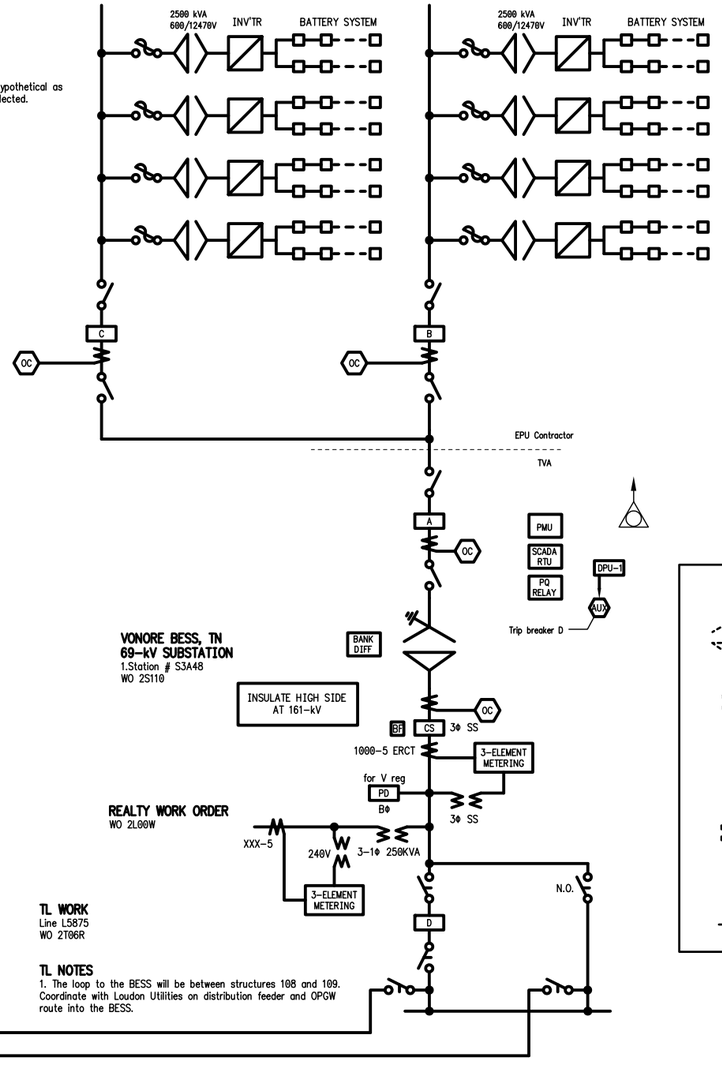
SK-2296

BESS NOTES
1. This layout is only hypothetical as no vendor has been selected.

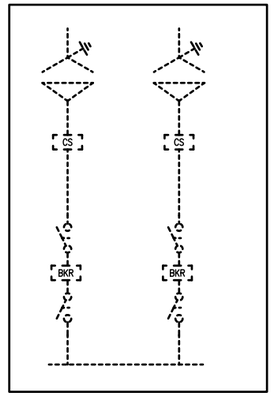


VONORE BESS, TN
69-kV SUBSTATION
1.Station # S3A48
WO 2S110

REALTY WORK ORDER
WO 2L00W

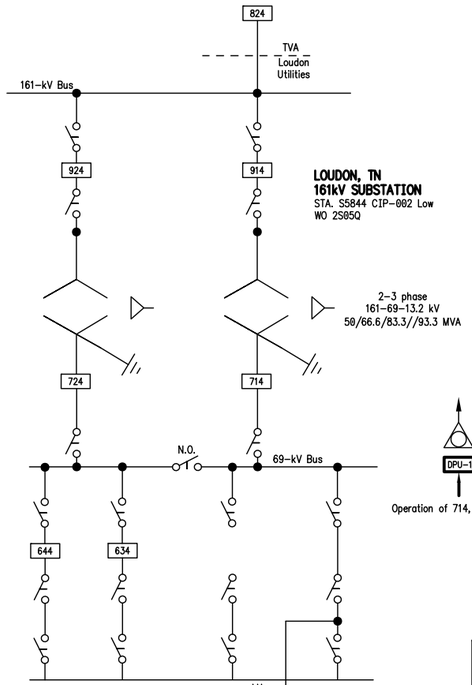
TL WORK
Line L5875
WO 2T06R

TL NOTES
1. The loop to the BESS will be between structures 108 and 109. Coordinate with Loudon Utilities on distribution feeder and OPGW route into the BESS.



ULTIMATE FOR HIGH SIDE

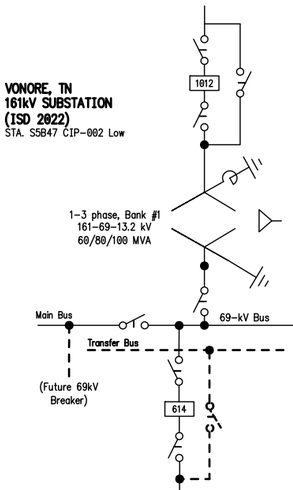
LOUDON NOTES
1. Install DTT so that any operation of breaker 824, 714 or 914 will trip the BESS off. This TT will need to be switched to any breaker switched to the BESS line.



LOUDON, TN
161kV SUBSTATION
STA. S5844 CIP-002 Low
WO 2S05Q

2-3 phase
161-69-13.2 kV
50/66.6/83.3//93.3 MVA

VONORE, TN
161kV SUBSTATION
(ISD 2022)
STA. S5B47 CIP-002 Low



FORT LOUDOUN HP
161-kV YARD
Station # 5132
TO FORT LOUDOUN
11.85 miles
20.4 mi
69 kV

TVA | Loudon Utilities
New 3-terminal structure
VONORE 69-kV Sub
(Loudon Utilities)
4 – 3.3 MVA 69/13kV
3 – 3.3 MVA 69/13kV
6.4 MW
N.O. (2022) (owned by TVA)
LOCK OPEN
653
STR 316
(previous delivery point)

0.91 mi
556,600 ACSR
615
0.65 mi
400,000 AL
655
N.O.
613
To Athens
(De-energized)

FORK CREEK
69-kV YARD
Station S3904
(Loudon Utilities)
7.7 mi
17 MW
LU
TVA
3.0 mi

0.87 mi
556,600 ACSR
645
0.05 mi
643
0.64 mi
653
N.O.
655
N.O.
639
TRDA
TAP
0.66 mi
659

(69kV lines owned by Loudon Utilities)

CARLEX
69-kV YARD
Station S3892
(Loudon Utilities)
605
603
TVA | Loudon Utilities
609
0.89 mi
683
CARLEX #1 BUS
N.O.
675
CARLEX #2 BUS
673
1.15 mi
12 MVA
69/12kV xfmr bank #1
8 MW
12 MVA
69/12kV xfmr bank #2
5 MW

WYETH
69-kV YARD
Station S3916
(Loudon Utilities)
663
665
635
614
Bank #1
12/16/20 MVA
69/12.47kV
624
Bank #2
12 MVA
69/12kV
1.3 MW

12 MVA
69/12kV
xfmr bank
TRDA
69-kV YARD
Station S3091
(Loudon Utilities)
17 MW

Ft Loudoun–Alcoa SS 161-kV TL
Line L5184
WO 2T06R

TL NOTES
1. Fiber will be installed on this line between structures 53 and 55. This fiber will connect two existing fiber routs together. See comm spec for detail.

APPROVED

Target ISD: 6/1/22
(See Schedule for official ISD)
Comm Spec. CSD-L-5136
PROJECT ID 193842

TENNESSEE VALLEY AUTHORITY
VONORE, TN. 69-kV BESS
CONSTRUCT BATTERY ENERGY STORAGE SYSTEM
SPECIFICATION DIAGRAM

REV	DATE	WORK ORDER	DCN NUMBER	ENG	RPU	SPA	PROJ MGR	PRIN ENG	SECT	TPD
0	2/22/21			ACD	GDP				RDH	JMH

DOC CLASS	DOC TYPE	DOC STATUS
PLANNING	SPEC DIAGRAM	PRELIMINARY

TO	TSC	APPROVAL STAMP	SCALE	SHEET 1 OF 1 SHEETS
CONST. AREA	CONTROL		NONE	
			STATION NUMBER	SK-2296 R0