SPECIFICATIONS:

1. SCOPE:
   A. FURNISH ALL LABOR, MATERIAL, EQUIPMENT AND TOOLS REQUIRED TO COMPLETE INSTALLATION OF THE ELECTRICAL SYSTEM INCLUDING BUT NOT LIMITED TO WIRING, BOXES, LIGHTING FIXTURES, PANELS, SWITCHES, RECEPTACLES, DEVICES, FEEDERS, DISCONNECTS, STARTERS, FITTINGS AND ALL OTHER WORK INDICATED ON THE DRAWINGS OR AS SPECIFIED HEREIN.
   B. OBTAIN ALL PERMITS, INSPECTIONS AND APPROVALS AS REQUIRED BY THE LOCAL AUTHORITIES HAVING JURISDICTION AND DELIVER APPROVAL CERTIFICATE TO THE GENERAL CONTRACTOR. ALL ASSOCIATED FEES SHALL BE PAID BY THE CONTRACTOR.
   C. DO NOT SCALE THESE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL EQUIPMENT AND CONFORM W/ OWNER'S REPRESENTATIVE. THE CONTRACTOR IS RESPONSIBLE FOR THE SYSTEM TO BE IN COMPLETE PROPER WORKING ORDER. THIS CONTRACTOR SHALL CO-ORDINATE HIS WORK WITH OTHER TRADES TO AVOID INTERFERENCES AND DELAYS IN CONSTRUCTION.
   D. CONTRACTOR SHALL COMPLY WITH CURRENT OSHA REQUIREMENTS.
   E. ALL MATERIALS AND EQUIPMENT OF THE ELECTRICAL SYSTEM NECESSARY FOR ITS PROPER OPERATION BUT NOT SPECIFICALLY MENTIONED OR SHOWN ON THE DRAWINGS BUT REASONABLY IMPLIED, SHALL BE FURNISHED AND INSTALLED WITHOUT ADDITIONAL CHARGE.
   F. THE CONTRACTOR SHALL FULFILL ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS AND SHALL COMPLETE THE IMPROVEMENTS SHOWN ON THE DRAWINGS AND INDICATED IN THE GENERAL NOTES. ALL SYSTEMS SHALL BE FINISHED AND PROVEN TO BE OPERATIONAL AND USABLE.
   G. THE ELECTRICAL CONTRACTOR FURNISH AND INSTALL THE NECESSARY TEMPORARY POWER FOR ALL TRADES INVOLVED IN THE PROJECT ALL SYSTEMS SHALL BE FINISHED AND PROVEN TO BE OPERATIONAL AND USABLE.
   H. WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE 2014 NATIONAL ELECTRICAL CODE AND STATE OF GEORGIA LATEST AMENDMENTS.

2. SUBMITTALS AND SUBSTITUTION:
   A. WITHIN 30 DAYS AFTER AWARD OF THE CONTRACT THE CONTRACTOR SHALL SUBMIT FOR APPROVAL A COMPLETE LIST OF EQUIPMENT AND MATERIALS PROPOSED FOR THIS PROJECT. ANY EQUIPMENT OR MATERIALS NOT SUBMITTED WITHIN THIS PERIOD SHALL BE INSTALLED AS SPECIFIED.
   B. SUBMIT FOR THE ENGINEERS REVIEW 5 COPIES OF INFORMATION ON ALL DEVICES AND WIRING COMPONENTS INTENDED TO BE PROVIDED THIS INCLUDES PANELS, WIRING DEVICES, CONDUIT BOXES, WIRE AND SYSTEM DEVICES.
   C. PRODUCTS SUBSTITUTION MAY BE PROPOSED BY THE CONTRACTOR WITHIN 30 DAYS FOR ANY EQUIPMENT SPECIFIED. SUFFICIENT DETAILED INFORMATION IS TO BE FURNISHED IN ORDER FOR ANY SUBSTITUTION TO BE EVALUATED.

3. COORDINATION:
   A. COORDINATE ALL WORK WITH OTHER TRADES INVOLVED IN THIS PROJECT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE ACTUAL LOCATION OF EQUIPMENT, DUCTWORK, PIPING, ETC., AND COORDINATE HIS INSTALLATION ACCORDINGLY.
   B. VERIFY ALL EQUIPMENT LOCATIONS, HORSEPOWER, VOLTAGE, PHASE & ETC. BEFORE ROUTING CONDUIT AND WIRE TO THE EQUIPMENT NOTIFY THE ENGINEER OF ALL DISCREPANCIES.
   C. ALL MATERIAL SHALL FIT THE SPACE AVAILABLE. VERIFY DIMENSIONS AND CLEARANCES AT BUILDING BEFORE COMMENCING WORK.

4. UTILITIES:
   A. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE POWER AND TELEPHONE SYSTEMS WITH THE UTILITIES PROVIDING EACH SERVICE. AND PAY FOR ALL METERING, CURRENT TRANSFORMERS, POWER TRANSFORMERS, PAD LOCATION, AND/OR OVERHEAD SERVICE WITH THE POWER CO.
   B. STUB OUT THE TELEPHONE SERVICE AT THE ROADWAY AS DIRECTED BY THE TELEPHONE CO.
   C. ALL CONDUIT TERMINATIONS AT THE PROPERTY LINE SHALL BE MARKED WITH AN IRON STAKE DRIVEN FLUSH WITH THE FINISHED GRADE.

5. CONDUIT:
   A. ALL WIRING SHALL BE ROUTED IN CONDUIT EXCEPT LOW VOLTAGE WIRING UNLESS NOTED OTHERWISE.
   B. CONDUIT ON THE INTERIOR OF THE BUILDING SHALL BE ANODIZED OR SHERARDIZED ELECTROAL METALLIC TUBING. ALL E.M.T. FITTINGS SHALL BE COMPRESSION TYPE, NO SET SCREW FITTINGS WILL BE PERMITTED.
   C. RIGID STEEL CONDUIT SHALL BE ROUTED IN ALL AREAS EXPOSED TO THE WEATHER,. STEEL CONDUIT FITTINGS SHALL BE THREADED. ALL BUSHINGS TO HAVE BAKELITE INSERTS.
   D. ALL POLYVINYL CHLORIDE CONDUIT SHALL BE SCHEDULE 80. ALL UNDERGROUND CONDUITS TO HAVE STEEL LONG RADIUS ELBOWS.
   E. ALL CONDUITS TO BE SUPPORTED PER NEC REQUIREMENTS.

6. CONDUCTORS:
   A. ALL CONDUCTORS SHALL BE COPPER, 98% CONDUCTIVITY, STRANDED, WITH 600 VOLT NEC TYPE THHN INSULATION OF 45 MIL. THICKNESS MINIMUM.
   B. WIRING #12 & #10 SHALL BE MADE UP USING WIRE CONNECTORS, T&B SCOTCHLOK OR IDEAL WITH INTERNAL SPRINGS.
   C. WIRING #8 AND LARGER SHALL BE MADE UP WITH CONNECTORS, T&B OR O.Z.
   D. A PULLING COMPOUND APPROVED FOR USE WITH PLASTIC INSULATION SHALL BE USED AT ALL TIMES.
   E. METAL CLAD CABLE WITH LENGTHS NOT TO EXCEED 20' MAY BE USED AS PERMITTED BY LOCAL CODES.
   F. COMPLETE ELECTRICAL SYSTEMS SHALL BE PROVIDED AS SHOWN ON THE DRAWINGS AND/OR AS SPECIFIED HEREIN.
   G. ALL SYSTEMS SHALL HAVE A GROUND CONDUCTOR.

7. OUTLET BOXES:
   A. ALL DEVICES AND LIGHTING FIXTURES TO HAVE AN OUTLET BOX. LEAVE AN 8" PIGTAIL FOR CONNECTION OF DEVICES.
   B. BOXES AND COVERS SHALL BE GALVANIZED STEEL, NOT LESS THAN 1/16" THICK AND IN EVERY INSTANCE OF SUCH FORM AND DIMENSIONS AS TO BE ADAPTED TO ITS SPECIFIC USAGE.
   C. CEILING OUTLET BOXES SHALL BE 1 1/2" OR 2 1/2" DEEP, 4" OCTAGONAL.
   D. WALL OUTLET BOXES FOR TOGGLE SWITCHES AND CONVENIENCE OUTLETS SHALL BE 1 1/2" OR 2 1/2" DEEP, 4" OCTAGONAL.
   E. OUTLET BOXES IN EXPOSED CONDUIT SHALL BE CAST FERROUS ALLOY, GALVANIZED.
   F. INSTALL ALL OUTLET BOXES WITHIN 1/8" OF WALL SURFACE.

8. WIRING DEVICES:
   A. ALL DEVICES SHALL BE AS MANUFACTURED BY GENERAL ELECTRIC, PASS & SEYMOUR, ARROW-HART OR HUBBELL.
   B. WIRING DEVICES SHALL CONFORM WITH APPLICABLE SECTIONS OF NEMA STANDARD WD-1.
   (1.) DEVICE COVER PLATES
   A. ALL DEVICE COVER PLATES SHALL BE NYLON OF COLOR AS SELECTED BY OWNER.
   B. COORDINATE DEVICE COVER PLATES TO AWARE THAT ALL ARE OF THE SAME COLOR. ALL VOLTS SHALL HAVE A COVER PLATE.
   (2.) WALL SWITCHES
   A. WALL SWITCHES SHALL BE FLUSH TYPE, 20 AMPERES, 120/277 VOLTS, IVORY COLOR, SPECIFICATION GRADE, DESIGNED FOR QUIET OPERATION, WITH A GROUNDING TERMINAL.
   B. SINGLE POLE WALL SWITCHES SHALL BE EQUAL TO ARROW-HART #1991.
   C. THREE-WAY AND OTHER CONFIGURATION OF SWITCHES SHALL BE OF SAME QUALITY AND MANUFACTURERS SERIES AS SINGLE POLE SWITCHES.
   (3.) WALL RECEPTACLES
   A. DUPLEX RECEPTACLES SHALL BE SPECIFICATION GRADE, NEMA 5-15R CONFIGURATION, BACK &SIDE WIRED, WITH GROUNDING TERMINAL SCREW.
   B. DUPLEX RECEPTACLES SHALL BE EQUAL TO ARROW-HART #5262.
   C. ALL CONFIGURATION OF RECEPTACLES SHALL BE OF SAME QUALITY AND MANUFACTURES SERIES AS DUPLEX RECEPTACLES.

9. BRANCH CIRCUIT PANEL BOARDS:
   A. PANEL BOARDS SHALL BE SIEMENS, GENERAL ELECTRIC, WESTINGHOUSE OR CUTLER HAMMER.
   B. BRANCH CIRCUIT PAPERBOARDS SHALL BE FACTORY ASSEMBLED WITH CIRCUIT BREAKERS AND SPACES AS SCHEDULED ON THE DRAWINGS.
   C. LABEL PANEL AS PER ARTICLE 408.4 OF THE 2014 NEC.
   (1.) PANEL BOARDS
   A. PANEL BOARDS SHALL BE SINGLE OR THREE PHASE, TYPE NLAB FOR 208Y/120V SERVICE, OR NHAB FOR 480Y/277V SERVICE.
   B. PANEL MAINS SHALL BE COPPER OF VOLTAGE AND AMPERAGE SCHEDULED ON THE DRAWINGS.
   C. CIRCUIT BREAKERS SHALL BE QUICK LAG TYPE, BOLT-ON OF QUANTITY, VOLTAGE AND TRIP RATINGS SCHEDULED.
   D. MULTI-POLE BREAKERS SHALL BE SINGLE HANDLE, INTERNAL COMMON TRIP.
   E. ALL GROUND BUSS SHALL BE COPPER, BRAZED TO THE PANEL CAN.
   F. ALL FLUSH MTD. PANEL BOARDS TO HAVE 4-3/4" CONDUITS STUBBED INTO CEILING SPACE.
   G. A TYPEWRITTEN CARD INDICATING THE LOADS CONTROLLED BY EACH BREAKER SHALL BE PROVIDED IN EACH CABINET. LABEL SPARES & SPACES IN PENCIL.

10. DISCONNECT SWITCHES:
   A. DISCONNECT SWITCHES SHALL BE SIEMENS, GENERAL ELECTRIC, WESTINGHOUSE OR CUTLER HAMMER.
   B. DISCONNECT SWITCHES SHALL BE HEAVY DUTY, FUSIBLE OR NON FUSIBLE AS INDICATED ON THE DRAWINGS. THEY SHALL BE OF AMPERE RATING AND NUMBER OF POLES AS NOTED AND OF VOLTAGE RATING AS REQUIRED FOR THE VOLTAGE OF THE CIRCUIT IN WHICH USED.

11. INDIVIDUALLY ENCLOSED CIRCUIT BREAKERS:
   (1.) INSTALLATION
   A. CIRCUIT BREAKERS SHALL BE MOLDED CASE OF VOLTAGE RATING, FRAME SIZE, NUMBER OF POLES AND AMPERE RATINGS AS NOTED ON THE DRAWINGS.
   B. CIRCUIT BREAKERS AND DISCONNECT SWITCHES SHALL BE INSTALLED ON WALLS, PANEL BACKBOARDS, PLENUMS, ETC., AS INDICATED ON THE DRAWINGS.
   C. DISCONNECTS & OTHER DEVICES AT ROOF TOP EQUIPMENT SHALL BE MOUNTED ON 1" PLYWOOD PAINTED WITH TWO COATS OF PRIMER & E COATS OF GRAY PAINT. MOUNT PLYWOOD ON TWO ANGLE IRON RAILS MOUNTED IN PITCH POCKETS.

12. LIGHT FIXTURES:
   A. VERIFY ALL CEILING TYPES FOR RECESSED FIXTURES BEFORE ORDERING FIXTURES.
   B. LOCATION OF ALL LIGHTING FIXTURES ON THE ELECTRICAL DRAWINGS ARE APPROXIMATE, REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION.
   C. LIGHTING FIXTURES INSTALLED IN EXPOSED T BAR CEILINGS SHALL BE WITH TWO 300 POUND SAFETY CHAINS TO SUPPORT FIXTURE IN THE EVENT OF CEILING FAILURES.
   D. SURFACE MTD. LIGHTING FIXTURES INSTALLED ON EXPOSED T BAR CEILINGS SHALL USE PATENTED GRID CLIPS ON THE T BARS TO SUPPORT THE FIXTURES AND SHALL BE SUPPLIED WITH 1/2" SPACER BETWEEN FIXTURE & CEILING.
   E. RECESSED OR SURFACE LIGHTING FIXTURES INSTALLED IN CONCEALED PLASTER CEILINGS SHALL BE SUPPORTED FROM PIECES OF SUPPORT CHANNEL SPANNING ACROSS THE MAIN SUPPORT CHANNELS AND NOT DEPENDENT ON THE METAL LATH FOR SUPPORT.
   F. ALL RECESSED FIXTURES IN SUSPENDED CEILING AREAS SHALL BE INSTALLED USING FLEXIBLE CONDUIT AND #14 WIRE. THE FLEXIBLE CONDUIT SHALL BE CONNECTED TO THE FIXTURE AND COVER OF THE OUTLET BOX. DO NOT USE "DAISY CHAIN" METHOD OF THE SUITABILITY FOR SUCH USE.
   G. RECESSED INCANDESCENT FIXTURES SHALL BE EQUIPPED WITH THERMAL PROTECTION AND SHALL BEAR THE UL LABEL INDICATING THE SUITABILITY FOR SUCH USE.
   H. LENS MATERIAL FOR RECESSED FIXTURES SHALL BE ACRYLIC THICK WITH A SQUARE PRISM PATTERN SIMILAR TO KSH-12.
   I. ALL FIXTURES SHALL BE STAMPED WITH THE MANUFACTURER AND CATALOGUE NUMBER IN A PLACE CONCEALED FROM PUBLIC VIEW.
   (2.) LAMP
   A. FLUORESCENT LAMPS SHALL BE ENERGY SAVINGS, COOL WHITE, T-8 SERIES OF WATTAGE INDICATED ON THE PLANS.
   B. INCANDESCENT LAMPS SHALL BE OF THE WATTAGE INDICATED ON THE PLANS RATED AT 130V.

13. FIRE ALARM
   A. REFERENCE ARCHITECTURAL DOCUMENTS FOR ADDITIONAL INFORMATION ON DEVICE LOCATIONS.

TYPE: EQ
MAINS 200 AMPS
MOUNTING: SURFACE

NEW PANEL BOARD 'A' SCHEDULE

A/C: 10,000 MIN.
VOLTAGE: 208Y/120 VOLTS
PHASE: 3/4 WIRE
EQUIP. GROUND BUS V

CRKT NO.	TO SERV	LOAD KVA	CRKT BRKR TRIP POLES	200 AMPS a b c MCB	CRKT BRKR TRIP POLES	LOAD KVA	TO SERV	CRKT NO.
1	VEGETABLE CUTTER	0.8	20/1		20/1	0.9	REACH-IN FREEZER	2
3	PLANCHA RANGE	0.5	20/1		20/1	1.0	FOOD WARMER	4
5	6 BURNER RANGE	0.5	20/1		20/1	1.3	PIZZA PREP UNIT	6
7	WALK-IN EVAPORATOR	0.6	20/1		20/1	.4	JUICER/PUUP EXTRACTOR	8
9	WALK-IN CONDENSER	1.3	20/1		20/1	0.7	ICE CRUSHER	10
11	WAREWASHER UNDERCOUNTER	6.6	20/1		20/1	3.6	POS WITH DATA	12
13	HACKBAR COOLERS	1.7	20/1		20/1	1.8	PIZZA PREP UNIT	14
15	MIXER	1.9	20/1		20/1	1.8	WAREWASHER DOOR TYPE	16
17	ICE MACHINE	2.3	20/1		20/1	2.3	ICE MACHINE	18
19					20/1	0.8	REFRIGERATOR	20
21	EXHAUST FAN (HOOD SYSTEM)	7.1	30/3		20/1	1.7	TEA BREWER	22
23					20/1	1.4	SODA DISPENSER	24
25					20/1	1.2	CONDENSATION FOR SODA SYSTEM	26
27	MAKE-UP AIR FAN (HOOD SYSTEM)	6.8	30/3		20/1	5.0	WATER DISPENSER	28
29					20/1	1.8	BEVERAGE COOLING SYSTEM, REMOTE	30
31	CONTROLS FOR HOOD SYSTEM		20/1		20/1	1.8	GLASS CHILLER	32
33	OVEN, SMOKER	3.3	20/1		20/1	1.8	BATCH FREEZER	34
35	GREASE TANK SYSTEM	0.6				--	SPARE	36
37	SPACE	--	--			--	SPARE	38
39	SPACE	--	--			--	SPARE	40
41	SPACE	--	--		--	--	SPARE	42

CONNECTED LOAD: 65.2 KVA x 1000 / 1.732 / 208 = 180.98 AMPS

TYPE: EQ
MAINS:200 AMPS
MOUNTING: SURFACE

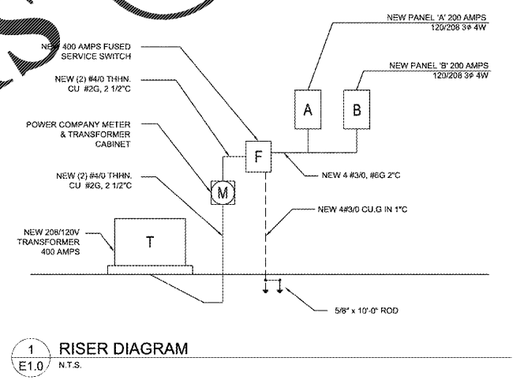
NEW PANEL BOARD 'B' SCHEDULE

A/C: 10,000 MIN.
VOLTAGE: 208Y/120 VOLTS
PHASE: 3/4 WIRE
EQUIP. GROUND BUS V

CRKT NO.	TO SERV	LOAD KVA	CRKT BRKR TRIP POLES	200 AMPS a b c MCB	CRKT BRKR TRIP POLES	LOAD KVA	TO SERV	CRKT NO.
1								2
3	BOOSTER HEATER	11.9	50/3		40/3	7.0	RTU 1	4
5								6
7	CU-A	4.3	35/2		35/2	4.3	CU-B	8
9								10
11	FURNACE A	1.7	20/1		20/1	1.7	FURNACE B	12
13	CU-C	4.3	35/2		35/2	4.3	CU-D	14
15								16
17	FURNACE C	1.7	20/1		20/1	1.7	FURNACE D	18
19	RECEPTACLES/POS (DINING AREA)	2.2	20/1		20/1	1.1	RECEPTACLES/POS (DINING AREA)	20
21	RECEPTACLES/POS (BAR AREA)	2.2	20/1		40/1	5.0	RECEPTACLES/SOUND SYSTEM/INTERNET	22
23	RECEPTACLES/POS (RESTROOM/ENTRANCE AREA)	2.0	20/1		20/1	1.0	LIGHTING (PATIO)	24
25	LIGHTING (DINING AREA)	1.4	20/1		20/1	0.5	LIGHTING (DINING AREA)	26
27	LIGHTING (BAR AREA)	0.7	20.1		20/1	0.4	LIGHTING (BAR AREA)	28
29	LIGHTING/EXHUST FANS (RESTROOM AREA)	2.0	20/1		20/1	0.1	LIGHTING KITCHEN (BACK OF HOUSE)	30
31	LIGHTING (SHOW KITCHEN)	0.2	20/1		20/1	1.0	SOFT SEATING AREA	32
33	SPACE	--	--		--	--	SPACE	34
35	SPACE	--	--		--	--	SPACE	36
37	SPACE	--	--		--	--	SPACE	38
39	SPACE	--	--		--	--	SPACE	40
41	SPACE	--	--		--	--	SPACE	42

CONNECTED LOAD: 63.7 KVA x 1000 / 1.732 / 208 = 176.82 AMPS

NOTE:
CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION OF BREAKERS AND WIRE CONNECTIONS.
IF ANY DISCREPANCIES ARE FOUND, CONTRACTOR SHALL NOTIFY TO ENGINEER PRIOR TO WORK.



1 / E1.0 RISER DIAGRAM
N.T.S.

LAPEER
ALPHARETTA, GEORGIA

ELECTRICAL NOTES & SCHEDULE

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Revision

No.	Date	By

DATE 04/03/2018
DRAWN CC
CHECKED SCH

JOB NO.

SHEET NO.
E1.0