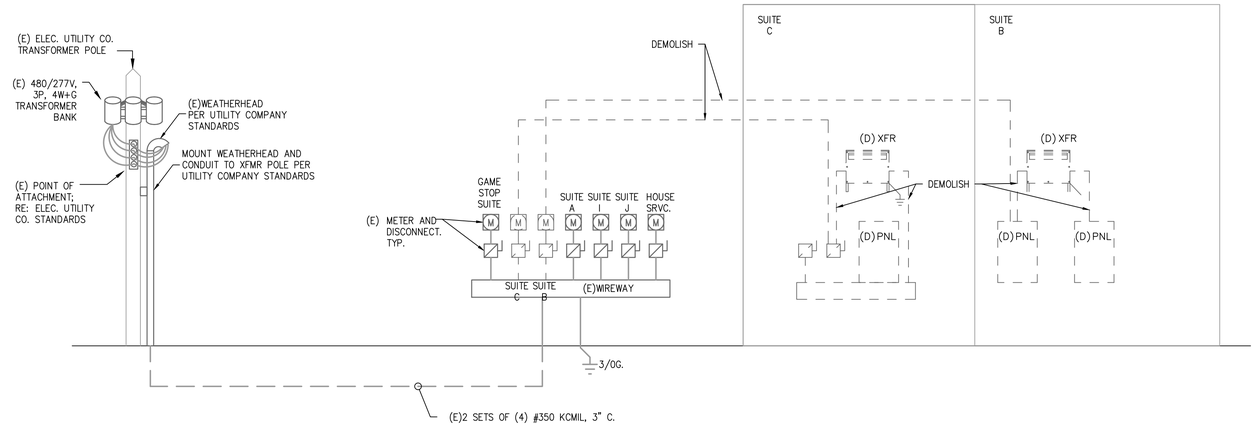
ELECTRICAL LOAD ANALYSIS					
PROJECT NAME:	GULF COAST EDUCATORS FCU				
PROJECT NUMBER:	26081.00				
SERVICE VOLTAGE:	277/480V, 3 PHASE, 4 WIRE, WYE				
SERVICE RATING:	100 AMPS				
GROSS AREA:	2,444 SQUARE FEET				
LOAD DESCRIPTION	CODE LOAD (kVA)	CONNECTED LOAD (kVA)	DEMAND FACTORS (%)	DESIGN LOAD (kVA)	REMARKS
LIGHTS (1.3 VA/FT2):	3.2	2.4	125%	4.0	NEC 220.42, 43, 44, 45
SIGN LIGHTS:		0.0	125%	0.0	NEC 220.14.F
SITE LIGHTS:		0.0	125%	0.0	NEC 220.42, 43, 44, 45
RECEPTACLES:	2.4	5.8	10kVA+50%	5.8	NEC 220.14.H, I, J, K, 220.47
EQUIPMENT:		8.4	100%	8.4	NEC 220.14.A
WATER HEATERS:		2.0	100%	2.0	NEC 220.14.A
HVAC:		26.2	100%	26.2	NEC 220.14.C, 220.50
ELECTRIC HEAT:		0.0	100%	0.0	NEC 220.51
LARGEST MOTOR:		0.0	125%	0.0	NEC 430.22
		TOTAL DESIGN LOAD:		46	kVA
		@ 480V, 3 PHASE:		56	AMPS

NOTE: ALL LOADS AND DEMAND FACTORS ARE IN ACCORDANCE WITH APPLICABLE SECTIONS OF NEC ARTICLE 220

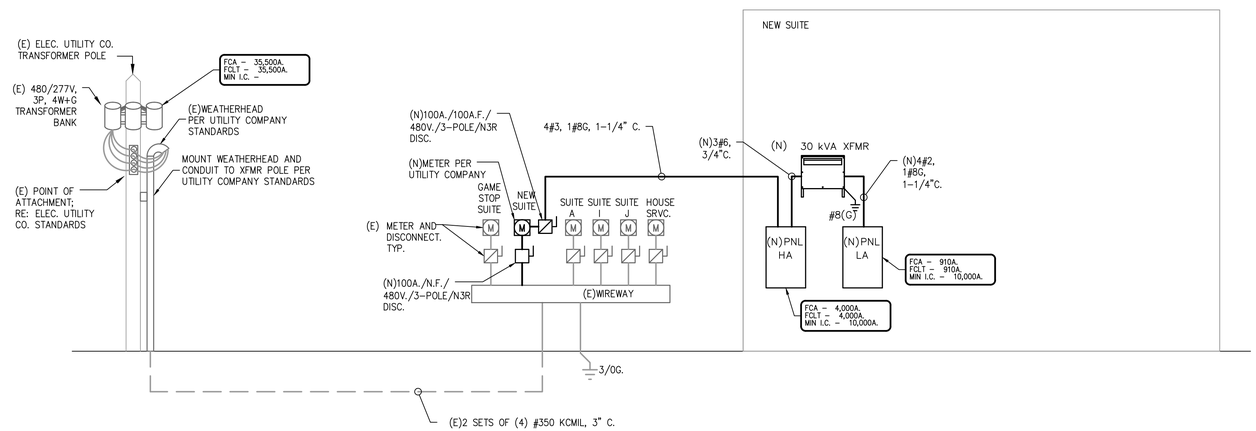


01 ELECTRICAL DISTRIBUTION DIAGRAM - DEMOLITION

SCALE: NO SCALE

PROJECT NAME:	GULF COAST EDUCATORS FCU														
PROJECT NUMBER:	26081.00														
PANEL:	HA													NEW PANEL	
VOLTAGE:	277/480V, 3PH, 4W					BUS: 100 AMP				MAINS: 100A. M.C.B.				ACCESSORIES: INSULATED GROUND	
						NEMA: 1				S.C.C.R: 10KAIC					
CODES:	0=LIGHTS 1=RECEP 2=EQUIP 3=A/C 4=HTG 5=125% LGST MTR 6=KITCHEN 7=PREVIOUSLY CALCULATED														
CODE	LOAD	CIRCUIT DESCRIPTION				BKR	CKT	PH	CKT	BKR	CIRCUIT DESCRIPTION			LOAD	CODE
0	1792	OFFICE LIGHTS				20/1	1	A	2	30/3	RTU-1			5540	3
0	620	LOBBY LIGHTS				20/1	3	B	4	--	--			5540	3
4	2000	EWH-1				20/1	5	C	6	--	--			5540	3
		SPARE				20/1	7	A	8	20/1	SPARE				
		SPARE				20/1	9	B	10	20/1	SPARE				
		SPARE				20/1	11	C	12	20/1	SPARE				
		SPARE				20/1	13	A	14	20/1	SPARE				
		SPARE				20/1	15	B	16	20/1	SPARE				
		SPARE				20/1	17	C	18	20/1	SPARE				
		SPARE				20/1	19	A	20	50/3	PANEL LA VIA 30KVA			8896	7
		SPARE				20/1	21	B	22	--	--			6571	7
		SPARE				20/1	23	C	24	--	--			8267	7
	LIGHTS	RECEP.	EQUIP.	MOTORS	EL. HEAT	PHASE				PHASE	CONN.KVA	LOAD FACTORS	DES. KVA	DES. AMP	
	1792	0	0	5540	0	A				A	16.2	LIGHTS @ 125%	7.8	28	
	620	0	0	5540	0	B				B	12.7	EQUIP. @ 100%	6.3	23	
	0	0	0	5540	2000	C				C	15.8	LG. MOTOR @125%	7.5	27	
	2412	0	0	16620	2000	TOTAL				TOTAL	44.8	RECEPS @ 10kW+50%	21.6	26	
SUB-FEED PANELS:															
							PANEL NAME			S.F. KVA	LOAD FACTORS		DES. KVA	DES. AMP	
							PANEL LA			23.7	SUB FEED @ 100%		23.7	29	
											GRAND TOTAL		45.4	55	

PROJECT NAME:	GULF COAST EDUCATORS FCU														
PROJECT NUMBER:	26081.00														
PANEL:	LA													NEW PANEL	
VOLTAGE:	120/208V, 3PH, 4W					BUS: 100 AMP				MAINS: 100A. M.C.B.				ACCESSORIES: INSULATED GROUND	
						NEMA: 1				S.C.C.R: 10KAIC					
CODES:	0=LIGHTS 1=RECEP 2=EQUIP 3=A/C 4=HTG 5=125% LGST MTR 6=KITCHEN 7=PREVIOUSLY CALCULATED														
CODE	LOAD	CIRCUIT DESCRIPTION				BKR	CKT	PH	CKT	BKR	CIRCUIT DESCRIPTION			LOAD	CODE
6	800	REF *GFCI BREAKER*				20/1	1	A	2	20/1	ITM			1200	2
1	360	BREAK ROOM GP				20/1	3	B	4	20/1	ITM			600	2
1	540	BREAK ROOM GP				20/1	5	C	6	20/1	OFFICE PC			1200	2
2	800	DATA DEDICATED				20/1	7	A	8	20/1	OFFICE G.P.			720	1
2	800	DATA DEDICATED				20/1	9	B	10	20/1	LOBBY PC			1200	2
3	3456	RTU-2				40/2	11	C	12	20/1	LOBBY GP			720	1
3	3456	--				--	13	A	14	20/1	CONFERENCE GP			720	1
3	1331	CU-1				30/2	15	B	16	20/1	EDF *GFCI BREAKER*			1200	2
3	1331	--				--	17	C	18	20/1	RR GFCI			360	1
2	300	EF-1,2,3				20/1	19	A	20	20/1	WORK AREA GP	QUAD		720	1
		SPARE				20/1	21	B	22	20/1	WORK AREA GP	QUAD		720	1
		SPARE				20/1	23	C	24	20/1	WORK AREA GP			360	1
		SPARE				20/1	25	A	26	20/1	ELECTRICAL GP			180	1
		SPARE				20/1	27	B	28	20/1	ELECTRICAL GP			360	1
		SPARE				20/1	29	C	30	20/1	WORK AREA PC			300	2
		SPARE				20/1	31	A	32	20/1	SPARE				
		SPARE				20/1	33	B	34	20/1	SPARE				
		SPARE				20/1	35	C	36	20/1	SPARE				
		SPARE				20/1	37	A	38	20/1	SPARE				
		SPARE				20/1	39	B	40	20/1	SPARE				
		SPARE				20/1	41	C	42	20/1	SPARE				
	LIGHTS	RECEP.	EQUIP.	MOTORS	EL. HEAT	PHASE				PHASE	CONN.KVA	LOAD FACTORS	DES. KVA	DES. AMP	
	0	2340	3100	3456	0	A				A	8.9	LIGHTS @ 125%	8.9	74	
	0	1440	3800	1331	0	B				B	6.6	EQUIP. @ 100%	6.6	55	
	0	1980	1500	4787	0	C				C	8.3	LG. MOTOR @125%	8.3	69	
	0	5760	8400	9574	0	TOTAL				TOTAL	23.7	RECEPS @ 10kW+50%	23.7	66	



02 ELECTRICAL DISTRIBUTION DIAGRAM - NEW WORK

SCALE: NO SCALE

ELECTRICAL DISTRIBUTION DIAGRAM NOTES:

1. CONDUCTOR SIZES SHOWN ARE FOR COPPER CONDUCTORS WITH THWN INSULATION IN EMT (4" C., OR LESS) OR RIGID CONDUIT (> 4" C.) PROVIDE GROUNDING CONDUCTORS FOR ALL CONDUIT. GROUNDING CONDUCTORS ARE NEEDED FOR ALL PVC CONDUIT.
2. SHORT CIRCUIT CURRENT VALUES ARE GIVEN IN RMS SYMETRICAL AMPERES. PREFIX 'FCA' INDICATES MAXIMUM AVAILABLE FAULT CURRENT. PREFIX 'FCLT' INDICATES APPARENT LET-THRU CURRENT FROM UPSTREAM CURRENT LIMITING DEVICE.
3. ELECTRICAL SYSTEM SHALL BE FULLY RATED. SERIES RATED EQUIPMENT IS NOT ACCEPTABLE.
4. PROVIDE FULL LENGTH, FULL SIZE INSULATED GROUND AND NEUTRAL BUS IN ALL PANELBOARDS.
5. REFER TO ELECTRICAL UTILITY SPECIFICATIONS FOR ALL WORK AT SERVICE POINT OF ATTACHMENT.
6. CONTRACTOR TO VERIFY FAULT CURRENT AVAILABLE AT UTILITY TRANSFORMER SECONDARY WITH ELECTRICAL UTILITY FOR THE FINAL SELECTION OF EQUIPMENT AIC RATINGS.
7. SPARES AND SPACES ARE INDICATED ON PANELBOARD SCHEDULES.
8. FLEXIBLE METAL CONDUIT SHALL NOT BE USED IN WET LOCATIONS OR WET AREAS.
9. ALL FEEDER AND BRANCH CIRCUIT WIRING METHODS SHALL INCLUDE AN EQUIPMENT-GROUNDING CONDUCTOR PER NEC.
10. ALL CONDUIT BELOW GRADE OR IN CONCRETE SLABS SHALL BE PVC. MAXIMUM CONDUIT SIZE FOR CONDUIT IN CONCRETE SLABS IS 3/4".
11. A PERMANENTLY AFFIXED LABEL SHALL BE APPLIED WITH THE AVAILABLE FAULT CURRENT AT THE TIME OF INSTALLATION AND CALCULATION. THE LABEL SHALL BE 2 X 3 IN SIZE AND SHALL BE BLUE LETTERING ON A CONTRASTING BACKGROUND. THIS LABEL SHALL ALSO INCLUDE THE DATE OF THE CALCULATION. COH ELECTRICAL CODE 504.1.1.

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12603 Southwest Frwy, Ste 170, Stafford, Tx 77477
Tel: (713) 840-0177 / Firm Reg. No: 5638

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HOUSTON, TEXAS 77084
713-465-4650
www.sligroup.com

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9001 Spencer Highway
Deer Park, Texas 77571
Suites B & C

E/B/E Project Number : 26081

ISSUED FOR CLIENT APPROVAL	06/24/2026
ISSUED FOR BIDDING	06/24/2026
ISSUED FOR PERMIT	06/24/2026
ISSUED FOR CONSTRUCTION	07/13/2026

REVISIONS

MARK	DESCRIPTION	DATE
	50% REVIEW SET	05/19/2026
	90% REVIEW SET	06/12/2026
	FINAL REVIEW SET	07/02/2026
	PERMIT SET	07/13/2026

STATE OF TEXAS
JOSE M. GUERRERO
154536
REGISTERED PROFESSIONAL ENGINEER
7/13/2026

DRAWING TITLE
ELECTRICAL SCHEDULES

DESIGN TEAM
P.M.: JG
MECHANICAL: CC
ELECTRICAL: JG
PLUMBING: CC
CHECKED-BY: JG

SHEET NO.
E-4.00

P:\26081\GULFCOASTEDFCU\DEERPARKTX\Arch\2026-05-07 Handoff\GCEFCU - Deer Park - detached for consultant.rvt