



TITLE	DWG No.
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD AND OPTICAL ARC FLASH DETECTION AC SCHEMATIC	227380 SH1
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD, & OPTICAL ARC FLASH DETECTION TRANSFORMER DC SCHEMATIC	227380 SH2
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD AND OPTICAL ARC FLASH DETECTION CUSTOMER OVERCURRENT DC SCHEMATIC	227380 SH3
CITY DISTRIBUTION SUB WITH E TYPE LV BOARD AND OAFD, DLAC PANEL SCHEMATIC, GENERAL DC SUPPLIES INTER-PANEL WIRING, FIBRE COMMS & CABLING DIAGRAM	227380 SH4
CITY DISTRIBUTION SUBSTATIONS WITH OPTICAL ARC FLASH DETECTION (E TYPE LV) TRANSFORMERS AND CUSTOMER OVERCURRENT PROTECTION FREE STANDING PANELS LAYOUT DETAILS	227381 SH1
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD & OAFD, TRANSFORMERS AND CUSTOMER OVERCURRENT PROTECTION FREE STANDING PANELS LABEL DETAILS	227381 SH2
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD, DRY TYPE TX, & OAFD, TRANSFORMER PROTECTION PANEL WIRING DIAGRAM	227381 SH3
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD, OIL TYPE TX, & OAFD, TRANSFORMER PROTECTION PANEL WIRING DIAGRAM	227381 SH4
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD AND OAFD CUSTOMER DC No.1 (8 No.2) PROTECTION PANEL WIRING AND CABLE CONNECTIONS	227381 SH5
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD AND OPTICAL ARC FLASH DETECTION CABLING DIAGRAM	227381 SH6
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD AND OPTICAL ARC FLASH DETECTION CABLE SCHEDULE	227381 SH7
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD AND OAFD 1500VVA TX'S AND VENTILATION FAN AC SERVICE BOARD LAYOUT, WIRING, & CONNECTIONS	227381 SH8
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD AND OAFD DISTRIBUTION LOCAL AUTOMATION CONTROL PANEL LAYOUT AND LABEL DETAILS	227381 SH9
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD, OAFD, & CUSTOMER DC No.1 & No.2 PROTECTION, DISTRIBUTION AUTOMATION CONTROL PANEL WIRING & CABLING	227381 SH10
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD, OAFD, & CUSTOMER DC No.1 PROTECTION, DISTRIBUTION AUTOMATION CONTROL PANEL WIRING & CABLING DIAGRAM	227381 SH11
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD AND OAFD TRANSFORMER ACB INTERNAL WIRING AND ACB PANEL CONTROL WIRING SCHEMATIC	227381 SH12
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD AND OAFD CUSTOMER ACB INTERNAL WIRING AND ACB PANEL CONTROL WIRING SCHEMATIC	227381 SH13
RMS SUBSTATIONS WITH E TYPE LV BOARD WITH OPTICAL ARC FLASH DETECTION FIBRE LOOPING AND GENERAL MOUNTING DETAILS	125750
EPOXY RESIN ENCASED PROTECTION CURRENT TRANSFORMER OUTLINE AND DETAILS	125750

- NOTES:**
- THIS DRAWING SHOWS THE CONTROL, PROTECTION AND SIGNALING CABLING WHICH IS TO BE USED IN CITY DISTRIBUTION SUBSTATIONS WITH OPTICAL ARC FLASH DETECTION INSTALLED. IT SHOULD BE READ IN CONJUNCTION WITH NETWORK STANDARDS AND THE SUBSTATION DESIGN INFORMATION PACKAGE.
 - THE HV DIFF CT'S ARE GENERALLY MOUNTED ON EACH HV SWITCH, HOWEVER THEY CAN BE MOUNTED ADJACENT TO THE TRANSFORMER HV CONNECTIONS IF THERE IS INADEQUATE SPACE ON THE HV SWITCH.
 - THE TRANSFORMER LV DIFF CT'S & CUSTOMER SUPPLY CT'S ARE LOCATED IN THEIR RESPECTIVE LV SWITCHBOARD PANEL.
 - THE CUSTOMER SUPPLY IS TO BE BY AN AIR CIRCUIT BREAKER. OVERCURRENT CT'S ARE INSTALLED IN THE CUSTOMER SUPPLY PANEL WHERE THERE ARE 2 CUSTOMER OVERCURRENT PROTECTIONS REQUIRED THEY ARE TO BE LOCATED ON THE SAME CUSTOMER OVERCURRENT PROTECTION PANEL SEE DRAWING 227381 SH1.
 - CABLE 11A IS TO BE SIZED TO MEET VOLTAGE DROP REQUIREMENTS OUTLINED IN AS 3000.
 - FOR CLARITY, TRANSFORMERS ARE REFERENCED AS 1st TRANSFORMER, 2nd TRANSFORMER & 3rd TRANSFORMER. ACTUAL DESIGNATION WILL DEPEND ON WHICH CITY TRIPLEX FEEDERS ARE SUPPLYING THE DISTRIBUTION SUBSTATION. TYPICAL DESIGNATION FOR 1st, 2nd, & 3rd TRANSFORMERS ARE 'A', 'B', & 'C'; 'D', 'E', & 'F'; 'G', 'H', & 'J'; or 'K', 'L', & 'M' SEE DESIGN PACKAGE FOR PROJECT DETAIL.
 - SCADA AND AUTOCLOSING ARE INTEGRATED INTO A NEW PANEL, THE DISTRIBUTION LOCAL AUTOMATION CONTROL PANEL (DLAC). IT PROVIDES FOR CUSTOMERS SEEKING CO-GENERATION CONNECTIONS TO THE AUSGRID NETWORK. SEE THE SUBSTATION DESIGN PACKAGE AND NETWORK STANDARD.
 - 'B' BATTERY TERMINATION BOX (BTB) INSTALLED TO ENABLE SIMPLIFIED BATTERY REPLACEMENT. REFER DRAWING 227379.
 - THE FAN CONTROL THERMOSTATS ARE TO BE MOUNTED ON THE TRANSFORMERS WHICH ARE LOCATED CLOSEST TO AND FURTHEST FROM THE SUBSTATION FAN.
 - CERTAIN CABLES, AS NOTED IN DRAWING, ARE OPTIONAL:
 CABLES REQUIRED ONLY WHERE CUST. DC No.2 IS INSTALLED:
 2CS, C2ACB, CDD2, DLACP2/F, C12ACB
 CABLES REQUIRED ONLY WITH DRY TYPE TRANSFORMERS:
 1T, 2T, 3T, TH1, TH2, TH3, 8A, 9A, 10A
 CABLES REQUIRED ONLY WITH SUBSTATION FAN INSTALLATION (CHAMBER/UNDERGROUND STATIONS):
 12A, 12C, 3FC, 3FC, 4FC, 3S
 CABLES REQUIRED ONLY WITH CUSTOMER CO-GENERATION:
 DLACC/F

REVISION	DATE	BY	CHKD	APP'D
1	12/02/2015	L.MARTINUZZI	M.BENNETT	L.MARTINUZZI
2	12/02/2015	L.MARTINUZZI	M.BENNETT	L.MARTINUZZI

END NOTES

1. SEE 'A' BATTERY TEST BOX WAS POSITIONED NEXT TO CUSTOMER SWITCH 1 IN PANEL. SEE 'C' STREET LIGHTS CONTROLLER & FLOOD GATE SENSOR PROTECTION PANELS JOINED AS REFERRED TO IN 1 & 2nd TX PROTECTION PANELS JOINED AS REFERRED TO IN CUSTOMER OVERCURRENT PROTECTION PANELS JOINED AS REFERRED TO IN BATTERY BOX DETAILS AND DLAC BATTERY BOX DETAILS.

2. ALL CABLES TO BE INSTALLED AS SHOWN UNLESS OTHERWISE SPECIFIED.

3. ALL CABLES TO BE INSTALLED AS SHOWN UNLESS OTHERWISE SPECIFIED.

4. ALL CABLES TO BE INSTALLED AS SHOWN UNLESS OTHERWISE SPECIFIED.

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15. ALL CABLES TO BE INSTALLED AS SHOWN UNLESS OTHERWISE SPECIFIED.

16. ALL CABLES TO BE INSTALLED AS SHOWN UNLESS OTHERWISE SPECIFIED.

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DESIGNED	-
DRAWN	L.MARTINUZZI / E.KAIROUZ
CHECKED	L.MARTINUZZI
APPROVED	M.BENNETT
DATE	12/02/2015
TRIM REF	-
PROJECT NUMBER	OPEX-6923-1

CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD AND OPTICAL ARC FLASH DETECTION CABLING DIAGRAM

ISSUED FOR CONSTRUCTION

DRAWING No **227386** SHEET 1 AMD 2 SIZE A0

C&P - DISTRIBUTION SUBS