



LEGEND	
DEVICE	DESCRIPTION
A	AMMETER
SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
ETS	EMERGENCY TRIP STATION AT TRACKSIDE
HMI	HUMAN MACHINE INTERFACE
RE-1	ETS AUXILIARY RELAY
V	VOLT METER
XD-A	CURRENT TRANSDUCER
XD-V	VOLTAGE TRANSDUCER
64D	DC SWGR. GRD. RELAY HOT STRUCTURE
64Y	DC SWGR. GRD. RELAY GRD. STRUCTURE
86	LOCK-OUT RELAY HAND RESET
172	DC AIR CKT. BKR.
176	DC BKR SERIES TRIP DEVICE
DC MPR	DC MULTI-PURPOSE PROTECTION RELAY
150/176	DC OVERCURRENT/RATE-OF-RISE RELAY
182/183	DC LOAD MEASURING/RECLOSEING RELAY
[Symbol]	FUSE
[Symbol]	SHUNT
[Symbol]	SURGE ARRESTER
[Symbol]	DISTIBUTED INPUT OUTPUT MODULE
[Symbol]	CABLE SHIELD MONITOR
[Symbol]	CABLE SHIELD MONITOR SENSOR
[Symbol]	DIGITAL TRACE RECORDER

- NOTES:**
- CONTROL VOLTAGE FOR ALL FEEDER BREAKERS IS INDIVIDUALLY FUSED 125VDC.
  - DIO CONTROL CONNECTIONS TO CIRCUIT BREAKERS REQUIRE INTERPOSING RELAYS
  - DTS CONTROL CONNECTIONS TO CIRCUIT BREAKERS REQUIRE INTERPOSING RELAYS.
  - DIO CONTROLS/INDICATIONS TO OPERATE IN PARALLEL WITH DTS CONTROLS/INDICATIONS.
  - ALL CIRCUIT BEAKERS ARE 6000A RATED.

**TIE BREAKER STATION - ONE LINE DIAGRAM**



"PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND."  
 LICENSE No. 39970  
 EXPIRATION DATE: 1/17/2017

DESIGNED	DATE	REFERENCE DRAWINGS		REVISIONS	
		NUMBER	TITLE	DATE	DESCRIPTION
JAJ	4/4/15			11/10/15	AMENDMENT #2: DELETED REFERENCE TO NOTE 15
JAJ	5/20/15				
PK	6/1/15				

**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**  
 DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES  
 CENI - POWER SYSTEMS ENGINEERING

REVISION SUBMITTED: \_\_\_\_\_ DATE: \_\_\_\_\_  
 APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
 DEPUTY CHIEF ENGINEER

<b>SIX (6) TIE BREAKER STATIONS UPGRADES ORANGE AND BLUE LINES DC, MD AND VA</b>	
TIE BREAKER CONTROL AND SCHEMATIC DIAGRAM	
CONTRACT NO. FQ15237	SCALE NONE
DRAWING NO. ST-SC-TB-SSI-200	SHEET NO. 15 OF 29