



## JLK ENGINEERING

**Date:** May 19, 2025  
**To:** Anthony P. Esson Architect  
PO Box 479  
Gaylord, MI 49735  
Attn: Tony Esson  
**Project Name:** Gaylord Community Schools SF3.8 – 2024 Sinking Fund Projects  
GCS SF3.8 Bid Package #4 – BOECC Generator & ATS Installation  
**JLK Project Number:** AEA 2401  
**Prepared by:** Justin Kowatch, PE  
**Addendum Number:** #1 – Electrical Items

### **ADDENDUM**

This Addendum is being issued for the purpose of modifying and/or clarifying the original Bidding Documents and shall take precedence over them.

Each Bidder's proposal shall include the work described herein. All requirements contained in the Contract Documents shall apply to this Addendum. All incidental work necessary to complete the Work shall be included in the Contractor's quotation even though not particularly mentioned.

Parts of the Specifications and Drawings referred to herein supersede previously issued data and form a part of this Addendum.

Supplemental Documents Issued with this Addendum, revised and dated 5/19/2025:

Drawing T – Modified Master sheet index to include new drawing E3.2.

Drawing E0.1 – Modified Electrical Drawing Index to include new drawing E3.2.

Drawing E1.1 – Clarified old service feeders shall be removed after service change-over is completed.

Drawing E2.1 – Clarified new Alternate Add #1 panels "MDP" & "DPA" shall be provided by the E.C.

Drawing E3.1 – Modified drawing E3.1 electrical 1-line to clarify Base-Bid work. Clarified grounding.

Drawing E3.2 – New drawing E3.2 with electrical 1-line to clarify Alternate Add #1 work.

### **PLUMBING ADDENDUM ITEMS**

None.

### **ELECTRICAL ADDENDUM ITEMS**

**E1. Electrical Modifications:** Refer to revised drawings T, E0.1, E1.1, E2.1, E3.1, and new E3.2, all of which are revised and reissued with this Addendum. Note the following changes:

- A. Clarified Base-Bid work versus Alternate Add #1 work.
- B. Clarified that 800A @ 208V/3p/4w service ground may be either (2)-#1/0 CU Grd (one per run of #500 mcm) or (1)-#2/0 CU Grd per NEC 250.102.
- C. Modified feeder from generator to ATS with option for 2 sets of #500s or 3 sets of #250s.
- D. Clarified grounding of existing "MD" in Base Bid work One-Line E3.1.
- E. Clarified grounding of new "MSP" in Alternate Add #1 One-Line E3.2.
- F. Clarified that the new Alternate Add #1 panels "MDP" and "DPA" are not pre-purchased by Owner and shall be provided/installed by the Electrical Contractor (E.C.).
- G. New drawing E3.2 to illustrate Alternate Add #1 work separate from Base-Bid work. Moved new 50A/2P breaker (for existing panel "E") from new "MDP" (Alternate Add #1) to new "DPA" (Alternate Add #1) to free up space on new "MDP" and also to save \$ because existing panel "E" is in same room as new "DPA".

### **End of Addendum #1 -**

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# GAYLORD COMMUNITY SCHOOLS PROJECT SF3.8

## BID PACKAGE NO. 4

### BOARD OFFICE / EARLY CHILDHOOD CENTER

### GENERATOR & ATS INSTALLATION PROJECT

615 S. ELM AVE., GAYLORD, MI 49735

WORK DESCRIPTION
WORK OF THE CONTRACT INCLUDES INSTALLATION OF A PREPACKAGED GENERATOR SET AND AUTOMATIC TRANSFER SWITCH (ATS) PREVIOUSLY PURCHASED BY THE OWNER.

CODE DATA
APPLICABLE CODES: 2021 MICHIGAN BUILDING CODE 2021 MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS 2021 MICHIGAN PLUMBING CODE 2023 MICHIGAN ELECTRIC CODE AND (NEC BY REFERENCE) 2012 LIFE SAFETY CODE  BUILDING USE GROUP: EXISTING B/E/S2 (MIXED OCCUPANCIES - NON-SEPARATED & SEPARATED)  CONSTRUCTION TYPE: 2021 MBC TYPE IIB NFPA TYPE II(000)  BUILDING AREA: TOTAL BUILDING AREA: 45,900 sf B/E USE: 33,010 sf S2 USE: 12,890 sf  OCCUPANT LOAD (PER 2021 MBC 1004.1.2): B/E USE AREAS: 750 S2 USE AREA: 42

BID ALTERNATES
BID ALTERNATE NO. 1: REPLACE EXISTING ELECTRICAL PANELS  INCLUDES REMOVAL AND REPLACEMENT OF EXISTING MAIN DISTRIBUTION PANEL "MDP", INSTALLED AT A NEW LOCATION, WITH FEEDERS FROM "MDP" AS NEEDED TO RECONNECT TO EXISTING "MD" LOADS; AND REMOVAL AND REPLACEMENT OF EXISTING SUB-PANEL "DPA" WITH NEW SUB-PANEL "DPA" INSTALLED AT THE SAME LOCATION AND RECONNECTING EXISTION FEEDERS TO EXISTING "DPA" LOADS.  BID ALTERNATE NO. 2: NEW GAS SERVICE HEADER  INCLUDES REMOVAL OF EXISTING BOECC BUILDING 3" NATURAL GAS SERVICE HEADER (LOCATED NEAR THE BOILER ROOM) AND REPLACEMENT WITH A 6" NATURAL GAS SERVICE HEADER IN THE SAME LOCATION AND CONNECTING TO THE EXISTING 3" NATURAL GAS MAIN SERVING EXISTING LOADS WITHIN THE EXISTING BOILER ROOM. PROVIDE A NEW 5" NATURAL GAS FEEDER PIPE TAPPED OFF NEW/UPGRADED 6" GAS HEADER ROUTED ACROSS ROOF, DOWN EXTERIOR WALL, AND UNDERGROUND TO NEW GENERATOR.

SHEET INDEX
T TITLE SHEET / PROJECT INFORMATION P0.1 PLUMBING TITLE SHEET & DETAILS - GAS SERVICE WORK P1.0 PLUMBING PLAN - GAS BASE BID (NEW GAS SERVICE) P1.1 PLUMBING PLAN - GAS ALTERNATE #2 (EXISTING GAS SERVICE) E0.1 ELECTRICAL TITLE SHEET & DETAILS E1.1 ELECTRICAL DEMOLITION PLANS E2.1 ELECTRICAL NEW WORK PLANS E3.1 ELECTRICAL ONE-LINE & DETAILS <b>E3.2 ELECTRICAL 1-LINE - ALTERNATE #1</b>

ADDENDUM #1  
(5/19/2025)



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ELECTRICAL ABBREVIATION LIST

ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
A	AMPS	M.C.	MECHANICAL CONTRACTOR
AFF	ABOVE FINISHED FLOOR	MCA	MINIMUM CIRCUIT AMPS
AFG	ABOVE FINISHED GRADE	MCB	MAIN CIRCUIT BREAKER
AIC	AMPS INTERRUPTING CAPACITY	MDP	MAIN DISTRIBUTION PANEL
BKR	BREAKER	MFS	MAX FUSE SIZE
CB	CIRCUIT BREAKER	MLO	MAIN LUGS ONLY
CKT	CIRCUIT	MTO	MOUNTED
COORD	COORDINATE	MTR	MOTOR
DISC	DISCONNECT	N.E.C.	NATIONAL ELECTRIC CODE
DP	DISTRIBUTION PANEL	NF	NON-FUSIBLE
DWG	DRAWING	NT	NOT IN CONTRACT
(E)	EXISTING	NTS	NOT TO SCALE
E.C.	ELECTRICAL CONTRACTOR	P-A	PANEL "A"
EMT	ELECTRICAL METALLIC TUBING	P.C.	PLUMBING CONTRACTOR
(F)	FUTURE	PRI	PRIOR TO ROUGH-IN
F.A.	FIRE ALARM SUBCONTRACTOR	(R)	RELOCATED
FLA	FULL LOAD AMPS	RECEPT	RECEPTACLE PANEL
FU	FUSE	RD	RECEPTACLE
CFI	GROUND FAULT INTERRUPTER	SD	SMOKE DETECTOR
GRD	GROUND	SPEC	SPECIFICATION
GRS	GALVANIZED RIGID STEEL	SW	SWITCH
HOA	HAND-OFF-AUTO	SWBD	SWITCHBOARD
HP	HORSEPOWER	SWGR	SWITCHGEAR
HZ	HERTZ	TELECOM	TELECOMMUNICATIONS
JB	JUNCTION BOX	TYP	TYPICAL
KVA	KILO VOLT-AMPERES	UON	UNLESS OTHERWISE NOTED
KW	KILOWATT	U/G	UNDERGROUND (BELOW GRADE)
KWH	KILOWATT-HOURS	V	VOLTS
LP	LIGHTING PANEL	W	WATTS
		WP	WEATHERPROOF
		XFMR	TRANSFORMER

GENERAL ELECTRICAL DEMOLITION NOTES:

- THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF THE WORK. THE EXTENT OF DEMOLITION WORK SHALL BE AS REQUIRED BY THE NEW WORK.
- THE CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH THE EXISTING SYSTEMS/EQUIPMENT PRIOR TO ISSUING HIS BID. ALL EXISTING PANEL/WIRE/LIGHT SIZES AND ROUTINGS SHOWN ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED.
- ALL ELECTRICAL ITEMS TO BE REMOVED SHALL BE REMOVED COMPLETE WITH ALL RELATED ITEMS INCLUDING, BUT NOT LIMITED TO, WIRES, CONDUITS, SUPPORTS, FIXTURES, ETC. REMOVED ITEMS SHALL BE LEGALLY DISPOSED OF OFF SITE.
- ANY INTERRUPTION OF EXISTING SERVICES AND/OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED, BY THE OWNER OR OWNER'S REPRESENTATIVE, AT LEAST (7) DAYS IN ADVANCE SO AS NOT TO INTERFERE WITH THE PRESENT BUILDING OPERATION.
- WHERE DEMOLITION OF EXISTING SERVICES ARE REQUIRED TO ACCOMMODATE THE PROJECT PHASING/SCHEDULING, AND SERVICES ARE TO BE INTERRUPTED IN AREAS THAT ARE REMAINING OCCUPIED, THE CONTRACTOR SHALL PROVIDE TEMPORARY SERVICES/CONNECTIONS TO THE OCCUPIED AREAS TO MAINTAIN ITS PRESENT OPERATION. IF SYSTEM SHUT DOWNS ARE REQUIRED, THE CONTRACTOR SHALL SCHEDULE WORK TO BE PERFORMED AT UNOCCUPIED HOURS.
- ALL ITEMS TO BE REMOVED AND/OR RELOCATED SHALL BE REMOVED AND/OR RELOCATED TOGETHER WITH ALL RELATED ITEMS AS REQUIRED BY THE NEW WORK TO BE PERFORMED.
- CONTRACTOR SHALL COORDINATE ALL REMOVAL AND/OR RELOCATION WITH THE EXTENT OF THE NEW WORK AND WITH ALL OTHER TRADES INVOLVED.

GENERAL ELECTRICAL POWER NOTES:





































- THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF WORK. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL MATERIALS (I.E. CONDUIT, WIRE, PULL BOXES, ETC.) REQUIRED FOR A COMPLETE AND FUNCTIONAL SYSTEM.
- ALL ELECTRICAL SYSTEMS SHALL BE PROVIDED/INSTALLED TO MEET APPLICABLE BUILDING CODES: MICHIGAN BUILDING CODE, MICHIGAN ELECTRICAL CODE, N.E.C., LIFE SAFETY CODE NFPA 101, MICHIGAN ENERGY CODE, ETC.
- VERIFY REQUIREMENTS OF ALL MECHANICAL/PLUMBING/ARCHITECTURAL EQUIPMENT WITH SHOP DRAWING SUBMITTALS PRIOR TO INSTALLATION. NOTIFY THE ENGINEER OF ANY CONFLICTS BETWEEN SHOP DRAWINGS AND PLANS.
- COORDINATE THE INSTALLATION OF ALL ELECTRICAL WORK WITH ALL OTHER TRADES. CONTRACTOR SHALL VERIFY ALL MECHANICAL AND ELECTRICAL CLEARANCES PRIOR TO FABRICATION OF ANY NEW WORK. ELECTRICAL EQUIPMENT, WIRING, ETC. SHALL NOT INTERFERE WITH MECHANICAL EQUIPMENT CLEARANCE SPACES.
- ALL CIRCUITS FOR POWER, LIGHTING, ETC. SHALL BE INSTALLED IN CONDUIT AS SPECIFIED. ALL CIRCUITS SHALL BE CONCEALED IN WALLS, INCLUDING (E) WALLS. SURFACE MOUNTED RACEWAY SHALL NOT BE USED, UNLESS NOTED OTHERWISE, OR UNLESS ABSOLUTELY NECESSARY. APPROVAL FROM ARCHITECT/ENGINEER MUST BE OBTAINED PRIOR TO USING SURFACE MOUNTED RACEWAY.
- UNLESS OTHERWISE NOTED, EACH SUBCONTRACTOR SHALL BE RESPONSIBLE FOR SEALING ALL NEW PENETRATIONS THROUGH ALL WALLS WITH FIRE CAULK IN ACCORDANCE WITH CURRENT BUILDING CODE REQUIREMENTS.

JLK Engineering  
Project Number:  
AEA 2401-01

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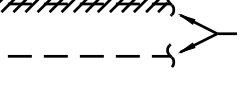
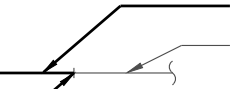


ELECTRICAL SYMBOL LIST

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	CIRCUIT BREAKER		SINGLE PHASE MOTOR
	SWITCH		THREE PHASE MOTOR
	AUTOMATIC OR MANUAL TRANSFER SWITCH		COMBINATION MOTOR STARTER WITH DISCONNECT SWITCH
	NODE		VARIABLE SPEED DRIVE COMBINATION MOTOR STARTER WITH DISCONNECT SWITCH
	GROUND		NON-FUSABLE DISCONNECT SWITCH
	ENGINE GENERATOR		FUSIBLE DISCONNECT SWITCH
	TRANSIENT VOLTAGE SURGE SUPPRESSION		HORSE POWER RATED SWITCH
	CIRCUIT HOMERUN TO PANEL "A" CIRCUIT #3		JUNCTION BOX
	LIGHTING PANEL (LP = <240V)		HARD WIRE POWER CONNECTION
	DISTRIBUTION PANEL		GROUND ROD
	TRANSFORMER		CONDUIT UP
	UTILITY METER		CONDUIT DOWN
	UTILITY CT CABINET		DUPLEX RECEPTACLE
	GENERATOR REMOTE ANNUNCIATOR PANEL		DUPLEX RECEPTACLE MOUNTED AT 48" ABOVE FLOOR (UNLESS NOTED OTHERWISE) - SIMILAR FOR ISOLATED GROUND, EMERGENCY AND GFI RECEPTACLES
	ATS REMOTE ANNUNCIATOR PANEL		QUAD RECEPTACLE
			DUPLEX RECEPTACLE MOUNTED 6" ABOVE COUNTERTOP OR AS REQUIRED TO ACCOMMODATE COUNTERS - REFER TO ARCHITECTURAL ELEVATIONS
			DUPLEX RECEPTACLE - GROUND FAULT INTERRUPTER
			DUPLEX RECEPTACLE - GROUND FAULT INTERRUPTER - MOUNTED 6" ABOVE COUNTERTOP OR AS REQUIRED TO ACCOMMODATE COUNTERS - REFER TO ARCHITECTURAL ELEVATIONS
			DUPLEX RECEPTACLE - GROUND FAULT INTERRUPTER - WEATHERPROOF COVER
			DUPLEX RECEPTACLE - GROUND FAULT INTERRUPTER - DEAD-FRONT COVER
			SPECIAL RECEPTACLE - NEMA CONFIGURATION AS NOTED

STANDARD MOUNTING HEIGHTS

- CONVENIENCE AND SPECIAL PURPOSE RECEPTACLE OUTLETS, TELE/DATA AND COMMUNICATIONS OUTLETS, NOT OTHERWISE SPECIFIED:
- 18" AFF TO THE MIDDLE OF BOX
  - 16" AFF TO BOTTOM OF BOX IN CMU WALLS
- LIGHT SWITCHES, MOTOR CONTROL DEVICES, AND FIRE ALARM PULL STATIONS, NOT OTHERWISE SPECIFIED:
- 48" AFF TO THE MIDDLE OF BOX
  - 48" AFF TO THE TOP OF BOX IN CMU WALLS
- T-STATS, TEMP. SENSORS, CO2 SENSORS, NOT OTHERWISE SPECIFIED:
- 48" AFF TO THE MIDDLE OF BOX
  - 48" AFF TO THE TOP OF BOX IN CMU WALLS
- GFI RECEPTACLES IN TOILET ROOMS AND JANITOR CLOSETS, NOT OTHERWISE SPECIFIED:
- 48" AFF TO TOP OF BOX.
- LIGHTING AND RECEPTACLE BRANCH CIRCUIT PANELBOARDS AND LIGHTING CONTROLLERS:
- 6'-6" AFF TO TOP OF ENCLOSURE.

METHODS OF NOTATION

- ① CONSTRUCTION KEYED NOTE NUMBER
- △ DEMOLITION KEYED NOTE NUMBER
-  EXISTING SYSTEM COMPONENT TO BE REMOVED
-  NEW SYSTEM COMPONENT
-  EXISTING SYSTEM COMPONENT TO REMAIN
-  POINT OF NEW CONNECTION
- A-3 CIRCUIT HOMERUN (BACK TO PANEL "A" - REFER TO PANEL SCHEDULE)

ELECTRICAL DRAWING INDEX

- E0.1 - ELECTRICAL TITLE SHEET & DETAILS
- E1.1 - ELECTRICAL DEMOLITION PLANS
- E2.1 - ELECTRICAL NEW WORK PLANS
- E3.1 - ELECTRICAL 1-LINE & DETAILS
- E3.2 - ELECTRICAL 1-LINE - ALTERNATE #1

GCS BOARD OF EDUCATION OFFICES & EARLY CHILDHOOD CENTER BUILDING (BOECC) GENERATOR & ATS INSTALLATION PROJECT - ALTERNATE BID ITEMS:

ALTERNATE #1 (ADDER) - ADDITION OF REPLACING EXISTING MAIN DISTRIBUTION PANEL "MD" AND EXISTING SUB-PANEL "DPA". STATE THE COST OF MATERIALS & LABOR REQUIRED TO ADD THE FOLLOWING WORK TO THE SCOPE OF THE PROJECT: REMOVAL & REPLACEMENT OF THE EXISTING MAIN DISTRIBUTION PANEL "MD" WITH A NEW MAIN DISTRIBUTION PANEL "MDP" (BY E.C.), INSTALLED AT A NEW LOCATION, WITH NEW FEEDERS FROM NEW "MDP" AS NEEDED TO RECONNECT TO THE EXISTING "MD" LOADS. REFER TO 1-LINE DIAGRAM. REMOVAL & REPLACEMENT OF THE EXISTING SUB-PANEL "DPA" WITH A NEW SUB-PANEL "DPA" (BY E.C.), INSTALLED AT THE SAME LOCATION, AND RECONNECTING EXISTING FEEDERS TO EXISTING "DPA" LOADS. REFER TO 1-LINE DIAGRAM.

ADDENDUM #1

ADDENDUM #1

DRAWING TITLE

ELECTRICAL TITLE SHEET & DETAILS

PROJECT TITLE

GAYLORD COMMUNITY SCHOOLS PROJECT SFS.8 - 2024 SINKING FUND PROJECT'S  
BOECC GENERATOR & ATS INSTALLATION PROJECT  
615 S. ELM AVE., GAYLORD, MI 49735

PROJECT NO.

284-20H-6

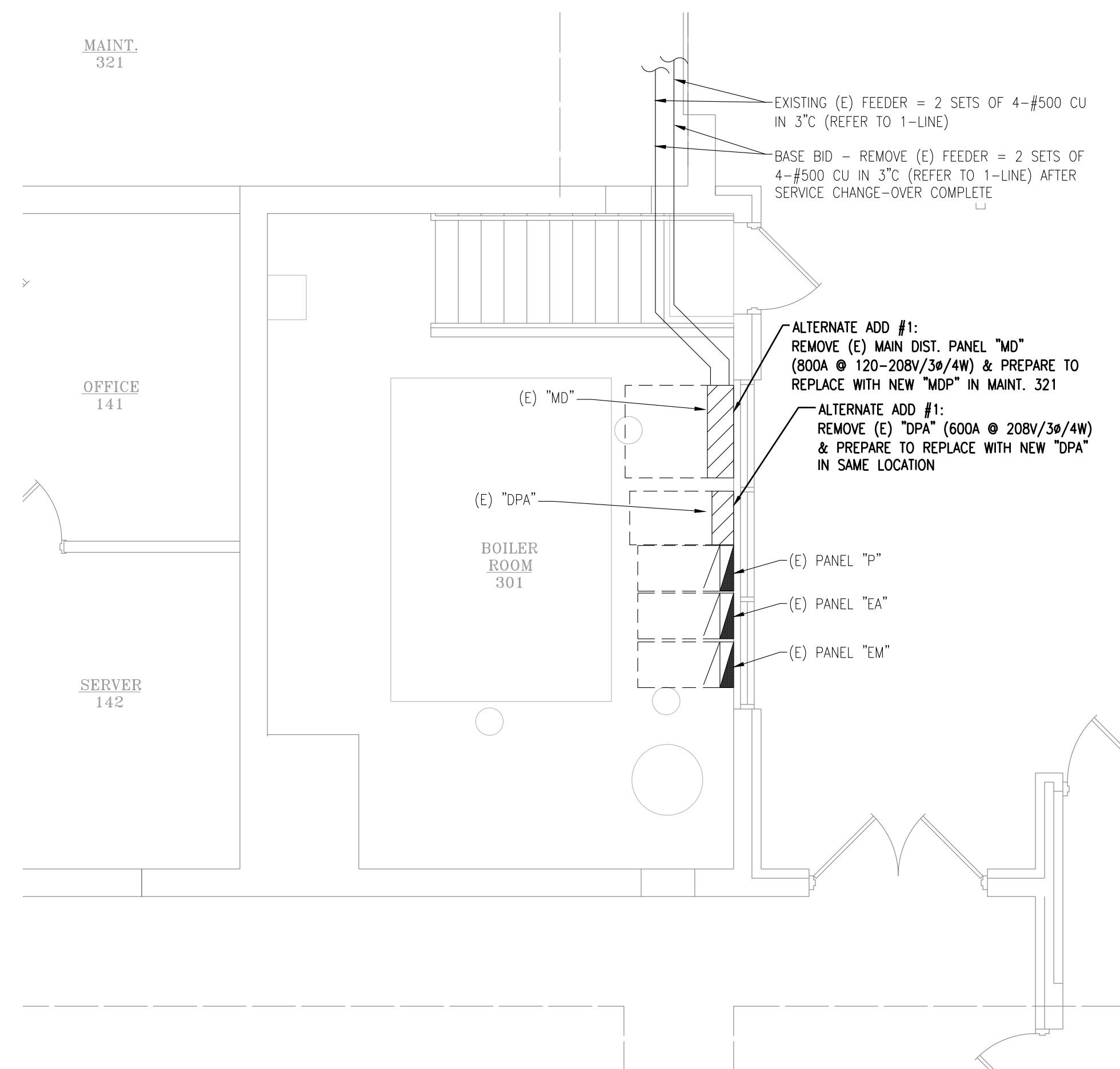
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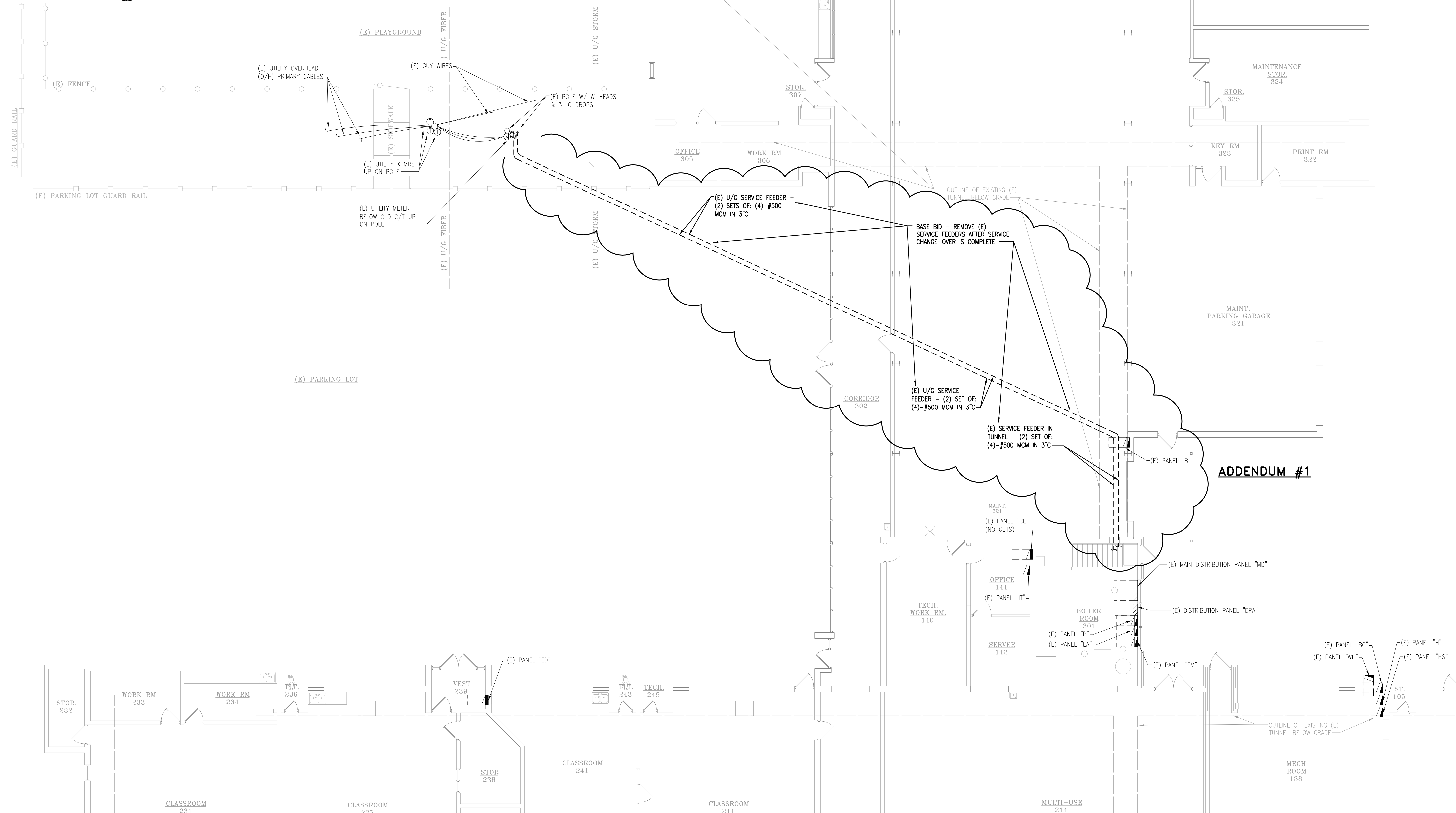
SHEET

E0.1

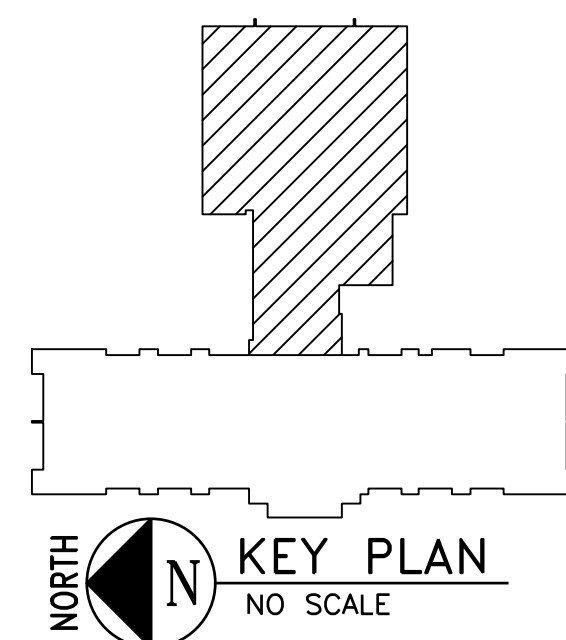




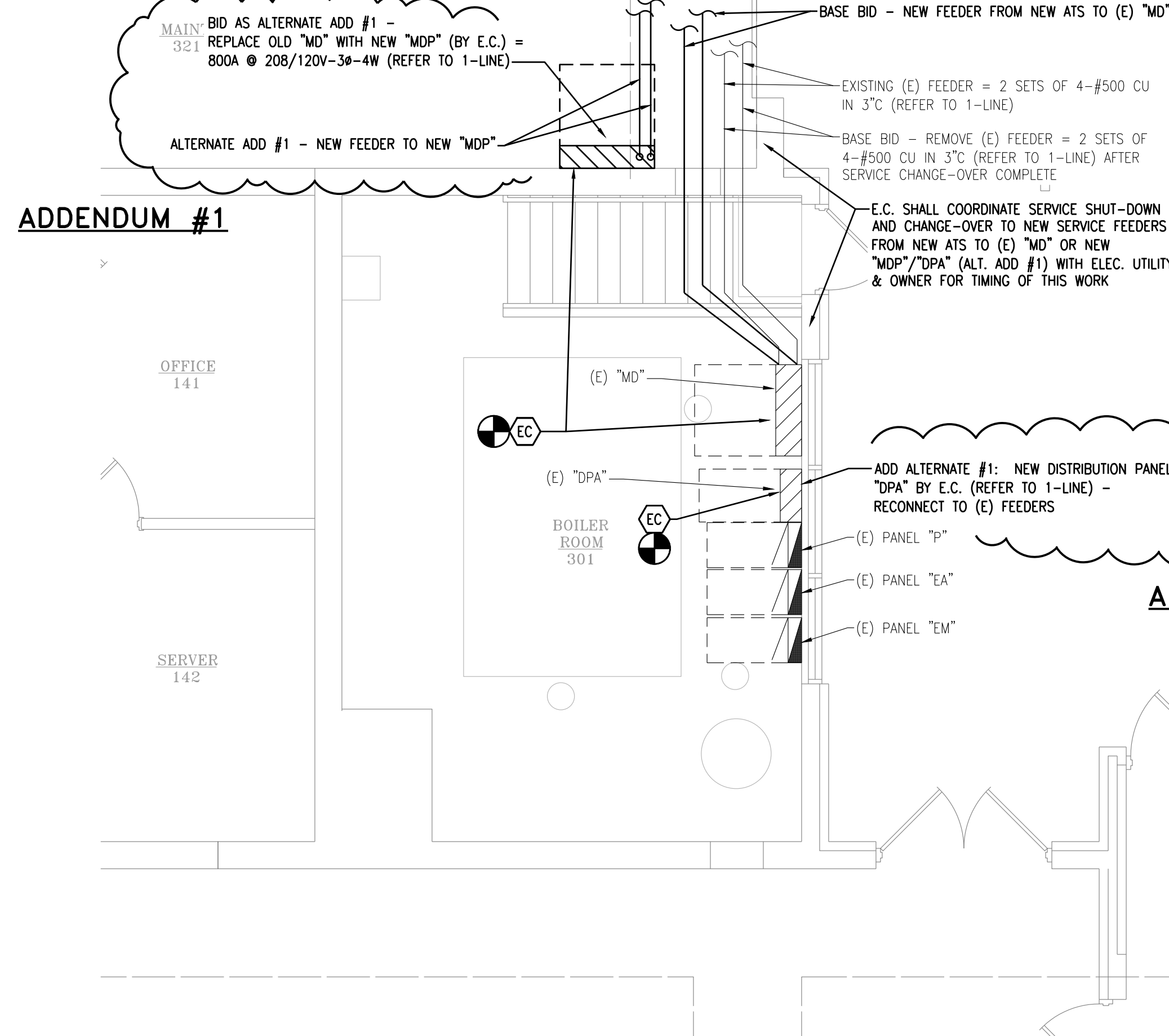
**ENLARGED BOILER ROOM DEMOLITION PLAN**  
SCALE: 1/4" = 1'-0"



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

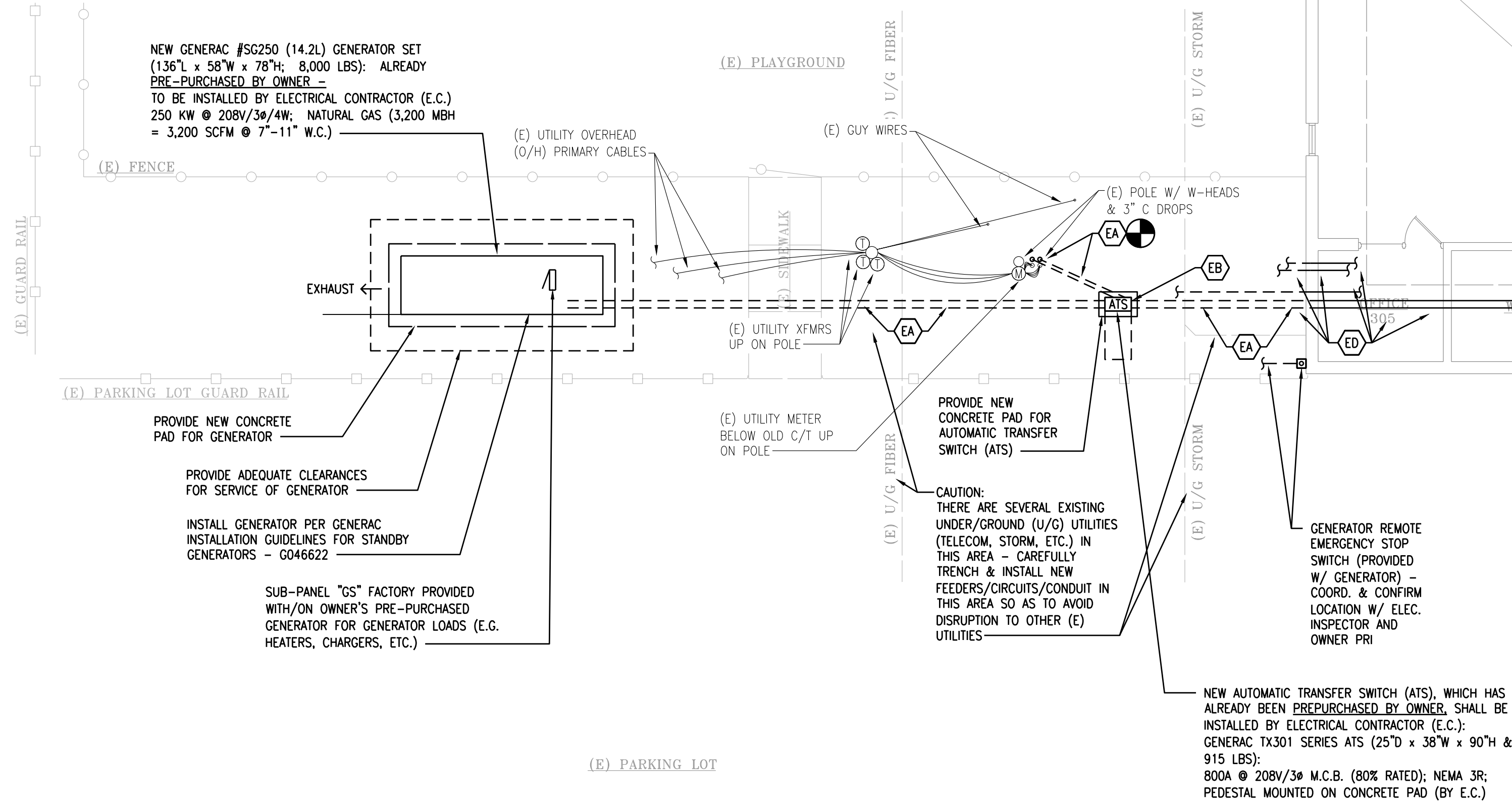






**ADDENDUM #1**

**ENLARGED BOILER ROOM - NEW WORK PLAN**  
SCALE: 1/4" = 1'-0"



NEW 30A @ 208V/1Ø CKT (3-#4 CU + 1-#8 CU GRD IN 1.25" C) FROM NEW 30A/2P BREAKER TO NEW SUB-PANEL "GS" PROVIDED ON GENERATOR (ASSUMED 4 KW @ 120V COORD./CONFIRM WITH GENERATOR SHOP)

NEW 20A @ 120V/1Ø CKT (2-#6 CU + 1-#10 CU GRD IN 3/4" C) FROM NEW 20A/1P BREAKER TO NEW ATS HEATER (ASSUMED 1.5 KW @ 120V) COORD./CONFIRM WITH ATS SHOP)

COORDINATE AND CONFIRM LOCATION (DAVID'S OFFICE) OF ATS AND GENERATOR REMOTE ANNUNCIATOR PANELS WITH OWNER PRIOR TO ROUGH-IN

NEW CONTROL CABLES TO GENERATOR VIA 3/4" C ROUTED THRU (E) TUNNEL

NEW CONTROL CABLES TO AUTOMATIC TRANSFER SWITCH (ATS) VIA 3/4" C ROUTED THRU (E) TUNNELS

(E) PANEL "A"

(E) DISTRIBUTION PANEL "DP"

(E) PANEL "J"

NEW 30A/2P BKR & NEW 20A/1P BKR

(E) PANEL "TO"

**KEYED ELECTRICAL POWER CONSTRUCTION NOTES:**

- EA NEW UNDERGROUND (U/G) FEEDERS TO/FROM NEW GENERATOR AND NEW ATS. SEE 1-LINE DIAGRAM.
- EB AUTOMATIC TRANSFER SWITCH (ATS) - E.C. SHALL INSTALL OWNER'S PRE-PURCHASED ATS. REFER TO 1-LINE DIAGRAM.
- EC ALTERNATE ADD #1: E.C. SHALL BID REPLACING MAIN DIST. PANEL "MD" (WITH NEW "MDP" IN SAME LOCATION) & SUB-PANEL "DPA" (WITH NEW "DPA" IN SAME LOCATION) AS ALTERNATE ADD #1.
- ED ROUTE ALL CONDUITS (FEEDERS, CIRCUITS, CONTROLS, ETC.) TO/FROM THE GENERATOR & ATS VIA THE TUNNEL SYSTEM & NOT SURFACE MOUNTED DOWN EXTERIOR WALL OF BUILDING

ALTERNATE ADD #1 = NEW FEEDER TO NEW "MDP"

BID AS ADD ALTERNATE #1: REPLACE OLD "MD" WITH NEW "MDP" BY E.C. = 800A @ 208/120V-3Ø-4W (REFER TO 1-LINE)

BASE BID = NEW FEEDER FROM NEW ATS TO EXISTING (E) "MD"

(E) MAIN DISTRIBUTION PANEL "MD"

REFER TO ENLARGED BOILER ROOM PLAN

(E) DISTRIBUTION PANEL "DPA"

(E) PANEL "CE" (NO GUTS)

(E) PANEL "P"

(E) PANEL "EA"

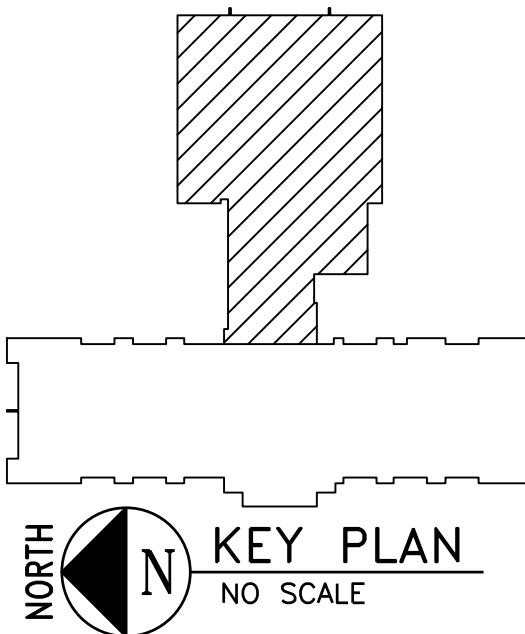
(E) PANEL "EM"

(E) PANEL "BO"

(E) PANEL "WH"

(E) PANEL "H"

(E) PANEL "HS"



**ELECTRICAL NEW WORK PLAN**  
SCALE: 1/8" = 1'-0"







JLK Engineering Project Number: AEA 2401-01  
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www.jlkeengineering.com

GENERATOR SET:  
250 KW CLASS, 120/208V-3P-4W, NATURAL GAS  
GENERIC 50250 (14.2L ENGINE)  
NOTE THAT THIS GENERATOR SET HAS BEEN PRE-PURCHASED BY OWNER AND SHALL BE  
INSTALLED WIRED BY THE ELECTRICAL CONTRACTOR (E.C.) -  
REFER TO GENERIC INSTALLATION GUIDELINES FOR STANDBY INDUSTRIAL GENERATORS - G046622.

800 AMP/3P MAIN CIRCUIT  
BREAKER (BKR RATED)  
PROVIDED W/GENERATOR SET

GENERATOR SUB-PANEL "GS" (PROVIDED  
WITH/ON GEN SET) FOR POWERING GEN SET  
FEATURES: ENGINE COOLANT HEATER, BATTERY  
CHARGER, ALTERNATOR HEATER, ENCLOSURE  
HEATER, ETC... TOTAL CONNECTED LOAD  
ASSUMED = 4.5 KW / 208V = 22 AMPS

PROVIDE CONCRETE PAD (4,000 PSI  
MIN.) WITH ADEQUATE STEEL  
REINFORCING & FOUNDATION FOR  
NEW GENERATOR SET (8,000 LBS)

#2/0 CU GRD TO  
PAD'S STEEL  
REINFORCEMENT BARS

FINISHED GRADE

EXOTHERMIC WELD  
CONNECTION (TYP)

TWO (2)-10" LONG  
TUNNEL BENEATH  
(TYP)

E.C. SHALL PROVIDE ALL LOW VOLTAGE  
CONTROL & COMMUNICATIONS CIRCUITS  
TO/FROM THE GENERATOR SET AND THE ATS,  
& REMOTE E-STOP SWITCH, & THE GENERATOR  
ANNUNCIATOR PANEL, ETC. AS REQUIRED.

COORD. REQUIREMENTS W/ OWNER  
PRE-PURCHASED GENERATOR & ATS SHOP  
DRAWING SUBMITTALS (INCLUDED IN  
SPECIFICATION MANUAL FOR REFERENCE)

REMOTE GENERATOR  
ANNUNCIATOR PANEL (ORA)  
COORD. LOCATION W/ OWNER  
PRI - MAINT. OFFICE 3167

FINISHED GRADE

SPARE 1" CONDUIT (C) TO  
BOECC BOILER ROOM 301 VIA  
TUNNEL FOR FUTURE USE

REMOTE GENERATOR  
EMERGENCY STOP  
(WITHIN SITE  
OF GENERATOR)  
COORD.  
LOCATION W/ A/HU &  
OWNER PRI

ELECTRICAL CONTRACTOR (E.C.) SHALL  
COORDINATE & CONFIRM ANY UTILITY  
IMPROVEMENTS WITH THE EXISTING  
ELECTRICAL UTILITY (CONSUMERS ENERGY  
ACCOUNT #1000001682822 FOR GAYLORD  
COMMUNITY SCHOOLS @ 515 S. ELM AVE.  
GAYLORD, MI 49735 - OWNER'S  
REPRESENTATIVE IS MR. DAVID PARSELL @  
989-705-3019) AS TO IF/WHEN THE  
UTILITY WANTS TO UPGRADE THEIR EXISTING  
TRANSFORMER &/OR METER - IF SO,  
OWNER SHALL PAY FOR UTILITY  
CHARGES FOR NEW TRANSFORMER OR  
METER DIRECTLY TO UTILITY

ANNUAL MAX DEMAND PER EMAIL  
FROM CONSUMERS ELECTRIC  
UTILITY ON 12/6/2023:  
66 KW @ 208V/3P = 183 AMPS

(E) WOOD UTILITY POLES W/ (E)  
LLC UTILITY TRANSFORMERS,  
ISOLATORS, WEATHERHEADS, ETC.

(E) 800 AMP @  
208-120V/3P/4W  
ELECTRICAL SERVICE

E.C. SHALL PROVIDE NEW SERVICE FEEDERS VIA  
NEW CONDUITS/WEATHER-HEADS AS REQUIRED  
FOR NEW SERVICE FEEDER TO NEW ATS

TWO (2)-#1/0 CU OR  
(1)-#2/0 CU SERVICE GRD  
FROM NEW SERVICE RATED  
ATS GROUND BUS TO NEW  
GRD MAT = THREE (3)-10"  
LONG 3/4"Ø GROUND RODS  
& REINFORCEMENT IN PAD

AUTOMATIC TRANSFER SWITCH (PRE-PURCHASED BY OWNER  
& TO BE INSTALLED BY ELECTRICAL CONTRACTOR) =  
GENERIC TX301 SERIES  
800 AMP @ 3-POLY-4-WIRE 208V. SERVICE ENTRANCE  
RATED (W/ 800A MCB): OPEN-DELAYED/PROGRAMMED  
TRANSFER (3-POSITION): MECHANICALLY HELD AUTO  
TRANSFER & MICROPROCESSOR CONTROLLER: NEMA 3R  
CABINET, WITH BOTTOM CABLE ENTRY, TO BE FLOOR  
MOUNTED ON CONCRETE PAD BY E.C.

800A/3P  
MCB

TWO (2)-#1/0 CU OR  
(1)-#2/0 CU GRD TO  
BUILDING'S (E) WATER  
SERVICE & (E) BUILDING  
STEEL STRUCTURE & ALSO  
TO MD/MDP'S GROUND BUS

NEW 20A/1P BKR IN (E) PANEL "TO"  
AND NEW CKT FOR NEW ATS FEEDERS

AUTO TRANSFER SWITCH'S REMOTE ANNUNCIATOR  
PANEL (ARA), COORD. LOCATION W/ OWNER PRI  
= MAINT. OFFICE 3167

FINISHED GRADE

E.C. SHALL PROVIDE ALL 120V POWER &  
CONTROL & COMMUNICATIONS CIRCUITS  
TO/FROM THE GENERATOR SET AND THE ATS,  
& THE ATS ANNUNCIATOR PANEL (ARA),  
ETC. AS REQUIRED. COORD. REQUIREMENTS  
W/ OWNER PRE-PURCHASED GENERATOR &  
ATS SHOP DRAWING SUBMITTALS (INCLUDED IN  
SPECIFICATION MANUAL FOR REFERENCE)

NEW MAIN DISTRIBUTION PANEL "MDP" (BY E.C.)  
800 AMP MCB @ 120/208V-3Ø-4W,  
SE RATED, SQ D 1-LINE  
(IN BOECC MAINT. GARAGE 321)

NOTE - BID AS ALTERNATE ADD #1:  
REMOVAL AND REPLACEMENT OF (E) MAIN DIST. PANEL "MD" WITH NEW "MDP"  
BY E.C. (SQUARE D "1-LINE" TYPE HCP/HCR - 86"X44"X9.5") 800A @  
208/120V-3Ø-4W WITH 800A/3P MCB, SERVICE ENTRANCE RATED (65 KAC  
= COORD/CONFIRM WITH UTILITY). POWER LOGIC METER, NEUTRAL BUS,  
GRD BUS, & ADDN. ISO. GRD BUS; SURFACE MTD NEMA 1 ENCLOSURE;  
WITH THE FOLLOWING BREAKERS TO REFLECT OLD/EXISTING "MD" BREAKERS:  
1 - 600A/3P BKR  
2 - 350A/3P BKRS  
3 - 200A/3P BKRS  
1 - 100A/3P SPACE  
IN ORDER TO REDUCE SHUT-DOWN/CHANGE-OVER, E.C. SHALL PRE-RUN  
NEW FEEDERS FROM NEW "MDP" TO EXISTING SUB-PAN/BOARDS (LIST  
PANELS HERE). AFTER NEW "MDP" IS IN PLACE, DISCONNECT/REMOVE OLD  
FEEDERS AND REMOVE OLD "MD".

(E) MAIN DISTRIBUTION PANEL "MD"  
800 AMP @ 120/208V-3Ø-4W  
MAIN LUG ONLY (MLO)  
GE TYPE "GCB-STY 2"  
IN BOECC BOILER ROOM 301

ANNUAL MAX DEMAND  
FROM ELECTRICAL UTILITY  
ON 12/6/2023:  
66 KW = 183 AMPS

(E) SERVICE FEEDER - TWO  
(2) SETS OF:  
(3)-#500 MCM + (1)-#500  
MCM (NEUTRAL) IN 3"Ø U/G  
FROM EXISTING UTILITY POLE  
DROPS AND THRU TUNNEL TO  
EXISTING "MD" IN BOILER ROOM  
301

BASE BID  
REMOVE (E)/OLD SERVICE FEEDER AFTER  
NEW SERVICE FEEDER FROM NEW ATS TO  
(E) "MD" IS COMPLETE

(E) PANEL "DPA"  
120/208V-3Ø-4W  
MAIN LUG ONLY  
GE TYPE "NAB-STY 2A"  
IN BOILER ROOM 301

NEW FEEDER - TWO SETS OF:  
(4)-#350 CU + (1)-#1 CU GRD EACH IN 3.5"Ø

NEW PANEL "DPA" (BY E.C.)  
600 AMP  
120/208V-3Ø-4W  
MAIN LUG ONLY  
SQUARE D "1-LINE"  
IN BOILER ROOM 301

RECONNECT TO (E) PANEL "EA"  
IN BOILER ROOM 301

RECONNECT TO (E) PANEL "WH"  
IN MECH ROOM 138

RECONNECT TO (E) PANEL "TO"  
IN STORAGE 215

RECONNECT TO (E) PANEL "TB"  
IN MULTI-USE 214

RECONNECT TO (E) PANEL "EX"  
IN ???

RECONNECT TO (E) PANEL "IT"  
IN OFFICE 141

NEW FEEDER:  
(3)-#6 CU + (1)-#10  
CU GRD IN 1"Ø

RECONNECT TO (E) PANEL "EA"  
IN BOILER ROOM 301

RECONNECT TO (E) PANEL "WH"  
IN MECH ROOM 138

RECONNECT TO (E) PANEL "TO"  
IN STORAGE 215

RECONNECT TO (E) PANEL "TB"  
IN MULTI-USE 214

RECONNECT TO (E) PANEL "EX"  
IN ???

RECONNECT TO (E) PANEL "IT"  
IN OFFICE 141

RECONNECT TO (E) PANEL "EA"  
IN BOILER ROOM 301

RECONNECT TO (E) PANEL "WH"  
IN MECH ROOM 138

RECONNECT TO (E) PANEL "TO"  
IN STORAGE 215

RECONNECT TO (E) PANEL "TB"  
IN MULTI-USE 214

RECONNECT TO (E) PANEL "EX"  
IN ???

RECONNECT TO (E) PANEL "IT"  
IN OFFICE 141

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IN BOILER ROOM 301

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IN MECH ROOM 138

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IN ???

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IN OFFICE 141

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IN BOILER ROOM 301

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IN MECH ROOM 138

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IN ???

RECONNECT TO (E) PANEL "IT"  
IN OFFICE 141

ADDENDUM #1

ELECTRICAL 1-LINE KEYED NOTES:

IF OWNER ACCEPTS ALTERNATE ADD #1, REMOVE  
(E) FEEDERS BACK TO OLD "MD" (WHICH IS BEING  
REMOVED/REPLACED WITH NEW "MDP") AFTER NEW  
"MDP" & NEW FEEDERS ARE IN PLACE

## ELECTRICAL ONE-LINE DIAGRAM (GCS-BOECC BUILDING) - ALTERNATE #1

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DRAWING TITLE  
ELECTRICAL 1-LINE - ALTERNATE #1

PROJECT TITLE  
GAYLORD COMMUNITY SCHOOLS PROJECT SPS 8 - 2024 SINKING FUND PROJECT'S  
BOECC GENERATOR & ATS INSTALLATION PROJECT  
615 S. ELM AVE., GAYLORD, MI 49735

SHEET	DATE	PROJECT NO.
E3.2	APRIL 18, 2025 MAY 19, 2025	284-20H-6