

208Y120V 3Ph 4W, full size neutral, w/copper ground bus (Fed from DP2)														
PANEL "L3A"														
Copper Bus Rating <b>100 AMP</b>					X MCB					New Panel				
Mains Rating (M.C.B.) <b>100 AMP</b>					MLO					Isolated Ground Bus				
1 run of 4#3, 1#6 G, 1 1/2" C					Feed Thru Lugs					SEE PLAN Location				
Feeder Ampacity = 100A					Shunt-Trip MCB					Surface Mounting				
(All Branch Breakers Shall Be Back-On Type)					10 KA A.I.C.					1 Enclosure (NEMA)				
LOAD DESCRIPTION	TYPE	LOAD KVA	LOAD AMP	WIRE/CONDUIT SIZE (Note 1)	TRIPPOLE (Note 2)	CKT #	PH #	CKT # (Note 2)	WIRE/CONDUIT SIZE (Note 1)	LOAD AMP	LOAD KVA	TYPE	LOAD DESCRIPTION	
1 D.R. Mechanical Rm. 125B Recept.	R	0.18	1.5	2#12, 1#12G, 1/2" C	20 / 1	A	2	20 / 1	2#10, 1#10G, 3/4" C (Voltage Drop)	9.0	1.08	R	6 D.R. Bedroom 114B + RR 115B	
4 D.R. Great Room 117B	R	0.72	6.0	2#12, 1#12G, 1/2" C	20 / 1	B	4	20 / 1	2#10, 1#10G, 3/4" C (Voltage Drop)	7.5	0.90	R	5 D.R. Bedroom 116B	
Great Room 117B Aquarium	MIS	1.00	8.3	2#12, 1#12G, 1/2" C	20 / 1	C	6	20 / 1	2#12, 1#12G, 1/2" C	7.5	0.90	R	5 D.R. Bedroom 120B	
4 D.R. Great Room 117B	R	0.72	6.0	2#12, 1#12G, 1/2" C	20 / 1	A	8	20 / 1	2#12, 1#12G, 1/2" C	10.5	1.26	R	7 D.R. Bedroom 123B, RR 121B, RR122B	
SPARE					20 / 1	B	10	20 / 1	2#12, 1#12G, 1/2" C	9.0	1.08	R	6 D.R. Bedroom 127B + RR126B	
SPARE					20 / 1	C	12	20 / 1	2#10, 1#10G, 3/4" C (Voltage Drop)	7.5	0.90	R	5 D.R. Bedroom 128B	
SPARE					20 / 1	A	14	20 / 1	2#10, 1#10G, 3/4" C (Voltage Drop)	9.0	1.08	R	6 D.R. Bedroom 131B + RR130B	
3 D.R. Conv. Recept. Rm. 110B-112B	R	0.54	4.5	2#10, 1#10G, 3/4" C (Voltage Drop)	20 / 1	B	16	20 / 1					SPARE	
Office (112B) Refrigerator	MIS	0.80	6.7	2#10, 1#10G, 3/4" C (Voltage Drop)	20 / 1	C	18	20 / 1					SPARE	
SPARE					20 / 1	A	20	20 / 1					SPARE	
4 D.R. Exterior Conv. Recept.	R	0.72	6.0	2#10, 1#10G, 3/4" C (Voltage Drop)	20 / 1	B	22	20 / 1	2#12, 1#12G, 3/4" C	9.8	1.2	MT	RCP-2, 1/2HP Disc30A/2P/240V/N1	
3 D.R. Exterior Conv. Recept.	R	0.54	4.5	2#10, 1#10G, 3/4" C (Voltage Drop)	20 / 1	C	24	20 / 1					SPARE	
2 D.R. Attic Conv. Recept.	R	0.36	3.0	2#10, 1#10G, 3/4" C (Voltage Drop)	20 / 1	A	26	20 / 1					SPARE	
SPARE					20 / 1	B	28	20 / 1					SPARE	
SPARE					20 / 1	C	30	20 / 1					SPARE	
SPARE					20 / 1	A	32	20 / 1					SPARE	
SPARE					20 / 1	B	34	20 / 1					SPARE	
SPARE					20 / 1	C	36	20 / 1					SPARE	
SPARE					20 / 1	A	38	20 / 1					SPARE	
SPARE					20 / 1	B	40	20 / 1					SPARE	
SPARE					20 / 1	C	42	20 / 1					SPARE	

PANEL "L3A" LOAD ANALYSIS

LOAD DESCRIPTION	TYPE	DEMAND FACTOR	LOAD (KVA)		NEC CALCULATION REFERENCE
			CONNECTED	CALCULATED	
RECEPTACLES	R	---	11.0	10.5	
MOTOR	MT	1	1.2	1.2	
MISC. NON-CONTINUOUS LOADS	MIS	1	1.8	1.8	
25% LARGEST MOTOR (1.2 KVA)	--	0.25		0.3	
TOTAL LOAD (KVA)			14.0 KVA	13.8 KVA	
TOTAL LOAD (AMP AVG)			38.7 AMP	38.2 AMP	Calc'd Amps: PhA=38A, PhB=42A, PhC=34A, Neut=7A

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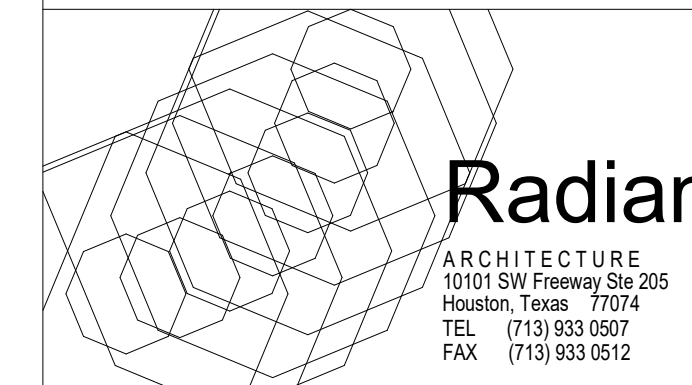
208Y120V 3Ph 4W, full size neutral, w/copper ground bus (Fed from DP2)														
PANEL "L4A"														
Copper Bus Rating <b>100 AMP</b>					X MCB					New Panel				
Mains Rating (M.C.B.) <b>100 AMP</b>					MLO					Isolated Ground Bus				
1 run of 4#3, 1#6 G, 1 1/2" C					Feed Thru Lugs					SEE PLAN Location				
Feeder Ampacity = 100A					Shunt-Trip MCB					Surface Mounting				
(All Branch Breakers Shall Be Back-On Type)					10 KA A.I.C.					1 Enclosure (NEMA)				
LOAD DESCRIPTION	TYPE	LOAD KVA	LOAD AMP	WIRE/CONDUIT SIZE (Note 1)	TRIPPOLE (Note 2)	CKT #	PH #	CKT # (Note 2)	WIRE/CONDUIT SIZE (Note 1)	LOAD AMP	LOAD KVA	TYPE	LOAD DESCRIPTION	
1 D.R. Mechanical Rm. 150B Recept.	R	0.18	1.5	2#12, 1#12G, 1/2" C	20 / 1	A	2	20 / 1	2#10, 1#10G, 3/4" C (Voltage Drop)	9.0	1.08	R	6 D.R. Bedroom 142B, RR 143B	
4 D.R. Great Room 145B	R	0.72	6.0	2#12, 1#12G, 1/2" C	20 / 1	B	4	20 / 1	2#10, 1#10G, 3/4" C (Voltage Drop)	7.5	0.90	R	5 D.R. Bedroom 144B	
Great Room 145B Aquarium	MIS	1.00	8.3	2#12, 1#12G, 1/2" C	20 / 1	C	6	20 / 1	2#12, 1#12G, 1/2" C	9.0	1.08	R	6 D.R. Bedroom 147B, RR 148B	
4 D.R. Great Room 145B	R	0.72	6.0	2#12, 1#12G, 1/2" C	20 / 1	A	8	20 / 1	2#12, 1#12G, 1/2" C	10.5	1.26	R	7 D.R. Bedroom 152B, RR 153B, RR 154B	
SPARE					20 / 1	B	10	20 / 1	2#12, 1#12G, 1/2" C	7.5	0.90	R	5 D.R. Bedroom 155B	
SPARE					20 / 1	C	12	20 / 1	2#10, 1#10G, 3/4" C (Voltage Drop)	7.5	0.90	R	5 D.R. Bedroom 156B	
SPARE					20 / 1	A	14	20 / 1	2#10, 1#10G, 3/4" C (Voltage Drop)	9.0	1.08	R	6 D.R. Bedroom 158B, RR 157B	
3 D.R. Conv. Recept. Rm. 161B-163B	R	0.54	4.5	2#10, 1#10G, 3/4" C (Voltage Drop)	20 / 1	B	16	20 / 1					SPARE	
Office (161B) Refrigerator	MIS	0.80	6.7	2#10, 1#10G, 3/4" C (Voltage Drop)	20 / 1	C	18	20 / 1					SPARE	
SPARE					20 / 1	A	20	20 / 1					SPARE	
5 D.R. Exterior Conv. Recept.	R	0.90	7.5	2#10, 1#10G, 3/4" C (Voltage Drop)	20 / 1	B	22	20 / 1	2#12, 1#12G, 3/4" C	9.8	1.2	MT	RCP-1 (Room 150B), 1/2HP Disc30A/2P/240V/N1	
3 D.R. Exterior Conv. Recept.	R	0.54	4.5	2#10, 1#10G, 3/4" C (Voltage Drop)	20 / 1	C	24	20 / 1					MIS Fountain Circuit (Provide GFCI Breaker)	
2 D.R. Attic Conv. Recept.	R	0.36	3.0	2#10, 1#10G, 3/4" C (Voltage Drop)	20 / 1	A	26	20 / 1					MIS Fountain Circuit (Provide GFCI Breaker)	
SPARE					20 / 1	B	28	20 / 1					SPARE	
SPARE					20 / 1	C	30	20 / 1					SPARE	
SPARE					20 / 1	A	32	20 / 1					SPARE	
SPARE					20 / 1	B	34	20 / 1					SPARE	
SPARE					20 / 1	C	36	20 / 1					SPARE	
SPARE					20 / 1	A	38	20 / 1					SPARE	
SPARE					20 / 1	B	40	20 / 1					SPARE	
SPARE					20 / 1	C	42	20 / 1					SPARE	

PANEL "L4A" LOAD ANALYSIS

LOAD DESCRIPTION	TYPE	DEMAND FACTOR	LOAD (KVA)		NEC CALCULATION REFERENCE
			CONNECTED	CALCULATED	
RECEPTACLES	R	---	11.2	10.6	
MOTOR	MT	1	1.2	1.2	
MISC. NON-CONTINUOUS LOADS	MIS	1	6.6	6.6	
25% LARGEST MOTOR (1.2 KVA)	--	0.25		0.3	
TOTAL LOAD (KVA)			18.9 KVA	18.7 KVA	
TOTAL LOAD (AMP AVG)			52.6 AMP	51.8 AMP	Calc'd Amps: PhA=51A, PhB=55A, PhC=49A, Neut=6A

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OPTIMUM CARE SUGAR LAND, TEXAS



Revision Schedule

#	Date	Description
3	09-04-15	PERMIT REVISIONS
4	10-26-18	ELECTRICAL REVISION

NOTES - PANEL SCHEDULES

Abbreviations: D.R.=DUPLICATE RECEPTACLE S.R.=SINGLE RECEPTACLE PC=PERSONAL COMPUTER HACR=HEATING/AIR CONDITIONING RATED BKR SWD=SWITCHING DUTY BKR GP=GENERAL PURPOSE (E)=EXISTING (N)=NEW

Note 1: Each circuit is shown as an individual homerun. Contractor may elect to combine two or three non-harmonics producing circuits in a common raceway. Contractor shall not install more than three circuits in a common conduit, except where specifically noted and allowed. Where more than three conductors are installed in a common raceway, the ampacity of all current-carrying conductors shall be derated and conductor size increased per N.E.C. 2014 Article 310.15(B)(3)(a). All wires shall have THHN/THWN insulation unless noted otherwise.

Note 2: All breakers 100Amp or less shall be rated for 75/60C wire termination. Breakers rated for only 60C wire termination shall not be used. Voltage drop - Use #10 wires for 20Amp 120V ckt's longer than 75 feet, use #10 wires for 20Amp 277V ckt's longer than 200 feet.

Note 3: All breakers greater than 100Amp shall be rated for 75C termination. N.E.C. 2014 Article 110.14(C)(1).

For 3-pole breaker, provide 3 wires + grd where neutral is not used or req'd. Similarly for 2-pole bkr, provide 2 wires + grd if neut. is not req'd.

General Notes: (A) Quantity and type of duplex & quad receptacles, light fixtures etc shown in panel schedule are for reference only, refer to plans for exact quantity of outlets, light fixtures and other devices.

(B) All underground conduit shall be a minimum size of 3/4".

(C) Each PC circuit shall have separate neutral wire. Do not share neutral wire between 2 or more circuits.

(D) Provide isolated ground for each PC circuit in pre-wired furniture system.

(E) Provide HACR rated breaker for all air-conditioning heating eqpt.

(F) Provide type-written Panel Directory with room name and devices served. Example: OFFICE 124, 3 RECEPTS

208Y120V 3Ph 4W full size neutral, w/copper ground bus (Fed from DPE2)														
PANEL "K2"														
Copper Bus Rating <b>100 AMP</b>					X MCB					New Panel				
Mains Rating (M.C.B.) <b>100 AMP</b>					MLO					Isolated Ground Bus				
1 run of 4#3, 1#6 G, 1 1/2" C					Feed Thru Lugs					SEE PLAN Location				
Feeder Ampacity = 100A					Shunt-Trip MCB					Surface Mounting				
(All Branch Breakers Shall Be Back-On Type)					10 KA A.I.C.					1 Enclosure (NEMA)				
LOAD DESCRIPTION	TYPE	LOAD KVA	LOAD AMP	WIRE/CONDUIT SIZE (Note 1)	TRIPPOLE (Note 2)	CKT #	PH #	CKT # (Note 2)	WIRE/CONDUIT SIZE (Note 1)	LOAD AMP	LOAD KVA	TYPE	LOAD DESCRIPTION	
Gas Range	MIS	0.20	1.7	2#12, 1#12G, 1/2" C	20 / 1	A	2	20 / 2	2#12, 1#12G, 1/2" C (Note 3)	14.1	1.5	MIS	Walk-in Cooler / Freezer: Freezer Cond. Unit	
***Shunt Trip for breaker above**					1 / 1	B	4			14.1	1.5	MIS	**14.1 FLA-Disc30A/2P/240V/N1NR	
Hood Lights	MIS	0.01	0.1	2#12, 1#12G, 1/2" C	20 / 1	C	6	20 / 2	2#12, 1#12G, 1/2" C (Note 3)	7.0	0.7	MIS	Walk-in Cooler / Freezer: Freezer Evap. Unit	
***Shunt Trip for breaker above**					1 / 1	A	8			7.0	0.7	MIS	**7 FLA-Disc30A/2P/240V/N1NR	
Gas Solenoid Valve	MIS	0.20	1.7	2#12, 1#12G, 1/2" C	20 / 1	B	10	20 / 1	2#12, 1#12G, 1/2" C	4.2	0.50	MIS	Walk-in Freezer: Lights, Door Heater	
***Shunt Trip for breaker above**					1 / 1	C	12	20 / 1	2#12, 1#12G, 1/2" C	4.2	0.50	MIS	Walk-in Cooler: Lights, Door Heater	
ANSUL Fire Protection System	MIS	0.50	4.2	2#12, 1#12G, 1/2" C	20 / 1	A	14	20 / 2	2#12, 1#12G, 1/2" C (Note 3)	12.1	1.3	MIS	Walk-in Cooler / Freezer: Cooler Cond. Unit	
WH-S Control Voltage	MIS	0.20	1.7	2#12, 1#12G, 1/2" C	20 / 1	B	16			12.1	1.3	MIS	**12.1 FLA-Disc30A/2P/240V/N1NR	
FCU-16 **Disc30A/2P/240V/N1N1	MIS	12	10.3	2#12, 1#12G, 1/2" C	15 / 1	C	18	20 / 1	2#12, 1#12G, 1/2" C	1.8	0.2	MIS	Walk-in Cooler / Freezer: Cooler Evap. Unit **Disc30A/2P/240V/N1NR	
MAF-2.14HP Disc30A/2P/240V/N1	MT	0.7	5.8	2#12, 1#12G, 3/4" C	20 / 1	A	20	20 / 1	2#12, 1#12G, 1/2" C	15.0	1.80	MIS	Microwave Oven - Kitchen	
KEF-2.12HP Disc30A/2P/240V/N1	MT	12	9.8	2#12, 1#12G, 3/4" C	20 / 1	B	22	20 / 1	2#12, 1#12G, 1/2" C	7.6	0.9	K	Ice Maker - Kitchen	
BAS	MIS	0.15	1.3	2#12, 1#12G, 1/2" C	20 / 1	C	24	20 / 1	2#12, 1#12G, 1/2" C	16.0	1.9	K	Dishwasher - Kitchen (GFCI Outlet or Breaker)	
Dampers	MIS	0.15	1.3	2#12, 1#12G, 1/2" C	20 / 1	A	26	20 / 1	2#12, 1#12G, 1/2" C	8.3	1.00	MIS	Kitchen Quad Recept.	
Heat Trace (GFI Breaker)	MIS	0.20	1.7	2#12, 1#12G, 1/2" C	20 / 1	B	28	20 / 1	2#12, 1#12G, 1/2" C	8.3	1.00	MIS	Kitchen Quad Recept.	
Kitchen Lights	L	0.43	3.6	2#12, 1#12G, 1/2" C	20 / 1	C	30	20 / 1	2#12, 1#12G, 1/2" C	8.3	1.00	MIS	Kitchen Quad Recept.	
SPARE					20 / 1	A	32	20 / 1	2#12, 1#12G, 1/2" C					
SPARE					20 / 1	B	34	20 / 1	2#12, 1#12G, 1/2" C	4.5	0.54	R	3 D.R. Corridor (133B) & RR Recept.	
SPARE					20 / 1	C	36	20 / 1	2#12, 1#12G, 1/2" C	15.0	1.8	MIS	MECHANICAL ECONOMIZER **Disc30A/2P/240V/N1N1	
SPARE					20 / 1	A	38	20 / 1						
SPARE					20 / 1	B	40	20 / 1						
SPARE					20 / 1	C	42	20 / 1						

PANEL "K2" LOAD ANALYSIS

LOAD DESCRIPTION	TYPE	DEMAND FACTOR	LOAD (KVA)		NEC CALCULATION REFERENCE
			CONNECTED	CALCULATED	
LIGHTING	L	1.25	0.4	0.5	125% of connected loads
RECEPTACLES	R	1	0.5	0.5	
MOTOR	MT	1	1.9	1.9	
MISC. NON-CONTINUOUS LOADS	MIS	1	18.6	18.6	
KITCHEN LOADS	K	1	2.8	2.8	NEC2014 Art. 220.56
25% LARGEST MOTOR (1.2 KVA)	--	0.25			