

ENGINEERING

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H2E PROJECT No. 1105

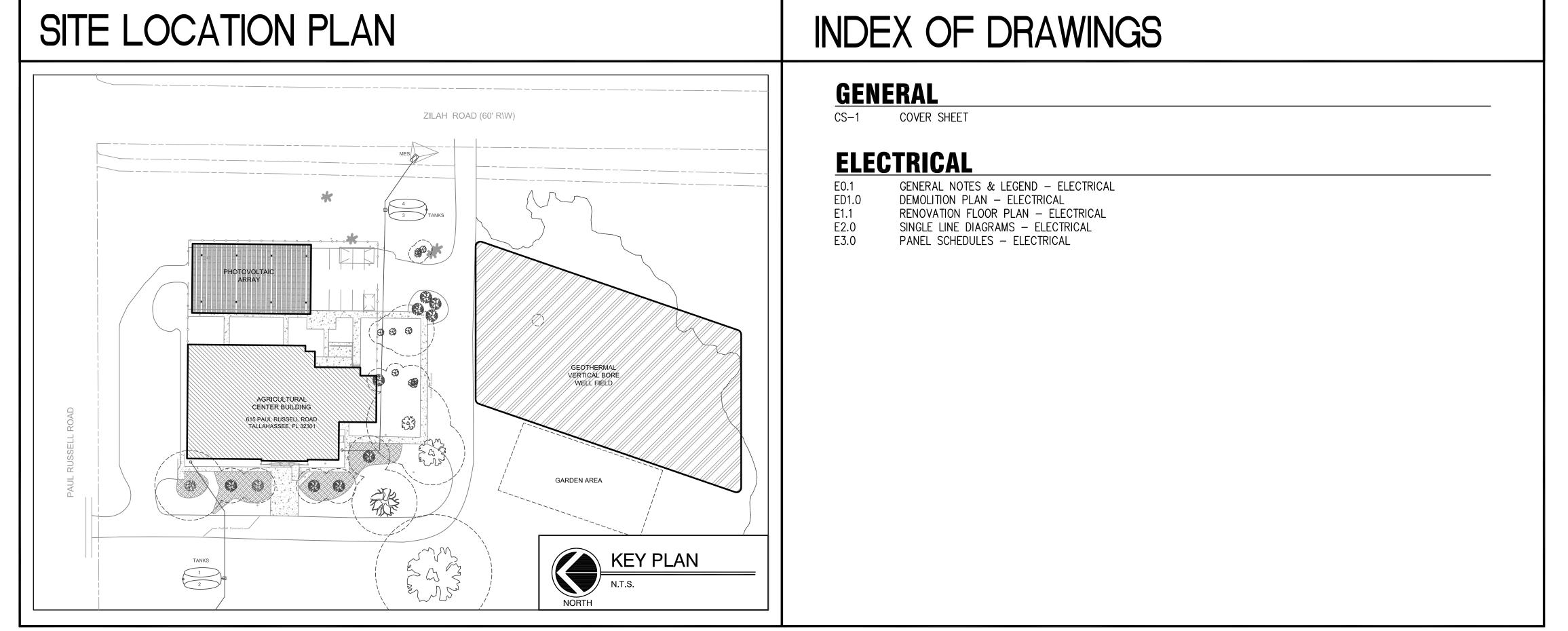
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Leon County Facilities Management & Construction Tallahassee, FL

100% CONSTRUCTION DOCUMENTS

Bid Package No. 3 - Electrical





Leon County -Sustainable Demonstration Center

10522 Drawn By: REM/KAS
Project Code Checked By: PCL/RRB

12 SEPTEMBER 2011

100% Construction Documents

COVER SHEET BID PACKAGE 3



LIGHTING FIXTURE SCHEDULE LIGHT FIXTURES DEEMED EQUAL TO THOSE SPECIFIED SHALL BE SUBMITTED FOR (1) ALL 4' FLUORESCENT LAMPS SHALL BE 3500k UNLESS NOTED OTHERWISE. MANUFACTURER CONTRACTOR SHALL COORDINATE FIXTURE TYPE VOLTAGE 120V UNLESS CATALOG NUMBER Architects. All rights Reserved APPROVAL IN ACCORDANCE WITH SPECIFICATION SECTION 260120. CORRISION AND VANDAL RESISTANT POLY CONSTRUCTION. POLYURETHANE GASKET. NOTE(S) REMARKS (2) CARBONATE NOTE: AN ELECTRICAL SYMBOL SHOWN IN THIS LEGEND IS NOT MEANT TO INDICATE THAT THE SPECIFIC EQUIPMENT IS REQUIRED FOR THIS PROJECT. (SEE THE FOLLOWING SHEETS FOR EQUIPMENT REQUIRED ON THIS PROJECT.) ☐ ?? ! ! POWER LIGHTING AND LIGHTING CONTROLS **ELECTRICAL SYMBOLS LEGEND** REL, Q \boxtimes 百 ₫ Θ **(** Φ \star equipment sizes will be indicated as follows: HOMERUN TO PANEL – ARROWS INDICATE NUMBER OF CIRCUITS. SLASH MARKS INDICATE NUMBER OF PHASE CONDUCTORS, NO SLASH MARKS INDICATE 2 CURRENT CARRYING CONDUCTORS, LONG SLASH MARK(S) INDICATE NEUTRAL CONDUCTOR(S). (NOTE THAT THE GREEN GROUND WIRE IS NOT SHOWN BUT IS REQUIRED IN EACH FEEDER, LIGHTING, RECEPTACLE, AND POWER BRANCH CIRCUIT. [PROVIDE A GREEN WITH YELLOW- STRIPE GROUNDING CONDUCTOR FOR EACH COMPUTER RECEPTACLE CIRCUIT. BOND THIS COMPUTER GROUNDING CONDUCTOR TO THE ISOLATED GROUND BUS IN THE PANIEL.] THERE SHALL BE NO SHARED NEUTRALS BETWEEN MULTIPLE CIRCUITS. FLUORESCENT STRIP FIXTURE ELECTRICAL DEVICES TO BE REMOVED DUPLEX RECEPTACLE - 120 VOLT, 20 AMP, 3 POLE GROUNDING TYPE, MOUNT 18" AFF UNLESS NOTED OTHERWISE RELOCATE EXISTING DEVICE TO POSITION MOTOR MAGNETIC MOTOR STARTER - SEE DRAWING FOR DISCONNECT SWITCH - SEE DRAWING FOR SIZE * EMERGENCY "STOP" PUSH-BUTTON FLEXIBLE STEEL CONDUIT ELECTRICAL CONNECTION SINGLE RECEPTACLE - 120 VOLT, 20 AMP, 3 POLE GROUNDING TYPE, MOUNT 18" AFF, UNLESS NOTED OTHERWISE WIRE IN CONDUIT - CONCEALED IN WALL OR CEILING JUNCTION BOX — 4" SQUARE UNLESS NOTED OTHERWISE WIRE IN CONDUIT — CONCEALED IN FLOOR OR UNDERGROUND PHOTOELECTRIC CELL - MOUNT ON ROOF FACING TOGGLE SWITCH - 120/277 VOLT, FUSE AMPS OR NON-FUSED (AS SHOWN) NEMA ENCLOSURE TYPE AMP RATING & POLE QTY. MOUNT **4**8, GRC ATS DN AFF AFF 20. 17. **=** 5 ₹ GF] 띳 쮸 뙤 24. 21. **ABBREVIATIONS** DRAWINGS ARE DIAGRAMMATIC, INDICATIVE OF WORK TO BE FURNISHED AND INSTALLED UNDER REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ALL DIMENSIONS. GENERAL NOTES COORDINATE AND SEQUENCE ALL DEMOLITION, CLEANING AND CONSTRUCTION WORK. SUBMIT A DETAILED CONSTRUCTION SCHEDULE PRIOR TO PRE-CONSTRUCTION CONFERENCE. BEFORE SUBMITTING FOR THE WORK, EACH BIDDER WILL BE RESPONSIBLE TO EXAMINE THE PREMISES AND SATISFY HIMSELF AS TO THE EXISTING CONDITIONS UNDER WHICH HE WILL BE OBLIGED TO OPERATE AND COMPLETE THE WORK UNDER THIS CONTRACT. NO ALLOWANCE WILL SUBSEQUENTLY BE MADE IN THIS CONNECTION ON BEHALF OF THE CONTRACTOR FOR ANY ERROR OR OMISSION ON HIS PART. ALL EXTERIOR DEVICES SHALL BE WEATHER PROOF ENCLOSURES AND GFI RATED IN ACCORDANCE WITH N.E.C. INSTALLER REQUIRED TO VERIFY PRIOR TO ORDERING MATERIALS. REMOVE ALL ELECTRICAL EQUIPMENT (CONDUIT, POWER & CONTROL WIRING, DISCONNECT SWITCHES, STARTERS, ETC.) RELATED TO EQUIPMENT BEING REMOVED OR REPLACED. ITEMS REMOVED AND SAVED FOR REUSE SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION. CONTRACTOR SHALL IDENTIFY ANY DEFECTIVE MATERIALS PRIOR TO DEMOLITION. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO MATERIALS AT PROJECT COMPLETION NOT IDENTIFIED PRIOR TO DEMOLITION REMOVE AND RE-INSTALL EXISTING CEILING TILE AS REQUIRED. REPLACE ANY TILE DAMAGED DURING CONSTRUCTION. EXIT WAYS SHALL BE KEPT CLEAR. IF AN EXIT MUST BE TEMPORARILY BLOCKED, PROVIDE THI BARRICADE AND DIRECTIONAL SIGNS FOR TEMPORARY EXITING AND SAFETY. SEAL ALL HOLES IN WALLS, CEILINGS, ETC. TO MATCH EXISTING ADJACENT SURFACES WHERE EQUIPMENT, CONDUIT AND/OR PIPING ARE REMOVED. PROVIDE PROPER PROTECTIVE MEASURES TO PROTECT EXISTING FURNITURE, CARPET AND FINISH COURSE OF CONSTRUCTION. TAKE CARE NOT TO DAMAGE EXISTING SURFACES. REPAIR TO MAI CONDITIONS AS REQUIRED. THE BUILDING WILL REMAIN OCCUPIED DURING CONSTRUCTION. THE OWNER WILL MAKE ALL REASONABLE EFFORTS TO ASSIST THE CONTRACTOR IN COMPLETING THE WORK. COORDINATE ALL WORK WITH THE OWNER'S DESIGNATED REPRESENTATIVE. CONTRACTOR SHALL GUARANTEE THE WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE. THIS GUARANTEE SHALL BE IN ADDITION TO THE WARRANTIES PROVIDED BY MATERIAL SUPPLIERS AND MANUFACTURERS. THE CONTRACTOR SHALL NOT BE RELIEVED OF RESPONSIBILITY FOR DEVIATIONS FROM REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE ARCHITECT/ENGINEER'S APPROVAL OF SHOP DRAWINGS, PRODUCT DATA, SAMPLES OR SIMILAR SUBMITTALS UNLESS THE CONTRACTOR HAS SPECIFICALLY INFORMED THE ARCHITECT/ENGINEER IN WRITING OF SUCH DEVIATION AT THE TIME OF SUBMITTAL AND THE ARCHITECT/ENGINEER HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION. THE CONTRACTOR SHALL NOT BE RELIEVED OF RESPONSIBILITY FOR ERRORS OR OMISSIONS IN SHOP DRAWINGS, PRODUCT DATA, SAMPLES OR SIMILAR SUBMITTALS BY THE ARCHITECT/ENGINEER'S APPROVAL THEREOF. THE CONTRACTOR SHALL BE RESTRICTED TO AREAS SPECIFIED BY THE OWNER FOR ON—SITE STORAGE OF CONSTRUCTION MATERIALS. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION AND SECURITY OF ALL EQUIPMENT AND MATERIALS. ERECT AND MAINTAIN ALL REASONABLE PRECAUTIONS FOR SAFETY AND HEALTH INCLUDING POSTING DANGER SIGNS AND OTHER WARNINGS AGAINST HAZARDS INCLUDING PROMULGATING SAFETY REGULATIONS. PROVIDE SAFETY PRECAUTIONS AND BARRICADES FOR PEDESTRIANS AT CONSTRUCTION VEHICLE ACCESS AND EGRESS LOCATIONS. ALL WORK SHALL COMPLY WITH APPLICABLE O.S.H.A. AND E.P.A. REGULATIONS AND GUIDELINES THE CONTRACTOR SHALL PAY FOR ALL INSPECTION PERMITS, CERTIFICATES, CONNECTION FEES, CHARGES AND LICENSE FEES IN CONNECTION WITH HIS WORK. FIELD VERIFY ALL DIMENSIONS AND ALL CONDITIONS. IF THE CONTRACTOR IS UNABLE TO INTERPRET THE CONTRACT DOCUMENTS, HE IS RESPONSIBLE TO REQUEST CLARIFICATION IN WRITING TO THE ARCHITECT. IF HE PROCEEDS WITH ANY WORK BEFORE OBTAINING CLARIFICATION, HE SHALL BE HELD RESPONSIBLE FOR ALL DEFICIENCIES ASSOCIATED THEREWITH. ALL DEVICE MOUNTING HEIGHTS INDICATED SHALL BE TO OUTLET BOX CENTER LINE. RELOCATE, AS REQUIRED, ANY EXISTING WIRE AND CONDUIT WHICH INTERFERES WITH INSTALLATION OF THE NEW WORK. REPLACE ALL SIDEWALKS DAMAGED BY OR DURING CONSTRUCTION OF THIS PROJECT. ALL EXISTING EQUIPMENT IS THE PROPERTY OF THE OWNER AND SHALL BE DISPOSED OF AS DIRECTED BY THE OWNER. DISPOSE OF ALL MATERIALS AND EQUIPMENT SHOWN TO BE REMOVED IN ACCORDANCE WITH LOCAL REGULATIONS. SUPPORTS AND HANGERS SHALL PRESENT A NEAT, ORDERLY APPEARANCE. ALL EXTERIOR STRUCTURES INCLUDED SHALL BE INSTALLED TO RESIST 110 MPH WIND LOAD. CONTRACTOR'S USE OF AN APPROVAL STAMP ON DOCUMENTS SUBMITTED AS SHOP DRAWINGS, SAMPLES AND SIMILAR SUBMITTALS CERTIFIES THAT THE CONTRACTOR HAS COMPLIED WITH THE DOCUMENT REQUIREMENTS RELATED TO "SHOP DRAWINGS, PRODUCT DATA AND SAMPLES". THE CONTRACTOR SHALL FURNISH "AS-BUILT" DRAWINGS TO THE (OWNER) AT COMPLETION OF THE CONTRACTOR SHALL MAINTAIN A CLEAN WORK ENVIRONMENT AT ALL TIMES AND SHALL CLEAN CONSTRUCTION SITE OF ALL DEBRIS AT COMPLETION OF THE JOB AND BEFORE FINAL PAYMENT IS MADE. THE CONTRACTOR SHALL STRICTLY BE HELD TO THE PROJECT SCHEDULE. HE SHALL PROVIDE MANPOWER AND EQUIPMENT TO FULLY MOBILIZE, PROCEED WITH AND COMPLETE THE WORK. REMOVE ALL SHRUBBERY, PLANTS, ETC. WHICH INTERFERE WITH WORK UNDER THIS CONTRACT. REPLANT AND/OR REPLACE ALL PLANTS, SHRUBBERY, ETC.AT COMPLETION OF JOB. ALL DISTURBED AREAS OF SOIL SHALL BE RE-SODDED. REPLACEMENT OR REPLANTING TO BE GUARANTEED FOR ONE YEAR. ABOVE FINISHED FLOOR
ABOVE FINISHED GRADE INVERTER GROUND EXISTING ELECTRICAL DEVICE SHOWN AT RELOCATED POSITION UNLESS NOTED OTHERWISE ISOLATED GROUND GALVANIZED RIGID CONDUIT EXISTING ELECTRICAL DEVICES TO REMAIN REPLACE EXISTING ELECTRICAL DEVICE (AND COVER PLATE) AT THIS LOCATION GROUND FAULT INTERRUPTER AUTOMATIC TRANSFER SWITCH SHES DURING THE ATCH EXISTING OR SOILED ie required , PRODUCT DATA, E CONTRACT SUFFICIENT COMPLETELY CONSTRUCTION. SYSTEM DEMAND THIS CONTRACT. 'n 'n DRAWING INDEX **ELECTRICAL DEMOLITION NOTES** CUTTING AND PATCHING:

A) ALL PAVED AREAS OR CONCRETE CURBS AND WALKS DAMAGED FROM CONSTRUCTION SHALL BE PATCHED AND REPAIRED AS FOLLOWS:

1. THE EDGES OF ALL TRENCHED AREAS SHALL BE SAW CUT WITH CLEAN EDGES.

2. ALL TRENCHED OPENINGS SHALL BE BACKFILLED AND COMPACTED IN 12" LIFTS TO 98% STANDARD PROCTOR PER ASTM D698.

3. CONCRETE AND ASPHALT SURFACES SHALL BE REPLACED WITH COMPARABLE MATERIALS TO MATCH EXISTING GRADES AND FINISHES. ELECTRICAL GENERAL NOTES ALL WIRING SYSTEMS SHALL BE COPPER CONDUCTORS IN METALLIC CONDUIT, UNLESS NOTED OTHERWISE. WIR AND CONDUIT SIZES SHOWN ARE BASED ON THIN COPPER, UNLESS NOTED OTHERWISE. HEAVY WALL RIGID PVC CONDUIT SHALL BE USED IN SLABS AND BELOW GRADE AND WHERE INDICATED AND INTERMEDIATE GRADE CONDUIT AND EMT CONDUIT MAY BE USED ELSEWHERE WHERE APPROVED BY N.E.C. AND LOCAL CODES. FLEXIBLE METAL CONDUIT SHALL BE STEEL AND USED TO CONNECT EQUIPMENT WHERE INDICATED AND WHERE REQUIRED DUE TO VIBRATION AND CONNECTION ACCESSIBILITY. INSTALL ALL WORK IN ACCORDANCE WITH THE FLORIDA BUILDING CODE 2007 EDITION WITH 2009 SUPPLEMENTS, THE FLORIDA FIRE PREVENTION CODE 2007 EDITION, THE NATIONAL ELECTRICAL CODE 2008 EDITION, AND ALL CODES, ORDINANCES, RULES AND REGULATIONS OF AUTHORITIES HAVING JURISDICTION AT THIS SITE. WHERE CONFLICTS OCCUR BETWEEN CODES AND THE CONSTRUCTION DOCUMENTS, THE MOST RESTRICTIVE REQUIREMENTS SHALL GOVERN. UNLESS OTHERWISE NOTED, REMOVE ALL ELECTRICAL MATERIALS AND EQUIPMENT FROM AREAS INDICATED FOR DEMOLITION. SOLAR PANEL INSTALLATION AND INVERTER INSTALLATION MANUALS SHALL BE MADE AVAILABLE TO INSPECTORS DURING INSPECTIONS. ENTRY AND REMOVAL OF EQUIPMENT FROM THE BUILDING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR CONTRACTOR SHALL REPAIR ANY DAMAGED MATERIALS TO THEIR ORIGINAL CONDITION. SURFACES SHALL BE REPAIRED TO MATCH THE EXISTING ADJACENT UNDAMAGED SURFACES. REMOVE UNUSED CONDUIT TO THE EXTENT NECESSARY TO ACCOMMODATE NEW WORK AND WHERE CONDUIT IS VISIBLE ABOVE THE FLOOR LINE. EXISTING UNUSED CONDUIT WHICH IS CONCEALED, AND WHICH DOES NOT INTERFERE WITH THE WORK, MAY REMAIN IN PLACE. SEAL ABANDONED LINES THAT REMAIN IN PLACE BEHIND WALLS OR FLOOR SURFACES. REMOVE EXISTING UNUSED WIRES. PROVIDE A LAMINATED PLASTIC NAMEPLATE IDENTIFYING EACH NEW PANELBOARD, MOTOR STARTER AND DISCONNECT SWITCH. LETTERING SHALL BE $\frac{1}{2}^n$ MINIMUM AND SHALL IDENTIFY EQUIPMENT SERVED, FEEDER ORIGINATION AND CIRCUIT NUMBER. SECURE NAMEPLATE WITH SCREWS TO EQUIPMENT TO BE IDENTIFIED. PLASTIC TAPE IS NOT APPROVED. THE CONTRACTOR SHALL COORDINATE THE CIRCUIT REQUIREMENTS WITH THE MANUFACTURER OF THE ACTUAL EQUIPMENT FURNISHED UNDER OTHER DIVISIONS OF WORK. THE CIRCUIT BREAKER, WIRE AND CONDUIT SHALL BE SIZED AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER. LIGHTING FIXTURES SHALL BE SECURELY FASTENED AND SUPPORTED PER N.E.C. CONTRACTOR SHALL BOND AND GROUND SYSTEMS AND EQUIPMENT PER ARTICLE 250 OF N.E.C. PROVIDE A GROUNDING CONDUCTOR SIZED IN ACCORDANCE WITH ARTICLE 250-122 N.E.C. ON ALL RECEPTACLES AND POWER BRANCH CIRCUITS. WIRING AND CONDUIT TO ELECTRICAL DEVICES BEING REMOVED SHALL BE REMOVED BACK TO NEAREST JUNCTION BOX. ANY DEVICES DOWNSTREAM FROM THESE POINTS SHALL REMAIN OPERABLE. ALL CIRCUIT BREAKERS SHALL BE BOLT-IN TYPE. ALL CONDUIT SHALL BE STRAPPED IN ACCORDANCE ALL FLUORESCENT FIXTURES SHALL BE EQUIPPED WITH T8 LAMPS AND ELECTRONIC BALLASTS. GENERAL NOTES & LEGEND — ELECTRICAL
DEMOLITION PLAN — ELECTRICAL
FLOOR PLAN — ELECTRICAL
SINGLE LINE DIAGRAMS — ELECTRICAL
PANEL SCHEDULES — ELECTRICAL WITH REQUIREMENTS OF N.E.C Leon County -Sustainable Demonstration Center 12 SEPTEMBER 2011

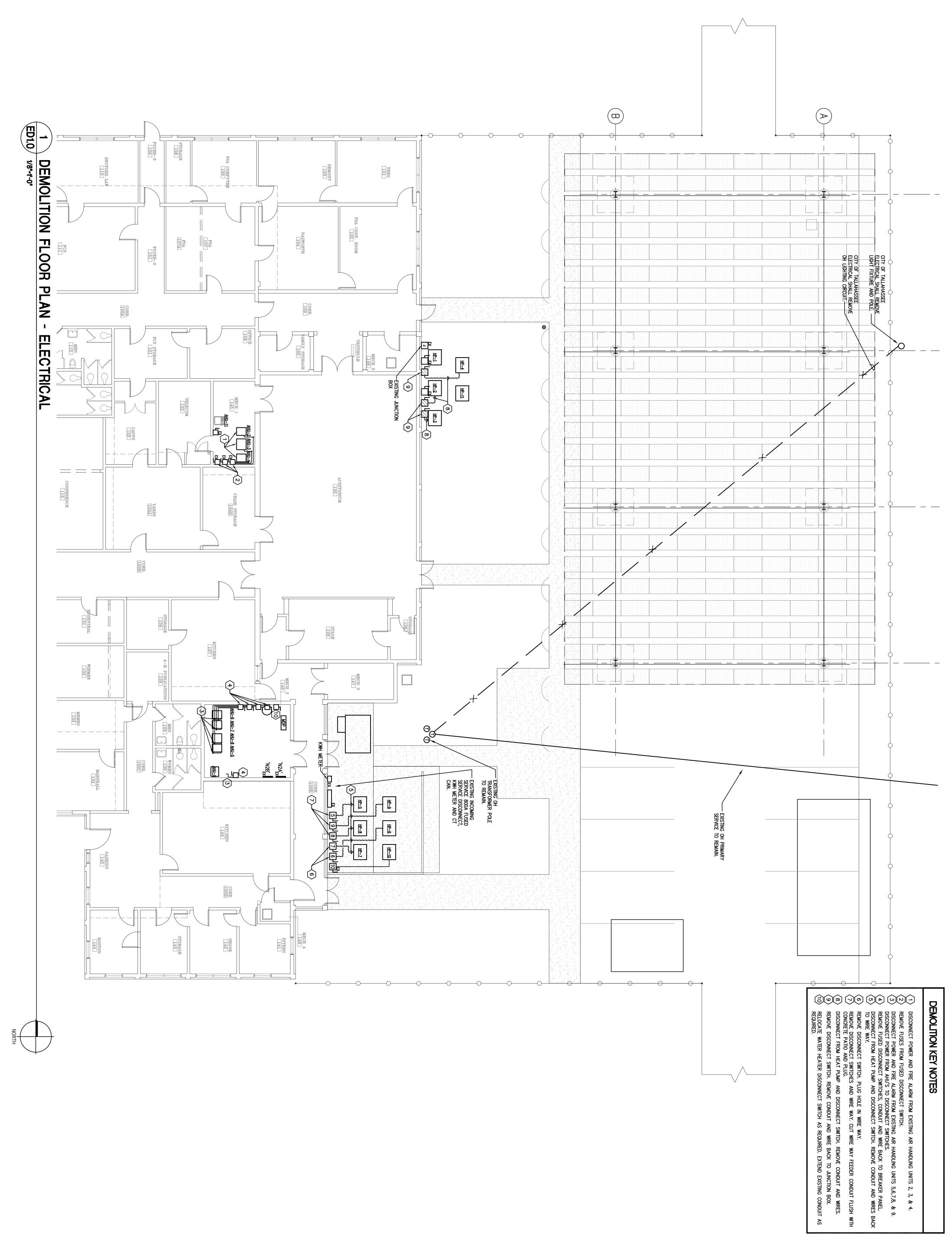
Date GENERAL NOTES & LEGEND - ELECTRICAL **Documents** 10522 100% Construction

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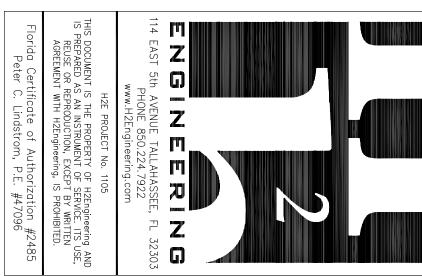
DEMOLITION FLOOR PLAN
- ELECTRICAL

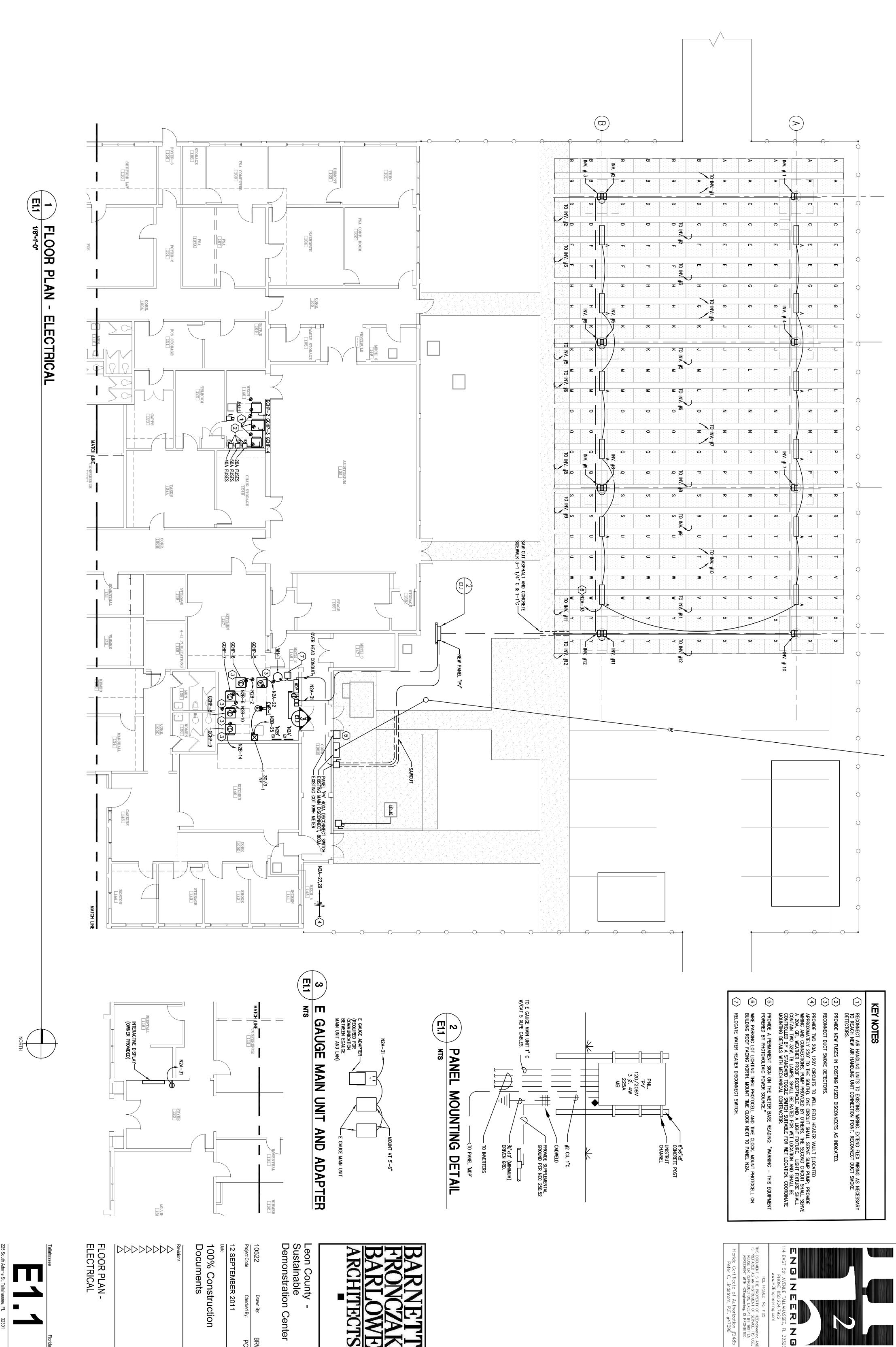
12 SEPTEMBER 2011

Date 10522 Project Cod 100% Construction Documents BRW PCL

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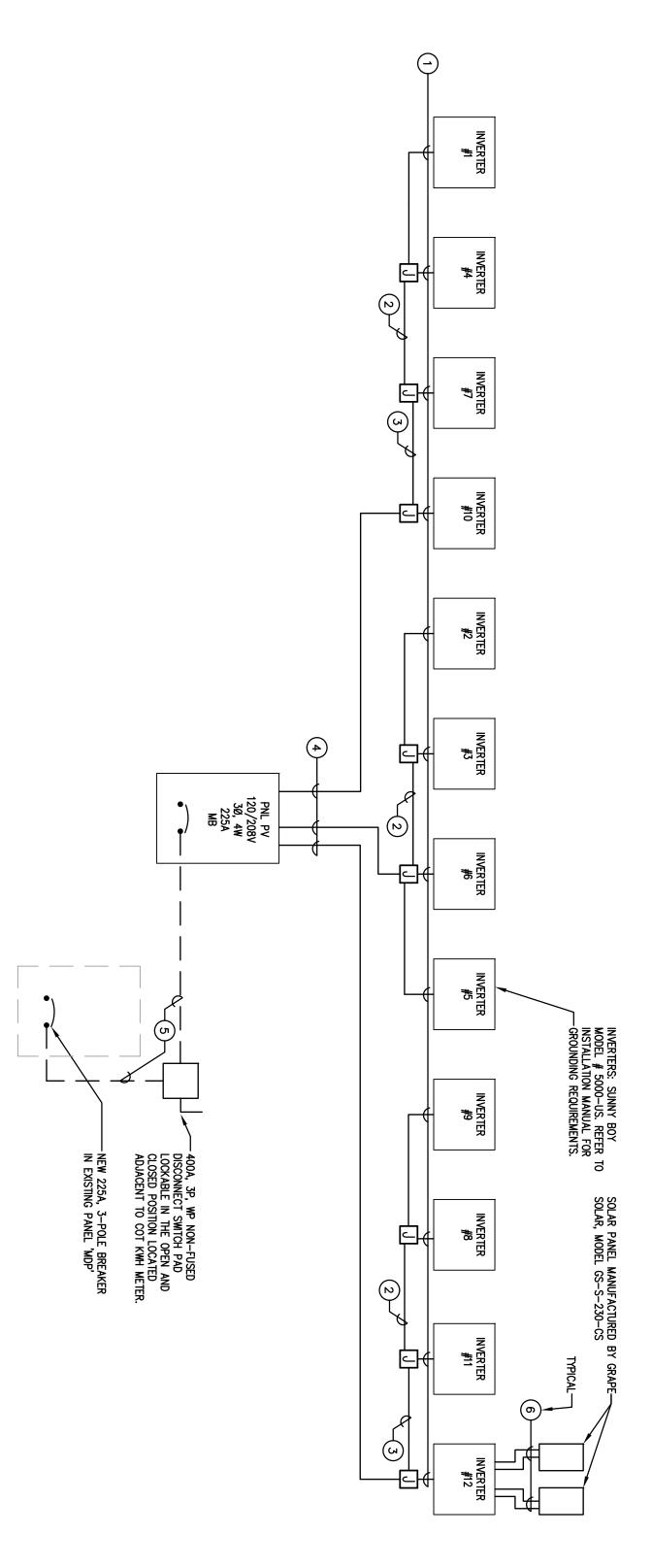




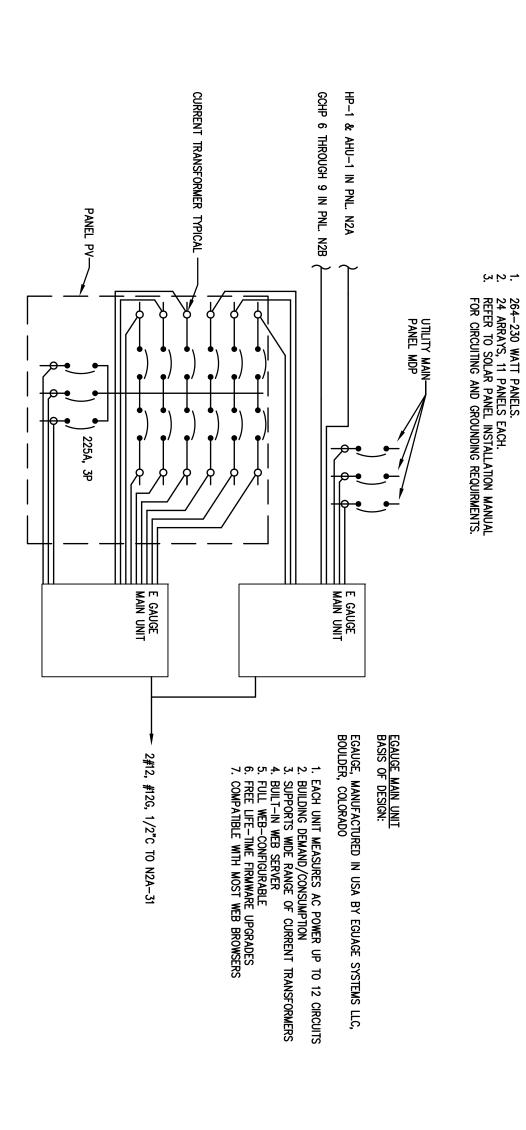
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G:\2011\1105 LC Sustainable Demonstration\Sheets\E1.1 FLOOR PLAN - ELECTRICAL.dwg, 9/14/2011 7:45:21 AM, dhenderson

BRW PCL



E2.0 SCHEMATIC PHOTOVOLTAIC WIRING DIAGRAM, 60 KW SYSTEM NO SCALE





| EXISTING MAIN SWITCH 120/208V 800A, 3P | EXISTING OVERHEAD SERVICE | |
|---|---|-----------------|
| NOTE: SHADING DENOTES EXISTING EQUIPMENT. | NOTES: 1. WIRING BETWEEN CT'S AND E GAUGE MAIN UNITS SHALL BE CAT 5 XLPE CABLE. EACH CABLE CAN MONITOR 4 CT'S. | / EC.O NO SCALE |

EXISTING CT CABINET

| ING PANEL EXISTING PANEL LP1 LP2 | | 100/3 | |
|---|--------|-----------|---|
| EXISTING PANEL LP3 | | 100/3 | |
| EXISTING PANEL LP4 | | 100/3 | EXISTING 800A FEEDER |
| EXISTING PANEL LP5 | | 100/3 | |
| SSAL | | 30/3 | |
| EXISTING PANEL N2A | | 400/3 | |
| EXISTING PANEL N2B | | 400/3 | EXISTING 800A MAIN PANEL 'MDP.' 120/208V, 3P, 4W |
| NEW PANEL PV 120/208V 3P,4W 225A MB | 400/3. | NEW 225/3 | L 'MDP.' |

3 E2.0 POWER RISER DIAGRAM
NO SCALE

| 6 | (5) | 4 | (3) | 2 | <u> </u> | MARK | |
|---------------------------------------|--------------|--------------|-------------|-------------|-------------|---------|--------------------|
| #10-2 (DE-RATED PER TABLE 690.31 (C)) | 4#4/0, 1#4G. | 12#8, 1#126. | 9#8, 1#12G. | 6#8, 1#12G. | 3#8, 1#12G. | | CONDUCTOR SCHEDULE |
| | 2 1/2" | 1 1/4" | _ * | 1" | 3/4" | CONDUIT | |

| | | | . 3 | 3 | | | |
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Leon County -Sustainable Demonstration Center

10522 Project Coc

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12 SEPTEMBER 2011

Date

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SINGLE LINE DIAGRAMS - ELECTRICAL

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CONNECTED LOAD=168A DEMAND LOAD=-

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FL 32301 Fax 850 561-6978

| | | | | | <u></u> | | | | | | l | | | I | | | | | | | | | — |
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| 41 | 39 | 37 | 35 | 33 | 31 | 29 | 27 | 25 | 23 | 21 | 19 | 17 | 15 | 13 | 11 | 9 | 7 | 5 | 3 | 1 | CIRC | TIUC | 225I FR= |
| | | SPD | | | | | | | | INVERTER #6 | | INVERTER #5 | | INVERTER #4 | | INVERTER #3 | | INVERTER #2 | | INVERTER #1 | SERVING | | 225MB 1ER=10,000 AIC RMS SYM |
| | | | | | | | | | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | CON LOA | | |
| | | | | | | | | | | 3/4" | | 3/4" | | 3/4" | | 3/4" | | 3/4" | | 3/4" | CON SIZE | ID. | |
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| | | | | | | | | | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | • | NEW PANEL 'PV' CIRCUIT SCHEDULE |
| | | | | | | | | | | 30 | | 30 | | 30 | | 30 | | 30 | | 30 | CLASS BKR | BREAKER | IT S |
| | | | | | | | | | - | | | | | | | | | | | ∞ | WIR | | SHE |
| | | | | | | | | | | 3/4" | | 3/4" | | 3/4" | | 3/4" | | 3/4" | | 3/4" | CON SIZE | | DUL |
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| | | | | | | | | | | INVERTER #12 | | INVERTER #11 | | INVERTER #10 | | INVERTER #9 | | INVERTER #8 | | INVERTER #7 | SEKVING | | NEMA 3R ENCLOSURE |
| | | | | | | | | | | | | | | | | | | | | | V G | 5 | SURFACE |
| 42 | 40 | 38 | 36 | 34 | 32 | 30 | 28 | 26 | 24 | 22 | 20 | 18 | 16 | 14 | 12 | 10 | 8 | 6 | 4 | 2 | CIRC | CUIT | |

| #EAT PUMP HP—1 — | • | رد مح | 77 | 35 | 33 | 31 | 29 | 27 | 25 | 23 | 21 | 19 | 17 | 15 | 13 | 11 | 6 | 7 | 5 | 3 | 1 | CIRC | CUIT | 400/ MLO IER= |
|--|-------------|-------|----------|----------|--------------------|------------|---------|----------|-----|----------|----------|-------|----------|----------|-------|---------|----------|----------|----------|---------|---------|---------|------------------|---|
| EXISTING PANEL 'N2A' CIRCUIT SCHEDULE (MODIFIE CONDING STREET SCHE | | | | | PV CANOPY LIGHTING | l | 1 | VAULT | | SPARE | | SPARE | | SPARE | | SPARE | | PUMP HP- | | | AS PACK | SERVING | OF DAY | 400A, 120/208V, 3ø, 4W MLO IER=10,000 AIC RMS SYM |
| SREAKER ASS BKR, WRE COND. ASS BKR, WRIZE COND. COAD ASS BKR, WRIZE COND. COAD CO | | | | | 8 | 5 | 2 | 5 | | _ | | 1 | | 1 | | - | | - | | | _ | CON | IN. D | |
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| SCHEDULE (MODIFIE MODIFIE MODI | | | | | 20 | 20 | 20 | 20 | | 25 | | 40 | | 50 | | 25 | | 50 | | | 50 | BKR. | CKT. | ; PA |
| WREAKER SIZE CONN. ASS BKR. WIRE SIZE CONN. 60 GCHP- 60 GCHP- 60 RANGE 60 SPD | | | | | | | | | | | | | | | | | | | | | | LASS | BREA | NEL I |
| WREAKER SIZE CONN. ASS BKR. WIRE SIZE CONN. 60 GCHP- 60 GCHP- 60 RANGE 60 SPD | | | | | <u> </u> | | | | 0- | 2 q | 0- | 29 | 0- | 2 ° | 0 | 2γ | 0 | 29 | 0 | -0- | 39 |) JJOc | KER _P | Ź |
| WREAKER SIZE CONN. ASS BKR. WIRE SIZE CONN. 60 GCHP- 60 GCHP- 60 RANGE 60 SPD | \subseteq | | <u> </u> | <u> </u> | <u>~</u> | | <u></u> | <u> </u> | | <u> </u> | <u>~</u> | | <u> </u> | <u>~</u> | | <u></u> | <u>~</u> | | <u> </u> | <u></u> | | ABC | HASE_ | ×, |
| WREAKER SIZE (MODIFIE | | 0 C | ٥ ک | 0 | -0- | 9 3 | 0- | -0- | _ | 0- | | 0- | _ | 0- | | 0 | _ | 0 | _ | 0- | | POLE | CKT. | CIR |
| CHEDULE (MODIFIE SIZE SIZE COND. SIZE CONN. LOAD WATER AHU-1 GCHP- COND. SIZE CONN. LOAD COHP- RANGE | | | | | | | | | | | | | | | | | | | | | | CLASS | BREA | CUIT |
| HEDULE (MODIFIED) HEDULE (MODIFIED) - SIZE COND. SIZE COND. SIZE CONN. COND. SERVING AHU-1 GCHP-2 GCHP-3 12 1/2 10 GCHP-3 RANGE RANGE | | 00 | 80 | | | 60 | | | 60 | | 20 | | 50 | | 60 | | 40 | | 60 | | 30 | • | | SC |
| ULE (MODIFIED) COND. SIZE COND. WATER HEATER GCHP-2 GCHP-3 1/2 10 GCHP-3 1/2 10 GCHP-5 10 RANGE | | 1 | I | | | ı | | | ı | | 12 | | ı | | ١ | | ١ | | ١ | | 1 | SIZ | E | |
| (MODIFIED) (MODIFIED) SERVING CONN SERVING - WATER HEATER - AHU-1 - GCHP-2 - GCHP-3 - GCHP-4 - GCHP-5 10 - RANGE - RANGE - SPD | | 1 | I | | | ı | | | ı | | 1/2 | | ı | | 1 | | 1 | | 1 | | - | SIZE | = | ULE |
| SERVING WATER HEATER AHU-1 AHU-1 GCHP-3 GCHP-4 GCHP-5 GCHP-5 RANGE RANGE RANGE | | ı | I | | | ı | | | ı | 10 | 10 | | ı | | - | | - | | - | | - | LOA | IN. D | <u>X</u> |
| | - | | Ω | | | RAI | | | RAN | | GCHF | | GCHF | | GCHP: | | GCHP | | AHU- | | WATE | | |) DI |

| | | | | | | | | | 1 | | ı | | - | | 1 | | ı | | | ı | WIF | RE 'C | |
|----|----------|----------|-------------------------------|---------|----------|----------|----------|----------|-----|-------------------------------|-----|---------------------------|---|-----------------|------------|--|----------|-----------------------|-----|--|--|--|---|
| | | | | | | | | | 25 | | 40 | | 50 | | 25 | | 50 | | | 50 | BKR | ST. | SIX |
| | | | | | | | | | | | | | | | | | | | | | CLAS | 1 | TING |
| | | | | | | | | ا ا | 2 9 | o- | 2 0 | 0- | 2 q | 0- | 2 γ | 0- | 2 ° | 0- | - | <u> </u> | CLASSPOLE | BREAKER | PA |
| | <u> </u> | <u> </u> | | <u></u> | <u>-</u> | <u> </u> | <u> </u> | <u> </u> | | | | | <u> </u> | | | | | | | | E ABC | | NEL |
| 0 | | 0 7 | 7 | - | 5.0 | 0 | • | φ3 | 0- | ° 2 | 0- | 0 2 | 0- | ۰ 2 | 0- | ° 2 | 0- | 02 | 0- | 9 2 | POLE | 유 I | , N |
| | | | | | | | | | | | | | | | | | | | | | CLASSBKR | . BREAKER | EXISTING PANEL 'N2A' CIRCUIT SCHEDULE |
| | Ç | 70 | | 5 | 60 | | | 60 | | 40 | | 50 | | 60 | | 40 | | 60 | | 30 | • | | NRCU |
| | 1 | <u> </u> | | - | ე | | | 6 | | ∞ | | 6 | | 4 | | ∞ | | 1 | | 10 | WIF SIZ | Έ | |
| | | <u> </u> | | | 1 | | | - | | | | ı | | 1 | | 1 | | 1 | | _ | CON | Ε | SCHI |
| | 1 | <u> </u> | | | <u> </u> | | | ١ | | | | ı | | 1 | | 1 | | ı | | - | CON | NN. D | EDU |
| | S. C. | SPD | | | RANGF | | | RANGE | | AHU-5 | | AHU-4 | | AHU-3 | | AHU-2 | | AHU-1 | | WATER HEATER | SERVING | CEDVINO | LE SURFACE |
| 42 | 40 | 38 | 7 Y | 7 2 | 35 | 30 | 28 | 26 | 24 | 22 | 20 | 18 | 16 | 14 | 12 | 10 | <u>∞</u> | 6 | 4 | 2 | CIR | CUIT | М |
| 41 | 39 | 71 5 | با د | | | | | | | | | | | | | | | | | | | | |
| | | - | 3 5 | 77 | 31 | 29 | 27 | 25 | 23 | 21 | 19 | 17 | 15 | 13 | 1 | 9 | 7 | 5 | 3 | 1 | CIRC | CUIT | 400 MLO IER= |
| | | | 3 2 | 33 | 31 | 29 | 27 | 25 | 23 | 21 HEATPUMP | 19 | 17 HEATPUMP | 15 | 13 HEATPUMP | 11 | 9 HEATPUMP | 7 | 5 HEATPUMP | 3 | 1 HEATPUMP | | | 400A, 120/208 MLO IER=10,000 AIC |
| | | | 37 2 | 33 | .31 | 29 | 27 | 25 | 23 | | 19 | | 15 | | 11 | | 7 | | 3 | | | CUIT | 400A, 120/208V, 3ø, 4W MLO IER=10,000 AIC RMS SYM |
| | | | 37 2 | 33 | 31 | 29 | 27 | 25 | 23 | HEATPUMP HP- | 19 | HEATPUMP | 15 | HEATPUMP HP- | 11 | HEATPUMP HP- | 7 | HEATPUMP HP- | 3 | HEATPUMP HP- | | CEDVINIC | 400A, 120/208V, 3ø, 4W MLO IER=10,000 AIC RMS SYM |
| | | | 37 2 | 33 | 31 | 29 | 27 | 25 | 23 | HEATPUMP HP-11 | 19 | HEATPUMP HP-10 | 15 | HEATPUMP HP-9 | 11 | HEATPUMP HP-8 | 7 | HEATPUMP HP-7 | 3 | HEATPUMP HP-6 | CON | SEDVINO IN. | 400A, 120/208V, 3ø, 4W MLO IER=10,000 AIC RMS SYM |
| | | | 37 2 | 33 | 31 | 29 | 27 | 25 | 23 | HEATPUMP HP-11 - | 19 | HEATPUMP HP-10 - | 15 | HEATPUMP HP-9 - | 11 | HEATPUMP HP-8 - | 7 | HEATPUMP HP-7 - | 3 | HEATPUMP HP-6 - | SEIVVING | SEDVINO | |
| | | | 37 2 | 33 | 31 | 29 | 27 | 25 | 23 | HEATPUMP HP-11 | 19 | HEATPUMP HP-10 | 15 | HEATPUMP HP-9 | 11 | HEATPUMP HP-8 | 7 | HEATPUMP HP-7 - | 3 | HEATPUMP HP-6 - - - | CON LOA SIZI WIF SIZ | SEDVINO | |
| | | | 37 2 | 33 | .31 | 29 | 27 | 25 | 23 | HEATPUMP HP-11 | 19 | HEATPUMP HP-10 | 15 | HEATPUMP HP-9 | 11 | HEATPUMP HP-8 | 7 | HEATPUMP HP-7 | 3 | HEATPUMP HP-6 - - - | CON LOA SIZI WIF SIZ | CEDVINIC IN. D. D. E. E. CKT. | |
| | | | 37 2 | 33 | 31 | 29 | 27 | 25 | 23 | HEATPUMP HP-11 | 19 | HEATPUMP HP-10 | 15 de la companya de | HEATPUMP HP-9 | 11 d | HEATPUMP HP-8 | 7 | HEATPUMP HP-7 | 3 | HEATPUMP HP-6 - - - | SENVING SENVIN | CEDVINIC IN. D. D. E. E. CKT. | |
| | | | 37 8 | 33 - | 31 | 29 | 27 | 25 | | HEATPUMP HP-11 25 2 | | HEATPUMP HP-10 30 2 | | HEATPUMP | | HEATPUMP HP-8 - - - 40 2 | | HEATPUMP HP-7 25 2 | | HEATPUMP HP-6 - - 25 2 | SENVING 중심 중핑 통증 BKR, CLASS POLE ABC | CEDVINIC IN. D. D. E. E. CKT. | |
| | - 1 | | 37 3 3 3 3 3 3 3 3 3 3 | | 31 0 3 | 29 | 27 | 25 | | HEATPUMP HP-11 25 2 | | HEATPUMP HP-10 30 2 9 | | HEATPUMP | | HEATPUMP HP-8 - - - 40 2 | | HEATPUMP HP-7 25 2 | | HEATPUMP HP-6 - - 25 2 | SENVING 중심 중핑 통증 BKR, CLASS POLE ABC | CKT. BREAKER PHASE CKT. | |
| | C | 7 | | | | | 27 | | 0- | HEATPUMP HP-11 25 2 2 φ φ 2 2 | 0- | HEATPUMP HP-10 30 29 0 22 | 0 | HEATPUMP HP-9 | 0 | HEATPUMP HP-8 - - 40 2 q q q 2 | 0- | HEATPUMP HP−7 | 0 0 | HEATPUMP HP-6 - - - 25 2 q 2 | SENVING 중심 중핑 통증 BKR, CLASS POLE ABC | CKT. BREAKER PHASE CKT. | |
| | | | | | 0 | | 27 | | 0- | HEATPUMP HP-11 25 29 9 9 | 0- | HEATPUMP HP-10 30 29 9 | 0 | HEATPUMP HP-9 | 0 | HEATPUMP HP-8 | 0- | HEATPUMP HP-7 25 29 9 | 0 0 | HEATPUMP HP-6 - - 25 29 6 9 | SENVING SENVIN | SEDVING SEDVIN | 400A, 120/208V, 3ø, 4W MLO IER=10,000 AIC RMS SYM EXISTING PANEL 'N2B' CIRCUIT S |

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AHU-8

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AHU-9

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AHU-10

42 40 38 33 4 23 28 26 27 22 20 18 16 14 12 10 8 6 4 2 CIRCUIT

DOCUMENT IS THE PROPERTY OF H2Engineering PREPARED AS AN INSTRUMENT OF SERVICE. ITS L REUSE OR REPRODUCTION, EXCEPT BY WRITTEN AGREEMENT WITH H2Engineering, IS PROHIBITED.

f Authorization #2485 rom, P.E. #47096

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AHU-11

DISHWASHER

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TRAILER HOOK-UP

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AHU-7

AHU-6

SCHEDULE

SURFACE

COND. SIZE

CONN. LOAD

SERVING

400A, 120/208V, 3ø, 2 MLO IER=10,000 AIC RMS S' ID SERVING CO SERVING 1 GAS PACK GP-1 3 HEAT PUMP HP-1

CONN. LOAD

COND. SIZE

MXS

4₩

| 42 | 40 | 38 | 36 | 34 | 32 | 30 | 28 | 26 | 24 | 22 | 20 | 18 | 16 | 14 | 12 | 10 | 8 | 6 | 4 | 2 | CID | CUIT | ָ ר | P CF |
|----|---------|----------|---------|-----------|----------|----------|-----------|------------|----------|----------|-----------|----------|---------|-----------|------------|---------|--------------|---|----------|--------------|-------------------|--------------------|-----------------------|------------------------------------|
| 2 | ے | <u> </u> | | | <u> </u> | | <u> </u> | <u></u> | 4 | <u> </u> | کا | | | | <u>'``</u> | | | | <u> </u> | | Oii | JUI 1 | | |
| 41 | 39 | 37 | 35 | 33 | 31 | 29 | 27 | 25 | 23 | 21 | 19 | 17 | 15 | 13 | 11 | 9 | 7 | 5 | 3 | _ | CIR | CUIT | | <u>×</u> 8 |
| | | | | _ | | | | — | | | | | | | | | SP | | | PΑ | | | ₹=3£ | P, P |
| | | | | PANEL N2B | | | PANEL N2A | SPACE | | | SPACE | | | SPACE | | | SPACE | | | PANEL PV | SENVING | CEDVINIO | ER=35,000 AIC RMS SYM | 800A, 120/208V, 3ø, 4W |
| | | | | | | | | ı | | | ı | | | ı | | | - | | | - 2 | CON | | | |
| | | | | EXIST | | | EXIST | | | | | | | | | | | | | 2 1/2" | CON SIZI | ND. E | | |
| | | | | 500 | | | 500 | ı | | | ı | | | ı | | | | | | 4/0 | WIF SIZ | RE E | ָ עַ | ַרַ |
| | | | | 400 | | | 400 | 1 | | | ı | | | ı | | | _ | | | 225 | BKR.C | CKT. | | |
| | | 0 | -0- | 3 p | 0- | -0- | 3 p | | 0 | -0- | 3 9 < | 0- | -0- | 3 p < | 0 | -0- | 3 p c | 6 | - | 3 γ (| BKR.CLASSPOLE ABC | BREAKER PHASE CKT. | | TING DANFI 'MDD' CIRCIIT SCHEDIIIF |
| 0 | <u></u> | | <u></u> | <u></u> | | - | <u></u> | | - | <u></u> | | - | <u></u> | | - | <u></u> | | 0 | <u></u> | | | HASE (| | '' |
| | | | 0- | -0- | ο 3 | 0- | -0- | 9 3 | 6 | -0- | o 3 | 0 | -0- | ρ 3 | 6 | 0 | ρ 3 | 6 | - | ρ 3 | POLE CLASS BKR | CKT. BRE | 2 | , AUN, |
| | | | | | 30 | | | 200 | | | 100 | | | 100 | | | 100 | | | 100 | SBKR | BREAKER | | |
| | | | | | | | | 3/0 | | | 1 | | | 1 | | | 1 | | | 1 | WIF | RE E | | |
| | | | | | | | | | | | | | | | | | EXIST | | | EXIST | CON SIZI | ND. | 2 | <u>م</u> ا |
| | | | | | | | | | | | | | | | | | _ | | | _ | CON | IN. D | <u>ו</u> | <u>+</u> |
| | | | | | TVSS | | | PANEL LP5 | | | PANEL LP1 | | | PANEL LP4 | | | PANEL LP2 | | | PANEL LP3 | JEN VIII | CEDVINO | , רר | = T |
| 42 | 40 | 38 | 36 | 34 | 32 | 30 | 28 | 26 | 24 | 22 | 20 | 18 | 16 | 14 | 12 | 10 | 8 | 6 | 4 | 2 | CIRC | | | SHREACE |

| 400A, 120/208V, 3ø, 4W MLO IER=10,000 AIC RMS SYM | CIRCUIT SERVING | 1 SPARE | 5 SPARE | 9 SPARF | | 13 SPARE | 17 HEATPUMP HP-10 | 1 HEATPUMP HP-11 | 5 PUMP CWP-1 | 27 29 | | 35 | 37 | 41 | 800A, 120/208V, 3ø, 4W MLO IER=35,000 AIC RMS SYM | CIRCUIT SERVING | 1 PANEL PV | 7 SPACE | <u> </u> | 13 SPACE | 9 SPACE | 23 25 SPACE | - | | PANFI | PANEL N2 | PANEL |
|---|------------------------|------------|---------|-------------|---|----------|-------------------|------------------|----------------|--------------|--------------|----|----------|----|---|------------------------|------------------|-------------|----------|-----------|-----------|----------------|------------------|------|-------|----------|----------------|
| | CONN. LOAD | 1 | 1 | I | | 1 | 1 | ı | 1 8 | 18 18 | | + | | | _ | CONN. LOAD | 1 | I | | 1 | 1 | 1 | | | | | + |
| EXISTING | COND. SIZE | 1 | ı | ı | | 1 | 1 | 1 | 3/4 | | | | | | | COND. SIZE | 2 1/2" | | | | | | EXIST | | | | |
| TING | WIRE SIZE | ı | 1 | ı | | ı | ı | ı | ∞ | | | | | | | WIRE SIZE | 4/0 | I | | 1 | ı | I | 500 | | | | |
| 1 | CKT. | 25 | 25 | 40 | Č | 25 | 30 | 25 | 40 | | | | | | EXISTING | CKT. | 225 | I | | 1 | ı | 1 | 400 | | - | _ | |
| PANEL, | BREAKER CLASS POLE | 2 | 2 | 2 | | 2 | 2 | 2 | 3 | | | | | | | BREAKER CLASS POLE | 3 | 7 | | 3 | 3 | | 3 | | (| | $\frac{1}{1}$ |
| N2B | ER PHASE LE ABC | T° | | • • —• | 0 | #\ | | | ~ ° | <u> </u> | <u> </u> | | <u> </u> | | PANEL | ER PHASE LE ABC | • • | • •- • | 0 | | | <u> </u> | • • | 0 | †°† |)-)- | <u></u> |
| | C POLE | 9 2 | 0 0 | 000 | | 2 | | 0 0 | 93 | - | 03 | • | 03 | | - | SE CKT. | 0 3 | 0 0 | | 0 0 | 0 0 | 93 | 0 | 0 3 | | _ | \overline{T} |
| CIRCUIT | BRE, | | | | | | | | | | | | | | 'MDP' C | BRE, | | | | | | | | | | | |
| SCI | | 20 | 20 | 40 | ā | 20 | 50 | 40 | 30 | | 60 | | 30 | | CIRCUIT | | 100 | 100 | | 100 | 100 | 200 | | 30 | | _ | \perp |
| SCHEDULE | WIRE SIZE | 12 | 12 | 5 | | 12 | | | 1 | | | | 1 | | -l | WIRE SIZE | <u> </u> | <u> </u> | | _ | | 3/0 | | | | | \downarrow |
| | COND. SIZE CONN. | 1/2 | 1/2 | 1/3 | | 1/2 | 1 | | 1 | | | | 1 | | SCHEDULE | COND. SIZE CONN. | XIST | FXIST | 2 | | | | | | | | <u> </u> |
| MO | LOAD | | | | | | | | | | | | 1 | | <u>-</u> Dul | LOAD | | | | | | | | | | | \downarrow |
| (MODIFIED) | SERVING | GCHP-6 | GCHP-7 | GCHP-8 | = | GCHP-9 | AHU-10 | AHU-11 | DISHWASHER | | TRAILER HOOK | | SPD | | m | SERVING | PANEL LP3 | PANEL 192 | | PANEL LP4 | PANEL LP1 | PANEL LP5 | | TVSS | | | |

| 3 | 設置 | BΑ |
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PANELS - ELECTRICAL

10522 Project Coc Drawn By:

12 SEPTEMBER 2011

Date

100% Construction Documents

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Leon County -Sustainable Demonstration Center

