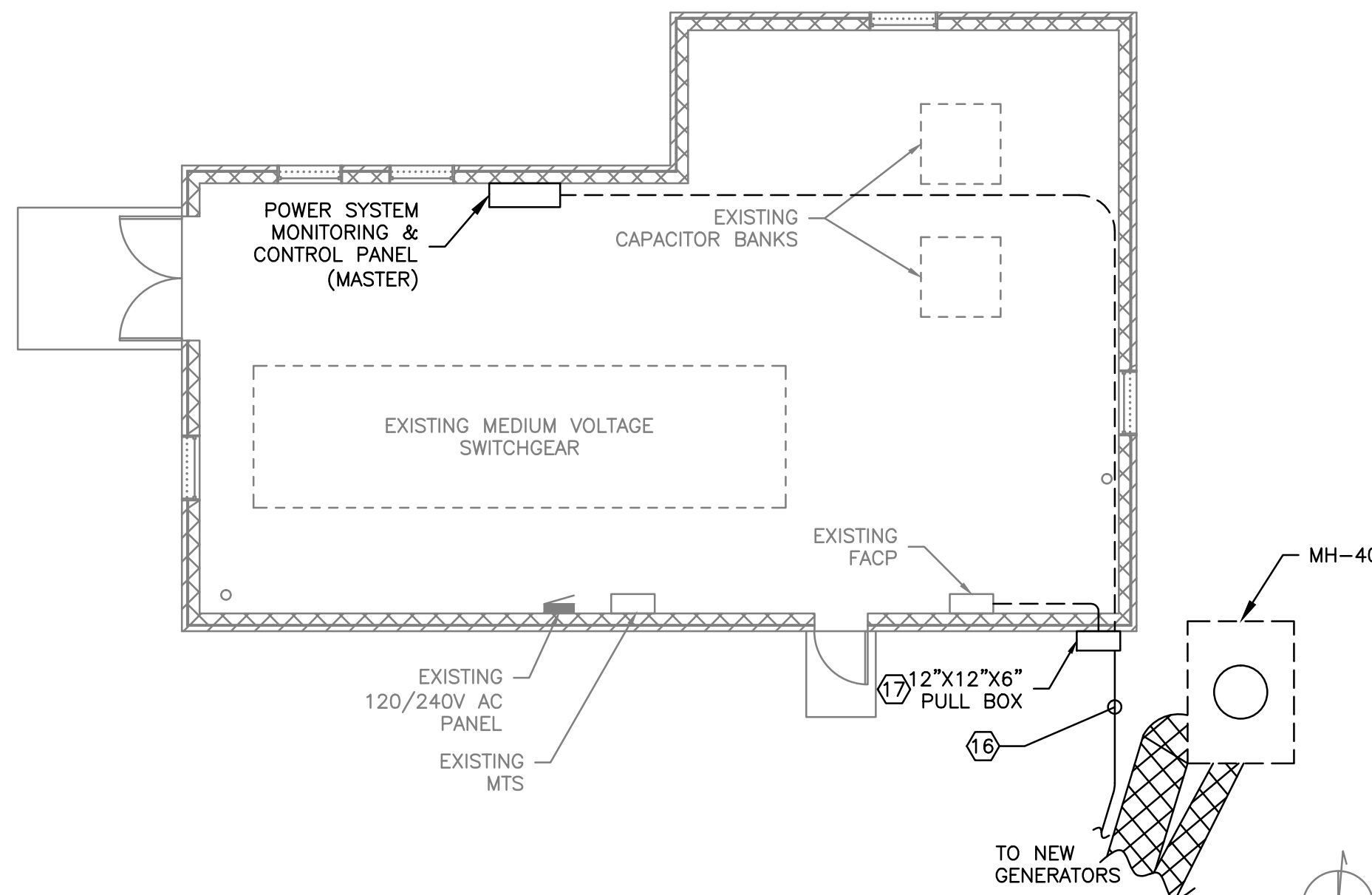




1 UNDERGROUND ELECTRICAL + INSTRUMENTATION PLAN
E-106 SCALE: 1" = 20'-0"

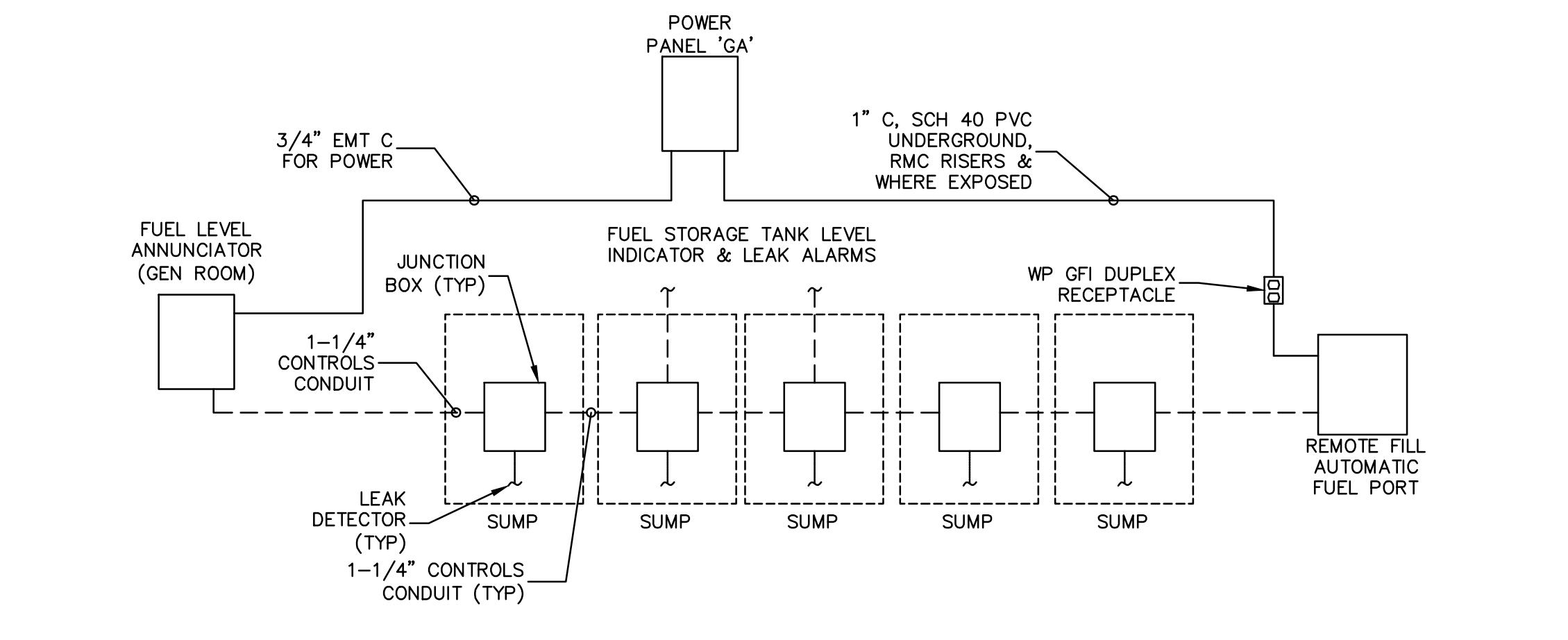


2 EXISTING BUILDING #74 POWER PLAN
E-106 SCALE: 1/8" = 1'-0"

- KEY NOTES:**
- EMERGENCY GENERATOR SET, 13.8 kV, PRIME RATED 1825 kW, 2281 kVA, MOUNTED ON ISOLATION MOUNTS ON APPROX. 2000 GAL SUB-BASE TANK. EPA TIER 2 EMERGENCY USE ONLY. EQUAL TO CUMMINS DOKAB OR CAT 3516C.
 - EMERGENCY GENERATOR PRE-FABRICATED CUSTOM ENCLOSURE BUILDING, WITH INTEGRAL GENERATOR SETS AND SUB-BASE TANKS, AND CONDITIONED ELECTRICAL GEAR RM.
 - EMERGENCY PARALLELING SWITCHGEAR, METAL-CLAD, 13.8 kV, 1200A, 500 MVA CLASS, 25 KAIC, MINIMUM 95 KV BIL DRAWOUT GEAR.
 - ENCLOSURE ENTRY/EGRESS LANDINGS, STEEL 5'x5', WITH RAILINGS AND STAIRS. (TYP. 3) SEE DETAIL 5/A-101.
 - HANDHOLE. SEE DETAILS ON SHEET 1/E-502.
 - 4" DIRECT BURIED CONDUIT WITH (2) 1-1/4" INNERDUCTS FROM SWITCHGEAR ROOM TO BLDG 28 BASEMENT TELCO CAGE. LAY METALIZED TAPE DIRECTLY OVER CONDUIT. INSTALL FLAT METALIZED PULL TAPE IN EACH INNERDUCT.
 - FUEL STORAGE TANKS: 12,000 GALLONS EACH, UL-2085 LISTED REINFORCED ABOVE GROUND STORAGE TANKS, CONVAULT OR EQUAL.
 - FUEL TREATMENT (POLISHING) STATION. EQUAL TO SIMPLX "SMARTFILTER" MODEL SFG10C.
 - DAY TANK FUEL TRANSFER STATION. EQUAL TO SIMPLX SPS-25-SD.
 - REMOTE FUEL FILL STATION. EQUAL TO SIMPLX "AUTOMATIC FUELPORT" FOR TWO TANK AUTOMATED FILLING FROM PUMPER DELIVERY TRUCK.
 - 1-1/4" CONDUIT & SPARE FROM STORAGE TANKS TO GENERATOR ROOM REMOTE ALARM STATION AND TO FUEL REMOTE FILL STATION FOR FUEL LEVEL AND LEAK ALARM MONITORING.
 - HVAC UNIT.
 - 1-1/4" CONDUIT FOR FUEL SUMP INSTRUMENTATION.
 - 2-10 AWG, 10 AWG EG IN 1" POWER C TO REMOTE AUTOMATIC FUEL PORT & RECEPTACLE. CONDUCTORS OVERSIZED DUE TO VOLTAGE DROP.
 - FUEL TANK REMOTE LEVEL ALARM & INDICATION.
 - 1-1" CONDUIT, FIRE ALARM
1-1" CONDUIT, SPARE
1-4" CONDUIT, WITH (3) 1-1/4" INNER DUCTS, CONTROL & ALARM
1-2" CONDUIT, SPARE
 - CONTROL, MONITORING, & ALARMS PULL BOX FOR CABLE ENTRY TO BUILDING 74. SIZE AS REQUIRED, 12"x12"x6" MINIMUM. PAINT TO MATCH BRICK.
 - RE-FEED EXISTING & EXISTING RELOCATED PARKING LOT LIGHTING FROM NEW PANEL 'GA'.
 - FEED NEW STREET LIGHT FROM EXISTING ABANDONED STREET LIGHT FEEDER FROM BUILDING 56.
 - (2) 8 AWG, 8 AWG EG, 3/4" EMT FOR GENERATOR BLOCK HEATERS.
 - LOAD BANK SWITCHED TERMINAL BOX FOR 13.8 KV LOAD BANK. EQUAL TO S&C PMH-3 OR PMH-5.

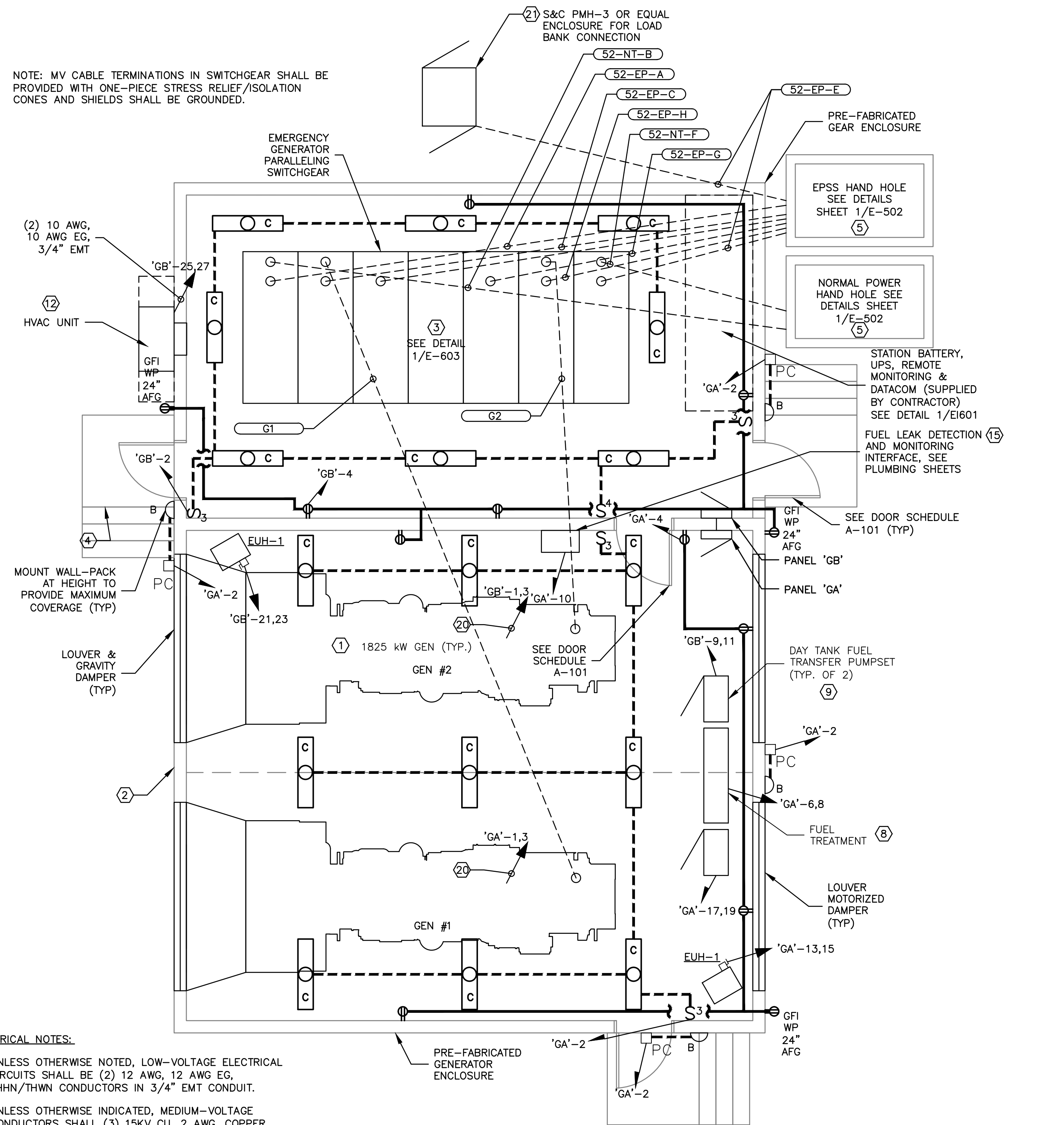
| CONDUIT FILL SCHEDULE | |
|-----------------------|--|
| TAG | DESCRIPTION |
| G1 | (3) 2 AWG 15KV, 2 AWG THWN-2 NEUTRAL, 2 AWG EG, 4" CONDUIT |
| G2 | (3) 2 AWG 15KV, 2 AWG THWN-2 NEUTRAL, 2 AWG EG, 4" CONDUIT |
| 52-NT-B (FT1) | (3) 3/0 AWG 15KV, 3/0 AWG THWN-2 NEUTRAL, 2 AWG EG, 4" CONDUIT |
| 52-NT-F (FT2) | (3) 3/0 AWG 15KV, 3/0 AWG THWN-2 NEUTRAL, 2 AWG EG, 4" CONDUIT |
| 52-EP-A | (3) 2 AWG 15KV, 2 AWG EG, 4" CONDUIT |
| 52-EP-C | (3) 2 AWG 15KV, 2 AWG EG, 4" CONDUIT |
| 52-EP-E | (3) 3/0 AWG 15KV, 2 AWG EG, 4" CONDUIT |
| 52-EP-G | (3) 2 AWG 15KV, 2 AWG EG, 4" CONDUIT |
| 52-EP-H | (3) 2 AWG 15KV, 2 AWG EG, 4" CONDUIT |

UNLESS OTHERWISE NOTED, MV CIRCUITS SHALL BE (3) 2 AWG 15KV, 2 AWG EG, IN 4" CONDUIT.



4 FACILITY FUEL SYSTEM POWER, INDICATION + CONTROLS CONDUIT DIAGRAM
E-106 SCALE: 1/8"

NOTE: MV CABLE TERMINATIONS IN SWITCHGEAR SHALL BE PROVIDED WITH ONE-PIECE STRESS RELIEF/ISOLATION CONES AND SHIELDS SHALL BE GROUNDED.



- ELECTRICAL NOTES:**
- UNLESS OTHERWISE NOTED, LOW-VOLTAGE ELECTRICAL CIRCUITS SHALL BE (2) 12 AWG, 12 AWG EG, THHN/THWN CONDUCTORS IN 3/4" EMT CONDUIT.
 - UNLESS OTHERWISE INDICATED, MEDIUM-VOLTAGE CONDUCTORS SHALL (3) 15KV CU, 2 AWG, COPPER TAPE SHIELDED, TRIPLE-EXTRUDED 15 kV EPR 133% INSULATION, PULLED IN 4" CONDUIT WITH 2 AWG THWN GREEN INSULATED STRANDED COPPER EG.
 - CONDUIT ROUTINGS ARE DIAGRAMMATIC & APPROXIMATE ONLY. CONTRACTOR IS RESPONSIBLE FOR PROPER STUB-UP LOCATIONS.

3 EPSS POWER + LIGHTING PLAN
E-106 SCALE: 1/4" = 1'

100% CONSTRUCTION DOCUMENTS

| | | | | | | | |
|--------------------------|--|------------------------------------|--|------------------------------------|--|--|--|
| PATIENT SAFETY MANAGER | | INFECTION PREVENTIONIST | | SUPERVISOR, PROJECT SECTION | | PROJECT MANAGER (COTR) | |
| SUPERVISION, BIOMED/ M&O | | ENVIRON HEALTH FIRE/SAFETY SECTION | | SAFETY/OCCUPATIONAL HEALTH MANAGER | | CHIEF, ACQUISITION MGT SECT, CONTRACTING OFFICER | |
| VA POLICE CHIEF | | PATIENT CARE SECTION | | GENERAL PROPERTIES SECTION | | GENERAL UTILITIES SECTION | |

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Professional Stamp/Seal

Drawing Title:
SITE POWER PLAN, EXISTING GEAR BUILDING POWER PLAN AND GENERATOR ENCLOSURE POWER & LIGHTING PLAN

Approved: Chief Engineering Service
Approved: Medical Center Director

Drawn: DJR/NAC
Checked: JMB/JDC

Project Title:
COATESVILLE - VA MEDICAL CENTER AVE INSTALL EMERGENCY GENERATOR

Building Number: ---
Location: COATESVILLE, PENNSYLVANIA

Date: 9/23/11
Project No. 542-11-104
Drawing No. E-106
Dwg. 7 of 16

Revisions

Date