

ELECTRICAL ABBREVIATIONS
SEE SPECIFICATION SECTION 'EQUIPMENT WIRING' FOR ADDITIONAL REVISIONS AND REQUIREMENTS.
A or AMP AMPERE
AC AIR CONDITIONING
AC or AE ARCHITECT & ENGINEER
AC ABOVE COUNTER
AC ALTERNATING CURRENT
ADA AMERICANS WITH DISABILITIES ACT
AFB ABOVE FINISH FLOOR
AFG ABOVE FINISH GRADE
AFI or FCI ABOVE FINISH CURB
AHJ AUTHORITY HAVING JURISDICTION
AHU AIR HANDLING UNIT
AAC AMPERES INTERRUPTING CURRENT
AL ALUMINUM
ANN ANNUNCIATOR
AS AUTOMATIC SENSORS
AVG AMERICAN WIRE GAUGE
% BELOW COUNTER
BC BELOW COUNTER
BH BASEMENT HOOP OPER
BL BLEACHER ELECTRIC OPERATOR
BRD or BD BOARD
BUH BUST UNIT HEATER
C or COND CONDUIT
CB or CB CATEGORICAL
CCT or CKT CIRCUIT
CM CARBON MONOXIDE SENSOR
CO CARBON MONOXIDE
COMB COMBINATION
CONF CONFERENCE
CP CEILING PROJECTOR
CTC CABLE TERMINATION CABINET
Cu or CU COPPER
CUH CONDENSING UNIT CABINET UNIT HEATER
DC DIRECT CURRENT
DC DISTRIBUTION CABINET
DP DISTRIBUTION PANEL
DSC DISCONNECT
DSD DISPOSAL
DL DOOR LEVELER
DN or DWN DOWN
DR DOOR
DWB DRINKING WATER
DWG DRAWING
EC ELECTRICAL CONTRACTOR
EC ELECTRICAL CABINET
EF EXHAUST FAN
EH ELECTRICAL HEAT
ELEC ELECTRIC OR ELECTRICAL
EHK ELECTRIC HAND DRYER
EM or EMERG EMERGENCY
EMT ELECTRICAL METALLIC TUBING
ENT ELECTRICAL NON-METALLIC TUBING
EUI ELECTRIC UNIT HEATER
EWC ELECTRIC WATER COOLER
EX EXISTING
EXP EXPLOSION PROOF
F or FUS FUSE OR FUSIBLE
FA FIRE ALARM
FACP FIRE ALARM CONTROL PANEL
FACD FIRE ALARM CONTROL DEVICE
FRO FURNISHED BY OTHERS
FL or FLU or FLUOR FLUORESCENT
FLA FULL LOAD AMPERES
FVNR FULL VOLTAGE, NON-REVERSING
FVR FULL VOLTAGE, REVERSING
GC GENERAL CONTRACTOR
GD GARBAGE DISPOSAL
GEN GENERATOR
GFI or GFCI GROUND FAULT CIRCUIT INTERRUPTER
GIC GALVANIZED RIGID CONDUIT
GRND or GRND GROUND
H & AC HEATING & AIR CONDITIONING
H & V HEATING & VENTILATING
HA HANDICAP ACCESS DOOR
HD HAND DRYER
HI HIGH INTENSITY DISCHARGE
HP HORSE POWER
HPS HIGH PRESSURE SODIUM
HTR HEATER
HTS HEATING
HTR HEATER
HVAC HEATING, VENTILATION & AIR CONDITIONING
HZ HERTZ (CYCLES/SEC)
IC INTERRUPTING CURRENT
IGR ISOLATED GROUND RECEPTACLE
IMC INTERMEDIATE METAL CONDUIT
INC INCANDESCENT
ISO ISOLATED OR ISOLATION
J, JB or J BOX JUNCTION BOX
KCMIL THOUSAND CIRCULAR MILS
KV KILVOLT
KVA KILOWATT-AMPERE
KVAR KILOWATT-AMPERE REACTIVE
KW KILOWATT
KWH KILOWATT - HOUR
LA LIGHTNING ARRESTOR
LT LIGHT
LTS LIGHTING
LTS LIGHTS
MC MECHANICAL CONTRACTOR
MCB MAIN CIRCULAR BREAKER
MCC MOTOR CONTROL CENTER
MCM THOUSAND CIRCULAR MILS
MDP MAIN DISTRIBUTION PANEL
MECH MECHANICAL
MFS MAIN FUSIBLE SWITCH
MH METAL HALIDE
MLO MAIN LUG ONLY
MSB MAIN SWITCHBOARD
MTD MOUNTED
MTS MOTOR THERMAL SWITCH
MW MERCURY VAPOR
MW MICROWAVE
NA or N/A NOT APPLICABLE
NC NORMALLY CLOSED
NEC NATIONAL ELECTRICAL CODE
NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NEU, NEUT or N NEUTRAL
NF NON-FUSED
NL NIGHT LIGHT
NO NORMALLY OPEN
OFF, OF, or OFC OFFICE OVERHEAD
OHD OVERHEAD DOOR
P POLE
PA PUBLIC ADDRESS
PB PUSH BUTTON
PH PHASE
PLBG PLUMBING
PNE PANEL
PR or pr PULL ROD
PRV POWER ROOF VENTILATOR
PS PULL SWITCH
PTZ PROJECTION SCREEN
PTZ PANT/TILT ZOOM
PVC POLYVINYL CHLORIDE
PWR POWER
RCP REFLECTED CEILING PLAN
REC or RECEPT RECEPTACLE
RES or RESERV RESERVATOR
RH RADIANT HEAT
RH RANGE HOOD
RLY RELAY
RM ROOM
RMS ROOT MEAN SQUARE
SCC SHORT CIRCUIT CURRENT
SD SMOKE DETECTOR
SFR SAFETY RECEPTACLE
SFTY SAFETY
SHD SHIELD OR SHIELDED
SIGNAL SIGNAL
SMR SURFACE MOUNT RADIWAY
SN SOLID NEUTRAL
SP SUMP PUMP
SPICS SPECIFICATIONS
SFRK SPEAKER
SPR SPLIT WIRE RECEPTACLE
SW SWITCH
SWBD SWITCH BOARD
TC TEMPERATURE CONTROL
TC TELEPHONE CABINET
TCC TEMPERATURE CONTROL CONTRACTOR
TEL TELEPHONE
TL TWIST LOCK
TL TRANS or TRFM TRANSFORMER
TIB TELEPHONE TERMINATION BOARD
TV TELEVISION
TVSS TRANSIENT VOLTAGE SURGE SUPPRESSION
TYP TYPICAL
UG UNDERGROUND
UH UNIT HEATER
UV UNIT VENTILATOR
V VOLT
VFD VARIABLE FREQUENCY DRIVE
W WATT
WI WITH
WIO WITHOUT
WR WATERPROOF
WTR or H2O WATER
WS WINDOW SHADE
XFRM TRANSFORMER
Y WYE CONNECTION
Ø PHASE
Δ DELTA

ELECTRICAL SYMBOLS
THESE SYMBOLS COMPRISE A STANDARD LIST. NOT ALL SYMBOLS MAY APPEAR ON THIS PROJECT.
ALL MOUNTING HEIGHTS ARE TO CENTER OF DEVICE ABOVE FINISHED FLOOR. MOUNTING HEIGHTS INDICATED ON ARCH. WALL ELEVATIONS GRAS NOTED SPECIFICALLY ON THE DRAWINGS OR IN THE SPECIFICATIONS SHALL TAKE PRECEDENCE OVER MOUNTING HEIGHTS LISTED BELOW.
LIGHTING
RECESSED FIXTURE
EMERGENCY RECESSED FIXTURE
WALL FIXTURE
FLOOR LIGHT
TRACK LIGHT
PHOTO ELECTRIC CELL
LIGHTING CONTACTOR (60" M.H.)
TIME CLOCK (60" M.H.)
EMERGENCY LIGHTING W/BATTERY PACK
CEILING EXIT LIGHT (FACE(S) SHADED, ARROW INDICATES CHEVRON, WALL EXIT LIGHT (FACE(S) SHADED, ARROW INDICATES CHEVRON)
OCCUPANCY SENSOR
SINGLE POLE SWITCH (48" M.H.)
DOUBLE POLE SWITCH (48" M.H.)
THREE-WAY SWITCH (48" M.H.)
FOUR-WAY SWITCH (48" M.H.)
SWITCH WITH PLOT (48" M.H.)
KEY OPERATED SWITCH (48" M.H.)
MOMENTARY CONTACT SWITCH (80" M.H.)
DIMMER SWITCH (48" M.H.)
TIMER SWITCH (80" M.H.)
VARIABLE SPEED SWITCH
FUSED SWITCH
INFRARED OCCUPANCY SENSOR SWITCH
POWER
PUSH BUTTON STATION (82" M.H.)
DOUBLE PUSH BUTTON STATION
EMERGENCY SHUTDOWN PUSHBUTTON
ISOLATED GROUND RECEPTACLE (18" M.H.)
DUPLEX CONVENIENCE RECEPTACLE (18" M.H.)
SINGLE RECEPTACLE (18" M.H.)
DOUBLE DUPLEX CONVENIENCE RECEPTACLE (18" M.H.)
SPLIT WIRE DOUBLE DUPLEX RECEPTACLE (18" M.H.)
SPLIT WIRE DOUBLE DUPLEX RECEPTACLE (18" M.H.)
SAFETY CONVENIENCE RECEPTACLE
POWER RECEPTACLE
EMERGENCY DUPLEX RECEPTACLE
TWIST LOCK RECEPTACLE
GFI DUPLEX CONVENIENCE RECEPTACLE
GFI DUPLEX CONVENIENCE RECEPTACLE
SPECIAL PURPOSE OUTLET OR CONNECTION
CORD PLUG
CORD REEL
CEILING DUPLEX RECEPTACLE
FLUSH FLOOR DUPLEX RECEPTACLE
FLUSH FLOOR DOUBLE DUPLEX RECEPTACLE (WITH DEVICES INDICATED)
MULTI-SERVICE POLE (WITH DEVICES INDICATED)
BLANK OUTLET
JUNCTION BOX
FULL BOX
MOTOR
DISCONNECT SWITCH
GENERATOR ANNUNCIATOR PANEL
AUTOMATIC TRANSFER SWITCH
VARIABLE FREQUENCY DRIVE
COMBINATION VARIABLE FREQUENCY DRIVE DISCONNECT
MAGNETIC STARTER
COMBINATION STARTER/DISCONNECT
MOTOR THERMAL SWITCH
TRANSFORMER
ELECTRIC METER
SWITCHBOARD/DISTRIBUTION PANEL SECTION
PANELBOARD OR LOAD CENTER
PANELBOARD OR LOAD CENTER (EXISTING TO REMAIN)
TRANSIENT VOLTAGE SURGE SUPPRESSOR
CIRCUIT BREAKER
FUSE
HANDHEAT
THERMOSTAT
REMOTE HVAC SENSOR
RADIANT HEAT PANEL
BASEBOARD OR COVE ELEC. HEAT
ELECTRIC UNIT HEATER
ELECTRIC CABINET UNIT HEATER
MOTORIZED DAMPER
BUS DUCT
SURFACE MOUNT RADIWAY
CEILING PADDLE FAN
TYPE OF EQUIPMENT - SEE SCHEDULES
EQUIPMENT NUMBER
ROOFTOP TRANSFORMER/CIRCUITING
EXISTING EQUIPMENT/CIRCUITING
GROUND
CONDUIT IN FLOOR OR UNDERGROUND
TELECOM
SPECIAL EQUIPMENT CABINET-AS NOTED
TERMINATION BOARD -AS NOTED
CABLE TRAY
TELEMETRY ANTENNA
INTERCOM
TELEPHONE/VOICE OUTLET (18" M.H.)
WALL PHONE (48" M.H.)
DATA OUTLET (18" M.H.)
DATA OUTLET (18" M.H.)
CEILING MOUNT DATA OUTLET
COMBINATION VOICE/DATA OUTLET (18" M.H.)
TELEVISION OUTLET (18" M.H.)
CEILING MOUNT TELEVISION OUTLET
FIRE ALARM
FIRE ALARM MANUAL STATION (48" M.H.)
HEAT DETECTOR (RATE OF RISE)
HEAT DETECTOR (FIXED TEMP. ONLY)
UNITARY TYPE SMOKE DETECTOR
SMOKE DETECTOR
DUCT SMOKE DETECTOR
BEAM DETECTOR TRANSMITTER
BEAM DETECTOR RECEIVER
REMOTE TEST STATION
COMB HEAT/SMOKE DETECTOR
FIRE SWITCH
PRESSURE SWITCH
TAMPER SWITCH
FIRE ALARM CUT OFF RELAY
REMOTE ANNUNCIATOR
MONITOR MODULE
CONTROL MODULE
FIRE ALARM CHIMESTROBE
FIRE ALARM SPEAKER/STROBE (80" M.H.)
CEILING MOUNT FIRE ALARM SPEAKER
MIN FIRE ALARM SPEAKER
MIN FIRE ALARM SPEAKER/STROBE
PROJECTION HORN
FIRE ALARM STROBE (80" M.H.)
CEILING MOUNT FIRE ALARM STROBE
FIRE ALARM BELL (80" M.H.)
COMBINATION FIRE-SMOKE DAMPER
FIRE ALARM ANNUNCIATOR PANEL
FIRE ALARM CONTROL PANEL
FIRE ALARM CHIMESTROBE
FIRE FIGHTER PHONE JACK
NURSE CALL
SINGLE PATIENT NURSE CALL STATION (48" M.H.)
DUAL PATIENT NURSE CALL STATION (48" M.H.)
STAFF STATION (48" M.H.)
STAFF EMERGENCY STATION (48" M.H.)
EMERGENCY STATION W/ AUDIO TOILETS
EMERGENCY STATION WATERPROOF-SHOWERS
ALARM/REST STATION
TELEMETRY ANTENNA CEILING MOUNTED
DOOR SWITCH
DUTY STATION (48" M.H.)
HOMELESS CONTROLLER
CODE BLUE STATION
NURSE CALL CANCEL STATION
BED STATUS STATION
STAFF TERMINAL STATION
SOUND AND SECURITY
FLUSH SPEAKER
SURFACE SPEAKER
PAGING HORN
COLUENE CONTROL (48" M.H.)
MICROPHONE OUTLET (18" M.H.)
AUXILIARY OUTLET
AIR PURIFIER
SURVEILLANCE VIDEO CAMERA
CEILING MOUNTED SURVEILLANCE VIDEO CAMERA
SURVEILLANCE VIDEO CAMERA - PAN/TILT/ZOOM
SURVEILLANCE VIDEO MONITOR
SURVEILLANCE VIDEO RECORDER
SURVEILLANCE VIDEO SWITCHOVER
ALARM CONTROL PANEL
BURGLAR ALARM ANNUNCIATOR
ANTENNA (AS NOTED)
AUDIO/VIDEO SERVER
WANDER MANAGEMENT
ALARM DOOR SWITCH
DOOR HOLD
ALARM MOTION DETECTOR
ALARM SHUNT PAD
ALARM KEYPAD
CARD READER
SECURITY INTERCOM (64" M.H.)
REQUEST EXIT PUSH BUTTON
MAGNETIC LOCK
EJECT BUTTON

Scale indicators: Three inches = one foot, one and one half inches = one foot, one inch = one foot, three quarters inch = one foot, one half inch = one foot, three eighths inch = one foot, one quarter inch = one foot, one eighth inch = one foot.

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Drawing Title: ELECTRICAL SYMBOLS & ABBREVIATIONS
Approved: [Signature]

Phase: BID DOCUMENTS
FULLY SPRINKLERED

Project Title: RENOVATE AND CONSOLIDATE INPATIENT FUNCTIONS
Location: FORT MEADE, SOUTH DAKOTA
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Checked: MRS
Drawn: VLS

Project Number: VA #568-14-110 WPE #BR21020
Building Number: 113
Drawing Number: EA101

DIVISION 27 SPECIFICATIONS

SECTION 27010 GENERAL PROVISIONS

- 1. This section shall apply to Divisions 27 and 28.
2. Contractor shall provide shop drawing submittals as outlined in Division 01 for all materials and equipment specified within this Division 27 and 28 specifications and/or specifically noted items called out on Signal Plan Sheets.
3. Contractor shall include these shop drawings, testing information and warranty information as part of O&M Manuals at completion of project as outlined in Division 01.
4. Contractor shall also provide As-Built drawings of these systems at completion of project as outlined in Division 01.

SECTION 271500 COMMUNICATIONS STRUCTURED CABLING

- 1. Submit communication closet layout per communication standards and per provided layout.
2. Product data:
a. NOTE: All components shall be as specified or be 100% compatible (ie. completely interchangeable, etc.).
b. Materials list of items proposed to be provided under this section.
c. Manufacturer's specifications and other data needed to provide compliance with the specified requirements.
3. Submit information on the labeling scheme that will be used. MUST be coordinated with the owner.
4. Project Record Documents: Record actual locations and sizes of pathways and outlets.

Quality Assurance:
1. Work shall be installed in accordance with the manufacturer's recommendations of the equipment to be supplied and installed under this contract. Installations and materials shall be in accordance with latest edition of the Uniform Building Code (UBC), National Electrical Code (NEC), and Building Industry Consulting Service International (BICSI).

2. Installer Qualifications: Company specializing in installing similar systems, with minimum five years documented experience.

Qualifications:
1. All cabling and terminations shall be by a telecommunications contractor. This contractor shall be a certified installer with at least 5 years of verifiable experience. References may be requested.

2. Installer: Personnel installing and terminating the Cabling system shall be trained for voice and data installations and testing work. All installers/testers shall provide proof of training. Training must be from a nationally recognized organization and must be able maintain system warranties of materials being installed. Proof of training shall be submitted as part of the submittal process prior to start of work.

Warranty:
1. Work subject to terms of Article "Warranty of Construction," FAR clause 52.246-21.

System Description:
1. Provide conduits, cable trays, backboards, racks, patch panels, termination blocks, cables, and outlets to form a raceway and wiring system for voice, data, wireless access points (WAP's), Robot Antennas, and Telemetry Antennas.

2. Structured cabling work shall be installed in accordance with the latest BICSI Telecommunication Distribution Methods Manual. This manual shall be on site for reference at all times telecommunication work is in progress. All cable shall be color coded per BICSI Standards. Confirm CAT 6A termination EIA/TIA 568A or EIA/TIA 568B method with Owner prior to commencing any terminations.

3. Contractor shall provide two 12 strand single mode fiber cables from existing Main Server Room in Building 145 Room 132 to DATA 252. Provide a 100 foot loop in Room 132 for each cable. Each cable will be run in its ownseparate conduit along the path indicated on plans. Provide a minimum of 24 inch separation between these two conduits. Confirm routing prior to installation and any locations where this 24 inch separation is not possible shall be brought to COR's attention for review. This will provide to parallel redundant service pathways to serve the new IT Closet on second floor. Each 12 strand cable will be installed in a 1 inch conduit. Provide proper bending radius for cable and any J-box/pull boxes shall be properly sized to ensure bending radius of fiber is met.

4. Contractor shall provide one 12 strand single mode fiber cables from existing Biomed room B29 located in the basement of Building 113 and shown on EY103 to BIOMED 250. Conduit shall be installed in a 3/4 inch conduit from room to room. Provide a 40' loop within B29. Coordinate what rack in B29 that Contractor is to install the Fiber Patch Panels.

5. Total station wire length to each workstation area shall be a maximum of 90 meters (295 feet) and a minimum of 20 meters (60 feet). Provide 20 foot loop for each cable within IT closet.

6. Combination Voice/Data Outlets shall consist of 4-11/16 inch by 4-11/16 inch by 2-1/8 inch deep J-box (42 cubic inches) with single gang mud ring or Arlington Industries LVHK and minimum of a 1 inch conduit. Conduit size shall be increased as required based on need to meet conduit fill or multiple conduits provided to meet conduit fill requirements based on the number of cables ran to each outlet location. Each outlet shall include the number of RJ-45/8 wire modular jacks rated CAT 6A indicated or a minimum of (2) where not noted. Each jack shall be fed by its own CAT 6A 4 pair cable. All conduits and cables will be terminated at patch panels in BIO MED 250/DATA 252.

7. Data Only Outlets shall consist of 4-11/16 inch by 4-11/16 inch by 2-1/8 inch deep J-box (42 cubic inches) with single gang mud ring or Arlington Industries LVHK and minimum of a 1 inch conduit. Conduit size shall be increased as required based on need to meet conduit fill or multiple conduits provided to meet conduit fill requirements based on the number of cables ran to each outlet location. Each outlet shall include the number of RJ-45/8 wire modular jacks rated CAT 6A indicated or a minimum of (2) where not noted. Each jack shall be fed by its own CAT 6A 4 pair cable. All conduits and cables will be terminated at patch panels in BIO MED 250/DATA 252.

8. Wall Phone Voice outlets shall consist of 4-11/16 inch by 4-11/16 inch by 2-1/8 inch deep J-box (42 cubic inches) with single gang mud ring and minimum of a 3/4 inch conduit and have appropriate face plate for hanging phone with one RJ-45/8 wire jack rated CAT 6A. This jack shall be fed by one CAT 6A 4 pair cable. This cable will be terminated at patch panels in BIO MED 250/DATA 252.

9. Wireless Access Points (WAP's) and Robot Antennas shall consist of 4-11/16 inch by 4-11/16 inch by 2-1/8 inch deep J-box (42 cubic inches) with single gang mud ring and minimum of a 3/4 inch conduit include one CAT 6A 4 pair cable to each location terminated with an RJ-45/8 wire jack rated CAT 6A. All conduits and cables will be terminated at patch panels in BIO MED 250/DATA 252. WAP's and Robot Antennas will be supplied by Owner and installed by the Contractor.

10. Telemetry Antennas shall consist of 4-11/16 inch by 4-11/16 inch by 2-1/8 inch deep J-box (42 cubic inches) with single gang mud ring and minimum of a 3/4 inch conduit include one CAT 6A 4 pair cable to each location terminated with an RJ-45/8 wire jack rated CAT 6A. All conduits and cables will be terminated at patch panels in ICU Closet 112A on First Floor. Telemetry Antennas will be provided and installed by the Owner.

CAT 6A Cable:
1. UL Listed CAT 6A, Plenum Rated cable. Systemax GigaSPEED X10D 2091B ETL or equal by Commscope Uniprise, Hubbell, Panduit, or Hitachi. Wire size 23 AWG.

2. Label both ends of cable. Label at faceplates and patch panels shall match VA Standard labeling scheme. Coordinate with VA prior to installing.

3. Patch Cord Assembly: Provide 2 patch cords per terminated cable. Patch cords shall be CAT 6A, 7 feet length for closet end and 10 feet for User/Outlet end connection.

Fiber Optic Cable:
1. 12 Strand Single Mode Plenum Rated Cable equal to AFL Model LQ01293018XB/C4C; Corning Model 012ESP-T4101D20; or Commscope P-012-DS-8W-FSUL.

2. Fiber ends shall be terminated using type LC on each end and shall be tested to within 3db loss.

3. Provide (2) closet cable (fiber patch cord) per fiber connection.

System Components:
1. All components such as faceplates and RJ-45 jacks shall be by a single manufacturer and 100% compatible (ie. completely interchangeable, etc.). Male and Female RJ-45 jacks shall be CAT 6A rated. Materials shall be equal to Leviton or Panduit Netkey style.

2. Faceplates shall be a minimum of 4 port with ID window or 6 port with ID windows provided where 6 port outlets are specifically noted.

3. Wall phone plates shall have studs for hanging phone and one CAT 6A port.

4. Equipment/Communications Racks shall be 23" 4-Post Communications Racks equal to Otrionics Model MM2073038-W with cable management equal to Otrionics Model MM20VMD706.

5. One rack in BIO MED 250 and one rack in DATA 252 shall be provided with a Base Power Distribution Unit (PDU) equal to a ZONIT Model ZPD5. Each ZPD5 PDU will have four L21-20R and six NEMA 5-20R outlets and two 12 foot power cords with L21-30P Plugs. All four racks in BIO MED 250 and DATA 252 will have two vertical PDUs equal to APC Model AP8861 RPDU. These vertical PDUs will plug into the ZONIT base PDUs. Provide all mounting brackets for connection and installation to racks.

6. Rack Mounted Patch Panels shall be Leviton Model E2X1A-S48 or equal with rear cable management and angled panel cover. Provide quantity of Patch Panels as needed for all cables shown to be installed plus 20% spares. Patch Panels shall be provided with mounting and labeling kits. Provide fully loaded ATLAS-X1 E2XHD copper trunks CAT 6A LTP CMP cable assembly with bundle of 6 blue cables.

7. Rack Mounted Fiber Patch Panels shall be equal to AFL Model XFM-1-U-B-0 with Patch and Splice Module equal to AFL PM-L-12-ULC-0-S-01. Provide quantity of Patch and Splice Modules as needed on each end for termination of all strands of fiber from each cable.

8. Telecommunications Ground Bus Bar. Provide grounding bus bar in BIO MED 250/DATA 252. Provide #10 copper ground from electrical service in basement of Building 113 to this ground bus bar. Ground Bus Bar: Copper, minimum 1/4" thick by 4" wide by 18" long with 3/8", 9/32", and 1/4" holes spaced per industry standard. Stand-Off Insulators: Comply with UL 891 for use in Switchboards, 600V. Lexan or PVC impulse tested at 5000V. Connectors: Mechanical type, cat silicon bronze, solderless compression type wire terminals and long barrel, two bolt connection to ground bus bar.

Testing of Copper and Fiber Systems:

- 1. Test 100% of the cables installed. Conduct testing after terminations have been made at room jack and patch panels. Any cable that fails must be replaced and/or re-terminated until it passes.
2. Owner shall be provided the option to observe all testing. Contractor shall notify Owner's representative 48 hours before commencing testing so Owner can make arrangement for observing testing.
3. Contractor shall provide a printed copy of all tests and test results and provide a copy with each of the O&M manuals. An electronic copy of the test results shall also be provided with the O&M manuals.
4. Test all CAT 6A cable to current BICSI standards for CAT 6A cabling using properly calibrated test equipment. Test report shall identify the cable being tested by matching labeling scheme approved during the installation process. Test and record the following: NEXT (Near End Cross Talk) NEXT (Near End Cross Talk); Attenuation; ACR (Attenuation to Cross Talk Ratio); Length of cable; 4% or 2 feet whichever is greater; Impedance; Loop Resistance; Capacitance; Measure Wire Map; Capable of indicating pairs or failure of testing.
5. Test all Fiber Optic cable strands after terminations in splice module on both ends. All optical connections must be tested for basic link with and Optical Time domain Reflectometer (OTDR). Single mode fibers shall be tested at 1310 and 1550 Nanometers wavelength in both directions. Acceptable loss less than 0.5 dB, per mated pair, acceptable splice loss less than 0.2dB, acceptable cable loss per manufacturer's calculated maximum dB loss per KM.

SECTION 274131 TELEVISION CABLING

- 1. Submit floor plan layout of showing TV locations with cabling interconnection shown.
2. Product data:
a. NOTE: All components shall be as specified or be 100% compatible (ie. completely interchangeable, etc.).
b. Materials list of items proposed to be provided under this section.
c. Manufacturer's specifications and other data needed to provide compliance with the specified requirements.
3. Project Record Documents: Record actual locations and sizes of pathways and TV locations.

Quality Assurance:
1. Work shall be installed in accordance with the manufacturer's recommendations of the equipment to be supplied and installed under this contract. Installations and materials shall be in accordance with latest edition of the Uniform Building Code (UBC), National Electrical Code (NEC), and Building Industry Consulting Service International (BICSI).

2. Installer Qualifications: Company specializing in installing similar systems, with minimum five years documented experience.

Qualifications:
1. All cabling and terminations shall be by a telecommunications contractor. This contractor shall be a certified installer with at least 5 years of verifiable experience. References may be requested.

Warranty:
1. Work subject to terms of Article "Warranty of Construction," FAR clause 52.246-21.

System Description:
1. Provide conduits, junction boxes, cables, terminations and faceplates to form a complete and functioning Television Distribution System. Televisions within patient rooms shall be interfaced by the Nurse Call Control system to allow for channel selection and volume control of Televisions from the patient bed location.

2. TV Outlets shall consist of 4-11/16 inch by 4-11/16 inch by 2-1/8 inch deep J-box (42 cubic inches) with single gang mud ring or Arlington Industries LVHK and minimum of a 3/4 inch conduit.

3. Provide TV outlet and cable (RG-6) from each outlet to the appropriate local splitter in telecom rooms and terminate to splitters(s). In addition, provide (1) CAT 6A data cable to each TV outlet. CAT 6A cable shall conform to specification 271500 Communications Structured Cabling and installed as outlined in that specification section.

Video Cable:
1. Branch distribution cable shall be RG-6 Coax, 75 ohm, 100% shielded, plenum rated.

System Components:
1. Faceplates shall be by the same manufacturer as provided under 271500 Communications Structured Cabling.

2. Connectors shall be Standard "F" connectors. 75 ohm back matched, Bandpass: 40MHz to 1GHz. Flatness: Plus or minus 0.5 dB or better over entire frequency range. Input and Output Return Loss: 20dB or greater for each component over complete frequency range.

3. Amplifiers shall be Blonder Tongue Laboratories, Inc. Model BIDA 5000 Series or equal by Winegard, Belton or Jerryd. Provide one single channel VHF amplifier with automatic gain control for each required channel, including converted UHF channels. Provide 120V power for amplifiers from local receptacle circuit.

Testing:
1. CAT 6A cable shall be tested as outlined in 271500 Communications Structured Cabling.

2. All new equipment shall be aligned as recommended per the manufacturer. Video signals shall be 100 IRE at the designation point. Sync levels shall be at 40 IRE. SC and horizontal phasing shall be done using a vector scope and waveform monitor. Provide documentation of signal strength for every TV outlet location and include in the O&M Manual for the project.

3. Contractor shall provide a demonstration and training of operation to VA staff at completion of project.

SECTION 275123 INTERCOMMUNICATIONS SYSTEMS (INTERCOM)

Submittal:
1. Submit floor plan layout of speaker locations with cabling interconnection shown. Provide wiring connection details for all connections to speakers and head end equipment.

2. Product data:
a. NOTE: All components shall be as specified or be 100% compatible (ie. completely interchangeable, etc.).
b. Materials list of items proposed to be provided under this section.
c. Manufacturer's specifications and other data needed to provide compliance with the specified requirements.

3. Project Record Documents: Record actual locations and sizes of pathways and speakers.

Quality Assurance:
1. Work shall be installed in accordance with the manufacturer's recommendations of the equipment to be supplied and installed under this contract. Installations and materials shall be in accordance with latest edition of the Uniform Building Code (UBC), National Electrical Code (NEC), and Building Industry Consulting Service International (BICSI).

2. Installer Qualifications: Company specializing in installing similar systems, with minimum five years documented experience.

Qualifications:
1. All cabling and terminations shall be by a telecommunications contractor. This contractor shall be a certified installer with at least 5 years of verifiable experience. References may be requested.

Warranty:
1. Work subject to terms of Article "Warranty of Construction," FAR clause 52.246-21.

System Description:
1. Provide conduits, junction boxes, cables, backboxes and speakers to form a complete and functioning Intercom System.

2. The existing Intercom system is a Dukane System. At the time of the design of this project, the Owner is in the process of replacing the Dukane System. Unit that point the Contractor will need to bid this project as if the Dukane System will remain in place. All speakers that are removed on the 2nd floor shall be salvaged and returned to Owner, if that is the desire of the Owner. If the Owner refuses salvage of speakers then the Contractor will be responsible for removal from site and proper disposal. As part of this contract the Contractor will provide new speakers at locations shown on plans. New speaker shall be Dukane Model 8CSPA/TBLUB speaker/transformer and provided with Lowell Model JG-BX battle, Lowell Model P68X backbox and Lowell Model SS24 support bar. All intercom cabling will be installed in conduit. No open wiring methods will be allowed. The Contractor shall provide all new cable at locations shown on plans. 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SECTION 275230 WANDER MANAGEMENT SYSTEM

System Description:

1. The existing Wander Management System is a Secure Care Door Guardian Wander Management System. This system along with all existing devices will be reused. These detection and alarm devices are standard and do not tie to a headend system. Contractor to remove existing devices shown on demolition plans and reinstall after walls have been painted. Contractor to ensure power is provided to the device locations and devices are reinstalled. Contractor to confirm full operation of system prior to demolition and note any issues to Owner. If no issues are noted Contractor will be responsible for reinstalling so that it is fully operational and functional. Provide demonstration of operation prior to final inspection.

SECTION 283100 FIRE DETECTION AND ALARM SYSTEM - VOICE EVACUATION

Submit:

- 1. Submit floor plan layout using AutoCAD 2019 or newer and include all contractor's information. Layering shall be by VA criteria as provided by the Contracting Officer's Representative (COR). Bid drawing files in AutoCAD format will be provided to the Contractor upon request. The contractor shall be responsible for verifying all critical dimensions shown on the drawings provided by VA showing all Fire Alarm devices and equipment to include cabling interconnection.
2. Floor plans: Provide locations of all devices (with device number at each addressable device corresponding to control unit programming), appliances, panels, equipment, junction/terminal cabinets/boxes, risers, electrical power connections, individual circuits and raceway routing, system zoning; number, size, and type of raceways and conductors in each raceway; conduit fill calculations with cross section area percent fill for each type and size of conductor and raceway. Only those devices connected and incorporated into the final system shall be on these floor plans. Do not show any removed devices on the floor plans. Show all interfaces for all fire safety functions.
3. Detailed wiring diagrams: Provide for control panels, modules, power supplies, electrical power connections, auxiliary relays and annunciators showing termination identifications, size and type conductors, circuit boards, LED lamps, indicators, adjustable controls, switches, ribbon connectors, wiring harnesses, terminal strips and connectors, spare zones/circuits. Diagrams shall be drawn to a scale sufficient to show spatial relationships between components, enclosures and equipment configuration.
4. Provide power supply and battery calculations as noted within this specification.

- 5. Two weeks prior to final inspection, the Contractor shall deliver to the COR 3 sets of as-built drawings and one set of the as-built drawing computer files (using AutoCAD 2019 or newer). As-built drawings (floor plans) shall show all new and/or existing conduit used for the fire alarm system.

- 6. Product data:
a. NOTE: All components shall be as specified or be 100% compatible (i.e. completely interchangeable, etc.).
b. Materials list of items proposed to be provided under this section.
c. Manufacturer's specifications and other data needed to provide compliance with the specified requirements.
7. Project Record Documents: Record actual locations of devices and equipment along with all cabling interconnections.

- 8. Submit simultaneously with the shop drawings, companion copies of complete maintenance and operating manuals including technical data sheets for all items used in the system, power requirements, device wiring diagrams, dimensions, and information for ordering replacement parts. Wiring diagrams shall have their terminals identified to facilitate installation, operation, expansion and maintenance. Wiring diagrams shall indicate internal wiring for each item of equipment and the interconnections between the items of equipment. Include complete listing of all software used and installation and operation instructions including the input/output matrix chart. Provide a clear and concise description of operation that gives, in detail, all the information required to properly operate, inspect, test and maintain the equipment and system. Provide all manufacturer's installation limitations including but not limited to circuit length limitations. Include information indicating who will provide emergency service and perform post contract maintenance. Provide a replacement parts list with current prices. Include a list of recommended spare parts, tools, and instruments for testing and maintenance purposes. A computerized preventive maintenance schedule for all equipment. The schedule shall be provided on disk in a computer format acceptable to the VAMC and shall describe the protocol for preventive maintenance of all equipment. The schedule shall include the required times for systematic examination, adjustment and cleaning of all equipment. A printout of the schedule shall also be provided in the manual. Provide the disk in a pocket within the manual. Furnish manuals in 3 ring loose-leaf binder or manufacturer's standard binder. A printout for all devices proposed on each signaling line circuit with spare capacity indicated.

- 9. Two weeks prior to final inspection, deliver 4 copies of the final updated maintenance and operating manual to the COR.

Quality Assurance:
1. Work shall be installed in accordance with the manufacturer's recommendations of the equipment to be supplied and installed under this contract. Installations and materials shall be in accordance with latest edition of the Uniform Building Code (UBC), NFPA 70 National Electrical Code (NEC), NFPA 72 National Fire Alarm and Signaling Code, NFPA 101 Life Safety Code and Building Industry Consulting Service International (BICSI).

2. The installing company shall employ NICET (minimum Level II Fire Alarm Technology) technicians on site to guide the final check-out and to ensure the system's integrity. The equipment supplier shall employ NICET (minimum Level III fire alarm technology) technician at their local office to prepare installation drawings and verify compliance with the specifications.

3. Installer Qualifications: Manufacturer authorized distributor and installer of Simplex Fire Alarm Systems, with minimum five years documented experience for installing Fire Alarm System. The manual shall be updated to include any information necessitated by the maintenance and operating manual approval. Complete "As installed" wiring and schematic diagrams shall be included that shows all items of equipment and their interconnecting wiring. Show all final terminal identifications. Complete listing of all programming information, including all control events, per device including an updated input/output matrix. Certificate of installation as required by NFPA 72 for each building. The certificate shall identify any variations from the National Fire Alarm Code. Certificate from equipment manufacturer assuring compliance with all manufacturers installation requirements and satisfactory system operation.

Qualifications:
1. All cabling and terminations shall be by a Simplex Fire Alarm System authorized contractor. This contractor shall be a certified installer with at least 5 years of verifiable experience. References may be requested.

Warranty:
1. All work performed and all material and equipment furnished under this contract shall be free from defects and shall remain so for a period of one year from the date of acceptance of the entire installation by the Contracting Officer.

Guaranty Period Services:
1. Complete inspection, testing, maintenance and repair service for the fire alarm system shall be provided by a factory trained authorized representative of the manufacturer of the major equipment for a period of 5 years from the date of acceptance of the entire installation by the Contracting Officer.

2. Contractor shall provide all necessary test equipment, parts and labor to perform required inspection, testing, maintenance and repair.

3. All inspection, testing, maintenance and permanent records required by NFPA 72, and recommended by the equipment manufacturer shall be provided by the contractor. Work shall include operation of sprinkler system alarm and supervisory devices as well as all reused existing equipment connected to the fire alarm system. It shall include all interfaced equipment including but not limited to elevators, HVAC shutdown, and extinguishing systems.

4. Maintenance and testing shall be performed in accordance with NFPA 72, a computerized preventive maintenance schedule shall be provided and shall describe the protocol for preventive maintenance of equipment. The schedule shall include a systematic examination, adjustment and cleaning of all equipment.

5. Non-included Work: Repair service shall not include the performance of any work due to improper use, accidents, or negligence for which the contractor is not responsible.

6. Service and emergency personnel shall report to the Engineering Office or their authorized representative upon arrival at the hospital and again upon the completion of the required work. A copy of the work ticket containing a complete description of the work performed and parts replaced shall be provided to the VA COR or his authorized representative.

7. Emergency Service:
a. Warranty Period Service: Service other than the preventative maintenance, inspection, and testing required by NFPA 72 shall be considered emergency call-back service and covered under the warranty of the installation during the first year of the warranty period, unless the required service is a result of abuse or misuse by the Government. Written notification shall not be required for emergency warranty period service and the contractor shall respond as outlined in the following sections on Normal and Overtime Emergency Call-Back Service. Warranty period service can be required during normal or overtime emergency call-back service time periods at the discretion of the COR or his authorized representative.

b. Normal and overtime emergency call-back service shall consist of an on-site response within 2 hours of notification of a system trouble.

c. Normal emergency call-back service times are between the hours of 7:30 a.m. and 4:00 p.m., Monday through Friday, exclusive of federal holidays. Service performed during all other times shall be considered to be overtime emergency call-back service. The cost of all normal emergency call-back service for years 2 through 5 shall be included in the cost of this contract.

d. Overtime emergency call-back service shall be provided for the system when requested by the Government. The cost of the first 40 manhours per year of overtime call-back service during years 2 through 5 of this contract shall be provided under this contract. Payment for overtime emergency call-back service in excess of the 40 man hours per year requirement will be handled through separate purchase orders. The method of calculating overtime emergency call-back hours is based on actual time spent on site and does not include travel time.

8. The contractor shall maintain a log at each fire alarm control unit. The log shall list the date and time of all examinations and trouble calls, condition of the system, and name of the technician. Each trouble call shall be fully described, including the nature of the trouble, necessary correction performed, and parts replaced.

System Description:
1. The existing Fire Alarm System serving the Ft. Meade VA Medical Complex is a Simplex Fire Alarm System. It is the intent of this project to integrate all of the work performed under this contract into the existing Simplex Fire Alarm System. The Contractor is to provide conduits, junction boxes, cables, terminations, devices and equipment to form a complete and functioning Fire Alarm System that is networked with the rest of Ft. Meade VA Medical Complex. The existing Fire Alarm Control Panel (FACP) that serves the Second Floor is located in the Basement of Building 113 in the Electrical Switchgear Room B14B. All work performed as part of this project shall be integrated with this existing FACP. Any subpanels or power supplies needed to be installed on Second Floor for the operation of the new devices shall be installed in BIO MED 250.

2. Alarm, trouble and supervisory signals from all intelligent reporting devices shall be encoded on a Class A (NFPA Style 4) Signaling Line Circuit (SLC).

3. Initiation Device Circuits (IDC) shall be wired Class A (NFPA Style C), as part of an addressable device connected by the SLC Circuit.

4. Notification Appliance Circuits (NAC) shall be wired Class A (NFPA Style Y), as part of an addressable device connected by the SLC Circuit.

Equipment and Materials, General:

1. All equipment and components shall be new unless specifically noted that certain components may be reused. All equipment and components shall be manufactured by Simplex and be UL listed for use with the existing Simplex FACP. The authorized representative of the manufacturer of the major equipment shall certify that the installation complies with all manufacturers' requirements and that satisfactory total system operation has been achieved.

Conduit, Boxes and Wire:
1. Conduit shall be in accordance with Section 28 05 33 RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS. All new conduits shall be installed in accordance with NFPA 70. Conduit fill shall not exceed 40 percent of interior cross sectional area. All new conduits shall be 3/4 inch (19 mm) minimum.

2. All wiring for the Fire Alarm System shall be installed in conduit. Wiring shall be in accordance with NEC article 760 and as recommended by the manufacturer of the fire alarm system. All wires shall be color coded. Number and size of conductors shall be as recommended by the fire alarm system manufacturer, but not less than 18 AWG for initiating device circuits and 14 AWG for notification device circuits.

3. Terminal Boxes, Junction Boxes, and Cabinets shall be galvanized steel in accordance with UL requirements. All boxes shall be sized and installed in accordance with NFPA 70. Covers shall be painted red in accordance with Section 09 91 00, PAINTING and shall be identified with white markings as "FA" for junction boxes and as "FIRE ALARM SYSTEM" for cabinets and terminal boxes. Lettering shall be a minimum of 3/4 inch (19 mm) high. Terminal boxes and cabinets shall have a volume 50 percent greater than required by the NFPA 70. Minimum sized wire shall be considered as 14 AWG for calculation purposes. Terminal boxes and cabinets shall have identified pressure type terminal strips and shall be located at the base of each riser. Terminal strips shall be labeled as specified or as approved by the COR.

Standby Power Supply:
1. Contractor shall perform power calculations to determine the number of power supplies needed to support the revised Second Floor Fire Alarm System. Contractor to also provide appropriate power to these panels from Life Safety Panel ZCLS. Contractor shall supply the correct number of power supplies and then calculate power needed for the battery backup system. The Contractor shall provide the revised battery backup system to meet the revised load. The calculations for these systems shall be included as part of the shop drawing submittal. The battery system shall have sufficient capacity to power the fire alarm system for not less than 24 hours plus 5 minutes of alarm to an end of voltage of 1.14 volts per cell, upon a normal AC power failure. If required the battery charge shall also be upgraded to meet the new load requirements.

Alarm Notification Appliances:
1. Speakers, speaker strobes and strobes shall all match the existing equipment. While speakers, speaker strobes and strobes are shown diagrammatically on the plans, the contractor will be responsible for meeting sound pressure requirements and visual requirements as required by NFPA 72. Audio amplifiers shall be provided as needed to ensure sound pressure levels are met.

Alarm Initiating Devices:
1. Manual Pull Stations; Smoke Detectors; Duct Smoke Detectors; Heat Detectors; Water Flow and Pressure Switches; and Address Reporting Interface Devices shall all match existing equipment. While smoke detectors and heat detectors are shown on the plans, the contractor will be responsible for providing shop drawings and layouts that meet NFPA 72 requirements.

2. All new Duct Smoke Detectors shall be supplied with an approved duct housing mounted exterior to the duct and shall have perforated sampling tubes extending across the full width of the duct (wall to wall). Detector placement shall be such that there is uniform airflow in the cross section of the duct. Duct Smoke Detectors shall be supplied with Monitoring/Test Stations. Monitoring/Test Stations shall be installed in an accessible area and labeled as to the system served (e.g., "DUCT SMOKE DETECTOR AHJ-X").

Electromagnetic Door Holders:
1. New Door Holders shall be standard wall mounted electromagnetic type. In locations where doors do not come in contact with the wall when in the full open position, an extension post shall be added to the door bracket.

2. Operation shall be by 24 volt DC supplied from a battery located at the fire alarm control unit. Door holders shall be coordinated as to voltage, ampere drain, and voltage drop with the battery, battery charger, wiring and fire alarm system for operation as specified.

3. A maximum of twelve door holders shall be provided for each circuit. Door holders shall be wired to allow releasing doors by smoke zone.

4. Door holder control circuits shall be electrically supervised.

5. Smoke detectors shall not be incorporated as an integral part of door holders.

Installation:
1. Installation shall be in accordance with NFPA 70, 72, 90A, and 101 as shown on the drawings, and as recommended by the major equipment manufacturer. Fire alarm wiring shall be installed in conduit and all penetrations of smoke and fire barriers shall be protected as required by Section 07 84 00, FIRESTOPPING.

2. All conduits, junction boxes, conduit supports and hangers shall be concealed in finished areas and may be exposed in unfinished areas.

3. All new conduit within finished spaces shall be concealed. If the Contractor feels that this is not possible in a space for some reason a request must be provided to install as exposed. If exposed conduits are approved they shall be painted in accordance with Section 09 91 00, PAINTING to match surrounding finished areas and red in unfinished areas.

4. All existing accessible fire alarm conduit not reused shall be removed.

5. While all devices on the Second Floor are called out to be new some existing devices are noted as being able to be reused on the First Floor. Where these existing devices are allowed to be reused they shall be properly mounted and installed. Where devices are installed on existing shallow backboxes, extension rings of the same material, color and texture of the new fire alarm devices shall be used. Mounting surfaces shall be cut and patched in accordance with Section 01 00 00, GENERAL REQUIREMENTS, Restoration, and be repainted in accordance with Section 09 91 00, PAINTING as necessary to match existing.

6. All fire detection and alarm system devices, control units and remote annunciators shall be flush mounted when located in finished areas and may be surface mounted when located in unfinished areas. Exact locations are to be approved by the COR.

7. Speakers shall be ceiling mounted and fully recessed in areas with suspended ceilings. Speakers shall be wall mounted and recessed in finished areas without suspended ceilings. Speakers may be surface mounted in unfinished areas.

8. Strobes shall be flush wall mounted with the bottom of the unit located 80 inches (2,000 mm) above the floor or 6 inches (150 mm) below ceiling, whichever is lower. Locate and mount to maintain a minimum 36 inches (900 mm) clearance from side obstructions.

9. Manual pull stations shall be installed not less than 42 inches (1,050 mm) or more than 48 inches (1,200 mm) from finished floor to bottom of device and within 60 inches (1,500 mm) of a stairway or an exit door.

Typical Operation:
1. Activation of any manual pull station, water flow or pressure switch, heat detector, or smoke detector shall cause the following operations to occur:
a. Operate the emergency voice communication system in Building 113. For sprinkler protected buildings, flash strobes continuously only in the zone of alarm. For buildings without sprinkler protection throughout, flash strobes continuously only on the floor of alarm. Confirm this operation with the Ft. Meade VA Fire Department.

b. Continuously sound a temporal pattern general alarm and flash all strobes in the building in alarm until reset at the local fire alarm control unit in Building 113.

c. Release only the magnetic door holders in the smoke zone on the floor from which alarm was initiated.

d. Transmit a separate alarm signal, via the main fire alarm control unit to the fire department.

e. Unlock the electrically locked exit doors on the floor of the alarm.

f. Heat detectors in elevator machine rooms shall, in addition to the above functions, disconnect all power to all elevators served by that machine room after a time delay. The time delay shall be programmed within the fire alarm system programming and be equal to the time it takes for the car to travel from the highest to the lowest level, plus 10 seconds.

g. Smoke detectors in the primary elevator lobbies of Buildings 113 shall, in addition to the above functions, return all elevators in the bank to the secondary floor.

h. Smoke detectors in the remaining elevator lobbies, elevator machine room, or top of hoist way shall, in addition to the above functions, return all elevators in the bank to the primary floor.

i. Operation of a smoke detector at a corridor door used for automatic closing shall also release only the magnetic door holders of that floor.

j. Operation of duct smoke detectors shall cause a system supervisory condition and shut down the ventilation system and close the associated smoke dampers as appropriate.

k. Operation of any sprinkler or standpipe system valve supervisory switch, high/low air pressure switch, or fire pump alarm switch shall cause a system supervisory condition.

l. Alarm verification shall not be used for smoke detectors installed for the purpose of early warning.

Tests:
1. Provide the service of a NICET level III, competent, factory trained engineer or technician authorized by the manufacturer of the fire alarm equipment to technically supervise and participate during all of the adjustments and tests for the system. Make all adjustments and tests in the presence of the COR.

2. When the systems have been completed and prior to the scheduling of the final inspection, furnish testing equipment and perform the following tests in the presence of the COR. When any defects are detected, make repairs or install replacement components, and repeat the tests until such time that the complete fire alarm systems meets all contract requirements. After the system has passed the initial test and been approved by the COR, the contractor may request a final inspection.

a. Before energizing the cables and wires, check for correct connections and test for short circuits, ground faults, continuity, and insulation.

b. Test the insulation on all installed cable and wiring by standard methods as recommended by the equipment manufacturer.

c. Run water through all flow switches. Check time delay on water flow switches. Submit a report listing all water flow switch operations and their retard time in seconds.

d. Open each alarm initiating and notification circuit to see if trouble signal actuates.

e. Ground each alarm initiation and notification circuit and verify response of trouble signals.

Final Inspection and Acceptance:

1. Prior to final acceptance a minimum 30 day "burn in" period shall be provided. The purpose shall be to allow equipment to stabilize and potential installation and software problems and equipment malfunctions to be identified and corrected. During this diagnostic period, all system operations and malfunctions shall be recorded. Final acceptance will be made upon successful completion of the "burn in" period and where the last 14 days is without a system or equipment malfunction.

2. At the final inspection a factory trained representative of the manufacturer of the major equipment shall repeat the tests in Article 3.3 TESTS and those required by NFPA 72. In addition the representative shall demonstrate that the systems function properly in every respect. The demonstration shall be made in the presence of a VA representative.

Instruction:
1. The manufacturer's authorized representative shall provide instruction and training to the VA as follows:
a. Four 2-hour sessions to Engineering and Fire Department staff for detailed operation of the system. Two sessions at the completion of installation and 2 sessions 3 months after the completion of installation.

2. The Contractor and/or the Systems Manufacturer's representative shall provide a typewritten "Sequence of Operation" including a trouble shooting guide of the entire system for submission to the VA. The sequence of operation will be shown for each input in the system in a matrix format and provided in a loose leaf binder. When reading the sequence of operation, the reader will be able to quickly and easily determine what output will occur upon activation of any input in the system. The INPUT/OUTPUT matrix format shall be as shown in Appendix A to NFPA 72.

Digitized Voice Messages:
1. Digitized voice messages shall be provided for each smoke zone of Buildings // indicate buildings //. The messages shall be arranged with a 3 second alert tone, a "Code Red" or "Nurse Blazer" of "Doctor Firestone" message and a description of the fire alarm area (building number, floor, level and smoke zone). A sample of such a message is as follows:
Alert Tone
Code Red
Building One Thirteen, Second Floor, East Wing
Code Red
Building One Thirteen, Second Floor, East Wing
Code Red
Building One Thirteen, Second Floor, East Wing

SECTION 281300 ACCESS CONTROL SYSTEM
Submit:
1. Submit floor plan layout of access control device and equipment locations with cabling interconnection shown. Provide wiring connection details for all devices, equipment and head end equipment.

2. Product data:
a. NOTE: All components shall be as specified or be 100% compatible (i.e. completely interchangeable, etc.).
b. Materials list of items proposed to be provided under this section.
c. Manufacturer's specifications and other data needed to provide compliance with the specified requirements.

3. Project Record Documents: Record actual locations and sizes of pathways, devices and equipment.

Quality Assurance:
1. Work shall be installed in accordance with the manufacturer's recommendations of the equipment to be supplied and installed under this contract. Installations and materials shall be in accordance with latest edition of the Uniform Building Code (UBC), National Electrical Code (NEC), and Building Industry Consulting Service International (BICSI).

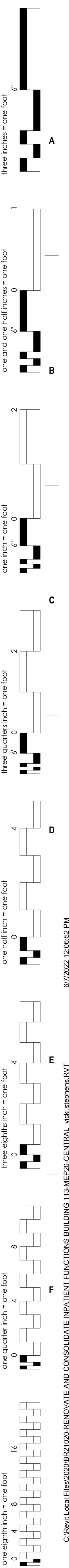
2. Installer Qualifications: Company specializing in installing similar systems, with minimum five years documented experience.

Qualifications:
1. All cabling and terminations shall be by a telecommunications contractor. This contractor shall be a certified installer with at least 5 years of verifiable experience. References may be requested.

Warranty:
1. Work subject to terms of contract "Warranty of Construction," FAR clause 52.246-21.

System Description:
1. Provide conduit, junction boxes, cables, backboxes and speakers to form a complete and functioning Intercom System.

2. The existing Access Control System is being replaced with a Johnson Controls C-CURE 9000 Access Control System. All new devices shall be provided by Johnson Controls that match similar devices being installed in other areas. All wiring shall be installed in conduit back to the new C-Cure Control Panel to be installed in Bio Med 250/Data 252. The new devices and control panel will need to be integrated into the head end equipment of the C-CURE 9000 control system with all programming included as part of this project. Johnson Controls out of Sioux Falls, South Dakota is the servicing vendor that shall be hired for modifications and integration of this system. POC Jason Kicker at (605)982-5326.



Main body of the drawing containing technical specifications, system descriptions, and installation requirements for the Wander Management System, Fire Detection and Alarm System, and Access Control System.

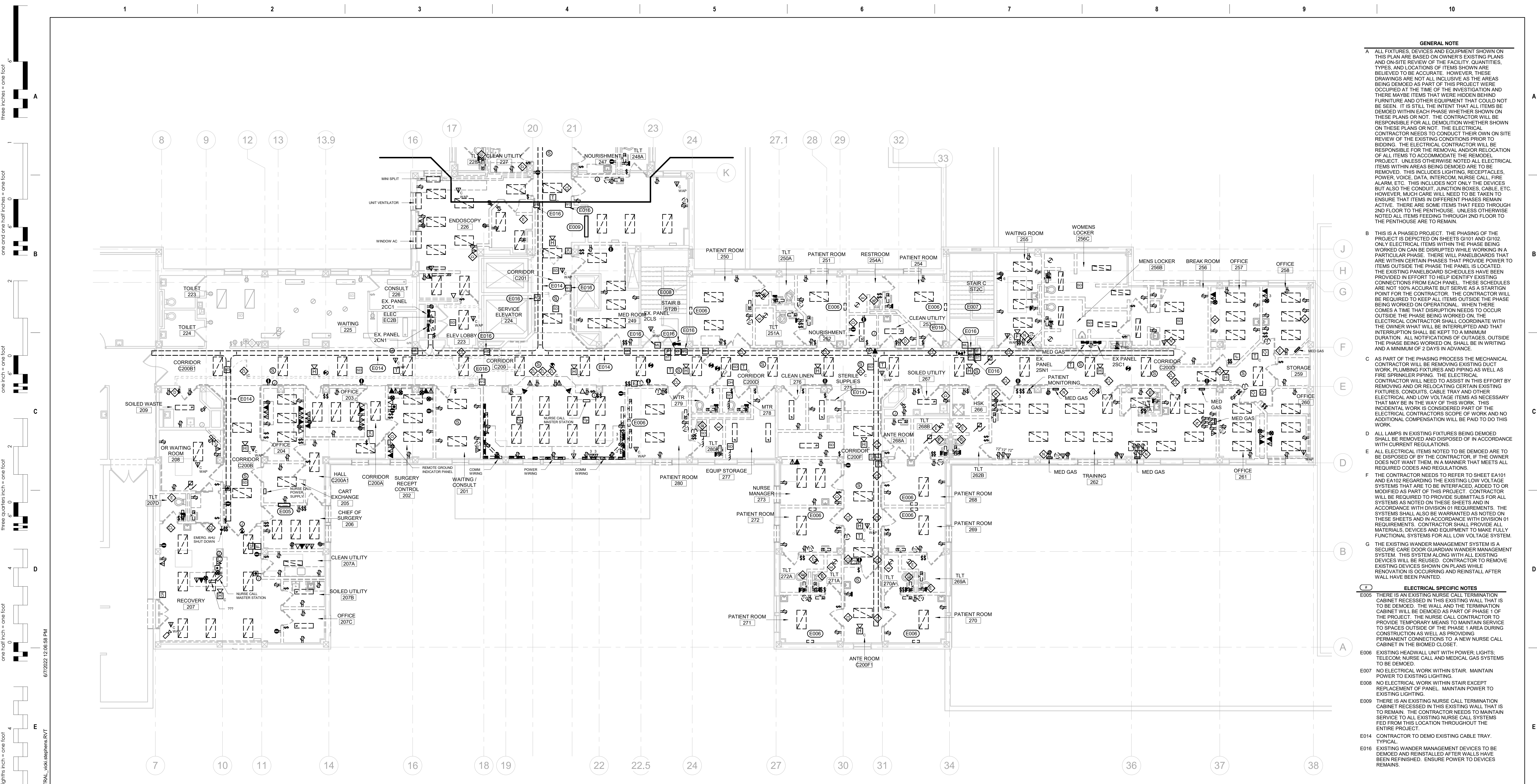
Revision table with columns for Revision#, Description, and Date.

CONSULTANTS section listing Structural, Mechanical/Electrical/Plumbing, and other services provided by Albertson Engineering, Inc. and West Plains Engineering, Inc.

ARCHITECT OF RECORD section for Stone Group Architects, Inc., including contact information and a professional engineer stamp for Todd Stone, AIA.

Office of Construction and Facilities Management logo and U.S. Department of Veterans Affairs logo.

Project information table including Drawing Title (ELECTRICAL SPECIFICATIONS), Phase (BID DOCUMENTS), Project Title (RENOVATE AND CONSOLIDATE INPATIENT FUNCTIONS), Location (FORT MEADE, SOUTH DAKOTA), Issue Date (06/10/2022), Checked (MRS), Drawn (VLS), and Project Number (VA #568-14-110 WPE #BR21020).



2 2ND LEVEL ELECTRICAL DEMOLITION PLAN - AREA A
1/8" = 1'-0"

- GENERAL NOTE**
- A ALL FIXTURES, DEVICES AND EQUIPMENT SHOWN ON THIS PLAN ARE BASED ON OWNER'S EXISTING PLANS AND ON-SITE REVIEW OF THE FACILITY. QUANTITIES, TYPES, AND LOCATIONS OF ITEMS SHOWN ARE BELIEVED TO BE ACCURATE. HOWEVER, THESE DRAWINGS ARE NOT ALL INCLUSIVE AS THERE ARE ITEMS BEING DEMOED AS PART OF THIS PROJECT THAT WERE OCCUPIED AT THE TIME OF THE INVESTIGATION AND THERE MAY BE ITEMS THAT WERE HIDDEN BEHIND FURNITURE AND OTHER EQUIPMENT THAT COULD NOT BE SEEN. IT IS STILL THE INTENT THAT ALL ITEMS BE DEMOED WITHIN EACH PHASE WHETHER SHOWN ON THESE PLANS OR NOT. THE ELECTRICAL CONTRACTOR NEEDS TO CONDUCT THEIR OWN ON-SITE REVIEW OF THE EXISTING CONDITIONS PRIOR TO BIDDING. THE ELECTRICAL CONTRACTOR WILL BE RESPONSIBLE FOR THE REMOVAL AND/OR RELOCATION OF ALL ITEMS TO ACCOMMODATE THE RENOVATION PROJECT. UNLESS OTHERWISE NOTED ALL ELECTRICAL ITEMS WITHIN AREAS BEING DEMOED ARE TO BE REMOVED. THIS INCLUDES NOT ONLY THE DEVICES BUT ALSO THE CONDUIT, JUNCTION BOXES, CABLE, ETC. HOWEVER, MUCH CARE WILL NEED TO BE TAKEN TO ENSURE THAT ITEMS IN DIFFERENT PHASES REMAIN ACTIVE. THERE ARE SOME ITEMS THAT FEED THROUGH 2ND FLOOR TO THE PENTHOUSE. UNLESS OTHERWISE NOTED ALL ITEMS FEEDING THROUGH 2ND FLOOR TO THE PENTHOUSE ARE TO REMAIN.
- B THIS IS A PHASED PROJECT. THE PHASING OF THE PROJECT IS DEPICTED ON SHEETS G101 AND G102. ONLY ELECTRICAL ITEMS WITHIN THE PHASE BEING WORKED ON CAN BE DISRUPTED WHILE WORKING IN A PARTICULAR PHASE. THERE WILL BE PHASES THAT ARE WITHIN CERTAIN PHASES THAT PROVIDE POWER TO ITEMS OUTSIDE THE PHASE THE PANEL IS LOCATED IN. THE EXISTING PANELBOARD SCHEDULES HAVE BEEN PROVIDED IN EFFORT TO HELP IDENTIFY EXISTING CONNECTIONS FROM EACH PANEL. THESE SCHEDULES ARE NOT 100% ACCURATE BUT SERVE AS A STARTING POINT FOR THE CONTRACTOR. THE CONTRACTOR WILL BE REQUIRED TO KEEP ALL ITEMS OUTSIDE THE PHASE BEING WORKED ON OPERATIONAL. WHEN THERE COMES A TIME THAT DISRUPTION NEEDS TO OCCUR OUTSIDE THE PHASE BEING WORKED ON, THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE OWNER WHAT WILL BE INTERRUPTED AND THAT INTERRUPTION SHALL BE KEPT TO A MINIMUM DURATION. ALL NOTIFICATIONS OF OUTAGES, OUTSIDE THE PHASE BEING WORKED ON, SHALL BE IN WRITING AND A MINIMUM OF 2 WEEKS ADVANCE.
- C AS PART OF THE PHASING PROCESS THE MECHANICAL CONTRACTOR WILL BE REMOVING EXISTING DUCT WORK, PLUMBING FIXTURES AND PIPING AS WELL AS FIRE SPRINKLER PIPING. THE ELECTRICAL CONTRACTOR WILL NEED TO ASSIST IN THIS EFFORT BY REMOVING AND/OR RELOCATING CERTAIN EXISTING ELECTRICAL AND LOW VOLTAGE ITEMS AS NECESSARY THAT MAY BE IN THE WAY OF THIS WORK. THIS INCIDENTAL WORK IS CONSIDERED PART OF THE ELECTRICAL CONTRACTOR'S SCOPE OF WORK AND NO ADDITIONAL COMPENSATION WILL BE PAID TO DO THIS WORK.
- D ALL LAMPS IN EXISTING FIXTURES BEING DEMOED SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH CURRENT REGULATIONS.
- E ALL ELECTRICAL ITEMS NOTED TO BE DEMOED ARE TO BE DISPOSED OF BY THE CONTRACTOR, IF THE OWNER DOES NOT WANT THEM, IN A MANNER THAT MEETS ALL REQUIRED CODES AND REGULATIONS.
- F THE CONTRACTOR NEEDS TO REFER TO SHEET EA101 AND EA102 REGARDING THE EXISTING LOW VOLTAGE SYSTEMS THAT ARE TO BE INTERFERED, ADDED TO OR MODIFIED AS PART OF THIS PROJECT. CONTRACTOR WILL BE REQUIRED TO PROVIDE SUBMITTALS FOR ALL SYSTEMS AS NOTED ON THESE SHEETS AND IN ACCORDANCE WITH DIVISION 01 REQUIREMENTS. THE SYSTEMS SHALL ALSO BE WARRANTED AS NOTED ON THESE SHEETS AND IN ACCORDANCE WITH DIVISION 01 REQUIREMENTS. CONTRACTOR SHALL PROVIDE ALL MATERIALS, DEVICES AND EQUIPMENT TO MAKE FULLY FUNCTIONAL SYSTEMS FOR ALL LOW VOLTAGE SYSTEMS.
- G THE EXISTING WANDER MANAGEMENT SYSTEM IS A SECURE CARE DOOR GUARDIAN WANDER MANAGEMENT SYSTEM. THIS SYSTEM ALONG WITH ALL EXISTING DEVICES WILL BE REUSED. CONTRACTOR TO REMOVE EXISTING DEVICES SHOWN ON PLANS WHILE RENOVATION IS OCCURRING AND REINSTALL AFTER WALL HAVE BEEN PAINTED.
- ELECTRICAL SPECIFIC NOTES**
- E005 THERE IS AN EXISTING NURSE CALL TERMINATION CABINET RECESSED IN THIS EXISTING WALL THAT IS TO BE DEMOED. THE WALL AND THE TERMINATION CABINET WILL BE DEMOED AS PART OF PHASE 1 OF THE PROJECT. THE NURSE CALL CONTRACTOR TO PROVIDE TEMPORARY MEANS TO MAINTAIN SERVICE TO SPACES OUTSIDE OF THE PHASE 1 AREA DURING CONSTRUCTION AS WELL AS PROVIDING PERMANENT CONNECTIONS TO A NEW NURSE CALL CABINET IN THE BIOMED CLOSET.
- E006 EXISTING HEADWALL UNIT WITH POWER, LIGHTS, TELECOM, NURSE CALL AND MEDICAL GAS SYSTEMS TO BE DEMOED.
- E007 NO ELECTRICAL WORK WITHIN STAIR. MAINTAIN POWER TO EXISTING LIGHTING.
- E008 NO ELECTRICAL WORK WITHIN STAIR EXCEPT REPLACEMENT OF PANEL. MAINTAIN POWER TO EXISTING LIGHTING.
- E009 THERE IS AN EXISTING NURSE CALL TERMINATION CABINET RECESSED IN THIS EXISTING WALL THAT IS TO REMAIN. THE CONTRACTOR NEEDS TO MAINTAIN SERVICE TO ALL EXISTING NURSE CALL SYSTEMS FED FROM THIS LOCATION THROUGHOUT THE ENTIRE PROJECT.
- E014 CONTRACTOR TO DEMO EXISTING CABLE TRAY. TYPICAL.
- E016 EXISTING WANDER MANAGEMENT DEVICES TO BE DEMOED AND REINSTALLED AFTER WALLS HAVE BEEN REFINISHED. ENSURE POWER TO DEVICES REMAINS.

Scale bars for various increments: 1/8" = 1'-0", 1/4" = 1'-0", 1/2" = 1'-0", 3/4" = 1'-0", 1" = 1'-0", 1 1/4" = 1'-0", 1 1/2" = 1'-0", 1 3/4" = 1'-0", 2" = 1'-0", 2 1/4" = 1'-0", 2 1/2" = 1'-0", 2 3/4" = 1'-0", 3" = 1'-0", 3 1/4" = 1'-0", 3 1/2" = 1'-0", 3 3/4" = 1'-0", 4" = 1'-0", 4 1/4" = 1'-0", 4 1/2" = 1'-0", 4 3/4" = 1'-0", 5" = 1'-0", 5 1/4" = 1'-0", 5 1/2" = 1'-0", 5 3/4" = 1'-0", 6" = 1'-0", 6 1/4" = 1'-0", 6 1/2" = 1'-0", 6 3/4" = 1'-0", 7" = 1'-0", 7 1/4" = 1'-0", 7 1/2" = 1'-0", 7 3/4" = 1'-0", 8" = 1'-0", 8 1/4" = 1'-0", 8 1/2" = 1'-0", 8 3/4" = 1'-0", 9" = 1'-0", 9 1/4" = 1'-0", 9 1/2" = 1'-0", 9 3/4" = 1'-0", 10" = 1'-0".

Revision#	Description	Date:

CONSULTANTS

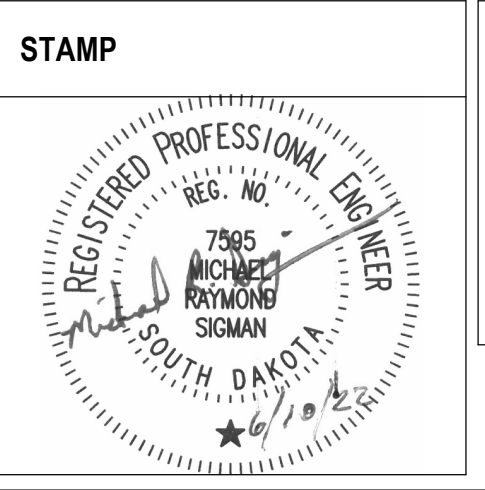
STRUCTURAL: Albertson Engineering Inc.
3202 W. Main St. #C
Rapid City, South Dakota 57702
Phone: 605-343-9606

MECHANICAL / ELECTRICAL / PLUMBING: WPE
West Plains Engineering, Inc.
1750 Rand Road
Rapid City, South Dakota 57702
Phone: 605-348-7455

ARCHITECT OF RECORD

A/E: STONE GROUP ARCHITECTS, INC.
319 N. MAIN AVE.
SIOUX FALLS, SD 57104
605.271.1144
TODD STONE, AIA

STONE GROUP ARCHITECTS



Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

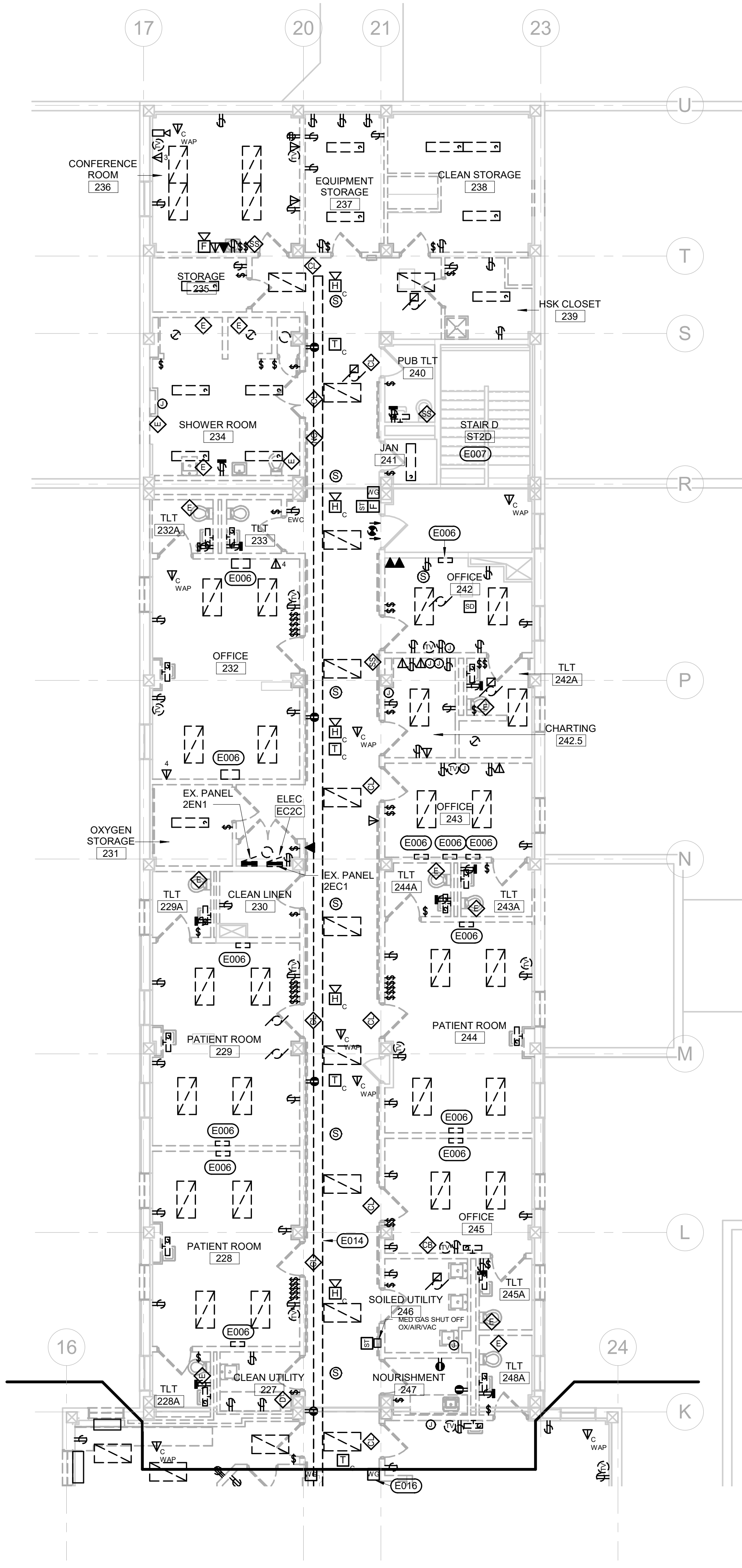
Drawing Title: ELECTRICAL DEMOLITION PLAN - 2ND LEVEL - AREA A
Approved: _____

Phase: BID DOCUMENTS
FULLY SPRINKLERED

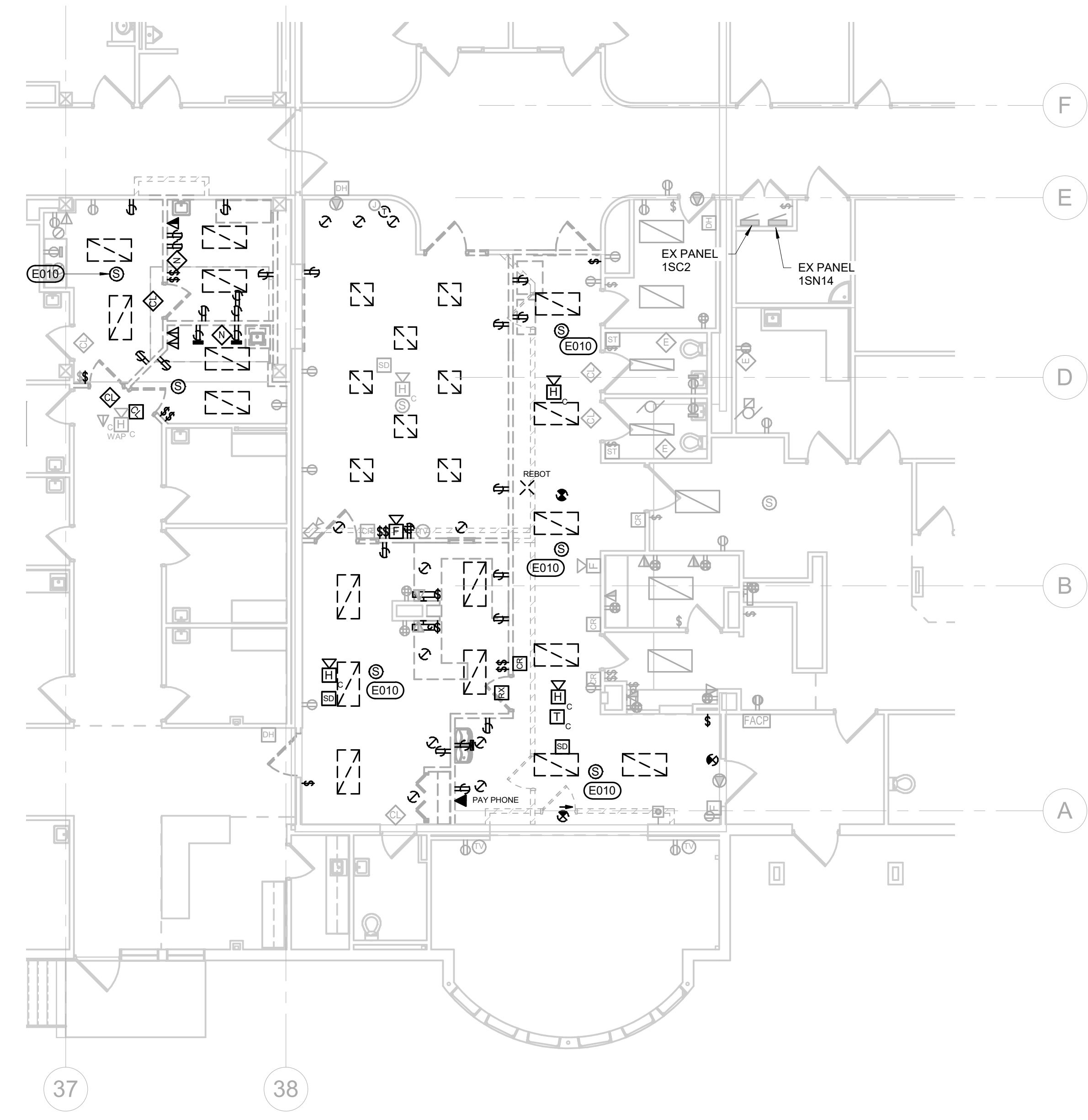
Project Title: RENOVATE AND CONSOLIDATE INPATIENT FUNCTIONS
Location: FORT MEADE, SOUTH DAKOTA
Issue Date: 06/10/2022
Checked: MRS
Drawn: VLS

Project Number: VA #568-14-110 WPE #BR21020
Building Number: 113
Drawing Number: ED101

Scale bars: three inches = one foot, one and one half inches = one foot, one inch = one foot, three quarters inch = one foot, one half inch = one foot, one quarter inch = one foot, one eighth inch = one foot. Vertical axis labels: A, B, C, D, E, F. Date: 06/10/2022 12:07:05 PM. File path: C:\Revit\Local Files\2022\06\10\120-RENOVATE AND CONSOLIDATE INPATIENT FUNCTIONS BUILDING 1154\REFUG-CENTRAL_wd1.sshpms.rvt



1 2ND LEVEL ELECTRICAL DEMOLITION PLAN - AREA B
1/8" = 1'-0"



2 FIRST FLOOR ELECTRICAL DEMOLITION PLAN - AREA C
1/8" = 1'-0"

- GENERAL NOTE**
- A ALL FIXTURES, DEVICES AND EQUIPMENT SHOWN ON THIS PLAN ARE BASED ON OWNER'S EXISTING PLANS AND ON-SITE REVIEW OF THE FACILITY. QUANTITIES, TYPES, AND LOCATIONS OF ITEMS SHOWN ARE BELIEVED TO BE ACCURATE. HOWEVER, THESE DRAWINGS ARE NOT ALL INCLUSIVE AS THE AREAS BEING DEMOED AS PART OF THIS PROJECT WERE OCCUPIED AT THE TIME OF THE INVESTIGATION AND THERE MAYBE ITEMS THAT WERE HIDDEN BEHIND FURNITURE AND OTHER EQUIPMENT THAT COULD NOT BE SEEN. IT IS STILL THE INTENT THAT ALL ITEMS BE DEMOED WITHIN EACH PHASE WHETHER SHOWN ON THESE PLANS OR NOT. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL DEMOLITION WHETHER SHOWN ON THESE PLANS OR NOT. THE ELECTRICAL CONTRACTOR NEEDS TO CONDUCT THEIR OWN ON SITE REVIEW OF THE EXISTING CONDITIONS PRIOR TO BIDDING. THE ELECTRICAL CONTRACTOR WILL BE RESPONSIBLE FOR THE REMOVAL AND/OR RELOCATION OF ALL ITEMS TO ACCOMMODATE THE REMOVED PROJECT. UNLESS OTHERWISE NOTED, ALL ELECTRICAL ITEMS WITHIN AREAS BEING DEMOED ARE TO BE REMOVED. THIS INCLUDES LIGHTING, RECEPTACLES, POWER, VOICE, DATA, INTERCOM, NURSE CALL, FIRE ALARM, ETC. THIS INCLUDES NOT ONLY THE DEVICES BUT ALSO THE CONDUIT, JUNCTION BOXES, CABLE, ETC. HOWEVER, MUCH CARE WILL NEED TO BE TAKEN TO ENSURE THAT ITEMS IN DIFFERENT PHASES REMAIN ACTIVE. THERE ARE SOME ITEMS THAT FEED THROUGH 2ND FLOOR TO THE PENTHOUSE. UNLESS OTHERWISE NOTED ALL ITEMS FEEDING THROUGH 2ND FLOOR TO THE PENTHOUSE ARE TO REMAIN.
- B THIS IS A PHASED PROJECT. THE PHASING OF THE PROJECT IS DEPICTED ON SHEETS G101 AND G102. ONLY ELECTRICAL ITEMS WITHIN THE PHASE BEING WORKED ON CAN BE DISRUPTED WHILE WORKING IN A PARTICULAR PHASE. THERE WILL PANEL BOARDS THAT ARE WITHIN CERTAIN PHASES THAT PROVIDE POWER TO ITEMS OUTSIDE THE PHASE THE PANEL IS LOCATED. THE EXISTING PANELBOARD SCHEDULES HAVE BEEN PROVIDED IN EFFORT TO HELP IDENTIFY EXISTING CONNECTIONS FROM EACH PANEL. THESE SCHEDULES ARE NOT 100% ACCURATE BUT SERVE AS A STARTING POINT FOR THE CONTRACTOR. THE CONTRACTOR WILL BE REQUIRED TO KEEP ALL ITEMS OUTSIDE THE PHASE BEING WORKED ON OPERATIONAL. WHEN THERE COMES A TIME THAT DISRUPTION NEEDS TO OCCUR OUTSIDE THE PHASE BEING WORKED ON, THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE OWNER WHAT WILL BE INTERRUPTED AND THAT INTERRUPTION SHALL BE KEPT TO A MINIMUM DURATION. ALL NOTIFICATIONS OF OUTAGES, OUTSIDE THE PHASE BEING WORKED ON, SHALL BE IN WRITING AND A MINIMUM OF 7 DAYS IN ADVANCE.
- C AS PART OF THE PHASING PROCESS THE MECHANICAL CONTRACTOR WILL BE REMOVING EXISTING DUCT WORK, PLUMBING FIXTURES AND PIPING AS WELL AS FIRE SPRINKLER PIPING. THE ELECTRICAL CONTRACTOR WILL NEED TO ASSIST IN THIS EFFORT BY REMOVING AND OR RELOCATING CERTAIN EXISTING FIXTURES, CONDUIT, CABLE TRAY AND OTHER ELECTRICAL AND LOW VOLTAGE ITEMS AS NECESSARY THAT MAY BE IN THE WAY OF THIS WORK. THIS INCIDENTAL WORK IS CONSIDERED PART OF THE ELECTRICAL CONTRACTORS SCOPE OF WORK AND NO ADDITIONAL COMPENSATION WILL BE PAID TO DO THIS WORK.
- D ALL LAMPS IN EXISTING FIXTURES BEING DEMOED SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH CURRENT REGULATIONS.
- E ALL ELECTRICAL ITEMS NOTED TO BE DEMOED ARE TO BE DISPOSED OF BY THE CONTRACTOR. IF THE OWNER DOES NOT WANT THEM, IN A MANNER THAT ALL REQUIRED CODES AND REGULATIONS.
- F THE CONTRACTOR NEEDS TO REFER TO SHEET EA101 AND EA102 REGARDING THE EXISTING LOW VOLTAGE SYSTEMS THAT ARE TO BE INTERFACED, ADDED TO OR MODIFIED AS PART OF THIS PROJECT. CONTRACTOR WILL BE REQUIRED TO PROVIDE SUBMITTALS FOR ALL SYSTEMS AS NOTED ON THESE SHEETS AND IN ACCORDANCE WITH DIVISION 01 REQUIREMENTS. THE SYSTEMS SHALL ALSO BE WARRANTED AS NOTED ON THESE SHEETS AND IN ACCORDANCE WITH DIVISION 01 REQUIREMENTS. CONTRACTOR SHALL PROVIDE ALL MATERIALS, DEVICES AND EQUIPMENT TO MAKE FULLY FUNCTIONAL SYSTEMS FOR ALL LOW VOLTAGE SYSTEM.
- G THE EXISTING WANDER MANAGEMENT SYSTEM IS A SECURE CARE DOOR GUARDIAN WANDER MANAGEMENT SYSTEM. THIS SYSTEM ALONG WITH ALL EXISTING DEVICES WILL BE REUSED. CONTRACTOR TO REMOVE EXISTING DEVICES SHOWN ON PLANS WHILE RENOVATION IS OCCURRING AND REINSTALL AFTER WALL HAVE BEEN PAINTED.
- ELECTRICAL SPECIFIC NOTES**
- E006 EXISTING HEADWALL UNIT WITH POWER, LIGHTS, TELECOM, NURSE CALL AND MEDICAL GAS SYSTEMS TO BE DEMOED.
- E007 NO ELECTRICAL WORK WITHIN STAIR. MAINTAIN POWER TO EXISTING LIGHTING.
- E010 EXISTING SPEAKER TO BE RELOCATED. CONTRACTOR TO PROVIDE ALL NEW CABLE FOR THE INTERCOM SYSTEM EQUAL TO WEST PENN 25293B 18AWG PLENUM CABLE TO CONNECT TO THE EXISTING SYSTEM.
- E014 CONTRACTOR TO DEMO EXISTING CABLE TRAY. TYPICAL.
- E016 EXISTING WANDER MANAGEMENT DEVICES TO BE DEMOED AND REINSTALLED AFTER WALLS HAVE BEEN REFINISHED. ENSURE POWER TO DEVICES REMAINS.

Revision#	Description	Date:

CONSULTANTS

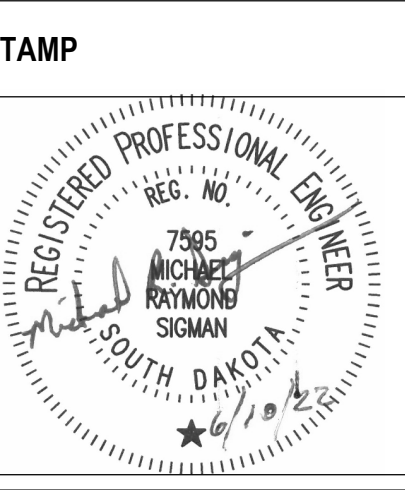
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Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

Drawing Title
ELECTRICAL DEMOLITION PLANS - 2ND LEVEL - AREA B & 1ST LEVEL - AREA C

Approved: _____

Phase
BID DOCUMENTS

FULLY SPRINKLERED

Project Title
RENOVATE AND CONSOLIDATE INPATIENT FUNCTIONS

Location
FORT MEADE, SOUTH DAKOTA

Issue Date
06/10/2022

Checked
MRS

Drawn
VLS

Project Number
VA #568-14-110 WPE #BR21020

Building Number
113

Drawing Number
ED102

1 2ND LEVEL LIGHTING PLAN - AREA A
1/8" = 1'-0"

ELECTRICAL MISCELLANEOUS NOTES

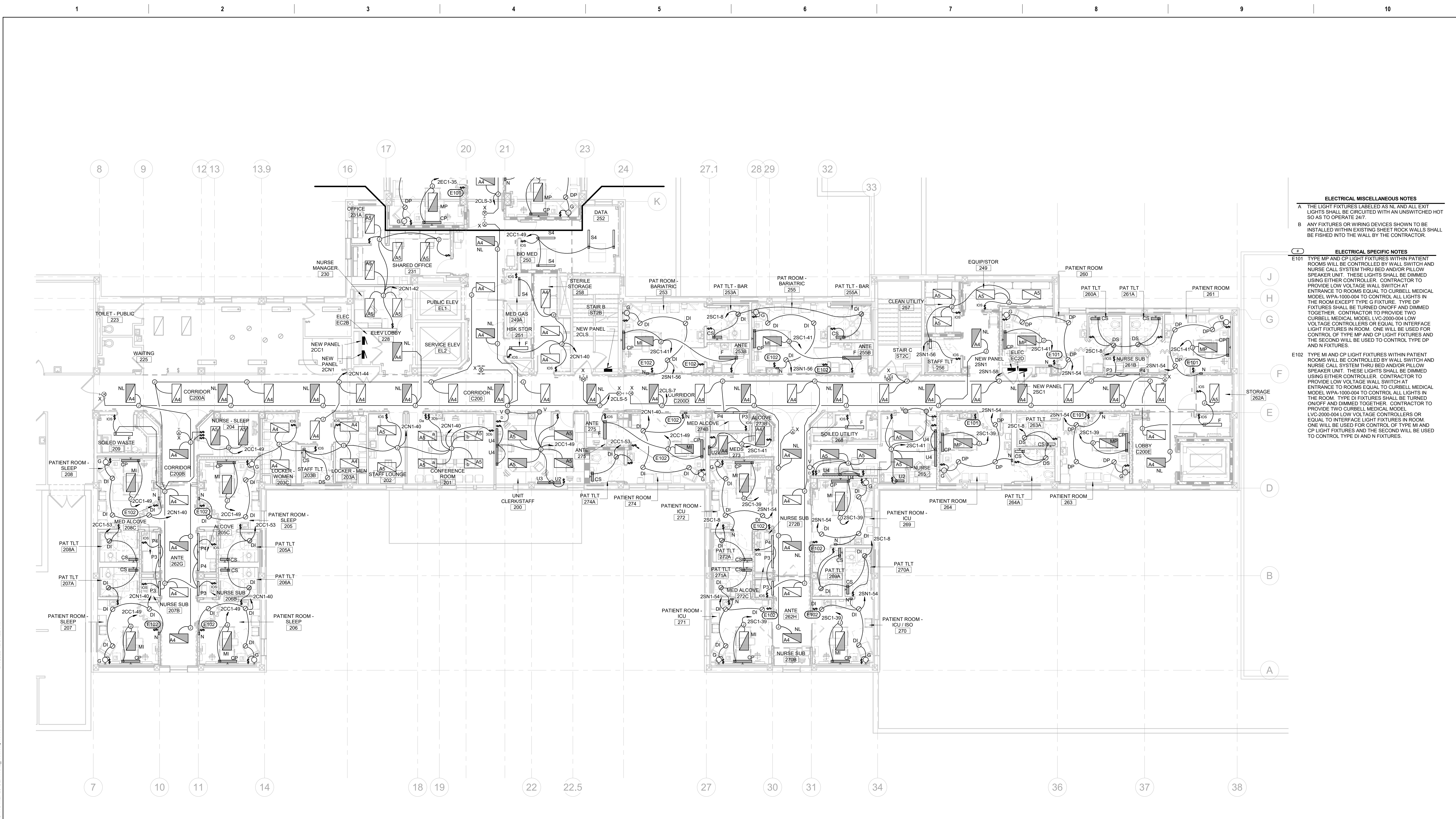
A THE LIGHT FIXTURES LABELED AS NL AND ALL EXIT LIGHTS SHALL BE CIRCUITED WITH AN UNSWITCHED HOT SO AS TO OPERATE 24/7.

B ANY FIXTURES OR WIRING DEVICES SHOWN TO BE INSTALLED WITHIN EXISTING SHEET ROCK WALLS SHALL BE FISHERD INTO THE WALL BY THE CONTRACTOR.

ELECTRICAL SPECIFIC NOTES

E101 TYPE MP AND CP LIGHT FIXTURES WITHIN PATIENT ROOMS WILL BE CONTROLLED BY WALL SWITCH AND NURSE CALL SYSTEM THRU BED AND/OR PILLOW SPEAKER UNIT. THESE LIGHTS SHALL BE DIMMED USING EITHER CONTROLLER. CONTRACTOR TO PROVIDE LOW VOLTAGE WALL SWITCH AT ENTRANCE TO ROOMS EQUAL TO CURBELL MEDICAL MODEL WPA-1000-004 TO CONTROL ALL LIGHTS IN THE ROOM EXCEPT TYPE G FIXTURE. TYPE DP FIXTURES SHALL BE TURNED ON/OFF AND DIMMED TOGETHER. CONTRACTOR TO PROVIDE TWO CURBELL MEDICAL MODEL LVC-2000-004 LOW VOLTAGE CONTROLLERS OR EQUAL TO INTERFACE LIGHT FIXTURES IN ROOM. ONE WILL BE USED FOR CONTROL OF TYPE MP AND CP LIGHT FIXTURES AND THE SECOND WILL BE USED TO CONTROL TYPE DP AND N FIXTURES.

E102 TYPE MI AND CP LIGHT FIXTURES WITHIN PATIENT ROOMS WILL BE CONTROLLED BY WALL SWITCH AND NURSE CALL SYSTEM THRU BED AND/OR PILLOW SPEAKER UNIT. THESE LIGHTS SHALL BE DIMMED USING EITHER CONTROLLER. CONTRACTOR TO PROVIDE LOW VOLTAGE WALL SWITCH AT ENTRANCE TO ROOMS EQUAL TO CURBELL MEDICAL MODEL WPA-1000-004 TO CONTROL ALL LIGHTS IN THE ROOM. TYPE DI FIXTURES SHALL BE TURNED ON/OFF AND DIMMED TOGETHER. CONTRACTOR TO PROVIDE TWO CURBELL MEDICAL MODEL LVC-2000-004 LOW VOLTAGE CONTROLLERS OR EQUAL TO INTERFACE LIGHT FIXTURES IN ROOM. ONE WILL BE USED FOR CONTROL OF TYPE MI AND CP LIGHT FIXTURES AND THE SECOND WILL BE USED TO CONTROL TYPE DI AND N FIXTURES.



Revision#	Description	Date:

CONSULTANTS

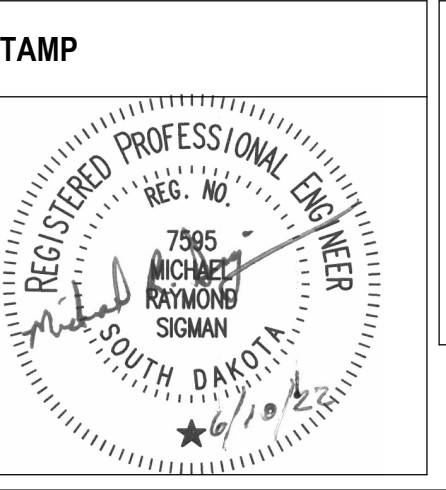
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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title
LIGHTING PLAN - 2ND LEVEL - AREA A

Approved:

Phase
BID DOCUMENTS

FULLY SPRINKLERED

Project Title
RENOVATE AND CONSOLIDATE INPATIENT FUNCTIONS

Location
FORT MEADE, SOUTH DAKOTA

Issue Date
06/10/2022

Checked
MRS

Drawn
VLS

Project Number
VA #568-14-110
WPE #BR21020

Building Number
113

Drawing Number
EL101

ELECTRICAL MISCELLANEOUS NOTES

A THIS IS A PHASED PROJECT. THE PHASING OF THE PROJECT IS DEPICTED ON SHEETS G101 AND G102. ONLY ELECTRICAL ITEMS WITHIN THE PHASE BEING WORKED ON CAN BE DISRUPTED WHILE WORKING IN A PARTICULAR PHASE. THERE WILL BE PANELBOARDS THAT ARE WITHIN CERTAIN PHASES THAT PROVIDE POWER TO ITEMS OUTSIDE THE PHASE. THE PANELS LOCATED OUTSIDE THE PHASE BEING WORKED ON ARE NOT 100% ACCURATE BUT SERVE AS A STARTUP POINT FOR THE CONTRACTOR. THE CONTRACTOR WILL BE REQUIRED TO KEEP ALL ITEMS OUTSIDE THE PHASE BEING WORKED ON OPERATIONAL. WHEN THERE COMES A TIME THAT DISRUPTION NEEDS TO OCCUR OUTSIDE THE PHASE BEING WORKED ON, THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE OWNER WHAT WILL BE INTERRUPTED AND THAT INTERRUPTION SHALL BE KEPT TO A MINIMUM DURATION. ALL NOTIFICATIONS OF OUTAGES, OUTSIDE THE PHASE BEING WORKED ON, SHALL BE IN WRITING AND A MINIMUM OF 2 DAYS IN ADVANCE.

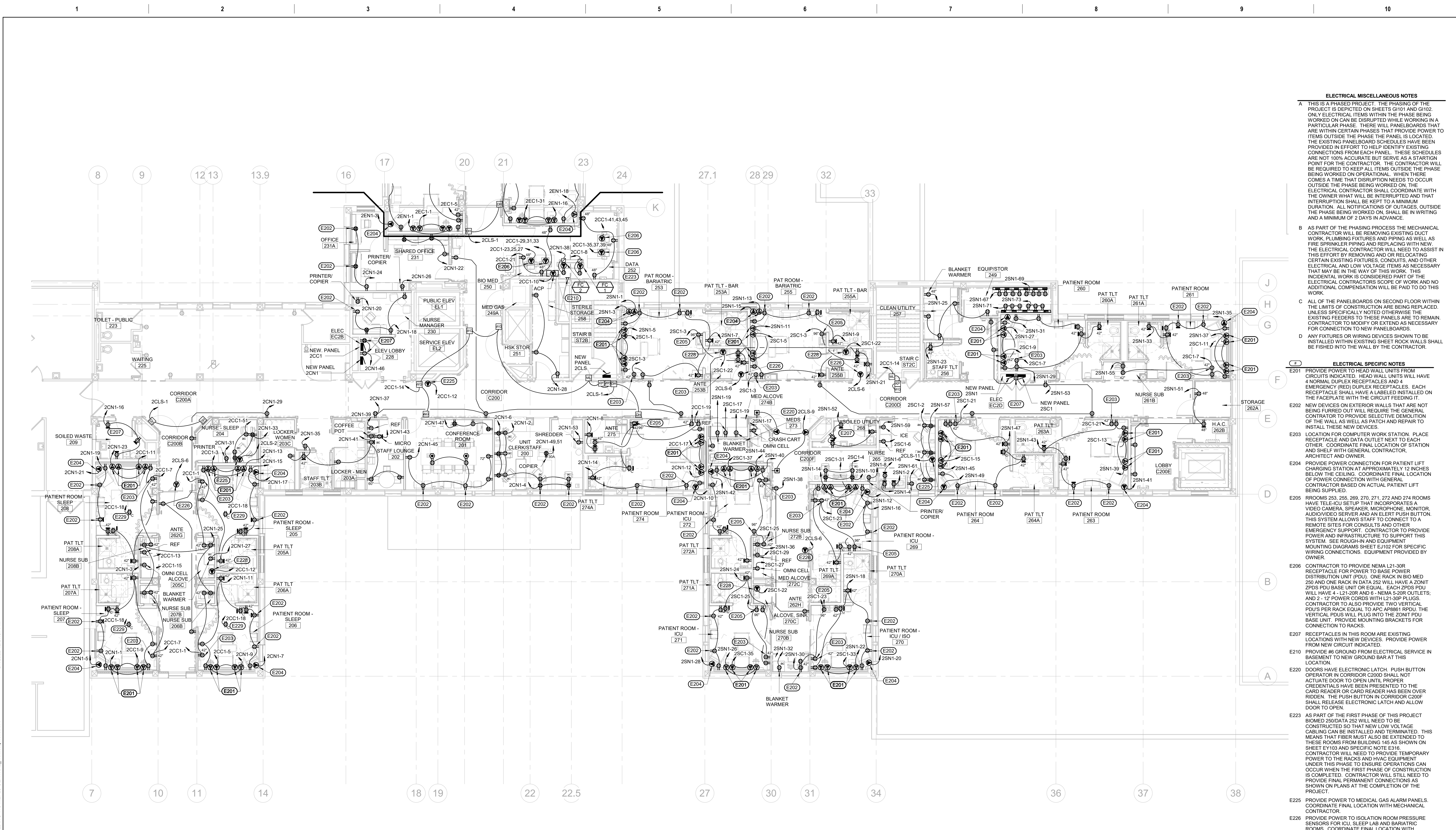
B AS PART OF THE PHASING PROCESS THE MECHANICAL CONTRACTOR WILL BE REMOVING EXISTING DUCT WORK, PLUMBING FIXTURES AND PIPING AS WELL AS FIRE SPRINKLER PIPING AND REPLACING WITH NEW. THE ELECTRICAL CONTRACTOR WILL NEED TO ASSIST IN THIS EFFORT BY REMOVING AND OR RELOCATING CERTAIN EXISTING FIXTURES, CONDUITS, AND OTHER ELECTRICAL AND LOW VOLTAGE ITEMS AS NECESSARY THAT MAY BE IN THE WAY OF THIS WORK. THIS INCIDENTAL WORK IS CONSIDERED PART OF THE ELECTRICAL CONTRACTORS SCOPE OF WORK AND NO ADDITIONAL COMPENSATION WILL BE PAID TO DO THIS WORK.

C ALL OF THE PANELBOARDS ON SECOND FLOOR WITHIN THE LIMITS OF CONSTRUCTION ARE BEING REPLACED UNLESS SPECIFICALLY NOTED OTHERWISE. THE EXISTING FEEDERS TO THESE PANELS ARE TO REMAIN. CONTRACTOR TO MODIFY OR EXTEND AS NECESSARY FOR CONNECTION TO NEW PANELBOARDS.

D ANY FIXTURES OR WIRING DEVICES SHOWN TO BE INSTALLED WITHIN EXISTING SHEET ROCK WALLS SHALL BE FISHED INTO THE WALL BY THE CONTRACTOR.

ELECTRICAL SPECIFIC NOTES

- E201 PROVIDE POWER TO HEAD WALL UNITS FROM CIRCUITS INDICATED. HEAD WALL UNITS WILL HAVE 4 NORMAL DUPLEX RECEPTACLES AND 4 EMERGENCY (RED) DUPLEX RECEPTACLES. EACH RECEPTACLE SHALL HAVE A LABEL INSTALLED ON THE FACEPLATE WITH THE CIRCUIT FEEDING IT.
- E202 NEW DEVICES ON EXTERIOR WALLS THAT ARE NOT BEING FURRED OUT WILL REQUIRE THE GENERAL CONTRACTOR TO PROVIDE SELECTIVE DEMOLITION OF THE WALL AS WELL AS PATCH AND REPAIR TO INSTALL THESE NEW DEVICES.
- E203 LOCATION FOR COMPUTER WORK STATION. PLACE RECEPTACLE AND DATA OUTLET NEXT TO EACH OTHER. PROVIDE RECEPTACLE AND DATA OUTLET AND SHELF WITH GENERAL CONTRACTOR, ARCHITECT AND OWNER.
- E204 PROVIDE POWER CONNECTION FOR PATIENT LIFT CHARGING STATION AT APPROXIMATELY 12 INCHES BELOW THE CEILING. COORDINATE FINAL LOCATION OF POWER CONNECTION WITH GENERAL CONTRACTOR BASED ON ACTUAL PATIENT LIFT BEING SUPPLIED.
- E205 ROOMS 253, 265, 269, 270, 271, 272 AND 274 ROOMS HAVE TELE-ICU SETUP THAT INCORPORATES A VIDEO CAMERA, SPEAKER, MICROPHONE, MONITOR, AUDIO/VIDEO SERVER AND A VIDEO PUSH BUTTON. THIS SYSTEM ALLOWS STAFF TO CONNECT TO A REMOTE SITES FOR CONSULTS AND OTHER EMERGENCY SUPPORT. CONTRACTOR TO PROVIDE POWER AND INFRASTRUCTURE TO SUPPORT THIS SYSTEM. SEE ROUGH-IN AND EQUIPMENT MOUNTING DIAGRAMS SHEET E110 FOR SPECIFIC WIRING CONNECTIONS. EQUIPMENT PROVIDED BY OWNER.
- E206 CONTRACTOR TO PROVIDE NEMA L21-30R RECEPTACLE FOR POWER TO BASE POWER DISTRIBUTION UNIT (PDU). ONE RACK IN BIO MED 250 AND ONE RACK IN DATA 252 WILL HAVE A ZONIT PDU BASE UNIT OR EQUAL. EACH ZONIT PDU WILL HAVE 4 - L21-20R AND 8 - NEMA 5-20R OUTLETS; AND 2 - 12' POWER CORDS WITH L21-30P PLUGS. CONTRACTOR TO ALSO PROVIDE TWO VERTICAL PDUS PER RACK EQUAL TO APC AP8861 RPDU. THE VERTICAL PDUS WILL PLUG INTO THE ZONIT PDU BASE UNIT. PROVIDE MOUNTING BRACKETS FOR CONNECTION TO RACKS.
- E207 RECEPTACLES IN THIS ROOM ARE EXISTING LOCATIONS WITH NEW DEVICES. PROVIDE POWER FROM NEW CIRCUIT INDICATED.
- E210 PROVIDE #6 GROUND FROM ELECTRICAL SERVICE IN BASEMENT TO NEW GROUND BAR AT THIS LOCATION.
- E220 DOORS HAVE ELECTRONIC LATCH. PUSH BUTTON OPERATOR IN CORRIDOR C200D SHALL NOT ACTIVATE DOOR TO OPEN UNTIL PROPER CREDENTIALS HAVE BEEN PRESENTED TO THE CARD READER OR CARD READER HAS BEEN OVER RIDDEN. THE PUSH BUTTON IN CORRIDOR C200F SHALL RELEASE ELECTRONIC LATCH AND ALLOW DOOR TO OPEN.
- E223 AS PART OF THE FIRST PHASE OF THIS PROJECT BIOMED 250/DATA 252 WILL NEED TO BE CONSTRUCTED SO THAT NEW LOW VOLTAGE CABELING CAN BE INSTALLED AND TERMINATED. THIS MEANS THAT FIBER MUST ALSO BE EXTENDED TO THESE ROOMS FROM BUILDING 145 AS SHOWN ON SHEET EY103 AND SPECIFIC NOTE E316. CONTRACTOR WILL NEED TO PROVIDE TEMPORARY POWER TO THE RACKS AND HVAC EQUIPMENT UNDER THIS PHASE TO ENSURE OPERATIONS CAN OCCUR WHEN THE FIRST PHASE OF CONSTRUCTION IS COMPLETED. CONTRACTOR WILL STILL NEED TO PROVIDE FINAL PERMANENT CONNECTIONS AS SHOWN ON PLANS AT THE COMPLETION OF THE PROJECT.
- E225 PROVIDE POWER TO MEDICAL GAS ALARM PANELS. COORDINATE FINAL LOCATION WITH MECHANICAL CONTRACTOR.
- E226 PROVIDE POWER TO ISOLATION ROOM PRESSURE SENSORS FOR ICU, SLEEP LAB AND BARIATRIC ROOMS. COORDINATE FINAL LOCATION WITH MECHANICAL CONTRACTOR.
- E228 PROVIDE POWER TO TRANSFORMER SUPPLIED BY MECHANICAL CONTRACTOR FOR SENSOR FAUCETS. COORDINATE POWER REQUIREMENTS, LOCATION AND CONNECTION REQUIREMENTS. ELECTRICAL CONTRACTOR TO ALSO ENSURE LOW VOLTAGE WIRING IS TAKEN TO FAUCET FOR FINAL CONNECTION. ALL WIRING TO BE CONCEALED TO THE EXTENT POSSIBLE.
- E229 OWNER WILL BE INSTALLING CAMERAS IN THE CEILING OF THE SLEEP STUDY ROOMS FOR MONITORING OF PATIENTS. THE CONTRACTOR SHALL PROVIDE A CEILING MOUNTED DUPLEX RECEPTACLE NEXT TO THE CAMERA. COORDINATE FINAL LOCATION OF RECEPTACLE NEXT TO CAMERA WITH OWNER PRIOR TO ROUGH-IN.



1 2ND LEVEL POWER PLAN - AREA A
1/8" = 1'-0"

Revision#	Description	Date:

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STONE GROUP ARCHITECTS

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title
POWER PLAN - 2ND LEVEL - AREA A

Phase
BID DOCUMENTS

Project Title
RENOVATE AND CONSOLIDATE INPATIENT FUNCTIONS

Location
FORT MEADE, SOUTH DAKOTA

Issue Date
06/10/2022

Checked
MRS

Drawn
WLS

Project Number
VA #568-14-110 WPE #BR21020

Building Number
113

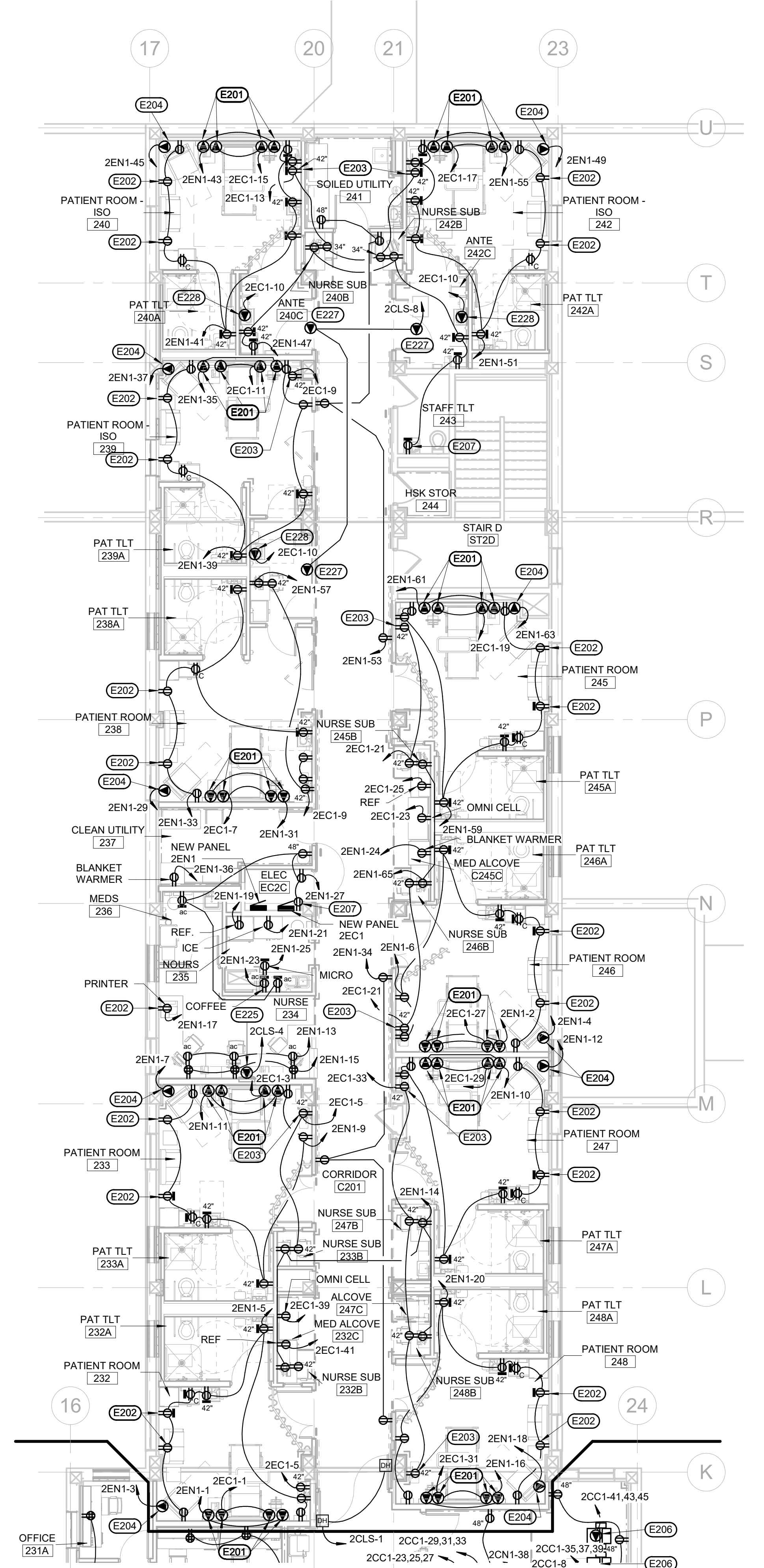
Drawing Number
EP101

ELECTRICAL MISCELLANEOUS NOTES

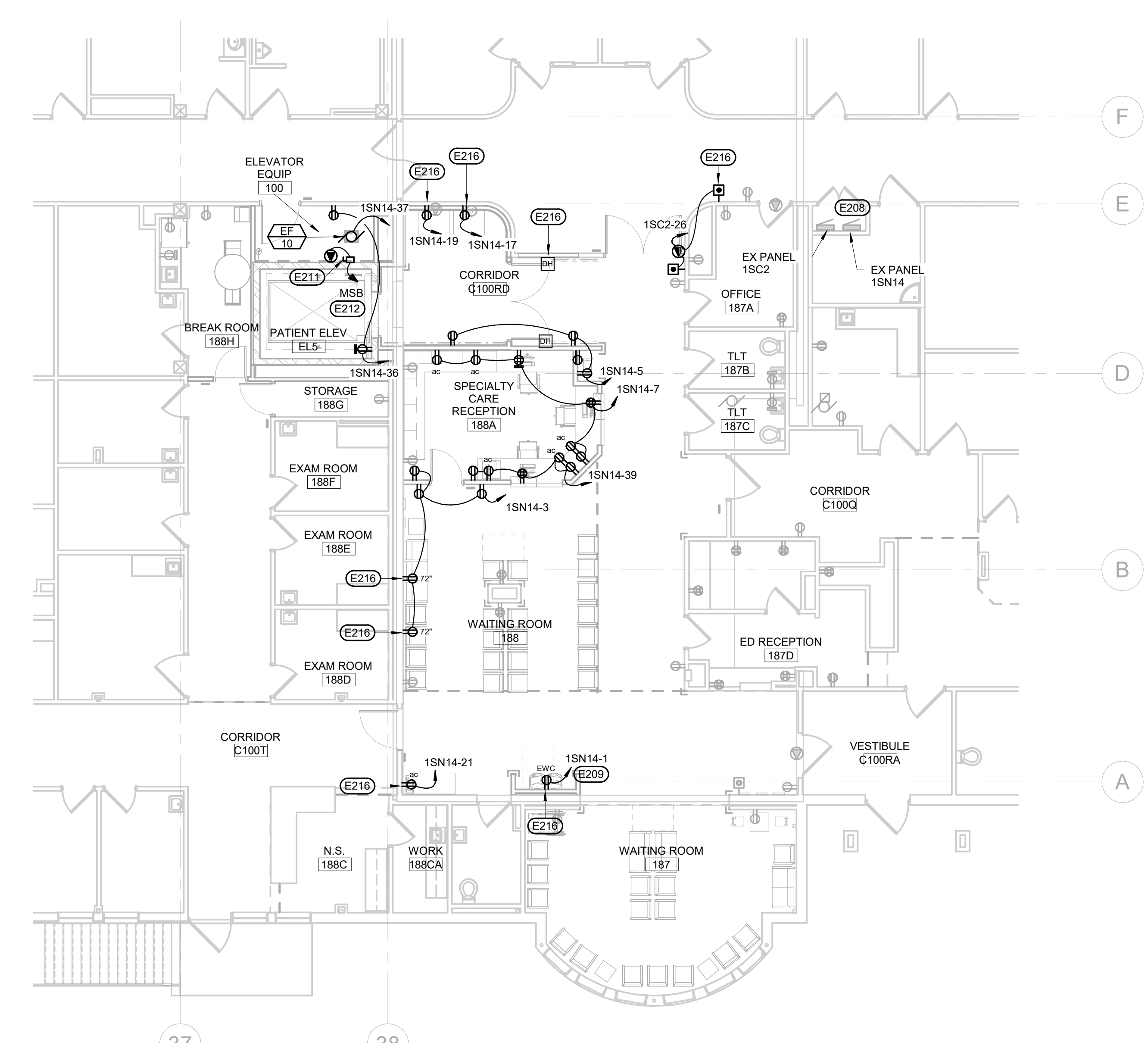
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- B AS PART OF THE PHASING PROCESS THE MECHANICAL CONTRACTOR WILL BE REMOVING EXISTING DUCT WORK, PLUMBING FIXTURES AND PIPING AS WELL AS FIRE SPRINKLER PIPING AND REPLACING WITH NEW. THE ELECTRICAL CONTRACTOR WILL NEED TO ASSIST IN THIS EFFORT BY REMOVING AND/OR RELOCATING CERTAIN EXISTING FIXTURES, CONDUITS, AND OTHER ELECTRICAL AND LOW VOLTAGE ITEMS AS NECESSARY THAT MAY BE IN THE WAY OF THE WORK. THIS INCIDENTAL WORK IS CONSIDERED PART OF THE ELECTRICAL CONTRACTORS SCOPE OF WORK AND NO ADDITIONAL COMPENSATION WILL BE PAID TO DO THIS WORK.
- C ALL OF THE PANELBOARDS ON SECOND FLOOR WITHIN THE LIMITS OF CONSTRUCTION ARE BEING REPLACED. UNLESS SPECIFICALLY NOTED OTHERWISE THE EXISTING FEEDERS TO THESE PANELS ARE TO REMAIN. CONTRACTOR TO MODIFY OR EXTEND AS NECESSARY FOR CONNECTION TO NEW PANELBOARDS.
- D ANY FIXTURES OR WIRING DEVICES SHOWN TO BE INSTALLED WITHIN EXISTING SHEET ROCK WALLS SHALL BE FISHED INTO THE WALL BY THE CONTRACTOR.

ELECTRICAL SPECIFIC NOTES

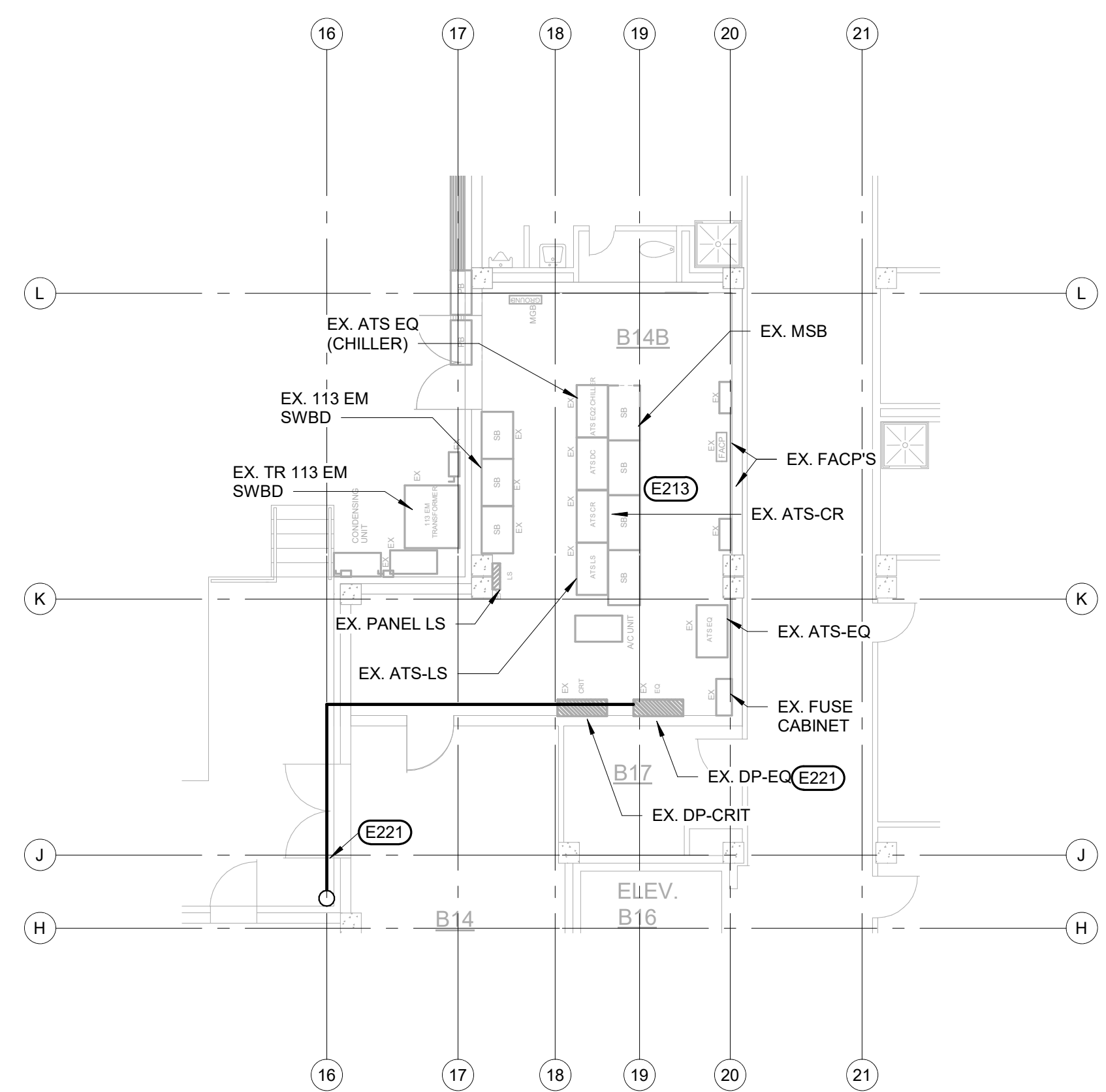
- E201 PROVIDE POWER TO HEAD WALL UNITS FROM CIRCUITS INDICATED. HEAD WALL UNITS WILL HAVE 4 NORMAL DUPLEX RECEPTACLES AND 4 EMERGENCY (RED) DUPLEX RECEPTACLES. EACH RECEPTACLE SHALL HAVE A LABELED INSTALLED ON THE FACEPLATE WITH THE CIRCUIT FEEDING IT.
- E202 NEW DEVICES ON EXTERIOR WALLS THAT ARE NOT BEING FURRED OUT WILL REQUIRE THE GENERAL CONTRACTOR TO PROVIDE SELECTIVE DEMOLITION OF THE WALL AS WELL AS PATCH AND REPAIR TO INSTALL THESE NEW DEVICES.
- E203 LOCATION FOR COMPUTER WORK STATION. PLACE RECEPTACLE AND DATA OUTLET NEXT TO EACH OTHER. COORDINATE FINAL LOCATION OF STATION AND SHELF WITH GENERAL CONTRACTOR, ARCHITECT AND OWNER.
- E204 PROVIDE POWER CONNECTION FOR PATIENT LIFT CHARGING STATION AT APPROXIMATELY 12 INCHES BELOW THE CEILING. COORDINATE FINAL LOCATION OF POWER CONNECTION WITH GENERAL CONTRACTOR BASED ON ACTUAL PATIENT LIFT BEING SUPPLIED.
- E206 CONTRACTOR TO PROVIDE NEMA L21-30R RECEPTACLE FOR POWER TO BASE POWER DISTRIBUTION UNIT (PDU). ONE RACK IN BIO MED 250 AND ONE RACK IN DATA 252 WILL HAVE A ZONIT ZP01 PDU BASE UNIT OR EQUAL. EACH ZP05 PDU WILL HAVE 4 - L21-20R AND 6 - NEMA 5-20R OUTLETS; AND 2 - 12' POWER CORDS WITH 21-30P PLUGS. CONTRACTOR TO ALSO PROVIDE TWO VERTICAL PDUS PER RACK EQUAL TO APC A9881 RPOU. THE VERTICAL PDU WILL PLUG INTO THE ZONIT PDU BASE UNIT. PROVIDE MOUNTING BRACKETS FOR CONNECTION TO RACKS.
- E207 RECEPTACLES IN THIS ROOM ARE EXISTING LOCATIONS WITH NEW DEVICES. PROVIDE POWER FROM NEW CIRCUIT INDICATED.
- E208 EXISTING PANEL BOARDS 1SC2 AND 1SN14 ARE 1200/200V/400V SQUARE D MPOD PANELBOARDS WITH 22KAIC RATED BREAKERS ANY BREAKERS ADDED OR CHANGED IN THESE PANELS SHALL BE UL LISTED FOR USE IN THESE PANELS AND SHALL BE 22KAIC RATED BREAKERS TO MATCH EXISTING.
- E209 EXISTING ELECTRIC WATER COOLER (EWC) IS FEED FROM 1SN14-1. CONTRACTOR TO PROVIDE NEW GFI BREAKER IN THIS CIRCUIT LOCATION AND PROVIDE FEED TO NEW EWC FROM THIS NEW BREAKER.
- E211 PROVIDE BUSSMANN POWER MODULE ELEVATOR DISCONNECT SWITCH MODEL PS-2-T20-R2-K-G-N2-B-F-1 OR EQUAL WITH TYPE J FUSES AND FUSE TO MATCH ELEVATOR EQUIPMENT REQUIREMENTS. INTERLOCK SHUNT TRIP OF DISCONNECT WITH HEAT DETECTORS IN ELEVATOR PIT AND ELEVATOR EQUIPMENT ROOM. ROUTE CIRCUIT FOR ELEVATOR THROUGH THIS SWITCH.
- E212 CONTRACTOR TO PROVIDE 4-430 CONDUCTORS FROM NEW 200A/3P BREAKER IN MAIN SWITCHBOARD (MSB) LOCATED IN THE BASEMENT OF BUILDING 113. SEE PARTIAL BASEMENT ELECTRICAL ROOM PLAN THIS SHEET FOR MORE INFORMATION. CONTRACTOR SHALL CONFIRM ROUTING WITH OWNER PRIOR TO INSTALLING.
- E213 CONTRACTOR TO PROVIDE NEW 200A/3P 65KAIC BREAKER WITH LSI ADJUSTMENT FEATURES IN EXISTING MAIN SWITCHBOARD (MSB) TO FEED NEW ELEVATOR. MSB IS A GE SPECTRA SERIES INSTALLED IN 2018. CONTRACTOR SHALL PROVIDE COORDINATION SETTINGS OF BREAKER SERVING THE ELEVATOR.
- E216 CONTRACTOR TO FISH INTO EXISTING EXISTING WALL TO INSTALL DEVICE.
- E221 EXISTING EMERGENCY DISTRIBUTION EQUIPMENT PANEL HAS A SPARE 600A LSI ELECTRONIC CIRCUIT BREAKER WITH ADJUSTABLE TRIP SETTINGS. CONTRACTOR TO PROVIDE A NEW FEEDER FROM THIS BREAKER TO NEW DISTRIBUTION PANEL POP-UP IN THE PENTHOUSE. BREAKER SHALL BE SET FOR 400A TRIP. FEEDER SHALL BE 4" CONDUIT WITH 4#600MCM & 1#2 GND CU OR PRIOR APPROVED EQUAL. CONDUIT SHALL BE ROUTED TO EXTERIOR OF BUILDING AND THEN UP TO PENTHOUSE. CONDUIT ON EXTERIOR OF BUILDING SHALL BE GRC OR IMC CONDUIT. INTERIOR CONDUIT MAYBE EMT, GRC OR IMC. ANY J-BOXES NEEDED ON EXTERIOR SHALL BE NEMA 3R.
- E225 PROVIDE POWER TO MEDICAL GAS ALARM PANELS. COORDINATE FINAL LOCATION WITH MECHANICAL CONTRACTOR.
- E227 PROVIDE POWER TO ISOLATION ROOM PRESSURE SENSORS FOR ISOLATION ROOMS IN AREA B. COORDINATE FINAL LOCATION WITH TEMPERATURE CONTROL CONTRACTOR.
- E228 PROVIDE POWER TO TRANSFORMER SUPPLIED BY MECHANICAL CONTRACTOR FOR SENSOR FAUCETS. COORDINATE POWER REQUIREMENTS, LOCATION AND CONNECTION REQUIREMENTS. ELECTRICAL CONTRACTOR TO ALSO ENSURE LOW VOLTAGE WIRING IS TAKEN TO FAUCET FOR FINAL CONNECTION. ALL WIRING TO BE CONCEALED TO THE EXTENT POSSIBLE.



1 2ND LEVEL POWER PLAN - AREA B
1/8" = 1'-0"



2 1ST LEVEL POWER PLAN - AREA C
1/8" = 1'-0"



3 EXISTING PARTIAL BASEMENT ELECTRICAL ROOM PLAN
1/8" = 1'-0"



Scale bars for various drawing sections:

- Three inches = one foot
- One and one half inches = one foot
- One inch = one foot
- Three quarters inch = one foot
- One half inch = one foot
- One quarter inch = one foot
- One eighth inch = one foot

Revision table:

Revision#	Description	Date:

Project Information:

CONSULTANTS:
 STRUCTURAL: [Firm Name]
 MECHANICAL / ELECTRICAL / PLUMBING: [Firm Name]

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Office of Construction and Facilities Management
 U.S. Department of Veterans Affairs

Drawing Title:
 POWER PLANS - 2ND LEVEL - AREA B & 1ST LEVEL - AREA C

Phase:
 BID DOCUMENTS

Project Title:
 RENOVATE AND CONSOLIDATE INPATIENT FUNCTIONS

Location:
 FORT MEADE, SOUTH DAKOTA

Issue Date:
 06/10/2022

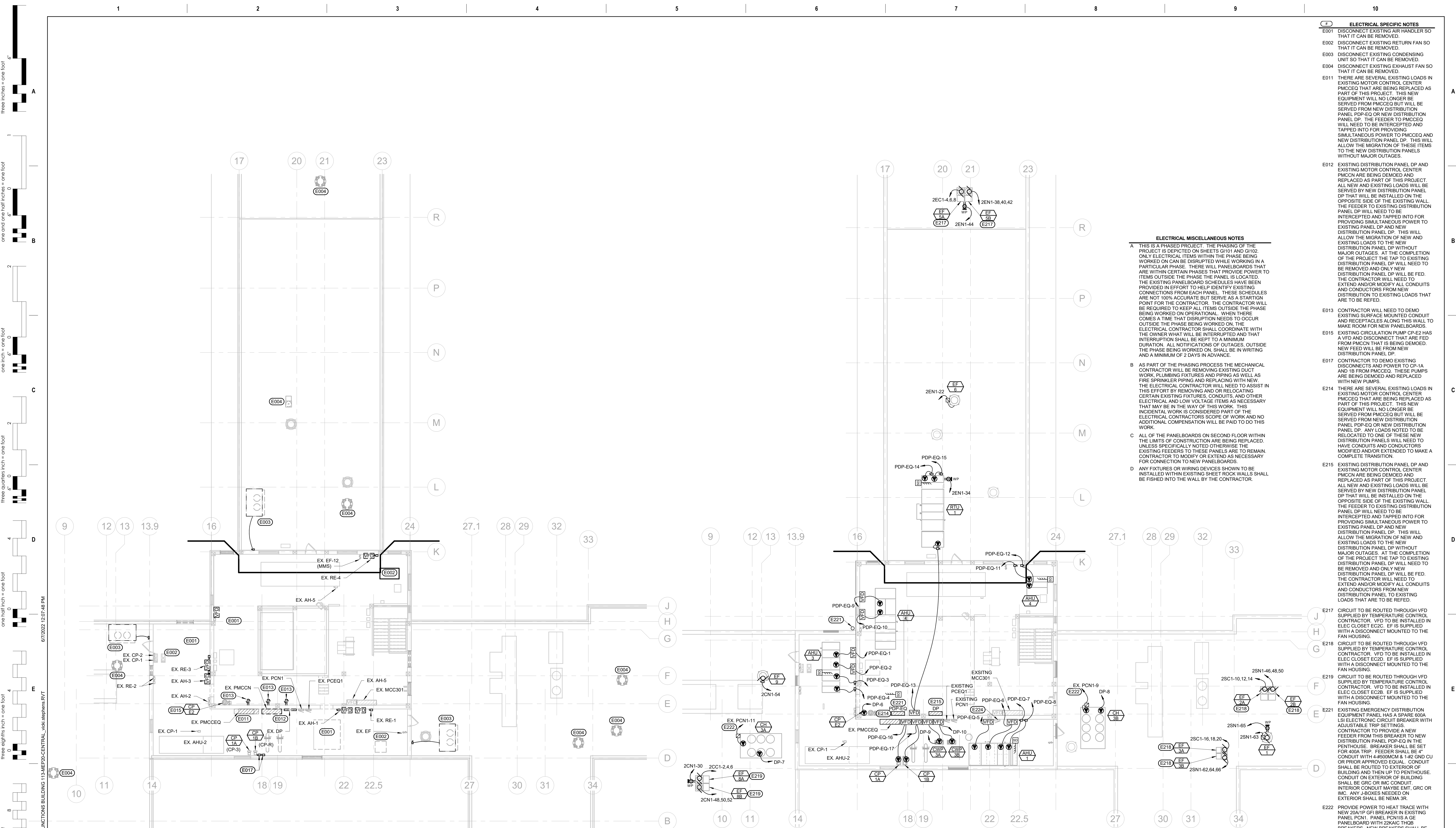
Checked:
 MRS

Drawn:
 VLS

Project Number:
 VA #568-14-110
 WPE #BR21020

Building Number:
 113

Drawing Number:
 EP102



1 PENTHOUSE LEVEL / LOW ROOF ELECTRICAL DEMOLITION PLAN
3/32" = 1'-0"

2 PENTHOUSE LEVEL / LOW ROOF ELECTRICAL PLAN
3/32" = 1'-0"

- ELECTRICAL MISCELLANEOUS NOTES**
- A THIS IS A PHASED PROJECT. THE PHASING OF THE PROJECT IS DEPICTED ON SHEETS G101 AND G102. ONLY ELECTRICAL ITEMS WITHIN THE PHASE BEING WORKED ON CAN BE DISRUPTED WHILE WORKING IN A PARTICULAR PHASE. THERE WILL BE PANELBOARDS THAT ARE WITHIN CERTAIN PHASES THAT PROVIDE POWER TO ITEMS OUTSIDE THE PHASE THE PANEL IS LOCATED. THE EXISTING PANELBOARD SCHEDULES HAVE BEEN PROVIDED IN EFFORT TO HELP IDENTIFY EXISTING CONNECTIONS FROM EACH PANEL. THESE SCHEDULES ARE NOT 100% ACCURATE BUT SERVE AS A STARTING POINT FOR THE CONTRACTOR. THE CONTRACTOR WILL BE REQUIRED TO KEEP ALL ITEMS OUTSIDE THE PHASE BEING WORKED ON OPERATIONAL. WHEN THERE COMES A TIME THAT DISRUPTION NEEDS TO OCCUR OUTSIDE THE PHASE BEING WORKED ON, THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE OWNER WHAT WILL BE INTERRUPTED AND THAT INTERRUPTION SHALL BE KEPT TO A MINIMUM DURATION. ALL NOTIFICATIONS OF OUTAGES, OUTSIDE THE PHASE BEING WORKED ON, SHALL BE IN WRITING AND A MINIMUM OF 2 DAYS IN ADVANCE.
- B AS PART OF THE PHASING PROCESS THE MECHANICAL CONTRACTOR WILL BE REMOVING EXISTING DUCT WORK, PLUMBING FIXTURES AND PIPING AS WELL AS FIRE SPRINKLER PIPING AND REPLACING WITH NEW. THE ELECTRICAL CONTRACTOR WILL NEED TO ASSIST IN THIS EFFORT BY REMOVING AND OR RELOCATING CERTAIN EXISTING FIXTURES, CONDUITS, AND OTHER ELECTRICAL AND LOW VOLTAGE ITEMS AS NECESSARY THAT MAY BE IN THE WAY OF THIS WORK. THIS INCIDENTAL WORK IS CONSIDERED PART OF THE ELECTRICAL CONTRACTORS SCOPE OF WORK AND NO ADDITIONAL COMPENSATION WILL BE PAID TO DO THIS WORK.
- C ALL OF THE PANELBOARDS ON SECOND FLOOR WITHIN THE LIMITS OF CONSTRUCTION ARE BEING REPLACED. UNLESS SPECIFICALLY NOTED OTHERWISE THE EXISTING FEEDERS TO THESE PANELS ARE TO REMAIN. CONTRACTOR TO MODIFY OR EXTEND AS NECESSARY FOR CONNECTION TO NEW PANELBOARDS.
- D ANY FIXTURES OR WIRING DEVICES SHOWN TO BE INSTALLED WITHIN EXISTING SHEET ROCK WALLS SHALL BE FISHED INTO THE WALL BY THE CONTRACTOR.

- ELECTRICAL SPECIFIC NOTES**
- E001 DISCONNECT EXISTING AIR HANDLER SO THAT IT CAN BE REMOVED.
- E002 DISCONNECT EXISTING RETURN FAN SO THAT IT CAN BE REMOVED.
- E003 DISCONNECT EXISTING CONDENSING UNIT SO THAT IT CAN BE REMOVED.
- E004 DISCONNECT EXISTING EXHAUST FAN SO THAT IT CAN BE REMOVED.
- E011 THERE ARE SEVERAL EXISTING LOADS IN EXISTING MOTOR CONTROL CENTER PMCCQ THAT ARE BEING REPLACED AS PART OF THIS PROJECT. THIS NEW EQUIPMENT WILL NO LONGER BE SERVED FROM PMCCQ BUT WILL BE SERVED FROM NEW DISTRIBUTION PANEL PDP-EQ OR NEW DISTRIBUTION PANEL DP. THE FEEDER TO PMCCQ WILL NEED TO BE INTERCEPTED AND TAPPED INTO FOR PROVIDING SIMULTANEOUS POWER TO PMCCQ AND NEW DISTRIBUTION PANEL DP. THIS WILL ALLOW THE MIGRATION OF THESE ITEMS TO THE NEW DISTRIBUTION PANELS WITHOUT MAJOR OUTAGES.
- E012 EXISTING DISTRIBUTION PANEL DP AND EXISTING MOTOR CONTROL CENTER PMCCQ ARE BEING DEMOED AND REPLACED AS PART OF THIS PROJECT. ALL NEW AND EXISTING LOADS WILL BE SERVED BY NEW DISTRIBUTION PANEL DP THAT WILL BE INSTALLED ON THE OPPOSITE SIDE OF THE EXISTING WALL. THE FEEDER TO EXISTING DISTRIBUTION PANEL DP WILL NEED TO BE INTERCEPTED AND TAPPED INTO FOR PROVIDING SIMULTANEOUS POWER TO EXISTING PANEL DP AND NEW DISTRIBUTION PANEL DP. THIS WILL ALLOW THE MIGRATION OF NEW AND EXISTING LOADS TO THE NEW DISTRIBUTION PANELS WITHOUT MAJOR OUTAGES. AT THE COMPLETION OF THE PROJECT THE TAP TO EXISTING DISTRIBUTION PANEL DP WILL NEED TO BE REMOVED AND ONLY NEW DISTRIBUTION PANEL DP WILL BE FED. THE CONTRACTOR WILL NEED TO EXTEND AND/OR MODIFY ALL CONDUITS AND CONDUCTORS FROM NEW DISTRIBUTION TO EXISTING LOADS THAT ARE TO BE REFEED.
- E013 CONTRACTOR WILL NEED TO DEMO EXISTING SURFACE MOUNTED CONDUIT AND RECEPTACLES ALONG THIS WALL TO MAKE ROOM FOR NEW PANELBOARDS.
- E015 EXISTING CIRCULATION PUMP CP-E2 HAS A VFD AND DISCONNECT THAT ARE FED FROM PMCCQ THAT IS BEING DEMOED. NEW FEED WILL BE FROM NEW DISTRIBUTION PANEL DP.
- E017 CONTRACTOR TO DEMO EXISTING DISCONNECTS AND POWER TO CP-1A AND 1B FROM PMCCQ. THESE PUMPS ARE BEING DEMOED AND REPLACED WITH NEW PUMPS.
- E214 THERE ARE SEVERAL EXISTING LOADS IN EXISTING MOTOR CONTROL CENTER PMCCQ THAT ARE BEING REPLACED AS PART OF THIS PROJECT. THIS NEW EQUIPMENT WILL NO LONGER BE SERVED FROM PMCCQ BUT WILL BE SERVED FROM NEW DISTRIBUTION PANEL PDP-EQ OR NEW DISTRIBUTION PANEL DP. ANY LOADS NOTED TO BE RELOCATED TO ONE OF THESE NEW DISTRIBUTION PANELS WILL NEED TO HAVE CONDUITS AND CONDUCTORS MODIFIED AND/OR EXTENDED TO MAKE A COMPLETE TRANSITION.
- E215 EXISTING DISTRIBUTION PANEL DP AND EXISTING MOTOR CONTROL CENTER PMCCQ ARE BEING DEMOED AND REPLACED AS PART OF THIS PROJECT. ALL NEW AND EXISTING LOADS WILL BE SERVED BY NEW DISTRIBUTION PANEL DP THAT WILL BE INSTALLED ON THE OPPOSITE SIDE OF THE EXISTING WALL. THE FEEDER TO EXISTING DISTRIBUTION PANEL DP WILL NEED TO BE INTERCEPTED AND TAPPED INTO FOR PROVIDING SIMULTANEOUS POWER TO EXISTING PANEL DP AND NEW DISTRIBUTION PANEL DP. THIS WILL ALLOW THE MIGRATION OF NEW AND EXISTING LOADS TO THE NEW DISTRIBUTION PANELS WITHOUT MAJOR OUTAGES. AT THE COMPLETION OF THE PROJECT THE TAP TO EXISTING DISTRIBUTION PANEL DP WILL NEED TO BE REMOVED AND ONLY NEW DISTRIBUTION PANEL DP WILL BE FED. THE CONTRACTOR WILL NEED TO EXTEND AND/OR MODIFY ALL CONDUITS AND CONDUCTORS FROM NEW DISTRIBUTION PANEL TO EXISTING LOADS THAT ARE TO BE REFEED.
- E217 CIRCUIT TO BE ROUTED THROUGH VFD SUPPLIED BY TEMPERATURE CONTROL CONTRACTOR. VFD TO BE INSTALLED IN ELEC CLOSET EC2C. EF IS SUPPLIED WITH A DISCONNECT MOUNTED TO THE FAN HOUSING.
- E218 CIRCUIT TO BE ROUTED THROUGH VFD SUPPLIED BY TEMPERATURE CONTROL CONTRACTOR. VFD TO BE INSTALLED IN ELEC CLOSET EC2D. EF IS SUPPLIED WITH A DISCONNECT MOUNTED TO THE FAN HOUSING.
- E219 CIRCUIT TO BE ROUTED THROUGH VFD SUPPLIED BY TEMPERATURE CONTROL CONTRACTOR. VFD TO BE INSTALLED IN ELEC CLOSET EC2B. EF IS SUPPLIED WITH A DISCONNECT MOUNTED TO THE FAN HOUSING.
- E221 EXISTING EMERGENCY DISTRIBUTION EQUIPMENT PANEL HAS A SPARE 600A LSI ELECTRONIC CIRCUIT BREAKER WITH ADJUSTABLE TRIP SETTINGS. CONTRACTOR TO PROVIDE A NEW FEEDER FROM THIS BREAKER TO NEW DISTRIBUTION PANEL PDP-EQ IN THE PENTHOUSE. BREAKER SHALL BE SET FOR 40A TRIP. FEEDER SHALL BE 4" CONDUIT WITH 4#600MCM & 1#2 GND CU OR PRIOR APPROVED EQUAL. CONDUIT SHALL BE ROUTED TO EXTERIOR OF BUILDING AND THEN UP TO PENTHOUSE. CONDUIT ON EXTERIOR OF BUILDING SHALL BE GRC OR IMC CONDUIT. INTERIOR CONDUIT MAYBE EMT, GRC OR IMC. ANY J-BOXES NEEDED ON EXTERIOR SHALL BE NEMA 3R.
- E222 PROVIDE POWER TO HEAT TRACE WITH NEW 20A 1P GFI BREAKER IN EXISTING PANEL PCN1. PANEL PCN1 IS A GE PANELBOARD WITH 22KAIC THCB BREAKERS. NEW BREAKERS SHALL BE UL LISTED FOR USE IN THIS PANEL AND BE 22KAIC CONTROL PANEL AND BREAKERS PRIOR TO ORDERING.
- E224 THERE IS AN EXISTING TEMPERATURE CONTROL PANEL IN THIS LOCATION AND IT IS BEING REPLACED WITH A NEW TEMPERATURE CONTROL PANEL IN THE SAME LOCATION. CONTRACTOR TO ENSURE POWER REMAINS FOR THE NEW PANEL.

Revision#	Description	Date:

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Office of Construction and Facilities Management
U.S. Department of Veterans Affairs

Drawing Title
PENTHOUSE LEVEL / LOW ROOF ELECTRICAL PLAN

Approved:

Phase
BID DOCUMENTS

FULLY SPRINKLERED

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RENOVATE AND CONSOLIDATE INPATIENT FUNCTIONS

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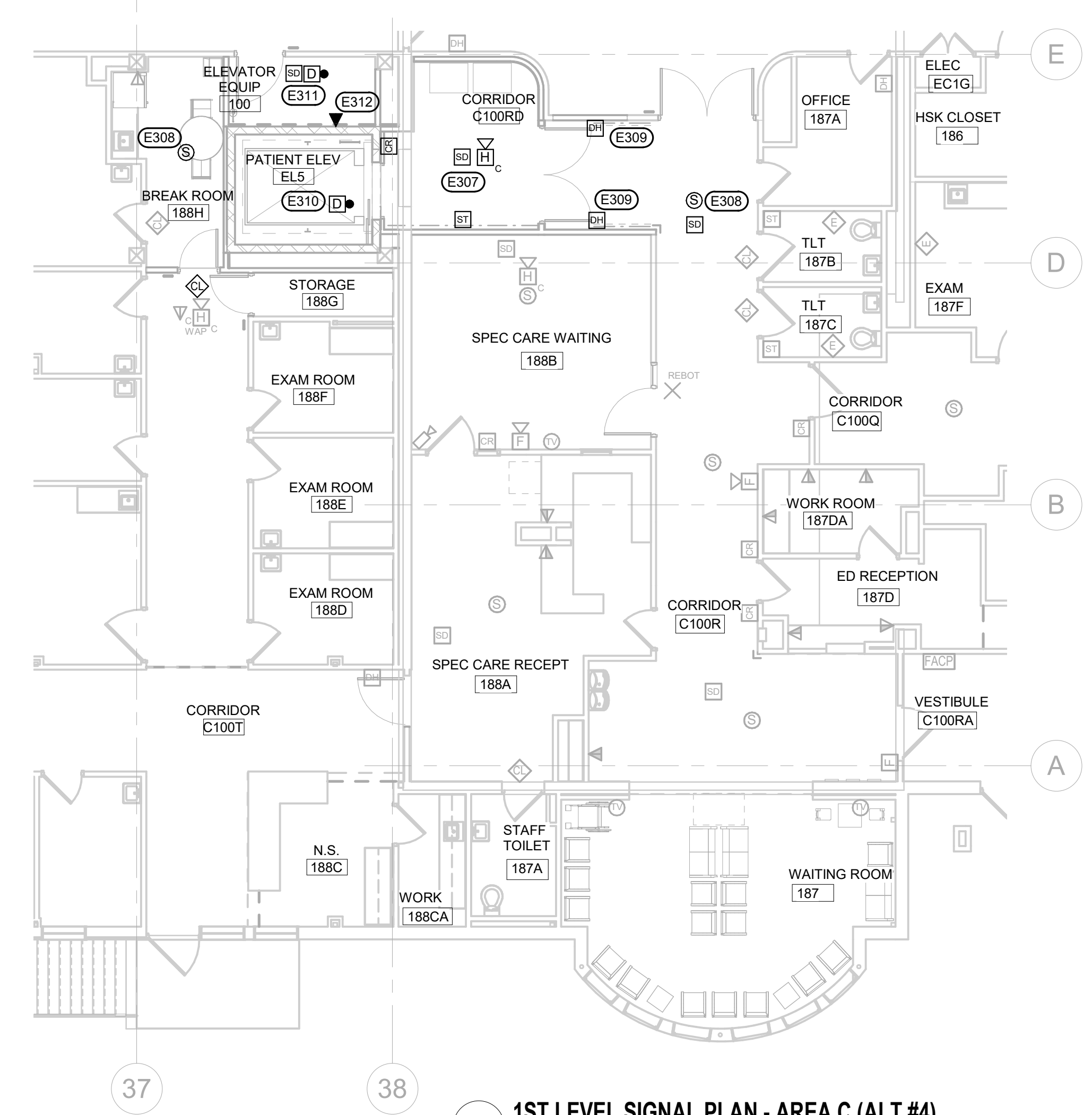
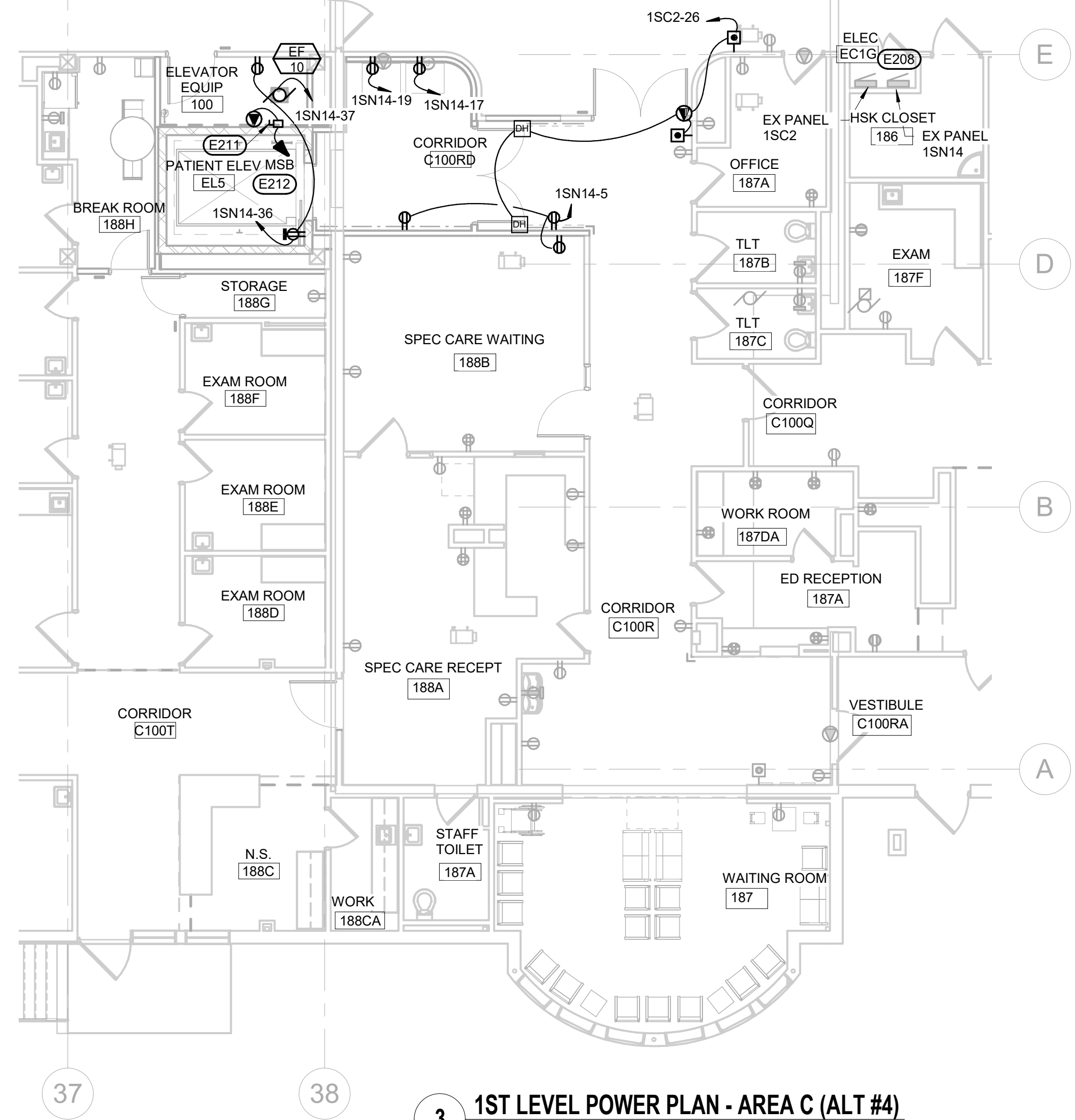
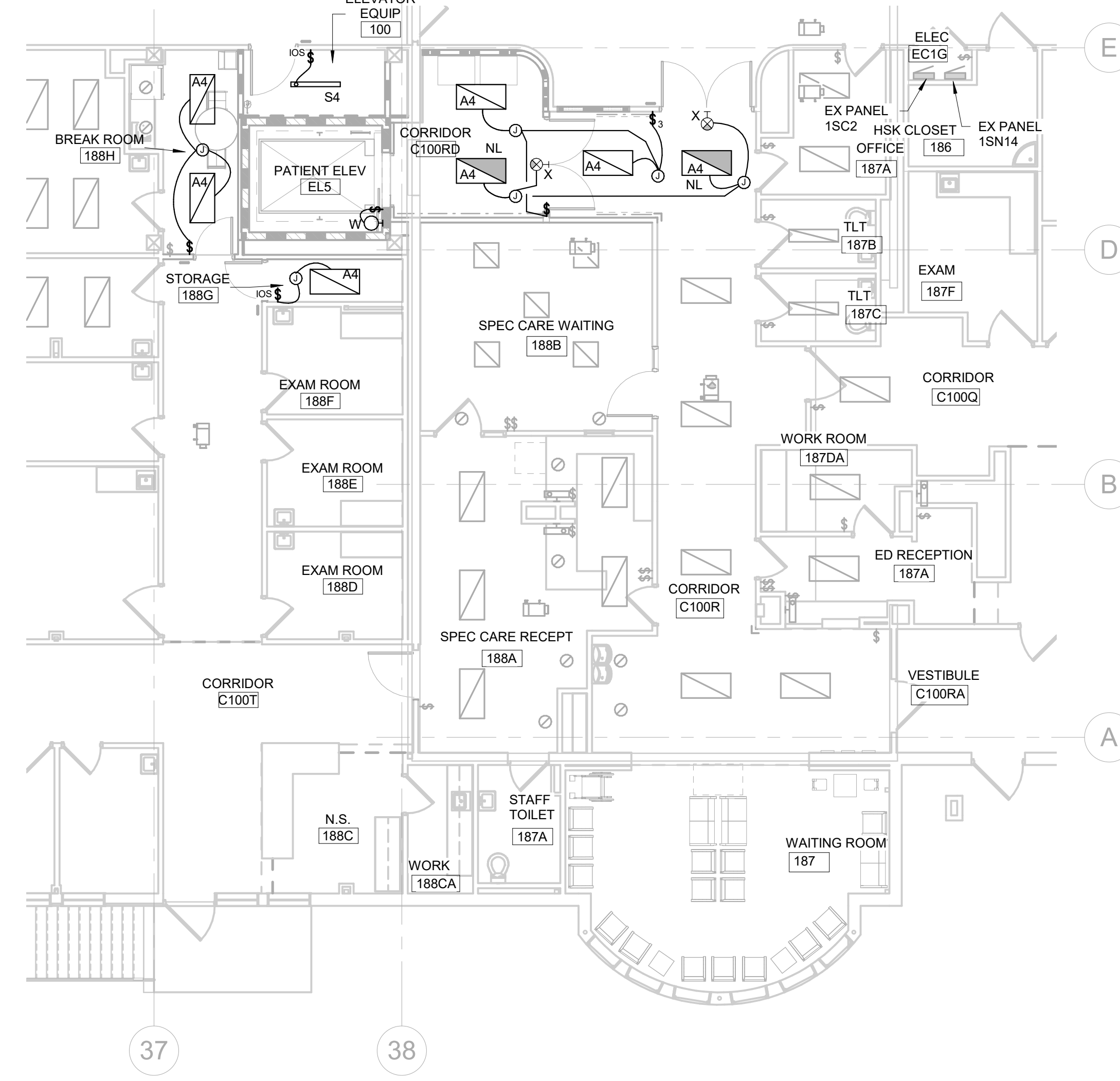
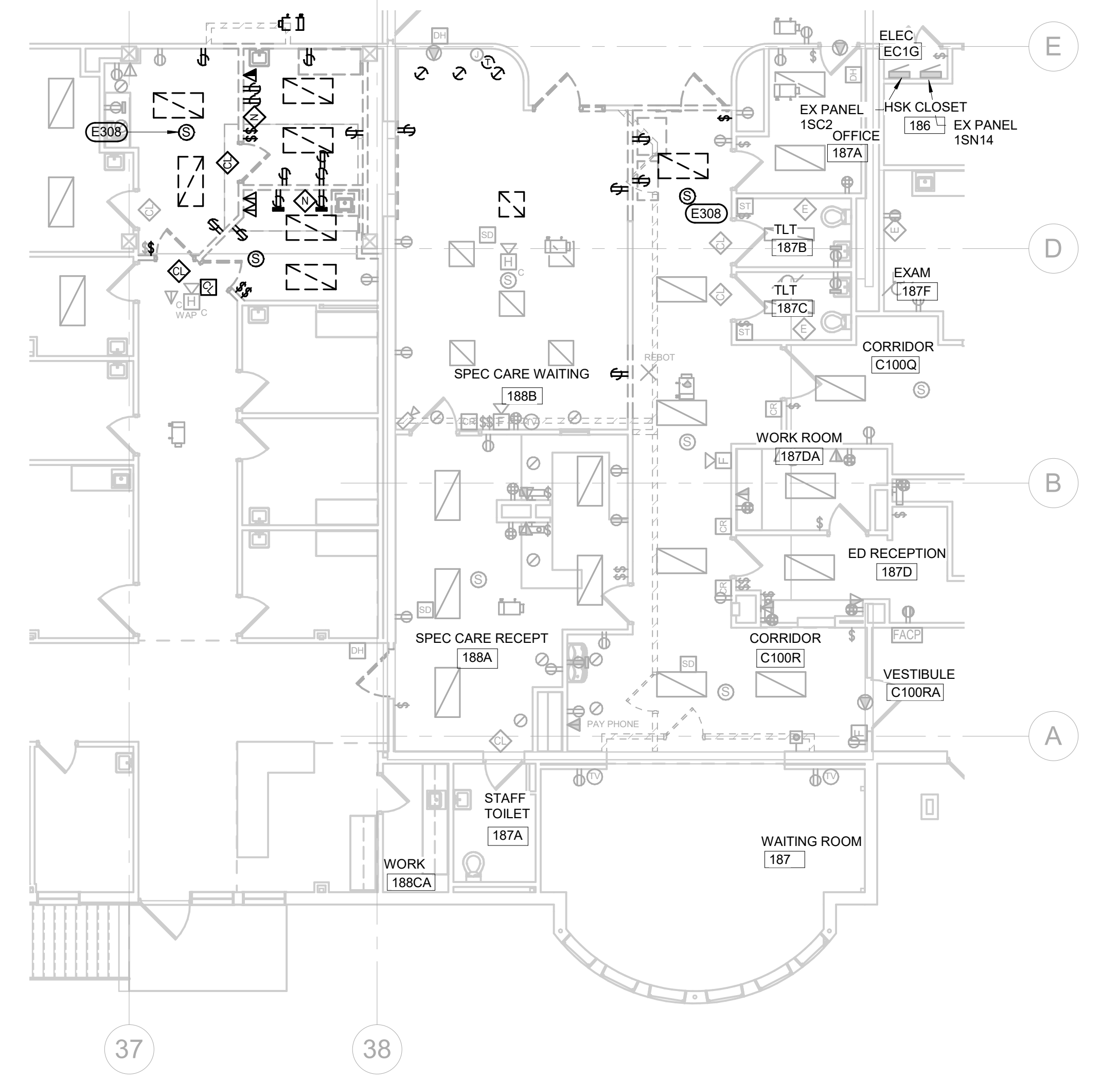
Drawn
VLS

Project Number
VA #568-14-110
WPE #BR21020

Building Number
113

Drawing Number
EP103

three inches = one foot
 one and one half inches = one foot
 one inch = one foot
 three quarters inch = one foot
 one half inch = one foot
 three eighths inch = one foot
 one quarter inch = one foot
 one eighth inch = one foot



- ELECTRICAL MISCELLANEOUS NOTES**
- A ALL ITEMS SHOWN IN DARK PEN ON THE DEMOLITION PLAN ARE TO BE REMOVED. THE CONTRACTOR SHALL REMOVE WIRING OR CABLING BACK TO THE NEXT J-BOX THAT WILL STILL HAVE ACTIVE DEVICES OR LIGHTING SERVED FROM IT OR IF NO ITEMS ARE STILL FED FROM THE WIRE OR CABLE THEN WIRE OR CABLE SHALL BE REMOVED BACK TO THE SOURCE.
 - B THIS IS A PHASED PROJECT. ONLY ELECTRICAL ITEMS WITHIN THE PHASE BEING WORKED ON CAN BE DISRUPTED WHILE WORKING IN A PARTICULAR PHASE. THERE WILL BE PANELBOARDS THAT ARE WITHIN CERTAIN PHASES THAT PROVIDE POWER TO ITEMS OUTSIDE THE PHASE THE PANEL IS LOCATED. THE CONTRACTOR WILL BE REQUIRED TO KEEP ALL ITEMS OUTSIDE THE PHASE BEING WORKED ON OPERATIONAL TO THE EXTENT POSSIBLE. WHEN THERE COMES A TIME THAT DISRUPTION NEEDS TO OCCUR OUTSIDE THE PHASE BEING WORKED ON THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE OWNER WHAT WILL BE INTERRUPTED AND THAT INTERRUPTION SHALL BE KEPT TO A MINIMUM DURATION. ALL NOTIFICATIONS OF OUTAGES, OUTSIDE THE PHASE BEING WORKED ON, SHALL BE IN WRITING AND A MINIMUM OF 2 DAYS IN ADVANCE.
 - C AS PART OF THE PHASING PROCESS THE MECHANICAL CONTRACTOR WILL BE REMOVING EXISTING DUCT WORK, PLUMBING FIXTURES AND PIPING AS WELL AS FIRE SPRINKLER PIPING. THE ELECTRICAL CONTRACTOR WILL NEED TO ASSIST WITH THIS EFFORT BY REMOVING AND OR RELOCATING CERTAIN EXISTING FIXTURES, CONDUITS, AND OTHER ELECTRICAL AND LOW VOLTAGE ITEMS AS NECESSARY THAT MAY BE IN THE WAY OF THIS WORK. THIS INCIDENTAL WORK IS CONSIDERED PART OF THE ELECTRICAL CONTRACTORS SCOPE OF WORK AND NO ADDITIONAL COMPENSATION WILL BE PAID TO DO THIS WORK.
 - D ALL LAMPS IN EXISTING FIXTURES BEING DEMOED SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH CURRENT REGULATIONS.
 - E ALL ELECTRICAL ITEMS NOTED TO BE DEMOED ARE TO BE DISPOSED OF BY THE CONTRACTOR, IF THE OWNER DOES NOT WANT THEM IN A MANNER THAT MEETS ALL REQUIRED CODES AND REGULATIONS.
 - F THE LIGHTING IN THE RENOVATED AREAS ON FIRST FLOOR SHALL BE CONNECTED TO EXISTING CIRCUITS ALREADY SERVING THIS AREA.
 - G THE CONTRACTOR NEEDS TO REFER TO EA SERIES SHEETS REGARDING THE EXISTING LOW VOLTAGE SYSTEMS THAT ARE TO BE INTERFACED, ADDED TO OR MODIFIED AS PART OF THIS PROJECT. CONTRACTOR WILL BE REQUIRED TO PROVIDE SUBMITTALS FOR ALL SYSTEMS AS NOTED ON THESE SHEETS AND IN ACCORDANCE WITH DIVISION 01 REQUIREMENTS. THE SYSTEMS SHALL ALSO BE WARRANTED AS NOTED ON THESE SHEETS AND IN ACCORDANCE WITH DIVISION 01 REQUIREMENTS. CONTRACTOR SHALL PROVIDE ALL MATERIALS, DEVICES AND EQUIPMENT TO MAKE FULLY FUNCTIONAL SYSTEMS FOR ALL LOW VOLTAGE SYSTEM.

- ELECTRICAL SPECIFIC NOTES**
- E208 EXISTING PANEL BOARDS 15C2 AND 15N14 ARE 120/208V/3-PH/4W SQUARE D NOOD PANELBOARDS WITH 22KAIC RATED BREAKERS ANY BREAKERS ADDED OR CHANGED IN THESE PANELS SHALL BE UL LISTED FOR USE IN THESE PANELS AND SHALL BE 22KAIC RATED BREAKERS TO MATCH EXISTING.
 - E211 PROVIDE BUSSMANN POWER MODULE ELEVATOR DISCONNECT SWITCH MODEL PS-2 T20-R2-K-G-N2-B-F1-1 OR EQUAL WITH TYPE J FUSES AND FUSE TO MATCH ELEVATOR EQUIPMENT REQUIREMENTS. INTERLOCK SHUNT TRIP OF DISCONNECT WITH HEAT DETECTORS IN ELEVATOR PIT AND ELEVATOR EQUIPMENT ROOM. ROUTE CIRCUIT FOR ELEVATOR THROUGH THIS SWITCH.
 - E212 CONTRACTOR TO PROVIDE 4-430 CONDUCTORS FROM NEW 200A/3P BREAKER IN MAIN SWITCHBOARD (MSB) LOCATED IN THE BASEMENT OF BUILDING 113. SEE PARTIAL BASEMENT ELECTRICAL ROOM PLAN THIS SHEET FOR MORE INFORMATION. CONTRACTOR SHALL CONFIRM ROUTING WITH OWNER PRIOR TO INSTALLING.
 - E307 INTERLOCK SMOKE DETECTORS WITH ELEVATOR RECALL.
 - E308 EXISTING SPEAKER TO BE RELOCATED. CONTRACTOR TO PROVIDE ALL NEW CABLE FOR THE INTERCOM SYSTEM EQUAL TO WEST PENN 292938 18AWG PLENUM CABLE TO CONNECT TO THE EXISTING SYSTEM.
 - E309 INTERLOCK DOOR HOLDS WITH FIRE ALARM SYSTEM SUCH THAT DOOR HOLDS RELEASE UPON ACTIVATION OF THE FIRE ALARM SYSTEM.
 - E310 PROVIDE FIXED TEMP HEAT DETECTOR NEXT TO SPRINKLER HEAD IN ELEVATOR PIT AREA. INTERLOCK THIS HEAT DETECTOR WITH THE SHUNT TRIP FOR THE ELEVATOR.
 - E311 PROVIDE FIXED TEMP HEAT DETECTOR NEXT TO SPRINKLER HEAD IN ELEVATOR EQUIPMENT ROOM. INTERLOCK THIS HEAT DETECTOR WITH THE SHUNT TRIP FOR THE ELEVATOR. ALSO PROVIDE SMOKE DETECTOR IN ELEVATOR EQUIPMENT ROOM AND INTERLOCK WITH ELEVATOR RECALL.
 - E312 PROVIDE CAT 6 CABLE TO ELEVATOR CONTROL PANEL FOR COMMUNICATIONS REQUIREMENTS IN THE ELEVATOR CAB.

Revision#	Description	Date:

CONSULTANTS

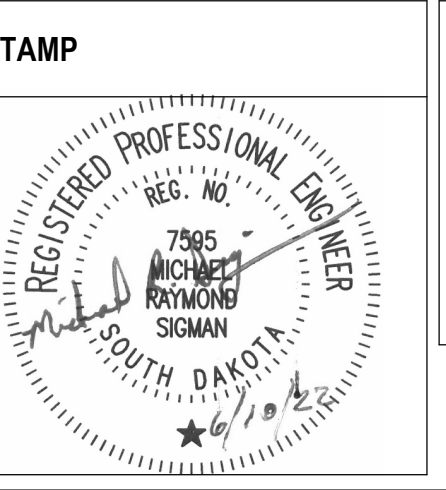
STRUCTURAL:
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 3202 W. Main St. #C
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MECHANICAL / ELECTRICAL / PLUMBING:
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 319 N. MAIN AVE.
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 TODD STONE, AIA

STONE GROUP ARCHITECTS



Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title
 ALTERNATE FIRST LEVEL ELECTRICAL PLANS - AREA C

Approved:

Phase
 BID DOCUMENTS

FULLY SPRINKLERED

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 FORT MEADE, SOUTH DAKOTA

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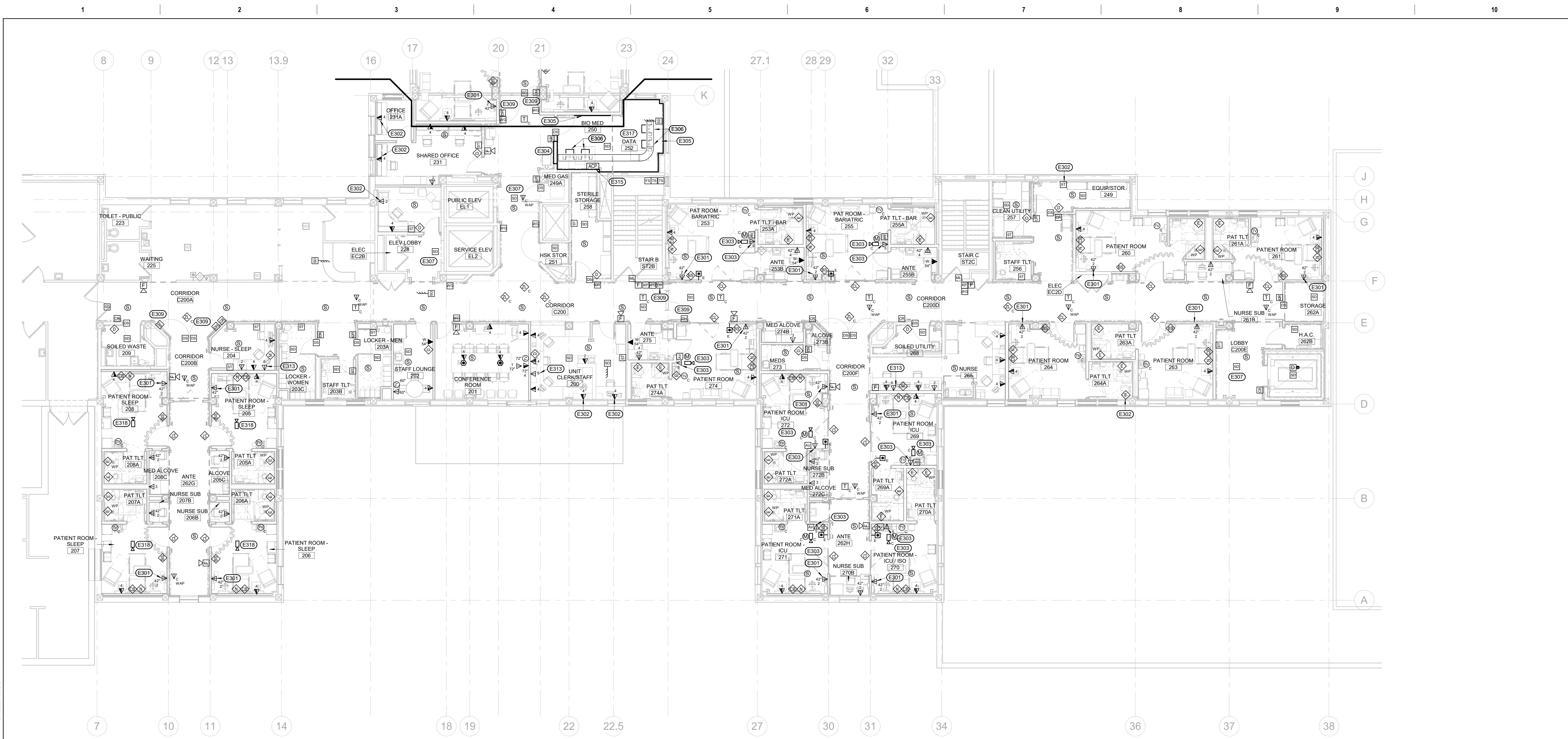
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 VA #568-14-110
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Building Number
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Drawing Number
 EP104



1 2ND LEVEL SIGNAL PLAN - AREA A
1/8" = 1'-0"

ELECTRICAL MISCELLANEOUS NOTES

- A THE CONTRACTOR NEEDS TO REFER TO EA SERIES SHEETS REGARDING THE EXISTING LOW VOLTAGE SYSTEMS THAT ARE TO BE INTERFACED, ADDED TO OR MODIFIED AS PART OF THIS PROJECT. CONTRACTOR WILL BE REQUIRED TO PROVIDE SUBMITTALS FOR ALL SYSTEMS AS NOTED ON THESE SHEETS AND IN ACCORDANCE WITH DIVISION 01 REQUIREMENTS. THE SYSTEMS SHALL ALSO BE WARRANTED AS NOTED ON THESE SHEETS AND IN ACCORDANCE WITH DIVISION 01 REQUIREMENTS. CONTRACTOR SHALL PROVIDE ALL MATERIALS, DEVICES AND EQUIPMENT TO MAKE FULLY FUNCTIONAL SYSTEMS FOR ALL LOW VOLTAGE SYSTEM.
- B ANY FIXTURES OR WIRING DEVICES SHOWN TO BE INSTALLED WITHIN EXISTING SHEET ROCK WALLS SHALL BE FISHED INTO THE WALL BY THE CONTRACTOR.

ELECTRICAL SPECIFIC NOTES

- E301 LOCATION FOR COMPUTER WORK STATION. PLACE RECEPTACLE AND DATA OUTLET NEXT TO EACH OTHER. COORDINATE FINAL LOCATION OF STATION AND SHELF WITH GENERAL CONTRACTOR, ARCHITECT AND OWNER.
- E302 NEW DEVICES ON EXTERIOR WALLS THAT ARE NOT BEING FURRED OUT WILL REQUIRE THE GENERAL CONTRACTOR TO PROVIDE SELECTIVE DEMOLITION OF THE WALL AS WELL AS PATCH AND REPAIR TO INSTALL THESE NEW DEVICES.
- E303 ROOMS 253, 255, 269, 270, 271, 272 AND 274 ROOMS HAVE TELE-ICU SETUP THAT INCORPORATES A VIDEO CAMERA, SPEAKER, MICROPHONE, MONITOR, AUDIO/VIDEO SERVER AND AN EJECT PUSH BUTTON. THIS SYSTEM ALLOWS STAFF TO CONNECT TO A REMOTE SITES FOR CONSULTS AND OTHER EMERGENCY SUPPORT. CONTRACTOR TO PROVIDE POWER AND INFRASTRUCTURE TO SUPPORT THIS SYSTEM. SEE ROUGH-IN AND EQUIPMENT MOUNTING DIAGRAMS SHEET EJ102 FOR SPECIFIC WIRING CONNECTIONS. EQUIPMENT PROVIDED BY OWNER.
- E304 THERE IS AN EXISTING NURSE CALL TERMINATION CABINET RECESSED IN THIS EXISTING WALL THAT IS TO REMAIN. THE CONTRACTOR NEEDS TO MAINTAIN SERVICE TO ALL EXISTING NURSE CALL SYSTEMS FED FROM THIS LOCATION THROUGHOUT THE ENTIRE PROJECT. NEW NURSE A NEW NURSE CALL CABINET SHALL BE INSTALLED IN THE BIOMED CLOSET AND ALL NEW NURSE CALL CABLES CAN BE RAN BACK TO THIS NEW PANEL. THE NEW PANEL SHALL BE TIED TO THE HOSPITAL WIDE NURSE CALL SYSTEM TO PROVIDE A COMPLETE SYSTEM HOSPITAL WIDE.
- E305 CONTRACTOR TO LINE INSIDE OF BIO MED 250 AND DATA 252 WITH 3/4" FIRE RATED PLYWOOD AND PAINT WITH GREY FIRE RATED PAINT. PLYWOOD SHALL BE HUNG WITH 2" EDGE RUNNING VERTICALLY AND SHALL BE HELD OFF THE FLOOR BY 2".

ELECTRICAL SPECIFIC NOTES

- E306 CONTRACTOR TO PROVIDE 23" 4-POST COMMUNICATIONS RACK EQUAL TO ORTRONICS MODEL MM2079338-W WITH CABLE MANAGEMENT EQUAL TO ORTRONICS MODEL MM20VMD706. PATCH PANELS SHALL BE LEVITON E2X1A-S48 OR EQUAL WITH REAR CABLE MANAGEMENT AND ANGLED PANEL COVER. PROVIDE QUANTITY OF PATCH PANELS AS NEED FOR ALL CABLES INSTALLED PLUS 20% SPARES. PROVIDE WITH FULLY LOADED ATLAS-X1 E23HD COPPER TRUNKS CAT 6A UTP CMP CABLE ASSEMBLY WITH BUNDLE OF 6 BLUE CABLES.
- E307 INTERLOCK SMOKE DETECTORS WITH ELEVATOR RECALL.
- E309 INTERLOCK DOOR HOLDS WITH FIRE ALARM SYSTEM SUCH THAT DOOR HOLDS RELEASE UPON ACTIVATION OF THE FIRE ALARM SYSTEM.
- E313 PROVIDE 6 CAT 6A CABLES FROM EACH LOCATION TO BIOMED 250 FOR CENTRAL MONITORING STATION. COORDINATE LOCATION WITH VA STAFF PRIOR TO ROUGH IN.
- E315 NEW C-CURE 9000 ACCESS CONTROL PANEL.
- E317 AS PART OF THE FIRST PHASE OF THIS PROJECT BIOMED 250/DATA 252 WILL NEED TO BE CONSTRUCTED SO THAT NEW LOW VOLTAGE CABLING CAN BE INSTALLED AND TERMINATED. THIS MEANS THAT FIBER MUST ALSO BE EXTENDED TO THESE ROOMS FROM BUILDING 145 AS SHOWN ON SHEET EY103 AND SPECIFIC NOTE E316. CONTRACTOR WILL NEED TO PROVIDE TEMPORARY POWER TO THE RACKS AND HVAC EQUIPMENT UNDER THIS PHASE TO ENSURE OPERATIONS CAN OCCUR WHEN THE FIRST PHASE OF CONSTRUCTION IS COMPLETED. CONTRACTOR WILL STILL NEED TO PROVIDE FINAL PERMANENT CONNECTIONS AS SHOWN ON PLANS AT THE COMPLETION OF THE PROJECT.
- E318 OWNER WILL BE INSTALLING CAMERAS IN THE CEILING OF THE SLEEP STUDY ROOMS FOR MONITORING OF PATIENTS. THE CONTRACTOR SHALL PROVIDE A DATA DROP FROM EACH CAMERA LOCATION BACK TO BIOMED/DATA 250/252. COORDINATE FINAL LOCATION OF CAMERA AND ALSO FINAL TERMINATION LOCATION IN BIOMED/DATA 250/252 WITH OWNER PRIOR TO ROUGH-IN.

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STAMP

Office of Construction and Facilities Management

U.S. Department of Veterans Affairs

Drawing Title
SIGNAL PLAN - 2ND LEVEL - AREA A

Approved:

Phase
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FULLY SPRINKLERED

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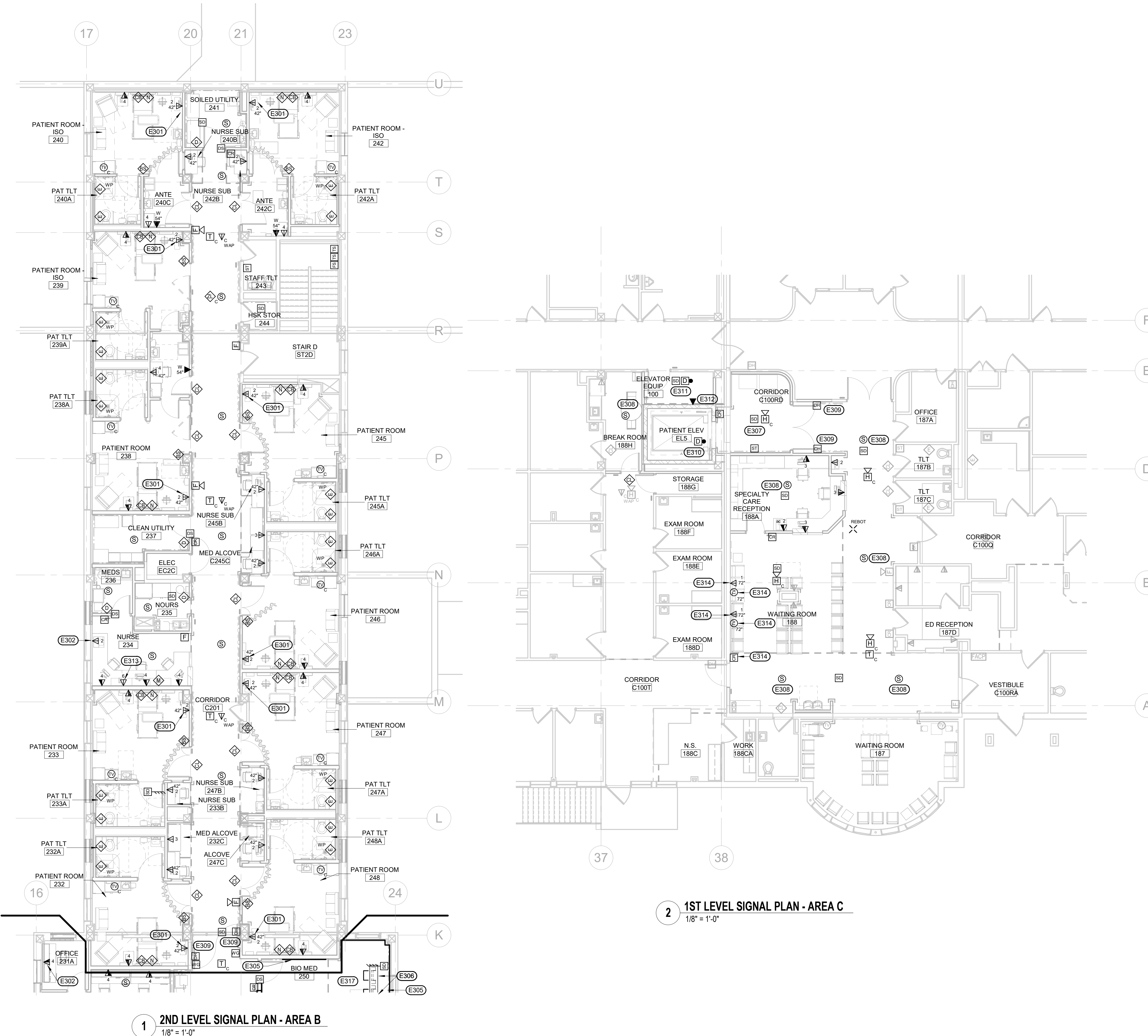
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EY101

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 - E311 PROVIDE FIXED TEMP HEAT DETECTOR NEXT TO SPRINKLER HEAD IN ELEVATOR EQUIPMENT ROOM. INTERLOCK THIS HEAT DETECTOR WITH THE SHUNT TRIP FOR THE ELEVATOR. ALSO PROVIDE SMOKE DETECTOR IN ELEVATOR EQUIPMENT ROOM AND INTERLOCK WITH ELEVATOR RECALL.
 - E312 PROVIDE CAT 6 CABLE TO ELEVATOR CONTROL PANEL FOR COMMUNICATIONS REQUIREMENTS IN THE ELEVATOR CAB.
 - E313 PROVIDE CAT 6A CABLES FROM EACH LOCATION TO BIOMED 250 FOR CENTRAL MONITORING STATION. COORDINATE LOCATION WITH VA STAFF PRIOR TO ROUGH IN.
 - E314 CONTRACTOR TO FISH INTO EXISTING EXISTING WALL TO INSTALL DEVICE.
 - E317 AS PART OF THE FIRST PHASE OF THIS PROJECT BIOMED 250 DATA 252 WILL NEED TO BE CONSTRUCTED SO THAT NEW LOW VOLTAGE CABLES CAN BE INSTALLED AND TERMINATED. THIS MEANS THAT FIBER MUST ALSO BE EXTENDED TO THESE ROOMS FROM BUILDING 145 AS SHOWN ON SHEET EY103 AND SPECIFIC NOTE E316. CONTRACTOR WILL NEED TO PROVIDE TEMPORARY POWER TO THE RACKS AND HVAC EQUIPMENT UNDER THIS PHASE TO ENSURE OPERATIONS CAN OCCUR WHEN THE FIRST PHASE OF CONSTRUCTION IS COMPLETED. CONTRACTOR WILL STILL NEED TO PROVIDE FINAL PERMANENT CONNECTIONS AS SHOWN ON PLANS AT THE COMPLETION OF THE PROJECT.

1 2ND LEVEL SIGNAL PLAN - AREA B
 1/8" = 1'-0"

2 1ST LEVEL SIGNAL PLAN - AREA C
 1/8" = 1'-0"

Revision#	Description	Date:

CONSULTANTS

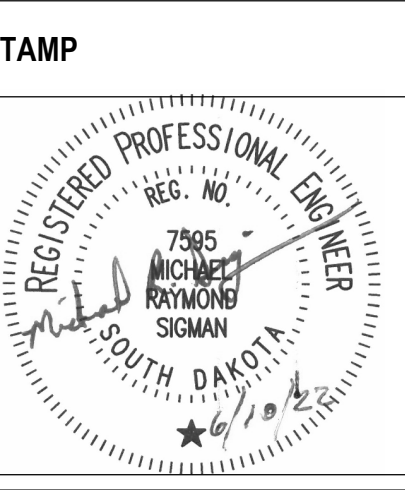
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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title
 SIGNAL PLANS - 2ND LEVEL - AREA B & 1ST LEVEL - AREA C

Approved:

Phase
 BID DOCUMENTS

FULLY SPRINKLERED

Project Title
 RENOVATE AND CONSOLIDATE INPATIENT FUNCTIONS

Location
 FORT MEADE, SOUTH DAKOTA

Issue Date
 06/10/2022

Checked
 MRS

Drawn
 VLS

Project Number
 VA #568-14-110
 WPE #BR21020

Building Number
 113

Drawing Number
 EY102

three inches = one foot
 one and one half inches = one foot
 one inch = one foot
 three quarters inch = one foot
 one half inch = one foot
 three eighths inch = one foot
 one quarter inch = one foot
 one eighth inch = one foot



ELECTRICAL SPECIFIC NOTES:

E316 THE EXISTING SERVER ROOM THAT SERVES THE VA CAMPUS IS LOCATED IN BUILDING 145. THIS CONTRACTOR IS TO PROVIDE TWO SEPARATE 1 INCH CONDUITS FROM BUILDING 145 ROOM 132 (FIRST FLOOR) TO NEW DATA 252. THE CONDUITS SHALL BE ROUTED FROM ROOM 132 (FIRST FLOOR) OF BUILDING 145 INTO THE CRAWL SPACE BELOW ROOM 132. THE CONDUITS WILL BE ROUTED THROUGH THE BUILDING 145 CRAWL SPACE TO THE TUNNEL BELOW THE LINK BETWEEN BUILDING 145 AND BUILDING 113. ONCE INTO BUILDING 113 THE CONDUIT WILL BE ROUTED IN THE CEILING SPACE OF THE BASEMENT TO ELECTRICAL CLOSET EC88 WHERE IT WILL EXTEND VERTICALLY TO THE SECOND FLOOR AND TO DATA 252. THE CONTRACTOR SHALL MAINTAIN A SEPARATION OF 24 INCHES BETWEEN THESE CONDUITS. IF THE CONTRACTOR FINDS A LOCATION THAT THIS DISTANCE CANNOT BE MAINTAINED IT MUST BE BROUGHT TO THE COR'S ATTENTION FOR REVIEW AND APPROVAL. EACH OF THESE CONDUITS WILL HAVE A 12 STRAND SINGLE MODE FIBER INSTALLED IN IT. SEE SHEETS EA101 AND EA102 FOR ADDITIONAL REQUIREMENTS REGARDING FIBER CABLE, MATERIALS, INSTALLATION AND TERMINATION REQUIREMENTS.

1 SIGNAL PLAN - FIBER ROUTING PLAN
 1/16" = 1'-0"

Revision#	Description	Date:

CONSULTANTS

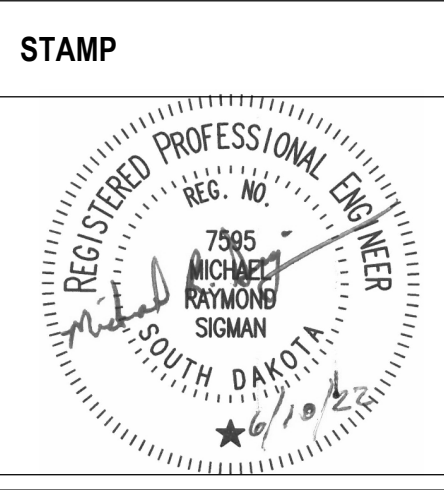
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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title
 SIGNAL PLAN - FIBER ROUTING

Approved:

Phase
 BID DOCUMENTS

FULLY SPRINKLERED

Project Title
 RENOVATE AND CONSOLIDATE INPATIENT FUNCTIONS

Location
 FORT MEADE, SOUTH DAKOTA

Issue Date
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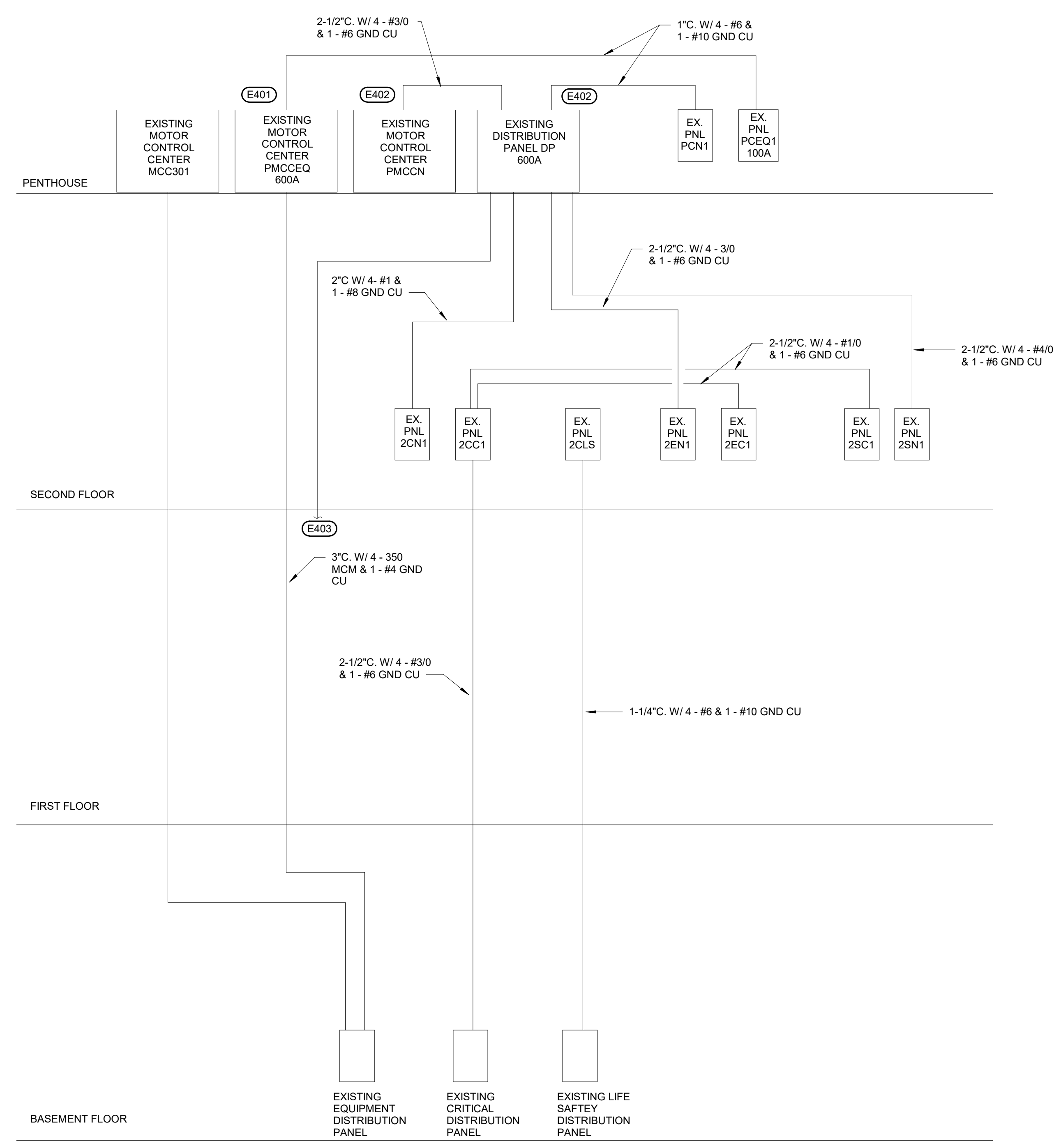
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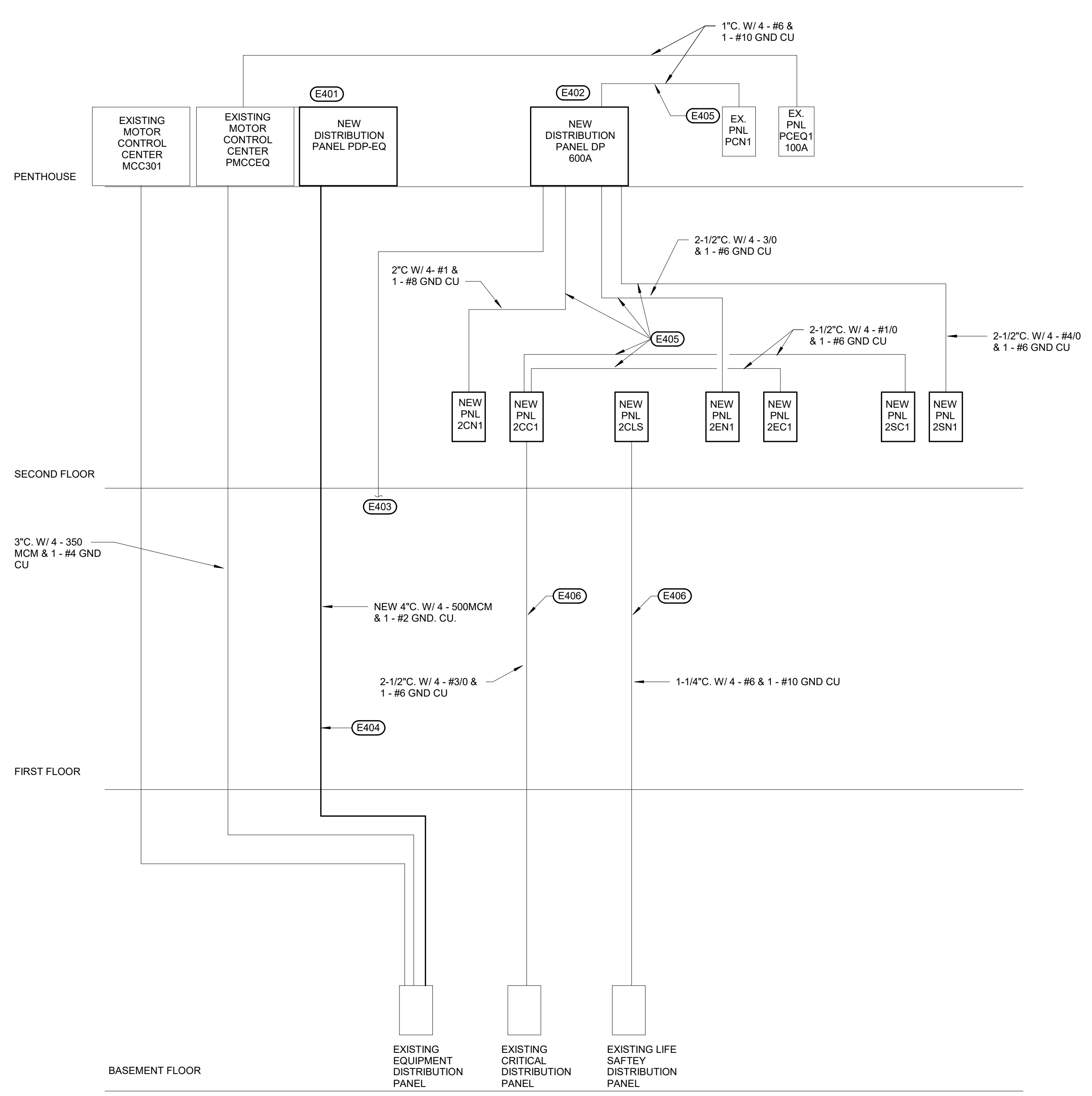
Project Number
 VA #568-14-110
 WPE #BR21020

Building Number
 113

Drawing Number
 EY103



1 PARTIAL EXISTING ELECTRICAL ONE-LINE DIAGRAM NO SCALE



2 PARTIAL REVISED ELECTRICAL ONE-LINE DIAGRAM NO SCALE

- ELECTRICAL MISCELLANEOUS NOTES:**
- A ALL OF THE PANELBOARDS ON SECOND FLOOR WITHIN THE LIMITS OF CONSTRUCTION ARE BEING REPLACED. UNLESS SPECIFICALLY NOTED OTHERWISE THE EXISTING FEEDERS TO THESE PANELS ARE TO REMAIN. CONTRACTOR TO MODIFY OR EXTEND AS NECESSARY FOR CONNECTION TO NEW PANELBOARDS.
- ELECTRICAL SPECIFIC NOTES:**
- E401 THERE ARE SEVERAL EXISTING LOADS IN EXISTING MOTOR CONTROL CENTER PMCC6Q THAT ARE BEING REPLACED AS PART OF THIS PROJECT. THIS NEW EQUIPMENT WILL NO LONGER BE SERVED FROM PMCC6Q BUT WILL BE SERVED FROM NEW DISTRIBUTION PANEL PDP-EQ OR NEW DISTRIBUTION PANEL DP. ANY LOADS NOTED TO BE RELOCATED TO ONE OF THESE NEW DISTRIBUTION PANELS WILL NEED TO HAVE CONDUITS AND CONDUCTORS MODIFIED AND/OR EXTENDED TO MAKE A COMPLETE TRANSITION.
- E402 EXISTING DISTRIBUTION PANEL DP AND EXISTING MOTOR CONTROL CENTER PMCCN ARE BEING DEMOED AND REPLACED AS PART OF THIS PROJECT. ALL NEW AND EXISTING LOADS WILL BE SERVED BY NEW DISTRIBUTION PANEL DP THAT WILL BE INSTALLED ON THE OPPOSITE SIDE OF THE EXISTING WALL. THE FEEDER TO EXISTING DISTRIBUTION PANEL DP WILL NEED TO BE INTERCEPTED AND TAPPED INTO FOR PROVIDING SIMULTANEOUS POWER TO EXISTING PANEL DP AND NEW DISTRIBUTION PANEL DP. THIS WILL ALLOW THE MIGRATION OF NEW AND EXISTING LOADS TO THE NEW DISTRIBUTION PANEL DP WITHOUT MAJOR OUTAGES. AT THE COMPLETION OF THE PROJECT THE TAP TO EXISTING DISTRIBUTION PANEL DP WILL NEED TO BE REMOVED AND ONLY NEW DISTRIBUTION PANEL DP WILL BE FED. THE CONTRACTOR WILL NEED TO EXTEND AND/OR MODIFY ALL CONDUITS AND CONDUCTORS FROM NEW DISTRIBUTION TO EXISTING LOADS THAT ARE TO BE REFEED.
- E403 EXISTING FEEDER EXTENDS TO THE MAIN SWITCHBOARD LOCATED IN THE BASEMENT OF BUILDING 113. EXISTING FEEDER CONSISTS OF 2 3-1/2\"/>

E404 EXISTING EMERGENCY DISTRIBUTION EQUIPMENT PANEL HAS A SPARE 400A LSI ELECTRONIC CIRCUIT BREAKER WITH ADJUSTABLE TRIP SETTINGS. CONTRACTOR TO PROVIDE A NEW FEEDER FROM THIS BREAKER TO NEW DISTRIBUTION PANEL PDP-EQ IN THE PENTHOUSE. BREAKER SHALL BE SET FOR 400A TRIP. FEEDER SHALL BE 4\"/>

E405 EXISTING FEEDER EXTENDS TO THE MAIN SWITCHBOARD LOCATED IN THE BASEMENT OF BUILDING 113. EXISTING FEEDER CONSISTS OF 2 3-1/2\"/>

E406 EXISTING EMERGENCY DISTRIBUTION EQUIPMENT PANEL HAS A SPARE 400A LSI ELECTRONIC CIRCUIT BREAKER WITH ADJUSTABLE TRIP SETTINGS. CONTRACTOR TO PROVIDE A NEW FEEDER FROM THIS BREAKER TO NEW DISTRIBUTION PANEL PDP-EQ IN THE PENTHOUSE. BREAKER SHALL BE SET FOR 400A TRIP. FEEDER SHALL BE 4\"/>

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Revision#	Description	Date:

CONSULTANTS

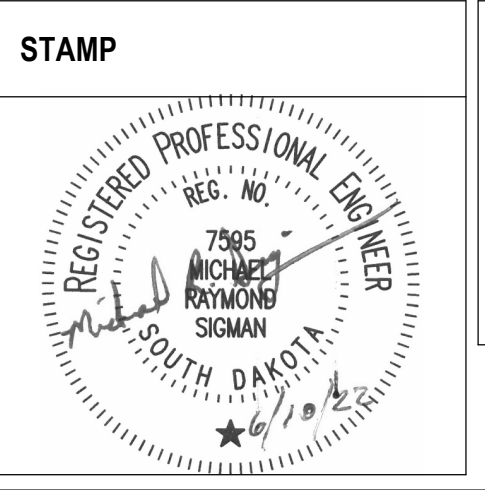
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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title
ELECTRICAL ONE-LINE DIAGRAM

Approved:

Phase
BID DOCUMENTS

FULLY SPRINKLERED

Project Title
RENOVATE AND CONSOLIDATE INFIRIANT FUNCTIONS

Location
FORT MEADE, SOUTH DAKOTA

Issue Date
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MRS

Drawn
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Project Number
VA #568-14-110
WPE #BR21020

Building Number
113

Drawing Number
EJ101