

**C2** SINGLE LINE DIAGRAM  
NO SCALE

**SINGLE-LINE DIAGRAM NOTES**

- VERIFY SERVICE LOCATIONS AND CONFORM TO THE REQUIREMENTS OF THE POWER COMPANY AND/OR DEVELOPER. POWER COMPANY AND/OR DEVELOPER SHALL BE CONTACTED PRIOR TO BEGINNING CONSTRUCTION TO ARRANGE AND VERIFY FOR THE INSTALLATION OF THE POWER COMPANY SERVICE, METER, AND OTHER ITEMS.
- GROUND ALL EQUIPMENT AND SERVICES IN ACCORDANCE WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE, LOCAL APPLICABLE CODES, AND ALL OTHERS INDICATED ON DRAWINGS.
- MAKE NECESSARY INSPECTIONS OF EXISTING SITE AND SERVICE LOCATIONS REQUIRED FOR THIS WORK AND MAKE ALLOWANCE FOR EXISTING CONDITIONS BEFORE SUBMITTING BID. VERIFY WORK REQUIRED WITH POWER COMPANY AND TELEPHONE COMPANY.
- CUT AND PATCH THE CONSTRUCTION WORK REQUIRED FOR PROPER INSTALLATION OF THE ELECTRICAL WORK. ALL PATCHING SHALL MATCH THE SURROUNDING WORK TO THE SATISFACTION OF THE ARCHITECT. ALL CONDUIT SHALL BE INSTALLED CONCEALED UNLESS SPECIFICALLY APPROVED BY THE ARCHITECT. COORDINATE WITH THE ARCHITECT, LANDLORD'S OR OWNER'S REPRESENTATIVE.
- WIRING TABLE:  
A. CONDUCTORS SHALL BE COPPER #12 MINIMUM UNLESS SPECIFICALLY NOTED OTHERWISE.  
B. CONDUIT SHALL BE AWG AND SMALLER SHALL BE SOLID AND #6 AWG AND LARGER SHALL BE STRANDED. INSULATION SHALL BE 600 VOLT, THINWALL.
- PROVIDE ENGRAVED LAMINATED PHENOLIC BLOCK-ON-WHITE (UNLESS NOTED OTHERWISE) NAMETAGS SECURED TO EQUIPMENT WITH ADHESIVE AND SCREWS FOR PANELBOARDS, RACK CABINETS, TRANSFORMERS, DISTRIBUTION BOARDS, AND MAIN PANELBOARD. IDENTIFYING EQUIPMENT DESIGNATION (CORRESPONDING WITH DESIGNATION USED ON DRAWINGS) AND EQUIPMENT VOLTAGE. LETTERING SHALL BE 1/4" HIGH. PROVIDE LABELS FOR CIRCUIT BREAKERS, FUSIBLE SWITCHES AND STARTERS IN PANELBOARDS AND DISTRIBUTION BOARDS FOR EACH DEVICE IDENTIFYING EQUIPMENT CONTROLLED. LETTERING SHALL BE 1/8" HIGH.
- ALL DEVICES SHALL HAVE AN INTERRUPTING CAPACITY NOT LESS THAN THE POWER COMPANY AVAILABLE FAULT CURRENT, OR AS INDICATED ON THE DRAWINGS.
- 120/208 VOLT BRANCH CIRCUIT PANELBOARD BREAKERS SHALL HAVE A MINIMUM U.L. SERIES RATING OF 65 KAIC WITH UP-STREAM FEEDER BREAKERS AS NOTED.
- AVAILABLE SPACE FOR MAIN PANELBOARD IS LIMITED. PANELBOARD MUST FIN IN ALLOCATED SPACE. COORDINATE WITH CONSTRUCTION AS REQUIRED.
- ALL WIRING SHALL BE IN CONDUIT, E.M.T OR RIGID. FLEXIBLE CONDUIT MAY ONLY BE USED FOR FINAL CONNECTIONS AND WITH GREEN EQUIPMENT GROUNDING CONDUCTORS.

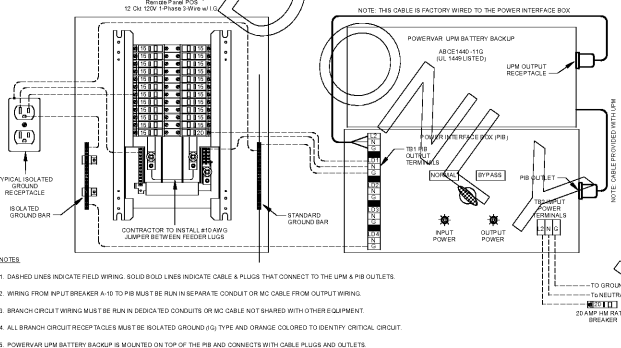
**SWITCHGEAR AND CONTROL EQUIPMENT NOTES**

- PURCHASE PANELBOARDS, SURGE ARRESTOR, AND TVSS FROM ONE OF THE TWO NATIONAL ACCOUNTS VENDORS (SEE SHEET E4.2 SECTION C16440, PANELBOARDS) PROVIDING SIEMENS OR SQUARE-D EQUIPMENT. NO SUBSTITUTIONS ALLOWED.
- PURCHASE CONTROL PANEL 'CFA-T500' FROM SUNCOAST ENVIRONMENTAL, INC. (NO SUBSTITUTIONS ALLOWED). ALL EQUIPMENT IN THE CONTROL PANEL SHALL BE INSTALLED, WIRED AND CONNECTED AT THE FACTORY, INCLUDING AUTOMATIC LIGHTING CONTROL SYSTEM, LIGHTING RELAYS, HVAC STARTERS, POWER SUPPLIES, MISCELLANEOUS RELAYS AND CONTROLS, AND THERMOSTATS.
- CONTRACTOR SHALL PROVIDE PANEL FEEDERS A, B, C, D, AND POS, BRANCH CIRCUIT CONDUIT AND WIRE, AND INSTALL ALL EQUIPMENT AS REQUIRED.
- ALL BREAKERS AND PANELS SHALL BE SIEMENS OR SQUARE-D, DEPENDING ON THE CHICK-FIL-A REGION THE STORE IS LOCATED.
- TVSS AND SURGE ARRESTOR UNITS SHALL BE MOUNTED DIRECTLY ADJACENT TO THE SIDE OF THE MAIN DISTRIBUTION PANEL IN NEMA 3R ENCLOSURES. CLOSE NIPPLE THE UNITS TO THE SIDE OF THE PANEL. PROVIDE CONNECTION OF TVSS UNIT TO BREAKER IN PANEL. CONNECT SURGE ARRESTOR TO MAIN INCOMING LUGS OF THE PANE. CONNECT USING MINIMUM LENGTH OF WIRE WITHOUT SHARP BENDS IN THE WIRE AND SHALL NOT BE LENGTHENED FROM WIRE LENGTH PROVIDED WITH THE TVSS OR SURGE SUPPRESSOR DEVICE.

**B1 CONDUIT AND CONDUCTORS SCHEDULE**

Mark No.	OCP Device (Amp/Poles)	Conductors		Conductors		Raceway Size (Nominal Inches)								
		600 C	75d C	Phase & Neutral Qty	Equip Grd Type	Min Eq Grd Qty	Size	No. Sets	EMT	IMC	RIGID	PVC	With Isolated Ground	
1	20/1	20	-	2	12	THHN	1	12	One	0.75	0.75	0.75	0.75	0.75
2	20/2	20	-	3	12	THHN	1	12	One	0.75	0.75	0.75	0.75	0.75
3	20/3	20	-	4	12	THHN	1	12	One	0.75	0.75	0.75	0.75	0.75
4	25/1	30	-	2	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75
5	25/2	30	-	3	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75
6	25/3	30	-	4	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75
7	30/1	30	-	2	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75
8	30/2	30	-	3	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75
9	30/3	30	-	4	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75
10	40/1	40	-	2	8	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75
11	40/2	40	-	3	8	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75
12	40/3	40	-	4	8	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75
13	50/1	55	-	2	6	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75
14	50/2	55	-	3	6	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75
15	50/3	55	-	4	6	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75
16	60/1	70	-	2	4	THW	1	8	One	1.25	1.00	1.00	1.25	1.00
17	60/2	70	-	3	4	THW	1	8	One	1.25	1.00	1.00	1.25	1.00
18	60/3	70	-	4	4	THW	1	8	One	1.25	1.00	1.00	1.25	1.00
19	70/1	70	-	4	THW	1	8	One	1.00	1.00	1.00	1.00	1.00	
20	70/2	-	-	4	THW	1	8	One	1.25	1.25	1.25	1.25	1.25	
21	70/3	-	-	4	THW	1	8	One	1.25	1.25	1.25	1.25	1.25	
22	80/2	85	-	3	THW	1	8	One	1.25	1.25	1.25	1.25	1.25	
23	80/3	85	-	4	THW	1	8	One	1.25	1.25	1.25	1.25	1.25	
24	95	95	-	3	THW	1	8	One	1.25	1.25	1.25	1.25	1.25	
25	90/3	95	-	4	THW	1	8	One	1.50	1.25	1.50	1.50	1.50	
26	100/2	100	-	1	THW	1	8	One	1.50	1.50	1.50	1.50	2.00	
27	100/3	100	-	1	THW	1	6	One	2.00	2.00	2.00	2.00	2.00	
28	110/2	-	-	3	THW	1	6	One	1.25	1.25	1.25	1.25	1.50	
29	110/3	-	-	4	THW	1	6	One	1.50	1.25	1.50	1.50	1.50	
30	125/2	-	-	3	THW	1	6	One	1.50	1.50	1.50	1.50	2.00	
31	125/3	-	-	4	THW	1	6	One	2.00	2.00	2.00	2.00	2.00	
32	150/2	-	-	3	THW	1	6	One	2.00	1.50	2.00	2.00	2.00	
33	150/3	-	-	4	THW	1	6	One	2.00	2.00	2.00	2.00	2.00	
34	175/2	-	-	3	THW	1	6	One	2.00	2.00	2.00	2.00	2.00	
35	175/3	-	-	4	THW	1	6	One	2.00	2.00	2.00	2.00	2.50	
36	200/2	-	-	3	THW	1	6	One	2.00	2.00	2.00	2.00	2.50	
37	200/3	-	-	4	THW	1	6	One	2.50	2.50	2.50	2.50	2.50	
38	225/2	-	-	3	THW	1	4	One	2.50	2.00	2.50	2.50	2.50	
39	225/3	-	-	4	THW	1	4	One	2.50	2.50	2.50	2.50	3.00	
40	250/3	-	-	4	THW	1	4	One	2.50	3.00	3.00	3.00	3.00	
41A	300/3	-	-	4	THW	1	4	One	3.00	3.00	3.00	3.00	3.00	
41B	300/3	-	-	4	THW	1	4	One	3.00	3.00	3.00	3.00	3.00	
42A	350/3	-	-	4	THW	1	4	One	3.00	3.50	3.50	3.50	3.50	
42B	350/3	-	-	4	THW	1	4	One	3.50	3.50	3.50	3.50	3.50	
43A	400/3	-	-	4	THW	1	3	One	3.50	3.50	3.50	3.50	3.50	
43B	400/3	-	-	4	THW	2	3	Two	2.50	2.50	2.50	2.50	2.50	
44A	600/3	-	-	4	THW	2	1	Two	3.00	3.00	3.00	3.00	3.00	
44B	600/3	-	-	4	THW	2	1	Two	3.00	3.00	3.00	3.00	3.50	
45A	800/3	-	-	4	THW	2	1/0	Two	3.50	3.50	3.50	3.50	3.50	
45B	800/3	-	-	4	THW	2	1/0	Two	4.00	4.00	4.00	4.00	4.00	
46	1000/3	-	-	4	THW	3	2/0	Three	3.50	3.50	3.50	3.50	3.50	
47	1200/3	-	-	4	THW	4	3/0	Four	3.50	3.50	3.50	3.50	4.00	
48	1600/3	-	-	4	THW	5	4/0	Five	4.00	4.00	4.00	4.00	4.00	

Notes:  
Conductors are rated at 600 volt or below and are to be copper.  
NEC Table 310.15(B)(16) - formerly Table 310.16 - is used for the basis of the conductor ampacities, which is not more than three current carrying conductors in a raceway at an ambient temperature of 30 deg C with 60 deg C rated conductors and connectors per 110.14(C)-1 for up to 100 amp rated and up to #1 AWG conductors for equipment terminations and 75 deg C rated conductors and termination connectors for larger than 100 amp or above #1 AWG conductors.  
NEC Tables 4, 5, and Appendix C is used for the basis of the conduit sizes. Table C1 for EMT, Table C4 for IMC, Table C5 for Rigid, and Table C10 for PVC (Sch 40).  
All Branch Feeders and Branch Circuits shall include a green Equipment Grounding Conductor. Omit Grounding conductor on Service Entrance Feeders.  
Omit Neutral conductor on all Delta primary transformer feeders or 3 phase loads not requiring a neutral.  
The above conductors are not calculated for Voltage Drop. Any circuits that exceed 100 feet shall be calculated by the installer to have less than a three percent voltage drop on feeders and five percent on branch circuits per the NEC.



**A1** PANEL-POS AND LAPC/PIB WIRING DIAGRAM  
NO SCALE



**INTERPLAN**  
ARCHITECTURE  
ENGINEERING  
INTERIOR DESIGN  
PROJECT MANAGEMENT

604 COURTLAND STREET SUITE 100  
ORLANDO, FLORIDA 32804  
PH 407.645.5008  
FX 407.629.9124

**CHICK-FIL-A**  
**P12\_LC\_LE\_LS\_SE**  
**SAR South Cobb Drive FSR**  
**3100 South Cobb Dr SE, Smyrna, GA 30080**

**FSR# 00810**

REVISION SCHEDULE		
NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # **2017.0165**  
PRINTED FOR **BID**  
DATE **September 06, 2017**  
DRAWN BY **MI**

**BID**  
SHEET **1** SINGLE LINE DIAGRAM AND NOTES  
SHEET NUMBER **E-502**

Order Plans

2/5/2016 8:05 PM