AND GRIDS IN ALL LEVEL 0 ROOMS AND REPLACE WITH NEW 2x2 CEILINGS AND GRIDS. VERIFY FINAL TILE SELECTION WITH OWNER.

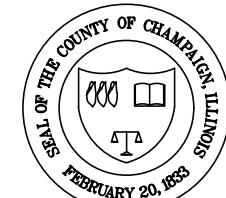
- EXCEPTIONS:
- 115A COMMUNICATIONS/EQUIPMENT
- 115B COMMUNICATIONS/EQUIPMENT
- 121 JANITOR
- 103 MECHANICAL
- 107 STORAGE
- ALL CLOSETS
- STAIR WELLS

HEATING + VENTILATING DETAILS

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CHAMPAIGN COUNTY
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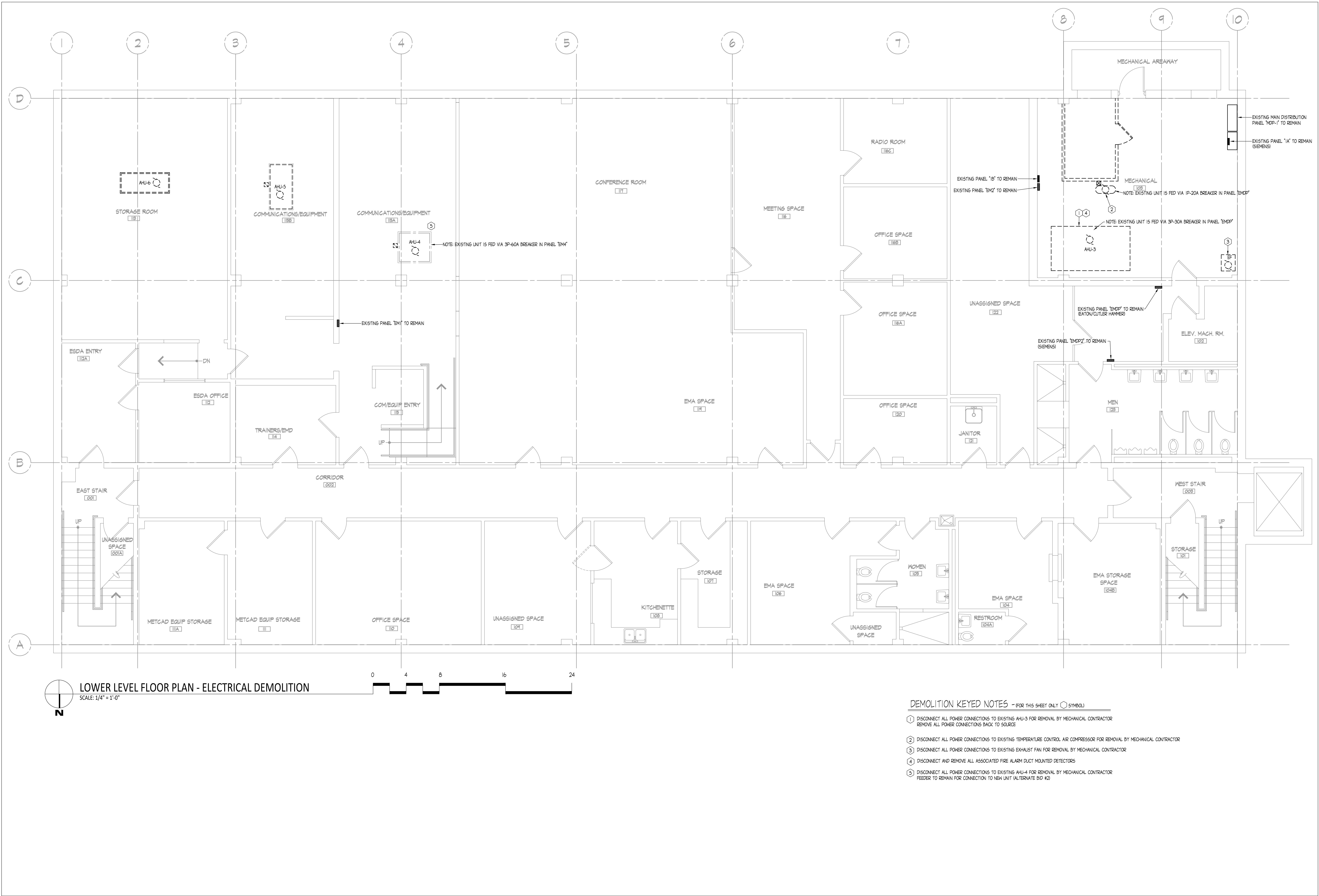
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SHOWN:	MLT/MSH	APPROVED:	JNG
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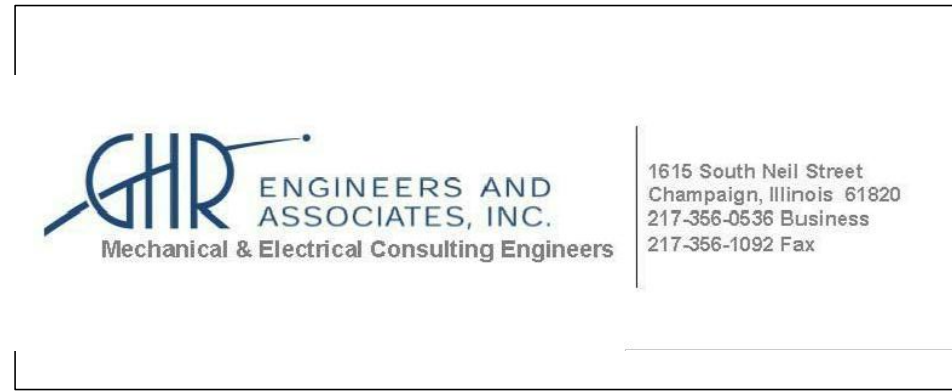
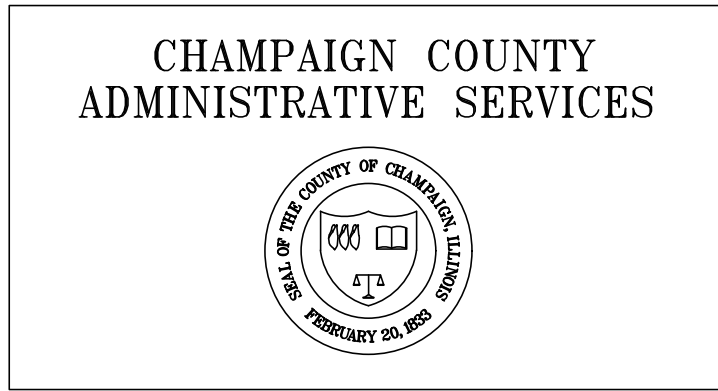
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V-3

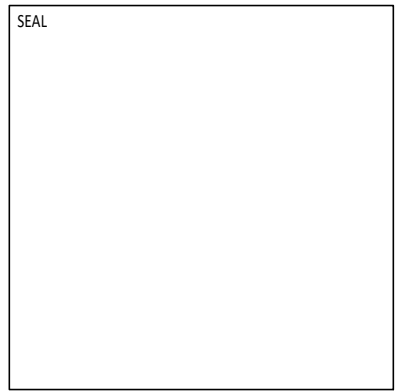
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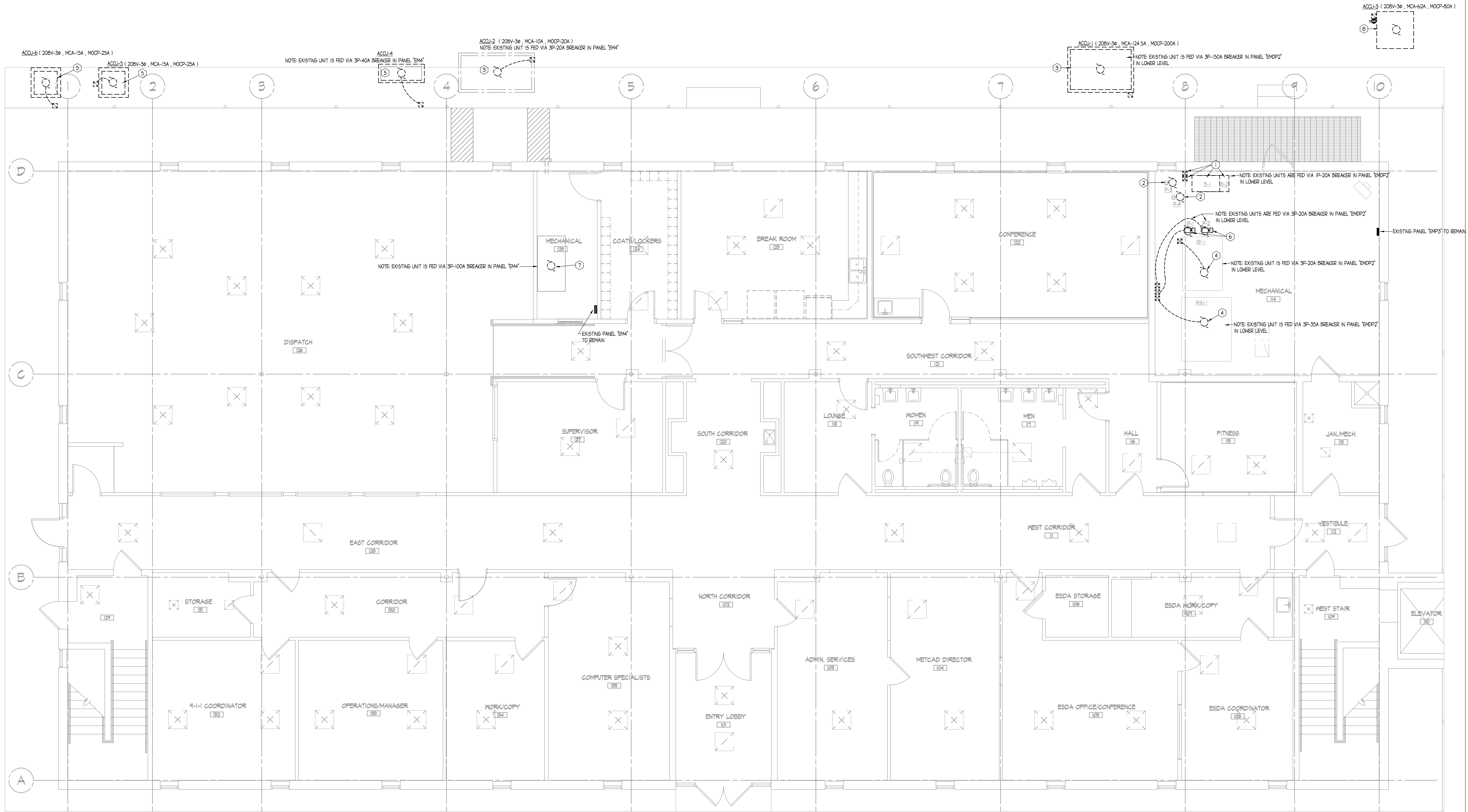
LOWER LEVEL FLOOR PLAN - ELECTRICAL DEMOLITION
911 METCAD EMERGENCY COMMUNICATIONS CENTER
CHAMPAIGN COUNTY OFFICE BUILDING
1905 E. MAIN ST. URBANA, ILLINOIS



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DATE: DEC 4, 2019	
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FILE: H:\GHR Projects\7205 - Metcand Building - 1905 East Main - Mechanical Electrical Study\ELEC\ED-2.dwg
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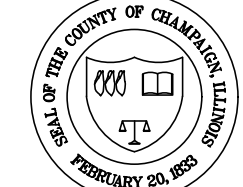
DEMOLITION KEYED NOTES - (FOR THIS SHEET ONLY) (SYMBOL)

- DISCONNECT ALL POWER CONNECTIONS TO EXISTING BOILERS FOR REMOVAL BY MECHANICAL CONTRACTOR. REMOVE ASSOCIATED MANUAL MOTOR STARTER DISCONNECT SWITCHES AND ALL ASSOCIATED CONDUIT AND WIRE BACK TO SOURCE. FIELD VERIFY AND COORDINATE.
- DISCONNECT ALL POWER CONNECTIONS TO EXISTING BOILER PUMPS FOR REMOVAL BY MECHANICAL CONTRACTOR. REMOVE ASSOCIATED MOTOR STARTERS AND ALL CONDUIT AND WIRE BACK TO SOURCE. FIELD VERIFY AND COORDINATE.
- DISCONNECT AND REMOVE EXISTING POWER CONNECTIONS AND DISCONNECT SWITCH ASSOCIATED WITH EXISTING ACQU ON GRADE. EXISTING FEEDER TO REMAIN FOR RECONNECTION TO NEW UNITS.
- DISCONNECT ALL POWER CONNECTIONS TO EXISTING AHU-1 AND RF-1 MOTORS FOR REPLACEMENT BY MECHANICAL CONTRACTOR. REMOVE ASSOCIATED MOTOR STARTERS/DISCONNECT SWITCHES. REMOVE ASSOCIATED CONDUCTORS BACK TO SOURCE.
- DISCONNECT AND REMOVE EXISTING POWER CONNECTIONS AND DISCONNECT SWITCH ASSOCIATED WITH EXISTING ACQU ON GRADE. REMOVE ALL CONDUIT AND CONDUCTORS BACK TO SOURCE AND SEAL ALL BUILDING PENETRATIONS.
- DISCONNECT ALL POWER CONNECTIONS TO EXISTING SYSTEM PUMPS FOR REMOVAL BY MECHANICAL CONTRACTOR. REMOVE ASSOCIATED MOTOR STARTERS/DISCONNECT SWITCHES. EXISTING MOTOR FEEDERS TO REMAIN FOR RECONNECTION TO NEW VFD UNITS.
- DISCONNECT ALL POWER CONNECTIONS TO EXISTING LIBERT UNIT FOR REMOVAL BY MECHANICAL CONTRACTOR. REMOVE FEEDER AND ASSOCIATED 3P-100A BREAKER IN PANEL FOR NEW BREAKER. REUSE EXISTING CONDUIT WHERE POSSIBLE (ALTERNATE BID #1).
- DISCONNECT AND REMOVE EXISTING POWER CONNECTIONS AND DISCONNECT SWITCH ASSOCIATED WITH EXISTING ACQU ON GRADE. REMOVE EXISTING FEEDER BACK TO SOURCE (EMDP2). REUSE EXISTING RECEPTACLE CIRCUIT FOR NEW RECEPTACLE AT NEW UNIT.

FIRST FLOOR PLAN - ELECTRICAL DEMOLITION
SCALE: 1/4" = 1'-0"

DATE	NO.	DESCRIPTION

CHAMPAIGN COUNTY
ADMINISTRATIVE SERVICES



GHR ENGINEERS AND
ASSOCIATES, INC.
Mechanical & Electrical Consulting Engineers

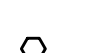
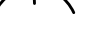
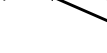
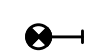
1915 South Neil Street
Champaign, Illinois 61820
217-366-0530 Business
217-366-1092 Fax

FIRST FLOOR PLAN - ELECTRICAL DEMOLITION
911 METCAD EMERGENCY COMMUNICATIONS CENTER
CHAMPAIGN COUNTY OFFICE BUILDING
1905 E. MAIN ST. URBANA, ILLINOIS

SEAL	DATE: TLH DEC 4, 2019 BID DOCUMENTS PROJECT: 7205	APPROVED: TLH SHEET: ED-2
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SCHEDULE OF MOTOR STARTERS ETC.																			
ITEM NO.	EQUIPMENT DESCRIPTION	MOTOR H.P.	ELEC. KVA	LINE VOLTAGE	INTEGRAL FUSED DISC. SW.	STARTER SIZE	STARTER TYPE	MANUAL STARTER W/PILOT	CONTROL LOCATION	SW & FUSE OR BREAKER ROLE & AMPS	CONDUCTOR SIZE & NO.	CONDUIT SIZE	DISCONNECT MEANS ADJACENT TO MOTOR	MOTOR LOCATION	MOUNT IN DOOR	AL. CONTACT OF STARTER	DEED	N.C.	NOTES, REFERENCES AND REMARKS
①	AHU-1 SUPPLY FAN	40.0 MCA 60 MOCP	10	3	208V	—	②	—	■ UNIT	3P-60A BREAKER	4 #6 E 1 #10 GND	3/4"	④	MECH 114					
②	AHU-1 RETURN FAN	22 MCA 35 MOCP	5	3	208V	—	②	—	■ UNIT	3P-30A BREAKER	4 #10 E 1 #10 GND	3/4"	④	MECH 114					
③	AHU-3 SUPPLY FAN	75.0 MCA 100.0 MOCP	7.5	3	208V	—	③	—	■ UNIT	3P-60A BREAKER	4 #6 E 1 #10 GND	3/4"	④	MECH 103					⑦
④	AHU-3 RETURN FAN	77.5 MCA 100.0 MOCP	5	3	208V	—	③	—	■ UNIT	3P-60A BREAKER	4 #6 E 1 #10 GND	3/4"	④	MECH 103					
⑤	BOILER #1			1	120V			●	■ UNIT	1P-20A BREAKER	2 #12 E 1 #12 GND	3/4"	MMS	MECH 114					⑥
⑥	BOILER #2			1	120V			●	■ UNIT	1P-20A BREAKER	2 #12 E 1 #12 GND	3/4"	MMS	MECH 114					⑥
⑦	BOILER PUMP P-3		1/3	1	120V			●	■ UNIT	1P-20A BREAKER	2 #12 E 1 #12 GND	3/4"	MMS	MECH 114					
⑧	BOILER PUMP P-4		1/3	1	120V			●	■ UNIT	1P-20A BREAKER	2 #12 E 1 #12 GND	3/4"	MMS	MECH 114					
⑨	CRU-1-4	44.0 FCA 60 MOCP	3	208V	—	①	—	—	■ UNIT	3P-60A BREAKER	4 #6 E 1 #8 GND	1"	3P-60A NFPS	COMM 115A					ALTERNATE BID #2
⑩	CRU-1-5	44.0 FCA 60 MOCP	3	208V	—	①	—	—	■ UNIT	3P-60A BREAKER	4 #6 E 1 #8 GND	1"	3P-60A NFPS	COMM 115D					
⑪	ACCU-1	102.0 MCA 125.0 MOCP	3	208V	—	①	—	—	■ UNIT	3P-125A BREAKER	4 #2 E 1 #6 GND	1 1/4"	3P-200A WNFPS	GRADE					⑤
⑫	ACCU-2	4.6 MCA 10.0 MOCP	3	208V	—	①	—	—	■ UNIT	3P-15A BREAKER	4 #12 E 1 #12 GND	3/4"	3P-30A WNFPS	GRADE					ALTERNATE BID #1
⑬	ACCU-3	67.0 MCA 110.0 MOCP	3	208V	—	①	—	—	■ UNIT	3P-110A BREAKER	4 #4 E 1 #6 GND	1"	3P-200A WNFPS	GRADE					⑤
⑭	ACCU-4	26.2 MCA 50.0 MOCP	3	208V	—	①	—	—	■ UNIT	3P-50A BREAKER	4 #10 E 1 #10 GND	3/4"	3P-60A WNFPS	ROOF					ALTERNATE BID #2
⑮	ACCU-5	26.2 MCA 50.0 MOCP	3	208V	—	①	—	—	■ UNIT	3P-50A BREAKER	4 #10 E 1 #10 GND	3/4"	3P-60A WNFPS	ROOF					
⑯	ACCU-6	26.2 MCA 50.0 MOCP	1	208V	—	①	—	—	■ UNIT	3P-60A BREAKER	3 #8 E 1 #10 GND	3/4"	3P-60A WNFPS	ROOF					
⑰	BF		1	120V				●	■ UNIT	1P-20A BREAKER	2 #12 E 1 #12 GND	3/4"	MMS	MECH 103					
⑱	PUMP P-1		3	3	208V	—	②	—	MECH 114	3P-20A BREAKER	4 #12 E 1 #12 GND	3/4"	④	MECH 114					
⑲	PUMP P-2		3	3	208V	—	②	—	MECH 114	3P-20A BREAKER	4 #12 E 1 #12 GND	3/4"	④	MECH 114					
⑳	WFB-1	.7 FLA	1	208V	—	②	—	—	MECH 114	2P-20A BREAKER	3 #12 E 1 #12 GND	3/4"	2P-30A NFPS	STOR 113					
㉑	WFB-2	.7 FLA	1	208V	—	②	—	—	MECH 114	2P-20A BREAKER	3 #12 E 1 #12 GND	3/4"	2P-30A NFPS	STOR 113					
㉒	AHU-2	70.7 FCA 90 MOCP	3	208V	—	①	—	—	■ UNIT	3P-90A BREAKER	4 #3 E 1 #8 GND	1 1/4"	④	MECH 125					ALTERNATE BID #1

ELECTRICAL SYMBOLS SCHEDULE	
SYMBOL	DESCRIPTION

-  DUPLEX GFI OUTLET WITH WEATHERPROOF "IN-USE" COVER
-  MOTOR OUTLET AS NOTED
-  DISCONNECT SWITCH
-  MANUAL MOTOR STARTER OR MAGNETIC STARTER/DISCONNECT SWITCH
-  JUNCTION BOX FOR NORMAL POWER CIRCUITS WITH BLANK COVER PLATE EXPOSED OR ABOVE CEILING
-  ELECTRICAL PANEL-EMERGENCY POWER
-  ELECTRICAL PANEL-NORMAL POWER
-  CONDUIT FOR EMERGENCY CIRCUIT CONCEALED IN WALL OR CEILING CONSTRUCTION
-  CONDUIT FOR NORMAL CIRCUIT CONCEALED IN WALL OR CEILING CONSTRUCTION
-  CONDUIT HOMERUN TO PANELBOARD
-  NEUTRAL WIRE
-  PHASE WIRE
-  FIRE ALARM DUCT MOUNTED SMOKE DETECTOR
-  FIRE ALARM ADDRESSABLE CONTROL MODULE
-  CIRCUIT FOR FIRE ALARM DEVICE
-  INDICATES KEYED NOTE FOR SHEET ON WHICH IT APPEARS UNLESS OTHERWISE NOTED
-  INDICATES REVISIONS
- E.C.

ELECTRICAL CONTRACTOR
- A.F.F.

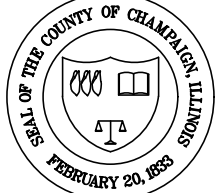
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KEYED NOTES AND ABBREVIATIONS FOR MOTOR STARTER SCHEDULE

- | | | | | | | | |
|------|---------------------------------------|-------|--|-----|------------------------|-----|--------------------|
| FAVR | FULL VOLTAGE NON REVERSING | FDS | FUSED DISCONNECT SWITCH | PB | PUSH BUTTON | A | AMPS |
| MMS | MANUAL MOTOR STARTER | NFDS | NON FUSED DISCONNECT SWITCH | HSA | HAND-OFF-AUTO SELECTOR | P | POLE |
| CSDS | COMBINATION STARTER/DISCONNECT SWITCH | WFPS | WEATHERPROOF FUSED DISCONNECT SWITCH | PL | PULL LIGHT | HP | HORSEPOWER |
| VFD | VARIABLE FREQUENCY DRIVE | WNFDS | WEATHERPROOF NON FUSED DISCONNECT SWITCH | NO | NORMALLY OPEN | KW | KILOWATT |
| STCB | SHUNT TRIP CIRCUIT BREAKER | HACR | HEATING, AIR CONDITIONING, REFRIGERATION RATED | NC | NORMALLY CLOSED | FLA | FULL LOAD AMPS |
| MCC | MOTOR CONTROL CENTER | | | ● | TO BE PROVIDED | - | NOT TO BE PROVIDED |
- ① MAGNETIC STARTER AND/OR CONTACTOR IS FURNISHED INTEGRAL WITH THE EQUIPMENT CONTROL PANEL. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL POWER WIRING AND MAKE ALL FINAL POWER CONNECTIONS AS REQUIRED.
- ② VARIABLE FREQUENCY DRIVE (VFD) CONTROLLER FURNISHED BY TEMPERATURE CONTROL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL INSTALL CONTROLLER ON WALL AS SHOWN AND PROVIDE ALL POWER WIRING/CONNECTIONS TO VFD AND FROM VFD TO MOTOR AS SHOWN. FIELD COORDINATE EXACT LOCATIONS WITH EXISTING CONDITIONS
- ③ VARIABLE FREQUENCY DRIVE (VFD) CONTROLLER FURNISHED INTEGRAL WITH EQUIPMENT BY MANUFACTURER. PROVIDE ALL FINAL POWER CONNECTIONS AS REQUIRED
- ④ DISCONNECT SWITCH AT UNIT FURNISHED INTEGRAL WITH CONTROL PANEL OR VARIABLE FREQUENCY DRIVE
- ⑤ PROVIDE NEW DUPLEX GFI RECEPTACLE WITH WEATHERPROOF "IN USE" COVER ON UNIT. RECONNECT EXISTING CIRCUIT PREVIOUSLY SERVING RECEPTACLE
- ⑥ PROVIDE MUSHROOM TYPE EMERGENCY BOILER STOP SWITCH ON WALL THIS LOCATION. CONNECT STOP SWITCHES FOR RESPECTIVE BOILERS IN SERIES SO EITHER SWITCH WILL SHUT DOWN BOILER. ROUTE 2 #12 E 1 #12 GROUND IN 3/4" CONDUIT FROM EACH SET OF SWITCHES AND PROVIDE FINAL CONNECTIONS TO RESPECTIVE BOILER EMERGENCY STOP TERMINALS IN CONTROL PANEL. COORDINATE EXACT REQUIREMENTS WITH FURNISHED EQUIPMENT
- ⑦ PROVIDE DUCT MOUNTED SMOKE DETECTOR IN SUPPLY AIR DUCT AND ADDRESSABLE CONTROL MODULE AT UNIT. CONFIGURE SYSTEM TO SHUT DOWN UNIT UPON DETECTION OF SMOKE BY DUCT DETECTOR. PROVIDE ALL REQUIRED CONTROL WIRING. INTERCEPT EXISTING FIRE ALARM INITIATING CIRCUIT AND EXTEND TO NEW DEVICES AS REQUIRED. FIELD COORDINATE ALL REQUIREMENTS AND COORDINATE DEVICES WITH FIRE ALARM MANUFACTURER. PROVIDE ALL ASSOCIATED FIRE ALARM SYSTEM REPROGRAMMING AS REQUIRED

DATE	NO.	DESCRIPTION

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ELECTRICAL SYMBOLS AND SCHEDULES

911 METCAD EMERGENCY COMMUNICATIONS CENTER

CHAMPAIGN COUNTY OFFICE BUILDING

1905 E. MAIN ST. URBANA, ILLINOIS

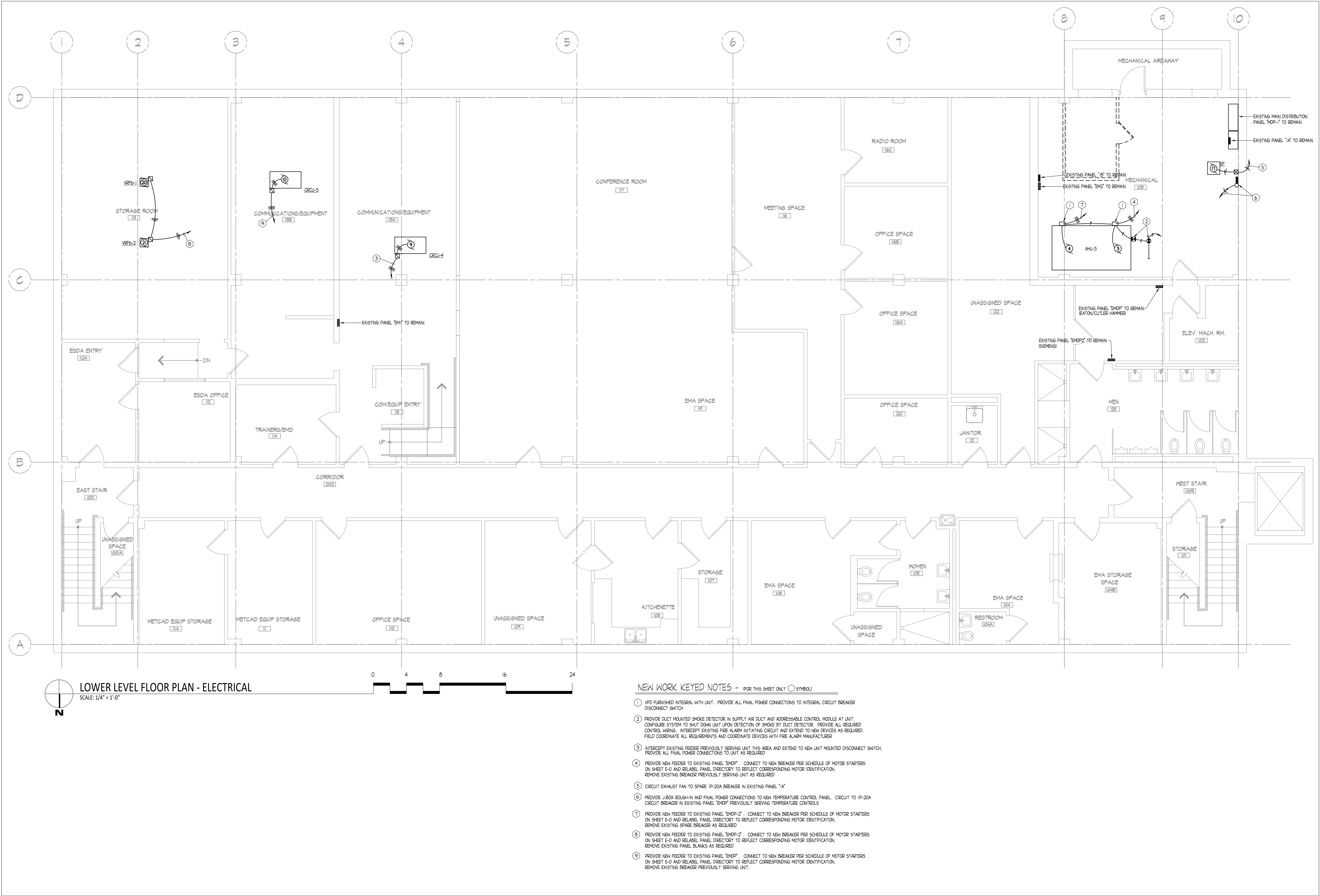
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DRAWN: TLH	APPROVED: TLH
DATE: DEC 4, 2019	
BID DOCUMENTS	
PROJECT: 7205	

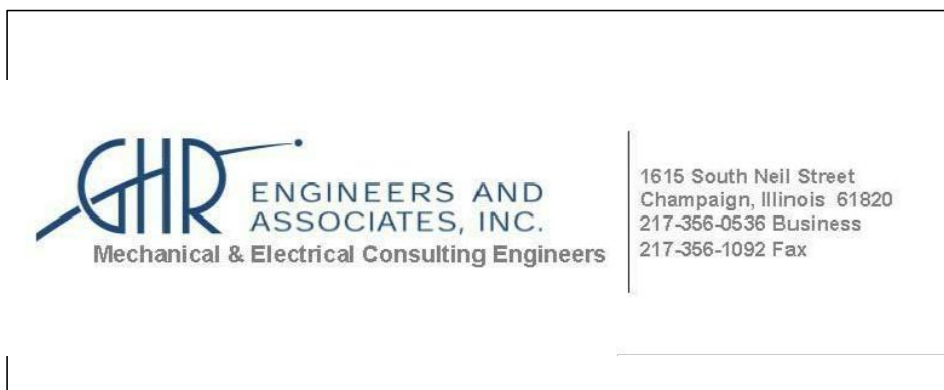
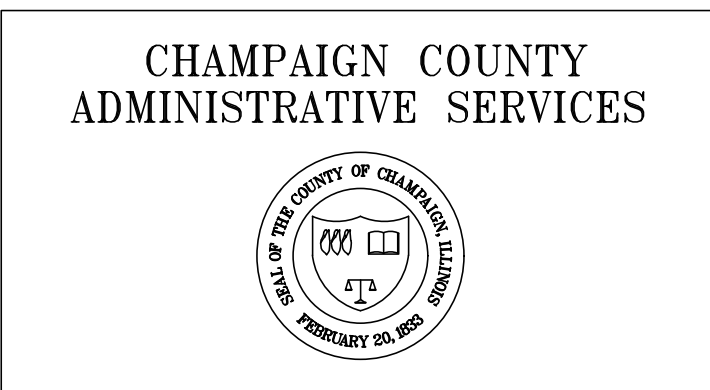
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PRINTED: 12/04/2019



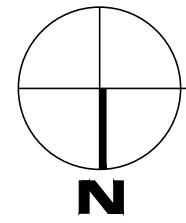
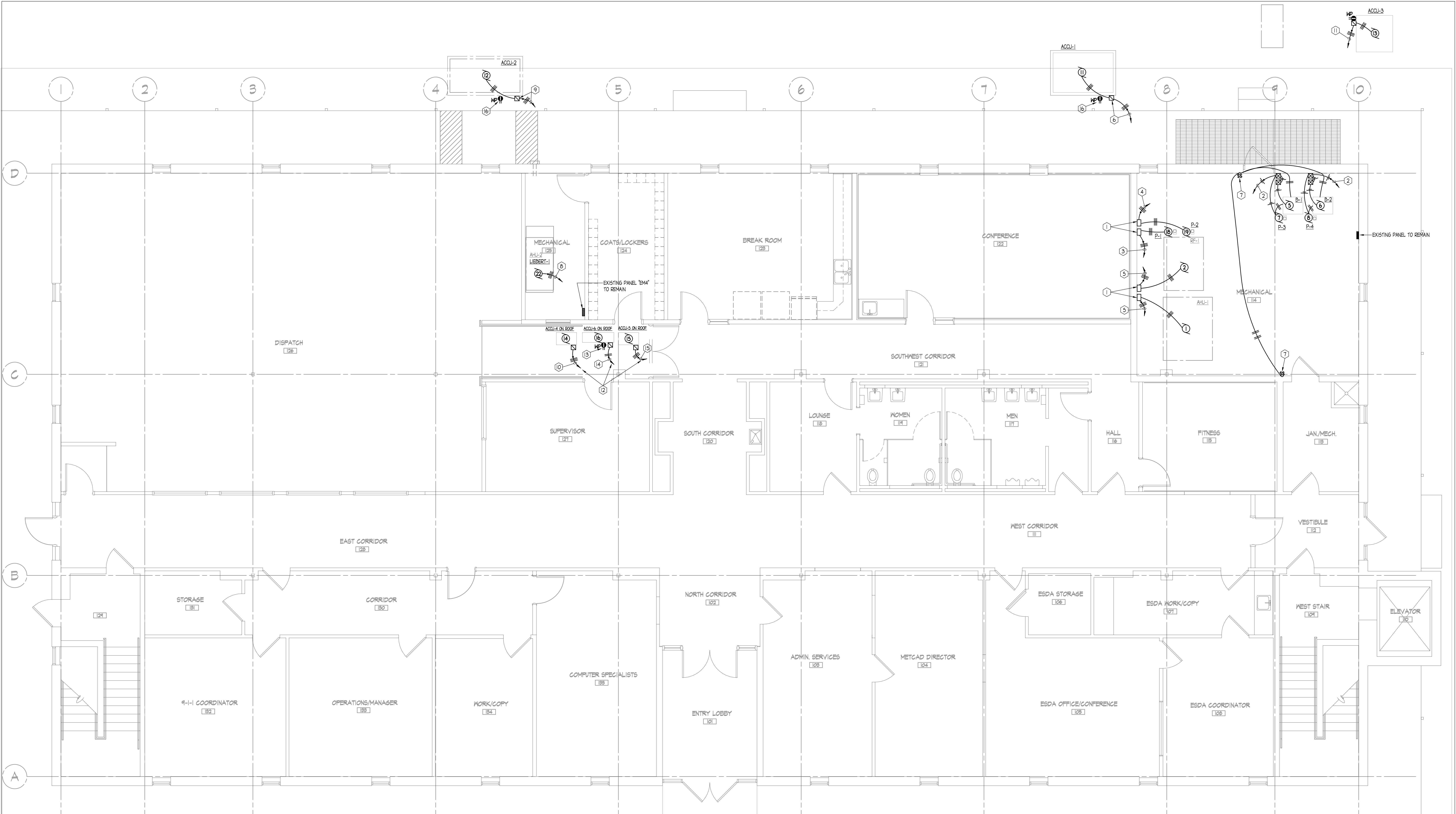
DATE	NO.	DESCRIPTION



LOWER LEVEL FLOOR PLAN - ELECTRICAL
911 METCAD EMERGENCY COMMUNICATIONS CENTER
CHAMPAIGN COUNTY OFFICE BUILDING
1905 E. MAIN ST. URBANA, ILLINOIS

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	DATE: DEC 4, 2019		
	BID DOCUMENTS		
	PROJECT: 7205		

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FIRST FLOOR PLAN - ELECTRICAL

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



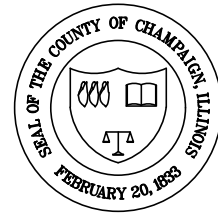
NEW WORK KEYED NOTES - (FOR THIS SHEET ONLY) (SYMBOL)

- VARIABLE FREQUENCY DRIVE (VFD) CONTROLLER FURNISHED BY TEMPERATURE CONTROL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL INSTALL CONTROLLER ON WALL AS SHOWN AND PROVIDE ALL POWER WIRING CONNECTIONS TO VFD AND FROM VFD TO MOTOR AS SHOWN. FIELD COORDINATE EXACT LOCATIONS WITH EXISTING CONDITIONS.
- ROUTE CIRCUIT DOWN TO EXISTING PANEL "TEMP-2" IN LOWER LEVEL. CONNECT EACH BOILER ALONG WITH RESPECTIVE PUMP TO INDIVIDUAL IP-20A BREAKER. PROVIDE ADDITIONAL IP-20A BREAKER IN EXISTING SPACE OF EXISTING SIEMENS PANEL AS REQUIRED.
- INTERCEPT EXISTING 3 PHASE MOTOR FEEDER PREVIOUSLY SERVING PUMP DISCONNECT SWITCH AND EXTEND TO NEW VFD UNIT.
- PROVIDE NEW FEEDER DOWN TO EXISTING PANEL "TEMP-2" IN LOWER LEVEL. CONNECT TO SPARE 3P-20A CIRCUIT BREAKER AND RELABEL PANEL DIRECTORY TO REFLECT CORRESPONDING MOTOR IDENTIFICATION.
- PROVIDE NEW FEEDER DOWN TO EXISTING PANEL "TEMP-2" IN LOWER LEVEL. CONNECT TO NEW CIRCUIT BREAKER AS REQUIRED PER SCHEDULE OF MOTOR STARTERS ON SHEET E-0. REMOVE EXISTING BREAKER AND RELABEL PANEL DIRECTORY TO REFLECT CORRESPONDING MOTOR IDENTIFICATION.
- PROVIDE NEW DISCONNECT SWITCH AT UNIT AND RECONNECT EXISTING FEEDER. PROVIDE ALL FINAL POWER CONNECTIONS TO NEW UNIT. REMOVE EXISTING 3P-150A BREAKER IN EXISTING PANEL "TEMP-2" IN LOWER LEVEL AND REPLACE WITH NEW 3P-125A BREAKER.
- PROVIDE MUSHROOM TYPE EMERGENCY BOILER STOP SWITCH ON WALL THIS LOCATION. CONNECT STOP SWITCHES FOR RESPECTIVE BOILERS IN SERIES SO EITHER SWITCH WILL SHUT DOWN BOILER. ROUTE 2 #12 1" #12 GROUND IN 3/4" CONDUIT FROM EACH SET OF SWITCHES AND PROVIDE FINAL CONNECTIONS TO RESPECTIVE BOILER EMERGENCY STOP TERMINALS IN CONTROL PANEL. COORDINATE EXACT REQUIREMENTS WITH FURNISHED EQUIPMENT.

- PROVIDE NEW FEEDER TO EXISTING PANEL "BM4" THIS AREA. CONNECT TO NEW CIRCUIT BREAKER AS REQUIRED PER SCHEDULE OF MOTOR STARTERS ON SHEET E-0. REMOVE EXISTING CONDUIT AS POSSIBLE. REMOVE EXISTING BREAKER AND RELABEL PANEL DIRECTORY TO REFLECT CORRESPONDING MOTOR IDENTIFICATION. (ALTERNATE BID #1)
- PROVIDE NEW DISCONNECT SWITCH AT UNIT AND RECONNECT EXISTING FEEDER. PROVIDE ALL FINAL POWER CONNECTIONS TO NEW UNIT. REMOVE EXISTING 3P-20A BREAKER IN EXISTING PANEL "BM4" AND REPLACE WITH NEW 3P-15A BREAKER (ALTERNATE BID #1)
- PROVIDE NEW FEEDER TO EXISTING PANEL "BM4" THIS AREA. CONNECT TO NEW CIRCUIT BREAKER AS REQUIRED PER SCHEDULE OF MOTOR STARTERS ON SHEET E-0. REMOVE EXISTING BREAKER AND RELABEL PANEL DIRECTORY TO REFLECT CORRESPONDING MOTOR IDENTIFICATION. (ALTERNATE BID #2)
- PROVIDE NEW FEEDER DOWN TO EXISTING PANEL "TEMP" IN LOWER LEVEL. CONNECT TO NEW CIRCUIT BREAKER AS REQUIRED PER SCHEDULE OF MOTOR STARTERS ON SHEET E-0. REMOVE EXISTING CONDUIT AS POSSIBLE. REMOVE EXISTING BREAKER AND RELABEL PANEL DIRECTORY TO REFLECT CORRESPONDING MOTOR IDENTIFICATION. PROVIDE NEW WEATHERPROOF "IN-USE" GFI BREAKER AT UNIT AND RECONNECT EXISTING CIRCUIT PREVIOUSLY SERVING RECEPTACLE.
- COORDINATE EXACT UNIT LOCATIONS WITH MECHANICAL CONTRACTOR. ROUTE ALL FEEDERS THRU PIPE PORTAL ALONG WITH MECHANICAL PIPING.
- PROVIDE WEATHERPROOF "IN-USE" DUPLEX RECEPTACLE AT UNITS ON ROOF. ROUTE CIRCUIT DOWN TO FIRST FLOOR AND CONNECT TO NEAREST GENERAL USE RECEPTACLE CIRCUIT. FIELD COORDINATE ALL REQUIREMENTS.
- PROVIDE NEW FEEDER DOWN TO EXISTING PANEL "TEMP" IN LOWER LEVEL. CONNECT TO NEW CIRCUIT BREAKER AS REQUIRED PER SCHEDULE OF MOTOR STARTERS ON SHEET E-0. REMOVE EXISTING BREAKER AND RELABEL PANEL DIRECTORY TO REFLECT CORRESPONDING MOTOR IDENTIFICATION.
- PROVIDE NEW FEEDER DOWN TO EXISTING PANEL "TEMP" IN LOWER LEVEL. CONNECT TO EXISTING CIRCUIT BREAKER PREVIOUSLY SERVING EXTERIOR CONDENSING UNIT PER SCHEDULE OF MOTOR STARTERS ON SHEET E-0. RELABEL PANEL DIRECTORY TO REFLECT CORRESPONDING MOTOR IDENTIFICATION.
- PROVIDE WEATHERPROOF "IN-USE" DUPLEX RECEPTACLE AT NEW UNITS ON GRADE. CONNECT TO SAME 120V. CIRCUIT FROM RECEPTACLE AT ACQU-3.

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FIRST FLOOR PLAN - ELECTRICAL

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