WL-3364

REVISION NOTES:
1. Retired device 987N; 15/5 aux. CT's; coupling cap. in Bϕ of Kingston line; line trap in Bϕ of transf. bank. Added MOD switches 949 & 959; coupling capacitors, line trap & potential device in Bϕ of AEC-K33 & Kingston S.P. 161 kV lines; devices 9427, 9527, 6641, 9179; "CS-278" carrier transmitter and Functional Single Line Diagram.
2. Roane 161kV line was (AEC)K33 South 161kV line "E". Rockwood-Kingston SP-K33 161kV line was Kingston SP 161kV line "E". Two point alarm was transmitted to Kingston S.P. Retired 9427Y & 9527X. Added 962, 964, 9489T & 95TT. Modified transfer trip receiver.
3. Device 95TT "HFA" was "HGA". Retired "308E". Added CCVT's, "ITE27D" to Harriman Dist. No.1 & No.2 Lines; 27A & 27B contacts to OCB's 664, 674 & 694 reclosing circuit; trip circuit's for OCB's 674 & 694 by device 95TT.

REFERENCES:

Three Line Diagram	WL-3365
Elementary Diagram	WR-3366
Switchboard Wiring-R.V	WL-3369
Outdoor Conduit Plan & Det.'s	LC-9665W
Conduit & Cable List	CMC-9665G

ROANE — 959 — HARRIMAN, TENN. SUB. — 949 — ROCKWOOD-KINGSTON S.P.-K33

9589 — 9489 — 914 — 9179 "SGR-12"

Trip 914 — Trip 959 — Close 949 — Close 914

PD — "IAV" (9527) — 3527Y — 9427X — 9589 — 9527Y — 9152 — 243 A

PD — "IAV" (9427) — 3132 — 9489 — "305" (SH2 T)

under Voltage "HGA" (9527 T) — over Voltage "HGA" (9427 T)

3529 — 9427X — 3401 F — 9152 — 943 A

FUNCTIONAL SINGLE LINE DIAGRAM

Close OCB 694 — Close OCB 664 — 43R — 6927A — 6927B — ITE 27D — CCVT — "TEV" (WM-10187)

69 kV TRANSFER BUS — ϕB — 699

69 kV HARRIMAN DIST. NO.1 (GUNBRIGHT)

Close OCB 674 — Close OCB 664 — 43R — 695 — 679

"TEV" (WM-10188) — 69kV HARRIMAN DIST No. 2

(WH-3374) — 1200-1200/5 — 694 — 1200-600/5 — 693 — 6979 "ACR" — 6927A 6927B — "CO-9" "ADV-2" .5-2.5 — P11, P12, P13

(WH-3373) — 1200-1200/5 — 674 — 1200-1200/5 — F73 — 6779 "ACR" — 675 — 669 — 667 — 661

(WH-3372) — 1200-1200/5 — 664 — 1200-900/5 — 663 — 6619 "ACR" — 6662R — 6643E — 6643 L.O. — 6643R — "305B" — 6642 E — 6643 E — P11 P12

69 kV. MELTON HILL — 639 — 635 — 633 — 6372 "ACR" — "305B" — "UY-25" "UY-25" — "CO-9" .5-2.5 — "ADV-2" — P11, P12, P13

69kV MAIN BUS — Sta. Serv. — C&D "DCU7" 58 Cells, 125 Vdc — La Marche 6ADC "A11-6-130VWB1" (WH-3414)

40,250V — 69kV — P13 — 67.08V — P11 — 115V — P12 — 3ϕ Ferranti-Packard 40,250-115/67.08-115/67.08Y

Sta. Serv. Bank #2 — 14,400-120/240 V — 1-75, 1-100 kVA — 227 — 007

Sta. Serv. Bank #1 — 14,400-120/240 V — 1-75, 1-100 kVA — 217 — Sta. Type — Curr. Limiting Fuse

GV (V/A) "VM-45" — 613V — P11 P12 P13

13kV — 69kV — 161kV

Transformer Bank No.1
4-Brown Boveri, 1ϕ
20,000 OA/26,667 FO/33,333 FOA kVA (H.V. & L.V.)
7,000 OA/9333 FO/11,667 FOA kVA (TV)
88.915/154 GrdY-39.8/69Y-13.2 kV
(WM-321) (WL-414)

13kV TRANSFORMER BUS — Sta. Type — 600-5 — 1200-1200/5 — 26 — (WS-294) — 300-5 — 300A "VAA" — GE TJS "Type 63015000A1 Rev" — 628T — 300B 628T — "TACS1" 1.5-6 — 664 — "2K" 4-16 — 64 — "TACS1" 1.5-6

"KD-4" .75-20 — 921 — P11, P12, P13

200-5 — "7D-2" — "PJC" 2-8 — 964 — A — 621 — "CEB17" 3-30 Ω — P11 P12 P13

Carrier Blocking — "CS-278" 64

** Closed when OCB 664, Subs. for OCB 634, 674 & 694.

Trip OCB 634 — **6629TT — Trip OCB 664

Trip OCB 674 6929TT — Trip OCB 694 — Closed when OCB 694 serves the Harriman Dist.

"308" (62T) — 62TT — 9152 "a" — N129TM — OITT

"308" — 662 — "HEA" — 94 — Remote Alarm — Trip & L.O. OCB 914, 634, & 664

6643 L.O.-Int. — Trip & L.O. OCB 694 & 674

6643 BK. — L.O. Int. — "TACS5" 1.5-6 — 687 — 694 "HEA" — Remote Alarm — Trip & L.O. OCB's 634, 664, 674, & 694

5/5 — "HU-1" — 87

"HFA" (95T) — 962 — AR** — * Logic Card Modified See Dwg. LC-36192, Sh 2

Sta. Alarms Transmitter

THIS STATION DESIGNED FOR:
1. NON-ATTENDED OPERATION
2. TRANSMITS 2 POINT ALARM TO VOLUNTEER R.C.C. Via ROANE SUB.

* W "69-G-2500" 69kV, 1200A. "AA-7" Pneu. Mech.

** 21-"KD-4" .75-20Ω
22-"KD-4" .75-20Ω
23-"KD-4" 4-30Ω

*6CB5-540000-24506-J0081

16kV TRANSFER BUS — 959 — ϕB — ROANE

3589 — PD #1 — ITE "TTR-A-49" WAH, 1600 A. "MB-10" motor mech. (WH-5703) — GE "4CD1A" — LTU — (9527) "IAV"

911 — 914 — 913 — 915 — W "GM-7" 161kV 1200A AAS-Pneu. Mech. — PSC 10-40

949 — 9489 — ROCKWOOD-KINGSTON S.P.-K33

PD #2 — ITE "TTR-A-49" WAH, 1600A. "MB-10" motor mech. (WH-5702) — GE "4CD1A" — LTU — (9427) "IAV" — 3152 — 9489 — (9831) "305" .25-30 Sec.

(WH-3370) — 9179 "SGR-12" — 9489T — 1200-1200/5 — 1200-1200/5

STATION NO 5270

REV. NO.	DATE	WORK ORDER	DSGN	DRWN	CHKD	SUPR.	SUBM
7	See Revision Note 3 3-25-92	*	DJL	JR	DJL/GG		
6	See Revision Note 2 3/20/84	29627	EBL	DN	WEH		
5	Added Dwg G762R 5-6-82	25713	JPB	JPB	WJM	JMJ	

DSGN NRG — DRWN — CHKD FH — SUPV. — W.O. 36681 — PROJ. ENGR. —

TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER PLANNING AND ENGINEERING

HARRIMAN, TENN., SUBSTATION-161kV
SINGLE LINE DIAGRAM

DATE 8/15/66 — SUBMITTED — APPROVED — SCALE NONE — CLASS. CODE 2X1

SHEET 1 OF 1 SHEETS — WL-3364 — R-7

MICROFILMED 6.

PHOTOGRAPHED IN CHATTANOOGA

24X