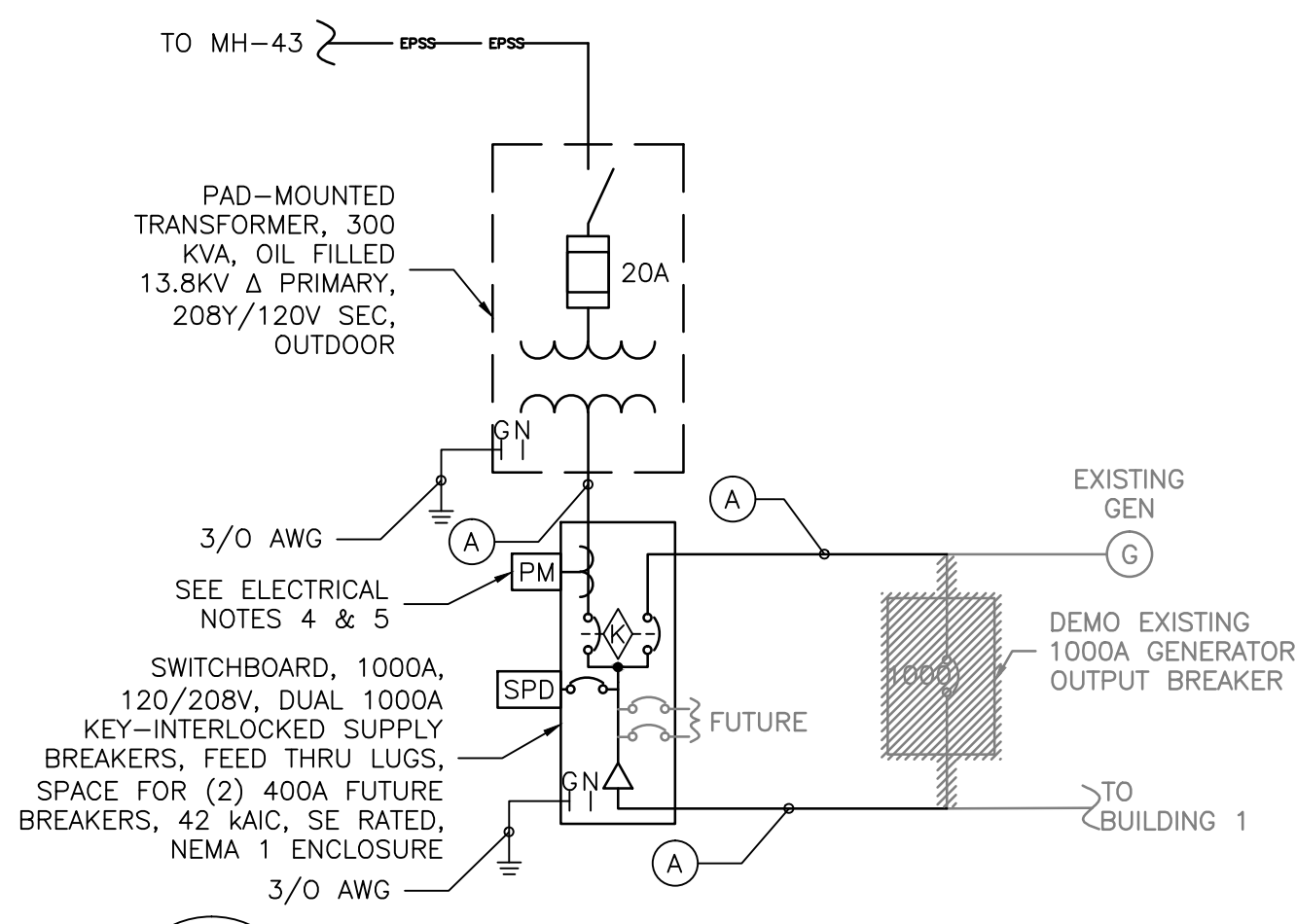
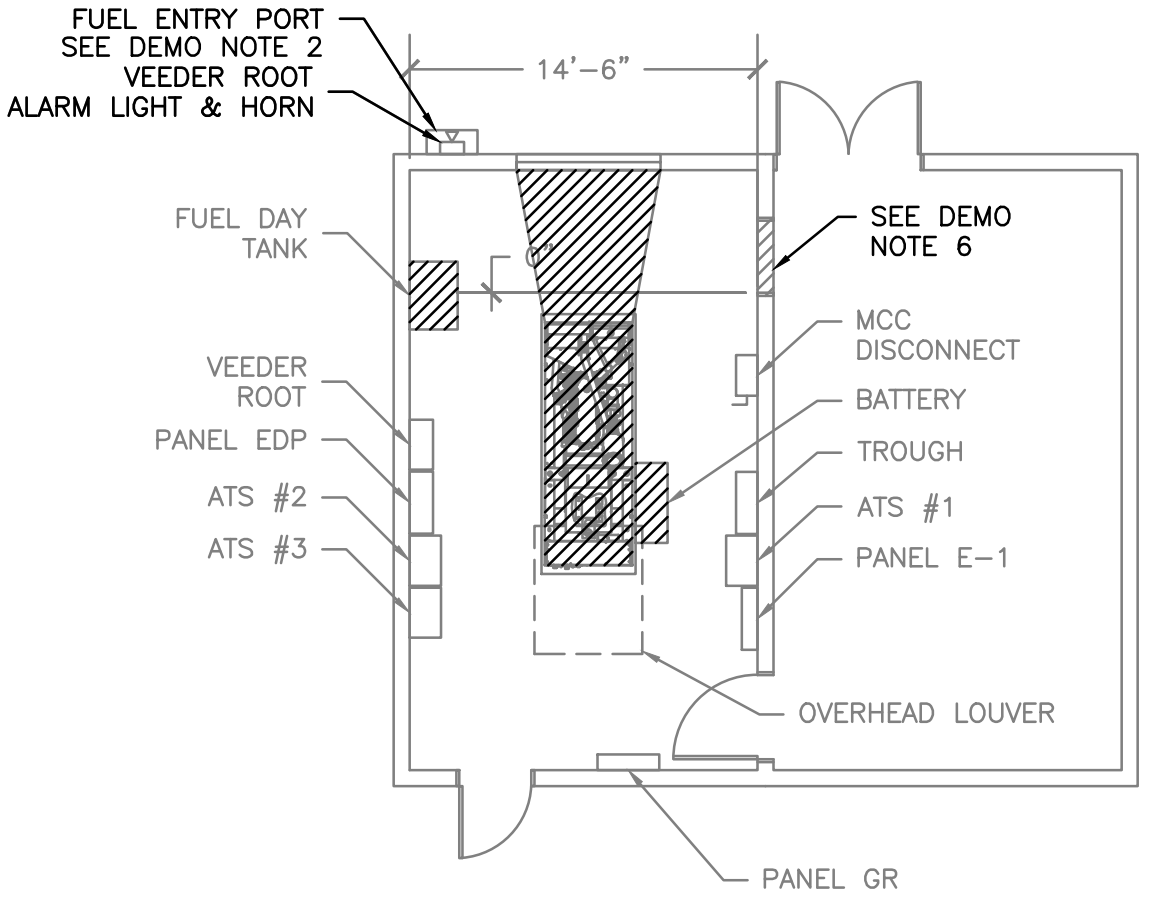


three inches = one foot  
one and one half inches = one foot  
one inch = one foot  
one half inch = one foot  
three quarters inch = one foot  
one eighth inch = one foot  
one quarter inch = one foot  
one eighth inch = one foot

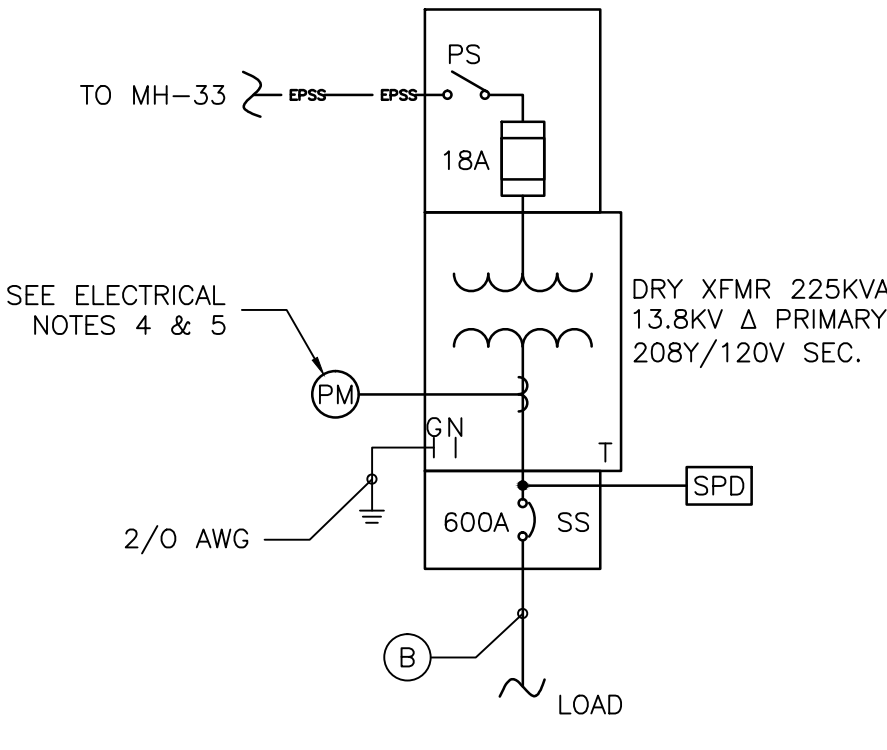
1 BUILDING 1 POWER PLAN  
E-107 SCALE: 1/8" = 1'



7 BUILDING 1 ONE-LINE DIAGRAM  
E-107 SCALE: NTS

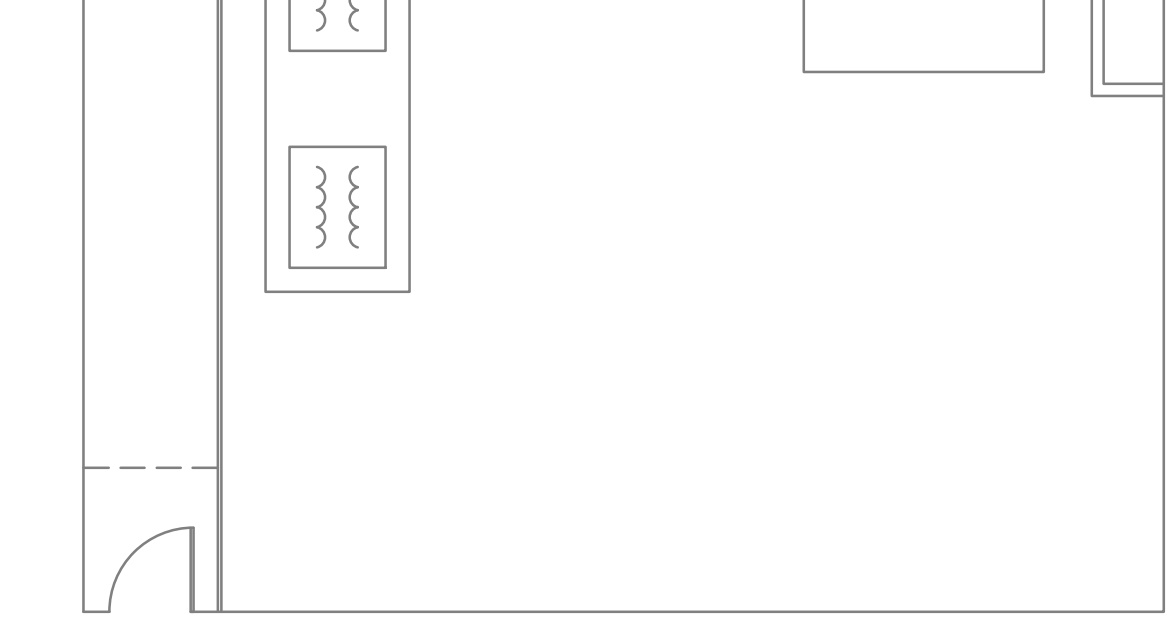


5 BUILDING 138 DEMO  
E-107 SCALE: 1/8" = 1'



9 BUILDING 138 ONE-LINE DIAGRAM  
E-107 SCALE: NTS

2 BUILDING 1 COURTYARD  
E-107 SCALE: 1/8" = 1'



6 BUILDING 138 POWER PLAN  
E-107 SCALE: 1/8" = 1'

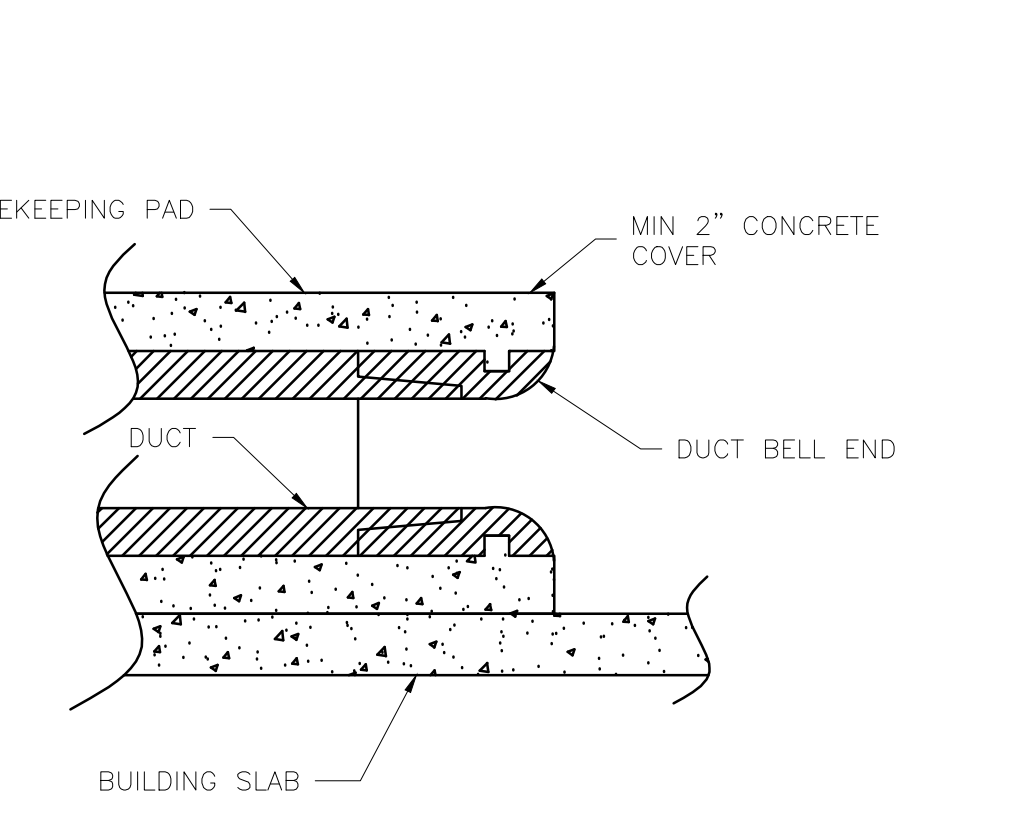
LOW VOLTAGE FEEDER SCHEDULE			
TAG	AMPACITY	DESCRIPTION	
A	1000A	(3) PARALLEL RUNS, EACH 4-400 KCML, 3/0 AWG EG, IN 3-1/2" C	
B	600A	(2) PARALLEL RUNS, EACH 4-350 KCML, 1 AWG EG, IN 3" C	
C	400A	(2) PARALLEL RUNS, EACH 4-3/0 AWG, 3 AWG EG, IN 2" C	

TRANSFORMER SCHEDULE								
BLDG.	PRI. VOLTAGE	PRI. SW.	TYPE	SIZE	SEC. VOLTAGE	SEC. OCPD.	POWER MONITORING	SURGE PROTECTION
1	13.8KV	INTERNAL FUSED	OIL	300KVA	208Y/120V	1000A	YES	YES
138	13.8KV	YES, FUSED	DRY	225KVA	208Y/120V	600A	YES	YES
139	13.8KV	YES, NF	DRY	300KVA	480Y/227V	400A	YES	YES

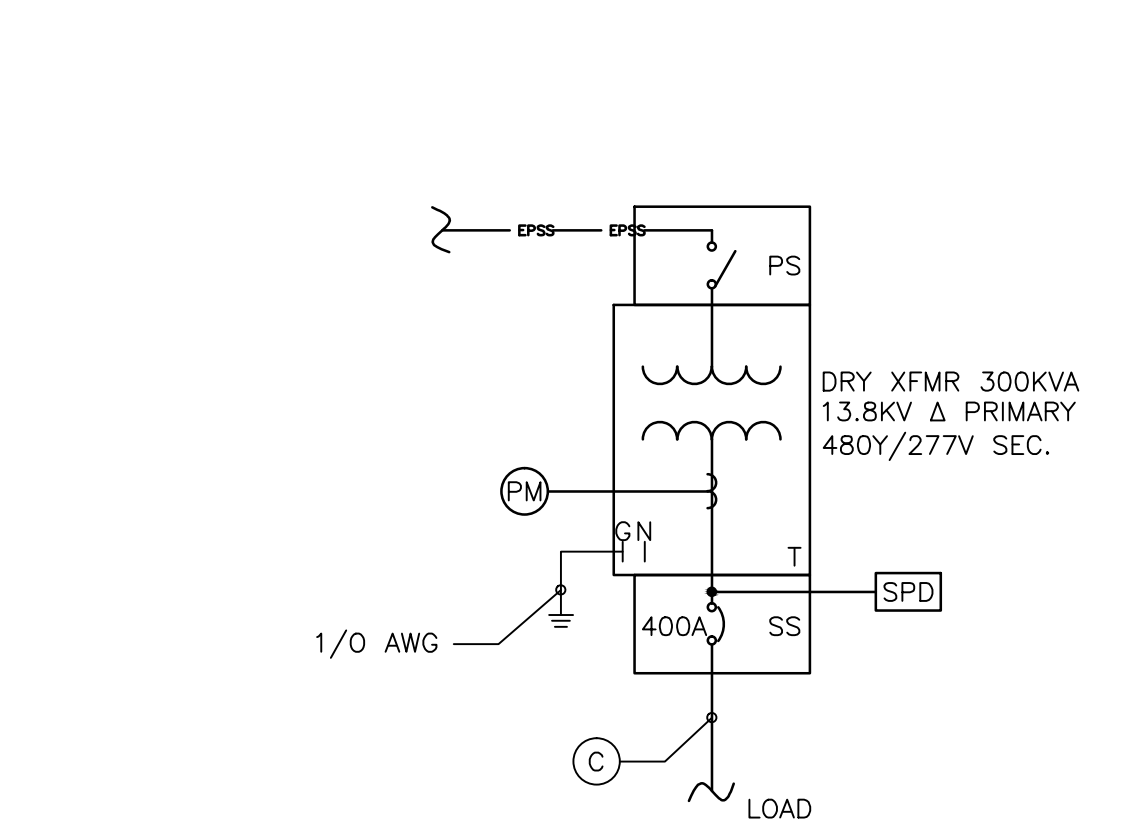
- ELECTRICAL NOTES:**
- ALL RECEPTACLE CONDUCTORS SHALL BE 2-12 AWG, 1-12 AWG EG IN 3/4" EMT OR MC CABLE UNLESS NOTED OTHERWISE.
  - VERIFY LOCATION OF MECHANICAL EQUIPMENT WITH MECHANICAL DRAWINGS.
  - THE TRANSFORMER USED IN CONJUNCTION WITH AN AUTOMATIC TRANSFER SWITCH WITH A SOLID NEUTRAL IS NOT A SEPARATELY DERIVED SYSTEM. AS SUCH, DO NOT BOND THE NEUTRAL TO GROUND AT THE TRANSFORMER SECONDARY OR SECONDARY DISCONNECT.
  - CONTRACTOR PROVIDE POWER MONITORING FOR ALL TRANSFORMERS. MONITORING SHALL INCLUDE AT A MINIMUM INSTANTANEOUS & PEAK A, KW, KVA, PF, AND L-L & L-N VOLTAGES, AND A LOSS OF VOLTAGE, LOSS OF PHASE ALARM WITH REMOTE CONTACT.
  - PROVIDE LOSS OF POWER/LOSS OF PHASE ALARM SIGNAL TO EXISTING ALARM LIGHT & HORN ON OUTSIDE OF BUILDING. (SEE FUEL DEMOLITION NOTES).
  - RELOCATE EXISTING VEEDER ROOT PANEL AND ANY OTHER EQUIPMENT AS NEEDED.
  - CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING BID.
  - ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH LATEST NEC AND LOCAL CODES.
  - CONTRACTOR TO RELOCATE AS NECESSARY EXISTING EQUIPMENT INTERFERING WITH NEW WORK.
- BONDING OF NEUTRAL TO GROUND:**
- THE EMERGENCY POWER GENERATOR OR UNIT SUBSTATION SUPPLYING 3-POLE AUTOMATIC TRANSFER SWITCH(ES) WITH SOLID NEUTRAL DOES NOT CONSTITUTE A SEPARATELY DERIVED SYSTEM.
  - CONTRACTOR VERIFY EACH EMERGENCY POWER SYSTEM IS CONFIGURED AS FOLLOWS PRIOR TO DEMOLITION.  
A. SERVED AUTOMATIC TRANSFER SWITCHES ARE 3-POLE WITH SOLID NEUTRAL.  
B. NEUTRAL IS NOT BONDED TO GROUND IN THE GENERATOR OR OUTPUT DISCONNECT OR SWITCHBOARD.
  - IF ITEM #2 IS NOT THE CASE, NOTIFY COTR FOR FUTURE GUIDANCE.
  - DO NOT BOND NEUTRAL TO GROUND AT THE SECONDARY OF THE TRANSFORMER OR IN THE SECONDARY SIDE (SS) DISCONNECT.
  - PER NEC (2011) ARTICLE 700.7, VERIFY OR INSTALL SIGNAGE AT THE ASSOCIATED MAIN SERVICE POINT. SIGNAGE SHALL READ:  
  
WARNING  
SHOCK HAZARD EXISTS IF GROUNDING ELECTRODE CONDUCTOR OR BONDING JUMPER CONNECTION IN THIS EQUIPMENT IS REMOVED WHILE ALTERNATE SOURCE IS ENERGIZED  
  
GROUNDING LOCATION FOR NORMAL SERVICE AND FOR UNIT SUBSTATION LOCATED IN (BUILDING/ROOM #).

- DEMOLITION NOTES:**
- DEMO ELECTRICAL CONDUCTORS AND CONDUIT BACK TO FIRST JUNCTION BOX ABOVE CEILING, FOR ALL DEVICES SHOWN IN THIS PLAN.
  - DEMO FUEL LINE TO OUTSIDE BUILDING. CAP LINE ABOVE GRADE UNDER BOX. SEAL OPENING TO BUILDING. (SEE FUEL DEMOLITION NOTES).
  - REMOVAL OF GENERATOR SHALL INCLUDE ALL GENERATOR APPURTENANCES (BATTERY CHARGER, FUEL PUMPS & DAY TANKS).
  - VEEDER ROOT ALARM SHALL REMAIN IN OPERATION, RELOCATE AS NEEDED.
  - DO NOT REMOVE OR MODIFY ROOM VENTILATION UNLESS OTHERWISE NOTED IN MECHANICAL DRAWINGS.
  - CUT AND FRAME 36" X 84" OPENING IN EXISTING WALL.
- FUEL SYSTEM DEMOLITION:**
- EMPTY, DISCONNECT, & REMOVE DAY TANK & APPURTENANCES.
  - REMOVE FUEL LINES BACK TO FLEXIBLE HOSES LOCATED UNDER METAL BOX JUST OUTSIDE BUILDING.
  - CAP & SEAL LINES.
  - REPLACE BOX.
  - EMPTY IN-GROUND TANK COMPLETELY. CONDITION FUEL & TRANSFER ELSEWHERE AS DIRECTED BY COTR.
  - WHEN IN-GROUND TANK HAS BEEN EMPTIED, DISCONNECT ALARM LIGHT & HORN FROM VEEDER ROOT MONITOR & CONNECT TO UNIT SUB-STATION POWER MONITOR.
- NOTE: EXISTING VEEDER-ROOT TLS-300 MONITOR MUST REMAIN IN OPERATION UNTIL IN-GROUND TANKS ARE CLEANED, FILLED, & ABANDONED IN PLACE, OR TANKS ARE REMOVED. IN GROUND TANK WORK IS NOT INCLUDED IN THIS CONTRACT.

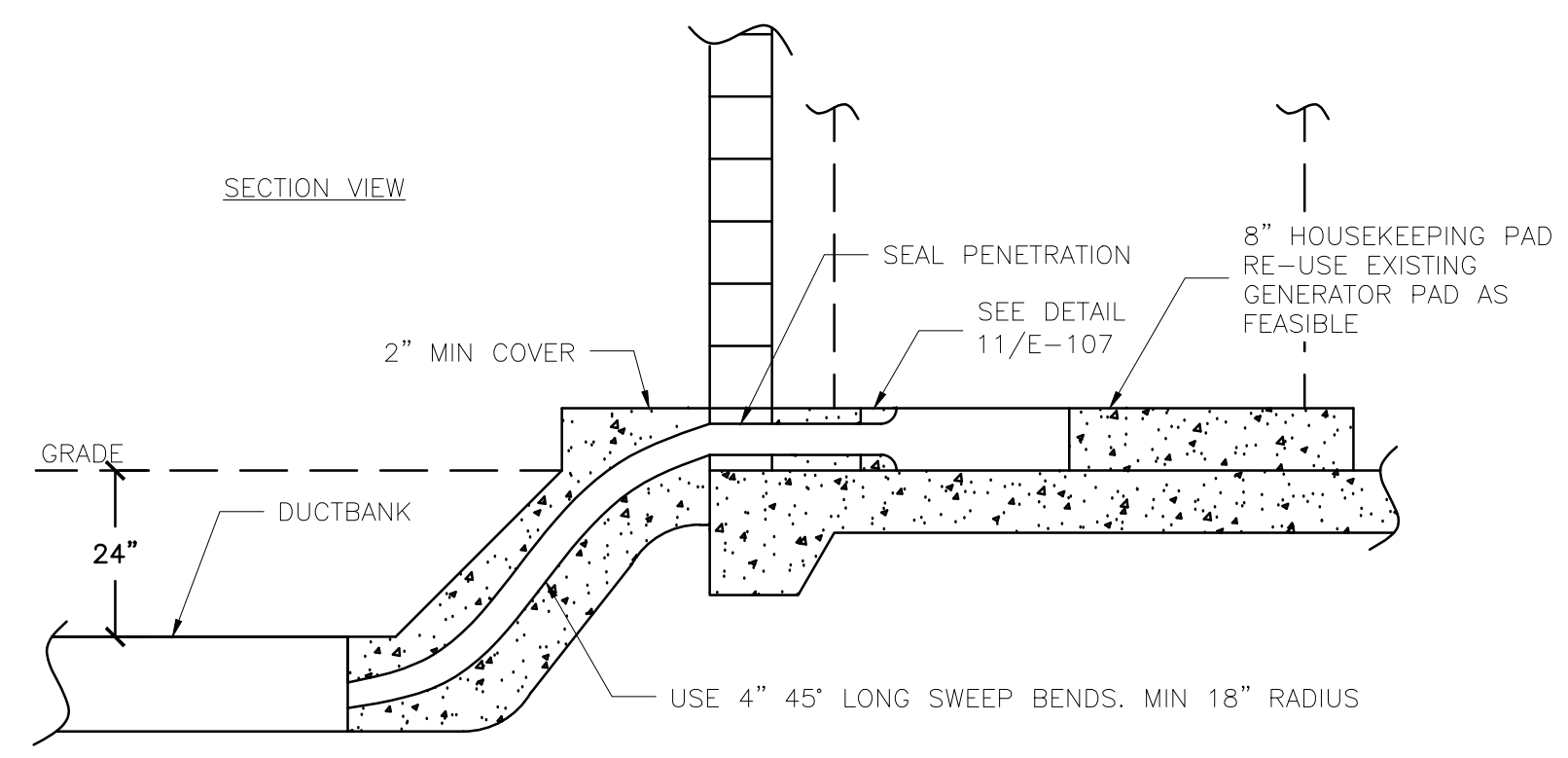
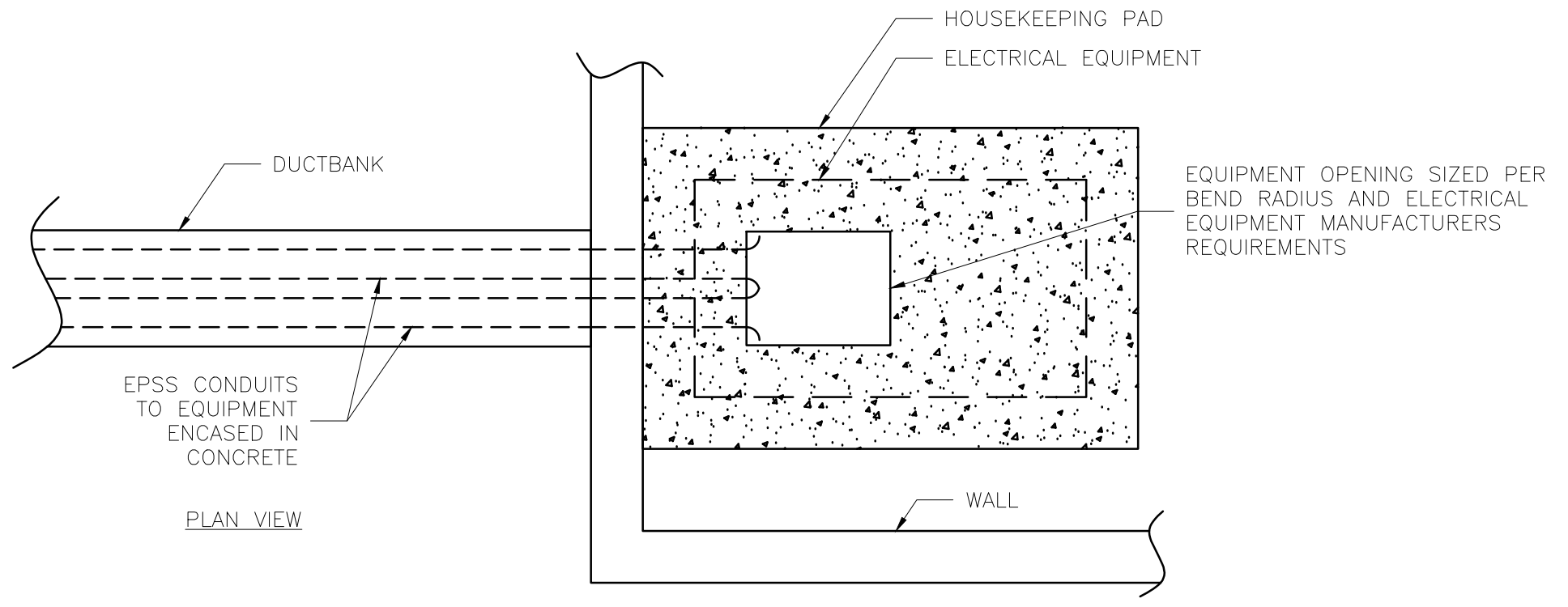
3 BUILDING 139 DEMO  
E-107 SCALE: 1/8" = 1'



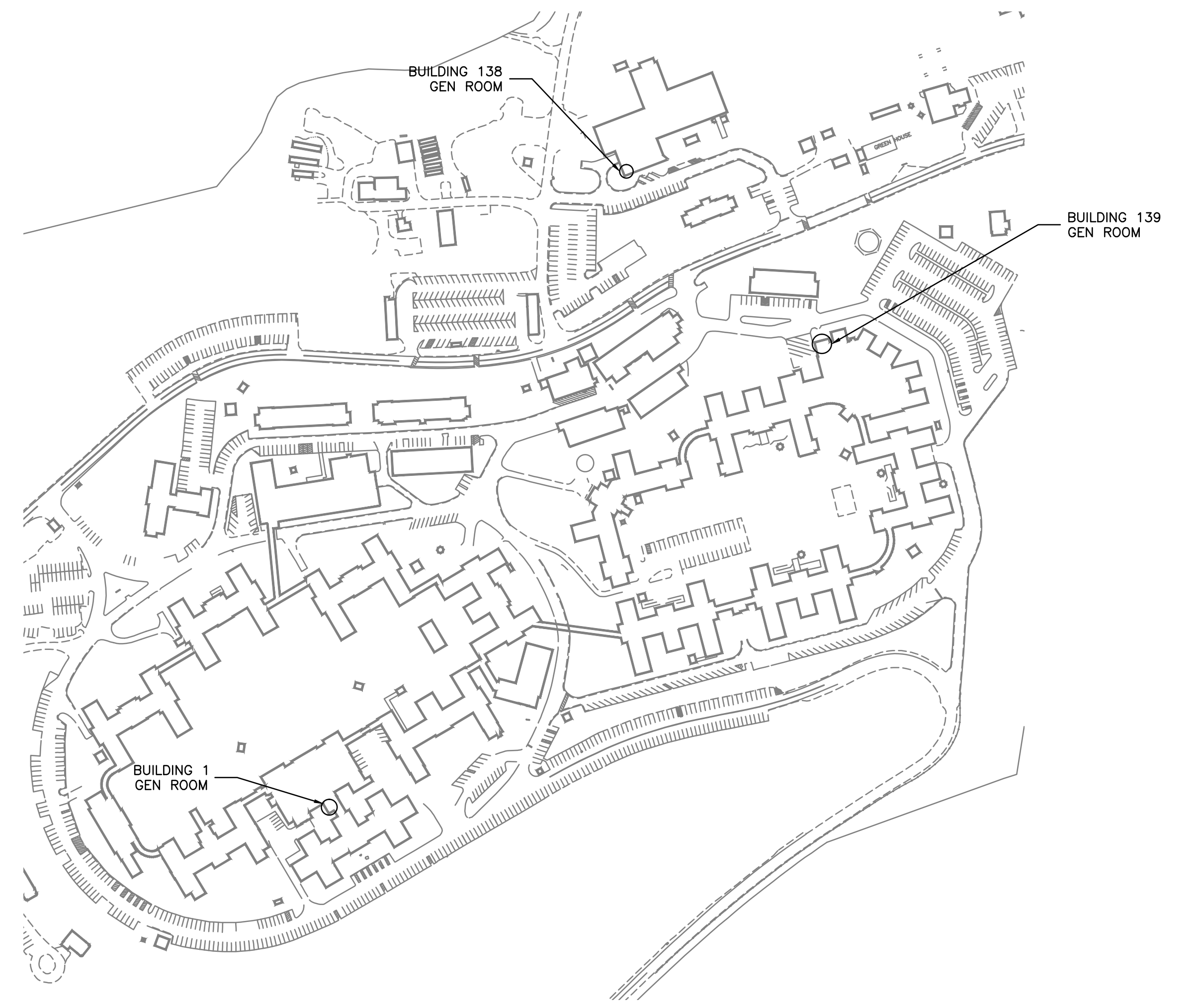
4 BUILDING 139 POWER PLAN  
E-107 SCALE: 1/8" = 1'



11 HOUSEKEEPING PAD BELL END DETAIL  
E-107 SCALE: NTS



10 EPSS CONDUITS TO EQUIPMENT DETAIL  
E-107 SCALE: NTS



KEY PLAN  
SCALE: NTS

100% CONSTRUCTION DOCUMENTS

PATIENT SAFETY MANAGER		INFECTION PREVENTIONIST		SUPERVISOR, PROJECT SECTION		PROJECT MANAGER (COTR)		Professional Stamp/Seal		Drawing Title <b>ELECTRICAL DEMO &amp; POWER PLANS, BUILDING 1, 138, 139</b>		Project Title COATESVILLE - VA MEDICAL CENTER AVE INSTALL EMERGENCY GENERATOR		Date 9/23/11	
SUPERVISION, BIOMED/ M&O		ENVIRON HEALTH FIRE/SAFETY SECTION		SAFETY/OCCUPATIONAL HEALTH MANAGER		CHIEF, ACQUISITION MGT SECT, CONTRACTING OFFICER		WALDON STUDIO ARCHITECTS & PLANNERS, PC 6325 Woodside Court, Suite 310 Columbia, Maryland 21046 Tel: 410.290.9580 Fax: 410.290.5777 www.waldonstudio.com		Drawn DJR/NAC		Building Number ---		Project No. 542-11-104	
VA POLICE CHIEF		PATIENT CARE SECTION		GENERAL PROPERTIES SECTION		GENERAL UTILITIES SECTION		Approved: Chief Engineering Service		Checked JMB/JDC		Location COATESVILLE, PENNSYLVANIA		DRAWING No. <b>E-107</b> Dwg. 8 Of 16	

Revisions

Date	Description

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**ENGINEERS/ARCHITECT:**

**APOGEE**  
Consulting Group, PA  
www.apogee-pa.com  
Apogee Project # 2010 228

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VA