

		# KEY NOTES #
	1.	EXISTING PANEL CHP PROTECTED BY A 480V, 800A/3P CIRCUIT BREAKER AT UTILITY SWITCHBOARD.
	2.	EXISTING 75KVA TRANSFORMER PROTECTED BY A 480V, 125A/3P ENCLOSED CIRCUIT BREAKER.
	3.	EXISTING GROUND PER NEC 250.
	4.	TO EXISTING PERMANENT COURTHOUSE GENERATOR 1600A/3P MAIN CIRCUIT BREAKER.
	5.	TO EXISTING EXTERIOR ROLL-UP GENERATOR CONNECT BOX.
٨	6.	TO EXISTING GENERATOR LOADS.
1	7 .	NOT USED.
	8.	NOT USED.
	9.	CONTRACTOR SHALL MODIFY EXISTING 'GE ZENITH ZTG' 1600A, 480/277V MTS TO ADD ADDITIONAL SET OF LUGS AT THE LOAD SIDE TO ALLOW FOR FUTURE LOAD

NUMBER: "150362666-740-1".

BANK TESTING. EXISTING MTS MODEL NUMBER: "ZTG000A0M16F" AND SERIAL

F	FEEDER SIZING SCHEDULE										
SYMBOL	# OF SETS	CONDUCTORS (COPPER)	GND.	CONDUIT	CONDUIT (W/O NEUTRAL)	AMPS					
800	2	2 4 500KCMIL #1/0 TWO 4" TWO 4" 760A									
1600	4	4 4 500KCMIL #4/0 FOUR 4" FOUR 4" 1520A									
*	REFER TO TRANSFORMER SCHEDULE FOR FEEDER SIZES										
	+ WHERE THE FEEDER SYMBOL IS SHOWN WITH A SUBSCIPT 'N', THE NEUTRAL CONDUCTOR SHALL BE DELETED FROM THE CONDUCTORS SHOWN IN THE FEEDER SCHEDULE.										

++ WHERE THE FEEDER SYMBOL IS SHOWN WITH A SUBSCIPT 'IG', THE FEEDER SHALL BE PROVIDED WITH A SEPERATE ISOLATED GROUND CONDUCTOR SIZED TO MATCH THE

	TRANSFORMER SCHEDULE													
TDANISCODMED LARGE / No.	TRANSFORMER LARFILLY STATUS SIZE PRIMARY PRIMARY - WIRING SECONDARY SECONDARY - WIRING													
TRANSFORMER LABEL / NO.	TRANSFORMER LABEL / No. (EX. OR NEW) (KVA) PH VOLTS OCPD FEEDER GND. CONDUIT VOLTS OCPD FEEDER GND. CONDUIT													
T-75	T-75 EXISTING 75 3 480 125 3#1 #6 1-1/4" 120/208 225*** 4#4/0 #2** 2-1/2" FLOOR													
** GROUND TO BUILDING STEEL	** GROUND TO BUILDING STEEL, OR BUILDING GROUNDING SYSTEM AS AS PER ARTICLE 250 OF THE NEC.													
SP= REFER TO PANEL SCHEDULE FOR INFORMATION IN THIS AREA. (THIS CAN BE USED FOR OCPD INFORMATION)														
SR = REFER TO POWER RISE	R FOR INFORM	ATION IN	THIS	AREA. (THIS	CAN BE	USED OCPD INFOR	RMATION)						

POWER RISER DIAGRAM

SCALE: NO SCALE

EQUIPMENT GROUND.

Service	anel ID:	CHP				Bus Type:	COPPER
Mains: 800A MCB			CAL ROOM			Service:	3 PHASE, 4 WIRE
Mains:	Voltage:	277/480V			Interr		EXISTING
AMM	3					· -	
AM	00500	ODV			1		
VM VOLT METER DM DIGITAL METERING GF GROUND FAULT PROTECTION SST SOLID STATE TRIP DEVICE ST SHUNT TRIP # POLE PROTECTIVE DEVICE FRAME Load kVA 1 - 800 800 - 2 3 150 150 - MAIN 2 3 150 150 - 43.0 CWP-1 3 3 150 150 - 43.0 CWP-2 4 3 400 350 - 43.0 CHWP-1 5 3 400 350 - 43.0 CHWP-2 6 3 250 200 - 18.0 EXISTING LOAD 7 3 60 20 - 6.0 SOLID SEPARATOR 8 3 100 30 - 12.0 PUMP P-9 (NOTE 1 9 3 - - SPACE <)		-		
DM					1		
SST SOLID STATE TRIP DEVICE ST SHUNT TRIP					1		
# POLE FRAME TRIP ACCESSORY Load kVA ITEM SERVED 1 - 800 800 MAIN 2 3 150 150 - 43.0 CWP-1 3 3 150 150 - 43.0 CWP-2 4 3 400 350 - 43.0 CHWP-1 5 3 400 350 - 43.0 CHWP-2 6 3 250 200 - 18.0 EXISTING LOAD 7 3 60 20 - 6.0 SOLID SEPARATOR 8 3 100 30 - 12.0 PUMP P-9 (NOTE 1) 9 3 - SPACE 10 3 - SPACE 11 3 - SPACE 11 3 - SPACE 13 3 - SPACE 14 3 - SPACE 15 3 - SPACE 16 3 - SPACE 17 3 5 - SPACE 17 3 - SPACE 18 SPACE 19 SPACE	GF	GROUND	FAULT PROT	rection]		
# POLE PROTECTIVE DEVICE FRAME TRIP ACCESSORY Load kVA ITEM SERVED				VICE			
# POLE FRAME TRIP ACCESSORY Load RVA HEM SERVED 1 - 800 800 MAIN 2 3 150 150 - 43.0 CWP-1 3 3 3 150 150 - 43.0 CWP-2 4 3 400 350 - 43.0 CHWP-1 5 3 400 350 - 18.0 EXISTING LOAD 7 3 60 20 - 6.0 SOLID SEPARATOR 8 3 100 30 - 12.0 PUMP P-9 (NOTE 1) 9 3 - SPACE 10 3 - SPACE 11 3 3 - SPACE 12 3 - SPACE 14 3 - SPACE 15 3 - SPACE 16 3 - SPACE 17 3 - SPACE X X X X X X X X X X X X X X X X X X X	ST	SHUNT TF	RIP		J		
1 - 800 800 MAIN 2 3 150 150 - 43.0 CWP-1 3 3 3 150 150 - 43.0 CWP-2 4 3 400 350 - 43.0 CHWP-1 5 3 400 350 - 43.0 CHWP-2 6 3 250 200 - 18.0 EXISTING LOAD 7 3 60 20 - 6.0 SOLID SEPARATOR 8 3 100 30 - 12.0 PUMP P-9 (NOTE 1) 9 3 - SPACE 10 3 - SPACE 11 3 - SPACE 11 3 - SPACE 12 3 - SPACE 13 3 - SPACE 14 3 - SPACE 15 3 - SPACE 16 3 - SPACE 17 3 - SPACE 18 SPACE 19 SPACE 19 SPACE 10 SPACE		DOLE	PR	OTECTIVE	DEVICE	1 1 1 2 / 4	ITEM CEDVED
2 3 150 150 - 43.0 CWP-1 3 3 150 150 - 43.0 CWP-2 4 3 400 350 - 43.0 CHWP-1 5 3 400 350 - 43.0 CHWP-2 6 3 250 200 - 18.0 EXISTING LOAD 7 3 60 20 - 6.0 SOLID SEPARATOR 8 3 100 30 - 12.0 PUMP P-9 (NOTE 1) 9 3 - SPACE 10 3 - SPACE 11 3 - SPACE 12 3 - SPACE 13 3 - SPACE 14 3 - SPACE 15 3 - SPACE 16 3 - SPACE 17 3 - SPACE 17 3 - SPACE 17 3	#	POLE	FRAME	TRIP	ACCESSORY	Load KVA	TIEM SERVED
3 3 150 150 - 43.0 CWP-2 4 3 400 350 - 43.0 CHWP-1 5 3 400 350 - 43.0 CHWP-2 6 3 250 200 - 18.0 EXISTING LOAD 7 3 60 20 - 6.0 SOLID SEPARATOR 8 3 100 30 - 12.0 PUMP P-9 (NOTE 1) 9 3 - SPACE 10 3 - SPACE 11 3 - SPACE 12 3 - SPACE 13 3 - SPACE 14 3 - SPACE 15 3 - SPACE 16 3 - SPACE 17 3 - SPACE 17 3 - SPACE 17 3 - SPACE 17 3 - SPACE	1	-	800	800	-	-	MAIN
4 3 400 350 - 43.0 CHWP-1 5 3 400 350 - 43.0 CHWP-2 6 3 250 200 - 18.0 EXISTING LOAD 7 3 60 20 - 6.0 SOLID SEPARATOR 8 3 100 30 - 12.0 PUMP P-9 (NOTE 1) 9 3 - SPACE 10 3 - SPACE 11 3 - SPACE 12 3 - SPACE 13 3 - SPACE 14 3 - SPACE 15 3 - SPACE 16 3 - SPACE 17 3 -	2	3	150	150	-	43.0	CWP-1
5 3 400 350 - 43.0 CHWP-2 6 3 250 200 - 18.0 EXISTING LOAD 7 3 60 20 - 6.0 SOLID SEPARATOR 8 3 100 30 - 12.0 PUMP P-9 (NOTE 1) 9 3 - SPACE 10 3 - SPACE 11 3 - SPACE 12 3 - SPACE 13 3 - SPACE 14 3 - SPACE 15 3 - SPACE 16 3 - SPACE 17 3 - SPACE 18	3	3	150	150	-	43.0	CWP-2
6 3 250 200 - 18.0 EXISTING LOAD 7 3 60 20 - 6.0 SOLID SEPARATOR 8 3 100 30 - 12.0 PUMP P-9 (NOTE 1) 9 3 - SPACE 10 3 - SPACE 11 3 - SPACE 12 3 - SPACE 13 3 - SPACE 14 3 - SPACE 15 3 - SPACE 16 3 - SPACE 17 3 - SPACE 18 - SPACE SPACE 19 - SPACE SPACE	4	3	400	350	-	43.0	CHWP-1
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8 3 100 30 - 12.0 PUMP P-9 (NOTE 1) 9 3 - SPACE 10 3 - SPACE 11 3 - SPACE 12 3 - SPACE 13 3 - SPACE 14 3 - SPACE 15 3 - SPACE 16 3 - SPACE 17 3 - SPACE X X X X X Total KVA: 208.0	6	3	250	200	-	18.0	EXISTING LOAD
9 3 - SPACE 10 3 - SPACE 11 3 - SPACE 12 3 - SPACE 13 3 - SPACE 14 3 - SPACE 15 3 - SPACE 16 3 - SPACE 17 3 - SPACE 17 3 - SPACE 17 3 - SPACE 18 SPACE 19 SPACE 10 SPACE 11 SPACE 11 SPACE 12 SPACE 13 SPACE 14 SPACE 15 SPACE 16 SPACE 17 SPACE 18 SPACE 19 SPACE 19 SPACE 10 SPACE 11 SPACE 12 SPACE 13 SPACE 14 SPACE 15 SPACE 16 SPACE	7	3	60	20	-	6.0	SOLID SEPARATOR
10 3 - SPACE 11 3 - SPACE 12 3 - SPACE 13 3 - SPACE 14 3 - SPACE 15 3 - SPACE 16 3 - SPACE 17 3 - SPACE x x x x x Total KVA: 208.0	8	3	100	30	-	12.0	PUMP P-9 (NOTE 1)
11 3 - SPACE 12 3 - SPACE 13 3 - SPACE 14 3 - SPACE 15 3 - SPACE 16 3 - SPACE 17 3 - SPACE X X X X X Total KVA: 208.0	9	3			-		SPACE
12 3 - SPACE 13 3 - SPACE 14 3 - SPACE 15 3 - SPACE 16 3 - SPACE 17 3 - SPACE X X X X X Total KVA: 208.0	10	3			-		SPACE
13 3 - SPACE 14 3 - SPACE 15 3 - SPACE 16 3 - SPACE 17 3 - SPACE X X X X X Total KVA: 208.0	11	3			-		SPACE
14 3 - SPACE 15 3 - SPACE 16 3 - SPACE 17 3 - SPACE x x x x x Total KVA: 208.0	12	3			-		SPACE
15 3 - SPACE 16 3 - SPACE 17 3 - SPACE x x x x x Total KVA: 208.0	13	3			-		SPACE
16 3 - SPACE 17 3 - SPACE x x x x x Total KVA: 208.0	14	3			-		SPACE
17 3 - SPACE x x x x x x x x x x x Total KVA: 208.0	15	3			-		SPACE
17 3 - SPACE x x x x x x x x x x Total KVA: 208.0	16	3			-		SPACE
X X X X X X X X X X X Total KVA: 208.0	17	3			_		
Total KVA: 208.0		х	х	х	х	х	
			1	!			

						PA	NEL	_S	CH	ΗE	DUL	E.							
Panel ID:	EL12A				(Condi	tion:	EX	IST	ING	;					Voltage:	120/208V, 3PH		
Location:	12TH FL ELEC CLC	SET			Type: LIFE SAFETY									Service:	3 PHASE, 4 WIRE				
Mounting:	SURFACE				Man	ufact	urer:									Mains:	400A MLO		
Neutral:	SOLID														l	AIC:	EXISTING		
Load	Description	kVA	Wire Size	Cond. Size	Brk	Р	Ckt #	Α	В	С	Ckt #	Р	Brk	Cond. Size	Wire Size	kVA	Load Description		
Existing Loa	d (E)	1.5	EX.	EX.	20	1	1	*	-	-	2	1	20	EX.	EX.	1.5	(E) Existing Load		
Existing Loa	d (E)	1.5	EX.	EX.	20	1	3	-	*	-	4	1	20	EX.	EX.	1.5	(E) Existing Load		
Existing Loa	d (E)	1.5	EX.	EX.	20	1	5	-	-	*	6	1	20	EX.	EX.	1.5	(E) Existing Load		
Existing Loa		1.5	EX.	EX.	20	1	7	*	-	-	8	1	20	EX.	EX.	1.5	(E) Existing Load		
Existing Loa		1.5	EX.	EX.	20	1	9	_	*	_	10	1	20	EX.	EX.	1.5	(E) Existing Load		
Existing Loa	• •	1.5	EX.	EX.	20	1	11	_	_	*	12	1	20	EX.	EX.	1.5	(E) Existing Load		
Existing Loa	• •	1.5	EX.	EX.	20	1	13	*	_	-	14	1	20	EX.	EX.	1.5	(E) Existing Load		
Existing Load	• •	1.5	EX.	EX.	20	1	15		*	_	16	1	20	EX.	EX.	1.5	(E) Existing Load		
•	• •							-		*		1					` '		
Existing Load	• •	1.5	EX.	EX.	20	1	17	*	-		18	1	20	EX.	EX.	1.5	(E) Existing Load		
Existing Loa	• •	1.5	EX.	EX.	20	1	19	*	-	-	20	1	20	EX.	EX.	1.5	(E) Existing Load		
	NNUNCIATOR*	1.5	12	3/4	20	1	21	-	*	-	22	X	X	X	X	Х	PFI		
PFF		Х	X	X	Х	Х	23	-	-	*	24	Х	X	X	Х	Х	PFI		
PFF		Х	X	Х	Х	Х	25	*	-	-	26	Χ	Х	Х	Х	Х	PFI		
PFF		Х	X	Х	Х	Х	27	-	*	-	28	Χ	Х	Х	Χ	Х	PFF		
PFF		X	X	Х	Х	Х	29	-	-	*	30	Χ	Х	X	Х	X	PFF		
PFF		Х	X	Х	Х	Х	31	*	-	-	32	Χ	Х	Х	Х	Х	PFF		
PFF		X	X	Х	Х	Х	33	-	*	-	34	Χ	Х	X	X	X	PFI		
PFF		Х	X	X	Х	X	35	-	-	*	36	Χ	Х	X	X	X	PFF		
PFF		Х	Х	Х	Х	Х	37	*	-		38	Х	Х	Х	Х	Х	PFF		
PFF		Х	Х	Х	Х	Х	39	-	*	-	40	Х	Х	Х	Х	Х	PFF		
PFF		Х	Х	Х	Х	Х	41	-	_	*	42	Х	Х	Х	Х	Х	PFF		
Notes:		Unless r						XIS	TIN	G to						l.			
	SR	* Provid **Circuit = See R	Breaker	made a	vailabl			•		atch	existi	ng.							
				L	oad Su	ımma	ry (F	OR	ALL	L P	ANEL	SEC	TIONS	5)					
		Connec	ted kVA	Dema	nd Fad	ctor	Der	nan VA	d							Addition	nal Options: Sub-Feed Lugs		
	Lighting (L):	0	<u> </u>	1	25%												NEMA 3R Enclosure		
Receptacles (R): 0.0 10 + Largest Motor Load (LM): 0.0 1			+ 50%>10 0 125% 0 100% 0		0.0									200% Neutral					
					0.0		-							Isolated Ground					
Remaining HVAC Loads (M): 0.0 1					0.0		0.0		* All VAV loads are calcul						Service Entrance Rated				
	()						100%			1.5		heat at 125% demand.				demand			
	chen Equipment (K): esistance Heat (RH)	0.		1	00%			0.0		ł									
	ONNECTED kVA =			1	270			1.5		=т	OTAL	. DEN	IAND I	kVA					
	ı			•				7.4		I _{=Т}	ΟΤΔΙ	DEM	IAND A	VMDC					

				EXISTING TO E	BE REPLACED ATSs					
ATS NUMBER	SYSTEM	ATS TYPE	AMP RATING (A)	VOLTAGE (V)	NUMBER OF POLES	DIMENSIONS (IN)	APPROXIMATE WEIGHT (LBS)	NORMAL FEED	EMERGECY FEED	LOAD FEED
ATS-1	LIFE-SAFETY	BYSPASS ISOLATION OPEN TRANSITION	400	480/277V	4	36W X 25D X 83H	840	BOTTOM	SIDE (LEFT)	BACK
ATS-2	LEGALLY REQUIRED	BYSPASS ISOLATION OPEN TRANSITION	400	480/277V	3	30W X 25D X 83H	770	BOTTOM	BACK	SIDE (LEFT)
ATS-3	ELEVATORS	BYSPASS ISOLATION OPEN TRANSITION	1200	480/277V	4	46W X 29D X 90H	1570	BACK	BACK	TOP
ATS-4	CRITICAL	BYSPASS ISOLATION OPEN TRANSITION	100	480/277V	4	36W X 25D X 83H	840	TOP	ТОР	BACK
ATS-5	OPTIONAL STANDBY	CLOSED TRANSITION	2000	480/277V	3	28W X 50D X 90H	1100	SIDE (LEFT)	TOP	SIDE (LEFT)
ATS-6	OPTIONAL STANDBY	OPEN TRANSITION	1200	480/277V	3	36W X 28D X 72H	1100	BACK	ТОР	BACK

				NEV	V ATSs					
ATS NUMBER	SYSTEM	ATS TYPE	AMP RATING (A)	VOLTAGE (V)	NUMBER OF POLES	DIMENSIONS (IN)	APPROXIMATE WEIGHT (LBS)	NORMAL FEED	EMERGECY FEED	LOAD FEED
ATS-1	LIFE-SAFETY	BYSPASS ISOLATION OPEN TRANSITION	400	480/277V	4	37W X 40D X 92H	950	воттом	SIDE (LEFT)	BACK
ATS-2	LEGALLY REQUIRED	BYSPASS ISOLATION OPEN TRANSITION	400	480/277V	3	33W X 40D X 92H	950	воттом	BACK	SIDE (LEFT)
ATS-3	ELEVATORS	BYSPASS ISOLATION OPEN TRANSITION	1200	480/277V	4	43W X 60D X 92H	1600	BACK	BACK	TOP
ATS-4	CRITICAL	BYSPASS ISOLATION OPEN TRANSITION	100	480/277V	4	37W X 40D X 92H	950	TOP	TOP	BACK
ATS-5	OPTIONAL STANDBY	BYSPASS ISOLATION CLOSED TRANSITION	2000	480/277V	3	38W X 60D X 92H	1600	SIDE (LEFT)	TOP	SIDE (LEFT)
ATS-6	OPTIONAL STANDBY	BYSPASS ISOLATION OPEN TRANSITION	800	480/277V	3	50W X 40D X 92H	1400	BACK	TOP	BACK

	PANELBO	DARD (TYP.)	
CIR	LOAD DESCRIPTION	LOAD DESCRIPTION	CIR
1	RECEPTACLE - ROOMS 102,103	RECEPTACLE - ROOMS 104,105	2
3	LIGHTING - ROOMS 102,103,104	LIGHTING - ROOMS 105,106,107	4
5	LIGHTING - ROOMS 108,109		

1. UPDATE PANELBOARD IDENTIFICATION CARD AT COMPLETION OF WORK. 2. LOAD DESCRIPTION PER NEC 408.4 SHALL INCLUDE: 2.1. ITEM SERVED (EX. RECEPTACLE) 2.2. ITEM LOCATION (EX. ROOM 102). 3. ROOM NUMBERS SHALL BE VERIFIED. 4. PANEL IDENTIFICATION CARD SHALL BE TYPEWRITTEN.

PANELBOARD IDENTIFICATION CARD DETAIL

ELECTRICAL ABBREVIATIONS

Α	AMPS
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AWG	AMERICAN WIRE GUAGE
BRK	BREAKER
C OR COND	CONDUIT
CIRC	CIRCUIT
CLG	CEILING
CU	CONDENSING UNIT
DHC	DUCT HEATING COIL
(E) OR EXIST	EXISTING
EC	EMPTY CONDUIT W/PULL WIRE
EF	EXHAUST FAN
EM	EMERGENCY
EMT	ELECTRIC METALLIC TUBING
EPO	EMERGENCY POWER OFF
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
FACP	FIRE ALARM CONTROL PANEL
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FLA	FULL LOAD AMPS
FT	FOOT
FRACT	FRACTIONAL
FSS	FUSED SAFETY SWITCH
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
GPR	GROUND PENETRATING RADAR
HP	HORSEPOWER
IG	ISOLATED GROUND
_	
IMC	INTERMEDIATE METAL CONDUIT
JB	JUNCTION BOX
KVA	KILOVOLT AMPS
KW	KILOWATT
MCB	MAIN CIRCUIT BREAKER
+ OR MH	MOUNTING HEIGHT (ABOVE FINISHED FLOOR)
MLO	MAIN LUGS ONLY
MOCP	MAXIMUM OVERCURRENT PROTECTION
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFSS	NON-FUSED SAFETY SWITCH
NO. OR #	NUMBER
OCPD	OVER CURRENT PROTECTION DEVICE
PNL	PANEL
P	POLE
Ø OR PH	PHASE
PFF	PROVISIONS FOR FUTURE
PVC	POLYVINYL CHLORIDE
R OR RE	RELOCATED
RGS	RIGID GALVANIZED STEEL
RLA	RUNNING LOAD AMPS
RM	ROOM
RTU	ROOF TOP UNIT
SWBD	SWITCHBOARD
TELE	TELEPHONE
TYP	TYPICAL
UH	UNIT HEATER
V	VOLTAGE
VAV	VARIABLE AIR VOLUME
V /	WIDE

WIRE WITH

UON

WEATHERPROOF

UNLESS OTHERWISE NOTED

WALL HEATER

- ELECTRICAL NOTES AND SPECIFICATIONS 1. ALL WORK SHALL BE DONE IN CONFORMANCE WITH ALL LOCAL AND STATE CODES RULES AND REGULATIONS, THE LATEST ADOPTED JURISDICTIONAL CODES, AND OF THE AUTHORITY HAVING JURISDICTION. 2. OBTAIN AND PAY FOR ALL PERMITS, ALL FEES AND ALL TAXES. 3. IT IS THE INTENTION OF THE SPECIFICATIONS AND DRAWINGS TO CALL FOR FINISHED WORK, TESTED AND READY FOR OPERATION. WHENEVER THE WORD "PROVIDE" IS USED, IT SHALL MEAN "FURNISH AND INSTALL COMPLETE AND READY FOR USE".
- 4. PROVIDE ALL LABOR, MATERIAL, EQUIPMENT, FIXTURES, SERVICES AND PERFORM ALL OPERATIONS REQUIRED FOR A COMPLETE AND SAFE INSTALLATION OF THE ELECTRICAL SYSTEMS AND RELATED WORK. ELECTRICAL SYSTEMS AND EQUIPMENT SHALL IN GENERAL INCLUDE THE FOLLOWING: 4.A. GENERAL PROVISIONS FOR ELECTRICAL WORK 4.B. WIRING, ELECTRICAL EQUIPMENT, RACEWAYS AND DEVICES 4.C. GROUNDING SYSTEM 4.D. INSTALLATION AND ALL CONNECTIONS.
- 5. PROVIDE ALL MATERIAL AND EQUIPMENT NOT INDICATED AS EXISTING IN THE CONTRACT DOCUMENTS. ALL MATERIAL SHALL BE NEW AND THE BEST PRODUCTS OF REPUTABLE MANUFACTURERS AND SHALL BE IN NEW CONDITION AT ACCEPTANCE OF WORK.
- 6. PROVIDE A GUARANTEE TO COVER ALL MATERIALS, LABOR AND EQUIPMENT. GUARANTEE SHALL BE FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE BY THE OWNER. GUARANTEE SHALL COVER PAYMENT FOR ANY REPAIRS OR REPLACEMENTS CAUSED BY DEFECTIVE WORKMANSHIP OR FAULTY MATERIALS WITHIN THE PERIOD COVERED BY THE GUARANTEE.
- 7. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH NECA-1 GOOD WORKMANSHIP IN ELECTRICAL
- 8. THE CONTRACTOR SHALL WALK THE WORK SITE PRIOR TO BIDDING AND VERIFY EXISTING CONDITIONS. DRAWINGS ARE DIAGRAMMATIC AND REPRESENT THE ENGINEERING ASSESSMENT AT THE TIME OF DESIGN.CIRCUITS SHOWN ARE BASED ON RECORD DRAWING AND FIELD CONDITIONS. CONDUIT SHALL NOT BE CONSIDERED AS DIRECT PATH STRAIGHT RUNS. THE CONTRACTOR SHALL EXPECT TO ROUTE CONDUIT AROUND EXISTING STRUCTURAL COMPONENTS AND ALL EQUIPMENT. THE CONTRACTOR SHALL PROVIDE REQUIRED PULL BOXES TO MAINTAIN NO MORE THAN FOUR 90 DEGREE EQUIVALENT BENDS IN EACH CONDUIT
- 9. PROVIDE ALL SCAFFOLDING, RIGGING, HOISTING, AND SERVICES NECESSARY FOR ERECTION AND DELIVERY INTO THE PREMISES OF ANY EQUIPMENT AND APPARATUS, WHETHER FURNISHED BY THIS CONTRACT OR OWNER, AND REMOVAL OF SAME FROM PREMISES WHEN NO LONGER REQUIRED.
- 10. INSTALL ALL WORK IN A NEAT AND ORDERLY MANNER, USING ONLY WORKMEN THOROUGHLY QUALIFIED IN THE TRADE OR DUTIES THEY ARE TO PERFORM. ROUGH WORK WILL BE REJECTED.
- 11. UNLESS OTHERWISE REQUIRED BY TRADE CUSTOM OR SPECIFIED UNDER ANOTHER SECTION OF THE SPECIFICATIONS, CUTTING AND PATCHING SHALL BE DONE BY THE APPROPRIATE TRADE. PROVIDE SKETCHES
- SHOWING THE LOCATIONS AND SIZES OF ALL OPENINGS, CHASES ETC. REQUIRED.
- 12. DO NOT CUT STRUCTURAL MEMBERS WITHOUT THE APPROVAL OF THE ENGINEER, AND ALL SUCH CUTTING SHALL BE DONE IN MANNER DIRECTED BY HIM.
- $\sqrt{}$ MAINTAIN CLEAN WORK AREA AT ALL TIMES DURING CONSTRUCTION.
- TEST ALL NEW EQUIPMENT AND SYSTEMS SYSTEMS SHALL OPERATE SATISFACTORILY AS DESIGNED AND INTENDED: REPORT ANY DEFICIENCIES TO THE ARCHITECT/ENGINEER.
- 15. PROVIDE A FIELD-APPLIED WARNING LABEL ON EACH SWITCHBOARD, PANELBOARD, CONTROL PANEL, TRANSFER SWITCH, STARTER, VFD, AND MOTOR CONTROL CENTER TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARD, PER NEC 110.16.
- 16. ELECTRICAL CONTRACTOR SHALL PROVIDE A REPLACEMENT SEQUENCE REPORT OF THE SIX AUTOMATIC TRANSFER SWITCHES. FINAL SEQUENCE REPORT SHALL BE APPROVED BY OWNER AND ENGINEER PRIOR TO COMMENCING CONSTRUCTION. SEQUENCE REPORT SHALL INCLUDE, BUT NOT LIMITED TO, THE FOLLOWING:
- 16.A. SUMMARY OF WORK TO BE PERFORMED, AND TEMPORARY EQUIPMENT, FEEDERS AND DEVICES TO
- BE USED FOR THE REPLACEMENT. 16.B. ORDER / SEQUENCE OF ATSs TO BE REPLACED INCLUDING STEPS TO COMPLETE THE REPLACEMENT. STEPS SHALL INCLUDE, TEMPORARY SOLUTION, DEMOLITION WORK, NEW WORK,
- STARTUP, TESTING, AND COMMISSIONING OF EACH ATS. 16.C. ESTIMATED NUMBER OF NORMAL POWER SHUTDOWNS
- 16.D. ESTIMATED LENGTH OF EACH SHUTDOWN 16.E. SCHEDULE TO COMPLETE THE WORK, INCLUDING CONTINGENCY DATES.

17. GENERAL PROVISION FOR ELECTRICAL WORK:

- 17.A. <u>DRAWINGS</u>: ELECTRICAL DRAWINGS ARE CONSIDERED DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF WORK AND SYSTEMS. VERIFY EXACT LOCATION OF EQUIPMENT ON SITE. COORDINATE ROUGH-IN REQUIREMENTS AND INSTALLATION REQUIREMENTS WITH OTHER TRADES.
- 17.B. QUALITY OF MATERIALS: NEW, BEST OF THEIR RESPECTIVE KIND, FREE FROM DEFECTS, AND LISTED BY UNDERWRITERS LABORATORIES, INC. AND BEARING THEIR LABEL.
- 17.C. VOLTAGE CHARACTERISTICS: 277/480 VOLT AND 120/208 VOLT, 3 PHASE, 4 WIRE, 60 HERTZ WITH GROUNDED NEUTRAL AS NOTED.
- 17.D. SHOP DRAWINGS:

 17.D.1. SUBMIT ELECTRONIC SHOP DRAWINGS FOR ALL FIXTURES AND DEVICES. OBTAIN APPROVAL BEFORE EQUIPMENT IS ORDERED, BUILT OR INSTALLED. CATALOGS, PAMPHLETS, OR OTHER DOCUMENTS SUBMITTED TO DESCRIBE ITEMS FOR WHICH APPROVAL IS BEING REQUESTED SHALL BE AS SPECIFIED AND IDENTIFICATION CATALOG, PAMPHLET, ETC., OF ITEM SUBMITTED SHALL BE CLEARLY NAMED IN INK. DATA OF A GENERAL NATURE AND FAXES WILL NOT BE ACCEPTED. SUBMITTAL SHALL INCLUDE CONTRACTOR'S NAME AND NAME OF JOB.
 - 17.D.1.a. BUILDING WIRE 17.D.1.b. DISTRIBUTION EQUIPMENT (PANEL BOARDS, TRANSFORMERS, ETC) 17.D.1.c. SAFETY SWITCHES
 - 17.D.1.d. RGS, IMC, EMT, PVC CONDUIT 17.D.1.e. DAY TANK CONTROLS

ELECTRICAL SYMBOLS

- * ALL MOUNTING HEIGHTS SHALL BE AS INDICATED BELOW, UNLESS OTHERWISE NOTED OR INDICATED ON PLANS. (HEIGHT INDICATED IS TO TOP OF DEVICE). * ALL DEVICES SHALL BE RECESSED MOUNTED FLUSH IN WALL, CEILING OR FLOOR UNLESS OTHERWISE NOTED.
- * FOR INSTALLATIONS IN EXISTING CONCRETE SLABS, CONTRACTOR SHALL: ** COORDINATE CORING OR TRENCHING SCHEDULE WITH BUILDING MANAGEMENT TO OCCUR AFTER NORMAL BUSINESS HOURS. ** X-RAY AND/OR GPR SLAB PRIOR TO CORING OR TRENCHING TO ENSURE THAT THE WORK WILL COMPLETELY AVOID INTERFERENCE WITH ANY EXISTING SYSTEMS IN THE SLAB.

GENERAL SYMBOLS

- 120/208 VOLT, 3 PHASE, 4 WIRE PANELBOARD 277/480 VOLT, 3 PHASE, 4 WIRE PANELBOARD
- FIXTURES AND DEVICES SHOWN WITH LIGHT SOLID LINES ARE EXISTING TO REMAIN.
- FIXTURES AND DEVICES SHOWN WITH DARK SOLID LINES ARE NEW.
- FIXTURES AND DEVICES SHOWN WITH LIGHT SOLID LINES ARE EXISTING TO REMAIN. ------ FIXTURES AND DEVICES SHOWN WITH DARK DASHED LINES ARE RELOCATED DEVICES IN THEIR NEW LOCATIONS.

---|I GROUND

FRONT DIRECTION OF EQUIPMENT.

SAFETY SWITCH SAFETY SWITCH

ENCLOSED CIRCUIT BREAKER

VIRGINIA ARLINGTON COUNTY GENERAL DISTRICT COURT 1425 N Courthouse Rd, Arlington, VA 22201



50% CONSTRUCTION DOCUMENTS 100% CONSTRUCTION 5/31/21 DOCUMENTS PERMIT SET 7/09/21 9/30/22 ISSUE FOR BID 1/24/23 ADDENDUM 1

Scale: **NONE**

Drawn: MRR Checked: AIE Sheet Name: COVER SHEET

ELECTRICAL

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DRAWING LIST

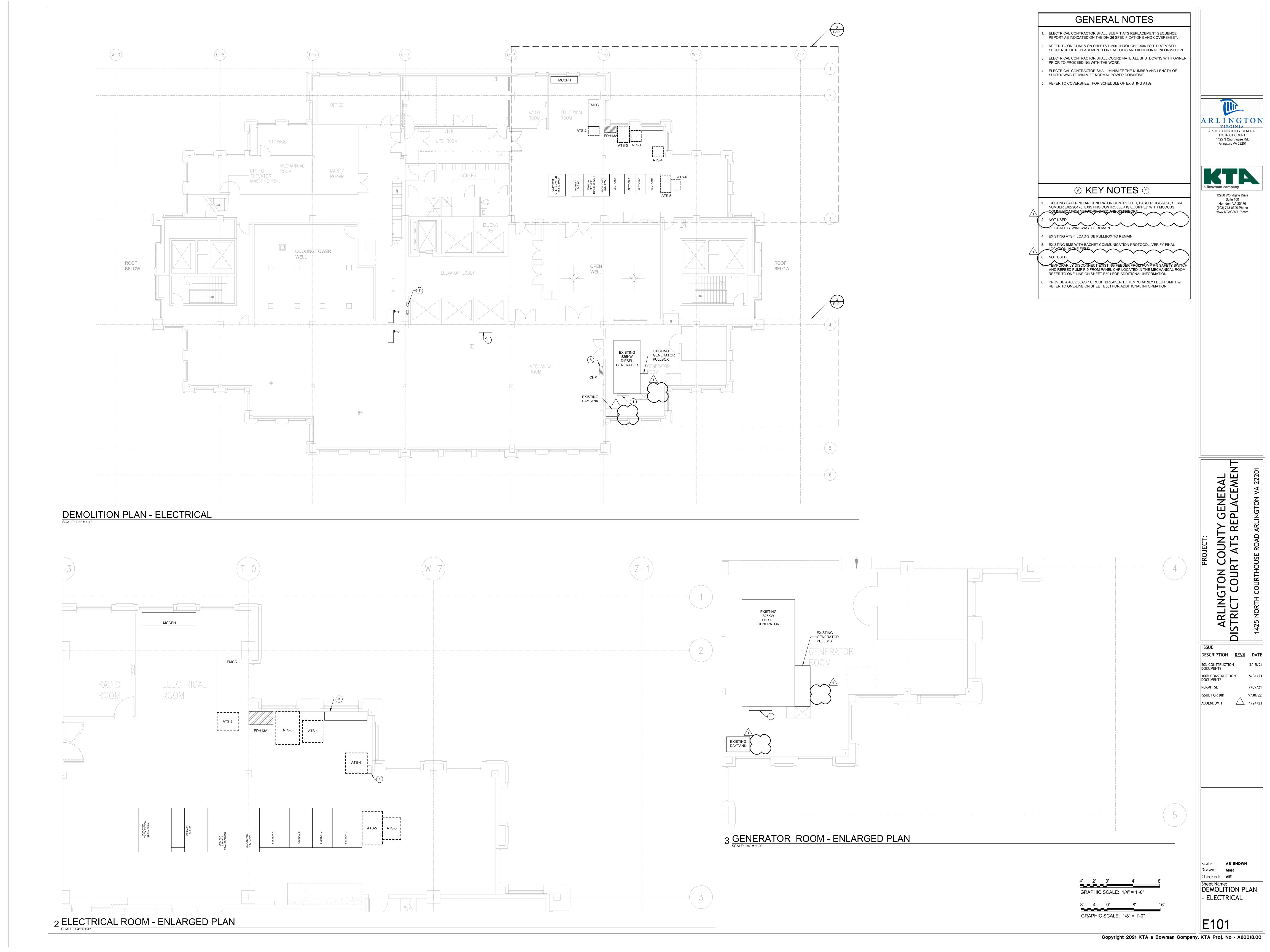
COVER SHEET - ELECTRICAL

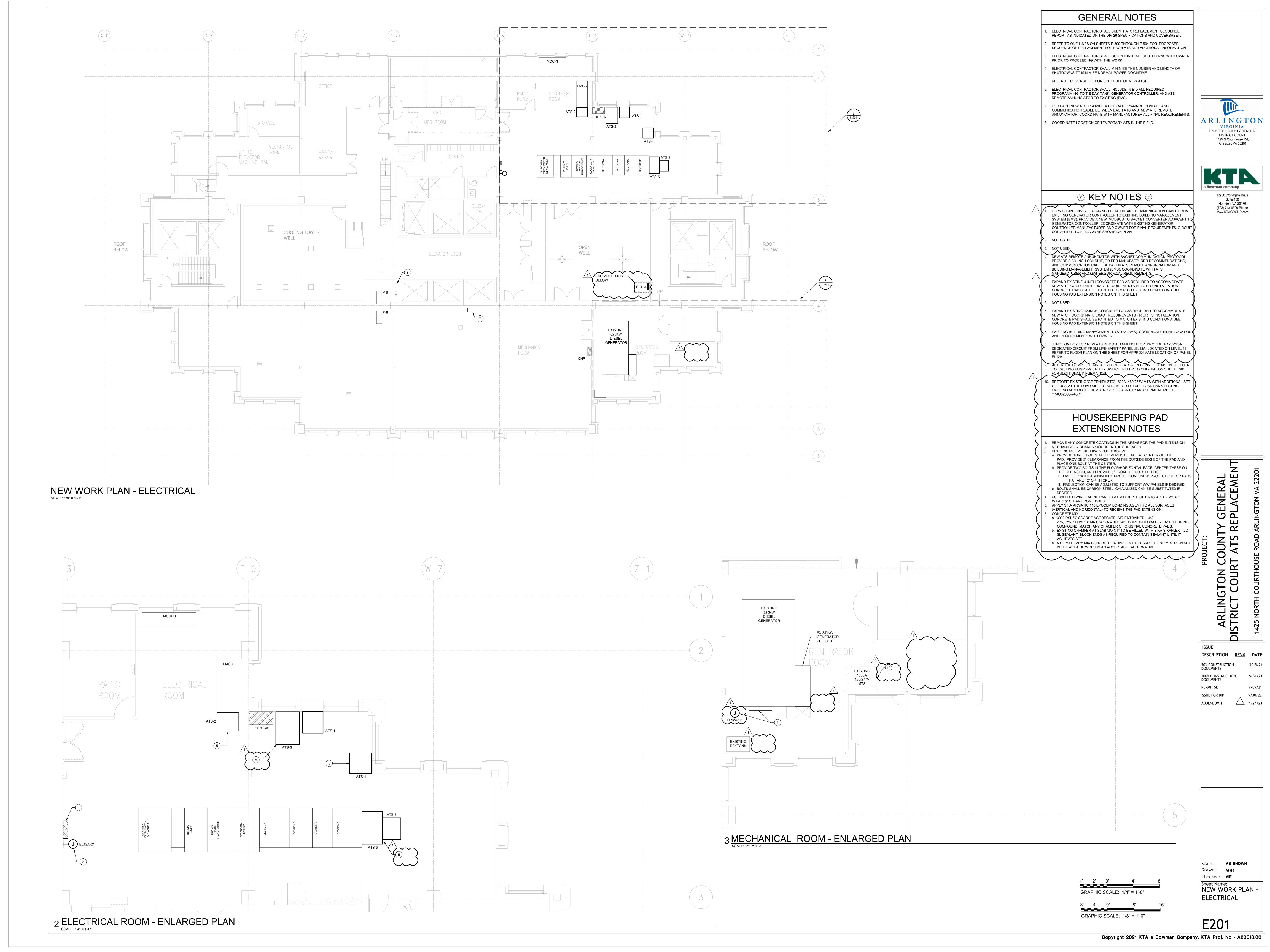
DEMOLITION PLAN - ELECTRICAL

NEW WORK PLAN - ELECTRICAL

ATS-1 ONE-LINE DIAGRAMS - ELECTRICAL

ATS-2 ONE-LINE DIAGRAMS - ELECTRICAL ATS-3 ONE-LINE DIAGRAMS - ELECTRICAL ATS-5 ONE-LINE DIAGRAMS - ELECTRICAL ATS-6 ONE-LINE DIAGRAMS - ELECTRICAL ATS-4 ONE-LINE DIAGRAMS - ELECTRICAL





GENERAL NOTES

- ELECTRICAL CONTRACTOR SHALL SUBMIT ATS REPLACEMENT SEQUENCE REPORT AS INDICATED ON THE DIV 26 SPECIFICATIONS AND COVERSHEET.
- 2. ELECTRICAL CONTRACTOR SHALL COORDINATE ALL SHUTDOWNS WITH OWNER
- B. ELECTRICAL CONTRACTOR SHALL MINIMIZE THE NUMBER AND LENGTH OF
- SHUTDOWNS TO MINIMIZE NORMAL POWER DOWNTIME.
- 4. REFER TO COVERSHEET FOR SCHEDULE OF EXISTING TO BE REPLACED ATSs. ELECTRICAL CONTRACTOR SHALL ENSURE POWER IS ONLINE TO LOAD DOWNSTREAM OF ATS DURING THE TEMPORARY PHASE PRIOR TO PROCEEDING WITH THE NEW
- **# TEMPORARY WORK KEY NOTES**

NOTE: NOTES BELOW ARE FOR REFERENCE ONLY. ELECTRICAL CONTRACTOR SHALL REUSE TEMPORARY ATS USED FOR THE REPLACEMENT OF ATS-1 AND ATS-2 TO COMPLETE THE REPLACEMENT OF ATS-3. REFER TO SHEET E500-E501 FOR ADDITIONAL INFORMATION.

- 1. SET TRIP SETTING OF EXISTING 800A/3P SPARE CIRCUIT BREAKER TO 800A. REUSE 800AF/400AT CIRCUIT BREAKER INSTALLED AS PART OF ATS-1 AND ATS-2
- REPLACEMENT FOR THE REPLACEMENT OF ATS-3. SET TRIP SETTING TO 800A. INSTALL A TEMPORARY 800A, 480/277V, 4P OPEN TRANSITION AUTOMATIC TRANSFER TEMPORARY ATS. PROVIDE 2-SETS OF 4-#500KCMIL, 1-#3/0 AWG GROUND COPPER
- CABLES. TEMPORARY CABLES SHALL BE TYPE DLO, SE, OR APPROVED EQUAL.

 INSTALL A NEW PULL-BOX ABOVE EXISTING ATS-3. PULL-BOX SHALL BE SIZED PE 6. SPLICE TEMPORARY CABLES FROM LOAD SIDE OF TEMPORARY ATS TO EXISTING LOAD SIDE CABLES OF EXISTING ATS-3 AT NEW PULL-BOX. CONFIRM ATS-3 SHUTDOWN PRIOR
- ELECTRICAL CONTRACTOR SHALL MAINTAIN NO MORE THAN ONE BUILDING ELEVATOR, ONE GARAGE ELEVATOR, AND T15 TRANSFORMER AND ASSOCAITED DOWNSTREAM DISTRIBUTION PANEL OPERATIONAL DURING THE REPLACEMENT PROCESS. COORDINATE WITH OWNER THE TWO ELEVATORS THAT WILL REMAIN OPERATIONAL.





DEMOLITION WORK KEY NOTES

DEMOLISH EXISTING ATS-3. MAINTAIN EXISTING NORMAL, EMERGENCY, LOAD SIDE, AND ENGINE START CIRCUIT CABLES TO CONNECT TO NEW ATS.

NEW WORK KEY NOTES

- INSTALL NEW ATS IN PLACE OF ATS-3. RECONNECT EXISTING NORMAL, EMERGENCY, LOAD, AND ENGINE STARTUP CABLES TO NEW ATS. EXTEND CABLES AS REQUIRED WITH SIZES AND TYPE THAT MATCH EXISTING CONDITIONS. EXTEND EXISTING CONCRETE PAD AS REQUIRED. REFER TO COVERSHEET FOR ATS RATING AND
- DISCONNECT TEMPORARY CABLES FROM NEW PULL-BOX AND RECONNECT EXISTING LOAD CABLES FROM EXISTING ATS-3.
- DISCONNECT AND MAINTAIN TEMPORARY ATS TO BE USED IN THE REPLACEMENT OF ATS-4, ATS-5 AND ATS-6. REFER TO SHEETS E503, E504 AND E505 FOR ADDITIONAL INFORMATION.
- DEMOLISH TEMPORARY CABLES ALL THE WAY BACK TO TEMPORARY CIRCUIT BREAKER. LABEL FREE CIRCUIT BREAKER AS SPARE.
- PROVIDE A DEDICATED ETHERNET CABLE IN A 3/4" CONDUIT FOR REMOTE MONITORING. TERMINATE CONDUIT AT NEW ATS REMOTE ANNUNICATOR PANEL. COORDINATE LOCATION AND FINAL ROUTING IN THE FIELD. CONFIRM FINAL REQUIREMENTS WITH MANUFACTURER PRIOR TO INSTALLATION.
- RE-ENERGIZE ALL ELEVATORS, BUILDING AND GARAGE, AND CONFIRM THEIR

ATS REPLACEMENT SEQUENCE

2. ATS-2 3. ATS-3 4. ATS-5

DESCRIPTION REV# DATE 50% CONSTRUCTION DOCUMENTS 100% CONSTRUCTION DOCUMENTS PERMIT SET ISSUE FOR BID ADDENDUM 1

ATS-3 ONE-LINE DIAGRAMS -ELECTRICAL

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