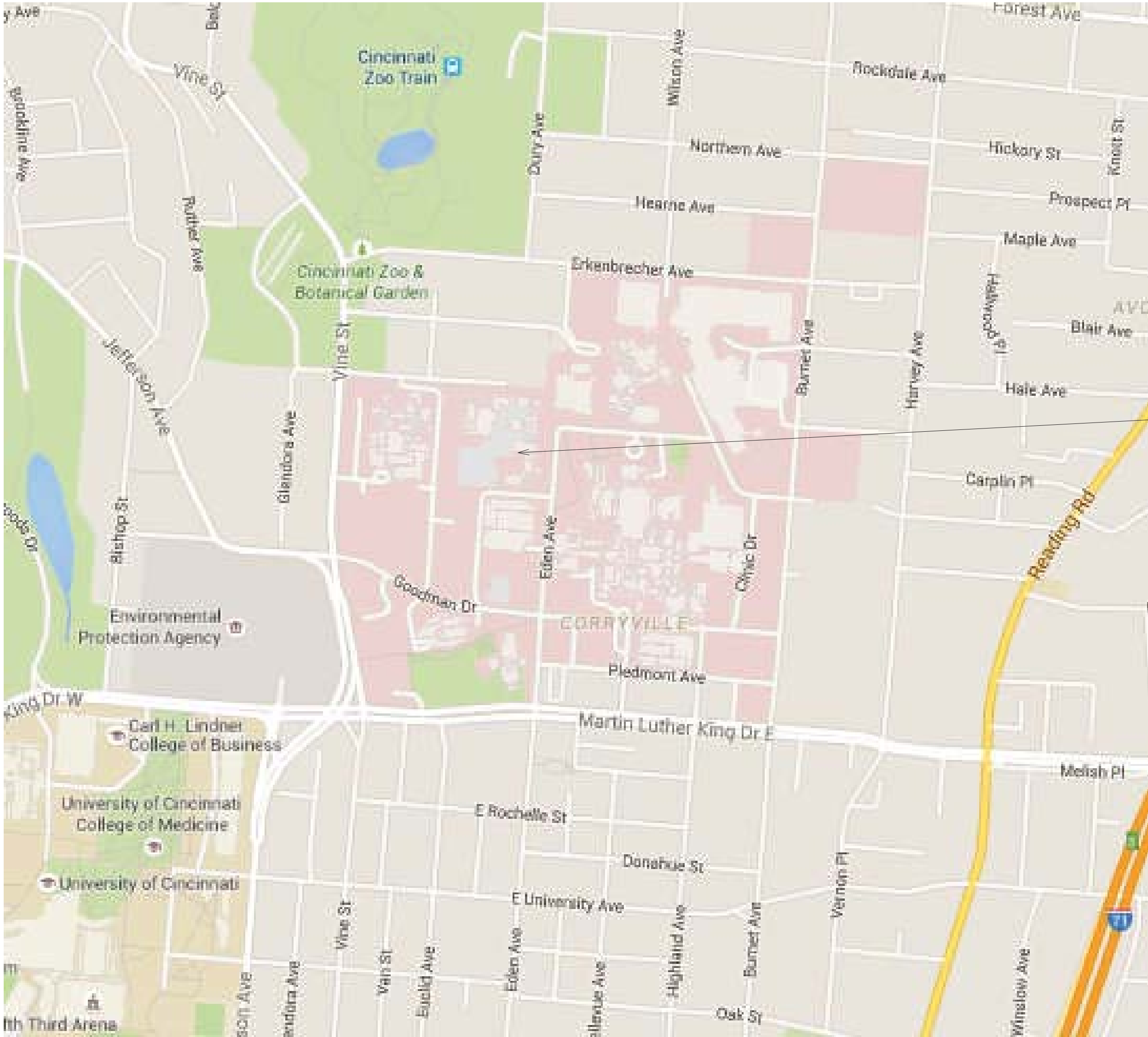


UPGRADE UPS AND AC IN COMPUTER ROOM CINCINNATI VA MEDICAL CENTER

3200 VINE STREET CINCINNATI OHIO 45220
PROJECT NO. 539-18-202

DRAWING SHEET INDEX		
Sheet Number	Sheet Name	Sheet Discipline
GI001	COVER SHEET	GENERAL
E001	ELECTRICAL LEGENDS	ELECTRICAL
EP101	PARTIAL FIRST FLOOR PLAN	ELECTRICAL
EP102	PHASE 1 PARTIAL THIRD FLOOR PLAN	ELECTRICAL
EP103	POWER PLAN - PHASE 1 PARTIAL FOURTH FLOOR IT ROOM A437C	ELECTRICAL
EP104	POWER PLAN - PHASE 2 PARTIAL FOURTH FLOOR IT ROOM A437C	ELECTRICAL
EP105	POWER PLAN - PHASE 3 PARTIAL FOURTH FLOOR IT ROOM A437C	ELECTRICAL
EP301	NORMAL & EMERGENCY POWER BRANCHES - 80KVA UPS - "1E7" / ATS-"1E7" SINGLE LINE DIAGRAM	ELECTRICAL
EP302	POWER BRANCH - 100KVA UPS2, PANEL EDPEQ3 SINGLE LINE DIAGRAM	ELECTRICAL
EP501	ELECTRICAL DETAILS	ELECTRICAL
EP601	EXISTING UPS1 POWER PANEL SCHEDULES	ELECTRICAL
EP602	NEW WORK - EDPEQ3 POWER PANEL SCHEDULE	ELECTRICAL
EP603	NEW UPS1 AND UPS2 POWER PANEL SCHEDULES	ELECTRICAL



PROJECT LOCATION

*** R.I.D. = RESIDENT INTERIOR DESIGNER. ***
** U.N.O. = UNLESS NOTED OTHERWISE.**
* C.O.R. = CONTRACTING OFFICER'S REPRESENTATIVE. THIS IS USED IN LIEU OF THE TERM OWNER.*

- ALL WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES, RULES, ORDINANCES AND REGULATIONS INCLUDING THE AMERICAN DISABILITIES ACT (ADA), ARCHITECTURAL BARRIERS ACT(ABA), THE VA BARRIER FREE DESIGN GUIDELINES AND THE AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) GUIDELINES.
- THE C.O.R. SHALL WORK WITH THE CONTRACTOR TO PROVIDE ACCESS TO TEMPORARY SERVICES REQUIRED TO PROVIDE THE WORK INDICATED. SEE SPECIFICATION SECTION 01 00 00 FOR ADDITIONAL REQUIREMENTS ON TEMPORARY ACCESS TO VA UTILITIES.
- THE GENERAL CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF THE SPECIFICATIONS, INCLUDING ALL GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS, AND MATERIAL AND CONSTRUCTION PROVISIONS, WHICH APPLY TO MATERIALS OR CONSTRUCTION METHODS REQUIRED BY THIS PROJECT.
- PRIOR TO BIDDING, THE GENERAL CONTRACTOR SHALL VISIT THE SITE, EXAMINE, AND ACCEPT ALL EXISTING CONDITIONS. DATES FOR SITE VISITS WILL BE POSTED IN THE CONTRACT DOCUMENTS AS POSTED ON THE FEDERAL BUSINESS OPPURTUNITIES WEBPAGE FOR THIS PROJECT. UNSCHEDULED VISITS WILL NOT BE ALLOWED.
- DO NOT PAINT ANY CAULKING OR SEALANTS WHICH ARE SUBJECT TO MOVEMENT - CONTROL JOINTS SHALL BE CAULKED AFTER PAINT AND SPECIAL COATING APPLICATIONS. PROVIDE CAULKING OR SEALANTS IN COLORS WHICH MATCH ADJACENT FINISHED SURFACE COLORS.
- VERIFY ALL CONDITIONS AND DIMENSIONS IN THE FIELD BEFORE FABRICATING ANY MATERIALS. IT IS THE INTENT OF THE DOCUMENTS TO INDICATE COMPLETE AND OPERATIONAL SYSTEMS (I.E. STRUCTURAL, HVAC, PLUMBING, ELECTRICAL, ETC.) THE CONTRACTOR SHALL PROVIDE THE SYSTEMS AS OPERATIONAL SYSTEMS WHICH COMPLY WITH APPLICABLE CODES AND REGULATIONS. THIS NOTE SHALL BE LIMITED TO THE SYSTEMS AS INDICATED BY THE DOCUMENTS AND SHALL NOT INCLUDE CHANGES TO THE SYSTEMS WHICH ALTER INDICATED CAPACITIES, OPERATIONAL CHARACTERISTICS, ETC.
- THE GENERAL CONTRACTOR SHALL VERIFY THE SIZES OF ALL EQUIPMENT OR FIXTURES TO BE INSTALLED IN THE BUILDING THROUGH THE SUBMITTAL PROCESS, AND SHALL MAKE SPECIAL PROVISIONS FOR INSTALLATION OF ANY EQUIPMENT WHICH IS TOO LARGE TO FIT THROUGH A FINISHED OPENING. ALL CONTRACTORS SHALL BE RESPONSIBLE TO PATCH AND REPAIR ALL SURFACES WHERE EXISTING CONSTRUCTION IS REMOVED OR DISTURBED BY WORK UNDER THEIR CONTRACT.
- ALL SUSPENDED ITEMS SUCH AS CEILINGS, DUCTS, PIPES, CONDUITS, ETC., SHALL BE SUSPENDED (ATTACHED) DIRECTLY TO STRUCTURE AND SHALL NOT BE ATTACHED OR ANCHORED TO EXISTING PLASTER, ACOUSTIC TILE, ETC.
- NEW PENETRATIONS SUCH AS DUCTS, CONDUITS, PIPING, ELECTRICAL OUTLETS, LIGHT SWITCHES, RECESSED DEVICES OR ITEMS, HOLES, VOIDS, CRACKS, ETC. IN MODIFIED AND NEW CORRIDOR WALLS, SMOKE PARTITIONS, AND FLOOR SLABS SHALL BE SEALED TO PREVENT PASSAGE OF ANY SMOKE, FLAME, GASES, ETC. AS INDICATED IN THE CONTRACT DOCUMENTS.
- WHERE NEW CONSTRUCTION REQUIRES CORE DRILLING THROUGH EXISTING STRUCTURAL CONCRETE FLOOR SLABS, AND WALLS THE CONTRACTOR SHALL COORDINATE HIS DRILLING WORK TO AVOID DRILLING INTO A STRUCTURAL ELEMENT, INCLUDING JOISTS, BEAMS, COLUMNS, ETC. ALSO SEE ELECTRICAL, DRAWINGS AND SPECIFICATIONS.
- WHERE NEW CONSTRUCTION IS INDICATED TO BE INSTALLED IN EXISTING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS FOR PROPER FIT AND FOR ACCESS INTO THE BUILDING PRIOR TO SHOP DRAWING SUBMITTAL, ORDERING AND DELIVERING TO THE SITE.
- FOR INFECTION CONTROL REASONS, WORK CONDUCTED IN THE CORRIDOR THAT DOES NOT GENERATE DUST MAY ONLY REMOVE UP TO 16 SQUARE FEET OF CEILING TILE AT ONCE, AS LONG AS THIS STANDARD IS FOLLOWED NEGATIVE AIR AND BARRIERS ARE NOT REQUIRED BY THE INFECTION CONTROL NURSES. IF DUST IS GENERATED AND GREATER THAN 16 SF OF CEILING TILES ARE DISTURBED AT ONCE THEN THE WORK AREA SHALL BE SEALED OFF WITH 6 MIL FIRE RETARDANT POLYETHYLENE AND NEGATIVE AIR PROVIDED. MAINTAIN 5' MINIMUM ACCESS IN CORRIDORS AT ALL TIMES. CLEAN THOROUGHLY PRIOR TO COMPLETION OF A GIVEN WORK AREA BY HEPA VACUUM AND WET MOP. REFER TO SPECIFICATION 01 35 36 FOR ADDITIONAL INFORMATION.

AREA MAP

FULLY SPRINKLERED

			CONSULTANTS:			ARCHITECT/ENGINEERS:  FFE, Inc. 420 Springfield Pike Cincinnati OH, 45215 513-522-0956	Drawing Title COVER SHEET		Project Title Upgrade UPS and AC in Computer Room		Project No. VA Project No. 539-18-202		Office of Construction and Facilities Management		
				Building Number 1			Location Cincinnati, Ohio		Drawing Number GI001		Department of Veterans Affairs				
0 ISSUED FOR CONSTRUCTION		06-09-2017					Approved: Project Director		Date 06/09/17			Checked RG		Drawn JK	
Revisions		Date													

GENERAL NOTES

- A. EACH BRANCH CIRCUIT HOMERUN SHALL HAVE NO MORE THAN THREE CIRCUITS. EACH BRANCH CIRCUIT HOMERUN SHALL HAVE A SEPARATE GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR.
- B. MULTI-GANG BACKBOXES FOR DIFFERENT VOLTAGES AND TYPES OF EMERGENCY AND NORMAL BRANCH WIRING DEVICES SHALL HAVE DIVIDERS BETWEEN DEVICES.
- C. COORDINATE ALL SHUT-DOWNS OF EXISTING ELECTRICAL SYSTEMS WITH OWNER A MINIMUM OF FOURTEEN (14) WORKING DAYS IN ADVANCE. ALL SHUT-DOWNS SHALL OCCUR DURING WEEKENDS OR UNOCCUPIED TIMES. INCLUDE ALL PREMIUM TIME CHARGES IN BID.
- D. ALL NOISE GENERATING OPERATIONS, INCLUDING CUTTING OF CEILINGS, WALLS AND FLOORS, CORING, DRILLING, ETC. SHALL BE SCHEDULED ON WEEKENDS OR BETWEEN 8:00PM AND 7:00AM ON WEEKDAYS. INCLUDE ALL PREMIUM TIME CHARGES IN BID.
- E. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF CEILINGS REQUIRED FOR ELECTRICAL WORK. ELECTRICAL CONTRACTOR SHALL REPLACE ANY DAMAGED CEILING MATERIAL.
- F. ALL NEW WALL MOUNTED ELECTRICAL DEVICES ARE TO BE INSTALLED FLUSH IN WALL UNLESS OTHERWISE NOTED. ALL ELECTRICAL CONDUIT SHALL BE CONCEALED BEHIND FINISHED WALLS AND ABOVE FINISHED CEILING UNLESS OTHERWISE NOTED. THE COST TO CUT AND PATCH WALLS SHALL BE THE RESPONSIBILITY OF THE TRADE REQUIRING THE CUTTING.
- G. ALL WORK SHALL BE PERFORMED IN STRICT CONFORMANCE WITH THE PHASING REQUIREMENTS OF THE PROJECT. ALL COSTS ASSOCIATED WITH THESE REQUIREMENTS SHALL BE INCLUDED IN THE BID SUBMITTAL. REFER TO ARCHITECTURAL PLANS FOR PHASING AND AREAS DESIGNATED AS "OFF HOURS" CONSTRUCTION AREAS.
- H. DEFINITION: "PROVIDE" - FURNISH, INSTALL AND CONNECT COMPLETE.

GENERAL NOTES - DEMOLITION

- A. FOR EXISTING EQUIPMENT, SUCH AS LIGHTING FIXTURES, WIRING DEVICES, CONDUITS, ETC., SHOWN ON PLANS TO BE REMOVED, COMPLETELY CUT/CAP CONDUITS AT THE AREA OF WORK PERIMETER AND REMOVE CONDUIT WITHIN THE WORK AREA, DISCONNECT WIRING AT THE OVERCURRENT PROTECTIVE DEVICE AND REMOVE WIRING COMPLETELY FROM THE ABANDONED CONDUITS.
- B. DISCONNECT ALL ABANDONED WIRING OF ALL TYPES AT THE OVERCURRENT PROTECTIVE DEVICE. COMPLETELY REMOVE ALL ABANDONED WIRING.
- C. MAINTAIN AND RESTORE, IF INTERRUPTED, ALL CONDUITS AND CONDUCTORS PASSING THROUGH RENOVATED AREAS AND SERVICING UNDISTURBED AREAS.

CODE COMPLIANCE

NFPA 2017

CHAPTER 6 - SPECIAL EQUIPMENT
ARTICLE 645 - INFORMATION TECHNOLOGY EQUIPMENT

- 645.5 SUPPLY CIRCUITS AND INTERCONNECTING CABLES
- 645.5(A) BRANCH CIRCUIT CONDUCTORS SHALL HAVE AN AMPACITY OF NOT LESS THAN 125% OF THE TOTAL CONNECTED LOAD.
- 645.5(B)(1) POWER SUPPLY CORDS SHALL NOT EXCEED 15 FEET IN LENGTH.
- 645.5(B)(2) POWER CORDS SHALL BE LISTED AND OF A TYPE PERMITTED FOR USE ON LISTED IT EQUIPMENT CONSTRUCTED FROM LISTED CORD WITH LISTED ATTACHMENT PLUGS AND CORD CONNECTORS OF A TYPE PERMITTED FOR IT EQUIPMENT.
- 645.5(C) INTERCONNECTING CABLES SHALL BE LISTED CABLES OR ASSEMBLIES.
- 645.5(D) WHERE EXPOSED TO PHYSICAL DAMAGE, SUPPLY CIRCUITS AND INTERCONNECTING CABLES SHALL BE PROTECTED FROM HARM.
- 645.5(E) FLOOR OPENINGS SHALL MINIMIZE THE ENTRANCE OF DEBRIS BENEATH THE FLOOR.
- 645.5(E)(1)(A) BRANCH CIRCUIT SUPPLY CONDUCTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF 300.11.
- 645.5(E)(1)(B) IN ADDITION TO THE WIRING METHODS OF 300.22, THE FOLLOWING WIRING METHODS ARE ALSO PERMITTED: (1) RIGID METAL CONDUIT, (2) RIGID NONMETALLIC CONDUIT, (3) INTERMEDIATE METAL CONDUIT, (4) ELECTRICAL METALLIC TUBING, (5) ELECTRICAL NONMETALLIC TUBING, (6) METAL WIREWAY, (7) NONMETALLIC WIREWAY, (8) SURFACE METAL RACEWAY WITH METAL COVER, (9) SURFACE NONMETALLIC RACEWAY, (10) FLEXIBLE METAL CONDUIT, (11) LIQUIDTIGHT FLEXIBLE METAL CONDUIT, (12) LIQUIDTIGHT NONMETALLIC CONDUIT, (13) TYPE MI CABLE, (14) TYPE MC CABLE, (15) TYPE AC CABLE, (16) ASSOCIATED METALLIC AND NONMETALLIC BOXES OR ENCLOSURES, (17) TYPE TC POWER AND CONTROL TRAY CABLE.
- 645.10 DISCONNECTING MEANS
- 645.10(B) REMOTE DISCONNECTING CONTROLS SHALL NOT BE REQUIRED FOR CRITICAL OPERATIONS DATA SYSTEMS WHEN ALL OF THE FOLLOWING ARE MET:
- (1) AN APPROVED PROCEDURE HAS BEEN ESTABLISHED AND MAINTAINED FOR REMOVING POWER AND AIR MOVEMENT WITHIN THE ROOM OR ZONE, (2) QUALIFIED PERSONNEL ARE CONTINUOUSLY AVAILABLE TO ADVISE EMERGENCY RESPONDERS AND TO INSTRUCT THEM OF DISCONNECTING METHODS, (3) A SMOKE-SENSING FIRE DETECTION SYSTEM IS IN PLACE, (4) AN APPROVED FIRE SUPPRESSION SYSTEM SUITABLE FOR THE APPLICATION IS IN PLACE, (5) THE INSTALLATION IS UNDER A RAISED FLOOR, OTHER THAN BRANCH CIRCUIT WIRING, AND POWER CORDS ARE INSTALLED IN COMPLIANCE WITH 645.5(E)(2) OR (E)(3), OR IN COMPLIANCE WITH TABLE 645.10(B)(5).
- 645.11 UPS SYSTEMS INSTALLED WITHIN THE INFORMATION TECHNOLOGY EQUIPMENT ROOM, AND THEIR SUPPLY AND OUTPUT CIRCUITS, SHALL COMPLY WITH THE DISCONNECTING MEANS SHALL AT DISCONNECT THE BATTERY FROM ITS LOAD.
- 645.15 ALL EXPOSED NON-CURRENT CARRYING METAL PARTS OF AN IT SYSTEM SHALL BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR IN ACCORDANCE WITH PARTS I, V, VI, VIIM, VIII OF ARTICLE 250 OR SHALL BE DOUBLE INSULATED.
- 645.16 EACH UNIT OF AN IT SYSTEM SUPPLIED BY A BRANCH CIRCUIT SHALL BE PROVIDED WITH A MANUFACTURER'S NAMEPLATE, WHICH SHALL ALSO INCLUDE THE INPUT POWER REQUIREMENTS FOR VOLTAGE, FREQUENCY, AND MAXIMUM RATED LOAD IN AMPERES.
- 645.18 PROTECTIVE SHIELDING SHALL BE PROVIDED FOR CRITICAL OPERATIONS DATA SYSTEMS.
- 645.27 OVERCURRENT DEVICES FOR CRITICAL OPERATION DATA SYSTEMS SHALL BE SELECTIVELY COORDINATED WITH ALL SUPPLY-SIDE OVERCURRENT PROTECTIVE DEVICES.





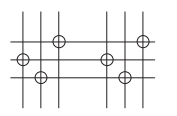

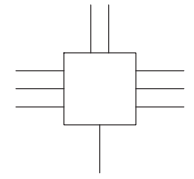









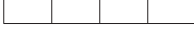




















ELECTRICAL ABBREVIATIONS

PH	SINGLE-PHASE		
1P	SINGLE POLE	IMC	INTERMEDIATE METAL CONDUIT
2/C	TWO-CONDUCTOR		
3/C	THREE-CONDUCTOR	J-BOX	JUNCTION BOX
3PH	THREE-PHASE		
4/C	FOUR-CONDUCTOR	KV	KILOVOLT
4W	FOUR-WIRE	KVA	KILOVOLT AMPERE
		KVAH	KILOWATT AMPERE PER HOUR
		KVAR	KILOVOLT AMPERE REACTIVE
AFC	ABOVE FINISHED COUNTER, AUTOMATIC FREQUENCY CONTROL, OR AVAILABLE FAULT CURRENT	KW	KILOWATT
AF	ABOVE FINISHED FLOOR	KWH	KILOWATT HOUR
AFG	ABOVE FINISHED GRADE	KWHM	KILOWATT HOUR METER
AH	AMPERE HOUR		
AHJ	AUTHORITY HAVING JURISDICTION	LV	LOW VOLTAGE
AIC	AMPERE INTERRUPTING CAPACITY		
AMP	AMPERE	MC	METAL-CLAD
ASC	AMPS SHORT CIRCUIT	MCA	MINIMUM CIRCUIT AMPS
AT	AMPERE TRIP	MCB	MAIN CIRCUIT BREAKER
ATS	AUTOMATIC TRANSFER SWITCH	MCC	MOTOR CONTROL CENTER
		MDP	MAIN DISTRIBUTION PANEL
		MOC	MAXIMUM OVERCURRENT PROTECTION
BAT	BATTERY	MLO	MAIN LUGS ONLY
BC	BARE COPPER	MT	MOUNT
BFF	BELOW FINISH FLOOR	MTD	MOUNTED
BRKR	BREAKER	MTG	MOUNTING
BYP	BY PASS	MTS	MANUAL TRANSFER SWITCH
C	CONDUIT	NA	NOT APPLICABLE
CAB	CABINET	NEC	NATIONAL ELECTRICAL CODE
CAP	CAPACITY	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
CKT	CIRCUIT	NEUT OR N	NEUTRAL
CKT BRKR	CIRCUIT BREAKER	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
CLF	CURRENT LIMITING FUSE		
CPT	CONTROL POWER TRANSFORMER	NIC	NOT IN CONTRACT
CT	CURRENT TRANSFORMER	NO	NORMALLY OPEN
CU	COPPER	NTS	NOT TO SCALE
CU FT	CUBIC FEET		
CUR	CURRENT	OC	ON CENTER
		OL	OVERLOAD
DC	DIRECT CURRENT		
DISC	DISCONNECT	PB	PANELBOARD
DISTR	DISTRIBUTION	PH	PHASE
DISTR PNL	DISTRIBUTION PANEL	PNL	PANEL
DMR SW	DIMMER SWITCH	PT	POTENTIAL TRANSFORMER
DN	DOWN	PWR	POWER
DPDT	DOUBLE POLE, DOUBLE THROW	REC	RECESSED
DPST	DOUBLE POLE, SINGLE THROW	RECPT	RECEPTACLE
DRSW	DOOR SWITCH		
DS	DISCONNECT SWITCH	SCC	SHORT CIRCUIT CAPACITY
EG	EQUIPMENT GROUND	TP	TWISTED PAIR
ELEV	ELEVATOR	TPS	TWISTED PAIR SHIELDED
EMT	ELECTRICAL METALLIC TUBING	TYP	TYPICAL
ENCL	ENCLOSURE		
EXIST	EXISTING	UFD	UNDERFLOOR DUCT
		UGND	UNDERGROUND
FLA	FULL LOAD AMPS	UL	UNDERWRITERS LABORATORY
FLEX	FLEXIBLE METALLIC CONDUIT	UON	UNLESS OTHERWISE NOTED
FU SW	FUSED SWITCH	UPS	UNINTERRUPTIBLE POWER SUPPLY
G	GROUND	V	VOLT
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	VA	VOLT AMPERE
GTB	GROUND TERMINAL BOX	VAR	VOLT AMPERE REACTIVE









CHAPTER 7 - SPECIAL CONDITIONS
ARTICLE 700 EMERGENCY SYSTEMS

- | | |
|--------|--|
| 700.8 | A LISTED SURGE PROTECTION DEVICE SHALL BE INSTALLED IN ALL EMERGENCY SYSTEM SWITCHBOARDS AND PANELBOARDS. |
| 700.32 | EMERGENCY SYSTEM OVERCURRENT DEVICES SHALL BE SELECTIVELY COORDINATED WITH ALL SUPPLY-SIDE OVERCURRENT PROTECTIVE DEVICES. |

ELECTRICAL SYMBOLS - POWER PLAN

	MOTOR, SINGLE-PHASE
	MOTOR, THREE-PHASE
	TRANSFORMER, PLAN
	WYE CONNECTION
	DUCT, CELL FLOOR HEADER
	DUCT, TROLLEY
	DUCT, UNDERFLOOR JUNCTION BOX
	EARTH GROUND
	JUNCTION BOX
	LADDER CABLE TRAY
	BRANCH CIRCUIT HOMERUN. LINES INDICATE NUMBER OF CIRCUITS, NEUTRAL, AND SWITCH LEG CONDUCTORS. ONE SEPARATE GREEN GROUNDING CONDUCTOR SHALL BE PROVIDED FOR EACH HOMERUN; NOT SHOWN
	PULL BOX
	WIREWAY
	RIGID CONDUIT LINE = RC
	DIRECT BURIAL CABLE = DB
	POWER DUCT = P
	BUSWAY
	FLOOR OUTLET, DATA COMMUNICATION
	OUTLET, DATA COMMUNICATION
	PUSH BUTTON
	DISTRIBUTION PANEL
	LIGHTING PANEL
	PANELBOARD CABINET, FLUSH MOUNTED
	PANELBOARD CABINET, SURFACE MOUNTED
	RECEPTACLE, CLOCK HANGER
	RECEPTACLE, DUPLEX
	RECEPTACLE, DUPLEX ON EMERGENCY POWER
	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER
	RECEPTACLE, QUADRUPLEX
	RECEPTACLE, SINGLE
	RECEPTACLE, SINGLE WITH SWITCH
	RECEPTACLE, SPECIAL PURPOSE A = 120V, 20A, 1 PHASE, 2-POLE, 3W, NEMA 5-20R. B = 208V, 20A, 1 PHASE, 2-POLE, 3W, NEMA 6-20R. C = 120V, 30A, 1 PHASE, 2-POLE, 3W, NEMA 5-30R. D = 208V, 30A, 1 PHASE, 2-POLE, 3W, NEMA 6-30R. E = 208V, 60A, 1 PHASE, 3-POLE, 4W, NEMA 14-60R. F = 208V, 30A, 3 PHASE, 3-POLE 4W, NEMA 15-30R. G = 208V, 50A, 3 PHASE, 3 POLE, 4W, NEMA 15-30R. H = 208V, 60A, 3 PHASE, 3 POLE, 4W, NEMA 15-60R.
	RECEPTACLE, SWITCHED DUPLEX
	DROP CORD, SINGLE CONVENIENCE OUTLET, 3-WIRE, GROUNDING TYPE, 20A, W/12 CONDUCTORS IN FLEXIBLE CORD (CENTER LINE OF OUTLET: 6'-6" [1981mm] AFF. MINIMUM).
	ELECTRICAL STRIP MOLD (OUTLETS ON 2'-0" [610mm] CENTERS OR AS DESIGNATED ON DRAWINGS), MTD 3'-6" [1067mm] AFF OR AS INDICATED.
	3-GANG COMPARTMENT BOX IN FLOOR FOR TELEPHONE, DATA & RECEPTACLE.
	RELAY; LETTER INDICATES RELAY TYPE 50 = INSTANTANEOUS OVERCURRENT OR RATE-OF-RISE 51 = AC-TIME OVERCURRENT 67 = AC-DIRECTIONAL OVERCURRENT 86 = LOCK OUT

ELECTRICAL SYMBOLS - POWER PLAN

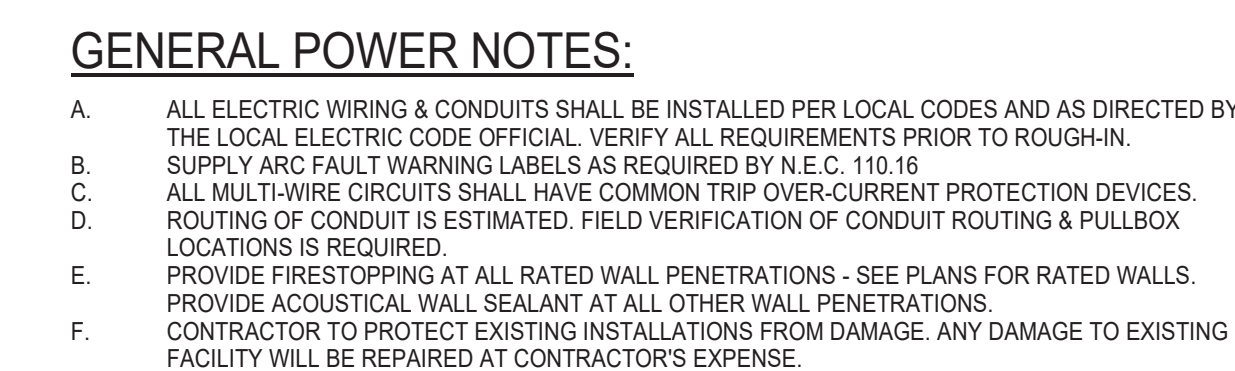
	DISCONNECT SWITCH, FUSED
	DISCONNECT SWITCH, UNFUSED
	STARTER, COMBINATION WITH DISCONNECT SWITCH
	STARTER OR MOTOR CONTROLLER
	VARIABLE FREQUENCY DRIVE
	CONDUIT TERMINATED 6" [152mm] AFF IN STANDARD BOX FOR EXTENSION TO EQUIPMENT AS DIRECTED.
	CONDUIT TERMINATED W/COUPLING (FLUSH W/FINISHED FLOOR) FOR EXTENSION TO EQUIPMENT AS DIRECTED.
	SWITCH
	F = FUSED SWITCH
	L = LOCK
	M = MANUAL MOTOR STARTING
	MP= MOTOR SNAP WITH PILOT LIGHT (THERMAL TYPE)
	PB= PUSH BUTTON STATION
	WP= WEATHER PROOF
	K = KEY OPERATED
	LM= LOW VOLTAGE MASTER
	MC= MOMENTARY CONTACT
	P = WITH PILOT LIGHT
	RC= REMOTE CONTROL
	X = EXPLOSION PROOF

ELECTRICAL SYMBOLS - DIAGRAM

	DELTA CONNECTION
	MOTOR, SINGLE-PHASE
	MOTOR, THREE-PHASE
	TRANSFORMER
	WYE CONNECTION
	EARTH GROUND
	JUNCTION BOX
	PULL BOX
	NORMALLY CLOSED RELAY CONTACT
	NORMALLY OPEN RELAY CONTACT
	FUSE WITH RATING
	MOLDED CASE CIRCUIT BREAKER
	LOW-VOLTAGE DRAWOUT AIR CIRCUIT BREAKER
	SWITCH AND FUSE UNIT
	FUSED DRAWOUT POTENTIAL TRANSFORMER
	RELAY 50 = INSTANTANEOUS OVERCURRENT OR RATE-OF-RISE 51 = AC-TIME OVERCURRENT 67 = AC-DIRECTIONAL OVERCURRENT 86 LOCKING OUT
	DISCONNECT SWITCH, FUSED
	DISCONNECT SWITCH, UNFUSED
	FUSIBLE LINK
	STARTER, COMBINATION WITH DISCONNECT SWITCH
	STARTER OR MOTOR CONTROLLER
	BATTERY
	METER
	AMMETER
	VOLTMETER
	WATTMETER
	WATT-HOUR METER

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ELECTRICAL POWER THIRD FLOOR PLAN - PANEL EDPEQ3

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

CONSULTANTS:

ARCHITECT/ENGINEERS:



FFE, Inc.
420 Springfield Pike
Cincinnati OH, 45215
513-522-0956

PHASE 1 PARTIAL THIRD FLOOR PLAN

Approved: Project Director

Upgrade UPS and AC in
Computer Room

Cincinnati, Ohio

Date

Checked

Drawn

Project No.

Building Number

Drawing Number

EP102

Dwg. 4 of 13

Office of
Construction
and Facilities
Management



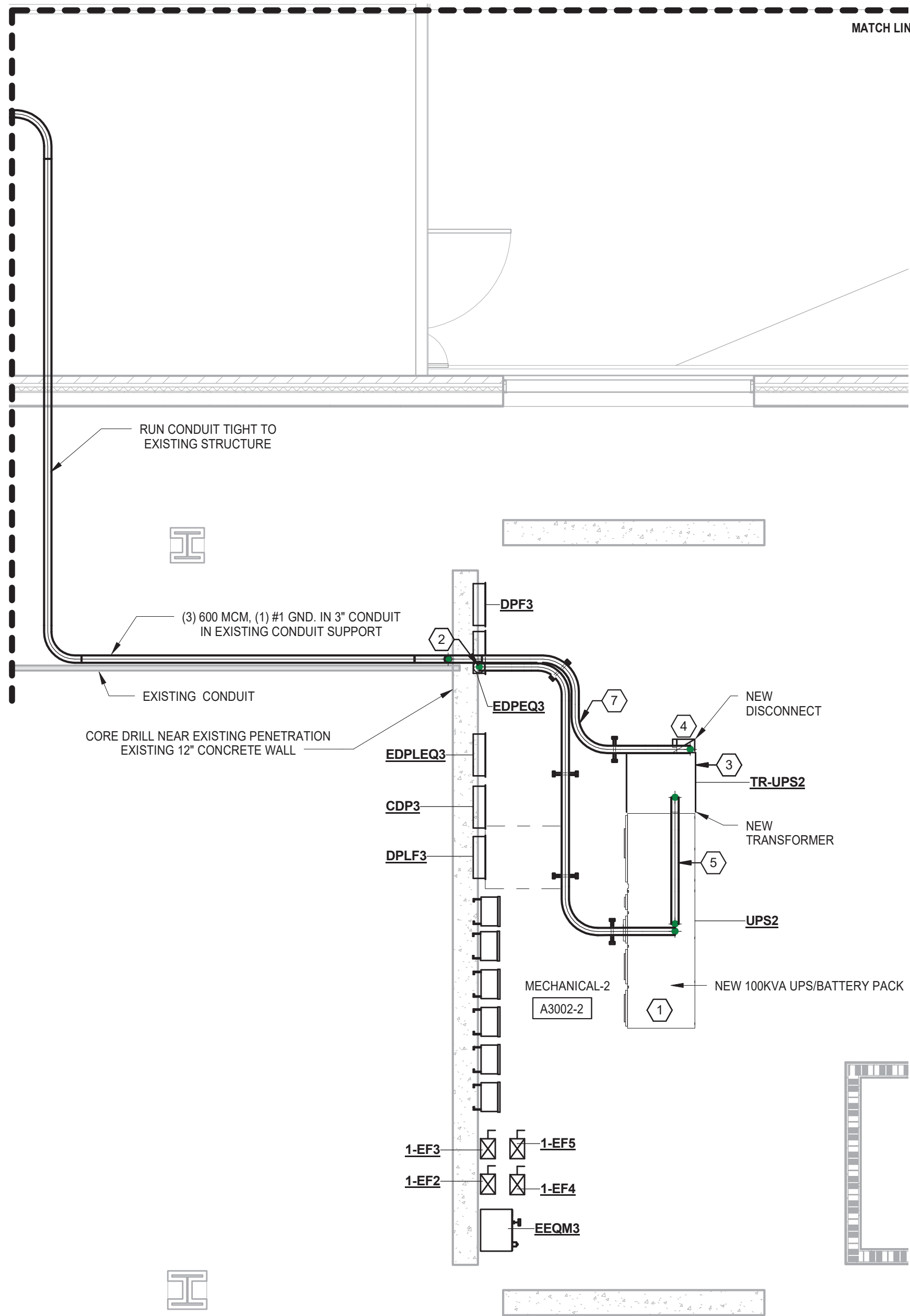
GENERAL POWER NOTES:

- ALL ELECTRIC WIRING & CONDUITS SHALL BE INSTALLED PER LOCAL CODES AND AS DIRECTED BY THE LOCAL ELECTRIC CODE OFFICIAL. VERIFY ALL REQUIREMENTS PRIOR TO ROUGH-IN.
- SUPPLY ARC FAULT WARNING LABELS AS REQUIRED BY N.E.C. 110.16.
- ALL MULTI-WIRE CIRCUITS SHALL HAVE COMMON TRIP OVER-CURRENT PROTECTION DEVICES.
- ROUTING OF CONDUIT IS ESTIMATED. FIELD VERIFICATION OF CONDUIT ROUTING & PULLBOX LOCATIONS IS REQUIRED.
- PROVIDE FIRESTOPPING AT ALL RATED WALL PENETRATIONS - SEE PLANS FOR RATED WALLS.
- PROVIDE ACOUSTICAL WALL SEALANT AT ALL OTHER WALL PENETRATIONS.
- CONTRACTOR TO PROTECT EXISTING INSTALLATIONS FROM DAMAGE. ANY DAMAGE TO EXISTING FACILITY WILL BE REPAIRED AT CONTRACTOR'S EXPENSE.

PHASING NOTES:

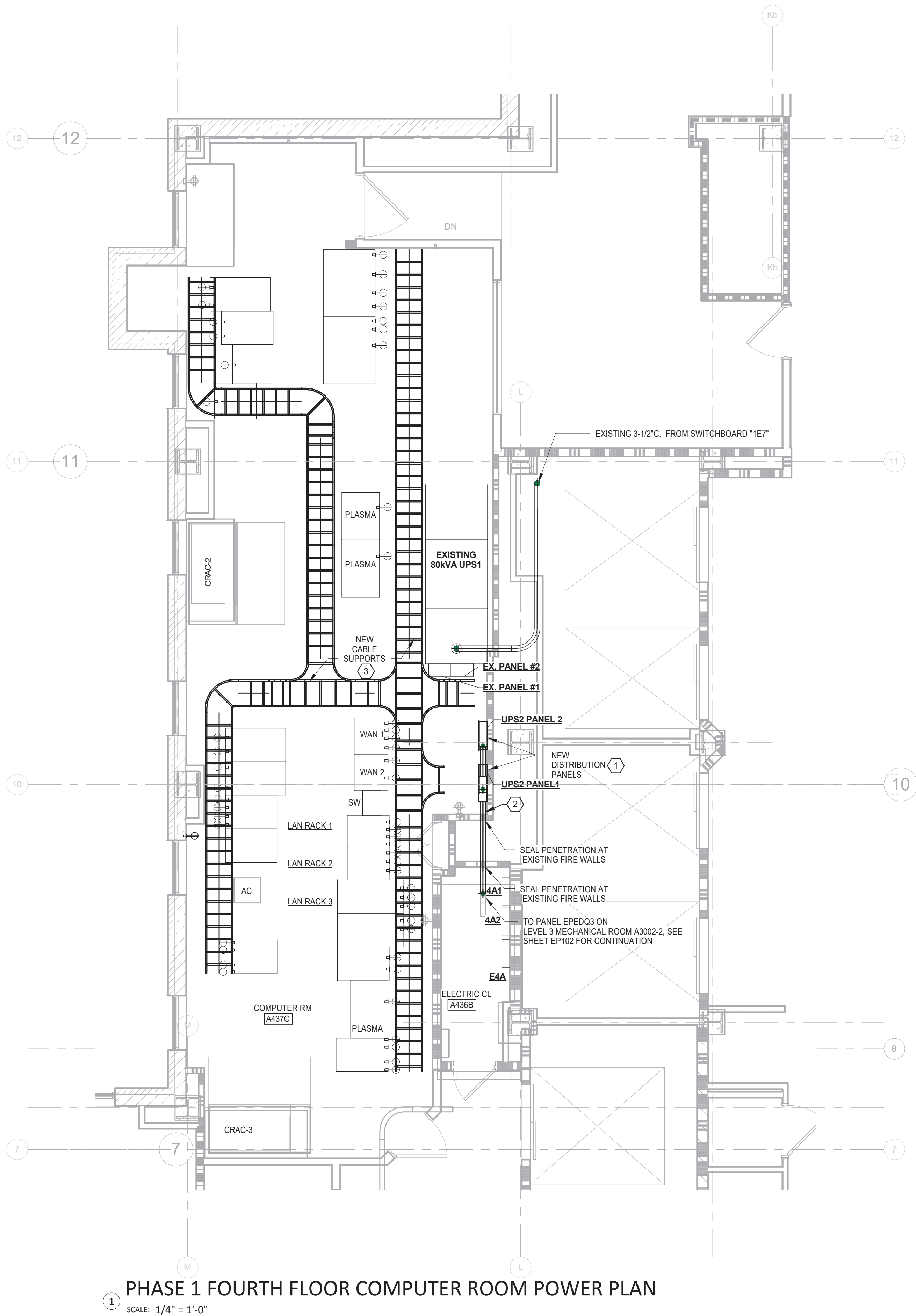
PHASE 1

- PROVIDE AND INSTALL 100KVA UPS BATTERY PACK MOUNTED IN MECHANICAL ROOM A3002-2. (SEE HEX NOTE 1 ON PLANS)
- PROVIDE AND INSTALL 150A CIRCUIT BREAKER IN PANEL EDPEQ3. RUN (3) #1 AWG CU / (1) #6 GND IN 2" CONDUIT FROM NEW CIRCUIT BREAKER TO NEW 100 KVA (NOMINAL) UPS BATTERY PACK & MAKE CONNECTIONS. (SEE HEX NOTE 2 ON PLANS)
- PROVIDE AND INSTALL 100KW, 480/208V/120V TRANSFORMER IN MECHANICAL ROOM A3002-2. (SEE HEX NOTE 3 ON PLANS)
- PROVIDE AND INSTALL 225A (22KA RATING) FUSED DISCONNECT TO NEW TRANSFORMER SECONDARY. (SEE HEX NOTE 4 ON PLANS)
- PROVIDE AND INSTALL (3) #1 AWG CU, (1) #6 GND IN 2" CONDUIT FROM UPS BATTERY PACK TO PRIMARY OF NEW TRANSFORMER. CONNECT NEW DISCONNECT TO NEW TRANSFORMER. (SEE HEX NOTE 5 ON PLANS)
- PROVIDE AND INSTALL TWO NEW DISTRIBUTION PANELS IN ROOM A4037C AS SHOWN ON SHEET EP103. (SEE HEX NOTE 6 ON PLANS)
- PROVIDE AND INSTALL (3) 600 MCM, (1) #1 AWG IN 3" CONDUIT FROM NEW TRANSFORMER TO NEW DISTRIBUTION PANELS. (SEE HEX NOTE 7 ON PLANS)



CABLE SCHEDULE				
FROM	TO	CABLE SIZE	CABLE TYPE	CABLE LENGTH
EDPEQ3 PANEL	UPS2	(3) #1 AWG CU / #6 GND	THWN	25' - 7"
UPS2	TR-UPS2	(3) #1 AWG CU / #6 GND	THWN	16' - 8"
TR-UPS2 DISCONNECT	UPS2 PANEL 1 AND UPS2 PANEL 2	(3) 600 MCM / #1 GND	THWN	198' - 2"

three inches = one foot
one and one-half inches = one foot
one inch = one foot
three-quarters inch = one foot
one-half inch = one foot
three-eighths inch = one foot
one-quarter inch = one foot
one-eighth inch = one foot



GENERAL POWER NOTES:

- A. ALL ELECTRIC WIRING & CONDUITS SHALL BE INSTALLED PER LOCAL CODES AND AS DIRECTED BY THE LOCAL ELECTRIC CODE OFFICIAL. VERIFY ALL REQUIREMENTS PRIOR TO ROUGH-IN.
B. SUPPLY ARC FAULT WARNING LABELS AS REQUIRED BY N.E.C. 110.16.
C. ALL MULTI-WIRE CIRCUITS SHALL HAVE COMMON TRIP OVERCURRENT PROTECTION DEVICES.
D. ROUTING OF CONDUIT IS ESTIMATED. FIELD VERIFICATION OF CONDUIT ROUTING & PULLBOX LOCATIONS IS REQUIRED.
E. PROVIDE FIRESTOPPING AT ALL RATED WALL PENETRATIONS - SEE PLANS FOR RATED WALLS.
F. PROVIDE ACOUSTICAL WALL SEALANT AT ALL OTHER WALL PENETRATIONS.
CONTRACTOR TO PROTECT EXISTING INSTALLATIONS FROM DAMAGE. ANY DAMAGE TO EXISTING FACILITY WILL BE REPAIRED AT CONTRACTOR'S EXPENSE.

PHASING NOTES:

PHASE 1

1. PROVIDE AND INSTALL TWO NEW DISTRIBUTION PANELS AS INDICATED ON EP103. (SEE HEX NOTE 1 ON PLANS)
2. PROVIDE AND INSTALL (8) 600 MCM, (1) #1 GND IN 3\"/>

FULLY SPRINKLERED

			CONSULTANTS:			ARCHITECT/ENGINEERS:  FFE, Inc. 420 Springfield Pike Cincinnati OH, 45215 513-522-0956	Drawing Title POWER PLAN - PHASE 1 PARTIAL FOURTH FLOOR IT ROOM A437C	Project Title Upgrade UPS and AC in Computer Room	Project No. VA Project No. 539-18-202		Office of Construction and Facilities Management		
Revisions									Building Number 1	Drawing Number EP103			
0 ISSUED FOR CONSTRUCTION							Approved: Project Director	Date 06/09/17	Checked RG	Drawn JK	Dwg. 5 of 13		

GENERAL POWER NOTES:

- A. ALL ELECTRIC WIRING & CONDUITS SHALL BE INSTALLED PER LOCAL CODES AND AS DIRECTED BY THE LOCAL ELECTRIC CODE OFFICIAL. VERIFY ALL REQUIREMENTS PRIOR TO BEGINNING.
- B. SUPPLY ARC FAULT WARNING LABELS AS REQUIRED BY N.E.C. 110.16
- C. ALL MULTI-WIRE CIRCUITS SHALL HAVE COMMON TRIP OVER-CURRENT PROTECTION DEVICES.
- D. ROUTING OF CONDUIT IS ESTIMATED. FIELD VERIFICATION OF CONDUIT ROUTING & PULLBOX LOCATIONS IS REQUIRED.
- E. PROVIDE FIRESTOPPING AT ALL RATED WALL PENETRATIONS - SEE PLANS FOR RATED WALLS.
- F. PROVIDE ACOUSTICAL WALL SEALANT AT ALL OTHER WALL PENETRATIONS.
- G. CONTRACTOR TO PROTECT EXISTING INSTALLATIONS FROM DAMAGE. ANY DAMAGE TO EXISTING FACILITY WILL BE REPAIRED AT CONTRACTOR'S EXPENSE.

PHASING NOTES:

PHASE 2

1. PROVIDE AND INSTALL NEW RACK AUTO TRANSFER SWITCHES AND POWER DISTRIBUTION UNITS IN EACH RACK. (SEE HEX NOTE 1 ON PLANS)
2. PROVIDE AND INSTALL NEW CABLE FROM PANELS UPS2-1 AND UPS2-2 TO EACH RACK ATS IN ACCORDANCE WITH THE ASSOCIATED PANEL SCHEDULE. INSTALL NEW POWER CIRCUITS IN A NEAT AND ORGANIZED MANNER. SECURE TO NEW CABLE SUPPORTS USING CABLE ACCESSORIES THAT ARE EITHER METAL OR THAT ARE LISTED AS HAVING LOW SMOKE OR HEAT RELEASE PROPERTIES.
3. CONNECT NEW CIRCUITS TO ATS SECONDARY INPUT. (SEE HEX NOTE 2 ON PLANS)
4. CONNECT CONTROL CIRCUIT FROM EACH ATS AND EACH PDU TO LOCAL NETWORK. (SEE HEX NOTE 4 ON PLANS)
5. INSTALL ATS AND PDU MONITORING SOFTWARE IN HMI DESIGNATED BY VA IT DEPARTMENT. (SEE HEX NOTE 5 ON PLANS)
6. VERIFY CONTROL AND POWER FUNCTIONS FOR EACH ATS AND EACH PDU. (SEE HEX NOTE 6 ON PLANS)
7. COORDINATE WITH VA IT DEPARTMENT FOR SEQUENCING OF SWITCHING RACK EQUIPMENT OVER TO NEW RACK PDUs. (SEE HEX NOTE 7 ON PLANS)
8. AS EACH DEVICE IS ADDED TO A PDU, CHECK THE PDU POWER METER TO ENSURE THE CIRCUIT IS NOT OVERLOADED. IF THE LOAD EXCEEDS 80% OF THE CAPACITY OF THE CIRCUIT, ADD AN ADDITIONAL CIRCUIT INCLUDING ATS AND PDU. FOR BIDDING PURPOSES, ASSUME NO MORE THAN TWO ADDITIONAL 120V, 30 AMP CIRCUITS. (SEE HEX NOTE 8 ON PLANS)
9. RACK 3 POWER FEED FROM UPS1 ONLY. EXISTING TO REMAIN. (SEE HEX NOTE 9 ON PLANS)

UPS2 PANELS 1 AND 2 CABLE SCHEDULE						
ATS NAME	VOLTAGE	PANEL	CIRCUIT	RECEPTACLE	CABLE SIZE	CABLE TYPE CABLE LENGTH
RACK 1 ATS-A	208V	UPS2 PANEL 1	21, 23	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 47'-10"
RACK 1 ATS-B	208V	UPS2 PANEL 1	37,39	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 47'-2"
RACK 2 ATS-A	208V	UPS2 PANEL 1	30, 32	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 45'-10"
RACK 2 ATS-B	208V	UPS2 PANEL 2	18, 20	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 44'-11"
RACK 4 ATS-A	120V	UPS2 PANEL 1	19	NEMA L5-20	(2) #12 AWG / #10 GND	MC 36'-4"
RACK 5 ATS-A	208V	UPS2 PANEL 1	34, 36	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 26'-1"
RACK 5 ATS-B	208V	UPS2 PANEL 2	39, 41	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 26'-4"
RACK 6 ATS-A	120V	UPS2 PANEL 1	20	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 27'-8"
RACK 6 ATS-B	208V	UPS2 PANEL 2	36, 38	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 28'-11"
RACK 7 ATS-A	120V	UPS2 PANEL 2	22	NEMA L5-20	(2) #12 AWG / #10 GND	MC 30'-0"
RACK 7 ATS-B	208V	UPS2 PANEL 1	24, 26	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 30'-0"
RACK 7 ATS-C	120V	UPS2 PANEL 1	6	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 30'-7"
RACK 7 ATS-D	120V	UPS2 PANEL 2	5	NEMA L5-20	(2) #12 AWG / #10 GND	MC 30'-7"
RACK 8 ATS	120V	UPS2 PANEL 2	3	NEMA L5-20	(2) #12 AWG / #10 GND	MC 31'-9"
RACK 9 ATS-A	120V	UPS2 PANEL 2	21	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 40'-0"
RACK 9 ATS-B	120V	UPS2 PANEL 1	27	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 40'-0"
RACK 9 ATS-C	120V	UPS2 PANEL 1	11	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 40'-0"
RACK 9 ATS-D	120V	UPS2 PANEL 2	24	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 40'-0"
RACK 10 ATS-A	208V	UPS2 PANEL 1	8, 10	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 37'-4"
RACK 10 ATS-B	208V	UPS2 PANEL 2	4, 6	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 36'-7"
RACK 11 ATS-A	208V	UPS2 PANEL 1	8, 10	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 35'-3"
RACK 11 ATS-B	208V	UPS2 PANEL 2	4, 6	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 34'-5"
RACK 12 ATS-A	120V	UPS2 PANEL 1	2	NEMA L5-20	(2) #12 AWG / #10 GND	MC 33'-3"
RACK 12 ATS-B	120V	UPS2 PANEL 2	26	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 33'-3"
RACK 12 ATS-C	120V	UPS2 PANEL 1	4	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 33'-3"
RACK 14 ATS	120V	UPS2 PANEL 2	2	NEMA L5-20	(2) #12 AWG / #10 GND	MC 22'-11"
RACK 15 ATS	120V	UPS2 PANEL 2	14	NEMA L5-20	(2) #12 AWG / #10 GND	MC 20'-0"
RACK 16 ATS-A	208V	UPS2 PANEL 1	40, 42	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 9'-5"
RACK 16 ATS-B	120V	UPS2 PANEL 1	7	NEMA L5- 20	(2) #12 AWG / #10 GND	MC 9'-5"
RACK 16 ATS-C	208V	UPS2 PANEL 2	17, 19	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 9'-5"
RACK 16 ATS-D	120V	UPS2 PANEL 2	16	NEMA L5-20	(2) #12 AWG / #10 GND	MC 9'-5"
RACK 17 ATS	120V	UPS2 PANEL 2	23	NEMA L5-20	(2) #12 AWG / #10 GND	MC 7'-3"
RACK 19 ATS-A	208V	UPS2 PANEL 2	7, 9	NEMA L6-20	(2) #12 AWG / #10 GND	MC 9'-10"
RACK 19 ATS-B	208V	UPS2 PANEL 1	13, 15	NEMA L6-20	(2) #12 AWG / #10 GND	MC 9'-10"
RACK 19 ATS-C	208V	UPS2 PANEL 2	31, 33	NEMA L6-20	(2) #12 AWG / #10 GND	MC 9'-10"
RACK 19 ATS-D	120V	UPS2 PANEL 1	9	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 9'-10"
RACK 20 ATS-A	208V	UPS2 PANEL 1	16, 18	NEMA L6-20	(2) #12 AWG / #10 GND	MC 12'-0"
RACK 20 ATS-B	208V	UPS2 PANEL 2	28, 30	NEMA L6-20	(2) #12 AWG / #10 GND	MC 12'-0"
RACK 20 ATS-C	208V	UPS2 PANEL 2	35, 37	NEMA L6-20	(2) #12 AWG / #10 GND	MC 12'-0"
RACK 21 ATS-A	120V	UPS2 PANEL 1	25	NEMA L5-20	(2) #12 AWG / #10 GND	MC 13'-11"
RACK 21 ATS-B	208V	UPS2 PANEL 1	31, 33	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 13'-11"
RACK 21 ATS-C	208V	UPS2 PANEL 2	32, 34	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 13'-11"
RACK 22 ATS-A	120V	UPS2 PANEL 1	28	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 15'-10"
RACK 22 ATS-B	120V	UPS2 PANEL 2	22	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 15'-10"
RACK 23 ATS-A	120V	UPS2 PANEL 1	28	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 17'-10"
RACK 23 ATS-B	120V	UPS2 PANEL 2	22	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 17'-10"
RACK 24 ATS	120V	UPS2 PANEL 2	8	NEMA L5-20	(2) #12 AWG / #10 GND	MC 21'-2"
RACK 25 ATS-A	120V	UPS2 PANEL 1	17	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 23'-5"
RACK 25 ATS-B	120V	UPS2 PANEL 2	29	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 23'-5"
RACK 25 ATS-C	120V	UPS2 PANEL 2	25	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 23'-5"
RACK 25 ATS-D	120V	UPS2 PANEL 2	15	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 23'-5"

PHASE 2 FOURTH FLOOR COMPUTER ROOM POWER PLAN

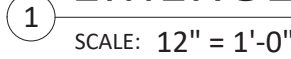
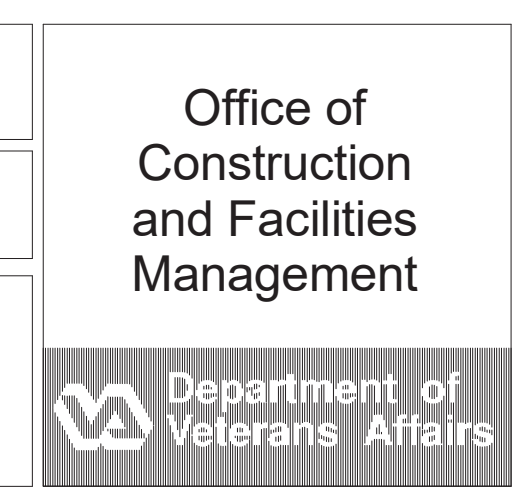
SCALE: 1/4" = 1'-0"

CONSULTANTS:		ARCHITECT/ENGINEERS:		Drawing Title		Project Title		Project No.		Office of Construction and Facilities Management	
		FFE, Inc.		POWER PLAN - PHASE 2 PARTIAL FOURTH FLOOR IT ROOM A437C		Upgrade UPS and AC in Computer Room		539-18-202			
		420 Springfield Pike Cincinnati OH, 45215 513-522-0956				Location		Building Number		Drawing Number	
						Cincinnati, Ohio		1		EP104	
						Date		Checked		Dwg. 6 of 13	
						06/09/17		RG			
						Approved: Project Director		Drawn			
								JK			
0 ISSUED FOR CONSTRUCTION 06-09-2017											
Revisions											

FULLY SPRINKLERED

[illegible]

[illegible]

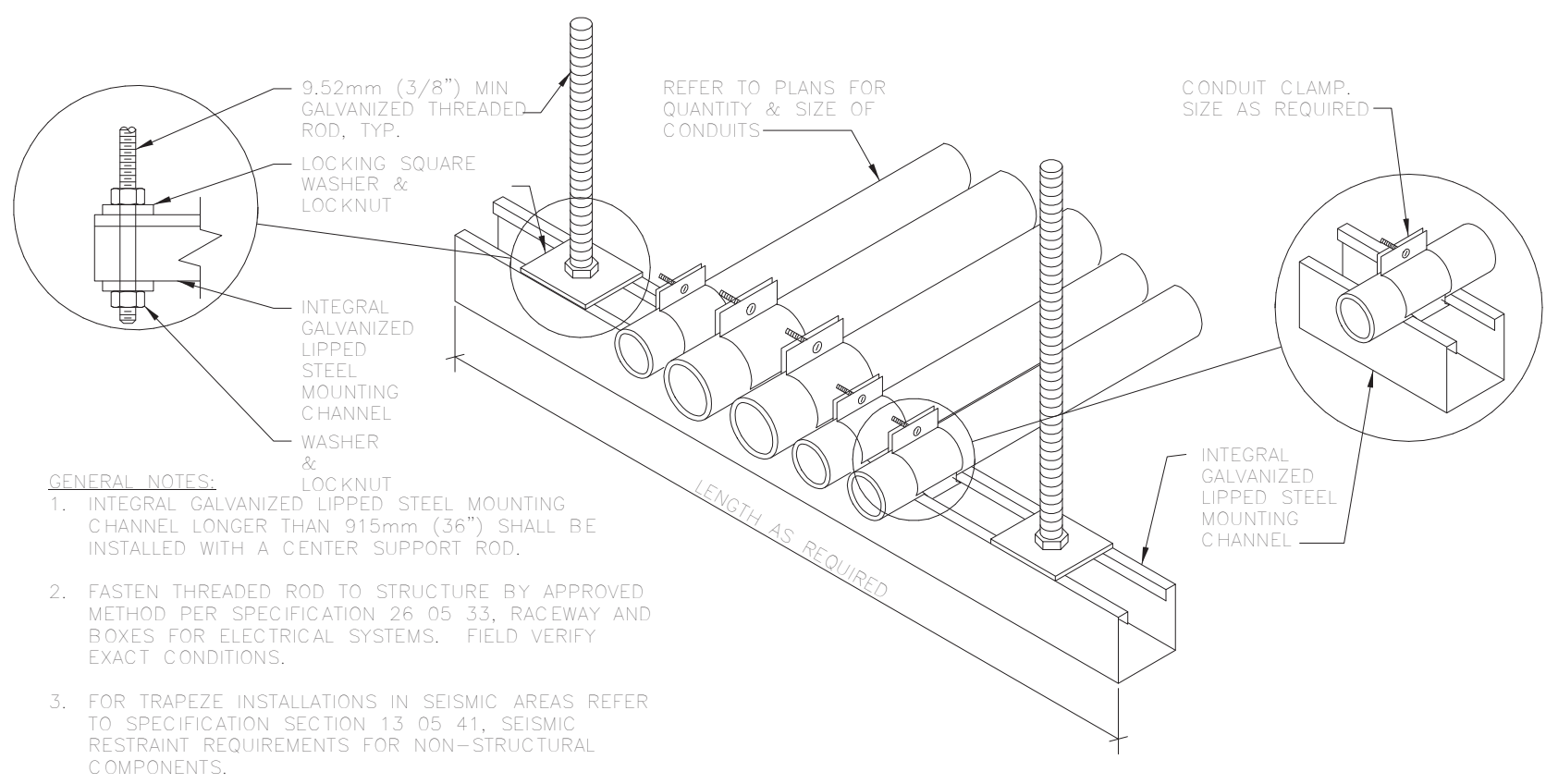
[illegible]

FULLY SPRINKLERED

three inches = one foot
one and one-half inches = one foot
one inch = one foot
three-quarters inch = one foot
one-half inch = one foot
three-eighths inch = one foot
one-quarter inch = one foot
one-eighth inch = one foot



1 FLOOR SLAB PENETRATION DETAIL
NTS



2 CONDUIT TRAPEZE MOUNTING DETAIL
NTS

EXISTING UPS1 PANELS 1 AND 2 CABLE SCHEDULE						
RACK NUMBER	VOLTAGE	PANEL	CIRCUIT	RECEPTACLE	CABLE SIZE	CABLE TYPE CABLE LENGTH
RACK 1	208V	EX. PANEL #1	25, 27	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 47'-10"
RACK 1	208V	EX. PANEL #1	26, 28	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 47'-2"
RACK 2	208V	EX. PANEL #1	30, 32	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 45'-10"
RACK 2	208V	EX. PANEL #2	33, 35	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 44'-11"
RACK 3	208V	EX. PANEL #1	38, 40	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 43'-6"
RACK 4	120V	EX. PANEL #1	20	NEMA L5-20	(2) #12 AWG / #10 GND	MC 36'-4"
RACK 5	208V	EX. PANEL #1	37, 39	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 26'-1"
RACK 5	208V	EX. PANEL #2	11, 13	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 26'-4"
RACK 6	120V	EX. PANEL #1	13	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 27'-8"
RACK 6	208V	EX. PANEL #2	25, 27	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 28'-11"
RACK 7	120V	?	?	NEMA L5-20	(2) #12 AWG / #10 GND	MC 30'-0"
RACK 7	208V	EX. PANEL #1	33, 35	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 30'-0"
RACK 7	120V	EX. PANEL #1	19	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 30'-7"
RACK 7	120V	EX. PANEL #2	19	NEMA L5-20	(2) #12 AWG / #10 GND	MC 30'-7"
RACK 8	120V	E4A	2	NEMA L5-20	(2) #12 AWG / #10 GND	MC 31'-9"
RACK 9	120V	EX. PANEL #1	14	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 40'-0"
RACK 9	120V	EX. PANEL #2	14	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 40'-0"
RACK 9	120V	EX. PANEL #1	10	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 40'-0"
RACK 9	120V	EX. PANEL #2	10	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 40'-0"
RACK 10	208V	EX. PANEL #1	34, 36	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 37'-4"
RACK 10	208V	EX. PANEL #2	34, 36	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 36'-7"
RACK 11	208V	EX. PANEL #1	34, 36	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 35'-3"
RACK 11	208V	EX. PANEL #2	34, 36	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 34'-5"
RACK 12	120V	EX. PANEL #1	24	NEMA L5-20	(2) #12 AWG / #10 GND	MC 33'-3"
RACK 12	120V	EX. PANEL #2	37	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 33'-3"
RACK 12	120V	EX. PANEL #1	7	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 33'-3"
RACK 14	120V	EX. PANEL #2	16	NEMA L5-20	(2) #12 AWG / #10 GND	MC 22'-11"
RACK 15	120V	EX. PANEL #2	18	NEMA L5-20	(2) #12 AWG / #10 GND	MC 20'-0"
RACK 16	208V	EX. PANEL #1	6, 8	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 9'-5"
RACK 16	120V	EX. PANEL #1	17	NEMA L5- 20	(2) #12 AWG / #10 GND	MC 9'-5"
RACK 16	208V	EX. PANEL #2	6, 8	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 9'-5"
RACK 16	120V	EX. PANEL #2	17	NEMA L5-20	(2) #12 AWG / #10 GND	MC 9'-5"
RACK 17	120V	EX. PANEL #2	24	NEMA L5-20	(2) #12 AWG / #10 GND	MC 7'-3"
RACK 17	120V	E4A	2	NEMA L5-20	(2) #12 AWG / #10 GND	MC 7'-3"
RACK 19	208V	EX. PANEL #1	1, 3	NEMA L6-20	(2) #12 AWG / #10 GND	MC 9'-10"
RACK 19	208V	EX. PANEL #2	1, 3	NEMA L6-20	(2) #12 AWG / #10 GND	MC 9'-10"
RACK 19	208V	EX. PANEL #2	39, 41	NEMA L6-20	(2) #12 AWG / #10 GND	MC 9'-10"
RACK 19	120V	EX. PANEL #1	16	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 9'-10"
RACK 20	208V	EX. PANEL #1	2, 4	NEMA L6-20	(2) #12 AWG / #10 GND	MC 12'-0"
RACK 20	208V	EX. PANEL #2	2, 4	NEMA L6-20	(2) #12 AWG / #10 GND	MC 12'-0"
RACK 20	208V	EX. PANEL #2	40, 42	NEMA L6-20	(2) #12 AWG / #10 GND	MC 12'-0"
RACK 21	120V	EX. PANEL #1	15	NEMA L5-20	(2) #12 AWG / #10 GND	MC 13'-11"
RACK 21	208V	EX. PANEL #1	29, 31	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 13'-11"
RACK 21	208V	EX. PANEL #2	29, 31	NEMA L6-30	(2) #10 AWG / # 8 GND	MC 13'-11"
RACK 22	120V	EX. PANEL #1	12	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 15'-10"
RACK 22	120V	EX. PANEL #2	12	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 15'-10"
RACK 23	120V	EX. PANEL #1	12	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 17'-10"
RACK 23	120V	EX. PANEL #2	12	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 17'-10"
RACK 24	120V	EX. PANEL #2	22	NEMA L5-20	(2) #12 AWG / #10 GND	MC 21'-2"
RACK 25	120V	EX. PANEL #1	9	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 23'-5"
RACK 25	120V	EX. PANEL #2	7	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 23'-5"
RACK 25	120V	EX. PANEL #2	9	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 23'-5"
RACK 25	120V	EX. PANEL #2	20	NEMA L5-30	(2) #10 AWG / # 8 GND	MC 23'-5"

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0 ISSUED FOR CONSTRUCTION 06-09-2017

Revisions Date

CONSULTANTS:

9Jun17

COLORADO LICENSE
ELECTRICAL
32894

ARCHITECT/ENGINEERS:
FFE
ENGINEERING & TECHNICAL SERVICES Inc.
FFE, Inc.
420 Springfield Pike
Cincinnati OH, 45215
513-522-0956

Drawing Title
ELECTRICAL DETAILS
Approved: Project Director

Project Title
Upgrade UPS and AC in Computer Room

Location
Cincinnati, Ohio

Date
06/09/17

Checked
RG

Drawn
JK

Project No.
VA Project No. 539-18-202

Building Number
1

Drawing Number
EP501

Dwg. 10 of 13

Office of Construction and Facilities Management
Department of Veterans Affairs

Branch Panel: EX. PANEL #1

Location:

Supply From: EXISTING 80kVA UPS1

Mounting: Surface

Enclosure: Type 1

Volts: 120/208 Wye

Phases: 3

Wires: 4

A.I.C. Rating: 25

Main Type:

Mains Rating: 225 A

MCB Rating:

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1	Rack #19	20 A	2	676 VA / 676 VA				2	20 A Rack #20	2
3		--	--		676 VA / 676 VA					4
5	Space					0 VA / 1014...		2	30 A Rack #16	6
7	Rack #12, OPEN	30 A	1	676 VA / 1014...				1	30 A Rack #9, OPEN	8
9	Rack #25	30 A	1		676 VA / 676 VA			1	30 A Rack #22 & Rack #23	10
11	Spare	30 A	1			0 VA / 676 VA		1	30 A Rack #9 (2 USED)	12
13	Rack #6 (1 USED) & Rack #6 (1 OPEN)	30 A	1	676 VA / 676 VA				1	30 A Rack #19, OPEN	14
15	Rack #21	20 A	1		676 VA / 676 VA			1	30 A Rack #19, OPEN	16
17	Rack #16	20 A	1			450 VA / 0 VA		1	20 A Spare	18
19	Rack 7, OPEN	20 A	1	450 VA / 450 VA				1	20 A Rack #4	20
21	Spare	20 A	1		0 VA / 450 VA			1	20 A Test Bench	22
23	Console	20 A	1			450 VA / 450 VA		1	20 A Rack # 12	24
25	Rack #1	30 A	2	1014... / 1014...				2	30 A Rack #1	26
27					1014... / 1014...					28
29	Rack #21	30 A	2			1014... / 1014...		2	30 A Rack #2	30
31				1014... / 1014...						32
33	Rack #7	30 A	2		1014... / 1014...			2	30 A Rack #10 & Rack #11	34
35						1014... / 1014...				36
37	Rack #5	30 A	2	1014... / 3381...				2	100 A Rack #3	38
39					1014... / 3381...					40
41	Spare	20 A	1			0 VA / 0 VA		1	20 A Spare	42
Total Load:				13745 VA		12957 VA		7096 VA		
Total Amps:				122 A		115 A		59 A		

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Computer Receptacle	33798 VA	100.00%	33798 VA	
				Total Conn. Load: 33798 VA
				Total Est. Demand: 33798 VA
				Total Conn.: 94 A
				Total Est. Demand: 94 A

Notes:

Branch Panel: EX. PANEL #3

Location:
Supply From: EXISTING 80kVA UPS1
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Vye
Phases: 3
Wires: 4

A.I.C. Rating: 25
Mains Type:
Mains Rating: 225 A
MCB Rating:

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1	Rack #19	20 A	2	676 VA 676 VA				2	20 A Rack #20	2
3					676 VA 676 VA					4
5	Space	--	--			0 VA 1014...	2	30 A Rack #16		6
7	Rack #25 (1 USED) & Rack #25 (1 OPEN)	30 A	1	676 VA 1014...				1	30 A Rack #9, OPEN	8
9	Rack #25	30 A	1		676 VA 676 VA			1	30 A Rack #22 & Rack #23	10
11						1014... 676 VA				12
13	Rack #5	30 A	2	1014... 676 VA				1	20 A Rack #9 (1 USED) Rack #9 (1 OPEN)	14
15	Spare	30 A	1		0 VA 450 VA			1	20 A Rack #14	16
17	Rack #16	20 A	1			450 VA 450 VA		1	20 A Rack #15	18
19	Rack #7, OPEN	20 A	1	450 VA 450 VA				1	20 A Rack #25, OPEN	20
21	Spare	20 A	1		0 VA 450 VA			1	20 A Rack #24	22
23	Test Bench	20 A	1			450 VA 450 VA		1	20 A Rack #17	24
25	Rack #6	30 A	2	1014... 1014...	1014...			2	30 A Sprint EL TEK Rect. 11&12	26
27						1014...	1014...			28
29	Rack #21	30 A	2			1014...	1014...		30 A Sprint EL TEK Rect. 15&16	30
31				1014... 1014...						32
33	Rack #2	30 A	2		1014... 1014...			2	30 A Rack #10 & Rack #11	34
35						1014... 1014...		--	Space	36
37	Rack #12 (1 USED) & Rack #12 (1 OPEN)	30 A	1	676 VA 0 VA				2	20 A Rack #20	38
39	Rack #19	20 A	2		676 VA 676 VA	676 VA 676 VA				40
41										42
Total Load:				10364 VA		9012 VA		9912 VA		
Total Amps:				88 A		75 A		84 A		
Legend:										
Load Classification		Connected Load		Demand Factor		Estimated Demand		Panel Totals		
Computer Receptacle		29288 VA		100.00%		29288 VA				
								Total Conn. Load: 29288 VA		
								Total Est. Demand: 29288 VA		
								Total Conn. Current: 81 A		
								Total Est. Demand Current: 81 A		

Notes:

			CONSULTANTS:						ARCHITECT/ENGINEERS:			Drawing Title EXISTING UPS1 POWER PANEL SCHEDULES			Project Title Upgrade UPS and AC in Computer Room			Project No. VA Project No. 539-18-202			Office of Construction and Facilities Management											
									FFE, Inc. 420 Springfield Pike Cincinnati OH, 45215 513-522-0956						Building Number 1			Drawing Number EP601														
0 ISSUED FOR CONSTRUCTION Revisions Date			06-09-2017 Date									Approved: Project Director			Location Cincinnati, Ohio			Date 06/09/17			Checked RG			Drawn JK			Dwg. 11 of 13			 Department of Veterans Affairs		

A
 three inches = one foot
 B
 one and one-half inches = one foot
 C
 one inch = one foot
 D
 three-quarters inch = one foot
 E
 one-half inch = one foot
 F
 three-eighths inch = one foot
 one-quarter inch = one foot
 one-eighth inch = one foot

A
 B
 C
 D
 E
 F

Branch Panel: EDPEQ3																					
Location: Supply From: Mounting: Surface Enclosure: Type 1				Volts: 480/277 Wye Phases: 3 Wires: 4				A.I.C. Rating: Mains Type: MB Mains Rating: 400 A MCB Rating:													
Notes:																					
CKT	Circuit Description			Trip	Poles	A		B		C		Poles	Trip	Circuit Description			CKT				
1	1-SF43b			30 A	3	3926 VA	3926 VA					3	30 A	1-SF43a			2				
3								3926 VA	3926 VA									4			
5																		6			
7																		8			
9	1-RF40			20 A	3	930 VA	3926 VA			3926 VA	3926 VA	3	30 A	1-SF43c			10				
11								930 VA	3926 VA									12			
13																		14			
15																		16			
17	1-SF43d			30 A	3	3926 VA	397 VA			3926 VA	397 VA	3	20 A	1-EF3			18				
19																		20			
21																		22			
23																		24			
25	1-EF2			20 A	3	397 VA	397 VA			397 VA	397 VA	3	20 A	1-EF5			26				
27																		28			
29																		30			
31																		32			
33	1-EF4			20 A	3	397 VA	333333 VA			397 VA	333333 VA	3	135 A	UPS2			34				
35																		36			
37																		38			
39																		40			
41	Spare			20 A	3	0 VA	0 VA			0 VA	0 VA	3	20 A	Spare			42				
43																		44			
45																		46			
47																		48			
49	Spare			20 A	3	0 VA	0 VA			0 VA	0 VA	3	20 A	Spare			50				
51																		52			
53																		54			
55																		56			
57	EDPLEQ3			50 A	3	1620 VA	0 VA			1000 VA	0 VA	--	--	Space			58				
59											0 VA						0 VA	--	60		
61						Space	--	--	0 VA	0 VA								--	--	Space	62
63						Space	--	--			0 VA						0 VA			--	--
65	Space	--	--							0 VA	0 VA	--	--	Space	66						
67	Space	--	--			0 VA	0 VA					--	--	Space	68						
69	Space	--	--							0 VA	0 VA	--	--	Space	70						
71	Space	--	--							0 VA	0 VA	--	--	Space	72						
Total Load:						53177 VA		52557 VA		51557 VA											
Total Amps:						193 A		190 A		186 A											
Legend:																					
Load Classification				Connected Load		Demand Factor		Estimated Demand		Panel Totals											
Motor				55930 VA		105.27%		58875 VA													
Power				100000 VA		100.00%		100000 VA		Total Conn. Load: 157290 VA											
Receptacle				1360 VA		100.00%		1360 VA		Total Est. Demand: 160235 VA											
										Total Conn.: 189 A											
										Total Est. Demand: 193 A											
Notes:																					

NEW WORK

DESIGN DEVELOPMENT - NOT FOR CONSTRUCTION
 FULLY SPRINKLERED

			CONSULTANTS:		ARCHITECT/ENGINEERS:	Drawing Title	Project Title	Project No.	Office of Construction and Facilities Management
						NEW WORK - EDPEQ3 POWER PANEL SCHEDULE	Upgrade UPS and AC in Computer Room	539-18-202	
							Location	Building Number	
							Cincinnati, Ohio	1	
								Drawing Number	
								EP602	
						Approved: Project Director	Date	Checked	Drawn
							06/09/17	RG	JK
								Dwg.	12 of 13

1

2

3

4

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8

9

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three-eighths inch = one foot
one-quarter inch = one foot
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Branch Panel: UPS2 PANEL1													
Location: Supply From: TR-UPS2 Mounting: Surface Enclosure: Type 1				Volts: 208Y/120V Phases: 3 Wires: 4				A.I.C. Rating: 10 kIA Mains Type: MCB Mains Rating: 400 A MCB Rating: 225 A					
Notes:													
CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT			
1	Console	20 A	1	415 VA 450 VA				1	Rack 12 ATS-A	2			
3	HP & Power Scribe Rack	30 A	1		669 VA 676 VA			1	Rack 12 ATS-C	4			
5	Test Bench	20 A	1			415 VA 450 VA		1	Rack 7 ATS-C	6			
7	Rack 16 ATS-B	20 A	1	450 VA 507 VA				2	Rack 7 ATS-C	8			
9	Rack 19 ATS-D	30 A	1		676 VA 507 VA			30 A	Rack 10 ATS-A & Rack 11 ATS-A	10			
11	Rack 9 ATS-C	30 A	1			676 VA 3381...				12			
13	Rack 19 ATS-B	20 A	2	676 VA 3381...				2	Rack 3 ATS	14			
15					676 VA 676 VA			2	Rack 20 ATS-A	16			
17	Rack 25 ATS-A	30 A	1			676 VA 676 VA				18			
19	Rack 4 ATS	20 A	1	450 VA 676 VA				1	Rack 6 ATS-A	20			
21					1014... 450 VA			1	Rack 7 ATS-A	22			
23	Rack 1 ATS-A	30 A	2			1014... 1014...				24			
25	Rack 21 ATS-A	20 A	1	676 VA 1014...				2	Rack 7 ATS-B	26			
27	Rack 9 ATS-B	30 A	1		676 VA 676 VA			1	Rack 22 ATS-A & Rack 23 ATS-A	28			
29	Spare	20 A	1			0 VA 1014...		2	Rack 2 ATS-A	30			
31										32			
33	Rack 21 ATS-B	30 A	2	1014... 1014...						34			
35	Spare	20 A	1		1014... 1014...	0 VA 1014...		2	Rack 5 ATS-A	36			
37										38			
39	Rack 1 ATS-B	30 A	2	1014... 0 VA		1014... 1014...		1	Spare	40			
41	Spare	30 A	1			0 VA 1014...		2	Rack 16 ATS-A	42			
				Total Amps:		99 A	90 A	95 A					
Legend:													
Load Classification		Connected Load		Demand Factor		Estimated Demand		Panel Totals					
Computer Receptacle		33833 VA		100.00%		33833 VA							
								Total Conn. Load: 33833 VA					
								Total Est. Demand: 33833 VA					
								Total Conn. Current: 94 A					
								Total Est. Demand Current: 94 A					
Notes:													

Branch Panel: Ex. Panel #1														
Location: Supply From: EXISTING 80kVA UPS1 Mounting: Surface Enclosure: Type 1				Volts: 208Y/120V Phases: 3 Wires: 4				A.I.C. Rating: Mains Type: Mains Rating: 225 A MCB Rating:						
Notes:														
CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT	
1	Rack 19 ATS-A	20 A	2	676 VA	676 VA					2	20 A	Rack 20 ATS-A	2	
3						676 VA	676 VA						4	
5	Space	--	--					0 VA	1014...				6	
7	Rack 12 ATS-C	30 A	1	676 VA	1014...					2	30 A	Rack 16 ATS-A	8	
9	Rack 25 ATS-A	30 A	1			676 VA	676 VA			1	30 A	Rack 9 ATS-B	10	
11	Spare	30 A	1					0 VA	338 VA		1	30 A	Rack 22 ATS-A & Rack 23 ATS-A	12
13	Rack 6 ATS-A	30 A	1	676 VA	676 VA					1	30 A	Rack 9 ATS-C	14	
15	HP & Power Scribe Rack	20 A	1			669 VA	676 VA			1	30 A	Rack 19 ATS-C	16	
17	Rack 16 ATS-B	20 A	1					450 VA	450 VA	1	20 A	Rack 7 ATS-A	18	
19	Rack 7 ATS-C	20 A	1	450 VA	450 VA					1	20 A	Rack 4 ATS	20	
21	Rack 21 ATS-A	20 A	1			676 VA	415 VA			1	20 A	Test Bench	22	
23	Console	20 A	1					415 VA	450 VA	1	20 A	Rack 12 ATS-A	24	
25	Rack 1 ATS-A	30 A	2	1014...	1014...					2	30 A	Rack 1 ATS-B	26	
27						1014...	1014...						28	
29	Rack 21 ATS-B	30 A	2					1014...	1014...	2	30 A	Rack 2 ATS-A	30	
31				1014...	1014...								32	
33	Rack 7 ATS-B	30 A	2			1014...	507 VA			2	30 A	Rack 10 ATS-A & Rack 11 ATS-B	34	
35								1014...	507 VA				36	
37	Rack 5 ATS-A	30 A	2	1014...	3381...					2	30 A	Rack 3 ATS	38	
39						1014...	3381...						40	
41	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	42	
				Total Load:	13745 VA		13084 VA		6686 VA					
				Total Amps:	123 A		117 A		56 A					
Legend:														
Load Classification				Connected Load		Demand Factor		Estimated Demand		Panel Totals				
Computer Receptacle				33495 VA		100.00%		33495 VA						
										Total Conn. Load: 33495 VA				
										Total Est. Demand: 33495 VA				
										Total Conn.: 93 A				
										Total Est. Demand: 93 A				
Notes:														

Branch Panel: UPS2 PANEL 2													
Location: Supply From: TR-UPS2 Mounting: Surface Enclosure: Type 1				Volts: 208Y/120V Phases: 3 Wires: 4				A.I.C. Rating: 10 kIA Mains Type: MCB Mains Rating: 400 A MCB Rating: 225 A					
Notes:													
CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT			
1	Test Bench	20 A	1	415 VA 450 VA				1	Rack 14 ATS	2			
3	Rack 8 ATS	20 A	1		2400... 507 VA					4			
5	Rack 7 ATS-D	20 A	1			450 VA 507 VA	2	30 A	Rack 10 ATS-B & Rack 11 ATS-B	6			
7										8			
9	Rack 19 ATS-A	20 A	2	676 VA 450 VA		676 VA 935 VA		1	Rack 24 ATS	10			
11								2	Sprint EL TEK Rect. 11&12	12			
13	Sprint EL TEK Rect. 15&16	20 A	2	935 VA 450 VA		935 VA 935 VA	1	20 A	Rack 15 ATS	14			
15	Rack 25 ATS-D	20 A	1		450 VA 450 VA		1	20 A	Rack 16 ATS-D	16			
17						1014... 1014...				18			
19	Rack 16 ATS-C	30 A	2	1014... 1014...			2	30 A	Rack 2 ATS-B	20			
21	Rack 9 ATS-A	30 A	1		676 VA 676 VA		1	30 A	Rack 22 ATS-B & Rack 23 ATS-B	22			
23	Rack 17 ATS	20 A	1			450 VA 676 VA	1	30 A	Rack 9 ATS-D	24			
25	Rack 25 ATS-C	30 A	1	676 VA 676 VA			1	30 A	Rack 12 ATS-B	26			
27	Spare	30 A	1		0 VA 676 VA					28			
29	Rack 25 ATS-B	30 A	1			676 VA 676 VA	2	20 A	Rack 20 ATS-B	30			
31										32			
33	Rack 19 ATS-C	20 A	2	676 VA 1014...		676 VA 1014...		2	30 A	Rack 21 ATS-C	34		
35										36			
37	Rack 20 ATS-C	20 A	2	676 VA 1014...			2	30 A	Rack 6 ATS-B	38			
39					1014... 0 VA		1	20 A	Spare	40			
41	Rack 5 ATS-B	30 A	2			1014... 0 VA	1	30 A	Spare	42			
				Total Load:	10136 VA	10150 VA	10037 VA						
				Total Amps:	85 A	85 A	84 A						
Legend:													
Load Classification		Connected Load		Demand Factor		Estimated Demand		Panel Totals					
Computer Receptacle		30323 VA		100.00%		30323 VA		Total Conn. Load: 30323 VA					
								Total Est. Demand: 30323 VA					
								Total Conn. Current: 84 A					
								Total Est. Demand Current: 84 A					
Notes:													

Branch Panel: Ex. Panel #2										
Location: Supply From: EXISTING 80kVA UPS1 Mounting: Surface Enclosure: Type 1				Volts: 208Y/120V Phases: 3 Wires: 4				A.I.C. Rating: Mains Type: Mains Rating: 225 A MCB Rating:		
Notes:										
CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1	Rack 19 ATS-B	20 A	2	676 VA 676 VA				2	20 A Rack 20 ATS-B	2
3		--	--		676 VA 676 VA					4
5	Space					0 VA 1014...		2	20 A Rack 16 ATS-C	6
7	Rack 25 ATS-B	20 A	1	676 VA 1014...				2	20 A Rack 9 ATS-D	8
9	Rack 25 ATS-C	20 A	1		676 VA 676 VA			1	20 A Rack 22 ATS-B & Rack 23 ATS-B	10
11								1	20 A Rack 9 ATS-A	12
13	Rack 5 ATS-B	20 A	2	1014... 676 VA		1014... 338 VA		1	20 A Rack 14 ATS	14
15	Spare	30 A	1		0 VA 450 VA			1	20 A Rack 15 ATS	16
17	Rack 16 ATS-D	20 A	1			450 VA 450 VA		1	20 A Rack 25 ATS-D	18
19	Rack 7 ATS-D	20 A	1	450 VA 450 VA				1	20 A Rack 24 ATS	20
21	Rack 8 ATS	20 A	1		2400... 450 VA			1	20 A Rack 17 ATS	22
23	Test Bench	20 A	1			415 VA 450 VA		1		24
25										26
27	Rack 6 ATS-B	20 A	2	1014... 935 VA				2	20 A Sprint EL TEK Rect. 118/12	28
29					1014... 935 VA					30
31	Rack 21 ATS-C	20 A	2			1014... 935 VA		2	20 A Sprint EL TEK Rect. 158/16	32
33				1014... 935 VA						34
35					1014... 507 VA			2	20 A Rack 10 ATS-B & Rack 11 ATS-B	36
37	Rack 2 ATS-B	20 A	2			1014... 507 VA		2		38
39	Rack 12 ATS-B	20 A	1	676 VA 0 VA				-- --	Space	40
41	Rack 19 ATS-D	20 A	2		676 VA 676 VA			2	20 A Rack 20 ATS-C	42
				Total Load:	10206 VA	10826 VA	8953 VA			
				Total Amps:	87 A	92 A	75 A			
Legend:										
Load Classification		Connected Load		Demand Factor		Estimated Demand		Panel Totals		
Computer Receptacle		29985 VA		100.00%		29985 VA				
								Total Conn. Load: 29985 VA		
								Total Est. Demand: 29985 VA		
								Total Conn.: 83 A		
								Total Est. Demand: 83 A		
Notes:										