



- NOTES:**
- THIS DRAWING SHOWS ADDITIONAL CABLING & THE SCADA SCHEMATIC TO BE USED AT RMICB CHAMBER TYPE SUBSTATIONS WITH 4 TRANSFORMERS & Tx OAFD PROTECTION PANELS. TO BE READ IN CONJUNCTION WITH NETWORK STANDARDS & THE SUBSTATION DESIGN INFORMATION PACKAGE.
  - CABLE NAMING TO FOLLOW THIS DRAWING. THE CABLING ON THIS DRAWING IS FOR A 4 TRANSFORMER SUBSTATION WITH NO CUSTOMER DC PANELS. FOR VARIATIONS OF SUBSTATION CONFIGURATION, DELETE EQUIPMENT NOT REQUIRED.
  - SCADA PANEL (ZM) REQUIRES SOME EXTRA EQUIPMENT NOT SHOWN:
    - a. NETWORK CONNECTION BETWEEN MODEM & SCADA CPU SLOT 1.
    - b. ANTENNA FOR MODEM.
    - c. TERMINATIONS TO SCADA DI SLOTS 3 & 4.
 REFER TO WIRING DIAGRAM 245781-6 & CURRENT CONTRACT MANUFACTURER'S DRAWINGS.
  - IDEAL CONFIGURATION SHOWN. RMI'S MOUNTED LEFT TO RIGHT & INCOMING FEEDER TERMINATED TO THE LEFT HAND SWITCH OF THE FIRST RMI. SWITCH 1 IS THE LEFT HAND SWITCH & SWITCH 2 IS THE RIGHT HAND SWITCH OF THE ASSOCIATED RMI. IF IT OCCURS THAT THE INCOMING FEEDER IS TERMINATED TO THE RIGHT HAND SWITCH (SWITCH 2) OF ITS ASSOCIATED RMI, THEN THE TERMINAL NUMBERING FOR ITS PALLET SWITCHES WILL ALTER ACCORDINGLY.
  - 'B' BATTERY TEST POINT BOX (BTP) ONLY REQUIRED WHERE THE 'A' BATTERY VOLTMETER/TEST POINT & OR THE ARC FLASH DETECTION INDICATION PANEL HAVE BEEN MOUNTED EXTERNALLY TO THE MAIN SUBSTATION CHAMBER.
  - THE MODEM REQUIRES A DC-DC CONVERTER. THE MODEM COMES WITH A CABLE TO BE CONNECTED TO THE DC-DC CONVERTER AS SHOWN.

| ABBREVIATION | DESCRIPTION  |
|--------------|--|
| A            | 30V DC 'A' BATTERY                                     |
| AFI          | ARC FLASH DETECTION INDICATION PANEL                   |
| B            | 48V-30V(TAPPED) DC 'B' BATTERY                         |
| BCA          | BATTERY CHARGER A                                      |
| BCB          | BATTERY CHARGER B                                      |
| BTB          | 'B' BATTERY TERMINATION BOX (LOCATED NEAR 'B' BATTERY) |
| BTP          | 'B' BATTERY TEST POINT (LOCATED NEAR AFI PANEL)        |
| P1           | TRANSFORMER No.1 PROTECTION PANEL                      |
| P2           | TRANSFORMER No.2 PROTECTION PANEL                      |
| P3           | TRANSFORMER No.3 PROTECTION PANEL                      |
| P4           | TRANSFORMER No.4 PROTECTION PANEL                      |
| SB           | 475V LV SERVICE BOARD OR LV SERVICE BOARD EXTENSION    |
| VTP          | VOLTMETER TEST POINT FOR 30V DC 'A' BATTERY            |
| ZM           | SCADA PANEL  |

| TAGNAME     | MFG             | CATNO     | DESC                                     | REF DWG |
|-------------|-----------------|-----------|--|---------|
| DC-DC       | SNAPTECH        | GB30-4812 | DC/DC CONVERTER 48VDC TO 12VDC 30W       | -       |
| M           | SIERRA WIRELESS | RV50X     | 4G MODEM                                 | -       |
| ZPM         | SIEMENS         | PS-8620   | POWER MODULE FOR SICAM A8000 UNIT        | -       |
| X1          | UTILUX          | 3820      | RAIL MOUNTED TERMINAL                    | 118547  |
| X2, X3      | WEIDMULLER      | SAKR      | RAIL MOUNTED ISOLATING TERM CAT No.41226 | -       |
| X3, XS1 - 8 | WEIDMULLER      | ASK1      | RAIL MOUNTED FUSE CAT No. 37676          | -       |
| XS1 - 8     | WEIDMULLER      | SAKR      | RAIL MOUNTED ISOLATING TERM CAT No.41226 | -       |
| EB          | -               | -         | CABINET EARTH BAR                        | -       |

**CAD DRAWING**  
DO NOT MANUALLY AMEND  
**REVISIONS**  
1. REVISED MEDIA CONVERTER & RELAY  
EARTH BONDING CONNECTIONS. AMENDED  
TYPES IN SCHEMATIC & LEGEND  
AMENDED NOTES 3 & 6.  
02/06/2023  
L.MARTINUZZI  
M.BENNETT  
APPROVED

| SCALE          | NTS          |
|----------------|--------------|
| DESIGNED       | L.MARTINUZZI |
| DRAWN          | L.MARTINUZZI |
| CHECKED        | M.BENNETT    |
| APPROVED       | M.BENNETT    |
| DATE           | 05/02/2021   |
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ISSUED FOR CONSTRUCTION

DISTRIBUTION SUBSTATIONS WITH RMICBS WITH INDIVIDUAL TX OAFD PROTECTION WITH 4 TRANSFORMERS SUPPLY CABLING AND SCADA SCHEMATIC

DRAWING No **245781** SHEET 5 AMD 1 SIZE B1

C&P - DISTRIBUTION SUBS