

PANEL 1P
120/208 VOLT, 3 PHASE, 4 WIRE
200A MCB

SURFACE MOUNTED, NEMA 3R
REFER TO FAULT CURRENT STUDY (BUS AFC) FOR MIN. AIC REQUIREMENT
PROVIDE WITH GROUND BARS

DKT	DESCRIPTION	BREAKER TRIP	POLE	VOLT	KVA	LOAD CODE	DKT	DESCRIPTION	BREAKER TRIP	POLE	VOLT	KVA	LOAD CODE
1	SPRINKLER MONITOR PANEL (1)	20	1	120	0.7	2							
3	CONTRACTOR/RECEPT	20	1	120	0.7	4							
5	EXTERIOR LIGHTINGS	20	1	120	0.4	1	6	CU-1/4MH-1	20	2	208	2.2	7
7	EXTERIOR LIGHTINGS	20	1	120	0.4	1	8						
9	EQUIPMENT ROOM RCPT/ALG/FAN	20	1	120	0.4	5	10	PUMP (1 HP)	20	2	208	1.8	4
11	IRRIGATION CONTROLLER (2)	20	1	120	0.5	7	12						
13	LIFT STATION LIGHT	20	1	120	0.2	1	14	PUMP (1 HP)	20	2	208	1.8	4
15	SPARE	20	1	120	0.2	1	16	SPARE	20	1	120	0.2	1
17	SPARE	20	1	120	0.2	1	18	SPARE	20	1	120	0.2	1
19	SITE LIGHTING	30	3	208	4.8	1	20	SITE LIGHTING	30	3	208	4.8	1
21	SPARE						22	SPARE					
23	SPARE						24	SPARE					
25	SITE LIGHTING	30	3	208	4.8	1	26	SITE LIGHTING	30	3	208	3.9	1
27	SPARE						28	SPARE					
29	SPARE						30	SPARE					
31	SITE LIGHTING	30	3	208	5.3	1	32	SITE NIGHT LIGHTING (1)	30	2	208	3.8	1
33	SPARE						34	SPARE					
35	SPARE						36	SPARE					
37	MONUMENT SIGN	20	1	120	1.2	1	38	MONUMENT SIGN	20	1	120	1.2	1
39	MONUMENT SIGN	20	1	120	1.2	1	40	MONUMENT SIGN	20	1	120	1.2	1
41	MONUMENT SIGN	20	1	120	1.2	1	42	MONUMENT SIGN	20	1	120	1.2	1

LOAD CODES: 1 LIGHTING, 2 HEAT, 3 AIR CONDITIONING, 4 MOTORS, 5 RECEPTACLES, 6 MISC. CONTINUOUS LOADS, 7 MISC. NON-CONTINUOUS LOADS, 8 KITCHEN EQUIPMENT (6 PIECES), 9 HOTEL ROOM LOADS

CONNECTED LOAD (KVA), DEMAND FACTOR, DEMAND LOAD

NOTES:
(1) PROVIDE LOCK-ON DEVICE.

GENERAL NOTES:
(1) PROVIDE A BREAKER TIE FOR ALL BRANCH CIRCUITS THAT ARE PART OF A MULTIWIRE BRANCH CIRCUIT HOMERUN.

PANEL A1
120/208 VOLT, 3 PHASE, 4 WIRE
225 A M.C.B. (MVA 200A FUSE)

SURFACE MOUNTED, NEMA 1
REFER TO FAULT CURRENT STUDY (BUS AFC) FOR MIN. AIC REQUIREMENT
PROVIDE WITH GROUND BARS

DKT	DESCRIPTION	BREAKER TRIP	POLE	VOLT	KVA	LOAD CODE	DKT	DESCRIPTION	BREAKER TRIP	POLE	VOLT	KVA	LOAD CODE
1	RECEPTABLES	20	1	120	0.5	2							
3	RECEPTABLES	20	1	120	0.7	4							
5	EMC RECEPTACLE	20	1	120	0.7	7	6	SPARE	20	1	120		
7	TELEPHONE RECEPTACLE	20	1	120	0.7	7	8	SHOW WINDOW RECEPTACLE	20	1	120	0.2	5
9	RTU-1	60	3	208	8.5	3	10	SHOW WINDOW RECEPTACLE	20	1	120	0.2	5
11	SPARE						12	SIGN	20	1	120	1.2	1
13	SPARE						14	SPARE	20	1	120		
15	RTU RECEPTACLE	20	1	120	0.2	9	16	SPARE	20	1	120		
17	WETA-HOT	20	1	120	2.4	7	18	SPARE	20	1	120		
19	SPACE						20	SPACE					
21	SPACE						22	SPACE					
23	SPACE						24	SPACE					
25	SPACE						26	SPACE					
27	SPACE						28	SPACE					
29	SPACE						30	SPACE					
31	SPACE						32	SPACE					
33	SPACE						34	SPACE					
35	SPACE						36	SPACE					
37	SPACE						38	SPACE					
39	SPACE						40	SPACE					
41	SPACE						42	SPACE					

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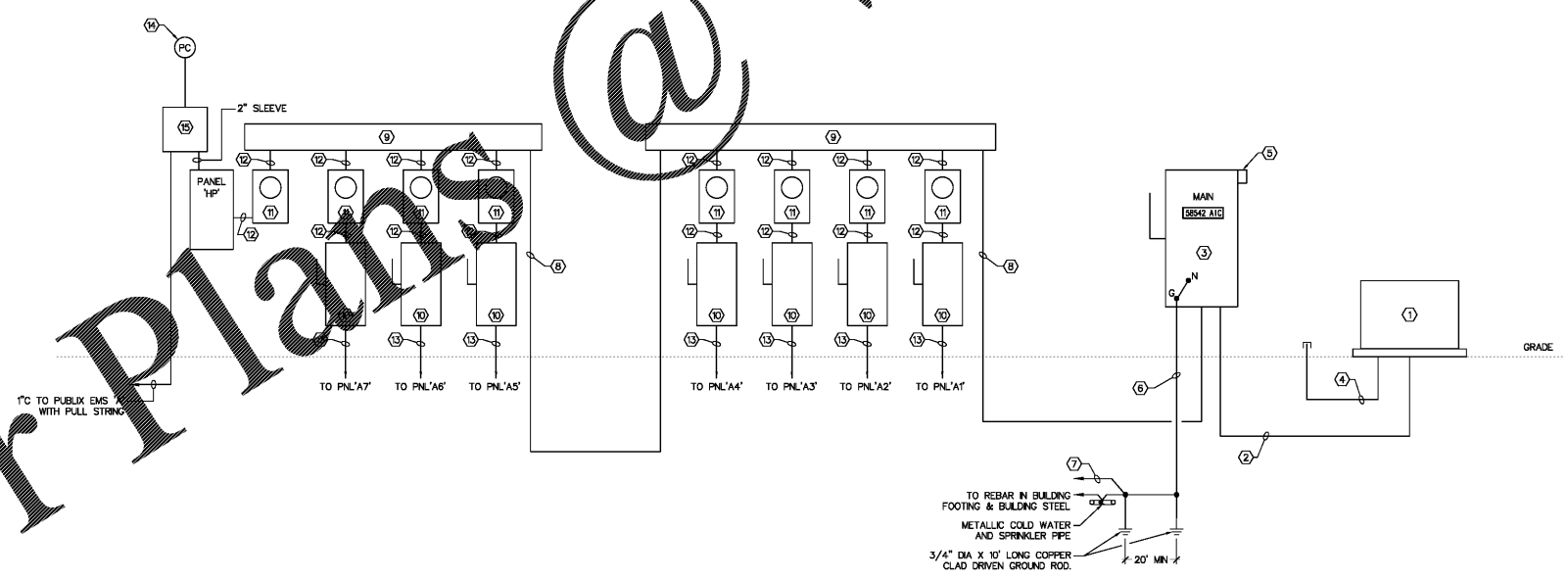
REVISED: 14-Aug-17
FAULT CURRENT STUDY
CABLE IMPEDANCE VALUES BASED ON IEEE STD. 241-1980, TABLE 65.
PROJECT: PUBLIC LEONARD RETAIL & RESTAURANT SOUTH LAKE DRIVE & PLATT SPRINGS ROAD LEVINGTON, SOUTH CAROLINA

SYSTEM VOLTAGE: 208
ASSUMED BASE KVA: 500
UTILITY COMPANY AFC: 89683
UTILITY COMPANY X/R RATIO: 12

WIRE TYPE CU-1
WIRE TYPE AL-2
PVC CONDUIT

BUS	SOURCE AFC	SOURCE X/R	WIRE SIZE	WIRE TYPE	# OF RUNS	IMP X/R	BUS AFC
MAIN	89683	12.00	800	1	3	8.17	58542
WIREWAY 1	89542	8.17	800	1	3	4.54	50338
WIREWAY 2	50338	4.54	800	1	3	3.33	39121
PANEL 1P	39121	3.33	3/0	1	1	2.14	33383
PANEL A1	30336	4.54	3/0	1	1	1.17	25289
PANEL A2	50338	4.54	3/0	1	1	1.48	31783
PANEL A3	50338	4.54	3/0	1	1	2.28	41836
PANEL A4	50338	4.54	3/0	1	1	1.80	37828
PANEL A5	39121	3.33	3/0	1	1	1.85	30894
PANEL A6	39121	3.33	3/0	1	1	2.14	34383
PANEL A7	39121	3.33	3/0	1	1	1.39	44976

ELECTRICAL CONTRACTOR SHALL CONFIRM UTILITY TRANSFORMER SIZE AND AVAILABLE FAULT CURRENT PRIOR TO ORDERING GEAR. IF UTILITY TRANSFORMER IS DIFFERENT THAN AS INDICATED ABOVE, THE ELECTRICAL CONTRACTOR SHALL CONSULT THE ENGINEER PRIOR TO PROCEEDING FOR SUITABLE AIC RATING. INTERMEDIATE SERIES RATINGS OF CIRCUIT BREAKERS IS PERMITTED. TO OBTAIN 81000 AIC RATING FOR INSTALLED TRANSFORMER FROM THE UTILITY PROVIDER AND MAKE AVAILABLE FOR INSPECTOR PRIOR TO INITIAL ELECTRICAL INSPECTION.



- NOTES
- UTILITY COMPANY PAD MOUNTED TRANSFORMER WITH 120/208 VOLT SECONDARY.
 - SERVICE LATERAL CONSISTING OF (3) PARALLEL RUNS OF 4" C WITH (4) #600 KCMIL COPPER EACH.
 - 1200 AMP HEAVY-DUTY, 3 POLE, NEMA 3R, 250 VOLT, SERVICE ENTRANCE RATED, DISCONNECT WITH SOLID NEUTRAL, FUSED AT 1200 AMPS WITH CLASS L CURRENT LIMITING FUSES. PROVIDE PLAQUE INDICATING "SERVICE MAIN" IN ACCORDANCE WITH NEC 230.70.
 - (2) 4" SPARE CONDUITS WITH PULL-STRING FOR FUTURE SERVICE. STUB UP AND CAP.
 - TYPE 1 SURGE PROTECTIVE DEVICE (SPD) PER NEC 285.
 - GROUNDING ELECTRODE CONDUCTOR TO CONSIST OF #3/0 FROM N-G BOND IN MAIN AND EXTENDED UNBROKEN TO TWO (2) 3/4" X 101' COPPER CLAD STEEL VERTICALLY DRIVEN GROUND RODS, NEAREST BUILDING STEEL BEAM, FOUNDATION STEEL (BELOW MAINS), COLD WATER PIPE AND SPRINKLER RISER (BOTH WITHIN 5FT. OF BUILDING ENTRY) IN ACCORDANCE WITH NEC 250.104. ROUTE EXTERIOR EXPOSED PORTIONS OF GEC IN PVC. ALL CONGEALED CONNECTIONS SHALL BE BY IRREVERSIBLE CONNECTION FOR THE INSTALLED USE.
 - EXTEND #6 COPPER CONDUCTOR TO TELEPHONE BOARD TELEPHONE CABINET. ROUTE EXTERIOR EXPOSED PORTIONS OF CONDUCTOR IN PVC.
 - 3 PARALLEL 3-1/2" C WITH 4 #600 KCMIL 1 #3/0 EG EACH.
 - 16"x16"x12" NEMA 3R WIREWAY WITH LOCKABLE COVER. BOND WIREWAY TO EG. EXTEND CONDUCTORS FULL LENGTH OF THE WIREWAY AND NSI POLARIS IPLD 600-12 IN A STAGGERED FASHION.
 - 200 AMP HEAVY-DUTY, NEMA 3R, 3 POLE, 250 VOLT, DISCONNECT, FUSED AT 200 AMPS WITH CLASS J FUSES.
 - PROVIDE 200AMP SELF-CONTAINED METER SOCKET. COORDINATE INSTALLATION WITH UTILITY COMPANY.
 - 2-1/2" C WITH 4 #3/0, 1 #1 EG.
 - (1) 2-1/2" C WITH 4 #3/0, 1 #6 EG. EXTENDED TO APPROPRIATE PANEL. PROVIDE (1) ADDITIONAL PARALLEL 2-1/2" EMPTY SPARE CONDUIT WITH PULLSTRING. STUB-UP AND CAP AT BOTH ENDS FOR FUTURE USE.
 - 120 VOLT PHOTO CELL MOUNTED ON WEATHERPROOF BOX ON ROOF FACING NORTH.
 - 24"x24"x6" DEEP, NEMA 3R, HINGED COVER BOX WITH CONTACTORS IN ACCORDANCE WITH SCHEDULE. REFER TO CONTROL DIAGRAM.
- GENERAL NOTES
- REFER TO FAULT CURRENT STUDY THIS SHEET FOR AVAILABLE FAULT CURRENT AT EACH PANEL (BUS AFC). EG TO ENSURE PANELBOARDS ARE SUITABLE FOR FAULT CURRENT ENVIRONMENT (BUS AFC). SERIES RATINGS WITH UPSTREAM DEVICES WILL BE ACCEPTED.
 - PROVIDE ENGRAVED PLASTIC LAMINATED SIGNS TO IDENTIFY MAINS AND SUITE NUMBERS.

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Publix/Retail @ Lake Crossing
South Lake Drive & Platt Springs Road
Levington, South Carolina

CLIENT NAME: WindCrest Companies
PROJECT NAME: Publix/Retail @ Lake Crossing
SHEET TITLE: POWER RISER DIAGRAM

No.	Description	Date
A	100% Public Submission	03/27/17
B	100% Public Submission	06/17/17
A	Issued for Bid/Permit	08/10/17

DATE: 03-17-17
DRAWN: SW
CHECKED: CB

Job Number: 51207
Colwill Engineering
Consulting Engineers, Inc.
Engineering Business No. CO 2507-PB
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