State Project No. HSMV-02425040
NKB A-Wing Switchgear Replacement &
D-Wing PDU / UPS / Surge Protection Upgrades
Neil Kirkman Building, Tallahassee, FL

to be constructed for:

Department of Highway Safety and Motor Vehicles
Neil Kirkman Building
2900 Apalachee Parkway
Tallahassee, Florida 32399

VICINITY MAP — NOT TO SCALE

AERIAL PHOTO — NOT TO SCALE

administered by

Department of Management Services
Real Estate Development and Management
4050 Esplanade Way
Tallahassee, Florida 32399

100% Construction Documents
September 5, 2025

McGINNISS + FLEMING ENGINEERING

JON BARBER, PE 55427 | BRIAN WALLACE, PE 75562
820 EAST PARK AVE, I-200, TALLAHASSEE, FL 32301
MFE-INC.COM | 850.681.6424

CODES AND REQUIREMENTS

THE INSTALLATION SHALL COMPLY WITH THE INDICATED EDITION OF THE FOLLOWING CODES AND ORDINANCES. WHERE SPECIFIC EDITION IS NOT INDICATED, COMPLY WITH THE LATEST PUBLISHED EDITION.

NATIONAL FIRE PROTECTION ASSOCIATION - NFPA
- NFPA 70 - 2020; NATIONAL ELECTRICAL CODE
- NFPA 72 - 2019; NATIONAL FIRE ALARM AND SIGNALING CODE

FLORIDA BUILDING CODE
- FBC-B 2023; THE FLORIDA BUILDING CODE (8th EDITION)
- FPC 2023; THE FLORIDA FIRE PREVENTION CODE (8th EDITION) INCLUDING NFPA 101 - 2021; THE LIFE SAFETY CODE
- FBC-M 2023; THE FLORIDA MECHANICAL CODE (8th EDITION)
- FBC-A 2023; THE FLORIDA BUILDING CODE, ACCESSIBILITY (8th EDITION)
- FBC-EB 2023; THE FLORIDA BUILDING CODE, EXISTING BUILDING (8th EDITION)

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION

NATIONAL ELECTRICAL SAFETY CODE

SERVING UTILITY COMPANY POLICIES

STATE AND MUNICIPAL CODES AND REQUIREMENTS

SHEET INDEX

MFE Project 2442 NKB A-Wing Switchgear Replacement & D-wing PDU/UPS/Surge Protection Upgrades - Neil Kirkman Building - HSMV-02425040 - 100% Construction Documents - September 5, 2025

DEMOLITION NOTES - GENERAL

1. THE LOCATIONS OF ALL ELECTRICAL EQUIPMENT INDICATED (FIXTURES AND DEVICES) MAY VARY FROM DRAWINGS. CONDITIONS AND DEMOLITION WORK WAS DETERMINED BY SITE OBSERVATION AND REVIEW OF EXISTING DOCUMENTS WITHOUT THE BENEFIT OF DESTRUCTIVE INVESTIGATION. VERIFY ACTUAL LOCATIONS, TYPES, CIRCUITING, AND QUANTITIES OF EQUIPMENT AND APPLY DEMOLITION NOTES AS APPROPRIATE FOR THE EQUIPMENT AND ROOM OR AREA.
2. ALL ELECTRICAL ITEMS SHOWN ON DEMOLITION PLANS ARE TO BE REMOVED UNLESS NOTED OTHERWISE. REMOVE ALL ELECTRICAL TRADE MATERIALS ASSOCIATED WITH ITEMS SHOWN TO BE REMOVED. THIS SHALL INCLUDE BUT NOT BE LIMITED TO CONDUIT AND RACEWAYS (BOTH SURFACE MOUNTED AND CONCEALED ACCESSIBLE), WIRE, DEVICES AND CONDUIT SUPPORTS, BACK TO SERVING PANEL.
3. REMOVE ALL CONDUIT STUB-UPS IN FLOOR. CUT OR GRIND CONDUITS BELOW FLOOR LEVEL AND GROUT OPENING. GROUT FINISH SHALL BE ABSOLUTELY FLAT AND READY FOR FLOOR FINISH.
4. ALL REMOVED ELECTRICAL EQUIPMENT, INCLUDING FIXTURES, DISCONNECTS, SWITCHGEAR, TRANSFORMER, SPD's, CONDUIT, WIRE, DEVICES, AND ALL OTHER MATERIALS SHALL BE DISPOSED OF OFFSITE BY THE CONTRACTOR AT NO ADDITIONAL COST.
5. BLANKING PLATES SHALL MATCH NEW PLATES INSTALLED.
6. WHERE EXISTING CIRCUITS ARE REWORKED BY THE ADDITION OR REMOVAL OF CONDUCTORS, THE OLD WIRE SHALL BE REMOVED, THE CONDUIT SWABBED OUT, AND NEW THWN WIRES REPULLED UNLESS INDICATED OTHERWISE.
7. IF ANY EXISTING ELECTRICAL EQUIPMENT THAT IS TO REMAIN BECOMES ISOLATED BY THE REMOVAL OF WALLS, CEILINGS, ELECTRICAL EQUIPMENT, ETC., IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REROUTE AND RECONNECT THE EQUIPMENT SO THAT THE SYSTEM REMAINS OPERABLE. ANY REQUIRED WORK SHALL BE IN ACCORDANCE WITH SPECIFICATIONS.
8. MOTORS AND HVAC DEVICES SHALL BE REMOVED BY CRAFTSMEN SKILLED IN THE HVAC TRADE. REMOVE ELECTRICAL CONNECTIONS TO SAME. COORDINATE REMOVAL OF CONTROL DEVICES AND ASSOCIATED RACEWAY WITH MECHANICAL TRADE. ALL LINE VOLTAGE WIRING SHALL BE DISCONNECTED AND REMOVED BY A QUALIFIED ELECTRICIAN.
9. RELOCATE EXISTING ELECTRICAL EQUIPMENT AS REQUIRED TO AVOID NEW CONSTRUCTION. ALL WORK REQUIRED SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS.
10. WHILE REMOVING ALL ELECTRICAL ITEMS INSIDE THE INDICATED ALTERATION AREA, RECONNECT CIRCUITS TO MAINTAIN INTEGRITY OF EXISTING CIRCUITS AND CONTINUED OPERATION OF LIGHTING, EQUIPMENT AND DEVICES TO REMAIN.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CUTTING OR PATCHING OF WALLS AND CEILINGS REQUIRED. CUTTING AND PATCHING WORK SHALL BE PERFORMED BY SKILLED CRAFTSMEN. RETURN ALL WALLS AND THEIR FINISHES TO ORIGINAL CONDITION.
12. ANY ITEM ABOVE CEILINGS IN EXISTING CORRIDORS OR ROOMS WHICH NEED TO BE RELOCATED FOR INSTALLATION OF NEW ELECTRICAL EQUIPMENT SHALL BE RELOCATED AND RECONNECTED AS REQUIRED. THIS INCLUDES BUT IS NOT LIMITED TO CONDUIT, WIRE, PIPING, AND DUCTWORK. RELOCATION SHALL BE MINIMUM DISTANCE POSSIBLE.
13. ABANDONED CONDUIT SHALL BE REMOVED WHERE POSSIBLE. ABANDONED CONDUIT IN SLAB OR CONCRETE WALLS WHICH CANNOT BE REMOVED SHALL HAVE WIRES PULLED FROM THEM. CUT OFF CONDUIT FLUSH WITH CONCRETE. PATCH OPENINGS AND PENETRATIONS WITH GROUT AND GRIND OR TROWEL SMOOTH, READY FOR NEW FINISH.
14. EXISTING CONDUITS WHICH PENETRATE EXTERIOR WALLS SHALL BE REMOVED AND EXTERIOR WALL PATCHED WITH LIKE MATERIALS.
15. ANY AND ALL HOLES OR DAMAGED SURFACES DUE TO DEMOLITION WORK SHALL BE PATCHED BY A SKILLED CRAFTSMAN.
16. WHERE ITEMS ARE DESIGNATED EXISTING TO REMAIN, THEY SHALL BE PROTECTED DURING DEMOLITION. RELOCATE AS REQUIRED WHERE ITEMS ARE INSTALLED IN CEILING.
17. ANY HAZARDOUS MATERIAL OR MATERIAL POSING A THREAT TO HEALTH OR THE ENVIRONMENT SHALL BE CAREFULLY DISPOSED OF IN AN APPROVED MANNER. THIS INCLUDES, BUT IS NOT LIMITED TO, FUEL OIL AND CONTAINERS, BATTERIES, BATTERY ACID, OILS, GREASE OR OTHER PETROLEUM PRODUCTS, OR ANTIFREEZE COOLANT.

SPD SCOPE OF WORK NOTES

PROVIDE NEW SURGE PROTECTION DEVICES FOR THE EXISTING EQUIPMENT AT THE FOLLOWING LOCATIONS WITHIN THE KIRKMAN BUILDING AS PART OF THIS PROJECT SCOPE.

SERVICE ENTRANCE EQUIPMENT LOCATIONS:
- A-WING CHILLER SWITCHBOARD - REPLACE EXISTING WITH NEW
- B-WING BASEMENT NORTH MAIN PANELBOARD 'MPB' - PROVIDE NEW
- C-WING MAIN SWITCHGEAR (A) - REPLACE EXISTING WITH NEW
- C-WING MAIN SWITCHGEAR (B) - REPLACE EXISTING WITH NEW

ELEVATOR LOCATIONS:
- ELEVATOR 6 (LOCATED IN C-WING) - PROVIDE SPD AT NEW ELEVATOR FUSED DISCONNECT SWITCH
- ELEVATORS 7, 8, 9, AND 10 (LOCATED IN A-WING) - PROVIDE SPD AT ELEVATOR ENCLOSED CIRCUIT BREAKERS

NETWORK:
- TWO-WAY RADIO ANTENNA CABLE IN 4TH FLOOR B-CENTRAL STAIR LANDING

SWITCHGEAR / SERVICE SIZING DESIGN NOTES

THE PEAK RECORDED METER DATA FOR THE PERIOD BETWEEN 12/10/24 AND 1/14/25 IS EQUAL TO THE FOLLOWING:
AØ = 626A
BØ = 954A
CØ = 542A

USING THE HIGHEST RECORDED VALUE AND ADDING THE FOUR 25HP HYDRAULIC A-WING ELEVATORS (DUE TO THE ASSUMPTION THAT THE 15-MINUTE RECORDING INTERVAL DID NOT PICK-UP THE ELEVATORS RUNNING), THE PEAK LOAD ON THE SWITCHGEAR IS AS FOLLOWS:

954A + (4 * 48A) = 1146A, 480V, 3Ø

APPLYING THE NEC 125% FACTOR, THE TOTAL LOAD TO BE USED FOR SIZING NEW SERVICE IS EQUAL TO 1433A, 480V, 3Ø.

THE SWITCHGEAR RATING SHALL BE 1600A, 480V, 3Ø WITH 100% RATED MAIN.

THE PAD-MOUNT TRANSFORMER RATING SHALL BE 1500KVA, 480V, 3Ø WITH FLA = 1807A.

THE SERVICE FEEDER SHALL BE RATED FOR 1600A AND CONSIST OF (5) RUNS OF 4#400KCMIL IN 4" CONDUIT.

SCHEDULED OUTAGE NOTES

1. THE CONTRACTOR IS EXPECTED TO PLAN OUT THE EXECUTION OF THE WORK SO AS TO MINIMIZE INTERFERENCE TO THE OWNER'S OPERATIONS. PHASING AND PREPARATION FOR THE WORK SHALL TAKE PLACE SO AS TO ACHIEVE THIS REQUIREMENT.
2. ELECTRICAL POWER OUTAGES ARE A REQUIREMENT OF THIS PROJECT AND SHALL BE THOROUGHLY PLANNED AND COORDINATED WITH HSMV. THERE IS EXPECTED TO BE OUTAGES TO A-WING, B-WING, C-WING, AND D-WING DURING THE PROJECT, BUT NOT ALL AT ONCE. NOTE THAT IN ORDER TO REMOVE POWER TO A-WING, B-WING MUST ALSO BE DE-ENERGIZED.
3. PROVIDE COMPLETE PROPOSED CONSTRUCTION SCHEDULE TO ENGINEER AND HSMV FOR REVIEW AND APPROVAL PRIOR TO BEGINNING CONSTRUCTION.
4. ELECTRICAL OUTAGES WILL BE LIMITED TO AFTER HOURS ON WEEKENDS OR STATE HOLIDAYS WHILE BUILDING IS CLOSED. OUTAGES DURING NORMAL BUSINESS HOURS WILL NOT BE PERMITTED. ALL OUTAGES MAY BEGIN ON FRIDAY EVENINGS AT 6:00PM AND MUST BE COMPLETED BY 6:00PM ON THE EVENING PRIOR TO BUILDING TENANTS RETURNING FOR WORK TO ALLOW TIME FOR PROPER START-UP BY FACILITIES STAFF. THE CONTRACTOR SHALL PLAN AND STAFF THE PROJECT ACCORDINGLY.
5. SCHEDULE A MEETING WITH THE ENGINEER AND THE OWNER'S PROJECT MANAGER WITHIN TWO WEEKS AFTER ACTIVATION TO DISCUSS CONTRACTOR'S STRATEGY FOR OUTAGES AND ACCOMPLISHING THE WORK.
6. COORDINATE ALL POWER OUTAGES WITH HSMV PRIOR TO OUTAGE. PROVIDE 14 DAY MINIMUM NOTICE TO HSMV PROJECT MANAGER AS TO WHEN PROPOSED POWER OUTAGES WILL OCCUR TO RECEIVE APPROVAL. ALL POWER OUTAGES AND CHANGEOVERS SHALL BE SCHEDULED WITH THE HSMV PROJECT MANAGER AND SCHEDULES STRICTLY ADHERED TO. OUTAGES THAT ARE NOT SCHEDULED WILL NOT BE ALLOWED.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY LOW VOLTAGE CONSTRUCTION POWER AND LIGHTING DURING OUTAGES.
8. THE CONTRACTOR SHALL PROVIDE A TRAINED AND KNOWLEDGEABLE STAFF MEMBER REPRESENTATIVE TO CONSULT WITH THE OWNER PRIOR TO ANY SWITCHING, AND TO PERFORM SWITCHING, TEST CIRCUITS, AND DEEM GROUNDED AND SAFE PRIOR TO WORK. NO HOT WORK WILL BE ALLOWED. ALL SWITCHING OF ELECTRICAL EQUIPMENT IS BY CONTRACTOR.
9. COORDINATION WITH HSMV PROJECT MANAGER MUST OCCUR FOR ENERGIZING AND DE-ENERGIZING FEEDERS. HSMV PROJECT MANAGER WILL LEAD COORDINATION EFFORTS WITH ISA, IDEMEA, AND OTHER BUILDING TENANTS.
10. DURING NORMAL POWER OUTAGES, STAND-BY GENERATOR(S) WILL RUN TO MAINTAIN STAND-BY POWER FOR THE OWNER'S CRITICAL LOADS.
11. CONTRACTOR SHALL MAINTAIN FUEL DURING ALL OUTAGES TO KEEP GENERATORS RUNNING FOR DURATION OF OUTAGES.
12. CONTRACTOR SHALL PROVIDE GENERATOR FUEL FOLLOWING THE OUTAGE TO TOP OFF THE FUEL TANK FOR THE BUILDING GENERATORS.
13. CONTRACTOR SHALL INCLUDE IN THE BID AN ALLOWANCE OF $4,500 FOR FUEL CHARGES FOR THE GENERATORS AND SHALL COORDINATE TOP OFF OF FUEL STORAGE TANKS NOTED ABOVE WITH #2 FUEL OIL AT COMPLETION OF EACH OUTAGE TO REPLENISH FUEL USED DURING OUTAGE. THE ALLOWANCE AMOUNT REMAINING AT THE COMPLETION OF THE CONTRACT SHALL BE CREDITED BACK TO THE OWNER.

GENERAL NOTES

1. ALL CONDUCTORS SHALL BE INSTALLED IN METAL CONDUIT OR TUBING. CONDUIT FOR BURIAL IN SOIL OR UNDER CONCRETE SHALL BE PLASTIC. FLEXIBLE CONDUIT INSTALLED OUT-OF-DOORS, IN ANY MECHANICAL EQUIPMENT ROOM, OR IN NORMALLY WET AREAS, SHALL BE LIQUID TIGHT FLEX WITH SUITABLE FITTINGS.
2. CONDUIT SHALL BE INSTALLED TIGHT TO DECK WHERE INSTALLED ABOVE CEILING. CONDUIT SHALL BE INSTALLED TIGHT TO FLOOR WHERE INSTALLED BELOW RAISED COMPUTER ROOM FLOOR. RELOCATE INCIDENTAL HANGERS, BRACKETS, ETC. WHERE IN CONFLICT. MAXIMIZE USE OF SPACE.
3. PROVIDE CONDUIT EXPANSION FITTINGS WITH BONDING JUMPERS FOR ALL CONDUITS PASSING THROUGH EXPANSION JOINTS.
4. CONDUIT SHALL PASS THROUGH WALLS AT 90 DEGREES AND SHALL BE RUN PARALLEL AND PERPENDICULAR TO WALLS.
5. BRANCH CIRCUITS AND HOMERUNS SHALL BE #12 WIRE AND 3/4" CONDUIT MINIMUM. EVERY CONDUIT SHALL HAVE A GREEN GROUND WIRE (#12 MINIMUM).
6. ALL CONDUCTORS SHALL BE COPPER WITH THHN/THWN INSULATION. CONDUCTORS SIZE # 8 AWG AND LARGER SHALL BE STRANDED.
7. NO MORE THAN 3 PHASE CONDUCTORS SHALL BE INSTALLED IN ONE CONDUIT UNLESS NOTED OTHERWISE. SHARED NEUTRALS ARE NOT PERMITTED.
8. COLOR OF ALL NORMAL BRANCH RECEPTACLES, SWITCHES, ETC. TO BE WHITE. COVERPLATES SHALL BE STAINLESS STEEL, UNLESS NOTED OTHERWISE. CEILING MOUNTED RECEPTACLES SHALL BE WHITE WITH MATCHING NYLON COVERPLATES.
9. MAINTAIN NEC MINIMUM CLEARANCE IN FRONT OF ALL SAFETY SWITCHES AND PANELBOARDS.
10. ALL ITEMS ON PLANS ARE NEW UNLESS NOTED OTHERWISE.
11. EXISTING PANELS TO REMAIN SHALL HAVE THEIR PANEL SCHEDULES UPDATED AND RETYPED AFTER COMPLETION OF NEW WORK. NEW PANEL LOAD DESCRIPTIONS SHALL CLEARLY DEFINE LOAD TYPE AND LOCATION. PANEL SCHEDULES SHALL INCLUDE CONTRACTOR COMPANY NAME, PHONE NUMBER, AND DATE SCHEDULE WAS MADE AND APPLIED.
12. ALL WALL PENETRATIONS SHALL BE SEALED USING AN APPROPRIATE UL ASSEMBLY TO MAINTAIN THE RATING OF THE WALL.
13. WHERE RECEPTACLES ARE INDICATED TO BE EQUIPPED WITH GROUND FAULT INTERRUPTING CIRCUITRY, IT SHALL BE INTEGRAL TO THE DEVICE AND HAVE A TEST/RESET MECHANISM INTEGRAL WITH THE DEVICE. REMOTE TEST/RESET OR THE INTERWIRING OF ADDITIONAL RECEPTACLES UTILIZING GF SENSING OF A SINGLE RECEPTACLE IS NOT ACCEPTABLE.
14. ALL WALL AND CEILING DEVICES SHOWN ON THE NEW WORK PLANS REQUIRE CONCEALED RACEWAYS AND RECESSED METAL BOXES UNLESS NOTED OTHERWISE. COORDINATE WITH DEMOLITION TO REUSE EXISTING BOXES IN CMU WALLS WHERE THE CONDUITS AND BOXES ARE ACCEPTABLE. WHERE NEW BOXES OR RACEWAYS ARE REQUIRED IN EXISTING HOLLOW CELL CMU WALLS, CUT-IN BOXES AND FISH APPROVED FLEXIBLE METAL CONDUIT WITHIN THE CELL TO THE FIRST JUNCTION ABOVE CEILING. CONSULT WITH ARCHITECT FOR ALL LOCATIONS WHERE SURFACE RACEWAYS AND BOXES ARE REQUIRED TO COMPLETE THE CIRCUIT AND DEVICE ARRANGEMENTS SHOWN.
15. ALL SINGLE POLE CIRCUITS SHALL TERMINATE ON A SINGLE POLE CIRCUIT BREAKER ASSEMBLY. DO NOT USE MULTI-POLE CIRCUIT BREAKER OVERCURRENT PROVISIONS FOR 120 VOLT OR 277 VOLT CIRCUITS. PROVIDE INDIVIDUAL GROUNDED CONDUCTORS FOR ALL SINGLE POLE CIRCUITS.
16. ALL GROUND FAULT PROTECTION DEVICES INSTALLED ON SERVICE DISCONNECTING MEANS, WHERE REQUIRED, SHALL BE PERFORMANCE TESTED WHEN FIRST INSTALLED ON SITE. TESTING SHALL BE CONDUCTED BY A QUALIFIED PERSON USING A TEST PROCESS OF PRIMARY CURRENT INJECTION AND IN ACCORDANCE WITH MANUFACTURE'S INSTRUCTIONS. TESTING REPORT SHALL BE MADE AVAILABLE TO THE AHJ AND THE OWNER.
17. ALL UNDERGROUND PVC CONDUIT RUNS SHALL HAVE RIGID STEEL ELBOWS AND RIGID STEEL SECTIONS AT GRADE PENETRATIONS WHERE SUBJECT TO POSSIBLE DAMAGE. WHERE RIGID STEEL IS USED AND IN CONTACT WITH EARTH OR CONCRETE, IT SHALL BE COMPLETELY COATED WITH AN ALKALI AND RUST-RESISTANT BITUMASTIC PAINT, AND THREADS SHALL BE COATED WITH ZINC CHROMATE.
18. CALL SUNSHINE 811 OR GO ONLINE TO WWW.SUNSHINE811.COM, AT LEAST TWO FULL BUSINESS DAYS BEFORE DIGGING TO HAVE UTILITIES LOCATED & MARKED.
19. WHERE CORE DRILLING OCCURS, CONTRACTOR SHALL USE CAUTION TO AVOID DAMAGING SURROUNDING SURFACES. CONTRACTOR RESPONSIBLE FOR CLEANING UP ALL SLURRY AND ENSURING A CLEAN AND PROFESSIONAL FINISH. CONTRACTOR SHALL REPLACE OR REPAIR BUILDING SURFACES OR EQUIPMENT DAMAGED BY SLURRY OR CORE DRILLING MATERIALS.
20. WHERE INSTALLING ELECTRICAL CONDUIT, MAINTAIN CONDUIT STRAPPING AND FASTENING PER NEC.
21. WHERE INSTALLING ELECTRICAL CONDUIT, MAINTAIN PULL POINTS PER NEC AND DO NOT EXCEED 360 DEGREES IN BENDS IN ANY CONDUIT RUN WITHOUT APPROPRIATE PULL POINTS.
22. ALL JUNCTION BOXES, PULLBOXES, AND DEVICES SHALL BE LABELED WITH CIRCUIT NUMBER AND CIRCUIT VOLTAGE.

DESCRIPTION OF WORK

1. FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS REQUIRED TO COMPLETE ALL ELECTRICAL WORK AS SHOWN ON THE CONTRACT DRAWINGS.
2. THIS SHALL INCLUDE THE INSTALLATION OF A COMPLETE AND PROPERLY OPERATING ELECTRICAL SYSTEM. THIS SYSTEM REQUIRED CONSISTS BASICALLY OF, AND IS NOT LIMITED TO, THE FOLLOWING:
   - EXTEND THE DISTRIBUTION SYSTEM FOR POWER INCLUDING THE NECESSARY FEEDERS, BRANCH CIRCUITS, INSTALLATION OF AND CONNECTION TO DEVICES, PANELBOARDS, TRANSFORMERS, SWITCHES, AND ALL OTHER EQUIPMENT SHOWN.
   - EXTEND THE BUILDING GROUND SYSTEM AND PROVIDE SPECIAL GROUNDS AS INDICATED.
   - PERFORM REPLACEMENT OF A-WING SWITCHGEAR AND COMPONENTS.
   - PERFORM REPLACEMENT OF A-WING PAD-MOUNT TRANSFORMER AND MAIN BUSDUCT WITH NEW FEEDERS IN RACEWAY.
   - PERFORM REPLACEMENT OF PDU's IN D-WING DATA CENTER, INCLUDING DISTRIBUTION PANELS, FEEDERS, AND RACEWAY AS SHOWN.
   - PROVIDE SURGE PROTECTION DEVICES AS SPECIFIED AND WHERE NOTED IN CONSTRUCTION DOCUMENTS.
   - PRINT AND APPLY ARC FLASH LABELS FOR EQUIPMENT NOTED. LABELS WILL BE PROVIDED TO CONTRACTOR BY ENGINEER IN PDF FORMAT AND ARE INCLUDED IN THESE PLANS FOR REFERENCE.
   - SECURE THE SERVICES OF FLORIDA CRITICAL POWER TO COMPLETE UPGRADES TO EXISTING UPS AS NOTED. ALL UPS WORK SHALL BE COMPLETED ON WEEKENDS TO ALLOW SYSTEM TO BE DOWN DURING NON-OCCUPIED HOURS.
   - SECURE THE SERVICES OF MECHANICAL CONTRACTOR AS PART OF ADDITIVE ALTERNATE SCOPE TO REMOVE AND DISPOSE OF HVAC EQUIPMENT IN D-WING. REFER TO ADD ALTERNATE NOTES.
   - PROVIDE (18) 30A RATED, 208V, 3Ø VERTICAL RACK-MOUNT PDU POWER STRIPS FOR OWNER INSTALL WITHIN EXISTING DATA RACKS. PDU's SHALL HAVE L21-30 PLUG. (GUIDE: APC #AP8865)
   - PERFORM TESTING REQUIRED ON NEW SWITCHGEAR MAIN BREAKER FOR ERMS AND GFCI PER ONE LINE NOTES AND GENERAL NOTES. COMPLETE TESTING FORM AND SUBMIT TO ENGINEER AT TIME OF COMPLETION.
   - PERFORM THE DEMOLITION WORK INDICATED.
3. THE BIDDER SHALL INSPECT THE PRESENT JOBSITE CONDITIONS BEFORE PREPARING HIS BID. THE SUBMISSION OF A BID WILL BE CONSIDERED EVIDENCE THAT SUCH A VISIT AND INSPECTION WAS PERFORMED BY THE BIDDER AND THAT HE TAKES FULL RESPONSIBILITY FOR ALL FACTORS GOVERNING HIS WORK.
4. THE ELECTRICAL WORK SHALL BE COMPLETE, FULLY OPERATIONAL, AND SUITABLE IN EVERY WAY FOR THE SERVICE REQUIRED. DRAWINGS ARE GENERALLY DIAGRAMMATIC IN NATURE AND DO NOT SHOW ALL DETAILS, DEVICES AND INCIDENTAL MATERIALS NECESSARY TO ACCOMPLISH THEIR INTENT. THEREFORE, IT SHALL BE UNDERSTOOD THAT SUCH DEVICES AND INCIDENTAL MATERIALS REQUIRED SHALL BE FURNISHED AT NO COST TO THE OWNER.

ADDITIVE ALTERNATE NOTES

ADDITIVE ALTERNATE #1

ADDITIVE ALTERNATE #1 SHALL INCLUDE THE PROVISION AND INSTALLATION OF A NEW 15KV PRIMARY FEEDER FROM EXISTING SWITCH 'SW-1' TO NEW PAD-MOUNT TRANSFORMER 'T-A2'. NEW FEEDER SHALL BE INSTALLED IN EXISTING 3" SPARE CONDUIT. CONDUIT SHALL BE SWABBED AND CLEANED PRIOR TO PULLING IN NEW FEEDER. FEEDER SHALL BE 3-1/C #2 CU EPR (15KV) WITH 1-1/C #4 CU (600). PROVIDE GROUND BUSHING ON EXISTING SPARE CONDUIT EACH END AND BOND GROUND CONDUCTOR TO BOTH SWITCH AND TRANSFORMER. SCOPE SHALL ALSO INCLUDE ALL TERMINATIONS AT BOTH SWITCH AND TRANSFORMER, DISCONNECTING AND REMOVAL OF EXISTING FEEDER WITH CONDUIT REMAINING AS NEW 'SPARE', NEW CABLE TAGS PER DETAIL, AND TESTING OF NEW CABLE PRIOR TO ENERGIZING. TERMINATIONS AT SWITCH SHALL BE 15KV COMPRESSION 2-HOLE LUGS. TERMINATIONS AT TRANSFORMER SHALL BE 15KV, 200A LOADBREAK ELBOWS. COMPLETE INITIAL TESTING OF NEW 15KV CABLE INSTALLED. CABLE TESTING SHALL BE VERY LOW FREQUENCY (VLF) AND BE IN ACCORDANCE WITH NETA MAINTENANCE TESTING STANDARDS AND CABLE MANUFACTURER RECOMMENDATIONS. UNLESS MANUFACTURER DATA STATES OTHERWISE, VLF TESTING SHALL BE AT 16KV RMS, 0.1Hz, FOR 1 HOUR. RECORD ALL TEST DATA AND SUBMIT TESTING REPORT TO OWNER.

BASE BID SCOPE IS TO REUSE EXISTING 15KV FEEDER CURRENTLY IN PLACE AND LAND EXISTING FEEDER 200A LOADBREAK ELBOWS TO NEW PAD-MOUNT TRANSFORMER PRIMARY BUSHINGS WHEN PAD-MOUNT IS REPLACED. NEW TRANSFORMER SHALL BE CAPABLE OF LANDING EXISTING CABLES ON NEW BUSHINGS, MATCHING BUSHING HEIGHT OF EXISTING TRANSFORMER. EXISTING BUSHING HEIGHT IS 26" ABOVE CONCRETE PAD.

ADDITIVE ALTERNATE #2

ADDITIVE ALTERNATE #2 SHALL INCLUDE THE DEMOLITION SCOPE TO REMOVE THE ABANDONED DATA CENTER HVAC EQUIPMENT, INCLUDING BUT NOT LIMITED TO, AC INDOOR AND OUTDOOR EQUIPMENT, REFRIGERANT LINES, AND ALL SUPPORTS, MOUNTING HARDWARE, AND PIPE STRAPS. REFRIGERANT SHALL BE DISPOSED OF PROPERLY. ALTERNATE #2 ALSO INCLUDES STEEL PLATES TO COVER FLOOR OPENINGS AS NOTED ON NEW WORK PLAN, AND SEALING WALLS WHERE PIPING AND CONDUIT ARE REMOVED.

BASE BID SCOPE SHALL INCLUDE REMOVING FEEDERS AND ACCESSIBLE RACEWAY SERVING DATA CENTER HVAC EQUIPMENT BACK TO SERVING PANELS. BREAKERS SPACES IN EXISTING PANELS ARE TO BE USED FOR NEW AC LOADS. REFER TO PANEL SCHEDULES.

McGINNISS + FLEMING ENGINEERING
JON BARBER, PE 55427 | BRIAN WALLACE, PE 75562
820 EAST PARK AVE, I-200, TALLAHASSEE, FL 32301
MFE-INC.COM | 850.681.6424

HSMV-02425040

NKB A-Wing Switchgear Replacement & D-Wing PDU / UPS / Surge Protection Upgrades

Neil Kirkman Building
Tallahassee, Florida

DATE:
September 5, 2025

REVISED:

DESIGNED BY:	DRAWN BY:
BW	AC

SUBMITTAL:
100% Construction Documents

SHEET TITLE:
GENERAL NOTES

SHEET:
E100

JOB NUMBER:
2442

SYMBOL LEGEND

ABBREVIATIONS

A	AMPERE
AC	ABOVE CEILING, ABOVE COUNTERTOP, ALTERNATING CURRENT
AIC	EQUIPMENT AMPERE INTERRUPTING CAPACITY
AFC	AVAILABLE FAULT CURRENT
AFF	MOUNTING HEIGHT ABOVE FINISHED FLOOR OR GRADE TO CENTERLINE
ATS	AUTOMATIC TRANSFER SWITCH
EM	EMERGENCY
ER	EXISTING DEVICE SHOWN IN RELOCATED POSITION
EX	EXISTING - RECONNECT AS REQUIRED AT EXISTING LOCATION. REMOVE AND REINSTALL IF REQUIRED
ETR	EXISTING TO REMAIN
FA	FIRE ALARM
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
HP	HORSE POWER
J	JUNCTION
MCC	MOTOR CONTROL CENTER
RELO	DEVICE TO BE RELOCATED
T	TRANSFORMER, THERMOSTAT
V	VOLT
VA	VOLT-AMPS
W	WATT
WP	WEATHERPROOF (NEMA 3R)

POWER, PANELS, SWGR, & EQUIPMENT

- PANELBOARD 208/240 VOLT - SURFACE MOUNTED - SEE PANELBOARD SCHEDULE
- POWER DISTRIBUTION PANEL OR 480 VOLT - SEE PANELBOARD SCHEDULE
- PANELBOARD - EMERGENCY POWER SYSTEM - SEE PANELBOARD SCHEDULE
- PANELBOARD OR ENCLOSED CIRCUIT BREAKER - RECESSED MOUNTED
- MOLDED CASE CIRCUIT BREAKER
- T — STEP DOWN, DRY-TYPE TRANSFORMER
- SPD — TRANSIENT VOLTAGE AND SURGE PROTECTION DEVICE
- PM — POWERLOGIC METER
- ERMS — ENERGY REDUCING MAINTENANCE SWITCH WITH LOCAL STATUS INDICATOR
- FUSE
- CIRCUIT BREAKER
- CIRCUIT INTERRUPTING SWITCH
- EMERGENCY POWER OFF (EPO)

GROUNDING

- 3/4" X 10'-0" GROUND ROD.

WALL OUTLETS

- DUPLEX RECEPTACLE, 20A, 125V, 2 POLE, 3 WIRE, MOUNT 1'-6" AFF, NEMA 5-20R.
- DOUBLE DUPLEX RECEPTACLE, 20A, 125V, 2 POLE, 3 WIRE,MOUNT 1'-6"AFF, NEMA 5-20R.
- SINGLE RECEPTACLE, 20A, 125V, 2 POLE, 3 WIRE, MOUNT 1'-6" AFF, NEMA 5-20R.
- DUPLEX RECEPTACLE, 20A, 125V, 2 POLE, 3 WIRE, MOUNT BOTTOM OF RECEPTACLE ABOVE COUNTER 3'-8" AFF, NEMA 5-20R.
- EX — NEW RECEPTACLE AND COVERPLATE TO REPLACE EXISTING DEVICE: REFEED IF REQUIRED DUE TO DEMOLITION WORK
- WP — DUPLEX RECEPTACLE, 20A, 125V, 2 POLE, 3 WIRE, WITH WEATHERPROOF-IN-USE COVER
- GFCI — DUPLEX RECEPTACLE, 20A, 125V, 2 POLE, 3 WIRE, WITH GROUND FAULT INTERRUPTER. MOUNT 1'-6" AFF
- 5-30 — SPECIAL RECEPTACLE - NEMA CONFIGURATION AS SHOWN ON FLOOR PLANS OR IN EQUIPMENT SCHEDULE - SHOWN NEMA 5-30R.
- DUPLEX RECEPTACLE, 20A, 125V, 2 POLE, 3 WIRE MOUNTED BELOW RAISED COMPUTER FLOOR
- SPECIAL RECEPTACLE - NEMA CONFIGURATION AS SHOWN ON FLOOR PLANS, MOUNTED BELOW RAISED COMPUTER FLOOR
- DOUBLE DUPLEX RECEPTACLE, 20A, 125V, 2 POLE, 3 WIRE, MOUNTED BELOW RAISED COMPUTER FLOOR
- SINGLE RECEPTACLE, 20A, 125V, 2 POLE, 3 WIRE, MOUNTED BELOW RAISED COMPUTER FLOOR
- J — POWER SYSTEMS FURNITURE CONNECTION WITH WHIP

JUNCTION BOXES AND OUTLETS

- J — JUNCTION BOX IN OR ABOVE CEILING
- J — JUNCTION BOX IN WALL - MOUNT 1'-6" UNLESS NOTED OTHERWISE.

CIRCUITING AND BRANCH CIRCUITS

- ARROW INDICATES CIRCUIT HOMERUNS IN CONDUIT
- LPA-2,4 — INDICATES HOMERUN TO CIRCUIT NUMBERS 2 & 4 IN PANEL "LPA"

NOTE:
NUMBER OF HOMERUNS SHOWN ON THE PLANS ARE THE NUMBER OF HOMERUNS REQUIRED. DO NOT RUN MORE THAN THREE HOMERUNS IN ONE CONDUIT. DO NOT RUN 2 CIRCUITS ON THE SAME PHASE IN ONE CONDUIT.

- INDICATES CONTINUATION OF RUN SHOWN ON ANOTHER PLAN VIEW
- L2A-3 — INDICATES 1 #12 PHASE CONDUCTOR, 1 #12 NEUTRAL & 1 #12 GND - 3/4" C. TO 1-POLE BREAKER, SIZED AS SHOWN IN PANEL SCHEDULES, ON CIRCUIT No. 3, IN PANEL 'L2A'.
- L2A-2,4 — INDICATES 2 #12 PHASE CONDUCTORS & 1 #12 GND - 3/4" C. TO 2-POLE BREAKER, SIZED AS SHOWN IN PANEL SCHEDULES, ON CIRCUIT No.'s 2 & 4 IN PANEL 'L2A'.
- L2A-2,4,6 — INDICATES 3 #12 PHASE CONDUCTORS & 1 #12 GND - 3/4" C, TO 3-POLE BREAKER, SIZED AS SHOWN IN PANEL SCHEDULES, ON CIRCUIT No.'S 2,4,6 IN PANEL 'L2A'.
- 10's — INDICATES ALL CONDUCTORS ARE TO BE MINIMUM #10 GAUGE, CONDUIT PER NEC OR AS INDICATED.
- SHORTER TICKMARKS INDICATE 2 OR MORE PHASE CONDUCTORS, OR SWITCH LEGS
- LONGER TICKMARKS INDICATE GROUNDED CONDUCTOR(S), QUANTITY AS SHOWN.

NEUTRALS SHALL NOT BE SMALLER SIZE THAN PHASE CONDUCTORS UNLESS SPECIFICALLY INDICATED OTHERWISE. PROVIDE THE APPROPRIATE NUMBER OF NEUTRALS IN ACCORDANCE WITH NEC.

INSULATED GROUNDING CONDUCTORS SHALL BE USED IN ALL CIRCUITS, SIZED IN ACCORDANCE WITH NEC ARTICLE 250.

2-#12, 1-#12 GROUND SHALL BE RUN IN 3/4" CONDUIT. 4 OR MORE #12 CONDUCTORS SHALL BE RUN IN 3/4" C. OR AS REQUIRED BY NEC. LARGER THAN #12 CONDUCTORS SHALL BE RUN IN CONDUIT SIZED IN ACCORDANCE WITH NEC.

- CONCEALED OVERHEAD OR IN WALLS.
- CONCEALED IN OR BELOW FLOORS OR GRADE.
- FLEXIBLE CONDUIT TO EQUIPMENT

CONTROLS & MECHANICAL EQUIPMENT

- N3R 30A — DISCONNECT SWITCH, NON-FUSIBLE, SIZE AND NEMA TYPE AS NOTED.
- N3R 30A — DISCONNECT SWITCH, FUSIBLE, SIZE AND NEMA TYPE AS NOTED, FUSE AS NOTED OR PER MANUFACTURER'S RECOMMENDATION FOR EQUIPMENT SERVED. NON-FUSED SWITCH MAY BE USED IF UNIT IS UL TESTED WITH BREAKER PROTECTION

McGINNISS + FLEMING ENGINEERING
JON BARBER, PE 55427 | BRIAN WALLACE, PE 75562
820 EAST PARK AVE, I-200, TALLAHASSEE, FL 32301
MFE-INC.COM | 850.681.6424

HSMV-02425040

NKB A-Wing Switchgear Replacement & D-Wing PDU / UPS / Surge Protection Upgrades

Neil Kirkman Building
Tallahassee, Florida

DATE:
September 5, 2025

REVISED:

DESIGNED BY:	DRAWN BY:
BW	AC

SUBMITTAL:
100% Construction Documents

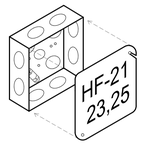
SHEET TITLE:
SYMBOL LEGEND

SHEET:
E101

JOB NUMBER:
2442

JUNCTION BOX IDENTIFICATION

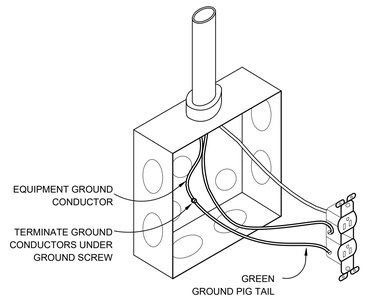
NOT TO SCALE



EACH JUNCTION BOX COVER SHALL BE LABELED WITH A PERMANENT "MAGIC" MARKER OR OTHER PERMANENT MEANS TO IDENTIFY THE CIRCUITS OR SYSTEMS CABLES WITHIN. INCLUDE THE PANEL AND CIRCUIT BREAKER NUMBER FOR ALL POWER CIRCUITS WITHIN. FOR EXAMPLE, A JUNCTION BOX CONTAINING LIGHTING CIRCUITS 21, 23, 25 FROM PANEL "HF" WOULD BE LABELED "HF-21,23,25" AS SHOWN.

RECEPTACLE WIRING DIAGRAM

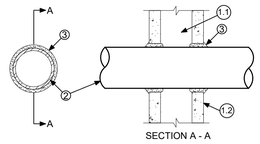
NOT TO SCALE



PENETRATION DETAIL - A

NOT TO SCALE

SYSTEM NO. W-L-1001
(FORMERLY SYSTEM NO. 147)
F RATINGS - 1, 2, 3 AND 4 HOUR (SEE ITEMS 2 & 3)
T RATING - 0, 1, 2, 3 AND 4 HOUR (SEE ITEM 3)
L RATING AT AMBIENT - LESS THAN 1 CFM/SQ FT
L RATING AT 400°F - LESS THAN 1 CFM/SQ FT



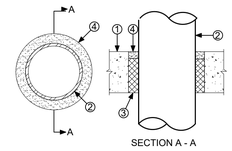
1. WALL ASSEMBLY - THE 1, 2, 3 OR 4 HOUR FIRE-RATED GYPSUM WALLBOARD / STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 OR U400 SERIES WALL OR PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   1.1. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS (MAXIMUM 2 HOUR FIRE RATED ASSEMBLIES) OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOMINAL 2"x4" LUMBER SPACED 16" O.C. WITH NOMINAL 2"x4" LUMBER END PLATES AND CROSS BRACES. STEEL STUDS TO BE MINIMUM 3-5/8" WIDE BY 1-3/8" DEEP CHANNELS SPACED MAXIMUM OF 24" O.C.
   1.2. WALLBOARD, GYPSUM - NOMINAL 1/2" OR 5/8" THICK, 4' WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM WALLBOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAXIMUM DIAMETER OF OPENING IS 13-1/2".
2. PIPE OR CONDUIT - NOMINAL 12" DIAMETER (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE, NOMINAL 12" DIAMETER (OR SMALLER) SERVICE WEIGHT (OR HEAVIER) CAST IRON SOIL PIPE, NOMINAL 12" DIAMETER (OR SMALLER) CLASS 50 (OR HEAVIER) DUCTILE IRON PRESSURE PIPE, NOMINAL 6" DIAMETER (OR SMALLER) STEEL CONDUIT, NOMINAL 4" DIAMETER (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING, NOMINAL 6" DIAMETER (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING OR NOMINAL 1" DIAMETER (OR SMALLER) FLEXIBLE STEEL CONDUIT. WHEN COPPER PIPE IS USED, MAXIMUM F RATING OF FIRESTOP SYSTEM (ITEM 3) IS 2 HOUR. STEEL PIPES OR CONDUITS LARGER THAN NOMINAL 4" DIAMETER MAY ONLY BE USED IN WALLS CONSTRUCTED USING STEEL CHANNEL STUDS. A MAXIMUM OF ONE PIPE OR CONDUIT IS PERMITTED IN THE FIRESTOP SYSTEM. PIPE OR CONDUIT TO BE INSTALLED NEAR CENTER OF STUD CAVITY WIDTH AND TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY.
3. FILL, VOID OR CAVITY MATERIAL - CAULK - CAULK FILL MATERIAL INSTALLED TO COMPLETELY FILL ANNULAR SPACE BETWEEN PIPE OR CONDUIT AND GYPSUM WALLBOARD AND WITH A MINIMUM 1/4" DIAMETER BEAD OF CAULK APPLIED TO PERIMETER OF PIPE OR CONDUIT AT ITS EGRESS FROM THE WALL. CAULK INSTALLED SYMMETRICALLY ON BOTH SIDES OF WALL ASSEMBLY. THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS SHOWN IN THE FOLLOWING TABLE. THE HOURLY T RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE TYPE OR SIZE OF THE PIPE OR CONDUIT AND THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS TABULATED BELOW:

MAXIMUM PIPE DIAMETER (INCHES)	ANNULAR SPACE (INCHES)	F RATING (HOURS)	T RATING (HOURS)
4	0 - 1-1/2	1 OR 2	0

PENETRATION DETAIL - B

NOT TO SCALE

SYSTEM NO. C-AJ-1014
(FORMERLY SYSTEM NO. 133)
F RATING - 2 HOUR
T RATING - 0 HOUR
L RATING AT AMBIENT - LESS THAN 1 CFM/SQ FT (SEE ITEM 4)
L RATING AT 400°F - LESS THAN 1 CFM/SQ FT (SEE ITEM 4)

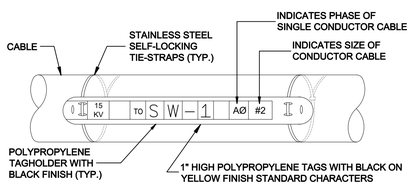


1. FLOOR OR WALL ASSEMBLY - MIN 3-1/4" THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS*. MAX DIAMETER OF CIRCULAR OPENING IS 6". SEE CONCRETE BLOCK (CAZT) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.
2. THROUGH PENETRANTS - ONE METALLIC PIPE OR CONDUIT TO BE CENTERED WITHIN THE FIRESTOP SYSTEM. A NOMINAL ANNULAR SPACE OF 3/4" IS REQUIRED WITHIN THE FIRESTOP SYSTEM. PIPE OR CONDUIT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES OR CONDUITS MAY BE USED:
   2.1. STEEL PIPE - NOMINAL 4" DIAMETER (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   2.2. CONDUIT - NOMINAL 4" DIAMETER (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR STEEL CONDUIT.
3. PACKING MATERIAL - MINIMUM 4 PCF MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OR FROM BOTH SURFACES OF WALL AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL. MINIMUM THICKNESS OF PACKING MATERIAL IN FLOORS AND WALLS TO BE 2-3/4" AND 2-1/4", RESPECTIVELY.
4. FILL, VOID OR CAVITY MATERIAL* - SEALANT - MINIMUM 1/2" THICKNESS OF FILL MATERIAL APPLIED WITHIN ANNULUS, FLUSH WITH TOP SURFACE OF FLOOR OR WITH BOTH SURFACES OF WALL. AS AN ALTERNATE, THE PERMANENT FORMING MATERIAL (ITEM 3) MAY BE OMITTED IF THE FILL MATERIAL THICKNESS IS INCREASED TO A MINIMUM OF 1-1/2".
   MINNESOTA MINING AND MFG CO - (TYPES FB-2000 OR FB-2000+). (NOTE: L RATINGS APPLY ONLY WHEN FB-2000+ IS USED.)

*BEARING THE UL CLASSIFICATION MARKING.

MEDIUM VOLTAGE CABLE TAGS

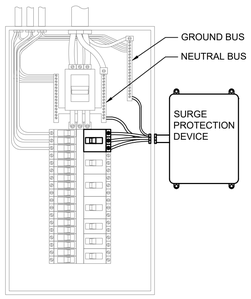
NOT TO SCALE



NEW FEEDER CIRCUIT IN NEW PAD-MOUNT TRANSFORMER AND IN SWITCH 'SW-1'
(IF FEEDER IS REPLACED AS PART OF ADD ALTERNATE #1)

SURGE PROTECTION DEVICE PANEL DETAIL

NOT TO SCALE

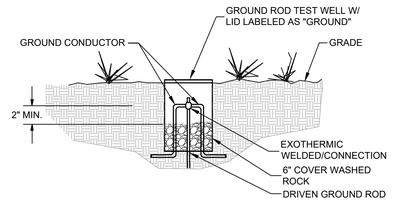


NOTES:

1. THE SPD SHALL BE LOCATED IMMEDIATELY ADJACENT TO THE SWITCHBOARD, PANELBOARD, OR DISCONNECT SWITCH BEING PROTECTED (CLOSE-NIPPLE TO PANELBOARDS).
2. CONDUCTORS SHALL NOT BE MORE THAN 12" IN LENGTH. ALL CONDUCTORS SHALL BE CUT TO PRECISELY THE SAME LENGTH BEFORE INSTALLATION. CONDUCTORS SHALL AVOID UNNECESSARY BENDS.
3. THE INSTALLER MAY REARRANGE BREAKER LOCATIONS TO ENSURE THE SHORTEST AND STRAIGHTEST LEADS TO THE SPD. BREAKER AND SPD SHALL BE INSTALLED CLOSE TO NEUTRAL BUS.
4. THE LAYOUT IN THIS DETAIL WILL NOT MATCH ALL INSTALLATIONS, BUT IS INTENDED TO SHOW PROPER PLACEMENT AND INSTALLATION OF SPD AND CORRESPONDING BREAKER. COORDINATE WITH EQUIPMENT PROVIDED.

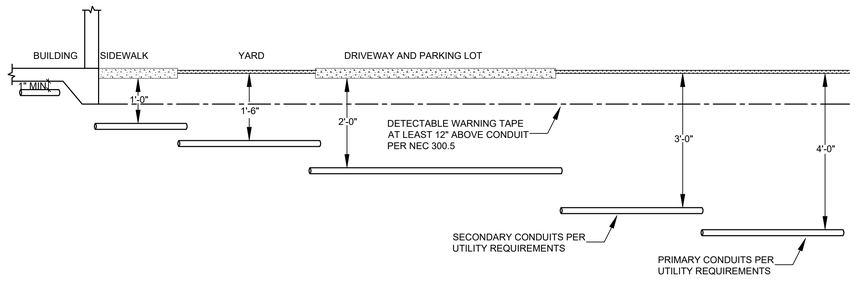
TEST WELL GROUND ROD INSTALLATION

NOT TO SCALE



UNDERGROUND CONDUIT BURIAL DEPTHS

NOT TO SCALE



WIRING SCHEDULE FOR VOLTAGE DROP	
DISTANCE	CONDUCTOR SIZE
120V - 20A BRANCH CIRCUIT	
UP TO 100'	#12
100' - 150'	#10
150' - 250'	#8
250' - OVER	#6
277V - 20A BRANCH CIRCUIT	
UP TO 200'	#12
200' - 375'	#10
375' - OVER	#8

NOTE: FOR CIRCUITS WITH #6 CONDUCTORS, REDUCE TO #8 CONDUCTORS AT PANEL FOR FINAL CONNECTIONS TO CIRCUIT BREAKER.

McGINNISS + FLEMING ENGINEERING

JON BARBER, PE 55427 | BRIAN WALLACE, PE 75562
820 EAST PARK AVE, I-200, TALLAHASSEE, FL 32301
MFE-INC.COM | 850.681.6424

HSMV-02425040

NKB A-Wing Switchgear Replacement & D-Wing PDU / UPS / Surge Protection Upgrades

Neil Kirkman Building
Tallahassee, Florida

DATE:
September 5, 2025

REVISED:

DESIGNED BY:	DRAWN BY:
BW	AC

SUBMITTAL:
100% Construction Documents

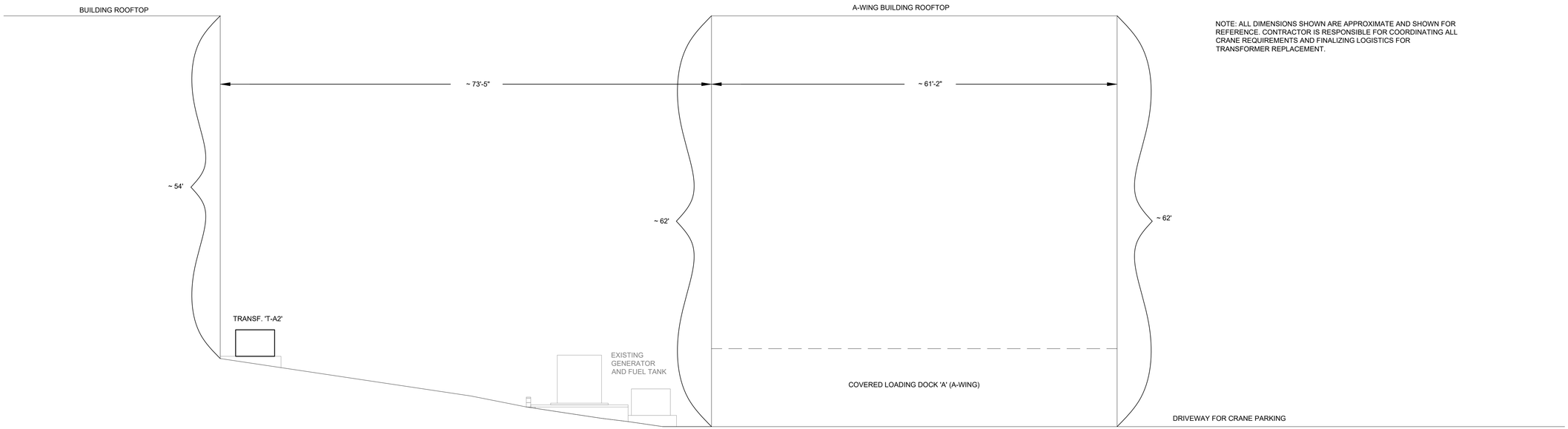
SHEET TITLE:
DETAILS

SHEET:
E102

JOB NUMBER:
2442

CRANE PLAN

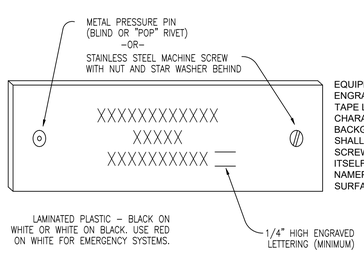
NOT TO SCALE



NOTE: ALL DIMENSIONS SHOWN ARE APPROXIMATE AND SHOWN FOR REFERENCE. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CRANE REQUIREMENTS AND FINALIZING LOGISTICS FOR TRANSFORMER REPLACEMENT.

NAMEPLATE DETAILS

NOT TO SCALE



EQUIPMENT IDENTIFICATION SHALL BE MADE USING ENGRAVED LAMINATED PLASTIC PLATES (INDENTED TAPE LABELS WILL NOT BE PERMITTED). CHARACTERS SHALL BE WHITE ON A BLACK BACKGROUND AND 1/4" HIGH MINIMUM. PLATES SHALL BE SECURED TO THE PANELS BY MEANS OF SCREWS OR METAL PRESSURE PINS. CEMENT, BY ITSELF, WILL NOT BE ACCEPTABLE. ALL NAMEPLATES SHALL BE MOUNTED ON THE OUTSIDE SURFACE OF THE PIECE OF EQUIPMENT.

ALL ENCLOSURES CONTAINING ENERGIZED COMPONENTS SHALL BE MARKED WITH STANDARDIZED MYLAR LABELS IDENTIFYING HAZARDS. SUCH WARNING MESSAGES AS "WARNING-HAZARDOUS VOLTAGE", "480 VOLTS", "208 VOLTS", ETC. ARE ACCEPTABLE. APPLY AS APPROPRIATE

NEW SWITCHGEAR - INSTALL ON MAIN BREAKER SECTION

3/8" LETTERS - WHITE ON RED BACKGROUND MOUNT TO MAIN BREAKER SECTION

PORTIONS OF THIS FACILITY ARE EQUIPPED WITH MULTIPLE STANDBY POWER GENERATORS AND ADDITIONAL SERVICES AS NOTED BELOW. DISCONNECTING THIS UTILITY SERVICE WILL NOT REMOVE POWER FROM FACILITY.

A-WING

GENERATOR 1 OF 3: 'GEN-1' IS LOCATED AT A-WING NEAR LOADING DOCK. GENERATOR SERVES LIFE SAFETY LOADS FOR ENTIRE KIRKMAN BUILDING. GENERATOR EPO LOCATED ON EXTERIOR WALL ADJACENT TO GENERATOR.

NORMAL SERVICE #1 ENTERING A-WING BASEMENT: DISCONNECT LOCATED IN MAIN SWITCHBOARD IN ELECTRICAL ROOM A813A.

NORMAL SERVICE #2 ENTERING A-WING BASEMENT: DISCONNECT LOCATED IN CHILLER PLANT SWITCHBOARD IN ELECTRICAL ROOM A813A.

B-WING

NORMAL SERVICE #3 ENTERING B-WING: DISCONNECT LOCATED IN SERVICE PANEL 'MPB' IN ELECTRICAL ROOM B802.

NORMAL SERVICE #4 ENTERING B-WING: DISCONNECT LOCATED IN SWITCHBOARD 'B2' IN OUTDOOR MECHANICAL ROOM NEAR TRASH COMPACTOR.

NORMAL SERVICE #5 ENTERING B-WING: DISCONNECT LOCATED IN SWITCHBOARD 'B1' IN FIRST FLOOR ELECTRICAL ROOM NEAR FRONT ENTRY OF BUILDING.

C-WING AND D-WING

GENERATOR 2 OF 3: 'GEN-2' IS LOCATED ON EAST SIDE OF C-WING. GENERATOR SERVES STAND-BY LOADS IN DATA CENTER. GENERATOR EPO LOCATED ON GENERATOR.

GENERATOR 3 OF 3: 'GEN-3' IS LOCATED ON EAST SIDE OF C-WING. GENERATOR SERVES STAND-BY LOADS IN DATA CENTER. GENERATOR EPO LOCATED ON GENERATOR.

NORMAL SERVICE #6 ENTERING C-WING: DISCONNECT LOCATED IN SWITCHBOARD 'C-1' IN MECHANICAL ROOM C802.

NORMAL SERVICE #7 ENTERING C-WING: DISCONNECT LOCATED IN SWITCHBOARD 'D-1' IN MECHANICAL ROOM C802.

UPS NORMAL SERVICE #8 ENTERING C-WING: DISCONNECT LOCATED IN SWITCHBOARD 'D-1' IN MECHANICAL ROOM C802.

AS REQUIRED

AS REQUIRED

* IN ADDITION TO NEW SWITCHGEAR, SIGNAGE SHALL BE PROVIDED AND INSTALLED ON ALL OTHER NORMAL POWER SERVICE LOCATIONS. NOTE A FEW OF THESE LOCATIONS ALREADY HAVE SIMILAR SIGNAGE, WHICH ARE TO BE REMOVED AND REPLACED WITH NEW SIGNAGE.

NEW SWITCHGEAR - INSTALL ON EACH SECTION

WHITE LETTERS ON RED BACKGROUND

PRIOR TO OPENING, SERVICING, OR INVESTIGATING ANY SWITCHGEAR DISTRIBUTION SECTIONS, ENGAGE ENERGY-REDUCING MAINTENANCE SWITCH AT MAIN BREAKER SECTION.

NEW SWITCHGEAR - INSTALL ON MAIN BREAKER SECTION

WHITE LETTERS ON BLACK BACKGROUND

MAIN SERVICE DISCONNECT
A-WING
FED BY PAD-MOUNT
TRANSFORMER 'T-A2'

NEW SWITCHGEAR - INSTALL ON MAIN BREAKER SECTION

WHITE LETTERS ON BLACK BACKGROUND

AVAILABLE FAULT CURRENT

* A
CALCULATION COMPLETED: 07/2025

* OBTAIN FINAL VALUE FROM ENGINEER PRIOR TO MAKING SIGN

NEW SWITCHGEAR - INSTALL AT ALL FEEDER BREAKERS

SWBD 'SD-1' - 4
150A
480V, 3Ø PANEL 'N4BB'

MAIN DISTRIBUTION SECTIONS SHALL HAVE EACH CIRCUIT IDENTIFIED AS TO CIRCUIT NUMBER, BREAKER SIZE, AND LOAD WITH ELECTRICAL CHARACTERISTICS OF LOAD. FOR EXAMPLE, A 480 VOLT, 3 PHASE PANEL 'N4BB' FED FROM 150A BREAKER IN SWITCHGEAR, CIRCUIT No. 4 WOULD BE LABELED AS FOLLOWS WITH THE PLATE ATTACHED ADJACENT TO THE CIRCUIT BREAKER:

SWGR - 4
150A
480V, 3Ø PANEL 'N4BB'

NOTE: ALL LOADS SHALL BE TESTED AND VERIFIED BY CONTRACTOR PRIOR TO APPLYING LABELS.

NFPA 70 ART. 210.5, WHERE THE PREMISES WIRING SYSTEM HAS BRANCH CIRCUITS SUPPLIED FROM MORE THAN ONE NOMINAL VOLTAGE SYSTEM, EACH UNGROUNDED CONDUCTOR OR BRANCH CIRCUIT SHALL BE IDENTIFIED BY PHASE OR LINE AND SYSTEM AT ALL TERMINATIONS, CONNECTIONS AND SPLICE POINTS IN COMPLIANCE WITH 210.5(C)(1)(a) AND (b). IDENTIFICATION SHALL BE PLACED AT EACH PANELBOARD OR SWITCHBOARD AND SHALL BE PERMANENT AND CLEARLY IDENTIFIABLE. IDENTIFY CONDUCTORS AS FOLLOWS.

208/120 VOLTS
PHASE A - BLACK
PHASE B - RED
PHASE C - BLUE
NEUTRAL - WHITE

480/277 VOLTS
PHASE A - BROWN
PHASE B - ORANGE
PHASE C - YELLOW
NEUTRAL - GRAY

McGINNISS + FLEMING ENGINEERING

JON BARBER, PE 55427 | BRIAN WALLACE, PE 75562
820 EAST PARK AVE, I-200, TALLAHASSEE, FL 32301
MFE-INC.COM | 850.681.6424

HSMV-02425040

NKB A-Wing Switchgear Replacement & D-Wing PDU / UPS / Surge Protection Upgrades

Neil Kirkman Building
Tallahassee, Florida

DATE:
September 5, 2025

REVISED:

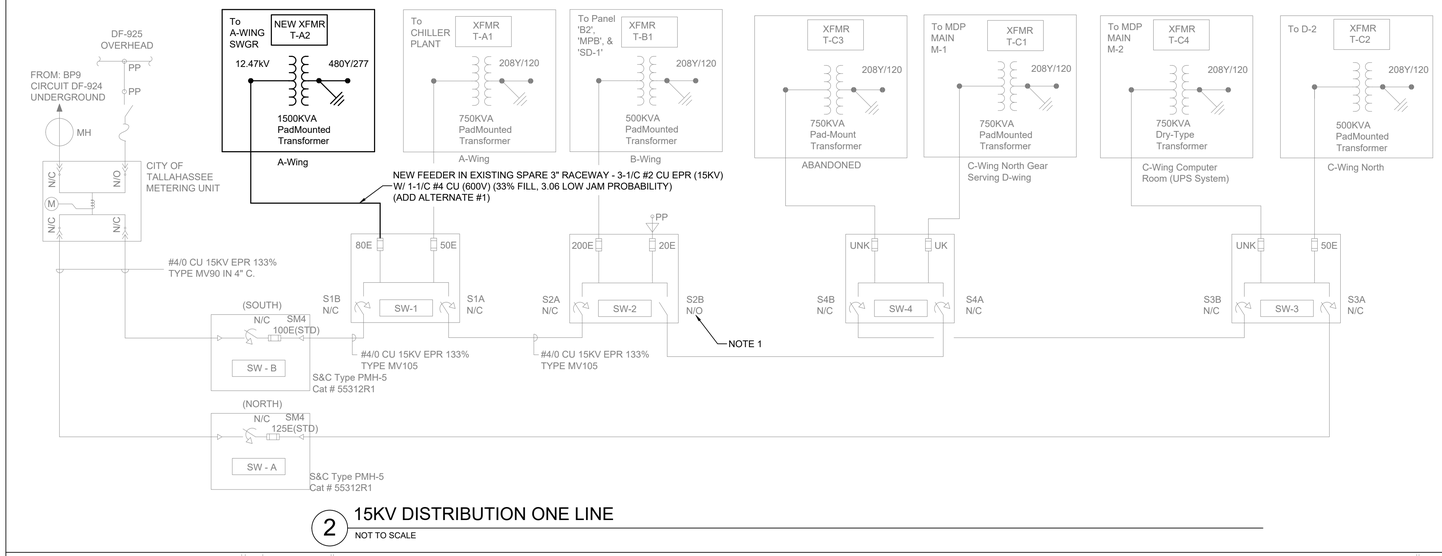
DESIGNED BY:	DRAWN BY:
BW	AC

SUBMITTAL:
100% Construction Documents

SHEET TITLE:
DETAILS

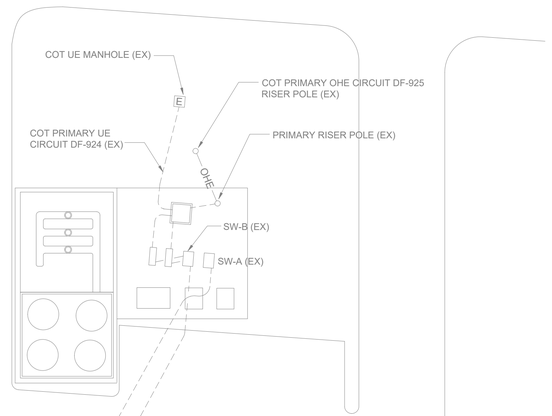
SHEET:
E103

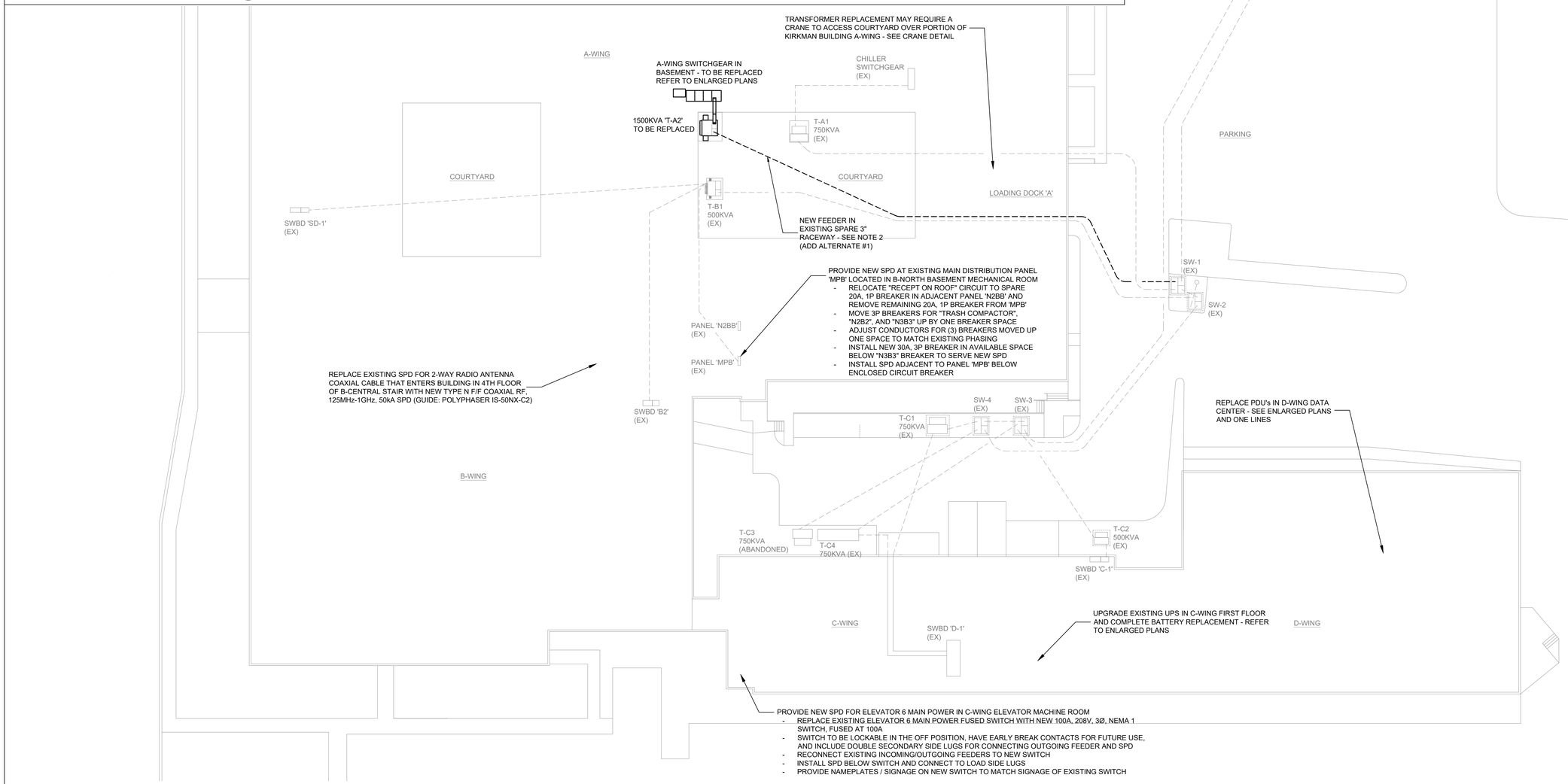
JOB NUMBER:
2442



2 15KV DISTRIBUTION ONE LINE

NOT TO SCALE





N

1 ELECTRICAL SITE PLAN

1" = 20'-0"

SHEET NOTES:

1. EXISTING MV LOOP SETUP HAS NORMALLY OPEN SWITCH AT 'SW-2B'. SWITCH WAY 'SW-2B' CANNOT BE CLOSED AND SHALL REMAIN AS THE NORMALLY OPEN PORTION OF THE LOOP.
2. EXISTING FEEDER BETWEEN 15KV SWITCH 'SW-1' AND PAD-MOUNT TRANSFORMER CONSISTS OF A SINGLE RUN OF 15KV, #2, WITH GROUND IN 3" CONDUIT. THERE IS AN ADDITIONAL SPARE 3" CONDUIT BETWEEN SWITCH AND TRANSFORMER TO BE USED FOR ADD ALTERNATE FEEDER. EXACT LENGTH IS UNKNOWN. CONTRACTOR TO VERIFY LENGTH PRIOR TO CUTTING FEEDER. SEE GENERAL NOTES SHEET FOR ALTERNATE SCOPE AND SEE ONE LINE FOR NEW FEEDER SIZING.

McGINNISS + FLEMING ENGINEERING
JON BARBER, PE 55427 | BRIAN WALLACE, PE 75562
820 EAST PARK AVE, I-200, TALLAHASSEE, FL 32301
MFE-INC.COM | 850.681.6424

HSMV-02425040

NKB A-Wing Switchgear Replacement & D-Wing PDU / UPS / Surge Protection Upgrades

Neil Kirkman Building
Tallahassee, Florida

DATE:
September 5, 2025

REVISED:

DESIGNED BY:	DRAWN BY:
BW	AC

SUBMITTAL:
100% Construction Documents

SHEET TITLE:
SITE PLAN

SHEET:
E104

JOB NUMBER:
2442

SEQUENCING NOTES

GENERAL NOTES:

1. THE COMPLETE SCOPE OF WORK AS NOTED WITHIN THESE DOCUMENTS SHALL BE COMPLETED IN PHASES. PHASING NOTES DO NOT INCLUDE ALL DETAILS OF CONSTRUCTION.
2. THE CONTRACTOR IS EXPECTED TO PLAN OUT THE EXECUTION OF THE WORK SO AS TO MINIMIZE INTERFERENCE TO THE OWNER'S OPERATIONS.
3. ELECTRICAL POWER OUTAGES FOR THIS FACILITY IS A REQUIREMENT OF THIS PROJECT AND SHALL BE THOROUGHLY PLANNED AND COORDINATED WITH HSMV.
4. ELECTRICAL OUTAGES WILL BE LIMITED TO SCHEDULED TIMES APPROVED BY HSMV. THE CONTRACTOR SHALL PLAN AND STAFF THE PROJECT ACCORDINGLY.
5. COORDINATE ALL POWER OUTAGES WITH HSMV AND DMS PROJECT MANAGER PRIOR TO OUTAGE. PROVIDE 21 DAY MINIMUM NOTICE TO HSMV AND DMS PROJECT MANAGER AS TO WHEN PROPOSED POWER OUTAGES WILL OCCUR TO RECEIVE APPROVAL. ALL POWER OUTAGES AND CHANGEOVERS SHALL BE SCHEDULED AND SCHEDULES STRICTLY ADHERED TO. OUTAGES THAT ARE NOT SCHEDULED WILL NOT BE ALLOWED.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY LOW VOLTAGE CONSTRUCTION POWER AND LIGHTING DURING OUTAGES.
7. THE CONTRACTOR SHALL PROVIDE A TRAINED AND KNOWLEDGEABLE STAFF MEMBER REPRESENTATIVE TO CONSULT WITH THE OWNER PRIOR TO ANY SWITCHING, AND TO PERFORM SWITCHING, TEST CIRCUITS, AND DEEM GROUNDED AND SAFE PRIOR TO WORK.
8. COORDINATION WITH HSMV MUST OCCUR FOR ENERGIZING AND DE-ENERGIZING FEEDERS AND EQUIPMENT.
9. WORK DONE UNDER THIS SECTION SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NFPA 70) AND THE NATIONAL ELECTRIC SAFETY CODE (ANSI C2).
10. CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING ALL WORK IN A SAFE MANNER AND COMPLETING ALL NECESSARY LOCK-OUT, TAG-OUT PROCEDURES. NO HOT WORK IS PERMITTED. CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING ALL SEQUENCING, SWITCHING, AND REQUIRED ACTIONS FOR SAFELY PERFORMING ALL WORK NOTED. SAFETY ITEMS INCLUDING LOCK-OUT, TAG-OUT PROCEDURES ARE NOT SPECIFICALLY NOTED IN PHASING NOTES BUT ARE EXPECTED.
11. SWITCHING OF BUILDING'S EQUIPMENT AS LISTED IN SEQUENCING NOTES SHALL BE COMPLETED BY ELECTRICAL CONTRACTOR. CONTRACTOR SHALL COORDINATE SWITCHING SCHEDULE WITH OWNER. CONTRACTOR SHALL VISIT SITE AND REVIEW EXISTING SWITCH CONDITIONS PRIOR TO SCHEDULED OUTAGES TO FAMILIARIZE THEMSELVES WITH SEQUENCE AND OPERATIONS.
12. SEQUENCING NOTES WERE DEVELOPED AT TIME OF DESIGN WITHOUT ANY COORDINATION WITH CONTRACTOR. SHOULD CONTRACTOR HAVE IDEAS TO SIMPLIFY CONSTRUCTION, PROVIDE SAFER WORK ENVIRONMENT, OR TO REDUCE OUTAGE QUANTITIES OR TIME FRAMES, CONTRACTOR SHALL PRESENT PLANS TO OWNER AND ENGINEER FOR DISCUSSION AND CONSIDERATION.
13. NOTES AT RIGHT MAY INCLUDE SCOPE IDENTIFIED AS ADDITIVE ALTERNATE AND / OR BASE BID. CONTRACTOR SHALL MODIFY SEQUENCING ACCORDINGLY DEPENDING ON WHETHER ADDITIVE ALTERNATE SCOPE IS INCLUDED BY OWNER OR NOT.

A-WING AND B-WING PHASE:

PRE-OUTAGE:

1. MAKE PREPARATIONS AND PERFORM INVESTIGATIONS OF EXISTING SWITCHBOARD, TRANSFORMER, AND FEEDERS TO PREPARE FOR EQUIPMENT REPLACEMENT. ALERT ENGINEER OF ANY DISCREPANCIES FOUND WELL IN ADVANCE OF OUTAGE.
2. DELIVER NEW SWITCHBOARD AND TRANSFORMER TO SITE AND PREPARE FOR INSTALL.
3. CONFIRM ALL PARTS AND COMPONENTS NECESSARY FOR SWITCHBOARD REPLACEMENT ARE ONSITE AND READY FOR USE.
4. POUR EQUIPMENT PAD EXTENSION AROUND EXISTING PAD AND MAKE READY FOR NEW SWITCHGEAR.
5. INSTALL GROUNDING TRIAD OUTSIDE AND EXTEND GROUND CONDUCTOR IN RACEWAY INDOORS TO NEW SWITCHGEAR LOCATION. MAKE READY FOR NEW CONNECTION.

A-WING AND B-WING OUTAGE #1 (TO REPLACE TRANSFORMER AND BUSDUCT)

6. OPEN SWITCH 'S1B' IN MEDIUM VOLTAGE SWITCH SW-1.

[48 HOUR WEEKEND OUTAGE FOR ALL A-WING AND B-WING NORMAL POWER LOADS]

7. LIFE SAFETY GENERATOR WILL START AND LIFE SAFETY ATS WILL TRANSFER TO PROVIDE LIFE SAFETY LOADS DURING OUTAGE.
8. PERFORM REPLACEMENT OF SPD AT CHILLER SWITCHBOARD DURING OUTAGE.
9. PERFORM INSTALLATION OF NEW SPD AT B-NORTH BASEMENT MAIN PANEL DURING OUTAGE.
10. CONFIRM ALL FEEDERS WITHIN TRANSFORMER ARE DE-ENERGIZED AND SAFE FOR WORK.
11. LABEL FEEDERS PER PHASE. DISCONNECT FEEDERS, AND PROTECT FOR REUSE.
12. IF ADDITIVE ALTERNATE TO REPLACE MEDIUM VOLTAGE FEEDERS IS ACCEPTED, FEEDERS SHOULD BE PULLED OUT AND REPLACED AT THIS TIME, WITH NEW FEEDERS INSTALLED, LABELED, TESTED, AND TERMINATED EACH END.
13. DEMOLISH EXISTING PAD-MOUNT TRANSFORMER AND CONNECTING BUSDUCT.
14. INSTALL NEW PAD-MOUNT TRANSFORMER AND NEW CONNECTING FEEDERS, WITH TEMPORARY PULLBOX AS NOTED ON PLAN.
15. REWORK RACEWAY AND RETERMINATE NEW FEEDERS TO EXISTING SWITCHBOARD. CONFIRM PHASING.
16. MAKE FINAL CONNECTIONS AND PREPARE FOR ENERGIZING.
17. CLOSE SWITCH 'S1B' IN MEDIUM VOLTAGE SWITCH SW-1 TO RE-ENERGIZE A-WING AND B-WING.

[A-WING AND B-WING NORMAL POWER IS RESTORED]

A-WING AND B-WING OUTAGE #2 (TO REPLACE SWITCHGEAR)

18. OPEN SWITCH 'S1B' IN MEDIUM VOLTAGE SWITCH SW-1.

[72 HOUR HOLIDAY WEEKEND OUTAGE FOR ALL A-WING AND B-WING NORMAL POWER LOADS]

19. LIFE SAFETY GENERATOR WILL START AND LIFE SAFETY ATS WILL TRANSFER TO PROVIDE LIFE SAFETY LOADS DURING OUTAGE. CONTRACTOR SHALL COORDINATE WITH OWNER FOR SHUTTING DOWN LIFE SAFETY SYSTEM AT TIME DESIGNATED DURING OUTAGE TO ALLOW FOR REWORK OF ATS NORMAL FEEDER AT SWITCHGEAR.
20. CONFIRM ALL FEEDERS WITHIN SWITCHBOARD ARE DE-ENERGIZED AND SAFE FOR WORK.
21. LABEL FEEDERS PER PHASE. DISCONNECT FEEDERS, PULL BACK, AND PROTECT FOR REUSE.
22. DEMOLISH EXISTING SWITCHBOARD.
23. INSTALL NEW SWITCHBOARD.
24. REWORK RACEWAY AND RETERMINATE EXISTING FEEDERS TO NEW SWITCHBOARD. CONFIRM PHASING.
25. REMOVE TEMPORARY PULLBOX AND EXTEND EXISTING INCOMING FEEDER IN NEW RACEWAY TO NEW SWITCHBOARD AND TERMINATE.
26. INSTALL GROUNDING AS NOTED.
27. INCORPORATE NEW BREAKER SETTINGS PROVIDED BY ENGINEER.
28. MAKE FINAL CONNECTIONS AND PREPARE FOR ENERGIZING.
29. CLOSE SWITCH 'S1B' IN MEDIUM VOLTAGE SWITCH SW-1 TO RE-ENERGIZE A-WING AND B-WING.

[A-WING AND B-WING NORMAL POWER IS RESTORED]

POST-OUTAGE:

30. PERFORM ELECTRICAL ROOM CLEAN-UP AND PROVIDE FINAL SWITCHBOARD SIGNAGE AS REQUIRED. PROVIDE ALL SIGNAGE AROUND BUILDING PER DETAIL.

ELEVATOR OUTAGE:

31. OPEN ELEVATOR 6, 7, 8, 9, AND 10 FEEDER BREAKERS AT EMERGENCY PANEL, PANELBOARD, AND SWITCHGEAR.

[24 HOUR WEEKEND OUTAGE FOR ELEVATORS 6, 7, 8, 9, AND 10]

32. INSTALL NEW SPD UNITS AT EXISTING ELEVATOR ENCLOSED CIRCUIT BREAKER OR DISCONNECT SWITCH LOCATIONS.
33. CLOSE ELEVATOR FEEDER BREAKERS TO RESTORE POWER. ENSURE ALL ELEVATORS ARE RUNNING AFTER RESTORATION OF POWER.

[ELEVATOR 6, 7, 8, 9, 10 POWER IS RESTORED]

C-WING AND D-WING PHASE:

PRE-OUTAGE:

1. INSTALL PANEL 'UPSDP' IN C-WING FIRST FLOOR UPS ROOM. INSTALL CONDUIT FROM PANEL TO UPS LOCATION. INSTALL CONDUIT FROM PANEL TO C-103 AND C-104 PANEL LOCATIONS. INSTALL CONDUIT DOWN TO BASEMENT LEVEL ADJACENT TO EXISTING CONDUIT TIE-IN LOCATIONS.
2. REMOVE EXISTING PDU-1 THAT IS CURRENTLY DOWN. REMOVE ALL ABANDONED RECEPTACLES AND BRANCH CIRCUITS FED FROM PDU-1. REMOVE PDU-1 FEEDER BACK TO SERVING PANEL 'MCDP'. REMOVE PORTION OF FLEXIBLE CONDUIT BELOW RAISED FLOOR BETWEEN PDU-1 AND PULLBOX TO REMAIN. REMOVE PORTION OF CONDUIT IN C-WING.
3. USING A PHASED APPROACH SUCH THAT NOT ALL AC UNITS ARE DOWN AT SAME TIME, DISCONNECT THE FOLLOWING AC UNITS FROM UPS FED PANELS OR PDU's AND RECIRCUIT TO NEW BREAKERS IN EXISTING PANELS AS SHOWN ON NEW WORK POWER PLANS. ROUTE NEW CIRCUITS FOR D-WING UNITS IN RACEWAY OVERHEAD ABOVE ACCESSIBLE CEILINGS BACK TO C-WING. TYPICAL FOR AHU-1, AHU-2, AHU-3, CU-1, CU-2, CU-3, C-103 AC-1, C-103 AC-2, C-103 CU-1, AND C-103 CU-2.

UPS OUTAGE #1:

4. SHUTDOWN UPS FOR CONNECTING NEW FEEDER TO UPS OUTGOING LUGS AND FOR UPGRADING UPS AND INSTALLING NEW BATTERIES.

[48 HOUR WEEKEND OUTAGE FOR ALL UPS LOADS]

5. PERFORM UPS UPGRADES TO ADD NEW BATTERY CABINET AND EXPAND CAPACITY OF UPS TO FULL CHASSIS RATING.
6. DISCONNECT EXISTING OUTGOING FEEDER FROM UPS OUTGOING LUGS.
7. PROVIDE POLARIS LUGS IN TOP OF UPS TO CONNECT BOTH EXISTING AND NEW FEEDERS TO UPS OUTPUT LUGS.
8. INSTALL SHORT RUN OF FEEDER FROM UPS OUTGOING LUGS TO POLARIS LUGS. MATCH EXISTING FEEDER SIZE.
9. INSTALL NEW FEEDER FROM POLARIS LUGS IN UPS TO PANEL 'UPSDP' AND MAKE PROVISIONS TO ENERGIZE PANEL. NEW FEEDER SHALL BE OF SUFFICIENT LENGTH TO ALLOW FOR TERMINATING TO UPS OUTGOING LUGS AT END OF PROJECT.
10. WHILE UPS LOADS ARE DOWN, INSTALL NEW FEEDER IN RACEWAY TO EXISTING PANELS 'C-103' AND 'C-104' AND CONNECT TO NEW PANEL 'UPSDP'. PREPARE TO ENERGIZE EXISTING PANELS FROM NEW PANEL AT COMPLETION OF OUTAGE.
11. DISCONNECT AND REMOVE EXISTING FEEDERS AND RACEWAY TO PANELS 'C-103' AND 'C-104' BACK TO EXISTING SERVING PANEL IN C-WING BASEMENT.
12. TURN BACK ON UPS AND ENERGIZE ALL UPS LOADS, INCLUDING 'UPSDP', 'C-103', AND 'C-104'.

[UPS LOADS ARE BACK ONLINE]

BETWEEN OUTAGES:

13. INSTALL NEW PDU-1 IN DATA CENTER.
14. CONNECT NEW CONDUIT TO EXISTING IN C-WING BASEMENT AND INSTALL NEW FEEDER FROM 'UPSDP' TO EXISTING PULLBOX BELOW RAISED FLOOR AND EXTEND IN RACEWAY BELOW RAISED FLOOR TO NEW PDU-1.
15. REWORK ALL RECEPTACLES IN LARGE DATA CENTER AREA FROM EXISTING PDU-3 TO NEW PDU-1. SOME WILL BE ONLY TEMPORARILY ON PDU-1 UNTIL NEW PDU-2 IS ONLINE.

[SCOPE REQUIRES EQUIPMENT DOWNTIME - COORDINATE OUTAGE TIME WITH OWNER]

16. INSTALL NEW 3Ø RECEPTACLES TO BE CONNECTED TO PDU-1.
17. REMOVE EXISTING PDU-3. REMOVE ALL ABANDONED RECEPTACLES AND BRANCH CIRCUITS FED FROM PDU-3. REMOVE PDU-3 FEEDER BACK TO SERVING PANEL 'CD'. REMOVE PORTION OF FLEXIBLE CONDUIT BELOW RAISED FLOOR BETWEEN PDU-3 AND PULLBOX TO REMAIN BELOW FLOOR. REMOVE PORTION OF CONDUIT IN C-WING.
18. INSTALL NEW PDU-2 IN DATA CENTER.
19. CONNECT NEW CONDUIT TO EXISTING C-WING BASEMENT AND INSTALL NEW FEEDER FROM 'UPSDP' TO EXISTING PULLBOX BELOW RAISED FLOOR AND EXTEND IN RACEWAY BELOW RAISED FLOOR TO NEW PDU-2. ENERGIZE NEW PDU-2.
20. REWORK ALL RECEPTACLES IN LARGE DATA CENTER AREA FROM EXISTING PDU-2 TO NEW PDU-2. REMOVE ALL ABANDONED RECEPTACLES AND BRANCH CIRCUITS FED FROM EXISTING PDU-2. EXISTING PDU-2 SHOULD NOW BE EMPTY OF ALL LOADS.

[SCOPE REQUIRES EQUIPMENT DOWNTIME - COORDINATE OUTAGE TIME WITH OWNER.]

21. REWORK RECEPTACLES THAT WERE TEMPORARILY ON NEW PDU-1 TO FINAL LOCATION ON NEW PDU-2.

[SCOPE REQUIRES EQUIPMENT DOWNTIME - COORDINATE OUTAGE TIME WITH OWNER.]

22. INSTALL NEW 3Ø RECEPTACLES TO BE CONNECTED TO NEW PDU-2.
23. REMOVE EXISTING PDU-2. REMOVE PDU-2 FEEDER BACK TO SERVING PANEL 'CD'. REMOVE PORTION OF FLEXIBLE CONDUIT BELOW RAISED FLOOR BETWEEN PDU-2 AND PULLBOX TO REMAIN BELOW FLOOR. REMOVE PORTION OF CONDUIT IN C-WING.
24. INSTALL NEW PDU-3 IN DATA CENTER.
25. CONNECT NEW CONDUIT TO EXISTING C-WING BASEMENT AND INSTALL NEW FEEDER FROM 'UPSDP' TO EXISTING PULLBOX BELOW RAISED FLOOR AND EXTEND IN RACEWAY BELOW RAISED FLOOR TO NEW PDU-3.
26. REWORK ALL RECEPTACLES IN SMALLER DATA CENTER AREA FROM EXISTING PDU-4 TO NEW PDU-3. REMOVE ALL ABANDONED RECEPTACLES AND BRANCH CIRCUITS FED FROM EXISTING PDU-4. EXISTING PDU-4 SHOULD NOW BE EMPTY OF ALL LOADS.

[SCOPE REQUIRES EQUIPMENT DOWNTIME - COORDINATE OUTAGE TIME WITH OWNER.]

27. REMOVE EXISTING PDU-4. REMOVE PDU-4 FEEDER AND RACEWAY IN THEIR ENTIRETY BACK TO SERVING PANEL 'MCDP'.
28. PANELS 'MCDP' AND 'CD' SHOULD HAVE ALL LOADS REMOVED AT THIS POINT.

UPS OUTAGE #2:

29. SHUTDOWN UPS FOR MAKING FINAL CONNECTION OF NEW FEEDER TO UPS OUTGOING LUGS.

[2 HOUR WEEKEND OUTAGE FOR ALL UPS LOADS]

30. DISCONNECT EXISTING FEEDER SERVING PANEL 'MCDP' FROM POLARIS LUGS AND PULL FEEDER BACK TO PULLBOX WITHIN UPS ROOM.
31. REMOVE POLARIS LUGS AND CONNECT PANEL 'UPSDP' FEEDER TO OUTGOING LUGS.
32. REMOVE EXISTING CONDUIT BETWEEN UPS AND PULLBOX AND PROVIDE KNOCK-OUT CAPS IN TOP OF UPS.
33. TURN BACK ON UPS AND ENERGIZE ALL UPS LOADS.

[UPS LOADS ARE BACK ONLINE]

34. COMPLETE DEMOLITION OF FEEDER AND RACEWAY, INCLUDING PULLBOXES, BETWEEN UPS ROOM AND PANELS 'MCDP' AND 'CD'. REMOVE ALL CONDUIT SUPPORTS, WIREWAY, AND PANELS IN THEIR ENTIRETY.

C-WING AND D-WING OUTAGE:

35. MAKE PREPARATIONS FOR A FULL C-WING AND D-WING OUTAGE TO REPLACE SPD's.
36. OPEN SWITCH 'S3A' IN MEDIUM VOLTAGE SWITCH 'SW-3' TO DE-ENERGIZE C-WING AND D-WING.
37. D-WING GENERATOR WILL START AND ATS'S WILL TRANSFER TO MAINTAIN POWER TO UPS LOADS AND EMERGENCY POWER LOADS. NOTE: EMERGENCY CIRCUITS ROUTE THROUGH MAIN SWITCHGEAR WHERE SPD's ARE BEING REPLACED. CONTRACTOR SHALL EVALUATE SWITCHGEAR PRIOR TO OUTAGE AND USE CAUTION WHEN WORKING AROUND ENERGIZED EQUIPMENT. NO HOT WORK ALLOWED.

[4-HOUR WEEKEND OUTAGE FOR ALL C-WING AND D-WING LOADS]

38. REPLACE SPD's IN MAIN SWITCHGEAR IN C-WING BASEMENT. (TYP OF 2)
39. CLOSE SWITCH 'S3A' IN MEDIUM VOLTAGE SWITCH 'SW-3' TO RE-ENERGIZE C-WING AND D-WING.

[C-WING AND D-WING LOADS ARE BACK ONLINE]

40. INSTALL ALL SIGNAGE, UPDATED PANEL SCHEDULES, AND CLEAN UP ALL WORK AREAS WITHIN C-WING AND D-WING.

McGINNISS + FLEMING ENGINEERING

JON BARBER, PE 55427 | BRIAN WALLACE, PE 75562
820 EAST PARK AVE, I-200, TALLAHASSEE, FL 32301
MFE-INC.COM | 850.681.6424

HSMV-02425040

NKB A-Wing Switchgear Replacement & D-Wing PDU / UPS / Surge Protection Upgrades

Neil Kirkman Building
Tallahassee, Florida

DATE:
September 5, 2025

REVISED:

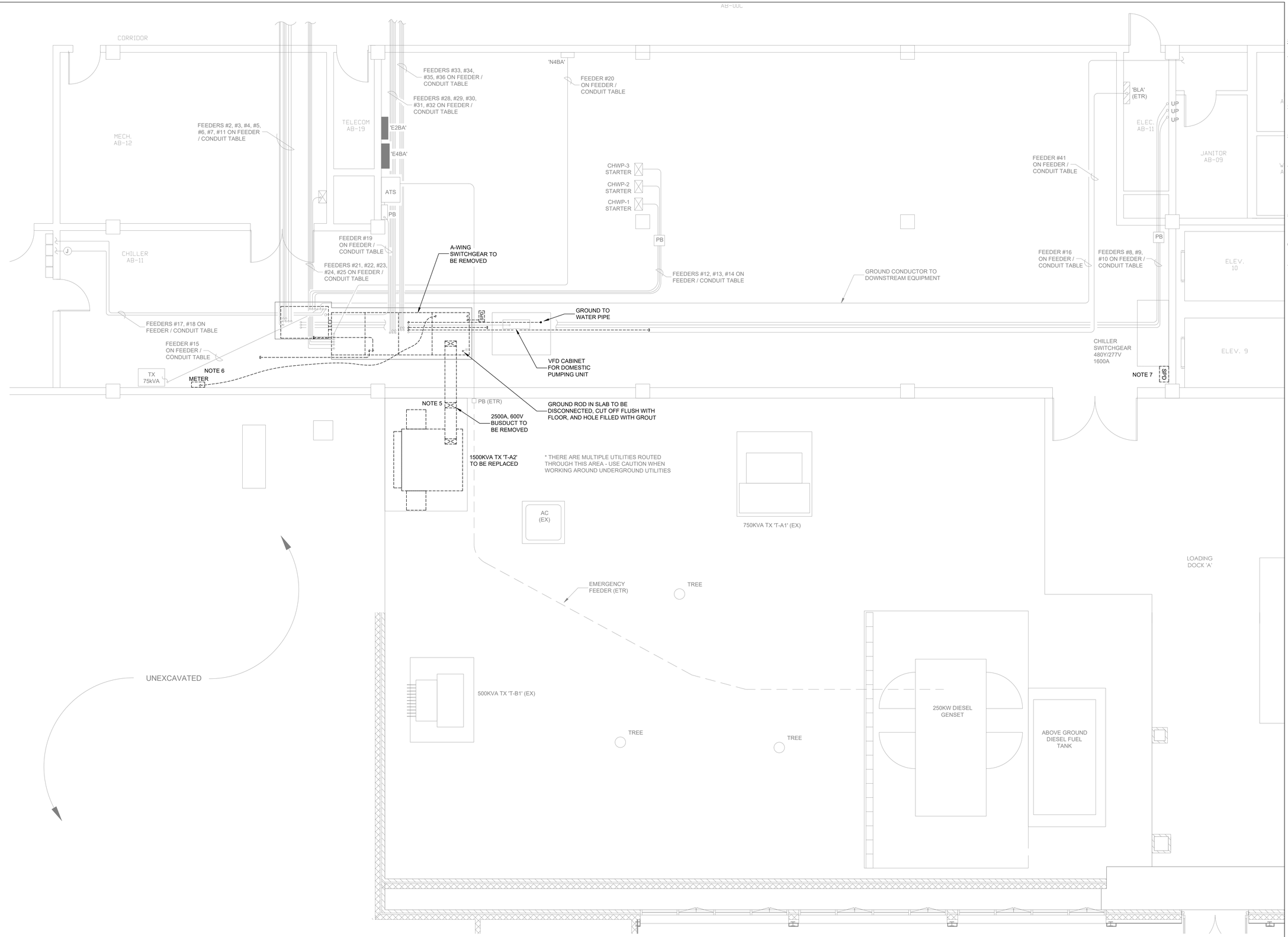
DESIGNED BY:	DRAWN BY:
BW	AC

SUBMITTAL:
100% Construction Documents

SHEET TITLE:
SEQUENCING NOTES

SHEET:
E105

JOB NUMBER:
2442



SHADED INDICATES EXISTING TO REMAIN.

DASHED (----------) INDICATES TO BE REMOVED.

SHEET NOTES:

1. EXISTING FEEDERS ENTERING SWITCHGEAR FROM OVERHEAD SHALL BE DISCONNECTED FOR GEAR REMOVAL AND PROTECTED FOR REUSE. PULL FEEDERS BACK FROM NEAREST PULLBOX, JUNCTION BOX, OR THEIR SOURCE TO ALLOW FOR CONDUIT RECONNECTION TO NEW GEAR.
2. CONTRACTOR SHALL IDENTIFY AND LABEL ALL FEEDERS / PHASES PRIOR TO DISCONNECTING FROM EXISTING BREAKERS TO ASSIST WITH RECONNECTION TO NEW SWITCHGEAR.
3. TO ALLOW FOR GEAR REMOVAL AROUND EXISTING CONDUIT AND FEEDERS, EXISTING GEAR WILL REQUIRE CUTTING AND PARTIAL DISASSEMBLY TO ENABLE REMOVAL.
4. REMOVE PAD-MOUNT TRANSFORMER AND SECONDARY BUSDUCT. REFER TO ADD ALTERNATE NOTES FOR 15KV FEEDER REPLACEMENT OR REUSE. PROTECT CONDUCTORS WHEN REPLACING TRANSFORMER FOR REUSE AS PART OF BASE BID SCOPE.
5. PATCH EXTERIOR WALL, FILL WITH BRICK AND GROUT, AND PAINT TO MATCH ADJACENT FINISH FOR A WEATHERPROOF SEAL WHERE BUSDUCT IS REMOVED.
6. DISCONNECT LOW VOLTAGE WIRING FROM WALL-MOUNT METERING PANEL AND REMOVE METER SYSTEM IN ITS ENTIRETY.
7. REMOVE SURGE PROTECTION DEVICE FROM CHILLER SWITCHGEAR. AN OUTAGE WILL BE REQUIRED TO DISCONNECT FROM MAIN SECTION. COORDINATE WITH OVERALL PROJECT SEQUENCING FOR SCHEDULING SCOPE OF WORK. MAKE PROVISIONS TO INSTALL NEW SPD's IN SAME LOCATION AS DEVICE THAT IS REMOVED.

N

1 A-WING - DEMOLITION PLAN

1/4" = 1'-0"

McGINNISS + FLEMING ENGINEERING

JON BARBER, PE 55427 | BRIAN WALLACE, PE 75562
820 EAST PARK AVE, I-200, TALLAHASSEE, FL 32301
MFE-INC.COM | 850.681.6424

HSMV-02425040

NKB A-Wing Switchgear Replacement & D-Wing PDU / UPS / Surge Protection Upgrades

Neil Kirkman Building
Tallahassee, Florida

DATE:
September 5, 2025

REVISED:

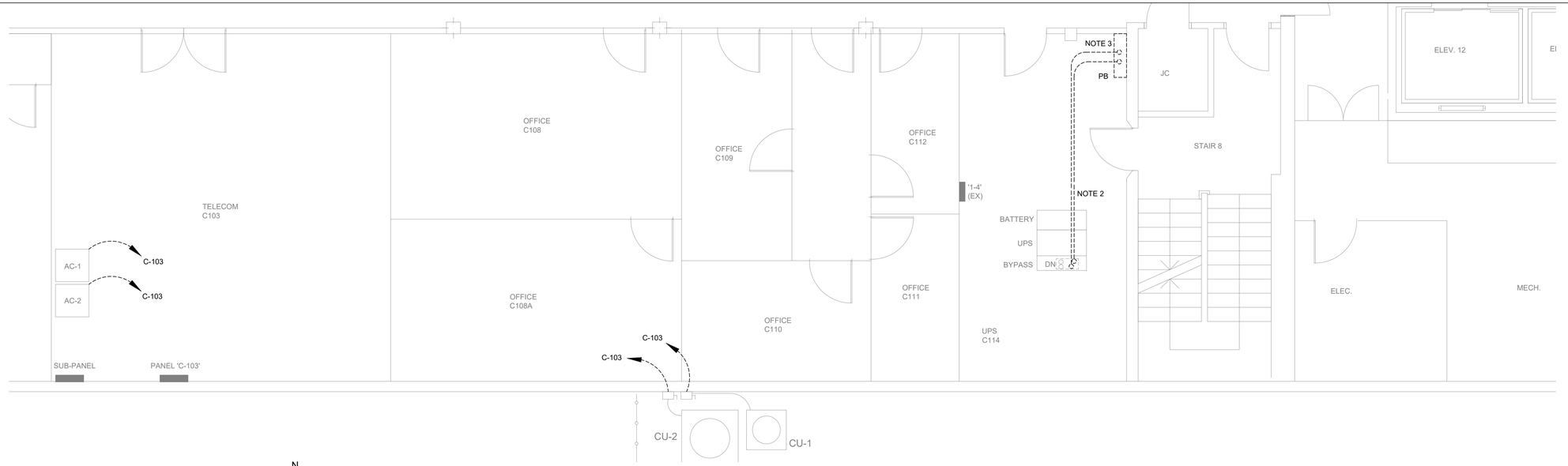
DESIGNED BY:	DRAWN BY:
BW	AC

SUBMITTAL:
100% Construction Documents

SHEET TITLE:
A-WING
BASEMENT
DEMOLITION PLAN

SHEET:
E200

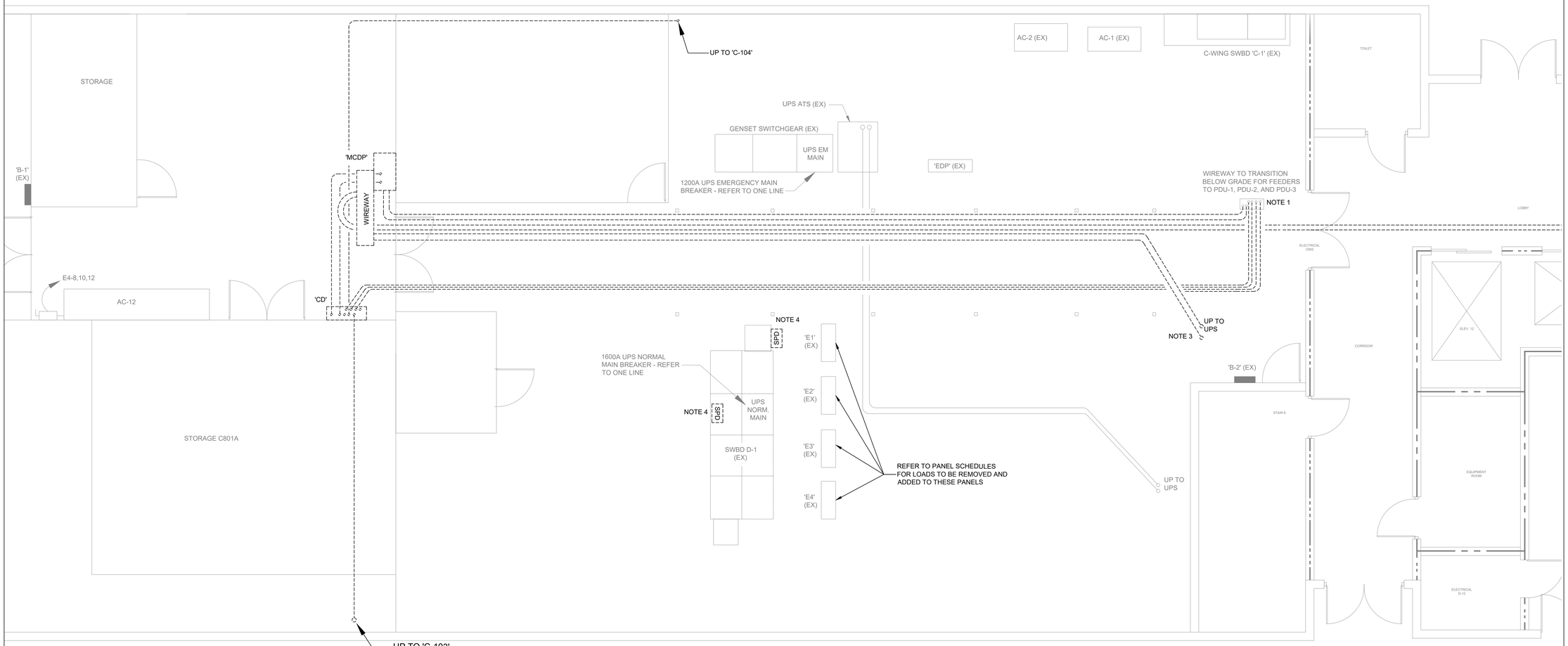
JOB NUMBER:
2442



N

2 C-WING - FIRST FLOOR - DEMOLITION PLAN

1/4" = 1'-0"



N

1 C-WING - BASEMENT - DEMOLITION PLAN

1/4" = 1'-0"

SHADED INDICATES EXISTING TO REMAIN.

DASHED (----------) INDICATES TO BE REMOVED.

SHEET NOTES:

1. EXISTING CONDUIT ROUTING BELOW GRADE FROM WIREWAY TO PDU LOCATIONS IN DATA CENTER WILL REMAIN FOR REUSE. CONDUIT SHALL BE SWABBED AND CLEANED AFTER EXISTING FEEDERS ARE REMOVED.
2. REMOVE CONDUIT CONNECTING TO UPS ONLY AFTER NEW FEEDERS HAVE BEEN INSTALLED, ENERGIZED, AND ALL LOADS SWAPPED OVER TO NEW PDU's.
3. SEAL OFF REMAINING HOLES IN FLOOR WHERE CONDUIT ARE REMOVED TO MEET FIRE RATINGS.
4. REMOVE SURGE PROTECTION DEVICES FROM MAIN SWITCHGEAR. AN OUTAGE WILL BE REQUIRED TO DISCONNECT FROM MAIN SECTION. COORDINATE WITH OVERALL PROJECT SEQUENCING FOR SCHEDULING SCOPE OF WORK. MAKE PROVISIONS TO INSTALL NEW SPD's IN SAME LOCATION AS DEVICES THAT ARE REMOVED.

McGINNISS + FLEMING ENGINEERING

JON BARBER, PE 55427 | BRIAN WALLACE, PE 75562
820 EAST PARK AVE, I-200, TALLAHASSEE, FL 32301
MFE-INC.COM | 850.681.6424

HSMV-02425040

NKB A-Wing Switchgear Replacement & D-Wing PDU / UPS / Surge Protection Upgrades

Neil Kirkman Building
Tallahassee, Florida

DATE:
September 5, 2025

REVISED:

DESIGNED BY:	DRAWN BY:
BW	AC

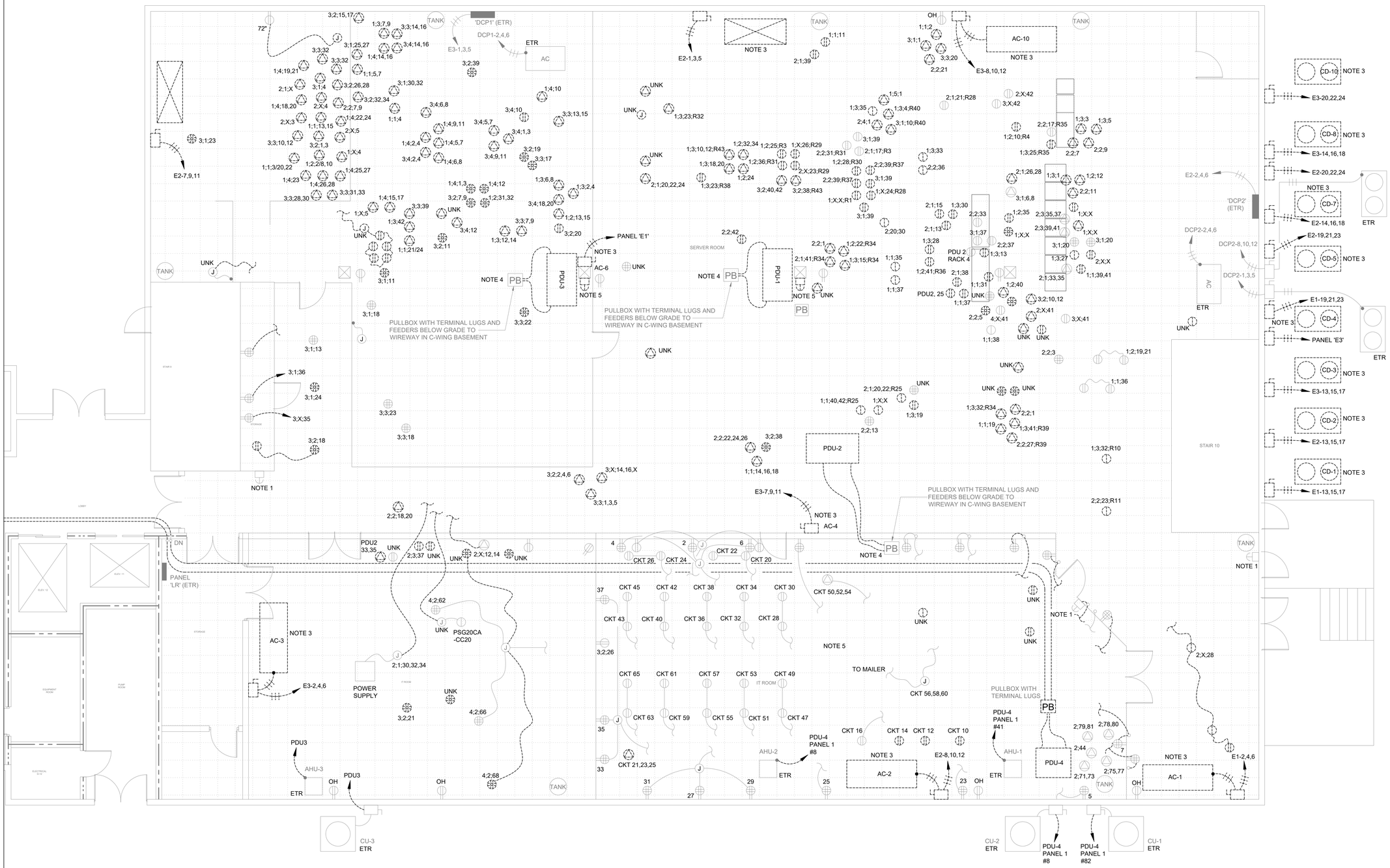
SUBMITTAL:
100% Construction Documents

SHEET TITLE:
C-WING
BASEMENT AND FIRST FLOOR
DEMOLITION PLANS

SHEET:
E201

JOB NUMBER:
2442

** CIRCUITS SHOWN WERE TAKEN FROM AS-BUILTS AND/OR LIMITED FIELD INVESTIGATION BY LOOKING AT JUNCTION BOX CIRCUIT LABELS. CONTRACTOR SHALL TRACE AND VERIFY ALL CIRCUITS PRIOR TO DEMOLITION. CONTRACTOR SHALL USE CAUTION TO NOT DISRUPT POWER NOT INTENDED TO BE DISCONNECTED. CIRCUITS SHOULD NOT BE ASSUMED ACCURATE WITHOUT BEING VERIFIED. CONTRACTOR TO REVIEW AND VERIFY ALL CIRCUITS TO ENSURE DEVICES ARE DE-ENERGIZED PRIOR TO DISCONNECTING AND REWORKING. CONTRACTOR SHALL ENSURE NEW CIRCUIT SIZES MATCH EXISTING DEVICE RATINGS, VOLTAGE, AND PHASE. NOTIFY THE ENGINEER OF ANY DISCREPANCIES FOUND. RECEPTACLE CIRCUIT DESIGNATIONS INDICATE PDU#; PANEL#; AND CIRCUIT BREAKER #. WHERE UNKNOWN, "X" IS USED. "UNK" INDICATES NO INFO IS KNOW. (TYP)



N

1 D-WING - BASEMENT - DEMOLITION PLAN

3/16" = 1'-0"

SHADED INDICATES EXISTING TO REMAIN.

DASHED (----------) INDICATES TO BE REMOVED.

SHEET NOTES:

1. NOTED EMERGENCY POWER OFF (EPO) BUTTONS ARE EXISTING TO REMAIN BUT SHALL HAVE WIRING REMOVED BACK TO ASSOCIATED PDU. EPO BUTTON SHALL BE REUSED WITH NEW PDU'S. REFER TO NEW WORK PLAN.
2. DATA CENTER HAS FIRE SUPPRESSION SYSTEM WITH SMOKE DETECTORS AND SPRAY NOZZLES LOCATED OVERHEAD AND ALSO BELOW THE FLOOR. CONTRACTOR SHALL USE CAUTION AND WORK CAREFULLY WITHIN DATA CENTER SO AS NOT TO DISRUPT SUPPRESSION SYSTEM. SYSTEM SHALL BE PUT INTO TEST AND DISABLED WHEN CONTRACTORS ARE WORKING IN DATA CENTER. SYSTEM SHALL BE RE-ARMED AT END OF EACH WORK DAY. CONTRACTOR SHALL COORDINATE WITH HSMV FOR ARMING / DISARMING SYSTEM EACH DAY.
3. CRAC UNITS AND ASSOCIATED OUTDOOR CONDENSING UNITS TO BE REMOVED AS PART OF ADDITIVE ALTERNATE #2. BASE BID WILL LEAVE EQUIPMENT WHERE IT IS CURRENTLY. DEMOLITION SHALL INCLUDE THE FOLLOWING: REMOVE ALL INDOOR UNITS, OUTDOOR UNITS, AND REFRIGERANT LINES BETWEEN INDOOR AND OUTDOOR UNITS. REFRIGERANT SHALL BE DISPOSED OF PROPERLY BY CONTRACTOR. REMOVE ALL CONTROLS WIRING AND RACEWAY. PATCH / SEAL REMAINING OPENINGS IN WALLS WHERE CONDUIT OR REFRIGERANT LINES WERE REMOVED TO WEATHERTIGHT CONDITION AND PAINT TO MATCH ADJACENT FINISH. NOTE: ELECTRICAL FEEDERS, ACCESSIBLE RACEWAY, AND DISCONNECT SWITCHES TO BE REMOVED AS PART OF BASE BID ELECTRICAL SCOPE. CIRCUIT BREAKERS TO REMAIN AS 'SPARE' AND BE LABELED ACCORDINGLY, UNLESS NOTED OTHERWISE. SEE PANEL SCHEDULES.
4. WHEN REMOVING PDU FEEDERS, REMOVE LUGS FROM PULLBOXES BELOW RAISED FLOOR AND MAINTAIN PULLBOX FOR REUSE WITH ROUTING NEW FEEDERS. NEW FEEDERS WILL ROUTE THROUGH PULLBOX AND WILL NOT USE LUGS.
5. NOTED EMERGENCY POWER OFF (EPO) BUTTONS SHALL BE REMOVED ALONG WITH WIRING BACK TO ASSOCIATED PDU.

McGINNISS + FLEMING ENGINEERING

JON BARBER, PE 55427 | BRIAN WALLACE, PE 75562
820 EAST PARK AVE, I-200, TALLAHASSEE, FL 32301
MFE-INC.COM | 850.681.6424

HSMV-02425040

NKB A-Wing Switchgear Replacement & D-Wing PDU / UPS / Surge Protection Upgrades

Neil Kirkman Building
Tallahassee, Florida

DATE:
September 5, 2025

REVISED:

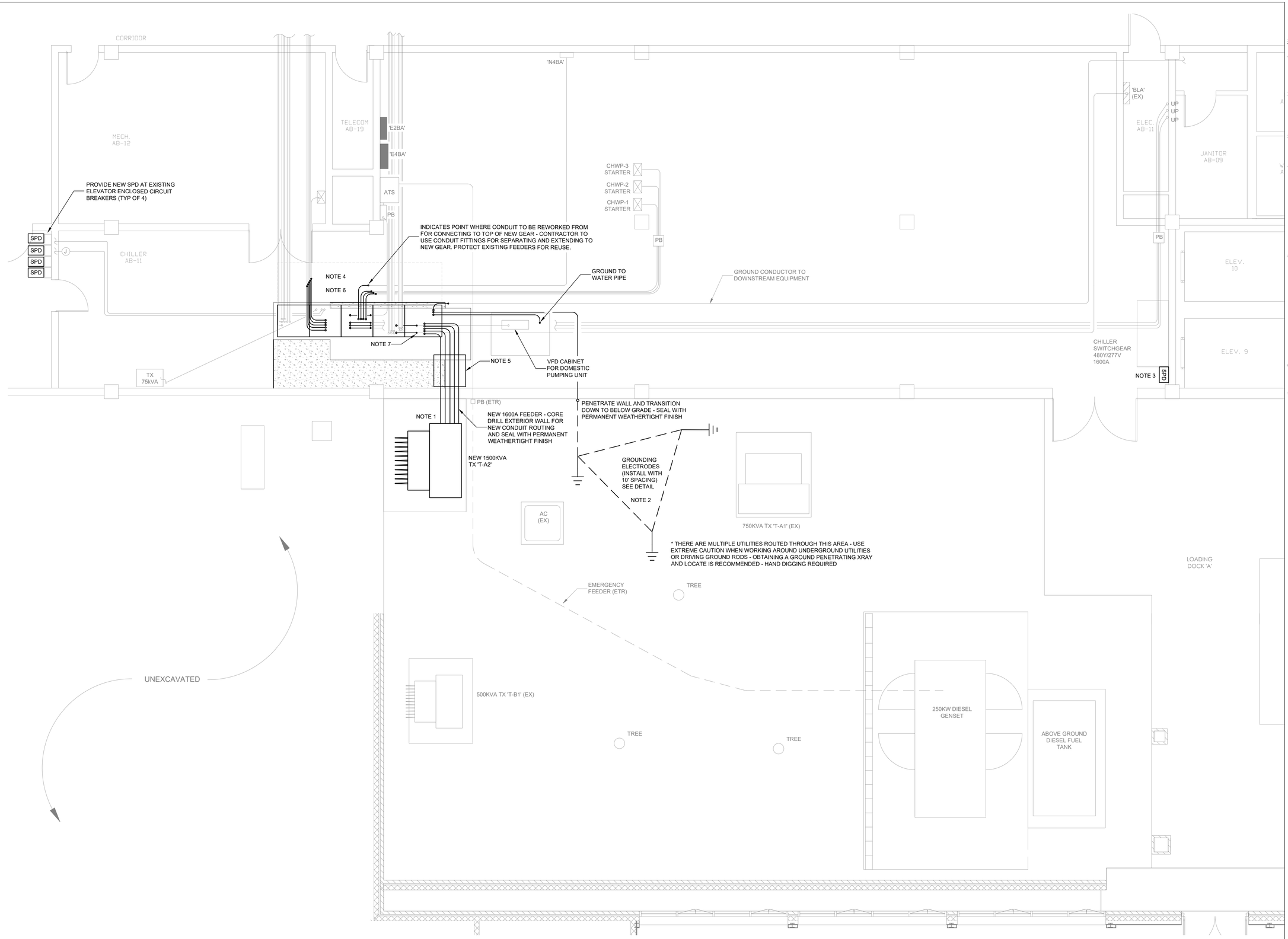
DESIGNED BY:	DRAWN BY:
BW	AC

SUBMITTAL:
100% Construction Documents

SHEET TITLE:
D-WING
BASEMENT
DEMOLITION PLAN

SHEET:
E202

JOB NUMBER:
2442



N

1 A-WING - BASEMENT - NEW WORK PLAN

1/4" = 1'-0"

SHADED INDICATES EXISTING.

BOLD INDICATES NEW.

SHEET NOTES:

1. NEW FEEDER RACEWAY TO EXIT SIDE COMPARTMENT OF NEW TRANSFORMER AND USE GASKETED MYERS HUBS AND GALVANIZED RIGID CONDUIT FOR A SEALED WEATHERPROOF CONNECTION.
2. PERFORM RESISTANCE TESTING OF GROUND RODS USING CLAMP-ON METHOD PRIOR TO CONNECTING SYSTEM TOGETHER AND VERIFY EACH DRIVEN ROD MEASURES BELOW 5Ω. ADD RODS AS REQUIRED TO OBTAIN RESISTANCE RATING.
3. INSTALL NEW SERVICE ENTRANCE TYPE SURGE PROTECTION DEVICE WHERE EXISTING DEVICE WAS REMOVED. COORDINATE INSTALLATION AND WIRING WITH OUTAGE SCHEDULE.
4. WHERE EXISTING FEEDERS / RACEWAY ARE SHOWN TO BE REWORKED FOR CONNECTING TO NEW GEAR, IT IS EXPECTED THAT EXISTING FEEDER LENGTHS ARE SUFFICIENT TO REACH NEW BREAKERS, WITH EXCEPTION FOR DOMESTIC PUMPING UNIT FEEDER, WHICH IS BEING REPLACED WITH NEW. COORDINATE WITH EXISTING FEEDERS, LOADS, RACEWAY, AND RACEWAY FITTING LOCATIONS FOR DISCONNECTING RACEWAY AND REWORKING AS SHOWN, AND FOR RETERMINATING EXISTING FEEDERS TO NEW BREAKERS. PROTECT EXISTING FEEDERS FOR REUSE.
5. IN ACCORDANCE WITH SEQUENCING NOTES, PAD-MOUNT TRANSFORMER AND BUSDUCT TO GET REPLACED PRIOR TO SWITCHGEAR. DURING TRANSFORMER AND BUSDUCT REPLACEMENT OUTAGE, INSTALL TEMPORARY PULLBOX WHERE NEW CONDUIT PENETRATES EXTERIOR WALL AND EXTEND FEEDERS TEMPORARILY IN FLEXIBLE METAL RACEWAY TO TOP OF EXISTING SWITCHGEAR AND TERMINATE FEEDERS TO BUS LUGS. ONCE SWITCHGEAR IS REPLACED WITH NEW, PULLBOX SHALL BE REMOVED AND CONDUIT EXTENDED TO TOP OF NEW SWITCHGEAR. TEMP BOX: 36"x36"x12"D. NEW FEEDERS SHALL BE SUFFICIENT LENGTH TO REACH NEW SWITCHBOARD MAIN SECTION WHEN INSTALLED.
6. PROVIDE GROUNDING BUSHINGS FOR ALL CONDUIT ENTERING NEW SWITCHGEAR AND BOND TO GROUND BUS WITH FULL SIZE GROUND CONDUCTOR.
7. EXISTING FEEDER FOR PANEL 'BLA' IS EXPECTED TO BE LONGER THAN NEEDED, HOWEVER, FULL LENGTH SHALL BE MAINTAINED. DO NOT CUT OFF ANY CONDUCTOR LENGHT FOR 'BLA' FEEDER WITHIN NEW SWITCHGEAR.

McGINNISS + FLEMING ENGINEERING
JON BARBER, PE 55427 | BRIAN WALLACE, PE 75562
820 EAST PARK AVE, I-200, TALLAHASSEE, FL 32301
MFE-INC.COM | 850.681.6424

HSMV-02425040

NKB A-Wing Switchgear Replacement & D-Wing PDU / UPS / Surge Protection Upgrades

Neil Kirkman Building
Tallahassee, Florida

DATE:
September 5, 2025

REVISED:

DESIGNED BY:	DRAWN BY:
BW	AC

SUBMITTAL:
100% Construction Documents

SHEET TITLE:
A-WING
BASEMENT
NEW WORK PLAN

SHEET:
E300

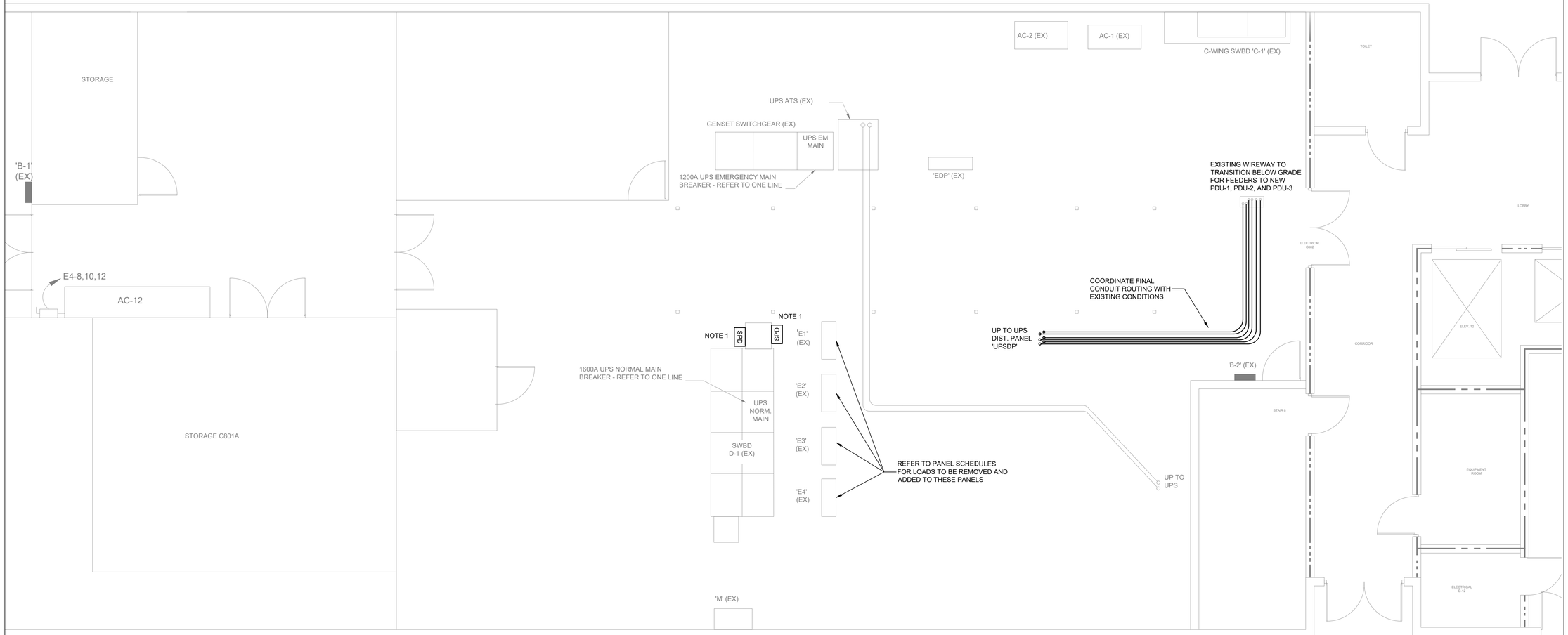
JOB NUMBER:
2442

SHADED INDICATES EXISTING.

BOLD INDICATES NEW.

SHEET NOTES:

1. INSTALL NEW SERVICE ENTRANCE TYPE SURGE PROTECTION DEVICE WHERE EXISTING DEVICE WAS REMOVED. COORDINATE INSTALLATION AND WIRING WITH OUTAGE SCHEDULE.



N

1 C-WING - BASEMENT - NEW WORK PLAN

1/4" = 1'-0"

McGINNISS + FLEMING ENGINEERING

JON BARBER, PE 55427 | BRIAN WALLACE, PE 75562
820 EAST PARK AVE, I-200, TALLAHASSEE, FL 32301
MFE-INC.COM | 850.681.6424

HSMV-02425040

NKB A-Wing Switchgear Replacement & D-Wing PDU / UPS / Surge Protection Upgrades

Neil Kirkman Building
Tallahassee, Florida

DATE:
September 5, 2025

REVISED:

DESIGNED BY:	DRAWN BY:
BW	AC

SUBMITTAL:
100% Construction Documents

SHEET TITLE:
C-WING
BASEMENT
NEW WORK PLAN

SHEET:
E301

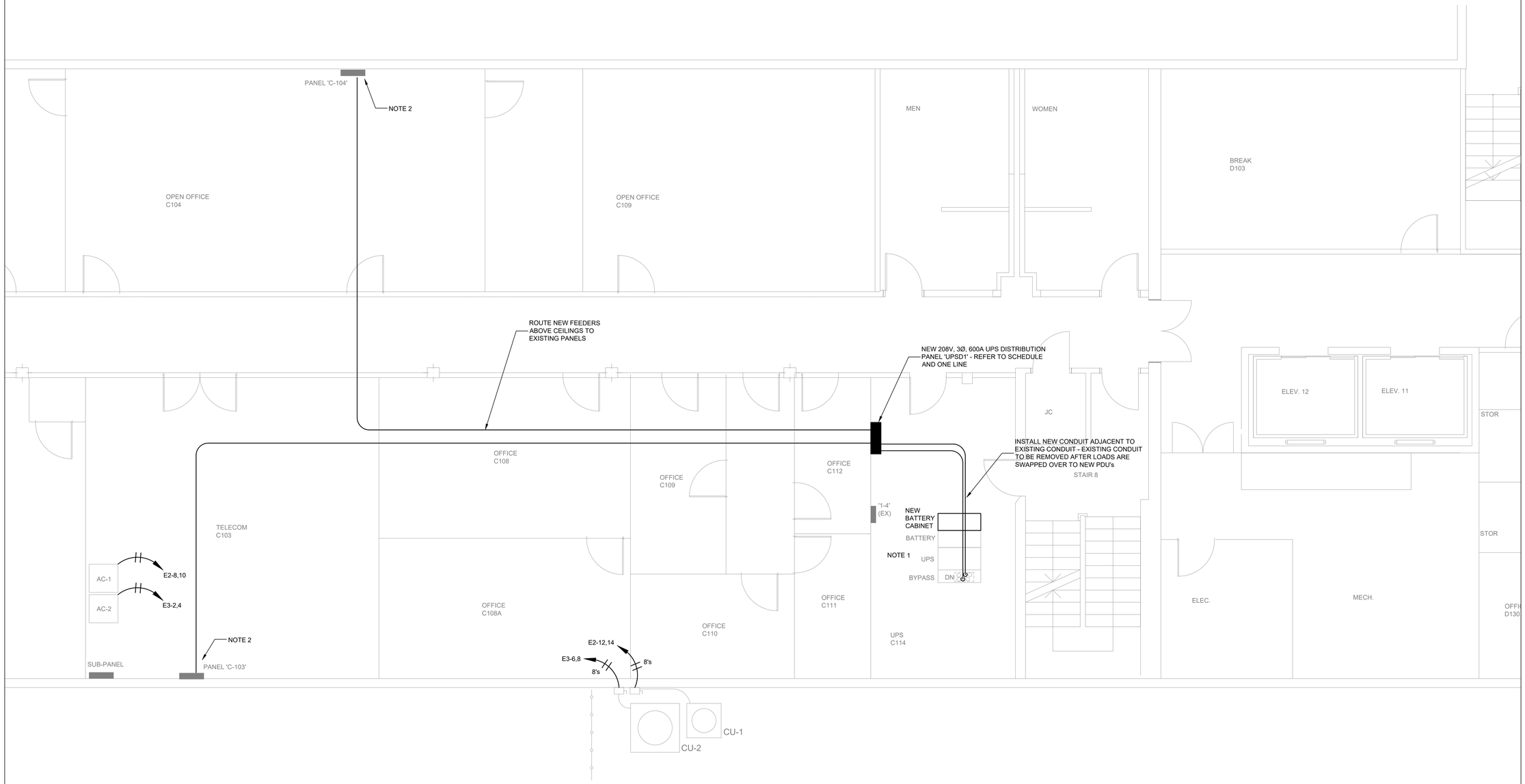
JOB NUMBER:
2442

SHADED INDICATES EXISTING.

BOLD INDICATES NEW.

SHEET NOTES:

1. EXISTING UPS IS AN EATON 93PM UNIT WITH 120kVA CHASSIS AND EXISTING CAPACITY OF 60KVA. CONTRACTOR SHALL SECURE THE SERVICES OF FLORIDA CRITICAL POWER TO COMPLETE THE FOLLOWING SCOPE OF WORK:
   A) PERFORM HARDWARE UPGRADE FOR 93PM UPS TO INCREASE CAPACITY FROM 60KVA TO 120KVA
   B) PERFORM SOFTWARE UPGRADE FOR 93PM UPS TO INCREASE CAPACITY FROM 60KVA TO 120KVA
   C) PROVIDE ADDITIONAL BATTERY CABINET (WITH MODEL 12200 BATTERIES) FOR INCREASED CAPACITY
   D) REPLACE EXISTING BATTERIES WITH NEW EATON 12200VRLA BATTERIES
2. COORDINATE WITH EXISTING PANEL FOR NEW FEEDER CONNECTIONS. EXISTING FEEDER TO BE REMOVED ENTERS PANEL FROM BELOW. NEW FEEDER WILL ENTER PANEL FROM ABOVE.



N

1 C-WING - FIRST FLOOR - NEW WORK PLAN

1/4" = 1'-0"

McGINNISS + FLEMING ENGINEERING

JON BARBER, PE 55427 | BRIAN WALLACE, PE 75562
820 EAST PARK AVE, I-200, TALLAHASSEE, FL 32301
MFE-INC.COM | 850.681.6424

HSMV-02425040

NKB A-Wing Switchgear Replacement & D-Wing PDU / UPS / Surge Protection Upgrades

Neil Kirkman Building
Tallahassee, Florida

DATE:
September 5, 2025

REVISED:

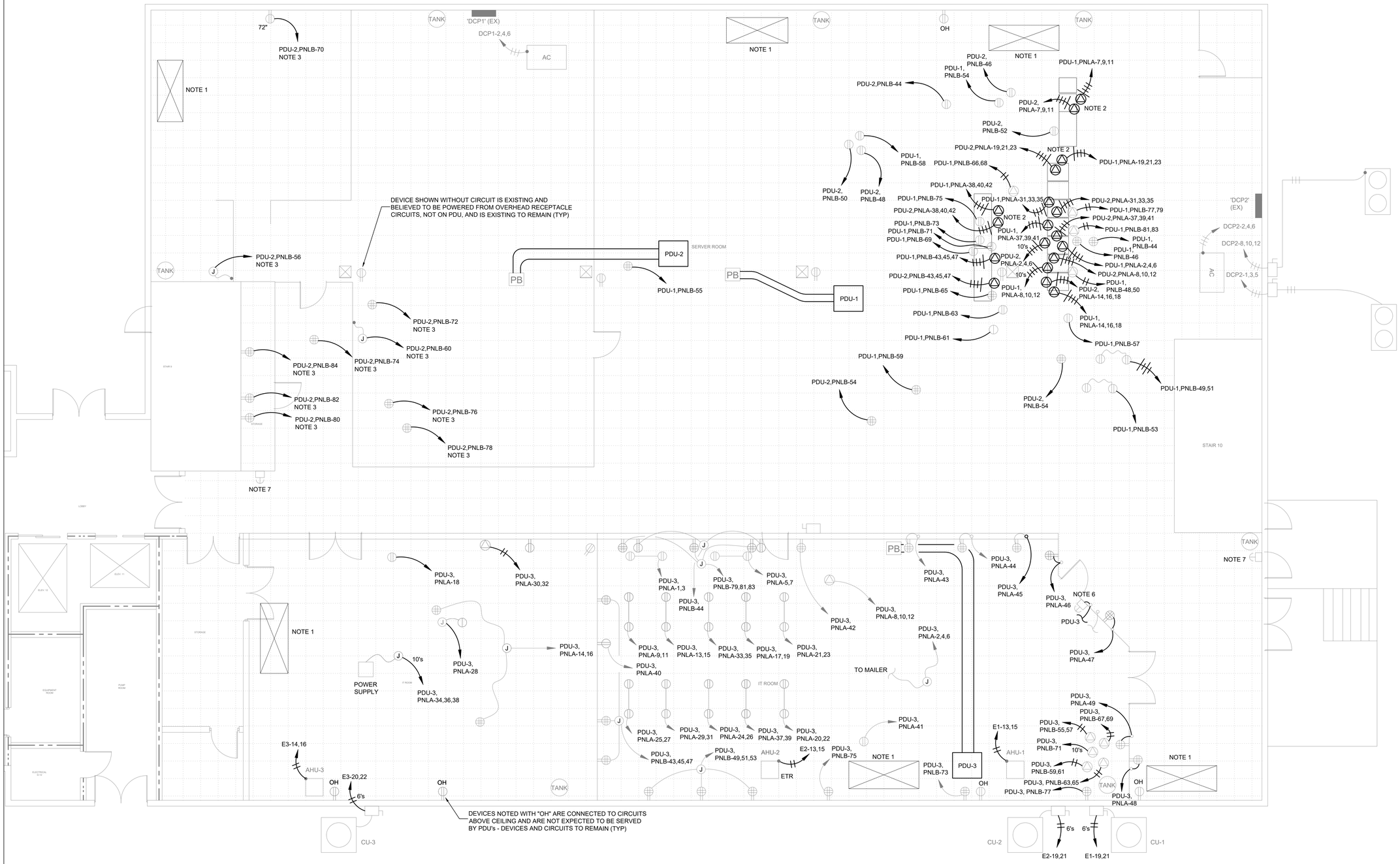
DESIGNED BY:	DRAWN BY:
BW	AC

SUBMITTAL:
100% Construction Documents

SHEET TITLE:
C-WING
FIRST FLOOR
NEW WORK PLAN

SHEET:
E302

JOB NUMBER:
2442



N

1 D-WING - BASEMENT - NEW WORK PLAN

3/16" = 1'-0"

SHADED INDICATES EXISTING.

BOLD INDICATES NEW.

SHEET NOTES:

1. PROVIDE 1/4" THICK PAINTED STEEL PLATE OVER OPENING IN RAISED FLOOR WHERE AC UNIT WAS REMOVED. CONFIRM DIMENSIONS OF OPENING IN FLOOR PRIOR TO ORDERING. PLATE SHALL EXTEND OVER ADJACENT TILES AROUND OPENING BY MINIMUM OF 12". ONLY APPLICABLE IF ALTERNATE #2 SCOPE IS ACCEPTED.
2. EXISTING SERVER RACKS SHALL GET TWO NEW 30A, 3Ø RECEPTACLES BELOW FLOOR, SERVED FROM TWO SEPARATE PDU'S FOR REDUNDANT POWER. NEW SPECIAL TYPE RECEPTACLES ARE TO BE TYPE L21-30. ALL CONDUCTORS FOR 30A, 3Ø CIRCUITS SHALL BE #10's.
3. NOTED DEVICES SHALL BE TEMPORARILY POWERED FROM PDU-1, PANEL B, UNTIL PDU-2 IS ONLINE. TEMPORARY HOMERUNS TO PDU-1, PANEL B ARE NOT NOTED ON PLAN. REFER TO TEMPORARY PDU-1, PANEL B SCHEDULE.
4. DATA CENTER HAS FIRE SUPPRESSION SYSTEM WITH SMOKE DETECTORS AND SPRAY NOZZLES LOCATED OVERHEAD AND ALSO BELOW THE FLOOR. CONTRACTOR SHALL USE CAUTION AND WORK CAREFULLY WITHIN DATA CENTER SO AS NOT TO DISRUPT SUPPRESSION SYSTEM. SYSTEM SHALL BE PUT INTO TEST AND DISABLED WHEN CONTRACTORS ARE WORKING IN DATA CENTER. SYSTEM SHALL BE RE-ARMED AT END OF EACH WORK DAY. CONTRACTOR SHALL COORDINATE WITH HSMV FOR ARMING / DISARMING SYSTEM EACH DAY.
5. CONTRACTOR TO REVIEW AND VERIFY ALL CIRCUITS TO ENSURE DEVICES ARE DE-ENERGIZED PRIOR TO DISCONNECTING AND REWORKING. CONTRACTOR SHALL ENSURE NEW CIRCUIT SIZES MATCH EXISTING DEVICE RATINGS, VOLTAGE, AND PHASE. NOTIFY THE ENGINEER OF ANY DISCREPANCIES FOUND.
6. EXISTING NOTED EPO BUTTON SHALL BE REWIRED TO NEW PDU-3 FOR SHUNTING POWER TO NEW PDU UPON ACTIVATION OF BUTTON. PROVIDE NEW WIRING IN RACEWAY BELOW FLOOR TO OBTAIN DESIRED OPERATION. COORDINATE WITH PDU PROVIDED FOR EPO CONNECTION POINT. COORDINATE WITH EXISTING EPO BUTTONS TO DETERMINE IF THEY ARE NORMALLY OPEN OR NORMALLY CLOSED.
7. EXISTING NOTED EPO BUTTONS SHALL BE REWIRED TO NEW PDU-1 AND PDU-2 FOR SHUNTING POWER TO BOTH PDU's UPON ACTIVATION OF BUTTON. NOTE THAT BOTH PDU's SHALL BE SHUTDOWN BY OPERATING EITHER EPO BUTTON. PROVIDE NEW WIRING IN RACEWAY BELOW FLOOR TO OBTAIN DESIRED OPERATION. COORDINATE WITH PDU PROVIDED FOR EPO CONNECTION POINT. COORDINATE WITH EXISTING EPO BUTTONS TO DETERMINE IF THEY ARE NORMALLY OPEN OR NORMALLY CLOSED.

McGINNISS + FLEMING ENGINEERING

JON BARBER, PE 55427 | BRIAN WALLACE, PE 75562
820 EAST PARK AVE, I-200, TALLAHASSEE, FL 32301
MFE-INC.COM | 850.681.6424

HSMV-02425040

NKB A-Wing Switchgear Replacement & D-Wing PDU / UPS / Surge Protection Upgrades

Neil Kirkman Building
Tallahassee, Florida

DATE:
September 5, 2025

REVISED:

DESIGNED BY:	DRAWN BY:
BW	AC

SUBMITTAL:
100% Construction Documents

SHEET TITLE:
D-WING
BASEMENT
NEW WORK PLAN

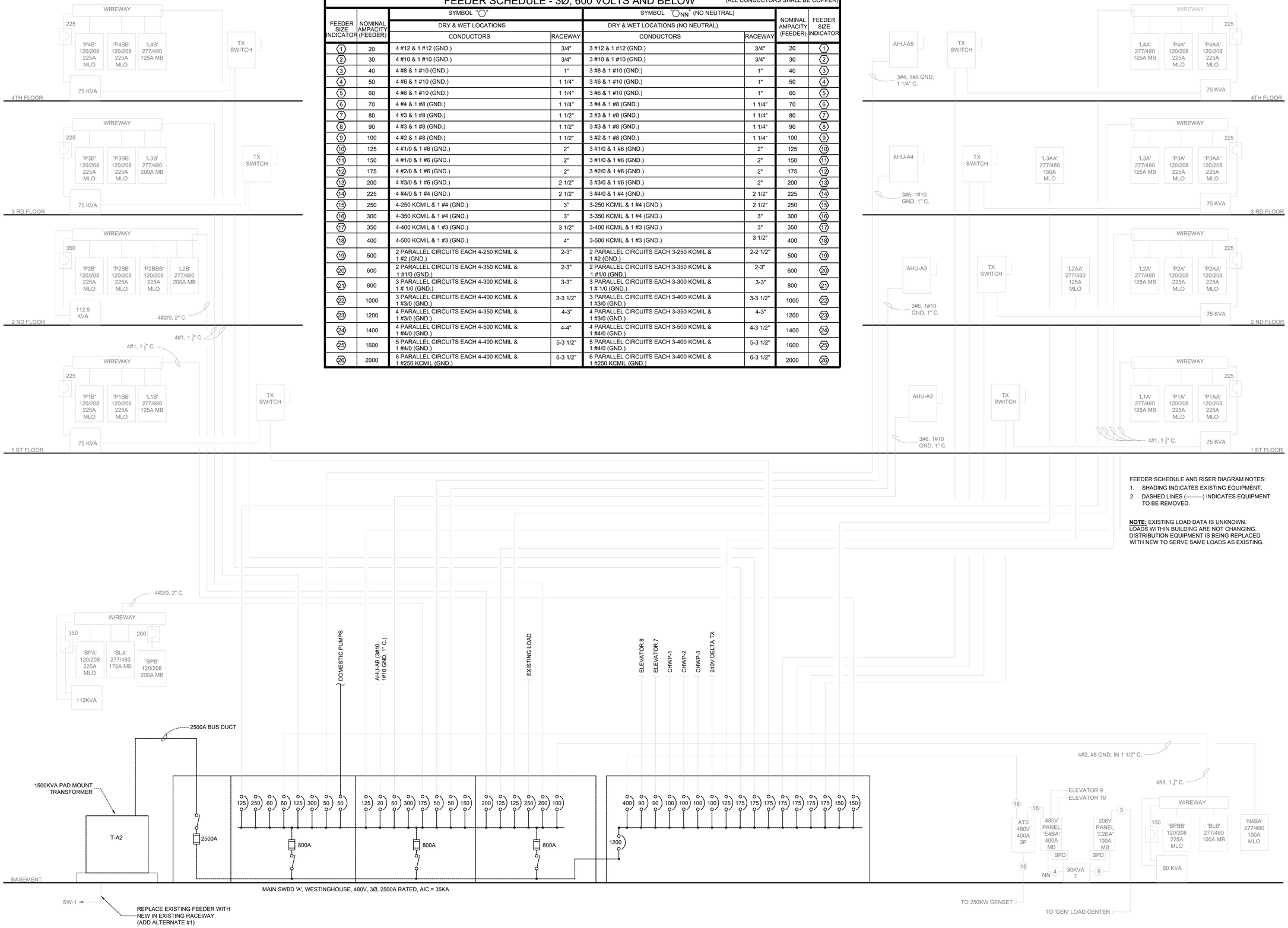
SHEET:
E303

JOB NUMBER:
2442

FEEDER SCHEDULE - 3Ø, 600 VOLTS AND BELOW

(ALL CONDUCTORS SHALL BE COPPER)

FEEDER SIZE INDICATOR	NOMINAL AMPACITY (FEEDER)	SYMBOL "◯" DRY & WET LOCATIONS CONDUCTORS	SYMBOL "◯NN" (NO NEUTRAL) DRY & WET LOCATIONS (NO NEUTRAL) CONDUCTORS	RACEWAY	NOMINAL AMPACITY (FEEDER)	FEEDER SIZE INDICATOR
1	20	4 #12 & 1 #12 (GND.)	3 #12 & 1 #12 (GND.)	3/4"	20	1
2	30	4 #10 & 1 #10 (GND.)	3 #10 & 1 #10 (GND.)	3/4"	30	2
3	40	4 #8 & 1 #10 (GND.)	3 #8 & 1 #10 (GND.)	1"	40	3
4	50	4 #6 & 1 #10 (GND.)	3 #6 & 1 #10 (GND.)	1"	50	4
5	60	4 #6 & 1 #10 (GND.)	3 #6 & 1 #10 (GND.)	1"	60	5
6	70	4 #4 & 1 #8 (GND.)	3 #4 & 1 #8 (GND.)	1 1/4"	70	6
7	80	4 #3 & 1 #8 (GND.)	3 #3 & 1 #8 (GND.)	1 1/4"	80	7
8	90	4 #3 & 1 #8 (GND.)	3 #3 & 1 #8 (GND.)	1 1/4"	90	8
9	100	4 #2 & 1 #8 (GND.)	3 #2 & 1 #8 (GND.)	1 1/4"	100	9
10	125	4 #1/0 & 1 #6 (GND.)	3 #1/0 & 1 #6 (GND.)	2"	125	10
11	150	4 #1/0 & 1 #6 (GND.)	3 #1/0 & 1 #6 (GND.)	2"	150	11
12	175	4 #2/0 & 1 #6 (GND.)	3 #2/0 & 1 #6 (GND.)	2"	175	12
13	200	4 #3/0 & 1 #6 (GND.)	3 #3/0 & 1 #6 (GND.)	2"	200	13
14	225	4 #4/0 & 1 #4 (GND.)	3 #4/0 & 1 #4 (GND.)	2 1/2"	225	14
15	250	4-250 KCMIL & 1 #4 (GND.)	3-250 KCMIL & 1 #4 (GND.)	2 1/2"	250	15
16	300	4-350 KCMIL & 1 #4 (GND.)	3-350 KCMIL & 1 #4 (GND.)	3"	300	16
17	350	4-400 KCMIL & 1 #3 (GND.)	3-400 KCMIL & 1 #3 (GND.)	3"	350	17
18	400	4-500 KCMIL & 1 #3 (GND.)	3-500 KCMIL & 1 #3 (GND.)	3 1/2"	400	18
19	500	2 PARALLEL CIRCUITS EACH 4-250 KCMIL & 1 #2 (GND.)	2 PARALLEL CIRCUITS EACH 3-250 KCMIL & 1 #2 (GND.)	2-3"	500	19
20	600	2 PARALLEL CIRCUITS EACH 4-350 KCMIL & 1 #1/0 (GND.)	2 PARALLEL CIRCUITS EACH 3-350 KCMIL & 1 #1/0 (GND.)	2-3"	600	20
21	800	3 PARALLEL CIRCUITS EACH 4-300 KCMIL & 1 # 1/0 (GND.)	3 PARALLEL CIRCUITS EACH 3-300 KCMIL & 1 # 1/0 (GND.)	3-3"	800	21
22	1000	3 PARALLEL CIRCUITS EACH 4-400 KCMIL & 1 #3/0 (GND.)	3 PARALLEL CIRCUITS EACH 3-400 KCMIL & 1 #3/0 (GND.)	3-3 1/2"	1000	22
23	1200	4 PARALLEL CIRCUITS EACH 4-350 KCMIL & 1 #3/0 (GND.)	4 PARALLEL CIRCUITS EACH 3-350 KCMIL & 1 #3/0 (GND.)	4-3"	1200	23
24	1400	4 PARALLEL CIRCUITS EACH 4-500 KCMIL & 1 #4/0 (GND.)	4 PARALLEL CIRCUITS EACH 3-500 KCMIL & 1 #4/0 (GND.)	4-4"	1400	24
25	1600	5 PARALLEL CIRCUITS EACH 4-400 KCMIL & 1 #4/0 (GND.)	5 PARALLEL CIRCUITS EACH 3-400 KCMIL & 1 #4/0 (GND.)	5-3 1/2"	1600	25
26	2000	6 PARALLEL CIRCUITS EACH 4-400 KCMIL & 1 #250 KCMIL (GND.)	6 PARALLEL CIRCUITS EACH 3-400 KCMIL & 1 #250 KCMIL (GND.)	6-3 1/2"	2000	26



FEEDER SCHEDULE AND RISER DIAGRAM NOTES:

1. SHADING INDICATES EXISTING EQUIPMENT.
2. DASHED LINES (---------) INDICATES EQUIPMENT TO BE REMOVED.

NOTE: EXISTING LOAD DATA IS UNKNOWN. LOADS WITHIN BUILDING ARE NOT CHANGING. DISTRIBUTION EQUIPMENT IS BEING REPLACED WITH NEW TO SERVE SAME LOADS AS EXISTING.

McGINNISS + FLEMING ENGINEERING

JON BARBER, PE 55427 | BRIAN WALLACE, PE 75562
820 EAST PARK AVE, I-200, TALLAHASSEE, FL 32301
MFE-INC.COM | 850.681.6424

HSMV-02425040

NKB A-Wing Switchgear Replacement & D-Wing PDU / UPS / Surge Protection Upgrades

Neil Kirkman Building
Tallahassee, Florida

DATE:
September 5, 2025

REVISED:

DESIGNED BY:	DRAWN BY:
BW	AC

SUBMITTAL:
100% Construction Documents

SHEET TITLE:
A-WING DEMOLITION ONE LINE

SHEET:
E400

JOB NUMBER:
2442

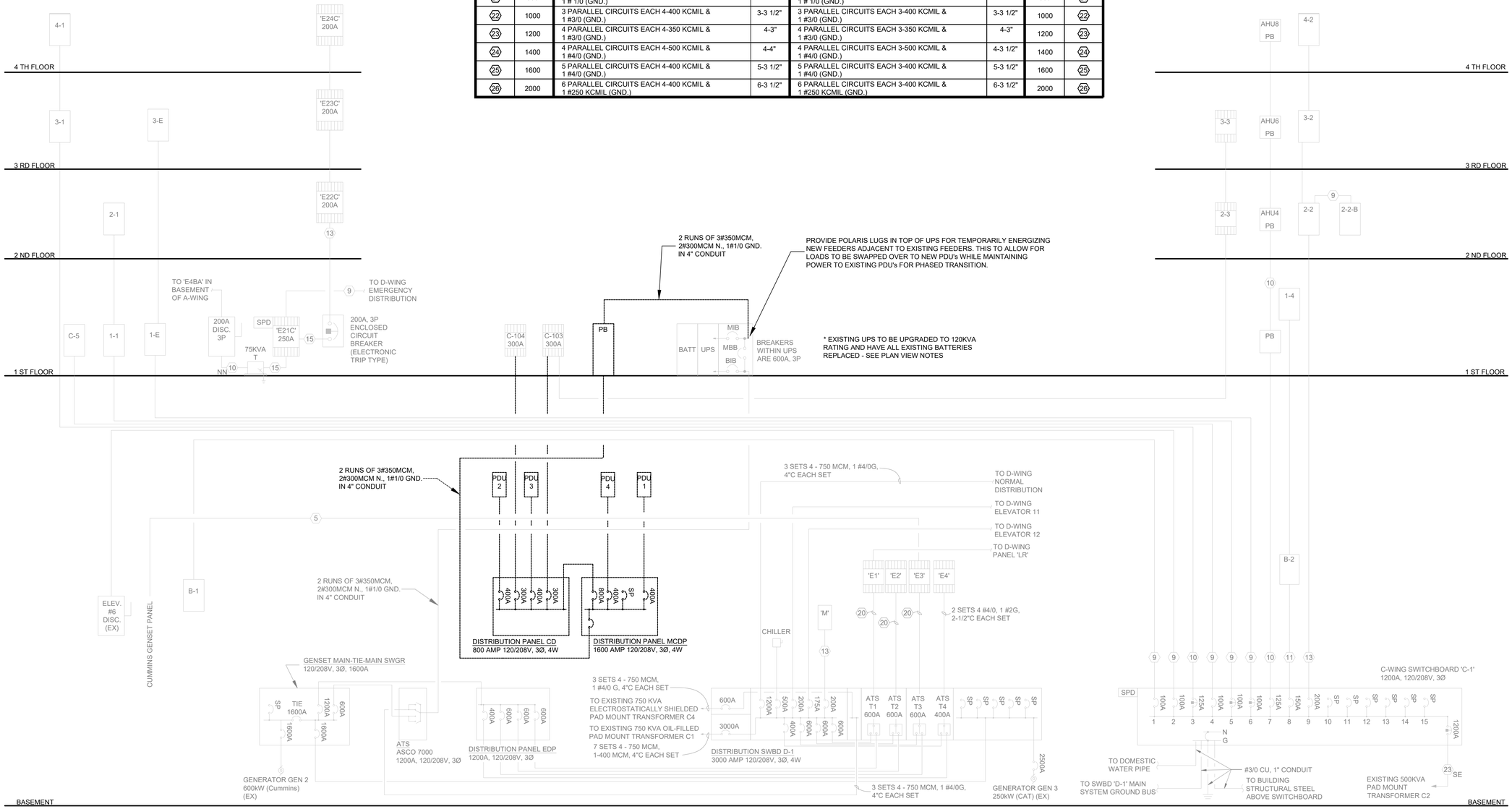
FEEDER SCHEDULE - 3Ø, 600 VOLTS AND BELOW (ALL CONDUCTORS SHALL BE COPPER)

FEEDER SIZE INDICATOR	NOMINAL AMPACITY (FEEDER)	SYMBOL "◯" DRY & WET LOCATIONS CONDUCTORS	SYMBOL "◯NN" (NO NEUTRAL) DRY & WET LOCATIONS (NO NEUTRAL) CONDUCTORS	RACEWAY	NOMINAL AMPACITY (FEEDER)	FEEDER SIZE INDICATOR
1	20	4 #12 & 1 #12 (GND.)	3 #12 & 1 #12 (GND.)	3/4"	20	1
2	30	4 #10 & 1 #10 (GND.)	3 #10 & 1 #10 (GND.)	3/4"	30	2
3	40	4 #8 & 1 #10 (GND.)	3 #8 & 1 #10 (GND.)	1"	40	3
4	50	4 #6 & 1 #10 (GND.)	3 #6 & 1 #10 (GND.)	1"	50	4
5	60	4 #6 & 1 #10 (GND.)	3 #6 & 1 #10 (GND.)	1"	60	5
6	70	4 #4 & 1 #8 (GND.)	3 #4 & 1 #8 (GND.)	1 1/4"	70	6
7	80	4 #3 & 1 #8 (GND.)	3 #3 & 1 #8 (GND.)	1 1/2"	80	7
8	90	4 #3 & 1 #8 (GND.)	3 #3 & 1 #8 (GND.)	1 1/4"	90	8
9	100	4 #2 & 1 #8 (GND.)	3 #2 & 1 #8 (GND.)	1 1/2"	100	9
10	125	4 #1/0 & 1 #6 (GND.)	3 #1/0 & 1 #6 (GND.)	2"	125	10
11	150	4 #1/0 & 1 #6 (GND.)	3 #1/0 & 1 #6 (GND.)	2"	150	11
12	175	4 #2/0 & 1 #6 (GND.)	3 #2/0 & 1 #6 (GND.)	2"	175	12
13	200	4 #3/0 & 1 #6 (GND.)	3 #3/0 & 1 #6 (GND.)	2"	200	13
14	225	4 #4/0 & 1 #4 (GND.)	3 #4/0 & 1 #4 (GND.)	2 1/2"	225	14
15	250	4-250 KCMIL & 1 #4 (GND.)	3-250 KCMIL & 1 #4 (GND.)	2 1/2"	250	15
16	300	4-350 KCMIL & 1 #4 (GND.)	3-350 KCMIL & 1 #4 (GND.)	3"	300	16
17	350	4-400 KCMIL & 1 #3 (GND.)	3-400 KCMIL & 1 #3 (GND.)	3"	350	17
18	400	4-500 KCMIL & 1 #3 (GND.)	3-500 KCMIL & 1 #3 (GND.)	3 1/2"	400	18
19	500	2 PARALLEL CIRCUITS EACH 4-250 KCMIL & 1 #2 (GND.)	2 PARALLEL CIRCUITS EACH 3-250 KCMIL & 1 #2 (GND.)	2-3"	500	19
20	600	2 PARALLEL CIRCUITS EACH 4-350 KCMIL & 1 #1/0 (GND.)	2 PARALLEL CIRCUITS EACH 3-350 KCMIL & 1 #1/0 (GND.)	2-3"	600	20
21	800	3 PARALLEL CIRCUITS EACH 4-300 KCMIL & 1 # 1/0 (GND.)	3 PARALLEL CIRCUITS EACH 3-300 KCMIL & 1 # 1/0 (GND.)	3-3"	800	21
22	1000	3 PARALLEL CIRCUITS EACH 4-400 KCMIL & 1 #3/0 (GND.)	3 PARALLEL CIRCUITS EACH 3-400 KCMIL & 1 #3/0 (GND.)	3-3 1/2"	1000	22
23	1200	4 PARALLEL CIRCUITS EACH 4-350 KCMIL & 1 #3/0 (GND.)	4 PARALLEL CIRCUITS EACH 3-350 KCMIL & 1 #3/0 (GND.)	4-3"	1200	23
24	1400	4 PARALLEL CIRCUITS EACH 4-500 KCMIL & 1 #4/0 (GND.)	4 PARALLEL CIRCUITS EACH 3-500 KCMIL & 1 #4/0 (GND.)	4-4"	1400	24
25	1600	5 PARALLEL CIRCUITS EACH 4-400 KCMIL & 1 #4/0 (GND.)	5 PARALLEL CIRCUITS EACH 3-400 KCMIL & 1 #4/0 (GND.)	5-3 1/2"	1600	25
26	2000	6 PARALLEL CIRCUITS EACH 4-400 KCMIL & 1 #250 KCMIL (GND.)	6 PARALLEL CIRCUITS EACH 3-400 KCMIL & 1 #250 KCMIL (GND.)	6-3 1/2"	2000	26

FEEDER SCHEDULE AND RISER DIAGRAM NOTES:

1. SHADING INDICATES EXISTING EQUIPMENT.
2. DASHED LINES (----------) INDICATE EQUIPMENT TO BE REMOVED.

NOTE: EXISTING LOAD DATA IS UNKNOWN. LOADS WITHIN BUILDING ARE NOT CHANGING. DISTRIBUTION EQUIPMENT IS BEING REPLACED WITH NEW TO SERVE SAME LOADS AS EXISTING.



McGINNISS + FLEMING ENGINEERING

JON BARBER, PE 55427 | BRIAN WALLACE, PE 75562
820 EAST PARK AVE, I-200, TALLAHASSEE, FL 32301
MFE-INC.COM | 850.681.6424

HSMV-02425040

NKB A-Wing Switchgear Replacement & D-Wing PDU / UPS / Surge Protection Upgrades

Neil Kirkman Building
Tallahassee, Florida

DATE:
September 5, 2025

REVISED:

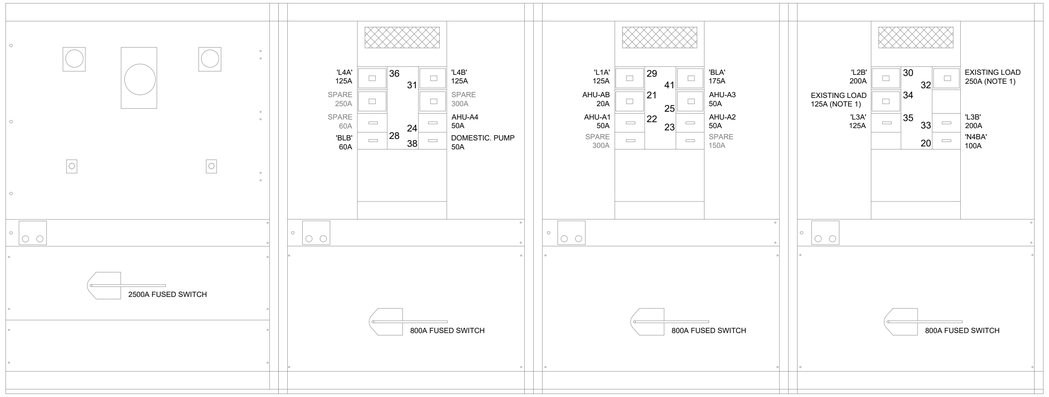
DESIGNED BY:	DRAWN BY:
BW	AC

SUBMITTAL:
100% Construction Documents

SHEET TITLE:
C-WING AND D-WING DEMOLITION ONE LINE

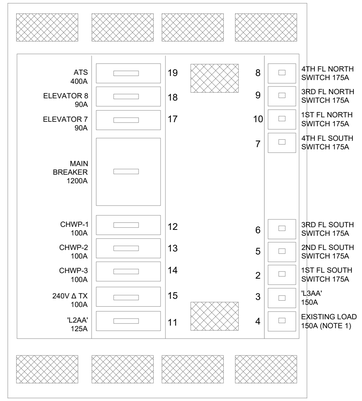
SHEET:
E401

JOB NUMBER:
2442

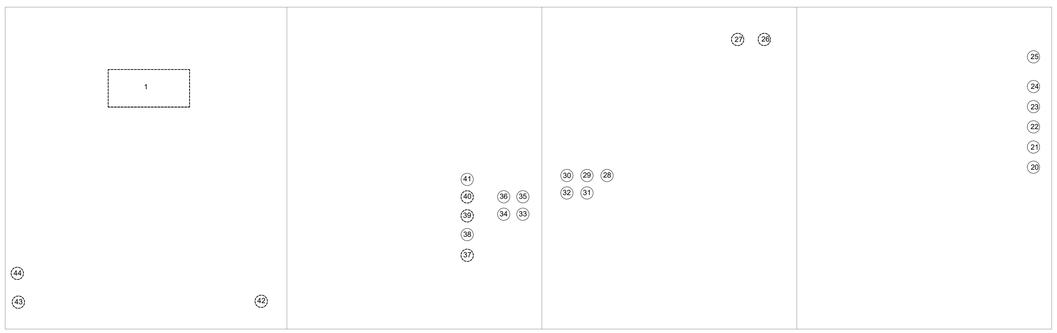


EXISTING SWITCHGEAR ELEVATION

SCALE: N.T.S.



REAR



FRONT

EXISTING CONDUIT PLAN (TOP OF GEAR)

SCALE: N.T.S.

FEEDER / CONDUIT DESIGNATION TABLE

#	FEEDER DESIGNATION	BREAKER SIZE	FEEDER SIZE
1	SERVICE FEEDER	2500A	2500A BUSDUCT
2	1st FLOOR SOUTH SWITCH	175A	2/0's
3	3rd FLOOR SOUTH 'L3AA'	150A	1/0's
4	EXISTING LOAD (NOTE 1)	150A	1/0's
5	2nd FLOOR SOUTH SWITCH	175A	2/0's
6	3rd FLOOR SOUTH SWITCH	175A	2/0's
7	4th FLOOR SOUTH SWITCH	175A	2/0's
8	4th FLOOR NORTH SWITCH	175A	2/0's
9	3rd FLOOR NORTH SWITCH	175A	2/0's
10	1st FLOOR NORTH SWITCH	175A	2/0's
11	2nd FLOOR SOUTH 'L2AA'	125A	1/0's
12	CHWP - 1 **	100A	#4's
13	CHWP - 2 **	100A	#4's
14	CHWP - 3 **	100A	#4's
15	240V DELTA TRANSFORMER	100A	#2's
16	GROUND TO UNKNOWN	N/A	N/A
17	ELEVATOR 7	90A	#3's
18	ELEVATOR 8	90A	#3's
19	ATS	400A	4#500KCMIL, 1#3 GND, 4" C.
20	BASEMENT 'N4BA'	100A	4#2, 1#8 GND, 1 1/2" C.
21	AHU-AB	20A	3#10, 1#10 GND, 1" C.
22	AHU-A1	50A	3#6, 1#10 GND, 1" C.
23	AHU-A2	50A	3#6, 1#10 GND, 1" C.
24	AHU-A4	50A	3#6, 1#10 GND, 1" C.
25	AHU-A3	50A	3#6, 1#10 GND, 1" C.
26	EMPTY CONDUIT	N/A	N/A
27	EMPTY CONDUIT	N/A	N/A
28	BASEMENT NORTH 'BLB'	60A	#6's
29	1ST FL SOUTH 'L1A'	125A	2/0's
30	2nd FLOOR NORTH 'L2B'	200A	250's
31	4TH FL NORTH 'L4B'	125A	2/0's
32	EXISTING LOAD (NOTE 1)	250A	4/0's
33	3rd FLOOR NORTH 'L3B'	200A	3/0's
34	EXISTING LOAD (NOTE 1)	125A	2/0's
35	3rd FLOOR SOUTH 'L3A'	125A	1/0's
36	4th FLOOR SOUTH 'L4A'	125A	1/0's
37	GROUND TO WATER PIPE	N/A	N/A
38	DOMESTIC PUMPING UNIT	50A	3#6, 1#10 GND., 1" C.
39	EMPTY CONDUIT	N/A	N/A
40	EMPTY CONDUIT	N/A	N/A
41	BASEMENT SOUTH 'BLA'	175A	2/0's
42	METERING	N/A	LOW VOLTAGE WIRING
43	EMPTY CONDUIT	N/A	N/A
44	SPD	N/A	N/A

** NOTED BREAKERS FOR PUMPS MAY BE SWAPPED FROM WHAT IS SHOWN. COORDINATE WITH EXISTING CONDITIONS.

SHEET NOTES:

1. EXISTING LOAD NOTED IS UNKNOWN. ALL LOADS ARE UNDERSTOOD TO BE WITHIN A-WING AND UNKNOWN LOAD IS EXPECTED TO BE A PANEL WITHIN ONE OF THE A-WING ELECTRICAL ROOMS. CONTRACTOR TO PERFORM SWITCHING DURING SCHEDULED OUTAGE TO LOCATE AND IDENTIFY EXISTING LOADS FOR IDENTIFICATION WITHIN NEW SWITCHGEAR. INDICATE LOAD ON AS-BUILTS.
2. DURING DESIGN PHASE, PARTIAL INVESTIGATION WAS COMPLETED TO DETERMINE WHAT BREAKERS SERVED WHICH LOADS AND TO DETERMINE EXISTING FEEDER SIZES. BREAKERS COULD NOT BE TURNED OFF/ON DURING DESIGN PHASE TO VERIFY LOADS SERVED. FEEDER SIZES NOTED MAY VARY FROM EXISTING CONDITIONS AND LOADS MAY BE SERVED FROM DIFFERENT BREAKER THAN AS SHOWN. THE NET RESULT OF THE PROJECT SCOPE IS TO DISCONNECT EXISTING LOADS FROM EXISTING BREAKER AND RECONNECT SAME EXISTING LOADS USING SAME FEEDERS TO SAME SIZE BREAKER IN NEW SWITCHGEAR. CONTRACTOR SHALL USE CAUTION TO LABEL FEEDERS AND ENSURE THEY GET CONNECTED TO SAME SIZE BREAKER AS EXISTING. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION AND ALL DIFFERENCES NOTED IN PROJECT AS-BUILTS.

NOTE: EXISTING LOAD DATA IS UNKNOWN. LOADS WITHIN BUILDING ARE NOT CHANGING. DISTRIBUTION EQUIPMENT IS BEING REPLACED WITH NEW TO SERVE SAME LOADS AS EXISTING.

McGINNISS + FLEMING ENGINEERING
JON BARBER, PE 55427 | BRIAN WALLACE, PE 75562
820 EAST PARK AVE, I-200, TALLAHASSEE, FL 32301
MFE-INC.COM | 850.681.6424

HSMV-02425040

NKB A-Wing Switchgear Replacement & D-Wing PDU / UPS / Surge Protection Upgrades

Neil Kirkman Building
Tallahassee, Florida

DATE:
September 5, 2025

REVISED:

DESIGNED BY:	DRAWN BY:
BW	AC

SUBMITTAL:
100% Construction Documents

SHEET TITLE:
A-WING
SWITCHGEAR CONDUIT PLAN
AND ELEVATION

SHEET:
E402

JOB NUMBER:
2442

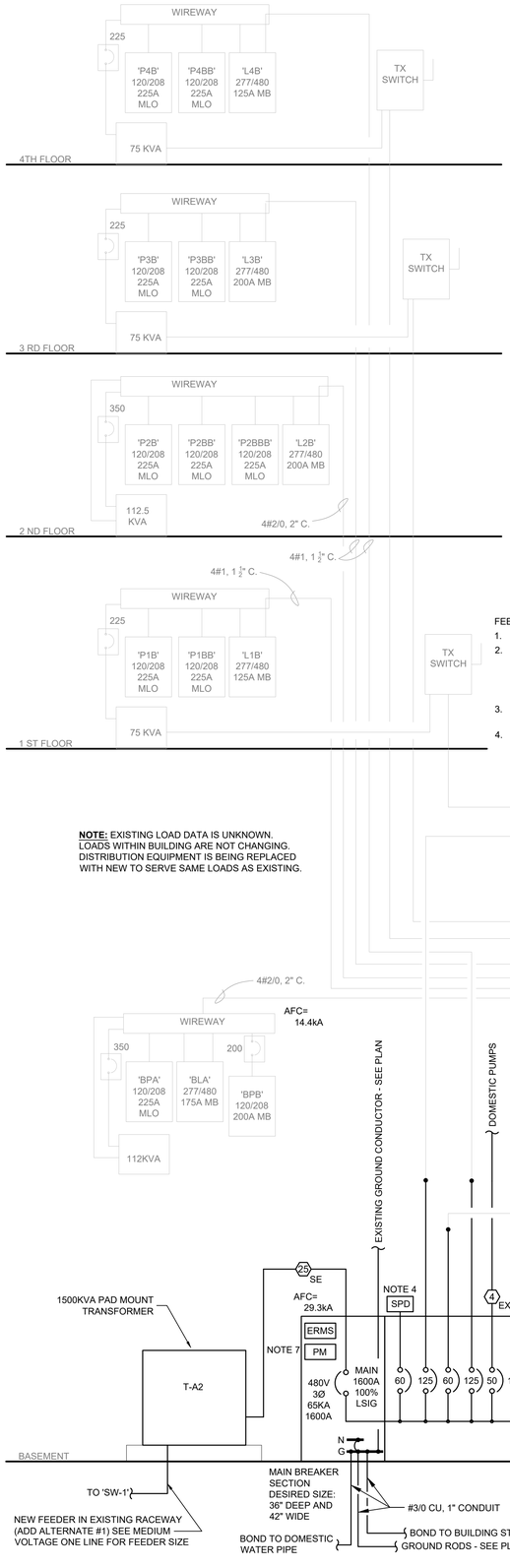
FEEDER SCHEDULE - 3Ø, 600 VOLTS AND BELOW

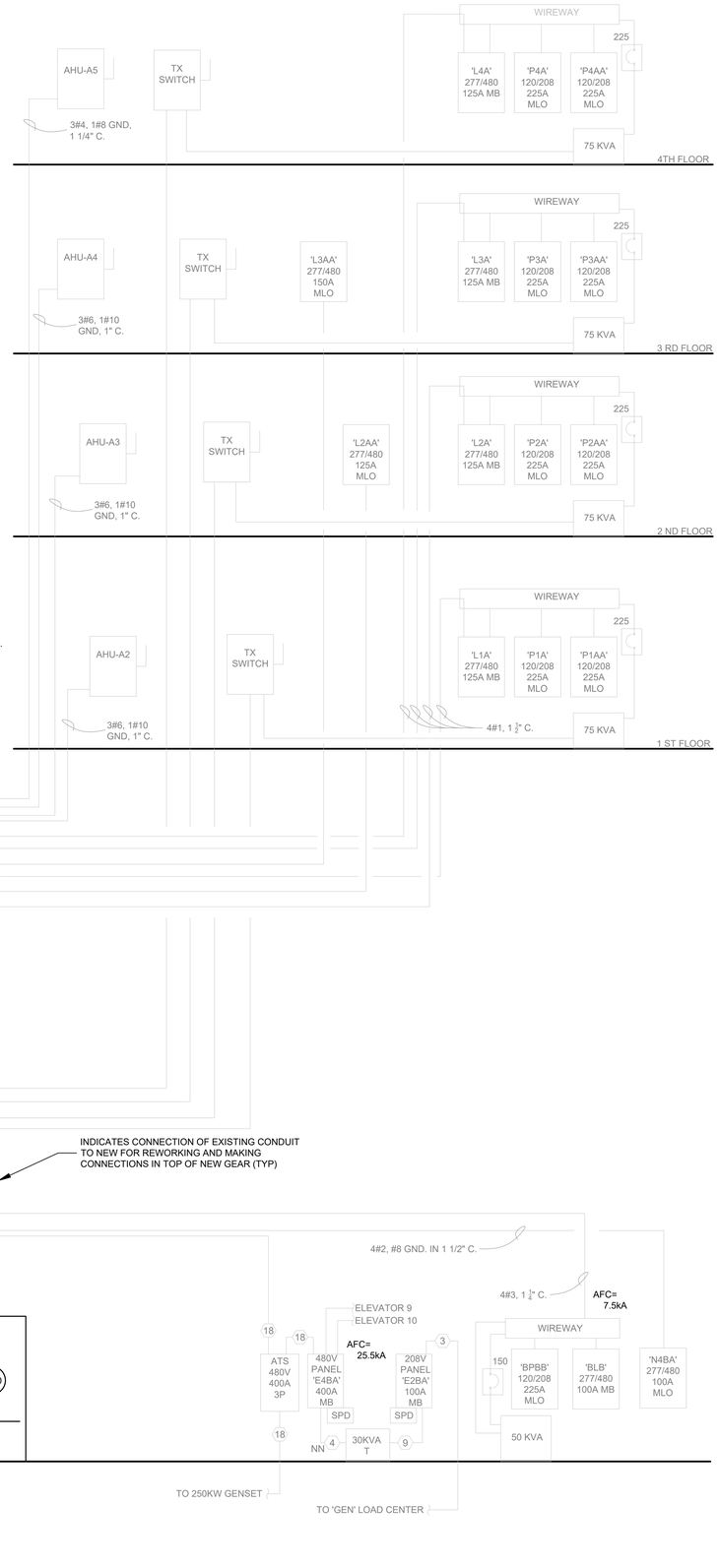
(ALL CONDUCTORS SHALL BE COPPER)

FEEDER SIZE INDICATOR	NOMINAL AMPACITY (FEEDER)	SYMBOL "◯" DRY & WET LOCATIONS CONDUCTORS	SYMBOL "◯NN" (NO NEUTRAL) DRY & WET LOCATIONS (NO NEUTRAL) CONDUCTORS	RACEWAY	NOMINAL AMPACITY (FEEDER)	FEEDER SIZE INDICATOR
1	20	4 #12 & 1 #12 (GND.)	3 #12 & 1 #12 (GND.)	3/4"	20	1
2	30	4 #10 & 1 #10 (GND.)	3 #10 & 1 #10 (GND.)	3/4"	30	2
3	40	4 #8 & 1 #10 (GND.)	3 #8 & 1 #10 (GND.)	1"	40	3
4	50	4 #6 & 1 #10 (GND.)	3 #6 & 1 #10 (GND.)	1"	50	4
5	60	4 #6 & 1 #10 (GND.)	3 #6 & 1 #10 (GND.)	1"	60	5
6	70	4 #4 & 1 #8 (GND.)	3 #4 & 1 #8 (GND.)	1 1/4"	70	6
7	80	4 #3 & 1 #8 (GND.)	3 #3 & 1 #8 (GND.)	1 1/4"	80	7
8	90	4 #3 & 1 #8 (GND.)	3 #3 & 1 #8 (GND.)	1 1/2"	90	8
9	100	4 #2 & 1 #8 (GND.)	3 #2 & 1 #8 (GND.)	1 1/2"	100	9
10	125	4 #1/0 & 1 #6 (GND.)	3 #1/0 & 1 #6 (GND.)	2"	125	10
11	150	4 #1/0 & 1 #6 (GND.)	3 #1/0 & 1 #6 (GND.)	2"	150	11
12	175	4 #2/0 & 1 #6 (GND.)	3 #2/0 & 1 #6 (GND.)	2"	175	12
13	200	4 #3/0 & 1 #6 (GND.)	3 #3/0 & 1 #6 (GND.)	2 1/2"	200	13
14	225	4 #4/0 & 1 #4 (GND.)	3 #4/0 & 1 #4 (GND.)	2 1/2"	225	14
15	250	4-250 KCMIL & 1 #4 (GND.)	3-250 KCMIL & 1 #4 (GND.)	3"	250	15
16	300	4-350 KCMIL & 1 #4 (GND.)	3-350 KCMIL & 1 #4 (GND.)	3"	300	16
17	350	4-400 KCMIL & 1 #3 (GND.)	3-400 KCMIL & 1 #3 (GND.)	3"	350	17
18	400	4-500 KCMIL & 1 #3 (GND.)	3-500 KCMIL & 1 #3 (GND.)	4"	400	18
19	500	2 PARALLEL CIRCUITS EACH 4-250 KCMIL & 1 #2 (GND.)	2 PARALLEL CIRCUITS EACH 3-250 KCMIL & 1 #2 (GND.)	3 1/2"	500	19
20	600	2 PARALLEL CIRCUITS EACH 4-350 KCMIL & 1 #1/0 (GND.)	2 PARALLEL CIRCUITS EACH 3-350 KCMIL & 1 #1/0 (GND.)	2-2 1/2"	600	20
21	800	3 PARALLEL CIRCUITS EACH 4-300 KCMIL & 1 # 1/0 (GND.)	3 PARALLEL CIRCUITS EACH 3-300 KCMIL & 1 # 1/0 (GND.)	2-3"	800	21
22	1000	3 PARALLEL CIRCUITS EACH 4-400 KCMIL & 1 #3/0 (GND.)	3 PARALLEL CIRCUITS EACH 3-400 KCMIL & 1 #3/0 (GND.)	3-3"	1000	22
23	1200	4 PARALLEL CIRCUITS EACH 4-350 KCMIL & 1 #3/0 (GND.)	4 PARALLEL CIRCUITS EACH 3-350 KCMIL & 1 #3/0 (GND.)	3-3 1/2"	1200	23
24	1400	4 PARALLEL CIRCUITS EACH 4-500 KCMIL & 1 #4/0 (GND.)	4 PARALLEL CIRCUITS EACH 3-500 KCMIL & 1 #4/0 (GND.)	4-3"	1400	24
25	1600	5 PARALLEL CIRCUITS EACH 4-400 KCMIL & 1 #4/0 (GND.)	5 PARALLEL CIRCUITS EACH 3-400 KCMIL & 1 #4/0 (GND.)	4-3 1/2"	1600	25
26	2000	6 PARALLEL CIRCUITS EACH 4-400 KCMIL & 1 #250 KCMIL (GND.)	6 PARALLEL CIRCUITS EACH 3-400 KCMIL & 1 #250 KCMIL (GND.)	6-3 1/2"	2000	26

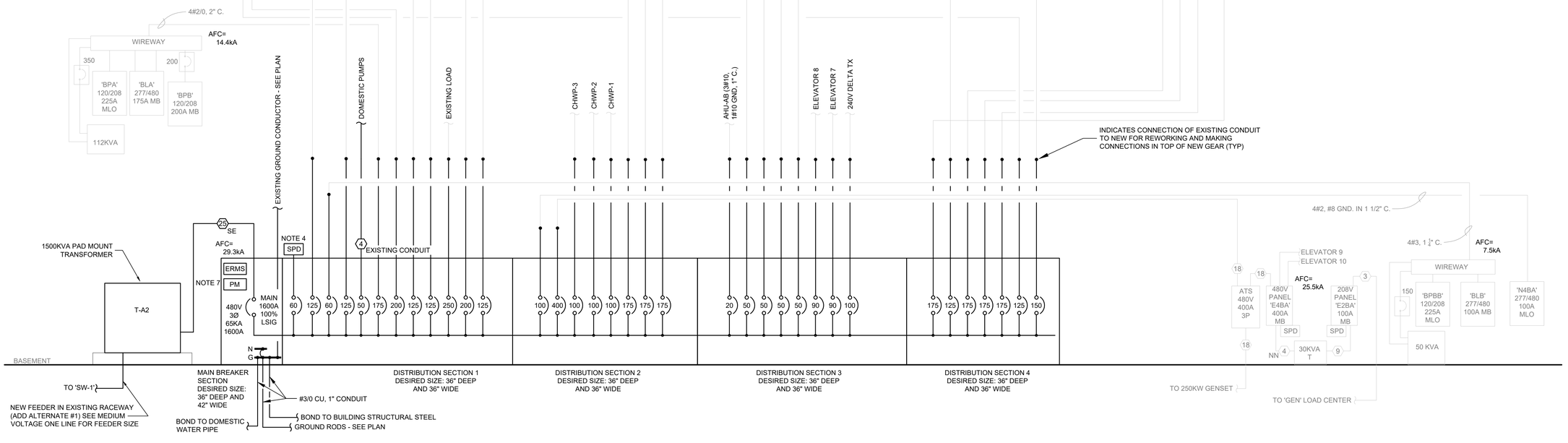
FEEDER SCHEDULE AND RISER DIAGRAM NOTES:

1. SHADING INDICATES EXISTING EQUIPMENT.
2. CONDUCTORS AMPACITIES ARE BASED ON 60°C INSULATION FOR CONDUCTORS OF #1 GAUGE AND SMALLER AND ARE BASED ON 75°C INSULATION FOR CONDUCTORS OF #1/0 GAUGE AND LARGER. THIS IS TO CONFORM TO UL'S TESTING OF EQUIPMENT TERMINATIONS AND NEC 110-14(C). CONDUCTOR SIZES SHALL NOT BE REDUCED FOR HIGHER RATED TEMPERATURE INSULATION USED.
3. CONDUIT SIZES ARE BASED ON "THW" INSULATION AND SHALL NOT BE REDUCED FOR DIFFERENT INSULATION TYPES.
4. INSTALL SURGE PROTECTION EXTERIOR TO SWITCHGEAR, LOCATED ABOVE GEAR, AND CONNECTED TO DEDICATED BREAKER IN FIRST DISTRIBUTION SECTION.
5. SYMBOL " (15)SE " INDICATES SERVICE ENTRANCE CABLE GROUP. PROVIDE CONDUCTORS SIZED AS SHOWN UNDER SYMBOL "(15) ", INCLUDING GROUNDED CONDUCTOR (NEUTRAL), BUT WITHOUT GROUNDING CONDUCTOR REQUIREMENT. CONDUIT SIZES SHALL REMAIN AS SHOWN.
6. ALL NEW BREAKERS ARE 3-POLE TYPE, UNLESS NOTED OTHERWISE.
7. PROVIDE DIGITAL METER INTEGRATED INTO MAIN BREAKER SECTION.
8. THE SYSTEM USED ON MAIN SWITCHBOARD 1600A MAIN BREAKER FOR ARC ENERGY REDUCTION IS AN ENERGY-REDUCING MAINTENANCE SWITCH. THE ARC ENERGY REDUCTION SYSTEM SHALL BE PERFORMANCE TESTED BY PRIMARY CURRENT INJECTION TESTING OR ANOTHER APPROVED METHOD WHEN FIRST INSTALLED ON SITE. THIS TESTING SHALL BE CONDUCTED BY A QUALIFIED PERSON(S) IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. A WRITTEN RECORD OF THIS TESTING SHALL BE MADE AND SHALL BE AVAILABLE TO THE AUTHORITY HAVING JURISDICTION. IF PERMITTED BY MANUFACTURER'S INSTRUCTIONS, SECONDARY CURRENT INJECTION TESTING IS RECOMMENDED.
9. REFER TO GENERAL NOTES FOR TESTING GFCI ON MAIN BREAKER.





NOTE: EXISTING LOAD DATA IS UNKNOWN. LOADS WITHIN BUILDING ARE NOT CHANGING. DISTRIBUTION EQUIPMENT IS BEING REPLACED WITH NEW TO SERVE SAME LOADS AS EXISTING.



McGINNISS + FLEMING ENGINEERING

JON BARBER, PE 55427 | BRIAN WALLACE, PE 75562
820 EAST PARK AVE, I-200, TALLAHASSEE, FL 32301
MFE-INC.COM | 850.681.6424

HSMV-02425040

NKB A-Wing Switchgear Replacement & D-Wing PDU / UPS / Surge Protection Upgrades

Neil Kirkman Building
Tallahassee, Florida

DATE:
September 5, 2025

REVISED:

DESIGNED BY:	DRAWN BY:
BW	AC

SUBMITTAL:
100% Construction Documents

SHEET TITLE:
A-WING
NEW WORK
ONE LINE

SHEET:
E403

JOB NUMBER:
2442

FEEDER SCHEDULE - 3Ø, 600 VOLTS AND BELOW

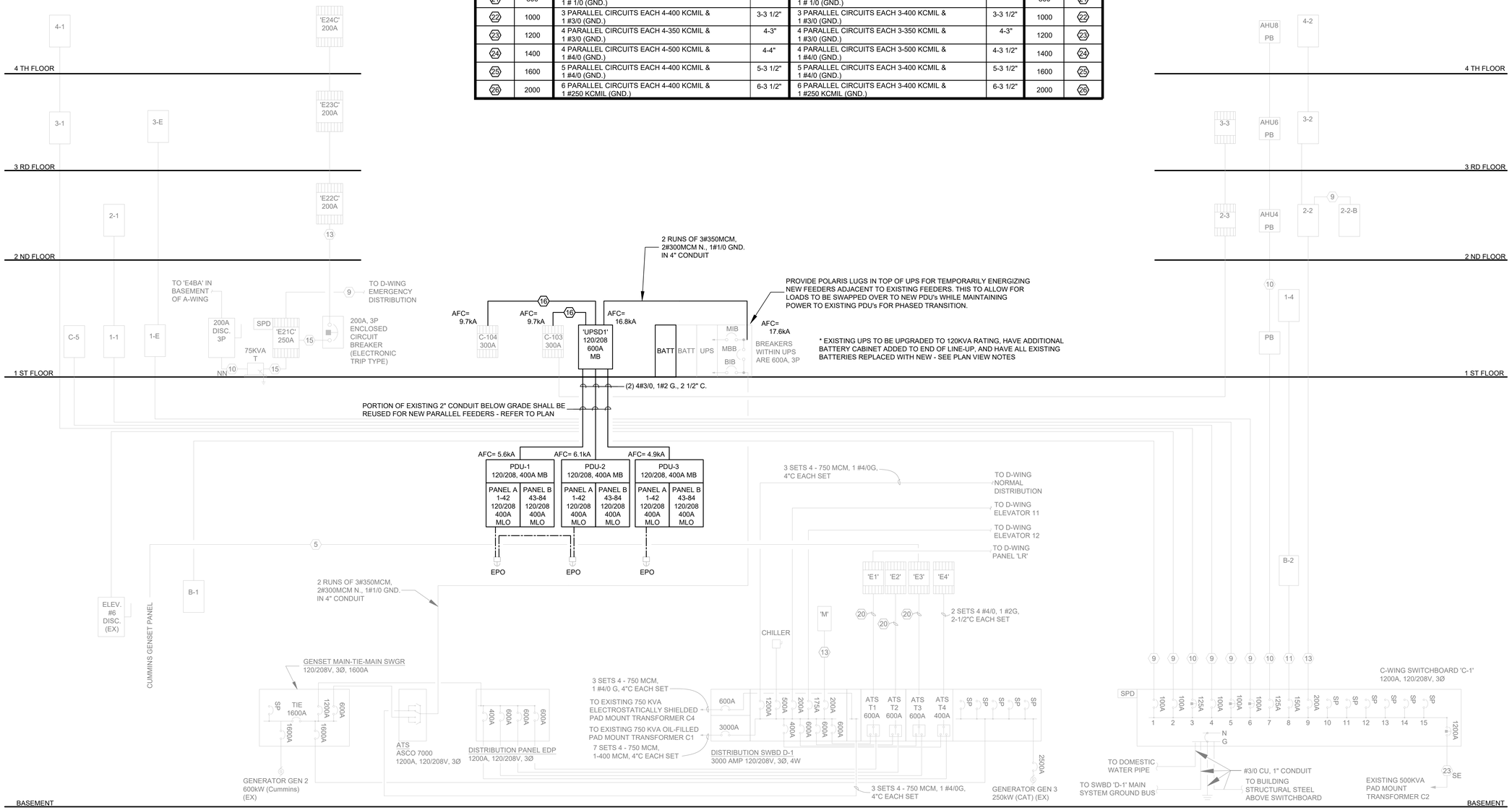
(ALL CONDUCTORS SHALL BE COPPER)

FEEDER SIZE INDICATOR	NOMINAL AMPACITY (FEEDER)	SYMBOL "◯" DRY & WET LOCATIONS CONDUCTORS	SYMBOL "◯NN" (NO NEUTRAL) DRY & WET LOCATIONS (NO NEUTRAL) CONDUCTORS	RACEWAY	NOMINAL AMPACITY (FEEDER)	FEEDER SIZE INDICATOR
1	20	4 #12 & 1 #12 (GND.)	3 #12 & 1 #12 (GND.)	3/4"	20	1
2	30	4 #10 & 1 #10 (GND.)	3 #10 & 1 #10 (GND.)	3/4"	30	2
3	40	4 #8 & 1 #10 (GND.)	3 #8 & 1 #10 (GND.)	1"	40	3
4	50	4 #6 & 1 #10 (GND.)	3 #6 & 1 #10 (GND.)	1 1/4"	50	4
5	60	4 #6 & 1 #10 (GND.)	3 #6 & 1 #10 (GND.)	1 1/4"	60	5
6	70	4 #4 & 1 #8 (GND.)	3 #4 & 1 #8 (GND.)	1 1/4"	70	6
7	80	4 #3 & 1 #8 (GND.)	3 #3 & 1 #8 (GND.)	1 1/2"	80	7
8	90	4 #3 & 1 #8 (GND.)	3 #3 & 1 #8 (GND.)	1 1/4"	90	8
9	100	4 #2 & 1 #8 (GND.)	3 #2 & 1 #8 (GND.)	1 1/4"	100	9
10	125	4 #1/0 & 1 #6 (GND.)	3 #1/0 & 1 #6 (GND.)	2"	125	10
11	150	4 #1/0 & 1 #6 (GND.)	3 #1/0 & 1 #6 (GND.)	2"	150	11
12	175	4 #2/0 & 1 #6 (GND.)	3 #2/0 & 1 #6 (GND.)	2"	175	12
13	200	4 #3/0 & 1 #6 (GND.)	3 #3/0 & 1 #6 (GND.)	2 1/2"	200	13
14	225	4 #4/0 & 1 #4 (GND.)	3 #4/0 & 1 #4 (GND.)	2 1/2"	225	14
15	250	4-250 KCMIL & 1 #4 (GND.)	3-250 KCMIL & 1 #4 (GND.)	3"	250	15
16	300	4-350 KCMIL & 1 #4 (GND.)	3-350 KCMIL & 1 #4 (GND.)	3"	300	16
17	350	4-400 KCMIL & 1 #3 (GND.)	3-400 KCMIL & 1 #3 (GND.)	3"	350	17
18	400	4-500 KCMIL & 1 #3 (GND.)	3-500 KCMIL & 1 #3 (GND.)	3 1/2"	400	18
19	500	2 PARALLEL CIRCUITS EACH 4-250 KCMIL & 1 #2 (GND.)	2 PARALLEL CIRCUITS EACH 3-250 KCMIL & 1 #2 (GND.)	2-3"	500	19
20	600	2 PARALLEL CIRCUITS EACH 4-350 KCMIL & 1 #1/0 (GND.)	2 PARALLEL CIRCUITS EACH 3-350 KCMIL & 1 #1/0 (GND.)	2-3"	600	20
21	800	3 PARALLEL CIRCUITS EACH 4-300 KCMIL & 1 # 1/0 (GND.)	3 PARALLEL CIRCUITS EACH 3-300 KCMIL & 1 # 1/0 (GND.)	3-3"	800	21
22	1000	3 PARALLEL CIRCUITS EACH 4-400 KCMIL & 1 #3/0 (GND.)	3 PARALLEL CIRCUITS EACH 3-400 KCMIL & 1 #3/0 (GND.)	3-3 1/2"	1000	22
23	1200	4 PARALLEL CIRCUITS EACH 4-350 KCMIL & 1 #3/0 (GND.)	4 PARALLEL CIRCUITS EACH 3-350 KCMIL & 1 #3/0 (GND.)	4-3"	1200	23
24	1400	4 PARALLEL CIRCUITS EACH 4-500 KCMIL & 1 #4/0 (GND.)	4 PARALLEL CIRCUITS EACH 3-500 KCMIL & 1 #4/0 (GND.)	4-4"	1400	24
25	1600	5 PARALLEL CIRCUITS EACH 4-400 KCMIL & 1 #4/0 (GND.)	5 PARALLEL CIRCUITS EACH 3-400 KCMIL & 1 #4/0 (GND.)	5-3 1/2"	1600	25
26	2000	6 PARALLEL CIRCUITS EACH 4-400 KCMIL & 1 #250 KCMIL (GND.)	6 PARALLEL CIRCUITS EACH 3-400 KCMIL & 1 #250 KCMIL (GND.)	6-3 1/2"	2000	26

FEEDER SCHEDULE AND RISER DIAGRAM NOTES:

1. SHADING INDICATES EXISTING EQUIPMENT.
2. CONDUCTORS AMPACITIES ARE BASED ON 60°C INSULATION FOR CONDUCTORS OF #1 GAUGE AND SMALLER AND ARE BASED ON 75°C INSULATION FOR CONDUCTORS OF #1/0 GAUGE AND LARGER. THIS IS TO CONFORM TO UL'S TESTING OF EQUIPMENT TERMINATIONS AND NEC 110-14(C). CONDUCTOR SIZES SHALL NOT BE REDUCED FOR HIGHER RATED TEMPERATURE INSULATION USED.
3. CONDUIT SIZES ARE BASED ON "THW" INSULATION AND SHALL NOT BE REDUCED FOR DIFFERENT INSULATION TYPES.
4. FEEDERS OF NOMINAL AMPACITY 250 AMPS OR GREATER MAY UTILIZE EQUIVALENT PARALLEL CIRCUITS. IN SUCH CASES EACH INDIVIDUAL GROUNDED CONDUCTOR SHALL BE FULL SIZE AND INSTALLED IN ACCORDANCE WITH ARTICLE 250 OF THE NEC.

NOTE: EXISTING LOAD DATA IS UNKNOWN. LOADS WITHIN BUILDING ARE NOT CHANGING. DISTRIBUTION EQUIPMENT IS BEING REPLACED WITH NEW TO SERVE SAME LOADS AS EXISTING.



McGINNISS + FLEMING ENGINEERING

JON BARBER, PE 55427 | BRIAN WALLACE, PE 75562
820 EAST PARK AVE, I-200, TALLAHASSEE, FL 32301
MFE-INC.COM | 850.681.6424

HSMV-02425040

NKB A-Wing Switchgear Replacement & D-Wing PDU / UPS / Surge Protection Upgrades

Neil Kirkman Building
Tallahassee, Florida

DATE:
September 5, 2025

REVISED:

DESIGNED BY:	DRAWN BY:
BW	AC

SUBMITTAL:
100% Construction Documents

SHEET TITLE:
C-WING AND D-WING NEW WORK ONE LINE

SHEET:
E404

JOB NUMBER:
2442

EXISTING PANEL SCHEDULES - DEMOLITION

BOLD INDICATES BREAKERS/LOADS TO BE REMOVED.

LOAD / REMARKS	CIR. NO.	BREAKERS AMPS	BREAKERS POLES	H.P. OR K.W.	AMPS PER PHASE LIGHTING ØA	LIGHTING ØB	LIGHTING ØC	GEN. RECEPTS ØA	GEN. RECEPTS ØB	GEN. RECEPTS ØC	SPECIAL ØA	SPECIAL ØB	SPECIAL ØC	H.P. OR K.W.	BREAKERS AMPS	BREAKERS POLES	CIR. NO.	LOAD / REMARKS
PANEL 'LR'	1	150	3	-	-	-	-	-	-	-	-	-	-	-	150	3	2	AC-1 (TBR)
	3				-	-	-	-	-	-	-	-	-				4	
	5				-	-	-	-	-	-	-	-	-				6	
AC-13 C-114 UPS ROOM	7	20	3	-	-	-	-	-	-	-	-	-	-	-	70	3	8	C-103 SUB PANEL
	9				-	-	-	-	-	-	-	-	-				10	
	11				-	-	-	-	-	-	-	-	-				12	
CD-1 (TBR)	13	20	3	-	-	-	-	-	-	-	-	-	-	-	30	2	14	DHPU-1
	15				-	-	-	-	-	-	-	-	-				16	
	17				-	-	-	-	-	-	-	-	-	-	20	1	18	EXISTING LOAD
CD-6 (TBR)	19	20	3	-	-	-	-	-	-	-	-	-	-	-	20	3	20	CD-13
	21				-	-	-	-	-	-	-	-	-				22	
	23				-	-	-	-	-	-	-	-	-				24	
TOTAL CONNECTED LOAD (AMPS)					-	-	-	-	-	-	-	-	-	TOTAL CONNECTED LOAD (AMPS)				

PANELBOARD SCHEDULE

NKB, C-wing
Tallahassee, Florida

Panel 'E1'
Location C-WING BASEMENT
Fed From ATS
Service 3 Phase 4 Wire
■ 208Y/120V
□ 480Y/277V
Main Bkr. - A - P
Lugs Only 600 A
Remarks
PANEL IS EXISTING TO REMAIN.

LOAD / REMARKS	CIR. NO.	BREAKERS AMPS	BREAKERS POLES	H.P. OR K.W.	AMPS PER PHASE LIGHTING ØA	LIGHTING ØB	LIGHTING ØC	GEN. RECEPTS ØA	GEN. RECEPTS ØB	GEN. RECEPTS ØC	SPECIAL ØA	SPECIAL ØB	SPECIAL ØC	H.P. OR K.W.	BREAKERS AMPS	BREAKERS POLES	CIR. NO.	LOAD / REMARKS
AC-9 (TBR)	1	150	3	-	-	-	-	-	-	-	-	-	-	-	150	3	2	DATA CENTER PANEL 'DCP2'
	3				-	-	-	-	-	-	-	-	-				4	
	5				-	-	-	-	-	-	-	-	-				6	
AC-7 (TBR)	7	150	3	-	-	-	-	-	-	-	-	-	-	-	150	3	8	AC-2 (TBR)
	9				-	-	-	-	-	-	-	-	-				10	
	11				-	-	-	-	-	-	-	-	-				12	
CD-2 (TBR)	13	20	3	-	-	-	-	-	-	-	-	-	-	-	20	3	14	CD-7 (TBR)
	15				-	-	-	-	-	-	-	-	-				16	
	17				-	-	-	-	-	-	-	-	-				18	
CD-5 (TBR)	19	20	3	-	-	-	-	-	-	-	-	-	-	-	20	3	20	CD-9 (TBR)
	21				-	-	-	-	-	-	-	-	-				22	
	23				-	-	-	-	-	-	-	-	-				24	
TOTAL CONNECTED LOAD (AMPS)					-	-	-	-	-	-	-	-	-	TOTAL CONNECTED LOAD (AMPS)				

PANELBOARD SCHEDULE

NKB, C-wing
Tallahassee, Florida

Panel 'E2'
Location C-WING BASEMENT
Fed From ATS
Service 3 Phase 4 Wire
■ 208Y/120V
□ 480Y/277V
Main Bkr. - A - P
Lugs Only 600 A
Remarks
PANEL IS EXISTING TO REMAIN.

LOAD / REMARKS	CIR. NO.	BREAKERS AMPS	BREAKERS POLES	H.P. OR K.W.	AMPS PER PHASE LIGHTING ØA	LIGHTING ØB	LIGHTING ØC	GEN. RECEPTS ØA	GEN. RECEPTS ØB	GEN. RECEPTS ØC	SPECIAL ØA	SPECIAL ØB	SPECIAL ØC	H.P. OR K.W.	BREAKERS AMPS	BREAKERS POLES	CIR. NO.	LOAD / REMARKS
DATA CENTER PANEL 'DCP1'	1	150	3	-	-	-	-	-	-	-	-	-	-	-	150	3	2	AC-3 (TBR)
	3				-	-	-	-	-	-	-	-	-				4	
	5				-	-	-	-	-	-	-	-	-				6	
AC-4 (TBR)	7	150	3	-	-	-	-	-	-	-	-	-	-	-	150	3	8	AC-10 (TBR)
	9				-	-	-	-	-	-	-	-	-				10	
	11				-	-	-	-	-	-	-	-	-				12	
CD-3 (TBR)	13	20	3	-	-	-	-	-	-	-	-	-	-	-	20	3	14	CD-8 (TBR)
	15				-	-	-	-	-	-	-	-	-				16	
	17				-	-	-	-	-	-	-	-	-				18	
GEN PANEL - ONAN	19	40	3	-	-	-	-	-	-	-	-	-	-	-	20	3	20	CD-10 (TBR)
	21				-	-	-	-	-	-	-	-	-				22	
	23				-	-	-	-	-	-	-	-	-				24	
TOTAL CONNECTED LOAD (AMPS)					-	-	-	-	-	-	-	-	-	TOTAL CONNECTED LOAD (AMPS)				

PANELBOARD SCHEDULE

NKB, C-wing
Tallahassee, Florida

Panel 'E3'
Location C-WING BASEMENT
Fed From ATS
Service 3 Phase 4 Wire
■ 208Y/120V
□ 480Y/277V
Main Bkr. - A - P
Lugs Only 600 A
Remarks
PANEL IS EXISTING TO REMAIN.

LOAD / REMARKS	CIR. NO.	BREAKERS AMPS	BREAKERS POLES	H.P. OR K.W.	AMPS PER PHASE LIGHTING ØA	LIGHTING ØB	LIGHTING ØC	GEN. RECEPTS ØA	GEN. RECEPTS ØB	GEN. RECEPTS ØC	SPECIAL ØA	SPECIAL ØB	SPECIAL ØC	H.P. OR K.W.	BREAKERS AMPS	BREAKERS POLES	CIR. NO.	LOAD / REMARKS
SPARE	1	150	3	-	-	-	-	-	-	-	-	-	-	-	150	3	2	AC-12
	3				-	-	-	-	-	-	-	-	-				4	
	5				-	-	-	-	-	-	-	-	-				6	
SPARE	7	150	3	-	-	-	-	-	-	-	-	-	-	-	150	3	8	AIR COMPRESSOR #2
	9				-	-	-	-	-	-	-	-	-				10	
	11				-	-	-	-	-	-	-	-	-				12	
CD-12	13	20	3	-	-	-	-	-	-	-	-	-	-	-	100	3	14	
	15				-	-	-	-	-	-	-	-	-				16	
	17				-	-	-	-	-	-	-	-	-				18	
AIR COMPRESSOR #1	19	30	3	-	-	-	-	-	-	-	-	-	-	-	70	3	20	SPARE (OFF)
	21				-	-	-	-	-	-	-	-	-				22	
	23				-	-	-	-	-	-	-	-	-				24	
TOTAL CONNECTED LOAD (AMPS)					-	-	-	-	-	-	-	-	-	TOTAL CONNECTED LOAD (AMPS)				

PANELBOARD SCHEDULE

NKB, C-wing
Tallahassee, Florida

Panel 'E4'
Location C-WING BASEMENT
Fed From ATS
Service 3 Phase 4 Wire
■ 208Y/120V
□ 480Y/277V
Main Bkr. - A - P
Lugs Only 400 A
Remarks
PANEL IS EXISTING TO REMAIN.

EXISTING PANEL SCHEDULES - NEW WORK

BOLD INDICATES NEW BREAKERS/LOADS TO BE ADDED.

LOAD / REMARKS	CIR. NO.	BREAKERS AMPS	BREAKERS POLES	H.P. OR K.W.	AMPS PER PHASE LIGHTING ØA	LIGHTING ØB	LIGHTING ØC	GEN. RECEPTS ØA	GEN. RECEPTS ØB	GEN. RECEPTS ØC	SPECIAL ØA	SPECIAL ØB	SPECIAL ØC	H.P. OR K.W.	BREAKERS AMPS	BREAKERS POLES	CIR. NO.	LOAD / REMARKS
PANEL 'LR'	1	150	3	-	-	-	-	-	-	-	-	-	-	-	150	3	2	SPARE
	3				-	-	-	-	-	-	-	-	-				4	
	5				-	-	-	-	-	-	-	-	-				6	
AC-13 C-114 UPS ROOM	7	20	3	-	-	-	-	-	-	-	-	-	-	-	70	3	8	C-103 SUB PANEL
	9				-	-	-	-	-	-	-	-	-				10	
	11				-	-	-	-	-	-	-	-	-				12	
AHU-1	13	15	2	-	-	-	-	-	-	-	-	-	-	-	30	2	14	DHPU-1
	15				-	-	-	-	-	-	-	-	-				16	
SPACE	17	-	-	-	-	-	-	-	-	-	-	-	-	-	20	1	18	EXISTING LOAD
CU-1	19	60	2	-	-	-	-	-	-	-	-	-	-	-	20	3	20	CD-13
	21				-	-	-	-	-	-	-	-	-				22	
SPACE	23	-	-	-	-	-	-	-	-	-	-	-	-				24	
TOTAL CONNECTED LOAD (AMPS)					-	-	-	-	-	-	-	-	-	TOTAL CONNECTED LOAD (AMPS)				

PANELBOARD SCHEDULE

NKB, C-wing
Tallahassee, Florida

Panel 'E1'
Location C-WING BASEMENT
Fed From ATS
Service 3 Phase 4 Wire
■ 208Y/120V
□ 480Y/277V
Main Bkr. - A - P
Lugs Only 600 A
Remarks
PANEL IS EXISTING TO REMAIN.

LOAD / REMARKS	CIR. NO.	BREAKERS AMPS	BREAKERS POLES	H.P. OR K.W.	AMPS PER PHASE LIGHTING ØA	LIGHTING ØB	LIGHTING ØC	GEN. RECEPTS ØA	GEN. RECEPTS ØB	GEN. RECEPTS ØC	SPECIAL ØA	SPECIAL ØB	SPECIAL ØC	H.P. OR K.W.	BREAKERS AMPS	BREAKERS POLES	CIR. NO.	LOAD / REMARKS
SPARE	1	150	3	-	-	-	-	-	-	-	-	-	-	-	150	3	2	DATA CENTER PANEL 'DCP2'
	3				-	-	-	-	-	-	-	-	-				4	
	5				-	-	-	-	-	-	-	-	-				6	
SPARE	7	150	3	-	-	-	-	-	-	-	-	-	-	-	20	2	8	C-103 AC-1
	9				-	-	-	-	-	-	-	-	-				10	
	11				-	-	-	-	-	-	-	-	-				12	C-103 CU-1
AHU-2	13	15	2	-	-	-	-	-	-	-	-	-	-	-	40	2	14	
	15				-	-	-	-	-	-	-	-	-				16	SPACE
SPACE	17	-	-	-	-	-	-	-	-	-	-	-	-				18	SPACE
CU-2	19	60	2	-	-	-	-	-	-	-	-	-	-	-	20	3	20	SPARE
	21				-	-	-	-	-	-	-	-	-				22	
SPACE	23	-	-	-	-	-	-	-	-	-	-	-	-				24	
TOTAL CONNECTED LOAD (AMPS)					-	-	-	-	-	-	-	-	-	TOTAL CONNECTED LOAD (AMPS)				

PANELBOARD SCHEDULE

NKB, C-wing
Tallahassee, Florida

Panel 'E2'
Location C-WING BASEMENT
Fed From ATS
Service 3 Phase 4 Wire
■ 208Y/120V
□ 480Y/277V
Main Bkr. - A - P
Lugs Only 600 A
Remarks
PANEL IS EXISTING TO REMAIN.

LOAD / REMARKS	CIR. NO.	BREAKERS AMPS	BREAKERS POLES	H.P. OR K.W.	AMPS PER PHASE LIGHTING ØA	LIGHTING ØB	LIGHTING ØC	GEN. RECEPTS ØA	GEN. RECEPTS ØB	GEN. RECEPTS ØC	SPECIAL ØA	SPECIAL ØB	SPECIAL ØC	H.P. OR K.W.	BREAKERS AMPS	BREAKERS POLES	CIR. NO.	LOAD / REMARKS
DATA CENTER PANEL 'DCP1'	1	150	3	-	-	-	-	-	-	-	-	-	-	-	20	2	2	C-103 AC-2
	3				-	-	-	-	-	-	-	-	-				4	
	5				-	-	-	-	-	-	-	-	-		40	2	6	C-103 CU-2
SPARE	7	150	3	-	-	-	-	-	-	-	-	-	-	-			8	
	9				-	-	-	-	-	-	-	-	-				10	SPACE
	11				-	-	-	-	-	-	-	-	-				12	SPACE
SPARE	13	20	3	-	-	-	-	-	-	-	-	-	-	-	15	2	14	AHU-3
	15				-	-	-	-	-	-	-	-	-				16	
	17				-	-	-	-	-	-	-	-	-				18	SPACE
GEN PANEL - ONAN	19	40	3	-	-	-	-	-	-	-	-	-	-	-	60	2	20	CU-3
	21				-	-	-	-	-	-	-	-	-				22	
	23				-	-	-	-	-	-	-	-	-				24	SPACE
TOTAL CONNECTED LOAD (AMPS)					-	-	-	-	-	-	-	-	-	TOTAL CONNECTED LOAD (AMPS)				

PANELBOARD SCHEDULE

NKB, C-wing
Tallahassee, Florida

Panel 'E3'
Location C-WING BASEMENT
Fed From ATS
Service 3 Phase 4 Wire
■ 208Y/120V
□ 480Y/277V
Main Bkr. - A - P
Lugs Only 600 A
Remarks
PANEL IS EXISTING TO REMAIN.

LOAD / REMARKS	CIR. NO.	BREAKERS AMPS	BREAKERS POLES	H.P. OR K.W.	AMPS PER PHASE LIGHTING ØA	LIGHTING ØB	LIGHTING ØC	GEN. RECEPTS ØA	GEN. RECEPTS ØB	GEN. RECEPTS ØC	SPECIAL ØA	SPECIAL ØB	SPECIAL ØC	H.P. OR K.W.	BREAKERS AMPS	BREAKERS POLES	CIR. NO.	LOAD / REMARKS
SPARE	1	150	3	-	-	-	-	-	-	-	-	-	-	-	150	3	2	SPARE
	3				-	-	-	-	-	-	-	-	-				4	
	5				-	-	-	-	-	-	-	-	-				6	
SPARE	7	150	3	-	-	-	-	-	-	-	-	-	-	-	150	3	8	AC-12
	9				-	-	-	-	-	-	-	-	-				10	
	11				-	-	-	-	-	-	-	-	-				12	AIR COMPRESSOR #2
CD-12	13	20	3	-	-	-	-	-	-	-	-	-	-	-	100	3	14	
	15				-	-	-	-	-	-	-	-	-				16	
	17				-	-	-	-	-	-	-	-	-				18	
AIR COMPRESSOR #1	19	30	3	-	-	-	-	-	-	-	-	-	-	-	70	3	20	SPARE (OFF)
	21				-	-	-	-	-	-	-	-	-				22	
	23				-	-	-	-	-	-	-	-	-				24	
TOTAL CONNECTED LOAD (AMPS)					-	-	-	-	-	-	-	-	-	TOTAL CONNECTED LOAD (AMPS)				

PANELBOARD SCHEDULE

NKB, C-wing
Tallahassee, Florida

Panel 'E4'
Location C-WING BASEMENT
Fed From ATS
Service 3 Phase 4 Wire
■ 208Y/120V
□ 480Y/277V
Main Bkr. - A - P
Lugs Only 400 A
Remarks
PANEL IS EXISTING TO REMAIN.

NOTE: EXISTING LOAD DATA IS UNKNOWN. LOADS WITHIN BUILDING ARE NOT CHANGING. DISTRIBUTION EQUIPMENT IS BEING REPLACED WITH NEW TO SERVE SAME LOADS AS EXISTING.

McGINNISS + FLEMING ENGINEERING

JON BARBER, PE 55427 | BRIAN WALLACE, PE 75562
820 EAST PARK AVE, I-200, TALLAHASSEE, FL 32301
MFE-INC.COM | 850.681.6424

HSMV-02425040

NKB A-Wing Switchgear Replacement & D-Wing PDU / UPS / Surge Protection Upgrades

Neil Kirkman Building
Tallahassee, Florida

DATE:
September 5, 2025

REVISED:

DESIGNED BY:	DRAWN BY:
BW	AC

SUBMITTAL:
100% Construction Documents

SHEET TITLE:
PANEL SCHEDULES

SHEET:
E500

JOB NUMBER:
2442

NEW PANEL SCHEDULES

LOAD / REMARKS	CIR. NO.	BREAKERS AMPS	BREAKERS POLES	H.P. OR K.W.	AMPS PER PHASE LIGHTING ØA	LIGHTING ØB	LIGHTING ØC	GEN. RECEPT. ØA	GEN. RECEPT. ØB	GEN. RECEPT. ØC	SPECIAL ØA	SPECIAL ØB	SPECIAL ØC	H.P. OR K.W.	BREAKERS AMPS	BREAKERS POLES	CIR. NO.	LOAD / REMARKS
SPACE	1			-	-			-			-			-	30	3	2	RECEPT - SERVER RACK
SPACE	3			-		-			-			-		-			4	
SPACE	5			-			-			-			-	-			6	
RECEPT - SERVER RACK	7	30	3	-	-			-			-			-	30	3	8	RECEPT - SERVER RACK
	9			-		-			-			-		-			10	
	11			-			-			-			-	-			12	
SPACE	13			-	-			-			-			-	30	3	14	RECEPT - SERVER RACK
SPACE	15			-		-			-			-		-			16	
SPACE	17			-			-			-			-	-			18	
RECEPT - SERVER RACK	19	30	3	-	-			-			-			-			20	SPACE
	21			-		-			-			-		-			22	SPACE
	23			-			-			-			-	-			24	SPACE
SPACE	25			-	-			-			-			-			26	SPACE
SPACE	27			-		-			-			-		-			28	SPACE
SPACE	29			-			-			-			-	-			30	SPACE
RECEPT - SERVER RACK	31	30	3	-	-			-			-			-			32	SPACE
	33			-		-			-			-		-			34	SPACE
	35			-			-			-			-	-			36	SPACE
RECEPT - SERVER RACK	37	30	3	-	-			-			-			-	30	3	38	RECEPT - SERVER RACK
	39			-		-			-			-		-			40	
	41			-			-			-			-	-			42	
RECEPT - SERVER RACK	43	30	3	-	-			-			-			-	20	1	44	RECEPT
	45			-		-			-			-		-	20	1	46	RECEPT
	47			-			-			-			-	-	20	2	48	RECEPT
RECEPT	49	20	1	-	-			-			-			-			50	
RECEPT	51	20	1	-		-			-			-		-	20	1	52	SPARE
RECEPT	53	20	1	-			-			-			-	-	20	1	54	RECEPT
RECEPT	55	20	1	-	-			-			-			-	20	1	56	SPARE
RECEPT	57	20	1	-		-			-			-		-	20	1	58	RECEPT
RECEPT	59	20	1	-			-			-			-	-	20	1	60	SPARE
RECEPT	61	20	1	-	-			-			-			-	20	1	62	SPARE
RECEPT	63	20	1	-		-			-			-		-	20	1	64	SPARE
RECEPT	65	20	1	-			-			-			-	-	20	1	66	RECEPT
SPACE	67			-	-			-			-			-			68	
RECEPT	69	20	1	-		-			-			-		-	20	1	70	SPARE
RECEPT	71	20	1	-			-			-			-	-	20	1	72	SPARE
RECEPT	73	20	1	-	-			-			-			-	20	1	74	SPARE
RECEPT	75	20	1	-		-			-			-		-	20	1	76	SPARE
RECEPT	77	20	2	-			-			-			-	-	20	1	78	SPARE
	79			-	-			-			-			-	20	1	80	SPARE
RECEPT	81	20	2	-		-			-			-		-	20	1	82	SPARE
	83			-			-			-			-	-	20	1	84	SPARE
EST. CONNECTED LOAD (AMPS)					-	-	-	-	-	-	-	-	-	EST. CONNECTED LOAD (AMPS)				

PANELBOARD SCHEDULE

NKB, D-wing
Tallahassee, Florida

Panel PDU-1, PNL A
Location DATA CENTER
Fed From 'UPSDP'
Service 3 Phase 4 Wire
■ 208Y/120V
☐ 480Y/277V
Main Bkr. - A - P
Lugs Only 400 A
10,000 AIC Min.
60 Hz.
Remarks
PANELBOARD TO BE INSTALLED INSIDE PDU CABINET.

PANELBOARD SCHEDULE

NKB, D-wing
Tallahassee, Florida

Panel PDU-1, PNL B
Location DATA CENTER
Fed From 'UPSDP'
Service 3 Phase 4 Wire
■ 208Y/120V
☐ 480Y/277V
Main Bkr. - A - P
Lugs Only 400 A
10,000 AIC Min.
60 Hz.
Remarks
PANELBOARD TO BE INSTALLED INSIDE PDU CABINET.

NOTE: PANEL SCHEDULE BELOW NOTED AS "TEMPORARY PDU-1, PNL B" WILL BE USED TO SERVE SEVERAL RECEPTACLES TEMPORARILY UNTIL NEW PDU-2 IS ONLINE.

LOAD / REMARKS	CIR. NO.	BREAKERS AMPS	BREAKERS POLES	H.P. OR K.W.	AMPS PER PHASE LIGHTING ØA	LIGHTING ØB	LIGHTING ØC	GEN. RECEPT. ØA	GEN. RECEPT. ØB	GEN. RECEPT. ØC	SPECIAL ØA	SPECIAL ØB	SPECIAL ØC	H.P. OR K.W.	BREAKERS AMPS	BREAKERS POLES	CIR. NO.	LOAD / REMARKS
SPARE	43	30	3	-	-			-			-			-	20	1	44	SPARE
SPARE	45			-		-			-			-		-	20	1	46	SPARE
SPARE	47			-			-			-			-	-	20	1	48	SPARE
SPARE	49	20	1	-	-			-			-			-	20	1	50	SPARE
SPARE	51	20	1	-		-			-			-		-	20	1	52	SPARE
SPARE	53	20	1	-			-			-			-	-	20	1	54	SPARE
SPARE	55	20	1	-	-			-			-			-	20	1	56	EXISTING LOAD - SYSTEMS FURN.
SPARE	57	20	1	-		-			-			-		-	20	1	58	SPARE
SPARE	59	20	1	-			-			-			-	-	20	1	60	EXISTING LOAD - SYSTEMS FURN.
SPARE	61	20	1	-	-			-			-			-	20	1	62	SPARE
SPARE	63	20	1	-		-			-			-		-	20	1	64	SPARE
SPARE	65	20	1	-			-			-			-	-	20	1	66	SPARE
SPARE	67			-	-			-			-			-	20	1	68	SPARE
SPARE	69	20	1	-		-			-			-		-	20	1	70	RECEPT
SPARE	71	20	1	-			-			-			-	-	20	1	72	RECEPT
SPARE	73	20	1	-	-			-			-			-	20	1	74	RECEPT
SPARE	75	20	1	-		-			-			-		-	20	1	76	RECEPT
SPARE	77	20	2	-			-			-			-	-	20	1	78	RECEPT
SPARE	79			-	-			-			-			-	20	1	80	RECEPT
SPARE	81	20	2	-		-			-			-		-	20	1	82	RECEPT
SPARE	83			-			-			-			-	-	20	1	84	RECEPT
EST. CONNECTED LOAD (AMPS)					-	-	-	-	-	-	-	-	-	EST. CONNECTED LOAD (AMPS)				

PANELBOARD SCHEDULE

NKB, D-wing
Tallahassee, Florida

TEMPORARY
Panel PDU-1, PNL B
Location DATA CENTER
Fed From 'UPSDP'
Service 3 Phase 4 Wire
■ 208Y/120V
☐ 480Y/277V
Main Bkr. - A - P
Lugs Only 400 A
10,000 AIC Min.
60 Hz.
Remarks
PANELBOARD TO BE INSTALLED INSIDE PDU CABINET.

LOAD / REMARKS	CIR. NO.	BREAKERS AMPS	BREAKERS POLES	H.P. OR K.W.	AMPS PER PHASE LIGHTING ØA	LIGHTING ØB	LIGHTING ØC	GEN. RECEPT. ØA	GEN. RECEPT. ØB	GEN. RECEPT. ØC	SPECIAL ØA	SPECIAL ØB	SPECIAL ØC	H.P. OR K.W.	BREAKERS AMPS	BREAKERS POLES	CIR. NO.	LOAD / REMARKS
'C-103'	1	300	3	-	-			-			-			-	400	3	2	PDU-1
	3					-			-			-					4	
	5						-			-			-				6	
'C-104'	7	300	3	-	-			-			-			-	400	3	8	PDU-2
	9					-			-			-					10	
	11						-			-			-				12	
SPACE	13				-			-			-			-	400	3	14	PDU-3
SPACE	15					-			-			-					16	
SPACE	17						-			-			-				18	
SPACE	19				-			-			-						20	SPACE
SPACE	21					-			-			-					22	SPACE
SPACE	23						-			-			-				24	SPACE
SPACE	25				-			-			-						26	SPACE
SPACE	27					-			-			-					28	SPACE
SPACE	29						-			-			-				30	SPACE
SPACE	31				-			-			-						32	SPACE
SPACE	33					-			-			-					34	SPACE
SPACE	35						-			-			-				36	SPACE
SPACE	37				-			-			-						38	SPACE
SPACE	39					-			-			-					40	SPACE
SPACE	41						-			-			-				42	SPACE
EST. CONNECTED LOAD (AMPS)					-	-	-	-	-	-	-	-	-	EST. CONNECTED LOAD (AMPS)				

PANELBOARD SCHEDULE

NKB, C-wing
Tallahassee, Florida

Panel 'UPSDP'
Location UPS ROOM
Fed From UPS
Service 3 Phase 4 Wire
■ 208Y/120V
☐ 480Y/277V
Main Bkr. 600 A 3 P
Lugs Only - A
22,000 AIC Min.
60 Hz.
Remarks
-

NOTE: EXISTING LOAD DATA IS UNKNOWN. LOADS WITHIN BUILDING ARE NOT CHANGING. DISTRIBUTION EQUIPMENT IS BEING REPLACED WITH NEW TO SERVE SAME LOADS AS EXISTING.

McGINNISS + FLEMING ENGINEERING

JON BARBER, PE 55427 | BRIAN WALLACE, PE 75562
820 EAST PARK AVE, I-200, TALLAHASSEE, FL 32301
MFE-INC.COM | 850.681.6424

HSMV-02425040

NKB A-Wing Switchgear Replacement & D-Wing PDU / UPS / Surge Protection Upgrades

Neil Kirkman Building
Tallahassee, Florida

DATE:
September 5, 2025

REVISED:

DESIGNED BY:	DRAWN BY:
BW	AC

SUBMITTAL:
100% Construction Documents

SHEET TITLE:
PANEL SCHEDULES

SHEET:
E501

JOB NUMBER:
2442

NEW PANEL SCHEDULES

LOAD / REMARKS	CIR. NO.	BREAKERS AMPS	BREAKERS POLES	H.P. OR K.W.	AMPS PER PHASE LIGHTING ØA	LIGHTING ØB	LIGHTING ØC	GEN. RECEPT. ØA	GEN. RECEPT. ØB	GEN. RECEPT. ØC	SPECIAL ØA	SPECIAL ØB	SPECIAL ØC	H.P. OR K.W.	BREAKERS AMPS	BREAKERS POLES	CIR. NO.	LOAD / REMARKS
RECEPT	1	20	1	-	-			-			-			-	40	3	2	MAILER
RECEPT	3	20	1	-		-			-			-					4	
RECEPT	5	20	1	-			-			-			-	-			6	
RECEPT	7	20	1	-	-			-			-			-	20	3	8	SHREDDER
RECEPT	9	20	1	-		-			-			-		-			10	
RECEPT	11	20	1	-			-			-			-	-			12	
RECEPT	13	20	1	-	-			-			-			-	20	1	14	RECEPT
RECEPT	15	20	1	-		-			-			-		-	20	1	16	RECEPT
RECEPT	17	20	1	-			-			-			-	-	20	1	18	RECEPT
RECEPT	19	20	1	-	-			-			-			-	20	1	20	RECEPT
RECEPT	21	20	1	-		-			-			-		-	20	1	22	RECEPT
RECEPT	23	20	1	-			-			-			-	-	20	1	24	RECEPT
RECEPT	25	20	1	-	-			-			-			-	20	1	26	RECEPT
RECEPT	27	20	1	-		-			-			-		-	20	1	28	RECEPT
RECEPT	29	20	1	-			-			-			-	-	20	2	30	RECEPT
RECEPT	31	20	1	-	-			-			-						32	
RECEPT	33	20	1	-		-			-			-		-	30	3	34	POWER SUPPLY
RECEPT	35	20	1	-			-			-			-	-			36	
RECEPT	37	20	1	-	-			-			-						38	
RECEPT	39	20	1	-		-			-			-		-	20	1	40	RECEPT
RECEPT	41	20	1	-			-			-			-	-	20	1	42	RECEPT
RECEPT	43	20	1	-	-			-			-			-	20	1	44	RECEPT
RECEPT	45	20	1	-		-			-			-		-	20	1	46	SPACE
RECEPT	47	20	1	-			-			-			-	-	20	1	48	SPARE
RECEPT	49	20	1	-	-			-			-			-	20	1	50	SPARE
RECEPT	51	20	1	-		-			-			-		-	20	1	52	SPARE
RECEPT	53	20	1	-			-			-			-	-	20	1	54	SPARE
RECEPT	55	20	2	-	-			-			-			-	20	1	56	SPARE
	57			-		-			-			-		-	20	1	58	SPARE
RECEPT	59	20	2	-			-			-			-	-	20	1	60	SPARE
	61			-	-			-			-			-	20	1	62	SPARE
RECEPT	63	20	2	-		-			-			-		-	20	1	64	SPARE
	65			-			-			-			-	-	20	1	66	SPARE
RECEPT	67	20	1	-	-			-			-			-	20	1	68	SPARE
	69	20	1	-		-			-			-		-	20	1	70	SPARE
RECEPT	71	30	1	-			-			-			-	-	20	1	72	SPARE
RECEPT	73	20	1	-	-			-			-			-	20	1	74	SPARE
RECEPT	75	20	1	-		-			-			-		-	20	1	76	SPARE
RECEPT	77	20	1	-			-			-			-	-	20	1	78	SPARE
RECEPT	79	20	1	-	-			-			-			-	20	1	80	SPARE
RECEPT	81	20	1	-		-			-			-		-	20	1	82	SPARE
RECEPT	83	20	1	-			-			-			-	-	20	1	84	SPARE
EST. CONNECTED LOAD (AMPS)					-	-	-	-	-	-	-	-	-	EST. CONNECTED LOAD (AMPS)				

PANELBOARD SCHEDULE

NKB, D-wing
Tallahassee, Florida

Panel PDU-3, PNL A
Location DATA CENTER
Fed From 'UPSDP'
Service 3 Phase 4 Wire
■ 208Y/120V
☐ 480Y/277V
Main Bkr. - A - P
Lugs Only 400 A
10,000 AIC Min.
60 Hz.
Remarks
PANELBOARD TO BE INSTALLED INSIDE PDU CABINET.

NKB, D-wing
Tallahassee, Florida

Panel PDU-3, PNL B
Location DATA CENTER
Fed From 'UPSDP'
Service 3 Phase 4 Wire
■ 208Y/120V
☐ 480Y/277V
Main Bkr. - A - P
Lugs Only 400 A
10,000 AIC Min.
60 Hz.
Remarks
PANELBOARD TO BE INSTALLED INSIDE PDU CABINET.

NOTE: EXISTING LOAD DATA IS UNKNOWN.
LOADS WITHIN BUILDING ARE NOT CHANGING.
DISTRIBUTION EQUIPMENT IS BEING REPLACED
WITH NEW TO SERVE SAME LOADS AS EXISTING.

ARC FLASH CLARIFICATION NOTES AND PRELIMINARY LABELS

NOTE: ARC FLASH LABELS WERE CREATED USING SKM POWERTOOLS© AS THE ARC FLASH ANALYSIS PROGRAM. OVERCURRENT PROTECTIVE DEVICE MODELING FILES FOR SPECIFIC DEVICE MANUFACTURER AND MODEL WERE PROVIDED BY SKM LIBRARY.

THE EQUATIONS USED FOR THE CALCULATION OF THE ESTIMATED MAXIMUM INCIDENT ENERGY AND THE ESTIMATED ARC FLASH BOUNDARY DISTANCE ARE BASED UPON MEASURED INCIDENT ENERGY UNDER A SPECIFIC SET OF TEST CONDITIONS AND ON THEORETICAL WORK. ACTUAL ARC FLASH EXPOSURES MAY BE MORE OR LESS SEVERE THAN CALCULATED BY THE ARC FLASH ANALYSIS PROGRAM. CALCULATIONS ARE BASED ON THE INSTALLATION AND CONFIGURATION OF THE ELECTRICAL DISTRIBUTION SYSTEM AS INITIALLY CONSTRUCTED. ANY CHANGES TO THE ELECTRICAL DISTRIBUTION SYSTEM MAY CAUSE THESE CALCULATIONS TO BE INVALID. ALL SHORT CIRCUIT AND OVERCURRENT PROTECTIVE DEVICES (OCPD) ARE ASSUMED TO OPERATE AS ORIGINALLY INTENDED BY MANUFACTURER.

IT SHOULD BE NOTED THAT THE PERSONAL PROTECTIVE EQUIPMENT (PPE) FOR THE ARC FLASH HAZARD IS THE LAST LINE-OF-DEFENSE. IT IS NOT INTENDED NOR WILL IT PREVENT ALL INJURIES. NFPA 70E PPE LEVELS ARE INTENDED TO REDUCE THE IMPACT OF AN ARC FLASH TO 2ND DEGREE BURNS FOR THE TORSO AND HEAD ONLY. NFPA 70E STATES THAT THE INCIDENT ENERGY EXPOSURE SHALL BE BASED ON THE WORKING DISTANCE OF THE EMPLOYEE'S FACE AND HEAD. OBJECTS CLOSER TO THE ARC FLASH WILL BE EXPOSED TO MUCH GREATER LEVELS OF INCIDENT ENERGY. FIRE RATED (FR) CLOTHING AND PPE SHALL BE USED BASED UPON THE INCIDENT ENERGY EXPOSURE. THIS MEANS INJURIES TO HANDS AND ARMS MAY BE EXPECTED IF AN ARC AT THE LEVEL CALCULATED AND PROTECTED AGAINST OCCURS.

INCIDENT ENERGY LEVELS ARE DIRECTLY RELATED TO THE CLEARING TIME OF THE UPSTREAM OCPD. OPERATION OF THE OCPD WITHIN THE MANUFACTURERS DESIGN SPECIFICATIONS IS ESSENTIAL FOR LIMITING THE INCIDENT ENERGY DUE TO ARC FLASH HAZARDS. FAILURE OF THE OCPD COMPONENTS TO OPERATE WITHIN THE MANUFACTURER'S TIME CURRENT CURVES WILL COMPROMISE THE RESULTS OF THIS ARC FLASH STUDY AND WILL RESULT IN HIGHER LEVELS OF INCIDENT ENERGY TO ELECTRICAL WORKERS. NFPA 70E STANDARDS RECOMMEND REGULARLY SCHEDULED MAINTENANCE AND TESTING BE PERFORMED ON THE ELECTRICAL DISTRIBUTION SYSTEM COMPONENTS TO ASSURE PROPER OPERATION OF ALL OVERCURRENT PROTECTIVE DEVICES. REGULAR TESTING IS REQUIRED TO PROTECT ELECTRICAL WORKERS FROM GREATER ARC FLASH ENERGY HAZARDS THAN ARE CALCULATED IN THIS STUDY.

LABELS BELOW ARE SHOWN FOR REFERENCE ONLY. A FULL BUILDING ARC FLASH STUDY IS BEING PREPARED OUTSIDE OF THESE DOCUMENTS. NEW EQUIPMENT PROVIDED UNDER THIS PROJECT WILL RECEIVE NEW ARC FLASH LABELS AS PART OF FULL BUILDING STUDY. VALUES ARE EXPECTED TO BE SIMILAR TO THOSE SHOWN BELOW.

CIRCUIT BREAKER ELECTRONIC TRIP SETTINGS WILL BE PROVIDED TO CONTRACTOR BY ENGINEER FOLLOWING FULL BUILDING ARC FLASH STUDY.

DANGER

Arc Flash and Shock Risks Appropriate PPE Required

ARC FLASH RISK PROTECTION	PPE
Incident Energy: **104.0 cal/cm^2** Arc Flash Boundary **294 in** **480 VAC** Shock Risk When Cover is Removed **Shock Protection Boundaries:** Limited Approach: **42 in** Restricted Approach: **12 in**	• DO NOT WORK ON LIVE! • DO NOT WORK ON LIVE! • DO NOT WORK ON LIVE! • DO NOT WORK ON LIVE!

Equipment ID: SWBD-A MB **Date of Analysis:** 07/15/2025

NOTE: THIS LABEL IS FOR SWBD-A MAIN BREAKER SECTION.

WARNING

Arc Flash and Shock Risks Appropriate PPE Required

ARC FLASH RISK PROTECTION	PPE
Incident Energy: **2.59 cal/cm^2** Arc Flash Boundary **29 in** **480 VAC** Shock Risk When Cover is Removed **Shock Protection Boundaries:** Limited Approach: **42 in** Restricted Approach: **12 in** (with ERMS engaged)	• 4 cal/sq cm, Arc-rated shirt (long-sleeve) plus Arc-rated pants (long), or Arc-rated coverall, plus arc-rated face shield or arc flash suit hood, Arc-rated rainwear as needed. • Hardhat + Arc-rated hard hat liner + Safety Glasses or Goggles + Ear Canal Inserts • Leather Gloves • Leather work shoes

Equipment ID: SWBD-A DIST. **Date of Analysis:** 07/15/2025

NOTE: THIS LABEL IS FOR SWBD-A DISTRIBUTION SECTIONS **WITH** ERMS ENGAGED.

WARNING

Arc Flash and Shock Risks Appropriate PPE Required

ARC FLASH RISK PROTECTION	PPE
Incident Energy: **25.9 cal/cm^2** Arc Flash Boundary **123 in** **480 VAC** Shock Risk When Cover is Removed **Shock Protection Boundaries:** Limited Approach: **42 in** Restricted Approach: **12 in** (without ERMS engaged)	• 40 cal/sq cm, Arc-rated shirt (long-sleeve) plus Arc-rated pants (long) plus Arc-rated coverall, plus arc rated arc flash suit jacket, pants, & hood, Arc-rated rainwear as needed. • Hardhat + Arc-rated hard hat liner + Safety Glasses or Goggles + Ear Canal Inserts • Arc-rated Gloves • Leather work shoes

Equipment ID: SWBD-A DIST. **Date of Analysis:** 07/15/2025

NOTE: THIS LABEL IS FOR SWBD-A DISTRIBUTION SECTIONS **WITHOUT** ERMS ENGAGED.

WARNING

Arc Flash and Shock Risks Appropriate PPE Required

ARC FLASH RISK PROTECTION	PPE
Incident Energy: **30.4 cal/cm^2** Arc Flash Boundary **136 in** **208 VAC** Shock Risk When Cover is Removed **Shock Protection Boundaries:** Limited Approach: **42 in** Restricted Approach: **Avoid Contact**	• 40 cal/sq cm, Arc-rated shirt (long-sleeve) plus Arc-rated pants (long) plus Arc-rated coverall, plus arc rated arc flash suit jacket, pants, & hood, Arc-rated rainwear as needed. • Hardhat + Arc-rated hard hat liner + Safety Glasses or Goggles + Ear Canal Inserts • Arc-rated Gloves • Leather work shoes

Equipment ID: UPSD1 **Date of Analysis:** 07/15/2025

WARNING

Arc Flash and Shock Risks Appropriate PPE Required

ARC FLASH RISK PROTECTION	PPE
Incident Energy: **0.27 cal/cm^2** Arc Flash Boundary **7 in** **208 VAC** Shock Risk When Cover is Removed **Shock Protection Boundaries:** Limited Approach: **42 in** Restricted Approach: **Avoid Contact**	• Non-melting or untreated natural fiber (cotton/wool/rayon/silk > 4.5 oz/sq yd), shirt (long-sleeve), pants (long). • Safety Glasses or Goggles + Ear Canal Inserts • Leather Gloves • N/A

Equipment ID: C103 **Date of Analysis:** 07/15/2025

WARNING

Arc Flash and Shock Risks Appropriate PPE Required

ARC FLASH RISK PROTECTION	PPE
Incident Energy: **0.27 cal/cm^2** Arc Flash Boundary **7 in** **208 VAC** Shock Risk When Cover is Removed **Shock Protection Boundaries:** Limited Approach: **42 in** Restricted Approach: **Avoid Contact**	• Non-melting or untreated natural fiber (cotton/wool/rayon/silk > 4.5 oz/sq yd), shirt (long-sleeve), pants (long). • Safety Glasses or Goggles + Ear Canal Inserts • Leather Gloves • N/A

Equipment ID: C104 **Date of Analysis:** 07/15/2025

WARNING

Arc Flash and Shock Risks Appropriate PPE Required

ARC FLASH RISK PROTECTION	PPE
Incident Energy: **10.8 cal/cm^2** Arc Flash Boundary **71 in** **208 VAC** Shock Risk When Cover is Removed **Shock Protection Boundaries:** Limited Approach: **42 in** Restricted Approach: **Avoid Contact**	• 25 cal/sq cm, Arc-rated shirt (long-sleeve) plus Arc-rated pants (long) plus Arc-rated coverall, plus arc rated arc flash suit jacket, pants, & hood, Arc-rated rainwear as needed. • Hardhat + Arc-rated hard hat liner + Safety Glasses or Goggles + Ear Canal Inserts • Arc-rated Gloves • Leather work shoes

Equipment ID: PDU-1 **Date of Analysis:** 07/15/2025

WARNING

Arc Flash and Shock Risks Appropriate PPE Required

ARC FLASH RISK PROTECTION	PPE
Incident Energy: **11.9 cal/cm^2** Arc Flash Boundary **76 in** **208 VAC** Shock Risk When Cover is Removed **Shock Protection Boundaries:** Limited Approach: **42 in** Restricted Approach: **Avoid Contact**	• 25 cal/sq cm, Arc-rated shirt (long-sleeve) plus Arc-rated pants (long) plus Arc-rated coverall, plus arc rated arc flash suit jacket, pants, & hood, Arc-rated rainwear as needed. • Hardhat + Arc-rated hard hat liner + Safety Glasses or Goggles + Ear Canal Inserts • Arc-rated Gloves • Leather work shoes

Equipment ID: PDU-2 **Date of Analysis:** 07/15/2025

WARNING

Arc Flash and Shock Risks Appropriate PPE Required

ARC FLASH RISK PROTECTION	PPE
Incident Energy: **9.33 cal/cm^2** Arc Flash Boundary **65 in** **208 VAC** Shock Risk When Cover is Removed **Shock Protection Boundaries:** Limited Approach: **42 in** Restricted Approach: **Avoid Contact**	• 25 cal/sq cm, Arc-rated shirt (long-sleeve) plus Arc-rated pants (long) plus Arc-rated coverall, plus arc rated arc flash suit jacket, pants, & hood, Arc-rated rainwear as needed. • Hardhat + Arc-rated hard hat liner + Safety Glasses or Goggles + Ear Canal Inserts • Arc-rated Gloves • Leather work shoes

Equipment ID: PDU-3 **Date of Analysis:** 07/15/2025

McGINNISS + FLEMING ENGINEERING
JON BARBER, PE 55427 | BRIAN WALLACE, PE 75562
820 EAST PARK AVE, I-200, TALLAHASSEE, FL 32301
MFE-INC.COM | 850.681.6424

HSMV-02425040

NKB A-Wing Switchgear Replacement & D-Wing PDU / UPS / Surge Protection Upgrades

Neil Kirkman Building
Tallahassee, Florida

DATE:
September 5, 2025

REVISED:

DESIGNED BY:	DRAWN BY:
BW	AC

SUBMITTAL:
100% Construction Documents

SHEET TITLE:
PANEL SCHEDULES

SHEET:
E502

JOB NUMBER:
2442