ELECTRICAL LEGEND

POWER

	SAME CIRCUIT/SWITCHED SEPARATELY
	NO. OF HASH MARKS DENOTES NO. OF CIRCUITS
	CIRCUIT HOMERUN
	EMERGENCY OR NIGHT LIGHT BRANCH CIRCUIT
	LOW VOLTAGE WIRING
VD	DENOTES VOICE/DATA HOMERUN
	DENOTES ISOLATED GROUND
	EXISTING BRANCH CIRCUIT PANELBOARD
	NEW BRANCH CIRCUIT PANELBOARD
	MOTOR CONNECTION
MD	MOTORIZED OVERHEAD GARAGE DOOR
M	GARAGE DOOR CONTROLLER
	DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
	MOTOR STARTER
	COMBINATION MOTOR STARTER
	ENCLOSED CIRCUIT BREAKER
EWH	ELECTRIC WATER HEATER
VFD	VARIABLE FREQUENCY DRIVE
SPD	SURGE PROTECTION DEVICE
EHC	ELECTRIC HEATING COIL
H	HEAT TRACE JUNCTION BOX
T	HEAT TRACE THERMOSTAT
EHD	ELECTRIC HAND DRYER
ECM	ELECTRONICALLY COMMUTATED MOTOR
BAS	BUILDING AUTOMATION SYSTEM PANEL
PM	POWER METER
ERMS	ENERGY REDUCTION MAINTENANCE SWITCH
K	KIRK-KEY MECHANICAL INTERLOCK
/ S_{DB}	DOOR BELL BUTTON & HORN/STROBE
V	VARIABLE AIR VOLUME (VAV) BOX
J**	JUNCTION BOX TAGS (**)

"UH"=UNIT HEATER — "FCU"=FAN COIL UNIT
"GFP"=GAS FIRE PLACE — "EBF"=ELEC BOTTLE FILLER
"EWC"=ELEC WATER COOLER — "FV"=FLUSH VALVE
"GD"=GARBAGE DISPOSAL — "TPS"=TRAP PRIMER STATION
"MP"=MOTORIZED PARTITION — "CUH"=CABINET UNIT HEATER
"FPU"=FAN POWERED UNIT — "FVT"=FLUSH VALVE XFMR
"FH"=FUME HOOD — "SC"=SERVICE CARRIER
"LM"=LIT MAKEUP MIRROR — "CWL"=CASEWORK LIGHT
"GWL"=GREEN WALL LIGHTING — "WDU"=WASHDOWN UNIT
"CT"=STEELCASE CONNECTRAC — "TH"=STEELCASE THREAD
"BSB"=VRF SELECTOR BOX — "CP"=CONDENSATE PUMP
"CU"=CONDENSING UNIT — "HP"=HEAT PUMP
"SP"=SUMP PUMP — "KL"=KEY LOCK BOX
"DWH"=DOMESTIC WATER HTR — "DL"=DOCK LIFT
"HWP"=HOT WATER PUMP — "VP"=VIDEO PROJECTOR
"MPS"=PROJECTION SCREEN — "D"=DAMPER

LIGHTING CONTROL SENSORS

S_{VD}	VACANCY SENSOR SWITCH W/ 0-10V DIMMING
S_V	VACANCY SENSOR SWITCH
DS	DAYLIGHT SENSOR
PP / SP	OCCUPANCY SENSOR POWER/SLAVE PACK RELAY
WLC	SENSOR WIRELESS RELAY POWER PACK
M A/B/C	DUAL TECH HARDWIRED SENSOR "A" = 500 SQFT / 180 DEGREE "B" = 1000 SQFT / 180 DEGREE "C" = 2000 SQFT / 360 DEGREE
M***	WIRELESS VACANCY SENSORS "WC" = CEILING MOUNT SENSOR – 360° "WH" = WALL MOUNT – HALLWAY SENSOR "KW" = CORNER MOUNT SENSOR – 90° "WW" = WALL MOUNT SENSOR – 180°

FIRE ALARM

SD	FIRE ALARM SMOKE DETECTOR
HD	FIRE ALARM HEAT DETECTOR
F	FIRE ALARM MANUAL PULL STATION
	FIRE ALARM AUDIBLE/STROBE
	FIRE ALARM STROBE
	FIRE ALARM AUDIBLE
SD	DUCT MOUNTED SMOKE DETECTOR
FCM / FRM	FIRE ALARM CONTROL/RELAY MODULE
RT	REMOTE TEST STATION
CO	CARBON MONOXIDE DETECTOR
	HORN/STROBE – CEILING MTD
	CEILING MOUNTED STROBE
	CEILING MOUNTED HORN
NAC	NOTIFICATION APPLIANCE CIRCUIT POWER SUPPLY
TRAN	FIRE ALARM TRANSPONDER PANEL
DH	FIRE ALARM MAGNETIC DOOR HOLDER
FACP	FIRE ALARM CONTROL PANEL
TS	SPRINKLER TAMPER SWITCH
FS	SPRINKLER WATER FLOW SWITCH
PS	SPRINKLER PRESSURE SWITCH
FAP	FIRE ALARM ANNUNCIATOR PANEL
ANT	CENTRAL STATION ANTENNA
DPC	DUAL PATH COMMUNICATOR
DACT	DIGITAL ALARM COMMUNICATOR TRANSMITTER
DES	DAMPER/LOUVER END SWITCH
J_D	MOTORIZED DAMPER/LOUVER

SWITCHING

S S_4 S_3	STANDARD / 3-WAY / 4-WAY LIGHT SWITCH
S_{LV}	LOW VOLTAGE MOMENTARY SWITCH
S_{HD}	HARD-WIRED/WIRELESS DIMMER SWITCH
S_{HF}	HARD-WIRED/WIRELESS FAN SWITCH
S_M	MOTOR/HEATER DISCONNECT SWITCH
S_{PS}	MOTORIZED PROJECTION SCREEN SWITCH
S_P	PILOT LIGHT SWITCH (ILLUM. WHEN LOAD ON)
S_{BE}	BOILER "EMERGENCY OFF" SWITCH
S_{HS}	HARD-WIRED/WIRELESS SWITCH
S_{CS}	COMPANION HARD-WIRED SWITCH (3/4-WAY)
S_{D1} / S_{D2}	0-10V / MLV / DIMMER SWITCH
S_{EF}	EXHAUST FAN SWITCH
S_{WP} / S_{3WP}	STANDARD / 3-WAY WEATHER-PROOF SWITCH
S_{WD}	WIRELESS DIMMER SWITCH
S_{WS}	WIRELESS 2-BUTTON LIGHT SWITCH
S_{TS}	REMOTE TEST SWITCH
S_2	SINGLE POLE-DOUBLE THROW SWITCH
LMH	LIGHTING CONTROL MAIN HUB (PROCESSOR)
QPS	LIGHTING CONTROL NETWORK POWER SUPPLY
NWK	LIGHTING CONTROL A/V INTERFACE MODULE
PRL	WIRELESS LIGHT FIXTURE RELAY MODULE
PRD	WIRELESS LIGHT FIXTURE DIMMING MODULE
PRF	WIRELESS FAN RELAY MODULE
QS	WIRELESS DEVICE/SENSOR REPEATER MODULE
PC	PHOTOCELL
R	FRACTIONAL HP MOTOR RELAY
TS	LIGHTING TOUCH SCREEN WALL CONTROL
CCI	CONTACT CLOSURE INTERFACE
ESN 1	LIGHTING PANEL W/ DIMMING
INV2 A	EMERGENCY LIGHTING INVERTER
xB	X-BUTTON PROGRAMMABLE CONTROL STATION
GTD	GENERATOR TRANSFER DEVICE

RECEPTACLES/DEVICES

RECEPTACLE TAGS (**)

"MW"=MICROWAVE — "REF"=REFRIGERATOR
"ACT"=ABOVE COUNTER — "H"=HORIZONTAL MTD
"CP"=CONDENSATE PUMP — "DW"=DISHWASHER
"WP"=WEATHERPROOF — "SM"=SURFACE MTD
"LAV"=LAVATORY REC — "EWC"=WATER COOLER
"VEN"=VENDING MACHINE — "CWM"=CASEWORK MOUNTED
"AVR"=AUDIO/VISUAL RACK — "VDR"=VOICE/DATA RACK
"UCR"=UNDER COUNTER REF — "FH"=FUME HOOD
"RWP"=RECESSED WP IN USE — "SWP"=SURFACE WP IN USE
"VP"=VIDEO PROJECTOR — "LTG"=LIGHTING RECEPTACLE
"ICE"=ICE MACHINE — "LP"=POLE RECEPTACLE
"SP"=SUMP PUMP — "HS"=HALF SWITCHED
"TV"=TELEVISION REC — "LTR"=LIGHTING TRUSS REC
"UGW"=UC GLASS WASHER — "FLC"=FORK LIFT CHARGER
"SWR"=STRETCH WRAP — "IG"=ISOLATED GROUND
"GMR"=GAS MANIFOLD — "CPR"=COPIER RECEPTACLE
"WH"=WATER HEATER — "MPS"=PROJECTION SCREEN

SPECIAL NEMA DEVICE TAGS (**)

SR1– 6-20R (208V.,1ø, 20A, STRAIGHT BLADE)
SR2– L14-30R (120/208V.,1ø, 30A, TWIST LOCK)
SR3– 6-50R (208V.,1ø, 50A, STRAIGHT BLADE)
SR4– 15-50R (250V.,3ø, 50A. STRAIGHT BLADE)
(**E) DENOTES CONNECTION TO EMERGENCY SOURCE

	GFCI DUPLEX RECEPTACLE
	DUPLEX RECEPTACLE
	DOUBLE DUPLEX RECEPTACLE (QUAD)
	DOUBLE DUPLEX GFCI RECEPTACLE
	USB + QUAD RECEPTACLE
	WIRELESS CONTROLLED DUPLEX/QUAD RECEPTACLE
	CEILING MOUNT DEVICE
A	CORD REEL TYPE 'A, B, C, ETC.'
	WIREMOLD 2000 SURFACE RACEWAY
V	VERTICAL RACEWAY TO CEILING / INFEED
	WIREMOLD AL3300 SURFACE RACEWAY
R – H	STEELCASE THREAD REC/HUB/WIRING
	CONNECTRAC – DUPLEX/QUAD/WIRING
	CONTINUOUS COPPER GROUND BUS 18"AFF
FC	FLOOR CORE
M	MOTORIZED DOOR CONTROL STATION
MGC / RGCS	MOTORIZED GATE CONTROLLER / REMAOTE STATION
RFM	RADIANT FLOOR MANIFOLD
MGB / LGB	MAIN GROUND / LV GROUND CONNECTION BARS

VOICE/DATA/AV

	VOICE AND/OR DATA STATION
	AUDIO/VISUAL/CATV STATION
	TELEPHONE STATION – WALL MOUNTED
	CAMERA DATA JACK MTD ABOVE CEILING
WAP / AV	WIRELESS ACCESS POINT & AV WALL BOX
TV / FB1	FLAT SCREEN TV WALL BOX & FLOOR BOX

SYSTEMS FURNITURE/SEATING

J /	HARD-WIRED FEED TO SYSTEMS FURNITURE
P	POWER POLE "LETTER DENOTES TYPE"
P / W	CONDUIT STUB / WALL BOX POWER WHIP TO SEATING

MISC. DRAWING SYMBOLS

#	CONSTRUCTION NOTE
#	DEMOLITION NOTE
#	CONSTRUCTION/DIAGRAM/DETAIL NOTE
E01A	KITCHEN EQUIPMENT TAG
#	REVISION TAG
XX	EQUIPMENT TYPE
XX	EQUIPMENT NUMBER

ABBREVIATIONS

A	AMPS
ACT	ABOVE COUNTER TOP
AF	AMP FRAME OR FUSE
AS	AMP SETTING
AT	AMP TRIP
ATC	AUTOMATIC TEMPERATURE CONTROLS
ATS	AUTOMATIC TRANSFER SWITCH
BAS	BUILDING AUTOMATION SYSTEM
BCT	BELOW COUNTER TOP
CB	CIRCUIT BREAKER
C	CONDUIT
CI	CIRCUIT INTEGRITY CABLE IN CONDUIT
CKT	CIRCUIT
CS	COMBINATION MOTOR STARTER
CT	CABLE TRAY
DDBP	DUPLEX DOMESTIC BOOSTER PUMP
DIST	DISTRIBUTION
DML	DOUBLE MAIN LUGS
DRP	DOMESTIC RECIRCULATING PUMP
DS	DISCONNECT SWITCH
E	EMERGENCY
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
EHH	ELECTRIC HANDHOLE
EMH	ELECTRIC MANHOLE
EMT	ELECTRICAL METALLIC TUBING
ERV	ENERGY RECOVERY VENTILATOR
ESN	LUTRON ENERGY SAVER NODE
EWC	ELECTRIC WATER COOLER
EX	EXISTING
FCC	FIRE COMMAND CENTER
FDR	FEEDER
FPLP	POWER LIMITED FIRE ALARM PLENUM
FTL	FEED THRU LUGS
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
GRS	GALVANIZED RIGID STEEL CONDUIT
GWH	GAS WATER HEATER
HP	HORSEPOWER
LV	LOW VOLTAGE
MAU	MAKE-UP AIR UNIT
MCC	MOTOR CONTROL CENTER
MPS	MOTORIZED PROJECTION SCREEN
NAC	NOTIFICATION APPLIANCE CIRCUIT
N/E	NORMAL/EMERGENCY
NF	NON-FUSED
NIC	NOT-IN-CONTRACT
NL	NIGHT LIGHT
NTS	NOT TO SCALE
QS	LUTRON QUANTUM SYSTEM
RAL	RIGID ALUMINUM CONDUIT
SLC	SIGNALING LINE CIRCUIT
TOS	TOP OF STAIR OR SHAFT
TP	TWISTED PAIR
TPS	TRAP PRIMING STATION
TSP	TWISTED SHIELDED PAIR
UON	UNLESS OTHERWISE NOTED
V	VOLTS
VD	VOICE/DATA
VF	VENTILATION FAN
(VIF)	VERIFY IN FIELD
WP	WEATHERPROOF
XFMR	TRANSFORMER
+42	DENOTES MOUNTING HEIGHT IN INCHES
(RE)	DENOTES "RELOCATED EXISTING"
(E)	DENOTES "EXISTING TO REMAIN"
(R)	DENOTES "REMOVE EXISTING"
(ER)	DENOTES "EXISTING TO BE RELOCATED"
(N)	DENOTES "NEW"

SECURITY SYSTEMS

CAM	SECURITY SYSTEM CAMERA
SEC / KP	SECURITY SYSTEM PANEL / KEY PAD
ML / REX	MAGNETIC LOCK / REQUEST TO EXIT
CR / E	CARD READER / ELECTRIC STRIKE
ER	EMERGENCY DOOR RELEASE
PS	POWER SUPPLY
/ M	DOOR CONTACT / MOTION DETECTOR
	SECURITY SYSTEM ALARM HORN/STROBE
GRC	GATE REMOTE CONTROL STATION
VIC	VIDEO INTERCOM SYSTEM
/ D	ADA DOOR STATION / MOTORIZED DOOR MTR
S_K	MOTORIZED DOOR KEY SWITCH OPERATOR

LIGHTING FIXTURES

	2X4 LED RECESSED FIXTURE
	2X4 LED EMERGENCY FIXTURE
	2X2 LED RECESSED FIXTURE / EMERGENCY
	LED EXIT SIGN
	RECESSED DOWNLIGHT
	LINEAR LED FIXTURE

GENERAL ELECTRICAL SPECIFICATIONS

1. ALL WORK SHALL COMPLY AND BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES, THE INTERNATIONAL CODES AS AMENDED AND ADOPTED BY THE LOCAL JURISDICTION, THE NATIONAL ELECTRIC CODE, NFPA, AND ALL OTHER AGENCIES HAVING JURISDICTION. OBTAIN ALL REQUIRED PERMITS AND PAY ALL REQUIRED FEES.
2. ALL ELECTRICAL EQUIPMENT, MATERIALS, DEVICES, AND APPLIANCES SHALL BE LABELED AND LISTED BY A CERTIFIED TESTING LABORATORY.
3. PROVIDE COMPLETE ELECTRICAL SYSTEMS AS INDICATED ON DRAWINGS AND SPECIFIED HEREIN. "PROVIDE" SHALL MEAN "FURNISH AND INSTALL". "DESIGN PROFESSIONAL" SHALL MEAN ENGINEER, ARCHITECT, LIGHTING DESIGNER, OR THEIR REPRESENTATIVE. "OWNER" SHALL WPAOG OR THEIR REPRESENTATIVE.
4. REFERENCE STRUCTURAL. CIVIL, ARCHITECTURAL, TELECOMMUNICATIONS, THEATRICAL, MECHANICAL, AND PLUMBING DRAWINGS FOR COORDINATION.
5. PROVIDE ALL MATERIALS AND LABOR FOR THE COMPLETE ELECTRICAL WORK AS SHOWN ON THE DRAWINGS AND AS SPECIFIED. ANY APPLIANCE, DEVICE OR WORK INCIDENTAL OR NECESSARY TO MAKE THE WORK COMPLETE SHALL BE PROVIDED WITHOUT ADDITIONAL EXPENSE TO THE OWNER.
6. OBTAIN CERTIFICATES OF INSPECTION FROM AN NFPA APPROVED AGENCY FOR THE WORK AND DELIVER SAME TO THE OWNER WITH REQUEST FOR FINAL PAYMENT.
7. VISIT THE SITE AND VERIFY ALL MEASUREMENTS AND FIELD CONDITIONS AFFECTING THE WORK, PRIOR TO SUBMITTING BID. IN SUBMITTING THE BID THE CONTRACTOR VERIFIES AND ASSERTS THAT HE HAS VISITED THE SITE AND NO ADDITIONAL COST TO THE OWNER WILL BE INCURRED DUE TO THE CONTRACTOR'S FAILURE TO VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING HIS BID. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND FIELD CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER.
8. WORK SHALL BE DONE IN A NEAT AND WORKMANLIKE MANNER BY SKILLED MECHANICS USING THE BEST TRADE METHODS.
9. SUBMIT SHOP DRAWINGS ACCORDING TO THE GENERAL CONDITIONS AND OBTAIN APPROVAL BEFORE PURCHASE OR INSTALLATION OF WORK.
10. COORDINATE ALL RIGGING ACTIVITIES AND POWER SHUTDOWNS WITH THE OWNER'S REPRESENTATIVE AND OTHER TRADES. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL STAGING, RIGGING, HOISTING AND SERVICES NECESSARY FOR THE ERECTION AND DELIVERY OF THE ELECTRICAL EQUIPMENT INTO THE BUILDING.
11. PRIOR TO FINAL ACCEPTANCE OF THE WORK SUBMIT A WRITTEN STATEMENT TO THE ARCHITECT/OWNER GUARANTEEING ALL EQUIPMENT AND WORK FOR ONE (1) YEAR FROM DATE OF ACCEPTANCE.
12. LOCAL SWITCHES (UNFINISHED AND INDUSTRIAL AREAS) – SPECIFICATION GRADE, TOGGLE STYLE, COLOR AS SELECTED BY ARCHITECT, QUIET OPERATION, 20A. 120/277V., SINGLE, 2-POLE, 3 OR 4 WAY AS REQUIRED. PROVIDE WEATHER-PROOF SWITCHES WHERE SHOWN.
13. LOCAL SWITCHES (ARCHITECTURALLY FINISHED AREAS) – SPECIFICATION GRADE, DECORA STYLE, COLOR AS SELECTED BY ARCHITECT, QUIET OPERATION, 20A. 120/277V., SINGLE, 2-POLE, 3 OR 4 WAY AS REQUIRED. PROVIDE WEATHER-PROOF SWITCHES WHERE SHOWN.
14. DUPLEX RECEPTACLES (NON-FINISHED AREAS OR CONCEALLED) – HEAVY DUTY GRADE, 20 AMP, 125 VOLT, MODULAR, NEMA 5-20R, 2-POLE, 3-WIRE, SELF-GROUNDING. COLOR SHALL BE AS SELECTED BY ARCHITECT.
15. DUPLEX RECEPTACLES (ARCHITECTURALLY FINISHED OFFICE AREAS) – DECORA STYLE DUPLEX RECEPTACLE OUTLET, HEAVY DUTY GRADE, TAMPER-RESISTANT, SMOOTH FACE, 20 AMP, 125 VOLT, MODULAR, NEMA 5-20R, 2-POLE, 3-WIRE, SELF-GROUNDING. COLOR AS SELECTED BY ARCHITECT. PROVIDE ISO GROUND WHERE SHOWN.
16. DUPLEX USB CHARGER RECEPTACLES: LEGRAND SPEC GRADE ULTRA-FAST 6-AMP TYPE AC USB CHARGING RECEPTACLE, SMOOTH FACE, 20 AMP, 125 VOLT, MODULAR, NEMA 5-20R, 2-POLE, 3-WIRE, SELF-GROUNDING. COLOR SHALL BE AS SELECTED BY ARCHITECT.
17. DUPLEX RECEPTACLES (WIRELESS RF DUAL SWITCH) – LUTRON #CAR2S-20-DTR-COLOR BY ARCHITECT.
18. DUPLEX RECEPTACLES (WIRELESS RF HALF SWITCH) – LUTRON #CAR2S-20-STR-COLOR BY ARCHITECT.
19. GFCI RECEPTACLES: SPEC-GRADE WEATHER-RESISTANT 20A SELF-TEST DUPLEX GFCI. COLOR SHALL BE AS SELECTED BY ARCHITECT.
20. DEVICE PLATES – BRUSHED STAINLESS STEEL, SINGLE OR MULTI-GANG TO MATCH DEVICE.
21. DIMMERS – REFERENCE THE ELECTRICAL LEGEND AND DETAILS FOR TYPES AND MODEL NUMBERS.
22. OCCUPANCY SENSORS – REFERENCE THE ELECTRICAL LEGEND AND DETAILS FOR TYPES AND MODEL NUMBERS.
23. DEVICE LOCATIONS SHOWN ON DRAWINGS ARE DIAGRAMMATIC, COORDINATE EXACT LOCATION AND MOUNTING HEIGHT IN FIELD PRIOR TO ROUGH IN.
24. NOTE THAT CONSTRUCTION IS TO BE PERFORMED IN EXISTING FACILITIES AND THAT THE DRAWINGS GENERALLY SHOW ONLY NEW WORK THAT IS REQUIRED. THE DRAWINGS DO NOT SHOW IN DETAIL HOW THE NEW WORK IS TO BE INSTALLED BECAUSE UNKNOWN OBSTRUCTIONS TO ITS INSTALLATION MAY BE DISCLOSED AS THE WORK PROGRESSES. PERFORM THE WORK INDICATED, AND PERFORM SUCH ADDITIONAL WORK AS MAY BE REQUIRED BUT IS NOT SPECIFICALLY SHOWN. PERFORM THIS WORK IN SUCH A MANNER AS TO OVERCOME ALL OBSTRUCTIONS AND DIFFICULTIES THAT ARE ENCOUNTERED AT NO ADDITIONAL EXPENSE TO THE OWNER.
25. NEW AND EXISTING WIRING PASSING THROUGH FIRE RATED PARTITIONS, FLOORS, AND CEILINGS: CAULK THE SPACE BETWEEN THE OPENING AND SLEEVE OR WIRING/CONDUIT AND THE SPACE BETWEEN THE SLEEVE AND WIRING/CONDUIT WITH U.L. APPROVED FIRESTOP PRODUCT AS MANUFACTURED BY HILTI, 3M, OR STI TO OBTAIN A U.L. LISTED FIRE RATED ASSEMBLY. ALL PRODUCTS SHALL BE INSTALLED IN STRICT COMPLIANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ALL EXISTING PENETRATIONS SHALL BE SEALED WITH A U.L. FIRE RATED ASSEMBLY.
26. CONTRACTOR SHALL PROPERLY PROTECT ALL WORK AND EQUIPMENT TO PREVENT OBSTRUCTION, DAMAGE, OR LOSS. ALL CONDUIT OPENINGS SHALL BE CLOSED WITH CAPS OR PLUGS DURING INSTALLATION. ALL EQUIPMENT SHALL BE TIGHTLY COVERED WITH APPROVED MATERIAL AND PROTECTED AGAINST DIRT, WATER, OR MECHANICAL INJURY. AT FINAL COMPLETION, ALL WORK SHALL BE THOROUGHLY CLEANED AND DELIVERED IN PERFECT, UNBLEMISHED CONDITION.
27. PROVIDE BARRICADES AND LIGHTS (IF REQUIRED) AROUND ALL WORK AREAS TO PROTECT PEDESTRIAN TRAFFIC AND TO PREVENT UNAUTHORIZED PEDESTRIAN ACCESS. PROTECTION SHALL MEET THE REQUIREMENTS OF THE LOCAL AND STATE REGULATIONS AND GOVERNMENT BODIES.
28. ALL DAMAGE TO THE BUILDING, MECHANICAL, PLUMBING, AND ELECTRICAL SYSTEMS OR SURROUNDINGS, RESULTING FROM CONTRACTOR'S FAILURE TO ADEQUATELY PROTECT THE WORK SHALL BE REPAIRED OR REPLACED AS DIRECTED, AT NO ADDITIONAL COST TO THE OWNER, INCLUDING ANY WORK DAMAGED IN ORDER TO MAKE GOOD SUCH DEFECTS.
29. ALL EQUIPMENT AND MATERIALS REMOVED AND NOT WANTED BY OWNER SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED IMMEDIATELY FROM THE SITE.
30. SEAL AND PATCH ALL REMAINING HOLES, OPENINGS, ETC. TO MATCH THE ADJOINING SURFACES IN MATERIALS, TEXTURES, AND FINISHES.
31. ANY EXISTING POTENTIALLY HAZARDOUS MATERIALS ENCOUNTERED IN THE COURSE OF THE WORK SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER FOR REMOVAL AND DISPOSAL.
32. SMOKING AT THE JOB SITE IS NOT ALLOWED.
33. FLAMMABLE MATERIALS MAY NOT BE STORED OR ALLOWED TO REMAIN OVERNIGHT WITHIN THE BUILDING. THIS INCLUDES, BUT IS NOT LIMITED TO, PAINTS, THINNERS, CLEANING AND RESTORATION PRODUCTS, RAGS OR BRUSHES, AND ANY TOOL THAT IS CAPABLE OF PRODUCING FLAME. SAWDUST, SCRAP LUMBER, SOAKED RAGS, AND OTHER FLAMMABLE CONSTRUCTION DEBRIS MUST BE COLLECTED AT THE END OF EACH DAY AND DISPOSED OF PROPERLY OUTSIDE OF THE BUILDING.
34. MAINTAIN SUITABLE FIRE PROTECTION EQUIPMENT AT BUILDING SITE. AT MINIMUM, TYPE ABC FIRE EXTINGUISHERS SHALL BE PROVIDED WHERE WORK IS BEING PERFORMED WITH OPEN FLAME OR USING FLAMMABLE MATERIALS AND AN ADDITIONAL FIRE EXTINGUISHER SHALL BE PROVIDED TO THE WORKER PERFORMING THE WORK. TRAIN ALL WORKERS IN THE USE OF FIRE PROTECTION EQUIPMENT.
35. ALL FIRE SAFETY REQUIREMENTS LISTED ABOVE ARE TO BE CONSIDERED MINIMUM. CONTRACTOR IS RESPONSIBLE FOR TAKING OTHER MEASURES DEEMED NECESSARY BY THE CONTRACTOR TO PROTECT THE BUILDING.
36. THE CONTRACTOR SHALL MAINTAIN AS-BUILT DRAWINGS OF THE WORK PERFORMED. AT THE COMPLETION OF THE INSTALLATION, EACH TRADE WILL INCORPORATE ALL FIELD CHANGES ON THE AUTOCAD DATA BASE AND SUBMIT THREE (3) SETS OF PLOTTED PRINTS & A DATA DISK FOR RECORD PURPOSES.
37. NO WALLS OR CEILINGS SHALL BE CLOSED PRIOR TO AN INSPECTION BY OWNER AND ISSUANCE OF THEIR APPROVAL.

WIRING DEVICE LOCATION & COORDINATION

1. THIS CONTRACTOR SHALL EXAMINE ALL ARCHITECTURAL AND INTERIOR DESIGN DRAWINGS, ELEVATIONS, AND DETAILS BEFORE LOCATING OUTLETS. OUTLETS SHALL BE PLACED AS REQUIRED TO HARMONIZE WITH MOLDINGS, PANELS, ETC. OUTLET LOCATIONS SHALL NOT BE OBTAINED FROM SCALE DIMENSIONS ON ELECTRICAL DRAWINGS BUT FROM MEASUREMENTS ON ARCHITECTURAL PLANS AND/OR DETAILS.
2. WORK IN CONJUNCTION WITH EACH OF THE OTHER TRADES TO FACILITATE PROPER AND INTELLIGENT EXECUTION OF WORK WITH MINIMUM INTERFERENCE.
3. NOT ALL REQUIRED OPENINGS AND PENETRATIONS ARE SHOWN ON THE DRAWINGS. THE ELECTRICAL CONTRACTOR SHALL IDENTIFY THE NUMBER, EXACT LOCATION AND DIMENSION OF ALL CUTTING AND PATCHING LOCATIONS AND SUBMIT A PROPOSED SCHEDULE AND WORK PLAN PRIOR TO PROCEEDING.
4. IF AN OUTLET IS INSTALLED BY THIS CONTRACTOR IN SUCH A LOCATION AS TO BE OUT OF PROPER RELATION TO BEAMS, WALLS, OR OTHER DETAILS OF THE BUILDING, ITS LOCATION SHALL BE CORRECTED BY, AND AT THE EXPENSE OF THIS CONTRACTOR, AT THE DIRECTION OF THE DESIGN PROFESSIONAL.
5. VERIFY OUTLET BOXES ARE INSTALLED AT PROPER HEIGHT.
6. VERIFY WALL OPENINGS ARE NEATLY CUT AND COMPLETELY COVERED BY WALL PLATES.
7. VERIFY BRANCH CIRCUIT WIRING INSTALLATION IS COMPLETED, TESTED, AND READY FOR CONNECTION TO WIRING DEVICES.
8. TAKE STEPS TO INSURE THAT DEVICES AND THEIR BOXES ARE PROTECTED. DO NOT PLACE WALL FINISH MATERIALS OVER DEVICE BOXES AND DO NOT CUT HOLES FOR BOXES WITH ROUTERS THAT ARE GUIDED BY RIDING AGAINST OUTSIDE OF THE BOXES.
9. KEEP OUTLET BOXES FREE OF PLASTER, DRYWALL JOINT COMPOUND, MORTAR, CEMENT, CONCRETE, DUST, PAINT, AND OTHER MATERIAL THAT MAY CONTAMINATE THE RACEWAY SYSTEM, CONDUCTORS, AND CABLES.
10. INSTALL WIRING DEVICES AFTER ALL WALL PREPARATION, INCLUDING PAINTING, IS COMPLETE.
11. INSPECT EACH WIRING DEVICE FOR DEFECTS. OPERATE EACH WALL SWITCH WITH CIRCUIT ENERGIZED AND VERIFY PROPER OPERATION. VERIFY EACH RECEPTACLE DEVICE IS ENERGIZED. TEST EACH RECEPTACLE DEVICE FOR PROPER POLARITY. TEST EACH GFCI RECEPTACLE DEVICE FOR PROPER OPERATION. ADJUST DEVICES AND WALL PLATES TO BE FLUSH AND LEVEL.
12. CAREFULLY EXAMINE ALL ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR THE PROPER FITTING OF ALL MATERIAL AND EQUIPMENT INTO THE BUILDING AS PLANNED AND WITHOUT INTERFERENCE WITH OTHER PIPING, DUCTWORK, CONDUIT, LIGHT FIXTURES, OR EQUIPMENT. PROPER JUDGMENT SHALL BE EXERCISED TO SECURE BEST POSSIBLE HEADROOM, DOOR AND WINDOW CLEARANCE, AND SPACE CONDITIONS THROUGHOUT; TO SECURE NEAT ARRANGEMENT FOR PIPING, EQUIPMENT, CONDUIT, AND LIGHT FIXTURES: AND TO OVERCOME ALL LOCAL DIFFICULTIES AND INTERFERENCES TO BEST ADVANTAGE. APPROVAL FOR ANY AND ALL CHANGES TO PLANS AND SPECIFICATIONS WHICH MAY THUS BE INCURRED SHALL BE OBTAINED FROM THE DESIGN PROFESSIONAL BEFORE PROCEEDING.
13. IN ARCHITECTUALLY FINISHED ROOMS WITH EXPOSED CONCRETE DECK AND BEAMS (GLEE CLUB, SPIRIT BAND, ETC), THE CONDUIT SHALL NOT CROSSOVER HIGH COFFERED AREAS OR SUSPENDED BETWEEN BEAMS. CONTRACTOR SHALL ATTEMPT TO RUN ALONG BEAMS WHERE EVER POSSIBLE AND TURN UP TO HIGHER CEILING AREAS. PRIOR TO ROUGH-IN, SUBMIT SKETCH OF CONDUIT LAYOUT TO ARCHITECT FOR REVIEW. AFTER REVIEW, CONTRACTOR SHALL MOCK-UP CONDUIT ROUTING FOR FIELD REVIEW. ROUTING OF CONDUIT AND BOX LOCATIONS NOT INCLUDED IN THE MOCK-UP SHALL BE FIELD MARKED WITH TAPE. FINAL INSTALLTION SHALL NOT OCCUR UNTIL AFTER APPROVAL BY ARCHITECT.

AUDIO/VISUAL SYSTEM NOTES

1. ALL AUDIO/VISUAL CABLING AND DEVICES WILL BE FURNISHED AND INSTALLED BY OTHERS. CONTRACTOR TO PROVIDE ALL BACKBOXES AND CONDUIT PATHWAYS.
2. THE ELECTRICAL ROUGH-IN (RACEWAY/BOX) REQUIREMENTS ASSOCIATED WITH THE AUDIO VIDEO SYSTEMS ARE SHOWN WITHIN THE "AV" DRAWING SET. ALL ELECTRICAL ROUGH-IN WORK INCLUDING BACKBOXES, CONDUIT, STUB-UP CONDUIT, RACEWAYS AND RELATED APPURTENANCES AS DEFINED WITHIN THE AV DRAWING SET SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. THE ELECTRICAL POWER REQUIREMENTS ASSOCIATED WITH THE AUDIO VIDEO SYSTEMS SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. PROVIDE ALL BRANCH CIRCUITS, JUNCTION BOXES, TERMINATIONS, GROUNDING/BONDING, AND FINAL CONNECTIONS. REFERENCE THE "AV" DRAWING SET.
3. IN THE EVENT OF CONFLICTING PROVISIONS BETWEEN THE ELECTRICAL CONSTRUCTION DOCUMENTS, THE AUDIO/VISUAL CONSTRUCTION DOCUMENTS, OR THE OWNER'S REQUIREMENTS, THE MORE STRINGENT WILL APPLY AT NO ADDITIONAL COST.
4. COORDINATE LOCATION AND MOUNTING HEIGHTS OF ALL AUDIO/VISUAL SYSTEM DEVICES WITH THE DESIGN PROFESSIONAL PRIOR TO ROUGH-IN.
5. DEVICES, CONDUIT/EMT, AND JUNCTION BOX CONFIGURATIONS AND LOCATIONS SHOWN IN ELEVATION AND PLAN ARE CONCEPTUAL REPRESENTATIONS ONLY. CONTRACTOR SHALL COORDINATE WITH THE OWNER'S AUDIO/VISUAL CONTRACTOR PRIOR TO ROUGH-IN.
6. ALL CONDUIT/EMT SHALL BE PROVIDED WITH PULL STRING AND NYLON BUSHINGS AT EACH FITTING.
7. DEVICE BACKBOX SIZES SHALL BE COORDINATED WITH THE OWNER'S AUDIO/VISUAL CONTRACTOR.

CONDUCTOR VOLTAGE DROP NOTES

1. BRANCH CIRCUITS SHALL BE INCREASED IN SIZE TO LIMIT VOLTAGE DROP TO 3%. FEEDERS SHALL BE INCREASED IN SIZE TO LIMIT VOLTAGE DROP TO 2%. IN NO CASE SHALL THE VOLTAGE DROP FROM SOURCE TO LOAD EXCEED 5%. FEEDER AND BRANCH CIRCUITS MAY BE SHOWN OVERSIZED TO LIMIT VOLTAGE DROP AND MAY NOT BE ABLE TO BE TERMINATED ON THE STANDARD LUGS OR DEVICE TERMINALS. CONTRACTOR SHALL SPLICE NEW CONDUCTOR EXTENSIONS TO MATCH LUG AND DEVICE TERMINATION SIZES; HOWEVER, AT NO TIME SHALL THE NEW CONDUCTORS BE LESS THAN THE OVER-CURRENT DEVICE LONG-TIME RATING. AT NO TIME SHALL CONDUCTOR STRANDS BE REMOVED FOR TERMINATING IN SMALLER LUGS.
2. FOR BRANCH CIRCUITS, TRANSITION FROM OVERSIZED CONDUCTORS TO DEVICES/RECEPTACLES SHALL BE MADE WITHIN 10 FEET OF DEVICE OR RECEPTACLE.

GENERAL WIRING METHODS

1. ALL CONDUCTOR INSULATION SHALL BE 90°C THHN/THWN. ALL FEEDERS AND BRANCH CIRCUITS SHALL BE COPPER.
2. ALL LUGS SHALL BE U.L. LISTED FOR USE WITH COPPER OR ALUMINUM CABLE WHOSE AMPACITY IS BASED ON 75°C CONDUCTOR TEMPERATURE RATING.
3. CIRCUIT CONDUCTORS SHALL BE SIZED BASED ON 60°C AMPACITY FOR CIRCUITS RATED 100A OR LESS (#12 AWG THROUGH #1 AWG) AND 75°C AMPACITY FOR CIRCUITS RATED OVER 100A (LARGER THAN #1 AWG).
4. ALL CIRCUITS TO BE 2#12, 1#12GND., UNLESS OTHERWISE NOTED. PROVIDE #10 AWG CONDUCTORS FOR ALL 120V.,20A BRANCH CIRCUITS EXCEEDING 90 FEET IN LENGTH.
5. BRANCH CIRCUITS ARE DIAGRAMMATIC AND DO NOT REPRESENT ACTUAL PLACEMENT OF CONDUIT.
6. ALL JUNCTION BOX AND DEVICE COVER PLATES SHALL IDENTIFY CIRCUIT NUMBERS.
7. ALL DEVICES SHALL HAVE ADHESIVE LABELS ATTACHED TO FACEPLATE IDENTIFYING CIRCUIT NUMBER(S).
8. ALL BRANCH CIRCUIT WIRING IN FINISHED AREAS IS TO BE INSTALLED CONCEALED IN FLOORS, WALLS AND CEILINGS.
9. ALL OUTLET BOXES SHALL BE 4 INCH SQUARE GALVANIZED PRESSED STEEL WITH RAISED COVER PLATES. BOXES FOR SINGLE DEVICES MAY BE 2" x 4" SINGLE SIZES. BOXES FOR LIGHTING FIXTURES SHALL 4" OCTAGON TYPE. EXTERIOR BOXES SHALL BE GASKETED CAST METAL WITH THREADED HUBS. MINIMUM DEPTH SHALL BE 2.5". INTERIOR SURFACE MOUNTED BOXES IN GARAGE AREA SHALL BE CAST METAL TYPE.
10. METAL CLAD CABLE (MC) AND CONDUIT SHALL BE SUPPORTED FROM THE BUILDING CONSTRUCTION ABOVE AT INTERVALS NOT GREATER THAN 6'-0" AND WITHIN 12" OF A DEVICE BACKBOX. AT NO TIME SHALL 'MC' CABLE OR CONDUIT BE SUPPORTED FROM FIXTURE HANGERS, CEILING GRID HANGERS OR HVAC SUPPORTS. 'MC' CABLE SHALL NOT LAY ON TOP OF THE CEILING SYSTEM. (LIMITED USE, SEE BELOW)
11. ALL ELECTRICAL CIRCUITS SHALL BE RATED FOR NO LESS THAN 20 AMPERES. ALL MULTI-WIRE BRANCH CIRCUITS ENTERING A SINGLE DEVICE OR SYSTEMS FURNITURE SHALL BE FED FROM 2 OR 3 POLE CIRCUIT BREAKERS.
12. GROUNDING SHALL BE DONE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE ARTICLE 250.
13. ANY EQUIPMENT REQUIRING MORE THAN 15 AMPERES SHALL BE ON ITS OWN DEDICATED CIRCUIT.
14. SHARED NEUTRALS FOR BRANCH CIRCUITS WILL NOT BE PERMITTED. PROVIDE DEDICATED NEUTRAL FOR EACH BRANCH CIRCUIT.
15. WIRE AND CABLE SHALL BE COPPER, 600 VOLT INSULATION TYPE THHN-2 FOR DRY LOCATIONS AND XHHW-2 FOR ALL UNDERGROUND WIRING, UNLESS OTHERWISE NOTED. WIRE SIZES #10 AND SMALLER SHALL BE SOLID, #8 AND LARGER SHALL BE STRANDED. MINIMUM SIZE WIRE SHALL BE #12AWG. BRANCH CIRCUITS CONNECTED TO VIBRATING EQUIPMENT (MOTORS, AHU'S, FCU'S, CU'S ETC.) SHALL BE STRANDED.
16. ALL RACEWAYS SHALL BE U.L. APPROVED. MINIMUM SIZE CONDUIT AND EMT SHALL BE ¾"
17. MC CABLE SHALL BE GALVANIZED SPIRAL STEEL ASSEMBLY WITH THHN WIRES INCLUDED, OR WITH APPROVED FITTINGS AND COUPLINGS BY AFC CO. CABLE SHALL HAVE GREEN INSULATED GROUND WIRE.
18. INTERIOR WIRING METHODS
    a. FEEDERS – ELECTRICAL METALLIC TUBING (EMT) WHERE EXPOSED (NOT SUBJECT TO PHYSICAL DAMAGE) OR CONCEALED IN WALLS, FLOORS, AND ABOVE CEILINGS. NOT TO BE ENCASED IN CONCRETE OR INSTALLED OUTDOORS.
    b. BRANCH CIRCUITS – ELECTRICAL METALLIC TUBING (EMT) WHERE EXPOSED (NOT SUBJECT TO PHYSICAL DAMAGE) OR CONCEALED IN WALLS, FLOORS, AND ABOVE CEILINGS. NOT TO BE ENCASED IN CONCRETE OR INSTALLED OUTDOORS.
    c. METAL CLAD CABLE (MC) – CONCEALED IN RENOVATIONS IN EXISTING AREAS WHERE WALLS AND CEILINGS ARE NOT DISTURBED.
    d. VOICE/DATA/VIDEO – ELECTRICAL METALLIC TUBING (EMT), WHERE EXPOSED OR CONCEALED IN WALLS AND FLOORS.
    e. FIRE ALARM – ELECTRICAL METALLIC TUBING (EMT) WHERE EXPOSED AND PLENUM RATED CABLE WHERE CONCEALED IN WALLS AND ABOVE CEILINGS.
    f. BUILDING CONTROLS – ELECTRICAL METALLIC TUBING (EMT).
    g. CONNECTION TO VIBRATING EQUIPMENT – FLEXIBLE METALLIC CONDUIT (FMC) TO SIX (6) FEET MAXIMUM IN LENGTH.
    h. CONNECTION TO PUMPS – LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LFMC) TO SIX (6) FEET MAXIMUM IN LENGTH.
19. EXTERIOR WIRING BELOW GRADE
    a. FEEDERS – SCHEDULE 40 NON-METALLIC CONDUIT (PVC).
    b. BRANCH CIRCUITS – SCHEDULE 80 NON-METALLIC CONDUIT (PVC).
    c. CONTROL CIRCUITS – SCHEDULE 80 NON-METALLIC CONDUIT (PVC).
    d. PVC TRANSITION TO ABOVE GRADE/SLAB – GALVANIZED RIGID STEEL CONDUIT (GRS).
    e. PVC TRANSITION TO INSIDE BUILDING – GALVANIZED RIGID STEEL CONDUIT (GRS).
    f. LINK-SEALS FOR ALL CONDUITS ENTERING BUILDING HORIZONTALLY ABOVE AND BELOW GRADE.
    g. RIGID ALUMINUM CONDUIT IN CONTACT WITH SOIL OR CONCRETE SHALL HAVE SUPPLEMENTARY CORROSION PROTECTION (BITUMASTIC PAINT, TAPE WRAPS APPROVED FOR THE PURPOSE, OR PVC COATED CONDUIT.)
    h. GRS SHALL BE JOINED WITH THREADED-TYPE FITTINGS.
20. EXTERIOR WIRING ABOVE GRADE
    a. FEEDERS – GALVANIZED RIGID STEEL CONDUIT (GRS).
    b. BRANCH CIRCUITS – GALVANIZED RIGID STEEL CONDUIT (GRS).
    c. CONTROL CIRCUITS – GALVANIZED RIGID STEEL CONDUIT (GRS).
    d. CONNECTION TO VIBRATING EQUIPMENT – LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LFMC) TO SIX (6) FEET MAXIMUM IN LENGTH.
    e. GRS SHALL BE JOINED WITH THREADED-TYPE FITTINGS.
21. USE LIQUID-TIGHT FLEXIBLE METAL CONDUIT (LFMC) FOR FINAL CONNECTION ALL INTERIOR AND EXTERIOR VIBRATING EQUIPMENT, AHU'S, ERU'S, PUMP MOTORS, EXTERIOR TRANSFORMERS, ETC. MAXIMUM LENGTH OF LFMC SHALL BE AS FOLLOWS:
    - 3/4" TO 1-1/4" — LFMC – 36 INCHES
    - 1-1/2" TO 2" — LFMC – 48 INCHES
    - 2-1/2" TO 4" — LFMC – 60 INCHES
22. FIELD COORDINATE LOCATION OF ALL CEILING MOUNTED DEVICES WITH LIGHT FIXTURES AND HVAC REGISTERS AND GRILLES.
23. ALL EXIT SIGNS AND EMERGENCY LIGHTS SHALL BE CIRCUITED TO A LOCAL UNSWITCHED LIGHTING CIRCUIT, UNLESS OTHERWISE NOTED TO BE CONNECTED TO AN INVERTER.
24. CONTRACTOR SHALL ATTEND A MANDATORY FIELD MEETING TO COORDINATE THE THE EXACT LOCATIONS AND HEIGHTS OF FURNITURE, EQUIPMENT, AND DEVICES WITH THE OWNER AND/OR ARCHITECT PRIOR TO ROUGH-IN.
25. PROVIDE BRANCH CIRCUITS TO ALL OF THE AUTOMATIC TEMPERATURE CONTROL PANELS AND DEVICES.
26. FOR SMALL FRACTIONAL HP MOTORS PROVIDE LOCAL DISCONNECT SWITCH AND CONTROL CONTACTOR TO INTERFACE WITH THE ATC SYSTEM U.O.N. COORDINATE CONTROL VOLTAGE WITH THE MECH/ATC CONTRACTOR.
27. COORDINATE ALL DEVICE LOCATIONS WITH THE FURNITURE AND CASEWORK LAYOUT. RECEPTACLES AND IT JACKS SHALL BE MOUNTED IN THE OPEN AREA/LEG SPACE BENEATH THE DESK. DEVICES TO BE MOUNTED 8" ON CENTER.
28. FIELD MARK ELECTRICAL EQUIPMENT TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARD IN ACCORDANCE WITH OWNER'S SPECIFIC REQUIREMENTS & STANDARDS.

HVAC & PLUMBING EQUIPMENT CONNECTION NOTES

1. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL BRANCH CIRCUITS, DISCONNECT SWITCHES, AND CONTROLS FOR THE MECHANICAL AND PLUMBING EQUIPMENT. REFERENCE MECHANICAL AND PLUMBING DRAWINGS FOR COORDINATION AND SCOPE OF WORK.
2. FOR DISCONNECT SWITCHES LOCATED BETWEEN THE VFD AND MOTOR PROVIDE FAST ACTING AUXILIARY CONTACT (MICRO-SWITCH) THAT WILL TRIGGER A FREEWHEEL STOP ON THE DRIVE BEFORE THE MAIN 3 PHASE CONTACTS OPEN. PROVIDE CONTROL WIRING IN CONDUIT FROM AUXILIARY CONTACT BACK TO ASSOCIATED VFD.
3. ALL MOTORS SHALL BE CONNECTED TO THEIR ASSOCIATED BRANCH CIRCUIT WITH U.L. LISTED 3M MOTOR LEAD SPLICING KITS 5300 SERIES AND 3M SCOTCHLOK COPPER COMPRESSION LUGS, 30000 SERIES. (SPLIT BOLT OR TWIST ON CONNECTORS ARE NOT ACCEPTABLE).
4. BRANCH CIRCUITS TO EXHAUST FANS SHALL BE ROUTED OUTSIDE THE AIR STREAM. (I.E. PROVIDE ROOF CURB WITH GRADUATED BOOT)
5. PROVIDE NEXANS STANDARD UNARMORED VFD CABLE IN CONDUIT FOR ALL EXHAUST FANS CONTROLLED BY VFD'S. CABLE SHALL BE FLEXIBLE WITH BRAID AND FOIL SHIELD, 2KV INSULATION THICKNESS. CABLE TO BE SPECIFICALLY ENGINEERED FOR USE IN VARIABLE FREQUENCY AC MOTOR DRIVE (VFD) APPLICATIONS.
6. DISCONNECT SWITCHES LOCATED ON ROOF SHALL BE MOUNTED ON DUAL RIGID ALUMINUM CONDUIT PEDESTALS SUPPORTED FROM STRUCTURAL STEEL BELOW AND BRACED HORIZONTALLY BOTH WAYS WITH UNISTRUT. PROVIDE STRUCTURAL ROOF CURB WITH GRADUATED (STEPPED) PVC CONDUIT CAP/BOOT WITH STAINLESS STEEL CONDUIT CLAMPS.
7. ALL CONDUIT PENETRATIONS THROUGH ROOF SHALL BE MADE WITH STRUCTURAL ROOF CURB AND GRADUATED (STEPPED) PVC CONDUIT CAP/BOOT WITH STAINLESS STEEL CONDUIT CLAMPS.

ARCHITECTURAL SURFACE RACEWAY SPECIFICATIONS

CADET SPIRIT BAND ROOM

1. SINGLE AND DUAL CHANNEL RACEWAY SHALL BE WIREMOLD #AL3300 ARCHITECTURAL ALUMINUM RACEWAY WITH SATIN ANODIZED FINISH (2.875"H x 1.875"D).
2. BLANK FILLER PLATE IN 6" AND 12" INCREMENTS AS REQUIRED. CUT FROM 5' SECTIONS (TYPICAL)
3. SINGLE CHANNEL CENTERED DUPLEX RECEPTACLE COVER (WIREMOLD #AL3346D). QUANTITY AS REQUIED. (TYP)
4. DUAL CHANNEL OFFSET DUPLEX RECEPTACLE COVER (WIREMOLD #AL3346DO). QUANTITY AS REQUIED. (TYP) (WITH OFFSET DIVIDER)
5. DUAL CHANNEL OFFSET VOICE/DATA COVER (WIREMOLD #AL3346GO). QUANTITY AS REQUIED. (TYP) (WITH OFFSET DIVIDER)
6. BLANK END FITTING (WIREMOLD #AL3310B) OR 3/4"C IN-FEED END FITTING (WIREMOLD #AL3310B1). (TYP)
7. FLAT ELBOW FITTING (WIREMOLD #AL3311). (TYP)
8. DIVIDER CLIP (WIREMOLD #AL3301D). (TYP)
9. INTERNAL DIVIDER (WIREMOLD #AL3300D5). (TYP)
10. BASE COUPLING (WIREMOLD #AL3301). (TYP)
11. GROUND CLAMP (HUBBELL #HBLALU2009). (TYPICAL FOR EACH VERTICAL RUN)
12. NOTE: MAXIMUM OF (4) CAT 6E CABLES PER RACEWAY.

INDIVIDUAL OFFICES AND SIMILAR FINISHED PUBLIC SPACES WHERE DEVICES SHOWN TO BE SURFACE MOUNTED

1. SINGLE-CHANNEL RACEWAY SHALL BE HUBBELL #HBL2000 ARCHITECTURAL RACEWAY WITH SATIN ANODIZED FINISH (0.82"H x 1.84"W).
2. BLANK FILLER PLATE IN 6" AND 12" INCREMENTS. (TYPICAL)
3. DUPLEX RECEPTACLE WITH COVER (HUBBELL #HBL2047). QUANTITY AS REQUIED. (TYP)
4. SPECIAL NEMA DEVICE WITH SINGLE RECEPTACLE COVER PLATE. (HUBBELL #HBL20442) (TYP)
5. BLANK END FITTING (HUBBELL #HBL2010B) OR IN-FEED END FITTING (HUBBELL #HBL2010A). (TYP)
6. INTERNAL ELBOW FITTING (HUBBELL #HBL2017). (TYP)
7. WIRE CLIP EVERY 16" (HUBBELL #HBL2000WC). (TYP)
8. GROUND CLAMP (HUBBELL #HBL2009). (TYPICAL FOR EACH VERTICAL RUN)
9. EXTEND RACEWAY TO ABOVE NEAREST CEILING.

Mark B. Thompson Associates
Architecture
502 South 24th Street
Philadelphia, PA 19146
215.985.1000 www.mbtarchitects.com

Keast & Hood Company of New York, PC
Structural Engineering
400 Market Street, Suite 1250
Philadelphia, PA 19106
215.625.0099 www.keasthood.com

Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

It is a violation of New York State Law for any person, unless he is acting under the direction of a licensed Professional Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Engineer or Land Surveyor is altered, the altering Engineer or Land Surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid and Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

EGNER HALL
BUILDING 685
U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300 (DJVI #2115)
Date: July 6, 2022

Drawing Title:
Electrical Cover Sheet
Legend & Notes

ECS1

Electric Service Calculation - Engineering Estimate
- Existing: 208/120V, 3-Phase, 4-Wire, 300KVA, 833 Amps
- Requested: 208/120V, 3-Phase, 4-Wire, 500KVA, 1236 Amps

WPAOG Egner Hall

West Point, NY

Article 220.42 & 220.44 (General Lighting and Receptacles)

	Quantity	Unit	Load (VA)	Total	Unit
General Lighting Load	49,639	SqFt	1.00	49,639	VA
General Receptacle Load	49,639	Ea	0.75	37,229	VA
Dedicated Receptacles	0	Ea	0.00	0	VA
Exterior Lighting (Included in Rec's	0	LS	0.00	0	VA

Table 220.42				
	Connected Load =	86,868		VA
First 10KVA Gen Receptacle	Diversity #1	10,000	@ 100%	10,000 VA
Remaining Rec/Misc Load	Diversity #2	27,229	@ 50%	13,615 VA
Lighting Load	Diversity #3	49,639	@ 100%	49,639 VA
	Demand Load =			**73,254 VA**

Article 220.50 & 220.51

#	Equipment	Notes	Quantity	Unit	Load (VA)	Total	Unit
1	Ex HP-1	8 Amps	0.85	Ea	1,664	1,414	VA
2	Ex HP-2	8 Amps	0.85	Ea	1,664	1,414	VA
3	Ex CU-1	36 Amps	0.85	Ea	12,954	11,011	VA
4	Ex HV-1	2HP	0.85	Ea	2,700	2,295	VA
5	Ex Window AC	12A	0.85	Ea	1,440	1,224	VA
6	Ex AHU-1	7.5HP	0.85	Ea	7,161	6,087	VA
7	Ex AHU-2	10HP	0.85	Ea	9,313	7,916	VA
8	Ex AHU-3	5HP	0.85	Ea	4,858	4,129	VA
9	Ex P1	7.5HP	0.85	Ea	8,750	7,438	VA
10	Ex P3	3HP	0.85	Ea	3,820	3,247	VA
11	Ex P5	0.5HP	0.85	Ea	800	680	VA
12	Ex Shop EF	0.5HP	0.85	Ea	800	680	VA
13	Ex Dust Collector	15HP	0.85	Ea	2,075	1,764	VA
14	Elevator	20HP Replacement	0.85	Ea	23,666	20,116	VA
15	Ex CH-1	350RELA	0.85	Ea	125,944	107,052	VA
16	Ex Air Comp	0.5hp	0.85	Ea	800	680	VA
17	Ex Misc Equipment		0.85	Ea	10,000	8,500	VA
18	***Enviro Ctr Unit***	*Indoor+Outdoor*	*1*	*Ea*	*30,500*	*30,500*	*VA*
19	***RTU-1***	*17.5 Tons*	*1*	*Ea*	*40,340*	*40,340*	*VA*
20	***RTU-2***	*15 Tons*	*1*	*Ea*	*34,760*	*34,760*	*VA*
21	***Electric Reheat***		*3*	*Ea*	*9,500*	*28,500*	*VA*
22	***Electric Reheat***		*1*	*Ea*	*1,500*	*1,500*	*VA*
23	***Electric Reheat***		*0*	*Ea*	*2,000*	*0*	*VA*
24	***Electric Reheat***		*0*	*Ea*	*3,000*	*0*	*VA*
25	***New SG-2***		*1*	*Ea*	*11,983*	*11,983*	*VA*
26	***New Misc Equipment***		*1*	*Ea*	*10,000*	*10,000*	*VA*
27	***New SG-1***	*Humidifier*	*1*	*Ea*	*23,965*	*23,965*	*VA*
28	***New EF***	*(1 @ 1HHP*	*1*	*Ea*	*750*	*750*	*VA*
29	***Air Curtain***	*(2) @ 1/2HP*	*1*	*Ea*	*2,250*	*2,250*	*VA*
30			*0*	*Ea*	*0*	*0*	*VA*
31	n/a		0	Ea	0	0	VA
32	n/a		0	Ea	0	0	VA
33	n/a		0	Ea	0	0	VA

Added Load = @ 100% **184,548**

Total Connected Load = @ 100% **370,196 VA**

Article 220.54 (Electric Dryer Load)

	Quantity	Unit	Load (W)	Total	
Electric Clothes Dryer	0	Ea	0	0	VA

Demand Load (Table 220.54) = **0 VA**

Article 220.55 (Ranges and Cooktops)

	Quantity	Unit	Load (W)	Total	
Electric Range	0	Ea	0	0	VA

Demand Load (Table 220.54 Col. C) = **0 VA**

Article 220 - Parts I / II / III (Branch Circuit, Feeder, & Service Calculations)

Total Demand Load = 443,449 VA

Voltage: 208
Phase: 3

Electric Service Ampacity = 1,232 Amps

Receptacles= 23,615 | Lighting = 49,639 | Air Conditioning= 227,716 | Misc: = 142,480

ELECTRICAL DEVICE MOUNTING HEIGHT SCHEDULE

DEVICE	MOUNTING HEIGHT
LIGHT SWITCHES, WALL MOUNTED OCCUPANCY SENSORS	44" TO CENTERLINE OF BOX. ALL EXISTING SWITCH LOCATIONS BEING RE-USED SHALL BE LOWERED TO MATCH NEW HEIGHT.
WALL MOUNTED EXIT SIGNS	90" CENTERLINE OF SIGN OR CENTERED IN WALL AREA BETWEEN TOP OF DOOR AND CEILING.
PENDANT MOUNTED FIXTURES	REFERENCE FIXTURE SCHEDULE
RECEPTACLES	18" TO CENTERLINE OF BOX U.O.N.
RECEPTACLES – ABOVE COUNTER	40" TO CENTERLINE OF BOX U.O.N.–UNIT LAUNDRY/BATHROOM 44" TO CENTERLINE OF BOX U.O.N.–UNIT KITCHENS
RECEPTACLES – REFRIGERATORS/VENDING	54" TO BOTTOM OF BOX U.O.N.
SPECIAL OUTLETS OR RECEPTACLES	16" TO BOTTOM OF BOX OR AS NOTED ON DRAWINGS.
VOICE/DATA OUTLETS	16" TO BOTTOM OF BOX. *EXCEPTION: 44" MAXIMUM TO TOP ABOVE COUNTERS WHICH ARE 20"–25"D*
TELEPHONE OUTLETS – WALL TYPE	44" TO DIAL CENTER (NON–ACCESSIBLE). 48" TO HIGHEST OPERABLE PART (ACCESSIBLE).
FIRE ALARM MANUAL PULL STATIONS	MINIMUM 44" ABOVE FINISHED FLOOR AND A MAXIMUM OF 48" ABOVE FINISHED FLOOR TO CENTER OF DEVICE.– NOT MORE THAN 5'–0" FROM EXIT
FIRE ALARM HORNS, BELLS, STROBES, ETC.	STROBES SHALL BE MOUNTED SUCH THAT THE ENTIRE LENS IS NOT LESS THAN 80" AND NOT GREATER THAN 96" ABOVE FINISH FLOOR OR 6" BELOW CEILING, WHICH EVER IS LOWER.
WALL MOUNTED REMOTE INDICATOR LIGHT FOR DUCT MOUNTED SMOKE DETECTORS	80" TO CENTERLINE OF DEVICE OR 6" BELOW CEILING, WHICHEVER IS LOWER.
INTERCOM STATION/AREA OF RESCUE	44" TO CENTERLINE OF BOX.
THERMOSTATS	44" TO CENTERLINE OF BOX.
TEMPERATURE/HUMIDITY SENSORS	44" TO CENTERLINE OF BOX.
STARTERS AND DISCONNECT SWITCHES	5'–0" TO CENTERLINE FROM FINISHED FLOOR.
PANELBOARDS	6'–6" TO TOP CIRCUIT BREAKER (MAXIMUM)
MOTION DETECTORS, CAMERAS, AND GLASS BREAK DETECTORS	COORDINATE WITH SECURITY SYSTEMS VENDOR/MANUFACTURER
TELEVISION AND CABLE TV OUTLETS	18" TO CENTERLINE OF BOX. U.O.N.

1. ALL DIMENSIONS ARE CONSIDERED FROM FINISHED FLOOR AND, UNLESS NOTED OTHERWISE, AND SHALL NOT VARY. ALL DIMENSIONS SHALL BE COORDINATED WITH ARCHITECTURAL DETAILS AND MAY BE ADJUSTED TO CONFORM WITH ARCHITECTURAL REQUIREMENTS AS LONG AS NO CODE RESTRICTION IS VIOLATED.
2. OUTLETS INSTALLED LOWER THAN 15" AFF (FORWARD REACH) AND 9" AFF (SIDE REACH) ARE IN VIOLATION OF ADA.
3. EXIT SIGNS SHALL NOT BE INSTALLED SO THAT IT BLOCKS FIRE ALARM VISUAL DEVICES.
4. CONTRACTOR SHALL COORDINATE ALL THE ABOVE MOUNTING HEIGHTS WITH THOSE SHOWN ON THE ARCHITECTURAL PLANS PRIOR TO ROUGH–IN.
5. COORDINATE DEVICE HEIGHTS WITH CASEWORK ELEVATIONS, BACK SPLASH, AND FIXED IN PLACE APPLIANCES.

DISCONNECT SWITCHES

MECHANICAL EQUIPMENT	RESPONSIBLE CONTRACTOR
CUH – CABINET UNIT HEATERS	MECHANICAL
EF – SINGLE PHASE	ELECTRICAL
EF – THREE PHASE	ELECTRICAL
EF – UPBLAST CENTRIFUGAL ROOF EXHAUSTER – SINGLE PHASE	MECHANICAL
EF – UPBLAST CENTRIFUGAL ROOF EXHAUSTER – THREE PHASE	ELECTRICAL
VF – SIDEWALL PROPELLER FANS	ELECTRICAL
VF – IN–LINIE CENTRIFUGAL	ELECTRICAL
PUMPS (NON–VFD CONTROLLED)	ELECTRICAL
AHU – AIR HANDLING UNITS	ELECTRICAL
AC/CU – AIR CONDITIONING/CONDENSING UNITS	MECHANICAL
ERV – ENERGY RECOVERY UNITS	MECHANICAL
MAU – MAKE–UP UNITS	ELECTRICAL
DOAS – DEDICATED OUTSIDE AIR UNIT	ELECTRICAL
CH – CHILLER	MECHANICAL
ATC/BAS PANELS	MECHANICAL
DOMESTIC DUPLEX BOOSTER PUMP	MECHANICAL
SUMP PUMPS	ELECTRICAL
DOMESTIC RE–CIRC PUMPS	ELECTRICAL
DOMESTIC WATER HEATERS	ELECTRICAL
FCU/FC – FAN COIL UNITS	MECHANICAL
RTU – PACKAGED ROOF TOP UNITS	MECHANICAL
EC–1/EC–1C – ENVIRONMENTAL CONTROL UNIT	MECHANICAL
VAV/EHC – VARIABLE AIR VOLUME BOXES/HEATING COIL	MECHANICAL
SG – ELECTRIC STEAM GENERATOR	MECHANICAL
ELEVATOR	ELECTRICAL
TRAP PRIMING STATIONS	ELECTRICAL
DOCK LEVELERS & LIFTS	ELECTRICAL

NOTE: WHERE DISCONNECT SWITCHES ARE BEING SUPPLIED BY THE MECHANICAL CONTRACTOR, THEY ARE SHOWN ON THE ELECTRICAL DRAWINGS FOR REFERENCE. DISCONNECT SWITCHES SHIPPED LOOSE FROM THE MANUFACTURER SHALL BE INSTALLED BY THE ELECTRICAL CONTRACTOR.

VOLTAGE DROP SCHEDULE (1ø)

		AMPERAGE (6A THRU 16A)										
		6	7	8	9	10	11	12	13	14	15	16
	AWG	MAXIMUM LENGTH OF CIRCUIT IN FEET										
120V	#12	150	135	117	104	93	85	78	72	57	62	58
	#10	250	220	186	165	150	135	125	115	105	100	90
	#8	400	350	295	260	235	215	200	180	165	155	145
277V	#12	365	310	270	240	215	200	180	165	155	145	135
	#10	580	500	430	380	340	310	285	265	245	230	215
	#8	890	775	680	600	545	495	453	420	385	365	340
208V	#12	270	230	200	180	162	145	135	125	115	110	100
	#10	450	380	320	285	255	235	215	200	185	170	160
	#8	675	600	510	455	410	370	340	315	290	270	255

LOW VOLTAGE CONDUIT SIZING CHART

TRADE SIZE CONDUIT (IN)	INTERNAL DIAMETER (IN)	WIRE O.D. (INCHES)									
		0.13	0.18	0.22	0.24	0.29	0.31	0.37	0.53	0.62	0.70
1/2"	0.62	1	1	0	0	0	0	0	0	0	0
3/4"	0.82	6	5	4	3	2	2	1	0	0	0
1"	1.05	8	8	7	6	3	3	2	1	0	0
1–1/4"	1.38	16	14	12	10	6	4	3	1	1	1
1–1/2"	1.61	20	18	16	15	7	6	4	2	1	1
2"	2.07	30	26	22	20	14	12	7	4	3	2
2–1/2"	2.47	45	40	36	30	17	14	12	6	3	3
3"	3.07	70	60	50	40	20	20	17	7	6	6
3–1/2"	3.55	–	–	–	–	–	–	22	12	7	6
4"	4.02	–	–	–	–	–	–	30	14	12	7

WIRE COLOR CODING CHART

	AC WIRING		DC WIRING	
CONDUCTOR	120/208/240V SYSTEM	277/480V SYSTEM	CONDUCTOR	UNGROUNDED SYSTEM
PHASE A	BLACK	BROWN	POSITIVE	RED
PHASE B	RED	ORANGE	NEGATIVE	BLACK
PHASE C	BLUE	YELLOW	GROUND	GREEN
NEUTRAL	WHITE	GREY	–	–
V REF	WHITE	GREY	–	–
GROUND	GREEN	GREEN	–	–

EMT SIZING CHART

TRADE SIZE RACEWAY EMT (IN)	INTERNAL DIAMETER (IN)	WIRE GAUGE (THHN/THWN/THWN–2)				
		#12	#10	#8	#6	#4
		MAX QUANTITY / RACEWAY				
3/4"	0.824	16	10	6	4	2
1"	1.049	26	16	9	7	4
1–1/4"	1.380	45	28	16	12	7
1–1/2"	1.610	61	38	22	16	10

WHEN THE NUMBER OF CONDUCTORS IN EMT EXCEEDS THREE, THE AMPACITIES ARE TO BE REDUCED PER THE NEC.

CODES AND STANDARDS

U.S. MILITARY ACADEMY / CITY OF WEST POINT / ORANGE COUNTY / NEW YORK

2019	UNIFIED FACILITIES CRITERIA UFC 1-200-01 GENERAL BUILDING REQUIREMENTS
2018	- EXCEPT AS INDICATED, USE STATE OF NEW YORK ADOPTED 2018 IBC AND 2018 IEBC
2018	IBC CHAPTER 27 - ELECTRICAL - EXCEPT AS MODIFIED BY UFC 3-520-01 INTERIOR ELECTRICAL SYSTEMS
2018	IBC CHAPTER 27 - ELECTRICAL - EXCEPT AS MODIFIED BY UFC 3-530-01 LIGHTING CONTROLS
2018	IBC CHAPTER 27 - ELECTRICAL - EXCEPT AS MODIFIED BY UFC 3-550-01 EXTERIOR POWER DISTRIBUTION
2018	IBC CHAPTER 27 - ELECTRICAL - EXCEPT AS MODIFIED BY UFC 3-580-01 TELECOMUNICATIONS
2019	IBC CHAPTER 27 - ELECTRICAL - EXCEPT AS MODIFIED BY UFC 3-600-01 FIRE PROTECTION
2019	- UFC 3-600-1 SUPERSEDES NFPA, EXCEPT WHERE NOT SPECIFICALLY ADDRESSED BY UFC
2018	- REFERENCES TO IFC SHALL BE REPLACED WITH NFPA 1, EXCEPT WHERE SUPERSEDED BY UFC
2003	UFC 3-450-01 NOISE AND VIBRATION CONTROL
2018	IBC CHAPTER 28 - MECHANICAL - EXCEPT AS MODIFIED BY UFC 3-410-01 HVAC SYSTEMS
2018	- UFC 3-410-2 DIRECT DIGITAL CONTROLS FOR HVAC
2016	NFPA 13 - STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS
2019	- UFC 3-600-1 SUPERSEDES NFPA, EXCEPT WHERE NOT SPECIFICALLY ADDRESSED BY UFC
2018	IBC CHAPTER 29- PLUMBING - EXCEPT AS MODIFIED BY UFC 3-420-01 PLUMBING SYSTEMS
2014	- NEW YORK CITY PLUMBING CODE - CHAPTER 10 - TRAPS, INTERCEPTORS, AND SEPARATORS
2018	NFPA 1 - FIRE CODE - EXCEPT WHERE SUPERSEDED BY UFC 3-600-01 FIRE PROTECTION
2018	NFPA 54 (ANSI Z223.1) - NATIONAL FUEL GAS CODE
2017	NFPA 70 - NATIONAL ELECTRICAL CODE
2018	NFPA 101 - LIFE SAFETY CODE - EXCEPT WHERE SUPERSEDED BY UFC 3-600-01 FIRE PROTECTION
2016	NFPA 72 - FIRE ALARM CODE - EXCEPT AS MODIFIED BY UFC 3-600-01 FIRE PROTECTION
2013	ASHRAE 90.1 - ENERGY EFFICIENCY - EXCEPT AS MODIFIED BY UFC 1-200-02 HIGH PERFORMANCE BLDGS
2020	US ARMY GARRISON, WEST POINT, NY ENGINEERING PLANNING STANDARDS - LATEST EDITION

TELECOMMUNICATIONS NOTES

1. CONTRACTOR SHALL PROVIDE ALL TELECOMMINUCATIONS CONDUIT, BACKBOXES, RACEWAYS, WIRING, DEVICES, ETC. IN THE BID CONTRACT FOR A COMPLETELY OPERATIONAL SYSTEM.
2. COORDINATE THE WORK WITH THE OWNER'S INFORMATION TECHNOLOGY DEPARTMENT/CONTRACTOR PRIOR TO ROUGH–IN. INSTALLATION SHALL COMPLY WITH ANSI/TIA/EIA 568C TELECOMMUNICATIONS CABLING STANDARD, COMMERCIAL BUILDINGS.
3. WHERE CABLING PASSES THROUGH NEW OR EXISTING WALLS, PROVIDE STI EZPATH 44+ SERIES FIRE RATED PRE–MANUFACTURED CABLE PATHWAYS COMPLETE WITH BRACKETS AND RADIUS CONTROL MODULE.
4. FOR EACH WALL MOUNTED COMMUNICATION JACK PROVIDE A 4"x4"x2.125" BOX WITH SINGLE GANG TILE RING, AND (1) 1" CONDUIT EXTENDED TO AN ACCESSIBLE LOCATION ABOVE CEILING. COORDINATE EXACT LOCATION WITH ARCHITECT AND OWNER.
5. FOR EACH TV WALL BOX AND FLOOR BOX PROVIDE (1) 1–1/4" CONDUIT EXTENDED TO AN ACCESSIBLE LOCATION ABOVE CEILING. COORDINATE EXACT LOCATION WITH ARCHITECT AND OWNER.
6. FOR EACH WALL MOUNTED WIRELESS ACCESS POINT PROVIDE A 4"x4"x2.125" BOX WITH SINGLE GANG TILE RING, AND (1) 1" CONDUIT EXTENDED TO AN ACCESSIBLE CEILING UNLESS OTHERWISE NOTED. WALL MOUNTED BOXES TO BE 6" BELOW CEILING. COORDINATE EXACT LOCATION WITH ARCHITECT AND OWNER. PROVIDE FOR EACH WIRELESS ACCENT POINT (2) ORANGE CAT–6A CABLES.
7. COORDINATE ALL DEVICE LOCATIONS WITH THE FURNITURE LAYOUT. RECEPTACLES AND IT JACKS SHALL BE MOUNTED IN THE OPEN AREA/LEG SPACE BENEATH THE DESK. DEVICES TO BE MOUNTED 8" ON CENTER.
8. ALL RECESSED AND SURFACE MOUNTED BOXES SHALL BE FURNISHED WITH 1–1/4 INCH DIAMETER EMT FIXED TO THE TOP OF THE BOX (TYPICAL) AND TURNING OUT A MINIMUM OF 6 INCHES ABOVE THE NEAREST ACCESSIBLE CEILING LEVEL.
9. BOTH OPEN ENDS OF THE EMT SHALL BE FURNISHED WITH A 1–1/4 INCH DIAMETER SET SCREW CONNECTOR AND THREADED NYLON BUSHING. EACH LENGTH OF EMT SHALL BE FURNISHED WITH A PULL STRING EXTENDING AT LEAST 18–INCHES BEYOND EACH OPEN END OF EMT. EMT SERVING VOICE AND DATA JACKS IN SPACES WITHOUT CEILINGS SHALL BE ROUTED TO THE NEAREST ACCESSIBLE CEILING AREA. AT NO TIME SHALL VOICE/DATA CABLING BE EXPOSED IN THE OPEN CEILING AREAS. COORDINATE ROUTING SO THAT THE SHORTEST PATH BACK TO THE IDF/MDF IS ACHIEVED.
10. CONDUCTOR–LESS FLEXIBLE ARMORED SHEATHING ("GREENFIELD") SHALL NOT BE PERMITTED FOR USE IN INSTALLATION OF TELECOMMUNICATIONS AND DATA CABLE PATHWAYS.
11. ALL PERSONNEL INVOLVED IN PULLING, TERMINATING, OR OTHERWISE INSTALLING CABLE MUST POSSESS APPROPRIATE TRAINING OR CERTIFICATION AND A MINIMUM OF TWO YEARS FIELD EXPERIENCE WITH INSTALLING CATEGORY 3, CATEGORY 5, CATEGORY 5 ENHANCED, CATEGORY 6, CATEGORY 6a, COAXIAL CABLE, SIAMESE, MULTI–MODE FIBER, AND SINGLE–MODE FIBER. PERSONNEL MUST HAVE A WORKING KNOWLEDGE OF TERMINATION TECHNIQUES, PULLING TENSION, ACCEPTABLE BEND RADIUS, SERVICE LOOPS, AND OTHER PRACTICES RELEVANT TO VERTICAL (RISER) AND HORIZONTAL CABLE INSTALLATION.
12. ALL SUPERVISORY PERSONNEL/FOREMEN MUST POSSESS APPROPRIATE CERTIFICATION AND A MINIMUM OF 5 YEARS EXPERIENCE IN CABLING AND THREE YEARS IN A SUPERVISORY CAPACITY.
13. CONTRACTOR MUST HAVE ON STAFF (OR OTHERWISE AVAILABLE), A PERSON WITH RCDD (REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER) ACCREDITATION FROM BISCI (BUILDING INDUSTRY CONSULTING SERVICE INTERNATIONAL) AND A MINIMUM OF FIVE YEARS EXPERIENCE.
14. THE VENDOR MUST SUBMIT MANUFACTURER–SPECIFIC PRODUCT DATA SHEETS DETAILING APPROPRIATE CHARACTERISTICS, PARAMETERS, OR LIMITATIONS FOR EACH TYPE OF CABLE OR HARDWARE PROPOSED. THESE SHOULD BE INCLUDED AS SEPARATELY LABELED APPENDICES AT THE END OF YOUR PROPOSAL.
15. ALL NEW VOICE STATION CABLES SHALL BE 24 AWG UTP COPPER CONFOMRING TO EIA/TIA CATEGORY 6 STANDARDS. COLOR "GREEN" FOR JACKET, JACKS, & PATCH CORDS.
16. ALL NEW DATA STATION CABLES, INCLUDING THOSE FOR WIRELESS ACCESS POINTS, SHALL BE 24 AWG UTP COPPER CONFORMING TO EIA/TIA CATEGORY 6 AND 6A STANDARDS. YELLOW (JACKET, JACKS, PATCH CORDS) FOR DATA AND ORANGE (JACKET, JACKS, PATCH CORDS) FOR WIRELESS ACCESS POINTS.
17. COAX RUNS SHALL BE INSTALLED AS QUAD–SHIELD RG–6U TERMINATED ON THE ASSOCIATED FACEPLATE AS DEFINED ON THE PRINTS AND TIPPED AT THE USER END IN THE FACEPLATE AS DEFINED. FOLLOW THE PRINTS FOR LOCATIONS AND TERMINATIONS. FOR ANY RUN GREATER THAN 150' IN LENGTH, NOTIFY OWNER IF RG–11 CABLE WILL BE REQUIRED.
18. ONCE INSTALLED, CONTRACTOR SHALL BE TEST ALL CABLES FOR THE FOLLOWING MEASUREMENTS: CABLE LENGTH, WIRE MAP, ATTENUATION, NEXT (NEAR END CROSSTALK), ELFEXT, AND RETURN LOSS. THE VENDOR MUST USE APPROPRIATE CATEGORY 6a TESTERS FOR DATA CABLES. PERFORMANCE TESTING MUST DEMONSTRATE COMPLIANCE WITH ALL CATEGORY 6/6a STANDARDS AND LIMITS. VOICE CABLES MUST BE TESTED FOR, AND COMPLY WITH ALL STANDARD EIA/TIA CATEGORY 6 REQUIREMENTS. TESTING MUST INCLUDE ALL MEASUREMENTS AS NOTED ABOVE FOR DATA CABLES.
19. CABLES MUST BE NEATLY DRESSED AND TIE–WRAPPED AND ATTACHED TO THE STRUCTURE WHEREVER REASONABLE. CABLES MUST NOT LAY ON LIGHT FIXTURES AND SHOULD NOT BE LAID IN PARALLEL WITH POWER WIRING. CABLES ARE NOT TO BE LAID ON CEILING GRIDS ANYWHERE IN THE BUILDING. ALL BUNDLED CABLES IN CEILINGS MUST BE ATTACHED TO THE STRUCTURE VIA J–HOOKS OR D–RINGS ACCORDING TO MANUFACTURER SPECIFICATIONS. CONTRACTOR SHALL PROVIDE ALL NECESSARY HARDWARE (HOOKS, RINGS ETC.). THE CONTRACTOR IS RESPONSIBLE FOR ALL PATHWAYS AND CABLE ROUTING FOR A COMPLETELY CONCEALED INSTALLATION. ALL EXPOSED CABLING IN FINISHED AREAS SHALL BE INSTALLED IN CONDUIT, UNLESS OTHERWISE NOTED TO BE INSTALLED IN METALLIC SURFACE RACEWAY.
20. ALL RISER AND HORIZONTAL CABLE SHOULD BE PLENUM–RATED THROUGHOUT UNLESS OTHERWISE NOTED.
21. FOLLOW EIA/TIA STANDARDS 567 AND 568 FOR INSTALLATION AND EIA/IEEE 568A FOR TERMINATION.
22. THE RESULTS OF CABLE TESTING MUST BE DOCUMENTED AND PROVIDED TO OWNER AS A FILE ON A CD. ALL TEST SHEETS SHOULD BE SIMILARLY SUPPLIED.
23. ALL HORIZONTAL AND VERTICAL CABLING MUST BE INSTALLED/RE–INSTALLED WITH SUFFICIENT SERVICE LOOPS AS DEFINED IN MANUFACTURER INSTRUCTIONS AND INDUSTRY STANDARDS.
24. ALL MODULES WILL BE COLOR CODED BY TYPE (VOICE OR DATA). ANY WALL MOUNTED (NON–SURFACE MOUNTED) PLATES OR JACKS MUST BE SECURELY AFFIXED TO THE WALL WITH A BOLT OR SIMILAR HARDWARE.
25. CONTRACTOR SHALL USE ALL EFFORTS TO SUPPLY A PROFESSIONAL AND DRESSED APPEARANCE OF ALL VOICE AND DATA CABLING. THIS WILL INCLUDE USE OF APPROPRIATE CABLE RINGS, BRACKETS, SUPPORT BARS, WIRE MANAGERS, TIE WRAPS, AND OTHER UNSPECIFIED CABLE MANAGEMENT PRODUCTS TO ASSURE CABLE INTEGRITY AND EFFICIENCY.
26. LABELS WILL BE ELECTRONICALLY GENERATED AND NOT HANDWRITTEN. LABELS MUST BE PERMANENTLY AFFIXED TO JACKS AND AT PATCH PANELS. VOICE JACKS AND CORRESPONDING 110 AND 66 BLOCKS MUST BE SIMILARLY LABELED FOR EASY IDENTIFICATION. LABELS SHALL INCLUDE TELECOM CLOSET NUMBER, ROOM NUMBER, AND JACK NUMBER.
27. ALL CABLE LABEL DOCUMENTATION WILL BE PROVIDED TO THE OWNER ELECTRONICALLY AS AN AS–BUILT PRINT/DIAGRAM OR AN EXCEL WORKSHEET. IN ADDITION, TWO HARD–BOUND COPIES OF ALL DOCUMENTATION MUST BE PROVIDED. AS–BUILT DRAWINGS OF CABLE ROUTES SHALL ALSO BE PROVIDED.
28. REMOVE EXPOSED ABANDONED TELECOMMUNICATIONS CABLES AND PATHWAYS, INCLUDING ABANDONED CABLES AND PATHWAYS ABOVE ACCESSIBLE CEILING FINISHES. CUT FLUSH WITH WALLS AND FLOORS, AND PATCH SURFACES. DISCONNECT AND REMOVE ABANDONED TELECOMMUNICATIONS EQUIPMENT.
29. MAINTAIN ACCESS TO EXISTING TELECOMMUNICATIONS EQUIPMENT, CABLING, AND TERMINATIONS AND OTHER INSTALLATIONS REMAINING ACTIVE AND REQUIRING ACCESS. MODIFY INSTALLATION OR PROVIDE ACCESS PANEL.
30. CLEAN AND REPAIR EXISTING TELECOMMUNICATIONS EQUIPMENT REMAINING OR IS TO BE REINSTALLED.
31. INSTALL PATHWAYS IN ACCORDANCE WITH TIA/EIA 569. INSTALL WIRE AND CABLE IN ACCORDANCE WITH TIA/EIA 568. TERMINATE WIRE AND CABLE IN ACCORDANCE WITH EIA/IEEE 568A.
32. GROUND AND BOND PATHWAYS, CABLE SHIELDS, AND EQUIPMENT.
33. PROVIDE A MINIMUM OF 5 FEET OF COILED CABLE ABOVE EACH WORKSTATION.

Mark B. Thompson Associates
Architecture
502 South 24th Street
Philadelphia, PA 19146
215.985.1000 www.mbtarchitects.com

Keast & Hood Company of New York, PC
Structural Engineering
400 Market Street, Suite 1250
Philadelphia, PA 19106
215.625.0099 www.keasthood.com

Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

It is a violation of New York State Law for any person, unless he is acting under the direction of a licensed Professional Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Engineer or Land Surveyor is altered, the altering Engineer or Land Surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid and Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

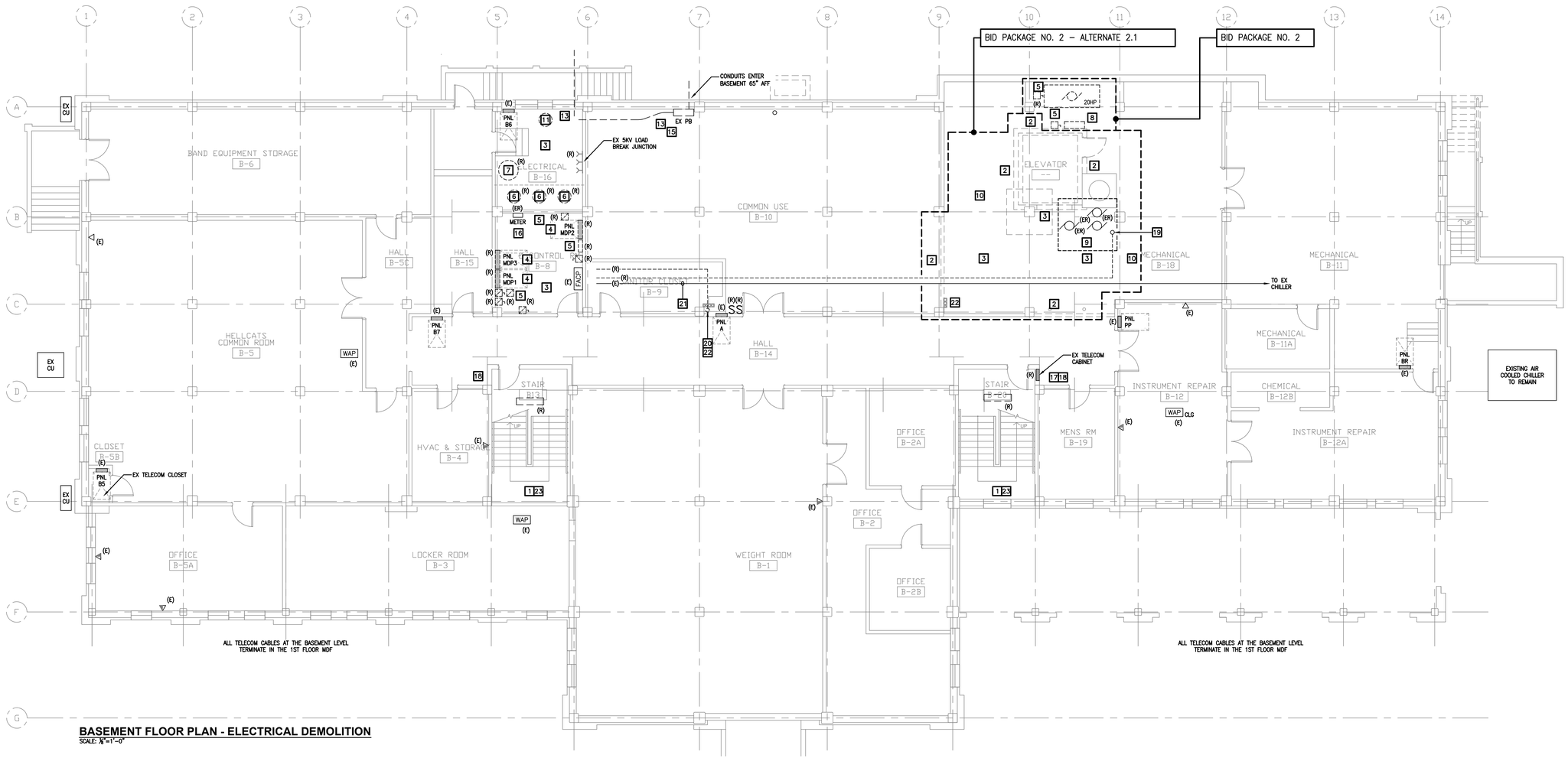
EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300 (DJVI #2115)
Date: July 6, 2022

Drawing Title:
Electrical Notes & Schedules

E C S 2



BASEMENT FLOOR PLAN - ELECTRICAL DEMOLITION

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

ELECTRICAL DEMOLITION & RELOCATION NOTES

1. REMOVE ALL EXISTING ELECTRICAL DEVICES AND BRANCH CIRCUITS, UNLESS OTHERWISE SHOWN TO REMAIN. ALL WIRING THAT FEEDS OTHER DEVICES/EQUIPMENT OUTSIDE THE AREA OF WORK NOT AFFECTED BY THE RENOVATION SHALL BE RELOCATED OUTSIDE THE AREA OF WORK AND RECONNECTED.
   - REMOVE ALL EXISTING LIGHTING FIXTURES, SWITCH CONTROL, AND BRANCH CIRCUITS.
   - REMOVE ALL BRANCH CIRCUITS BACK TO SOURCE OF POWER.
   - REMOVE ALL EXISTING FIRE ALARM DEVICES, UNLESS OTHERWISE SHOWN TO REMAIN.
   - REMOVE ALL BRANCH CIRCUITS, CONTROLLERS, DISCONNECTS, AND WIRING FOR EQUIPMENT INDICATED TO BE DEMOLISHED ON THE MECHANICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS.
   - EXISTING DEVICES TO REMAIN AND BE RE-USED IN THEIR ORIGINAL LOCATION SHALL BE TEMPORARILY REMOVED AND REINSTALLED FOR NEW FINISHES. PROTECT DEVICES DURING DEMOLITION AND CONSTRUCTION.
   - REMOVE EXISTING EMERGENCY LIGHTING WALL PACKS AND BRANCH CIRCUITS.
   - REMOVE ALL SURFACE MOUNTED RACEWAYS, CONDUITS, BOXES, AND MOUNTING HARDWARE.
2. REMOVE ALL DEVICES AND BRANCH CIRCUITS FROM WALL BEING DEMOLISHED. WIRING REQUIRED TO REMAIN IN SERVICE SHALL BE RELOCATED AND CONCEALED IN THE NEW AND EXISTING CONSTRUCTION.
3. REMOVE ALL EXISTING LIGHTING FIXTURES, SWITCH CONTROL, AND BRANCH CIRCUITS.
4. REMOVE EXISTING PANELBOARD AND ASSOCIATED BRANCH CIRCUITS AND FEEDER. BRANCH CIRCUITS REQUIRED TO REMAIN IN SERVICE SHALL BE RECIRCUITED TO THE NEW PANELBOARDS.
5. REMOVE EXISTING DISCONNECT/CIRCUIT BREAKER SWITCH AND ASSOCIATED FEEDERS.
6. REMOVE EXISTING TRANSFORMER AND PRIMARY/SECONDARY CABLING.
7. REMOVE EXISTING 5KV SWITCH MODULE.
8. REMOVE EXISTING ELEVATOR CONTROLLER, PUMPING UNIT, WIRING, AND FEEDER.
9. EXISTING AIR COMPRESSORS, DRYER, DEVICES, STARTERS, AND DISCONNECTS/CONTROLS TO BE RELOCATED TO ADJACENT MECHANICAL ROOM. EXTEND AND RECONNECT ASSOCIATED BRANCH CIRCUITS.
10. MODIFY EXISTING LIGHTING FIXTURES TO ACCOMMODATE THE NEW WORK.
11. REMOVE EXISTING ABANDONED OIL FILLED TRANSFORMER AND OIL FILLED 5KV SWITCHES.
12. NOT USED.
13. EXISTING 5KV CABLES TO BE REMOVED BY THE LOCAL UTILITY COMPANY, CITY LIGHT & POWER (CLP).
14. NOT USED.
15. EXISTING 5KV CONDUITS AND PULL BOX TO BE REMOVED BY CONTRACTOR AFTER THE 5KV CABLES ARE REMOVED BY CLP. CONTRACTOR SHALL SEAL AND WATER-PROOF EXISTING THROUGH-WALL DUCT.
16. EXISTING SHARK SUBMETER TO BE RELOCATED AS SHOWN ON DRAWING E200 AND RECONNECTED WITH NEW VOLTAGE SENSING CIRCUIT AND NEW CT'S.
17. REMOVE EXISTING TELECOM CABINET IN IT'S ENTIRETY; INCLUDING INTERCONNECTING RACEWAYS. EXISTING YELLOW, ORANGE, GRAY, BLUE AND RED TELECOM AND LV CABLE RISERS SHALL BE REMOVED AND REPLACED IN NEW RISER LOCATION. COORDINATE NEW RISER LOCATION WITH ARCHITECT. CABLES SHALL BE TERMINATED AND TESTED. ALL CABLING SHALL BE RELOCATED AND REPLACED FROM END TO END PRIOR TO REMOVING THE TELECOM CABINETS. ALL 66-BLOCK TYPE TELEPHONE BLOCKS AND MULTI-PAIR (LARGE) GRAY TELEPHONE CABLES IN THE CABINETS CAN BE REMOVED.
18. EXISTING FIXTURES AND DEVICES AT BASEMENT LEVEL THAT ARE FED FROM BRANCH CIRCUITS BEING DEMOLISHED ON UPPER FLOORS (STAIR DOORS/WALLS) SHALL BE RECIRCUITED FROM LOCAL SOURCE.
19. EXISTING FEEDER RISER TO BE REPLACED WITH NEW IN NEW LOCATION TO ACCOMMODATE THE GENERAL CONSTRUCTION WORK.
20. FEEDER RISER TO 3RD FLOOR PANELS 'D' & 'D1' TO BE REMOVED.
21. EXISTING CHILLER FEEDER TO REMAIN.
22. RELOCATE EXISTING ELECTRICAL WIRING, CONDUIT, AND CABLING THAT IS TO REMAIN IN SERVICE AROUND THE NEW CONDUIT RISERS AND FLOOR PENETRATIONS; INCLUDING ANY REQUIRED ELECTRICAL WORK TO GAIN ACCESS TO THE CONDUIT RISER LOCATION. REFERENCE ARCHITECTURAL DRAWINGS FOR EXTENT OF FLOOR, WALL, AND CEILING DEMOLITION.
23. REMOVE EXISTING STAIR SWITCH CONTROL AND ASSOCIATED WIRING ON ALL FLOORS (TYP). PROVIDE BLANK PLATE.

GENERAL DEMOLITION NOTES

1. GENERAL DEMOLITION NOTES PERTAIN TO ALL DRAWINGS.
2. REMOVE CIRCUITS NOT REQUIRED IN THE AREA OF WORK BACK TO SOURCE OF POWER INCLUDING ALL HANGERS, SUPPORTS, CONDUITS, JUNCTION BOXES, ETC. ALL FEEDERS, CONDUIT, CIRCUITS, WIRING, AND CABLING PASSING THROUGH AREA OF WORK WHICH SERVES OTHER AREAS OF THE BUILDING SHALL BE RETAINED. RELOCATE AND RECONNECT AS REQUIRED FOR THE NEW CONSTRUCTION. EXISTING POWER, LIGHTING, AND LOW VOLTAGE CIRCUITS BEYOND CONTRACT LIMITS SHALL REMAIN IN SERVICE. RECIRCUIT AND SWITCH AS REQUIRED.
3. CONTRACTOR SHALL BUNDLE AND SUPPORT ALL EXISTING VOICE/DATA, FIRE ALARM, SECURITY, CONTROL, ETC. CABLES REQUIRED TO REMAIN IN SERVICE, THAT WILL BE CONCEALED ABOVE NEW CEILINGS. AT NO TIME SHALL EXISTING CABLES LAY ON THE CEILING SYSTEM.
4. CONTRACTOR SHALL BUNDLE AND SUPPORT ALL EXISTING METAL CLAD (MC) CABLES REQUIRED TO REMAIN IN SERVICE, THAT WILL BE CONCEALED ABOVE NEW CEILINGS. AT NO TIME SHALL EXISTING CABLES LAY ON THE NEW OR EXISTING CEILING SYSTEM. POWER AND LOW VOLTAGE CABLES SHALL NOT BE BUNDLED TOGETHER. CABLE SHALL NOT BE SUPPORTED FROM THE SPRINKLER PIPING.
5. ALL EXISTING FIRE ALARM DEVICES IN THE AREA OF WORK TO BE REPLACED WITH NEW UNLESS OTHERWISE NOTED TO REMAIN OR BE RELOCATED. RELOCATE AND PROVIDE NEW AS SHOWN. EXISTING STROBE CANDELA RATING SHALL BE CHANGED TO COMPENSATE FOR THE NEW LOCATIONS. NEW DEVICE CANDELA RATINGS SHALL BE BASED ON THE NEW LAYOUT AND ROOM CONFIGURATION/SIZE.
6. REMOVE ALL COVER PLATES AT EXISTING TO REMAIN DEVICES AND PROVIDE NEW DEVICE PLATES AS SPECIFIED. PROVIDE BOX EXTENSIONS AS REQUIRED.
7. REMOVE ALL ABANDONED WIRING AND CABLING FROM ABOVE ALL CEILINGS. EXISTING CONDUIT ALREADY INSTALLED IN THE STRUCTURE MAY BE REUSED IF IT IS IN GOOD CONDITION.
8. ALL WORK ON THE DRAWINGS AND IN THE SPECIFICATIONS SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL, PRIOR TO BIDDING, VISIT THE SITE AND REVIEW THE COMPLETE SET OF CONSTRUCTION DOCUMENTS FOR EACH TRADE, INCLUDING ADDENDUMS, TO VERIFY THE EXTENT OF EQUIPMENT, DEVICES, LIGHT FIXTURES, FEEDERS, JUNCTION/PULL BOXES, AND BRANCH CIRCUITS THAT MUST BE RELOCATED AND INCLUDE THIS COST IN THE BID PROPOSAL.
9. REMOVE AND/OR RELOCATE EXISTING EQUIPMENT AS REQUIRED BY THE RENOVATIONS AND TO ACCOMMODATE THE NEW MECHANICAL AND PLUMBING EQUIPMENT, PIPING, AND DUCTWORK. RECONNECT DISTURBED EQUIPMENT AND PLACE IN OPERATING CONDITION.
10. WHERE PARTS OF THE EXISTING WIRING SYSTEM ARE DISRUPTED, REWORK WIRING AS REQUIRED TO RE-ENERGIZE LOADS THAT ARE TO REMAIN IN OPERATION. CUT THE STRUCTURE ON EACH SIDE OF OUTLETS TO BE REMOVED, REMOVE EXISTING CONDUIT AND WIRING, PROVIDE NEW CONDUIT AND WIRING BETWEEN REMAINING OUTLETS, MAKE FINAL CONNECTIONS, AND PATCH STRUCTURE.
11. WHERE OUTLETS ARE CUT OFF FROM AN EXISTING FEED, RE-FEED THEM FROM ANOTHER DIRECTION IF POSSIBLE, AND PROVIDE NEW CONDUIT AND WIRE IF NECESSARY.
12. REMOVE AND/OR RELOCATE EXISTING FEEDER AND BRANCH CIRCUIT WIRING AND CONDUIT AS REQUIRED BY THE RENOVATIONS AND TO ACCOMMODATE THE NEW MECHANICAL AND PLUMBING EQUIPMENT, PIPING, AND DUCTWORK. RECONNECT DISTURBED FACILITIES AND PLACE IN OPERATING CONDITION.
13. REMOVE CIRCUITS NOT REQUIRED IN THE RENOVATED AREA BACK TO SOURCE OF POWER INCLUDING ALL HANGERS, SUPPORTS, CONDUITS, JUNCTION BOXES, ETC. ALL FEEDERS, CONDUIT, CIRCUITS, WIRING, AND CABLING PASSING THROUGH RENOVATED AREA WHICH SERVES OTHER AREAS OF THE BUILDING SHALL BE RETAINED. RELOCATE AND RECONNECT AS REQUIRED FOR THE NEW CONSTRUCTION.
14. REMOVE EXISTING CONDUIT AND WIRING WHERE NO LONGER REQUIRED, AND REMOVE THEM WHERE THEY INTERFERE WITH NEW CONSTRUCTION.
15. PROMPTLY REMOVE USED MATERIAL FROM THE SITE IF IT IS NO LONGER REQUIRED. WHERE INDICATED, DELIVER USED MATERIAL TO THE OWNER WHERE DIRECTED ON THE SITE.

GENERAL CUTTING AND PATCHING NOTES

1. GENERAL CUTTING AND PATCHING NOTES PERTAIN TO ALL DRAWINGS.
2. ALL CUTTING AND PATCHING SHALL BE PERFORMED BY THE CONTRACTOR. ALL HOLES SHALL BE CORE BORED. ALL FLOORS, BLACKTOP, WALKS, CURBS, ETC. SHALL BE SAW CUT. PROVIDE ALL CUTTING AND PATCHING REQUIRED FOR WORK PERFORMED UNDER THIS CONTRACT. NO HOLES MAY BE CUT OR DRILLED IN STRUCTURAL MEMBERS WITHOUT PRIOR APPROVAL OF OWNER'S REPRESENTATIVE. CUTTING SHALL BE DONE BY MECHANICS SKILLED IN THEIR RESPECTIVE TRADES.
3. CONTRACTOR SHALL PATCH WALLS WHERE EXISTING DEVICES HAVE BEEN REMOVED. MATCH EXISTING FINISH AND TEXTURE.
4. NO CUTTING THAT MAY IMPAIR THE STRENGTH OF THE BUILDING CONSTRUCTION SHALL BE DONE. NO HOLES MAY BE DRILLED IN OR ATTACHMENTS WELDED TO THE BEAMS OR OTHER STRUCTURAL MEMBERS WITHOUT PRIOR APPROVAL FROM THE OWNER'S REPRESENTATIVE. ALL WORK SHALL BE DONE BY MECHANICS SKILLED IN THEIR TRADE.
5. ALL PATCHING SHALL BE DONE IN A MANNER TO MATCH APPEARANCES AND QUALITY OF EXISTING SURFACES.
6. UNLESS OTHERWISE INDICATED, THE CONTRACTOR SHALL PATCH AND SEAL ALL WALLS, FLOORS, CEILINGS (DRYWALL, PLASTER, LAY-IN CEILINGS, ETC.) SOFFITS, ETC. WHERE EXISTING ITEMS SUCH AS CONDUIT, RACEWAYS, HANGERS, SUPPORTS, ETC. ARE REMOVED OR NEW WORK IS INSTALLED UNDER THIS CONTRACT. ALL PATCHING SHALL BE PERFORMED WITH EQUIVALENT MATERIALS AND FINISHES AND SHALL MATCH ADJOINING SURFACES IN BOTH TEXTURE AND FINISH.
7. REMOVE AND REPLACE EXISTING CEILING SYSTEM TILES AND GRIDS AS REQUIRED TO INSTALL THE NEW WORK. REPAIR AS NECESSARY AND USE NEW GRIDS AND TILES TO MATCH THE EXISTING.
8. ALL EXISTING LIGHTING CONTROL DEVICE WALL OPENINGS SHALL BE PATCHED WERE REMOVED AND/OR REPLACED. ALL NEW DEVICE HEIGHTS TO COMPLY WITH ADA. EXISTING BACKBOXES, IF RE-USED, SHALL BE LOWERED,

EXISTING BRANCH CIRCUITS

1. EXISTING BRANCH CIRCUIT NOTES PERTAIN TO ALL DRAWINGS.
2. CONTRACTOR SHALL METER THE LOAD ON EACH EXISTING LIGHTING CIRCUIT AND VERIFY WHICH CIRCUITS HAVE CAPACITY FOR THE NEW FIXTURE LOAD. NEW LIGHT FIXTURES AND DEVICES SHALL BE TIED INTO THE AVAILABLE CIRCUIT THAT HAS SPARE CAPACITY AT THE EXISTING PANEL, UNLESS OTHERWISE SHOWN TO BE DEDICATED. CONTRACTOR TO TRACE-OUT ALL EXISTING CIRCUITS AND DEVICES.
3. BRANCH CIRCUIT NUMBERS WERE DERIVED FROM EXISTING PANEL SCHEDULES AND SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL TRACE OUT EXISTING CIRCUITS, FIELD VERIFY SOURCE, AND PROVIDE NEW TYPED PANEL SCHEDULES INDICATING NEW AND EXISTING CIRCUITS.
4. ALL "ROMEX" CABLING LOCATED ABOVE THE CEILING SHALL BE REPLACED WITH NEW METAL CLAD CABLE.
5. ALL ACTIVE NON-PLENUM RATED TELECOMMUNICATIONS, CONTROL, AND FIRE ALARM CABLING LOCATED ABOVE THE CEILING BEING USED AS A RETURN AIR PLENUM SHALL BE REPLACED WITH NEW "PLENUM RATED" CABLE.

Mark B. Thompson Associates
Architecture
502 South 24th Street
Philadelphia, PA 19146
215.985.1000 www.mbtarchitects.com

Keast & Hood Company of New York, PC
Structural Engineering
400 Market Street, Suite 1250
Philadelphia, PA 19106
215.625.0099 www.keasthood.com

Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

It is a violation of New York State Law for any person, unless he is acting under the direction of a licensed Professional Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Engineer or Land Surveyor is altered, the altering Engineer or Land Surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid and Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

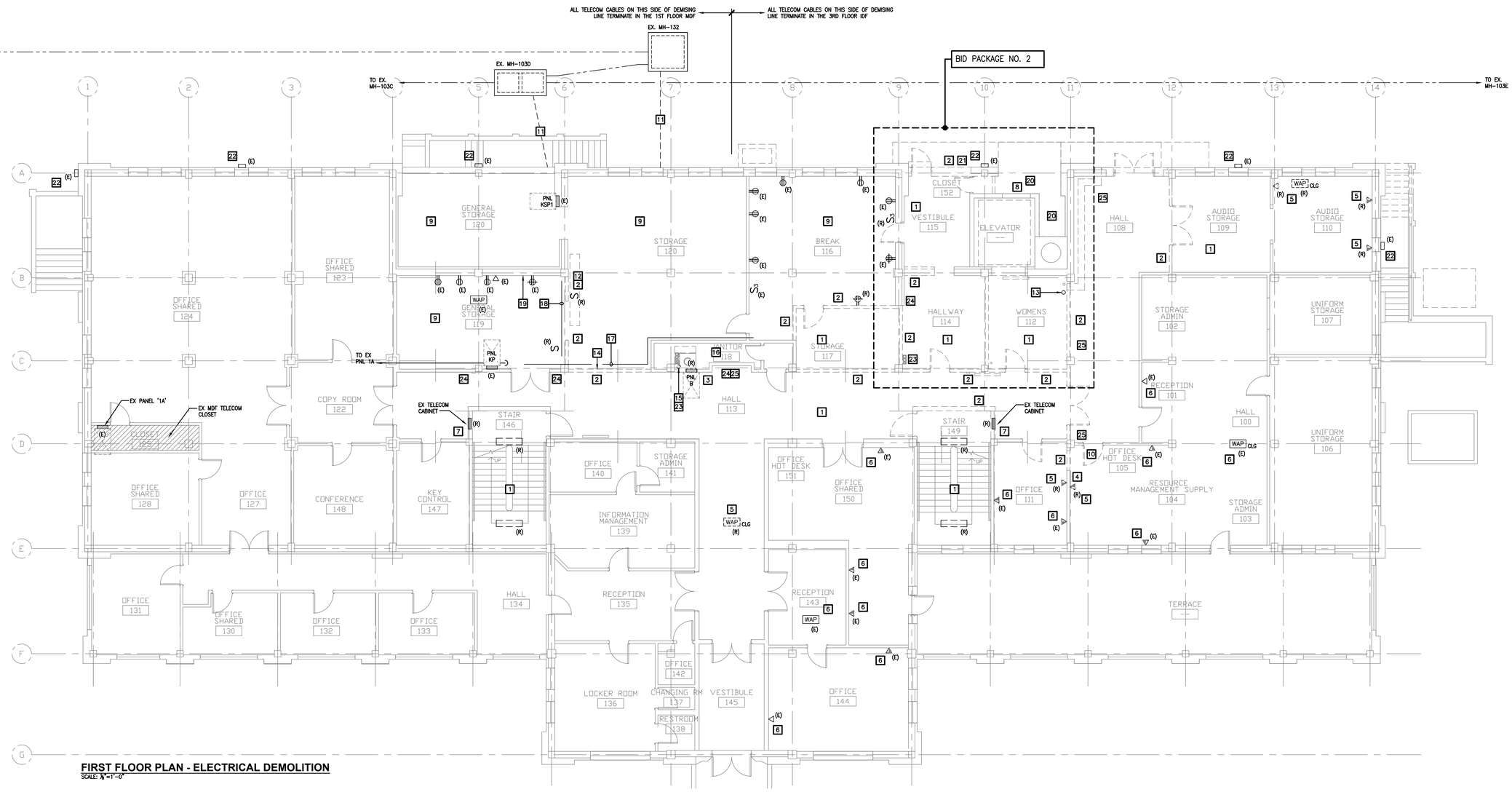
EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300 (DJVI #2115)
Date: July 6, 2022

Drawing Title:
Basement Floor Plan
Electrical Demolition

E100



FIRST FLOOR PLAN - ELECTRICAL DEMOLITION

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

ELECTRICAL DEMOLITION & RELOCATION NOTES

1. REMOVE ALL EXISTING ELECTRICAL DEVICES AND BRANCH CIRCUITS, UNLESS OTHERWISE SHOWN TO REMAIN. ALL WIRING THAT FEEDS OTHER DEVICES/EQUIPMENT OUTSIDE THE AREA OF WORK NOT AFFECTED BY THE RENOVATION SHALL BE RELOCATED OUTSIDE THE AREA OF WORK AND RECONNECTED.
   - REMOVE ALL EXISTING LIGHTING FIXTURES, SWITCH CONTROL, AND BRANCH CIRCUITS.
   - REMOVE ALL BRANCH CIRCUITS BACK TO SOURCE OF POWER.
   - REMOVE ALL EXISTING FIRE ALARM DEVICES, UNLESS OTHERWISE SHOWN TO REMAIN.
   - REMOVE ALL BRANCH CIRCUITS, CONTROLLERS, DISCONNECTS, AND WIRING FOR EQUIPMENT INDICATED TO BE DEMOLISHED ON THE MECHANICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS.
   - EXISTING DEVICES TO REMAIN AND BE RE-USED IN THEIR ORIGINAL LOCATION SHALL BE TEMPORARILY REMOVED AND REINSTALLED FOR NEW FINISHES. PROTECT DEVICES DURING DEMOLITION AND CONSTRUCTION.
   - REMOVE EXISTING EMERGENCY LIGHTING WALL PACKS AND BRANCH CIRCUITS.
   - REMOVE ALL SURFACE MOUNTED RACEWAYS, CONDUITS, BOXES, AND MOUNTING HARDWARE.
2. REMOVE ALL DEVICES, BRANCH CIRCUITS, FEEDERS, ETC. FROM WALL/PARTITION BEING DEMOLISHED. ANY UTILITY OR WIRING REQUIRED TO REMAIN IN SERVICE SHALL BE RELOCATED AND CONCEALED IN THE NEW AND EXISTING CONSTRUCTION.
3. REMOVE EXISTING PANELBOARD AND ASSOCIATED BRANCH CIRCUITS AND FEEDER. BRANCH CIRCUITS REQUIRED TO REMAIN IN SERVICE SHALL BE RECIRCUITED TO THE NEW PANELBOARDS.
4. REMOVE EXISTING DEVICES AND WIRING THAT WILL INTERFERE WITH THE NEW WALL.
5. ALL TELECOM AND LV CABLING AND DEVICES (VOICE/DATA/CATV/WAP/BAS/SECURITY) IN THE RENOVATED SPACES SHALL BE REMOVED IF NO LONGER REQUIRED AND REROUTED IF REQUIRED TO BE MAINTAINED. NEW DEVICES AND CABLING (PLUS EX. REROUTED) SHALL BE INSTALLED, TERMINATED, AND TESTED. IF THEY ARE REMOVED FROM A WALL BE DEMOLISHED/RENOVATED, THEY SHALL BE REROUTED, RE-INSTALLED, AND RETERMINATED AT NEW LOCATIONS. REMOVE EXISTING WIRELESS ACCESS POINT AND TELECOM CABLING BACK TO THE DESIGNATED TELECOM CLOSET. TURN OVER EXISTING WAP TO OWNER FOR STORAGE STOCK OR RE-INSTALLATION.
6. ALL ACTIVE TELECOM AND LV CABLING (VOICE/DATA/CATV/WAP/BAS/SECURITY) SERVING ADJOINING SPACES THAT PASS THROUGH THE RENOVATED AREA SHALL BE REMOVED FROM END TO END, REPLACED, TERMINATED, AND TESTED. EXISTING CABLES CAN BE RE-USED IF NOT DAMAGED.
7. REMOVE EXISTING TELECOM CABINET IN IT'S ENTIRETY; INCLUDING INTERCONNECTING RACEWAYS. EXISTING YELLOW, ORANGE, GRAY, BLUE AND RED TELECOM AND LV CABLE RISERS SHALL BE REMOVED AND REPLACED IN NEW RISER LOCATION. COORDINATE NEW RISER LOCATION WITH ARCHITECT. CABLES SHALL BE TERMINATED AND TESTED. ALL CABLING SHALL BE RELOCATED AND REPLACED FROM END TO END PRIOR TO REMOVING THE TELECOM CABINETS. ALL 66-BLOCK TYPE TELEPHONE BLOCKS AND MULTI-PAIR (LARGE) GRAY TELEPHONE CABLES IN THE CABINETS CAN BE REMOVED.
8. REMOVE ALL CONTROLS AND WIRING ASSOCIATED WITH THE ELEVATOR BEING DEMOLISHED.
9. EXISTING LIGHTING FIXTURES, SWITCH CONTROL, AND BRANCH CIRCUITS TO REMAIN.
10. MODIFY EXISTING LIGHTING AND SWITCH CONTROL TO ACCOMMODATE NEW VESTIBULE.
11. EXISTING 5KV CABLES TO BE REMOVED BY THE LOCAL UTILITY COMPANY, CITY LIGHT & POWER (CL&P).
12. EXISTING OVERHEAD SHEET METAL ENCLOSURE TO BE REBUILT IN PLACE. PROVIDE TEMPORARY CONDUIT SUPPORTS PRIOR TO DEMOLITION OF WALL. RE-SUPPORT FROM NEW WALL.
13. EXISTING FEEDER RISER TO BE REPLACED WITH NEW IN NEW LOCATION TO ACCOMMODATE THE GENERAL CONSTRUCTION WORK.
14. RELOCATE EXISTING CONDUIT TO ACCOMMODATE THE GENERAL CONSTRUCTION.
15. FEEDER RISER TO 3RD FLOOR PANELS 'D' & 'D1' TO BE REMOVED.
16. REMOVE EXISTING FAN BRANCH CIRCUIT AND CONTROLS. REMOVE ALL ABANDONED EQUIPMENT INSIDE CHASE/CLOSET.
17. RELOCATE EXISTING CONDUIT TO ABOVE NEW CEILING. EXTEND AND RECONNECT WIRING.
18. RELOCATE EXISTING CONDUITS, JUNCTION BOXES, DEVICES ETC. TO ACCOMMODATE THE GENERAL CONSTRUCTION WORK.
19. EXISTING DEVICES ALONG THIS WALL SHALL BE RECONNECTED BACK TO EXISTING PANEL 'KP'. RELOCATE DEVICES AND CONDUIT AS REQUIRED.
20. REMOVE EXISTING EXTERIOR LIGHT FIXTURE, BRANCH CIRCUIT, CONDUIT, AND SWITCH CONTROL.
21. RELOCATE EXISTING FIREFIGHTER ACCESS KEY (KNOX) BOX AS DIRECTED BY AHJ.
22. EXISTING EXTERIOR FLOOD LIGHTS MOUNTED HIGH ON WALL TO REMAIN. RECONNECT EXISTING CIRCUITS AND SWITCH CONTROL AS REQUIRED IF DISTURBED DURING DEMOLITION AND CONSTRUCTION.
23. RELOCATE EXISTING ELECTRICAL WIRING, CONDUIT, AND CABLING THAT IS TO REMAIN IN SERVICE AROUND THE NEW CONDUIT RISERS AND FLOOR PENETRATIONS; INCLUDING ANY REQUIRED ELECTRICAL WORK TO GAIN ACCESS TO THE CONDUIT RISER LOCATION. REFERENCE ARCHITECTURAL DRAWINGS FOR EXTENT OF FLOOR, WALL, AND CEILING DEMOLITION.
24. EXISTING SURFACE WIRING/CONDUIT TO BE RELOCATED AND CONCEALED IF REQUIRED TO REMAIN IN SERVICE.
25. EXISTING TELECOM CABLING TO BE RELOCATED AND REPLACED WITH NEW END TO END (IN CONDUIT WHERE EXPOSED).

Mark B. Thompson Associates
Architecture
502 South 24th Street
Philadelphia, PA 19146
215.985.1000 www.mbtarchitects.com

Keast & Hood Company of New York, PC
Structural Engineering
400 Market Street, Suite 1250
Philadelphia, PA 19106
215.625.0099 www.keasthood.com

Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

It is a violation of New York State Law for any person, unless he is acting under the direction of a licensed Professional Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Engineer or Land Surveyor is altered, the altering Engineer or Land Surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid and Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

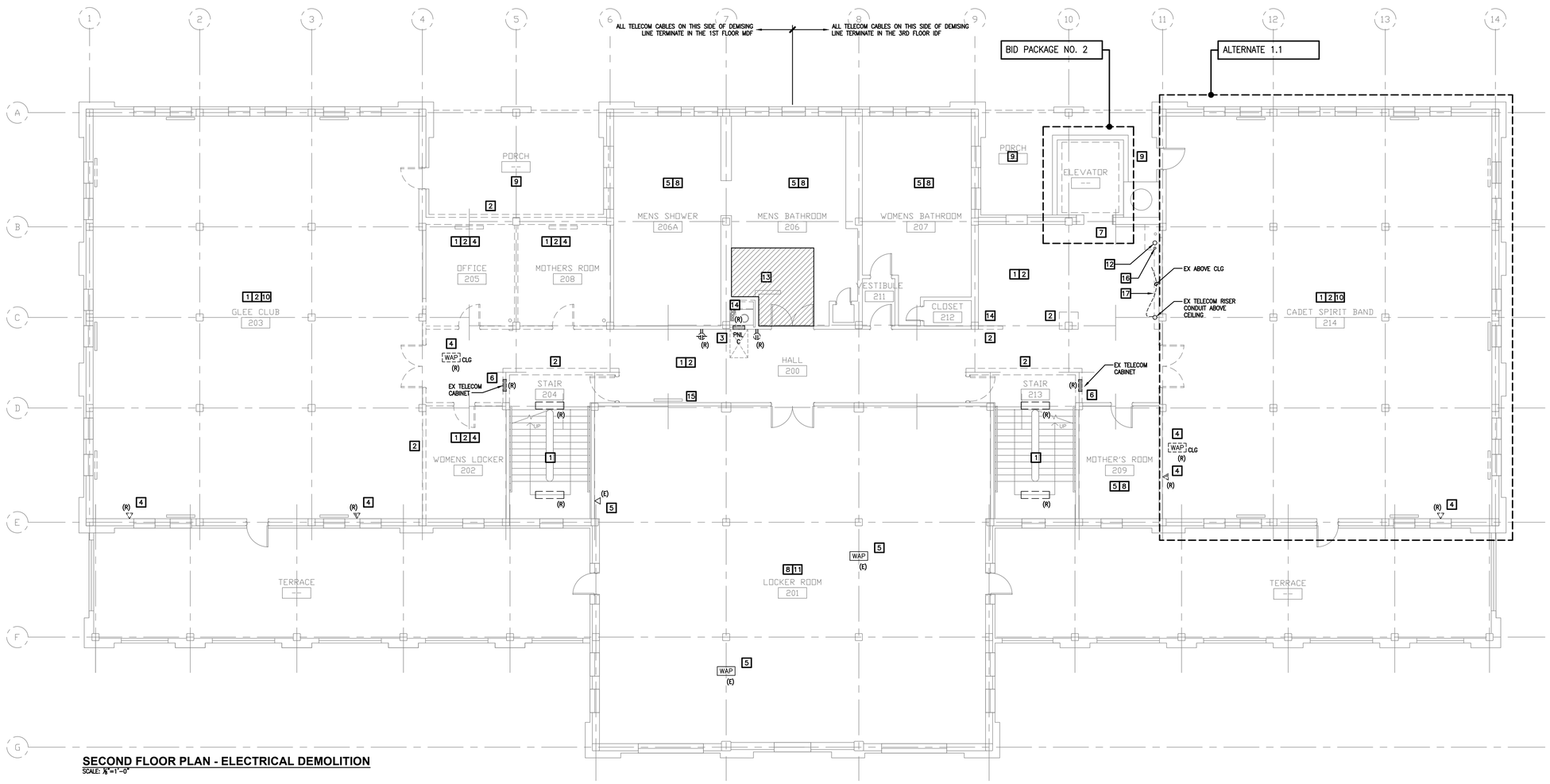
EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300 (DJVI #2115)
Date: July 6, 2022

Drawing Title:
First Floor Plan
Electrical Demolition

E101



SECOND FLOOR PLAN - ELECTRICAL DEMOLITION

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

ELECTRICAL DEMOLITION & RELOCATION NOTES

1. REMOVE ALL EXISTING ELECTRICAL DEVICES AND BRANCH CIRCUITS, UNLESS OTHERWISE SHOWN TO REMAIN. ALL WIRING THAT FEEDS OTHER DEVICES/EQUIPMENT OUTSIDE THE AREA OF WORK NOT AFFECTED BY THE RENOVATION SHALL BE RELOCATED OUTSIDE THE AREA OF WORK AND RECONNECTED.
   - REMOVE ALL EXISTING LIGHTING FIXTURES, SWITCH CONTROL, AND BRANCH CIRCUITS.
   - REMOVE ALL BRANCH CIRCUITS BACK TO SOURCE OF POWER.
   - REMOVE ALL EXISTING FIRE ALARM DEVICES, UNLESS OTHERWISE SHOWN TO REMAIN.
   - REMOVE ALL BRANCH CIRCUITS, CONTROLLERS, DISCONNECTS, AND WIRING FOR EQUIPMENT INDICATED TO BE DEMOLISHED ON THE MECHANICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS.
   - EXISTING DEVICES TO REMAIN AND BE RE-USED IN THEIR ORIGINAL LOCATION SHALL BE TEMPORARILY REMOVED AND REINSTALLED FOR NEW FINISHES. PROTECT DEVICES DURING DEMOLITION AND CONSTRUCTION.
   - REMOVE EXISTING EMERGENCY LIGHTING WALL PACKS AND BRANCH CIRCUITS.
   - REMOVE ALL SURFACE MOUNTED RACEWAYS, CONDUITS, BOXES, AND MOUNTING HARDWARE.
2. REMOVE ALL DEVICES, BRANCH CIRCUITS, FEEDERS, ETC. FROM WALL/PARTITION BEING DEMOLISHED. ANY UTILITY OR WIRING REQUIRED TO REMAIN IN SERVICE SHALL BE RELOCATED AND CONCEALED IN THE NEW AND EXISTING CONSTRUCTION.
3. REMOVE EXISTING PANELBOARD AND ASSOCIATED BRANCH CIRCUITS AND FEEDER. BRANCH CIRCUITS REQUIRED TO REMAIN IN SERVICE SHALL BE RECIRCUITED TO THE NEW PANELBOARDS.
4. ALL TELECOM AND LV CABLING AND DEVICES (VOICE/DATA/CATV/WAP/BAS/SECURITY) IN THE RENOVATED SPACES SHALL BE REMOVED IF NO LONGER REQUIRED AND REROUTED IF REQUIRED TO BE MAINTAINED. NEW DEVICES AND CABLING (PLUS EX. REROUTED) SHALL BE INSTALLED, TERMINATED, AND TESTED. IF THEY ARE REMOVED FROM A WALL BE DEMOLISHED/RENOVATED, THEY SHALL BE REROUTED, RE-INSTALLED, AND RETERMINATED AT NEW LOCATIONS. REMOVE EXISTING WIRELESS ACCESS POINT AND TELECOM CABLING BACK TO THE DESIGNATED TELECOM CLOSET. TURN OVER EXISTING WAP TO OWNER FOR STORAGE STOCK OR RE-INSTALLATION.
5. ALL ACTIVE TELECOM AND LV CABLING (VOICE/DATA/CATV/WAP/BAS/SECURITY) SERVING ADJOINING SPACES THAT PASS THROUGH THE RENOVATED AREA SHALL BE REMOVED FROM END TO END, REPLACED, TERMINATED, AND TESTED. EXISTING CABLES CAN BE RE-USED IF NOT DAMAGED.
6. REMOVE EXISTING TELECOM CABINET IN IT'S ENTIRETY; INCLUDING INTERCONNECTING RACEWAYS. EXISTING YELLOW, ORANGE, GRAY, BLUE AND RED TELECOM AND LV CABLE RISERS SHALL BE REMOVED AND REPLACED IN NEW RISER LOCATION. COORDINATE NEW RISER LOCATION WITH ARCHITECT. CABLES SHALL BE TERMINATED AND TESTED. ALL CABLING SHALL BE RELOCATED AND REPLACED FROM END TO END PRIOR TO REMOVING THE TELECOM CABINETS. ALL 66-BLOCK TYPE TELEPHONE BLOCKS AND MULTI-PAIR (LARGE) GRAY TELEPHONE CABLES IN THE CABINETS CAN BE REMOVED.
7. REMOVE ALL CONTROLS AND WIRING ASSOCIATED WITH THE ELEVATOR BEING DEMOLISHED.
8. EXISTING LIGHTING FIXTURES, SWITCH CONTROL, AND BRANCH CIRCUITS TO REMAIN.
9. REMOVE EXISTING LIGHT FIXTURE AND BRANCH CIRCUIT.
10. REMOVE ALL AUDIO/VISUAL SYSTEM DEVICES, SPEAKERS, WALL BOXES, MICROPHONES, PROJECTORS, SCREENS, CABLING, ETC. COORDINATE WITH THE OWNER PRIOR TO DEMOLITION. REFERENCE AV DRAWINGS FOR ADDITIONAL WORK.
11. ALL EXISTING ELECTRICAL DEVICES TO REMAIN.
12. EXISTING FEEDER RISER TO BE REPLACED WITH NEW IN NEW LOCATION TO ACCOMMODATE THE GENERAL CONSTRUCTION WORK.
13. REMOVE EXISTING CEILING, LIGHTING FIXTURES AND CEILING DEVICES TO ACCOMMODATE THE CONDUIT INSTALLATION. RE-INSTALL IN SAME LOCATION AFTER THE CONDUIT/WIRE WORK IS COMPLETE.
14. RELOCATE EXISTING ELECTRICAL WIRING, CONDUIT, AND CABLING THAT IS TO REMAIN IN SERVICE AROUND THE NEW CONDUIT RISERS AND FLOOR PENETRATIONS; INCLUDING ANY REQUIRED ELECTRICAL WORK TO GAIN ACCESS TO THE CONDUIT RISER LOCATION. REFERENCE ARCHITECTURAL DRAWINGS FOR EXTENT OF FLOOR, WALL, AND CEILING DEMOLITION.
15. EXISTING SURFACE CONDUIT/WIRING TO BE RELOCATED AND CONCEALED.
16. EXISTING VERTICAL BRANCH CIRCUIT TO BE RELOCATED IF REQUIRED TO REMAIN IN SERVICE.
17. EXISTING TELECOM CABLING FROM 3RD FLOOR TO BE RELOCATED AND REPLACED WITH NEW END TO END TO ACCOMMODATE THE NEW DUCTWORK.

Mark B. Thompson Associates
Architecture
502 South 24th Street
Philadelphia, PA 19146
215.985.1000 www.mbtarchitects.com

Keast & Hood Company of New York, PC
Structural Engineering
400 Market Street, Suite 1250
Philadelphia, PA 19106
215.625.0099 www.keasthood.com

Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

It is a violation of New York State Law for any person, unless he is acting under the direction of a licensed Professional Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Engineer or Land Surveyor is altered, the altering Engineer or Land Surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid and Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

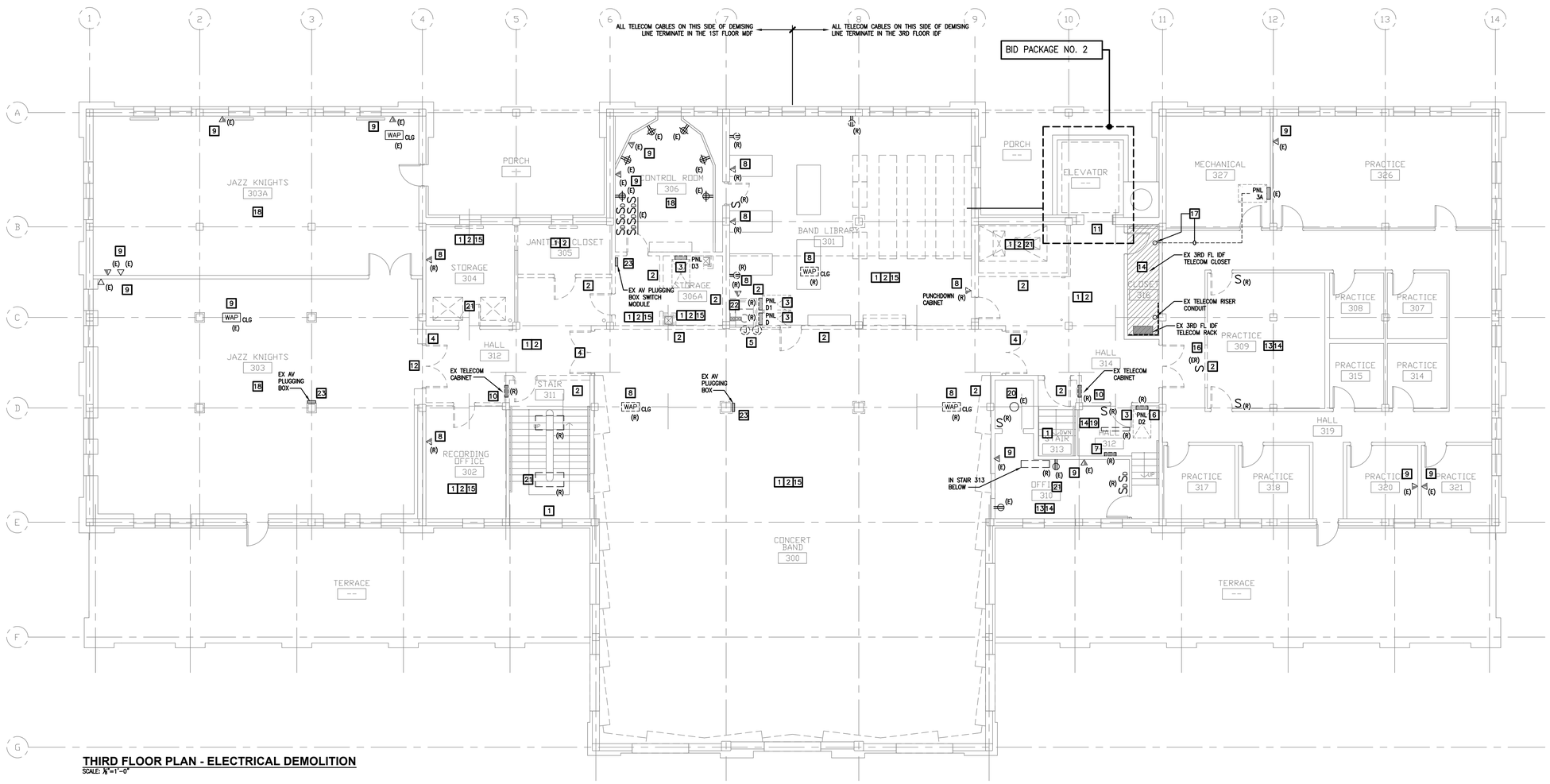
EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300 (DJVI #2115)
Date: July 6, 2022

Drawing Title:
Second Floor Plan
Electrical Demolition

E102



THIRD FLOOR PLAN - ELECTRICAL DEMOLITION

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

ELECTRICAL DEMOLITION & RELOCATION NOTES

1. REMOVE ALL EXISTING ELECTRICAL DEVICES AND BRANCH CIRCUITS, UNLESS OTHERWISE SHOWN TO REMAIN. ALL WIRING THAT FEEDS OTHER DEVICES/EQUIPMENT OUTSIDE THE AREA OF WORK NOT AFFECTED BY THE RENOVATION SHALL BE RELOCATED OUTSIDE THE AREA OF WORK AND RECONNECTED.
   - REMOVE ALL EXISTING LIGHTING FIXTURES, SWITCH CONTROL, AND BRANCH CIRCUITS.
   - REMOVE ALL BRANCH CIRCUITS BACK TO SOURCE OF POWER.
   - REMOVE ALL EXISTING FIRE ALARM DEVICES, UNLESS OTHERWISE SHOWN TO REMAIN.
   - REMOVE ALL BRANCH CIRCUITS, CONTROLLERS, DISCONNECTS, AND WIRING FOR EQUIPMENT INDICATED TO BE DEMOLISHED ON THE MECHANICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS.
   - EXISTING DEVICES TO REMAIN AND BE RE-USED IN THEIR ORIGINAL LOCATION SHALL BE TEMPORARILY REMOVED AND REINSTALLED FOR NEW FINISHES. PROTECT DEVICES DURING DEMOLITION AND CONSTRUCTION.
   - REMOVE EXISTING EMERGENCY LIGHTING WALL PACKS AND BRANCH CIRCUITS.
   - REMOVE ALL SURFACE MOUNTED RACEWAYS, CONDUITS, BOXES, AND MOUNTING HARDWARE.
2. REMOVE ALL DEVICES, BRANCH CIRCUITS, FEEDERS, ETC. FROM WALL/PARTITION BEING DEMOLISHED. ANY UTILITY OR WIRING REQUIRED TO REMAIN IN SERVICE SHALL BE RELOCATED AND CONCEALED IN THE NEW AND EXISTING CONSTRUCTION.
3. REMOVE EXISTING PANELBOARD AND ASSOCIATED BRANCH CIRCUITS AND FEEDER. BRANCH CIRCUITS REQUIRED TO REMAIN IN SERVICE SHALL BE RECIRCUITED TO THE NEW PANELBOARDS.
4. REMOVE EXISTING ILLUMINATED SIGNAGE, BRANCH CIRCUIT, AND CONTROL DEVICES.
5. REMOVE EXISTING JUNCTION/PULL BOX, CONDUIT, AND FEEDERS.
6. REMOVE EXISTING POWER CONDITIONER, CONDUITS, AND CIRCUITS.
7. REMOVE EXISTING CONCERT BAND DIMMING SYSTEM PANEL AND ALL CONTROL WIRING/BRANCH CIRCUITS.
8. ALL TELECOM AND LV CABLING AND DEVICES (VOICE/DATA/CATV/WAP/BAS/SECURITY) IN THE RENOVATED SPACES SHALL BE REMOVED IF NO LONGER REQUIRED AND REROUTED IF REQUIRED TO BE MAINTAINED. NEW DEVICES AND CABLING (PLUS EX. REROUTED) SHALL BE INSTALLED, TERMINATED, AND TESTED. IF THEY ARE REMOVED FROM A WALL BE DEMOLISHED/RENOVATED, THEY SHALL BE REROUTED, RE-INSTALLED, AND RETERMINATED AT NEW LOCATIONS. REMOVE EXISTING WIRELESS ACCESS POINT AND TELECOM CABLING BACK TO THE DESIGNATED TELECOM CLOSET. TURN OVER EXISTING WAP TO OWNER FOR STORAGE STOCK OR RE-INSTALLATION.
9. ALL ACTIVE TELECOM AND LV CABLING (VOICE/DATA/CATV/WAP/BAS/SECURITY) SERVING ADJOINING SPACES THAT PASS THROUGH THE RENOVATED AREA SHALL BE REMOVED FROM END TO END, REPLACED, TERMINATED, AND TESTED. EXISTING CABLES CAN BE RE-USED IF NOT DAMAGED.
10. REMOVE EXISTING TELECOM CABINET IN IT'S ENTIRETY; INCLUDING INTERCONNECTING RACEWAYS. EXISTING YELLOW, ORANGE, GRAY, BLUE AND RED TELECOM AND LV CABLE RISERS SHALL BE REMOVED AND REPLACED IN NEW RISER LOCATION. COORDINATE NEW RISER LOCATION WITH ARCHITECT. CABLES SHALL BE TERMINATED AND TESTED. ALL CABLING SHALL BE RELOCATED AND REPLACED FROM END TO END PRIOR TO REMOVING THE TELECOM CABINETS. ALL 66-BLOCK TYPE TELEPHONE BLOCKS AND MULTI-PAIR (LARGE) GRAY TELEPHONE CABLES IN THE CABINETS CAN BE REMOVED.
11. REMOVE ALL CONTROLS AND WIRING ASSOCIATED WITH THE ELEVATOR BEING DEMOLISHED.
12. REMOVE EXISTING DEVICES, FIXTURES, AND BRANCH CIRCUITS TO ACCOMMODATE THE NEW ENTRY AND DOOR CONFIGURATION.
13. REMOVE EXISTING CEILING MOUNTED DEVICES FOR DEMOLITION OF EXISTING CEILING AND RE-INSTALL IN NEW CEILING. EXTEND AND RECONNECT WIRING (INCLUDES FIRE ALARM).
14. REMOVE EXISTING LIGHT FIXTURES AND SWITCH CONTROL. RETAIN EXISTING BRANCH CIRCUITS AND RE-USE FOR THE NEW WORK.
15. REMOVE ALL AUDIO/VISUAL SYSTEM DEVICES, SPEAKERS, WALL BOXES, MICROPHONES, PROJECTORS, SCREENS, CABLING, ETC. COORDINATE WITH THE OWNER PRIOR TO DEMOLITION. REFERENCE AV DRAWINGS FOR ADDITIONAL WORK.
16. EXISTING COVE LIGHT ABOVE NEW DOOR TO REMAIN. PROTECT FIXTURE DURING CONSTRUCTION.
17. EXISTING FEEDER RISER TO BE REPLACED WITH NEW IN NEW LOCATION TO ACCOMMODATE THE GENERAL CONSTRUCTION WORK.
18. EXISTING LIGHTING FIXTURES, SWITCH CONTROL, AND RECEPTACLES TO REMAIN AND BE RECIRCUITED TO NEW PANELS.
19. REMOVE EXISTING CEILING, LIGHTING FIXTURES AND CEILING DEVICES TO ACCOMMODATE THE CONDUIT INSTALLATION. RE-INSTALL IN SAME LOCATION AFTER THE CONDUIT/WIRE WORK IS COMPLETE.
20. EXISTING SWITCH TO BE REPLACED WITH NEW. EXISTING FIXTURE TO REMAIN.
21. RELOCATE EXISTING ELECTRICAL WIRING, CONDUIT, AND CABLING THAT IS TO REMAIN IN SERVICE AROUND THE NEW PIPING AND DUCTWORK STRUCTURAL FLOOR & ROOF OPENINGS. (TYPICAL ROOF DECK AND 3RD FLOOR. REFERENCE ARCHITECTURAL AND MECHANICAL DRAWINGS)
22. RELOCATE EXISTING ELECTRICAL WIRING, CONDUIT, AND CABLING THAT IS TO REMAIN IN SERVICE AROUND THE NEW CONDUIT RISERS AND FLOOR PENETRATIONS; INCLUDING ANY REQUIRED ELECTRICAL WORK TO GAIN ACCESS TO THE CONDUIT RISER LOCATION. REFERENCE ARCHITECTURAL DRAWINGS FOR EXTENT OF FLOOR, WALL, AND CEILING DEMOLITION.
23. REFERENCE AV DRAWINGS FOR RELOCATION AND/OR REPLACEMENT.

Mark B. Thompson Associates
Architecture
502 South 24th Street
Philadelphia, PA 19146
215.985.1000 www.mbtarchitects.com

Keast & Hood Company of New York, PC
Structural Engineering
400 Market Street, Suite 1250
Philadelphia, PA 19106
215.625.0099 www.keasthood.com

Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

It is a violation of New York State Law for any person, unless he is acting under the direction of a licensed Professional Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Engineer or Land Surveyor is altered, the altering Engineer or Land Surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid and Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

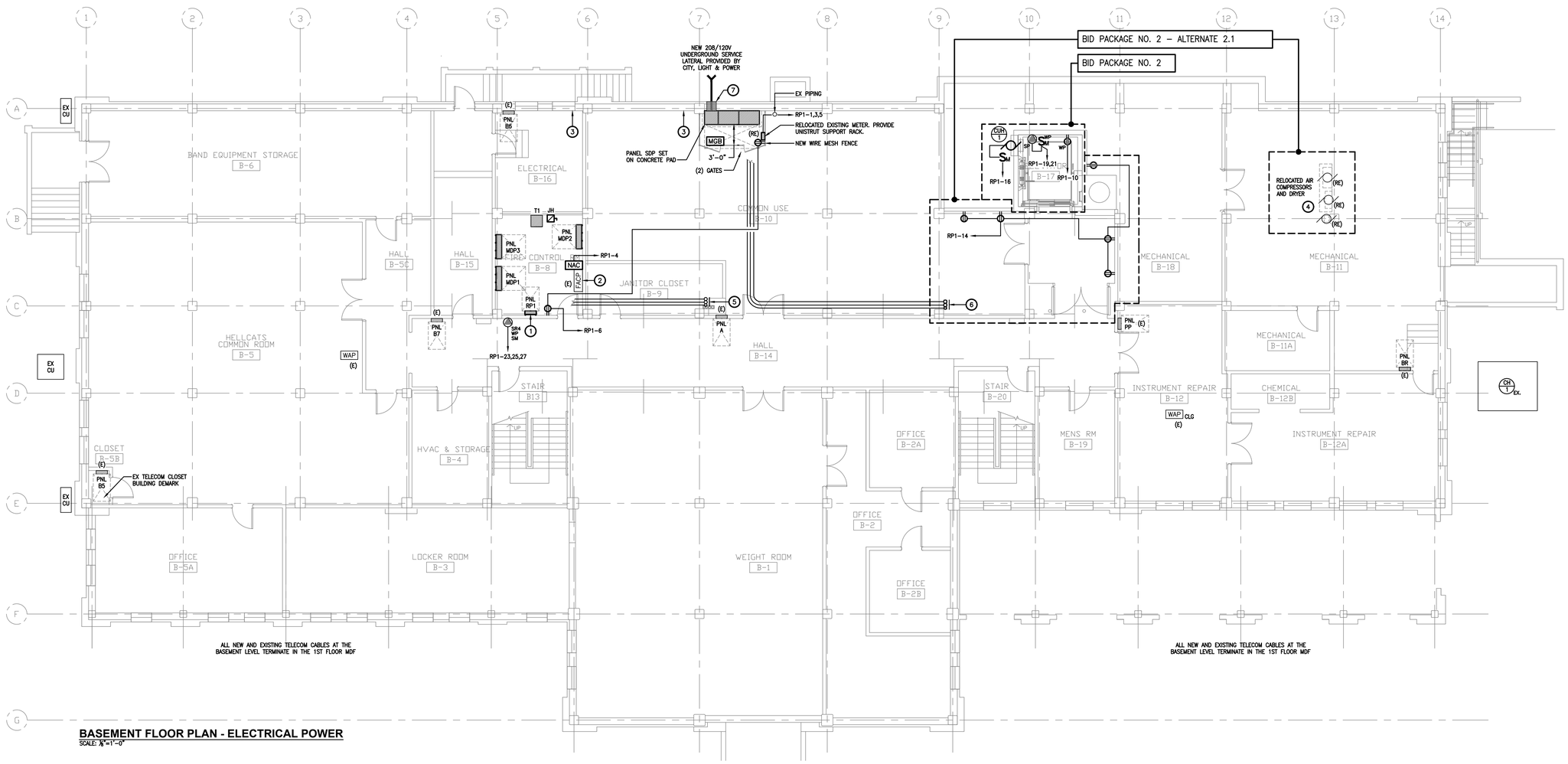
EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300 (DJVI #2115)
Date: July 6, 2022

Drawing Title:
Third Floor Plan
Electrical Demolition

E103



BASEMENT FLOOR PLAN - ELECTRICAL POWER

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

ELECTRICAL NOTES

1. PROVIDE NEW PANELBOARDS FOR NEW BRANCH CIRCUITS. RECONNECT EXISTING BRANCH CIRCUITS TO REMAIN.
2. RECIRCUIT EXISTING FIRE ALARM PANELS TO NEW PANELBOARD.
3. SEAL EXISTING DUCTBANK ENTRIES WITH POLYWATER FOAM SEALANT.
4. RECONNECT EX AIR COMPRESSORS, DRYER, STARTERS, AND DISCONNECTS/CONTROLS. EXTEND AND RECONNECT ASSOCIATED BRANCH CIRCUITS. PROVIDE NEW DEVICES.
5. FEEDER RISERS
   (1) 2" CONDUIT TO PANEL 'B' – 1ST FLOOR
   (1) 2.5" CONDUIT TO PANEL 'D1' – 3RD FLOOR
   (1) 3.5" CONDUIT TO PANEL 'C1' – 2ND FLOOR
6. FEEDER RISERS
   (2) 3.5" CONDUITS TO PANEL 'MDP4' – 3RD FLOOR
   (1) 2.5" CONDUIT SPARE TO 3RD FLOOR TELECOM CLOSET
7. CONTRACTOR SHALL CORE DRILL EXISTING BASEMENT WALL FOR INSTALLATION OF (6) 5" CONDUITS BEING FURNISHED AND INSTALLED BY CL&P. PROVIDE MODULAR MECHANICAL SEAL "LINK-SEAL" FOR CORE DRILLED HOLES TO SEAL OPENING BETWEEN CORE WALL AND CONDUIT. ALL CONDUIT INTERIORS SHALL BE SEALED WITH POLYWATER "FST" FOAM SEALANT. COORDINATE WITH CL&P ON ORIENTATION OF DUCTBANK SO THAT ALL CONDUITS ENTER BACK OF THE 24" WIDE SWITCHGEAR AUXILIARY INCOMING SECTION. (NOTE: CORES ARE APPROXIMATELY 10" IN DIAMETER. COORDINATE EXACT SIZE WITH MANUFACTURER)

Mark B. Thompson Associates
Architecture
502 South 24th Street
Philadelphia, PA 19146
215.985.1000 www.mbtarchitects.com

Keast & Hood Company of New York, PC
Structural Engineering
400 Market Street, Suite 1250
Philadelphia, PA 19106
215.625.0099 www.keasthood.com

Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

It is a violation of New York State Law for any person, unless he is acting under the direction of a licensed Professional Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Engineer or Land Surveyor is altered, the altering Engineer or Land Surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid and Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

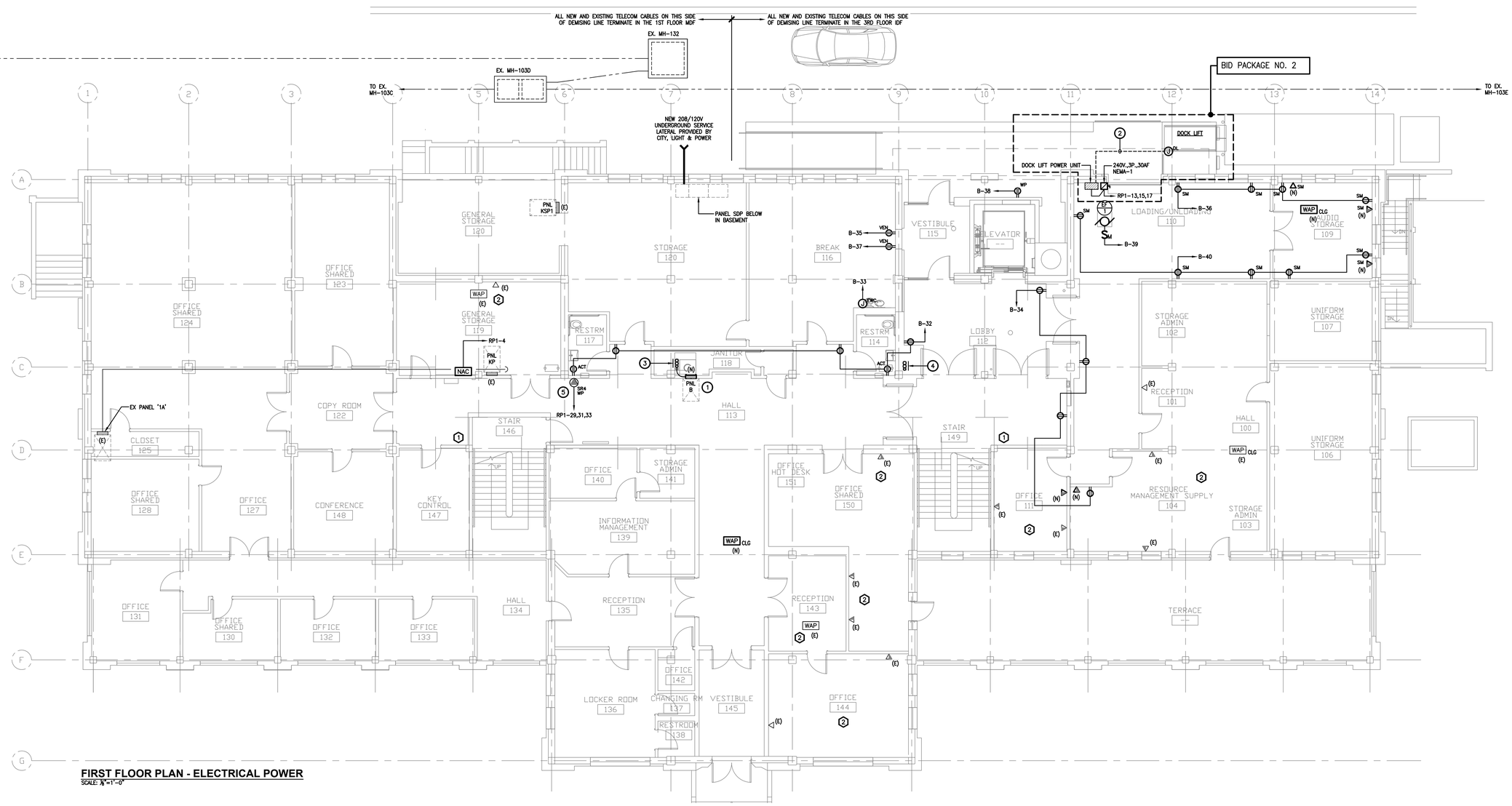
EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300 (DJVI #2115)
Date: July 6, 2022

Drawing Title:
Basement Floor Plan
Electrical Power

E200



FIRST FLOOR PLAN - ELECTRICAL POWER

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

ELECTRICAL NOTES

1. PROVIDE NEW PANELBOARDS FOR NEW BRANCH CIRCUITS. RECONNECT EXISTING BRANCH CIRCUITS TO REMAIN.
2. EXTEND CONDUIT THROUGH WALL ABOVE GRADE AND 'LB' DOWN TO BELOW SLAB. ROUTE HYDRAULIC PIPING AND CONTROL WIRING IN CONDUIT BELOW FINISH SLAB FROM THE INDOOR POWER UNIT TO THE LIFT TABLE. COORDINATE CONDUIT SIZE AND TERMINATION POINT WITH LIFT VENDOR. SEAL ENDS OF CONDUIT.
3. FEEDER RISERS
   (1) 2" CONDUIT TO PANEL 'B'
   (1) 2.5" CONDUIT TO PANEL 'D1'
   (1) 3.5" CONDUIT TO PANEL 'C1'
4. FEEDER RISERS
   (2) 3.5" CONDUITS TO PANEL 'MDP4'
   (1) 2.5" CONDUIT SPARE TO 3RD FLOOR TELECOM CLOSET
5. 50A DEVICE TO BE FLUSH MOUNTED WITH WEATHER-PROOF RECTANGULAR FLIP COVER.

TELECOMMUNICATIONS NOTES

1. LOCATION OF EXISTING DEMOLISHED TELECOM CABINET. THE FOLLOWING EXISTING YELLOW, ORANGE, GRAY, BLUE AND RED TELECOM AND LV CABLE RISERS SHALL BE REMOVED AND REPLACED IN NEW RISER LOCATION. COORDINATE NEW RISER LOCATION WITH ARCHITECT. CABLES SHALL BE TERMINATED AND TESTED. ALL CABLING SHALL BE RELOCATED AND REPLACED FROM END TO END PRIOR TO REMOVING THE TELECOM CABINETS. ALL 66-BLOCK TYPE TELEPHONE BLOCKS AND MULTI-PAIR (LARGE) GRAY TELEPHONE CABLES IN THE CABINETS CAN BE REMOVED.
2. ALL ACTIVE TELECOM AND LV CABLING (VOICE/DATA/CATV/WAP/BAS/SECURITY) SERVING ADJOINING SPACES THAT PASS THROUGH THE RENOVATED AREA SHALL BE REMOVED FROM END TO END, REPLACED, TERMINATED, AND TESTED. EXISTING CABLES CAN BE RE-USED IF NOT DAMAGED.

TELECOM & LV CABLE TYPE & COLOR CODING

(N) / (E)	VOICE:	PROVIDE (1) 4P/UTP CAT 6 PLENUM RATED "GREEN" CABLE W/ (1) T568A RJ45 JACK
	DATA:	PROVIDE (2) 4P/UTP CAT 6 PLENUM RATED "YELLOW" CABLE W/ (2) T568A RJ45 JACKS
	STATION:	(4) MODULE FACEPLATE
WAP (N) / WAP (E)	DATA:	PROVIDE (2) 4P/UTP CAT 6 PLENUM RATED "ORANGE" CABLE W/ (2) T568A RJ45 JACKS
	STATION:	(2) MODULE FACEPLATE (WHITE)
(N)	VOICE:	PROVIDE (1) 4P/UTP CAT 6 PLENUM RATED "GREEN" CABLE W/ (1) T568A RJ45 JACKS
	STATION:	(1) MODULE FACEPLATE (WHITE)
(N) / (E)	CATV:	PROVIDE (1) 75 OHM PLENUM RATED QUAD SHIELDED RG-6U COAX CABLE
	STATION:	(1) MODULE FACEPLATE W/ "F" CONNECTOR

Mark B. Thompson Associates
Architecture
502 South 24th Street
Philadelphia, PA 19146
215.985.1000 www.mbtarchitects.com

Keast & Hood Company of New York, PC
Structural Engineering
400 Market Street, Suite 1250
Philadelphia, PA 19106
215.625.0099 www.keasthood.com

Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

It is a violation of New York State Law for any person, unless he is acting under the direction of a licensed Professional Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Engineer or Land Surveyor is altered, the altering Engineer or Land Surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid and Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

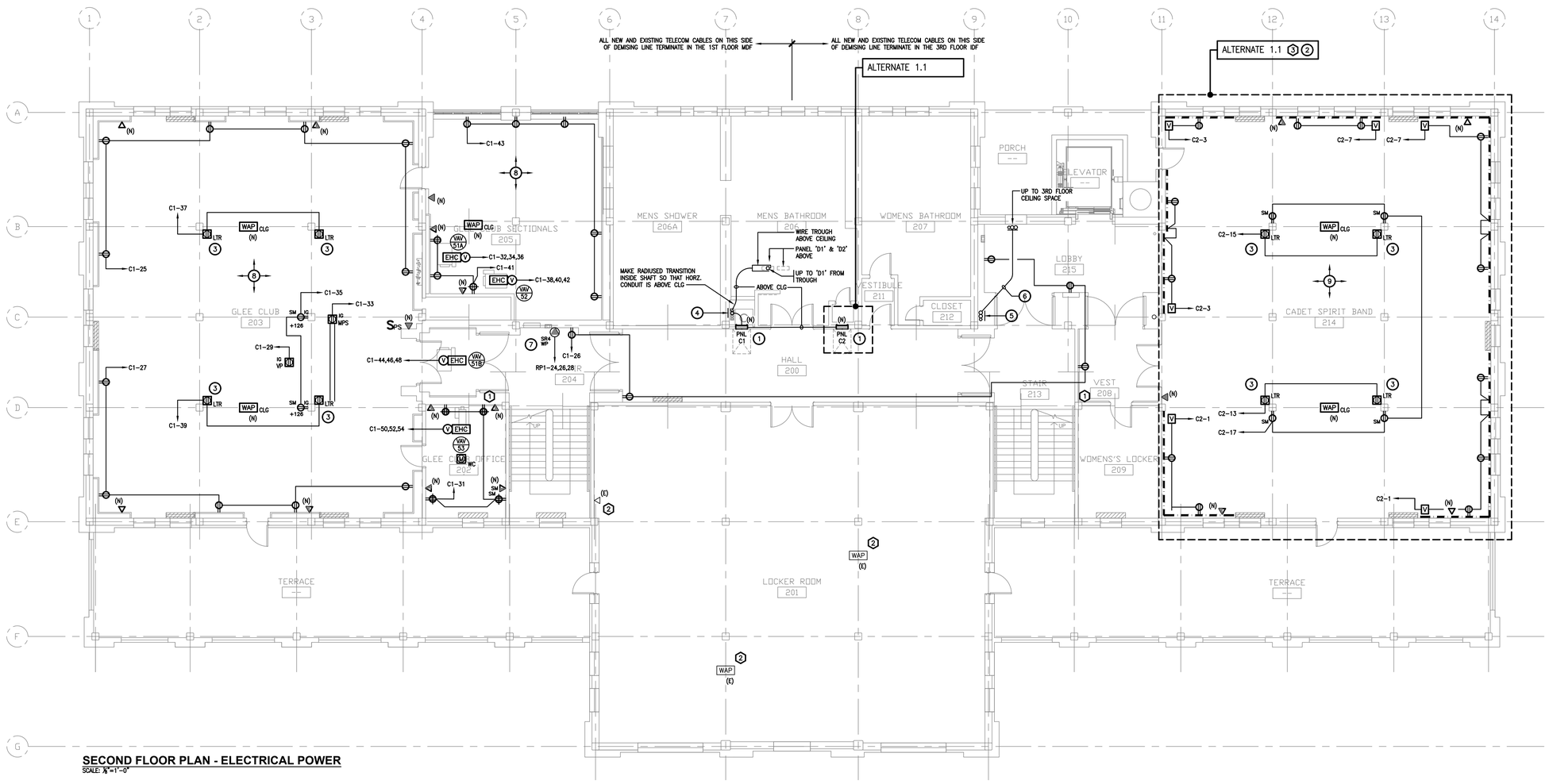
EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300 (DJVI #2115)
Date: July 6, 2022

Drawing Title:
First Floor Plan
Electrical Power

E 2 0 1



SECOND FLOOR PLAN - ELECTRICAL POWER

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

ELECTRICAL NOTES

1. PROVIDE NEW PANELBOARDS FOR NEW BRANCH CIRCUITS. RECONNECT EXISTING BRANCH CIRCUITS TO REMAIN.
2. IF ALTERNATE IS NOT ACCEPTED, ALL ELECTRICAL DEVICES SHALL REMAIN AND BE RECIRCUITED TO NEW PANELS.
3. RECEPTACLES NOTED AS "LTR" SHALL BE MOUNTED ON THE SIDES OF THE EXISTING CONCRETE BEAMS. TYPICAL FOR ALL.
4. FEEDER RISERS
   (1) 2.5" CONDUIT TO PANEL 'D1'
   (1) 3.5" CONDUIT TO PANEL 'C1'
5. FEEDER RISERS
   (2) 3.5" CONDUITS TO PANEL 'MDP4'
   (1) 2.5" CONDUIT SPARE TO 3RD FLOOR TELECOM CLOSET
6. TRANSITION CONDUIT RISERS ABOVE CEILING TO 3RD FLOOR DUCT SHAFT. COORDINATE WITH DUCTWORK, PIPING, AND RATED CONSTRUCTION.
7. 50A DEVICE TO BE FLUSH MOUNTED WITH WEATHER-PROOF RECTANGULAR FLIP COVER.
8. PROVIDE EXTRA-DEEP BACKBOXES SO THAT THE DEVICES SIT FLUSH WITH THE FACE OF THE ACOUSTICAL WALL AND CEILING TREATMENTS (SPRAY FOAM ON UNDERSIDE OF DECK BETWEEN BEAMS). CONDUITS TO SIT TIGHT TO EXISTING WALL BEHIND WALL COVERING AND CEILING TREATMENTS. TYPICAL FOR ALL DEVICES. REFERENCE ARCHITECTURAL DRAWINGS FOR COORDINATION.
9. PROVIDE EXTRA-DEEP BACKBOXES SO THAT THE DEVICES SIT FLUSH WITH THE FACE OF THE CEILING TREATMENTS (SPRAY FOAM ON UNDERSIDE OF DECK BETWEEN BEAMS). CONDUITS TO SIT TIGHT TO EXISTING DECK BEHIND CEILING TREATMENTS. TYPICAL FOR ALL DEVICES. REFERENCE ARCHITECTURAL DRAWINGS FOR COORDINATION.

TELECOMMUNICATIONS NOTES

1. LOCATION OF EXISTING DEMOLISHED TELECOM CABINET. THE FOLLOWING EXISTING YELLOW, ORANGE, GRAY, BLUE AND RED TELECOM AND LV CABLE RISERS SHALL BE REMOVED AND REPLACED IN NEW RISER LOCATION. COORDINATE NEW RISER LOCATION WITH ARCHITECT. CABLES SHALL BE TERMINATED AND TESTED. ALL CABLING SHALL BE RELOCATED AND REPLACED FROM END TO END PRIOR TO REMOVING THE TELECOM CABINETS. ALL 66-BLOCK TYPE TELEPHONE BLOCKS AND MULTI-PAIR (LARGE) GRAY TELEPHONE CABLES IN THE CABINETS CAN BE REMOVED.
2. ALL ACTIVE TELECOM AND LV CABLING (VOICE/DATA/CATV/WAP/BAS/SECURITY) SERVING ADJOINING SPACES THAT PASS THROUGH THE RENOVATED AREA SHALL BE REMOVED FROM END TO END, REPLACED, TERMINATED, AND TESTED. EXISTING CABLES CAN BE RE-USED IF NOT DAMAGED.
3. IF ALTERNATE IS NOT ACCEPTED, ALL ACTIVE TELECOM AND LV CABLING SERVING THE CADET SPIRIT BAND ROOM THAT PASS THROUGH THE RENOVATED AREA SHALL BE REMOVED, REPLACED, TERMINATED, AND TESTED. EXISTING CABLES CAN BE RE-USED IF NOT DAMAGED.

TELECOM & LV CABLE TYPE & COLOR CODING

▽ (N) / ▽ (E)	VOICE:	PROVIDE (1) 4P/UTP CAT 6 PLENUM RATED "GREEN" CABLE W/ (1) T568A RJ45 JACK
	DATA:	PROVIDE (2) 4P/UTP CAT 6 PLENUM RATED "YELLOW" CABLE W/ (2) T568A RJ45 JACKS
	STATION:	(4) MODULE FACEPLATE
WAP (N) / WAP (E)	DATA:	PROVIDE (2) 4P/UTP CAT 6 PLENUM RATED "ORANGE" CABLE W/ (2) T568A RJ45 JACKS
	STATION:	(2) MODULE FACEPLATE (WHITE)
▽ (N)	VOICE:	PROVIDE (1) 4P/UTP CAT 6 PLENUM RATED "GREEN" CABLE W/ (1) T568A RJ45 JACKS
	STATION:	(1) MODULE FACEPLATE (WHITE)
▽ (N) / ▽ (E)	CATV:	PROVIDE (1) 75 OHM PLENUM RATED QUAD SHIELDED RG-6U COAX CABLE
	STATION:	(1) MODULE FACEPLATE W/ "F" CONNECTOR

Mark B. Thompson Associates
Architecture
502 South 24th Street
Philadelphia, PA 19146
215.985.1000 www.mbtarchitects.com

Keast & Hood Company of New York, PC
Structural Engineering
400 Market Street, Suite 1250
Philadelphia, PA 19106
215.625.0099 www.keasthood.com

Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

It is a violation of New York State Law for any person, unless he is acting under the direction of a licensed Professional Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Engineer or Land Surveyor is altered, the altering Engineer or Land Surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid and Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

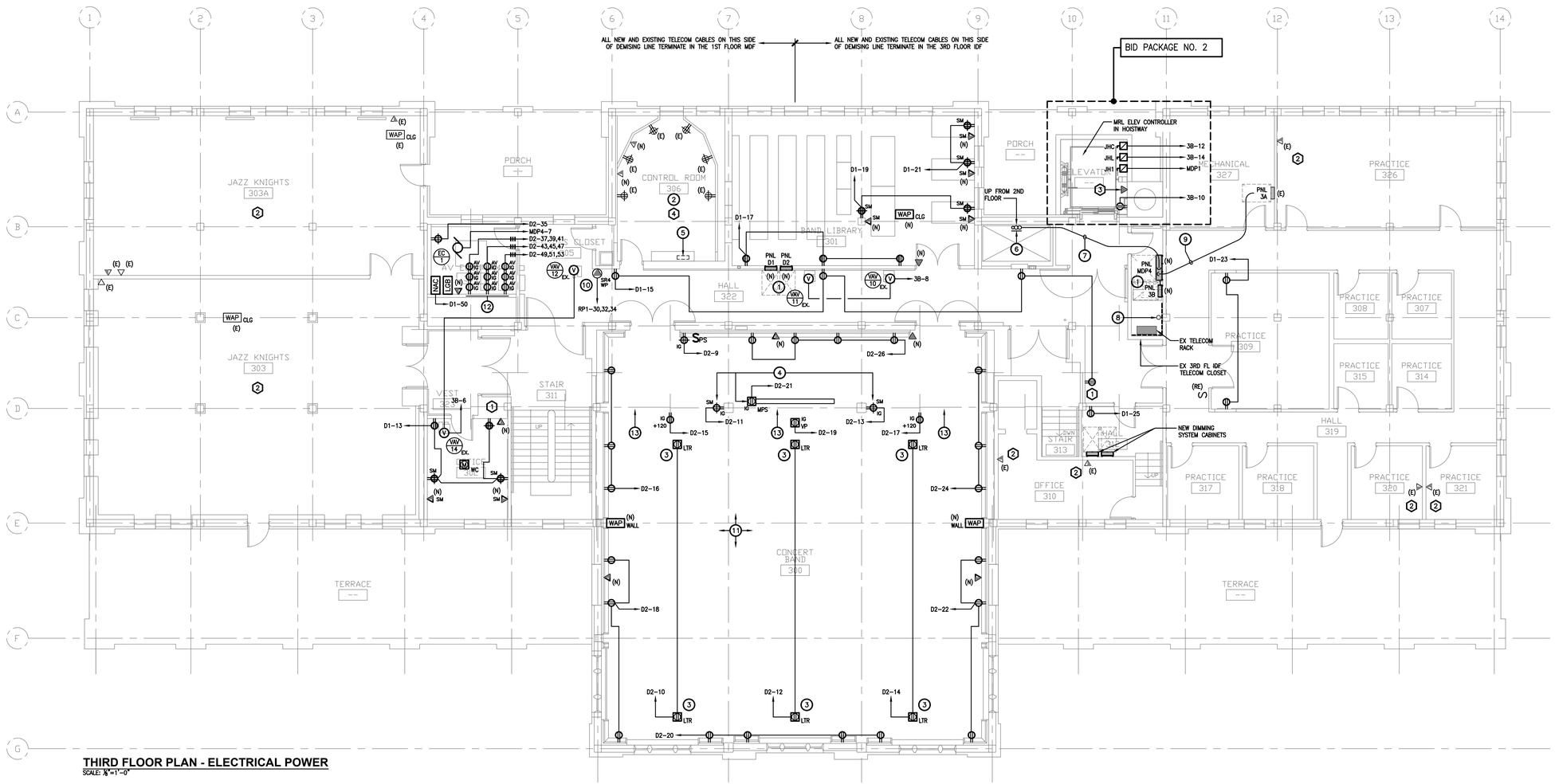
EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300 (DJVI #2115)
Date: July 6, 2022

Drawing Title:
Second Floor Plan
Electrical Power

E 2 0 2



THIRD FLOOR PLAN - ELECTRICAL POWER

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

ELECTRICAL NOTES

1. PROVIDE NEW PANELBOARDS FOR NEW BRANCH CIRCUITS. RECONNECT EXISTING BRANCH CIRCUITS TO REMAIN.
2. EXISTING LIGHTING FIXTURES, SWITCH CONTROL, AND RECEPTACLES TO REMAIN AND BE RECIRCUITED TO NEW PANELS.
3. RECEPTACLES NOTED AS "LTR" SHALL BE MOUNTED TO THE UNDERSIDE OF THE STRUCTURAL SLAB ABOVE SO THAT THE FACE OF THE RECEPTACLE SITS FLUSH WITH THE SURFACE OF THE SPRAY-ON ACOUSTICAL FOAM.
4. MOUNT DEVICES TO UNDERSIDE OF HORIZONTAL SECTION OF SOFFIT.
5. ALL EXISTING BRANCH CIRCUITS FROM DEMOLISHED PANEL 'D3' SERVING THE CONTROL ROOM SHALL BE EXTENDED AND RECONNECTED TO NEW PANEL 'D2'.
6. FEEDER RISERS
   (2) 3.5" CONDUITS TO PANEL 'MDP4'
   (1) 2.5" CONDUIT SPARE TO 3RD FLOOR TELECOM CLOSET
7. TRANSITION CONDUIT RISERS ABOVE CEILING TO 3RD FLOOR TELECOM CLOSET. COORDINATE WITH DUCTWORK, PIPING, AND RATED CONSTRUCTION.
8. EX TELECOM CONDUIT STUB THROUGH FLOOR TO ABOVE 2ND FLOOR CEILING.
9. FEEDER ROUTED ABOVE CEILING TO EXISTING PANEL 3A. COORDINATE WITH DUCTWORK AND PIPING.
10. 50A DEVICE TO BE FLUSH MOUNTED WITH WEATHER-PROOF RECTANGULAR FLIP COVER.
11. PROVIDE EXTRA-DEEP BACKBOXES SO THAT THE DEVICES SIT FLUSH WITH THE FACE OF THE ACOUSTICAL WALL AND CEILING TREATMENTS (SPRAY FOAM ON UNDERSIDE OF DECK BETWEEN BEAMS). CONDUITS TO SIT TIGHT TO EXISTING WALL BEHIND WALL COVERING AND CEILING TREATMENTS. TYPICAL FOR ALL DEVICES. REFERENCE ARCHITECTURAL DRAWINGS FOR COORDINATION.
12. COORDINATE MOUNTING LOCATION (AND ASSOCIATED HARD-WIRED CONNECTIONS, IF ANY) WITH THE AV CONTRACTOR.
13. FURRED-OUT WALL ABOVE SOFFIT AND UP TO HIGH CEILING TO BE USED AS A CONCEALED PATHWAY FROM SOFFIT FOR ELECTRICAL POWER, LIGHTING CIRCUITS, CONTROLS, FIRE ALARM, ETC.

TELECOMMUNICATIONS NOTES

1. LOCATION OF EXISTING DEMOLISHED TELECOM CABINET. THE FOLLOWING EXISTING YELLOW, ORANGE, GRAY, BLUE AND RED TELECOM AND LV CABLE RISERS SHALL BE REMOVED AND REPLACED IN NEW RISER LOCATION. COORDINATE NEW RISER LOCATION WITH ARCHITECT. CABLES SHALL BE TERMINATED AND TESTED. ALL CABLING SHALL BE RELOCATED AND REPLACED FROM END TO END PRIOR TO REMOVING THE TELECOM CABINETS. ALL 66-BLOCK TYPE TELEPHONE BLOCKS AND MULTI-PAIR (LARGE) GRAY TELEPHONE CABLES IN THE CABINETS CAN BE REMOVED.
2. ALL ACTIVE TELECOM AND LV CABLING (VOICE/DATA/CATV/WAP/BAS/SECURITY) SERVING ADJOINING SPACES THAT PASS THROUGH THE REMOVATED AREA SHALL BE REMOVED FROM END TO END, REPLACED, TERMINATED, AND TESTED. EXISTING CABLES CAN BE RE-USED IF NOT DAMAGED.
3. MRL ELEVATOR CONTROLLER – PROVIDE ANALOG TELEPHONE CONNECTION TO ELEVATOR WITH (1) GREEN CAT-6 CABLE EXTENDED AND TERMINATED ON THE EXISTING 110 BLOCKS IN THE 3RD FLOOR TELECOM CLOSET.
4. COORDINATE EXACT LOCATION OF NEW VOICE/DATA JACKS WITH OWNER.

TELECOM & LV CABLE TYPE & COLOR CODING

▽ (N) / ▽ (E)	VOICE:	PROVIDE (1) 4P/UTP CAT 6 PLENUM RATED "GREEN" CABLE W/ (1) T568A RJ45 JACK
	DATA:	PROVIDE (2) 4P/UTP CAT 6 PLENUM RATED "YELLOW" CABLE W/ (2) T568A RJ45 JACKS
	STATION:	(4) MODULE FACEPLATE
WAP (N) / WAP (E)	DATA:	PROVIDE (2) 4P/UTP CAT 6 PLENUM RATED "ORANGE" CABLE W/ (2) T568A RJ45 JACKS
	STATION:	(2) MODULE FACEPLATE (WHITE)
▽ (N)	VOICE:	PROVIDE (1) 4P/UTP CAT 6 PLENUM RATED "GREEN" CABLE W/ (1) T568A RJ45 JACKS
	STATION:	(1) MODULE FACEPLATE (WHITE)
▽ (N) / ▽ (E)	CATV:	PROVIDE (1) 75 OHM PLENUM RATED QUAD SHIELDED RG-6U COAX CABLE
	STATION:	(1) MODULE FACEPLATE W/ "F" CONNECTOR

Mark B. Thompson Associates
Architecture
502 South 24th Street
Philadelphia, PA 19146
215.985.1000 www.mbtarchitects.com

Keast & Hood Company of New York, PC
Structural Engineering
400 Market Street, Suite 1250
Philadelphia, PA 19106
215.625.0099 www.keasthood.com

Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

It is a violation of New York State Law for any person, unless he is acting under the direction of a licensed Professional Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Engineer or Land Surveyor is altered, the altering Engineer or Land Surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid and Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

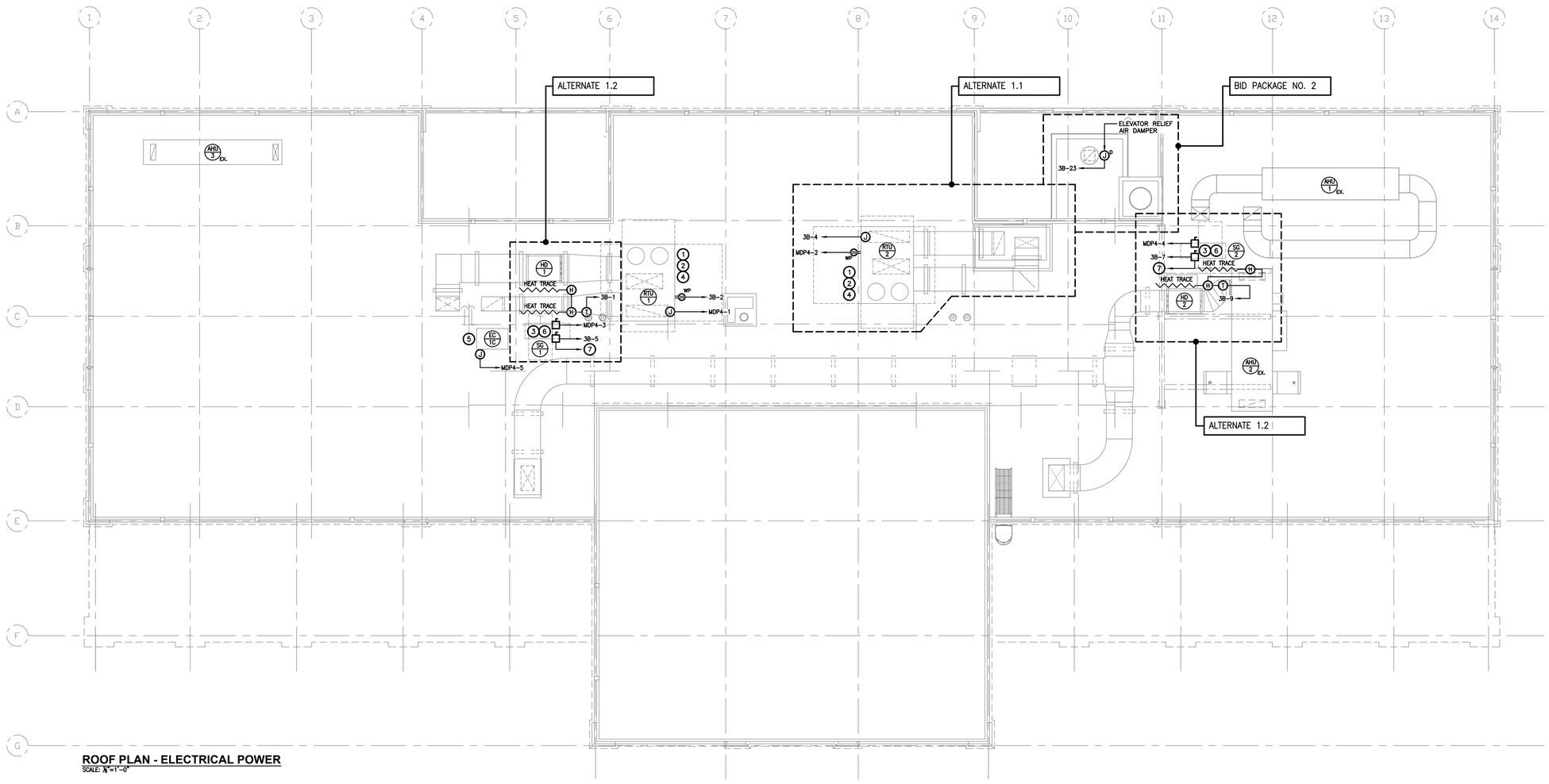
EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300 (DJVI #2115)
Date: July 6, 2022

Drawing Title:
Third Floor Plan
Electrical Power

E 2 0 3



ROOF PLAN - ELECTRICAL POWER

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

ELECTRICAL NOTES

1. PROVIDE SINGLE POINT POWER CONNECTION TO THE NEW AHU/RTU. INCLUDE BRANCH CIRCUITS FOR LOCAL RECEPTACLE AND INTERNAL LIGHTING.
2. PROVIDE HEAT TRACING, CONTROLLER, AND BRANCH CIRCUIT. CONTROLLER TO BE TIED INTO THE BUILDING AUTOMATION SYSTEM. REFERENCE MECHANICAL DRAWINGS FOR DETAILS.
3. PROVIDE POWER TO THE ELECTRIC TO STEAM HUMIDIFIER.
4. REFERENCE FIRE ALARM DRAWINGS FOR ADDITIONAL WORK.
5. PROVIDE POWER TO THE AC CONDENSING UNIT.
6. PROVIDE 120V.,16A BRANCH CIRCUIT FOR THE HUMIDIFIER HEATED ENCLOSURE.
7. PROVIDE 120V BRANCH CIRCUIT FROM HEATED ENCLOSURE DISCONNECT SWITCH TO THE WATER SUPPLY AND DRAIN VALVES. REFERENCE MECHANICAL DETAILS FOR LOCATION.

Mark B. Thompson Associates
Architecture
502 South 24th Street
Philadelphia, PA 19146
215.985.1000 www.mbtarchitects.com

Keast & Hood Company of New York, PC
Structural Engineering
400 Market Street, Suite 1250
Philadelphia, PA 19106
215.625.0099 www.keasthood.com

Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

It is a violation of New York State Law for any person, unless he is acting under the direction of a licensed Professional Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Engineer or Land Surveyor is altered, the altering Engineer or Land Surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid and Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

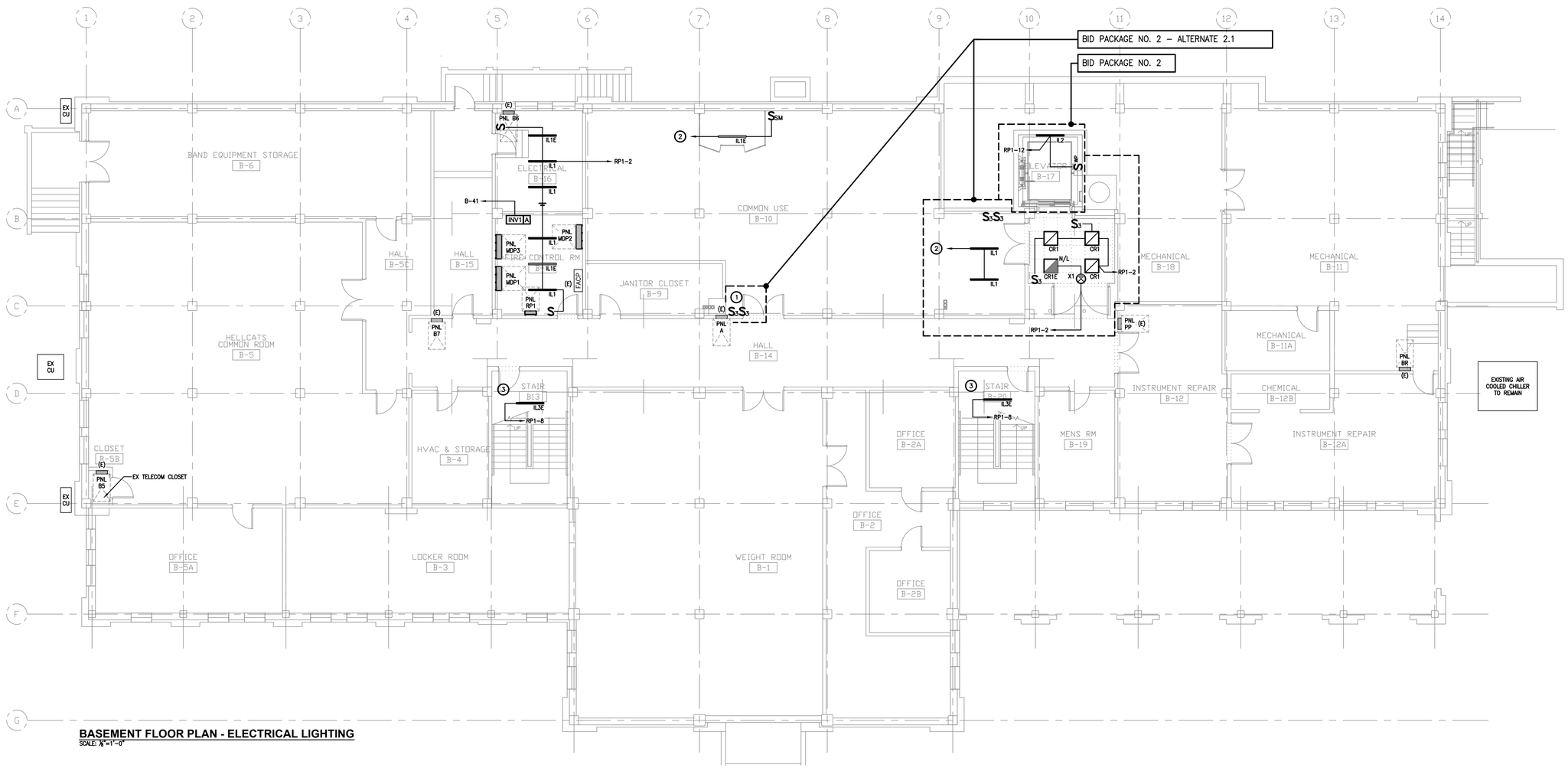
EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300 (DJVI #2115)
Date: July 6, 2022

Drawing Title:
Roof Plan
Electrical Power

E 2 0 4



BASEMENT FLOOR PLAN - ELECTRICAL LIGHTING

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

ELECTRICAL NOTES

1. REPLACE EXISTING SINGLE POLE SWITCHES WITH NEW 3-WAY SWITCHES AND TIE INTO EXISTING AND NEW LIGHTING AS SHOWN. CONNECT TO NEW SET OF 3-WAY SWITCHES NEAR ELEVATOR LOBBY ENTRANCE.
2. TIE INTO EXISTING LIGHTING BRANCH CIRCUIT AND NEW LIGHTING CONTROLS.
3. REPLACE LIGHTING IN STAIR WITH NEW.

Mark B. Thompson Associates
Architecture
502 South 24th Street
Philadelphia, PA 19146
215.985.1000 www.mbtarchitects.com

Keast & Hood Company of New York, PC
Structural Engineering
400 Market Street, Suite 1250
Philadelphia, PA 19106
215.625.0099 www.keasthood.com

Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

It is a violation of New York State Law for any person, unless he is acting under the direction of a licensed Professional Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Engineer or Land Surveyor is altered, the altering Engineer or Land Surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid and Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

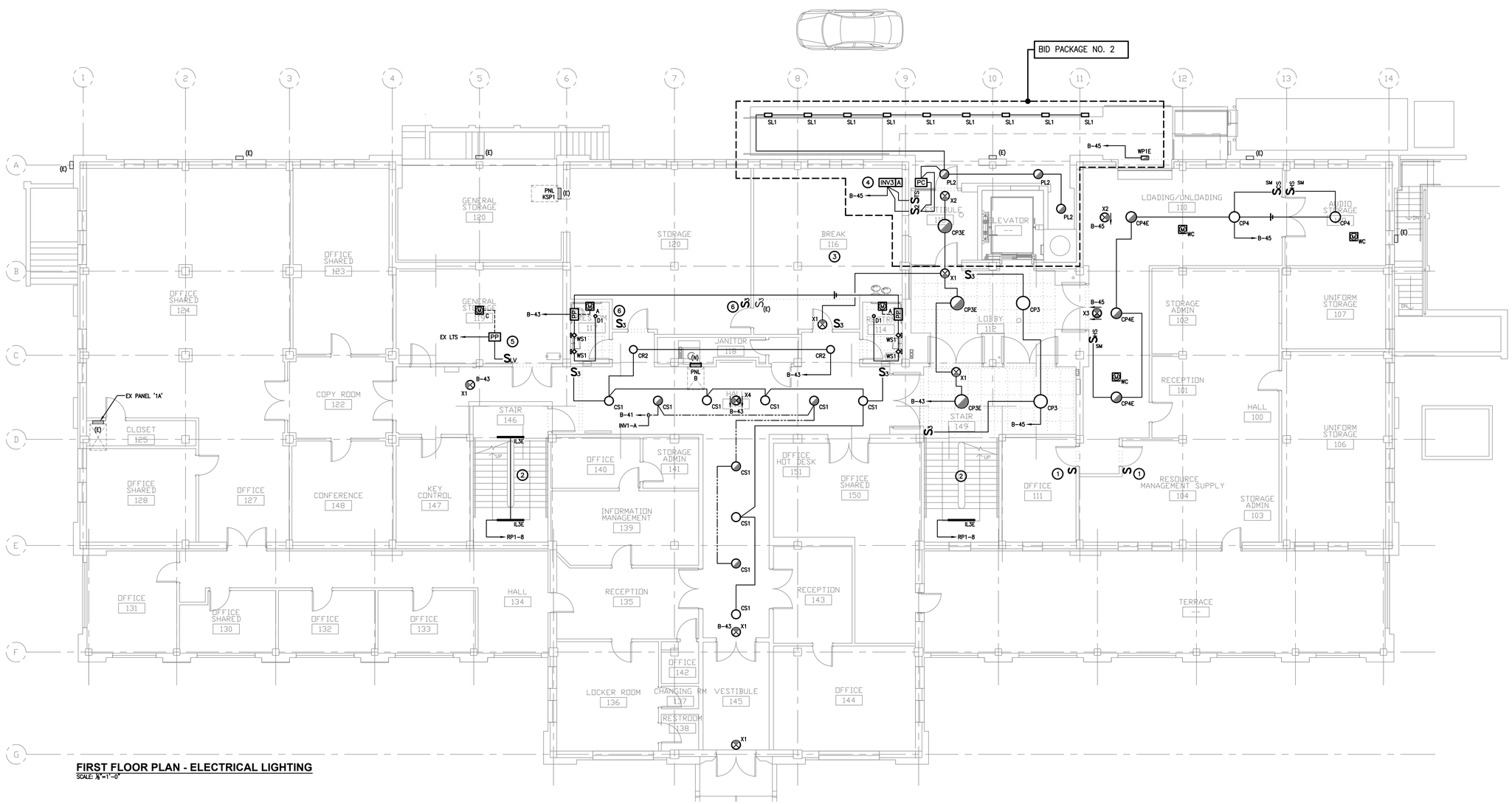
EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300 (DJVI #2115)
Date: July 6, 2022

Drawing Title:
Basement Floor Plan
Electrical Lighting

E300



FIRST FLOOR PLAN - ELECTRICAL LIGHTING

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

ELECTRICAL NOTES

1. PROVIDE NEW SWITCH CONTROL FOR EXISTING LIGHT FIXTURES.
2. REPLACE LIGHTING IN STAIR WITH NEW.
3. MODIFY EXISTING LIGHTING FOR NEW LAYOUT. PROVIDE EXIT SIGNAGE AND NEW EMERGENCY LIGHT BATTERY PACK IN MINIMUM OF (2) EXISTING LIGHT FIXTURES. PROVIDE NEW SWITCH CONTROL.
4. MOUNT INVERTER ABOVE CEILING. EXTEND AND CONNECT WIRING TO REMOTE TEST SWITCH. PROVIDE ADDITIONAL SPDT (OR SIMILAR MEANS) PHOTOCELL BYPASS SWITCH.
5. PROVIDE NEW WALL SWITCH, MOTION SENSOR, AND POWER PACK RELAY TO CONTROL EXISTING LIGHT FIXTURES. EXTEND AND CONNECT TO EXISTING LIGHT FIXTURES.
6. PROVIDE NEW SWITCH TIED INTO EXISTING LIGHTING.

Mark B. Thompson Associates
Architecture
502 South 24th Street
Philadelphia, PA 19146
215.985.1000 www.mbtarchitects.com

Keast & Hood Company of New York, PC
Structural Engineering
400 Market Street, Suite 1250
Philadelphia, PA 19106
215.625.0099 www.keasthood.com

Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

It is a violation of New York State Law for any person, unless he is acting under the direction of a licensed Professional Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Engineer or Land Surveyor is altered, the altering Engineer or Land Surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

General Notes

1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid and Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

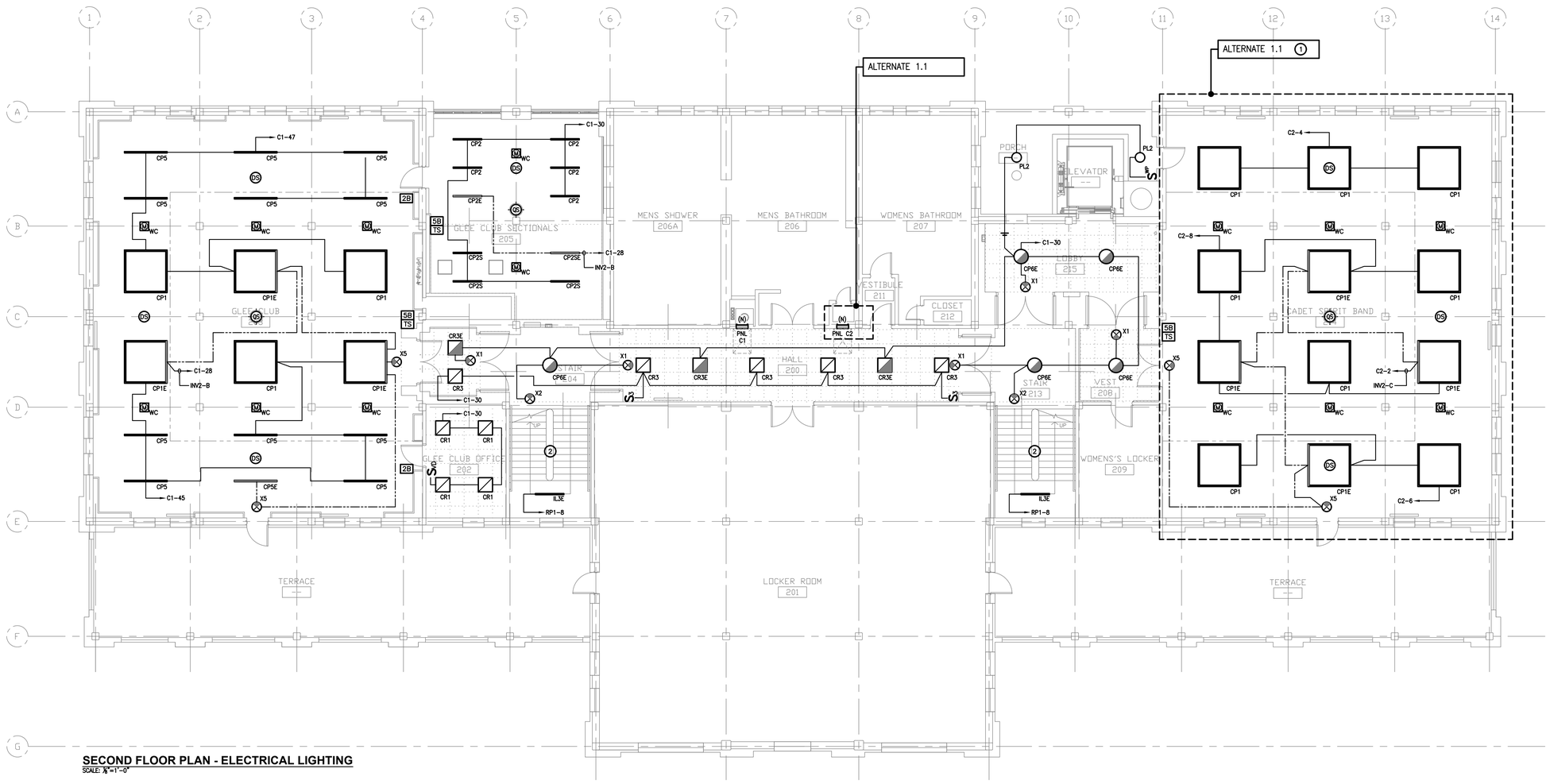
EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300 (DJVI #2115)
Date: July 6, 2022

Drawing Title:
First Floor Plan
Electrical Lighting

E 3 0 1



SECOND FLOOR PLAN - ELECTRICAL LIGHTING

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

ELECTRICAL NOTES

1. IF ALTERNATE IS NOT ACCEPTED, ALL LIGHTING FIXTURES AND CONTROL TO REMAIN AND BE RECIRCUITED TO NEW PANELS.
2. REPLACE LIGHTING IN STAIR WITH NEW.

Mark B. Thompson Associates
Architecture
502 South 24th Street
Philadelphia, PA 19146
215.985.1000 www.mbtarchitects.com

Keast & Hood Company of New York, PC
Structural Engineering
400 Market Street, Suite 1250
Philadelphia, PA 19106
215.625.0099 www.keasthood.com

Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

It is a violation of New York State Law for any person, unless he is acting under the direction of a licensed Professional Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Engineer or Land Surveyor is altered, the altering Engineer or Land Surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

General Notes

1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid and Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

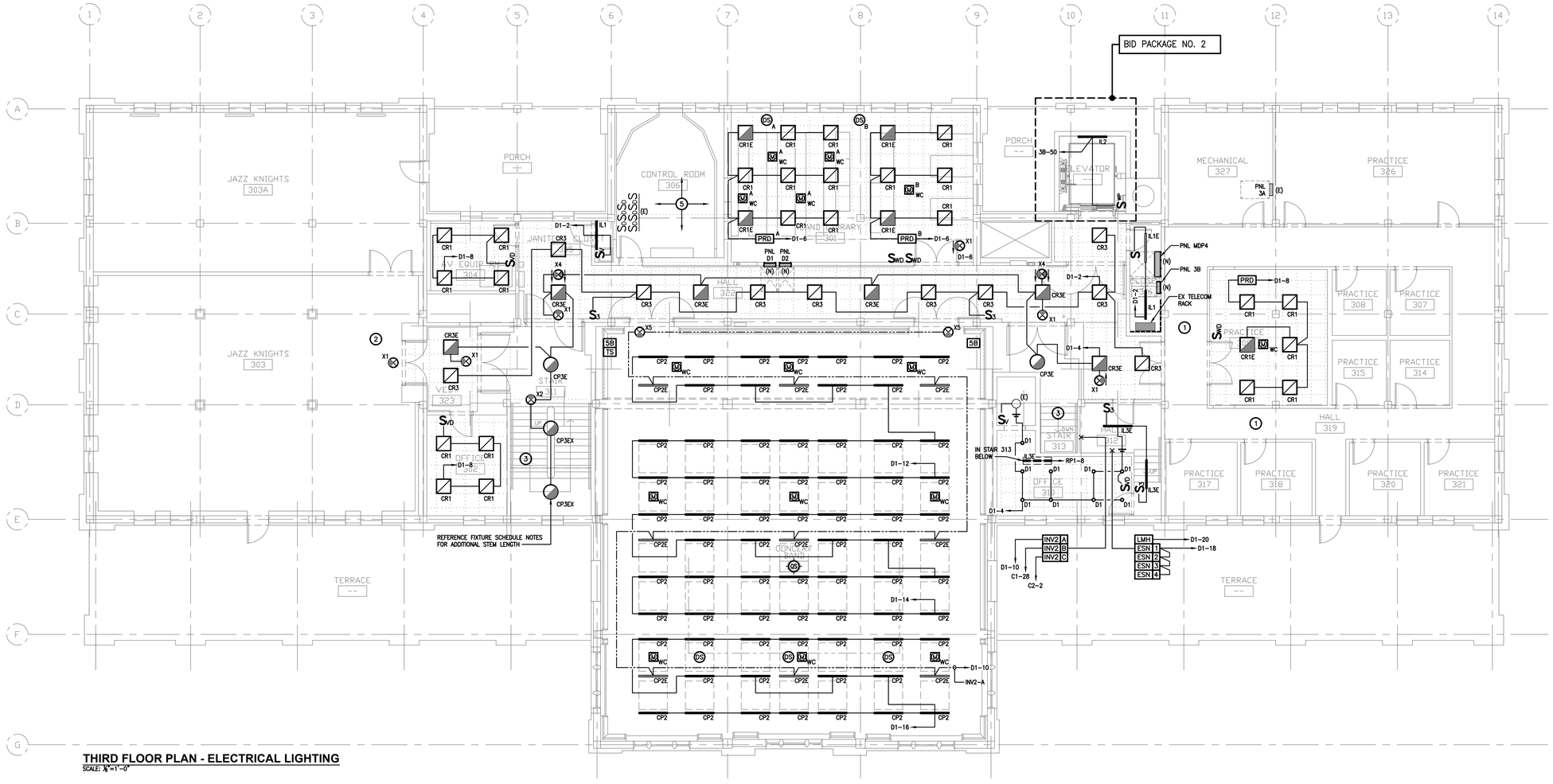
EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300 (DJVI #2115)
Date: July 6, 2022

Drawing Title:
Second Floor Plan
Electrical Lighting

E302



THIRD FLOOR PLAN - ELECTRICAL LIGHTING

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

ELECTRICAL NOTES

1. REMOVE AND RE-INSTALL EXISTING LIGHT FIXTURES AND CEILING MOUNTED DEVICES TO ACCOMMODATE THE MECHANICAL WORK.
2. RELOCATE EXISTING LIGHT FIXTURE TO ACCOMMODATE THE NEW ENTRY AND DOOR CONFIGURATION. PROVIDE NEW EXIT SIGN AND (3) NEW LIGHT SWITCHES FOR EXISTING CIRCUITS.
3. REPLACE LIGHTING IN STAIR WITH NEW.
4. PROVIDE NEW COVER PLATE.
5. REPLACE (19) INCANDESCENT R30 LAMPS WITH (19) NEW 12PAR30S/F40/927/DIM LED LAMPS BY PHILIPS, SATCO, OR CREE. PROVIDE TWO FIELD INSTALLED SAMPLES TO VERIFY EXISTING LUTRON DIMMER COMPATIBILITY PRIOR TO ORDERING.

Mark B. Thompson Associates
Architecture
502 South 24th Street
Philadelphia, PA 19146
215.985.1000 www.mbtarchitects.com

Keast & Hood Company of New York, PC
Structural Engineering
400 Market Street, Suite 1250
Philadelphia, PA 19106
215.625.0099 www.keasthood.com

Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

It is a violation of New York State Law for any person, unless he is acting under the direction of a licensed Professional Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Engineer or Land Surveyor is altered, the altering Engineer or Land Surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid and Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

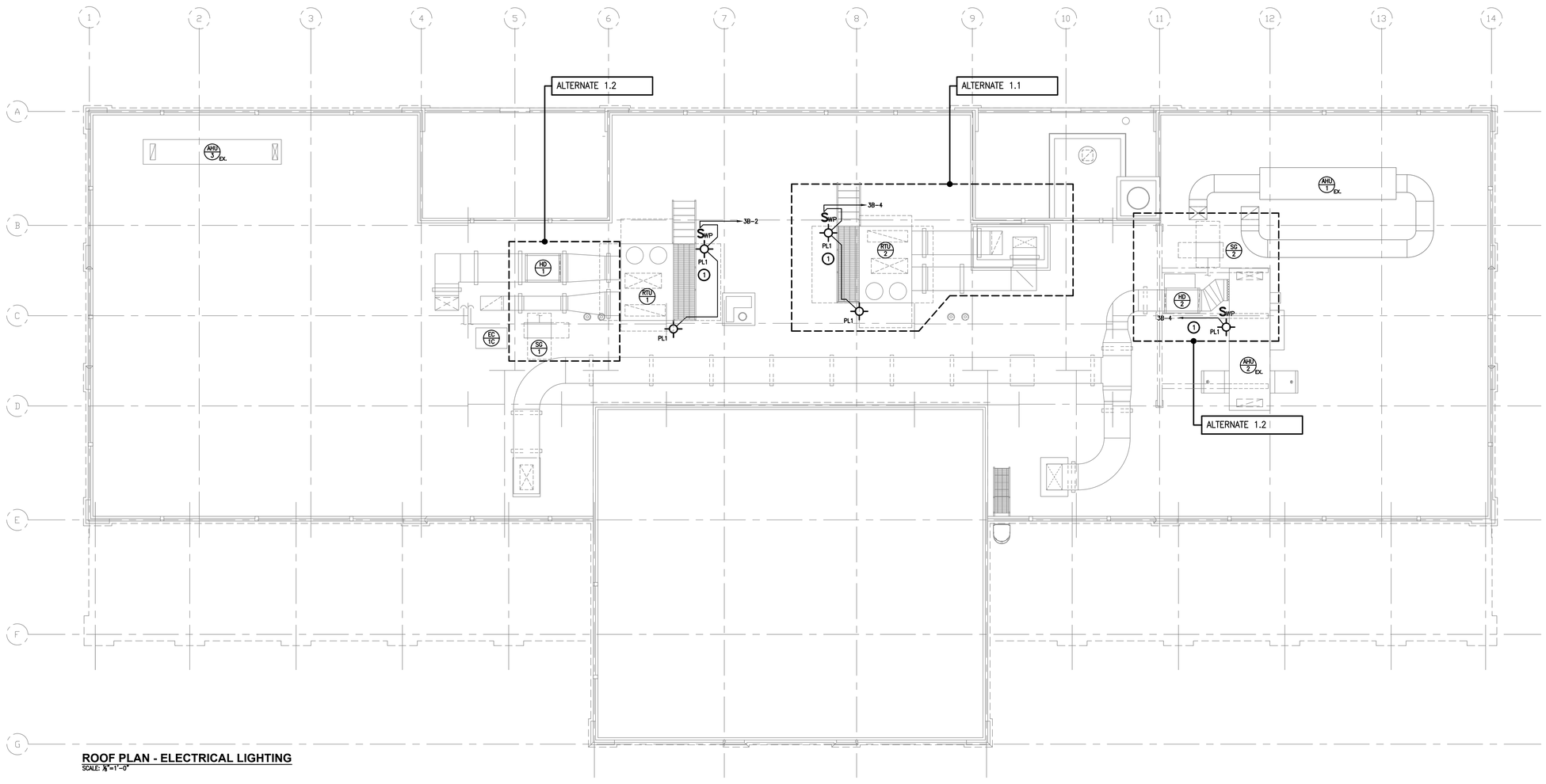
EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300 (DJVI #2115)
Date: July 6, 2022

Drawing Title:
Third Floor Plan
Electrical Lighting

E 3 0 3



ROOF PLAN - ELECTRICAL LIGHTING

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

ELECTRICAL NOTES

1. PROVIDE NEW EXTERIOR WEATHERPROOF FLOOD LIGHT MOUNTED TO PAINTED GALVANIZED STEEL PIPE STANCHION. PROVIDE ALL MOUNTING HARDWARE TO SECURELY FASTEN POLE/FIXTURE TO STEEL ROOF STRUCTURES. PROVIDE 120V BRANCH CIRCUIT AND LOCAL WEATHERPROOF SWITCH.

Mark B. Thompson Associates
Architecture
502 South 24th Street
Philadelphia, PA 19146
215.985.1000 www.mbtarchitects.com

Keast & Hood Company of New York, PC
Structural Engineering
400 Market Street, Suite 1250
Philadelphia, PA 19106
215.625.0099 www.keasthood.com

Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

It is a violation of New York State Law for any person, unless he is acting under the direction of a licensed Professional Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Engineer or Land Surveyor is altered, the altering Engineer or Land Surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid and Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

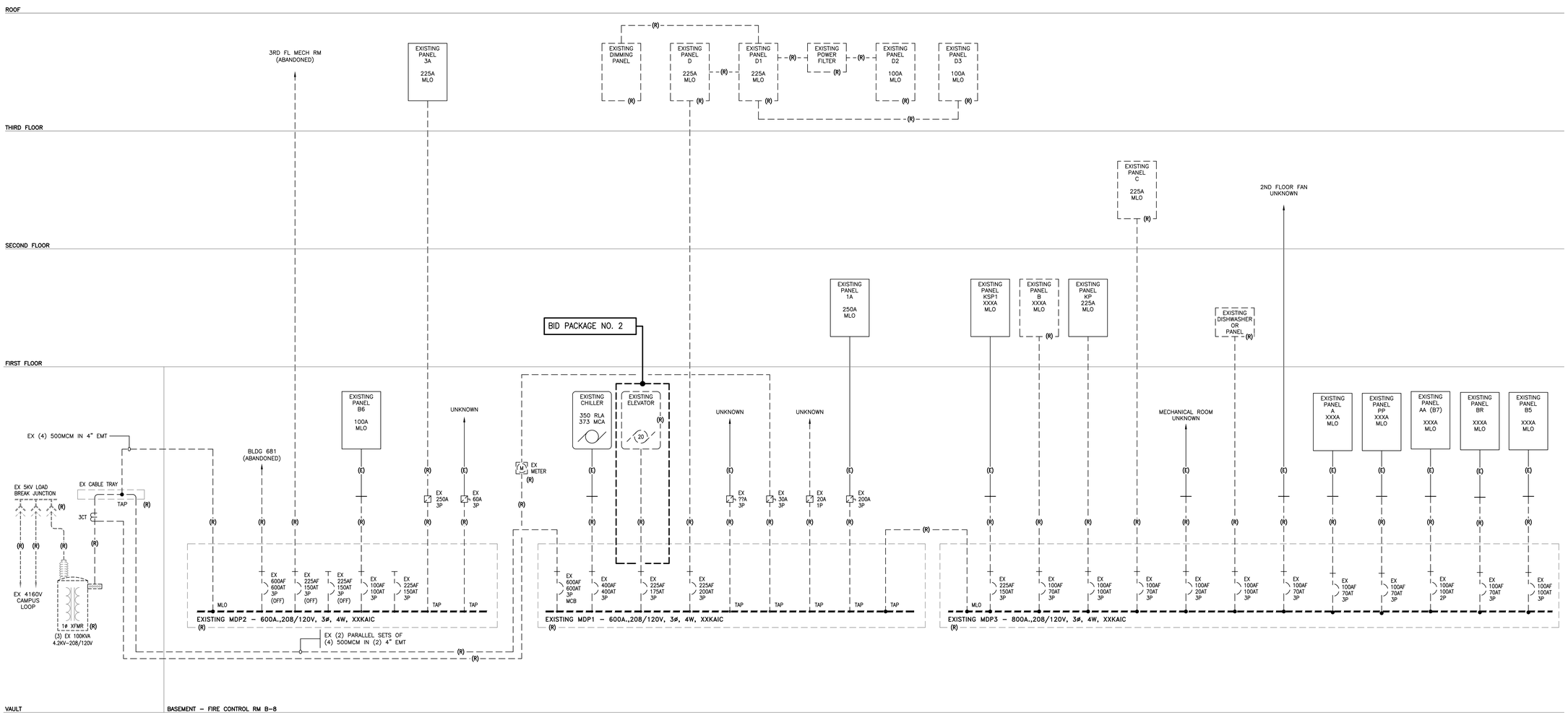
EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300 (DJVI #2115)
Date: July 6, 2022

Drawing Title:
Roof Plan
Electrical Lighting

E304



SINGLE LINE RISER DIAGRAM - POWER DISTRIBUTION - DEMOLITION
NTS

Mark B. Thompson Associates
Architecture
502 South 24th Street
Philadelphia, PA 19146
215.985.1000 www.mbtarchitects.com

Keast & Hood Company of New York, PC
Structural Engineering
400 Market Street, Suite 1250
Philadelphia, PA 19106
215.625.0099 www.keasthood.com

Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

It is a violation of New York State Law for any person, unless he is acting under the direction of a licensed Professional Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Engineer or Land Surveyor is altered, the altering Engineer or Land Surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid and Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

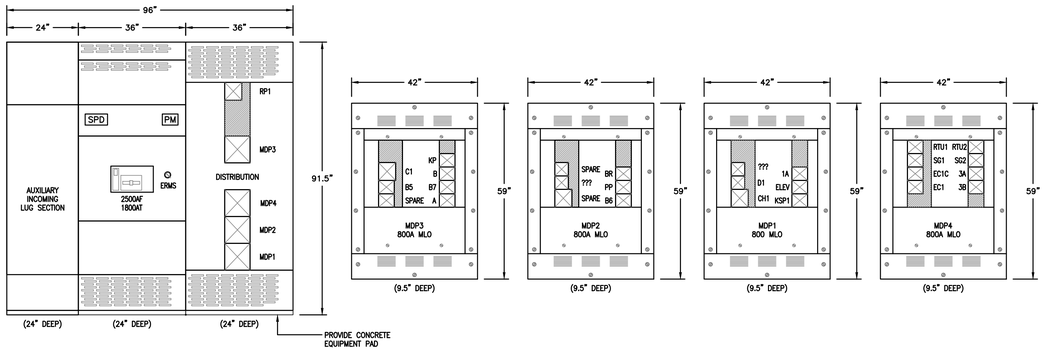
EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300 (DJVI #2115)
Date: July 6, 2022

Drawing Title:
Single Line Diagram
Demolition

E600



PANELBOARD ELEVATIONS - SDP / MDP1 / MDP2 / MDP3 / MDP4

N.T.S.

EQUIPMENT SERIES RATING

1. FAULT DUTIES SHOWN ARE THE ANTICIPATED MAXIMUM IN A NON–SERIES RATED DISTRIBUTION SYSTEM.
2. PROVIDE SERIES RATING BETWEEN THE 'MDPx' xxKAIC FEEDER BREAKERS AND DOWN STREAM PANELBOARD BRANCH CIRCUIT BREAKERS. PANELBOARDS THAT INCLUDE A MAIN CIRCUIT BREAKER SHALL HAVE THE MAIN SERIES RATED WITH THE BRANCH CIRCUIT BREAKERS. TYPICAL FOR ALL NEW PANELBOARDS.
3. SUBMITTALS SHALL INDICATE SPECIFIC CIRCUIT BREAKER COMBINATION SERIES RATINGS.

GENERAL NOTES

1. THE SQUARE–D SWITCHGEAR HAS BEEN ENGINEERED BY THE FACTORY TO ACCOMMODATE THE EXISTING CONDITIONS. CONTRACTOR TAKES FULL RESPONSIBILITY FOR ANY DEVIATIONS FROM THE MAXIMUM DIMENSIONS SHOWN ON THE DRAWING; INCLUDING, BUT NOT LIMITED TO, RELOCATION AND MODIFICATIONS OF ALL AFFECTED WIRING, CABLING, CONDUIT, BUSDUCTS, EQUIPMENT, RIGGING PATH, INTERIOR WALLS, DOORS, CEILINGS, STRUCTURAL COMPONENTS, ETC.
2. ALL CONDUIT INTERIORS SHALL BE SEALED WITH POLYWATER "FST" FOAM SEALANT WHERE THEY ENTER AND EMERGE INTO BUILDING FROM BELOW GRADE.
3. COORDINATE MECHANICAL AND ELECTRICAL EQUIPMENT LUG SIZES TO INSURE THE ARE ADEQUATE TO ACCEPT THE SPECIFIED SIZES. FOR FEEDERS AND BRANCH CIRCUITS OVERSIZED FOR VOLTAGE DROP COMPENSATION AND DO NOT NOT CORRESPOND TO THE MANUFACTURES' STANDARD OR OPTIONAL LUG KITS, PROVIDE JUNCTION BOX AND SPLICE CONDUCTORS TO LARGEST LUG RATING. AT NO TIME SHALL THE REDUCED FEEDER AMPACITY BE LOWER THAN THE UPSTREAM OVERCURRENT PROTECTION. LL SPLICES SHALL BE MADE WITH PRE–INSULATED POWER DISTRIBUTION BLOCKS. COORDINATE MAXIMUM LENGTH OF REDUCED FEEDER WITH THE DESIGN PROFESSIONAL PRIOR TO ROUGH–IN.

SINGLE LINE DIAGRAM NOTES

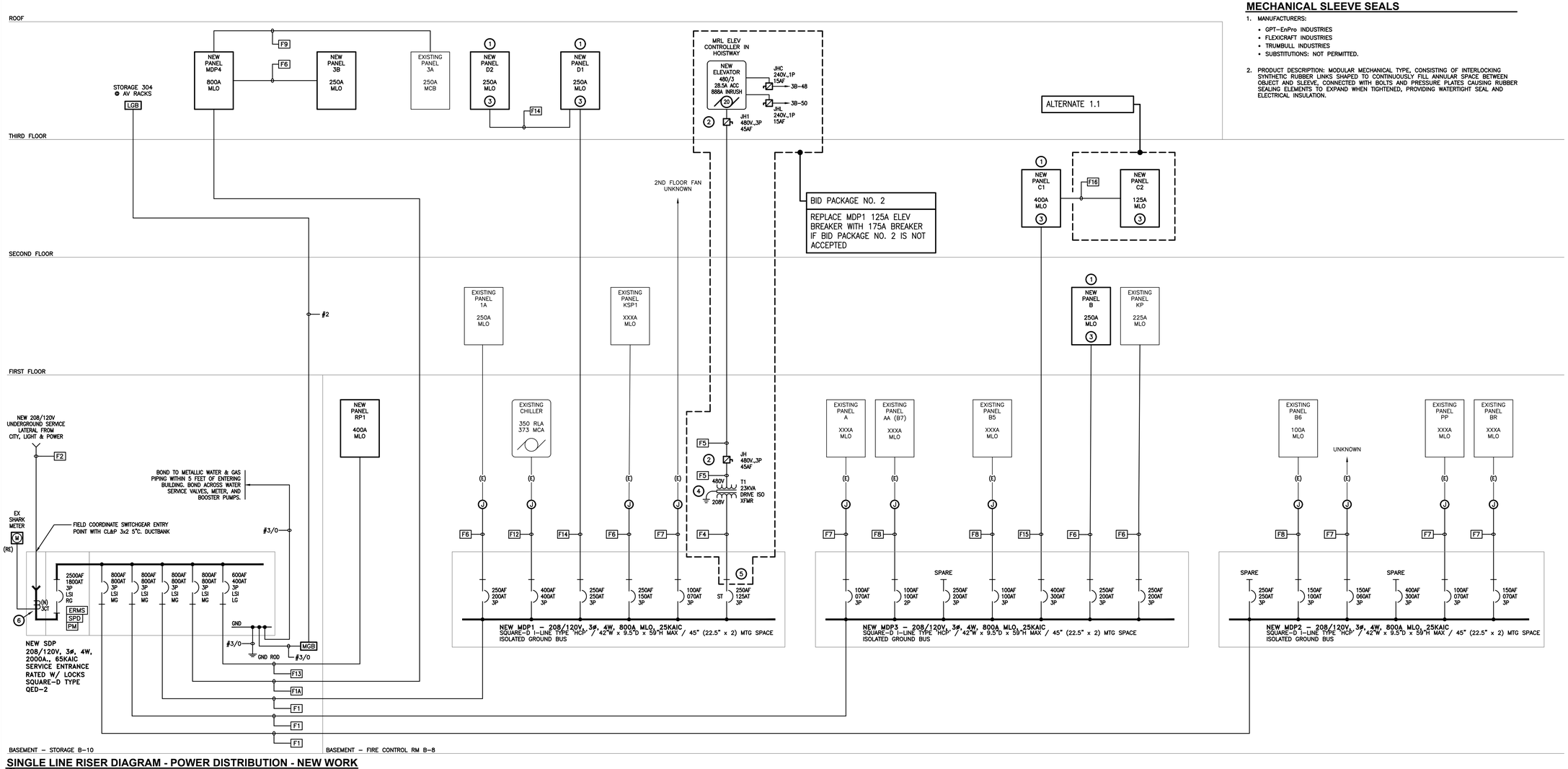
1. EXTEND AND CONNECT EXISTING CIRCUITS REQUIRED TO REMAIN IN SERVICE FROM DEMOLISHED PANEL TO THE NEW PANEL. PROVIDE INTERMEDIATE HIDDEN JUNCTION BOXES AND ACCESSIBLE SPLICES OR REPLACE EXISTING BRANCH CIRCUITS AS REQUIRED.
2. PROVIDE FUSE TYPE RECOMMENDED BY THE ELEVATOR MANUFACTURER. EACH DISCONNECT SHALL HAVE AN AUXILIARY CONTACT THAT OPENS WHEN THE DISCONNECT IS OPENED. PROVIDE 2 SETS OF 600V., 2/C #18 WIRE FROM EACH DISCONNECT TO THE ELEVATOR CONTROLLER.
3. RECESSED PANELBOARDS SHALL HAVE SPARE 1" CONDUITS EXTENDED TO AN ACCESSIBLE LOCATION FOR FUTURE USE. PROVIDE (1) CONDUIT FOR EVERY (3) SINGLE POLE SPACES/SPARES.
4. ELEVATOR AUTOTRANSFORMER FURNISHED BY ELEVATOR CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
5. PROVIDE SHUNT TRIP BREAKER ACCESSORY TIED INTO THE FIRE ALARM SYSTEM. PROVIDE AUXILIARY CONTACT TIED INTO THE ELEVATOR CONTROLLER.
6. PROVIDE NEW SPLIT–CORE CURRENT TRANSFORMERS CONNECTED TO RELOCATED SHARK METER. CONTRACTOR SHALL VERIFY SHARK 200 METER CHARACTERISTICS PRIOR TO BID. CURRENT TRANSFORMERS SHALL BE 2000A:5A 60HZ, INSULATION CLASS 0, 6KV, BIL 19KV FULL WAVE, CONTINUOUS THERMAL RATING 1.33 AT 55°C, AND MEET C57.13 STANDARD. EXTEND AND CONNECT FIBER OPTIC CABLING FOR REMOTE MONITORING FROM THE METER TO THE BASE WIDE CONTROL SYSTEM. REPROGRAM METER FOR NEW PARAMETERS. COORDINATE WITH OWNER.

CIRCUIT & FEEDER SCHEDULE

FEEDER TAG	PHASE AWG	NEUTRAL AWG	GROUND AWG	CONDUIT / CABLE O.D.	TYPE
F1	(2) SETS OF (3) 600MCM	(2) SETS OF (1) 600MCM	(2) SETS OF (1) #1/0 +(1) #1/0 ISO	(2) 3.5"	COPPER/THWN–2/90°C
F1A	(2) SETS OF (3) 600MCM	(2) SETS OF (1) 600MCM	(2) SETS OF (1) #1/0	(2) 3.5"	COPPER/THWN–2/90°C
F2	FURNISHED & INSTALLED BY CL&P (FINAL TERMINATIONS BY EC) (4) SETS OF (4) 750MCM CU., XHHW, 105°C IN (4) 5" C. DUCTBANK w/ (2) 5" C. SPARES				
F3	(2) SETS OF (3) 350MCM	(2) SETS OF (1) 350MCM	(2) SETS OF (1) #1	(2) 3"	COPPER/THWN–2/90°C
F4	(3) #2	–	(1) #6	1.25"	COPPER/THWN–2/90°C
F5	(3) #6	–	(1) #6	1.25"	COPPER/THWN–2/90°C
F6	(3) #3/0	(1) #3/0	(1) #6	2"	COPPER/THWN–2/90°C
F7	(3) #4	(1) #4	(1) #8	1.25"	COPPER/THWN–2/90°C
F8	(3) #1	(1) #1	(1) #6	1.50"	COPPER/THWN–2/90°C
F9	(3) 250MCM	(1) 250MCM	(1) #4	2.5"	COPPER/THWN–2/90°C
F10	–	–	–	–	–
F11	–	–	–	–	–
F12	(3) 500MCM	–	(1) #2	3.50"	COPPER/THWN–2/90°C
F13	(3) 500MCM	(1) 500MCM	(1) #2	3.5"	COPPER/THWN–2/90°C
F14	(3) 250MCM	(1) 250MCM	(1) #4 +(1) #4 ISO	2.5"	COPPER/THWN–2/90°C
F15	(3) 500MCM	(1) 500MCM	(1) #2 +(1) #2 ISO	3.5"	COPPER/THWN–2/90°C
F16	(3) #1	(1) #1	(1) #6 +(1) #6 ISO	1.50"	COPPER/THWN–2/90°C

MECHANICAL SLEEVE SEALS

1. MANUFACTURERS:
   - GPT–EnPro INDUSTRIES
   - FLEXICRAFT INDUSTRIES
   - TRUMBULL INDUSTRIES
   - SUBSTITUTIONS: NOT PERMITTED.
2. PRODUCT DESCRIPTION: MODULAR MECHANICAL TYPE, CONSISTING OF INTERLOCKING SYNTHETIC RUBBER LINKS SHAPED TO CONTINUOUSLY FILL ANNULAR SPACE BETWEEN OBJECT AND SLEEVE, CONNECTED WITH BOLTS AND PRESSURE PLATES CAUSING RUBBER SEALING ELEMENTS TO EXPAND WHEN TIGHTENED, PROVIDING WATERTIGHT SEAL AND ELECTRICAL INSULATION.



SINGLE LINE RISER DIAGRAM - POWER DISTRIBUTION - NEW WORK

NTS

Mark B. Thompson Associates
Architecture
502 South 24th Street
Philadelphia, PA 19146
215.985.1000 www.mbtarchitects.com

Keast & Hood Company of New York, PC
Structural Engineering
400 Market Street, Suite 1250
Philadelphia, PA 19106
215.625.0099 www.keasthood.com

Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

It is a violation of New York State Law for any person, unless he is acting under the direction of a licensed Professional Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Engineer or Land Surveyor is altered, the altering Engineer or Land Surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid and Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300 (DJVI #2115)
Date: July 6, 2022

Drawing Title:
Single Line Diagram
New Work

E601

NORMAL

NEW PANEL B — VOLTAGE: 208/120V.,3ø,4W — MAINS: 250A.,M.L.O. — NEUTRAL BUS SIZE: 100% — INTERRUPTING RATING: 22KAIC

CKT NO.	CKT LOAD	BKR SIZE	CIRCUIT SIZE	CIRCUIT DESCRIPTION AND/OR LOCATION	LOAD VA øA	LOAD VA øB	LOAD VA øC	CIRCUIT DESCRIPTION AND/OR LOCATION	CIRCUIT SIZE	BKR SIZE	CKT LOAD	CKT NO.
1	1200	20/1	2#12, 1#12GND., 0.75"C.	EXISTING UNKNOWN	2400			EXISTING UNKNOWN	2#12, 1#12GND., 0.75"C.	20/1	1200	2
3	1200	20/1	2#12, 1#12GND., 0.75"C.	EXISTING UNKNOWN		2400		EXISTING UNKNOWN	2#12, 1#12GND., 0.75"C.	20/1	1200	4
5	1200	20/1	2#12, 1#12GND., 0.75"C.	EXISTING UNKNOWN			2400	EXISTING UNKNOWN	2#12, 1#12GND., 0.75"C.	20/1	1200	6
7	1200	20/1	2#12, 1#12GND., 0.75"C.	EXISTING UNKNOWN	2400			EXISTING UNKNOWN	2#12, 1#12GND., 0.75"C.	20/1	1200	8
9	1200	20/1	2#12, 1#12GND., 0.75"C.	EXISTING UNKNOWN		2400		EXISTING UNKNOWN	2#12, 1#12GND., 0.75"C.	20/1	1200	10
11	1200	20/1	2#12, 1#12GND., 0.75"C.	EXISTING UNKNOWN			2400	EXISTING UNKNOWN	2#12, 1#12GND., 0.75"C.	20/1	1200	12
13	1200	20/1	2#12, 1#12GND., 0.75"C.	EXISTING UNKNOWN	2400			EXISTING UNKNOWN	2#12, 1#12GND., 0.75"C.	20/1	1200	14
15	1200	20/1	2#12, 1#12GND., 0.75"C.	EXISTING UNKNOWN		2400		EXISTING UNKNOWN	2#12, 1#12GND., 0.75"C.	20/1	1200	16
17	1200	20/1	2#12, 1#12GND., 0.75"C.	EXISTING UNKNOWN			2400	EXISTING UNKNOWN	2#12, 1#12GND., 0.75"C.	20/1	1200	18
19	1200	20/1	2#12, 1#12GND., 0.75"C.	EXISTING UNKNOWN	2400			EXISTING UNKNOWN	2#12, 1#12GND., 0.75"C.	20/1	1200	20
21	1200	20/1	2#12, 1#12GND., 0.75"C.	EXISTING UNKNOWN		2400		EXISTING UNKNOWN	2#12, 1#12GND., 0.75"C.	20/1	1200	22
23	1200	20/1	2#12, 1#12GND., 0.75"C.	EXISTING UNKNOWN			2400	EXISTING UNKNOWN	2#12, 1#12GND., 0.75"C.	20/1	1200	24
25	1200	20/1	2#12, 1#12GND., 0.75"C.	EXISTING UNKNOWN	2400			EXISTING UNKNOWN	2#12, 1#12GND., 0.75"C.	20/1	1200	26
27	1200	20/1	2#12, 1#12GND., 0.75"C.	EXISTING UNKNOWN		2400		EXISTING UNKNOWN	2#12, 1#12GND., 0.75"C.	20/1	1200	28
29	1200	20/1	2#12, 1#12GND., 0.75"C.	EXISTING UNKNOWN			2400	EXISTING UNKNOWN	2#12, 1#12GND., 0.75"C.	20/1	1200	30
31	0	20/1	–	SPARE	900			REC–RESTROOM / LOBBY	2#12, 1#12GND., 0.75"C.	20/1	900	32
33	650	*20/1*	2#12, 1#12GND., 0.75"C.	EWC		1370		REC–LOBBY/RESOURCE MGNT	2#12, 1#12GND., 0.75"C.	20/1	720	34
35	1200	20/1	2#12, 1#12GND., 0.75"C.	VENDING MACHINE REC			1920	REC–LOADING/UNLOADING/AUDIO STORAGE	2#12, 1#12GND., 0.75"C.	20/1	720	36
37	1200	20/1	2#12, 1#12GND., 0.75"C.	VENDING MACHINE REC	1380			REC–EXTERIOR LOADING DOCK	2#12, 1#12GND., 0.75"C.	20/1	180	38
39	696	20/1	2#12, 1#12GND., 0.75"C.	EF–1 (0.25HP)		1596		REC–LOADING/UNLOADING/AUDIO STORAGE	2#12, 1#12GND., 0.75"C.	20/1	900	40
41	250	20/1	2#12, 1#12GND., 0.75"C.	LTS–CORRIDOR – INV1–A			250	SPARE	–	20/1	0	42
43	581	20/1	2#12, 1#12GND., 0.75"C.	LTS–LOBBY/CORRIDOR/TOILET ROOMS	581			SPARE	–	20/1	0	44
45	500	20/1	2#12, 1#12GND., 0.75"C.	LTS–LOADING AREA/LOBBY/EXTERIOR		500		SPARE	–	20/1	0	46
47	0	20/1	–	SPARE			0	SPARE	–	20/1	0	48
49	0	20/1	–	SPARE	0			SPARE	–	20/1	0	50
51	0	20/1	–	SPARE		0		SPARE	–	20/1	0	52
53	0	20/1	–	SPARE			0	SPARE	–	20/1	0	54
				TOTAL/PHASE (VA):	14861	15466	14170					
				LOAD FROM SUBPANELS (VA):	0	0	0					
				TOTAL (VA):		44497						

20/1 = 5mA GFCI BKR; –20/1– = CKT BKR HANDLE TIE; +20/1+ = AFCI BKR; [20/1] = CKT BKR HANDLE LOCK; **20/1** = 30mA GFCI BKR; ST = SHUNT TRIP BKR; >20/1< = DUAL AFCI/GFCI; T = TANDEM BKR

RECEPTACLE:	FIRST 10KVA @ 100% DEMAND	=	10,000 VA X 100% =	10,000 VA
RECEPTACLE:	REMAINDER @ 50% DEMAND	=	33,166 VA X 50% =	16,583 VA
LIGHTING:	TOTAL @ 100% DEMAND	=	1,331 VA X 100% =	1,331 VA
MECHANICAL:	TOTAL @ 100% DEMAND	=	0 VA X 100% =	0 VA
KITCHEN:	TOTAL @ 100% DEMAND	=	0 VA X 65% =	0 VA
EV CHARGER:	TOTAL @ 125% DEMAND	=	0 VA X 125% =	0 VA
ELECTRIC HEAT	TOTAL @ 125% DEMAND	=	0 VA X 125% =	0 VA
PLUS 25% OF LARGEST MOTOR LOAD:		=	0 VA X 25% =	0 VA
			TOTAL DEMAND LOAD =	27,914 VA
			TOTAL AMPS =	78 A

BUSSING: ☐ ALUMINUM ☒ TIN PLATED COPPER
ENCLOSURE: ☒ TYPE 1 ☐ TYPE 3R/4X STAINLESS STEEL
MOUNTING: ☐ SURFACE ☒ FLUSH
LUGS: ☐ FEED–THRU ☐ DOUBLE MAIN
MAIN: ☐ BREAKER ☒ LUGS ONLY
TRIM: DOOR–IN–DOOR HINGED FRONT TRIM
SAFETY: IEC 60529 IP2X FINGER BARRIERS

BRANCH CIRCUIT DESCRIPTIONS AND NUMBERING WERE DERIVED FROM EXISTING PANEL SCHEDULES AND SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ACCURACY OF EXISTING CIRCUIT DIRECTORY BY TRACING OUT EXISTING CIRCUITS, FIELD VERIFY SOURCE, AND PROVIDE NEW TYPED PANEL SCHEDULES INDICATING NEW AND EXISTING CIRCUITS.

NORMAL

NEW PANEL RP1 — VOLTAGE: 208/120V.,3ø,4W — MAINS: 400A.,M.L.O. — NEUTRAL BUS SIZE: 100% — INTERRUPTING RATING: 22KAIC

CKT NO.	CKT LOAD	BKR SIZE	CIRCUIT SIZE	CIRCUIT DESCRIPTION AND/OR LOCATION	LOAD VA øA	LOAD VA øB	LOAD VA øC	CIRCUIT DESCRIPTION AND/OR LOCATION	CIRCUIT SIZE	BKR SIZE	CKT LOAD	CKT NO.
1	10	20/3	3#12, 1#12GND., 0.75"C.	POWER METER	478			LIGHTING	2#12, 1#12GND., 0.75"C.	20/1	468	2
3	10					260		FIRE ALARM NAC PANEL	2#12, 1#12GND., 0.75"C.	[20/1]	250	4
5	10						370	REC–ELEC RM & SPD CAGE	2#12, 1#12GND., 0.75"C.	20/1	360	6
7	1500			RECIRCUIT EX UNKNOWN	1900			STAIR LIGHTING	2#12, 1#12GND., 0.75"C.	20/1	400	8
9	1500	20/3	3#10, 1#10GND., 0.75"C.			1680		REC – ELEVATOR PIT	2#12, 1#12GND., 0.75"C.	[20/1]	180	10
11	1500						1550	LIGHTS – ELEVATOR PIT	2#12, 1#12GND., 0.75"C.	[20/1]	50	12
13	2920	45/3	3#6, 1#8GND., 1"C.	LOADING DOCK SCISSOR LIFT	3820			REC–ELEV LOBBY/C–USE B10	2#12, 1#12GND., 0.75"C.	20/1	900	14
15	2920			(1 @ 5HP MAX)		3020		CUH–1 (ELEV HOISTWAY)	2#12, 1#12GND., 0.75"C.	20/1	100	16
17	2920						2920	SPARE	–	20/1	0	18
19	1747	40/2	2#8, 1#10GND., 0.75"C.	ELEV SUMP PUMP (1.5HP/16.8A)	1747			SPARE	–	20/1	0	20
21	1747					1747		SPARE	–	20/1	0	22
23	5000	50/3	3#6, 1#8GND., 1"C.	REC–15KW SALAMANDER PORTABLE HEATER			10000	REC–15KW SALAMANDER PORTABLE HEATER	3#6, 1#8GND., 1"C.	50/3	5000	24
25	5000			(BASEMENT)	10000			(SECOND FLOOR)			5000	26
27	5000					10000					5000	28
29	5000	50/3	3#6, 1#8GND., 1"C.	REC–15KW SALAMANDER PORTABLE HEATER			10000	REC–15KW SALAMANDER PORTABLE HEATER	3#6, 1#8GND., 1"C.	50/3	5000	30
31	5000			(FIRST FLOOR)	10000			(THIRD FLOOR)			5000	32
33	5000					10000					5000	34
35	0	20/1	–	SPARE			0	SPARE	–	20/1	0	36
37	0	20/1	–	SPARE	0			SPARE	–	20/1	0	38
39	0	20/1	–	SPARE		0		SPARE	–	20/1	0	40
41	0	20/1	–	SPARE			0	SPARE	–	20/1	0	42
43	0	20/1	–	SPARE	0			SPARE	–	20/1	0	44
45	0	20/1	–	SPARE		0		SPARE	–	20/1	0	46
47	0	20/1	–	SPARE			0	SPARE	–	20/1	0	48
49	0	20/1	–	SPARE	0			SPARE	–	20/1	0	50
51	0	20/1	–	SPARE		0		SPARE	–	20/1	0	52
53	0	20/1	–	SPARE			0	SPARE	–	20/1	0	54
				TOTAL/PHASE (VA):	27945	26707	24840					
				LOAD FROM SUBPANELS (VA):	0	0	0					
				TOTAL (VA):		79492						

20/1 = 5mA GFCI BKR; –20/1– = CKT BKR HANDLE TIE; +20/1+ = AFCI BKR; [20/1] = CKT BKR HANDLE LOCK; **20/1** = 30mA GFCI BKR; ST = SHUNT TRIP BKR; >20/1< = DUAL AFCI/GFCI; T = TANDEM BKR

RECEPTACLE:	FIRST 10KVA @ 100% DEMAND	=	0 VA X 100% =	0 VA
RECEPTACLE:	REMAINDER @ 50% DEMAND	=	0 VA X 50% =	0 VA
LIGHTING:	TOTAL @ 100% DEMAND	=	868 VA X 100% =	868 VA
MECHANICAL:	TOTAL @ 100% DEMAND	=	18,624 VA X 100% =	18,624 VA
KITCHEN:	TOTAL @ 100% DEMAND	=	0 VA X 65% =	0 VA
EV CHARGER:	TOTAL @ 125% DEMAND	=	0 VA X 125% =	0 VA
ELECTRIC HEAT	TOTAL @ 125% DEMAND	=	60,000 VA X 125% =	75,000 VA
PLUS 25% OF LARGEST MOTOR LOAD:		=	0 VA X 25% =	0 VA
			TOTAL DEMAND LOAD =	94,492 VA
			TOTAL AMPS =	263 A

BUSSING: ☐ ALUMINUM ☒ TIN PLATED COPPER
ENCLOSURE: ☒ TYPE 1 ☐ TYPE 3R/4X STAINLESS STEEL
MOUNTING: ☒ SURFACE ☐ FLUSH
LUGS: ☐ FEED–THRU ☐ DOUBLE MAIN
MAIN: ☐ BREAKER ☒ LUGS ONLY
TRIM: DOOR–IN–DOOR HINGED FRONT TRIM
SAFETY: IEC 60529 IP2X FINGER BARRIERS

BRANCH CIRCUIT DESCRIPTIONS AND NUMBERING WERE DERIVED FROM EXISTING PANEL SCHEDULES AND SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ACCURACY OF EXISTING CIRCUIT DIRECTORY BY TRACING OUT EXISTING CIRCUITS, FIELD VERIFY SOURCE, AND PROVIDE NEW TYPED PANEL SCHEDULES INDICATING NEW AND EXISTING CIRCUITS.

NORMAL

NEW PANEL C1 (ISOLATED GROUND BUS) — VOLTAGE: 208/120V.,3ø,4W — MAINS: 400A.,M.L.O. — NEUTRAL BUS SIZE: 100% — INTERRUPTING RATING: 22KAIC

CKT NO.	CKT LOAD	BKR SIZE	CIRCUIT SIZE	CIRCUIT DESCRIPTION AND/OR LOCATION	LOAD VA øA	LOAD VA øB	LOAD VA øC	CIRCUIT DESCRIPTION AND/OR LOCATION	CIRCUIT SIZE	BKR SIZE	CKT LOAD	CKT NO.
1	1500	[20/1]	2#12, 1#10GND., 0.75"C.	EXISTING	3000			EXISTING	2#12, 1#12GND., 0.75"C.	20/1	1200	2
3	1500	20/1	2#12, 1#10GND., 0.75"C.	EXISTING		3000		EXISTING	2#12, 1#12GND., 0.75"C.	20/1	1500	4
5	1500	20/1	2#12, 1#10GND., 0.75"C.	EXISTING			3000	EXISTING	2#12, 1#12GND., 0.75"C.	20/1	1500	6
7	1500	20/1	2#12, 1#10GND., 0.75"C.	EXISTING	3000			EXISTING	2#12, 1#12GND., 0.75"C.	20/1	1500	8
9	1500	20/1	2#12, 1#10GND., 0.75"C.	EXISTING		3000		EXISTING	2#12, 1#12GND., 0.75"C.	20/1	1500	10
11	1500	20/1	2#12, 1#10GND., 0.75"C.	EXISTING			3000	EXISTING	2#12, 1#12GND., 0.75"C.	20/1	1500	12
13	1500	20/1	2#12, 1#10GND., 0.75"C.	EXISTING	3000			EXISTING	2#12, 1#12GND., 0.75"C.	20/1	1500	14
15	1500	20/1	2#12, 1#10GND., 0.75"C.	EXISTING		3000		EXISTING	2#12, 1#12GND., 0.75"C.	20/1	1500	16
17	1500	20/1	2#12, 1#10GND., 0.75"C.	EXISTING			3000	EXISTING	2#12, 1#12GND., 0.75"C.	20/1	1500	18
19	1500	20/1	2#12, 1#10GND., 0.75"C.	EXISTING	3000			EXISTING	2#12, 1#12GND., 0.75"C.	20/1	1500	20
21	1500	20/2	2#12, 1#10GND., 0.75"C.	EXISTING		3000		EXISTING	2#12, 1#12GND., 0.75"C.	20/2	1500	22
23	1500						3000				1500	24
25	1080	20/1	2#12, 1#12GND., 0.75"C.	REC–GLEE CLUB	1980			REC–CORRIDOR/LOBBY	2#12, 1#12GND., 0.75"C.	20/1	900	26
27	900	20/1	2#12, 1#12GND., 0.75"C.	REC–GLEE CLUB		1275		LTS–GLEE CLUB – INV2–B	2#12, 1#12GND., 0.75"C.	20/1	375	28
29	1200	20/1 IG	2#12, 2#12GND., 0.75"C.	REC–GLEE CLUB VP			2282	LTS–GLEE CLUB SECT/CORRIDOR/OFFICE	2#12, 1#12GND., 0.75"C.	20/1	1082	30
31	1080	20/1	2#12, 1#12GND., 0.75"C.	REC–GLEE CLUB OFFICE	4280			2ND FLOOR VAV–51A (9.5KW)			3200	32
33	180	20/1 IG	2#12, 2#12GND., 0.75"C.	REC–GLEE CLUB PROJECTION SCREEN		3380			3#8, 1#10GND., 0.75"C.	40/3	3200	34
35	360	20/1 IG	2#12, 2#12GND., 0.75"C.	REC–GLEE CLUB SPEAKERS			3560				3200	36
37	1200	20/1	2#12, 1#12GND., 0.75"C.	REC–GLEE CLUB LIGHTING TRUSS	4400			2ND FLOOR VAV–52 (9.5KW)			3200	38
39	1200	20/1	2#12, 1#12GND., 0.75"C.	REC–GLEE CLUB LIGHTING TRUSS		4400			3#8, 1#10GND., 0.75"C.	40/3	3200	40
41	900	20/1	2#12, 1#12GND., 0.75"C.	REC–GLEE CLUB SECTIONALS			4100				3200	42
43	900	20/1	2#12, 1#12GND., 0.75"C.	REC–GLEE CLUB SECTIONALS	4100			2ND FLOOR VAV–51B (9.5KW)			3200	44
45	921	20/1	–	LTS–GLEE CLUB		4121			3#8, 1#10GND., 0.75"C.	40/3	3200	46
47	1045	20/1	–	LTS–GLEE CLUB			4245				3200	48
49	4479	100/3	REFERENCE SINGLE LINE DIAGRAM	NEW PANEL C2	4979			2ND FLOOR VAV–53 (1.5KW)			500	50
51	2655					3155			3#12, 1#12GND., 0.75"C.	20/3	500	52
53	1933						2433				500	54
				TOTAL/PHASE (VA):	31739	28331	28620					
				LOAD FROM SUBPANELS (VA):	0	0	0					
				TOTAL (VA):		88690						

20/1 = 5mA GFCI BKR; –20/1– = CKT BKR HANDLE TIE; +20/1+ = AFCI BKR; [20/1] = CKT BKR HANDLE LOCK; **20/1** = 30mA GFCI BKR; ST = SHUNT TRIP BKR; >20/1< = DUAL AFCI/GFCI; IG = ISO GROUND CIRCUIT

RECEPTACLE:	FIRST 10KVA @ 100% DEMAND	=	10,000 VA X 100% =	10,000 VA
RECEPTACLE:	REMAINDER @ 50% DEMAND	=	42,278 VA X 50% =	21,139 VA
LIGHTING:	TOTAL @ 100% DEMAND	=	6,112 VA X 100% =	6,112 VA
MECHANICAL:	TOTAL @ 100% DEMAND	=	0 VA X 100% =	0 VA
KITCHEN:	TOTAL @ 100% DEMAND	=	0 VA X 65% =	0 VA
EV CHARGER:	TOTAL @ 125% DEMAND	=	0 VA X 125% =	0 VA
ELECTRIC HEAT	TOTAL @ 125% DEMAND	=	30,300 VA X 125% =	37,875 VA
PLUS 25% OF LARGEST MOTOR LOAD:		=	0 VA X 25% =	0 VA
			TOTAL DEMAND LOAD =	75,126 VA
			TOTAL AMPS =	209 A

BUSSING: ☐ ALUMINUM ☒ TIN PLATED COPPER ☒ ISO GND BUS
ENCLOSURE: ☒ TYPE 1 ☐ TYPE 3R/4X STAINLESS STEEL
MOUNTING: ☐ SURFACE ☒ FLUSH
LUGS: ☐ FEED–THRU ☐ DOUBLE MAIN
MAIN: ☐ BREAKER ☒ LUGS ONLY
TRIM: DOOR–IN–DOOR HINGED FRONT TRIM
SAFETY: IEC 60529 IP2X FINGER BARRIERS

BRANCH CIRCUIT DESCRIPTIONS AND NUMBERING WERE DERIVED FROM EXISTING PANEL SCHEDULES AND SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ACCURACY OF EXISTING CIRCUIT DIRECTORY BY TRACING OUT EXISTING CIRCUITS, FIELD VERIFY SOURCE, AND PROVIDE NEW TYPED PANEL SCHEDULES INDICATING NEW AND EXISTING CIRCUITS.

ALTERNATE 1.1

NORMAL

NEW PANEL C2 (ISOLATED GROUND BUS) — VOLTAGE: 208/120V.,3ø,4W — MAINS: 125A.,M.L.O. — NEUTRAL BUS SIZE: 100% — INTERRUPTING RATING: 22KAIC

CKT NO.	CKT LOAD	BKR SIZE	CIRCUIT SIZE	CIRCUIT DESCRIPTION AND/OR LOCATION	LOAD VA øA	LOAD VA øB	LOAD VA øC	CIRCUIT DESCRIPTION AND/OR LOCATION	CIRCUIT SIZE	BKR SIZE	CKT LOAD	CKT NO.
1	900	20/1	2#12, 1#12GND., 0.75"C.	REC–CADET SPIRIT BAND	1275			LTS–CADET SPIRIT BAND – INV2–B	2#12, 1#12GND., 0.75"C.	20/1	375	2
3	540	20/1	2#12, 1#12GND., 0.75"C.	REC–CADET SPIRIT BAND		1275		LTS–CADET SPIRIT BAND	2#12, 1#12GND., 0.75"C.	20/1	735	4
5	0	20/1	–	SPARE			673	LTS–CADET SPIRIT BAND	2#12, 1#12GND., 0.75"C.	20/1	673	6
7	720	20/1	2#12, 1#12GND., 0.75"C.	REC–CADET SPIRIT BAND	2004			LTS–CADET SPIRIT BAND	2#12, 1#12GND., 0.75"C.	20/1	1284	8
9	180	20/1	–	SPARE		180		SPARE	–	20/1	0	10
11	360	20/1	–	SPARE			360	SPARE	–	20/1	0	12
13	1200	20/1	2#12, 1#12GND., 0.75"C.	REC–CADET SPIRIT BAND LIGHTING TRUSS	1200			SPARE	–	20/1	0	14
15	1200	20/1	2#12, 1#12GND., 0.75"C.	REC–CADET SPIRIT BAND LIGHTING TRUSS		1200		SPARE	–	20/1	0	16
17	900	20/1	2#12, 1#12GND., 0.75"C.	REC–CADET SPIRIT BAND			900	SPARE	–	20/1	0	18
19	0	20/1	–	SPARE	0			SPARE	–	20/1	0	20
21	0	20/1	–	SPARE		0		SPARE	–	20/1	0	22
23	0	20/1	–	SPARE			0	SPARE	–	20/1	0	24
25	0	20/1	–	SPARE	0			SPARE	–	20/1	0	26
27	0	20/1	–	SPARE		0		SPARE	–	20/1	0	28
29	0	20/1	–	SPARE			0	SPARE	–	20/1	0	30
31	0	20/1	–	SPARE	0			SPARE	–	20/1	0	32
33	0	20/1	–	SPARE		0		SPARE	–	20/1	0	34
35	0	20/1	–	SPARE			0	SPARE	–	20/1	0	36
37	0	20/1	–	SPARE	0			SPARE	–	20/1	0	38
39	0	20/1	–	SPARE		0		SPARE	–	20/1	0	40
41	0	20/1	–	SPARE			0	SPARE	–	20/1	0	42
				TOTAL/PHASE (VA):	4479	2655	1933					
				LOAD FROM SUBPANELS (VA):	0	0	0					
				TOTAL (VA):		9067						

20/1 = 5mA GFCI BKR; –20/1– = CKT BKR HANDLE TIE; +20/1+ = AFCI BKR; [20/1] = CKT BKR HANDLE LOCK; **20/1** = 30mA GFCI BKR; ST = SHUNT TRIP BKR; >20/1< = DUAL AFCI/GFCI; IG = ISO GROUND CIRCUIT

RECEPTACLE:	FIRST 10KVA @ 100% DEMAND	=	7,000 VA X 100% =	7,000 VA
RECEPTACLE:	REMAINDER @ 50% DEMAND	=	0 VA X 50% =	0 VA
LIGHTING:	TOTAL @ 100% DEMAND	=	2,067 VA X 100% =	2,067 VA
MECHANICAL:	TOTAL @ 100% DEMAND	=	0 VA X 100% =	0 VA
KITCHEN:	TOTAL @ 100% DEMAND	=	0 VA X 65% =	0 VA
EV CHARGER:	TOTAL @ 125% DEMAND	=	0 VA X 125% =	0 VA
ELECTRIC HEAT	TOTAL @ 125% DEMAND	=	0 VA X 125% =	0 VA
PLUS 25% OF LARGEST MOTOR LOAD:		=	0 VA X 25% =	0 VA
			TOTAL DEMAND LOAD =	9,067 VA
			TOTAL AMPS =	25 A

BUSSING: ☐ ALUMINUM ☒ TIN PLATED COPPER ☒ ISO GND BUS
ENCLOSURE: ☒ TYPE 1 ☐ TYPE 3R/4X STAINLESS STEEL
MOUNTING: ☐ SURFACE ☒ FLUSH
LUGS: ☐ FEED–THRU ☐ DOUBLE MAIN
MAIN: ☐ BREAKER ☒ LUGS ONLY
TRIM: DOOR–IN–DOOR HINGED FRONT TRIM
SAFETY: IEC 60529 IP2X FINGER BARRIERS

BRANCH CIRCUIT DESCRIPTIONS AND NUMBERING WERE DERIVED FROM EXISTING PANEL SCHEDULES AND SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ACCURACY OF EXISTING CIRCUIT DIRECTORY BY TRACING OUT EXISTING CIRCUITS, FIELD VERIFY SOURCE, AND PROVIDE NEW TYPED PANEL SCHEDULES INDICATING NEW AND EXISTING CIRCUITS.

Mark B. Thompson Associates
Architecture
502 South 24th Street
Philadelphia, PA 19146
215.985.1000 www.mbtarchitects.com

Keast & Hood Company of New York, PC
Structural Engineering
400 Market Street, Suite 1250
Philadelphia, PA 19106
215.625.0099 www.keasthood.com

Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

It is a violation of New York State Law for any person, unless he is acting under the direction of a licensed Professional Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Engineer or Land Surveyor is altered, the altering Engineer or Land Surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid and Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300 (DJVI #2115)
Date: July 6, 2022

Drawing Title:
Panel Schedules

E 7 0 0

NEW PANEL D1 (ISOLATED GROUND BUS)

NORMAL

VOLTAGE: 208/120V.,3ø,4W
MAINS: 250A.,M.L.O.
NEUTRAL BUS SIZE: 100%
INTERRUPTING RATING: 22KAIC

CKT NO.	CKT LOAD	BKR SIZE	CIRCUIT SIZE	CIRCUIT DESCRIPTION AND/OR LOCATION	LOAD VA øA	LOAD VA øB	LOAD VA øC	CIRCUIT DESCRIPTION AND/OR LOCATION	CIRCUIT SIZE	BKR SIZE	CKT LOAD	CKT NO.
1	3500	40/3	4#8, 1#10GND., 1"C.	EXISTING UNKNOWN	3716			LTS–CORRIDOR	2#12, 1#12GND., 0.75"C.	20/1	216	2
3	3500					3826		LTS–CORRIDOR	2#12, 1#12GND., 0.75"C.	20/1	326	4
5	3500						4085	LTS–BAND LIBRARY	2#12, 1#12GND., 0.75"C.	20/1	585	6
7	0	20/1	–	SPARE	816			LTS–AV EQUIP RM/OFFICES/PRACTICE	2#12, 1#12GND., 0.75"C.	20/1	816	8
9	0	20/1	–	SPARE		375		LTS–CONCERT BAND – INV2–A	2#12, 1#12GND., 0.75"C.	20/1	375	10
11	1920	30/1	2#10, 1#10GND., 0.75"C.	EX AIR COMPRESSOR			2940	LTS–CONCERT BAND	2#12, 1#12GND., 0.75"C.	20/1	1020	12
13	1260	20/1	2#12, 1#12GND., 0.75"C.	REC–OFFICE	2280			LTS–CONCERT BAND	2#12, 1#12GND., 0.75"C.	20/1	1020	14
15	720	20/1	2#12, 1#12GND., 0.75"C.	REC–CORRIDOR		1455		LTS–CONCERT BAND	2#12, 1#12GND., 0.75"C.	20/1	735	16
17	540	20/1	2#12, 1#12GND., 0.75"C.	REC–BAND LIBRARY			740	LIGHTING CONTROL PANELS (ESN)	2#12, 1#12GND., 0.75"C.	20/1	200	18
19	720	20/1	2#12, 1#12GND., 0.75"C.	REC–BAND LIBRARY	970			LIGHTING HUB (LHM)	2#12, 1#12GND., 0.75"C.	20/1	250	20
21	720	20/1	2#12, 1#12GND., 0.75"C.	REC–BAND LIBRARY		720		SPARE	–	20/1	0	22
23	360	20/1	2#12, 1#12GND., 0.75"C.	REC–PRACTICE ROOM			360	SPARE	–	20/1	0	24
25	180	20/1	2#12, 1#12GND., 0.75"C.	REC–HALL	1555			EXISTING UNKNOWN	2#12, 1#12GND., 0.75"C.	20/2	1375	26
27	0	20/1	–	SPARE		1375					1375	28
29	0	20/1	–	SPARE			0	SPARE	–	20/1	0	30
31	0	20/1	–	SPARE	0			SPARE	–	20/1	0	32
33	0	20/1	–	SPARE		0		SPARE	–	20/1	0	34
35	0	20/1	–	SPARE			0	SPARE	–	20/1	0	36
37	0	20/1	–	SPARE	0			SPARE	–	20/1	0	38
39	0	20/1	–	SPARE		0		SPARE	–	20/1	0	40
41	0	20/1	–	SPARE			0	SPARE	–	20/1	0	42
43	0			SPARE	0			SPARE	–	20/1	0	44
45	0	20/3	–			0		SPARE	–	20/1	0	46
47	0						0	SPARE	–	20/1	0	48
49	0			SPARE	250			FIRE ALARM NAC PANEL	2#12, 1#12GND., 0.75"C.	[20/1]	250	50
51	0	60/3	–			0		SPARE	–	20/2	0	52
53	0						0				0	54
				TOTAL/PHASE (VA):	9587	7751	8125					
				LOAD FROM PANEL D2 (VA):	16460	12010	12320					
				TOTAL (VA):	66253							

20/1 = 5mA GFCI BKR
–20/1– = CKT BKR HANDLE TIE
+20/1+ = AFCI BKR
[20/1] = CKT BKR HANDLE LOCK
20/1 = 30mA GFCI BKR
ST = SHUNT TRIP BKR
>20/1< = DUAL AFCI/GFCI
IG = ISO GROUND CIRCUIT

RECEPTACLE:	FIRST 10KVA @ 100% DEMAND	=	10,000 VA	X 100% =	10,000 VA
RECEPTACLE:	REMAINDER @ 50% DEMAND	=	37,451 VA	X 50% =	18,726 VA
LIGHTING:	TOTAL @ 100% DEMAND	=	5,302 VA	X 100% =	5,302 VA
MECHANICAL:	TOTAL @ 100% DEMAND	=	13,500 VA	X 100% =	13,500 VA
KITCHEN:	TOTAL @ 100% DEMAND	=	0 VA	X 65% =	0 VA
EV CHARGER:	TOTAL @ 125% DEMAND	=	0 VA	X 125% =	0 VA
ELECTRIC HEAT	TOTAL @ 125% DEMAND	=	0 VA	X 125% =	0 VA
PLUS 25% OF LARGEST MOTOR LOAD:		=	0 VA	X 25% =	0 VA
				TOTAL DEMAND LOAD =	47,528 VA
				TOTAL AMPS =	132 A

BUSSING: ☐ ALUMINUM ☒ TIN PLATED COPPER ☒ ISO GND BUS
ENCLOSURE: ☒ TYPE 1 ☐ TYPE 3R/4X STAINLESS STEEL
MOUNTING: ☐ SURFACE ☒ FLUSH
LUGS: ☐ FEED–THRU ☒ DOUBLE MAIN
MAIN: ☐ BREAKER ☒ LUGS ONLY
TRIM: DOOR–IN–DOOR HINGED FRONT TRIM
SAFETY: IEC 60529 IP2X FINGER BARRIERS

BRANCH CIRCUIT DESCRIPTIONS AND NUMBERING WERE DERIVED FROM EXISTING PANEL SCHEDULES AND SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ACCURACY OF EXISTING CIRCUIT DIRECTORY BY TRACING OUT EXISTING CIRCUITS, FIELD VERIFY SOURCE, AND PROVIDE NEW TYPED PANEL SCHEDULES INDICATING NEW AND EXISTING CIRCUITS.

NEW PANEL MDP4

SQUARE–D I–LINE TYPE 'HCP' / 42"W x 9.5"D x 59"H MAX / 45" MTG SPACE

NORMAL

VOLTAGE: 208/120V.,3ø,4W
MAINS: 800A.,M.L.O.
NEUTRAL BUS SIZE: 100%
INTERRUPTING RATING: 25KAIC

CKT NO.	CKT LOAD	BKR SIZE	CIRCUIT SIZE	CIRCUIT DESCRIPTION AND/OR LOCATION	LOAD VA øA	LOAD VA øB	LOAD VA øC	CIRCUIT DESCRIPTION AND/OR LOCATION	CIRCUIT SIZE	BKR SIZE	CKT LOAD	CKT NO.
	13450			RTU–1 (112.1 MCA)	25040			RTU–2 (96.6 MCA)			11590	
1	13450	125/3	3#1/0, 1#6GND., 1.5"C.			25040			3#1, 1#6GND., 1.25"C.	110/3	11590	2
	13450						25040				11590	
	7988			STEAM GEN SG–1 (66.6 FLA)	11982			STEAM GEN SG–2 (33.3 FLA)			3994	
3	7988	90/3	3#4, 1#8GND., 1"C.			11982			3#8, 1#10GND., 0.75"C.	45/3	3994	4
	7988						11982				3994	
	2940			EC–1C (24.5 FLA) – OUTDOOR UNIT	23940			EX PANEL 3A			21000	
5	2940	50/3	3#8, 1#10GND., 3/4"C.			26440			REF SINGLE LINE	250/3	23500	6
	2940						18440				15500	
	5375			EC–1 (44.8 FLA) – INDOOR UNIT	7275			NEW PANEL 3B			1900	
7	5375	60/3	3#4, 1#8GND., 1"C.			6555			REF SINGLE LINE	150/3	1180	8
	5375						7025				1650	
	0			SPACE				SPACE			0	
9	0	4.5"	–		0					4.5"	0	10
	0					0					0	
							0				0	
				TOTAL/PHASE (VA):	68237	70017	62487					
				LOAD FROM SUBPANELS (VA):	0	0	0					
				TOTAL (VA):	200741							

20/1 = 5mA GFCI BKR
–20/1– = CKT BKR HANDLE TIE
+20/1+ = AFCI BKR
[20/1] = CKT BKR HANDLE LOCK
20/1 = 30mA GFCI BKR
ST = SHUNT TRIP BKR
>20/1< = DUAL AFCI/GFCI
T = TANDEM BKR

RECEPTACLE:	FIRST 10KVA @ 100% DEMAND	=	0 VA	X 100% =	0 VA
RECEPTACLE:	REMAINDER @ 50% DEMAND	=	0 VA	X 50% =	0 VA
LIGHTING:	TOTAL @ 100% DEMAND	=	0 VA	X 100% =	0 VA
MECHANICAL:	TOTAL @ 100% DEMAND	=	164,793 VA	X 100% =	164,793 VA
KITCHEN:	TOTAL @ 65% DEMAND	=	0 VA	X 65% =	0 VA
EV CHARGER:	TOTAL @ 125% DEMAND	=	0 VA	X 125% =	0 VA
ELECTRIC HEAT	TOTAL @ 125% DEMAND	=	35,948 VA	X 125% =	44,935 VA
PLUS 25% OF LARGEST MOTOR LOAD:		=	40,350 VA	X 25% =	10,088 VA
				TOTAL DEMAND LOAD =	219,816 VA
				TOTAL AMPS =	611 A

BUSSING: ☐ ALUMINUM ☒ TIN PLATED COPPER
ENCLOSURE: ☒ TYPE 1 ☐ TYPE 3R/4X STAINLESS STEEL
MOUNTING: ☒ SURFACE ☐ FLUSH
LUGS: ☐ SUBFEED ☐ DOUBLE MAIN
MAIN: ☐ BREAKER ☒ LUGS ONLY
TRIM: DOOR–IN–DOOR HINGED FRONT TRIM
SAFETY: NA

NEW PANEL D2 (ISOLATED GROUND BUS)

NORMAL

VOLTAGE: 208/120V.,3ø,4W
MAINS: 250A.,M.L.O.
NEUTRAL BUS SIZE: 100%
INTERRUPTING RATING: 22KAIC

CKT NO.	CKT LOAD	BKR SIZE	CIRCUIT SIZE	CIRCUIT DESCRIPTION AND/OR LOCATION	LOAD VA øA	LOAD VA øB	LOAD VA øC	CIRCUIT DESCRIPTION AND/OR LOCATION	CIRCUIT SIZE	BKR SIZE	CKT LOAD	CKT NO.
1	1200	20/1	2#12, 1#12GND., 0.75"C.	EXISTING	2400			EXISTING	2#12, 1#12GND., 0.75"C.	20/1	1200	2
3	1200	20/1	2#12, 1#12GND., 0.75"C.	EXISTING		2400		EXISTING	2#12, 1#12GND., 0.75"C.	20/1	1200	4
5	1200	20/1	2#12, 1#12GND., 0.75"C.	EXISTING			2400	EXISTING	2#12, 1#12GND., 0.75"C.	20/1	1200	6
7	1200	20/1	2#12, 1#12GND., 0.75"C.	EXISTING	2400			EXISTING	2#12, 1#12GND., 0.75"C.	20/1	1200	8
9	1500	20/1 IG	2#12, 2#10GND., 0.75"C.	REC–CONCERT BAND AV		2700		REC–CONCERT BAND LIGHT TRUSS	2#12, 1#12GND., 0.75"C.	20/1	1200	10
11	1500	20/1 IG	2#12, 2#10GND., 0.75"C.	REC–CONCERT BAND AV			2700	REC–CONCERT BAND LIGHT TRUSS	2#12, 1#12GND., 0.75"C.	20/1	1200	12
13	1500	20/1 IG	2#12, 2#10GND., 0.75"C.	REC–CONCERT BAND AV	2700			REC–CONCERT BAND LIGHT TRUSS	2#12, 1#12GND., 0.75"C.	20/1	1200	14
15	180	20/1 IG	2#12, 2#10GND., 0.75"C.	REC–CONCERT BAND SPEAKER		720		REC–CONCERT BAND	2#12, 1#12GND., 0.75"C.	20/1	540	16
17	180	20/1 IG	2#12, 2#10GND., 0.75"C.	REC–CONCERT BAND SPEAKER			720	REC–CONCERT BAND	2#12, 1#12GND., 0.75"C.	20/1	540	18
19	1920	20/1 IG	2#12, 2#10GND., 0.75"C.	REC–CONCERT BAND VP	2640			REC–CONCERT BAND	2#12, 1#12GND., 0.75"C.	20/1	720	20
21	50	20/1 IG	2#12, 2#10GND., 0.75"C.	REC–CONCERT BAND PROJ SCREEN		590		REC–CONCERT BAND	2#12, 1#12GND., 0.75"C.	20/1	540	22
23	0	20/1	–	SPARE			540	REC–CONCERT BAND	2#12, 1#12GND., 0.75"C.	20/1	540	24
25	0	20/1	–	SPARE	720			REC–CONCERT BAND	2#12, 1#12GND., 0.75"C.	20/1	720	26
27	0	20/1	–	SPARE		0		SPARE	–	20/1	0	28
29	0	20/1	–	SPARE			0	SPARE	–	20/1	0	30
31	0	20/1	–	SPARE	500			RECIRCUITED CONTROL ROOM 306	2#12, 1#12GND., 0.75"C.	20/1	500	32
33	0	20/1	–	SPARE		500		RECIRCUITED CONTROL ROOM 306	2#12, 1#12GND., 0.75"C.	20/1	500	34
35	360	20/1 IG	2#12, 2#10GND., 0.75"C.	REC–AV EQUIPMENT RM 304			860	RECIRCUITED CONTROL ROOM 306	2#12, 1#12GND., 0.75"C.	20/1	500	36
37	1200	20/1 IG	2#12, 2#10GND., 0.75"C.	REC–AV RACK RM 304	1700			RECIRCUITED CONTROL ROOM 306	2#12, 1#12GND., 0.75"C.	20/1	500	38
39	1200	20/1 IG	2#12, 2#10GND., 0.75"C.	REC–AV RACK RM 304		1700		RECIRCUITED CONTROL ROOM 306	2#12, 1#12GND., 0.75"C.	20/1	500	40
41	1200	20/1 IG	2#12, 2#10GND., 0.75"C.	REC–AV RACK RM 304			1700	RECIRCUITED CONTROL ROOM 306	2#12, 1#12GND., 0.75"C.	20/1	500	42
43	1200	20/1 IG	2#12, 2#10GND., 0.75"C.	REC–AV RACK RM 304	1700			RECIRCUITED CONTROL ROOM 306	2#12, 1#12GND., 0.75"C.	20/1	500	44
45	1200	20/1 IG	2#12, 2#10GND., 0.75"C.	REC–AV RACK RM 304		1700		RECIRCUITED CONTROL ROOM 306	2#12, 1#12GND., 0.75"C.	20/1	500	46
47	1200	20/1 IG	2#12, 2#10GND., 0.75"C.	REC–AV RACK RM 304			1700	RECIRCUITED CONTROL ROOM 306	2#12, 1#12GND., 0.75"C.	20/1	500	48
49	1200	20/1 IG	2#12, 2#10GND., 0.75"C.	REC–AV RACK RM 304	1700			RECIRCUITED CONTROL ROOM 306	2#12, 1#12GND., 0.75"C.	20/1	500	50
51	1200	20/1 IG	2#12, 2#10GND., 0.75"C.	REC–AV RACK RM 304		1700		RECIRCUITED CONTROL ROOM 306	2#12, 1#12GND., 0.75"C.	20/1	500	52
53	1200	20/1 IG	2#12, 2#10GND., 0.75"C.	REC–AV RACK RM 304			1700	RECIRCUITED CONTROL ROOM 306	2#12, 1#12GND., 0.75"C.	20/1	500	54
				TOTAL/PHASE (VA):	16460	12010	12320					
				LOAD FROM SUBPANELS (VA):	0	0	0					
				TOTAL (VA):	40790							

20/1 = 5mA GFCI BKR
–20/1– = CKT BKR HANDLE TIE
+20/1+ = AFCI BKR
[20/1] = CKT BKR HANDLE LOCK
20/1 = 30mA GFCI BKR
ST = SHUNT TRIP BKR
>20/1< = DUAL AFCI/GFCI
IG = ISO GROUND CIRCUIT

RECEPTACLE:	FIRST 10KVA @ 100% DEMAND	=	10,000 VA	X 100% =	10,000 VA
RECEPTACLE:	REMAINDER @ 50% DEMAND	=	30,790 VA	X 50% =	15,395 VA
LIGHTING:	TOTAL @ 100% DEMAND	=	0 VA	X 100% =	0 VA
MECHANICAL:	TOTAL @ 100% DEMAND	=	0 VA	X 100% =	0 VA
KITCHEN:	TOTAL @ 100% DEMAND	=	0 VA	X 65% =	0 VA
EV CHARGER:	TOTAL @ 125% DEMAND	=	0 VA	X 125% =	0 VA
ELECTRIC HEAT	TOTAL @ 125% DEMAND	=	0 VA	X 125% =	0 VA
PLUS 25% OF LARGEST MOTOR LOAD:		=	0 VA	X 25% =	0 VA
				TOTAL DEMAND LOAD =	25,395 VA
				TOTAL AMPS =	71 A

BUSSING: ☐ ALUMINUM ☒ TIN PLATED COPPER ☒ ISO GND BUS
ENCLOSURE: ☒ TYPE 1 ☐ TYPE 3R/4X STAINLESS STEEL
MOUNTING: ☐ SURFACE ☒ FLUSH
LUGS: ☐ FEED–THRU ☐ DOUBLE MAIN
MAIN: ☐ BREAKER ☒ LUGS ONLY
TRIM: DOOR–IN–DOOR HINGED FRONT TRIM
SAFETY: IEC 60529 IP2X FINGER BARRIERS

BRANCH CIRCUIT DESCRIPTIONS AND NUMBERING WERE DERIVED FROM EXISTING PANEL SCHEDULES AND SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ACCURACY OF EXISTING CIRCUIT DIRECTORY BY TRACING OUT EXISTING CIRCUITS, FIELD VERIFY SOURCE, AND PROVIDE NEW TYPED PANEL SCHEDULES INDICATING NEW AND EXISTING CIRCUITS.

NEW PANEL 3B

NORMAL

VOLTAGE: 208/120V.,3ø,4W
MAINS: 250A.,M.L.O.
NEUTRAL BUS SIZE: 100%
INTERRUPTING RATING: 22KAIC

CKT NO.	CKT LOAD	BKR SIZE	CIRCUIT SIZE	CIRCUIT DESCRIPTION AND/OR LOCATION	LOAD VA øA	LOAD VA øB	LOAD VA øC	CIRCUIT DESCRIPTION AND/OR LOCATION	CIRCUIT SIZE	BKR SIZE	CKT LOAD	CKT NO.
1	250	**20/1**	2#12, 1#12GND., 3/4"C.	HEAT TRACE SG–1 / HD–1	750			LIGHTS/REC – RTU–1	3#12, 1#12GND., 0.75"C.	20/1	500	2
3	250	**20/1**	–	SPARE		750		LIGHTS/REC – RTU–2/AHU–2	3#12, 1#12GND., 0.75"C.	20/1	500	4
5	600	20/1	2#12, 1#12GND., 3/4"C.	ENCLOSURE SG–1			1100	VAV BOXES–HOT WATER	3#12, 1#12GND., 0.75"C.	20/1	500	6
7	600	20/1	2#12, 1#12GND., 3/4"C.	ENCLOSURE SG–2	1100			VAV BOXES–HOT WATER	3#12, 1#12GND., 0.75"C.	20/1	500	8
9	250	**20/1**	2#12, 1#12GND., 3/4"C.	HEAT TRACE SG–2 / HD–2		430		REC – ELEV HOISTWAY	2#12, 1#12GND., 0.75"C.	20/1	180	10
11	50	20/1	2#12, 1#12GND., 3/4"C.	ELEVATOR RELIEF AIR DAMPER			550	VISUAL COM – ELEV HOISTWAY	2#12, 1#12GND., 0.75"C.	20/1	500	12
13	0	20/1	–	SPARE	50			LTS–ELEVATOR HOISTWAY	2#12, 1#12GND., 0.75"C.	20/1	50	14
15	0	20/1	–	SPARE		0		SPARE	–	20/1	0	16
17	0	20/1	–	SPARE			0	SPARE	–	20/1	0	18
19	0	20/1	–	SPARE	0			SPARE	–	20/1	0	20
21	0	20/1	–	SPARE		0		SPARE	–	20/1	0	22
23	0	20/1	–	SPARE			0	SPARE	–	20/1	0	24
25	0	20/1	–	SPARE	0			SPARE	–	20/1	0	26
27	0	20/1	–	SPARE		0		SPARE	–	20/1	0	28
29	0	20/1	–	SPARE			0	SPARE	–	20/1	0	30
31	0	20/1	–	SPARE	0			SPARE	–	20/1	0	32
33	0	20/1	–	SPARE		0		SPARE	–	20/1	0	34
35	0	20/1	–	SPARE			0	SPARE	–	20/1	0	36
37	0	20/1	–	SPARE	0			SPARE	–	20/1	0	38
39	0	20/1	–	SPARE		0		SPARE	–	20/1	0	40
41	0	20/1	–	SPARE			0	SPARE	–	20/1	0	42
				TOTAL/PHASE (VA):	1900	1180	1650					
				LOAD FROM SUBPANELS (VA):	0	0	0					
				TOTAL (VA):	4730							

20/1 = 5mA GFCI BKR
–20/1– = CKT BKR HANDLE TIE
+20/1+ = AFCI BKR
[20/1] = CKT BKR HANDLE LOCK
20/1 = 30mA GFCI BKR
ST = SHUNT TRIP BKR
>20/1< = DUAL AFCI/GFCI
T = TANDEM BKR

RECEPTACLE:	FIRST 10KVA @ 100% DEMAND	=	0 VA	X 100% =	0 VA
RECEPTACLE:	REMAINDER @ 50% DEMAND	=	0 VA	X 50% =	0 VA
LIGHTING:	TOTAL @ 100% DEMAND	=	0 VA	X 100% =	0 VA
MECHANICAL:	TOTAL @ 100% DEMAND	=	4,730 VA	X 100% =	4,730 VA
KITCHEN:	TOTAL @ 65% DEMAND	=	0 VA	X 65% =	0 VA
EV CHARGER:	TOTAL @ 125% DEMAND	=	0 VA	X 125% =	0 VA
ELECTRIC HEAT	TOTAL @ 125% DEMAND	=	0 VA	X 125% =	0 VA
PLUS 25% OF LARGEST MOTOR LOAD:		=	0 VA	X 25% =	0 VA
				TOTAL DEMAND LOAD =	4,730 VA
				TOTAL AMPS =	13 A

BUSSING: ☐ ALUMINUM ☒ TIN PLATED COPPER
ENCLOSURE: ☒ TYPE 1 ☐ TYPE 3R/4X STAINLESS STEEL
MOUNTING: ☒ SURFACE ☐ FLUSH
LUGS: ☐ SUBFEED ☐ DOUBLE MAIN
MAIN: ☐ BREAKER ☒ LUGS ONLY
TRIM: DOOR–IN–DOOR HINGED FRONT TRIM
SAFETY: IEC 60529 IP2X FINGER BARRIERS

BRANCH CIRCUIT DESCRIPTIONS AND NUMBERING WERE DERIVED FROM EXISTING PANEL SCHEDULES AND SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ACCURACY OF EXISTING CIRCUIT DIRECTORY BY TRACING OUT EXISTING CIRCUITS, FIELD VERIFY SOURCE, AND PROVIDE NEW TYPED PANEL SCHEDULES INDICATING NEW AND EXISTING CIRCUITS.

Mark B. Thompson Associates
Architecture
502 South 24th Street
Philadelphia, PA 19146
215.985.1000 www.mbtarchitects.com

Keast & Hood Company of New York, PC
Structural Engineering
400 Market Street, Suite 1250
Philadelphia, PA 19106
215.625.0099 www.keasthood.com

Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

It is a violation of New York State Law for any person, unless he is acting under the direction of a licensed Professional Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Engineer or Land Surveyor is altered, the altering Engineer or Land Surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid and Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

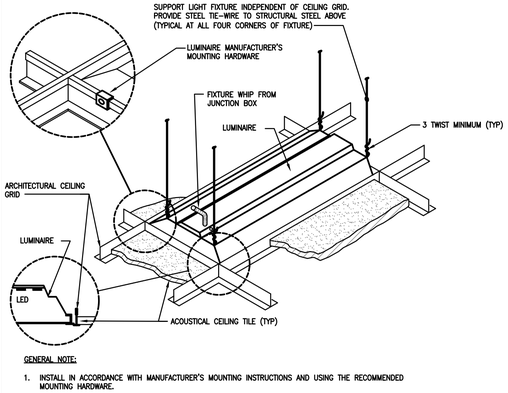
EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300 (DJVI #2115)
Date: July 6, 2022

Drawing Title:
Panel Schedules

E701

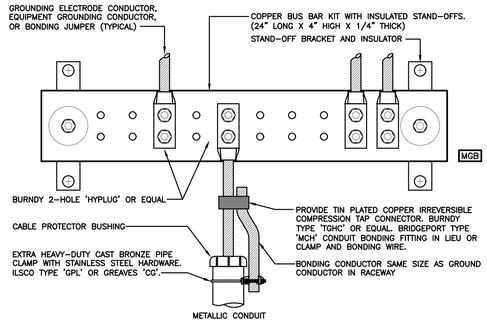


GENERAL NOTE:

1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S MOUNTING INSTRUCTIONS AND USING THE RECOMMENDED MOUNTING HARDWARE.

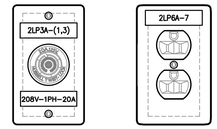
LAY-IN LIGHT FIXTURE MOUNTING DETAIL

SCALE: NONE



MAIN GROUNDING ELECTRODE CONDUCTOR 'MGB' BUS BAR DETAIL

SCALE: NONE

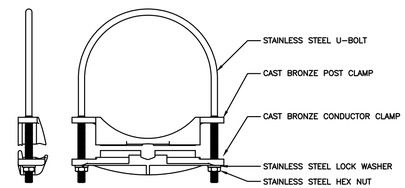


NON-STANDARD DEVICES NEMA 5-20R DEVICE

1. THE LABELS SHALL BE PLACED ON THE OUTSIDE OF THE RESPECTIVE DEVICE'S FACE PLATE.
2. THE LABELS SHALL BE 1/4" HIGH PRESSURE SENSITIVE INDUSTRIAL TAPE WITH ADHESIVE BACKING AND HELVETICA LETTERING. THE LETTERING SHALL BE APPLIED WITH A BROTHER HIGH PERFORMANCE LABELING MACHINE OR APPROVED EQUAL.
3. THE LABEL COLOR WILL BE DETERMINED BY OWNER.
4. THE LABEL SHALL INDICATE THE DEVICE'S CIRCUIT NUMBER. IN ADDITION, ALL DEVICES OTHER THAN NEMA 5-20R RECEPTACLES SHALL INDICATE THE DEVICE'S VOLTAGE, PHASE, AND AMPERAGE.

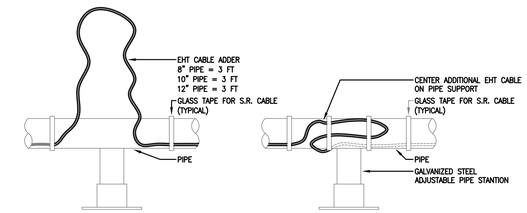
DEVICE IDENTIFICATION DETAIL

SCALE: NONE



ILSCO GPL SERIES GROUNDING CLAMP

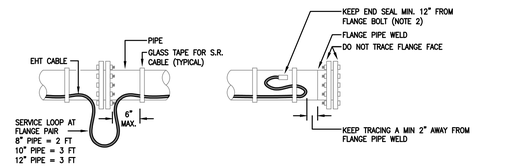
SCALE: NONE



TYPICAL PIPE SUPPORT ELECTRIC HEAT TRACE INSTALLATION

N.T.S.

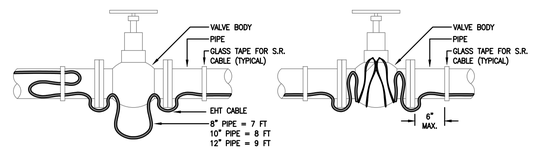
NOTES:
1. THE DETAIL SHOWS THE GENERAL INSTALLATION METHOD.
2. FOR THE MINIMUM BEND RADIUS OF S.R. CABLE. REFER TO MANUFACTURERS INSTRUCTIONS.



ELECTRIC HEAT TRACING AT PIPE FLANGE

N.T.S.

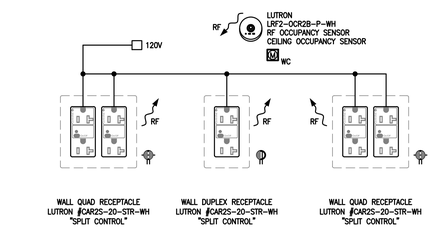
NOTES:
1. THE DETAIL BELOW SHOWS THE GENERAL INSTALLATION METHOD.
2. FOR THE MINIMUM BEND RADIUS OF S.R. AND M.I. CABLE. REFER TO MANUFACTURERS INSTRUCTIONS.



ELECTRIC HEAT TRACING AT VALVE INSTALLATION

N.T.S.

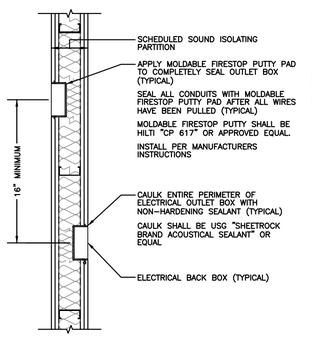
NOTES:
1. THE DETAIL SHOWS THE GENERAL INSTALLATION METHOD. THE ELECTRIC HEAT TRACING CABLE INSTALLATION WILL LOOK DIFFERENT FOR DIFFERENT VALVE SHAPES AND ELECTRIC HEAT TRACING CABLE LENGTHS.
2. FOR THE MINIMUM BEND RADIUS OF S.R. CABLE, REFER TO MANUFACTURERS INSTRUCTIONS.
3. FOR PIPES WITH MORE THAN ONE PASS OF ELECTRIC HEAT TRACING CABLE, APPLY THE FULL VALVE ADDER FOR EACH PASS OF ELECTRIC HEAT TRACING CABLE ON EACH VALVE.
   EXAMPLE: A 10" NPS PIPE THAT HAS TWO PASSES OF ELECTRIC HEAT TRACING CABLE WOULD REQUIRE 8' (2.4M) PER PASS OF ELECTRIC HEAT TRACING CABLE ON EACH 150# VALVE.
4. FOR SOME APPLICATIONS IT MAY BE PHYSICALLY IMPOSSIBLE TO INSTALL ALL THE RECOMMENDED ELECTRIC HEAT TRACING CABLE ON THE VALVE BODY. IN THIS CASE, USE UP THE REMAINING ELECTRIC HEAT TRACING CABLE ON THE PIPE TO EITHER SIDE OF THE VALVE.

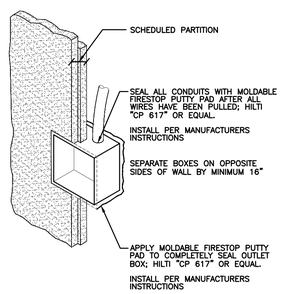


TYPICAL WIRELESS "CONTROLLED" RECEPTACLE DIAGRAM

SCALE: NONE

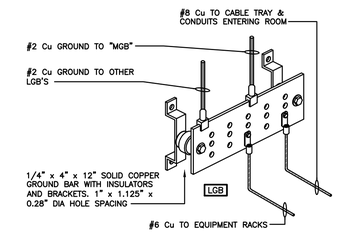
NOTE: OCCUPANCY/VACANCY SENSOR CAN BE COMBINED WITH LIGHTING CONTROLS, OTHERWISE PROVIDE DEDICATED "RECEPTACLE" SENSOR.





RECESSED BOX SOUND ISOLATION DETAILS

SCALE: NONE



LV GROUNDING CONNECTION BAR "LGB" DETAIL

N.T.S.

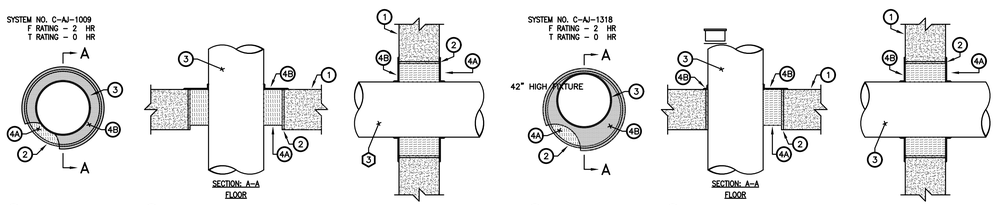
NOTE: PROVIDE INSULATED HALO BRACKETS TO SECURE THE CABLE.

HEAT TRACE FOR FREEZE PROTECTION SPECIFICATIONS

1. FURNISH AND INSTALL HEAT TRACE ON ALL NEW EXTERIOR PIPING. REVIEW MECHANICAL DRAWINGS FOR EXTENT AND LOCATION OF PIPING. PIPING IF SHOWN ON ELECTRICAL DRAWINGS IS FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY CABLE WATTAGE WITH MANUFACTURER AND SUBMIT CALCULATIONS TO ENGINEER FOR REVIEW.
2. PRODUCT SUBMITTAL DATA: HEATING CABLE DATA SHEET, FREEZE PROTECTION DESIGN GUIDE, SYSTEM INSTALLATION AND OPERATION MANUAL, SYSTEM INSTALLATION DETAILS, CONNECTION KITS AND ACCESSORIES DATA SHEET, CONTROLLER DATA SHEET, CONTROLLER WIRING DIAGRAM.
3. DELEGATED-DESIGN SUBMITTAL: DESIGN OF THE HEAT TRACING SYSTEM SHALL BE DELEGATED TO THE CONTRACTOR AND ALL COSTS INCLUDED IN THEIR BID PROPOSAL. CONTRACTOR SHALL ENGAGE MANUFACTURER TO DESIGN COMPLETE AND FUNCTIONAL HEAT-TRACING SYSTEM AS REQUIRED BY PROJECT DOCUMENTS.
4. WARRANTY PERIOD: TEN YEARS FROM DATE OF SUBSTANTIAL COMPLETION.
5. SYSTEM DESCRIPTION: COMPLETE PIPE FREEZE PROTECTION SYSTEM FOR PIPING EXPOSED TO THE RISK OF FREEZING. SYSTEM CONSISTS OF A SELF-REGULATING HEATING CABLE, CONNECTION KITS, ACCESSORIES, AND ENERGY-EFFICIENT CONTROL AND THERMOSTAT.
6. BASIS-OF-DESIGN PRODUCT: PROVIDE RAYCHEM "XL2-CR" TRACE PIPE FREEZE/FLOW MAINTENANCE, FOR ALL PIPING REQUIRING FREEZE PROTECTION. VOLTAGE: 120 / WATTAGE: DETERMINED BY MANUFACTURER. COMPLY WITH UL 515A, CSA 22.2 NO 130-03, AND IEEE 515.1 REQUIREMENTS.
7. HEATING ELEMENT: PAIR OF PARALLEL NO. 16 AWG, NICKEL-COATED, STRANDED COPPER BUS WIRES EMBEDDED IN CROSSLINKED CONDUCTIVE POLYMER CORE, WHICH VARIES HEAT OUTPUT IN RESPONSE TO TEMPERATURE ALONG ITS LENGTH. TERMINATE WITH WATERPROOF, FACTORY-ASSEMBLED, NONHEATING LEADS WITH CONNECTORS AT ONE END, AND SEAL THE OPPOSITE END WITH A WATERTIGHT END SEAL. CABLE SHALL BE CAPABLE OF CROSSING OVER ITSELF WITHOUT OVERHEATING.
8. OUTER JACKET: FLUOROPOLYMER / ELECTRICAL INSULATING JACKET: FLAME-RETARDANT MODIFIED POLYOLEFIN / GROUND BRAID: TINNED-COPPER BRAID. MINIMUM 70 PERCENT FOR GROUND PATH AND MECHANICAL RUGGEDNESS / OUTER JACKET: REQUIRED FOR ALL APPLICATIONS: FOR ABOVE GROUND FREEZE PROTECTION OF WATER LINES WHERE FUEL OIL OR AQUEOUS CHEMICALS ARE NOT PRESENT, USE A MODIFIED POLYOLEFIN WITH ULTRAVIOLET INHIBITOR.
9. MAXIMUM OPERATING TEMPERATURE (POWER ON): 150 DEG F (65 DEG C) / MAXIMUM EXPOSURE TEMPERATURE (POWER OFF): 150 DEG F (65 DEG C).
10. TEMPERATURE CONTROLLER/SENSORS: PROVIDE MECHANICAL THERMOSTATS RATED 240V., 22A.
11. HEATING CABLE CONNECTION KITS: PROVIDE LIGHTED POWER CONNECTION KITS, SPLICES/TEES, AND LIGHTED END SEAL KITS TO PROPERLY CONNECT AND TERMINATE HEATING CABLE CIRCUIT ALONG SPECIFIED LENGTH OF PIPING. INSTALL SPLICES, TEES, AND CROSSES UNDERNEATH PIPE INSULATION WITH SERVICE LOOPS INSTALLED TO ALLOW FOR FUTURE SERVICE OF PIPING. CONNECTION KITS SHALL BE RATED NEMA 4X TO PREVENT WATER INGRESS AND CORROSION. ALL COMPONENTS SHALL BE UV STABILIZED AND SHALL NOT REQUIRE CUTTING INTO HEATING-CABLE CORE TO EXPOSE BUS WIRES.
12. ACCESSORIES: BINDING TAPE, ALUMINUM TAPE, STAINLESS STEEL PIPE STRAPS, AND INDICATING STRIP PIPE LABEL: ETL
13. SYSTEM APPROVAL: COMPLETE HEAT TRACE SYSTEM (HEATING CABLE, CONNECTION KITS, AND CONTROLLER) SHALL BE LISTED BY A NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL), AND MARKED FOR INTENDED FREEZE PROTECTION OF MECHANICAL PIPING.
14. EXAMINATION: EXAMINE SURFACES AND SUBSTRATES TO RECEIVE ELECTRIC HEATING CABLES FOR COMPLIANCE WITH REQUIREMENTS FOR INSTALLATION TOLERANCES AND OTHER CONDITIONS AFFECTING PERFORMANCE.
15. PREPARATION: PROTECT ALL HEATING CABLE ENDS FROM MOISTURE INGRESS UNTIL CABLE IS TERMINATED WITH END SEALS.
16. INSTALLATION: INSTALL ELECTRIC HEATING CABLE WHERE INDICATED AND IN ACCORDANCE WITH NFPA 70. INSTALL ELECTRIC HEATING CABLES IN ACCORDANCE WITH IEEE 515.1. INSTALL WARNING TAPE ON PIPING INSULATION WHERE PIPING IS EQUIPPED WITH ELECTRIC HEATING CABLES.
17. MANUFACTURER'S FIELD SERVICE: INITIAL START-UP AND FIELD TESTING (COMMISSIONING) OF SYSTEM SHALL BE PERFORMED BY FACTORY TECHNICIAN IN ACCORDANCE WITH OWNER'S REQUIREMENTS.
18. CONTRACTOR TO PERFORM TESTS AND INSPECTIONS DURING INSTALLATION IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

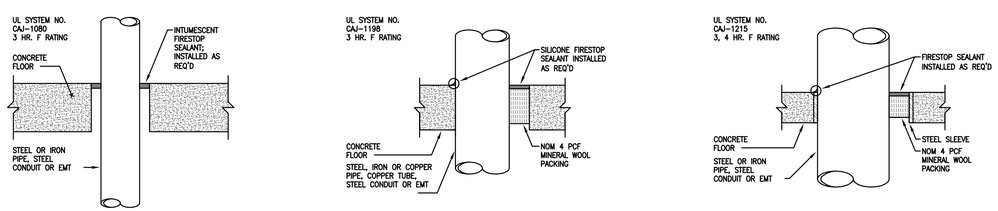
GENERAL FIRESTOPPING NOTES

1. CONTRACTOR SHALL FIRE STOP AND SEAL ALL EXISTING OPENINGS AND ALL NEW OPENINGS RESULTING FROM THE ELECTRICAL WORK. INDIVIDUAL ROOMS/AREAS SHALL BE SEALED AIR-TIGHT FOR BALANCING THE HVAC AIR DISTRIBUTION SYSTEM.
2. CLEAN SUBSTRATE SURFACES OF DIRT, DUST, GREASE, OIL, LOOSE MATERIAL, OR OTHER MATTER AFFECTING BOND OF FIRESTOPPING MATERIAL. REMOVE INCOMPATIBLE MATERIALS AFFECTING BOND. PROVIDE BACKING MATERIALS TO ARREST LIQUID MATERIAL LEAKAGE.
3. PROVIDE MATERIAL AT FIRE RATED CONSTRUCTION PERIMETERS/OPENINGS AND AT LOCATIONS CONTAINING PENETRATING SLEEVES, PIPING, DUCTWORK, CONDUIT AND OTHER ITEMS. APPLY PRIMER WHERE RECOMMENDED BY MANUFACTURER FOR TYPE OF FIRESTOPPING MATERIAL AND SUBSTRATE INVOLVED, AND AS REQUIRED FOR COMPLIANCE WITH REQUIRED FIRE RATINGS.
4. APPLY FIRESTOPPING MATERIAL IN SUFFICIENT THICKNESS TO ACHIEVE REQUIRED FIRE AND SMOKE RATING. COMPRESS FIBERED MATERIAL TO MAXIMUM 40 PERCENT OF ITS UNCOMPRESSED SIZE. PLACE FOAMED MATERIAL IN LAYERS TO ENSURE HOMOGENOUS DENSITY, FILLING CAVITIES AND SPACES. PLACE SEALANT TO COMPLETELY SEAL JUNCTIONS WITH ADJACENT DISSIMILAR MATERIALS. PLACE INTUMESCENT COATING IN SUFFICIENT COATS TO ACHIEVE RATING REQUIRED.



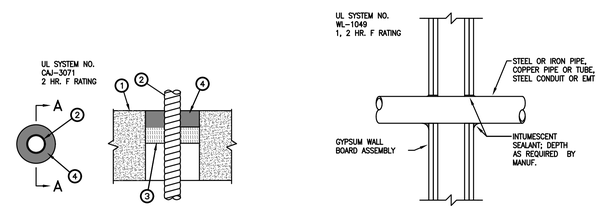
1. FLOOR OR WALL ASSEMBLY
2. METALLIC SLEEVE
3. METALLIC CONDUIT/EMT
4. FIRESTOP SYSTEM

4A. PACKING MATERIAL
4B. FILL, VOID OR CAVITY MATERIAL – SEALANT



MASONRY FLOOR OR WALL PENETRATION FIRE-STOP ASSEMBLY DETAILS FOR CONDUIT, EMT, & CABLE

N.T.S. (CONTRACTOR SHALL REFERENCE AND COMPLY WITH APPLICABLE DETAILS FOUND AT "HTTP://PRODUCTSPEC.UL.COM/INDEX.PHP?TYPE=FIRESTOP")



1. FLOOR OR WALL ASSEMBLY
2. METAL CLAD CABLE
3. PACKING MATERIAL – MINERAL WOOL BATT
4. FIRE STOP SEALANT

1. WALL ASSEMBLY
1A. WALL STUDS
1B. 5/8 GYPSUM – 48" WIDE
1C. FASTENERS
2. FLEXIBLE METAL CONDUIT OR METAL CLAD CABLE
3. FIRE STOP SEALANT

GYPSUM BOARD PENETRATION FIRE-STOP ASSEMBLY DETAILS FOR CONDUIT, EMT, & CABLE

N.T.S. (CONTRACTOR SHALL REFERENCE AND COMPLY WITH APPLICABLE DETAILS FOUND AT "HTTP://PRODUCTSPEC.UL.COM/INDEX.PHP?TYPE=FIRESTOP")

Mark B. Thompson Associates
Architecture
502 South 24th Street
Philadelphia, PA 19146
215.985.1000 www.mbtarchitects.com

Keast & Hood Company of New York, PC
Structural Engineering
400 Market Street, Suite 1250
Philadelphia, PA 19106
215.625.0099 www.keasthood.com

Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

It is a violation of New York State Law for any person, unless he is acting under the direction of a licensed Professional Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Engineer or Land Surveyor is altered, the altering Engineer or Land Surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid and Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300 (DJVI #2115)
Date: July 6, 2022

Drawing Title:
Electrical Details

E800

LIGHTING CONTROL FUNCTIONALITY

A. GENERALLY, THE LIGHTING CONTROL FUNCTIONALITY FOR THE PROJECT ENVISIONS THE FOLLOWING TYPES OF EVENTS:
- IN INTERMITTENTLY OCCUPIED SPACES, LIGHTING FIXTURE OUTPUT SHOULD BE RESPONSIVE TO CHANGES IN OCCUPANCY STATE.
- LIGHTING FIXTURE OUTPUT SHOULD MODULATE IN RESPONSE TO DIMMING COMMANDS.
- LIGHTING FIXTURE OUTPUT SHOULD MODULATE IN RESPONSE TO AMBIENT LIGHT LEVELS.
- LIGHTING FIXTURE OUTPUT SHOULD BE MODIFIABLE BY OCCUPANTS USING LOCAL CONTROL AND PRESET SCENES.
- EMERGENCY EGRESS LIGHTING OVER-RIDE TO FULL "ON".
- COLOR TUNING

B. MANUFACTURER: LUTRON (BASIS OF DESIGN) OR PRE-APPROVED EQUAL. REFERENCE THE GENERAL WIRING DIAGRAMS. THE SPECIFIED SEQUENCES ARE THE MINIMUM FUNCTIONALITY TO BE PROVIDED AND MAY NOT FULLY REPRESENT WHAT IS REQUIRED FOR A COMPLETE FUNCTIONAL SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE QUANTITIES AND TYPES OF DEVICES REQUIRED TO MEET THE FUNCTIONALITY AND SEQUENCES.

C. SPACE SPECIFIC FUNCTIONALITY: THE FOLLOWING DESCRIPTIONS PROVIDE THE MINIMUM FUNCTIONALITY FOR SPECIFIC SPACE TYPES TO THE VARIOUS CONTROL OPTIONS DESCRIBED ABOVE.

1. BREAK & LUNCH ROOMS

a. OCCUPANCY SENSOR ON/OFF CONTROL ONLY.
c. EMERGENCY LIGHTING "AUTO-ON" THROUGH UL924 RELAY.
d. SELECT LIGHT FIXTURES TO BE PROVIDED WITH INTERNAL EMERGENCY BATTERY PACKS.

2. RECORDING STUDIO

a. TO BE DETERMINED

3. CONCERT BAND ROOM, GLEE CLUB, GLEE CLUB SECTIONALS, & CADET SPIRIT BAND

a. LIGHT FIXTURES SHALL BE GROUPED INTO ZONES RELATIVE TO THEIR FUNCTION, AMBIENT LIGHT, ACCENT LIGHT, AND TASK LIGHT AS SHOWN ON THE PLANS, SCHEDULES, AND DIAGRAMS.
b. PRESET SCENES SHALL INCLUDE "TUNABLE WHITE" CONTROL FOR VARIOUS SPACE FUNCTIONS.
c. LOCAL SCENE CONTROLLERS WITH RAISE/LOWER FUNCTIONALITY SHALL BE PROVIDED.
d. THE ZONES SHALL BE WIRED BACK TO "ROOM CONTROLLERS" LOCATED IN B.O.H. FOR SETTING INITIAL HI/LOW TRIM ILLUMINATION LEVELS AND PRESET SCENES.
e. PRESET SCENES AS SELECTED BY OWNER.
f. DAYLIGHT HARVESTING: ROOMS WITH DIRECT OR INDIRECT DAYLIGHT SHALL INCORPORATE CONTINUOUS DIMMING DAYLIGHT HARVESTING WHERE DAYLIGHT ZONE IS GREATER THAN 150W UNLESS OTHERWISE INDICATED.
g. EMERGENCY LIGHTING (INVERTER CONNECTED FIXTURES): UPON LOSS OF POWER TO THE LED DRIVER COMMUNICATION LOOP, FIXTURES CONNECTED TO NORMAL/EMERGENCY INVERTER BRANCH CIRCUITS SHALL RAMP UP TO 100% POWER (FULL ILLUMINATION).
h. OCCUPANCY SENSOR: REQUIRED TO ACTIVATE PRESET SCENES.
i. TUNABLE WHITE: PRESET SCENES SHALL BE PROVIDED FOR VARIOUS COLOR TEMPERATURES AND BE USER ADJUSTABLE THROUGH THE TOUCH SCREEN WALL CONTROLLER.
j. AN RS232 INTERFACE SHALL BE PROVIDED FOR INTEGRATION TO THE AUDIO/VISUAL SYSTEMS.

4. SMALL ROOMS AND OFFICES

a. VACANCY SENSOR "AUTO-OFF", MANUAL "ON/OFF/DIM".
b. LOCAL DIMMER SWITCHES FOR NUMBER OF ZONES INDICATED.
c. SELECT LIGHT FIXTURES TO BE PROVIDED WITH INTERNAL EMERGENCY BATTERY PACKS.
d. LIGHT LEVELS ADJUSTED BY LOCAL USERS.

5. ELEVATOR LOBBY AND CORRIDORS

a. PASSAGE OF EGRESS AREA GENERAL LIGHTING TO BE CONTROLLED WITH LOCAL MANUAL "ON/OFF" SWITCHES.
b. SELECT FIXTURES WILL BE PROVIDED WITH INTERNAL BATTERY PACKS OR CONNECTED TO INVERTER AS SHOWN.
c. THE SELECT EMERGENCY FIXTURES WILL BE "UNSWITCHED" NIGHT-LIGHTS ON 24/7.

6. MECHANICAL & ELECTRICAL ROOMS

a. MANUAL "ON/OFF" CONTROL ONLY, NO VACANCY OR OCCUPANCY SENSORS.
b. EMERGENCY LIGHTING "AUTO-ON" THROUGH UL924 RELAY OR INTERNAL BATTERY PACKS.

7. COMMON & PRIVATE NON-GENDER BATHROOMS/PODS

a. OCCUPANCY SENSOR "ON" WITH TIMED "OFF" CONTROL ONLY.
b. NO LOCAL MANUAL CONTROL.

8. EXIT STAIRS

a. ALL EXIT STAIR LIGHTING FIXTURES TO INCLUDE INTERNAL EMERGENCY BATTERY PACKS. AT NO TIME WILL THE STAIRS BE WITHOUT ILLUMINATION, REGARDLESS OF OCCUPANCY.
b. LIGHT FIXTURES TO BE UNSWITCHED ON 24/7.

9. STORAGE AND SHOP ROOMS

a. VACANCY SENSOR "AUTO-OFF", MANUAL "ON/OFF".
b. LOW VOLTAGE MOMENTARY "ON" SWITCH WHERE SHOWN.
c. SELECT LIGHT FIXTURES TO BE PROVIDED WITH INTERNAL EMERGENCY BATTERY PACKS.

10. EXTERIOR SITE AND EGRESS LIGHTING

a. PHOTOCELL CONTROL FOR EGRESS WALL PACKS AND EGRESS CANOPY FIXTURES.
b. EGRESS WALL PACKS TO HAVE COLD WEATHER BATTERY PACTS.

OCCUPANCY-VACANCY SENSOR GENERAL NOTES

1. MANUFACTURERS: LUTRON WIRED AND WIRELESS
2. PROVIDE NEW OCCUPANCY & VACANCY SENSORS AS SHOWN TIED INTO EXISTING AND NEW LIGHT FIXTURE BRANCH CIRCUITS. PROVIDE ASSOCIATED POWER PACKS AND CONTROL WIRING. PROVIDE ADDITIONAL POWER PACKS WHERE MORE THAN 3 SENSORS CONTROL ONE ZONE OF LIGHTING (MAX 3 SENSORS PER POWER PACK)
3. PROVIDE SLAVE RELAYS WHERE REQUIRED TO CONTROL EXHAUST FANS AND TASK LIGHTING. SLAVE RELAYS SHALL BE WIRED IN PARALLEL WHERE MULTIPLE TOILET ROOM ZONES CONTROLS ONLY ONE REMOTE EXHAUST FAN.
4. THE DESK SHOULD BE WITHIN THE MINOR MOTION COVERAGE AREA OF A SENSOR (TURNING A PAGE IN A BOOK IS AN EXAMPLE OF MINOR MOTION).
5. THE DOOR SHOULD BE IN CLEAR VIEW OF A SENSOR.
6. FOR IN-WALL OR WALL-MOUNTED SENSORS, VERIFY THAT TALL FURNITURE SUCH AS A BOOKCASE WILL NOT OBSTRUCT THE VIEW OF THE ROOM.
7. VERIFY THAT ANY IN-WALL OR WALL-MOUNTED SENSOR'S VIEW OF THE ROOM ISN'T BLOCKED BY THE DOOR WHEN IT'S OPEN.
8. VERIFY THAT THE CEILING SENSOR'S VIEW OF THE ENTRANCE WON'T BE BLOCKED BY THE DOOR WHEN IT'S OPEN
9. DO NOT MOUNT SENSORS CLOSE TO AIR VENTS, AS THE VIBRATION AND AIR FLOW CAN REDUCE THE EFFECTIVENESS OF THE SENSOR (PIR SENSORS SHOULD NOT BE WITHIN 4FT OF AN AIR VENT, AND ULTRASONIC SENSORS SHOULD NOT BE WITHIN 6FT OF AN AIR VENT).
10. AVOID HAVING THE SENSOR LOOKING OUT THE DOOR OF THE SPACE. CEILING MOUNTED SENSORS SHALL BE MOUNTED CLOSE TO THE WALL WITH THE DOOR ON IT. FOR WALL-MOUNTED SENSORS, MOUNT THE SENSOR ON THE WALL WITH THE DOOR.
11. THE OCCUPANT SENSOR MUST HAVE AN UNOBSTRUCTED VIEW OF THE ROOM. DO NOT MOUNT BEHIND OR NEAR TALL CABINETS, SHELVES, HANGING FIXTURES, ETC.
12. WHEN INSTALLING A 180° OCCUPANT SENSOR, PLACE THE SENSOR ON THE SAME WALL AS THE DOORWAY SO THAT HALLWAY TRAFFIC WILL NOT AFFECT THE SENSOR; OTHERWISE, PLACE IN CENTER OF ROOM.
13. REFERENCE THE GENERAL WIRING DIAGRAMS. THE CONTROL SYSTEM DRAWINGS ARE TO BE USED AS A GUIDE ONLY AND ARE BASED ON A GENERAL SYSTEM TO SHOW FUNCTIONALITY AND INTERCONNECTION OF COMPONENTS AND MAY NOT FULLY REPRESENT WHAT IS REQUIRED FOR A COMPLETE FUNCTIONAL SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE QUANTITIES AND TYPES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION AND LOAD TYPE.

LIGHTING CONTROL GENERAL REQUIREMENTS

1. THE LIGHTING CONTROL SYSTEM DEVICES SHOWN ON THE DRAWINGS ARE TO BE USED AS A GUIDE ONLY AND ARE BASED ON A GENERAL SYSTEM TO SHOW FUNCTIONALITY AND INTERCONNECTION OF COMPONENTS AND MAY NOT FULLY REPRESENT WHAT IS REQUIRED FOR A COMPLETE FUNCTIONAL SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE QUANTITIES AND TYPES OF DEVICES REQUIRED TO MEET THE FUNCTIONALITY AND SEQUENCES.

2. MANUFACTURER
A. LUTRON (BASIS OF DESIGN) OR PRE-APPROVED EQUAL. THE SPECIFIED SEQUENCES ARE THE MINIMUM FUNCTIONALITY TO BE PROVIDED AND MAY NOT FULLY REPRESENT WHAT IS REQUIRED FOR A COMPLETE FUNCTIONAL SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE QUANTITIES AND TYPES OF DEVICES REQUIRED TO MEET THE FUNCTIONALITY AND SEQUENCE. BY USING ALTERNATE MANUFACTURERS, CONTRACTOR ACCEPTS RESPONSIBILITY AND ASSOCIATED COSTS FOR ALL REQUIRED MODIFICATIONS TO RELATED EQUIPMENT AND WIRING. PROVIDE COMPLETE ENGINEERED SHOP DRAWINGS WITH DEVIATIONS FROM THE ORIGINAL DESIGN HIGHLIGHTED IN AN ALTERNATE COLOR FOR REVIEW AND APPROVAL BY THE DESIGN PROFESSIONAL.

3. SENSOR PLACEMENT
A. MANUFACTURER TO ANALYZE THE REFLECTED CEILING PLANS AND DESIGN A DETAILED SENSOR LAYOUT THAT PROVIDES ADEQUATE OCCUPANCY SENSOR COVERAGE AND ENSURES OCCUPANCY AND DAYLIGHT SENSOR PERFORMANCE PER SEQUENCE OF OPERATIONS.

4. START-UP SERVICES
A. PROVIDE MANUFACTURER START-UP SERVICES, INCLUDING AFTER HOURS ADJUSTMENT OF LIGHTING LEVELS.
B. CONTRACTOR AND/OR CONTROL MANUFACTURER'S CERTIFIED TECHNICIANS TO PROVIDE LABOR AND MATERIALS AS REQUIRED TO INSPECT, START-UP, COMMISSION AND PROGRAM THE NEW CONTROL SYSTEMS IN ORDER TO PROVIDE A COMPLETE, FULLY-FUNCTIONING LIGHTING SYSTEM.
C. REFERENCE START-UP SCHEDULE ON DIAGRAM DRAWINGS FOR ADDITIONAL REQUIREMENTS.

5. COORDINATION
A. COORDINATE THE PLACEMENT OF SENSORS AND WALL CONTROLS WITH MILLWORK, FURNITURE, EQUIPMENT, ETC. INSTALLED UNDER OTHER SECTIONS OR BY OTHERS. COORDINATE THE PLACEMENT OF WALL CONTROLS WITH ACTUAL INSTALLED DOOR SWINGS.
B. COORDINATE THE PLACEMENT OF DAYLIGHT SENSORS WITH WINDOWS, SKYLIGHTS, AND LUMINAIRES TO ACHIEVE OPTIMUM OPERATION.
C. COORDINATE PLACEMENT WITH DUCTWORK, PIPING, EQUIPMENT, OR OTHER POTENTIAL OBSTRUCTIONS TO LIGHT LEVEL MEASUREMENT INSTALLED UNDER OTHER SECTIONS OR BY OTHERS.
D. COORDINATE THE WORK TO PROVIDE LUMINAIRES AND LAMPS COMPATIBLE WITH THE LIGHTING CONTROLS TO BE INSTALLED.
E. NOTIFY THE DESIGN PROFESSIONAL OF ANY CONFLICTS OR DEVIATIONS FROM THE CONTRACT DOCUMENTS TO OBTAIN DIRECTION PRIOR TO PROCEEDING WITH WORK.
F. FINISHES AND ENGRAVING SCHEDULE TO BE COORDINATED WITH DESIGN PROFESSIONAL PRIOR TO RELEASE OF ORDER.
G. ELECTRICAL CONTRACTOR TO PROVIDE ALL NECESSARY MOUNTING HARDWARE AND EQUIPMENT FOR COMPLETE AND CODE COMPLIANT INSTALLATION.
H. ELECTRICAL CONTRACTOR SHALL PROVIDE WIRE TYPES, INTER-CONNECTIONS AND DEVICES PER MANUFACTURER'S RECOMMENDATIONS FOR FULLY OPERATIONAL LIGHTING CONTROL SYSTEMS.
I. PROVIDE ASSOCIATED POWER PACKS AND CONTROL WIRING. PROVIDE ADDITIONAL POWER PACKS WHERE MORE THAN 3 SENSORS CONTROL ONE ZONE OF LIGHTING (MAX 3 SENSORS PER POWER PACK). PROVIDE SLAVE RELAYS WHERE REQUIRED TO CONTROL EXHAUST FANS AND TASK LIGHTING. SLAVE RELAYS SHALL BE WIRED IN PARALLEL WHERE MULTIPLE TOILET ROOM ZONES CONTROLS ONLY ONE REMOTE EXHAUST FAN.
J. REFERENCE THE GENERAL WIRING DIAGRAMS. THE CONTROL SYSTEM DRAWINGS ARE TO BE USED AS A GUIDE ONLY AND ARE BASED ON A GENERAL SYSTEM TO SHOW FUNCTIONALITY AND INTERCONNECTION OF COMPONENTS AND MAY NOT FULLY REPRESENT WHAT IS REQUIRED FOR A COMPLETE FUNCTIONAL SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE QUANTITIES AND TYPES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION AND LOAD TYPE.

6. PRE-INSTALLATION MEETING
A. CONDUCT ON-SITE MEETING WITH LIGHTING CONTROL SYSTEM MANUFACTURER PRIOR TO COMMENCING WORK AS PART OF MANUFACTURER'S STANDARD STARTUP SERVICES. MANUFACTURER TO REVIEW WITH INSTALLER:
B. LOW VOLTAGE WIRING REQUIREMENTS.
C. SEPARATION OF POWER AND LOW VOLTAGE/DATA WIRING.
D. LIGHTING DEVICE LOCATIONS AND INSTALLATION.
E. CONNECTIONS TO OTHER EQUIPMENT.

7. PRODUCT DATA
A. INCLUDE RATINGS, CONFIGURATIONS, STANDARD WIRING DIAGRAMS, DIMENSIONS, COLORS, SERVICE CONDITION REQUIREMENTS, AND INSTALLED FEATURES.
B. OCCUPANCY/VACANCY SENSORS: INCLUDE DETAILED BASIC MOTION DETECTION COVERAGE RANGE DIAGRAMS.

8. SHOP DRAWINGS & SUBMITTALS
A. PROVIDE SYSTEM RISER DIAGRAM INDICATING COMPONENT INTERCONNECTIONS. INCLUDE REQUIREMENTS FOR INTERFACE WITH OTHER SYSTEMS.
B. PROVIDE DETAILED SEQUENCE OF OPERATIONS DESCRIBING SYSTEM FUNCTIONS.
C. SAMPLES: AVAILABLE COLOR AND FINISH SELECTIONS. PROVIDE SAMPLE(S) FOR EACH PRODUCT.
D. MANUFACTURER'S INSTALLATION INSTRUCTIONS: INCLUDE APPLICATION CONDITIONS AND LIMITATIONS OF USE STIPULATED BY PRODUCT TESTING AGENCY. INCLUDE INSTRUCTIONS FOR STORAGE, HANDLING, PROTECTION, EXAMINATION, PREPARATION, AND INSTALLATION OF PRODUCT.
E. MANUFACTURER TO PROVIDE PLANS INDICATING OCCUPANCY/VACANCY AND/OR DAYLIGHT SENSOR LOCATIONS.
F. ELECTRICAL CONTRACTOR TO PROVIDE WITH THEIR SUBMITTAL: DATA SHEETS FOR ALL SYSTEM COMPONENTS WITH CATALOG NUMBERS ANNOTATED, SINGLE-LINE DIAGRAM, SEQUENCE OF OPERATIONS, AND A COMPLETE BILL OF MATERIALS FOR REVIEW BY DESIGN PROFESSIONAL PRIOR TO RELEASE OF ORDER.

9. PROJECT RECORD DOCUMENTS
A. RECORD ACTUAL INSTALLED LOCATIONS AND SETTINGS FOR LIGHTING CONTROL SYSTEM COMPONENTS.
B. OPERATION AND MAINTENANCE DATA: INCLUDE DETAILED INFORMATION ON LIGHTING CONTROL SYSTEM OPERATION, EQUIPMENT PROGRAMMING AND SETUP, REPLACEMENT PARTS, AND RECOMMENDED MAINTENANCE PROCEDURES AND INTERVALS.
C. WARRANTY: SUBMIT SAMPLE OF MANUFACTURER'S WARRANTY

10. COMMISSIONING & FUNCTIONAL TESTING
A. UPON COMPLETION OF INSTALLATION BY THE CONTRACTOR, INCLUDING COMPLETION OF ALL REQUIRED VERIFICATION AND DOCUMENTATION REQUIRED BY THE MANUFACTURER, THE SYSTEM SHALL BE STARTED UP AND PROGRAMMED BY AN AUTHORIZED REPRESENTATIVE OF THE MANUFACTURER.
B. LIGHTING CONTROL DEVICES AND CONTROL SYSTEMS SHALL BE TESTED TO ENSURE THAT CONTROL HARDWARE AND SOFTWARE ARE CALIBRATED, ADJUSTED, PROGRAMMED, AND IN PROPER WORKING CONDITION IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND MANUFACTURER'S INSTALLATION INSTRUCTIONS. WHEN OCCUPANT SENSORS, TIME SWITCHES, PROGRAMMABLE SCHEDULE CONTROLS, OR PHOTOSENSORS ARE INSTALLED, AT A MINIMUM, THE PROCEDURES OUTLINED IN ASHRAE 90.1 "FUNCTIONAL TESTING" SHALL BE PERFORMED. THE INDIVIDUALS RESPONSIBLE FOR THE FUNCTIONAL TESTING SHALL NOT BE DIRECTLY INVOLVED IN EITHER THE DESIGN OR CONSTRUCTION OF THE PROJECT AND SHALL PROVIDE DOCUMENTATION CERTIFYING THAT THE INSTALLED LIGHTING CONTROLS MEET OR EXCEED ALL DOCUMENTED PERFORMANCE CRITERIA.
C. LOW VOLTAGE NETWORK CABLE TESTING SHALL BE PERFORMED PRIOR TO SYSTEM STARTUP.
D. SYSTEM START-UP AND PROGRAMMING SHALL INCLUDE:
- VERIFYING OPERATIONAL COMMUNICATION TO ALL SYSTEM DEVICES.
- PROGRAMMING DEVICES INTO FUNCTIONAL CONTROL ZONES TO MEET THE REQUIRED SEQUENCE OF OPERATION.
- PROGRAMMING AND VERIFYING ALL SEQUENCE OF OPERATIONS.
- VERIFY INTEGRATION AND FUNCTIONALITY WITH THE BAS.
- INITIAL START-UP AND PROGRAMMING IS TO OCCUR ON-SITE.

E. UPON SUCCESSFUL COMPLETION OF STEPS ABOVE, PROVIDE OWNER A WRITTEN CERTIFICATION THAT THE SYSTEM HAS BEEN COMMISSIONED AND THAT IT IS FULLY OPERATIONAL.

LIGHTING FIXTURE GENERAL NOTES

1. FURNISH AND INSTALL A COMPLETE SYSTEM OF LIGHTING FIXTURES INSTALLED IN PLACE, INCLUDING LAMPS, WIRED AND CONNECTED AND LEFT IN A SATISFACTORY OPERATING CONDITION. AT TIME OF FINAL APPROVAL BY THE DESIGN PROFESSIONAL ALL FIXTURES SHALL BE CLEAN AND ANY BALLASTS, DRIVERS OR LED MODULES SHALL BE REPLACED AT NO ADDITIONAL CHARGE.
2. CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE AND FULLY WORKING LIGHTING SYSTEM WITH ALL NECESSARY COMPONENTS, ACCESSORIES, LED MODULES, DRIVERS, AND TRANSFORMERS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS TO MEET THE SPECIFICATIONS AND DESIGN INTENT HEREIN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE ALL NECESSARY EQUIPMENT, SPECIALTIES, AND APPURTENANCES ARE INCLUDED REGARDLESS OF THE PRODUCT SPECIFICATION.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING MOUNTING COMPATIBILITY AND PLENUM CLEARANCE OF ALL LIGHTING FIXTURES AND SHALL NOTIFY THE DESIGN PROFESSIONAL OF ANY CONFLICTS WITH STRUCTURE, HVAC OR PLUMBING PRIOR TO THE ORDERING OF THE EQUIPMENT IN QUESTION. ANY CONFLICT WILL BE VERIFIED IN FIELD WITH THE DESIGN PROFESSIONAL.
4. ALL LIGHTING FIXTURES, LAMPS AND RELATED DEVICES FURNISHED UNDER THIS CONTRACT SHALL CARRY THE APPROVAL LABEL OF UL OR ETL FOR THE SPECIFIC APPLICATION IN WHICH THEY ARE USED.
5. THE STATEMENT "FINISH TO BE SELECTED BY DESIGN PROFESSIONAL" SHALL BE INTERPRETED TO MEAN THAT THE FINISH OF THE LUMINAIRE SHALL MATCH THE APPEARANCE OF A PAINT CHIP, COLOR NUMBER, OR METAL SWATCH FURNISHED BY THE DESIGN PROFESSIONAL DURING THE SUBMITTAL REVIEW PROCESS.
6. WHITE L.E.D.'S SHALL MEET, AT A MINIMUM, CHROMATICITY STANDARDS SET BY ANSI/NEMA/ANSLG C79.377-2011. L.E.D. LUMEN MAINTENANCE SHALL BE MEASURED IN ACCORDANCE WITH IESNA LM-80 STANDARDS. PHOTOMETRIC TESTING FOR SOLID STATE LUMINAIRES SHALL BE IN ACCORDANCE WITH IESNA LM-79 STANDARDS.
7. CONTRACTOR SHALL CONFIRM FIXTURE VOLTAGES, CEILING TRIMS, AND MOUNTING HARDWARE ARE COMPATIBLE WITH THEIR APPLICATION AS DETERMINED BY THE DESIGN PROFESSIONAL PRIOR TO ORDERING FIXTURES.
8. CONTRACTOR SHALL SELECT, FURNISH AND INSTALL THE CORRECT SIZE OF SECONDARY WIRING FROM REMOTE TRANSFORMERS AND/OR REMOTE BALLASTS AS REQUIRED TO KEEP VOLTAGE DROP IN THE SECONDARY WIRING BELOW 3% OF RATED VOLTAGE.
9. CONTRACTOR SHALL PROVIDE LABOR AND EQUIPMENT FOR FOCUSING OF ADJUSTABLE FIXTURES AND PRESETTING OF LIGHTING CONTROL SYSTEMS. FOCUSING AND PRESETTING SHALL BE DONE IN THE PRESENCE OF THE DESIGN PROFESSIONAL. CONTRACTOR SHALL FOCUS LIGHTING AFTER DARK IF DIRECTED BY THE OWNER'S REPRESENTATIVE. UNLESS OTHERWISE NOTED, CONTRACTOR SHALL PROVIDE AT LEAST ONE DAY OF A FACTORY-TRAINED AND CERTIFIED TECHNICIAN TO PROVIDE WARRANTY START UP AND PROGRAMMING FOR ALL LIGHTING CONTROL SYSTEMS AND PROGRAMMABLE LIGHTING FIXTURES.
10. CONTRACTOR SHALL PROVIDE THE FOLLOWING WITH THEIR BID:

A. THE UNIT PRICE FOR EACH LIGHTING FIXTURE TYPE LISTED WITHIN THE LIGHTING FIXTURE SCHEDULE. THE UNIT PRICE SHALL BE FOR ONE OF THE LISTED MANUFACTURER'S FOR THAT PARTICULAR FIXTURE. THE MANUFACTURER SHALL BE IDENTIFIED. SUBSTITUTIONS FOR FIXTURES PROVIDED BY MANUFACTURERS NOT LISTED IN THE SCHEDULE ARE NOT ACCEPTABLE. SEE BELOW FOR REQUIREMENTS ASSOCIATED WITH SUBMITTING LIGHTING FIXTURE SUBSTITUTIONS.
B. THE TOTAL QUANTITY OF EACH FIXTURE TYPE WITH THE EXTENDED COST FOR THAT QUANTITY.

10. WITHIN 21 DAYS OF CONTRACT AWARD, THE CONTRACTOR SHALL FURNISH SUBMITTALS FOR ALL SPECIFIED LIGHTING FIXTURES FOR REVIEW BY THE DESIGN PROFESSIONAL. THE SUBMITTALS SHALL INCLUDE LUMINAIRE CATALOG CUTS, SUBMITTAL SHEETS, OR MANUFACTURERS SHOP DRAWINGS INDICATING THE FOLLOWING:

A. MANUFACTURER'S NAME AND COMPLETE CATALOG NUMBER
B. FIXTURE TYPE, DIMENSIONS AND FINISHES
C. FIXTURE PHOTOMETRIC TEST DATA FROM AN INDEPENDENT TEST LABORATORY
D. FIXTURE ACCESSORIES, COMPONENTS, AND HARDWARE WHEN SPECIFIED
E. LAMP TYPE, QUANTITY, WATTAGE, LUMEN OUTPUT, RATED LIFE, COLOR TEMPERATURE, COLOR RENDERING INDEX AND BEAM SPREAD AS APPLICABLE
F. BALLAST/DRIVER TYPE AND FIXTURE VOLTAGE

SUBMITTALS FOR LIGHTING FIXTURES MOUNTED WITHIN ARCHITECTURAL COVES OR CASEWORK, VARIABLE LENGTH FIXTURES, AND FOR NON-STANDARD, OR CUSTOM FIXTURES, SHALL ALSO INCLUDE SCALED DRAWINGS SHOWING THE LAYOUT AND DIMENSIONS OF ALL FIXTURE COMPONENTS AND ACCESSORIES, THE METHOD OF INSTALLATION, AND A COMPLETE BILL OF MATERIALS.

11. LIGHTING FIXTURE SUBSTITUTION REQUESTS MUST BE SENT TO AND RECEIVED BY THE DESIGN PROFESSIONAL FOR REVIEW 14 DAYS PRIOR TO BID DATE. FAILURE TO SUBMIT WITHIN THIS DEADLINE SHALL CONSTITUTE A GUARANTEE THAT THE SPECIFIED FIXTURES WILL BE SUPPLIED. THE SUBMITTAL SHALL INCLUDE THE FOLLOWING:

A. SIX HARD COPIES OF THE SUBMITTALS REQUIRED ABOVE FOR BOTH THE SPECIFIED FIXTURE AND THE PROPOSED SUBSTITUTION.
B. ONE NON-RETURNABLE WORKING SAMPLE OF THE PROPOSED SUBSTITUTE FIXTURE WITH CORD & PLUG CONNECTION FOR 120 VOLT OPERATION, AND SPECIFIED LAMP(S).
C. CONTRACTOR'S STATEMENT INDICATING THE EFFECT OF THE SUBSTITUTION ON THE CONSTRUCTION SCHEDULE COMPARED TO THE SCHEDULE WITHOUT THE APPROVAL OF THE PROPOSED SUBSTITUTION.
D. CONTRACTOR'S CERTIFICATION STATING THAT THE PROPOSED SUBSTITUTION CONFORMS TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS IN EVERY RESPECT AND IS APPROPRIATE FOR THE APPLICATIONS INDICATED IN THE DOCUMENTS.
E. CONTRACTOR'S CERTIFICATION STATING THAT ANY MODIFICATIONS TO ANY BUILDING SYSTEM OR EQUIPMENT THAT MAY RESULT FROM THE PROPOSED LIGHTING FIXTURE SUBSTITUTION WILL BE DESIGNED AND CONSTRUCTED AT THE CONTRACTOR'S EXPENSE.
F. CONTRACTOR'S WAIVER OF RIGHTS TO ADDITIONAL PAYMENT OR TIME THAT MAY BECOME NECESSARY SHOULD THE PROPOSED SUBSTITUTION FAIL TO PERFORM IN A MANNER THAT MATCHES THE SPECIFIED FIXTURE.
G. CONTRACTOR-NET UNIT PRICE FOR THE SPECIFIED FIXTURE AND FOR THE PROPOSED SUBSTITUTE FIXTURE.

THE DESIGN PROFESSIONAL SHALL BE REIMBURSED BY THE CONTRACTOR FOR ALL OF THE DESIGNER'S TIME ASSOCIATED WITH THE REVIEW OF THE PROPOSED FIXTURE SUBSTITUTION(S). PAYMENT SHALL BE MADE IN ADVANCE OF THE REVIEW, BASED ON THE DESIGNER'S ESTIMATE OF THE REQUIRED TIME. THE PAYMENT SHALL BE BASED ON THE DESIGNER'S STANDARD HOURLY RATES FOR THE PERSONNEL INVOLVED IN THE REVIEW.

12. ALL FIXTURES SHALL BE ERECTED AND SHALL HANG PERFECTLY PLUMB WITH CANOPIES SET SQUARELY AGAINST THE WALL OR CEILING.
13. CONTRACTOR SHALL CHECK THE TYPE OF CEILING WHERE RECESSED FIXTURES ARE INSTALLED TO BE SURE THE PROPER TYPE OF MOUNTING HARDWARE IS ORDERED AND TO DETERMINE IF A LAY-IN TYPE FIXTURE OR OTHERWISE IS REQUIRED OR IF PLASTER RINGS ARE REQUIRED. HE SHALL BE RESPONSIBLE TO SEE THAT THE PROPER TYPE FIXTURE IS INSTALLED TO SUITE THE CEILING CONDITION AND MOUNTING DEPTH.
14. REFLECTORS, REFLECTOR CONES AND VISIBLE TRIM OF ALL LIGHTING FIXTURES SHALL NOT BE INSTALLED UNTIL COMPLETION OF PLASTERING, CEILING TILE WORK, PAINTING AND GENERAL CLEAN-UP. THEY SHALL BE CAREFULLY HANDLED TO AVOID SCRATCHING OR FINGERPRINTING AND SHALL BE, AT THE TIME OF ACCEPTANCE BY OWNER, COMPLETELY CLEAN.
15. FIXTURE HOUSING AND DOOR FRAMES SHALL BE FULLY SEALED AGAINST LIGHT LEAKAGE. LIGHT LEAKS BETWEEN CEILING TRIMS OF RECESSED LIGHTING EQUIPMENT AND THE CEILINGS WILL NOT BE PERMITTED. RECESSED FIXTURE OPENINGS CUT INTO THE GENERAL CONSTRUCTION SHALL NOT BE LARGER THAN THE FIXTURES TRIM RING. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIXTURE CUTTING AND PATCHING.
16. SUPPORT LUMINAIRES INDEPENDENT OF CEILING FRAMING.
17. INSTALL SURFACE MOUNTED LUMINAIRES PLUMB AND ADJUST TO ALIGN WITH BUILDING LINES AND WITH EACH OTHER. SECURE TO PREVENT MOVEMENT.
18. PROVIDE LOW VOLTAGE OCCUPANCY SENSORS AS SHOWN ON THE DRAWINGS. PROVIDE ASSOCIATED POWER PACK RELAYS AND AUXILIARY RELAYS AS REQUIRED FOR A COMPLETE FUNCTIONAL SYSTEM.
19. ALL EMERGENCY LIGHT VOLTAGE SENSING CIRCUITS SHALL BE TIED INTO THE LOCAL LIGHTING CIRCUIT AHEAD OF ALL SWITCHING DEVICES.
20. ALL EXIT SIGNS SHALL BE CONNECTED TO DEDICATED LIFE-SAFETY EMERGENCY BRANCH CIRCUITS AHEAD OF ALL SWITCHES AND CONTROL DEVICES UNLESS SHOWN CONNECTED TO AN INVERTER CIRCUIT.
21. CONTRACTOR SHALL COORDINATE FIXTURE MOUNTING WITH THE CEILING. PROVIDE STRUCTURAL SUPPORTS FOR THE RIGID ATTACHMENT OF THE FIXTURE. SECURE FIXTURE SO THAT IT DOES NOT MOVE OR TWIST WHEN INSTALLING, REMOVING, OR RELAMPING. FIXTURES SHALL RUN TRUE AND PARALLEL WITH THE CEILING SYSTEMS.
22. ALL REMOTE POWER SUPPLIES AND DRIVERS LOCATED ABOVE ACCESSIBLE CEILINGS SHALL BE PLENUM RATED OR MOUNTED IN A METALLIC ENCLOSURE.
23. ALL LOW VOLTAGE POWER AND CONTROL WIRING LOCATED ABOVE CEILINGS SHALL BE PLENUM RATED.
24. ALL LOW VOLTAGE WIRING TO FIXTURES IN AREAS WITHOUT CEILINGS SHALL BE INSTALLED IN CONDUIT.

Mark B. Thompson Associates
Architecture
502 South 24th Street
Philadelphia, PA 19146
215.985.1000 www.mbtarchitects.com

Keast & Hood Company of New York, PC
Structural Engineering
400 Market Street, Suite 1250
Philadelphia, PA 19106
215.625.0099 www.keasthood.com

Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

It is a violation of New York State Law for any person, unless he is acting under the direction of a licensed Professional Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Engineer or Land Surveyor is altered, the altering Engineer or Land Surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid and Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

EGNER HALL
BUILDING 685
U.S. MILITARY ACADEMY
West Point, New York

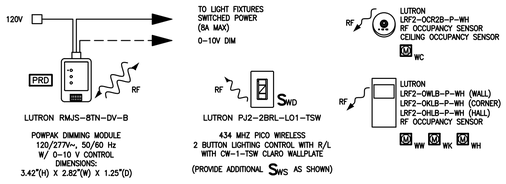
Project No.: 11300 (DJVI #2115)
Date: July 6, 2022

Drawing Title:
Lighting Fixture & Control Notes

E900

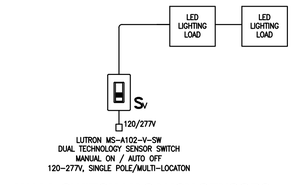
LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MOUNTING TYPE	MOUNTING HEIGHT	VOLTS	LAMP QTY	LAMP TYPE	SYSTEM WATTS	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN CATALOG NO.	CONTROL METHOD	ALTERNATE MANUFACTURER	NOTES
CP1	TUNABLE WHITE – DIRECT 2"W APERTURE x 4"H x 288"L LINEAR PENDANT FABRICATED IN A CONTINUOUS 72" SQUARE PATTERN.	SUSPENDED CABLE	REFERENCE ARCH DRAWINGS	120	N/A	LED 804 LUMENS/FT TW / 80 CRI	244.8 (10.2/FT)	FINELITE	HP2-P-D-24'(SQ)-V-8TW-F-96LG-120-SC-(LUT-TW)-FA50/FM-C4-FE-RAL-MITERED CORNERS	LUTRON T-SERIES 0.1%-100% ADDRESSABLE INTENSITY/KELVIN	–	–
CP1E	SAME AS 'CP1' EXCEPT 6' SECTION CONNECTED TO REMOTE EMERGENCY LIGHTING INVERTER CIRCUIT (62W/FIXTURE)	SUSPENDED CABLE	REFERENCE ARCH DRAWINGS	120	N/A	LED 804 LUMENS/FT TW / 80 CRI	244.8 (10.2/FT)	FINELITE	HP2-P-D-24'(SQ)-V-8TW-F-96LG-120-MC-(LUT-TW)-FA50/FM-C4-FE-RAL-MITERED CORNERS	LUTRON T-SERIES 0.1%-100% ADDRESSABLE INTENSITY/KELVIN	–	–
CP2	TUNABLE WHITE – DIRECT 2"W APERTURE x 4"H x 48"L LINEAR PENDANT.	CABLE ATTACHED TO RIGID UNISTRUT FOR ALIGNMENT	REFERENCE ARCH DRAWINGS	120	N/A	LED 804 LUMENS/FT TW / 80 CRI	40.8 (10.2/FT)	FINELITE	HP2-P-D-4'(L)-V-8TW-F-96LG-120-SC-(LUT-TW)-FA100/FM-C4-FE-RAL	LUTRON T-SERIES 0.1%-100% ADDRESSABLE INTENSITY/KELVIN	–	CONCERT BAND ROOM – PROVIDE RIGID UNISTRUT HORIZONTAL MEMBER ABOVE FIXTURE. UNISTRUT SHALL BE SECURELY SUSPENDED FROM STRUCTURE. FIXTURE SHALL HANG FROM UNISTRUT STRUCTURE WITH CABLE. PAINT UNISTRUT. MAX LENGTH OF SUSPENSION CABLE SHALL BE 24". COLOR OF FIXTURE AND UNISTRUT BY ARCHITECT.
CP2S	TUNABLE WHITE – DIRECT 2"W APERTURE x 4"H x 48"L LINEAR PENDANT.	SURFACE MTD	CEILING	120	N/A	LED 804 LUMENS/FT TW / 80 CRI	40.8 (10.2/FT)	FINELITE	HP2-SM-D-4'(L)-V-8TW-F-96LG-120-SC-(LUT-TW)-C4-FE-RAL	LUTRON T-SERIES 0.1%-100% ADDRESSABLE INTENSITY/KELVIN	–	–
CP2E	SAME AS 'CP2' EXCEPT CONNECTED TO REMOTE EMERGENCY LIGHTING INVERTER CIRCUIT	CABLE ATTACHED TO RIGID UNISTRUT FOR ALIGNMENT	REFERENCE ARCH DRAWINGS	120	N/A	LED 804 LUMENS/FT TW / 80 CRI	40.8 (10.2/FT)	FINELITE	HP2-P-D-4'(L)-V-8TW-F-96LG-120-SC-(LUT-TW)-FA100/FM-C4-FE-RAL	LUTRON T-SERIES 0.1%-100% ADDRESSABLE INTENSITY/KELVIN	–	CONCERT BAND ROOM – PROVIDE RIGID UNISTRUT HORIZONTAL MEMBER ABOVE FIXTURE. UNISTRUT SHALL BE SECURELY SUSPENDED FROM STRUCTURE. FIXTURE SHALL HANG FROM UNISTRUT STRUCTURE WITH CABLE. PAINT UNISTRUT. MAX LENGTH OF SUSPENSION CABLE SHALL BE 24". COLOR OF FIXTURE AND UNISTRUT BY ARCHITECT.
CP2SE	SAME AS 'CP2S' EXCEPT CONNECTED TO REMOTE EMERGENCY LIGHTING INVERTER CIRCUIT	SURFACE MTD	CEILING	120	N/A	LED 804 LUMENS/FT TW / 80 CRI	40.8 (10.2/FT)	FINELITE	HP2-SM-D-4'(L)-V-8TW-F-96LG-120-SC-(LUT-TW)-C4-FE-RAL	LUTRON T-SERIES 0.1%-100% ADDRESSABLE INTENSITY/KELVIN	–	–
CP3	24" DIAMETER DIRECT LED FIXTURE WITH CUSTOM COLOR FINISH AND 9" STEM	SURFACE CANOPY W/ STEM	REFERENCE ARCH DRAWINGS	120	N/A	LED 5832 LUMENS 3500K / 80 CRI	81	DECO LIGHTING	RND-2-CN-35-U-W-S9-C-10	1%-100% 0-10V	PINNACLE CORONET	CUSTOM COLOR
CP3E	SAME AS 'CP3' EXCEPT WITH INTERNAL EMERGENCY BATTERY PACK	SURFACE CANOPY W/ STEM	REFERENCE ARCH DRAWINGS	120	N/A	LED 5832 LUMENS 3500K / 80 CRI	81	DECO LIGHTING	RND-2-CN-35-U-W-S9-C-E-10	1%-100% 0-10V	PINNACLE CORONET	CUSTOM COLOR. FOR FIXTURES IN STAIR 311 DESIGNATED 'CP3EX', PROVIDE ADDITIONAL STEM LENGTH SO THAT FIXTURES ABOVE STAIR MATCH FIXTURE 'CP3E' ELEVATION IN STAIR VESTIBULE.
CP4	19" DIAMETER DIRECT LED FIXTURE	SURFACE CANOPY W/ CABLE	REFERENCE ARCH DRAWINGS	120	N/A	LED 7179 LUMENS 3500K / 80 CRI	56	LITHONIA	VCVL-V4-P4-35K-80CRI-T5W-MVOLT-PM-AC6-WG-DWHXD	1%-100% 0-10V	–	–
CP4E	SAME AS 'CP4' EXCEPT WITH INTERNAL EMERGENCY BATTERY PACK	SURFACE CANOPY W/ CABLE	REFERENCE ARCH DRAWINGS	120	N/A	LED 7179 LUMENS 3500K / 80 CRI	56	LITHONIA	VCVL-V4-P4-35K-80CRI-T5W-MVOLT-PM-AC6- E10WH-WG-DWHXD	1%-100% 0-10V	–	–
CP5	TUNABLE WHITE – DIRECT 2"W APERTURE x 4"H x 72"L LINEAR PENDANT.	SUSPENDED CABLE FROM UNISTRUT FOR ALIGNMENT	REFERENCE ARCH DRAWINGS	120	N/A	LED 804 LUMENS/FT TW / 80 CRI	61.2 (10.2/FT)	FINELITE	HP2-P-D-6'(L)-V-8TW-F-96LG-120-SC-(LUT-TW)-FA100/FM-C4-FE-RAL	LUTRON T-SERIES 0.1%-100% ADDRESSABLE INTENSITY/KELVIN	–	–
CP5E	SAME AS 'CP5' EXCEPT CONNECTED TO REMOTE EMERGENCY LIGHTING INVERTER CIRCUIT	SUSPENDED CABLE FROM UNISTRUT FOR ALIGNMENT	REFERENCE ARCH DRAWINGS	120	N/A	LED 804 LUMENS/FT TW / 80 CRI	61.2 (10.2/FT)	FINELITE	HP2-P-D-6'(L)-V-8TW-F-96LG-120-SC-(LUT-TW)-FA100/FM-C4-FE-RAL	LUTRON T-SERIES 0.1%-100% ADDRESSABLE INTENSITY/KELVIN	–	–
CP6	24" DIAMETER SURFACE DIRECT LED FIXTURE WITH CUSTOM COLOR FINISH	SURFACE	CEILING	120	N/A	LED 3960 LUMENS 3500K / 80 CRI	55	DECO LIGHTING	RND-2-BX-35-U-W-SU-C-10	1%-100% 0-10V	PINNACLE CORONET	CUSTOM COLOR
CP6E	SAME AS 'CP3' EXCEPT WITH INTERNAL EMERGENCY BATTERY PACK	SURFACE	CEILING	120	N/A	LED 5832 LUMENS 3500K / 80 CRI	81	DECO LIGHTING	RND-2-CN-35-U-W-SU-C-E-10	1%-100% 0-10V	PINNACLE CORONET	CUSTOM COLOR
CR1	2'x2' ARCHITECTURAL LED TROFFER	RECESSED	CEILING	120	N/A	LED 5265 LUMENS 3500K / 80 CRI	39	DECO LIGHTING	GO-LED-22-39-354050-U-F	1%-100% 0-10V	FINELITE HPR	–
CR1E	SAME AS 'CR1' EXCEPT WITH INTERNAL EMERGENCY BATTERY PACK	RECESSED	CEILING	120	N/A	LED 5265 LUMENS 3500K / 80 CRI	39	DECO LIGHTING	GO-LED-22-39-354050-U-F-E	1%-100% 0-10V	FINELITE HPR	–
CR2	14" DIAMETER DIRECT LED FIXTURE WITH MATTE WHITE FINISH	RECESSED	CEILING	120	N/A	LED 1520 LUMENS 3500K / 80 CRI	20	DECO LIGHTING	RNR-1-AW-35-W-M-10	1%-100% 0-10V	–	–
CR2E	SAME AS 'CR2' EXCEPT WITH INTERNAL EMERGENCY BATTERY PACK	RECESSED	CEILING	120	N/A	LED 1520 LUMENS 3500K / 80 CRI	20	DECO LIGHTING	RNR-1-AW-35-W-M-E-10	1%-100% 0-10V	–	–
CR3	2'x2' ARCHITECTURAL LED TROFFER	RECESSED	CEILING	120	N/A	LED 3336 LUMENS 3500K / 80 CRI	24	DECO LIGHTING	GO-LED-22-24-354050-U-F	1%-100% 0-10V	FINELITE HPR	–
CR3E	SAME AS 'CR3' EXCEPT WITH INTERNAL EMERGENCY BATTERY PACK	RECESSED	CEILING	120	N/A	LED 3336 LUMENS 3500K / 80 CRI	24	DECO LIGHTING	GO-LED-22-24-354050-U-F-E	1%-100% 0-10V	FINELITE HPR	
CS1	PERIOD STYLE SCHOOLHOUSE FIXTURE WITH OIL RUBBED BRONZE FINISH AND 16" OPAL CYLINDER SHADE	SEMI-FLUSH	CEILING APPROX 8' AFF	120	N/A	LED 6500 LUMENS 3500K / 80 CRI	56	SPECTRUM LIGHTING	SS16LX-65L-35K-EX-CP113-HM-3"-BZ	NON-DIM	–	–
D1	4" DIAMETER SLIM PROFILE LED DOWNLIGHT	RECESSED	CEILING	120	N/A	LED 650 LUMENS 3000K / 80 CRI	10	DECO LIGHTING	93090-4"-10W-650-3000K-120V	0-10V	CONTECH PRESCOLITE	–
WS1	PERIOD STYLE 3" FITTER WALL SCONCE WITH OIL RUBBED BRONZE FINISH AND 6" OPAL BALL SHADE	SEMI-FLUSH	WALL REFERENCE ARCH DRAWINGS	120	1	CREE A19/E26 LED 1100 LUMENS 3000K / 90 CRI	12	REJUVENATION	FOSTER A0905/B5105-OP	NON-DIM	–	–
IL1	48"L INDUSTRIAL LENSED STRIP LIGHT WITH WIRE GUARD	PENDANT	APPROX 8'-0" AFF	120	N/A	LED 6395 LUMENS 3500K / 80 CRI	52	COLUMBIA	LCL4-35HL-E-U-LCLWG4	NON-DIM	–	–
IL1E	SAME AS 'IL1' EXCEPT WITH INTERNAL EMERGENCY BATTERY PACK	PENDANT	APPROX 8'-0" AFF	120	N/A	LED 6395 LUMENS 3500K / 80 CRI	52	COLUMBIA	LCL4-35HL-E-U-ELL14-LCLWG4	NON-DIM	–	–
IL2	36"L S.S. WET LOCATION LOW PROFILE SURFACE MOUNT INDUSTRIAL STRIP	SURFACE	ELEVATOR PIT AND HOISTWAY	120	N/A	LED 6974 LUMENS 4000K / 83 CRI	63	PARAMOUNT	PMC5-3-SF-UNV-4K-CRI83-70L-S4-L8-LD		–	–
IL3E	48" ARCHITECTURAL LENSED STRIP LIGHT WITH INTERNAL EMERGENCY BATTERY PACK, ADJUSTABLE CCT, AND MOTION SENSOR DIMMING.	SURFACE	CEILING OF STAIRWELL	120	N/A	LED 5720 LUMENS 4000K / 80 CRI	44	DECO LIGHTING	DACH-LED-4-44-354050--U-R-E-M-10	INTEGRAL PIR DIMMING	–	–
PL1	EXTERIOR LED FLOOD LIGHT WITH POST TOP FITTER MOUNTED TO PAINTED GALVANIZED RIGID STEEL POST	POST	VERIFY IN FIELD	120	N/A	LED 3261 LUMENS 5000K / 83 CRI	28	LSI	TSFL-LED-3L-W-UNV-DIM-50-BLK-PT	NON-DIM	–	PROVIDE PAINTED POST
PL2	16" EXTERIOR RLM FIXTURE WITH LED MODULE	SURFACE	CEILING	120	N/A	LED 1250 LUMENS 3500K / 90 CRI	12	ANP LIGHTING	W516-MO10LDD-W-35K-(ST-SRTCC)-3ST6-100GLFRGUP-44W-UNV	NON-DIM	–	WHITE MARINE GRADE FINISH
SL1	8.75"L x 3.58"H LED STEP (BRICK) LIGHT	RECESSED	12" AFG	120	N/A	LED 39 LUMENS 3000K / 73 CRI	2.5	CONTECH LIGHTING	STPB-WW-LH-BR	NON-DIM PHOTOCELL	HEALTHCARE LIGHTING	COLOR SELECTED BY ARCHITECT
WP1E	EXTERIOR LED WALL PACK WITH CONDUIT ENTRY BOX, VANDAL RESISTANT LENS (SHIELD POLYCARBONATE), PHOTOCELL, AND COLD WEATHER BATTERY PACK	SURFACE	ABOVE DOOR	120	N/A	LED 5526 LUMENS 4000K / 70 CRI	51	HUBBELL	SG2-50-4K7-FT-120-COLOR-PCU-EH-(SG2-SPC)	NON-DIM PHOTOCELL	–	COLOR SELECTED BY ARCHITECT. PROVIDE CUSTOM WIRE GUARD AROUND ENTIRE FIXTURE.
X1	EDGE-LIT SELF POWERED EXIT SIGN SINGLE FACE/MIRRORED/RECESSED	RECESSED	CEILING	120	N/A	LED	3	LSI	ELX-RE-6-R-1M-FC-WB-SA-SD2	N/A	–	ALL EXIT SIGNS SHALL BE TIED INTO LOCAL CIRCUIT AHEAD OF ALL SWITCHING. UNITS WITHOUT BATTERIES SHALL BE TIED INTO LOCAL INVERTER CIRCUIT.
X2	EDGE-LIT SELF POWERED EXIT SIGN SINGLE FACE/MIRRORED/PENDANT	PENDANT	REFERENCE ARCH DRAWINGS	120	N/A	LED	3	LSI	ELX-U-6-R-1M-FC-WB-SA-SD2-PExx	N/A	–	ALL EXIT SIGNS SHALL BE TIED INTO LOCAL CIRCUIT AHEAD OF ALL SWITCHING. UNITS WITHOUT BATTERIES SHALL BE TIED INTO LOCAL INVERTER CIRCUIT. VERIFY PENDANT LENGTH.
X3	EDGE-LIT SELF POWERED EXIT SIGN DOUBLE FACE/MIRRORED/PENDANT	PENDANT	REFERENCE ARCH DRAWINGS	120	N/A	LED	3	LSI	ELX-U-6-R-2M-FC-WB-SA-SD2-PExx	N/A	–	ALL EXIT SIGNS SHALL BE TIED INTO LOCAL CIRCUIT AHEAD OF ALL SWITCHING. UNITS WITHOUT BATTERIES SHALL BE TIED INTO LOCAL INVERTER CIRCUIT. VERIFY PENDANT LENGTH.
X4	EDGE-LIT SELF POWERED EXIT SIGN DOUBLE FACE/MIRRORED/RECESSED	RECESSED	CEILING	120	N/A	LED	3	LSI	ELX-RE-6-R-2M-FC-WB-SA-SD2	N/A	–	ALL EXIT SIGNS SHALL BE TIED INTO LOCAL CIRCUIT AHEAD OF ALL SWITCHING. UNITS WITHOUT BATTERIES SHALL BE TIED INTO LOCAL INVERTER CIRCUIT.
X5	EDGE-LIT AC ONLY EXIT SIGN SINGLE FACE/MIRRORED/PENDANT POWERED FROM REMOTE INVERTER	PENDANT	REFERENCE ARCH DRAWINGS	120	N/A	LED	3	LSI	ELX-U-6-R-1M-FC-LB-SA-PExx	N/A	–	ALL EXIT SIGNS SHALL BE TIED INTO LOCAL CIRCUIT AHEAD OF ALL SWITCHING. UNITS WITHOUT BATTERIES SHALL BE TIED INTO LOCAL INVERTER CIRCUIT. VERIFY PENDANT LENGTH.



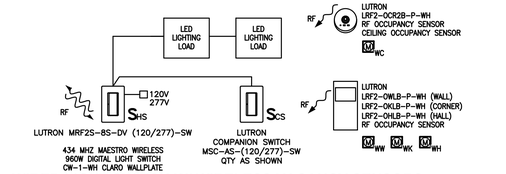
WIRELESS SWITCHING & VACANCY SENSORS & 0-10V DIM

SCALE: NONE



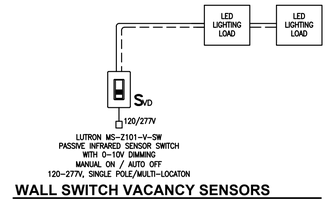
WALL SWITCH VACANCY SENSORS

SCALE: NONE



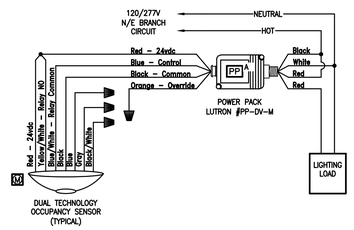
WIRED LIGHT SWITCH W/ WIRELESS VACANCY SENSORS

SCALE: NONE



WALL SWITCH VACANCY SENSORS WITH 0-10V DIMMING

SCALE: NONE

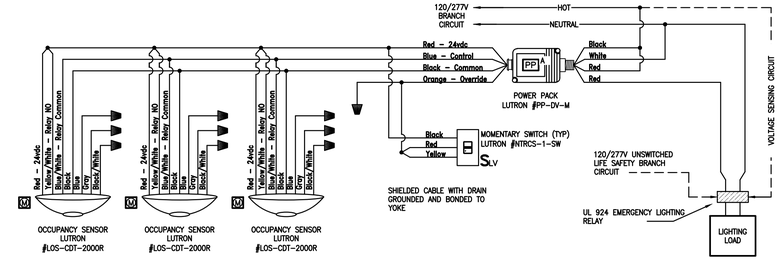


TOILET ROOMS - OCCUPANCY SENSOR

SCALE: NONE

EMERGENCY LIGHTING INVERTER SCHEDULE

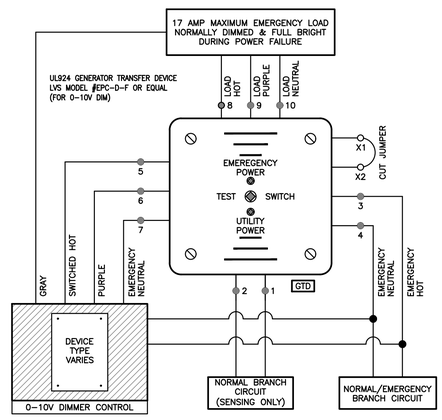
TYPE	DESCRIPTION	VOLTS	SYSTEM WATTS	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN CATALOG NO.	ALTERNATE MANUFACTURER
INV1	250W SINGLE PHASE LIGHTING INVERTER	120	250	DUAL-LITE	LG250-S-I	ISOLITE CHLORIDE BODINE EMERGI-LITE
INV2	375W SINGLE PHASE LIGHTING INVERTER	120	375	DUAL-LITE	LG375-S-I	ISOLITE CHLORIDE BODINE EMERGI-LITE
INV3	55W SINGLE PHASE LIGHTING INVERTER	120	55	DUAL-LITE	LPS55-S-RTSLP	ISOLITE CHLORIDE BODINE EMERGI-LITE



INDIVIDUAL ROOM OR AREA

TYPICAL HARD WIRED OCCUPANCY SENSORS - SMALL AREA

SCALE: NONE



UL 924 EMERGENCY LIGHTING RELAY DIAGRAM

SCALE: NONE

Mark B. Thompson Associates
Architecture
502 South 24th Street
Philadelphia, PA 19146
215.985.1000 www.mbtarchitects.com

Keast & Hood Company of New York, PC
Structural Engineering
400 Market Street, Suite 1250
Philadelphia, PA 19106
215.625.0099 www.keasthood.com

Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

It is a violation of New York State Law for any person, unless he is acting under the direction of a licensed Professional Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Engineer or Land Surveyor is altered, the altering Engineer or Land Surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid and Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

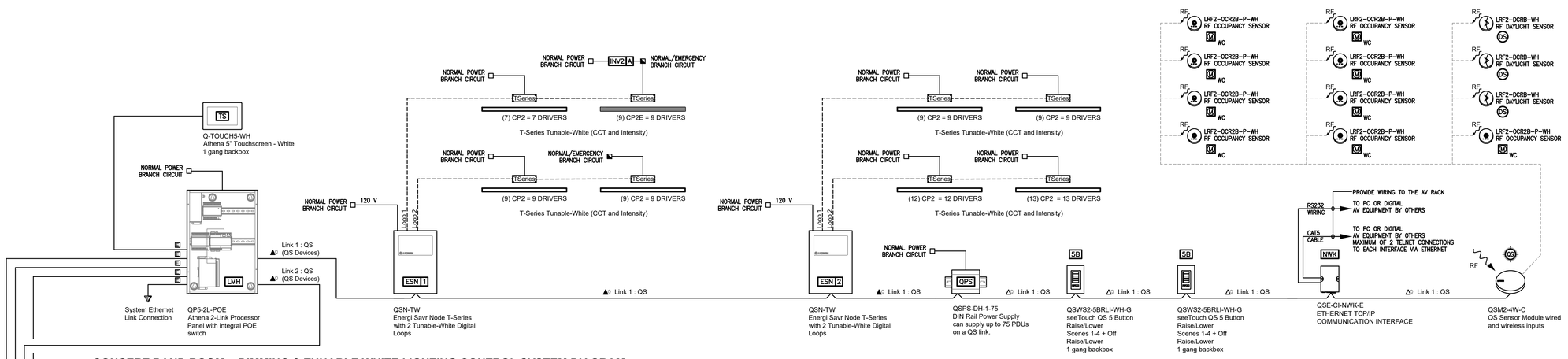
EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300 (DJVI #2115)
Date: July 6, 2022

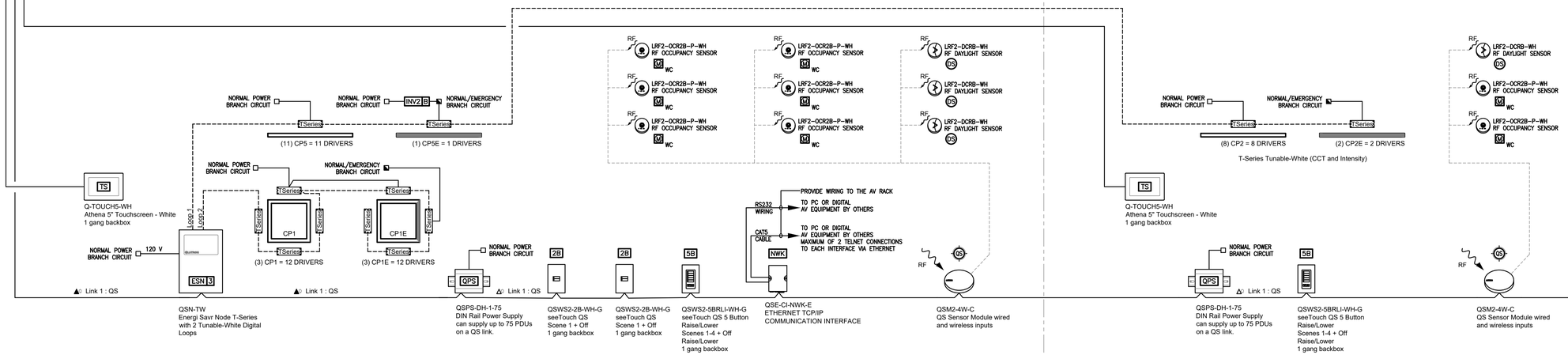
Drawing Title:
Lighting Fixture Schedule & Diagrams

E901



CONCERT BAND ROOM - DIMMING & TUNABLE WHITE LIGHTING CONTROL SYSTEM DIAGRAM

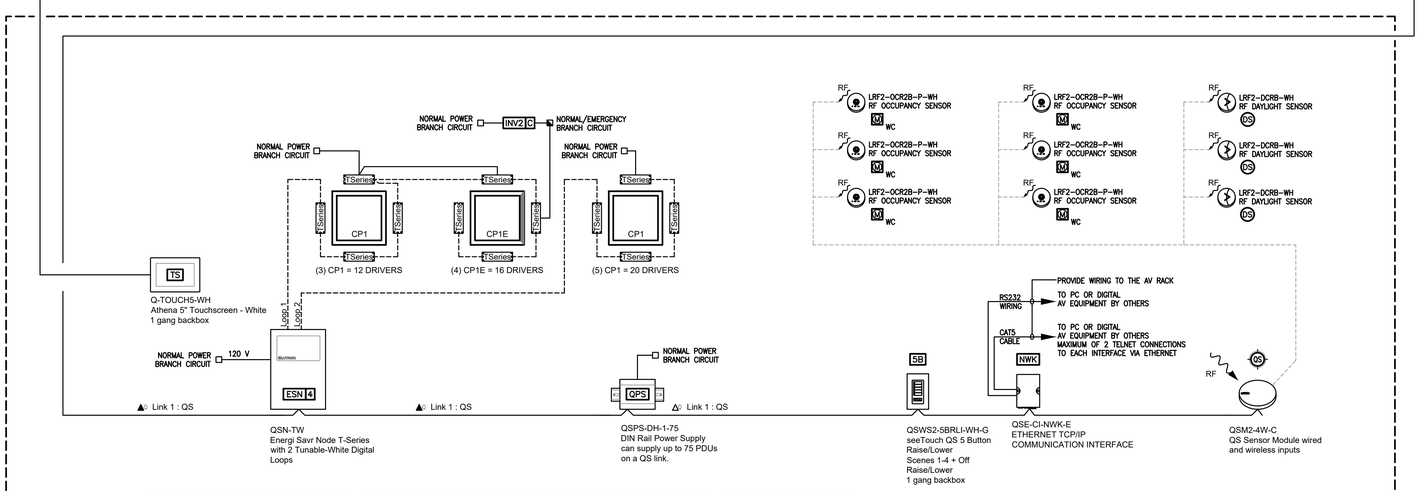
SCALE: NONE



GLEE CLUB ROOM - DIMMING & TUNABLE WHITE LIGHTING CONTROL SYSTEM DIAGRAM

SCALE: NONE

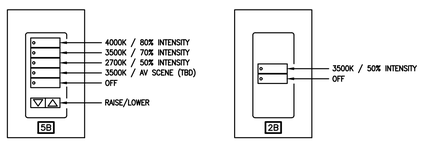
GLEE CLUB SECTIONALS - DIMMING & TUNABLE WHITE LIGHTING CONTROL SYSTEM DIAGRAM



CADET SPIRIT BAND ROOM - DIMMING & TUNABLE WHITE LIGHTING CONTROL SYSTEM DIAGRAM

SCALE: NONE

ALTERNATE 1.1



WALL STATION PRESET SCENES - USER DEFINED

SCALE: NONE

1. OCCUPANCY SENSORS SHALL TURN LIGHTS ON TO 3500K / 50% INTENSITY.
2. DURING COMMISSIONING, A SPECTROMETER SHALL BE USED TO SET THE CCT TO THE SPECIFIED LUMEN OUTPUT

LIGHTING CONTROL MANUFACTURER'S SERVICES

QTY	SERVICE TITLE	SERVICE DESCRIPTION
		THE QUANTITY OF SERVICES BELOW ARE TO BE INCLUDED AS PART OF THIS PROJECT'S SCOPE OF WORK.
		PRE-STARTUP SERVICES
1	SYSTEM & NETWORK INTEGRATION CONSULTATION	A CONSULTATIVE VISIT WITH THIRD PARTY INTEGRATORS TO CONFIRM THE SPECIFIED SEQUENCE OF OPERATION AND DISCUSS INTEGRATION PROCEDURES NEEDED IN ORDER TO INTEGRATE WITH THE LUTRON EQUIPMENT. THIS MAY INCLUDE ANY OF THE FOLLOWING THIRD PARTY SYSTEMS: BMS, BAS, IT, NON-LUTRON SHADES, BACNET, AV, OR ENERGY DASHBOARDS.
		STARTUP SUPPORT SERVICES
1	ONSITE SCENE & LEVEL TUNING	AN ONSITE VISIT WITH THE CUSTOMER REPRESENTATIVE TO REVIEW THE DESIGN INTENT, ESTABLISH AND FINE-TUNE THE SCENE LEVEL PROGRAMMING OF SCENES/ZONES, COLOR TUNING, AND MAKE ADJUSTMENTS TO TIMECLOCKS.
1	DYNAMIC WHITE PROGRAMMING PACKAGE	
		POST-STARTUP SERVICES
1	CUSTOMER-SITE SOLUTION TRAINING	A VISIT AT 6 MONTHS AFTER INITIAL START-UP TO TEACH SYSTEM USERS HOW TO OPERATE AND MAINTAIN THE LIGHTING CONTROL SYSTEM. IN ADDITION, INCLUDE ONSITE VISIT WITH THE CUSTOMER REPRESENTATIVE TO REVIEW THE DESIGN INTENT, FINE-TUNE THE SCENE LEVEL PROGRAMMING AND COLOR TUNING, AND MAKE ADJUSTMENTS TO TIMECLOCKS.
		MAINTENANCE & SUPPORT SERVICES
1	COMMERCIAL SYSTEMS 2-YEAR WARRANTY	A 2-YEAR SYSTEM WARRANTY PROVIDING 100% REPLACEMENT PARTS AND 100% LUTRON DIAGNOSTIC LABOR COVERAGE WITH A FIRST-AVAILABLE RESPONSE TIME.

Mark B. Thompson Associates
Architecture
502 South 24th Street
Philadelphia, PA 19146
215.985.1000 www.mbtarchitects.com

Keast & Hood Company of New York, PC
Structural Engineering
400 Market Street, Suite 1250
Philadelphia, PA 19106
215.625.0099 www.keasthood.com

Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

It is a violation of New York State Law for any person, unless he is acting under the direction of a licensed Professional Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Engineer or Land Surveyor is altered, the altering Engineer or Land Surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid and Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

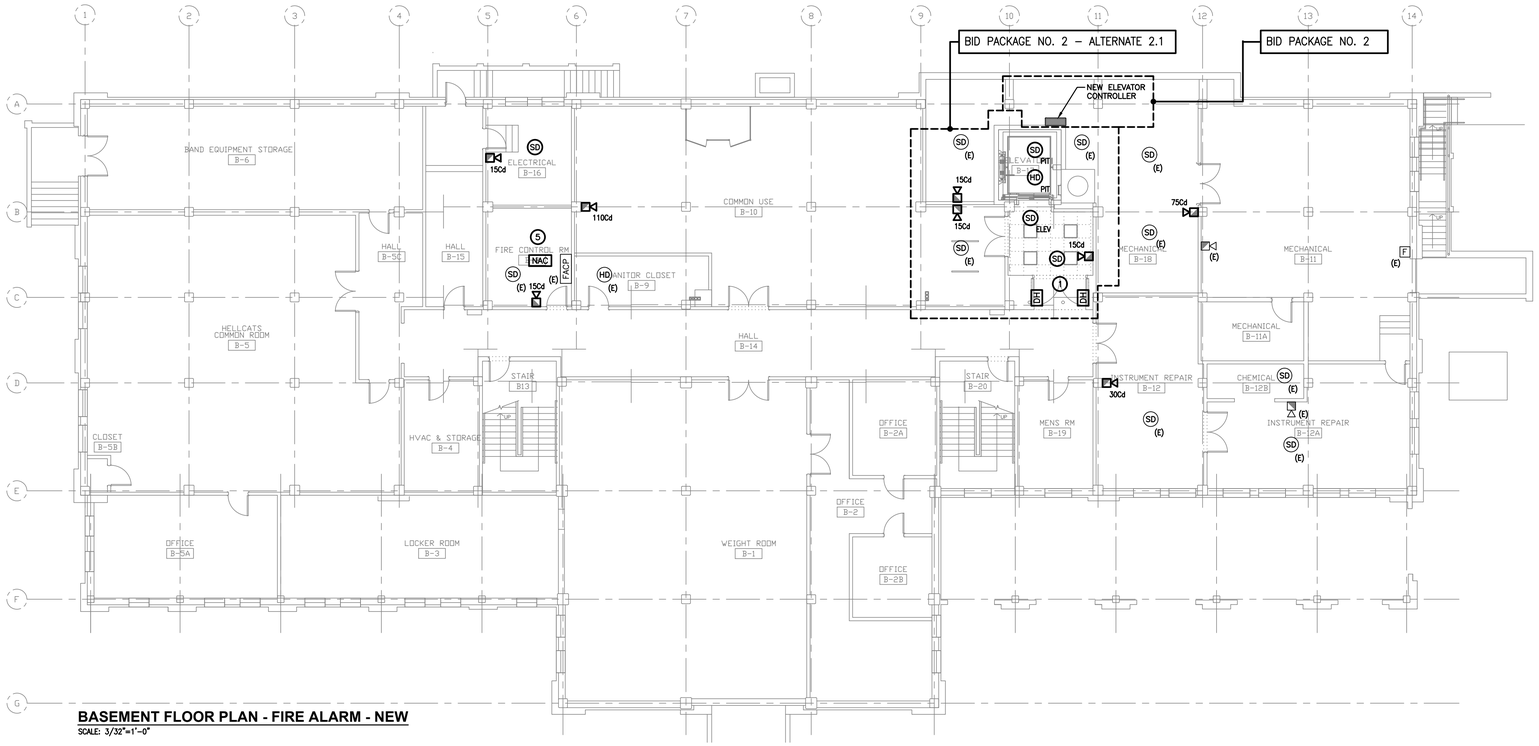
EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300 (DJVI #2115)
Date: July 6, 2022

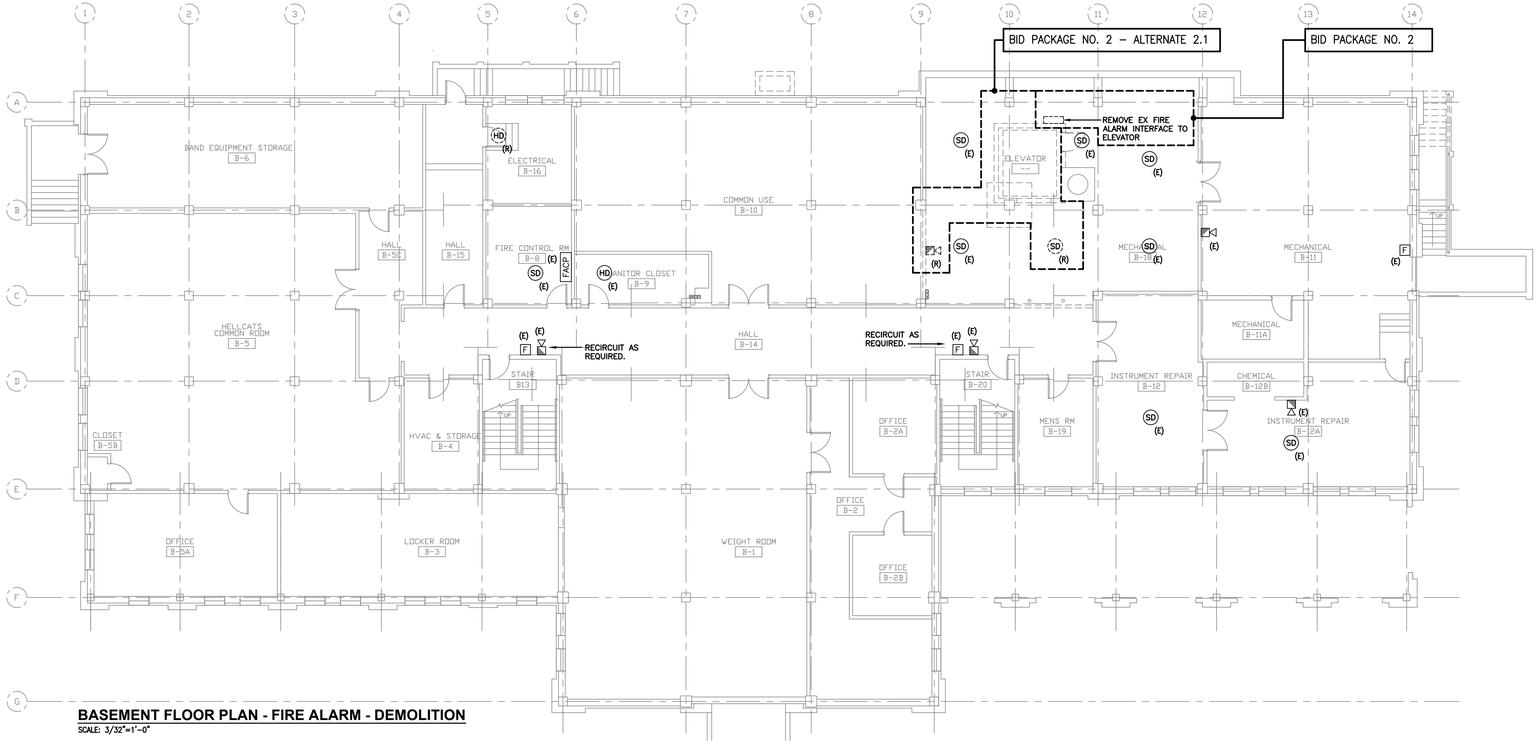
Drawing Title:
Lighting Control Diagrams

E902



BASEMENT FLOOR PLAN - FIRE ALARM - NEW

SCALE: 3/32"=1'-0"



BASEMENT FLOOR PLAN - FIRE ALARM - DEMOLITION

SCALE: 3/32"=1'-0"

FIRE ALARM NOTES

1. PROVIDE NEW 24V MAGNETIC DOOR HOLDERS AS SHOWN TIED INTO THE FIRE ALARM SYSTEM. PROVIDE ADDITIONAL POWER SUPPLIES, WIRING, AND BRANCH CIRCUITS. PROVIDE ALL REQUIRED SMOKE DETECTORS BASED ON FINAL CEILING HEIGHTS, SOFFITS, ETC. ON BOTH SIDES OF DOOR FOR THE RELEASE FUNCTION, WHETHER OR NOT SHOWN ON THE DRAWINGS.
2. PROVIDE EXTRA–DEEP BACKBOXES SO THAT THE DEVICES SIT FLUSH WITH THE FACE OF THE ACOUSTICAL WALL AND CEILING TREATMENTS (SPRAY FOAM ON UNDERSIDE OF DECK BETWEEN BEAMS). CONDUITS TO SIT TIGHT TO EXISTING WALL BEHIND WALL COVERING AND CEILING TREATMENTS. TYPICAL FOR ALL DEVICES. REFERENCE ARCHITECTURAL DRAWINGS FOR COORDINATION. SURFACE MOUNTED DEVICES SHALL BE PROVIDED WITH MANUFACTURER'S CUSTOM SURFACE MOUNT BACK BOX (SKIRT) TO BLEND SEAMLESSLY WITH THE DEVICE'S OVERALL DIMENSIONS. STANDARD SHEET METAL BACK BOXES SHALL NOT BE USED FOR SURFACE MOUNTED DEVICES, UNLESS BOX IS HIDDEN BY (OR RECESSED IN) WALL AND CEILING ARCHITECTURAL TREATMENTS. THE APPEARANCE SHALL BE THAT THE DEVICE SITS TIGHT TO NEW AND EXISTING WALLS AND WALL/CEILING ARCHITECTURAL TREATMENTS.
3. PROVIDE EXTRA–DEEP BACKBOXES SO THAT THE DEVICES SIT FLUSH WITH THE FACE OF THE CEILING TREATMENTS (SPRAY FOAM ON UNDERSIDE OF DECK BETWEEN BEAMS). CONDUITS TO SIT TIGHT TO EXISTING DECK BEHIND CEILING TREATMENTS. TYPICAL FOR ALL DEVICES. REFERENCE ARCHITECTURAL DRAWINGS FOR COORDINATION. SURFACE MOUNTED DEVICES SHALL BE PROVIDED WITH MANUFACTURER'S CUSTOM SURFACE MOUNT BACK BOX (SKIRT) TO BLEND SEAMLESSLY WITH THE DEVICE'S OVERALL DIMENSIONS. STANDARD SHEET METAL BACK BOXES SHALL NOT BE USED FOR SURFACE MOUNTED DEVICES, UNLESS BOX IS HIDDEN BY (OR RECESSED IN) WALL AND CEILING ARCHITECTURAL TREATMENTS. THE APPEARANCE SHALL BE THAT THE DEVICE SITS TIGHT TO NEW AND EXISTING WALLS AND WALL/CEILING ARCHITECTURAL TREATMENTS.
4. CONTRACTOR SHALL PROVIDE SAMPLE BOXES, MOUNTING DETAIL SKETCH, AND FIELD MOCK–UP FOR ARCHITECTURAL REVIEW PRIOR TO ROUGH–IN.
5. PROVIDE REQUIRED QUANTITY OF NAC'S TO POWER THE NOTIFICATION DEVICES AND MAGNETIC DOOR HOLDERS.

Mark B. Thompson Associates
Architecture
502 South 24th Street
Philadelphia, PA 19146
215.985.1000 www.mbtarchitects.com

Keast & Hood Company of New York, PC
Structural Engineering
400 Market Street, Suite 1250
Philadelphia, PA 19106
215.625.0099 www.keasthood.com

Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

It is a violation of New York State Law for any person, unless he is acting under the direction of a licensed Professional Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Engineer or Land Surveyor is altered, the altering Engineer or Land Surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid and Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

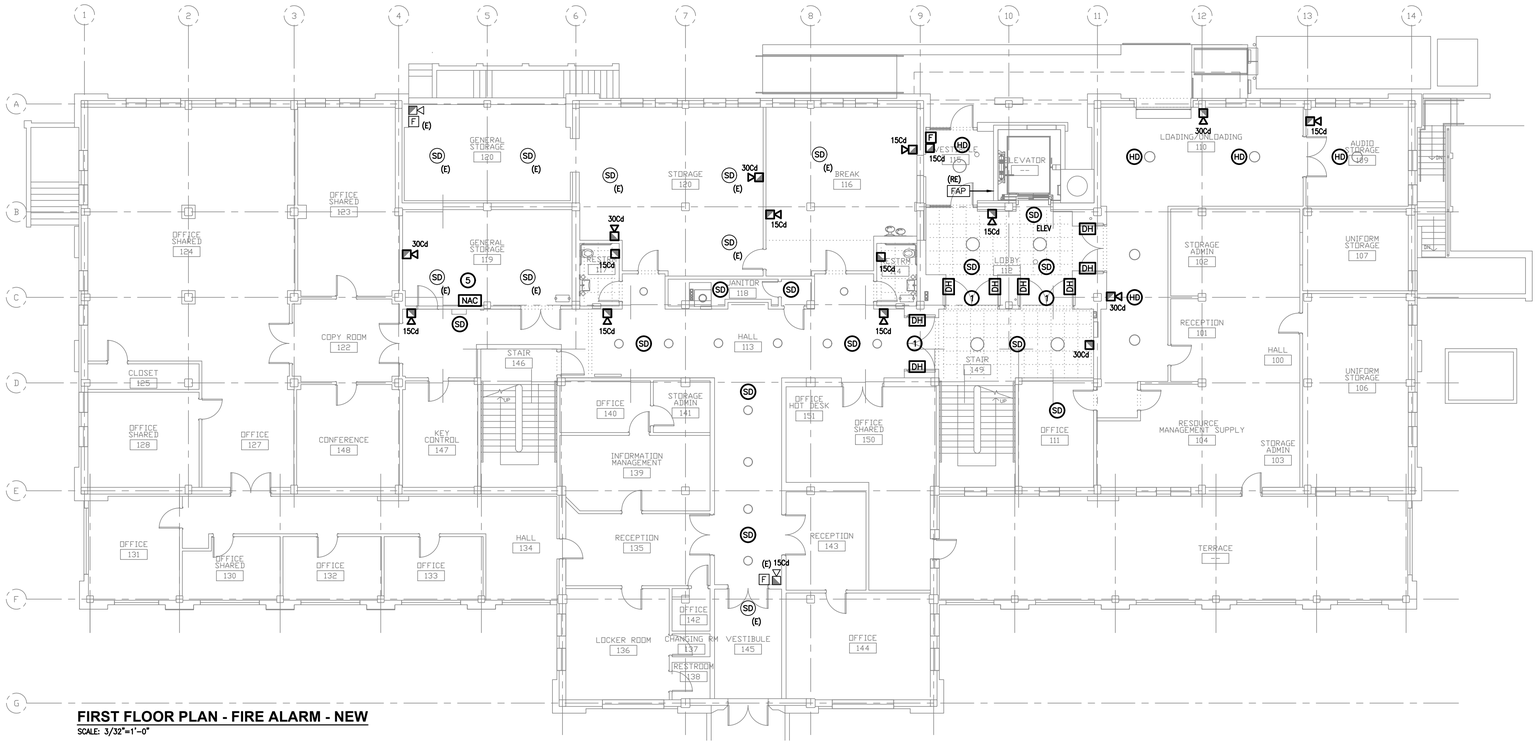
EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300 (DJVI #2115)
Date: July 6, 2022

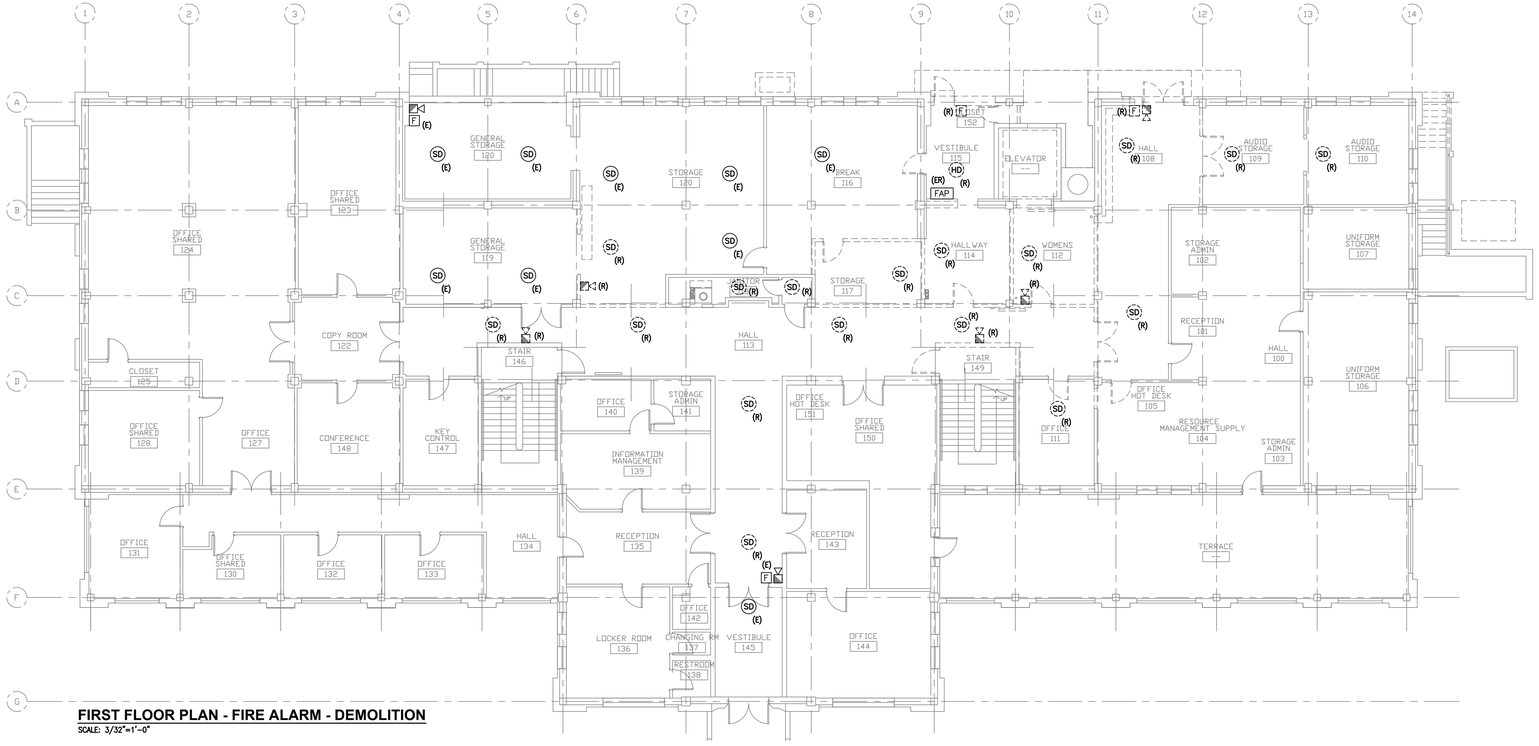
Drawing Title:
Basement Floor Plans
Fire Alarm

FA 1 0 0



FIRST FLOOR PLAN - FIRE ALARM - NEW

SCALE: 3/32"=1'-0"



FIRST FLOOR PLAN - FIRE ALARM - DEMOLITION

SCALE: 3/32"=1'-0"

FIRE ALARM NOTES

1. PROVIDE NEW 24V MAGNETIC DOOR HOLDERS AS SHOWN TIED INTO THE FIRE ALARM SYSTEM. PROVIDE ADDITIONAL POWER SUPPLIES, WIRING, AND BRANCH CIRCUITS. PROVIDE ALL REQUIRED SMOKE DETECTORS BASED ON FINAL CEILING HEIGHTS, SOFFITS, ETC. ON BOTH SIDES OF DOOR FOR THE RELEASE FUNCTION, WHETHER OR NOT SHOWN ON THE DRAWINGS.
2. PROVIDE EXTRA–DEEP BACKBOXES SO THAT THE DEVICES SIT FLUSH WITH THE FACE OF THE ACOUSTICAL WALL AND CEILING TREATMENTS (SPRAY FOAM ON UNDERSIDE OF DECK BETWEEN BEAMS). CONDUITS TO SIT TIGHT TO EXISTING WALL BEHIND WALL COVERING AND CEILING TREATMENTS. TYPICAL FOR ALL DEVICES. REFERENCE ARCHITECTURAL DRAWINGS FOR COORDINATION. SURFACE MOUNTED DEVICES SHALL BE PROVIDED WITH MANUFACTURER'S CUSTOM SURFACE MOUNT BACK BOX (SKIRT) TO BLEND SEAMLESSLY WITH THE DEVICE'S OVERALL DIMENSIONS. STANDARD SHEET METAL BACK BOXES SHALL NOT BE USED FOR SURFACE MOUNTED DEVICES, UNLESS BOX IS HIDDEN BY (OR RECESSED IN) WALL AND CEILING ARCHITECTURAL TREATMENTS. THE APPEARANCE SHALL BE THAT THE DEVICE SITS TIGHT TO NEW AND EXISTING WALLS AND WALL/CEILING ARCHITECTURAL TREATMENTS.
3. PROVIDE EXTRA–DEEP BACKBOXES SO THAT THE DEVICES SIT FLUSH WITH THE FACE OF THE CEILING TREATMENTS (SPRAY FOAM ON UNDERSIDE OF DECK BETWEEN BEAMS). CONDUITS TO SIT TIGHT TO EXISTING DECK BEHIND CEILING TREATMENTS. TYPICAL FOR ALL DEVICES. REFERENCE ARCHITECTURAL DRAWINGS FOR COORDINATION. SURFACE MOUNTED DEVICES SHALL BE PROVIDED WITH MANUFACTURER'S CUSTOM SURFACE MOUNT BACK BOX (SKIRT) TO BLEND SEAMLESSLY WITH THE DEVICE'S OVERALL DIMENSIONS. STANDARD SHEET METAL BACK BOXES SHALL NOT BE USED FOR SURFACE MOUNTED DEVICES, UNLESS BOX IS HIDDEN BY (OR RECESSED IN) WALL AND CEILING ARCHITECTURAL TREATMENTS. THE APPEARANCE SHALL BE THAT THE DEVICE SITS TIGHT TO NEW AND EXISTING WALLS AND WALL/CEILING ARCHITECTURAL TREATMENTS.
4. CONTRACTOR SHALL PROVIDE SAMPLE BOXES, MOUNTING DETAIL SKETCH, AND FIELD MOCK–UP FOR ARCHITECTURAL REVIEW PRIOR TO ROUGH–IN.
5. PROVIDE REQUIRED QUANTITY OF NAC'S TO POWER THE NOTIFICATION DEVICES AND MAGNETIC DOOR HOLDERS.

Mark B. Thompson Associates
Architecture
502 South 24th Street
Philadelphia, PA 19146
215.985.1000 www.mbtarchitects.com

Keast & Hood Company of New York, PC
Structural Engineering
400 Market Street, Suite 1250
Philadelphia, PA 19106
215.625.0099 www.keasthood.com

Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

It is a violation of New York State Law for any person, unless he is acting under the direction of a licensed Professional Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Engineer or Land Surveyor is altered, the altering Engineer or Land Surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid and Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

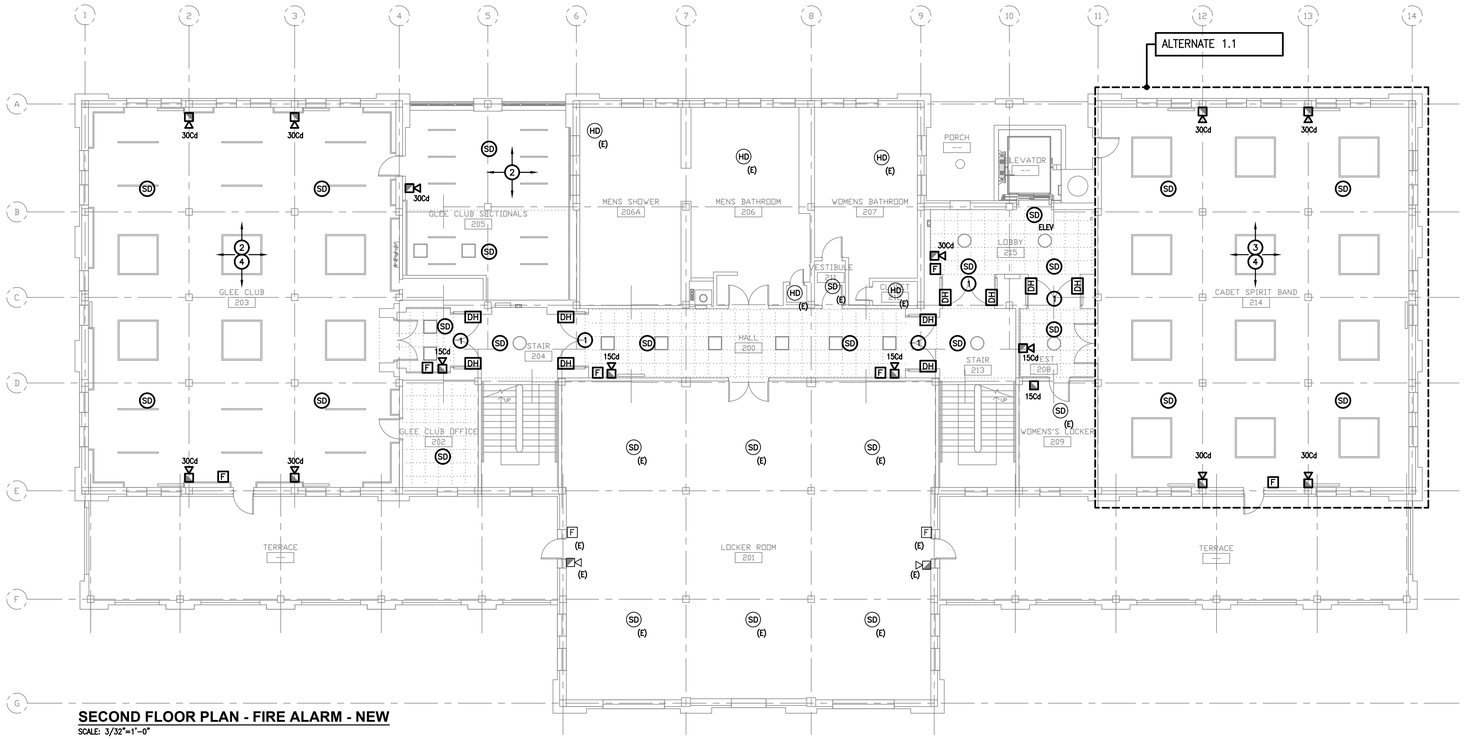
EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300 (DJVI #2115)
Date: July 6, 2022

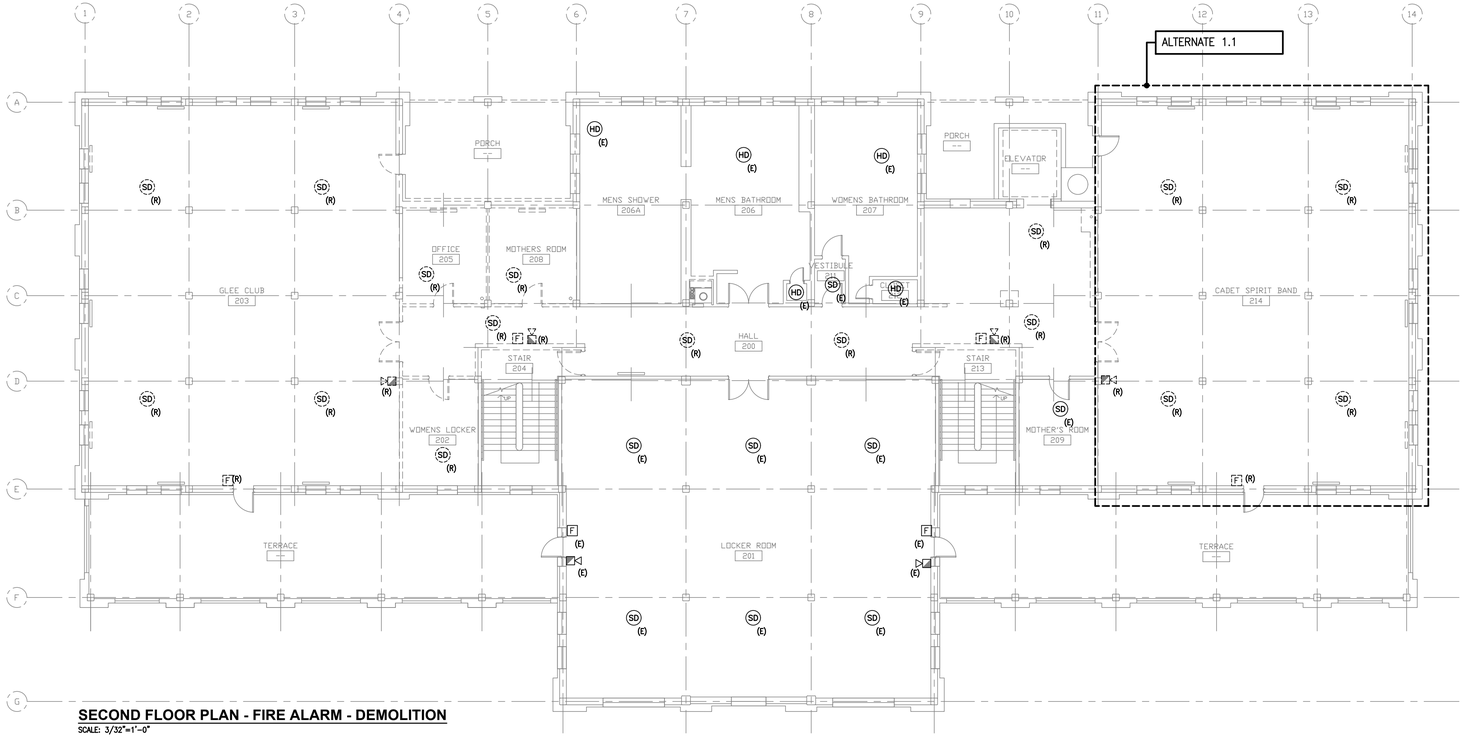
Drawing Title:
First Floor Plans
Fire Alarm

FA 1 0 1



SECOND FLOOR PLAN - FIRE ALARM - NEW

SCALE: 3/32"=1'-0"



SECOND FLOOR PLAN - FIRE ALARM - DEMOLITION

SCALE: 3/32"=1'-0"

FIRE ALARM NOTES

1. PROVIDE NEW 24V MAGNETIC DOOR HOLDERS AS SHOWN TIED INTO THE FIRE ALARM SYSTEM. PROVIDE ADDITIONAL POWER SUPPLIES, WIRING, AND BRANCH CIRCUITS. PROVIDE ALL REQUIRED SMOKE DETECTORS BASED ON FINAL CEILING HEIGHTS, SOFFITS, ETC. ON BOTH SIDES OF DOOR FOR THE RELEASE FUNCTION, WHETHER OR NOT SHOWN ON THE DRAWINGS.
2. PROVIDE EXTRA-DEEP BACKBOXES SO THAT THE DEVICES SIT FLUSH WITH THE FACE OF THE ACOUSTICAL WALL AND CEILING TREATMENTS (SPRAY FOAM ON UNDERSIDE OF DECK BETWEEN BEAMS). CONDUITS TO SIT TIGHT TO EXISTING WALL BEHIND WALL COVERING AND CEILING TREATMENTS. TYPICAL FOR ALL DEVICES. REFERENCE ARCHITECTURAL DRAWINGS FOR COORDINATION. SURFACE MOUNTED DEVICES SHALL BE PROVIDED WITH MANUFACTURER'S CUSTOM SURFACE MOUNT BACK BOX (SKIRT) TO BLEND SEAMLESSLY WITH THE DEVICE'S OVERALL DIMENSIONS. STANDARD SHEET METAL BACK BOXES SHALL NOT BE USED FOR SURFACE MOUNTED DEVICES, UNLESS BOX IS HIDDEN BY (OR RECESSED IN) WALL AND CEILING ARCHITECTURAL TREATMENTS. THE APPEARANCE SHALL BE THAT THE DEVICE SITS TIGHT TO NEW AND EXISTING WALLS AND WALL/CEILING ARCHITECTURAL TREATMENTS.
3. PROVIDE EXTRA-DEEP BACKBOXES SO THAT THE DEVICES SIT FLUSH WITH THE FACE OF THE CEILING TREATMENTS (SPRAY FOAM ON UNDERSIDE OF DECK BETWEEN BEAMS). CONDUITS TO SIT TIGHT TO EXISTING DECK BEHIND CEILING TREATMENTS. TYPICAL FOR ALL DEVICES. REFERENCE ARCHITECTURAL DRAWINGS FOR COORDINATION. SURFACE MOUNTED DEVICES SHALL BE PROVIDED WITH MANUFACTURER'S CUSTOM SURFACE MOUNT BACK BOX (SKIRT) TO BLEND SEAMLESSLY WITH THE DEVICE'S OVERALL DIMENSIONS. STANDARD SHEET METAL BACK BOXES SHALL NOT BE USED FOR SURFACE MOUNTED DEVICES, UNLESS BOX IS HIDDEN BY (OR RECESSED IN) WALL AND CEILING ARCHITECTURAL TREATMENTS. THE APPEARANCE SHALL BE THAT THE DEVICE SITS TIGHT TO NEW AND EXISTING WALLS AND WALL/CEILING ARCHITECTURAL TREATMENTS.
4. CONTRACTOR SHALL PROVIDE SAMPLE BOXES, MOUNTING DETAIL SKETCH, AND FIELD MOCK-UP FOR ARCHITECTURAL REVIEW PRIOR TO ROUGH-IN.
5. PROVIDE REQUIRED QUANTITY OF NAC'S TO POWER THE NOTIFICATION DEVICES AND MAGNETIC DOOR HOLDERS.

Mark B. Thompson Associates
Architecture
502 South 24th Street
Philadelphia, PA 19146
215.985.1000 www.mbtarchitects.com

Keast & Hood Company of New York, PC
Structural Engineering
400 Market Street, Suite 1250
Philadelphia, PA 19106
215.625.0099 www.keasthood.com

Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

It is a violation of New York State Law for any person, unless he is acting under the direction of a licensed Professional Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Engineer or Land Surveyor is altered, the altering Engineer or Land Surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid and Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

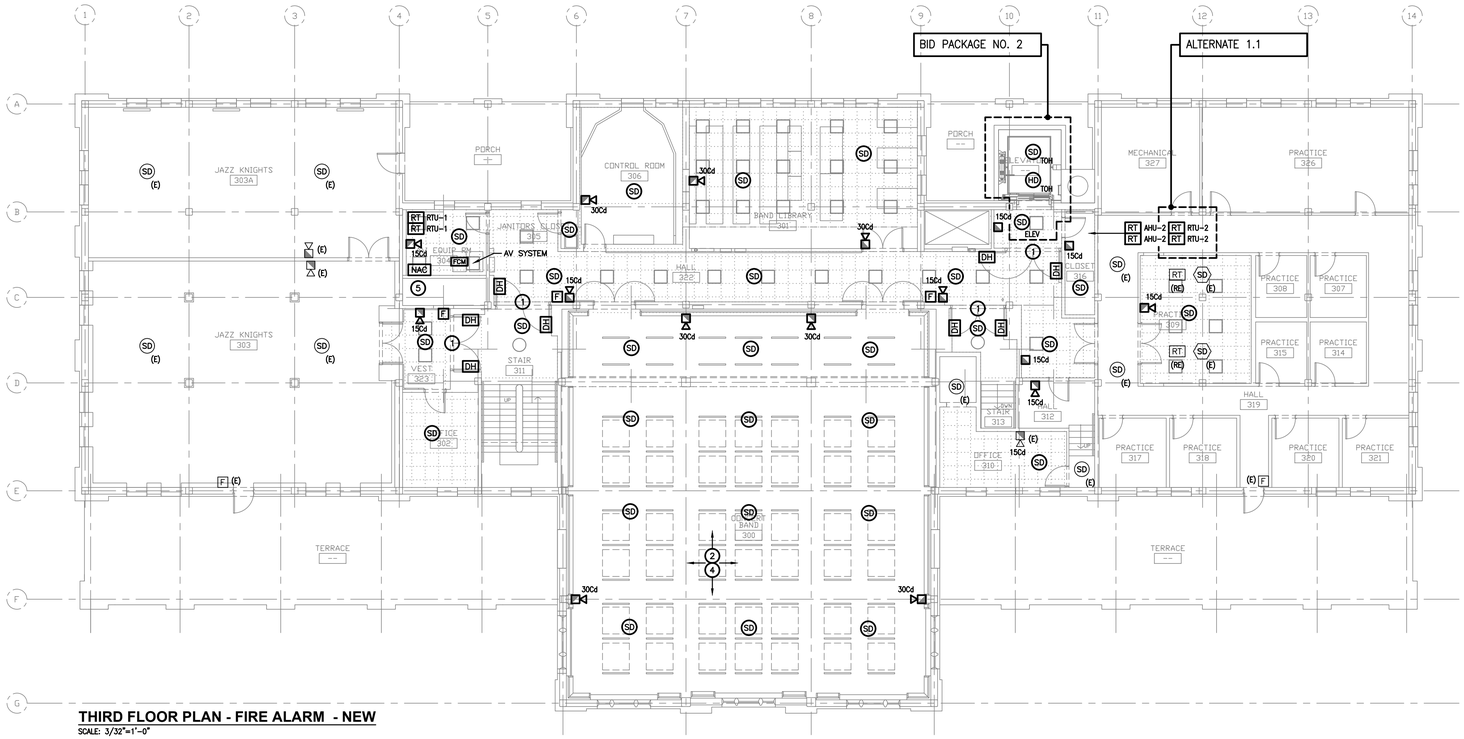
EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300 (DJVI #2115)
Date: July 6, 2022

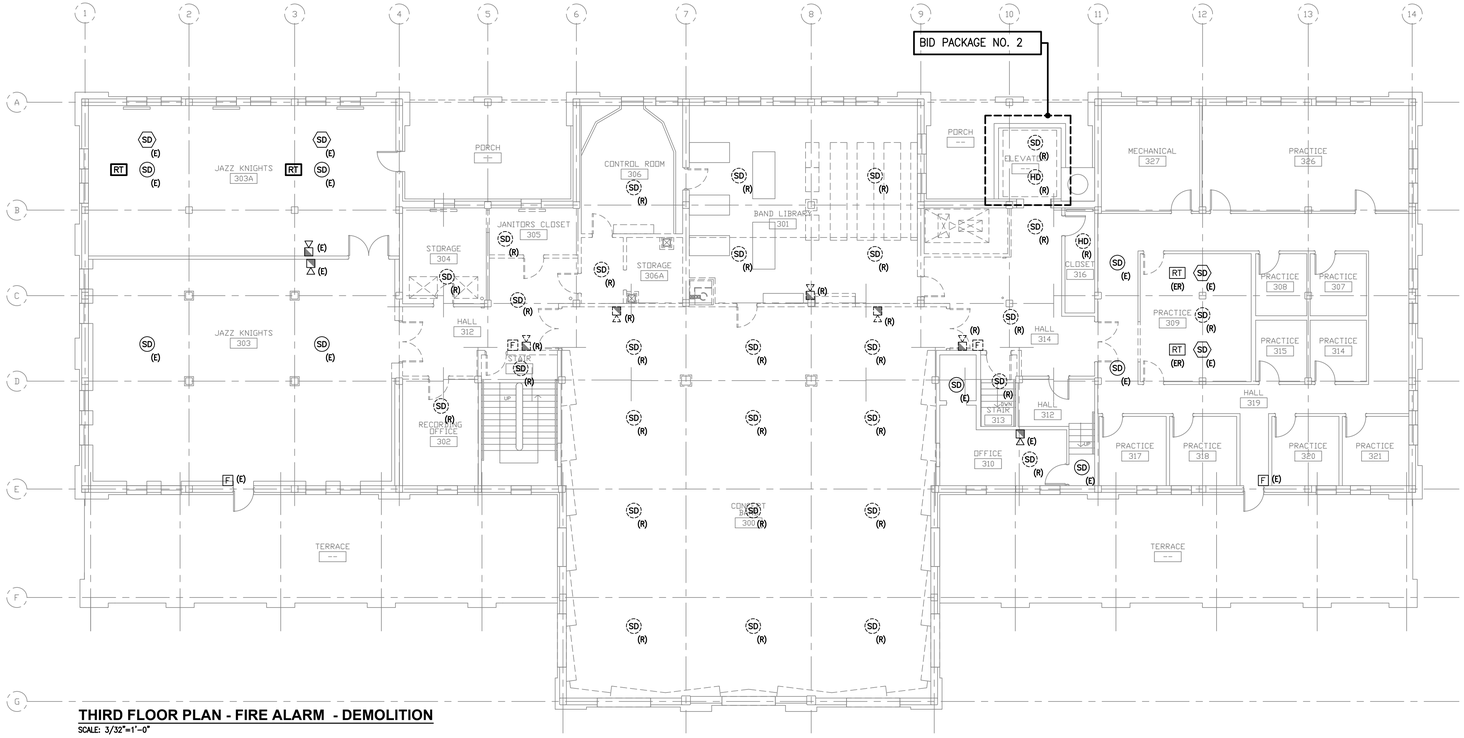
Drawing Title:
Second Floor Plans
Fire Alarm

FA 1 0 2



THIRD FLOOR PLAN - FIRE ALARM - NEW

SCALE: 3/32"=1'-0"



THIRD FLOOR PLAN - FIRE ALARM - DEMOLITION

SCALE: 3/32"=1'-0"

FIRE ALARM NOTES

1. PROVIDE NEW 24V MAGNETIC DOOR HOLDERS AS SHOWN TIED INTO THE FIRE ALARM SYSTEM. PROVIDE ADDITIONAL POWER SUPPLIES, WIRING, AND BRANCH CIRCUITS. PROVIDE ALL REQUIRED SMOKE DETECTORS BASED ON FINAL CEILING HEIGHTS, SOFFITS, ETC. ON BOTH SIDES OF DOOR FOR THE RELEASE FUNCTION, WHETHER OR NOT SHOWN ON THE DRAWINGS.
2. PROVIDE EXTRA-DEEP BACKBOXES SO THAT THE DEVICES SIT FLUSH WITH THE FACE OF THE ACOUSTICAL WALL AND CEILING TREATMENTS (SPRAY FOAM ON UNDERSIDE OF DECK BETWEEN BEAMS). CONDUITS TO SIT TIGHT TO EXISTING WALL BEHIND WALL COVERING AND CEILING TREATMENTS. TYPICAL FOR ALL DEVICES. REFERENCE ARCHITECTURAL DRAWINGS FOR COORDINATION. SURFACE MOUNTED DEVICES SHALL BE PROVIDED WITH MANUFACTURER'S CUSTOM SURFACE MOUNT BACK BOX (SKIRT) TO BLEND SEAMLESSLY WITH THE DEVICE'S OVERALL DIMENSIONS. STANDARD SHEET METAL BACK BOXES SHALL NOT BE USED FOR SURFACE MOUNTED DEVICES, UNLESS BOX IS HIDDEN BY (OR RECESSED IN) WALL AND CEILING ARCHITECTURAL TREATMENTS. THE APPEARANCE SHALL BE THAT THE DEVICE SITS TIGHT TO NEW AND EXISTING WALLS AND WALL/CEILING ARCHITECTURAL TREATMENTS.
3. PROVIDE EXTRA-DEEP BACKBOXES SO THAT THE DEVICES SIT FLUSH WITH THE FACE OF THE CEILING TREATMENTS (SPRAY FOAM ON UNDERSIDE OF DECK BETWEEN BEAMS). CONDUITS TO SIT TIGHT TO EXISTING DECK BEHIND CEILING TREATMENTS. TYPICAL FOR ALL DEVICES. REFERENCE ARCHITECTURAL DRAWINGS FOR COORDINATION. SURFACE MOUNTED DEVICES SHALL BE PROVIDED WITH MANUFACTURER'S CUSTOM SURFACE MOUNT BACK BOX (SKIRT) TO BLEND SEAMLESSLY WITH THE DEVICE'S OVERALL DIMENSIONS. STANDARD SHEET METAL BACK BOXES SHALL NOT BE USED FOR SURFACE MOUNTED DEVICES, UNLESS BOX IS HIDDEN BY (OR RECESSED IN) WALL AND CEILING ARCHITECTURAL TREATMENTS. THE APPEARANCE SHALL BE THAT THE DEVICE SITS TIGHT TO NEW AND EXISTING WALLS AND WALL/CEILING ARCHITECTURAL TREATMENTS.
4. CONTRACTOR SHALL PROVIDE SAMPLE BOXES, MOUNTING DETAIL SKETCH, AND FIELD MOCK-UP FOR ARCHITECTURAL REVIEW PRIOR TO ROUGH-IN.
5. PROVIDE REQUIRED QUANTITY OF NAC'S TO POWER THE NOTIFICATION DEVICES AND MAGNETIC DOOR HOLDERS.

Mark B. Thompson Associates
Architecture
502 South 24th Street
Philadelphia, PA 19146
215.985.1000 www.mbtarchitects.com

Keast & Hood Company of New York, PC
Structural Engineering
400 Market Street, Suite 1250
Philadelphia, PA 19106
215.625.0099 www.keasthood.com

Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

It is a violation of New York State Law for any person, unless he is acting under the direction of a licensed Professional Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Engineer or Land Surveyor is altered, the altering Engineer or Land Surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid and Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

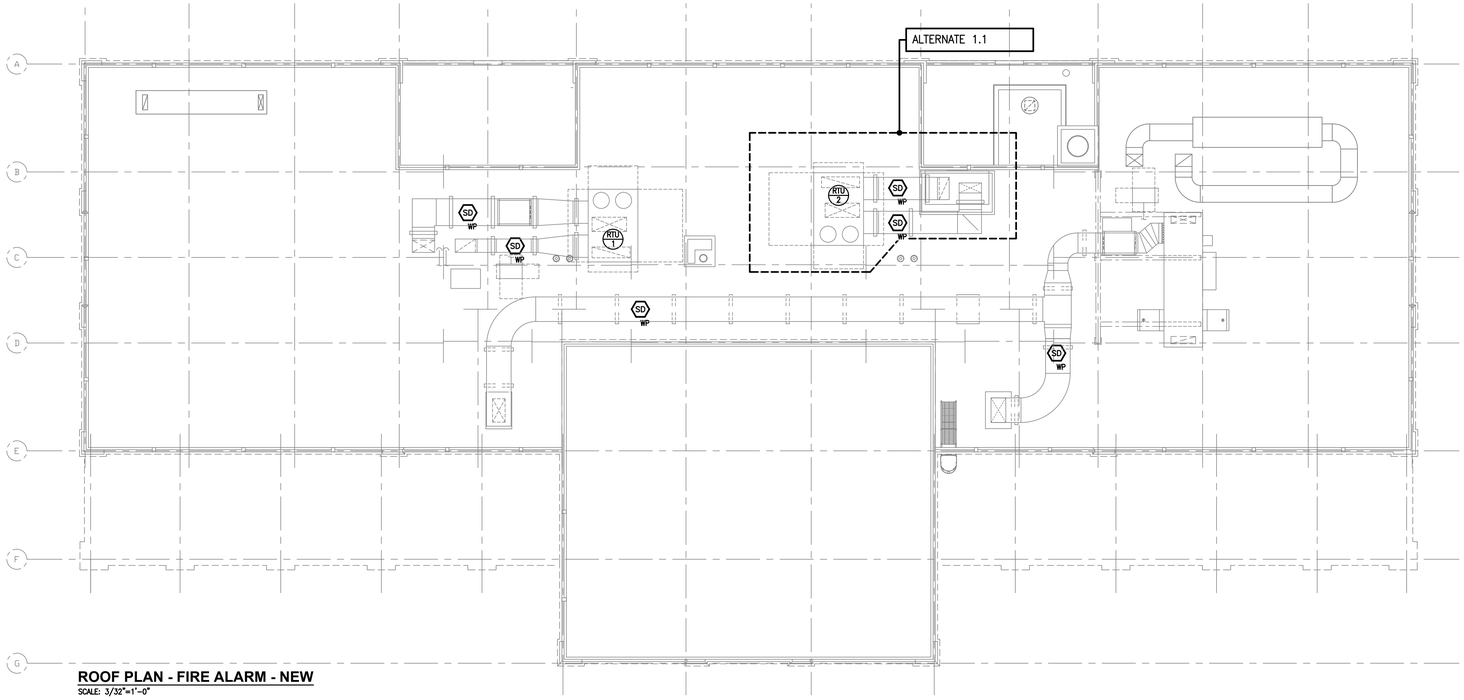
EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300 (DJVI #2115)
Date: July 6, 2022

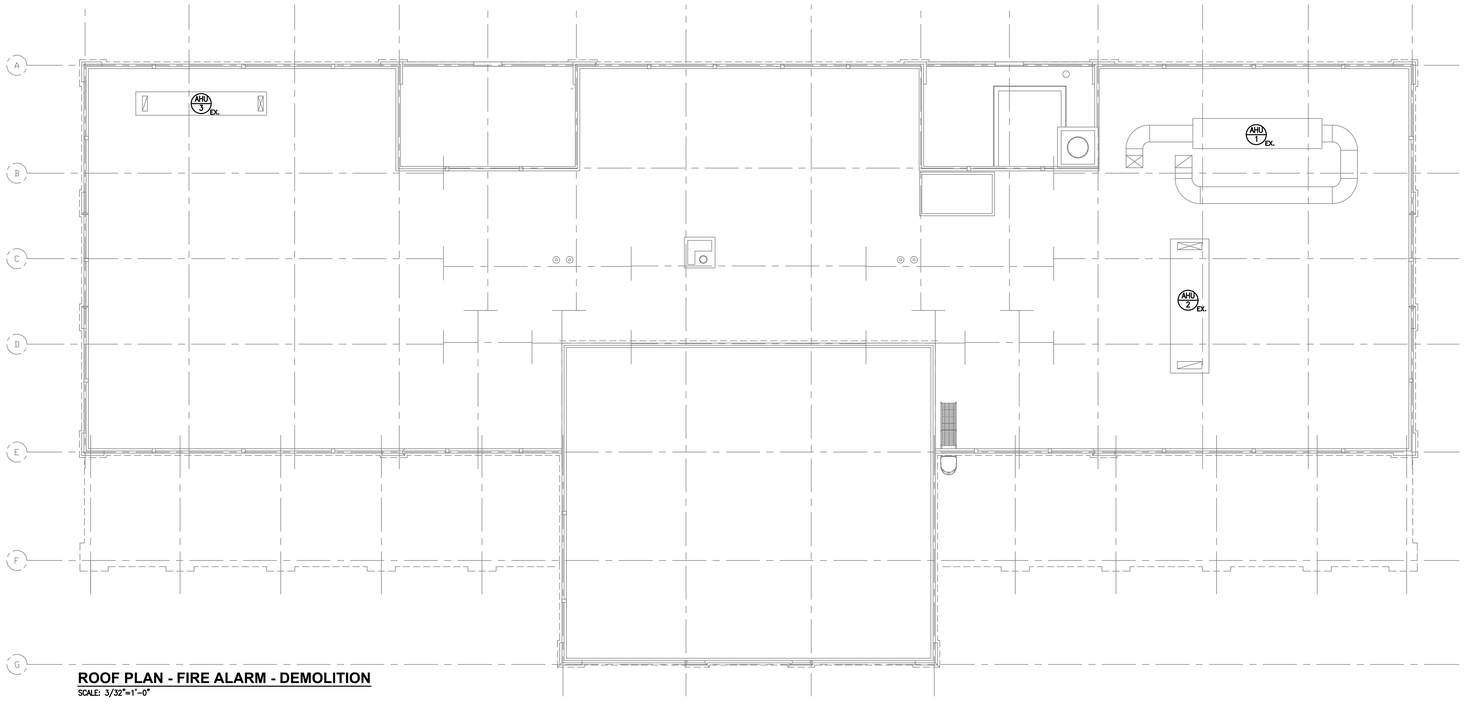
Drawing Title:
Third Floor Plans
Fire Alarm

FA 1 0 3



ROOF PLAN - FIRE ALARM - NEW

SCALE: 3/32"=1'-0"



ROOF PLAN - FIRE ALARM - DEMOLITION

SCALE: 3/32"=1'-0"

FIRE ALARM NOTES

1. PROVIDE NEW 24V MAGNETIC DOOR HOLDERS AS SHOWN TIED INTO THE FIRE ALARM SYSTEM. PROVIDE ADDITIONAL POWER SUPPLIES, WIRING, AND BRANCH CIRCUITS. PROVIDE ALL REQUIRED SMOKE DETECTORS BASED ON FINAL CEILING HEIGHTS, SOFFITS, ETC. ON BOTH SIDES OF DOOR FOR THE RELEASE FUNCTION, WHETHER OR NOT SHOWN ON THE DRAWINGS.
2. PROVIDE EXTRA-DEEP BACKBOXES SO THAT THE DEVICES SIT FLUSH WITH THE FACE OF THE ACOUSTICAL WALL AND CEILING TREATMENTS (SPRAY FOAM ON UNDERSIDE OF DECK BETWEEN BEAMS). CONDUITS TO SIT TIGHT TO EXISTING WALL BEHIND WALL COVERING AND CEILING TREATMENTS. TYPICAL FOR ALL DEVICES. REFERENCE ARCHITECTURAL DRAWINGS FOR COORDINATION. SURFACE MOUNTED DEVICES SHALL BE PROVIDED WITH MANUFACTURER'S CUSTOM SURFACE MOUNT BACK BOX (SKIRT) TO BLEND SEAMLESSLY WITH THE DEVICE'S OVERALL DIMENSIONS. STANDARD SHEET METAL BACK BOXES SHALL NOT BE USED FOR SURFACE MOUNTED DEVICES, UNLESS BOX IS HIDDEN BY (OR RECESSED IN) WALL AND CEILING ARCHITECTURAL TREATMENTS. THE APPEARANCE SHALL BE THAT THE DEVICE SITS TIGHT TO NEW AND EXISTING WALLS AND WALL/CEILING ARCHITECTURAL TREATMENTS.
3. PROVIDE EXTRA-DEEP BACKBOXES SO THAT THE DEVICES SIT FLUSH WITH THE FACE OF THE CEILING TREATMENTS (SPRAY FOAM ON UNDERSIDE OF DECK BETWEEN BEAMS). CONDUITS TO SIT TIGHT TO EXISTING DECK BEHIND CEILING TREATMENTS. TYPICAL FOR ALL DEVICES. REFERENCE ARCHITECTURAL DRAWINGS FOR COORDINATION. SURFACE MOUNTED DEVICES SHALL BE PROVIDED WITH MANUFACTURER'S CUSTOM SURFACE MOUNT BACK BOX (SKIRT) TO BLEND SEAMLESSLY WITH THE DEVICE'S OVERALL DIMENSIONS. STANDARD SHEET METAL BACK BOXES SHALL NOT BE USED FOR SURFACE MOUNTED DEVICES, UNLESS BOX IS HIDDEN BY (OR RECESSED IN) WALL AND CEILING ARCHITECTURAL TREATMENTS. THE APPEARANCE SHALL BE THAT THE DEVICE SITS TIGHT TO NEW AND EXISTING WALLS AND WALL/CEILING ARCHITECTURAL TREATMENTS.
4. CONTRACTOR SHALL PROVIDE SAMPLE BOXES, MOUNTING DETAIL SKETCH, AND FIELD MOCK-UP FOR ARCHITECTURAL REVIEW PRIOR TO ROUGH-IN.
5. PROVIDE REQUIRED QUANTITY OF NAC'S TO POWER THE NOTIFICATION DEVICES AND MAGNETIC DOOR HOLDERS.

Mark B. Thompson Associates
Architecture
502 South 24th Street
Philadelphia, PA 19146
215.985.1000 www.mbtarchitects.com

Keast & Hood Company of New York, PC
Structural Engineering
400 Market Street, Suite 1250
Philadelphia, PA 19106
215.625.0099 www.keasthood.com

Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

It is a violation of New York State Law for any person, unless he is acting under the direction of a licensed Professional Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Engineer or Land Surveyor is altered, the altering Engineer or Land Surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid and Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300 (DJVI #2115)
Date: July 6, 2022

Drawing Title:
Roof Plans
Fire Alarm

FA 1 0 4

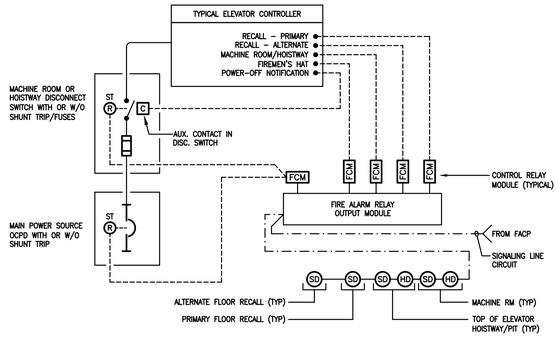
GENERAL FIRE ALARM NOTES AND SPECIFICATIONS

1. THIS SPECIFICATION DESCRIBES THE EXPANSION OF THE EXISTING SMOKE DETECTION & FIRE ALARM SYSTEM FOR THE FACILITY.
2. MANUFACTURER: EXISTING CAMPUS STANDARD – MONACO ENTERPRISES, NO EXCEPTIONS.
3. THE SYSTEM SHALL BE IN FULL COMPLIANCE WITH NATIONAL AND LOCAL CODES. THE SYSTEM SHALL INCLUDE ALL REQUIRED HARDWARE, RACEWAYS, INTERCONNECTING WIRING AND SOFTWARE TO ACCOMPLISH THE REQUIREMENTS OF THE SPECIFICATIONS AND THE CONTRACT DRAWINGS, WHETHER OR NOT SPECIFICALLY ITEMIZED HEREIN. DEVICE QUANTITIES ARE SHOWN TO REPRESENT A GENERIC SYSTEM LAYOUT AND INTERCONNECTION OF COMPONENTS. THEY DO NOT REPRESENT THE TOTAL QUANTITIES REQUIRED. PROVIDE ALL DEVICES REQUIRED BY LOCAL CODES AND THE AHJ WHETHER OR NOT SHOWN ON THE PLANS OR SPECIFIED, AT NO ADDITIONAL COST TO THE OWNER.
4. CONTRACTOR SHALL FIELD VERIFY ALL NEW DEVICE QUANTITIES, DIMENSIONS, SIZES, CLEARANCES, HEIGHTS, AND LOCATIONS PRIOR TO SUBMITTING THEIR BID PROPOSAL AND ADVISE THE ENGINEER AND THE OWNER OF ANY DISCREPANCIES BETWEEN THE CONTRACT DOCUMENTS, CODE REQUIREMENTS, FIELD CONDITIONS, AND THE AUTHORITY HAVING JURISDICTION.
5. ALL EQUIPMENT FURNISHED SHALL BE NEW AND THE LATEST STATE OF THE ART PRODUCTS OF A SINGLE MANUFACTURER, ENGAGED IN THE MANUFACTURING AND SALE OF FIRE DETECTION DEVICES FOR OVER TEN YEARS, UNLESS OTHERWISE NOTED TO REUSE EXISTING.
6. THE SYSTEM AS SPECIFIED SHALL BE SUPPLIED, INSTALLED, TESTED AND APPROVED BY THE LOCAL AUTHORITY HAVING JURISDICTION, AND TURNED OVER TO THE OWNER IN AN OPERATIONAL CONDITION.
7. THE CONTRACTOR SHALL INCLUDE IN HIS WORK, WITHOUT EXTRA COST TO THE OWNER, ANY LABOR, MATERIALS, SERVICES, APPARATUS, DRAWINGS, IN ADDITION TO CONTRACT DOCUMENTS, IN ORDER TO MEET THE FUNCTIONAL INTENT AND COMPLY WITH ALL APPLICABLE CODES, LAWS, ORDINANCES, RULES AND REGULATIONS, WHETHER OR NOT INDICATED IN THE CONSTRUCTION DOCUMENTS.
8. PROVIDE STROBES RATED 15/30/60/75/117 CD UNLESS OTHERWISE NOTED. SELECTION OF CANDELA RATINGS ARE THE RESPONSIBILITY OF THE FIRE ALARM VENDOR AND CONTRACTOR. THE CANDELA RATING OF EXISTING DEVICES BEING RE–USED SHALL BE REVIEWED AND VERIFIED FOR THE LAYOUT SHOWN ON THE DRAWINGS. PROVIDE NEW ADDITIONAL DEVICES OR MODIFY LAYOUT AS REQUIRED TO MEET APPLICABLE CODES AND STANDARDS.
9. FIELD COORDINATE LOCATION OF ALL CEILING MOUNTED DEVICES WITH LIGHT FIXTURES AND HVAC REGISTERS AND GRILLES. SMOKE DETECTORS SHALL NOT BE MOUNTED WITHIN 36" OF BATHROOM DOOR OR EDGE OF HVAC TERMINALS AND WITHIN 72" OF COOKING APPLIANCES.
10. THE CONTRACTOR IS RESPONSIBLE FOR SIZING ALL WIRE AND CABLE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, NFPA, AND VOLTAGE DROP.
11. PROVIDE CODE REQUIRED SIGNAGE AT EACH FIRE ALARM PULL STATION IF REQUIRED BY THE AHJ.
12. PROVIDE ADDITIONAL NAC POWER SUPPLIES AND CONTROL HARDWARE AS REQUIRED FOR A COMPLETE FUNCTIONAL SYSTEM.
13. SYSTEMS MUST BE PROTECTED AND MAINTAINED DURING CONSTRUCTION.
14. THE ELECTRICAL CONTRACTOR SHALL INCLUDE IN HIS BID PROPOSAL ALL COSTS INCURRED BY THE FIRE ALARM VENDOR AND FOR ALL EQUIPMENT AND DEVICES.
15. FURNISH BATTERY CALCULATIONS AND DRAWINGS FOR THE NEW SYSTEM.
16. ALL SMOKE DETECTORS SHALL BE PHOTOELECTRIC TYPE.
17. PROVIDE ACCESSIBLE WALL MOUNTED TEST/STATUS STATIONS FOR ALL NEW AND DUCT MOUNTED SMOKE DETECTORS.
18. ALL DUCT MOUNTED SMOKE DETECTORS CONCEALED ABOVE ACCESSIBLE CEILINGS SHALL HAVE THEIR LOCATION IDENTIFIED ON THE CEILING GRID.
19. LABEL ALL FIELD DEVICES, I.E. DETECTORS AND MODULES, WITH A PRINTED DEVICE ADDRESS.
20. CONDUIT COMPRESSION CONNECTORS AND COUPLINGS ARE TO BE INSULATED STEEL.
21. PROVIDE AUDIBLE ALARMS IN ALL AREAS OF THE RENOVATED SPACE(S). THE AUDIBLE ALARM NOTIFICATION DEVICES SHALL PROVIDE A SOUND PRESSURE LEVEL OF 15 DBA ABOVE THE AVERAGE AMBIENT SOUND LEVEL OR 5 DBA ABOVE THE MAXIMUM SOUND LEVEL HAVING A DURATION OF AT LEAST 60 SECONDS, WHICHEVER IS GREATER, IN EVERY SPACE. MINIMUM SOUND PRESSURE LEVEL SHALL BE 70 DBA, EXCEPT FOR MECHANICAL EQUIPMENT ROOMS WHICH SHALL BE MINIMUM 90 DBA. MAXIMUM SOUND PRESSURE: THE MAXIMUM SOUND PRESSURE LEVEL FOR AUDIBLE ALARM NOTIFICATION APPLIANCES SHALL BE 110 DBA AT THE MINIMUM HEARING DISTANCE FROM THE AUDIBLE APPLIANCE. WHERE THE AVERAGE AMBIENT NOISE IS GREATER THAN 95 DBA.
22. WHERE AUDIBLE APPLIANCES ARE PROVIDED TO PRODUCE SIGNALS FOR SLEEPING AREAS, THEY SHALL PRODUCE A LOW FREQUENCY ALARM SIGNAL THAT HAS A FUNDAMENTAL FREQUENCY OF 520HZ +– 10% AND SHALL BE A SQUARE WAVE OR PROVIDE EQUIVALENT AWAKENING ABILITY.
23. SLEEPING AREA DBA OUTPUT SHALL BE THE HIGHEST OF THREE POSSIBLE SCENARIOS MEASURED AT THE HEAD OF BED, PILLOW LEVEL: SOUND LEVEL OF AT LEAST 75 DBA, 15 DBA ABOVE AVERAGE AMBIENT SOUND, OR 5 DBA ABOVE THE MAXIMUM SOUND LEVEL WITH A DURATION OF AT LEAST 60 SECONDS.
24. WHEN PERMITTED, T–TAPPING SHALL BE AUTHORIZED IN ADVANCE BY THE FIRE ALARM VENDOR. JUNCTION BOX LOCATIONS SHALL BE NOTED ON AS–BUILT DRAWINGS BY INSTALLER.
25. CIRCUIT SHIELDS SHALL BE CONTINUOUS AND TERMINATED AT THE SPECIFIED CONTROL PANEL LOCATION ONLY UNLESS NOTED OTHERWISE ON THE FA DRAWINGS.
26. WIRES MUST NOT BE LOOPED AROUND TERMINALS. WIRES MUST BE CUT AT DEVICES AND TERMINATED INDIVIDUALLY FOR PROPER SUPERVISION.
27. FIRE ALARM WIRING MUST BE KEPT AWAY FROM OR RUN SEPARATE FROM ALL AC POWER AND HIGH VOLTAGE WIRING.
28. TOGGLE BOLTS SHALL NOT BE USED TO SUPPORT ANY FIRE ALARM DEVICES.
29. POWER LIMITED WIRING MUST BE KEPT SEPARATE FROM NON–POWER LIMITED WIRING (SEE NEC 760 FOR DETAILS).
30. ALL WIRES MUST BE TAGGED AT JUNCTION BOXES.
31. CONTROL RELAYS MUST BE LOCATED WITHIN THREE (3) FEET OF THE CONTROLLED DEVICE OR CIRCUIT.
32. ADDRESSABLE FIRE ALARM DEVICES MUST BE MOUNTED IN AN ENVIRONMENTALLY SUITABLE LOCATION WHERE TEMPERATURES ARE BETWEEN 32 AND 100 DEGREES FAHRENHEIT AND HUMIDITY IS BELOW 85%.
33. HEAT DETECTORS INSTALLED IN ELEVATOR MACHINE ROOMS OR ELEVATOR HOISTWAYS WITH THE INTENDED USE OF ELEVATOR POWER SHUNT–TRIP MUST BE LOCATED WITHIN TWO FEET OF EACH SPRINKLER HEAD.
34. DUCT SMOKE DETECTORS MUST BE MOUNTED IN AN ENVIRONMENTALLY SUITABLE LOCATION WHERE TEMPERATURES ARE BETWEEN 32 AND 100 DEGRESS FAHRENHEIT AND HUMIDITY IS BELOW 85%. IF THIS IS UNAVOIDABLE DUE TO CONSTRUCTION CONSTRAINTS, PROVIDE A WEATHERPROOF HOUSING WITH INTEGRAL HEATER (120V), UNLESS DETECTOR IS RATED FOR –4 DEG F.
35. REMOTE TEST/ALARM STATIONS SHALL BE MOUNTED INDOORS AS TO FACILITATE THE OPTIMUM VIEWING PATH.
36. FAN SHUTDOWN RELAYS SHALL BE MOUNTED WITHIN 3 FEET OF CONTROLLED APPARATUS.
37. EXACT LOCATION OF DUCT MOUNTED SMOKE DETECTORS, TEST STATIONS AND SHUTDOWN RELAYS TO BE DETERMINED AT INSTALLATION AND NOTED ON THE AS–BUILT RECORD DRAWINGS.
38. PROVIDE STROBES RATED FOR 110 CD IN ALL ADA DESIGNATED SLEEPING AND LIVING AREAS. PROVIDE STROBES RATED FOR 15 CD IN ALL INDIVIDUAL UNIT ADA BATHROOMS.
39. PROVIDE FIRE ALARM SPEAKERS AND STROBES IN EACH SLEEPING AND LIVING AREA OF DWELLING UNITS.
40. STROBES SHALL BE MOUNTED 80" ABOVE FINISH FLOOR OR 6" BELOW CEILING, WHICH EVER IS LOWER.
41. MANUAL PULL STATIONS SHALL BE MOUNTED A MINIMUM 40" ABOVE FINISHED FLOOR AND A MAXIMUM OF 48" ABOVE FINISHED FLOOR TO CENTER OF DEVICE, OR AS DIRECTED BY THE AHJ.
42. ALL SMOKE DETECTORS SHALL BE MOUNTED A SUFFICIENT DISTANCE AWAY FROM SOURCES OF MIST AND STEAM.
43. PROVIDE EMERGENCY LIGHTING FIXTURE AND SMOKE DETECTOR AT EACH FIRE ALARM CONTROL PANEL (FACP, NAC, TRAN, ETC.).
44. PROVIDE TERMINAL CABINETS WITH HINGED, LOCKABLE RED COVERS AT ALL JUNCTION AND SPLICE POINTS. ALL CONDUCTOR SPLICES AND TERMINATIONS SHALL BE MADE ON SCREW–TYPE TERMINAL BLOCKS. WIRE NUTS AND BUTT OR CRIMP TYPE CONNECTORS SHALL NOT BE USED. ALL TERMINALS WITHIN A TERMINAL CABINET SHALL BE PROPERLY IDENTIFIED.
45. FIRE ALARM DEVICES LOCATED IN THE DWELLING UNITS (APARTMENTS) CAN BE CEILING OR WALL MOUNTED IN COMPLIANCE WITH NFPA 72 AND AHJ. COORDINATE ALL WALL MOUNTED DEVICES WITH THE ARCHITECT PRIOR TO INSTALLATION. ALL APARTMENT DEVICES TO BE WHITE IN COLOR.
46. PROVIDE WIRE AND CABLE COLOR CODING AS REQUIRED BY THE AHJ.
47. PROVIDE SLC LINE ISOLATION MODULES FOR EACH FLOOR.
48. AUDIBLE/VISUAL DEVICES ON THE EXTERIOR OF THE BUILDING SHALL BE WEATHERPROOF.
49. MANUAL FIRE ALARM BOXES (PULL STATIONS) NOT MORE THAN 5 FEET FROM ENTRANCE TO EACH EXIT.
50. PROVIDE VISIBLE ALARM NOTIFICATION APPLIANCES (STROBES) IN THE FOLLOWING AREAS: PUBLIC AND COMMON AREAS, OPEN OFFICE SPACES, CONFERENCE ROOMS, MUSIC ROOMS, COMMON CORRIDORS, LOBBIES, TOILET ROOMS, LOCKER ROOMS, MECH/ELEC ROOMS, FIRE PUMP ROOM, TRANSFORMER VAULT, ROOMS DESIGNATED ADA, AND TRASH ROOMS.
51. PROVIDE SMOKE DETECTORS WHERE SHOWN ON THE DRAWINGS. PROVIDE ADDITIONAL DETECTORS AS REQUIRED BY THE APPLICABLE CODES.
52. ALL BATTERIES SHALL BE SIZED FOR 15 MINUTES OF ALARM AFTER 24 HOURS IN STANDBY.
53. DUCT SMOKE DETECTORS
    - THE DETECTOR SHALL BE MOUNTED IN A DUCT DETECTOR HOUSING LISTED FOR THAT PURPOSE. PROVIDE REMOTE TEST SWITCH, RELAY, AND LED REMOTE INDICATOR. THE DUCT DETECTOR SHALL BE SUPPLIED WITH THE APPROPRIATE SAMPLING TUBES TO FIT THE INSTALLATION.
    - THE DUCT HOUSING COVER SHALL INCLUDE A TEST PORT FOR FUNCTIONAL TESTING OF THE DETECTOR WITHOUT COVER REMOVAL. THE DUCT HOUSING SHALL INCLUDE A COVER REMOVAL SWITCH CAPABLE OF INDICATING COVER REMOVAL STATUS TO THE FIRE ALARM CONTROL PANEL.
    - THE INTELLIGENT DUCT DETECTOR SHALL HAVE A DUCT HOUSING WITH AN ON–BOARD RELAY.
    - PROVIDE REMOTE TEST STATION WITH ALARM LED.
    - PROVIDE WEATHERPROOF AND HEATED ENCLOSURE AS REQUIRED FOR EXTERIOR LOCATIONS (ROOF, ETC.).
55. PROVIDE ALL CONTROL WIRING, DEVICES, AND RELAYS TO SHUTDOWN THE ASSOCIATED MECHANICAL EQUIPMENT.
56. PROVIDE ALL CONTROL WIRING, DEVICES, AND RELAYS TO "MUTE" THE SOUND SYSTEMS AND DISABLE THE ELECTRONIC ACOUSTIC ENHANCEMENT SYSTEM.
57. PROVIDE ALL CONTROL WIRING, DEVICES, AND RELAYS TO UNLOCK SECURED DOORS UPON GENERAL ALARM. REFERENCE ARCHITECTURAL AND INTERIOR DESIGN DRAWINGS FOR COORDINATION.
58. COORDINATE DACT CONTACT ID COMMUNICATION FORMAT POINT (DEVICE/LOCATION) REPORTING WITH OWNERS CMS SERVICE.
59. ALL REMOTE FIRE ALARM DEVICES, MODULES, AND EQUIPMENT CONCEALED ABOVE ACCESSIBLE CEILINGS SHALL HAVE LOCATIONS CLEARLY IDENTIFIED ON THE AS–BUILT DRAWINGS.
60. PROVIDE ALL DEVICES AND WIRING FOR ACTIVATION OF THE ELEVATOR SHUNT TRIP BREAKERS.
61. ALL FIRE ALARM WIRING TO BE INSTALLED IN CONDUIT.
62. MAGNETIC DOOR HOLDER

    PROVIDE 24 VOLT MAGNETIC DOOR HOLDER WITH INTEGRAL DIODES TO REDUCE BUZZING. PROVIDE MAGNETIC DOOR HOLDERS AS SHOWN ON DRAWINGS AND WHERE REQUIRED BY AUTHORITY HAVING JURISDICTION. MAGNETIC DOOR HOLDER SHALL BE SEMI–FLUSH MOUNTED FOR EACH DOOR. COORDINATE EQUIPMENT WITH THE DOOR HARDWARE. REFERENCE ARCHITECTURAL DRAWINGS, DETAILS, AND SPECIFICATIONS FOR TYPE, MOUNTING DETAILS, ETC. PRIOR TO ROUGH–IN.
63. NAC PANEL

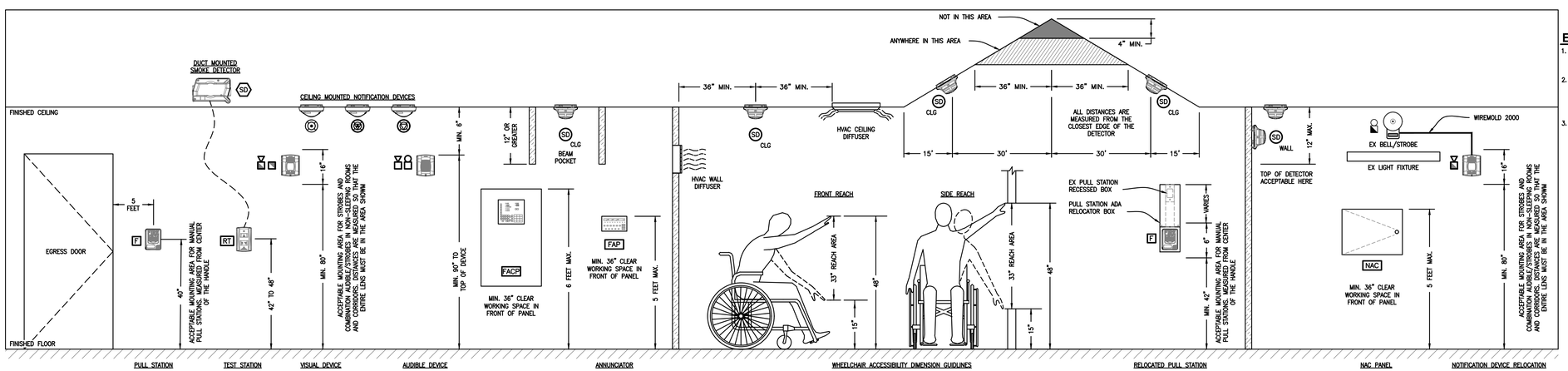
    POWER EXTENDER PANEL SHALL BE A STAND–ALONE PANEL CAPABLE OF POWERING A MINIMUM OF 4 NOTIFICATION APPLIANCE CIRCUITS. NOTIFICATION APPLIANCE CIRCUITS SHALL BE CLASS A STYLE Z RATED AT 2 AMPS EACH. PANEL SHALL PROVIDE CAPABILITY TO BE EXPANDED TO 8 NOTIFICATION APPLIANCE CIRCUITS. NAC PANELS SHALL ALSO POWER THE MAGNETIC DOOR HOLDERS.
64. SURFACE MOUNTED DEVICES

    SURFACE MOUNTED DEVICES SHALL BE PROVIDED WITH MANUFACTURER'S CUSTOM SURFACE MOUNT BACK BOX (SKIRT) TO BLEND SEAMLESSLY WITH THE DEVICE'S OVERALL DIMENSIONS. STANDARD SHEET METAL BACK BOXES SHALL NOT BE USED FOR SURFACE MOUNTED DEVICES, UNLESS BOX IS HIDDEN BY (OR RECESSED IN) WALL AND CEILING ARCHITECTURAL TREATMENTS. THE APPEARANCE SHALL BE THAT THE DEVICE SITS TIGHT TO NEW AND EXISTING WALLS AND WALL/CEILING ARCHITECTURAL TREATMENTS.



TYPICAL ELEVATOR CONTROL DIAGRAM

N.T.S.



FIRE ALARM DEVICES AND EQUIPMENT - MOUNTING HEIGHTS AND DIMENSIONS

NTS

EXISTING FIRE ALARM DEVICES

1. ALL EXISTING FIRE ALARM PULL STATIONS BEING RETAINED AND RE–USED SHALL BE LOWERED TO COMPLY WITH ADA ACCESSIBILITY REQUIREMENTS AND SHALL MATCH THE INSTALLATION OF NEW DEVICES.
2. ALL EXISTING DEVICES LOCATED WHERE NEW WALL FINISHES, FURRINGS, OR MATERIALS ARE APPLIED SHALL BE REMOVED TO ACCOMMODATE THE GENERAL CONSTRUCTION AND RE–INSTALLED IN SAME LOCATION, UNLESS OTHERWISE NOTED. PROVIDE BACKBOX AND CONDUIT EXTENSIONS AS REQUIRED.
3. ALL EXISTING DEVICES SHOWN TO BE RE–USED SHALL BE RELOCATED AS SHOWN. EXTEND AND RECONNECT WIRING. DEVICES SHALL BE REMOVED AND RE–INSTALLED TO ACCOMMODATE THE GENERAL CONSTRUCTION WORK.

Mark B. Thompson Associates
Architecture
502 South 24th Street
Philadelphia, PA 19146
215.985.1000 www.mbtarchitects.com

Keast & Hood Company of New York, PC
Structural Engineering
400 Market Street, Suite 1250
Philadelphia, PA 19106
215.625.0099 www.keasthood.com

Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

It is a violation of New York State Law for any person, unless he is acting under the direction of a licensed Professional Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Engineer or Land Surveyor is altered, the altering Engineer or Land Surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid and Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300 (DJVI #2115)
Date: July 6, 2022

Drawing Title:
Fire Alarm Details & Notes

FA 2 0 0