SOLAR ARRAY FRAME

SOLAR PV MODULE
300W, 24V

1x6mm2 Cu

Solar cables 4(1cx35mm2)+1x35mm2GND CU, (THWN-2 90* C)

Solar cables 4(1cx35mm2)+1x35mm2GND CU, (THWN-2 90* C)

Solar cables 4(1cx35mm2)+1x35mm2GND CU, (THWN-2 90* C)

90x(300W, 24V SOLAR PV MODULE)

Solar cables 4(1cx35mm2)+1x35mm2GND CU, (THWN-2 90* C)

DC Panel Disconnecting/Switchting
250 Amps

Solar cables 4(1cx35mm2)+1x35mm2GND CU, (THWN-2 90* C)

DC Panel Disconnecting/Switching
250 Amps

Solar cables 4(1cx35mm2)+1x35mm2GND CU, (THWN-2 90* C)

DC Panel Disconnecting/Switching
250 Amps

30KW
48VDC/400VAC
THREE PHASE
HYBRID
INVERTER
(ON GRID ADN
OFF GRID)

Panel
Disconnecting
Switching
100 Amps

Utility Power 400V
4(1cx35mm2)+1x25mm2GND CU

Panel
Disconnecting/Switching
100 Amps

4(1cx35mm2)+1x25mm2GND CU

Notice:
Solar cables with multi stranded copper conductors XLPE or XLPO insulated and sheathed with the voltage rating of 1000 V DC.
- Outdoor cables must be UV protected
- All cables are single core XLPE or XLPL
- Cables must be selected to ensure voltage drop across it must not exceed 3%

BATTERY RACK

250AH, 12V
BATTERY

1x70mm2 CU

48V BATTERY BANK
48x(250AH, 12V BATTERY)

Solar cables 4(1cx70mm2)+1x35mm2GND CU

Solar cables 4(1cx70mm2)+1x35mm2GND CU

DC Panel Disconnecting/Switching
400 Amps

DC Panel Disconnecting/Switching
400 Amps

To Building Electrical Loads

1
PV S01
Photovoltaic Solar Power System
SCALE: 1:100

REV No	DESCRIPTION	Date	APPROVED
3	REVISION		XX
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1	FIRST ISSUE		XX

SCALE 1:100

DATE: November 25, 2020
DESIGNED BY: W. Azmy
DRAWN BY: W. Azmy
CHECKED BY: XX
SUBMITTED BY: UNDP/LOTFA
CONTRACT NO.: XX. XX. T.O. 01

UNITED NATIONS DEVELOPMENT PROGRAM
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KABUL MOI

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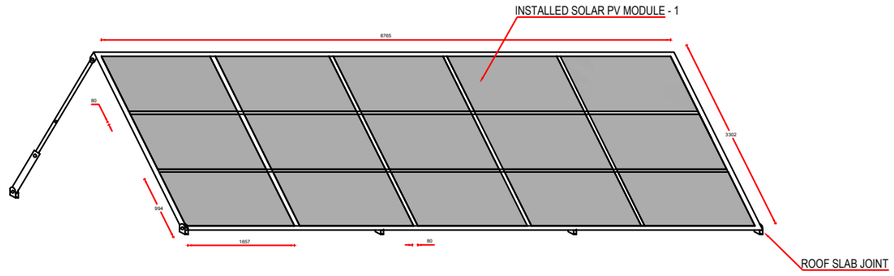
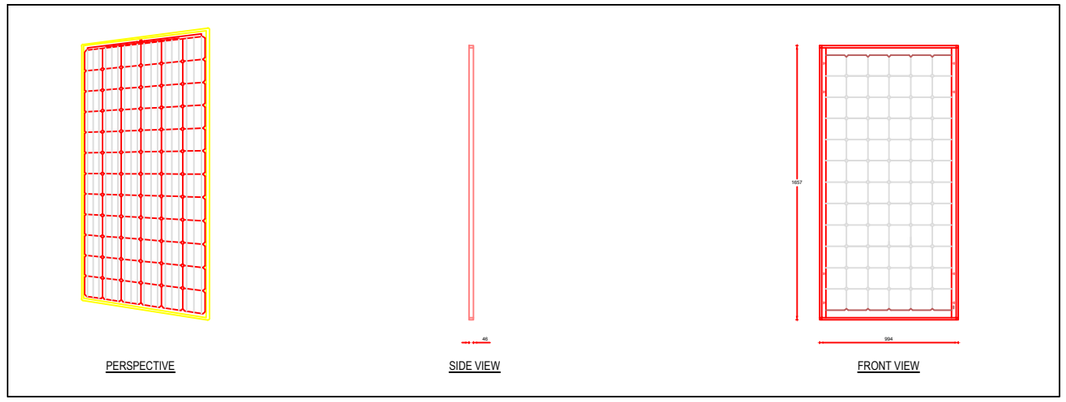
KABUL, AFGHANISTAN
BUILDING 02 - PHQ
Photovoltaic Solar Power System

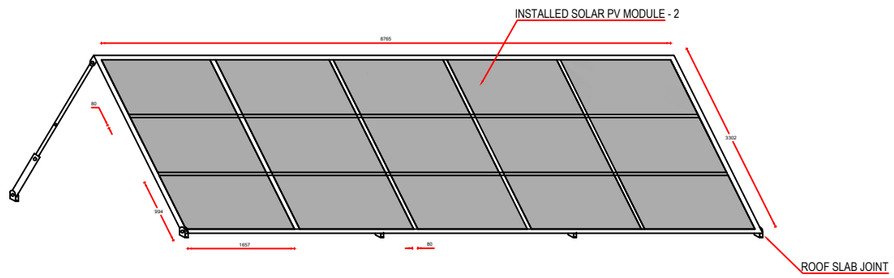
SHEET NUMBER
PV S01

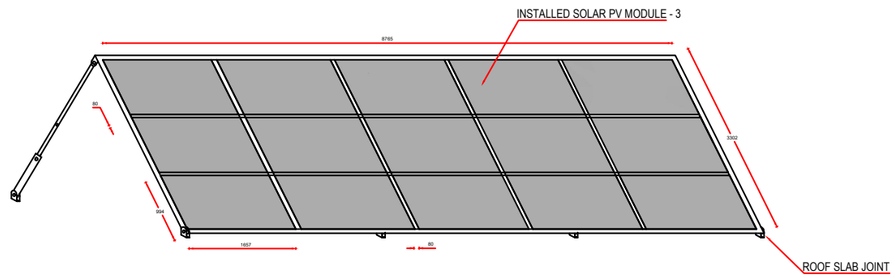




SCHEDULE FOR ADJUSTING THE SOLAR PANELS TILT ANGLE

SEASON	TILT ANGLE	THE BEST DATE TO CHANGE THE SOLAR PANEL TILT ANGLE
WINTER	38.24	OCT 7 TO MARCH 5
SPRING	13.38	MARCH 5 TO APRIL 18
SUMMER	-9.58	APRIL 18 TO AUGUST 24
AUTUMN	13.38	AUGUST 24 TO OCT 7





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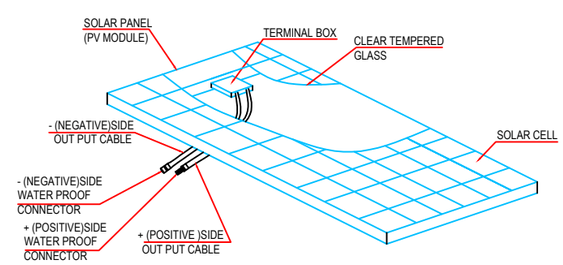

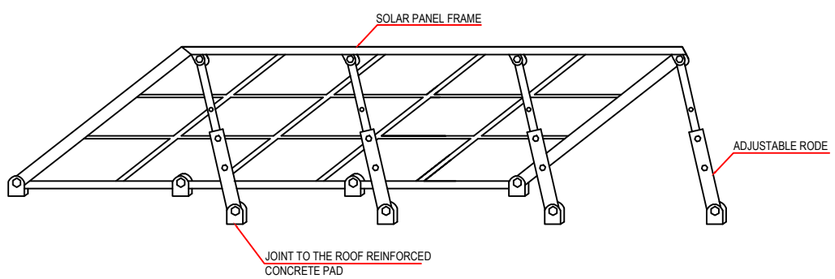

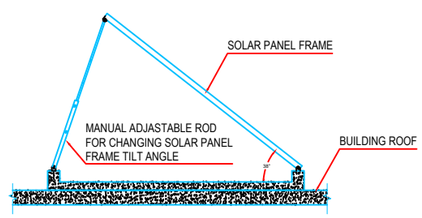

1 PV S02

Photovoltaic Solar Modules Power System Installation 1, 2 and 3

SCALE:

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3	REVISION		XX
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1	FIRST ISSUE		XX

SCAL 1:100

DATE: November 25, 2020
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CONTRACT NO.: XX - XX - T.O. 01
DESIGNED BY: W. Azimy
CHECKED BY:
APPROVED BY: XX

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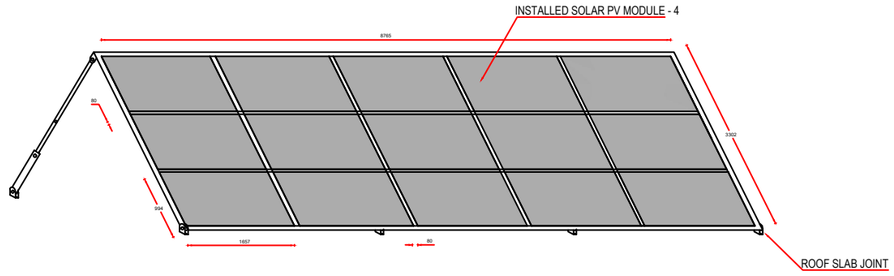
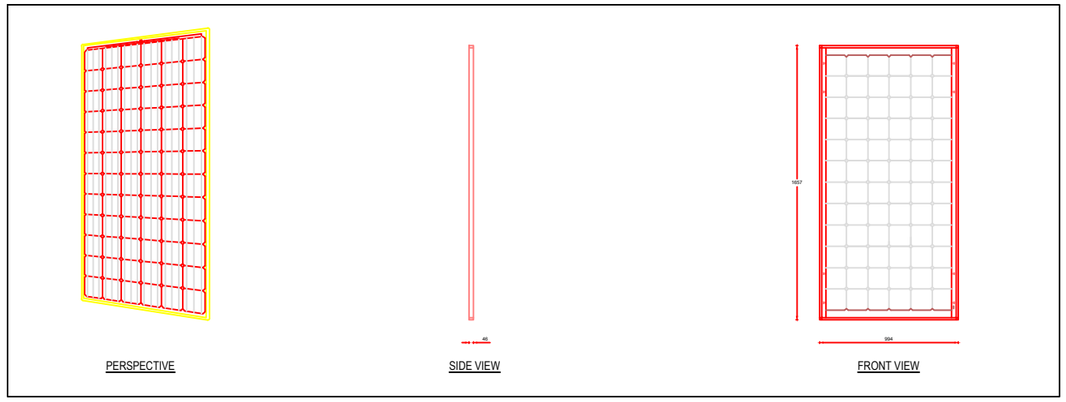
Photovoltaic Solar Power System Installation

SHEET NUMBER
PV S02





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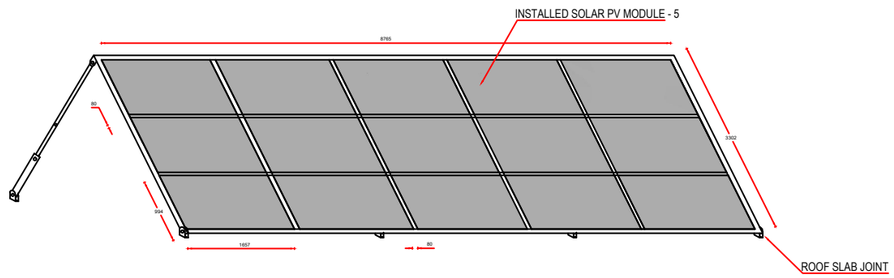

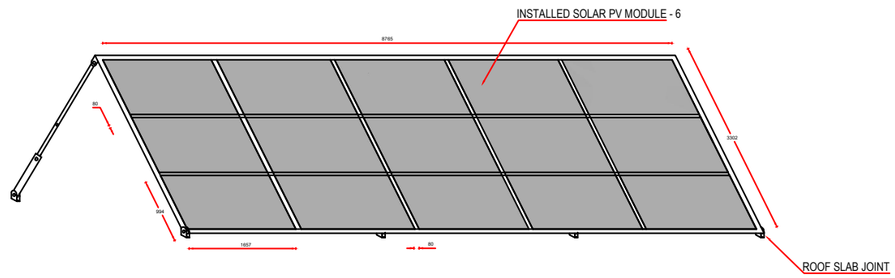

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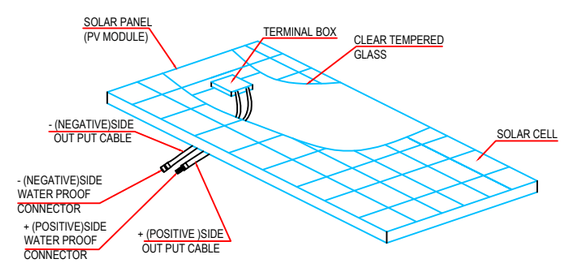

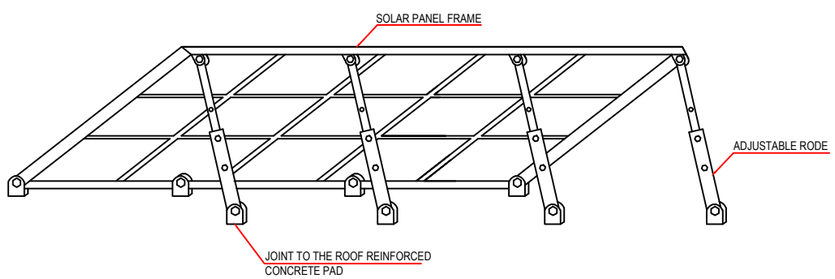

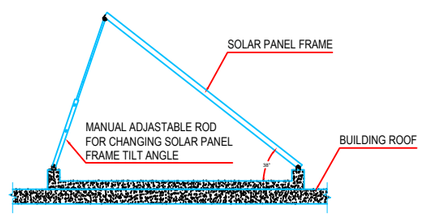

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PV S03

Photovoltaic Solar Modules Power System Installation 4, 5 and 6

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DESIGNED BY: W. Azimy
CHECKED BY: XX
APPROVED BY: XX

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SHEET NUMBER

PV S03