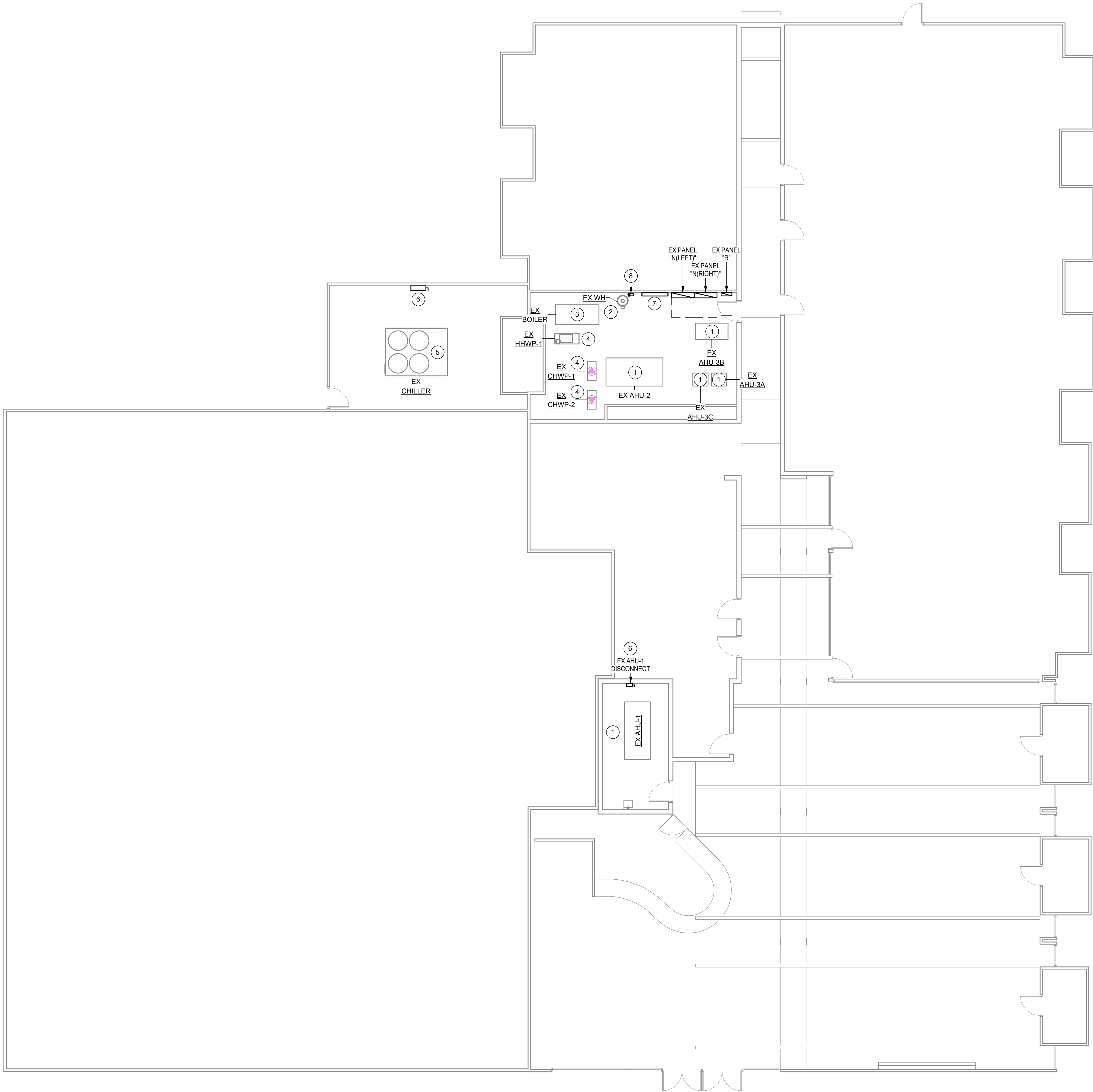


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te, TX 75150  
DOCUMENTS

NOTES:		GFI		GROUND FAULT INTERRUPTER		WG		WIRE GUARD	
1. MOUNT ALL DEVICES AT HEIGHTS INDICATED ABOVE, UNO ON PLAN		IC		INTERRUPTING CAPACITY		WP		WEATHERPROOF	
2. 48" AFF INDICATES TO TOP OF DEVICE		IG		ISOLATED GROUND		WP/WIU		WEATHERPROOF/ WHILE-IN-USE COVER	
15" AFF INDICATES TO BOTTOM OF DEVICE		MTD		MOUNT OR MOUNTED		XFMR		TRANSFORMER	
ALL OTHER MOUNTING HEIGHTS INDICATE TO CENTERLINE OF DEVICE						UNO		UNLESS NOTED OTHERWISE	

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<b>GENERAL NOTES AND LEGENDS</b>	
 <h1>E-001</h1> Sheet Number	



1

# ELECTRICAL DEMOLITION PLAN

1/8" = 1'-0"

## GENERAL DEMOLITION NOTES:

A. REFER TO SHEET E-001 FOR ELECTRICAL DEMOLITION NOTES.

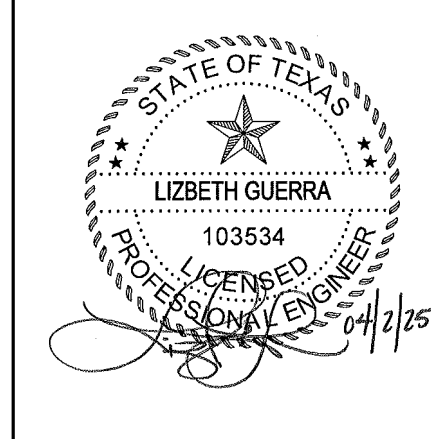
## KEY NOTES: #

- EXISTING AIR HANDLING UNIT TO BE DEMOLISHED. REFER TO MECHANICAL DEMOLITION PLAN MD-101. REMOVE ALL CONDUIT AND CIRCUIT WIRING BACK TO ITS SOURCE. CONTRACTOR SHALL DEMOLISH ALL ASSOCIATED ELECTRICAL EQUIPMENT SUCH AS SWITCHES AND STARTERS.
- EXISTING DOMESTIC WATER HEATER TO BE DEMOLISHED. REMOVE ALL CONDUIT AND CIRCUIT WIRING BACK TO ITS SOURCE. REFER TO MECHANICAL DEMOLITION PLAN MD-101. CONTRACTOR SHALL DEMOLISH ALL ASSOCIATED ELECTRICAL EQUIPMENT SUCH AS SWITCHES AND STARTERS.
- EXISTING BOILER TO BE DEMOLISHED. REMOVE ALL CIRCUIT WIRING BACK TO ITS SOURCE. EXISTING CONDUIT FROM BOILER TO POWER SOURCE TO REMAIN. REFER TO MECHANICAL DEMOLITION PLAN MD-101. CONTRACTOR SHALL DEMOLISH ALL ASSOCIATED ELECTRICAL EQUIPMENT SUCH AS SWITCHES AND STARTERS.
- EXISTING WATER PUMP TO BE DEMOLISHED. REMOVE ALL CIRCUIT WIRING BACK TO ITS SOURCE. EXISTING CONDUIT FROM WATER PUMP TO POWER SOURCE TO REMAIN. EXISTING CIRCUIT BREAKER SHALL BE RE-USED FOR CONNECTION OF NEW WATER PUMPS. CONTRACTOR SHALL DOCUMENT AND LABEL ASSOCIATED CIRCUIT BREAKERS IN PANEL N (RIGHT) AND KEEP THIS INFORMATION FOR CONNECTION OF NEW WATER PUMPS. REFER TO MECHANICAL DEMOLITION PLAN MD-101. CONTRACTOR SHALL DEMOLISH ALL ASSOCIATED ELECTRICAL EQUIPMENT SUCH AS SWITCHES AND STARTERS.
- EXISTING CHILLER UNIT TO BE DEMOLISHED. REMOVE ALL CONDUIT AND CIRCUIT WIRING BACK TO ITS SOURCE. REFER TO MECHANICAL DEMOLITION PLAN MD-101.
- EXISTING DISCONNECT FEEDING CHILLER UNIT TO BE DEMOLISHED.
- CONTRACTOR SHALL DEMOLISH EXISTING WIREWAY AND ANY REMAINING ELECTRICAL EQUIPMENT BELONGING TO DEMOLISHED HVAC EQUIPMENT.
- EXISTING CIRCULATING PUMP TO BE DEMOLISHED. REMOVE ALL CONDUIT AND CIRCUIT WIRING BACK TO ITS SOURCE. REFER TO MECHANICAL DEMOLITION PLAN MD-101.

FLORENCE REC. CENTER  
EQUIPMENT REPLACEMENTS  
CITY OF MESQUITE  
2501 Whitson Way, Mesquite, TX 75150  
100% CONSTRUCTION DOCUMENTS



Revision No.	Date	Description



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ED-100	Sheet Number

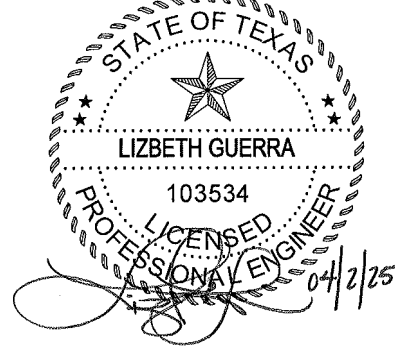




A. REFER TO SHEET E-001 FOR ELECTRICAL GENERAL NOTES

- CONTRACTOR SHALL FURNISH AND INSTALL NEW 100A 120/208V 3-PHASE PANEL-AC2 FOR CONNECTION OF NEW EQUIPMENT. CONTRACTOR SHALL RE-USE EXISTING CIRCUIT BREAKER ON PANEL N (RIGHT). REFER TO REVISED ONE-LINE DIAGRAM ON SHEET E-201 FOR CONNECTION DETAILS.
- CONTRACTOR SHALL FURNISH AND INSTALL NEW CONDUCTORS AND CONDUIT FOR CONNECTION TO NEW AIR HANDLING UNIT. CONTRACTOR SHALL RE-USE EXISTING CIRCUIT BREAKER ON PANEL N (RIGHT). REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULES ON SHEET E-201, FOR CONNECTION DETAILS.
- CONTRACTOR SHALL FURNISH AND INSTALL NEW CONDUCTORS IN EXISTING CONDUIT FOR CONNECTION TO NEW GAS BOILER B-1 CONTROLS. REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE ON SHEET E-201, FOR CONNECTION DETAILS.
- FURNISH AND INSTALL NEW CONDUCTORS AND CONDUIT TO NEW PANEL AC2 FOR POWER TO NEW AIR HANDLING UNIT. REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE ON SHEET E-201, FOR CONNECTION DETAILS.
- CONTRACTOR SHALL FURNISH AND INSTALL CONDUCTORS AND CONDUIT FOR CONNECTION TO NEW CHILLER CH-1. CONTRACTOR SHALL RE-USE EXISTING CIRCUIT BREAKER ON PANEL N (RIGHT). CONTRACTOR SHALL PROVIDE ADDITIONAL 120V, 20A SINGLE PHASE CIRCUIT FOR POWER TO FREEZE PROTECTION HEATER, CIRCUIT AC2-10. REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE ON SHEET E-201, FOR CONNECTION DETAILS.
- CONTRACTOR SHALL FURNISH AND INSTALL NEW 120V, 20A SINGLE PHASE CIRCUIT FOR POWER TO BOILER RELAY CONTROLLER BRC-1, CIRCUIT AC2-11.
- CONTRACTOR SHALL FURNISH AND INSTALL NEW CONDUCTORS IN EXISTING CONDUIT FOR CONNECTION TO NEW WATER PUMP VIA ITS ASSOCIATED VFD. CONTRACTOR SHALL RE-USE EXISTING CIRCUIT BREAKERS IN PANEL N (RIGHT). REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE ON SHEET E-201, FOR CONNECTION DETAILS.
- PROVIDE MOTOR RATED SWITCH FOR NEW CIRCULATING PUMP CP-1. REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE ON SHEET E-201, FOR CONNECTION DETAILS.
- CONTRACTOR SHALL FURNISH AND INSTALL NEW 120V, 20A SINGLE PHASE CIRCUIT FOR POWER TO GAS WATER HEATER CONTROLS, CIRCUIT AC2-8.
- CONTRACTOR SHALL FURNISH AND INSTALL NEW 400A/3P NEMA 3R DISCONNECT FOR NEW CHILLER CH-1. REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE ON SHEET E-201 FOR CONNECTION DETAILS.

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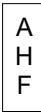








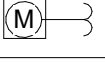
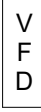
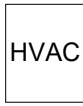
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<b>E-100</b>	
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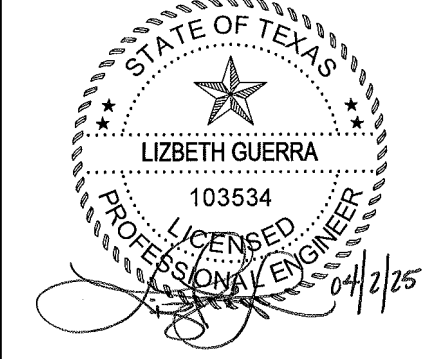
MECHANICAL EQUIPMENT CONNECTION SCHEDULE				
MARK	PANEL	CIRCUIT	NOTES	DISCONNECTING MEANS AND/OR BRANCH CIRCUIT SIZE
AHU-1	N(RIGHT)	EXISTING	1,2	3#4, 1#10G, 1°C
AHU-2	N(RIGHT)	EXISTING	1,2	3#4, 1#10G, 1°C
AHU-3A	AC2	2		30/-1P NEMA 1 DISCONNECT SWITCH / 2#12, 1#12G, 3/4"C
AHU-3B	AC2	1,3		30/-2P NEMA 1 DISCONNECT SWITCH / 2#12, 1#12G, 3/4"C
AHU-3C	AC2	4		30/-1P NEMA 1 DISCONNECT SWITCH / 2#12, 1#12G, 3/4"C
B-1	R	34	3	2#12, 1#12G
CH-1	N(RIGHT)	EXISTING	2	400/-3P NEMA 3R DISCONNECT SWITCH / 3#600KCMIL, 1#3G, 4"C
CHWP-1	N(RIGHT)	EXISTING	2,4,5	3#10, 1#10G
CHWP-2	N(RIGHT)	EXISTING	2,4,5	3#10, 1#10G
CP-1	AC2	6		MOTOR RATED SWITCH / 2#12, 1#12G, 3/4"C
HHWP-1	N(RIGHT)	EXISTING	2,4,5	3#10, 1#10G

- NOTES:
1. INTEGRAL VFD/DISCONNECT PROVIDED BY MECHANICAL CONTRACTOR, ELECTRICAL CONTRACTOR TO INSTALL.
  2. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS OF QMR INTERRUPTER PRIOR TO ANY WORK.
  3. CONTRACTOR SHALL PROVIDE BRANCH CIRCUIT CONDUCTORS FOR GAS BOILER CONTROLS IN EXISTING CONDUIT.
  4. CONTRACTOR SHALL FURNISH AND INSTALL BRANCH CIRCUIT CONDUCTORS USING EXISTING CONDUIT.
  5. WALL MOUNT VFD WITH INTEGRAL DISCONNECT PROVIDED BY MECHANICAL CONTRACTOR, ELECTRICAL CONTRACTOR TO INSTALL.

1. EXISTING EQUIPMENT AND ALL ASSOCIATED WIRING TO BE REMOVED. EXISTING CONDUIT AND CIRCUIT BREAKERS SHALL REMAIN IN PLACE FOR CONNECTION OF NEW WATER PUMPS.
2. EXISTING EQUIPMENT TO REMAIN.
3. NEW PANEL AC2 SHALL BE CONNECTED TO EXISTING 60A/3P BREAKER IN EXISTING PANEL-N (RIGHT).
4. REFER TO PANEL SCHEDULES AND MECHANICAL EQUIPMENT CONNECTION SCHEDULE FOR CONNECTION DETAILS.
5. EXISTING EQUIPMENT AND ALL ASSOCIATED CONDUIT AND WIRING TO BE REMOVED. EXISTING CIRCUIT BREAKERS SHALL REMAIN IN PLACE.
6. CONTRACTOR SHALL MARK EXISTING QMR FUSIBLE INTERRUPTER AS A SPARE.



LEGEND	
	NEW EQUIPMENT TO BE INSTALLED
	EXISTING EQUIPMENT TO REMAIN
	ACTIVE HARMONIC FILTER
	FUSE
	CIRCUIT BREAKER
	SOLID STATE POWER BREAKER WITH ARC ENERGY REDUCTION PER NEC, 240.87(A) 2017
	INDUCTION ELECTRIC MOTOR # INDICATES RATED HORSEPOWER
	DISCONNECT SWITCH
	DRY TYPE DOE2016 TRANSFORMER
	SURGE PROTECTION DEVICE
	POWER QUALITY METER
	UTILITY METER
	VARIABLE FREQUENCY DRIVE
	HVAC EQUIPMENT
NOTES:	ALL SYMBOLS SHOWN MAY NOT APPEAR IN ALL DRAWINGS. SYMBOLS ARE SHOWN SCHEMATIC AND MAY NOT BE TO SCALE.

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<b>ELECTRICAL ONE-LINE DIAGRAM &amp; SCHEDULES</b>	
<b>E-201</b>	
Sheet Number	



PANELBOARD R (EXISTING)

VOLTAGE: 208Y/120 VOLT 3 PHASE 4 WIRE										LOCATION: MECHANICAL ROOM		
100 A MAIN CIRCUIT BREAKER										MOUNTING: SURFACE		
BUSES: MAIN - 225 A;												
VA:L	VA:R	VA:O	LOAD	BKR	CKT	PH	CKT	BKR	LOAD	VA:L	VA:R	VA:O
0	400		LIGHTS/FIRE PANEL	20/1	1	A	2	20/1	LIGHTING	1000		
0	400		RECEPTACLES	20/1	3	B	4	20/1	LIGHTING	1000		
0	400		RECEPTACLES	20/1	5	C	6	20/1	LIGHTING	1000		
0	400		RECEPTACLES	20/1	7	A	8	20/1	LIGHTING	1000		
0	400		RECEPTACLES	20/1	9	B	10	20/1	LIGHTING	1000		
0	400		RECEPTACLES	20/1	11	C	12	20/1	LIGHTING	1000		
0	400		LIGHTING	20/1	13	A	14	20/1	LIGHTING	1000		
0	400		LIGHTING	20/1	15	B	16	20/1	LIGHTING	1000		
0	400		LIGHTING	20/1	17	C	18	20/1	EX LOAD	400	0	
0	400		LIGHTING	20/1	19	A	20	20/1	EX LOAD	400	0	
0	400		RECEPTACLES	20/1	21	B	22	20/1	RECEPTACLES	400	0	
0	400		EX LOAD	20/1	23	C	24	20/1	RECEPTACLES	400	0	
0	400		RECEPTACLES	20/1	25	A	26	20/1	EX LOAD	400	0	
0	400		EX LOAD	20/1	27	B	28	20/1	EX LOAD	400	0	
0	400		RECEPTACLES	20/1	29	C	30	20/1	LIGHTING	400	0	
0	400		EX LOAD	20/1	31	A	32	20/1	EX LOAD	400	0	
0	400		AC	30/1	33	B	34	20/1	BOILER	400	0	
0	400		EX LOAD	20/1	35	C	36	20/1	AH-2	400	0	
0	400		EX LOAD	20/1	37	A	38	20/1	RECEPTACLES/LIGHTING	400	0	
0	400		RECEPTACLES	20/1	39	B	40	40/1	EX LOAD	1500	0	
0	400		EX LOAD	20/1	41	C	42	40/1	EX LOAD	1500	0	
VA:L (LIGHTING)				15400	CONNECTED			19250	DEMAND			
VA:R (RECEPTACLES)				8400	CONNECTED			8400	DEMAND			
VA:O (OTHER)				0	CONNECTED			0	DEMAND			
VA: TOTAL				23800	CONNECTED			27650	DEMAND			
AMPS: TOTAL				66	CONNECTED			77	DEMAND			
L	R	O	TOTAL			VA =		62	AMPS CONNECTED TO A PHASE @ 120 VOLTS			
4600	2800	0	VA CONNECTED TO A PHASE			VA =		71	AMPS CONNECTED TO B PHASE @ 120 VOLTS			
5700	2800	0	VA CONNECTED TO B PHASE			VA =		66	AMPS CONNECTED TO C PHASE @ 120 VOLTS			
5100	2800	0	VA CONNECTED TO C PHASE			VA =						
15400	8400	0	TOTAL			23800	VA					

PANELBOARD R (REVISED)

VOLTAGE: 208Y/120 VOLT 3 PHASE 4 WIRE										LOCATION: MECHANICAL ROOM/PUMP ROOM		
100 A MAIN CIRCUIT BREAKER										MOUNTING: SURFACE		
BUSES: MAIN - 225 A;												
VA:L	VA:R	VA:O	LOAD	BKR	CKT	PH	CKT	BKR	LOAD	VA:L	VA:R	VA:O
0	400		LIGHTS/FIRE PANEL	20/1	1	A	2	20/1	LIGHTING	1000		
0	400		RECEPTACLES	20/1	3	B	4	20/1	LIGHTING	1000		
0	400		RECEPTACLES	20/1	5	C	6	20/1	LIGHTING	1000		
0	400		RECEPTACLES	20/1	7	A	8	20/1	LIGHTING	1000		
0	400		RECEPTACLES	20/1	9	B	10	20/1	LIGHTING	1000		
0	400		RECEPTACLES	20/1	11	C	12	20/1	LIGHTING	1000		
0	400		LIGHTING	20/1	13	A	14	20/1	LIGHTING	1000		
0	400		LIGHTING	20/1	15	B	16	20/1	LIGHTING	1000		
0	400		LIGHTING	20/1	17	C	18	20/1	EX LOAD	400	0	
0	400		LIGHTING	20/1	19	A	20	20/1	EX LOAD	400	0	
0	400		RECEPTACLES	20/1	21	B	22	20/1	RECEPTACLES	400	0	
0	400		EX LOAD	20/1	23	C	24	20/1	RECEPTACLES	400	0	
0	400		RECEPTACLES	20/1	25	A	26	20/1	EX LOAD	400	0	
0	400		EX LOAD	20/1	27	B	28	20/1	EX LOAD	400	0	
0	400		RECEPTACLES	20/1	29	C	30	20/1	LIGHTING	400	0	
0	400		EX LOAD	20/1	31	A	32	20/1	EX LOAD	400	0	
0	400		AC	30/1	33	B	34	20/1	NEW GAS BOILER CONTROLS	400	0	
0	400		EX LOAD	20/1	35	C	36	20/1	AH-2	400	0	
0	400		EX LOAD	20/1	37	A	38	20/1	RECEPTACLES/LIGHTING	400	0	
0	400		RECEPTACLES	20/1	39	B	40	40/1	EX LOAD	1500	0	
0	400		EX LOAD	20/1	41	C	42	40/1	EX LOAD	1500	0	
VA:L (LIGHTING)				15400	CONNECTED			19250	DEMAND			
VA:R (RECEPTACLES)				8400	CONNECTED			8400	DEMAND			
VA:O (OTHER)				0	CONNECTED			0	DEMAND			
VA: TOTAL				23800	CONNECTED			27650	DEMAND			
AMPS: TOTAL				66	CONNECTED			77	DEMAND			
L	R	O	TOTAL			VA =		62	AMPS CONNECTED TO A PHASE @ 120 VOLTS			
4600	2800	0	VA CONNECTED TO A PHASE			VA =		71	AMPS CONNECTED TO B PHASE @ 120 VOLTS			
5700	2800	0	VA CONNECTED TO B PHASE			VA =		66	AMPS CONNECTED TO C PHASE @ 120 VOLTS			
5100	2800	0	VA CONNECTED TO C PHASE			VA =						
15400	8400	0	TOTAL			23800	VA					

PANEL: AC2

Location: MECHANICAL/PUMP ROOM										Volts: 120/208 Wye				A.I.C. Rating: 25KAIC							
Supply From: N(RIGHT)										Phases: 3				Mains Type: MCB							
Mounting: Surface										Wires: 4				Mains Rating: 100 A							
Enclosure: Type 1														MCB Rating: 60 A							
Notes:																					
CKT	Circuit Description					Trip	Poles	A		B		C		Poles	Trip	Circuit Description					CKT
						20 A	2	1367 VA	863 VA					1	20 A						
1	AHU-3B					20 A	2	1367 VA	863 VA					1	20 A	AHU-3A					2
3	--					--	--			1367 VA	863 VA			1	20 A	AHU-3C					4
5	GFI RECEPT					20 A	1					180 VA	168 VA	1	20 A	CP-1					6
7	GFI RECEPT					20 A	1	360 VA	180 VA					1	20 A	WH-1 CONTROLS					8
9	GFI RECEPT					20 A	1			180 VA	500 VA			1	20 A	CH-1 FREEZE PROTECTION					10
11	BOILER RELAY CONTROLLER					20 A	1					500 VA	--	1	--	Space					12
13	Space					--	1	--	--					1	--	Space					14
15	Space					--	1			--	--			1	--	Space					16
17	Space					--	1					--	--	1	--	Space					18
19	Space					--	1	--	--					1	--	Space					20
21	Space					--	1			--	--			1	--	Space					22
23	Space					--	1					--	--	1	--	Space					24
25	Space					--	1	--	0 VA					3	30 A	SPD					26
27	Space					--	1			--	0 VA			--	--	--					28
29	Space					--	1					--	0 VA	--	--	--					30
Total Load:								2770 VA		2910 VA		848 VA									
Total Amps:								26 A		27 A		7 A									
Load Classification						Connected Load			Demand Factor			Estimated Demand			Panel Totals						
Motor						168 VA			100.00%			168 VA			Total Conn. Load: 6528 VA						
Other						4640 VA			100.00%			4640 VA			Total Est. Demand: 6528 VA						
Receptacle						720 VA			100.00%			720 VA			Total Conn. Current: 18 A						
Power						1000 VA			100.00%			1000 VA			Total Est. Demand Current: 18 A						



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<b>E-301</b>	
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