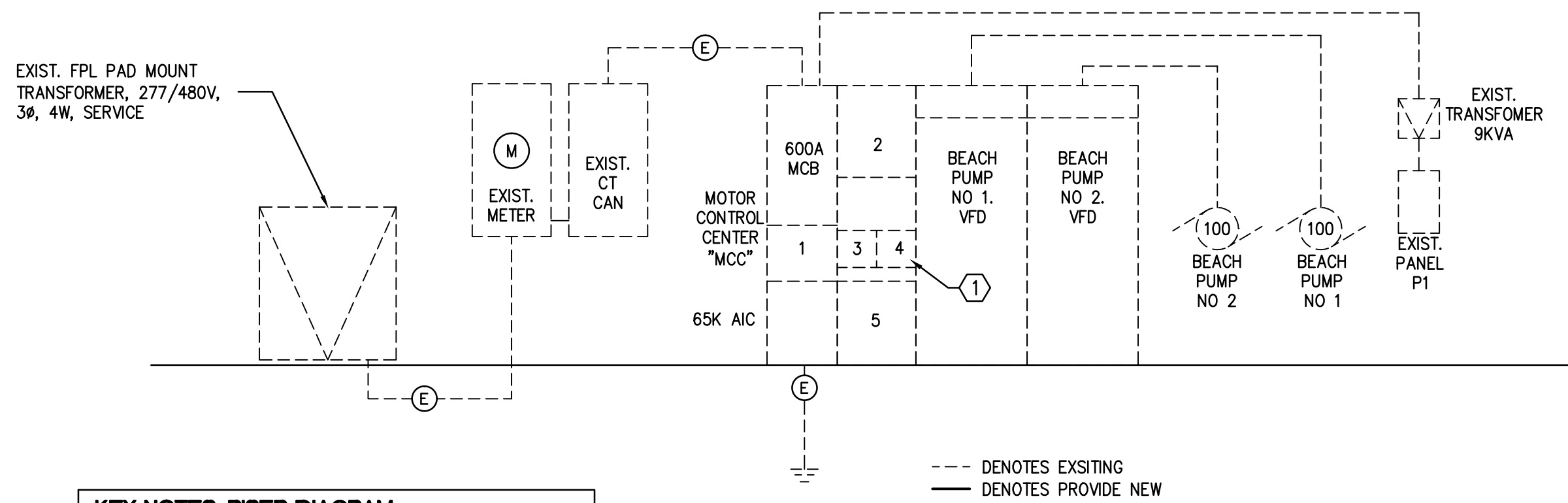
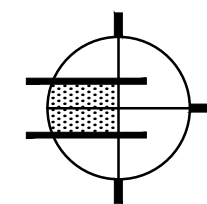


**KEY NOTES: FLOOR PLAN**

- ① EXISTING EXHAUST FAN IS TO BE RELOCATED TO THIS LOCATION. THE CONTRACTOR SHALL RELOCATE THE FAN, PROVIDE NEW WIRING AND CONDUIT AS REQUIRED FOR THE CIRCUIT. THE CONTRACTOR SHALL RELOCATE THE T-STAT TO THE WALL NEXT TO THE FAN, PROVIDE ALL WIRE AND CONDUIT AS NECESSARY.
- ② PROVIDE NEW SPST LIGHT SWITCH FOR ON/OFF CONTROL OF EXISTING LIGHTS IN THIS SPACE. PROVIDE NEW WIRE AND CONDUIT AS REQUIRED.
- ③ PROVIDE NEW EM BATTERY BACK-U LIGHT FIXTURE FOR THIS SPACE. CONNECT TO THE EXISTING LIGHTING CIRCUIT IN THE SPACE. PROVIDE NEW WIRE AND CONDUIT AS REQUIRED.
- ④ PROVIDE NEW 3/12, 1/2" C TO EXISTING RECEPTACLE CIRCUIT IN BUILDING AND CONNECT FOR OPERATION.
- ⑤ PROVIDE NEW 3#8, 1#10G, 3/4" C TO EXISTING MCC AND CONNECT TO NEW CIRCUIT BREAKER IN MCC.
- ⑥ EXISTING CHEMICAL TANK AND FEEDER IS BEING RELOCATED. THE CONTRACTOR SHALL RELOCATE THE ELECTRICAL POWER FOR THE TANK AND FEEDER TO THE NEW LOCATION. PROVIDE NEW WIRE AND CONDUIT AS REQUIRED.

**FLOOR PLAN – ELECTRICAL**

1/4" = 1'-0"



**KEY NOTES: RISER DIAGRAM**

- ① EXISTING MOTOR CONTROL CENTER SHALL REMAIN. THE CONTRACTOR SHALL UTILIZE THE EXISTING SPARE BREAKER COMPARTMENT FOR THE NEW AHU. PROVIDE NEW CIRCUIT BREAKER (35A/3P) IN SPACE. PROVIDE ALL MOUNTING HARDWARE.

**ELECTRICAL SERVICE - RISER DIAGRAM**

SCALE: NTS

**ELECTRICAL NOTES**

1. ELECTRICAL CONTRACTOR SHALL BE FULLY COGNIZANT OF THE LATEST EDITION OF THE 2014 FBC, 2011 NEC, 2012 NFPA101, 2012 NFPA72, 2012 FLORIDA FIRE PREVENTION CODE AND ALL LOCAL CODES, ORDINANCES OF THE AUTHORITIES HAVING JURISDICTION AND PERFORM ALL WORK IN ACCORDANCE WITH THE INTENT AND REQUIREMENTS OF THESE CODES, ORDINANCES AND AUTHORITIES.
2. DO NOT SCALE DRAWINGS: VERIFY DIMENSIONS IN FIELD PRIOR TO COMMENCEMENT OF ALL WORK. THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL LAYOUT OF ELECTRICAL SYSTEMS.
3. WHEREVER THE WORD "PROVIDE" IS USED, IT SHALL MEAN TO "FURNISH AND INSTALL".
4. FINAL CONNECTIONS TO EQUIPMENT SHALL BE PER MANUFACTURERS APPROVED WIRING DIAGRAMS, DETAILS AND INSTRUCTIONS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PROVIDE MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED.
5. PROVIDE WITH SHOP DRAWING SUBMITTAL, 1/4" SCALE LAYOUT DRAWINGS OF AREAS WITH ELECTRICAL SWITCHGEAR AND TRANSFORMERS. LAYOUT SHALL SHOW LOCATIONS OF AND SHALL BE COORDINATED WITH MECHANICAL EQUIPMENT AND MECHANICAL EQUIPMENT SHALL BE DRAWN TO SCALE.
6. IT IS THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS TO ESTABLISH A STANDARD OF QUALITY. THE ENGINEER RESERVES THE RIGHT TO APPROVE METHODS AND MATERIALS NOT REFLECTED HEREIN.
7. THE CONTRACTOR SHALL REVIEW ARCHITECTURAL, STRUCTURAL AND MECHANICAL DRAWINGS AND SHALL PROVIDE LIGHTS, SWITCHES, RECEPTACLES, TELEPHONE OUTLETS, EQUIPMENT CONNECTIONS, ETC. AND ASSOCIATED CIRCUITING IN NEW AND REMODELED AREAS, EVEN IF SUCH AREAS ARE NOT SHOWN ON THE ELECTRICAL DRAWINGS. LAYOUTS, FIXTURE TYPES, QUANTITIES AND SPACING SHALL BE IN ACCORDANCE WITH SIMILAR AREAS ON THIS PROJECT. THE CONTRACTOR SHALL INCLUDE COSTS FOR THE ABOVE IN HIS BID. IN ADDITION, THE CONTRACTOR SHALL PROVIDE LAYOUT DRAWINGS FOR WORK IN SUCH AREAS AND SUBMIT FOR APPROVAL PRIOR TO ROUGH-IN.
8. THE CONTRACTOR SHALL REVIEW ARCHITECTURAL, STRUCTURAL, MECHANICAL AND OTHER DRAWINGS PRIOR TO BID AND SHALL COORDINATE ALL TRADES TO PROVIDE A COMPLETE PRODUCT TO AVOID CONFLICTS BETWEEN TRADES, AND TO DETERMINE WHICH TRADE IS TO PERFORM THE NECESSARY WORK. COORDINATION BETWEEN TRADES SHALL INCLUDE LOW VOLTAGE WIRING.
9. PROVIDE SUBSTITUTIONS OF ELECTRICAL EQUIPMENT OR REQUEST FOR "OR EQUIVALENT" OR "APPROVED EQUIVALENT" LISTING SHALL BE SUBMITTED TO THE ARCHITECT NOT LESS THAN TEN (10) WORKING DAYS PRIOR TO BID. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
10. WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER TO THE SATISFACTION OF THE ARCHITECT.
11. ALL EQUIPMENT AND MATERIALS PROVIDED SHALL BE NEW AND IN CONFORMANCE WITH APPLICABLE PROVISIONS OF NEMA, ANSIS U.L., ETC AND SHALL BEAR AN APPROVED TESTING AGENCY LABEL WHERE APPLICABLE.
12. PROVIDE PERMITS AND INSPECTIONS AS REQUIRED.
13. GUARANTEE THE INSTALLATION AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP WHICH MAY OCCUR UNDER NORMAL USAGE FOR A PERIOD OF ONE YEAR AFTER OWNER'S ACCEPTANCE. DEFECTS SHALL BE PROMPTLY REMEDIED WITHOUT COST TO THE OWNER.
14. PROVIDE RECORD DRAWINGS TO THE BUILDING OWNER AND ARCHITECT WITHIN 30 DAYS AFTER SYSTEM ACCEPTANCE, PER FBC 13-413.1.ABC.2.1. DRAWINGS SHALL INCLUDE ALL ADDENDUM ITEMS, CHANGE ORDERS, ALTERATIONS, REROUTINGS, ETC.
15. VERIFY EXACT LOCATION OF EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH-IN. MODIFICATIONS REQUIRED DUE TO LACK OF COORDINATION BY CONTRACTORS, WILL BE DONE AT NO ADDITIONAL COST TO THE OWNER.
16. SYSTEMS SHALL BE TESTED FOR PROPER OPERATION. IF TESTS SHOW THAT WORK IS DEFECTIVE, THE CONTRACTOR SHALL MAKE CORRECTIONS NECESSARY AT NO COST TO THE OWNER.
17. THE CONTRACTOR SHALL PROVIDE OPERATING MANUALS TO THE OWNER, PER FBC 13-413.1.ABC.2.2.
18. THE CONTRACTOR SHALL COORDINATE WITH FPL ALL REQUIREMENTS FOR CONDUIT ENTRY AND CABLE TERMINATIONS IN THE UTILITY TRANSFORMER. ANY CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER PRIOR TO COMMENCEMENT OF WORK.
19. THE CONTRACTOR SHALL COORDINATE WITH THE TELEPHONE UTILITY FOR PROVIDING THE REQUIRED CONDUIT SIZE AND NUMBER TO THE TENANT SPACE. THE CONTRACTOR SHALL PROVIDE ALL CONDUITS WITH PULL CORDS AND SHALL INSTALL FROM THE LOCAL TELEPHONE BOARD TO THE MAIN POINT OF SERVICE.
20. WIRE SHALL BE COPPER, 75 DEGREES C RATED FOR GENERAL USE, FOR HID FIXTURES AND WIRING WITHIN 3 INCHES OF FLUORESCENT BALLAST WIRE SHALL BE COPPER, MINIMUM 90 DEGREES C RATED. SIZES INDICATED ARE FOR INSTALLATION IN A MAXIMUM 30 DEGREES C AMBIENT. CONDUCTOR AMPACITY SHALL BE DERATED FOR HIGHER AMBIENT INSTALLATIONS. THE CONTRACTOR SHALL INCREASE THE SIZE OF THE CONDUCTOR TO MEET VOLTAGE DROP REQUIREMENTS WHERE FIELD CONDITIONS INCREASE THE CONDUIT RUN LENGTH SUCH THAT THE VOLTAGE DROP IS EFFECTED.
21. PRESENT SHOP DRAWING SUBMITTAL DATA AT ONE TIME, BOUND IN THREE-RING BINDERS, INDEXED IN A NEAT AND ORDERLY MANNER. PARTIAL SUBMITTALS WILL NOT BE ACCEPTED. SUBMITTALS SHALL INCLUDE, BUT NOT BE LIMITED TO: LIGHTING FIXTURES, SWITCHGEAR, PANELBOARDS, WIRING DEVICES, SAFETY SWITCHES, FUSES, MOTOR STARTERS, LAMPS, CONDUIT, CONDUIT FITTINGS AND TRANSFORMERS.
22. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING EQUIPMENT WHICH IS DAMAGED DUE TO INCORRECT FIELD WIRING PROVIDED UNDER THIS SECTION OR FACTORY WIRING IN EQUIPMENT PROVIDED UNDER THIS SECTION.
23. CONTRACTOR'S FAILURE TO ORDER OR RELEASE ORDER FOR MATERIALS AND/OR EQUIPMENT WILL NOT BE ACCEPTED AS A REASON TO SUBSTITUTE ALTERNATE MATERIAL, EQUIPMENT OR INSTALLATION METHODS.
24. SYSTEMS SHALL BE COMPLETE, OPERABLE AND READY FOR CONTINUOUS OPERATION. LIGHTS, SWITCHES, RECEPTACLES, MOTORS, ETC., SHALL BE CONNECTED AND OPERABLE.
25. VERIFY EXACT LOCATIONS OF EXISTING AND NEW UNDERGROUND UTILITIES, PIPING AND RACEWAY SYSTEMS PRIOR TO TRENCHING. PROVIDE NECESSARY TRENCHING, BACKFILL, EXCAVATION, SUPPORTS, SERVICE FEEDERS (CONDUIT AND/OR WIRE), PULL BOXES, TRANSFORMER PAD, SAW CUTTING AND PATCHING, CONCRETE/PAVING, ETC., REQUIRED BACKFILL TRENCHED TO 90% COMPACTION AND PATCH TO MATCH EXISTING. CONTRACTOR SHALL OBTAIN AND VERIFY EXACT UTILITY COMPANY DRAWINGS AND REQUIREMENTS.
26. DEVICES SHALL BE AS FOLLOWS:
  - A. RECEPTACLES – HUBBELL #362 SERIES
  - B. SWITCHES – HUBBELL #221 SERIES
  - C. DIMMERS – LUTRON "NOVA" SERIES
  - D. THE COLOR OF THE DEVICES AND COVER PLATES SHALL BE AS DIRECTED BY ARCHITECT. IN DAMP OR WET LOCATIONS COVER PLATES SHALL BE STAINLESS STEEL. IN DRY LOCATIONS COVER PLATES SHALL BE SMOOTH HIGH ABUSE NYLON OR EQUIVALENT. PROVIDE COVER PLATES FOR SWITCHES, RECEPTACLES, TELEPHONE, TELEVISION, COMPUTER, AND J-BOX OUTLETS AS REQUIRED.
27. BOXES FOR TELEPHONE, T.V., COMPUTER, WIRING DEVICES, ETC., SHALL BE MINIMUM 4" SQUARE. THE CONTRACTOR SHALL COORDINATE WITH THE ARCHITECTURAL AND INTERIOR DRAWINGS FOR ALL ROUGH-IN LOCATIONS FOR APPLIANCES. IF NO LOCATION IS INDICATED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING FOR CLEARIFICATION.
28. STEEL TYPE "MC" CABLE #12 AWG AND #10 AWG WITH A FULL SIZED GROUNDING CONDUCTOR MAY BE USED WHERE PERMITTED BY BOTH THE N.E.C. AND LOCAL ORDINANCE, IN THE FOLLOWING APPLICATIONS:
  - 1. IN WALLS FOR HORIZONTAL DEVICE CONNECTION ONLY. HOMERUNS TO PANELBOARDS SHALL BE EMT OR PVC (BELOW GRADE).
29. DISCONNECT SWITCHES SHALL BE GENERAL DUTY TYPE. FUSIBLE SWITCHES SHALL ACCEPT CLASS "R" FUSES ONLY AND REJECT ALL OTHERS.
30. PROVIDE TWO (2) SETS OF THREE (3) SPARE FUSES FOR EACH SIZE AND TYPE PROVIDED ON THIS PROJECT. INSTALL FUSES IN A HINGED DOOR, SHEET METAL STORAGE CABINET EQUIPPED WITH CLIPS OR CUBICLES, EACH MARKED WITH THE SIZE AND TYPE FUSE STORED THEREIN. PROVIDE NAMEPLATE "SPARE FUSES". INSTALL IN LOCATIONS AS DIRECTED BY OWNER.
31. CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE AND FUSES SHALL BE BUSSMANN OR LITLUSE.
32. ALL WIRING SHALL BE INSTALLED IN LISTED METALLIC RACEWAYS. RACEWAYS IN SLAB-ON-GRADE OR BELOW GRADE SHALL BE SCHEDULE 40 PVC. TRANSITIONS FROM BELOW TO ABOVE GRADE SHALL BE WITH RIGID STEEL ELBOWS WITH P.V.C. JACKET OR APPROVED EQUIVALENT PROTECTION. MET FITTINGS SHALL BE MALLEABLE IRON OR STEEL. CONNECTORS SHALL BE INSULATED THROAT TYPE.
33. FINAL CONNECTIONS TO MOTORS, TRANSFORMERS AND OTHER VIBRATING EQUIPMENT SHALL BE WITH SEAL TIE FLEX AND APPROVED FITTINGS. DO NOT SECURE CONDUITS, DISCONNECTS OR DEVICES TO DUCTWORK OR MECHANICAL EQUIPMENT.
34. ALL ELECTRICAL SYSTEMS COMPONENTS SHALL BE LISTED OR LABELED BY U.L. OR OTHER RECOGNIZED TESTING FACILITIES.
35. WIRE TERMINATION PROVISIONS FOR PANELBOARDS, CIRCUIT BREAKERS, SAFETY SWITCHES, AND ALL OTHER ELECTRICAL APPARATUS SHALL BE LISTED AS SUITABLE FOR 75 DEGREE C.
36. ELECTRICAL CONTRACTOR SHALL PROVIDE CONTROLS, INTERLOCKS, ACCESSORIES, ETC., IN MOTOR CONTROL STARTERS AS REQUIRED BY THE TEMPERATURE CONTROL CONTRACTOR. STARTERS SHALL CONTAIN 120V CONTROL TRANSFORMER, PILOT LIGHT, AND PUSH BUTTONS OR SELECTOR SWITCH AS REQUIRED, IN ADDITION TO OTHER ITEMS (AUXILIARY CONTACTS, DOOR SWITCHES, RELAYS, ETC.) REQUIRED. SUBMIT ELEMENTARY CONTROL DIAGRAMS FOR APPROVAL. SUBMITTALS SHALL INCLUDE INDICATION OF PRIOR REVIEW AND ACCEPTANCE BY TEMPERATURE CONTROL CONTRACTOR. REFER TO DIV. 15 DRAWINGS AND TEMPERATURE CONTROL DIAGRAMS FOR ADDITIONAL CONDUIT, WIRE, RELAYS, TRANSFORMERS, CONNECTIONS, ETC. REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
37. PROVIDE EXPANSION FITTINGS IN CONDUIT RUNS CROSSING STRUCTURAL EXPANSION JOINTS.
38. VOLTAGE DROP CALCULATIONS ON ALL FEEDERS AND BRANCH CIRCUITS HAVE BEEN PERFORMED IN ACCORDANCE WITH THE STATE OF FLORIDA ENERGY CODE CHAPTER 13 (C405.7.3.1 & C405.7.3.2). THE CONTRACTOR IS RESPONSIBLE TO BE FAMILIAR WITH CHAPTER 13 AND SHALL UPSIZE THE CONDUCTORS FOR FEEDER AND BRANCH CIRCUITS BASED ON THE ACTUAL ROUTING IN THE FIELD.
39. ADDITIONAL NOTES FOR NEW PANELBOARDS:
  - A. PROVIDE LIGHTING AND RECEPTACLE PANELS AS INDICATED ON THE PLANS AND AS SPECIFIED HEREIN. ALL PANELS SHALL BE DEAD FRONT, CIRCUIT BREAKER TYPE, AND SHALL BEAR THE U.L. LABEL AS WELL AS MEET ALL APPLICABLE NEMA REQUIREMENTS.
  - B. UNLESS OTHERWISE NOTED, TOP OF PANELS SHALL BE MOUNTED 6'-0" A.F.F.
  - C. ALL PANELS SHALL HAVE TYPEWRITTEN CIRCUIT DIRECTORIES MOUNTED INSIDE OF DOOR.
  - D. PANELS SHALL BE SUITABLE FOR THE SERVICE RATING AND THE A.I.C. RATING INDICATED ON THE PANEL SCHEDULES.
  - E. ALL BREAKERS SHALL BE FULL SPACED, INDIVIDUAL FRAME TYPE, BOLT-ON E. TYPE. NO "PIGGY-BACK" OR TANDEM BREAKERS WILL BE PERMITTED.
  - F. CONTRACTOR SHALL PROVIDE ON ALL FLUSH (RECESSED) MOUNTED PANELS TWO (2), SPARE 2" CONDUITS STUBBED INTO THE CEILING SPACE.
  - G. ALL CURRENT CARRYING BUS BARS SHALL BE COPPER.

**ELECTRICAL SYMBOL LIST**

S	WALL SWITCH – 1 POLE – 125V – 20 AMP. MOUNT 46" A.F.F. 42" A.F.F. @ COUNTERTOPS OR AS NOTED. QUIET TYPE.
⊞	LINE VOLTAGE OCCUPANCY SENSOR SWITCH – 120V-800W-6.7 AMP, MOUNT 46" A.F.F. OR AS NOTED. DUAL TECHNOLOGY
⊞	DUPLEX RECEPTACLE – 125V – 20 AMP – NEMA 5-20R, MOUNT 15" A.F.F. (STANDARD), 42" A.F.F. @ COUNTERTOPS OR AS NOTED
GF I	DUPLEX RECEPTACLE ON GROUND FAULT INTERRUPTER CIRCUIT. 125V – 20 AMP – NEMA 5-20R
⊞	JUNCTION BOX MOUNTED ABOVE CEILING.
⊞	EXHAUST FAN – FRACTIONAL HORSEPOWER.
⊞	MOTOR – NUMBER DENOTES HORSEPOWER.
⊞	PANELBOARD
3P NE 30	NON-FUSED DISCONNECT SWITCH.
3P 20 30	FUSED DISCONNECT SWITCH OR CIRCUIT BREAKER ENCLOSURE.
⊞	PUSH BUTTON
W.P.	WEATHERPROOF
V.P.	VAPOR PROOF
I.G.	ISOLATED GROUND
N.L.	NIGHT LIGHT
EM.	EMERGENCY

anderson architecture, inc.

399 CAMINO GARDENS BLVD. SUITE 202 BOCA RATON, FLORIDA 33432  
V: 561.362.0220 F: 561.362.0224  
www.andersonarchitecture.com

consultant:

**TYECO** HVAC PLUMBING ELECTRICAL  
THOMPSON & YOUNGROSS ENGINEERING CONSULTANTS, LLC

CERTIFICATE OF AUTHORIZATION NO. 25996

902 CULM MOORE ROAD SUITE 142 BOCA RATON, FLORIDA 33487  
TEL: 561-274-0200 FAX: 561-274-0222  
E-MAIL: tyco@tyeco.com www.tyeco.com

seal:

ANDREW J. YOUNGROSS  
LICENSE  
NO. 5758  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER

**A Renovation For:  
Hillsboro Beach Pump Station**

1210 Hillsboro Mile  
Pompano Beach, Florida 33062

revision: \_\_\_\_\_  
date: \_\_\_\_\_

commission: 16-022  
principal: DET/AJY  
project manager: AJY

file name: 16045-TB  
date: 06.21.2016  
title: FLOOR PLAN – ELECTRICAL

**NOTE**  
THESE DRAWINGS ARE PREPARED PER ESTABLISHED INDUSTRY STANDARDS AND REPRESENT THE ENGINEERS DESIGN CONCEPT. THEY ARE NOT INTENDED TO PROVIDE EVERY DETAIL OR CONDITION REQUIRED TO CONSTRUCT THE BUILDING. THE CONTRACTOR THROUGH SUBMITTALS AND OTHER COORDINATION EFFORTS IS FULLY RESPONSIBLE FOR PROVIDING A COMPLETE AND OPERATIONAL BUILDING WHETHER INDICATED ON THE P L A N S O R N O T .

of 1 E