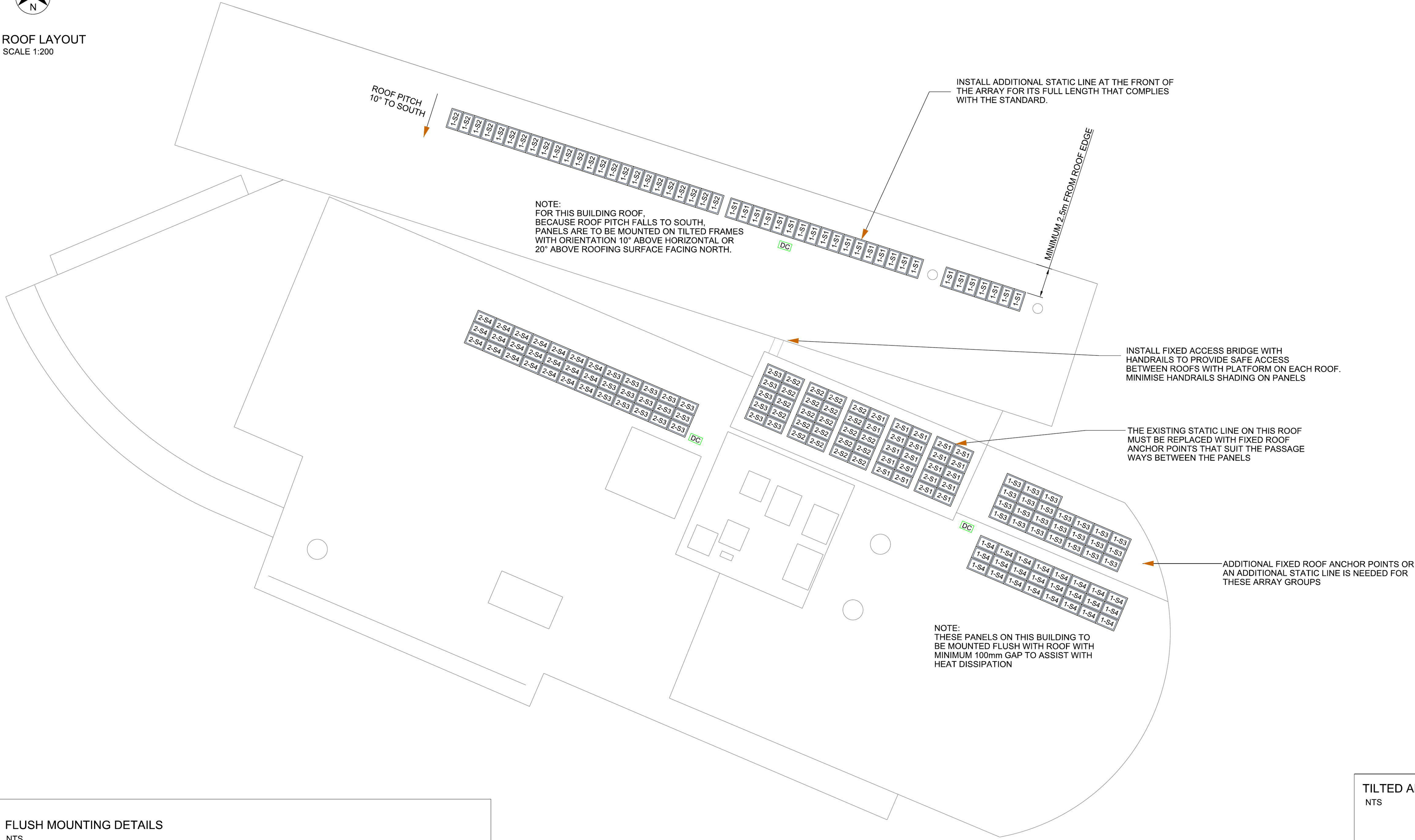




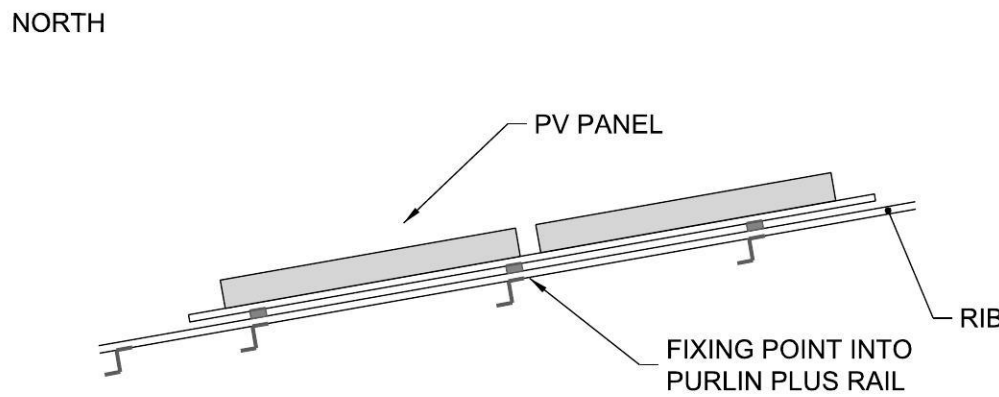
ROOF LAYOUT
SCALE 1:200



NOTES:

1. ACTUAL CABLE LENGTHS SHALL BE DETERMINED BY THE CONTRACTOR AND CABLES SIZED ACCORDINGLY FOR THE APPROPRIATE RATINGS.
2. ALL DC CABLES SHALL BE PV1-F CERTIFIED AND APPROPRIATELY DERATED FOR UP TO 110°C CABLE OPERATING TEMPERATURE FOR MINIMUM CURRENT CARRYING CAPACITY.
3. VOLTAGE DROP SHALL BE LESS THAN 1% BETWEEN PV MODULES AND INVERTERS.
4. VOLTAGE RISE SHALL BE LESS THAN 1% BETWEEN THE INVERTER TERMINALS AND THE SITE'S MAIN SWITCHBOARD AS PER NSW SERVICE AND INSTALLATION RULES AND ENDEAVOUR ENERGY REQUIREMENTS. ALL CABLES TO BE APPROPRIATELY SIZED TO MEET THIS REQUIREMENT.
5. ALL EXTERNAL SWITCHGEAR AND ENCLOSURES SHALL BE MINIMUM IP65 RATED.
6. MANUFACTURER AND MAKE OF PV MODULES, INVERTERS AND PROTECTIVE EQUIPMENT IS INDICATIVE ONLY. REFER TO TENDER SPECIFICATION.
7. INVERTERS MUST HAVE THREE PHASE OUTPUT. SINGLE PHASE INVERTERS WILL NOT BE ACCEPTED.
8. EARTH NOT SHOWN FOR CLARITY.
9. INSTALLATION TO COMPLY WITH AS4777, AS5033, AS3000, AS3439, NSW SERVICE AND INSTALLATION RULES AND ENDEAVOUR ENERGY NETWORK RULES.
10. ENSURE ELV SEGMENTATION AS PER AS5033.
11. SOLAR AC SWITCHGEAR TO BE SIZED FOR MAXIMUM INVERTER AC OUTPUT.
12. DC SWITCHGEAR TO BE RATED FOR PV SYSTEM LOAD AS PER AS5033.
13. ALL EXPOSED CONDUCTIVE PARTS OF THE PV ARRAY INCLUDING PV FRAMES & STRUCTURAL METAL PARTS SHALL BE BONDED TO MAIN EARTH PROVIDING EQUIPOTENTIAL BONDING OF ALL INSTALLED EQUIPMENT.
14. REPLACE / REPROGRAMME EXISTING METERING IN MAIN SWITCHBOARD WITH BI-DIRECTIONAL METERING TO REQUIREMENTS OF ENDEAVOUR ENERGY.
15. CONTRACTOR TO ENSURE CORRECT POLARITY BEFORE ENERGISING SYSTEM.
16. INSTALL THOROUGH AND APPROPRIATE SIGNAGE ON THE MAIN SWITCHBOARD, SOLAR DBs, INVERTERS AND ROOFTOP SOLAR PROTECTION EQUIPMENT. REFLECTING THE COMPLETE SOLAR INSTALLATION, CONNECTIONS AND FULL SHUT DOWN PROCEDURES. SIGNAGE WILL BE TO THE REQUIREMENTS AND APPROVAL OF ENDEAVOUR ENERGY.
17. THE DOCUMENTED SYSTEM IS AN INDICATIVE DESIGN BASED AROUND 260W PV PANELS AND SMA TRIPower INVERTERS, HOWEVER THE CONTRACTOR MAY USE ANY COMBINATION OF PV PANELS / INVERTERS, AS LONG AS THEY MEET THE TECHNICAL REQUIREMENTS WRITTEN IN THE TENDER TECHNICAL SPECIFICATION DOCUMENT.
18. ALTERNATIVE TENDERS USING MICRO-INVERTERS MAY BE SUBMITTED, AS LONG AS A COMPLYING TENDER IS ALSO SUBMITTED.
19. ROOFING MATERIAL APPEARS TO BE CUSTOM BLUE ORB.

FLUSH MOUNTING DETAILS
NTS



FLUSH MOUNTING

1. FOR CUSTOM BLUE ORB ROOF, USE PV SYSTEM BRACKETS THAT ARE FIXED WITH SCREWS INTO THE PURLINS. THE PV SYSTEM FIXING POINTS MUST BE SEPARATE TO THE ROOF SHEETING FIXING SYSTEM
2. WHERE PV PANELS ARE LOCATED WITHIN 2.5m OF ROOF EDGE, THE FIXING SYSTEM MUST BE DESIGNED FOR MINIMUM DOUBLE WIND LOAD PRESSURE
3. THIS ROOF HAS A SMALL ARC RADIUS

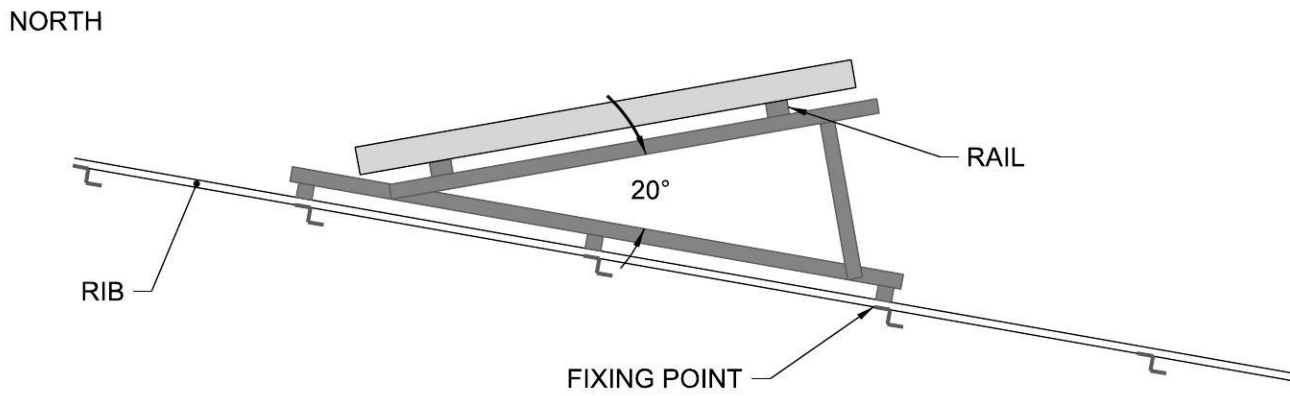
STRUCTURAL NOTES:

1. IT IS ASSUMED THAT THE EXISTING ROOF STRUCTURE IS IN A SOUND STRUCTURAL CONDITION. INSPECTION AND CONFIRMATION OF EXISTING STRUCTURAL CONDITION TO BE DONE BY THE CONTRACTOR.
2. DESIGN LOADS:IMPOSED FLOOR ACTIONS
ROOF = 0.25kPa
WIND LOADS FROM AS1170.2 - 2002
BUILDING IMPORTANCE LEVEL = 3 (REFER TO BCA)
ANNUAL PROBABILITY =1/1000 ULTIMATE
REGIONAL WIND SPEED $V = 46$ m/s
TERRAIN CATEGORY 3

SOLAR MOUNTING SYSTEM INSTALLER (CONTRACTOR) RESPONSIBILITY

- S1) PROVIDE PROPRIETARY PRODUCTS THAT ARE APPROPRIATE FOR THIS PARTICULAR INSTALLATION AND THE INSTALLATION ENVIRONMENT
- S2) DESIGN, INSTALL AND CERTIFY PROPRIETARY SOLAR MOUNTING SYSTEM FOR LOADS IN ACCORDANCE WITH AS1170.2 BUT NOT LESS THAN RECOMMENDED ON THIS DRAWING
- S3) INSTALL SOLAR MOUNTING SYSTEM IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND SPECIFICATION.
- S4) SUBMIT DESIGN AND CALCULATION TO THE PRINCIPAL BEFORE PROCEEDING WITH THE WORK

TILTED ADJUSTABLE FRAME MOUNTING DETAILS
NTS



TILTED ADJUSTABLE FRAME MOUNTING

1. THE ADJUSTABLE FRAME MUST BE A SEPARATE STRUCTURE INDEPENDENT OF THE PV PANEL FRAME AND MUST HAVE A MINIMUM THREE (3) FIXING POINTS SPANNING THREE (3) PURLINS.
2. FOR CUSTOM BLUE ORB ROOF FIXING POINTS USING SCREWS INTO PURLINS MUST BE SEPARATE TO THE ROOF SHEETING FIXING SYSTEM
3. THE PV ADJUSTABLE FRAMES MUST BE INSTALLED A MINIMUM DISTANCE OF 2.5m FROM THE ROOF EDGE

- 1 The Government Architect's Office, a division of the Department of Finance & Services (the Department) shall not be liable or responsible for any loss or damage arising out of the conversion of any electronic document, data or program to any other format or medium, or arising out of any modification or changes that occur in the handling or use of the electronic document, data or program.
- 2 The recipient or user of any electronic document, data or program is solely responsible for ascertaining its accuracy and its suitability for their purposes.
- 3 The Department uses virus scanning software to prevent file and system virus attacks but gives no warranty. The recipient or user is solely responsible for their own virus protection.

REVISION		
ISS	DATE	COMMENT

ELECTRICAL GOVERNMENT ARCHITECT'S OFFICE T 9372 8253 F 9372 8133



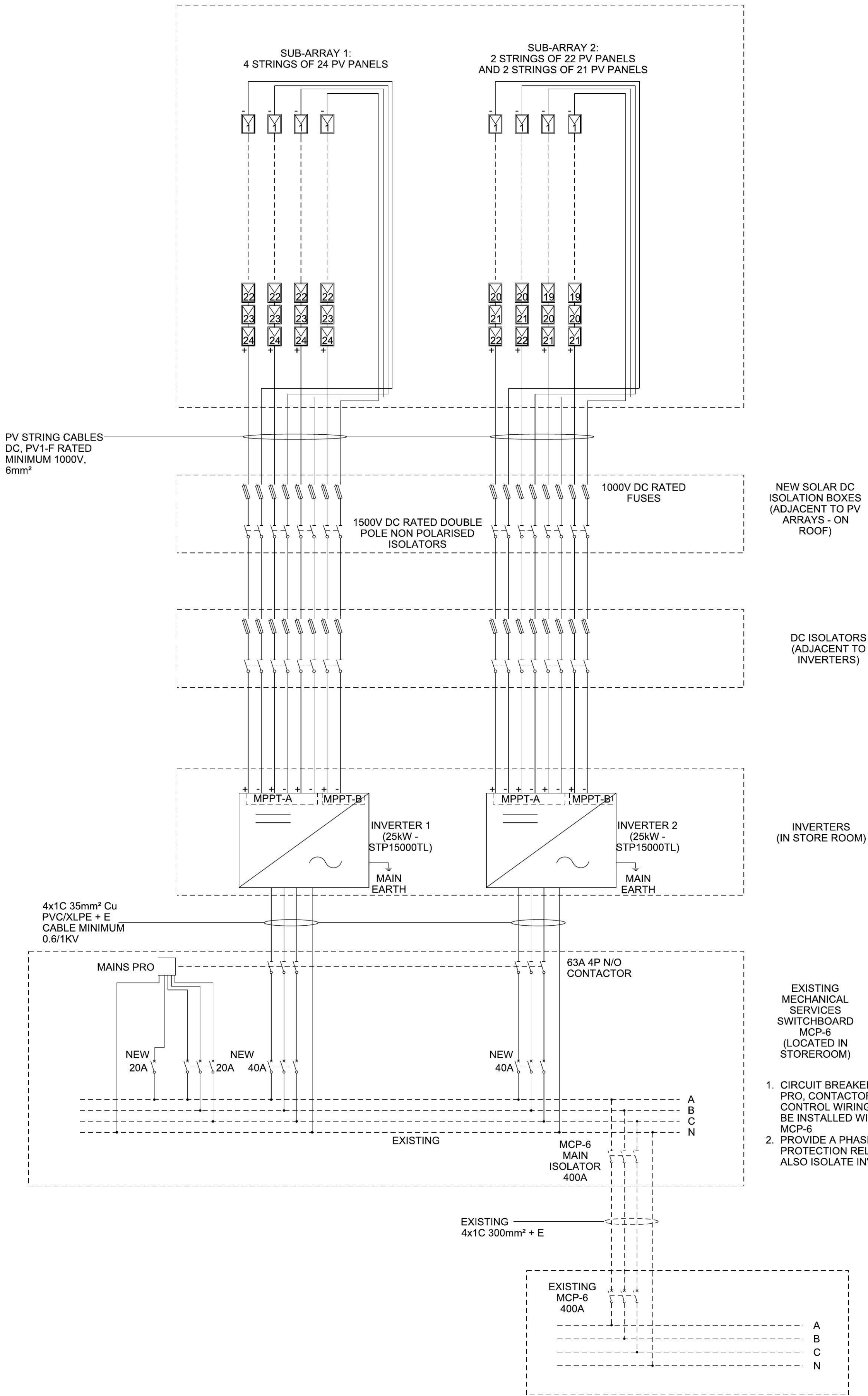
Public Works
Government Architect's Office
BARRY SHARAH
Principal Engineer
Level 13 McRae Building, 2-24 Rawson Place
Sydney NSW 2000, AUSTRALIA
A division of the Department of Finance, Services & Innovation



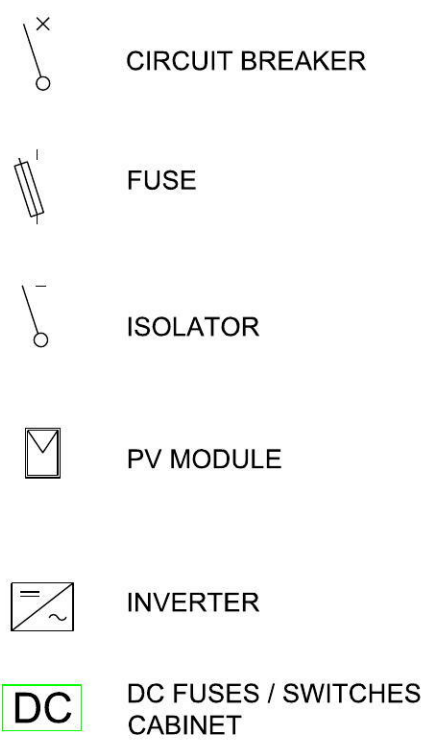
PENRITH CITY COUNCIL
JOAN SUTHERLAND CENTRE
47.32kW
PHOTOVOLTAIC SYSTEM
SITE PLAN & NOTES

PLAN RM NO		CONTRACT NUMBER	
AS SHOWN		SHEET NO	
DESIGNED BARRY S.	PLOT DATE 21.01.2016	PV - 1	
DRAFTED MARAM M.	VERIFIED LEILA E.	REVISION	

PV ARRAY FLUSH MOUNTED ON
NORTH WEST 16° PITCHED ROOF

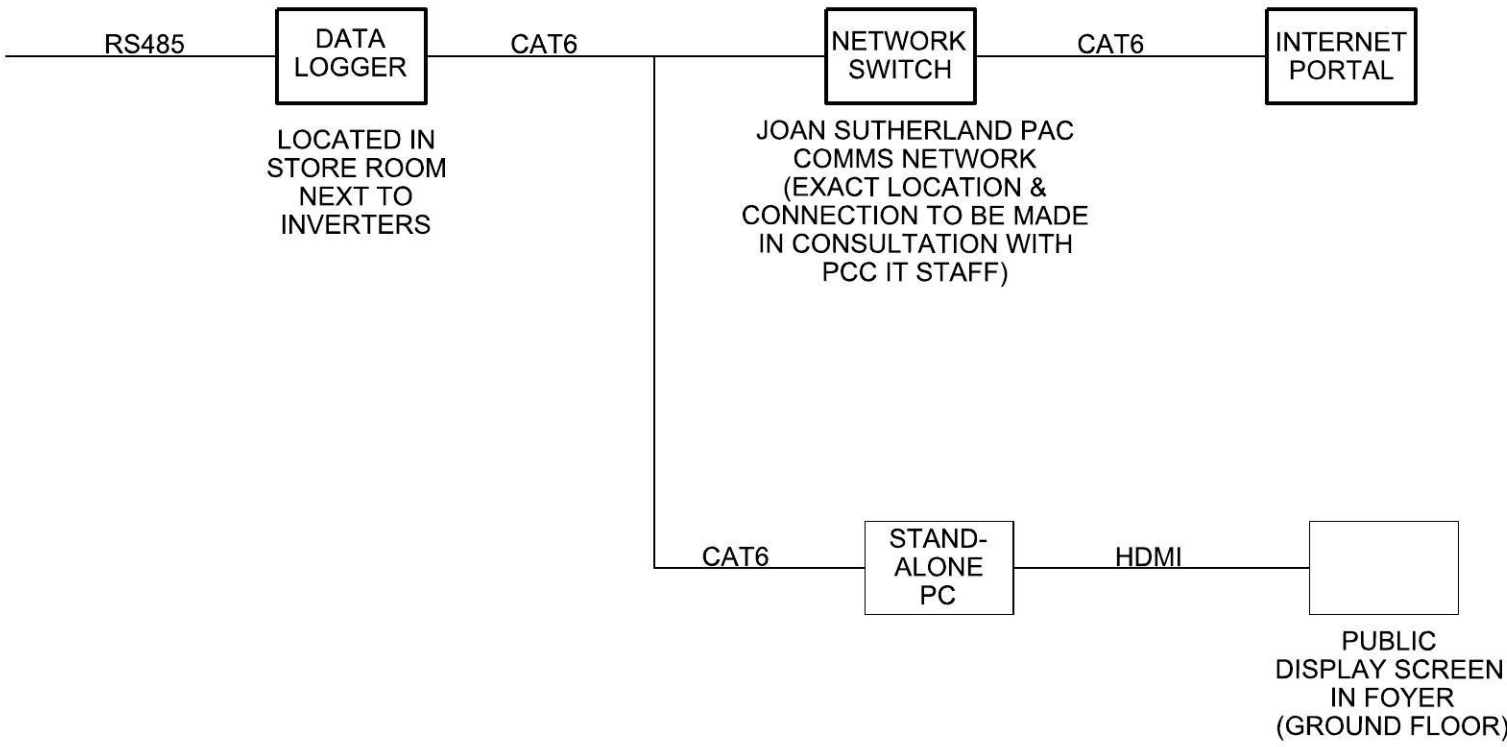


LEGEND



COMMUNICATIONS SCHEMATIC

INVERTER COMMUNICATIONS CONNECTED TOGETHER WITH RS485 CABLES & INTERFACE



1 The Government Architect's Office, a division of the Department of Finance & Services (the Department) shall not be liable or responsible for any loss or damage arising out of the conversion of any electronic document, data or program to any other format or medium, or arising out of any modification or changes that occur in the handling or use of the electronic document, data or program.

2 The recipient or user of any electronic document, data or program is solely responsible for ascertaining its accuracy and its suitability for their purposes.

3 The Department uses virus scanning software to prevent file and system virus attacks but gives no warranty. The recipient or user is solely responsible for their own virus protection.

REVISION		
ISS	DATE	COMMENT

ELECTRICAL
GOVERNMENT ARCHITECT'S OFFICE
T 9372 8253 F 9372 8133



Public Works
Government Architect's Office
BARRY SHARAH
Principal Engineer
Level 13 McRae Building, 2-24 Rawson Place
Sydney NSW 2000, AUSTRALIA
A division of the Department of Finance, Services & Innovation



PENRITH CITY COUNCIL
JOAN SUTHERLAND CENTRE
47.32kW
PHOTOVOLTAIC SYSTEM
SINGLE LINE DIAGRAM &
SCHEMATIC

PLAN RM NO	
SCALES	
AS SHOWN	
DESIGNED	PLOT DATE
BARRY S.	21.01.2016
DRAFTED	VERIFIED
MARAM M.	LEILA E.