



01 PARTIAL DISTRIBUTION DIAGRAM
SCALE: NO SCALE

VOLTAGE DROP CALCULATION:
VOLTAGE DROP CALCULATIONS HAVE BEEN PERFORMED. NO CIRCUIT HAS A VOLTAGE DROP HIGHER THAN 3%.

ELECTRICAL LOAD ANALYSIS					
PROJECT NAME: BAGEL BEE					
PROJECT NUMBER: 26049.00					
SERVICE VOLTAGE: 120/208V, 3 PHASE, 4 WIRE, WYE					
SERVICE RATING: 400 AMPS					
GROSS AREA: 1,304 SQUARE FEET					
LOAD DESCRIPTION	CODE LOAD (kVA)	CONNECTED LOAD (kVA)	DEMAND FACTORS (%)	DESIGN LOAD (kVA)	REMARKS
LIGHTS (1.3 VA/FT ²):	1.7	2.1	125%	2.7	NEC 220.42, 43, 44, 45
SIGN LIGHTS:	0.0	125%	0.0	125%	NEC 220.14.F
SITE LIGHTS:	0.0	125%	0.0	125%	NEC 220.42, 43, 44, 45
RECEPTACLES:	2.5	10kVA+50%	2.5	25.0	NEC 220.14.H, I, J, K, 220.47
EQUIPMENT:	33.8	100%	33.8	33.8	NEC 220.14.A
WATER HEATERS:	10.0	100%	10.0	10.0	NEC 220.14.A
HVAC:	54.0	100%	54.0	54.0	NEC 220.14.C, 220.50
ELECTRIC HEAT:	5.0	100%	5.0	5.0	NEC 220.51
LARGEST MOTOR:	0.0	125%	0.0	125%	NEC 430.22
TOTAL DESIGN LOAD:					108 kVA
@ 208V, 3 PHASE:					300 AMPS

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

PROJECT NAME: BAGEL BEE											
PROJECT NUMBER: 26049.00											
PANEL: MSB											
VOLTAGE: 120/208V, 3PH, 4W											
BUS: 3000 AMP											
MAINS: M.L.O.											
ACCESSORIES: EXISTING PANEL											
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	
2	5000	SPD	80/3	1	A	2	200/3	PANEL L1	14160	2	
2	5000	---	---	3	B	4	---	---	14160	2	
2	5000	---	---	5	C	6	---	---	14160	2	
		SPARE	200/3	7	A	8	200/3	SPARE			
		---	---	9	B	10	---	---			
		---	---	11	C	12	---	---			
7	36005	PANEL BB1	400/3	13	A	14	150/3	PANEL L1	12838	2	
7	36005	---	---	15	B	16	---	---	14026	2	
7	36005	---	---	17	C	18	---	---	14670	2	
		SPARE	400/3	19	A	20	400/3	SPARE			
		---	---	21	B	22	---	---			
		---	---	23	C	24	---	---			
2	39600	BDP	600/3	25	A	26	---	SPACE			
2	39600	---	---	27	B	28	---	---			
2	39600	---	---	29	C	30	---	---			
2	50880	DP2A	800/3	31	A	32	800/3	DP3A	51680	2	
2	50880	---	---	33	B	34	---	---	51680	2	
2	50880	---	---	35	C	36	---	---	51680	2	
2	49850	DP3B	800/3	37	A	38	---	---			
2	49850	---	---	39	B	40	---	---			
2	49850	---	---	41	C	42	---	---			
LIGHTS	RECEP.	EQUIP.	MOTORS	EL. HEAT	PHASE	PHASE	CONN.KVA	LOAD FACTORS	DES. KVA	DES. AMP	
0	0	224008	0	0	A	A	260.0	LIGHTS @ 125%	224.0	1865	
0	0	225196	0	0	B	B	261.2	EQUIP. @ 100%	225.2	1875	
0	0	225840	0	0	C	C	261.8	LG. MOTOR @125%	225.8	1881	
0	0	675044	0	0	TOTAL	TOTAL	783.1	RECEPS @ 10kV+50%	675.0	1874	
SUB-FEED PANELS:											
PANEL NAME						S.F. KVA	LOAD FACTORS	DES. KVA	DES. AMP		
PANEL BB1						108.0	SUB FEED @ 100%	108.0	300		
GRAND TOTAL						783.1		2174			

- * EXISTING CIRCUIT BREAKER - ESTIMATED LOAD
- ** EXISTING SPARE CIRCUIT BREAKER
- *** EXISTING BREAKER SPACE
- **** REPLACE EXISTING BREAKER AS SHOWN

ELECTRICAL DISTRIBUTION DIAGRAM NOTES:

- 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.
- SHORT CIRCUIT CURRENT VALUES ARE GIVEN IN RMS SYMMETRICAL AMPERES. PREFIX 'FCA' INDICATES MAXIMUM AVAILABLE FAULT CURRENT. PREFIX 'FCLT' INDICATES APPARENT LET-THRU CURRENT FROM UPSTREAM CURRENT LIMITING DEVICE.
- ELECTRICAL SYSTEM SHALL BE FULLY RATED. SERIES RATED EQUIPMENT IS NOT ACCEPTABLE.
- PROVIDE FULL LENGTH, FULL SIZE INSULATED GROUND AND NEUTRAL BUS IN ALL PANELBOARDS.
- REFER TO ELECTRICAL UTILITY SPECIFICATIONS FOR ALL WORK AT SERVICE POINT OF ATTACHMENT.
- CONTRACTOR TO VERIFY FAULT CURRENT AVAILABLE AT UTILITY TRANSFORMER SECONDARY WITH ELECTRICAL UTILITY FOR THE FINAL SELECTION OF EQUIPMENT AIC RATINGS.
- SPARES AND SPACES ARE INDICATED ON PANELBOARD SCHEDULES.
- FLEXIBLE METAL CONDUIT SHALL NOT BE USED IN WET LOCATIONS OR WET AREAS.
- ALL FEEDER AND BRANCH CIRCUIT WIRING METHODS SHALL INCLUDE AN EQUIPMENT-GROUNDING CONDUCTOR PER NEC.
- ALL CONDUIT BELOW GRADE OR IN CONCRETE SLABS SHALL BE PVC. MAXIMUM CONDUIT SIZE FOR CONDUIT IN CONCRETE SLABS IS 3/4".
- 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.

PROJECT NAME: BAGEL BEE											
PROJECT NUMBER: 26049.00											
PANEL: BB1 S.1											
VOLTAGE: 120/208V, 3PH, 4W											
BUS: 400AMP											
MAINS: 400A. M.C.B.											
ACCESSORIES: INSULATED GROUND											
FEED-THRU LUGS											
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	660	SERVICE/DINING/OFFICE LIGHTING	20/1	1	A	2	20/3	LFR-FOX OVEN	960	6	
0	288	KITCHEN LIGHTING	20/1	3	B	4	---	---	960	6	
2	1200	KITCHEN HOOD	20/1	5	C	6	---	---	960	6	
0	1200	SIGN	20/1	7	A	8	20/1	36" RANGE	200	6	
		SPARE	20/1	9	B	10	---	***SHUNT TRIP***			
		SPARE	20/1	11	C	12	20/1	36" SALAMANDER	200	6	
		SPARE	20/1	13	A	14	---	***SHUNT TRIP***			
		SPARE	20/1	15	B	16	20/1	GRIDDLE	500	6	
6	1000	ICE MAKER	20/1	17	C	18	---	***SHUNT TRIP***			
2	400	HWCP-1	20/1	19	A	20	20/1	CHEF BASE REFRIGERATOR	276	6	
1	360	G.P. RECEPTACLES	20/1	21	B	22	---	***SHUNT TRIP***			
6	800	UCR *GFCI BREAKER*	20/1	23	C	24	20/3	FLOOR MIXER	3000	6	
1	540	GP	20/1	25	A	26	---	---	3000	6	
2	1200	MONITORS	20/1	27	B	28	---	---	3000	6	
6	1800	COFFEE MAKER	20/1	29	C	30	20/1	G.P.	1080	1	
6	6000	COFFEE MAKER	50/1	31	A	32	20/1	SMALL MIXER	1920	6	
6	500	ICE COFFEE MAKER	20/1	33	B	34	20/1	OFFICE PC	300	2	
6	1200	SLICER	15/1	35	C	36	20/1	OFFICE GP	540	1	
6	1700	TOASTER	20/1	37	A	38	20/1	CASH REGISTER	500	2	
6	3000	ESPRESSO	30/2	39	B	40	20/1	DISPLAY CASE REF	1110	6	
6	3000	---	---	41	C	42	30/1	DISPLAY CASE REF	3700	6	
LIGHTS	RECEP.	EQUIP.	MOTORS	EL. HEAT	PHASE	PHASE	CONN.KVA	LOAD FACTORS	DES. KVA	DES. AMP	
1860	540	10036	0	0	A	A	12.4	LIGHTS @ 125%	12.9	107	
288	360	7396	0	0	B	B	8.0	EQUIP. @ 100%	8.1	68	
0	1620	11379	0	0	C	C	13.0	LG. MOTOR @125%	13.0	108	
2148	2520	28811	0	0	TOTAL	TOTAL	33.5	RECEPS @ 10kV+50%	34.0	94	
SUB-FEED PANELS:											
PANEL NAME						S.F. KVA	LOAD FACTORS	DES. KVA	DES. AMP		
PANEL BB1 S.2						74.0	SUB FEED @ 100%	74.0	206		
GRAND TOTAL						108.0		300			

PROJECT NAME: BAGEL BEE										
PROJECT NUMBER: 26049.00										
PANEL: BB1 S.2										
VOLTAGE: 120/208V, 3PH, 4W										
BUS: 400AMP										
MAINS: MLO										
ACCESSORIES: INSULATED GROUND										
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
3	4896	RTU-1	60/3	43	A	44	90/2	EW-1	7500	4
3	4896	---	---	45	B	46	---	---	7500	4
3	4896	---	---	47	C	48	20/2	WALK IN COOLER CU	1248	2
		SPARE	20/1	49	A	50	---	---	1248	2
2	100	SF(1-3)	20/1	51	B	52	20/3	KEF-1	800	2
3	4826	AHU-1	60/2	53	C	54	---	---	800	2
3	4826	---	---	55	A	56	---	---	800	2
7	2496	CU-1	50/2	57	B	58	110/3	DOAS-1	9888	3
		---	---	59	C	60	---	---	9888	3
		SPACE	---	61	A	62	---	---	9888	3
		SPACE	---	63	B	64	---	SPACE		
		SPACE	---	65	C	66	---	SPACE		
		SPACE	---	67	A	68	---	SPACE		
		SPACE	---	69	B	70	---	SPACE		
		SPACE	---	71	C	72	---	SPACE		
		SPACE	---	73	A	74	---	SPACE		
		SPACE	---	75	B	76	---	SPACE		
		SPACE	---	77	C	78	---	SPACE		
		SPACE	---	79	A	80	---	SPACE		
		SPACE	---	81	B	82	---	SPACE		
		SPACE	---	83	C	84	---	SPACE		
LIGHTS	RECEP.	EQUIP.	MOTORS	EL. HEAT	PHASE	PHASE	CONN.KVA	LOAD FACTORS	DES. KVA	DES. AMP
0	0	2048	19610	7500	A	A	29.2	LIGHTS @ 125%	29.2	243
0	0	900	14784	7500	B	B	25.7	EQUIP. @ 100%	23.2	193
0	0	2048	19610	0	C	C	24.2	LG. MOTOR @125%	21.7	180
0	0	4996	54004	15000	TOTAL	TOTAL	79.0	RECEPS @ 10kV+50%	74.0	205

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PM	MECH	ELEC	PLBG	CHCK
JG	THV	JG	BM	JG

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ISSUED FOR CLIENT APPROVAL	DATE
ISSUED FOR BIDDING	05/08/2026
ISSUED FOR PERMIT	05/08/2026
ISSUED FOR CONSTRUCTION	

REVISIONS		
MARK	DESCRIPTION	DATE
	90% REVIEW SET	2026/04/07
	PERMIT AND BID SET	2026/05/08

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DRAWING TITLE: **ELECTRICAL SCHEDULES**
SHEET NO.: **E4.01**