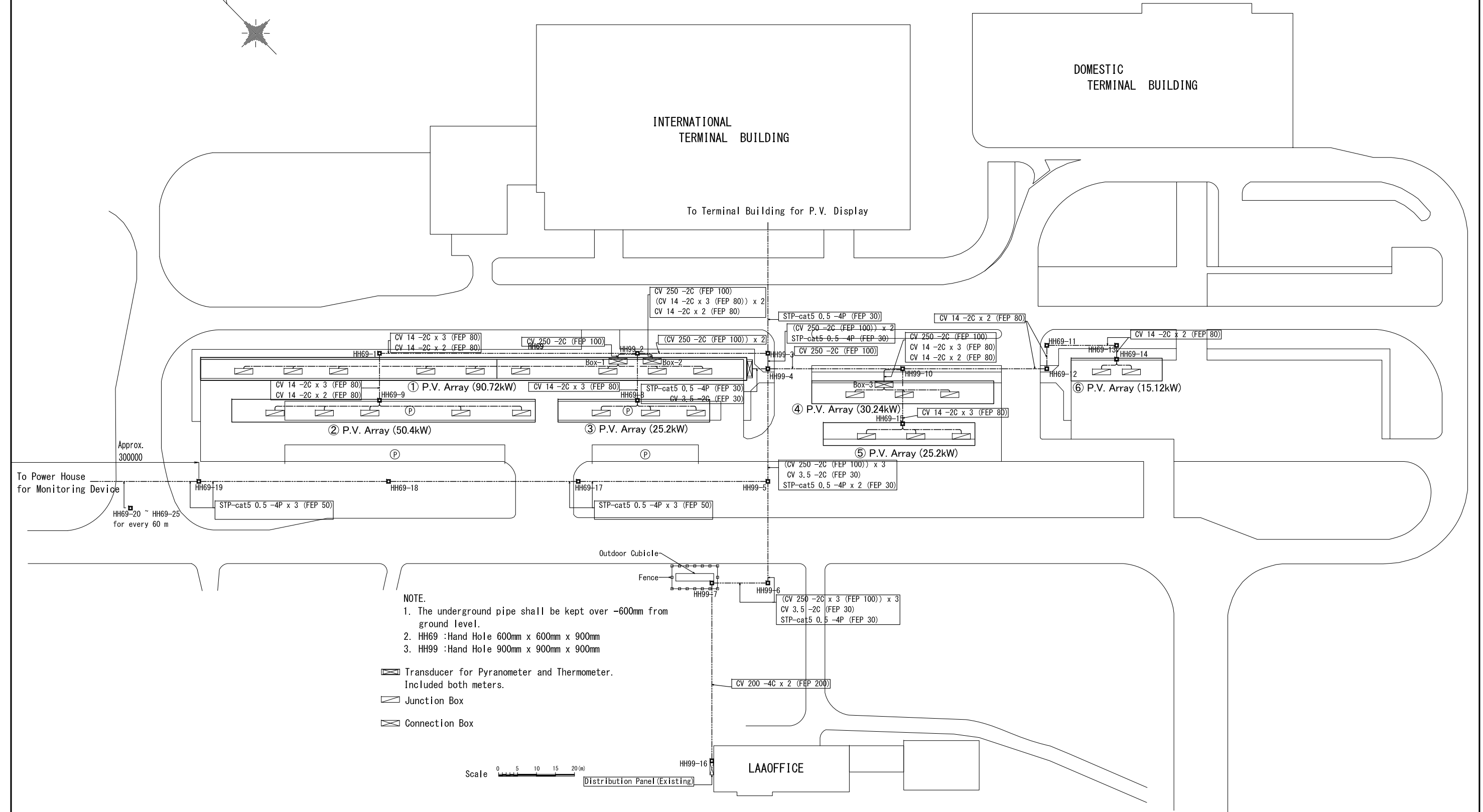
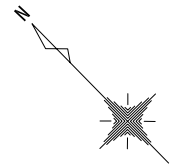



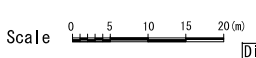


圖 面



NOTE.
 1. The underground pipe shall be kept over -600mm from ground level.
 2. HH69 :Hand Hole 600mm x 600mm x 900mm
 3. HH99 :Hand Hole 900mm x 900mm x 900mm

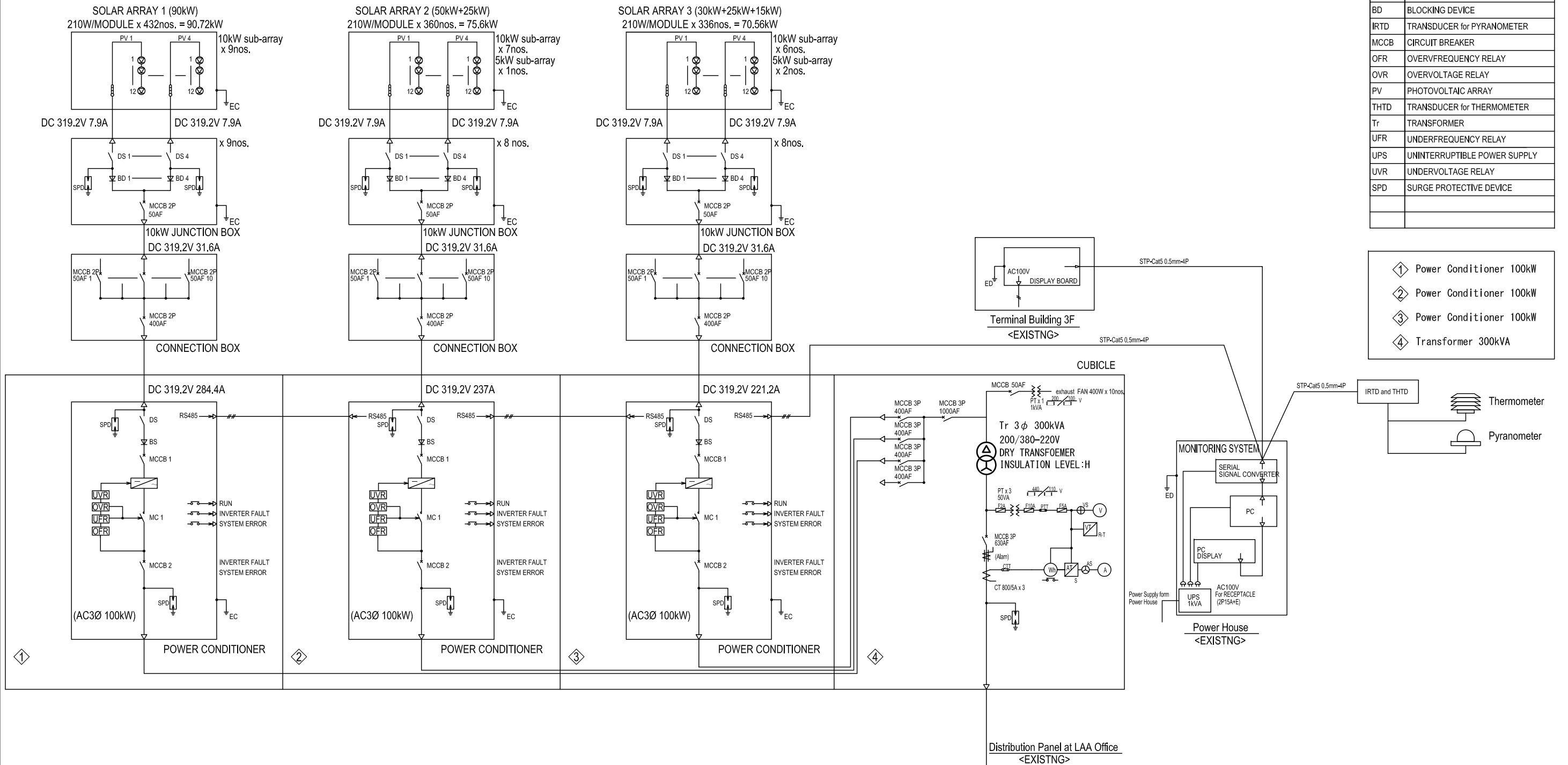
-  Transducer for Pyranometer and Thermometer. Included both meters.
-  Junction Box
-  Connection Box



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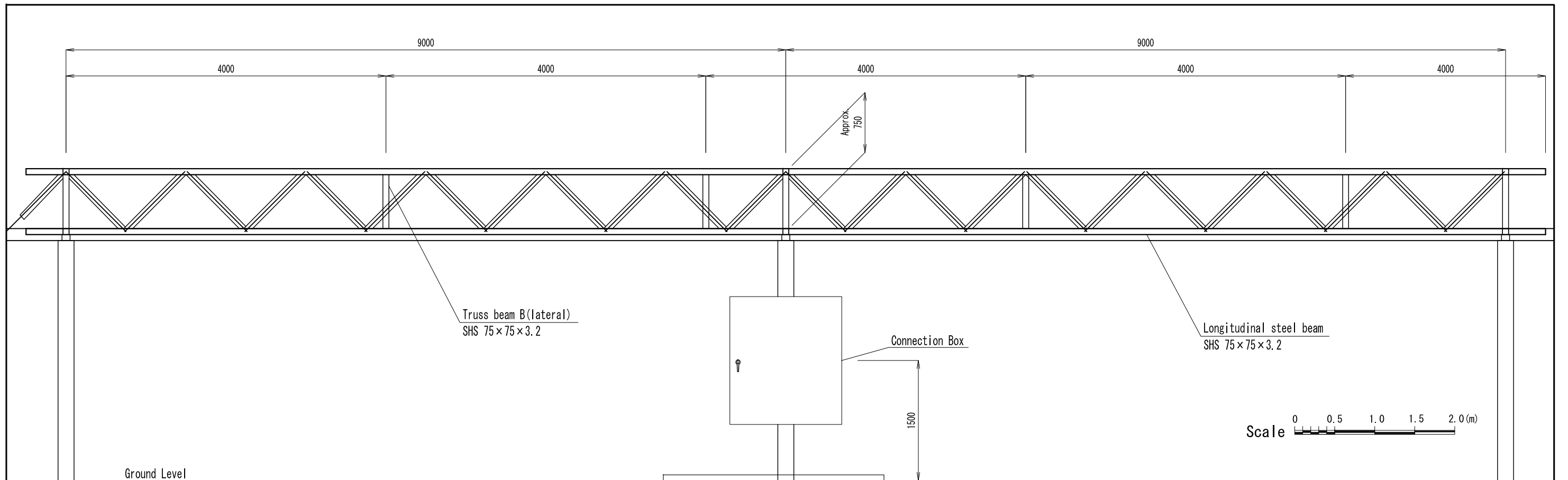
PROJECT	COUNTRY	SHEET CONTENTS	DRAWING NO.
Preparatory Survey on the Project for Clean Energy Promotion Using Solar Photovoltaic System	The Lao People's Democratic Republic	Overall Layout at Wattay International Airport (NEW) (Scale: 1:1000)	PWT-01

SOLAR SYSTEM (236kW)

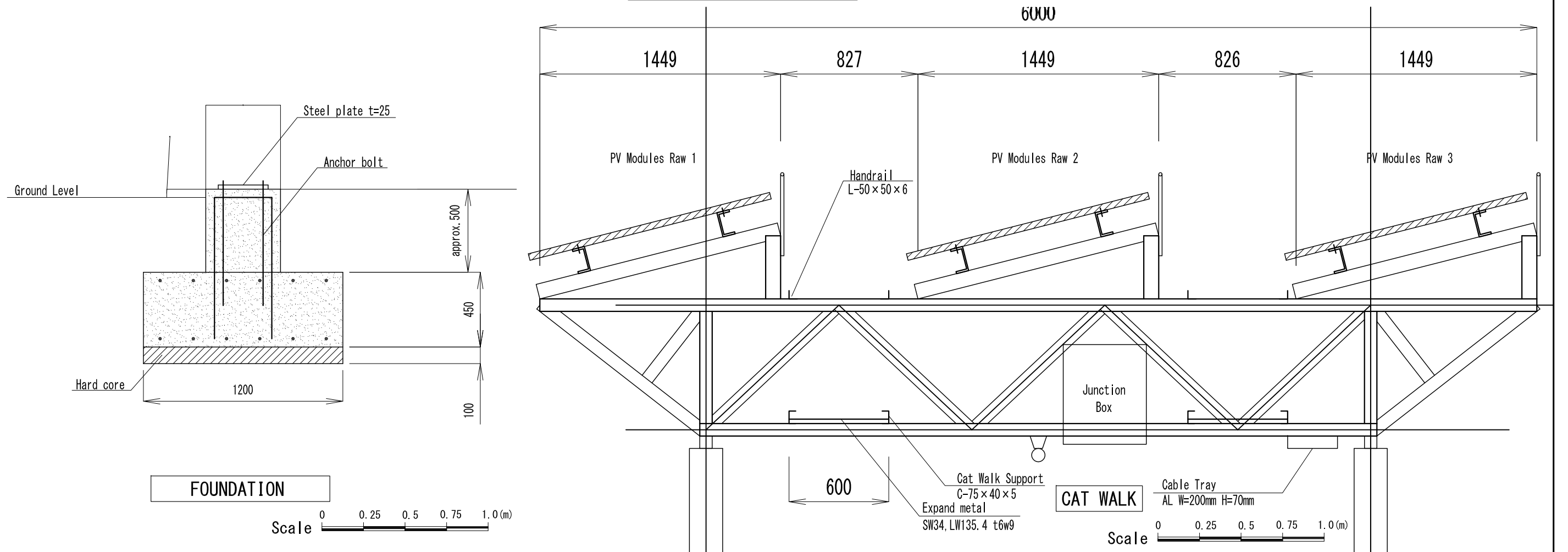


JAPAN INTERNATIONAL COOPERATION AGENCY

PROJECT	COUNTRY	SHEET CONTENTS	DRAWING NO.
Preparatory Survey on the Project for Clean Energy Promotion Using Solar Photovoltaic System	The Lao People's Democratic Republic	SINGLE LINE DIAGRAM FOR PHOTOVOLTAIC POWER PANEL (Airport) (Scale: NONE)	PWT-02



LONGITUDINAL ELEVATION



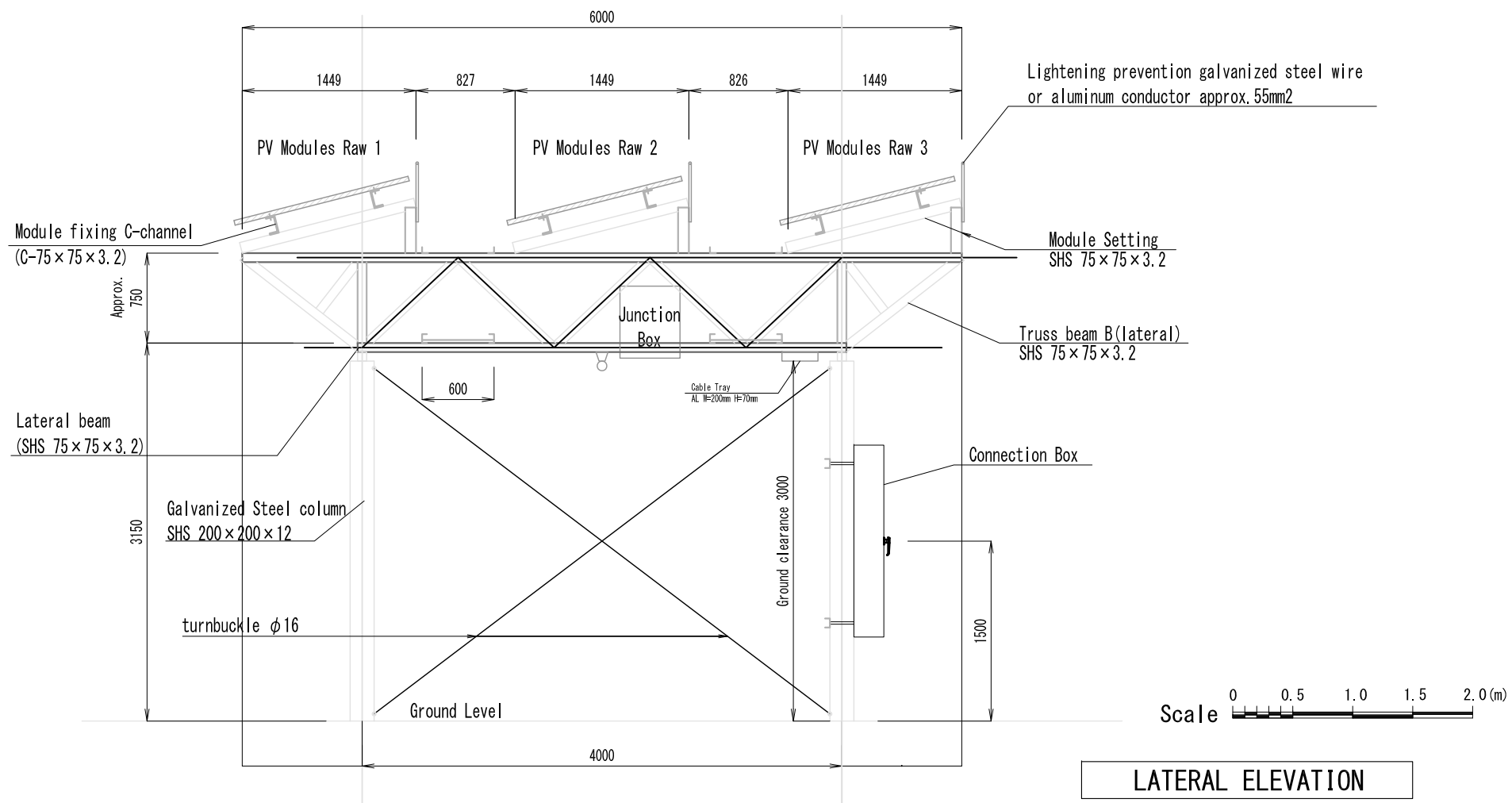
FOUNDATION

CAT WALK



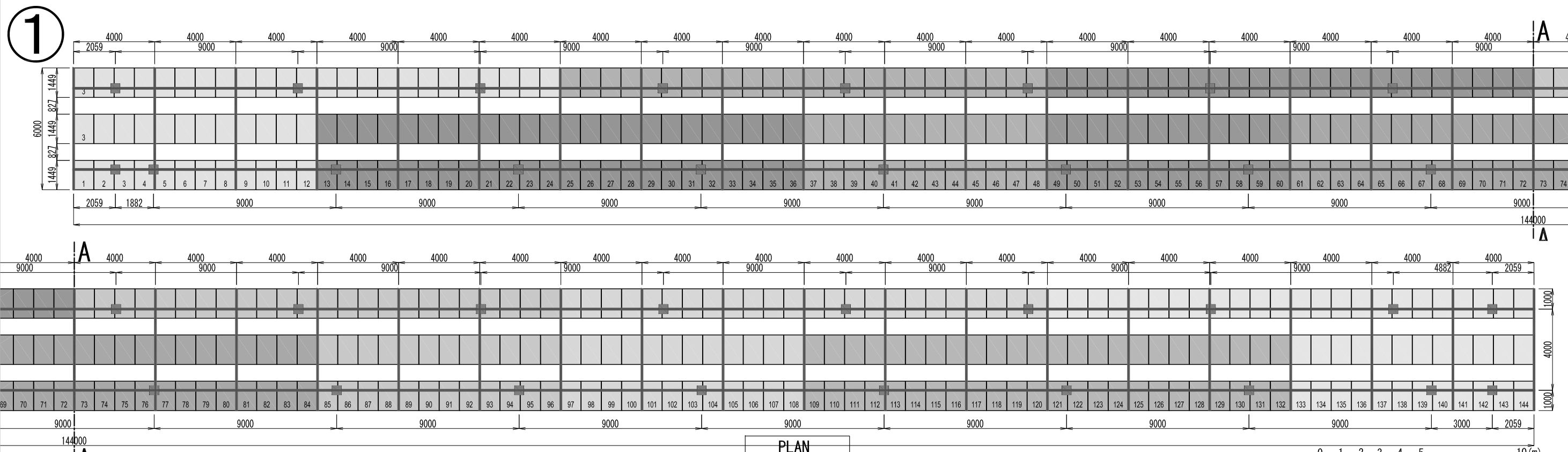
JAPAN INTERNATIONAL COOPERATION AGENCY

PROJECT	COUNTRY	SHEET CONTENTS	DRAWING NO.
Preparatory Survey on the Project for Clean Energy Promotion Using Solar Photovoltaic System	The Lao People's Democratic Republic	Airport 236kWp PV array and steel structure arrangement Elevation and foundation drawing (Scale: 1:50, 1:25)	PWT-03



SUMMARY	
Array Maximum Output	: 236.88 kWp
Numbers of 10kW sub-arrays	: 22 nos.
Numbers of 5kW sub-arrays	: 3 nos.
Numbers of junction boxes	: 25 nos.
Array Dimensions	: 376x6 m (2,256m ²) (144m+80m+40m+48m+40m+24m =376m)
Numbers of modules	: 1,128 nos. (12 nos. x 94 strings) (376 nos. x 3 rows)
Numbers of foundations	: 98 nos.
Numbers of Steel columns	: 98 nos. (approx. H=3150mm)
Truss beam A(Longitudinal)	: 752 m (376 m x 2 rows)
Truss beam B(Lateral)	: 100 nos. (1 nos./6 m)
C-channel (approx. C-150)	: 2,256 m (376 m x 6 nos.)
Cat walks	: 752 m (376 m x 2 rows)
Including handrails, climbing steps stairs and etc.	

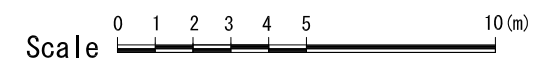
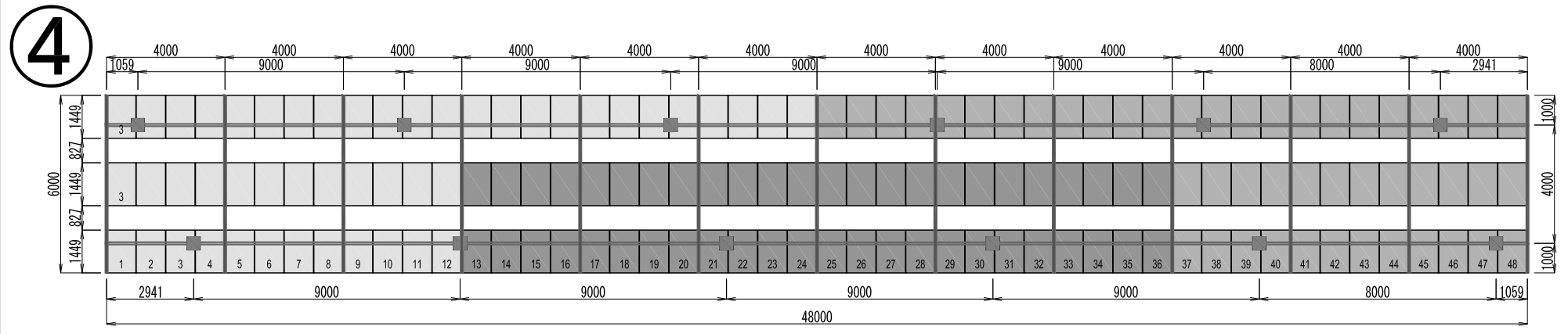
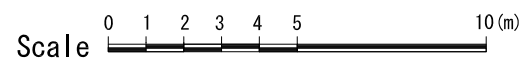
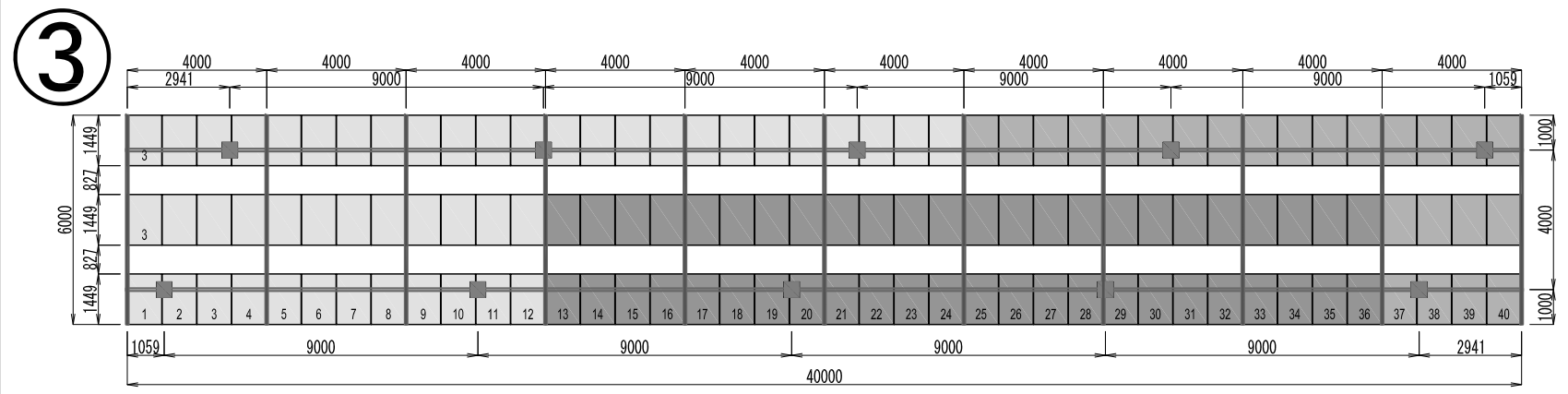
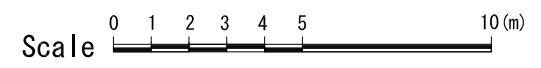
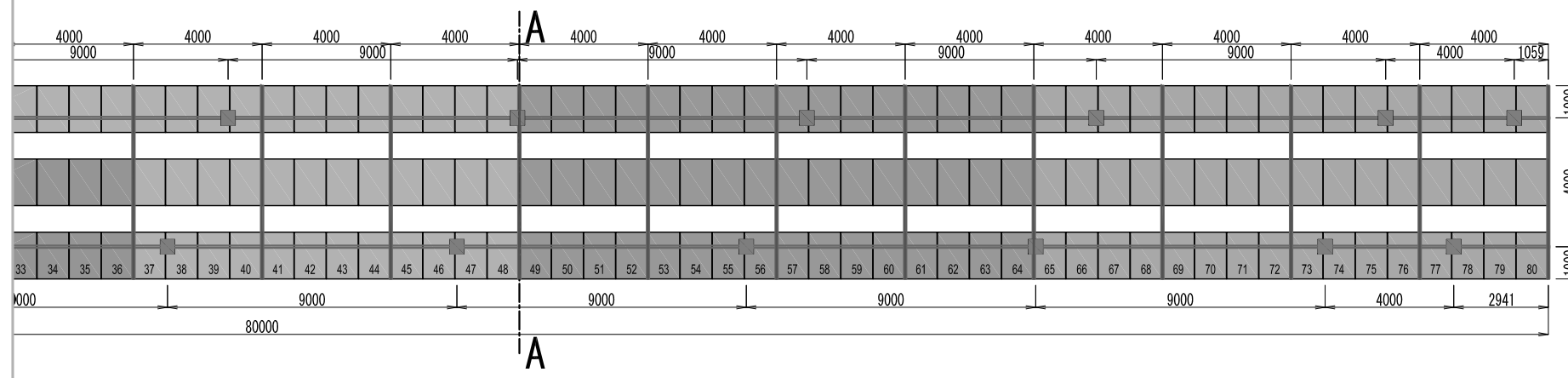
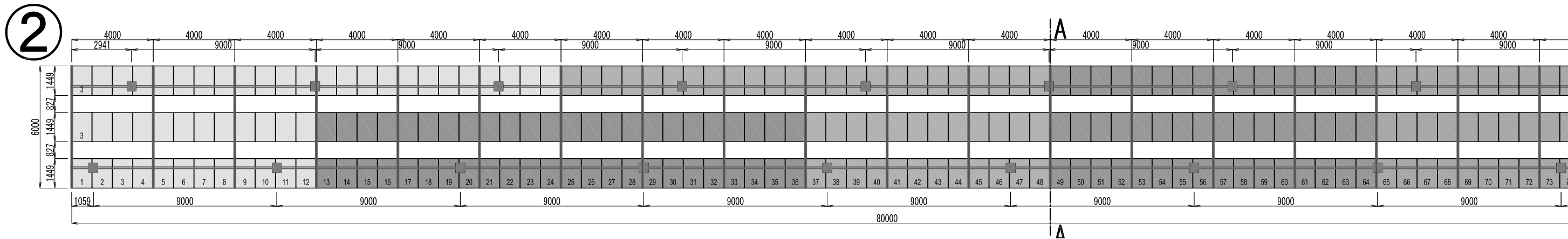
LATERAL ELEVATION



PLAN


NOTE: Module fixing C-channels are not shown on the above plan drawing

	JAPAN INTERNATIONAL COOPERATION AGENCY	PROJECT	COUNTRY	SHEET CONTENTS	DRAWING NO.
		Preparatory Survey on the Project for Clean Energy Promotion Using Solar Photovoltaic System	The Lao People's Democratic Republic	Airport 236kWp PV array and steel structure arrangement Plan and Elevation drawing steel member arrangement Plan (1/3) (Scale: 1:50, 1:200)	PWT-04

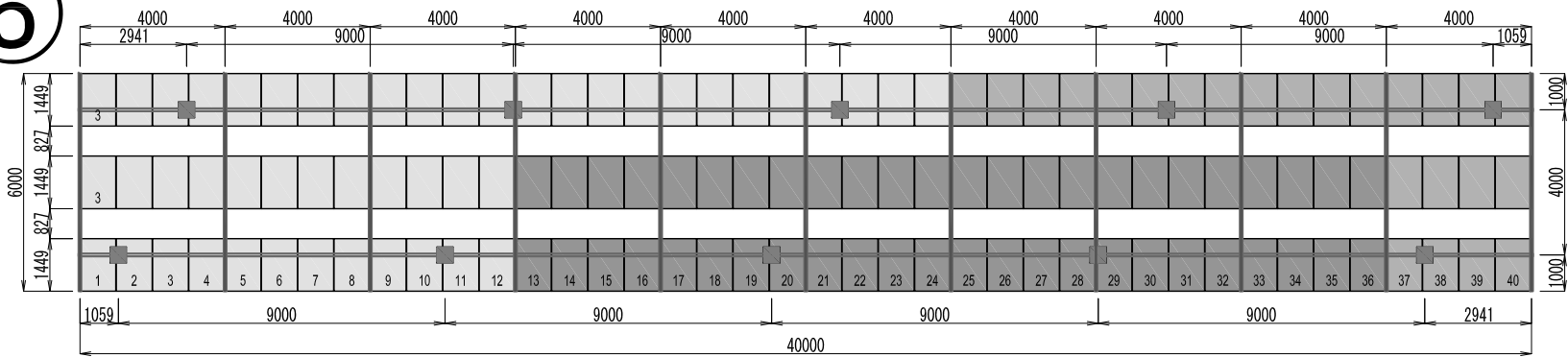


PLAN

NOTE: Module fixing C-channels are not shown on the above plan drawing

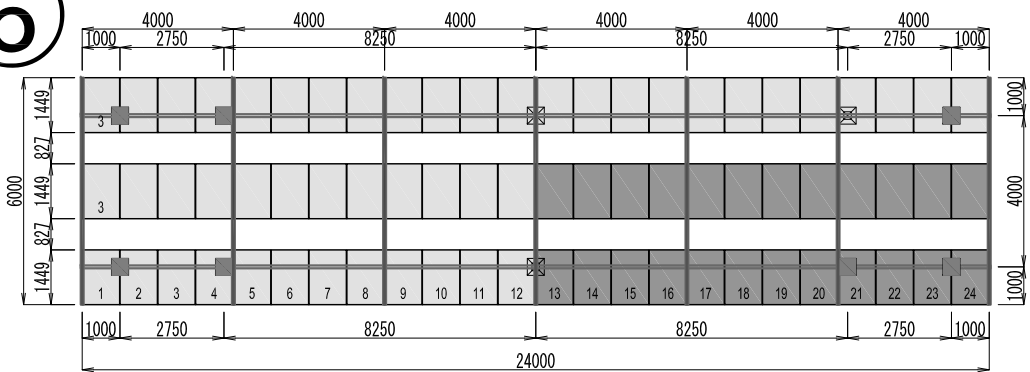
 JAPAN INTERNATIONAL COOPERATION AGENCY	PROJECT	COUNTRY	SHEET CONTENTS	DRAWING NO.
	Preparatory Survey on the Project for Clean Energy Promotion Using Solar Photovoltaic System	The Lao People's Democratic Republic	Airport 236kWp PV array and steel structure arrangement Plan and Elevation drawing steel member arrangement Plan (2/3) (Scale: 1:50, 1:200)	PWT-05

5



Scale 0 1 2 3 4 5 10 (m)

6



Scale 0 1 2 3 4 5 10 (m)

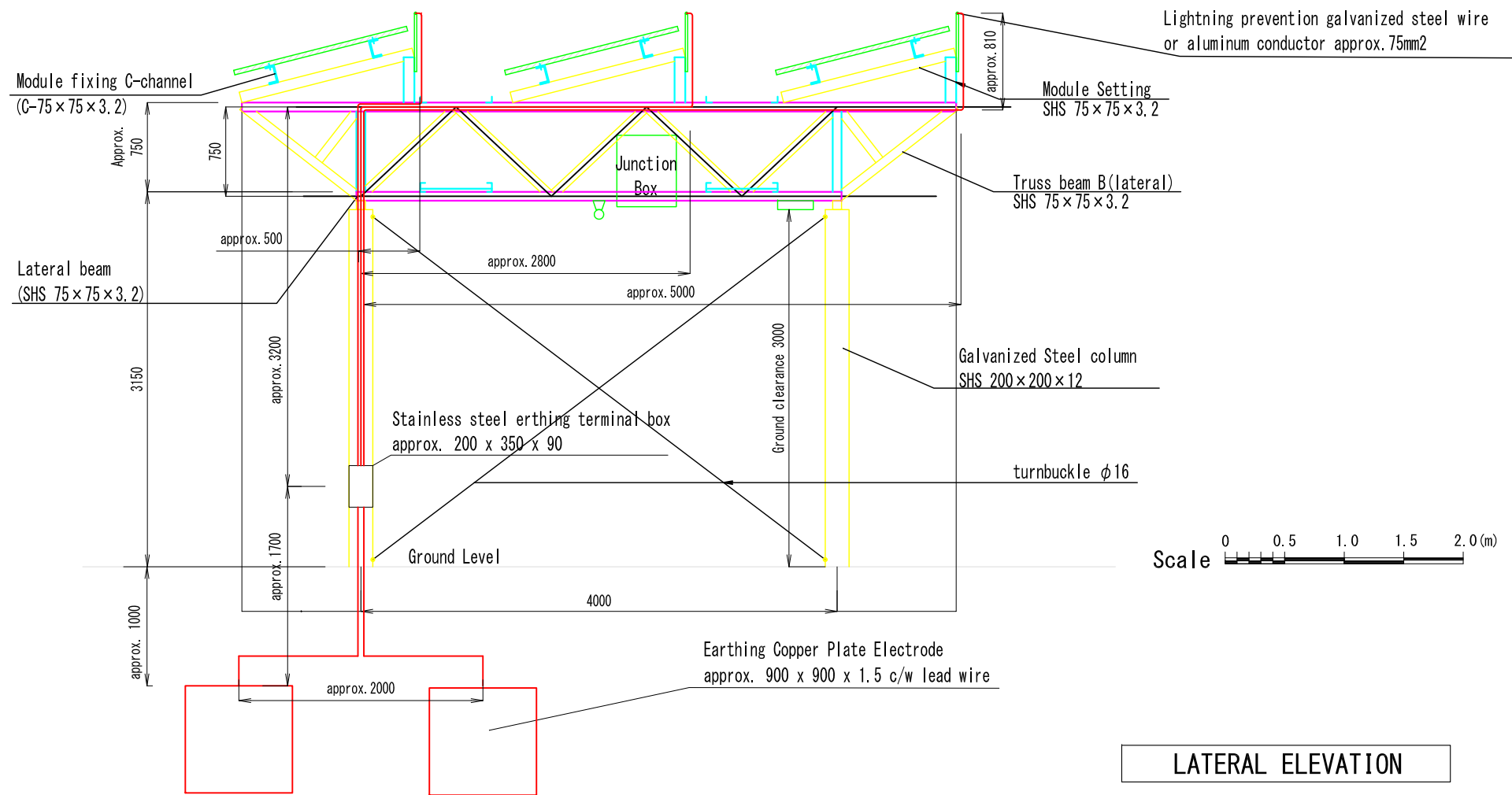
PLAN

NOTE: Module fixing C-channels are not shown on the above plan drawing



JAPAN INTERNATIONAL COOPERATION AGENCY

PROJECT	COUNTRY	SHEET CONTENTS	DRAWING NO.
Preparatory Survey on the Project for Clean Energy Promotion Using Solar Photovoltaic System	The Lao People's Democratic Republic	Airport 236kWp PV array and steel structure arrangement Plan and Elevation drawing steel member arrangement Plan (3/3) (Scale: 1:50, 1:200)	PWT-06



SUMMARY
 Lightning Protection System Aluminum Bar Conductors 75mm2 total 1,794m
 Earthing Terminal Box : 24nos.
 Earthing Copper Plate Electrode 900x900x1.5 : 48 nos.

ARRAY- 1
 Lightning Protection System Aluminum Bar Conductors 75mm2 total 684.1m
 Beside PV modules : 144m x 3 = 432.0m
 Horizontal : $(5.0+2.8+0.5) \times 8 + 3 \times (1.9+2 \times 4+4 \times 3) = 132.1m$
 Vertical : $8 \times (3 \times 3.2 + 2 \times 1.7 + 2) = 120.0m$
 Earthing Terminal Box : 8 nos.
 Earthing Copper Plate Electrode 900x900x1.5 : 16 nos.

LATERAL ELEVATION



PLAN

NOTE: Module fixing C-channels are not shown on the above plan drawing

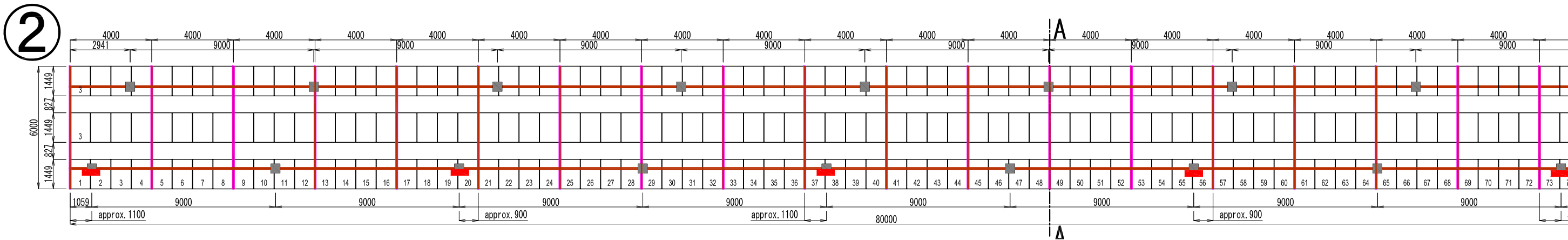


JAPAN INTERNATIONAL COOPERATION AGENCY

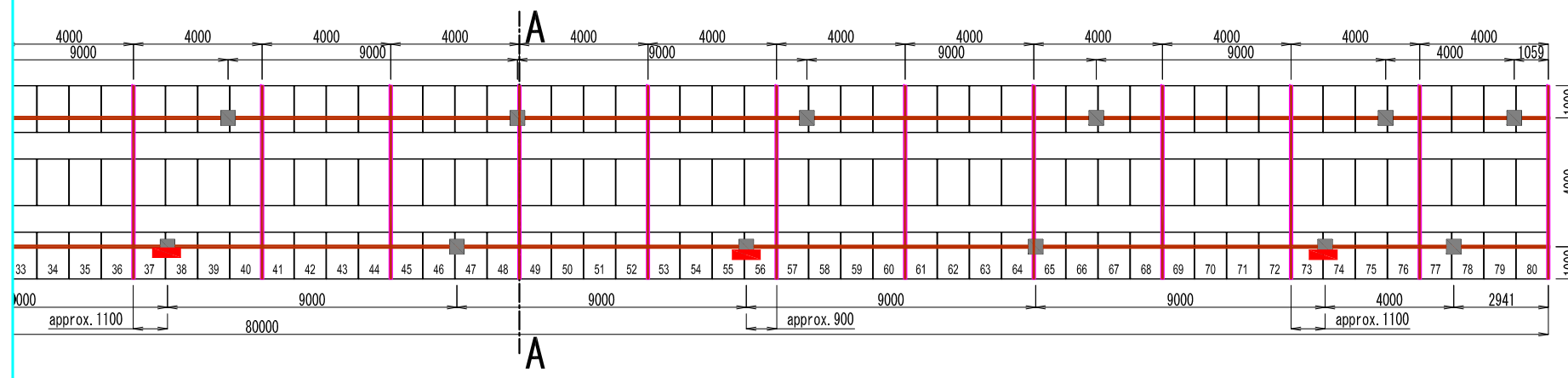
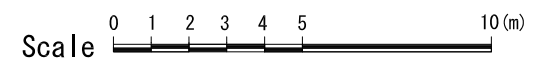
PROJECT	COUNTRY
Preparatory Survey on the Project for Clean Energy Promotion Using Solar Photovoltaic System	The Lao People's Democratic Republic

SHEET CONTENTS
Airport 236kWp PV array earthing system (1/3)
(Scale: 1:50, 1:200)

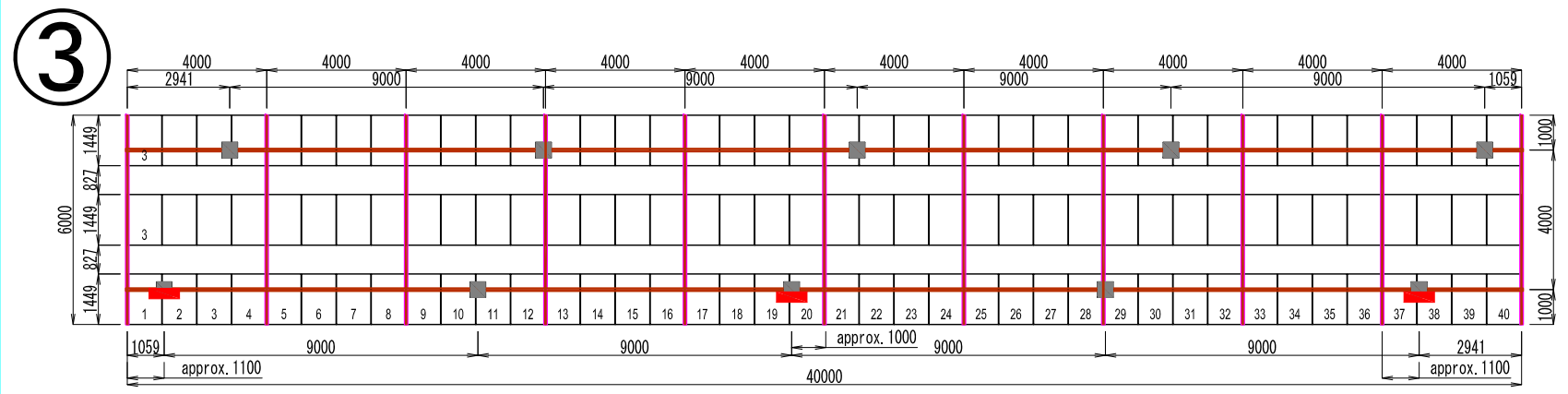
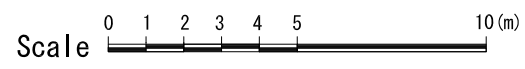
DRAWING NO.
PWT-07



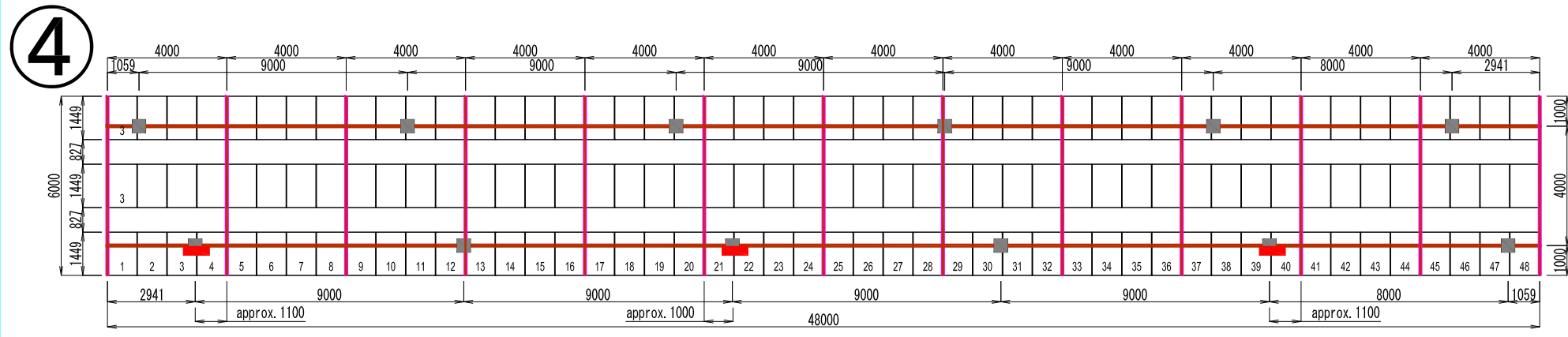
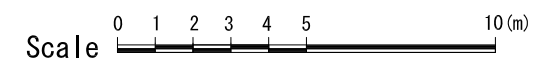
ARRAY- 2
 Lightning Protection System Aluminum Bar Conductors 75mm² total 371.8m
 Beside PV modules : 180 x 3 = 240.0m
 Horizontal : (5.0+2.8+0.5)x8+3x(0.9*2+1.1*3) = 56.8m
 Vertical : 5x(3*3.2+2*1.7+2) = 75.0m
 Earthing Terminal Box : 5 nos.
 Earthing Copper Plate Electrode 900x900x1.5 : 10 nos.



ARRAY- 3
 Lightning Protection System Aluminum Bar Conductors 75mm² total 199.5m
 Beside PV modules : 40m x 3 = 120.0m
 Horizontal : (5.0+2.8+0.5)x3+3x(1.1x 2+1.0) = 34.5m
 Vertical : 3x(3*3.2+2*1.7+2) = 45.0m
 Earthing Terminal Box : 3 nos.
 Earthing Copper Plate Electrode 900x900x1.5 : 6 nos.



ARRAY- 4
 Lightning Protection System Aluminum Bar Conductors 75mm² total 223.5m
 Beside PV modules : 48m x 3 = 144.0m
 Horizontal : (5.0+2.8+0.5)x3+3x(1.1x2+1.0) = 34.5m
 Vertical : 3x(3*3.2+2*1.7+2) = 45.0m
 Earthing Terminal Box : 3 nos.
 Earthing Copper Plate Electrode 900x900x1.5 : 6 nos.



PLAN

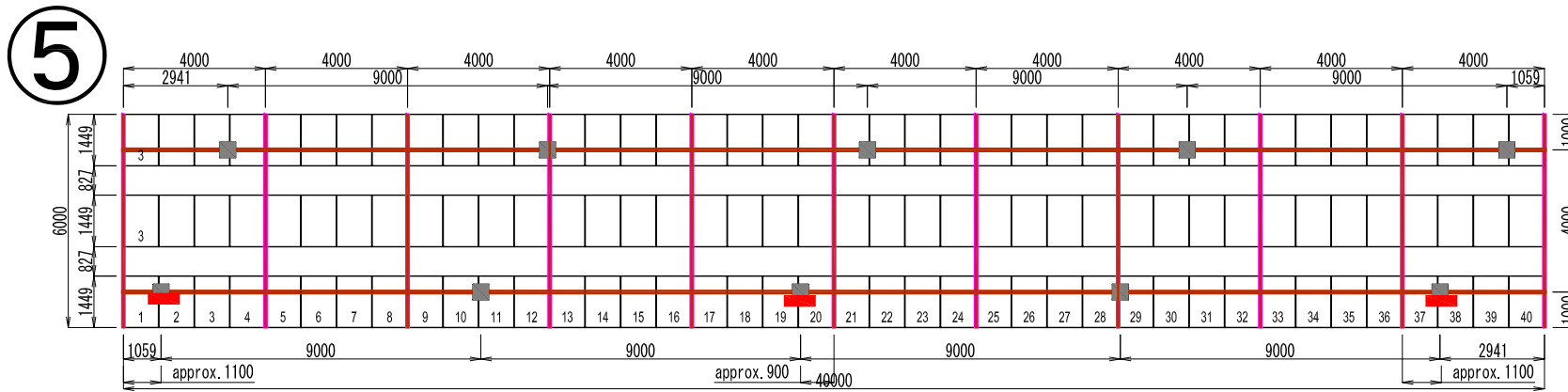
NOTE: Module fixing C-channels are not shown on the above plan drawing



JAPAN INTERNATIONAL COOPERATION AGENCY

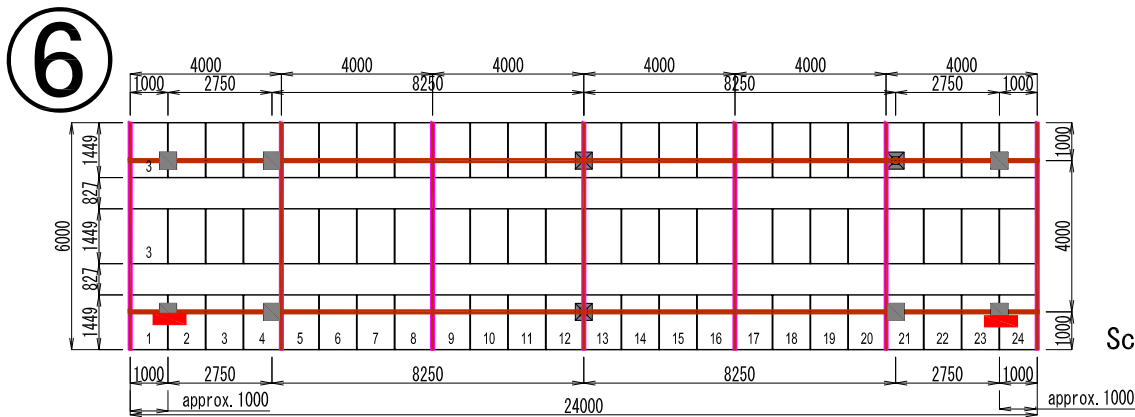
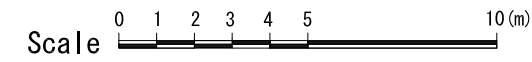
PROJECT	COUNTRY
Preparatory Survey on the Project for Clean Energy Promotion Using Solar Photovoltaic System	The Lao People's Democratic Republic

SHEET CONTENTS	DRAWING NO.
Airport 236kWp PV array earthing system (2/3) (Scale: 1:200)	PWT-08



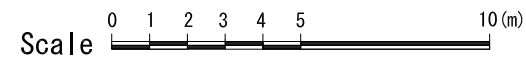
ARRAY- 5

Lightning Protection System Aluminum Bar Conductors 75mm² total 199.2m
 Beside PV modules : 40m x 3 = 120.0m
 Horizontal : (5.0+2.8+0.5)x3+3x(1.1x2+0.9) = 34.2m
 Vertical : 3x(3*3.2+2*1.7+2) = 45.0m
 Earthing Terminal Box : 3 nos.
 Earthing Copper Plate Electrode 900x900x1.5 : 6 nos.



ARRAY- 6

Lightning Protection System Aluminum Bar Conductors 75mm² total 124.6m
 Beside PV modules : 24m x 3 = 72.0m
 Horizontal : (5.0+2.8+0.5)x2+3x(1.0 x 2) = 22.6m
 Vertical : 2x(3*3.2+2*1.7+2) = 30.0m
 Earthing Terminal Box : 2 nos.
 Earthing Copper Plate Electrode 900x900x1.5 : 4 nos.



PLAN

NOTE: Module fixing C-channels are not shown on the above plan drawing



JAPAN INTERNATIONAL COOPERATION AGENCY

PROJECT	COUNTRY	SHEET CONTENTS	DRAWING NO.
Preparatory Survey on the Project for Clean Energy Promotion Using Solar Photovoltaic System	The Lao People's Democratic Republic	Airport 236kWp PV array earthing system (3/3) (Scale: 1:200)	PWT-09