SYMBOLS LIST

- KEYED NOTE
- ELECTRICAL PANELBOARD SURFACE MOUNTED
- ELECTRICAL PANELBOARD FLUSH MOUNTED
- DISCONNECT SWITCH. 3 POLE, 60 AMPS, WP U.O.N.
- FUSED DISCONNECT SWITCH.
- MOTOR/HVAC/HWH/FURNACE/FAN. CIRCUIT VIA STARTERS/CONTROLLERS/DRIVES ETC.. SEE MECHANICAL PLANS FOR ADDITIONAL INFORMATION.
- PANEL — PANELBOARD (ONE-LINE)
- SPD OR SPD — SURGE PROTECTION DEVICE-JOSLYN SURGITRON III 1455-49
- METER
- (3) — METERING CURRENT TRANSFORMERS AND POTENTIAL CT'S/TAPS AS APPLICABLE.
- CIRCUIT TAG
- CIRCUIT BREAKER – 3 POLE UON. "ST" INDICATES WITH SHUNT TRIP COIL.
- CIRCUIT BREAKER – 3 POLE UON
- FUSED DISCONNECT (ONE-LINE)
- GROUND
- LP-A#3 — SINGLE POLE HOME-RUN TO PANEL AND CIRCUIT AS INDICATED. 2#12,1#12G-3/4"C-20A OCPD UON
- RP-A #1,3,5 — HOMERUN TO PANEL BOARD AS INDICATED. QUANTITY OF ARROWHEADS INDICATE THE NUMBER OF SINGLE POLE CIRCUITS. EACH CIRCUIT WITH DEDICATED NEUTRAL.
- RP-A #2 — MULTIPOLE HOMERUN TO PANELBOARD AS INDICATED.
- CEILING MOUNTED CARBON MONOXIDE DETECTOR. PROGRAM FOR SUPERVISORY ANNUNCIATION
- DUCT MOUNTED SMOKE DETECTOR WITH PITOT SAMPLING TUBE, HOUSING, HEATER AND WEATHER ENCLOSURE. PROVIDE REMOTE STATION.
- INTELLIGENT MONITOR MODULE.
- ADDRESSABLE OPEN AREA CEILING MOUNTED SMOKE DETECTOR.
- ADDRESSABLE BEAM TYPE SMOKE DETECTOR.
- MANUAL PULL STATION
- AUDIO/VISUAL INDICATING APPLIANCE. (FIRE-ALARM)
- VISUAL INDICATING APPLIANCE.
- PAD — FIRE ALARM SUPERVISED EXTENDED POWER SUPPLY WITH AUDIO/VISUAL APPLIANCE CIRCUIT(S).
- FACP — FIRE ALARM CONTROL PANEL (FACP).
- FAA — FIRE ALARM 2 LINE LIQUID CRYSTAL ANNUNCIATOR.
- PC DESKTOP COMPUTER FOR SPECIFIC SYSTEM (FIRE ALARM, ACCESS CONTROL ETC...) COMPLETE WITH ALL CONNECTIONS, SOFTWARE AND PROGRAMMING.
- JACK/OUTLET FOR IT/DATA/TELEPHONE. PROVIDE RECESSED CONCEALED DEEP 1900 BOX, PLASTER RING, 1" EMPTY RACEWAY UP INTO ACCESSIBLE CEILING. PROVIDE (2)RJ45 TELEPHONE AND (2) RJ45 COMPUTER JACKS EACH WITH COLOR CODED CAT 6A CABLE TERMINATED AND PATCHED IN THE NEAREST IT CLOSET.
- JACK/OUTLET FOR IT/DATA/TELEPHONE IN MODULAR FURNITURE. PROVIDE AS INDICATED FOR OPEN TRIANGLE SYMBOL EXCEPT EXTENDED INTO THE MODULAR FURNITURE.
- IT/DATA OUTLET/JACK RJ45 WITH CAT 6A CABLING IN ACCESSIBLE CEILING CAVITY FOR POE WiFi ACCESS POINT.
- E — EMERGENCY POWER OFF (EPO). SLEEVED PUSH BUTTON. CLEAR FLIP COVER.
- TV — WALL COAX JACK FOR TELEVISION. WITH 1" EMPTY RACEWAY UP INTO ACCESSIBLE CEILING CAVITY.
- FIRE ALARM REMOTE INDICATOR STATION. ILLUMINATES WHEN ASSOCIATED (USUALLY CONCEALED) DEVICE IS ACTIVATED.
- 226 — DOOR IDENTIFIER. SEE SECURITY/ACCESS CONTROL DETAILS AND ARCHITECTURAL DRAWINGS/SCHEDULES FOR ADDITIONAL INFORMATION
- CONCEALED MAGNETIC SWITCHES IN THE HEAD OF THE DOOR/JAMB (LATCH SIDE) AND IN THE ELECTRIC HINGE HARDWARE.
- ML — ELECTRIFIED MORTISE LOCK/LATCH SET AND ASSOCIATED ELECTRIC HINGE HARDWARE. PROVIDE CONCEALED THRU WIRING IN DOOR THROUGH TO HINGE. PROVIDE MORTAR SHIELD BOX WITH RACEWAY UP FRAME/WALL TO SYSTEM.
- ESR — ELECTRIC STRIKE RELEASE. PROVIDE MORTISE SHIELD WITH CONCEALED WIRING UP FRAME/WALL (IN RACEWAY) TO ACCESS CONTROL SYSTEM.
- ACCESS CONTROL READER.
- EH — ELECTRIC HINGE WITH CONCEALED MAGNETIC CONTACT AND WIRING THROUGH THE DOOR LEAF TO EML OR STRIKE COMPONENT(S).
- DOORCHIME/BUZZER WITH ASSOCIATED CONTROL POWER TRANSFORMER. CIRCUIT TO ACTIVATE ON OPERATION OF THE ASSOCIATED PUSHBUTTON
- PUSHBUTTON. CIRCUIT TO ACTIVATE ASSOCIATED DOORCHIME/BUZZER.

- 2'X4' (NOMINAL) LIGHTING FIXTURE –TYPE 'BB' UON
- 2'X4' (NOMINAL) LIGHTING FIXTURE WITH INTEGRAL EMERGENCY BATTERY PACK –TYPE 'BBE' UON
- 2'X2' (NOMINAL) LIGHTING FIXTURE–TYPE 'BA' UON
- 2'X2' (NOMINAL) EMERGENCY LIGHT FIXTURE WITH INTEGRAL EMERGENCY BATTERY PACK –TYPE 'BAE' UON.
- RECESSED DOWN LIGHT
- WALL MOUNTED LIGHT FIXTURE WITH INTEGRAL EMERGENCY BATTERY PACK –TYPE 'T' UON.
- 1'X4' (NOMINAL) LIGHTING FIXTURE. TYPE T WITH PENDANT MOUNT UON.
- S_{3a} — ANTIMICROBIAL DECORA SERIES SPDT (3 WAY) 120-277 VAC SPECIFICATION GRADE SWITCH
- S — ANTIMICROBIAL DECORA SERIES SPST 120-277 VAC SPECIFICATION GRADE SWITCH
- S_P — ANTIMICROBIAL DECORA SERIES SPST 120-277 VAC SPECIFICATION GRADE SWITCH ILLUMINATED WHEN ON LEVITON SERIES 5628.
- S_T — THERMAL SWITCH
- S_a^{LV}, $S_{a,b,f}^{LV}$, $S_{a,c-f,g}^{LV}$ — LOW VOLTAGE SPECIFICATION GRADE NETWORKED DIGITAL SWITCH. WATT STOPPER. NUMBER OF BUTTONS TO PROVIDE SWITCH LEGS AS DESIGNATED BY SUBLETTERS AND/OR NUMBER IN PARENTHESES. SUB LETTER DESIGNATED WITH A HYPHEN REPRESENTS ONE BUTTON PROGRAMMED TO CONTROL SEVERAL SWITCH LEGS/GROUPS.

UPPER CASE LETTER(S) DENOTES TYPE, NUMBER DENOTES CIRCUIT, LOWER CASE LETTER DENOTES SWITCH LEG

- S_{TM} — BATHROOM FAN/LIGHT SWITCH WITH DELAY TIMERS AND VENTILATION TIMER. AIRCYCLER SMART EXHAUST SE1 (TOGGLE) SED-S (DECORA).
- S_a^{PIR} — LOW VOLTAGE LIGHTING CONTROL SWITCH DIGITAL OCCUPANCY SENSOR/WALL SWITCH. PROGRAMMIBLE AS OCCUPANCY OR VACANCY AS DIRECTED IN THE FIELD. WATT STOPPER LMPW-101*.
- S_a^{VS} — LOW VOLTAGE LIGHTING CONTROL SWITCH DIGITAL VACANCY SENSOR/WALL SWITCH WITH ON/OFF AND DIMMER. WATT STOPPER LMPW-101*.
- S_P^{3a} — SPECIFICATION GRADE 3-WAY SWITCH WITH ILLUMINATED HANDLE. SWITCH ILLUMINATES WHEN LOAD IS ON.
- OS a — DIGITAL NETWORKED ULTRASONIC/PASSIVE INFRARED OCCUPANCY SENSOR. WATT STOPPER LMDC-100. "US" INDICATES ULTRASONIC ONLY
- VS a — DIGITAL NETWORKED ULTRASONIC/PASSIVE INFRARED VACANCY SENSOR. WATT STOPPER LMDC-VS-100. "US" INDICATES ULTRASONIC ONLY
- 1 LC a,b,c — DIGITAL LOAD CONTROL RELAY WITH 3 RELAYS. WATT STOPPER LMRC-213.
- I/O — DIGITAL NETWORK INPUT/OUTPUT DEVICE. WATT STOPPER
- TS — 4 ZONE PROGRAMMABLE TIME SWITCH. PROVIDE WITH NETWORK I/O DEVICE MODULE. INTERFACE TO CONTROL (1)EXTERIOR LIGHTS (2)OUTDOOR SIGN LIGHTS (3)END OF WORK DAY LIGHTS OFF
- DH — DAYLIGHT HARVESTING NETWORK SENSOR.
- WALL MOUNTED LED ILLUMINATED EXIT LIGHT WITH INTEGRAL BATTERY BACKUP AND DUAL EMERGENCY LIGHTS
- SAME AS ABOVE BUT DUAL DIRECTIONAL AND CEILING MOUNTED
- SAME AS ABOVE BUT DIRECTIONAL AND WALL MOUNTED
- WALL MOUNTED EMERGENCY LIGHT
- DECORA STYLE SPECIFICATION GRADE DUPLEX SAFETY GRADE NEMA 5-20R RECEPTACLE. WHERE INDICATED WITH "TV" MOUNT 60"AFF FOR TELEVISION.
- DECORA STYLE DOUBLE DUPLEX (QUAD) RECEPTACLE, SPECIFICATION SAFETY GRADE GRADE NEMA 5-20R. WHERE INDICATED PROVIDE WITH INTEGRAL USB POWER JACKS.
- SPECIFICATION GRADE DECORA DUPLEX NEMA 5-20R RECEPTACLE ON DEDICATED CIRCUIT.
- USB — DECORA STYLE SPECIFICATION GRADE TAMPER RESISTANT DUPLEX NEMA 5-20R RECEPTACLE. WITH TYPE A AND C USB POWER PORTS
- SPECIFICATION GRADE NEMA L21-30R (UON) RECEPTACLE
- SPECIFICATION GRADE NEMA L6-30R (UON) RECEPTACLE
- (OR / OR) — RECESSED FLOOR BOX WITH TWO (1) NEMA 5-20R RECEPTACLE, (1) NEMA 5-20R W/USB RECEPTACLE AND DATA/IT/AV/MEDIA ETC... RECEPTACLES. WIREMOLD EVOLUTION SERIES EFB6S-(OG WHERE APPLICABLE). WHERE SHOWN ON THE SECOND AND THIR FLOORS PROVIDE SAME DEVICE FEATURES IN A RATED POKE THRU TYPE ASSEMBLY; LEGRAND SERIES 6ATC2PAVBZ3HCOORDINATE TYPE TO ACCOMMODATE THE TYPE OF CONSTRUCTION BOX IS TO BE INSTALLED IN. PROVIDE COMPLETE WITH SIDE MODULES, PLATES, DIVIDERS, CAPS AND COVERS AND TRIMS. EXPOSED FINISHES AS APPROVED BY ARCHITECT
- P — WALL MOUNTED/TRANSITION BASE POWER FEED FOR FURNITURE. "P" DENOTES FOR POWER. "D" DENOTES LOW VOLTAGE (DATA, TELEPHONE ETC..).
- FLOOR MOUNTED/TRANSITION BASE FEED FOR FURNITURE. FIRE RATED POKE THROUGH WITH CONNECTION WHIP. "P" DENOTES FOR POWER. "D" DENOTES LOW VOLTAGE (DATA, TELEPHONE ETC.)
- ST — FRACTIONAL HORSEPOWER MOTOR/LOAD WITH MANUAL MOTOR STARTER DISCONNECT AT UNIT AND ADDITIONAL DISCONNECT AT ACCESSIBLE FLOOR LOCATION.

- STATIONARY ELECTRIC GENERATOR.
- G — PORTABLE TRAILER MOUNTED ELECTRIC GENERATOR.
- UTILITY POLE
- TRANSFORMER
- AUTOMATIC TRANSFER SWITCH.
- LIGHTNING PROTECTION AIR TERMINAL AND ASSOCIATED COMPONENTS.
- GROUNDING/BONDING CONNECTION. CADWELD UON.
- GROUND ROD. COPPER CLAD 5/8"ø 10' LONG UON
- OR — COPPER GROUND BAR.
- WIRE MANAGEMENT TRAY SYSTEM. SNAKE TRAY.
- CAT 6A ETHERNET (LAN) PATCH CORD WITH RJ45 TERMINATED ENDS. RED OUTER JACKET. PROVIDE FOR INTERCONNECTIONS BETWEEN LIGHTING CONTROL DEVICES. RUN CONCEALED. WHERE EXPOSED (NO CEILING, MECHANICAL ROOMS, OUTDOORS) PROVIDE IN RACEWAY. PROGRAM SYSTEM TO CONTROL(S) AS DESIGNATED BY SUB-LETTERS ON THE DOCUMENTS.
- S_a^{OS} — CONVENTIONAL HARD WIRED LIGHTING CONTROL SWITCH/VACANCY SENSOR/WALL SWITCH.
- OC a — CONVENTIONAL HARD WIRED ULTRASONIC OCCUPANCY SENSOR. WATT STOPPER.
- PSa — POWER SUPPLY "a" (DESIGNATION VARIES) FOR LED LIGHTING. PROVIDE IN NEMA 1 ENCLOSURE. PROVIDE CONCEALED LOW VOLTAGE CIRCUITRY TO LED.
- EMERGENCY CALL ANNUNCIATOR/CONTROLLER/SYSTEM WITH AUDIO AND VISUAL INDICATING OF EMERGENCY CALL STATION ACTIVATION. CIRCUIT TO ORIGINAL CIRCUIT.
- Ø SR — EMERGENCY CALL ELECTRIC STRIKE RELEASE. CIRCUIT TO RELEASE DOOR ON ACTIVATION OF EMERGENCY CALL STATION ACTIVATION.
- E — IN TOILETS: EMERGENCY CALL PULL STATION WITH PULL CORD. INTERCONNECT WITH SYSTEM. CIRCUIT TO ACTIVATE ASSOCIATED AUDIO-VISUAL ANNUNCIATING DEVICE. PROVIDE COMPLETE SYSTEM AND POWER SUPPLY.
- SURFACE MOUNTED CAMERA. POWERED OVER ETHERNET (POE). PROVIDE WITH CAT6A CABLE IN RACEWAY BACK TO THE NEAREST IT/DATA CLOSET/ROOM
- P — CHARGING STATION FOR ELECTRIC VEHICLES. DUAL STATION TO ACCOMMODATE 2 VEHICLES. LEVITON EVR-GREEN 4000 LEVEL 2 STATION. #CHHU2-CBMBX-CPCAP-B-CPCBX-CPCMX-CPWY3-CPVAL
- AFD — ADJUSTABLE FREQUENCY DRIVE. SEE MECHANICAL DOCUMENTS FOR ADDITIONAL INFORMATION.
- MOTOR CONTROLLER/STARTER. SEE MECHANICAL DOCUMENTS FOR ADDITIONAL INFORMATION.
- WALL MOUNTED LIGHT FIXTURE. CIRCUITING/FIXTURE TYPE AS INDICATED. WHERE NO TYPE IS INDICATED PROVIDE TYPE "X" WITH BATTERY BACKUP.
- SYMBOL FOR HEAD / TRACK — TRACK LIGHTING WITH ALL ASSOCIATED FITTINGS AND PLATES. TRACK LENGTH PER PLANS HEADS AS INDICATED.

PROVIDE ALL ELECTRICAL WIRING DEVICES AS DECORA STYLE DEVICES

ANY OF THESE SYMBOLS CONSTITUTES NEW WORK PROVIDED UNDER THIS CONTRACT, UNLESS OTHERWISE NOTED. SYMBOLS SHOWN IN ' ———— ' (LIGHT CONTINUOUS) LINETYPE ARE EXISTING DEVICES. SYMBOLS SHOWN IN ' — — — ' (DASHED) LINETYPE ARE TO BE REMOVED. ALL OTHER SYMBOLS, INCLUDING SYMBOLS SHOWN IN ' ———— ' OR ' ———— ' (SOLID HEAVIER) LINETYPES ARE NEW. SYMBOLS INDICATED WITH (ER) ARE EXISTING TO BE RELOCATED. SYMBOLS INDICATED WITH (RE) ARE RELOCATED EXISTING IN THE NEW LOCATION. SYMBOLS WITH AN NUMBER IN PARENTHESIS DENOTES MULTIPLE QUANTITIES OF THAT SYMBOL.

IN CERTAIN CASES SYMBOLS FOR NEW WORK MAY BE INDICATED IN LIGHTER LINETYPES TO EMPHASIZE OTHER WORK ASSOCIATED WITH THAT WORK. IF WORK IS INDICATED ANYWHERE AS NEW IT IS TO BE PROVIDED.

* ADJUST CATALOG NUMBER TO ACCOMMODATE THE NUMBER OF BUTTONS, ROUNDED UP TO EQUAL OR EXCEED THE NUMBER OF CONTROL SUBLETTERS OR NUMBER IN PARENTHESIS.

ABBREVIATIONS

ABBREVIATION	DESCRIPTION
A	AMPERE
ACCU	AIR COOLED CONDENSING UNIT
AFF	ABOVE FINISHED FLOOR
AIC	AMPERE INTERRUPTING CAPACITY
ANN	ANNUNCIATOR
AWG	AMERICAN WIRE GAUGE
BKR	BREAKER
CB	CIRCUIT BREAKER
CCT	CORRELATED COLOR TEMPERATURE
CKT	CIRCUIT
COL	COLUMN
DET	DETECTOR
DWG	DRAWING
EF	EXHAUST FAN
ELEC	ELECTRIC(AL)
EMER	EMERGENCY
EML	ELECTRIC MORTISE LOCK
EMT	ELECTRICAL METALLIC TUBING
ESR	ELECTRIC STRIKE RELEASE
(E), EX	EXISTING
EXIST	EXISTING
EXT	EXTERIOR
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FL	FLOOR, FLUORESCENT
FBO	FURNISHED BY ANOTHER DIVISION, WIRED BY THIS DIVISION
FIBO	FURNISHED AND INSTALLED BY ANOTHER DIVISION, WIRED BY THIS DIVISION
FLA	FULL LOAD AMPERES
FLR, FL	FLOOR
FLUOR	FLUORESCENT
FUT	FUTURE
FURN	FURNISH, FURNITURE
G, GND	GROUND
GFF	GAS FIRED FURNACE
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
HP	HORSEPOWER, HEAT PUMP
HTR	HEATER
HWH	HOT WATER HEATER
IBC	INTERNATIONAL BUILDING CODE
JB	JUNCTION BOX
J-BOX	JUNCTION BOX

ABBREVIATION	DESCRIPTION
JCT	JUNCTION
KCMIL	THOUSAND CIRCULAR MILS
KVA	KILOVOLT-AMPERE
KW	KILOWATT
LP	LIGHTING PANEL
LTG	LIGHTING
LT(S)	LIGHT(S)
MCB	MAIN CIRCUIT BREAKER
MCM	THOUSAND CIRCULAR MILS
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MTD	MOUNTED
MTR	MOTOR
NEC	NATIONAL ELECTRIC CODE
NL	NIGHT LIGHT
NO	NORMALLY OPEN
OC	OVER COUNTER
OCPD	OVERCURRENT PROTECTIVE DEVICE
P	POLE(S)
PNL	PANEL
POE	POINT OF ENTRY
PWR	POWER
ø	PHASE
(R)	REMOVE
RP	RECEPTACLE PANEL
RECP, RECEP	RECEPTACLE
RM	ROOM
SCH	SCHEDULE
SPD	SURGE PROTECTION DEVICE
SPR	SPARE
STA	STATION
SUSP	SUSPEND(ED)
SW	SWITCH
SWBD	SWITCHBOARD
T, TEL, TELE	TELEPHONE
TEMP	TEMPORARY
TV	TELEVISION
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
V	VOLT, VOLTS
VIF	VERIFY IN FIELD
W	WIRE
WH	WATER HEATER
WP	WEATHERPROOF
WG	WIRE GUARD
XFRM	TRANSFORMER

LIST OF ELECTRICAL DRAWINGS

LIGHTING FIXTURE SCHEDULE

IN ADDITION TO THE SPECIFIED FEATURE ON THIS SCHEDULE. WHERE FIXTURE TYPE IS INDICATED WITH AN "E" AND/OR FIXTURE SYMBOL IS HALF SHADED, PROVIDE BATTERY BACK-UP EMERGENCY PACK TO AUTOMATICALLY ILLUMINATE FIXTURE FOR 2 HOUR ON LOSS OF UTILITY POWER

WATTS PER FIXTURE	TYPE		LAMPS	DESCRIPTION	MANUFACTURER AND MODEL	REMARKS
22W	A		LED	6" RECESSED DOWN LIGHT FOR GENERAL LIGHTING. 2,000 LUMENS	HALO COMMERCIAL HC620D010-HM612840-61MDW	
40W	B		LED	47.9"X23.8"X3.9" RECESSED TROFFER LOW PROFILE GENERAL OFFICE LIGHTING	LSI LPEC24-LED-48L-UNV-DIM1 -35(-EM10)	
	BB		LED	47.9"X23.8"X3.9" RECESSED TROFFER LOW PROFILE GENERAL OFFICE LIGHTING	LSI LPEC24-LED-30L-UNV-DIM1 -35-(EM10)	
20W	BA		LED	2'X2' RECESSED TROFFER FIXTURE GENERAL OFFICE LIGHTING	LSI OPT22 LED LENSED TROFFER OPT22-LED45L-W-UNV-40	
32W	C		LED	DECO DRUM I-SERIS 516 ENERGY STAR VERSION 24" ROUND DRUM PENDANT	LEGION LIGHTING CO., INC MODEL 2408 516-2408-WMA-LL4-30-120 -F10DC-CM3-WH-8'	WHERE INDICTED WITH "E" IN TYPE AND/OR WHERE SYMBOL IS HALF SHADED; PROVIDE WITH DC BATTERY EMERGENCY PACK IN SEPARATE NEMA-1 ENCLOSURE (CONCEALED IN CLOSEST INTERIOR ACCESSIBLE CEILING CAVITY. CIRCUIT TO ILLUMINATE LIGHT ON LOSS OF POWER.
-W	D		LED	LOBBY TRIPLE RING PENDANT	STONE LIGHTING RINGS SUSPENSION CH143-CR-BB-604233	
77W	F		LED	LINEAR PENDANT	KUZCO EERIE PD19359 PENDANTS PD19359-AN ANTIQUE BRASS	
106W	H		LED	RING PENDANT	KUZCO PD22753 PENDANT LAMP BS BRUSHED SILVER	
37W	HA		LED	PROFESSIONAL TRACK WITH LED LIGHT HEADS	TARGETTI #STP-0-10V-PW-L2-35-WF (LIGHT HEADS)	PROVIDE TARGETTI 9000-UL8/B-ST-120 (9004/W, 9001/9002/W/3C, ETC..) TRACK LENGTHS (MODIFIED AS REQUIRED) AS DEPICTED BY THE LINE(S) ON THE DRAWINGS. PROVIDE TRACK HEADS AS DEPICTED BY THE TRIANGULAR SYMBOLS SHOWN ON THE LINE(S) REPRESENTING THE TRACK(S)
	HB		LED	LUX ILLUMINAIRE. LED WALL MOUNTED DIRECT LINEAR LIGHTING FIXTURE. 4' SECTIONS AS REQUIRED, WITH JOINER AND END CAPS, TO ACCOMMODATE THE RUN LENGTHS.	LUX ILLUMINAIRE E0S-30-W-D-ASY-750-4-35K-4-UNV (-EB WHERE INDICATED AS TYPE "HBE")	
6.1W PER FOOT	J		LED	RECESSED LINEAR	METALUMEN RAIL 4 RMD4 RM4D-1L35K-2-M-W-L1-1-T-4	
	K		LED	2' LONG RECESSED LINEAR FIXTURE	METALUMEN RAIL 4 RMD4 RM4D-1L35K-2-M-W-L1-1-T-4	
XXW	KK		LED	RING PENDANT	G LIGHTING ORBIS II ACRYLIC INTERIOR PENDANT GL-2739-Z-CH-1A	
17W	L		LED	WALL MOUNTED 4' LONG ROTATIONAL SIGNAGE LIGHT WITH SINGLE PIECE EXTRUDED ALUMINUM HOUSING	STARTEK LIGHTING # OPTD-4-1000-SD-35K-PBR -EBR-RWM-UEMB10	
8.3W	M		LED	ELEVATOR WALL SCONCE	TECH LIGHTING LINGER WALL 700WSLNG-11-N-LED930	WHERE INDICTED WITH "E" IN TYPE AND/OR WHERE SYMBOL IS HALF SHADED; PROVIDE WITH DC BATTERY EMERGENCY PACK IN SEPARATE NEMA-1 ENCLOSURE (CONCEALED IN CLOSEST INTERIOR ACCESSIBLE CEILING CAVITY. CIRCUIT TO ILLUMINATE LIGHT ON LOSS OF POWER.
31.45W	N		LED	PENDANT MOUNT LINEAR WET LOCATION	LSI #EG3 4 WET LOCATION EG3-4-LED-04L-DAS-S-UNV-DIM-4080(-EM)	
15W	O		LED	SURFACE MOUNT HEIGHT 3" DIAMETER 12" WALL OR CEILING MOUNT	LIGHTWAY BRCC-12-LED-F1P-4 -B99-WSP-DIM	WHERE INDICTED WITH "E" IN TYPE AND/OR WHERE SYMBOL IS HALF SHADED; PROVIDE WITH DC BATTERY EMERGENCY PACK IN SEPARATE NEMA-1 ENCLOSURE (CONCEALED IN CLOSEST INTERIOR ACCESSIBLE CEILING CAVITY. CIRCUIT TO ILLUMINATE LIGHT ON LOSS OF POWER.
8W	P		LED	SIGN LIGHT	HK USA LIGHTING GROUP #ZXLF-CPV-NBR-BD-12V-8-30-ACL W/#TXE-120-12	WP. CIRCUIT VIA POWER SUPLY. MOUNT POWER SUPPLY IN THE ASSOCIATED ACCESSIBLE INTERIOR CEILING CAVITY AT THE CORRESPONDING FLOOR.
19W	Q		LED	WALL SCONCE	G LIGHTING LUX EXTERIOR SCONCE GL-6618-B-R3-CH-A-EM	WP. PROVIDE WITH DC BATTERY EMERGENCY PACK IN SEPARATE NEMA-1 ENCLOSURE (CONCEALED IN CLOSEST INTERIOR ACCESSIBLE CEILING CAVITY. CIRCUIT TO ILLUMINATE LIGHT ON LOSS OF POWER.
20.3W	R		LED	VANITY LIGHT	MODERN FORMS COMPANY MINI LOFT WS-14824-BN-20.3-1826-1588	
12W	S		LED	SHOWER LIGHT WET AREA	TECH LIGHTING ENTRA CL 3" LED ENCL3R-F-L12 (HOUSING) ENCL3R-F-D-935-W-W (TRIM)	
	T		LED	WALL MOUNT LED FIXTURE WITH INTEGRAL OCCUPANCY SENSOR AND DUAL LIGHT LEVEL CONTROL. FIXTURE MAINTAIN LOW LIGHTING LEVEL AT ALL TIMES AND ILLUMINATES TO FULL OUTPUT WHEN OCCUPANCY IS DETECTED. WITH EMERGENCY BALLAST.	COLUMBIA# LBIL435MLUELL14	PROVIDE PENDANT MOUNTING WHERE NOT WALL MOUNTED.
	HR		LED	FLEX LED STRIP LIGHTING BUILT-IN TO ARCHITECTURAL HAND RAIL. 2.8 WATTS/FT. REMOTE 120-24V POWER SUPPLY. CONCEALED ACCESS. ANGLE FITTINGS. HAND RAIL TRACK WITH LENS.	LEDSCAPE #FLEX-T-HP-30-65-HR19-D-P WITH PS240D240U POWER SUPPLIES IN NEMA 1 ENCLOSURE	CUSTOM WIRED TO REMOTE POWER SUPPLY. CONCEALED LIGHTING STRIPS AND WIRING
48	V		LED	**OUTDOOR LED AREA LIGHT**	LSI MIRADA MEDIUM OUTDOOR LED AREA LIGHT MRM LED-07L-SIL-FT-30-70CRI	PROVIDE WITH LSI #4RP-B3-S10G-10'-S-STANDARD COLOR-GA-4SRBS. PROVIDE (2) ADDITIONAL RGS SPARE 3/4" C FROM POLE BASE THROUGH CONCRETE BASE TO BELOW GRADE. PROVIDE IMSBT INTEGRATED MOTION SENSOR PROGRAMMED TO CONTROL BI-LEVEL ILLUMINATION.
48	VA		LED	**OUTDOOR LED AREA LIGHT** WITH SHIELDING	LSI MIRADA MEDIUM OUTDOOR LED AREA LIGHT MRM LED-07L-SIL-FT-30-70CRI-IL	PROVIDE WITH LSI #4RP-B3-S10G-10'-S-STANDARD COLOR-GA-4SRBS. PROVIDE (2) ADDITIONAL RGS SPARE 3/4" C FROM POLE BASE THROUGH CONCRETE BASE TO BELOW GRADE. PROVIDE IMSBT INTEGRATED MOTION SENSOR PROGRAMMED TO CONTROL BI-LEVEL ILLUMINATION.
48	W		LED	OUTDOOR LED AREA LIGHT	LSI IRADA MEDIUM OUTDOOR LED AREA LIGHT MRM LED-07L-SIL-5W-30-70CRI	PROVIDE WITH LSI #4RP-B3-S10G-10'-S-STANDARD COLOR-GA-4SRBS. PROVIDE (2) ADDITIONAL RGS SPARE 3/4" C FROM POLE BASE THROUGH CONCRETE BASE TO BELOW GRADE. PROVIDE IMSBT INTEGRATED MOTION SENSOR PROGRAMMED TO CONTROL BI-LEVEL ILLUMINATION.
23	X		LED	SEE SYMBOL LIST FOR FIXTURE DESCRIPTION	RAB LIGHTING #WP2LED34L750UPCU	
85	Y		LED	OUTDOOR LED AREA LIGHT	LSI MIRADA MEDIUM OUTDOOR LED AREA LIGHT MRM LED-12L-SIL-FT-30-70CRI	PROVIDE WITH LSI #4RP-B3-S10G-10'-S-STANDARD COLOR-GA-4SRBS. PROVIDE (2) ADDITIONAL RGS SPARE 3/4" C FROM POLE BASE THROUGH CONCRETE BASE TO BELOW GRADE. PROVIDE IMSBT INTEGRATED MOTION SENSOR PROGRAMMED TO CONTROL BI-LEVEL ILLUMINATION.
85	YA		LED	OUTDOOR LED AREA LIGHT WITH SHIELDING	LSI MIRADA MEDIUM OUTDOOR LED AREA LIGHT MRM LED-12L-SIL-FT -30-70CRI-IL	PROVIDE WITH LSI #4RP-B3-S10G-10'-S-STANDARD COLOR-GA-4SRBS. PROVIDE (2) ADDITIONAL RGS SPARE 3/4" C FROM POLE BASE THROUGH CONCRETE BASE TO BELOW GRADE. PROVIDE IMSBT INTEGRATED MOTION SENSOR PROGRAMMED TO CONTROL BI-LEVEL ILLUMINATION.
27	Z		LED	OUTDOOR RADIAL EMISSION LED BOLLARD	TARGETTI RADIAL EMISSION OUTDOOR LED BOLLARD MBB414036L330FE	PROVIDE (2) ADDITIONAL RGS SPARE 3/4" C FROM POLE BASE THROUGH CONCRETE BASE TO BELOW GRADE
11	AB		LED	OUTDOOR IN-GROUND MOUNTED MONUMENT LIGHT ENCLOSED AND GASKETED. COMPOSITE BRONZE WELL LIGHT	KIM LIGHTING #LTV82EB18L3KUVPL	
	(symbol)		LED	AUTOMATIC EMERGENCY LIGHTING UNIT WITH 2 LED HEADS		
3.8	(symbol)		LED	CEILING MOUNTED EDGELIT EXIT SIGN WITH GREEN LETTERS AND INTEGRATED BATTERY BACK-UP	PHILIPS 44RLU2R-NYC-G-EM. SHADED ARE DENOTES ILLUMINATED FACE. ARROWS AS INDICATED	WITH EMERGENCY BATTERY PACK TO ILLUMINATE FIXTURE FOR 2 HOUR ON LOSS OF UTILITY POWER. PROVIDE CONSTANT HOT SENSING LEG IN ADDITION TO SWITCH LEG(S). ARROW(S) INDICATES DIRECTIONALITY
3.8	(symbol)		LED	WALL MOUNTED EDGELIT EXIT SIGN WITH GREEN LETTERS AND INTEGRATED BATTERY BACK-UP	PHILIPS 44RLU1R-NYC-G-EM. SHADED ARE DENOTES ILLUMINATED FACE. ARROWS AS INDICATED	WITH EMERGENCY BATTERY PACK TO ILLUMINATE FIXTURE FOR 2 HOUR ON LOSS OF UTILITY POWER. PROVIDE CONSTANT HOT SENSING LEG IN ADDITION TO SWITCH LEG(S). ARROW(S) INDICATES DIRECTIONALITY
3.8	(symbol)		LED	WALL MOUNTED EXIT SIGN WITH DUAL EMERGENCY LIGHTS, GREEN LETTERS AND INTEGRATED BATTERY BACK-UP	PHILIPS 44RLU1R-NYC-RH-G-EM. ARE DENOTES ILLUMINATED FACE. ARROWS AS INDICATED	WITH EMERGENCY BATTERY PACK TO ILLUMINATE FIXTURE FOR 2 HOUR ON LOSS OF UTILITY POWER. PROVIDE CONSTANT HOT SENSING LEG IN ADDITION TO SWITCH LEG(S). ARROW(S) INDICATES DIRECTIONALITY

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CBK PROJECT NO. 21030

ISSUE NO.	ISSUE DATE	DESCRIPTION
1	11/9/2021	RELEASE FOR BID

ORANGETOWN TOWN HALL
ADDITION AND ALTERATIONS

26 ORANGEBURG RD
ORANGEBURG, NEW YORK 10962

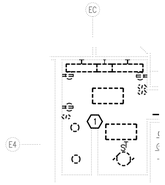
ELECTRICAL SYMBOLS LIST, LIGHTING FIXTURE SCHEDULE AND ABBREVIATIONS

PROJECT NO.: 2219-05

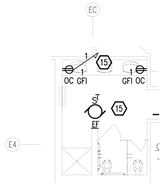
DRAWING NO.: E-001

one eighth inch = one foot; one quarter inch = one foot; three eighths inch = one foot; one half inch = one foot; three quarters inch = one foot; one inch = one foot

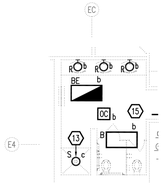
S:\CBK\PROJECTS\2021\21030 OrangeTown Town Hall Revisions\Drawings\PROJECT\E-001.dwg



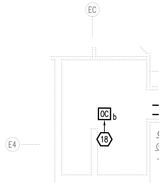
1 PART PLAN BASEMENT
ROOM 014 - ALTERNATE 01
(REMOVALS)
SCALE: 1/8"=1'-0"



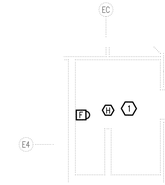
2 PART PLAN BASEMENT
ROOM 014 - ALTERNATE 01
(POWER)
SCALE: 1/8"=1'-0"



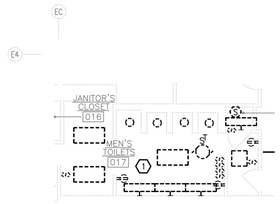
3 PART PLAN BASEMENT
ROOM 014 - ALTERNATE 01
(LIGHTING)
SCALE: 1/8"=1'-0"



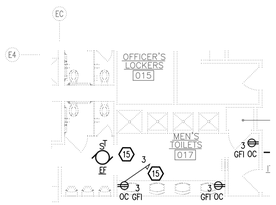
4 PART PLAN BASEMENT
ROOM 014 - ALTERNATE 01
(LIGHTING CONTROLS)
SCALE: 1/8"=1'-0"



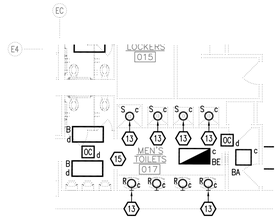
5 PART PLAN BASEMENT
ROOM 014 - ALTERNATE 01
(FIRE ALARM)
SCALE: 1/8"=1'-0"



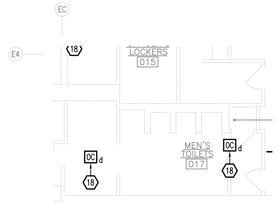
6 PART PLAN BASEMENT
ROOM 017 - ALTERNATE 01
(REMOVALS)
SCALE: 1/8"=1'-0"



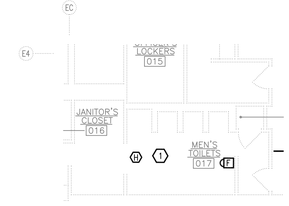
7 PART PLAN BASEMENT
ROOM 017 - ALTERNATE 01
(POWER)
SCALE: 1/8"=1'-0"



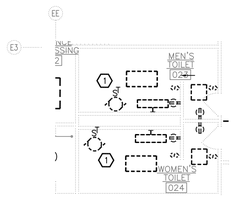
8 PART PLAN BASEMENT
ROOM 017 - ALTERNATE 01
(LIGHTING)
SCALE: 1/8"=1'-0"



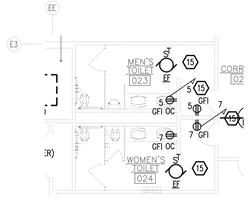
9 PART PLAN BASEMENT
ROOM 017 - ALTERNATE 01
(LIGHTING CONTROLS)
SCALE: 1/8"=1'-0"



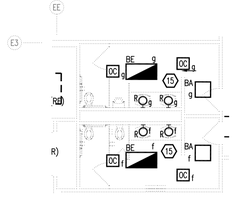
10 PART PLAN BASEMENT
ROOM 017 - ALTERNATE 01
(FIRE ALARM)
SCALE: 1/8"=1'-0"



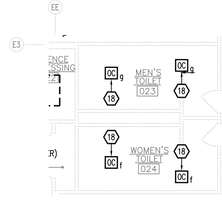
11 PART PLAN BASEMENT
ROOMS 023-024 - ALTERNATE 01
(REMOVALS)
SCALE: 1/8"=1'-0"



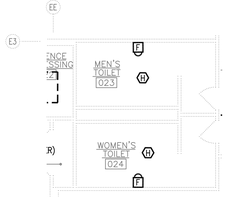
12 PART PLAN BASEMENT
ROOMS 023-024 - ALTERNATE 01
(POWER)
SCALE: 1/8"=1'-0"



13 PART PLAN BASEMENT
ROOMS 023-024 - ALTERNATE 01
(LIGHTING)
SCALE: 1/8"=1'-0"



14 PART PLAN BASEMENT
ROOMS 023-024 - ALTERNATE 01
(LIGHTING CONTROLS)
SCALE: 1/8"=1'-0"



15 PART PLAN BASEMENT
ROOMS 023-024 - ALTERNATE 01
(FIRE ALARM)
SCALE: 1/8"=1'-0"

KEYED NOTES(REMOVALS)

1. REMOVE THE ELECTRICAL DEVICES AND CIRCUITRY IN THESE ROOM(S) AND AREA(S) AS REQUIRED TO ACCOMMODATE THE MODIFICATIONS UNDER THIS CONTRACT. IN ROOMS WHERE ALTERNATES ARE DEFINED, MAINTAIN THE ELECTRICAL CIRCUIT(S) FOR REUSE IN THE NEW LAYOUT(S).
2. REMOVE THE ELECTRICAL DEVICES AND CIRCUITRY IN THIS AREA TO ACCOMMODATE THE IT/DATA RACEWAY BANK AND ASSOCIATED SOFTIT ACROSS THE CORRIDOR.
3. TEMPORARILY REMOVE THE EXISTING ELECTRICAL EQUIPMENT AND DEVICES IN THE CEILING OF THIS AREA TO ACCOMMODATE THE INSTALLATION OF THE IT/DATA RACEWAY BANK. REINSTALL ALL EQUIPMENT AND DEVICES BACK TO THE ORIGINAL CONDITION WHEN DIRECTED BY THE OWNER.
4. RELOCATE EXISTING UTILITY METER TO ACCOMMODATE WORK UNDER THIS CONTRACT.

KEYED NOTES

1. UNDERGROUND RACEWAYS FOR ADDITIONAL/RELOCATED COMMUNICATIONS SERVICES. SEE COMMUNICATIONS ONE-LINE DIAGRAM AND RISER FOR ADDITIONAL INFORMATION.
2. BUILDING END BOX FOR ADDITIONAL FIBER OPTIC/TELCO SERVICE CABLING.
3. MULTIPLE RACEWAYS AND CIRCUITRY FROM SITE/BUILDING EXTERIOR (EAST SIDE). UTILIZE THE UNDERGROUND ACCESS CREATED FOR THE COMMUNICATIONS ENTRY TO ACCOMMODATE THIS WORK AND TO MAINTAIN CONCEALED BUILDING ENTRIES.
4. IT/COMMUNICATION RACEWAY BANK. RUN IN EXISTING CEILING CAVITY. MODIFY ROUTING AND GROUPINGS TO ACCOMMODATE EXISTING CONDITIONS. SEE RISER DIAGRAM FOR ADDITIONAL INFORMATION.
5. IT/COMMUNICATION RACEWAY BANK. TRANSITIONED TO UNDERGROUND. SEE RISER DIAGRAM FOR ADDITIONAL INFORMATION.
6. SERVICES/CIRCUITRY/FEEDERS. SEE SITE PLAN, ONE-LINE DIAGRAM AND GENERATOR DETAILS FOR ADDITIONAL INFORMATION.
7. SPARE RACEWAYS. SEE SITE PLAN FOR ADDITIONAL INFORMATION.
8. PROVIDE FUEL OIL MONITORING SYSTEM FOR GENERATOR BASE MOUNTED FUEL TANK. PROVIDE REMOTE PANEL WITH ANNUNCIATOR AND NETWORK CARD.
9. PROVIDE REMOTE ANNUNCIATOR FOR OUTDOOR GENERATOR. PROVIDE WITH NETWORK CARD.
10. PROVIDE 8 CHANNEL DIGITAL ASTRONOMICAL TIME SWITCH. TORK ELC78. PROVIDE EPC-LC EXTERIOR PHOTO SENSOR. PROGRAM EACH CHANNEL FOR CONTROL TIME/SEQUENCE AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
11. CIRCUIT EACH OF THE TIMESWITCH CHANNELS TO LIGHTING CONTROL DIGITAL INPUTS TO CONTROL THE ASSOCIATED CIRCUITS. PROVIDE LIGHTING CONTROL NETWORK INTERFACE(S) TO ACCOMMODATE THIS CONTROL.
12. RUN IN RACEWAY UP TO FLOOR ABOVE ACCESSIBLE CEILING CAVITIES.
13. CIRCUIT THIS LIGHT TO BE AT 30% ILLUMINATION AT ALL TIME AND TO INCREASE TO 100% ON ACTIVATION OF OCCUPANCY SENSOR.
14. PROVIDE (8)MULTIPOLE ASCO CONTROL RELAYS FOR SITE LIGHTING CONTROL (SWITCH LEGS INDICATED WITH "tc"). INTERFACE WITH DIGITAL CONTROLLER(S). PROVIDE TIMECLOCK, PHOTO CELL AND NETWORK OVERRIDE.
15. CIRCUIT DESIGNATION IS ARBITRARY. CIRCUIT REPLACEMENT DEVICES, FIXTURE(S) ETC... TO THE EXISTING/ORIGINAL CIRCUITRY/CONTROLS. MODIFY CIRCUITRY AS REQUIRED. WHERE UPDATED CONTROLS ARE INDICATED, PROVIDE CONTROL CIRCUITRY AS INDICATED.
16. TEMPORARILY REMOVE THE EXISTING ELECTRICAL EQUIPMENT AND DEVICES IN THE CEILING OF THIS AREA TO ACCOMMODATE THE INSTALLATION OF THE IT/DATA RACEWAY BANK. REINSTALL ALL EQUIPMENT AND DEVICES BACK TO THE ORIGINAL CONDITION WHEN DIRECTED BY THE OWNER.
17. FOR POINT OF USE WATER HEATER. MOUNT ABOVE ACCESSIBLE CEILING. SEE MECHANICAL PLANS FOR EXACT LOCATION(S). CIRCUIT TO THE NEAREST 120VAC PANELBOARD USING 2#12,1#12G-3/4"C. PROVIDE 1P-20A OCPD.
18. PROVIDE STAND ALONE (HARD WIRED CONVENTIONAL) TYPE DEVICES WHERE LIGHTING CONTROL DEVICES ARE SHOWN WITHOUT CONNECTION TO THE LIGHTING CONTROL NETWORK. TYPICAL.
19. EXISTING MAIN SERVICE CT AND 52-M1 SECTION.
20. FULLY RATED 1600A 120/208VAC 3# 4W+G BUSS TAP 90° ELL. PROVIDE CUSTOM UTILITY GRADE CORNER STRUCTURE/SECTION.
21. 52-M2 SECTION.
22. RELOCATE THE ELECTRIC UTILITY METER. EXTEND CIRCUITRY AS REQUIRED. PROVIDE WEATHER PROOF 3R PAN/ENCLOSURE. COMPLY WITH ALL UTILITY REQUIREMENTS.

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CBK PROJECT NO. 21030

ISSUE NO.	ISSUE DATE	DESCRIPTION
1	11/9/2021	RELEASE FOR BID

TOWN OF ORANGETOWN — RICH IN HISTORY

ORANGETOWN TOWN HALL

ADDITION AND ALTERATIONS

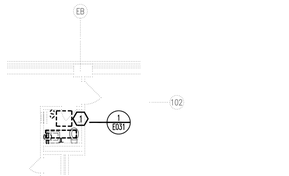
26 ORANGEBURG RD
ORANGEBURG, NEW YORK 10962

BASEMENT LEVEL PART PLANS ALTERNATE 01

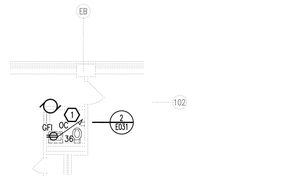
PROJECT NO.: 2219-05

DRAWING NO.:

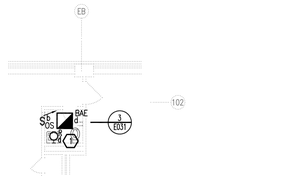
E-030



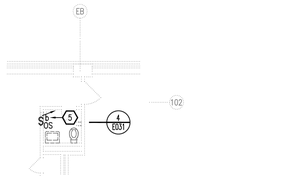
1 PART PLAN LEVEL 01
ROOM 123 - ALTERNATE 01
(REMOVALS)
SCALE: 1/8"=1'-0"



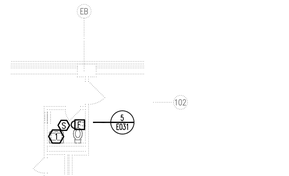
2 PART PLAN LEVEL 01
ROOM 123 - ALTERNATE 01
(POWER)
SCALE: 1/8"=1'-0"



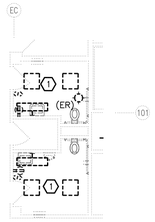
3 PART PLAN LEVEL 01
ROOM 123 - ALTERNATE 01
(LIGHTING)
SCALE: 1/8"=1'-0"



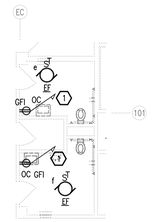
4 PART PLAN LEVEL 01
ROOM 123 - ALTERNATE 01
(LIGHTING CONTROLS)
SCALE: 1/8"=1'-0"



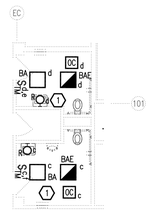
5 PART PLAN LEVEL 01
ROOM 123 - ALTERNATE 01
(FIRE ALARM)
SCALE: 1/8"=1'-0"



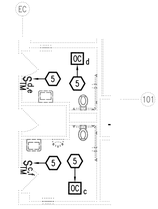
6 PART PLAN LEVEL 01
ROOMS 126-128 - ALTERNATE 01
(REMOVALS)
SCALE: 1/8"=1'-0"



7 PART PLAN LEVEL 01
ROOMS 126-128 - ALTERNATE 01
(POWER)
SCALE: 1/8"=1'-0"



8 PART PLAN LEVEL 01
ROOMS 126-128 - ALTERNATE 01
(LIGHTING)
SCALE: 1/8"=1'-0"



9 PART PLAN LEVEL 01
ROOMS 126-128 - ALTERNATE 01
(LIGHTING CONTROLS)
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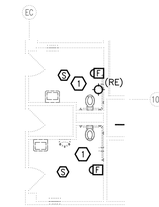
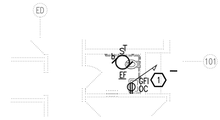
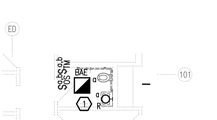


10 PART PLAN LEVEL 01
ROOMS 126-128 - ALTERNATE 01
(FIRE ALARM)
SCALE: 1/8"=1'-0"

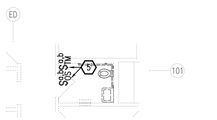
11 PART PLAN LEVEL 01
ROOM 138 - ALTERNATE 01
(REMOVALS)
SCALE: 1/8"=1'-0"



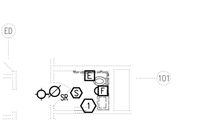
12 PART PLAN LEVEL 01
ROOM 138 - ALTERNATE 01
(POWER)
SCALE: 1/8"=1'-0"



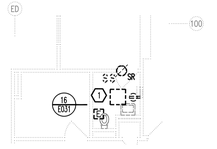
13 PART PLAN LEVEL 01
ROOM 138 - ALTERNATE 01
(LIGHTING)
SCALE: 1/8"=1'-0"



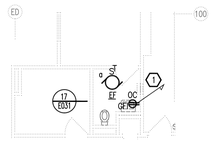
14 PART PLAN LEVEL 01
ROOM 138 - ALTERNATE 01
(LIGHTING CONTROLS)
SCALE: 1/8"=1'-0"



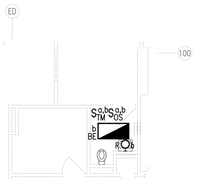
15 PART PLAN LEVEL 01
ROOM 138 - ALTERNATE 01
(FIRE ALARM)
SCALE: 1/8"=1'-0"



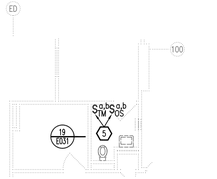
16 PART PLAN LEVEL 01
ROOM 103 - ALTERNATE 01
(REMOVALS)
SCALE: 1/8"=1'-0"



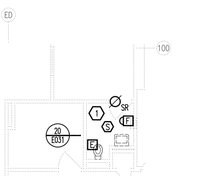
17 PART PLAN LEVEL 01
ROOM 103 - ALTERNATE 01
(POWER)
SCALE: 1/8"=1'-0"



18 PART PLAN LEVEL 01
ROOM 103 - ALTERNATE 01
(LIGHTING)
SCALE: 1/8"=1'-0"



19 PART PLAN LEVEL 01
ROOM 103 - ALTERNATE 01
(LIGHTING CONTROLS)
SCALE: 1/8"=1'-0"



20 PART PLAN LEVEL 01
ROOM 103 - ALTERNATE 01
(FIRE ALARM)
SCALE: 1/8"=1'-0"

KEYED NOTES(REMOVALS)

1. REMOVE THE ELECTRICAL DEVICES AND CIRCUITRY IN THESE ROOM(S) AND AREA(S) AS REQUIRED TO ACCOMMODATE THE MODIFICATIONS UNDER THIS CONTRACT. IN ROOMS WHERE ALTERNATES ARE DEFINED, MAINTAIN THE ELECTRICAL CIRCUIT FOR REUSE IN THE NEW LAYOUT(S).

3. FOR ADDITIONAL INFORMATION, SEE THE ARCHITECTURAL DOCUMENTS FOR DEVICES MOUNTED IN/ON MILLWORK.

4. CIRCUIT THE HOMERUN AND/OR ELECTRICAL DEVICE(S) TO THE NEAREST 120VAC POWER PANEL. PROVIDE MATCHING OCPD.

5. PROVIDE STAND ALONE (HARD WIRED CONVENTIONAL) TYPE DEVICES WHERE LIGHTING CONTROL DEVICES ARE SHOWN WITHOUT CONNECTION TO THE LIGHTING CONTROL NETWORK. TYPICAL.

6. FOR POWER WINDOW SHADE SYSTEM. LOCATE AS DIRECTED BY THE OWNER'S REPRESENTATIVE, TO ACCOMMODATE CONCEALED SYSTEM.

7. WHISPER SHADE IQ2-PLUS DUAL SPLITTER/SWITCH MODULE. LOCATED CONCEALED IN ACCESSIBLE CEILING. PROVIDE ETHERNET CAT 6A CABLES FROM SPLITTER TO EACH:
   - SHADE MOTOR
   - 5 BUTTON CONTROL SWITCH (2 TO 10 BUTTON)
   - PREVIOUS SWITCH
   - NEXT SWITCH

8. PROVIDE WHISPER SHADE IQ2-PLUS 10 BUTTON SWITCH. CONFIGURE TO CONTROL SHADES AS DIRECTED BY THE OWNER'S REPRESENTATIVE.

9. PROVIDE TYPICAL FOR FLOOR BOXES (FOR THE ENTIRE PROJECT):
   - POWER CIRCUITRY (IN 3/4" C) EMBEDDED IN THE SLAB RUN OVER AND UP THROUGH A PARTITION TO THE ACCESSIBLE CEILING TO THE POWER CONNECTION.
   - DATA CIRCUITRY (IN 1 1/4" C) EMBEDDED IN/UNDER THE SLAB RUN OVER AND UP THROUGH A PARTITION TO THE ACCESSIBLE CEILING.
   - AUDIO VISUAL CABLING WHERE INDICATED (IN 1 1/4" C) EMBEDDED IN/UNDER THE SLAB RUN OVER AND UP THROUGH A PARTITION TO THE ACCESSIBLE CEILING.
   - ALL FLOOR BOXES TO BE INSTALLED FLUSH WITH THE NEW FINISHED FLOOR.

10. EXTEND AND UPGRADE, THE ACCESS CONTROL SYSTEM AND ALL ASSOCIATED POWER SUPPLIES TO ACCOMMODATE THE ADDED DEVICES AND FEATURES OF THE ACCESS CONTROL AND CAMERA DEVICES UNDER THIS PROJECT. MAINTAIN ALL SYSTEMS WARRANTEES.

11. PROVIDE DC BATTERY EMERGENCY PACK IN SEPARATE NEMA-1 ENCLOSURE (CONCEALED IN CLOSEST INTERIOR ACCESSIBLE CEILING CAVITY). CIRCUIT TO ILLUMINATE LIGHT ON LOSS OF POWER.

12. FOR "WAY FINDER" MONITOR. COORDINATE MOUNTING HEIGHT AND LOCATIONS WITH THE OWNER'S REPRESENTIVE.

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CBK PROJECT NO. 21030

ISSUE NO.	ISSUE DATE	DESCRIPTION
1	11/9/2021	RELEASE FOR BID

TOWN OF ORANGETOWN — RICH IN HISTORY

ORANGETOWN TOWN HALL
ADDITION AND ALTERATIONS

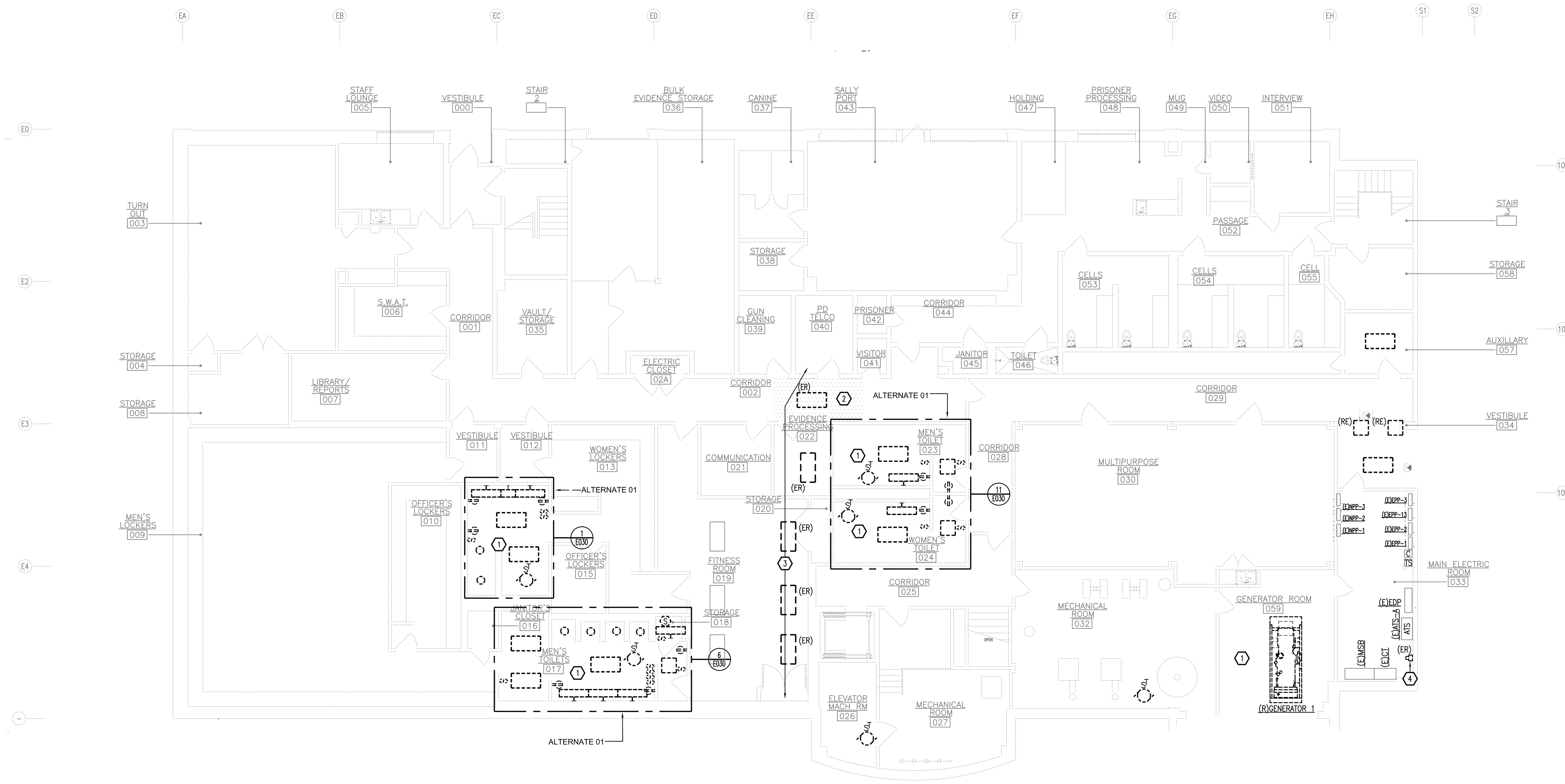
26 ORANGEBURG RD
ORANGEBURG, NEW YORK 10962

LEVEL 01 PART PLANS ALTERNATE 01

PROJECT NO.: 2219-05

DRAWING NO.:

E-031



2 BASEMENT LEVEL FLOOR PLAN (REMOVALS)

SCALE: 1/8"=1'-0"

MAGNETIC NORTH   PROJECT NORTH

KEYED NOTES(REMOVALS)

1. REMOVE THE ELECTRICAL DEVICES AND CIRCUITRY IN THESE ROOM(S) AND AREA(S) AS REQUIRED TO ACCOMMODATE THE MODIFICATIONS UNDER THIS CONTRACT. IN ROOMS WHERE ALTERNATES ARE DEFINED, MAINTAIN THE ELECTRICAL CIRCUIT(S) FOR REUSE IN THE NEW LAYOUT(S).
2. REMOVE THE ELECTRICAL DEVICES AND CIRCUITRY IN THIS AREA TO ACCOMMODATE THE IT/DATA RACEWAY BANK AND ASSOCIATED SOFFIT ACROSS THE CORRIDOR.
3. TEMPORARILY REMOVE THE EXISTING ELECTRICAL EQUIPMENT AND DEVICES IN THE CEILING OF THIS AREA TO ACCOMMODATE THE INSTALLATION OF THE IT/DATA RACEWAY BANK. REINSTALL ALL EQUIPMENT AND DEVICES BACK TO THE ORIGINAL CONDITION WHEN DIRECTED BY THE OWNER.
4. RELOCATE EXISTING UTILITY METER TO ACCOMMODATE WORK UNDER THIS CONTRACT.

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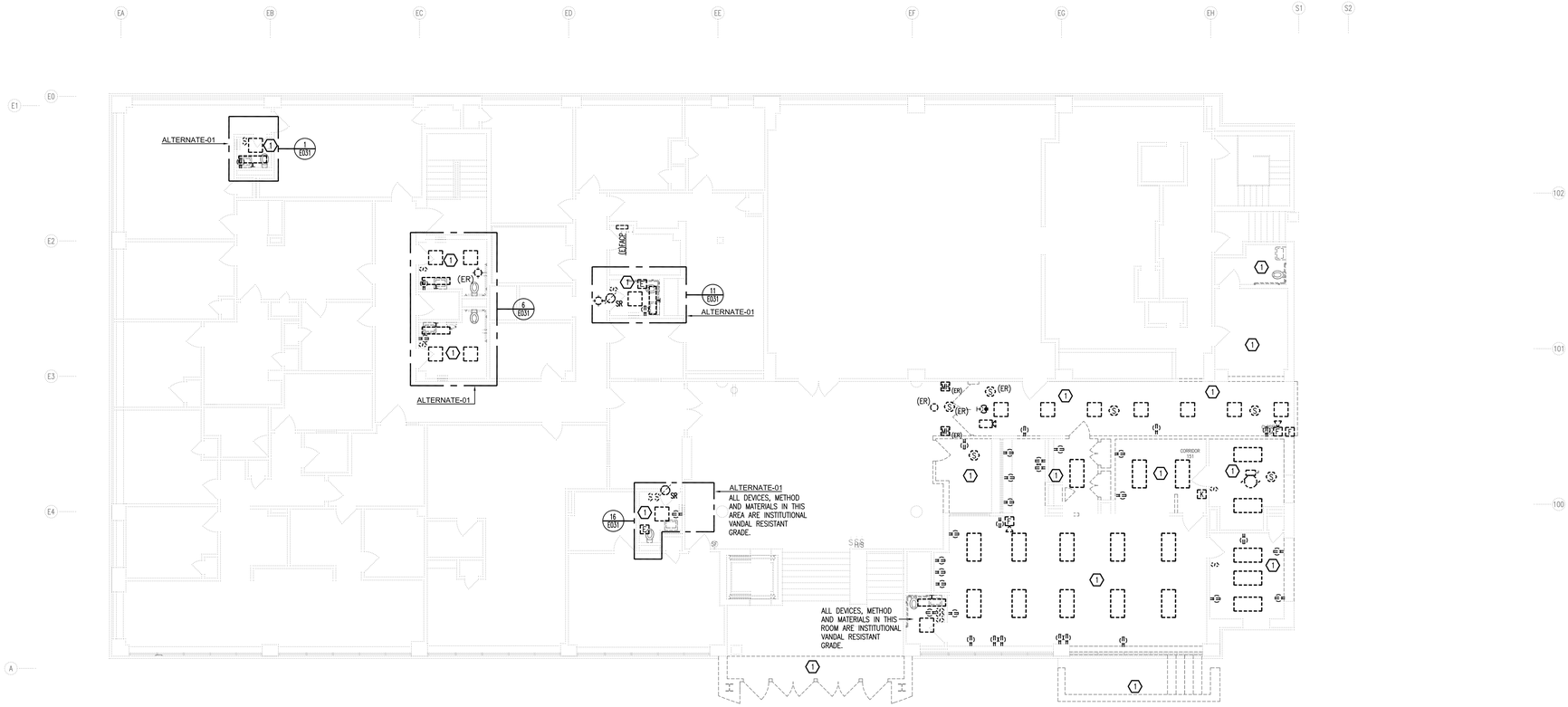
ELECTRICAL BASEMENT LEVEL FLOOR PLAN (REMOVALS)

PROJECT NO.: 2219-05

DRAWING NO.:

E-101

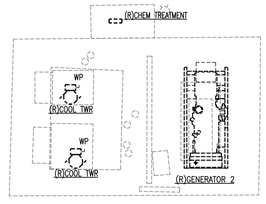


2 PART LEVEL 01 PLAN (REMOVALS)

SCALE: 1/8"=1'-0"

MAGNETIC NORTH / PROJECT NORTH

1. REMOVE THE ELECTRICAL DEVICES AND CIRCUITRY IN THESE ROOM(S) AND AREA(S) AS REQUIRED TO ACCOMMODATE THE MODIFICATIONS UNDER THIS CONTRACT. IN ROOMS WHERE ALTERNATES ARE DEFINED, MAINTAIN THE ELECTRICAL CIRCUIT FOR REUSE IN THE NEW LAYOUT(S).



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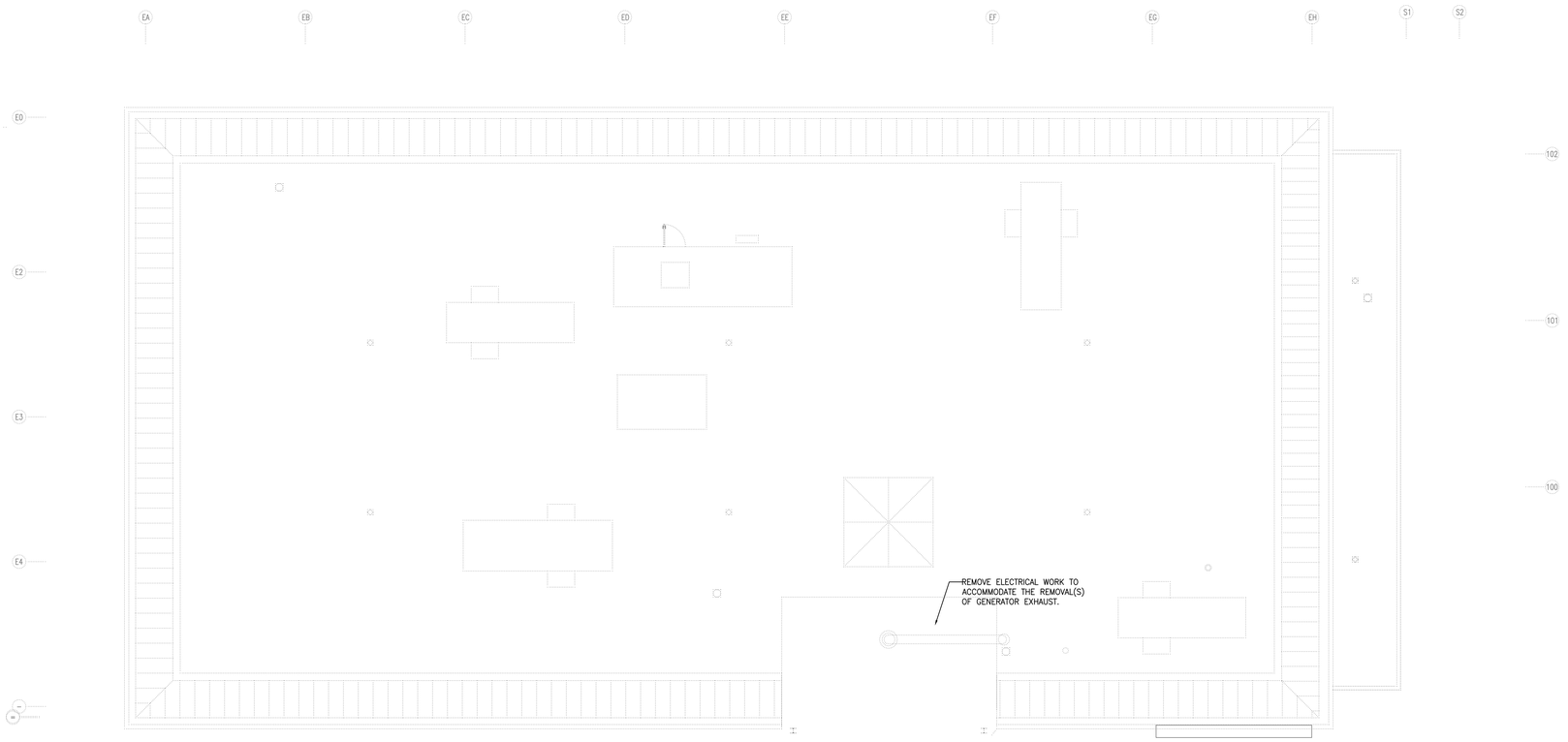
ELECTRICAL LEVEL 01 PLAN (REMOVALS)

PROJECT NO.: 2219-05

DRAWING NO.:

E-102



1 EXISTING ROOF PLAN (REMOVALS)

SCALE: 1/8"=1'-0"

MAGNETIC NORTH

PROJECT NORTH

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ELECTRICAL LEVEL 02 PLAN (REMOVALS)

PROJECT NO.: 2219-05

DRAWING NO.:

E-103

one inch = one foot 0 1 2
three quarters inch = one foot 0 1 2
one half inch = one foot 0 2 4
three eighths inch = one foot 0 4 8
one quarter inch = one foot 0 4 8
one eighth inch = one foot 1 0 8 16

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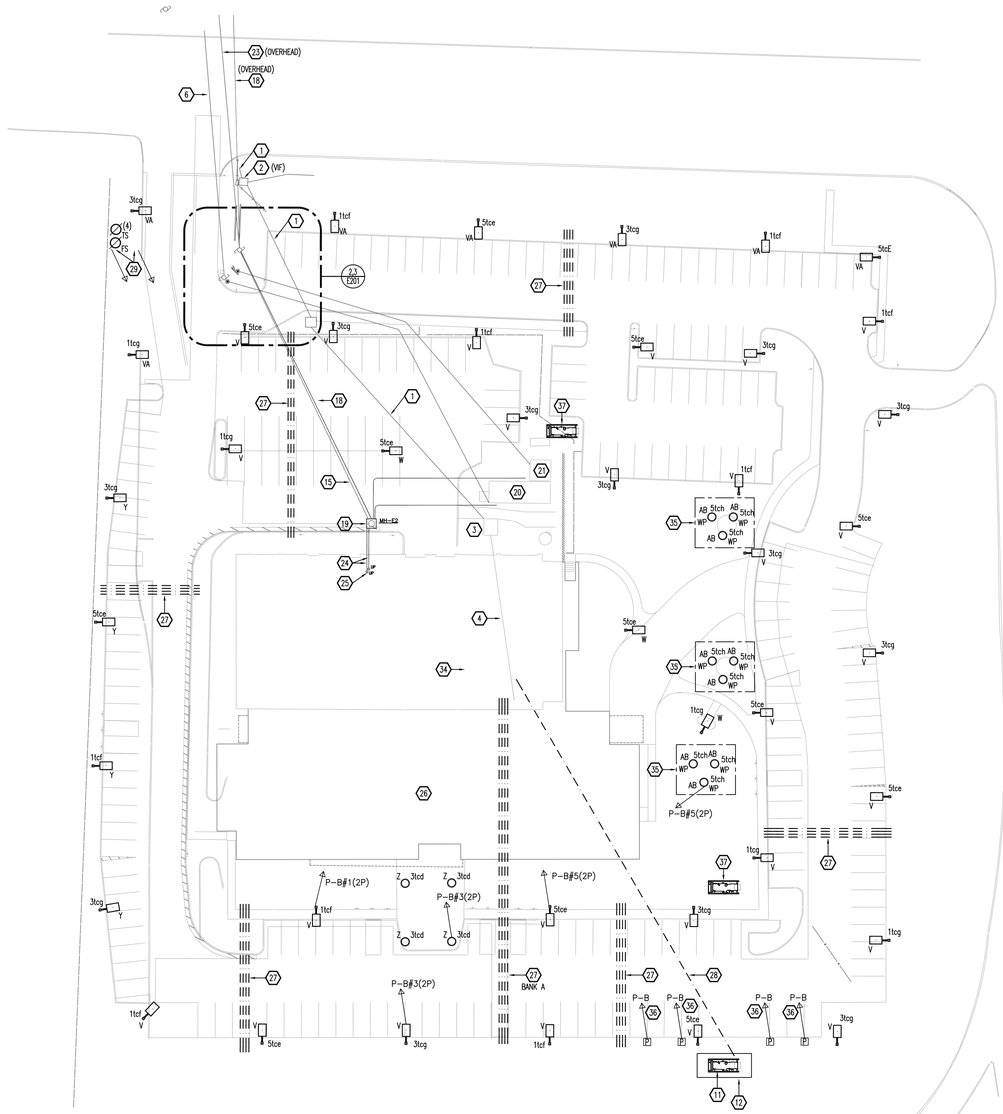


1 ELECTRICAL SITE PLAN

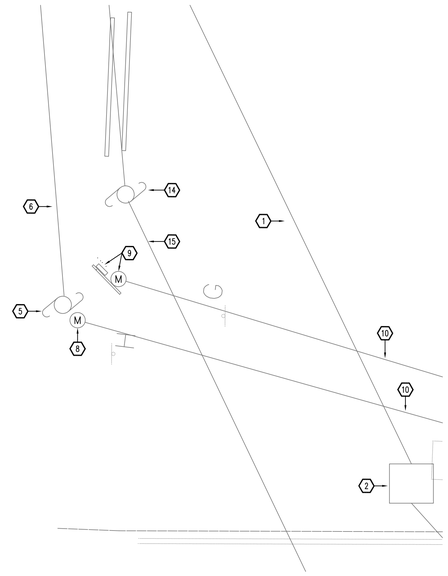
MAGNETIC NORTH / PROJECT NORTH

SCALE: 1/32"=1'-0"

FEEDERS, RACEWAYS, SERVICES INDICATED ON THIS DRAWINGS ARE UNDER GROUND UON. PROVIDE ALL LOCATING, MARKING AND IN GROUND INVESTIGATION TO DETERMINE WHAT EXISTS AND THE BEST ROUTINGS TO BE USED. PROVIDE ALL EXPLORATORY EXCAVATION REQUIRED TO ENSURE COORDINATION WITH EXISTING CONDITIONS.

KEYED NOTES

1. EXISTING UTILITY POWER UNDERGROUND PRIMARY ELECTRICAL SERVICE FEEDER (WF). ROUTING IS APPROXIMATE. MAINTAIN CONTINUITY OF SERVICE. MARK OUT AND PROTECT .
2. EXISTING UTILITY POWER ELECTRICAL SERVICE ACCESS POINT/HANDHOLE WITH ABOVE GRADE COVER. MAINTAIN CONTINUITY OF SERVICE.
3. EXISTING PAD MOUNTED UTILITY ELECTRIC SERVICE TRANSFORMER.
4. EXISTING UNDERGROUND SECONDARY ELECTRIC SERVICE FEEDER (WF). MAINTAIN CONTINUITY OF SERVICE. MARK OUT AND PROTECT .
5. EXISTING UTILITY POWER POLE TO BE REMOVED/RELOCATED.
6. EXISTING UTILITY POWER OVERHEAD FEED (UN-METERED) TO BE MODIFIED, REMOVED/RELOCATED.
7. NOT USED
8. EXISTING UTILITY POWER REVENUE METER MOUNTED ON POLE TO REMAIN. ENSURE CONTINUITY OF SERVICE.
9. EXISTING UTILITY POWER REVENUE METER, ASSOCIATED 3R OCPD AND WOOD SUPPORT STRUCTURE TO REMAIN. ENSURE CONTINUITY OF SERVICE..
10. UNDERGROUND UTILITY POWER SERVICE FEEDER TO REMAIN. ENSURE CONTINUITY OF SERVICE.
11. OUTDOOR DIESEL GENERATOR WITH BASE FUEL TANK-CRITICAL SOUND ATTENUATED GENERATOR.
12. OUTDOOR SOUND ATTENUATED LEVEL 1 ENCLOSURE.
13. NOT USED
14. EXISTING UTILITY POLE (COMMUNICATIONS/FIBER) TO REMAIN. ENSURE CONTINUITY OF SERVICE..
15. UNDERGROUND RACEWAYS WITH COMMUNICATIONS FIBER OPTIC CABLING TO BE MODIFIED.
16. NOT USED
17. EXTENDED UNDERGROUND RACEWAYS TO ACCOMMODATE THE RELOCATION AND EXTENSION OF FIBER OPTIC SERVICES.
18. PROVIDE NEW FIBER OPTIC CABLING FROM SERVICE PROVIDER TO FACILITY DEMARK (IN BASEMENT). WHERE IN RACEWAY PROVIDE EACH PROVIDER IN ITS OWN INNER DUCT.
19. 5'X5'X5' ROADWAY RATED MANHOLE COMPLETE WITH COLLAR, COVER AND ALL NECESSARY APPURTENANCES.
20. EXISTING CELLULAR CARRIER #1 COMMUNICATIONS HUT.
21. EXISTING CELLULAR CARRIER #2 COMMUNICATIONS HUT.
22. 2#10,1#10G (PLUS 4#10 SPARES)-1"C UG TO TIME CLOCK CIRCUIT IN MAIN ELECTRIC ROOM.
23. OVERHEAD FIBER OPTIC (UTILITY) CABLING TO BE MODIFIED TO ACCOMMODATE POLE RELOCATIONS.
24. UNDERGROUND RACEWAYS FOR ADDITIONAL/RELOCATED COMMUNICATIONS SERVICES.
25. BUILDING END BOX FOR ADDITIONAL FIBER OPTIC/TELCO SERVICE CABLING.
26. SHADED AREA INDICATES APPROXIMATE AREA OF BUILDING ADDITION.
27. PROVIDE (4)2" UNDERGROUND SPARE RACEWAY FOR FUTURE USE. CAP BOTH ENDS BELOW GRADE. PROVIDE SURFACE GROUND MONUMENTS TO MARK THE AREAS WHERE THE RACEWAYS ARE TERMINATED.
28. MULTIPLE UNDERGROUND FEEDERS/CIRCUITRY/RACEWAYS BETWEEN BUILDING AND OUTDOOR GENERATOR. SEE DETAILS FOR ADDITIONAL INFORMATION.
29. WATER SERVICE "HOT BOX". SEE ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
30. REMOVE EXISTING LIGHTING FIXTURE/UNIT.
31. NOT USED
32. NOT USED
33. NOT USED
34. APPROXIMATE LOCATION OF PANEL P-B IN BASEMENT OF EXISTING BUILDING.
35. FOR POLE/MONUMENT/STATUE. LOCATE PER ARCHITECTURAL DRAWINGS/OWNER'S REPRESENTATIVE. AIM LIGHT PATTERN TO PREVENT EXCESSIVE UPWARD/SKYWARD DISTRIBUTION.
36. IN ADDITION TO THE POWER CIRCUITRY, PROVIDE AN ADDITIONAL 1" UG RACEWAY WITH 12 STRAND FIBER CABLE TO FIRST FLOOR IT CLOSET. TERMINATE FIBER AT FIRST FLOOR PATCH BAY AND AT CHARGING STATION.
37. GEN-T. TEMPORARY TRAILER MOUNTED STANDBY GENERATOR AND ASSOCIATED FEEDERS AND SHORE POWER/CONTROL CIRCUITRY. SEE ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION. VARY LOCATIONS AS REQUIRED TO ACCOMMODATE PROJECT PHASING. INCLUDE FULL BASE TANK OF FUEL (SITE DELIVERED) AND (2) ADDITIONAL SITE DELIVERED (TANK CAPACITY) REFILLS OF FUEL. PROVIDE FOR DURATION OF THE PROJECT OR UNTIL DIRECTED BY THE OWNER'S REPRESENTATIVE. INCLUDE ALL ASSOCIATED COSTS IN THE BID SUBMISSION.



2 ELECTRICAL PART SITE PLAN (REMOVALS)

MAGNETIC NORTH / PROJECT NORTH

SCALE:1/8"=1'-0"

3 ELECTRICAL PART SITE PLAN

MAGNETIC NORTH / PROJECT NORTH

SCALE:1/8"=1'-0"

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TOWN OF ORANGETOWN — RICH IN HISTORY

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ADDITION AND ALTERATIONS

26 ORANGEBURG RD
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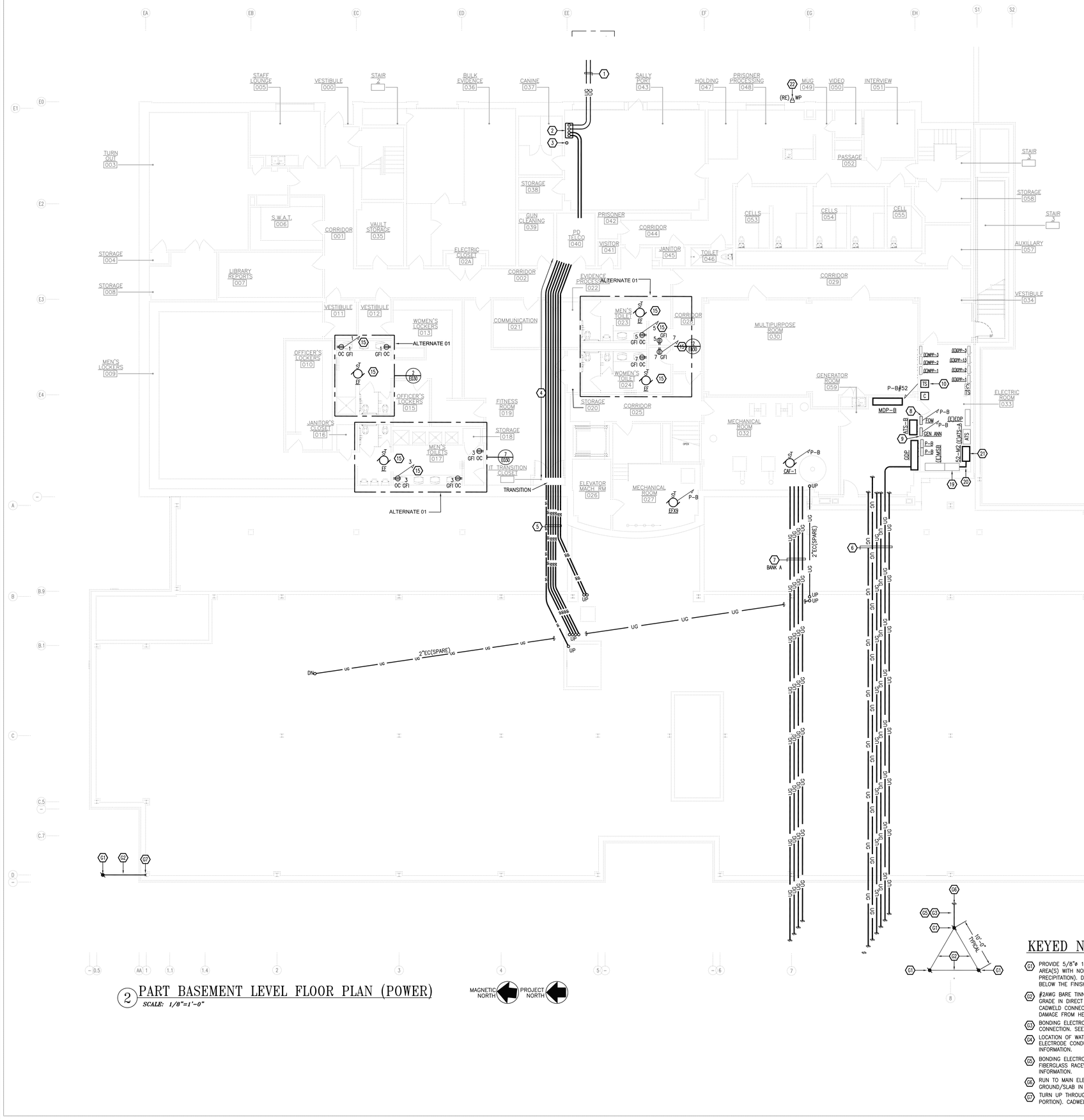
ELECTRICAL SITE PLAN

PROJECT NO.: 2219-05

DRAWING NO.:

E-201



KEYED NOTES

1. UNDERGROUND RACEWAYS FOR ADDITIONAL/RELOCATED COMMUNICATIONS SERVICES. SEE COMMUNICATIONS ONE-LINE DIAGRAM AND RISER FOR ADDITIONAL INFORMATION.
2. BUILDING END BOX FOR ADDITIONAL FIBER OPTIC/TELCO SERVICE CABLING.
3. MULTIPLE RACEWAYS AND CIRCUITRY FROM SITE/BUILDING EXTERIOR (EAST SIDE). UTILIZE THE UNDERGROUND ACCESS CREATED FOR THE COMMUNICATIONS ENTRY TO ACCOMMODATE THIS WORK AND TO MAINTAIN CONCEALED BUILDING ENTRIES.
4. IT/COMMUNICATION RACEWAY BANK. RUN IN EXISTING CEILING CAVITY. MODIFY ROUTING AND GROUPINGS TO ACCOMMODATE EXISTING CONDITIONS. SEE RISER DIAGRAM FOR ADDITIONAL INFORMATION.
5. IT/COMMUNICATION RACEWAY BANK. TRANSITIONED TO UNDERGROUND. SEE RISER DIAGRAM FOR ADDITIONAL INFORMATION.
6. SERVICES/CIRCUITRY/FEEDERS. SEE SITE PLAN, ONE-LINE DIAGRAM AND GENERATOR DETAILS FOR ADDITIONAL INFORMATION.
7. SPARE RACEWAYS. SEE SITE PLAN FOR ADDITIONAL INFORMATION.
8. PROVIDE FUEL OIL MONITORING SYSTEM FOR GENERATOR BASE MOUNTED FUEL TANK. PROVIDE REMOTE PANEL WITH ANNUNCIATOR AND NETWORK CARD.
9. PROVIDE REMOTE ANNUNCIATOR FOR OUTDOOR GENERATOR. PROVIDE WITH NETWORK CARD.
10. PROVIDE 8 CHANNEL DIGITAL ASTRONOMICAL TIME SWITCH, TORK ELC78. PROVIDE EPC-LC EXTERIOR PHOTO SENSOR. PROGRAM EACH CHANNEL FOR CONTROL TIME/SEQUENCE AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
11. CIRCUIT EACH OF THE TIMESWITCH CHANNELS TO LIGHTING CONTROL DIGITAL INPUTS TO CONTROL THE ASSOCIATED CIRCUITS. PROVIDE LIGHTING CONTROL NETWORK INTERFACE(S) TO ACCOMMODATE THIS CONTROL.
12. RUN IN RACEWAY UP TO FLOOR ABOVE ACCESSIBLE CEILING CAVITIES.
13. CIRCUIT THIS LIGHT TO BE AT 30% ILLUMINATION AT ALL TIME AND TO INCREASE TO 100% ON ACTIVATION OF OCCUPANCY SENSOR.
14. PROVIDE (8)MULTIPOLE ASCO CONTROL RELAYS FOR SITE LIGHTING CONTROL (SWITCH LEGS INDICATED WITH "lc"). INTERFACE WITH DIGITAL CONTROLLER(S). PROVIDE TIMECLOCK, PHOTO CELL AND NETWORK OVERRIDE.
15. CIRCUIT DESIGNATION IS ARBITRARY. CIRCUIT REPLACEMENT DEVICES, FIXTURE(S) ETC... TO THE EXISTING/ORIGINAL CIRCUITRY/CONTROLS. MODIFY CIRCUITRY AS REQUIRED. WHERE UPDATED CONTROLS ARE INDICATED, PROVIDE CONTROL CIRCUITRY AS INDICATED.
16. TEMPORARILY REMOVE THE EXISTING ELECTRICAL EQUIPMENT AND DEVICES IN THE CEILING OF THIS AREA TO ACCOMMODATE THE INSTALLATION OF THE IT/DATA RACEWAY BANK. REINSTALL ALL EQUIPMENT AND DEVICES BACK TO THE ORIGINAL CONDITION WHEN DIRECTED BY THE OWNER.
17. FOR POINT OF USE WATER HEATER. MOUNT ABOVE ACCESSIBLE CEILING. SEE MECHANICAL PLANS FOR EXACT LOCATION(S). CIRCUIT TO THE NEAREST 120VAC PANELBOARD USING 2#12,1#12G-3/4"C. PROVIDE 1P-20A OCPD.
18. PROVIDE STAND ALONE (HARD WIRED CONVENTIONAL) TYPE DEVICES WHERE LIGHTING CONTROL DEVICES ARE SHOWN WITHOUT CONNECTION TO THE LIGHTING CONTROL NETWORK. TYPICAL.
19. EXISTING MAIN SERVICE CT AND 52-M1 SECTION.
20. FULLY RATED 1600A 120/208VAC 3ø 4W+G BUSS TAP 90° ELL. PROVIDE CUSTOM UTILITY GRADE CORNER STRUCTURE/SECTION.
21. 52-M2 SECTION.
22. RELOCATE THE ELECTRIC UTILITY METER. EXTEND CIRCUITRY AS REQUIRED. PROVIDE WEATHER PROOF 3R PAN/ENCLOSURE. COMPLY WITH ALL UTILITY REQUIREMENTS.

KEYED NOTES (GROUNDING)

G1. PROVIDE 5/8"ø 10' LONG COPPER CLAD GROUND ROD. LOCATE IN AREA(S) WITH NORMAL GROUND COVER (EXPOSED TO NORMAL PRECIPITATION). DRIVE INTO EARTH UNTIL TOP OF ROD IS 6" BELOW THE FINISHED GRADE.

G2. #2AWG BARE TINNED COPPER CONDUCTOR, MINIMUM 3'6" BELOW GRADE IN DIRECT CONTACT WITH EARTH. BOND TO ROD(S) USING CADWELD CONNECTION(S) BELOW THE FROST LINE TO PREVENT DAMAGE FROM HEAVING.

G3. BONDING ELECTRODE CONDUCTOR. BOND TO ROD USING CADWELD CONNECTION. SEE ONE-LINE FOR ADDITIONAL INFORMATION.

G4. LOCATION OF WATER SERVICE ENTRANCE. BOND BONDING ELECTRODE CONDUCTOR. SEE ONE-LINE FOR ADDITIONAL INFORMATION.

G5. BONDING ELECTRODE CONDUCTOR. RUN BELOW SLAB/GRADE IN FIBERGLASS RACEWAY. SEE ONE-LINE FOR ADDITIONAL INFORMATION.

G6. RUN TO MAIN ELECTRICAL GROUND/BOND POINT UNDER GROUND/SLAB IN FIBERGLASS RACEWAY

G7. TURN UP THROUGH SLAB (IN FIBERGLASS RACEWAY FOR IN SLAB PORTION). CADWELD TO BASE OF BUILDING STEEL.

2 PART BASEMENT LEVEL FLOOR PLAN (POWER)

SCALE: 1/8"=1'-0"

MAGNETIC NORTH / PROJECT NORTH

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ORANGETOWN TOWN HALL

ADDITION AND ALTERATIONS

26 ORANGEBURG RD
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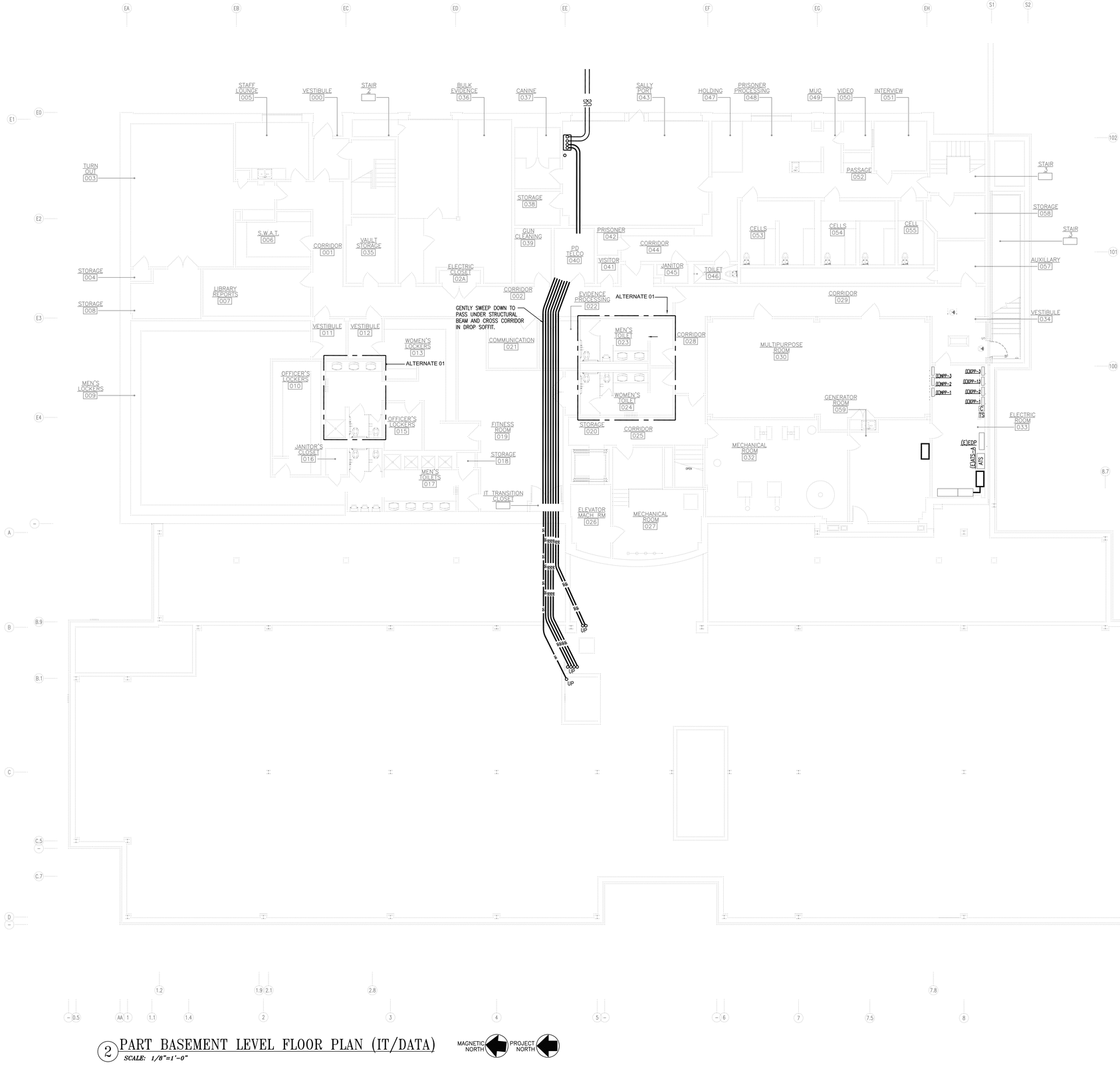
ELECTRICAL BASEMENT LEVEL FLOOR PLAN (POWER)

PROJECT NO.: 2219-05

DRAWING NO.:

E-202



2 PART BASEMENT LEVEL FLOOR PLAN (IT/DATA)

SCALE: 1/8"=1'-0"

MAGNETIC NORTH / PROJECT NORTH

KEYED NOTES

1. UNDERGROUND RACEWAYS FOR ADDITIONAL/RELOCATED COMMUNICATIONS SERVICES. SEE COMMUNICATIONS ONE-LINE DIAGRAM AND RISER FOR ADDITIONAL INFORMATION.
2. BUILDING END BOX FOR ADDITIONAL FIBER OPTIC/TELCO SERVICE CABLING.
3. MULTIPLE RACEWAYS AND CIRCUITRY FROM SITE/BUILDING EXTERIOR (EAST SIDE). UTILIZE THE UNDERGROUND ACCESS CREATED FOR THE COMMUNICATIONS ENTRY TO ACCOMMODATE THIS WORK AND TO MAINTAIN CONCEALED BUILDING ENTRIES.
4. IT/COMMUNICATION RACEWAY BANK. RUN IN EXISTING CEILING CAVITY. MODIFY ROUTING AND GROUPINGS TO ACCOMMODATE EXISTING CONDITIONS. SEE RISER DIAGRAM FOR ADDITIONAL INFORMATION.
5. IT/COMMUNICATION RACEWAY BANK. TRANSITIONED TO UNDERGROUND. SEE RISER DIAGRAM FOR ADDITIONAL INFORMATION.
6. SERVICES/CIRCUITRY/FEEDERS. SEE SITE PLAN, ONE-LINE DIAGRAM AND GENERATOR DETAILS FOR ADDITIONAL INFORMATION.
7. SPARE RACEWAYS. SEE SITE PLAN FOR ADDITIONAL INFORMATION.
8. PROVIDE FUEL OIL MONITORING SYSTEM FOR GENERATOR BASE MOUNTED FUEL TANK. PROVIDE REMOTE PANEL WITH ANNUNCIATOR AND NETWORK CARD.
9. PROVIDE REMOTE ANNUNCIATOR FOR OUTDOOR GENERATOR. PROVIDE WITH NETWORK CARD.
10. PROVIDE 8 CHANNEL DIGITAL ASTRONOMICAL TIME SWITCH. TORK ELC78. PROVIDE EPC-LC EXTERIOR PHOTO SENSOR. PROGRAM EACH CHANNEL FOR CONTROL TIME/SEQUENCE AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
11. CIRCUIT EACH OF THE TIMESWITCH CHANNELS TO LIGHTING CONTROL DIGITAL INPUTS TO CONTROL THE ASSOCIATED CIRCUITS. PROVIDE LIGHTING CONTROL NETWORK INTERFACE(S) TO ACCOMMODATE THIS CONTROL.
12. RUN IN RACEWAY UP TO FLOOR ABOVE ACCESSIBLE CEILING CAVITIES.
13. CIRCUIT THIS LIGHT TO BE AT 30% ILLUMINATION AT ALL TIME AND TO INCREASE TO 100% ON ACTIVATION OF OCCUPANCY SENSOR.
14. PROVIDE (8)MULTIPOLE ASCO CONTROL RELAYS FOR SITE LIGHTING CONTROL (SWITCH LEGS INDICATED WITH "tc"). INTERFACE WITH DIGITAL CONTROLLER(S). PROVIDE TIMECLOCK, PHOTO CELL AND NETWORK OVERRIDE.
15. CIRCUIT DESIGNATION IS ARBITRARY. CIRCUIT REPLACEMENT DEVICES, FIXTURE(S) ETC... TO THE EXISTING/ORIGINAL CIRCUITRY/CONTROLS. MODIFY CIRCUITRY AS REQUIRED. WHERE UPDATED CONTROLS ARE INDICATED, PROVIDE CONTROL CIRCUITRY AS INDICATED.
16. TEMPORARILY REMOVE THE EXISTING ELECTRICAL EQUIPMENT AND DEVICES IN THE CEILING OF THIS AREA TO ACCOMMODATE THE INSTALLATION OF THE IT/DATA RACEWAY BANK. REINSTALL ALL EQUIPMENT AND DEVICES BACK TO THE ORIGINAL CONDITION WHEN DIRECTED BY THE OWNER.
17. FOR POINT OF USE WATER HEATER. MOUNT ABOVE ACCESSIBLE CEILING. SEE MECHANICAL PLANS FOR EXACT LOCATION(S). CIRCUIT TO THE NEAREST 120VAC PANELBOARD USING 2#12,1#12G-3/4"C. PROVIDE 1P-20A OCPD.
18. PROVIDE STAND ALONE (HARD WIRED CONVENTIONAL) TYPE DEVICES WHERE LIGHTING CONTROL DEVICES ARE SHOWN WITHOUT CONNECTION TO THE LIGHTING CONTROL NETWORK. TYPICAL.
19. EXISTING MAIN SERVICE CT AND 52-M1 SECTION.
20. FULLY RATED 1600A 120/208VAC 3ø 4W+G BUSS TAP 90° ELL. PROVIDE CUSTOM UTILITY GRADE CORNER STRUCTURE/SECTION.
21. 52-M2 SECTION.
22. RELOCATE THE ELECTRIC UTILITY METER. EXTEND CIRCUITRY AS REQUIRED. PROVIDE WEATHER PROOF 3R PAN/ENCLOSURE. COMPLY WITH ALL UTILITY REQUIREMENTS.

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CBK PROJECT NO. 21030

ISSUE NO.	ISSUE DATE	DESCRIPTION
1	11/9/2021	RELEASE FOR BID

TOWN OF ORANGETOWN — RICH IN HISTORY

ORANGETOWN TOWN HALL

ADDITION AND ALTERATIONS

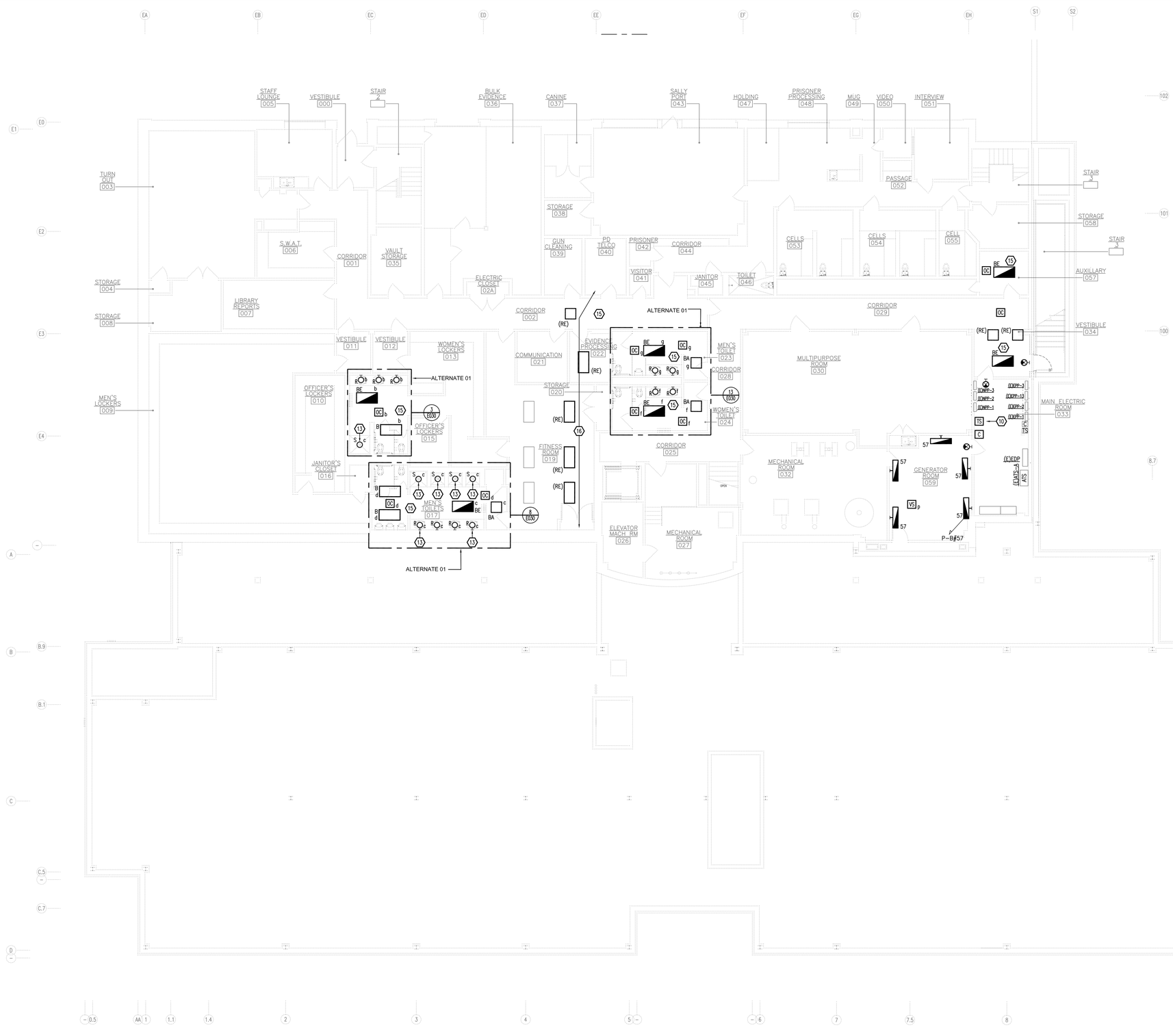
26 ORANGEBURG RD
ORANGEBURG, NEW YORK 10962

ELECTRICAL BASEMENT LEVEL FLOOR PLAN (IT/DATA/SECURITY)

PROJECT NO.: 2219-05

DRAWING NO.:

E-203



KEYED NOTES

1. UNDERGROUND RACEWAYS FOR ADDITIONAL/RELOCATED COMMUNICATIONS SERVICES. SEE COMMUNICATIONS ONE-LINE DIAGRAM AND RISER FOR ADDITIONAL INFORMATION.
2. BUILDING END BOX FOR ADDITIONAL FIBER OPTIC/TELCO SERVICE CABLING.
3. MULTIPLE RACEWAYS AND CIRCUITRY FROM SITE/BUILDING EXTERIOR (EAST SIDE). UTILIZE THE UNDERGROUND ACCESS CREATED FOR THE COMMUNICATIONS ENTRY TO ACCOMMODATE THIS WORK AND TO MAINTAIN CONCEALED BUILDING ENTRIES.
4. IT/COMMUNICATION RACEWAY BANK. RUN IN EXISTING CEILING CAVITY. MODIFY ROUTING AND GROUPINGS TO ACCOMMODATE EXISTING CONDITIONS. SEE RISER DIAGRAM FOR ADDITIONAL INFORMATION.
5. IT/COMMUNICATION RACEWAY BANK. TRANSITIONED TO UNDERGROUND. SEE RISER DIAGRAM FOR ADDITIONAL INFORMATION.
6. SERVICES/CIRCUITRY/FEEDERS. SEE SITE PLAN, ONE-LINE DIAGRAM AND GENERATOR DETAILS FOR ADDITIONAL INFORMATION.
7. SPARE RACEWAYS. SEE SITE PLAN FOR ADDITIONAL INFORMATION.
8. PROVIDE FUEL OIL MONITORING SYSTEM FOR GENERATOR BASE MOUNTED FUEL TANK. PROVIDE REMOTE PANEL WITH ANNUNCIATOR AND NETWORK CARD.
9. PROVIDE REMOTE ANNUNCIATOR FOR OUTDOOR GENERATOR. PROVIDE WITH NETWORK CARD.
10. PROVIDE 8 CHANNEL DIGITAL ASTRONOMICAL TIME SWITCH. TORK ELC78. PROVIDE EPC-LC EXTERIOR PHOTO SENSOR. PROGRAM EACH CHANNEL FOR CONTROL TIME/SEQUENCE AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
11. CIRCUIT EACH OF THE TIMESWITCH CHANNELS TO LIGHTING CONTROL DIGITAL INPUTS TO CONTROL THE ASSOCIATED CIRCUITS. PROVIDE LIGHTING CONTROL NETWORK INTERFACE(S) TO ACCOMMODATE THIS CONTROL.
12. RUN IN RACEWAY UP TO FLOOR ABOVE ACCESSIBLE CEILING CAVITIES.
13. CIRCUIT THIS LIGHT TO BE AT 30% ILLUMINATION AT ALL TIME AND TO INCREASE TO 100% ON ACTIVATION OF OCCUPANCY SENSOR.
14. PROVIDE (8)MULTIPOLE ASCO CONTROL RELAYS FOR SITE LIGHTING CONTROL (SWITCH LEGS INDICATED WITH "lc"). INTERFACE WITH DIGITAL CONTROLLER(S). PROVIDE TIMECLOCK, PHOTO CELL AND NETWORK OVERRIDE.
15. CIRCUIT DESIGNATION IS ARBITRARY. CIRCUIT REPLACEMENT DEVICES, FIXTURE(S) ETC... TO THE EXISTING/ORIGINAL CIRCUITRY/CONTROLS. MODIFY CIRCUITRY AS REQUIRED. WHERE UPDATED CONTROLS ARE INDICATED, PROVIDE CONTROL CIRCUITRY AS INDICATED.
16. TEMPORARILY REMOVE THE EXISTING ELECTRICAL EQUIPMENT AND DEVICES IN THE CEILING OF THIS AREA TO ACCOMMODATE THE INSTALLATION OF THE IT/DATA RACEWAY BANK. REINSTALL ALL EQUIPMENT AND DEVICES BACK TO THE ORIGINAL CONDITION WHEN DIRECTED BY THE OWNER.
17. FOR POINT OF USE WATER HEATER. MOUNT ABOVE ACCESSIBLE CEILING. SEE MECHANICAL PLANS FOR EXACT LOCATION(S). CIRCUIT TO THE NEAREST 120VAC PANELBOARD USING 2#12,1#12G-3/4"C. PROVIDE 1P-20A OCPD.
18. PROVIDE STAND ALONE (HARD WIRED CONVENTIONAL) TYPE DEVICES WHERE LIGHTING CONTROL DEVICES ARE SHOWN WITHOUT CONNECTION TO THE LIGHTING CONTROL NETWORK. TYPICAL.
19. EXISTING MAIN SERVICE CT AND 52-M1 SECTION.
20. FULLY RATED 1600A 120/208VAC 3ø 4W+G BUSS TAP 90° ELL. PROVIDE CUSTOM UTILITY GRADE CORNER STRUCTURE/SECTION.
21. 52-M2 SECTION.
22. RELOCATE THE ELECTRIC UTILITY METER. EXTEND CIRCUITRY AS REQUIRED. PROVIDE WEATHER PROOF 3R PAN/ENCLOSURE. COMPLY WITH ALL UTILITY REQUIREMENTS.

1 PART BASEMENT LEVEL FLOOR PLAN (LIGHTING)

SCALE: 1/8"=1'-0"
LIGHTING CIRCUITRY TO INCLUDE ADDITIONAL 2/C FOR 0-10V DIMMING CONTROLS

MAGNETIC NORTH / PROJECT NORTH

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TOWN OF ORANGETOWN — RICH IN HISTORY

ORANGETOWN TOWN HALL
ADDITION AND ALTERATIONS

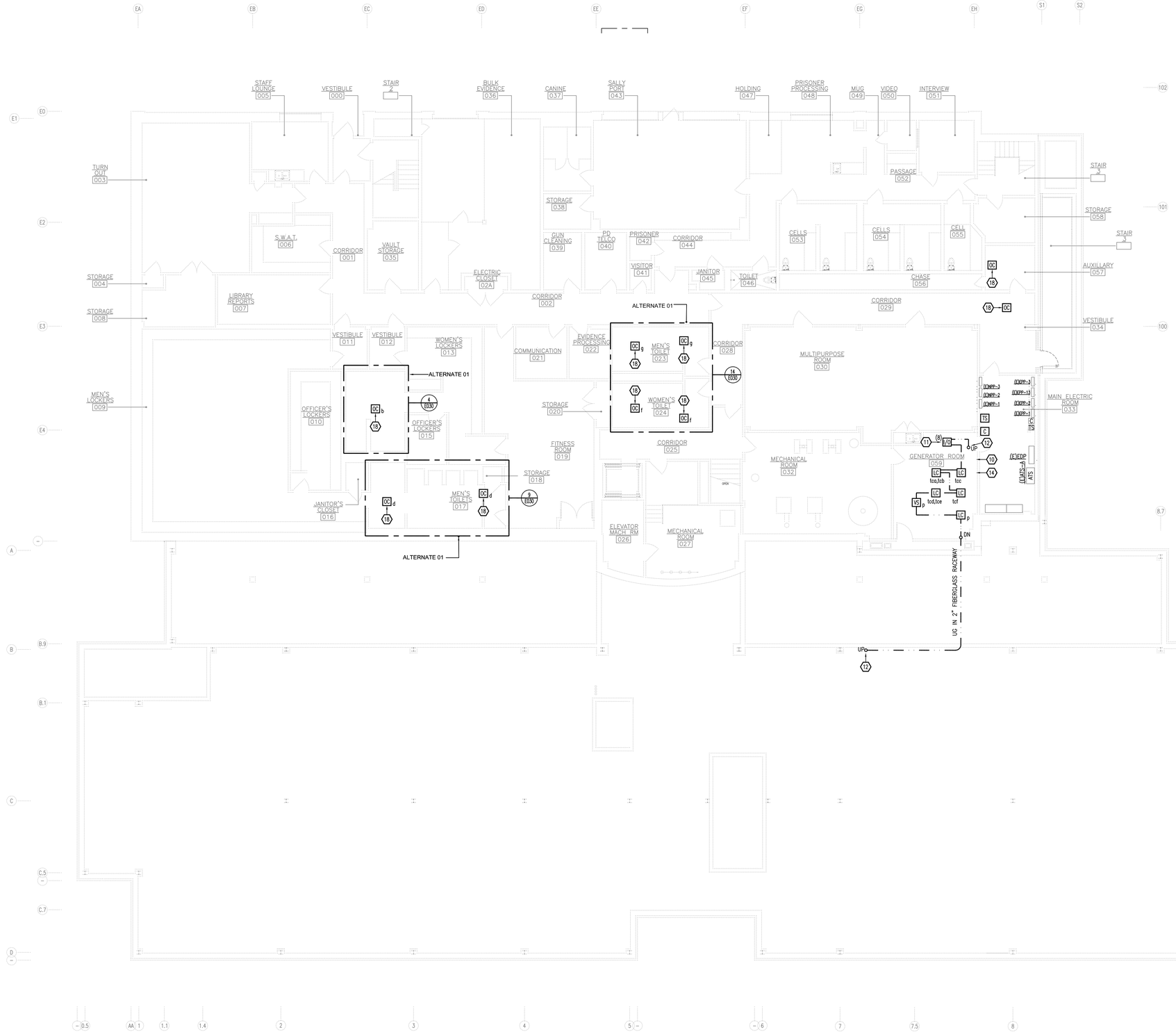
26 ORANGEBURG RD
ORANGEBURG, NEW YORK 10962

ELECTRICAL BASEMENT LEVEL FLOOR PLAN (LIGHTING)

PROJECT NO.: 2219-05

DRAWING NO.:

E-204



KEYED NOTES

1. UNDERGROUND RACEWAYS FOR ADDITIONAL/RELOCATED COMMUNICATIONS SERVICES. SEE COMMUNICATIONS ONE-LINE DIAGRAM AND RISER FOR ADDITIONAL INFORMATION.
2. BUILDING END BOX FOR ADDITIONAL FIBER OPTIC/TELCO SERVICE CABLING.
3. MULTIPLE RACEWAYS AND CIRCUITRY FROM SITE/BUILDING EXTERIOR (EAST SIDE). UTILIZE THE UNDERGROUND ACCESS CREATED FOR THE COMMUNICATIONS ENTRY TO ACCOMMODATE THIS WORK AND TO MAINTAIN CONCEALED BUILDING ENTRIES.
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6. SERVICES/CIRCUITRY/FEEDERS. SEE SITE PLAN, ONE-LINE DIAGRAM AND GENERATOR DETAILS FOR ADDITIONAL INFORMATION.
7. SPARE RACEWAYS. SEE SITE PLAN FOR ADDITIONAL INFORMATION.
8. PROVIDE FUEL OIL MONITORING SYSTEM FOR GENERATOR BASE MOUNTED FUEL TANK. PROVIDE REMOTE PANEL WITH ANNUNCIATOR AND NETWORK CARD.
9. PROVIDE REMOTE ANNUNCIATOR FOR OUTDOOR GENERATOR. PROVIDE WITH NETWORK CARD.
10. PROVIDE 8 CHANNEL DIGITAL ASTRONOMICAL TIME SWITCH, TORK ELC78. PROVIDE EPC-LC EXTERIOR PHOTO SENSOR. PROGRAM EACH CHANNEL FOR CONTROL TIME/SEQUENCE AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
11. CIRCUIT EACH OF THE TIMESWITCH CHANNELS TO LIGHTING CONTROL DIGITAL INPUTS TO CONTROL THE ASSOCIATED CIRCUITS. PROVIDE LIGHTING CONTROL NETWORK INTERFACE(S) TO ACCOMMODATE THIS CONTROL.
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13. CIRCUIT THIS LIGHT TO BE AT 30% ILLUMINATION AT ALL TIME AND TO INCREASE TO 100% ON ACTIVATION OF OCCUPANCY SENSOR.
14. PROVIDE (8)MULTIPOLE ASCO CONTROL RELAYS FOR SITE LIGHTING CONTROL (SWITCH LEGS INDICATED WITH "tc"). INTERFACE WITH DIGITAL CONTROLLER(S). PROVIDE TIMECLOCK, PHOTO CELL AND NETWORK OVERRIDE.
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16. TEMPORARILY REMOVE THE EXISTING ELECTRICAL EQUIPMENT AND DEVICES IN THE CEILING OF THIS AREA TO ACCOMMODATE THE INSTALLATION OF THE IT/DATA RACEWAY BANK. REINSTALL ALL EQUIPMENT AND DEVICES BACK TO THE ORIGINAL CONDITION WHEN DIRECTED BY THE OWNER.
17. FOR POINT OF USE WATER HEATER. MOUNT ABOVE ACCESSIBLE CEILING. SEE MECHANICAL PLANS FOR EXACT LOCATION(S). CIRCUIT TO THE NEAREST 120VAC PANELBOARD USING 2#12,1#12G-3/4"C. PROVIDE 1P-20A OCPD.
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1 PART BASEMENT LEVEL FLOOR PLAN (LIGHTING CONTROL)

MAGNETIC NORTH / PROJECT NORTH

SCALE: 1/8"=1'-0"

LIGHTING CIRCUITRY TO INCLUDE ADDITIONAL 2/C FOR 0-10V DIMMING CONTROLS

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TOWN OF ORANGETOWN — RICH IN HISTORY

ORANGETOWN TOWN HALL

ADDITION AND ALTERATIONS

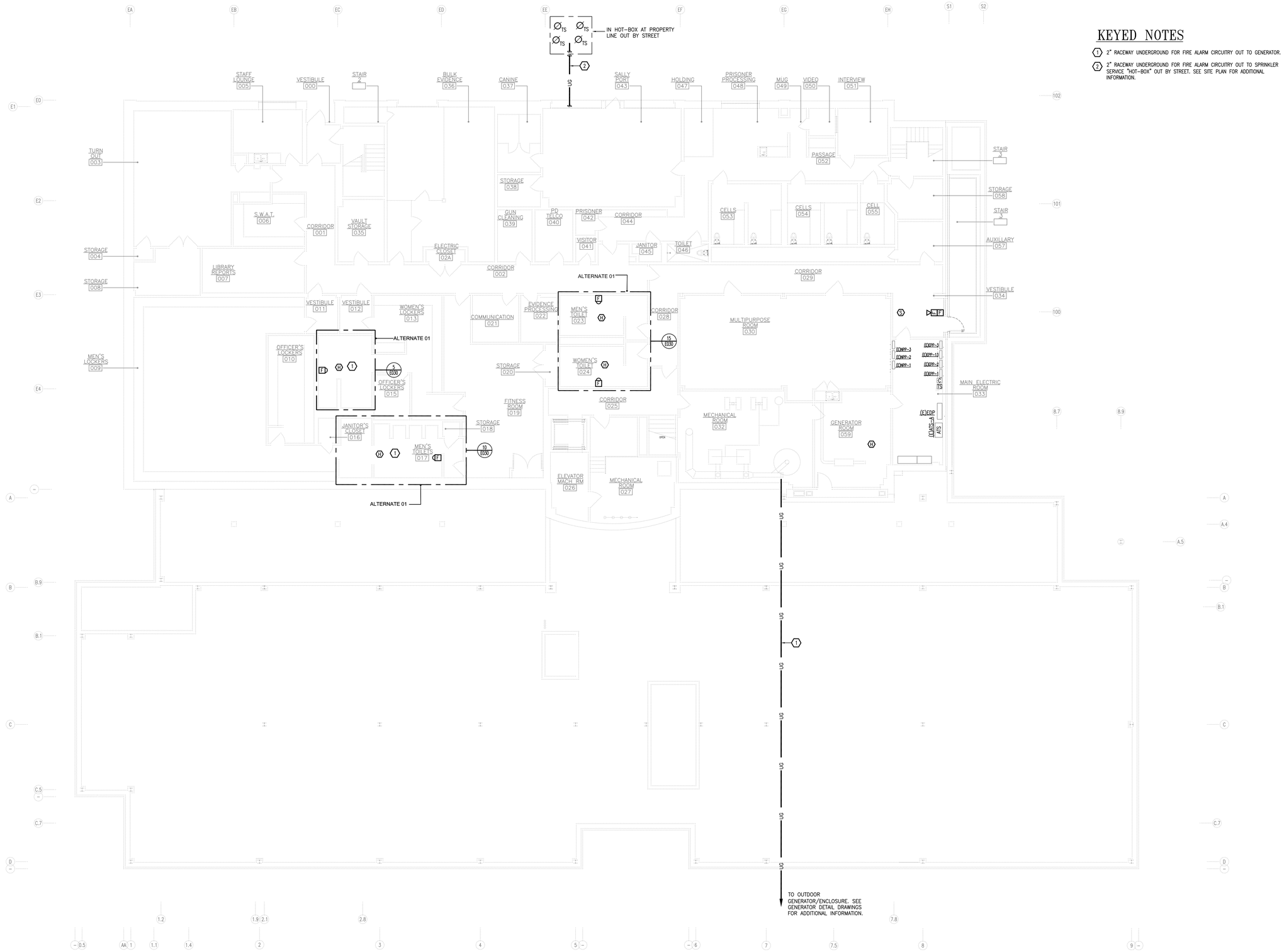
26 ORANGEBURG RD
ORANGEBURG, NEW YORK 10962

ELECTRICAL BASEMENT LEVEL FLOOR PLAN (LIGHTING CONTROL)

PROJECT NO.: 2219-05

DRAWING NO.:

E-205



KEYED NOTES

1. 2" RACEWAY UNDERGROUND FOR FIRE ALARM CIRCUITRY OUT TO GENERATOR.
2. 2" RACEWAY UNDERGROUND FOR FIRE ALARM CIRCUITRY OUT TO SPRINKLER SERVICE "HOT-BOX" OUT BY STREET. SEE SITE PLAN FOR ADDITIONAL INFORMATION.

1 PART BASEMENT LEVEL FLOOR PLAN (FIRE ALARM)

SCALE: 1/8"=1'-0"

MAGNETIC NORTH / PROJECT NORTH

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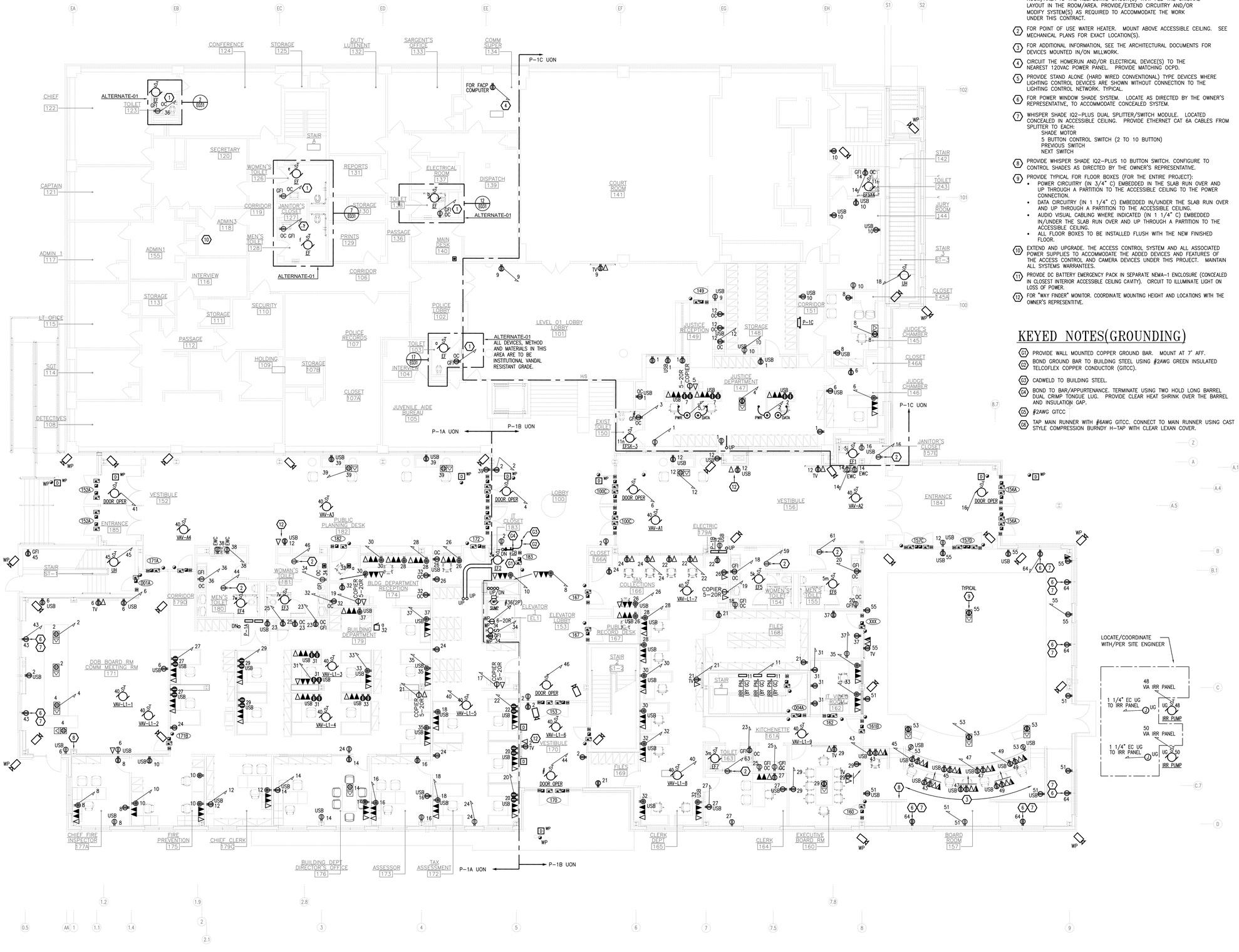
ORANGEBURG, NEW YORK 10962

ELECTRICAL BASEMENT LEVEL FLOOR PLAN (FIRE ALARM)

PROJECT NO.: 2219-05

DRAWING NO.:

E-206



KEYED NOTES

1. CIRCUIT THE HOMERUN AND/OR ELECTRICAL DEVICES IN THIS ROOM/AREA TO THE RESPECTIVE CIRCUIT(S) THAT FED THE ORIGINAL LAYOUT IN THE ROOM/AREA. PROVIDE/EXTEND CIRCUITRY AND/OR MODIFY SYSTEM(S) AS REQUIRED TO ACCOMMODATE THE WORK UNDER THIS CONTRACT.
2. FOR POINT OF USE WATER HEATER. MOUNT ABOVE ACCESSIBLE CEILING. SEE MECHANICAL PLANS FOR EXACT LOCATION(S).
3. FOR ADDITIONAL INFORMATION, SEE THE ARCHITECTURAL DOCUMENTS FOR DEVICES MOUNTED IN/ON MILLWORK.
4. CIRCUIT THE HOMERUN AND/OR ELECTRICAL DEVICE(S) TO THE NEAREST 120VAC POWER PANEL. PROVIDE MATCHING OCPD.
5. PROVIDE STAND ALONE (HARD WIRED CONVENTIONAL) TYPE DEVICES WHERE LIGHTING CONTROL DEVICES ARE SHOWN WITHOUT CONNECTION TO THE LIGHTING CONTROL NETWORK. TYPICAL.
6. FOR POWER WINDOW SHADE SYSTEM. LOCATE AS DIRECTED BY THE OWNER'S REPRESENTATIVE, TO ACCOMODATE CONCEALED SYSTEM.
7. WHISPER SHADE IQ2-PLUS DUAL SPLITTER/SWITCH MODULE. LOCATED CONCEALED IN ACCESSIBLE CEILING. PROVIDE ETHERNET CAT 6A CABLES FROM SPLITTER TO EACH:
   - SHADE MOTOR
   - 5 BUTTON CONTROL SWITCH (2 TO 10 BUTTON)
   - PREVIOUS SWITCH
   - NEXT SWITCH
8. PROVIDE WHISPER SHADE IQ2-PLUS 10 BUTTON SWITCH. CONFIGURE TO CONTROL SHADES AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
9. PROVIDE TYPICAL FOR FLOOR BOXES (FOR THE ENTIRE PROJECT):
   - POWER CIRCUITRY (IN 3/4" C) EMBEDDED IN THE SLAB RUN OVER AND UP THROUGH A PARTITION TO THE ACCESSIBLE CEILING TO THE POWER CONNECTION.
   - DATA CIRCUITRY (IN 1 1/4" C) EMBEDDED IN/UNDER THE SLAB RUN OVER AND UP THROUGH A PARTITION TO THE ACCESSIBLE CEILING.
   - AUDIO VISUAL CABLING WHERE INDICATED (IN 1 1/4" C) EMBEDDED IN/UNDER THE SLAB RUN OVER AND UP THROUGH A PARTITION TO THE ACCESSIBLE CEILING.
   - ALL FLOOR BOXES TO BE INSTALLED FLUSH WITH THE NEW FINISHED FLOOR.
10. EXTEND AND UPGRADE. THE ACCESS CONTROL SYSTEM AND ALL ASSOCIATED POWER SUPPLIES TO ACCOMMODATE THE ADDED DEVICES AND FEATURES OF THE ACCESS CONTROL AND CAMERA DEVICES UNDER THIS PROJECT. MAINTAIN ALL SYSTEMS WARRANTEES.
11. PROVIDE DC BATTERY EMERGENCY PACK IN SEPARATE NEMA-1 ENCLOSURE (CONCEALED IN CLOSEST INTERIOR ACCESSIBLE CEILING CAVITY). CIRCUIT TO ILLUMINATE LIGHT ON LOSS OF POWER.
12. FOR "WAY FINDER" MONITOR. COORDINATE MOUNTING HEIGHT AND LOCATIONS WITH THE OWNER'S REPRESENTITVE.

KEYED NOTES(GROUNDING)

G1. PROVIDE WALL MOUNTED COPPER GROUND BAR. MOUNT AT 7' AFF.
G2. BOND GROUND BAR TO BUILDING STEEL USING #2AWG GREEN INSULATED TELCOFLEX COPPER CONDUCTOR (GITCC).
G3. CADWELD TO BUILDING STEEL.
G4. BOND TO BAR/APPURTENANCE. TERMINATE USING TWO HOLD LONG BARREL DUAL CRIMP TONGUE LUG. PROVIDE CLEAR HEAT SHRINK OVER THE BARREL AND INSULATION GAP.
G5. #2AWG GITCC
G6. TAP MAIN RUNNER WITH #6AWG GITCC. CONNECT TO MAIN RUNNER USING CAST STYLE COMPRESSION BURNDY H-TAP WITH CLEAR LEXAN COVER.

2 PART LEVEL 01 PLAN (POWER)

SCALE: 1/8"=1'-0"
ALL CIRCUITS ON THIS DRAWING ARE TO PANEL P-1A OR P-1B UNLESS OTHERWISE NOTED (UON)

MAGNETIC NORTH / PROJECT NORTH

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TOWN OF ORANGETOWN — RICH IN HISTORY

ORANGETOWN TOWN HALL

ADDITION AND ALTERATIONS

26 ORANGEBURG RD
ORANGEBURG, NEW YORK 10962

ELECTRICAL LEVEL 01 PLAN (POWER)

PROJECT NO.: 2219-05

DRAWING NO.:

E-207

KEYED NOTES

1. PROVIDE SNAKE TRAY SERIES 201-5D CABLE TRAY SYSTEM MOUNTED ABOVE ACCESSIBLE CEILING IN CEILING CAVITY. PROVIDE ALL ASSOCIATED APPURTENANCES. SUPPORT FROM STRUCTURE ABOVE. SEE MANUFACTURER'S DETAILS AND STRUCTURE DRAWINGS FOR ADDITIONAL INFORMATION.
2. PROVIDE EZ-PATH SERIES 44+ FIRE RATED (WHILE OPEN) CABLE PATHWAY. SPECIFIED TECHNOLOGIES INC. WITH WALL TRIM PLATES (MULTI GANGED TO MATCH APPLICATION).
3. PROVIDE TYPICAL FOR FLOOR BOXES:
   - POWER CIRCUITRY (IN 3/4" C) EMBEDDED IN THE SLAB RUN OVER AND UP THROUGH A PARTITION TO THE ACCESSIBLE CEILING TO THE POWER CONNECTION.
   - DATA CIRCUITRY (IN 1 1/4" C) EMBEDDED IN/UNDER THE SLAB RUN OVER AND UP THROUGH A PARTITION TO THE ACCESSIBLE CEILING.
   - AUDIO VISUAL CABLING WHERE INDICATED (IN 1 1/4" C) EMBEDDED IN/UNDER THE SLAB RUN OVER AND UP THROUGH A PARTITION TO THE ACCESSIBLE CEILING.
4. PROVIDE 4 POSITION MOMENTARY CONTACT PUSHBUTTONS. CIRCUIT TO RELEASE SPECIFIC DOOR ACCESS AS DESIGNATED BY THE OWNER'S REPRESENTATIVE.

2 PART LEVEL 01 PLAN (IT/DATA)

SCALE: 1/8"=1'-0"

MAGNETIC NORTH / PROJECT NORTH

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ORANGEBURG, NEW YORK 10962

ELECTRICAL LEVEL 01 PLAN (IT/DATA/SECURITY)

PROJECT NO.: 2219-05

DRAWING NO.:

E-208

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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

KEYED NOTES

1. CIRCUIT THE HOMERUN AND/OR ELECTRICAL DEVICES IN THIS ROOM/AREA TO THE RESPECTIVE CIRCUIT(S) THAT FED THE ORIGINAL LAYOUT IN THE ROOM/AREA. PROVIDE/EXTEND CIRCUITRY AND/OR MODIFY SYSTEM(S) AS REQUIRED TO ACCOMMODATE THE WORK UNDER THIS CONTRACT.
2. FOR POINT OF USE WATER HEATER. MOUNT ABOVE ACCESSIBLE CEILING. SEE MECHANICAL PLANS FOR EXACT LOCATION(S).
3. FOR ADDITIONAL INFORMATION, SEE THE ARCHITECTURAL DOCUMENTS FOR DEVICES MOUNTED IN/ON MILLWORK.
4. CIRCUIT THE HOMERUN AND/OR ELECTRICAL DEVICE(S) TO THE NEAREST 120VAC POWER PANEL. PROVIDE MATCHING OCPD.
5. PROVIDE STAND ALONE (HARD WIRED CONVENTIONAL) TYPE DEVICES WHERE LIGHTING CONTROL DEVICES ARE SHOWN WITHOUT CONNECTION TO THE LIGHTING CONTROL NETWORK. TYPICAL.
6. FOR POWER WINDOW SHADE SYSTEM. LOCATE AS DIRECTED BY THE OWNER'S REPRESENTATIVE, TO ACCOMMODATE CONCEALED SYSTEM.
7. WHISPER SHADE IQ2-PLUS DUAL SPLITTER/SWITCH MODULE. LOCATED CONCEALED IN ACCESSIBLE CEILING. PROVIDE ETHERNET CAT 6A CABLES FROM SPLITTER TO EACH:
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   - 5 BUTTON CONTROL SWITCH (2 TO 10 BUTTON)
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   - NEXT SWITCH
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9. PROVIDE TYPICAL FOR FLOOR BOXES (FOR THE ENTIRE PROJECT):
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12. FOR "WAY FINDER" MONITOR. COORDINATE MOUNTING HEIGHT AND LOCATIONS WITH THE OWNER'S REPRESENTITVE.

1 PART LEVEL 01 PLAN (LIGHTING)

SCALE: 1/8"=1'-0"

LIGHTING CIRCUITRY TO INCLUDE ADDITIONAL 2/C FOR 0-10V DIMMING CONTROLS
ALL CIRCUITS ON THIS DRAWING ARE TO PANEL P-1A OR P-1B UNLESS OTHERWISE NOTED (UON)
CIRCUIT ALL EXIT SIGN ON THIS DRAWING TO CIRCUIT #42 UON.

MAGNETIC NORTH / PROJECT NORTH

1 PROVIDE SELF ILLUMINATING EGRESS MARKING SYSTEM READING "NOT AN EXIT".

Lothrop

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ELECTRICAL LEVEL 01 PLAN (LIGHTING)

PROJECT NO.: 2219-05

DRAWING NO.:

E-209

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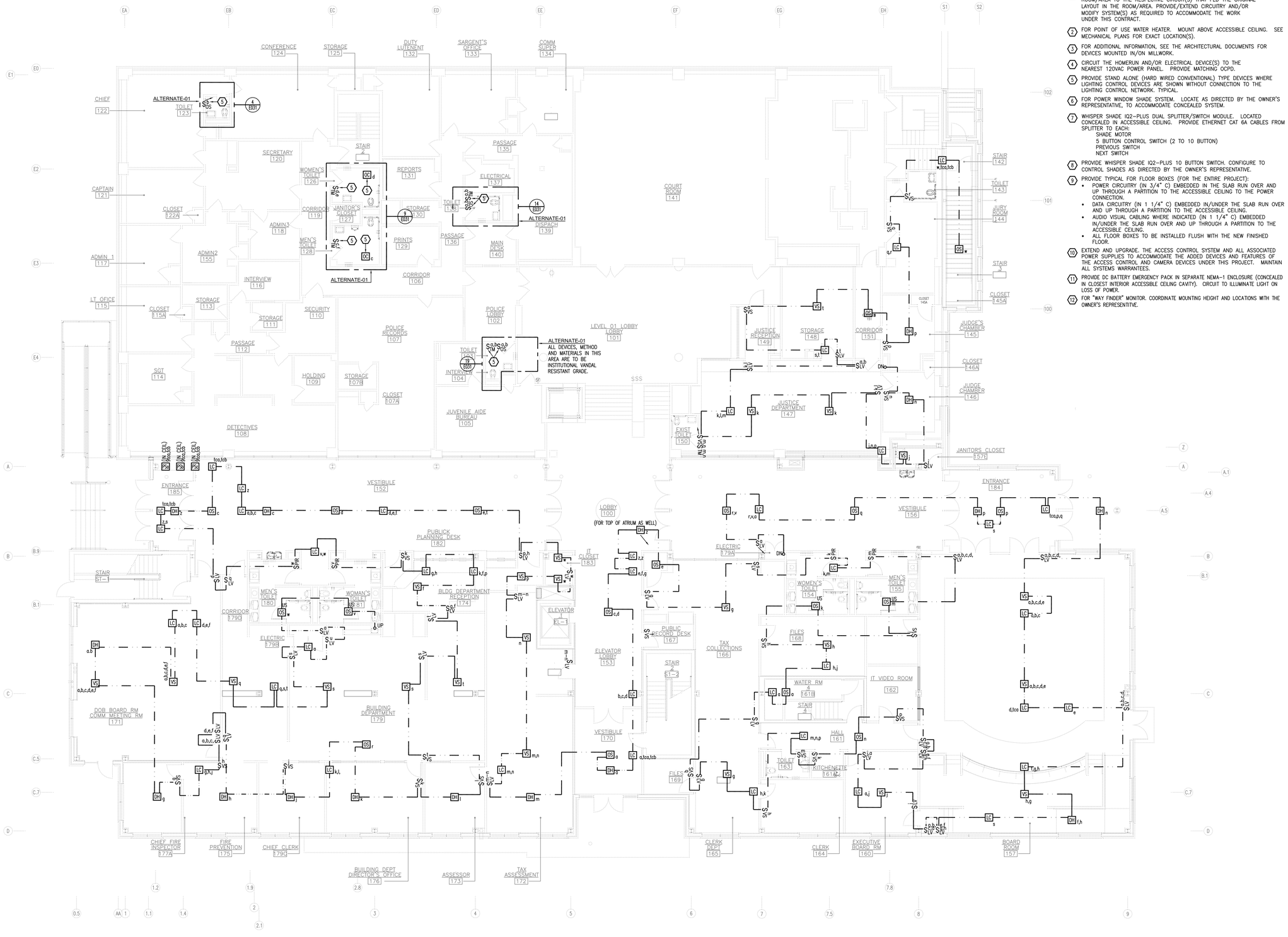

1 PART LEVEL 01 PLAN (LIGHTING CONTROL)

SCALE: 1/8"=1'-0"

LIGHTING CIRCUITRY TO INCLUDE ADDITIONAL 2/C FOR 0-10V DIMMING CONTROLS

MAGNETIC NORTH / PROJECT NORTH

KEYED NOTES

1. CIRCUIT THE HOMERUN AND/OR ELECTRICAL DEVICES IN THIS ROOM/AREA TO THE RESPECTIVE CIRCUIT(S) THAT FED THE ORIGINAL LAYOUT IN THE ROOM/AREA. PROVIDE/EXTEND CIRCUITRY AND/OR MODIFY SYSTEM(S) AS REQUIRED TO ACCOMMODATE THE WORK UNDER THIS CONTRACT.
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3. FOR ADDITIONAL INFORMATION, SEE THE ARCHITECTURAL DOCUMENTS FOR DEVICES MOUNTED IN/ON MILLWORK.
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5. PROVIDE STAND ALONE (HARD WIRED CONVENTIONAL) TYPE DEVICES WHERE LIGHTING CONTROL DEVICES ARE SHOWN WITHOUT CONNECTION TO THE LIGHTING CONTROL NETWORK. TYPICAL.
6. FOR POWER WINDOW SHADE SYSTEM. LOCATE AS DIRECTED BY THE OWNER'S REPRESENTATIVE, TO ACCOMMODATE CONCEALED SYSTEM.
7. WHISPER SHADE IQ2-PLUS DUAL SPLITTER/SWITCH MODULE. LOCATED CONCEALED IN ACCESSIBLE CEILING. PROVIDE ETHERNET CAT 6A CABLES FROM SPLITTER TO EACH:
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   - 5 BUTTON CONTROL SWITCH (2 TO 10 BUTTON)
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   - DATA CIRCUITRY (IN 1 1/4" C) EMBEDDED IN/UNDER THE SLAB RUN OVER AND UP THROUGH A PARTITION TO THE ACCESSIBLE CEILING.
   - AUDIO VISUAL CABLING WHERE INDICATED (IN 1 1/4" C) EMBEDDED IN/UNDER THE SLAB RUN OVER AND UP THROUGH A PARTITION TO THE ACCESSIBLE CEILING.
   - ALL FLOOR BOXES TO BE INSTALLED FLUSH WITH THE NEW FINISHED FLOOR.
10. EXTEND AND UPGRADE. THE ACCESS CONTROL SYSTEM AND ALL ASSOCIATED POWER SUPPLIES TO ACCOMMODATE THE ADDED DEVICES AND FEATURES OF THE ACCESS CONTROL AND CAMERA DEVICES UNDER THIS PROJECT. MAINTAIN ALL SYSTEMS WARRANTEES.
11. PROVIDE DC BATTERY EMERGENCY PACK IN SEPARATE NEMA-1 ENCLOSURE (CONCEALED IN CLOSEST INTERIOR ACCESSIBLE CEILING CAVITY). CIRCUIT TO ILLUMINATE LIGHT ON LOSS OF POWER.
12. FOR "WAY FINDER" MONITOR. COORDINATE MOUNTING HEIGHT AND LOCATIONS WITH THE OWNER'S REPRESENTITVE.

Lothrop

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CBK PROJECT NO. 21030

ISSUE NO.	ISSUE DATE	DESCRIPTION
1	11/9/2021	RELEASE FOR BID

TOWN OF ORANGETOWN — RICH IN HISTORY

ORANGETOWN TOWN HALL
ADDITION AND ALTERATIONS

26 ORANGEBURG RD
ORANGEBURG, NEW YORK 10962

ELECTRICAL LEVEL 01 PLAN (LIGHTING CONTROL)

PROJECT NO.: 2219-05

DRAWING NO.:

E-210

S:\CBK\PROJECTS\2021\21030 OrangeTown Town Hall Revisions\Drawings\PROJECT\E-FIRST FLOOR.dwg

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

KEYED NOTES

1. CIRCUIT THE HOMERUN AND/OR ELECTRICAL DEVICES IN THIS ROOM/AREA TO THE RESPECTIVE CIRCUITRY THAT FED THE ORIGINAL LAYOUT IN THE ROOM/AREA. PROVIDE/EXTEND CIRCUITRY AND/OR MODIFY SYSTEM(S) AS REQUIRED TO ACCOMMODATE THE WORK UNDER THIS CONTRACT.
2. REPLACE THE EXISTING FIRE ALARM CONTROL PANEL (FACP). EDWARDS IO SERIES WITH EDWARDS EST-4 SYSTEM. THE CURRENT SYSTEM IS MAINTAINED AND WARRANTED BY REDHAWK (JOHN CIROCCO 914-418-9420 johncirocco@adt.com). MAINTAIN ALL SYSTEM WARRANTEES. SYSTEM SHALL BE COMPATIBLE WITH ALL THE EXISTING FIRE ALARM DEVICES AND COMPONETS/FUNCTIONS. PROVIDE ADDITIONAL FEATURES, POWER SUPPLIES AND NETWORK EXPANSIONS AS REQUIRED TO ACCOMMODATE THE WORK UNDER THIS PROJECT AND UNDER THIS CONTRACT.
3. PROVIDE COMPUTER AND ASSOCIATED GRAPHICS, SOFTWARE, PROGRAMMING, ETC., AS REQUIRED FOR ACTIVE REMOTE GRAPHIC DISPLAY AND SYSTEM MANAGEMENT. CONNECT AND PROGRAM TO THE FACP.

ALTERNATE-01
ALL DEVICES, METHOD AND MATERIALS IN THIS AREA ARE TO BE INSTITUTIONAL VANDAL RESISTANT GRADE.

1 PART LEVEL 01 PLAN (FIRE ALARM)

SCALE: 1/8"=1'-0"

PROVIDE (8)ADDITIONAL DETECTORS, (2)ADDITIONAL INDICATING A/V APPLIANCES AND (2) ADDITIONAL PULL STATIONS . LOCATE AS DIRECTED BY THE OWNER'S REPRESENTATIVE.

MAGNETIC NORTH / PROJECT NORTH

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TOWN OF ORANGETOWN — RICH IN HISTORY

ORANGETOWN TOWN HALL
ADDITION AND ALTERATIONS

26 ORANGEBURG RD
ORANGEBURG, NEW YORK 10962

ELECTRICAL LEVEL 01 PLAN (FIRE ALARM)

PROJECT NO.: 2219-05

DRAWING NO.:

E-211

KEYED NOTES

1. CIRCUIT GAS SOLENOID VALVE TO SHUT DOWN FUEL FEED TO THE ASSOCIATED UNIT ON DETECTION OF CARBON–MONOXIDE BY THE CO DETECTOR ASSOCIATED WITH THE FUEL FIRED UNIT.
2. FOR POINT OF USE WATER HEATER. MOUNT ABOVE ACCESSIBLE CEILING. SEE MECHANICAL PLANS FOR EXACT LOCATION(S).

KEYED NOTES(GROUNDING)

01. PROVIDE WALL MOUNTED COPPER GROUND BAR. MOUNT AT 7' AFF.
02. BOND GROUND BAR TO BUILDING STEEL USING #2AWG GREEN INSULATED TELCOFLEX COPPER CONDUCTOR (GITCC).
03. CADWELD TO BUILDING STEEL.
04. BOND TO BAR/APPURTENANCE. TERMINATE USING TWO HOLD LONG BARREL DUAL CRIMP TONGUE LUG. PROVIDE CLEAR HEAT SHRINK OVER THE BARREL AND INSULATION GAP.
05. #2AWG GITCC
06. TAP MAIN RUNNER WITH #6AWG GITCC. CONNECT TO MAIN RUNNER USING CAST STYLE COMPRESSION BURNDY H–TAP WITH CLEAR LEXAN COVER.

1 PART LEVEL 02 PLAN (POWER)

SCALE: 1/8"=1'-0"
ALL CIRCUITS ON THIS DRAWING ARE TO PANEL P-2A OR P-2B UNLESS OTHERWISE NOTED (UON)

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ORANGETOWN TOWN HALL
ADDITION AND ALTERATIONS

26 ORANGEBURG RD
ORANGEBURG, NEW YORK 10962

ELECTRICAL LEVEL 02 PLAN (POWER)

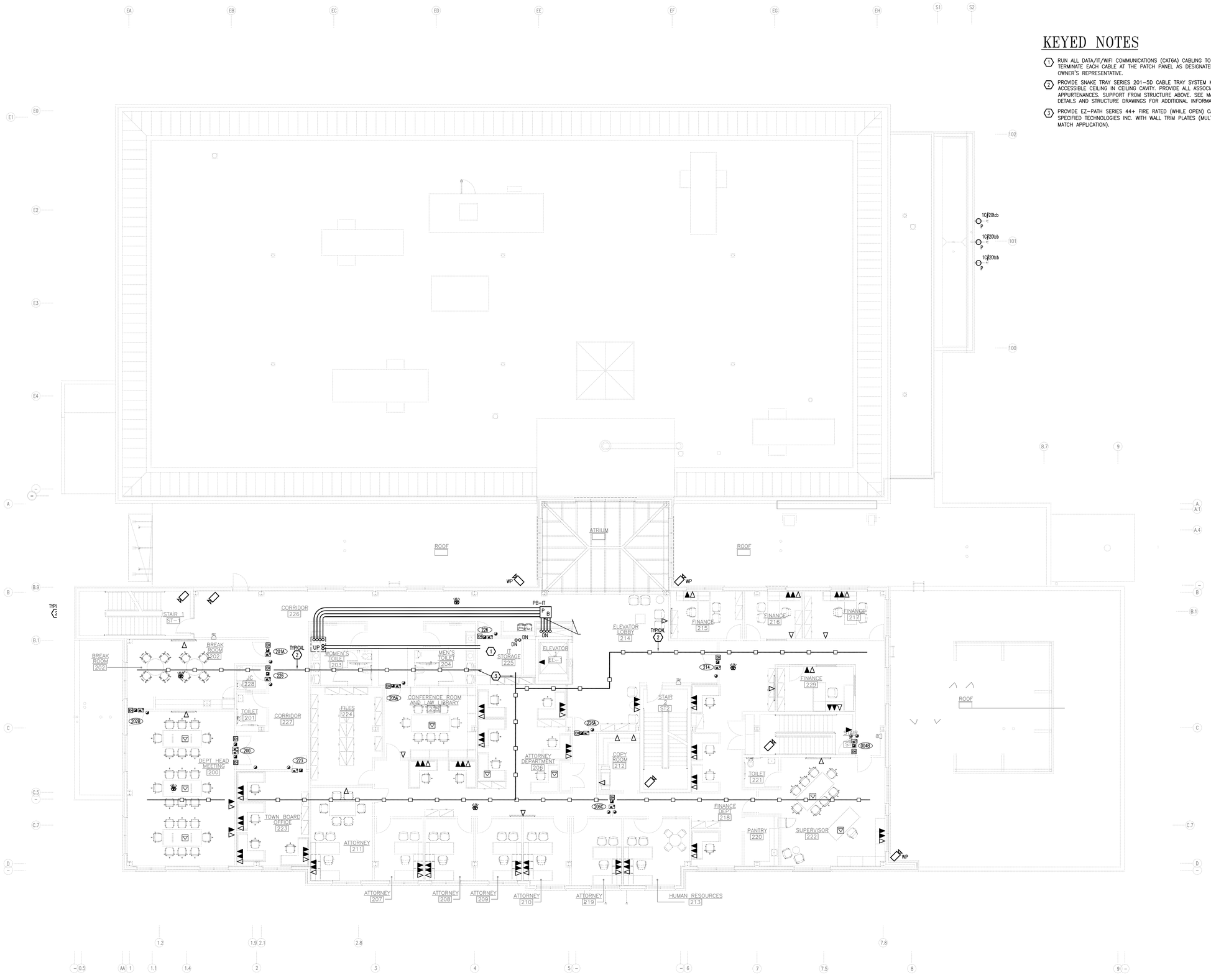
PROJECT NO.: 2219-05

DRAWING NO.:

E-212

KEYED NOTES

1. RUN ALL DATA/IT/WIFI COMMUNICATIONS (CAT6A) CABLING TO THIS ROOM. TERMINATE EACH CABLE AT THE PATCH PANEL AS DESIGNATED BY THE OWNER'S REPRESENTATIVE.
2. PROVIDE SNAKE TRAY SERIES 201-5D CABLE TRAY SYSTEM MOUNTED ABOVE ACCESSIBLE CEILING IN CEILING CAVITY. PROVIDE ALL ASSOCIATED APPURTENANCES. SUPPORT FROM STRUCTURE ABOVE. SEE MANUFACTURER'S DETAILS AND STRUCTURE DRAWINGS FOR ADDITIONAL INFORMATION.
3. PROVIDE EZ-PATH SERIES 44+ FIRE RATED (WHILE OPEN) CABLE PATHWAY. SPECIFIED TECHNOLOGIES INC. WITH WALL TRIM PLATES (MULTI GANGED TO MATCH APPLICATION).



1 PART LEVEL 02 PLAN (IT/DATA)
SCALE: 1/8"=1'-0"

MAGNETIC NORTH / PROJECT NORTH

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ORANGETOWN TOWN HALL

ADDITION AND ALTERATIONS

26 ORANGEBURG RD
ORANGEBURG, NEW YORK 10962

ELECTRICAL LEVEL 02 PLAN (IT/DATA/SECURITY)

PROJECT NO.: 2219-05

DRAWING NO.:

E-213

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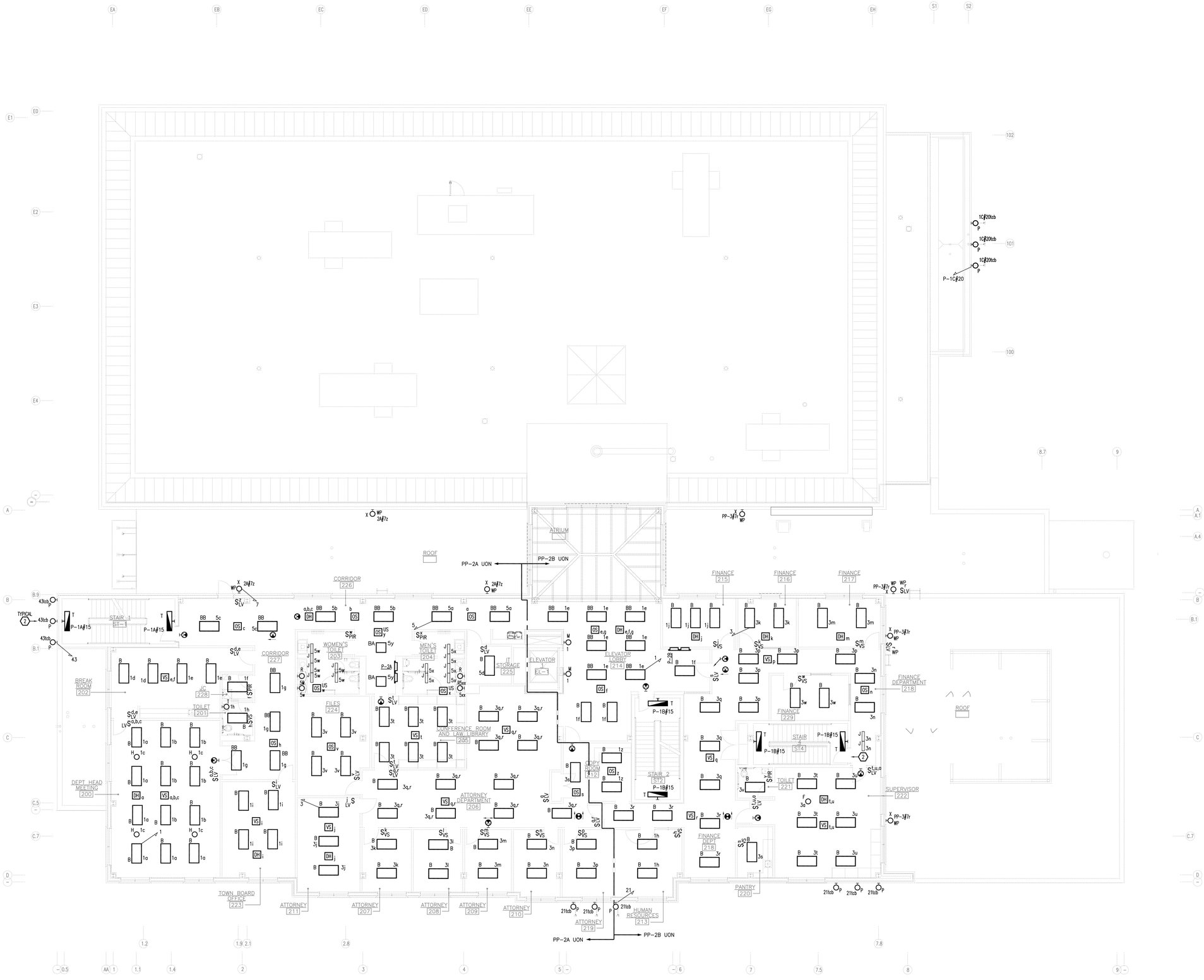

1 PART LEVEL 02 PLAN (LIGHTING)

MAGNETIC NORTH / PROJECT NORTH

SCALE: 1/8"=1'-0"

LIGHTING CIRCUITRY TO INCLUDE ADDITIONAL 2/C FOR 0-10V DIMMING CONTROLS
ALL CIRCUITS ON THIS DRAWING ARE TO PANEL P-2A OR P-2B UNLESS OTHERWISE NOTED (UON)
CIRCUIT ALL EXIT SIGN ON THIS DRAWING TO CIRCUIT #42 UON.

1. FOR ROOF TOP LIGHTING. SWITCH WITH ILLUMINATED HANDLE.ILLUMINATED WHEN LOAD IS ON. PROVIDE ENGRAVED COVER PLATE IDENTIFYING LOAD.
2. PROVIDE SELF ILLUMINATING LOW LEVEL EGRESS MARKING READING "NOT AN EXIT".
3. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND ADDITIONAL INFORMATION OF/ON LIGHTING FIXTURES.

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TOWN OF ORANGETOWN — RICH IN HISTORY

ORANGETOWN TOWN HALL

ADDITION AND ALTERATIONS

26 ORANGEBURG RD
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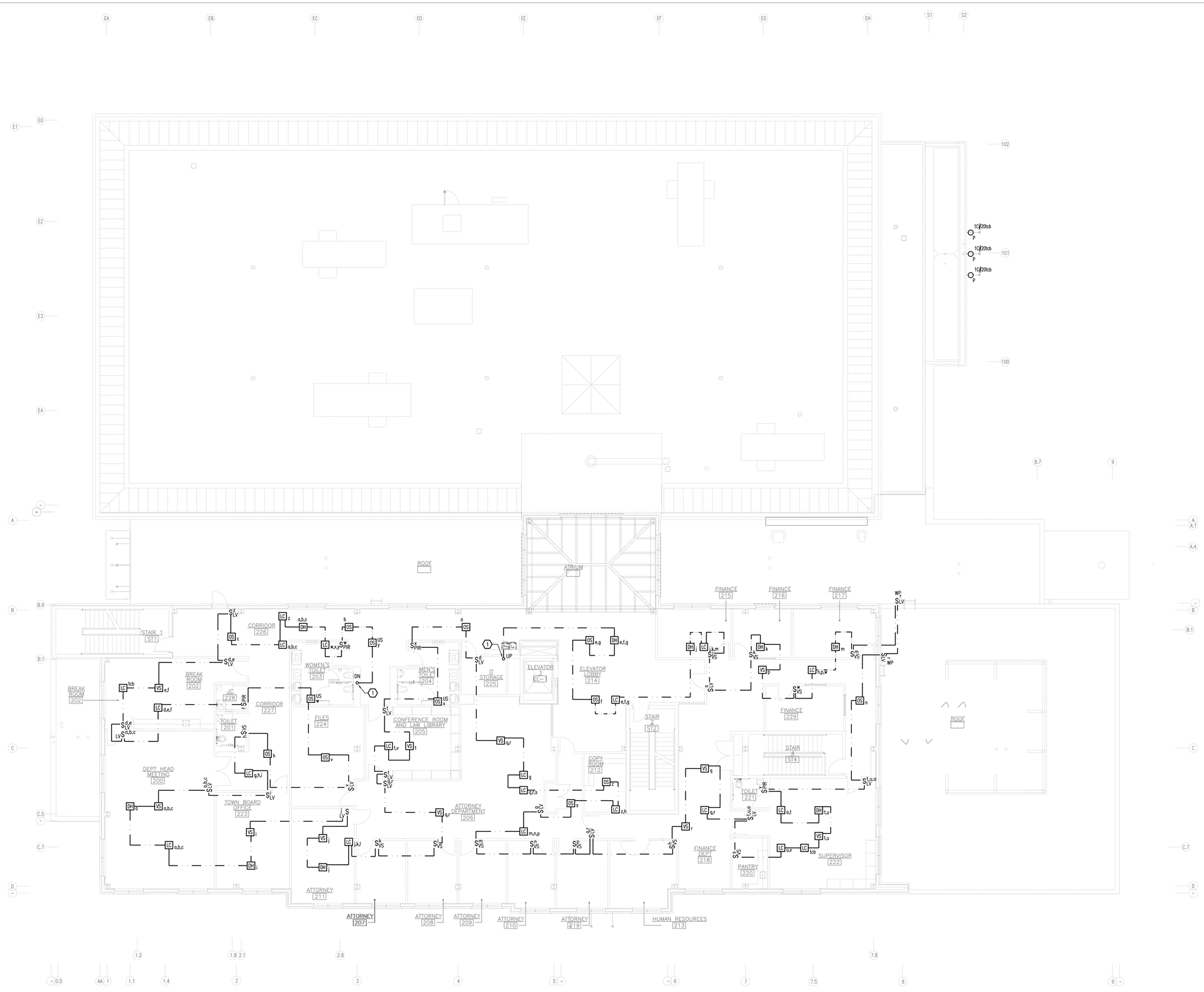
ELECTRICAL LEVEL 02 PLAN (LIGHTING)

PROJECT NO.: 2219-05

DRAWING NO.:

E-214



1 PART LEVEL 02 PLAN (LIGHTING CONTROL)

SCALE: 1/8"=1'-0"

LIGHTING CIRCUITRY TO INCLUDE ADDITIONAL 2/C FOR 0-10V DIMMING CONTROLS

(1) RUN IN 1 1/4" RACEWAY FROM ACCESSIBLE CEILING CAVITIES BETWEEN FLOORS.

MAGNETIC NORTH / PROJECT NORTH

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TOWN OF ORANGETOWN — RICH IN HISTORY

ORANGETOWN TOWN HALL

ADDITION AND ALTERATIONS

26 ORANGEBURG RD
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ELECTRICAL LEVEL 02 PLAN (LIGHTING CONTROL)

PROJECT NO.: 2219-05

DRAWING NO.:

E-215

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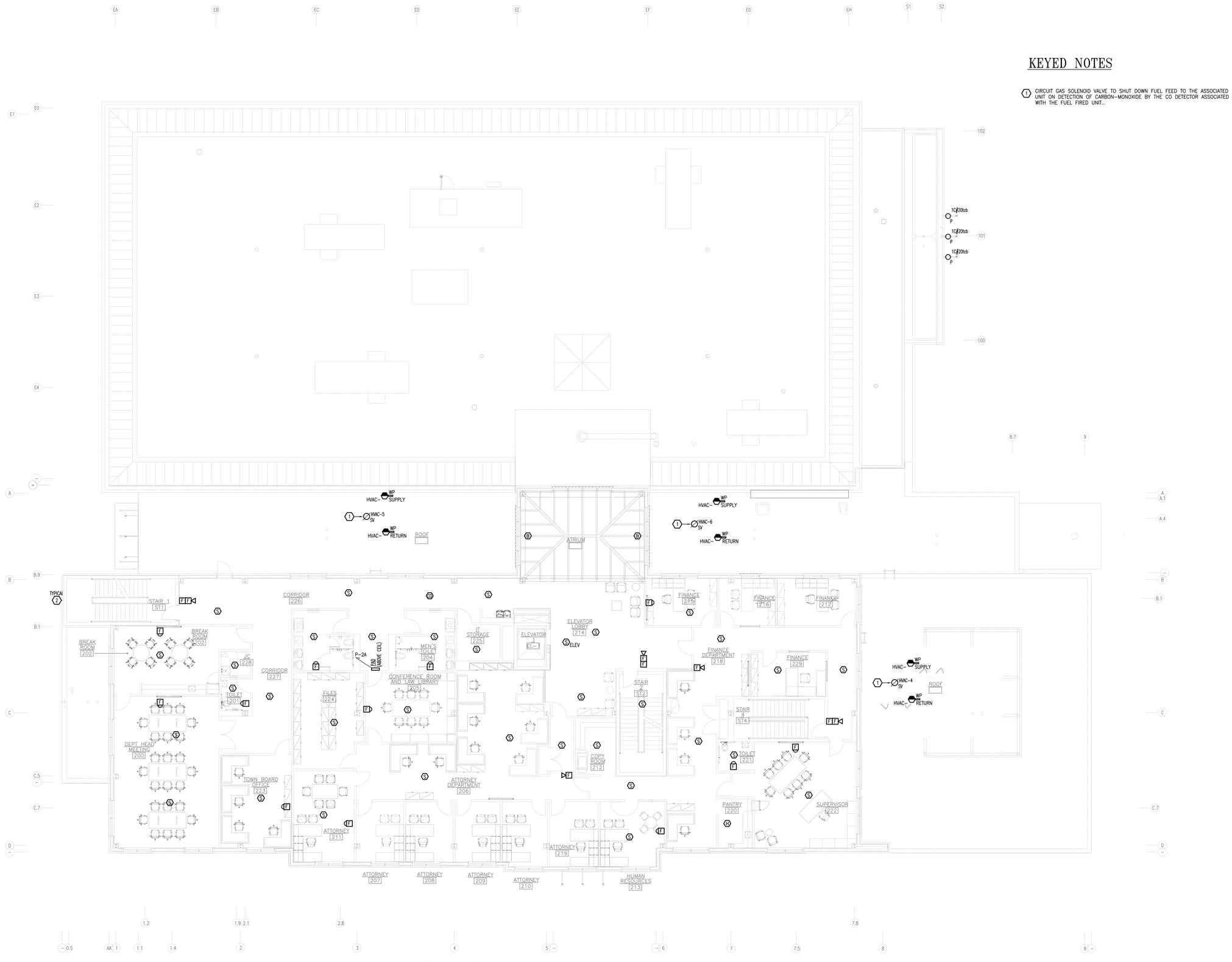
three quarters inch = one foot
one half inch = one foot
three eighths inch = one foot
one quarter inch = one foot
one eighth inch = one foot

KEYED NOTES

1. CIRCUIT GAS SOLENOID VALVE TO SHUT DOWN FUEL FEED TO THE ASSOCIATED UNIT ON DETECTION OF CARBON-MONOXIDE BY THE CO DETECTOR ASSOCIATED WITH THE FUEL FIRED UNIT..



1 PART LEVEL 02 PLAN (FIRE ALARM)
SCALE: 1/8"=1'-0"

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PROJECT NORTH

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ELECTRICAL LEVEL 02 PLAN (FIRE ALARM)

PROJECT NO.: 2219-05

DRAWING NO.:

E-216

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

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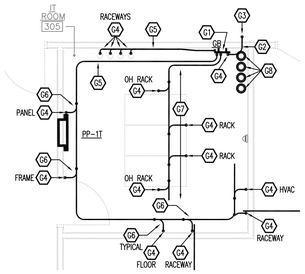
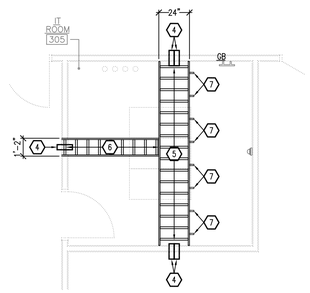


2 PART THIRD FLOOR PLAN IT ROOM 305 (GROUNDING)

SCALE:1/4"=1'-0"



2 PART THIRD FLOOR PLAN IT ROOM 305 (HORIZONTAL RACKING)

SCALE:1/4"=1'-0"

KEYED NOTES(GROUNDING)

G1 PROVIDE WALL MOUNTED COPPER GROUND BAR. MOUNT AT 7' AFF.

G2 BOND GROUND BAR TO BUILDING STEEL USING #2AWG GREEN INSULATED TELCOFLEX COPPER CONDUCTOR (GITCC).

G3 CADWELD TO BUILDING STEEL.

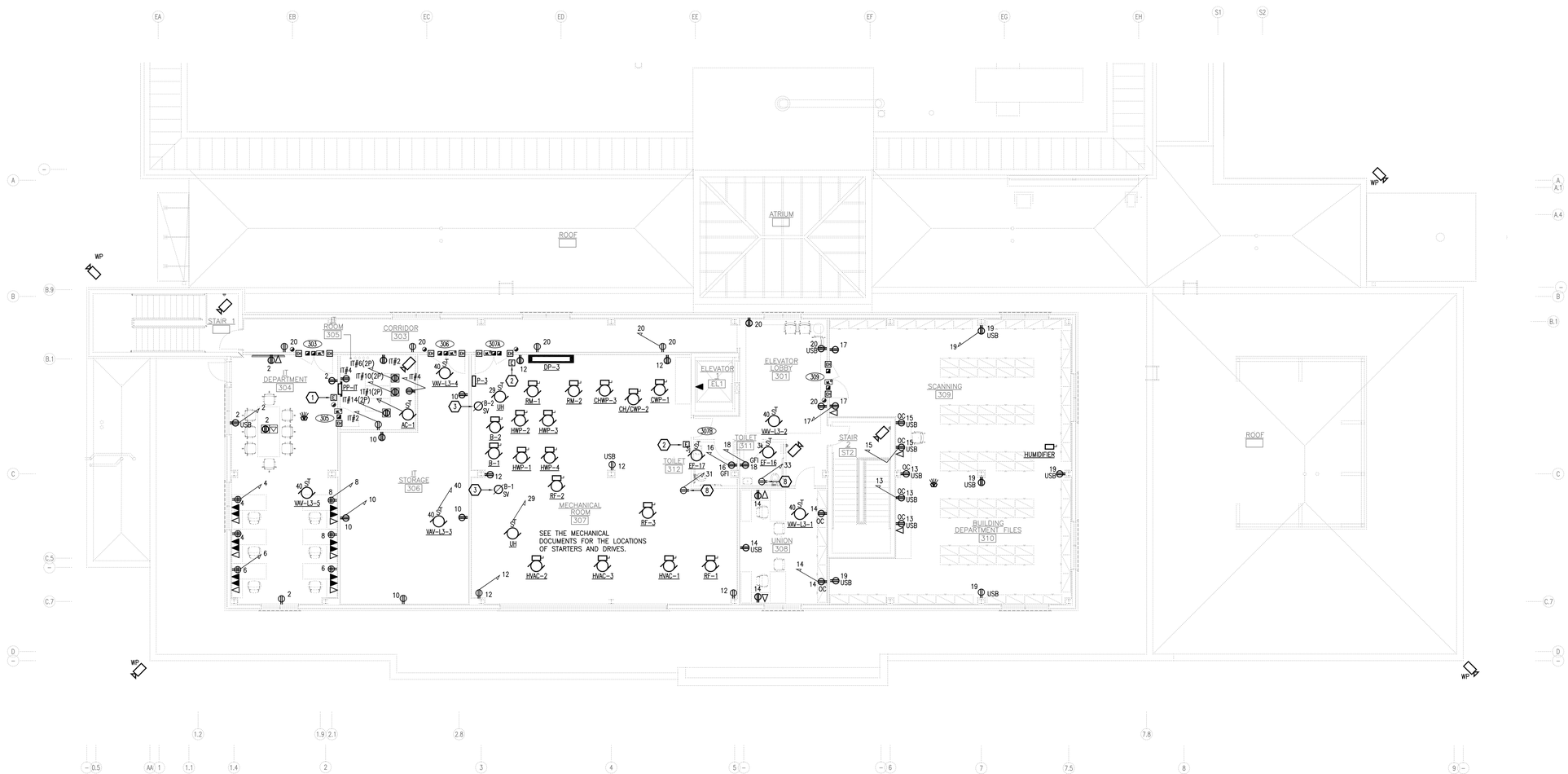
G4 BOND TO BAR/APPURTENANCE. TERMINATE USING TWO HOLD LONG BARREL DUAL CRIMP TONGUE LUG. PROVIDE CLEAR HEAT SHRINK OVER THE BARREL AND INSULATION GAP.

G5 #2AWG GITCC

G6 TAP MAIN RUNNER WITH #6AWG GITCC. CONNECT TO MAIN RUNNER USING CAST STYLE COMPRESSION BURNDY H-TAP WITH CLEAR LEXAN COVER.

G7 RUN/SUPPORT ON SIDE HOOKS OF OVERHEAD HORIZONTAL LADDER RACK. SECURE TO HOOKS USING WAXED TWINE.

G8 BOND RACEWAYS TO BAR USING #6AWG GITCC.



1 PART LEVEL 03 PLAN (POWER)

SCALE: 1/8"=1'-0"

ALL CIRCUITS ON THIS DRAWING ARE TO PANEL P-3 UNLESS OTHERWISE NOTED (UON)

MAGNETIC NORTH / PROJECT NORTH

KEYED NOTES

1 PROVIDE EMERGENCY POWER OFF (EPO) STATION. CIRCUIT TO SHUT OFF ALL POWER IN THE IT ROOM ON ACTIVATION OF THE STATION. CIRCUIT TO SHUNT TRIP THE MAIN CIRCUIT BREAKER IN THE IT POWER PANEL. CIRCUIT THE SECOND POLE TO SHUT OFF ALL UPS POWER IN THE IT ROOM.

2 PROVIDE EMERGENCY SHUT OFF STATION TO SHUT DOWN BOILERS ON ACTIVATION OF THE STATION. CIRCUIT TO SHUNT TRIP THE CIRCUIT BREAKERS THAT FEED THE BOILERS B-1 AND B-2 AND THE CHILLERS RM-1 AND RM-2.

3 CIRCUIT GAS SOLENOID VALVE TO SHUT DOWN FUEL FEED TO THE ASSOCIATED UNIT ON DETECTION OF CARBON-MONOXIDE BY THE CO DETECTOR ASSOCIATED WITH THE FUEL FIRED UNIT..

4 EZ-PATH SERIES 44+ FIRE RATED (WHILE OPEN) CABLE PATHWAY. SPECIFIED TECHNOLOGIES INC. WITH WALL TRIM PLATES (SINGLE OR MULTI GANGED TO MATCH APPLICATION).

5 CENTRAL STEEL FABRICATORS SERIES 110, 1.5" CABLE RACKING ASSEMBLY WITH SOLID BAR AND CHANNELS #11024. SUPPORT TO STRUCTURE ABOVE WITH 5/8" THREADED RODS (BOTH SIDES) ON 4' CENTERS. PROVIDE ASSOCIATED FITTINGS AND ADAPTERS.

6 CENTRAL STEEL FABRICATORS SERIES 110, 1.5" CABLE RACKING ASSEMBLY WITH SOLID BAR AND CHANNELS #11012. SUPPORT TO STRUCTURE ABOVE WITH 5/8" THREADED RODS (BOTH SIDES) ON 4' CENTERS. PROVIDE ASSOCIATED FITTINGS AND ADAPTERS.

7 CENTRAL STEEL FABRICATORS ACB53R SIDE MOUNTED AUX CABLE BRACKET.

8 FOR POINT OF USE WATER HEATER. MOUNT ABOVE ACCESSIBLE CEILING. SEE MECHANICAL PLANS FOR EXACT LOCATION(S).

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CBK PROJECT NO. 21030

ISSUE NO.	ISSUE DATE	DESCRIPTION
1	11/9/2021	RELEASE FOR BID

TOWN OF ORANGETOWN — RICH IN HISTORY

ORANGETOWN TOWN HALL

ADDITION AND ALTERATIONS

26 ORANGEBURG RD
ORANGEBURG, NEW YORK 10962

ELECTRICAL LEVEL 03 PLAN (POWER)

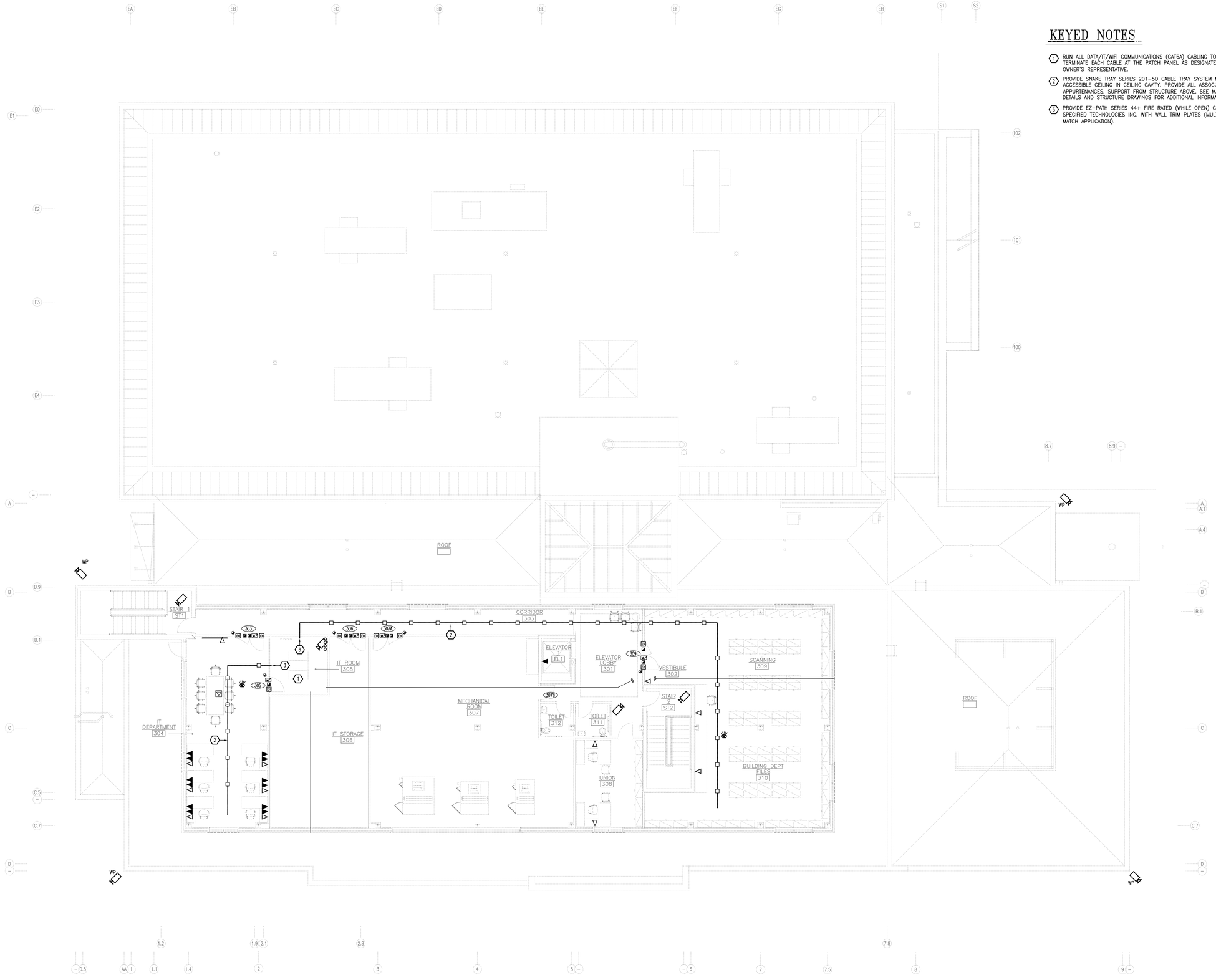
PROJECT NO.: 2219-05

DRAWING NO.:

E-217

KEYED NOTES

1. RUN ALL DATA/IT/WIFI COMMUNICATIONS (CAT6A) CABLING TO THIS ROOM. TERMINATE EACH CABLE AT THE PATCH PANEL AS DESIGNATED BY THE OWNER'S REPRESENTATIVE.
2. PROVIDE SNAKE TRAY SERIES 201-5D CABLE TRAY SYSTEM MOUNTED ABOVE ACCESSIBLE CEILING IN CEILING CAVITY. PROVIDE ALL ASSOCIATED APPURTENANCES. SUPPORT FROM STRUCTURE ABOVE. SEE MANUFACTURER'S DETAILS AND STRUCTURE DRAWINGS FOR ADDITIONAL INFORMATION.
3. PROVIDE EZ-PATH SERIES 44+ FIRE RATED (WHILE OPEN) CABLE PATHWAY. SPECIFIED TECHNOLOGIES INC. WITH WALL TRIM PLATES (MULTI GANGED TO MATCH APPLICATION).



1 PART LEVEL 03 PLAN (IT/DATA)
SCALE: 1/8"=1'-0"

MAGNETIC NORTH / PROJECT NORTH

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ADDITION AND ALTERATIONS

26 ORANGEBURG RD
ORANGEBURG, NEW YORK 10962

ELECTRICAL LEVEL 03 PLAN (IT/DATA/SECURITY)

PROJECT NO.: 2219-05

DRAWING NO.:

E-218

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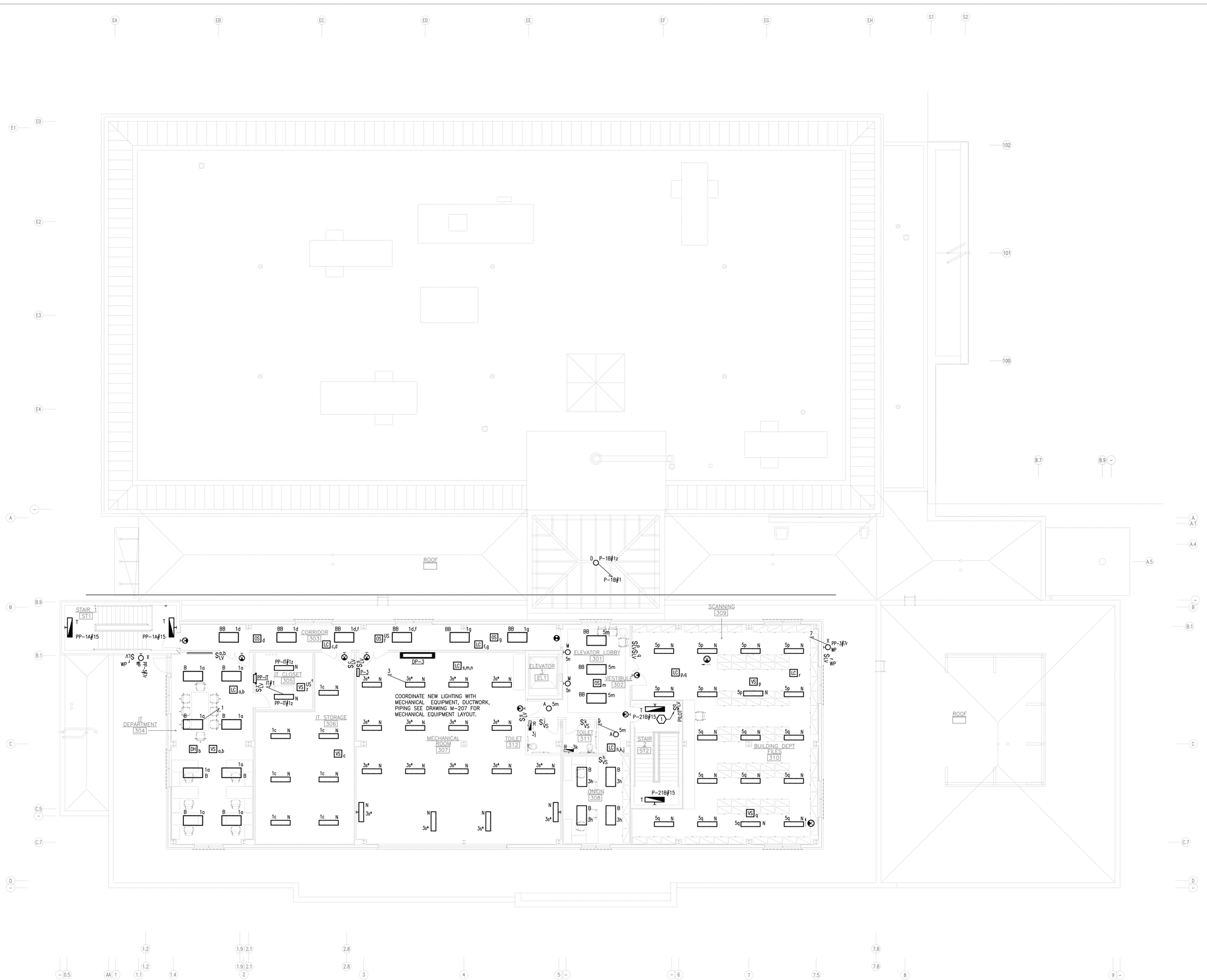

1 PART LEVEL 03 PLAN (LIGHTING)

SCALE: 1/8"=1'-0"

LIGHTING CIRCUITRY TO INCLUDE ADDITIONAL 2/C FOR 0-10V DIMMING CONTROLS.
ALL CIRCUITS ON THIS DRAWING ARE TO PANEL P-3 UNLESS OTHERWISE NOTED (UON)
CIRCUIT ALL EXIT SIGN ON THIS DRAWING TO PANEL P-3 CIRCUIT #42 UON.

MAGNETIC NORTH / PROJECT NORTH

KEYED NOTES

1. FOR ROOF TOP LIGHTING, SWITCH WITH ILLUMINATED HANDLE. ILLUMINATED WHEN LOAD IS ON. PROVIDE ENGRAVED COVER PLATE IDENTIFYING LOAD.
2. PROVIDE SELF ILLUMINATING LOW LEVEL EGRESS MARKING READING "NOT AN EXIT".
3. PROVIDE IN 1 1/4" RACEWAY BETWEEN ACCESSIBLE CEILING CAVITIES, BETWEEN FLOORS.

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ADDITION AND ALTERATIONS

26 ORANGEBURG RD
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ELECTRICAL LEVEL 03 PLAN (LIGHTING)

PROJECT NO.: 2219-05

DRAWING NO.:

E-219

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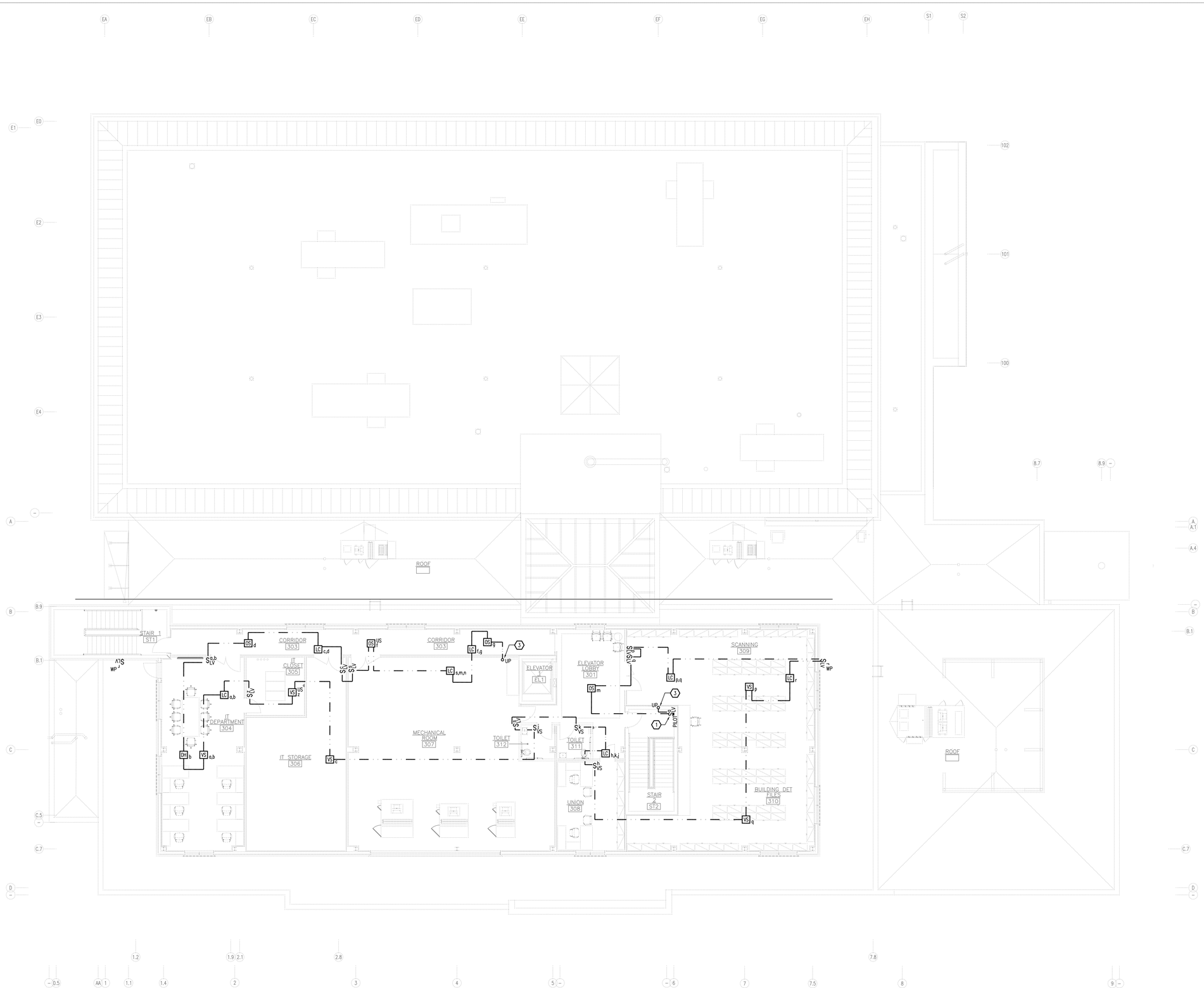

1 PART LEVEL 03 PLAN (LIGHTING CONTROL)

SCALE: 1/8"=1'-0"

LIGHTING CIRCUITRY TO INCLUDE ADDITIONAL 2/C FOR 0-10V DIMMING CONTROLS

MAGNETIC NORTH / PROJECT NORTH

1. FOR ROOF TOP LIGHTING. SWITCH WITH ILLUMINATED HANDLE. ILLUMINATED WHEN LOAD IS ON. PROVIDE ENGRAVED COVER PLATE IDENTIFYING LOAD.
2. PROVIDE SELF ILLUMINATING LOW LEVEL EGRESS MARKING READING "NOT AN EXIT".
3. PROVIDE IN 1 1/4" RACEWAY BETWEEN ACCESSIBLE CEILING CAVITIES, BETWEEN FLOORS.

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26 ORANGEBURG RD
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ELECTRICAL LEVEL 03 PLAN (LIGHTING CONTROL)

PROJECT NO.: 2219-05

DRAWING NO.:

E-220

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

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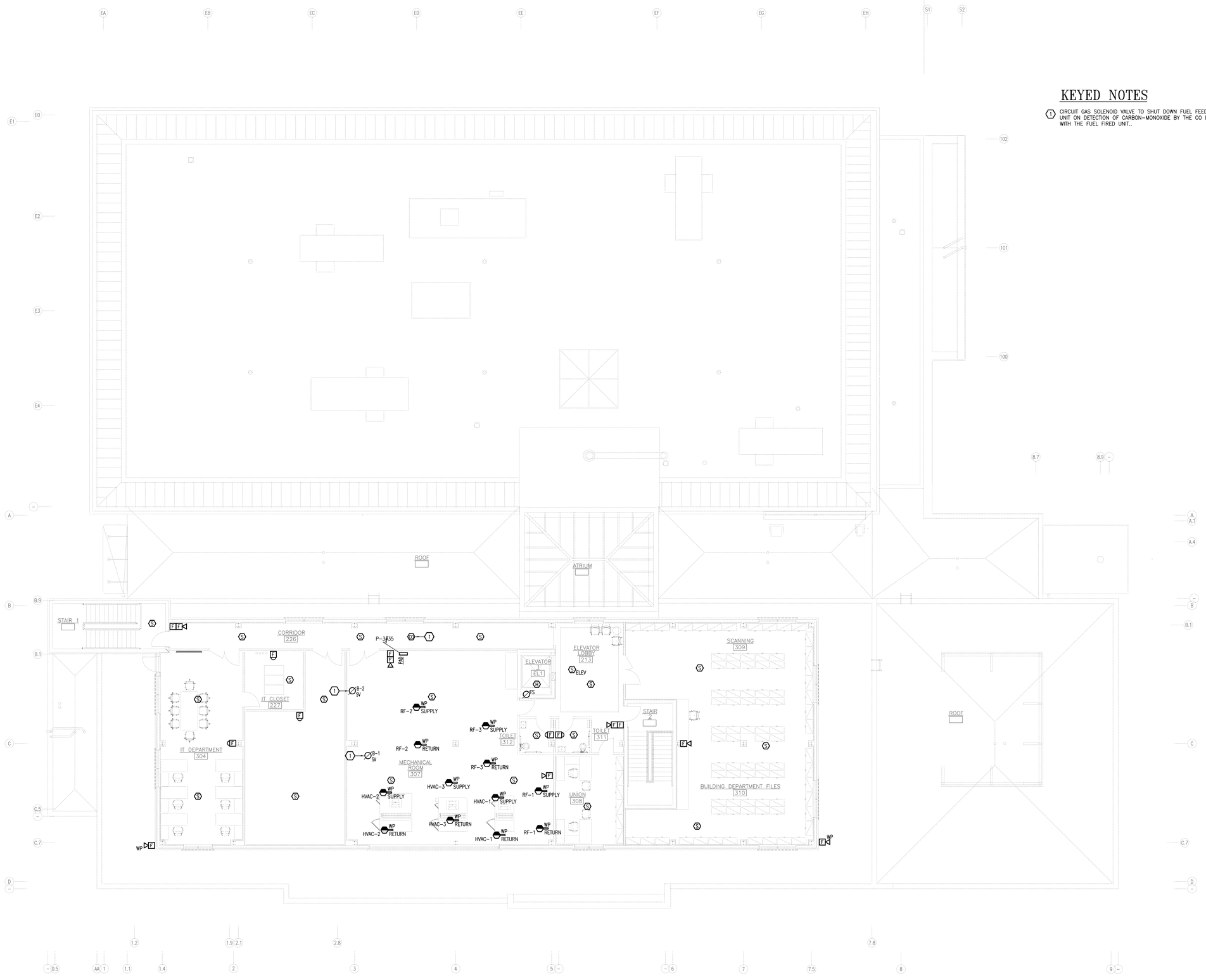
KEYED NOTES

1. CIRCUIT GAS SOLENOID VALVE TO SHUT DOWN FUEL FEED TO THE ASSOCIATED UNIT ON DETECTION OF CARBON-MONOXIDE BY THE CO DETECTOR ASSOCIATED WITH THE FUEL FIRED UNIT..



1 PART LEVEL 03 PLAN (FIRE ALARM)

SCALE: 1/8"=1'-0"

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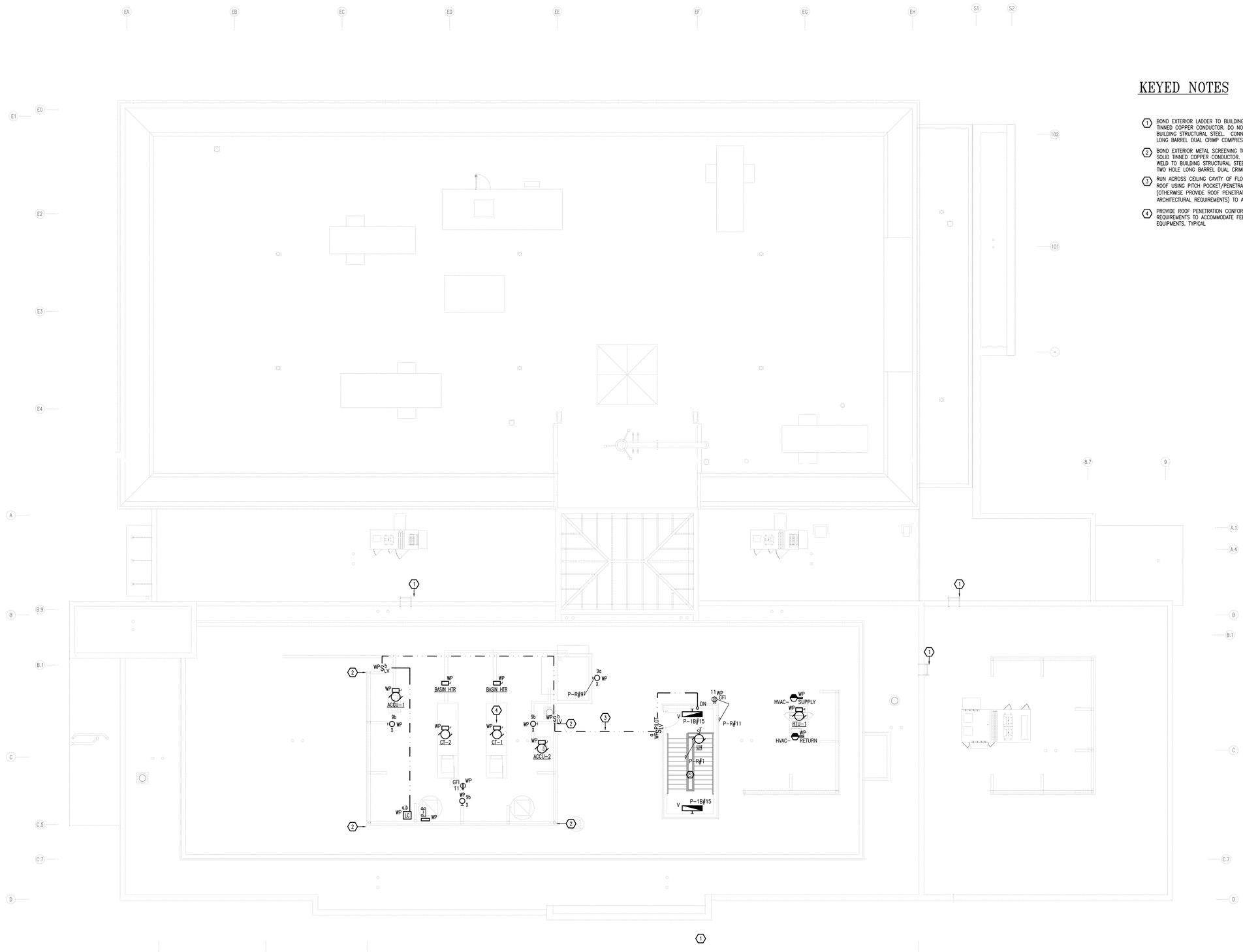
PROJECT NO.: 2219-05

DRAWING NO.:

E-221



KEYED NOTES

1. BOND EXTERIOR LADDER TO BUILDING STEEL USING #2AWG SOLID TINNED COPPER CONDUCTOR. DO NOT RUN IN RACEWAY. CAD WELD TO BUILDING STRUCTURAL STEEL. CONNECT TO LADDER USING TWO HOLE LONG BARREL DUAL CRIMP COMPRESSION TONGUE LUG.
2. BOND EXTERIOR METAL SCREENING TO BUILDING STEEL USING #2AWG SOLID TINNED COPPER CONDUCTOR. DO NOT RUN IN RACEWAY. CAD WELD TO BUILDING STRUCTURAL STEEL. CONNECT TO LADDER USING TWO HOLE LONG BARREL DUAL CRIMP COMPRESSION TONGUE LUG.
3. RUN ACROSS CEILING CAVITY OF FLOOR BELOW AND UP THROUGH ROOF USING PITCH POCKET/PENETRATION LOCATIONS WHERE AVAILABLE (OTHERWISE PROVIDE ROOF PENETRATION CONFORMING TO ARCHITECTURAL REQUIREMENTS) TO AVOID TRIPPING HAZARDS. TYPICAL
4. PROVIDE ROOF PENETRATION CONFORMING TO ARCHITECTURAL REQUIREMENTS TO ACCOMMODATE FEEDS AND CIRCUITRY TO ROOF TOP EQUIPMENTS. TYPICAL

1 PART ROOF PLAN

SCALE: 1/8"=1'-0"

MAGNETIC NORTH / PROJECT NORTH

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TOWN OF ORANGETOWN — RICH IN HISTORY

ORANGETOWN TOWN HALL

ADDITION AND ALTERATIONS

26 ORANGEBURG RD
ORANGEBURG, NEW YORK 10962

ELECTRICAL ROOF PLAN

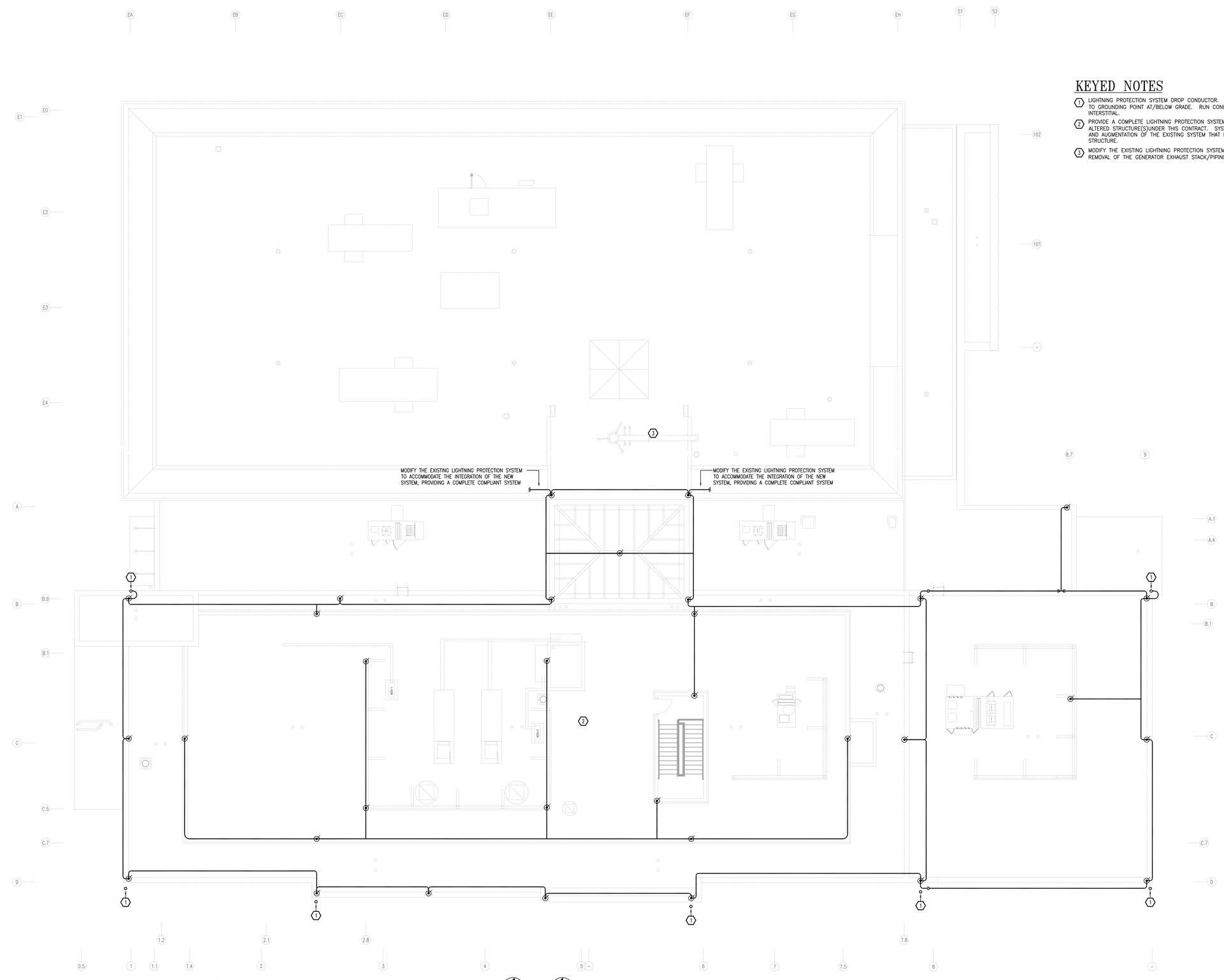
PROJECT NO.: 2219-05

DRAWING NO.:

E-222

KEYED NOTES

1. LIGHTNING PROTECTION SYSTEM DROP CONDUCTOR. RUN DOWN THE STRUCTURE TO GROUNDING POINT AT/BELOW GRADE. RUN CONCEALED IN EXTERIOR WALL INTERSTITIAL.
2. PROVIDE A COMPLETE LIGHTNING PROTECTION SYSTEM FOR THE ADDITIONS AND ALTERED STRUCTURE(S)UNDER THIS CONTRACT. SYSTEM SHALL BE AN EXPANSION AND AUGMENTATION OF THE EXISTING SYSTEM THAT IS PRESENT ON THE EXISTING STRUCTURE.
3. MODIFY THE EXISTING LIGHTNING PROTECTION SYSTEM TO ACCOMMODATE THE REMOVAL OF THE GENERATOR EXHAUST STACK/PIPING.



1 ROOF PLAN (LIGHTNING PROTECTION)
SCALE: 1/8"=1'-0"

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ELECTRICAL ROOF PLAN (LIGHTNING PROTECTION)

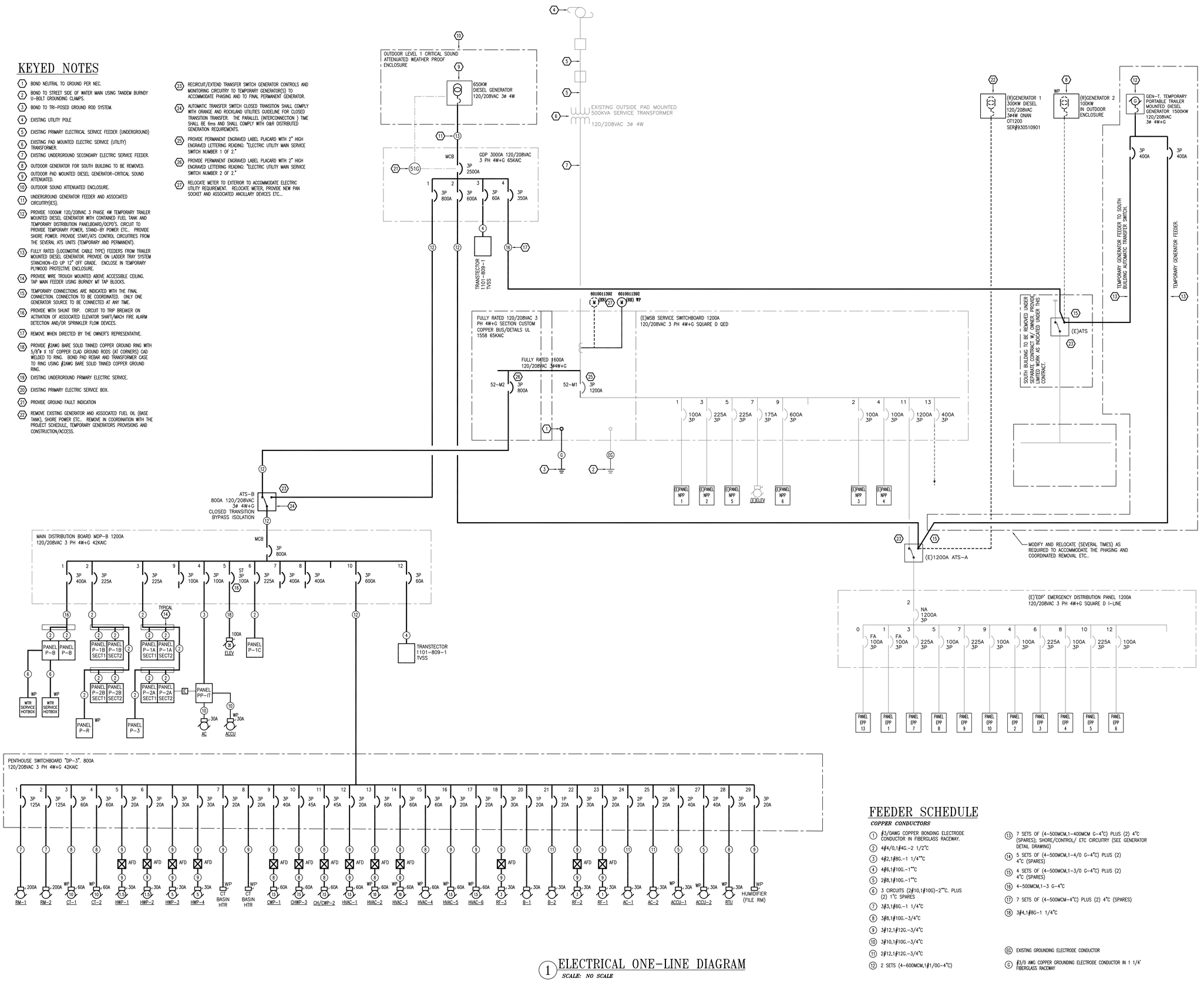
PROJECT NO.: 2219-05

DRAWING NO.:

E-223

KEYED NOTES

1. BOND NEUTRAL TO GROUND PER NEC.
2. BOND TO STREET SIDE OF WATER MAIN USING TANDEM BURNDY U-BOLT GROUNDING CLAMPS.
3. BOND TO TRI-POSED GROUND ROD SYSTEM.
4. EXISTING UTILITY POLE
5. EXISTING PRIMARY ELECTRICAL SERVICE FEEDER (UNDERGROUND)
6. EXISTING PAD MOUNTED ELECTRIC SERVICE (UTILITY) TRANSFORMER.
7. EXISTING UNDERGROUND SECONDARY ELECTRIC SERVICE FEEDER.
8. OUTDOOR GENERATOR FOR SOUTH BUILDING TO BE REMOVED.
9. OUTDOOR PAD MOUNTED DIESEL GENERATOR-CRITICAL SOUND ATTENUATED.
10. OUTDOOR SOUND ATTENUATED ENCLOSURE.
11. UNDERGROUND GENERATOR FEEDER AND ASSOCIATED CIRCUITRY(IES).
12. PROVIDE 1000kW 120/208VAC 3 PHASE 4W TEMPORARY TRAILER MOUNTED DIESEL GENERATOR WITH CONTAINED FUEL TANK AND TEMPORARY DISTRIBUTION PANELBOARD/OCPD'S. CIRCUIT TO PROVIDE TEMPORARY POWER, STAND-BY POWER ETC.. PROVIDE SHORE POWER. PROVIDE START/ATS CONTROL CIRCUITRIES FROM THE SEVERAL ATS UNITS (TEMPORARY AND PERMANENT).
13. FULLY RATED (LOCOMOTIVE CABLE TYPE) FEEDERS FROM TRAILER MOUNTED DIESEL GENERATOR. PROVIDE ON LADDER TRAY SYSTEM STANCHION-ED UP 12" OFF GRADE. ENCLOSE IN TEMPORARY PLYWOOD PROTECTIVE ENCLOSURE.
14. PROVIDE WIRE TROUGH MOUNTED ABOVE ACCESSIBLE CEILING. TAP MAIN FEEDER USING BURNDY MT TAP BLOCKS.
15. TEMPORARY CONNECTIONS ARE INDICATED WITH THE FINAL CONNECTION. CONNECTION TO BE COORDINATED. ONLY ONE GENERATOR SOURCE TO BE CONNECTED AT ANY TIME.
16. PROVIDE WITH SHUNT TRIP. CIRCUIT TO TRIP BREAKER ON ACTIVATION OF ASSOCIATED ELEVATOR SHAFT/MACH FIRE ALARM DETECTION AND/OR SPRINKLER FLOW DEVICES.
17. REMOVE WHEN DIRECTED BY THE OWNER'S REPRESENTATIVE.
18. PROVIDE #2AWG BARE SOLID TINNED COPPER GROUND RING WITH 5/8"ø X 10' COPPER CLAD GROUND RODS (AT CORNERS) CAD WELDED TO RING. BOND PAD REBAR AND TRANSFORMER CASE TO RING USING #2AWG BARE SOLID TINNED COPPER GROUND RING.
19. EXISTING UNDERGROUND PRIMARY ELECTRIC SERVICE.
20. EXISTING PRIMARY ELECTRIC SERVICE BOX.
21. PROVIDE GROUND FAULT INDICATION
22. REMOVE EXISTING GENERATOR AND ASSOCIATED FUEL OIL (BASE TANK), SHORE POWER ETC.. REMOVE IN COORDINATION WITH THE PROJECT SCHEDULE, TEMPORARY GENERATORS PROVISIONS AND CONSTRUCTION/ACCESS.
23. RECIRCUIT/EXTEND TRANSFER SWITCH GENERATOR CONTROLS AND MONITORING CIRCUITRY TO TEMPORARY GENERATOR(S) TO ACCOMMODATE PHASING AND TO FINAL PERMANENT GENERATOR.
24. AUTOMATIC TRANSFER SWITCH CLOSED TRANSITION SHALL COMPLY WITH ORANGE AND ROCKLAND UTILITIES GUIDELINE FOR CLOSED TRANSITION TRANSFER. THE PARALLEL (INTERCONNECTION) TIME SHALL BE 6ms AND SHALL COMPLY WITH O&R DISTRIBUTED GENERATION REQUIREMENTS.
25. PROVIDE PERMANENT ENGRAVED LABEL PLACARD WITH 2" HIGH ENGRAVED LETTERING READING: "ELECTRIC UTILITY MAIN SERVICE SWITCH NUMBER 1 OF 2."
26. PROVIDE PERMANENT ENGRAVED LABEL PLACARD WITH 2" HIGH ENGRAVED LETTERING READING: "ELECTRIC UTILITY MAIN SERVICE SWITCH NUMBER 2 OF 2."
27. RELOCATE METER TO EXTERIOR TO ACCOMMODATE ELECTRIC UTILITY REQUIREMENT. RELOCATE METER, PROVIDE NEW PAN SOCKET AND ASSOCIATED ANCILLARY DEVICES ETC...



FEEDER SCHEDULE

COPPER CONDUCTORS

1. #3/0AWG COPPER BONDING ELECTRODE CONDUCTOR IN FIBERGLASS RACEWAY.
2. 4#4/0,1#4G.-2 1/2"C
3. 4#2,1#8G.-1 1/4"C
4. 4#6,1#10G.-1"C
5. 2#8,1#10G.-1"C
6. 3 CIRCUITS (2#10,1#10G)-2"C. PLUS (2) 1"C SPARES
7. 3#3,1#6G.-1 1/4"C
8. 3#8,1#10G.-3/4"C
9. 3#12,1#12G.-3/4"C
10. 3#10,1#10G.-3/4"C
11. 2#12,1#12G.-3/4"C
12. 2 SETS (4-600MCM,1#1/0G-4"C)
13. 7 SETS OF (4-500MCM,1-400MCM G-4"C) PLUS (2) 4"C (SPARES); SHORE/CONTROL/ ETC CIRCUITRY (SEE GENERATOR DETAIL DRAWING)
14. 5 SETS OF (4-500MCM,1-4/0 G-4"C) PLUS (2) 4"C (SPARES)
15. 4 SETS OF (4-500MCM,1-3/0 G-4"C) PLUS (2) 4"C (SPARES)
16. 4-500MCM,1-3 G-4"C
17. 7 SETS OF (4-500MCM-4"C) PLUS (2) 4"C (SPARES)
18. 3#4,1#8G-1 1/4"C

EC EXISTING GROUNDING ELECTRODE CONDUCTOR

6 #3/0 AWG COPPER GROUNDING ELECTRODE CONDUCTOR IN 1 1/4" FIBERGLASS RACEWAY

1 ELECTRICAL ONE-LINE DIAGRAM
SCALE: NO SCALE

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ELECTRICAL ONE-LINE DIAGRAM

PROJECT NO.: 2219-05

DRAWING NO.:

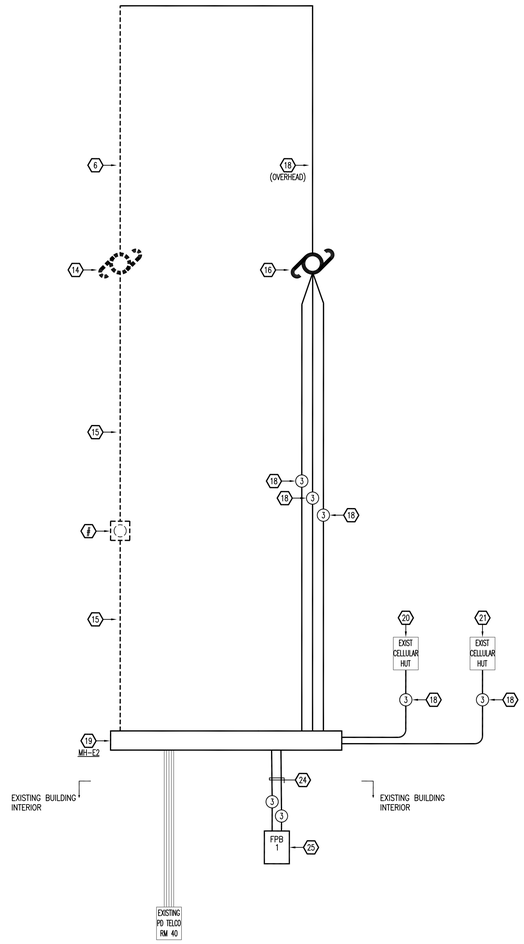
E-301

1 ELECTRICAL SITE PLAN(REMOVALS)

MAGNETIC NORTH / PROJECT NORTH

SCALE: 1/32"=1'-0"

FEEDERS, RACEWAYS, SERVICES INDICATED ON THIS DRAWINGS ARE UNDER GROUND UON. PROVIDE ALL LOCATING, MARKING AND IN GROUND INVESTIGATION TO DETERMINE WHAT EXISTS AND THE BEST ROUTINGS TO BE USED. PROVIDE ALL EXPLORATORY EXCAVATION REQUIRED TO ENSURE COORDINATION WITH EXISTING CONDITIONS.



2 OUTSIDE PLANT FIBER OPTIC/COMMUNICATIONS DIAGRAM

SCALE: NO SCALE

KEYED NOTES

1. EXISTING UTILITY POWER UNDERGROUND PRIMARY ELECTRICAL SERVICE FEEDER (VIF). ROUTING IS APPROXIMATE. MAINTAIN CONTINUITY OF SERVICE. MARK OUT AND PROTECT .
2. EXISTING UTILITY POWER ELECTRICAL SERVICE ACCESS POINT/HANDHOLE WITH ABOVE GRADE COVER. MAINTAIN CONTINUITY OF SERVICE.
3. EXISTING PAD MOUNTED UTILITY ELECTRIC SERVICE TRANSFORMER.
4. EXISTING UNDERGROUND SECONDARY ELECTRIC SERVICE FEEDER (VIF). MAINTAIN CONTINUITY OF SERVICE. MARK OUT AND PROTECT .
5. EXISTING UTILITY POWER POLE TO BE REMOVED/RELOCATED.
6. EXISTING UTILITY POWER OVERHEAD FEED (UN-METERED) TO BE MODIFIED, REMOVED/RELOCATED.
7. NOT USED
8. EXISTING UTILITY POWER REVENUE METER MOUNTED ON POLE TO REMAIN. ENSURE CONTINUITY OF SERVICE.
9. EXISTING UTILITY POWER REVENUE METER, ASSOCIATED 3R OCPD AND WOOD SUPPORT STRUCTURE TO REMAIN. ENSURE CONTINUITY OF SERVICE..
10. UNDERGROUND UTILITY POWER SERVICE FEEDER TO REMAIN. ENSURE CONTINUITY OF SERVICE.
11. OUTDOOR DIESEL GENERATOR WITH BASE FUEL TANK-CRITICAL SOUND ATTENUATED GENERATOR.
12. OUTDOOR SOUND ATTENUATED LEVEL 1 ENCLOSURE.
13. NOT USED
14. EXISTING UTILITY POLE (COMMUNICATIONS/FIBER) TO REMAIN. ENSURE CONTINUITY OF SERVICE.
15. UNDERGROUND RACEWAYS WITH COMMUNICATIONS FIBER OPTIC CABLING TO BE MODIFIED.
16. NOT USED
17. EXTENDED UNDERGROUND RACEWAYS TO ACCOMMODATE THE RELOCATION AND EXTENSION OF FIBER OPTIC SERVICES.
18. PROVIDE NEW FIBER OPTIC CABLING FROM SERVICE PROVIDER TO FACILITY DEMARK (IN BASEMENT). WHERE IN RACEWAY PROVIDE EACH PROVIDER IN ITS OWN INNER DUCT.
19. 5'X5'X5' ROADWAY RATED MANHOLE COMPLETE WITH COLLAR, COVER AND ALL NECESSARY APPURTENANCES.
20. EXISTING CELLULAR CARRIER #1 COMMUNICATIONS HUT.
21. EXISTING CELLULAR CARRIER #2 COMMUNICATIONS HUT.
22. 2#10,1#10G (PLUS 4#10 SPARES)-1"C UG TO TIME CLOCK CIRCUIT IN MAIN ELECTRIC ROOM.
23. OVERHEAD FIBER OPTIC (UTILITY) CABLING TO BE MODIFIED TO ACCOMMODATE POLE RELOCATIONS.
24. UNDERGROUND RACEWAYS FOR ADDITIONAL/RELOCATED COMMUNICATIONS SERVICES.
25. BUILDING END BOX FOR ADDITIONAL FIBER OPTIC/TELCO SERVICE CABLING.
26. SHADED AREA INDICATES APPROXIMATE AREA OF BUILDING ADDITION.
27. PROVIDE (4)2" UNDERGROUND SPARE RACEWAY FOR FUTURE USE. CAP BOTH ENDS BELOW GRADE. PROVIDE SURFACE GROUND MONUMENTS TO MARK THE AREAS WHERE THE RACEWAYS ARE TERMINATED.
28. MULTIPLE UNDERGROUND FEEDERS/CIRCUITRY/RACEWAYS BETWEEN BUILDING AND OUTDOOR GENERATOR. SEE DETAILS FOR ADDITIONAL INFORMATION.
29. WATER SERVICE "HOT BOX". SEE ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
30. REMOVE EXISTING LIGHTING FIXTURE/UNIT.
31. NOT USED
32. NOT USED
33. NOT USED
34. APPROXIMATE LOCATION OF PANEL P-B IN BASEMENT OF EXISTING BUILDING.
35. FOR POLE/MONUMENT/STATUE. LOCATE PER ARCHITECTURAL DRAWINGS/OWNER'S REPRESENTATIVE. AIM LIGHT PATTERN TO PREVENT EXCESSIVE UPWARD/SKYWARD DISTRIBUTION.
36. IN ADDITION TO THE POWER CIRCUITRY, PROVIDE AN ADDITIONAL 1" UG RACEWAY WITH 12 STRAND FIBER CABLE TO FIRST FLOOR IT CLOSET. TERMINATE FIBER AT FIRST FLOOR PATCH BAY AND AT CHARGING STATION.
37. GEN-T. TEMPORARY TRAILER MOUNTED STANDBY GENERATOR AND ASSOCIATED FEEDERS AND SHORE POWER/CONTROL CIRCUITRY. SEE ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION. VARY LOCATIONS AS REQUIRED TO ACCOMMODATE PROJECT PHASING. INCLUDE FULL BASE TANK OF FUEL (SITE DELIVERED) AND (2) ADDITIONAL SITE DELIVERED (TANK CAPACITY) REFILLS OF FUEL. PROVIDE FOR DURATION OF THE PROJECT OR UNTIL DIRECTED BY THE OWNER'S REPRESENTATIVE. INCLUDE ALL ASSOCIATED COSTS IN THE BID SUBMISSION.

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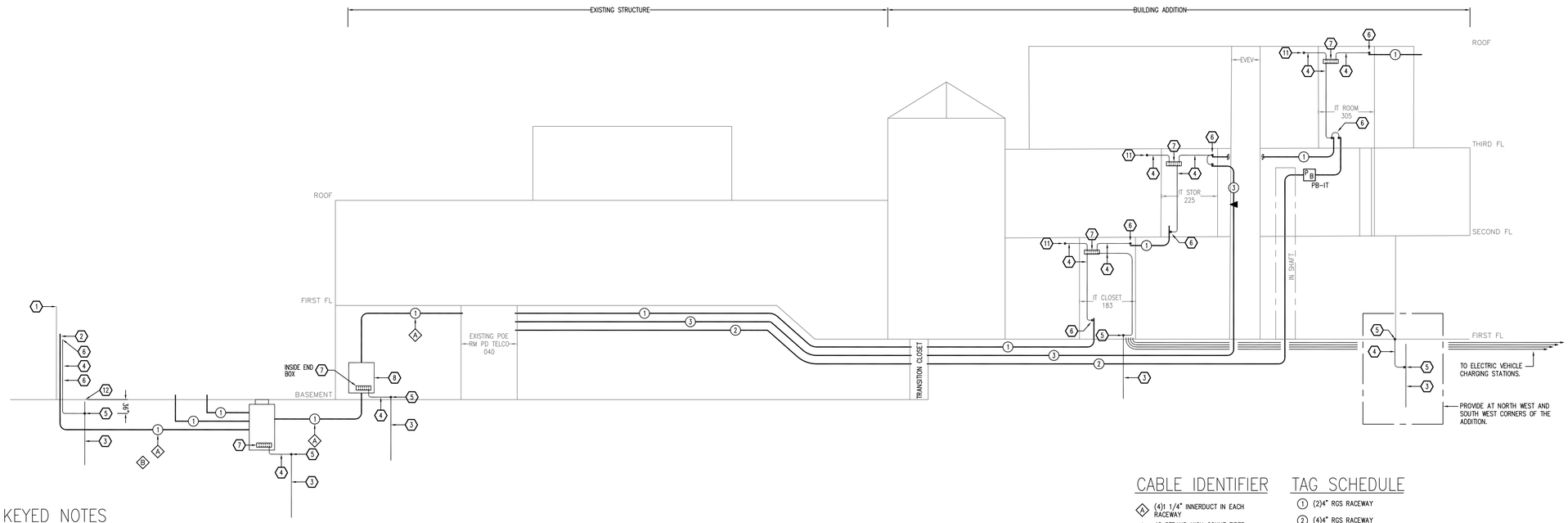
ELECTRICAL PART ONE-LINE POWER DIAGRAM, OUTDOOR PLANT FIBER OPTIC DIAGRAM AND KEYED NOTES

PROJECT NO.: 2219-05

DRAWING NO.:

E-302



KEYED NOTES

1. EXISTING UTILITY POLE WITH TELCO/FIBER SERVICES.
2. RUN RACEWAYS UP UTILITY POLE ON SIDE OPPOSITE ON COMING TRAFFIC.
3. 5/8"ø X 10' COPPER CLAD GROUND ROD. DRIVE INTO EARTH TILL TOP OF THE ROD IS 8" BELOW FINISHED GRADE. PROVIDE MARKER MONUMENT AT GRADE DIRECTLY ABOVE ROD.
4. #2AWG SOLID TINNED COPPER CONDUCTOR.
5. CADWELD CONDUCTOR TO GROUND ROD.
6. BOND CONDUCTOR TO RISER RACEWAYS USING BURNDY PIPE CLAMPS.
7. COPPER GROUND BAR.
8. FIBER OPTICS END BOX. HOFFMAN A48R3616NK. WALL MOUNTED 48"H X 36"W X 16"D POWDER COATED MILD STEEL ENCLOSURE BOX.
9. 144 POSITION FIBER OPTIC PATCH BAY/PANEL 19" RACK MOUNTED.
10. 24 POSITION FIBER OPTIC PATCH BAY/PANEL 19" RACK MOUNTED.
11. CADWELD TO BUILDING STEEL.
12. PROVIDE TEST WELL/COVER/MARKER.

1 IT/COMMUNICATIONS BACKBONE RISER DIAGRAM

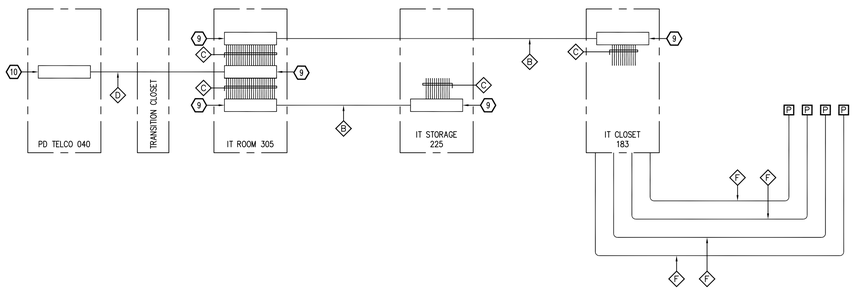
SCALE: NO SCALE
MAIN INFRASTRUCTURE SEE PLANS FOR OUTLET QUANTITIES AND LOCATIONS
ALL WORK IS CONCEALED. ALL WORK INDICATED IS BASE BID

CABLE IDENTIFIER

- A: (4)1 1/4" INNERDUCT IN EACH RACEWAY
- B: 48 STRAND HIGH COUNT FIBER IN 1 1/4" INNER-DUCT IN RACEWAY
- C: FIBER PATCH CORD/CABLE. MULTIPLE QUANTITIES WHERE INDICATED BY NUMBER IN PARENTHESES.
- D: 144 STRAND HIGH COUNT FIBER IN 1 1/4" INNER-DUCT IN RACEWAY
- F: 12 STRAND FIBER IN RACEWAY

TAG SCHEDULE

1. (2)4" RGS RACEWAY
2. (4)4" RGS RACEWAY
3. 1" RGS RACEWAY



2 FIBER OPTIC BLOCK DIAGRAM

SCALE: NO SCALE
POE THROUGH IT ROOMS

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IT/COMMUNICATIONS RISER DIAGRAM

PROJECT NO.: 2219-05

DRAWING NO.:

E-303

PANEL P–1A SECTION 1. 3P–225A MCB 120/208VAC 3ø 4W+G 42KAIC COPPER BUS BOLT ON BREAKERS DOOR IN DOOR CONSTRUCTION WITH KEYED LOCK

SERVES	LOAD WATTS øA	LOAD WATTS øB	LOAD WATTS øC	CIR No
LIGHTING	XXXX			1
LIGHTING		XXXX		3
LIGHTING			XXXX	5
LIGHTING	XXXX			7
HANDRAIL PS LED LIGHTING		XXXX		9
SPARE			XXXX	11
SPARE	XXXX			13
STAIR		XXXX		15
COPIER			800	17
COPIER	XXXX			19
COPIER		XXXX		21
179 RECEPTS			XXXX	23
179 RECEPTS	XXXX			25
179 RECEPTS		XXXX		27
179 RECEPTS			XXXX	29
179 RECEPTS	XXXX			31
179 RECEPTS		XXXX		33
179 RECEPTS			XXXX	35
179 RECEPTS	XXXX			37
152 RECEPTS		XXXX		39
DOOR OPERATOR			XXXX	41

CIR No	LOAD WATTS øA	LOAD WATTS øB	LOAD WATTS øC	SERVES
2	XXXX			171 RECEPTS
4		XXXX		171 RECEPTS
6			XXXX	171 RECEPTS
8	XXXX			177A RECEPTS
10		XXXX		175 RECEPTS
12			XXXX	179C RECEPTS
14	XXXX			176 RECEPTS
16		XXXX		173 RECEPTS
18			XXXX	172 RECEPTS
20	XXXX			172 RECEPTS
22		XXXX		172 RECEPTS
24			XXXX	172 RECEPTS
26	XXXX			RECEPTS
28		XXXX		RECEPTS
30			XXXX	RECEPTS
32	XXXX			182 RECEPTS
34		XXXX		181 TOILET RECEPT
36			XXXX	180 TOILET RECEPT
38	XXXX			ELEC WATER COOLERS
40		XXXX		VAV BOXES
42			XXXX	EXIT SIGNS

XX

PANEL P–1A SECTION 2. 3P–225A MCB 120/208VAC 3ø 4W+G 42KAIC COPPER BUS BOLT ON BREAKERS DOOR IN DOOR CONSTRUCTION WITH KEYED LOCK

SERVES	LOAD WATTS øA	LOAD WATTS øB	LOAD WATTS øC	CIR No
ELECTRIC SHADES	XXXX			43
UH		XXXX		45
SPARE			XXXX	47
SPARE	XXXX			49
SPARE		XXXX		51
SPARE			XXXX	53
SPARE	XXXX			55
SPARE		XXXX		57
SPARE			XXXX	59
SPARE	XXXX			61
SPARE		XXXX		63
SPARE			XXXX	65
SPARE	XXXX			67
SPARE		XXXX		69
SPARE			XXXX	71
SPARE	XXXX			73
SPARE		XXXX		75
SPARE			XXXX	77
SPARE	XXXX			79
SPARE		XXXX		81
SPARE			XXXX	83

CIR No	LOAD WATTS øA	LOAD WATTS øB	LOAD WATTS øC	SERVES
44	1500			POINT OF USE WTR HTR
46		1500		POINT OF USE WTR HTR
48			XXXX	SPARE
50	XXXX			SPARE
52		XXXX		SPARE
54			XXXX	SPARE
56	XXXX			SPARE
58		XXXX		SPARE
60			XXXX	SPARE
62	XXXX			SPARE
64		XXXX		SPARE
66			XXXX	SPARE
68	XXXX			SPARE
70		XXXX		SPARE
72			XXXX	SPARE
74	XXXX			SPARE
76		XXXX		SPARE
78			XXXX	SPARE
80	XXXX			SPARE
82		XXXX		SPARE
84			XXXX	SPARE

PANEL P–1B SECTION 1. 3P–225A MCB 120/208VAC 3ø 4W+G 42KAIC COPPER BUS BOLT ON BREAKERS DOOR IN DOOR CONSTRUCTION WITH KEYED LOCK

SERVES	LOAD WATTS øA	LOAD WATTS øB	LOAD WATTS øC	CIR No
ATRIUM LIGHT	XXXX			1
LIGHTING		XXXX		3
LIGHTING			XXXX	5
157 LIGHTING	XXXX			7
157 LIGHTING		XXXX		9
IRRIGATION PANELS			XXXX	11
157 LIGHTING	888			13
STAIR #4 AND #2 LTG		XXXX		15
SPARE			XXXX	17
COPIER	XXXX			19
166 168 169 RECEPTS		XXXX		21
TOILET 163 RECEPT			XXXX	23
161A KIT RECEPTS	XXXX			25
164 RECEPTS		XXXX		27
160 RECEPTS			XXXX	29
162 RECEPTS	XXXX			31
162 RECEPTS		XXXX		33
162 RECEPTS			XXXX	35
RECPTS	XXXX			37
SPARE		XXXX		39
SPARE			XXXX	41

CIR No	LOAD WATTS øA	LOAD WATTS øB	LOAD WATTS øC	SERVES
2	XXXX			153 170 RECEPTS
4		XXXX		DOOR OPERATOR
6			XXXX	DOOR OPERATOR
8	XXXX			183 RECEPTS
10		XXXX		183 RECEPTS
12			XXXX	156 RECEPTS
14	XXXX			ELECTRIC WTR COOLERS
16		XXXX		DOOR OPERATOR
18			XXXX	TOILET 154 RECEPTS
20	XXXX			TOILET 155 RECEPTS
22		XXXX		166 RECEPTS
24			XXXX	166 RECEPTS
26	XXXX			166 167 RECEPTS
28		XXXX		166 RECEPTS
30			XXXX	166 RECEPTS
32	XXXX			ELEV PIT
34		XXXX		ELEV PIT SUMP PUMP
36			XXXX	2#10,1#10G–3/4"C
38	XXXX			VAV BOXES
40		XXXX		EXIT SIGNS
42			XXXX	

XX

PANEL P–1B SECTION 2. 3P–225A MCB 120/208VAC 3ø 4W+G 42KAIC COPPER BUS BOLT ON BREAKERS DOOR IN DOOR CONSTRUCTION WITH KEYED LOCK

SERVES	LOAD WATTS øA	LOAD WATTS øB	LOAD WATTS øC	CIR No
157 STAGE RECEPTS	XXXX			43
157 STAGE RECEPTS		XXXX		45
157 STAGE RECEPTS			XXXX	47
157 STAGE RECEPTS	XXXX			49
157 RECEPTS		XXXX		51
157 RECEPTS			XXXX	53
157 RECEPTS	XXXX			55
ELEC RM LIGHTING		XXXX		57
POINT OF USE WTR HTR			1500	59
POINT OF USE WTR HTR	1500			61
POINT OF USE WTR HTR		1500		63
LOBBY LIGHTING			555	65
SPARE	XXXX			67
SPARE		XXXX		69
SPARE			XXXX	71
SPARE	XXXX			73
SPARE		XXXX		75
SPARE			XXXX	77
SPARE	XXXX			79
SPARE		XXXX		81
SPARE			XXXX	83

CIR No	LOAD WATTS øA	LOAD WATTS øB	LOAD WATTS øC	SERVES
44	XXXX			DOOR OPERATOR
46		XXXX		DOOR OPERATOR
48			XXXX	IRRIGATION PUMP
50	XXXX			IRRIGATION PUMP
52		XXXX		SITE LTG RELAY
54			XXXX	SITE LIGHTING(1)
56	XXXX			2#10,1#10G–1 1/4"C
58		XXXX		SITE LIGHTING(1)
60			XXXX	2#10,1#10G–1 1/4"C
62	XXXX			FA PAD
64		XXXX		ELECTRIC SHADES
66			XXXX	SPARE
68	XXXX			SPARE
70		XXXX		SPARE
72			XXXX	SPARE
74	XXXX			SPARE
76		XXXX		SPARE
78			XXXX	SPARE
80	XXXX			SPARE
82		XXXX		SPARE
84			XXXX	SPARE

(1) CIRCUIT VIA CONTROL RELAY/CONTACTOR

PANEL P–2A SECTION 1. 3P–225A MCB 120/208VAC 3ø 4W+G 42KAIC COPPER BUS BOLT ON BREAKERS DOOR IN DOOR CONSTRUCTION WITH KEYED LOCK

SERVES	LOAD WATTS øA	LOAD WATTS øB	LOAD WATTS øC	CIR No
LIGHTING	XXXX			1
LIGHTING		XXXX		3
LIGHTING			XXXX	5
LOWER ROOF LTG/RECEPTS	XXXX			7
SPARE		XXXX		9
SPARE			XXXX	11
205,224 RECEPTS	XXXX			13
211 RECEPTS		XXXX		15
207 RECEPTS			XXXX	17
208 RECEPTS	XXXX			19
209 RECEPTS		XXXX		21
210 RECEPTS			XXXX	23
229 RECEPTS	XXXX			25
206 CORR RECEPTS		XXXX		27
206 RECEPTS			XXXX	29
206 RECEPTS	XXXX			31
206 RECEPTS		XXXX		33
206 RECEPTS			XXXX	35
SPARE	XXXX			37
SPARE		XXXX		39
SPARE			XXXX	41

CIR No	LOAD WATTS øA	LOAD WATTS øB	LOAD WATTS øC	SERVES
2	XXXX			200 RECEPTS
4		XXXX		200 RECEPTS
6			XXXX	223 RECEPTS
8	XXXX			223 RECEPTS
10		XXXX		201 RECEPTACLE
12			XXXX	202 REFRIG RECEPT
14	XXXX			202 COUNTER RECEPTS
16		XXXX		202 COUNTER RECEPTS
18			XXXX	202 RECEPTS
20	XXXX			203 TOILET RECEPTS
22		XXXX		204 TOILET RECEPTS
24			XXXX	CORR RECEPTS
26	XXXX			ELEC WTR COOLER
28		XXXX		SPARE
30			XXXX	SPARE
32	XXXX			SPARE
34		XXXX		SPARE
36			XXXX	SPARE
38	XXXX			SPARE
40		XXXX		VAV BOXES
42			XXXX	EXIT SIGNS

XX

PANEL P–2A SECTION 2. 3P–225A MCB 120/208VAC 3ø 4W+G 42KAIC COPPER BUS BOLT ON BREAKERS DOOR IN DOOR CONSTRUCTION WITH KEYED LOCK

SERVES	LOAD WATTS øA	LOAD WATTS øB	LOAD WATTS øC	CIR No
SIGN LIGHTING	XXXX			43
SPARE		XXXX		45
SPARE			XXXX	47
SPARE	XXXX			49
SPARE		XXXX		51
SPARE			XXXX	53
SPARE	XXXX			55
SPARE		XXXX		57
SPARE			XXXX	59
SPARE	XXXX			61
SPARE		XXXX		63
SPARE			XXXX	65
SPARE	XXXX			67
SPARE		XXXX		69
SPARE			XXXX	71
SPARE	XXXX			73
SPARE		XXXX		75
SPARE			XXXX	77
SPARE	XXXX			79
SPARE		XXXX		81
SPARE			XXXX	83

CIR No	LOAD WATTS øA	LOAD WATTS øB	LOAD WATTS øC	SERVES
44	XXXX			FA PAD
46		1500		POINT OF USE WTR HTR
48			1500	POINT OF USE WTR HTR
50	1500			POINT OF USE WTR HTR
52	XXXX			SHUNT TRIP FOR PP–IT
54		XXXX		SPARE
56	XXXX			SPARE
58		XXXX		SPARE
60			XXXX	SPARE
62	XXXX			SPARE
64		XXXX		SPARE
66			XXXX	SPARE
68	XXXX			SPARE
70		XXXX		SPARE
72			XXXX	SPARE
74	XXXX			SPARE
76		XXXX		SPARE
78			XXXX	SPARE
80	XXXX			SPARE
82		XXXX		SPARE
84			XXXX	SPARE

PANEL P–2B SECTION 1. 3P–225A MCB 120/208VAC 3ø 4W+G 42KAIC COPPER BUS BOLT ON BREAKERS DOOR IN DOOR CONSTRUCTION WITH KEYED LOCK

SERVES	LOAD WATTS øA	LOAD WATTS øB	LOAD WATTS øC	CIR No
LIGHTING	XXXX			1
LIGHTING		XXXX		3
LIGHTING			XXXX	5
LOWER ROOF LTG/RECEPTS	XXXX			7
ROOFTOP LTG RECEPTS		XXXX		9
SPARE			XXXX	11
221 TOILET RECEPT	XXXX			13
215, 216 RECEPTS		XXXX		15
217, 218 RECEPTS			XXXX	17
POINT OF USE WTR HTR	1500			19
SIGN LIGHTING		XXXX		21
SPARE			XXXX	23
SPARE	XXXX			25
SPARE		XXXX		27
SPARE			XXXX	29
SPARE	XXXX			31
SPARE		XXXX		33
SPARE			XXXX	35
SPARE	XXXX			37
SPARE		XXXX		39
SHUNT TRIP FOR PP–IT			XXXX	41

CIR No	LOAD WATTS øA	LOAD WATTS øB	LOAD WATTS øC	SERVES
2	XXXX			214 RECEPTS
4		XXXX		212 RECEPTS
6			XXXX	212 RECEPTS
8	XXXX			212 COPIER RECEPT
10		XXXX		CORRIDOR RECEPTS
12			XXXX	213 RECEPTS
14	XXXX			219 RECEPTS
16		XXXX		219 RECEPTS
18			XXXX	220 REFRIG RECEPT
20	XXXX			220 COUNTER RECEPTS
22		XXXX		OFFICE RECEPTS
24			XXXX	OFFICE RECEPTS
26	XXXX			SPARE
28		XXXX		SPARE
30			XXXX	SPARE
32	XXXX			SPARE
34		XXXX		SPARE
36			XXXX	SPARE
38	XXXX			SPARE
40		XXXX		VAV BOXES
42			XXXX	EXIT SIGNS

XX

PANEL P–2B SECTION 2. 3P–225A MCB 120/208VAC 3ø 4W+G 42KAIC COPPER BUS BOLT ON BREAKERS DOOR IN DOOR CONSTRUCTION WITH KEYED LOCK

SERVES	LOAD WATTS øA	LOAD WATTS øB	LOAD WATTS øC	CIR No
SPARE	XXXX			43
SPARE		XXXX		45
SPARE			XXXX	47
SPARE	XXXX			49
SPARE		XXXX		51
SPARE			XXXX	53
SPARE	XXXX			55
SPARE		XXXX		57
SPARE			XXXX	59
SPARE	XXXX			61
SPARE		XXXX		63
SPARE			XXXX	65
SPARE	XXXX			67
SPARE		XXXX		69
SPARE			XXXX	71
SPARE	XXXX			73
SPARE		XXXX		75
SPARE			XXXX	77
SPARE	XXXX			79
SPARE		XXXX		81
SPARE			XXXX	83

CIR No	LOAD WATTS øA	LOAD WATTS øB	LOAD WATTS øC	SERVES
44	XXXX			SPARE
46		XXXX		SPARE
48			XXXX	SPARE
50	XXXX			SPARE
52		XXXX		SPARE
54			XXXX	SPARE
56	XXXX			SPARE
58		XXXX		SPARE
60			XXXX	SPARE
62	XXXX			SPARE
64		XXXX		SPARE
66			XXXX	SPARE
68	XXXX			SPARE
70		XXXX		SPARE
72			XXXX	SPARE
74	XXXX			SPARE
76		XXXX		SPARE
78			XXXX	SPARE
80	XXXX			SPARE
82		XXXX		SPARE
84			XXXX	SPARE

PANEL P–1C. 3P–225A MCB 120/208VAC 3ø 4W+G 42KAIC COPPER BUS BOLT ON BREAKERS DOOR IN DOOR CONSTRUCTION WITH KEYED LOCK

SERVES	LOAD WATTS øA	LOAD WATTS øB	LOAD WATTS øC	CIR No
147 RECEPTS	XXXX			1
147 RECEPTS		XXXX		3
147 RECEPTS			XXXX	5
RECEPTS	XXXX			7
LOBBY 101 RECEPTS		XXXX		9
LIGHTING			XXXX	11
LIGHTING	XXXX			13
SPARE		XXXX		15
SPARE			XXXX	17
SPARE	XXXX			19
SPARE		XXXX		21
SPARE			XXXX	23
SPARE	XXXX			25
SPARE		XXXX		27
SPARE			XXXX	29
SPARE	XXXX			31
SPARE		XXXX		33
SPARE			XXXX	35
SPARE	XXXX			37
SPARE		XXXX		39
SPARE			XXXX	41

CIR No	LOAD WATTS øA	LOAD WATTS øB	LOAD WATTS øC	SERVES
2	XXXX			147 RECEPTS
4		XXXX		147 RECEPTS
6			XXXX	146 RECEPTS
8	XXXX			145 RECEPTS
10		XXXX		JURY RM RECEPTS
12			XXXX	149 RECEPTS
14	XXXX			243 TOILET RECEPTS
16		1500		POINT OF USE WTR HTR
18			XXXX	UH
20	XXXX			SIGN LIGHTING (tcb)
22		XXXX		SPARE
24			XXXX	SPARE
26	XXXX			SPARE
28		XXXX		SPARE
30			XXXX	SPARE
32	XXXX			SPARE
34		XXXX		SPARE
36			XXXX	SPARE
38	XXXX			SPARE
40		XXXX		VAV BOXES
42			XXXX	EXIT SIGNS

XX

PANEL P–3. 3P–225A MCB 120/208VAC 3ø 4W+G 42KAIC COPPER BUS BOLT ON BREAKERS DOOR IN DOOR CONSTRUCTION WITH KEYED LOCK

SERVES	LOAD WATTS øA	LOAD WATTS øB	LOAD WATTS øC	CIR No
SPARE	XXXX			1
SPARE		XXXX		3
SPARE			XXXX	5
SPARE	XXXX			7
SPARE		XXXX		9
SPARE			XXXX	11
RECEPTACLES	XXXX			13
RECEPTACLES		XXXX		15
RECEPTACLES			XXXX	17
RECEPTACLES	XXXX			19
RECEPTACLES		XXXX		21
SPARE			XXXX	23
SPARE	XXXX			25
SPARE		XXXX		27
UNIT HEATERS			XXXX	29
POINT OF USE WTR HTR	1500			31
POINT OF USE WTR HTR		1500		33
FACP PAD			XXXX	35
SPARE	XXXX			37
SPARE		XXXX		39
SPARE			XXXX	41

CIR No	LOAD WATTS øA	LOAD WATTS øB	LOAD WATTS øC	SERVES
2	XXXX			RECEPTACLES
4		XXXX		RECEPTACLES
6			XXXX	RECEPTACLES
8	XXXX			RECEPTACLES
10		XXXX		RECEPTACLES
12			XXXX	RECEPTACLES
14	XXXX			RECEPTACLES
16		XXXX		RECEPTACLES
18			XXXX	RECEPTACLES
20	XXXX			RECEPTACLES
22		XXXX		SPARE
24			XXXX	SPARE
26	XXXX			SPARE
28		XXXX		SPARE
30			XXXX	SPARE
32	XXXX			SPARE
34		XXXX		SPARE
36			XXXX	SPARE
38	XXXX			SPARE
40		XXXX		VAV'S
42			XXXX	SPARE

XXXX XXXX XXXX XXXX XXXX XXXX

PANEL P–R. NEMA 3R STAINLESS STEEL. 3P–225A MCB 120/208VAC 3ø 4W+G 42KAIC COPPER BUS BOLT ON BREAKERS DOOR IN DOOR CONSTRUCTION WITH KEYED LOCK

SERVES	LOAD WATTS øA	LOAD WATTS øB	LOAD WATTS øC	CIR No
STAIR UNIT HEATER	XXXX			1
SPARE		XXXX		3
SPARE			XXXX	5
SPARE	XXXX			7
ROOF LTG		XXXX		9
ROOF RECEPTS			XXXX	11
SPARE	XXXX			13
SPARE		XXXX		15
SPARE			XXXX	17
SPARE	XXXX			19
SPARE		XXXX		21
SPARE			XXXX	23
SPARE	XXXX			25
SPARE		XXXX		27
SPARE			XXXX	29
SPARE	XXXX			31
SPARE		XXXX		33
SPARE			XXXX	35
SPARE	XXXX			37
SPARE		XXXX		39
SPARE			XXXX	41

CIR No	LOAD WATTS øA	LOAD WATTS øB	LOAD WATTS øC	SERVES
2	XXXX			SPARE
4		XXXX		SPARE
6			XXXX	SPARE
8	XXXX			SPARE
10		XXXX		SPARE
12			XXXX	SPARE
14	XXXX			SPARE
16		XXXX		SPARE
18			XXXX	SPARE
20	XXXX			SPARE
22		XXXX		SPARE
24			XXXX	SPARE
26	XXXX			SPARE
28		XXXX		SPARE
30			XXXX	SPARE
32	XXXX			SPARE
34		XXXX		SPARE
36			XXXX	SPARE
38	XXXX			SPARE
40		XXXX		SPARE
42			XXXX	SPARE

XXXX XXXX XXXX XXXX XXXX XXXX

PANEL P–B. 3P–225A MCB 120/208VAC 3ø 4W+G 42KAIC COPPER BUS BOLT ON BREAKERS DOOR IN DOOR CONSTRUCTION WITH KEYED LOCK

SERVES	LOAD WATTS øA	LOAD WATTS øB	LOAD WATTS øC	CIR No
PARKING LOT LTG	XXXX			1
2#8,1#10G –1"C		XXXX		3
PARKING LOT LTG			XXXX	5
2#8,1#10G –1"C	XXXX			7
PARKING LOT LTG		XXXX		9
2#8,1#10G –1"C			XXXX	11
SPARE	XXXX			13
SPARE		XXXX		15
SPARE			XXXX	17
SPARE	XXXX			19
SPARE		XXXX		21
SPARE			XXXX	23
SPARE	XXXX			25
SPARE		XXXX		27
SPARE			XXXX	29
SPARE	XXXX			31
SPARE		XXXX		33
SPARE			XXXX	35
SPARE	XXXX			37
SPARE		XXXX		39
SPARE			XXXX	41

CIR No	LOAD WATTS øA	LOAD WATTS øB	LOAD WATTS øC	SERVES	
2	1500			HOT BOX HEATER	SHARED C.
4		1500		HOT BOX HEATER	
6			XXXX	HOT BOX LIGHTING/RECEPT	
8	XXXX			TO MON PANEL	
10		XXXX		GENERATOR REMOTE ANN	
12			XXXX	GEN BLOCK HTR	
14	XXXX			2#10,1#10G–1 1/4"C	
16		XXXX		GEN RECEPTACLE	
18			500	CAF–1	
20	400			EFX9	
22		XXXX		SPARE	
24			XXXX	SPARE	
26	XXXX			SPARE	
28		XXXX		SPARE	
30			XXXX	SPARE	
32	XXXX			SPARE	
34		XXXX		SPARE	
36			XXXX	SPARE	
38	XXXX			SPARE	
40		XXXX		SPARE	
42			XXXX	EXIT SIGNS	

(1) CIRCUIT VIA THE LOAD CONTROLLERS; PROGRAMMED FOR TIME CLOCK CONTROL

PANEL P–IT. 3P–100A MCB W/SHUNT TRIP. 120/208VAC 3ø 4W+G 42KAIC COPPER BUS BOLT ON BREAKERS DOOR IN DOOR CONSTRUCTION WITH KEYED LOCK
SHUNT TRIP THIS PANELS MCB ON ACTIVATION OF THE EPO BUTTON(S)

SERVES	LOAD WATTS øA	LOAD WATTS øB	LOAD WATTS øC	CIR No
AC–1	100			1
2#12,1#12G–3/4"C		100		3
ACCU–1			2876	5
2#10,1#10G–3/4"C	2976			7
SPARE		XXXX		9
--			XXXX	11
SPARE	XXXX			13
--		XXXX		15
SPARE			XXXX	17
--	XXXX			19
SPARE		XXXX		21
SPARE			XXXX	23

CIR No	LOAD WATTS øA	LOAD WATTS øB	LOAD WATTS øC	SERVES
2	XXXX			IT ROOM RECEPTS
4		XXXX		IT ROOM RECEPTS
6			XXXX	IT ROOM RECEPTS
8	XXXX			2#10,1#10G–3/4"C
10		XXXX		IT ROOM RECEPTS
12			XXXX	2#10,1#10G–3/4"C
14	XXXX			IT ROOM RECEPTS
16		XXXX		2#10,1#10G–3/4"C
18			XXXX	SPARE
20	XXXX			SPARE
22		XXXX		SPARE
24			XXXX	SPARE

PANEL P–B. 3P–225A MCB 120/208VAC 3ø 4W+G 42KAIC COPPER BUS BOLT ON BREAKERS DOOR IN DOOR CONSTRUCTION WITH KEYED LOCK

SERVES	LOAD WATTS øA	LOAD WATTS øB	LOAD WATTS øC	CIR No
SPARE	XXXX			43
SPARE		XXXX		45
SPARE			XXXX	47
SPARE	XXXX			49
SPARE		XXXX		51
SPARE			XXXX	53
CHARGING STATION	3500			55
2#2,1#8G		3500		57
CHARGING STATION			3500	59
2#2,1#8G	3500			61
CHARGING STATION		3500		63
2#2,1#8G			3500	65
CHARGING STATION	3500			67
2#2,1#8G		3500		69
CHARGING STATION			3500	71
2#2,1#8G	3500			73
CHARGING STATION		3500		75
2#2,1#8G			3500	77
SPARE	XXXX			79
SPARE		XXXX		81
SPARE			XXXX	83

CIR No	LOAD WATTS øA	LOAD WATTS øB	LOAD WATTS øC	SERVES	
44	XXXX			SPARE	
46		XXXX		SPARE	
48			XXXX	SPARE	
50	XXXX			SPARE	
52		XXXX		SPARE	
54			XXXX	SPARE	
56	XXXX			SPARE	
58		XXXX		SPARE	
60			XXXX	SPARE	
62	3500			CHARGING STATION	
64		3500		2#2,1#8G	
66			3500	CHARGING STATION	
68	3500			2#2,1#8G	
70		XXXX		SPARE	
72			XXXX	SPARE	
74	XXXX			SPARE	
76		XXXX		SPARE	
78			XXXX	SPARE	
80	XXXX			SPARE	
82		XXXX		SPARE	
84			XXXX	EXIT SIGNS	

(1) CIRCUIT VIA THE LOAD CONTROLLERS; PROGRAMMED FOR TIME CLOCK CONTROL

DO NOT SHARE NEUTRAL CONDUCTOR. PROVIDE EACH CIRCUIT REQUIRING A NEUTRAL WITH ITS OWN NEUTRAL CONDUCTOR.

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CBK PROJECT NO. 21030

ISSUE NO.	ISSUE DATE	DESCRIPTION
1	11/9/2021	RELEASE FOR BID

ORANGETOWN TOWN HALL

ADDITION AND ALTERATIONS

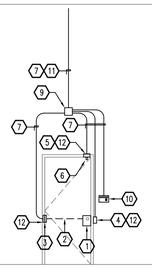
26 ORANGEBURG RD
ORANGEBURG, NEW YORK 10962

ELECTRICAL PANEL SCHEDULES

PROJECT NO.: 2219–05

DRAWING NO.:

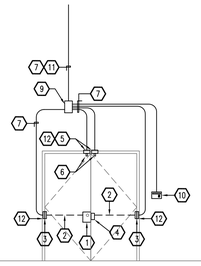
E-304



1 ACCESS CONTROL AT SINGLE TYPE DOOR (SECURE SIDE VIEW)

SCALE: NO SCALE

ALL COMPONENTS AND CIRCUITRY ARE TO BE CONCEALED. ALL WIRING IN NON ACCESSIBLE CONSTRUCTION SHALL BE IN RACEWAY. ALL WIRING OUT SIDE THE SECURED AREA SHALL BE IN RACEWAY.



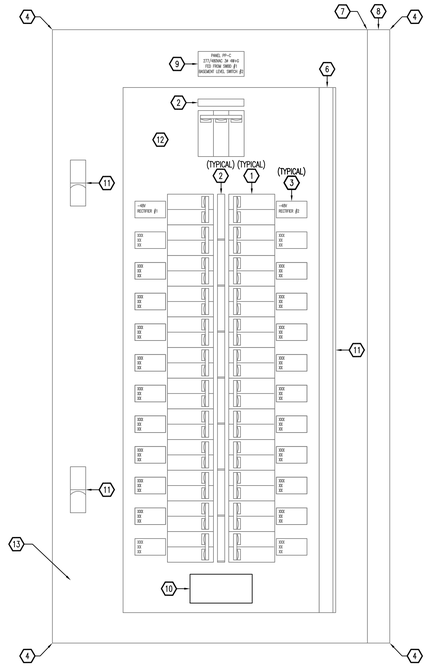
2 ACCESS CONTROL AT DOUBLE TYPE DOOR (SECURE SIDE VIEW)

SCALE: NO SCALE

ALL COMPONENTS AND CIRCUITRY ARE TO BE CONCEALED. ALL WIRING IN NON ACCESSIBLE CONSTRUCTION SHALL BE IN RACEWAY. ALL WIRING OUT SIDE THE SECURED AREA SHALL BE IN RACEWAY.

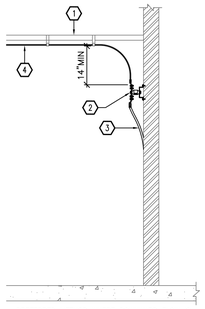
KEYED NOTES(ACCESS CONTROL)

1. LOCKSET DOOR HARDWARE WITH ELECTRIC RELEASE, INTEGRAL REX MICROSWITCH. NOTE: EGRESS PASSAGE IS A MECHANICAL FUNCTION OF THE LOCKSET INDEPENDENT OF THE ACCESS CONTROL.
2. WIRING CONCEALED IN/THROUGH DOOR LEAF FROM LOCKSET THROUGH ELECTRIC HINGE.
3. ELECTRIC HINGE WITH THRU WIRING AND MAGNETIC CONTACT.
4. CONCEALED STRIKE STATUS SWITCH WITH MORTOR SHIELD BOX.
5. CONCEALED MAGNETIC SWITCH.
6. CONCEALED REPELLING MAGNET FOR MAGNETIC SWITCH.
7. WIRING IN RACEWAY CONCEALED IN PARTITION.
8. PASSIVE INFRARED/ULTRASONIC MOTION DETECTOR
9. FLUSH MOUNTED 6X6X4 JUNCTION BOX.
10. ACCESS CONTROL READER.
11. PROVIDE 120VAC CIRCUIT.
12. PROVIDE DOOR FRAME WITH MORTOR SHIELD BOX AND RACEWAY UP THROUGH FRAME/WALL/ETC.

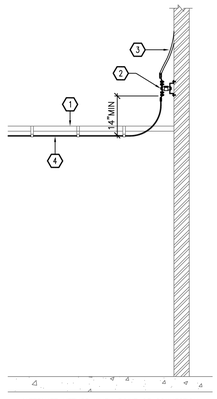


4 TYPICAL PANEL BOARD FEATURES

SCALE: NO SCALE IN ADDITION TO SPECIFIED FEATURES. PROVIDE FOR ALL TYPES OF PANELS



PREFERRED METHOD WHERE DOWNWARD FLOW IS MAINTAINED. POINT OF CONNECTION TO BUILDING STEEL MUST BE AVAILABLE BELOW MGB.

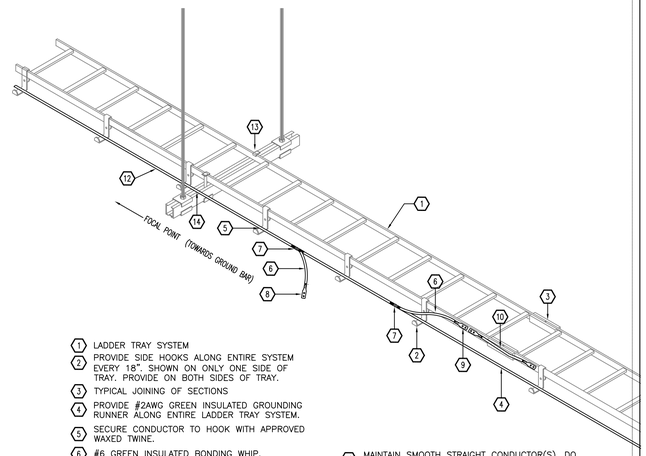


ALTERNATE METHOD WHEN POINT OF CONNECTION TO BUILDING STEEL IS ONLY AVAILABLE ABOVE MGB.

2 MOUNTING HEIGHT OF MGB

SCALE: NO SCALE

1. OVERHEAD LADDER TRAY.
2. WALL MOUNTED GROUND BAR (MGB).
3. MAIN BONDING CONDUCTOR FROM MGB TO E
4. #2AWG GROUNDING RUNNER.



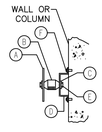
1. LADDER TRAY SYSTEM
2. PROVIDE SIDE HOOKS ALONG ENTIRE SYSTEM EVERY 18". SHOWN ON ONLY ONE SIDE OF TRAY. PROVIDE ON BOTH SIDES OF TRAY.
3. TYPICAL JOINING OF SECTIONS
4. PROVIDE #2AWG GREEN INSULATED GROUNDING RUNNER ALONG ENTIRE LADDER TRAY SYSTEM.
5. SECURE CONDUCTOR TO HOOK WITH APPROVED WAXED TWINE.
6. #6 GREEN INSULATED BONDING WHIP.
7. COMPRESSION "H" TAP
8. TWO HOLE LONG BARREL COMPRESSION TONGUE LUG. TERMINATE ON EQUIPMENT RACK. TYPICAL EACH EQUIPMENT RACK.
9. TWO HOLE LONG BARREL COMPRESSION TONGUE LUG. TERMINATE ON SECTION OF TRAY. TYPICAL FOR EACH PREFABRICATED SECTION OF TRAY SYSTEM
10. BOND ACROSS SECTIONS OF CABLE TRAY SYSTEM
11. CLEAN SURFACES OF TRAY AND TRAPEZE SUPPORT TO BARE METAL TO MAINTAIN BONDED CONNECTION.
12. MAINTAIN SMOOTH STRAIGHT CONDUCTOR(S). DO NOT ALLOW SAGGING. PROVIDE ADDITIONAL HOOKS WHERE REQUIRED TO ACCOMMODATE THIS REQUIREMENT.
13. REMOVE PAINT WHERE LADDER RACK CONTACTS TRAPEZE HANGER(S) TO ENSURE GROUND CONNECTION BETWEEN BOTH APPURTENANCES.
14. WHERE CONDUCTOR RESTS ON TRAPEZE OR "WATERFALLS" OFF/OVER RACK PROVIDE STATIC PAPER WRAP ON STRUCTURE TO PREVENT CONDUCTOR WEAR.

6 LADDER TRAY BONDING DETAIL

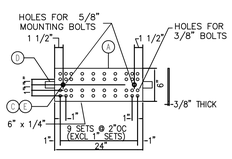
SCALE: NO SCALE

KEYED NOTES (PANEL BOARD)

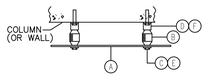
1. BRANCH CIRCUIT BREAKER. RATING AND POLE VARY.
2. STRANCO CIRCUIT SAFE LOCK OUT TAG OUT SYSTEM FOR ENTIRE PANELBOARD. PROVIDE COMPLETE WITH ADDITIONAL DEVICES (NOT SHOWN).
3. IN ADDITION TO TYPE WRITTEN PANEL SCHEDULE. LABEL EACH DEVICE (INCLUDING SPARES) WITH P-TOUCH LABEL INDICATED THE LOAD SERVED.
4. WELD ALL CORNERS OF BACK BOX WITH CONTINUOUS BEAD WELD. GRIND CLEAN AND APPLY RUST PROOFING.
5. HINGED DEAD FRONT COVER (SHOWN CLOSED)
6. HINGED DOOR (SHOWN OPEN) WITH LATCH
7. CONTINUOUS PIANO HINGE FOR FRONT COVER
8. FIXED LEAF OF HINGED FRONT COVER ANCHORED TO BACKBOX.
9. ENGRAVED PHENOLIC LABEL SECURED TO TOP AREA OF PANELBOARD HINGED COVER.
10. STRANCO HOLDER WITH SPARE LOCKOUT DEVICES
11. LATCHES
12. DEAD FRONT BREAKER PANEL MODIFIED TO BE SECURED TO HINGED COVER SO THAT DEAD COVER OPENS WITH HINGED COVER.
13. BRAZED STUDS TO INTERIOR OF BACKBOX TO ACCOMMODATE TWO HOLE COMPRESSION TONGUE LUG. PROVIDE INTERIOR BONDING CONDUCTOR FROM STUDS TO GROUND BUS.



SIDE VIEW (WALL OR COLUMN TYPE)



FRONT VIEW (WALL TYPE)



PLAN VIEW (WALL OR COLUMN TYPE)

4 GROUND BAR DETAIL

SCALE: NO SCALE

NOTES:

- (A) COPPER GROUND BUS BAR.
- (B) INSULATORS – NEWTON CAT. #3061-4
- (C) 5/8" LOCKWASHERS – NEWTON CAT. #3015-B
- (D) WALL MOUNTING BRACKET – NEWTON CAT. #A-6056 UNISTRUT P100HS 24" LONG (WHERE FLOOR MOUNT)
- (E) 5/8 = 11x1" HHCS BOLT – NEWTON CAT. #3012-1
- (F) USE APPROPRIATE EXPANSION SHIELDS & BOLTS FOR MOUNTING ON CONCRETE COLUMN

ALL BENDS IN GROUNDING CONDUCTORS SHALL BE MADE WITH LONG SMOOTH SWEEPS (12" RADIUS, MIN 6" WHERE 12" IS NOT POSSIBLE) WITH THE POTENTIAL CURRENT FLOW SWEEPING DOWNWARDS OR TOWARDS THE PRINCIPLE GROUNDING POINT.

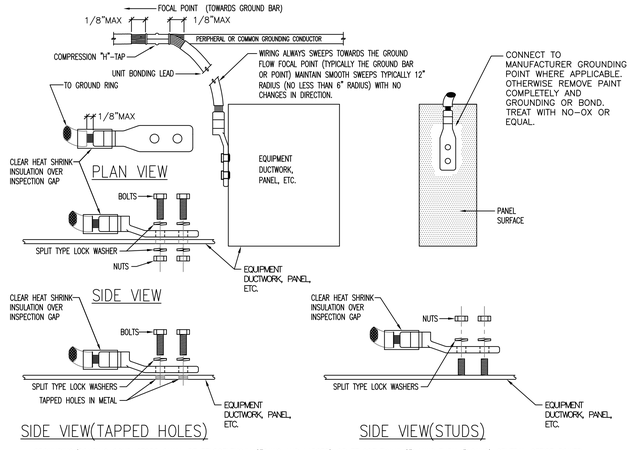
DO NOT ENCIRCLE GROUNDING CONDUCTORS WITH MAGNETIC OR CONDUCTIVE MATERIALS.

ALL PERMANENT CONNECTIONS OF GROUNDING CONDUCTORS SHALL BE COMPRESSION CONNECTIONS OR CADWELD CONNECTIONS (WHERE OUTDOOR, TOP BUILDING STEEL AND/OR BURIED). CONNECTIONS AT EQUIPMENT AND TO GROUND BARS SHALL BE TWO HOLE LONG BARREL COMPRESSION TONGUE LUGS.

WHERE GROUNDING CONDUCTORS (OTHER THAN RACEWAY BONDING CONDUCTORS) ARE INSTALLED IN RACEWAY, THE RACEWAY SHALL BE FIBERGLASS WITH NON-METTALLIC STRAPS/SUPPORTS.

3 STRANCO LOCKOUT/TAKOUT SYSTEM

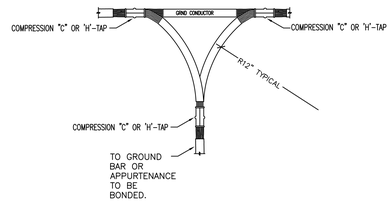
SCALE: NO SCALE ROVIDE FOR ALL PANELS AND INDIVIUAL BREAKERS



GROUNDING/BONDING CONDUCTORS SHALL BE TELCOFLEX® IV (#8AWG AND LARGER) OR TELCOFLEX® III (#14AWG THRU #10AWG) CENTRAL OFFICE POWER WIRE AND CABLE CLASS I FLEXIBLE STRAND WITH BRAID. LOW-SMOKE, LEAD-FREE AND SILICONE-FREE NON-HALOGENATED INSULATION. UL CENTRAL OFFICE POWER CABLE 105°C DRY, 60°C WET. UL LISTED RHH/LS FT4 AND VW-1, 90°C DRY, 60°C WET. 600 VOLTS. SIZES 1/0 AND LARGER ARE UL, CT USE RATED. CSA AWM I B 105°C, 600 VOLTS, FT4-ST1.

3 GROUNDING DETAIL

SCALE: NO SCALE

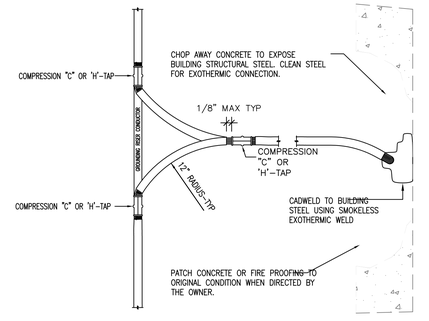


4 OMNI-DIRECIONAL GROUNDING NODE

SCALE: NO SCALE

GROUNDING AND BONDING CONDUCTORS SHALL BE TELCOFLEX® IV (#8AWG AND LARGER) OR TELCOFLEX® III (#14AWG THRU #10AWG) CENTRAL OFFICE POWER WIRE AND CABLE CLASS I FLEXIBLE STRAND WITH BRAID. LOW-SMOKE, LEAD-FREE AND SILICONE-FREE NON-HALOGENATED INSULATION. UL CENTRAL OFFICE POWER CABLE 105°C DRY, 60°C WET. UL LISTED RHH/LS FT4 AND VW-1, 90°C DRY, 60°C WET. 600 VOLTS. SIZES 1/0 AND LARGER ARE UL, CT USE RATED. CSA AWM I B 105°C, 600 VOLTS, FT4-ST1.

H-TAPS SHALL BE BURNDY "YH" SERIES TIN PLATED COPPER COMPRESSION TAPS. C-TAPS SHALL BE BURNDY "YC" SERIES TIN PLATED COPPER COMPRESSION TAPS.



5 INTERMEDIATE BONDING OF GROUND RISER TO BUILDING STEEL

SCALE: NO SCALE

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CBK PROJECT NO. 21030

ISSUE NO.	ISSUE DATE	DESCRIPTION
1	11/9/2021	RELEASE FOR BID

TOWN OF ORANGETOWN — RICH IN HISTORY

ORANGETOWN TOWN HALL

ADDITION AND ALTERATIONS

26 ORANGEBURG RD
ORANGEBURG, NEW YORK 10962

ELECTRICAL DETAILS

PROJECT NO.: 2219-05

DRAWING NO.:

E-305

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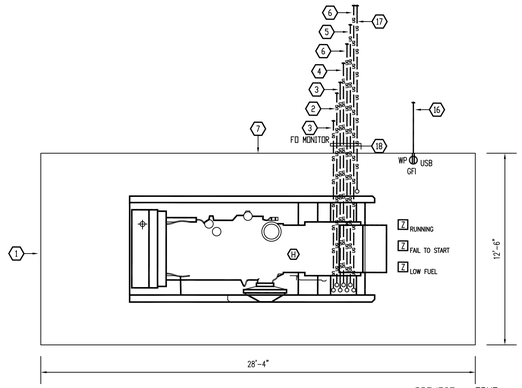
one inch = one foot
three quarters inch = one foot
one half inch = one foot
three eighths inch = one foot
one quarter inch = one foot
one eighth inch = one foot

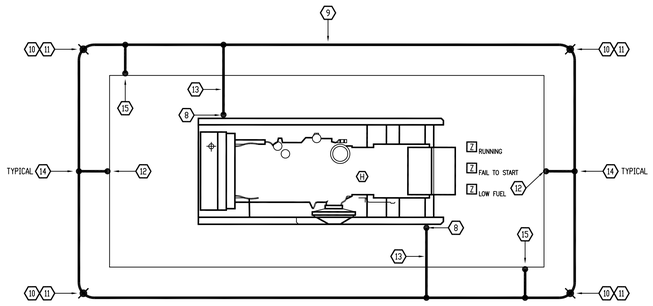


1 PART SITE PLAN–GENERATOR

PROJECT NORTH TRUE NORTH

SCALE: 1/4"=1'-0"

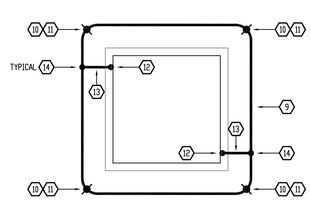
ALL SERVICES, FEEDERS, CONNECTIONS ETC.. TO THE GEMERATOR SHALL BE RUN CONCEALED AND CONCEALED WITHIN THE GENERATOR ENCLOSURE DIMENSIONS ARE ORDER OF MAGNITUDE. ACTUAL DIMENSIONS VARY.



2 PART SITE PLAN–GENERATOR GROUNDING/BONDING

PROJECT NORTH TRUE NORTH

SCALE: 1/4"=1'-0"



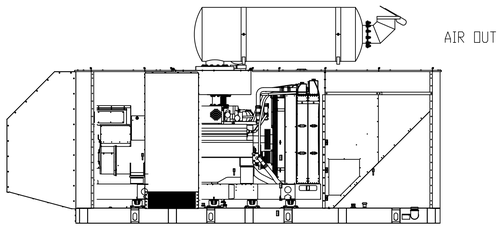
2 PART SITE PLAN–UTILITY TRANSFORMER GROUNDING/BONDING

SCALE: 1/4"=1'-0" ***IN ADDITION, PROVIDE ALL UTILITY REQUIREMENTS***

PROJECT NORTH TRUE NORTH

KEYED NOTES

1. STANDBY GENERATOR WITH CRITICAL ACOUSTICAL, WEATHER RATED ENCLOSURE.
2. UNDERGROUND POWER FEEDER FROM GENERATOR. SEE ONE–LINE DIAGRAM FOR ADDITIONAL INFORMATION.
3. UNDERGROUND CIRCUITRY FOR GENERATOR REMOTE ALARMS/ANNUNCIATOR.
4. UNDERGROUND CIRCUITRY FOR GENERATOR CONTROL.
5. UNDERGROUND CIRCUITRY FOR GENERATOR SHORE POWER (CHARGER, BLOCK HEATER).
6. UNDERGROUND SPARE (FUTURE) 2" RACEWAY(S) FOR GENERATOR.
7. CONCRETE PAD FOR GENERATOR. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
8. BOND GENERATOR AT THE BASE RAIL USING #2AWG BARE TINNED SOLID COPPER CONDUCTOR FROM GROUND RING. RUN UNDER CONCRETE PAD AND UP TO GENERATOR. LABEL IN ACCORDANCE WITH NEC 445.11
9. #2AWG BARE TINNED SOLID COPPER CONDUCTOR BURIED IN DIRECT CONTACT WITH EARTH MINIMUM 3'6" BELOW FINISHED GRADE.
10. 5/8"ø X 10' LONG COPPER CLAD GROUND ROD. DRIVE INTO EARTH UNTIL TOP OF THE ROD IS 6" BELOW FINISHED GRADE.
11. CADWELD #2AWG TO GROUND ROD 3'6" BELOW GRADE.
12. BOND ENCLOSURE AT THE BASE RAIL USING #2AWG BARE TINNED SOLID COPPER CONDUCTOR FROM GROUND RING. RUN UNDER CONCRETE PAD AND UP TO BASE. LABEL IN ACCORDANCE WITH NEC 445.11
13. IN FIBERGLASS RACEWAY UNDER/THROUGH SLAB/PAD.
14. CADWELD ALL GROUNDING/BONDING CONNECTIONS THAT ARE IN CONTACT WITH EARTH OR EXPOSED TO THE EXTERIOR. WHERE SURFACE MATERIAL WILL NOT ACCOMMODATE CADWELD TWO HOLE LONG BARREL DUAL CRIMP TONGUE LUGS MAY BE USED IF VERIFIED BY THE ENGINNER/ARCHITECT.
15. BOND CONCRETE PAD (REBAR) USING #2AWG BARE TINNED SOLID COPPER CONDUCTOR.
16. 2#10,1#10G–2"C UNDERGROUND TO ELECTRICAL PANEL IN BASEMENT MAIN ELECTRIC ROOM.
17. UNDERGROUND CIRCUITRY FOR GENERATOR ENCLOSURE FIRE ALARM DETECTION AND STATUS ALARMS.
18. PROVIDE CIRCUITRY AS RECOMMENDED BY THE GENERATOR MANUFACTURER, PLUS ADDITIONAL CIRCUITRY AS INDICATED ELSEWHERE IN THE CONTRACT DOCUMENTS(EG SITE PLAN, ONE–LINE DIAGRAM ETC.)
19. NOT USED
20. NOT USED
21. GENERATOR RACEWAYS ENTER BOTTOM OF TERMINAL BOX. TRANSITION TO FLEXIBLE RACEWAY BEFORE ENTERING BOX. SUBMIT DETAILS OF CONNECTION PRIOR TO INSTALLATION. MAINTAIN ALL CONDUITS, PIPING ETC. UP FROM SLAB WITHIN THE GENERATOR ENCLOSURE
22. NOT USED



3 SECTION THROUGH GENERATOR AND ENCLOSURE

SCALE: 1/4"=1'-0"

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CBK PROJECT NO. 21030

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TOWN OF ORANGETOWN — RICH IN HISTORY

ORANGETOWN TOWN HALL

ADDITION AND ALTERATIONS

26 ORANGEBURG RD
ORANGEBURG, NEW YORK 10962

GENERATOR DETAILS

PROJECT NO.: 2219-05

DRAWING NO.:

E-306

one inch = one foot 2
three quarters inch = one foot 1.5
one half inch = one foot 1
three eighths inch = one foot 0.75
one quarter inch = one foot 0.5
one eighth inch = one foot 0.25

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NOTES:

A. EQUIPMENT RACKS:

1. PROVIDE IN EACH IT CLOSET GREAT LAKES 4-POST FLOOR-TO-CEILING ALUMINUM RELAY RACKS PN: 4PM6-36. IN MAIN IT ROOM PROVIDE 3 RACKS.

2. LOCATE RACK IN IT ROOM. SECURE EACH RACK TO THE FLOOR AND TO THE CEILING TO ENSURE STABILITY. BOLT RACKS TO THE STRUCTURAL FLOOR USING 1/2" HARDWARE.

3. INSTALL ALL RACKS WITH A MINIMUM OF 3-FOOT CLEARANCE FOR THE FRONT AND BACK OF EACH RELAY RACK.

4. PROVIDE THREE 48-PORT PATCH PANELS IN EACH RACK.
PROVIDE SUPERIOR MODULAR PART# DCC4888/110SIX PATCH PANELS.

5. PROVIDE WIRE MANAGEMENT PANELS SEPARATING ALL PATCH PANELS. PROVIDE SUPERIOR MODULAR C017519L SEPARATING PATCH PANELS. PROVIDE TOP WIRE MANAGEMENT PANELS IN EACH RELAY RACK MANUFACTURED BY SUPERIOR MODULAR.

6. PROVIDE TWO SUPERIOR MODULAR PN:C03519L WIRE MANAGEMENT PANEL AT THE TOP OF EACH RACK

7. PROVIDE SUPERIOR PN:C017519L WIRE MANAGEMENT PANEL UNDER THE PATCH PANELS IN EACH RACK

8. TERMINATE ALL INSTALLED DATA CABLES AT PATCH PANEL(S) AND AT JACKS.

9. PROVIDE GREAT LAKES LARGE BUNDLE CABLE ORGANIZER PN: 1984-VCM10 ON EACH SIDE OF THE 4-POST RACKS (AND/OR BETWEEN RACKS)

10. PROVIDE EACH RACK WITH 2 RACK MOUNTABLE POWER STRIP WITH A MINIMUM OF 8 RECEPTACLES.

B. CATEGORY (CAT) 6/6A CABLING

1. PROVIDE 24 AWG, 4 PAIR CATEGORY 6 A CABLES CONFORMING TO INTERNATIONAL STANDARDS ORGANIZATION (ISO) STANDARD 11801 FOR CATEGORY 6 CABLES.

2. ALL CABLES SHALL BE COLOR CODED AS FOLLOWS:

3. BLUE: PC'S

4. WHITE/GRAY: TELEPHONES (V1 & V2)

5. GREEN: LIGHTING CONTROL NETWORK

6. TERMINATE ALL CAT6 CABLES ON WALL RJ-45 JACKS THROUGHOUT THE SPACE AND AT THE CORRESPONDING PATCH PANELS IN IT ROOM.

7. LABEL AND DOCUMENT ALL CABLES INSTALLED UNDER THIS CONTRACT. CONFORM TO TIA/EIA 606 STANDARD.

8. ALL CABLING INSTALLED FOR THIS CONTRACT MUST ACHIEVE 10.8 DB ACR AT 200MHZ. CONFORM TO EIA/TIA TSB67 CABLE TESTING CRITERIA. TEST ALL CABLES AND SUBMIT CERTIFIED TEST REPORTS.

9. ALL CAT6 CABLE RUNS ARE TO BE INSTALLED CONCEALED, IN RACEWAY FROM THE JACK UP INTO THE ACCESSIBLE CEILING CAVITY; CONTINUE ABOVE/ACROSS THE ACCESSIBLE CEILINGS AND RUN IN CABLE SLINGS ATTACHED TO THE SLAB ABOVE USING CABLE HOOKS IN SUCH A WAY THAT NO CABLE SHALL BE LYING ON THE DROP CEILING OR CEILING GRID. CABLES SHALL RUN CONTINUOUS INTO THE ASSOCIATED DATA PANEL, THROUGH THE PANEL IN THE COLLECTED RACEWAY(S) TO THE PATCH PANEL IN THE IT ROOM.

10. MACHINE LABEL ALL CABLES WITHIN 1 INCH OF TERMINATION.

C. PATCH CABLES

1. PROVIDE AND TEST ALL DATA PATCH CABLES ASSOCIATED WITH THIS INSTALLATION. PROVIDE COLORED PATCH CABLES FOLLOWING THE COLOR STANDARDS SET FORTH FOR CABLE INSTALLATION.

2. PROVIDE DESK LOCATION PATCH CABLES FOR EVERY JACK INSTALLED UNDER THIS CONTRACT. PROVIDE A MINIMUM OF A 14-FOOT PATCH CABLE. THE PATCH CABLE WILL BE INSTALLED FROM THE WALL OUTLET TO THE DESK, AND WILL BE NEATLY COILED UP AND PLACED ON THE DESK OR TABLE OF EACH LOCATION. IN THE EVENT THAT NO DESK IS AVAILABLE, THE PATCH CABLE WILL BE INSTALLED AND NEATLY COILED UP AND PLACED ON THE FLOOR. THE COLOR OF EACH CABLE WILL BE COORDINATED.

3. PROVIDE PATCH CABLES FOR EVERY JACK INSTALLED UNDER THIS CONTRACT. PROVIDE A COMBINATION OF 6, 12, 24-INCH LONG PATCH CABLES IN QUANTITIES AS DETERMINED BY THE OWNER. INSTALL THE PATCH CABLES BETWEEN PATCH PANEL POSITIONS AS DIRECTED BY THE OWNER. THE COLOR OF EACH CABLE WILL BE COORDINATED.

D. JACKS AND TERMINATIONS

1. CABLE JACKS – ALL CABLES SHALL BE TERMINATED ON "KEYSTONE STYLE" RJ45 JACKS, AND BE MOUNTED IN FACEPLATES. ALL JACKS ASSOCIATED WITH THIS INSTALLATION SHALL BE WIRED TO THE T568B WIRING STANDARD. LABEL EACH JACK POSITION WITH A TENANT DESIGNATED CODE AND COLOR SCHEME TO MATCH THE AFOREMENTIONED COLOR CODING.

2. FACEPLATES – ALL CABLES SHALL BE MOUNTED IN FACEPLATES, AND ALL FACEPLATE SHALL BE ATTACHED TO THE WALL IN SHEET METAL BOXES WITH RACEWAY RISERS. ALL FACEPLATES SHALL BE ALMOND OR WHITE IN COLOR, AND CLEARLY LABELED.

3. ALL VOICE RJ-45 JACKS INDICATED ON THE CONTRACT DOCUMENTS SHALL COLOR CODED:

4. JACK INSERTS AND PATCH CABLES TO BE THE SAME COLOR.

5. VOICE AND DATA CABLES SHALL BE SEPARATED ON DIFFERENT PATCH PANELS IN THE RACK LOCATED IN THE IT ROOM.

E. NETWORK CONNECTIVITY/TRANSPORT

1. PROVIDE PLENUM RATED RISER CABLING RUN IN RACEWAY TERMINATED ON 66M AND/OR RJ21X HARDWARE IN THE IT ROOM FROM THE BUILDING TELEPHONE POINT OF ENTRY/DEMARK (POE/DEMARK).

F. LABELING

1. PROVIDE EACH CABLE INSTALLED WITH A UNIQUE LABEL. THE CONTRACTOR WILL USE THE ROOM NUMBER AS THE UNIQUE LABEL FOR EACH CABLE. IN THE EVENT THAT A ROOM HAS MORE THAN ONE CABLE TERMINATING IN IT, THE CONTRACTOR SHALL LABEL ALL CABLES WITH THAT ROOM NUMBER FOLLOWED BY LETTERS OF THE ALPHABET. FOR EXAMPLE, IF ROOM 210 HAS TWO QUAD (2 VOICE/2 DATA) WALL PLATES IN IT, THE UNIQUE LABELS FOR THE CABLES IN THE FIRST WALL PLATE WILL BE 210A-V1, 210A-V2, 210A-D1, 210A-D2 RESPECTIVELY. THE UNIQUE LABELS FOR THE CABLES IN THE SECOND WALL PLATE WILL BE 210B-V1, 210B-V2, 210B-D1, 210B-D2 RESPECTIVELY. PROVIDE IDENTICAL CABLE DESIGNATION LABELING AT THE RESPECTIVE IT ROOM PATCH PANEL.

2. PROVIDE MACHINE-GENERATED LABELS. HAND WRITTEN LABELS ARE NOT ACCEPTABLE.

3. PATCH PANELS – LABEL THE FRONT OF EACH PATCH PANEL INDICATING EACH CABLE INSTALLED ON THE PATCH PANEL.

4. WALL PLATES – LABEL EACH WALL PLATE INDICATING ALL CABLES TERMINATED AT THAT LOCATION. FOR EXAMPLE, IF ROOM 210 HAS VOICE AND DATA JACKS IN THE SECOND WALL PLATE, THE LABEL FOR THAT WALL PLATE SHALL BE V0210B. THE LABELS USED FOR WALL PLATES SHALL CONSIST OF BLACK LETTERING WITH A WHITE OR CLEAR BACKGROUND. SEE IT/DATA/COMMUNICATIONS JACK DETAIL FOR CLARIFICATION.

5. CABLES – ALL CABLES WILL BE FITTED WITH MACHINE-GENERATED LABELS AT EACH END IN THE EVENT THAT A CABLE IS PULLED AWAY FROM A PATCH PANEL OR WALL PLATE. THE LABEL INSTALLED AT THE PATCH PANEL END SHALL BE WITHIN ONE INCH OF TERMINATION AND SHOULD REFLECT THE UNIQUE CABLE IDENTIFIER. PLEASE REFER TO SEE IT/DATA/COMMUNICATIONS JACK DETAIL FOR CLARIFICATION. THE LABEL INSTALLED ON THE CABLE AT THE REMOTE END WILL BE WITHIN 4 INCHES OF TERMINATION.

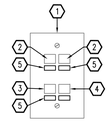
6. PRIOR TO LABELING, SUBMIT SAMPLES OF MACHINE GENERATED LABELS TO BE USED ON THIS INSTALLATION.

G. GROUNDING

1. THE CONTRACTOR SHALL PROVIDE THE FOLLOWING GROUNDING EQUIPMENT;

2. PROVIDE GROUND BUSS BAR MOUNTED TO THE WALL OF EAACH IT ROOM NEAR THE CEILING WHERE THE CABLES FROM ENTER THE ROOM. GROUND BUSS SHALL BE BONDED TO BUILDING STEEL.

3. ALL CABINETS INSTALLED IN THE IT ROOM SHALL BE ELECTRICALLY BONDED TO THE GROUND BUSS USING #6 AWG GREEN INSULATED TELCOFLEX COPPER CONDUCTOR.



TYPICAL FOR SYMBOLS " 1 " " 2 " " 3 " " 4 " " 5 "

1. FOUR POSITION SINGLE GANG DEVICE PLATE.
2. BLUE RJ45 JACK FOR DATA.
3. WHITE RJ45 JACK FOR VOICE.
4. WHITE BLANK COVER FOR UNUSED POSITION(S).
5. IDENTIFICATION LABEL FOR SPECIFIC JACK. PRINTED LABEL WITH TEXT DESIGNATION AS DIRECTED BY THE TENANT. TEXT COLOR TO MATCH JACK COLOR DESIGNATION (USE BLACK TEXT FOR WHITE).

1 IT/DATA/COMMUNICATIONS JACK DETAIL

SCALE: NO SCALE

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IT/DATA SPECIFICATIONS AND DETAILS

PROJECT NO.: 2219-05

DRAWING NO.:

E-307