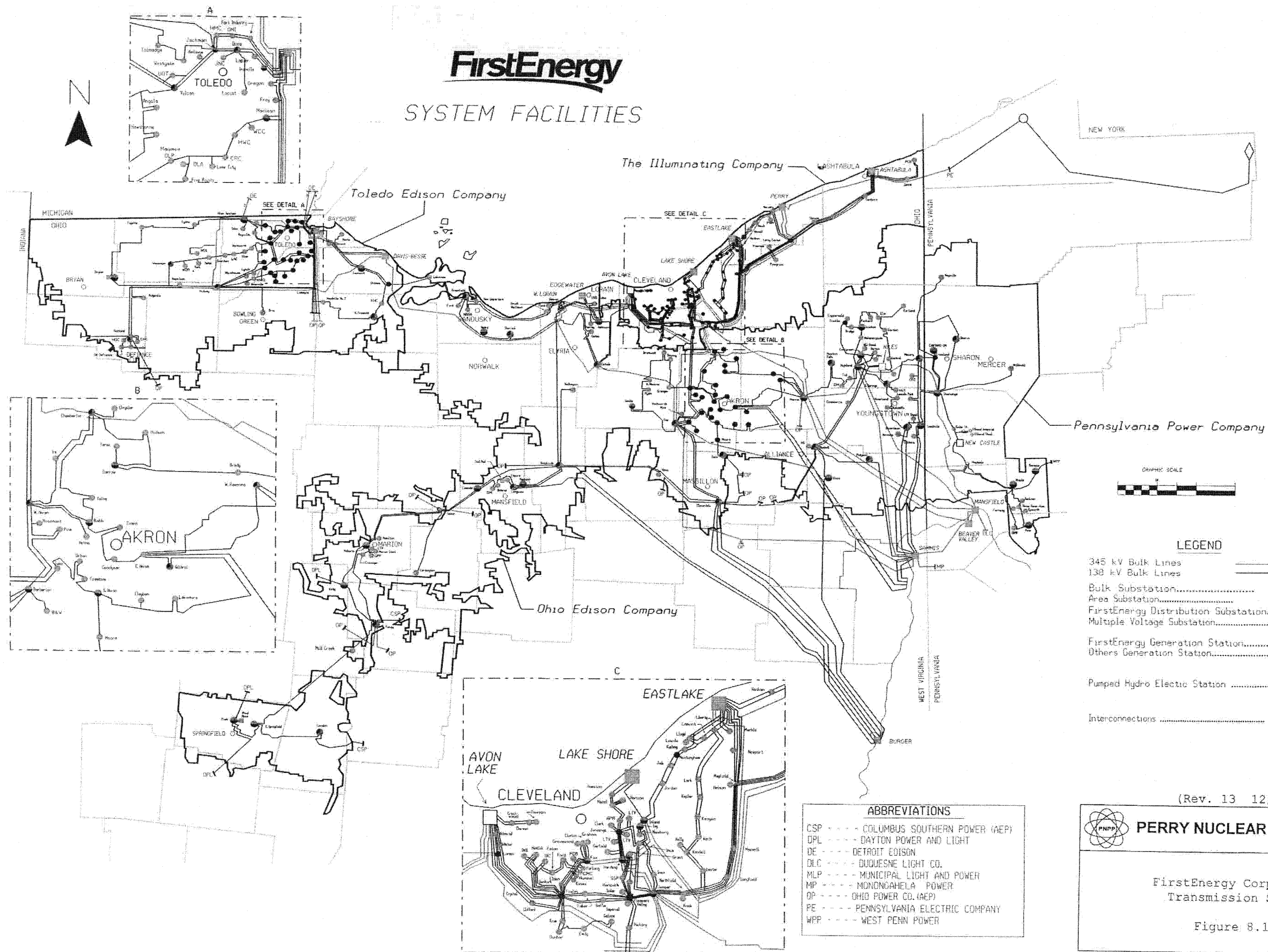
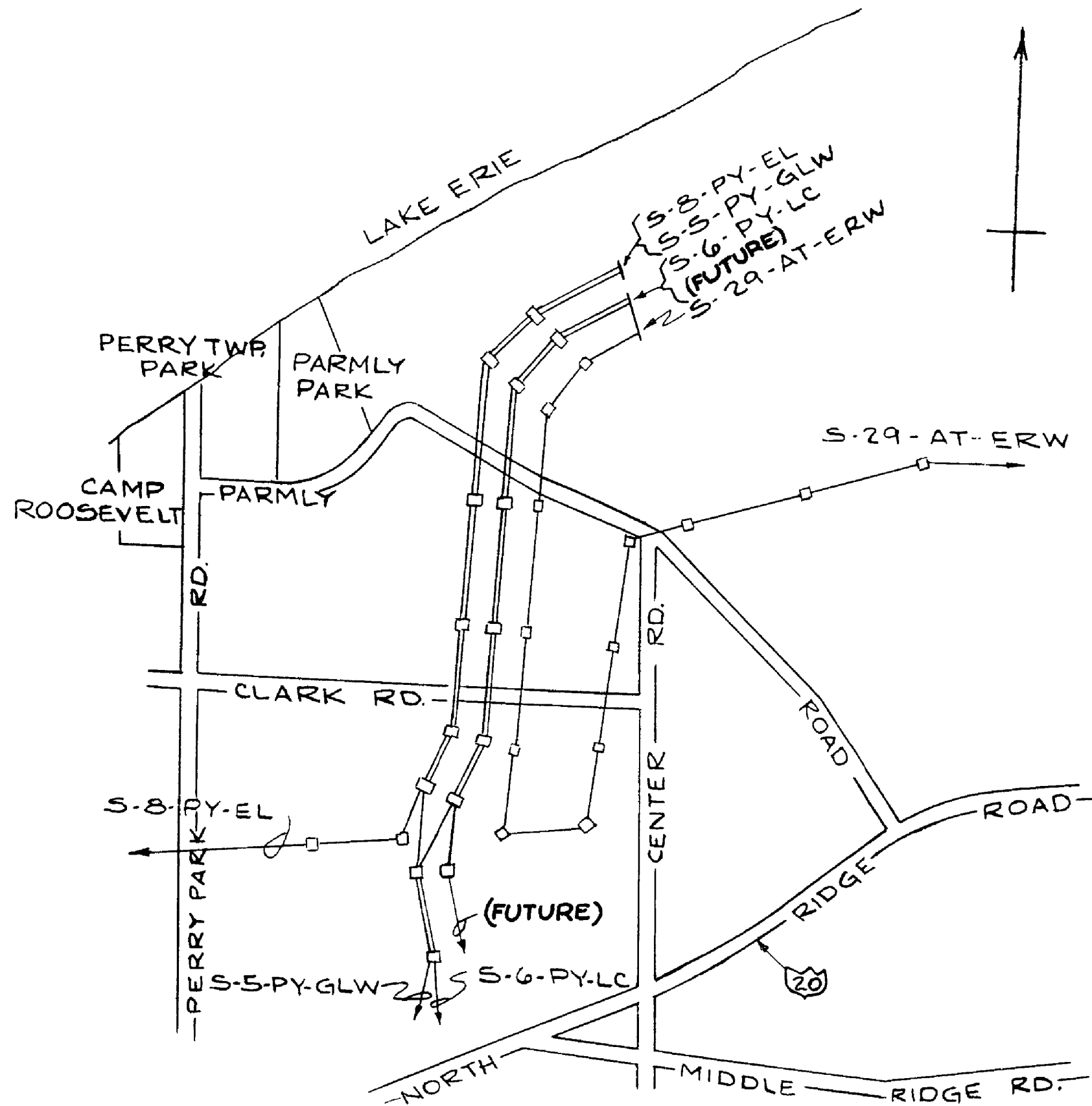


FirstEnergy

SYSTEM FACILITIES



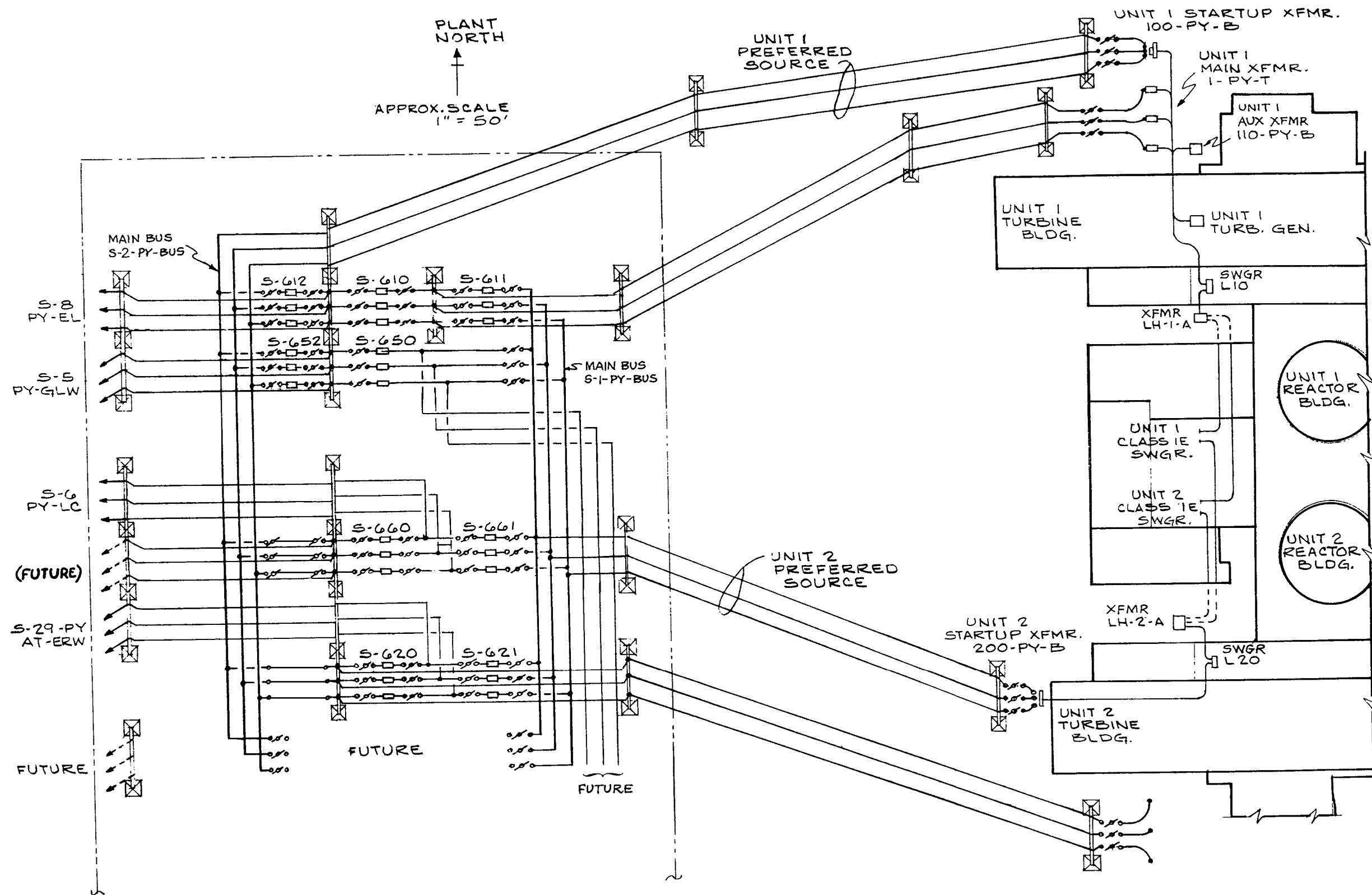


(REV. 20 10/2017)

PERRY NUCLEAR POWER PLANT
10 CENTER RD., PERRY, OHIO 44081

TRANSMISSION LINES
LAYOUT

FIGURE 8.2-1

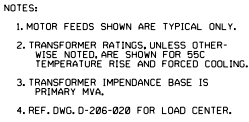


(REV. 20 10/2017)

PERRY NUCLEAR POWER PLANT
10 CENTER RD., PERRY, OHIO 44081

PREFERRED POWER
SYSTEM LAYOUT

FIGURE 8.2-3



PERRY NUCLEAR POWER PLANT
10 CENTER RD., PERRY, OHIO 44081

MAIN ONE LINE DIAGRAM,
13.8 KV AND 4.16 KV
FIGURE 8.3-1
(DWG. D-206-0010-00000)



MAIN ONE LINE DIAGRAM,
480V AND UNDER
FIGURE 8.3-2
(DWG. D-206-0020-00000)

Removed in Accordance with RIS 2015-17

PERRY NUCLEAR POWER PLANT
10 CENTER RD., PERRY, OHIO 44081

CONTROL COMPLEX AND DIESEL GENERATOR
BUILDING EQUIPMENT LAYOUT ABOVE
ELEV. 620'-6", UNITS 1 AND 2
FIGURE 8.3-3
(DWG. E-001-0033-00000)

Removed in Accordance with RIS 2015–17

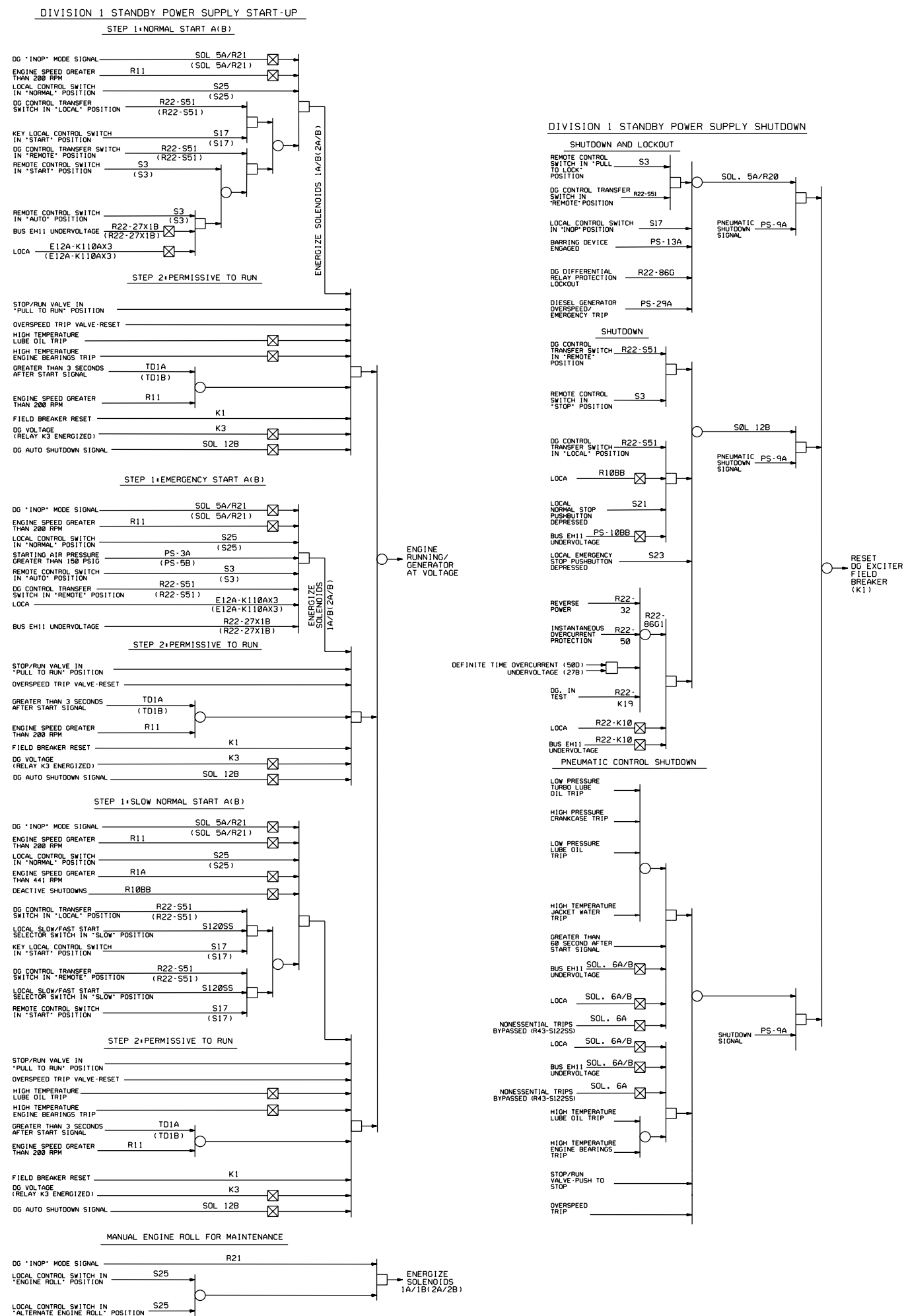
PERRY NUCLEAR POWER PLANT
10 CENTER RD., PERRY, OHIO 44081

CONTROL COMPLEX EQUIPMENT LAYOUT
ABOVE ELEV. 628'-6", UNITS 1 AND 2
FIGURE 8.3-4
(DWG. E-001-0042-00000)

Removed in Accordance with RIS 2015-17

PERRY NUCLEAR POWER PLANT
10 CENTER RD., PERRY, OHIO 44081

EMERGENCY SERVICE WATER PUMPHOUSE
EQUIPMENT LAYOUT ABOVE ELEV. 586'-6"
FIGURE 8.3-5
(DWG. E-015-0002-00000)



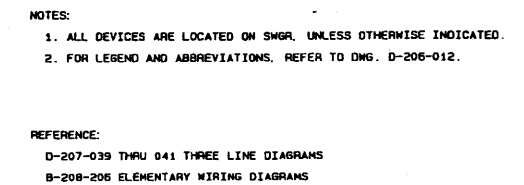
NUCLEAR SAFETY RELATED

(Rev.17 10/11)

PERRY NUCLEAR POWER PLANT
10 CENTER RD., PERRY, OHIO 44081

Diesel Logic Diagrams
Division 1

Figure 8.3-6 (Sheet 1 of 2)
(DWG. D-808-0317-00001)



(Rev. 12 1/03)

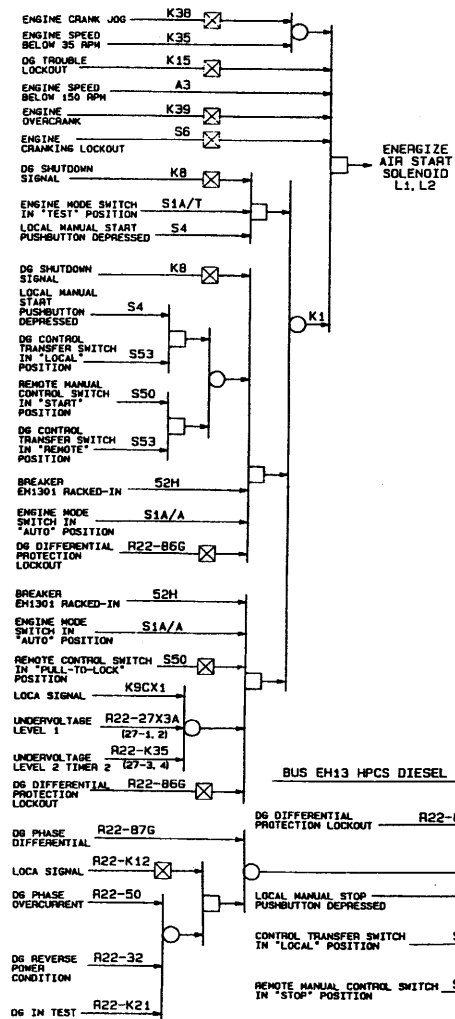


PERRY NUCLEAR POWER PLANT

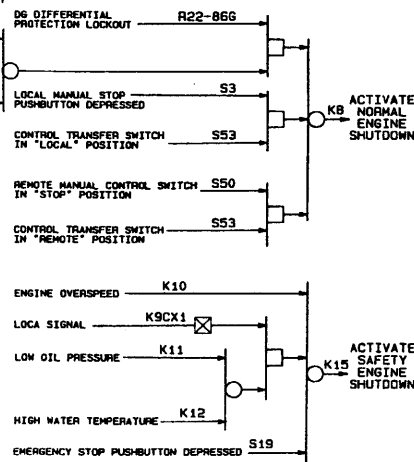
One Line Meter and Relay Diagram,
Class 1E, 4.16 kV,
Division 3

Figure 8.3-7
(Dwg. D-206-018)

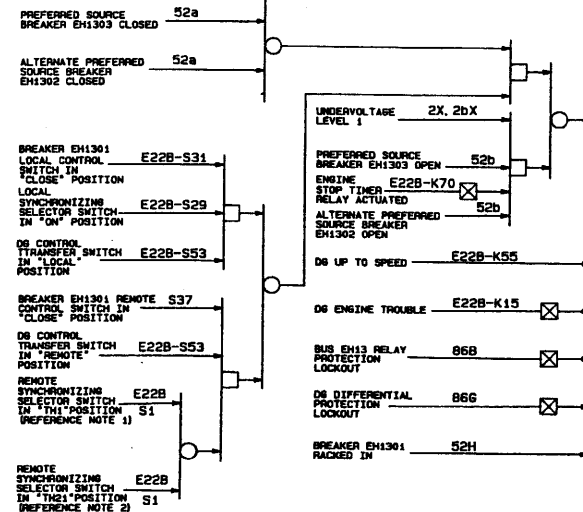
BUS EH13 HPCS DIESEL GENERATOR START LOGIC



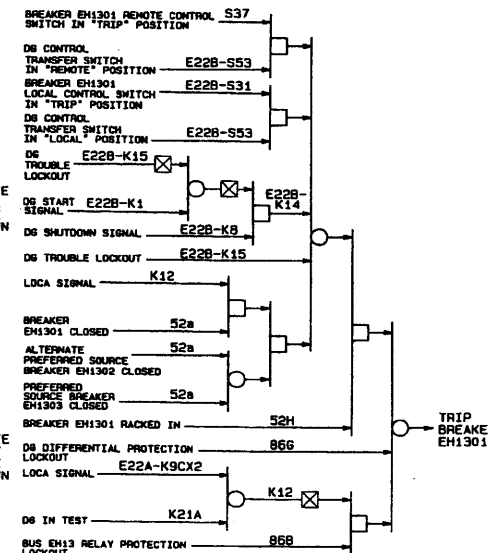
BUS EH13 HPCS DIESEL GENERATOR STOP LOGIC



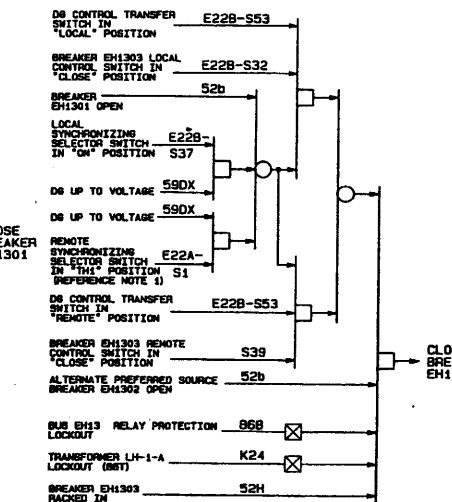
BUS EH13 DIESEL GENERATOR BREAKER EH1301 CLOSE LOGIC



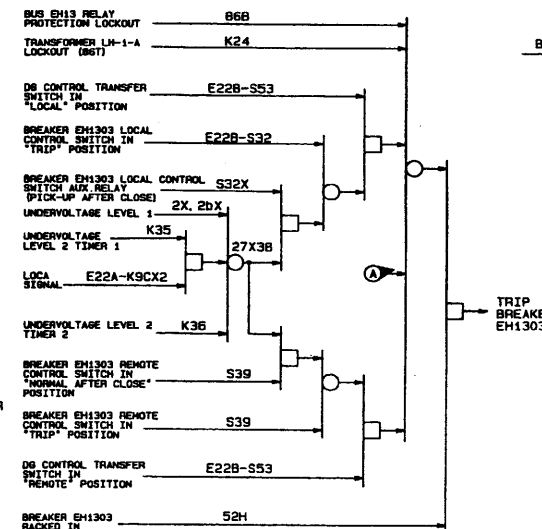
BUS EH13 DIESEL GENERATOR BREAKER EH1301 TRIP LOGIC



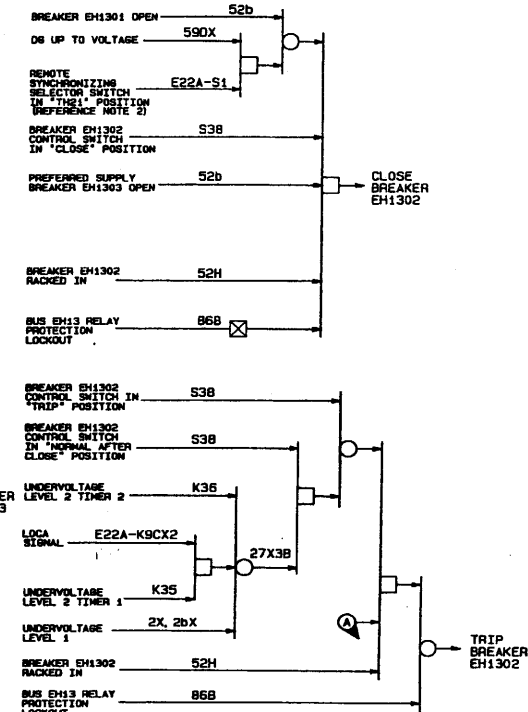
BUS EH13 PREFERRED SUPPLY BREAKER EH1303 CLOSE LOGIC



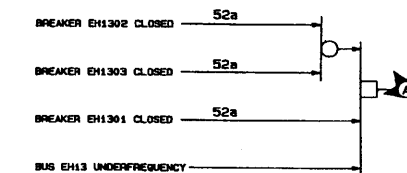
BUS EH13 PREFERRED SUPPLY BREAKER EH1303 TRIP LOGIC



BUS EH13 ALTERNATE PREFERRED SUPPLY BREAKER EH1302 CLOSE AND TRIP LOGIC



BUS EH13 DIESEL GENERATOR LOAD TEST OVERLOAD PROTECTION



- NOTES:
 1. TH1 IS THE CABLE BUS CONNECTING THE UNIT 1 CLASS 1E HW BUSES TO NORMAL OFF-SITE POWER VIA UNIT 1 INTERBUS TRANSFORMER LH-1-A.
 2. TH2 IS THE CABLE BUS CONNECTING THE UNIT 1 CLASS 1E HW BUSES TO OFF-SITE POWER VIA UNIT 2 INTERBUS TRANSFORMER LH-2-A.

LEGEND:
 AND
 NOT
 OR

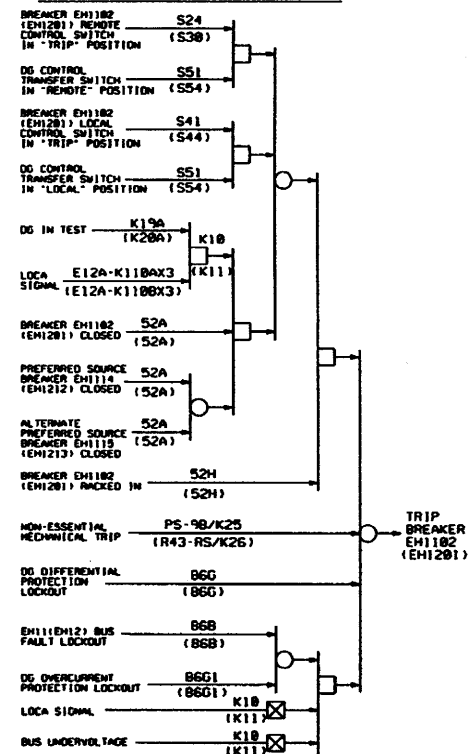
(Rev. 12 1/03)

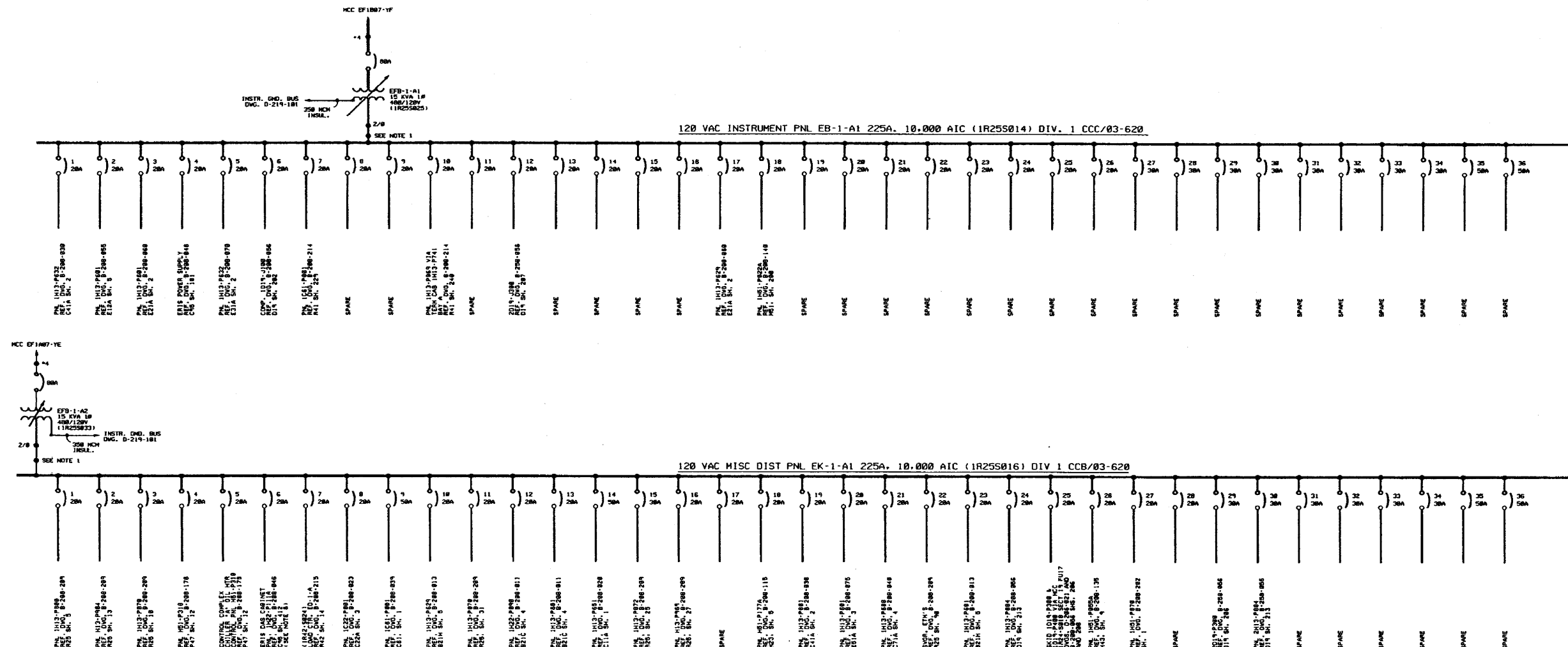
NUCLEAR SAFETY RELATED



PERRY NUCLEAR POWER PLANT

HPCS Diesel, Diesel Breakers,
 Alternate Preferred Supply
 Breakers Logic Diagram,
 (Division 3)
 Figure 8.3-8
 [Dwg. D-808-311(4)]






REFERENCES
REF. DWG. D-206-012 FOR INTERPRETATION OF PANEL BUS NUMBERS

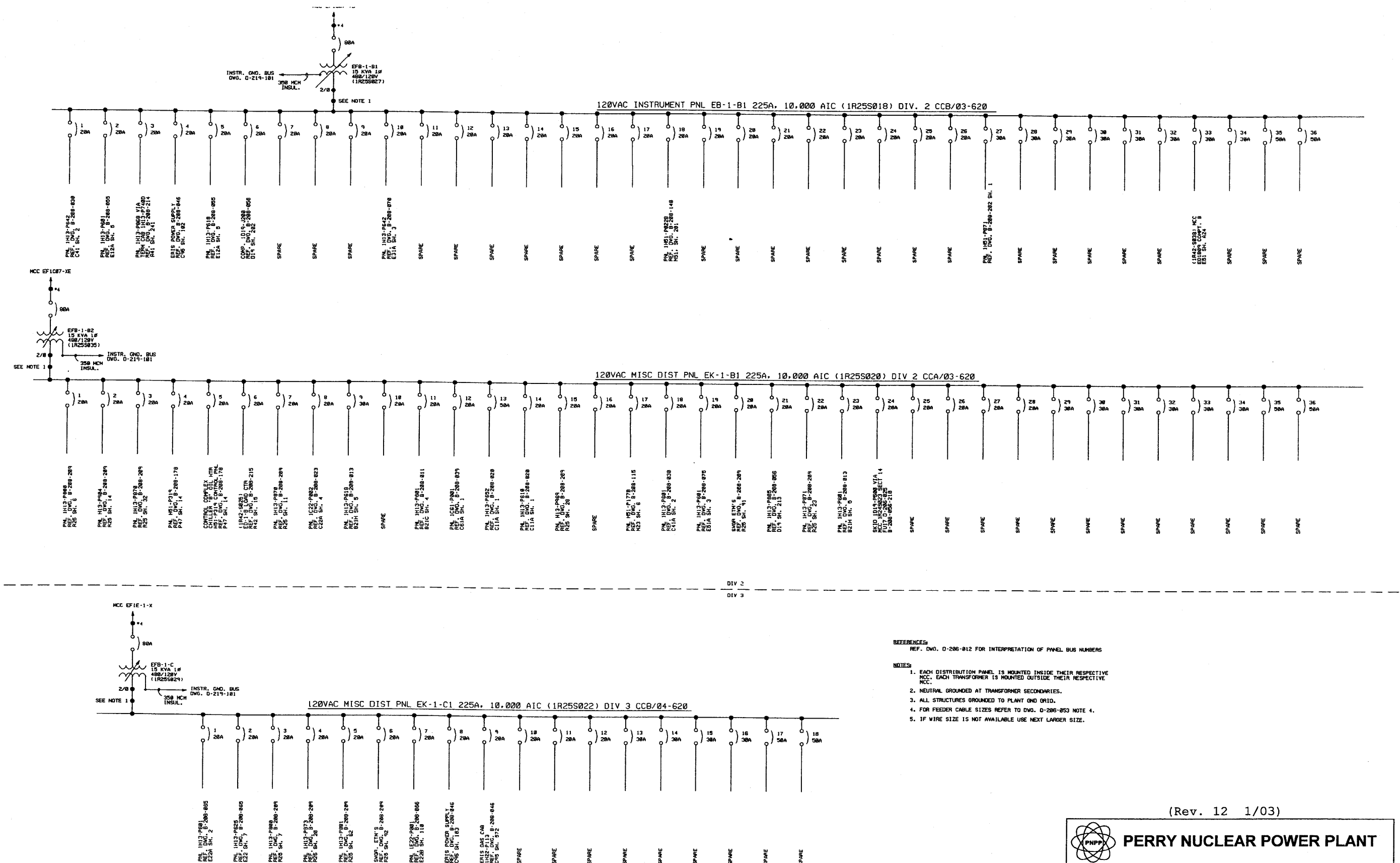
- NOTES
1. EACH DISTRIBUTION PANEL IS MOUNTED INSIDE THEIR RESPECTIVE MCC. EACH TRANSFORMER IS MOUNTED OUTSIDE THEIR RESPECTIVE MCC.
 2. NEUTRALS GROUNDED AT TRANSFORMER SECONDARIES.
 3. ALL STRUCTURES GROUNDED TO PLANT GND GRID.
 4. FEEDER CABLE SIZES:
- | BUS SIZE | WIRE SIZE IF RUN ENTIRELY IN CONDUIT | WIRE SIZE IF RUN ENTIRELY OR PARTIALLY IN TRAY 2" OR UP. | WIRE SIZE IF RUN ENTIRELY OR PARTIALLY IN TRAY 2" OR UP. |
|----------|--------------------------------------|--|--|
| 20A | #12 | #10 | #6 |
| 30A | #10 | #8 | #4 |
| 50A | #6 | #4 | #2 |
5. IF WIRE SIZE IS NOT AVAILABLE USE NEXT LARGER SIZE.
 6. THE CABLE FOR CIRCUIT BREAKER NO. 6 DOES NOT MEET THE "FEEDER CABLE SIZE" CRITERIA OF NOTE 4. THIS CABLE IS USED BY THE ERIS COMPUTER TO MONITOR THE BUS VOLTAGE.

(Rev. 12 1/03)



PERRY NUCLEAR POWER PLANT

One Line Diagram, Class 1E,
120 Volt AC, Division 1

Figure 8.3-12
(Dwg. D-206-053)



(Rev. 12 1/03)


PERRY NUCLEAR POWER PLANT

One Line Diagram, Class 1E,
120 Volt AC, Divisions 2 and 3

Figure 8.3-13
(Dwg. D-206-054)

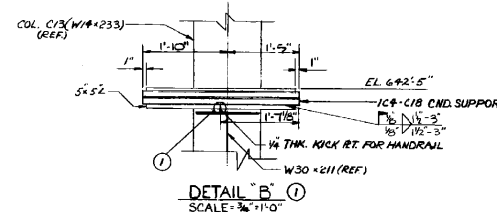
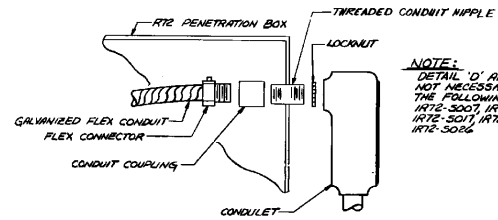
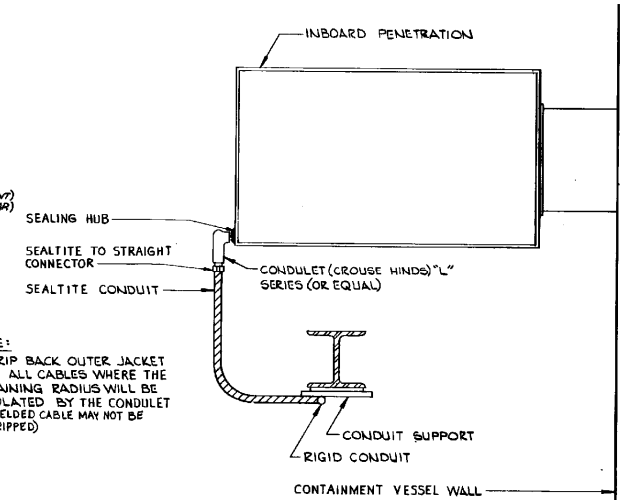
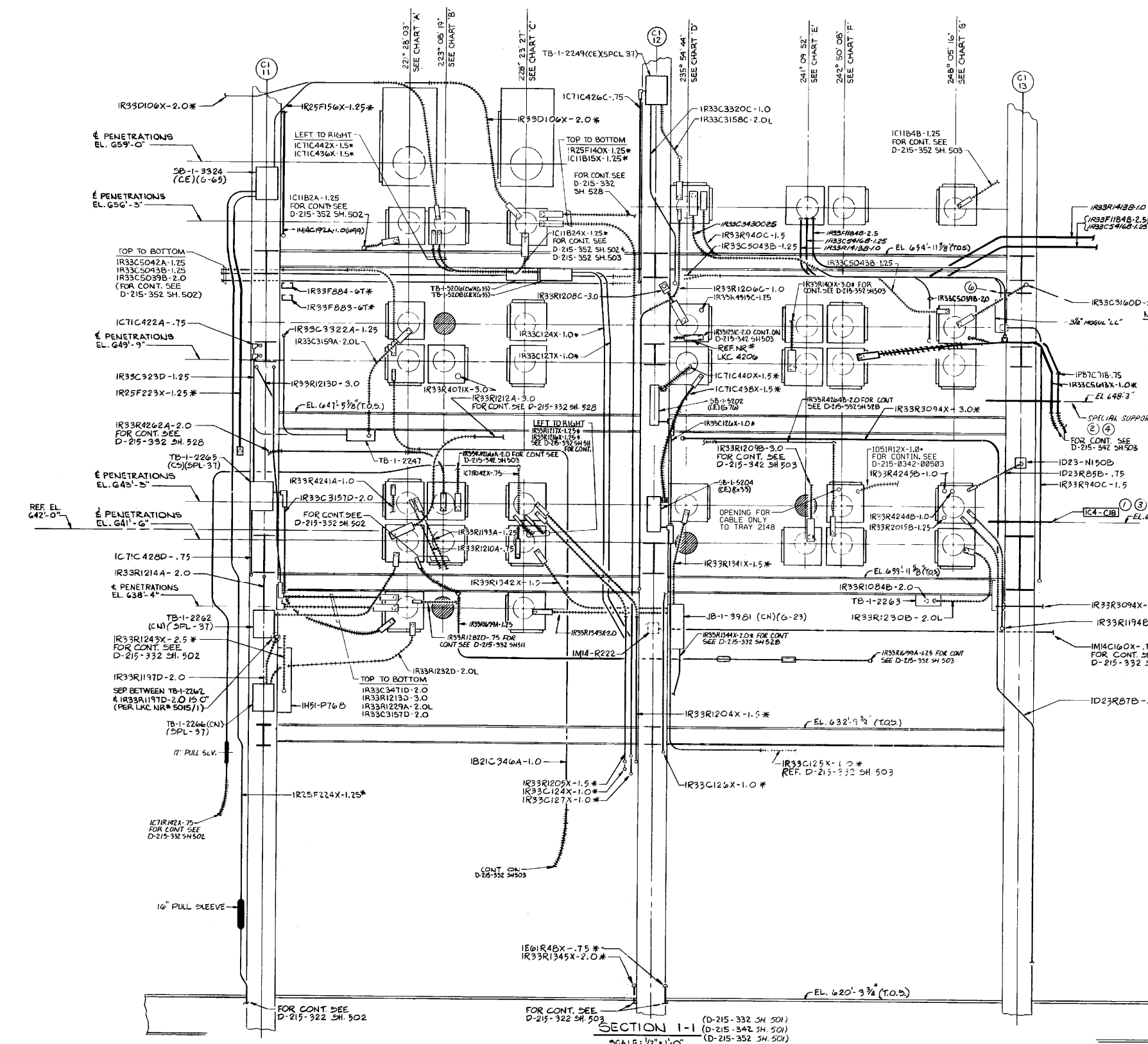


CHART 'A' TOP TO BOT.	CHART 'B' TOP TO BOT.	CHART 'C' TOP TO BOT.	CHART 'D' TOP TO BOT.	CHART 'E' TOP TO BOT.	CHART 'F' TOP TO BOT.	CHART 'G' TOP TO BOT.
ERB5008 IRT2-5001	ERB5002 IRT2-5029	ERB5010 IRT2-5002	ERB5004 IRT2-5011	ERB5005 IRT2-5032	ERB5006 IRT2-5006	ERB5007 IRT2-5004
ERB5001 IRT2-5003	ERB4019 SPARE	ERB5003 IRT2-5005	ERB5002 IRT2-5012	ERB4022 IRT2-5038	ERB4023 IRT2-5014	ERB4024 IRT2-5009
ERB4018 IRT2-5007	ERB4010 IRT2-5031	ERB4020 IRT2-5012	ERB4021 IRT2-5033	ERB4013 IRT2-5036	ERB4014 IRT2-5015	ERB4015 IRT2-5010
ERB4009 IRT2-5008	ERB4002 IRT2-5030	ERB4011 IRT2-5018	ERB4004 IRT2-5013	ERB4005 SPARE	ERB4006 IRT2-5022	ERB4007 IRT2-5020
ERB4001 IRT2-5016	ERB3004 IRT2-5028	ERB4003 IRT2-5018	ERB3006 SPARE	ERB3007 IRT2-5021	ERB3008 IRT2-5035	ERB3009 IRT2-5023
ERB3003 IRT2-5017	ERB3002 SPARE	ERB3005 IRT2-5019				
ERB3001 IRT2-5026		ERB3000 IRT2-5027				

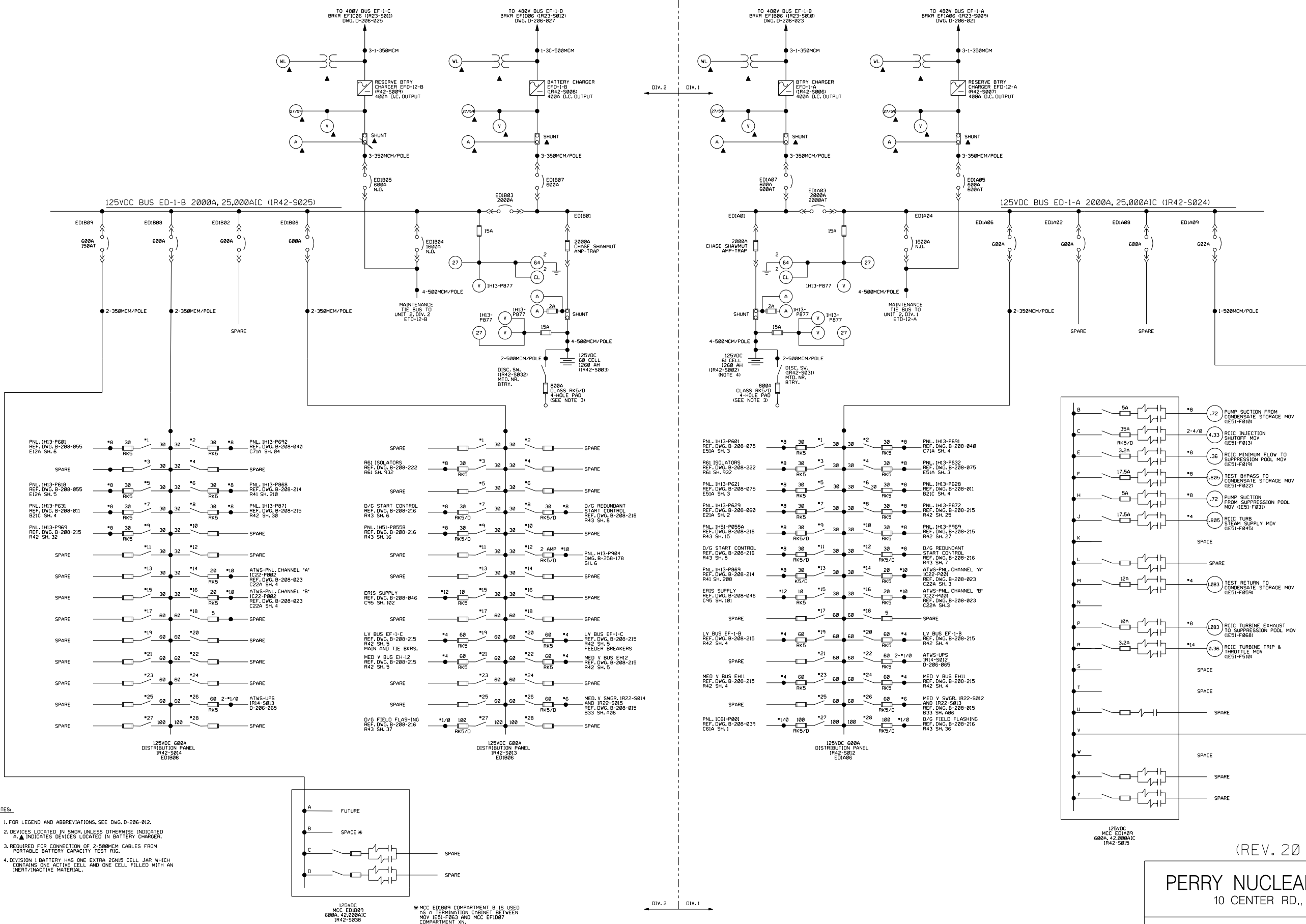
- VARIANCES**
- ATTACH B52B STRUT TO CONDUIT SUPPORT IC4-C18 PER DETAIL 'B'. STRUT IS TO EXTEND 1" MAX. PAST THE EDGE OF IC4-C18 ON BOTH SIDES
 - ATTACH AN ELECTRICAL CONDUIT SUPPORT IDENTICAL TO IC4-C18 TO COLUMN C1-13 (W/4x233) AND ATTACH B52B STRUT THE ENTIRE LENGTH OF SUPPORT PLUS 1" MAX. PAST BOTH ENDS
 - ALLOW CND. IR33R940C-1.5 AND IR33R940X-3.0 TO ATTACH TO IC4-C18
 - ALLOW CND. N/5 IR33R940C-1.5, IPB7C71B-75 & IR33C5613X-1.0 TO ATTACH TO SUPPORT (REF. VARIANCE 2)
 - SPARE
 - ALLOW DETAIL 'D' THAT SUPPORTS CND. IR33R940C-1.5 TO ATTACH TO COLUMN
- 7 ALLOW IR33R940C-1.5 TO BE MOUNTED ON STRUT TO SEC. C1-11, 1" MAX. DOWN ON SEC. 3-3 (D-215-667 SH 502), UTILIZING 3/8" STUD NUTS

- NOTES:
- FOR LEGEND, NOTES, REFERENCES AND STANDARD DETAILS, SEE D-215-881.
 - DWG. D-215-667 SH. 501 PER GA1 DWG. D-215-667 REV. H.
 - THIS DWG. TO BE WORKED WITH DWGS. D-215-332 SH. 502, 503, D-215-342 SH. 502, 503, D-215-352 SH. 502 AND 503.

(REV. 20 10/2017)

PERRY NUCLEAR POWER PLANT
10 CENTER RD., PERRY, OHIO 44081

CONTAINMENT VESSEL PENETRATION
LOCATIONS PROTECTIVE ENCLOSURE
SPATIAL LAYOUT VIEWED FROM INSIDE
UNIT 1 CONTAINMENT VESSEL
FIGURE 8.3-19
(DWG. D-215-0667-00501)

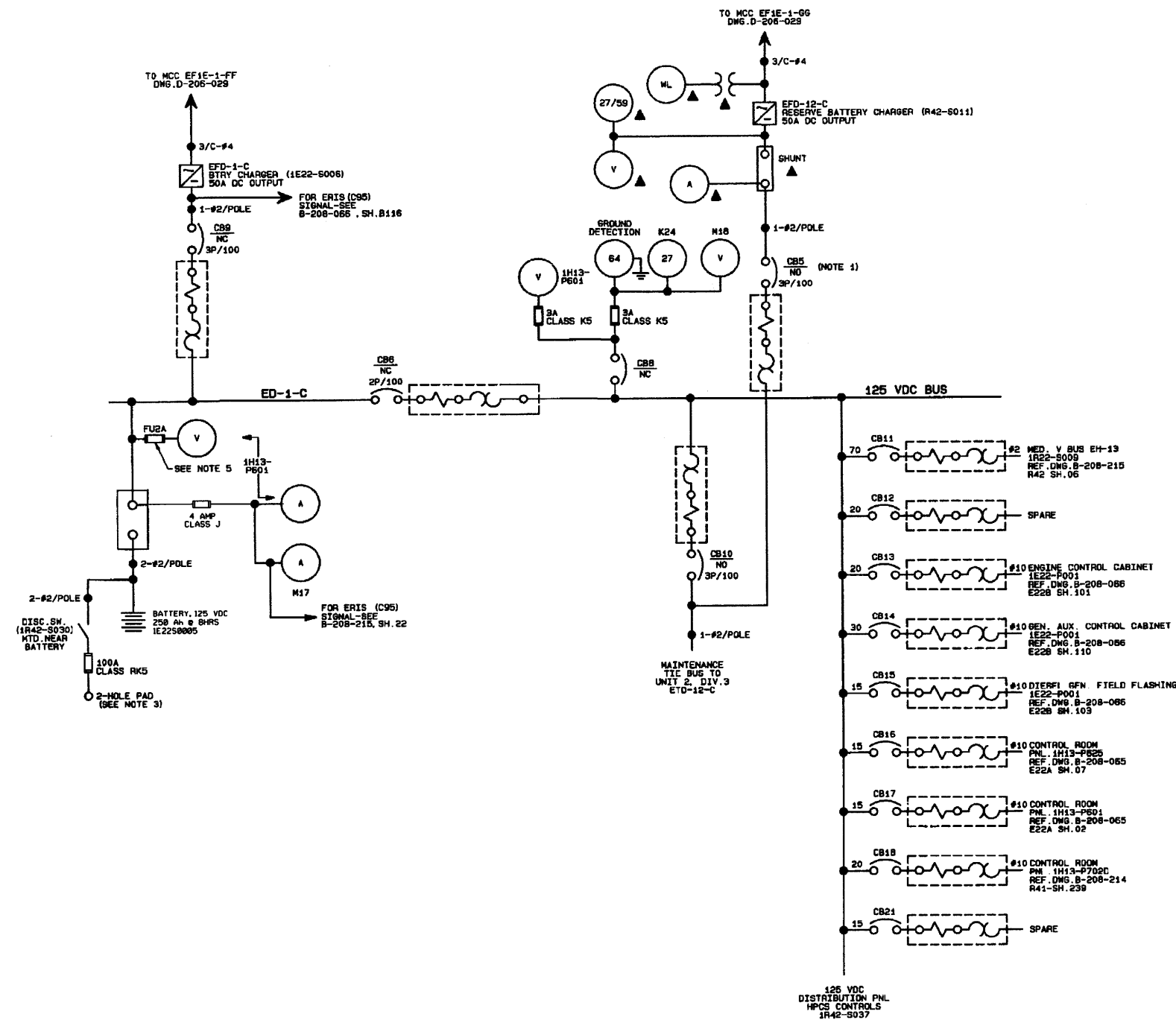


(REV. 20 10/2017)

PERRY NUCLEAR POWER PLANT

10 CENTER RD., PERRY, OHIO 44081

ONE LINE METER AND RELAY DIAGRAM,
CLASS 1E, 125 VOLT DC, DIVISION 1 & 2
FIGURE 8.3-21
(DWG. D-206-0051-00000)



NOTES:

1. CB5 BREAKER IS SUPPLIED ON GENERATOR UNIT NO.1 ONLY.
2. FOR LEGEND AND ABBREVIATIONS, SEE DWG. D-206-012.
3. REQUIRED FOR CONNECTION OF 500MCM CABLE FROM PORTABLE BATTERY CAPACITY TEST RIG.
4. DEVICES LOCATED IN SWGR UNLESS OTHERWISE INDICATED
A. INDICATES DEVICES LOCATED IN BATTERY CHARGER
5. GOULD SHAWMUT-FUSE MODEL OTM-2 OR EQUIVALENT.

REFERENCES:

B-211-208 SH.1	BLOCK DIAGRAM
B-211-065 SH.2 & 13	BLOCK DIAGRAM
B-211-066 SH.6 & 13	BLOCK DIAGRAM

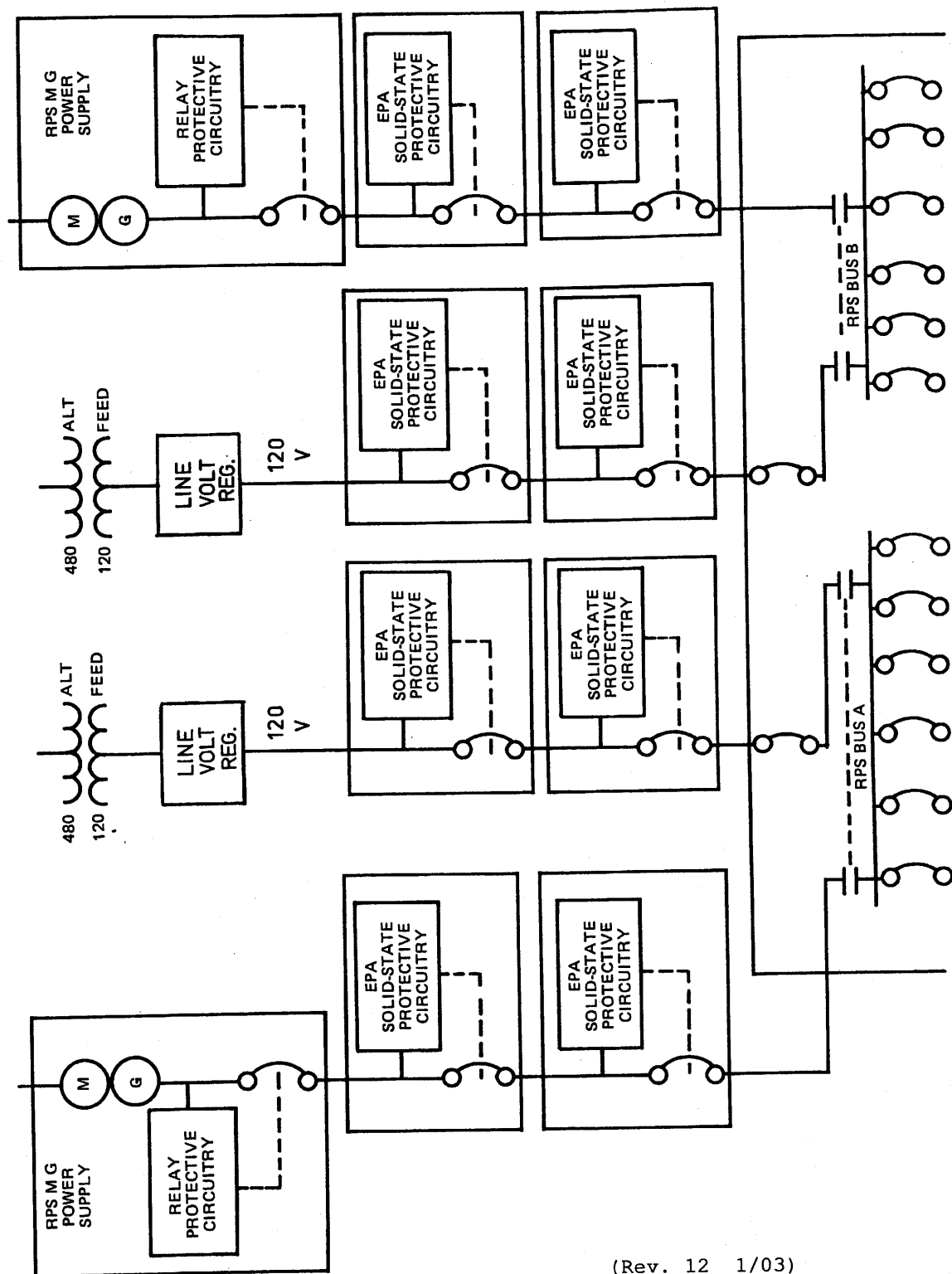
REFERENCES:

D-81381-22711CE STEWART & STEVENSON SERVICES

(REV. 19 10/2015)

PERRY NUCLEAR POWER PLANT
10 CENTER RD., PERRY, OHIO 44081

ONE LINE METER AND RELAY DIAGRAM,
CLASS 1E, 125 VOLT DC, DIVISION 3
FIGURE 8.3-22
(DWG. D-206-0050-00000)



(Rev. 12 1/03)



PERRY NUCLEAR POWER PLANT

Block Diagram - RPS Protective
Circuit Showing EPA Assemblies

Figure 8.3-23