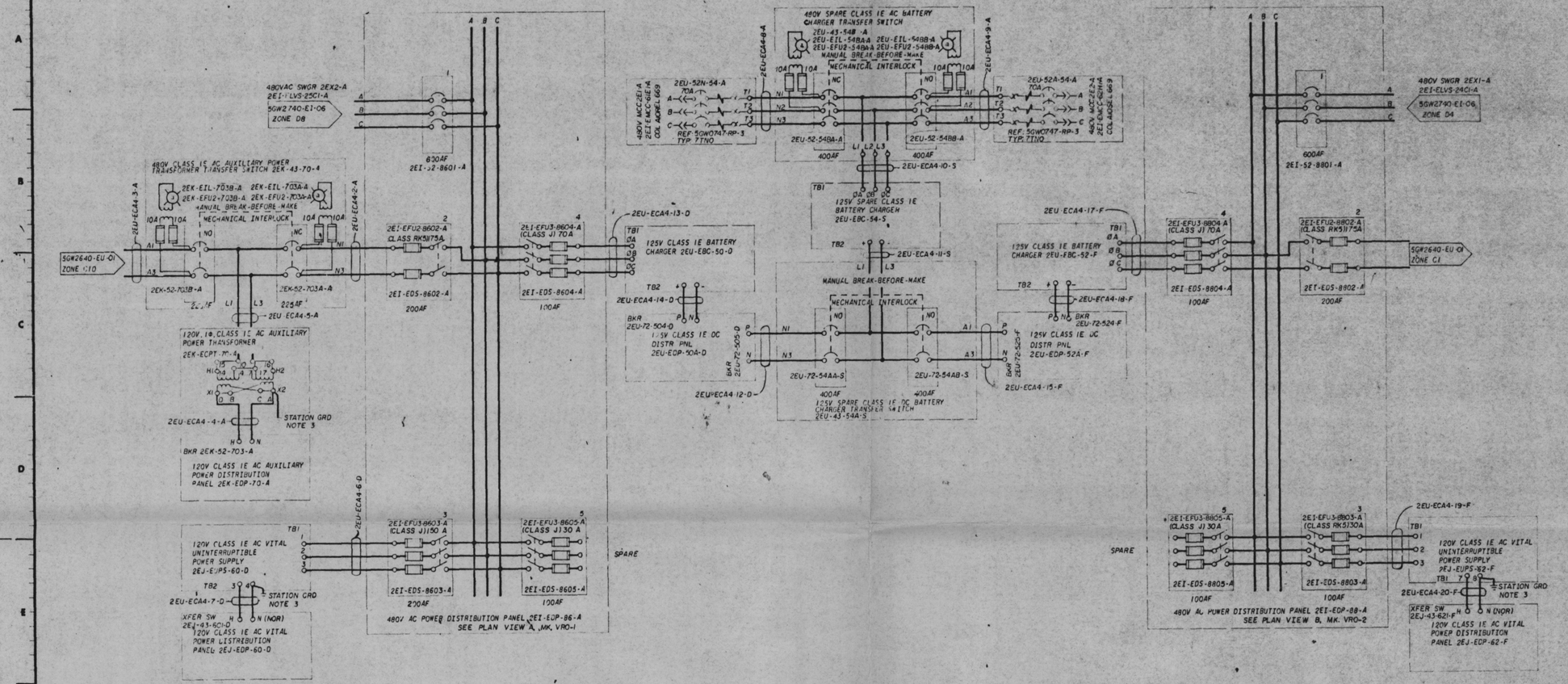
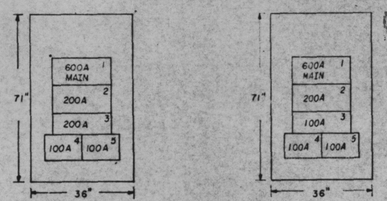
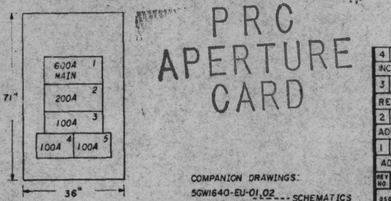




PLAN VIEW A

480V AC POWER DISTRIBUTION PANELS 2EI-EDP-86-A 2EI-EDP-87-B
REFER TO NOTES 2, 7, AND 12
NOT TO SCALE



PLAN VIEW B

480V AC POWER DISTRIBUTION PANELS 2EI-EDP-88-A 2EI-EDP-89-B
REFER TO NOTES 2, 7, AND 12
NOT TO SCALE

PRC APERTURE CARD

COMPANION DRAWINGS:
5GW1640-EU-01,02 --- SCHEMATICS
5GW2640-EU-02

REFERENCE DRAWINGS:
5BW0625-EU-01-04 --- SINGLE LINES
5BW0625-EJ-01-04
5BW0620-EU-01 --- KEY DIAGRAM
5AW0820-RU-03 --- EQUIP LAYOUT

NOTES:

1. SYSTEMS EJ AND EK SHOWN ON THE 5GW2640-EU SCHEMATIC SERIES ARE CONSIDERED SUBSYSTEMS OF SYSTEM EU.

DWG NO.	SYSTEM
5GW2640-EU	EU-125V CLASS 1E DC POWER DISTR SYS EJ-120V CLASS 1E AC VITAL PWR DISTR SYS EK-120V CLASS 1E AC AUX POWER DISTR SYS

2. ALL DEVICES SHOWN ON THIS DRAWING ARE CLASS 1E.
3. 120V CLASS 1E AC VITAL UNINTERRUPTIBLE POWER SUPPLIES AND AUXILIARY TRANSFORMERS HAVE COMMON GROUND POINT IN THEIR RESPECTIVE TRAINED BATTERY BOARD AREA.
4. INDICATION LIGHT WIRING IS NO. 16 AWG, SINGLE CONDUCTOR, 600V, TEFLON COATED.
5. INDICATING LIGHTS ARE OILTIGHT UNITS COMPLETE WITH LAMP BASE, AMBER LENS, 6-V LAMP, AND TRANSFORMER FOR 480V AC OPERATION, CUTLER HAMMER TYPE 10250T184CS.
6. INSTRUMENT FUSES ARE CURRENT LIMITING-CLASS J.
7. 480V POWER DISTRIBUTION PANELS:
   A. PANELS ARE PROVIDED ON CONTRACT NO. 77K3-820237
   B. PANELS ARE DESIGNED FOR 600 AMP SERVICE, WESTINGHOUSE TYPE FDP OR EQUAL.
   C. 600 AMP FRAME BREAKER IS NON-AUTOMATIC USED AS MAIN BREAKER, WESTINGHOUSE TYPE LA, THREE POLE, OR EQUAL.
   D. 200 AMP FUSIBLE SWITCHES HAVE INTERRUPTING CAPACITY OF 100,000 RMS SYMMETRICAL AMPS, FUSES SIZED AS SHOWN, WESTINGHOUSE 200 AMP SINGLE UNIT FUSIBLE SWITCH, CLASS RK5 FUSES (SEE NOTE 16), TWO POLE, OR EQUAL.
   E. 100 AMP FUSIBLE SWITCHES HAVE INTERRUPTING CAPACITY OF 100,000 RMS SYMMETRICAL AMPS, FUSES SIZED AS SHOWN, WESTINGHOUSE 100 AMP SINGLE UNIT FUSIBLE SWITCH, CLASS RK5 FUSES, THREE POLE, OR EQUAL.
   F. 100 AMP FUSIBLE SWITCHES HAVE INTERRUPTING CAPACITY OF 100,000 RMS SYMMETRICAL AMPS, FUSES SIZED AS SHOWN, WESTINGHOUSE 100 AMP TWIN UNIT FUSIBLE SWITCH, CLASS J FUSES, THREE POLE, OR EQUAL.
8. 480V CLASS 1E SPARE BATTERY CHARGER TRANSFER SWITCH:
   A. SWITCH IS PROVIDED ON CONTRACT NO. 77K5-820964
   B. 400 AMP FRAME BREAKERS ARE NON-AUTOMATIC WITH MECHANICAL INTERLOCK FOR MAKE-BEFORE-BREAK TRANSFER. WESTINGHOUSE TYPE LA (WITH WALKING BEAM INTERLOCK), THREE POLE.
9. 125V SPARE CLASS 1E DC BATTERY CHARGER TRANSFER SWITCH:
   A. SWITCH IS PROVIDED ON CONTRACT NO. 77K5-820964
   B. 400 AMP FRAME BREAKERS ARE NON-AUTOMATIC WITH MECHANICAL INTERLOCK FOR BREAK-BEFORE-MAKE TRANSFER. WESTINGHOUSE TYPE LA (WITH WALKING BEAM INTERLOCK), TWO POLE.
10. 120V CLASS 1E AC AUXILIARY POWER TRANSFORMER TRANSFER SWITCH:
   A. SWITCH IS PROVIDED ON CONTRACT NO. 77K5-820764.
   B. 225 AMP FRAME BREAKERS ARE NON-AUTOMATIC WITH MECHANICAL INTERLOCK FOR BREAK-BEFORE-MAKE TRANSFER. WESTINGHOUSE TYPE JA (WITH WALKING BEAM INTERLOCK), TWO POLE.
11. 120V CLASS 1E AC AUXILIARY POWER TRANSFORMER:
   A. TRANSFORMER IS PROVIDED ON CONTRACT NO. 77KK3-820551
   B. DRY TYPE TRANSFORMER, 240X480-120/240, 1Ø, 60HZ, 50 KVA, 80°C TEMPERATURE RISE, WITH TWO, 2 1/2% FULL-CAPACITY-ABOVE-NORMAL TAPS AND TWO, 2 1/2% FULL-CAPACITY-BELOW-NORMAL TAPS. HEVI-DUTY TYPE SSH50.
12. 400A AND 600A NON-AUTOMATIC BREAKERS HAVE MINIMUM SHORT-TIME CURRENT RATINGS AT 600V AC AS FOLLOWS:

CURRENT	DURATION
6000A	1 SECOND
10,000A	0.166 SECONDS
28,900A	0.066 SECONDS
33,000A	0.0083 SECONDS

13. 120VAC CLASS 1E VITAL UPS ARE SUPPLIED ON CONTRACT 77K3-869C1.
14. 125VDC CLASS 1E BATTERY CHARGERS ARE SUPPLIED ON CONTRACT 76K6-86843
15. 480V SWITCHGEAR IS SUPPLIED ON CONTRACT 76K3-85526.
16. CLASS RK5 FUSES FOR TRANSFORMER FEEDS ARE PROVIDED ON CONTRACT 80K13-826663.
17. CLASS RK5 FUSES FOR 7.5 KVA UPS FEEDS PROVIDED BY FIELD.

REV	ECN	DATE	DESIGN	DRAWN	CHKD	SUPV	ENGR	INSP	SUBM	RECM	APPR
4	S1	7-9-82	DK	JL							
INCORPORATED FCR E-2488. REVISED EK XFER SW FUSE & LIGHT UNIDS.											
3	1240	4-13-81	DK								
REVISED FUSE CLASS.											
2	1139	3-13-81	DK								
ADDED CONTRACT NO. REMOVED LOCATIONS.											
1	S1,748	1-15-79									
ADDED CABLE AND TERMINAL DESIG. INCREASED PNL CAP. REV FUSE CLASS.											

DESIGN L. S. Alexander
DRAWN J. L. Brown / J. R. Southern
CHKD R. R. Hudson
DEPT. N/A
INSP
ENGINEER N. W. Stevenson

GENERAL
UNIT 2

SCHEMATIC DIAGRAM
125V CLASS 1E DC POWER
DISTRIBUTION SYSTEM

BELLEFONTE NUCLEAR PLANT
TENNESSEE VALLEY AUTHORITY
DIVISION OF ENGINEERING DESIGN

Q

SUBMITTED N. W. Stevenson
RECOMMENDED G. L. Hennig
APPROVED R. M. Gridley

KNOXVILLE 3-9-76 88 E 5GW2640-EU-01

RECORD DRAWING AS CONSTRUCTED

REVIEWED
RC(CIVIL) N/A
RE(ELEC) N/A
RM(MECH) N/A
INSPECTED AND APPROVED FOR ISSUE

Document # SR-438 8309050536
Control # 8-25-83
Date of Document
REGULATORY DOCKET FILE

PRINTS MADE-8
SR #:
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ND
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LR
BL
PX

PRINT
SIZE