PANELBOARD NOTES ( )

(1) KITCHEN EQUIPMENT SHOWN AT 65% IN PANEL TOTALS PER NEC (KITCHEN EQUIPMENT).

(2) TERMINATE GROUND ON ISOLATED GROUND BUS.

(3) ROUTE CIRCUIT THROUGH LIGHTING CONTACTOR, CONTROLLED BY TIMECLOCK. REFER TO DETAILS, SHEET 11/E-400.

(4) WIRE SIZE INCREASE DUE TO VOLTAGE DROP. SIZE EQUIPMENT GROUND CONDUCTOR PROPORTIONALLY PER NEC.

(5) REFER TO ONE-LINE DIAGRAM FOR WIRE SIZES.

(6) GFCI BREAKER

(7) INSTALL LOCKING DEVICE (LOCK-OFF FOR MAITENANCE).

PROVIDE AN ARC FLASH WARNING SIGN PER NEC 110.16.

PNL A — PANELBOARD (NEW)

MOUNTING: FLUSH
LOCATION: ELEC. CABINET
TYPE: BOLT ON W/GROUND BUS
NEMA RATING: 1

INTERIOR PANELBOARDS SHALL BE RECESSED WITH FLANGED/REMOVABLE SCREW-ON COVER. SURFACE MOUNTED PANELBOARDS OR HINGED/FLUSH COVERS NOT ALLOWED

208Y/120V, 3PH, 4W
400A M.L.O.
SERIES RATED 65/22K A.I.C.
GROUND BUS
ISOLATED GROUND

	DESCRIPTION	WIRE	BRKR	PL	KVA A	KVA B	KVA C	PL	BRKR	WIRE	DESCRIPTION	
1	WC DISPLAY LTS/MENUBRD/LED(30	12	20	1	0.275	1.00		1	20	12	FAX '87', MGR '84C', COMP '49A'	2
3	HOOD CONTL PNL 'M4'	12	20	1		0.50	0.60	1	20	12	MUSIC, VCR, MONITOR	4
5	SERVICE POS 94, PTR '86A'(2,6)	12	20	1			1.10	0.50	1	20	12	COMPUTER RECEP '83A' (2)	6
7	D.THRU POS '94','PTRS '86A'(2,6)	12	20	1	1.10	0.13		1	20	12	10J ICE MACHINE (6)	8
9	95-4-S3', FLY LT,C02 (1,6)	12	20	1		0.82		2	20	12	SPARE	10
11	RICE WARMER '54A' (1,4)	12	20	1			0.11					12
13	REF. PREP TABLE '34D' (1)	12	20	1	1.80	1.18		1	20	12	REAR DOOR - FLY FAN 'M8A'	14
15	REF. PREP TABLE "34D" (1)	12	20	1		1.08	0.10	1	20	12	FIRE SUPPRESS' SHUTDOWN RELAY	16
17	UNDER CTR FRZR '30L' (1,4)	10	20	1			1.08				SHUNT	18
19	BEVERAGE DISP.'4AB'(1)	12	20	1	1.12	1.30		1	20	10	INDUCT WELL 3F, 3G (1,4,6)	20
21	SERVING COUNTER	12	20	1		0.10	1.30	1	20	10	INDUCT WELL 3F, 3G (1,4,6)	22
23	ICE TEA BREWER '9D'	12	20	1			1.78	1.30	1	20	10	INDUCT WELL 3F, 3G (1,4,6)	24
25	FOOD PROCESSOR '53'	12	20	1	1.20	1.30		1	20	10	INDUCT WELL 3F, 3G (1,4,6)	26
27	SPARE		20	1			1.30	1	20	10	INDUCT WELL 3F, 3G (1,4,6)	28
29	WALK-IN COOLER COIL '31M'(1)	12	20	1			0.24	1.30	1	20	10	INDUCT WELL 3F, 3G (1,4,6)	30
31	RICE HOLD CAB '24H' (1,4,6)	10	20	1	1.78	1.30		1	20	10	INDUCT WELL 3F, 3G (1,4,6)	32
33	FUTURE CONTROLS (1,6)	12	20	1		0.20	0.84	1	20	12	RAD TOP HEATER '1S2B1' (1)	34
35	TIMECLOCK	12	20	1			0.01	1.10	1	20	12	RAD TOP HEATER '1S2B2' (1)	36
37	4B' BOOSTER OUTLET (6)	12	20	1	0.86	1.10		1	20	12	RAD TOP HEATER '1S2B2' (1)	38
39	HEAT WRAP '32-S7 (6)	12	20	1		0.50	0.84	1	20	12	RAD TOP HEATER '1S2B1' (1)	40
41	FLY LIGH1 (6)	12	20	1			0.18	0.84	1	20	12	RAD TOP HEATER '1S2B1' (1)	42
43	DUCT DETECTORS	12	20	1	0.20			1	20		SPARE	44
45	LTG-FOOD PRP/EF3 (3)(4)	10	20	1		1.13		1	20		SPARE	46
47	LTG DINING AREA(3)	12	20	1			0.95	1.40	2	15	12	MICROWAVE - 55A (1)	48
49	SHOW WINDOW RECEPS(3)	12	20	1	0.90	1.40							50
51	GENERAL RECEPS	12	20	1		0.72	0.18	1	20	12	FUTURE EQUIPMENT	52
53	EXTERIOR RECEPS	12	20	1			0.36		1	20		SPARE	54
55	SPARE		20	1		1.23		2	20	12	ICE MACHINE COND. '10J-S' (1)	56
57	10J ICE MACHINE (6)	12	20	1		0.13	1.23					58
59	GAS WATER HEATER - P3, (6)	12	20	1			0.96	3.33	2	40	8	WALKIN FRZR COND. '32-S1'(1,7)	60
61	ICE TEA BREWER "9D" (1,4)	10	20	1	1.78	3.33							62
63	SPARE		20	1			2.81	2	35	10	WALK IN COOL COND '31-S' (1)	64
65	SPARE		20	1				2.81					66
67	DT WINDOW 'M9A' AIR CURTAIN	12	20	1	0.50	5.52		3	50	6	RTU-3 (LENNOX)	68
69	INDUC DR WELL 3F,3G (1,4,6)	10	20	1		1.30	5.52					70
71	INDUC DR WELL 3F,3G (1,4,6)	10	20	1			1.30	5.52				72
73	ELECTRIC GRIDDLE - "23E" (1,6)	6	50	2	3.79	5.52		3	50	6	RTU-2 (LENNOX)	74
75						3.79	5.52					76
77	SPACE							5.52				78
79	SPACE					3.84		3	45	6	RTU-1 (LENNOX)	80
81	INDUC DRY WELL 3F,3G (1,4,6)	10	20	1		1.30	3.84					82
83	INDUC DRY WELL 3F,3G (1,4,6)	10	20	1			1.30	3.84				84
	PANELBOARD TOTALS CALCULATED		TOTAL		43.45	34.31	31.71	KVA				
	PER NEC ARTICLE 220				362	285.9	264.25	AMPS				
			TOTAL LOAD		109.47	KVA	304	AMPS				
			FEEDER LOAD		102.79	KVA	286	AMPS				

PROVIDE AN ARC FLASH WARNING SIGN PER NEC 110.16.

PNL B — PANELBOARD (NEW)

MOUNTING: FLUSH
LOCATION: ELEC. CABINET
TYPE: BOLT ON W/GROUND BUS
NEMA RATING: 1

INTERIOR PANELBOARDS SHALL BE RECESSED WITH FLANGED/REMOVABLE SCREW-ON COVER. SURFACE MOUNTED PANELBOARDS OR HINGED/FLUSH COVERS NOT ALLOWED

208Y/120V, 3PH, 4W
225A M.L.O.
SERIES RATED 22/10K A.I.C.
GROUND BUS

	DESCRIPTION	WIRE	BRKR	PL	KVA A	KVA B	KVA C	PL	BRKR	WIRE	DESCRIPTION	
1	BUILDING SIGN/LOGO (3)	12	20	1	1.00	1.23		2	20	10	ICE MACHINE COND. '10J-S1' (4)	2
3	EXTERIOR POLE MOUNT LTG (3,4)	10	20	1		0.59	1.23					4
5	EXTERIOR POLE MOUNT LTG (3,4)	10	20	1			0.59	0.90	1	20	12	21B MJ345 FRYER (1,6)	6
7	TICKET PRINTER	12	20	1	0.22							SPACE	8
9	BEV. DISPENSER 4AB (1,4)	10	20	1		1.12						SPACE	10
11	SECURITY/POS MONITORS	12	20	1			0.10					SPACE	12
13	HYPERACTIVE TIMER SYS.	12	20	1	0.10							SPACE	14
15	DINING TV'S	12	20	1		0.26						SPACE	16
17	EXTERIOR POLE MOUNT LTG (3,4)	10	20	1			0.30					SPACE	18
19	COKE CARBONATOR	12	20	1	0.20			3	30	10	SPARE	20
21	MONUMENT SIGN (3,4)	10	20	1		0.50						22
23	BUILDING LTG/EM (3)	12	20	1			0.10					24
25	MENUBOARD (3,4)	10	20	1	1.50	0.71		3	15	12	EF-1	26
27	DR THRU ORDER SCREEN (4)	10	20	1		1.00	0.71					28
29	RTU CONVENIENCE OUTLETS	12	20	1			0.54	0.71				30
31	CANOPY LIGHTING (3)	12	20	1	0.13	0.71		3	15	12	EF-2	32
33	CANOPY LIGHTING (3)	12	20	1		0.13	0.71					34
35	EXTERIOR MOTION SECURITY LED	12	20	1			0.71					36
37	SPARE	10	30	3		2.40		3	30	10	MAU-1	38
39							2.40					40
41								2.40				42
	PANELBOARD TOTALS CALCULATED		TOTAL		13.32	13.78	11.48	KVA				
	PER NEC ARTICLE 220				111	115	96	AMPS				
			TOTAL LOAD		38.58	KVA	108	AMPS				
			FEEDER LOAD		39.77	KVA	111	AMPS				

SES — SWITCHBOARD (NEW)

MOUNTING: SURFACE
LOCATION: OUTSIDE IN NEMA 3R ENCLOSURE

208Y/120V, 3PH, 4W
600A M.C.B.
65,000 AIC
GROUND BUS
ISOLATED GROUND

	DESCRIPTION	WIRE	BRKR	PL	KVA A	KVA B	KVA C	PL	BRKR	WIRE	DESCRIPTION	
1	PANELBOARD "A" (5)		400	3	43.49							2
3						37.12					SPACE	4
5							37.52					6
7					13.32							8
9	PANELBOARD "B" (5)		200	3		13.78					SPACE	10
11							11.48					12
13												14
15	SPACE										SPACE	16
17												18
	PANELBOARD TOTALS CALCULATED		TOTAL		56.81	50.90	49.00	KVA				
	PER NEC ARTICLE 220				474	425	409	AMPS				
			TOTAL LOAD		156.71	KVA	435	AMPS				
			FEEDER LOAD		142.56	KVA	396	AMPS				

Total VA per system

1) General Receptacles - 1st 10,000VA	=	6,800	x	1.00	=	6,800
2) General Receptacles - over 10,000VA	=		x	0.50	=	
3) Kitchen Equipment	=	48,500	x	0.65	=	31,525
4) Lighting	=	8,600	x	1.25	=	10,750
5) HVAC	=	44,600	x	1.00	=	44,600
6) Refrigeration	=	17,180	x	1.00	=	17,180
7) Continuous	=	4,356	x	1.25	=	5,445
8) Non-Continuous	=	1,400	x	1.00	=	1,400
9) Spare	=		x	1.00	=	
Total VA per system	=	131,436				117,700
Panelboard voltage	=	360				360
Total Connected Load (amperes)	=	365.1				
Total Diversified Load (amperes)	=					326.9

PANEL SCHEDULES 1

NOT TO SCALE E-601

1. UNLESS NOTED, ALL DEVICES AND TERMINATIONS 100 AMPS AND LESS TO BE RATED FOR 60°C WIRE, OVER 100 AMPS, 75°C WIRE.
2. CONTRACTOR TO SUBMIT SERVICE ENTRANCE GEAR SHOP DRAWINGS TO SERVING UTILITY COMPANY FOR APPROVAL.
3. ALL WIRE #8 AND SMALLER TO BE THWN/THHN CU.; #6 AND LARGER TO BE XHHW CU.
4. THE DESIGN PROFESSIONAL HAS PERFORMED ALL REQUIRED LOAD CALCULATIONS AND VERIFIES THAT ALL UPSTREAM PANELS AND EQUIPMENT ARE NOT OVERLOADED.
5. E.C. SHALL PROVIDE GROUNDING PER NEC ARTICLE 250, RE: 1/E400 FOR ADDITIONAL INFORMATION.

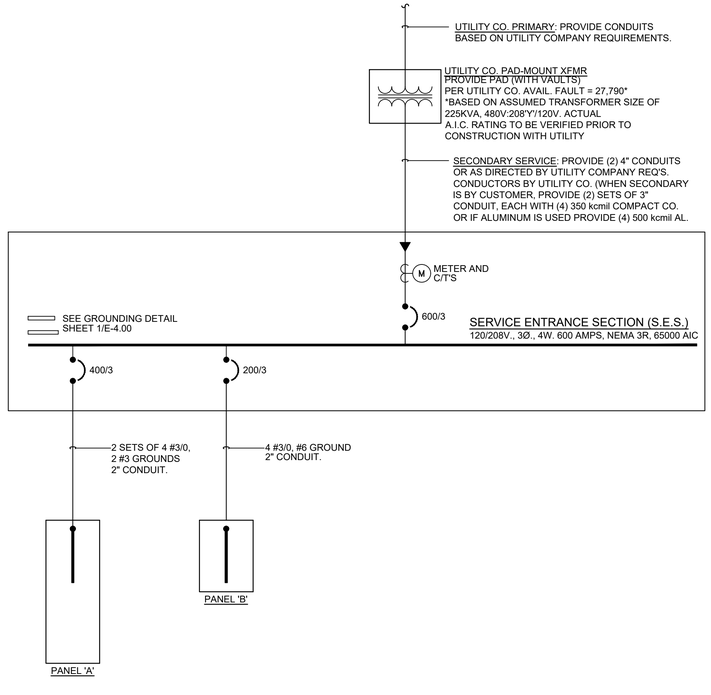
SINGLE LINE DIAGRAM GENERAL NOTES 3

NOT TO SCALE E-601

1. ENTIRE INSTALLATION TO COMPLY WITH N.E.C. 110.22 AND 240.86(B).
2. NO DESIGN CHANGES MAY BE MADE TO THE SYSTEM WITHOUT THE PRIOR APPROVAL OF THE DESIGN ELECTRICAL ENGINEER AND THE ELECTRICAL INSPECTOR.
3. A TWO TIER 65000/10000 AIC SERIES RATING SYSTEM IS SPECIFIED BETWEEN THE SES MAINS FUSES AND THE PANEL BRANCH CIRCUIT BREAKERS, NO SUBSTITUTIONS - UNLESS A FULLY RATED SYSTEM IS PROVIDED.
4. MOTOR CONTRIBUTION TO THE FAULT CURRENT IS LESS THAN 1% OF THE INTERRUPTING RATING OF THE DOWNSTREAM CIRCUIT BREAKER(S).
5. THE ELECTRICAL CONTRACTOR SHALL PROVIDE LABELS AT ALL COMPONENTS OF THE SERIES PROTECTED SYSTEM; AT PANEL 'A' STATING "CAUTION - 65/10 SERIES COMBINATION SYSTEM RATED 21,572 AMPERES. IDENTIFIED REPLACEMENT COMPONENTS REQUIRED", AT PANEL 'B' STATING "CAUTION - 65/10 SERIES COMBINATION SYSTEM RATED 20,985 AMPERES. IDENTIFIED REPLACEMENT COMPONENTS REQUIRED". IDENTIFIED REPLACEMENT COMPONENTS REQUIRED"
6. EQUIPMENT SUPPLIER TO PROVIDE CUT SHEETS OF ALL SERIES RATED COMPONENTS (I.E. FUSES, CIRCUIT BREAKERS) HI-LIGHTING EACH ITEM AND THE SPECIFIC LISTING/TESTING OF EACH ITEM'S SERIES RATING WITH THE OTHER.
7. POST THIS INFORMATION ON THE JOB-SITE WITH PERMIT FOR CITY ELECTRICAL INSPECTOR'S REVIEW/APPROVAL.

SERIES RATING NOTES 4

NOT TO SCALE E-601



SINGLE LINE DIAGRAM 2

NOT TO SCALE E-601

ELECTRICAL SERVICE ENTRANCE COORDINATION

NEW SERVICE REQUIRED: 600A, 120/208V, 3 PHASE, 4 WIRE
SERVICE TO BUILDING ROUTED: TBD
AVAILABLE FAULT CURRENT: TBD
METERING LOCATION: EXTERIOR BUILDING

UTILITY COMPANY: TBD
NAME OF CONTACT: TBD
PHONE: TBD
EMAIL: TBD

ITEMS	CONTRACTOR FURNISHED BY	CONTRACTOR INSTALLED BY	UTILITY COMPANY FURNISHED BY	UTILITY COMPANY INSTALLED BY
PRIMARY CONDUCTORS			X	X
PRIMARY TERMINATIONS			X	X
PRIMARY CONDUIT(S)	X	X		
PRIMARY TRENCH/BACKFILL	X	X		
TRANSFORMER -(CONTRACTOR TO PROVIDE PAD PER/UTILITY REQ'S.)			X	X
SECONDARY CONDUCTORS (FROM XFMR TO UTILITY METER)	X	X		
SECONDARY TERMINATIONS @ TRANSFORMER (GC PROVIDE LUGS)			X	X
SECONDARY TERMINATIONS @ SERVICE ENTRANCE	X	X		
SECONDARY CONDUIT	X	X		
SECONDARY TRENCH/BACKFILL	X	X		
METERING CT'S - TO BE DETERMINED BY UTILITY			X	X
METER HOUSING - PROVIDED BY UTILITY TO CONTRACTOR AT NO CHARGE	X	X		

CONTRACTOR NOTE:
1. CONTRACTOR TO FIELD VERIFY AND COORDINATE THEIR RESPONSIBILITIES FOR ELECTRICAL SERVICE ENTRANCE WITH ELECTRICAL SERVICE PROVIDER; AND PROVIDE BID WITH ALL ASSOCIATED COSTS WITH NO ADDITIONAL COST TO OWNER.

DESIGNER NOTE:
1. ENGINEER/DESIGNER TO MODIFY ELECTRICAL COORDINATION FORM AS PER THEIR CONVERSATION WITH UTILITY PROVIDER.

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REVISIONS:

ISSUE DATE:

1st	BUILDING PERMIT SET	03-29-21

DRAWN BY: -

PANDA PROJECT #: S8-22-D8072
PANDA STORE #: -
ARCH PROJECT #: 20044.009

STATE OF OHIO · DAVID R. LIPPE · 58822 · REGISTERED PROFESSIONAL ENGINEER · 04/02/2021

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PANDA EXPRESS

TRUE WARM & WELCOME
E. KEMPER RD & CENTURY BLVD.
CINCINNATI (SPRINGDALE), OH 45246

E-601

PANELS, SINGLE LINE, LOAD CALC'S