

Plot Date 7/29/2015 3:48:04 PM

F

one quarter inch = one foot

three eighths inch = one foot

D

one half inch = one foot

C

one inch = one foot

B

one sixteenth inch = one foot

A

one thirty second inch = one foot

GENERAL CONTRACTOR NOTES

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL DRAWINGS AND SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO ARCHITECTURAL, CIVIL, STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL PRIOR TO SUBMITTING A BID. REPORT ANY DISCREPANCIES TO ARCHITECT OR ENGINEER PRIOR TO BID.
2. BIDDING CONTRACTORS ARE TO VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS AND SATISFY THEMSELVES AS TO THE NATURE AND SCOPE OF THE WORK. THE SUBMISSION OF A BID WILL BE EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE. LATER CLAIMS FOR LABOR, EQUIPMENT, OR MATERIALS REQUIRED, OR FOR ANY DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD AN EXAMINATION BEEN MADE, WILL NOT BE ALLOWED.
3. NEW CIRCUIT DESIGNATIONS MAY NOT REPRESENT ACTUAL FIELD CONDITIONS. THEY ARE INTENDED FOR REFERENCE ONLY.
4. THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES IN REGARDS TO THEIR SCOPE OF WORK WHICH WILL REQUIRE ELECTRICAL WORK SUCH AS DISCONNECTION AND/OR RECONNECTION OF EQUIPMENT, AND WHICH MAY NOT BE SHOWN OR INDICATED ON THE DRAWINGS.

GENERAL NOTES - DEMOLITION

1. ELECTRICAL DEMOLITION WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, REMOVING LIGHTING FIXTURES, RECEPTACLES, SERVICE AND DISTRIBUTION EQUIPMENT, WIRE, CONDUIT, HANGERS, ETC. AS REQUIRED FOR THE INSTALLATION OF NEW EQUIPMENT AND RENOVATION OF THE EXISTING FACILITIES AS INDICATED ON THE DRAWINGS.
2. REFER TO ARCHITECTURAL, CIVIL, STRUCTURAL, PLUMBING, AND HVAC DRAWINGS FOR ADDITIONAL DEMOLITION WORK NEEDING COORDINATION.
3. SEE SPECIFICATION SECTION 02 41 00 -DEMOLITION FOR ADDITIONAL REQUIREMENTS.
4. ALL ELECTRICAL MATERIALS BEING REMOVED SHALL BE DISPOSED OF IN AN ENVIRONMENTALLY SAFE MANNER. MATERIALS INCLUDE, BUT ARE NOT LIMITED TO, LIGHT FIXTURES, TELEPHONE, DATA OUTLETS, CONDUIT, WIRING, ETC. COORDINATE DISPOSITION OF THE MATERIALS WITH OWNER PRIOR TO REMOVAL.
5. CONTRACTOR SHALL REMOVE ANY EXPOSED WIRE, CONDUIT, HANGERS, CLAMPS, BOXES, ETC. WHICH ARE NOT BEING UTILIZED FOR THE NEW INSTALLATION.
6. EXISTING WIRE AND CONDUITS, CONCEALED ABOVE CEILING OR IN WALLS SHALL BE REMOVED AS REQUIRED. EXISTING CONDUIT NOT ABLE TO BE REMOVED SHALL BE CUT, CAPPED AND MARKED.
7. MAINTAIN AND RESTORE, IF INTERRUPTED, ALL CONDUITS AND CONDUCTORS PASSING THROUGH RENOVATED AREAS AND SERVICING UNDISTURBED AREAS.
8. CONTRACTOR IS RESPONSIBLE TO VERIFY CAPACITY OF PANELBOARDS BEFORE ADDING NEW CIRCUITS.
9. CIRCUITING SHOWN ON THE PLANS IS BASED ON INFORMATION GIVEN TO THE ENGINEER AT TIME OF DESIGN AND A GENERAL FIELD SURVEY. CONTRACTOR SHALL FIELD VERIFY ACTUAL AVAILABLE CIRCUITS, PRIOR TO START OF CONSTRUCTION, AND ADJUST ACCORDINGLY.
10. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL CORRECT ALL PANELBOARD CIRCUIT DIRECTORY CARDS TO REFLECT AS-BUILT CONDITIONS.
11. CONTRACTOR SHALL PROPERLY COVER ALL UNUSED SPACES. CONTRACTOR SHALL VERIFY ALL EXISTING CIRCUIT BREAKERS BEING REUSED FOR THIS PROJECT, TO BE IN PROPER WORKING CONDITION. ALL LOOSE CIRCUIT BREAKERS SHALL BE PROPERLY SECURED. ALL BROKEN OR MALFUNCTIONING BREAKERS SHALL BE REPLACED.
12. ALL NEW CIRCUIT BREAKERS SHALL MATCH EXISTING EQUIPMENT FOR TYPE AND A.I.C. RATING.
13. RE-USE EXISTING JUNCTION BOXES, CONDUIT AND WIRE WHERE APPLICABLE. REMOVE AND DISPOSE OF ALL UNUSED CONDUIT AND WIRE BACK TO ITS SOURCE.
14. ALL EXISTING ELECTRICAL IN BUILDINGS TO REMAIN ARE FED FROM EXISTING PANELBOARDS. CONTRACTOR SHALL LEAVE ALL AFFECTED CIRCUIT BREAKERS IN EXISTING PANELBOARDS IN-PLACE AND SHALL UPDATE THE EXISTING PANELBOARD DIRECTORY CARDS TO SHOW AFFECTED CIRCUIT BREAKERS AS SPARES, IF APPLICABLE.

GENERAL RECYCLE NOTES

1. ALL WASTE MATERIALS RESULTING FROM DEMOLITION AND NEW CONSTRUCTION SHALL BE SORTED AND RECYCLED IN ORDER TO MINIMIZE THE IMPACT TO LAND FILL SITES. CONTRACTOR TO IMPLEMENT A COMPREHENSIVE WASTE MANAGEMENT PLAN FOR THIS PROJECT AND SUBMIT IT FOR APPROVAL BY THE RESIDENT ENGINEER.

GENERAL ENERGY NOTES

1. ALL ENERGY CONSUMING PRODUCTS SHALL BE ENERGY STAR OR FEMP-DESIGNATED EQUIPMENT (E.G. BOILERS, APPLIANCES, LIGHTING, MOTORS, ETC.) REQUIRED BY §104 OF EPCAT 2005.

GENERAL ELECTRICAL NOTES

1. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN AND INTERIOR ELEVATION DRAWINGS FOR EXACT MOUNTING HEIGHTS AND/OR LOCATIONS OF ALL LIGHTING FIXTURES, OUTLETS AND DEVICES.
2. LIGHTING SWITCHES SHALL BE GROUPED WITH COMMON FACEPLATE AND LOCATED APPROXIMATELY 6 INCHES FROM DOOR FRAME (STRIKE SIDE), U.O.N.
3. LIGHTING FIXTURES WITH MORE THAN TWO LAMPS SHALL HAVE TWO OUTER LAMPS CONTROLLED WITH ONE SWITCH AND INNER LAMP(S) CONTROLLED BY A SECOND SWITCH, PROVIDE ADDITIONAL BALLASTS AS REQUIRED.
4. A GROUND CONDUCTOR SHALL BE INSTALLED IN ENTIRE RACEWAY SYSTEM INCLUDING WALL SWITCHES AND FLEXIBLE CONDUIT TO LIGHT FIXTURES.
5. WIRE SIZING FOR ALL BRANCH CIRCUITS SHALL BE IN ACCORDANCE WITH N.E.C. TABLE 310-16, 75deg. COLUMN AS A MINIMUM.
6. WHERE CIRCUITS ARE IN EXCESS OF 50'-0" ON 120V CIRCUITS, OR 150'-0" ON 277V CIRCUITS, WIRE SIZE SHALL BE INCREASED FROM #12 ON 20A CIRCUIT TO #10, WHERE CIRCUITS LENGTHS ARE BELOW 50'-0" ON 120V CIRCUITS, OR BELOW 150'-0" ON 277V CIRCUITS, WIRE SIZE SHALL BE MINIMUM #12 ON 20A CIRCUITS IN MINIMUM 3/4" CONDUITS, U.O.N.
7. WHERE WIRE SIZE IS INCREASED DUE TO CIRCUIT LENGTH AS SHOWN ABOVE, THAT WIRE SIZE SHALL BE CARRIED THROUGHOUT THE CIRCUIT AS A MINIMUM.
8. WIRE SIZING SHALL BE AS SHOWN IN NOTES ABOVE OR AS SHOWN ON THE DRAWINGS WHICHEVER IS MORE STRINGENT. THAT SAME WIRE SIZE SHALL BE CARRIED THROUGHOUT THE CIRCUIT, AS A MINIMUM.
9. PROVIDE AN EQUIPMENT GROUND CONDUCTOR IN EACH AND EVERY CONDUIT OR RACEWAY, METALLIC OR NON-METALLIC, RIGID OR FLEXIBLE.
10. EQUIPMENT GROUND CONDUCTOR SHALL BE SIZED PER N.E.C. TABLE 250-122 OR AS SHOWN ON THE DRAWINGS WHICHEVER IS MORE STRINGENT.
11. EACH BRANCH CIRCUIT HOMERUN SHALL HAVE NO MORE THAN THREE CIRCUITS. EACH BRANCH CIRCUIT HOMERUN SHALL HAVE A SEPARATE GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR.
12. MULTI-GANG BACKBOXES FOR DIFFERENT VOLTAGES AND TYPES OF EMERGENCY AND NORMAL BRANCH WIRING DEVICES SHALL HAVE DIVIDERS BETWEEN VOLTAGES AND TYPES OF BRANCH WIRING DEVICES.
13. ELECTRICAL CONTRACTOR SHALL FURNISH, INSTALL AND CONNECT LIGHTING CONTROL EQUIPMENT, ACCESSORIES AND HARDWARE INCLUDING BUT NOT LIMITED TO TIMER, SWITCHES, OCCUPANCY SENSORS, AUTOMATIC CONTROL SWITCHES, AUTOMATIC 3-WAY CONTROL SWITCHES, POWER SUPPLIES, RELAYS AND PHOTOCELLS AS SHOWN ON THE LIGHTING DRAWINGS SO THAT THESE SHALL CONTROL THE INDIVIDUAL ROOMS OR AREAS SHOWN ON THE DRAWINGS. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING VENDOR/MANUFACTURER DESIGN LAYOUT DRAWINGS FOR LOCATIONS OF OCCUPANCY SENSORS, POWER SUPPLIES, RELAYS ETC. FOR ALL ROOMS AND AREAS AND SHALL FURNISH, INSTALL AND CONNECT AS RECOMMENDED BY THE VENDOR/MANUFACTURER. ELECTRICAL CONTRACTOR SHALL INCLUDE IN THE LIGHTING SUBMITTAL THE VENDOR/MANUFACTURER DESIGN LAYOUT DRAWINGS FOR REVIEW.
14. THE CONTRACTOR SHALL VERIFY ALL EQUIPMENT BEING INSTALLED PRIOR TO INSTALLATION TO ASSURE THAT THE FEEDER, DISCONNECT, STARTER, OVERCURRENT PROTECTION, ETC. MATCHES THE ACTUAL NAMEPLATE DATA AS SUPPLIED BY THE MANUFACTURER. REFER TO EQUIPMENT CUTSHEETS AND MANUFACTURER'S DATA FOR ROUGH-IN LOCATIONS OF ELECTRICAL CONNECTIONS AND INTERCONNECTIONS OF ALL EQUIPMENT AND PROVIDE/INSTALL AS REQUIRED.
15. ALL EXPOSED CONDUIT SHALL BE RUN PARALLEL, OR AT RIGHT ANGLES TO STRUCTURE.
16. ALL PENETRATIONS THROUGH RATED ASSEMBLY SHALL CONFORM TO THE THROUGH-PENETRATION FIRESTOP SYSTEMS AS REQUIRED FOR THAT ASSEMBLY AND BY UNDERWRITERS LABORATORIES, INC. (U.L.)
17. THE CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR APPROVAL DETAILS OF ALL PENETRATIONS THRU RATED ASSEMBLIES.
18. WHERE LOW VOLTAGE WIRING IS PERMITTED BY THESE DRAWINGS AND APPROVED BY THE LOCAL AUTHORITY HAVING JURISDICTION TO BE FREE-WIRED (ABOVE 7'-0" AND DROPPED CEILINGS), THESE WIRES AND ALL ASSOCIATED TIES AND HANGERS SHALL BE PLENUM RATED AND U.L. LISTED FOR THE APPLICATION.
19. WORK CALLED FOR BY THE PLANS OR SPECIFICATIONS IS REQUIRED THE SAME AS IF REQUIRED BY BOTH. WHERE A CONFLICT EXISTS BETWEEN THE PLANS AND SPECIFICATIONS, THE MORE STRINGENT REQUIREMENTS OF THE TWO SHALL APPLY, UNLESS SPECIFICALLY APPROVED IN WRITING BY THE ARCHITECT AND ENGINEER.
20. FOR INSTANCES WHERE CIRCUITS WITH ROOM NUMBER OR AREA DESIGNATION THAT ARE SHOWN ON PANEL SCHEDULES BUT NOT SHOWN ON ELECTRICAL PLAN, THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATIONS OF RECEPTACLES, OUTLETS, AND BOXES WITH EQUIPMENT SPECIFICATION AND MANUFACTURER REQUIREMENT, FURNITURE LAYOUT, AND SEE THE APPROPRIATE CORRESPONDING DISCIPLINE PLANS FOR ADDITIONAL INFORMATION.
21. COORDINATE ALL TELEPHONE AND DATA DROP LOCATIONS WITH VAMC PERSONNEL PRIOR TO ROUGH-IN.
22. COORDINATE ALL INTERCOM SYSTEM DEVICE LOCATIONS WITH VAMC PERSONNEL PRIOR TO ROUGH-IN.
23. FURNISH CABLING AND RACEWAYS FOR SYSTEM DEVICES AND INSTRUMENTATION ACCORDING TO OTHER TRADES AND VENDORS DRAWINGS AND SPECIFICATIONS.
24. COORDINATE WITH MECHANICAL DRAWINGS AND THE MECHANICAL CONTRACTOR FOR EXACT LOCATIONS AND REQUIREMENTS OF ALL MECHANICAL EQUIPMENT PRIOR TO ROUGH-IN.
25. ALL WORK SHALL BE PERFORMED DURING TIME PERIODS ACCEPTABLE TO THE OWNER. SCHEDULE ALL WORK WITH THE OWNER'S AUTHORIZED REPRESENTATIVE 72 HOURS BEFORE PROCEEDING.
26. ELECTRICAL SHUTDOWNS MUST BE SUBMITTED TO OWNER 3 WORKING DAYS PRIOR TO A MINOR OUTAGE OR 15 DAYS PRIOR TO A MAJOR OUTAGE. SUBMIT TESTING PLAN FOR APPROVAL PRIOR TO EXECUTION. TESTING PLAN SHALL INCLUDE RUNNING GENERATORS IN PARALLEL IN BOTH ISLAND MODE AND GRID PARALLEL MODE, AND UTILIZE COMBINATION LOAD BANK AND LIVE HOSPITAL LOADS FOR LOAD TESTING WITHOUT DROPPING POWER TO THE HOSPITAL. COORDINATE TESTING WITH SOUTH CAROLINA ELECTRIC & GAS (SCE&G), VA, AND EQUIPMENT MANUFACTURERS.

1PH	SINGLE-PHASE	FA	FIRE ALARM
1P	SINGLE POLE	FAAP	FIRE ALARM ANNUNCIATOR PANEL
2/C	TWO-CONDUCTOR	FACP	FIRE ALARM CONTROL PANEL
3/C	THREE-CONDUCTOR	FC	FOOTCANDLE
3PH	THREE-PHASE	FIXT	FIXTURE
4/C	FOUR-CONDUCTOR	FLA	FULL LOAD AMPS
4W	FOUR-WIRE	FLEX	FLEXIBLE METALLIC CONDUIT
		FLT	FLOODLIGHT
A/C UNIT	AIR CONDITIONING UNIT	FLUOR	FLUORESCENT
A/E	ARCHITECT / ENGINEER	FP	FIRE PROTECTION
AAP	ALARM ANNUNCIATOR PANEL	FT	FEET OR FOOT
AC	ALTERNATING CURRENT OR ARMORED CABLE	FU SW	FUSED SWITCH
ACC	ACCESSIBLE	FVR	FULL VOLTAGE NON-REVERSING FULL VOLTAGE REVERSING
ADDL	ADDITIONAL		
ADJ	ADJACENT, ADJOINING	GND, G	GROUND
AF	AMPERE FRAME OR AMP FUSE	GEN	GENERATOR
AFC	AVAILABLE FAULT CURRENT	GFCI	GROUND FAULT CIRCUIT INTERRUPTER
AFF	ABOVE FINISHED FLOOR	GTB	GROUND TERMINAL BOX
AFG	ABOVE FINISHED GRADE		
AH	AMPERE HOUR	HID	HIGH INTENSITY DISCHARGE
AHJ	AUTHORITY HAVING JURISDICTION	HOA	HAND-OFF-AUTOMATIC
AIC	AMPERE INTERRUPTING CAPACITY	HP	HORSEPOWER
ALT	ALTERNATE	HRSG	HEAT RECOVERY STEAM GENERATOR
AMB	AMBIENT	HT	HEIGHT
AMP	AMPERE	HZ	HERTZ
ARCH	ARCHITECT	IESNA	ILLUMINATION ENGINEERING SOCIETY OF NORTH AMERICA
ASC	AMPS SHORT CIRCUIT	IMC	INTERMEDIATE METAL CONDUIT
AT	AMPERE TRIP	INCAND	INCANDESCENT
ATS	AUTOMATIC TRANSFER SWITCH	IR	INFRARED
AUTO	AUTOMATIC	IWH	INSTANTANEOUS WATER HEATER
AV	AUDIO/VISUAL	J-BOX	JUNCTION BOX
BAT	BATTERY	KV	KILOVOLT
BC	BARE COPPER	KVA	KILOVOLT AMPERE
BD	BOARD	KVAH	KILOVOLT AMPERE PER HOUR
BFF	BELOW FINISH FLOOR	KVAR	KILOVOLT AMPERE REACTIVE
BLDG	BUILDING	KW	KILOWATT
BPIP	BOILER PLANT INSTRUMENTATION PANEL	KWH	KILOWATT HOUR
BRKR	BREAKER	KWHM	KILOWATT HOUR METER
BYP	BYPASS		
		LCP	LIGHTING CONTROL PANEL
C	CONDUIT	LED	LIGHT EMITTING DIODE
CAB	CABINET	LF	LINEAR FEET (FOOT)
CALC	CALCULATE	LM	LUMEN
CAP	CAPACITY	LP	LIGHT POLE
CAT	CATALOG	LPS	LOW PRESSURE SODIUM
CATV	COMMUNITY ANTENNA TELEVISION	LRA	LOCKED ROTOR AMPS
CCR	CONTROL CONTRACTOR	LSIG	LONG, SHORT, INSTANTANEOUS, GROUND
CCTV	CLOSED CIRCUIT TELEVISION	LTCP	LOCAL TEMPERATURE CONTROL PANEL
cd	CANDELA	LT	LIGHT
CD	CONSTRUCTION DOCUMENTS	LTG	LIGHTING
CF	CONTRACTOR FURNISHED	LTNG	LIGHTNING
CF/CI	CONTRACTOR FURNISHED / CONTRACTOR INSTALLED	LV	LOW VOLTAGE
CF/OI	CONTRACTOR FURNISHED / OWNER INSTALLED		
		MATV	MASTER ANTENNA TELEVISION SYSTEM
CHP	COMBINED HEAT & POWER	MAX	MAXIMUM
CHW	CHILLED WATER	MC	METAL-CLAD
CHWP	CHILLED WATER PUMP	MCA	MINIMUM CIRCUIT AMPS
CKT	CIRCUIT	MCB	MAIN CIRCUIT BREAKER
CKT BRKR	CIRCUIT BREAKER	MCC	MOTOR CONTROL CENTER
CLF	CURRENT LIMITING FUSE	MDP	MAIN DISTRIBUTION PANEL
CLG	CEILING	MECH	MECHANICAL
CNUJ	CONCRETE MASONRY UNIT	MG	MOTOR GENERATOR
COAX	COAX CABLE	MH	MANHOLE
COMM	COMMUNICATION	MIN	MINIMUM
COMPT	COMPARTMENT	MOCB	MAXIMUM OVERCURRENT PROTECTION
CONC	CONCRETE	MLO	MAIN LUGS ONLY
CONT	CONTINUE	MSB	MAIN SWITCHBOARD
CONTR	CONTRACTOR	MT	MOUNT
COORD	COORDINATE	MTD	MOUNTED
CPT	CONTROL POWER TRANSFORMER	MTG	MOUNTING
CRI	COLOR RENDERING INDEX	MTS	MANUAL TRANSFER SWITCH
CT	CURRENT TRANSFORMER	MV	MEDIUM VOLTAGE
CTV	CABLE TELEVISION	MVA	MEGAVOLT-AMPERE
CU	COPPER	MW	MEGAWATT MICROWAVE
CUR	CURRENT		
		N/A	NOT APPLICABLE
DB	DECIBEL	NC	NORMALLY CLOSED
DC	DIRECT CURRENT	NEC	NATIONAL ELECTRICAL CODE
DEG C	DEGREES CELSIUS	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
DEG F	DEGREES FAHRENHEIT	NEUT, N	NEUTRAL
DEMO	DEMOLITION	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
DIAG	DIAGRAM	NIC	NOT IN CONTRACT
DISC	DISCONNECT	NL	NIGHT LIGHT
DISTR	DISTRIBUTION	NO	NORMALLY OPEN
DN	DOWN	NTS	NOT TO SCALE
DPDT	DOUBLE POLE, DOUBLE THROW		
DPST	DOUBLE POLE, SINGLE THROW	OC	ON CENTER
DRSW	DOOR SWITCH	OD	OUTSIDE DIAMETER
DS	DISCONNECT SWITCH	OL	OVERLOAD
DWG	DRAWING		
		P	POLE
EC	EMPTY CONDUIT	PA	PUBLIC ADDRESS
EG	ELEVATION	PB	PULL BOX, OR PUSHBUTTON
EL	ELECTRIC OR ELECTRICAL	PCB	POLYCHLORINATED BIPHENYL
ELEC	ELEVATOR	P/C	PHOTOELECTRIC CELL
ELEV	EMERGENCY	PED	PEDESTAL
EMER	ELECTROMAGNETIC INTERFERENCE	PEND	PENDANT
EMI	ELECTRICAL METALLIC TUBING	PF	POWER FACTOR
EMT	ENCLOSURE	PH	PHASE
ENCL	EMERGENCY POWER OFF	PLC	PROGRAMMABLE LOGIC CONTROLLER
EPO	EXPLOSION PROOF	PM	POWER MONITORING
EPRF	EASEMENT	PNL	PANEL
ESMT	ELECTRIC WATER COOLER	PVC	POLYVINYL CHLORIDE (PLASTIC)
EWC	ELECTRIC WATER HEATER	PWR	POWER
EVH	EXISTING		
EX	EXISTING TO REMAIN		
ETR			

ELECTRICAL ABBREVIATIONS

FA	FIRE ALARM	RCP	REFLECTED CEILING PLAN
FAAP	FIRE ALARM ANNUNCIATOR PANEL	REC	RECESSED
FACP	FIRE ALARM CONTROL PANEL	REM	REMOVE
FC	FOOTCANDLE	RECPT	RECEPTACLE
FIXT	FIXTURE	RGS	RIGID GALVANIZED STEEL
FLA	FULL LOAD AMPS	RMS	ROOT MEAN SQUARE
FLEX	FLEXIBLE METALLIC CONDUIT	REQD	REQUIRED
FLT	FLOODLIGHT		
FLUOR	FLUORESCENT	SCC	SHORT CIRCUIT CAPACITY
FP	FIRE PROTECTION	SES	SERVICE ENTRANCE SECTION
FT	FEET OR FOOT	SD	SMOKE DETECTOR
FU SW	FUSED SWITCH	SF	SQUARE FOOT (FEET)
FVR	FULL VOLTAGE NON-REVERSING FULL VOLTAGE REVERSING	SHT	SHEET
		SI	INTERNATIONAL SYSTEM OF UNITS
GND, G	GROUND	SPD	SURGE PROTECTIVE DEVICE
GEN	GENERATOR	SPEC	SPECIFICATION
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	SPST	SINGLE POLE, SINGLE THROW
GTB	GROUND TERMINAL BOX	SURF	SURFACE
		SW	SWITCH
HID	HIGH INTENSITY DISCHARGE	SWBD	SWITCHBOARD
HOA	HAND-OFF-AUTOMATIC	SWGR	SWITCHGEAR
HP	HORSEPOWER		
HRSG	HEAT RECOVERY STEAM GENERATOR	T/C	TIME CLOCK
HT	HEIGHT	TEL	TELEPHONE
HZ	HERTZ	TP	TWISTED PAIR
		TPS	TWISTED PAIR SHIELDED
IESNA	ILLUMINATION ENGINEERING SOCIETY OF NORTH AMERICA	TTB	TELEPHONE TERMINAL BOARD
IMC	INTERMEDIATE METAL CONDUIT	TV	TELEVISION
INCAND	INCANDESCENT	TYP	TYPICAL
IR	INFRARED		
IWH	INSTANTANEOUS WATER HEATER	UFD	UNDERFLOOR DUCT
J-BOX	JUNCTION BOX	UGND	UNDERGROUND
		UL	UNDERWRITERS LABORATORY
KV	KILOVOLT	UON	UNLESS OTHERWISE NOTED
KVA	KILOVOLT AMPERE	UPS	UNINTERRUPTIBLE POWER SUPPLY
KVAH	KILOVOLT AMPERE PER HOUR	UTIL	UTILITY
KVAR	KILOVOLT AMPERE REACTIVE		
KW	KILOWATT	V	VOLT
KWH	KILOWATT HOUR	VA	VOLT-AMPERE
KWHM	KILOWATT HOUR METER	VAR	VOLT-AMPERE REACTIVE
		VFD	VARIABLE FREQUENCY DRIVE
LCP	LIGHTING CONTROL PANEL	VOLT	VOLTAGE
LED	LIGHT EMITTING DIODE	W	WATT
LF	LINEAR FEET (FOOT)	WH	WATER HEATER
LM	LUMEN	WP	WEATHERPROOF
LP	LIGHT POLE	XFER	TRANSFER
LPS	LOW PRESSURE SODIUM	XFMR	TRANSFORMER
LRA	LOCKED ROTOR AMPS		
LSIG	LONG, SHORT, INSTANTANEOUS, GROUND		
LTCP	LOCAL TEMPERATURE CONTROL PANEL		
LT	LIGHT		
LTG	LIGHTING		
LTNG	LIGHTNING		
LV	LOW VOLTAGE		
MATV	MASTER ANTENNA TELEVISION SYSTEM		
MAX	MAXIMUM		
MC	METAL-CLAD		
MCA	MINIMUM CIRCUIT AMPS		
MCB	MAIN CIRCUIT BREAKER		
MCC	MOTOR CONTROL CENTER		
MDP	MAIN DISTRIBUTION PANEL		
MECH	MECHANICAL		
MG	MOTOR GENERATOR		
MH	MANHOLE		
MIN	MINIMUM		
MOCB	MAXIMUM OVERCURRENT PROTECTION		
MLO	MAIN LUGS ONLY		
MSB	MAIN SWITCHBOARD		
MT	MOUNT		
MTD	MOUNTED		
MTG	MOUNTING		
MTS	MANUAL TRANSFER SWITCH		
MV	MEDIUM VOLTAGE		
MVA	MEGAVOLT-AMPERE		
MW	MEGAWATT MICROWAVE		
N/A	NOT APPLICABLE		
NC	NORMALLY CLOSED		
NEC	NATIONAL ELECTRICAL CODE		
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION		
NEUT, N	NEUTRAL		
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION		
NIC	NOT IN CONTRACT		
NL	NIGHT LIGHT		
NO	NORMALLY OPEN		
NTS	NOT TO SCALE		
OC	ON CENTER		
OD	OUTSIDE DIAMETER		
OL	OVERLOAD		
P	POLE		
PA	PUBLIC ADDRESS		
PB	PULL BOX, OR PUSHBUTTON		
PCB	POLYCHLORINATED BIPHENYL		
P/C	PHOTOELECTRIC CELL		
PED	PEDESTAL		
PEND	PENDANT		
PF	POWER FACTOR		
PH	PHASE		
PLC	PROGRAMMABLE LOGIC CONTROLLER		
PM	POWER MONITORING		
PNL	PANEL		
PVC	POLYVINYL CHLORIDE (PLASTIC)		
PWR	POWER		

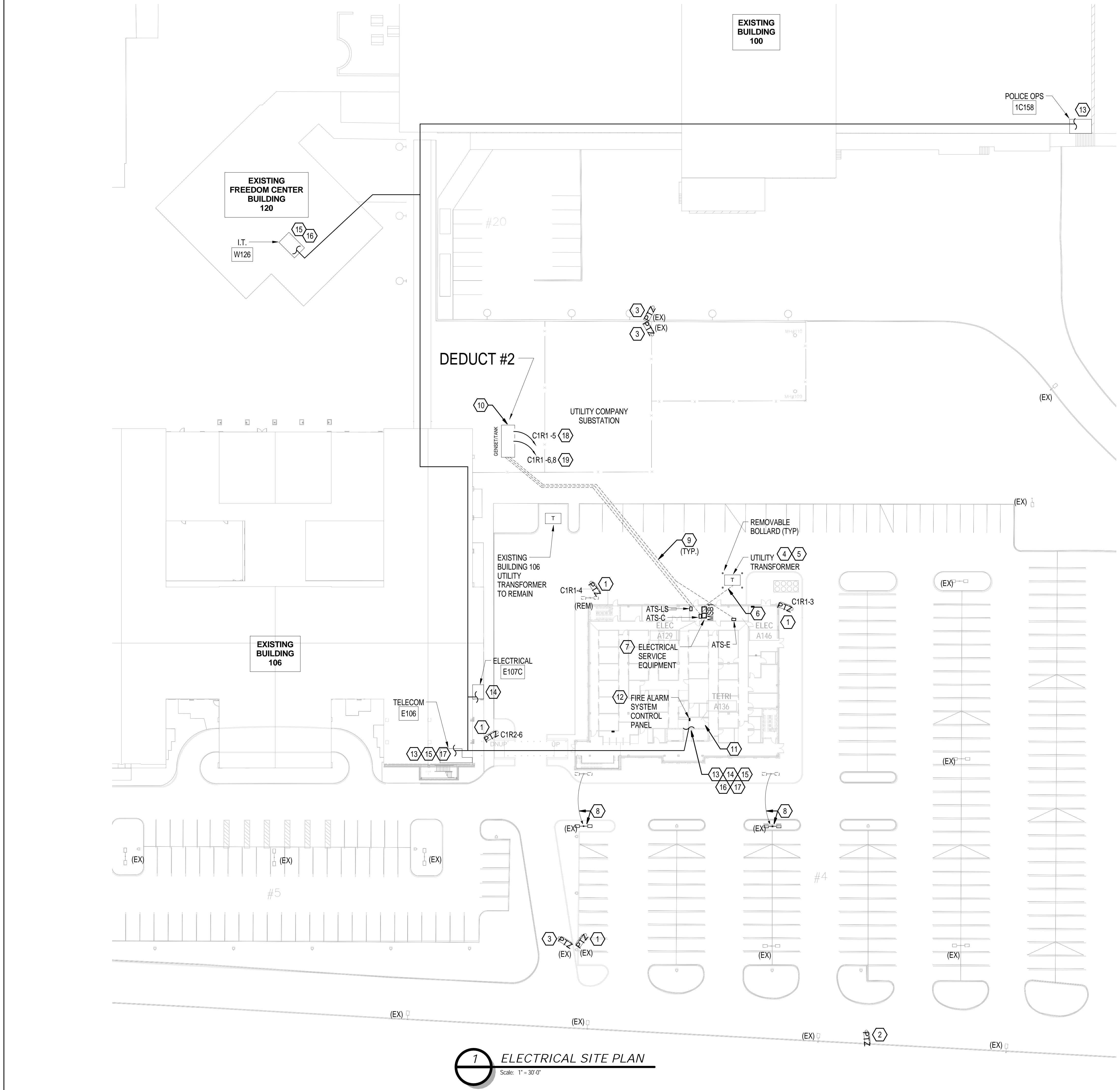
RECPT	RECEPTACLE	SCC	SHORT CIRCUIT CAPACITY
RGS	RIGID GALVANIZED STEEL	SES	SERVICE ENTRANCE SECTION
RMS	ROOT MEAN SQUARE	SD	SMOKE DETECTOR
REQD	REQUIRED	SF	SQUARE FOOT (FEET)
		SHT	SHEET
		SI	INTERNATIONAL SYSTEM OF UNITS
		SPD	SURGE PROTECTIVE DEVICE
		SPEC	SPECIFICATION
		SPST	SINGLE POLE, SINGLE THROW
		SURF	SURFACE
		SW	SWITCH
		SWBD	SWITCHBOARD
		SWGR	SWITCHGEAR
T/C	TIME CLOCK		
TEL	TELEPHONE		
TP	TWISTED PAIR		
TPS	TWISTED PAIR SHIELDED		
TTB	TELEPHONE TERMINAL BOARD		
TV	TELEVISION		
TYP	TYPICAL		
UFD	UNDERFLOOR DUCT		
UGND	UNDERGROUND		
UL	UNDERWRITERS LABORATORY		
UON	UNLESS OTHERWISE NOTED		
UPS	UNINTERRUPTIBLE POWER SUPPLY		
UTIL	UTILITY		
V	VOLT		
VA	VOLT-AMPERE		
VAR	VOLT-AMPERE REACTIVE		
VFD	VARIABLE FREQUENCY DRIVE		
VOLT	VOLTAGE		
W	WATT		
WH	WATER HEATER		
WP	WEATHERPROOF		
XFER	TRANSFER		
XFMR	TRANSFORMER		

MECHANICAL EQUIPMENT ABBREVIATIONS

ACC	AIR COOLED CONDENSER
ACCH	AIR COOLED CHILLER
ACCU	AIR-COOLED CONDENSING UNIT
ACU	AIR CONDITIONING UNIT
AHU	AIR-HANDLING UNIT
B	BOILER
BHW	HOT WATER HEATING BOILER
BHX	BOILER BLOWDOWN HEAT EXCHANGER
BT	BLOWOFF TANK
CC	COOLING COIL
CFP	CHEMICAL FEED PUMP
CH	CHILLER
CHP	CHILLED WATER PUMP
COMP	COMPRESSOR UNIT
CP	CONDENSATE PUMP
CSG	CLEAN STEAM GENERATOR
CT	COOLING TOWER
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
CWP	CONDENSER WATER PUMP
DDC	DIRECT DIGITAL CONTROLS
ECU	EVAPORATIVE CONDENSER UNIT
EDH	ELECTRIC DUCT HEATER
EH	EXHAUST FAN
EGS	EMERGENCY GAS SHUTOFF
EH	EXHAUST HOOD
ERP	ELECTRIC RADIANT PANEL
EUH	ELECTRIC UNIT HEATER
EWC	EVAPORATIVE WATER COOLER
FCU	FAN COIL UNIT
FOP	FUEL OIL PUMP
FOHX	FUEL OIL HEAT EXCHANGER
FPTU	FAN POWERED TERMINAL UNIT
HOA	HAND / OFF / AUTOMATIC
HP	HEAT PUMP
HWP	HEATING HOT WATER PUMP
HWHU	HOT WATER UNIT HEATER
HX	HEAT EXCHANGER
ICF	IN-LINE CENTRIFUGAL FAN
IRH	INFRARED HEATER
IU	INDUCTION UNIT
LLHX	LIQUID TO LIQUID HEAT EXCHANGER
LTPC	LOCAL TEMPERATURE CONTROL PANEL
MAU	MAKE-UP AIR UNIT
MOV	MOTOR OPERATED VALVE
P	PUMP
PEF	PROPELLER (TYPE) EXHAUST FAN
PTAC	PACKAGED TERMINAL AIR CONDITIONER
RAD	REFRIGERANT AIR DRYER
RAHX	ROTARY AIR HEAT EXCHANGER
RCCH	REMOTE CONDENSER CHILLER
RCU	RECIPROCATING CHILLER UNIT
RF	RETURN FAN
RTU	ROOF TOP UNIT
SD	SMOKE DETECTOR
SF	SUPPLY FAN
SSHX	STEAM TO STEAM HEAT EXCHANGER
SUH	STEAM UNIT HEATER
SWHX	STEAM TO WATER HEAT EXCHANGER
TSTAT	THERMOSTAT
TU	TERMINAL UNIT
TWU	THRU-WALL UNIT
UC	UNIT COOLER
UH	UNIT HEATER
VAF	VANE-AXIAL FAN
VAV	VARIABLE AIR VOLUME
VP	VACUUM PUMP
VUH	VERTICAL UNIT HEATER
WCCH	WATER COOLED CHILLER
WCCU	WATER COOLED CONDENSING UNIT
WCHP	WATER COOLED HEAT PUMPS
WCPU	WATER COOLED PACKAGED UNIT
WEF	WALL EXHAUST FAN

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one thirty second inch = one foot
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one sixteenth inch = one foot
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one inch = one foot
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three quarters inch = one foot
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one half inch = one foot
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one eighth inch = one foot
one quarter inch = one foot



- ### SHEET KEYNOTES
- NEW PAN-TILT-ZOOM CAMERA. PROVIDE ONE (1) 1" PVC SCH. 40 AND EXTEND AND CONNECT 1#12, 1#12G - 1" C TO BRANCH CIRCUIT INDICATED. TO BE INSTALLED BY OTHERS UNDER A SEPARATE PROJECT. COORDINATE EXACT SECURITY REQUIREMENTS PER SPECIFICATION.
 - NEW PAN-TILT-ZOOM CAMERA. PROVIDE ONE (1) 1" PVC SCH. 40 AND EXTEND AND CONNECT 1#12, 1#12G - 1" C TO BRANCH CIRCUIT INDICATED. TO BE INSTALLED BY OTHERS UNDER A SEPARATE PROJECT. COORDINATE EXACT SECURITY REQUIREMENTS PER SPECIFICATION. PROVIDED UNDER SEPARATE CONTRACT.
 - EXISTING PAN-TILT-ZOOM CAMERA TO REMAIN.
 - PROPOSED SCE&G UTILITY COMPANY PRIMARY ROUTING. BURIED 3'-0" BELOW GRADE. VERIFY ALL REQUIREMENTS WITH SCE&G AND PROVIDE ACCORDINGLY. SCE&G WILL PROVIDE THE UTILITY TRANSFORMER AND PRIMARY SERVICE CONDUCTORS. ELECTRICAL CONTRACTOR WILL PROVIDE PRIMARY TRENCH AND CONDUIT, TRANSFORMER SLAB, AND COMPLETE SERVICE ON SECONDARY SIDE. REFER TO GENERAL NOTES ON THIS SHEET.
 - NEW UTILITY COMPANY PADMOUNT TRANSFORMER. VERIFY ALL REQUIREMENTS WITH SCE&G UTILITY COMPANY AND PROVIDE ACCORDINGLY. REFER TO GENERAL NOTES ON THIS SHEET. REFER TO POWER RISER DIAGRAM ON SHEET ES-601 FOR ADDITIONAL INFORMATION.
 - NEW CLINIC UNDERGROUND ELECTRICAL SECONDARY, REFER TO POWER RISER DIAGRAM ON SHEET ES-601 FOR ADDITIONAL INFORMATION.
 - NEW ELECTRICAL SERVICE EQUIPMENT LOCATION. REFER TO GENERAL NOTES ON THIS SHEET. REFER TO POWER RISER DIAGRAM ON SHEET ES-601 FOR ADDITIONAL INFORMATION.
 - EXISTING LIGHT POLE TO REMAIN. CONTRACTOR SHALL EXTEND/CONNECT EXISTING SITE LIGHTING CIRCUIT AND CONTROL METHOD TO NEW POLE LOCATION AS SHOWN.
 - NEW GENERATOR FEEDS TO AUTOMATIC TRANSFER SWITCHES. REFER TO POWER RISER DIAGRAM ON SHEET ES-601 FOR ADDITIONAL INFORMATION.
 - PROPOSED EMERGENCY GENERATOR LOCATION, FURNISHED BY OWNER, INSTALLED BY GENERAL CONTRACTOR. VERIFY EXACT LOCATION PRIOR TO ANY ROUGH-IN. REFER TO POWER RISER DIAGRAM ON SHEET ES-601 FOR ADDITIONAL INFORMATION.
 - LOW-VOLTAGE SYSTEMS (FIBER, DATA, FIRE ALARM, CCTV, SECURITY, PAGING, ETC.) DEMARC POINT IN SECOND FLOOR TELECOM ROOM. COORDINATE EXACT DEMARC LOCATION WITH VA HOSPITAL SYSTEMS STAFF.
 - NEW FIRE ALARM CONTROL PANEL LOCATION IN FIRST FLOOR TELECOM ROOM. COORDINATE EXACT CONTROL PANEL LOCATION WITH VA HOSPITAL SYSTEMS STAFF.
 - PROPOSED CONDUIT RUN WITH FIBER OPTIC CABLING (PLUS 1 SPARE CONDUIT WITH PULLWIRE) TO BUILDING 106 FIRST FLOOR TELECOM ROOM E106. CONNECT TO EXISTING BUILDING 106 CCTV AND SECURITY SYSTEMS HEADEND EQUIPMENT. REFER TO SECOND FLOOR SYSTEMS PLAN ON SHEET EY-102 FOR ADDITIONAL INFORMATION. CONTRACTOR SHALL PROVIDE ADD-ALTERNATE BID LINE ITEM TO EXTEND CONDUIT AND CABLING TO EXISTING VA HOSPITAL POLICE OPERATIONS ROOM 1C158 IN BUILDING 100. COORDINATE CONDUIT AND CABLING TERMINATION LOCATIONS WITH OWNER PRIOR TO ROUGH-IN.
 - PROPOSED CONDUIT RUN WITH FIBER OPTIC CABLING (PLUS 1 SPARE CONDUIT WITH PULLWIRE) TO BUILDING 106 FIRST FLOOR ELECTRICAL ROOM E107C. CONNECT TO EXISTING BUILDING 106 FIRE ALARM SYSTEM EQUIPMENT. REFER TO FIRST AND SECOND FLOOR SYSTEMS PLANS ON SHEETS EY-101 AND EY-102 FOR ADDITIONAL INFORMATION. COORDINATE CONDUIT AND CABLING TERMINATION LOCATIONS WITH OWNER PRIOR TO ROUGH-IN.
 - PROPOSED CONDUIT RUN WITH 200-PAIR COPPER CABLING (PLUS 1 SPARE CONDUIT WITH PULLWIRE) TO BUILDING 106 FIRST FLOOR TELECOM ROOM E106. CONNECT TO EXISTING BUILDING 106 TELECOMMUNICATIONS SYSTEM HEADEND EQUIPMENT. TERMINATION NUMBERING SCHEME AND LABELING AT PUNCHDOWN BLOCKS SHALL BE IDENTICAL ON BOTH TERMINATION ENDS. REFER TO SECOND FLOOR SYSTEMS PLAN ON SHEET EY-102 FOR ADDITIONAL INFORMATION. CONTRACTOR SHALL PROVIDE ADD-ALTERNATE BID LINE ITEM TO EXTEND CONDUIT AND CABLING TO EXISTING VA HOSPITAL FREEDOM CENTER I.T. ROOM W126. COORDINATE CONDUIT AND CABLING TERMINATION LOCATIONS WITH OWNER PRIOR TO ROUGH-IN.
 - PROPOSED CONDUIT RUN WITH FIBER OPTIC CABLING (PLUS 1 SPARE CONDUIT WITH PULLWIRE) TO FREEDOM CENTER I.T. ROOM W126. CONNECT TO EXISTING VA HOSPITAL DATA SYSTEMS HEADEND EQUIPMENT. REFER TO SECOND FLOOR SYSTEMS PLAN ON SHEET EY-102 FOR ADDITIONAL INFORMATION. COORDINATE CONDUIT AND CABLING TERMINATION LOCATIONS WITH OWNER PRIOR TO ROUGH-IN.
 - PROPOSED CONDUIT RUN WITH MFR REQUIRED PAGING SYSTEM CABLING (PLUS 1 SPARE CONDUIT WITH PULLWIRE) TO BUILDING 106 FIRST FLOOR TELECOM ROOM E106. CONNECT TO EXISTING BUILDING 106 PAGING SYSTEM HEADEND EQUIPMENT. REFER TO SECOND FLOOR SYSTEMS PLAN ON SHEET EY-102 FOR ADDITIONAL INFORMATION. COORDINATE CONDUIT AND CABLING TERMINATION LOCATIONS WITH OWNER PRIOR TO ROUGH-IN.
 - PROVIDE JUNCTION BOX AND HARDWARE CONNECTION TO GENERATOR BATTERY CHARGER. CONNECT AS SHOWN WITH 2 #10, 1 #10 G. IN 1" C.
 - PROVIDE JUNCTION BOX AND HARDWARE CONNECTION TO GENERATOR JACKET HEATER. CONNECT AS SHOWN WITH 2 #8, 1 #8 G. IN 1" C.

- ### GENERAL NOTES
- REFER TO GENERAL DEMOLITION NOTES ON SHEET ES-001 FOR ADDITIONAL DEMOLITION INFORMATION.
 - CONDUIT RUN BELOW GRADE SHALL BE PVC SCHEDULE 80. ELBOWS AND RISERS SHALL BE GALVANIZED RIGID CONDUIT. REFER TO SPECIFICATIONS.
 - ALL UNDERGROUND CONDUIT SHALL BE BURIED A MINIMUM OF 36 INCHES DEEP BELOW FINISHED GRADE TO TOP OF CONDUIT, UN.
 - PROVIDE WARNING TAPE FOR IDENTIFICATION AT 18 INCHES BELOW GRADE (ABOVE SERVICE CONDUIT RUNS) PER N.E.C. 300-5(d).
 - ALL TURNS SHALL BE MADE WITH LONG SWEEP ELLS.
 - CONTRACTOR SHALL PROVIDE ALL EXCAVATING AND BACKFILL REQUIRED FOR ALL NEW WORK INCLUDING FILL, COMPACTION, SURFACE, ETC. TO MEET ALL REQUIREMENTS AS APPLICABLE FOR THE AREA.
 - PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL DETERMINE THE PRESENCE AND LOCATION OF ANY UNDERGROUND RACEWAYS SUCH AS TELEPHONE, ELECTRIC POWER, WATER, GAS, SEWAGE LINES, SITE LIGHTING, ETC. WHETHER PREVIOUSLY EXISTING OR AS INSTALLED BY OTHER TRADES, TO AVOID INTERFERENCE WITH ANY SUCH SYSTEM.
 - ALL SPARE, EMPTY CONDUIT SHALL BE LABELED AS TO THEIR FUNCTION.
 - CONTRACTOR SHALL MAINTAIN AN AS-BUILT DIMENSIONAL DRAWING ON-SITE SHOWING ALL UNDERGROUND SERVICE ROUTING AND TERMINATION POINTS.
 - ALL FINAL LOCATIONS, ROUTING AND ARRANGEMENTS OF SITE MANHOLES, CONDUIT DUCTBANKS, ETC. SHALL BE COORDINATED WITH THE OWNER'S AUTHORIZED REPRESENTATIVE AND LOCAL UTILITIES PRIOR TO ROUGH-IN.
 - REFER TO UTILITY GENERAL NOTES ON POWER RISER DIAGRAM SHEET ES-601 FOR ADDITIONAL REQUIREMENTS AND CONTACT INFORMATION.

NOTE: THE CONTRACTOR'S FAILURE TO COMPLY WITH THESE COORDINATION PROCEDURES WILL CONSTITUTE ASSUMING ALL COSTS ASSOCIATED WITH REPLACING ANY AND ALL WORK ALREADY IN PLACE TO MEET UTILITY COMPANIES RULES AND REQUIREMENTS.

100% CONSTRUCTION DOCUMENTS

<div>Revisions:</div> <div>Dates</div>		<div>CONSULTANTS:</div> <div>ROWE PROFESSIONAL SERVICES COMPANY Engineering • Surveying • Aerial Photography / Mapping Landscape Architecture • Planning 511 Broadway Street, Myrtle Beach, SC 29577 Tel: 843.444.1020 www.rowepsc.com Fax: 843.444.3936</div>		<div>ARCHITECT/ENGINEERS: URS 1000 Abernathy Road NE, Suite 900 400 Northpark Tower Center Atlanta, Georgia 30328 Tel: (478) 858-8800 aa+e 1101 Johnson Avenue, Suite 104 Myrtle Beach, SC 29577 843.712.1470 Accord Architects & Engineers</div>		<div>Drawing Title ELECTRICAL SITE PLAN</div> <div>Approved: Project Director</div>		<div>Project Title CONSTRUCT CLINIC ADDITION TRACK 3 CLINIC BUILD</div> <div>Location WJBD VA MEDICAL CENTER COLUMBIA, SC 29209</div>		<div>Project Number 544-302</div> <div>Building Number 122</div> <div>Drawing Number ES-100</div>		<div>Office of Facilities Management</div> <div>Department of Veterans Affairs</div>	
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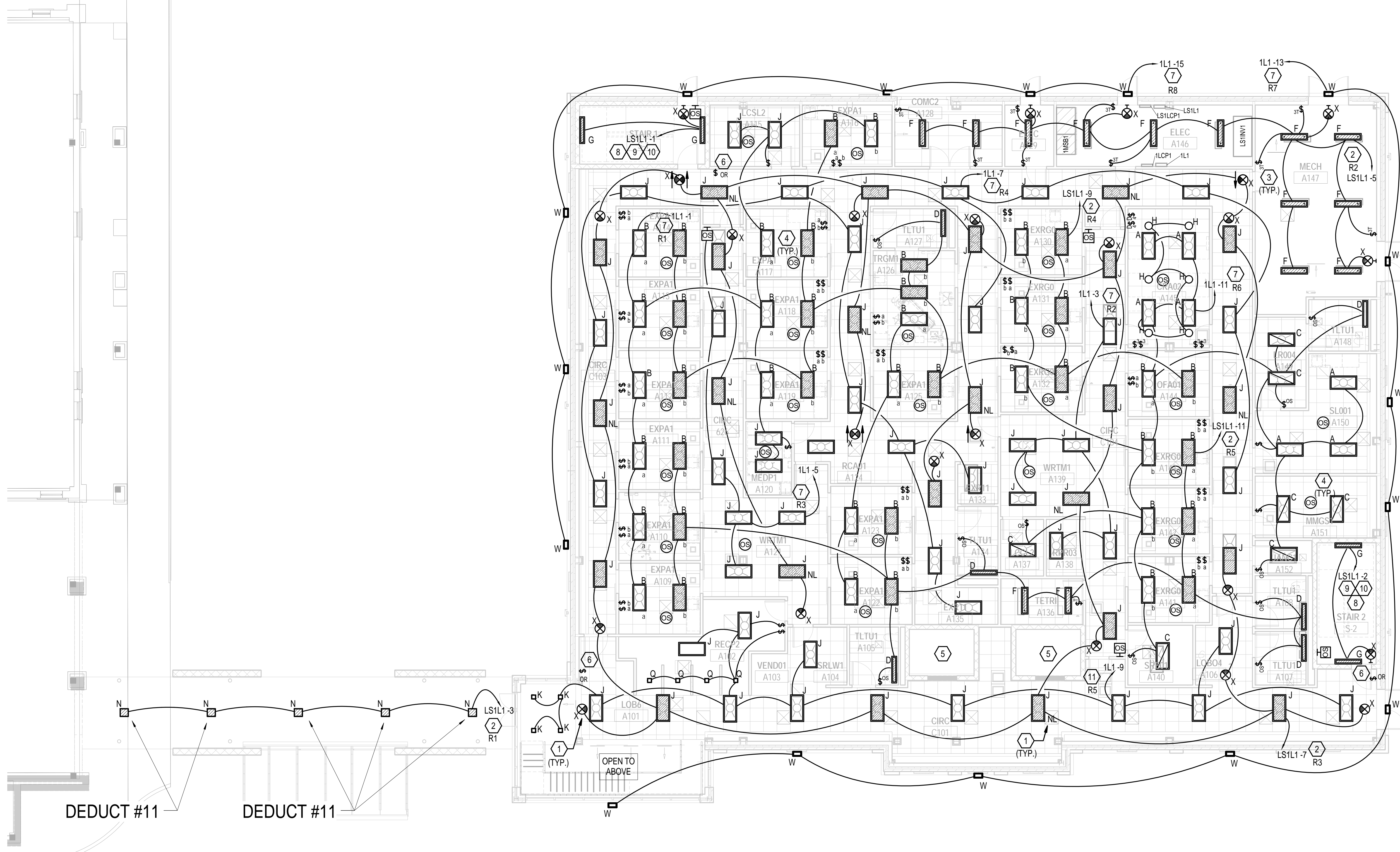
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1 FIRST FLOOR PLAN - LIGHTING
Scale: 1/8" = 1'-0"

- ### GENERAL NOTES
1. ALL FINAL LOCATIONS AND ARRANGMENTS OF LIGHTING FIXTURES, WIRING DEVICES, ETC. SHALL BE OBTAINED FROM THE ARCHITECTURAL INTERIOR AND EXTERIOR ELEVATION.
 2. COORDINATE LIGHTING FIXTURE LOCATIONS WITH MECHANICAL SYSTEMS AND DIFFUSERS PRIOR TO INSTALLATION.
 3. (EX) DENOTES EXISTING, TO REMAIN. (ER) DENOTES RELOCATED. CONNECT AS SHOWN.
 4. EACH BRANCH CIRCUIT HOMERUN SHALL CONTAIN NO MORE THAN THREE CIRCUITS. EACH BRANCH CIRCUIT SHALL HAVE A SEPARATE GREEN INSULATED EQUIPMENT GROUND CONDUCTOR.
 5. PROVIDE A SEPARATE NEUTRAL CONDUCTOR FOR EACH PHASE OF DIMMABLE CIRCUITS.
 6. LIGHTING FIXTURE TYPES WITH SHADING DESIGNATE FIXTURE CONNECTED TO EMERGENCY LIGHTING CIRCUITS (GENERATOR AND/OR INVERTER).
 7. COVER PLATES SHALL BE BRUSHED STAINLESS STEEL, UON.
 8. PROVIDE FAIL-SAFE TYPE OCCUPANCY SENSORS WHERE LIGHTING WILL STAY "ON" IN THE EVENT OF SENSOR FAILURE.
 9. ALL RECESSED LIGHT FIXTURES SHALL BE SUPPORTED INDEPENDENTLY OF THE SUSPEND CEILING GRID. REFER TO FIXTURE MOUNTING DETAILS, SHEET ES-611 FOR MORE INFORMATION.
 10. LIGHTING WALL CONTROLS SHALL BE COORDINATED W/ THE OWNER FOR EXACT LOCATIONS PRIOR TO ROUGH-INS. INSTALL NEXT TO DOOR, STRIKE SIDE, UON.
 11. ALL LIGHT SWITCHES SHALL BE LOCATED 6" FROM DOOR FRAME, ON STRIKE SIDE. VERIFY WITH OWNER PRIOR TO ROUGH-IN.
 12. COORDINATE EXIT SIGNAGE COLOR WITH OWNER, TO MATCH BUILDING 106 STANDARDS AND PROVIDE ACCORDINGLY.
 13. EXTEND AND CONNECT OCCUPANCY SENSOR LOCATED IN EXAM ROOMS TO BOTH SWITCH A (NORMAL) AND SWITCH B (EMERGENCY) FOR CONTROL OF FIXTURES.

- ### SHEET KEYNOTES
1. EXIT SIGNS, EMERGENCY LIGHTS AND NIGHT LIGHT (NL) FIXTURES SHALL BE CONNECTED TO THE UNSWITCHED CONDUCTOR OF THE LOCAL LIGHTING CIRCUIT. SHOWN CONNECTED TO NEAREST FIXTURE FOR CIRCUIT SELECTION PURPOSES AND DRAWING CLARITY ONLY.
 2. RUN CIRCUIT VIA LIGHTING CONTROL SYSTEM PANEL 'LS1LCP1' RELAY INDICATED (R#). CONTROL AS SHOWN ON LIGHTING CONTROL SYSTEM PANEL SCHEDULE ON SHEET ES-612.
 3. DIGITAL TIMER SWITCH, WITH AUDIBLE/VISUAL TIME-OUT ALARMS. SET TIME-OUT TO 1 HOUR, UON. VERIFY EXACT REQUIREMENTS WITH OWNER.
 4. CEILING MOUNTED DUAL-TECHNOLOGY OCCUPANCY SENSOR WITH ADJUSTABLE "LIGHTS OFF" TIMER. BOTH TECHNOLOGIES SHALL BE REQUIRED TO TURN LIGHTS "ON" AND EITHER TECHNOLOGY TO MAINTAIN "ON".
 5. REFER TO ELEVATOR PIT ENLARGED PLAN ON SHEET EP-101 FOR MORE INFORMATION.
 6. LIGHTING CONTROL SYSTEM OVERRIDE SWITCH. REFER TO LIGHTING CONTROL SYSTEM DETAILS ON SHEET ES-612 FOR MORE INFORMATION. VERIFY EXACT LOCATIONS AND QUANTITIES OF OVERRIDE SWITCHES WITH OWNER PRIOR TO ROUGH-IN.
 7. RUN CIRCUIT VIA LIGHTING CONTROL SYSTEM PANEL 'LCP1' RELAY INDICATED (R#). CONTROL AS SHOWN ON LIGHTING CONTROL SYSTEM PANEL SCHEDULE ON SHEET ES-612.
 8. DIMMABLE LIGHT FIXTURES IN THIS SPACE SHALL BE CONTROLLED VIA OCCUPANCY SENSORS AS FOLLOWS:
*UNOCCUPIED/NO MOTION - FIXTURES SHALL OPERATE AT MINIMUM ILLUMINATION LEVELS (20%) WHEN NO OCCUPANCY DETECTED.
*OCCUPIED/SENSING MOTION - FIXTURES SHALL RAMP UP TO 100% ILLUMINATION LEVELS UPON OCCUPANCY DETECTION.
 9. STAIRWELL FIXTURES SHALL FOLLOW NORMAL HOURS SETTING AND SHALL NOT BE RUN/CONTROLLED VIA LIGHTING CONTROL SYSTEM.
 10. COMPLETE STAIRWELL LIGHTING CIRCUIT CONNECTION TO FIXTURES ON FLOOR ABOVE.

100% CONSTRUCTION DOCUMENTS

<div>Revisions:</div> <div>Dates:</div>		<div>CONSULTANTS:</div> <div><div>ROWE PROFESSIONAL SERVICES COMPANY</div><div>Engineering • Surveying • Aerial Photography / Mapping Landscape Architecture • Planning</div><div>511 Broadway Street, Myrtle Beach, SC 29577 www.rowepsc.com</div><div>Tel: 843.444.1020 Fax: 843.444.3936</div></div>		<div>ARCHITECT/ENGINEERS:</div> <div><div>URS</div><div>1000 Abernathy Road NE, Suite 900 400 Northpark Tower Center Atlanta, Georgia 30328 Tel: (404) 888-8800</div><div>aa+e</div><div>1101 Johnson Avenue, Suite 104 Myrtle Beach, SC 29577 843.712.1470</div><div>Accord Architects & Engineers</div></div>		<div>Drawing Title</div> <div>FIRST FLOOR PLAN - LIGHTING</div> <div>Approved: Project Director</div>		<div>Project Title</div> <div>CONSTRUCT CLINIC ADDITION TRACK 3 CLINIC BUILD</div> <div>Location</div> <div>WJBD VA MEDICAL CENTER COLUMBIA, SC 29209</div> <div>Date</div> <div>07/30/2015</div> <div>Checked</div> <div>KV</div> <div>Drawn</div> <div>CR</div>		<div>Project Number</div> <div>544-302</div> <div>Building Number</div> <div>122</div> <div>Drawing Number</div> <div>EL-101</div>		<div>Office of Facilities Management</div> <div>Department of Veterans Affairs</div>	
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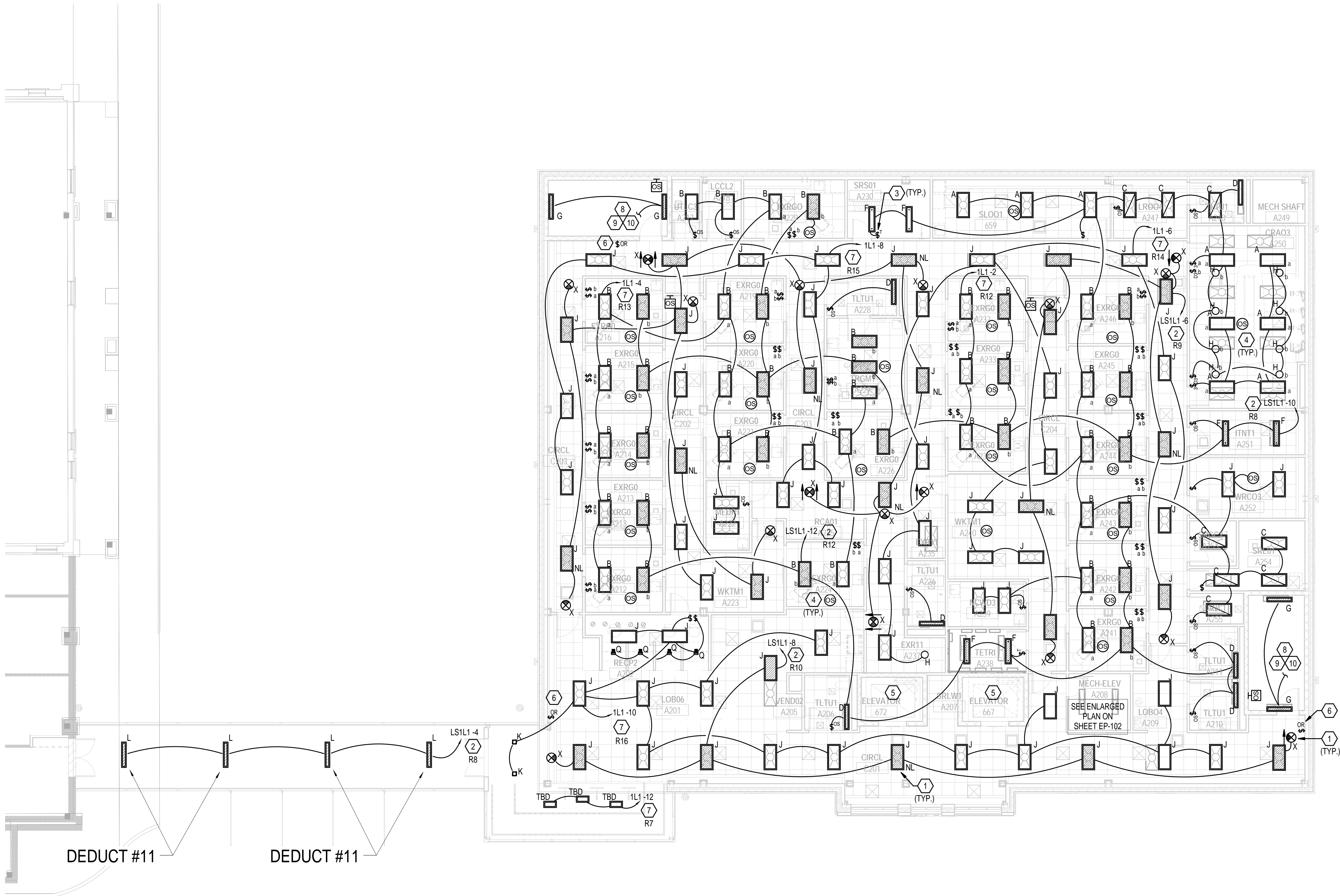
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one thirty second inch = one foot
one sixteenth inch = one foot
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three quarters inch = one foot
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one eighth inch = one foot
one quarter inch = one foot



DEDUCT #11

DEDUCT #11

1 SECOND FLOOR PLAN - LIGHTING
Scale: 1/8" = 1'-0"

GENERAL NOTES

- ALL FINAL LOCATIONS AND ARRANGMENTS OF LIGHTING FIXTURES, WIRING DEVICES, ETC. SHALL BE OBTAINED FROM THE ARCHITECTURAL INTERIOR AND EXTERIOR ELEVATION.
- COORDINATE LIGHTING FIXTURE LOCATIONS WITH MECHANICAL SYSTEMS AND DIFFUSERS PRIOR TO INSTALLATION.
- (EX) DENOTES EXISTING, TO REMAIN. (ER) DENOTES RELOCATED. CONNECT AS SHOWN.
- EACH BRANCH CIRCUIT HOMERUN SHALL CONTAIN NO MORE THAN THREE CIRCUITS. EACH BRANCH CIRCUIT SHALL HAVE A SEPARATE GREEN INSULATED EQUIPMENT GROUND CONDUCTOR.
- PROVIDE A SEPARATE NEUTRAL CONDUCTOR FOR EACH PHASE OF DIMMABLE CIRCUITS.
- LIGHTING FIXTURE TYPES WITH SHADING DESIGNATE FIXTURE CONNECTED TO EMERGENCY LIGHTING CIRCUITS (GENERATOR AND/OR INVERTER).
- COVER PLATES SHALL BE BRUSHED STAINLESS STEEL UON.
- PROVIDE FAIL-SAFE TYPE OCCUPANCY SENSORS WHERE LIGHTING WILL STAY 'ON' IN THE EVENT OF SENSOR FAILURE.
- ALL RECESSED LIGHT FIXTURES SHALL BE SUPPORTED INDEPENDENTLY OF THE SUSPEND CEILING GRID. REFER TO FIXTURE MOUNTING DETAILS, SHEET ES-611 FOR MORE INFORMATION.
- LIGHTING WALL CONTROLS SHALL BE COORDINATED W/ THE OWNER FOR EXACT LOCATIONS PRIOR TO ROUGH-INS. INSTALL NEXT TO DOOR, STRIKE SIDE, UON.
- ALL LIGHT SWITCHES SHALL BE LOCATED 6" FROM DOOR FRAME, ON STRIKE SIDE. VERIFY WITH OWNER.
- COORDINATE EXIT SIGNAGE COLOR WITH OWNER, TO MATCH BUILDING 106 STANDARDS AND PROVIDE ACCORDINGLY.
- PROVIDE #10AWG PHASE AND GROUND CONDUCTORS THROUGHOUT ENTIRE CIRCUIT INCLUDING TO LAST DEVICE.
- EXTEND AND CONNECT OCCUPANCY SENSOR LOCATED IN EXAM ROOMS TO BOTH SWITCH A (NORMAL) AND SWITCH B (EMERGENCY) FOR CONTROL OF FIXTURES.

SHEET KEYNOTES

- EXIT SIGNS, EMERGENCY LIGHT AND NIGHT LIGHT (NL) FIXTURES SHALL BE CONNECTED TO THE UNSWITCHED CONDUCTOR OF THE LOCAL LIGHTING CIRCUIT. SHOWN CONNECTED TO NEAREST FIXTURE FOR CIRCUIT SELECTION PURPOSES AND DRAWING CLARITY ONLY.
- RUN CIRCUIT VIA LIGHTING CONTROL SYSTEM PANEL 'LS1LCP1' RELAY INDICATED (R#). CONTROL AS SHOWN ON LIGHTING CONTROL SYSTEM PANEL SCHEDULE ON SHEET ES-612.
- DIGITAL TIMER SWITCH, WITH AUDIBLE/VISUAL TIME-OUT ALARMS. SET TIME-OUT TO 1 HOUR, UON. VERIFY EXACT REQUIREMENTS WITH OWNER.
- CEILING MOUNTED DUAL-TECHNOLOGY OCCUPANCY SENSOR WITH ADJUSTABLE 'LIGHTS OFF' TIMER. BOTH TECHNOLOGIES SHALL BE REQUIRED TO TURN LIGHTS 'ON' AND EITHER TECHNOLOGY TO MAINTAIN 'ON'.
- REFER TO ELEVATOR PIT ENLARGED PLAN ON SHEET EP-101 FOR MORE INFORMATION.
- LIGHTING CONTROL SYSTEM OVERRIDE SWITCH. REFER TO LIGHTING CONTROL SYSTEM DETAILS ON SHEET ES-612 FOR MORE INFORMATION. VERIFY EXACT LOCATIONS AND QUANTITIES OF OVERRIDE SWITCHES WITH OWNER PRIOR TO ROUGH-IN.
- RUN CIRCUIT VIA LIGHTING CONTROL SYSTEM PANEL 'LCP1' RELAY INDICATED (R#). CONTROL AS SHOWN ON LIGHTING CONTROL SYSTEM PANEL SCHEDULE ON SHEET ES-612.
- DIMMABLE LIGHT FIXTURES IN THIS SPACE SHALL BE CONTROLLED VIA OCCUPANCY SENSORS AS FOLLOWS:
*UNOCCUPIED/NO MOTION - FIXTURES SHALL OPERATE AT MINIMUM ILLUMINATION LEVELS (20%) WHEN NO OCCUPANCY DETECTED.
*OCCUPIED/SENSING MOTION - FIXTURES SHALL RAMP UP TO 100% ILLUMINATION LEVELS UPON OCCUPANCY DETECTION.
- STAIRWELL FIXTURES SHALL FOLLOW NORMAL HOURS SETTING AND SHALL NOT BE RUN/CONTROLLED VIA LIGHTING CONTROL SYSTEM.
- COMPLETE STAIRWELL LIGHTING CIRCUIT CONNECTION TO FIXTURES ON FLOOR BELOW.

100% CONSTRUCTION DOCUMENTS

		<div>CONSULTANTS:</div> <div><div>ROWE PROFESSIONAL SERVICES COMPANY Engineering • Surveying • Aerial Photography / Mapping Landscape Architecture • Planning 511 Broadway Street, Myrtle Beach, SC 29577 www.roweps.com</div><div>Tel: 843.444.1020 Fax: 843.446.3936</div></div>		<div>ARCHITECT/ENGINEERS:</div> <div><div>URS 1000 Abernathy Road NE, Suite 900 400 Northpark Tower Center Atlanta, Georgia 30328 Tel: 678.458.4600</div><div>aa+e 1101 Johnson Avenue, Suite 104 Myrtle Beach, SC 29577 843.712.1470 Accord Architects & Engineers</div></div>		<div>Drawing Title</div> <div>SECOND FLOOR PLAN - LIGHTING</div>		<div>Project Title</div> <div>CONSTRUCT CLINIC ADDITION TRACK 3 CLINIC BUILD</div>		<div>Project Number</div> <div>544-302</div>		<div>Office of Facilities Management</div>	
				<div>Approved: Project Director</div>		<div>Location</div> <div>WJBD VA MEDICAL CENTER COLUMBIA, SC 29209</div>		<div>Building Number</div> <div>122</div>		<div>Drawing Number</div> <div>EL-102</div>			
<div>Revisions:</div>		<div>Dates</div>				<div>Date</div> <div>07/30/2015</div>		<div>Checked</div> <div>KV</div>		<div>Drawn</div> <div>CR</div>			
										<div>Department of Veterans Affairs</div>			

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one quarter inch = one foot

one half inch = one foot

one inch = one foot

three quarters inch = one foot


one sixteenth inch = one foot

one thirty second inch = one foot


Revisions:

Dates


CONSULTANTS:



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Tel: 678.838.6800

1101 Johnson Avenue,
Suite 104
Myrtle Beach, SC 29577
843.712.1470

Accord Architects & Engineers

Drawing Title

FIRST FLOOR PLAN - POWER

Approved: Project Director

Project Title

CONSTRUCT CLINIC
ADDITION TRACK 3 CLINIC
BUILD

Location

WJBD VA MEDICAL CENTER
COLUMBIA, SC 29209

Date

07/30/2015

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Building Number

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Drawing Number

EP-101

Department of Veterans Affairs

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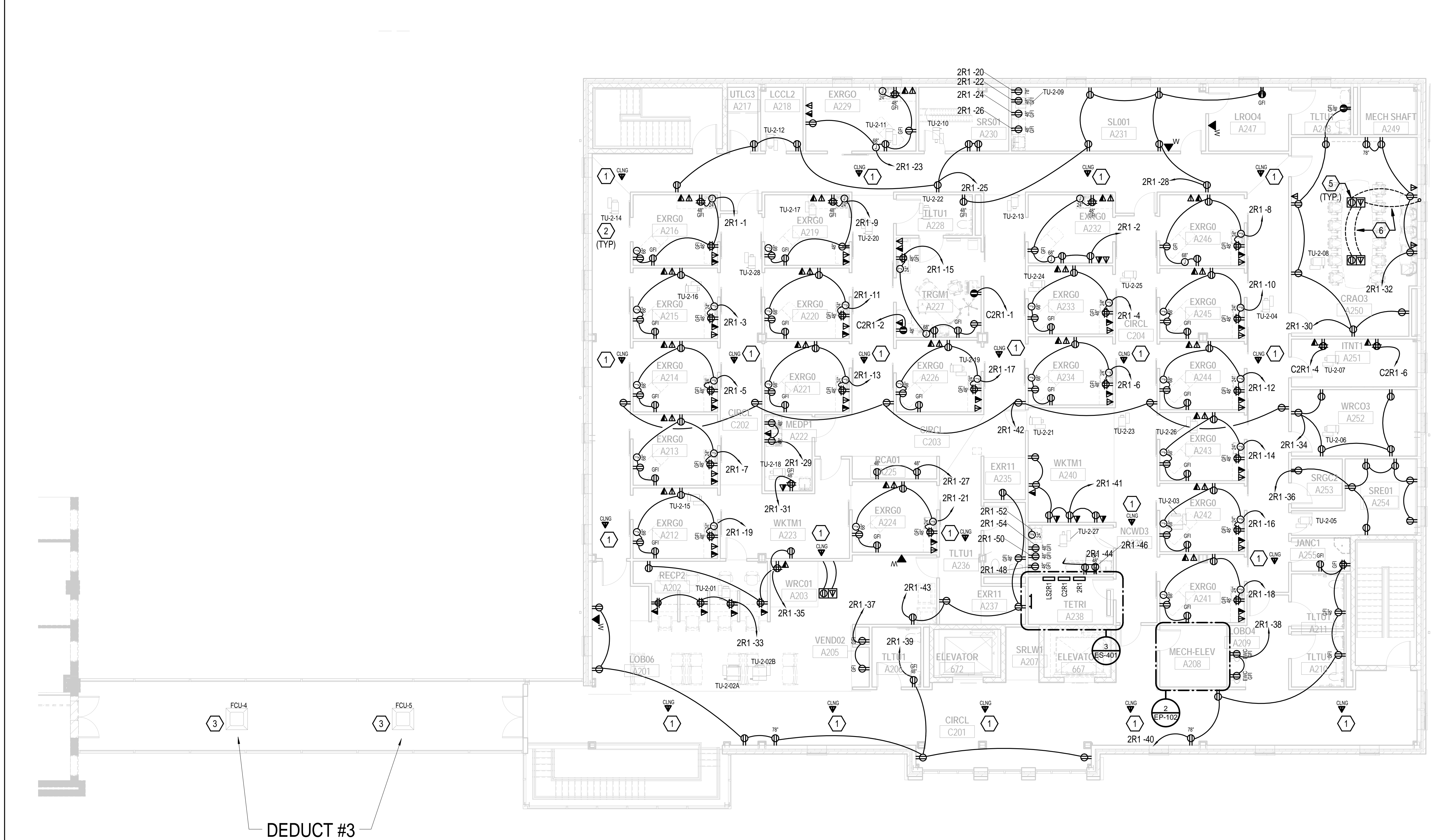
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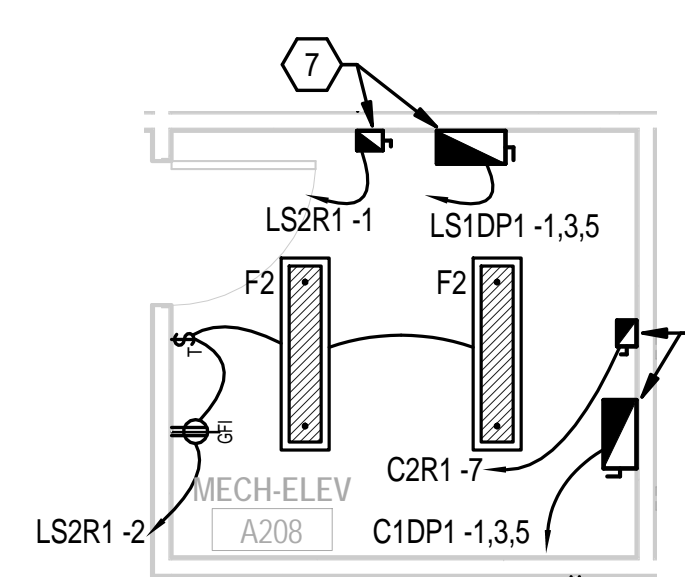
one half inch = one foot

three eighths inch = one foot

one quarter inch = one foot



1 SECOND FLOOR PLAN - POWER AND TELECOMMUNICATIONS
Scale: 1/8" = 1'-0"



2 ENLARGED ELEVATOR MACHINE ROOM
EP-102 Scale: 1/4" = 1'-0"

- GENERAL NOTES**
- ALL FINAL LOCATIONS AND ARRANGEMENTS OF RECEPTACLES, DATA OUTLETS, ETC. SHALL BE OBTAINED FROM THE ARCHITECTURAL INTERIOR AND EXTERIOR ELEVATIONS.
 - ALL RECEPTACLES SHALL BE HOSPITAL GRADE, REFER TO SPECIFICATIONS.
 - LIGHT, DASHED LINES INDICATE N.E.C. REQUIRED WORKING CLEARANCES.
 - REFER TO SHEET ES-613 MECHANICAL EQUIPMENT CONNECTION SCHEDULE FOR ELECTRICAL REQUIREMENTS TO MECHANICAL EQUIPMENT.
 - EACH BRANCH CIRCUIT HOMERUN SHALL HAVE NO MORE THAN (3) CIRCUITS. EACH BRANCH CIRCUIT SHALL HAVE A SEPARATE GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR.
 - PROVIDE PROTECTIVE EQUIPMENT ON SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, AND ALL OTHER ELECTRICAL EQUIPMENT, TO PROTECT AGAINST LEAKS, CONDENSATION, AND BREAKS FROM DUCTS AND PIPING, IF LOCATED DIRECTLY ABOVE THE ELECTRICAL EQUIPMENT.
 - TELECOMMUNICATIONS AND DATA CABLING COLOR SCHEME SHALL ADHERE TO FREEDOM CENTER BUILDING 120 STANDARDS, U.O.N. VERIFY THE FOLLOWING WITH VA HOSPITAL I.T. STAFF:
BLUE - TELECOMMUNICATIONS WHITE - DATA

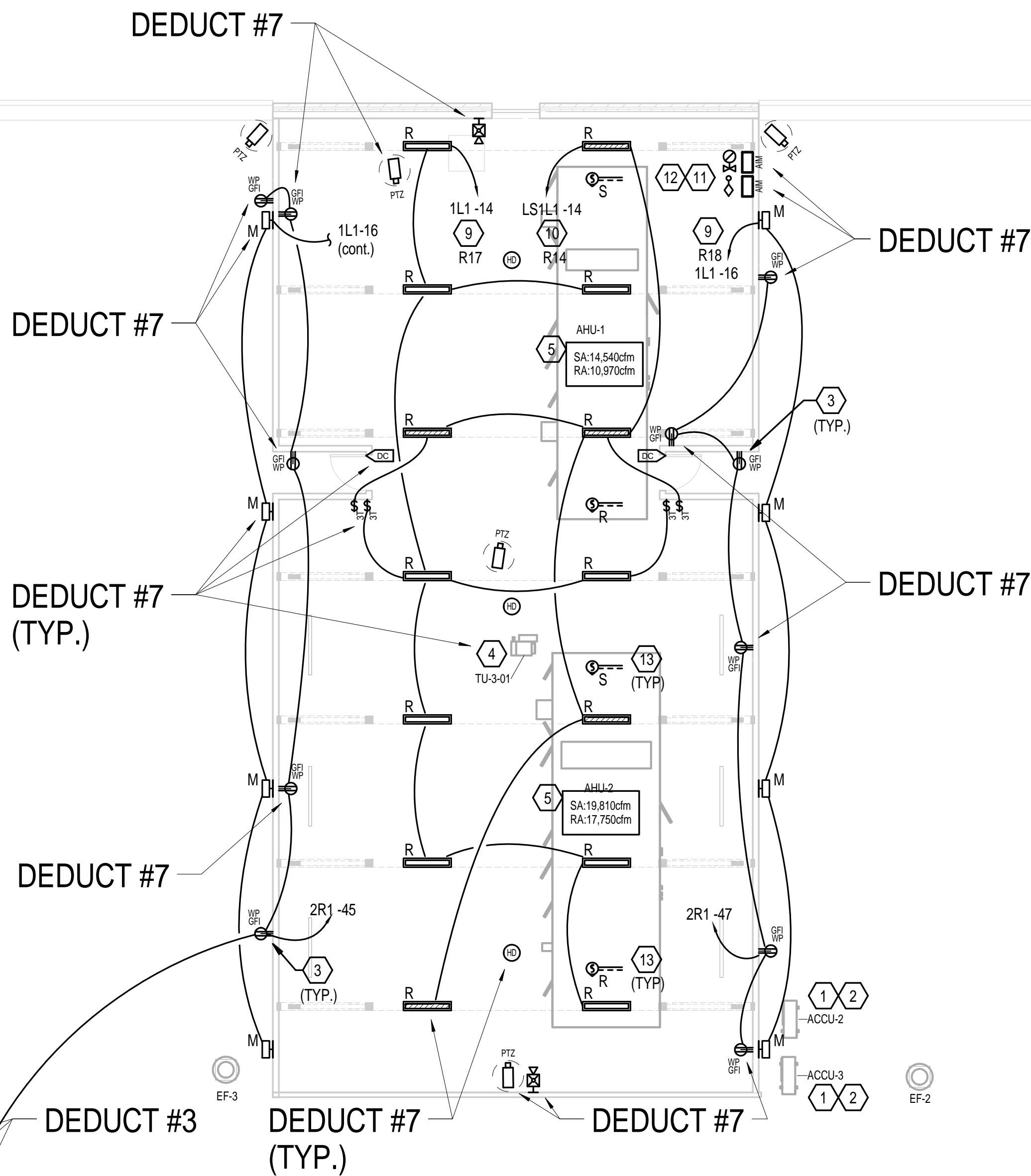
- SHEET KEYNOTES**
- PROVIDE DATA JACK FOR WIRELESS ACCESS POINTS ABOVE CEILING AS INDICATED. WIRELESS ACCESS POINT SHALL BE (POE) POWER OVER ETHERNET. CONTRACTOR SHALL MOUNT JACK ABOVE CEILING TILE WITH 20' OF SLACK CABLE. CEILING TILE SHALL HAVE ENGRAVED NAMEPLATE INDICATING WIRELESS ACCESS POINT ABOVE.
 - VAV TERMINAL BOX. CONTRACTOR SHALL PROVIDE CONNECTION TO UNIT LOW-VOLTAGE TRANSFORMER ALONG WITH REQUIREMENTS AS SHOWN ON MECHANICAL EQUIPMENT CONNECTION SCHEDULE ON SHEET ES-613.
 - PROVIDE LINE-VOLTAGE AS REQUIRED FROM ASSOCIATED MECHANICAL EQUIPMENT ON FLOOR(S) ABOVE. CONTRACTOR SHALL VERIFY EXACT CONNECTION AND MOUNTING REQUIREMENTS PRIOR TO ROUGH-IN AND PROVIDE AS REQUIRED. PROVIDE RECEPTACLE AS REQUIRED. COORDINATE WITH MECHANICAL CONTRACTOR.
 - PROVIDE #10AWG PHASE AND GROUND CONDUCTORS THROUGHOUT ENTIRE CIRCUIT, INCLUDING TO THE LAST DEVICE, AT THE END OF THE LINE.
 - PROVIDE MULTI-GANG FLOOR BOX WITH SEPARATE COMPARTMENTS FOR EACH DEVICE OR TERMINATION. PROVIDE DEDICATED CONDUIT RACEWAY FOR EACH DEVICE.
 - CONTRACTOR SHALL COORDINATE FLOOR BOX LOCATION WITH FINAL FURNITURE PLANS AND OWNER PRIOR TO ROUGH-IN. ROUTE DEDICATED CONDUIT RACEWAYS TO NEAREST WALL, AND UP TO CEILING SPACE. PROVIDE PULLSTRING AS REQUIRED.
 - REFER TO TYPICAL ELEVATOR MOTOR WIRING DETAIL ON SHEET ES-501 FOR ADDITIONAL INFORMATION.

- NOTES - ELEVATOR MACHINE ROOM**
- USE TYPE 'FS' OUTLET BOXES.
 - ELEVATOR MACHINE ROOM LIGHT FIXTURES SHALL BE WIRED TO 120V POWER CIRCUIT AS SHOWN. PROVIDE FIXTURES WITH UNIVERSAL VOLTAGE DRIVERS.
 - DUPLEX RECEPTACLE, GFI TYPE, TYPICAL WITH WET 'WHILE-IN-USE' COVER. MOUNT AS PER ELEVATOR INSTALLER REQUIREMENTS.
 - WIRE LIGHT FIXTURES AHEAD OF THE GFI RECEPTACLES SHOWN.

100% CONSTRUCTION DOCUMENTS

<div>Revisions:</div> <div>Dates:</div>	CONSULTANTS: <div>ROWE PROFESSIONAL SERVICES COMPANY Engineering • Surveying • Aerial Photography / Mapping Landscape Architecture • Planning 511 Broadway Street, Myrtle Beach, SC 29577 www.rowepsc.com Tel: 843.444.1020 Fax: 843.446.3936</div>	<div>SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 21670 KING CHIH YEN</div>	ARCHITECT/ENGINEERS: <div>URS 1000 Abernathy Road NE, Suite 900 400 Northpark Tower Center Atlanta, Georgia 30328 Tel: 678.438.6800</div> <div>aa+e 1101 Johnson Avenue, Suite 104 Myrtle Beach, SC 29577 843.712.1470</div> <div>Accord Architects & Engineers</div>	Drawing Title SECOND FLOOR PLAN - POWER	Project Title CONSTRUCT CLINIC ADDITION TRACK 3 CLINIC BUILD	Project Number 544-302
	Approved: Project Director		Location WJBD VA MEDICAL CENTER COLUMBIA, SC 29209	Building Number 122		
	Date 07/30/2015		Checked KV	Drawn CR		
				Drawing Number EP-102		

Office of Facilities Management
Department of Veterans Affairs



1 ROOF PLAN - POWER, LIGHTING AND SYSTEMS
Scale: 1/8" = 1'-0"

GENERAL NOTES

1. ALL FINAL LOCATIONS AND ARRANGEMENTS OF LIGHTING FIXTURES, WIRING DEVICES, RECEPTACLES, DATA OUTLETS, SECURITY DEVICES, CAMERAS, ETC. SHALL BE OBTAINED FROM THE ARCHITECTURAL INTERIOR AND EXTERIOR ELEVATIONS.
2. COORDINATE LIGHTING FIXTURE LOCATIONS WITH MECHANICAL SYSTEMS AND DIFFUSERS PRIOR TO INSTALLATION.
3. ALL RECEPTACLES SHALL BE HOSPITAL GRADE, REFER TO SPECIFICATIONS.
4. ALL EXTERIOR DEVICES SHALL BE MANUFACTURER RATED FOR EXTERIOR USE AND SHALL BE WEATHERPROOF TYPE.
5. REFER TO SHEET ES-613 MECHANICAL EQUIPMENT CONNECTION SCHEDULE FOR ELECTRICAL REQUIREMENTS TO MECHANICAL EQUIPMENT.
6. EACH BRANCH CIRCUIT HOMERUN SHALL HAVE NO MORE THAN (3) CIRCUITS. EACH BRANCH CIRCUIT SHALL HAVE A SEPARATE GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR.
7. EXIT SIGNS, EMERGENCY LIGHT AND NIGHT LIGHT (NL) FIXTURES SHALL BE CONNECTED TO THE UNSWITCHED CONDUCTOR OF THE LOCAL LIGHTING CIRCUIT. SHOWN CONNECTED TO NEAREST FIXTURE FOR CIRCUIT SELECTION PURPOSES AND DRAWING CLARITY ONLY.
8. LIGHTING FIXTURE TYPES WITH SHADING DESIGNATE FIXTURE CONNECTED TO EMERGENCY LIGHTING CIRCUITS (GENERATOR AND/OR INVERTER).
9. COVER PLATES SHALL BRUSHED STAINLESS STEEL, UON.
10. PROVIDE PROTECTIVE EQUIPMENT ON FIRE ALARM, SECURITY, PAGING, AND ALL OTHER ELECTRICAL AND LOW-VOLTAGE EQUIPMENT, TO PROTECT AGAINST LEAKS, CONDENSATION, AND BREAKS FROM DUCTS AND PIPING, IF LOCATED DIRECTLY ABOVE THE ELECTRICAL EQUIPMENT.
11. FOR EXTERIOR CAMERAS, PTZ TYPE, ENSURE CAMERA PLACEMENT CONSIDERS SUN MOVEMENT, AND PROVIDE SUN SHIELDING AS REQUIRED.
12. TELECOMMUNICATIONS AND DATA CABLING OR SCHEME SHALL ADHERE TO FREEDOM CENTER BUILDING 120 STANDARDS, U.O.N. VERIFY THE FOLLOWING WITH VA HOSPITAL I.T. STAFF:
BLUE - TELECOMMUNICATIONS WHITE - DATA
13. **LIGHTNING PROTECTION:** THE CONTRACTOR SHALL PROVIDE A COMPLETE U.L. MASTER LABEL, INSPECTION CERTIFIED LIGHTNING PROTECTION SYSTEM FOR THE PROJECT PER NFPA 780 AND SPECIFICATION SECTION 264100.

SHEET KEYNOTES

1. PROVIDE LINE-VOLTAGE AS REQUIRED TO ASSOCIATED MECHANICAL EQUIPMENT ON FLOOR(S) BELOW. CONTRACTOR SHALL VERIFY EXACT CONNECTION AND MOUNTING REQUIREMENTS PRIOR TO ROUGH-IN AND PROVIDE AS REQUIRED. PROVIDE RECEPTACLE AS REQUIRED. COORDINATE WITH MECHANICAL CONTRACTOR.
2. PROVIDE #10AWG PHASE AND GROUND CONDUCTORS THROUGHOUT ENTIRE CIRCUIT, INCLUDING TO THE LAST DEVICE, AT THE END OF THE LINE.
3. MOUNT RECEPTACLES TO ROOF STRUCTURE, NOT TO PENTHOUSE STRUCTURAL PANELS.
4. VAV TERMINAL BOX. CONTRACTOR SHALL PROVIDE CONNECTION TO UNIT LOW-VOLTAGE TRANSFORMER ALONG WITH REQUIREMENTS AS SHOWN ON MECHANICAL EQUIPMENT CONNECTION SCHEDULE ON SHEET ES-613.
5. AIR HANDLING UNIT. CONTRACTOR SHALL PROVIDE CONNECTION TO UNIT INDIVIDUAL MOTORS AND MAINTENANCE LIGHTING/RECEPTACLE CIRCUIT AS SHOWN ON MECHANICAL EQUIPMENT CONNECTION SCHEDULE ON SHEET ES-613.
6. PROVIDE FIRE ALARM ADDRESSABLE OUTPUT MODULES AND CONNECT TO AIR HANDLING UNITS FOR SHUTDOWN UPON FIRE ALARM SYSTEM INITIATION. REFER TO FIRE ALARM RISER DIAGRAM ON SHEET ES-602 FOR ADDITIONAL INFORMATION.
7. CONNECT EXIT SIGN OR NIGHT LIGHT (NL) TO UNSWITCHED CONDUCTOR OF LOCAL LIGHTING CIRCUIT. REFER TO GENERAL NOTES.
8. DIGITAL TIME SWITCH, WITH AUDIBLE/VISUAL TIME-OUT ALARMS. SET TIME-OUT TO 1 HOUR, UNON. VERIFY EXACT REQUIREMENTS WITH OWNER.
9. RUN CIRCUIT VIA LIGHTING CONTROL SYSTEM PANEL "1LCP1" RELAY INDICATED (R#), CONTROL AS SHOWN ON LIGHTING CONTROL SYSTEM PANEL SCHEDULE ON SHEET ES-612.
10. RUN CIRCUIT VIA LIGHTING CONTROL SYSTEM PANEL "L51LCP1" RELAY INDICATED (R#), CONTROL AS SHOWN ON LIGHTING CONTROL SYSTEM PANEL SCHEDULE ON SHEET ES-612.
11. PROVIDE FIRE ALARM ADDRESSABLE INPUT MODULES AND COMPLETE CONNECTION TO FIRE SUPPRESSION VALVE FLOW AND/OR TAMPER SWITCHES. PROVIDE 1 MODULE PER VALVE SWITCH. REFER TO FIRE SUPPRESSION DRAWINGS FOR EXACT QUANTITIES AND LOCATIONS.
12. LOCATE AT MAIN DRAIN AS REQUIRED. COORDINATE LOCATION OF MAIN DRAIN WITH FIRE SUPPRESSION CONTRACTOR.
13. CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR FOR FURNISHING AND INSTALLATION RESPONSIBILITIES OF AHU SMOKE DET DETECTORS. REFER TO FIRE ALARM RISER DIAGRAM AND SYSTEM NOTES ON SMOKE DET-602 FOR ADDITIONAL INFORMATION.

100% CONSTRUCTION DOCUMENTS

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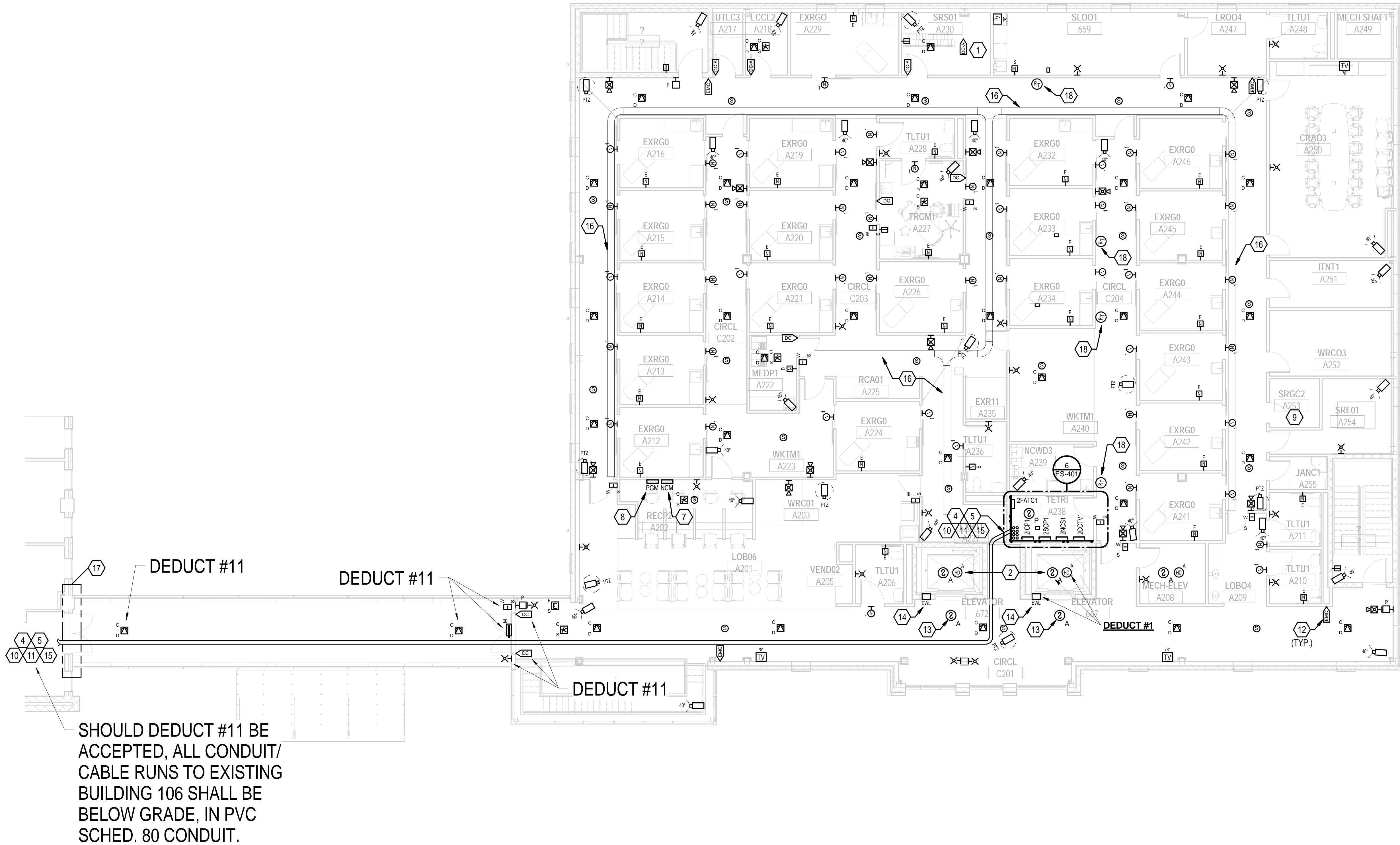
one eighth inch = one foot

GENERAL NOTES

1. ALL FINAL LOCATIONS AND ARRANGEMENTS OF DEVICES, CAMERAS, ETC. SHALL BE OBTAINED FROM THE ARCHITECTURAL INTERIOR AND EXTERIOR ELEVATIONS.
2. ALL EXTERIOR DEVICES SHALL BE MANUFACTURER RATED FOR EXTERIOR USE AND SHALL BE WEATHERPROOF TYPE.
3. FOR EXTERIOR CAMERAS, PTZ TYPE, ENSURE CAMERA PLACEMENT CONSIDERS SUN MOVEMENT, AND PROVIDE SUN SHIELDING AS REQUIRED.
4. PROVIDE PROTECTIVE EQUIPMENT ON ALL FIRE ALARM, SECURITY, INTERCOM, AND ALL OTHER LOW-VOLTAGE ELECTRICAL EQUIPMENT, TO PROTECT AGAINST LEAKS, CONDENSATION, AND BREAKS FROM DUCTS AND PIPING, IF LOCATED DIRECTLY ABOVE THE EQUIPMENT.
5. NEW CCTV, ACCESS CONTROL, INTRUSION DETECTION, SECURITY, PAGING DEVICES SHALL BE COMPATIBLE WITH EXISTING SYSTEMS IN PLACE AT THIS VA CAMPUS. COORDINATE EXISTING SYSTEMS FOR COMPATIBILITY WITH OWNER PRIOR TO BID.

SHEET KEYNOTES

1. PROVIDE SECURITY DOOR CONTACT WITH ALARM AT ROOF ACCESS HATCH. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH SECURITY SYSTEM INSTALLER PRIOR TO ROUGH-IN AND PROVIDE ACCORDINGLY.
2. DEVICES LOCATED AT TOP OF ELEVATOR SHAFT, SEE FIRE ALARM RISER DIAGRAM ON SHEET ES-602 FOR ADDITIONAL INFORMATION.
3. PROVIDE FIRE ALARM ADDRESSABLE INPUT MODULES AND COMPLETE CONNECTION TO FIRE SUPPRESSION VALVE FLOW AND/OR TAMPER SWITCHES. PROVIDE 1 MODULE PER VALVE SWITCH. REFER TO FIRE SUPPRESSION DRAWINGS FOR EXACT QUANTITIES AND LOCATIONS.
4. PROVIDE 4" CONDUIT WITH 12 STRAND 62.5/125µM MULTIMODE TYPE OFNR FIBER OPTIC CABLE FROM BUILDING 106 TELECOM ROOM TO NEW CLINIC BUILDING TELECOM ROOM, AND CONNECT THE NEW CLINIC BUILDING CCTV AND SECURITY SYSTEMS TO THE EXISTING VA CCTV AND SECURITY SYSTEMS. PROVIDE COMPLETE INTERFACE EQUIPMENT AND PROGRAMMING TO COMPLETE COMMUNICATION BETWEEN THE NEW CLINIC BUILDING CCTV AND SECURITY SYSTEMS AND THE EXISTING VA CCTV AND SECURITY SYSTEMS. CONDUIT BENDING RADIUS SHALL BE GREATER THAN THE ALLOWABLE BENDING RADIUS OF THE FIBER OPTIC CABLE. ROUTE CONDUIT DOWN TO FIRST FLOOR CEILING SPACE, THROUGH THE CONNECTOR BRIDGE, AND TO BUILDING 106. PROVIDE JUNCTION BOXES AS NEEDED. REFER TO ELECTRICAL SITE PLAN ON SHEET ES-100 FOR ADDITIONAL AND ADD-ALTERNATE INFORMATION.
5. PROVIDE 4" CONDUIT WITH 12 STRAND 62.5/125µM MULTIMODE TYPE OFNR FIBER OPTIC CABLE FROM BUILDING 106 ELECTRICAL ROOM TO NEW CLINIC BUILDING TELECOM ROOM, AND CONNECT THE NEW CLINIC BUILDING FIRE ALARM SYSTEM TO THE EXISTING VA FIRE ALARM SYSTEM. PROVIDE COMPLETE INTERFACE EQUIPMENT AND PROGRAMMING TO COMPLETE COMMUNICATION BETWEEN THE NEW CLINIC BUILDING FIRE ALARM SYSTEM AND THE EXISTING VA FIRE ALARM SYSTEM. CONDUIT BENDING RADIUS SHALL BE GREATER THAN THE ALLOWABLE BENDING RADIUS OF THE FIBER OPTIC CABLE. ROUTE CONDUIT DOWN TO FIRST FLOOR CEILING SPACE, THROUGH THE CONNECTOR BRIDGE, AND TO THE EXISTING VA BUILDING 106 ELECTRICAL ROOM. PROVIDE JUNCTION BOXES AS NEEDED. REFER TO ELECTRICAL SITE PLAN ON SHEET ES-100 FOR ADDITIONAL INFORMATION.
6. LOCATE AT MAIN DRAIN AS REQUIRED. COORDINATE LOCATION OF MAIN DRAIN WITH FIRE SUPPRESSION CONTRACTOR.
7. PROVIDE NURSE CALL MASTER STATION LOCATED AT RECEPTIONIST DESK. REFER TO SPECIFICATIONS FOR EXACT REQUIREMENTS AND PROVIDE ACCORDINGLY. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO INSTALLATION.
8. PROVIDE PAGING MASTER STATION LOCATED AT RECEPTIONIST DESK. REFER TO SPECIFICATIONS FOR EXACT REQUIREMENTS AND PROVIDE ACCORDINGLY. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO INSTALLATION.
9. PROVIDE GAS DETECTORS CAPABLE OF DETECTING CO, CL2, NO2, H2S, SO2, O2, AND COMBUSTIBLES. CONNECT TO THE FIRE ALARM CONTROL PANEL. PROVIDE ADDRESSABLE INPUT AND OUTPUT MODULES AS REQUIRED.
10. PROVIDE 4" CONDUIT WITH 200 PAIR COPPER TELECOMMUNICATIONS CABLE FROM BUILDING 106 TELECOM ROOM TO NEW CLINIC BUILDING TELECOM ROOM, AND CONNECT THE NEW CLINIC BUILDING DATA SYSTEM TO THE EXISTING VA DATA SYSTEM. PROVIDE COMPLETE INTERFACE EQUIPMENT AND PROGRAMMING TO COMPLETE COMMUNICATION BETWEEN THE NEW CLINIC BUILDING TELECOM SYSTEM AND THE EXISTING VA TELECOM SYSTEM. ROUTE CONDUIT DOWN TO FIRST FLOOR CEILING SPACE, THROUGH THE CONNECTOR BRIDGE, AND TO THE EXISTING VA BUILDING 106 TELECOM ROOM. PROVIDE JUNCTION BOXES AS NEEDED. REFER TO ELECTRICAL SITE PLAN ON SHEET ES-100 FOR ADDITIONAL AND ADD-ALTERNATE INFORMATION.
11. PROVIDE 4" CONDUIT WITH 24 STRAND 62.5/125µM MULTIMODE TYPE OFNR FIBER OPTIC CABLE FROM FREEDOM CENTER BUILDING 120 TELECOM ROOM TO NEW CLINIC BUILDING TELECOM ROOM, AND CONNECT THE NEW CLINIC BUILDING DATA SYSTEM TO THE EXISTING VA DATA SYSTEM. PROVIDE COMPLETE INTERFACE EQUIPMENT AND PROGRAMMING TO COMPLETE COMMUNICATION BETWEEN THE NEW CLINIC BUILDING DATA SYSTEM AND THE EXISTING VA DATA SYSTEM. CONDUIT BENDING RADIUS SHALL BE GREATER THAN THE ALLOWABLE BENDING RADIUS OF THE FIBER OPTIC CABLE. ROUTE CONDUIT DOWN TO FIRST FLOOR CEILING SPACE, THROUGH THE CONNECTOR BRIDGE, THROUGH BUILDING 106 AND COVERED WALKWAY FOR CONTINUED ROUTING TO FREEDOM CENTER BUILDING 120 TELECOM ROOM. PROVIDE JUNCTION BOXES AS NEEDED. REFER TO ELECTRICAL SITE PLAN ON SHEET ES-100 FOR ADDITIONAL INFORMATION.
12. SECURITY CONTACT DEVICE FOR FIRE EXTINGUISHER CABINET TO CONNECT TO VA HOSPITAL ENGAGE MONITORING SYSTEM. COORDINATE EXACT REQUIREMENTS WITH OWNER AND PROVIDE ACCORDINGLY.
13. ELEVATOR LOBBY SMOKE DETECTOR FOR ELEVATOR RECALL. SEE FIRE ALARM RISER DIAGRAM ON SHEET ES-602 FOR ADDITIONAL INFORMATION.
14. ELEVATOR WARNING LIGHT. COORDINATE REQUIREMENT WITH ELEVATOR INSTALLER AND PROVIDE ACCORDINGLY. SEE FIRE ALARM RISER DIAGRAM ON SHEET ES-602 FOR ADDITIONAL INFORMATION.
15. PROVIDE 4" CONDUIT WITH MFR REQUIRED CABLING FROM BUILDING 106 TELECOM ROOM TO NEW CLINIC BUILDING TELECOM ROOM, AND CONNECT THE NEW CLINIC BUILDING PAGING SYSTEM TO THE EXISTING VA PAGING SYSTEM. PROVIDE COMPLETE INTERFACE EQUIPMENT AND PROGRAMMING TO COMPLETE COMMUNICATION BETWEEN THE NEW CLINIC BUILDING PAGING SYSTEM AND THE EXISTING VA PAGING SYSTEM. ROUTE CONDUIT DOWN TO FIRST FLOOR CEILING SPACE, THROUGH THE CONNECTOR BRIDGE, AND TO THE EXISTING VA BUILDING 106 TELECOM ROOM. PROVIDE JUNCTION BOXES AS NEEDED. REFER TO ELECTRICAL SITE PLAN ON SHEET ES-100 FOR ADDITIONAL INFORMATION.
16. 12" TELEPHONE/LAN CABLE TRAY MOUNTED 10'-0" AFF (TYP.). PROVIDE THREE (3) SECTION CABLE TRAY FOR SYSTEM PROVIDED.
17. COORDINATE USE OF SEISMIC EXPANSION JOINT FITTINGS BETWEEN CONNECTOR BRIDGE AND EXISTING BUILDING 106 WITH ARCHITECTURAL AND STRUCTURAL PLANS AND SPECIFICATIONS. REFER TO EXPANSION JOINT DETAIL ON SHEET ES-602.
18. AHU DUCT MOUNTED SMOKE DETECTOR REMOTE TEST STATION AND INDICATING LAMP FOR UNIT ON ROOF. VERIFY EXACT MOUNTING LOCATION WITH VA FIRE DEPARTMENT AND OWNER PRIOR TO ROUGH-IN. PROVIDE ENGRAVED NAMEPLATE FOR TEST STATION ACCORDINGLY.



1 SECOND FLOOR PLAN - SYSTEMS
Scale: 1/8" = 1'-0"

100% CONSTRUCTION DOCUMENTS

		CONSULTANTS:				ARCHITECT/ENGINEERS:		Drawing Title SECOND FLOOR PLAN - SYSTEMS		Project Title CONSTRUCT CLINIC ADDITION TRACK 3 CLINIC BUILD		Project Number 544-302		Office of Facilities Management	
		 <div>Engineering • Surveying • Aerial Photography / Mapping Landscape Architecture • Planning</div> <div>511 Broadway Street, Myrtle Beach, SC 29577 Tel: 843.444.1020 www.rowepsc.com Fax: 843.446.3936</div>				 <div>1000 Abernethy Road NE, Suite 900 400 Northpark Tower Center Atlanta, Georgia 30308 Tel: (404) 888-8800</div> <div>1101 Johnson Avenue, Suite 104 Myrtle Beach, SC 29577 843.712.1470</div> <div>aa+e</div> <div>Accord Architects & Engineers</div>		Approved: Project Director		Location WJBD VA MEDICAL CENTER COLUMBIA, SC 29209		Building Number 122			
Revisions:		Dates								Date 07/30/2015		Checked KV		Drawn CR	

Department of
Veterans Affairs

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Revisions:

Dates

CONSULTANTS:

ROWE PROFESSIONAL SERVICES COMPANY

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Landscape Architecture • Planning

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www.rowepsc.com

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SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 21670
3/26/15
KUNG CHIH VEE

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843.712.1470

aa+e

Accord Architects & Engineers

Drawing Title

ENLARGED ELECTRICAL PLANS

Approved: Project Director

Project Title

CONSTRUCT CLINIC
ADDITION TRACK 3 CLINIC
BUILD

Location

WJBD VA MEDICAL CENTER
COLUMBIA, SC 29209

Project Number

544-302

Building Number

122

Date

07/30/2015

Checked

KV

Drawn

CR

Drawing Number

ES-401

Office of
Facilities
Management

Department of
Veterans Affairs

ENLARGED ELECTRICAL ROOMS A129 / A146 PLAN - POWER

1
EP-101
Scale: 1/4" = 1'-0"

ENLARGED TETRI A136 PLAN - POWER

2
EP-101
Scale: 1/4" = 1'-0"

ENLARGED TETRI A238 PLAN - POWER

3
EP-102
Scale: 1/4" = 1'-0"

ENLARGED ELECTRICAL ROOMS A129 / A146 PLAN - SYSTEMS

4
EY-101
Scale: 1/4" = 1'-0"

ENLARGED TETRI A136 PLAN - SYSTEMS

5
EY-101
Scale: 1/4" = 1'-0"

ENLARGED TETRI A238 PLAN - SYSTEMS

6
EY-102
Scale: 1/4" = 1'-0"

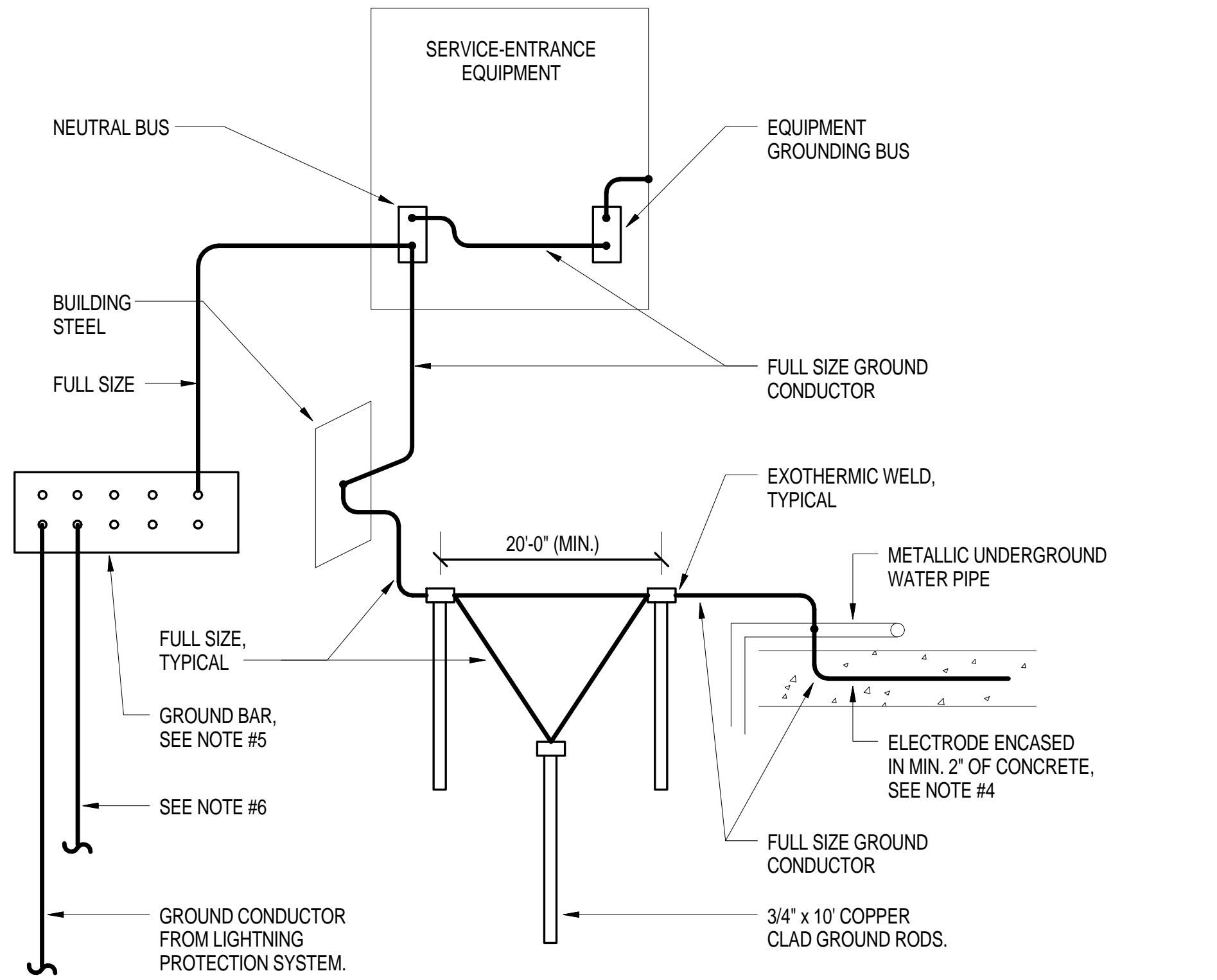
GENERAL NOTES

- ALL FINAL LOCATIONS AND ARRANGEMENTS OF RECEPTACLES, DATA OUTLETS, SYSTEMS DEVICES, CAMERAS, ETC. SHALL BE OBTAINED FROM THE ARCHITECTURAL INTERIOR AND EXTERIOR ELEVATIONS.
- (EX) DENOTES EXISTING; TO REMAIN. (R) DENOTES RELOCATED. CONNECT AS SHOWN.
- LIGHT, DASHED LINES INDICATE N.E.C. REQUIRED WORKING CLEARANCES.
- REFER TO SHEET ES-613 MECHANICAL EQUIPMENT CONNECTION SCHEDULE FOR ELECTRICAL REQUIREMENTS TO MECHANICAL EQUIPMENT.
- EACH BRANCH CIRCUIT HOMERUN SHALL HAVE NO MORE THAN (3) CIRCUITS. EACH BRANCH CIRCUIT SHALL HAVE A SEPARATE GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR.
- PROVIDE PROTECTIVE EQUIPMENT ON SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, ALL OTHER ELECTRICAL EQUIPMENT, FIRE ALARM, SECURITY, INTERCOM, AND ALL OTHER LOW-VOLTAGE ELECTRICAL EQUIPMENT, TO PROTECT AGAINST LEAKS, CONDENSATION, AND BREAKS FROM DUCTS AND PIPING, IF LOCATED DIRECTLY ABOVE THE ELECTRICAL EQUIPMENT.
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- FOR EXTERIOR CAMERAS, PTZ TYPE, ENSURE CAMERA PLACEMENT CONSIDERS SUN MOVEMENT, AND PROVIDE SUN SHIELDING AS REQUIRED.
- NEW CCTV, ACCESS CONTROL, INTRUSION DETECTION, SECURITY, PAGING DEVICES SHALL BE COMPATIBLE WITH EXISTING SYSTEMS IN PLACE AT THIS VA CAMPUS. COORDINATE EXISTING SYSTEMS FOR COMPATIBILITY WITH OWNER PRIOR TO BID.
- TELECOMMUNICATIONS AND DATA CABLING COLOR SCHEME SHALL ADHERE TO BUILDING 120 STANDARDS, U.O.N. VERIFY THE FOLLOWING WITH VA HOSPITAL I.T. STAFF:
BLUE - TELECOMMUNICATIONS
WHITE - DATA

SHEET KEYNOTES

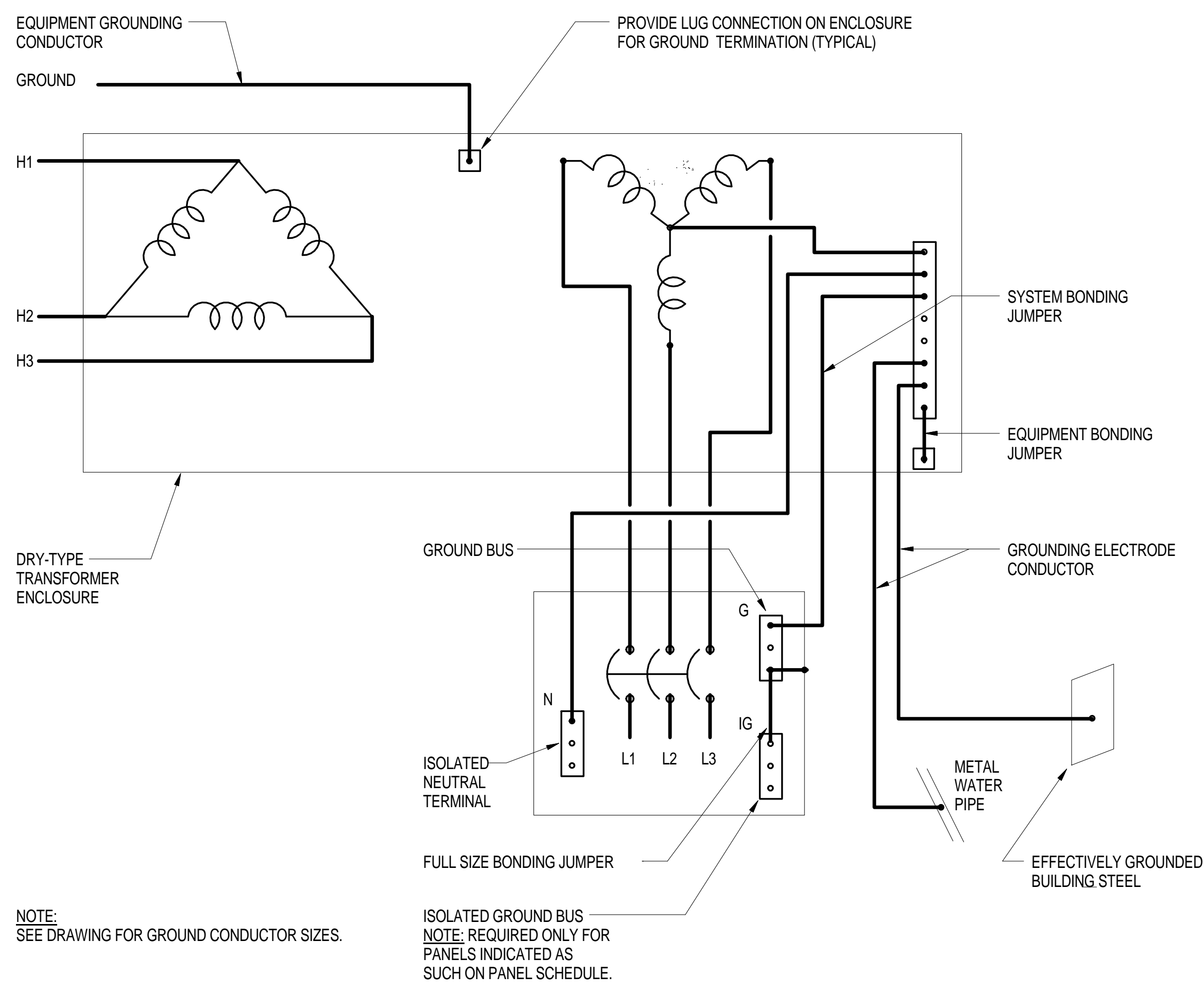
- PROVIDE STAND-ALONE UPS, PLUG-IN TYPE, POINT OF USE, FOR EACH LOW-VOLTAGE SYSTEM. COORDINATE UPS TYPE WITH OWNER.
- 4x8x3/4" TELECOM TERMINAL BACKBOARD, PAINTED FLAME-RETARDANT GRAY. PROVIDE REQUIRED 24-PORT FIBER OPTIC PATCH PANELS (FOR CCTV FIBER, FIRE ALARM FIBER, AND ETHERNET). PROVIDE REQUIRED ETHERNET SWITCHES COMPATIBLE WITH EXISTING VA I.T. SYSTEM (FOR CCTV, FIRE ALARM, AND ETHERNET). PROVIDE REQUIRED 96-PORT CAT6 PATCH PANELS. PROVIDE REQUIRED 110 PUNCH BLOCKS. COMPLETE ALL TERMINATIONS AND SOFTWARE CONFIGURATIONS.
- FIRE ALARM CONTROL PANEL WITH BATTERY BACKUP. REFER TO FIRE ALARM SPECIFICATIONS AND FIRE ALARM SYSTEM GENERAL NOTES AND REQUIREMENTS ON SHEET ES-602 FOR ADDITIONAL INFORMATION.
- FIRE ALARM TERMINATION CABINET/EXTENDER PANEL WITH BATTERY BACKUP. REFER TO FIRE ALARM SPECIFICATIONS AND FIRE ALARM SYSTEM GENERAL NOTES AND REQUIREMENTS ON SHEET ES-602 FOR ADDITIONAL INFORMATION.
- TELECOMMUNICATIONS GROUND BUS BAR. REFER TO POWER RISER DIAGRAM, SHEET ES-601 FOR ADDITIONAL INFORMATION.
- LIGHTING CONTROL PANEL (LCP#) MASTER OR SATELLITE. REFER TO LIGHTING CONTROL SYSTEM PANEL DETAILS ON SHEET ES-612 FOR ADDITIONAL INFORMATION.
- COORDINATE EXACT CAMERA LOCATION WITH ELECTRICAL EQUIPMENT AND OWNER PRIOR TO ROUGH-IN AND INSTALLATION TO AVOID ANY CONFLICTS IN VIEWING ANGLES.
- SINGLE-POINT POWER CONNECTION FED FROM CONDENSER OUTSIDE. CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS AS REQUIRED BETWEEN FAN COIL UNITS, CONDENSER, ETC. COORDINATE EXACT REQUIREMENTS WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
- SINGLE-POINT POWER CONNECTION FED FROM CONDENSER ON ROOF. CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS AS REQUIRED BETWEEN FAN COIL UNITS, CONDENSER, ETC. COORDINATE EXACT REQUIREMENTS WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.

one thirty second inch = one foot
one sixteenth inch = one foot
one eighth inch = one foot
one quarter inch = one foot
one half inch = one foot
three eighths inch = one foot
one eighth inch = one foot
one quarter inch = one foot



- NOTES:**
- FULL SIZE GROUND MEANS THAT GROUND CONDUCTOR SIZE SHALL BE AS SHOWN ON SERVICE EQUIPMENT AT THE RISER DIAGRAM.
 - AFTER GROUNDING SYSTEM IS INSTALLED, GROUND RESISTANCE SHALL BE MEASURED TO ASSURE THAT GROUND VALUE OF 5 OHMS MAXIMUM RESISTANCE IS ACHIEVED. IF NOT, ADDITIONAL GROUNDING SHALL BE PROVIDED TO MEET THE SPECIFIED VALUE.
 - ALL CONNECTIONS TO GROUND RODS SHALL BE EXOTHERMIC WELD CONNECTIONS.
 - GROUND CONDUCTOR SHALL BE LOCATED WITHIN OR NEAR BOTTOM OF CONCRETE FOUNDATION OR FOOTING THAT IS IN DIRECT CONTACT WITH THE EARTH AND SHALL CONSIST OF AT LEAST 20 FEET OF ONE OR MORE STEEL REINFORCING BARS OR RODS OF NOT LESS THAN 1/2 INCH DIAMETER OR AT LEAST 20'-0" OF BARE COPPER CONDUCTOR.
 - COPPER GROUND BAR 6" H x 24" L x 1/4" THICK WITH A MINIMUM OF 12 HOLES AND Cw/A LUGS FOR CONDUCTORS UP TO #4/0 STRANDED. GROUND BAR SHALL BE MOUNTED ON STANDOFFS AT 18" AFF. GROUND BAR SHALL BE FURNISHED, INSTALLED, AND WIRED BY THE ELECTRICAL CONTRACTOR.
 - #10 STRANDED IN 1-1/4" PVC CONDUIT WITH LONG SWEEP ELBOWS TO GROUND BUS BAR SHOWN IN MAIN UTILITIES ROOM, AND INDIVIDUAL ELECTRIC ROOMS.

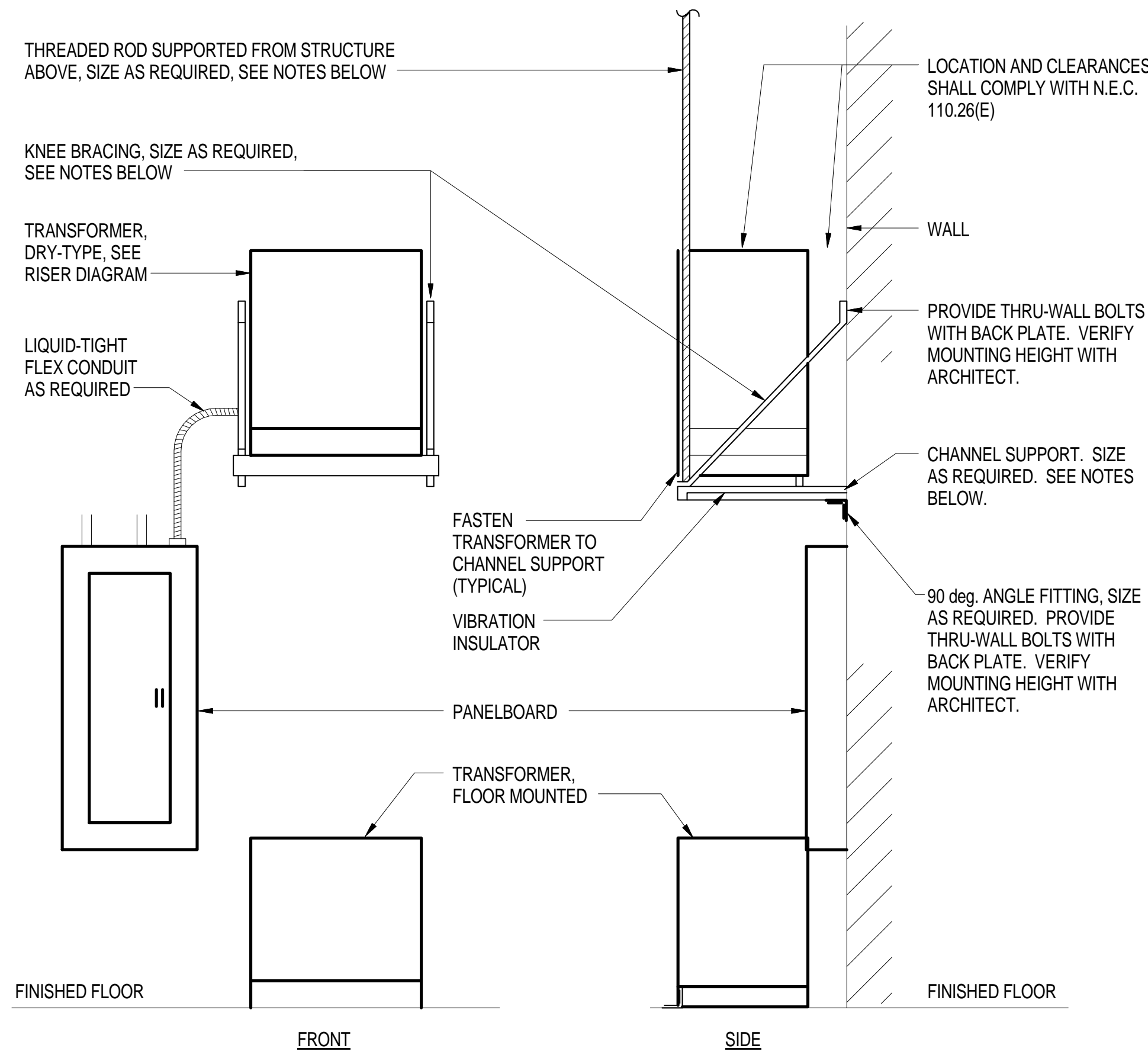
1 SERVICE ENTRANCE EQUIPMENT GROUNDING
Scale: 1/2" = 1'-0"



NOTE:
SEE DRAWING FOR GROUND CONDUCTOR SIZES.

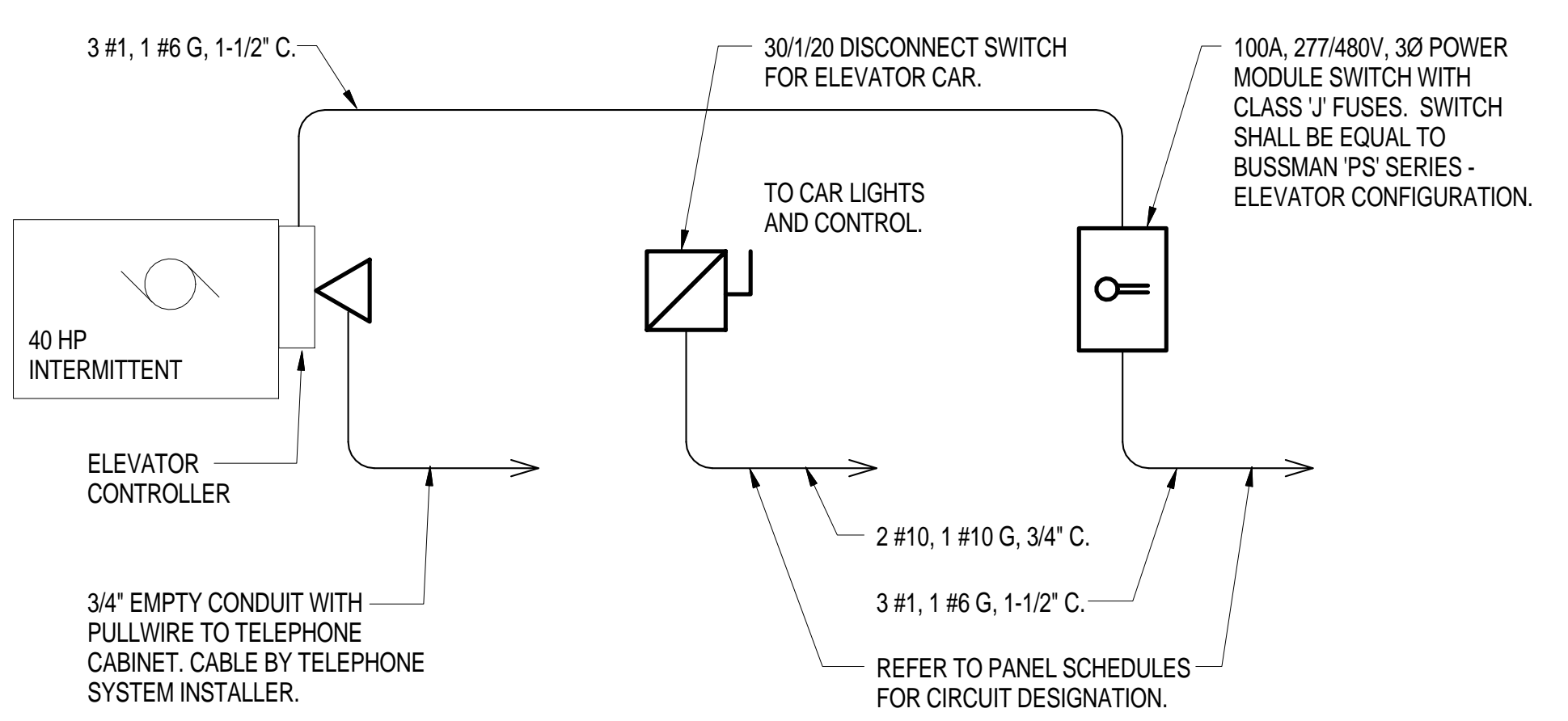
ISOLATED GROUND BUS - NOTE: REQUIRED ONLY FOR PANELS INDICATED AS SUCH ON PANEL SCHEDULE.

2 DRY-TYPE TRANSFORMER GROUNDING
Scale: 1/2" = 1'-0"



- NOTES:**
- TRANSFORMER WEIGHT IS APPROXIMATELY 650 LBS.
 - CONTRACTOR SHALL VERIFY SUPPORT METHOD WITH GENERAL CONTRACTOR AND ARCHITECT ON SITE PRIOR TO INSTALLATION.
 - ALL BRACING AND SUPPORT SHALL BE DESIGNED TO SUPPORT TWICE THE TRANSFORMER WEIGHT SHOWN IN NOTE #1 ABOVE OR ACTUAL EQUIPMENT WEIGHT PROVIDED, WHICHEVER IS MORE STRINGENT.

4 PANELBOARD TRANSFORMER SURFACE MOUNTING
Scale: 1/2" = 1'-0"

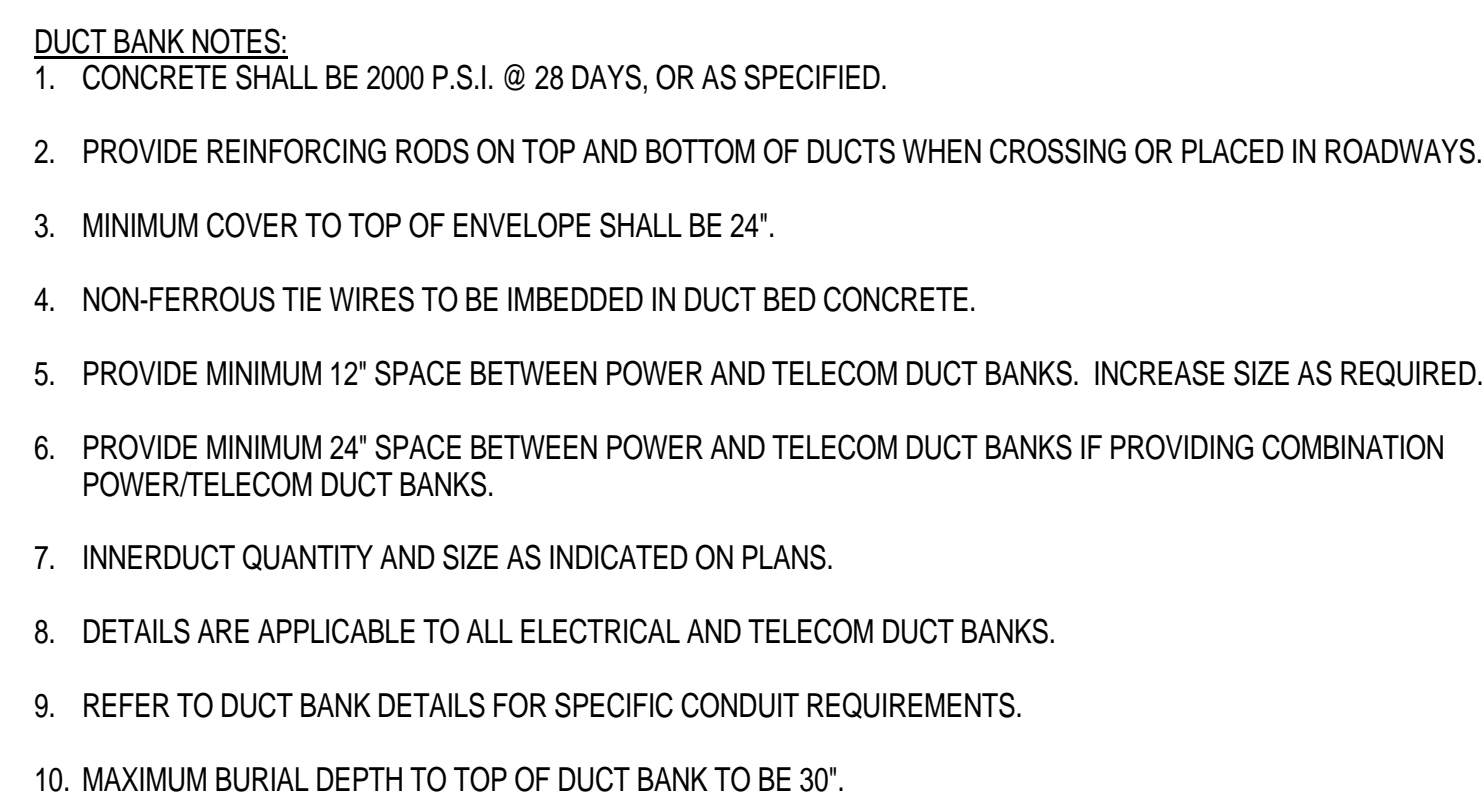
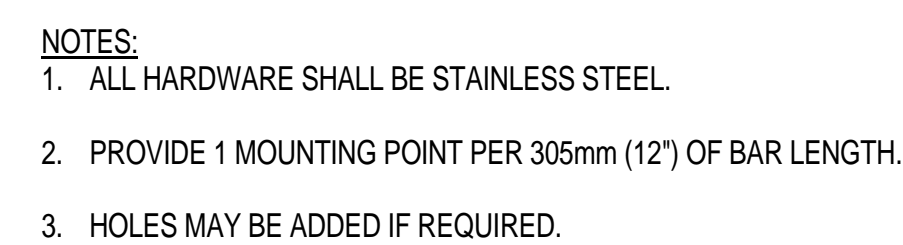


- NOTES:**
- VERIFY EXACT RATING AND LOCATION OF ELEVATOR MOTOR AND CONTROLLER.
 - ELEVATOR MOTOR RATING AND SWITCH (POWER MODULE) SHALL INCLUDE THE FOLLOWING:
 - CONTROL TRANSFORMER - VERIFY VOLTAGE.
 - FIRE SAFETY INTERFACE RELAY.
 - INTERLOCK CONTACTS FOR BATTERY LOWERING DEVICE - HYDRAULIC ELEVATOR.
 - SHUNT-TRIP VOLTAGE MONITORING RELAY.
 - KEY TO TEST SWITCH.
 - GREEN ON PILOT LIGHT.
 - EQUIPMENT FUSE RATING IS BASED ON MOTOR HP RATING INDICATED, OPERATING ON SOLID-STATE SOFT STARTER.
 - DO NOT USE THIS DETAIL FOR ELEVATORS HAVING ACROSS-THE-LINE STARTERS OR SIMILAR


3 ELEVATOR MOTOR WIRING
Scale: 1/2" = 1'-0"

100% CONSTRUCTION DOCUMENTS

CONSULTANTS: Engineering • Surveying • Aerial Photography / Mapping Landscape Architecture • Planning 511 Broadway Street, Myrtle Beach, SC 29577 Tel: 843.444.1020 www.rowepsc.com Fax: 843.444.3936		ARCHITECT/ENGINEERS: 1000 Abernethy Road NE, Suite 900 400 Northpark Tower Center Atlanta, Georgia 30328 Tel: 678.838.6800 1101 Johnson Avenue, Suite 104 Myrtle Beach, SC 29577 843.712.1470 Accord Architects & Engineers		Drawing Title ELECTRICAL DETAILS		Project Title CONSTRUCT CLINIC ADDITION TRACK 3 CLINIC BUILD		Project Number 544-302 Building Number 122		Office of Facilities Management 	
Revisions:				Approved: Project Director		Location WJBD VA MEDICAL CENTER COLUMBIA, SC 29209		Drawing Number ES-501			
Date				Date 07/30/2015		Checked KV		Drawn CR			



Office of
Facilities
Management

 Department of
Veterans Affairs

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Load Analysis

Load Calculation for Normal Power Distribution
Total Electrical Loads (Estimated)

Base Building Square Footage	25000.00	SF
Lighting Loads (@ 2VA/SF)	50.00	KVA
Receptacles (@ 2VA/SF)	50.00	KVA
Critical Equipment Load (@ 2VA/SF)	50.00	KVA
Chiller (80 ton)	351.91	KVA
Other HVAC Loads (@ 50HP)	46.61	KVA
Other Plumbing Loads (5HP)	4.66	KVA
Fire Pump Load (no fire pump)	0.00	KVA
Elevator Load (Two @ 30HP)	69.91	KVA
Other Loads (@ 1.5VA/SF)	37.50	KVA
Total Estimated Connected Loads	660.58	KVA
with 20% Spare Capacity for Growth / Future Expansion	792.70	KVA
Estimated Current Draw @ 480V, 3P	954.60	Amps

Generator Sizing Calculation	Demand Factors	
Lighting Loads (@ 2VA/SF)	x 40%	20.00 KVA
(40% of first 50,000VA)		
Receptacles (@ 2VA/SF)		
1st 10KVA	x 100%	10.00 KVA
Remainder	x 50%	20.00 KVA
Critical Equipment Load (@ 2VA/SF)	x 70%	35.00 KVA
Chiller (80 ton, not on generator)	x 0%	0.00 KVA
Other HVAC Loads (@ 50HP)	x 50%	23.30 KVA
Other Plumbing Loads (5HP, not on generator)	x 0%	0.00 KVA
Fire Pump Load (no fire pump)	x 100%	0.00 KVA
Elevator Load (Two @ 30HP)	x 100%	69.91 KVA
Other Loads (@ 1.5VA/SF)	x 30%	11.25 KVA
Total Estimated Demand Loads		189.46 KVA
with 20% Spare Capacity for Growth / Future Expansion		227.36 KVA
Estimated Current Draw @ 480V, 3P		273.79 Amps
Generator Size @ 0.8 PF		181.88 KW

ESTIMATED NEW CLINIC LIGHTING INVERTER LOAD CALCULATION				
AREA DESCRIPTION	S.F.	LOAD [KVA]	NOTES	
NEW CLINIC	25000	50.00	LIGHTING @	2 VA/SQ FT
		47.50	KW/KVA	0.95 POWER FACTOR
		19.00	KW/KVA	40% OF EMERGENCY LIGHTING
	X 1.25 =	23.75	KW/KVA	
24KVA LIGHTING INVERTER IS RECOMMENDED				

GENERATOR SEQUENCE OF OPERATION

- UPON LOSS OF NORMAL UTILITY POWER THE GENERATOR SHALL RECEIVE START-UP SIGNAL FROM THE AUTOMATIC TRANSFER SWITCHES) AND CONNECT THE DIFFERENT GENERATOR LOADS AS FOLLOWS:
- LIFE SAFETY BRANCH SHALL CHANGE OVER TO GENERATOR SOURCE WITHIN 10 SECONDS.
- CRITICAL BRANCH SHALL CHANGE OVER TO GENERATOR SOURCE WITHIN 10 SECONDS, BUT ONLY AFTER LIFE SAFETY BRANCH.
- EQUIPMENT BRANCH IS CONSIDERED OPTIONAL STAND-BY AND SHALL NOT CHANGE OVER TO GENERATOR SOURCE UNLESS SELECTED TO BY THE OWNER. IF SO, THEN THE CHANGE OVER SHALL BE WITHIN 5 MINUTES.

CONDUCTOR SCHEDULE

- 3 SETS 4 #500KCMIL (CU) IN 4" C.
- 4 #500KCMIL, 1 #4 G. IN 4" C.
- 4 #250KCMIL, 1 #4 G. IN 2-1/2" C.
- 4 #1/0, 1 #6 G. IN 2" C.
- 4 #3, 1 #8 G. IN 1 1/4" C.
- 3 #1, 1 #6 G. IN 1-1/4" C.
- 4 #1, 1 #6 G. IN 1-1/2" C.
-

TRANSFORMER SCHEDULE

- T1 30 KVA, DRY-TYPE, NEMA TP-1
- T2 45 KVA, DRY-TYPE, NEMA TP-1
- T3 75 KVA, DRY-TYPE, NEMA TP-1
- T4 112.5 KVA, DRY-TYPE, NEMA TP-1

ALL TRANSFORMERS ARE 480V PRIMARY (P), AND 208Y/120V, 3-PH, 4W SECONDARY (S), UNLESS OTHERWISE NOTED.

GENERAL KEYNOTES

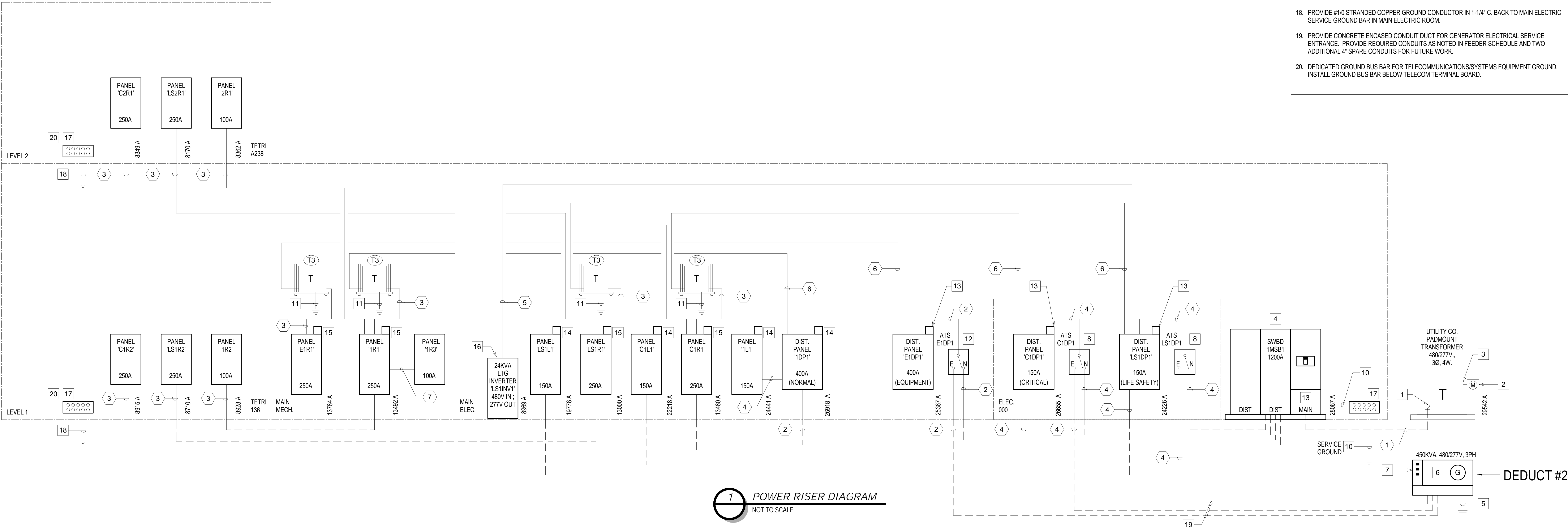
- ALL WORK SHOWN IS NEW, UNLESS OTHERWISE NOTED (UON).
- ANY EXISTING ELECTRICAL WORK SHOWN REFLECTS FIELD CONDITIONS PRESENT AT THE TIME OF SURVEY.
- REFER TO ELECTRICAL SYMBOL LEGEND ON SHEET ES-002.
- REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE ON SHEET ES-611 FOR MORE INFORMATION.
- SERIES RATED PANELBOARDS ARE NOT PERMITTED.
- ALL NEW EQUIPMENT WITHIN THE INTERIOR OF THE BUILDING SHALL BE RATED NEMA 1. NEW OUTDOOR EQUIPMENT SHALL BE RATED NEMA 3R.
- THE AIC CALCULATIONS PERFORMED WERE BASED ON A 750KVA, 480/277V, 3Ø, 4W PADMOUNT UTILITY CO. TRANSFORMER WITH A 3.5% IMPEDANCE. SHOULD THE ACTUAL TRANSFORMER BE LARGER, HAVE A LOWER PERCENT IMPEDANCE, OR BE LOCATED CLOSER TO THE MAIN SERVICE EQUIPMENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ELECTRICAL EQUIPMENT AIC RATINGS AND SHALL ADJUST ACCORDINGLY. PROVIDE NEC REQUIRED LABELING ON ALL ELECTRICAL EQUIPMENT.
- CONTRACTOR SHALL PROVIDE ARC FLASH ANALYSIS FOR ALL CIRCUITS. PROVIDE REPORT AND LABEL ELECTRICAL SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, ETC. IN ACCORDANCE WITH NEC 70E.

UTILITY GENERAL NOTES

- CONTRACTOR SHALL MEET ONSITE WITH THE UTILITY COMPANY REPRESENTATIVE TO DETERMINE, PRIOR TO BID AND ROUGH-IN, THE FOLLOWING:
 - VERIFY PRIMARY CONDUIT WORK REQUIRED AND RESPONSIBILITY.
 - VERIFY THE EXACT LOCATION OF THE PADMOUNT TRANSFORMER.
 - PAD DIMENSIONS, RESPONSIBILITY AND SPECIFICATIONS.
 - VERIFY METERING METHOD AND REQUIREMENTS, IF DIFFERENT FROM SHOWN.
 - THE CONTRACTOR'S FAILURE TO COMPLY WITH THESE COORDINATION PROCEDURES WILL CONSTITUTE ASSUMING ALL COST ASSOCIATED WITH REPLACING ANY AND ALL WORK ALREADY IN PLACE TO MEET THE UTILITY COMPANY'S RULES AND REQUIREMENTS.
- LOCAL ELECTRIC COMPANY: SOUTH CAROLINA ELECTRIC & GAS (SCE&G)
BILL EISELE ACCOUNTS MANAGER 803-217-9220 (OFFICE) WEISELE@SCANA.COM
JEFF HOLLEY LOCAL MANAGER 803-217-9186 (OFFICE) JHOLLEY@SCANA.COM
RYAN S. DENNIS, P.E. 803-217-8832 (OFFICE) RDENNIS@SCANA.COM
JOE C. GROOMS JR. 803-217-8440 (OFFICE) JGROOMS@SCANA.COM

SHEET KEYNOTES

- LEAVE A MINIMUM 8'-0" SLACK CONDUCTOR FOR UTILITY CO. USE.
- COORDINATE WITH UTILITY Co. FOR C.T. METER, ENCLOSURE AND INSTALLATION REQUIREMENTS AND PROVIDE ACCORDINGLY.
- 1-1/2" CONDUIT WITH PULLSTRING. COORDINATE WITH UTILITY Co. FOR TERMINATIONS.
- 1200A MAIN SWITCHBOARD, 100K AIC, SERVICE-ENTRANCE RATED, WITH GROUND FAULT PROTECTION PER NEC.
- #3/0 GROUND TO (3) 3/4" x 10'-0" Cu. GROUND RODS DRIVEN 20'-0" APART IN A TRIPOD CONFIGURATION, TO MAIN BUILDING FOOTER GROUND, TO MAIN SERVICE GROUND BUS BAR, TO MAIN COLD WATER PIPE, AND TO EFFECTIVELY GROUNDED BUILDING STEEL. CONDUCTORS SHALL BE STRANDED COPPER.
- GOVERNMENT FURNISHED 450KVA EMERGENCY GENERATOR, 480/277V, 3Ø, 4W OUTPUT. CONTRACTOR SHALL INSTALL GENERATOR ON EXISTING PAD IN FENCED AREA LOCATION. REFER TO RISER DIAGRAM FOR ELECTRICAL REQUIREMENTS. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- (1) 400A, 3P AND (2) 150A, 3P GENERATOR OUTPUT CIRCUIT BREAKERS WITH GROUND FAULT PROTECTION.
- AUTOMATIC TRANSFER SWITCH, 150A., 4P, 600V, 100K AIC, 'BREAK-BEFORE-MAKE' RATED.
- TRANSFORMER MOUNTED FROM STRUCTURE ABOVE. REFER TO TRANSFORMER MOUNTING DETAIL ON SHEET ES-501.
- #4/0 Cu. GROUND, REFER TO SERVICE EQUIPMENT GROUNDING DETAIL ON SHEET ES-501.
- #1/0 Cu. GROUND, REFER TO DRY-TYPE TRANSFORMER GROUNDING DETAIL ON SHEET ES-501.
- AUTOMATIC TRANSFER SWITCH, 400A., 4P, 600V, 100K AIC, 'BREAK-BEFORE-MAKE' RATED.
- SPD TYPE 1, 200KA PER MODE. UL 1449 3RD EDITION COMPLIANT, CURRENT TECHNOLOGY MODEL # CGP200-277/480-3GY-D. PROVIDE SWITCHBOARD CIRCUIT BREAKER AND SHALL BE RATED PER SPD SUPPLIER RECOMMENDATION.
- SPD TYPE 1, 150KA PER MODE. UL 1449 3RD EDITION COMPLIANT, CURRENT TECHNOLOGY MODEL # CGP150-277/480-3GY-D. PROVIDE PANELBOARD CIRCUIT BREAKER AND SHALL BE RATED PER SPD SUPPLIER RECOMMENDATION.
- SPD TYPE 1, 150KA PER MODE. UL 1449 3RD EDITION COMPLIANT, CURRENT TECHNOLOGY MODEL # CGP150-120/208-3GY-D. PROVIDE PANELBOARD CIRCUIT BREAKER AND SHALL BE RATED PER SPD SUPPLIER RECOMMENDATION.
- PROVIDE LIGHTING INVERTER, 24KW, 480V, 3Ø IN, 277V, 1Ø OUT, MINIMUM 90 MINUTES OF BATTERY RUNTIME.
- 4" H. x 24" L. x 1/4" THICK SOLID COPPER GROUNDING BUS BAR, MOUNTED AT 18" AFF. PROVIDE 2" DIA. x 2' L. (MIN.) ELECTRICAL ISOLATION STAND-OFF INSULATORS WITH SUITABLE MOUNTING HARDWARE BETWEEN GROUNDING BAR AND TOP OF INSULATOR, AS WELL AS BETWEEN INSULATOR AND WALL. REFER TO GROUNDING BAR DETAIL ON SHEET ES-502 MINIMUM LUG TERMINATION CONFIGURATION AND PROVIDE 20% SPARE LUG TERMINATION CAPACITY. ALL CONNECTIONS AT THE BUS BAR SHALL BE BY AN IRREVERSIBLE MEANS SUCH AS (CADWELD) FOR COMPLIANCE WITH N.E.C.
- PROVIDE #1/0 STRANDED COPPER GROUND CONDUCTOR IN 1-1/4" C. BACK TO MAIN ELECTRIC SERVICE GROUND BAR IN MAIN ELECTRIC ROOM.
- PROVIDE CONCRETE ENCASED CONDUIT DUCT FOR GENERATOR ELECTRICAL SERVICE ENTRANCE. PROVIDE REQUIRED CONDUITS AS NOTED IN FEEDER SCHEDULE AND TWO ADDITIONAL 4" SPARE CONDUITS FOR FUTURE WORK.
- DEDICATED GROUND BUS BAR FOR TELECOMMUNICATIONS/SYSTEMS EQUIPMENT GROUND. INSTALL GROUND BUS BAR BELOW TELECOM TERMINAL BOARD.



Revisions:	Dates

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Suite 104
Myrtle Beach, SC 29577
843.712.1470

Drawing Title
POWER RISER DIAGRAM

Approved: Project Director

Project Title
**CONSTRUCT CLINIC
ADDITION TRACK 3 CLINIC
BUILD**

Location
**WJBD VA MEDICAL CENTER
COLUMBIA, SC 29209**

Date
07/30/2015

Checked
KV

Drawn
CR

Project Number
544-302

Building Number
122

Drawing Number
ES-601

Office of
Facilities
Management



Plot Date 7/29/2015 3:48:22 PM

one thirty sixteenth inch = one foot

one sixteenth inch = one foot

one inch = one foot

three quarters inch = one foot

one half inch = one foot

one eighth inch = one foot

one quarter inch = one foot

FIRE ALARM SYSTEM GENERAL NOTES

- SEE FIRE ALARM SPECIFICATIONS FOR EQUIPMENT SPECIFICATION AND SYSTEM FUNCTIONS.
- SEE FIRE ALARM DRAWINGS FOR DEVICE QUANTITIES.
- CONTRACTOR SHALL VERIFY ALL DEVICE AND EQUIPMENT LOCATIONS, AND FUNCTIONS WITH FIRE MARSHAL AND OWNER PRIOR TO ROUGH-IN.
- PROVIDE 120V AND LOW-VOLTAGE SURGE PROTECTIVE DEVICES, TYPE AS RECOMMENDED BY SYSTEM MANUFACTURER.
- PROVIDE SURGE PROTECTION DEVICES FOR ALL INCOMING, OUTGOING SIGNAL AND/OR DATA LINE CIRCUITS, AT FIRE ALARM CONTROL PANEL AND AT DUAL LINE DIGITAL DIALER. COORDINATE WITH SYSTEM SUPPLIER.
- PROVIDE ISOLATION MODULES AS DESCRIBED IN FIRE ALARM SPECIFICATIONS. PROVIDE (1) MINIMUM PER WING, PER FLOOR.
- PROVIDE (2) SPARE SIGNAL CIRCUITS MINIMUM. PROVIDE REQUIRED BATTERY CAPACITY.
- SEE ELECTRICAL AND FIRE ALARM SPECIFICATIONS FOR MORE INFORMATION.
- COORDINATE ALL FIRE ALARM SYSTEM REQUIREMENTS WITH THE VA HOSPITAL ELECTRONICS SHOP SUPERVISOR.

FIRE ALARM SYSTEM NOTES

- FIRE ALARM SYSTEM SHALL BE INSTALLED, WHERE REQUIRED BY NFPA-101, BY A LICENSED FIRE ALARM CONTRACTOR IN STRICT ACCORDANCE WITH NFPA-72 AND VA FIRE PROTECTION DESIGN MANUAL, AS A MINIMUM.
- ANY DRAWINGS RESUBMITTED SHALL CLEARLY INDICATE REVISIONS BY CLOUDING AND DATING THE CHANGED AREA.
- AT THE TIME OF THE SYSTEM ACCEPTANCE TEST, THE FIRE ALARM CONTRACTOR'S TECH SHALL BE PREPARED TO CONDUCT THE TEST WITH A SOUND PRESSURE METER TO ENSURE PROPER SOUND PRESSURE LEVELS.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS WITH THE FOLLOWING INFORMATION AS A MINIMUM:
 - PROVIDE SEQUENCE OF OPERATION (MATRIX CHART) TO DEFINE THE EVENTS THAT OCCUR WHEN VARIOUS INITIATING DEVICES ARE ACTIVATED.
 - DUCT MOUNTED SMOKE DETECTORS, WHERE APPLICABLE, SHALL, UPON SENSING SMOKE, SHUT DOWN ALL ASSOCIATED HVAC EQUIPMENT VIA RELAYS SHOWN.
 - PROVIDE FIRE ALARM RISER SIMILAR TO RISER SHOWN ON CONSTRUCTION DOCUMENTS.
 - ALL SUBMITTALS SHALL INDICATE COMPLIANCE WITH LATEST ADOPTED EDITIONS:
 - VA FIRE PROTECTION DESIGN MANUAL
 - INTERNATIONAL FIRE CODE
 - NFPA - 72 (NATIONAL FIRE ALARM AND SIGNALING CODE)
 - NFPA - 13 (STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS)
 - NFPA - 101 (LIFE SAFETY CODE)
 - NFPA - 70 (NATIONAL ELECTRICAL CODE)
 - ADA - AMERICANS WITH DISABILITIES ACT
 - ALL STATE AND LOCAL CODES AND ORDINANCES.
 - SHOP DRAWINGS SHALL IDENTIFY EACH STROBE LIGHT CANDELA RATINGS.
 - SHOW ALARM CONNECTION TO THE SPRINKLER SYSTEM DEVICES.
 - PROVIDE SIGNED AND DATED CONTRACT FOR TEST AND INSPECTION IN ACCORDANCE WITH NFPA STANDARDS ALONG WITH THE RECORD OF COMPLETION AS PER NFPA 72 1-6.2.1 AT TIME OF SYSTEM ACCEPTANCE.
 - PROVIDE DETAILS ON THE DRAWINGS SHOWING THE WIRING TYPE BASED ON NFPA 70 ARTICLE 760 AND CUTSHEET OF THE WIRING PROPOSED.
 - PROVIDE DETAILED CUTSHEET OF THE WIRING CONDUIT SYSTEM PROPOSED; FACTORY COATED 'RED'.
 - SHOW LOCATION OF ALL SYSTEM PANELS AND SHOW SMOKE DETECTOR ABOVE EACH.
 - PROVIDE A CUTSHEET OF ALL LOW VOLTAGE SURGE SUPPRESSION PROPOSED FOR WIRING SHOWN.
 - PROVIDE BATTERY CALCULATION SUPPORTING COMPLIANCE WITH MINIMUM CODE OR AS REQUIRED BY THESE DOCUMENTS WHICHEVER IS MORE STRINGENT.
 - PROVIDE VOLTAGE DROP CALCULATION FOR THE PROPOSED WIRE SIZING, TYPE AND ROUTING.
 - PROVIDE RECORD DRAWINGS SHOWING ACTUAL CONDUIT AND WIRING INSTALLATION AND ANY DEVIATION FROM THE PROPOSED ONE.
 - SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER WITH AN ACTIVE STATE LICENSE.

FIRE ALARM SYSTEM REQUIREMENTS

- REFER TO SPECIFICATIONS FOR APPROVED MANUFACTURERS AND ADDITIONAL INFORMATION.
- FULLY ADDRESSABLE FIRE ALARM SYSTEM TO BE INSTALLED BY MANUFACTURER'S AUTHORIZED INSTALLER.
- SUBMIT SHOP DRAWINGS TO FIRE MARSHAL AND ENGINEER FOR APPROVAL PRIOR TO ROUGH-IN.
- PROVIDE AND INSTALL ALL 'FIRE MARSHAL APPROVED' SIGNAL TRANSMISSION EQUIPMENT FOR MUNICIPAL TIE-IN. COORDINATE WITH FIRE MARSHAL'S OFFICE.
- TROUBLE AND ALARM INITIATIONS TO TRANSMIT SEPARATE AND DISTINCT SIGNALS TO MONITORING STATION.
- INCOMING 'FIRE' ALARM INITIATIONS SHALL OVERRIDE 'TROUBLE' INITIATIONS.
- SEPARATE 'TROUBLE' AND 'ALARM' SIGNALS SHALL BE ANNUNCIATED AT CONTROL PANEL AND ANNUNCIATOR PANEL, (IF APPLICABLE).
- ANNUNCIATOR PANEL, (IF APPLICABLE) SHALL DUPLICATE REPORTING OF FIRE ALARM CONTROL PANEL. THIS PANEL SHALL INCLUDE SILENCE AND RESET KEY SWITCHES.
- COORDINATE WITH SYSTEM VENDOR FOR ADDITIONAL REQUIREMENTS AND PROVIDE ALL LINE VOLTAGE NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM.
- DUCT MOUNTED SMOKE DETECTORS, WHERE APPLICABLE, SHALL BE FURNISHED AND SYSTEM WIRED BY ELECTRICAL CONTRACTOR, INSTALLED ONLY BY MECHANICAL CONTRACTOR. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH MECHANICAL CONTRACTOR AND PROVIDE ACCORDINGLY.
- ELECTRICAL CONTRACTOR SHALL PROVIDE JUNCTION BOXES AND CONDUITS WITH WIRES AS REQUIRED FOR A COMPLETE FIRE ALARM SYSTEM.
- SIGNAL FROM A DUCT MOUNTED SMOKE DETECTOR SHALL SHUT DOWN ALL HVAC UNITS
- ELECTRICAL CONTRACTOR'S FIRE ALARM SUBCONTRACTOR SHALL PROVIDE ALL CABLING, PER SYSTEM MANUFACTURER'S SPECIFICATIONS FOR CONTROL OPTIONS AS OUTLINED IN FIRE ALARM SPECIFICATIONS.
- ALL CABLING SHALL BE RUN IN 3/4" CONDUIT SYSTEM, MINIMUM, THROUGHOUT, NO EXCEPTIONS. CONDUIT SYSTEM SHALL BE FACTORY COATED 'RED'.
- PROVIDE SEPARATE I/O CONTROL CIRCUITS FOR ELEVATOR CONTROL AND HVAC SHUT-DOWN. SYSTEM SHALL HAVE TEST OVERRIDE CAPABILITIES FOR THESE CIRCUITS.
- RELAYS FOR SECURITY DOOR LOCKS (IF APPLICABLE) SHALL BE CONFIGURED SO THAT LOCKS WILL DE-ENERGIZE UPON ACTIVATION OF THE FIRE ALARM SYSTEM OR UPON LOSS OF NORMAL UTILITY POWER.
- SYSTEM ALARM INDICATION SHALL COMPLY WITH TEMPORAL CODE REQUIREMENTS.
- BATTERY CALCULATION SHALL BE BASED ON TWENTY-FOUR (24) HOURS OF STANDBY PLUS FIVE (5) MINUTES OF ALARM AT THE END OF THE PERIOD.
- NOTIFICATION APPLIANCES (SPEAKER/STROBES AND STROBES) SHALL BE WHITE IN COLOR, OR AS DIRECTED BY THE ARCHITECT.
- PROVIDE SYNC MODULES FOR ALL VISUAL NOTIFICATION APPLIANCE CIRCUITS.
- NOTIFICATION APPLIANCES: PLACEMENT AND SPACING OF NOTIFICATION APPLIANCES SHALL BE IN ACCORDANCE WITH NFPA 72 AND SHALL BE SELECTED BASED ON THE PURPOSE OF THE NOTIFICATION (I.E., GENERAL EVACUATION OR STAFF RESPONSE) AS LISTED IN THE VA FIRE PROTECTION DESIGN MANUAL; 7.3, F, 1 AND 7.3, F, 2.
- VISUAL NOTIFICATION APPLIANCE (STROBES) INTENSITIES SHALL BE AS FOLLOWS:
 - CEILING MOUNTED SHALL BE 75cd MINIMUM, AND SHALL CONFORM TO THE REQUIREMENTS OF NFPA 72-6.4.4.
 - WALL MOUNTED SHALL BE 1575cd OR 75cd AND HIGHER AND SHALL CONFORM TO THE REQUIREMENTS OF NFPA 72.
 - WALL MOUNTED IN ROOMS 10'x10' OR SMALLER SHALL BE 30cd MINIMUM (ie. PRIVATE TOILET ROOMS).
- PROVIDE A PRINTER TO MAKE HARD COPIES OF ALL SIGNALS AND OPERATOR RESPONSES. COORDINATE THE LOCATION OF THE PRINTER WITH VA PERSONNEL.

FIRE ALARM WIRING NOTE

WIRING FOR LOCAL BUILDING FIRE ALARM SYSTEMS SHALL BE SPECIFIED AS DEFINED IN NFPA 72 AS FOLLOWS:

a. INITIATING DEVICE CIRCUITS (IDC): CLASS B

b. SIGNALING LINE CIRCUITS (SLC): CLASS B

c. NOTIFICATION APPLIANCE CIRCUITS (NAC): CLASS B

d. COMMUNICATIONS BETWEEN BUILDING FIRE ALARM CONTROL UNITS: CLASS X

WIRING SHALL MEET THE PERFORMANCE REQUIREMENTS OF NFPA 72, TABLE A12.3. (a),(b), AND (c).

FIRE ALARM SYSTEM ELEVATOR DEVICE NOTES

- REFER TO FIRE ALARM SPECIFICATIONS FOR APPROVED MANUFACTURERS AND ADDITIONAL INFORMATION.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE STATE ELEVATOR INSPECTORS OFFICE. COORDINATE ALL REQUIRED SYSTEM DEVICES AND LOCATIONS. SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO ROUGH-IN. ALL REQUIREMENTS OF STATE ELEVATOR CODE SHALL BE MET WHETHER SHOWN ON PLANS OR NOT. PLANS ILLUSTRATE THE DESIGN INTENT.
- SYSTEM INSTALLER SHALL ALSO COORDINATE ALL REQUIRED DEVICES AND LOCATIONS WITH LOCAL FIRE MARSHAL. MAKE ALL NECESSARY ADJUSTMENTS PRIOR TO START OF WORK. PROVIDE SHOP DRAWINGS, CUTSHEETS, BATTERY CALCULATIONS, AND SEQUENCE OF OPERATION FOR APPROVAL PRIOR TO COMMENCING ANY WORK.
- ELEVATOR WARNING LIGHTS SHALL BE FLUSH MOUNTED AT ELEVATOR ACCESS LOCATIONS AT FLOOR INDICATED. PROVIDE ENGRAVED, RED LETTERS, FACEPLATE TO READ "DO NOT USE ELEVATOR WHEN FLASHING". (24 VOLTS)
- HEAT DETECTORS IN ELEVATOR MACHINE ROOM, ELEVATOR PIT AND ELEVATOR SHAFT SHALL BE 135 DEGREE FIXED TEMPERATURE (NON-RESETTING) WITH AUXILIARY CONTACTS. CONTACTS SHALL BE FOR MONITORING ONLY BY THE FACP.
- SYSTEM INSTALLER SHALL COORDINATE WITH SPRINKLER SYSTEM INSTALLER FOR RESPONSIBILITY OF WORK AND MAKE CONNECTIONS AS REQUIRED FOR ALL FLOW AND TAMPER SWITCHES.
- LOCATE DEVICES TO AVOID ANY CONFLICT WITH HVAC DUCTS.
- COORDINATE ALL REQUIRED RECALL TERMINATIONS WITH ELEVATOR EQUIPMENT SUPPLIER/ INSTALLER AND PROVIDE ACCORDINGLY.
- SMOKE AND HEAT DETECTORS DESIGNATED WITH AN 'A' SHALL BE PROVIDED WITH AUXILIARY CONTACTS AS REQUIRED TO MEET THE DESIGN INTENT.
- ACTIVATION OF THE ELEVATOR LOBBY, SHAFT OR MACHINE ROOM SMOKE DETECTORS SHALL CAUSE THE CAR TO RETURN NON-STOP TO DESIGNATED LEVEL OR ALTERNATE FIRE DEPARTMENT ACCESS LEVEL AND INITIATE A GENERAL ALARM (PHASE 1 RECALL).
- IN ADDITION TO INITIATING PHASE 1 RECALL, THE SMOKE DETECTOR IN THE ELEVATOR MACHINE ROOM SHALL ALSO ILLUMINATE THE ELEVATOR WARNING LIGHT, SEE NOTE #4.
- ACTIVATION OF THE ELEVATOR MACHINE ROOM, SHAFT OR PIT HEAT DETECTORS SHALL DISCONNECT MAIN POWER SUPPLY TO THE ELEVATOR PRIOR TO APPLICATION OF WATER AND INITIATE A TROUBLE SIGNAL AT THE FACP.
- PROVIDE INTERFACES WITH SHUNT-TRIP ON ELEVATOR POWER MODULES. SEE ELEVATOR MOTOR WIRING DETAIL FOR MORE INFORMATION.

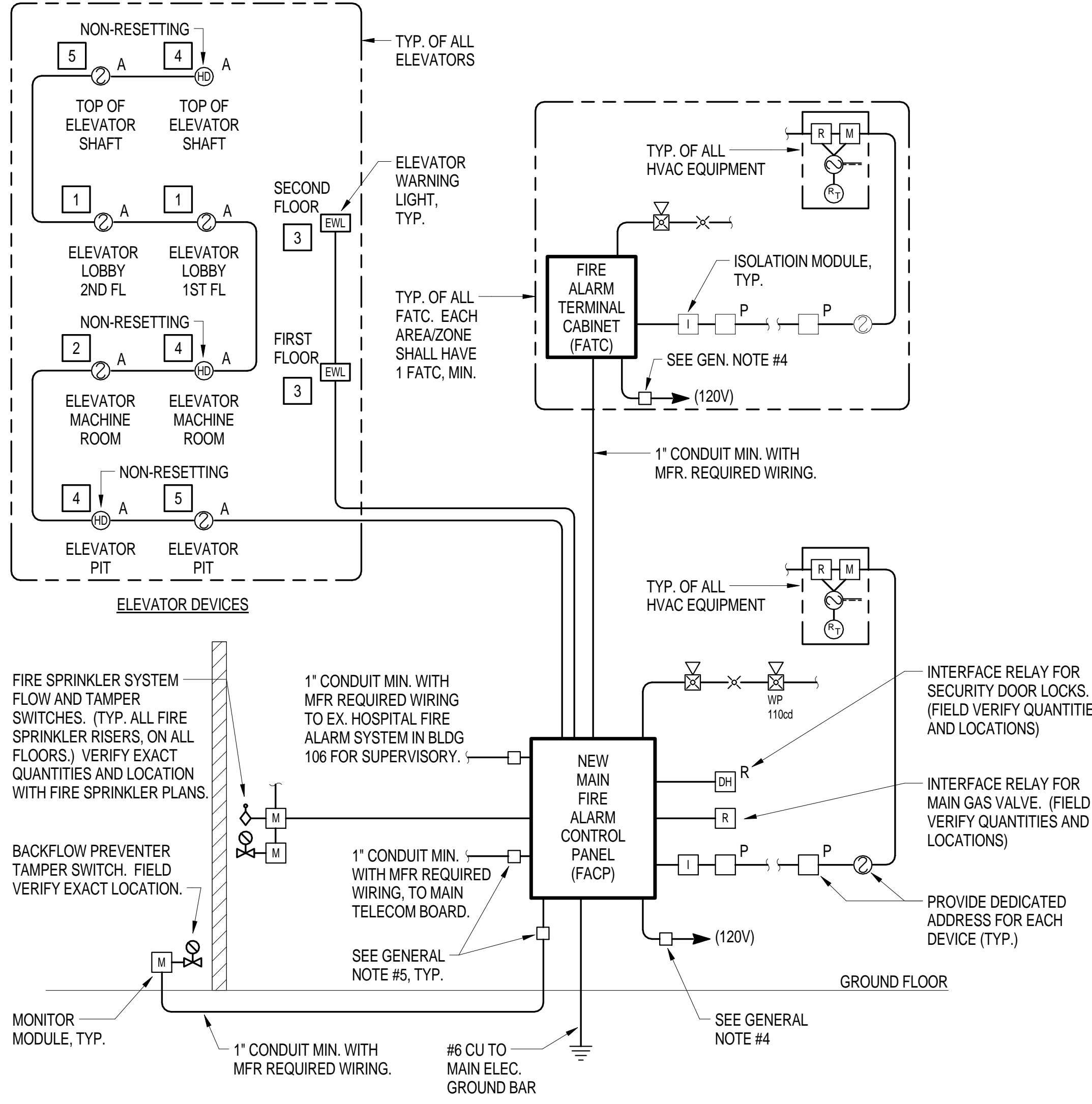
FIRE ALARM ELEVATOR RECALL NOTES

- ACTIVATION SHALL CAUSE THE CAR TO RETURN NON-STOP TO DESIGNATED LEVEL OR ALTERNATE FIRE DEPARTMENT ACCESS LEVEL AND INITIATE A GENERAL ALARM.
- SAME AS NOTE 1 ABOVE, PLUS CAUSE ELEVATOR WARNING LIGHT TO FLASH.
- THE ELEVATOR WARNING LIGHT (EWL) "DO NOT USE ELEVATOR" SHALL BE LOCATED ADJACENT TO THE PHASE 1 RECALL SWITCH OR ELEVATOR BUTTON AT THE DESIGNATED AND ALTERNATE FIRE DEPARTMENT ACCESS LEVEL.
- ACTIVATION SHALL DISCONNECT MAIN POWER SUPPLY TO ELEVATOR PRIOR TO APPLICATION OF WATER AND INITIATE A TROUBLE SIGNAL AT THE FACP. THIS DEVICE SHALL HAVE NO OTHER FUNCTION. WIRE VIA ELEVATOR POWER MODULE SHUNT-TRIP.
- ACTIVATION SHALL RECALL THE ELEVATOR AND REPORT A GENERAL ALARM.

SYSTEM NOTES:
THE FIRE ALARM DESIGN SHOWN IS CONSIDERED PRELIMINARY AND IS INTENDED TO PROVIDE GENERAL LAYOUT AND CRITERIA INFORMATION FOR BIDDING PURPOSES ONLY.

THE FIRE ALARM SYSTEM SHALL BE COMPATIBLE WITH THE EXISTING VA HOSPITAL FIRE ALARM SYSTEM (NOTIFIER SYSTEM), IN ALL ASPECTS FOR COMMUNICATION AND REPORTING OF ALL ALARMS, ADDRESSABLE OR OTHERWISE.

THE SUCCESSFUL FIRE ALARM SYSTEM INSTALLER SHALL BE RESPONSIBLE FOR PREPARING FOR AND OBTAINING THE NECESSARY PERMIT, AND FOR PROVIDING DEVICES SUITABLE FOR THE LOCATION AT WHICH THEY ARE INSTALLED, AND FOR CONFIRMING WITH THE FIRE MARSHAL OR AHJ THAT THE SYSTEM IS SUITABLE AND COMPLETE. ANY ADDITIONAL REQUIREMENTS AND/OR DEVICES REQUIRED BY THE FIRE MARSHAL OR AHJ SHALL BE ADDED, AT NO ADDITIONAL COST TO THE OWNER.



FIRE ALARM SYSTEM RISER

SCALE: NONE

FIRE ALARM SYSTEM OPERATION MATRIX	SYSTEM OUTPUT															
	ACTIVATE GENERAL BUILDING ALARM	ACTIVATE GENERAL BUILDING ALARM (ZONED PER FLOOR)	ACTIVATE GENERAL ALARM AT FACP AND FAAP	ACTIVATE SUPERVISORY ALARM AT FACP AND FAAP	ACTIVATE TROUBLE ALARM AT FACP AND FAAP	TRANSMIT ALARM SIGNAL TO 24-HOUR MANAGED POINT FOR IMMEDIATE RESPONSE	TRANSMIT ALARM TO VA HOSPITAL FIRE DEPARTMENT	RELEASE MAGNETICALLY HELD SMOKE DOORS (ZONED PER FLOOR)	CLOSE ASSOCIATED DAMPERS ON FAN	SHUT DOWN RTU AND/OR AHU PROXIMATE TO DETECTOR SERVED BY DETECTOR	RELEASE ELECTRONIC LOCKED EXISTING DOORS ON FLOOR OF FIRE ORIGIN	INITIATE ELEVATOR(S) RECALL (4)	INITIATE ELEVATOR SHUTDOWN AND DISCONNECT ELEVATOR POWER (4)	ACTIVATE EXTERIOR STROBE DEVICE AT VA HOSPITAL FIRE DEPARTMENT RESPONSE POINT	ACTIVATE MAIN GAS VALVE ACTUATOR TO SHUT-OFF GAS TO THE BUILDING	DISPLAY/PRINT CHANGE OF STATUS
MANUAL PULL STATIONS		✓	✓			✓		✓	✓		✓			✓		✓
SMOKE DETECTORS (AREA) (1)		✓	✓			✓		✓	✓		✓	✓		✓		✓
DUCT SMOKE DETECTORS (SUPPLY & RETURN) (1)				✓		✓		✓	✓	✓				✓		✓
SMOKE/HEAT DETECTORS (ELEVATORS) (1)(4)	✓		✓			✓		✓	✓		✓	✓		✓		✓
SMOKE/HEAT DETECTORS (ELEV. MACHINE RM) (4)	✓		✓			✓		✓	✓		✓	✓	✓	✓		✓
SPRINKLER WATER FLOW SWITCH, ELEV. MACHINE RM OR SHAFT	✓		✓			✓		✓	✓		✓	✓	✓	✓		✓
SPRINKLER WATER FLOW SWITCH	✓		✓			✓		✓	✓		✓	✓		✓	✓	✓
SPRINKLER VALVE TAMPER SWITCH				✓		✓										✓
FAS AC POWER FAILURE					✓	✓										✓
FAS LOW BATTERY					✓	✓										✓
OPEN CIRCUIT					✓	✓										✓
GROUND FAULT					✓	✓										✓
AUDIBLE/VISUAL APPLIANCE CIRCUIT SHORT					✓	✓										✓
GENERATOR SYSTEM, LOW FUEL				✓		✓										✓
GENERATOR SYSTEM, SYSTEM NOT IN AUTOMATIC				✓		✓										✓

- NOTES:
- WHILE NFPA 101 DOES NOT REQUIRE SOME DETECTORS TO NOTIFY BUILDING OCCUPANTS, VA STANDARDS REQUIRE ALL SMOKE DETECTORS, OTHER THAN DUCT SMOKE DETECTORS, TO NOTIFY BUILDING OCCUPANTS. ONLY INSTALL SMOKE DETECTORS WHEN REQUIRED BY THE LIFE SAFETY CODE AND ITS REFERENCES.
 - THOSE DOORS THAT ARE REQUIRED TO BE TIED TO THE FIRE ALARM SYSTEM SUCH AS DELAYED EGRESS AND ACCESS CONTROLLED DOORS.
 - DO NOT PROVIDE DUCT DETECTORS IN DEDICATED (100%) EXHAUST FANS, THEY SHOULD CONTINUE TO RUN.
 - REFER TO ADDITIONAL ELEVATOR RECALL NOTES ON SHEET ES-602.

100% CONSTRUCTION DOCUMENTS

Revisions:	Dates

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Drawing Title
FIRE ALARM RISER DIAGRAM, NOTES AND OPERATION MATRIX

Approved: Project Director

Project Title
CONSTRUCT CLINIC ADDITION TRACK 3 CLINIC BUILD

Location
WJBD VA MEDICAL CENTER
COLUMBIA, SC 29209

Date
07/30/2015

Checked
KV

Drawn
CR

Project Number
544-302

Building Number
122

Drawing Number
ES-602

Office of Facilities Management

Department of Veterans Affairs

7/29/2015 3:48:23 PM
Plot Date

one thirty second inch = one foot

one sixteenth inch = one foot

one inch = one foot

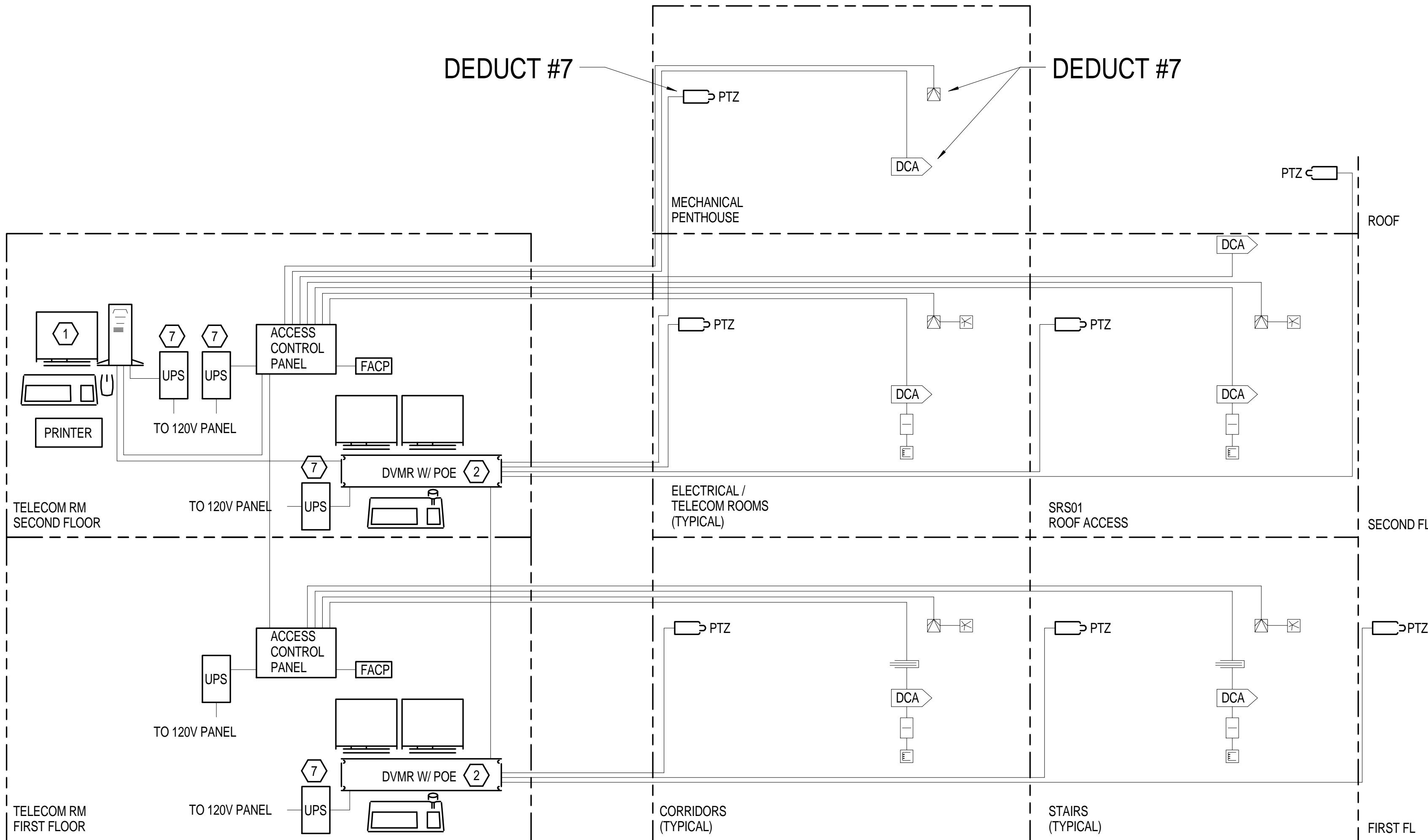
three quarters inch = one foot

one half inch = one foot

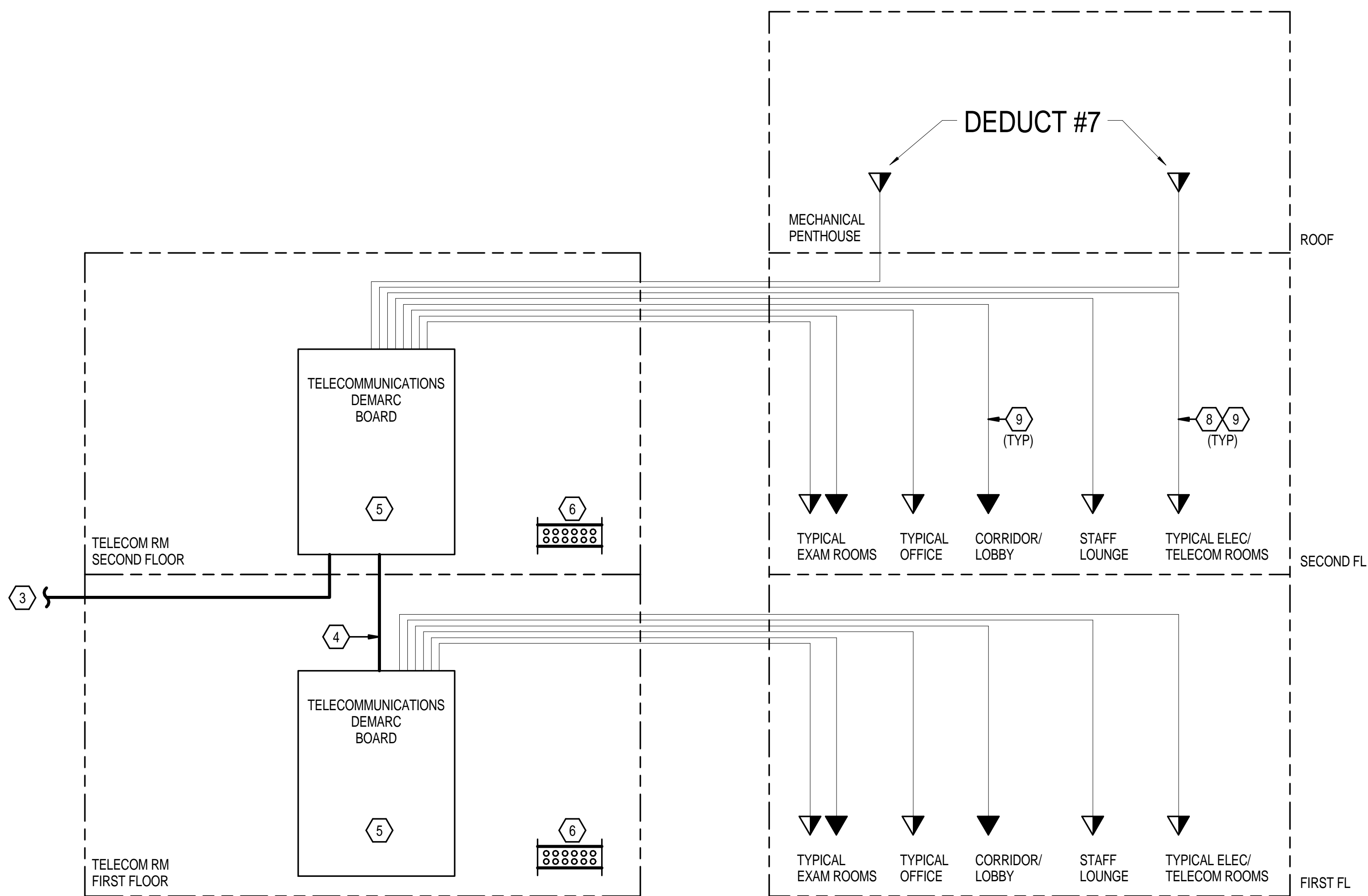
three eighths inch = one foot

one quarter inch = one foot

one eighth inch = one foot



1 SECURITY SYSTEM RISER
NOT TO SCALE



2 TELECOMMUNICATION SYSTEM RISER
Scale: 1/2" = 1'-0"

SYSTEMS RISERS GENERAL NOTES

1. THE SYSTEMS RISERS ARE SCHEMATIC IN NATURE AND ARE NOT INTENDED TO SHOW ALL DETAILS, RATHER JUST TYPICAL MAJOR COMPONENTS. IT IS INTENDED THAT COMPLETE SECURITY AND TELECOMMUNICATION SYSTEMS BE DESIGNED, BASED ON THESE SCHEMATIC DRAWINGS, AND INSTALLED, WITH ALL NECESSARY EQUIPMENT, CONTROLS AND APPURTENANCES, INCLUDING ALL REQUIRED POWER PANELS, TRANSFORMERS, JUNCTION BOXES, CONDUIT AND CONDUCTORS. PROVIDE INSTALLATION AND WIRING PER MFR INSTALLATION REQUIREMENTS. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. A COMPLETE SECURITY AND TELECOMMUNICATION SYSTEM DESIGNS, INCLUDING SHOP DRAWINGS, SHALL BE PROVIDED FOR REVIEW AND APPROVAL PRIOR TO ANY PROCUREMENT, FABRICATION, OR INSTALLATION. THE CONTRACTOR SHALL CAREFULLY REVIEW ALL THE CONTRACT DOCUMENTS AND COORDINATE BETWEEN ALL TRADES PRIOR TO SUBMITTING SHOP DRAWINGS.
3. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION OR PURCHASE OF EQUIPMENT, MATERIALS, AND ASSEMBLIES. THERE MAY EXIST CONDITIONS WHICH DIFFER FROM THOSE SHOWN ON THESE DRAWINGS. ANY SUCH DEVIATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION BEFORE PROCEEDING WITH ANY CONSTRUCTION, FABRICATION, OR MATERIAL/EQUIPMENT PURCHASE.
4. REFER TO SYSTEMS AND TELECOMMUNICATION DRAWINGS FOR DEVICE QUANTITIES.
5. ALL WIRING SHALL BE CONTAINED IN APPROPRIATELY SIZED CONDUIT, 3/4" MINIMUM.
6. COORDINATE INSTALLATION WITH ALL TRADES. MAKE OFFSETS AND TRANSITIONS TO COORDINATE WITH OTHER TRADES AS NECESSARY WITHOUT ADDITIONAL EXPENSE TO OWNER.
7. PROVIDE 120V AND LOW-VOLTAGE SURGE PROTECTIVE DEVICES, TYPE AS RECOMMENDED BY SYSTEM MANUFACTURER.
8. PROVIDE SURGE PROTECTION DEVICES FOR ALL INCOMING, OUTGOING SIGNAL AND/OR DATA LINE CIRCUITS, AT SECURITY AND TELECOMMUNICATION SYSTEMS CONTROL PANELS. COORDINATE WITH INDIVIDUAL SYSTEMS SUPPLIER.
9. ALL HARDWARE INCLUDING CLAMPS, BOLTS, NUTS, WASHERS, STRUTS, ANCHOR BOLTS, ANGLES, ETC. USED TO SUPPORT OR INSTALL ANY EXTERIOR EQUIPMENT, PIPE, CONDUIT, BOX, OR OTHER DEVICE SHALL BE STAINLESS STEEL ANSI 304.
10. SEE ELECTRICAL AND INDIVIDUAL SYSTEMS SPECIFICATIONS FOR MORE INFORMATION.

SHEET KEYNOTES

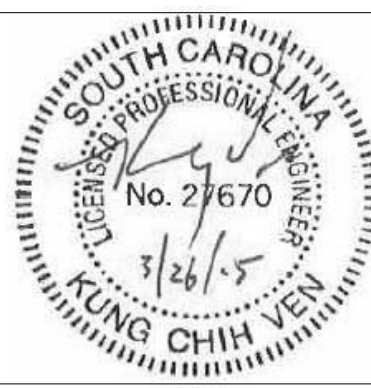
1. PROVIDE WORKSTATION EQUIPPED WITH MONITOR, KEYBOARD, MOUSE, CPU, AND PRINTER FOR MONITORING AND CONTROL OF THE CARD ACCESS CONTROL AND INTRUSION DETECTION SYSTEMS. PROVIDE SOFTWARE, PROGRAMMING, AND CONFIGURATION.
2. PROVIDE DIGITAL VIDEO MULTIPLEXER RECORDER (DVMR) WITH POWER OVER ETHERNET (POE).
3. FIBER OPTIC AND COPPER CAT6 CABLE TRUNKS FROM EXISTING VA HOSPITAL. REFER TO ELECTRICAL SITE PLAN SHEET ES-100 AND SYSTEMS SECOND FLOOR FLOOR PLAN SHEET EY-102 FOR ADDITIONAL INFORMATION AND ROUTING.
4. FIBER OPTIC AND COPPER CAT6 CABLE INTERCONNECTIONS FROM DEMARC BOARD ON SECOND FLOOR. REFER TO ELECTRICAL SYSTEMS FIRST FLOOR PLAN SHEET EY-101 FOR ADDITIONAL INFORMATION.
5. TELECOM TERMINAL BACKBOARD. REFER TO ENLARGED ELECTRICAL PLANS ON SHEET ES-401 FOR ADDITIONAL INFORMATION.
6. TELECOM TERMINAL BOARD GROUND BUS BAR. REFER TO ELECTRICAL POWER RISER DIAGRAM ON SHEET ES-601 FOR ADDITIONAL INFORMATION.
7. PROVIDE STAND-ALONE UPS, PLUG-IN TYPE. POINT OF USE, FOR EACH LOW-VOLTAGE SYSTEM. COORDINATE UPS TYPE WITH OWNER.
8. ROUTE HORIZONTAL DATA CABLES TO PATCH PANELS USING CAT6 CABLES.
9. ROUTE CAT6 TELEPHONE CABLES TO 110 PUNCHDOWN BLOCKS.

100% CONSTRUCTION DOCUMENTS

Revisions:	Dates:

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Drawing Title
SECURITY AND TELECOMMUNICATION SYSTEMS RISERS

Approved: Project Director

Project Title
CONSTRUCT CLINIC ADDITION TRACK 3 CLINIC BUILD

Location
WJBD VA MEDICAL CENTER COLUMBIA, SC 29209

Date
07/30/2015

Checked
KV

Drawn
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Project Number
544-302

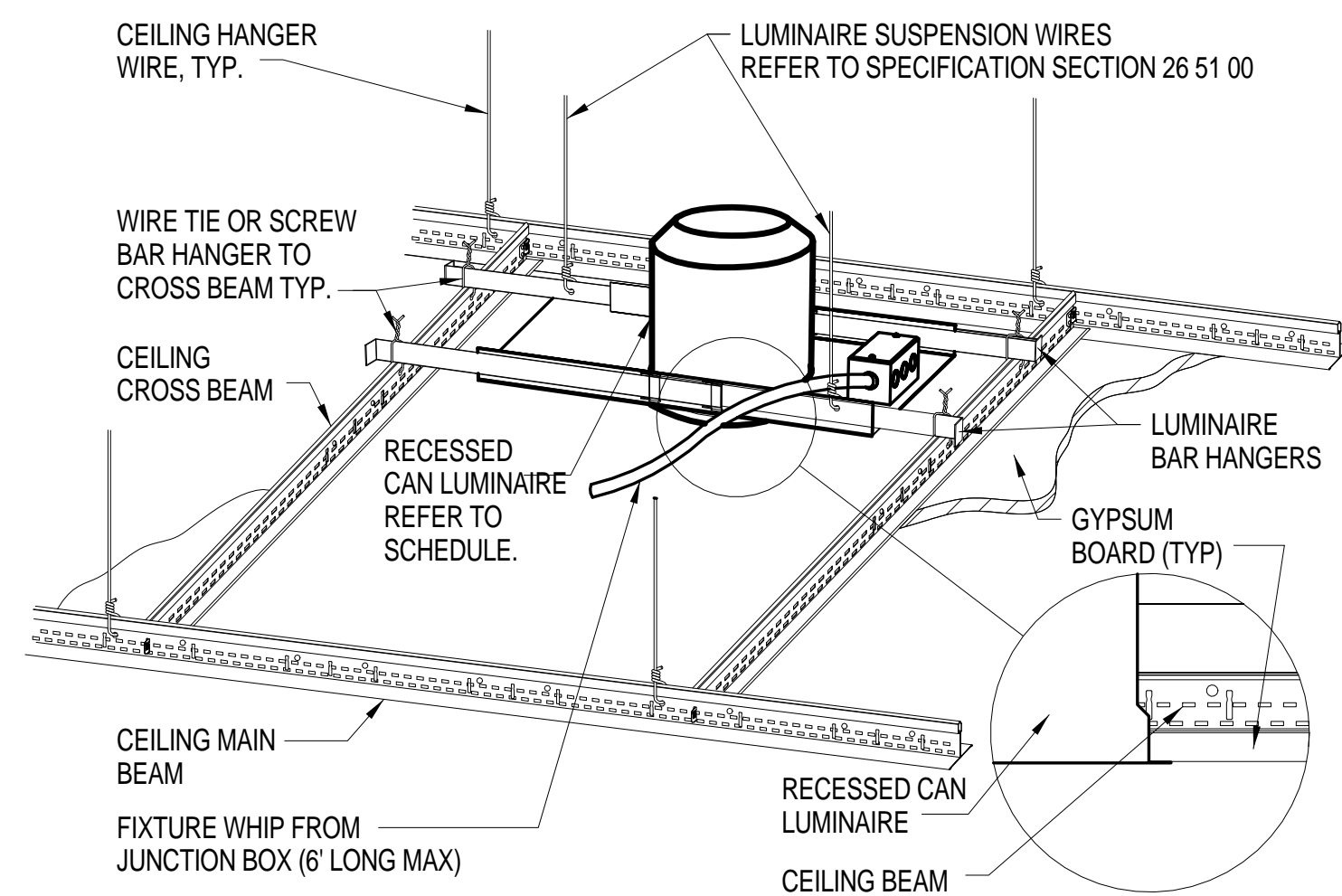
Building Number
122

Drawing Number

ES-603

Office of
Facilities
Management

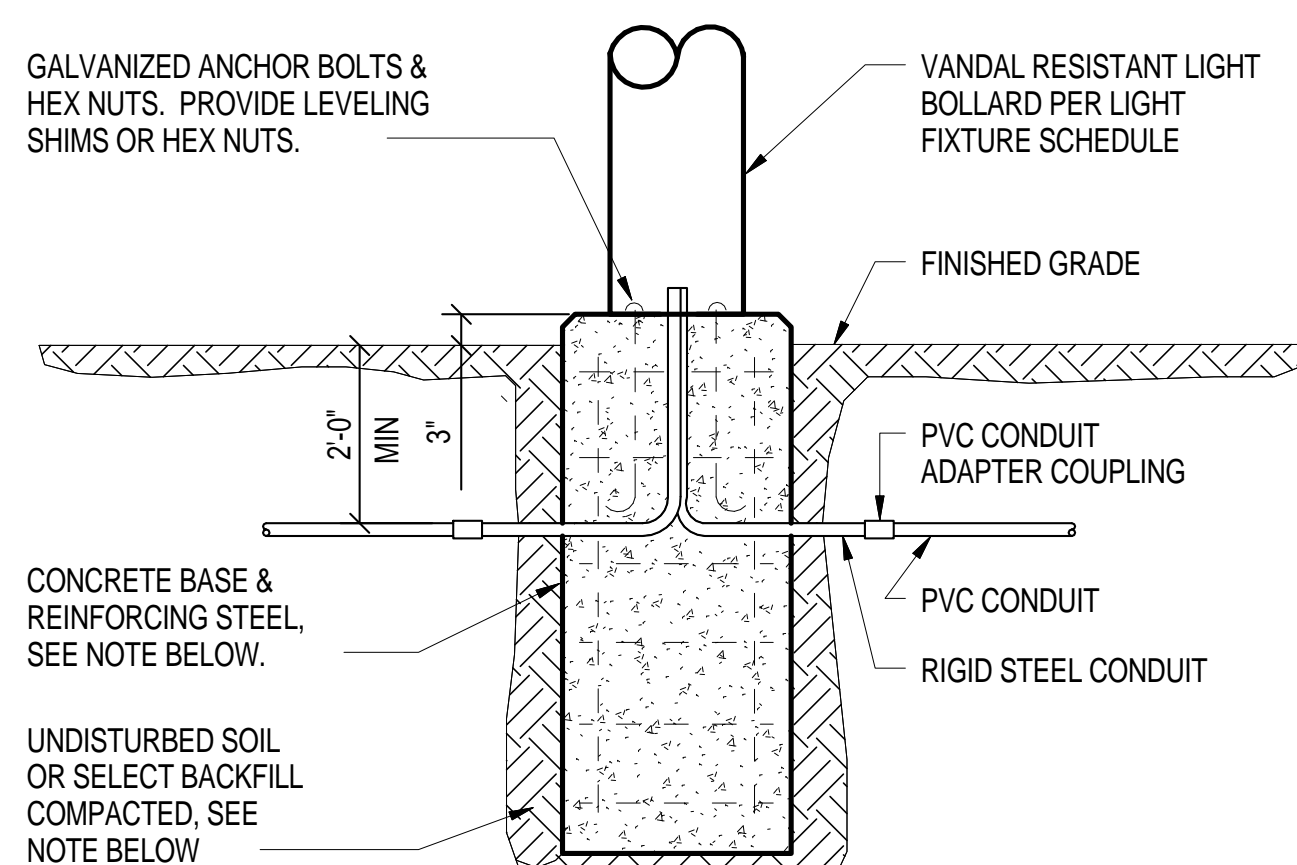




NOTE:
INSTALL IN ACCORDANCE WITH MANUFACTURER'S MOUNTING
INSTRUCTIONS AND USING THE RECOMMENDED MOUNTING HARDWARE

2 DOWNLIGHT MOUNTING - GYPSUM CEILING

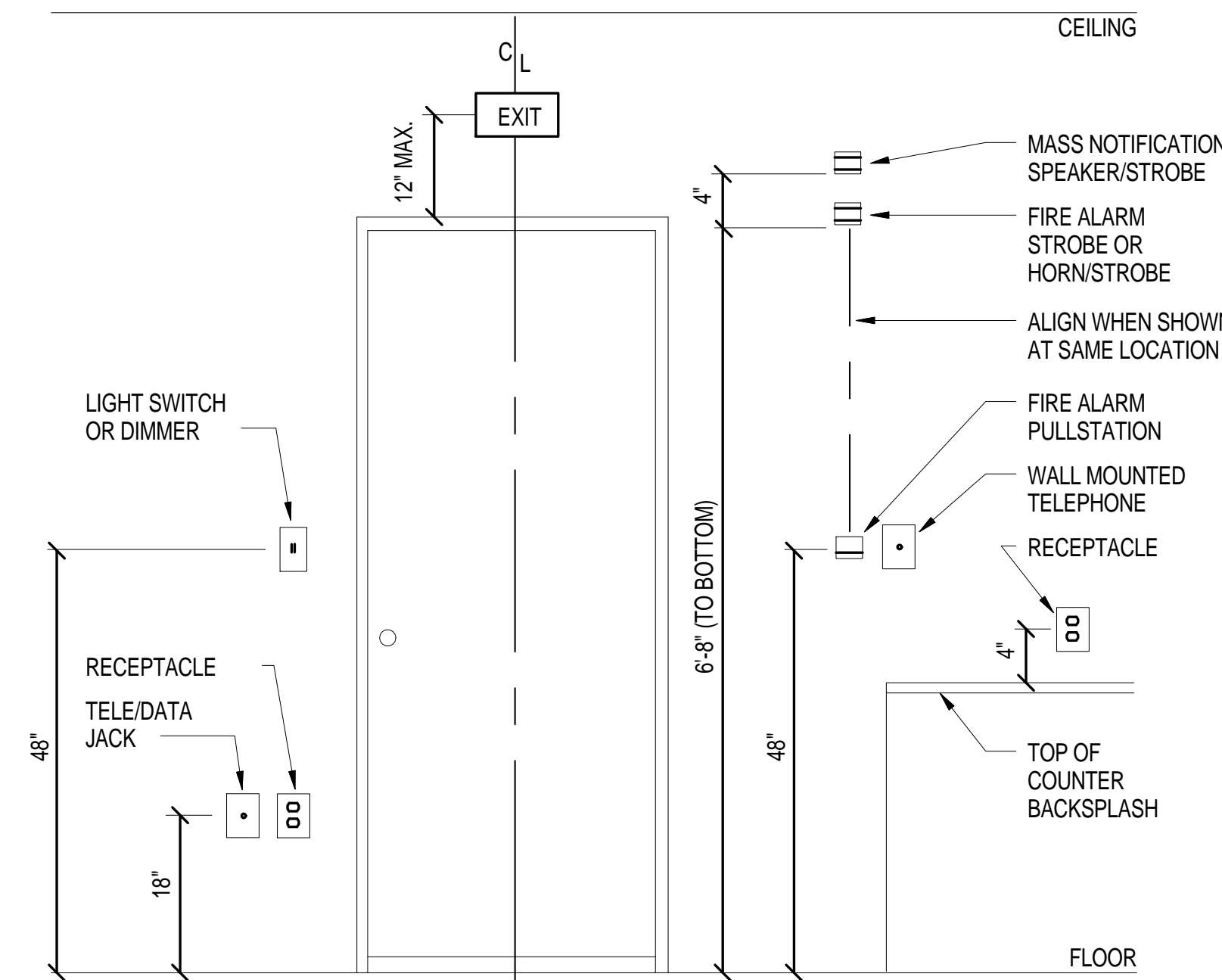
NOT TO SCALE



NOTE:
BACKFILL, CONCRETE, REINFORCING STEEL, AND ANCHOR BOLTS ARE SHOWN FOR
REFERENCE ONLY. STRUCTURAL DESIGN IS SHOWN ON STRUCTURAL DRAWINGS.

4 BOLLARD BASE- GRADE

NOT TO SCALE



NOTES:

1. ALL DIMENSIONS ARE TO CENTERLINE OF DEVICE, UNLESS OTHERWISE NOTED.
2. DEVICES SHOWN IN THIS DETAIL ARE FOR MOUNTING HEIGHT REFERENCE ONLY AND NOT FOR LOCATIONS. REFER TO DRAWINGS FOR ACTUAL LOCATIONS, FOR EXAMPLE, ADJACENT DEVICES SHALL BE NO MORE THAN 2' APART.
3. WHERE EXIT SIGN IS MOUNTED ABOVE A DOUBLE DOOR, CENTER EXIT SIGN BETWEEN DOORS.

6 TYPICAL DEVICE MOUNTING HEIGHT

NOT TO SCALE

[illegible]

100% CONSTRUCTION DOCUMENTS

Office of
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Management



LCP 'LS1LCP1' (MASTER) LOAD SCHEDULE		
RELAY #	CONTROLS	CONTROL METHOD
1	LS1L1-3	PHOTOCELL-ON / PHOTOCELL-OFF
2	LS1L1-5	TIMECLOCK-ON / TIMECLOCK-OFF
3	LS1L1-7	TIMECLOCK-ON / TIMECLOCK-OFF
4	LS1L1-9	TIMECLOCK-ON / TIMECLOCK-OFF
5	LS1L1-11	TIMECLOCK-ON / TIMECLOCK-OFF
6	-	SPARE
7	-	SPARE
8	LS1L1-4	PHOTOCELL-ON / PHOTOCELL-OFF
9	LS1L1-6	TIMECLOCK-ON / TIMECLOCK-OFF
10	LS1L1-8	TIMECLOCK-ON / TIMECLOCK-OFF
11	LS1L1-10	TIMECLOCK-ON / TIMECLOCK-OFF
12	LS1L1-12	TIMECLOCK-ON / TIMECLOCK-OFF
13	LS1L1-14	TIMECLOCK-ON / TIMECLOCK-OFF
14	-	SPARE
15	-	SPARE
16	-	SPARE

LCP '1LCP1' (SATELLITE) LOAD SCHEDULE		
RELAY #	CONTROLS	CONTROL METHOD
1	1L1-1	TIMECLOCK-ON / TIMECLOCK-OFF
2	1L1-3	TIMECLOCK-ON / TIMECLOCK-OFF
3	1L1-5	TIMECLOCK-ON / TIMECLOCK-OFF
4	1L1-7	TIMECLOCK-ON / TIMECLOCK-OFF
5	1L1-9	TIMECLOCK-ON / TIMECLOCK-OFF
6	1L1-11	TIMECLOCK-ON / TIMECLOCK-OFF
7	1L1-13	PHOTOCELL-ON / PHOTOCELL-OFF
8	1L1-15	PHOTOCELL-ON / PHOTOCELL-OFF
9	-	SPARE
10	-	SPARE
11	1L1-2	TIMECLOCK-ON / TIMECLOCK-OFF
12	1L1-4	TIMECLOCK-ON / TIMECLOCK-OFF
13	1L1-6	TIMECLOCK-ON / TIMECLOCK-OFF
14	1L1-8	TIMECLOCK-ON / TIMECLOCK-OFF
15	1L1-10	TIMECLOCK-ON / TIMECLOCK-OFF
16	1L1-12	TIMECLOCK-ON / TIMECLOCK-OFF
17	1L1-14	TIMECLOCK-ON / TIMECLOCK-OFF
18	1L1-16	PHOTOCELL-ON / PHOTOCELL-OFF
19	-	SPARE
20	-	SPARE
21	-	SPARE
22	-	SPARE
23	-	SPARE
24	-	SPARE

NETWORK CLOCK/
PROGRAMMER

LOW VOLTAGE BACKPLATE
HINGED FOR ACCESS TO
LINE VOLTAGE SECTION
BEHIND.

RELAY CONTROL BUTTONS

ZONE CONTROL BUTTONS

RJ45 BUS CONNECTOR

SELECTABLE POWER SUPPLY
(120/277V)

BACK PLATE (MOUNTS ON
BACK OF ENCLOSURE)

LINE/LOW VOLTAGE BARRIER

RELAY (TYPICAL OF 16)
REFERENCED ON PANEL
SCHEDULE AS R#

LINE VOLTAGE SECTION

FRONT VIEW
INCLUDING LOW
VOLTAGE SECTION

FRONT VIEW
SHOWING LINE VOLTAGE SECTION
(LOW VOLTAGE SECTION CUT AWAY)
LINE VOLTAGE FEEDS FROM
TOP AND BOTTOM ONLY

TO LOAD,
SEE PLANS.

LIGHTING CONTROL PANEL (LCP) DETAIL

NO SCALE

PHOTOCELL ON THE ROOF
FACING NORTH

2#18 AWG IN 1/2" CONDUIT

120V/277V,
SURGE PROTECTIVE
DEVICE

277V INPUT
POWER TO
PANEL SEE
PLANS FOR
CIRCUIT.

LIGHTING
CONTROL
PANEL
LCP

CAT 5 PATCH CABLE WITH
RJ45 CONNECTORS IN 3/4"
CONDUIT (4000 FT MAXIMUM)

SEE PLANS FOR
ADDITIONAL
CONTROL REQUIRED.

SYSTEM MANUAL OVERRIDE
SWITCH. SEE PLANS FOR
LOCATION AND QUANTITY.

LCP PANEL WIRING DIAGRAM

NO SCALE

DO NOT CONTROL ANY EXIT SIGNS, EMERGENCY LIGHTS, NIGHT
LIGHTS, OR EMERGENCY BATTERY BALLASTS FROM THE
LIGHTING CONTROL SYSTEM. WHEN THESE ITEMS ARE SHOWN
CONNECTED TO A CONTROLLED CIRCUIT, PROVIDE AN
UNSWITCHED CONDUCTOR CONNECTED AT THE LINE SIDE OF
THE CONTACTOR TO SERVE THEM.

LCP GENERAL NOTES:

1. LIGHTING CONTROL SYSTEM SHALL BE DIGITAL AND CONSIST OF A MASTER PANEL, SATELLITE PANEL(S), DIGITAL TIME CLOCK (DTC), PHOTOCELL, MANUAL OVERRIDE SWITCHES) AND OTHER CONTROLS AS SHOWN ON THE DRAWINGS. ALL SYSTEM COMPONENTS SHALL CONNECT IN A 'DAISY CHAIN' STYLE CONFIGURATION AND BE CONTROLLED VIA CATEGORY 5 PATCH CABLE WITH RJ45 CONNECTORS, PROVIDING REAL-TIME TWO-WAY COMMUNICATION WITH EACH SYSTEM COMPONENT. ANALOG SYSTEMS ARE NOT ACCEPTABLE. ALL CABLES SUPPLIED BY CONTRACTOR.

2. RELAY PANELS SHALL BE PRE-WIRED, PRE-ASSEMBLED, PRE-PROGRAMMED AND LISTED TO UL 916 (NORMAL) OR ETL LISTED TO UL924 (EMERGENCY). PANELS SHALL BE PROVIDED WITH DUAL-VOLTAGE POWER SUPPLY AND 16 GAUGE BARRIERS TO SEPARATE HIGH AND LOW-VOLTAGES, NORMAL AND EMERGENCY POWER.

3. STANDARD RELAYS SHALL HAVE NORMALLY CLOSED (NC) CONTACTS RATED FOR 120/277V 20A TUNGSTEN, BALLAST OR HID. STANDARD RELAYS SHALL BE ZERO-CROSS TYPE, NO EXCEPTIONS.

4. ALL INCANDESCENT LIGHTING CIRCUITS SHALL BE CONTROLLED BY A NC/SOFTSTART RELAY, NO EXCEPTIONS.

5. RELAY PANEL ELECTRONICS SHALL PROVIDE CURRENT VISUAL STATUS AND CONTROL OF EACH RELAY OR ZONE. ALL SYSTEM CONTROL ELECTRONICS SHALL STORE PROGRAMMING IN A NON-VOLATILE MEMORY AND PROVIDE 10 YEAR BATTERY BACKUP FOR TIME OF DAY.

6. ALL SWITCHES SHALL COMMUNICATE VIA CAT 5 PATCH CABLE WITH RJ45 CONNECTORS. CONTACT CLOSURE STYLE SWITCHES ARE NOT ACCEPTABLE. ANY SWITCH BUTTON FUNCTION SHALL BE ABLE TO BE CHANGED LOCALLY AT THE DTC. REFER TO SINGLE LINE DIAGRAM FOR WIRING DETAILS.

LCP GENERAL NOTES: (CONT.)

7. PHOTOCELL, EXTERIOR (PCO) OR INTERIOR (PCI) SHALL PROVIDE READOUT ON THE DTC SCREEN IN NUMBER VALUES ANALOGOUS TO FOOT-CANDLES. EACH PHOTOCELL SHALL PROVIDE A MINIMUM OF 14 TRIGGER POINTS. EACH TRIGGER CAN BE PROGRAMMED TO CONTROL ANY RELAY OR ZONE. EACH TRIGGER SHALL BE SET THROUGH DTC. LOCALLY. PHOTOCELLS THAT REQUIRE THE USE OF SET SCREWS OR MANUAL ADJUSTMENTS AT THE PHOTOCELL CONTROL CARD SHALL NOT BE ACCEPTABLE.

8. SHOP DRAWINGS: SUBMIT DIMENSIONED DRAWINGS OF LIGHTING CONTROL SYSTEM AND ACCESSORIES INCLUDING, BUT NOT NECESSARILY LIMITED TO, RELAY PANELS, SWITCHES, DTC, PHOTOCELLS AND OTHER INTERFACES.

9. PROVIDE ON SITE PROGRAMMING AND OWNER TRAINING ON THE SYSTEM.

LCP SYSTEM PERFORMANCE:

1. RELAYS IN LIGHTING CONTROL PANEL SHALL CONTROL LOAD DIRECTLY AS SHOWN ON PANEL SCHEDULES OR SHALL CONTROL CONTACTOR COILS AS SHOWN ON THIS SHEET.

2. EXTERIOR LIGHTING SHALL BE CONTROLLED VIA PHOTOCELL 'ON', PHOTOCELL 'OFF' OR 'PHOTOCELL 'ON', TIME CLOCK 'OFF', AS DIRECTED BY THE OWNER.

3. ALL INTERIOR LIGHTING CONTROLS, VIA RELAYS AND OR VIA RELAYS CONTROLLING CONTACTOR COILS, SHALL BE SET TO TURN OFF THE LIGHTING ONE HOUR AFTER TIME INDICATED BY OWNER. AT THIRTY (30) MINUTES PRIOR TO SET TIME THE LIGHTS SHALL BLINK FIVE (5) TIMES, AND AT FIFTEEN (15) MINUTES PRIOR TO SET TIME THE LIGHTS SHALL BLINK THREE (3) TIMES TO ALERT OCCUPANTS THAT THE LIGHTS ARE ABOUT TO BE TURNED OFF.

4. MANUAL OVERRIDE SWITCH SHALL BE LOCATED AS SHOWN ON THE DRAWING WITH AN ENGRAVED LABEL STATING "LIGHTING SYSTEM OVERRIDE SWITCH". RE-VERIFY EXACT LOCATION WITH OWNER ON-SITE PRIOR TO ROUGH IN. THE SWITCH SHALL BE PROGRAMMED TO OVERRIDE THE PRESET TO 'OFF' TIME FOR TWO HOUR INTERVALS.

5. PROVIDE (2) COPIES OF A LAMINATED ONE PAGE OPERATION INSTRUCTION, WRITTEN IN A FRIENDLY, EASY TO READ FORMAT FOR OWNER'S USE.

6. WHEN RELAYS ARE CONTROLLING ELECTRICALLY HELD CONTACTORS, THEN THE RATIO OF RELAYS TO CONTACTOR COILS IS 1 TO 1. WHEN RELAYS ARE CONTROLLING MECHANICALLY HELD CONTACTOR, THEN THE RATIO IS (2) RELAYS PER COIL. IN THIS CASE THE RELAYS SHALL BE PROGRAMMED AS A MOMENTARY DEVICE WITH TIME SET PER CONTACTOR MANUFACTURER RECOMMENDATION.

100% CONSTRUCTION DOCUMENTS

Revisions:

Dates

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Accord Architects & Engineers

Drawing Title

LIGHTING CONTROL SYSTEM PANEL
DETAIL AND NOTES

Approved: Project Director

Project Title

CONSTRUCT CLINIC
ADDITION TRACK 3 CLINIC
BUILD

Location

VJBD VA MEDICAL CENTER
COLUMBIA, SC 29209

Date

07/30/2015

Checked

KV

Drawn

CR

Project Number

544-302

Building Number

122

Drawing Number

ES-612

Office of
Facilities
Management

Department of
Veterans Affairs

VA FORM 08-6231, OCT 1978

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Plot Date

