



DATE: 05-14-21

MADERA UNIFIED SCHOOL DISTRICT
SERVER ROOM
1902 HOWARD ROAD
MADERA, CA. 93637

CDS # 20-65243

| REVISIONS | 5/25/22 | ADDENDUM - 3 |
|-----------|--------------|--------------|
| 1 | ADDENDUM - 3 | |
| 2 | ADDENDUM - 4 | |
| 3 | | |
| 4 | | |
| 5 | | |



TITLE:
PARTIAL SINGLE LINE DIAGRAM,
EQUIPMENT ATTRIBUTES,
& PANEL SCHEDULES

SHEET:
E1.03
PROJECT 21052

| VOLTAGE: 208/120V, 3Ø, 4W BUS: 125A MAIN BREAKER: 70A/3P | | | | | (N) PANEL 'G' | | | | | BREAKER AIC: 35,000 MOUNTING: SURFACE NEMA 3R ENCLOSURE | | | | |
|--|--------|-----------|---------|---------|-----------------------|--------------------|----------------|---------|----------------|---|-------|--|--|--|
| CIR # | BKR | LOAD (VA) | | | DESCRIPTION | DESCRIPTION | LOAD (VA) | | | BKR | CIR # | | | |
| | | PHASE A | PHASE B | PHASE C | | | PHASE C | PHASE B | PHASE A | | | | | |
| 1 | 20A/1P | 240 | | | GEN. BATT. CHARGER | FUEL MAINT. SYSTEM | | | 600 | 20A/1P | | | | |
| 3 | 20A/1P | | | | JACKET WATER HEATER | SPARE | | 0 | | 20A/1P | | | | |
| 5 | 20A/1P | | | | FUEL TANK ALARM PNL | 100 | | | | 20A/1P | | | | |
| 7 | 20A/1P | 44 | | | WALL MOUNTED LIGHTS | SPARE | | 0 | | 20A/1P | | | | |
| 9 | 20A/1P | | 400 | | SPARE | SPARE | | 400 | | 20A/1P | | | | |
| 11 | 20A/1P | | | 180 | GEN. GFICI RECEPTACLE | PANEL REC. | 180 | | | 20A/1P | | | | |
| 13 | 20A/1P | 400 | | | SPARE | SPARE | | 400 | | 20A/1P | | | | |
| 15 | 20A/1P | | 400 | | ↓ | ↓ | | 400 | | 20A/1P | | | | |
| 17 | 20A/1P | | | 400 | ↓ | ↓ | 400 | | | 20A/1P | | | | |
| 19 | | 0 | | | SPACE | SPACE | | 0 | | 20A | | | | |
| 21 | ↓ | | 0 | | ↓ | ↓ | | 0 | | ↓ | 22 | | | |
| 23 | ↓ | | | 0 | ↓ | ↓ | 0 | | | ↓ | 24 | | | |
| 25 | ↓ | 0 | | | ↓ | ↓ | | 0 | | ↓ | 26 | | | |
| 27 | ↓ | | 0 | | ↓ | ↓ | | 0 | | ↓ | 28 | | | |
| 29 | ↓ | | | 0 | ↓ | ↓ | 0 | | | ↓ | 30 | | | |
| 31 | ↓ | 0 | | | ↓ | ↓ | | 0 | | ↓ | 32 | | | |
| 33 | ↓ | | 0 | | ↓ | ↓ | | 0 | | ↓ | 34 | | | |
| 35 | ↓ | | | 0 | ↓ | ↓ | 0 | | | ↓ | 36 | | | |
| 37 | ↓ | 0 | | | ↓ | ↓ | | 0 | 0 | ↓ | 38 | | | |
| 39 | ↓ | | | 0 | ↓ | ↓ | | | 0 | ↓ | 40 | | | |
| 41 | ↓ | | | 0 | ↓ | ↓ | 0 | | | ↓ | 42 | | | |
| TOTAL Ø LOADS (VA): | | | | | PHASE A = 1684 | | PHASE B = 2850 | | PHASE C = 2510 | | | | | |
| TOTAL Ø LOADS (A): | | | | | PHASE A = 14 | | PHASE B = 24 | | PHASE C = 21 | | | | | |
| TOTAL LOAD: | | | | | 7044 VA | | 20 A | | | | | | | |
| NOTE: | | | | | | | | | | | | | | |

| VOLTAGE: 208/120V, 3Ø, 4W BUS: 225A MAIN BREAKER: 200A/3P | | | | | (N) PANEL 'AC-PNL-1' | | | BREAKER AIC: 35,000 MOUNTING: SURFACE NEMA 1 ENCLOSURE | | | |
|---|---------|-----------|---------|---------|----------------------|---------------|-----------------|--|-----------------|--------|-------|
| CIR # | BKR | LOAD (VA) | | | DESCRIPTION | DESCRIPTION | LOAD (VA) | | | BKR | CIR # |
| | | PHASE A | PHASE B | PHASE C | | | PHASE C | PHASE B | PHASE A | | |
| 1 | 20A/3P | 1201 | | | EXISTING LOAD | EXISTING LOAD | | | 1560 | 30A/2P | 1 |
| 3 | | | 1201 | | | | | 1560 | | | |
| 5 | | | | 1201 | | | | | | | |
| 7 | 20A/1P | 960 | | | EXISTING LOAD | EXISTING LOAD | | 1560 | 1560 | 30A/2P | 7 |
| 9 | | | 1201 | | | | | | 2080 | | 9 |
| 11 | 20A/3P | | | 1201 | EXISTING LOAD | EXISTING LOAD | | 2080 | | 30A/2P | 11 |
| 13 | | 1201 | | | | SPARE | | | 0 | 20A/1P | 13 |
| 15 | 20A/1P | | 0 | | SPARE | SPARE | | 0 | | 20A/1P | 15 |
| 17 | 20A/1P | | | 0 | ↓ | ↓ | | 0 | | 20A/1P | 17 |
| 19 | 20A/1P | 300 | | | FIRE SUPPRESSION PNL | FACP | | | 200 | 20A/1P | 19 |
| 21 | 20A/1P | | 0 | | SPARE | SPARE | | 0 | | 20A/1P | 21 |
| 23 | 20A/1P | | | 0 | | ↓ | | 0 | | 20A/1P | 23 |
| 25 | ↓ | 0 | | | SPACE | SPACE | | | 0 | ↓ | 25 |
| 27 | ↓ | | 0 | | ↓ | ↓ | | 0 | | ↓ | 27 |
| 29 | ↓ | | | 0 | ↓ | ↓ | | 0 | | ↓ | 29 |
| 31 | ↓ | 0 | | | ↓ | ↓ | | | 0 | ↓ | 31 |
| 33 | ↓ | | 0 | | ↓ | ↓ | | 0 | | ↓ | 33 |
| 35 | ↓ | | | 0 | ↓ | ↓ | | 0 | | ↓ | 35 |
| 37 | | 3960 | | | | ↓ | | | 0 | ↓ | 37 |
| 39 | 200A/3P | | 4800 | | PANEL 'AC-PNL-1B' | | | 0 | | ↓ | 39 |
| 41 | | | | 4920 | | ↓ | | 0 | | ↓ | 41 |
| TOTAL Ø LOADS (VA): | | | | | PHASE A = 10942 | | PHASE B = 10842 | | PHASE C = 10962 | | |
| TOTAL Ø LOADS (A): | | | | | PHASE A = 91 | | PHASE B = 90 | | PHASE C = 91 | | |
| TOTAL LOAD: | | | | | 32746 VA | | 91 A | | | | |
| NOTE: 1. PANEL SHALL HAVE SURGE PROTECTIVE DEVICE. | | | | | | | | | | | |

| VOLTAGE: 208/120V, 3Ø, 4W BUS: 225A MAIN BREAKER: 200A/3P | | | | | (N) PANEL 'AC-PNL-1B' | | | | | BREAKER ICU: 35,000 MOUNTING: SURFACE NEMA 1 ENCLOSURE | | | | |
|---|--------|-----------|---------|---------|-----------------------|----------------|----------------|---------|---------|--|--------|----|--|--|
| CIR # | BKR | LOAD (VA) | | | DESCRIPTION | DESCRIPTION | LOAD (VA) | | | BKR | CIR # | | | |
| | | PHASE A | PHASE B | PHASE C | | | PHASE C | PHASE B | PHASE A | | | | | |
| 1 | 20A/1P | 0 | | | SPARE | EXISTING LOAD | | | | 720 | 20A/1P | 1 | | |
| 3 | 30A/1P | | 960 | | EXISTING LOAD | EXISTING LOAD | | | 960 | | 20A/1P | 3 | | |
| 5 | 20A/1P | | | 960 | EXISTING LOAD | EXISTING LOAD | | 1560 | | | | 5 | | |
| 7 | 20A/1P | 960 | | | EXISTING LOAD | EXISTING LOAD | | | | 1560 | | 7 | | |
| 9 | 20A/1P | | 0 | | SPARE | EXISTING LOAD | | | 1920 | | | 9 | | |
| 11 | 20A/1P | | | 960 | EXISTING LOAD | EXISTING LOAD | | 720 | | | | 11 | | |
| 13 | 20A/1P | 0 | | | SPARE | EXISTING LOAD | | | | 720 | | 13 | | |
| 15 | 20A/1P | | 0 | | ↓ | EXISTING LOAD | | | 960 | | | 15 | | |
| 17 | 20A/1P | | | 0 | ↓ | EXISTING LOAD | | 720 | | | | 17 | | |
| 19 | 20A/1P | 0 | | | ↓ | SPARE | | | | 0 | | 19 | | |
| 21 | 20A/1P | | 0 | | ↓ | ↓ | | | 0 | | | 21 | | |
| 23 | 20A/1P | | | 0 | ↓ | ↓ | | 0 | | | | 23 | | |
| 25 | ↓ | 0 | | | SPACE | SPACE | | | | 0 | | 25 | | |
| 27 | ↓ | | 0 | | ↓ | ↓ | | | 0 | | | 27 | | |
| 29 | ↓ | | | 0 | ↓ | ↓ | | 0 | | | | 29 | | |
| 31 | ↓ | 0 | | | ↓ | ↓ | | | | 0 | | 31 | | |
| 33 | ↓ | | 0 | | ↓ | ↓ | | | 0 | | | 33 | | |
| 35 | ↓ | | | 0 | ↓ | ↓ | | 0 | | | | 35 | | |
| 37 | ↓ | 0 | | | ↓ | ↓ | | | | 0 | | 37 | | |
| 39 | ↓ | | 0 | | ↓ | ↓ | | | | 0 | | 39 | | |
| 41 | ↓ | | | 0 | ↓ | ↓ | | 0 | | | | 41 | | |
| TOTAL Ø LOADS (VA): | | | | | PHASE A = 3960 | PHASE B = 4800 | PHASE C = 4920 | | | | | | | |
| TOTAL Ø LOADS (A): | | | | | PHASE A = 33 | PHASE B = 40 | PHASE C = 41 | | | | | | | |
| TOTAL LOAD: | | | | | 13680 VA | 38 A | | | | | | | | |
| NOTE: 1. PANEL SHALL HAVE SURGE PROTECTIVE DEVICE. | | | | | | | | | | | | | | |

| VOLTAGE: 208/120V, 3Ø, 4W BUS: 150A MAIN BREAKER: 150A/3P | | | | | (N) PANEL 'M' | | | | | BREAKER AIC: 35,000 MOUNTING: SURFACE NEMA 3R ENCLOSURE | | | | |
|---|--------|-----------|---------|---------|---------------------|---------------------|----------------|---------|---------|---|-------|--|--|--|
| CIR # | BKR | LOAD (VA) | | | DESCRIPTION | DESCRIPTION | LOAD (VA) | | | BKR | CIR # | | | |
| | | PHASE A | PHASE B | PHASE C | | | PHASE C | PHASE B | PHASE A | | | | | |
| 1 | 60A/3P | 4107 | | | FC-1 | FC-2 | | | 4107 | 60A/3P | 1 | | | |
| 3 | | | 4107 | | | | | 4107 | | | | | | |
| 5 | | | | 4107 | | | | | | | | | | |
| 7 | 15A/3P | 685 | | | CU-1 | CU-2 | | | 685 | 15A/3P | 7 | | | |
| 9 | | | 685 | | | | | 685 | | | | | | |
| 11 | | | | 685 | | | | 685 | | | | | | |
| 13 | 20A/1P | 400 | | | SPARE | NETWORK ROOM LTG | | | 400 | 20A/1P | 13 | | | |
| 15 | 20A/1P | | 400 | | ↓ | HVAC ROOF REC. | | 180 | | 20A/1P | 15 | | | |
| 17 | 15A/1P | | | 168 | HEATER PAD FOR CU-1 | HEATER PAD FOR CU-2 | 168 | | | 15A/1P | 17 | | | |
| 19 | ↓ | 0 | | | SPACE | SPACE | | | 0 | ↓ | 19 | | | |
| 21 | ↓ | | 0 | | ↓ | ↓ | | 0 | | ↓ | 21 | | | |
| 23 | ↓ | | | 0 | ↓ | ↓ | 0 | | | ↓ | 23 | | | |
| 25 | ↓ | 0 | | | ↓ | ↓ | | | 0 | ↓ | 25 | | | |
| 27 | ↓ | | 0 | | ↓ | ↓ | | 0 | | ↓ | 27 | | | |
| 29 | ↓ | | | 0 | ↓ | ↓ | 0 | | | ↓ | 29 | | | |
| 31 | ↓ | 0 | | | ↓ | ↓ | | | 0 | ↓ | 31 | | | |
| 33 | ↓ | | 0 | | ↓ | ↓ | | 0 | | ↓ | 33 | | | |
| 35 | ↓ | | | 0 | ↓ | ↓ | 0 | | | ↓ | 35 | | | |
| 37 | ↓ | 0 | | | ↓ | ↓ | | | 0 | ↓ | 37 | | | |
| 39 | ↓ | | | 0 | ↓ | ↓ | | 0 | | ↓ | 39 | | | |
| 41 | ↓ | | | 0 | ↓ | ↓ | 0 | | | ↓ | 41 | | | |
| TOTAL Ø LOADS (VA): | | | | | PHASE A = 10384 | PHASE B = 10164 | PHASE C = 9920 | | | | | | | |
| TOTAL Ø LOADS (A): | | | | | PHASE A = 86 | PHASE B = 85 | PHASE C = 83 | | | | | | | |
| TOTAL LOAD: | | | | | 30468 VA | 85 A | | | | | | | | |
| NOTE: | | | | | | | | | | | | | | |

| VOLTAGE: 120/208V, 3Ø, 4W MAIN BREAKER: 100A/3P (E) PANEL 'AC-PNL-1' | | | | | | | | | |
|--|---------|-----------------|---------|-----------------|---------------|-----------------|---------|---------|---------|
| LOAD (VA) | | DESCRIPTION | | DESCRIPTION | | LOAD (VA) | | BKR | |
| CIR # | BKR | PHASE A | PHASE B | PHASE C | PHASE A | PHASE B | PHASE C | PHASE A | PHASE B |
| 42 | | | | | SPACE | | | | 41 |
| 40 | ↓ | | | | ↓ | | | | 39 |
| 38 | ↓ | | | | ↓ | | | | 37 |
| 36 | | 1201 | | | EXISTING LOAD | | | 1560 | 30A/2P |
| 34 | 20A/3P | | | | EXISTING LOAD | | | 1560 | 30A/2P |
| 32 | | | | | EXISTING LOAD | | | 1560 | 30A/2P |
| 30 | 20A/1P | 960 | | | EXISTING LOAD | | | 1560 | 30A/2P |
| 28 | | | | | EXISTING LOAD | | | 2080 | 30A/2P |
| 26 | 20A/3P | | | | EXISTING LOAD | | | 2080 | 30A/2P |
| 24 | | | | | EXISTING LOAD | | | 720 | 20A/1P |
| 22 | 30A/1P | 960 | | | EXISTING LOAD | | | 960 | 20A/1P |
| 20 | 20A/1P | | | | EXISTING LOAD | | | 1560 | 30A/2P |
| 18 | 20A/1P | 960 | | | EXISTING LOAD | | | 1560 | 30A/2P |
| 16 | 20A/1P | | | | EXISTING LOAD | | | 1920 | 30A/1P |
| 14 | | | | | EXISTING LOAD | | | 720 | 20A/1P |
| 12 | | | | | EXISTING LOAD | | | 720 | 20A/1P |
| 10 | 100A/3P | | | | INPUT MAIN | | | 960 | 20A/1P |
| 8 | | 0 | | | SPACE | | | 0 | 5 |
| 6 | ↓ | | | | ↓ | | | 0 | 3 |
| 4 | ↓ | | | | ↓ | | | 0 | 1 |
| 2 | ↓ | | | | ↓ | | | 0 | 2 |
| TOTAL Ø LOADS (VA): | | PHASE A = 10442 | | PHASE B = 11802 | | PHASE C = 10002 | | | |
| TOTAL Ø LOADS (A): | | PHASE A = 87 | | PHASE B = 98 | | PHASE C = 83 | | | |
| TOTAL LOAD: | | 32246 VA | | 90 A | | | | | |

| GENERATOR, ATS, AND UPS WEIGHT & DIMENSIONS SCHEDULE | | | | | | |
|---|-------|-------------|--------|--------|--------|--------------|
| NAME | RATED | WEIGHT(LBS) | W | D | H | MOUNTING |
| GENERATOR | 125kW | 16188 | 1134" | 160" | 182" | FREESTANDING |
| ATS-AT1 | 400A | 1620 | 49.12" | 36.66" | 95.2" | FREESTANDING |
| ATS-AT2 | 400A | 1620 | 49.12" | 36.66" | 95.2" | FREESTANDING |
| 60KW UPS | - | 2552 | 59.86" | 33.34" | 58.46" | FREESTANDING |
| FUTURE 60KW UPS | - | 2552 | 59.86" | 33.34" | 58.46" | FREESTANDING |

| ELECTRICAL DISTRIBUTION WEIGHT & DIMENSIONS SCHEDULE | | | | | | |
|---|------|------------|-----|--------|--------|--------------|
| NAME | CB | WEIGHT(lb) | W | D | H | MOUNTING |
| DBEM1 | 450A | 1200 | 36" | 39.03" | 91.50" | FREESTANDING |
| DBEM2 | 250A | 1200 | 36" | 39.03" | 91.50" | FREESTANDING |
| PANEL 'G' | 70A | 164 | 20" | 6.5" | 50" | SURFACE |
| PANEL 'M' | 150A | 296 | 20" | 6.5" | 50" | SURFACE |
| PANEL 'AC-PNL-1' | 200A | 204 | 20" | 5.75" | 68" | SURFACE |
| PANEL 'AC-PNL-1B' | 200A | 150 | 20" | 5.75" | 50" | SURFACE |



DATE: 05-14-21

MADERA UNIFIED SCHOOL DISTRICT
SERVER ROOM
1902 HOWARD ROAD
MADERA, CA. 93637

CDS # 20-65243

| REVISIONS | ADDENDUM - 3 | ADDENDUM - 4 |
|-----------|--------------|--------------|
| 5/25/22 | ADDENDUM - 3 | ADDENDUM - 4 |
| 6/7/22 | ADDENDUM - 3 | ADDENDUM - 4 |
| | ADDENDUM - 3 | ADDENDUM - 4 |
| | ADDENDUM - 3 | ADDENDUM - 4 |

LAWRENCE
ENGINEERING GROUP
Fresno, CA 93720
7084 N. Maple Ave., Suite 101
(559) 431-1342
(559) 431-0101

TITLE:
ELECTRICAL AND FIRE
ALARM SITE PLAN

SHEET:

E2.01

PROJECT 21052

SHEET NOTES

- EXISTING METER MAIN - 1
- EXISTING METER MAIN - 2
- EXISTING METER MAIN - 3
- EXISTING MISCELLANEOUS METER SUB-PANELS WITH PG&E METER REMOVED AND ELECTRICAL NO LONGER USED.
- EXISTING FLOOR-MOUNTED TRANSFORMER 'TX1'.
- CONNECT FUEL TANK LEVEL CONTROLLER TO CIRCUIT INDICATED USING THREE #10 AWG CONDUCTORS. PROVIDE AND INSTALL #16 STP AND SIX #14 AWG FROM FUEL TANK CONTROL PANEL TO GENERATOR FOR FUEL TANK LEVEL SIGNALS AND LEAK DETECTION SIGNAL.
- PROVIDE AND INSTALL CONDUITS FOR POWER. RUN CONDUITS UP THE WALL THEN CORE DRILL THROUGH CONCRETE/CMU WALL AS HIGH AS POSSIBLE TO RUN CONDUIT TO THE EXISTING METER MAIN 2, TO THE EXISTING TRANSFORMER 'TX1' VIA THE DISCONNECT 'DISC1', TO THE NEW AND FUTURE 60KV UPS, TO THE NEW MECHANICAL UNITS, TO THE REMOTE PUSH BUTTON EMERGENCY SHUT-OFF, AND TO THE NEW WALL MOUNTED LIGHTS. PROVIDE AND INSTALL (2) 18-INCH WIDE x 36-INCH TALL x 12-INCH DEEP, HINGED J-BOX. REFER TO THE ONE LINE DIAGRAM AND MECHANICAL SCHEDULE ON SHEET E1.03 FOR THE CONDUIT AND CONDUCTORS SIZE.
- PROVIDE AND INSTALL (2) #12 AWG CONDUCTORS BACK TO THE FUEL MAINTENANCE SYSTEM FOR FUEL MAINTENANCE SHUT-OFF WHEN THE GENERATOR IS RUNNING. CONNECT AND PROGRAM AN ANALOG RELAY FROM THE GENERATOR CONTROLLER TO OPEN UPON GENERATOR RUN TO OPEN THE RUN CIRCUIT ON THE FUEL MAINTENANCE PUMP TO STOP THE FUEL MAINTENANCE PUMP OPERATION.
- PROVIDE AND INSTALL THREE #14 AWG FOR THE GENERATOR START CIRCUIT BACK TO THE ATS 'AT1' AND 'AT2'.
- PROVIDE AND INSTALL PREFERRED UTILITIES MANUFACTURING #PF-501 CA-1-WR-1 OR APPROVED EQUAL DIESEL FUEL MAINTENANCE SYSTEM IN A WEATHERPROOF, RAIN-TIGHT CUSTOM ENCLOSURE PER DETAIL 6/E4.01. CONNECT TO CIRCUIT INDICATED USING THREE #10 AWG CONDUCTORS. PROVIDE SIGNAL CONDUCTORS BETWEEN FUEL MAINTENANCE SYSTEM CONTROLLER AND FUEL TANK LEVEL CONTROLLER, COORDINATE WITH MANUFACTURER(S).
- PROVIDE AND INSTALL 1000 GALLON, UL 2085 DIESEL FUEL TANK, LEVEL CONTROLLER/LEAK DETECTOR, VALVES, LEVEL SENSOR, LEVEL SWITCHES, GAUGES, LEAK SENSOR, FILLING CONNECTION/SPILL BOX, AND ALL OTHER ACCESSORIES FOR A FULLY FUNCTION DIESEL FUEL TANK MEETING ALL APPLICABLE REQUIREMENTS OF CALIFORNIA FIRE CODE AND NFPA 30. THE CONTRACTOR SHALL COORDINATE WITH THE GENERATOR SUPPLIER FOR THE FUEL LINE INTERCONNECTION TO THE GENERATOR. THE FUEL TANK SHALL COME WITH ALL REQUIRED VENT LINES, VALVES, LEAK DETECTION, AND CONTROL PANEL PER A UL APPROVED ASSEMBLED.
- PROVIDE AND INSTALL NEW WALL MOUNTED LIGHT FIXTURE ON EXTERIOR OF BUILDING AT SAME HEIGHT AS EXISTING NORTHERN EXTERIOR FIXTURE.
- PROVIDE AND INSTALL LOCAL MUSHROOM HEAD PUSH BUTTON FOR EMERGENCY POWER SHUT-OFF. PROVIDE AND INSTALL SIGNAL WIRING WITHIN A 1-INCH CONDUIT BACK TO THE GENERATOR PER THE GENERATOR MANUFACTURER.
- PROVIDE AND INSTALL FIXED BARRIER POST CONSISTING OF A 72-INCH BY 4-INCH DIAMETER, CONCRETE FILLED, SCHEDULE 80, STEEL PIPE AND CAP PAINTED WITH CORROSION RESISTANT PAINT EMBEDDED 36-INCH INTO A 42-INCH BY 15-INCH DIAMETER CONCRETE BASE PER CALIFORNIA FIRE CODE SECTION 312. PROVIDE AND INSTALL TWO 3-INCH REFLECTIVE TAPE BANDS ON EACH POST.
- PROVIDE AND INSTALL GENERATOR REMOTE ANNUNCIATOR AT THE DISTRICT OFFICE ENTRANCE. FISH THE FLEXIBLE CONDUIT AND CABLING WITHIN THE INTERIOR WALL TO CONCEAL. PROVIDE A 2-GANG CUT-IN BACK BOX TO HOLD THE CONDUIT AND THE CONDUIT. CUT THE EXISTING GYPSUM BOARD TO INSTALL THE RECESS MOUNTED BACK BOX TO MOUNT THE GENERATOR REMOTE ANNUNCIATOR. RUN CONDUIT AND CABLING BACK TO THE GENERATOR CONTROLLER.
- PROVIDE AND INSTALL 12-INCH BY 12-INCH BY 8-INCH NEMA-3R HINGED WIRE WAY MOUNTED UP HIGH TO ROUTE THE GENERATOR REMOTE ANNUNCIATOR CABLE. CORE DRILL THROUGH THE EXISTING CONCRETE/CMU WALL AND NIPPLE THROUGH WITH CONDUIT.
- DISCONNECT AND REMOVE THE EXISTING WALL MOUNTED CIRCUIT BREAKER FOR THE SECONDARY OF THE EXISTING TRANSFORMER AND REPLACE WITH THE NEW WALL MOUNTED BREAKER IN A NEMA-1 ENCLOSURE. REFER TO THE SINGLE LINE DIAGRAM.
- NOT USED.
- CONDUIT AND CONDUCTORS FROM THE GENERATOR TO PANEL 'G' FOR THE FOLLOWING SYSTEMS. REFER TO PANEL 'G' SCHEDULE:
 - 1-INCH CONDUIT - (3) # 12 AWG FOR THE BATTERY CHARGER,
 - 1-INCH CONDUIT - (3) # 12 AWG FOR THE RECEPTACLE,
 - 1-INCH CONDUIT - (3) # 12 AWG FOR THE ALTERNATOR HEATER,
 - 1-INCH CONDUIT - (3) # 12 AWG FOR OIL HEATER,
 - 1-INCH CONDUIT - (3) # 12 AWG FOR THE COOLANT HEATER,
 - 1-INCH CONDUIT - SPARE CONDUIT FROM PANEL 'G' TO THE GENERATOR.
- PROVIDE AND INSTALL 2A-40B-C FIRE EXTINGUISHER ON A 4-INCH STEEL BOLLARD POLE WITH 18-INCH BY 12-INCH DIAMETER FOUNDATION.
- PROVIDE AND INSTALL CAT-6 CABLE FROM THE (N) FACP TO THE REMOTE ANNUNCIATOR AND CABLE TYPE A FOR MANUAL PULL STATION IN THE DISTRICT OFFICE ENTRANCE WITHIN A 1-1/4-INCH CONDUIT. REFER TO SHEET E3.3.

HOWARD ROAD

DWYER STREET

MODOC STREET

ELECTRICAL AND FIRE ALARM SITE PLAN

SCALE: 1" = 30' - 0"

NEW EQUIPMENT SCHEDULE

- 125kW GENERATOR
- FUEL TANK
- FUEL MAINTENANCE SYSTEM
- DISTRIBUTION BOARD 'DBEM1'
- ATS 'AT1'
- ATS 'AT2'
- TRANSFORMER 'TX2'
- DISCONNECT 'DISC2'
- PANEL 'M'
- PANEL 'G'
- DISTRIBUTION BOARD 'DBEM2'

GENERAL NOTES

- MADERA DISTRICT NOW OWNS THE FACILITY.
- COORDINATE UNDERGROUND CONDUIT STUB OUT LOCATIONS WITH EQUIPMENT MANUFACTURERS.
- PROVIDE CONCRETE PAD FOR ALL GROUND MOUNTED EQUIPMENT.

PARTIAL ELECTRICAL SITE PLAN

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



NEW FIRE ALARM AND GENERATOR REMOTE ANNUNCIATOR LOCATION AT OFFICE ENTRANCE

SCALE: NOT TO SCALE

DUCT BANK SCHEDULE

| DESIGNATOR # | POWER | SPARE | COMMUNI- CATIONS |
|-----------------|--------------------------|-------|---------------------|
| 1 | (2) 2-1/2" | - | - |
| 2 | 2-1/2" | - | - |
| 3 | 2-1/2" | - | 1-1/4" |
| 4 | - | - | 1-1/4" |
| 5 | 2-1/2" | - | 1" |
| 6 | 3/4" | - | - |
| 7 | (7) 1" | 1" | - |
| 8 | 1-1/4" | - | - |
| 9 | 3" | - | - |
| 10 | (7) 3/4", (2) 1" | - | - |
| 11 | 2-1/2" & 3/4" | - | 1" |
| 12 | 2-1/2", (8) 3/4", (2) 1" | - | 1" |
| 13 | 2-1/2" | - | - |
| 14 | 3" | - | - |
| 15 | 3" | - | - |
| 16 | 2-1/2" | - | 1-1/4" |
| 17 | - | - | 1-1/4" |
| 18 | - | - | (2) 1-1/4" |
| 19 | - | - | (2) 1-1/4" |
| 20 | 1" | - | - |
| 21 | 1-1/4" | - | (2) 1-1/4" |
| 22 | - | - | (2) 1-1/4" |
| 23 | 1-1/4" | - | (2) 1-1/4" |
| 24 | 1" | - | - |
| 25 | - | - | (4) 1-1/4" & 1" |
| 26 | (5) 1" | 1" | - |
| 27 | - | - | 1" & 1-1/4" |
| 28 | - | - | 1" |
| 29 | 2-1/2" | - | - |
| 30 | 2-1/2" | - | - |
| 31 | 2" | - | - |
| 32 | 2-1/2" | - | - |
| 33 | - | - | 1-1/4" |

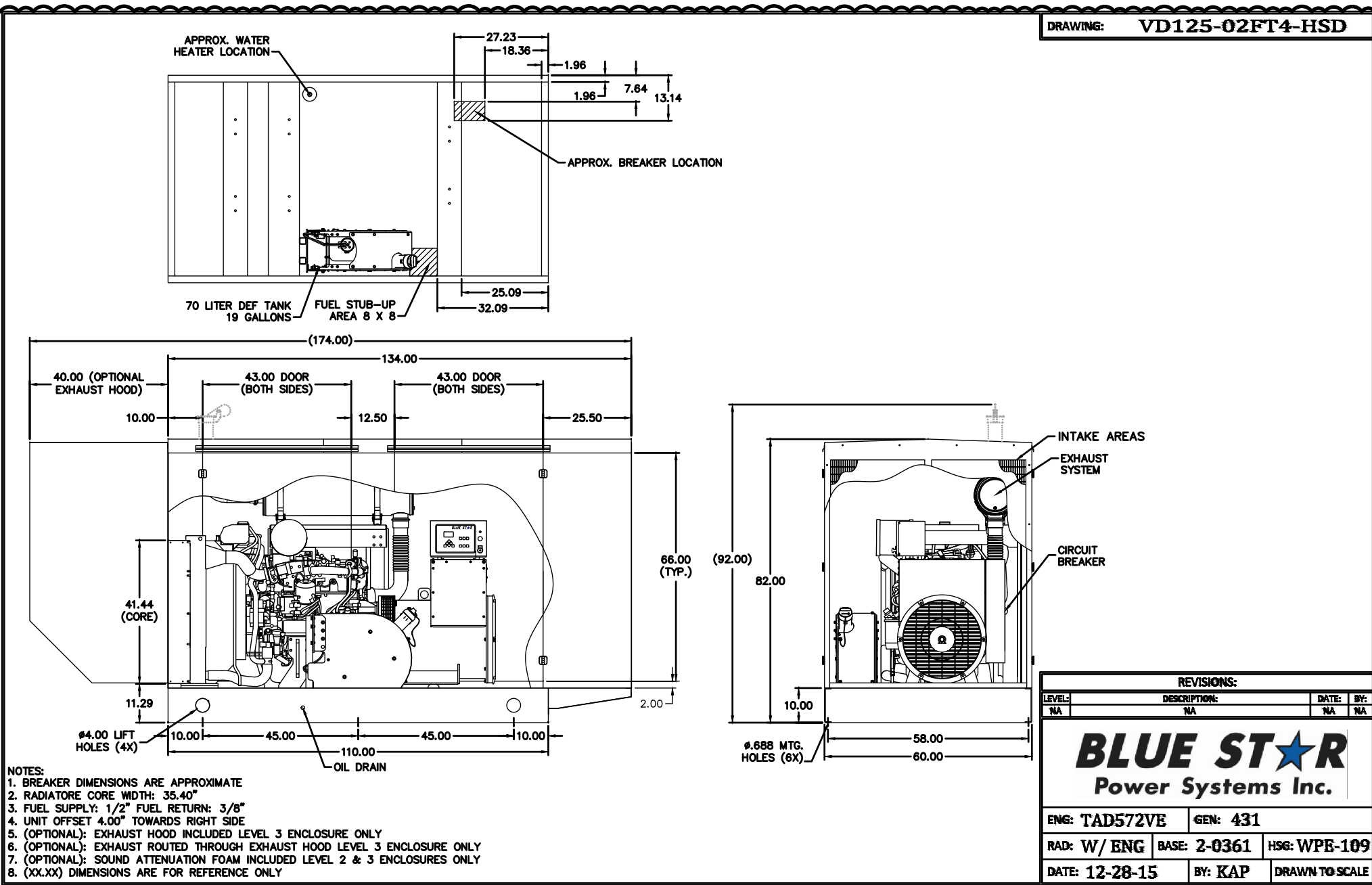
PULL BOX SCHEDULE

| CATEGORY | DESIGNATION | MINIMUM SIZE | LID TYPE | SYSTEMS |
|--------------------|-------------|--------------|----------|---------|
| POWER | P1 | B1324 | H/20 | POWER |
| COMM- UNICATION | C1 | B1324 | H/20 | DATA |

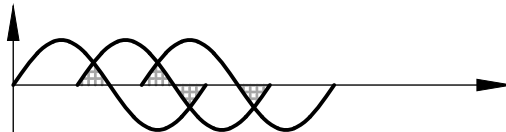
NOTES:

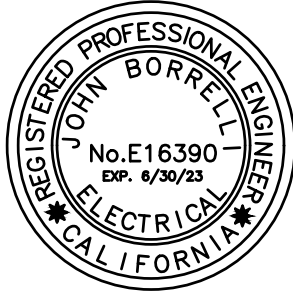
- ALL PULL BOXES SHALL BE EITHER BROOKS, CHRISTY, OR EQUIVALENT.
- ALL PULL BOXES SHALL BE PROVIDED WITH EXTENSION RINGS AND BOLT DOWN COVERS AS REQUIRED TO SUIT THE APPLICATION. VERIFY PULL BOX LOCATIONS REQUIRING FULL TRAFFIC COVERS WITH THE ARCHITECT AND CIVIL ENGINEER.
- LABEL PULL BOXES 'ELECTRICAL', 'SIGNAL' OR 'COMMUNICATIONS' AS REQUIRED.

△



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Borrelli & Associates, Inc.
Consulting Electrical Engineers
2032 N. Gateway Boulevard
Fresno, CA 93727
Phone: 559-233-4138
http://www.borrelliengineering.com/
ca-bal@borrelliengineering.com
BAI# 20141



APPROVALS:
APPLICATION #



DATE: 05-14-21

MADERA UNIFIED SCHOOL DISTRICT
SERVER ROOM
1902 HOWARD ROAD
MADERA, CA. 93637

CDS # 20-65243

REVISIONS

△ 5/25/22 ADDENDUM - 3
△ 6/7/22 ADDENDUM - 4
△
△
△
△

LAWRENCE
ENGINEERING GROUP
Fresno, CA 93720
7084 N. Maple Ave., Suite 101
(559) 431-0101
FAX (559) 431-1342

TITLE:
TYPICAL ELECTRICAL
DETAILS

SHEET:

E4.02

PROJECT 21052