

GENERAL NOTES:

A. ALL WORK SHALL CONFORM TO 2015 VUSBC, PART 1, 2015 INTERNATIONAL BUILDING CODE, 2014 NEC, AND 2015 VIRGINIA ENERGY CONSERVATION CODE (2015 ECCC WITH STATE PROVISIONS), AND NFPA 13-2010, 14-2010, 20-2010, 25-2010 AND 72-2010.

GENERAL SYMBOLS table with symbols and descriptions like KEYED SHEET NOTE, REVISION TAG, FEEDER SIZE TAG, LEADER - ARROW, LEADER - LOOP.

SWITCHING SYMBOLS table with symbols and descriptions like MOMENTARY CONTACT SWITCH, MOTORIZED SCREEN CONTROL MOUNT, EXHAUST FAN SWITCH, MANUAL MOTOR STARTER WITH THERMAL OVERLOAD PROTECTION.

Table with symbols and descriptions for various electrical symbols like sensor switches, timer switches, low voltage switches, gateway devices, vacuum/occupancy sensors, photo-electric sensor.

ELECTRICAL GENERAL NOTES:

LLL. LIGHT FIXTURES IN MECHANICAL ARE SHOWN IN APPROXIMATE LOCATIONS. COORDINATE LOCATIONS AND MOUNTING HEIGHTS OF LIGHTING FIXTURES IN MECHANICAL ROOMS WITH FINAL LOCATIONS OF PIPE, DUCTS, AND OTHER EQUIPMENT FOR BEST ARRANGEMENT.

POWER SYMBOLS table with symbols and descriptions like NEW BRANCH CIRCUIT CONDUIT CONCEALED IN WALL OR CEILING, BRANCH CIRCUIT HOMERUN, CONDUIT TURNED UP/DOWN, UNDERGROUND DIRECT BURIAL CABLE, UNDERGROUND DUCT LINE.

Table with symbols and descriptions for various power symbols like pullbox, circuit number, main distribution panels, surface mounted panelboards, recessed mounted panelboards, magnetic motor starters, combination magnetic motor starters, fuses, safety switches, motor connections, ceiling mounted junction boxes, wall and floor mounted junction boxes, variable frequency drive, wall mounted 20A, 125V, 3W tamper resistant simplex receptacles, ground fault interrupting wall mounted 20A receptacles, ceiling and floor mounted 20A, 125V, 3W tamper resistant duplex receptacles, double tamper resistant duplex receptacles, ceiling mounted double duplex receptacles, floor mounted tamper resistant double duplex receptacles, special receptacle, ampere as stated on drawing, blank electrical coverplate, busway, cable thru ladder or channel, surface terminal cabinet, recessed terminal cabinet, provide E2 path series 44 fire rated pathway centered above door.

Table with symbols and descriptions for various power symbols like double tamper resistant duplex receptacle, ceiling mounted double duplex receptacle, floor mounted tamper resistant double duplex receptacle.

LIGHTING SYMBOLS

Table with symbols and descriptions for various lighting symbols like 2x4 fixture upper/lower case, 2x4 direct/indirect fixture, 2x2 direct/indirect fixture, 1x4 fixture, round/square downlight, strip fixture, pendant mounted fixture, track light head, washer fixture, double/single faced ceiling mounted exit light, double/single faced wall mounted exit light, double/single exit sign directional arrow.

ELECTRICAL ABBREVIATIONS

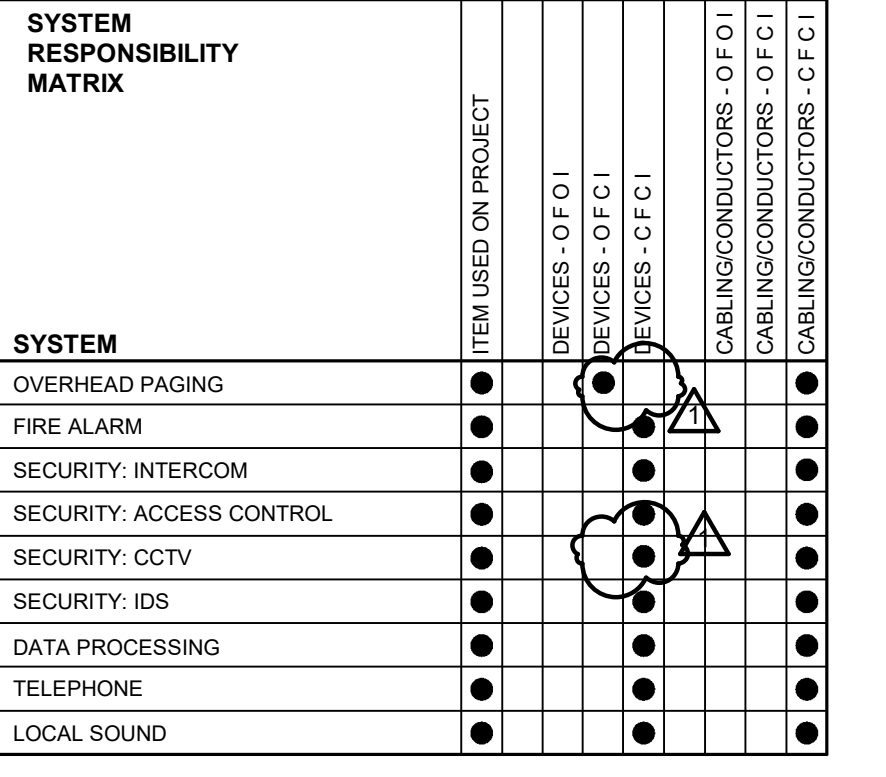
Table with abbreviations and descriptions like AMP, ALTERNATING CURRENT, ABOVE FINISHED FLOOR, AIR HANDLING UNIT, BREAKER, CONDUIT, CIRCUIT BREAKER, EMERGENCY, FULL LOAD AMPERES, FUSED SAFETY SWITCH, GROUND FAULT CURRENT INTERRUPTER, GROUND, HORSEPOWER, 1000 AMPERES INTERRUPTING CAPACITY, 1000 CIRCULAR MILS, KILOVOLT, KILOWATT, LIGHTING, MAIN CIRCUIT BREAKER, MAIN LUG ONLY, NATIONAL ELECTRIC CODE, NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION, NATIONAL ELECTRICAL TESTING AGENCY, NOT IN CONTRACT, NOT TO SCALE, EMERGENCY POWER OFF, POLE, PANEL, RUNNING LOAD AMPERE, SWITCH, SWITCHBOARD, SOLID NEUTRAL, THROUGH, TYPICAL, UNLESS OTHERWISE NOTED, UNINTERRUPTIBLE POWER SUPPLY, VOLT, VOLT-AMPERE, WATT, WEATHER PROOF, ELECTRIC WATER COOLER, REFRIGERATOR OUTLET, TV OUTLET, HOSPITAL GRADE RECEPTACLE.

HAZARDOUS MATERIALS GENERAL NOTES

NO ASBESTOS OR PRODUCT CONTAINING ASBESTOS AND/OR PCBs HAVE BEEN KNOWNLY SPECIFIED FOR THIS PROJECT. ASBESTOS, PCB OR LEAD CONTAINING MATERIALS SHALL BE USED ON THIS PROJECT.

MOCK-UP GENERAL NOTES:

- 1. PROVIDE MOCK-UPS FOR ALL ELECTRICAL CONNECTIONS FOR ALL EQUIPMENT AS INDICATED IN DIV. 52, 27 AND 28 SPECIFICATIONS.



SYSTEM RESPONSIBILITY GENERAL NOTES: A. REFER TO VENDOR DRAWINGS FOR COMPLETE SCOPE OF WORK RELATING TO VENDORS-FURNISHED EQUIPMENT.

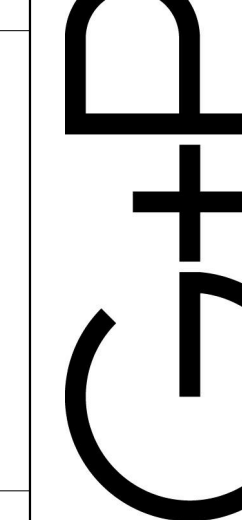
APPLICABLE BUILDING CODES

Table with columns APPLICABLE BUILDING CODES, DOCUMENT, and YEAR. Lists codes like VUSBC, IBC, IMC, IPC, NFPA 70, IFGC, IECC.

SHEET LIST - ELECTRICAL

Table with columns SHEET # and SHEET NAME. Lists sheets E001 through E807.

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GP #21846

ELECTRICAL COVER Elementary School (ES-29) 41135 Collaboration Drive Aisle, VA 20105

Table with columns DATE, DESCRIPTION, ADDENDUM 3.

E001 01/22/20 BID SET

ELEC - LUMINAIRE SCHEDULE

TYPE	Image	BASIS OF DESIGN	DESCRIPTION	LAMPS / CCT	MINIMUM LUMENS	MAXIMUM WATTAGE	VOLTAGE
F1		LITHONIA 2BLT4 72L ADSM E21 LP840	RECESS MOUNTED VOLUMETRIC 2'x4' LED. LOW PROFILE DIE FORMED WITH HIGH REFLECTIVE MATTE WHITE POWDER PAINTED REFLECTOR. CURVED DIFFUSER WITH SMOOTH FROSTED FINISH.	4000K	7228	58	277
F1a		LITHONIA 2BLT4 TUWH RHYR 60L ADSM MVOLT NLT	RECESS MOUNTED VOLUMETRIC 2'x4' LED TUNABLE WHITE RHYTHM RANGE. LOW PROFILE DIE FORMED WITH HIGH REFLECTIVE MATTE WHITE POWDER PAINTED REFLECTOR. CURVED DIFFUSER WITH SMOOTH FROSTED FINISH.	4000K	5546	45	277
F2		LITHONIA 2BLT4 60L ADSM E21 LP840	RECESS MOUNTED VOLUMETRIC 2'x4' LED. LOW PROFILE DIE FORMED WITH HIGH REFLECTIVE MATTE WHITE POWDER PAINTED REFLECTOR. CURVED DIFFUSER WITH SMOOTH FROSTED FINISH.	4000K	6002	48	277
F4		PHS 30L40K 80CRI AS PW	LED PENDANT MOUNTED HIGHBAY WITH UPLIGHT AND DOWNLIGHT WITH ROBUST CAST ALUMINUM HOUSING, PRISMATIC BOROSILICATE GLASS. BOTTOM OF LIGHT SHALL BE AT 26" AFF. PROVIDE UNISTRUT FOR MOUNTING.	4000K	25705	246	277
F8		KENALL CSEDO 24 67L 40K8 DM1 DV 2F 4H SYM	RECESS MOUNTED VOLUMETRIC 2'x4' LED W/GLOSS WHITE DOORFRAME. STANDARD 24 GAUGE COLLECTOR STEEL. HOLE FREE, ONE PIECE, SEAM WELDED CONSTRUCTION.	4000K	6000	72	277
F10		GOTHAM EVO 40 20 4AR MVOLT EZB NP80EZ	RECESSED LED DOWNLIGHT WITH 4" APERTURE SELF FLANGED, 16 GAUGE GALVANIZED STEEL CONSTRUCTION WITH POLYCARBONATE LENS INTEGRAL TO LIGHT ENGINE	4000K	2000	30	277
F15		BROWNLÉE LIGHTING 1575D 24 BN H16 40	LED WALLSCONCE. FORMED COLD ROLLED STEEL WITH UV STABILIZED WHITE ACRYLIC TOP AND BOTTOM DIFFUSER. BRUSHED NICKEL FINISH. REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHT. VERIFY COLOR WITH ARCHITECT/TOWNER.	4000K	2076	16	277
F16		MARK SL4L LOP 4FT FLP TG 80 CRI 40K 600LMF MINI MVOLT ZT	RECESSED LINEAR LED. COLD ROLLED STEEL HOUSING WITH EXTRUDED ALUMINUM CEILING TRIM. PAINTED HIGH REFLECTANCE MATTE WHITE POWDER COAT FINISH.	4000K	2168	24	277
F16a		MARK SL4L LOP 4FT FLP TG 80 CRI 40K 600LMF MINI MVOLT ZT	RECESSED LINEAR LED WET LOCATION LISTED. REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING LOCATION AND DETAILS.	4000K	2168	24	277
F17		MARK SL4L LOP 4FT FLP TG 80 CRI 40K 1000LMF MINI MVOLT ZT	RECESSED LINEAR LED. COLD ROLLED STEEL HOUSING WITH EXTRUDED ALUMINUM CEILING TRIM. PAINTED HIGH REFLECTANCE MATTE WHITE POWDER COAT FINISH.	4000K	2168	24	277
F23		LITHONIA LE S R ELN SERIES	CEILING MOUNTED SINGLE OR DOUBLE FACE UNIVERSAL MOUNT LED EXIT SIGN			1	277
F24		LITHONIA EDG/EDGR 1/2 RMR	WALL/CEILING MOUNTED SINGLE OR DOUBLE FACE UNIVERSAL MOUNT LED EXIT SIGN			1	277
FL		KIM LIGHTING LV825S SP 4K RCA82	IN-GROUND LED FIXTURE WITH POUR BOX ROUGH-IN HOUSING, HIGH TEMPERATURE LIV RESISTANT THERMAL PLASTIC 1" MINIMUM WALL, BLACK, PROTECTIVE ALUMINUM DEBRIS SHIELD MASK WITH ORIENTATION LABEL, ONE-PIECE IMPREGNATED CAST BRONZE, FULLY SEALED COMPONENTS, IP67 RATED, PROTECTED CABLE, 1/2" STAINLESS STEEL MATE WITH BRUSHED FINISH, SPY OPTICS, CLEAR 6 1/8" THICK LENS, 100,000 HOUR LEDS AND DRIVER(S)	4000K	2300	24	277
FT		JUNO TRACMASTER	TWO (2) CIRCUIT LIGHT TRACK CONSTRUCTED OF EXTRUDED ALUMINUM, ONE-PIECE THERMOPLASTIC INSULATOR, 12-GAUGE SOLID COPPER WITH ALL LIVE-END CONNECTORS, END-TO-END CONNECTORS, AND OTHER HARDWARE AS REQUIRED. TRACK SHALL BE WHITE AND SHALL BE PROVIDED IN LENGTHS AS SHOWN ON THE DRAWINGS. EACH SECTION OF FT SHOWN SHALL BE COMPLETE WITH FIFTEEN (15) #25LED LAMP FIXTURES, WITH FIVE (5) SPOT, FIVE (5) NARROW FLOOD, AND FIVE (5) FLOOD TYPE DISTRIBUTION LAMP PER SECTION. TRACK FIXTURES SHALL BE WHITE AND SHALL BE DIMMABLE AND SHALL BE FULLY COMPATIBLE WITH SPECIFIED LIGHT DIMMERS.	4000K	3500	35	120
H		LITHONIA CLX L48 7000LM SEF FDL MVOLT G210 40K 80CRI	LINEAR SUSPENDED LED 48" WITH FLAT DIFFUSER AND HIGH GLOSS, BAKED WHITE POLYESTER. BOTTOM OF FIXTURE SHALL BE AT 9' AFF.	4000K	6628		277
H1		LITHONIA DMW2 L24 200LM ACL MD MVOLT40K 80CRI	LINEAR SURFACE MOUNTED LED, ENCLOSED AND GASKETED. WET LOCATION.	4000K	2000	18	277
H2		LITHONIA CLX L96 10000LM SEF FDL MVOLT G210 40K 80CRI WH	LINEAR SUSPENDED LED 48" WITH FLAT DIFFUSER AND HIGH GLOSS, BAKED WHITE POLYESTER. BOTTOM OF FIXTURE SHALL BE AT 9' AFF.	4000K	2000	65	277
K		KY C K 908 40 167 0050 S67E G	SEMI RECESSED FLEXIBLE CABINET/FIXTURE MOUNTED LIGHT FIXTURE. CUSTOM LENGTH, HOMOGENOUS DIFFUSER WITH THIN LIGHT LINE. IP67 RATED. FIXTURE SHALL BE MOUNTED IN CUBBIE CHANNEL. PROVIDE WITH MALE/FEMALE CONNECTORS AS REQUIRED. FIXTURE SHALL BE CONTROLLED THROUGH MEDIA CENTER GRAPHIC CONTROLS.	4000K	41LMW	6	120
L		LLI LHE3.5 20 42K 24V 80	LINEAR LED UNDERCABINET LIGHT	4000K	520FT	10	277
OL1		LITHONIA DSX1 LED 40C 1000 40K T4M MVOLT SPA DBLXD SSS 17 4C DM19AS DOB SERIES	ONE POLE MOUNTED LED LUMINAIRE WITH 17" SQUARE POLE	4000K	4563	49	277
OL2		LITHONIA DSX1 LED 40C 1000 40K T4M MVOLT SPA DBLXD SSS 17 4C DM28AS DOB SERIES	TWO POLE MOUNTED LED LUMINAIRES WITH 17" TALL SQUARE POLE.	4000K	9126	100	277
OL3		LITHONIA DSX1 LED 40C 1000 40K T4M MVOLT SPA DBLXD SSS 14 4C DM19AS DOB SERIES	ONE POLE MOUNTED LED LUMINAIRE WITH 14" SQUARE POLE	4000K	4563	49	277
OLW		LITHONIA DSXW1 LED 20C 700 40K TFTM MVOLT	BUILDING MOUNTED LED FIXTURE. FINISH/ COLOR TO BE SELECTED BY ARCHITECT. WALL LIGHTS SHALL BE MOUNTED AT +12" AFF. U NO AND SHALL BE INSTALLED IN THE SAME BRICK LINE AROUND THE BUILDING.	4000K	46490	45	277

- NOTES:**
- PROVIDE DRIVER DISCONNECT FOR ALL LED DRIVER(S) THAT SHALL DISCONNECT ALL CONDUCTORS TO THE DRIVER SIMULTANEOUSLY, INCLUDING THE GROUNDED CONDUCTOR.
  - COORDINATE EXACT MOUNTING LOCATION AND HEIGHT FOR ALL RECESSED/PENDANT/SURFACE MOUNTED FIXTURES WITH ARCHITECT.
  - VERIFY FINAL SELECTION AND MODEL OF THE LIGHT FIXTURES WITH ARCHITECT AND OWNER PRIOR TO ORDERING.
  - LIGHT FIXTURES SHALL BE SUITABLE FOR MOUNTING IN THE TYPE OF CEILING ENCOUNTERED. CONTRACTOR SHALL VERIFY TRIM TYPE OF FIXTURES PRIOR TO RELEASE.
  - LIGHT FIXTURES NOTED WITH "FM" SHALL BE INTERFACED WITH THE LOCAL PHOTOCELL IN THAT SPACE. THE ASSOCIATED FIXTURE(S) SHALL BE SET AND PROGRAMMED TO AUTOMATICALLY DIM BASED ON PHOTOCELL INPUT TO ACHIEVE UNIFORM LIGHTING TO THE EXTENT POSSIBLE. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION ON REQUIRED SET-UP, PROGRAMMING, AND VERIFICATION OF SYSTEM.
  - OCCUPANCY SENSING DEVICE(S) IN ANY SPACE SHALL CONTROL ALL FIXTURES IN THAT SPACE UNLESS OTHERWISE NOTED.
  - 2015 INTERNATIONAL ENERGY CONSERVATION CODE INTERIOR POWER ALLOWANCE BUILDING AREA METHOD: SCHOOL/UNIVERSITY - 1.2W/SQ. FT.
  - 2015 INTERNATIONAL ENERGY CONSERVATION CODE EXTERIOR POWER ALLOWANCE: PARKING AREAS AND DRIVEWAYS - .09W/SQ. FT. ENTRY CANOPY - .25W/SQ. FT. WALKWAY < 10FT. WIDE - .7W/LINEAR FT.
  - LIGHT FIXTURE LABELED WITH "EM" SHOULD BE CONNECTED TO EMERGENCY LIGHTING CIRCUIT WITH 20A TRANSFER FOR EACH FIXTURE/AREA.

COMcheck Software Version 4.1.1.0  
Interior Lighting Compliance Certificate

**Project Information**  
 Energy Code: 2015 IECC  
 Project Title: Elementary School 29  
 Project Type: New Construction

Construction Site: 41025 Collaboration Drive Aldie, VA 20105  
 Owner/Agent: Designer/Contractor:

**Additional Efficiency Package(s)**  
 Enhanced Interior Lighting Controls

**Allowed Interior Lighting Power**

A Area Category	B Floor Area (ft <sup>2</sup> )	C Allowed Watts / ft <sup>2</sup>	D Allowed Watts (B X C)
1-School/University	107000	0.87	93090
		Total Allowed Watts =	93090

**Proposed Interior Lighting Power**

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
1-School/University				
LED 1: F1: 2'x4' LED RECESSED MOUNTED: Other:	1	633	58	36714
LED 2: F3: 2'x2' LED RECESSED MOUNTED: Other:	1	49	40	1960
LED 3: F4: 2'x2' LED RECESSED MOUNTED: Other:	1	4	246	984
LED 4: F8: 2'x4' LED STAINLESS STEEL: Other:	1	22	72	1584
LED 5: F10: RECESSED LED DOWNLIGHT: Other:	1	10	30	295
LED 6: F10A: RECESSED LED DOWNLIGHT: Other:	1	169	13	2163
LED 7: F15: WALLSCONCE: Other:	1	3	16	48
LED 8: F16: RECESSED LINEAR LED: Other:	1	476	24	11424
LED 9: FP: PENDANT LINEAR LED LIGHT: Other:	1	14	46	644
LED 10: H: 48" LINEAR SUSPENDED LED: Other:	1	36	30	1080
LED 11: H1: LINEAR SURFACE MOUNTED LED: Other:	1	19	18	342
LED 12: L: UNDERCABINET LIGHTS: Other:	1	5	15	75
LED 13: F17: COVE LIGHTING: Other:	1	64	20	1280
		Total Proposed Watts =	98593	

Interior Lighting PASSES: Design 37% better than code

**Interior Lighting Compliance Statement**  
 Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2015 IECC requirements in COMcheck Version 4.1.1.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Project Title: Elementary School 29  
 Data filename: W:\Projects\WLC19 Loudoun County ES29\B. Elec2. Calcs & Notes\interior\_comcheck\_11.27.2019.cck  
 Report date: 12/02/19  
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AVERAGE LIGHT LEVEL TARGETS

SPACE	LIGHT LEVEL (fc)	TASK PLANE
CLASSROOMS	50	30" AFF
COLLABORATIVE LEARNING	50	30" AFF
OPEN AND PRIVATE OFFICES	40	30" AFF
WORKROOMS	30	36" AFF
CONFERENCE ROOM	50	30" AFF
CLINIC	40	30" AFF
CAFETERIA	35	30" AFF
KITCHEN	65	36" AFF
KITCHEN STORAGE	45	30" AFF
MEDIA CENTER	60	30" AFF
KILN	35	30" AFF
GYM	40	FLOOR
PRIVATE TOILETS	30	30" AFF
GROUP TOILETS	40	30" AFF
CORRIDORS	20	FLOOR
MECHANICAL ROOM	50	30" AFF
MDF ROOM	70	36" AFF

COMcheck Software Version 4.1.1.0  
Exterior Lighting Compliance Certificate

**Project Information**  
 Energy Code: 2015 IECC  
 Project Title: Elementary School 29  
 Project Type: New Construction  
 Exterior Lighting Zone: 3 (Other)

Construction Site: 41025 Collaboration Drive Aldie, VA 20105  
 Owner/Agent: Designer/Contractor:

**Allowed Exterior Lighting Power**

A Area/Surface Category	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B X C)
Driveway	13502 ft <sup>2</sup>	0.1	Yes	1350
Main entry	13 ft of door	30	Yes	390
Other door (not main entry)	87 ft of door	20	Yes	1740
Parking area	65099 ft <sup>2</sup>	0.1	Yes	6510
		Total Tradable Watts (a) =	10485	
		Total Allowed Watts =	10485	
		Total Allowed Supplemental Watts (b) =	750	

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.  
 (b) A supplemental allowance equal to 750 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

**Proposed Exterior Lighting Power**

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Driveway (13502 ft <sup>2</sup> ): Tradable Wattage				
OL1: Other:	1	18	49	882
Main entry (13 ft of door width): Tradable Wattage				
F10a: Other:	1	8	13	104
F10a: Other:	1	11	24	264
Other door (not main entry) (87 ft of door width): Tradable Wattage				
F10: Other:	1	12	45	540
F10: Other:	1	16	30	480
Parking area (65099 ft <sup>2</sup> ): Tradable Wattage				
OL1: Other:	1	5	100	500
OL1: Other:	1	18	49	882
		Total Tradable Proposed Watts =	3652	
Walkway < 10 feet wide (613 ft of walkway length): Tradable Wattage				

Exterior Lighting PASSES: Design 67% better than code

**Exterior Lighting Compliance Statement**  
 Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2015 IECC requirements in COMcheck Version 4.1.1.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title Signature Date

Project Title: Elementary School 29  
 Data filename: W:\Projects\WLC19 Loudoun County ES29\B. Elec2. Calcs & Notes\interior\_comcheck\_11.27.2019.cck  
 Report date: 12/03/19  
 Page 2 of 6

CMTA  
 1220 N FILLMORE STREET, SUITE 350  
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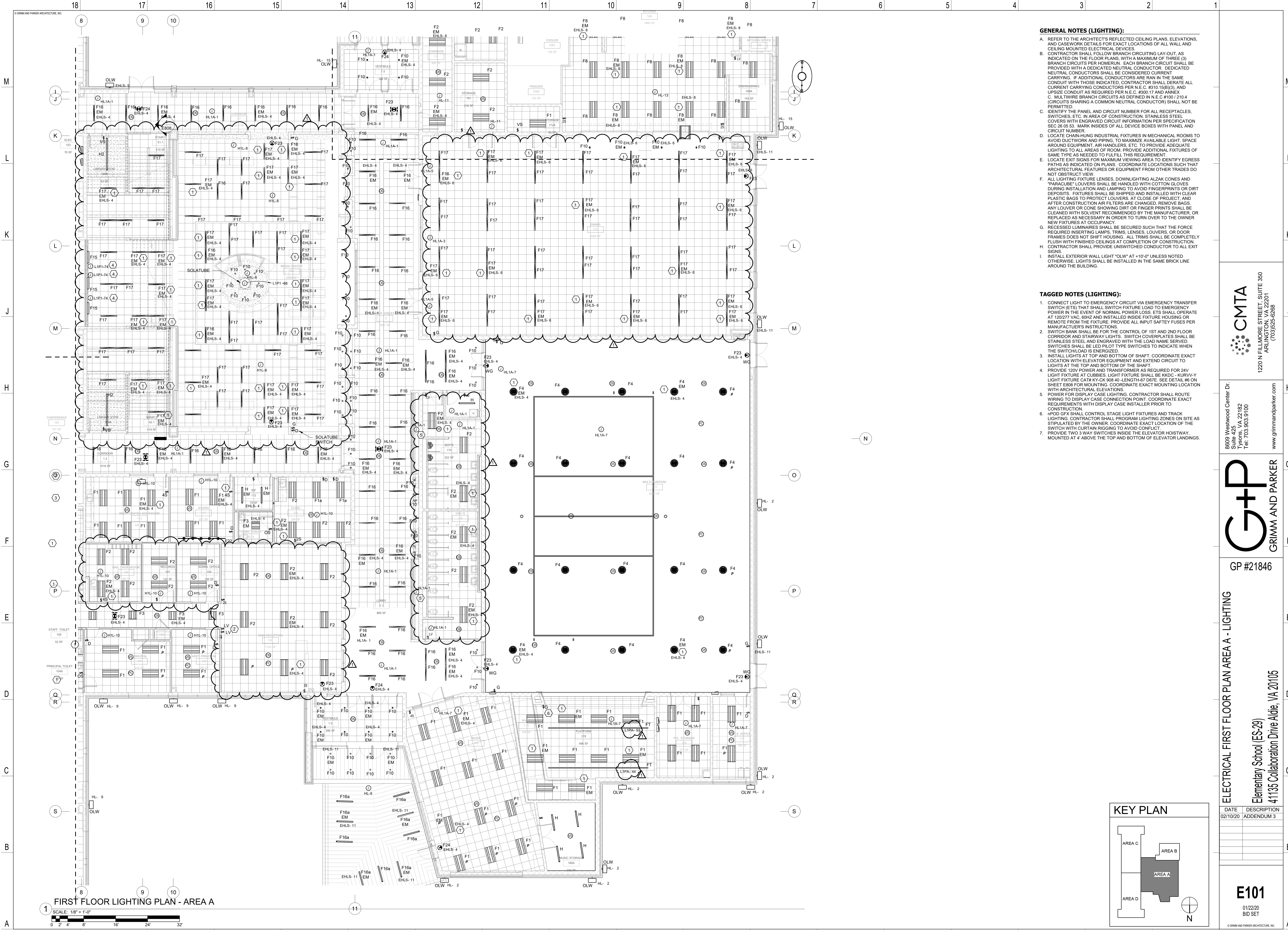
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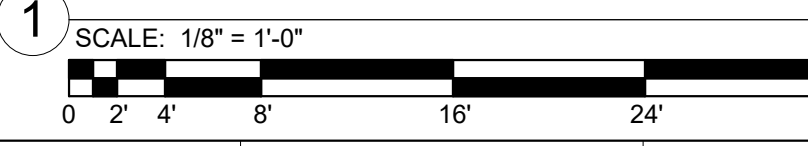
ELECTRICAL LIGHT FIXTURE SCHEDULES  
 Elementary School (ES-29)  
 41135 Collaboration Drive Aldie, VA 20105

DATE	DESCRIPTION
02/10/20	ADDENDUM 3

E002  
 01/22/20  
 BID SET



**FIRST FLOOR LIGHTING PLAN - AREA A**



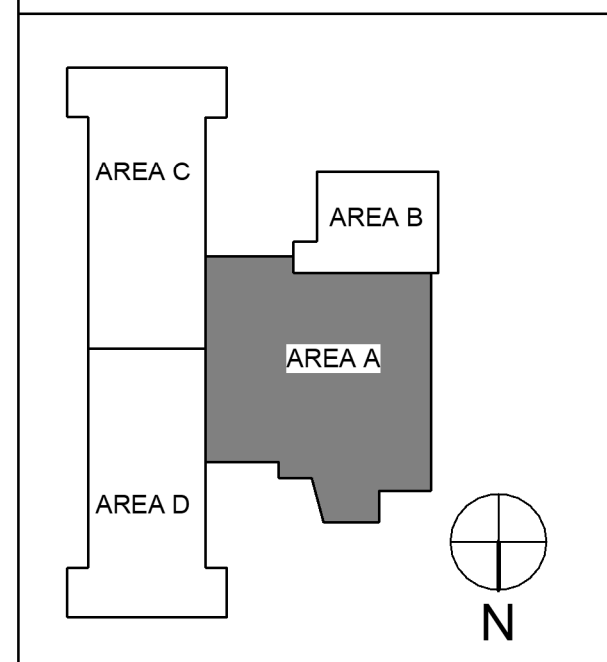
**GENERAL NOTES (LIGHTING):**

- A. REFER TO THE ARCHITECT'S REFLECTED CEILING PLANS, ELEVATIONS, AND CASEWORK DETAILS FOR EXACT LOCATIONS OF ALL WALL AND CEILING MOUNTED ELECTRICAL DEVICES.
- B. CONTRACTOR SHALL FOLLOW BRANCH CIRCUITING LAYOUT, AS INDICATED ON THE FLOOR PLANS, WITH A MAXIMUM OF THREE (3) BRANCH CIRCUITS PER HOMERUN. EACH BRANCH CIRCUIT SHALL BE PROVIDED WITH A DEDICATED NEUTRAL CONDUCTOR. DEDICATED NEUTRAL CONDUCTORS SHALL BE CONSIDERED CURRENT CARRYING. IF ADDITIONAL CONDUCTORS ARE RAN IN THE SAME CONDUIT WITH THOSE INDICATED, CONTRACTOR SHALL DERATE ALL CURRENT CARRYING CONDUCTORS PER N.E.C. #310.15(B)(3), AND UPSIZE CONDUIT AS REQUIRED PER N.E.C. #300.17 AND ANNEX C. MULTIWIRE BRANCH CIRCUITS AS DEFINED IN N.E.C. #100 / 210.4 (CIRCUITS SHARING A COMMON NEUTRAL CONDUCTOR) SHALL NOT BE PERMITTED.
- C. IDENTIFY THE PANEL AND CIRCUIT NUMBER FOR ALL RECEPTACLES, SWITCHES, ETC. IN AREA OF CONSTRUCTION. STAINLESS STEEL COVERS WITH ENGRAVED CIRCUIT INFORMATION PER SPECIFICATION SEC 26 05 53. MARK INSIDES OF ALL DEVICE BOXES WITH PANEL AND CIRCUIT NUMBER.
- D. LOCATE CHAIN-HUNG INDUSTRIAL FIXTURES IN MECHANICAL ROOMS TO AVOID DUCTWORK AND PIPING, TO MAXIMIZE AVAILABLE LIGHT. SPACE AROUND EQUIPMENT, AIR HANDLERS, ETC. TO PROVIDE ADEQUATE LIGHTING TO ALL AREAS OF ROOM. PROVIDE ADDITIONAL FIXTURES OF SAME TYPE AS NEEDED TO FULFILL THIS REQUIREMENT.
- E. LOCATE EXIT SIGNS FOR MAXIMUM VIEWING AREA TO IDENTIFY EGRESS PATHS AS INDICATED ON PLANS. COORDINATE LOCATIONS SUCH THAT ARCHITECTURAL FEATURES OR EQUIPMENT FROM OTHER TRADES DO NOT OBSTRUCT VIEW.
- F. ALL LIGHTING FIXTURE LENSES, DOWNLIGHTING ALZAK CONES AND "PARACUBE" LOUVERS SHALL BE HANDLED WITH COTTON GLOVES DURING INSTALLATION AND LAMPING TO AVOID FINGERPRINTS OR DIRT DEPOSITS. FIXTURES SHALL BE SHIPPED AND INSTALLED WITH CLEAR PLASTIC BAGS TO PROTECT LOUVERS, AT CLOSE OF PROJECT, AND AFTER CONSTRUCTION AIR FILTERS ARE CHANGED, REMOVE BAGS. ANY LOUVER OR CONE SHOWING DIRT OR FINGER PRINTS SHALL BE CLEANED WITH SOLVENT RECOMMENDED BY THE MANUFACTURER, OR REPLACED AS NECESSARY IN ORDER TO TURN OVER TO THE OWNER NEW FIXTURES AT OCCUPANCY.
- G. RECESSED LUMINAIRES SHALL BE SECURED SUCH THAT THE FORCE REQUIRED INSERTING LAMPS, TRIMS, LENSES, LOUVERS, OR DOOR FRAMES DOES NOT SHIFT HOUSING. ALL TRIMS SHALL BE COMPLETELY FLUSH WITH FINISHED CEILINGS AT COMPLETION OF CONSTRUCTION.
- H. CONTRACTOR SHALL PROVIDE UNSWITCHED CONDUCTOR TO ALL EXIT SIGNS.
- I. INSTALL EXTERIOR WALL LIGHT "OLW" AT +10'-0" UNLESS NOTED OTHERWISE. LIGHTS SHALL BE INSTALLED IN THE SAME BRICK LINE AROUND THE BUILDING.

**TAGGED NOTES (LIGHTING):**

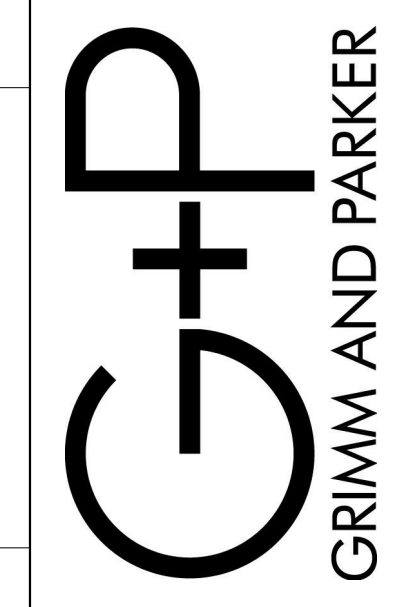
1. CONNECT LIGHT TO EMERGENCY CIRCUIT VIA EMERGENCY TRANSFER SWITCH (ETS) THAT SHALL SWITCH FIXTURE LOAD TO EMERGENCY POWER IN THE EVENT OF NORMAL POWER LOSS. ETS SHALL OPERATE AT 120/277 VAC, 60HZ AND INSTALLED INSIDE FIXTURE HOUSING OR REMOTE FROM THE FIXTURE. PROVIDE ALL INPUT SAFETY FUSES PER MANUFACTURER'S INSTRUCTIONS.
2. SWITCH BANK SHALL BE FOR THE CONTROL OF 1ST AND 2ND FLOOR CORRIDOR AND STAIRWAY LIGHTS. SWITCH COVERPLATES SHALL BE STAINLESS STEEL AND ENGRAVED WITH THE LOAD NAME SERVED. SWITCHES SHALL BE LED PILOT TYPE SWITCHES TO INDICATE WHEN THE SWITCHLOAD IS ENERGIZED.
3. INSTALL LIGHTS AT TOP AND BOTTOM OF SHAFT. COORDINATE EXACT LOCATION WITH ELEVATOR EQUIPMENT AND EXTEND CIRCUIT TO LIGHTS AT THE TOP AND BOTTOM OF THE SHAFT.
4. PROVIDE 120V POWER AND TRANSFORMER AS REQUIRED FOR 24V LIGHT FIXTURE AT CUBBIES. LIGHT FIXTURE SHALL BE KKD-C-KURVLEY LIGHT FIXTURE CAT# KY-CK 908 40 -LENGTH-67 D67E. SEE DETAIL #6 ON SHEET E808 FOR MOUNTING. COORDINATE EXACT MOUNTING LOCATION WITH ARCHITECTURAL ELEVATIONS.
5. POWER FOR DISPLAY CASE LIGHTING. CONTRACTOR SHALL ROUTE WIRING TO DISPLAY CASE CONNECTION POINT. COORDINATE EXACT REQUIREMENTS WITH DISPLAY CASE INSTALLER PRIOR TO CONSTRUCTION.
6. IP0D GIX SHALL CONTROL STAGE LIGHT FIXTURES AND TRACK LIGHTING. CONTRACTOR SHALL PROGRAM LIGHTING ZONES ON SITE AS STIPULATED BY THE OWNER. COORDINATE EXACT LOCATION OF THE SWITCH WITH CURTAIN RIGGING TO AVOID CONFLICT.
7. PROVIDE TWO 3 WAY SWITCHES INSIDE THE ELEVATOR HOISTWAY, MOUNTED AT 4' ABOVE THE TOP AND BOTTOM OF ELEVATOR LANDINGS.

**KEY PLAN**



**CMTA**  
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8609 Westwood Center Dr.  
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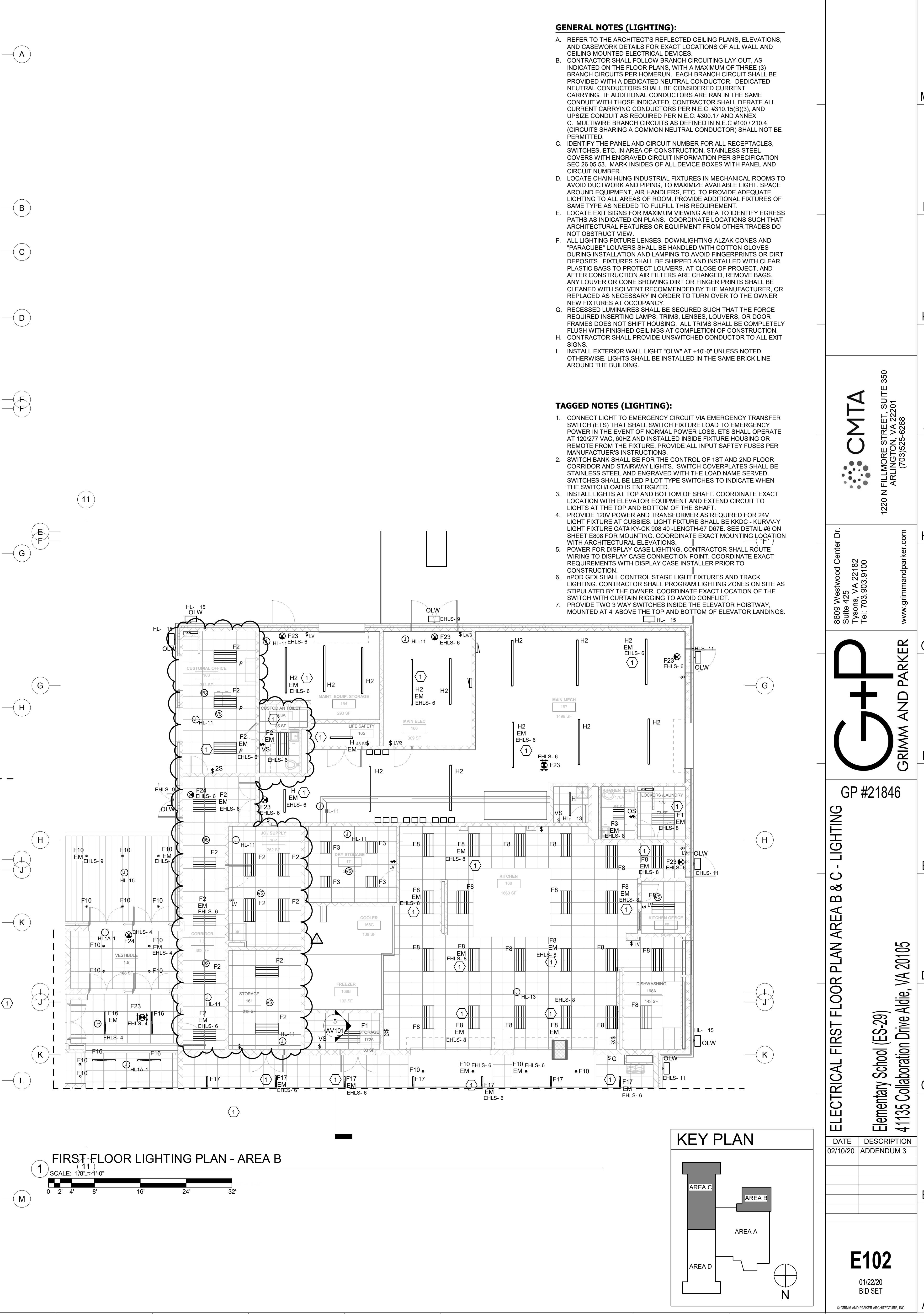
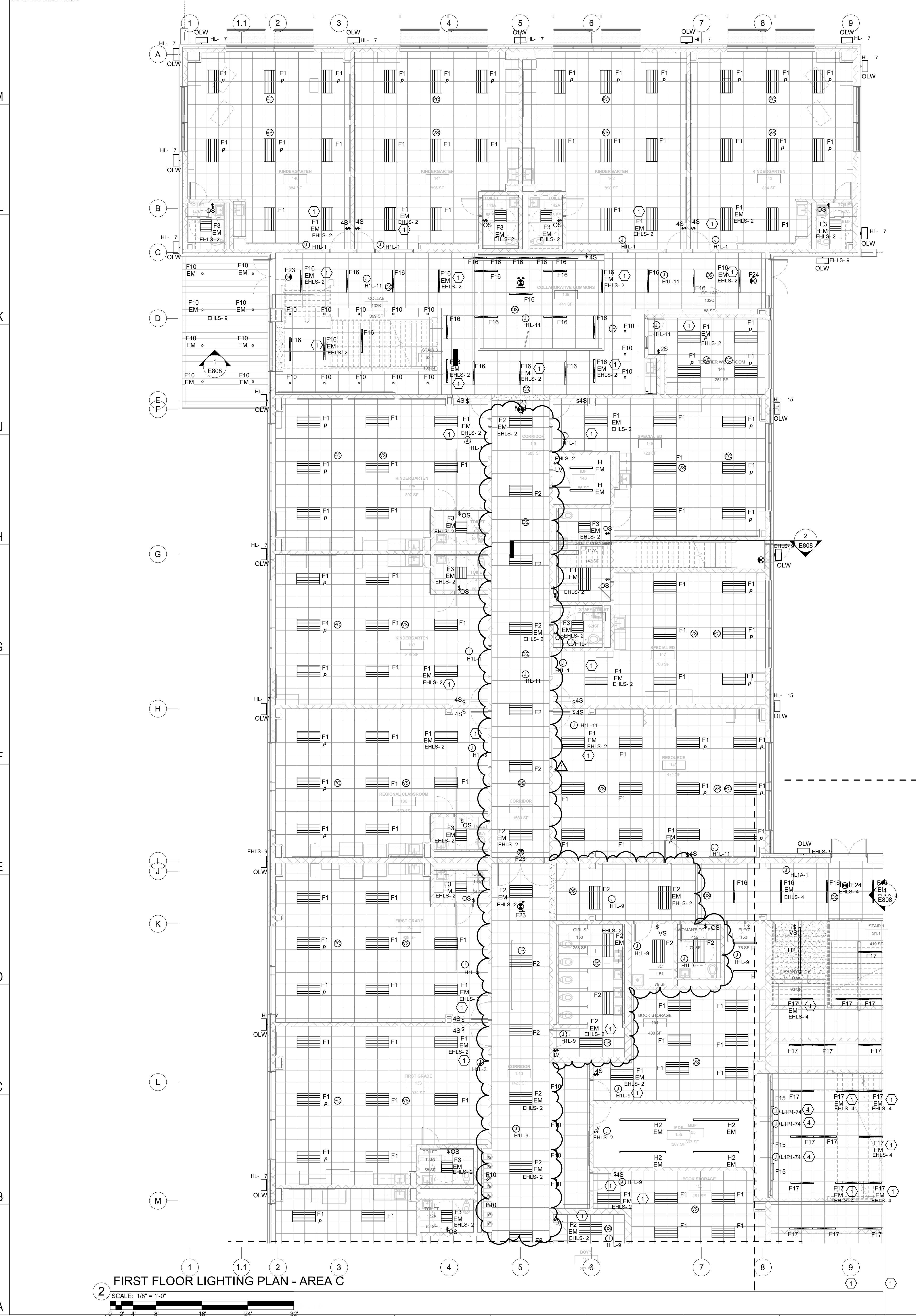
GP #21846

**ELECTRICAL FIRST FLOOR PLAN AREA A - LIGHTING**

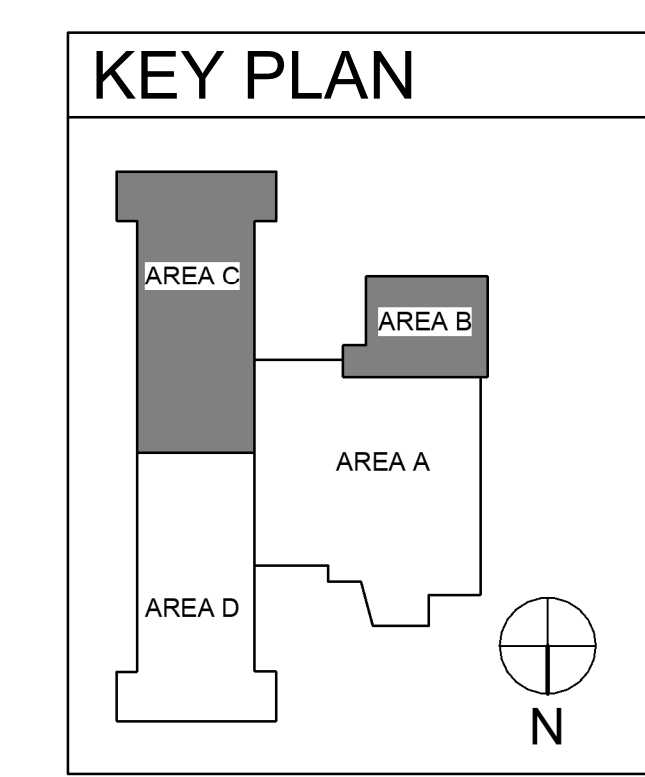
Elementary School (ES-29)  
41135 Collaboration Drive, VA 20105

DATE	DESCRIPTION
02/10/20	ADDENDUM 3

**E101**  
01/22/20  
BID SET



- GENERAL NOTES (LIGHTING):**
- REFER TO THE ARCHITECT'S REFLECTED CEILING PLANS, ELEVATIONS, AND CASEWORK DETAILS FOR EXACT LOCATIONS OF ALL WALL AND CEILING MOUNTED ELECTRICAL DEVICES.
  - CONTRACTOR SHALL FOLLOW BRANCH CIRCUITING LAY-OUT, AS INDICATED ON THE FLOOR PLANS, WITH A MAXIMUM OF THREE (3) BRANCH CIRCUITS PER HOMERUN. EACH BRANCH CIRCUIT SHALL BE PROVIDED WITH A DEDICATED NEUTRAL CONDUCTOR. DEDICATED NEUTRAL CONDUCTORS SHALL BE CONSIDERED CURRENT CARRYING. IF ADDITIONAL CONDUCTORS ARE RUN IN THE SAME CONDUIT WITH THOSE INDICATED, CONTRACTOR SHALL DERATE ALL CURRENT CARRYING CONDUCTORS PER N.E.C. #310.15(B)(3), AND UPSIZE CONDUIT AS REQUIRED PER N.E.C. #300.17 AND ANNEX C. MULTIWIRE BRANCH CIRCUITS AS DEFINED IN N.E.C. #100.2(1) & 210.4 (CIRCUITS SHARING A COMMON NEUTRAL CONDUCTOR) SHALL NOT BE PERMITTED.
  - IDENTIFY THE PANEL AND CIRCUIT NUMBER FOR ALL RECEPTACLES, SWITCHES, ETC. IN AREA OF CONSTRUCTION. STAINLESS STEEL COVERS WITH ENGRAVED CIRCUIT INFORMATION PER SPECIFICATION SEC 26 05 53. MARK INSIDES OF ALL DEVICE BOXES WITH PANEL AND CIRCUIT NUMBER.
  - LOCATE CHAIN-HUNG INDUSTRIAL FIXTURES IN MECHANICAL ROOMS TO AVOID DUCTWORK AND PIPING. TO MAXIMIZE AVAILABLE LIGHT, SPACE AROUND EQUIPMENT, AIR HANDLERS, ETC. TO PROVIDE ADEQUATE LIGHTING TO ALL AREAS OF ROOM. PROVIDE ADDITIONAL FIXTURES OF SAME TYPE AS NEEDED TO FULFILL THIS REQUIREMENT.
  - LOCATE EXIT SIGNS FOR MAXIMUM VIEWING AREA TO IDENTIFY EGRESS PATHS AS INDICATED ON PLANS. COORDINATE LOCATIONS SUCH THAT ARCHITECTURAL FEATURES OR EQUIPMENT FROM OTHER TRADES DO NOT OBSTRUCT VIEW.
  - ALL LIGHTING FIXTURE LENSES, DOWNLIGHTING ALZAK CONES AND PARACUBES LOUVERS SHALL BE HANDLED WITH COTTON GLOVES DURING INSTALLATION AND LAMPING TO AVOID FINGERPRINTS OR DIRT DEPOSITS. FIXTURES SHALL BE SHIPPED AND INSTALLED WITH CLEAR PLASTIC BAGS TO PROTECT LOUVERS. AT CLOSE OF PROJECT AND AFTER CONSTRUCTION AIR FILTERS ARE CHANGED, REMOVE BAGS. ANY LOUVER OR CONE SHOWING DIRT OR FINGER PRINTS SHALL BE CLEANED WITH SOLVENT RECOMMENDED BY THE MANUFACTURER, OR REPLACED AS NECESSARY IN ORDER TO TURN OVER TO THE OWNER NEW FIXTURES AT OCCUPANCY.
  - RECESSED LUMINAIRES SHALL BE SECURED SUCH THAT THE FORCE REQUIRED INSERTING LAMPS, TRIMS, LENSES, LOUVERS, OR DOOR FRAMES DOES NOT SHIFT HOUSING. ALL TRIMS SHALL BE COMPLETELY FLUSH WITH FINISH CEILING AT COMPLETION OF CONSTRUCTION.
  - CONTRACTOR SHALL PROVIDE UNSWITCHED CONDUCTOR TO ALL EXIT SIGNS.
  - INSTALL EXTERIOR WALL LIGHT "OLW" AT +10'-0" UNLESS NOTED OTHERWISE. LIGHTS SHALL BE INSTALLED IN THE SAME BRICK LINE AROUND THE BUILDING.
- TAGGED NOTES (LIGHTING):**
- CONNECT LIGHT TO EMERGENCY CIRCUIT VIA EMERGENCY TRANSFER SWITCH (ETS) THAT SHALL SWITCH FIXTURE LOAD TO EMERGENCY POWER IN THE EVENT OF NORMAL POWER LOSS. ETS SHALL OPERATE AT 120/277 VAC, 60HZ AND INSTALLED INSIDE FIXTURE HOUSING OR REMOTE FROM THE FIXTURE. SWITCH COVER/PLATES SHALL BE STAINLESS STEEL AND ENGRAVED WITH THE LOAD NAME SERVED. SWITCHES SHALL BE LED PILOT TYPE SWITCHES TO INDICATE WHEN THE SWITCH/LOAD IS ENERGIZED.
  - INSTALL LIGHTS AT TOP AND BOTTOM OF SHAFT. COORDINATE EXACT LOCATION WITH ELEVATOR EQUIPMENT AND EXTEND CIRCUIT TO LIGHTS AT THE TOP AND BOTTOM OF THE SHAFT.
  - INSTALL 120V POWER AND TRANSFORMER AS REQUIRED FOR 24V LIGHT FIXTURE AT CURBIES. LIGHT FIXTURE SHALL BE KKKC - KURUV-VY LIGHT FIXTURE WITH 18" CK 808 40" LENGTH 40" DIA. SEE DETAIL 88 ON SHEET E808 FOR MOUNTING. COORDINATE EXACT MOUNTING LOCATION WITH ARCHITECTURAL ELEVATIONS.
  - POWER FOR DISPLAY CASE LIGHTING. CONTRACTOR SHALL ROUTE WIRING TO DISPLAY CASE CONNECTION POINT. COORDINATE EXACT REQUIREMENTS WITH DISPLAY CASE INSTALLER PRIOR TO CONSTRUCTION.
  - POD GFX SHALL CONTROL STAGE LIGHT FIXTURES AND TRACK LIGHTING. CONTRACTOR SHALL PROGRAM LIGHTING ZONES ON SITE AS STIPULATED BY THE OWNER. COORDINATE EXACT LOCATION OF THE SWITCH WITH CURTAIN RIGGING TO AVOID CONFLICT.
  - PROVIDE TWO 3 WAY SWITCHES INSIDE THE ELEVATOR HOISTWAY, MOUNTED AT 4' ABOVE THE TOP AND BOTTOM OF ELEVATOR LANDINGS.



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**GRIMM AND PARKER**

GP #21846

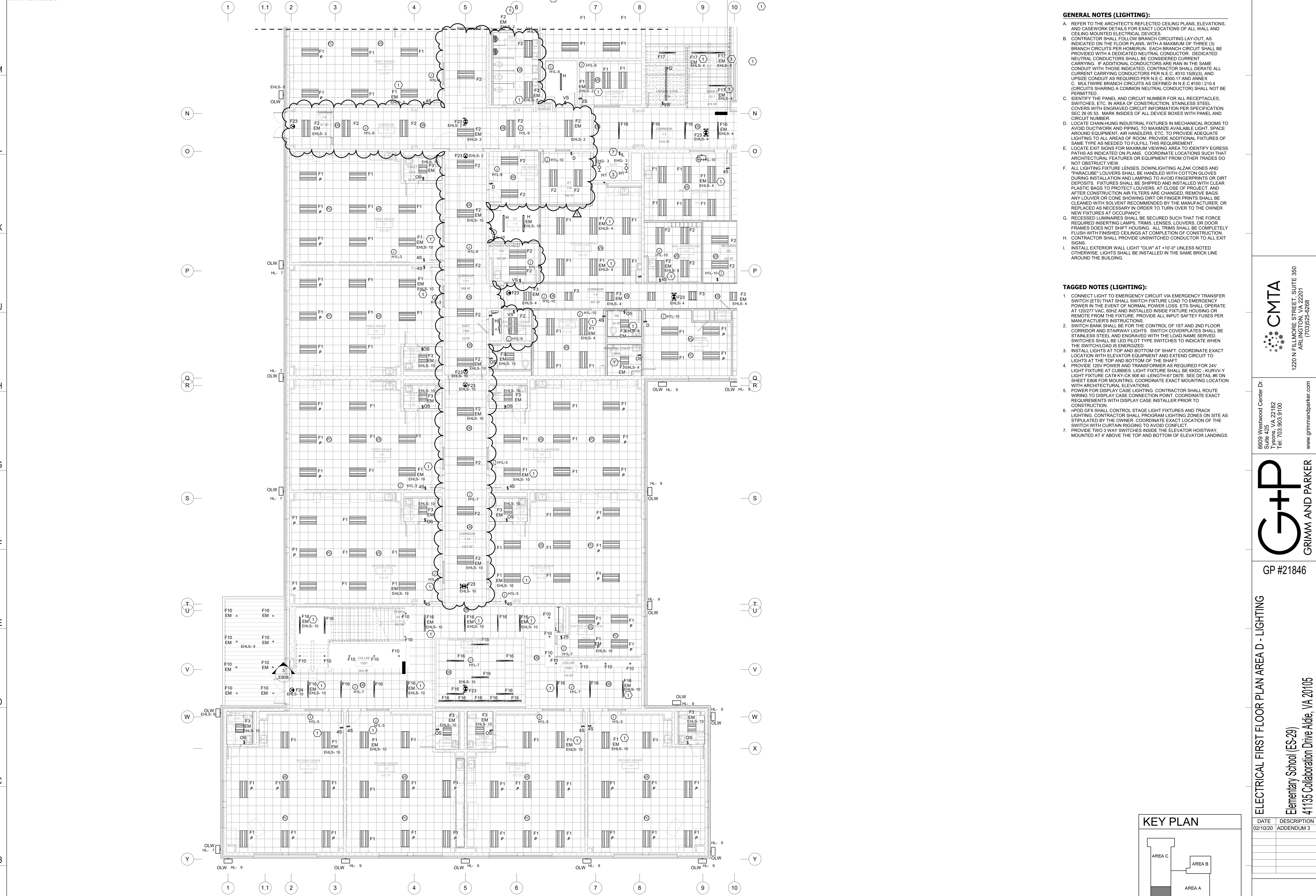
ELECTRICAL FIRST FLOOR PLAN AREA B & C - LIGHTING

Elementary School (ES-29)  
41135 Collaboration Drive, VA 20105

DATE	DESCRIPTION
02/10/20	ADDENDUM 3

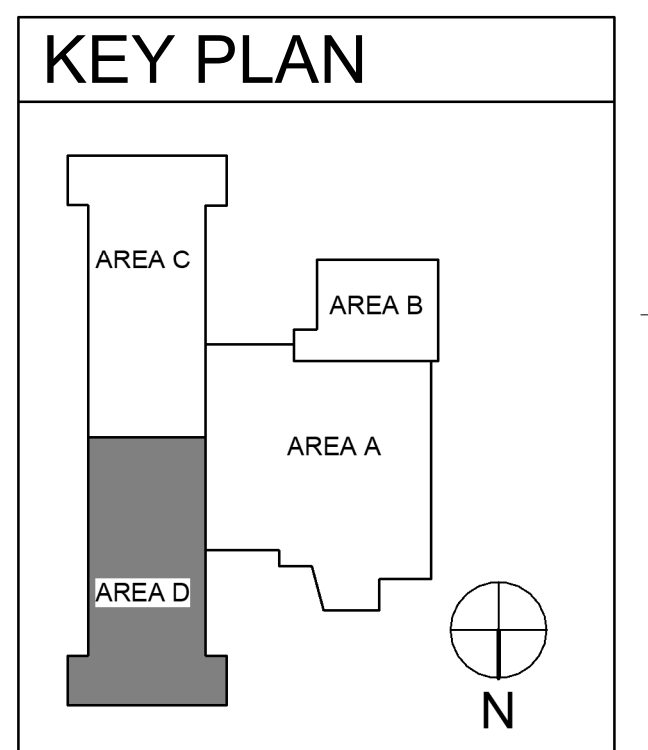
**E102**  
01/22/20  
BID SET

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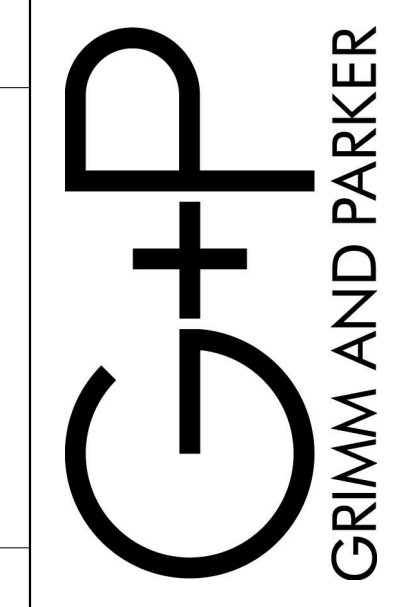
- GENERAL NOTES (LIGHTING):**
- REFER TO THE ARCHITECT'S REFLECTED CEILING PLANS, ELEVATIONS, AND CASEWORK DETAILS FOR EXACT LOCATIONS OF ALL WALL AND CEILING MOUNTED ELECTRICAL DEVICES.
  - CONTRACTOR SHALL FOLLOW BRANCH CIRCUITING LAY-OUT AS INDICATED ON THE FLOOR PLANS, WITH A MAXIMUM OF THREE (3) BRANCH CIRCUITS PER HOMERUN. EACH BRANCH CIRCUIT SHALL BE PROVIDED WITH A DEDICATED NEUTRAL CONDUCTOR. DEDICATED NEUTRAL CONDUCTORS SHALL BE CONSIDERED CURRENT CARRYING. IF ADDITIONAL CONDUCTORS ARE RAN IN THE SAME CONDUIT WITH THOSE INDICATED, CONTRACTOR SHALL DERATE ALL CURRENT CARRYING CONDUCTORS PER N.E.C. #310.15(B)(3), AND UPSIZE CONDUIT AS REQUIRED PER N.E.C. #300.17 AND ANNEX C. MULTIWIRE BRANCH CIRCUITS AS DEFINED IN N.E.C #100.210.4 (CIRCUITS SHARING A COMMON NEUTRAL CONDUCTOR) SHALL NOT BE PERMITTED.
  - IDENTIFY THE PANEL AND CIRCUIT NUMBER FOR ALL RECEPTACLES, SWITCHES, ETC. IN AREA OF CONSTRUCTION. STAINLESS STEEL COVERS WITH ENGRAVED CIRCUIT INFORMATION PER SPECIFICATION SEC 28 05 53. MARK INSIDES OF ALL DEVICE BOXES WITH PANEL AND CIRCUIT NUMBER.
  - LOCATE CHAIN-HUNG INDUSTRIAL FIXTURES IN MECHANICAL ROOMS TO AVOID DUCTWORK AND PIPING. TO MAXIMIZE AVAILABLE LIGHT, SPACE AROUND EQUIPMENT, AIR HANDLERS, ETC. TO PROVIDE ADEQUATE LIGHTING TO ALL AREAS OF ROOM. PROVIDE ADDITIONAL FIXTURES OF SAME TYPE AS NEEDED TO FULFILL THIS REQUIREMENT.
  - LOCATE EXIT SIGNS FOR MAXIMUM VIEWING AREA TO IDENTIFY EGRESS PATHS AS INDICATED ON PLANS. COORDINATE LOCATIONS SUCH THAT ARCHITECTURAL FEATURES OR EQUIPMENT FROM OTHER TRADES DO NOT OBSTRUCT VIEW.
  - ALL LIGHTING FIXTURE LENSES, DOWNLIGHTING ALZAK CONES AND "PARACUBE" LOUVERS SHALL BE HANDLED WITH COTTON GLOVES DURING INSTALLATION AND LAMPING TO AVOID FINGERPRINTS OR DIRT DEPOSITS. FIXTURES SHALL BE SHIPPED AND INSTALLED WITH CLEAR PLASTIC BAGS TO PROTECT LOUVERS. AT CLOSE OF PROJECT, AND AFTER CONSTRUCTION AND FILTERS ARE CHANGED, REMOVE BAGS. ANY LOUVER OR CONE SHOWING DIRT OR FINGER PRINTS SHALL BE CLEANED WITH SOLVENT RECOMMENDED BY THE MANUFACTURER, OR REPLACED AS NECESSARY IN ORDER TO TURN OVER TO THE OWNER NEW FIXTURES AT OCCUPANCY.
  - RECESSED LUMINAIRES SHALL BE SECURED SUCH THAT THE FORCE REQUIRED INSERTING LAMPS, TRIMS, LENSES, LOUVERS OR DOOR FRAMES DOES NOT SHIFT HOUSING. ALL TRIMS SHALL BE COMPLETELY FLUSH WITH FINISHED CEILINGS AT COMPLETION OF CONSTRUCTION.
  - CONTRACTOR SHALL PROVIDE UNSWITCHED CONDUCTOR TO ALL EXIT SIGNS.
  - INSTALL EXTERIOR WALL LIGHT "OLW" AT +10'-0" UNLESS NOTED OTHERWISE. LIGHTS SHALL BE INSTALLED IN THE SAME BRICK LINE AROUND THE BUILDING.
- TAGGED NOTES (LIGHTING):**
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  - SWITCH BANK SHALL BE FOR THE CONTROL OF 1ST AND 2ND FLOOR CORRIDOR AND STAIRWAY LIGHTS. SWITCH COVERPLATES SHALL BE STAINLESS STEEL AND ENGRAVED WITH THE LOAD NAME SERVED. SWITCHES SHALL BE LED PILOT TYPE SWITCHES TO INDICATE WHEN THE SWITCHLOAD IS ENERGIZED.
  - INSTALL LIGHTS AT TOP AND BOTTOM OF SHAFT. COORDINATE EXACT LOCATION WITH ELEVATOR EQUIPMENT AND EXTEND CIRCUIT TO LIGHTS AT THE TOP AND BOTTOM OF THE SHAFT.
  - PROVIDE 120V POWER AND TRANSFORMER AS REQUIRED FOR 34V LIGHT FIXTURE AT CUBBIES. LIGHT FIXTURE SHALL BE KKDC - KURVV-Y LIGHT FIXTURE CAT# KY-CK 908 40 - LENGTH-47 D67E. SEE DETAIL #6 ON SHEET E508 FOR MOUNTING. COORDINATE EXACT MOUNTING LOCATION WITH ARCHITECTURAL ELEVATIONS.
  - POWER FOR DISPLAY CASE LIGHTING. CONTRACTOR SHALL ROUTE WIRING TO DISPLAY CASE CONNECTION POINT. COORDINATE EXACT REQUIREMENTS WITH DISPLAY CASE INSTALLER PRIOR TO CONSTRUCTION.
  - #POD GFX SHALL CONTROL STAGE LIGHT FIXTURES AND TRACK LIGHTING. CONTRACTOR SHALL PROGRAM LIGHTING ZONES ON SITE AS STIPULATED BY THE OWNER. COORDINATE EXACT LOCATION OF THE SWITCH WITH CURTAIN RIGGING TO AVOID CONFLICT.
  - PROVIDE TWO 3 WAY SWITCHES INSIDE THE ELEVATOR HOISTWAY, MOUNTED AT 4' ABOVE THE TOP AND BOTTOM OF ELEVATOR LANDINGS.

**FIRST FLOOR LIGHTING PLAN - AREA D**  
 SCALE: 1/8" = 1'-0"  
 1



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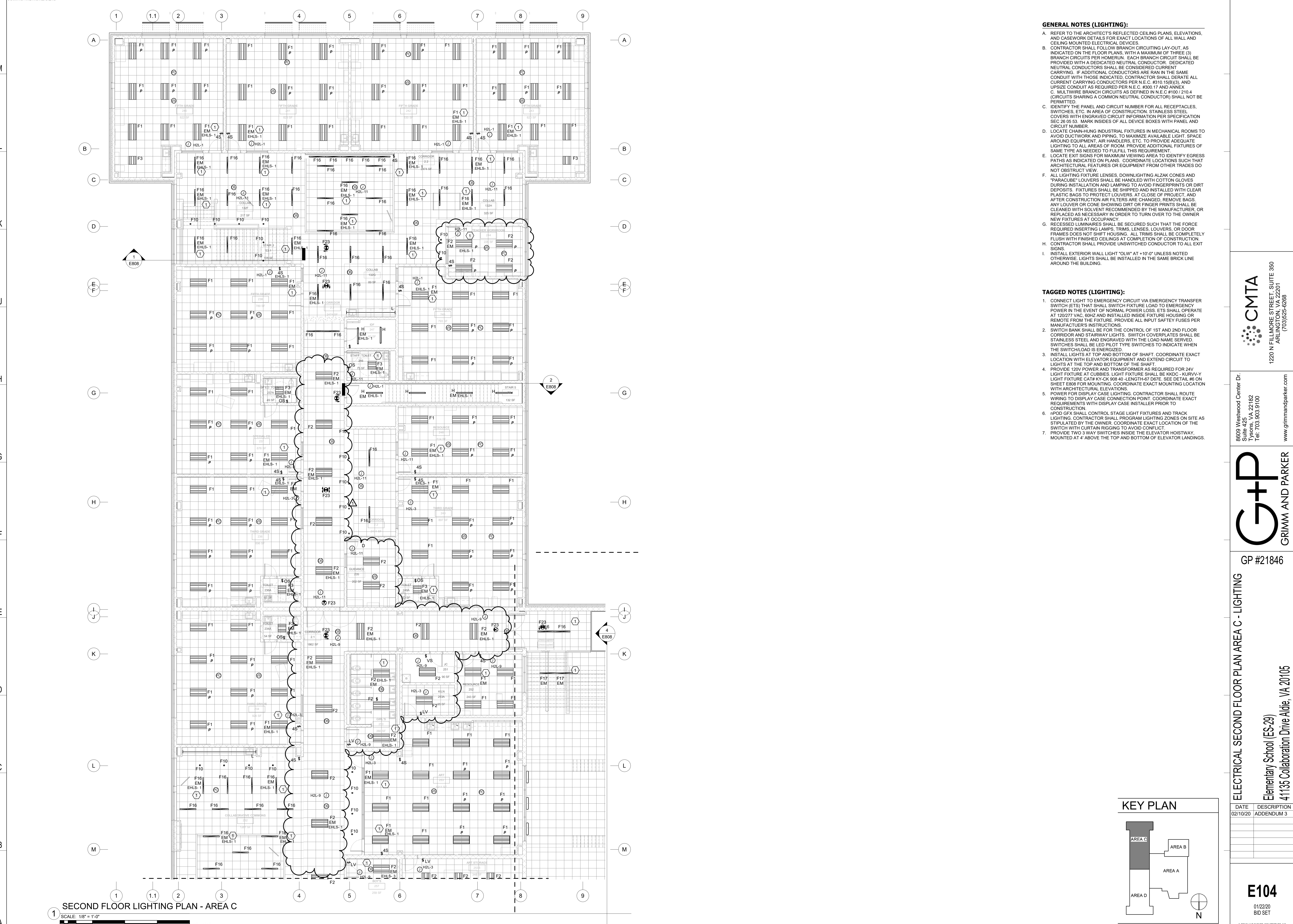


GP #21846

**ELECTRICAL FIRST FLOOR PLAN AREA D - LIGHTING**  
 Elementary School (ES-29)  
 41135 Collaboration Drive Aisle, VA 20105

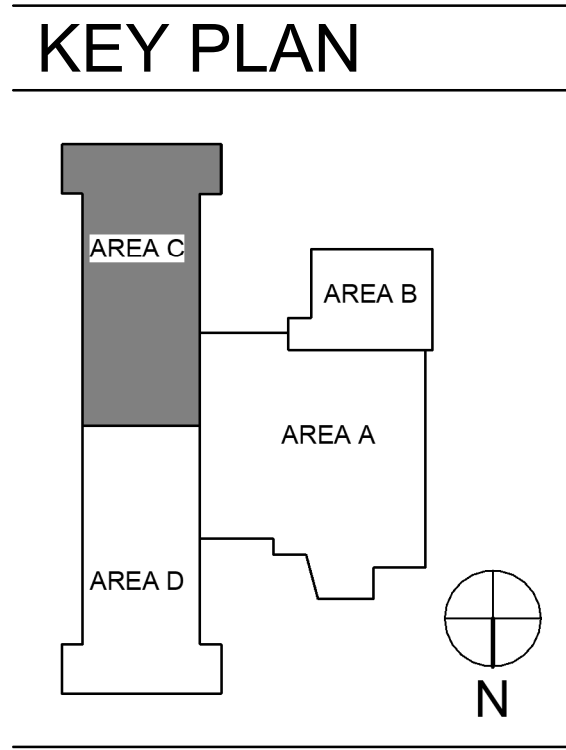
DATE	DESCRIPTION
02/10/20	ADDENDUM 3

**E103**  
 01/22/20  
 BID SET



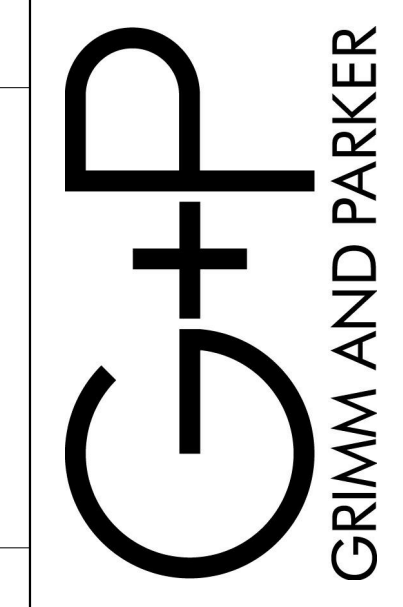
- GENERAL NOTES (LIGHTING):**
- REFER TO THE ARCHITECT'S REFLECTED CEILING PLANS, ELEVATIONS, AND CASEWORK DETAILS FOR EXACT LOCATIONS OF ALL WALL AND CEILING MOUNTED ELECTRICAL DEVICES.
  - CONTRACTOR SHALL FOLLOW BRANCH CIRCUITING LAY-OUT, AS INDICATED ON THE FLOOR PLANS, WITH A MAXIMUM OF THREE (3) BRANCH CIRCUITS PER HOMERUN. EACH BRANCH CIRCUIT SHALL BE PROVIDED WITH A DEDICATED NEUTRAL CONDUCTOR. DEDICATED NEUTRAL CONDUCTORS SHALL BE CONSIDERED CURRENT CARRYING. IF ADDITIONAL CONDUCTORS ARE RAN IN THE SAME CONDUIT WITH THOSE INDICATED, CONTRACTOR SHALL DERATE ALL CURRENT CARRYING CONDUCTORS PER N.E.C. #310.15(B)(3), AND UPSIZE CONDUIT AS REQUIRED PER N.E.C. #300.17, AND ANNEX C. MULTIWIRE BRANCH CIRCUITS AS DEFINED IN N.E.C. #100/210.4 (CIRCUITS SHARING A COMMON NEUTRAL CONDUCTOR) SHALL NOT BE PERMITTED.
  - IDENTIFY THE PANEL AND CIRCUIT NUMBER FOR ALL RECEPTACLES, SWITCHES, ETC. IN AREA OF CONSTRUCTION. STAINLESS STEEL COVERS WITH ENGRAVED CIRCUIT INFORMATION PER SPECIFICATION SEC 28 05 53. MARK INSIDES OF ALL DEVICE BOXES WITH PANEL AND CIRCUIT NUMBER.
  - LOCATE CHANUNING INDUSTRIAL FIXTURES IN MECHANICAL ROOMS TO AVOID DUCTWORK AND PIPING, TO MAXIMIZE AVAILABLE LIGHT SPACE AROUND EQUIPMENT, AIR HANDLERS, ETC. TO PROVIDE ADEQUATE LIGHTING TO ALL AREAS OF ROOM. PROVIDE ADDITIONAL FIXTURES OF SAME TYPE AS NEEDED TO FULFILL THIS REQUIREMENT.
  - LOCATE EXIT SIGNS FOR MAXIMUM VIEWING AREA TO IDENTIFY EGRESS PATHS AS INDICATED ON PLANS. COORDINATE LOCATIONS SUCH THAT ARCHITECTURAL FEATURES OR EQUIPMENT FROM OTHER TRADES DO NOT OBSTRUCT VIEW.
  - ALL LIGHTING FIXTURE LENSES, DOWNLIGHTING ALZAM CONES AND "PARACUBE" LOUVERS SHALL BE HANDLED WITH COTTON GLOVES DURING INSTALLATION AND LAMPING TO AVOID FINGERPRINTS OR DIRT DEPOSITS. FIXTURES SHALL BE SHIPPED AND INSTALLED WITH CLEAR PLASTIC BAGS TO PROTECT LOUVERS. AT CLOSE OF PROJECT, AND AFTER CONSTRUCTION AIR FILTERS ARE CHANGED, REMOVE BAGS. ANY LOUVER OR CONE SHOWING DIRT OR FINGERPRINTS SHALL BE CLEANED WITH SOLVENT RECOMMENDED BY THE MANUFACTURER, OR REPLACED AS NECESSARY IN ORDER TO TURN OVER TO THE OWNER NEW FIXTURES AT OCCUPANCY.
  - RECESSED LUMINAIRES SHALL BE SECURED SUCH THAT THE FORCE REQUIRED INSERTING LAMPS, TRIMS, LENSES, LOUVERS, OR DOOR FRAMES DOES NOT SHEAR HOUSING. ALL TRIMS SHALL BE COMPLETELY FLUSH WITH FINISHED CEILINGS AT COMPLETION OF CONSTRUCTION. CONTRACTOR SHALL PROVIDE UNSWITCHED CONDUCTOR TO ALL EXIT SIGNS.
  - INSTALL EXTERIOR WALL LIGHT "OLW" AT +10'-0" UNLESS NOTED OTHERWISE. LIGHTS SHALL BE INSTALLED IN THE SAME BRICK LINE AROUND THE BUILDING.

- TAGGED NOTES (LIGHTING):**
- CONNECT LIGHT TO EMERGENCY CIRCUIT VIA EMERGENCY TRANSFER SWITCH (ETS) THAT SHALL SWITCH FIXTURE LOAD TO EMERGENCY POWER IN THE EVENT OF NORMAL POWER LOSS. ETS SHALL OPERATE AT 120/277 VAC, 60HZ AND INSTALLED INSIDE FIXTURE HOUSING OR REMOTE FROM THE FIXTURE. PROVIDE ALL INPUT SAFETY FUSES PER MANUFACTURER'S INSTRUCTIONS.
  - SWITCH BANK SHALL BE FOR THE CONTROL OF 1ST AND 2ND FLOOR CORRIDOR AND STAIRWAY LIGHTS. SWITCH COVERPLATES SHALL BE STAINLESS STEEL AND ENGRAVED WITH THE LOAD NAME SERVED. SWITCHES SHALL BE LED PILOT TYPE SWITCHES TO INDICATE WHEN THE SWITCHLOAD IS ENERGIZED.
  - INSTALL LIGHTS AT TOP AND BOTTOM OF SHAFT. COORDINATE EXACT LOCATION WITH ELEVATOR EQUIPMENT AND EXTEND CIRCUIT TO LIGHTS AT THE TOP AND BOTTOM OF THE SHAFT.
  - PROVIDE 120V POWER AND TRANSFORMER AS REQUIRED FOR 24V LIGHT FIXTURE AT CUBBIES. LIGHT FIXTURE SHALL BE KKOC - KURV-VY LIGHT FIXTURE CAT# KY-CK 908 40 - LENGTH-67 D67E. SEE DETAIL #6 ON SHEET E808 FOR MOUNTING. COORDINATE EXACT MOUNTING LOCATION WITH ARCHITECTURAL ELEVATIONS.
  - POWER FOR DISPLAY CASE LIGHTING, CONTRACTOR SHALL ROUTE WIRING TO DISPLAY CASE CONNECTION POINT. COORDINATE EXACT REQUIREMENTS WITH DISPLAY CASE INSTALLER PRIOR TO CONSTRUCTION.
  - nPOD GFX SHALL CONTROL STAGE LIGHT FIXTURES AND TRACK LIGHTING. CONTRACTOR SHALL PROGRAM LIGHTING ZONES ON SITE AS STIPULATED BY THE OWNER. COORDINATE EXACT LOCATION OF THE SWITCH WITH CURTAIN RIGGING TO AVOID CONFLICT.
  - PROVIDE TWO 3 WAY SWITCHES INSIDE THE ELEVATOR HOISTWAY, MOUNTED AT 4' ABOVE THE TOP AND BOTTOM OF ELEVATOR LANDINGS.



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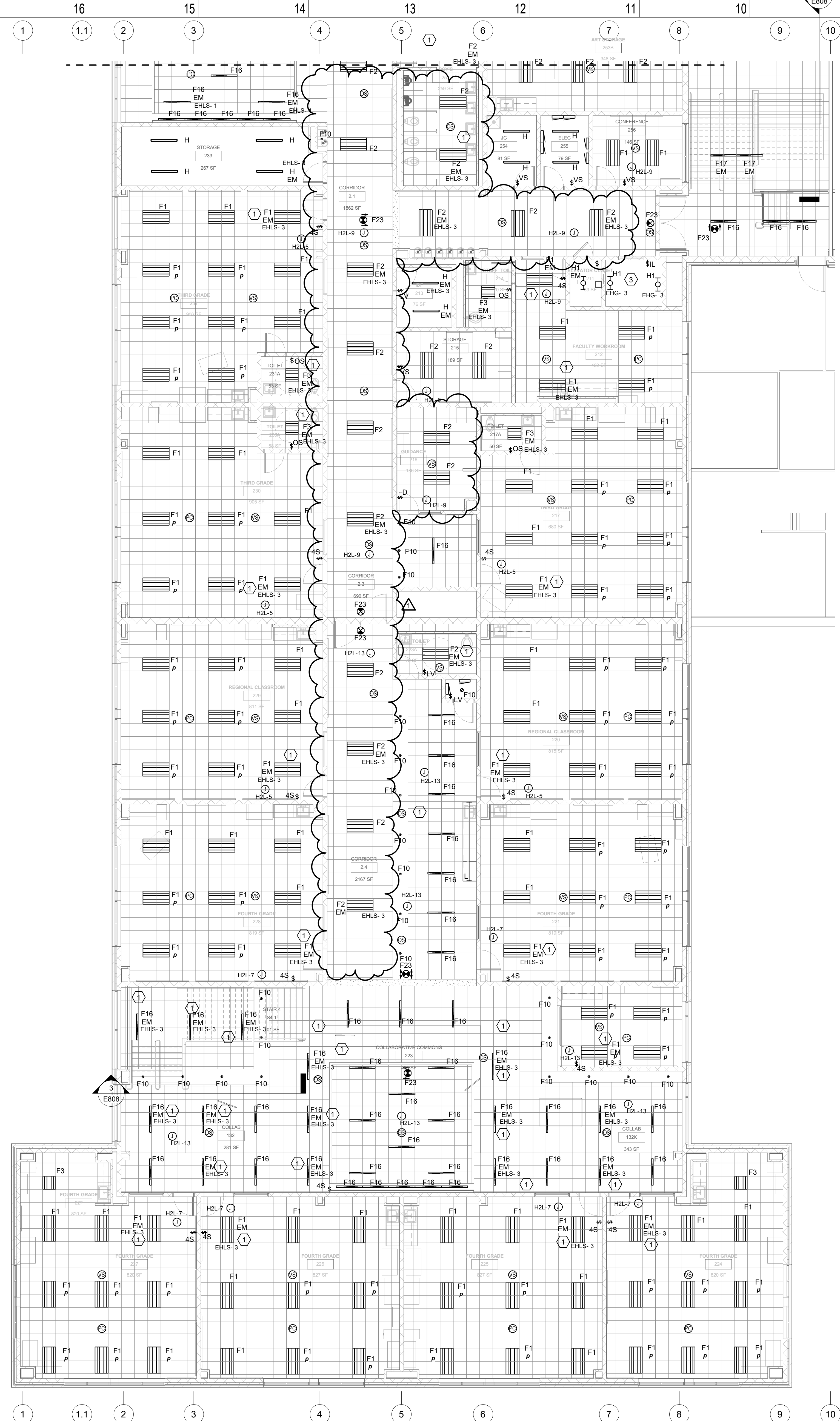
GP #21846

ELECTRICAL SECOND FLOOR PLAN AREA C - LIGHTING  
 Elementary School (ES-29)  
 41135 Collaboration Drive Aisle, VA 20105

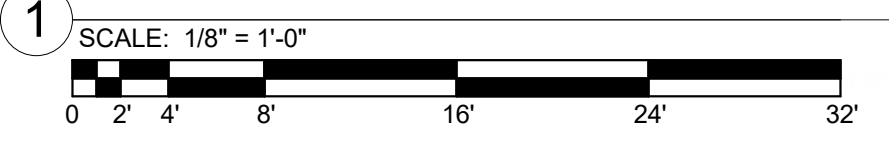
DATE	DESCRIPTION
02/10/20	ADDENDUM 3

**E104**  
 01/22/20  
 BID SET

SECOND FLOOR LIGHTING PLAN - AREA C  
 SCALE: 1/8" = 1'-0"



1 SECOND FLOOR LIGHTING PLAN - AREA D

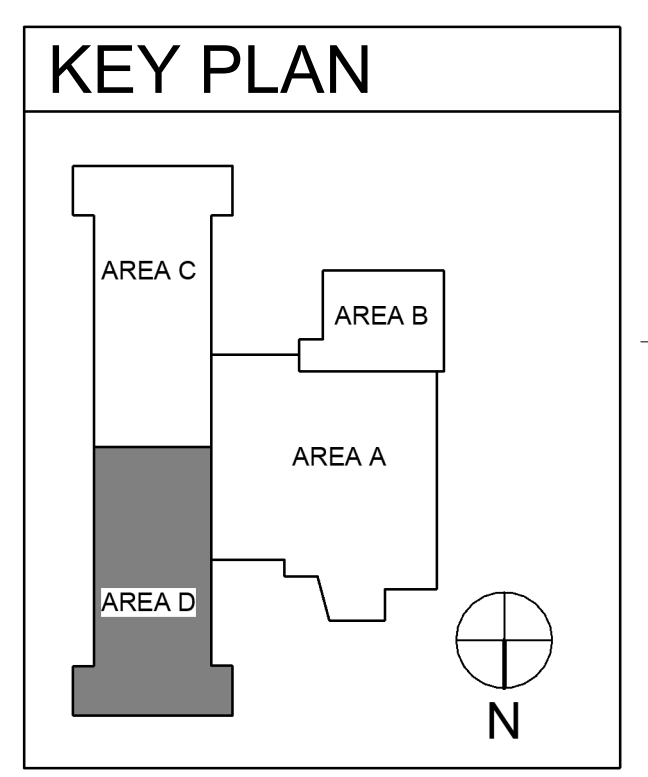


**GENERAL NOTES (LIGHTING):**

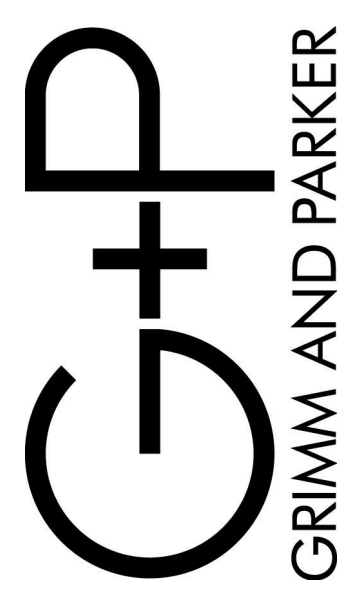
- A. REFER TO THE ARCHITECT'S REFLECTED CEILING PLANS, ELEVATIONS, AND CASEWORK DETAILS FOR EXACT LOCATIONS OF ALL WALL AND CEILING MOUNTED ELECTRICAL DEVICES.
- B. CONTRACTOR SHALL FOLLOW BRANCH CIRCUITING LAY-OUT, AS INDICATED ON THE FLOOR PLANS, WITH A MAXIMUM OF THREE (3) BRANCH CIRCUITS PER HOMERUN. EACH BRANCH CIRCUIT SHALL BE PROVIDED WITH A DEDICATED NEUTRAL CONDUCTOR. DEDICATED NEUTRAL CONDUCTORS SHALL BE CONSIDERED CURRENT CARRYING. IF ADDITIONAL CONDUCTORS ARE RAN IN THE SAME CONDUIT WITH THOSE INDICATED, CONTRACTOR SHALL DERATE ALL CURRENT CARRYING CONDUCTORS PER N.E.C. #310.15(B)(3), AND UPSIZE CONDUIT AS REQUIRED PER N.E.C. #400.17 AND ANNEX C. MULTIWIRE BRANCH CIRCUITS AS DEFINED IN N.E.C. #100.210.4 (CIRCUITS SHARING A COMMON NEUTRAL CONDUCTOR) SHALL NOT BE PERMITTED.
- C. IDENTIFY THE PANEL AND CIRCUIT NUMBER FOR ALL RECEPTACLES, SWITCHES, ETC. IN AREA OF CONSTRUCTION. STAINLESS STEEL COVERS WITH ENGRAVED CIRCUIT INFORMATION PER SPECIFICATION SEC 28 05 53. MARK INSIDES OF ALL DEVICE BOXES WITH PANEL AND CIRCUIT NUMBER.
- D. LOCATE CHAIN-HUNG INDUSTRIAL FIXTURES IN MECHANICAL ROOMS TO AVOID DUCTWORK AND PIPING. TO MAXIMIZE AVAILABLE LIGHT. SPACE AROUND EQUIPMENT, AIR HANDLERS, ETC. TO PROVIDE ADEQUATE LIGHTING TO ALL AREAS OF ROOM. PROVIDE ADDITIONAL FIXTURES OF SAME TYPE AS NEEDED TO FULFILL THIS REQUIREMENT.
- E. LOCATE EXIT SIGNS FOR MAXIMUM VIEWING AREA TO IDENTIFY EGRESS PATHS AS INDICATED ON PLANS. COORDINATE LOCATIONS SUCH THAT ARCHITECTURAL FEATURES OR EQUIPMENT FROM OTHER TRADES DO NOT OBSTRUCT VIEW.
- F. ALL LIGHTING FIXTURE LENSES, DOWNLIGHTING ALZAK CONES AND "PARACUBE" LOUVERS SHALL BE HANDLED WITH COTTON GLOVES DURING INSTALLATION AND LAMPING TO AVOID FINGERPRINTS OR DIRT DEPOSITS. FIXTURES SHALL BE SHIPPED AND INSTALLED WITH CLEAR PLASTIC BAGS TO PROTECT LOUVERS. AT CLOSE OF PROJECT, AND AFTER CONSTRUCTION AIR FILTERS ARE CHANGED, REMOVE BAGS. ANY LOUVER OR CONE SHOWING DIRT OR FINGERPRINTS SHALL BE CLEANED WITH SOLVENT RECOMMENDED BY THE MANUFACTURER, OR REPLACED AS NECESSARY IN ORDER TO TURN OVER TO THE OWNER NEW FIXTURES AT OCCUPANCY.
- G. RECESSED LUMINAIRE SHALL BE SECURED SUCH THAT THE FORCE REQUIRED INSERTING LAMPS, TRIMS, LENSES, LOUVERS, OR DOOR FRAMES DOES NOT SHEET HOUSING. ALL TRIMS SHALL BE COMPLETELY FLUSH WITH FINISHED CEILINGS AT COMPLETION OF CONSTRUCTION. CONTRACTOR SHALL PROVIDE UNSWITCHED CONDUCTOR TO ALL EXIT SIGNS.
- H. INSTALL EXTERIOR WALL LIGHT "OLW" AT +10'-0" UNLESS NOTED OTHERWISE. LIGHTS SHALL BE INSTALLED IN THE SAME BRICK LINE AROUND THE BUILDING.

**TAGGED NOTES (LIGHTING):**

1. CONNECT LIGHT TO EMERGENCY CIRCUIT VIA EMERGENCY TRANSFER SWITCH (ETS) THAT SHALL SWITCH FIXTURE LOAD TO EMERGENCY POWER IN THE EVENT OF NORMAL POWER LOSS. ETS SHALL OPERATE AT 120/277 VAC, BRKZ AND INSTALLED INSIDE FIXTURE HOUSING OR REMOTE FROM THE FIXTURE. PROVIDE ALL INPUT SAFETY FUSES PER MANUFACTURER'S INSTRUCTIONS.
2. SWITCH BANK SHALL BE FOR THE CONTROL OF 1ST AND 2ND FLOOR CORRIDOR AND STAIRWAY LIGHTS. SWITCH COVERPLATES SHALL BE STAINLESS STEEL AND ENGRAVED WITH THE LOAD NAME SERVED. SWITCHES SHALL BE LED PILOT TYPE SWITCHES TO INDICATE WHEN THE SWITCH/LOAD IS ENERGIZED.
3. INSTALL LIGHTS AT TOP AND BOTTOM OF SHAFT. COORDINATE EXACT LOCATION WITH ELEVATOR EQUIPMENT AND EXTEND CIRCUIT TO LIGHTS AT THE TOP AND BOTTOM OF THE SHAFT.
4. PROVIDE 120V POWER AND TRANSFORMER AS REQUIRED FOR 24V LIGHT FIXTURE AT CUBBIES. LIGHT FIXTURE SHALL BE KKDC - KURVJ-Y LIGHT FIXTURE CAT# KY-CK 908 40 -LENGTH-67 D67E. SEE DETAIL #6 ON SHEET E808 FOR MOUNTING. COORDINATE EXACT MOUNTING LOCATION WITH ARCHITECTURAL ELEVATIONS.
5. POWER FOR DISPLAY CASE LIGHTING. CONTRACTOR SHALL ROUTE WIRING TO DISPLAY CASE CONNECTION POINT. COORDINATE EXACT REQUIREMENTS WITH DISPLAY CASE INSTALLER PRIOR TO CONSTRUCTION.
6. IP60 GXF SHALL CONTROL STAGE LIGHT FIXTURES AND TRACK LIGHTING. CONTRACTOR SHALL PROGRAM LIGHTING ZONES ON SITE AS STIPULATED BY THE OWNER. COORDINATE EXACT LOCATION OF THE SWITCH WITH CURTAIN RIGGING TO AVOID CONFLICT.
7. PROVIDE TWO 3-WAY SWITCHES INSIDE THE ELEVATOR HOISTWAY, MOUNTED AT 4' ABOVE THE TOP AND BOTTOM OF ELEVATOR LANDINGS.



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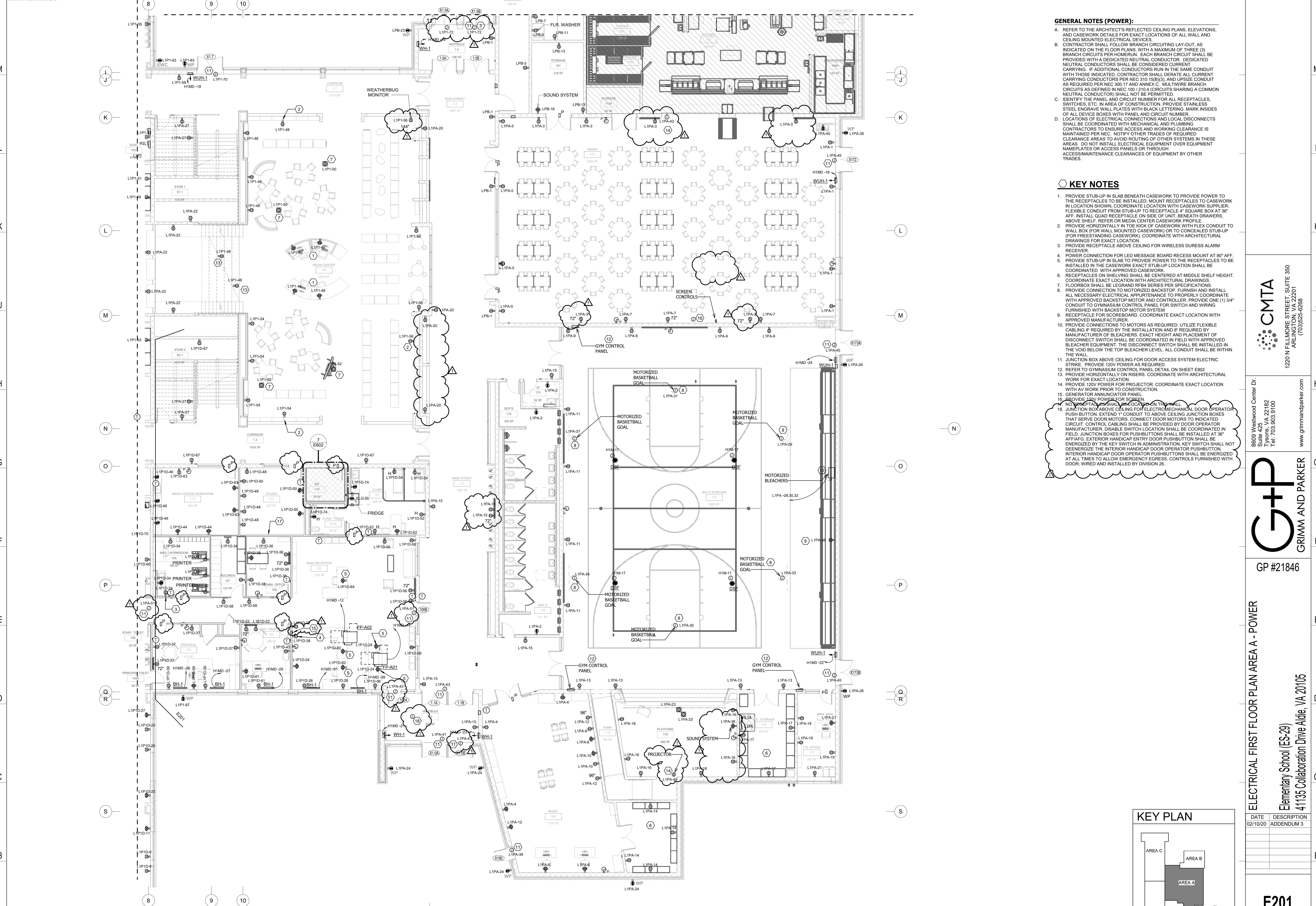


GP #21846

ELECTRICAL SECOND FLOOR PLAN AREA D - LIGHTING  
Elementary School (ES-29)  
41135 Collaboration Drive, VA 20105

DATE	DESCRIPTION
02/10/20	ADDENDUM 3

**E105**  
01/22/20  
BID SET



**GENERAL NOTES (POWER):**

- REFER TO THE ARCHITECT'S REFLECTED CEILING PLANS, ELEVATIONS, AND CASEWORK DETAILS FOR EXACT LOCATIONS OF ALL WALL AND CEILING MOUNTED ELECTRICAL DEVICES.
- CONTRACTOR SHALL FOLLOW BRANCH CIRCUITING LAY-OUT, AS INDICATED ON THE FLOOR PLANS, WITH A MAXIMUM OF THREE (3) BRANCH CIRCUITS PER HOMERUN. EACH BRANCH CIRCUIT SHALL BE PROVIDED WITH A DEDICATED NEUTRAL CONDUCTOR. DEDICATED NEUTRAL CONDUCTORS SHALL BE CONSIDERED CURRENT CARRYING. IF ADDITIONAL CONDUCTORS RUN IN THE SAME CONDUIT WITH THOSE INDICATED, CONTRACTOR SHALL DERATE ALL CURRENT CARRYING CONDUCTORS PER NEC 310.15(B)(3), AND UPSIZE CONDUIT AS REQUIRED PER NEC 300.17 AND ANNEX C. MULTIWIRE BRANCH CIRCUITS AS DEFINED IN NEC 100.2(D) (CIRCUITS SHARING A COMMON NEUTRAL CONDUCTOR) SHALL NOT BE PERMITTED.
- IDENTIFY THE PANEL AND CIRCUIT NUMBER FOR ALL RECEPTACLES, SWITCHES, ETC. IN AREA OF CONSTRUCTION. PROVIDE STAINLESS STEEL ENGRAVE WALL PLATES WITH BLACK LETTERING. MARK INSIDES OF ALL DEVICE BOXES WITH PANEL AND CIRCUIT NUMBER.
- LOCATIONS OF ELECTRICAL CONNECTIONS AND LOCAL DISCONNECTS SHALL BE COORDINATED WITH MECHANICAL AND PLUMBING CONTRACTORS TO ENSURE ACCESS AND WORKING CLEARANCE IS MAINTAINED PER NEC. NOTIFY OTHER TRADES OF REQUIRED CLEARANCE AREAS TO AVOID ROUTING OF OTHER SYSTEMS IN THESE AREAS. DO NOT INSTALL ELECTRICAL EQUIPMENT OVER EQUIPMENT NAMEPLATES OR ACCESS PANELS OR THROUGH ACCESS/MAINTENANCE CLEARANCES OF EQUIPMENT BY OTHER TRADES.

**KEY NOTES**

- PROVIDE STUB-UP IN SLAB BENEATH CASEWORK TO PROVIDE POWER TO THE RECEPTACLES TO BE INSTALLED. MOUNT RECEPTACLES TO CASEWORK IN LOCATION SHOWN, COORDINATE LOCATION WITH CASEWORK SUPPLIER. FLEXIBLE CONDUIT FROM STUB-UP TO RECEPTACLE 4" SQUARE BOX AT 36" AFF. INSTALL QUAD RECEPTACLE ON SIDE OF UNIT. BENEATH DRAWERS, ABOVE SHELF. REFER TO MEDIA CENTER CASEWORK PROFILE.
- PROVIDE HORIZONTALLY IN TOE KICK OF CASEWORK WITH FLEX CONDUIT TO WALL BOX (FOR WALL MOUNTED CASEWORK) OR TO CONCEALED STUB-UP (FOR FREESTANDING CASEWORK). COORDINATE WITH ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
- PROVIDE RECEPTACLE ABOVE CEILING FOR WIRELESS DURESS ALARM RECEIVER.
- POWER CONNECTION FOR LED MESSAGE BOARD RECESS MOUNT AT 80" AFF.
- PROVIDE STUB-UP IN SLAB TO PROVIDE POWER TO THE RECEPTACLES TO BE INSTALLED. IN THE CASEWORK EXACT STUB-UP LOCATION SHALL BE COORDINATED WITH APPROVED CASEWORK.
- RECEPTACLES ON SHELVING SHALL BE CENTERED AT MIDDLE SHELF HEIGHT. COORDINATE EXACT LOCATION WITH ARCHITECTURAL DRAWINGS.
- FLOORBOX SHALL BE LEGRAND RFB4 SERIES PER SPECIFICATIONS.
- PROVIDE CONNECTION TO MOTORIZED BACKSTOP. FURNISH AND INSTALL ALL NECESSARY ELECTRICAL APPURTENANCE TO PROPERLY COORDINATE WITH APPROVED BACKSTOP MOTOR AND CONTROLLER. PROVIDE ONE (1) 3/4" CONDUIT TO GYMNASIUM CONTROL PANEL FOR SWITCH AND WIRING FURNISHED WITH BACKSTOP MOTOR SYSTEM.
- RECEPTACLE FOR SCOREBOARD. COORDINATE EXACT LOCATION WITH APPROVED MANUFACTURER.
- PROVIDE CONNECTIONS TO MOTORS AS REQUIRED. UTILIZE FLEXIBLE CABLING IF REQUIRED BY THE INSTALLATION AND IF REQUIRED BY MANUFACTURER OF BLEACHERS. EXACT HEIGHT AND PLACEMENT OF DISCONNECT SWITCH SHALL BE COORDINATED IN FIELD WITH APPROVED BLEACHER EQUIPMENT. THE DISCONNECT SWITCH SHALL BE INSTALLED IN THE VOID BELOW THE TOP BLEACHER LEVEL. ALL CONDUIT SHALL BE WITHIN THE WALL.
- JUNCTION BOX ABOVE CEILING FOR DOOR ACCESS SYSTEM ELECTRIC STRIKE. PROVIDE 120V POWER AS REQUIRED.
- REFER TO GYMNASIUM CONTROL PANEL DETAIL ON SHEET E802
- PROVIDE HORIZONTALLY ON RISERS. COORDINATE WITH ARCHITECTURAL WORK FOR EXACT LOCATION.
- PROVIDE 120V POWER FOR PROJECTOR. COORDINATE EXACT LOCATION WITH AV WORK PRIOR TO CONSTRUCTION.
- GENERATOR ANNUNCIATOR PANEL.
- PROVIDE 120V POWER FOR SCREEN.
- NO RECEPTACLES SHALL BE LOCATED ON THE WALL.
- JUNCTION BOX ABOVE CEILING FOR ELECTROMECHANICAL DOOR OPERATOR PUSH BUTTON. EXTEND 1" CONDUIT TO ABOVE CEILING JUNCTION BOXES THAT SERVE DOOR MOTORS. CONNECT DOOR MOTORS TO INDICATED CIRCUIT. CONTROL CABLING SHALL BE PROVIDED BY DOOR OPERATOR MANUFACTURER. DISABLE SWITCH LOCATION SHALL BE COORDINATED IN FIELD. JUNCTION BOXES FOR PUSHBUTTONS SHALL BE INSTALLED AT 36" AFF. EXTERIOR HANDICAP ENTRY DOOR PUSHBUTTON SHALL BE ENERGIZED BY THE KEY SWITCH IN ADMINISTRATION. KEY SWITCH SHALL NOT DEENERGIZE THE INTERIOR HANDICAP DOOR OPERATOR PUSHBUTTON. INTERIOR HANDICAP DOOR OPERATOR PUSHBUTTONS SHALL BE ENERGIZED AT ALL TIMES TO ALLOW EMERGENCY EGRESS. CONTROLS FURNISHED WITH DOOR. WIRED AND INSTALLED BY DIVISION 26.

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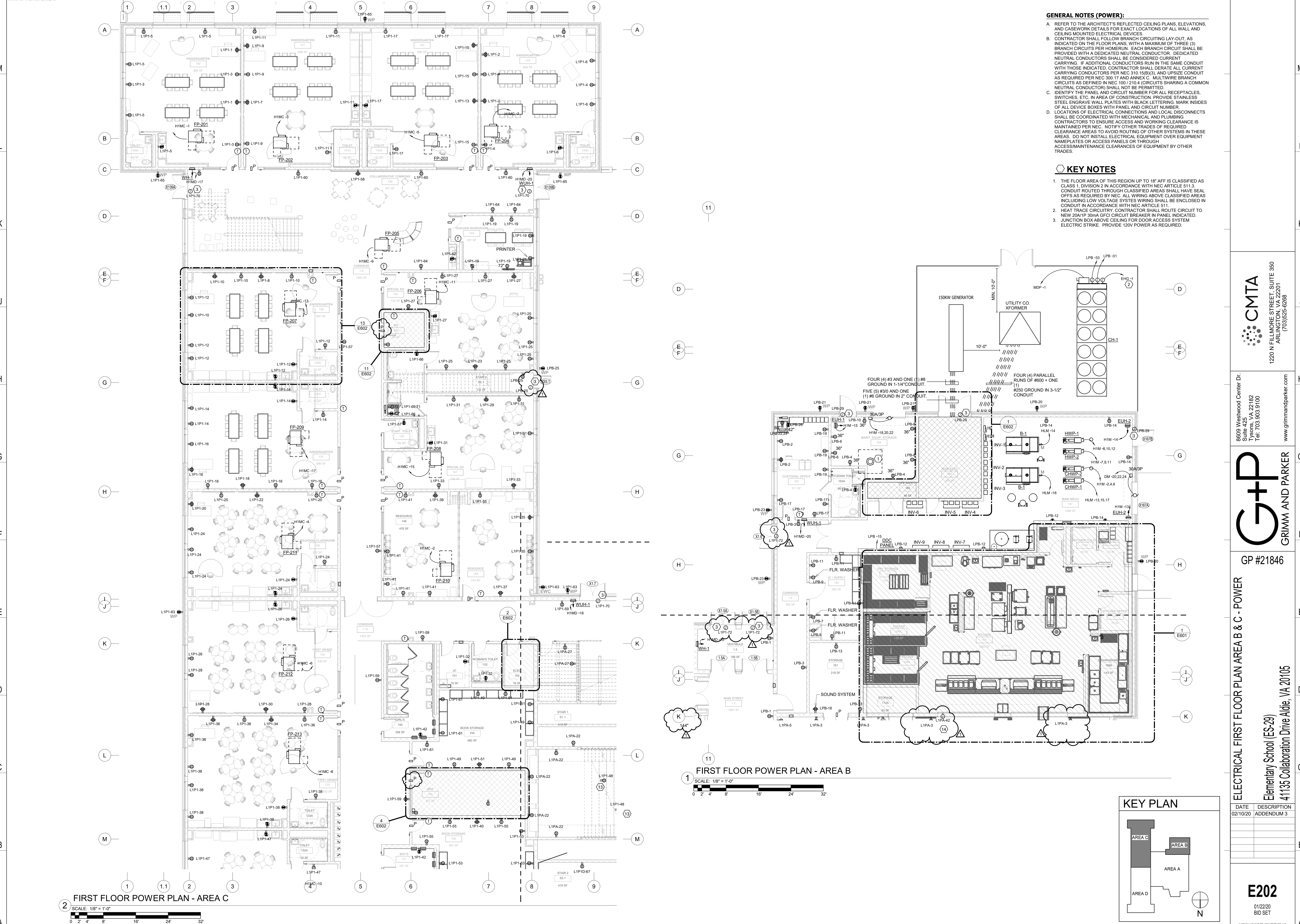
**GP #21846**

**ELECTRICAL FIRST FLOOR PLAN AREA A - POWER**  
Elementary School (ES-29)  
41135 Collaboration Drive, VA 20105

DATE	DESCRIPTION
02/10/20	ADDENDUM 3

**E201**  
01/22/20  
BID SET  
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**GENERAL NOTES (POWER):**

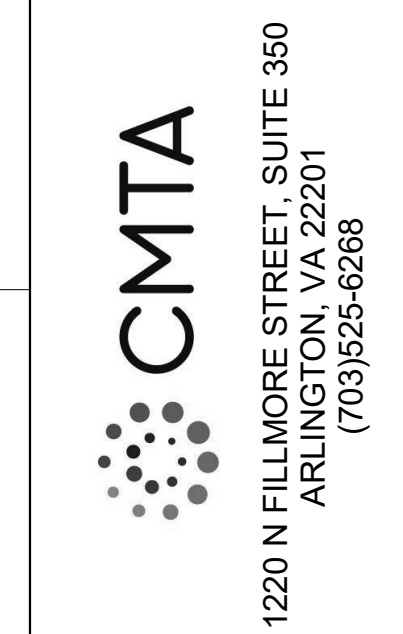
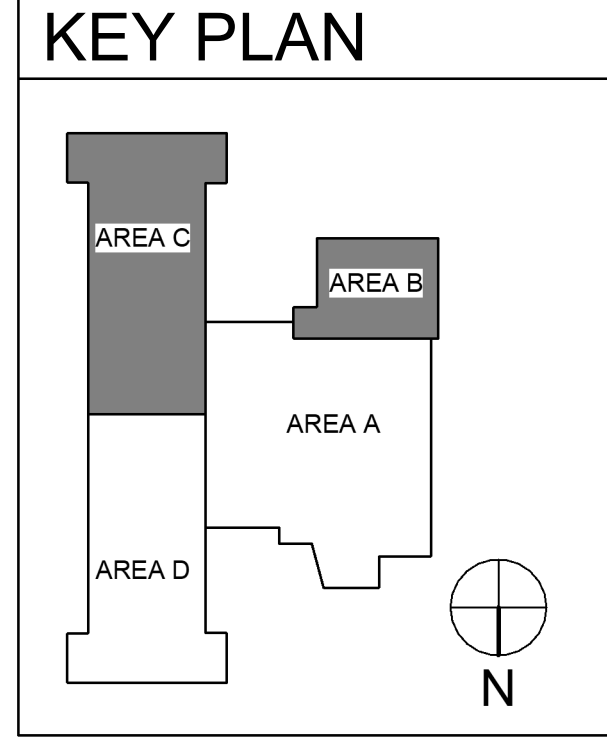
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- CONTRACTOR SHALL FOLLOW BRANCH CIRCUITING LAY-OUT, AS INDICATED ON THE FLOOR PLANS, WITH A MAXIMUM OF THREE (3) BRANCH CIRCUITS PER HOMERUN. EACH BRANCH CIRCUIT SHALL BE PROVIDED WITH A DEDICATED NEUTRAL CONDUCTOR. DEDICATED NEUTRAL CONDUCTORS SHALL BE CONSIDERED CURRENT CARRYING. IF ADDITIONAL CONDUCTORS RUN IN THE SAME CONDUIT WITH THOSE INDICATED, CONTRACTOR SHALL DERATE ALL CURRENT CARRYING CONDUCTORS PER NEC 310.15(B)(3), AND UPSIZE CONDUIT AS REQUIRED PER NEC 300.17 AND ANNEX C. MULTIWIRE BRANCH CIRCUITS AS DEFINED IN NEC 100/210.4 (CIRCUITS SHARING A COMMON NEUTRAL CONDUCTOR) SHALL NOT BE PERMITTED.
- IDENTIFY THE PANEL AND CIRCUIT NUMBER FOR ALL RECEPTACLES, SWITCHES, ETC. IN AREA OF CONSTRUCTION. PROVIDE STAINLESS STEEL ENGRAVE WALL PLATES WITH BLACK LETTERING, MARK INSIDES OF ALL DEVICE BOXES WITH PANEL AND CIRCUIT NUMBER.
- LOCATIONS OF ELECTRICAL CONNECTIONS AND LOCAL DISCONNECTS SHALL BE COORDINATED WITH MECHANICAL AND PLUMBING CONTRACTORS TO ENSURE ACCESS AND WORKING CLEARANCE IS MAINTAINED PER NEC. NOTIFY OTHER TRADES OF REQUIRED CLEARANCE AREAS TO AVOID ROUTING OF OTHER SYSTEMS IN THESE AREAS. DO NOT INSTALL ELECTRICAL EQUIPMENT OVER EQUIPMENT NAMEPLATES OR ACCESS PANELS OR THROUGH ACCESS/MAINTENANCE CLEARANCES OF EQUIPMENT BY OTHER TRADES.

**KEY NOTES**

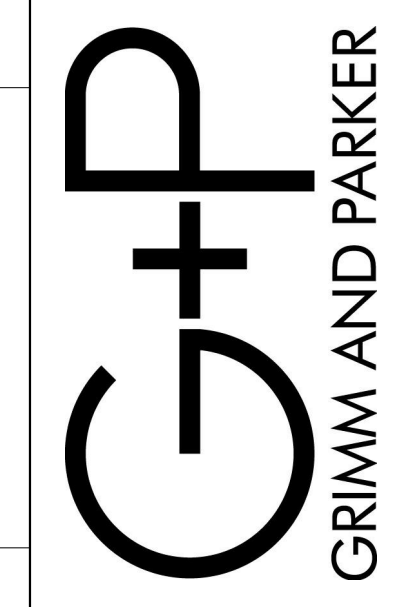
- THE FLOOR AREA OF THIS REGION UP TO 18" AFF IS CLASSIFIED AS CLASS 1, DIVISION 2 IN ACCORDANCE WITH NEC ARTICLE 511.3. CONDUIT ROUTED THROUGH CLASSIFIED AREAS SHALL HAVE SEAL OFFS AS REQUIRED BY NEC. ALL WIRING ABOVE CLASSIFIED AREAS INCLUDING LOW VOLTAGE SYSTEMS WIRING SHALL BE ENCLOSED IN CONDUIT IN ACCORDANCE WITH NEC ARTICLE 511.
- HEAT TRACE CIRCUITRY: CONTRACTOR SHALL ROUTE CIRCUIT TO NEW 20A/1P 30mA GFCI CIRCUIT BREAKER IN PANEL INDICATED.
- JUNCTION BOX ABOVE CEILING FOR DOOR ACCESS SYSTEM ELECTRIC STRIKE. PROVIDE 120V POWER AS REQUIRED.

**FIRST FLOOR POWER PLAN - AREA C**  
 SCALE: 1/8" = 1'-0"

**FIRST FLOOR POWER PLAN - AREA B**  
 SCALE: 1/8" = 1'-0"



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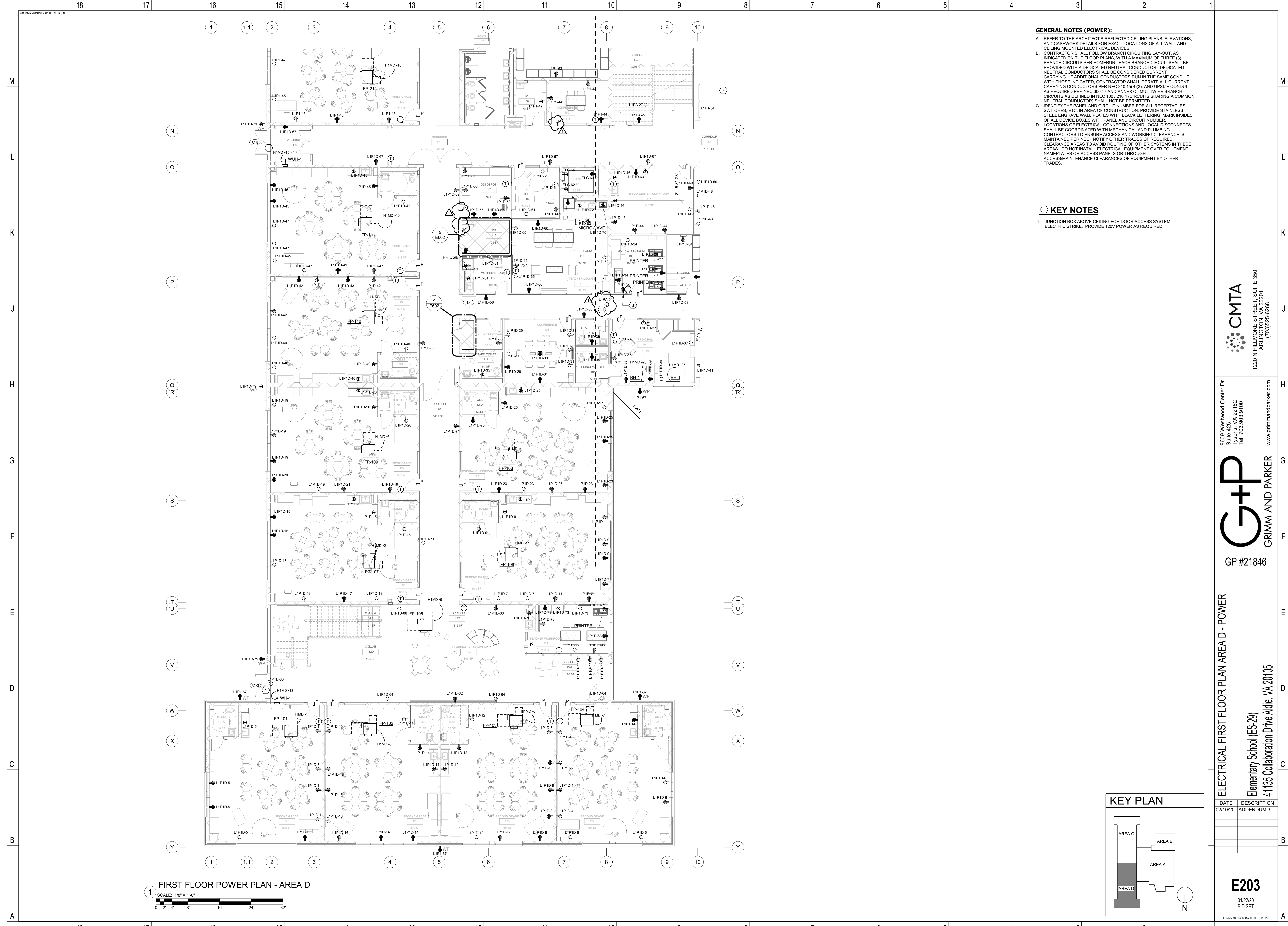


GP #21846

**ELECTRICAL FIRST FLOOR PLAN AREA B & C - POWER**  
 Elementary School (ES-29)  
 41135 Collaboration Drive, VA 20105

DATE	DESCRIPTION
02/10/20	ADDENDUM 3

**E202**  
 01/22/20  
 BID SET



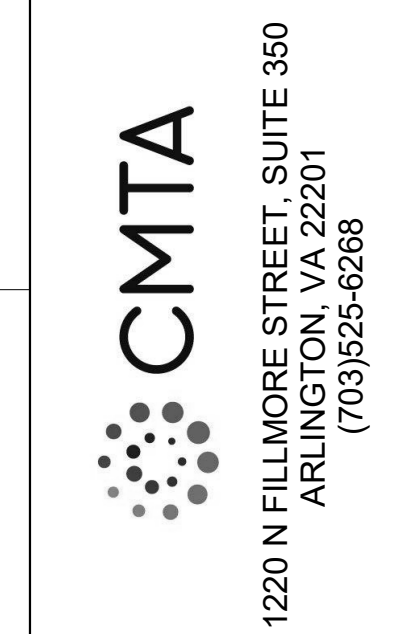
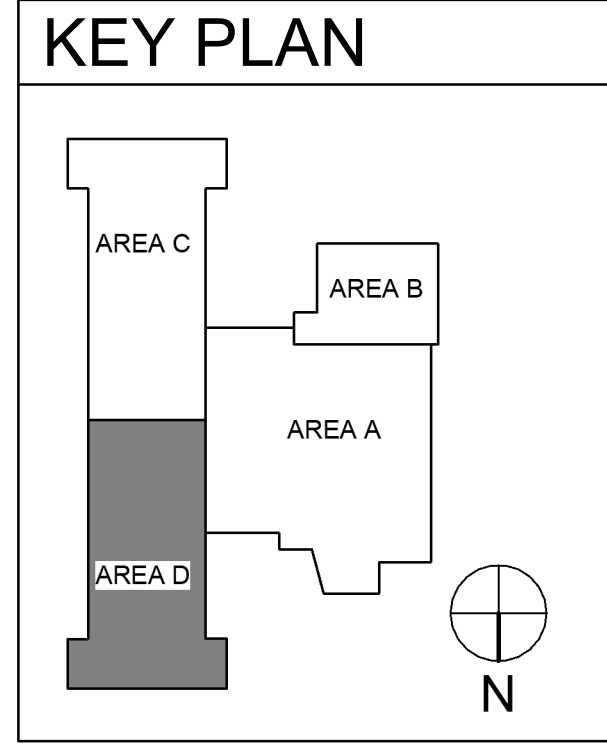
**GENERAL NOTES (POWER):**

- REFER TO THE ARCHITECT'S REFLECTED CEILING PLANS, ELEVATIONS, AND CASEWORK DETAILS FOR EXACT LOCATIONS OF ALL WALL AND CEILING MOUNTED ELECTRICAL DEVICES.
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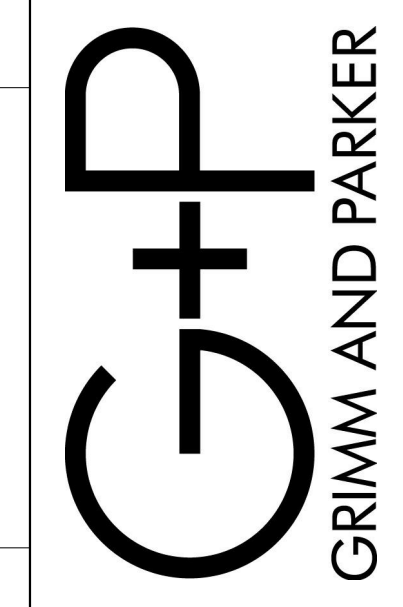
**KEY NOTES**

- JUNCTION BOX ABOVE CEILING FOR DOOR ACCESS SYSTEM ELECTRIC STRIKE. PROVIDE 120V POWER AS REQUIRED.

**FIRST FLOOR POWER PLAN - AREA D**  
SCALE: 1/8" = 1'-0"



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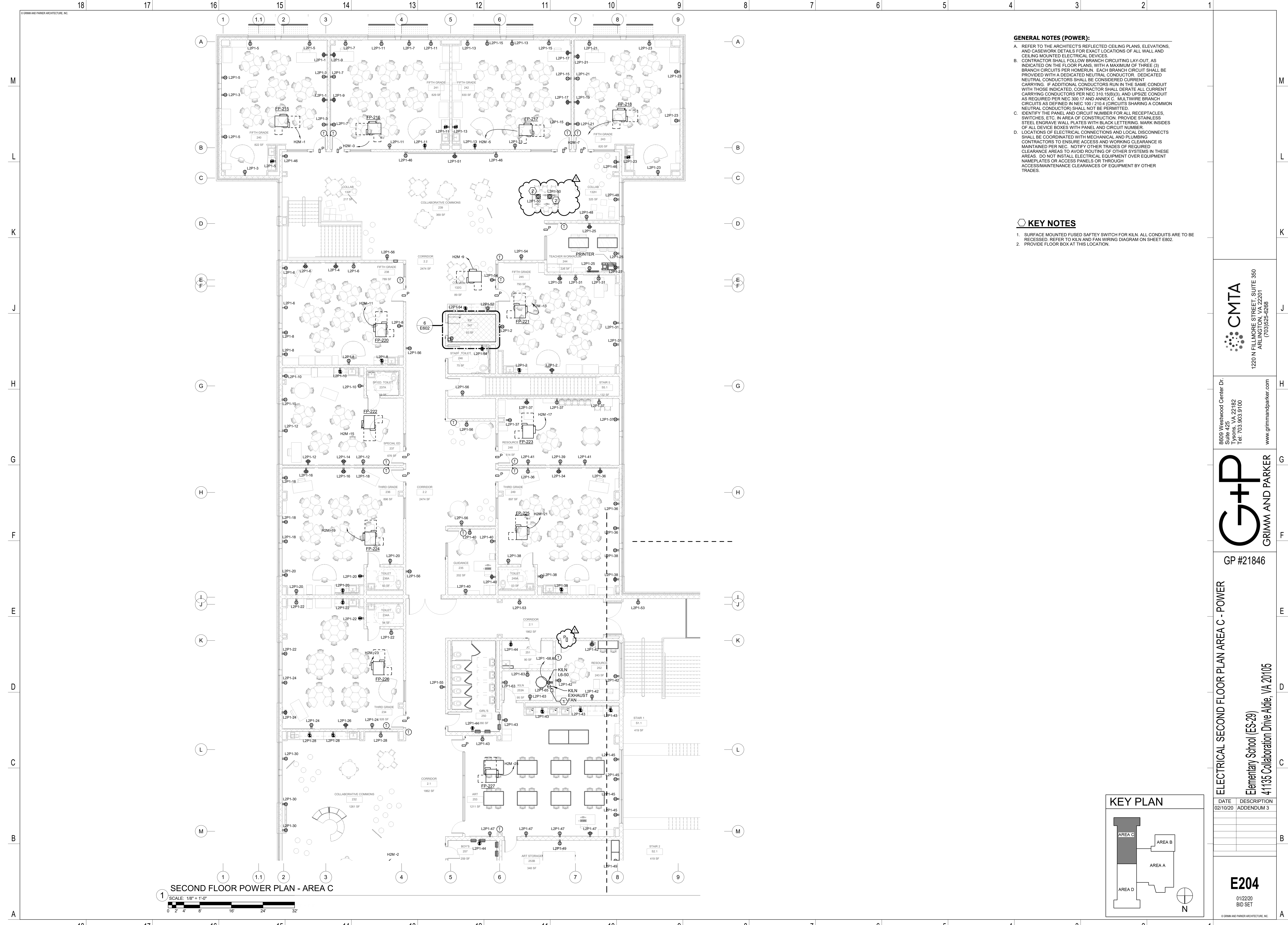


GP #21846

ELECTRICAL FIRST FLOOR PLAN AREA D - POWER  
Elementary School (ES-29)  
41135 Collaboration Drive Aisle, VA 20105

DATE	DESCRIPTION
02/10/20	ADDENDUM 3

**E203**  
01/22/20  
BID SET



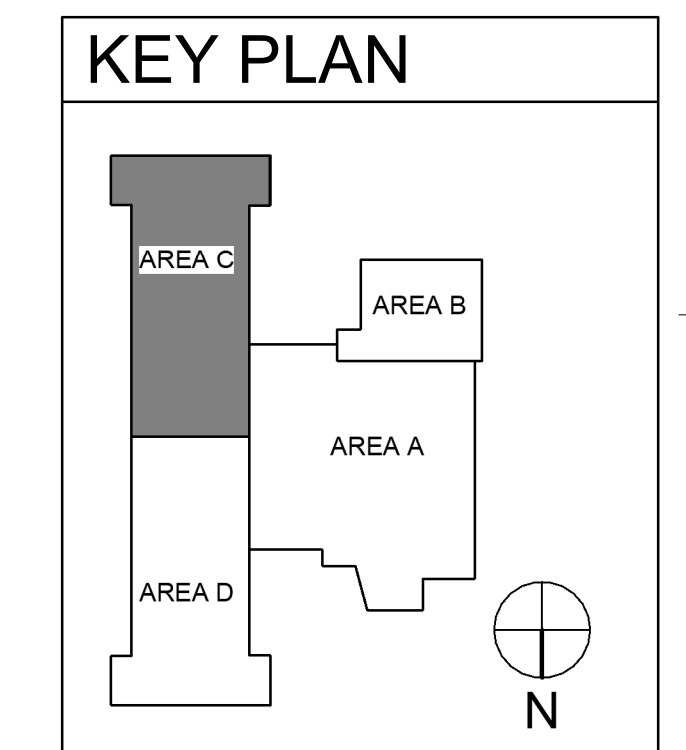
**1 SECOND FLOOR POWER PLAN - AREA C**  
 SCALE: 1/8" = 1'-0"  
 0 2 4 8 16 24 32

**GENERAL NOTES (POWER):**

- REFER TO THE ARCHITECT'S REFLECTED CEILING PLANS, ELEVATIONS, AND CASEWORK DETAILS FOR EXACT LOCATIONS OF ALL WALL AND CEILING MOUNTED ELECTRICAL DEVICES.
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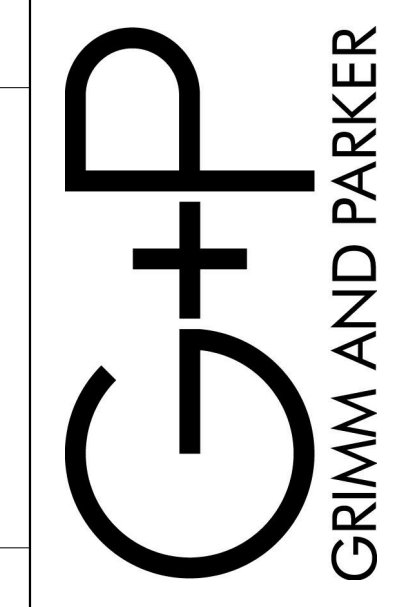
**KEY NOTES**

- SURFACE MOUNTED FUSED SAFETY SWITCH FOR KILN. ALL CONDUITS ARE TO BE RECESSED. REFER TO KILN AND FAN WIRING DIAGRAM ON SHEET E802.
- PROVIDE FLOOR BOX AT THIS LOCATION.



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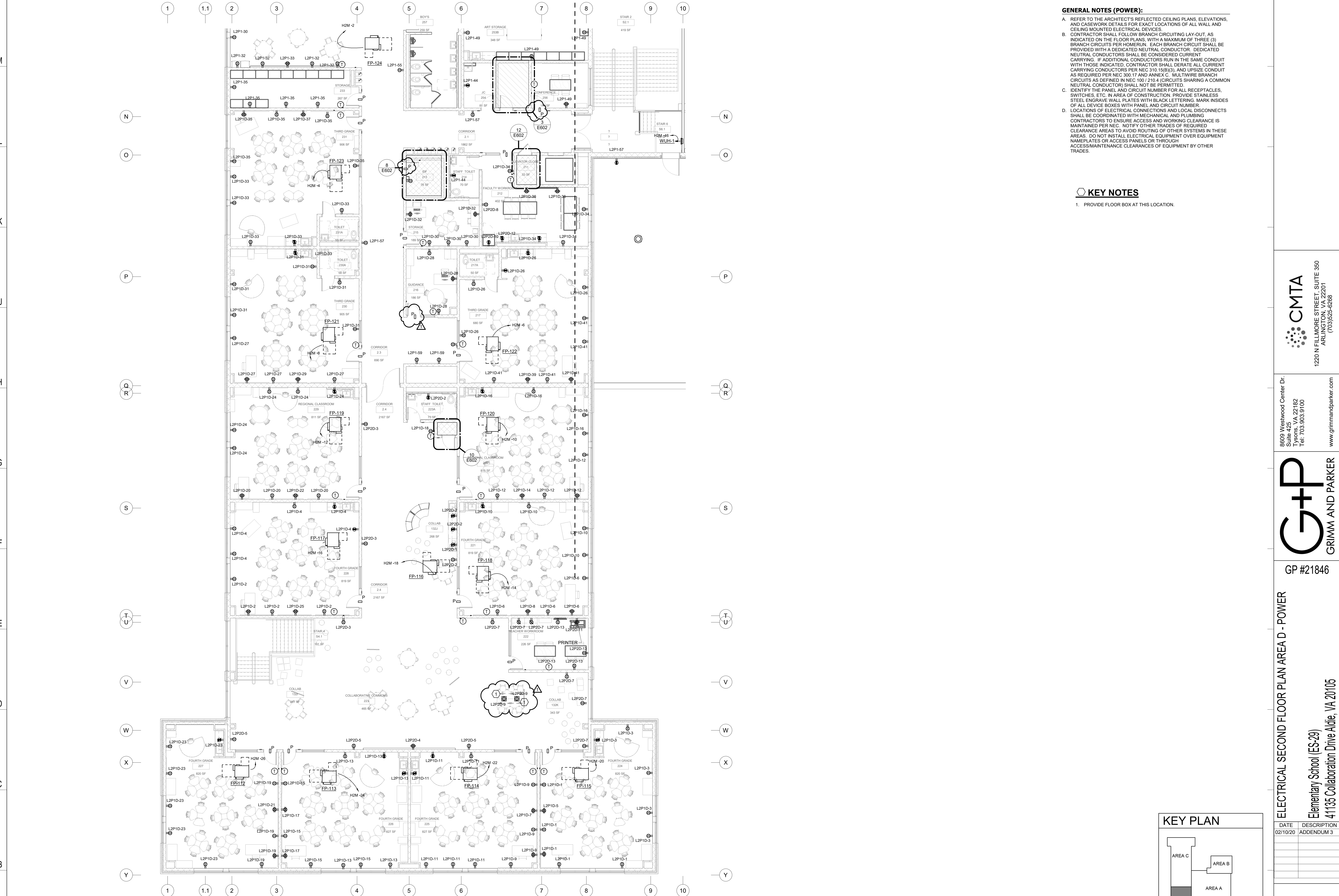


GP #21846

**ELECTRICAL SECOND FLOOR PLAN AREA C - POWER**  
 Elementary School (ES-29)  
 41135 Collaboration Drive Aldie, VA 20105

DATE	DESCRIPTION
02/10/20	ADDENDUM 3

**E204**  
 01/22/20  
 BID SET  
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**GENERAL NOTES (POWER):**

A. REFER TO THE ARCHITECT'S REFLECTED CEILING PLANS, ELEVATIONS, AND CASEWORK DETAILS FOR EXACT LOCATIONS OF ALL WALL AND CEILING MOUNTED ELECTRICAL DEVICES.

B. CONTRACTOR SHALL FOLLOW BRANCH CIRCUITING LAY-OUT, AS INDICATED ON THE FLOOR PLANS, WITH A MAXIMUM OF THREE (3) BRANCH CIRCUITS PER HOMERUN. EACH BRANCH CIRCUIT SHALL BE PROVIDED WITH A DEDICATED NEUTRAL CONDUCTOR. DEDICATED NEUTRAL CONDUCTORS SHALL BE CONSIDERED CURRENT CARRYING. IF ADDITIONAL CONDUCTORS RUN IN THE SAME CONDUIT WITH THOSE INDICATED, CONTRACTOR SHALL DERATE ALL CURRENT CARRYING CONDUCTORS PER NEC 310.15(B)(3), AND UPSIZE CONDUIT AS REQUIRED PER NEC 300.17 AND ANNEX C. MULTIWIRE BRANCH CIRCUITS AS DEFINED IN NEC 100/210.4 (CIRCUITS SHARING A COMMON NEUTRAL CONDUCTOR) SHALL NOT BE PERMITTED.

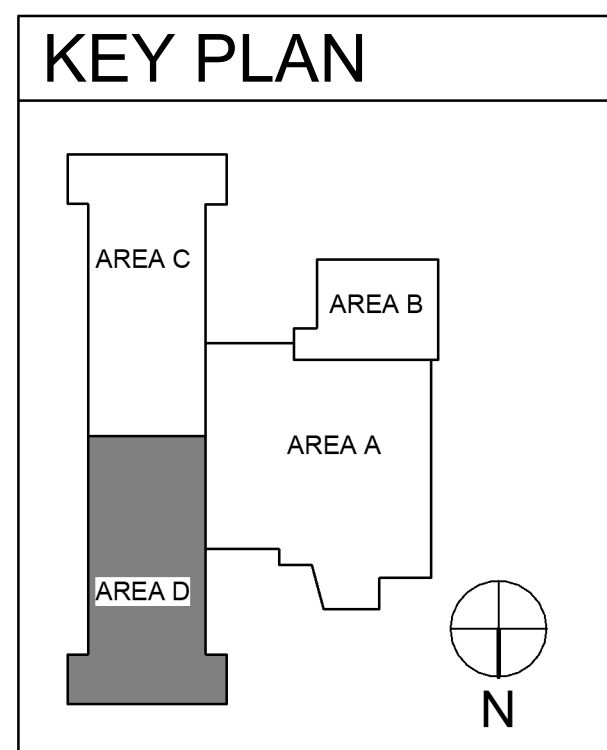
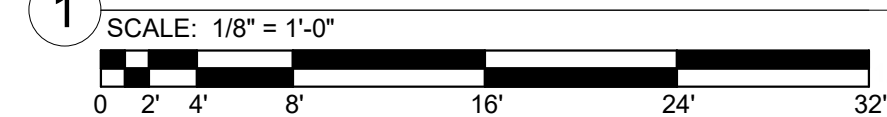
C. IDENTIFY THE PANEL AND CIRCUIT NUMBER FOR ALL RECEPTACLES, SWITCHES, ETC. IN AREA OF CONSTRUCTION. PROVIDE STAINLESS STEEL ENGRAVE WALL PLATES WITH BLACK LETTERING, MARK INSIDES OF ALL DEVICE BOXES WITH PANEL AND CIRCUIT NUMBER.

D. LOCATIONS OF ELECTRICAL CONNECTIONS AND LOCAL DISCONNECTS SHALL BE COORDINATED WITH MECHANICAL AND PLUMBING CONTRACTORS TO ENSURE ACCESS AND WORKING CLEARANCE IS MAINTAINED PER NEC. NOTIFY OTHER TRADES OF REQUIRED CLEARANCE AREAS TO AVOID ROUTING OF OTHER SYSTEMS IN THESE AREAS. DO NOT INSTALL ELECTRICAL EQUIPMENT OVER EQUIPMENT NAMEPLATES OR ACCESS PANELS OR THROUGH ACCESS/MAINTENANCE CLEARANCES OF EQUIPMENT BY OTHER TRADES.

**KEY NOTES**

1. PROVIDE FLOOR BOX AT THIS LOCATION.

**SECOND FLOOR POWER PLAN - AREA D**



ELECTRICAL SECOND FLOOR PLAN AREA D - POWER

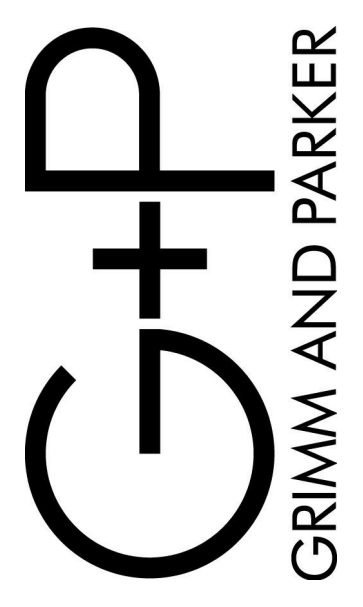
Elementary School (ES-29)  
41135 Collaboration Drive Aldie, VA 20105

DATE	DESCRIPTION
02/10/20	ADDENDUM 3

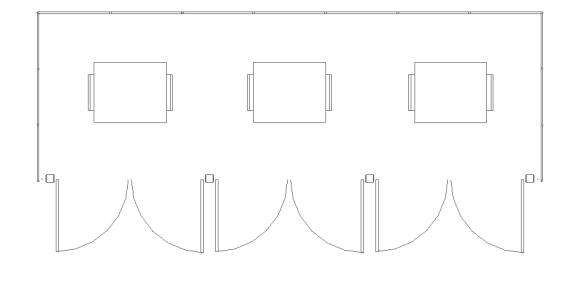
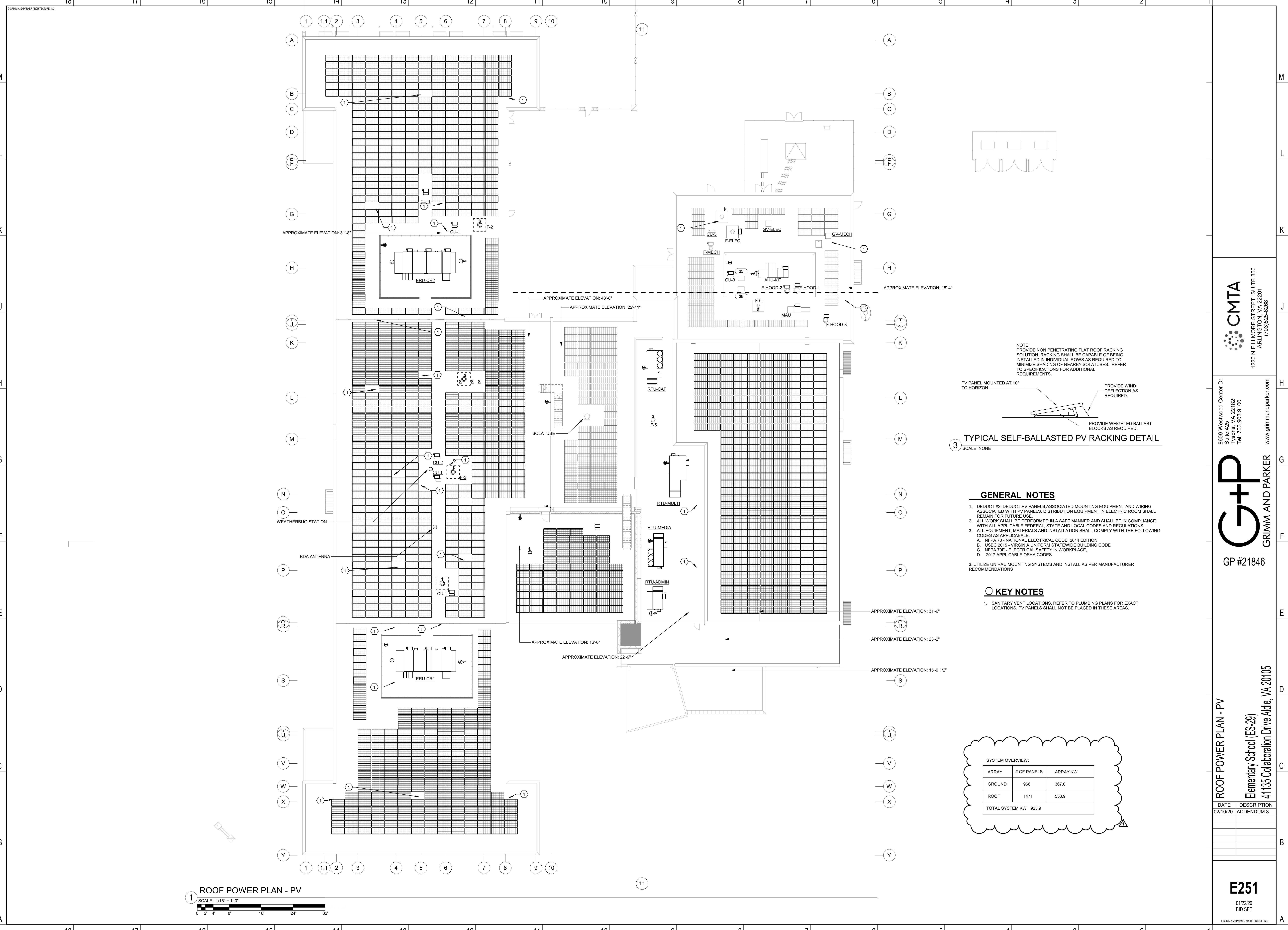
**E205**  
01/22/20  
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GP #21846



NOTE:  
 PROVIDE NON PENETRATING FLAT ROOF RACKING SOLUTION. RACKING SHALL BE CAPABLE OF BEING INSTALLED IN INDIVIDUAL ROWS AS REQUIRED TO MINIMIZE SHADING OF NEARBY SOLATUBES. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

PV PANEL MOUNTED AT 10° TO HORIZON. PROVIDE WIND DEFLECTION AS REQUIRED. PROVIDE WEIGHTED BALLAST BLOCKS AS REQUIRED.

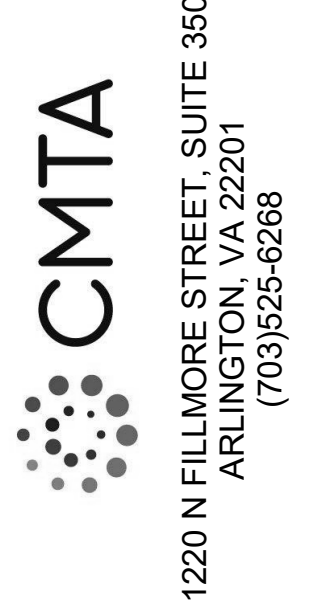
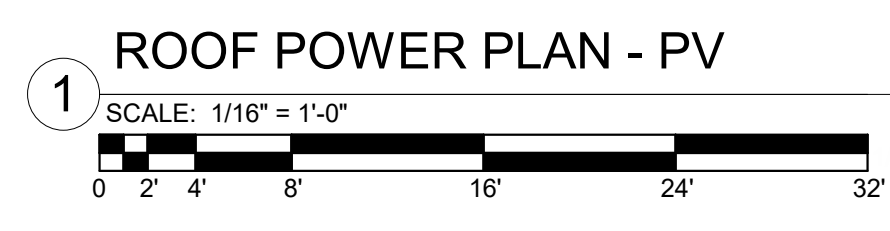
**3 TYPICAL SELF-BALLASTED PV RACKING DETAIL**  
 SCALE: NONE

- GENERAL NOTES**
1. DEDUCT #2. DEDUCT PV PANELS, ASSOCIATED MOUNTING EQUIPMENT AND WIRING ASSOCIATED WITH PV PANELS. DISTRIBUTION EQUIPMENT IN ELECTRIC ROOM SHALL REMAIN FOR FUTURE USE.
  2. ALL WORK SHALL BE PERFORMED IN A SAFE MANNER AND SHALL BE IN COMPLIANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND REGULATIONS.
  3. ALL EQUIPMENT, MATERIALS AND INSTALLATION SHALL COMPLY WITH THE FOLLOWING CODES AS APPLICABLE:  
 A. NFPA 70 - NATIONAL ELECTRICAL CODE, 2014 EDITION  
 B. USBC 2015 - VIRGINIA UNIFORM STATEWIDE BUILDING CODE  
 C. NFPA 70E - ELECTRICAL SAFETY IN WORKPLACE.  
 D. 2017 APPLICABLE OSHA CODES
  3. UTILIZE UNIRAC MOUNTING SYSTEMS AND INSTALL AS PER MANUFACTURER RECOMMENDATIONS

- KEY NOTES**
1. SANITARY VENT LOCATIONS. REFER TO PLUMBING PLANS FOR EXACT LOCATIONS. PV PANELS SHALL NOT BE PLACED IN THESE AREAS.

SYSTEM OVERVIEW:

ARRAY	# OF PANELS	ARRAY KW
GROUND	966	367.0
ROOF	1471	558.9
<b>TOTAL SYSTEM KW</b>	<b>925.9</b>	



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GP #21846

ROOF POWER PLAN - PV  
 Elementary School (ES-29)  
 41135 Collaboration Drive Aldie, VA 20105

DATE	DESCRIPTION
02/10/20	ADDENDUM 3

**E251**  
 01/22/20  
 BID SET

PANELBOARD AND WIRING SCHEDULE

Panel H1L, 480Y/277V, 3P, 4W, 100A MCB, SURFACE MOUNTING. Includes circuit descriptions, wire types, and load classification summary.

PANELBOARD AND WIRING SCHEDULE

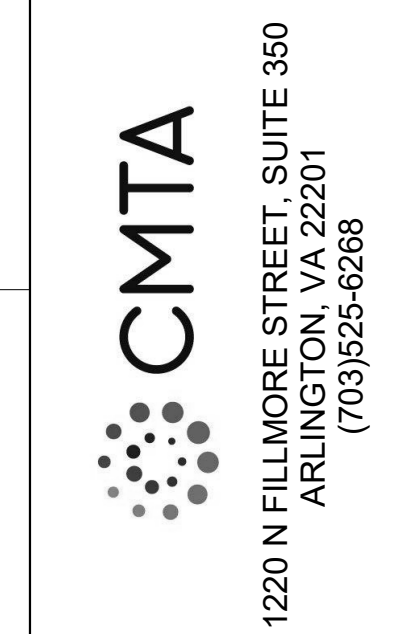
Panel HL1A, 480Y/277V, 3P, 4W, 100A MCB, SURFACE MOUNTING. Includes circuit descriptions, wire types, and load classification summary.

PANELBOARD AND WIRING SCHEDULE

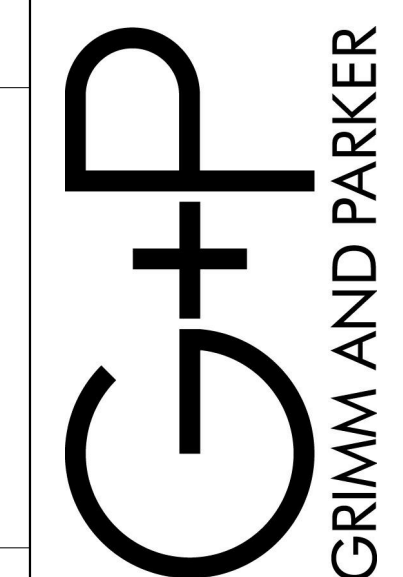
Panel H2L, 480Y/277V, 3P, 4W, 100A MCB, SURFACE MOUNTING. Includes circuit descriptions, wire types, and load classification summary.

PANELBOARD AND WIRING SCHEDULE

Panel HL, 480Y/277V, 3P, 4W, 100A MCB, SURFACE MOUNTING. Includes circuit descriptions, wire types, and load classification summary.



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GP #21846

ELECTRICAL PANEL SCHEDULES - LIGHTING Elementary School (ES-29) 41135 Colaboration Drive, Aldie, VA 20105

Table with 2 columns: DATE, DESCRIPTION. Row 1: 02/10/20, ADDENDUM 3

**PANELBOARD AND WIRING SCHEDULE**

PANEL: L1P1  
 VOLTAGE: 208Y/120V, 3P, 4W  
 AMPERES: 225 A  
 MAINS TYPE: 225A MCB  
 SPD: SPD  
 MOUNTING: SURFACE

AVAILABLE FAULT CURRENT:  
 PANEL INTERRUPTING RATING:  
 LOCATION: FIRST GRADE C149  
 SUPPLY FROM: DP

CIRCUIT DESCRIPTION	WIRE	GND	C	OC	P	PKT	A	B	C	CKT	P	OC	C	GND	WIRE	CIRCUIT DESCRIPTION
REC KINDERGARTEN-1 140-1	20	1	1	0.4	0.4					2	1	20				REC KINDERGARTEN 143
REC KINDERGARTEN-1 140-1	20	1	3			0.5	0.5			4	1	20				REC KINDERGARTEN 143
REC KINDERGARTEN 141	20	1	5					0.9	0.7	6	1	20				REC KINDERGARTEN 143
REC KINDERGARTEN 141	20	1	7	0.2	0.2					8	1	20				REC KINDERGARTEN 138
REC KINDERGARTEN 141	20	1	9			0.5	0.9			10	1	20				REC KINDERGARTEN 138
REC KINDERGARTEN 141	20	1	11					0.7	1.3	12	1	20				REC KINDERGARTEN 137
REC KINDERGARTEN 142	20	1	13	0.2	1.1					14	1	20				REC KINDERGARTEN 137
REC KINDERGARTEN 142	20	1	15			0.5	1.1			16	1	20				REC KINDERGARTEN 137
REC Room 142	20	1	17					0.7	0.2	18	1	20				REC KINDERGARTEN 137
REC TEACHER WORKROOM 144	20	1	19	0.9	0.5					20	1	20				REC REGIONAL CLASSROOM 138
REC PRINTER COPY 144	20	1	21			0.8	0.2			22	1	20				REC REGIONAL CLASSROOM 138
REC SPECIAL ED 145	20	1	23					0.2	1.1	24	1	20				REC REGIONAL CLASSROOM 136
REC SPECIAL ED 145	20	1	25	1.3	0.5					26	1	20				REC FIRST GRADE-1 134-1
REC SPECIAL ED 145	20	1	27			0.9	0.5			28	1	20				REC FIRST GRADE-1 134-1
REC SPECIAL ED 147	20	1	29					0.2	0.2	30	1	20				REC FIRST GRADE-1 134-1
REC SPECIAL ED 147	20	1	31	0.7	0.5					32	1	20				REC FIRST GRADE C149
REC SPECIAL ED 147	20	1	33			0.5	0.4			34	1	20				REC FIRST GRADE-1 133-1
REC RESOURCE-1 148-1	20	1	35					0.7	0.7	36	1	20				REC FIRST GRADE-1 133-1
REC RESOURCE-1 148-1	20	1	37	0.2	1.1					38	1	20				REC Room 133-1
REC TOILET / CHANGING C147A	20	1	39			0.2	0.2			40	1	20				REC BOOK STORAGE-1 196-1
REC TOILET / CHANGING C147A	20	1	41					0.9	0.5	42	1	20				REC Room 157-1
REC FIRST GRADE-1 132-1	20	1	43	0.4	0.5					44	1	20				REC Room 159
REC FIRST GRADE-1 132-1	20	1	45			0.5	1.4			46	1	20				REC MEDIA CENTER-1 160-1
REC FIRST GRADE-1 132-1	20	1	47					0.7	1.1	48	1	20				REC MEDIA CENTER-1 160-1
REC	20	1	49	0.7	0.7					50	1	20				REC MEDIA CENTER-1 160-1
REC	20	1	51			0.4	0.7			52	1	20				REC MEDIA CENTER-1 160-1
REC	20	1	53					0.7	0.7	54	1	20				REC Room 160-1
REC BOOK STORAGE-1 156-1	20	1	55	0.5	0.7					56	1	20				REC MEDIA CENTER-1 160-1
REC BOOK STORAGE-1 156-1	20	1	57			0.5	0.2			58	1	20				REC COLLABORATIVE COMMON...
REC CORRIDOR 1.9	20	1	59					0.7	0.7	60	1	20				REC Room 136-1
REC	20	1	61	0.7	0.2					62	1	20				REC CORRIDOR 1.9
REC	20	1	63			0.5	0.5			64	1	20				REC CORRIDOR 1.9
REC	20	1	65					0.5	0.4	66	1	20				REC STAFF TOILET C146A
REC	20	1	67	0.7	0.0					68	1	20				LTNG SOLATUBE
WASHER DRYER C146A	20	2	69			0.8	0.5			70	1	20				EQUIP CORRIDOR 1.9
SPARE			71			0.8	0.5			72	1	20				LTNG
SPARE			73	0.0	0.0					74	1	20				LTNG
SPARE			75			0.0	0.0			76	1	20				SPARE
SPARE			77			0.0	0.0			78	1	20				SPARE
SPARE			79	0.0	0.0					80	1	20				SPARE
SPARE			81			0.0	0.0			82	1	20				SPARE
SPARE			83			0.0	0.0			84	1	20				SPARE

TOTAL LOAD (kVA): 13.3 kVA 13.9 kVA 15.8 kVA  
 TOTAL CURRENT (A): 111 A 118 A 132 A

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND
EQUIP	2400 VA	100.00%	2400 VA
LTNG	0 VA	0.00%	0 VA
REC	40980 VA	62.32%	25290 VA

PANEL TOTALS  
 TOTAL CONNECTED LOAD: 42980 VA  
 TOTAL ESTIMATED DEMAND: 27690 VA  
 TOTAL CONNECTED CURRENT: 119 A  
 TOTAL ESTIMATED DEMAND CURRENT: 77 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

**PANELBOARD AND WIRING SCHEDULE**

PANEL: L1P2  
 VOLTAGE: 208Y/120V, 3P, 4W  
 AMPERES: 225 A  
 MAINS TYPE: 225A MCB  
 SPD: SPD  
 MOUNTING: SURFACE

AVAILABLE FAULT CURRENT:  
 PANEL INTERRUPTING RATING:  
 LOCATION: FIRST GRADE C149  
 SUPPLY FROM: DP

CIRCUIT DESCRIPTION	WIRE	GND	C	OC	P	PKT	A	B	C	CKT	P	OC	C	GND	WIRE	CIRCUIT DESCRIPTION
SPARE			20	1	1	0.0	0.0			2	1	20				SPARE
SPARE			20	1	3			0.0	0.0	4	1	20				SPARE
SPARE			20	1	5					6	1	20				SPARE
SPARE			20	1	7	0.0	0.0			8	1	20				SPARE
SPARE			20	1	9			0.0	0.0	10	1	20				SPARE
SPARE			20	1	11					12	1	20				SPARE
SPARE			20	1	13	0.0	0.0			14	1	20				SPARE
SPARE			20	1	15			0.0	0.0	16	1	20				SPARE
SPARE			20	1	17					18	1	20				SPARE
SPARE			20	1	19	0.0	0.0			20	1	20				SPARE
SPARE			20	1	21			0.0	0.0	22	1	20				SPARE
SPARE			20	1	23					24	1	20				SPARE
SPARE			20	1	25	0.0	0.0			26	1	20				SPARE
SPARE			20	1	27			0.0	0.0	28	1	20				SPARE
SPARE			20	1	29					30	1	20				SPARE
SPARE			20	1	31	0.0	0.0			32	1	20				SPARE
SPARE			20	1	33			0.0	0.0	34	1	20				SPARE
SPARE			20	1	35					36	1	20				SPARE
SPARE			20	1	37	0.0	0.0			38	1	20				SPARE
SPARE			20	1	39			0.0	0.0	40	1	20				SPARE
SPARE			20	1	41					42	1	20				SPARE
SPARE			20	1	43	0.0	0.0			44	1	20				SPARE
SPARE			20	1	45			0.0	0.0	46	1	20				SPARE
SPARE			20	1	47					48	1	20				SPARE
SPARE			20	1	49	0.0	0.0			50	1	20				SPARE
SPARE			20	1	51			0.0	0.0	52	1	20				SPARE
SPARE			20	1	53					54	1	20				SPARE
SPARE			20	1	55	0.0	0.0			56	1	20				SPARE
SPARE			20	1	57			0.0	0.0	58	1	20				SPARE
SPARE			20	1	59					60	1	20				SPARE
SPARE			20	1	61	0.0	0.0			62	1	20				SPARE
SPARE			20	1	63			0.0	0.0	64	1	20				SPARE
SPARE			20	1	65					66	1	20				SPARE
SPARE			20	1	67	0.0	0.0			68	1	20				SPARE
SPARE			20	1	69			0.0	0.0	70	1	20				SPARE
SPARE			20	1	71					72	1	20				SPARE
SPARE			20	1	73	0.0	0.0			74	1	20				SPARE
SPARE			20	1	75			0.0	0.0	76	1	20				SPARE
SPARE			20	1	77					78	1	20				SPARE
SPARE			20	1	79	0.0	0.0			80	1	20				SPARE
SPARE			20	1	81			0.0	0.0	82	1	20				SPARE
SPARE			20	1	83					84	1	20				SPARE

TOTAL LOAD (kVA): 0.0 kVA 0.0 kVA 0.0 kVA  
 TOTAL CURRENT (A): 0 A 0 A 0 A

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND
EQUIP	0 VA	100.00%	0 VA
LTNG	0 VA	0.00%	0 VA
REC	0 VA	0.00%	0 VA

PANEL TOTALS  
 TOTAL CONNECTED LOAD: 0 VA  
 TOTAL ESTIMATED DEMAND: 0 VA  
 TOTAL CONNECTED CURRENT: 0 A  
 TOTAL ESTIMATED DEMAND CURRENT: 0 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

**PANELBOARD AND WIRING SCHEDULE**

PANEL: L1P10  
 VOLTAGE: 208Y/120V, 3P, 4W  
 AMPERES: 225 A  
 MAINS TYPE: 225A MCB  
 SPD: SPD  
 MOUNTING: SURFACE

AVAILABLE FAULT CURRENT:  
 PANEL INTERRUPTING RATING:  
 LOCATION: ELEC 110A  
 SUPPLY FROM: DP

CIRCUIT DESCRIPTION	WIRE	GND	C	OC	P	PKT	A	B	C	CKT	P	OC	C	GND	WIRE	CIRCUIT DESCRIPTION
REC SECOND GRADE 127	20	1	1	0.7	0.2					2	1	20				REC SECOND GRADE 124
REC SECOND GRADE 127	20	1	3			0.2	0.5			4	1	20				REC SECOND GRADE 124
REC SECOND GRADE 127	20	1	5					0.7	0.9	6	1	20				REC SECOND GRADE 124
REC SECOND GRADE 121	20	1	7	0.7	0.7					8	1	20				REC SECOND GRADE-1 125-1
REC SECOND GRADE 121	20	1	9			0.9	0.2			10	1	20				REC SECOND GRADE-1 125-1
REC SECOND GRADE 121	20	1	11					0.4	0.9	12	1	20				REC SECOND GRADE-1 125-1
REC SECOND GRADE 128	20	1	13	0.5	0.9					14	1	20				REC SECOND GRADE 126
REC Room 128	20	1	15			0.9	0.7			16	1	20				REC SECOND GRADE 126
REC SECOND GRADE 128	20	1	17					0.2	0.2	18	1	20				REC SECOND GRADE 126
REC FIRST GRADE 129	20	1	19	0.9	0.7					20	1	20				REC FIRST GRADE 129
REC FIRST GRADE 129	20	1	21			0.2	0.5			22	1	20				REC Room 102 100
REC REGIONAL CLASSROOM 120	20	1	23					0.7	0.5	24	1	20				REC MAIN RECEPTION 100
REC Room 120	20	1	25	0.9	0.4					26	1	20				REC MAIN RECEPTION 100
REC REGIONAL CLASSROOM 120	20	1	27			0.4	0.2			28	1	20				REC MAIL WORKROOM 109
REC CONFERENCE 108	20	1	29					0.5	0.2							

**PANELBOARD AND WIRING SCHEDULE**

PANEL: L2P1										AVAILABLE FAULT CURRENT:									
VOLTAGE: 208Y120V, 3P, 4W										PANEL INTERRUPTING RATING: LOCATION: ELEC 255									
AMPERES: 225 A										SUPPLY FROM: DP									
MOUNTING: SURFACE										MOUNTING: SURFACE									
CIRCUIT DESCRIPTION	WIRE	GND	OC	P	CKT	A	B	C	CKT	P	OC	C	GND	WIRE	CIRCUIT DESCRIPTION				
REC FIFTH GRADE 240	20	1	1	0.4	0.5				2	1	20				REC FIFTH GRADE 245				
REC FIFTH GRADE 240	20	1	3			0.7	0.2		4	1	20				REC FIFTH GRADE 238				
REC FIFTH GRADE 240	20	1	5					0.9	0.7	6	1	20			REC FIFTH GRADE 238				
REC FIFTH GRADE 241	20	1	7	0.7	0.9				8	1	20				REC FIFTH GRADE 238				
REC FIFTH GRADE 241	20	1	9			0.4	0.7		10	1	20				REC SPECIAL ED 237				
REC FIFTH GRADE 241	20	1	11					0.9	0.5	12	1	20			REC SPECIAL ED 237				
REC FIFTH GRADE 242	20	1	13	0.9	0.2				14	1	20				REC SPECIAL ED 237				
REC FIFTH GRADE 242	20	1	15			0.7	0.4		16	1	20				REC THIRDO GRADE 236				
REC FIFTH GRADE 242	20	1	17					0.4	0.7	18	1	20			REC THIRDO GRADE 236				
REC FIFTH GRADE 243	20	1	19	0.2	0.9				20	1	20				REC THIRDO GRADE 234				
REC FIFTH GRADE 243	20	1	21			0.7	0.9		22	1	20				REC THIRDO GRADE 234				
REC FIFTH GRADE 243	20	1	23					0.9	0.7	24	1	20			REC THIRDO GRADE 234				
REC TEACHER WORKROOM 244	20	1	25	0.5	0.2				26	1	20				REC THIRDO GRADE 234				
REC TEACHER WORKROOM 244	20	1	27			0.2	0.5		28	1	20				REC COLLABORATIVE...				
REC FIFTH GRADE 245	20	1	29					0.2	0.7	30	1	20			REC COLLABORATIVE...				
REC FIFTH GRADE 245	20	1	31	0.7	0.7				32	1	20				REC COLLABORATIVE...				
REC COLLABORATIVE...	20	1	33			0.2	0.2		34	1	20				REC THIRDO GRADE 249				
REC	20	1	35					0.7	0.7	36	1	20			REC THIRDO GRADE 249				
REC RESOURCE 248	20	1	37	0.9	0.9				38	1	20				REC THIRDO GRADE 249				
REC RESOURCE 248	20	1	39			0.2	0.7		40	1	20				REC GUIDANCE-1 235-1				
REC RESOURCE 248	20	1	41					0.4	0.7	42	1	20			REC				
REC ART-1 253-1	20	1	43	0.9	0.9				44	1	20				REC Room 257-1, 250				
REC ART-1 253-1	20	1	45			0.7	0.7		46	1	20				REC CORRIDOR-1 2,2-1				
REC ART-1 253-1	20	1	47					0.7	0.4	48	1	20			REC				
REC Room 253B-1	20	1	49	0.9	0.7				50	1	20				REC				
REC CORRIDOR-1 2,2-1	20	1	51			0.2	0.2		52	1	20				REC				
REC Room A670, S1.1	20	1	53					0.4	0.7	54	1	20			REC				
REC CORR A670	20	1	55	0.4	1.1				56	1	20				REC CORRIDOR-1 2,2-1				
REC Room A670	20	1	57			0.7	0.5		58	1	20				KILN RM 235A				
REC	20	1	59					0.4	0.5	60	2	60							
REC	20	1	61	1.0	0.0				62	1	20			--	SPARE				
REC	20	1	63			0.5	0.0		64	1	20			--	SPARE				
KILN EXH FAN	20	1	65					0.7	0.0	66	1	20			--	SPARE			
SPARE	--	--	20	1	67	0.0	0.0		68	1	20			--	SPARE				
SPARE	--	--	20	1	69			0.0	0.0	70	1	20			--	SPARE			
SPARE	--	--	20	1	71				0.0	0.0	72	1	20			--	SPARE		
SPARE	--	--	20	1	73	0.0	0.0		74	1	20			--	SPARE				
SPARE	--	--	20	1	75			0.0	0.0	76	1	20			--	SPARE			
SPARE	--	--	20	1	77				0.0	0.0	78	1	20			--	SPARE		
SPARE	--	--	20	1	79	0.0	0.0		80	1	20			--	SPARE				
SPARE	--	--	20	1	81			0.0	0.0	82	1	20			--	SPARE			
SPARE	--	--	20	1	83				0.0	0.0	84	1	20			--	SPARE		
<b>TOTAL LOAD (kVA):</b>	14.5 kVA			14.7 kVA			17.4 kVA												
<b>TOTAL CURRENT (A):</b>	121 A			123 A			145 A												
<b>LOAD CLASSIFICATION</b>	<b>CONNECTED LOAD</b>		<b>DEMAND FACTOR</b>		<b>ESTIMATED DEMAND</b>		<b>PANEL TOTALS</b>												
EQUIP	11480 VA		100.00%		11480 VA		TOTAL CONNECTED LOAD: 46580 VA												
REC	35100 VA		64.25%		22550 VA		TOTAL ESTIMATED DEMAND: 34030 VA												
							TOTAL CONNECTED CURRENT: 129 A												
							TOTAL ESTIMATED DEMAND CURRENT: 94 A												

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

**PANELBOARD AND WIRING SCHEDULE**

PANEL: L2P2										AVAILABLE FAULT CURRENT:									
VOLTAGE: 208Y120V, 3P, 4W										PANEL INTERRUPTING RATING: LOCATION: ELEC 255									
AMPERES: 225 A										SUPPLY FROM: DP									
MOUNTING: SURFACE										MOUNTING: SURFACE									
CIRCUIT DESCRIPTION	WIRE	GND	OC	P	CKT	A	B	C	CKT	P	OC	C	GND	WIRE	CIRCUIT DESCRIPTION				
SPARE	--	--	20	1	1	0.0	0.0		2	1	20				SPARE				
SPARE	--	--	20	1	3			0.0	0.0	4	1	20			SPARE				
SPARE	--	--	20	1	5				0.0	0.0	6	1	20		SPARE				
SPARE	--	--	20	1	7	0.0	0.0		8	1	20				SPARE				
SPARE	--	--	20	1	9			0.0	0.0	10	1	20			SPARE				
SPARE	--	--	20	1	11				0.0	0.0	12	1	20		SPARE				
SPARE	--	--	20	1	13	0.0	0.0		14	1	20				SPARE				
SPARE	--	--	20	1	15				0.0	0.0	16	1	20		SPARE				
SPARE	--	--	20	1	17				0.0	0.0	18	1	20		SPARE				
SPARE	--	--	20	1	19	0.0	0.0		20	1	20				SPARE				
SPARE	--	--	20	1	21				0.0	0.0	22	1	20		SPARE				
SPARE	--	--	20	1	23				0.0	0.0	24	1	20		SPARE				
SPARE	--	--	20	1	25	0.0	0.0		26	1	20				SPARE				
SPARE	--	--	20	1	27				0.0	0.0	28	1	20		SPARE				
SPARE	--	--	20	1	29				0.0	0.0	30	1	20		SPARE				
SPARE	--	--	20	1	31	0.0	0.0		32	1	20				SPARE				
SPARE	--	--	20	1	33				0.0	0.0	34	1	20		SPARE				
SPARE	--	--	20	1	35				0.0	0.0	36	1	20		SPARE				
SPARE	--	--	20	1	37	0.0	0.0		38	1	20				SPARE				
SPARE	--	--	20	1	39				0.0	0.0	40	1	20		SPARE				
SPARE	--	--	20	1	41				0.0	0.0	42	1	20		SPARE				
SPARE	--	--	20	1	43	0.0	0.0		44	1	20				SPARE				
SPARE	--	--	20	1	45				0.0	0.0	46	1	20		SPARE				
SPARE	--	--	20	1	47				0.0	0.0	48	1	20		SPARE				
SPARE	--	--	20	1	49	0.0	0.0		50	1	20				SPARE				
SPARE	--	--	20	1	51				0.0	0.0	52	1	20		SPARE				
SPARE	--	--	20	1	53				0.0	0.0	54	1	20		SPARE				
SPARE	--	--	20	1	55	0.0	0.0		56	1	20				SPARE				
SPARE	--	--	20	1	57				0.0	0.0	58	1	20		SPARE				
SPARE	--	--	20	1	59				0.0	0.0	60	1	20		SPARE				
SPARE	--	--	20	1	61	0.0	0.0		62	1	20				SPARE				
SPARE	--	--	20	1	63				0.0	0.0	64	1	20		SPARE				
SPARE	--	--	20	1	65				0.0	0.0	66	1	20		SPARE				
SPARE	--	--	20	1	67	0.0	0.0		68	1	20				SPARE				
SPARE	--	--	20	1	69				0.0	0.0	70	1	20		SPARE				
SPARE	--	--	20	1	71				0.0	0.0	72	1	20		SPARE				
SPARE	--	--	20	1	73	0.0	0.0		74	1	20				SPARE				
SPARE	--	--	20	1	75				0.0	0.0	76	1	20		SPARE				
SPARE	--	--	20	1	77				0.0	0.0	78	1	20		SPARE				
SPARE	--	--	20	1	79	0.0	0.0		80	1	20				SPARE				
SPARE	--	--	20	1	81				0.0	0.0	82	1	20		SPARE				
SPARE	--	--	20	1	83				0.0	0.0	84	1	20		SPARE				
<b>TOTAL LOAD (kVA):</b>	0.0 kVA			0.0 kVA			0.0 kVA												
<b>TOTAL CURRENT (A):</b>	0 A			0 A			0 A												
<b>LOAD CLASSIFICATION</b>	<b>CONNECTED LOAD</b>		<b>DEMAND FACTOR</b>		<b>ESTIMATED DEMAND</b>		<b>PANEL TOTALS</b>												
EQUIP	0 VA		100.00%		0 VA		TOTAL CONNECTED LOAD: 0 VA												
REC	0 VA		0.00%		0 VA		TOTAL ESTIMATED DEMAND: 0 VA												
							TOTAL CONNECTED CURRENT: 0 A												
							TOTAL ESTIMATED DEMAND CURRENT: 0 A												

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

**PANELBOARD AND WIRING SCHEDULE**

PANEL: L2P1D										AVAILABLE FAULT CURRENT:									
VOLTAGE: 208Y120V, 3P, 4W										PANEL INTERRUPTING RATING: LOCATION: ELEC 219									
AMPERES: 225 A										SUPPLY FROM: DP									
MOUNTING: SURFACE										MOUNTING: SURFACE									
CIRCUIT DESCRIPTION	WIRE	GND	OC	P	CKT	A	B	C	CKT	P	OC	C	GND	WIRE	CIRCUIT DESCRIPTION				
REC FOURTH GRADE 224	20	1	1	0.9	0.7				2	1	20				REC FOURTH GRADE 228				
REC Room 224	20	1	3			0.9	0.9		4	1	20				REC				
REC FOURTH GRADE 224	20	1	5					0.2	0.7	6	1	20			REC FOURTH GRADE-1 221-1				
REC FOURTH GRADE 225	20	1	7	0.2	0.2				8	1	20				REC FOURTH GRADE-1 221-1				
REC FOURTH GRADE 225	20	1	9			0.7	0.7		10	1	20				REC FOURTH GRADE-1 221-1				
REC FOURTH GRADE 225	20	1	11					1.1	0.7	12	1	20			REC REGIONAL CLASSROOM 220				
REC FOURTH GRADE 226	20	1	13	0.9	0.2				14	1	20				REC REGIONAL CLASSROOM 220				
REC FOURTH GRADE 226	20	1	15			0.7	0.7		16	1	20				REC REGIONAL CLASSROOM 220				
REC FOURTH GRADE 226	20	1	17					0.4	0.2	18	1	20			REC PROJECT ROOM 219				
REC FOURTH GRADE-1 227-1	20	1	19	0.7	0.5				20	1	20				REC REGIONAL CLASSROOM 229				
REC FOURTH GRADE-1 227-1	20	1	21			0.2	0.2		22	1	20				REC REGIONAL CLASSROOM 229				
REC FOURTH GRADE-1 227-1	20	1	23																



PANELBOARD AND WIRING SCHEDULE

Table for Panel H1M, 480Y/277V, 3P, 4W, 200 A. Includes circuit descriptions like AHU-KIT, HWP2 MAIN MECH-1 167-1, and load classification summary.

PANELBOARD AND WIRING SCHEDULE

Table for Panel DM, 480Y/277V, 3P, 4W, 800 A. Includes circuit descriptions like RTU-CAF, RTU-MED, and load classification summary.

PANELBOARD AND WIRING SCHEDULE

Table for Panel H1MD, 480Y/277V, 3P, 4W, 100 A. Includes circuit descriptions for various room heaters and loads.

PANELBOARD AND WIRING SCHEDULE

Table for Panel H1MC, 480Y/277V, 3P, 4W, 100 A. Includes circuit descriptions for various room heaters and loads.

PANELBOARD AND WIRING SCHEDULE

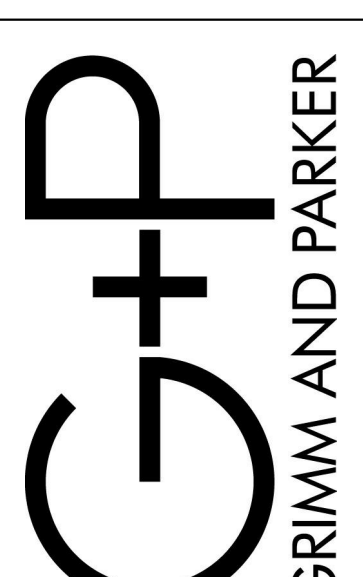
Table for Panel H2M, 480Y/277V, 3P, 4W, 250 A. Includes circuit descriptions like ER-CR1 EXHAUST, ER-CR2 ENRGY WHEEL, and load classification summary.

PANELBOARD AND WIRING SCHEDULE

Table for Panel HLM, 480Y/277V, 3P, 4W, 125 A. Includes circuit descriptions like FHOOD-2, FHOOD-3, and load classification summary.



8609 Westwood Center Dr. Suite 425 Tysons, VA 22182 Tel: 703.903.9100 www.grimm-and-parker.com



GP #21846

ELECTRICAL PANEL SCHEDULES - MECHANICAL LOADS  
Elementary School (ES-29)  
41135 Colaboration Drive, VA 20105

Table with columns: DATE, DESCRIPTION

02/10/20  
ADDENDUM 3

E404

01/22/20  
BID SET

**PANELBOARD AND WIRING SCHEDULE**

PANEL: **LK**  
 VOLTAGE: 208/120V, 3P, 4W  
 AMPERES: 225 A

MAINS TYPE: 225A MCB  
 SPD: SPD  
 MOUNTING: FLUSH

AVAILABLE FAULT CURRENT:  
 PANEL INTERRUPTING RATING: SUPPLY FROM: DIS  
 LOCATION: KITCHEN-1 168-1

CIRCUIT DESCRIPTION	WIRE	GND	OC	P	CKT	A	B	C	CKT	P	OC	GND	WIRE	CIRCUIT DESCRIPTION	
FLY FAN	#12	#12	3/4"	20	1	1	0.9	1.6	2	1	15	3/4"	#12	#12 COFFEE BREWER	
CORD REEL FOR FOOD...	#12	#12	3/4"	15	1	3		1.8	4	1	15	3/4"	#12	#12 CORD REEL FOR BLENDER	
ICE MACHINE BIN	#12	#12	3/4"	20	1	5		1.6	6	1	15	3/4"	#12	#12 ICE CREAM CABINET	
CASHER STAND	#6	#1	2"	125	3	9	7.3	1.0	10	1	15	3/4"	#12	#12 KITCHEN OFFICE	
PASS THRU HOT FOR HOLDING CABINET	#12	#12	3/4"	20	2	15		7.3	12	1	15	3/4"	#12	#12 REACH-IN REFRIGERATION	
NON INSULATED PROOFHOT...	#12	#12	3/4"	20	1	17		0.8	14	2	20	3/4"	#12	#12 REACH-IN REFRIGERATION	
HOOD LIGHT	#12	#12	3/4"	20	1	19	0.4	1.9	20	3	50	1-1/4"	#10	#6 UDS SYSTEM	
WORK TABLE RECEPTACLE	#12	#12	3/4"	20	1	21		1.0	22						
WORK TABLE RECEPTACLE	#12	#12	3/4"	20	1	23		1.0	24	1	20	3/4"	#12	#12 WORKTABLE RECEPTACLE	
DISHABLE RINSER	#12	#12	3/4"	20	3	27	1.2	0.6	28	3	20	3/4"	#12	#12 TWO COMPARTMENT SINK DISPOSER	
GENERAL RECEPTACLES	#12	#12	3/4"	20	1	31	0.9	0.2	32	1	20	3/4"	#12	#12 GENERAL RECEPTACLE	
GENERAL RECEPTACLES	#12	#12	3/4"	20	1	33		0.7	34	1	20	3/4"	#12	#12 RECEPTACLES LOCKERS...	
DRYER	#10	#10	3/4"	30	2	35		1.5	36	1	20	3/4"	#12	#12 WASHER	
REC KITCHEN-1 168-1				20	1	39	1.5	2.1	40	1	20			REC KITCHEN-1 168-1	
SPARE	--	--	--	20	1	41		0.0	42	1	20			SPARE	
SPARE	--	--	--	20	1	43	0.0	0.0	44	1	20			SPARE	
SPARE	--	--	--	20	1	45		0.0	46	1	20			SPARE	
SPARE	--	--	--	20	1	47		0.0	48	1	20			SPARE	
SPARE	--	--	--	20	1	49	0.0	0.0	50	1	20			SPARE	
SPARE	--	--	--	20	1	51		0.0	52	1	20			SPARE	
SPARE	--	--	--	20	1	53		0.0	54	1	20			SPARE	
SPARE	--	--	--	20	1	55	0.0	0.0	56	1	20			SPARE	
SPARE	--	--	--	20	1	57		0.0	58	1	20			SPARE	
SPARE	--	--	--	20	1	59		0.0	60	1	20			SPARE	
SPARE	--	--	--	20	1	61	0.0	0.0	62	1	20			SPARE	
SPARE	--	--	--	20	1	63		0.0	64	1	20			SPARE	
SPARE	--	--	--	20	1	65		0.0	66	1	20			SPARE	
SPARE	--	--	--	20	1	67	0.0	0.0	68	1	20			SPARE	
SPARE	--	--	--	20	1	69		0.0	70	1	20			SPARE	
SPARE	--	--	--	20	1	71		0.0	72	1	20			SPARE	
SPARE	--	--	--	20	1	73	0.0	0.0	74	1	20			SPARE	
SPARE	--	--	--	20	1	75		0.0	76	1	20			SPARE	
SPARE	--	--	--	20	1	77		0.0	78	1	20			SPARE	
SPARE	--	--	--	20	1	79	0.0	0.0	80	1	20			SPARE	
SPARE	--	--	--	20	1	81		0.0	82	1	20			SPARE	
SPARE	--	--	--	20	1	83		0.0	84	1	20			SPARE	
<b>TOTAL LOAD (KVA):</b>						21.2 KVA		20.9 KVA	21.0 KVA						
<b>TOTAL CURRENT (A):</b>						177 A		174 A	175 A						
<b>LOAD CLASSIFICATION</b>		<b>CONNECTED LOAD</b>	<b>DEMAND FACTOR</b>	<b>ESTIMATED DEMAND</b>		<b>PANEL TOTALS</b>									
EQUIP		40750 VA	100.00%	40750 VA		TOTAL CONNECTED LOAD: 53000 VA									
LTNG		1600 VA	100.00%	1600 VA		TOTAL ESTIMATED DEMAND: 57675 VA									
REC		20650 VA	74.21%	15325 VA		TOTAL CONNECTED CURRENT: 175 A									
						TOTAL ESTIMATED DEMAND CURRENT: 160 A									
<b>NOTES:</b> WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.															

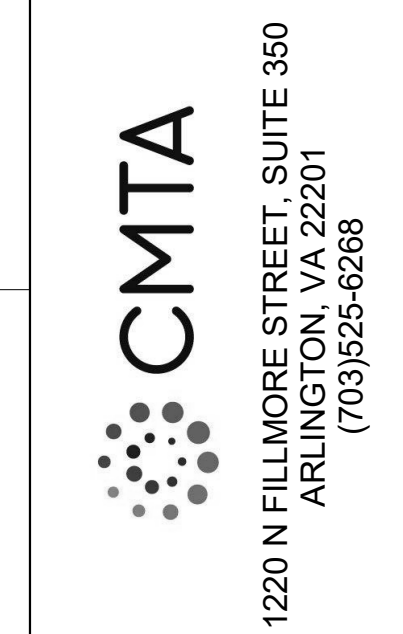
**PANELBOARD AND WIRING SCHEDULE**

PANEL: **HK**  
 VOLTAGE: 480Y/277V, 3P, 4W  
 AMPERES: 225 A

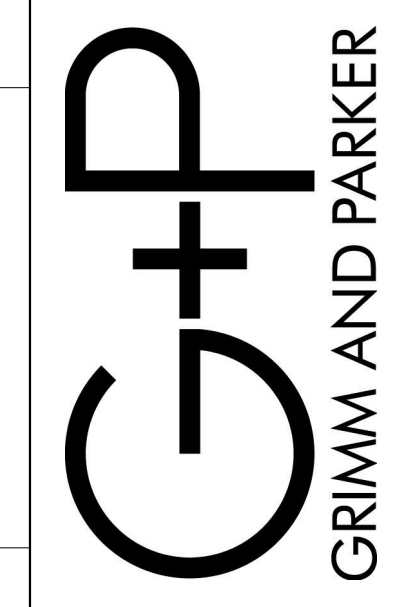
MAINS TYPE: 150A MCB  
 SPD: SPD  
 MOUNTING: FLUSH

AVAILABLE FAULT CURRENT:  
 PANEL INTERRUPTING RATING: SUPPLY FROM: DIS  
 LOCATION: KITCHEN-1 168-1

CIRCUIT DESCRIPTION	WIRE	GND	OC	P	CKT	A	B	C	CKT	P	OC	GND	WIRE	CIRCUIT DESCRIPTION	
DISH MACHINE BOOSTER HEATER	#10	#6	1-1/4"	50	3	1	10.0	8.5	2	3	40	1"	#8	#10 DISH MACHINE	
MIXER	#12	#12	1"	20	3	9	0.7	0.0	10	1	20			SPARE	
SPARE	--	--	--	20	1	13	0.0	0.0	14	1	20			SPARE	
SPARE	--	--	--	20	1	15		0.0	16	1	20			SPARE	
SPARE	--	--	--	20	1	17		0.0	18	1	20			SPARE	
SPARE	--	--	--	20	1	19	0.0	0.0	20	1	20			SPARE	
SPARE	--	--	--	20	1	21		0.0	22	1	20			SPARE	
SPARE	--	--	--	20	1	23		0.0	24	1	20			SPARE	
SPARE	--	--	--	20	1	25	0.0	0.0	26	1	20			SPARE	
SPARE	--	--	--	20	1	27		0.0	28	1	20			SPARE	
SPARE	--	--	--	20	1	29		0.0	30	1	20			SPARE	
SPARE	--	--	--	20	1	31	0.0	0.0	32	1	20			SPARE	
SPARE	--	--	--	20	1	33		0.0	34	1	20			SPARE	
SPARE	--	--	--	20	1	35		0.0	36	1	20			SPARE	
SPARE	--	--	--	20	1	37	0.0	0.0	38	1	20			SPARE	
SPARE	--	--	--	20	1	39		0.0	40	1	20			SPARE	
SPARE	--	--	--	20	1	41		0.0	42	1	20			SPARE	
<b>TOTAL LOAD (KVA):</b>						19.2 KVA		19.2 KVA	19.2 KVA						
<b>TOTAL CURRENT (A):</b>						69 A		69 A	69 A						
<b>LOAD CLASSIFICATION</b>		<b>CONNECTED LOAD</b>	<b>DEMAND FACTOR</b>	<b>ESTIMATED DEMAND</b>		<b>PANEL TOTALS</b>									
EQUIP		57700 VA	100.00%	57700 VA		TOTAL CONNECTED LOAD: 57700 VA									
						TOTAL ESTIMATED DEMAND: 57700 VA									
						TOTAL CONNECTED CURRENT: 69 A									
						TOTAL ESTIMATED DEMAND CURRENT: 69 A									
<b>NOTES:</b> WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.															



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GP #21846

ELECTRICAL PANEL SCHEDULES - KITCHEN  
 Elementary School (ES-29)  
 41135 Collaboration Drive Aldie, VA 20105

DATE	DESCRIPTION
02/10/20	ADDENDUM 3

**E405**  
 01/22/20  
 BID SET



### SWITCHBOARD AND WIRING SCHEDULE

SWITCHBOARD: **MDP**  
 VOLTAGE: 480Y/277V, 3P, 4W  
 AMPERES: 2000 A

KAIC VALUE:  
 KAIC RATING: 100 KAIC  
 LOCATION: MAIN ELEC 166  
 SUPPLY FROM:

CKT	CIRCUIT DESCRIPTION	SETS	WIRE	GND	COND	POLES	FRAME	TRIP	LOAD (kVA)	REMARKS
1	CH-1					3	500 A	500 A	263.3	
2	HL1A					3	400 A	100 A	4.6	
3	HL					3	400 A	100 A	5.7	
4	DM					3	800 A	800 A	468.1	
5										
6										
7	T-DP					3	500 A	500 A	273.8	
8										
9										
10	ATS-EG					3	400 A	200 A	0.0	
11										
12										
13	ATS-ELS					3	400 A	100 A	0.0	
14										
15										
16	HIL					3	400 A	100 A	25.5	
17										
18										
19	SPARE	--	--	--	--	1	--	200 A	0.0	
20	SPARE	--	--	--	--	1	--	200 A	0.0	

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS
EQUIP	81914 VA	100.00%	81914 VA	TOTAL CONN. LOAD: 1041 kVA
HVAC	675948 VA	100.00%	675948 VA	TOTAL EST. DEMAND: 945 kVA
LTNG	14754 VA	100.00%	14754 VA	TOTAL CONN. CURRENT: 1252 A
Motor	2440 VA	100.00%	2440 VA	TOTAL EST. DEMAND CURRENT: 1137 A
Other	60 VA	100.00%	60 VA	
REC	200330 VA	52.40%	105465 VA	
Lighting	2160 VA	100.00%	2160 VA	
Lighting - Exterior	52 VA	125.00%	65 VA	
Heating	19750 VA	100.00%	19750 VA	
Electronic	250 VA	100.00%	250 VA	
WALL HEATER	26000 VA	100.00%	26000 VA	
LTG	20520 VA	100.00%	20520 VA	

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

### PANELBOARD AND WIRING SCHEDULE

PANEL: **DP**  
 VOLTAGE: 208Y/120V, 3P, 4W  
 AMPERES: 1000 A

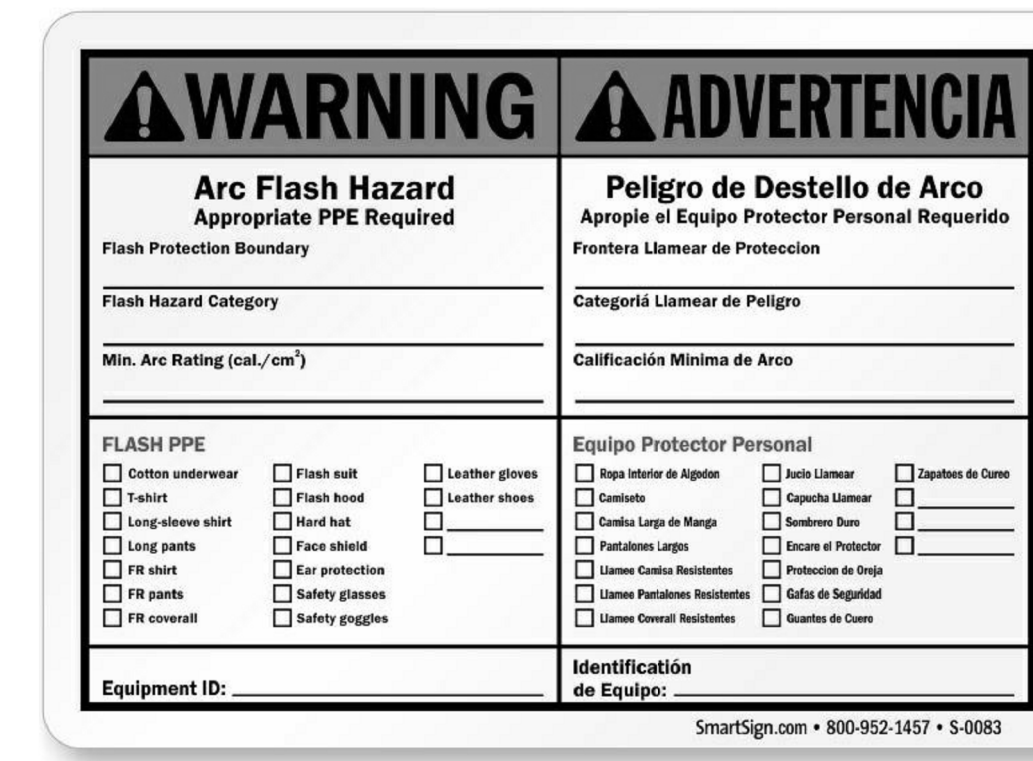
AVAILABLE FAULT CURRENT:  
 PANEL INTERRUPTING RATING: MAIN ELEC 166  
 SUPPLY FROM: T-DP

CIRCUIT DESCRIPTION	WIRE	GND	C	OCP	P	CKT	A	B	C	CKT	P	OCP	C	GND	WIRE	CIRCUIT DESCRIPTION		
L1P1				225	3	1	13.3	16.7		2	1	20	--	--	--	L1PD		
						5			13.9	14.0								
						7	9.9	14.5				15.8	13.3					
L2P1D				225	3	21			9.7	14.7		10	3	225		L2P1		
						11						10.5	17.4					
						13	21.2	9.5										
LK				225	3	15			20.9	11.2		16	3	150		L1PA		
						17						20	1	20	--	SPARE		
						19	5.4	0.0				22	1	20	--	SPARE		
L2P1D				150	3	21			4.9	0.0		5.1	0.0	24	1	20	--	SPARE
						23						26	1	20	--	SPARE		
SPARE	--	--	--	20	1	25	0.0	0.0				28	1	20	--	SPARE		
SPARE	--	--	--	20	1	27			0.0	0.0		30	1	20	--	SPARE		
SPARE	--	--	--	20	1	29						32	1	20	--	SPARE		
SPARE	--	--	--	20	1	31	0.0	0.0				34	1	20	--	SPARE		
SPARE	--	--	--	20	1	33			0.0	0.0		36	1	20	--	SPARE		
SPARE	--	--	--	20	1	35						38	1	20	--	SPARE		
SPARE	--	--	--	20	1	37	0.0	0.0				40	1	20	--	SPARE		
SPARE	--	--	--	20	1	39			0.0	0.0		42	1	20	--	SPARE		
SPARE	--	--	--	20	1	41												

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS
EQUIP	70910 VA	100.00%	70910 VA	TOTAL CONNECTED LOAD: 273785 VA
LTNG	1670 VA	100.00%	1670 VA	TOTAL ESTIMATED DEMAND: 178326 VA
REC	200330 VA	52.40%	105465 VA	TOTAL CONNECTED CURRENT: 750 A
Lighting - Exterior	26 VA	125.00%	33 VA	TOTAL ESTIMATED DEMAND CURRENT: 496 A
Electronic	250 VA	100.00%	250 VA	

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.



BASED ON THE RESULTS OF THE INCIDENT ENERGY STUDY, THE CONTRACTOR SHALL PRODUCE AND INSTALL A WARNING LABEL (ORANGE <40 CAL/CM2) OR DANGER LABEL (RED >40 CAL/CM2) FOR EACH PIECE OF EQUIPMENT AS SPECIFIED IN "SECTION A" IN ACCORDANCE WITH ANSI Z535.4-2002. THE LABEL MUST BE READABLE IN BOTH INDOOR AND OUTDOOR ENVIRONMENTS FOR AT LEAST 3 YEARS AND CONTAIN THE FOLLOWING INFORMATION:

- ARC HAZARD BOUNDARY (INCHES)
- WORKING DISTANCE (INCHES)
- ARC FLASH INCIDENT ENERGY AT THE WORKING DISTANCE (CALORIES/ CM2)
- PPE CATEGORY AND DESCRIPTION INCLUDING THE GLOVE RATING
- VOLTAGE RATING OF THE EQUIPMENT
- LIMITED APPROACH DISTANCE (INCHES)
- RESTRICTED APPROACH DISTANCE (INCHES)
- PROHIBITED APPROACH DISTANCE (INCHES)
- EQUIPMENT/BUS NAME
- DATE PREPARED
- CONTRACTOR NAME AND ADDRESS

### PANELBOARD AND WIRING SCHEDULE

PANEL: **DPV**  
 VOLTAGE: 480Y/277V, 3P, 4W  
 AMPERES: 1600 A

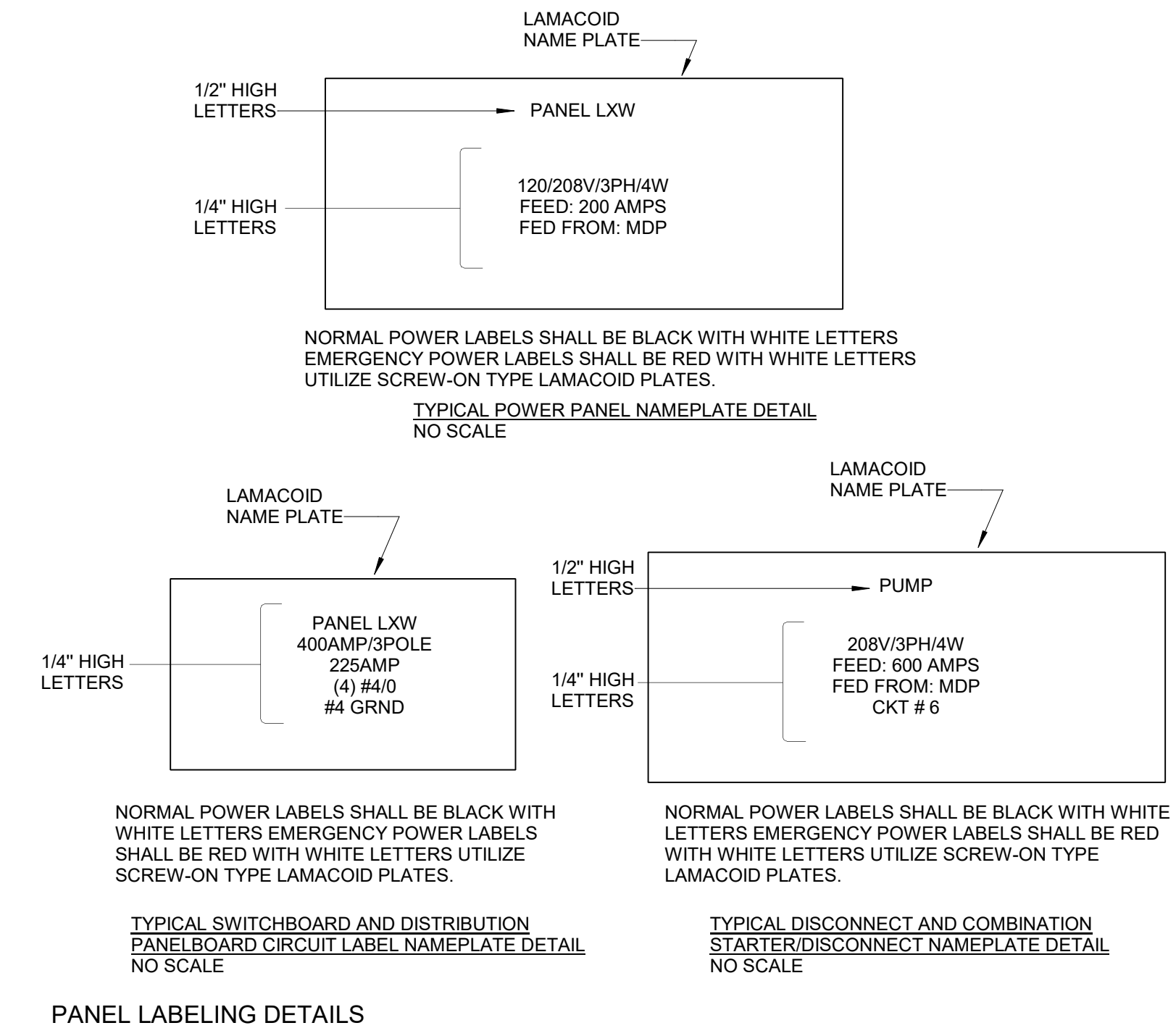
AVAILABLE FAULT CURRENT:  
 PANEL INTERRUPTING RATING: MAIN ELEC 166  
 SUPPLY FROM:

CIRCUIT DESCRIPTION	WIRE	GND	C	OCP	P	CKT	A	B	C	CKT	P	OCP	C	GND	WIRE	CIRCUIT DESCRIPTION
SPARE	--	--	--	20	1	1	0.0	0.0		2	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	3			0.0	0.0		4	1	20	--	SPARE
SPARE	--	--	--	20	1	5						6	1	20	--	SPARE
SPARE	--	--	--	20	1	7	0.0	0.0				8	1	20	--	SPARE
SPARE	--	--	--	20	1	9			0.0	0.0		10	1	20	--	SPARE
SPARE	--	--	--	20	1	11						12	1	20	--	SPARE
SPARE	--	--	--	20	1	13	0.0	0.0				14	1	20	--	SPARE
SPARE	--	--	--	20	1	15			0.0	0.0		16	1	20	--	SPARE
SPARE	--	--	--	20	1	17						18	1	20	--	SPARE
SPARE	--	--	--	20	1	19	0.0	0.0				20	1	20	--	SPARE
SPARE	--	--	--	20	1	21			0.0	0.0		22	1	20	--	SPARE
SPARE	--	--	--	20	1	23						24	1	20	--	SPARE
SPARE	--	--	--	20	1	25	0.0	0.0				26	1	20	--	SPARE
SPARE	--	--	--	20	1	27			0.0	0.0		28	1	20	--	SPARE
SPARE	--	--	--	20	1	29						30	1	20	--	SPARE
SPARE	--	--	--	20	1	31	0.0	0.0				32	1	20	--	SPARE
SPARE	--	--	--	20	1	33			0.0	0.0		34	1	20	--	SPARE
SPARE	--	--	--	20	1	35						36	1	20	--	SPARE
SPARE	--	--	--	20	1	37	0.0	0.0				38	1	20	--	SPARE
SPARE	--	--	--	20	1	39			0.0	0.0		40	1	20	--	SPARE
SPARE	--	--	--	20	1	41						42	1	20	--	SPARE

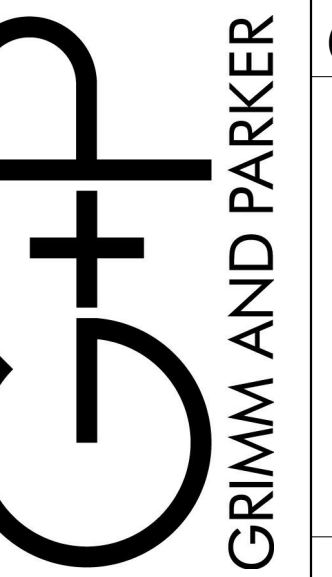
LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS
	0 VA		0 VA	TOTAL CONNECTED LOAD: 0 VA
	0 VA		0 VA	TOTAL ESTIMATED DEMAND: 0 VA
	0 A		0 A	TOTAL CONNECTED CURRENT: 0 A
	0 A		0 A	TOTAL ESTIMATED DEMAND CURRENT: 0 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.



CMTA  
 1220 N FILLMORE STREET, SUITE 350  
 ARLINGTON, VA 22201  
 (703)525-6266

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 Suite 425  
 Tysons, VA 22182  
 Tel: 703.903.9100  
 www.grimmandparker.com



GP #21846

ELECTRICAL PANEL SCHEDULES - MAIN PANELS  
 Elementary School (ES-29)  
 41135 Collaboration Drive Aldie, VA 20105

DATE	DESCRIPTION
02/10/20	ADDENDUM 3

E407

01/22/20  
 BID SET

### FOUR-WIRE FEEDER SCHEDULE

FEEDER NAME	AMPS	WIRE SIZE	GROUND WIRE SIZE	CONDUIT SIZE	208V MAX LENGTH	480V MAX LENGTH
26	20	#12	#12	3/4"	98'	227'
27	30	#10	#10	3/4"	109'	250'
28	40	#8	#10	1"	123'	285'
29	60	#4	#10	1-1/4"	128'	295'
30	70	#4	#8	1-1/4"	169'	390'
31	100	#1	#8	1-1/4"	176'	406'
32	125	#1	#6	1-1/2"	171'	394'
33	150	#1/0	#6	2"	182'	420'
34	175	#2/0	#6	2"	182'	418'
35	200	#3/0	#6	2"	192'	443'
36	225	#4/0	#4	2-1/2"	203'	468'
37	250	#250MCM	#4	2-1/2"	202'	466'
38	300	#350MCM	#4	3"	211'	487'
39	350	#400MCM	#2	3"	194'	450'
40	400	#500MCM	#2	3-1/2"	191'	442'
41	450	(2)#4/0	(2)#1	(2) 2-1/2"	203'	468'
42	500	(2)#250MCM	(2)#1	(2) 2-1/2"	202'	466'
43	600	(2)#350MCM	(2)#1	(2) 3"	210'	487'
44	700	(2)#500MCM	(2)#1/0	(2) 3-1/2"	219'	505'
45	800	(2)#600MCM	(2)#1/0	(2) 3-1/2"	207'	478'
46	1000	(3)#400MCM	(3)#2/0	(3) 3-1/2"	205'	474'
47	1200	(3)#600MCM	(3)#3/0	(3) 3-1/2"	207'	478'
48	1600	(4)#600MCM	(4)#4/0	(4) 3-1/2"	207'	478'
49	2000	(5)#600MCM	(5)#250MCM	(5) 3-1/2"	207'	478'
50	2500	(6)#600MCM	(6)#350MCM	(6) 3-1/2"	199'	459'

### BRANCH CIRCUIT SCHEDULE CHART

CIRCUIT TYPE	CIRCUIT BREAKER	CONDUCTORS (COPPER)	CONDUIT
1 POLE - 1 PHASE 2 WIRE + GROUND	20A-1P	2 #12 + 1 #12 GROUND	3/4"
	30A-1P	2 #10 + 1 #10 GROUND	3/4"
	40A-1P	2 #8 + 1 #10 GROUND	3/4"
2 POLE - 1 PHASE 2 WIRE + GROUND	50A-1P	2 #6 + 1 #10 GROUND	3/4"
	60A-1P	2 #4 + 1 #10 GROUND	1 1/4"
	20A-2P	2 #12 + 1 #12 GROUND	3/4"
2 POLE - 1 PHASE 3 WIRE + GROUND	30A-2P	2 #10 + 1 #10 GROUND	3/4"
	40A-2P	2 #8 + 1 #10 GROUND	3/4"
	50A-2P	2 #6 + 1 #10 GROUND	3/4"
2 POLE - 1 PHASE 3 WIRE + GROUND	60A-2P	2 #4 + 1 #10 GROUND	1 1/4"
	20A-2P	3 #12 + 1 #12 GROUND	3/4"
	30A-2P	3 #10 + 1 #10 GROUND	3/4"
3 POLE - 3 PHASE 3 WIRE + GROUND	40A-2P	3 #8 + 1 #10 GROUND	3/4"
	50A-2P	3 #6 + 1 #10 GROUND	3/4"
	60A-2P	3 #4 + 1 #10 GROUND	1 1/4"
3 POLE - 3 PHASE 3 WIRE + GROUND	20A-3P	3 #12 + 1 #12 GROUND	3/4"
	30A-3P	3 #10 + 1 #10 GROUND	3/4"
	40A-3P	3 #8 + 1 #10 GROUND	3/4"
3 POLE - 3 PHASE 4 WIRE + GROUND	50A-3P	3 #6 + 1 #10 GROUND	3/4"
	60A-3P	3 #4 + 1 #10 GROUND	1 1/4"
	20A-3P	4 #12 + 1 #12 GROUND	3/4"
3 POLE - 3 PHASE 4 WIRE + GROUND	30A-3P	4 #10 + 1 #10 GROUND	3/4"
	40A-3P	4 #8 + 1 #10 GROUND	3/4"
	50A-3P	4 #6 + 1 #10 GROUND	1"
60A-3P	4 #4 + 1 #10 GROUND	1 1/4"	

### ENERGY CODE CALCULATIONS IECC 2015

2015 IECC TABLE C405.4.2(1) INTERIOR LIGHTING POWER ALLOWANCES: BUILDING AREA METHOD SCHOOL/UNIVERSITY.	LPD (W/FT <sup>2</sup> ) 0.87
BUILDING SQUARE FOOTAGE	110,895
ALLOWABLE INTERIOR LIGHTING POWER (KW)	96.5
ACTUAL INTERIOR LIGHTING POWER (KW)	TBD
ACTUAL INTERIOR LIGHTING POWER DENSITY	TBD

### LIGHTING LOAD DEMAND FACTOR

SCHOOL (NEC TABLE 220.42)	100%
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### RECEPTACLE LOAD DEMAND FACTOR

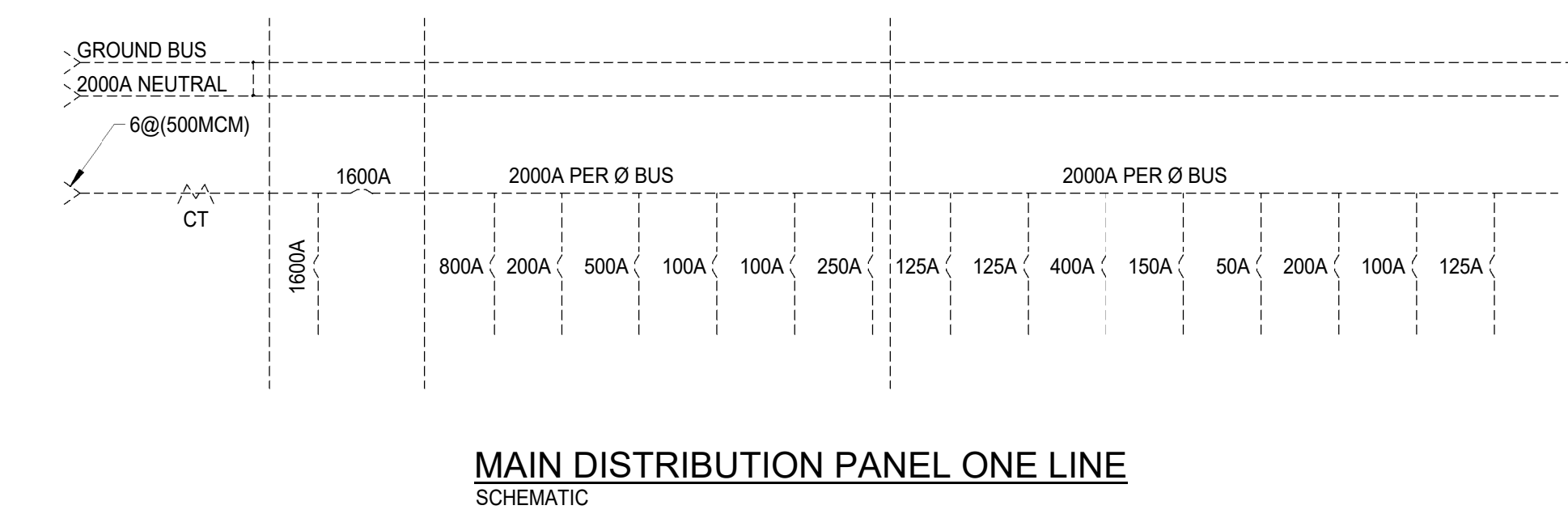
NEC TABLE 220.44	FIRST 10KVA OR LESS AT 100% REMAINDER OVER 10KVA 50%
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### GENERAL NOTES (RISER):

- PROVIDE ENGRAVED LAMACOID LABELS FOR ALL POWER DISTRIBUTION EQUIPMENT FURNISHED OR MODIFIED IN THIS PROJECT. LABELS PER DETAILS AND SPECIFICATIONS.
- SERVICE EQUIPMENT SHALL BE MARKED WITH THE MAXIMUM AVAILABLE FAULT-CURRENT AT THE EQUIPMENT AND THE DATE THE CALCULATION WAS PERFORMED. APPLY A TYPE-WRITTEN ADHESIVE LABEL WITH WHITE BACKGROUND, 1/2" HIGH BLACK LETTERING.
- CONTRACTOR SHALL INSTALL SEPARATE CONDUITS, PULL BOXES, ETC. FOR EACH EMERGENCY POWER BRANCH & NORMAL POWER PER NEC FOR COMPLETE SEPARATION OF POWER SERVICES.
- ALL CIRCUIT BREAKERS AND/OR DISCONNECTS SERVING THE PRIMARY SIDE OF A TRANSFORMER WHICH ARE NOT WITHIN SITE OF THE TRANSFORMER SHALL BE PROVIDED WITH PERMANENTLY INSTALLED MEANS TO LOCK THE BREAKER IN THE OFF POSITION. SUCH TRANSFORMERS SHALL HAVE THE ROOM NAME AND NUMBER OF THE PRIMARY DISCONNECTING MEANS ENGRAVED ON THE EQUIPMENT NAMEPLATE.
- REFER TO SPECIFICATIONS FOR ARC FLASH AND RELATED POWER SYSTEM STUDY REQUIREMENTS.

### ELECTRICAL LOAD SUMMARY

LOAD	CONNECTED LOAD ESTIMATE (KVA)	ALLOWED DEMAND NEC	DEMAND LOAD (KVA)
RECEPTACLES	221.7	FIRST 10KVA - 100% OVER 10KVA - 50%	115.85
LIGHTING	55.4	100%	55.4
HVAC	443.6	100%	443.6
KITCHEN	110	60%	66
MOTORS (ELEVATOR)	35	100%	35
MISC	100	100%	100
WATER HEATING	5	100%	5
<b>TOTAL:</b>	<b>966.2KVA</b>		<b>816.35KVA</b>



### NOTES:

- CONDUITS SMALLER THAN 3" MAY BE UPGRADED TO THE NEXT LARGER SIZE WHEN USED FOR UNDERGROUND INSTALLATIONS OR LONG RUNS.
- CONDUIT SIZES INDICATED ARE MINIMUM RECOMMENDED SIZES, AND MAY BE INCREASED FOR LONG CIRCUITS, OR WHERE MULTIPLE BENDS ARE NECESSARY.
- THE FEEDER NAME REPRESENTS ITS BASE AMPACITY AND THE NUMBER OF WIRES (NOT INCLUDING GROUND).
- THE BASE AMPACITY INDICATED IN THE FEEDER NAME DOES NOT ACCOUNT FOR VOLTAGE DROP, FAULT CURRENT OR TEMPERATURE.
- ALL FEEDERS FOR 120/208V PANELBOARDS WITH ISOLATED GROUND (IG) BUS SHALL INCLUDE A SEPARATE IG CONDUCTOR TIED TO THE IG BUS.
- THE RATING OF THE OVERCURRENT PROTECTION DEVICE MAY BE LOWER, BUT NOT HIGHER, THAN THE RATING OF THE FEEDER THAT IT PROTECTS.
- MAXIMUM LIMITS ON THE NUMBER OF TURNS AND CONDUIT LENGTH SHOULD BE VERIFIED FOR ALL UNDERGROUND INSTALLATIONS.
- MAXIMUM FEEDER LENGTH IS THE LENGTH THAT PRODUCES A 3% VOLTAGE DROP AT THE SPECIFIED VOLTAGE, WHEN THE LOAD IS AT THE FULL AMPACITY OF THE FEEDER, AND HAS A POWER FACTOR OF 90%.
- MAXIMUM FEEDER LENGTH DOES NOT APPLY IF THE FEEDER IS SIZED FOR VOLTAGE DROP RATHER THAN AMPACITY.

### GENERAL NOTES

- REFER TO SHEET E001 FOR SPECIFICATIONS SYMBOLS AND ABBREVIATIONS.
- REFER TO FEEDER AND BRANCH CIRCUIT SCHEDULE FOR FEEDER AND BRANCH CIRCUIT CONDUCTOR SIZES (I/O/N).
- REFER TO TRANSFORMER SCHEDULE FOR TRANSFORMER PRIMARY AND SECONDARY FEEDER SIZES.

### SHEET NOTES

- PROVIDE SURGE PROTECTION DEVICE (SPD) TYPE 2 UNIT FOR DISTRIBUTION PANELBOARD AS SPECIFIED (DIVISION 26). PROVIDE UNIT INTEGRAL TO PANELBOARD OR ALIGN COVERS AND INSTALL WITHOUT GAP BETWEEN SPD AND PANELBOARD.
- PROVIDE SURGE PROTECTION DEVICE (SPD) TYPE 1 UNIT FOR MAIN SERVICE SWITCHBOARD AS SPECIFIED (DIVISION 26). PROVIDE UNIT INTEGRAL TO SWITCHBOARD.

### DRY TYPE 480V - 120/208V TRANSFORMER SCHEDULE

XFMR NAME	RATING (KVA)	480V FLA (A)	480V OVP CB	480V FEEDER	EQUIPMENT GROUND	120/208V FLA (A)	120/208V OVP CB	120/208V FEEDER	BONDING JUMPER	GROUNDING ELECTRODE
T-3	3	3.6	3P/15A	(3)#12, 3/4"	#12	8.3	3P/15A	(4)#12, 3/4"	#8	#8
T-6	6	7.2	3P/15A	(3)#12, 3/4"	#12	17	3P/20A	(4)#12, 3/4"	#8	#8
T-9	9	11	3P/15A	(3)#12, 3/4"	#12	25	3P/30A	(4)#10, 3/4"	#8	#8
T-15	15	18	3P/25A	(3)#10, 3/4"	#10	42	3P/60A	(4)#6, 1-1/4"	#8	#8
T-30	30	36	3P/45A	(3)#8, 3/4"	#10	83	3P/100A	(4)#2, 1-1/4"	#8	#8
T-45	45	54	3P/70A	(3)#4, 1-1/4"	#8	125	3P/150A	(4)#1/0, 2"	#6	#6
T-75	75	90	3P/125A	(3)#1, 1-1/2"	#6	208	3P/250A	(4)#250MCM, 2-1/2"	#2	#2
T-112	112.5	135	3P/175A	(3)#2/0, 2"	#6	312	3P/400A	(4)#500MCM, #2G, 3-1/2"	#1/0	#1/0
T-150	150	180	3P/225A	(3)#4/0, 2-1/2"	#4	416	3P/500A	(2)SETS - (4)#250MCM, 2-1/2"	#1/0	#1/0
T-225	225	271	3P/350A	(3)#500MCM, 3-1/2"	#2	625	3P/800A	(2)SETS - (4)#600MCM, 3-1/2"	#2/0	#2/0
T-300	300	361	3P/450A	(2)SETS - (3)#4/0, 2-1/2"	#1	833	3P/1000A	(3)SETS - (4)#400MCM, 3-1/2"	#2/0	#2/0
T-500	500	602	3P/800A	(2)SETS - (3)#600MCM, 3-1/2"	#1/0	1389	3P/1800A	(5)SETS - (4)#600MCM, 3-1/2"	#250MCM	#250MCM
T-750	750	903	3P/1200A	(3)SETS - (3)#600MCM, 3-1/2"	#3/0	2083	3P/2500A	(6)SETS - (4)#600MCM, 3-1/2"	#350MCM	#350MCM

### NOTES:

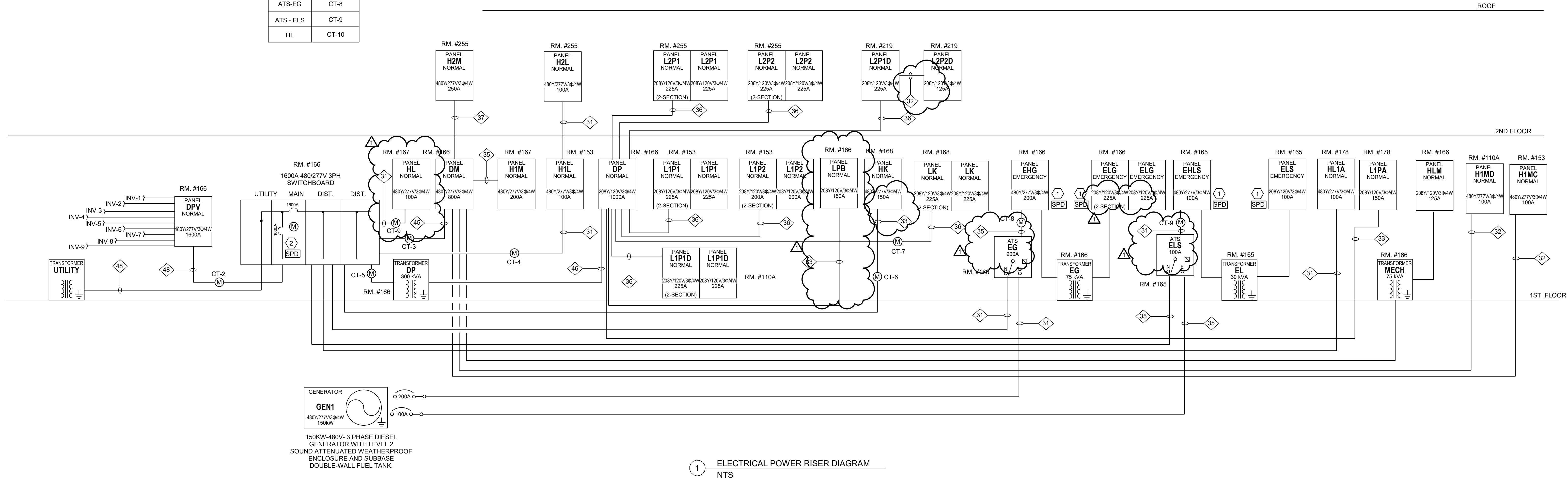
- REFER TO FEEDER SCHEDULE FOR FEEDER CONDUCTOR AND CONDUIT SIZES.
- FEEDER AND BREAKER/FUSE/SWITCH SIZES MUST BE SIZED TO INCLUDE THE LCL ADDITION.
- TRANSFORMERS THAT ARE 45KVA AND LESS, MAY BE WALL OR CEILING MOUNTED.
- TRANSFORMERS LARGER THAN 112.5KVA SHOULD BE SPECIFIED AS COMPLETELY ENCLOSED, IF LOCATED IN NON-FIRE-RATED WALLS.
- 3" MINIMUM THICK HOUSEKEEPING PAD SHALL BE SPECIFIED FOR ALL FLOOR MOUNTED TRANSFORMERS.

### CT SCHEDULE GENERAL NOTE:

METERING SYSTEM SHALL BE E-GAUGE PRO ALL METERS SHALL BE CAPABLE OF RECORDING ELECTRICAL ENERGY USAGE WITH A MINIMUM RECORDING INTERVAL OF 15 MINUTES. THE RECORDED DATA SHALL BE REPORTED HOURLY, DAILY, MONTHLY AND ANNUALLY TO THE ENERGY MANAGEMENT SYSTEM (EMS). THE METERING SYSTEM SHALL BE CAPABLE OF MAINTAINING ALL DATA COLLECTED FOR A MINIMUM OF 36 MONTHS. PROVIDE GRAPHS FOR LIGHTING, MECHANICAL, AND KITCHEN LOADS. PROVIDE NETWORK CONNECTION TO METERING SYSTEM AS REQUIRED FOR REPORTING.

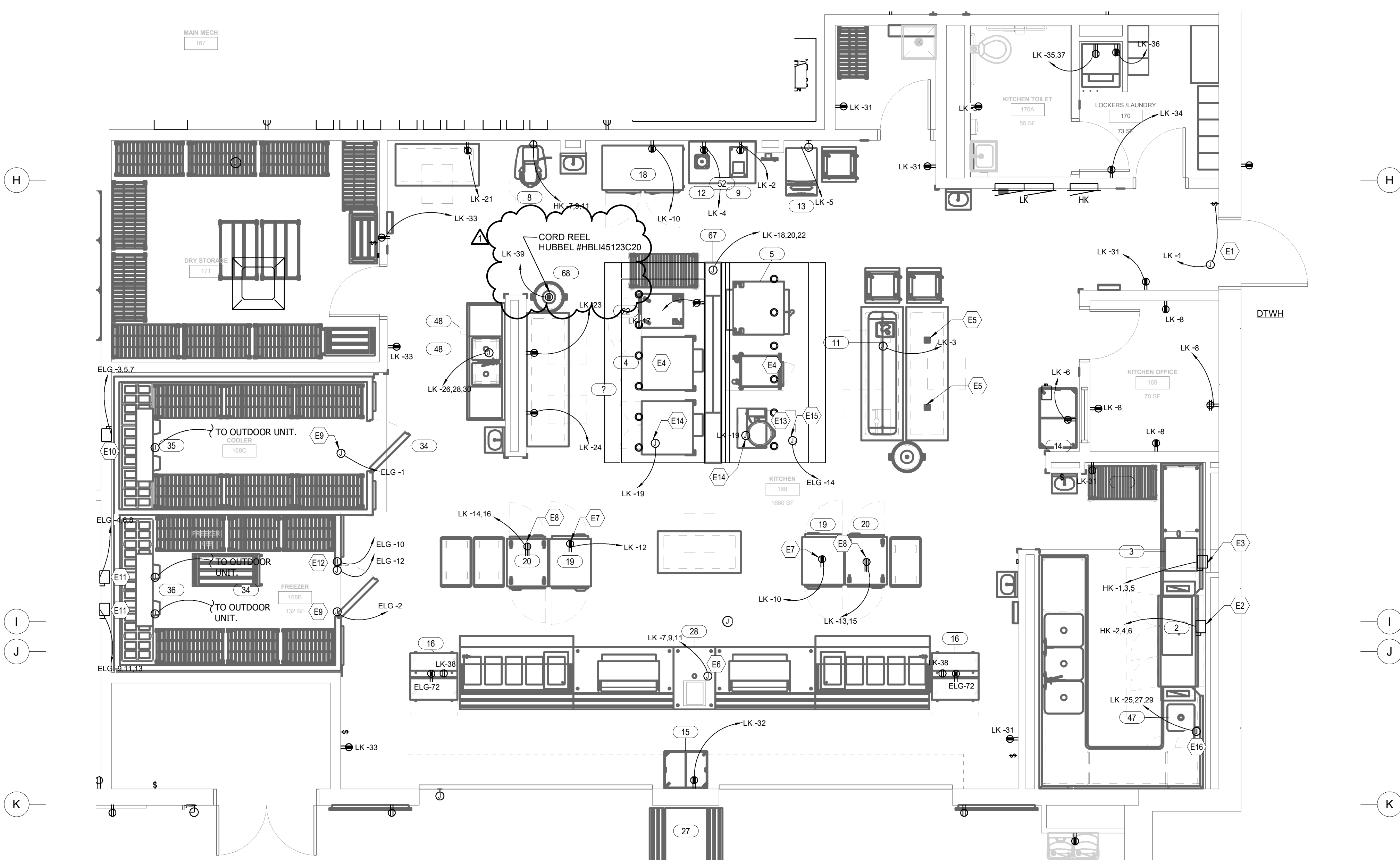
### CT SCHEDULE

LOAD	CT NAME
MDP	CT-1
DPV	CT-2
DM	CT-3
H1L	CT-4
T-DP	CT-5
HK	CT-6
LK	CT-7
ATS-EG	CT-8
ATS-ELS	CT-9
HL	CT-10



1 ELECTRICAL POWER RISER DIAGRAM NTS

DATE	DESCRIPTION
02/10/20	ADDENDUM 3



**1 ENLARGED KITCHEN PLAN**  
SCALE: 1/4" = 1'-0"  
0 1' 2' 4' 8' 12' 16'

- GENERAL NOTES (KITCHEN):**
- A. PROVIDE BREAKER LOCK-OUT PROVISIONS IN PANELS FOR BREAKERS THAT SERVE HARD-WIRED KITCHEN EQUIPMENT CONNECTIONS.
  - B. KITCHEN PLANS ARE BASED UPON COORDINATION WITH THE KITCHEN DESIGN CONSULTANT'S DRAWINGS. ALL ROUGH-INS AND FINAL CONNECTIONS SHALL BE VERIFIED WITH KITCHEN EQUIPMENT SHOP DRAWINGS AND ARCHITECTURAL PLANS AND ELEVATIONS PRIOR TO CONSTRUCTION.
  - C. FOR ALL CIRCUITS SERVING RECEPTACLES AND EQUIPMENT IN KITCHEN AND SERVING AREAS, PROVIDE "GFCI" TYPE CIRCUIT BREAKERS FOR THOSE CIRCUITS. FOR ALL RECEPTACLES THAT ARE CONNECTED TO "GFCI" CIRCUIT BREAKERS, PROVIDE PERMANENT LABELS ON THE RECEPTACLE COVERPLATE INDICATING "GFCI" PROTECTED CIRCUIT.
  - D. PROVIDE #302 STAINLESS STEEL COVERPLATES ON ALL OUTLETS LOCATED ON A WALL WITH STAINLESS STEEL COVERINGS. VERIFY LOCATIONS OF THESE STAINLESS STEEL WALLS WITH THE KITCHEN VENDOR DRAWINGS / SHOP DRAWINGS.
  - E. REFER TO KITCHEN ELECTRICAL CONNECTIONS SCHEDULES FOR MOUNTING HEIGHTS OF RECEPTACLES AND JUNCTION BOXES.
  - F. VERIFY EXACT OUTLET NEMA CONFIGURATIONS WITH EQUIPMENT SUPPLIER PRIOR TO CONSTRUCTION.
  - G. REFER TO 'K' SERIES SHEETS FOR ALL ADDITIONAL WIRING REQUIREMENTS BETWEEN EQUIPMENT. (SPECIFICALLY K-202)

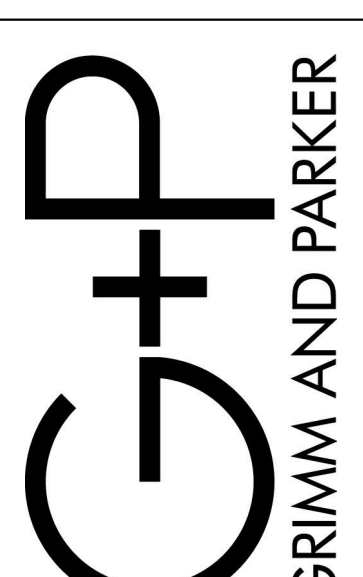
- KEY NOTES**
- E1 PROVIDE DEDICATED CONNECTION TO FLY FAN. EXTEND CIRCUIT THROUGH DOOR SWITCH FOR CONNECTION / INTEGRATION.
  - E2 PROVIDE NEMA 4X, 60A, 3P DISCONNECT FOR DISH MACHINE. COORDINATE EXACT LOCATION WITH KITCHEN SHOP DRAWINGS. EXTEND CIRCUIT TO EQUIPMENT CONNECTIONS ACCORDINGLY.
  - E3 PROVIDE NEMA 4X, 60A, 3P DISCONNECT FOR BOOSTER HEATER. COORDINATE EXACT LOCATION WITH KITCHEN SHOP DRAWINGS.
  - E4 EQUIPMENT UNDER HOOD SERVED BY INTEGRATED RECEPTACLES IN UDS SYSTEM.
  - E5 PROVIDE CONNECTION TO RETRACTABLE CORD REEL FOR FOOD SERVICE EQUIPMENT TO CONNECT.
  - E6 PROVIDE 125A CONNECTION TO CASHIER STAND. EXTEND TO MAIN BREAKER PANEL IN UNIT. REFER TO K-30L.
  - E7 PROVIDE NEMA 5-15 RECEPTACLE ON S-CORD FROM CEILING. REFER TO DETAIL ON K202.
  - E8 PROVIDE NEMA L14-20P ON S-CORD FROM CEILING. REFER TO DETAIL ON K202.
  - E9 PROVIDE 120V CONNECTION TO COOLER / FREEZER MSC LOADS. PROVIDE 2#12, 1#12 GROUND IN 3/4" CONDUIT.
  - E10 PROVIDE 30A, NEMA 3R, 3P DISCONNECT FOR OUTDOOR COOLER CONDENSING UNIT. EXTEND 2#12, 1#12 GROUND IN 3/4" CONDUIT TO INDOOR UNIT. PROVIDE LOAD DISCONNECT AT INDOOR UNIT.
  - E11 PROVIDE 30A, NEMA 3R, 3P DISCONNECT FOR OUTDOOR FREEZER UNIT. EXTEND 4#12, 1#12 GROUND IN 3/4" CONDUIT TO INDOOR UNIT. PROVIDE LOAD DISCONNECT AT INDOOR UNIT.
  - E12 PROVIDE CIRCUITS FOR HEAT TRACE. PROVIDE GFPE BREAKERS.
  - E13 EXTEND EXHAUST FAN CIRCUIT ON ROOF TO FAN CONTROL PANEL FOR INTERLOCK.
  - E14 PROVIDE 120V CONNECTION TO HOOD LIGHT AND CONNECT TO HOOD CONTROL CENTER.
  - E15 PROVIDE 120V CONNECTION TO HOOD FIRE SUPPRESSION SYSTEM.
  - E16 EXTEND DISPOSAL CIRCUIT TO CONTROL PANEL.

**ELECTRICAL ROUGH-IN SCHEDULE**

ITEM	QTY	DESCRIPTION	VOLT	PHASE	KW	HP	AMP	CONN	SUGGESTED ROUTING				REMARKS
									WL	FLR	DFA	HGT	
1	1	FLY FAN	115	1	-	3/4	7.5	J-BOX	X	-	-	96	NOTE 1, EXTEND CIRCUIT THRU DOOR SWITCH TO MOTOR UNDER DIV 26
2	1	DISHMACHINE	480	3	-	-	30.6	J-BOX	X	-	-	12	NOTE 1, 8, 14, MCA 40, MOP 40
3	1	BOOSTER HEATER	480	3	15	-	18.1	J-BOX	X	-	-	12	NOTE 1, 30 AMP BREAKER REQUIRED
4	2	CONVECTION DOUBLE OVEN, MOBILE	(2) 115	1	-	3/4	8	C&P	-	-	-	-	NEMA 5-15P, SERVED BY ITEM 67
5	1	CONVECTION OVEN WITH WATER INJECTION	(2) 115	1	-	-	10	C&P	-	-	-	-	NEMA 5-20P, SERVED BY ITEM 67
6	1	TILTING KETTLE, 12-GALLON	115	1	-	-	5	C&P	-	-	-	-	NEMA 5-15P, SERVED BY ITEM 67
7	1	STACKED STEAMER	115	1	-	-	4	J-BOX	-	-	-	-	SERVED BY ITEM 67
8	1	MIXER, 40-QUART	480	3	-	1-1/2	2.7	J-BOX	X	-	-	44	NOTE 1
9	1	COFFEE BREWER	115	1	1.5	-	13	C&P	X	-	-	54	NEMA 5-15P
11	1	FOOD PROCESSOR	115	1	-	3	15	C&P	-	-	-	-	NEMA 5-15P, SERVED BY ITEM 71 ABOVE
12	1	BLENDER	115	1	-	3-3/4	15	C&P	-	-	-	-	NEMA 5-15P, SERVED BY ITEM 71 ABOVE
13	1	ICE MACHINE/BIN	115	1	-	-	13.2	J-BOX	X	-	-	36	NOTE 11, PROVIDE CORD SET AND MATCHING RECEPTACLE UNDER DIVISION 26
14	1	ICE CREAM CABINET, MOBILE	115	1	-	1/3	1.1	C&P	X	-	-	18	NEMA 5-15P
15	1	ICE CREAM CABINET, MOBILE	115	1	-	1/3	1.1	C&P	X	-	-	18	NEMA 5-15P
16	2	MILK COOLER, MOBILE	115	1	-	1/6	3	C&P	-	-	-	-	NEMA 5-15P, SERVED BY RECEPTACLE ON ITEM 29
18	1	REACH-IN REFRIGERATOR, MOBILE	115	1	-	1/2	10.4	C&P	X	-	-	60	NEMA 5-20P
19	2	PASS-THRU REFRIGERATOR, MOBILE	115	1	-	1/3	8.3	C&P	-	-	X	80	NEMA 5-15P, S-CORD FROM CEILING, REFER TO DETAIL #1, K202
20	2	PASS-THRU HOT FOOD HOLDING CABINET, MOBILE	115/208	1	1.5	-	7.8	C&P	-	-	X	80	NEMA L14-20P, S-CORD FROM CEILING, REFER TO DETAIL #1, K202
22	1	NON-INSULATED PROOF/HOT CABINET, MOBILE	115	1	2	-	16.7	C&P	X	-	-	48	NEMA 5-20P
28	1	CASHIER STAND	115/208	3	-	-	62.4	J-BOX	-	X	-	5	NOTE 1, 13, 125 AMP SERVICE SIZE
29	2	HOT FOOD COUNTER	-	-	-	-	-	-	-	-	-	-	SERVED BY DISTRIBUTION PANEL IN ITEM 28
30	2	COLD FOOD COUNTER	-	-	-	-	-	-	-	-	-	-	SERVED BY DISTRIBUTION PANEL IN ITEM 28
34	1	WALK-IN COOLER/FREEZER	115	1	-	-	8	J-BOX	-	-	X	96	NOTE 1, 3
35	1	COOLER REFRIGERATION SYSTEM	115	1	-	-	1.8	J-BOX	-	-	X	96	NOTE 1, 3, 4
36	1	FREEZER REFRIGERATION SYSTEM	208	3	-	1	6.4	J-BOX	-	-	-	-	NOTE 1, MCA 15, MOP 15
44	1	CLEAN DISHTABLE	208	3	-	-	-	-	-	-	-	-	NOTE 1, 4, 5
47	1	DISPOSER WITH CONTROL PANEL (SOILED DISHTABLE)	208	3	-	3	9.9	J-BOX	X	-	-	18	NOTE 1, 6
48	1	DISPOSER WITH CONTROL PANEL (TWO COMPARTMENT SINK)	208	3	-	1-1/2	4	J-BOX	X	-	-	18	NOTE 1, 6
53	1	WORKTABLE, MOBILE	(2)115	1	-	-	16	RECP	X	-	-	54	NEMA 5-20R, DUPLEX CONVENIENCE
55	1	WORKTABLE WITH SINK	115	1	-	-	16	RECP	X	-	-	54	NEMA 5-20R, DUPLEX CONVENIENCE
66A	1	VENTILATOR	115	1	-	-	12	J-BOX	-	-	X	84	NOTE 1, EXTEND SWITCHED CIRCUIT TO 66B, REFER TO K902 FOR REQUIREMENTS
66B	1	VENTILATOR	-	-	-	-	-	-	-	-	-	-	INCLUDED IN 66A, EXTEND SWITCHED CIRCUIT FROM 26 A
66C	1	FIRE SUPPRESSION SYSTEM	115	1	-	-	12	J-BOX	-	-	X	84	NOTE 1, 12
66D	1	FAN CONTROL PANEL	115	1	-	-	12	J-BOX	-	-	X	84	NOTE 1, 10
66F	1	ROOM TEMPERATURE MONITOR	-	-	-	-	-	-	-	-	-	-	EXTEND LOW VOLTAGE CIRCUIT UNDER DIVISION 26
67	1	UTILITY DISTRIBUTION SYSTEM	115/208	3	12.4	-	34.4	J-BOX	-	-	X	60	NOTE 1, 80 AMP SERVICE SIZE, REFER TO K 801 FOR REQUIREMENTS
71	2	RETRACTABLE CORD REEL	115	1	-	-	16	RECP	-	-	X	120	NEMA 5-20P



1220 N FILLMORE STREET, SUITE 350  
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(703)525-6266



GP #21846

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ELECTRICAL ENLARGED PLANS

Elementary School (ES-29)  
41135 Collaboration Drive, VA 20105

DATE	DESCRIPTION
02/10/20	ADDENDUM 3

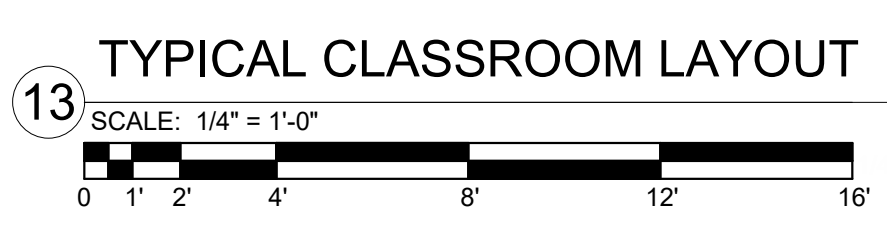
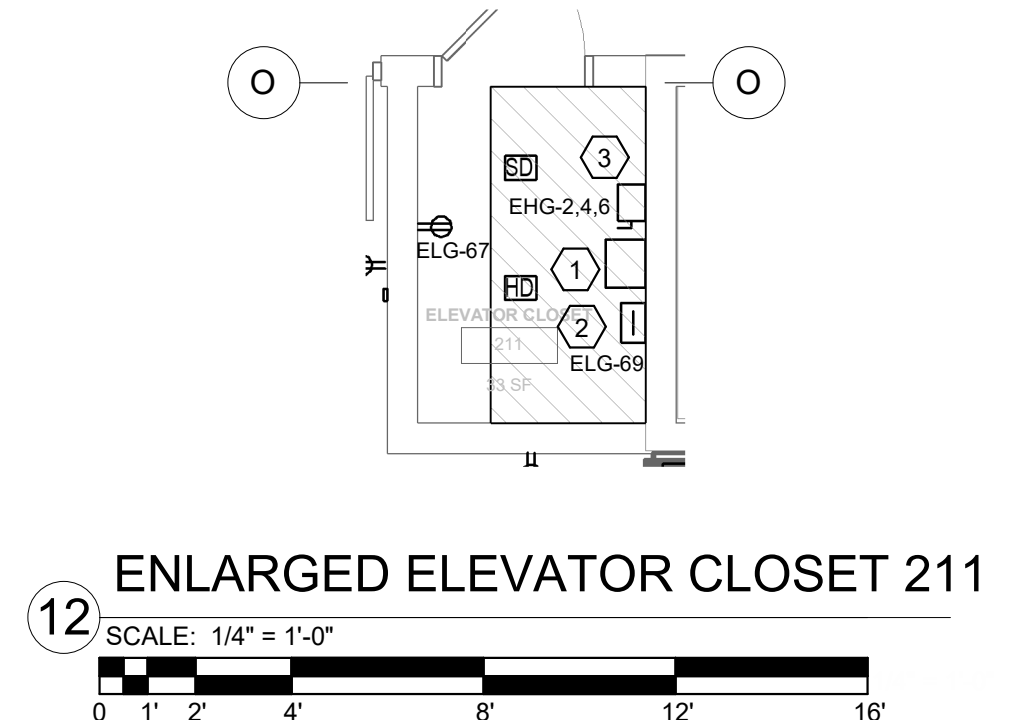
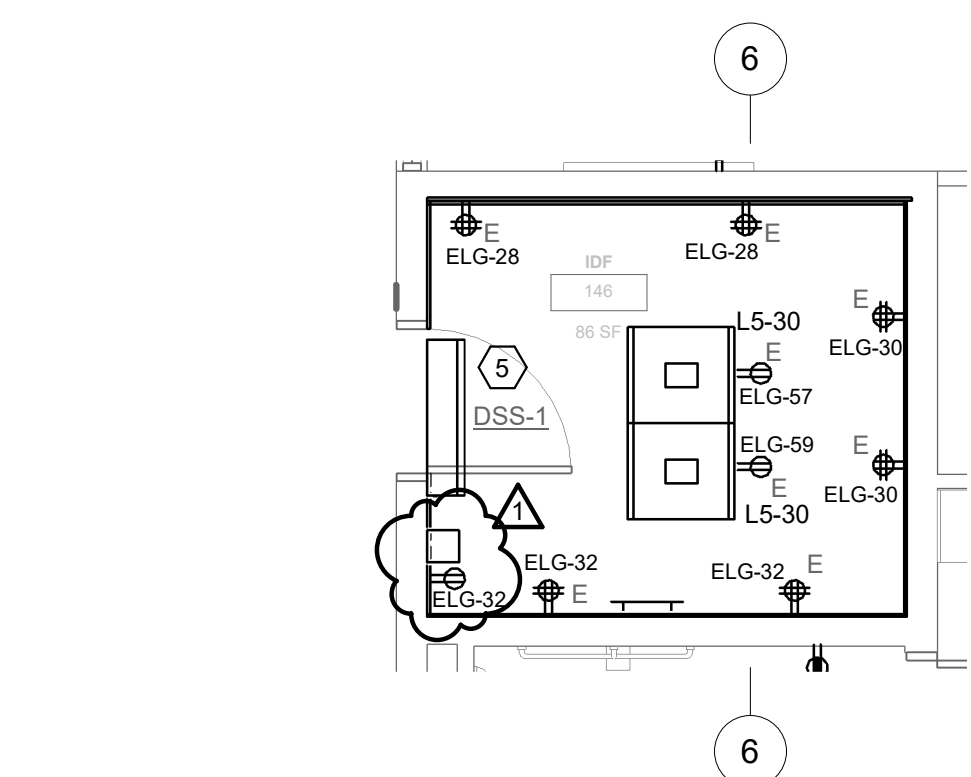
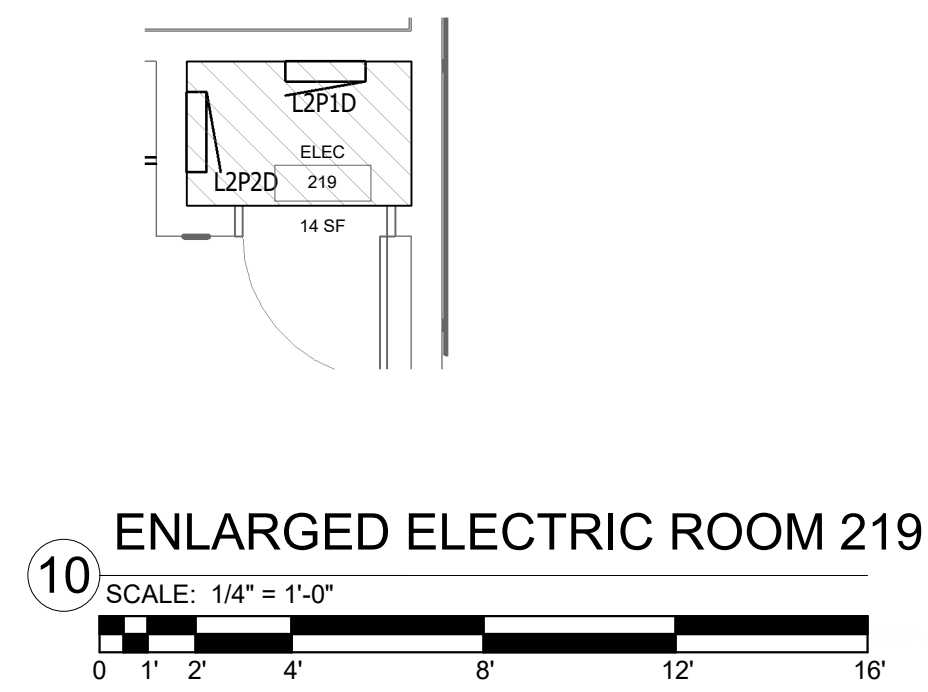
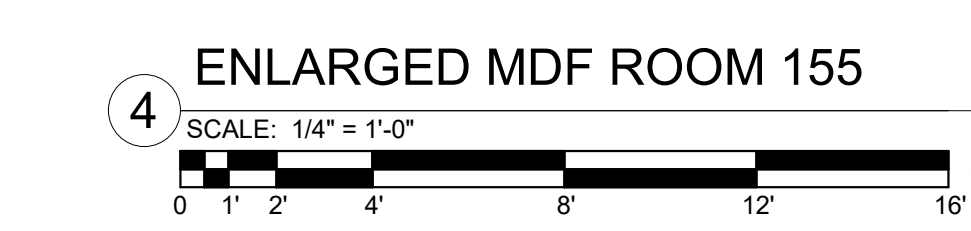
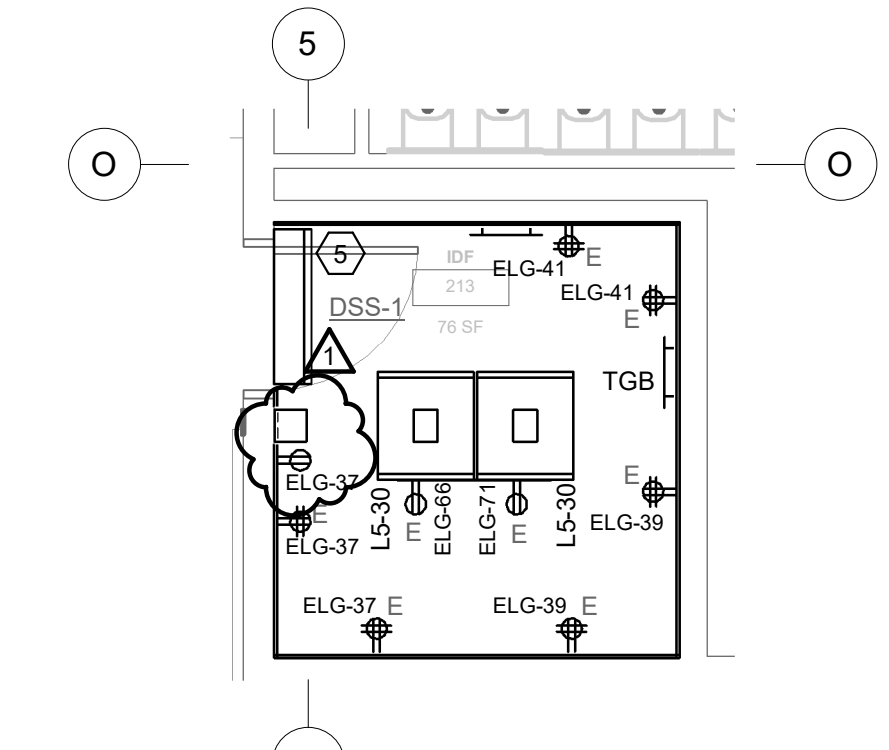
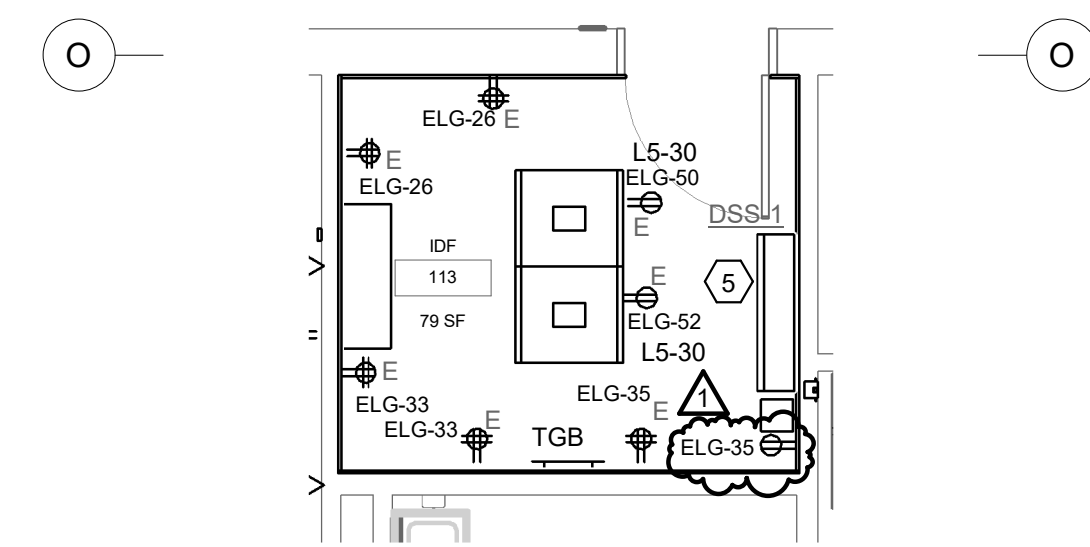
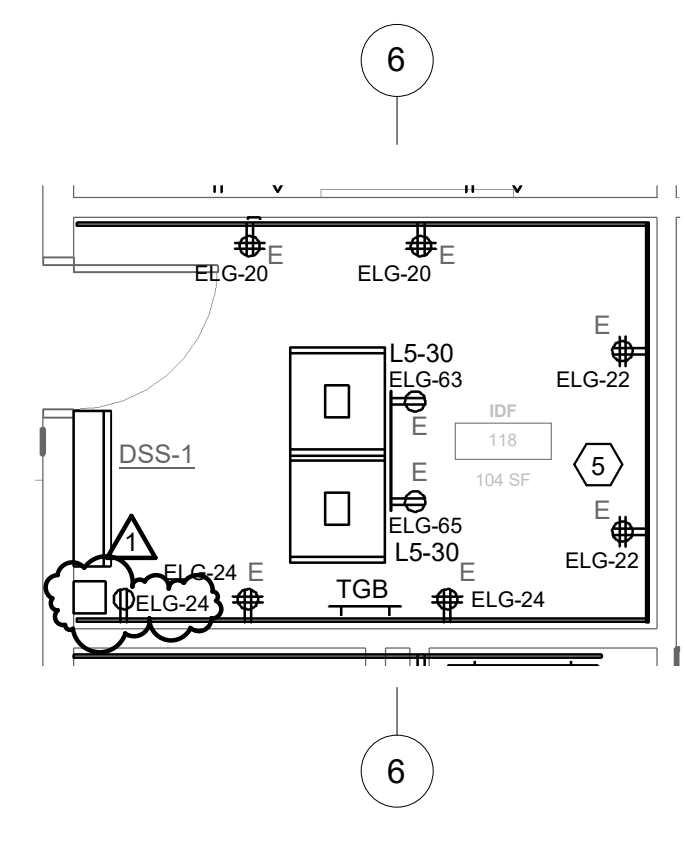
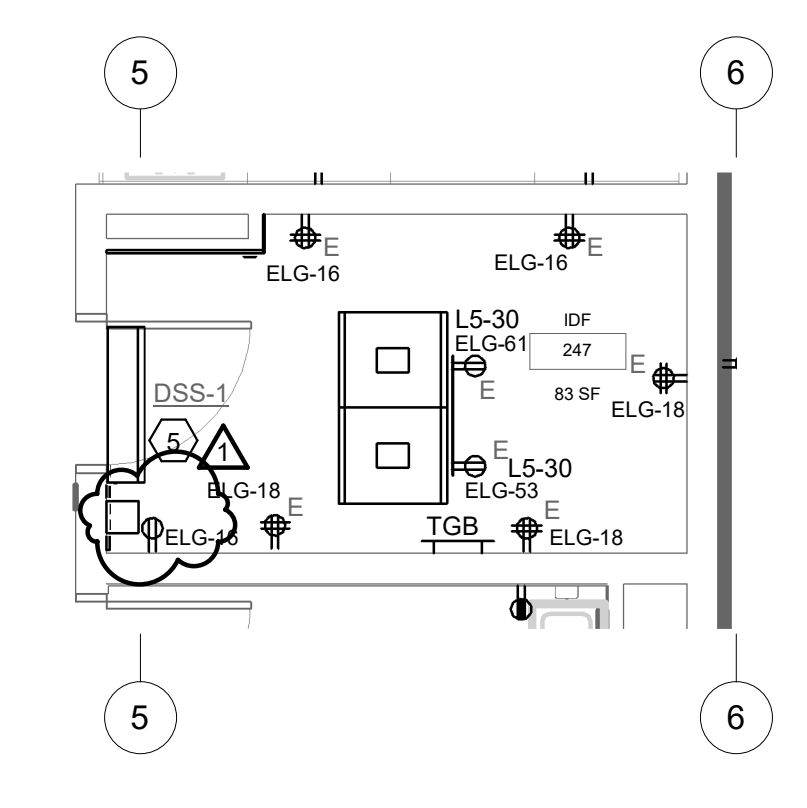
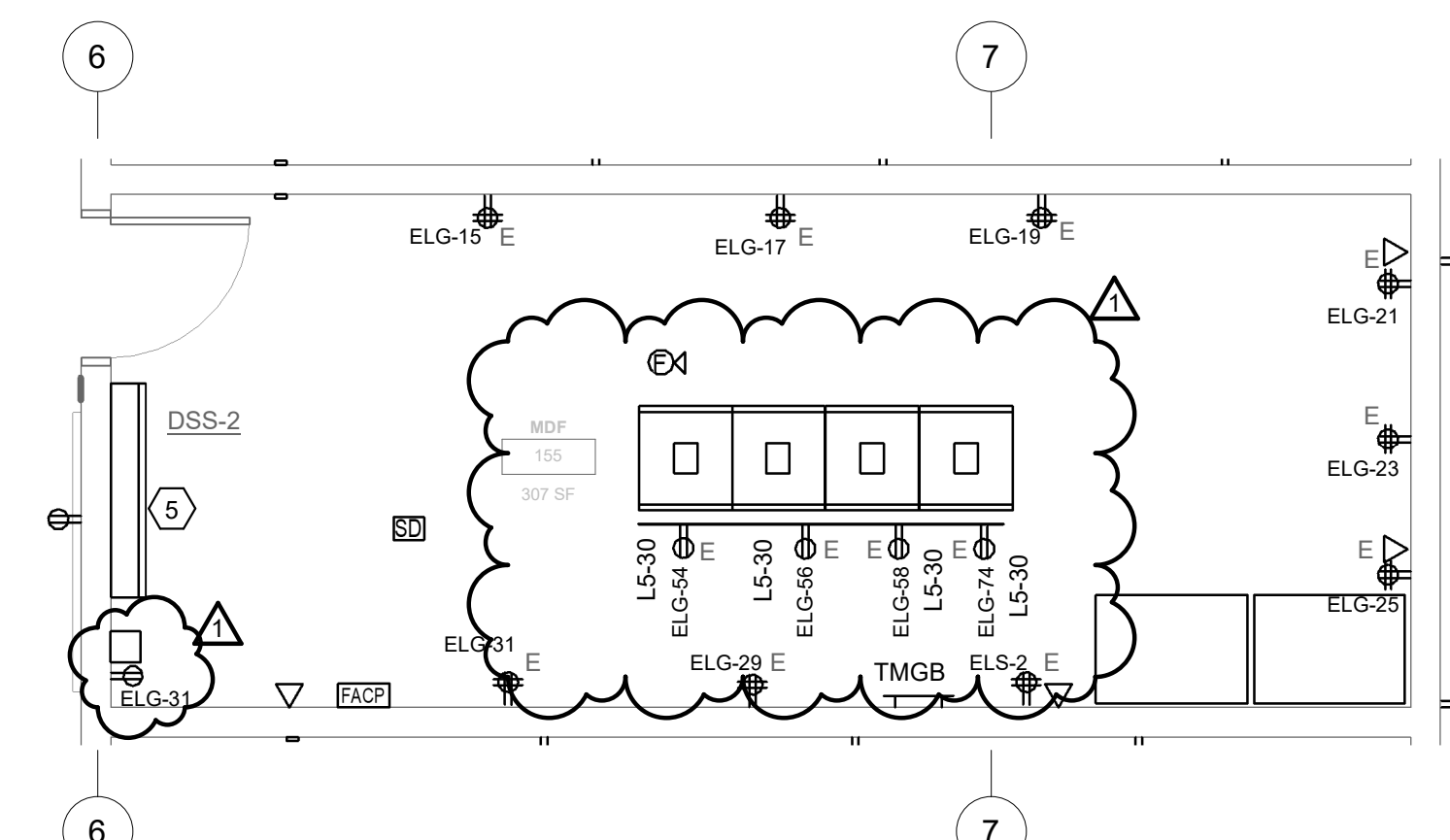
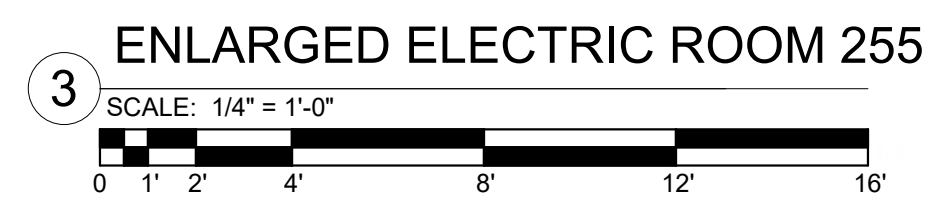
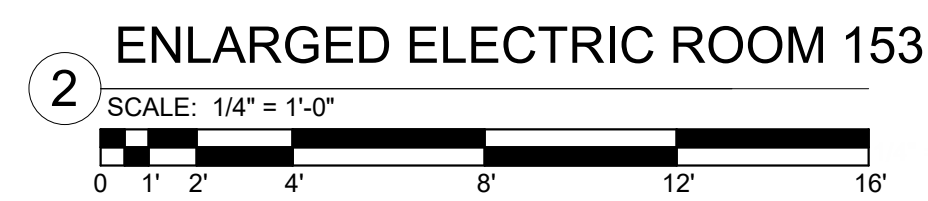
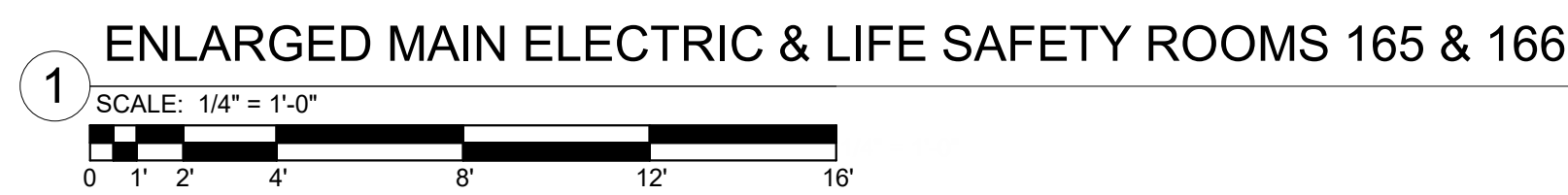
**E601**  
01/22/20  
BID SET

**GENERAL NOTES (ENLARGED):**

- A. CLASSROOM LAYOUTS ARE TYPICAL AND MAY VARY OR MIRROR OTHER ASSOCIATED ROOMS. CONTRACTOR SHALL REFER TO ARCHITECTURAL ELEVATIONS AND COORDINATE EACH ROOM PRIOR TO ROUGH-IN.
- B. PROVIDE SUFFICIENT ACCESS TO WORKING CLEARANCE ABOUT THE ELECTRICAL EQUIPMENT IN ACCORDANCE WITH NEC 110.26(A).
- C. PROVIDE ACCESS AND ENTRANCES TO AND EGRESS FROM WORKING SPACE ABOUT ELECTRICAL EQUIPMENT IN ACCORDANCE WITH NEC 110.27(A).
- D. NEMA 5-30 RECEPTACLE SHOWN MOUNTED IN DATA RACK SHALL BE MOUNTED AT 12" AFF. CONDUIT SHALL BE EXTENDED DOWN SPLINE OF DATA RACK (NOT INHIBITING DATA NETWORK CABLING PATHWAY) IN EMT CONDUIT AND SECURED TO RACK SPLINE. RECEPTACLE SHALL BE FOR CONNECTION TO DATA RACK EQUIPMENT. NEMA 5-30 RECEPTACLE SHALL HAVE ENGRAVED PLATE MARKED "EMERGENCY" IN RED. EXACT LOCATION OF RECEPTACLES SHALL BE COORDINATED WITH THE FINAL RACK LOCATION AND EQUIPMENT IN THE FIELD.

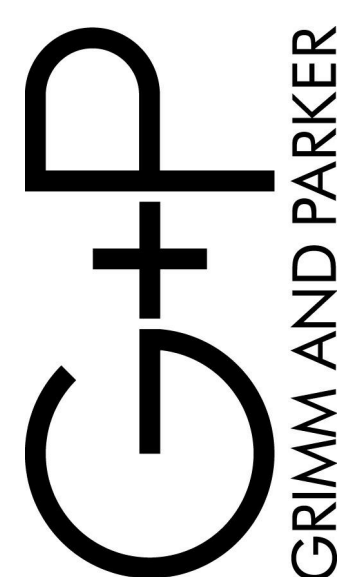
**KEY NOTES**

- 1. ELEVATOR CONTROLLER. PROVIDE THREE PHASE ELECTRICAL FEEDER SYSTEM TERMINATING IN THE ELEVATOR CONTROLLER. COORDINATE EXACT REQUIREMENTS WITH ELEVATOR INSTALLER PRIOR TO CONSTRUCTION.
- 2. PROVIDE 20A/120V/1P INDIVIDUALLY MOUNTED GFCI CIRCUIT BREAKER IN NEMA-1 ENCLOSURE FOR ELEVATOR CAB LIGHTS. PROVIDE FULL SIZE NEUTRAL AND GROUND BAR. COORDINATE EXACT LOCATIONS AND SIZES WITH ELEVATOR SHOP DRAWINGS AND MANUFACTURER'S RECOMMENDATIONS PRIOR TO CONSTRUCTION.
- 3. PROVIDE 60A/90V/3P/NEMA-1 FUSIBLE DISCONNECT SWITCH. PROVIDE FUSING AT ELEVATOR EQUIPMENT NAMEPLATE RATINGS. PROVIDE COMPLETE WITH AUXILIARY RELAY FOR SHUNT TRIP OPERATION AS REQUIRED. REFER TO "ELEVATOR POWER WIRING DIAGRAM" FOR ADDITIONAL REQUIREMENTS. DISCONNECT SWITCH SHALL BE EATON ELEVATOR CONTROL ES SWITCH (SHUNT TRIP OPERATED) OR APPROVED EQUAL. COORDINATE EXACT LOCATIONS WITH ELEVATOR SHOP DRAWINGS AND MANUFACTURER'S RECOMMENDATIONS PRIOR TO CONSTRUCTION. IF ADDITIONAL DISCONNECT IS REQUIRED, PROVIDE AND COORDINATE EXACT LOCATION WITH ELEVATOR MANUFACTURER RECOMMENDATIONS.
- 4. PROVIDE HEAT AND SMOKE DETECTORS IN THE PIT AND TOP OF ELEVATOR SHAFT AS REQUIRED.
- 5. DSS INDOOR UNIT SHALL BE POWERED FROM ASSOCIATED OUTDOOR UNIT LOCATED ON ROOF. PROVIDE CONDUIT AND WIRING AS REQUIRED FOR CONNECTION.



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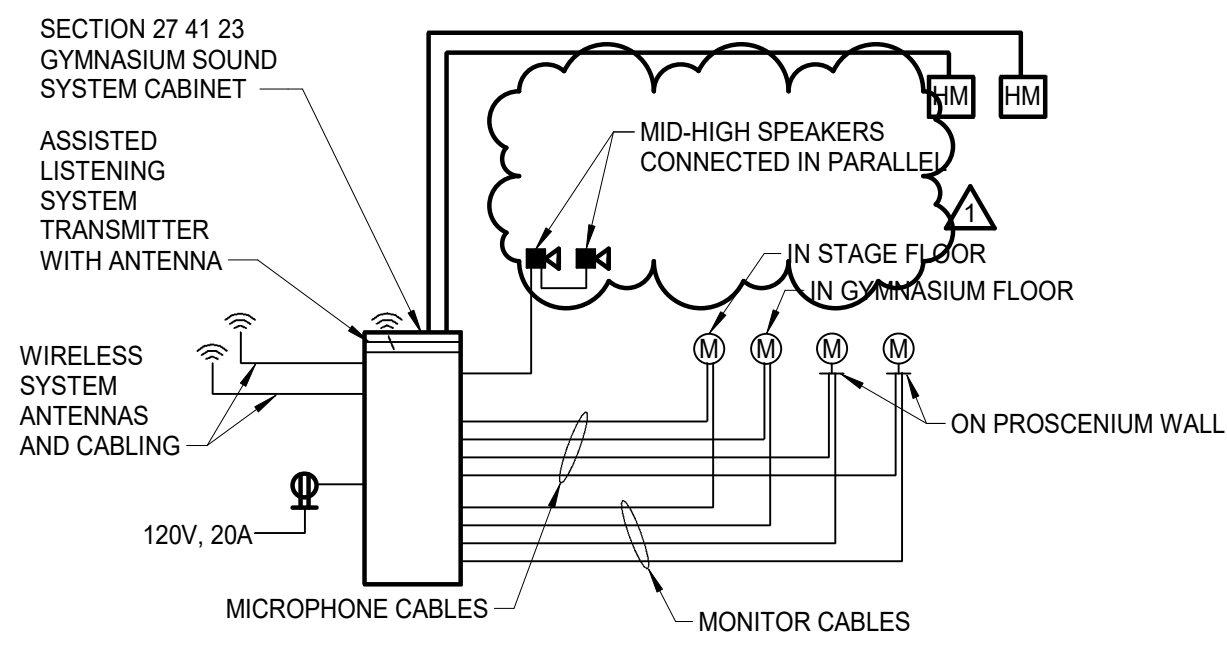


GP #21846

**ELECTRICAL ENLARGED PLANS**  
 Elementary School (ES-29)  
 41135 Collaboration Drive Aldie, VA 20105

DATE	DESCRIPTION
02/10/20	ADDENDUM 3

**E602**  
 01/22/20  
 BID SET



**MULTIPURPOSE ROOM SOUND SYSTEM SCHEMATIC**

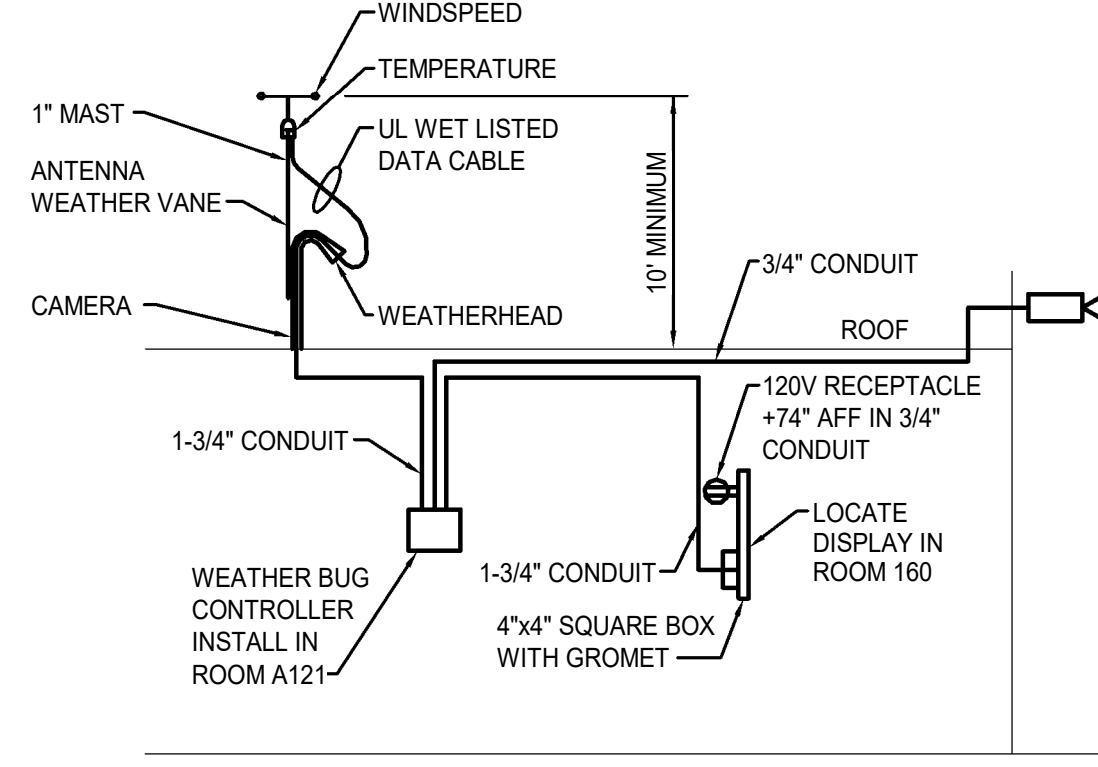
SCHEMATIC

NOTES:

1. SPEAKERS SHALL BE SUSPENDED UTILIZING KINDORF CHANNEL SUPPORT AND AIRCRAFT CABLE. EXACT SPEAKER LOCATION SHALL BE COORDINATED WITH STRUCTURAL FRAMING AND CROSS-BRACING. REFER TO DETAIL ON DRAWING E-303.

**1 GYMNASIUM SOUND SYSTEM SCHEMATIC**

SCALE: NONE

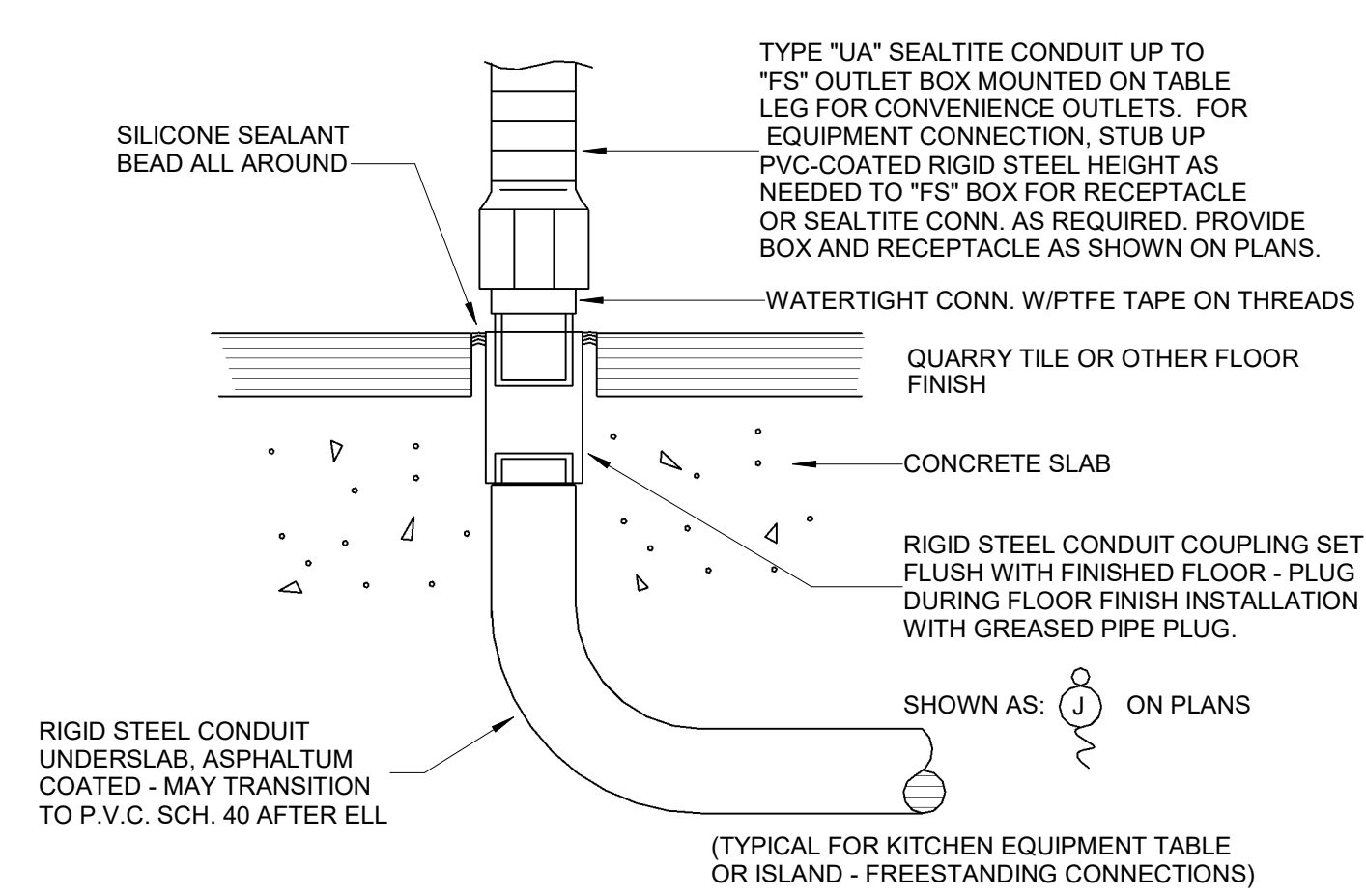


**WEATHERBUG DETAIL**

NO SCALE

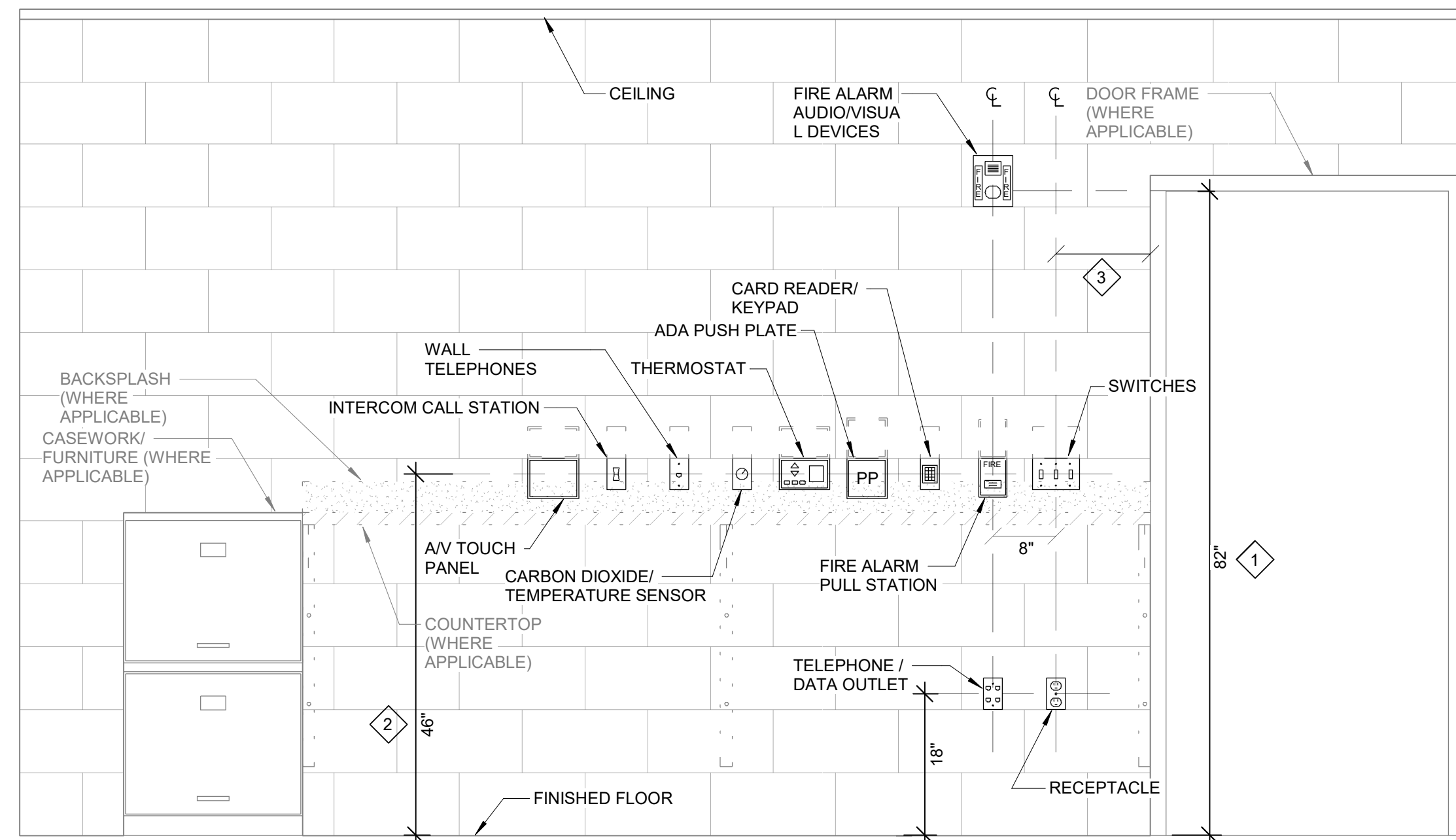
**2 WEATHERBUG DETAIL**

SCALE: NONE



**6 FLOOR OUTLET COUPLING TO FLEX STUB-UP DETAIL**

SCALE: NONE



**DEVICE MOUNTING DETAIL - GENERAL NOTES:**

- A. WHERE DEVICES OF ANY DISCIPLINE ARE LOCATED IN THE SAME GENERAL AREA ON THE PLANS AND ARE SHOWN TO BE MOUNTED AT A SIMILAR HEIGHT - ALIGN HORIZONTALLY ALONG CENTERLINE OF DEVICE BACKBOX (AS SHOWN IN DETAIL AND DESCRIBED IN KEY NOTE #2).
- B. WHERE DEVICES OF ANY DISCIPLINE ARE LOCATED IN THE SAME GENERAL AREA ON THE PLANS AND ARE SHOWN MOUNTED AT DIFFERENT HEIGHTS, ALIGN VERTICALLY ALONG THE CENTERLINE OF THE DEVICE BACKBOX (AS SHOWN IN DETAIL).
- C. FOR ANY WALL OTHER THAN PAINTED GYPSUM BOARD OR CMU, DEVICE LOCATIONS MUST BE FIELD APPROVED BY ENGINEER OR ARCHITECT PRIOR TO INSTALLATION OF FINISHES.

**DEVICE MOUNTING DETAIL - KEY NOTES:**

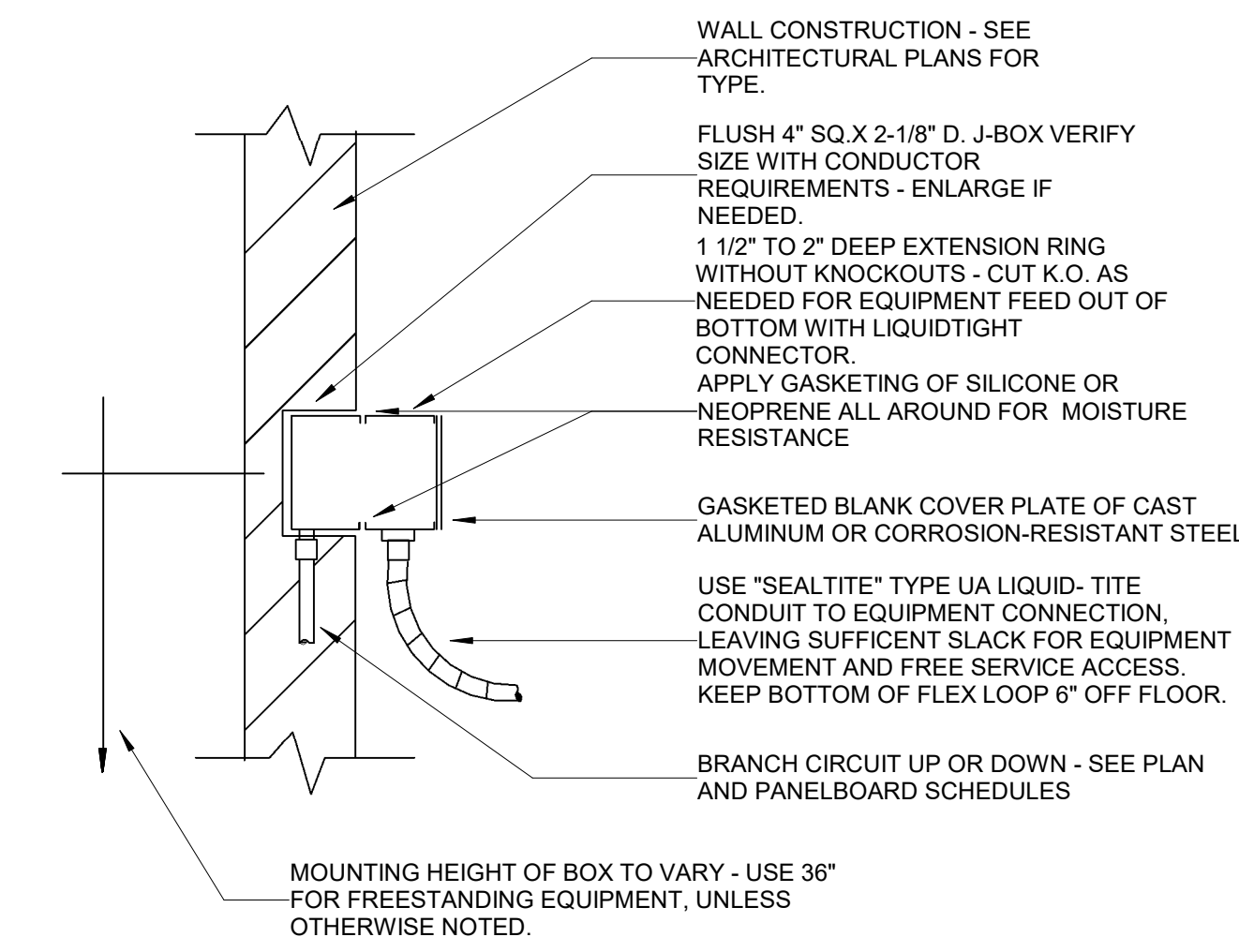
1. MOUNT VISUAL NOTIFICATION APPLIANCES SO THAT ENTIRE LENS IS BETWEEN 90° AND 96° AFF. IF CEILING IS TOO LOW FOR DEVICE TO BE MOUNTED ABOVE 90° MOUNT SO THAT THE LENS IS WITHIN 6" OF CEILING.
2. THE CONTRACTOR IS TO COORDINATE ALL ROUGH-INS WITH ANY COUNTERTOPS/BACKSPASHES TO AVOID CONFLICT. WHENEVER THE TYPICAL DEVICE MOUNTING HEIGHT SHOWN CAUSES CONFLICT WITH A COUNTERTOP/BACKSPASH, ALIGN DEVICE BACKBOXES IN THE BOTTOM OF THE NEXT FULL BLOCK ABOVE THE BACKSPASH AS SHOWN BY THE DOTTED LINES. FOR NON-BLOCK WALLS ALIGN CENTERLINE OF DEVICE BACKBOXES 4" ABOVE BACKSPASH. COORDINATE WORK WITH CASEWORK AND KITCHEN SHOP DRAWINGS ACCORDINGLY. IF CONFLICT STILL ARISES CONTACT THE ENGINEER FOR DIRECTION ON HOW TO PROCEED.
3. MOUNTING HEIGHTS SHOWN ILLUSTRATE DESIGN INTENT AND ARE TO BE FOLLOWED UNLESS CONTRADICTED BY APPLICABLE CODE. WHERE DEVICES ARE SHOWN ADJACENT TO DOOR FRAMES ON PLANS INSTALL 12" FROM FRAME TO AVOID SLUSHED SECTIONS. SPECIFIC DEVICES ARE SHOWN IN RELATIVE ORDER FROM DOOR FRAME; WHERE THESE DEVICES ARE NOT PRESENT AT A PARTICULAR LOCATION, ADJUST LOCATIONS CLOSER TO DOOR ACCORDINGLY.

**TYPICAL WALL DEVICE MOUNTING DETAIL**

NO SCALE

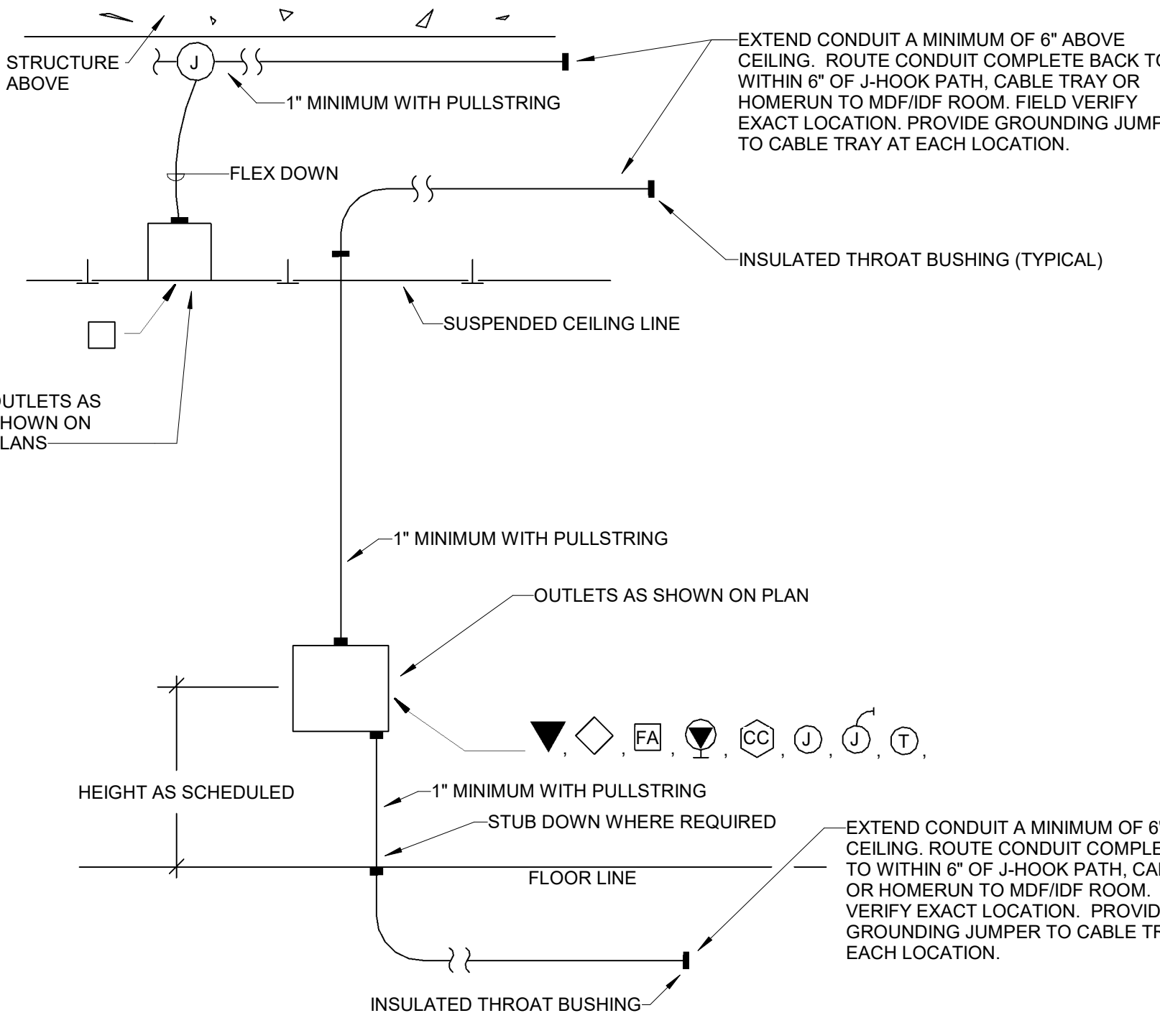
**3 TYPICAL WALL DEVICE MOUNTING DETAIL**

NO SCALE



**4 TYPICAL HARD-WIRED CONNECTION**

SCALE: NONE

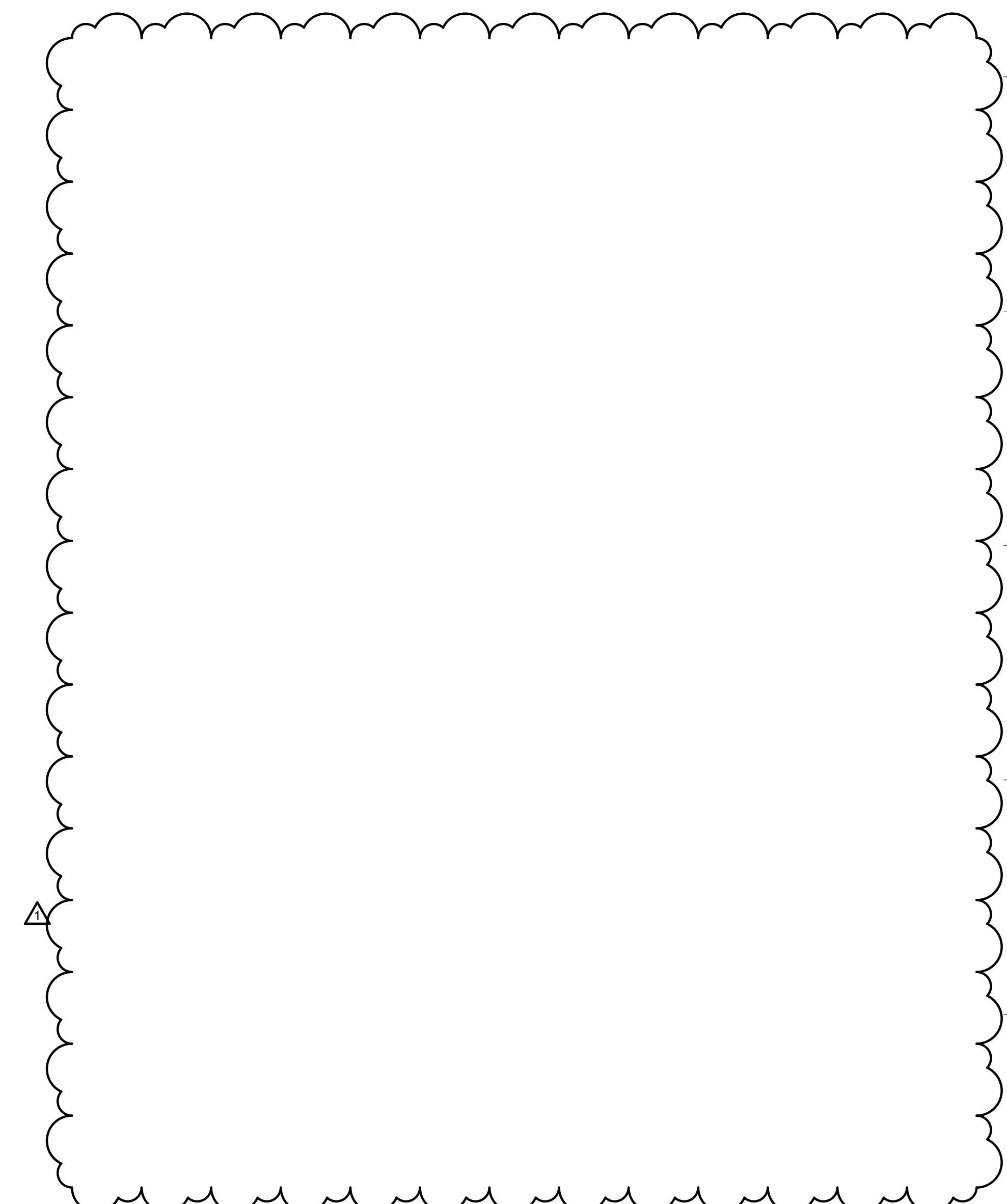


**NOTES:**

1. EXTEND CONDUIT TO NEAREST WIRING PATH UNLESS CABLING TERMINATES AT ANOTHER OUTLET IN THE SAME ROOM IN WHICH CASE, STUB CONDUIT OUT ABOVE THE ROOM'S SUSPENDED CEILING. ROUTE CONDUIT COMPLETE BACK TO WITHIN 6" OF HOOK PATH, CABLE TRAY OR HOMERUN TO MDF/IDF ROOM. FIELD VERIFY EXACT LOCATION. PROVIDE GROUNDING JUMPER TO CABLE TRAY AT EACH LOCATION.
2. WHERE OPEN CABLING IS INSTALLED WITHIN ENVIRONMENT AIR PLENUMS, SUCH CABLING SHALL MEET NEC REQUIREMENTS FOR SUCH INSTALLATIONS.
3. LABEL BACK OF OUTLET BOXES AND ENDS OF CONDUIT WITH UNIQUE NUMBER TO IDENTIFY EACH STUB-UP. USE PERMANENT MARKER PEN, 3/4" HIGH LETTERS. MATCH NUMBER ON OUTLET BOX TO END OF CONDUIT.
4. INSTALL TELECOMMUNICATION AND CABLE TV OUTLETS WITHIN 6" OF POWER RECEPTACLE WHERE POWER RECEPTACLE IS SHOWN ON POWER PLANS IN SAME GENERAL LOCATION.

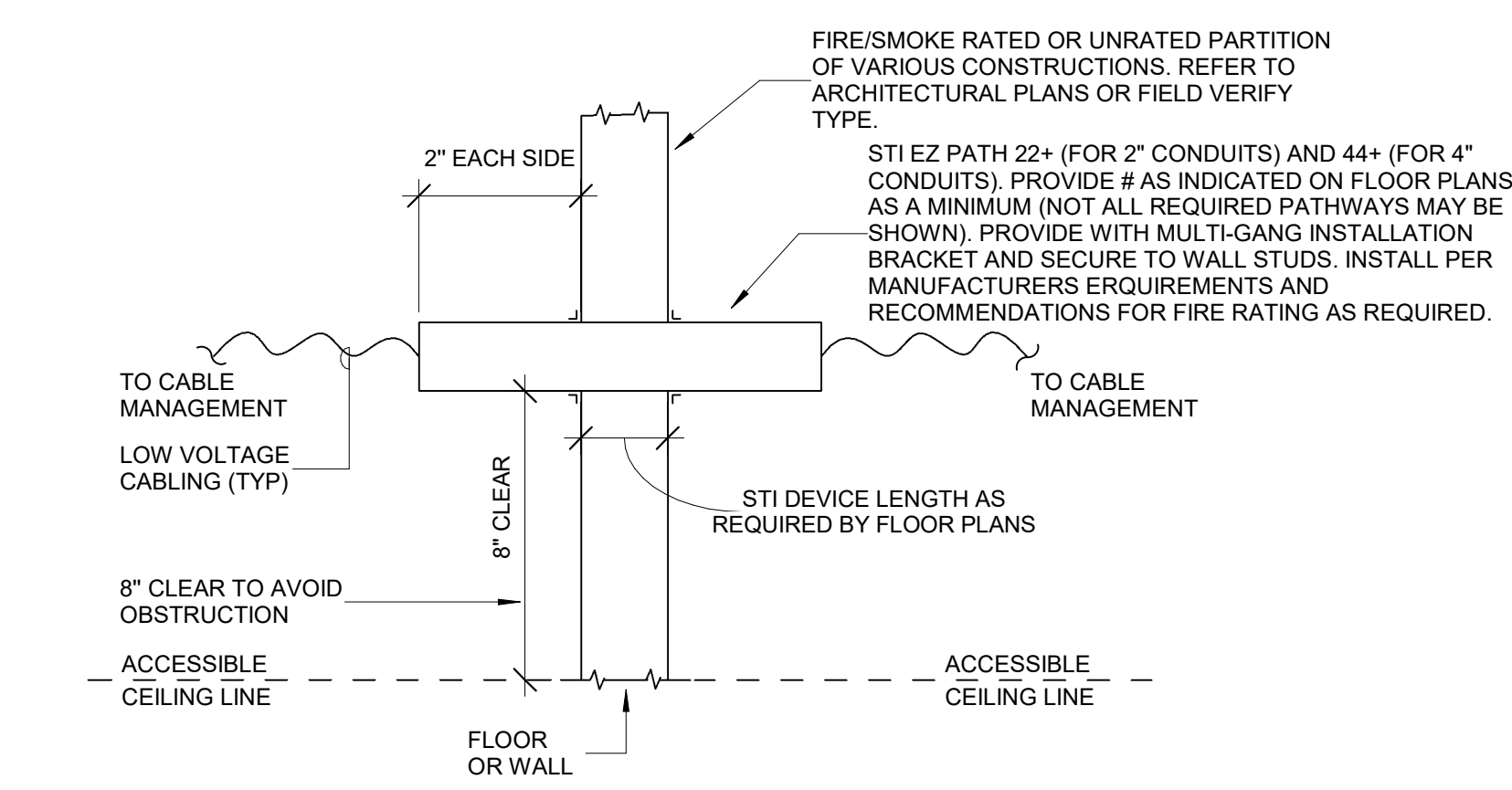
**5 ROUGHING-IN DETAIL FOR STUB-OUTS**

SCALE: NONE



**7 KITCHEN TYPE FLOOR STUB-UP OUTLET**

SCALE: NONE



**9 SYSTEMS CABLING SLEEVE INSTALLATION DETAIL**

SCALE: NONE



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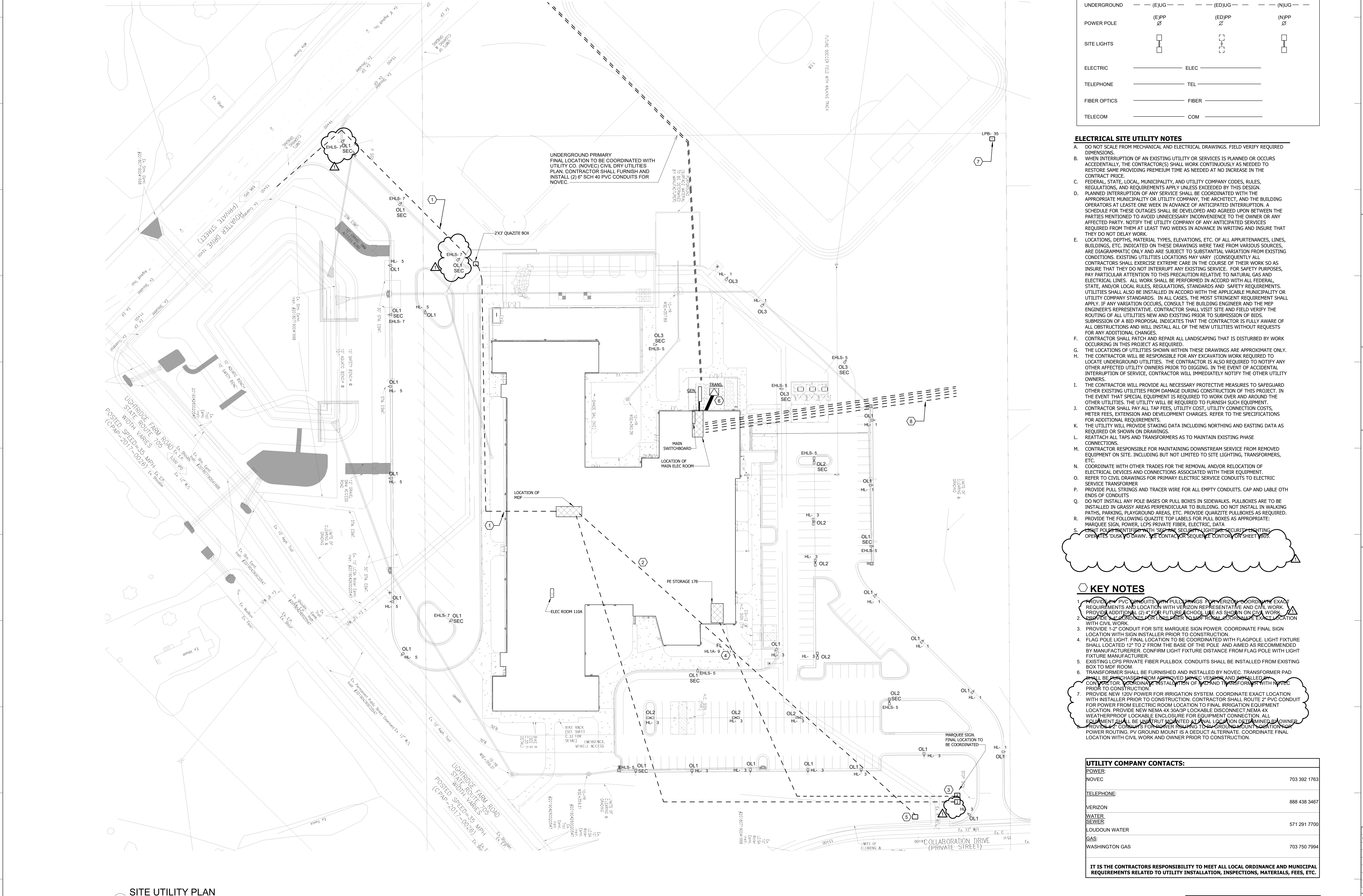
GP #21846

Elementary School (ES-29)  
4135 Collaboration Drive Aldie, VA 20105

DATE	DESCRIPTION
02/10/20	ADDENDUM 3

**E801**  
01/22/20  
BID SET





ELECTRICAL SITE UTILITIES LINE LEGEND		
EXISTING	DEMOLITION	NEW
OVERHEAD (E)OH	(ED)OH	(N)OH
UNDERGROUND (E)UG	(ED)UG	(N)UG
POWER POLE (E)PP	(ED)PP	(N)PP
SITE LIGHTS		
ELECTRIC	ELEC	
TELEPHONE	TEL	
FIBER OPTICS	FIBER	
TELECOM	COM	

**ELECTRICAL SITE UTILITY NOTES**

- DO NOT SCALE FROM MECHANICAL AND ELECTRICAL DRAWINGS. FIELD VERIFY REQUIRED DIMENSIONS.
- WHEN INTERRUPTION OF AN EXISTING UTILITY OR SERVICES IS PLANNED OR OCCURS ACCIDENTALLY, THE CONTRACTOR(S) SHALL WORK CONTINUOUSLY AS NEEDED TO RESTORE SAME PROVIDING PREMIUM TIME AS NEEDED AT NO INCREASE IN THE CONTRACT PRICE.
- FEDERAL, STATE, LOCAL, MUNICIPALITY, AND UTILITY COMPANY CODES, RULES, REGULATIONS, AND REQUIREMENTS APPLY UNLESS EXCEEDED BY THIS DESIGN.
- PLANNED INTERRUPTION OF ANY SERVICE SHALL BE COORDINATED WITH THE APPROPRIATE MUNICIPALITY OR UTILITY COMPANY, THE ARCHITECT, AND THE BUILDING OPERATORS AT LEAST ONE WEEK IN ADVANCE OF ANTICIPATED INTERRUPTION. A SCHEDULE FOR THESE OUTAGES SHALL BE DEVELOPED AND AGREED UPON BETWEEN THE PARTIES MENTIONED TO AVOID UNNECESSARY INCONVENIENCE TO THE OWNER OR ANY AFFECTED PARTY. NOTIFY THE UTILITY COMPANY OF ANY ANTICIPATED SERVICES REQUIRED FROM THEM AT LEAST TWO WEEKS IN ADVANCE IN WRITING AND INSURE THAT THEY DO NOT DELAY WORK.
- LOCATIONS, DEPTHS, MATERIAL TYPES, ELEVATIONS, ETC. OF ALL APPURTENANCES, LINES, BUILDINGS, ETC. INDICATED ON THESE DRAWINGS WERE TAKEN FROM VARIOUS SOURCES, ARE DIAGRAMMATIC ONLY AND ARE SUBJECT TO SUBSTANTIAL VARIATION FROM EXISTING CONDITIONS. EXISTING UTILITIES LOCATIONS MAY VARY (CONSEQUENTLY ALL CONTRACTORS SHALL EXERCISE EXTREME CARE IN THE COURSE OF THEIR WORK SO AS TO INSURE THAT THEY DO NOT INTERRUPT ANY EXISTING SERVICE. FOR SAFETY PURPOSES, PAY PARTICULAR ATTENTION TO THIS PRECAUTION RELATIVE TO NATURAL GAS AND ELECTRICAL LINES. ALL WORK SHALL BE PERFORMED IN ACCORD WITH ALL FEDERAL, STATE, AND/OR LOCAL RULES, REGULATIONS, STANDARDS AND SAFETY REQUIREMENTS. UTILITIES SHALL ALSO BE INSTALLED IN ACCORD WITH THE APPLICABLE MUNICIPALITY OR UTILITY COMPANY STANDARDS. IN ALL CASES, THE MOST STRINGENT REQUIREMENT SHALL APPLY. IF ANY VARIATION OCCURS, CONSULT THE BUILDING ENGINEER AND THE MEP ENGINEER'S REPRESENTATIVE. CONTRACTOR SHALL VISIT SITES AND FIELD VERIFY THE ROUTING OF ALL UTILITIES NEW AND EXISTING PRIOR TO SUBMISSION OF BIDS. SUBMISSION OF A BID PROPOSAL INDICATES THAT THE CONTRACTOR IS FULLY AWARE OF ALL OBSTRUCTIONS AND WILL INSTALL ALL OF THE NEW UTILITIES WITHOUT REQUESTS FOR ANY ADDITIONAL CHANGES.
- CONTRACTOR SHALL PATCH AND REPAIR ALL LANDSCAPING THAT IS DISTURBED BY WORK OCCURRING IN THIS PROJECT AS REQUIRED.
- THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE DRAWINGS ARE APPROXIMATE ONLY.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY EXCAVATION WORK REQUIRED TO LOCATE UNDERGROUND UTILITIES. THE CONTRACTOR IS ALSO REQUIRED TO NOTIFY ANY OTHER AFFECTED UTILITY OWNERS PRIOR TO DIGGING. IN THE EVENT OF ACCIDENTAL INTERRUPTION OF SERVICE, CONTRACTOR WILL IMMEDIATELY NOTIFY THE OTHER UTILITY OWNERS.
- THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD OTHER EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE OTHER UTILITIES, THE UTILITY WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT.
- CONTRACTOR SHALL PAY ALL TAP FEES, UTILITY COST, UTILITY CONNECTION COSTS, METER FEES, EXTENSION AND DEVELOPMENT CHARGES. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- THE UTILITY WILL PROVIDE STAKING DATA INCLUDING NORTHING AND EASTING DATA AS REQUIRED OR SHOWN ON DRAWINGS.
- REATTACH ALL TAPS AND TRANSFORMERS AS TO MAINTAIN EXISTING PHASE CONNECTIONS.
- CONTRACTOR RESPONSIBLE FOR MAINTAINING DOWNSTREAM SERVICE FROM REMOVED EQUIPMENT ON SITE, INCLUDING BUT NOT LIMITED TO SITE LIGHTING, TRANSFORMERS, ETC.
- COORDINATE WITH OTHER TRADES FOR THE REMOVAL AND/OR RELOCATION OF ELECTRICAL DEVICES AND CONNECTIONS ASSOCIATED WITH THEIR EQUIPMENT.
- REFER TO CIVIL DRAWINGS FOR PRIMARY ELECTRIC SERVICE CONDUITS TO ELECTRIC SERVICE TRANSFORMER
- PROVIDE PULL STRINGS AND TRACER WIRE FOR ALL EMPTY CONDUITS. CAP AND LABEL BOTH ENDS OF CONDUITS.
- DO NOT INSTALL ANY POLE BASES OR PULL BOXES IN SIDEWALKS. PULLBOXES ARE TO BE INSTALLED IN GRASSY AREAS PERPENDICULAR TO BUILDING. DO NOT INSTALL IN WALKING PATHS, PARKING, PLAYGROUND AREAS, ETC. PROVIDE QUARTZITE PULLBOXES AS REQUIRED.
- PROVIDE THE FOLLOWING QUARTZITE TOP LABELS FOR PULL BOXES AS APPROPRIATE:  
MARQUEE SIGN, POWER, LCPS PRIVATE FIBER, ELECTRIC, DATA
- PROVIDE TO SUBMITTER WITH 1/2" SCALE SECURITY LIGHTING FIXTURES. SECURITY LIGHTING OPERATES DUSK TO DAWN. SEE CONTACTOR SEQUENCE CONTROL ON SHEET 2005.

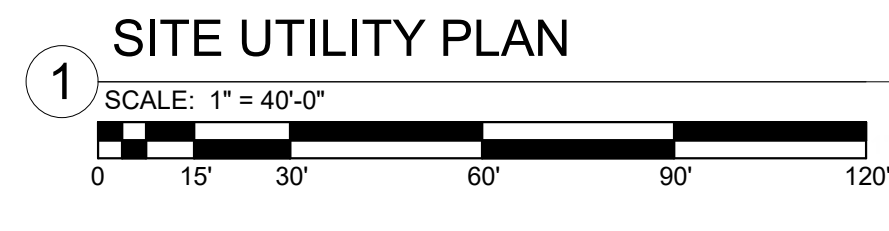
**KEY NOTES**

- PROVIDE 1/2" PVC CONDUITS WITH PULL STRINGS FOR VERIZON. COORDINATE EXACT REQUIREMENTS AND LOCATION WITH VERIZON REPRESENTATIVE AND CIVIL WORK. PROVIDE ADDITIONAL 1/2" PVC CONDUITS FOR FUTURE SCHOOL LINES SHOWN ON CIVIL WORK.
- SECURE ALL CONDUITS WITH 1/2" GALVANNEUM SECURITY LIGHTING FIXTURES IN ACCORDATION WITH CIVIL WORK.
- PROVIDE 1/2" CONDUIT FOR SITE MARQUEE SIGN POWER. COORDINATE FINAL SIGN LOCATION WITH SIGN INSTALLER PRIOR TO CONSTRUCTION.
- FLAG POLE LIGHT. FINAL LOCATION TO BE COORDINATED WITH FLAGPOLE LIGHT FIXTURE SHALL LOCATED 12" TO 2" FROM THE BASE OF THE POLE, AND AIMED AS RECOMMENDED BY MANUFACTURER. CONFORM LIGHT FIXTURE DISTANCE FROM FLAG POLE WITH LIGHT FIXTURE MANUFACTURER.
- EXISTING LCPS PRIVATE FIBER PULLBOX. CONDUITS SHALL BE INSTALLED FROM EXISTING BOX TO MDF ROOM.
- TRANSFORMER SHALL BE FURNISHED AND INSTALLED BY NOVEC. TRANSFORMER PAD SHALL BE APPROVED AND INSTALLED BY VERIZON AND APPROVED BY THE CONTRACTOR. COORDINATE INSTALLATION OF POT AND TRANSFORMER WITH MVEE PRIOR TO CONSTRUCTION.
- PROVIDE NEW 120V POWER FOR IRRIGATION SYSTEM. COORDINATE EXACT LOCATION WITH INSTALLER PRIOR TO CONSTRUCTION. CONTRACTOR SHALL ROUTE 2" PVC CONDUIT FOR POWER FROM ELECTRIC ROOM LOCATION TO FINAL IRRIGATION EQUIPMENT LOCATION. PROVIDE NEW NEMA 4X 30A 3P LOCKING DISCONNECT NEMA 4X WEATHERPROOF LOCKABLE ENCLOSURE FOR EQUIPMENT CONNECTION. ALL EQUIPMENT SHALL BE MANUFACTURED AT FINAL LOCATION DETERMINED BY OWNER. PROVIDE NEW 120V POWER FOR IRRIGATION SYSTEM. COORDINATE EXACT LOCATION WITH CIVIL WORK AND OWNER PRIOR TO CONSTRUCTION.

**UTILITY COMPANY CONTACTS:**

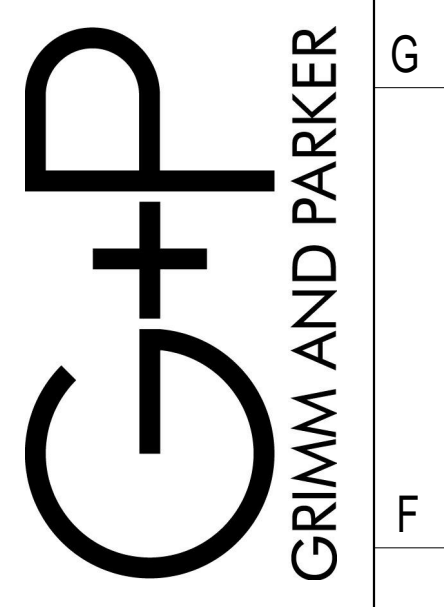
POWER:	
NOVEC	703 392 1763
TELEPHONE:	
VERIZON	888 438 3467
WATER	
SEWER:	
LOUDOUN WATER	571 291 7700
GAS:	
WASHINGTON GAS	703 750 7994

**IT IS THE CONTRACTORS RESPONSIBILITY TO MEET ALL LOCAL ORDINANCE AND MUNICIPAL REQUIREMENTS RELATED TO UTILITY INSTALLATION, INSPECTIONS, MATERIALS, FEES, ETC.**



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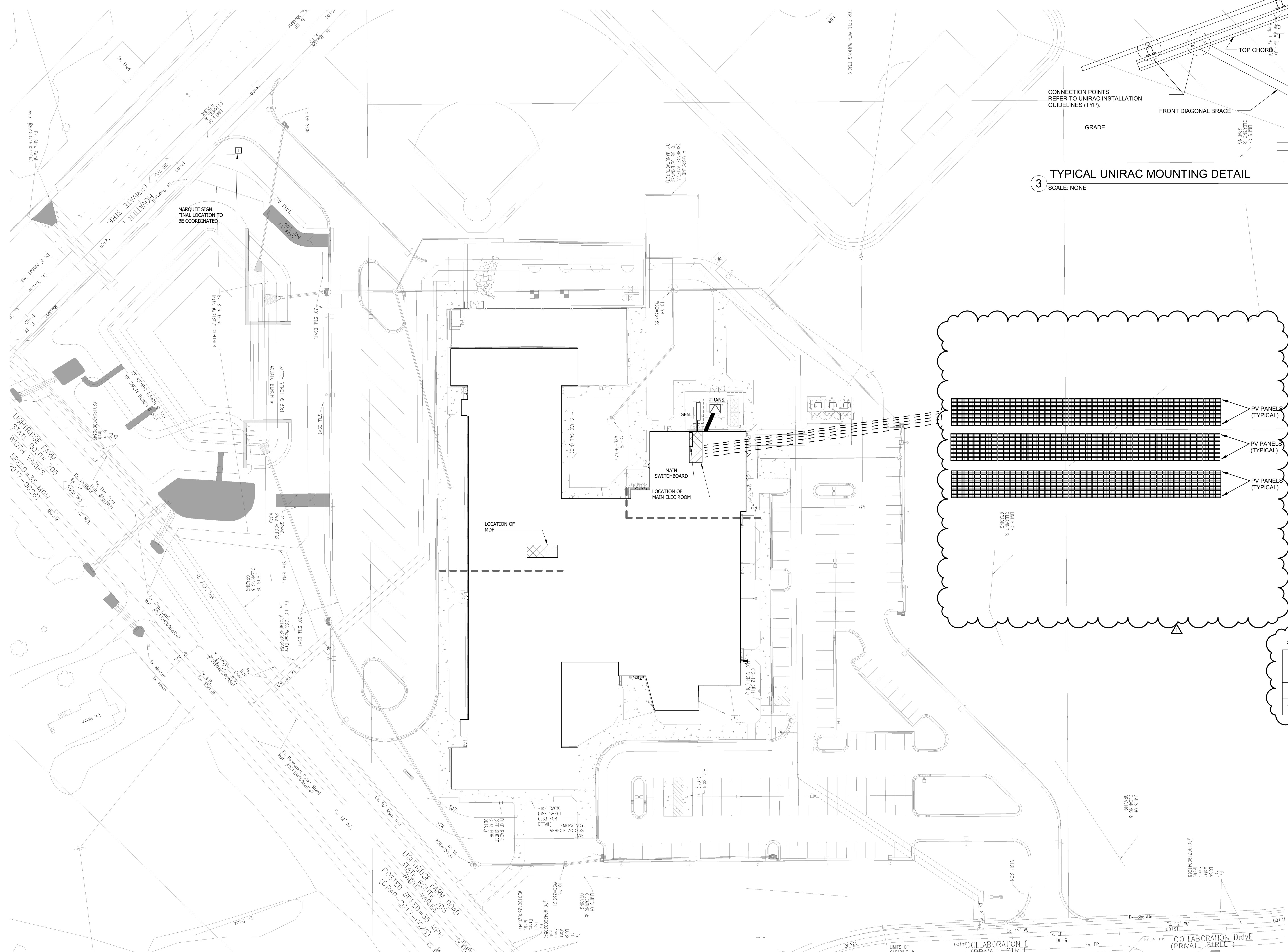


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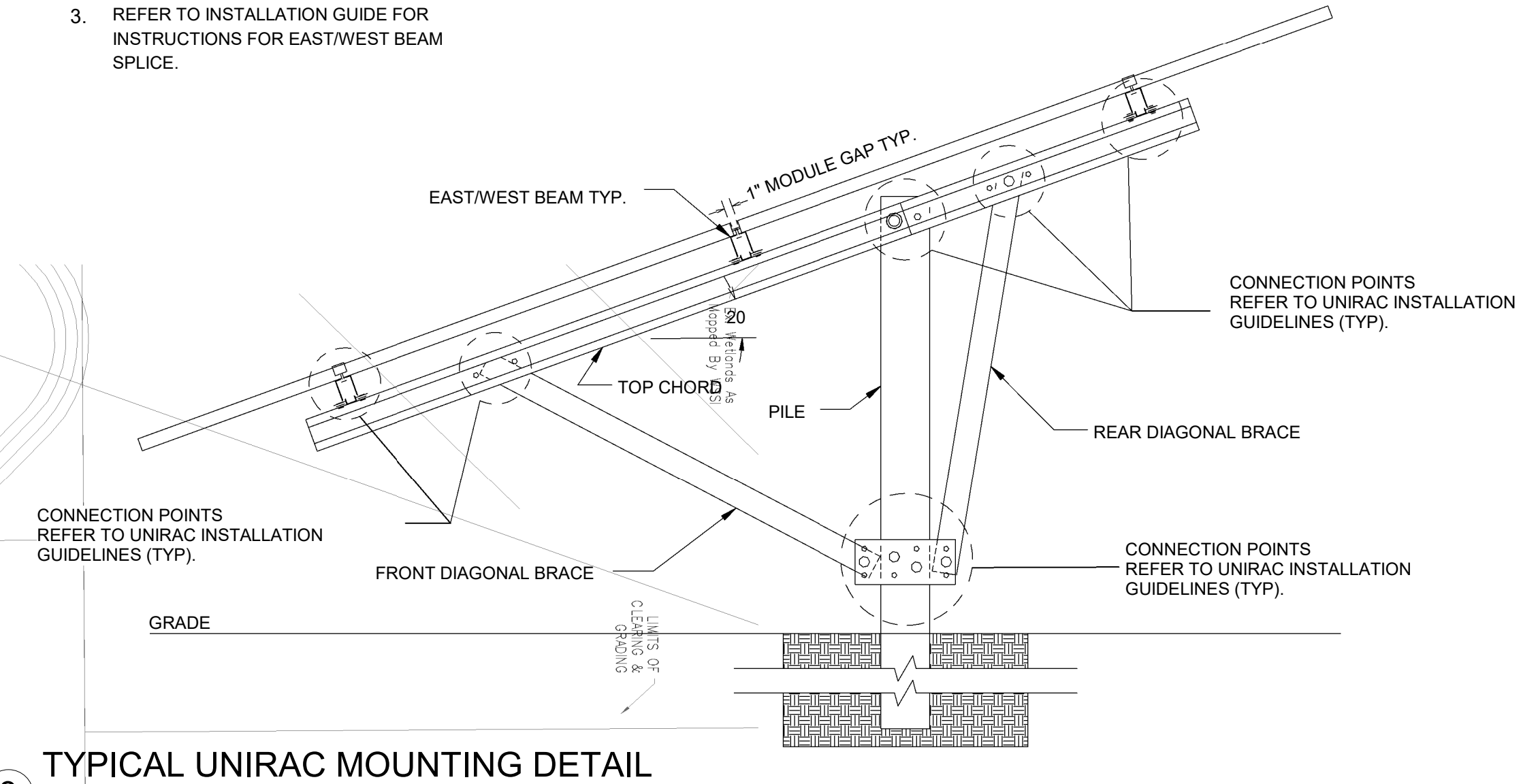
**ELECTRICAL SITE UTILITY PLAN**  
Elementary School (ES-29)  
41135 Collaboration Drive Aisle, VA 20105

DATE	DESCRIPTION
02/10/20	ADDENDUM 3

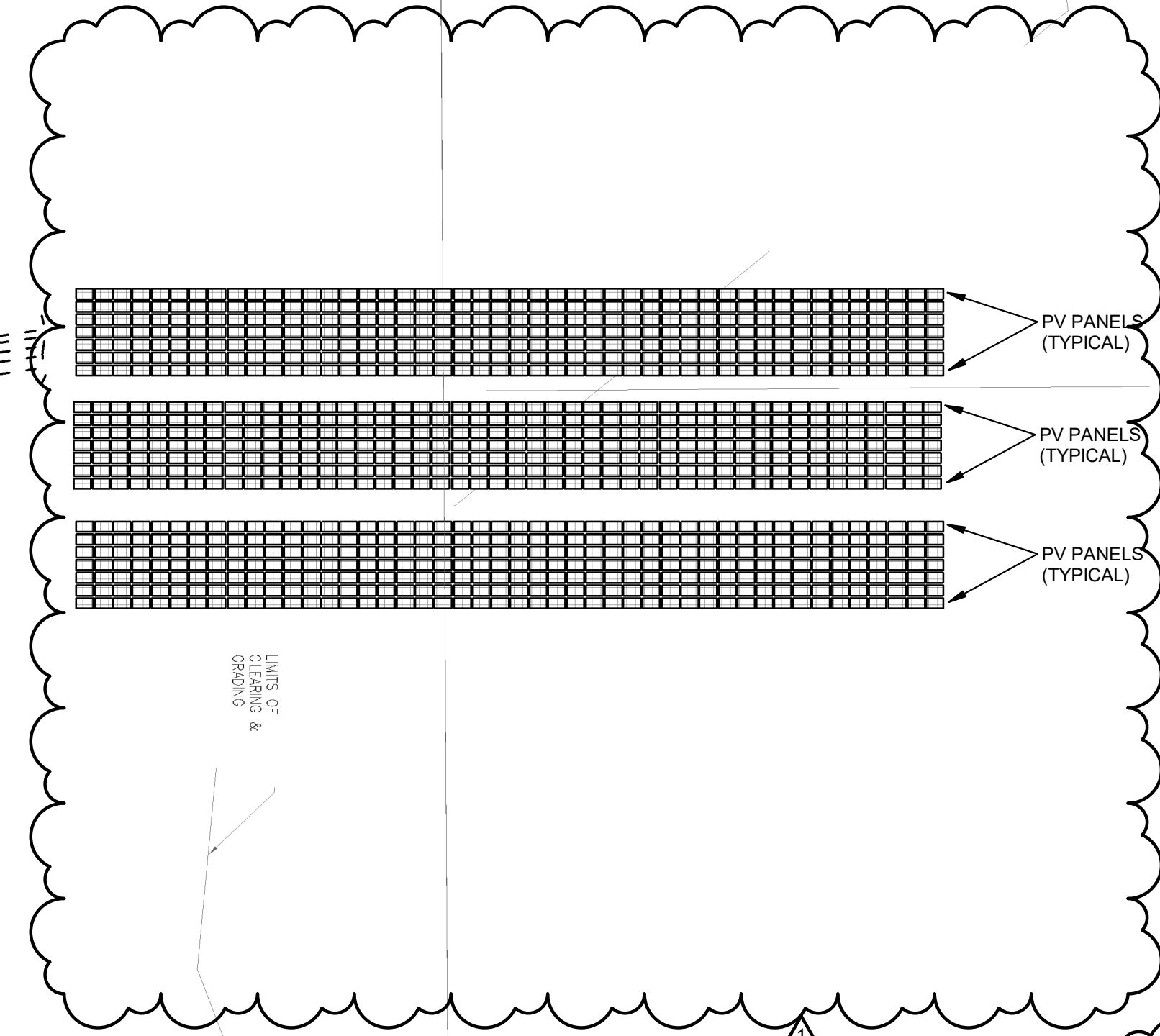
**ES001**  
01/22/20  
BID SET



- RACKING DETAIL NOTES:**
1. SEE UNIRAC INSTALLATION GUIDE FOR PILE TOLERANCE.
  2. SEE UNIRAC INSTALLATION GUIDE FOR CONNECTION ADJUSTMENT INSTRUCTIONS.
  3. REFER TO INSTALLATION GUIDE FOR INSTRUCTIONS FOR EASTWEST BEAM SPLICE.



**3 TYPICAL UNIRAC MOUNTING DETAIL**  
SCALE: NONE



SYSTEM OVERVIEW:

ARRAY	# OF PANELS	ARRAY KW
GROUND	966	367.0
ROOF	1471	558.9
<b>TOTAL SYSTEM KW</b>	<b>925.9</b>	

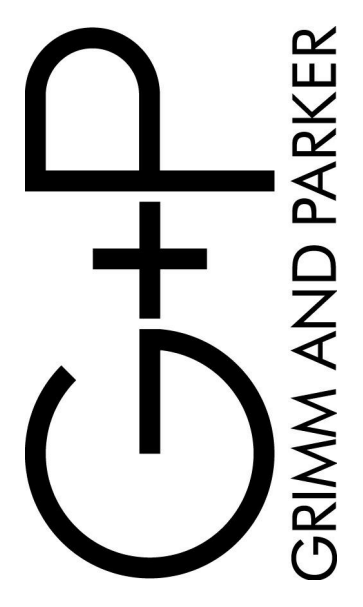
**GENERAL NOTES**

1. DEDUCT #1: DEDUCT PV PANELS ASSOCIATED GROUND MOUNTING EQUIPMENT AND WIRING ASSOCIATED WITH PV PANELS. DISTRIBUTION EQUIPMENT IN ELECTRIC ROOM AND CONDUITS TO ARRAY LOCATION ON SITE SHALL REMAIN FOR FUTURE USE.
2. ALL WORK SHALL BE PERFORMED IN A SAFE MANNER AND SHALL BE IN COMPLIANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND REGULATIONS.
3. ALL EQUIPMENT, MATERIALS AND INSTALLATION SHALL COMPLY WITH THE FOLLOWING CODES AS APPLICABLE:
  - A. NFPA 70 - NATIONAL ELECTRICAL CODE, 2014 EDITION
  - B. USBC 2015 - VIRGINIA UNIFORM STATEWIDE BUILDING CODE
  - C. NFPA 70E - ELECTRICAL SAFETY IN WORKPLACE.
  - D. 2017 APPLICABLE OSHA CODES
3. UTILIZE UNIRAC MOUNTING SYSTEMS AND INSTALL AS PER MANUFACTURER RECOMMENDATIONS. TYPICAL GROUND FIXED TILT DETAIL SHOWN. COORDINATE WITH UNIRAC INSTALLATION DETAILS FOR ALL PARTS AND REQUIRED MOUNTING INSTALLATION GUIDES.

**1 SITE UTILITY PLAN**  
SCALE: 1" = 40'-0"  
0 15 30 60 90 120



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GP #21846

ELECTRICAL SITE PLAN - PV  
Elementary School (ES-29)  
41135 Collaboration Drive Aldie, VA 20105

DATE	DESCRIPTION
02/10/20	ADDENDUM 3

**ES003**  
01/22/20  
BID SET