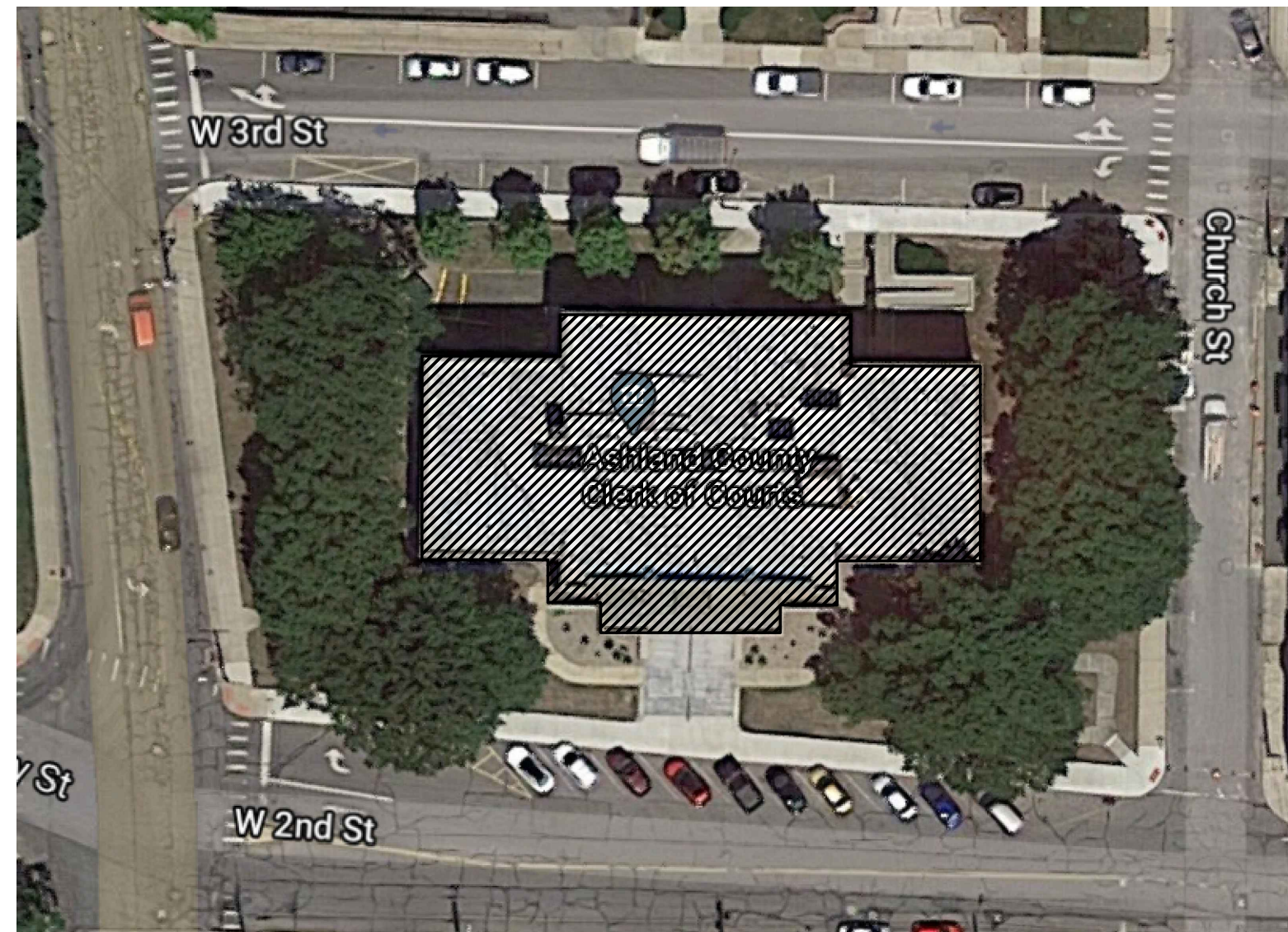


ASHLAND COUNTY COURTHOUSE HVAC SYSTEM UPGRADES

142 WEST 2ND STREET ASHLAND, OH 44805



SITE PLAN

NOT TO SCALE



ISSUED FOR BIDDING: JANUARY 22, 2021

PROJECT SPECIFIC SCOPE & INSTRUCTIONS

BASE PROJECT SCOPE:

- THE BASE SCOPE OF THIS PROJECT INCLUDES THE ADDITION OF FOUR (4) DUCTLESS VARIABLE REFRIGERANT VOLUME (VRV) SYSTEMS, THREE (3) DEDICATED OUTDOOR AIR SYSTEMS (DOAS) AND REPLACEMENT OF ONE (1) PACKAGED ROOFTOP UNIT AT THE ASHLAND COUNTY COURTHOUSE. A SINGLE PRIME CONTRACT WILL BE EXECUTED WITH THE WINNING MECHANICAL CONTRACTOR AND ALL OTHER WORK WILL BE AS PERFORMED AS A SUBCONTRACTOR TO THE WINNING BIDDER. WORK INCLUDES, BUT IS NOT LIMITED TO INSTALLATION OF NEW EQUIPMENT, REFRIGERANT & CONDENSATE PIPING, DUCTWORK, AIR DEVICES, LINE AND LOW VOLTAGE ELECTRICAL AND A NEW BUILDING CONTROL SYSTEM.

PERMITS AND PLAN REVIEW:

- DRAWINGS WILL BE SUBMITTED TO THE CITY OF ASHLAND BUILDING DEPARTMENT BY ENGINEER PRIOR TO PROJECT KICK-OFF. THIS CONTRACTOR IS RESPONSIBLE FOR SECURING AND PAYING FOR ALL SUBSEQUENT FEES, PERMITS AND INSPECTIONS.

BUILDING AUTOMATION CONTRACTOR:

- AS PART OF THIS PROJECT, THIS CONTRACTOR SHALL PROVIDE INTEGRATION OF ALL NEW EQUIPMENT AND THE EXISTING BOILER PLANT INTO THE COUNTY'S EXISTING SUPERVISORY OPEN ARCHITECTURE CONTROL SYSTEM. CONTACT PHILIP CHIARAPPA AT CONTROL CONCEPTS OF OHIO (330-958-1416, PHILIP@CONTROLCONCEPTS.COM) FOR MORE INFORMATION.

DEMOLISHED MATERIALS:

- ASHLAND COUNTY PERSONNEL WILL REMOVE FROM SERVICE, DEMOLISH AND DISPOSE OF ANY EXISTING HVAC EQUIPMENT, PIPING, WIRING, ELECTRICAL AS DEEMED NECESSARY PRIOR TO WORK COMMENCING. ADDITIONALLY, COUNTY PERSONNEL WILL REMOVE AND REPLACE ALL ACOUSTICAL CEILING TILES AND GRID AGREED UPON DURING THE PRE-CONSTRUCTION MEETING AS BEING NECESSARY FOR WORK TO BE COMPLETED.

SITE ACCESS AND SECURITY:

- ACCESS TO THE SITE WILL BE GIVEN DURING NORMAL WORKING HOURS, MONDAY THROUGH FRIDAY 7 A.M TO 5 P.M. AND SHALL BE COORDINATED A MINIMUM OF 24 HOURS IN ADVANCE.
- CORE/HAMMER DRILLING REQUIRED FOR PIPE AND CONDUIT PENETRATIONS MAY BE POSSIBLE DURING NORMAL WORKING HOURS, HOWEVER MUST BE COORDINATED WITH COUNTY PERSONNEL IN THE EVENT THE NOISE CREATED BY THESE ACTIVITIES WILL BE DISRUPTIVE TO NORMAL COUNTY BUSINESS.
- THE JOB SITE IS A TOBACCO/SMOKE FREE FACILITY (INCLUDING E-CIGARETTES). ANY EMPLOYEE OR SUBCONTRACTOR FOUND TO BE USING THESE PRODUCTS ON SITE WILL BE ASKED TO ABSTAIN FROM THESE ACTIVITIES AND A SECOND OFFENSE WILL LEAD TO REMOVAL FROM THE PROJECT.

- ALL WORK TO BE COORDINATED WITH REPRESENTATIVE OF ASHLAND COUNTY TO ENSURE THE BUILDING IS ACCESSIBLE.
- THE PICKUP, DELIVERY AND/OR STORAGE OF NEW AND DEMOLISHED EQUIPMENT AND MATERIALS ON THE EXTERIOR OF THE BUILDING IS TO BE KEPT TO AN ABSOLUTE MINIMUM AS A SAFETY PRECAUTION.
- ON-SITE RESTROOM FACILITIES ARE AVAILABLE FOR USE.
- FIELD PERSONNEL WILL BE UNDER VIDEO SURVEILLANCE AT ALL TIMES WHILE ON SITE.
- ALL HOT WORK WILL NEED TO BE COORDINATED WITH ASHLAND COUNTY MAINTENANCE TO ENSURE BUILDING SECURITY/FIRE SYSTEMS ARE DISARMED APPROPRIATELY.
- CONTRACTORS WILL BE REQUIRED TO COMPLY WITH ALL APPLICABLE COVID-19 REQUIREMENTS SET FORTH BY ASHLAND COUNTY REPRESENTATIVES AT THE KICKOFF MEETING FOR THE PROJECT.

SUBMITTALS AND SHOP DRAWINGS:

- WITHIN 15 WORKING DAYS OF AWARD OF CONTRACT, THIS CONTRACTOR SHALL SUBMIT FOR REVIEW BY THE ENGINEER, COPIES OF MANUFACTURER'S DRAWINGS, CUT SHEETS, AND APPLICATION SPECIFIC PERFORMANCE DATA RELEVANT TO THE PROJECT. THIS REQUIREMENT PERTAINS TO ALL EQUIPMENT AND SYSTEM COMPONENTS INCLUDING VRV UNITS, INDOOR UNITS, AIR HANDLERS, DAMPERS, LOUVERS, AIR DEVICES, HVAC PIPING & INSULATION, HVAC WIRING, SPECIALTIES, ELECTRICAL PANELS, BREAKERS, CONTROLS AND SEQUENCES OF OPERATION.
- WITHIN 15 WORKING DAYS OF AWARD OF CONTRACT, THIS CONTRACTOR SHALL SUBMIT FOR REVIEW BY THE ENGINEER AND ASHLAND COUNTY A DETAILED ANTICIPATED SCHEDULE FOR PROJECT COMPLETION. AT A MINIMUM, PROJECT SCHEDULE TO INCLUDE ALL WORK DETAILED IN THESE DRAWINGS, EQUIPMENT LEAD TIMES, CRITICAL PATH ITEMS AND SUBCONTRACTOR SCHEDULES.
- PRIOR TO INSTALLATION, THIS CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS FOR REVIEW BY THE ENGINEER/MANUFACTURER FOR ALL REFRIGERANT PIPING AND MANIFOLDS. THESE DRAWINGS SHALL INCLUDE SIZING, DIMENSIONS, FITTINGS, SUPPORTS, ELEVATIONS, TOTAL PIPE LENGTHS AND ANY OTHER APPLICABLE INFORMATION DEEMED RELEVANT TO THE INSTALLATION.
- ONCE FINAL VRV SYSTEM PIPING LAYOUTS AND ACTUAL REFRIGERANT VOLUMES ARE DETERMINED, THIS CONTRACTOR SHALL WORK WITH THE COUNTY, AHJ AND ENGINEER OF RECORD TO CONFIRM COMPLIANCE WITH ASHRAE STANDARDS 15 & 34 IN REGARDS TO THE REQUIRED CONCENTRATION LIMITS OF R-410A WITH RESPECT TO THE SMALLEST OCCUPIED SPACE CONTAINING A COMPONENT OF THE VRV SYSTEM.

Sheet List Table	
Sheet Number	Sheet Title
C1.0	COVER PAGE
M1.0	LOWER LEVEL HVAC NEW WORK PLAN
M1.1	1ST FLOOR HVAC NEW WORK PLAN
M1.2	2ND FLOOR HVAC NEW WORK PLAN
M1.3	ROOF HVAC NEW WORK PLAN
M3.0	HVAC EQUIPMENT SCHEDULES 1
M3.1	HVAC EQUIPMENT SCHEDULES 2
M4.0	VRV PIPING SCHEMATICS
E1.0	LOWER LEVEL ELECTRICAL NEW WORK
E1.1	1ST FLOOR ELECTRICAL NEW WORK
E1.2	2ND FLOOR ELECTRICAL NEW WORK
E1.3	ROOF ELECTRICAL NEW WORK
E3.0	ELECTRICAL SINGLE LINE DIAGRAM
E4.0	ELECTRICAL SINGLE LINE DIAGRAM
E4.1	VRV WIRING SCHEMATICS

CODE REVIEW DATA

PROJECT INFORMATION:

SQUARE FOOTAGE: 30,918 SQ. FT.
 CONSTRUCTION TYPE: BUILDING = 2B,
 NON-COMBUSTIBLE, NON-SPRINKLED
 PORTABLE FIRE EXTINGUISHERS AS REQUIRED BY IFC
 USE GROUP: A-3 COURTROOM

APPLICABLE CODES:

BUILDING: OHIO BUILDING CODE, 2017
 FIRE: OHIO FIRE CODE, 2017
 MECHANICAL: OHIO MECHANICAL CODE, 2017
 PLUMBING: OHIO PLUMBING CODE, 2017
 FUEL GAS: IFGC, 2015
 ELECTRICAL: NATIONAL ELECTRICAL CODE, 2017
 ACCESSIBILITY: ICC/ANSI A117.1-2003

CHAPTER 3 - USE AND OCCUPANCY

CLASSIFICATION:
 SECTION 303.4 USE = A-3 COURTROOM

0	JPR	01/22/21	ISSUED FOR BID
REV	BY	DATE	DESCRIPTION

DESIGNERS:



ASHLAND COMFORT CONTROL
 HEATING-AIR CONDITIONING-FIREPLACES-PLUMBING
 805 E. MAIN STREET - ASHLAND, OH
 P: 419.281.0144 F: 419.281.6971
 WWW.ASHLANDCOMFORTCONTROL.COM
 JOSEPH P. REEP - OHIO PE: #77349
 INFO@ASHLANDCOMFORT.COM

PROJECT

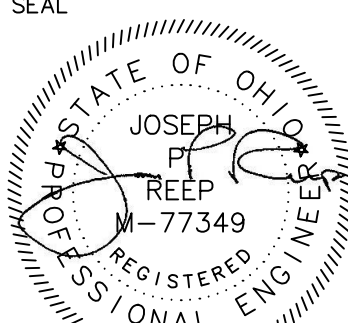


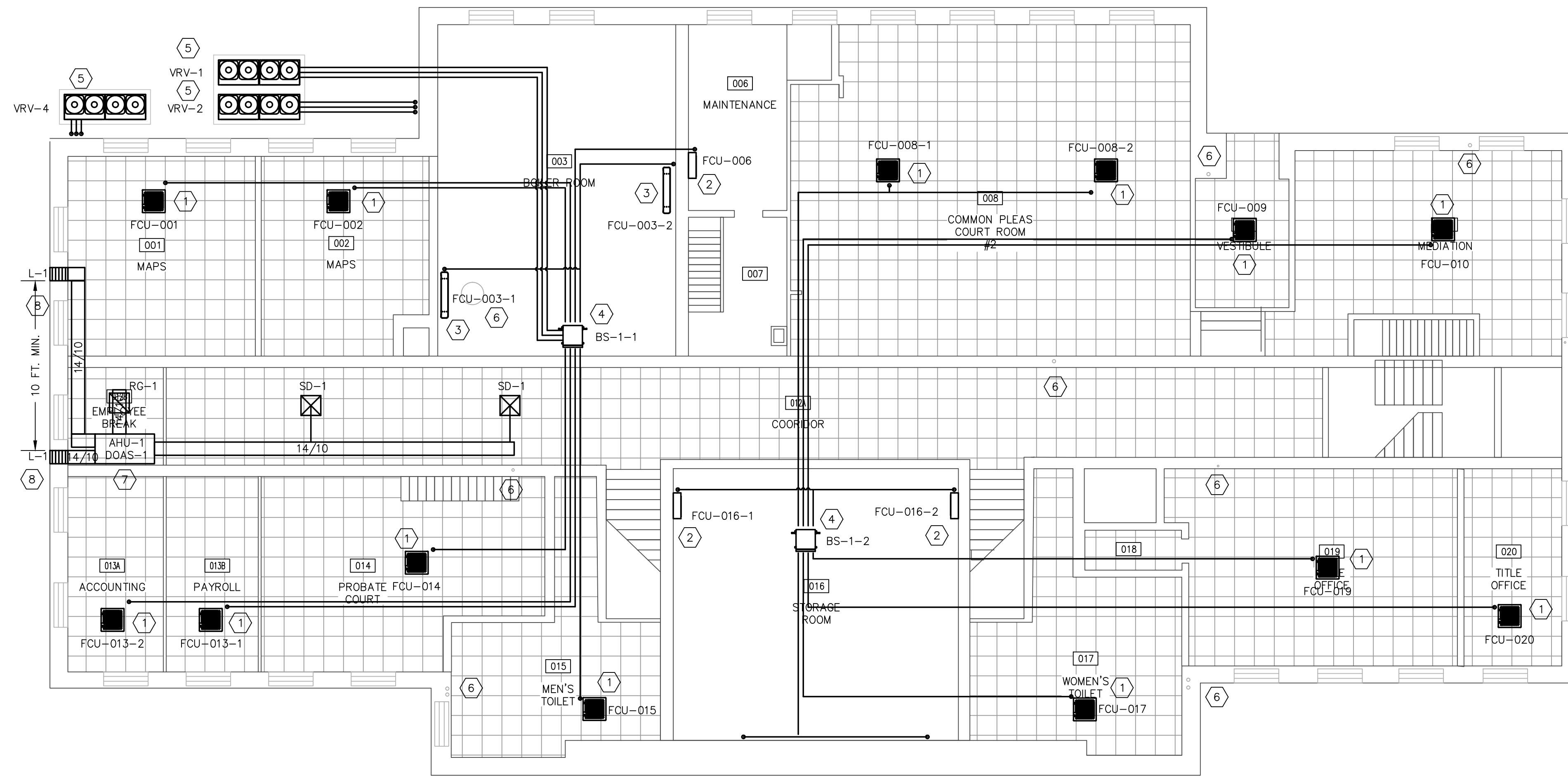
142 West 2nd Street
 Ashland, OH 44805

Ashland County Courthouse HVAC System Upgrades

DRAWN BY: JPR	ORIGIN DATE: 10/12/20	DESIGNED BY: JPR	DATE: 12/31/20
APPROVED BY: JPR	DATE: 01/21/21	CLIENT NO. ASH000	JOB NO. 220210

DRAWING NAME:
COVER.DWG

SEAL	TITLE
	COVER SHEET
	LAST EDIT DATE: 1/21/21 SCALE: DRAWING NO. C1.0



A PLAN VIEW
GROUND LEVEL HVAC WORK
1/8" = 1'-0"

GROUND LEVEL OUTDOOR AIR VENTILATION SCHEDULE

ROOM NO.	SYSTEM	NAME	AREA	OCCUPANCY	USE	ASHRAE 62.1 REQUIRED OA		
						CFM/PERSON	CFM/FT ²	TOTAL
001	BASEMENT	MAPS	382	1	OFFICES	5	0.06	27.9
002	BASEMENT	MAPS	327	1	OFFICES	5	0.06	24.6
003	BASEMENT	BOILER RM	805	-	STORAGE	-	0.06	48.3
006	BASEMENT	MAINTENANCE	212	1	OFFICES	5	0.06	13.7
007	BASEMENT	MAINTENANCE	140	-	STORAGE	-	0.06	8.4
008	BASEMENT	COMM. PLEA #2	1,322	20	COURT ROOM	5	0.06	179.3
009	BASEMENT	VESTIBULE	180	-	COORDIOR	-	0.06	10.8
010	BASEMENT	MEDIATION	573	8	CONFERENCE	5	0.06	74.5
012	BASEMENT	CORRIDOR	1,606	-	COORDIOR	-	0.06	96.4
013A	BASEMENT	ACCOUNTING	190	2	OFFICES	5	0.06	21.4
013B	BASEMENT	PAYROLL	183	2	OFFICES	5	0.06	21.0
014	BASEMENT	PROBATE CT	507	8	COURT ROOM	5	0.06	70.4
015	BASEMENT	MEN'S TLT	341	-	RESTROOM	-	-	-
016	BASEMENT	STORAGE	788	-	STORAGE	-	0.06	47.3
017	BASEMENT	WOMEN'S TLT	385	-	RESTROOM	-	-	-
018	BASEMENT	STORAGE	39	-	STORAGE	-	0.06	2.3
019	BASEMENT	TITLE OFFICE	554	5	OFFICE	5	0.06	53.2
020	BASEMENT	TITLE OFFICE	197	2	OFFICE	5	0.06	21.8
						TOTAL:		721.3

NOTES:
 * 70 CFM EXHAUST PER TOILET/URINAL
 ** OCCUPANCY CALCULATED FROM DEFAULT RATE / 1,000 FT² PER TABLE 403.3.1.1 OF 2017 OMC IF NOT POSTED.

- (X) CODED NOTES:**
- MECHANICAL CONTRACTOR (M.C.) TO INSTALL ONE (1) NEW 4-WAY CEILING CASSETTE STYLE VRV HEAD IN EXISTING CEILING GRID. SUSPEND/SUPPORT CASSETTE FROM STRUCTURE ABOVE IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS USING SYSTEM OF 3/8" THREADED ROD, WASHERS & NUTS AND/OR GRIPPLE AIRCRAFT CABLE. GRAVITY DRAIN CONDENSATE TO NEAREST PLUMBING STACK, FLOOR DRAIN OR UTILITY SINK (IF POSSIBLE), OTHERWISE UTILIZE BUILT-IN CONDENSATE LIFT MECHANISM TO PUMP TO NEAREST APPROPRIATE DISPOSAL POINT. REFER TO EQUIPMENT SCHEDULES AND MANUFACTURER PROVIDED PIPING DIAGRAMS AND MANUALS FOR SPECIFIC INSTALLATION REQUIREMENTS.
 - M.C. TO INSTALL ONE (1) NEW WALL MOUNTED VRV HEAD. SUSPEND/SUPPORT HEAD FROM EXISTING WALL STRUCTURE IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS. GRAVITY DRAIN CONDENSATE TO NEAREST PLUMBING STACK, FLOOR DRAIN OR UTILITY SINK (IF POSSIBLE), OTHERWISE PROVIDE OPTIONAL PUMP TO DISCHARGE CONDENSATE TO NEAREST APPROPRIATE DISPOSAL POINT. REFER TO EQUIPMENT SCHEDULES AND MANUFACTURER PROVIDED PIPING DIAGRAMS AND MANUALS FOR SPECIFIC INSTALLATION REQUIREMENTS.
 - M.C. TO INSTALL ONE (1) CONSOLE STYLE VRV UNIT. SUPPORT UNIT FROM EXISTING FLOOR IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS. GRAVITY DRAIN CONDENSATE TO NEAREST PLUMBING STACK, FLOOR DRAIN OR UTILITY SINK (IF POSSIBLE), OTHERWISE PROVIDE OPTIONAL PUMP TO DISCHARGE CONDENSATE TO NEAREST APPROPRIATE DISPOSAL POINT. REFER TO EQUIPMENT SCHEDULES AND MANUFACTURER PROVIDED PIPING DIAGRAMS AND MANUALS FOR SPECIFIC INSTALLATION REQUIREMENTS.
 - M.C. TO INSTALL BRANCH SELECTOR UNIT IN APPROXIMATE LOCATION SHOWN. REFER TO EQUIPMENT SCHEDULES AND MANUFACTURER PROVIDED PIPING DIAGRAMS AND MANUALS FOR SPECIFIC INSTALLATION REQUIREMENTS. SELECTOR BOXES AND REFRIGERANT LINES TO BE CONCEALED ABOVE ACOUSTICAL CEILING WHERE POSSIBLE. EXPOSED PIPING SHALL BE RUN NEAT, LEVEL AND CONCEALED IN PAINTABLE LINE-HIDE.
 - M.C. TO SET NEW VRV OUTDOOR UNITS IN APPROXIMATE LOCATIONS SHOWN. CONTRACTOR TO PROVIDE NEW 4" REINFORCED EQUIPMENT PAD FOR EACH UNIT WHICH EXTENDS A MINIMUM OF 6" BEYOND FOOTPRINT OF EQUIPMENT.
 - EXISTING PLUMBING STACK OR POTENTIAL CONDENSATE DISPOSAL LOCATION.
 - M.C. TO SUSPEND NEW AIR HANDLER, COIL AND VRV CONTROLLER ABOVE EXISTING ACOUSTICAL CEILING. INCLUDE PLYWOOD AND SECONDARY DRAIN PAN WITH CONDENSATE COP OR EQUIVALENT. ALL DUCTWORK TO BE INSULATED WITH R-8 INSULATION, LIMITING FLEX RUNS TO LENGTHS LESS THAN 5 FEET.
 - NEW INTAKE AND EXHAUST LOUVERS TO BE INSTALLED, FASTENED AND SEALED WEATHER TIGHT ON THE BUILDING EXTERIOR.

0	JPR	01/22/21	ISSUED FOR BID
REV	BY	DATE	DESCRIPTION

DESIGNERS:

ASHLAND COMFORT CONTROL
 HEATING, COOLING, VENTILATION & AIR QUALITY
 805 E. MAIN STREET - ASHLAND, OH
 P: 419.281.0144 F: 419.281.6971
 WWW.ASHLANDCOMFORTCONTROL.COM
 JOSEPH P. REEP - OHIO PE: #77349
 INFO@ASHLANDCOMFORT.COM

PROJECT

142 West 2nd Street
 Ashland, OH 44805

**Ashland County Courthouse
 HVAC System Upgrades**

DRAWN BY: JPR	ORIGIN DATE: 10/12/20	DESIGNED BY: JPR	DATE: 12/31/20
APPROVED BY: JPR	DATE: 01/21/21	CLIENT NO. ASH000	JOB NO. 220210

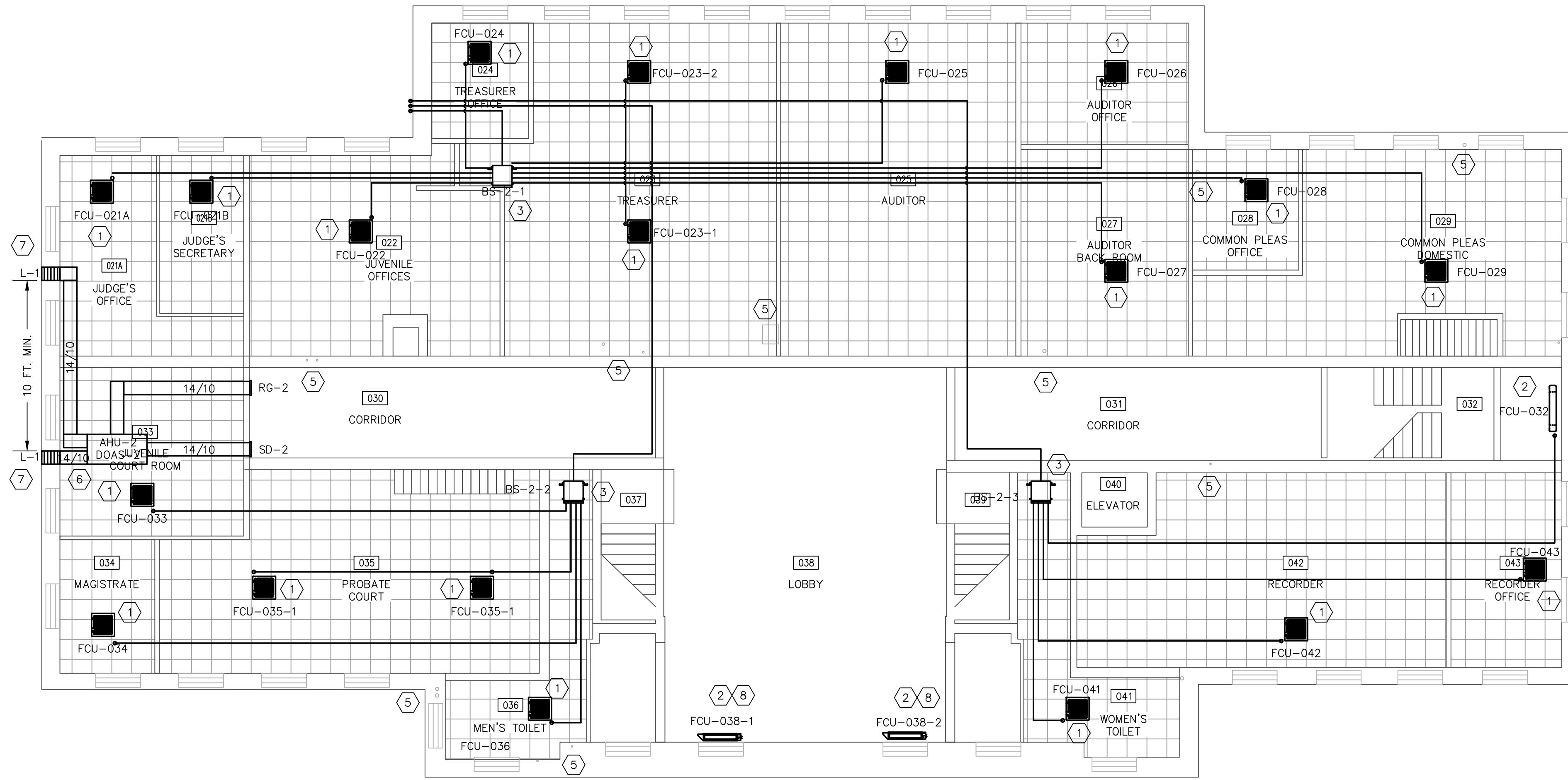
DRAWING NAME:
220210 - HVAC.DWG

SEAL

TITLE
**LOWER LEVEL
 HVAC NEW WORK
 PLAN**

LAST EDIT DATE:
1/21/21

DRAWING NO.
M1.0



A PLAN VIEW
1ST FLOOR HVAC WORK
1/8" = 1'-0"

FIRST FLOOR OUTDOOR AIR VENTILATION SCHEDULE

ROOM NO.	SYSTEM	NAME	AREA	OCCUPANCY	USE	ASHRAE 62.1 REQUIRED OA		
						CFM/PERSON	CFM/FT ²	TOTAL
021A	1ST FLOOR	JUDGE'S OFFICE	231	1	OFFICE	5	0.06	18.9
021B	1ST FLOOR	JUDGE'S SEC.	134	1	OFFICE	5	0.06	13.0
022	1ST FLOOR	JUVENILE OFF.	494	3	OFFICE	5	0.06	44.6
023	1ST FLOOR	TREAS. OFFICE	113	1	OFFICE	5	0.06	7.8
024	1ST FLOOR	TREASURER	898	4	OFFICE	5	0.06	73.9
025	1ST FLOOR	AUDITOR	791	4	OFFICE	5	0.06	67.5
026	1ST FLOOR	AUDITOR OFF.	205	2	OFFICE	5	0.06	22.3
027	1ST FLOOR	AUDIT BACK RM	349	8	OFFICE	5	0.06	60.9
028	1ST FLOOR	COMM PLEA OFF.	129	2	OFFICE	5	0.06	17.7
029	1ST FLOOR	COMM PLEA DOM	630	4	COURT RM	5	0.06	57.8
030	1ST FLOOR	CORRIDOR	371	-	COORDOR	-	0.06	22.3
031	1ST FLOOR	CORRIDOR	340	-	COORDOR	-	0.06	20.4
032	1ST FLOOR	STAIRCASE	221	-	COORDOR	-	0.06	13.3
033	1ST FLOOR	JUV COURT RM	313	8	COURT RM	5	0.06	58.8
034	1ST FLOOR	MAGISTRATE	128	1	OFFICE	5	0.06	12.7
035	1ST FLOOR	PROBATE COURT	719	10	COURT RM	5	0.06	93.1
036	1ST FLOOR	MEN'S TOILET	199	-	RESTROOM	-	-	-
037	1ST FLOOR	STAIRCASE	187	-	COORDOR	-	0.06	11.2
038	1ST FLOOR	LOBBY	1,064	10	MAIN ENTRY	5	0.06	113.8
039	1ST FLOOR	STAIRCASE	184	-	COORDOR	-	0.06	11.0
040	1ST FLOOR	ELEVATOR	36	-	ELEVATOR	-	-	-
041	1ST FLOOR	WOMEN'S TLT	223	-	RESTROOM	-	-	-
042	1ST FLOOR	RECORDER	675	2	OFFICE	5	0.06	50.5
043	1ST FLOOR	RECORDER OFF.	218	2	OFFICE	5	0.06	23.1
						TOTAL:		814.4

NOTES:
 * 70 CFM EXHAUST PER TOILET/URINAL
 ** OCCUPANCY CALCULATED FROM DEFAULT RATE / 1,000 FT² PER TABLE 403.3.1.1 OF 2017 OMC IF NOT POSTED.

(X) CODED NOTES:

- MECHANICAL CONTRACTOR (M.C.) TO INSTALL ONE (1) NEW 4-WAY CEILING CASSETTE STYLE VRV HEAD IN EXISTING CEILING GRID. SUSPEND/SUPPORT CASSETTE FROM STRUCTURE ABOVE IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS USING SYSTEM OF 3/8" THREADED ROD, WASHERS & NUTS AND/OR GRIPPLE AIRCRAFT CABLE. GRAVITY DRAIN CONDENSATE TO NEAREST PLUMBING STACK, FLOOR DRAIN OR UTILITY SINK (IF POSSIBLE). OTHERWISE UTILIZE BUILT-IN CONDENSATE LIFT MECHANISM TO PUMP TO NEAREST APPROPRIATE DISPOSAL POINT. REFER TO EQUIPMENT SCHEDULES AND MANUFACTURER PROVIDED PIPING DIAGRAMS AND MANUALS FOR SPECIFIC INSTALLATION REQUIREMENTS.
- M.C. TO INSTALL ONE (1) CONSOLE STYLE VRV UNIT. SUPPORT UNIT FROM EXISTING FLOOR IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS. GRAVITY DRAIN CONDENSATE TO NEAREST PLUMBING STACK, FLOOR DRAIN OR UTILITY SINK (IF POSSIBLE). OTHERWISE PROVIDE OPTIONAL PUMP TO DISCHARGE CONDENSATE TO NEAREST APPROPRIATE DISPOSAL POINT. REFER TO EQUIPMENT SCHEDULES AND MANUFACTURER PROVIDED PIPING DIAGRAMS AND MANUALS FOR SPECIFIC INSTALLATION REQUIREMENTS.
- M.C. TO INSTALL BRANCH SELECTOR UNIT IN APPROXIMATE LOCATION SHOWN. REFER TO EQUIPMENT SCHEDULES AND MANUFACTURER PROVIDED PIPING DIAGRAMS AND MANUALS FOR SPECIFIC INSTALLATION REQUIREMENTS. SELECTOR BOXES AND REFRIGERANT LINES TO BE CONCEALED ABOVE ACOUSTICAL CEILING WHERE POSSIBLE. EXPOSED PIPING SHALL BE RUN NEAT, LEVEL AND CONCEALED IN PAINTABLE LINE-HIDE.
- M.C. TO SET NEW VRV OUTDOOR UNITS IN APPROXIMATE LOCATIONS SHOWN. CONTRACTOR TO PROVIDE NEW 4" REINFORCED EQUIPMENT PAD FOR EACH UNIT WHICH EXTENDS A MINIMUM OF 6" BEYOND FOOTPRINT OF EQUIPMENT.
- EXISTING PLUMBING STACK OR POTENTIAL CONDENSATE DISPOSAL LOCATION.
- M.C. TO SUSPEND NEW AIR HANDLER, COIL AND VRV CONTROLLER ABOVE EXISTING ACOUSTICAL CEILING. INCLUDE PLYWOOD AND SECONDARY DRAIN PAN WITH CONDENSATE COP OR EQUIVALENT. ALL DUCTWORK TO BE INSULATED WITH R-8 INSULATION, LIMITING FLEX RUNS TO LENGTHS LESS THAN 5 FEET.
- NEW INTAKE AND EXHAUST LOUVERS TO BE INSTALLED, FASTENED AND SEALED WEATHER TIGHT ON THE BUILDING EXTERIOR.
- REMOVE EXISTING RADIATOR AND CAP STEAM LINES BENEATH FLOOR IN LOBBY ENCLOSURES TO PROVIDE ADEQUATE SPACE NECESSARY FOR VRV CONSOLE.

0	JPR	01/22/21	ISSUED FOR BID
REV	BY	DATE	DESCRIPTION

DESIGNERS:



ASHLAND COMFORT CONTROL
 HEATING, AIR CONDITIONING & REFRIGERATION
 805 E. MAIN STREET - ASHLAND, OH
 P: 419.281.0144 F: 419.281.6971
 WWW.ASHLANDCOMFORTCONTROL.COM
 JOSEPH P. REEP - OHIO PE #77349
 INFO@ASHLANDCOMFORT.COM

PROJECT

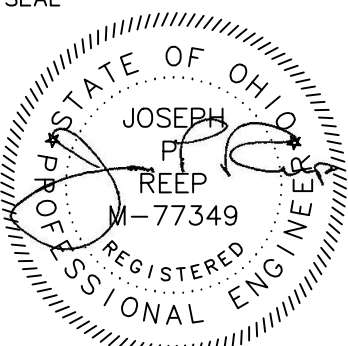


142 West 2nd Street
 Ashland, OH 44805

**Ashland County Courthouse
 HVAC System Upgrades**

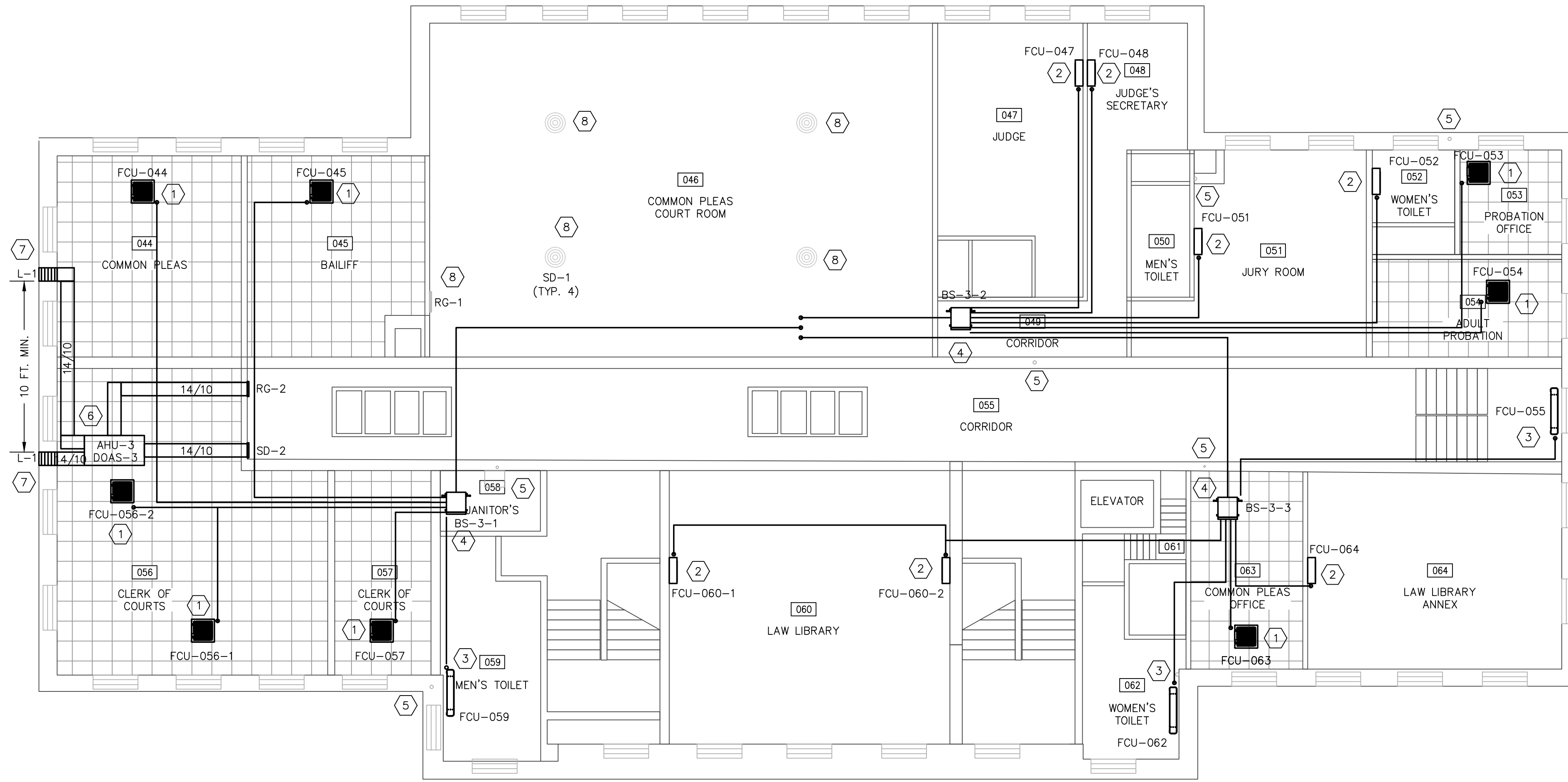
DRAWN BY: JPR	ORIGIN DATE: 10/12/20	DESIGNED BY: JPR	DATE: 12/31/20
APPROVED BY: JPR	DATE: 01/21/21	CLIENT NO. ASH000	JOB NO. 220210

DRAWING NAME:
220210 - HVAC.DWG

	TITLE 1ST FLOOR HVAC NEW WORK PLAN
	LAST EDIT DATE: 1/21/21 DRAWING NO. M1.1

PLOT DATE \ TIME: 12/12/2021 11:14:25 PM
 S:\CC COMMERCIAL PROJECTS\ASHLAND COUNTY\220210_ASHLAND COUNTY COURTHOUSE ENGINEERING\0 - DRAWINGS\1 - DRAWINGS RECEIVED FROM OTHERS\NEW DRAWING TEMPLATE

PLOT DATE \ TIME: 12/20/21 11:14:29 PM
 S:\ACC COMMERCIAL PROJECTS\ASHLAND COUNTY\220210_ASHLAND COUNTY COURTHOUSE ENGINEERING\0 - DRAWINGS\1 - DRAWINGS RECEIVED FROM OTHERS\NEW DRAWING TEMPLATE



A PLAN VIEW
 2ND FLOOR HVAC WORK
 1/8" = 1'-0"

SECOND FLOOR OUTDOOR AIR VENTILATION SCHEDULE

ROOM NO.	SYSTEM	NAME	AREA	OCCUPANCY	USE	ASHRAE 62.1 REQUIRED OA		
						CFM/PERSON	CFM/FT ²	TOTAL
044	2ND FLOOR	COMMON PLEAS	372	1	OFFICE	5	0.06	27.3
045	2ND FLOOR	BAILIFF	351	1	OFFICE	5	0.06	26.1
046	RTU	CO. PL CRT RM	1,689	118	COURT ROOM	5	0.06	691.3***
047	2ND FLOOR	JUDGE'S OFF	400	1	OFFICE	5	0.06	29.0
048	2ND FLOOR	JUDGE'S SEC	128	1	OFFICE	5	0.06	12.7
049	2ND FLOOR	COORDOR	167	-	COORDOR	-	0.06	10.0
050	2ND FLOOR	MEN'S TLT	66	-	RESTROOM	-	-	-
051	2ND FLOOR	JURY ROOM	394	15	CONFERENCE	5	0.06	98.6
052	2ND FLOOR	WOMEN'S TLT	86	-	RESTROOM	-	-	-
053	2ND FLOOR	PROBATION OFF	107	2	OFFICE	5	0.06	16.4
054	2ND FLOOR	ADLT PROBATION	186	2	OFFICE	5	0.06	21.2
055	2ND FLOOR	COORDOR	1,217	-	COORDOR	-	0.06	73.0
056	2ND FLOOR	CLRK OF CRTS	745	2	OFFICE	5	0.06	54.7
057	2ND FLOOR	CLRK OF CRTS	198	1	OFFICE	5	0.06	16.9
058	2ND FLOOR	JANITOR'S	61	-	STORAGE	-	0.06	3.7
059	2ND FLOOR	MEN'S TLT	204	-	RESTROOM	-	-	-
060	2ND FLOOR	LAW LIBRARY	772	6	LIBRARY	5	0.12	122.6
061	2ND FLOOR	STAIRCASE	52	-	COORDOR	-	0.06	3.1
062	2ND FLOOR	WOMEN'S TLT	140	-	RESTROOM	-	-	-
063	2ND FLOOR	COMM PL OFF	224	2	OFFICE	5	0.06	23.4
064	2ND FLOOR	LAW LIB. ANX.	498	6	LIBRARY	5	0.12	89.8
						TOTAL:		628.5

NOTES:

- * 70 CFM EXHAUST PER TOILET/URINAL
- ** OCCUPANCY CALCULATED FROM DEFAULT RATE / 1,000 FT² PER TABLE 403.3.1.1 OF 2017 OMC IF NOT POSTED.
- *** LARGE COMMON PLEAS COURT ROOM IS ON A DEDICATED ROOFTOP UNIT WITH ITS OWN MEANS OF OUTSIDE AIR

(X) CODED NOTES:

- MECHANICAL CONTRACTOR (M.C.) TO INSTALL ONE (1) NEW 4-WAY CEILING CASSETTE STYLE VRV HEAD IN EXISTING CEILING GRID. SUSPEND/SUPPORT CASSETTE FROM STRUCTURE ABOVE IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS USING SYSTEM OF 3/8" THREADED ROD, WASHERS & NUTS AND/OR GRIPPLE AIRCRAFT CABLE. GRAVITY DRAIN CONDENSATE TO NEAREST PLUMBING STACK, FLOOR DRAIN OR UTILITY SINK (IF POSSIBLE). OTHERWISE UTILIZE BUILT-IN CONDENSATE LIFT MECHANISM TO PUMP TO NEAREST APPROPRIATE DISPOSAL POINT. REFER TO EQUIPMENT SCHEDULES AND MANUFACTURER PROVIDED PIPING DIAGRAMS AND MANUALS FOR SPECIFIC INSTALLATION REQUIREMENTS.
- M.C. TO INSTALL ONE (1) NEW WALL MOUNTED VRV HEAD. SUSPEND/SUPPORT HEAD FROM EXISTING WALL STRUCTURE IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS. GRAVITY DRAIN CONDENSATE TO NEAREST PLUMBING STACK, FLOOR DRAIN OR UTILITY SINK (IF POSSIBLE). OTHERWISE PROVIDE OPTIONAL PUMP TO DISCHARGE CONDENSATE TO NEAREST APPROPRIATE DISPOSAL POINT. REFER TO EQUIPMENT SCHEDULES AND MANUFACTURER PROVIDED PIPING DIAGRAMS AND MANUALS FOR SPECIFIC INSTALLATION REQUIREMENTS.
- M.C. TO INSTALL ONE (1) CONSOLE STYLE VRV UNIT. SUPPORT UNIT FROM EXISTING FLOOR IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS. GRAVITY DRAIN CONDENSATE TO NEAREST PLUMBING STACK, FLOOR DRAIN OR UTILITY SINK (IF POSSIBLE). OTHERWISE PROVIDE OPTIONAL PUMP TO DISCHARGE CONDENSATE TO NEAREST APPROPRIATE DISPOSAL POINT. REFER TO EQUIPMENT SCHEDULES AND MANUFACTURER PROVIDED PIPING DIAGRAMS AND MANUALS FOR SPECIFIC INSTALLATION REQUIREMENTS.
- M.C. TO INSTALL BRANCH SELECTOR UNIT IN APPROXIMATE LOCATION SHOWN. REFER TO EQUIPMENT SCHEDULES AND MANUFACTURER PROVIDED PIPING DIAGRAMS AND MANUALS FOR SPECIFIC INSTALLATION REQUIREMENTS. SELECTOR BOX AND REFRIGERANT LINES TO BE CONCEALED IN BUILDING ATTIC WHERE POSSIBLE. EXPOSED PIPING SHALL BE RUN NEAT, LEVEL AND CONCEALED IN PAINTABLE LINE-HIDE.
- EXISTING PLUMBING STACK OR POTENTIAL CONDENSATE DISPOSAL LOCATION.
- M.C. TO SUSPEND NEW AIR HANDLER, COIL AND VRV CONTROLLER ABOVE EXISTING ACoustical CEILING. INCLUDE PLYWOOD AND SECONDARY DRAIN PAN WITH CONDENSATE COP OR EQUIVALENT. ALL DUCTWORK TO BE INSULATED WITH R-8 INSULATION, LIMITING FLEX RUNS TO LENGTHS LESS THAN 5 FEET.
- NEW INTAKE AND EXHAUST LOUVERS TO BE INSTALLED, FASTENED AND SEALED WEATHER TIGHT ON THE BUILDING EXTERIOR.
- EXISTING DUCTWORK AND DIFFUSERS IN COURTROOM TO REMAIN.

0	JPR	01/22/21	ISSUED FOR BID
REV	BY	DATE	DESCRIPTION

DESIGNERS:



ASHLAND COMFORT CONTROL
 HEATING, COOLING, AND PLUMBING
 805 E. MAIN STREET - ASHLAND, OH
 P: 419.281.0144 F: 419.281.6971
 WWW.ASHLANDCOMFORTCONTROL.COM
 JOSEPH P. REEP - OHIO PE #77349
 INFO@ASHLANDCOMFORT.COM

PROJECT

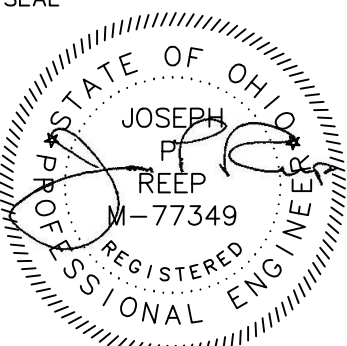


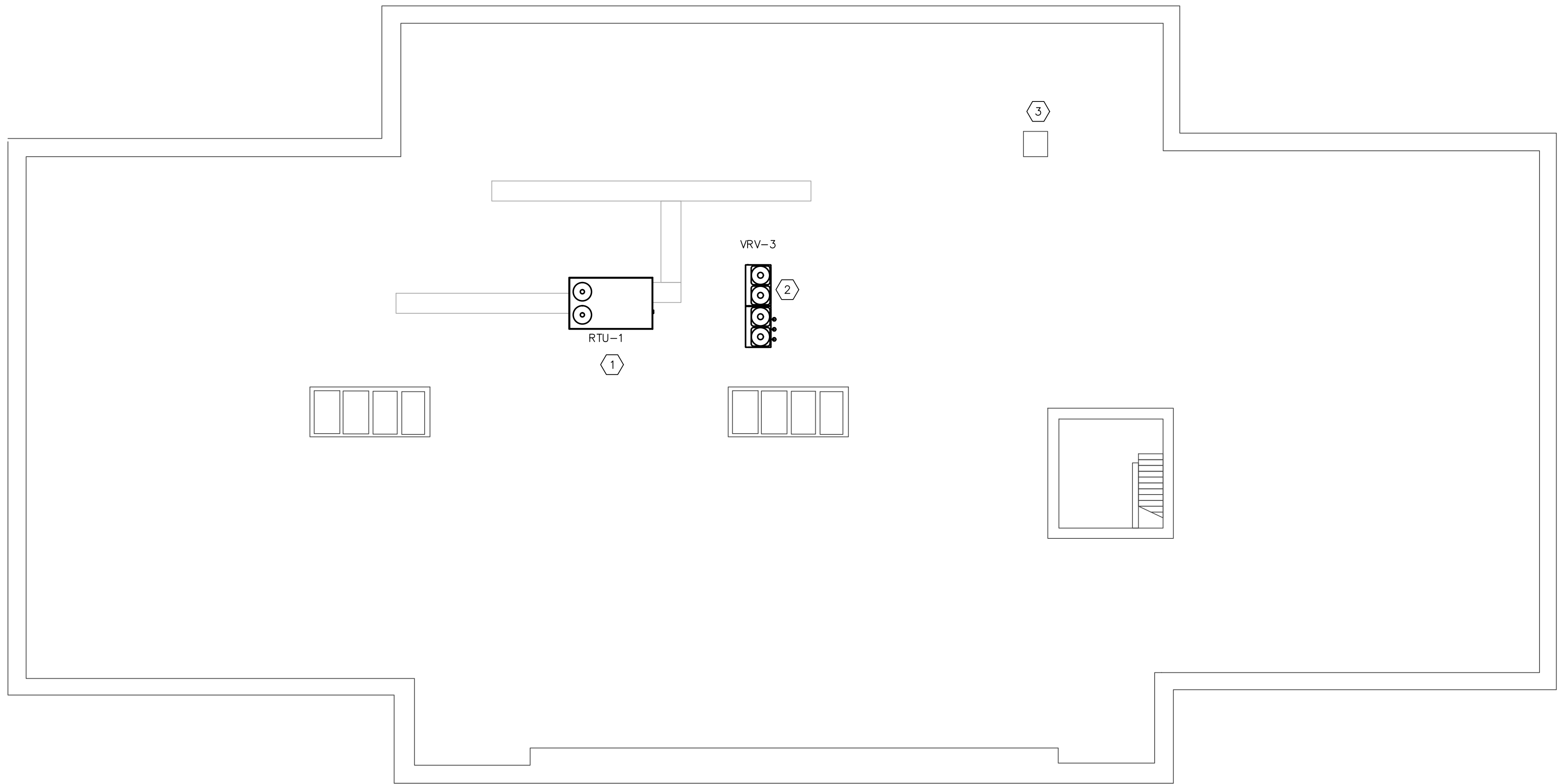
142 West 2nd Street
 Ashland, OH 44805

Ashland County Courthouse HVAC System Upgrades

DRAWN BY: JPR	ORIGIN DATE: 10/12/20	DESIGNED BY: JPR	DATE: 12/31/20
APPROVED BY: JPR	DATE: 01/21/21	CLIENT NO. ASH000	JOB NO. 220210

DRAWING NAME:
220210 - HVAC.DWG

	TITLE 2ND FLOOR HVAC NEW WORK PLAN
	LAST EDIT DATE: 1/21/21 DRAWING NO. M1.2



A PLAN VIEW
 ROOF HVAC WORK 1/8" = 1'-0"

(X) CODED NOTES:

1. MECHANICAL CONTRACTOR (M.C.) TO REPLACE ONE (1) EXISTING GAS/ELECTRIC, HORIZONTAL DISCHARGE, PACKAGED ROOFTOP UNIT DEDICATED TO MUNICIPAL COURTROOM. UNIT TO INCLUDE ALL ACCESSORIES AND OPTIONS AS SCHEDULED AND INDICATED IN THIS DRAWING PACKAGE. RE-USE EXISTING DUCTWORK AND AIR DEVICES AS POSSIBLE AND SEAL NEW AND EXISTING COMPONENTS FOR PROTECTION AGAINST WATER INFILTRATION.
2. M.C. TO SET NEW VRV OUTDOOR UNIT ON ROOF ON EXISTING STRUCTURAL STEEL SUPPORT ADJACENT TO PACKAGED ROOFTOP UNIT. MC TO BE RESPONSIBLE FOR PATCHING ALL NEW ROOF PENETRATIONS AND COORDINATING WITH COUNTY PREFERRED ROOFING CONTRACTOR SO AS NOT TO VOID ANY EXISTING ROOF WARRANTY.
5. EXISTING ATTIC ACCESS HATCH.


0	JPR	01/22/21	ISSUED FOR BID
REV	BY	DATE	DESCRIPTION

DESIGNERS:



ASHLAND COMFORT CONTROL
 HEATING • AIR CONDITIONING • FIRE LOSS PREVENTION
 805 E. MAIN STREET - ASHLAND, OH
 P: 419.281.0144 F: 419.281.6971
 WWW.ASHLANDCOMFORTCONTROL.COM
 JOSEPH P. REEP - OHIO PE #77349
 INFO@ASHLANDCOMFORT.COM

PROJECT

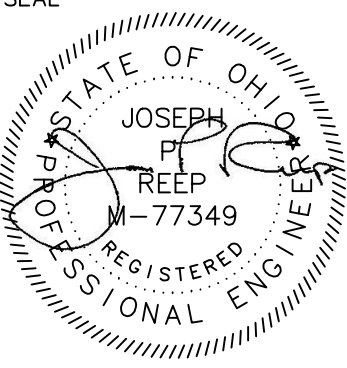


142 West 2nd Street
 Ashland, OH 44805

**Ashland County Courthouse
 HVAC System Upgrades**

DRAWN BY: JPR	ORIGIN DATE: 10/12/20	DESIGNED BY: JPR	DATE: 12/31/20
APPROVED BY: JPR	DATE: 01/21/21	CLIENT NO. ASH000	JOB NO. 220210

DRAWING NAME:
220210 - HVAC.DWG

SEAL 	TITLE ROOF HVAC NEW WORK PLAN	
	LAST EDIT DATE: 1/21/21 SCALE:	DRAWING NO. M1.3

(VRV) VARIABLE REFRIGERANT VOLUME – INDOOR UNIT SCHEDULE

TAG	ROOM	NOMINAL TONNAGE	CONNECTED TO:		SUPPLY FAN AIRFLOW RATE	COOLING CAPACITY			HEATING CAPACITY		ELECTRICAL			DIMENSIONS		MAKE	MODEL	TYPE	OPTIONS & ACC.	NOTES
			COND. UNIT	ZONE C/O		TOTAL BTU/h	SENSIBLE BTU/h	EA DB/WB	TOTAL BTU/h	EA DB	VOLTAGE/PH	MCA	MOP	WxHxD (IN.)	WEIGHT					
FCU-001	MAPS	0.6	VRV-1	YES	307 CFM	6,823	4,958	75/64F	8,527	70F	208/230V, 1PH	0.3	15.0	22.6x10.2x22.6	35.3 LBS	DAIKIN	FXZQ07TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-002	MAPS	0.6	VRV-1	YES	307 CFM	6,823	4,958	75/64F	8,527	70F	208/230V, 1PH	0.3	15.0	22.6x10.2x22.6	35.3 LBS	DAIKIN	FXZQ07TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-003A	BOILER	0.6	VRV-1	YES	245 CFM	6,687	4,659	75/64F	8,496	70F	208/230V, 1PH	0.3	15.0	39.4x23.6x8.7	57.3 LBS	DAIKIN	FXLQ07MVJU9	FLOOR STANDING UNIT		1-2
FCU-003B	BOILER	0.6	VRV-1	YES	245 CFM	6,687	4,659	75/64F	8,496	70F	208/230V, 1PH	0.3	15.0	39.4x23.6x8.7	57.3 LBS	DAIKIN	FXLQ07MVJU9	FLOOR STANDING UNIT	BRC1E73 (1)	1-2
FCU-006	MAINTENANCE	0.6	VRV-1	YES	260 CFM	6,699	5,167	75/64F	8,500	70F	208/230V, 1PH	0.3	15.0	31.3x11.4x9.3	26.5 LBS	DAIKIN	FXAQ07PVJU	WALL MOUNTED UNIT	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-008A	COMM. PLEAS #2	1.3	VRV-1	YES	405 CFM	13,646	8,972	75/64F	17,057	70F	208/230V, 1PH	0.4	15.0	22.6x10.2x22.6	36.4 LBS	DAIKIN	FXZQ15TAVJU	4-WAY CASSETTE (2'x2')	BYFQ60C3W1W (1)	1-2
FCU-008B	COMM. PLEAS #2	1.3	VRV-1	YES	405 CFM	13,646	8,972	75/64F	17,057	70F	208/230V, 1PH	0.4	15.0	22.6x10.2x22.6	36.4 LBS	DAIKIN	FXZQ15TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-009	VESTIBULE	0.5	VRV-1	YES	300 CFM	5,118	4,022	75/64F	6,483	70F	208/230V, 1PH	0.3	15.0	22.6x10.2x22.6	35.3 LBS	DAIKIN	FXZQ05TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-010	MEDIATION	1.0	VRV-1	YES	353 CFM	10,917	6,942	75/64F	13,642	70F	208/230V, 1PH	0.4	15.0	22.6x10.2x22.6	36.4 LBS	DAIKIN	FXZQ12TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-012B	EMP. BREAKROOM	0.5	VRV-1	YES	300 CFM	5,118	4,022	75/64F	6,483	70F	208/230V, 1PH	0.3	15.0	22.6x10.2x22.6	35.3 LBS	DAIKIN	FXZQ05TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-013A	ACCOUNTING	0.5	VRV-1	YES	300 CFM	5,118	4,022	75/64F	6,483	70F	208/230V, 1PH	0.3	15.0	22.6x10.2x22.6	35.3 LBS	DAIKIN	FXZQ05TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-013B	PAYROLL	0.5	VRV-1	YES	300 CFM	5,118	4,022	75/64F	6,483	70F	208/230V, 1PH	0.3	15.0	22.6x10.2x22.6	35.3 LBS	DAIKIN	FXZQ05TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-014	PROBATE CRT.	0.8	VRV-1	YES	317 CFM	8,529	5,659	75/64F	10,574	70F	208/230V, 1PH	0.3	15.0	22.6x10.2x22.6	35.3 LBS	DAIKIN	FXZQ09TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-015	MEN'S RR	0.6	VRV-1	YES	307 CFM	6,823	4,958	75/64F	8,527	70F	208/230V, 1PH	0.3	15.0	22.6x10.2x22.6	35.3 LBS	DAIKIN	FXZQ07TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-016A	STORAGE	0.6	VRV-1	YES	260 CFM	6,699	5,167	75/64F	8,500	70F	208/230V, 1PH	0.3	15.0	31.3x11.4x9.3	26.5 LBS	DAIKIN	FXAQ07PVJU	WALL MOUNTED UNIT		1-2
FCU-016B	STORAGE	0.6	VRV-1	YES	260 CFM	6,699	5,167	75/64F	8,500	70F	208/230V, 1PH	0.3	15.0	31.3x11.4x9.3	26.5 LBS	DAIKIN	FXAQ07PVJU	WALL MOUNTED UNIT	BRC1E73 (1)	1-2
FCU-017	WOMEN'S RR	0.6	VRV-1	YES	245 CFM	6,687	4,659	75/64F	8,496	70F	208/230V, 1PH	0.3	15.0	39.4x23.6x8.7	57.3 LBS	DAIKIN	FXLQ07MVJU9	FLOOR STANDING UNIT	BRC1E73 (1)	1-2
FCU-019	TITLE OFFICE	1.0	VRV-1	YES	353 CFM	10,917	6,942	75/64F	13,642	70F	208/230V, 1PH	0.4	15.0	22.6x10.2x22.6	36.4 LBS	DAIKIN	FXZQ12TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-020	TITLE OFFICE	0.5	VRV-1	YES	300 CFM	5,118	4,022	75/64F	6,483	70F	208/230V, 1PH	0.3	15.0	22.6x10.2x22.6	35.3 LBS	DAIKIN	FXZQ05TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-021A	JUDGE'S OFFICE	0.5	VRV-2	YES	300 CFM	5,118	4,022	75/64F	6,483	70F	208/230V, 1PH	0.3	15.0	22.6x10.2x22.6	35.3 LBS	DAIKIN	FXZQ05TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-021B	JUDGE'S SECRETARY	0.5	VRV-2	YES	300 CFM	5,118	4,022	75/64F	6,483	70F	208/230V, 1PH	0.3	15.0	22.6x10.2x22.6	35.3 LBS	DAIKIN	FXZQ05TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-022	JUVENILE OFFICE	1.0	VRV-2	YES	353 CFM	10,917	6,942	75/64F	13,642	70F	208/230V, 1PH	0.4	15.0	22.6x10.2x22.6	36.4 LBS	DAIKIN	FXZQ12TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-023A	TREASURER	1.0	VRV-2	YES	353 CFM	10,917	6,942	75/64F	13,642	70F	208/230V, 1PH	0.4	15.0	22.6x10.2x22.6	36.4 LBS	DAIKIN	FXZQ12TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-023B	TREASURER	1.0	VRV-2	YES	353 CFM	10,917	6,942	75/64F	13,642	70F	208/230V, 1PH	0.4	15.0	22.6x10.2x22.6	36.4 LBS	DAIKIN	FXZQ12TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-024	TREASURER OFFICE	0.6	VRV-2	YES	260 CFM	6,699	5,167	75/64F	8,500	70F	208/230V, 1PH	0.3	15.0	31.3x11.4x9.3	26.5 LBS	DAIKIN	FXAQ07PVJU	WALL MOUNTED UNIT	BRC1E73 (1)	1-2
FCU-025	AUDITOR	1.5	VRV-2	YES	511 CFM	16,035	10,957	75/64F	20,121	70F	208/230V, 1PH	0.6	15.0	22.6x10.2x22.6	41.9 LBS	DAIKIN	FXZQ18TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-026	AUDITOR'S OFFICE	0.5	VRV-2	YES	300 CFM	5,118	4,022	75/64F	6,483	70F	208/230V, 1PH	0.3	15.0	22.6x10.2x22.6	35.3 LBS	DAIKIN	FXZQ05TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-027	AUDITOR'S BCK RM	0.8	VRV-2	YES	317 CFM	8,529	5,659	75/64F	10,574	70F	208/230V, 1PH	0.3	15.0	22.6x10.2x22.6	35.3 LBS	DAIKIN	FXZQ09TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-028	COMMON PLEAS OFF.	0.5	VRV-2	YES	300 CFM	5,118	4,022	75/64F	6,483	70F	208/230V, 1PH	0.3	15.0	22.6x10.2x22.6	35.3 LBS	DAIKIN	FXZQ05TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-029	COMMON PLEAS DOM.	1.3	VRV-2	YES	405 CFM	13,646	8,972	75/64F	17,057	70F	208/230V, 1PH	0.4	15.0	22.6x10.2x22.6	36.4 LBS	DAIKIN	FXZQ15TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-032	TITLE OFFICE	0.6	VRV-2	YES	245 CFM	6,687	4,659	75/64F	8,496	70F	208/230V, 1PH	0.3	15.0	39.4x23.6x8.7	57.3 LBS	DAIKIN	FXLQ07MVJU9	FLOOR STANDING UNIT	BRC1E73 (1)	1-2
FCU-033	JUVENILE COURT RM	0.6	VRV-2	YES	307 CFM	6,823	4,958	75/64F	8,527	70F	208/230V, 1PH	0.3	15.0	22.6x10.2x22.6	35.3 LBS	DAIKIN	FXZQ07TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-034	MAGISTRATE	0.5	VRV-2	YES	300 CFM	5,118	4,022	75/64F	6,483	70F	208/230V, 1PH	0.3	15.0	22.6x10.2x22.6	35.3 LBS	DAIKIN	FXZQ05TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-035A	PROBATE COURT	0.8	VRV-2	YES	317 CFM	8,529	5,659	75/64F	10,574	70F	208/230V, 1PH	0.3	15.0	22.6x10.2x22.6	35.3 LBS	DAIKIN	FXZQ09TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-035B	PROBATE COURT	0.8	VRV-2	YES	317 CFM	8,529	5,659	75/64F	10,574	70F	208/230V, 1PH	0.3	15.0	22.6x10.2x22.6	35.3 LBS	DAIKIN	FXZQ09TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-036	MEN'S RR	0.5	VRV-2	YES	300 CFM	5,118	4,022	75/64F	6,483	70F	208/230V, 1PH	0.3	15.0	22.6x10.2x22.6	35.3 LBS	DAIKIN	FXZQ05TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-038A	LOBBY	1.0	VRV-1	YES	280 CFM	10,698	6,952	75/64F	13,499	70F	208/230V, 1PH	0.5	15.0	44.9x23.6x8.7	66.1 LBS	DAIKIN	FXLQ12MVJU9	FLOOR STANDING UNIT	BRC1E73 (1)	1-2
FCU-038B	LOBBY	1.0	VRV-1	YES	280 CFM	10,698	6,952	75/64F	13,499	70F	208/230V, 1PH	0.5	15.0	44.9x23.6x8.7	66.1 LBS	DAIKIN	FXLQ12MVJU9	FLOOR STANDING UNIT	BRC1E73 (1)	1-2
FCU-041	WOMEN'S RR	0.5	VRV-3	YES	300 CFM	5,118	4,022	75/64F	6,483	70F	208/230V, 1PH	0.3	15.0	22.6x10.2x22.6	35.3 LBS	DAIKIN	FXZQ05TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-042	RECORDER	1.3	VRV-3	YES	405 CFM	13,646	8,972	75/64F	17,057	70F	208/230V, 1PH	0.4	15.0	22.6x10.2x22.6	36.4 LBS	DAIKIN	FXZQ15TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-043	RECORDER'S OFF.	0.5	VRV-3	YES	300 CFM	5,118	4,022	75/64F	6,483	70F	208/230V, 1PH	0.3	15.0	22.6x10.2x22.6	35.3 LBS	DAIKIN	FXZQ05TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-044	COMMON PLEAS	0.8	VRV-3	YES	317 CFM	8,529	5,659	75/64F	10,574	70F	208/230V, 1PH	0.3	15.0	22.6x10.2x22.6	35.3 LBS	DAIKIN	FXZQ09TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-045	BAILIFF	0.8	VRV-3	YES	317 CFM	8,529	5,659	75/64F	10,574	70F	208/230V, 1PH	0.3	15.0	22.6x10.2x22.6	35.3 LBS	DAIKIN	FXZQ09TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-047	JUDGE'S OFFICE	0.8	VRV-3	YES	280 CFM	8,499	6,168	75/64F	10,500	70F	208/230V, 1PH	0.3	15.0	31.3x11.4x9.3	26.5 LBS	DAIKIN	FXAQ09PVJU	WALL MOUNTED UNIT	BRC1E73 (1)	1-2
FCU-048	JUDGE'S SECRETARY	0.5	VRV-3	YES	300 CFM	5,118	4,022	75/64F	6,483	70F	208/230V, 1PH	0.3	15.0	22.6x10.2x22.6	35.3 LBS	DAIKIN	FXZQ05TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-051	JURY ROOM	0.8	VRV-3	YES	280 CFM	8,499	6,168	75/64F	10,500	70F	208/230V, 1PH	0.3	15.0	31.3x11.4x9.3	26.5 LBS	DAIKIN	FXAQ09PVJU	WALL MOUNTED UNIT	BRC1E73 (1)	1-2
FCU-052	WOMEN'S RR	0.6	VRV-3	YES	260 CFM	6,699	5,167	75/64F	8,500	70F	208/230V, 1PH	0.3	15.0	31.3x11.4x9.3	26.5 LBS	DAIKIN	FXAQ07PVJU	WALL MOUNTED UNIT	BRC1E73 (1)	1-2
FCU-054	PROBATION OFF.	0.5	VRV-3	YES	300 CFM	5,118	4,022	75/64F	6,483	70F	208/230V, 1PH	0.3	15.0	22.6x10.2x22.6	35.3 LBS	DAIKIN	FXZQ05TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-055	CORRIDOR STAIR.	1.0	VRV-3	YES	280 CFM	10,698	6,952	75/64F	13,499	70F	208/230V, 1PH	0.5	15.0	44.9x23.6x8.7	66.1 LBS	DAIKIN	FXLQ12MVJU9	FLOOR STANDING UNIT	BRC1E73 (1)	1-2
FCU-056A	CLERK OF COURTS	0.8	VRV-3	YES	317 CFM	8,529	5,659	75/64F	10,574	70F	208/230V, 1PH	0.3	15.0	22.6x10.2x22.6	35.3 LBS	DAIKIN	FXZQ09TAVJU	4-WAY CASSETTE (2'x2')	BRC1E73 (1), BYFQ60C3W1W (1)	1-2
FCU-056B	CLERK OF COURTS	0.8	VRV-3	YES	317 CFM	8,529	5,659	75/64F	10,574	70F	208/230V, 1PH	0.3	15.0	22.6x10.2x22.6	35.3 LBS	DAIKIN	FXZQ09TAVJU	4-WAY CASSETTE (2		

(VRV) VARIABLE REFRIGERANT VOLUME – ZONE HEAT RECOVERY DEVICE SCHEDULE

Table with columns: TAG, CONDENSING UNIT SERVED, MAX CAPACITY (PER PORT), ELECTRICAL (VOLTAGE/PH, MCA, MOP), DIMENSIONS (WxHxD (IN.), WEIGHT), MAKE, MODEL, OPTIONS & ACCESSORIES, NOTES. Rows include BS-1-1, BS-1-2, BS-2-1, BS-2-2, BS-2-3, BS-3-1, BS-3-2, BS-3-3.

- NOTES: 1. INDIVIDUAL CONTROL AND CHANGEOVER WITH EXTENDED RANGE OF PRODUCT OFFERINGS - 4, 6, 8, 10 AND 12 PORT OPTIONS 2. UNLIMITED NUMBER OF UNUSED PORTS PER BOX OR SYSTEM 3. NO DRAIN PIPING NEEDED 4. STANDARD LIMITED WARRANTY: 10-YEAR WARRANTY ON ALL PARTS

AIR DEVICE SCHEDULE

Table with columns: SYMBOL, SIZE, TYPE, NECK, N.C, MODEL, MANUFACTURER, REMARKS. Rows include SD-1, SD-2, RG-1, RG-2.

- NOTES: 1. WHERE RADIAL DAMPER NOT PROVIDED, MANUAL BALANCE DAMPER INSTALLED IN BRANCH. 2. AIR DEVICES SIZED TO MAINTAIN N.C. BELOW 20.

LOUVER SCHEDULE

Table with columns: NUMBER, MAKE, MODEL, WIDTH INCHES, HEIGHT INCHES, MIN. F.A. SQ. FT., MAX. CFM, MAX. APD IN. WC, FINISH, SERVICE REFERENCE, NOTES. Row includes L-1.

- NOTES: 1. LOUVERS SUPPLIED WITH BIRD SCREENS. 3. DRAINABLE BLADE LOUVER. 2. DIMENSIONS INDICATED ARE NORMAL, EXACT DIMENSIONS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR.

(VRV) VARIABLE REFRIGERANT VOLUME – AIR-COOLED CONDENSING UNIT SCHEDULE

Table with columns: TAG, NOMINAL TONNAGE, COOLING CAPACITY (OA DESIGN DB, BTU/h), HEATING CAPACITY (OA DESIGN DB/WB, BTU/h), REFRIGERANT CHARGE (FACTORY CHARGE, ADD'L), CONNECTION RATIO, ELECTRICAL (VOLTAGE/PH, MCA, MOP, RLA), DIMENSIONS (WxHxD (IN.), WEIGHT), EFFICIENCY (NON-DUCTED) (EER, IEER, COP47, COP17, SCHE), MAKE, MODEL, OPTIONS & ACCESSORIES, NOTES. Rows include VRV-1, VRV-2, VRV-3, VRV-4.

- NOTES: 1. MANUFACTURER MUST BE CERTIFIED, LISTED AND LABELED PER AHRI 1230 2. SYSTEM RATING DATA BASED ON DESIGN AMBIENT CONDITIONS FOR COOLING & HEATING 3. SUBMITTED PERFORMANCE DATA MUST BE FULLY DE-RATED FOR ALL COMPONENTS AND ACCESSORIES, INCLUDING BUT NOT LIMITED TO, LINE LENGTH, VERTICAL SEPARATION, CONNECTION RATIO, DESIGN CONDITIONS, CONDENSER COIL COATING 4. CONDENSING UNITS MUST HAVE FULLY MODULATING INVERTER COMPRESSORS 5. CONDENSING UNITS MUST HAVE AUTO CHANGEOVER FUNCTIONS 6. DEMAND LIMITING RELAY CONTACT MUST BE PROVIDED 7. EEV ACTUATORS MUST BE REMOVABLE FROM VALVE BODY WITHOUT DISTURBING THE REFRIGERANT SYSTEM 8. FCU THERMOSTATS MUST PROVIDE +1 DEG. DEAD-BAND SET-POINT AND CONTROL CAPABILITY 9. SYSTEM SHALL BE PROVIDED WITH I-TOUCH MANAGER CONTROLLER WITH WEB BASED SOFTWARE FOR DISPLAYING UP TO 8 DIII-NET SYSTEMS WITH 128 INDOOR UNITS PER SYSTEM. PC BY OTHERS 10. MANUFACTURERS SUBMITTAL MUST INCLUDE REFRIGERANT PIPING DIAGRAM WITH PIPE DIAMETERS, LENGTHS AND REFRIGERANT VOLUME 11. SUBSTITUTE MANUFACTURER SHALL BE RESPONSIBLE FOR ADDITIONAL PIPING AND REFRIGERANT 12. CONTRACTOR TO VERIFY PIPING DIMENSIONS 13. INSTALLING CONTRACTOR MUST HAVE SUCCESSFULLY COMPLETED MANUFACTURER'S CERTIFIED INSTALLATION CLASS WITHIN PAST 36 MONTHS 14. CONTRACTOR TO FURNISH AND INSTALL INSULATION ON REFRIGERANT PIPING 15. MANUFACTURER'S REPRESENTATIVE MUST HAVE LOCAL STOCK OF PARTS AND FACTORY CERTIFIED TECHNICIAN ON STAFF 16. MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE PROOF OF ONGOING INSTALLATION TRAINING AT THEIR LOCAL FACILITY FOR AT LEAST THE PAST 5 YEARS 17. MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE PROOF OF CONTINUOUS SALES AND SUPPORT OF THEIR PRODUCTS FOR AT LEAST 15 YEARS 18. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DIRECT COSTS AND OPERATING COSTS INCREASES FOR 20 YEARS ASSOCIATED WITH ANY DEVIATIONS RESULTING FROM CHANGES IN DESIGN 19. MANUFACTURER MUST PROVIDE 10-YEAR PARTS WARRANTY ON ALL FCUS, CONDENSING UNITS AND MODE CHANGEOVER DEVICES. WARRANTY CONDITIONS MUST BE CLARIFIED DURING SUBMITTAL PHASE 20. 3-PHASE AIR COOLED CONDENSING UNITS MUST HAVE PUBLISHED PERFORMANCE DATA WITH 200% CONNECTED CAPACITY 21. CONDENSING UNITS MUST BE FURNISHED WITH PROTECTIVE COIL COATING TO WITHSTAND ASTM B117 SALT SPRAY TEST FOR A MINIMUM OF 1000 HOURS. PERFORMANCE OF SYSTEM MUST BE DE-RATED FOR COIL COATING 22. MANUFACTURER MUST CERTIFY AND SUBMIT SYSTEM PERFORMANCE AT EXTREME CONDITIONS OF 122 DEG. FDB AMBIENT IN COOLING MODE AND -22 DEG FWB IN HEATING MODE

(RTU) ROOFTOP UNIT SCHEDULE

Table with columns: SYMBOL, CFM (TOTAL, MIN OA), ESP, H.P., MOC, ELECTRICAL, TCC (BTU/h), COILING COIL (SCC (BTU/h)), IEER/EER, FUEL (MBH, AFUE), MAKE, MODEL, NOTES. Row includes RTU-1.

- NOTES: 1. PROVIDE FIELD INSTALLED APPSTAT RTU 2H/2C ECON 2. FACTORY INSTALLED GFCI CONVENIENCE OUTLET 3. FACTORY INSTALLED ELECTRO-MECHANICAL CONTROLS 4. FACTORY INSTALLED HAIL GUARD 5. FACTORY INSTALLED HINGED PANELS 6. FACTORY INSTALLED NON-FUSED DISCONNECT 7. FACTORY INSTALLED PHASE MONITOR 8. FACTORY INSTALLED R/A SMOKE DETECTOR W/ REMOTE ANNUNCIATOR 9. FACTORY INSTALLED 409 SS HEAT EXCHANGER 10. FACTORY INSTALLED 2-STAGE COOLING MODE 11. FACTORY INSTALLED ULTRA LOW-LEAK INTERNAL HORIZONTAL ECONOMIZER W/ENTHALPY SENSOR 12. RETURN AIR CO2 SENSOR FOR DEMAND CONTROLLED VENTILATION

(DOAS) DEDICATED OUTDOOR AIR SYSTEM SCHEDULE

Table with columns: TAG, NOMINAL TONNAGE, NOMINAL CFM, OUTDOOR AIR FLOW, RETURN AIR FLOW, EFFECTIVENESS % (SENS., LAT., TOTAL-S/W), ELECTRICAL (VOLTAGE/PH, MCA, MROPD, FUSE), DIMENSIONS (WxHxD (IN.), WEIGHT), ELECTRIC PRE-HEAT (VOLTAGE/PH, kW, FLA, FUSE), ELECTRIC RE-HEAT (VOLTAGE/PH, kW, FLA, FUSE), MAKE, MODEL, OPTIONS & ACCESSORIES, NOTES. Rows include DOAS-1, DOAS-2, DOAS-3.

- NOTES: 1. CONSTANT AIR VOLUME 2. ELECTRIC PRE-HEAT AND RE-HEAT COILS 3. 2" MERV-13 OA FILTERS, 2" MERV-8 RA FILTERS 4. HEATCRAFT DX COILS W/DAIKIN VRV AHU INTEGRATION VALVE KIT.

PLOT DATE \ TIME: 1/21/2021 11:14:44 PM S:\ACC COMMERCIAL PROJECTS\ASHLAND COUNTY\220210_ASHLAND COUNTY COURTHOUSE ENGINEERING\0 - DRAWINGS\1 - DRAWINGS RECEIVED FROM OTHERS\NEW DRAWING TEMPLATE

Table with columns: REV, BY, DATE, DESCRIPTION. Row includes 0, JPR, 01/22/21, ISSUED FOR BID.

Table with columns: DESIGNERS, ASHLAND COMFORT CONTROL, HEATING-AIR CONDITIONING-FIREPLACES-PLUMBING, 805 E. MAIN STREET - ASHLAND, OH, P: 419.281.0144 F: 419.281.6971, WWW.ASHLANDCOMFORTCONTROL.COM, JOSEPH P. REEP - OHIO PE: #77349, INFO@ASHLANDCOMFORT.COM



PROJECT: 142 West 2nd Street Ashland, OH 44805

Ashland County Courthouse HVAC System Upgrades

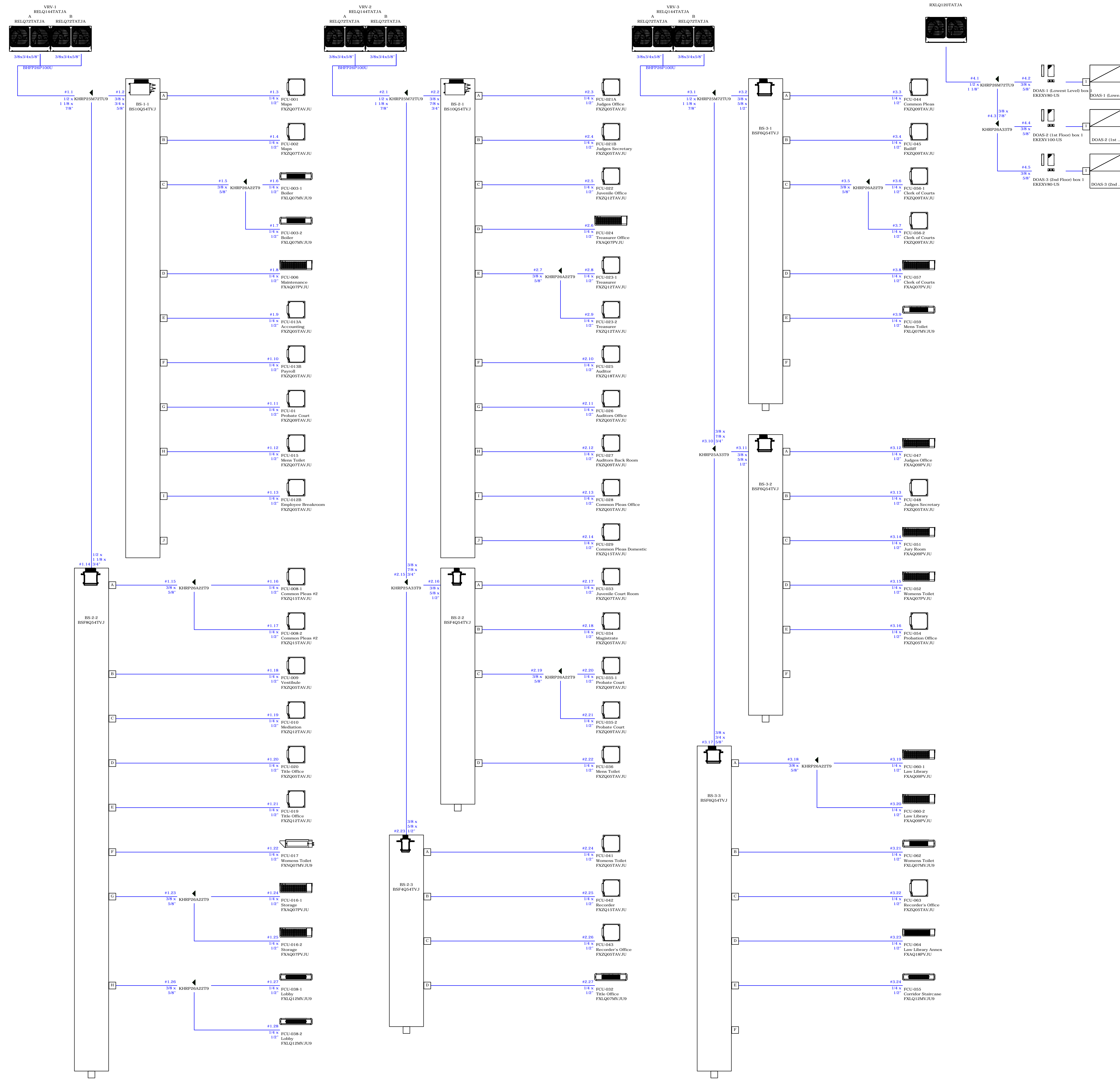
Table with columns: DRAWN BY, ORIGIN DATE, DESIGNED BY, DATE. Row includes JPR, 10/12/20, JPR, 12/31/20.

Table with columns: APPROVED BY, DATE, CLIENT NO., JOB NO. Row includes JPR, 01/21/21, ASH000, 220210.

DRAWING NAME: 220210 - HVAC.DWG

Professional Engineer Seal for Joseph P. Reep, State of Ohio, License #77349. Title: HVAC EQUIPMENT SCHEDULES 2. Last Edit Date: 1/21/21. Drawing No: M3.1.

PLOT DATE \ TIME: 1/21/2021 11:14:54 PM
 S:\ACC COMMERCIAL PROJECTS\ASHLAND COUNTY\220210_ASHLAND COUNTY COURTHOUSE ENGINEERING\0 - DRAWINGS\1 - DRAWINGS RECEIVED FROM OTHERS\NEW DRAWING TEMPLATE



0	JPR	01/22/21	ISSUED FOR BID
---	-----	----------	----------------

REV	BY	DATE	DESCRIPTION
-----	----	------	-------------

DESIGNERS:



ASHLAND COMFORT CONTROL
 HEATING-AIR CONDITIONING-FIREPLACES-PLUMBING
 805 E. MAIN STREET - ASHLAND, OH
 P: 419.281.0144 F: 419.281.6971
 WWW.ASHLANDCOMFORTCONTROL.COM
 JOSEPH P. REEP - OHIO PE: #77349
 INFO@ASHLANDCOMFORT.COM

PROJECT

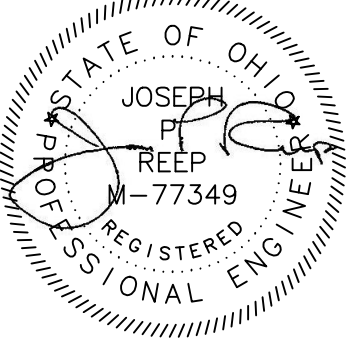


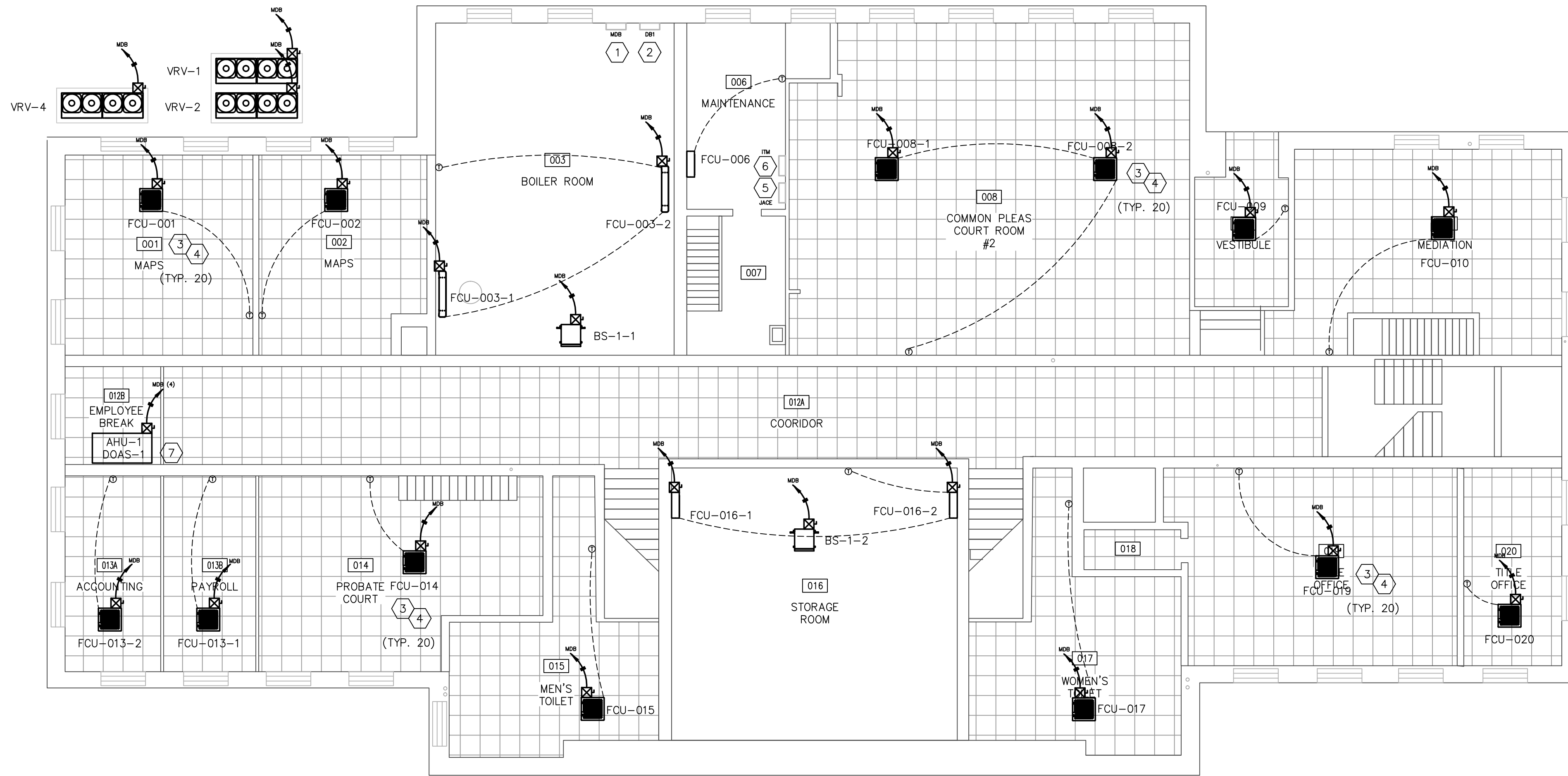
142 West 2nd Street
 Ashland, OH 44805

Ashland County Courthouse HVAC System Upgrades

DRAWN BY: JPR	ORIGIN DATE: 10/12/20	DESIGNED BY: JPR	DATE: 12/31/20
APPROVED BY: JPR	DATE: 01/21/21	CLIENT NO. ASH000	JOB NO. 220210

DRAWING NAME:
220210 - HVAC.DWG

	TITLE VRV PIPING SCHEMATICS	
	LAST EDIT DATE: 1/21/21	DRAWING NO. M4.0



A PLAN VIEW
GROUND LEVEL ELECTRICAL WORK 1/8" = 1'-0"

(X) CODED NOTES:

- ELECTRICAL CONTRACTOR (E.C.) TO PROVIDE AND INSTALL ONE (1) NEW 400A, 84 CIRCUIT, 208/230V, 3Ø MAIN DISTRIBUTION PANEL TO REPLACE EXISTING MDB. IN ADDITION TO FEEDING SUB-PANELS DB1 AND DB2, MDB TO FEED BRANCH CIRCUITS FOR VRV-1, VRV-2, VRV-4 AND ALL GROUND FLOOR INDOOR FAN COIL AND BRANCH SELECTOR UNITS. SEE DRAWING E3.0 AND E4.1 FOR ADDITIONAL INFORMATION.
- E.C. TO INSTALL ONE (1) 225A, 54 CIRCUIT, 208/230V, 3Ø SUB-PANEL DB1, DB1 TO FEED BRANCH CIRCUITS FOR ALL FIRST FLOOR INDOOR FAN COIL AND BRANCH SELECTOR UNITS. SEE DRAWING E3.0 AND E4.1 FOR ADDITIONAL INFORMATION.
- E.C. TO PROVIDE NEW 15A, 208/230V, 1Ø BRANCH CIRCUIT TO EACH INDOOR FAN COIL UNIT AND BRANCH SELECTOR UNIT. INSTALLATION TO INCLUDE BREAKER, CONDUIT, CONDUCTORS AND INDIVIDUAL DISCONNECT FOR EACH CIRCUIT. SEE DRAWING E3.0 AND E4.1 FOR ADDITIONAL INFORMATION.
- TEMPERATURE CONTROL CONTRACTOR (T.C.C.) TO PROVIDE ALL LOW VOLTAGE AND CATS COMMUNICATION AND CONTROL WIRE FOR VRV UNITS, BRANCH SELECTOR UNITS, FAN COIL UNITS, ROOM THERMOSTATS, NEW RTU, DOAS UNITS AND BOILER PLANT. CONTRACTOR TO COORDINATE SPECIFIC REQUIREMENTS INCLUDING TYPE/QUANTITY/GAUGE OF WIRING WITH EQUIPMENT MANUFACTURER. INSTALL TO INCLUDE ALL CONDUIT, RACEWAY AND WIRE MOLD FOR A CLEAN, PROFESSIONAL INSTALLATION.
- T.C.C. TO PROVIDE ONE (1) HONEYWELL JACE-8075 TRIDIUM BASED INTEGRATION DEVICE COMPLETE WITH CONTROL ENCLOSURE, POWER SUPPLY AND INDUSTRIAL NETWORK SWITCH. INSTALLATION TO INCLUDE 5-YEAR TRIDIUM FACTORY SOFTWARE MAINTENANCE AGREEMENT AND NIAGARA NETWORK CONNECTION TO EXISTING N4 SUPERVISOR INCLUDING ALL INTEGRATION, 3D FLOOR PLAN, CUSTOM GRAPHICS FOR NEW VRF SYSTEM, DOAS UNITS, RTU AND BOILER PLANT.
- VRV SYSTEM iTOUCH MANAGER AND BACnet LICENSE TO BE PROVIDED BY M.C. AND INSTALLED/INTEGRATED BY T.C.C. IN APPROXIMATE LOCATION SHOWN IN A DEDICATED ENCLOSURE.
- E.C. TO PROVIDE INDIVIDUAL CIRCUITS FROM MDB TO AHU/DOAS UNIT FOR VRV CONTROLLER, AIR HANDLER, PRE-HEAT AND RE-HEAT COMPONENTS. SEE E3.0 FOR ADDITIONAL INFORMATION.

0	JPR	01/22/21	ISSUED FOR BID
REV	BY	DATE	DESCRIPTION

DESIGNERS:



ASHLAND COMFORT CONTROL
HEATING • AIR CONDITIONING • FIREPLACE • BOILING
805 E. MAIN STREET - ASHLAND, OH
P: 419.281.0144 F: 419.281.6971
WWW.ASHLANDCOMFORTCONTROL.COM
JOSEPH P. REEP - OHIO PE: #77349
INFO@ASHLANDCOMFORT.COM

PROJECT

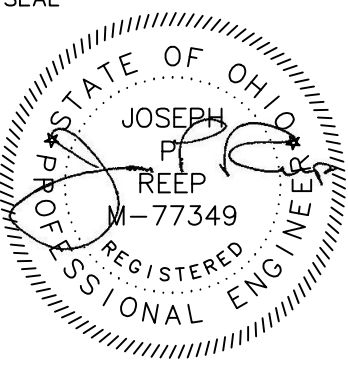


142 West 2nd Street
Ashland, OH 44805

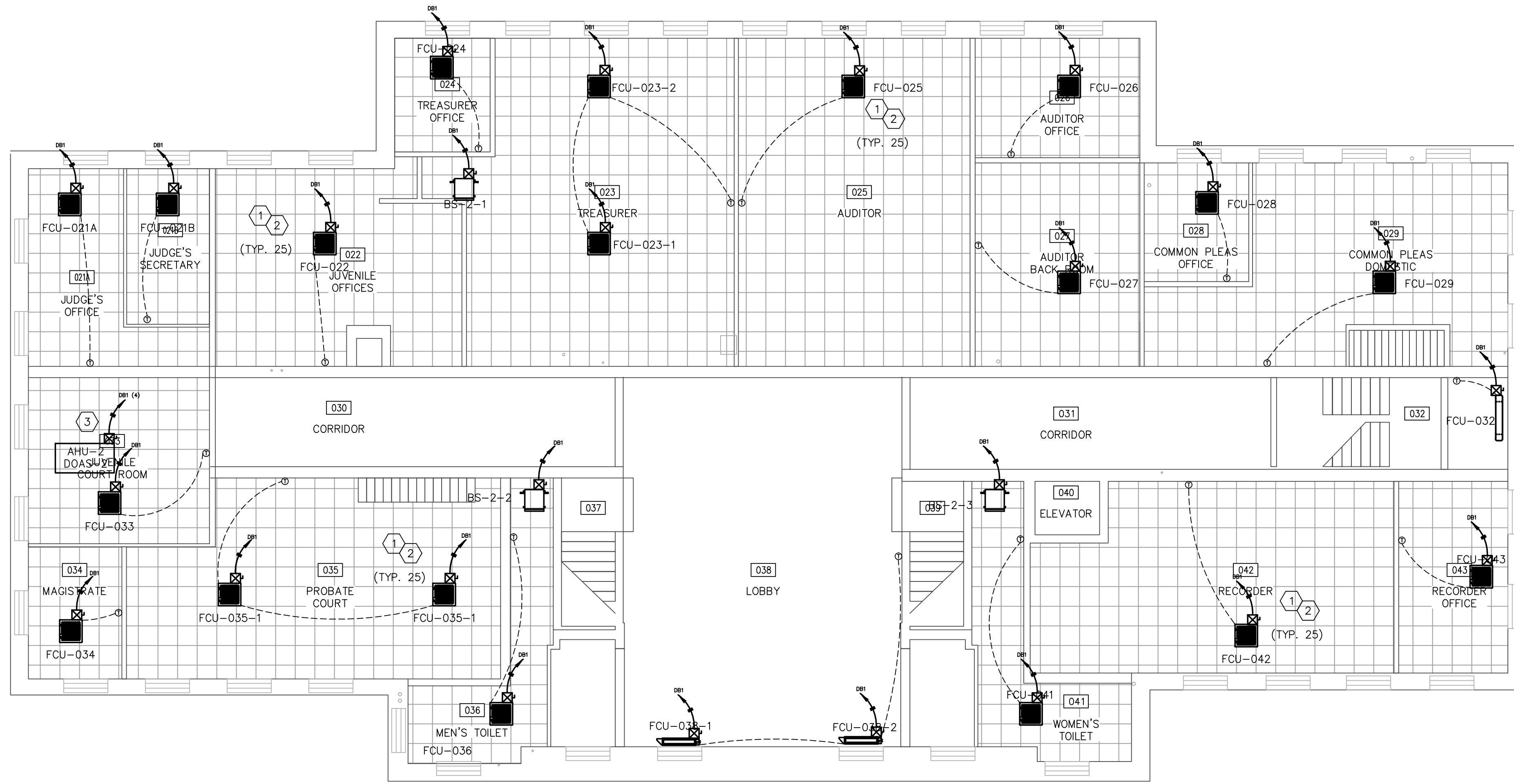
**Ashland County Courthouse
HVAC System Upgrades**

DRAWN BY:	ORIGIN DATE:	DESIGNED BY:	DATE:
JPR	10/12/20	JPR	12/31/20
APPROVED BY:	DATE:	CLIENT NO.	JOB NO.
JPR	01/21/21	ASH000	220210

DRAWING NAME:
220210 - ELEC.DWG

	TITLE
	LOWER LEVEL ELECTRICAL NEW WORK
LAST EDIT DATE:	DRAWING NO.
1/21/21	E1.0
SCALE:	

PLOT DATE \ TIME: 12/1/2021 11:15:19 PM
 S:\ACC COMMERCIAL PROJECTS\ASHLAND COUNTY\220210_ASHLAND COUNTY COURTHOUSE ENGINEERING\0 - DRAWINGS\1 - DRAWINGS RECEIVED FROM OTHERS\NEW DRAWING TEMPLATE



A PLAN VIEW
 1ST FLOOR ELECTRICAL WORK 1/8" = 1'-0"

(X) CODED NOTES:

1. E.C. TO PROVIDE NEW 15A, 208/230V, 1Ø BRANCH CIRCUIT TO EACH INDOOR FAN COIL UNIT AND BRANCH SELECTOR UNIT. INSTALLATION TO INCLUDE BREAKER, CONDUIT, CONDUCTORS AND INDIVIDUAL DISCONNECT FOR EACH CIRCUIT. SEE DRAWING E3.0 AND E4.1 FOR ADDITIONAL INFORMATION.
2. TEMPERATURE CONTROL CONTRACTOR (T.C.C.) TO PROVIDE ALL LOW VOLTAGE AND CATS COMMUNICATION AND CONTROL WIRE FOR VRV UNITS, BRANCH SELECTOR UNITS, FAN COIL UNITS, ROOM THERMOSTATS, NEW RTU, DOAS UNITS AND BOILER PLANT. CONTRACTOR TO COORDINATE SPECIFIC REQUIREMENTS INCLUDING TYPE/QUANTITY/GAUGE OF WIRING WITH EQUIPMENT MANUFACTURER. INSTALL TO INCLUDE ALL CONDUIT, RACEWAY AND WIRE MOLD FOR A CLEAN, PROFESSIONAL INSTALLATION.
3. E.C. TO PROVIDE INDIVIDUAL CIRCUITS FROM DB1 TO AHU/DOAS UNIT FOR VRV CONTROLLER, AIR HANDLER, PRE-HEAT AND RE-HEAT COMPONENTS. SEE E3.0 FOR ADDITIONAL INFORMATION.

0	JPR	01/22/21	ISSUED FOR BID
REV	BY	DATE	DESCRIPTION

DESIGNERS:



ASHLAND COMFORT CONTROL
 HEATING • AIR CONDITIONING • FIRE ALARM • PLUMBING
 805 E. MAIN STREET - ASHLAND, OH
 P: 419.281.0144 F: 419.281.6971
 WWW.ASHLANDCOMFORTCONTROL.COM
 JOSEPH P. REEP - OHIO PE: #77349
 INFO@ASHLANDCOMFORT.COM

PROJECT

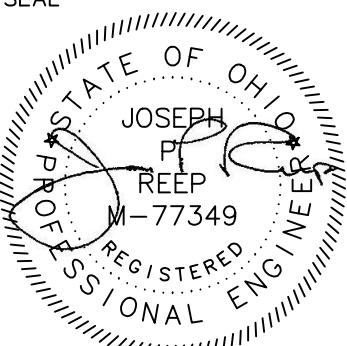


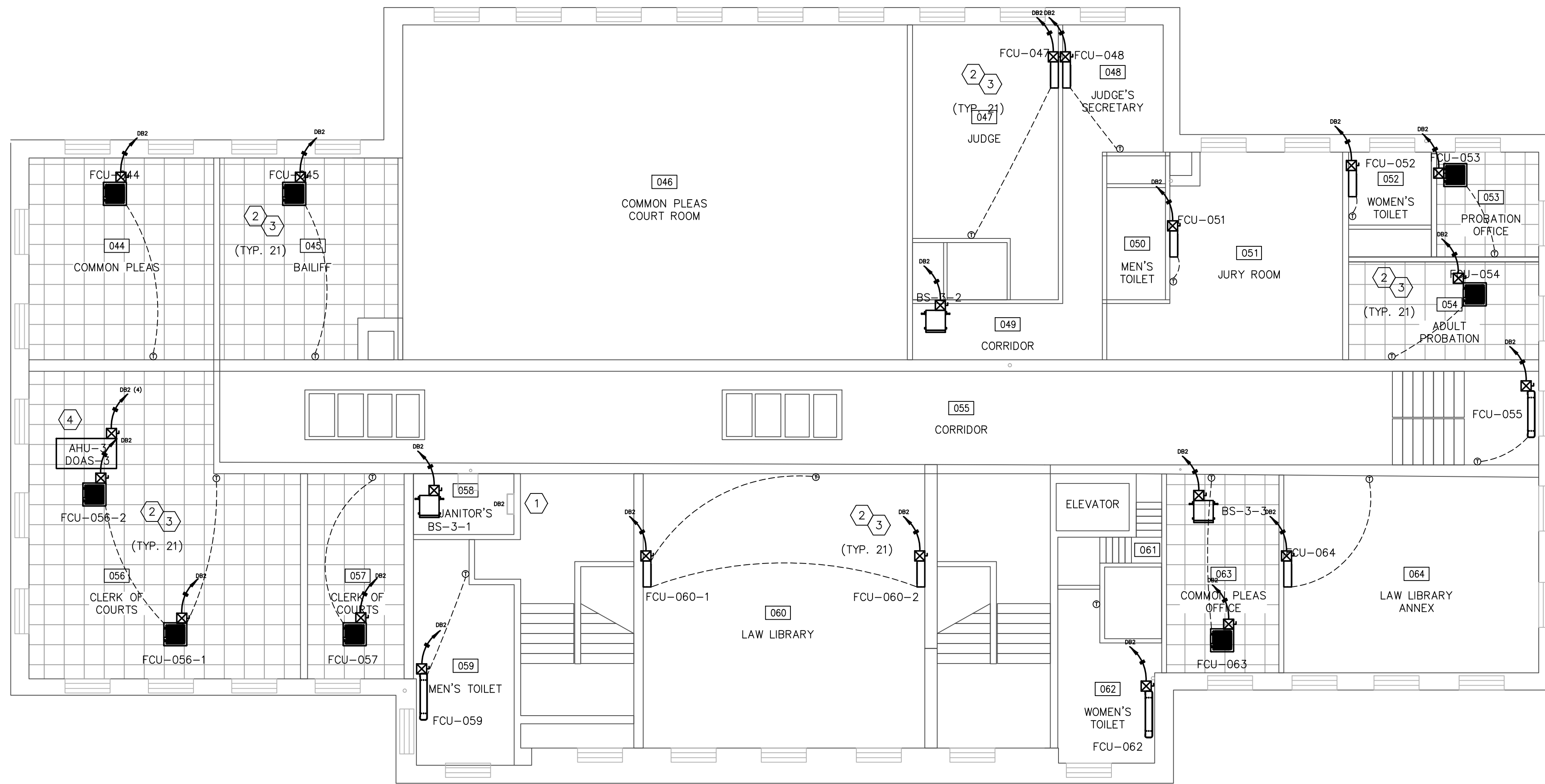
142 West 2nd Street
 Ashland, OH 44805

Ashland County Courthouse HVAC System Upgrades

DRAWN BY:	ORIGIN DATE:	DESIGNED BY:	DATE:
JPR	10/12/20	JPR	12/31/20
APPROVED BY:	DATE:	CLIENT NO.	JOB NO.
JPR	01/21/21	ASH000	220210

DRAWING NAME:
220210 - ELEC.DWG

SEAL 	TITLE	
	1ST FLOOR ELECTRICAL NEW WORK	
LAST EDIT DATE:	DRAWING NO.	
1/21/21	E1.1	
SCALE:		



A PLAN VIEW
 2ND FLOOR ELECTRICAL WORK
 1/8" = 1'-0"

(X) CODED NOTES:

- E.C. TO INSTALL ONE (1) 225A, 72 CIRCUIT, 208/230V, 3Ø SUB-PANEL DB1, DB1 TO FEED BRANCH CIRCUITS FOR ALL SECOND FLOOR INDOOR FAN COIL, BRANCH SELECTOR AND DOAS UNITS, NEW RTU AND VRV-3. SEE DRAWING E3.0 AND E4.1 FOR ADDITIONAL INFORMATION.
- E.C. TO PROVIDE NEW 15A, 208/230V, 1Ø BRANCH CIRCUIT TO EACH INDOOR FAN COIL UNIT AND BRANCH SELECTOR UNIT. INSTALLATION TO INCLUDE BREAKER, CONDUIT, CONDUCTORS AND INDIVIDUAL DISCONNECT FOR EACH CIRCUIT. SEE DRAWING E3.0 AND E4.1 FOR ADDITIONAL INFORMATION.
- TEMPERATURE CONTROL CONTRACTOR (T.C.C.) TO PROVIDE ALL LOW VOLTAGE AND CATS COMMUNICATION AND CONTROL WIRE FOR VRV UNITS, BRANCH SELECTOR UNITS, FAN COIL UNITS, ROOM THERMOSTATS, NEW RTU, DOAS UNITS AND BOILER PLANT. CONTRACTOR TO COORDINATE SPECIFIC REQUIREMENTS INCLUDING TYPE/QUANTITY/GAUGE OF WIRING WITH EQUIPMENT MANUFACTURER. INSTALL TO INCLUDE ALL CONDUIT, RACEWAY AND WIRE MOLD FOR A CLEAN, PROFESSIONAL INSTALLATION.
- E.C. TO PROVIDE INDIVIDUAL CIRCUITS FROM DB2 TO AHU/DOAS UNIT FOR VRV CONTROLLER, AIR HANDLER, PRE-HEAT AND RE-HEAT COMPONENTS. SEE E3.0 FOR ADDITIONAL INFORMATION.


0	JPR	01/22/21	ISSUED FOR BID
REV	BY	DATE	DESCRIPTION

DESIGNERS:



ASHLAND COMFORT CONTROL
 HEATING • AIR CONDITIONING • FIRE • PLUMBING
 805 E. MAIN STREET - ASHLAND, OH
 P: 419.281.0144 F: 419.281.6971
 WWW.ASHLANDCOMFORTCONTROL.COM
 JOSEPH P. REEP - OHIO PE: #77349
 INFO@ASHLANDCOMFORT.COM

PROJECT

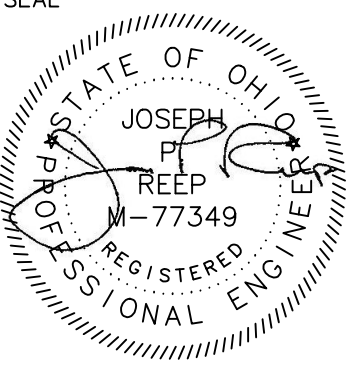


142 West 2nd Street
 Ashland, OH 44805

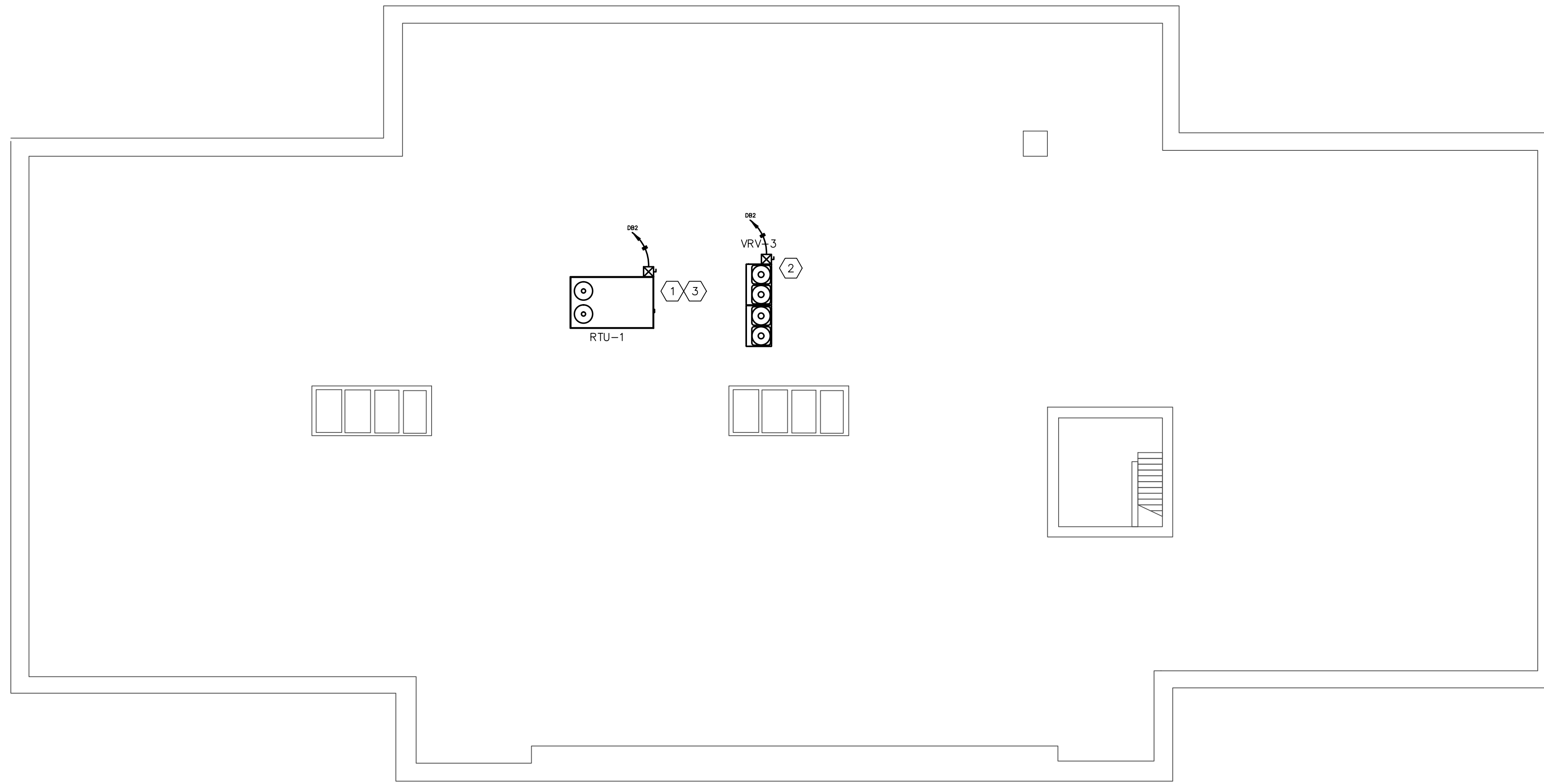
**Ashland County Courthouse
 HVAC System Upgrades**

DRAWN BY:	ORIGIN DATE:	DESIGNED BY:	DATE:
JPR	10/12/20	JPR	12/31/20
APPROVED BY:	DATE:	CLIENT NO.	JOB NO.
JPR	01/21/21	ASH000	220210

DRAWING NAME:
 220210 - ELEC.DWG

	TITLE 2ND FLOOR ELECTRICAL NEW WORK	
	LAST EDIT DATE: 1/21/21 SCALE:	DRAWING NO. E1.2

PLOT DATE \ TIME: 1/21/2021 11:15:29 PM
 S:\ACC COMMERCIAL PROJECTS\ASHLAND COUNTY\220210_ASHLAND COUNTY COURTHOUSE ENGINEERING\0 - DRAWINGS\1 - DRAWINGS RECEIVED FROM OTHERS\NEW DRAWING TEMPLATE



A PLAN VIEW
 ROOF ELECTRICAL WORK
 1/8" = 1'-0"

(X) CODED NOTES:

1. ELECTRICAL CONTRACTOR (E.C.) TO PROVIDE NEW 60A, 208/230V, 3Ø BRANCH CIRCUIT TO NEW 10-TON ROOFTOP UNIT. INSTALLATION TO INCLUDE BREAKER, CONDUIT, CONDUCTORS AND INDIVIDUAL DISCONNECT FOR EACH CIRCUIT. SEE DRAWING E3.0 AND E4.1 FOR ADDITIONAL INFORMATION.
2. E.C TO PROVIDE NEW 70A, 208/230V, 3Ø BRANCH CIRCUIT TO NEW VRV UNIT. INSTALLATION TO INCLUDE BREAKER, CONDUIT, CONDUCTORS AND INDIVIDUAL DISCONNECT FOR EACH CIRCUIT. SEE DRAWING E3.0 AND E4.1 FOR ADDITIONAL INFORMATION.
3. E.C. TO PROVIDE 15A CONVENIENCE RECEPTACLE WITH WEATHERPROOF ENCLOSURE AND COVER.

0	JPR	01/22/21	ISSUED FOR BID
REV	BY	DATE	DESCRIPTION

DESIGNERS:



ASHLAND COMFORT CONTROL
 HEATING • AIR CONDITIONING • FIRE ALARMS • PLUMBING
 805 E. MAIN STREET - ASHLAND, OH
 P: 419.281.0144 F: 419.281.6971
 WWW.ASHLANDCOMFORTCONTROL.COM
 JOSEPH P. REEP - OHIO PE #77349
 INFO@ASHLANDCOMFORT.COM

PROJECT

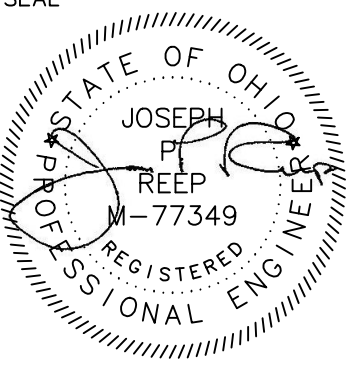


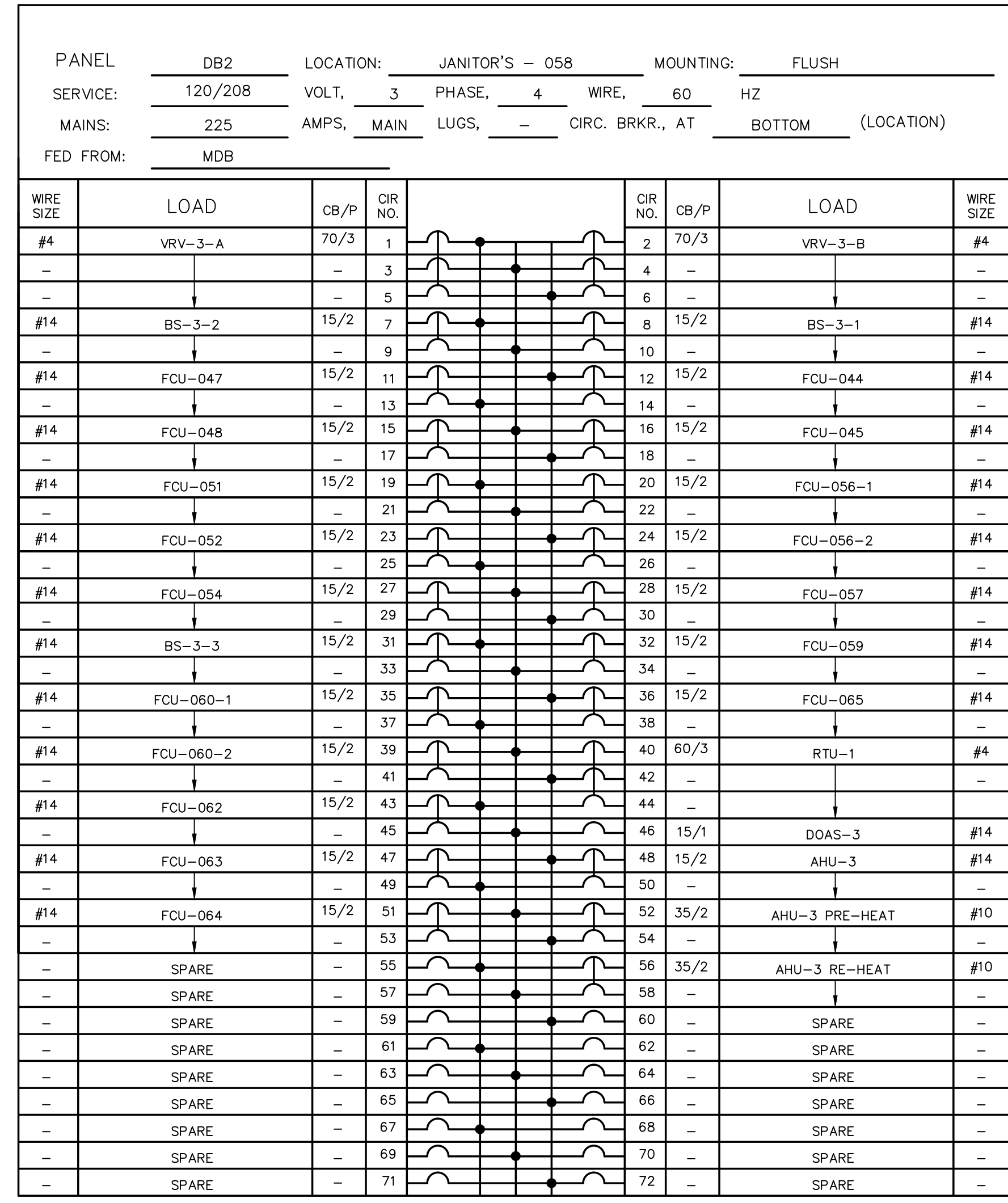
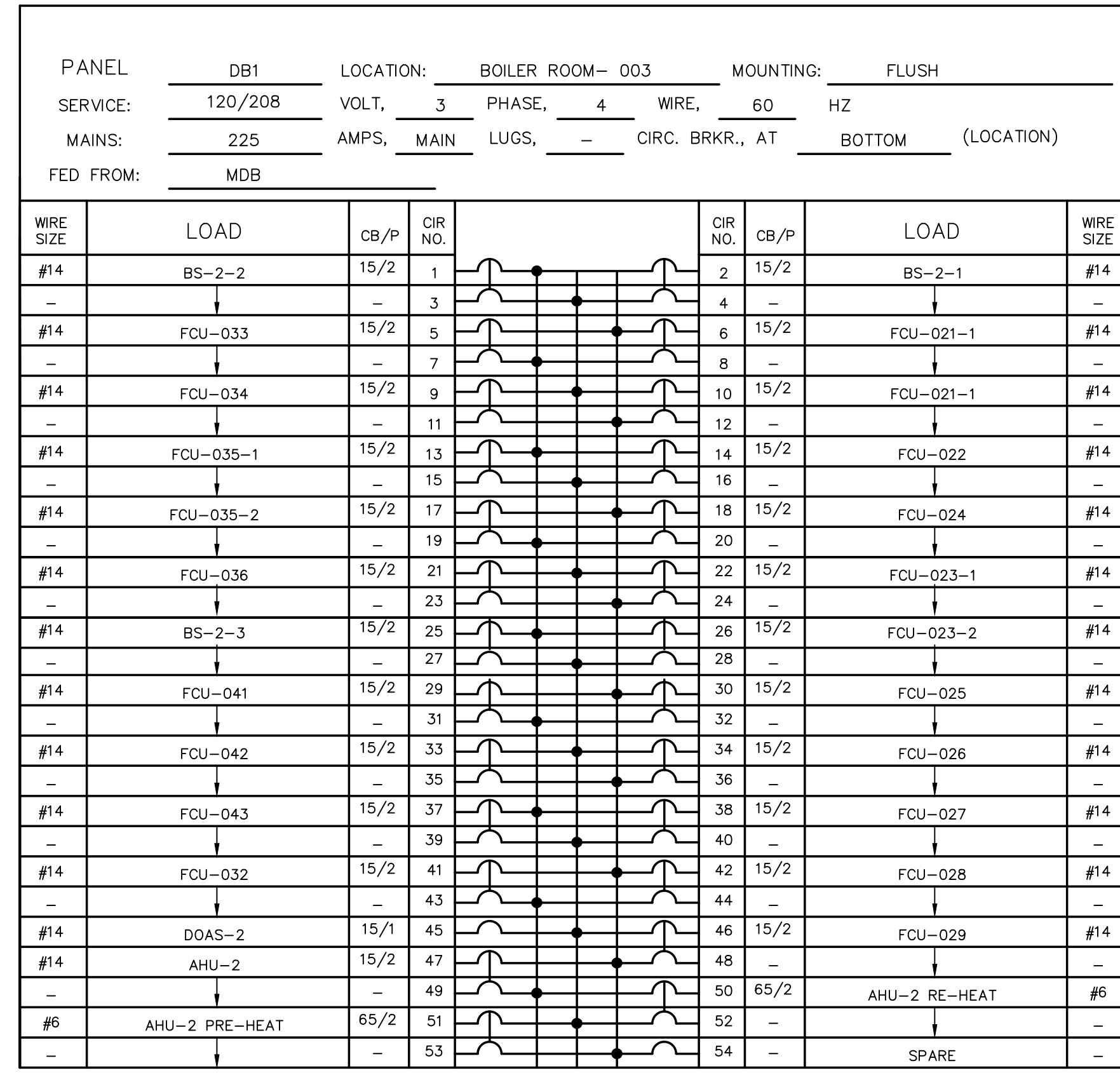
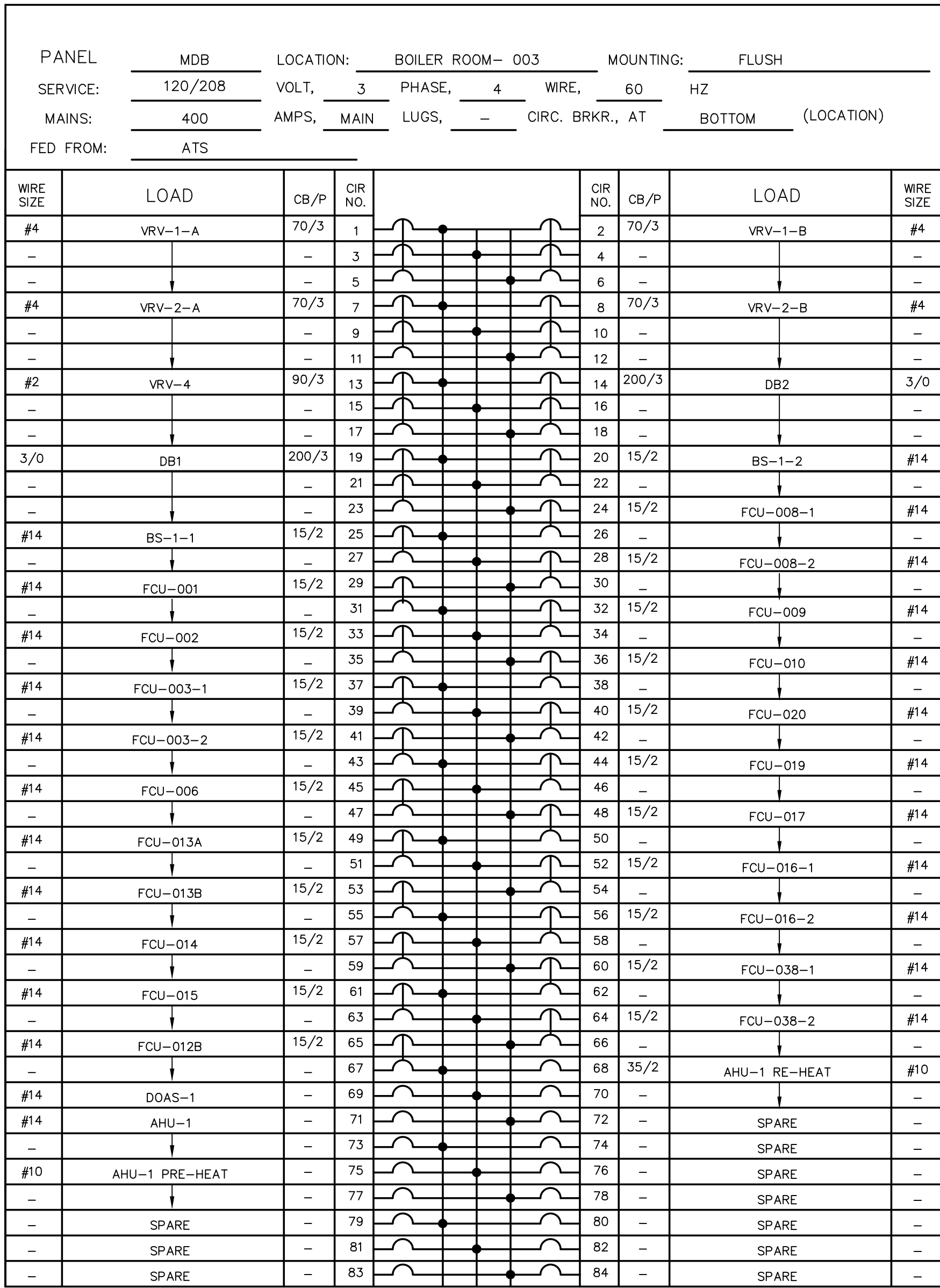
142 West 2nd Street
 Ashland, OH 44805

**Ashland County Courthouse
 HVAC System Upgrades**

DRAWN BY: JPR	ORIGIN DATE: 10/12/20	DESIGNED BY: JPR	DATE: 12/31/20
APPROVED BY: JPR	DATE: 01/21/21	CLIENT NO. ASH000	JOB NO. 220210

DRAWING NAME:
220210 - ELEC.DWG

	TITLE ROOF ELECTRICAL NEW WORK	
	LAST EDIT DATE: 1/21/21 SCALE:	DRAWING NO. E1.3



ELECTRICAL SPECIFICATIONS:

- THE REQUIREMENTS AS SET FORTH UNDER GENERAL CONDITIONS, INSTRUCTIONS TO BIDDERS AND GENERAL REQUIREMENTS ARE A PART OF THIS CONTRACT.
- BIDS SHALL BE BASED ON A COMPLETE/FULL SET OF DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF WORK WITH WORK PERFORMED BY OTHER TRADES.
- CONTRACTOR SHALL VISIT SITE PRIOR TO BIDDING. BIDS SHALL SERVE AS EVIDENCE OF KNOWLEDGE OF EXISTING CONDITIONS. FIELD VERIFY ALL EXISTING ELECTRICAL LOCATIONS, CONDITIONS ETC. FAILURE TO VISIT THE SITE SHALL NOT RELIEVE THE CONTRACTOR FROM ANY RESPONSIBILITY IN THE PERFORMANCE OF THE ELECTRICAL WORK. BEGINNING OF WORK INDICATES ACCEPTANCE OF EXISTING CONDITIONS.
- FURNISH ALL LABOR, MATERIALS, TESTING, EQUIPMENT, INCIDENTALS AND TOOLS TO PERFORM ELECTRICAL WORK SHOWN, NOTED OR SCHEDULED FOR A COMPLETE AND FINISHED INSTALLATION. MATERIALS, PRODUCTS AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND AS SUCH APPEAR ON THE UNDERWRITERS LABORATORIES LIST OF APPROVED ITEMS AND SHALL BE SIZED IN CONFORMITY WITH REQUIREMENTS OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AND OTHER APPLICABLE CODES, WHICHEVER ARE MORE STRINGENT.
- ALL WORK IS TO BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NEC AND ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES.
- SECURE AND PAY FOR ALL REQUIRED PERMITS, FEES, ASSESSMENTS AND INSPECTION CERTIFICATES THAT RELATE TO THE ELECTRICAL CONTRACT. FURNISH APPROVED CERTIFICATE OF FINAL INSPECTION, AND TURN OVER TO OWNER AT COMPLETION OF PROJECT.
- THESE ELECTRICAL PLANS ARE DIAGRAMMATIC, NOT SHOWING EVERY ITEM IN EXACT LOCATION OR DETAIL. MEASUREMENTS AND LOCATIONS MUST BE FIELD-VERIFIED AND COORDINATED WITH ARCHITECTURAL, PLUMBING, HVAC, FIRE PROTECTION, STRUCTURAL AND OTHER BUILDING DRAWINGS.
- CONDUIT SHALL BE STANDARD STEEL RIGID, IMC OR EMT (THIN WALL) ACCORDING TO LOCAL CODE REQUIREMENTS. CONDUIT SHALL BE CONCEALED IN FINISHED AREAS, EXCEPT AS OTHERWISE APPROVED.
- WIRE SHALL BE SINGLE CONDUCTOR COPPER WITH 600 VOLT INSULATION. MINIMUM WIRE SIZE SHALL BE #12 AWG, ALL WIRE AND CABLE SHALL BE NEW AND SHALL BE BROUGHT TO THE SITE IN UNBROKEN PACKAGES. ALL WIRING OF ANY TYPE SHALL BE IN CONDUIT. NO STRANDED WIRE ALLOWED FOR #10 AND #12 AWG SIZES. INCREASE CONDUCTOR BY ONE SIZE FOR EVERY 150' INCREMENT OF DISTANCE FROM THE PANEL BOARD FOR 120 VOLT CIRCUITS. GENERAL WIRING SHALL BE THW OR THHN. ALUMINUM CONDUCTORS ARE ONLY PERMITTED FOR PANEL FEEDERS AND SERVICE ENTRANCE CONDUCTORS. ALUMINUM CONDUCTORS ARE NOT PERMITTED FOR BRANCH CIRCUIT WIRING. TYPE NM WIRING IS APPROVED FOR CONCEALED BRANCH CIRCUIT WIRING.
- FURNISH AND INSTALL A COMPLETE WIRED GROUNDING SYSTEM FOR ELECTRICAL EQUIPMENT AND CIRCUITS AS SHOWN ON THE DRAWINGS AND REQUIRED PER N.E.C. ARTICLE 250. ALL GROUNDING CONDUCTORS SHALL BE GREEN, WHERE EXPOSED IN PANEL, OUTLETS, BOXES, ETC.
- PROVIDE BRANCH CIRCUIT PANELS WHICH SHALL BE OF THE BOLTED CIRCUIT BREAKER TYPE WITH SOLID COPPER BUSSING FULL SIZED NEUTRAL, 25% GROUND BUSSING, OVERALL HINGED/LOCKABLE DOOR, AND TYPEWRITTEN DIRECTORY INSIDE DOOR. ALL SERVICE ENTRANCE EQUIPMENT SHALL BEAR THE MANUFACTURER'S LABEL WHICH SHALL STATE THAT THE EQUIPMENT IS RATED FOR SERVICE ENTRANCE APPLICATION IN ACCORDANCE WITH N.E.C. #230-70. LOAD BALANCE ALL ELECTRICAL PHASES AT PANEL. TWO POLE BREAKERS SHALL BE COMMON TRIP TYPE. SQUARE D OR EQUAL BY SIEMENS, EATON, OR GENERAL ELECTRIC. NEMA 3R ENCLOSURE AS NOTED. PROVIDE ARC FAULT LABELING PER NEC. LOAD CENTER TYPE PANELS ARE APPROVED.
- ALL ELECTRIC WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATING, SERVICING, MAINTAINING AND REPAIRING. HANGERS SHALL INCLUDE ALL MISCELLANEOUS STEEL SUCH AS CHANNELS, RODS, ETC., NECESSARY FOR THE INSTALLATION OF WORK AND SHALL BE FASTENED TO BUILDING STEEL, CONCRETE OR MASONRY, BUT NOT PIPING OR DUCTWORK. ALL CONDUIT SHALL BE CONCEALED WHEREVER POSSIBLE. EXPOSED CONDUITS SHALL BE IN STRAIGHT LINES PARALLEL WITH OR AT RIGHT ANGLES TO COLUMN LINES OR BEAMS AND SEPARATED AT LEAST 3 INCHES FROM WATER LINES WHEREVER THEY RUN ALONGSIDE OR ACROSS SUCH LINES. ALL CONDUCTORS SHALL BE IN CONDUIT, DUCTS OR OTHER CODE APPROVED RACEWAYS.
- MATERIALS, EQUIPMENT AND INSTALLATION SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE. DEFECTS APPEARING IN THAT PERIOD SHALL BE CORRECTED AT THE ELECTRICAL CONTRACTOR'S EXPENSE. FOR THE SAME PERIOD, ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO PREMISES CAUSED BY DEFECTS IN WORKMANSHIP OR IN THE WORK OR EQUIPMENT FURNISHED AND/OR INSTALLED BY THE ELECTRICAL CONTRACTOR.
- IT IS THE INTENT THAT THE FOREGOING WORK SHALL BE COMPLETE IN EVERY RESPECT AND THAT ANY MATERIAL OR WORK NOT SPECIFICALLY MENTIONED OR SHOWN ON THE DRAWINGS, BUT NECESSARY TO FULLY COMPLETE THE WORK SHALL BE FURNISHED.

PLOT DATE \ TIME: 1/21/2021 11:15:34 PM SJACC COMMERCIAL PROJECTS\ASHLAND COUNTY\220210_ASHLAND COUNTY COURTHOUSE ENGINEERING\0 - DRAWINGS\1 - DRAWINGS RECEIVED FROM OTHERS\NEW DRAWING TEMPLATE

0	JPR	01/22/21	ISSUED FOR BID
REV	BY	DATE	DESCRIPTION

DESIGNERS:



ASHLAND COMFORT CONTROL
HEATING-AIR CONDITIONING-FIREPLACES-PLUMBING
805 E. MAIN STREET - ASHLAND, OH
P: 419.281.0144 F: 419.281.6971
WWW.ASHLANDCOMFORTCONTROL.COM
JOSEPH P. REEP - OHIO PE: #77349
INFO@ASHLANDCOMFORT.COM

PROJECT

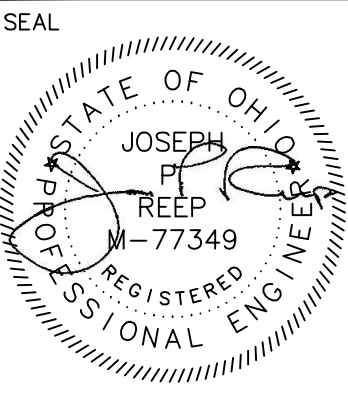


142 West 2nd Street
Ashland, OH 44805

**Ashland County Courthouse
HVAC System Upgrades**

DRAWN BY:	JPR	ORIGIN DATE:	10/12/20	DESIGNED BY:	JPR	DATE:	12/31/20
APPROVED BY:	JPR	DATE:	01/21/21	CLIENT NO.:	ASH000	JOB NO.:	220210

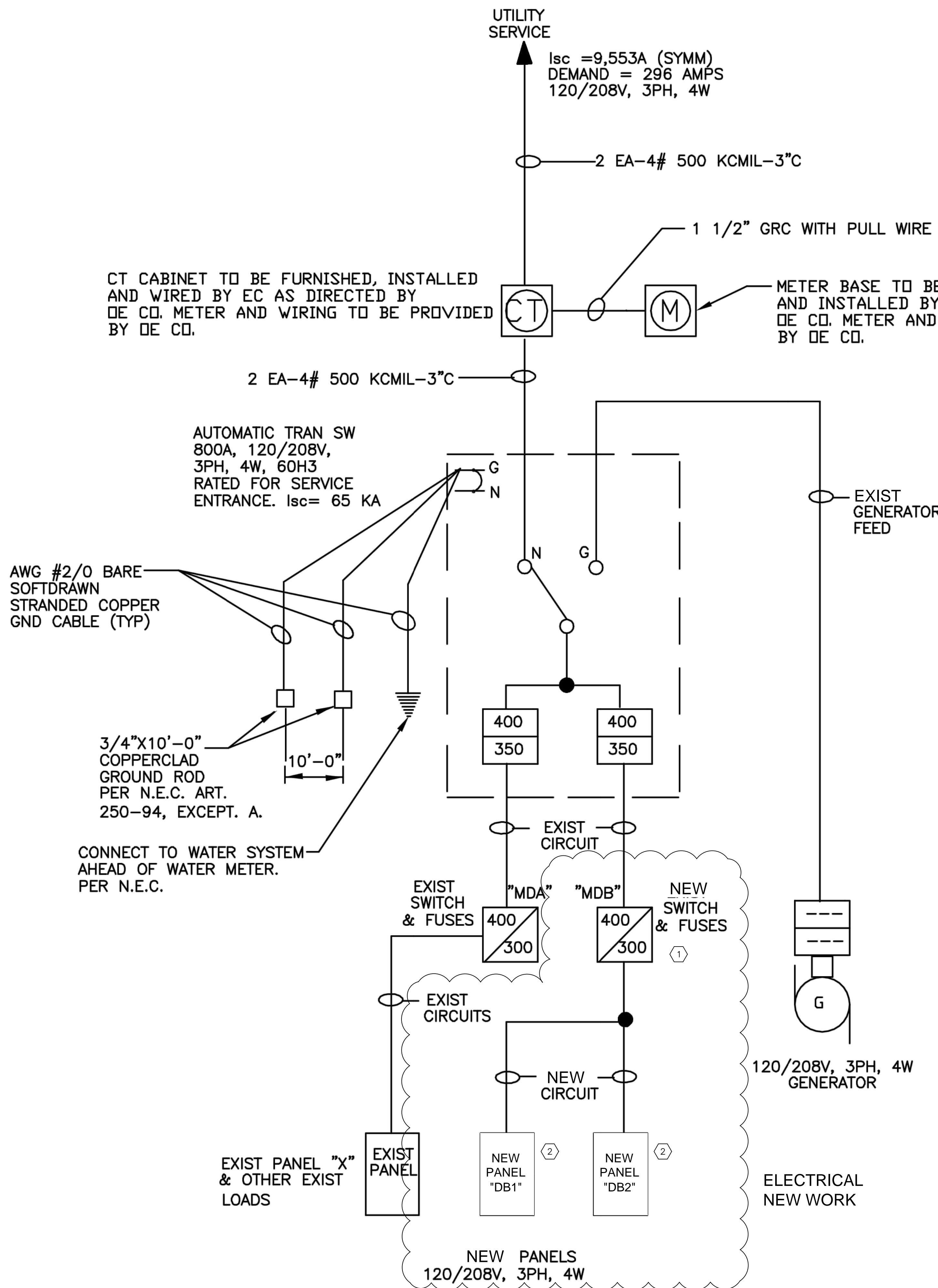
DRAWING NAME:
220210 - ELEC.DWG



TITLE
**ELECTRICAL PANEL
SCHEDULE AND
SPECIFICATIONS**

LAST EDIT DATE:
1/21/21

DRAWING NO.
E3.0



SINGLE LINE DIAGRAM
 NO SCALE

(X) CODED NOTES:

1. ELECTRICAL CONTRACTOR (E.C.) TO PROVIDE AND INSTALL ONE (1) NEW 400A, 84 CIRCUIT, 208/230V, 3Ø MAIN DISTRIBUTION PANEL TO REPLACE EXISTING MDB. IN ADDITION TO FEEDING SUB-PANELS DB1 AND DB2, MDB TO FEED BRANCH CIRCUITS FOR VRV-1, VRV-2, VRV-4 AND ALL GROUND FLOOR INDOOR FAN COIL AND BRANCH SELECTOR UNITS.
2. E.C. TO INSTALL TWO (2) 225A, 54 CIRCUIT, 208/230V, 3Ø SUB-PANELS DB1 & DB2. DB1 & DB2 TO FEED BRANCH CIRCUITS FOR REMAINING VRV, DOAS, INDOOR FAN COIL AND BRANCH SELECTOR UNITS. EXISTING CIRCUITRY SERVING WINDOW AIR CONDITIONERS TO BE DISCONNECTED AND ABANDONED IN PLACE.
3. E.C. TO PROVIDE 15A CONVENIENCE RECEPTACLE WITH WEATHERPROOF ENCLOSURE AND COVER.

0	JPR	01/22/21	ISSUED FOR BID
REV	BY	DATE	DESCRIPTION

DESIGNERS:

ASHLAND COMFORT CONTROL
 HEATING-AIR CONDITIONING-FIREPLACES-PLUMBING
 805 E. MAIN STREET - ASHLAND, OH
 P: 419.281.0144 F: 419.281.6971
 WWW.ASHLANDCOMFORTCONTROL.COM
 JOSEPH P. REEP - OHIO PE: #77349
 INFO@ASHLANDCOMFORT.COM

PROJECT

142 West 2nd Street
 Ashland, OH 44805

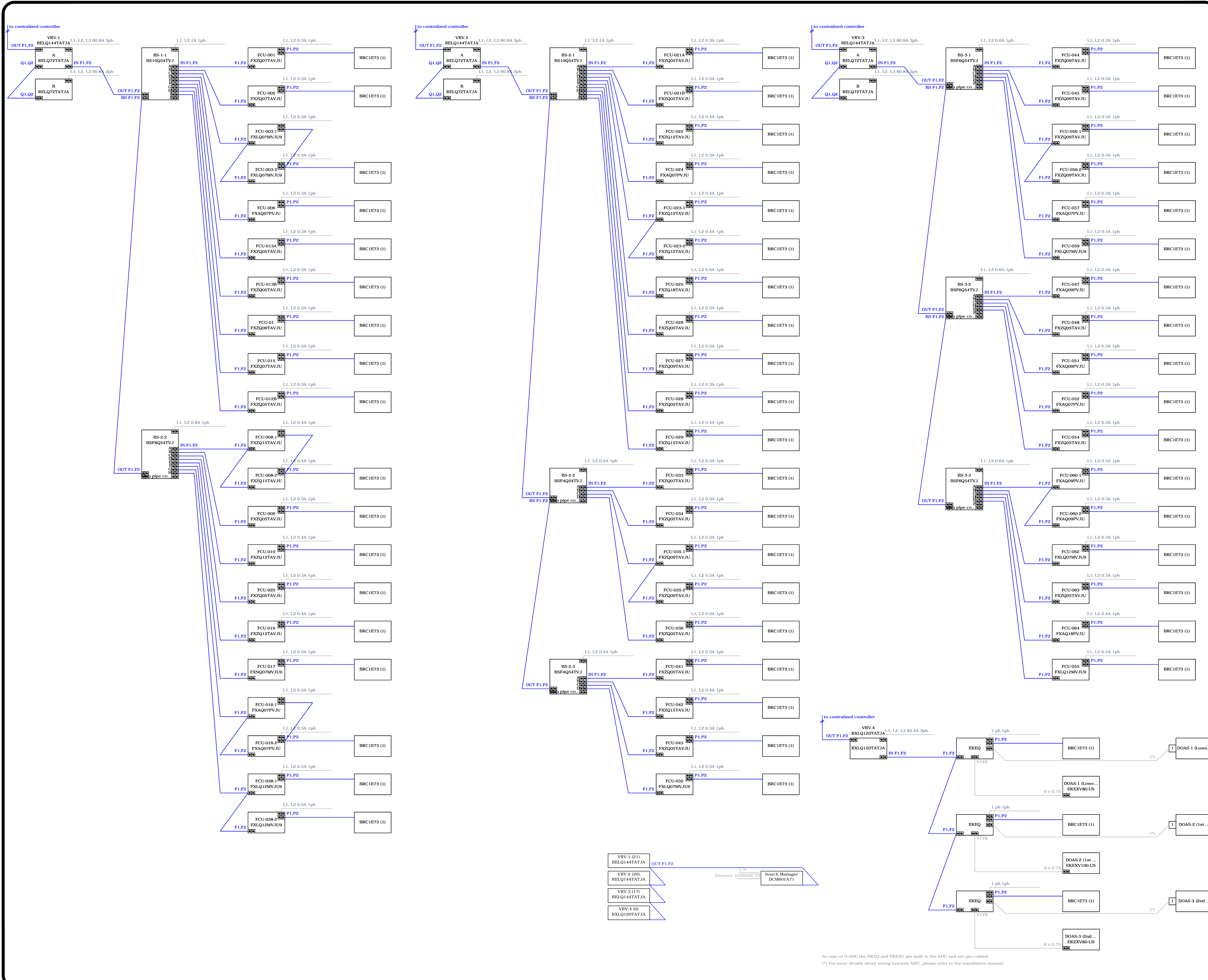
**Ashland County Courthouse
 HVAC System Upgrades**

DRAWN BY: JPR	ORIGIN DATE: 10/12/20	DESIGNED BY: JPR	DATE: 12/31/20
APPROVED BY: JPR	DATE: 01/21/21	CLIENT NO. ASH000	JOB NO. 220210

DRAWING NAME:
220210 - ELEC.DWG

SEAL	TITLE
	ELECTRICAL SINGLE LINE DIAGRAM
	LAST EDIT DATE: 1/21/21 SCALE:

PLOT DATE \ TIME: 1/21/2021 11:15:49 PM S:\ACC COMMERCIAL PROJECTS\ASHLAND COUNTY\220210_ASHLAND COUNTY COURTHOUSE ENGINEERING\0 - DRAWINGS\1 - DRAWINGS RECEIVED FROM OTHERS\NEW DRAWING TEMPLATE



0	JPR	01/22/21	ISSUED FOR BID
REV	BY	DATE	DESCRIPTION

DESIGNERS:



ASHLAND COMFORT CONTROL
 HEATING-AIR CONDITIONING-FIREPLACES-PLUMBING
 805 E. MAIN STREET - ASHLAND, OH
 P: 419.281.0144 F: 419.281.6971
 WWW.ASHLANDCOMFORTCONTROL.COM
 JOSEPH P. REEP - OHIO PE: #77349
 INFO@ASHLANDCOMFORT.COM

PROJECT



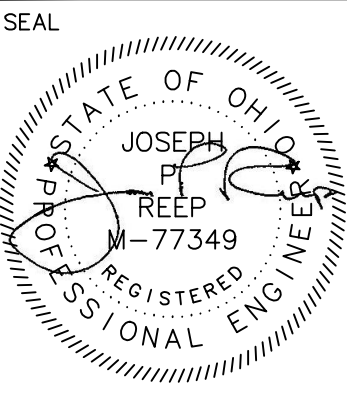
142 West 2nd Street
 Ashland, OH 44805

Ashland County Courthouse HVAC System Upgrades

DRAWN BY:	JPR	ORIGIN DATE:	10/12/20	DESIGNED BY:	JPR	DATE:	12/31/20
APPROVED BY:	JPR	DATE:	01/21/21	CLIENT NO.:	ASH000	JOB NO.:	220210

DRAWING NAME:
 220210 - ELEC.DWG

SEAL



TITLE
**VRV WIRING
 SCHEMATICS**

LAST EDIT DATE:
 1/21/21

DRAWING NO.
E4.1

In case of D-AHU the EKEDQ and EKEXV are built in the AHU and are pre-cabled.
 (*) For more details about wiring towards AHU, please refer to the installation manual.