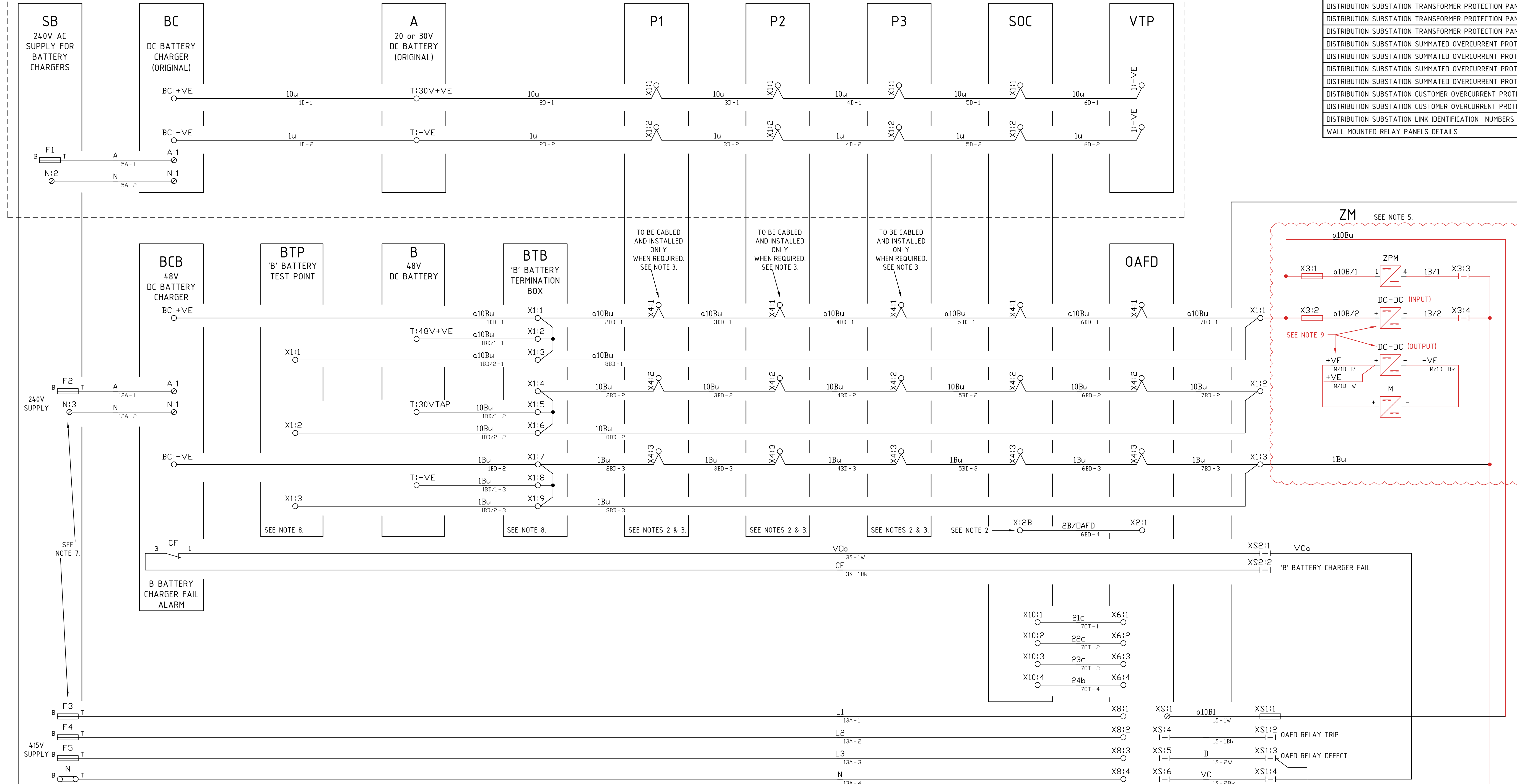


REFERENCES		
DISTRIBUTION SUBSTATION SCHEMATIC WITH RMICBS WITH EXPOSED LV BOARDS WITH LV TRANSFORMER ACBS WITH CUSTOMER SUPPLY PANELS WITH SUMMATED OAFD	227360SH01	
DISTRIBUTION SUBSTATION SCHEMATIC WITH RMICBS WITH H2 LV BOARDS WITH LV TRANSFORMER LINKS WITH CUSTOMER SUPPLY PANELS WITH OAFD	242878SH01	
DISTRIBUTION SUBSTATION SUPPLY CABLING AND SCADA SCHEMATIC WITH EXPOSED LV BOARDS WITH OAFD	227360SH02	
DISTRIBUTION SUBSTATION FIBRE LOOPING AND GENERAL MOUNTING DETAILS WITH EXPOSED BUSBAR LV BOARDS WITH OAFD	227360SH03	
DISTRIBUTION SUBSTATION BUSBAR PROTECTION PANEL LAYOUT AND LABELS WITH OAFD	227361SH01	
DISTRIBUTION SUBSTATION BUSBAR PROTECTION PANEL WIRING WITH OAFD	227361SH02	
DISTRIBUTION SUBSTATION INDICATOR PANEL SCHEMATIC, DRILLING & WIRING WITH OAFD	227362SH01	
DISTRIBUTION SUBSTATION SCADA PANEL WIRING & CABLE CONNECTIONS WITH BUSBAR PROTECTION WITH OAFD	227363SH01	
DISTRIBUTION SUBSTATION SCADA PANEL LAYOUT AND LABELS WITH BUSBAR PROTECTION WITH OAFD	227363SH02	
DISTRIBUTION SUBSTATION TRANSFORMER PROTECTION PANEL WIRING & CABLE CONNECTIONS, WITH RMICBS WITH TX LV ACBS WITH OAFD	227364SH01	
DISTRIBUTION SUBSTATION TRANSFORMER PROTECTION PANEL DRILLING WIRING AND CABLING WITH RMICBS WITH TX LV ACBS WITH OAFD WITH WALL MOUNTING	227364SH02	
DISTRIBUTION SUBSTATION TRANSFORMER PROTECTION PANEL WIRING AND CABLE CONNECTIONS WITH RMICBS WITH TX LV LINKS WITH OAFD	242879SH01	
DISTRIBUTION SUBSTATION TRANSFORMER PROTECTION PANEL DRILLING WIRING AND CABLING WITH RMICBS WITH TX LV LINKS WITH OAFD WITH WALL MOUNTING	242879SH02	
DISTRIBUTION SUBSTATION SUMMATED OVERCURRENT PROTECTION PANEL WIRING & CABLE CONNECTIONS WITH RMICBS WITH TX LV ACBS WITH OAFD	227365SH01	
DISTRIBUTION SUBSTATION SUMMATED OVERCURRENT PROTECTION PANEL DRILLING WIRING AND CABLING WITH RMICBS WITH TX LV ACBS WITH OAFD WITH WALL MOUNTING	227365SH02	
DISTRIBUTION SUBSTATION SUMMATED OVERCURRENT PROTECTION PANEL WIRING AND CABLING WITH RMICBS WITH TX LV LINKS WITH OAFD	242880SH01	
DISTRIBUTION SUBSTATION SUMMATED OVERCURRENT PROTECTION PANEL DRILLING WIRING AND CABLING WITH RMICBS WITH TX LV LINKS WITH OAFD WITH WALL MOUNTING	242880SH02	
DISTRIBUTION SUBSTATION CUSTOMER OVERCURRENT PROTECTION PANEL WIRING AND CABLING WITH RMICBS WITH OAFD	227366SH01	
DISTRIBUTION SUBSTATION CUSTOMER OVERCURRENT PROTECTION PANEL DRILLING WIRING AND CABLING WITH RMICBS WITH OAFD WITH WALL MOUNTING	227366SH02	
DISTRIBUTION SUBSTATION LINK IDENTIFICATION NUMBERS AND LABEL DETAILS WITH RMICBS WITH OAFD	227367SH01	
WALL MOUNTED RELAY PANELS DETAILS	28632	

EXISTING DC SUPPLY LOOP

SEE NOTE 2.



PANEL ABBREVIATION TABLE	
A	20 - 30V DC BATTERY (ORIGINAL)
AFI	ARC FLASH DETECTION INDICATION PANEL
B	48V-30V(TAPPED) DC 'B' BATTERY
BC	BATTERY CHARGER (ORIGINAL)
BCB	BATTERY CHARGER B
BTB	B BATTERY TERMINATION BOX (LOCATED NEAR 'B' BATTERY)
BTP	B BATTERY TEST POINT (LOCATED NEAR AFI PANEL)
OAFD	OPTICAL ARC FLASH DETECTION PANEL
SOC	SUMMATED OVERCURRENT PROTECTION PANEL
P1	TRANSFORMER No 1 PROTECTION PANEL
P2	TRANSFORMER No 2 PROTECTION PANEL
P3	TRANSFORMER No 3 PROTECTION PANEL
SB	475V LV SERVICE BOARD
VTP	VOLTMETER / TEST POINT FOR 30V DC 'A' BATTERY
ZM	SCADA PANEL

NOTES:

- THIS DRAWING SHOWS THE AC & DC SUPPLY AND SCADA CABLING WHICH IS TO BE USED IN CONJUNCTION WITH RMICB CHAMBER TYPE SUBSTATIONS WHEN INSTALLING THE OPTICAL ARC FLASH DETECTION UPGRADE.
- THE EXISTING CABLING AND TERMINALS SHOWN ARE NOMINAL ONLY. THE CONFIGURATION IS SHOWN AS A GUIDE. ASSOCIATED CABLE NAMING AND TERMINAL NUMBERING ARE NOT REQUIRED TO BE UPDATED.
- CABLES 2BD, 3BD, 4BD, & 5BD ARE ONLY REQUIRED TO BE CABLED TO THE TRANSFORMER PROTECTION PANELS WHERE THE TRANSFORMER LV AIR CIRCUIT BREAKERS HAVE TWO DC TRIP COILS. WHERE THIS IS NOT REQUIRED, CABLE 2BD IS TO BE CABLED DIRECTLY TO THE SUMMATED OC PANEL AND CABLES 3BD, 4BD, & 5BD NOT INSTALLED. FOR CONSISTENCY CABLE BETWEEN SUMMATED OC PANEL AND OAFD PANEL SHALL ALWAYS BE NAME 6BD.
- NEW CABLES TO BE NAMED ACCORDING TO THIS DRAWING.
- SCADA PANEL (ZM) REQUIRES SOME EXTRA EQUIPMENT NOT SHOWN:
 - NETWORK CONNECTION BETWEEN MODEM & SCADA CPU SLOT 1.
 - ANTENNA FOR MODEM.
 - TERMINATIONS TO SCADA DI SLOTS 3 & 4.
 REFER TO WIRING DIAGRAM 227363-1 & CURRENT CONTRACT MANUFACTURER'S DRAWINGS.
- LOCATION OF THE EARTH FAULT CT'S TO BE DETERMINED BY THE INDIVIDUAL SUBSTATION INSTALLATION.
- THESE FUSES AND LINK NAMING ON THIS SCHEMATIC ARE NOMINAL, FINAL NAMING WILL DEPEND ON THE SERVICES LOCATED AT THE SUBSTATION. NEW FUSES AND LINK FOR AC SUPPLIES MAY BE ADDED TO EXISTING SERVICE BOARD IF POSSIBLE. A REPLACEMENT SERVICE BOARD MAY BE REQUIRED. FUSES AND LINK TO BE CLEARLY LABELLED AND NUMBERED.
- '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 SUBSTATION CHAMBER. 'B' BATTERY TERMINATION BOX (BTB) ADDED TO ENABLE SIMPLIFIED BATTERY REPLACEMENT. 'BTB' ENCLOSURE TO BE PVC, IP65 RATED WITH MINIMUM DIMENSIONS OF 180mm(L)x175mm(W)x75mm(D) WITH G TYPE TERMINAL RAIL AND UTILUX 3820 TERMINALS.
- THE MODEM REQUIRES A DC-DC CONVERTER. THE MODEM COMES WITH A CABLE TO BE CONNECTED TO THE DC-DC CONVERTER AS SHOWN.

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 8000 UNIT	-	-
X1, 2, 4, 6	UTILUX	3820	RAIL MOUNTED TERMINAL	11854.7	-
X7, 10	UTILUX	3820	RAIL MOUNTED TERMINAL - ORANGE	-	-
X8	UTILUX	3820	RAIL MOUNTED TERMINAL	11854.7	-
X1	UTILUX	3820	RAIL MOUNTED TERMINAL	-	-
X2, X3	WEIDMULLER	SAKR	RAIL MOUNTED ISOLATING TERM CAT No.41226	-	-
XS1, X3	WEIDMULLER	ASK1	RAIL MOUNTED FUSE CAT No. 37676	-	-
XS1-2	WEIDMULLER	SAKR	RAIL MOUNTED ISOLATING TERM CAT No.41226	-	-

CAD DRAWING
DO NOT MANUALLY AMEND
AMENDMENTS

1. REF E2 TO E0
DELETED TX 1, 2 & 3 ACB CB PANEL
DELETED TX 1, 2 & 3 ACB CB PANEL
CABLE LOOP DRIVING FROM
SUMMATED OC PANEL.
REF E2 TO E0
ADDED CABLES FROM 'B' BATTERY TO
BATTERY CHARGER B. 'B' BATTERY
CABLES HAVE BEEN RENAMED.
REF H14
REF H14
AMENDED NOTE 3.
ADDED NEW 'B' BATTERY CONNECTION
DETAILS AND CABLES. ADDED 'B'
BATTERY TEST POINT BOX.
BATTERY CHARGER FAIL CONTACT
CHANGED.
REF D14
AMENDED PANEL ABBREVIATION TABLE
REF H14
REF H14
REF H14
06/05/2013
L.MARTINUZZI
B.HAINES
A.TURNER
APPROVED

2. REFERENCE TABLE TITLES MODIFIED
DRAWING 242878 TO 242880 ADDED:
E.KAROUZ 27-09-2016
CHECKED C.MURPHY
APPROVED S.M.15/08
PN: 5845788
TRIM REF: D16/732602

3. DRAWING TITLE AMENDED
REF REVISION CLOUDS IN RED WHEN
COLOUR PRINTED. AMENDED DRAWING
REFERENCE TABLE.
L.MARTINUZZI 28-03-2018
CHECKED M.BENNETT
APPROVED S.M.26/42
PN: 5845788
TRIM REF: D16/732602

4. REFERENCE TABLE TITLES MODIFIED
DRAWING 242878 TO 242880 ADDED:
E.KAROUZ 27-09-2016
CHECKED C.MURPHY
APPROVED S.M.15/08
PN: 5845788
TRIM REF: D16/732602

5. REFERENCE TABLE TITLES MODIFIED
DRAWING 242878 TO 242880 ADDED:
E.KAROUZ 27-09-2016
CHECKED C.MURPHY
APPROVED S.M.15/08
PN: 5845788
TRIM REF: D16/732602

6. REFERENCE TABLE TITLES MODIFIED
DRAWING 242878 TO 242880 ADDED:
E.KAROUZ 27-09-2016
CHECKED C.MURPHY
APPROVED S.M.15/08
PN: 5845788
TRIM REF: D16/732602

7. REFERENCE TABLE TITLES MODIFIED
DRAWING 242878 TO 242880 ADDED:
E.KAROUZ 27-09-2016
CHECKED C.MURPHY
APPROVED S.M.15/08
PN: 5845788
TRIM REF: D16/732602

8. REFERENCE TABLE TITLES MODIFIED
DRAWING 242878 TO 242880 ADDED:
E.KAROUZ 27-09-2016
CHECKED C.MURPHY
APPROVED S.M.15/08
PN: 5845788
TRIM REF: D16/732602

9. REFERENCE TABLE TITLES MODIFIED
DRAWING 242878 TO 242880 ADDED:
E.KAROUZ 27-09-2016
CHECKED C.MURPHY
APPROVED S.M.15/08
PN: 5845788
TRIM REF: D16/732602

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ISSUED FOR
CONSTRUCTION

SCALE	AS SHOWN
DESIGNED	-
DRAWN	L.MARTINUZZI
CHECKED	B.HAINES
APPROVED	A.TURNER
DATE	12/07/2012
TRIM REF	-
PROJECT NUMBER	SM 6717-1-2

DISTRIBUTION SUBSTATION
SUPPLY CABLING AND SCADA
SCHEMATIC
WITH EXPOSED LV BOARDS WITH OAFD

ISSUED FOR
CONSTRUCTION

PROJECT NUMBER: SM 6717-1-2
DRAWING No: 227360
SHEET: 2
AMD: 5
SIZE: B1

C&P - DISTRIBUTION SUBS