ELECTRICAL SYMBOLS

(ALL SYMBOLS MAY NOT BE USED ON THIS PROJECT)

- 2'x4' LED LIGHT FIXTURE (A – INDICATES FIXTURE TYPE)
- 2'x4' EMERGENCY LED LIGHT FIXTURE (AE – INDICATES FIXTURE TYPE)
- 2'x2' LED LIGHT FIXTURE
- 2'x2' EMERGENCY LED LIGHT FIXTURE
- 5"x4' LED LIGHT FIXTURE
- 5"x4' EMERGENCY LED LIGHT FIXTURE
- DOWNLIGHT LIGHT FIXTURE
- EMERGENCY DOWNLIGHT LIGHT FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- WALL MOUNTED EMERGENCY LIGHT FIXTURE
- EXIT SIGN (SHADED AREA INDICATES FACE) (ARROW INDICATES DIRECTION) (XW – WALL MOUNTED) (XC – CEILING MOUTED)
- DUAL HEAD EMERGENCY BATTERY BACKUP
- DUAL REMOTE HEADS
- SWITCH, SINGLE POLE TOGGLE
- SWITCH, 3–WAY TOGGLE
- SWITCH, 4–WAY TOGGLE
- SWITCH, DIMMER
- SWITCH, KEY OPERATED
- SWITCH, PILOT LIGHT
- SWITCH, LOW VOLTAGE
- FRACTIONAL HP STARTER
- OCCUPANCY SENSOR – P – PASSIVE INFRARED; U – ULTRASONIC; D – DUAL TECHNOLOGY
- SITE LIGHT
- DAYLIGHT SENSOR
- RECEPTACLE, DUPLEX – (K – KEY LOCKING STEEL COVER) (S – SURGE PROTECTOR) (L – LOCKING COVER) (+ – MOUNT 8" A.F.F.) (T – TAMPER PROOF) (U – DUPLEX WITH USB PORT)
- RECEPTACLE, QUAD
- RECEPTACLE, SINGLE
- RECEPTACLE, GFI – (WP–WEATHERPROOF IN–USE COVER)
- RECEPTACLE, SPECIAL (NEMA CONFIGURATION INDICATED)
- RECEPTACLE, DUPLEX FLOOR MOUNT (POKE–THRU)
- RECEPTACLE, CEILING
- FLOOR BOX WITH (2) DUPLEX RECEPTACLES
- DUPLEX RECEPTACLE AND CATV RECEPTACLE
- JUNCTION BOX
- JUNCTION BOX, FLOOR MOUNTED
- JUNCTION BOX, TELEPHONE
- JUNCTION BOX, DATA
- JUNCTION BOX, TELEPHONE/DATA
- JUNCTION BOX, POWER
- ELECTRIC FLUSH VALVE TRANSFORMER JUNCTION BOX – ABOVE CEILING
- LIGHTING/RECEPTACLE PANEL – SURFACE MOUNTED
- LIGHTING/RECEPTACLE PANEL – FLUSH MOUNTED
- EQUIPMENT CABINET OR PANEL – SURFACE MOUNTED
- EQUIPMENT CABINET OR PANEL – FLUSH MOUNTED
- CIRCUIT BREAKER IN ENCLOSURE
- CIRCUIT BREAKER
- ELECTRIC UTILITY METER
- INTERMEDIATE DISTRIBUTION FRAME
- MAIN DISTRIBUTION FRAME
- CURRENT TRANSFORMER
- GENERATOR
- TRANSFORMER
- POTENTIAL TRANSFORMER
- MV SWITCH GEAR
- GROUND ROD (10' x 3/4")
- MOTOR
- NON–FUSED DISCONNECT SWITCH – (XX/XX/XX – INDICATES AMPS/VOLTS/PHASE) 30A, 3P UNLESS OTHERWISE NOTED
- FUSED DISCONNECT SWITCH
- COMBINATION STARTER/DISCONNECT SWITCH
- MAGNETIC STARTER
- KEY OPERATED CONTROL STATION
- MAGNETIC CONTACTOR
- PHOTOCELL
- TIME CLOCK SWITCH
- RELAY
- HAND DRYER
- GROUNDING ELECTRODE
- NON FUSED DISCONNECT SWITCH
- FUSED DISCONNECT SWITCH
- FUSED POTENTIAL TRANSFORMER

- AUTOMATIC TRANSFER SWITCH – L – LOAD; N – NORMAL POWER; E – EMERGENCY POWER
- LIGHTNING ARRESTER
- SPD – SURGE PROTECTIVE DEVICE WITH DISCONNECT
- HEAT TRACE CABLING
- EXPOSED RACEWAY
- LOW VOLTAGE WIRING
- CONDUIT CONCEALED IN WALLS OR CEILING
- EM – EMERGENCY CIRCUIT
- CONDUIT CONCEALED IN OR UNDER FLOOR OR UNDERGROUND
- HOMERUN – CIRCUIT & PANEL AS INDICATED (2#12 + 1#12G, 3/4"C, UNLESS OTHERWISE NOTED)
- CT – CABLE TRAY
- W – SURFACE RACEWAY, WIREMOLD
- F – FIRE ALARM PULL STATION
- A – ALYSSA LAW MASS NOTIFICATION PULL STATION
- 30cd / F – FIRE ALARM STROBE LIGHT – (XXcd – CANDELA RATING)
- A – ALYSSA LAW MASS NOTIFICATION STROBE (WP – WEATHERPROOF)
- F – FIRE ALARM/BELL
- 30cd – COMBINATION FIRE ALARM SPEAKER/STROBE – (XXcd – CANDELA RATING)
- FIRE ALARM CODE BLUE
- S – PHOTO–ELECTRIC TYPE SMOKE DETECTOR
- H – HEAT DETECTOR (COMBINATION FT/RR U.O.N., AC–ABOVE CEILING.)
- HS – COMBINATION HEAT/SMOKE DETECTOR
- S – D – PHOTO–ELECTRIC TYPE DUCT SMOKE DETECTOR
- FACP – FIRE ALARM CONTROL PANEL
- RAP – REMOTE ANNUNICATOR PANEL
- FS – SPRINKLER FLOW SWITCH
- TS – SPRINKLER TAMPER SWITCH
- FIRE ALARM GONG
- FAAP – FIRE ALARM ANNUNCIATION PANEL
- GRAP – GENERATOR REMOTE ANNUNCIATION PANEL
- CO – D – CARBON MONOXIDE TYPE DUCT DETECTOR (WP – WEATHERPROOF)
- CO – CARBON MONOXIDE DETECTOR
- NO2 – NITROGEN DIOXIDE DETECTOR
- CO2 – CARBON DIOXIDE DETECTOR
- G – EMERGENCY GAS SHUTOFF
- B – EMERGENCY BOILER SHUTOFF
- DOOR RELEASE
- K – REMOTE KEY PAD
- DL – ELECTRONIC DOOR LOCK
- M – MAGNETIC DOOR HOLDER
- KF – KEY FOB
- PANIC ALARM BUTTON
- SECURITY/VIDEO CAMERA (WP – WEATHERPROOF) (PTZ – PAN, TILT, ZOOM)
- CR – CARD READER
- DC – ELECTRONIC DOOR CONTACT
- RX – REQUEST TO EXIT PUSH BUTTON
- IR – INFRARED SENSOR – REQUEST TO EXIT
- MS – MOTION SENSOR
- DUAL CCTV CAMERA ASSEMBLY W/ DOME COVER
- SECURITY MOTION SENSOR
- VOIP OUTLET
- 2 – DATA OUTLET – (2 – # OF DROPS)
- DATA OUTLET – CEILING MOUNTED
- COMBINATION VOIP AND DATA OUTLET
- SOUND SYSTEM WALL PHONE
- S – MASS NOTIFICATION SPEAKER
- SPEAKER – CEILING MOUNTED
- SPEAKER – WALL MOUNTED (WP – WEATHERPROOF)
- SC – CLOCK/SPEAKER – WALL MOUNTED
- MICROPHONE
- CS – CALL SWITCH
- SV – SOUND VOLUME CONTROL
- IC – INTERCOM
- CLOCK/SPEAKER BAFFLE
- WALL MOUNTED CLOCK
- MOTOR STARTER WITH THERMAL OVERLOAD RELAY
- INDICATES EXISTING TO BE DEMOLISHED
- DENOTES POINT OF CONNECTION OF EXISTING TO NEW
- XX / X – EQUIPMENT DESIGNATION TAG
- WIFI – WIRELESS FIDELITY (WIFI)
- PR – PRIMARY RECALL
- SR – SECONDARY RECALL
- FH – FIRE HAT
- M – MOTORIZED DAMPER

ABBREVIATIONS

%	PERCENT
&	AND
ø, PH	PHASE
°C.	CENTIGRADE DEGREES
°F.	FAHRENHEIT DEGREES
1/C	SINGLE CONDUCTOR
A.I.C.	AMPERES INTERRUPTING CAPACITY
A.T.C.	AUTOMATIC TEMPERATURE CONTROL
A.T.S.	AUTOMATIC TRANSFER SWITCH
A/C.	AIR CONDITION
AC	ALTERNATING CURRENT
ADDL.	ADDITIONAL
AF	AMPERE FRAME
A–F	AMPERE FUSE
AFCI	ARC FAULT CIRCUIT INTERRUPTER
AFF/A.F.F.	ABOVE FINISHED FLOOR
AFG/A.F.G.	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AL.	ALUMINUM
AMP., A.	AMPERE
APPROX.	APPROXIMATE
ARCH.	ARCHITECTURAL
AT	AMPERE TRIP
ASY.	ASYMMETRICAL
AUX.	AUXILIARY
B.F.C.	BELOW FINISHED CEILING
BKR.	BREAKER
BLDG.	BUILDING
BSMT.	BASEMENT
C/C.	CONDUIT
C OF U/CFU	COEFFICIENT OF UTILIZATION
C.T., CT	CURRENT TRANSFORMER
CB, CIR. BKR., C/B	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT., CIR, CIRC.	CIRCUIT
CL.	CLOSET
CLG.	CEILING
CO./Co.	COMPANY
COAX.	COAXIAL CABLE
COL.	COLUMN
COMP.	COMPLETE
CONC.	CONCRETE
CONDR.	CONDUCTOR
CONN	CONNECTED, CONNECTOR
CONST.	CONSTRUCTION
CONT.	CONTINUATION
CONTR.	CONTRACTOR
COORD.	COORDINATE
CORR.	CORRIDOR
CPU	CENTRAL PROCESSING UNIT
Cu	COPPER
CU	CONDENSING UNIT
CU. FT.	CUBIC FEET
CW	CLOCKWISE
D	DEPTH
DEM	DEMAND
DIA.	DIAMETER
DISC.	DISCONNECT SWITCH
DIV.	DIVISION
DN.	DOWN
DPST	DOUBLE POLE SINGLE THROW
DRAW., DWG.	DRAWING
E.C.	ELECTRICAL CONTRACTOR
E.F., EF	EXHAUST FAN
E.H.	ELECTRIC HEATER
E.P.R.	ETHYLENE PROPYLENE RUBBER
E.W.	EACH WAY
EA.	EACH
EHT	ELECTRICAL HEAT TRACING CABLE
ELEC. CLO.	ELECTRICAL CLOSET
ELEC./ELECT.	ELECTRIC
ELEV./EL.	ELEVATION/ELEVATOR
EM	EMERGENCY POWER PACK COMPLETE
EMT	ELECTRICAL METALLIC TUBING
ENCL.	ENCLOSURE
ENT.	ENTRANCE
EMERG.	EMERGENCY
EQUIP.	EQUIPMENT
EST.	ESTIMATE
EX./E	EXISTING
EXT.	EXTERNAL/EXTERIOR
F.A.	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
F.E.	FIRE EXTINGUISHER
F.O.	FIBER OPTIC
FDN.	FOUNDATION
FIG.	FIGURE
FIN.	FINISH/FINISHED
FIXT.	FIXTURE
FL.	FLOOR
FLA	FULL LOAD AMPERES
FLEX.	FLEXIBLE
F.L.M.C.	FLEXIBLE LIQUIDTIGHT METALLIC CONDUIT
FLUOR.	FLUORESCENT
FC	FOOTCANDLE
FT	FAULT TRIP
FT.	FEET
FU.	FUSE/FUSED
G.C.	GENERAL CONTRACTOR
GA.	GAGE/GAUGE
GALV.	GALVANIZED
GEN.	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
GRD, GND., G	GROUND
GTD	GENERATOR TRANSFER DEVICE
H.I.D.	HIGH INTENSITY DISCHARGE
H.O.A.	HAND OFF AUTO
H.P.S.	HIGH PRESSURE SODIUM
HEX.	HEXAGON
HH	HANDHOLE
HORIZ.	HORIZONTAL
H.P./HP.	HORSEPOWER
HPF	HIGH POWER FACTOR
HT.	HEIGHT
HWH	HOT WATER HEATER
HZ.	HERTZ
IMC	INTERMEDIATE CONDUIT
INC.	INCANDESCENT
INSUL.	INSULATION/INSULATED
ISOL.	ISOLATED
IAP	INTRUSION ALARM PANEL
IAKP	INTRUSION ALARM KEYPAD
JB, J	JUNCTION BOX
KAIC	THOUSAND AMPERES INTERRUPTING CAPACITY
KVAR	KILOVAR
KO	KNOCKOUT
kW	KILOWATT
kCMIL	THOUSAND CIRCULAR MILS
KWH	KILOWATT HOUR
KHZ	KILOHERTZ
kV	KILOVOLT
kVA	KILOVOLT–AMPERE
LG.	LENGTH
LF.	LINEAR FEET
LG.	LONG
LRA	LOCKED ROTOR AMPERES
LT.	LIGHT
LTG.	LIGHTING
M.L.O.	MAIN LUGS ONLY
M/C	MULTI–CONDUCTOR
MANUF., MFR.	MANUFACTURER
MAX.	MAXIMUM
M.B./MB	MAIN BREAKER
M.C.B./MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCM	THOUSAND CIRCULAR MILLS
MDS	MAIN DISTRIBUTION SWITCHBOARD
MDP	MAIN DISTRIBUTION PANEL
MECH.	MECHANICAL
MET.	METALLIC
MF	MAINTENANCE FACTOR
MG	MOTOR GENERATOR
MIN.	MINIMUM
MISC.	MISCELLANEOUS
MTD.	MOUNTED
MTG.	MOUNTING
N	NEUTRAL
NC	NORMAL CLOSED
NEC/N.E.C.	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER ASSOCIATION
N.I.C./NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
No., #	NUMBER
N.T.S./NTS	NOT TO SCALE
NL	NIGHT LIGHT CIRCUT
N.F.	NON FUSED
P	POLE
PC	PHOTOCELL
P.I.L.C.	PAPER INSULATED LEAD COVERED
PB, P	PULL BOX, BREAKER OR SWITCH POLE
PNL.	PANELBOARD
PORC.	PORCELAIN
PRI.	PRIMARY
POE	POWER OVER ETHERNET
PTD.	PAINTED
PVC	POLYVINYLCHLORIDE
R	RADIUS
RAP	REMOTE ANNUNCIATOR PANEL
R.C.SW.	REMOTE CONTROL SWITCH
REBAR.	REINFORCING BAR
REC.	RECESSED, RECEPTACLE
RECEPT.	RECEPTACLES
REQ'D	REQUIRED
REV.	REVISE/REVISION
RF	RADIO FREQUENCY
RGA	REMOTE GENERATOR ANNUNCIATOR
RGS	RIGID GALVANIZED STEEL CONDUIT
RM.	ROOM
RT	ROOFTOP
S.F.	SQUARE FEET
S.S.	STAINLESS STEEL
SEC.	SECONDARY
SECT.	SECTION
SEP.	SEPARATE
SERV.	SERVICE
SHT.	SHEET
SIG.	SIGNAL
SK.	SKETCH
SN	SOLID NEUTRAL
SPECS.	SPECIFICATIONS
SPD	SURGE PROTECTIVE DEVICE
SQ.	SQUARE
SSRV	SOLID STATE REDUCED VOLTAGE STARTER
STA.	STATION
SURF.	SURFACE
SUSP.	SUSPENDED
SW.	SWITCH
SWBD.	SWITCHBOARD
SYM.	SYMMETRICAL
T.C./TC	TIME CLOCK
TEL.	TELEPHONE
THRU	THROUGH
TRANS./XFMR	TRANSFORMER
TYP.	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
UH	UNIT HEATER
UL	UNDERWRITING LABORATORIES
UPS	UNINTERRUPTIBLE POWER SOURCE
V	VOLTAGE, VOLTS
VD	VOLTAGE DROP
VERT.	VERTICAL
V.I.F./VIF	VERIFY IN FIELD
VS.	VERSUS
W	WIRE
W.I.	WROUGHT IRON
W/	WITH
W/O	WITHOUT
WD.	WIDE
WP	WEATHER PROOF
XLPE	CROSSLINKED POLYETHYLENE

GENERAL NOTES

1. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED AND GROUNDED IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE, THE SPECIFICATIONS FOR GROUNDING, THE CONTRACT DRAWINGS, FEDERAL, STATE AND LOCAL CODES AND TO THE SATISFACTION OF THE ENGINEER. ALL GROUNDING CONNECTIONS TO BE MADE BY THE CADWELD PROCESS OR EQUAL.
2. ALL CONDUITS AND ELECTRICAL EQUIPMENT ARE SHOWN DIAGRAMMATICALLY AND MAY BE ALTERED TO SUIT FIELD CONDITIONS PENDING ENGINEER'S APPROVAL.
3. ALL PLANS ELEVATIONS AND CLEARANCES SHALL BE CHECKED IN THE FIELD PRIOR TO INSTALLATION TO AVOID ALL OBSTRUCTIONS.
4. ALL JUNCTION BOXES SHALL BE OF SUFFICIENT SIZE TO PROVIDE FREE SPACE FOR ALL CONDUCTORS ENCLOSED IN THE BOX AND SHALL BE SIZED WITH THE LATEST N.E.C. ARTICLE 314.
5. ALL DIMENSIONS ARE APPROXIMATE AND MUST BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
6. CONTRACTOR SHALL CHECK FOR OBSTRUCTIONS AND CLEAN OUT ALL CONDUITS PRIOR TO PULLING IN CABLES.
7. PHASING OF ALL ELECTRICAL CONNECTIONS SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR AND SHALL BE MADE IN ACCORDANCE WITH THE LOCAL UTILITY COMPANY REQUIREMENTS.
8. ALL HOLES THROUGH STRUCTURE TO ACCOMMODATE ELECTRICAL CONDUITS SHALL BE CORE DRILLED AND SEALED WITH NON–SHRINK GROUTING COMPOUND. WHERE RACEWAYS PASS THROUGH FLOORS AND FIRE RATED WALLS AND/OR PARTITIONS, CONTRACTOR SHALL FURNISH UL RATED FIREPROOFING MATERIAL TO BE INSTALLED IN STRICT COMPLIANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND RESTORE ORIGINAL FIRE RATING.
9. THE CONTRACTOR SHALL FURNISH STRUCTURAL SUPPORT FOR ALL EQUIPMENT. FOR SURFACE MOUNTED EQUIPMENT, SUCH AS PANELBOARDS, STARTERS, SAFETY SWITCHES AND THE LIKE, PROVIDE "UNISTRUT" WITH CORROSION RESISTANT MOUNTING HARDWARE.
10. NO CONDUIT SMALLER THAN 3/4" SHALL BE USED UNLESS OTHERWISE SPECIFIED.
11. ALL JOINTS BETWEEN DISSIMILAR METALS SHALL BE COATED WITH A LITHIUM BASED THREAD LUBRICANT.
12. RACEWAYS SHALL BE PROVIDED WITH AN APPROVED EXPANSION–DEFLECTION FITTINGS WHERE CROSSING BUILDING CONSTRUCTION EXPANSION JOINTS AND WHERE NECESSARY TO COMPENSATE FOR THERMAL EXPANSION AND CONTRACTION.
13. FURNISH AND INSTALL CONCRETE PADS FOR ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT.
14. PRIOR TO SUBMITTING PROPOSALS, BIDDERS ARE INSTRUCTED TO REVIEW PLANS AND SPECIFICATIONS OF ALL CONCURRENT WORK TO DETERMINE QUANTITIES OF LABOR AND MATERIAL NECESSARY TO INSTALL, CONNECT, AND TEST MATERIAL FURNISHED UNDER THESE SPECIFICATIONS. ANY ADDITIONAL LABOR AND MATERIAL REQUIRED DUE TO FAILURE OF THE CONTRACTOR TO FOLLOW THESE INSTRUCTIONS, SHALL BE FURNISHED AT NO ADDITIONAL COST TO THE OWNER.
15. THE ELECTRICAL CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF ALL OTHER CONTRACTORS EMPLOYED ON THIS PROJECT PRIOR TO ROUGHING IN. THE CONTRACTOR SHALL OBTAIN AND REVIEW APPROVED SHOP DRAWINGS OF ALL OTHER TRADES AFFECTING ALL ELECTRICAL WORK.
16. THE CONTRACTOR SHALL CHECK AND TORQUE TIGHTEN ALL CONNECTIONS, WHETHER FACTORY MADE OR MADE UNDER THIS CONTRACT, USING ACCURATELY CALIBRATED TOOLS. TORQUE SETTINGS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFIC RECOMMENDATIONS.
17. INSTALL AN 1/8" INCH POLY PROPYLENE (PULL STRING) IN ALL SPARE CONDUITS.
18. INSULATED COPPER CONDUCTORS FOR EQUIPMENT GROUNDING SHALL BE ROUTED WITH ALL POWER CONDUCTORS.
19. CONDUCTORS USED FOR CONTROL WIRING SHALL BE AT LEAST #14AWG AND ALL POWER CONDUCTORS SHALL BE AT LEAST #12AWG UNLESS OTHERWISE SPECIFIED.
20. CONTRACTOR SHALL PROVIDE ALL NECESSARY SAFETY EQUIPMENT AND EXERCISE PRECAUTIONARY PROCEDURES WHEN WORKING WITH OR NEAR ENERGIZED EQUIPMENT.
21. CONTRACTOR SHALL REMOVE ALL OBSOLETE EQUIPMENT, CONDUITS AND WIRING, EXCEPT WHERE OTHERWISE NOTED.
22. INTERRUPTION OF SERVICE SHALL BE SCHEDULED AND COORDINATED WITH THE OWNER AND HELD TO MINIMUM IN ORDER TO MAINTAIN THE PROPER OPERATION OF THE FACILITY.
23. WHEN CONDUIT OR CABLE RUNS FOR POWER AND LIGHTING EXCEED 60FT. FOR 120VOLT OR 120FT. FOR 277VOLT TO CENTER OF LOAD, #10AWG WIRE OR LARGER SHALL BE USED AS REQUIRED FOR A MAXIMUM 3% VOLTAGE DROP AT FULL CIRCUIT CAPACITY.
24. HEAVIER LINE WEIGHT SYMBOLS AND TEXT INDICATE NEW WORK UNLESS OTHERWISE NOTED. LIGHT LINE WEIGHT SYMBOLS AND ITALICIZED TEXT INDICATE EXISTING CONDITIONS TO REMAIN UNLESS OTHERWISE NOTED.
25. CONTRACTOR SHALL SALVAGE ALL DEMOLISHED EQUIPMENT AND VERIFY WITH OWNER PRIOR TO DISPOSING OF THE DEMOLISHED EQUIPMENT.
26. CONTRACTOR SHALL COORDINATE THE REMOVAL AND INSTALLATION OF ALL DEVICES ASSOCIATED WITH SURVEILLANCE, COMMUNICATIONS, AND CONTROL OF THE FACILITY WITH THE OWNER.
27. THE CONTRACTOR SHALL PROVIDE A THOROUGH EVALUATION OF THE EXISTING PROJECT SITE AND BUILDING CONDITIONS. WHERE EXISTING CONDITIONS WARRANT CHANGES TO ACCOMMODATE THE NEW WORK PLANNED, THE CONTRACTOR SHALL PROVIDE THE REQUIRED WORK AND MATERIALS TO INCLUDE ANY AND ALL ALTERATIONS, DEMOLITION, PATCHING, AND REPAIRING OF THE EXISTING CONDITIONS TO ACCOMMODATE THE NEW CONSTRUCTION WORK AS A COMPLETE INSTALLATION.

STANDARD MOUNTING HEIGHTS

MOUNTING HEIGHTS FOR EQUIPMENT SHALL BE AS LISTED BELOW UNLESS OTHERWISE SPECIFICALLY LABELED. (UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TO THE CENTERLINE OF BOXES.)

SWITCHES	3'–8" A.F.F.
TELEPHONE – WALL TYPE	3'–8" A.F.F.
TELEPHONE – DESK TYPE	1'–6" A.F.F.
RECEPTACLE – GENERAL OFFICE	1'–6" A.F.F.
RECEPTACLE – MECHANICAL ROOMS	3'–0" A.F.F.
FIRE ALARM GONG OR SPEAKER	6'–8" TO BOTTOM OF GONG OR SPEAKER
FIRE ALARM PULL STATION	3'–8" A.F.F. TO CENTER OF PULL
FIRE ALARM STROBE LIGHT	6'–8" A.F.F. TO BOTTOM OF STROBE
MOTION SENSOR	6'–5" A.F.F.
PANELBOARDS	6'–0" TO TOP OF CIRCUIT BREAKER MAX.
EXIT LIGHT	ABOVE DOORS (MIN. 7'–6" A.F.F. CLEAR)
KEY PAD (REMOTE)	3'–8" A.F.F.
DATA OUTLET	1'–6" A.F.F.
VOLUME CONTROL/CALL SWITCH	3'–8" A.F.F.
TIMER (NON–ADA)	4'–6" A.F.F.

WIRE & CONDUIT SIZING SCHEDULE

WIRE SIZE (AWG/KCMIL)			NO. OF WIRES & CONDUIT SIZE IN INCHES		
CKT. TYPE	CONDUCTOR & NEUTRAL	GROUND	A 2W+G	B 3W+G	C 4W+G
1	14	14	3/4	3/4	3/4
2	12	12	3/4	3/4	3/4
3	10	10	3/4	3/4	3/4
4	8	10	3/4	3/4	3/4
5	6	10	3/4	1	1
6	4	10	1	1–1/4	1–1/4
7	4	8	1	1–1/4	1–1/4
8	3	8	1–1/4	1–1/4	1–1/4
9	2	8	1–1/4	1–1/4	1–1/2
10	1	6	1–1/4	1–1/2	2
11	1	6	1–1/4	1–1/2	2
12	1/0	6	1–1/2	2	2
13	2/0	6	2	2	2
14	3/0	6	2	2	2–1/2
15	4/0	2	2	2–1/2	2–1/2
16	250 kCMIL	2	2	2–1/2	2–1/2
17	300 kCMIL	2	2	2–1/2	2–1/2
18	350 kCMIL	2	2	2–1/2	3
19	400 kCMIL	1/0	2	2–1/2	3
20	500 kCMIL	1/0	2–1/2	3	3–1/2
21	(2) 4/0	(2) 2	–––	(2) 2	(2) 2–1/2
22	(2) 250 kCMIL	(2) 2	–––	(2) 2	(2) 2–1/2
23	(2) 350 kCMIL	(2) 1	–––	(2) 2–1/2	(2) 3
24	(2) 500 kCMIL	(2) 1/0	–––	(2) 3	(2) 3–1/2
25	(3) 300 kCMIL	(3) 1/0	–––	(3) 2–1/2	(3) 3
26	(3) 400 kCMIL	(3) 2/0	–––	(3) 3	(3) 3
27	(3) 500 kCMIL	(3) 3/0	–––	(3) 3	(3) 3–1/2
28	(4) 350 kCMIL	(4) 3/0	–––	(4) 2–1/2	(4) 3
29	(4) 500 kCMIL	(4) 4/0	–––	(4) 3	(4) 3–1/2
30	(5) 400 kCMIL	(5) 4/0	–––	(5) 3	(5) 3
31	(5) 500 kCMIL	(5) 250	–––	(5) 3	(5) 3–1/2
32	(6) 400 kCMIL	(6) 250	–––	(6) 3	(6) 3–1/2
33	(7) 500 kCMIL	(7) 350	–––	(7) 3	(7) 3–1/2
34	(8) 500 kCMIL	(8) 400	–––	(8) 3	(8) 3–1/2

THE ABOVE SCHEDULE IS BASED ON 600 VOLT WIRE TYPE 90°C THHN/THWN/XHHW. THE FOLLOWING IS A SAMPLE OF WIRE AND CONDUIT READOUT FROM ABOVE SCHEDULE:

(2A) = (2)#12AWG, (1)#12GRD IN 3/4"C.

ISSUED FOR BID: 11-13-2020

RVE 1901
REMINGTON & VERNICK ENGINEERS
232 KINGS HIGHWAY EAST
HADDONFIELD, NJ 08033
(856) 795-9595, FAX (856) 795-1882
WEB SITE ADDRESS : WWW.RVE.COM
Certification of Authorization: 24 GA 28003300
–ENGINEERING EXCELLENCE–

DATE:
CHRISTOPHER A. SAPONARO
NJ PROFESSIONAL ENGINEER LIC. No. 40059

DATE:
BRIAN B. GREGG
NJ PROFESSIONAL ENGINEER LIC. No. 46577

NO.	DESCRIPTION	DATE	BY (CHK)

ELECTRICAL COVER SHEET

PENNSAUKEN BOARD OF EDUCATION

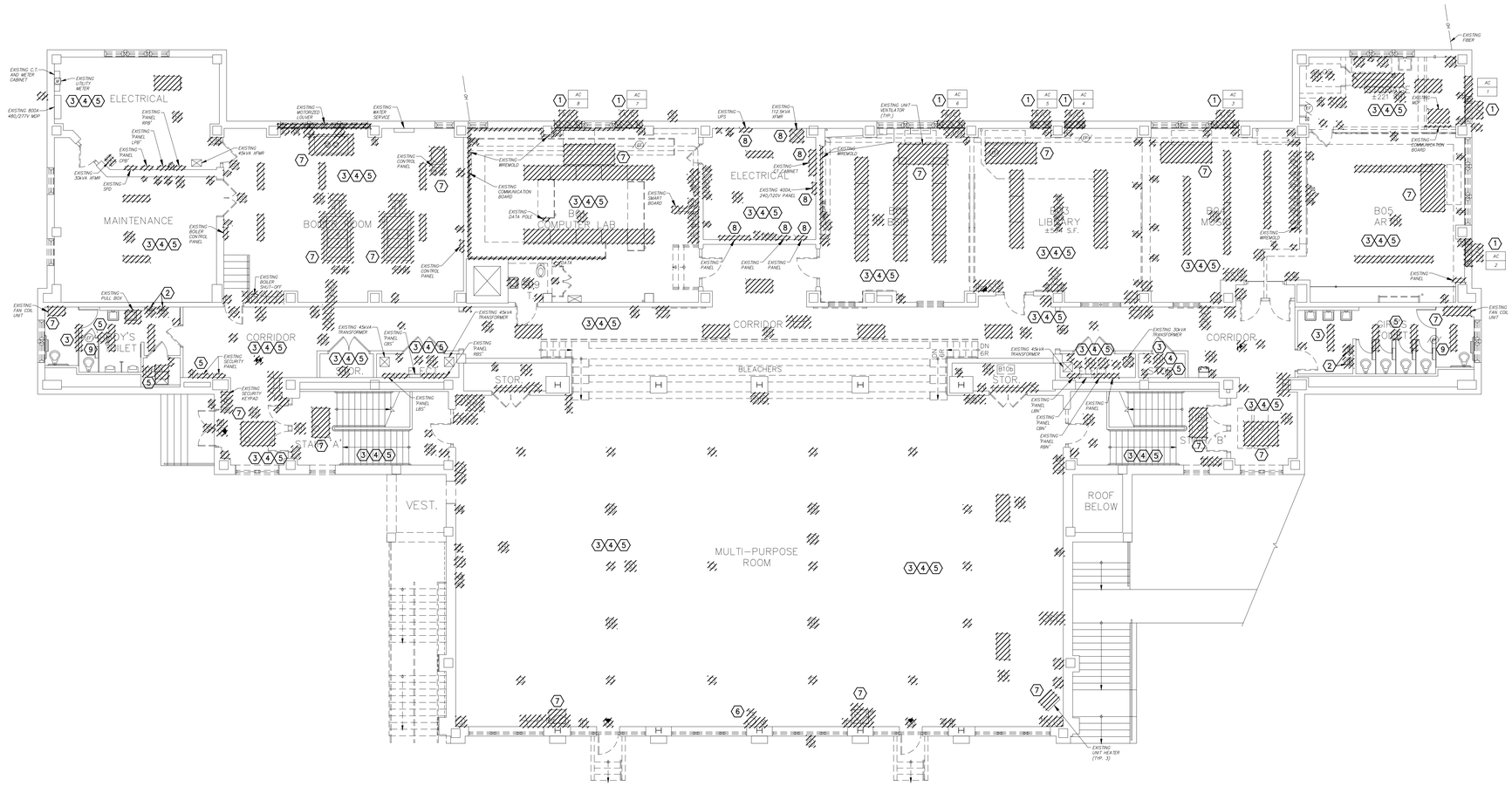
ROOSEVELT STEM SCHOOL ADDITION AND RENOVATIONS
5526 WISTERIA AVENUE, PENNSAUKEN, NEW JERSEY 08109

PENNSAUKEN TOWNSHIP CAMDEN COUNTY NEW JERSEY

DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
S.M.	K.M.		AS NOTED

DATE: 10-19-2020
SHEET No.: E-1.0
JOB No.: MP038X049

P:\Projects\Pennsauken\MP038x049\Sheets\E-1.0 Electrical Cover Sheet.dwg



1 ELECTRICAL DEMOLITION BASEMENT FLOOR PLAN

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

GENERAL DEMOLITION NOTES:

1. ALL NOTES, SYMBOLS, AND ABBREVIATIONS ON DRAWING E-1.0 APPLY TO THIS DRAWING.
2. THIS DEMOLITION PLAN HAS BEEN PROVIDED AS A GUIDE. HOWEVER, ALL DEMOLITION REQUIRED TO SUCCESSFULLY COMPLETE THIS PROJECT SHALL BE INCLUDED IN THE SCOPE OF WORK. IT IS THE INTENT OF THE PLANS AND SPECIFICATIONS TO SECURE A COMPLETELY INTERCONNECTED AND FUNCTIONING SYSTEM AND IF ANY WORKMANSHIP OR MATERIALS ARE REQUIRED WHICH ARE OBVIOUSLY NECESSARY TO CARRY OUT THE FULL INTENT AND MEANING OF THE PLANS AND SPECIFICATIONS OR TO BE REASONABLY INFERRED THEREFROM, THE COST OF SUCH WORKMANSHIP OR MATERIALS SHALL BE INCLUDED IN THE SCOPE OF WORK.
3. ALL DEMOLITION WORK SHALL INCLUDE REMOVAL OF ALL EXISTING RACEWAYS AND CONDUCTORS. NO EXISTING RACEWAYS OR CONDUCTORS SHALL BE LEFT ABANDONED, UNLESS OTHERWISE NOTED.
4. ALL WALLS DESCRIBED TO BE DEMOLISHED ALSO INCLUDES ANY/ALL EXISTING ELECTRICAL COMPONENTS AND SYSTEMS COMPONENTS CONCEALED AND/OR NOT, SHALL BE DEMOLISHED IN ITS ENTIRETY BACK TO SOURCE ELECTRICAL PANEL OR EQUIPMENT.

DEMOLITION NOTES:

(1) EXISTING WINDOW A/C UNITS TO BE REMOVED AND TURNED OVER TO THE PENNSAUKEN SCHOOL DISTRICT. DEMOLISH ELECTRICAL WIRING DEVICE AND ALL ASSOCIATED RACEWAYS AND CONDUCTORS BACK TO SOURCE PANEL.

(2) EXISTING HAND DRYER TO BE REMOVED. DEMOLISH ELECTRICAL WIRING DEVICE AND ALL ASSOCIATED RACEWAYS AND CONDUCTORS BACK TO SOURCE PANEL.

(3) DEMOLISH EXISTING LIGHTING FIXTURES AND ASSOCIATED RACEWAYS, BOXES, CONDUCTORS, CABLES, AND WIRING DEVICES IN THIS SPACE IN ITS ENTIRETY BACK TO SOURCE ELECTRICAL PANEL. PATCH AND REPAIR CEILING SYSTEM TO ACCEPT NEW LIGHTS AND DEVICES.

(4) DEMOLISH EXISTING WIRING DEVICES, SURFACE MOUNTED RACEWAYS AND ASSOCIATED RACEWAYS, BOXES, CONDUCTORS, AND CABLES IN THIS SPACE IN ITS ENTIRETY BACK TO SOURCE ELECTRICAL PANEL.

(5) DEMOLISH EXISTING FIRE ALARM, SECURITY, CLOCKS, PA SYSTEMS, CCTV, TV'S, AND ASSOCIATED RACEWAYS, BOXES, CONDUCTORS AND CABLES IN THIS SPACE IN ITS ENTIRETY BACK TO SOURCE HEAD END EQUIPMENT.

(6) CAREFULLY DISMANTLE AND REMOVE EXISTING EQUIPMENT AND RETURN TO OWNER. SHOULD OWNER ELECT NOT TO KEEP, PROPERLY DISPOSE.

(7) COORDINATE WITH MECHANICAL CONTRACTOR, DISCONNECT AND DEMOLISH ALL ASSOCIATED ELECTRICAL COMPONENTS BACK TO SOURCE ELECTRICAL PANEL OR CONTROL DEVICES OF HVAC MECHANICAL EQUIPMENT DESIGNATED TO BE DEMOLISHED.

(8) DEMOLISH EXISTING ELECTRICAL PANEL AND/OR EQUIPMENT PREP FOR NEW WHERE REQUIRED.

(9) DISCONNECT EXISTING EXHAUST FAN AND DEMOLISH EXISTING CIRCUIT, RACEWAY, AND CONDUCTORS BACK TO SOURCE PANEL. PREP FOR NEW CIRCUIT WIRING.

ISSUED FOR BID: 11-13-2020

REMINGTON & VERNICK **ENGINEERS**
232 KINGS HIGHWAY EAST
HADDONFIELD, NJ 08033
(856) 795-9595, FAX (856) 795-1882
WEB SITE ADDRESS : WWW.RVE.COM
Certification of Authorization: 24 GA 28003300
~ENGINEERING EXCELLENCE~

DATE:
CHRISTOPHER A. SAPONARO
NJ PROFESSIONAL ENGINEER LIC. No. 40059

DATE:
BRIAN B. GREGG
NJ PROFESSIONAL ENGINEER LIC. No. 46577

NO.	REVISION	DATE	BY	CHK

ELECTRICAL DEMOLITION BASEMENT FLOOR PLAN

PENNSAUKEN BOARD OF EDUCATION

ROOSEVELT STEM SCHOOL ADDITION AND RENOVATIONS
5526 WISTERIA AVENUE, PENNSAUKEN, NEW JERSEY 08109

PENNSAUKEN TOWNSHIP CAMDEN COUNTY NEW JERSEY

DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
S.M.	K.M.		AS NOTED

DATE: 10-19-2020

JOB No.: MP038X049

SHEET No.: E-1.1

P:\Projects\Pennsauken\MP038X049\Sheets\E-1.1 Electrical Demolition Basement Floor Plan.dwg

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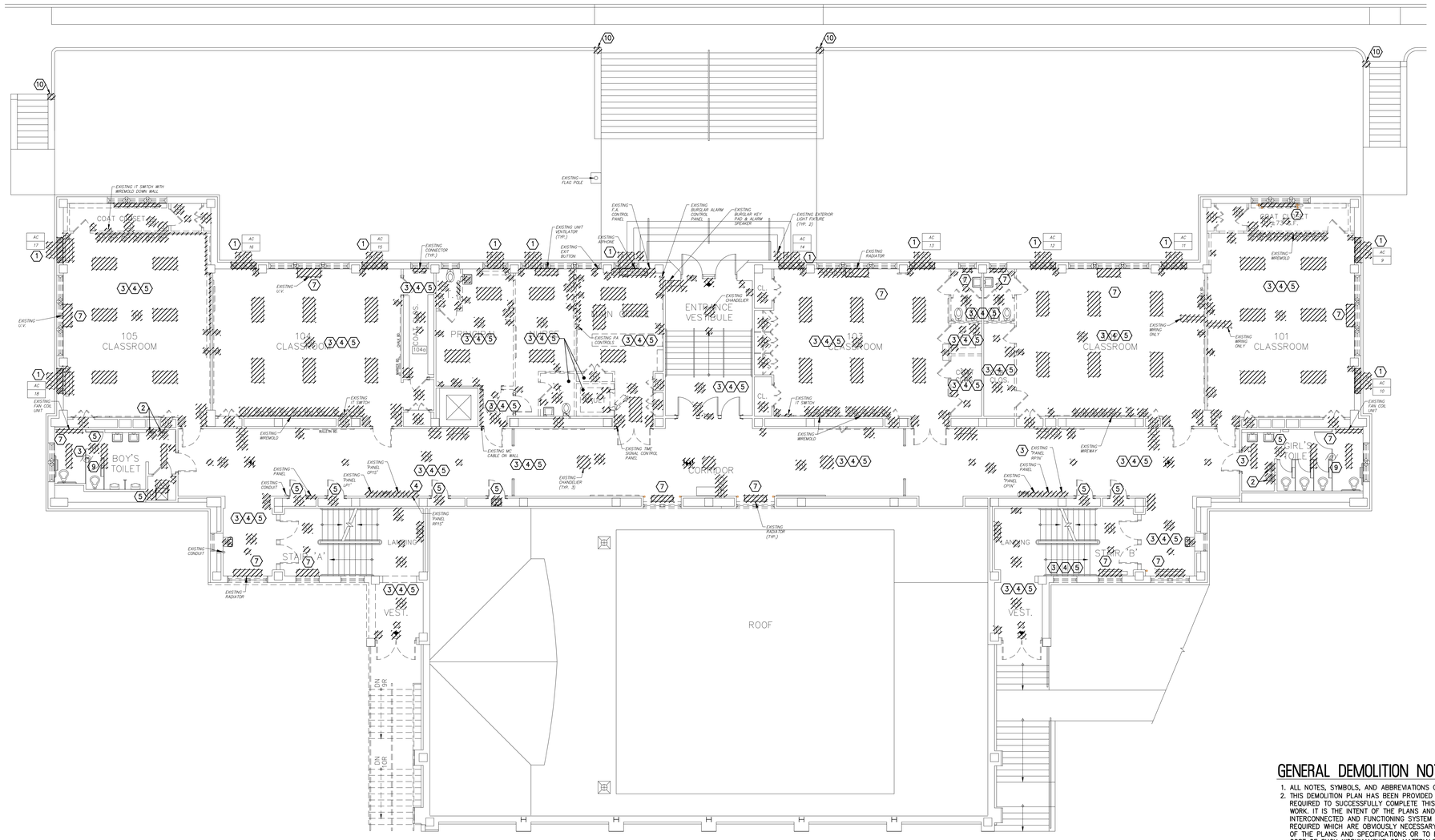

1 ELECTRICAL DEMOLITION FIRST FLOOR PLAN

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

GENERAL DEMOLITION NOTES:

1. ALL NOTES, SYMBOLS, AND ABBREVIATIONS ON DRAWING E-1.0 APPLY TO THIS DRAWING.
2. THIS DEMOLITION PLAN HAS BEEN PROVIDED AS A GUIDE. HOWEVER, ALL DEMOLITION REQUIRED TO SUCCESSFULLY COMPLETE THIS PROJECT SHALL BE INCLUDED IN THE SCOPE OF WORK. IT IS THE INTENT OF THE PLANS AND SPECIFICATIONS TO SECURE A COMPLETELY INTERCONNECTED AND FUNCTIONING SYSTEM AND IF ANY WORKMANSHIP OR MATERIALS ARE REQUIRED WHICH ARE OBVIOUSLY NECESSARY TO CARRY OUT THE FULL INTENT AND MEANING OF THE PLANS AND SPECIFICATIONS OR TO BE REASONABLY INFERRED THEREFROM, THE COST OF SUCH WORKMANSHIP OR MATERIALS SHALL BE INCLUDED IN THE SCOPE OF WORK.
3. ALL DEMOLITION WORK SHALL INCLUDE REMOVAL OF ALL EXISTING RACEWAYS AND CONDUCTORS. NO EXISTING RACEWAYS OR CONDUCTORS SHALL BE LEFT ABANDONED, UNLESS OTHERWISE NOTED.
4. ALL WALLS DESCRIBED TO BE DEMOLISHED ALSO INCLUDES ANY/ALL EXISTING ELECTRICAL COMPONENTS AND SYSTEMS COMPONENTS CONCEALED AND/OR NOT, SHALL BE DEMOLISHED IN ITS ENTIRETY BACK TO SOURCE ELECTRICAL PANEL OR EQUIPMENT.

DEMOLITION NOTES:

(1) EXISTING WINDOW A/C UNITS TO BE REMOVED AND TURNED OVER TO THE PENNSAUKEN SCHOOL DISTRICT. DEMOLISH ELECTRICAL WIRING DEVICE AND ALL ASSOCIATED RACEWAYS AND CONDUCTORS BACK TO SOURCE PANEL.

(2) EXISTING HAND DRYER TO BE REMOVED. DEMOLISH ELECTRICAL WIRING DEVICE AND ALL ASSOCIATED RACEWAYS AND CONDUCTORS BACK TO SOURCE PANEL.

(3) DEMOLISH EXISTING LIGHTING FIXTURES AND ASSOCIATED RACEWAYS, BOXES, CONDUCTORS, CABLES, AND WIRING DEVICES IN THIS SPACE IN ITS ENTIRETY BACK TO SOURCE ELECTRICAL PANEL. PATCH AND REPAIR CEILING SYSTEM TO ACCEPT NEW LIGHTS AND DEVICES.

(4) DEMOLISH EXISTING WIRING DEVICES, SURFACE MOUNTED RACEWAYS AND ASSOCIATED RACEWAYS, BOXES, CONDUCTORS, AND CABLES IN THIS SPACE IN ITS ENTIRETY BACK TO SOURCE ELECTRICAL PANEL.

(5) DEMOLISH EXISTING FIRE ALARM, SECURITY, CLOCKS, PA SYSTEMS, CCTV, TV'S, AND ASSOCIATED RACEWAYS, BOXES, CONDUCTORS AND CABLES IN THIS SPACE IN ITS ENTIRETY BACK TO SOURCE HEAD END EQUIPMENT.

(6) CAREFULLY DISMANTLE AND REMOVE EXISTING EQUIPMENT AND RETURN TO OWNER. SHOULD OWNER ELECT NOT TO KEEP, PROPERLY DISPOSE.

(7) COORDINATE WITH MECHANICAL CONTRACTOR, DISCONNECT AND DEMOLISH ALL ASSOCIATED ELECTRICAL COMPONENTS BACK TO SOURCE ELECTRICAL PANEL OR CONTROL DEVICES OF HVAC MECHANICAL EQUIPMENT DESIGNATED TO BE DEMOLISHED.

(8) DEMOLISH EXISTING ELECTRICAL PANEL AND/OR EQUIPMENT PREP FOR NEW WHERE REQUIRED.

(9) DISCONNECT EXISTING EXHAUST FAN AND DEMOLISH EXISTING CIRCUIT, RACEWAY, AND CONDUCTORS BACK TO SOURCE PANEL. PREP FOR NEW CIRCUIT WIRING.

(10) CONTRACTOR SHALL DEMOLISH EXISTING LIGHT POLE BASE, RACEWAYS, CONDUCTORS, AND ELECTRICAL DEVICES BACK TO SOURCE PANEL.

ISSUED FOR BID: 11-13-2020

RVE 1901
REMINGTON & VERNICK **ENGINEERS**
232 KINGS HIGHWAY EAST
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DATE:
CHRISTOPHER A. SAPONARO
NJ PROFESSIONAL ENGINEER LIC. No. 40059

DATE:
BRIAN B. GREGG
NJ PROFESSIONAL ENGINEER LIC. No. 46577

NO.	REVISION	DATE	BY	CHK'D

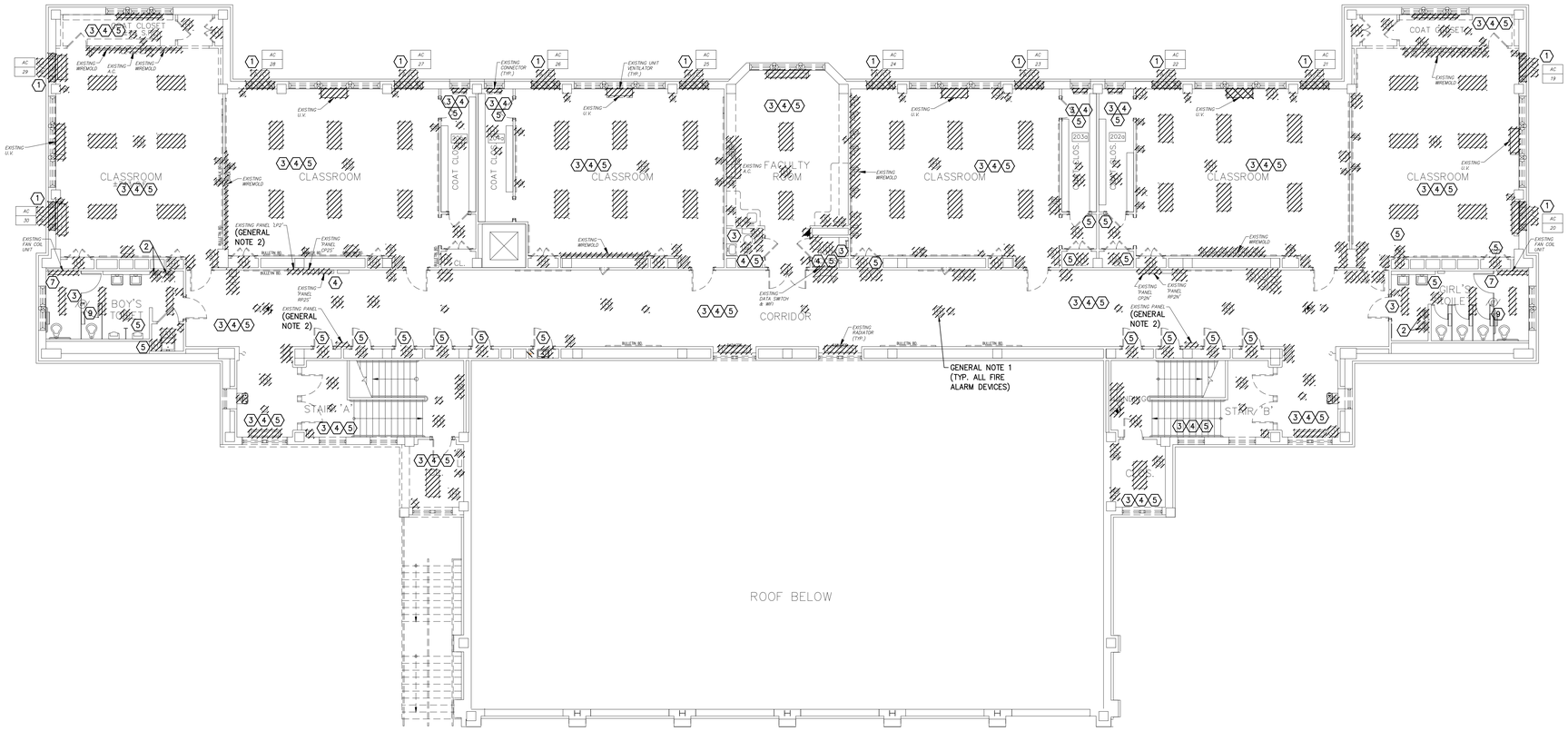
ELECTRICAL DEMOLITION FIRST FLOOR PLAN

PENNSAUKEN BOARD OF EDUCATION
ROOSEVELT STEM SCHOOL ADDITION AND RENOVATIONS
5526 WISTERIA AVENUE, PENNSAUKEN, NEW JERSEY 08109
PENNSAUKEN TOWNSHIP CAMDEN COUNTY NEW JERSEY

DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
S.M.	K.M.		AS NOTED

DATE: 10-19-2020
JOB No.: MP038X049
SHEET No.: E-1.2

P:\Projects\Pennsauken\MP038x049\Sheets\E-1.2 Electrical Demolition First Floor Plan.dwg



1 ELECTRICAL DEMOLITION SECOND FLOOR PLAN (ALTERNATE)

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

GENERAL DEMOLITION NOTES:

1. ALL NOTES, SYMBOLS, AND ABBREVIATIONS ON DRAWING E-1.0 APPLY TO THIS DRAWING.
2. THIS DEMOLITION PLAN HAS BEEN PROVIDED AS A GUIDE. HOWEVER, ALL DEMOLITION REQUIRED TO SUCCESSFULLY COMPLETE THIS PROJECT SHALL BE INCLUDED IN THE SCOPE OF WORK. IT IS THE INTENT OF THE PLANS AND SPECIFICATIONS TO SECURE A COMPLETELY INTERCONNECTED AND FUNCTIONING SYSTEM AND IF ANY WORKMANSHIP OR MATERIALS ARE REQUIRED WHICH ARE OBVIOUSLY NECESSARY TO CARRY OUT THE FULL INTENT AND MEANING OF THE PLANS AND SPECIFICATIONS OR TO BE REASONABLY INFERRED THEREFROM, THE COST OF SUCH WORKMANSHIP OR MATERIALS SHALL BE INCLUDED IN THE SCOPE OF WORK.
3. ALL DEMOLITION WORK SHALL INCLUDE REMOVAL OF ALL EXISTING RACEWAYS AND CONDUCTORS. NO EXISTING RACEWAYS OR CONDUCTORS SHALL BE LEFT ABANDONED, UNLESS OTHERWISE NOTED.
4. ALL WALLS DESCRIBED TO BE DEMOLISHED ALSO INCLUDES ANY/ALL EXISTING ELECTRICAL COMPONENTS AND SYSTEMS COMPONENTS CONCEALED AND/OR NOT, SHALL BE DEMOLISHED IN ITS ENTIRETY BACK TO SOURCE ELECTRICAL PANEL OR EQUIPMENT.

DEMOLITION NOTES:

(1) EXISTING WINDOW A/C UNITS TO BE REMOVED AND TURNED OVER TO THE PENNSAUKEN SCHOOL DISTRICT. DEMOLISH ELECTRICAL WIRING DEVICE AND ALL ASSOCIATED RACEWAYS AND CONDUCTORS BACK TO SOURCE PANEL.

(2) EXISTING HAND DRYER TO BE REMOVED. DEMOLISH ELECTRICAL WIRING DEVICE AND ALL ASSOCIATED RACEWAYS AND CONDUCTORS BACK TO SOURCE PANEL.

(3) DEMOLISH EXISTING LIGHTING FIXTURES AND ASSOCIATED RACEWAYS, BOXES, CONDUCTORS, CABLES, AND WIRING DEVICES IN THIS SPACE IN ITS ENTIRETY BACK TO SOURCE ELECTRICAL PANEL. PATCH AND REPAIR CEILING SYSTEM TO ACCEPT NEW LIGHTS AND DEVICES.

(4) DEMOLISH EXISTING WIRING DEVICES, SURFACE MOUNTED RACEWAYS AND ASSOCIATED RACEWAYS, BOXES, CONDUCTORS, AND CABLES IN THIS SPACE IN ITS ENTIRETY BACK TO SOURCE ELECTRICAL PANEL.

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(6) CAREFULLY DISMANTLE AND REMOVE EXISTING EQUIPMENT AND RETURN TO OWNER. SHOULD OWNER ELECT NOT TO KEEP, PROPERLY DISPOSE.

(7) COORDINATE WITH MECHANICAL CONTRACTOR, DISCONNECT AND DEMOLISH ALL ASSOCIATED ELECTRICAL COMPONENTS BACK TO SOURCE ELECTRICAL PANEL OR CONTROL DEVICES OF HVAC MECHANICAL EQUIPMENT DESIGNATED TO BE DEMOLISHED.

(8) DEMOLISH EXISTING ELECTRICAL PANEL AND/OR EQUIPMENT PREP FOR NEW WHERE REQUIRED.

(9) DISCONNECT EXISTING EXHAUST FAN AND DEMOLISH EXISTING CIRCUIT, RACEWAY, AND CONDUCTORS BACK TO SOURCE PANEL. PREP FOR NEW CIRCUIT WIRING.

GENERAL NOTES:

1. DEMOLITION OF ALL FIRE ALARM DETECTION AND NOTIFICATION DEVICES IS BASE BID.
2. IF ALTERNATE BID IS NOT ACCEPTED, EXISTING PANEL AND BRANCH CIRCUITS ARE TO REMAIN AND PANEL IS TO BE REFED.

ISSUED FOR BID: 11-13-2020

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DATE:
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NJ PROFESSIONAL ENGINEER LIC. No. 40059

DATE:
BRIAN B. GREGG
NJ PROFESSIONAL ENGINEER LIC. No. 46577

NO.	REVISION	DATE	BY	CHK

ELECTRICAL DEMOLITION SECOND FLOOR PLAN (ALTERNATE)

PENNSAUKEN BOARD OF EDUCATION

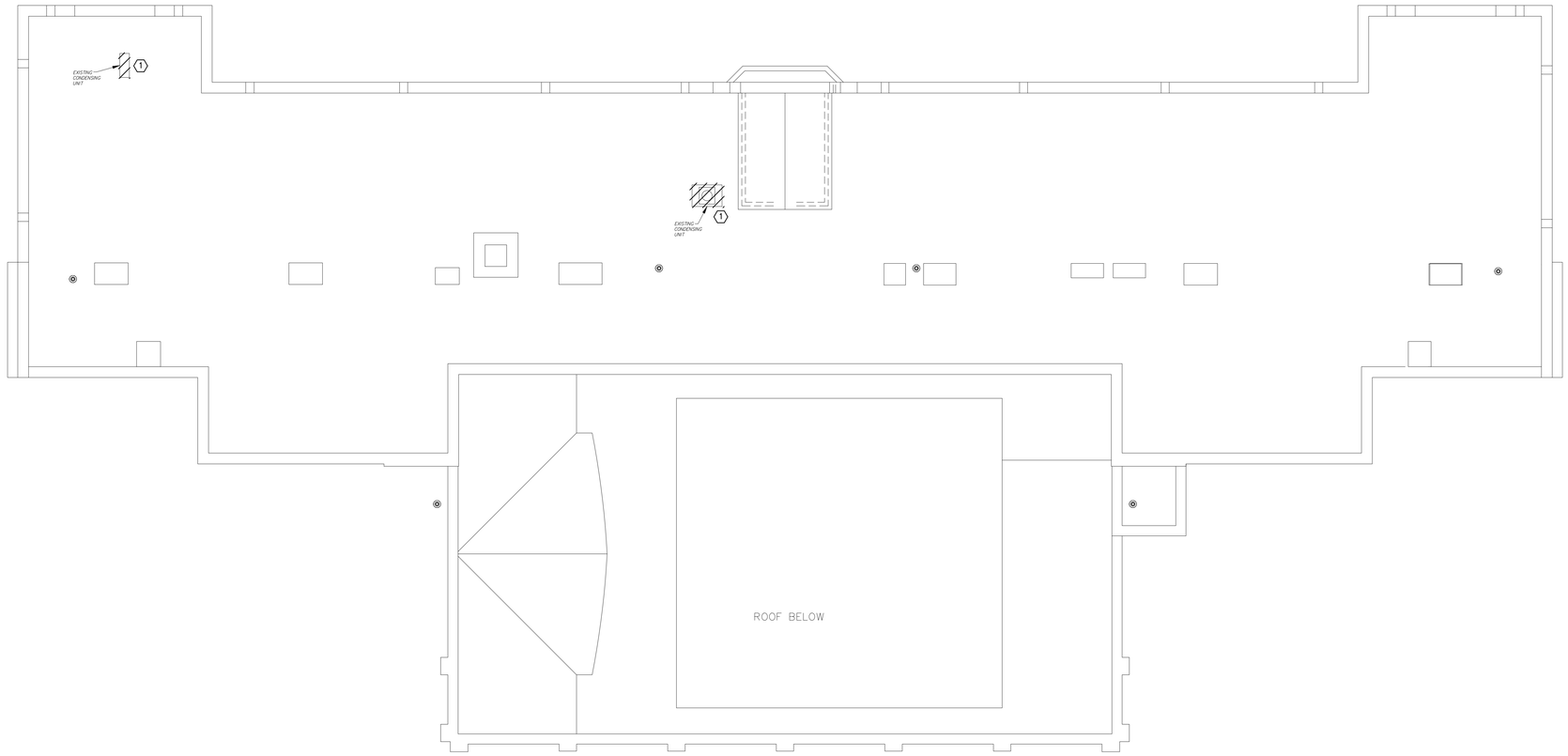
ROOSEVELT STEM SCHOOL ADDITION AND RENOVATIONS
5526 WISTERIA AVENUE, PENNSAUKEN, NEW JERSEY 08109
PENNSAUKEN TOWNSHIP CAMDEN COUNTY NEW JERSEY

DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
S.M.	K.M.		AS NOTED

DATE:	SHEET No.:
10-19-2020	E-1.3

JOB No.: MP0336X049

P:\Projects\Pennsauken\MP0336X049\Sheets\E-1.3 Electrical Demolition Second Floor Plan.dwg



1 ELECTRICAL DEMOLITION ROOF PLAN
SCALE: 1/8"=1'-0"

GENERAL DEMOLITION NOTES:

1. ALL NOTES, SYMBOLS, AND ABBREVIATIONS ON DRAWING E-1.0 APPLY TO THIS DRAWING.
2. THIS DEMOLITION PLAN HAS BEEN PROVIDED AS A GUIDE. HOWEVER, ALL DEMOLITION REQUIRED TO SUCCESSFULLY COMPLETE THIS PROJECT SHALL BE INCLUDED IN THE SCOPE OF WORK. IT IS THE INTENT OF THE PLANS AND SPECIFICATIONS TO SECURE A COMPLETELY INTERCONNECTED AND FUNCTIONING SYSTEM AND IF ANY WORKMANSHIP OR MATERIALS ARE REQUIRED WHICH ARE OBVIOUSLY NECESSARY TO CARRY OUT THE FULL INTENT AND MEANING OF THE PLANS AND SPECIFICATIONS OR TO BE REASONABLY INFERRED THEREFROM, THE COST OF SUCH WORKMANSHIP OR MATERIALS SHALL BE INCLUDED IN THE SCOPE OF WORK.

DEMOLITION NOTES:

1. COORDINATE WITH MECHANICAL CONTRACTOR, DISCONNECT AND DEMOLISH ALL ASSOCIATED ELECTRICAL COMPONENTS BACK TO SOURCE ELECTRICAL PANEL OR CONTROL DEVICES OF HVAC MECHANICAL EQUIPMENT DESIGNATED TO BE DEMOLISHED.

ISSUED FOR BID: 11-13-2020

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NJ PROFESSIONAL ENGINEER LIC. No. 46577

PLANS WHICH DO NOT BEAR AN EMBOSSED SEAL ARE NOT VALID.

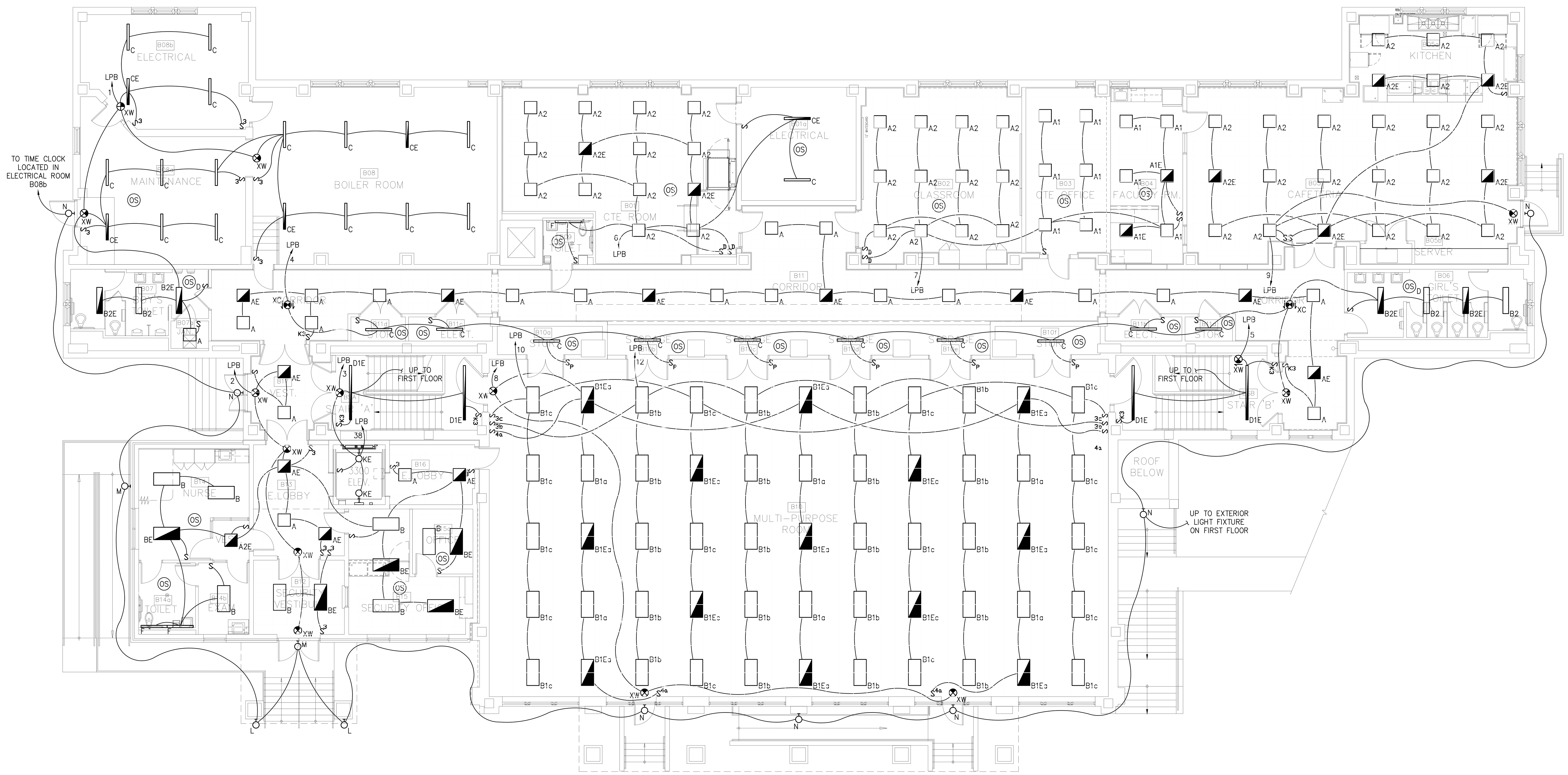
No.	REVISION	DATE	BY	CHK'D

ELECTRICAL DEMOLITION ROOF PLAN

PENNSAUKEN BOARD OF EDUCATION
ROOSEVELT STEM SCHOOL ADDITION AND RENOVATIONS
5526 WISTERIA AVENUE, PENNSAUKEN, NEW JERSEY 08109
PENNSAUKEN TOWNSHIP CAMDEN COUNTY NEW JERSEY

DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
S.M.	K.M.		AS NOTED
DATE: 10-19-2020			SHEET No.: E-1.4
JOB No.: MP038X049			

P:\Projects\Pennsauken\MP038X049\Sheets\E-1.4 Electrical Demolition Roof Plan.dwg



1 ELECTRICAL LIGHTING BASEMENT FLOOR PLAN

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

NOTES:

1. ALL NOTES, SYMBOLS, AND ABBREVIATIONS ON DRAWING E–1.0 APPLY TO THIS DRAWING.
2. THIS DRAWING IS DIAGRAMMATIC, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM EXISTING SITE CONDITIONS AND INSTALLATION CLEARANCES PRIOR TO SHOP DRAWING SUBMISSIONS AND INSTALLATION. SHOULD THE CONTRACTOR DETERMINE THAT THE INSTALLATION OF ANY ELECTRICAL COMPONENT IS RESTRICTED OR NOT ABLE TO BE INSTALLED IN THE SUGGESTED LOCATION THE CONTRACTOR SHALL READDRESS THE INSTALLATION ACCORDINGLY AND IN COMPLIANCE WITH NEC2017, AT NO ADDITIONAL COST.
3. CONTRACTOR SHALL PROVIDE 0–10V DIMMING CONTROL WIRING AS REQUIRED.

ISSUED FOR BID: 11-13-2020

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BRIAN B. GREGG
NJ PROFESSIONAL ENGINEER LIC. No. 46577

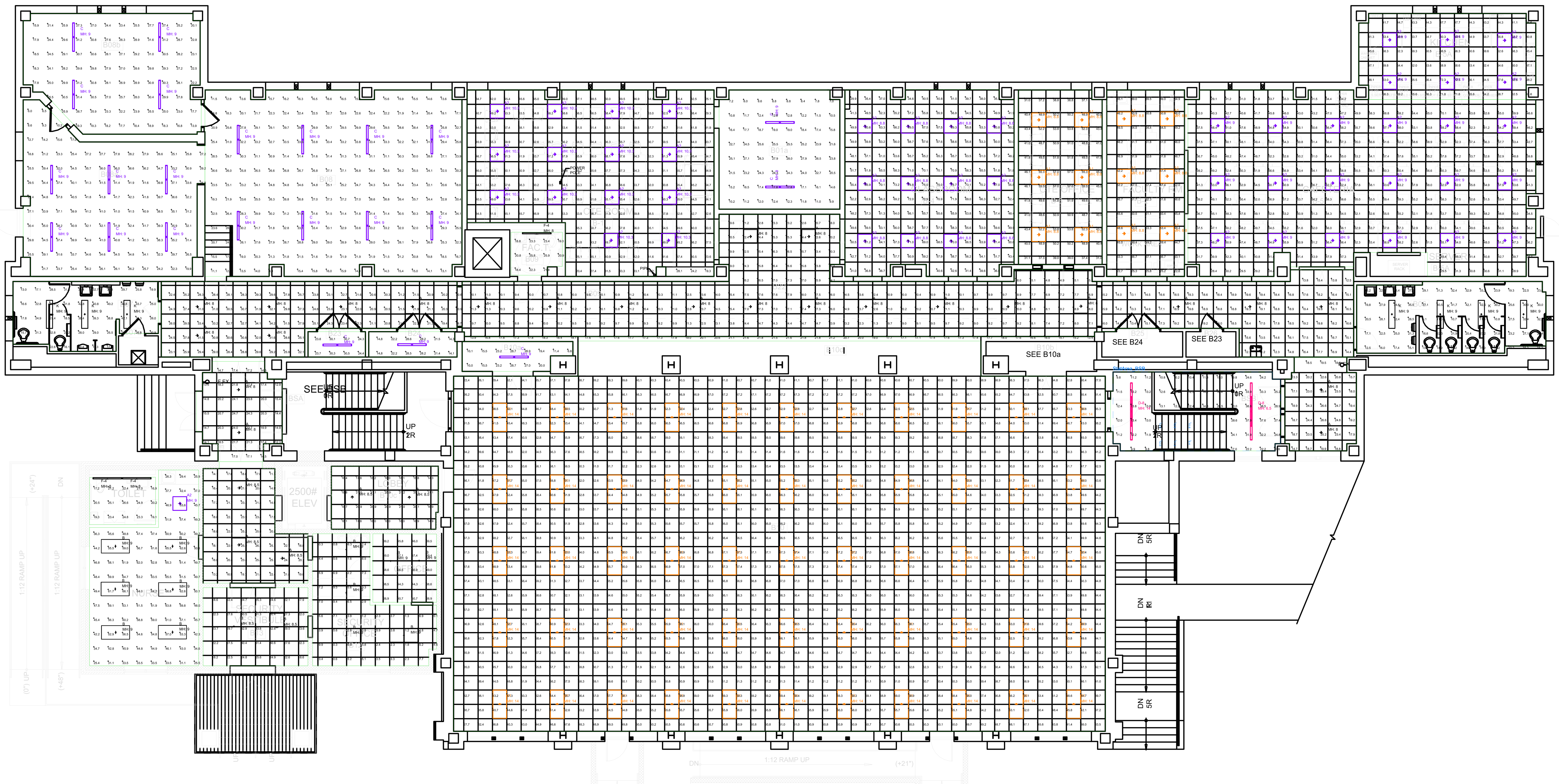
No.	REVISION	DATE	BY	CHK.

ELECTRICAL LIGHTING BASEMENT FLOOR PLAN

PENNSAUKEN BOARD OF EDUCATION
ROOSEVELT STEM SCHOOL ADDITION AND RENOVATIONS
5526 WISTERIA AVENUE, PENNSAUKEN, NEW JERSEY 08109
PENNSAUKEN TOWNSHIP CAMDEN COUNTY NEW JERSEY

DRAWN BY :	DESIGN BY :	CHECKED BY :	SCALE :
S.M.	K.M.		AS NOTED

DATE :	SHEET No. :
10-19-2020	E-2.1
JOB No. : MP038X049	



Luminaire Schedule

Symbol	Qty	Arrangement	Fixture Type	Fixture Description	Manufacturer	Catalog Number	LLF	Total Watts	Delivered Lumens	Photometric File Name
	30	SINGLE	A	2X2 ARCHITECTURAL EDGE-LIT TROFFER, 2500LM	COLUMBIA LIGHTING	VSY22-35LWHE-EDU	0.900	19.27	2567	VSY22-35LWHE-EDU.ies
	12	SINGLE	A1	2X2 ARCHITECTURAL EDGE-LIT TROFFER, 3200LM	COLUMBIA LIGHTING	VSY22-35MLHE-EDU	0.900	24.48	3273	VSY22-35MLHE-EDU.ies
	51	SINGLE	A2	2X2 ARCHITECTURAL EDGE-LIT TROFFER, 3700LM	COLUMBIA LIGHTING	VSY22-35HLHE-EDU	0.900	26.02	3752	VSY22-35HLHE-EDU.ies
	14	SINGLE	B	2X4 ARCHITECTURAL EDGE-LIT TROFFER, 3700LM	COLUMBIA LIGHTING	VSY24-35MWHE-EDU	0.900	29.28	3757	VSY24-35MWHE-EDU.ies
	55	SINGLE	B1	2X4 ARCHITECTURAL EDGE-LIT TROFFER, 5600LM	COLUMBIA LIGHTING	VSY24-35HLHE-EDU	0.900	38.49	5644	VSY24-35HLHE-EDU.ies
	23	SINGLE	C	3 INCH SURFACE MOUNT LINEAR, 3400LM, 4FT LONG	COLUMBIA LIGHTING	MPS4-35MW-FW-EDU	0.900	30.1	3491	MPS4-35MW-FW-EDU.ies
	2	BACK-BACK	D-8	3 INCH SURFACE MOUNT LINEAR, 6000LM, 8FT LONG	LITECONTROL	67L-S-D-8-BL-X-CX-35K-D075	0.900	46.436	6000	67L-S-D-4-BL-X-CX-35K-D075.ies
	3	SINGLE	F-4	3 INCH WALL MOUNT LINEAR, 4000LM, 4FT LONG	LITECONTROL	67L-W-D-4-DM-X-CX-35K-D100	0.900	33.934	4000	67L-W-D-4-DM-X-CX-35K-D100.ies
	7	SINGLE	K	1X4 ARCHITECTURAL EDGE-LIT TROFFER, 3100LM	COLUMBIA LIGHTING	VSY14-35VWHE-EDU	0.900	25.13	3195	VSY14-35VWHE-EDU.ies

Calculation Summary

Label	CalcType	Units	Avg	Max	Min
B-1 CTE ROOM_Workplane	Illuminance	Fc	51.55	68.1	19.3
B-2 FACULTY RM_Workplane	Illuminance	Fc	46.60	57.5	22.6
B-3 CTE OFFICE_Workplane	Illuminance	Fc	46.79	57.0	31.0
B-4 CLASSROOM_Workplane	Illuminance	Fc	58.73	76.8	29.9
B-5 CAFETERIA_Workplane	Illuminance	Fc	50.92	70.1	24.4
B-5A KITCHEN_Workplane	Illuminance	Fc	57.45	72.3	26.6
B01a ELECTRICAL_Workplane	Illuminance	Fc	17.48	28.3	7.0
B06 GIRLS TOILET_Workplane	Illuminance	Fc	23.50	42.5	9.1
B07 BOYS TOILET_Workplane	Illuminance	Fc	27.91	42.8	13.0
B08 BOILER ROOM_Workplane	Illuminance	Fc	25.07	33.8	9.0
B08a MAINTENANCE_Workplane	Illuminance	Fc	32.01	42.4	6.0
B08b ELECTRICAL_Workplane	Illuminance	Fc	25.75	31.6	13.9
B09 FAC T_Workplane	Illuminance	Fc	21.82	25.9	18.4
B10 MULTI-PURPOSE_Workplane	Illuminance	Fc	57.02	67.5	22.4
B10a STOR_Workplane	Illuminance	Fc	19.01	28.7	6.6
B10c LOBBY_Floor	Illuminance	Fc	18.53	21.2	14.3
B12 SECURITY OFFICE_Workplane	Illuminance	Fc	40.41	56.5	20.1
B13 SECURITY VEST_Floor	Illuminance	Fc	25.78	33.8	17.9
B22 CORRIDOR_Floor	Illuminance	Fc	21.29	34.2	11.2
B22a CORRIDOR_Floor	Illuminance	Fc	18.34	24.7	12.3
B22b CORRIDOR_Floor	Illuminance	Fc	20.42	26.3	11.7
B22c CORRIDOR_Floor	Illuminance	Fc	20.75	26.6	13.3
B23 STOR_Workplane	Illuminance	Fc	27.23	30.7	23.7
B24 ELECT_Workplane	Illuminance	Fc	21.57	28.6	14.1
BSB_Floor	Illuminance	Fc	19.13	38.8	9.8
NURSE_Workplane	Illuminance	Fc	50.98	66.8	25.4
OFFICE_Workplane	Illuminance	Fc	43.77	57.4	26.9
TOILET_Workplane	Illuminance	Fc	21.73	26.6	16.9
StatArea_BSB	Illuminance	Fc	18.39	38.8	9.4

LPD Area Summary

Label	Area	Total Watts	LPD
B-1 CTE ROOM_LPD	784.76	364.28	0.464
B-2 FACULTY RM_LPD	281.66	146.88	0.521
B-3 CTE OFFICE_LPD	281.99	146.88	0.521
B-4 CLASSROOM_LPD	596.61	312.24	0.523
B-5 CAFETERIA_LPD	1159	468.3599	0.404
B-5A KITCHEN_LPD	286.52	156.12	0.545
B01a ELECTRICAL_LPD	276.21	60.2	0.218
B06 GIRLS TOILET_LPD	252.77	100.52	0.398
B07 BOYS TOILET_LPD	176.75	75.39	0.427
B08 BOILER ROOM_LPD	915.02	240.8	0.263
B08a MAINTENANCE_LPD	484.5	180.6	0.373
B08b ELECTRICAL_LPD	377.17	120.4	0.319
B09 FAC T_LPD	40.46	33.934	0.839
B10 MULTI-PURPOSE_LPD	4773	2116.95	0.444
B10a STOR_LPD	57.54	30.1	0.523
B10c LOBBY_LPD	130.28	38.54	0.296
B12 SECURITY OFFICE_LPD	222.85	117.12	0.526
B13 SECURITY VEST_LPD	159.22	58.56	0.368
B22 CORRIDOR_LPD	1514	404.67	0.267
B22a CORRIDOR_LPD	140.23	38.54	0.275
B22b CORRIDOR_LPD	197.2	57.81	0.293
B22c CORRIDOR_LPD	121.81	38.54	0.316
B23 STOR_LPD	28.34	30.1	1.062
B24 ELECT_LPD	43.17	30.1	0.697
BSB_LPD	255.93	92.872	0.363
NURSE_LPD	337.83	201.7	0.597
OFFICE_LPD	84.51	58.56	0.693
TOILET_LPD	60.66	67.868	1.119

Room Summary

Label	Type	Clg Ht.	Description
B-1 CTE ROOM	Polygon-Flat	10.3	REFLECTANCES: 80/50/20
B-2 FACULTY RM	Polygon-Flat	8.8	REFLECTANCES: 80/50/20
B-3 CTE OFFICE	Polygon-Flat	8.8	REFLECTANCES: 80/50/20
B-4 CLASSROOM	Polygon-Flat	8.8	REFLECTANCES: 80/50/20
B-5 CAFETERIA	Polygon-Flat	9	REFLECTANCES: 80/50/20
B-5A KITCHEN	Polygon-Flat	9	REFLECTANCES: 80/50/20
B01a ELECTRICAL	Polygon-Flat	9	REFLECTANCES: 80/50/20
B06 GIRLS TOILET	Polygon-Flat	9	REFLECTANCES: 80/50/20
B07 BOYS TOILET	Polygon-Flat	9	REFLECTANCES: 80/50/20
B08 BOILER ROOM	Polygon-Flat	9	REFLECTANCES: 80/50/20
B08a MAINTENANCE	Polygon-Flat	9	REFLECTANCES: 80/50/20
B08b ELECTRICAL	Polygon-Flat	9	REFLECTANCES: 80/50/20
B09 FAC T	Polygon-Flat	9	REFLECTANCES: 80/50/20
B10 MULTI-PURPOSE	Polygon-Flat	14	REFLECTANCES: 80/50/20
B10a STOR	Polygon-Flat	9	REFLECTANCES: 80/50/20
B10c LOBBY	Polygon-Flat	8.5	REFLECTANCES: 80/50/20
B12 SECURITY OFFICE	Polygon-Flat	9	REFLECTANCES: 80/50/20
B13 SECURITY VEST	Polygon-Flat	8.5	REFLECTANCES: 80/50/20
B22 CORRIDOR	Polygon-Flat	8	REFLECTANCES: 80/50/20
B22a CORRIDOR	Polygon-Flat	8	REFLECTANCES: 80/50/20
B22b CORRIDOR	Polygon-Flat	8.5	REFLECTANCES: 80/50/20
B22c CORRIDOR	Polygon-Flat	8	REFLECTANCES: 80/50/20
B23 STOR	Polygon-Flat	9	REFLECTANCES: 80/50/20
B24 ELECT	Polygon-Flat	9	REFLECTANCES: 80/50/20
BSB	Polygon-Flat	14	REFLECTANCES: 80/50/20
NURSE	Polygon-Flat	9	REFLECTANCES: 80/50/20
OFFICE	Polygon-Flat	9	REFLECTANCES: 80/50/20
TOILET	Polygon-Flat	8	REFLECTANCES: 80/50/20

GENERAL NOTES:
1. MH: IS THE LIGHTING FIXTURE MOUNTING HEIGHT
2. REFLECTANCES OF 80/50/20 ARE USED UNLESS OTHERWISE NOTED
3. CALCULATION POINTS ON THE WORKPLANE ARE AT 2.5' UNLESS OTHERWISE NOTED

NOTE:
1. CONTRACTOR IS TO PROVIDE PHOTOMETRIC CALCULATION FOR ALL FIXTURE SUBSTITUTIONS. SUBSTITUTED FIXTURES PERFORMANCE IS TO MEET OR EXCEED BASIS OF DESIGN FIXTURES.

1 (FOR REFERENCE ONLY) ELECTRICAL LIGHTING BASEMENT FLOOR PLAN - (LIGHTING PHOTOMETRICS)
N.T.S.

ISSUED FOR BID: 11-13-2020

RVE 1901
REMINGTON & VERNICK ENGINEERS
232 KINGS HIGHWAY EAST
HADDONFIELD, NJ 08033
(856) 795-9595, FAX (856) 795-1882
WEB SITE ADDRESS : WWW.RVE.COM
Certification of Authorization: 24 GA 28003300
~ENGINEERING EXCELLENCE~

DATE:
CHRISTOPHER A. SAPONARO
NJ PROFESSIONAL ENGINEER LIC. No. 40059

DATE:
BRIAN B. GREGG
NJ PROFESSIONAL ENGINEER LIC. No. 46577

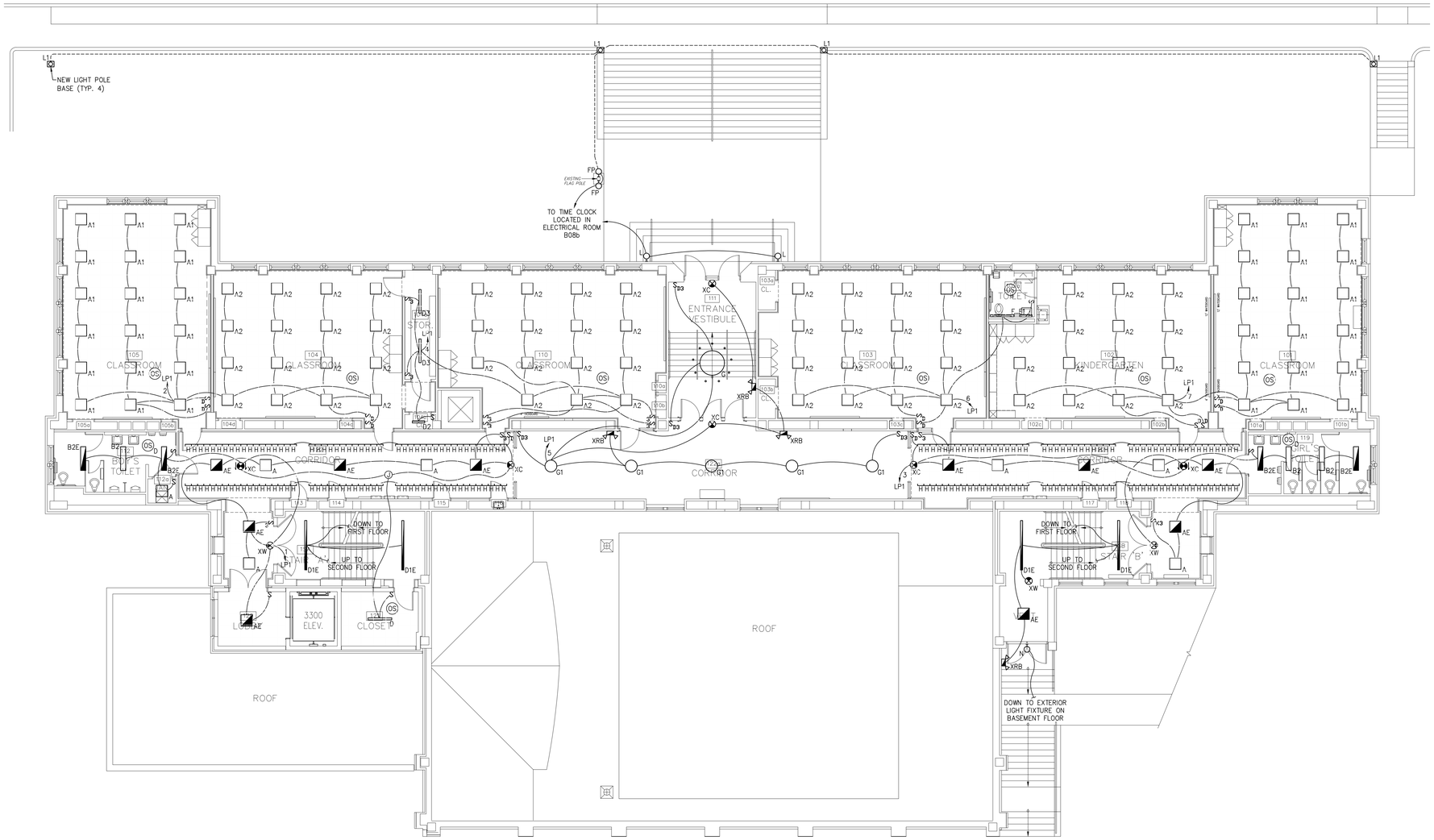
No.	REVISION	DATE	BY	CHK

(FOR REFERENCE ONLY) ELECTRICAL LIGHTING BASEMENT FLOOR PLAN - (LIGHTING PHOTOMETRICS)

PENNSAUKEN BOARD OF EDUCATION
ROOSEVELT STEM SCHOOL ADDITION AND RENOVATIONS
5526 WISTERIA AVENUE, PENNSAUKEN, NEW JERSEY 08109
PENNSAUKEN TOWNSHIP CAMDEN COUNTY NEW JERSEY

DRAWN BY :	DESIGN BY :	CHECKED BY :	SCALE :
S.M.	K.M.		AS NOTED

DATE : 10-19-2020
JOB No. : MP038X049
SHEET No. : E-2.1A



1 ELECTRICAL LIGHTING FIRST FLOOR PLAN

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

NOTES:

1. ALL NOTES, SYMBOLS, AND ABBREVIATIONS ON DRAWING E-1.0 APPLY TO THIS DRAWING.
2. THIS DRAWING IS DIAGRAMMATIC, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM EXISTING SITE CONDITIONS AND INSTALLATION CLEARANCES PRIOR TO SHOP DRAWING SUBMISSIONS AND INSTALLATION. SHOULD THE CONTRACTOR DETERMINE THAT THE INSTALLATION OF ANY ELECTRICAL COMPONENT IS RESTRICTED OR NOT ABLE TO BE INSTALLED IN THE SUGGESTED LOCATION THE CONTRACTOR SHALL READDRESS THE INSTALLATION ACCORDINGLY AND IN COMPLIANCE WITH NEC2017, AT NO ADDITIONAL COST.
3. CONTRACTOR SHALL PROVIDE 0-10V DIMMING CONTROL WIRING AS REQUIRED.

ISSUED FOR BID: 11-13-2020

RVE 1901
REMINGTON & VERNICK **ENGINEERS**
232 KINGS HIGHWAY EAST
HADDONFIELD, NJ 08033
(856) 795-9595, FAX (856) 795-1882
WEB SITE ADDRESS : WWW.RVE.COM
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~ENGINEERING EXCELLENCE~

DATE:
CHRISTOPHER A. SAPONARO
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DATE:
BRIAN B. GREGG
NJ PROFESSIONAL ENGINEER LIC. No. 46577

NO.	REVISION	DATE	BY	CHK

ELECTRICAL LIGHTING FIRST FLOOR PLAN

PENNSAUKEN BOARD OF EDUCATION
ROOSEVELT STEM SCHOOL ADDITION AND RENOVATIONS
5526 WISTERIA AVENUE, PENNSAUKEN, NEW JERSEY 08109
PENNSAUKEN TOWNSHIP CAMDEN COUNTY NEW JERSEY

DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
S.M.	K.M.		AS NOTED

DATE: 10-19-2020
JOB No.: MP038X049
SHEET No.: E-2.2

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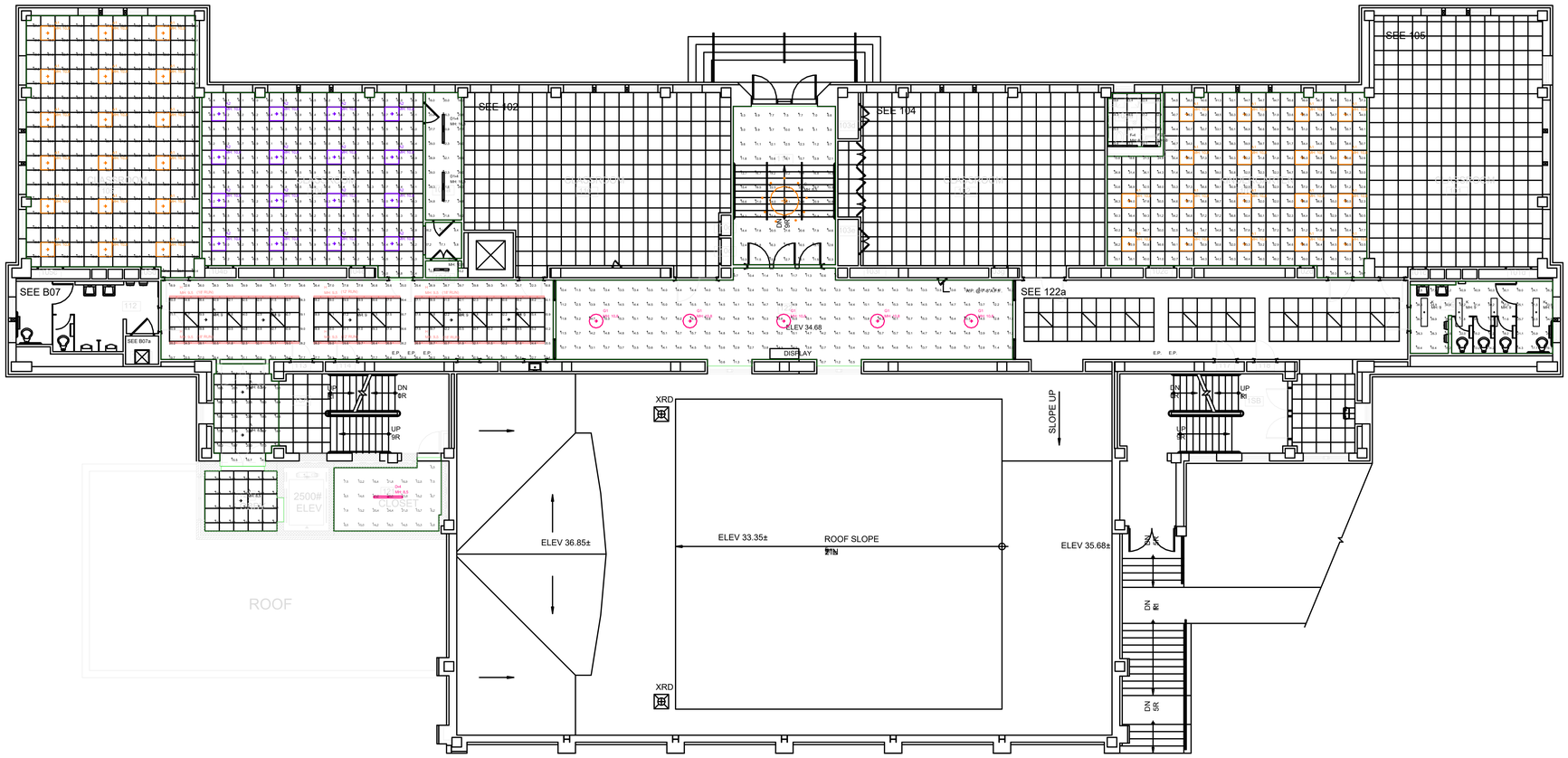

Luminaire Schedule

Symbol	Qty	Arrangement	Fixture Type	Fixture Description	Manufacturer	Catalog Number	LLF	Total Watts	Delivered Lumens	Photometric File Name
	8	SINGLE	A	2X2 ARCHITECTURAL EDGE-LIT TROFFER, 2500LM	COLUMBIA LIGHTING	VSY22-35LWHE-EDU	0.900	19.27	2567	VSY22-35LWHE-EDU.ies
	36	SINGLE	A1	2X2 ARCHITECTURAL EDGE-LIT TROFFER, 3200LM	COLUMBIA LIGHTING	VSY22-35MLHE-EDU	0.900	24.48	3273	VSY22-35MLHE-EDU.ies
	16	SINGLE	A2	2X2 ARCHITECTURAL EDGE-LIT TROFFER, 3700LM	COLUMBIA LIGHTING	VSY22-35HLHE-EDU	0.900	26.02	3752	VSY22-35HLHE-EDU.ies
	1	SINGLE	D-4	3 INCH SURFACE MOUNT LINEAR, 3000LM, 4FT LONG	LITECONTROL	6TL-S-D-4-BL-X-CX-35K-D075	0.900	23.218	3000	6TL-S-D-4-BL-X-CX-35K-D075.ies
	1	SINGLE	D1-2	3 INCH SURFACE MOUNT LINEAR, 2000LM, LLF FOR 2FT LONG	LITECONTROL	6TL-S-D-2-SQ-X-CX-35K-D100	0.450	33.934	4000	6TL-S-D-4-SQ-X-CX-35K-D100.ies
	2	SINGLE	D1-4	3 INCH SURFACE MOUNT LINEAR, 4000LM, 4FT LONG	LITECONTROL	6TL-S-D-4-SQ-X-CX-35K-D100	0.900	33.934	4000	6TL-S-D-4-SQ-X-CX-35K-D100.ies
	1	SINGLE	F-2	3 INCH WALL MOUNT LINEAR, 2000LM, LLF FOR 2FT LONG	LITECONTROL	6TL-W-D-2-DM-X-CX-35K-D100	0.450	16.5	4000	6TL-W-D-4-DM-X-CX-35K-D100.ies
	1	SINGLE	F-4	3 INCH WALL MOUNT LINEAR, 4000LM, 4FT LONG	LITECONTROL	6TL-W-D-4-DM-X-CX-35K-D100	0.900	33.934	4000	6TL-W-D-4-DM-X-CX-35K-D100.ies
	1	GROUP	G	54 INCH DIAMETER DECORATIVE PENDANT WITH 9 SATALLITE ARMS (SORAA LAMP CAT#SA19-11-OMNI-927-01 IN OUTER SHADES)	OCL / SORAA	CS2-P1AK-540-XX-XXX-LED1-27K	0.895	150.8	11689	N.A.
	5	SINGLE	G1	25 INCH DIAMETER SURFACE CEILING MOUNT	OCL ARCHITECTURAL LIGHTING INC	CM1-C1NA-25-LED1-35K	0.900	50	4489	CM1-P1AJ-25 LED1.ies
	96	SINGLE	H	2 INCH SURFACE MOUNT LINEAR WALL WASH, 1FT LONG SECTION OF CONTINUOUS RUN LENGTHS AS SHOWN ON DRAWINGS	EcoSense Lighting	L35-I-12-04-35-80-MULT-120	0.900	4	311	L35-I-12-04-35-80-MULT-120.ies
	11	SINGLE	K	1X4 ARCHITECTURAL EDGE-LIT TROFFER, 3100LM	COLUMBIA LIGHTING	VSY14-35VWHE-EDU	0.900	25.13	3195	VSY14-35VWHE-EDU.ies

Calculation Summary

Label	CalcType	Units	Avg	Max	Min
102 KINDERGARTEN_Workplane	Illuminance	Fc	52.36	67.6	15.8
102a TLT_Workplane	Illuminance	Fc	23.76	29.1	19.2
104 CLASSROOM_Workplane	Illuminance	Fc	57.01	70.8	8.4
104a_Workplane	Illuminance	Fc	26.37	32.3	18.0
104d_Workplane	Illuminance	Fc	12.17	13.8	10.2
105 CLASSROOM_Workplane	Illuminance	Fc	51.87	62.9	24.4
111 MAIN ENTRANCE_Floor	Illuminance	Fc	15.08	26.1	6.3
119 GIRLS TOILET_Workplane	Illuminance	Fc	27.74	52.2	9.3
120 LOBBY_Floor	Illuminance	Fc	12.31	15.8	8.0
121 CLOSET_Workplane	Illuminance	Fc	14.27	28.0	5.5
122 CORRIDOR_Floor	Illuminance	Fc	13.78	16.3	9.7
122a CORRIDOR_Floor	Illuminance	Fc	28.52	34.0	17.4
122a CORRIDOR_Wall_4	Illuminance	Fc	31.40	52.8	13.0
1SA CORRIDOR_Floor	Illuminance	Fc	17.75	22.9	12.7

LPD Area Summary

Label	Area	Total Watts	LPD
102 KINDERGARTEN_LPD	803.68	440.64	0.548
102a TLT_LPD	53.13	50.434	0.949
104 CLASSROOM_LPD	770.34	416.3199	0.540
104a_LPD	88	67.868	0.771
104d_LPD	11	33.934	3.085
105 CLASSROOM_LPD	832.48	440.64	0.529
111 MAIN ENTRANCE_LPD	311.08	150.8	0.485
119 GIRLS TOILET_LPD	191.94	100.52	0.524
120 LOBBY_LPD	90.27	19.27	0.213
121 CLOSET_LPD	134.79	23.218	0.172
122 CORRIDOR_LPD	731.59	250	0.342
122a CORRIDOR_LPD	598.13	480.3499	0.803
1SA CORRIDOR_LPD	118.62	38.54	0.325

Room Summary

Label	Type	Clg Ht.	Description
102 KINDERGARTEN	Polygon-Flat	10.8	REFLECTANCES: 80/50/20
102a TLT	Polygon-Flat	10.8	REFLECTANCES: 80/50/20
104 CLASSROOM	Polygon-Flat	10.8	REFLECTANCES: 80/50/20
104a	Polygon-Flat	10.8	REFLECTANCES: 80/50/20
104d	Polygon-Flat	10.8	REFLECTANCES: 80/50/20
105 CLASSROOM	Polygon-Flat	10.8	REFLECTANCES: 80/50/20
111 MAIN ENTRANCE	Rect-Flat	10.8	REFLECTANCES: 80/50/20
119 GIRLS TOILET	Polygon-Flat	9	REFLECTANCES: 80/50/20
120 LOBBY	Polygon-Flat	8.5	REFLECTANCES: 80/50/20
121 CLOSET	Polygon-Flat	8.5	REFLECTANCES: 80/50/20
122 CORRIDOR	Polygon-Flat	10.8	REFLECTANCES: 80/50/20
122a CORRIDOR	Polygon-Flat	10.8	REFLECTANCES: 20/50/20
1SA CORRIDOR	Polygon-Flat	8.5	REFLECTANCES: 80/50/20

GENERAL NOTES:
1. MH: IS THE LIGHTING FIXTURE MOUNTING HEIGHT
2. REFLECTANCES OF 80/50/20 ARE USED UNLESS OTHERWISE NOTED
3. CALCULATION POINTS ON THE WORKPLANE ARE AT 2.5' UNLESS OTHERWISE NOTED

1 (FOR REFERENCE ONLY)
ELECTRICAL LIGHTING FIRST FLOOR PLAN - (LIGHTING PHOTOMETRICS)
N.T.S.

NOTE:
1. CONTRACTOR IS TO PROVIDE PHOTOMETRIC CALCULATION FOR ALL FIXTURE SUBSTITUTIONS. SUBSTITUTED FIXTURES PERFORMANCE IS TO MEET OR EXCEED BASIS OF DESIGN FIXTURES.

ISSUED FOR BID: 11-13-2020

REMINGTON & VERNICK **ENGINEERS**
232 KINGS HIGHWAY EAST
HADDONFIELD, NJ 08033
(856) 795-9595, FAX (856) 795-1882
WEB SITE ADDRESS : WWW.RVE.COM
Certification of Authorization: 24 GA 28003300
~ENGINEERING EXCELLENCE~

DATE:
CHRISTOPHER A. SAPONARO
NJ PROFESSIONAL ENGINEER LIC. No. 40059

DATE:
BRIAN B. GREGG
NJ PROFESSIONAL ENGINEER LIC. No. 46577

PLANS WHICH DO NOT BEAR AN EMBOSSED SEAL ARE NOT VALID

NO.	REVISION	DATE	BY	CHK

(FOR REFERENCE ONLY) ELECTRICAL
LIGHTING FIRST FLOOR PLAN -
(LIGHTING PHOTOMETRICS)

PENNSAUKEN BOARD OF EDUCATION

ROOSEVELT STEM SCHOOL ADDITION AND RENOVATIONS
5526 WISTERIA AVENUE, PENNSAUKEN, NEW JERSEY 08109

PENNSAUKEN TOWNSHIP CAMDEN COUNTY NEW JERSEY

DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
S.M.	K.M.		AS NOTED

DATE: 10-19-2020
JOB No.: MP038X049
SHEET No.: E-2.2A

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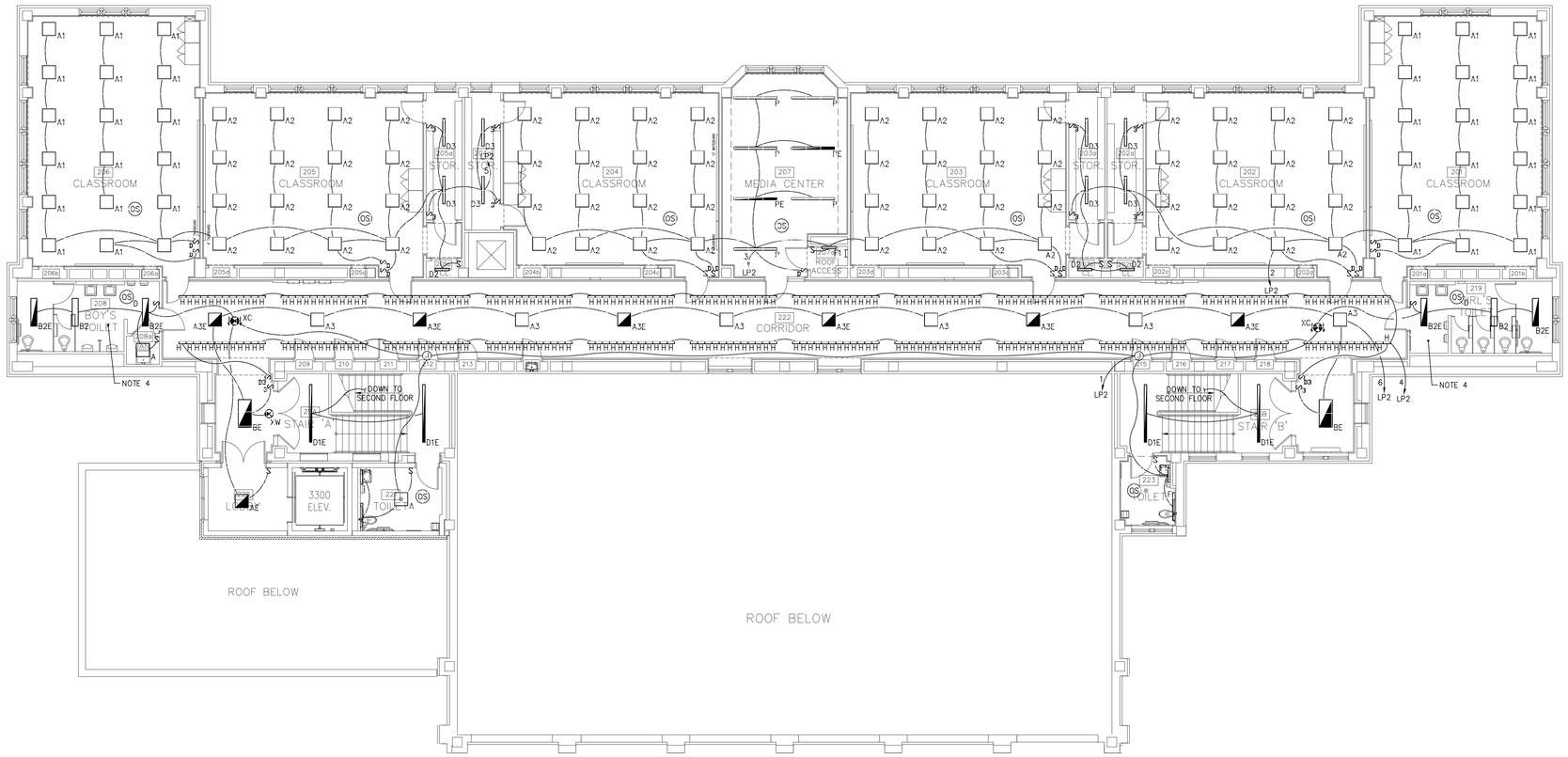

1 ELECTRICAL LIGHTING SECOND FLOOR PLAN (ALTERNATE)

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

NOTES:

1. ALL NOTES, SYMBOLS, AND ABBREVIATIONS ON DRAWNG E-1.0 APPLY TO THIS DRAWING.
2. THIS DRAWING IS DIAGRAMMATIC, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM EXISTING SITE CONDITIONS AND INSTALLATION CLEARANCES PRIOR TO SHOP DRAWING SUBMISSIONS AND INSTALLATION. SHOULD THE CONTRACTOR DETERMINE THAT THE INSTALLATION OF ANY ELECTRICAL COMPONENT IS RESTRICTED OR NOT ABLE TO BE INSTALLED IN THE SUGGESTED LOCATION THE CONTRACTOR SHALL READDRESS THE INSTALLATION ACCORDINGLY AND IN COMPLIANCE WITH NEC2017, AT NO ADDITIONAL COST.
3. CONTRACTOR SHALL PROVIDE 0-10V DIMMING CONTROL WIRING AS REQUIRED.
4. IF ALTERNATE BID IS NOT ACCEPTED, REFEED EXISTING BATHROOM LIGHTS FROM PANEL 'LP2' CIRCUIT #84.

ISSUED FOR BID: 11-13-2020

REMINGTON & VERNICK **ENGINEERS**
232 KINGS HIGHWAY EAST
HADDONFIELD, NJ 08033
(856) 795-9595, FAX (856) 795-1882
WEB SITE ADDRESS : WWW.RVE.COM
Certification of Authorization: 24 GA 28003300
~ENGINEERING EXCELLENCE~

DATE:

CHRISTOPHER A. SAPONARO
NJ PROFESSIONAL ENGINEER LIC. No. 40059

DATE:

BRIAN B. GREGG
NJ PROFESSIONAL ENGINEER LIC. No. 46577

PLANS WHICH DO NOT BEAR AN EMBOSSED SEAL ARE NOT VALID.

NO.	REVISION	DATE	BY

ELECTRICAL LIGHTING SECOND FLOOR PLAN (ALTERNATE)

PENNSAUKEN BOARD OF EDUCATION

ROOSEVELT STEM SCHOOL ADDITION AND RENOVATIONS
5526 WISTERIA AVENUE, PENNSAUKEN, NEW JERSEY 08109
PENNSAUKEN TOWNSHIP CAMDEN COUNTY NEW JERSEY

DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
S.M.	K.M.		AS NOTED

DATE: 10-19-2020

JOB No.: MP038X049

SHEET No.: E-2.3

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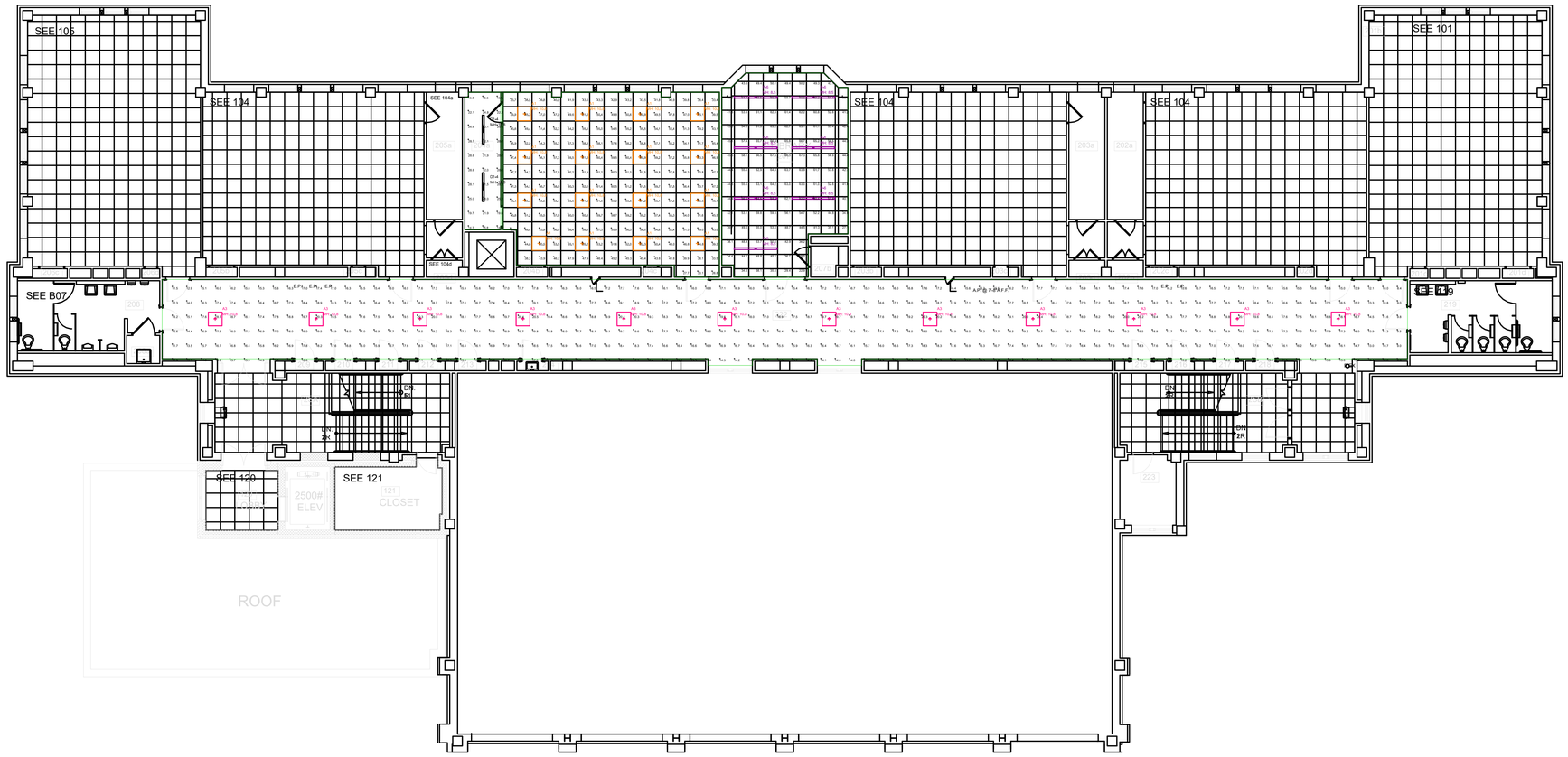

Luminaire Schedule										
Symbol	Qty	Arrangement	Fixture Type	Fixture Description	Manufacturer	Catalog Number	LLF	Total Watts	Delivered Lumens	Photometric File Name
	16	SINGLE	A1	2X2 ARCHITECTURAL EDGE-LIT TROFFER, 3200LM	COLUMBIA LIGHTING	VSY22-35MLHE-EDU	0.900	24.48	3273	VSY22-35MLHE-EDU.ies
	12	SINGLE	A3	2X2 ARCHITECTURAL EDGE-LIT TROFFER, 4600LM	COLUMBIA LIGHTING	VSY22-35VLHE-EDU	0.900	32.33	4610	VSY22-35VLHE-EDU.ies
	2	SINGLE	D1-4	3 INCH SURFACE MOUNT LINEAR, 4000LM, 4FT LONG	LITECONTROL	67L-S-D-4-SQ-X-CX-35K-D100	0.900	33.934	4000	67L-S-D-4-SQ-X-CX-35K-D100.ies
	7	SINGLE	P-6	6 INCH DIRECT/INDIRECT LINEAR PENDANT, 3000LM UP, 2700LM DOWN, LLF FOR 6FT LONG	LITECONTROL	SAE101-P-ID-6-SOF-35K-I050-D045	1.350	43.5	3801	SAE101-P-ID-STD-4-SOF-CX-35K-I050-D045.ies

Calculation Summary					
Label	CalcType	Units	Avg	Max	Min
204 CLASSROOM_Workplane	Illuminance	Fc	51.53	62.0	26.8
204a_Workplane	Illuminance	Fc	24.72	32.1	13.5
207 LIBRARY_Workplane	Illuminance	Fc	52.05	67.5	22.9
222 CORRIDOR_Floor	Illuminance	Fc	16.95	20.5	8.4

LPD Area Summary			
Label	Area	Total Watts	LPD
204 CLASSROOM_LPD	719.63	391.68	0.544
204a_LPD	95.08	67.868	0.714
207 LIBRARY_LPD	450.73	304.5	0.676
222 CORRIDOR_LPD	1912	387.9601	0.203

Room Summary			
Label	Type	Clg Ht.	Description
204 CLASSROOM	Polygon-Flat	10.8	REFLECTANCES: 80/50/20
204a	Polygon-Flat	10.8	REFLECTANCES: 80/50/20
207 LIBRARY	Polygon-Flat	10.8	REFLECTANCES: 80/50/20
222 CORRIDOR	Polygon-Flat	10.8	REFLECTANCES: 80/50/20

GENERAL NOTES:
1. MH: IS THE LIGHTING FIXTURE MOUNTING HEIGHT
2. REFLECTANCES OF 80/50/20 ARE USED UNLESS OTHERWISE NOTED
3. CALCULATION POINTS ON THE WORKPLANE ARE AT 2.5' UNLESS OTHERWISE NOTED

1 (FOR REFERENCE ONLY)
ELECTRICAL LIGHTING SECOND FLOOR PLAN - (LIGHTING PHOTOMETRICS)
N.T.S.

NOTE:
1. CONTRACTOR IS TO PROVIDE PHOTOMETRIC CALCULATION FOR ALL FIXTURE SUBSTITUTIONS. SUBSTITUTED FIXTURES PERFORMANCE IS TO MEET OR EXCEED BASIS OF DESIGN FIXTURES.

ISSUED FOR BID: 11-13-2020

RVE 1901
REMINGTON & VERNICK **ENGINEERS**
232 KINGS HIGHWAY EAST
HADDONFIELD, NJ 08033
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~ENGINEERING EXCELLENCE~

DATE:
CHRISTOPHER A. SAPONARO
NJ PROFESSIONAL ENGINEER LIC. No. 40059

DATE:
BRIAN B. GREGG
NJ PROFESSIONAL ENGINEER LIC. No. 46577

NO.	REVISION	DATE	BY	CHK

(FOR REFERENCE ONLY) ELECTRICAL LIGHTING SECOND FLOOR PLAN - (LIGHTING PHOTOMETRICS)

PENNSAUKEN BOARD OF EDUCATION

ROOSEVELT STEM SCHOOL ADDITION AND RENOVATIONS
5226 WISTERIA AVENUE, PENNSAUKEN, NEW JERSEY 08109

PENNSAUKEN TOWNSHIP CAMDEN COUNTY NEW JERSEY

DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
S.M.	K.M.		AS NOTED

DATE: 10-19-2020
JOB No.: MP038X049
SHEET No.: E-2.3A

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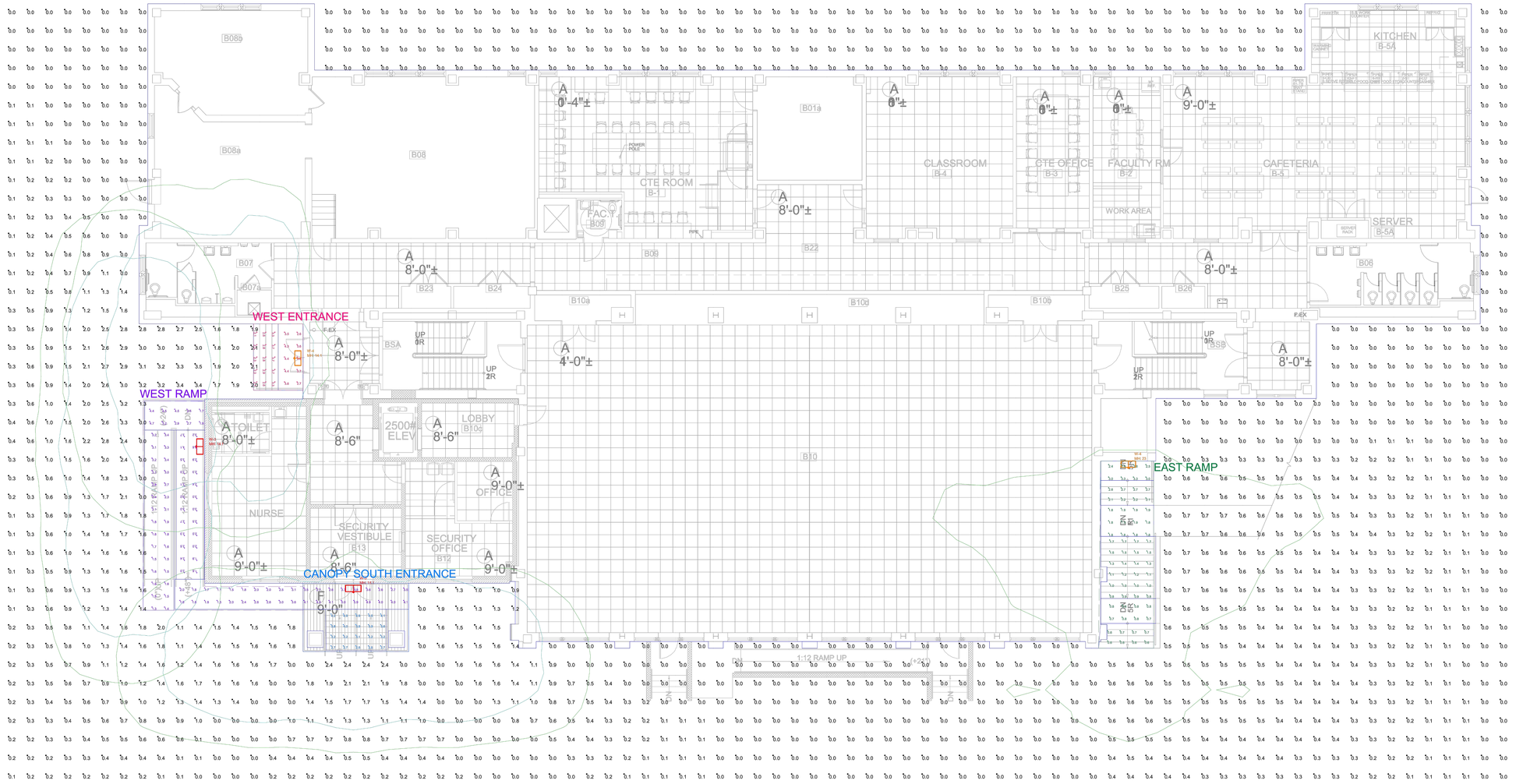

Luminaire Schedule

Symbol	Qty	Arrangement	Fixture Type	Fixture Description	Manufacturer	Catalog Number	LLF	Total Watts	Delivered Lumens	Photometric File Name
	2	SINGLE	W-3	WALL PACK, TYPE 3 DISTRIBUTION, MOUNTING HEIGHT AS INDICATED ON DRAWINGS	HUBBELL OUTDOOR	TRP2-24L-30-4K7-3	0.900	27.9	3747	TRP2-24L-30-4K7-3.IES
	2	SINGLE	W-4	WALL PACK, TYPE 4 DISTRIBUTION, MOUNTING HEIGHT AS INDICATED ON DRAWINGS	HUBBELL OUTDOOR	TRP2-24L-30-3K7-4	0.900	27.9	3284	TRP2-24L-30-3K7-4.IES

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CalcPts to Zero	Illuminance	Fc	0.34	3.5	0.0	N.A.	N.A.
CANOPY SOUTH ENTRANCE	Illuminance	Fc	3.71	5.9	2.6	1.43	2.27
EAST RAMP	Illuminance	Fc	1.55	3.3	0.6	2.58	5.50
WEST ENTRANCE	Illuminance	Fc	3.16	4.4	2.1	1.50	2.10
WEST RAMP	Illuminance	Fc	2.47	4.7	1.1	2.25	4.27

GENERAL NOTES:
1. MH: IS THE LIGHTING FIXTURE MOUNTING HEIGHT

1 (FOR REFERENCE ONLY)
ELECTRICAL EXTERIOR LIGHTING PLAN - (LIGHTING PHOTOMETRICS)
N.T.S.

NOTE:
1. CONTRACTOR IS TO PROVIDE PHOTOMETRIC CALCULATION FOR ALL FIXTURE SUBSTITUTIONS. SUBSTITUTED FIXTURES PERFORMANCE IS TO MEET OR EXCEED BASIS OF DESIGN FIXTURES.

ISSUED FOR BID: 11-13-2020

RVE 1901
REMINGTON & VERNICK **ENGINEERS**
232 KINGS HIGHWAY EAST
HADDONFIELD, NJ 08033
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WEB SITE ADDRESS : WWW.RVE.COM
Certification of Authorization: 24 GA 28003300
–ENGINEERING EXCELLENCE–

DATE:
CHRISTOPHER A. SAPONARO
NJ PROFESSIONAL ENGINEER LIC. No. 40059

DATE:
BRIAN B. GREGG
NJ PROFESSIONAL ENGINEER LIC. No. 46577

NO	DATE	REVISION	BY	CHK

(FOR REFERENCE ONLY) ELECTRICAL EXTERIOR LIGHTING PLAN - (LIGHTING PHOTOMETRICS)

PENNSAUKEN BOARD OF EDUCATION
ROOSEVELT STEM SCHOOL ADDITION AND RENOVATIONS
5526 WISTERIA AVENUE, PENNSAUKEN, NEW JERSEY 08109
PENNSAUKEN TOWNSHIP CAMDEN COUNTY NEW JERSEY

DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
B.Z.	C.H.		AS NOTED

DATE: 10-19-2020
JOB No.: MP038X049
SHEET No.: E-2.4A

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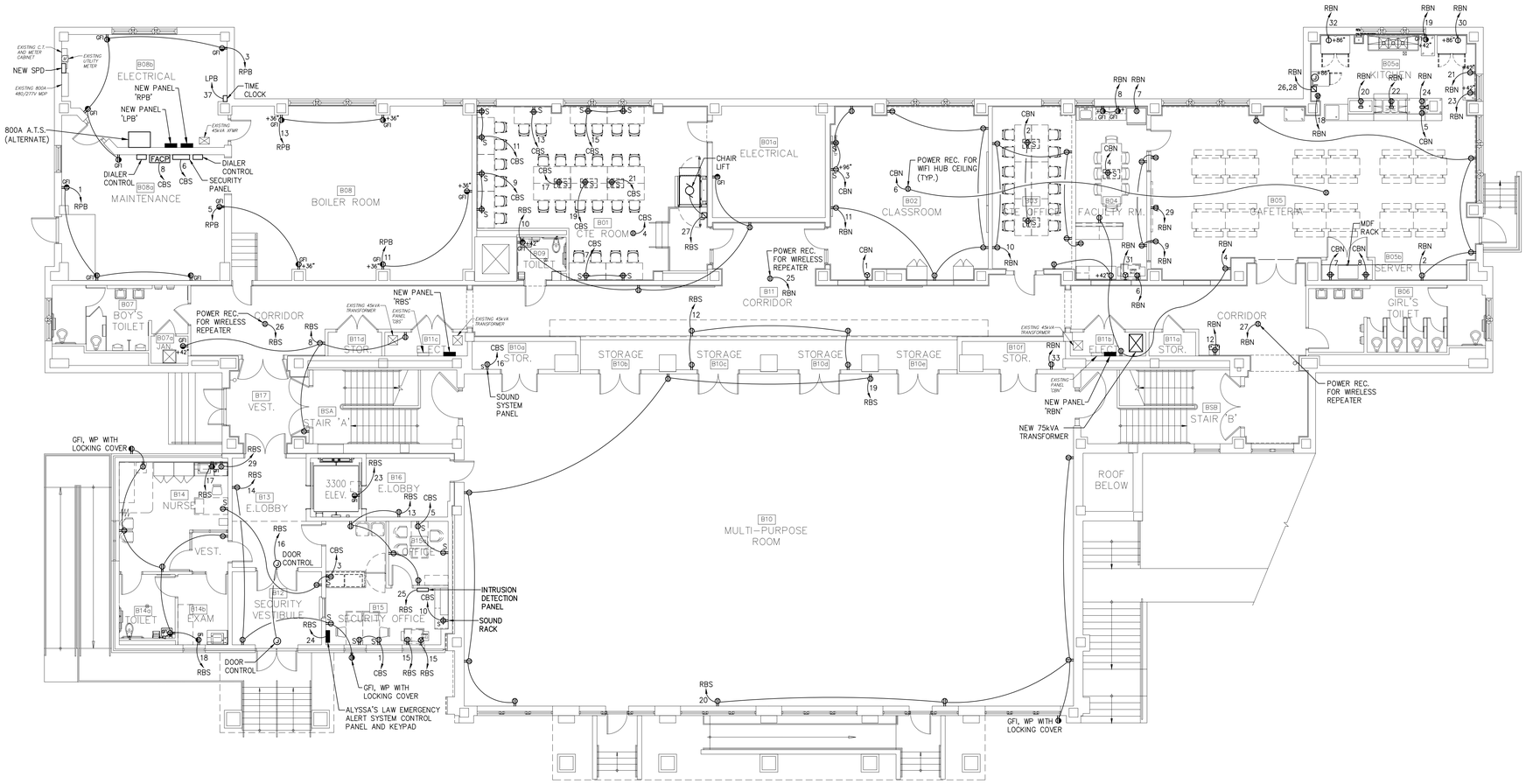

1 ELECTRICAL POWER BASEMENT FLOOR PLAN

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

NOTES:

1. ALL NOTES, SYMBOLS, AND ABBREVIATIONS ON DRAWING E-1.0 APPLY TO THIS DRAWING.
2. THIS DRAWING IS DIAGRAMMATIC, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM EXISTING SITE CONDITIONS AND INSTALLATION CLEARANCES PRIOR TO SHOP DRAWING SUBMISSIONS AND INSTALLATION. SHOULD THE CONTRACTOR DETERMINE THAT THE INSTALLATION OF ANY ELECTRICAL COMPONENT IS RESTRICTED OR NOT ABLE TO BE INSTALLED IN THE SUGGESTED LOCATION THE CONTRACTOR SHALL READDRESS THE INSTALLATION ACCORDINGLY AND IN COMPLIANCE WITH NEC2017, AT NO ADDITIONAL COST.

ISSUED FOR BID: 11-13-2020

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DATE:
BRIAN B. GREGG
NJ PROFESSIONAL ENGINEER LIC. No. 46577

NO.	REVISION	DATE	BY	CHK'D

ELECTRICAL POWER BASEMENT FLOOR PLAN

PENNSAUKEN BOARD OF EDUCATION

ROOSEVELT STEM SCHOOL ADDITION AND RENOVATIONS
5526 WISTERIA AVENUE, PENNSAUKEN, NEW JERSEY 08109
PENNSAUKEN TOWNSHIP CAMDEN COUNTY NEW JERSEY

DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
S.M.	K.M.		AS NOTED

DATE:	SHEET No.:
10-19-2020	E-3.1

JOB No.: MP03830049

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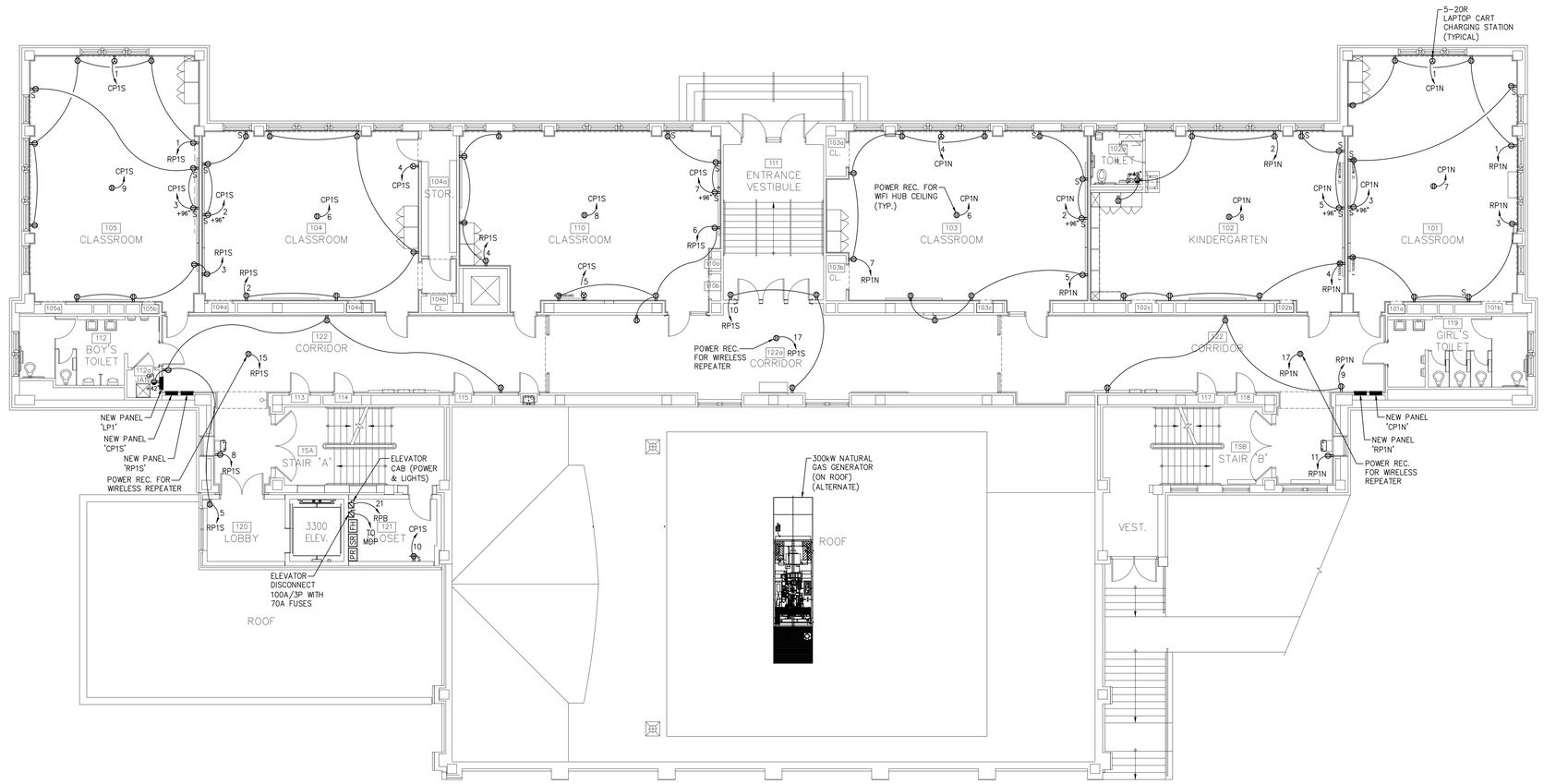

1 ELECTRICAL POWER FIRST FLOOR PLAN

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

NOTES:

1. ALL NOTES, SYMBOLS, AND ABBREVIATIONS ON DRAWING E-1.0 APPLY TO THIS DRAWING.
2. THIS DRAWING IS DIAGRAMMATIC, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM EXISTING SITE CONDITIONS AND INSTALLATION CLEARANCES PRIOR TO SHOP DRAWING SUBMISSIONS AND INSTALLATION. SHOULD THE CONTRACTOR DETERMINE THAT THE INSTALLATION OF ANY ELECTRICAL COMPONENT IS RESTRICTED OR NOT ABLE TO BE INSTALLED IN THE SUGGESTED LOCATION THE CONTRACTOR SHALL READDRESS THE INSTALLATION ACCORDINGLY AND IN COMPLIANCE WITH NEC2017, AT NO ADDITIONAL COST.

ISSUED FOR BID: 11-13-2020

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NJ PROFESSIONAL ENGINEER LIC. No. 40059

DATE:
BRIAN B. GREGG
NJ PROFESSIONAL ENGINEER LIC. No. 46577

NO.	REVISION	DATE	BY	CHK

ELECTRICAL POWER FIRST FLOOR PLAN

PENNSAUKEN BOARD OF EDUCATION

ROOSEVELT STEM SCHOOL ADDITION AND RENOVATIONS
5526 WISTERIA AVENUE, PENNSAUKEN, NEW JERSEY 08109

PENNSAUKEN TOWNSHIP CAMDEN COUNTY NEW JERSEY

DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
S.M.	K.M.		AS NOTED

DATE: 10-19-2020

JOB No.: MP038X049

SHEET No.: E-3.2

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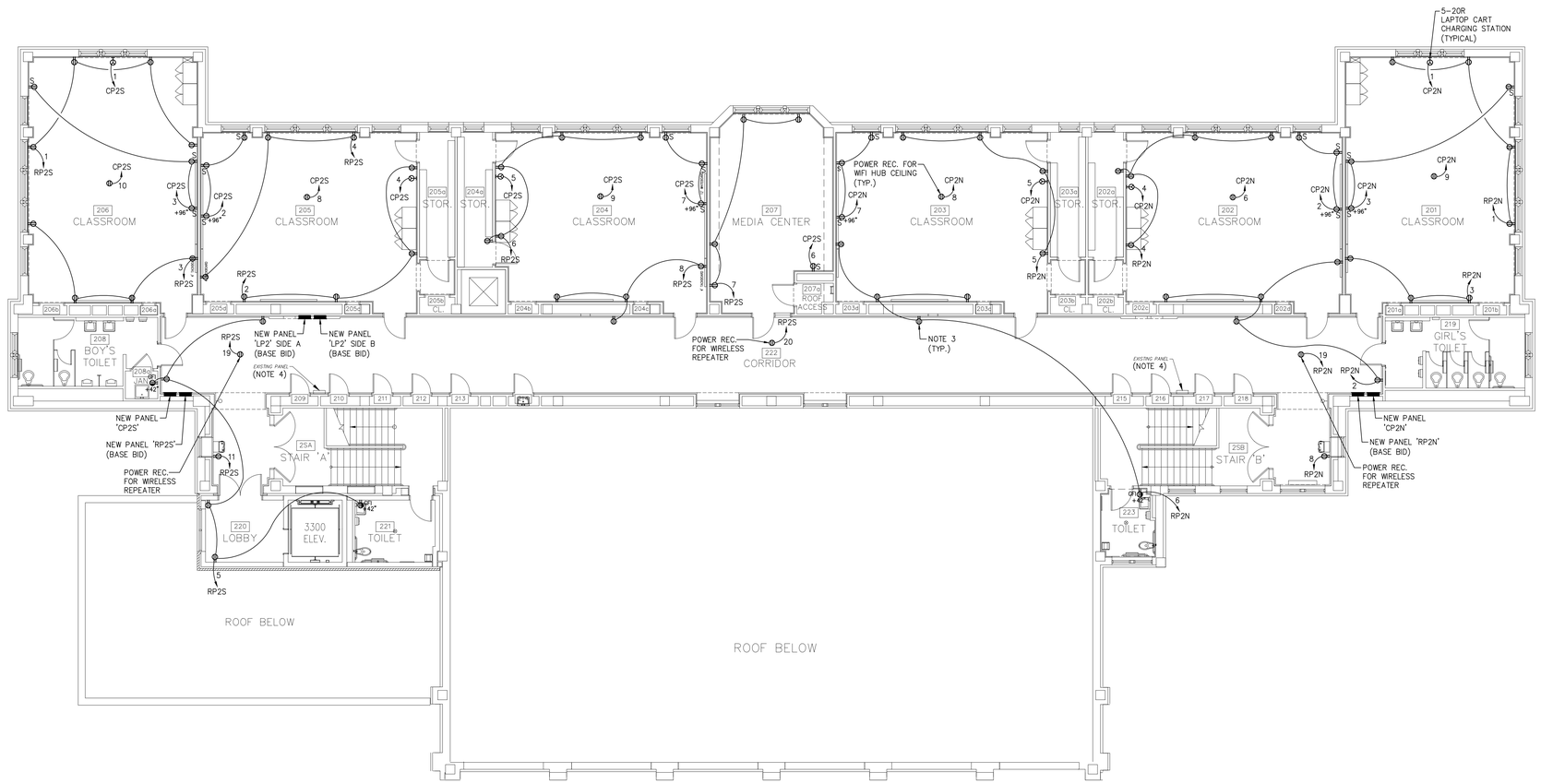

1 ELECTRICAL POWER SECOND FLOOR PLAN (ALTERNATE)

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

NOTES:

1. ALL NOTES, SYMBOLS, AND ABBREVIATIONS ON DRAWING E-1.0 APPLY TO THIS DRAWING.
2. THIS DRAWING IS DIAGRAMMATIC, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM EXISTING SITE CONDITIONS AND INSTALLATION CLEARANCES PRIOR TO SHOP DRAWING SUBMISSIONS AND INSTALLATION. SHOULD THE CONTRACTOR DETERMINE THAT THE INSTALLATION OF ANY ELECTRICAL COMPONENT IS RESTRICTED OR NOT ABLE TO BE INSTALLED IN THE SUGGESTED LOCATION THE CONTRACTOR SHALL READDRESS THE INSTALLATION ACCORDINGLY AND IN COMPLIANCE WITH NEC2017, AT NO ADDITIONAL COST.
3. ALL RECEPTACLES ARE ALTERNATE BID.
4. IF ALTERNATE BID IS NOT ACCEPTED, REFEED EXISTING PANELS FROM PANELS 'RP2N' AND 'RP2S'.

ISSUED FOR BID: 11-13-2020

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DATE:
BRIAN B. GREGG
NJ PROFESSIONAL ENGINEER LIC. No. 46577

PLANS WHICH DO NOT BEAR AN EMBOSSED SEAL ARE NOT VALID

NO.	REVISION	DATE	BY	CHK'D

ELECTRICAL POWER SECOND FLOOR PLAN (ALTERNATE)

PENNSAUKEN BOARD OF EDUCATION

ROOSEVELT STEM SCHOOL ADDITION AND RENOVATIONS
5526 WISTERIA AVENUE, PENNSAUKEN, NEW JERSEY 08109

PENNSAUKEN TOWNSHIP CAMDEN COUNTY NEW JERSEY

DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
S.M.	K.M.		AS NOTED

DATE: 10-19-2020
JOB No.: MP0383K049
SHEET No.: E-3.3

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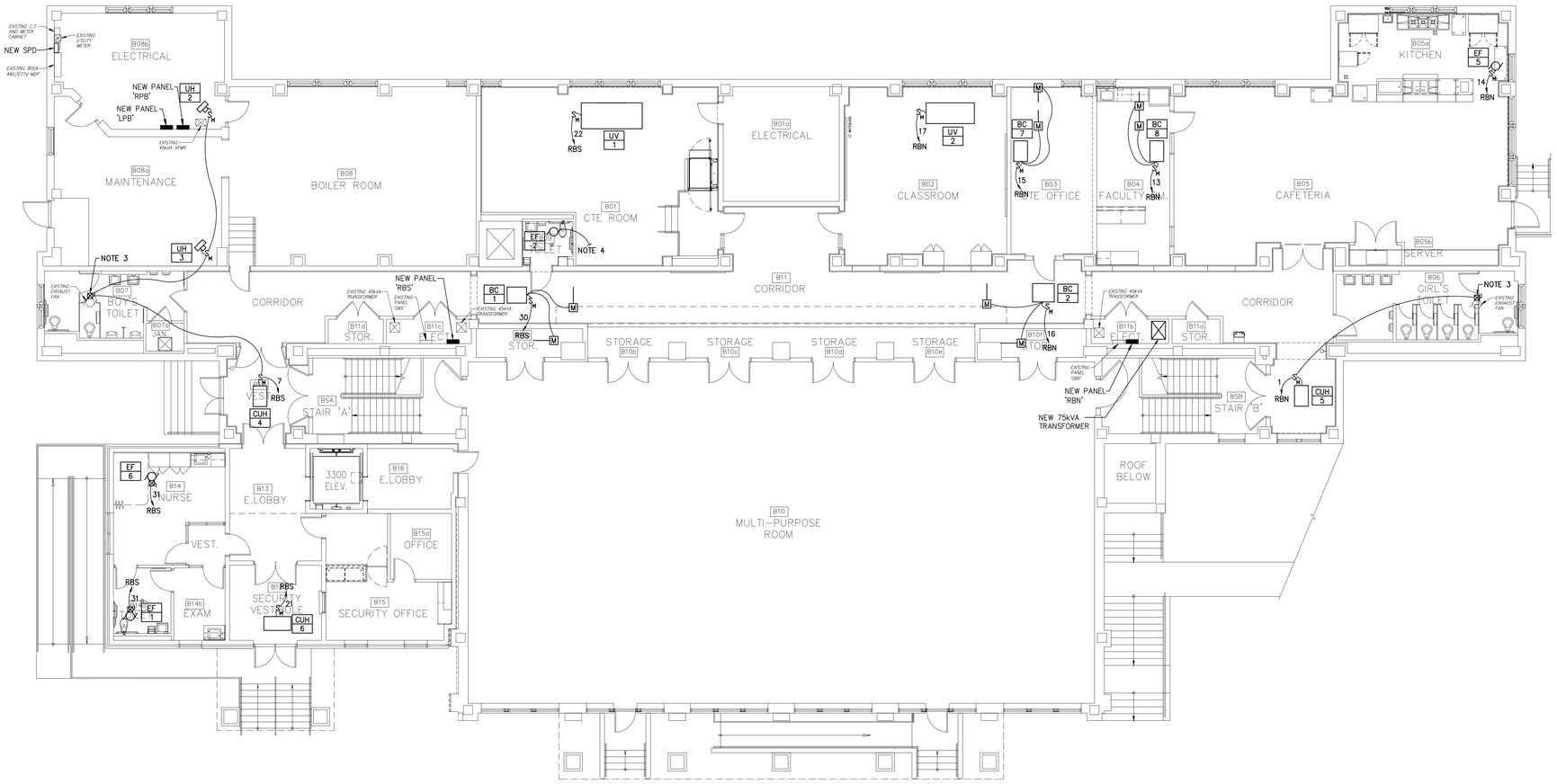
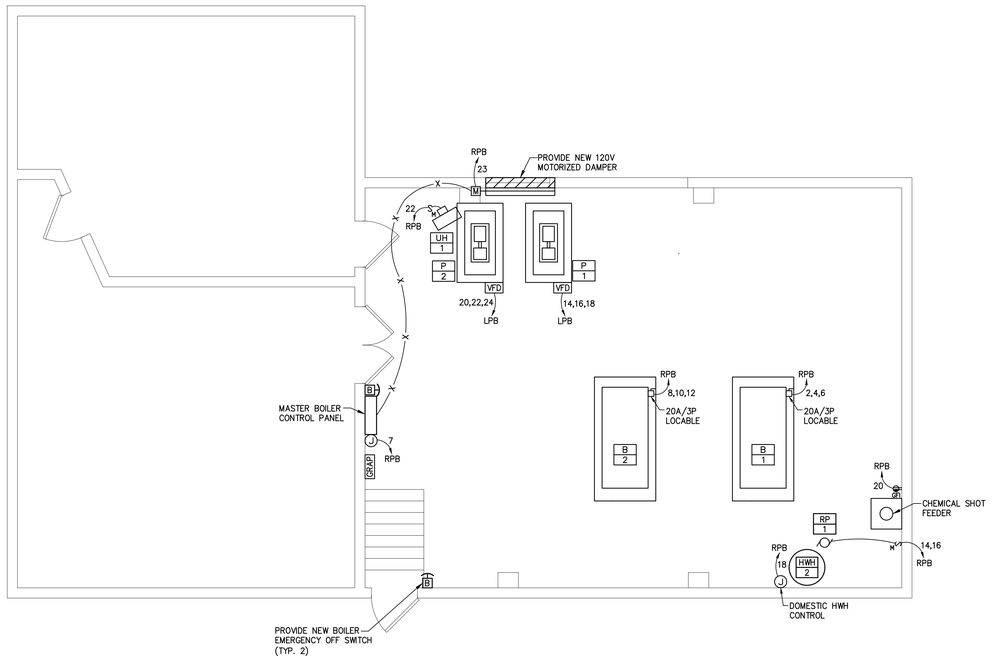


1 ELECTRICAL HVAC POWER BASEMENT FLOOR PLAN

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



2 ELECTRICAL ENLARGED BOILER ROOM FLOOR PLAN

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

NOTES:

1. ALL NOTES, SYMBOLS, AND ABBREVIATIONS ON DRAWING E-1.0 APPLY TO THIS DRAWING.
2. THIS DRAWING IS DIAGRAMMATIC, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM EXISTING SITE CONDITIONS AND INSTALLATION CLEARANCES PRIOR TO SHOP DRAWING SUBMISSIONS AND INSTALLATION. SHOULD THE CONTRACTOR DETERMINE THAT THE INSTALLATION OF ANY ELECTRICAL COMPONENT IS RESTRICTED OR NOT ABLE TO BE INSTALLED IN THE SUGGESTED LOCATION THE CONTRACTOR SHALL READDRESS THE INSTALLATION ACCORDINGLY AND IN COMPLIANCE WITH NEC2017, AT NO ADDITIONAL COST.
3. EXHAUST FAN TO BE CONTROLLED BY BAS SYSTEM.
4. CONNECT EXHAUST FAN TO TOILET ROOM LIGHTING CIRCUIT.

ISSUED FOR BID: 11-13-2020

RVE 1901
REMINGTON & VERNICK **ENGINEERS**
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NJ PROFESSIONAL ENGINEER LIC. No. 40059

DATE:
BRIAN B. GREGG
NJ PROFESSIONAL ENGINEER LIC. No. 46577

No.	REVISION	DATE	BY	CHK

ELECTRICAL HVAC POWER BASEMENT FLOOR PLAN

PENNSAUKEN BOARD OF EDUCATION

ROOSEVELT STEM SCHOOL ADDITION AND RENOVATIONS
5526 WISTERIA AVENUE, PENNSAUKEN, NEW JERSEY 08109

PENNSAUKEN TOWNSHIP CAMDEN COUNTY NEW JERSEY

DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
S.M.	K.M.		AS NOTED

DATE: 10-19-2020

JOB No.: MP038X049

SHEET No.: E-3.4

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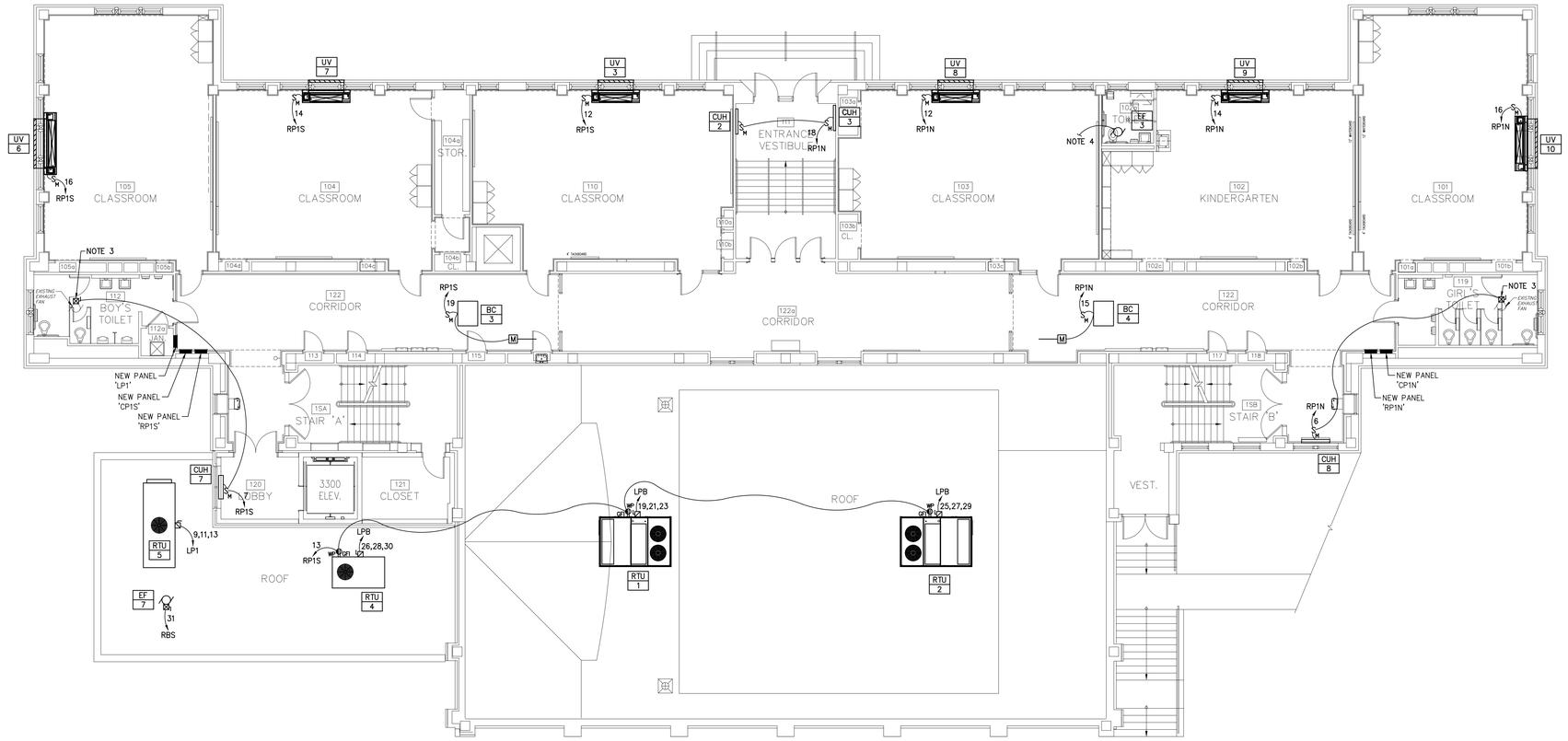

1 ELECTRICAL HVAC POWER FIRST FLOOR PLAN

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

NOTES:

1. ALL NOTES, SYMBOLS, AND ABBREVIATIONS ON DRAWNG E–1.0 APPLY TO THIS DRAWING.
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3. EXHAUST FAN TO BE CONTROLLED BY BAS SYSTEM.
4. CONNECT EXHAUST FAN TO TOILET ROOM LIGHTING CIRCUIT.

ISSUED FOR BID: 11-13-2020

REMINGTON & VERNICK **ENGINEERS**

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DATE:
BRIAN B. GREGG
NJ PROFESSIONAL ENGINEER LIC. No. 46577

NO.	REVISION	DATE	BY	CHK

ELECTRICAL HVAC POWER FIRST FLOOR PLAN

PENNSAUKEN BOARD OF EDUCATION

ROOSEVELT STEM SCHOOL ADDITION AND RENOVATIONS
5526 WISTERIA AVENUE, PENNSAUKEN, NEW JERSEY 08109
PENNSAUKEN TOWNSHIP CAMDEN COUNTY NEW JERSEY

DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
S.M.	K.M.		AS NOTED
DATE: 10-19-2020			SHEET No.: E-3.5
JOB No.: MP038X049			

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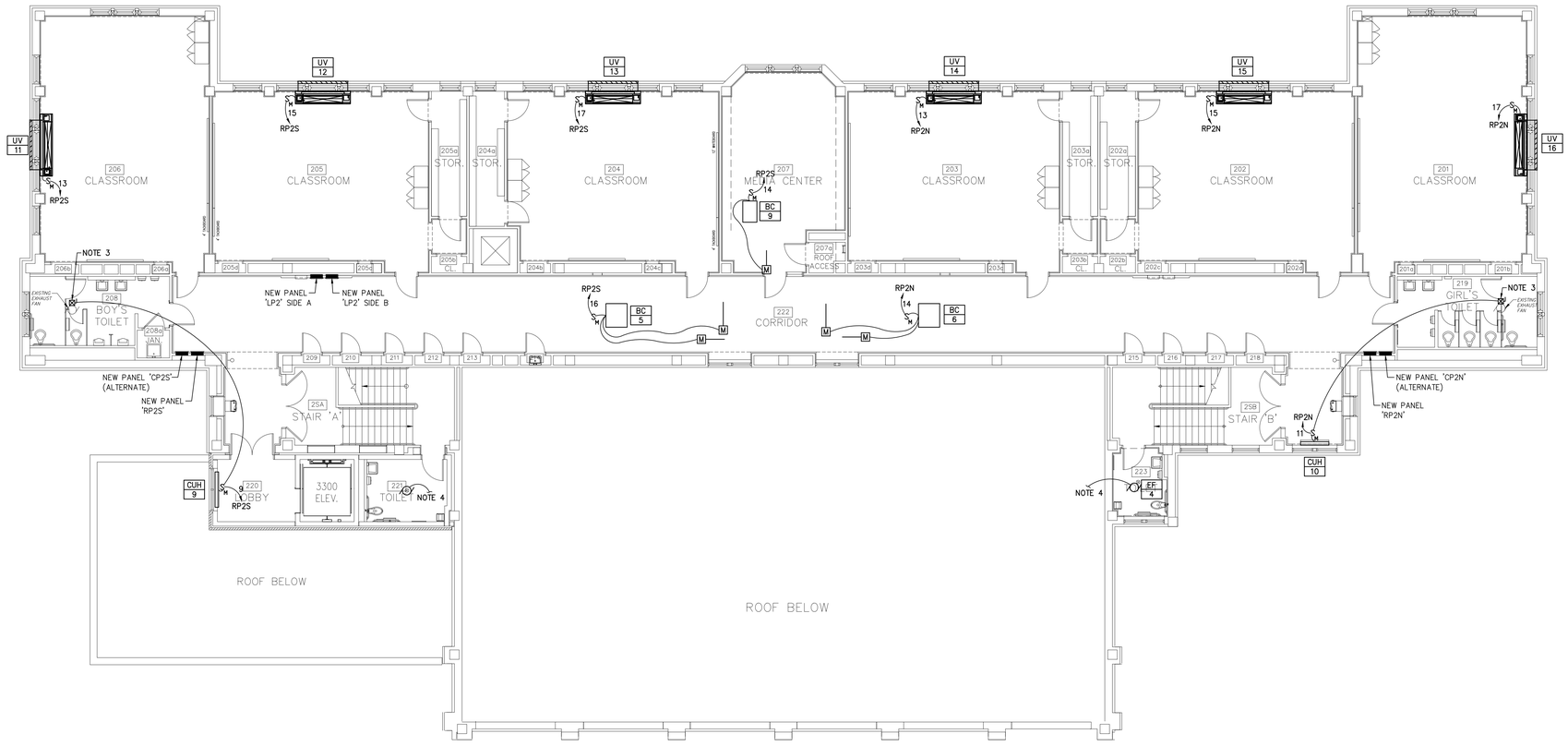

1 ELECTRICAL HVAC POWER SECOND FLOOR PLAN

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

NOTES:

1. ALL NOTES, SYMBOLS, AND ABBREVIATIONS ON DRAWING E-1.0 APPLY TO THIS DRAWING.
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3. EXHAUST FAN TO BE CONTROLLED BY BAS SYSTEM.
4. CONNECT EXHAUST FAN TO TOILET ROOM LIGHTING CIRCUIT.

ISSUED FOR BID: 11-13-2020

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DATE:
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DATE:
BRIAN B. GREGG
NJ PROFESSIONAL ENGINEER LIC. No. 46577

PLANS WHICH DO NOT BEAR AN EMBOSSED SEAL ARE NOT VALID.

NO.	REVISION	DATE	BY	CHK'D

ELECTRICAL HVAC POWER SECOND FLOOR PLAN

PENNSAUKEN BOARD OF EDUCATION

ROOSEVELT STEM SCHOOL ADDITION AND RENOVATIONS
5526 WISTERIA AVENUE, PENNSAUKEN, NEW JERSEY 08109
PENNSAUKEN TOWNSHIP CAMDEN COUNTY NEW JERSEY

DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
S.M.	K.M.		AS NOTED

DATE: 10-19-2020

JOB No.: MP038X049

SHEET No.: E-3.6

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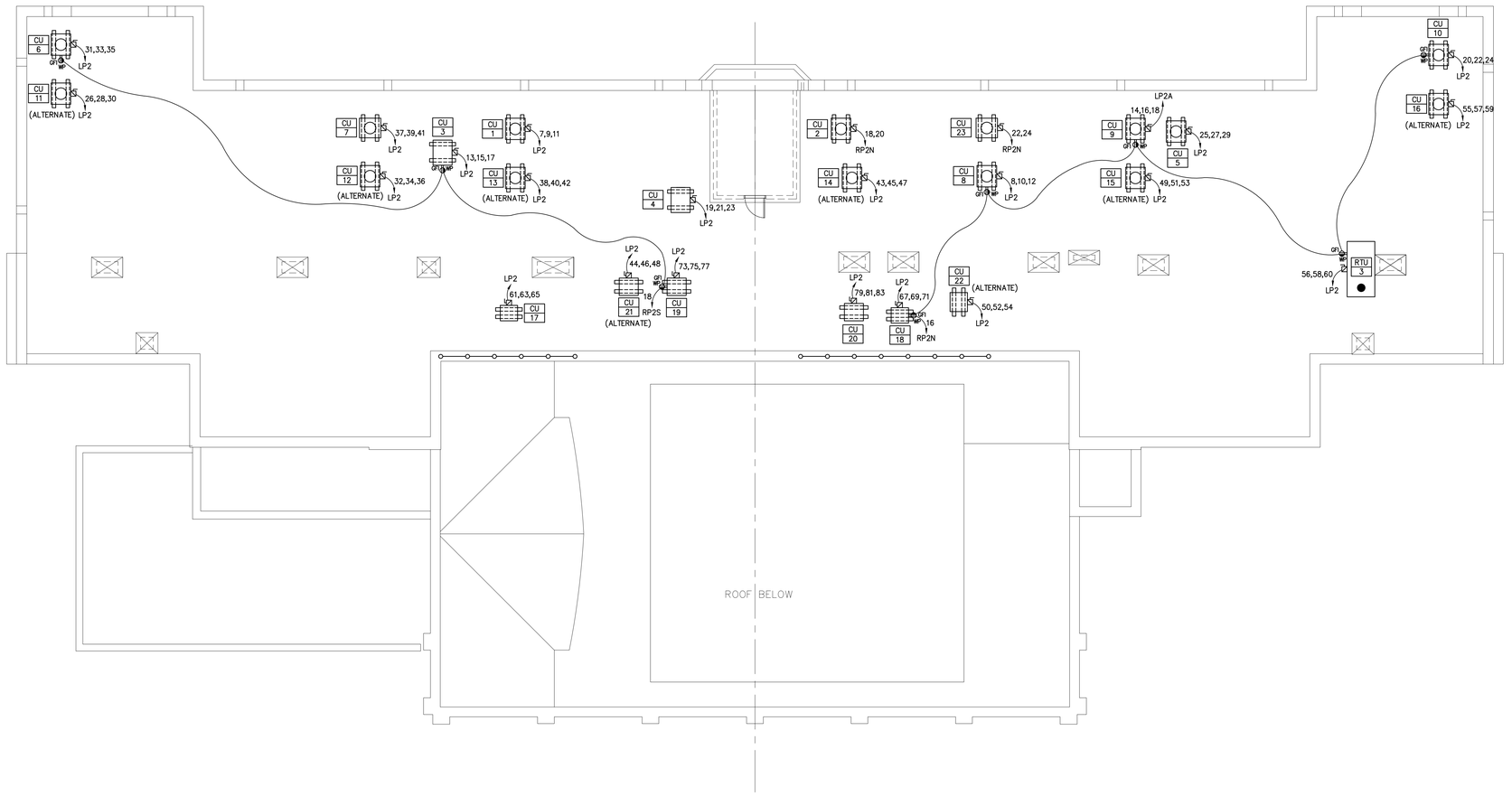

1 ELECTRICAL HVAC POWER ROOF PLAN

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

NOTES:

1. ALL NOTES, SYMBOLS, AND ABBREVIATIONS ON DRAWING E-1.0 APPLY TO THIS DRAWING.
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3. ALL CONDENSING UNITS ASSOCIATED WITH THE SECOND FLOOR HVAC ARE ALTERNATE BID. REFER TO MECHANICAL DRAWINGS FOR MORE DETAILS.

ISSUED FOR BID: 11-13-2020

RVE 1901
REMINGTON & VERNICK **ENGINEERS**
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(856) 795-9595, FAX (856) 795-1882
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ELECTRICAL HVAC POWER ROOF PLAN

PENNSAUKEN BOARD OF EDUCATION

ROOSEVELT STEM SCHOOL ADDITION AND RENOVATIONS
5526 WISTERIA AVENUE, PENNSAUKEN, NEW JERSEY 08109

PENNSAUKEN TOWNSHIP CAMDEN COUNTY NEW JERSEY

DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
S.M.	K.M.		AS NOTED

DATE: 10-19-2020

JOB No.: MP038X049

SHEET No.: E-3.7

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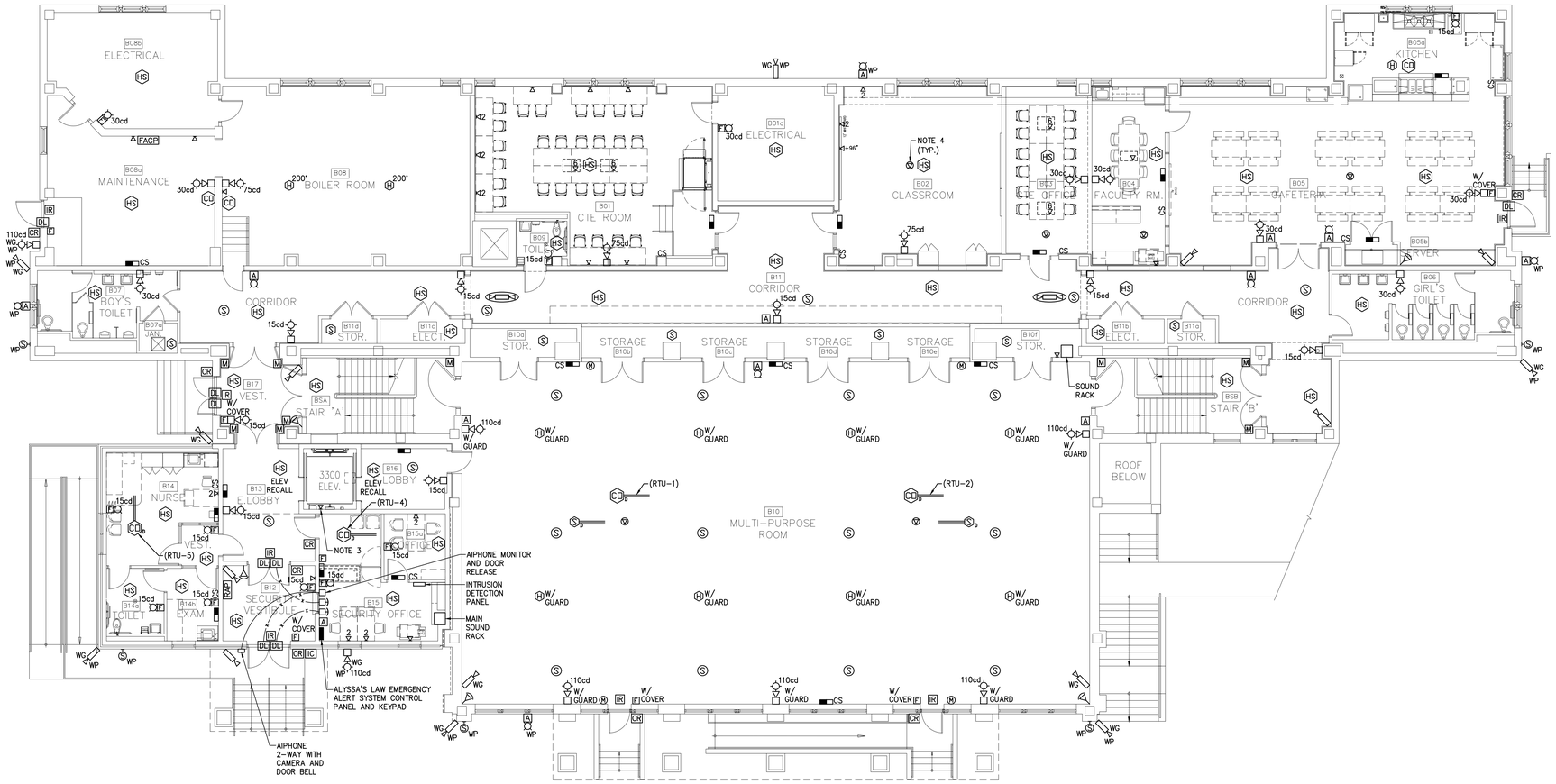

1 ELECTRICAL SYSTEMS BASEMENT FLOOR PLAN

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

NOTES:

1. ALL NOTES, SYMBOLS, AND ABBREVIATIONS ON DRAWING E-1.0 APPLY TO THIS DRAWING.
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3. PROVIDE ELEVATOR PHONE CONNECTION.
4. PROVIDE CEILING MOUNTED DATA OUTLET FOR WIFI.

ISSUED FOR BID: 11-13-2020

RVE 1901
REMINGTON & VERNICK **ENGINEERS**
232 KINGS HIGHWAY EAST
HADDONFIELD, NJ 08033
(856) 795-9595, FAX (856) 795-1882
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NO.	REVISION	DATE	BY	CHK

ELECTRICAL SYSTEMS BASEMENT FLOOR PLAN

PENNSAUKEN BOARD OF EDUCATION

ROOSEVELT STEM SCHOOL ADDITION AND RENOVATIONS
5526 WISTERIA AVENUE, PENNSAUKEN, NEW JERSEY 08109
PENNSAUKEN TOWNSHIP CAMDEN COUNTY NEW JERSEY

DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
S.M.	K.M.		AS NOTED
DATE: 10-19-2020			SHEET No.: E-4.1
JOB No.: MP038X049			

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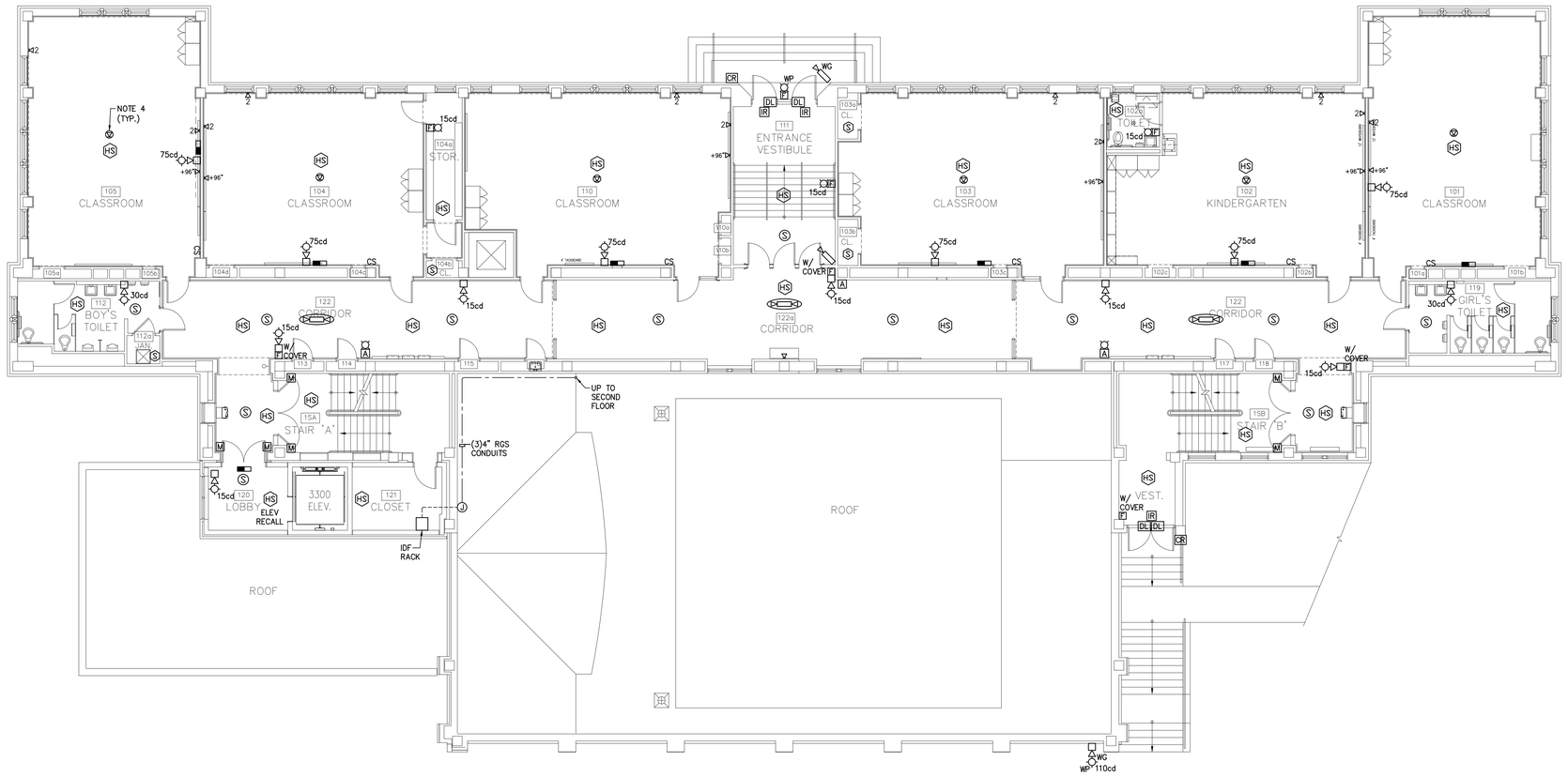

1 ELECTRICAL SYSTEMS FIRST FLOOR PLAN

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

NOTES:

1. ALL NOTES, SYMBOLS, AND ABBREVIATIONS ON DRAWING E-1.0 APPLY TO THIS DRAWING.
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3. PROVIDE CEILING MOUNTED DATA OUTLET FOR WIFI.
4. PROVIDE CEILING MOUNTED DATA OUTLET FOR WIFI.

ISSUED FOR BID: 11-13-2020

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DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
S.M.	K.M.		AS NOTED
DATE: 10-19-2020			SHEET No.: E-4.2
JOB No.: MP038X049			

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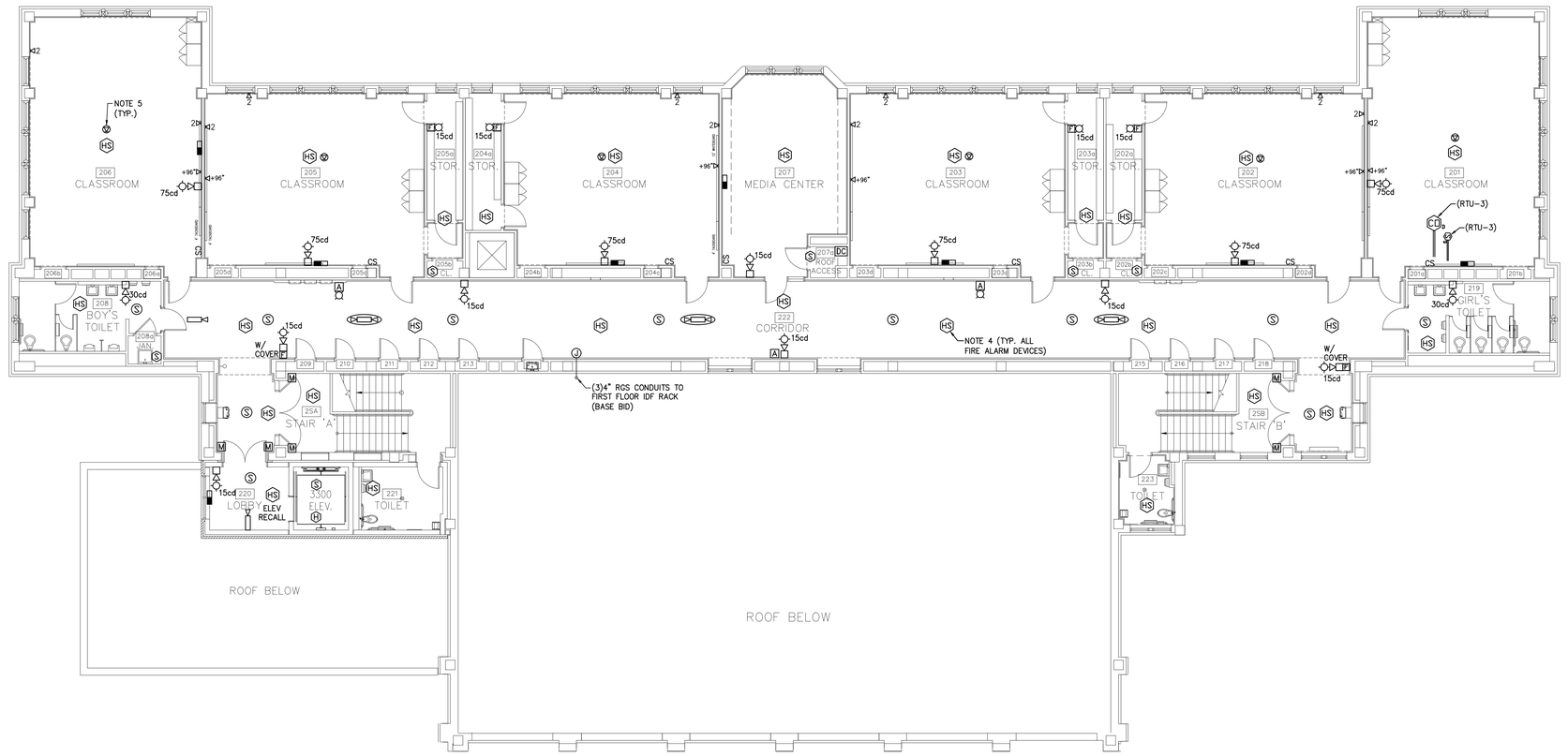

1 ELECTRICAL SYSTEMS SECOND FLOOR PLAN (ALTERNATE)

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

NOTES:

1. ALL NOTES, SYMBOLS, AND ABBREVIATIONS ON DRAWING E-1.0 APPLY TO THIS DRAWING.
2. THIS DRAWING IS DIAGRAMMATIC, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM EXISTING SITE CONDITIONS AND INSTALLATION CLEARANCES PRIOR TO SHOP DRAWING SUBMISSIONS AND INSTALLATION. SHOULD THE CONTRACTOR DETERMINE THAT THE INSTALLATION OF ANY ELECTRICAL COMPONENT IS RESTRICTED OR NOT ABLE TO BE INSTALLED IN THE SUGGESTED LOCATION THE CONTRACTOR SHALL READDRESS THE INSTALLATION ACCORDINGLY AND IN COMPLIANCE WITH NEC2017, AT NO ADDITIONAL COST.
3. PROVIDE CEILING MOUNTED DATA OUTLET FOR WIFI.
4. ALL FIRE ALARM DEVICES ARE BASE BID. IF THE ALTERNATE BID IS NOT ACCEPTED, ALL DEVICES SHALL BE TEMPORARILY INSTALLED IN SURFACE MOUNTED JUNCTION BOXES AND SURFACE MOUNTED ARMORED CABLE. 10 FEET OF SPARE ARMORED CABLE WILL BE COILED AT EACH JUNCTION BOX FOR FUTURE DEVICE RELOCATION.
5. PROVIDE CEILING MOUNTED DATA OUTLET FOR WIFI.

ISSUED FOR BID: 11-13-2020

RVE 1901
REMINGTON & VERNICK **ENGINEERS**
232 KINGS HIGHWAY EAST
HADDONFIELD, NJ 08033
(856) 795-9595, FAX (856) 795-1882
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Certification of Authorization: 24 GA 28003300
~ENGINEERING EXCELLENCE~

DATE:
CHRISTOPHER A. SAPONARO
NJ PROFESSIONAL ENGINEER LIC. No. 40059

DATE:
BRIAN B. GREGG
NJ PROFESSIONAL ENGINEER LIC. No. 46577

NO.	REVISION	DATE	BY	CHK

ELECTRICAL SYSTEMS SECOND FLOOR PLAN (ALTERNATE)

PENNSAUKEN BOARD OF EDUCATION

ROOSEVELT STEM SCHOOL ADDITION AND RENOVATIONS
5526 WISTERIA AVENUE, PENNSAUKEN, NEW JERSEY 08109

PENNSAUKEN TOWNSHIP CAMDEN COUNTY NEW JERSEY

DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
S.M.	K.M.		AS NOTED

DATE: 10-19-2020

JOB No.: MP038X049

SHEET No.: E-4.3

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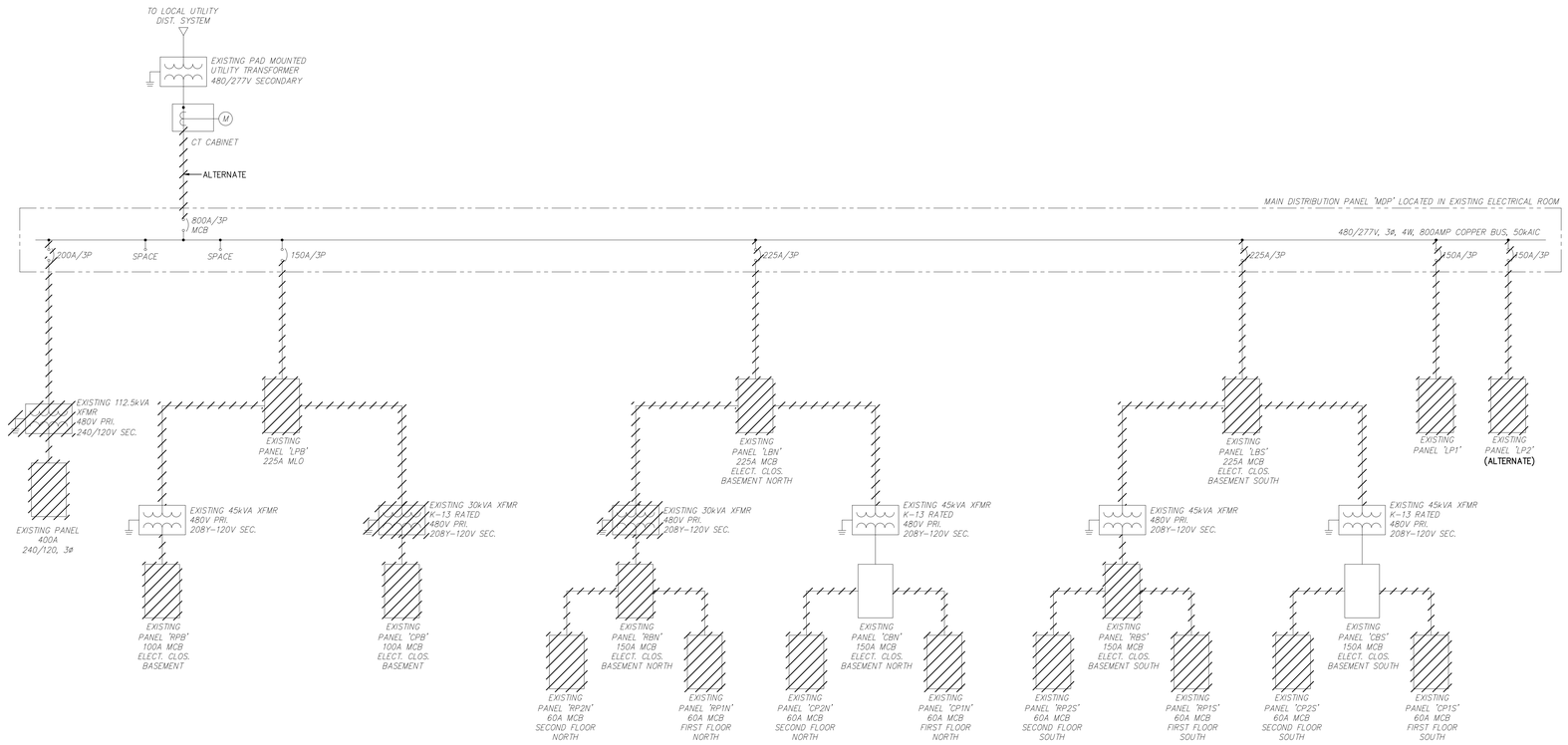
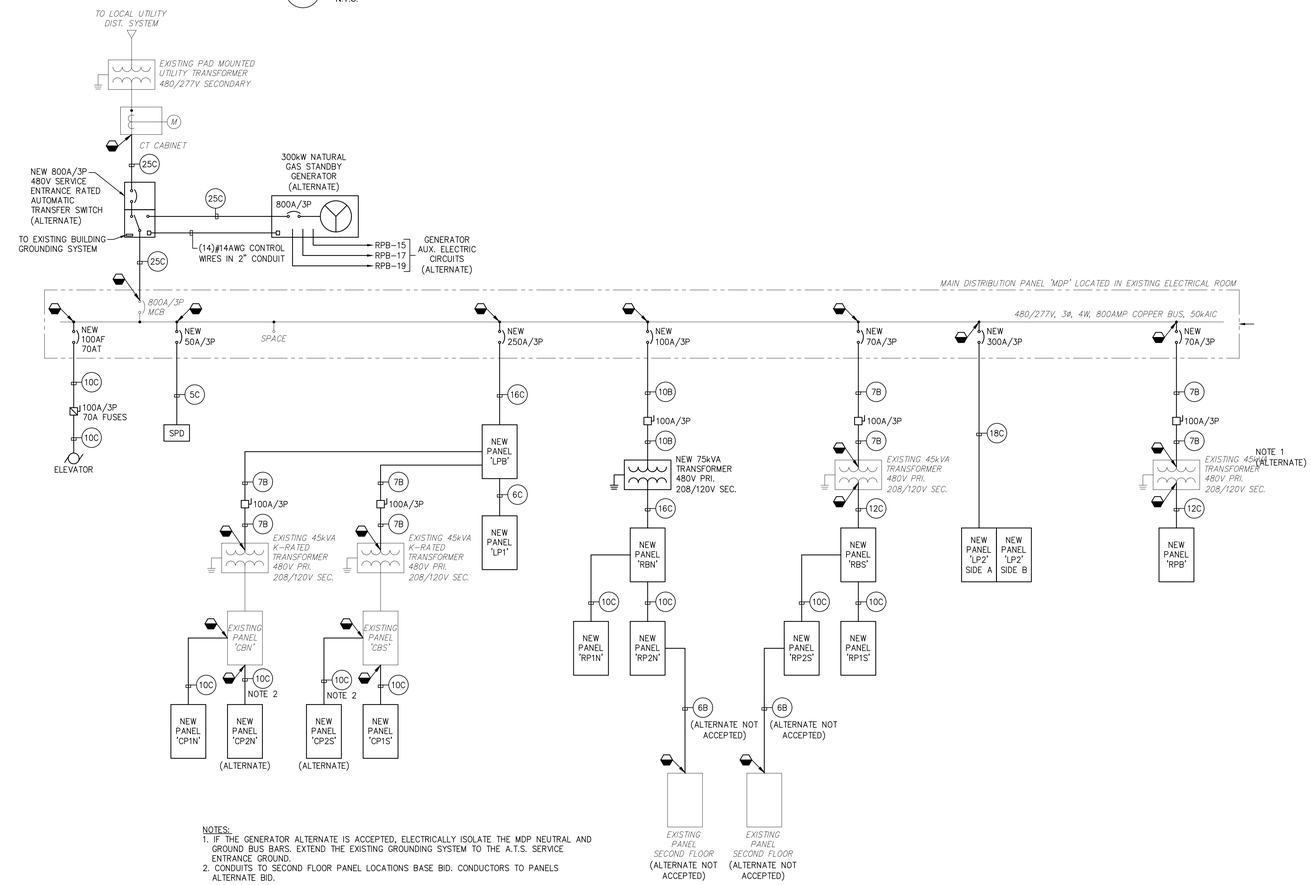


1 ELECTRICAL SINGLE LINE DIAGRAM - DEMOLITION

N.T.S.



NOTES:
1. IF THE GENERATOR ALTERNATE IS ACCEPTED, ELECTRICALLY ISOLATE THE MDP NEUTRAL AND GROUND BUS BARS. EXTEND THE EXISTING GROUNDING SYSTEM TO THE A.T.S. SERVICE ENTRANCE GROUND.
2. CONDUITS TO SECOND FLOOR PANEL LOCATIONS BASE BID. CONDUCTORS TO PANELS ALTERNATE BID.

2 ELECTRICAL SINGLE LINE DIAGRAM - PROPOSED

N.T.S.

ISSUED FOR BID: 11-13-2020

REMINGTON & VERNICK **ENGINEERS**
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NO.	REVISION	DATE	BY	CHK

ELECTRICAL SINGLE LINE DIAGRAMS

PENNSAUKEN BOARD OF EDUCATION
ROOSEVELT STEM SCHOOL ADDITION AND RENOVATIONS
5526 WISTERIA AVENUE, PENNSAUKEN, NEW JERSEY 08109
PENNSAUKEN TOWNSHIP CAMDEN COUNTY NEW JERSEY

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BZ.	CH.		AS NOTED

DATE: 10-19-2020
JOB No.: MP038X049
SHEET No.: E-5.1

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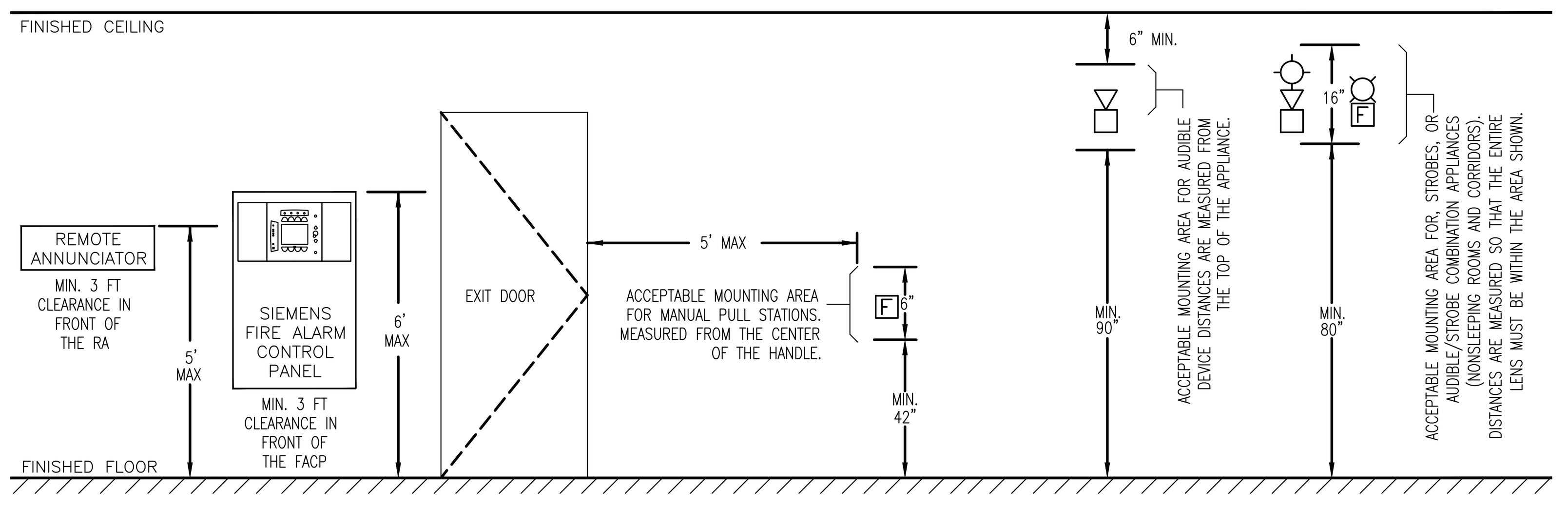
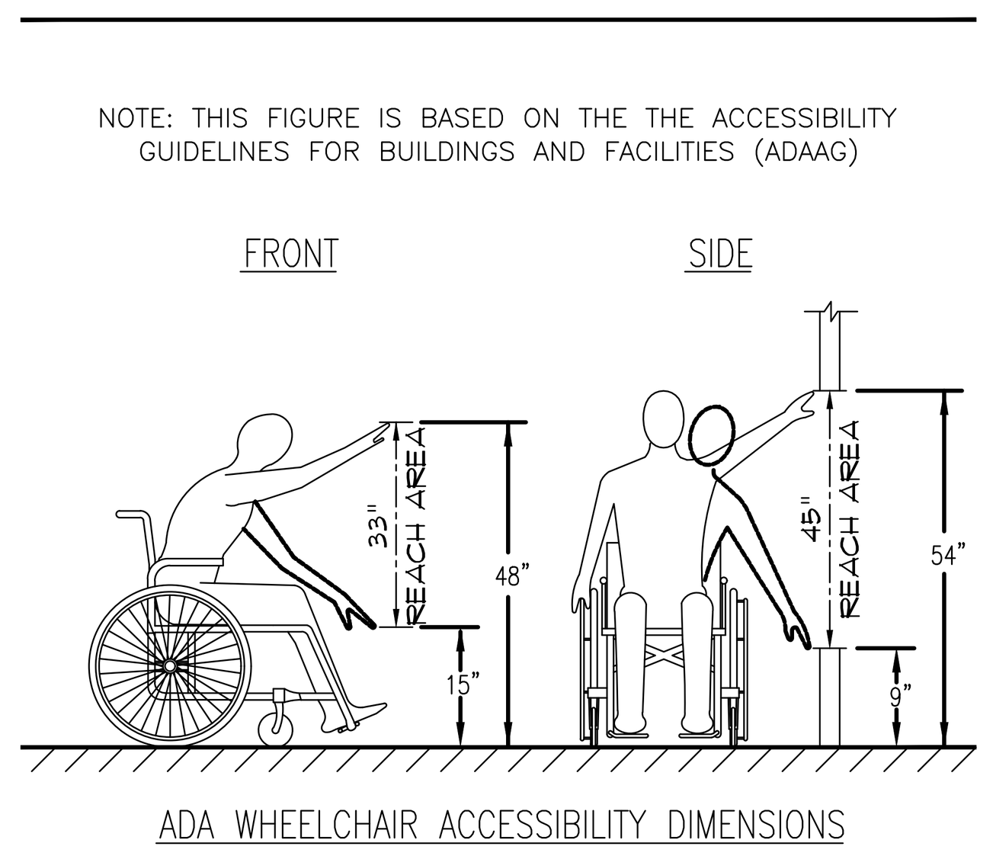


FIRE ALARM EQUIPMENT MOUNTING HEIGHTS DIMENSIONS



ADA WHEELCHAIR ACCESSIBILITY DIMENSIONS

MANUAL PULL STATION MOUNTING HEIGHT REFERENCES

CODE	MINIMUM	MAXIMUM
NFPA-72	39"	54"
IBC	42"	48"
ADAAG	–	+48"

+ THE MOST RESTRICTIVE FRONT REACH DISTANCE

1 HARMONIZED FIRE ALARM EQUIPMENT MOUNTING DISTANCE REQUIREMENTS - IBC/ADA/NFPA/ANSI

N.T.S. - FOR INSTALLER'S REFERENCE

	SYSTEM ALARM	TROUBLE SIGNAL	SUPERVISORY SIGNAL	ANNUNCIATE @ FACP	ANNUNCIATE @ RA	ALARM SIGNAL TO SUPERVISING STATION	TROUBLE SIGNAL TO SUPERVISING STATION	SUPERVISORY SIGNAL TO SUPERVISING STATION	FAN SHUTDOWN OF ASSOCIATED HVAC UNIT	FAN SHUTDOWN OF ALL HVAC UNITS	LOCAL SOUNDER ON CO DETECTOR	EXTERIOR DOOR UNLOCK
MANUAL PULL STATION	●			●	●	●						●
AREA DETECTOR (SMOKE OR HEAT)	●			●	●	●						●
DUCT SMOKE DETECTOR			●	●	●			●	●			
FACP/PB PRIMARY POWER FAILURE		●		●	●		●					
FACP/PB LOW BATTERY		●		●	●		●					
SLC/NAC OPEN-CIRCUIT		●		●	●		●					
SLC/NAC GROUND-FAULT		●		●	●		●					
SLC/NAC SHORT-CIRCUIT		●		●	●		●					
CARBON MONOXIDE DETECTOR			●	●	●			●		●	●	

NFPA 72 SIGNAL TYPE

ALARM
A SIGNAL WHICH INDICATES AN EMERGENCY SITUATION REQUIRING IMMEDIATE ACTION

TROUBLE
A SIGNAL WHICH INDICATES A FAULT WITH AN APPLIANCE, DEVICE, OR SYSTEM COMPONENT

SUPERVISORY
A SIGNAL WHICH INDICATES A NON-EMERGENCY SITUATION REQUIRING IMMEDIATE ACTION

SYSTEM OPERATION NOTES:

1. IN ORDER TO INSURE CONTINUED SAFE AND RELIABLE OPERATION OF THE FIRE ALARM SYSTEM, PERIODIC INSPECTION AND TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPLICABLE NFPA 72 STANDARDS.FOR ANY REQUIRED SERVICE, REFER TO THE SYSTEM MANUAL OR CONTACT A FACTORY AUTHORIZED REPRESENTATIVE.
2. IN NORMAL STANDBY OPERATION, THE GREEN AC POWER ON LED SHOULD BE ILLUMINATED AND NO OTHER INDICATOR OPERATING. THE DISPLAY WILL SHOW THE SYSTEM NAME, "SYSTEM NORMAL" ANNOUNCEMENT AND THE CURRENT DATE, DAY, AND TIME.
3. THIS SYSTEM SHALL BE CAPABLE OF EVERY INITIATION DEVICE AND NOTIFICATION APPLIANCE ACTIVATING SIMULTANEOUSLY.
4. SYSTEM OPERATING INSTRUCTIONS SHALL BE PRINTED ON THE INSIDE DOOR OF THE FACP.
5. FIRE ALARM CABINET DOORS AND ANY OTHER LOCKABLE FIRE EQUIPMENT SHALL BE UTILIZE A T-45 KEY.

2 FIRE ALARM SEQUENCE OF OPERATIONS MATRIX

N.T.S.

GENERAL FIRE ALARM SYSTEM NOTES

1. THIS SYSTEM HAS BEEN ENGINEERED BASED ON THE PERFORMANCE AND CAPABILITIES OF SIEMENS DESIGO ADDRESSABLE VOICE FIRE ALARM CONTROL PANEL (FACP) WITH DOOR-MOUNTED DISPLAY/ CONTROLS, AND INTERNAL BATTERY BACKUP. MANUFACTURES AND MODEL NUMBERS NOTED ON THE CONSTRUCTION DOCUMENTS ARE FOR REFERENCE ONLY AND TO ESTABLISH A BASIS OF DESIGN. PRODUCTS PROVIDED BY ALTERNATIVE MANUFACTURERS SHALL BE ACCEPTABLE PROVIDING THEY MEET THE QUALITY STANDARDS REFERENCED HEREIN AND ARE APPROVED IN WRITING BY THE DESIGN PROFESSIONAL PRIOR TO BIDDING.
2. THE SELECTED SYSTEM IS MODULAR IN DESIGN. ALL SPECIFIED COMPONENTS MUST HAVE A MINIMUM 20% SPARE EXPANSION CAPACITY TO ACCOMMODATE CONSTRUCTION CHANGES AND FUTURE RENOVATIONS. THIS SPARE CAPACITY INCLUDES CABINET EXPANSION SPACE, CAPACITIES ON POWER SUPPLIES/ PANEL CARDS AND NETWORKING CAPABILITY.
3. IT IS THE INTENT THAT THE DRAWINGS AND SPECIFICATIONS SHALL PROVIDE A WORKING INSTALLATION. THE OMISSION OF EXPRESSED REFERENCE IN THE DRAWINGS OR SPECIFICATION TO ANY LABOR OR MATERIAL NECESSARY FOR THE PROPER EXECUTION OF THE WORK IN ACCORDANCE WITH PRESENT GOOD PRACTICE OF THE TRADE SHALL NOT RELIEVE THIS CONTRACTOR FROM PROVIDING, AT NO COST, SUCH ADDITIONAL LABOR AND MATERIAL UNDER THIS CONTRACT.
4. ALL WIRING SHALL COMPLY WITH PROJECT SPECIFICATIONS, NFPA 72, NEC ARTICLE 760, AND THE REQUIREMENTS OF THE AHJ. NO FIRE ALARM POWER-LIMITED WIRING SHALL BE PERMITTED IN THE SAME RACEWAY AS NO POWER-LIMITED UNLESS SEPARATED BY AN APPROVED BARRIER.
5. FOR CONDUIT APPLICATIONS, USE ELECTRICAL METALLIC TUBING (EMT), 3/4" MINIMUM.
6. ALL CONDUITS, CONDUCTORS, RACEWAYS, EQUIPMENT, ETC., SHALL BE SUPPORTED IN AN APPROVED MANNER BY THE BUILDING STRUCTURE, INCLUDING HANGERS AND RESTRAINTS, IN ACCORDANCE WITH ALL APPLICABLE CODES AND SEISMIC RESTRAINT REQUIREMENTS.
7. ALL FIRE RATED PENETRATIONS SHALL BE MADE WITH A UL APPROVED FIRE STOP MATERIAL OR METHOD.
8. SEAL ALL PENETRATIONS THROUGH EXTERIOR WALLS, FLOORS, AND ROOFS WITH WATERTIGHT MATERIAL.
9. FURNISH AND INSTALL ACCESS PANELS WHERE REQUIRED FOR ACCESS TO CONCEALED EQUIPMENT WHERE NO OTHER MEANS IS PROVIDED.
10. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING PATCHING AND PAINTING REQUIRED FOR COMPLETE FIRE ALARM SYSTEM INSTALLATION.
11. MOUNTING FOR ALL DEVICES AND APPLIANCES SHALL COMPLY WITH STATE, LOCAL, AND ADAAG.
12. CONTRACTOR SHALL REPAIR/PATCH AND/OR REPAINT TO MATCH ADJACENT AREAS, ANY AREAS DAMAGED (OR WHERE ITEMS WERE REMOVED/ DEMOLISHED) BY WORK OF THIS CONTRACT.
13. THE FIRE ALARM VENDOR MUST CALCULATE THE NOTIFICATION APPLIANCES CANDELA RATINGS AND DESIGNATE THEM ON THE SHOP DRAWINGS. ALL STROBE SETTING MUST COMPLY WITH NFPA 72 REQUIREMENTS.
14. EACH AIR HANDLING SYSTEM 2000 CFM OR GREATER SHALL BE EQUIPPED WITH A SUPPLY DUCT DETECTOR. EACH AIR HANDLING SYSTEM GREATER THAN 15,000 CFM SHALL BE EQUIPPED WITH A SUPPLY AND RETURN DUCT DETECTOR. WHEN THE AIR HANDLER SUPPLIES MORE THAN ONE STORY. RETURN DUCT DETECTORS ARE NOT REQUIRED. WHERE THE ENTIRE SPACE SERVED BY THE AIR HANDLER IS PROTECTED BY SYSTEM SMOKE. DETECTORS. DUCT DETECTORS ARE NOT REQUIRED ON 100% EXHAUST FANS.
15. ALL WORK AND SHUTDOWNS ASSOCIATED WITH FIRE ALARM SYSTEM INTERFACES SHALL BE COORDINATED THROUGH THE RESPECTIVE CONTRACTOR, INCLUDING BUT NOT LIMITED TO: SPECIAL HAZARD SUPPRESSION SYSTEM(S), AUTOMATIC SPRINKLER SYSTEM(S), HVAC SYSTEM(S), ELEVATOR SYSTEM(S), AND SECURITY/ ACCESS CONTROL SYSTEM(S).
16. SYSTEM MANUFACTURER SHALL COORDINATE FINAL QUANTITIES AND LOCATIONS OF ALL SYSTEM MONITORS AND CONTROL MODULES WITH THE RESPECTIVE CONTRACTORS FOR INTERFACE. FINAL LOCATIONS TO BE SHOWN ON SHOP DRAWINGS. CHECK AND VERIFY ALL CONDITIONS AT THE SITE WITHIN THE CONTRACT LIMITS. THE INSTALLATION CONTRACTOR IS RESPONSIBLE FOR ALL FIELD MEASUREMENTS AND VERIFICATION OF FIELD CONDITIONS PRIOR TO COMMENCING WORK. ANY CHANGES IN WORK NECESSITATED BY FAILURE OF THIS CONTRACTOR TO COMPLY WITH THIS PROCEDURE SHALL BE UNDERTAKEN BY THIS CONTRACTOR AT HIS/ HER OWN EXPENSE.
17. THE INSTALLATION CONTRACTOR IS RESPONSIBLE FOR REVIEWING THE FIRE ALARM SHOP DRAWING SUBMITTAL FOR COMPLETE COMPLIANCE WITH THE FULL SET OF BID DOCUMENTS PRIOR TO SUBMITTING TO THE ENGINEER FOR APPROVAL.
18. ACCEPTANCE TESTING MUST BE PERFORMED IN ACCORDANCE WITH NFPA 72 AND AHJ REQUIREMENTS.
19. UPON COMPLETION OF FINAL TESTING AND APPROVAL OF THE AHJ, THE SYSTEM VENDOR SHALL SUBMIT RECORD DRAWINGS TO THE OWNER DETAILING AS-BUILT CIRCUITING AS SHOWN ON THE INSTALLER'S RED-LINE MARKUPS. THEY SHALL INCORPORATE ALL FIELD AND DESIGN DIRECTIVES GIVEN THROUGH OUT THE PROJECT.

FIRE ALARM SYSTEM SHEET NOTES

1. ALL SYSTEMS ARE SHOWN SCHEMATICALLY. THE FLOORPLANS ARE GENERALLY DIAGRAMMATIC AND INDICATIVE OF THE WORK TO BE PREFORMED. THE DRAWINGS ARE NOT INTENDED TO SHOW EXACT LOCATIONS OR TO SHOW EVERY CONDUCTOR, BOX, TERMINATION OR APPURTENANCE REQUIRED FOR A COMPLETE INSTALLATION. THE INSTALLATION CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH OTHER TRADES, TO ASCERTAIN THE EXACT LOCATIONS OF ALL SHOWN EQUIPMENT AND TO VERIFY REQUIRED CLEARANCES FOR INSTALLATION.
2. DUCT SMOKE DETECTORS SHALL BE FURNISHED BY THE FIRE ALARM INSTALLATION CONTRACTOR AND INSTALLED BY THE MECHANICAL CONTRACTOR PER THE MECHANICAL CONTRACT DRAWINGS. THE FIRE ALARM INSTALLATION CONTRACTOR SHALL PROVIDE POWER & COMMUNICATION CIRCUITS TO THE DUCT DETECTOR AND THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL HVAC UNIT SHUTDOWN WIRING FROM THE FIRE ALARM DEVICE TO THE HVAC CONTROL EQUIPMENT.
3. REFER TO THE FIRE PROTECTION DRAWINGS FOR EXACT LOCATIONS OF ALL FIRE SPRINKLER WATERFLOW, TAMPER AND MONITORING POINTS. FIRE ALARM INSTALLER TO PROVIDE ELECTRONIC SUPERVISION OF ALL SPRINKLER POINTS TO THE BUILDING SYSTEM. CORDINATE LOCATION AND QUANITY OF SPRINKLER FLOW AND TAMPER SWITCHES WITH SPRINKLER ALARM INSTALLER PRIOR TO ROUGH-IN. FIRE ALARM INSTALLER RESPONSIBLE FOR FINIAL CONNECTIONS, AS REQUIRED.

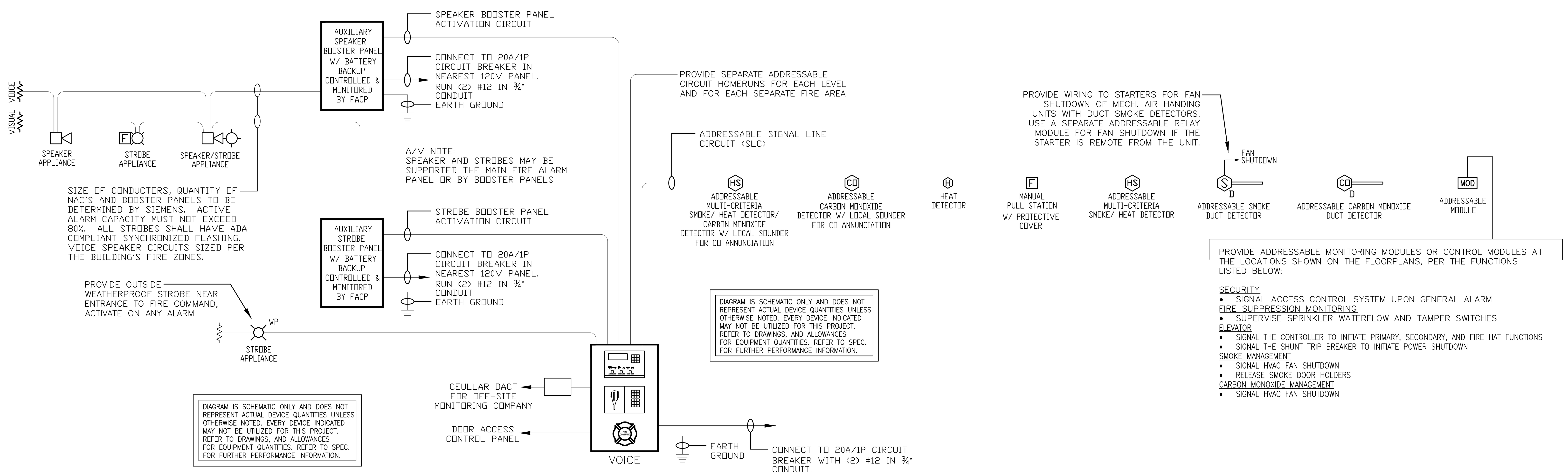


DIAGRAM IS SCHEMATIC ONLY AND DOES NOT REPRESENT ACTUAL DEVICE QUANTITIES UNLESS OTHERWISE NOTED. EVERY DEVICE INDICATED MAY NOT BE UTILIZED FOR THIS PROJECT. REFER TO DRAWINGS, AND ALLOWANCES FOR EQUIPMENT QUANTITIES. REFER TO SPEC. FOR FURTHER PERFORMANCE INFORMATION.

FIRE ALARM SYSTEM RISER NOTES:

1. THIS RISER DIAGRAM IS BASED ON SIEMENS BUILDING TECHNOLOGIES DESIGO VOICE FIRE ALARM CONTROL PANEL. THIS DIAGRAM IS SCHEMATIC ONLY AND DOES NOT REPRESENT ACTUAL DEVICE QUANTITIES UNLESS OTHERWISE NOTED. IT IS A REPRESENTATION OF THE INTENDED SYSTEM FOR THIS PROJECT. SEE THE FLOOR PLANS FOR EXACT QUANTITIES AND LOCATIONS OF FIELD EQUIPMENT. SEE THE PROJECT SPECIFICATIONS FOR PERFORMANCE AND COMPLIANCE REQUIREMENTS. QUANTITY AND SIZE OF CONDUCTORS TO BE DETERMINED BY SIEMENS.
2. PROVIDE AUXILIARY FIRE ALARM SIGNAL PANEL(S) AND VOICE AMPLIFIERS W/ BATTERY BACKUP AS REQUIRED TO SUPPORT NOTIFICATION APPLIANCE LOADS.
3. PROVIDE A MANUAL VOICE PAGING SWITCHES FOR 'ALL CALL' FOR SIMULTANEOUSLY PAGING THE ENTIRE FACILITY AND SELECTIVE PAGING FOR EACH FLOOR AND FIRE AREA.
4. ALL WIRING REQUIREMENTS SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS.
5. PROVIDE END OF LINE RESISTERS AS NECESSARY.
6. ALL ADDRESSABLE SLC'S SHALL BE NFPA 72 CLASS B, STYLE 4.
7. ALL NOTIFICATION NAC'S SHALL BE NFPA 72 CLASS B, STYLE Y.
8. STROBE CANDELAS MUST BE SIZED PER NFPA 72 REQUIREMENTS BY THE FIRE ALARM VENDOR AND SHOWN ON THE SHOP DRAWINGS.
9. ALL PANEL BATTERY BACKUP (STANDBY & ALARM) SHALL BE SIZED PER NFPA 72 REQUIREMENTS.
10. A COMPLETE SET FOR FIRE ALARM PRODUCT CUTSHEETS, FIRE ALARM SHOP DRAWINGS, AND BATTERY/ VOLTAGE/ LOAD CALCULATIONS MUST BE SUBMITTED AND APPROVED PRIOR TO INSTALLATION.
11. PRIMARY FACP POWER FED VIA BRANCH CIRCUIT(S) DEDICATED FOR THE FIRE ALARM SYSTEM.
12. ALL EARTH GROUND PANEL CONNECTIONS REQUIRED BY THE MANUFACTURER SHALL BE CONNECTED TO THE BUILDING'S GROUND. PANEL NEUTRAL OR GROUNDING TO CONDUIT/ BUILDING STEEL NOT ACCEPTABLE.

3 THEODORE ROOSEVELT ELEMENTARY SCHOOL ADDRESSABLE VOICE FIRE ALARM RISER DIAGRAM (NOTE 3)

N.T.S.

NOTES:

1. ALL NOTES, SYMBOLS, AND ABBREVIATIONS ON DRAWING E-1.0 APPLY TO THIS DRAWING.
2. THIS DRAWING IS DIAGRAMMATIC, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM EXISTING SITE CONDITIONS AND INSTALLATION CLEARANCES PRIOR TO SHOP DRAWING SUBMISSIONS AND INSTALLATION. SHOULD THE CONTRACTOR DETERMINE THAT THE INSTALLATION OF ANY ELECTRICAL COMPONENT IS RESTRICTED OR NOT ABLE TO BE INSTALLED IN THE SUGGESTED LOCATION THE CONTRACTOR SHALL READDRESS THE INSTALLATION ACCORDINGLY AND IN COMPLIANCE WITH NEC2017, AT NO ADDITIONAL COST.
3. ENTIRE FIRE ALARM SYSTEM IS BASE BID.

ISSUED FOR BID: 11-13-2020

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No.	REVISION	DATE	BY	CHK

ELECTRICAL FIRE ALARM RISER DIAGRAMS

PENNSAUKEN BOARD OF EDUCATION
ROOSEVELT STEM SCHOOL ADDITION AND RENOVATIONS
5526 WISTERIA AVENUE, PENNSAUKEN, NEW JERSEY 08109
PENNSAUKEN TOWNSHIP CAMDEN COUNTY NEW JERSEY

DRAWN BY :	DESIGN BY :	CHECKED BY :	SCALE :
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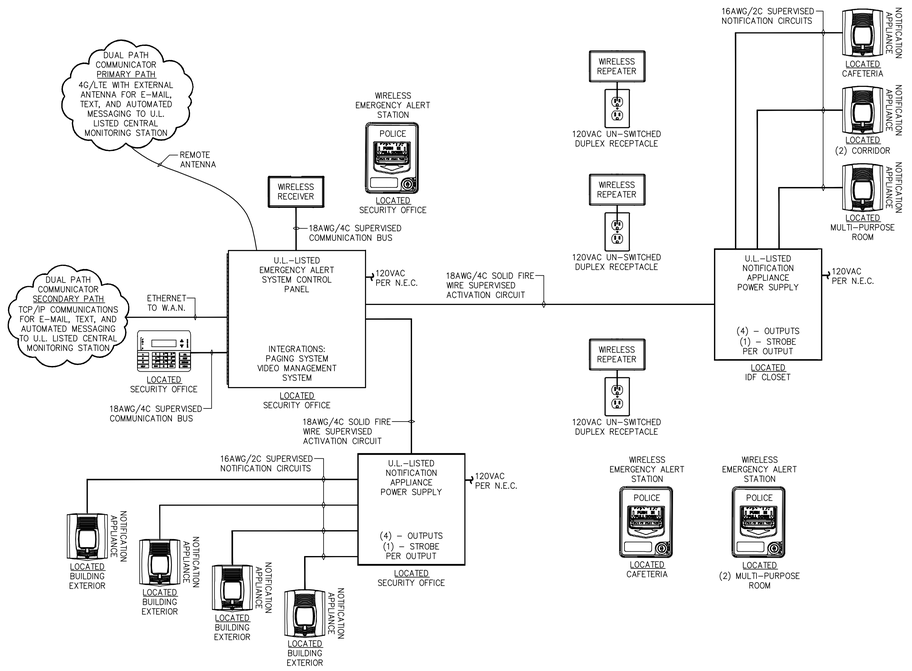
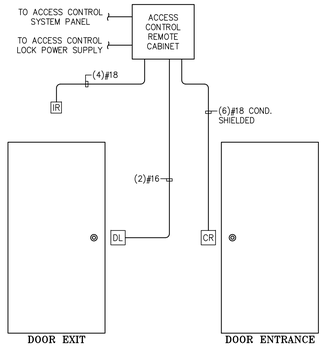


SYSTEM NOTES:
1. SYSTEM SHALL INTEGRATE WITH PAGING SYSTEM.
2. SYSTEM SHALL INTEGRATE WITH VIDEO MANAGEMENT/CCTV SYSTEM.
3. ALL SYSTEM COMPONENTS SHALL BE FULLY SUPERVISED FOLLOWING ALL APPLICABLE CODES AND LISTINGS.
4. SYSTEM AND ALL CONNECTED COMPONENTS SHALL BE U.L. LISTED.
5. SYSTEM SHALL ALLOW FOR E-MAIL, TEXT, AND AUTOMATED MESSAGING TO A U.L. LISTED CENTRAL MONITORING STATION.
6. IF THE SECOND FLOOR ALTERNATE BID IS NOT ACCEPTED, THE SYSTEMS SHALL HAVE SPARE CAPACITY FOR THE ALTERNATE BID ITEMS IN THE FUTURE.

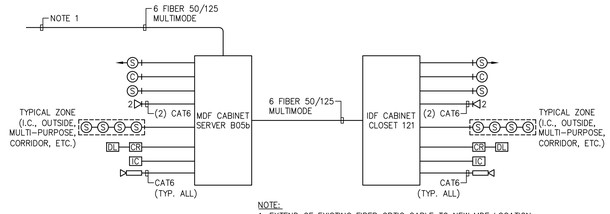
5 EMERGENCY ALERT SYSTEM VOICE NOTIFICATION - CENTRAL STATION
N.T.S.

ACCESS CONTROL DEVICE LEGEND	
CR	ACCESS CONTROL CARD READER
DL	ACCESS CONTROL ELECTRIC STRIKE DOOR LOCK
DC	ACCESS CONTROL DOOR CONTACT
REX	ACCESS CONTROL REQUEST TO EXIT



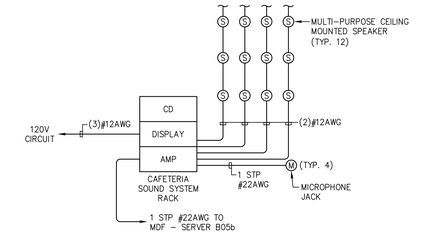
TYPICAL DOOR WIRING DETAIL
N.T.S.

1 ACCESS CONTROL RISER DIAGRAM
N.T.S.

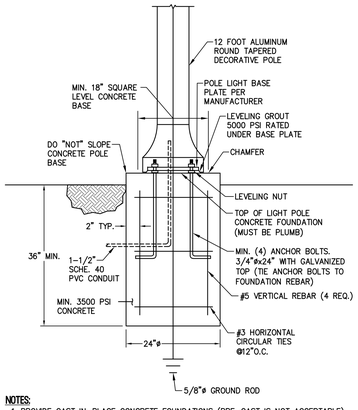


NOTE:
1. EXTEND OF EXISTING FIBER OPTIC CABLE TO NEW MDF LOCATION .
2. IF THE SECOND FLOOR ALTERNATE BID IS NOT ACCEPTED, THE SYSTEMS SHALL HAVE SPARE CAPACITY FOR THE ALTERNATE BID ITEMS IN THE FUTURE.

2 TYPICAL IT DATA DROP, SOUND / CLOCK SYSTEM, AND SECURITY CAMERA WIRING DIAGRAM
N.T.S.

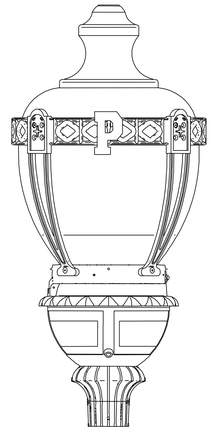


3 MULTI-PURPOSE ROOM SOUND SYSTEM WIRING DIAGRAM
N.T.S.

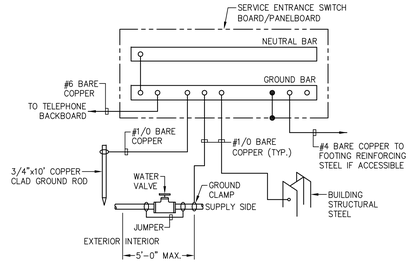


NOTES:
1. PROVIDE CAST IN-PLACE CONCRETE FOUNDATIONS (PRE-CAST IS NOT ACCEPTABLE).
2. SET BASE PLATE PER MANUFACTURER'S CERTIFIED RECOMMENDATION.
3. BASE PLATE AND POLE BASE SHALL BE SECURED WITH A MINIMUM OF (4) FOUR ANCHOR BOLTS.
4. THE POLE LIGHT ASSEMBLY SHALL BE IN COMPLIANCE WITH THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE (IBC) FOR WIND LOAD REQUIREMENTS DESIGNATED FOR PROJECT LOCATION, NOT LESS THAN 120MPH.

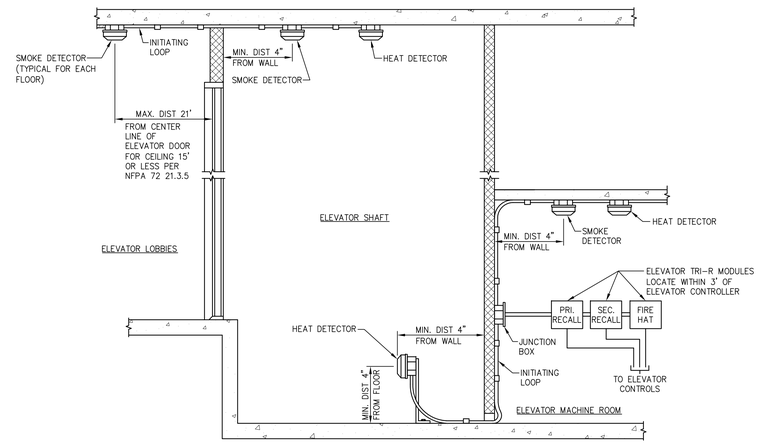
6 SITE POLE LED FIXTURE POLE BASE DETAIL
N.T.S.



7 SITE POLE LED FIXTURE DETAIL
N.T.S.



8 SERVICE EQUIPMENT GROUNDING DIAGRAM
N.T.S. (GENERATOR ALTERNATE)



4 ELEVATOR DEVICE MOUNTING DETAIL
N.T.S.

ISSUED FOR BID: 11-13-2020

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232 KINGS HIGHWAY EAST
HADDONFIELD, NJ 08033
(856) 795-9595, FAX (856) 795-1882
WEB SITE ADDRESS : WWW.RVE.COM
Certification of Authorization: 24 GA 28003300
~ENGINEERING EXCELLENCE~

DATE:
CHRISTOPHER A. SAPONARO
NJ PROFESSIONAL ENGINEER LIC. No. 40059

DATE:
BRIAN B. GREGG
NJ PROFESSIONAL ENGINEER LIC. No. 46577

NO.	REVISION	DATE	BY

ELECTRICAL DETAILS

PENNSAUKEN BOARD OF EDUCATION
ROOSEVELT STEM SCHOOL ADDITION AND RENOVATIONS
5526 WISTERIA AVENUE, PENNSAUKEN, NEW JERSEY 08109
PENNSAUKEN TOWNSHIP CAMDEN COUNTY NEW JERSEY

DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
S.M.	K.M.		AS NOTED
DATE: 10-19-2020			SHEET No.: E-5.3
JOB No.: MP038x049			

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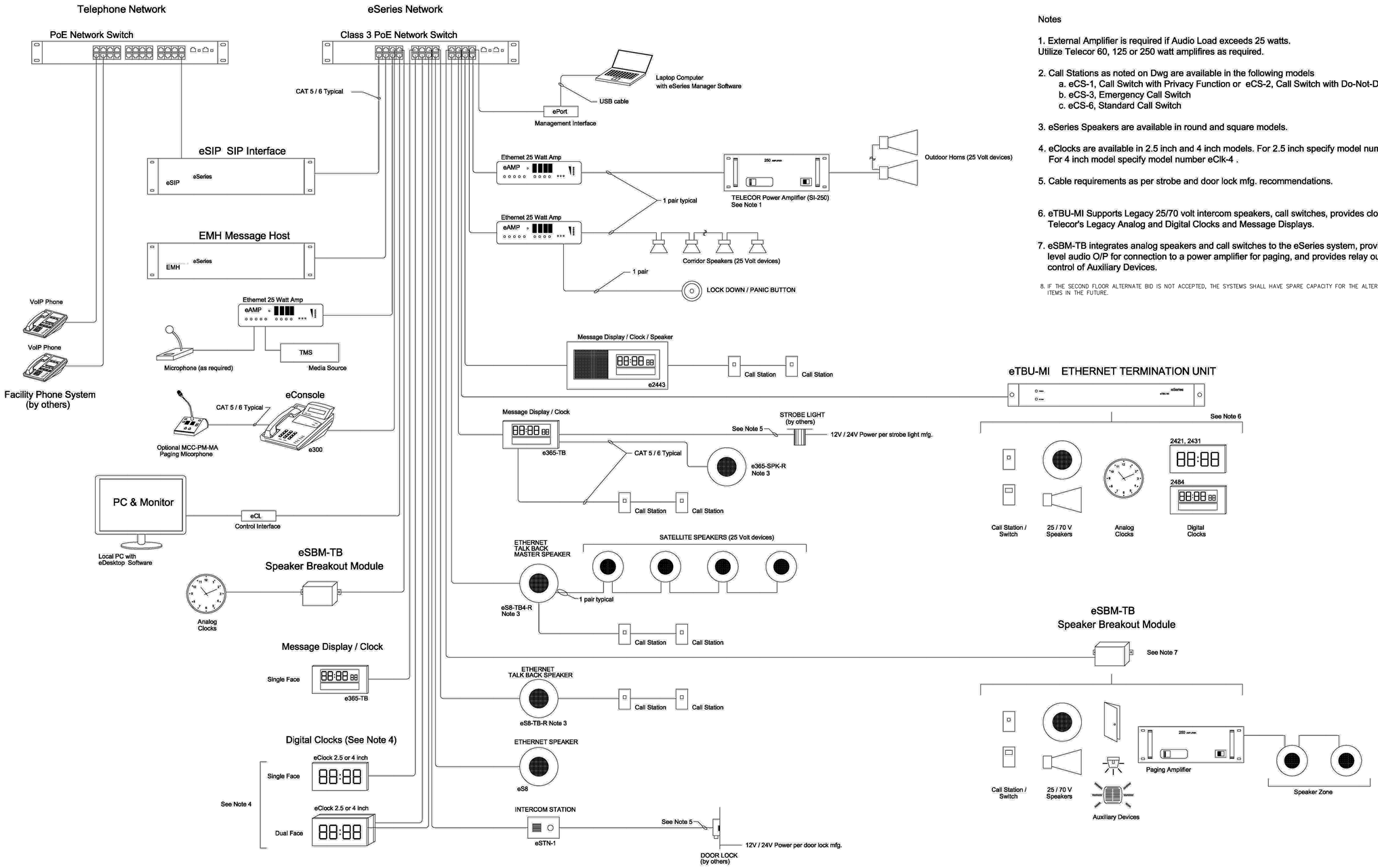

1 TYPICAL SOUND SYSTEM DIAGRAM
N.T.S.

Notes

1. External Amplifier is required if Audio Load exceeds 25 watts.
Utilize Telecor 60, 125 or 250 watt amplifires as required.

2. Call Stations as noted on Dwg are available in the following models
   a. eCS-1, Call Switch with Privacy Function or eCS-2, Call Switch with Do-Not-Disturb Function
   b. eCS-3, Emergency Call Switch
   c. eCS-6, Standard Call Switch

3. eSeries Speakers are available in round and square models.

4. eClocks are available in 2.5 inch and 4 inch models. For 2.5 inch specify model number eClk-2.5. For 4 inch model specify model number eClk-4 .

5. Cable requirements as per strobe and door lock mfg. recommendations.

6. eTBU-MI Supports Legacy 25/70 volt intercom speakers, call switches, provides clock synch for Telecor's Legacy Analog and Digital Clocks and Message Displays.

7. eSBM-TB integrates analog speakers and call switches to the eSeries system, provides line level audio O/P for connection to a power amplifier for paging, and provides relay output for control of Auxiliary Devices.

8. IF THE SECOND FLOOR ALTERNATE BID IS NOT ACCEPTED, THE SYSTEMS SHALL HAVE SPARE CAPACITY FOR THE ALTERNATE BID ITEMS IN THE FUTURE.

ISSUED FOR BID: 11-13-2020

REMINGTON & VERNICK ENGINEERS
232 KINGS HIGHWAY EAST
HADDONFIELD, NJ 08033
(856) 795-9595, FAX (856) 795-1882
WEB SITE ADDRESS : WWW.RVE.COM
Certification of Authorization: 24 GA 28003300
–ENGINEERING EXCELLENCE–

DATE:
CHRISTOPHER A. SAPONARO
NJ PROFESSIONAL ENGINEER LIC. No. 40059

DATE:
BRIAN B. GREGG
NJ PROFESSIONAL ENGINEER LIC. No. 46577

PLANS WHICH DO NOT BEAR AN EMBOSSED SEAL ARE NOT VALID.

NO.	REVISION	DATE	BY (CHK)

ELECTRICAL DETAILS

PENNSAUKEN BOARD OF EDUCATION

ROOSEVELT STEM SCHOOL ADDITION AND RENOVATIONS
5526 WISTERIA AVENUE, PENNSAUKEN, NEW JERSEY 08109

PENNSAUKEN TOWNSHIP CAMDEN COUNTY NEW JERSEY

DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
S.M.	K.M.		AS NOTED

DATE: 10-19-2020
JOB No.: MP038X049
SHEET No.: E-5.4

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PANEL: CP2N (ALTERNATE)

VOLTAGE: 208Y/120V, 3ø, 4W+G | X MCB 100A/3P | POLES: 30 | AIC RATING: 10,000
MAIN BUS: 125A | MLO | MTG: SURFACE | LOCATION: 2ND. FLR. CORRIDOR NORTH

CKT #	CIRCUIT BREAKER TRIP	POLE	BRANCH CIRCUIT	DESCRIPTION	kVA PER PHASE A	B	C	REMARKS	REMARKS	kVA PER PHASE A	B	C	DESCRIPTION	BRANCH CIRCUIT	CIRCUIT BREAKER POLE	TRIP	CKT #
1	20	1	2A	LAPTOP CHARGING CABINET	1.50			C.R. 201	C.R. 202	0.60			(3) RECEPT. / SMART BD.	2A	1	20	2
3	20	1	2A	(3) RECEPT. / SMART BD.		0.60		C.R. 201	C.R. 202		1.50		LAPTOP CHARGING CABINET	2A	1	20	4
5	20	1	2A	LAPTOP CHARGING CABINET			1.50	C.R. 203				0.25	WI-FI	2A	1	20	6
7	20	1	2A	(3) RECEPT. / SMART BD.	0.60			C.R. 203		0.25			WI-FI	2A	1	20	8
9	20	1	2A	WI-FI HUB		0.25							SPARE		1	20	10
11	20	1		SPARE									SPARE		1	20	12
13	20	1		SPARE									SPARE		1	20	14
15	20	1		SPARE									SPARE		1	20	16
17	20	1		SPARE									SPARE		1	20	18
19	20	1		SPARE									SPARE		1	20	20
21	20	1		SPARE									SPARE		1	20	22
23	20	1		SPARE									SPARE		1	20	24
25	20	1		SPARE									SPARE		1	20	26
27	20	1		SPARE									SPARE		1	20	28
29	20	1		SPARE									SPARE		1	20	30
					2.10	0.85	1.50			0.85	1.50	0.25					

20 TOTAL CONNECTED LOAD (AMPS) — TOTAL CONNECTED LOAD (kVA) 7.05

NOTES: 1. PROVIDE INTEGRAL SPD.

PANEL: CP2S (ALTERNATE)

VOLTAGE: 208Y/120V, 3ø, 4W+G | X MCB 100A/3P | POLES: 30 | AIC RATING: 10,000
MAIN BUS: 125A | MLO | MTG: SURFACE | LOCATION: CORRIDOR

CKT #	CIRCUIT BREAKER TRIP	POLE	BRANCH CIRCUIT	DESCRIPTION	kVA PER PHASE A	B	C	REMARKS	REMARKS	kVA PER PHASE A	B	C	DESCRIPTION	BRANCH CIRCUIT	CIRCUIT BREAKER POLE	TRIP	CKT #
1	20	1	2A	LAPTOP CHARGING CABINET	1.50			C.R. 206	C.R. 205	0.60			(3) RECEPT. / SMART BD.	2A	1	20	2
3	20	1	2A	(3) RECEPT. / SMART BD.		0.60		C.R. 206	C.R. 205		1.50		LAPTOP CHARGING CABINET	2A	1	20	4
5	20	1	2A	LAPTOP CHARGING CABINET			1.50	C.R. 204	LIBRARY			0.36	(1) QUAD RECEPT.	2A	1	20	6
7	20	1	2A	(3) RECEPT. / SMART BD.	0.60			C.R. 204		0.25			WI-FI HUB	2A	1	20	8
9	20	1	2A	WI-FI HUB		0.25					0.25		WI-FI HUB	2A	1	20	10
11	20	1		SPARE									SPARE		1	20	12
13	20	1		SPARE									SPARE		1	20	14
15	20	1		SPARE									SPARE		1	20	16
17	20	1		SPARE									SPARE		1	20	18
19	20	1		SPARE									SPARE		1	20	20
21	20	1		SPARE									SPARE		1	20	22
23	20	1		SPARE									SPARE		1	20	24
25	20	1		SPARE									SPARE		1	20	26
27	20	1		SPARE									SPARE		1	20	28
29	20	1		SPARE									SPARE		1	20	30
					2.10	0.85	1.50			0.85	1.75	0.36					

21 TOTAL CONNECTED LOAD (AMPS) — TOTAL CONNECTED LOAD (kVA) 7.41

NOTES: 1. PROVIDE INTEGRAL SPD.

PANEL: LP2 - SIDE A

VOLTAGE: 480Y/277V, 3ø, 4W+G | X MCB 300A/3P | POLES: 42 | AIC RATING: 22,000
MAIN BUS: 400A | MLO | MTG: SURFACE | LOCATION: 2ND FLR. CORRIDOR

CKT #	CIRCUIT BREAKER TRIP	POLE	BRANCH CIRCUIT	DESCRIPTION	kVA PER PHASE A	B	C	REMARKS	REMARKS	kVA PER PHASE A	B	C	DESCRIPTION	BRANCH CIRCUIT	CIRCUIT BREAKER POLE	TRIP	CKT #
1	20	1	2A	LIGHTING R.R.	0.62					1.05			LIGHTING C.R. 201, 202	2A	1	20	2
3	20	1	2A	LIGHTING C.R. 203, 204, 207		1.38					2.30		CORRIDOR LIGHTING	2A	1	20	4
5	20	1	2A	LIGHTING C.R. 205, 206			1.18					0.42	CORRIDOR LIGHTING	2A	1	20	6
7					2.33					2.28							8
9	15	3	2C	CU-1		2.33		ROOFTOP	ROOFTOP		2.28		CU-8	2C	3	15	10
11							2.33					2.28					12
13					2.28					2.28							14
15	15	3	2C	CU-3		2.28		ROOFTOP	ROOFTOP		2.28		CU-9	2C	3	15	16
17							2.28					2.28					18
19					2.28					2.33							20
21	15	3	2C	CU-4		2.28		ROOFTOP	ROOFTOP		2.33		CU-10	2C	3	15	22
23							2.28					2.33					24
25					2.28					2.33							26
27	15	3	2C	CU-5		2.28		ROOFTOP	ROOFTOP		2.33		CU-11	2C	3	15	28
29							2.28		NOTE 3			2.33					30
31					2.33					2.28							32
33	15	3	2C	CU-6		2.33		ROOFTOP	ROOFTOP		2.28		CU-12	2C	3	15	34
35							2.33		NOTE 3			2.28					36
37					2.28					2.28							38
39	15	3	2C	CU-7		2.28		ROOFTOP	ROOFTOP		2.28		CU-13	2C	3	15	40
41							2.28		NOTE 3			2.28					42
					14.40	15.16	14.96			14.83	16.08	14.20					

108 TOTAL CONNECTED LOAD (AMPS) — TOTAL CONNECTED LOAD (kVA) 89.63

NOTES: 1. PROVIDE TYPE HACR BREAKERS
2. LOAD FROM SIDE B = 96 AMPS @ 480V.
3. CIRCUIT PROVIDED IS FOR 2ND FLOOR ALTERNATE. IF ALTERNATE IS NOT SELECTED PROVIDE 3 POLE SPACE FOR FUTURE.

PANEL: LP2 - SIDE B

VOLTAGE: 480Y/277V, 3ø, 4W+G | MCB | POLES: 42 | AIC RATING: 22,000
MAIN BUS: 400A | X MLO | MTG: SURFACE | LOCATION: 2ND FLR. CORRIDOR

CKT #	CIRCUIT BREAKER TRIP	POLE	BRANCH CIRCUIT	DESCRIPTION	kVA PER PHASE A	B	C	REMARKS	REMARKS	kVA PER PHASE A	B	C	DESCRIPTION	BRANCH CIRCUIT	CIRCUIT BREAKER POLE	TRIP	CKT #
43					2.28					2.28							44
45	15	3	2C	CU-14		2.28		ROOFTOP	ROOFTOP		2.28		CU-21	2C	3	15	46
47							2.28	NOTE 3	NOTE 3			2.28					48
49					2.28					2.28							50
51	15	3	2C	CU-15		2.28		ROOFTOP	ROOFTOP		2.28		CU-22	2C	3	15	52
53							2.28	NOTE 3	NOTE 3			2.28					54
55					2.33					6.01							56
57	15	3	2C	CU-16		2.33		ROOFTOP	ROOFTOP		6.01		RTU-3	3C	3	25	58
59							2.33	NOTE 3				6.01					60
61					2.28												62
63	15	3	2C	CU-17		2.28		ROOFTOP					SPARE		3	15	64
65							2.28										66
67					2.28												68
69	15	3	2C	CU-18		2.28		ROOFTOP					SPARE		3	15	70
71							2.28										72
73					2.28												74
75	15	3	2C	CU-19		2.28		ROOFTOP					SPARE		3	15	76
77							2.28										78
79					2.28								SPACE				80
81	15	3	2C	CU-20		2.28		ROOFTOP					SPACE				82
83							2.28		(ALT. NOT ACCEPTED)				SECOND FLOOR BATHRM. LTG.	2A	1	20	84
					16.01	16.01	16.01			10.57	10.57	10.57					

96 TOTAL CONNECTED LOAD (AMPS) — TOTAL CONNECTED LOAD (kVA) 79.74

NOTES: 1. PROVIDE TYPE HACR BREAKERS
2. BUS TAP FEED FROM LP2 SIDE A
3. CIRCUIT PROVIDED IS FOR 2ND FLOOR ALTERNATE. IF ALTERNATE IS NOT SELECTED PROVIDE 3 POLE SPACE FOR FUTURE.

PANEL: LP1

VOLTAGE: 480Y/277V, 3ø, 4W+G | X MCB 60A/3P | POLES: 30 | AIC RATING: 10,000
MAIN BUS: 125A | MLO | MTG: SURFACE | LOCATION: 1ST FLR. CORRIDOR

CKT #	CIRCUIT BREAKER TRIP	POLE	BRANCH CIRCUIT	DESCRIPTION	kVA PER PHASE A	B	C	REMARKS	REMARKS	kVA PER PHASE A	B	C	DESCRIPTION	BRANCH CIRCUIT	CIRCUIT BREAKER POLE	TRIP	CKT #
1	20	1	2A	LIGHTING CORR. SOUTH	0.75			8A, 1D, 116H, 3		1.05			C.R. 104, 105	2A	1	20	2
3	20	1	2A	LIGHTING CORR. NORTH		0.75		8A, 1D, 116H, 3			0.59		C.R. 110	2A	1	20	4
5	20	1	2A	LIGHTING CORR. - CENTER			1.00	CHANDELIERS				0.58	C.R. 103, R.R. 102A	2A	1	20	6
7	20	1	2A	LIGHTING C.R. 1-1, 102	1.01			11P2, 1P					SPARE		1	20	8
9						6.40							SPARE		1	20	10
11	30	3	3B	RTU-5			6.40						SPARE		1	20	12
13					6.40								SPARE		1	20	14
15	20	1		SPARE									SPARE		1	20	16
17	20	1		SPARE									SPARE		1	20	18
19	20	1		SPARE									SPARE		1	20	20
21	20	1		SPARE									SPARE		1	20	22
23	20	1		SPARE									SPARE		1	20	24
25	20	1		SPARE									SPARE		1	20	26
27	20	1		SPARE									SPARE		1	20	28
29	20	1		SPARE									SPARE		1	20	30
					8.16	7.15	7.40			1.05	0.59	0.58					

30 TOTAL CONNECTED LOAD (AMPS) — TOTAL CONNECTED LOAD (kVA) 24.93

NOTES:

PANEL: RPB

VOLTAGE: 208Y/120V, 3ø, 4W+G | X MCB 150A/3P | POLES: 42 | AIC RATING: 10,000
MAIN BUS: 200A | MLO | MTG: SURFACE | LOCATION: ELECTRICAL ROOM

CKT #	CIRCUIT BREAKER TRIP	POLE	BRANCH CIRCUIT	DESCRIPTION	kVA PER PHASE A	B	C	REMARKS	REMARKS	kVA PER PHASE A	B	C	DESCRIPTION	BRANCH CIRCUIT	CIRCUIT BREAKER POLE	TRIP	CKT #
1	20	1	2A	(3) DUPLEX RECEPT.	0.54			MAINTENANCE		1.85							2
3	20	1	2A	(4) DUPLEX RECEPT.		0.72		ELECTRIC ROOM	BOILER ROOM		1.85		KN26	2C	3	20	4
5	20	1	2A	(2) DUPLEX RECEPT.			0.36	MAINT. & BOILER RM				1.85	BOILER #1				6
7	20	1	2A	BOILER CONTROL PANEL	0.75			BOILER ROOM		1.85							8
9	20	1	2A	(3) DUPLEX RECEPT.		0.54			BOILER ROOM		1.85		KN26	2C	3	20	10
11	20	1	2A	(2) DUPLEX RECEPT.			0.36	BOILER ROOM				1.85	BOILER #2				12
13	20	1	2A	(2) DUPLEX RECEPT.	0.36				BOILER ROOM	0.57			DOMESTIC HOT WATER	2A	2	20	14
15	20	1	2A	BATTERY CHARGER		0.75		GENERATOR			0.57		CIRC. PUMP 1/2 HP.				16
17	30	1	3A	ENGINE BLOCK HTR.			2.50	GENERATOR	BOILER ROOM			0.25	HWH CONTROL	2A	1	20	18
19	20	1	2A	ALTERNATOR STRIP HTR.	0.75			GENERATOR	BOILER ROOM	0.18			CHEMICAL FEED PUMP	2A	1	20	20
21	20	1	2A	ELEVATOR CAB		0.75		CLOSET 121	BOILER ROOM		0.10		UH-1	2A	1	20	22
23	20	1	2A	MOTORIZED DAMPER			0.50		ELECTRIC ROOM				EXISTING. RECEPTACLE	5A	2	50	24
25	20	1		SPARE													26
27	20	1		SPARE									SPARE		1	20	28
29	20	1		SPARE									SPARE		1	20	30
31	20	1		SPARE									SPARE		1	20	32
33	20	1		SPARE									SPARE		1	20	34
35	20	1		SPARE									SPARE		1	20	36
37	20	1		SPARE									SPARE		1	20	38
39	20	1		SPARE									SPARE		1	20	40
41	20	1		SPARE									SPARE		1	20	42
					2.40	2.76	3.72			4.45	4.37	3.95					

60 TOTAL CONNECTED LOAD (AMPS) — TOTAL CONNECTED LOAD (kVA) 21.65

NOTES:

PANEL: CP1N

VOLTAGE: 208Y/120V, 3ø, 4W+G | X MCB 100A/3P | POLES: 30 | AIC RATING: 10,000
MAIN BUS: 125A | MLO | MTG: SURFACE | LOCATION: 1ST FLR. CORRIDOR NORTH

CKT #	CIRCUIT BREAKER TRIP	POLE	BRANCH CIRCUIT	DESCRIPTION	kVA PER PHASE A	B	C	REMARKS	REMARKS	kVA PER PHASE A	B	C	DESCRIPTION	BRANCH CIRCUIT	CIRCUIT BREAKER POLE	TRIP	CKT #
1	20	1	2A	LAPTOP CHARGING CABINET	1.50			C.R. 101	C.R. 103	0.60			(3) RECEPT. / SMART BD.	2A	1	20	2
3	20	11	2A	(3) RECEPT. / SMART BD.		0.60		C.R. 101	C.R. 103		1.50		LAPTOP CHARGING CABINET	2A	1	20	4
5	20	1	2A	(3) RECEPT. / SMART BD.			0.60	C.R. 102				0.25	WI-FI HUB	2A	1	20	6
7	20	1	2A	WI-FI HUB	0.25					0.25			WI-FI HUB	2A	1	20	8
9	20	1		SPARE									SPARE		1	20	10
11	20	1		SPARE									SPARE		1	20	12
13	20	1		SPARE									SPARE		1	20	14
15	20	1		SPARE									SPARE		1	20	16
17	20	1		SPARE									SPARE		1	20	18
19	20	1		SPARE									SPARE		1	20	20
21	20	1		SPARE									SPARE		1	20	22
23	20	1		SPARE									SPARE		1	20	24
25	20	1		SPARE									SPARE		1	20	26
27	20	1		SPARE									SPARE		1	20	28
29	20	1		SPARE									SPARE		1	20	30
					1.75	0.60	0.60			0.85	1.50	0.25					

15 TOTAL CONNECTED LOAD (AMPS) — TOTAL CONNECTED LOAD (kVA) 5.55

NOTES: 1. PROVIDE INTEGRAL SPD.

PANEL: CP1S

VOLTAGE: 208Y/120V, 3ø, 4W+G | X MCB 100A/3P | POLES: 30 | AIC RATING: 10,000
MAIN BUS: 125A | MLO | MTG: SURFACE | LOCATION: 1ST FLOOR CORRIDOR SOUTH

CKT #	CIRCUIT BREAKER TRIP	POLE	BRANCH CIRCUIT	DESCRIPTION	kVA PER PHASE A	B	C	REMARKS	REMARKS	kVA PER PHASE A	B	C	DESCRIPTION	BRANCH CIRCUIT	CIRCUIT BREAKER POLE	TRIP	CKT #
1	20	1	2A	LAPTOP CHARGING CABINET	1.50			C.R. 105	C.R. 104	0.60			(3) RECEPT. / SMART BD.	2A	1	20	2
3	20	1	2A	(3) RECEPT. / SMART BD.		0.60		C.R. 105	C.R. 104		1.50		LAPTOP CHARGING CABINET	2A	1	20	4
5	20	1	2A	LAPTOP CHARGING CABINET			1.50	C.R. 110				0.25	WI-FI HUB	2A	1	20	6
7	20	1	2A	(3) RECEPT. / SMART BD.	0.60			C.R. 110		0.25			WI-FI HUB	2A	1	20	8
9	20	1	2A	WI-FI HUB		0.25					0.36		(1) QUAD. RECE[TACLE	2A	1	20	10
11	20	1		SPARE									SPARE		1	20	12
13	20	1		SPARE									SPARE		1	20	14
15	20	1		SPARE									SPARE		1	20	16
17	20	1		SPARE									SPARE		1	20	18
19	20	1		SPARE									SPARE		1	20	20
21	20	1		SPARE									SPARE		1	20	22
23	20	1		SPARE									SPARE		1	20	24
25	20	1		SPARE									SPARE		1	20	26
27	20	1		SPARE									SPARE		1	20	28
29	20	1		SPARE									SPARE		1	20	30
					2.10	0.85	1.50			0.85	1.86	0.25					

21 TOTAL CONNECTED LOAD (AMPS) — TOTAL CONNECTED LOAD (kVA) 7.41

NOTES: 1. PROVIDE INTEGRAL SPD.

PANEL: RP1N

VOLTAGE: 208Y/120V, 3ø, 4W+G | X MCB 100A/3P | POLES: 30 | AIC RATING: 10,000
MAIN BUS: 125A | MLO | MTG: SURFACE | LOCATION: 1ST FLR. CORRIDOR NORTH

CKT #	CIRCUIT BREAKER TRIP	POLE	BRANCH CIRCUIT	DESCRIPTION	kVA PER PHASE A	B	C	REMARKS	REMARKS	kVA PER PHASE A	B	C	DESCRIPTION	BRANCH CIRCUIT	CIRCUIT BREAKER POLE	TRIP	CKT #
1	20	1	2A	(4) DUPLEX RECEPT.	0.72			C.R. 101	C.R. 102	0.72			(4) DUPLEX RECEPT.	2A	1	20	2
3	20	1	2A	(4) DUPLEX RECEPT.		0.72		C.R. 101	C.R. 102		0.72		(4) DUPLEX RECEPT.	2A	1	20	4
5	20	1	2A	(4) DUPLEX RECEPT.			0.72	C.R. 103	GIRLS R.R.			0.40	CUH-8 & EX. FAN	2A	1	15	6
7	20	1	2A	(4) DUPLEX RECEPT.	0.72			C.R. 103					SPARE		1	20	8
9	20	1	2A	(3) DUPLEX RECEPT.		0.54		CORRIDOR					SPARE		1	20	10
11	20	1	2A	DRINKING FOUNTAIN			0.80	STAIR B	C.R. 103			0.84	UV-8	2A	1	15	12
13	20	1	2A	CUH-2, CUH-3, EF-3	0.50			ENTRY, T.R.	C.R. 102	0.84			UV-9	2A	1	15	14
15	20	1	3A	BC-4		1.60		CORRIDOR	C.R. 101		0.84		UV-10	2A	1	15	16
17	20	1	2A	WIRELESS REPEATER			0.18	CORRIDOR				0.40	CUH-2 & CUH-3	2A	1	15	18
19	20	1		SPARE									SPARE		1	20	20
21	20	1		SPARE									SPARE		1	20	22
23	20	1		SPARE									SPARE		1	20	24
25	20	1		SPARE									SPARE		1	20	26
27	20	1		SPARE									SPARE		1	20	28
29	20	1		SPARE									SPARE		1	20	30
					1.94	2.86	1.70			1.56	1.56	1.64					

31 TOTAL CONNECTED LOAD (AMPS) — TOTAL CONNECTED LOAD (kVA) 11.26

NOTES:

PANEL: RP1S

VOLTAGE: 208Y/120V, 3ø, 4W+G | X MCB 100A/3P | POLES: 30 | AIC RATING: 10,000
MAIN BUS: 125A | MLO | MTG: SURFACE | LOCATION: 1ST FLR. CORRIDOR SOUTH

CKT #	CIRCUIT BREAKER TRIP	POLE	BRANCH CIRCUIT	DESCRIPTION	kVA PER PHASE A	B	C	REMARKS	REMARKS	kVA PER PHASE A	B	C	DESCRIPTION	BRANCH CIRCUIT	CIRCUIT BREAKER POLE	TRIP	CKT #
1	20	1	2A	(5) DUPLEX RECEPT.	0.90			C.R. 105	C.R. 104	0.90			(5) DUPLEX RECEPT.	2A	1	20	2
3	20	1	2A	(4) DUPLEX RECEPT.		0.72		C.R. 105, 104	C.R. 110		0.72		(4) DUPLEX RECEPT.	2A	1	20	4
5	20	1	2A	(5) DUPLEX RECEPT.			0.90	CORRIDOR	C.R. 110			0.72	(4) DUPLEX RECEPT.	2A	1	20	6
7	15	1	2A	EX. FAN, CUH-7	0.60			BOYS R.R.	STAIR A	0.80			DRINKING FOUNTAIN	2A	1	20	8
9	20	1		SPARE					ENTRANCE		0.54		(3) DUPLEX RECEPT.	2A	1	20	10
11	20	1		SPARE					C.R. 110			0.84	UV-3	2A	1	15	12
13	20	1	2A	(3) ROOF RECEPT.	0.54				C.R. 104	0.84			UV-7	2A	1	15	14
15	20	1	2A	WIRELESS REPEATER		0.18		CORRIDOR	C.R. 105		0.84		UV-6	2A	1	15	16
17	20	1	2A	WIRELESS REPEATER			0.18	CORRIDOR					SPARE		1	20	18
19	25	1	3A	BC-3	1.60								SPARE		1	20	20
21	20	1		SPARE				CORRIDOR					SPARE		1	20	22
23	20	1		SPARE									SPARE		1	20	24
25	20	1		SPARE									SPARE		1	20	26
27	20	1		SPARE									SPARE		1	20	28
29	20	1		SPARE									SPARE		1	20	30
					3.64	0.90	1.08			2.54	2.10	1.56					

33 TOTAL CONNECTED LOAD (AMPS) — TOTAL CONNECTED LOAD (kVA) 11.82

NOTES:

PANEL: CBN (EXISTING TO REMAIN)

VOLTAGE: 208Y/120V, 3ø, 4W+G | X MCB 150A/3P | POLES: 30 | AIC RATING: 10,000
MAIN BUS: 150 A | MLO | MTG: SURFACE | LOCATION: ELECTRIC CLOSET - NORTH

CKT #	CIRCUIT BREAKER TRIP	POLE	BRANCH CIRCUIT	DESCRIPTION	kVA PER PHASE A	B	C	REMARKS	REMARKS	kVA PER PHASE A	B	C	DESCRIPTION	BRANCH CIRCUIT	CIRCUIT BREAKER POLE	TRIP	CKT #
1	20	1	2A	LAPTOP CHARGING CABINET	1.50			C.R. B02	CONF. RM.	0.72			(2) QUAD FLOOR RECEPT.	2A	1	20	2
3	20	1	2A	(3) RECEPT. W/ SMART BD.		0.60		C.R. B02	FACULTY RM.		0.36		(1) QUAD FLOOR RECEPT.	2A	1	20	4
5	20	1	2A	(1) DUPLEX RECEPT.			0.18	KITCHEN CASHIER				0.50	WI-FI HUB	2A	1	20	6
7	20	1	2A	(1) QUAD. RECEPTACLE	0.36					0.36			(1) QUAD. RECEPTACLE	2A	1	20	8
9	20	1		SPARE									SPARE		1	20	10
11	20	1		SPARE									SPARE		1	20	12
13																	14
15																	16
17																	18
19																	20
21																	22
23																	24
25					2.60					2.95							26
27	100	3	10C	PANEL CP1N		2.10		1ST FLOOR CORRIDOR	2ND. FLOOR CORRIDOR		2.35		PANEL CP2N	10C	3	100	28
29							0.85					1.75					30
					4.46	2.70	1.03			4.03	2.71	2.25					

48 TOTAL CONNECTED LOAD (AMPS) — TOTAL CONNECTED LOAD (kVA) 17.18

NOTES: 1. PROVIDE BRANCH BREAKERS TO ACCOMMODATE NEW WORK.

PANEL: CBS (EXISTING TO REMAIN)

VOLTAGE: 208Y/120V, 3ø, 4W+G | X MCB 150A/3P | POLES: 30 | AIC RATING: 10,000
MAIN BUS: 150 A | MLO | MTG: SURFACE | LOCATION: ELECTRIC CLOSET - SOUTH

CKT #	CIRCUIT BREAKER TRIP	POLE	BRANCH CIRCUIT	DESCRIPTION	kVA PER PHASE A	B	C	REMARKS	REMARKS	kVA PER PHASE A	B	C	DESCRIPTION	BRANCH CIRCUIT	CIRCUIT BREAKER POLE	TRIP	CKT #
1	20	1	2A	(2) RECEPT.	0.36			OFFICE					SPARE		1	20	2
3	20	1	2A	(3) RECEPT.		0.54		OFFICE / NURSE			0.25		WI-F1 HUB	2A	1	20	4
5	20	1	2A	(2) RECEPT.			0.36	SECURITY	MAINTENANCE			0.50	SECURITY PANEL	2A	1	20	6
7	20	1	2A	(2) QUAD RECEPT.	0.72			CTE ROOM	MAINTENANCE	0.75			FIRE ALARM CONTROL PANEL	2A	1	20	8
9	20	1	2A	(2) QUAD RECEPT.		0.72		CTE ROOM					SPARE		1	20	10
11	20	1	2A	(2) QUAD RECEPT.			0.72	CTE ROOM					SPARE		1	20	12
13	20	1	2A	(1) QUAD RECEPT.	0.36			CTE ROOM					SPARE		1	20	14
15	20	1	2A	(2) QUAD RECEPT.		0.72		CTE ROOM					SPARE		1	20	16
17	20	1	2A	(1) QUAD RECEPT.			0.36	CTE ROOM					SPARE		1	20	18
19	20	1	2A	(1) QUAD RECEPT.	0.36			CTE ROOM					SPARE		1	20	20
21	20	1	2A	(1) QUAD RECEPT.		0.36							SPARE		1	20	22
23	20	1		SPARE									SPARE		1	20	24
25					2.95					2.95							26
27	100	3	10C	PANEL CP1S		2.71		1ST. FLOOR	2ND FLOOR		2.60		PANEL CP2S	10C	3	100	28
29							1.75					1.86					30
					4.75	5.05	3.19			3.70	2.85	2.36					

61 TOTAL CONNECTED LOAD (AMPS) — TOTAL CONNECTED LOAD (kVA) 21.90

NOTES: 1. REVISE BRANCH CIRCUIT BREAKERS TO ACCOMMODATE NEW WORK.

PANEL: LPB

VOLTAGE: 480Y/277V, 3ø, 4W+G | X MCB 250A/3P | POLES: 42 | AIC RATING: 22,000
MAIN BUS: 400A | MLO | MTG: SURFACE | LOCATION: MAIN ELECTRIC RM.

CKT #	CIRCUIT BREAKER TRIP	POLE	BRANCH CIRCUIT	DESCRIPTION	kVA PER PHASE A	B	C	REMARKS	REMARKS	kVA PER PHASE A	B	C	DESCRIPTION	BRANCH CIRCUIT	CIRCUIT BREAKER POLE	TRIP	CKT #
1	20	1	2A	LIGHTING MAINT. BOILER RM.	0.54			18 C	7 A, 1 A2, 14 B, 2 F	0.66			LIGHTING ADMIN. / NURSE	2A	1	20	2
3	20	1	2A	LIGHTING STAIR A / ELEV. PIT		0.29		6 D1	23 A, 6 C, 3		0.75		LIGHTING CORR., CLOS., R.R.	2A	1	20	4
5	20	1	2A	LIGHTING STAIR B			0.29	6 D1	14 A2, 2 C, 1 F			0.46	C.R. B01, B09	2A	1	20	6
7	20	1	2A	LIGHTING C.R. B02, B03, B04	0.62			12 A2, 12 A1	15 B1	0.59			MULTI-PURPOSE RM.	2A	1	20	8
9	20	1	2A	LIGHTING CAFETERIA		0.63		24 A2	20 B1		0.78		MULTI-PURPOSE RM.	2A	1	20	10
11	20	1	2A	SPARE					20 B1			0.78	MULTI-PURPOSE RM.	2A	1	20	12
13					9.21					2.10			P1				14
15	60	3	6C	PANEL LP1		7.74		1ST FLOOR LIGHTING	BOILER ROOM		2.10		HEATING CIRCULATOR	2C	3	20	16
17							7.98					2.10	PUMP 5 HP				18
19					15.30					2.10			P2				20
21	70	3	7C	RTU-1		15.30		MULTI-PURPOSE ROOM	BOILER ROOM		2.10		HEATING CIRCULATOR	2C	3	20	22
23							15.30					2.10	PUMP 5 HP				24
25					15.30					3.32							26
27	70	3	7C	RTU-2		15.30		MULTI-PURPOSE ROOM	SECURITY ENTRANCE		3.32		RTU-4	2C	3	15	28
29							15.30					3.32					30
31					8.49					8.45							32
33	70	3	7B	45 KVA TRANSFORMER		5.41		ELECTRIC CLOSET	ELECTRIC CLOSET		7.90		45 KVA TRANSFORMER	7B	3	70	34
35				PANEL CBN			3.28	CORRIDOR NORTH	CORRIDOR SOUTH			5.55	PANEL CBS				36
37	20	1	2A	TIME CLOCK	0.71					0.10			ELEVATOR PIT LIGHTS	2A	1	20	38
39				SPACE									SPACE				40
41				SPACE									SPACE				42
					50.17	44.67	42.15			17.32	16.95	14.31					

223 TOTAL CONNECTED LOAD (AMPS) — TOTAL CONNECTED LOAD (kVA) 185.57

NOTES: 1. PROVIDE TYPE HACR BRANCH BREAKERS FOR ALL MOTORIZED EQUIPMENT.

PANEL: RBS

VOLTAGE: 208Y/120V, 3ø, 4W+G | X MCB 200A/3P | POLES: 42 | AIC RATING: 10,000
MAIN BUS: 200A | MLO | MTG: SURFACE | LOCATION: BASEMENT ELEC. CLOS, S.

CKT #	CIRCUIT BREAKER TRIP	POLE	BRANCH CIRCUIT	DESCRIPTION	kVA PER PHASE A	B	C	REMARKS	REMARKS	kVA PER PHASE A	B	C	DESCRIPTION	BRANCH CIRCUIT	CIRCUIT BREAKER POLE	TRIP	CKT #
1					6.18					4.98							2
3	100	3	10C	PANEL RP1S		3.00		1ST FLOOR CORRIDOR	2ND FLOOR CORRIDOR		4.70		PANEL RP2S	10C	3	100	4
5							2.64					4.98					6
7	20	1	2A	EX FAN, UH-2, UH-3, CUH-4	0.70			BOYS ROOM	CORRIDOR	0.72			(4) DUPLEX RECEPT.	2A	1	20	8
9	20	1		SPARE					CORRIDOR		0.92		(4) DUPLEX RECEPTACLES	2A	1	20	10
11	20	1		SPARE								0.72	(4) DUPLEX RECEPT.	2A	1	20	12
13	20	1	2A	(5) DUPLEX RECEPT.	0.90			SECURITY OFFICE	MAIN ENTRANCE	0.90			(5) DUPLEX RECEPT.	2A	1	20	14
15	20	1	2A	COPY MACHINE		0.80		ADMIN. OFFICE	MAIN ENTRANCE		0.60		(2) DOOR OEPRATORS	2A	1	20	16
17	20	1	2A	(1) COUNTER RECEPT, (1) REF			0.75	NURSE	NURSE			1.08	(6) DUPLEX RECEPT.	2A	1	20	18
19	20	1	2A	(5) DUPLEX RECEPT.	0.90			MULTI-PURPOSE RM.	MULTI-PURPOSE RM.	0.90			(5) DUPLEX RECEPT.	2A	1	20	20
21	15	1		CUH-6		0.30		SECURITY OFFICE	C.R. B01		1.44		UV-1	2A	1	15	22
23	20	1	2A	(1) GFI DUPLEX RECEPTACLE			0.18	ELEVATOR PIT	SECURITY VESTIBULE			0.50	ALYSSA'S CONTROL PANEL	2A	1	20	24
25	20	1	2A	INTRUSION DETECTION PANEL	0.50				CORRIDOR	0.18			WIRELESS REPEATER	2A	1	20	26
27	20	1	2A	CHAIR LIFT		1.90		CTE ROOM B01	SECURITY OFFICE B15		0.18		(1) DUPLEX RECEPT.	2A	1	20	28
29	20	1	2A	(1) DUPLEX RECEPTACLE			0.18	NURSE B14				1.60	BC-1	3A	1	25	30
31	20	1	2A	EF-1, EF-6, EF-7	0.60								SPARE		1	20	32
33	20	1											SPARE		1	20	34
35	20	1		SPARE									SPARE		1	20	36
37	20	1		SPARE									SPARE		1	20	38
39	20	1		SPARE									SPARE		1	20	40
41	20	1		SPARE									SPARE		1	20	42
					9.18	6.00	3.75			7.68	7.84	8.88					

120 TOTAL CONNECTED LOAD (AMPS) — TOTAL CONNECTED LOAD (kVA) 43.33

NOTES:

PANEL: RBN

VOLTAGE: 208Y/120V, 3ø, 4W+G | X MCB 250A/3P | POLES: 42 | AIC RATING: 10,000
MAIN BUS: 300A | MLO | MTG: SURFACE | LOCATION: BASEMENT CORR. NORTH

CKT #	CIRCUIT BREAKER TRIP	POLE	BRANCH CIRCUIT	DESCRIPTION	kVA PER PHASE A	B	C	REMARKS	REMARKS	kVA PER PHASE A	B	C	DESCRIPTION	BRANCH CIRCUIT	CIRCUIT BREAKER POLE	TRIP	CKT #
1	15	1	2A	EX. FAN & CUH-5	0.60			GIRLS LAV / STAIR B	CAFETERIA	0.72			(4) DUPLEX RECEPT.	2A	1	20	2
3	20	1		SPARE					CAFETERIA, FACULTY		0.90		(5) DUPLEX RECEPT.	2A	1	20	4
5	20	1		SPARE					FACULTY			1.40	COPY MACHINE	2A	1	20	6
7	20	1	2A	REFRIGERATOR RECEPT.	0.75			FACULTY	FACULTY COUNTER	0.36			(2) DUPLEX RECEPT.	2A	1	20	8
9	20	1	2A	(4) DUPLEX RECEPT.		0.72		FACULTY, CAFETERIA	CONFERENCE RM.		0.90		(5) DUPLEX RECEPT.	2A	1	20	10
11	20	1	2A	(5) DUPLEX RECEPT.			0.90	C.R. B02	CORRIDOR			0.80	DRINKING FOUNTAIN	2A	1	20	12
13	15	1	2A	BC-8	0.90			FACULTY	KITCHEN	0.22			EF-5	2A	1	20	14
15	15	1	2A	BC-7		0.90		CONF. ROOM	CORRIDOR		1.60		BC-2	3A	1	25	16
17	15	1	2A	UV-2			1.45	C.R. B02	KITCHEN ITEM #2			0.64	MILK DISPENSER	2A	1	20	18
19	20	1	2A	DUPLEX RECEPT.	0.18			KITCHEN	KITCHEN ITEM #3	0.96			COLD PAN UNIT	2A	1	20	20
21	20	1	2A	DUPLEX RECEPT.		0.18		KITCHEN	KITCHEN ITEM #4		4.00		HOT FOOD COUNTER	5A	1	50	22
23	20	1	2A	DUPLEX RECEPT.			0.18	KITCHEN	KITCHEN ITEM #5			0.50	FLAT TOP UNIT	2A	1	20	24
25	20	1	2A	WIRELESS REPEATER	0.18			CORRIDOR	KITCHEN	0.75			REACH-IN WARMER	2A	2	20	26
27	20	1	2A	WIRELESS REPEATER		0.18		CORRIDOR	ITEM #11		0.75						28
29	20	1	2A	DUPLEX RECEPT.			0.18	CAFETERIA B05	KITCHEN ITEM #12			0.83	TWO DOOR REFRIGERATOR	2A	1	20	30
31	20	1	2A	COPIER	0.50			FACULTY RM. B04	KITCHEN ITEM #13	1.18			TWO DOOR FREEZER	2A	1	20	32
33	20	1	2A	SOUND RACK		0.18		RM. B10					SPARE		1	20	34
35	20	1		SPARE									SPARE		1	20	36
37					3.50					6.71							38
39	100	3	10C	PANEL RP1N		4.42		FIRST FLOOR	SECOND FLOOR		5.61		PANEL RP2N	10C	3	100	40
41							3.34					7.08					42
					6.61	6.58	6.05			10.90	13.76	11.25					

153 TOTAL CONNECTED LOAD (AMPS) — TOTAL CONNECTED LOAD (kVA) 55.15

NOTES: 1. PROVIDE TYPE HACR BRANCH BREAKERS FOR ALL KITCHEN EQUIPMENT AND MOTORIZED HVAC EQUIPMENT

ISSUED FOR BID: 11-13-2020

RVE 1901
REMINGTON & VERNICK ENGINEERS
232 KINGS HIGHWAY EAST
HADDONFIELD, NJ 08033
(856) 795-9595, FAX (856) 795-1882
WEB SITE ADDRESS : WWW.RVE.COM
Certification of Authorization: 24 GA 28003300
~ENGINEERING EXCELLENCE~

DATE:
CHRISTOPHER A. SAPONARO
NJ PROFESSIONAL ENGINEER LIC. No. 40059

DATE:
BRIAN B. GREGG
NJ PROFESSIONAL ENGINEER LIC. No. 46577

No.	REVISION	DATE	BY	CHK

ELECTRICAL SCHEDULES

PENNSAUKEN BOARD OF EDUCATION
ROOSEVELT STEM SCHOOL ADDITION AND RENOVATIONS
5526 WISTERIA AVENUE, PENNSAUKEN, NEW JERSEY 08109
PENNSAUKEN TOWNSHIP CAMDEN COUNTY NEW JERSEY

DRAWN BY :	DESIGN BY :	CHECKED BY :	SCALE :
S.M.	K.M.		AS NOTED
DATE : 10-19-2020		SHEET No. : E-6.1	
JOB No. : MP038X049			

LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION	MOUNTING	MANUFACTURER	CATALOG NO.	LAMPS	VOLTS	REMARKS
A	2' x 2' ARCHITECTURAL EDGE-LIT TROFFER	RECESSED	COLUMBIA LIGHTING	VSY22-35LWHE-EDU	LED 19 WATTS	UNV	
AE	2' x 2' ARCHITECTURAL EDGE-LIT TROFFER	RECESSED	COLUMBIA LIGHTING	VSY22-35LWHE-EDU-ELL14	LED 19 WATTS	UNV	PROVIDE FIXTURE WITH 90 MINUTE BATTERY BACKUP
A1	2' x 2' ARCHITECTURAL EDGE-LIT TROFFER	RECESSED	COLUMBIA LIGHTING	VSY22-35MLHE-EDU	LED 24 WATTS	UNV	
A1E	2' x 2' ARCHITECTURAL EDGE-LIT TROFFER	RECESSED	COLUMBIA LIGHTING	VSY22-35MLHE-EDU-ELL14	LED 24 WATTS	UNV	PROVIDE FIXTURE WITH 90 MINUTE BATTERY BACKUP
A2	2' x 2' ARCHITECTURAL EDGE-LIT TROFFER	RECESSED	COLUMBIA LIGHTING	VSY22-35HLHE-EDU	LED 26 WATTS	UNV	
A2E	2' x 2' ARCHITECTURAL EDGE-LIT TROFFER	RECESSED	COLUMBIA LIGHTING	VSY22-35HLHE-EDU-ELL14	LED 26 WATTS	UNV	PROVIDE FIXTURE WITH 90 MINUTE BATTERY BACKUP
A3	2' x 2' ARCHITECTURAL EDGE-LIT TROFFER	RECESSED	COLUMBIA LIGHTING	VSY22-35VLHE-EDU	LED 32.3 WATTS	UNV	
A3E	2' x 2' ARCHITECTURAL EDGE-LIT TROFFER	RECESSED	COLUMBIA LIGHTING	VSY22-35VLHE-EDU-ELL14	LED 32.3 WATTS	UNV	PROVIDE FIXTURE WITH 90 MIUNTE BATTERY BACKUP
B	2' x 4' ARCHITECTURAL EDGE-LIT TROFFER	RECESSED	COLUMBIA LIGHTING	VSY24-35MWHE-EDU	LED 29 WATTS	UNV	
BE	2' x 4' ARCHITECTURAL EDGE-LIT TROFFER	RECESSED	COLUMBIA LIGHTING	VSY24-35MWHE-EDU-ELL14	LED 29 WATTS	UNV	PROVIDE FIXTURE WITH 90 MINUTE BATTERY BACKUP
B1	2' x 4' ARCHITECTURAL EDGE-LIT TROFFER	RECESSED	COLUMBIA LIGHTING	VSY24-35HLHE-EDU	LED 29 WATTS	UNV	
B1E	2' x 4' ARCHITECTURAL EDGE-LIT TROFFER	RECESSED	COLUMBIA LIGHTING	VSY24-35HLHE-EDU-ELL14	LED 29 WATTS	UNV	PROVIDE FIXTURE WITH 90 MINUTE BATTERY BACKUP
B2	1' x 4' ARCHITECTURAL EDGE-LIT TROFFER	RECESSED	COLUMBIA LIGHTING	VSY14-35VWHE-EDU	LED 25 WATTS	UNV	
B2E	1' x 4' ARCHITECTURAL EDGE-LIT TROFFER	RECESSED	COLUMBIA LIGHTING	VSY14-35VWHE-EDU-ELL14	LED 25 WATTS	UNV	PROVIDE FIXTURE WITH 90 MINUTE BATTERY BACKUP
C	3" SURFACE MOUNT LINEAR, 4' LONG	SURFACE	COLUMBIA LIGHTING	MPS4-35MW-FW-EDU	LED 30 WATTS	UNV	
CE	3" SURFACE MOUNT LINEAR, 4' LONG	SURFACE	COLUMBIA LIGHTING	MPS4-35MW-FW-EDU-ELL14	LED 30 WATTS	UNV	PROVIDE FIXTURE WITH 90 MINUTE BATTERY BACKUP
D	3" SURFACE MOUNT LINEAR, 4' LONG	SURFACE	LITECONTROL	67L-S-D-4-BL-X-CX-35K-D075	LED 23 WATTS	UNV	
D1	3" SURFACE MOUNT LINEAR, 8' LONG	SURFACE	LITECONTROL	67L-S-D-8-BL-X-CX-35K-D075	LED 46 WATTS	UNV	
D1E	3" SURFACE MOUNT LINEAR, 8' LONG	SURFACE	LITECONTROL	67L-S-D-8-BL-X-CX-35K-D075-EF	LED 46 WATTS	UNV	PROVIDE FIXTURE WITH 90 MINUTE BATTERY BACKUP
D2	3" SURFACE MOUNT LINEAR, 2' LONG	SURFACE	LITECONTROL	67L-S-D-2-SQ-X-CX-35K-D100	LED 34 WATTS	UNV	
D3	3" SURFACE MOUNT LINEAR, 4' LONG	SURFACE	LITECONTROL	67L-S-D-4-SQ-X-CX-35K-D100	LED 34 WATTS	UNV	
F	3" WALL MOUNT LINEAR, 4' LONG	WALL	LITECONTROL	67L-W-D-4-DM-X-CX-35K-D100	LED 34 WATTS	UNV	
F1	3" WALL MOUNT LINEAR, 2' LONG	WALL	LITECONTROL	67L-W-D-2-DM-X-CX-35K-D100	LED 17 WATTS	UNV	
FP	LED INDIRECT FLAGPOLE LIGHT FIXTURE	POLE	KIRLIN	LWR-09490-3500L-277-50K-X	LED 42 WATTS	UNV	FIXTURE SHALL BE WET LOCATION RATED
G	54" DIA. LED DECORATIVE PENDANT FIXTURE	PENDANT	OCL ARCHITECTURAL LIGHTING	CS2-P1AK-540-XX-XXX-LED1-27K	LED 150 WATTS	UNV	
G1	25" DIA. LED SURFACE FIXTURE	SURFACE	OCL ARCHITECTURAL LIGHTING	CM1-C1NA-25-LED1-35K	LED 50 WATTS	UNV	
H	2" SURFACE MOUNT LINEAR WALL WASH, 1' LONG	SURFACE	ECOSENSE LIGHTING	L35-I-12-04-35-80-MULT-120	LED 4 WATTS	UNV	
J	4" RECESSED LINEAR SLOT, 4' LONG	RECESSED	LITECONTROL	4L-R-D-4-SOF-X-CX-35K-D100	LED 72 WATTS	UNV	
KE	LED ELEVATOR PIT LIGHT FIXTURE	WALL	KENALL LIGHTING	MR17FFL-PP-MB-25L35K-DV-LEL-SA	LED 25 WATTS	UNV	PROVIDE FIXTURE WITH 90 MIUNTE BATTERY BACKUP
L	WALL MOUNTED LED FIXTURE	ARM	BEACON LIGHTING	2A24/PCT/H2/C3MOD/24L-55/4K7/UNV/T4/PEC-120/PT	LED 55 WATTS	UNV	FIXTURE IS TO HAVE "P" (PENNSAUKEN RED) ON THE GLOBAL BAND WALL MOUNTED ARM (AA-52-W-T-BBT)
L1	POLE MOUNTED LED FIXTURE	POLE	BEACON LIGHTING	2A24/PCT/H2/C3MOD/24L-55/4K7/UNV/T4/PEC-120/PT	LED 55 WATTS	UNV	FIXTURE IS TO HAVE "P" (PENNSAUKEN RED) ON THE GLOBAL BAND 10 FOOT POLE (RSAB-CEAK-F-10-40-B-TN3-BBT)
M	LED WALL PACK TYPE 3 DISTRIBUTION	WALL	HUBBELL OUTDOOR	TRP2-24L-30-4K7-3-UNV-E	LED 30 WATTS	UNV	FIXTURE SHALL BE RATED FOR WET LOCATIONS PROVIDE FIXTURE WITH 90 MINUTE BATTERY BACKUP
N	LED WALL PACK TYPE 4 DISTRIBUTION	WALL	HUBBELL OUTDOOR	TRP2-24L-30-4K7-4-UNV-E	LED 30 WATTS	UNV	FIXTURE SHALL BE RATED FOR WET LOCATIONS PROVIDE FIXTURE WITH 90 MINUTE BATTERY BACKUP
P	6" DIRECT / INDIRECT LINEAR PENDANT, 6' LONG	PENDANT	LITECONTROL	SAE101-P-ID-6-SOF-35K-I050-D045	LED 44 WATTS	UNV	
PE	6" DIRECT / INDIRECT LINEAR PENDANT, 6' LONG	PENDANT	LITECONTROL	SAE101-P-ID-6-SOF-35K-I050-D045-2EF	LED 44 WATTS	UNV	PROVIDE FIXTURE WITH 90 MINUTE BATTERY BACKUP
XW	WALL MOUNTED LED EXIT SIGN	WALL	DUAL LITE	EVE-U-R-W	LED 1.9 WATTS	UNV	
XC	CEILING MOUNTED LED EXIT SIGN	CEILING	DUAL LITE	EVE-U-R-W	LED 1.9 WATTS	UNV	
XRB	DUAL REMOTE HEADS BATTERY BACKUP	WALL	DUAL LITE	LZ-30-03L	LED 3 WATTS	UNV	

PANEL: MDP (EXISTING TO REMAIN)

VOLTAGE: 480Y/277V, 3ø, 4W+G — X MCB 800A/3P — POLES: 30 — AIC RATING: 50,000
MAIN BUS: 800 A — MLO — MTG: SURFACE — LOCATION: ELECTRICAL ROOM

CKT #	CIRCUIT TRIP	BREAKER POLE	BRANCH CIRCUIT	DESCRIPTION	kVA PER PHASE A	B	C	REMARKS	REMARKS	kVA PER PHASE A	B	C	DESCRIPTION	BRANCH CIRCUIT	CIRCUIT BREAKER POLE	TRIP	CKT #
1					67.49					14.40							2
3	250	3	16C	PANEL LPB		61.62					14.40		ELEVATOR	7C	3	100	4
5							56.46					14.40				70AT	6
7					17.51					6.85							8
9	100	3	10B	PANEL RBN 75 KVA TRANSFORMER		20.16					7.13		PANEL RPB 45 KVA TRANSFORMER	7B	3	70	10
11							17.30					7.67					12
13					16.86												14
15	70	3	7B	PANEL RBS 75 KVA TRANSFORMER		13.84							SPD	5C	3	50	16
17							12.63										18
19					55.81												20
21	300	3	18C	PANEL LP2		55.52							SPACE				22
23							55.32										24
					157.67	151.14	141.71			21.25	21.53	22.07					

620 TOTAL CONNECTED LOAD (AMPS) — TOTAL CONNECTED LOAD (kVA) 515.37

NOTES:

PANEL: RP2N

VOLTAGE: 208Y/120V, 3ø, 4W+G — X MCB 100A/3P — POLES: 30 — AIC RATING: 10,000
MAIN BUS: 125A — MLO — MTG: SURFACE — LOCATION: 2ND FLR. CORRIDOR NORTH

CKT #	CIRCUIT TRIP	BREAKER POLE	BRANCH CIRCUIT	DESCRIPTION	kVA PER PHASE A	B	C	REMARKS	REMARKS	kVA PER PHASE A	B	C	DESCRIPTION	BRANCH CIRCUIT	CIRCUIT BREAKER POLE	TRIP	CKT #
1	20	1	2A	(4) DUPLEX RECEPT.	0.72			C.R. 201	C.R. 202	0.90			(5) DUPLEX RECEPT.	2A	1	20	2
3	20	1	2A	(4) DUPLEX RECEPT.		0.72		C.R.201	C.R. 202		0.90		(5) DUPLEX RECEPT.	2A	1	20	4
5	20	1	2A	(4) DUPLEX RECEPT.			0.72	C.R. 203	C.R. 204			0.90	(5) DUPLEX RECEPT.	2A	1	20	6
7	20	1		SPARE					STAIR B	0.80			DRINKING FOUNTAIN	2A	1	20	8
9	20	1		SPARE									SPARE		1	20	10
11	15	1	2A	EX. FAN & CUH-10			0.70	GIRLS R.R. / STAIR A					SPARE		1	20	12
13	15	1	2A	UV-14	0.84			C.R. 203	CORRIDOR	1.60			BC-6	2A	1	15	14
15	15	1	2A	UV-15		0.84		C.R. 202	ROOF		0.90		(5) ROOFTOP RECEPT.	2A	1	20	16
17	15	1	2A	UV-16			0.84	C.R. 201	UV-2			1.67	CU-2	3A	2	25	18
19	20	1	2A	WIRELESS REPEATER	0.18			CORRIDOR		1.67							20
21	20	1		SPARE					BC-7		1.25		CU-23	2A	2	20	22
23	20	1		SPARE								1.25					24
25	20	1		SPARE									SPARE		1	20	26
27	20	1		SPARE					IF ALTERNATE		1.00		EXISTING	6B	2	60	28
29	20	1		SPARE					NOT ACCEPTED			1.00	PANEL				30
					1.74	1.56	2.26			4.97	4.05	4.82					

54 TOTAL CONNECTED LOAD (AMPS) — TOTAL CONNECTED LOAD (kVA) 19.40

NOTES:

PANEL: RP2S

VOLTAGE: 208Y/120V, 3ø, 4W+G — X MCB 100A/3P — POLES: 30 — AIC RATING: 10,000
MAIN BUS: 125A — MLO — MTG: SURFACE — LOCATION: 2ND FLR. CORRIDOR SOUTH

CKT #	CIRCUIT TRIP	BREAKER POLE	BRANCH CIRCUIT	DESCRIPTION	kVA PER PHASE A	B	C	REMARKS	REMARKS	kVA PER PHASE A	B	C	DESCRIPTION	BRANCH CIRCUIT	CIRCUIT BREAKER POLE	TRIP	CKT #
1	20	1	2A	(4) DUPLEX RECEPT.	0.72			C.R. 206	C.R. 205	0.72			(4) DUPLEX RECEPT.	2A	1	20	2
3	20	1	2A	(4) DUPLEX RECEPT.		0.72		C.R. 206	C.R. 205		0.54		(3) DUPLEX RECEPT.	2A	1	20	4
5	20	1	2A	(5) DUPLEX RECEPT.			0.90	CORR. & ELEVATOR	C.R. 204			0.90	(5) DUPLEX RECEPT.	2A	1	20	6
7	20	1	2A	(4) DUPLEX RECEPT.	0.72			LIBRARY	C.R.204 & CORRIDOR	0.72			(4) DUPLEX RECEPT.	2A	1	20	8
9	15	1	2A	EX. FAN, CUH-9		0.60		BOYS R.R. ELEVLOBBY					SPARE		1	20	10
11	20	1	2A	DRINKING FOUNTAIN			0.80	STAIR A					SPARE		1	20	12
13	15	1	2A	UV-11	0.84			C.R. 206	LIBRARY	0.90			BC-9	2A	1	15	14
15	15	1	2A	UV-12		0.84		C.R. 205	CORRIDOR		1.60		BC-5	2A	1	15	16
17	15	1	2A	UV-13			0.84	C.R. 204				0.54	(3) ROOFTOP RECEPT.	2A	1	20	18
19	20	1	2A	WIRELESS REPEATER	0.18			CORRIDOR	CORRIDOR	0.18			WIRELESS REPEATER	2A	1	20	20
21	20	1		SPARE									SPARE		1	20	22
23	20	1		SPARE									SPARE		1	20	24
25	20	1		SPARE									SPARE		1	20	26
27	20	1		SPARE					IF ALTERNATE		1.00		EXISTING	6B	2	60	28
29	20	1		SPARE					NOT ACCEPTED			1.00	PANEL				30
					2.46	2.16	2.54			2.52	3.14	2.44					

42 TOTAL CONNECTED LOAD (AMPS) — TOTAL CONNECTED LOAD (kVA) 15.26

NOTES:

ISSUED FOR BID: 11-13-2020

RVE 1901
REMINGTON & VERNICK ENGINEERS
232 KINGS HIGHWAY EAST
HADDONFIELD, NJ 08033
(856) 795-9595, FAX (856) 795-1882
WEB SITE ADDRESS : WWW.RVE.COM
Certification of Authorization: 24 GA 28003300
~ENGINEERING EXCELLENCE~

DATE:
CHRISTOPHER A. SAPONARO
NJ PROFESSIONAL ENGINEER LIC. No. 40059

DATE:
BRIAN B. GREGG
NJ PROFESSIONAL ENGINEER LIC. No. 46577

PLANS WHICH DO NOT BEAR AN EMBOSSED SEAL ARE NOT VALID.

NO.	REVISION	DATE	BY (CHK)

ELECTRICAL SCHEDULES

PENNSAUKEN BOARD OF EDUCATION
ROOSEVELT STEM SCHOOL ADDITION AND RENOVATIONS
5526 WISTERIA AVENUE, PENNSAUKEN, NEW JERSEY 08109
PENNSAUKEN TOWNSHIP — CAMDEN COUNTY — NEW JERSEY

DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
S.M.	K.M.		AS NOTED

DATE: 10-19-2020
JOB No.: MP038X049
SHEET No.: E-6.2

P:\Projects\Pennsauken\MP038x049\Sheets\E-6.2 Electrical Schedules.dwg